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8/28/2020

Final

Second Quarter 2020 - Quarterly Groundwater Monitoring Report

Red Hill Bulk Fuel Storage Facility
Joint Base Pearl Harbor-Hickam, Oʻahu, Hawaiʻi

DOH Facility ID No.: 9-102271
DOH Release ID Nos.: 990051, 010011, 020028, and 140010

July 2020

Contract Number N62742-17-D-1800, CTO 18F0126

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July 2020

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Contract Number N62742-17-D-1800, CTO 18F0126

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EXECUTIVE SUMMARY

This groundwater monitoring report presents the results of the Second Quarter (April) 2020 groundwater monitoring event conducted April 20–28, 2020, and also the results of an additional monitoring event for newly installed well RHMW13 conducted March 3–10, 2020 at the Red Hill Bulk Fuel Storage Facility (Facility), Joint Base Pearl Harbor-Hickam, Hawai‘i. The Facility is located in the south-central portion of the island of O‘ahu, Hawai‘i. The Facility contains 14 active and 6 inactive underground fuel storage tanks. The State of Hawai‘i Department of Health (DOH) Facility identification number is 9-102271. The DOH Release identification numbers are 990051, 010011, 020028, and 140010.

The groundwater sampling was conducted as part of the Red Hill groundwater long-term monitoring (LTM) program pursuant to the *Groundwater Protection Plan* (DON 2014) and performed under the Comprehensive Long-Term Environmental Action Navy V contract task order 18F0126. Data collected for this groundwater monitoring event also support Sections 6 and 7 of the *Administrative Order on Consent* [AOC] *in the Matter of Red Hill Bulk Fuel Storage Facility, EPA Docket No: RCRA 7003-R9-2015-01 and DOH Docket No: 15-UST-EA-01*, Attachment A, Statement of Work (EPA Region 9 and DOH 2015). The purpose of the sampling is to assess the condition of groundwater beneath the Facility and to ensure that the United States Department of the Navy (Navy) remains in compliance with DOH Underground Storage Tank release response requirements as described in Hawai‘i Administrative Rules Chapter 11-280.1, Subchapter 6, Release Response Action. The sampling was conducted in accordance with the Naval Facilities Engineering Command, Pacific Environmental Restoration Program *Project Procedures Manual* (DON 2015b), the DOH *Technical Guidance Manual for the Implementation of the Hawaii State Contingency Plan* (DOH 2018), and the AOC Statement of Work Sections 6 and 7 *Work Plan/Scope of Work* (DON 2017a). A *Sampling and Analysis Plan* and addenda (DON 2017b; 2017c; 2017d; 2018f) were also prepared for AOC Statement of Work Sections 6 and 7 that contain updated information for the groundwater sampling.

During the March 2020 groundwater monitoring event, AECOM Technical Services, Inc. personnel collected groundwater samples from the five multilevel monitoring zones of newly installed (November 2019) multilevel monitoring RHMW13. Of the five multilevel monitoring zones, primary and duplicate samples were collected from multilevel monitoring well RHMW13 Zone 5 (RHMW13-05).

During the Second Quarter (April) 2020 groundwater monitoring event, AECOM Technical Services, Inc. personnel collected groundwater samples from 19 monitoring locations within the Red Hill groundwater monitoring network in accordance with the *Sampling and Analysis Plan* and addenda (DON 2017b; 2017c; 2017d; 2018f). These include:

- The sampling point at Red Hill Shaft (RHMW2254-01)
- Eleven single-screen monitoring wells located within the Facility boundary (RHMW01 through RHMW10 and OWDFMW01)
- One deep monitor well located outside the Facility boundary at the Hālawa Correctional Facility (Hālawa Deep Monitor Well [HDMW2253-03])
- One sampling zone each at two multilevel monitoring wells (RHMW11 and RHMW14) located at the Hālawa Correctional Facility
- Three sampling zones at multilevel monitoring well RHMW13 and one sampling zone at multilevel monitoring well RHMW15, both wells located within the Facility boundary

Of the multilevel monitoring wells listed above, the following zones were sampled during this event:

- RHMW11 Zone 5, RHMW14 Zone 3, RHMW13 Zones 3 to 5, and RHMW15 Zone 5

The following multilevel monitoring zones were not sampled in this sampling event:

- RHMW11 Zones 1 to 4
- RHMW14 Zones 1 to 2
- RHMW13 Zones 1 to 2
- RHMW15 Zones 1 to 4 due to lack of detections of chemicals of potential concern (COPCs) in previous monitoring events
- RHMW11 Zones 6 to 8 and RHMW14 Zones 4 to 8 due to the low hydraulic conductivity of the aquifer in these zones

Of the monitoring locations sampled during the Second Quarter (April) 2020 groundwater monitoring event, primary and field duplicate samples were collected from sampling point RHMW2254-01, monitoring well RHMW02, and multilevel monitoring well RHMW13 Zone 5 (RHMW13-05).

Analytical results from the sampling event were compared to the current LTM screening criteria. The LTM screening criteria were agreed upon by the AOC Parties and were presented in the February 4, 2016, AOC Statement of Work Sections 6 and 7 scoping completion letter (EPA Region 9 and DOH 2016). The LTM screening criteria were updated (as applicable) with the most current (Fall 2017) DOH Tier 1 groundwater environmental action levels for sites where groundwater is a potential or current drinking water resource and the nearest surface water body is greater than 150 meters from the release site (DOH 2017).

The analytical results for groundwater samples collected from RHMW01, RHMW02, and RHMW03 were also compared to the Site-Specific Risk-Based Levels (SSRBLs) for total petroleum hydrocarbons (TPH)-diesel range organics (TPH-d) (4,500 micrograms per liter [µg/L]) and benzene (750 µg/L). The use of these screening SSRBLs was described in the Red Hill *Groundwater Protection Plan* (DON 2014) and later presented in the February 4, 2016, AOC Statement of Work Sections 6 and 7 scoping completion letter (EPA Region 9 and DOH 2016).

No detectable amounts of free product, sheen, or color were present in groundwater from any monitoring well. During the March 2020 and Second Quarter (April) 2020 events, COPCs were detected at multiple monitoring locations, of which many TPH detections were attributed to laboratory contamination. COPC concentrations exceeded LTM screening criteria for samples collected from RHMW02 and OWDFMW01; however, the OWDFMW01 TPH-d screening criteria exceedance was due to laboratory contamination. No SSRBL exceedances were reported. Analytical results for the groundwater monitoring event are summarized as follows:

- *RHMW05, RHMW06, RHMW09, RHMW10, RHMW13-01, RHMW13-02, RHMW13-03, and RHMW15-05:* No COPCs were detected.
- *RHMW2254-01 (primary and duplicate):* TPH-d (180 J and 280 J µg/L) was detected at concentrations below the screening criterion (400 µg/L); no other COPCs were detected. The TPH chromatograms of both primary and duplicate samples (in both the original and re-extract analyses) displayed a chemical signature of sharp discrete peaks not indicative of hydrocarbons related to petroleum products used at the Facility. Chromatograms of the samples and the

laboratory method blanks showed similar chromatographic signatures, indicating that the reported concentrations were attributable to laboratory solvent contamination rather than TPH in the groundwater. Additionally, the non-SGC chromatograms from these groundwater samples and associated laboratory QC samples were markedly different compared to RHMW02 and RHMW03, both of which exhibited profiles that were similar to and expected of weathered dissolved fuels associated with the site. Additional discussion of the laboratory contamination is presented in the laboratory's United States Environmental Protection Agency (EPA) Method 8015 limit study (Appendix C.4).

- *RHMW01:* TPH-d (190 J µg/L) was detected at a concentration below the screening criterion (400 µg/L); no other COPCs were detected. The sample's TPH chromatograms (both the original and re-extract analyses) displayed a chemical signature of sharp discrete peaks not indicative of hydrocarbons related to petroleum products used at the Facility. The TPH-d with silica gel cleanup (SGC) analysis result was non-detect, suggesting the reported concentrations of TPH-d from testing without SGC were not from petroleum hydrocarbons.
- *RHMW02 (primary and duplicate):* TPH-d (1,700 J and 1,500 J µg/L), 1-methylnaphthalene (13 and 13 µg/L), 2-methylnaphthalene (12 and 11 µg/L), and naphthalene (33 and 32 µg/L) were detected at concentrations exceeding their respective screening criteria (400, 10, 10, and 17 µg/L). TPH-d was also detected in the SGC analysis but at significantly lower concentrations (350 and 310 J µg/L), suggesting that the majority of the non-SGC TPH-d results were biodegradation by-products. The concentrations of TPH-d did not exceed the SSRBL of 4,500 µg/L. TPH-g (49 and 63 µg/L) and TPH-o (260 J and 290 J µg/L) were detected at concentrations below their respective screening criteria (300 and 500 µg/L). No other COPCs were detected.
- *RHMW03:* TPH-d (220 J µg/L) and TPH-o (240 J µg/L) were detected at concentrations below their respective screening criteria (400 and 500 µg/L). The TPH-d and TPH-o with SGC analysis results were non-detect, suggesting that the non-SGC TPH-d result consisted entirely of biodegradation by-products.
- *RHMW04, RHMW07, RHMW08, RHMW11-05, RHMW13-04 (March 2020 event), RHMW13-05 (March 2020 event, primary and duplicate), RHMW14-03, and HDMW2253-03:* TPH-d and/or TPH-o were detected below their respective screening criteria (400 and 500 µg/L) in RHMW04 (240 J and <300 U µg/L), RHMW07 (<300 UJ and 150 J µg/L), RHMW08 (150 J and 170 J µg/L), RHMW11-05 (<260 U and 240 J µg/L), RHMW13-04 (220 J and 240 J µg/L), RHMW13-05 (primary, 240 J and 240 J µg/L), RHMW13-05 (duplicate, 200 J and 170 J µg/L), RHMW14-03 (<300 and 150 J µg/L), and HDMW2253-03 (190 J and <300 µg/L). Evaluation of the samples, field QC, and laboratory QC chromatograms showed similar TPH chromatographic profiles of discrete peaks not indicative of petroleum hydrocarbons. The similar chromatographic profiles between the field samples and laboratory QC samples indicated laboratory solvent contamination. TPH-d and TPH-o with SGC analysis results were non-detect when analyzed, confirming that the non-SGC TPH-d and TPH-o results consisted of non-petroleum hydrocarbons. Additionally, the non-SGC chromatograms from these groundwater, field QC, and laboratory QC samples were markedly different compared to RHMW02 and RHMW03, both of which exhibited profiles that were similar to and expected of weathered dissolved fuels associated with the site.
- *OWDFMW01:* TPH-d (450 J µg/L) was detected above the screening criterion (400 µg/L), and TPH-o (280 J µg/L) was detected below the screening criterion (500 µg/L). Evaluation of the TPH chromatograms of the sample (original analysis and re-extract analysis) and laboratory QC showed similar chromatographic profiles of discrete peaks not indicative of petroleum hydrocarbons; the similar chromatographic profiles between the field samples and laboratory

QC samples indicated that the TPH detections were attributable to laboratory solvent contamination. TPH-d and TPH-o with SGC analysis results were also non-detect, confirming that the non-SGC TPH-d and TPH-o results consisted of non-petroleum hydrocarbons. Additionally, the non-SGC chromatograms from the groundwater and laboratory QC samples were markedly different compared to RHMW02 and RHMW03, both of which exhibited profiles that were similar to and expected of weathered dissolved fuels associated with the site.

Analytical results of natural attenuation parameters (NAPs) suggest that biodegradation is occurring in the vicinity of RHMW02, based on depleted dissolved oxygen (DO), depleted nitrate and sulfate concentrations, and elevated dissolved methane concentrations. Likewise, the concentrations of SGC TPH-d and polynuclear aromatic hydrocarbons (PAHs) found at RHMW02 further underscore that biodegradation is occurring at the site. The depleted DO, dissolved methane, depleted nitrate, and reduced sulfate concentrations at RHMW01 and the depleted DO at RHMW03 indicate that biodegradation is likely occurring at these locations. Evaluation of COPC results and NAP concentrations at all other monitoring locations did not indicate biodegradation.

In March 2020, the analytical laboratory performed a limit study for EPA Method 8015 to re-establish limits (i.e., detection limit [DL], limit of detection [LOD], and limit of quantitation [LOQ]) for TPH-d and TPH-o. A limit study is a complete, specific, and well-defined analytic method for determining whether "the measured concentration is distinguishable from method blank results" (40 CR 136, Appendix B). The study was initiated to address impurities (identified as compounds used in polymeric materials and plasticizers) observed in recent batches of reagent-grade solvent used in the extraction of groundwater samples for EPA Method 8015 analysis. The study of TPH method blanks showed solvent impurities ranged from approximately 70 to 140 µg/L. Implementation of new limits to reduce false-positive TPH detections due to the solvent contamination was performed in accordance with the most current Department of Defense (DoD) *Quality Systems Manual (QSM) for Environmental Laboratories* (DoD and DOE 2019), the National Environmental Laboratory Accreditation Program (NELAP) Institute Manual (TNI 2016), and 40 CFR Part 136, as modified (Methods Update Rule [MUR] 2017). The previous and new TPH-d and TPH-o laboratory limits are listed in Table ES-1. The updated TPH-d and TPH-o laboratory limits are higher than previously reported by the Navy-contracted laboratory but are still below the LTM screening criteria. The updated limits are also now similar to EPA Region 9 Laboratory EPA Method 8015 reporting limits (150 µg/L for TPH-d and 600 µg/L for TPH-o) used during split sampling events performed in 2017 and 2018.

Table ES-1: Laboratory Limits for TPH-d and TPH-o

Analyte:	TPH-d		TPH-o	
DOH EAL:	400 µg/L		500 µg/L	
Laboratory Limit	Prior to March 2020	As of March 2020	Prior to March 2020	As of March 2020
DL	13.07 µg/L	150 µg/L	5.54 µg/L	150 µg/L
LOD	25 µg/L	300 µg/L	40 µg/L	300 µg/L
LOQ	40 µg/L	320 µg/L	40 µg/L	320 µg/L

EAL Environmental Action Level (DOH 2017)

Starting from the First Quarter 2020 monitoring event, increasing concentrations of non-petroleum-related impurities were observed in recent batches of reagent-grade solvent used in the extraction of groundwater samples for EPA Method 8015 analysis. Extraction of samples for EPA Method 8015 uses relatively large amount of solvent (300-milliliter [mL]) that is concentrated (5-mL or less) prior to analysis. Thus, the trace impurities are magnified in the final extract for TPH analysis. The solvent

contamination is evident in samples from the March 2020 sampling event and the Second Quarter (April) 2020 monitoring event. Additional EPA Method 8270 analysis of the RHMW13-05 March 2020 sample tentatively identified three compounds (i.e., 2-ethyl-1-hexanol, cis-1-butyl-2-methylcyclopropane, and octadecanoic acid) used in polymeric materials and plasticizers; no other compounds associated with the solvent contamination could be positively identified using the method.

Lead scavengers were not detected at RHMW14 during the Second Quarter 2020 monitoring event, which completes 1 year of sampling with no detections at all sampled RHMW14 multilevel monitoring well zones. Based on no detections of lead scavengers at all sampled RHMW14 multilevel monitoring well zones for 1 year of sampling, it is recommended that testing for lead scavengers be discontinued for RHMW14.

Based on the groundwater monitoring results, pursuant to the *Groundwater Protection Plan* (DON 2014) and in accordance with AOC Statement of Work Sections 6 and 7 (EPA Region 9 and DOH 2015), groundwater monitoring at locations within the Red Hill groundwater monitoring network will continue. It is also recommended that the Red Hill groundwater LTM program continue testing for NAPs at each monitoring event and continue SGC TPH-d and TPH-o analysis for all locations with non-SGC TPH-d or TPH-o detections.

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ACRONYMS AND ABBREVIATIONS

%R	percent recovery
µg/L	micrograms per liter
AOC	Administrative Order on Consent
bgs	below ground surface
btoc	below top of casing
CAS	Chemical Abstracts Service
CCV	continuing calibration verification
CFR	Code of Federal Regulations
COPC	chemical of potential concern
CSM	conceptual site model
DL	detection limit
DO	dissolved oxygen
DOC	dissolved organic carbon
DoD	Department of Defense, United States
DOH	Department of Health, State of Hawai‘i
EAL	Environmental Action Level
EPA	Environmental Protection Agency, United States
F-24	North Atlantic Treaty Organization-grade F-24 jet fuel
F-76	Marine Diesel Fuel
Facility	Red Hill Bulk Fuel Storage Facility
FD	field duplicate sample
ft	foot or feet
GW	groundwater
ID	identification
IDW	investigation-derived waste
IRR	Investigation and Remediation of Releases
J	estimated value
JBPHH	Joint Base Pearl Harbor-Hickam
JP-5	Jet Fuel Propellant No. 5
LCS	laboratory control sample
LCSD	laboratory control sample duplicate
LOD	limit of detection
LOQ	limit of quantitation
LTM	long-term monitoring
mg/L	milligrams per liter
MS	matrix spike
MSD	matrix spike duplicate
msl	mean sea level
MUR	Methods Update Rule
N	normal or primary sample
NAP	natural attenuation parameter
NAVFAC	Naval Facilities Engineering Command
Navy	Department of the Navy, United States
NELAP	National Environmental Laboratory Accreditation Program
No.	number

ORP	oxidation-reduction potential
PAH	polynuclear aromatic hydrocarbon
PID	photoionization detector
ppm	parts per million
QA	quality assurance
QC	quality control
QSM	Quality Systems Manual
Qtr	quarter
RPD	relative percent difference
Rpt	report
SAP	sampling and analysis plan
SGC	silica gel cleanup
SIM	selected ion monitoring
SOW	scope of work
SSRBL	Site-Specific Risk-Based Level
TGM	Technical Guidance Manual
TOC	total organic carbon
TPH	total petroleum hydrocarbons
TPH-d	total petroleum hydrocarbons – diesel range organics
TPH-g	total petroleum hydrocarbons – gasoline range organics
TPH-o	total petroleum hydrocarbons – residual range organics (i.e., TPH-oil)
U	non-detect value
UJ	non-detect estimated value
U.S.	United States
VOC	volatile organic compound
WP	work plan

1. Introduction

This groundwater monitoring report presents the results of the Second Quarter (April) 2020 groundwater monitoring event conducted April 20–28, 2020, and also the results of an additional monitoring event for newly installed well RHMW13 conducted March 3–10, 2020, at the Red Hill Bulk Fuel Storage Facility (Facility), Joint Base Pearl Harbor-Hickam (JBPHH), O'ahu, Hawai'i (Figure 1). In accordance with the *Groundwater Protection Plan* (DON 2014), the purpose of the sampling is to (1) assess the condition of groundwater beneath the Facility with respect to chemical constituents associated with Jet Fuel Propellant and Marine Diesel Fuel (F-76), and (2) ensure that the United States (U.S.) Department of the Navy (Navy) remains in compliance with the State of Hawai'i Department of Health (DOH) Underground Storage Tank release response requirements codified in Hawai'i Administrative Rules Chapter 11-280.1, Subchapter 6, Release Response Action. The DOH Facility identification number (no.) for the Facility is 9-102271. The DOH Release identification nos. are 990051, 010011, 020028, and 140010.

The groundwater sampling was conducted under Naval Facilities Engineering Command (NAVFAC) Pacific Contract No. N62742-17-D-1800 as part of the long-term groundwater and soil vapor monitoring program at the Facility for Naval Supply Systems Command Fleet Logistics Center Pearl Harbor. Soil vapor monitoring at Red Hill is conducted under another contract and reported separately. The groundwater sampling was conducted in accordance with the NAVFAC Pacific Environmental Restoration Program *Project Procedures Manual* (DON 2015b); the DOH *Technical Guidance Manual for the Implementation of the Hawaii State Contingency Plan* (TGM) (DOH 2018); and the Administrative Order on Consent (AOC) Statement of Work Sections 6 and 7, *Work Plan/Scope of Work* (WP/SOW) (DON 2017a). A *Sampling and Analysis Plan* (SAP) and addenda (DON 2017b; 2017c; 2017d; 2018f) containing updated information for the groundwater sampling were also prepared for AOC Statement of Work Sections 6 and 7 (EPA Region 9 and DOH 2015).

This report presents the results for sampling activities conducted at groundwater monitoring locations both within and outside of the Facility boundaries. Cumulative historical monitoring results for the Red Hill groundwater monitoring network are presented in tables and charts in Appendix A. Field activity and analytical documentation for the monitoring event are presented in Appendix B and Appendix C, respectively.

1.1 Site Description

The Facility is located on Federal Government land (on land zoned by the City and County of Honolulu as a mix of F-1 Federal and Military and P-1 Restricted Preservation districts) in south-central O'ahu, approximately 2.5 miles northeast of Pearl Harbor (Figure 1). It is located on a low ridge on the western edge of the Ko'olau Mountain Range that divides Hālawa Valley and Moanalua Valley. The Facility occupies 144 acres of land, and the majority of the ground surface of the site lies at an elevation of approximately 200–500 feet above mean sea level. Proximate to the Facility lie Hālawa Industrial Park and Hālawa Correctional Facility to the north, preservation land to the northeast, residential neighborhoods in Moanalua Valley to the southeast, and additional residential neighborhoods and the U.S. Coast Guard reservation to the southwest. A quarry is located less than one-quarter mile to the northwest.

The Facility contains 14 active and 6 inactive underground fuel storage tanks that are operated by Naval Supply Systems Command Fleet Logistics Center Pearl Harbor. Each tank has a capacity of approximately 12 million gallons. The bottoms of the Facility's tanks are located a minimum of approximately 100 feet above the basal aquifer. The fuel storage tanks currently contain Jet Fuel

Propellant No. 5 (JP-5), North Atlantic Treaty Organization-grade F-24 jet fuel, and F-76. The current status of each tank is summarized in Table 1-1.

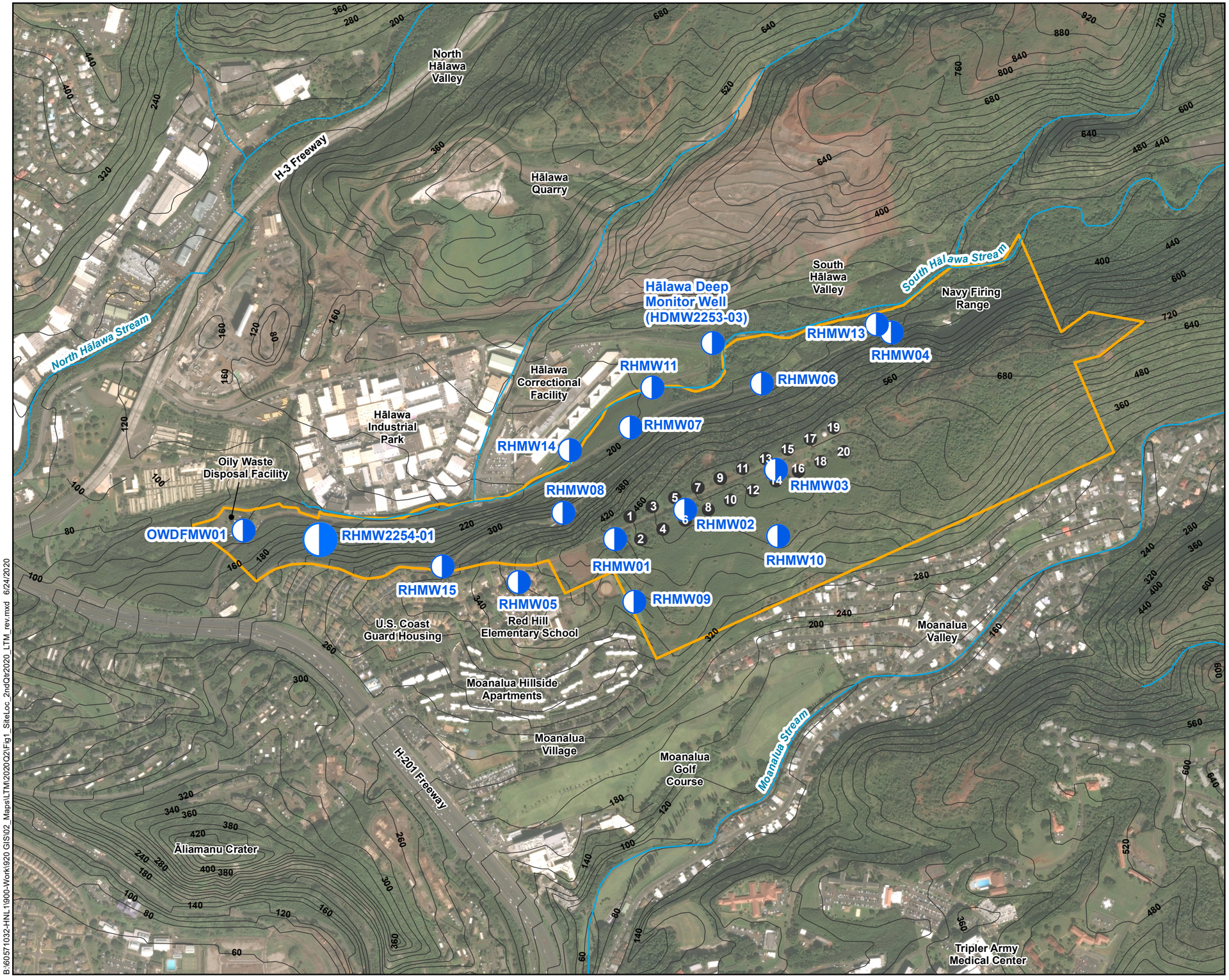
Table 1-1: Current Status of the Facility's Fuel Storage Tanks as of May 2020

Tank ID	Fuel Type	Status [a]	Capacity (million gallons) [b]
F-1	Empty	Inactive	12.0
F-2	F-24	Active	12.0
F-3	F-24	Active	12.0
F-4	F-24	Active	12.0
F-5	F-24	Active	12.7
F-6	F-24	Active	12.7
F-7	JP-5	Active	12.7
F-8	JP-5	Active	12.7
F-9	JP-5	Active	12.7
F-10	JP-5	Active	12.7
F-11	JP-5	Active	12.7
F-12	JP-5	Active	12.7
F-13	Empty	Inactive (CIR)	12.7
F-14	Empty	Inactive (CIR)	12.7
F-15	F-76	Active	12.7
F-16	F-76	Active	12.7
F-17	Empty	Inactive (CIR)	12.7
F-18	Empty	Inactive (CIR)	12.7
F-19	Empty	Inactive	12.7
F-20	JP-5	Active	12.7

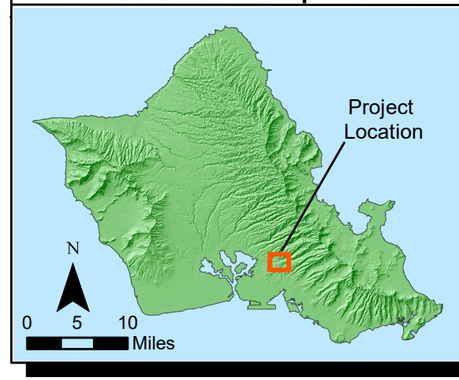
F-24 North Atlantic Treaty Organization-grade F-24 jet fuel
ID identification
CIR Clean, Inspect, Repair
[a] Active status indicates that a tank is currently available for use. Inactive status indicates that a tank is currently not available for use. CIR status indicates a tank is currently scheduled for cleaning, inspection, and repair activities.
[b] Tank capacity in this table is approximate and is not necessarily the tank-rated capacity or maximum allowable fill volume.

One sampling point at Red Hill Shaft (RHMW2254-01), 11 single-screen monitoring wells (RHMW01 to RHMW10 and OWDFMW01), and two multilevel monitoring wells (RHMW13 and RHMW15) are located within the Facility boundary. One deep monitor well (HDMW2253-03) and two multilevel monitoring wells (RHMW11 and RHMW14) are located outside the Facility boundary.

Of the non-multilevel monitoring locations, RHMW01 to RHMW10 and OWDFMW01 are conventional monitoring wells with single screens typically installed across or near the water table. Sampling point RHMW2254-01 is located inside the shaft of Navy Supply Well 2254-01. HDMW2253-03 is a deep monitor well installed by the State of Hawai'i Department of Land and Natural Resources at the Hālawa Correctional Facility and has a solid casing installed to approximately 50 feet below the water table.



Location Map



Legend

- Existing Monitoring Well Location
- Red Hill Tank
- Stream
- Topographic Contour (feet above mean sea level)
- Red Hill Facility Boundary

Notes

1. Map projection: NAD 1983 UTM Zone 4N
2. Base Map: DigitalGlobe, Inc. (DG) and NRCS. Publication_Date: 2015

N

0 400 800 1,600 Feet

Figure 1
Site Location Map
2nd Qtr 2020 Groundwater LTM Report
Red Hill Bulk Fuel Storage Facility
JBPHH, O'ahu, Hawai'i

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RHMW11, RHMW13, RHMW14, and RHMW15 are multilevel monitoring wells that are screened at the water table and at other depths above and below the water table. RHMW13 is a newly installed (November 2019) monitoring well that was initially sampled during the March 2020 monitoring event.

- RHMW11 has eight monitoring zones: one zone (Zone 8) near the groundwater table, two zones (Zones 6 and 7) below the groundwater table with sampling ports within the saprolite layer (the layer of heavily weathered and altered clay-rich basalts), and five zones (Zones 1 to 5) below the groundwater table with sampling ports within the basalt layer.
- RHMW13 has five monitoring zones all located within high-hydraulic-conductivity portions of unweathered basalt: one monitoring zone (Zone 5) near the approximate elevation of the regional basal aquifer, and four zones (Zones 1 to 4) below the elevation of the regional basal aquifer.
- RHMW14 has eight monitoring zones: one monitoring zone (Zone 8) near the approximate elevation of the piezometric surface of the regional basal aquifer, four zones (Zones 4 to 7) below the approximate elevation of the piezometric surface of the regional basal aquifer with sampling ports within basalt with relatively lower hydraulic conductivity, and three zones (Zones 1 to 3) below the elevation of the piezometric surface of the regional basal aquifer with sampling ports within the relatively higher-hydraulic-conductivity portions of the unweathered basalt of the regional basal aquifer.
- RHMW15 has five monitoring zones, all located within high-hydraulic-conductivity portions of unweathered basalt: one monitoring zone (Zone 5) near the approximate elevation of the regional basal aquifer, and four zones (Zones 1 to 4) below the elevation of the regional basal aquifer.

1.2 PHYSICAL SETTING

The Facility is situated on the southwest flank of the Ko'olau shield volcano and is primarily underlain by Ko'olau volcanic series basalts. Climatological conditions in the area of the Facility consist of warm to moderate temperatures and low to moderate rainfall. The average annual precipitation is approximately 40 inches, which occurs mainly between November and April (Giambelluca, Nullet, and Schroeder 1986). Average temperatures range from the low 60s to high 80s (degrees Fahrenheit) (Juvik and Juvik 1998).

The Facility is located at the administrative boundary between the Waimalu Aquifer System of the Pearl Harbor Aquifer Sector and the Moanalua Aquifer System of the Honolulu Aquifer Sector. The underlying aquifer is classified as a basal, unconfined, flank-type and is currently used as a drinking water source. The aquifer is considered fresh, with less than 250 milligrams per liter (mg/L) of chloride, and is considered an irreplaceable resource with a high vulnerability to contamination (Mink and Lau 1990).

The nearest drinking water supply well is Navy Supply Well 2254-01 (also known as Red Hill Shaft), located within the Facility's lower access tunnel. Navy Supply Well 2254-01 is located approximately 2,600 feet topographically downgradient of the fuel storage tanks (Figure 1) and provides potable water to the JBPHH Water System, which serves approximately 65,200 military customers. NAVFAC Hawaii Utilities Energy Management Division operates Navy Supply Well 2254-01 and its associated water development tunnel.

The nearest surface water body is South Hālawa Stream, which is an ephemeral stream present along the north side of the Facility. Wells RHMW01 through RHMW03, RHMW05, RHMW09, RHMW10, and RHMW15 are located greater than 150 meters from any portion of South Hālawa Stream.

Sampling point RHMW2254-01 and wells RHMW04, RHMW06 through RHMW08, RHMW11, RHMW13, RHMW14, HDMW2253-03, and OWDFMW01 are located within 150 meters of a portion of Hālawa Stream. The approximate distance from each well and sampling point to Hālawa Stream is presented in Table 1-2.

Table 1-2: Distance of Sampling Locations to South Hālawa Stream

Sampling Location	Approximate Closest Distance to South Hālawa Stream (meters)
RHMW2254-01	85
RHMW01	232
RHMW02	299
RHMW03	271
RHMW04	81
RHMW05	225
RHMW06	104
RHMW07	81
RHMW08	64
RHMW09	376
RHMW10	452
RHMW11	3 [a]
RHMW13	47
RHMW14	10 [a]
RHMW15	153
HDMW2253-03	20
OWDFMW01	143

[a] RHMW11 and RHMW14 are located alongside the concrete-lined portion of South Hālawa Stream.

Despite some wells being located within 150 meters of surface water (South Hālawa Stream), there are no indications of any complete pathways to nearby water bodies. Both South Hālawa Stream and Moanalua Stream (located in Moanalua Valley east of the Facility) are intermittent streams (USGS 2017) located approximately 100 feet or more above the water table of the basal aquifer. Moreover, the bottoms of the fuel tanks are located at least 50 feet below the bottom of the streams, and the segment of South Hālawa Stream between Red Hill and Hālawa Correctional Facility is concrete-lined. Thus, groundwater conditions do not affect the nearby stream, and analytical results for the long-term monitoring (LTM) program are therefore compared to the screening criteria based on DOH environmental action levels (EALs) Table D-1b (i.e., groundwater EALs for sites where "groundwater is a current or potential drinking water resource" and the nearest "surface water body is not located within 150 meters of release site") (DOH 2017).

1.3 BACKGROUND

The U.S. Government constructed the Facility in the early 1940s. Twenty tanks were constructed of reinforced concrete lined with steel. The fueling system is a self-contained underground unit that was installed into native rock composed primarily of basalt with some interbedded tuffs and breccias (DON 2010). Each tank measures approximately 250 feet in height and 100 feet in diameter. The upper domes of the tanks lie at depths varying between 100 and 200 feet below ground surface (bgs). The tanks currently contain JP-5, North Atlantic Treaty Organization-grade F-24 jet fuel, and F-76. In the past, the tanks also stored Navy special fuel oil, Navy distillate, aviation gasoline, and motor gasoline (DON 2010).

1.3.1 Previous Groundwater Monitoring Results

Groundwater samples for the Red Hill groundwater LTM program have been analyzed by the various offsite laboratories listed in Table 1-3. The Red Hill groundwater LTM program results spanning from 2005 onward are summarized in Table 1-4.

Table 1-3: Red Hill Groundwater LTM Program Analytical Laboratories

Groundwater Monitoring Event	Analytical Laboratory
1st Qtr 2020 – 2nd Qtr 2020 (March and April)	APPL
4th Qtr 2019	APPL (all COPCs and NAPs except TOC and DOC for select samples) ARI (TOC and DOC for select samples)
2nd Qtr 2019 – 3rd Qtr 2019	APPL
1st Qtr 2019	APPL (all COPCs and NAPs except TOC during the December 2018 event) ARI (TOC during the December 2018 event only)
3rd Qtr 2018 – 4th Qtr 2018	APPL (all COPCs and NAPs except TOC and DOC) ALS Environmental - Houston (TOC and DOC only)
4th Qtr 2016 – 2nd Qtr 2018	APPL (all COPCs and all NAPs except TOC) Eurofins Lancaster Laboratories (TOC only)
1st Qtr 2017 – 3rd Qtr 2017, 1st Qtr 2018, 3rd Qtr 2018 (split samples only)	EPA Region 9 Laboratory
2nd Qtr 2015 – 3rd Qtr 2016	ALS Environmental - Kelso
4th Qtr 2012 – 1st Qtr 2015	Calscience Environmental Laboratories, Inc. (currently Eurofins Calscience)
4th Qtr 2010 – 3rd Qtr 2012	APPL
1st Qtr 2008 – 3rd Qtr 2010	SGS Environmental Services, Inc. - Alaska Division
3rd Qtr 2006 [a] – 3rd Qtr 2007 [b]	Accutest Laboratories - Florida (currently SGS Accutest Laboratories Southeast)
1st Qtr 2005 – 4th Qtr 2005	Columbia Analytical Services, Inc. (currently ALS Environmental - Kelso)

APPL Agriculture & Priority Pollutants Laboratories, Inc.
ARI Analytical Resources, Inc.
COPC chemical of potential concern
DOC dissolved organic carbon
EPA Environmental Protection Agency, United States
NAP natural attenuation parameter
Qtr quarter
TOC total organic carbon

[a] Groundwater LTM samples were not collected during the First and Second Quarters 2006 due to Phase I and Phase II site investigation activities (DON 2007) occurring at that time.

[b] Groundwater LTM samples were not collected during the Fourth Quarter 2007.

Groundwater sampling locations are depicted on Figure 1. Detailed cumulative results of historical groundwater monitoring are tabulated in Appendix A.1, and concentration graphs of chemicals of potential concern (COPCs) over time are presented in Appendix A.2. All historical data are compared to the most recently updated (Fall 2017) DOH EALs (DOH 2017). Total petroleum hydrocarbons (TPH)-diesel range organics (TPH-d) and benzene are also compared to the Site-Specific Risk-Based Levels (SSRBLs), as discussed in the Red Hill *Groundwater Protection Plan* (DON 2014), as supplemented by the February 4, 2016, AOC Statement of Work Sections 6 and 7 scoping completion letter (EPA Region 9 and DOH 2016). Historical results indicate that most, and generally the highest, detected concentrations of COPCs occur in monitoring well RHMW02.

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Table 1-4: Summary Statistics of Cumulative Groundwater COPC Data as of the Second Quarter 2020 Quarterly Groundwater Monitoring Event
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		RHMW2254-01						Inside-Tunnel Wells							Outside-Tunnel Wells						
Analyte	DOH EAL (µg/L)	No. of Detects	No. of Non-detects	Percent Detected	Did Detects Exceed EALs?	Maximum Detected Concentration (µg/L)	Date Sampled of Max Concentration	No. of Detects	No. of Non-detects	Percent Detected	Did Detects Exceed EALs?	Location of Max Concentration	Maximum Detected Concentration (µg/L)	Date Sampled of Max Concentration	No. of Detects	No. of Non-detects	Percent Detected	Did Detects Exceed EALs?	Location of Max Concentration	Maximum Detected Concentration (µg/L)	Date Sampled of Max Concentration
TPH-d	400	15	104	13%	No	280	23-Apr-20	273	76	78%	**Yes**	RHMW02	6500	20-Jan-16	81	286	22%	**Yes**	OWDFMW01	3100	22-Jul-15
TPH-g	300	1	111	0.9%	No	14	4-Feb-09	93	216	30%	**Yes**	RHMW02	660	28-Jan-13	1	365	0.3%	No	HDMW2253-03	16	19-Oct-15
TPH-o	500	3	70	4.1%	No	59	8-Sep-05	58	102	36%	**Yes**	RHMW01	890	17-Feb-05	34	264	11%	No	OWDFMW01	390	22-Jul-15
Benzene	5	0	120	0%	—	—	—	20	316	6.0%	No	RHMW02	0.26	4-Feb-09	24	344	7%	No	OWDFMW01	1.3	19-Jul-12
Ethylbenzene	30	2	118	2%	No	1	8-Sep-05	52	284	15%	No	RHMW02	1.3	10-Jul-06	0	368	0%	—	—	—	—
Toluene	40	3	117	2.5%	No	0.71	22-Oct-12	11	325	3.3%	No	RHMW01	2.5	15-Jan-14	4	364	1.1%	No	HDMW2253-03	3.8	22-Oct-14
Xylenes, Total (p/m-, o-xylene)	20	2	118	2%	No	0.81	22-Oct-18	70	266	21%	No	RHMW02	1.4	6-Jul-17	2	366	0.5%	No	OWDFMW01	0.39	21-Apr-11
1-Methylnaphthalene	10	1	104	1.0%	No	0.0276	22-Oct-08	154	187	45%	**Yes**	RHMW02	142	10-Jul-06	11	356	3.0%	No	OWDFMW01	0.03	19-Jan-16
2-Methylnaphthalene	10	4	119	3.3%	No	0.038	6-Dec-05	162	196	45%	**Yes**	RHMW02	88.5	20-Sep-05	16	376	4.1%	No	OWDFMW01	0.02	19-Jan-16
Naphthalene	17	13	135	9%	No	0.099	23-Jul-13	230	215	52%	**Yes**	RHMW02	343	10-Jul-06	32	401	7%	No	RHMW09	1	8-Feb-17

Notes:
Bold and shaded text indicates analyte detected above DOH EAL.
RHMW2254-01 is the sampling point located inside the shaft of the Navy Supply Well 2254-01.
Inside Wells: RHMW01, RHMW02, RHMW03, RHMW05.
Outside Wells: RHMW04, RHMW06, RHMW07, RHMW08, RHMW09, RHMW10, RHMW11, RHMW14, RHMW15, HDMW2253-03, OWDFMW01.
As of the Third Quarter 2018 Groundwater Monitoring Report, the "No. of Detects" and "No. of Non-detects" includes all primary and replicate results; versions of this table previous to the Third Quarter 2018 report included only the maximum detected concentration between primary and replicate samples.
As of the Second Quarter 2019 Groundwater Monitoring Report, the "No. of Detects" and "No. of Non-detects" includes EPA Region 9 Laboratory split sampling data; versions of this table previous to the Second Quarter 2019 report included only data from Navy-contracted laboratories.
TPH-d and TPH-o detections for RHMW2254-01 and most of the samples collected during Second Quarter (April) 2020 groundwater monitoring event is due to laboratory solvent contamination. See Second Quarter 2020 report narrative for additional discussion.
— = no data
% = percent
µg/L = microgram per liter
DOH = Department of Health, State of Hawai'i
EAL = Environmental Action Level
EPA = Environmental Protection Agency, United States
no. = number
TPH-d = total petroleum hydrocarbons-diesel range organics
TPH-g = total petroleum hydrocarbons-gasoline range organics
TPH-o = total petroleum hydrocarbons-residual range organics (i.e., TPH-oil)

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No measurable amount of free product has ever been detected in any of the Red Hill monitoring wells. Of the 30 previously sampled monitoring locations (including both non-multilevel wells and multilevel well monitoring zones) from 2005 to 2020, only five monitoring locations have had COPCs in concentrations exceeding the screening criteria (i.e., RHMW01, RHMW02, RHMW05, HDWMW2253-03, and OWDFMW01). No detections of COPCs have ever exceeded screening criteria at the sampling point (RHMW2254-01) in Red Hill Shaft. Of the three monitoring wells that the SSRBLs apply to (RHMW01, RHMW02, and RHMW03), only TPH-d in RHMW02 has ever exceeded the SSRBL. Sampling results analyzed by Navy-contracted laboratories from 2005 to 2019 are summarized below:

- *RHMW2254-01* is a sampling point located inside the shaft of Navy Supply Well 2254-01. Detections of TPH-gasoline range organics (TPH-g), TPH-d, TPH-residual range organics (TPH-o), and polynuclear aromatic hydrocarbons (PAHs) occurred occasionally during monitoring events between 2005 and October 2017, but no COPCs were detected above the screening criteria. Ethylbenzene, toluene, and total xylenes were detected below screening criteria during the Fourth Quarter (October) 2018 groundwater monitoring event, but were non-detect during the subsequent monthly (November and December 2018) monitoring events; thus, the Fourth Quarter 2018 detections could not be verified. Evaluation of the chromatograms of the First Quarter 2020 groundwater samples, field quality control (QC), and laboratory QC showed similar chromatographic signatures, indicating that the RHMW2254-01 First Quarter 2020 monitoring event detection was due to laboratory contamination.
- *RHMW01*, an inside-tunnel monitoring well located southwest of the tank farm, was installed in 2001 (DON 2002). TPH-d has consistently been detected at RHMW01 but has not exceeded the DOH screening criterion (400 micrograms per liter [µg/L]) since the First Quarter (January) 2016 monitoring event. TPH-d has never exceeded the SSRBL (4,500 µg/L). PAHs were periodically detected below the screening criteria. Sporadic detections of benzene and toluene below their respective screening criteria occurred in 2005, 2014, and 2017.
- *RHMW02*, an inside-tunnel monitoring well located next to Tank 6, was installed in 2005 (DON 2007). TPH-g was detected and exceeded the screening criterion (300 µg/L) during Fourth Quarter 2012 and First Quarter 2013 monitoring events. TPH-d has consistently been detected; concentrations exceeded the screening criterion (400 µg/L) in all monitoring events and exceeded the SSRBL in 2008, 2014, 2015, and 2016. TPH-o was detected below the screening criterion (500 µg/L) in most monitoring events from 2015 onward. Silica gel cleanup (SGC) TPH-d and TPH-o results showed reduced or non-detect concentrations compared to non-SGC TPH-d and TPH-o results, indicating that the majority of the reported non-SGC TPH mass was likely biodegradation by-products. PAHs regularly exceeded their screening criteria during monitoring events from 2005 onward. Ethylbenzene and total xylenes were also detected in most events between 2005 and 2018 at trace concentrations below the screening criteria. Benzene and toluene were also detected at trace concentrations below the screening criteria between 2008 and 2016, although less frequently than were ethylbenzene and total xylenes.
- *RHMW03*, an inside-tunnel monitoring well located next to Tank 14, was installed in 2005 (DON 2007). TPH-d and TPH-o were frequently detected but at concentrations below the screening criteria. SGC TPH-d and TPH-o results were frequently non-detect. TPH-g, toluene, and PAHs were occasionally detected at trace concentrations below screening criteria between 2005 and 2016. No COPCs have been detected above the screening criteria.
- *RHMW04*, an outside-tunnel monitoring well located northeast of the tank farm, was installed in 2005 as a background monitoring location (DON 2007). TPH-d, benzene, total xylenes, and PAHs were sporadically detected below screening criteria. Evaluation of the chromatograms

of the First Quarter 2020 groundwater sample, field QC, and laboratory QC showed similar chromatographic signatures, indicating that the First Quarter 2020 monitoring event detection was due to laboratory solvent contamination. No other COPCs have been detected.

- *RHMW05*, an inside-tunnel monitoring well located southwest of the tank farm and east of sampling point RHMW2254-01, was installed in 2009. TPH-d exceeded the screening criterion during monitoring events in 2009 and 2010, but subsequent TPH-d detections were below the screening criterion; evaluations of historical TPH chromatograms suggested non-petroleum chemical signatures. TPH-o, toluene, and PAHs were occasionally detected below screening criteria. Evaluation of the chromatograms of the First Quarter 2020 groundwater sample, field QC, and laboratory QC showed similar chromatographic signatures, indicating that the First Quarter 2020 monitoring event detection was due to laboratory contamination. No other COPCs have been detected.
- *RHMW06 & RHMW07*, outside-tunnel monitoring wells located north of the tank farm, were installed in 2014 in response to the January 2014 release (DON 2015a). TPH-d, TPH-o, and PAHs were occasionally detected below screening criteria. No COPCs have ever been detected above screening criteria. TPH-d was detected in RHMW07 during the First Quarter 2020 groundwater monitoring event; evaluation of the chromatograms of the sample, field QC, and laboratory QC showed similar chromatographic signatures, indicating that the First Quarter 2020 monitoring event detection was due to laboratory contamination.
- *RHMW08 & RHMW09*, outside-tunnel monitoring wells located respectively west and south of Tank 1, were installed in 2016 as part of the AOC Statement of Work Sections 6 and 7 investigation (DON 2017a). TPH-d and TPH-o were detected below the screening criteria at RHMW08 from November 2016 to March 2017 but have not been detected since. Naphthalene was detected below the screening criterion by U.S. Environmental Protection Agency (EPA) Region 9 during the February 2017 split sampling event at RHMW09. TPH-d was detected in RHMW09 during the First Quarter 2020 groundwater monitoring event; evaluation of the chromatograms of the sample, field QC, and laboratory QC showed similar chromatographic signatures, indicating that the First Quarter 2020 monitoring event detection was due to laboratory contamination.
- *RHMW10*, an outside-tunnel monitoring well located south of Tank 14, was installed in April 2017 as part of the AOC Statement of Work Sections 6 and 7 investigation (DON 2017a). TPH-d and TPH-o were sporadically detected at concentrations below the screening criteria. No other COPCs have been detected.
- *RHMW11*, an outside-tunnel multilevel monitoring well located at the Hālawa Correctional Facility north of the tank farm, was installed in November 2017 as part of the AOC Statement of Work Sections 6 and 7 investigation (DON 2017a). Five of the eight multilevel monitoring zones (RHMW11 Zones 1 to 5) were sampled during the First, Second, and Third Quarter 2018 events. Sampling was discontinued for RHMW11 Zones 1 to 4 due to lack of COPC detections in groundwater samples collected from all five zones during the First Quarter 2018 through Third Quarter 2018 events. Groundwater samples continued to be collected from RHMW11 Zone 5 thereafter. RHMW11 Zone 7 (one of three zones located in the saprolite formation with low hydraulic conductivity) was sampled during the Third Quarter 2019 monitoring event to collect general chemistry data from formation water within the saprolite. No COPCs have been detected in any of the RHMW11 multilevel monitoring zones that have been sampled.
- *RHMW14,* an outside-tunnel multilevel monitoring well located at the Hālawa Correctional Facility northwest of Tank 1, was installed in March 2019 as part of the AOC Statement of Work Sections 6 and 7 investigation (DON 2017a). RHMW14 has eight multilevel monitoring

zones. Three of the eight zones (RHMW14 Zones 1 to 3) are within relatively higher-hydraulic-conductivity portions of the unweathered basalt formation, while the other five zones (RHMW14 Zones 4 to 8) are within relatively lower-hydraulic-conductivity portions of the basalt. Groundwater samples have been collected from six of eight multilevel monitoring zones (RHMW14 Zones 1 to 5 and Zone 7). No COPCs have been detected in any of the RHMW11 multilevel monitoring zones that have been sampled.

- *RHMW15*, an outside-tunnel multilevel monitoring well located between RHMW2254-01 and RHMW05 within the Facility boundaries, was installed in July 2019 as part of the AOC Statement of Work Sections 6 and 7 investigation (DON 2017a). RHMW15 has five multilevel monitoring zones located within relatively higher-hydraulic-conductivity portions of the unweathered basalt formation, with RHMW15 Zone 5 located near the basal aquifer water table. All monitoring zones of RHMW15 were initially sampled during the Third Quarter 2019 monitoring event. No COPCs have been detected in any of the RHMW15 multilevel monitoring zones.
- *HDMW2253-03*, an outside-tunnel well located north of the tank farm at the Hālawa Correctional Facility, was installed in 2000 by the State of Hawai'i Department of Land and Natural Resources below the groundwater table without a well screen. TPH-d was detected above the screening criterion during the First Quarter 2013 quarterly monitoring event, but no other COPCs have exceeded screening criteria, and no COPCs have been detected since the Third Quarter 2016 monitoring event. HDMW2253-03 was not sampled during quarterly and monthly monitoring events from April to July 2017 due to experimental testing conducted by the State of Hawai'i Department of Land and Natural Resources Commission on Water Resource Management and the University of Hawai'i.
- *OWDFMW01*, located at the former Oily Waste Disposal Facility west of Navy Supply Well 2254-01, was installed in 1998 (DON 2000). TPH-d exceeded the screening criterion during quarterly monitoring events in 2010, 2012, 2013, and 2015. No other COPCs have ever exceeded screening criteria. Evaluations of historical TPH chromatograms suggested that the reported TPH detections were not related to the release of petroleum fuels.

As discussed in previous quarterly monitoring reports, the TPH and PAH concentrations for the Second Quarter 2018 through Fourth Quarter 2018 monitoring events were higher than the reported results from the Fourth Quarter 2016 through First Quarter 2018 monitoring events. The increase in concentrations starting from the Fourth Quarter 2017 through Third Quarter 2018 are attributable to changes made to the Navy-contracted laboratory's extraction and analysis protocols in an effort to optimize the laboratory's EPA Method 8015 and EPA Method 8270 selected ion monitoring (SIM) standard operating procedures. The changes were prompted by the January–March 2017 split sampling and October 2017 TPH-d performance testing results conducted by the EPA Region 9 laboratory in Richmond, California, and the Navy-contracted laboratory (EPA Region 9 and DOH 2018; DON 2017e). The split sampling and performance testing results showed that the EPA Region 9 laboratory had higher TPH-d and PAH recoveries than the Navy-contracted laboratory for analytes present in groundwater samples at high concentrations (EPA Region 9 and DOH 2017a, 2018; DON 2018b). The differences in recoveries were due to the EPA Region 9 laboratory protocols being more effective at recovering higher TPH-d and PAH concentrations, especially for samples with higher concentrations of polar hydrocarbons and metabolites. Changes made to the Navy-contracted laboratory's protocols include: using calibration standards identical to those used by the EPA Region 9 laboratory, sample acidification to pH less than 5 prior to extraction, switching extraction methodologies from EPA Method 3510C (separatory funnel liquid-liquid extraction) to EPA Method 3520C (continuous liquid-liquid extraction), using a rotary evaporator for extract condensation, and reduction of the field-collected sample volume for optimal extraction within the liquid-liquid extractor vessel. The Third

Quarter 2018 split sampling event results indicated that TPH-d and PAH data generated by the Navy-contracted laboratory were approximately 12–37 percent lower than results reported by the EPA Region 9 laboratory (DON 2018a). The Navy-contracted laboratory's recoveries have significantly improved since the First Quarter 2017 split sampling event, during which recoveries were approximately 65 percent lower than the EPA Region 9 laboratory's results. After the method optimizations, there were no apparent increases in the TPH and PAH concentration trends. Evaluation of the split sampling data was presented in detail in the Third Quarter 2018 monitoring report (DON 2018a).

1.3.2 Previous Reports

The Red Hill groundwater LTM reports listed in Table 1-5 were prepared and submitted to DOH. Starting from the Fourth Quarter 2016 groundwater monitoring event, information for both the inside-tunnel and outside-tunnel monitoring locations has been combined into one report.

Table 1-5: Previous Groundwater Monitoring Reports

Year	Title	Sampling Period		Submittal Date	
Combined Reports for Inside- and Outside-Tunnel Wells					
2020	1st Qtr 2020 GW Monitoring Rpt	Jan		Apr	
2019	4th Qtr 2019 GW Monitoring Rpt	Oct to Nov		Feb 2020	
	3rd Qtr 2019 GW Monitoring Rpt	Jul to Aug		Nov	
	2nd Qtr 2019 GW Monitoring Rpt	April		Aug	
	1st Qtr 2019 GW Monitoring Rpt	Dec 2018 to Jan 2019		May	
2018	4th Qtr 2018 GW Monitoring Rpt	Oct to Nov		Mar 2019	
	3rd Qtr 2018 GW Monitoring Rpt	Jul to Aug		Nov	
	2nd Qtr 2018 GW Monitoring Rpt	Apr		Oct	
	1st Qtr 2018 GW Monitoring Rpt	Mar		Jul	
2017	4th Qtr 2017 GW Monitoring Rpt	Oct		Jan 2018	
	3rd Qtr 2017 GW Monitoring Rpt	May to Jul		Oct	
	2nd Qtr 2017 GW Monitoring Rpt	Feb to Apr		Jul	
	1st Qtr 2017 GW Monitoring Rpt	Nov 2016 to Jan 2017		Apr	
2016	4th Qtr 2016 GW Monitoring Rpt	Oct		Dec	
Separate Reports for Inside- and Outside-Tunnel Wells		Inside-Tunnel Wells		Outside-Tunnel Wells	
Year	Title	Sampling Period	Submittal Date	Sampling Period	Submittal Date
2016	3rd Qtr 2016 GW Monitoring Rpt	Jul	Oct	Jul	Oct
	2nd Qtr 2016 GW Monitoring Rpt	Apr	Jul	Apr	Jul
	1st Qtr 2016 GW Monitoring Rpt	Jan	Mar	Jan	Mar
2015	4th Qtr 2015 GW Monitoring Rpt	Oct	Jan 2016	Oct	Feb 2016
	3rd Qtr 2015 GW Monitoring Rpt	Jul	Nov	Jul	Nov
	2nd Qtr 2015 GW Monitoring Rpt	Apr	Aug	Apr	Aug
	1st Qtr 2015 GW Monitoring Rpt	Jan	Mar	Jan	Mar
	Draft Monitoring Well Installation Rpt for RHMW06 and RHMW07	—	—	—	Mar
2014	4th Qtr 2014 GW Monitoring Rpt	Oct	Jan 2015	Oct	Jan 2015
	3rd Qtr 2014 GW Monitoring Rpt	Jul	Sep	Jul	Sep
	GW Sampling Rpt for Tank 5 Release Response on June 23 and 24	Jun 23, 24	Jul	—	—
	GW Sampling Rpt for Tank 5 Release Response on May 27 and 28	May 27, 28	Jun	—	—

Separate Reports for Inside- and Outside-Tunnel Wells		Inside-Tunnel Wells		Outside-Tunnel Wells	
Year	Title	Sampling Period	Submittal Date	Sampling Period	Submittal Date
[2014]	2nd Qtr 2014 GW Monitoring Rpt	Apr	Jun	Apr	Jun
	GW Sampling Rpt for Tank 5 Release Response on Apr 7	Apr	Apr	—	—
	GW Sampling Rpt for Tank 5 Release Response on March 25 and 26	Mar 25, 26	Apr	—	—
	GW Sampling Rpt for Tank 5 Release Response on March 10	Mar 10	Mar	—	—
	GW Sampling Rpt for Tank 5 Release Response on March 5 and 6	Mar 5, 6	Mar	—	—
	GW Sampling Rpt for Additional Sampling (Inside-Tunnel)/GW Monitoring Rpt for Additional Sampling of HDMW2253-03 (Outside-Tunnel)	Jan	Jan	Jan	Feb
	1st Qtr 2014 GW Monitoring Rpt	Jan	Apr	Jan	Apr
2013	4th Qtr 2013 GW Monitoring Rpt	Oct	Jan 2014	Oct	Jan 2014
	3rd Qtr 2013 GW Monitoring Rpt	Jul	Sep	Jul	Sep
	2nd Qtr 2013 GW Monitoring Rpt	Apr	Jul	Apr	Jul
	1st Qtr 2013 GW Monitoring Rpt	Jan	Apr	Jan	Apr
2012	4th Qtr 2012 GW Monitoring Rpt	Oct	Jan 2013	Nov	Jan 2013
	3rd Qtr 2012 GW Monitoring Rpt	Jul	Sep	Jul	Sep
	2nd Qtr 2012 GW Monitoring Rpt	Apr	Jul	Apr	Jul
	1st Qtr 2012 GW Monitoring Rpt	Jan, Feb	Oct	Jan	Mar
2011	4th Qtr 2011 GW Monitoring Rpt	Oct	Dec	Oct	Dec
	3rd Qtr 2011 GW Monitoring Rpt	Jul	Sep	Jul	Sep
	2nd Qtr 2011 GW Monitoring Rpt	Apr	Jun	Apr	Jun
	1st Qtr 2011 GW Monitoring Rpt	Jan	Mar	Jan	Mar
2010	4th Qtr 2010 GW Monitoring Rpt	Oct	Dec	Oct	Dec
	3rd Qtr 2010 GW Monitoring Rpt	Jul	Aug	Jul	Aug
	2nd Qtr 2010 GW Monitoring Rpt	Apr	May	Apr	May
	1st Qtr 2010 GW Monitoring Rpt	Jan, Feb, Mar	Apr	Jan	Apr
2009	4th Qtr 2009 GW Monitoring Rpt	Oct	Dec	Oct	Dec
	3rd Qtr 2009 GW Monitoring Rpt	Jul	Sep	Aug	Sep
	2nd Qtr 2009 GW Monitoring Rpt	May	Jul	—	—
	1st Qtr 2009 GW Monitoring Rpt	Feb	May	—	—
2008	4th Qtr 2008 GW Monitoring Rpt	Oct, Dec	Feb 2009	—	—
	3rd Qtr 2008 GW Monitoring Rpt	Jul	Oct	—	—
	2nd Qtr 2008 GW Monitoring Rpt	Apr	May	—	—
	1st Qtr 2008 GW Monitoring Rpt	Jan	Mar	—	—
2007	3rd Qtr 2007 GW Monitoring Results	Sep	Oct	—	—
	2nd Qtr 2007 GW Monitoring Results	Jun	Aug	—	—
	1st Qtr 2007 GW Monitoring Results	Mar	May	—	—
2006	4th Qtr 2006 GW Monitoring Results	Dec	Jan 2007	—	—
	3rd Qtr 2006 GW Monitoring Results	Jul	Sep	—	—
2005	4th Qtr 2005 GW Sampling Rpt	4th Qtr	Feb 2006	—	—
	3rd Qtr 2005 GW Sampling Rpt	3rd Qtr	Nov	—	—
	2nd Qtr 2005 GW Sampling Rpt	2nd Qtr	Aug	—	—
	1st Qtr 2005 GW Sampling Rpt	1st Qtr	Apr	—	—

— no data
GW groundwater
Qtr quarter
Rpt report

2. Groundwater Monitoring Activities

During the March 2020 sampling event, AECOM Technical Services, Inc. personnel collected groundwater samples from the five multilevel monitoring zones of newly installed (November 2019) multilevel monitoring well RHMW13. Of these five zones, primary and duplicate samples were collected from Zone 5 (RHMW13-05).This was the first groundwater sampling event for RHMW13.

During the Second Quarter (April) 2020 groundwater monitoring event, AECOM Technical Services, Inc. personnel collected groundwater samples from 19 monitoring locations within the Red Hill groundwater monitoring network in accordance with the *Sampling and Analysis Plan* and addenda (DON 2017b; 2017c; 2017d; 2018f). These include:

- The sampling point at Red Hill Shaft (RHMW2254-01)
- Eleven single-screen monitoring wells located within the Facility boundary (RHMW01 through RHMW10 and OWDFMW01)
- One deep monitor well located outside the Facility boundary at the Hālawa Correctional Facility (Hālawa Deep Monitor Well [HDMW2253-03])
- One sampling zone each at two multilevel monitoring wells (RHMW11 and RHMW14) located at the Hālawa Correctional Facility
- Three sampling zones at multilevel monitoring well RHMW13 and one sampling zone at multilevel monitoring well RHMW15, both wells located within the Facility boundary

Of the multilevel monitoring wells listed above, the following zones were sampled during this event:

- RHMW11 Zone 5, RHMW14 Zone 3, RHMW13 Zones 3 to 5, and RHMW15 Zone 5

The following multilevel monitoring zones were not sampled in this sampling event:

- RHMW11 Zones 1 to 4
- RHMW14 Zones 1 to 2
- RHMW13 Zones 1 to 2
- RHMW15 Zones 1 to 4 due to lack of detections of COPCs in previous monitoring events
- RHMW11 Zones 6 to 8 and RHMW14 Zones 4 to 8 due to the low hydraulic conductivity of the aquifer in these zones

Of the monitoring locations sampled during the Second Quarter (April) 2020 groundwater monitoring event, primary and field duplicate samples were collected from sampling point RHMW2254-01, monitoring well RHMW02, and multilevel monitoring well RHMW13 Zone 5 (RHMW13-05).

All samples were collected in accordance with the AOC Statement of Work Sections 6 and 7 WP/SOW (DON 2017a), SAP (DON 2017b; 2017c), SAP Addendum 01 (DON 2017d), and SAP Addendum 03 (DON 2018f). The WP/SOW and SAP are consistent with DOH underground storage tank release response requirements (Hawai'i Administrative Rules, Chapter 11-280.1), NAVFAC Pacific Environmental Restoration Program Project Procedure I-C-3, *Monitoring Well Sampling* (DON 2015b), and the Red Hill *Groundwater Protection Plan* (DON 2014). Prior to purging and sampling, ambient and headspace vapor readings (volatile organic compounds [VOCs], oxygen, hydrogen sulfide, carbon monoxide, and lower explosive levels of vapors) were measured using a MultiRAE multi-gas monitor at all inside-tunnel sampling locations, and VOCs were measured using a MiniRAE 3000

photoionization detector (PID) at all outside-tunnel sampling locations. The depth to groundwater was measured using Heron oil/water interface probes and calibrated Solinst water level measuring tapes (see Appendix B.2 for tape correction factors). No free product or sheen was observed in any of the wells. Monitoring well headspace PID detections occurred at RHMW03, RHMW05, RHMW13-04 (March 2020 event), RHMW13-05 (March 2020 event), and RHMW14-03. Field measurements and observations are presented in the groundwater purge logs in Appendix B.1.

2.1 GROUNDWATER SAMPLING

2.1.1 Single-Screen (Non-Multilevel) Monitoring Well Sampling

Prior to collecting groundwater samples, the non-multilevel monitoring wells were purged of standing water in the well casings. These monitoring locations each contain a dedicated bladder pump, which was used to purge the well and collect samples. The groundwater wells were purged using low-flow sampling methodology at flow rates of approximately 0.10–0.30 liter per minute to minimize VOC loss and drawdown.

To operate the pump, a portable air compressor with an in-line filter was connected to a QED Environmental Systems MicroPurge MP10 Controller, which was then connected to the pump. The compressor was turned on to power the pump, and the controller was used to adjust the pumping rate to less than 1 liter of water per minute. Compressed nitrogen gas was used to purge and sample these non-multilevel monitoring wells.

Water quality parameters were monitored on a periodic basis during well purging using an In-Situ Inc. smarTROLL multi-parameter handheld water quality meter. Parameters measured included total dissolved solids, pH, temperature, specific conductivity, dissolved oxygen (DO), turbidity, oxidation-reduction potential (ORP), and salinity. The water quality parameters were used to evaluate whether the natural characteristics of the aquifer formation water were present within the monitoring wells before the samples were collected. A minimum of five readings were collected at each well during the purging process. When feasible, water level measurements were collected and recorded during purging to detect indications of drawdown; if drawdown approaching 0.2 foot was detected, the rate of low-flow purging was reduced. Purging was considered complete when at least three consecutive water quality measurements stabilized within the specified range for each parameter noted in groundwater sampling logs (Appendix B.1) and in accordance with NAVFAC Pacific Environmental Restoration Program Project Procedure I-C-3, *Monitoring Well Sampling* (DON 2015b). The readings were recorded in the groundwater sampling logs (Appendix B.1).

Once water quality parameters stabilized, groundwater samples were immediately collected from the wells using the bladder pumps. Groundwater samples from these non-multilevel monitoring wells were collected no more than 2.5 hours after purging was completed. Groundwater samples were collected in sample containers that were pre-preserved (as necessary) and provided by the analytical laboratory. Samples collected for ferrous iron analysis were filtered in the field using new, individual 0.45-micron filters attached at the end of the pump/probe discharge tubing.

2.1.2 Multilevel Monitoring Well Sampling

Due to the multilevel design of monitoring wells RHMW11, RHMW13, RHMW14, and RHMW15, purging was not required immediately prior to collecting groundwater from the sampled monitoring zone, since the measurement ports allow groundwater to flow directly from the surrounding formation and there is no filter pack. Groundwater was collected using sampling probes from the following multilevel monitoring zones:

- *RHMW11:* Zone 5 (located within the basalt layer at 285.3 feet bgs).

- *RHMW13:*
  - During the March 2020 event: Zone 1 (located at 412.0 feet bgs), Zone 2 (at 325.8 feet bgs), Zone 3 (at 286.5 feet bgs), Zone 4 (at 243.3 feet bgs), and Zone 5 (at 230.3 feet bgs). These zones are within the relatively hydraulically conductive portions of the basalt formation, and Zone 5 is located near the basal aquifer water table.
  - During the April 2020 event: Zone 3, Zone 4, and Zone 5.
- *RHMW14:* Zone 3 (located at 325.1 feet bgs, within the relatively hydraulically conductive portions of the basalt formation).
- *RHMW15:* Zone 5 (located at 292.0 feet bgs, within the relatively hydraulically conductive portions of the basalt formation and near the basal aquifer water table).

A string of four sealed 250-milliliter (mL) sample containers was connected to the sampling probe, which was lowered to each monitoring zone, and the containers filled with groundwater from the formation through a sampling port in the central casing of the well. Once sampling containers were filled, the sampling port was closed, and the probe and container string were brought to the surface. The groundwater was then transferred to the appropriate laboratory-supplied containers. For collection of groundwater quality parameters, the sample containers were flushed with nitrogen to remove air from within the containers prior to collection of groundwater. The nitrogen flush was performed to minimize DO enrichment due to high water pressure in the formation, which would otherwise have forced air in the sample containers to mix into the groundwater collected. Groundwater quality parameters were collected at least three times during the sampling of each multilevel monitoring well zone and recorded in the groundwater sampling logs (Appendix B.1). Observations of groundwater DO enrichment were presented in the *First Quarter 2018 Groundwater Monitoring Report* (DON 2018g).

Groundwater samples were collected in sampling containers that were pre-preserved (as necessary) and provided by the analytical laboratory. Samples collected for ferrous iron were filtered in the field using new, individual 0.45-micron filters attached at the end of the pump/probe discharge tubing.

Groundwater sampling at multilevel monitoring well zones requires a few hours for each zone due to the limited volume (1 liter) collected from each deployment of the sample container string. During the Second Quarter 2019 monitoring event, a one-time evaluation was conducted to evaluate whether the groundwater geochemistry changes during the sampling duration. Three additional aliquots of groundwater (from run #2, run #7, and run #13) were collected from RHMW11-05 and analyzed for anions and alkalinity. The results indicated that the groundwater geochemistry is consistent during the 4-hour sampling duration at RHMW11-05. Data related to these samples were presented in the *Second Quarter 2019 Groundwater Monitoring Report* (DON 2019c).

The analytical program for the March 2020 sampling event and the Second Quarter (April) 2020 groundwater monitoring event is shown in Table 2-1.

Table 2-1: Groundwater Sampling Program for the March 2020 Sampling Event and Second Quarter (April) 2020 Quarterly Monitoring Event

Parameter	Analytical Method	Analyte(s) [a]	Screening Criterion (µg/L) [a]	RHMW2254-01	RHMW01	RHMW02	RHMW03	RHMW04	RHMW05	RHMW06	RHMW07	RHMW08	RHMW09	RHMW10	RHMW11-05	RHMW13-01	RHMW13-02	RHMW13-03	RHMW13-04	RHMW13-05	RHMW14-03	RHMW15-05	HDMW2253-03	OWDFMW01
TPH	EPA 8260	TPH-g	300	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ [f]	✓ [f]	✓ [g]	✓ [g]	✓ [g]	✓	✓	✓	✓
	EPA 8015	TPH-d	400	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ [f]	✓ [f]	✓ [g]	✓ [g]	✓ [g]	✓	✓	✓	✓
		TPH-o	500	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ [f]	✓ [f]	✓ [g]	✓ [g]	✓ [g]	✓	✓	✓	✓
TPH with SGC [c]	EPA 3630/8015	TPH-d	400	—	—	✓	✓	—	—	✓	✓	✓	—	—	✓	—	—	—	✓ [g]	✓ [g]	✓	—	—	✓
		TPH-o	500	—	—	✓	✓	—	—	✓	✓	✓	—	—	✓	—	—	—	✓ [g]	✓ [g]	✓	—	—	✓
VOCs	EPA 8260	Benzene	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ [f]	✓ [f]	✓ [g]	✓ [g]	✓ [g]	✓	✓	✓	✓
		Ethyl Benzene	30	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ [f]	✓ [f]	✓ [g]	✓ [g]	✓ [g]	✓	✓	✓	✓
		Toluene	40	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ [f]	✓ [f]	✓ [g]	✓ [g]	✓ [g]	✓	✓	✓	✓
		Total Xylenes	20	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ [f]	✓ [f]	✓ [g]	✓ [g]	✓ [g]	✓	✓	✓	✓
PAHs	EPA 8270 SIM	1-Methylnaphthalene	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ [f]	✓ [f]	✓ [g]	✓ [g]	✓ [g]	✓	✓	✓	✓
		2-Methylnaphthalene	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ [f]	✓ [f]	✓ [g]	✓ [g]	✓ [g]	✓	✓	✓	✓
		Naphthalene	17	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ [f]	✓ [f]	✓ [g]	✓ [g]	✓ [g]	✓	✓	✓	✓
Fuel Additives	EPA 8270	Phenol	300	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ [f]	✓ [f]	✓ [g]	✓ [g]	✓ [g]	✓	✓	✓	✓
	Lab Procedure	2-(2-Methoxyethoxy)Ethanol	800 [b]	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ [f]	✓ [f]	✓ [g]	✓ [g]	✓ [g]	✓	✓	✓	✓
Lead Scavengers [d]	EPA 8011	1,2-Dibromoethane	0.04	—	—	—	—	—	—	—	—	—	—	—	—	✓ [f]	✓ [f]	✓ [g]	✓ [g]	✓ [g]	✓	✓	—	—
	EPA 8260	1,2-Dichloroethane	5	—	—	—	—	—	—	—	—	—	—	—	—	✓ [f]	✓ [f]	✓ [g]	✓ [g]	✓ [g]	✓	✓	—	—
NAPs	Field parameter	DO, ORP	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ [f]	✓ [f]	✓ [g]	✓ [g]	✓ [g]	✓	✓	✓	✓
	SM 3500-Fe	Ferrous Iron	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ [f]	✓ [f]	✓ [g]	✓ [g]	✓ [g]	✓	✓	✓	✓
	RSK 175M	Methane	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ [f]	✓ [f]	✓ [g]	✓ [g]	✓ [g]	✓	✓	✓	✓
	EPA 300.0	Nitrate, Sulfate, Chloride	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ [f]	✓ [f]	✓ [g]	✓ [g]	✓ [g]	✓	✓	✓	✓
	EPA 353.2	Nitrate-Nitrite as Nitrogen	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ [f]	✓ [f]	✓ [g]	✓ [g]	✓ [g]	✓	✓	✓	✓
	EPA 2320	Carbonate, Bicarbonate, and Total Alkalinity	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ [f]	✓ [f]	✓ [g]	✓ [g]	✓ [g]	✓	✓	✓	✓
	EPA 9060A	TOC	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ [f]	✓ [f]	✓ [g]	✓ [g]	✓ [g]	✓	✓	✓	✓
		DOC	—	—	—	—	—	—	—	—	—	—	—	—	—	✓ [f]	✓ [f]	✓ [f]	✓ [f]	✓ [f]	—	—	—	—
General Chemistry [e]	EPA 300.0	Bromide, Fluoride	—	—	—	—	—	—	—	—	—	—	—	—	—	✓ [f]	✓ [f]	✓ [f]	✓ [f]	✓ [f]	—	—	—	—
	SM 4500-Si D	Total Silica and Dissolved Silica	—	—	—	—	—	—	—	—	—	—	—	—	—	✓ [f]	✓ [f]	✓ [f]	✓ [f]	✓ [f]	—	—	—	—
	EPA 6010	Total Calcium, Magnesium, Manganese, Potassium, and Sodium	—	—	—	—	—	—	—	—	—	—	—	—	—	✓ [f]	✓ [f]	✓ [f]	✓ [f]	✓ [f]	—	—	—	—

— not available/not analyzed
✓ analyzed
DOC dissolved organic carbon
[a] COPCs and associated screening criteria were provided in the February 4, 2016, AOC Statement of Work Sections 6 and 7 scoping completion letter from the Regulatory Agencies (EPA Region 9 and DOH 2016) and updated with the most current DOH Tier 1 EALs in Table D-1b (DOH 2017) where appropriate.
[b] Screening criterion is from EPA Tap Water Regional Screening Levels, target hazard quotient = 1.0, November 2019 (EPA 2019).

[c] TPH-d and TPH-o with SGC were analyzed only in samples with positive detections of TPH-d and TPH-o without SGC and: 1) sample results show a chromatographic signature not indicative of laboratory contamination; 2) the TPH-d and/or TPH-o without SGC concentrations were greater than 300 µg/L; or 3) based on laboratory analyst judgment.

[d] Lead scavengers are collected only from newly installed monitoring wells for at least 1 year of sampling, and may be discontinued if sample results are below the Groundwater Action Levels established in the February 4, 2016, scoping completion letter (EPA Region 9 and DOH 2016). Lead scavenger analysis was performed during the March 2020 sampling event for RHMW13 Zones 1 to 5 and during the Second Quarter 2020 monitoring event for RHMW13 Zones 3 to 5, RHMW14 Zone 3, and RHMW15 Zones 5, which have not yet completed the minimum 1 year of sampling. The lead scavenger requirement has been completed for all other monitoring locations as of the Fourth Quarter 2018 monitoring event.

[e] General groundwater chemistry parameters are collected during at least one sampling event for all monitoring wells in accordance with SAP Revision 01 (DON 2017c). General groundwater chemistry was performed only for RHMW13 Zones 1 to 5 during the March 2020 sampling event. General groundwater chemistry parameters for all other monitoring locations have been sampled in previous monitoring events.

[f] Analyzed during the March 2020 sampling event for RHMW13 only, and not analyzed during the Second Quarter (April) 2020 quarterly monitoring event.

[g] Analyzed during both the March 2020 sampling event and Second Quarter (April) 2020 quarterly monitoring event.

2.2 FIELD QUALITY ASSURANCE/QUALITY CONTROL

A quality assurance/quality control (QA/QC) program was implemented in the field in accordance with the NAVFAC Pacific *Project Procedures Manual* (DON 2015b), DOH TGM (DOH 2018), the project WP (DON 2015c), AOC Statement of Work Sections 6 and 7 WP/SOW (DON 2017a), SAP (DON 2017b; 2017c), SAP Addendum 01 (DON 2017d), and SAP Addendum 03 (DON 2018f) to support generating data of known and defensible quality. The QA/QC program was designed to minimize error, provide early identification and correction of potential problems, and evaluate the performance of the sampling program.

Field instruments were calibrated each morning prior to starting field activities. The PID was calibrated with 100 parts per million (ppm) isobutylene calibration gas. The multi-gas monitor was calibrated with 100 ppm isobutylene calibration gas and a multi-gas monitor calibration gas composed of 50 ppm carbon monoxide, 25 ppm dihydrogen sulfide, 19 percent oxygen, and 50 percent of the lower explosive limit of methane. The water quality meter was calibrated with an auto-calibration solution prior to recording measurements.

To assess the effectiveness of the equipment decontamination process, one equipment blank sample was collected from the reusable sample container used during the multilevel monitoring well zone sampling. The equipment blank sample was collected on site by pouring distilled water into the decontaminated multilevel well sample container string and then into the sample containers. A field blank sample was also collected to assess the quality of the locally sourced Menehune Water Company distilled water used to collect the equipment blank. The field blank was collected by pouring distilled water directly into sample containers. The field blank and equipment blank samples were analyzed for the same COPCs as the groundwater samples.

As all non-multilevel monitoring locations have dedicated bladder pumps installed, no field and equipment blanks were collected from non-multilevel monitoring locations.

To help assess the precision of the data collection activity, including sampling and analysis, field duplicates were collected at the same approximate time as their respective primary samples. During the March 2020 sampling event, one field duplicate was collected from RHMW13 Zone 5; during the Second Quarter (April) 2020 monitoring event, one field duplicate each was collected from RHMW2254-01, RHMW02, and RHMW13 Zone 5.

One trip blank was used at each sampling location to accurately represent the condition of the samples in each shipment. The hermetically sealed trip blank samples were supplied pre-filled by the analytical laboratory and remained with the associated groundwater sample in the cooler during the field event and transported to and from the site.

2.3 SAMPLE HANDLING AND ANALYSIS

The samples were labeled and logged in accordance with NAVFAC Pacific Environmental Restoration Program Project Procedure III-E, *Record Keeping, Sample Labeling, and Chain-of-Custody Procedures* (DON 2015b). Immediately after collection, all samples were labeled, logged in the field logbooks, custody-sealed, sealed with tape, and placed in a resealable plastic bag. To meet the recommended holding time for nitrate analysis, efforts were made to ship samples to the laboratory on the day of collection. Samples not shipped on the day of collection were stored in secure and controlled cold storage overnight and shipped the following day.

Prior to shipping, the samples were logged in a chain-of-custody form and loaded into a cooler with double-bagged wet ice. Packed coolers were sent by field personnel via express-courier overnight shipping in custody-sealed coolers to Agriculture & Priority Pollutants Laboratories, Inc. in Clovis,

California. Sample transport and custody details are provided in the chain-of-custody records in the laboratory reports in Appendix C.1.

2.4 DECONTAMINATION

Decontamination activities were performed in accordance with NAVFAC Pacific Environmental Restoration Program Project Procedure I-F, *Equipment Decontamination* (DON 2015b). A staging and decontamination area was established near each well location. Non-disposable sampling equipment (e.g., water level meter, oil/water interface probe, and multilevel monitoring well sample container string) was decontaminated at the beginning of each day and after purging and sampling each well. The decontamination process included washing and scrubbing the equipment with stiff-bristled nylon brushes and a non-phosphate detergent (e.g., Alconox) solution, followed by rinsing once with isopropyl alcohol and twice with distilled water. Liquid wastes generated during decontamination activities were captured and containerized in properly labeled, U.S. Department of Transportation-approved 55-gallon drums or other suitable temporary containers and managed as investigation-derived waste (IDW).

2.5 INVESTIGATION-DERIVED WASTE MANAGEMENT

IDW generated during the monitoring events consisted of purged groundwater from the monitoring wells and decontamination water. The IDW was handled, stored, and labeled in accordance with NAVFAC Pacific Environmental Restoration Program Project Procedure I-A-6, *Investigation-Derived Waste Management* (DON 2015b). Approximately 110 gallons of fluid from all wells were containerized in three clearly labeled, 55-gallon-capacity drums, covered with a tarp, and stored on site in an area designated by the Navy, pending disposal. Disposable personal protective equipment and sampling equipment and supplies were collected in plastic trash bags and disposed of as municipal waste.

3. Data Evaluation and Quality Assessment

Field observations and measurements and laboratory groundwater analytical results collected during the March 2020 sampling event and Second Quarter (April) 2020 groundwater monitoring event were evaluated along with available correction factors and historical groundwater concentrations. A data quality assessment consisting of a review of the overall groundwater sample collection and analysis process was performed to determine whether the analytical data generated met the quality objectives for the project. The data quality assessment was performed in accordance with the AOC Statement of Work Sections 6 and 7 WP/SOW (DON 2017a) and the SAP and addenda (DON 2017b; 2017c; 2017d; 2018f). The field QC program consisted of standardized sample collection and management procedures and the collection of field duplicate samples, matrix spike (MS) samples, and trip blank samples. The laboratory QA program consisted of the use of standard analytical methods and the preparation and analyses of MS/MS duplicate (MSD) samples, surrogate spikes, blanks, and laboratory control samples (LCSs)/LCS duplicates (LCSDs).

3.1 GROUNDWATER LEVEL MEASUREMENTS

Depths to groundwater were gauged from the notched and surveyed top of casing using calibrated water level measuring tapes at non-multilevel monitoring well locations prior to sampling (Table 3-1). Additionally, a Heron or Solinst oil/water interface probe was used to detect nonaqueous-phase liquid, which was measured if present.

The oil/water interface probe and water level measuring tapes were decontaminated between well measurements by washing with a non-phosphate detergent solution and rinsing with isopropyl alcohol and distilled water to prevent cross-contamination. Measuring points for all wells are detailed in three well elevation survey reports (DON 2019a) and presented in Table 3-1.

Table 3-1: Groundwater Elevations

Monitoring Well No.	Sampling Date	PID Reading at Wellhead (ppm)	Depth to Water (ft btoc) [a]	Measuring Tape Correction Factor [Tape ID] (ft) [b]	Well Horizontal Displacement Correction Factor (ft) [c]	Corrected Depth to Water (ft btoc)	Measuring Point Elevation (ft msl) [d]	Groundwater Elevation (ft msl)
RHMW2254-01	4/23/2020	0.0	— [h]	—	—	—	100.4501	—
RHMW01	4/20/2020	0.0	82.89	-0.02 [N-1]	—	82.87	101.9955	19.13
RHMW02	4/22/2020	0.0	85.64	-0.02 [N-1]	-0.06	85.56	104.5970	19.04
RHMW03	4/20/2020	0.2 [e]	101.85	-0.03 [N-1]	-0.04	101.78	120.8980	19.12
RHMW04	4/22/2020	0.0	293.26	-0.03 [N-2]	-0.02	293.21	312.1062	18.90
RHMW05	4/21/2020	0.2 [e]	82.34	-0.02 [N-1]	-0.01	82.31	101.3102	19.00
RHMW06 [f]	4/20/2020	0.0	240.26	-0.02 [N-2]	-0.01	240.23	259.1275	18.90
RHMW07 [f]	4/20/2020	0.0	197.45	-0.02 [N-2]	-0.01	197.42	220.4517	23.03
RHMW08 [f]	4/20/2020	0.0	291.60	-0.03 [N-2]	-0.03	291.54	310.4817	18.94
RHMW09 [f]	4/21/2020	0.0	376.84	-0.04 [N-2]	-0.24	376.56	395.4299	18.87
RHMW10 [f]	4/21/2020	0.0	476.83	-0.04 [N-2]	-0.09	476.70	495.6388	18.94
RHMW11-05 [g]	4/20/2020	0.0	—	—	-0.09	—	—	—
RHMW13-01 [g]	3/3/2020	0.0	—	—	— [i]	—	—	—
RHMW13-02 [g]	3/4/2020	0.0	—	—	— [i]	—	—	—
RHMW13-03 [g]	3/5/2020	0.0	—	—	— [i]	—	—	—
RHMW13-03 [g]	4/23/2020	0.0	—	—	— [i]	—	—	—
RHMW13-04 [g]	3/9/2020	0.3 [e]	—	—	— [i]	—	—	—
RHMW13-04 [g]	4/27/2020	0.0	—	—	— [i]	—	—	—
RHMW13-05 [g]	3/10/2020	2.6 [e]	—	—	— [i]	—	—	—
RHMW13-05 [g]	4/28/2020	0.0	—	—	— [i]	—	—	—
RHMW14-03 [g]	4/21/2020	2.9 [e]	—	—	— [i]	—	—	—
RHMW15-05 [g]	4/22/2020	0.0	—	—	— [i]	—	—	—
HDMW2253-03	4/23/2020	0.0	206.85	-0.02 [N-2]	-0.01	206.82	226.6812	19.86
OWDFMW01	4/22/2020	0.0	119.31	-0.03 [N-1]	-0.03	119.25	138.1361	18.89

— not applicable
btoc below top of casing
ft foot or feet
msl mean sea level

[a] Depth to water readings were taken using the calibrated water level measuring tapes.
[b] Water level measuring tape calibration information and correction factors are presented in Appendix B.2.
[c] Well horizontal displacement correction factor based on gyroscopic survey of the monitoring well's vertical plumbness. Correction factors are presented in the *Technical Memorandum, Gyroscopic Survey Results and Calculated Correction Factors for Groundwater Monitoring Network Wells at the Red Hill Bulk Fuel Storage Facility* (DON 2018d).
[d] Well Elevation Survey Reports: (DON 2018c; 2018e; 2019a).
[e] Ambient PID measurements were 0.0 ppm except at RHMW13-05 and RHMW14-03 (0.1 ppm and 2.9 ppm, respectively).
[f] Depth to water is measured from the top of the gray plate at monitoring wells RHMW06, RHMW07, RHMW08, RHMW09, and RHMW10.
[g] Depth to water measurements cannot be measured in multilevel monitoring wells RHMW11, RHMW13, RHMW14, and RHMW15.
[h] Depth to water at the Red Hill Shaft sampling point was not measured due to safety concerns related to entering the shaft access manhole.
[i] The horizontal displacement correction factor for the zones in multilevel wells RHMW13, RHMW14, and RHMW15 are currently unavailable but will be published in a forthcoming deliverable.

Groundwater elevations beneath and near the site ranged from 18.87 to 23.03 feet above mean sea level during the Second Quarter (April) 2020 groundwater monitoring event; groundwater elevations were not collected during the March 2020 sampling event, in which only RHMW13 (a multilevel monitoring well) was sampled. Graphs of cumulative historical depth to water readings are presented in Appendix A.4.

PID readings at the wellheads ranged from 0.0 to 2.9 ppm, with PID detections at RHMW03, RHMW05, RHMW13-04 (March 2020 event only), RHMW13-05 (March 2020 event only), and RHMW14-03. The highest PID detection was at RHMW14-03 at 2.9 ppm; however, PID measurements of ambient conditions was also 2.9 ppm. No odor, sheen, or nonaqueous-phase liquid was observed during sampling at all locations. It was noted that the groundwater collected from HDMW2253-03 showed a slight rust color during the beginning of the sample collection. All other groundwater samples were observed as clear of color and sediment.

Because of safety concerns related to entering the Red Hill Shaft access manhole, depth to groundwater measurement at RHMW2254-01 is no longer collected starting from the Second Quarter 2019 groundwater monitoring event. Additionally, due to the design of the multilevel monitoring wells, depths to groundwater cannot be measured in the monitoring zones of RHMW11, RHMW13, RHMW14, and RHMW15.

3.2 ANALYTICAL RESULTS

The following chemicals were analyzed for during these monitoring events:

- TPH-d and TPH-o by EPA SW846 Test Method 8015B
- TPH-g, benzene, toluene, ethylbenzene, and xylenes by EPA Method 8260B
- 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene by EPA Method 8270D SIM
- Phenol by EPA Method 8270D
- 2-(2-methoxyethoxy)-ethanol by a proprietary laboratory procedure
- Nitrate, chloride, and sulfate by EPA Method 300.0
- Nitrate-nitrite as nitrogen, methane, ferrous iron, and alkalinity by EPA 353.2, RSK175, SM 3500-Fe-B, and SM2320B, respectively
- Total organic carbon (TOC) by EPA Method 9060A
- Dissolved organic carbon (DOC) by EPA Method 9060A (March 2020 sampling event only)
- Total and dissolved silica by SM 4500-SiD (March 2020 sampling event only)
- Bromide and fluoride by EPA Method 300.0 (March 2020 sampling event only)
- Total calcium, magnesium, manganese, potassium, and sodium by EPA Method 6010C (March 2020 sampling event only)

The chemicals analyzed and the respective analytical methods for each groundwater sample are identified in Table 3-2. Copies of the laboratory reports are presented in Appendix C.1. Copies of the third-party data validation reports are presented in Appendix C.2.

Analytical results were compared to the current LTM screening criteria as established by the February 4, 2016, AOC Statement of Work Sections 6 and 7 scoping completion letter (EPA Region 9 and DOH 2016) and updated with the most recent DOH (2017) Tier 1 EALs in Table D-1b (Section 1.2). The field and QC sample results of the First Quarter 2020 groundwater monitoring event are summarized in Table 3-2.

Table 3-3: Groundwater and QC Sample Results for the March 2020 Sampling Event and the Second Quarter 2020 Quarterly Groundwater Monitoring Event
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

						Location	RHMW2254-01	RHMW2254-01	RHMW01	RHMW02	RHMW02	RHMW03	RHMW04	RHMW05	RHMW06	RHMW07	RHMW08	RHMW09	RHMW10	RHMW11-05	RHMW13-01	RHMW13-02
						COC ID	ERH1039	ERH1040	ERH1042	ERH1044	ERH1045	ERH1047	ERH1049	ERH1051	ERH1053	ERH1055	ERH1057	ERH1059	ERH1061	ERH1070	ERH1023	ERH1025
						Collection Date	2020-04-23	2020-04-23	2020-04-20	2020-04-22	2020-04-22	2020-04-20	2020-04-22	2020-04-21	2020-04-20	2020-04-20	2020-04-20	2020-04-21	2020-04-21	2020-04-20	2020-03-03	2020-03-04
						Sample Type	N	FD	N	N	FD	N	N	N	N	N	N	N	N	N	N	N
						FD Parent Sample	—	ERH1039	—	—	ERH1044	—	—	—	—	—	—	—	—	—	—	—
Analyte	**CAS No.**	**Method**	**Criteria**	**SSRBL [a]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Chemicals of Potential Concern																						
Benzene	71-43-2	8260B	5	750	µg/L	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U
Ethylbenzene	100-41-4	8260B	30	—	µg/L	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
Toluene	108-88-3	8260B	40	—	µg/L	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U
Xylenes	1330-20-7	8260B	20	—	µg/L	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U
TPH-g (C6-C10)	PHCC6C10	8260B	300	—	µg/L	< 18.0 U	< 18.0 U	< 18.0 U	**49**	**63**	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U
TPH-d (C10-C24) [b, c]	PHCC10C24	8015B_E	400	4500	µg/L	**180 J ***	**280 J ***	**190 J ***	**1700 J**	**1500 J**	**220 J**	**240 J ***	< 300.0 U	< 300.0 U	< 300.0 UJ	**150 J ***	< 300.0 U	< 300.0 U	< 260 U *	< 300.0 U	< 300.0 U
TPH-d (C10-C24) with Silica Gel Cleanup	PHCC10C24SGC	8015B_E	400	—	µg/L	—	—	< 300.0 U	**350**	**310 J**	< 300.0 U	—	—	< 300.0 U	< 300.0 U	< 300.0 U	—	—	< 300.0 U	—	—
TPH-o (C24-C40) [b, c]	PHCC24C40	8015B_E	500	—	µg/L	< 300.0 U	< 300.0 U	< 300.0 U	**260 J**	**290 J**	**240 J**	< 300.0 U	< 300.0 U	< 300.0 U	< 300.0 U	**150 J ***	**170 J ***	< 300.0 U	< 300.0 U	**240 J ***	< 300.0 U	< 300.0 U
TPH-o (C24-C40) with Silica Gel Cleanup	PHCC24C40SGC	8015B_E	500	—	µg/L	—	—	< 300.0 U	< 300.0 U	< 300.0 U	< 300.0 U	—	—	< 300.0 U	< 300.0 U	< 300.0 U	—	—	< 300.0 U	—	—
1-Methylnaphthalene	90-12-0	8270DSIM	10	—	µg/L	< 0.10 U	< 0.10 U	< 0.10 U	**13**	**13**	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U
2-Methylnaphthalene	91-57-6	8270DSIM	10	—	µg/L	< 0.10 U	< 0.10 U	< 0.10 U	**12**	**11**	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U
Naphthalene	91-20-3	8270DSIM	17	—	µg/L	< 0.10 U	< 0.10 U	< 0.10 U	**33**	**32**	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U
Fuel Additives																						
Phenol	108-95-2	8270D	300	—	µg/L	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U
2-(2-Methoxyethoxy)-ethanol	111-77-3	8270D	800	—	µg/L	< 80.0 U	< 80.0 U	< 80.0 U	< 80.0 U	< 80.0 U	< 80.0 U	< 80.0 U	< 80.0 U	< 80.0 U	< 80.0 U	< 80.0 U	< 80.0 U	< 80.0 U	< 80.0 U	< 80.0 U	< 80.0 UJ	< 80.0 UJ
Lead Scavengers																						
1,2-Dibromomethane (Ethylene Dibromide)	106-93-4	8011	0.04	—	µg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.019 U	< 0.019 U
1,2-Dichloroethane	107-06-2	8260B	5	—	µg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.30 U	< 0.30 U
Natural Attenuation Parameters																						
Methane	74-82-8	RSK175	—	—	µg/L	< 1.00 U	—	**790**	**6700**	—	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U
Iron, Ion (Fe2+)	ALK	2320B	—	—	mg/L	< 0.32 U	—	**0.35 J**	**2.0**	—	< 0.32 U	< 0.32 U	< 0.32 U	< 0.32 U	< 0.32 U	< 0.32 U	< 0.32 U	< 0.32 U	< 0.32 U	< 0.32 U	< 0.32 U	< 0.32 U
Nitrate (as NO3 anion)	15438-31-0	3500-FE-B	—	—	mg/L	**2.6**	—	**0.80**	< 0.18 U	—	**7.3**	**2.3**	**3.4**	**2.6**	**4.5**	**6.2**	**2.0**	**2.1**	< 0.18 UJ	< 1.3 UJ	< 1.5 U
Sulfate (as SO4)	14797-55-8_A	300.0	—	—	mg/L	**16.0**	—	**5.4**	**0.92 J**	—	**47.7**	**9.7**	**33.8**	**70.3**	**83.2**	**37.6**	**9.2**	**6.9**	**11.2**	**6.4**	**5.5**
Chloride (as Cl)	14808-79-8	300.0	—	—	mg/L	**88.5 J**	—	**41.8**	**42.4**	—	**46.3**	**72.8**	**128**	**301**	**415**	**143**	**55.6**	**41.7**	**50.8**	**41.8**	**26.5**
Nitrogen, Nitrate-Nitrite	16887-00-6	300.0	—	—	mg/L	**0.66**	—	**0.13**	< 0.090 U	—	**1.6**	**0.47**	**0.76**	**0.59**	**1.0**	**1.5**	**0.46**	**0.41**	< 0.090 U	**0.31 J**	**0.36**
Bicarbonate	71-52-3	2320B	—	—	mg/L	**63.8 J**	—	**83.5**	**185**	—	**286**	**75.5**	**86.9**	**103**	**101**	**98.7**	< 1.70 U	**67.5**	**112**	**51.8**	**70.7**
Carbonate (As CO3)	3812-32-6	2320B	—	—	mg/L	< 1.70 U	—	< 1.70 U	< 1.70 U	—	< 1.70 U	< 1.70 U	< 1.70 U	< 1.70 U	< 1.70 U	< 1.70 U	**48.8**	< 1.70 U	< 1.70 U	< 1.70 U	< 1.70 U
Alkalinity, Total (As CaCO3)	NO3NO2N	353.2	—	—	mg/L	**63.8 J**	—	**83.5**	**185**	—	**286**	**75.5**	**86.9**	**103**	**101**	**98.7**	**53.2**	**67.5**	**112**	**51.8 J**	**70.7 J**
Total Organic Carbon	TOC	9060A	—	—	mg/L	**0.16 J**	—	**0.69 J**	**3.5 J**	—	**1.5**	**0.25 J**	**0.39 J**	**0.19 J**	**0.28 J**	**0.64 J**	**0.19 J**	**0.19 J**	**0.76 J**	**7.0 J**	**7.0 J**
Dissolved Organic Carbon	DOC	9060A	—	—	mg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	**19.9 J**	**0.32 J**
Dissolved Oxygen	—	Field	—	—	mg/L	**8.99**	—	**0.78**	**0.72**	—	**1.12**	**8.52**	**8.61**	**6.64**	**4.42**	**4.39**	**8.30**	**8.12**	**1.05**	**2.52**	**1.00**
Oxidation-Reduction Potential	—	Field	—	—	mV	**88.4**	—	**-0.9**	**-40.0**	—	**56.7**	**113.6**	**87.7**	**51.5**	**54.7**	**42.6**	**57.8**	**69.2**	**169.6**	**121.7**	**155.0**
General Chemistry																						
Bromide	24959-67-9	300.0	—	—	mg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	**0.21 J**	**0.19 J**
Fluoride	16984-48-8	300.0	—	—	mg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.09 U	< 0.09 U
Total Silica	7631-86-9	4500-SIO2-C	—	—	mg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	**40.4**	**47.9**
Dissolved Silica	7631-86-9	4500-SIO2-C	—	—	mg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	**41.6**	**42.9**
Total Calcium	7440-70-2	6010C	—	—	µg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	**12100**	**10300**
Total Magnesium	7439-95-4	6010C	—	—	µg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	**9320**	**9710**
Total Manganese	7439-96-5	6010C	—	—	µg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	**2.6 J**	**5.9 J**
Total Potassium	7440-09-7	6010C	—	—	µg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	**1870 J**	**1700 J**
Total Sodium	7440-23-5	6010C	—	—	µg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	**21600**	**23500**
Tentatively Identified Compounds																						
2-Ethyl-1-Hexanol	104-76-7	8270D	—	—	µg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cis-1-Butyl-2-Methylcyclopropane	38851-69-3	8270D	—	—	µg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Octadecanoic Acid	57-11-4	8270D	—	—	µg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Table 3-3: Groundwater and QC Sample Results for the March 2020 Sampling Event and the Second Quarter 2020 Quarterly Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

						Location	RHMW13-03	RHMW13-03	RHMW13-04	RHMW13-04	RHMW13-05	RHMW13-05	RHMW13-05	RHMW13-05	RHMW14-03	RHMW15-05	HDMW2253-03	OWDFMW01	Multilevel Well QC (March)		Multilevel Well QC (April)	
						COC ID	ERH1027	ERH1076	ERH1029	ERH1078	ERH1031	ERH1032	ERH1080	ERH1081	ERH1072	ERH1074	ERH1065	ERH1063	ERH1034	ERH1035	ERH1067	ERH1068
						Collection Date	2020-03-05	2020-04-23	2020-03-09	2020-04-27	2020-03-10	2020-03-10	2020-04-28	2020-04-28	2020-04-21	2020-04-22	2020-04-23	2020-04-22	2020-03-04	2020-03-04	2020-04-20	2020-04-20
						Sample Type	N	N	N	N	N	FD	N	FD	N	N	N	N	FB	EB	FB	EB
						FD Parent Sample	—	—	—	—	—	ERH1031	—	ERH1080	—	—	—	—	—	—	—	—
Analyte	**CAS No.**	**Method**	**Criteria**	**SSRBL [a]**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Chemicals of Potential Concern																						
Benzene	71-43-2	8260B	5	750	µg/L	< 0.30 UJ	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U
Ethylbenzene	100-41-4	8260B	30	—	µg/L	< 0.50 UJ	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
Toluene	108-88-3	8260B	40	—	µg/L	< 0.30 UJ	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U
Xylenes	1330-20-7	8260B	20	—	µg/L	< 0.30 UJ	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U
TPH-g (C6-C10)	PHCC6C10	8260B	300	—	µg/L	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U
TPH-d (C10-C24) [b, c]	PHCC10C24	8015B_E	400	4500	µg/L	< 300.0 U	< 200 UJ *	**220 J ***	< 160 U *	**240 J ***	**200 J ***	< 210 U *	< 180 U *	< 300.0 U	< 160 UJ *	**190 J ***	**450 J ***	< 300.0 U	< 300.0 U	< 300.0 U	< 300.0 U
TPH-d (C10-C24) with Silica Gel Cleanup	PHCC10C24SGC	8015B_E	400	—	µg/L	—	—	< 300.0 U	< 300.0 U	< 300.0 U	< 300.0 U	< 300.0 U	< 300.0 U	< 300.0 U	—	—	< 300.0 U	—	—	< 300.0 U	< 300.0 U
TPH-o (C24-C40) [b, c]	PHCC24C40	8015B_E	500	—	µg/L	< 300.0 U	< 300.0 U	**240 J ***	< 300.0 U	**240 J ***	**170 J ***	< 300.0 U	< 300.0 U	**150 J ***	< 300.0 U	< 300.0 U	**280 J ***	< 300.0 U	< 300.0 U	< 300.0 U	< 300.0 U
TPH-o (C24-C40) with Silica Gel Cleanup	PHCC24C40SGC	8015B_E	500	—	µg/L	—	—	< 300.0 U	< 300.0 U	< 300.0 U	< 300.0 U	< 300.0 U	< 300.0 U	< 300.0 U	—	—	< 300.0 U	—	—	< 300.0 U	< 300.0 U
1-Methylnaphthalene	90-12-0	8270DSIM	10	—	µg/L	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U
2-Methylnaphthalene	91-57-6	8270DSIM	10	—	µg/L	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U
Naphthalene	91-20-3	8270DSIM	17	—	µg/L	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U	< 0.10 U
Fuel Additives																						
Phenol	108-95-2	8270D	300	—	µg/L	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U	< 4.00 U
2-(2-Methoxyethoxy)-ethanol	111-77-3	8270D	800	—	µg/L	< 80.0 UJ	< 80.0 U	< 80.0 U	< 80.0 UJ	< 80.0 U	< 80.0 U	< 80.0 UJ	< 80.0 UJ	< 80.0 U	< 80.0 U	< 80.0 U	< 80.0 U	< 80.0 UJ	< 80.0 UJ	< 80.0 U	< 80.0 U
Lead Scavengers																						
1,2-Dibromomethane (Ethylene Dibromide)	106-93-4	8011	0.04	—	µg/L	< 0.019 U	< 0.019 U	< 0.019 U	< 0.019 U	< 0.019 U	< 0.019 U	< 0.019 U	< 0.019 U	< 0.019 U	< 0.019 U	—	—	< 0.019 U	< 0.019 U	< 0.019 U	< 0.019 U
1,2-Dichloroethane	107-06-2	8260B	5	—	µg/L	< 0.30 UJ	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	—	—	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U
Natural Attenuation Parameters																						
Methane	74-82-8	RSK175	—	—	µg/L	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	**20**	—	**19**	—	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	—	—	—	—
Iron, Ion (Fe2+)	ALK	2320B	—	—	mg/L	< 0.32 U	< 0.32 U	< 0.32 U	< 0.32 U	< 0.32 U	—	< 0.32 U	—	< 0.32 U	< 0.32 U	**2.5**	< 0.32 U	—	—	—	—
Nitrate (as NO3 anion)	15438-31-0	3500-FE-B	—	—	mg/L	**1.8**	**2.0**	**1.8 J**	**1.8 J**	**0.40 J**	—	**1.6 J**	—	**1.7**	**1.8 J**	**0.83**	**7.2**	—	—	—	—
Sulfate (as SO4)	14797-55-8_A	300.0	—	—	mg/L	**7.5**	**7.5**	**11.3**	**7.5**	**11.7**	—	**12.0**	—	**7.7**	**9.7**	**26.9**	**215**	—	—	—	—
Chloride (as Cl)	14808-79-8	300.0	—	—	mg/L	**47.5**	**48.5**	**46.6**	**47.9**	**65.8**	—	**70.5**	—	**43.7**	**53.4**	**85.8**	**909**	—	—	—	—
Nitrogen, Nitrate-Nitrite	16887-00-6	300.0	—	—	mg/L	**0.42**	**0.48**	**0.43**	**0.50**	**0.048 J**	—	**0.41**	—	**0.34**	**0.43**	**0.23**	**1.9**	—	—	—	—
Bicarbonate	71-52-3	2320B	—	—	mg/L	**81.5**	**73.1**	**73.3**	**71.7**	**84.8**	—	**93.4**	—	**60.4**	**64.1**	**53.0**	**66.4**	—	—	—	—
Carbonate (As CO3)	3812-32-6	2320B	—	—	mg/L	< 1.70 U	< 1.70 U	< 1.70 U	< 1.70 U	**5.5**	—	< 1.70 U	—	< 1.70 U	< 1.70 U	< 1.70 U	< 1.70 U	—	—	—	—
Alkalinity, Total (As CaCO3)	NO3NO2N	353.2	—	—	mg/L	**81.5 J**	**73.1**	**73.3**	**71.7**	**90.3**	—	**93.4**	—	**60.4**	**64.1**	**53.0**	**66.4**	—	—	—	—
Total Organic Carbon	TOC	9060A	—	—	mg/L	**18.5**	**16.2 J**	**5.4**	**9.8**	**29.7**	—	**0.87 J**	—	**0.54 J**	**1.6 J**	**0.32 J**	**0.37 J**	—	—	—	—
Dissolved Organic Carbon	DOC	9060A	—	—	mg/L	**0.40 J**	—	**0.72 J**	—	**0.36**	—	—	—	—	—	—	—	—	—	—	—
Dissolved Oxygen	—	Field	—	—	mg/L	**0.24**	**0.75**	**0.42**	**0.84**	**4.8**	—	**1.29**	—	**1.31**	**0.44**	**1.10**	**5.13**	—	—	—	—
Oxidation-Reduction Potential	—	Field	—	—	mV	**119.8**	**120.7**	**126.6**	**163.4**	**137.8**	—	**196.1**	—	**150.6**	**51.4**	**0.7**	**80.5**	—	—	—	—
General Chemistry																						
Bromide	24959-67-9	300.0	—	—	mg/L	**0.22 J**	—	**0.33 J**	—	**0.40 J**	—	—	—	—	—	—	—	—	—	—	—
Fluoride	16984-48-8	300.0	—	—	mg/L	**0.25**	—	**0.19**	—	**0.87**	—	—	—	—	—	—	—	—	—	—	—
Total Silica	7631-86-9	4500-SIO2-C	—	—	mg/L	**51.1**	—	**49.3**	—	**9.0**	—	—	—	—	—	—	—	—	—	—	—
Dissolved Silica	7631-86-9	4500-SIO2-C	—	—	mg/L	**46.5**	—	**50.2**	—	**9.0**	—	—	—	—	—	—	—	—	—	—	—
Total Calcium	7440-70-2	6010C	—	—	µg/L	**11400**	—	**10600**	—	**21900**	—	—	—	—	—	—	—	—	—	—	—
Total Magnesium	7439-95-4	6010C	—	—	µg/L	**12100**	—	**11800**	—	**14900**	—	—	—	—	—	—	—	—	—	—	—
Total Manganese	7439-96-5	6010C	—	—	µg/L	**1.4 J**	—	**4.8 J**	—	**117**	—	—	—	—	—	—	—	—	—	—	—
Total Potassium	7440-09-7	6010C	—	—	µg/L	**1960 J**	—	**2000 J**	—	**3380**	—	—	—	—	—	—	—	—	—	—	—
Total Sodium	7440-23-5	6010C	—	—	µg/L	**33900**	—	**40700**	—	**47500**	—	—	—	—	—	—	—	—	—	—	—
Tentatively Identified Compounds																						
2-Ethyl-1-Hexanol	104-76-7	8270D	—	—	µg/L	—	—	—	—	**6.5**	**13**	—	—	—	—	—	—	—	—	—	—
Cis-1-Butyl-2-Methylcyclopropane	38851-69-3	8270D	—	—	µg/L	—	—	—	—	**99**	**100**	—	—	—	—	—	—	—	—	—	—
Octadecanoic Acid	57-11-4	8270D	—	—	µg/L	—	—	—	—	—	**6.0**	—	—	—	—	—	—	—	—	—	—

Table 3-3: Groundwater and QC Sample Results for the March 2020 Sampling Event and the Second Quarter 2020 Quarterly Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

						Location	RHMW13-01	RHMW13-02	RHMW13-03	RHMW13-04	RHMW13-05	RHMW2254-01	RHMW01	RHMW02	RHMW03	RHMW04	RHMW05	RHMW06	RHMW07	RHMW08	RHMW09	RHMW10
						COC ID	ERH1022	ERH1024	ERH1026	ERH1028	ERH1030	ERH1038	ERH1041	ERH1043	ERH1046	ERH1048	ERH1050	ERH1052	ERH1054	ERH1056	ERH1058	ERH1060
						Collection Date	2020-03-03	2020-03-04	2020-03-05	2020-03-09	2020-03-10	2020-04-23	2020-04-20	2020-04-22	2020-04-20	2020-04-22	2020-04-21	2020-04-20	2020-04-20	2020-04-20	2020-04-21	2020-04-21
						Sample Type	TB	TB	TB	TB	TB	TB	TB	TB	TB	TB	TB	TB	TB	TB	TB	TB
						FD Parent Sample	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Analyte	**CAS No.**	**Method**	**Criteria**	**SSRBL [a]**	**Unit**		**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Chemicals of Potential Concern																						
Benzene	71-43-2	8260B	5	750	µg/L		< 0.30 U	< 0.30 U	< 0.30 UJ	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U
Ethylbenzene	100-41-4	8260B	30	—	µg/L		< 0.50 U	< 0.50 U	< 0.50 UJ	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
Toluene	108-88-3	8260B	40	—	µg/L		< 0.30 U	< 0.30 U	< 0.30 UJ	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U
Xylenes	1330-20-7	8260B	20	—	µg/L		< 0.30 U	< 0.30 U	< 0.30 UJ	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U
TPH-g (C6-C10)	PHCC6C10	8260B	300	—	µg/L		< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U
TPH-d (C10-C24) [b, c]	PHCC10C24	8015B_E	400	4500	µg/L		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TPH-d (C10-C24) with Silica Gel Cleanup	PHCC10C24SGC	8015B_E	400	—	µg/L		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TPH-o (C24-C40) [b, c]	PHCC24C40	8015B_E	500	—	µg/L		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TPH-o (C24-C40) with Silica Gel Cleanup	PHCC24C40SGC	8015B_E	500	—	µg/L		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1-Methylnaphthalene	90-12-0	8270DSIM	10	—	µg/L		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2-Methylnaphthalene	91-57-6	8270DSIM	10	—	µg/L		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Naphthalene	91-20-3	8270DSIM	17	—	µg/L		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fuel Additives																						
Phenol	108-95-2	8270D	300	—	µg/L		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2-(2-Methoxyethoxy)-ethanol	111-77-3	8270D	800	—	µg/L		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Lead Scavengers																						
1,2-Dibromomethane (Ethylene Dibromide)	106-93-4	8011	0.04	—	µg/L		< 0.019 U	< 0.019 U	< 0.019 U	< 0.019 U	< 0.019 U	—	—	—	—	—	—	—	—	—	—	—
1,2-Dichloroethane	107-06-2	8260B	5	—	µg/L		< 0.30 U	< 0.30 U	< 0.30 UJ	< 0.30 U	< 0.30 U	—	—	—	—	—	—	—	—	—	—	—
Natural Attenuation Parameters																						
Methane	74-82-8	RSK175	—	—	µg/L		< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U
Iron, Ion (Fe2+)	ALK	2320B	—	—	mg/L		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Nitrate (as NO3 anion)	15438-31-0	3500-FE-B	—	—	mg/L		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sulfate (as SO4)	14797-55-8_A	300.0	—	—	mg/L		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Chloride (as Cl)	14808-79-8	300.0	—	—	mg/L		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Nitrogen, Nitrate-Nitrite	16887-00-6	300.0	—	—	mg/L		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Bicarbonate	71-52-3	2320B	—	—	mg/L		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Carbonate (As CO3)	3812-32-6	2320B	—	—	mg/L		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Alkalinity, Total (As CaCO3)	NO3NO2N	353.2	—	—	mg/L		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total Organic Carbon	TOC	9060A	—	—	mg/L		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dissolved Organic Carbon	DOC	9060A	—	—	mg/L		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dissolved Oxygen	—	Field	—	—	mg/L		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Oxidation-Reduction Potential	—	Field	—	—	mV		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Chemistry																						
Bromide	24959-67-9	300.0	—	—	mg/L		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fluoride	16984-48-8	300.0	—	—	mg/L		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total Silica	7631-86-9	4500-SIO2-C	—	—	mg/L		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dissolved Silica	7631-86-9	4500-SIO2-C	—	—	mg/L		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total Calcium	7440-70-2	6010C	—	—	µg/L		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total Magnesium	7439-95-4	6010C	—	—	µg/L		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total Manganese	7439-96-5	6010C	—	—	µg/L		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total Potassium	7440-09-7	6010C	—	—	µg/L		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total Sodium	7440-23-5	6010C	—	—	µg/L		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tentatively Identified Compounds																						
2-Ethyl-1-Hexanol	104-76-7	8270D	—	—	µg/L		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cis-1-Butyl-2-Methylcyclopropane	38851-69-3	8270D	—	—	µg/L		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Octadecanoic Acid	57-11-4	8270D	—	—	µg/L		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Table 3-3: Groundwater and QC Sample Results for the March 2020 Sampling Event and the Second Quarter 2020 Quarterly Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

						Location	HDMW2253-03	OWDFMW01	RHMW11-05	RHMW14-03	RHMW15-05	RHMW13-03	RHMW13-04	RHMW13-05	Multilevel Well QC (March)	Multilevel Well QC (April)
						COC ID	ERH1064	ERH1062	ERH1069	ERH1071	ERH1073	ERH1075	ERH1077	ERH1079	ERH1033	ERH1066
						Collection Date	2020-04-23	2020-04-22	2020-04-20	2020-04-21	2020-04-22	2020-04-23	2020-04-27	2020-04-28	2020-03-04	2020-04-20
						Sample Type	TB	TB	TB	TB	TB	TB	TB	TB	TB	TB
						FD Parent Sample	—	—	—	—	—	—	—	—	—	—
Analyte	**CAS No.**	**Method**	**Criteria**	**SSRBL [a]**	**Unit**		**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Chemicals of Potential Concern																
Benzene	71-43-2	8260B	5	750	µg/L		< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U
Ethylbenzene	100-41-4	8260B	30	—	µg/L		< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
Toluene	108-88-3	8260B	40	—	µg/L		< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U
Xylenes	1330-20-7	8260B	20	—	µg/L		< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U
TPH-g (C6-C10)	PHCC6C10	8260B	300	—	µg/L		< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U	< 18.0 U
TPH-d (C10-C24) [b, c]	PHCC10C24	8015B_E	400	4500	µg/L		—	—	—	—	—	—	—	—	—	—
TPH-d (C10-C24) with Silica Gel Cleanup	PHCC10C24SGC	8015B_E	400	—	µg/L		—	—	—	—	—	—	—	—	—	—
TPH-o (C24-C40) [b, c]	PHCC24C40	8015B_E	500	—	µg/L		—	—	—	—	—	—	—	—	—	—
TPH-o (C24-C40) with Silica Gel Cleanup	PHCC24C40SGC	8015B_E	500	—	µg/L		—	—	—	—	—	—	—	—	—	—
1-Methylnaphthalene	90-12-0	8270DSIM	10	—	µg/L		—	—	—	—	—	—	—	—	—	—
2-Methylnaphthalene	91-57-6	8270DSIM	10	—	µg/L		—	—	—	—	—	—	—	—	—	—
Naphthalene	91-20-3	8270DSIM	17	—	µg/L		—	—	—	—	—	—	—	—	—	—
Fuel Additives																
Phenol	108-95-2	8270D	300	—	µg/L		—	—	—	—	—	—	—	—	—	—
2-(2-Methoxyethoxy)-ethanol	111-77-3	8270D	800	—	µg/L		—	—	—	—	—	—	—	—	—	—
Lead Scavengers																
1,2-Dibromomethane (Ethylene Dibromide)	106-93-4	8011	0.04	—	µg/L		—	—	—	< 0.019 U	< 0.019 U	< 0.019 U	< 0.019 U	< 0.019 U	< 0.019 U	< 0.019 U
1,2-Dichloroethane	107-06-2	8260B	5	—	µg/L		—	—	—	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U	< 0.30 U
Natural Attenuation Parameters																
Methane	74-82-8	RSK175	—	—	µg/L		< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	—	—
Iron, Ion (Fe2+)	ALK	2320B	—	—	mg/L		—	—	—	—	—	—	—	—	—	—
Nitrate (as NO3 anion)	15438-31-0	3500-FE-B	—	—	mg/L		—	—	—	—	—	—	—	—	—	—
Sulfate (as SO4)	14797-55-8_A	300.0	—	—	mg/L		—	—	—	—	—	—	—	—	—	—
Chloride (as Cl)	14808-79-8	300.0	—	—	mg/L		—	—	—	—	—	—	—	—	—	—
Nitrogen, Nitrate-Nitrite	16887-00-6	300.0	—	—	mg/L		—	—	—	—	—	—	—	—	—	—
Bicarbonate	71-52-3	2320B	—	—	mg/L		—	—	—	—	—	—	—	—	—	—
Carbonate (As CO3)	3812-32-6	2320B	—	—	mg/L		—	—	—	—	—	—	—	—	—	—
Alkalinity, Total (As CaCO3)	NO3NO2N	353.2	—	—	mg/L		—	—	—	—	—	—	—	—	—	—
Total Organic Carbon	TOC	9060A	—	—	mg/L		—	—	—	—	—	—	—	—	—	—
Dissolved Organic Carbon	DOC	9060A	—	—	mg/L		—	—	—	—	—	—	—	—	—	—
Dissolved Oxygen	—	Field	—	—	mg/L		—	—	—	—	—	—	—	—	—	—
Oxidation-Reduction Potential	—	Field	—	—	mV		—	—	—	—	—	—	—	—	—	—
General Chemistry																
Bromide	24959-67-9	300.0	—	—	mg/L		—	—	—	—	—	—	—	—	—	—
Fluoride	16984-48-8	300.0	—	—	mg/L		—	—	—	—	—	—	—	—	—	—
Total Silica	7631-86-9	4500-SIO2-C	—	—	mg/L		—	—	—	—	—	—	—	—	—	—
Dissolved Silica	7631-86-9	4500-SIO2-C	—	—	mg/L		—	—	—	—	—	—	—	—	—	—
Total Calcium	7440-70-2	6010C	—	—	µg/L		—	—	—	—	—	—	—	—	—	—
Total Magnesium	7439-95-4	6010C	—	—	µg/L		—	—	—	—	—	—	—	—	—	—
Total Manganese	7439-96-5	6010C	—	—	µg/L		—	—	—	—	—	—	—	—	—	—
Total Potassium	7440-09-7	6010C	—	—	µg/L		—	—	—	—	—	—	—	—	—	—
Total Sodium	7440-23-5	6010C	—	—	µg/L		—	—	—	—	—	—	—	—	—	—
Tentatively Identified Compounds																
2-Ethyl-1-Hexanol	104-76-7	8270D	—	—	µg/L		—	—	—	—	—	—	—	—	—	—
Cis-1-Butyl-2-Methylcyclopropane	38851-69-3	8270D	—	—	µg/L		—	—	—	—	—	—	—	—	—	—
Octadecanoic Acid	57-11-4	8270D	—	—	µg/L		—	—	—	—	—	—	—	—	—	—

Notes:

Bold text indicates detected value.

Bold and shaded text indicates analyte exceeds the screening criterion.

— = not analyzed or not applicable

* - associated laboratory method blank shows similar chromatographic signature of non-petroleum hydrocarbon peaks, indicating that part or all of the sample concentration is due to laboratory artifact.

µg/L = microgram per liter

CAS = Chemical Abstracts Service

COC = chain-of-custody

EB = equipment blank (rinsate)

FB = field blank (source water)

FD = field duplicate

ID = identification

J = estimated value

mg/L = milligram per liter

mV = millivolt

N = normal (primary) sample

no. = number

QC = quality control

U = nondetect value

SSRBL = Site-Specific Risk-Based Level

TB = trip blank

TIC = tentatively identified compound

TPH-g = total petroleum hydrocarbons-gasoline range organics

TPH-d = total petroleum hydrocarbons-diesel range organics

TPH-o = total petroleum hydrocarbons-residual range organics (i.e., TPH-oil)

[a] SSRBL applies to RHMW01, RHMW02, and RHMW03.

[b] For EPA 8015 TPH-d and TPH-o, the April samples were extracted twice (on different days) to confirm laboratory solvent contamination. In the event of multiple results for an analyte, the validation reports the result from the more technically sound analysis.

[c] For EPA 8015 TPH-d and TPH-o, the laboratory did not analyze silica gel cleaned extract for all samples. Analysis of silica gel cleaned extract was performed on samples based on:
1) the sample showing a chromatographic signature not similar to the chromatogram of the associated method blank,
2) the sample TPH concentration greater than 300 ug/L regardless of chromatographic signature, or
3) laboratory analyst judgment.

Figure 2A and Figure 2B present COPC detections, and Figure 3A and Figure 3B present the natural attenuation parameter (NAP) results at all monitoring locations. Figure 4A and Figure 4B present the general groundwater chemistry parameters for all monitoring wells in the LTM program. A description of laboratory data qualifiers and definitions and basic concepts of the terms detection limit (DL), limit of detection (LOD), and limit of quantitation (LOQ) are presented in the Department of Defense (DoD) Environmental Data Quality Workgroup Fact Sheet included as Appendix C.3.

3.2.1 EPA Method 8015 Limits Update

In March 2020, the analytical laboratory performed a limit study for EPA Method 8015 to re-establish limits (i.e., DL, LOD, and LOQ) for TPH-d and TPH-o (see Appendix C.4). A limit study is a complete, specific, and well-defined analytic method for determining whether "the measured concentration is distinguishable from method blank results" (40 CR 136, Appendix B). The study was initiated to address impurities (identified as compounds used in polymeric materials and plasticizers) observed in recent batches of reagent-grade solvent used in the extraction of groundwater samples for EPA Method 8015 analysis. The laboratory's study of TPH method blanks showed solvent impurities ranged from approximately 70 to 140 µg/L. Implementation of new limits to reduce false-positive TPH detections due to the solvent contamination was performed in accordance with the most current DoD *Quality Systems Manual (QSM) for Environmental Laboratories* (DoD and DOE 2019), the National Environmental Laboratory Accreditation Program (NELAP) Institute Manual (TNI 2016), and 40 CFR Part 136, as modified (Methods Update Rule [MUR] 2017). The previous and new TPH-d and TPH-o laboratory limits are listed in Table 3-3. The updated TPH-d and TPH-o laboratory limits are higher than previously reported by the Navy-contracted laboratory, but are still below the LTM screening criteria. The updated limits are also now similar to EPA Region 9 Laboratory EPA Method 8015 reporting limits (150 µg/L for TPH-d and 600 µg/L for TPH-o) used during split sampling events performed in 2017 and 2018.

Table 3-3: Laboratory Limits for TPH-d and TPH-o

Analyte:	TPH-d		TPH-o	
DOH EAL:	400 µg/L		500 µg/L	
Laboratory Limit	Prior to March 2020	As of March 2020	Prior to March 2020	As of March 2020
DL	13.07 µg/L	150 µg/L	5.54 µg/L	150 µg/L
LOD	25 µg/L	300 µg/L	40 µg/L	300 µg/L
LOQ	40 µg/L	320 µg/L	40 µg/L	320 µg/L

EAL Environmental Action Level (DOH 2017)

Starting from the First Quarter 2020 monitoring event, increasing concentrations of non-petroleum-related impurities were observed in recent batches of reagent-grade solvent used in the extraction of groundwater samples for EPA Method 8015 analysis. Extraction of samples for EPA Method 8015 uses relatively large amount of solvent (300-mL) that is concentrated (5-mL or less) prior to analysis. Thus, the trace impurities are magnified in the final extract for TPH analysis. The solvent contamination is evident in samples from the March 2020 sampling event and the Second Quarter (April) 2020 monitoring event. Additional EPA Method 8270 analysis of the RHMW13-05 March 2020 sample tentatively identified three compounds (i.e., 2-ethyl-1-hexanol, cis-1-butyl-2-methylcyclopropane, and octadecanoic acid) used in polymeric materials and plasticizers; no other compounds associated with the solvent contamination could be positively identified using the method.

TPH-d and TPH-o detections due to laboratory contamination are marked with an asterisk (*) in Table 3-2. Additionally, starting with the March 2020 groundwater data, the cumulative groundwater COPC graphs (Appendix A.2) differentiate TPH-d and TPH-o detections due to laboratory contamination.

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			Location	RHMW02	RHMW02
			Sample ID	ERH1044	ERH1045
			Collection Date	4/22/2020	4/22/2020
			Sample Type	N	FD
			FD Parent Sample	—	ERH1044
Analyte	Criteria	SSRBL	Unit	Result	Result
TPH-g (C6-C10)	300	—	µg/L	**49**	**63**
TPH-d (C10-C24)	400	4500	µg/L	**1700 J**	**1500 J**
TPH-d (C10-C24) w ith SGC	400	—	µg/L	**350**	**310 J**
TPH-o (C24-C40)	500	—	µg/L	**260 J**	**290 J**
TPH-o (C24-C40) w ith SGC	500	—	µg/L	< 300.0 U	< 300.0 U
1-Methylnaphthalene	10	—	µg/L	**13**	**13**
2-Methylnaphthalene	10	—	µg/L	**12**	**11**
Naphthalene	17	—	µg/L	**33**	**32**

			Location	RHMW2254-01	RHMW2254-01
			Sample ID	ERH1039	ERH1040
			Collection Date	4/23/2020	4/23/2020
			Sample Type	N	FD
			FD Parent Sample	—	ERH1039
Analyte	Criteria	SSRBL	Unit	Result	Result
TPH-d (C10-C24)	400	4500	µg/L	**180 J ***	**280 J ***

			Location	RHMW07
			Sample ID	ERH1055
			Collection Date	4/20/2020
			Sample Type	N
Analyte	Criteria	SSRBL	Unit	Result
TPH-o (C24-C40)	500	—	µg/L	**150 J ***

			Location	RHMW04
			Sample ID	ERH1049
			Collection Date	4/22/2020
			Sample Type	N
Analyte	Criteria	SSRBL	Unit	Result
TPH-d (C10-C24)	400	4500	µg/L	**240 J ***

			Location	OWDFMW01
			Sample ID	ERH1063
			Collection Date	4/22/2020
			Sample Type	N
Analyte	Criteria	SSRBL	Unit	Result
TPH-d (C10-C24)	400	4500	µg/L	**450 J ***
TPH-o (C24-C40)	500	—	µg/L	**280 J ***

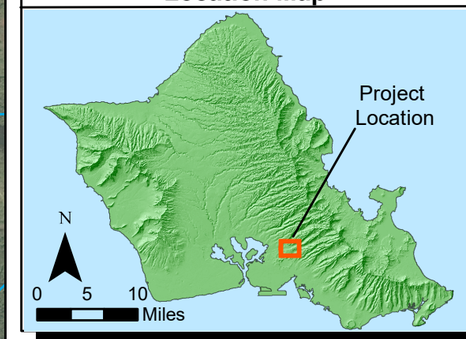
			Location	RHMW03
			Sample ID	ERH1047
			Collection Date	4/20/2020
			Sample Type	N
Analyte	Criteria	SSRBL	Unit	Result
TPH-d (C10-C24)	400	4500	µg/L	**220 J**
TPH-d (C10-C24) w ith SGC	400	—	µg/L	< 300.0 U
TPH-o (C24-C40)	500	—	µg/L	**240 J**
TPH-o (C24-C40) w ith SGC	500	—	µg/L	< 300.0 U

			Location	RHMW01
			Sample ID	ERH1042
			Collection Date	4/20/2020
			Sample Type	N
Analyte	Criteria	SSRBL	Unit	Result
TPH-d (C10-C24)	400	4500	µg/L	**190 J ***

Hālawa Quarry
South Hālawa Valley
South Hālawa Stream
Navy Firing Range
Hālawa Deep Monitor Well (HDMW2253-03)
RHMW13
RHMW04
Hālawa Correctional Facility
RHMW11
RHMW06
RHMW14
RHMW07
Hālawa Industrial Park
RHMW02
RHMW03
RHMW08
Oily Waste Disposal Facility
OWDFMW01
RHMW2254-01
RHMW10
RHMW01
RHMW15
RHMW05
RHMW09
U.S. Coast Guard Housing
Red Hill Elementary School
Moanalua Hillside Apartments
H-201 Freeway
Moanalua Golf Course
Āliamanu Crater

N
0 385 770 1,540 Feet

Location Map



Legend

- Monitoring Well with Screening Criteria Exceedance(s)
- Existing Monitoring Well Location
- Red Hill Tank
- Stream
- Red Hill Facility Boundary

Notes

1. Map projection: NAD 1983 UTM Zone 4N
2. Base Map: DigitalGlobe, Inc. (DG) and NRCS. Publication_Date: 2015
3. Only analytes with detections and associated SGC data (if applicable) are shown.
4. COPC screening criteria is based on DOH Tier 1 groundwater environmental action levels for sites where groundwater is a potential or current drinking water resource and the nearest surface water body is greater than 150 meters from the release site.
5. Results marked with asterisk (*) indicates result is mostly or wholly due to laboratory TPH-d/o contamination.

ABBREVIATIONS:

FD	field duplicate sample
ID	identification
J	estimated value
N	primary (normal) sample
SGC	silica gel cleanup
SSRBL	site-specific risk based level
TPH	total petroleum hydrocarbon
TPH-d	TPH-diesel range organics
TPH-g	TPH-gasoline range organics
TPH-o	TPH-oil/residual range organics
U	non-detect value (reported as less than the limit of detection)
µg/L	microgram per liter
1300	Exceeds screening criterion

Bold text indicates detected value.

Figure 2A
COPC Detections
2nd Qtr 2020 Groundwater LTM Report
Red Hill Bulk Fuel Storage Facility
JBPHH, O'ahu, Hawai'i

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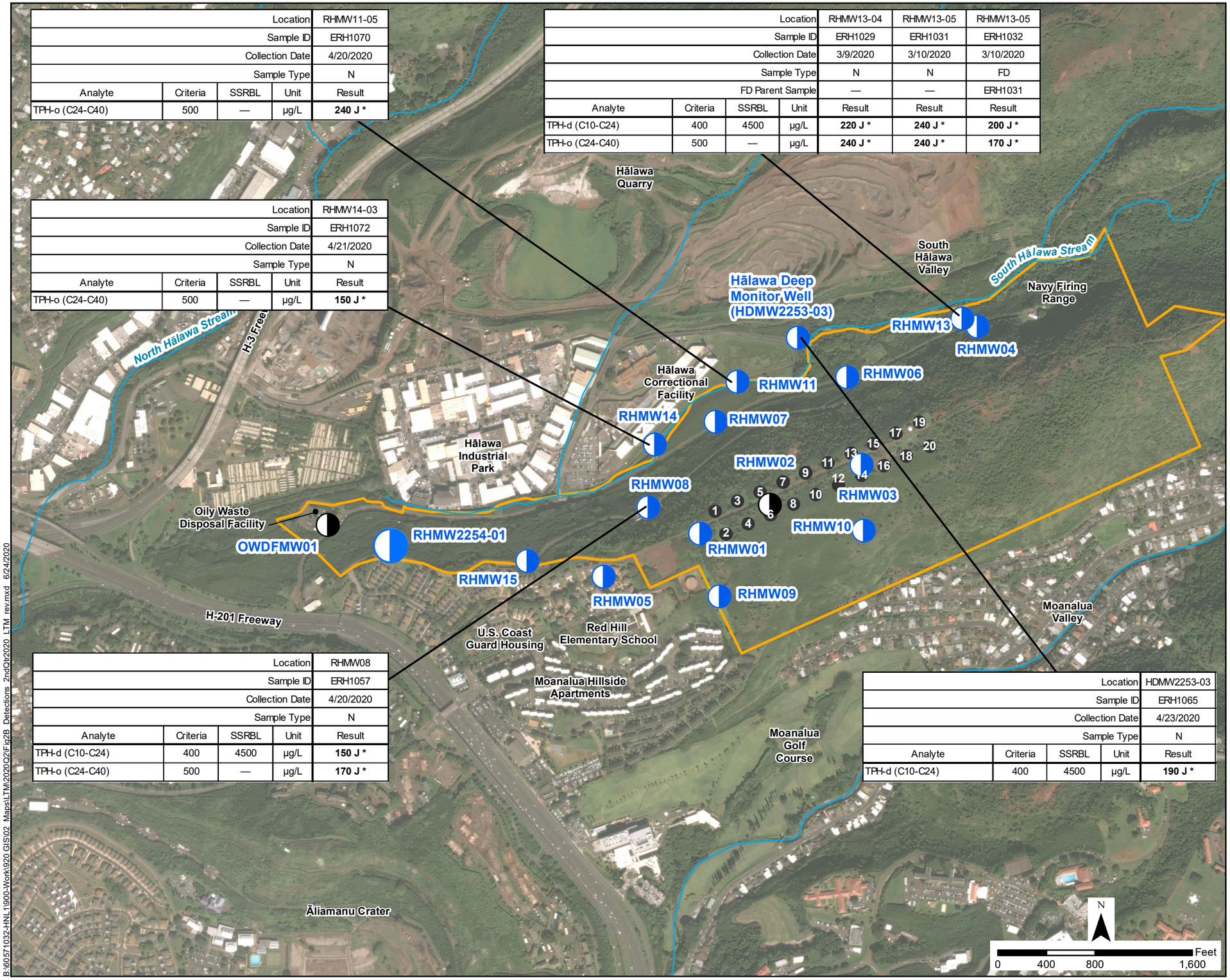
				Location	RHMW11-05
				Sample ID	ERH1070
				Collection Date	4/20/2020
				Sample Type	N
Analyte	Criteria	SSRBL	Unit	Result	
TPH-o (C24-C40)	500	—	µg/L	**240 J ***	

				Location	RHMW13-04	RHMW13-05	RHMW13-05
				Sample ID	ERH1029	ERH1031	ERH1032
				Collection Date	3/9/2020	3/10/2020	3/10/2020
				Sample Type	N	N	FD
				FD Parent Sample	—	—	ERH1031
Analyte	Criteria	SSRBL	Unit	Result	Result	Result	
TPH-d (C10-C24)	400	4500	µg/L	**220 J ***	**240 J ***	**200 J ***	
TPH-o (C24-C40)	500	—	µg/L	**240 J ***	**240 J ***	**170 J ***	

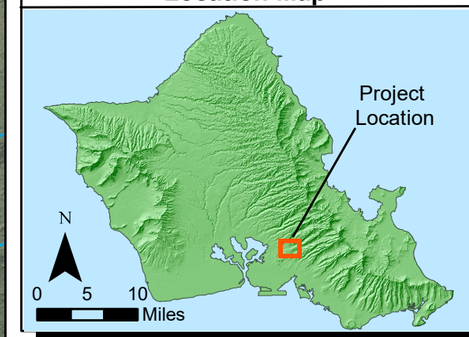
				Location	RHMW14-03
				Sample ID	ERH1072
				Collection Date	4/21/2020
				Sample Type	N
Analyte	Criteria	SSRBL	Unit	Result	
TPH-o (C24-C40)	500	—	µg/L	**150 J ***	

				Location	RHMW08
				Sample ID	ERH1057
				Collection Date	4/20/2020
				Sample Type	N
Analyte	Criteria	SSRBL	Unit	Result	
TPH-d (C10-C24)	400	4500	µg/L	**150 J ***	
TPH-o (C24-C40)	500	—	µg/L	**170 J ***	

				Location	HDMW2253-03
				Sample ID	ERH1065
				Collection Date	4/23/2020
				Sample Type	N
Analyte	Criteria	SSRBL	Unit	Result	
TPH-d (C10-C24)	400	4500	µg/L	**190 J ***	



Location Map



Legend

- Monitoring Well with Screening Criteria Exceedance(s)
- Existing Monitoring Well Location
- Red Hill Tank
- Stream
- Red Hill Facility Boundary

Notes

1. Map projection: NAD 1983 UTM Zone 4N
2. Base Map: DigitalGlobe, Inc. (DG) and NRCS. Publication_Date: 2015
3. Only analytes with detections and associated SGC data (if applicable) are shown.
4. COPC screening criteria is based on DOH Tier 1 groundwater environmental action levels for sites where groundwater is a potential or current drinking water resource and the nearest surface water body is greater than 150 meters from the release site.
5. Results marked with asterisk (*) indicates result is mostly or wholly due to laboratory TPH-d/o contamination.

ABBREVIATIONS:

FD	field duplicate sample
ID	identification
J	estimated value
N	primary (normal) sample
SGC	silica gel cleanup
SSRBL	site-specific risk based level
TPH	total petroleum hydrocarbon
TPH-d	TPH-diesel range organics
TPH-g	TPH-gasoline range organics
TPH-o	TPH-oil/residual range organics
U	non-detect value (reported as less than the limit of detection)
µg/L	microgram per liter
1300	Exceeds screening criterion

Bold text indicates detected value.

Figure 2B
COPC Detections
2nd Qtr 2020 Groundwater LTM Report
Red Hill Bulk Fuel Storage Facility
JBPHH, O'ahu, Hawai'i

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Location	RHMW07
Collection Date	4/20/2020

Analyte	Unit	Result
Methane	µg/L	< 1.00 U
Ferrous Iron	mg/L	< 0.32 U
Nitrate	mg/L	**4.5**
Sulfate	mg/L	**83.2**
Chloride	mg/L	**415**
Nitrogen, Nitrate-Nitrite	mg/L	**1.0**
Alkalinity, Bicarbonate	mg/L	**101**
Alkalinity, Carbonate	mg/L	< 1.70 U
Alkalinity, Total	mg/L	**101**
Total Organic Carbon	mg/L	**0.28 J**
DO	mg/L	**4.42**
ORP	mV	**54.7**

Sampling Port Depth	325.1 ft bgs
Location	RHMW14-03
Collection Date	4/21/2020

Analyte	Unit	Result
Methane	µg/L	< 1.00 U
Ferrous Iron	mg/L	< 0.32 U
Nitrate	mg/L	**1.7**
Sulfate	mg/L	**7.7**
Chloride	mg/L	**43.7**
Nitrogen, Nitrate-Nitrite	mg/L	**0.34**
Alkalinity, Bicarbonate	mg/L	**60.4**
Alkalinity, Carbonate	mg/L	< 1.70 U
Alkalinity, Total	mg/L	**60.4**
Total Organic Carbon	mg/L	**0.54 J**
DO	mg/L	**1.31**
ORP	mV	**150.6**

Sampling Port Depth	285.3 ft bgs
Location	RHMW11-05
Collection Date	4/20/2020

Analyte	Unit	Result
Methane	µg/L	< 1.00 U
Ferrous Iron	mg/L	< 0.32 U
Nitrate	mg/L	< 0.18 UJ
Sulfate	mg/L	**11.2**
Chloride	mg/L	**50.8**
Nitrogen, Nitrate-Nitrite	mg/L	< 0.090 U
Alkalinity, Bicarbonate	mg/L	**112**
Alkalinity, Carbonate	mg/L	< 1.70 U
Alkalinity, Total	mg/L	**112**
Total Organic Carbon	mg/L	**0.76 J**
DO	mg/L	**1.05**
ORP	mV	**169.6**

Location	HDMW2253-03
Collection Date	4/23/2020

Analyte	Unit	Result
Methane	µg/L	< 1.00 U
Ferrous Iron	mg/L	**2.5**
Nitrate	mg/L	**0.83**
Sulfate	mg/L	**26.9**
Chloride	mg/L	**85.8**
Nitrogen, Nitrate-Nitrite	mg/L	**0.23**
Alkalinity, Bicarbonate	mg/L	**53.0**
Alkalinity, Carbonate	mg/L	< 1.70 U
Alkalinity, Total	mg/L	**53.0**
Total Organic Carbon	mg/L	**0.32 J**
DO	mg/L	**1.10**
ORP	mV	**0.7**

Location	RHMW06
Collection Date	4/20/2020

Analyte	Unit	Result
Methane	µg/L	< 1.00 U
Ferrous Iron	mg/L	< 0.32 U
Nitrate	mg/L	**2.6**
Sulfate	mg/L	**70.3**
Chloride	mg/L	**301**
Nitrogen, Nitrate-Nitrite	mg/L	**0.59**
Alkalinity, Bicarbonate	mg/L	**103**
Alkalinity, Carbonate	mg/L	< 1.70 U
Alkalinity, Total	mg/L	**103**
Total Organic Carbon	mg/L	**0.19 J**
DO	mg/L	**6.64**
ORP	mV	**51.5**

Location	RHMW04
Collection Date	4/22/2020

Analyte	Unit	Result
Methane	µg/L	< 1.00 U
Ferrous Iron	mg/L	< 0.32 U
Nitrate	mg/L	**2.3**
Sulfate	mg/L	**9.7**
Chloride	mg/L	**72.8**
Nitrogen, Nitrate-Nitrite	mg/L	**0.47**
Alkalinity, Bicarbonate	mg/L	**75.5**
Alkalinity, Carbonate	mg/L	< 1.70 U
Alkalinity, Total	mg/L	**75.5**
Total Organic Carbon	mg/L	**0.25 J**
DO	mg/L	**8.52**
ORP	mV	**113.6**

Location	OWDFMW01
Collection Date	4/22/2020

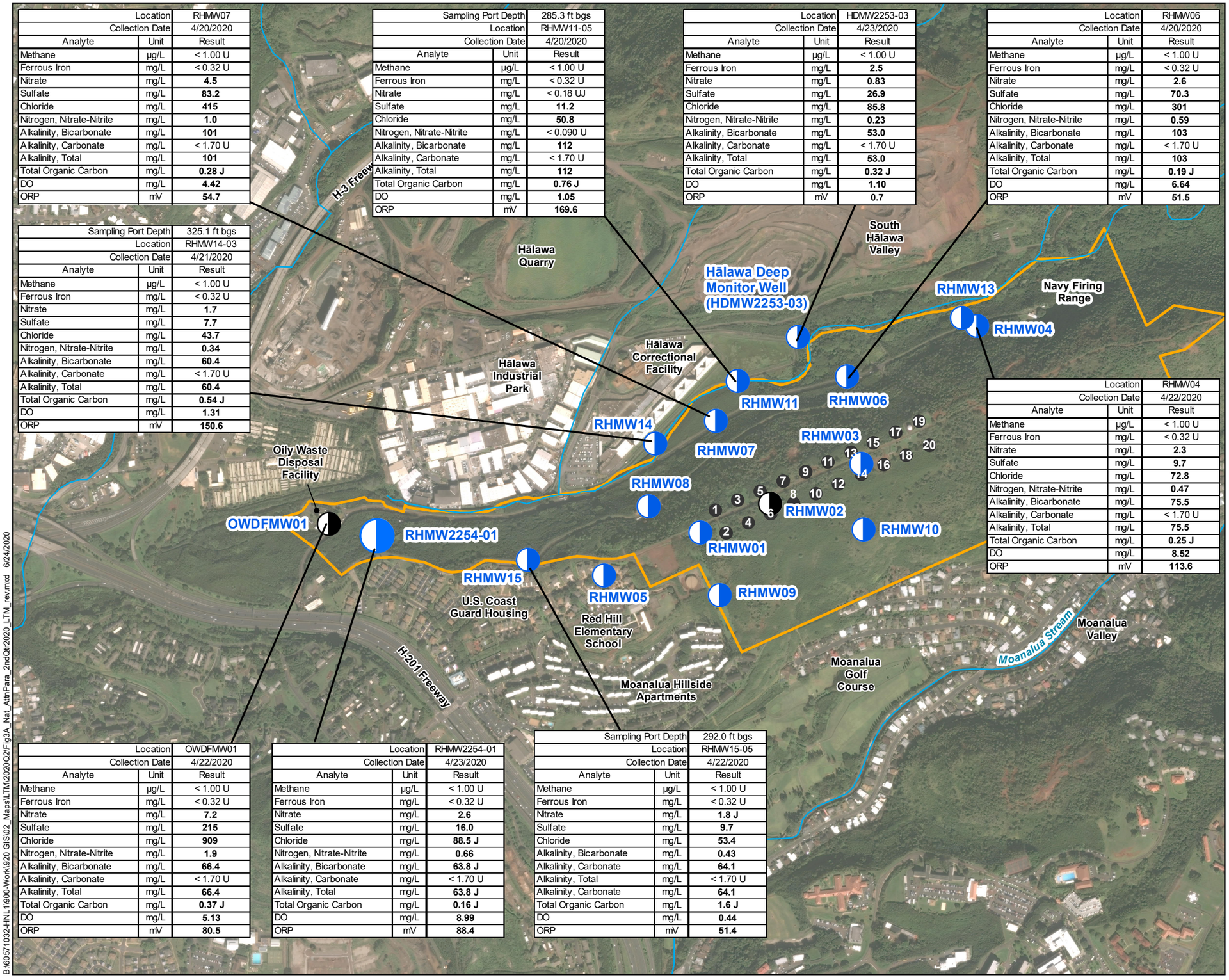
Analyte	Unit	Result
Methane	µg/L	< 1.00 U
Ferrous Iron	mg/L	< 0.32 U
Nitrate	mg/L	**7.2**
Sulfate	mg/L	**215**
Chloride	mg/L	**909**
Nitrogen, Nitrate-Nitrite	mg/L	**1.9**
Alkalinity, Bicarbonate	mg/L	**66.4**
Alkalinity, Carbonate	mg/L	< 1.70 U
Alkalinity, Total	mg/L	**66.4**
Total Organic Carbon	mg/L	**0.37 J**
DO	mg/L	**5.13**
ORP	mV	**80.5**

Location	RHMW2254-01
Collection Date	4/23/2020

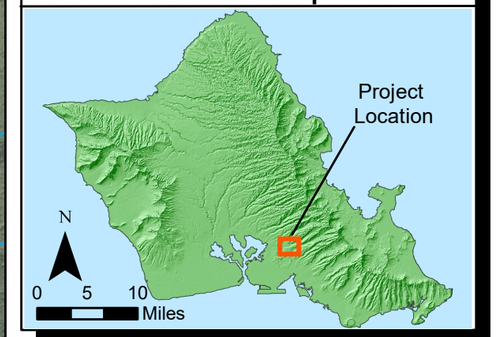
Analyte	Unit	Result
Methane	µg/L	< 1.00 U
Ferrous Iron	mg/L	< 0.32 U
Nitrate	mg/L	**2.6**
Sulfate	mg/L	**16.0**
Chloride	mg/L	**88.5 J**
Nitrogen, Nitrate-Nitrite	mg/L	**0.66**
Alkalinity, Bicarbonate	mg/L	**63.8 J**
Alkalinity, Carbonate	mg/L	< 1.70 U
Alkalinity, Total	mg/L	**63.8 J**
Total Organic Carbon	mg/L	**0.16 J**
DO	mg/L	**8.99**
ORP	mV	**88.4**

Sampling Port Depth	292.0 ft bgs
Location	RHMW15-05
Collection Date	4/22/2020

Analyte	Unit	Result
Methane	µg/L	< 1.00 U
Ferrous Iron	mg/L	< 0.32 U
Nitrate	mg/L	**1.8 J**
Sulfate	mg/L	**9.7**
Chloride	mg/L	**53.4**
Alkalinity, Bicarbonate	mg/L	**0.43**
Alkalinity, Carbonate	mg/L	**64.1**
Alkalinity, Total	mg/L	< 1.70 U
Alkalinity, Carbonate	mg/L	**64.1**
Total Organic Carbon	mg/L	**1.6 J**
DO	mg/L	**0.44**
ORP	mV	**51.4**



Location Map



Legend

- Monitoring Well with Screening Criteria Exceedance(s)
- Existing Monitoring Well Location
- Red Hill Tank
- Stream
- Red Hill Facility Boundary

Notes

1. Map projection: NAD 1983 UTM Zone 4N
2. Base Map: DigitalGlobe, Inc. (DG) and NRCS. Publication_Date: 2015

ABBREVIATIONS:

bgs	below ground surface
DO	dissolved oxygen
ft	feet
J	estimated value
mg/L	milligrams per liter
mV	millivolts
NA	not analyzed or not applicable
ORP	oxidation-reduction potential
U	non-detect value (reported as less than the limit of detection)
µg/L	microgram per liter

Bold text indicates detected value.

N

0 400 800 1,600 Feet

Figure 3A
Natural Attenuation Parameter Results
2nd Qtr 2020 Groundwater LTM Report
Red Hill Bulk Fuel Storage Facility
JBPHH, O'ahu, Hawai'i

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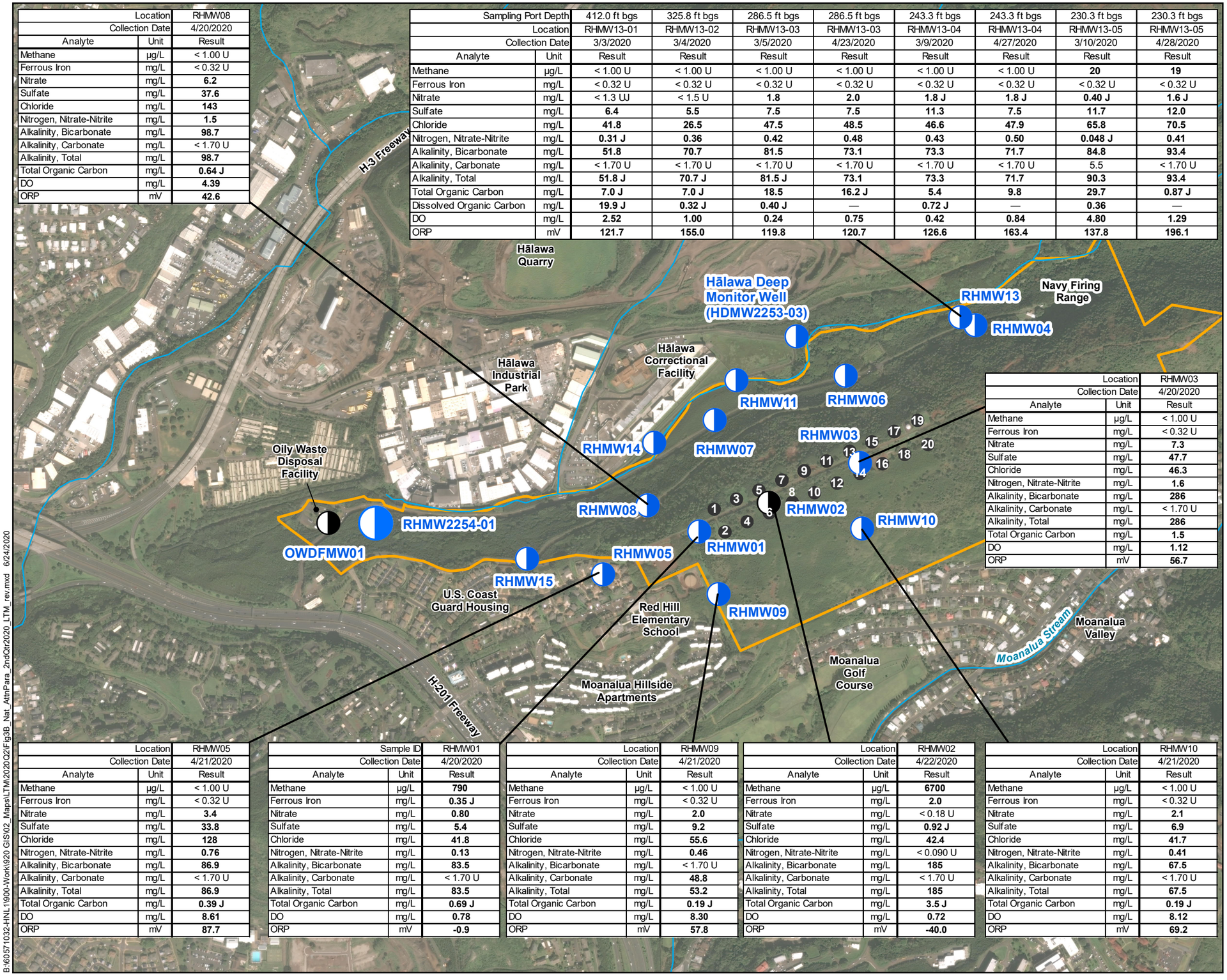


Location	RHMW08
Collection Date	4/20/2020
Analyte / Unit	Result
Methane µg/L	< 1.00 U
Ferrous Iron mg/L	< 0.32 U
Nitrate mg/L	**6.2**
Sulfate mg/L	**37.6**
Chloride mg/L	**143**
Nitrogen, Nitrate-Nitrite mg/L	**1.5**
Alkalinity, Bicarbonate mg/L	**98.7**
Alkalinity, Carbonate mg/L	< 1.70 U
Alkalinity, Total mg/L	**98.7**
Total Organic Carbon mg/L	**0.64 J**
DO mg/L	**4.39**
ORP mV	**42.6**

Sampling Port Depth	412.0 ft bgs	325.8 ft bgs	286.5 ft bgs	286.5 ft bgs	243.3 ft bgs	243.3 ft bgs	230.3 ft bgs	230.3 ft bgs
Location	RHMW13-01	RHMW13-02	RHMW13-03	RHMW13-03	RHMW13-04	RHMW13-04	RHMW13-05	RHMW13-05
Collection Date	3/3/2020	3/4/2020	3/5/2020	4/23/2020	3/9/2020	4/27/2020	3/10/2020	4/28/2020
Analyte / Unit	Result	Result	Result	Result	Result	Result	Result	Result
Methane µg/L	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	< 1.00 U	**20**	**19**
Ferrous Iron mg/L	< 0.32 U	< 0.32 U	< 0.32 U	< 0.32 U	< 0.32 U	< 0.32 U	< 0.32 U	< 0.32 U
Nitrate mg/L	< 1.3 UJ	< 1.5 U	**1.8**	**2.0**	**1.8 J**	**1.8 J**	**0.40 J**	**1.6 J**
Sulfate mg/L	**6.4**	**5.5**	**7.5**	**7.5**	**11.3**	**7.5**	**11.7**	**12.0**
Chloride mg/L	**41.8**	**26.5**	**47.5**	**48.5**	**46.6**	**47.9**	**65.8**	**70.5**
Nitrogen, Nitrate-Nitrite mg/L	**0.31 J**	**0.36**	**0.42**	**0.48**	**0.43**	**0.50**	**0.048 J**	**0.41**
Alkalinity, Bicarbonate mg/L	**51.8**	**70.7**	**81.5**	**73.1**	**73.3**	**71.7**	**84.8**	**93.4**
Alkalinity, Carbonate mg/L	< 1.70 U	< 1.70 U	< 1.70 U	< 1.70 U	< 1.70 U	< 1.70 U	5.5	< 1.70 U
Alkalinity, Total mg/L	**51.8 J**	**70.7 J**	**81.5 J**	**73.1**	**73.3**	**71.7**	**90.3**	**93.4**
Total Organic Carbon mg/L	**7.0 J**	**7.0 J**	**18.5**	**16.2 J**	**5.4**	**9.8**	**29.7**	**0.87 J**
Dissolved Organic Carbon mg/L	**19.9 J**	**0.32 J**	**0.40 J**	—	**0.72 J**	—	**0.36**	—
DO mg/L	**2.52**	**1.00**	**0.24**	**0.75**	**0.42**	**0.84**	**4.80**	**1.29**
ORP mV	**121.7**	**155.0**	**119.8**	**120.7**	**126.6**	**163.4**	**137.8**	**196.1**

Location	RHMW03
Collection Date	4/20/2020
Analyte / Unit	Result
Methane µg/L	< 1.00 U
Ferrous Iron mg/L	< 0.32 U
Nitrate mg/L	**7.3**
Sulfate mg/L	**47.7**
Chloride mg/L	**46.3**
Nitrogen, Nitrate-Nitrite mg/L	**1.6**
Alkalinity, Bicarbonate mg/L	**286**
Alkalinity, Carbonate mg/L	< 1.70 U
Alkalinity, Total mg/L	**286**
Total Organic Carbon mg/L	**1.5**
DO mg/L	**1.12**
ORP mV	**56.7**

Location	RHMW05
Collection Date	4/21/2020
Analyte / Unit	Result
Methane µg/L	< 1.00 U
Ferrous Iron mg/L	< 0.32 U
Nitrate mg/L	**3.4**
Sulfate mg/L	**33.8**
Chloride mg/L	**128**
Nitrogen, Nitrate-Nitrite mg/L	**0.76**
Alkalinity, Bicarbonate mg/L	**86.9**
Alkalinity, Carbonate mg/L	< 1.70 U
Alkalinity, Total mg/L	**86.9**
Total Organic Carbon mg/L	**0.39 J**
DO mg/L	**8.61**
ORP mV	**87.7**

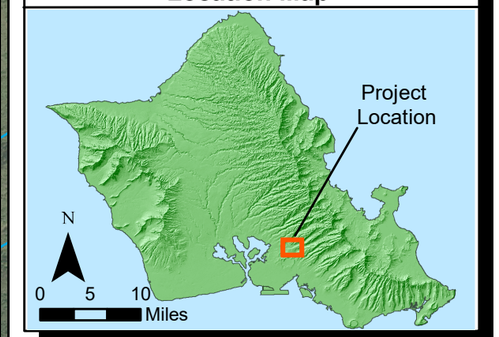
Sample ID	RHMW01
Collection Date	4/20/2020
Analyte / Unit	Result
Methane µg/L	**790**
Ferrous Iron mg/L	**0.35 J**
Nitrate mg/L	**0.80**
Sulfate mg/L	**5.4**
Chloride mg/L	**41.8**
Nitrogen, Nitrate-Nitrite mg/L	**0.13**
Alkalinity, Bicarbonate mg/L	**83.5**
Alkalinity, Carbonate mg/L	< 1.70 U
Alkalinity, Total mg/L	**83.5**
Total Organic Carbon mg/L	**0.69 J**
DO mg/L	**0.78**
ORP mV	**-0.9**

Location	RHMW09
Collection Date	4/21/2020
Analyte / Unit	Result
Methane µg/L	< 1.00 U
Ferrous Iron mg/L	< 0.32 U
Nitrate mg/L	**2.0**
Sulfate mg/L	**9.2**
Chloride mg/L	**55.6**
Nitrogen, Nitrate-Nitrite mg/L	**0.46**
Alkalinity, Bicarbonate mg/L	< 1.70 U
Alkalinity, Carbonate mg/L	**48.8**
Alkalinity, Total mg/L	**53.2**
Total Organic Carbon mg/L	**0.19 J**
DO mg/L	**8.30**
ORP mV	**57.8**

Location	RHMW02
Collection Date	4/22/2020
Analyte / Unit	Result
Methane µg/L	**6700**
Ferrous Iron mg/L	**2.0**
Nitrate mg/L	< 0.18 U
Sulfate mg/L	**0.92 J**
Chloride mg/L	**42.4**
Nitrogen, Nitrate-Nitrite mg/L	< 0.090 U
Alkalinity, Bicarbonate mg/L	**185**
Alkalinity, Carbonate mg/L	< 1.70 U
Alkalinity, Total mg/L	**185**
Total Organic Carbon mg/L	**3.5 J**
DO mg/L	**0.72**
ORP mV	**-40.0**

Location	RHMW10
Collection Date	4/21/2020
Analyte / Unit	Result
Methane µg/L	< 1.00 U
Ferrous Iron mg/L	< 0.32 U
Nitrate mg/L	**2.1**
Sulfate mg/L	**6.9**
Chloride mg/L	**41.7**
Nitrogen, Nitrate-Nitrite mg/L	**0.41**
Alkalinity, Bicarbonate mg/L	**67.5**
Alkalinity, Carbonate mg/L	< 1.70 U
Alkalinity, Total mg/L	**67.5**
Total Organic Carbon mg/L	**0.19 J**
DO mg/L	**8.12**
ORP mV	**69.2**

Location Map



Legend

- Monitoring Well with Screening Criteria Exceedance(s)
- Existing Monitoring Well Location
- Red Hill Tank
- Stream
- Red Hill Facility Boundary

Notes

1. Map projection: NAD 1983 UTM Zone 4N
2. Base Map: DigitalGlobe, Inc. (DG) and NRCS. Publication_Date: 2015

ABBREVIATIONS:

bgs	below ground surface
DO	dissolved oxygen
ft	feet
J	estimated value
mg/L	milligrams per liter
mV	millivolts
NA	not analyzed or not applicable
ORP	oxidation-reduction potential
U	non-detect value (reported as less than the limit of detection)
µg/L	microgram per liter

Bold text indicates detected value.

N

0 400 800 1,600 Feet

Figure 3B
Natural Attenuation Parameter Results
2nd Qtr 2020 Groundwater LTM Report
Red Hill Bulk Fuel Storage Facility
JBPHH, O'ahu, Hawai'i

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Sampling Port Depth		459.3 ft bgs	396.0 ft bgs	357.8 ft bgs	330.5 ft bgs	285.3 ft bgs	234.8 ft bgs
Location		RHMW11-01	RHMW11-02	RHMW11-03	RHMW11-04	RHMW11-05	RHMW11-07
Collection Date		3/21/2018	3/22/2018	3/27/2018	3/27/2018	3/28/2018	10/30/2019
Analyte	Unit	Result	Result	Result	Result	Result	Result
Bromide	mg/L	**0.30 J**	**0.30 J**	**0.27 J**	**0.29 J**	**0.33 J**	**0.15 J**
Fluoride	mg/L	< 0.09 U	< 0.09 U	< 0.09 U	< 0.09 U	**0.13**	< 0.09 U
Calcium	µg/L	**10,100**	**9,300**	**8,050**	**8,320**	**19,500**	**5,620**
Iron	µg/L	—	—	—	—	**316**	—
Lead	µg/L	—	—	—	—	< 4.00 U	—
Magnesium	µg/L	**9,340**	**8,710**	**8,040**	**8,280**	**18,900**	**5,670**
Manganese	µg/L	**3.3 J**	**2.0 J**	< 13.1 U	**322**	**482**	**8.8 J**
Potassium	µg/L	**1,850 J**	**1,870 J**	**1,780 J**	**1,290 J**	**1,150 J**	**655 J**
Sodium	µg/L	**26,600**	**28,000**	**33,800**	**36,800**	**41,500**	**31,400**
Silica, Dissolved	mg/L	**41.8**	**42.0**	**39.6**	**33.9**	**37.9**	**39.7**
Silica, Total	mg/L	**40.4**	**41.8**	**38.9**	**33.0**	**39.6**	**44.9**

Location		HDMW2253-03
Collection Date		11/16/2016
Analyte	Unit	Result
Bromide	mg/L	**0.37 J**
Fluoride	mg/L	**0.17**
Calcium	µg/L	**12,900**
Magnesium	µg/L	**17,500**
Manganese	µg/L	**56.1**
Potassium	µg/L	**608 J**
Sodium	µg/L	**57,100**
Silica, Dissolved	mg/L	**62.7**
Silica, Total	mg/L	**67.0**

Location		RHMW06
Collection Date		11/14/2016
Analyte	Unit	Result
Bromide	mg/L	**1.3**
Fluoride	mg/L	**0.23**
Calcium	µg/L	**35,100**
Magnesium	µg/L	**54,900**
Manganese	µg/L	< 4.00 U
Potassium	µg/L	**2,330 J**
Sodium	µg/L	**165,000**
Silica, Dissolved	mg/L	**71.2**
Silica, Total	mg/L	**72.1**

Location		RHMW07
Collection Date		11/14/2016
Analyte	Unit	Result
Bromide	mg/L	**1.3**
Fluoride	mg/L	**0.19 J**
Calcium	µg/L	**55,500**
Magnesium	µg/L	**71,900**
Manganese	µg/L	< 4.00 U
Potassium	µg/L	**3,040**
Sodium	µg/L	**150,000**
Silica, Dissolved	mg/L	**76.7**
Silica, Total	mg/L	**78.0**

Location		RHMW04
Collection Date		11/14/2016
Analyte	Unit	**Result**
Bromide	mg/L	**0.35 J**
Fluoride	mg/L	**0.16**
Calcium	µg/L	**16,900**
Magnesium	µg/L	**18,600**
Manganese	µg/L	< 4.00 U
Potassium	µg/L	**1,960 J**
Sodium	µg/L	**34,700**
Silica, Dissolved	mg/L	**62.4**
Silica, Total	mg/L	**57.2**

Location		OWDFMW01
Collection Date		11/15/2016
Analyte	Unit	Result
Bromide	mg/L	**3.2**
Fluoride	mg/L	< 0.45 U
Calcium	µg/L	**115,000**
Magnesium	µg/L	**220,000**
Manganese	µg/L	< 4.00 U
Potassium	µg/L	**7,640**
Sodium	µg/L	**350,000**
Silica, Dissolved	mg/L	**58.9**
Silica, Total	mg/L	**64.4**

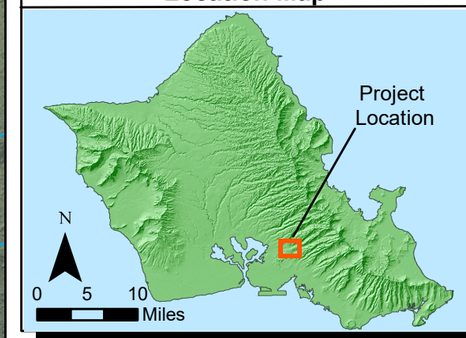
Location		RHMW2254-01
Collection Date		11/14/2016
Analyte	Unit	**Result**
Bromide	mg/L	**0.36 J**
Fluoride	mg/L	**0.24**
Calcium	µg/L	**15,800**
Magnesium	µg/L	**15,400**
Manganese	µg/L	< 4.00 U
Potassium	µg/L	**2,230 J**
Sodium	µg/L	**42,200**
Silica, Dissolved	mg/L	**53.0**
Silica, Total	mg/L	**51.9 J**

Sampling Port Depth		565.0 ft bgs	463.8 ft bgs	410.5 ft bgs	320.3 ft bgs	292.0 ft bgs
Location		RHMW15-01	RHMW15-02	RHMW15-03	RHMW15-04	RHMW15-05
Collection Date		11/4/2019	11/5/2019	11/7/2019	10/31/2019	11/6/2019
Analyte	Unit	Result	Result	Result	Result	Result
Bromide	mg/L	**0.22 J**	**0.22 J**	**0.22 J**	**0.17 J**	**0.19 J**
Fluoride	mg/L	< 0.09 U	< 0.09 U	< 0.09 U	< 0.09 U	< 0.09 U
Calcium	µg/L	**17,200**	**14,900**	**13,200**	**9,490**	**13,800 J**
Magnesium	µg/L	**16,100**	**15,900**	**13,800**	**9,990**	**10,600 J**
Manganese	µg/L	< 4.00 U	< 4.00 U	**3.0 J**	**11.6**	**191 J**
Potassium	µg/L	**2,130 J**	**2,310 J**	**2,070 J**	**1,730 J**	**1,610 J**
Sodium	µg/L	**38,600**	**42,600**	**35,300**	**28,300**	**39,600 J**
Silica, Dissolved	mg/L	**39.7**	**41.4**	**44.9**	**42.6**	**13.7**
Silica, Total	mg/L	**43.5**	**44.5**	**45.3**	**46.2**	**14.6**

Location		RHMW05
Collection Date		11/15/2016
Analyte	Unit	Result
Bromide	mg/L	**0.62**
Fluoride	mg/L	**0.39**
Calcium	µg/L	**7,850**
Magnesium	µg/L	**13,200**
Manganese	µg/L	< 4.00 U
Potassium	µg/L	**4,930**
Sodium	µg/L	**136,000**
Silica, Dissolved	mg/L	**85.4**
Silica, Total	mg/L	**82.6**

Hālawa Quarry
Hālawa Deep Monitor Well (HDMW2253-03)
South Hālawa Valley
South Hālawa Stream
Navy Firing Range
RHMW13
RHMW04
RHMW06
RHMW11
Hālawa Correctional Facility
Hālawa Industrial Park
RHMW07
RHMW14
H-3 Freeway
Oily Waste Disposal Facility
OWDFMW01
RHMW2254-01
RHMW02
RHMW03
RHMW08
RHMW10
RHMW01
RHMW15
RHMW09
RHMW05
H-201 Freeway
U.S. Coast Guard Housing
Red Hill Elementary School
Moanalua Hillside Apartments
Moanalua Golf Course
Tripler Army Medical Center

Location Map



Legend

- Monitoring Well with Screening Criteria Exceedance(s)
- Existing Monitoring Well Location
- Red Hill Tank
- Stream
- Red Hill Facility Boundary

Notes

1. Map projection: NAD 1983 UTM Zone 4N
2. Base Map: DigitalGlobe, Inc. (DG) and NRCS. Publication_Date: 2015
3. Only analytes with detections and associated SGC data (if applicable) are shown.

ABBREVIATIONS:

FD	field duplicate sample
ID	identification
J	estimated value
N	primary (normal) sample
SGC	silica gel cleanup
SSRBL	site-specific risk based level
TPH-d	total petroleum hydrocarbon - diesel range organics
TPH-g	total petroleum hydrocarbon - gasoline range organics
TPH-o	total petroleum hydrocarbon - oil/residual organics
U	non-detect value (reported as less than the limit of detection)
µg/L	microgram per liter

Monitoring Well with **COPC** Screening Criteria Exceedance(s)

N
0 400 800 1,600 Feet

Figure 4A
General Groundwater Chemistry Parameters
2nd Qtr 2020 Groundwater LTM Report
Red Hill Bulk Fuel Storage Facility
JBPHH, O'ahu, Hawai'i

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Sampling Port Depth		456.6 ft bgs	415.3 ft bgs	325.1 ft bgs	254.8 ft bgs	210.6 ft bgs	164.1 ft bgs
Location		RHMW14-01	RHMW14-02	RHMW14-03	RHMW14-04	RHMW14-05	RHMW14-07
Collection Date		10/21/2019	10/22/2019	10/28/2019	10/24/2019	10/23/2019	10/23/2019
Analyte	Unit	Result	Result	Result	Result	Result	Result
Bromide	mg/L	**0.15 J**	**0.15 J**	**0.14 J**	**0.13 J**	**0.18 J**	**0.15 J**
Fluoride	mg/L	< 0.09 U	< 0.09 U	< 0.09 U	< 0.09 U	< 0.09 U	< 0.09 U
Calcium	µg/L	**10,500**	**10,000**	**7,740**	**8,100**	**10,300**	**11,400 J**
Magnesium	µg/L	**10,500**	**10,300**	**8,820**	**9,260**	**14,700**	**11,400 J**
Manganese	µg/L	< 3.5 U	< 4.00 U	**7.3 J**	< 4.00 U	**64.1**	**15.8**
Potassium	µg/L	**1,580 J**	**1,610 J**	**1,390 J**	**482 J**	**620 J**	**799 J**
Sodium	µg/L	**31,300**	**35,000**	**36,100**	**32,400**	**39,000**	**36,200**
Silica, Dissolved	mg/L	**44.5**	**40.1**	**45.1**	**54.8**	**52.7 J**	**61.1**
Silica, Total	mg/L	**43.4**	**42.5**	**49.1**	**55.0**	**52.5 J**	**63.1**

Sampling Port Depth		412.0 ft bgs	325.8 ft bgs	286.5 ft bgs	243.3 ft bgs	230.3 ft bgs
Location		RHMW13-01	RHMW13-02	RHMW13-03	RHMW13-04	RHMW13-05
Collection Date		3/3/2020	3/4/2020	3/5/2020	4/27/2020	3/10/2020
Analyte	Unit	Result	Result	Result	Result	Result
Bromide	mg/L	**0.21 J**	**0.19 J**	**0.22 J**	**0.33 J**	**0.40 J**
Fluoride	mg/L	< 0.09 U	< 0.09 U	**0.25**	**0.19**	**0.87**
Calcium	µg/L	**12,100**	**10,300**	**11,400**	**10,600**	**21,900**
Magnesium	µg/L	**9,320**	**9,710**	**12,100**	**11,800**	**14,900**
Manganese	µg/L	**2.6 J**	**5.9 J**	**1.4 J**	**4.8 J**	**117**
Potassium	µg/L	**1,870 J**	**1,700 J**	**1,960 J**	**2,000 J**	**3,380**
Sodium	µg/L	**21,600**	**23,500**	**33,900**	**40,700**	**47,500**
Silica, Dissolved	mg/L	**41.6**	**42.9**	**46.5**	**50.2**	**9.0**
Silica, Total	mg/L	**40.4**	**47.9**	**51.1**	**49.3**	**9.0**

Location		RHMW08
Collection Date		11/15/2016
Analyte	Unit	**Result**
Bromide	mg/L	**0.63**
Fluoride	mg/L	**0.35**
Calcium	µg/L	**32,700**
Magnesium	µg/L	**12,000**
Manganese	µg/L	< 4.00 U
Potassium	µg/L	**5,680**
Sodium	µg/L	**109,000**
Silica, Dissolved	mg/L	**39.0**
Silica, Total	mg/L	**36.3**

Location		RHMW03
Collection Date		11/15/2016
Analyte	Unit	Result
Bromide	mg/L	**0.29 J**
Fluoride	mg/L	**0.25**
Calcium	µg/L	**25,000**
Magnesium	µg/L	**33,400**
Manganese	µg/L	**36.7**
Potassium	µg/L	**3,700**
Sodium	µg/L	**104,000**
Silica, Dissolved	mg/L	**83.5**
Silica, Total	mg/L	**87.4**

Location		RHMW10
Collection Date		10/25/2017
Analyte	Unit	Result
Bromide	mg/L	**0.29 J**
Fluoride	mg/L	< 0.09 U
Calcium	µg/L	**9,650**
Iron	µg/L	< 25.0 U
Lead	µg/L	< 4.00 U
Magnesium	µg/L	**9,420**
Manganese	µg/L	< 4.00 U
Potassium	µg/L	**1,730 J**
Sodium	µg/L	**32,700**
Silica, Dissolved	mg/L	**41.3**
Silica, Total	mg/L	**37.5**

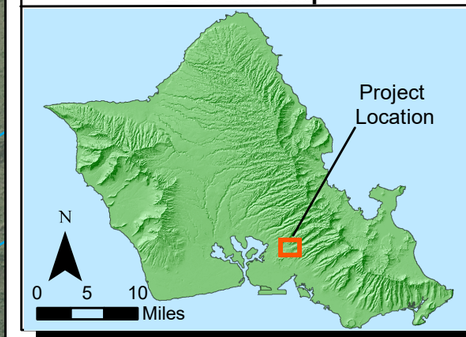
Location		RHMW01
Collection Date		11/14/2016
Analyte	Unit	Result
Bromide	mg/L	**0.26 J**
Fluoride	mg/L	**0.28**
Calcium	µg/L	**11,500**
Magnesium	µg/L	**9,880**
Manganese	µg/L	**743**
Potassium	µg/L	**1,900 J**
Sodium	µg/L	**35,200**
Silica, Dissolved	mg/L	**68.1**
Silica, Total	mg/L	**65.9**

Location		RHMW09
Collection Date		11/15/2016
Analyte	Unit	Result
Bromide	mg/L	**0.29 J**
Fluoride	mg/L	**0.17**
Calcium	µg/L	**12,900**
Magnesium	µg/L	**11,600**
Manganese	µg/L	< 4.00 U
Potassium	µg/L	**2,110 J**
Sodium	µg/L	**36,600**
Silica, Dissolved	mg/L	**53.7**
Silica, Total	mg/L	**46.7**

Location		RHMW02
Collection Date		11/15/2016
Analyte	Unit	Result
Bromide	mg/L	**0.26 J**
Fluoride	mg/L	**0.78**
Calcium	µg/L	**12,600**
Magnesium	µg/L	**24,800**
Manganese	µg/L	**1,950**
Potassium	µg/L	**2,440 J**
Sodium	µg/L	**53,600**
Silica, Dissolved	mg/L	**84.4**
Silica, Total	mg/L	**83.7**

Hālawa Quarry
Hālawa Deep Monitor Well (HDMW2253-03)
South Hālawa Valley
South Hālawa Stream
Navy Firing Range
RHMW04
RHMW13
RHMW06
RHMW11
Hālawa Correctional Facility
Hālawa Industrial Park
RHMW07
RHMW14
RHMW02
RHMW03
RHMW08
RHMW01
RHMW10
OWDFMW01
RHMW2254-01
RHMW15
RHMW05
RHMW09
H-3 Freeway
H-201 Freeway
Oily Waste Disposal Facility
U.S. Coast Guard Housing
Red Hill Elementary School
Moanalua Hillside Apartments
Moanalua Golf Course
Āliamanu Crater
Tripler Army Medical Center

Location Map



Legend

- Monitoring Well with Screening Criteria Exceedance(s)
- Existing Monitoring Well Location
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Notes

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3. Only analytes with detections and associated SGC data (if applicable) are shown.

ABBREVIATIONS:

FD	field duplicate sample
ID	identification
J	estimated value
N	primary (normal) sample
SGC	silica gel cleanup
SSRBL	site-specific risk based level
TPH-d	total petroleum hydrocarbon - diesel range organics
TPH-g	total petroleum hydrocarbon - gasoline range organics
TPH-o	total petroleum hydrocarbon - oil/residual organics
U	non-detect value (reported as less than the limit of detection)
µg/L	microgram per liter

Monitoring Well with **COPC** Screening Criteria Exceedance(s)

N
0 400 800 1,600
Feet

Figure 4B
General Groundwater Chemistry Parameters
2nd Qtr 2020 Groundwater LTM Report
Red Hill Bulk Fuel Storage Facility
JBPHH, O'ahu, Hawai'i

B:\60571032-HNL\1900-Work\920 GIS\02 Maps\LTM\2020Q2\Fig4B Gen GWChemPara 2ndQtr2020 LTM rev.mxd 6/24/2020

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3.2.2 Analytical Results

Analytical results for the March 2020 sampling event and the Second Quarter (April) 2020 groundwater monitoring event are summarized as follows:

- *RHMW05, RHMW06, RHMW09, RHMW10, RHMW13-01, RHMW13-02, RHMW13-03, and RHMW15-05:* No COPCs were detected.
- *RHMW2254-01 (primary and duplicate):* TPH-d (180 J and 280 J µg/L) was detected at concentrations below the screening criterion (400 µg/L); no other COPCs were detected. The TPH chromatograms of both primary and duplicate samples (in both the original and re-extract analyses) displayed a chemical signature of sharp discrete peaks not indicative of hydrocarbons related to petroleum products used at the Facility. Chromatograms of the samples and the laboratory method blanks showed similar chromatographic signatures, indicating that the reported concentrations were attributable to laboratory solvent contamination rather than TPH in the groundwater. Additionally, the non-SGC chromatograms from these groundwater samples and associated laboratory QC samples were markedly different compared to RHMW02 and RHMW03, both of which exhibited profiles that were similar to and expected of weathered dissolved fuels associated with the site. Additional discussion of the laboratory contamination is presented in the laboratory's EPA Method 8015 limit study (Appendix C.4).
- *RHMW01:* TPH-d (190 J µg/L) was detected at a concentration below the screening criterion (400 µg/L); no other COPCs were detected. The sample's TPH chromatograms (both the original and re-extract analyses) displayed a chemical signature of sharp discrete peaks not indicative of hydrocarbons related to petroleum products used at the Facility. The TPH-d with SGC analysis result was non-detect, suggesting the reported concentrations of TPH-d from testing without SGC were not from petroleum hydrocarbons.
- *RHMW02 (primary and duplicate):* TPH-d (1,700 J and 1,500 J µg/L), 1-methylnaphthalene (13 and 13 µg/L), 2-methylnaphthalene (12 and 11 µg/L), and naphthalene (33 and 32 µg/L) were detected at concentrations exceeding their respective screening criteria (400, 10, 10, and 17 µg/L). TPH-d was also detected in the SGC analysis but at significantly lower concentrations (350 and 310 J µg/L), suggesting that the majority of the non-SGC TPH-d results were biodegradation by-products. The concentrations of TPH-d did not exceed the SSRBL of 4,500 µg/L. TPH-g (49 and 63 µg/L) and TPH-o (260 J and 290 J µg/L) were detected at concentrations below their respective screening criteria (300 and 500 µg/L). No other COPCs were detected.
- *RHMW03:* TPH-d (220 J µg/L) and TPH-o (240 J µg/L) were detected at concentrations below their respective screening criteria (400 and 500 µg/L). The TPH-d and TPH-o with SGC analysis results were non-detect, suggesting that the non-SGC TPH-d result consisted entirely of biodegradation by-products.
- *RHMW04, RHMW07, RHMW08, RHMW11-05, RHMW13-04 (March 2020 event), RHMW13-05 (March 2020 event, primary and duplicate), RHMW14-03, and HDMW2253-03:* TPH-d and/or TPH-o were detected below their respective screening criteria (400 and 500 µg/L) in RHMW04 (240 J and <300 U µg/L), RHMW07 (<300 UJ and 150 J µg/L), RHMW08 (150 J and 170 J µg/L), RHMW11-05 (<260 U and 240 J µg/L), RHMW13-04 (220 J and 240 J µg/L), RHMW13-05 (primary, 240 J and 240 J µg/L), RHMW13-05 (duplicate, 200 J and 170 J µg/L), RHMW14-03 (<300 U and 150 J µg/L), and HDMW2253-03 (190 J and <300 U µg/L). Evaluation of the sample, field QC, and laboratory QC chromatograms showed similar TPH chromatographic profiles of discrete peaks not

indicative of petroleum hydrocarbons. The similar chromatographic profiles between the field samples and laboratory QC samples indicated laboratory solvent contamination. TPH-d and TPH-o with SGC analysis results when analyzed were non-detect, confirming that the non-SGC TPH-d and TPH-o results consisted of non-petroleum hydrocarbons. Additionally, the non-SGC chromatograms from these groundwater, field QC, and laboratory QC samples were markedly different compared to RHMW02 and RHMW03, both of which exhibited profiles that were similar to and expected of weathered dissolved fuels associated with the site.

- *OWDFMW01:* TPH-d (450 J µg/L) was detected above the screening criterion (400 µg/L), and TPH-o (280 J µg/L) was detected below the screening criterion (500 µg/L). Evaluation of the TPH chromatograms of the sample (original analysis and re-extract analysis) and laboratory QC showed similar chromatographic profiles of discrete peaks not indicative of petroleum hydrocarbons; the similar chromatographic profiles between the field samples and laboratory QC samples indicated that the TPH detections were attributable to laboratory solvent contamination rather than petroleum hydrocarbons. TPH-d and TPH-o with SGC analysis results were also non-detect, confirming that the non-SGC TPH-d and TPH-o results consisted of non-petroleum hydrocarbons. Additionally, the non-SGC chromatograms from the groundwater and laboratory QC samples were markedly different compared to RHMW02 and RHMW03, both of which exhibited profiles that were similar to and expected of weathered dissolved fuels associated with the site.

As discussed above, the TPH-d and/or TPH-o detections in groundwater samples from RHMW2254-01, RHMW04, RHMW07, RHMW08, RHMW11-05, RHMW13-04 (March 2020 event), RHMW13-05 (March 2020 event), RHMW14-03, HDMW2253-03, and OWDFMW01 were attributable to laboratory solvent contamination based on evaluation of the TPH chromatograms of the samples, field QC, and laboratory QC after the third-party validation of the combined March 2020 and Second Quarter (April) 2020 events' dataset was completed. Additionally, similar chromatographic profiles were seen in the samples used for the laboratory's method blank study (see Section 3.2.1 and Appendix C.4). However, these March 2020 and Second Quarter (April) 2020 groundwater monitoring event sample detections were not qualified during the third-party validation as non-detect ("U" flag) because the laboratory method blanks were reported as non-detect (<300 µg/L). The laboratory method blanks associated with these samples did have detectable TPH, but at concentrations slightly below the DL of 150 µg/L. Because these laboratory method blank TPH detections were less than the DL, the TPH results were reported as non-detect (<300 U µg/L) in accordance with the most current DoD QSM (DoD and DOE 2019) (see Appendix C for additional information). Additional discussion of the third-party validation results is presented in Section 3.2 and Section 3.2.2.

Consistent with previous monitoring events, no free product or visible sheen was observed in the groundwater collected from all monitoring locations for the duration of the sampling. However, a slight rust-like color was observed in the groundwater collected from HDMW2253-03, which is not screened and terminates 50 ft below the groundwater surface. No odors were noted in any of the groundwater samples.

3.3 GROUNDWATER CONTAMINANT CONCENTRATIONS

A table of cumulative historical groundwater results is included as Appendix A.1. The historical groundwater COPC concentrations for TPH-g; TPH-d; TPH-o; benzene, toluene, ethylbenzene, and xylenes; 1-methylnaphthalene; 2-methylnaphthalene; and naphthalene are illustrated in Appendix A.2. Starting with the March 2020 groundwater data, the cumulative groundwater COPC graphs (Appendix A.2) differentiate TPH-d and TPH-o detections due to laboratory contamination. Cumulative NAP measurements starting from the Fourth Quarter 2016 event are illustrated in Appendix A.3.1, and current

NAP measurements are illustrated in Appendix A.3.2. There are no graphs for lead scavengers, fuel additives, and analytes that are no longer included as COPCs for the Red Hill groundwater LTM program (EPA Region 9 and DOH 2016). The only detections of lead scavengers and other fuel additives in groundwater samples were below-screening-criteria concentrations of 1,2-dichloroethane from April 2015 to January 2016 at OWDFMW01 and phenol (one detection) during a December 2016 sampling event at RHMW09.

3.1 GROUNDWATER CHEMISTRY PARAMETERS

During the March 2020 sampling event, five multilevel monitoring zones at RHMW13 were sampled for major ions to profile the aquifer chemistry within the monitoring location (see Table 3-2). Based on concentrations of calcium and magnesium at each of the multilevel monitoring zones at RHMW13, groundwater at this monitoring well profiles as very soft water (i.e., soft water has a hardness concentration less than or equal to 75 mg/L [75,000 µg/L]). Groundwater chemistry parameters for all monitoring locations are presented on Figure 4A and Figure 4B. Evaluation of groundwater chemistry parameters (including but not limited to groundwater conditions, flow paths, preferential pathways, effect of subsurface geology on groundwater general chemistry, and intra-well comparisons) in the monitoring wells within the LTM program is discussed in the AOC Statement of Work Sections 6 and 7 *Conceptual Site Model* (CSM) report (DON 2019b) and *Investigation and Remediation of Releases* (IRR) report (DON 2020), with further discussion planned for forthcoming AOC deliverables.

3.2 DATA VALIDATION AND ASSESSMENT

The analytical laboratory data for the March 2020 sampling event and Second Quarter (April) 2020 groundwater monitoring event were submitted to a third-party data validator (Laboratory Data Consultants, Inc.) for data validation and assessment. Analytical data from monitoring events from 2005 to Third Quarter 2016 underwent a limited data verification for all events in which a third-party data validation was not performed (DON 2018a). Analytical data from Fourth Quarter 2016 onward were validated by a third-party data validator.

The objective of data validation is to provide data of known quality for project decisions. Data quality is judged in terms of precision, accuracy, representativeness, comparability, completeness, and sensitivity. Data validation is performed in accordance with the data validation procedures in the NAVFAC Pacific Environmental Restoration Program *Project Procedures Manual* (DON 2015b), and consistent with the protocol in the DoD QSM Version 5.1 (DoD and DOE 2017), as presented in the SAP and addenda (DON 2017b; 2017c; 2017d; 2018f). A number of factors may affect the quality of data, including sample collection methods; sample analysis methods; and adherence to established procedures for sample collection, preservation, management, shipment, and analysis. Data validation reports are presented in Appendix C.2.

Precision

Precision is defined as the reproducibility of replicate measurements. Precision is evaluated by the relative percent difference (RPD) of field duplicates, LCS/LCSD, MS/MSD, and laboratory duplicate results. Field duplicate and MS/MSD samples were collected at a rate of approximately 10 percent of primary samples. Field duplicates were sent to the laboratory along with the primary samples. Primary and field duplicate RPDs are presented in Table 3-4. When COPCs were not detected in the primary and field duplicate samples, no RPDs could be calculated.

Table 3-4: Field Duplicate Analyte RPDs

Sampling Location [a]	Analyte	Screening Criterion (µg/L)	Sample ID	Concentration (µg/L)	RPD [b]
RHMW2254-01	TPH-d	400	ERH1039	180 J *	43%
			ERH1040	280 J *	
RHMW02	TPH-g	300	ERH1044	49	25%
			ERH1045	63	
	TPH-d	400	ERH1044	1700 J	13%
			ERH1045	1500 J	
	TPH-d w/SGC	400	ERH1044	350	12%
			ERH1045	310 J	
	TPH-o	500	ERH1044	260 J	11%
			ERH1045	290 J	
	1-Methylnaphthalene	10	ERH1044	13	0%
			ERH1045	13	
	2-Methylnaphthalene	10	ERH1044	12	9%
			ERH1045	11	
	Naphthalene	17	ERH1044	33	3%
			ERH1045	32	
RHMW13-05 (March 2020 event)	TPH-d	400	ERH1031	240 J *	18%
			ERH1032	200 J *	
	TPH-o	500	ERH1031	240 J *	34%
			ERH1032	170 J *	

* detected result is due to laboratory solvent contamination
% percent
J estimated value
[a] No COPCs were detected in the primary and field duplicate samples collected from RHMW13-05 (collected during the Second Quarter [April] 2020 groundwater monitoring event).
[b] Field duplicate RPD measurement performance criterion for groundwater is 50 percent in accordance with the criteria presented in Table 5-1 of the SAP (DON 2017b, 2018c) and Table 3-2 of the SAP addenda (DON 2017d, 2018g).

All primary and field duplicate samples RPDs were within the 50 percent measurement performance criteria (Table 3-4). No other COPCs besides those listed in Table 3-4 were detected in the primary and field duplicate samples collected during the March 2020 sampling event and Second Quarter (April) 2020 groundwater monitoring event.

LCS/LCSD RPDs exceeded the 20 percent criterion (see criteria in SAP Appendix D [DON 2017b, 2018c] and SAP addenda Appendix C [DON 2017d, 2018g]) for 2-(2-methoxyethoxy)-ethanol in eight samples. Associated results were qualified as non-detect estimated (UJ).

The MS/MSD RPD also exceeded criterion for one TPH-o result, leading to the result being flagged as estimated (J).

No other precision concerns were identified during validation of sample results. Data usability of the samples is discussed in Section 3.3.

Accuracy

Accuracy is defined as the degree of conformity of a measurement to a standard or true value. Accuracy is evaluated through measurement of the percent recovery (%R) of an analyte in a reference standard or spiked sample. Accuracy limits for surrogates, LCS, MS, and MSD samples are either prescribed

by the DoD or established by the individual laboratory. The acceptance criteria for accuracy are dependent on the analytical method and based on historical laboratory or DoD data.

One chloride result was flagged as estimated (J) due to low MS and MSD %Rs, and three DOC results were flagged as estimated (J) due to low LCSD %Rs. The low %Rs indicated possible low bias.

One nitrate-nitrite as N result was flagged estimated (J) due to the high MSD %Rs. Three total alkalinity results, nine TPH-d results, and eight TPH-o results were also flagged estimated due to high LCS and/or LCSD %Rs. The high %Rs indicated possible high bias.

Benzene, ethylbenzene, toluene, xylenes, and 1,2-dichloroethane results for two samples were flagged as non-detect estimated (UJ) due to low surrogate %Rs, indicating possible low bias.

Two TPH-d and two TPH-o results were flagged as estimated (J) due to high surrogate %Rs, indicating possible high bias.

Six total organic carbon, one bicarbonate alkalinity, and one total alkalinity results were flagged as estimated (J) due to high continuing calibration verification %R, indicating possible high bias.

Two 1,2-dichloroethane results were flagged as non-detect estimated (UJ) due to high continuing calibration verification %D, indicating indeterminate bias.

No other accuracy concerns identified during validation affected sample results. Data usability is discussed in Section 3.3.

Representativeness

Representativeness is the degree to which data accurately and precisely represent a characteristic of a population, parameter variations at a sampling point, or an environmental condition. Representativeness was achieved by conducting sampling in accordance with the sample collection procedures described in the AOC Statement of Work Sections 6 and 7 WP/SOW (DON 2017a) and the SAP (DON 2017b; 2017c; 2017d), including standardized sample collection methods identified in NAVFAC Pacific Environmental Restoration Program Project Procedure I-C-3, *Monitoring Well Sampling* (DON 2015b).

Representativeness is also evaluated through compliance with the method-recommended sample holding time and sample preservation methods and through the analysis of blank samples, including method blank, equipment blank, field blank, and trip blank samples. All sample holding times and sample preservation were evaluated in accordance with EPA SW-846 method recommendations and DoD QSM Version 5.1 (DoD and DOE 2017).

All samples were associated with a trip blank and laboratory blanks. Field and equipment blanks were collected and analyzed to demonstrate efficiency of field equipment decontamination. TPH-d was detected in the field and equipment blanks associated with multilevel monitoring well sampling locations. Six TPH-d results were flagged as non-detect (U) based on field and equipment blank contamination, indicating that sample detections are likely from field and/or laboratory artifacts. Three of these six results were also flagged as non-detect (U) based on the associated laboratory method blank contamination. Notably, the TPH chromatographic signatures of the field and equipment blanks, associated field samples, and associated laboratory method blanks show similar discrete peaks attributable to solvent contamination.

Two nitrate results were flagged as non-detect (U) due to laboratory method blank contamination.

Seven nitrate samples (RHMW11-05, RHMW13-01, RHMW13-04 [March 2020 and April 2020 samples], RHMW13-05 [March 2020 and April 2020 samples], and RHMW15-05) were analyzed beyond the method-recommended 48-hour holding time. These samples were analyzed between 50 and 125 hours from sample collection. The results were qualified as estimated (J). All groundwater samples were also analyzed for nitrate-nitrite as nitrogen, which can be used to confirm the nitrate results. Nitrate was recovered between 81 and 188 percent of the calculated equivalent nitrate concentration based on nitrate-nitrite as nitrogen results (Table 3-5). Of the five detected results from samples analyzed for nitrate outside of the method-recommended holding time, the result for RHMW13-04 and RHMW13-05 (both from the Second Quarter [April] 2020 monitoring event) recovered below 90 percent of the calculated equivalent nitrate concentration, indicating possible low bias.

Table 3-5: Nitrate Result Confirmation

Location	Sample ID	Nitrate Result (mg/L)	Nitrate-Nitrite as Nitrogen Result (mg/L)	Calculated Equivalent Nitrate Concentration Based on Nitrate-Nitrite as Nitrogen Result (mg/L) [a]	%R
RHMW2254-01	ERH1039	2.6	0.66	2.92	89%
RHMW01	ERH1042	0.80	0.13	0.58	139%
RHMW02	ERH1044	< 0.18 U	< 0.090 U	—[c]	—[c]
RHMW03	ERH1047	7.3	1.6	7.09	103%
RHMW04	ERH1049	2.3	0.47	2.08	110%
RHMW05	ERH1051	3.4	0.76	3.37	101%
RHMW06	ERH1053	2.6	0.59	2.61	99%
RHMW07	ERH1055	4.5	1.0	4.43	102%
RHMW08	ERH1057	6.2	1.5	6.65	93%
RHMW09	ERH1059	2.0	0.46	2.04	98%
RHMW10	ERH1061	2.1	0.41	1.82	116%
RHMW11-05[b]	ERH1070	< 0.18 UJ	< 0.090 U	—[c]	—[c]
RHMW13-01[b]	ERH1023	< 1.3 UJ	0.31 J	—[c]	—[c]
RHMW13-02	ERH1025	< 1.5 U	0.36	—[c]	—[c]
RHMW13-03 (March)	ERH1027	1.8	0.42	1.86	97%
RHMW13-03 (April)	ERH1076	2.0	0.48	2.13	94%
RHMW13-04 (March)[b]	ERH1029	1.8 J	0.43	1.90	94%
RHMW13-04 (April)[b]	ERH1078	1.8 J	0.50	2.22	81%
RHMW13-05 (March)[b]	ERH1031	0.40 J	0.048 J	0.21	188%
RHMW13-05 (April)[b]	ERH1080	1.6 J	0.41	1.82	88%
RHMW14-03	ERH1072	1.7	0.34	1.51	113%
RHMW15-05[b]	ERH1074	1.8 J	0.43	1.90	94%
HDMW2253-03	ERH1065	0.83	0.23	1.02	81%
OWDFMW01	ERH1063	7.2	1.9	8.42	86%

— not calculable
% percent
J estimated value
U non-detect value

[a] Nitrate-nitrite as nitrogen result converted to nitrate by multiplying nitrate-nitrite as nitrogen result by a factor of 4.43 (CalEPA 2011).
[b] Groundwater samples from these locations were extracted outside of the holding time for nitrate analysis.
[c] No equivalent nitrate concentration or %R was calculated due to the nitrate or nitrate-nitrite results reported as non-detect(s).

The representativeness of the data is considered acceptable after qualification for recommended holding time. Data usability is discussed in Section 3.3.

Completeness

Completeness is defined as the overall percentage of valid analytical results (including estimated results) compared to the total number of analytical results reported by the analytical laboratory.

Of the 925 results reported, none of the results were rejected. The completeness of the data (100 percent) met the 90 percent completeness goal.

Comparability

Comparability expresses the confidence with which one data set can be compared to another. Comparability can be related to accuracy and precision because these quantities are measures of data reliability. Data with acceptable precision and accuracy are considered comparable if collection techniques, analytical procedures, methods, and reporting are equivalent.

Samples collected from 2005 through the current monitoring event have been analyzed by multiple laboratories (Table 1-3). Data comparability is complicated by differences in analytical methods and extraction and analysis protocols used. For example, TPH-g and naphthalene have been reported using different EPA methods (either or both EPA 8260 and EPA 8270 SIM), and TPH-d and TPH-o have been reported using the same method (EPA 8015) but with differing carbon ranges over time (e.g., C10–C28, C10–C24 for reporting TPH-d) and different extraction methods (i.e., separatory funnel liquid-liquid extraction [EPA 3510] versus continuous liquid-liquid extraction [EPA 3520]), yielding different TPH concentrations.

Current analytical methods used are aimed to have laboratory limits lower than the current screening criteria. Starting from the Fourth Quarter 2016 event, analytical method DLs, LODs, and LOQs have been lower for most analytes than they had been during previous events, except for the EPA Method 8015 TPH-d and TPH-o DLs, LODs, and LOQs starting from March 2020. The method used to analyze TPH-g was also changed from EPA Method 8015 to EPA Method 8260 to improve sensitivity. The improved reporting limits should be considered when results are compared to data from earlier events. An evaluation of data reported between laboratories is presented in the AOC Statement of Work Sections 6 and 7 CSM report (DON 2019b) as part of the AOC Statement of Work Sections 6 and 7 investigation.

The laboratory used standard analytical methods for all analyses. In all cases, the DLs and LODs attained were below the specified LOQs. Target analytes detected below the LOQs flagged (J) by the laboratory should be considered estimated.

Sensitivity

The LOQs are established by the laboratory based on the LODs or instrument DLs, historical data, and limits established for the various methods. The LOQs and LODs for samples may require adjustment by the laboratory due to matrix interference or when high levels of target analytes necessitate dilution before analysis. Matrix interference and sample dilutions decrease sensitivity and increase the LOQs/LODs. No results in this data set had increased LOQs or LODs that impacted sensitivity and data usability.

3.3 DATA ASSESSMENT AND USABILITY CONCLUSIONS

The precision, accuracy, representativeness, comparability, completeness, and sensitivity criteria were evaluated, and with some exceptions the criteria were met. Results associated with QC data that failed acceptance criteria are discussed in Section 3.2. Data quality issues that need to be taken into account for project decisions are summarized below.

The LCS/LCSD RPD exceedances indicated a lack of precision leading to indeterminate bias in the associated results 2-(2-methoxyethoxy)-ethanol for RHMW13-01, RHMW13-02, RHMW13-03 (March 2020 sample), RHMW13-04 (April 2020 sample), RHMW13-05 (April 2020 primary and duplicate samples), and the field and equipment blanks for the March 2020 samples. However, data accuracy criteria were met for the above-mentioned results, and the results were non-detect; thus, the results were likely not affected by possible bias.

There is possible high bias for total alkalinity results (due to high LCS/LCSD %Rs) and total organic carbon results (due to high continuing calibration verification [CCV] %R) for RHMW13-01, RHMW13-02, and RHMW13-03. Additionally, the low LCSD %Rs indicated possible low bias for DOC at these same locations. As there were no COPC detections at these locations and no other indications of natural attenuation of petroleum compounds, the results were likely not affected by the possible biases.

The high LCS/LCSD %Rs indicated possible high bias in the associated results for TPH-d (RHMW2254-01 [primary and duplicate], RHMW02 [primary and duplicate], RHMW04, RHMW13-03, RHMW15-05, HDMW2253-03, and OWDFMW01) and TPH-o (RHMW02 [primary and duplicate], RHMW03, RHMW07, RHMW08, RHMW11-05, RHMW14-03, and OWDFMW01). Additionally, the high surrogate %Rs for TPH-d and TPH-o indicated possible high bias for RHMW07 and RHMW08. Most of the above-mentioned results (except for TPH-d and TPH-o detections in RHMW02 and RHMW03) were due to solvent contamination in the laboratory; high LCS/LCSD and surrogate recoveries were also due to contributions of the solvent contamination; thus, the high biases did not present significant impacts. Conversely, the RHMW02 and RHMW03 TPH chromatographic signatures were consistent with historical groundwater TPH signatures for these two locations, and concentrations were consistent with previous data; thus, RHMW02 and RHMW03 results were likely not affected by the bias.

The MS/MSD RPD exceedance for TPH-d (RHMW2254-01) also indicated indeterminate bias. Due to the sample and laboratory method blanks sharing similar TPH chromatographic signatures because of solvent contamination, the result was likely not affected by the possible bias.

The high MSD %R associated with one nitrate-nitrite as N result (RHMW13-01) indicated possible high bias. As nitrate is non-detect at RHMW13-01, the possible high bias on nitrate-nitrite as N did not affect the natural attenuation parameter evaluation for the monitoring location.

The low MS/MSD %Rs for the chloride result for RHMW2254-01 indicated possible low bias. A comparison with previous events' results shows similar concentrations; thus, the result was likely not affected by the bias.

The low surrogate %Rs for the benzene, ethylbenzene, toluene, xylenes, and 1,2-dichloroethane results for RHMW13-03 (March 2020) and the associated trip blank indicated possible low bias. Additionally, the 1,2-dichloroethane results for the same samples had possible indeterminate bias due to high CCV %D. Because both the March 2020 and Second Quarter (April) 2020 RHMW13-03 results were

non-detect and because the Second Quarter (April) 2020 results did not have QC exceedances, the March 2020 results were likely not affected by the biases.

The high CCV %Rs for the associated results for total organic carbon (RHMW02, RHMW15-05, and HDMW2253-03), bicarbonate alkalinity (RHMW2254-01), and total alkalinity (RHMW2254-01) indicated possible high bias. A comparison with previous events' results showed similar concentrations; thus, the result was likely not affected by the bias.

Several TPH-d (RHMW11-05, RHMW13-03 [April 2020], RHMW13-04 [April 2020] and RHMW13-05 [April 2020, primary and duplicate], and RHMW15-05) results were qualified as non-detect due to detections in the laboratory method blanks and/or field and equipment blanks. The sample detections were due to laboratory solvent contamination based on chromatograms for the groundwater sample, field blank and equipment blank, and laboratory method blank sample showing similar TPH signatures.

Nitrate results for RHMW13-01 and RHMW13-02 were flagged as non-detect due to laboratory method blank detections. Because there were no COPC detections at these locations and no other indications of natural attenuation of petroleum compounds, the method blank detection did not present a significant impact to the data.

The holding time exceedances for nitrate indicated possible low bias for results from RHMW11-05, RHMW13-01, RHMW13-04 (March 2020 and April 2020), RHMW13-05 (March 2020 and April 2020), and RHMW15-05. A comparison of the nitrate and nitrate-nitrite as nitrogen results (Table 3-5) for these samples indicated that the RHMW13-04 (April 2020) and RHMW13-05 (April 2020) results may have been biased low, based on the nitrate results recovering less than 90 percent of the calculated equivalent nitrate concentrations. The RHMW13-04 (April 2020) and RHMW13-05 (April 2020) results were likely not affected by the bias based on relatively consistent nitrate concentrations between the March 2020 and April 2020 results. Additional nitrate data from RHMW13-05 from future monitoring events will be used to further evaluate the nitrate concentrations at this location.

The third-party data assessment (Appendix C.2) concluded that all data generated during the monitoring events reported herein are usable for the intended purpose with the limitations described above.

4. Natural Attenuation Evaluation

The natural attenuation evaluation uses the following lines of evidence:

- The use of historical groundwater primary indicators (COPC data) to demonstrate contaminant concentration over time.
- The use of secondary lines of evidence (hydrogeologic and geochemical data) to evaluate whether natural attenuation processes are active at the site and the rate at which such processes can reduce contaminant concentrations to below screening levels.
- Comparison of TPH-d and TPH-o with and without SGC to evaluate the degree of weathering of the dissolved fuel hydrocarbons based on the fraction of polar-weathered hydrocarbons and total recoverable hydrocarbons.

Two objectives for analyzing NAPs are to assess whether natural attenuation is occurring on site and to evaluate the potential for natural attenuation to reduce the concentrations of petroleum-related constituents in groundwater. Secondary lines of evidence for natural attenuation are based on

additional information collected during the groundwater monitoring events and include DO, ORP, pH, specific conductance, dissolved ferrous iron, methane, nitrate, and sulfate.

Fuel hydrocarbons can be biodegraded by microorganisms in the subsurface under aerobic or anaerobic conditions. Biodegradation is the result of microbial-mediated reduction-oxidation reactions in which the simultaneous oxidation of an electron donor and reduction of an electron acceptor occur.

Biodegradation of fuel hydrocarbons causes changes to the groundwater geochemistry. During aerobic biodegradation of hydrocarbons, DO concentrations are depleted as aerobic respiration occurs because DO is the most thermodynamically favored electron acceptor used in biodegradation. ORP is a measure of electron activity and an indicator of the relative tendency of a solute species to gain or lose electrons. Higher ORP measurements suggest that aerobic respiration is occurring.

After DO is depleted in aerobic respiration, anaerobic respiration ensues, and the potential electron acceptors (i.e., nitrate, ferric iron, sulfate, and carbon dioxide) are used in biodegradation. Use of these electron acceptors proceeds along a natural succession in the order as listed above because of decreasing energetic efficiency (Leeson et al. 2004). Nitrate is the most thermodynamically favored electron acceptor of the anaerobic pathways, biodegrading to nitrite (followed by nitrogen gas) and carbon dioxide. Ferric iron in soil can be consumed by anaerobic biodegradation when both DO and nitrate have been depleted in anaerobic groundwater, yielding dissolved ferrous iron in groundwater. Sulfate can be consumed by anaerobic degradation after DO, nitrate, and ferric iron are depleted, yielding precipitated iron sulfides. Lower concentrations of sulfate in groundwater compared to background levels indicate that sulfate reduction is an ongoing biological process for petroleum hydrocarbon degradation within plume areas. When all the soluble electron acceptors (i.e., DO, nitrate, ferric iron, and sulfate) are depleted, groundwater conditions can become conducive to fermentation, and methane can be generated.

Alkalinity is a general indicator of the buffering capacity of an aquifer system against pH changes due to attenuation processes in the groundwater. Production of carbon dioxide during biodegradation causes carbonate minerals to dissolve, increasing alkalinity concentrations in the groundwater. Alkalinity is used in conjunction with pH measurements to evaluate the groundwater's capacity to neutralize metabolic acids produced by biodegradation.

Both aerobic and anaerobic biodegradation may be occurring at the site. COPCs such as naphthalene are known to degrade both aerobically and anaerobically, and geochemical parameters indicative of biodegradation may vary with location and with time (Wiedemeier et al. 1999). A more detailed evaluation of natural attenuation at the Red Hill groundwater monitoring locations is presented in the AOC Statement of Work Sections 6 and 7 CSM report (DON 2019b).

The field water quality data parameters for the March 2020 sampling event and the Second Quarter (April) 2020 groundwater monitoring event are included in the field sampling logs (Appendix B.1). Table 3-2 and Figure 3A and Figure 3B summarize DO, ORP, and other NAPs. Graphs of the DO, ORP, and NAP results are presented in Appendix A.3.

Unweathered petroleum contains (non-polar) hydrocarbons that, when weathered in the environment, create polar compounds as byproducts of biological sources and processes. SGC is commonly used to separate polar from nonpolar compounds. Polar compounds will preferentially adsorb to silica, while non-polar compounds will not. DOH TGM Section 9.3.1.2, Total Petroleum Hydrocarbons, discusses the use of SGC to separate out the polar TPH fraction and compare the remaining non-polar TPH fraction to the screening criteria: "*Comparison of data for groundwater samples tested with and*

without silica gel cleanup could be useful for assessing the state of natural biodegradation within a plume of petroleum-contaminated groundwater and optimizing remedial and monitoring actions" (DOH 2018). Analysis of SGC TPH-d or SGC TPH-o was performed on samples with detected concentrations of TPH-d or TPH-o without SGC (see Section 4.1.8 for additional discussion).

4.1 EVALUATION USING NATURAL ATTENUATION PARAMETERS

NAPs were collected during the groundwater monitoring field activities and include DO and ORP, nitrate, ferrous iron, methane, sulfate, and chloride. These parameters indicate the conditions under which natural attenuation is likely occurring.

4.1.1 Dissolved Oxygen and Oxidation-Reduction Potential

DO and ORP concentrations for all RHMW13 multilevel monitoring well zones were first collected during the March 2020 sampling event. DO and ORP concentrations for the Second Quarter (April) 2020 groundwater monitoring event were generally consistent with previous measurements. The background (RHMW04) DO measurement for the monitoring event was 8.52 mg/L, which is consistent with literature values for O'ahu groundwater (Hunt Jr. 2004). Similar to previous events, the monitoring locations with consistent COPC detections had depressed DO measurements (0.72 to 1.12 mg/L at RHMW01, RHMW02, and RHMW03) and low ORP values (-40.0 to 56.7 millivolts).

In RHMW01, RHMW02, and RHMW03, the depleted DO in conjunction with the presence of dissolved-phase COPCs and other NAP results such as the dissolved methane concentrations (790 and 6,700 µg/L at RHMW01 and RHMW02, respectively) indicates that both aerobic and anaerobic respirations are likely occurring. The presence of dissolved-phase COPCs and the DO depletion at RHMW03 are indicative of aerobic biodegradation, but the absence of methane indicates that methanogenesis is likely not occurring at RHMW03.

RHMW11-05, RHMW13 (all zones, March 2020 and April 2020 events), RHMW14-03, RHMW15-05, and HDMW2253-03 also had low DO measurements (ranging from 0.24 to 4.8 mg/L), consistent with previous events (except for RHMW13) and consistent with historical multilevel monitoring well DO measurements. The consistently low DO, high ORP, and lack of COPC detections indicate that the low DO values are the baseline for these monitoring locations (and a facet of multilevel monitoring wells) and are not related to attenuation of the COPCs.

4.1.2 Nitrate

Of the known anaerobic pathways for hydrocarbon biodegradation, nitrate is the most thermodynamically favored electron acceptor; decreased nitrate concentrations suggest that anaerobic respiration may be occurring. For the Second Quarter 2020 monitoring event, RHMW01, RHMW02, and RHMW11-05 had non-detect or very low nitrate concentrations. These results are in line with previously measured nitrate concentrations at these locations. The low nitrate results in RHMW01 and RHMW02 in conjunction with the DO and ORP measurements suggest that anaerobic respiration is likely occurring at these two wells.

Similar to previous NAP measurements at multilevel monitoring wells RHMW11, RHMW14, and RHMW15 (i.e., non-detect or low nitrate concentrations without associated COPC detections nor other indications of ongoing natural attenuation), the non-detect or very low nitrate concentrations at the RHMW13 zones (March 2020 and April 2020 events) are likely baseline for the RHMW13 multilevel monitoring zones and not related to attenuation of the COPCs.

The remaining wells had nitrate at concentrations that were similar to or greater than the historical background nitrate levels for the site. Evaluation of the nitrate results at these locations in conjunction with the DO and ORP results suggested that attenuation is likely not occurring (for wells that show no TPH detections) or that aerobic conditions are likely occurring, such as at RHMW03 where DO was lower than background but nitrate was higher than background.

4.1.3 Ferrous Iron

Bacteria will typically break down ferric iron in soil once oxygen is depleted, which causes ferrous iron to be released to groundwater. Elevated levels of ferrous iron indicate that the groundwater environment has undergone iron reduction for anaerobic respiration. Ferrous iron was detected in: RHMW01 (0.35 J mg/L) and RHMW02 (2.0 mg/L), and HDMW2253-03 (2.5 mg/L). When compared to the other monitoring locations and evaluated with other NAPs discussed above, the ferrous iron results for RHMW01 and RHMW02 also suggest that anaerobic biodegradation is likely occurring at these wells. The ferrous iron concentration at HDMW2253-03 is within the historical concentration range for this location, and the COPC and other NAP results do not indicate anaerobic biodegradation.

4.1.4 Methane

An additional line of evidence for biological degradation of petroleum hydrocarbons includes the presence of methane, a reaction byproduct of fermentative biological reactions that can occur after oxygen is depleted by aerobic digestion. Methane was again detected in the samples from RHMW01 (790 µg/L) and RHMW02 (6,700 µg/L). These methane concentrations suggest that methanogenic biodegradation is occurring in these wells. Methane was not detected in any other location except for low concentrations in RHMW13-05 during both the March 2020 (20 µg/L) and Second Quarter (April) 2020 (19 µg/L) events. As there are no COPCs detected at this location, additional COPC and methane data from RHMW13-05 from future monitoring events will be used to further evaluate the possible methanogenesis occurring at this multilevel well monitoring zone.

4.1.5 Sulfate

Sulfate is normally consumed by bacteria only after DO, nitrate, and ferric iron have been depleted. Concentrations of sulfate lower than background concentrations, when evaluated in conjunction with depressed DO and nitrate concentrations, suggest that anaerobic activity is occurring. The concentration of sulfate in groundwater at RHMW01 and RHMW02 (5.4 and 0.92 J mg/L, respectively) were much lower than the background sulfate concentrations in RHMW04 (9.7 mg/L). The sulfate results in RHMW01 and RHMW02 suggest that anaerobic activity is likely actively occurring there.

Sulfate concentrations at RHMW09, RHMW10, RHMW13 (Zones 1 to 4), and RHMW14-03 were also less than the background. Based on the consistently low historical sulfate concentrations, lack of TPH detections, and lack of other NAP results indicative of biodegradation, the lower-than-background sulfate concentrations at these locations are the baseline for these monitoring locations.

4.1.6 Chloride

Chloride is a general water quality parameter, and background concentrations of chloride in the aquifer are a result of mineral dissolution. Evaluation of NAP data from the Fourth Quarter 2016 monitoring event onward and the groundwater geochemistry parameters indicated that the chloride concentrations at the site are due to the aquifer geochemistry and are not related to anaerobic dechlorination.

Chloride concentrations at RHMW01, RHMW02, RHMW03, RHMW09, RHMW10, RHMW11-05, RHMW13 (Zones 1 to 5), RHMW14-04, and RHMW15-05 were below the background (RHMW04) concentration of 72.9 mg/L. All other locations had chloride concentrations higher than background.

4.1.7 Alkalinity

The alkalinity concentrations in RHMW01, RHMW02, RHMW03, RHMW05, RHMW06, RHMW07, RHMW08, RHMW11-05, and RHMW13-05 were greater than the background concentration (RHMW04) of 75.5 mg/L. The elevated alkalinity in RHMW01, RHMW02, and RHMW03 may be attributable to natural attenuation processes occurring at these locations; the elevated alkalinity at the other monitoring locations may be attributable to aquifer geochemistry, based on the lack of COPC detections and lack of other NAP results indicative of biodegradation.

4.1.8 TPH with Silica Gel Cleanup

SGC TPH-d and TPH-o results for RHMW01, RHMW02, and RHMW03 showed reduced or non-detect concentrations compared to non-SGC TPH-d and TPH-o results (Table 4-1). The SGC TPH-d and TPH-o results suggest that petroleum weathering is occurring at RHMW01, RHMW02, and RHMW03, especially when evaluated in conjunction with the other NAPs.

For RHMW02, the SGC TPH-d concentrations for the primary and field duplicate samples were 350 and 310 J µg/L (with non-SGC TPH-d concentrations of 1,700 and 1,500 µg/L), respectively. The SGC TPH-d results indicate that biodegradation is occurring. The recoveries of SGC TPH-d to non-SGC TPH-d for RHMW02 have ranged from 14–57 percent, indicating that 43–86 percent of the reported non-SGC TPH mass is likely biodegradation by-products.

Non-SGC chromatograms for the RHMW02 sample show signal evidence of soluble components of degraded jet fuel, with a large portion of the mass showing a signature indicative of polar metabolites from petroleum degradation. The corresponding SGC chromatogram for RHMW02 is characteristic of dissolved aromatic hydrocarbons expected from jet fuel. Further evaluation of the SGC TPH results and natural attenuation, along with the potential role of other site-specific factors (e.g., complex geology, surface water recharge, infiltration rates), was included in the AOC Statement of Work Sections 6 and 7 CSM report (DON 2019b).

Table 4-1 presents a comparison of TPH-d and TPH-o concentrations without and with SGC for RHMW01, RHMW02, and RHMW03 from the Fourth Quarter 2016 monitoring event onward.

Table 4-1: Comparison of TPH Concentrations Without and With Silica Gel Cleanup, Second Quarter 2020 Quarterly Groundwater Monitoring Event, Red Hill Bulk Fuel Storage Facility, JBPHH, Oʻahu, Hawaiʻi

Monitoring Well	Monitoring Event [a]	TPH-d (non-SGC) (µg/L)	TPH-d w/ SGC (µg/L)	Percent of Polar Compounds (SGC Result) in Non-SGC TPH-d Result	TPH-o (non-SGC) (µg/L)	TPH-o w/ SGC (µg/L)	Percent of Polar Compounds (SGC Result) in Non-SGC TPH-o Result
RHMW01	2nd Qtr 2020	190 J *	< 300.0 U	100%	< 300.0 U	< 300.0 U	—
	1st Qtr 2020	180 J	39 J	78%	< 40 U	< 40 U	—
	3rd Qtr 2019	210	< 25 U	100%	< 40 U	< 40 U	—
	2nd Qtr 2019	230	57	75%	< 40 U	< 40 U	—
	4th Qtr 2018	170 J	67 J	61%	< 40 UJ	< 40 UJ	—
	3rd Qtr 2018	350	< 25 U	100%	< 40 U	< 40 U	—
	1st Qtr 2018	150	< 25 U	100%	< 40 U	< 40 U	—
	4th Qtr 2017 [b]	86	< 25 U	100%	67	< 40 U	100%
	4th Qtr 2017 [b]	83	< 25 UJ	100%	59	< 40 UJ	100%
	3rd Qtr 2017	110	< 25 U	100%	< 40 U	< 40 U	—
	Jun 2017	98	36	63%	< 40 U	< 40 U	—
	May 2017	110	< 51 U [c]	100%	< 40 U	< 40 U	—
	4th Qtr 2016	120	< 25 U	100%	< 40 U	< 40 U	—
RHMW02	2nd Qtr 2020 [b]	**1700 J**	350	79%	260 J	< 300.0 U	100%
	2nd Qtr 2020 [b]	**1500 J**	310 J	79%	290 J	< 300.0 U	100%
	1st Qtr 2020 [b]	**1,500 J**	280	81%	< 40 U	< 40 U	—
	1st Qtr 2020 [b]	**1,700**	360	79%	< 40 U	< 40 U	—
	4th Qtr 2019 [b]	**1,700**	**520**	69%	200	< 40 U	100%
	4th Qtr 2019 [b]	**1,800**	**430**	76%	190	< 40 U	100%
	3rd Qtr 2019 [b]	**2,400**	**690**	71%	190	< 40 U	100%
	3rd Qtr 2019 [b]	**2,600**	**480**	82%	200	< 40 U	100%
	2nd Qtr 2019 [b]	**2,300**	**430**	81%	< 40 U	< 40 U	—
	2nd Qtr 2019 [b]	**2,200**	**440**	80%	< 40 U	< 40 U	—
	1st Qtr 2019 [b]	**2,400**	**420**	83%	< 40 U	< 40 U	—
	1st Qtr 2019 [b]	**2,700**	**430**	84%	< 40 U	< 40 U	—
	4th Qtr 2018 [b]	**2,000 J**	**370 J**	82%	< 40 UJ	< 40 UJ	—
	4th Qtr 2018 [b]	**2,100 J**	**430 J**	80%	< 40 UJ	< 40 UJ	—
	3rd Qtr 2018 [b]	**2,100**	**580**	72%	< 40 U	< 40 U	—
	3rd Qtr 2018 [b]	**1,500**	260	83%	< 40 U	< 40 U	—
	2nd Qtr 2018 [b]	**2,700**	**510**	81%	< 40 U	< 40 U	—
	2nd Qtr 2018 [b]	**2,800**	**420**	85%	< 40 U	< 40 U	—
	1st Qtr 2018 [b]	**1,900**	**640**	66%	< 40 U	< 40 U	—
	1st Qtr 2018 [b]	**1,800**	**460**	74%	< 40 U	< 40 U	—
	4th Qtr 2017 [b]	**1,300 J**	230	82%	< 40 U	< 40 U	—
	4th Qtr 2017 [b]	**1,600**	230	86%	< 40 U	< 40 U	—
	3rd Qtr 2017	**1,000**	250	75%	< 40 U	< 40 U	—
	Jun 2017	**1,000**	**570**	43%	< 40 U	< 40 U	—
	May 2017	**1,000**	**< 480 U** [c]	100%	< 40 U	< 40 U	—
	4th Qtr 2016	**1,300 J**	300	77%	< 40 U	< 40 U	—
RHMW03	2nd Qtr 2020	220 J	< 300.0 U	100%	240 J	< 300.0 U	100%
	1st Qtr 2020	260	< 25 U	100%	250	< 40 U	100%
	4th Qtr 2019	150	< 25 U	100%	230	< 40 U	100%
	3rd Qtr 2019	300	< 25 U	100%	270	< 40 U	100%
	2nd Qtr 2019	300	< 25 U	100%	190	< 40 U	100%
	1st Qtr 2019	380	< 25 U	100%	310	< 40 U	100%
	4th Qtr 2018	220 J	< 25 UJ	100%	190 J	< 40 UJ	100%
	3rd Qtr 2018	300	< 25 U	100%	140	< 40 U	100%
	2nd Qtr 2018	160	< 25 U	100%	110	< 40 U	100%
	1st Qtr 2018	190	< 25 U	100%	180	< 40 U	100%
	4th Qtr 2017 [b]	160	< 25 U	100%	160	< 40 U	100%
	4th Qtr 2017 [b]	210	< 25 U	100%	200	< 40 U	100%
	3rd Qtr 2017	49	< 25 U	100%	46	< 40 U	100%
	Jun 2017	46	50	0%	36 J	34	6%
	May 2017	50	< 25 U	100%	46	< 40 U	100%
	4th Qtr 2016	65	< 25 U	100%	59	< 40 U	100%

Note: **Bold text** indicates concentrations exceeding the TPH-d screening criterion of 400 µg/L.

* = result is due to laboratory solvent contamination

% = percent SGC = silica gel cleanup J = estimated value

µg/L = microgram per liter Qtr = quarter U = non-detect value

[a] Table presents only quarterly and monthly monitoring events during which TPH with SGC is analyzed.

[b] Primary and field duplicate samples.

[c] Result was flagged as non-detect during data validation due to laboratory method blank contamination.

4.1.9 Total and Dissolved Organic Carbon

TOC concentrations in groundwater samples include all volatile, non-volatile, soluble, and insoluble forms of carbon present in the sample, while DOC concentrations include only the volatile, non-volatile, and soluble forms of carbon. TOC and DOC concentrations are useful especially for samples with known high concentrations of polar hydrocarbons and metabolites, which are not efficiently extracted and analyzed using the TPH-d and TPH-o analysis. However, as the TOC and DOC method (EPA 9060) does not discriminate between petroleum and non-petroleum hydrocarbons, TOC and DOC must be evaluated in conjunction with TPH and other NAP results to determine if the TOC and DOC concentrations found in groundwater samples may be contributed by petroleum constituents in groundwater. TOC was collected for all monitoring locations sampled during the March 2020 sampling event and the Second Quarter (April) 2020 monitoring event; DOC was collected only during the March 2020 sampling event.

TOC results in RHMW01, RHMW02, and RHMW03 are in line with historical TPH, SGC TPH, and NAP data, indicating that petroleum constituents and petroleum biodegradation by-products are present at these wells, contributing to TOC concentrations. Additionally, the TOC concentrations were higher than corresponding TPH concentrations (e.g., for RHMW02, TOC was 3.5 mg/L and TPH-d was 1.7 mg/L [1,700 µg/L]), confirming that the TPH method does not capture all polar hydrocarbons and metabolites present in the groundwater and supporting evidence of natural attenuation occurring at these locations. Additionally, the TOC and DOC concentrations at other locations may also indicate the presence of polar hydrocarbons and metabolites that are not captured in the TPH extraction; however, the COPC and NAP concentrations at these locations do not indicate that biodegradation is currently occurring at these locations and instead suggest a non-petroleum source of carbon.

4.2 NAP CONCENTRATIONS

Graphs of cumulative groundwater NAP results are presented in Appendix A.3.1, and graphs of NAP results for the March 2020 and Second Quarter (April) 2020 events are presented in Appendix A.3.2. Evaluation of the NAP data from the Fourth Quarter 2016 monitoring event onward indicated that there is no evidence that seasonal variations (i.e., wet- and dry-season effects) influence NAP concentrations (and thus biodegradation) in groundwater at the Red Hill monitoring well network.

The NAP concentrations at RHMW01, RHMW02, and RHMW03 indicate that aerobic or anaerobic biodegradation may be occurring at these locations. This is confirmed by the SGC TPH results, which generally present a relatively low ratio of non-biodegraded (non-polar) hydrocarbons to biodegradation by-product hydrocarbons (polar hydrocarbons and metabolites). However, evaluation of NAPs along with TPH trends (based on numerical TPH results alone) must be conducted with caution. The variability of TPH-d procedures and results from one laboratory to another precludes reliable trend analyses, such that higher or lower results over time may be due not to changing conditions in the groundwater at the Facility but rather to changes in the laboratory's TPH extraction and analysis protocols. Nonetheless, the RHMW03 NAP results (i.e., depleted DO and relatively high concentrations of other electron acceptors) indicate that continuous aerobic biodegradation is occurring at this location, possibly due to an influx of oxygenated water at this location providing sufficient DO that anaerobic biodegradation is not evident. Similarly, continuous aerobic and anaerobic biodegradation is occurring at RHMW01 and RHMW02, based on the depleted electron acceptors and presence of dissolved methane. Notably, methane concentrations at RHMW01 and RHMW02 have generally decreased over time, which may be an indicator of reduced available biodegradable fuel at the subsurface from various natural source-zone depletion processes and natural attenuation.

Additional evaluation of the 2014 fuel release, natural source-zone depletion, and natural attenuation at the Facility is discussed in the AOC Statement of Work Sections 6 and 7 CSM report (DON 2019b).

5. Lead Scavengers

The scoping completion letter for AOC Statement of Work Sections 6 and 7 dated February 4, 2016 (EPA Region 9 and DOH 2016) required that lead scavengers (1,2-dichloroethane and 1,2-dibromoethane) be analyzed for at least 1 year's worth of sampling, and indicated that lead scavenger testing can be discontinued at a given well if analyte concentrations are below DOH EALs.

Lead scavengers were analyzed for in groundwater samples collected from newly installed Red Hill monitoring wells. RHMW14 is a multilevel monitoring well installed in March 2019. RHMW14 Zone 3 was sampled during 1 year's worth of monitoring events (Third Quarter 2019 to Second Quarter 2020); other monitoring zones were also sampled during Third Quarter 2019 (Zones 4, 5, and 7), Fourth Quarter 2019 (Zones 1, 2, 4, 5, and 7), and First Quarter 2020 (Zones 1 and 2). Analytical results for 1,2-dibromoethane and 1,2-dichloroethane for all zones are presented in Table 5-1. Analytical results for RHMW14 show non-detect concentrations for the lead scavengers during all monitoring events. LODs are below the respective screening criteria. Full analytical and validation reports are presented in Appendix C and in previous groundwater monitoring reports.

Table 5-1: Lead Scavengers Results at RHMW14, Third Quarter 2019 – Second Quarter 2020

			Analyte:	1,2-Dibromoethane	1,2-Dichloroethane
			CAS No.:	106-93-4	107-06-2
			Analytical Method:	8011	8260B
			Screening Criterion: [a]	0.04	5.0
			Unit:	µg/L	µg/L
Sampling Location	Sampling Date	Sample ID	Sample Type	Result [b]	Result [b]
RHMW14-01	10/21/2019	ERH942	N	< 0.019 U	< 0.3 U
	1/20/2020	ERH1004	N	< 0.019 U	< 0.3 U
RHMW14-02	10/22/2019	ERH944	N	< 0.019 U	< 0.3 U
	1/21/2020	ERH1006	N	< 0.019 U	< 0.3 U
RHMW14-03	7/30/2019	ERH882	N	< 0.019 U	< 0.3 U
	7/30/2019	ERH883	FD	< 0.019 U	< 0.3 U
	10/28/2019	ERH946	N	< 0.019 U	< 0.3 U
	10/28/2019	ERH947	FD	< 0.019 U	< 0.3 U
	1/22/2020	ERH1008	N	< 0.019 U	< 0.3 U
	1/22/2020	ERH1009	FD	< 0.019 U	< 0.3 U
	4/21/2020	ERH1072	N	< 0.019 U	< 0.3 U
RHMW14-04	7/29/2019	ERH880	N	< 0.019 U	< 0.3 U
	10/24/2019	ERH949	N	< 0.019 U	< 0.3 U
RHMW14-05	7/31/2019	ERH872	N	< 0.019 U	< 0.3 U
	10/23/2019	ERH951	N	< 0.019 U	< 0.3 U
RHMW14-07	8/6/2019	ERH876	N	< 0.019 U	< 0.3 U
	10/23/2019	ERH953	N	< 0.019 U	< 0.3 U

CAS Chemical Abstracts Service
FD field duplicate sample
N normal or primary sample
U non-detect
[a] DOH EALs: Table D-1b, Groundwater Action Levels (groundwater is a current or potential drinking water resource; surface water body is not located within 150 meters of release site) (DOH 2017).
[b] Results reported as less than the laboratory's LOD.

In accordance with the February 4, 2016, scoping completion letter, RHMW14 underwent 1 year of monitoring and had lead scavenger non-detect concentrations below the groundwater action levels. Thus, testing for lead scavengers will be discontinued for RHMW14.

6. Summary, Conclusions, and Recommendations

6.1 SUMMARY

During the March 2020 groundwater monitoring event, AECOM Technical Services, Inc. personnel collected groundwater samples from newly installed multilevel monitoring well RHMW13. RHMW13 was completed in November 2019 and has five multilevel monitoring zones. Of the five multilevel monitoring zones, primary and duplicate samples were collected from multilevel monitoring well RHMW13 Zone 5 (RHMW13-05). No other monitoring locations were sampled during the March 2020 event.

During the Second Quarter (April) 2020 groundwater monitoring event, groundwater samples were collected from 19 monitoring locations within the Red Hill groundwater monitoring network. These include:

- The sampling point at Red Hill Shaft (RHMW2254-01)
- Eleven single-screen monitoring wells located within the Facility boundary (RHMW01 through RHMW10 and OWDFMW01)
- One deep monitor well located outside the Facility boundary at the Hālawa Correctional Facility (Hālawa Deep Monitor Well [HDMW2253-03])
- One sampling zone each at two multilevel monitoring wells (RHMW11 and RHMW14) located at the Hālawa Correctional Facility
- Three sampling zones at multilevel monitoring well RHMW13 and one sampling zone at multilevel monitoring well RHMW15, both wells located within the Facility boundary

Of the multilevel monitoring wells listed above, the following zones were sampled during this event:

- RHMW11 Zone 5, RHMW14 Zone 3, RHMW13 Zones 3 to 5, and RHMW15 Zone 5

The following multilevel monitoring zones were not sampled in this sampling event:

- RHMW11 Zones 1 to 4
- RHMW14 Zones 1 to 2
- RHMW13 Zones 1 to 2
- RHMW15 Zones 1 to 4 due to lack of detections of COPCs in previous monitoring events
- RHMW11 Zones 6 to 8 and RHMW14 Zones 4 to 8 due to the low hydraulic conductivity of the aquifer in these zones

Of the monitoring locations sampled during the Second Quarter (April) 2020 groundwater monitoring event, primary and field duplicate samples were collected from sampling point RHMW2254-01, monitoring well RHMW02, and multilevel monitoring well RHMW13 Zone 5 (RHMW13-05). This groundwater sampling event was conducted as part of the Red Hill groundwater LTM program.

No detectable amounts of free product or sheen were present in groundwater from any monitoring well during the March 2020 and Second Quarter (April) 2020 groundwater monitoring events. A slight rust-

like color was observed in the groundwater collected from HDMW2253-03. No odors were noted in the groundwater samples.

During the March 2020 and Second Quarter (April) 2020 events, COPCs were detected at multiple monitoring locations, of which many of the TPH detections were evaluated as due to laboratory contamination. No SSRBL exceedances were reported. Analytical results for the groundwater monitoring event are summarized as follows:

- *RHMW05, RHMW06, RHMW09, RHMW10, RHMW13-01, RHMW13-02, RHMW13-03, and RHMW15-05:* No COPCs were detected.
- *RHMW2254-01 (primary and duplicate):* TPH-d (180 J and 280 J µg/L) was detected at concentrations below the screening criterion (400 µg/L); no other COPCs were detected. The TPH chromatograms of both primary and duplicate samples (in both the original and re-extract analyses) displayed a chemical signature of sharp discrete peaks not indicative of hydrocarbons related to petroleum products used at the Facility. Chromatograms of the samples and laboratory method blanks showed similar chromatographic signatures, indicating that the reported concentrations were attributable to laboratory solvent contamination rather than TPH in the groundwater. Additionally, the non-SGC chromatograms from these groundwater samples and associated laboratory QC samples were markedly different compared to RHMW02 and RHMW03, both of which exhibited profiles that were similar to and expected of weathered dissolved fuels associated with the site. Additional discussion of the laboratory contamination is presented in the laboratory's EPA Method 8015 limit study (Appendix C.4).
- *RHMW01:* TPH-d (190 J µg/L) was detected at a concentration below the screening criterion (400 µg/L); no other COPCs were detected. The sample's TPH chromatograms (both the original and re-extract analyses) displayed a chemical signature of sharp discrete peaks not indicative of hydrocarbons related to petroleum products used at the Facility. The TPH-d with SGC analysis result was non-detect, suggesting the reported concentrations of TPH-d from testing without SGC were not from petroleum hydrocarbons.
- *RHMW02 (primary and duplicate):* TPH-d (1,700 J and 1,500 J µg/L), 1-methylnaphthalene (13 and 13 µg/L), 2-methylnaphthalene (12 and 11 µg/L), and naphthalene (33 and 32 µg/L) were detected at concentrations exceeding their respective screening criteria (400, 10, 10, and 17 µg/L). TPH-d was also detected in the SGC analysis but at significantly lower concentrations (350 and 310 J µg/L), suggesting that the majority of the non-SGC TPH-d results were biodegradation by-products. The concentrations of TPH-d did not exceed the SSRBL of 4,500 µg/L. TPH-g (49 and 63 µg/L) and TPH-o (260 J and 290 J µg/L) were detected at concentrations below their respective screening criteria (300 and 500 µg/L). No other COPCs were detected.
- *RHMW03:* TPH-d (220 J µg/L) and TPH-o (240 J µg/L) were detected at concentrations below their respective screening criteria (400 and 500 µg/L). The TPH-d and TPH-o with SGC analysis results were non-detect, suggesting that the non-SGC TPH-d result consisted entirely of biodegradation by-products.
- *RHMW04, RHMW07, RHMW08, RHMW11-05, RHMW13-04 (March 2020 event), RHMW13-05 (March 2020 event, primary and duplicate), RHMW14-03, and HDMW2253-03:* TPH-d and/or TPH-o were detected below their respective screening criteria (400 and 500 µg/L) in RHMW04 (240 J and <300 U µg/L), RHMW07 (<300 UJ and 150 J µg/L), RHMW08 (150 J and 170 J µg/L), RHMW11-05 (<260 U and 240 J µg/L), RHMW13-04 (220 J and 240 J µg/L), RHMW13-05 (primary, 240 J and 240 J µg/L), RHMW13-05 (duplicate, 200 J and 170 J µg/L), RHMW14-03 (<300 and 150 J µg/L), and HDMW2253-03 (190 J and <300 µg/L).

Evaluation of the sample, field QC, and laboratory QC chromatograms showed similar TPH chromatographic profiles of discrete peaks not indicative of petroleum hydrocarbons. The similar chromatographic profiles between the field samples and laboratory QC samples indicates laboratory solvent contamination. TPH-d and TPH-o with SGC analysis results were non-detect when analyzed, confirming that the non-SGC TPH-d and TPH-o results consisted of non-petroleum hydrocarbons. Additionally, the non-SGC chromatograms from these groundwater, field QC, and laboratory QC samples were markedly different compared to RHMW02 and RHMW03, both of which exhibited profiles that were similar to and expected of weathered dissolved fuels associated with the site.

- *OWDFMW01:* TPH-d (450 J µg/L) was detected above the screening criterion (400 µg/L), and TPH-o (280 J µg/L) was detected below the screening criterion (500 µg/L). Evaluation of the TPH chromatograms of the sample (original analysis and re-extract analysis) and laboratory QC showed similar chromatographic profiles of discrete peaks not indicative of petroleum hydrocarbons; the similar chromatographic profiles between the field samples and laboratory QC samples indicated that the TPH detections were attributable to laboratory solvent contamination rather than petroleum hydrocarbons. TPH-d and TPH-o with SGC analysis results were also non-detect, confirming that the non-SGC TPH-d and TPH-o results consisted of non-petroleum hydrocarbons. Additionally, the non-SGC chromatograms from the groundwater and laboratory QC samples were markedly different compared to RHMW02 and RHMW03, both of which exhibited profiles that were similar to and expected of weathered dissolved fuels associated with the site.

The NAP and SGC TPH data present evidence of aerobic and anaerobic biodegradation occurring in the vicinity of RHMW02 based on depleted DO, elevated dissolved methane concentrations, depleted nitrate and sulfate concentrations, and high alkalinity concentrations compared to other monitoring wells in the network. Additionally, SGC TPH-d concentrations at RHMW02 indicate that the majority of the reported non-SGC TPH mass is likely biodegradation by-products. The concentrations of NAPs and depressed SGC TPH at RHMW01 and RHMW03 suggest that biodegradation is also occurring there.

In March 2020, the analytical laboratory performed a limit study for EPA Method 8015 to re-establish limits (i.e., DL, LOD, and LOQ] for TPH-d and TPH-o. The study was initiated to address impurities (identified as compounds used in polymeric materials and plasticizers) observed in recent batches of reagent-grade solvent used in the extraction of groundwater samples for EPA Method 8015 analysis. The study of TPH method blanks showed solvent impurities ranged from approximately 70 to 140 µg/L. Implementation of new limits to reduce false-positive TPH detections due to the solvent contamination was performed in accordance with the most current DoD QSM (DoD and DOE 2019), the NELAP Institute Manual (TNI 2016), and 40 CFR Part 136 (MUR 2017). The previous and new TPH-d and TPH-o laboratory limits are listed in Table 6-1.

Table 6-1: Laboratory Limits for TPH-d and TPH-o

Analyte:	TPH-d		TPH-o	
DOH EAL:	400 µg/L		500 µg/L	
Laboratory Limit	Prior to March 2020	As of March 2020	Prior to March 2020	As of March 2020
DL	13.07 µg/L	150 µg/L	5.54 µg/L	150 µg/L
LOD	25 µg/L	300 µg/L	40 µg/L	300 µg/L
LOQ	40 µg/L	320 µg/L	40 µg/L	320 µg/L

EAL Environmental Action Level (DOH 2017)

Lead scavengers were not detected at RHMW14 during the Second Quarter 2020 monitoring event, which completes 1 year of sampling with no detections at all sampled RHMW14 multilevel monitoring well zones.

6.2 CONCLUSIONS AND RECOMMENDATIONS

During the March 2020 and Second Quarter (April) 2020 groundwater monitoring event, TPH-d was detected in many of the samples. Evaluation of chromatograms of all groundwater, field QC, and laboratory QC samples indicated that the TPH detections except for RHMW02 and RHMW03 were due to solvent contamination. Due to the increasing concentrations of solvent artifacts evident in multiple batches of solvent over a period of several months, the laboratory performed a method blank and limit study and implemented new reporting limits for EPA Method 8015. The laboratory limit study was performed in accordance with the most current DoD QSM (DoD and DOE 2019), the NELAP Institute Manual (TNI 2016), and 40 CFR Part 136 (MUR 2017).

No SSRBL exceedances occurred at RHMW01, RHMW02, and RHMW03. Screening criteria exceedances (TPH-d, 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene) occurred only at RHMW02.

Based on the groundwater monitoring results, pursuant to the *Groundwater Protection Plan* (DON 2014) and in accordance with AOC Statement of Work Sections 6 and 7 (EPA Region 9 and DOH 2015), groundwater monitoring at locations within the Red Hill groundwater monitoring network will continue.

It is recommended that the Red Hill groundwater LTM program continue testing for NAPs at each monitoring event and continue SGC TPH-d and TPH-o analysis for all locations with non-SGC TPH-d or TPH-o detections.

Based on no detections of lead scavengers at all sampled RHMW14 multilevel monitoring well zones for 1 year of sampling, it is recommended that testing for lead scavengers be discontinued for RHMW14.

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Appendix A:
Cumulative Historical Monitoring Results

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Appendix A.1:
Cumulative Groundwater COPC Results

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Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	TPH				TPH				TPH				TPH				TPH				Volatiles				Volatiles				Volatiles				Volatiles				Volatiles			
		Analyte Type	COPC				COPC				COPC				COPC				COPC				COPC				non-COPC				COPC				non-COPC				COPC			
		Analytical Method	8015				8260				8015				8015				8015				8260				524.2				8260				524.2				8260			
		Analyte	TPH-g ****				TPH-g ****				TPH-d				TPH-d with Silica Gel Cleanup				TPH-o				TPH-o with Silica Gel Cleanup				Benzene				Benzene				Ethylbenzene				Ethylbenzene				Toluene				Toluene			
		CAS No.	Gas				Gas				Diesel				Disel SGC				Oil				Oil SGC				71-43-2				71-43-2				100-41-4				100-41-4				108-88-3				108-88-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	300				300				400				400				500				500				5				5				30				30				40				40			
		SSRBL	—				—				4500				—				—				—				750				750				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW2254-01	RH-B-001	2/16/2005[be]	< 50	U			—				< 50	U			—				< 100	U			—				< 0.50	U			—				< 0.50	U			—				< 1.0	UJ	t		—			
RHMW2254-01	RH-B-002	2/16/2005[bf]	< 50	U			—				< 53	U			—				< 110	U			—				< 0.50	U			—				< 0.50	U			—				< 1.2	UJ	t		—			
RHMW2254-01	RH-B-003	2/16/2005*[bf]	< 50	U			—				< 50	U			—				< 100	U			—				< 0.50	U			—				< 0.50	U			—				< 0.81	UJ	t		—			
RHMW2254-01	RH-B-004	6/28/2005[ae]	< 13	U			—				**43**	**J**			—				—				—				< 0.50	U		b	—				< 0.50	U		b	—				< 0.50	U		b	—			
RHMW2254-01	RH-B-005	6/28/2005*[ae]	< 13	U			—				**67**			Z	—				—				—				< 0.50	U		b	—				< 0.50	U		b	—				< 0.50	U		b	—			
RHMW2254-01	RH-B-006	6/28/2005*[af]	< 13	U			—				**58**			Z	—				—				—				< 0.50	U		b	—				< 0.50	U		b	—				< 0.50	U		b	—			
RHMW2254-01	RH-B-007	9/8/2005[ae]	< 13	U			—				**45**	**J**			—				**59**	**J**			—				< 0.14	U			—				< 0.13	U			—				< 0.11	U			—			
RHMW2254-01	RH-B-008	9/8/2005[af]	< 13	U			—				< 19	U			—				< 28	U			—				< 0.14	U			—				< 0.13	U			—				< 0.11	U			—			
RHMW2254-01	RH-B-009	9/8/2005*[af]	< 13	U			—				< 50	U		d	—				< 100	U		d	—				< 0.14	U			—				< 0.13	U			—				< 0.11	U			—			
RHMW2254-01	RHMW2254W01	9/20/2005[bd]	—				—				—				—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW2254-01	RH-B-010	12/6/2005[ae]	< 13	U			—				**38**	**J**			—				—				—				< 0.14	U			—				< 0.13	U			—				< 0.11	U			—			
RHMW2254-01	RH-B-011	12/6/2005*[ae]	< 13	U			—				**24**	**J**			—				—				—				< 0.14	U			—				< 0.13	U			—				< 0.11	U			—			
RHMW2254-01	RH-B-012	12/7/2005[af]	< 13	U			—				< 20	U			—				—				—				< 0.14	U			—				< 0.13	U			—				< 0.11	U			—			
RHMW2254-01	RHMW2254-01-GW02	7/10/2006[a]	< 50	U			—				< 110	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW2254-01	RHMW2254-01-GW06	12/5/2006[a]	< 50	U			—				< 100	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW2254-01	RHMW2254-01-WG07	3/27/2007[a]	< 50	U			—				< 98	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW2254-01	RHMW2254-01-WG08	6/12/2007[a]	< 50	U			—				< 98	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW2254-01	RHMW2254-01-WG0	9/10/2007[a]	< 50	U			—				< 97	U			—				—				—				< 0.20	U			—				< 0.20	U			—				< 0.27	U			—			
RHMW2254-01	RHMW2254-01-WG10 (RHMW2254-WG10)	1/15/2008[a]	< 10.0	U			—				< 102	UJ	b		—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U			—			
RHMW2254-01	RHMW2254-01-WG10.1	2/6/2008[a]	—				—				< 100	U			—				—				—				—				—				—				—				—			
RHMW2254-01	RHMW2254-01-WG10.1	2/6/2008[a]	—				—				< 10.3	U			—				—				—				—				—				—				—				—			
RHMW2254-01	RHMW2254-01-WG11 (RHMW2254-WG11)	4/15/2008[a]	< 10.0	U			—				< 86.0	U			—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U			—			
RHMW2254-01	RHMW2254-01-WG12	7/29/2008[ad]	< 10.0	U			—				< 83.3	U			—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U			—			
RHMW2254-01	RHMW2254-01-WG13	10/22/2008[ad]	< 10.0	U			—				< 84.2	U			—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U			—			
RHMW2254-01	RHMW2254-WG13B	12/16/2008[c]	—				—				—				—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U			—			
RHMW2254-01	RHMWA01-WG13B	12/16/2008*[c]	—				—				—				—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U			—			
RHMW2254-01	RHMW2254-01-WG14	2/4/2009[a]	**14.0**	**J**			—				< 92.0	U			—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U			—			
RHMW2254-01	RHMW2254-01-WG15	5/13/2009[a]	< 19.1	UJ	b t		—				< 169	U			—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U			—			
RHMW2254-01	RHMW2254-01-WG16	7/15/2009[a]	< 30.0	U			—				< 163	U			—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U			—			
RHMW2254-01	RHMW2254-WG17	10/14/2009[a]	< 30	U			—				< 158	U			—				—				—				< 0.12	U			—				< 0.31	U			—				< 0.31	U			—			
RHMW2254-01	RHMW2254-01-WG18	2010-01-27	< 60.0	U			—				< 320	U			—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U			—			
RHMW2254-01	RHMW2254-01-WG19 (RHMW225-WG19)	2010-04-13	< 60.0	U			—				< 320	U			—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U			—			
RHMW2254-01	RHMW2254-01-WG20 (RHMW2254-WG20)	2010-07-13	< 60.0	U			—				< 320	U			—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U			—			
RHMW2254-01	ES004	2010-10-19	—				< 12.12	U			< 80.0	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
RHMW2254-01	ES014	1/20/2011[d]	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
RHMW2254-01	ES019	4/19/2011[d]	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
RHMW2254-01	ES040	2011-07-20	—				< 12.12	U			< 80.8	U			—				< 212.0	U			—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
RHMW2254-01	ES050	2011-10-25	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
RHMW2254-01	ES062	2012-02-01	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
RHMW2254-01	ES074	2012-04-17	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Volatiles			Volatiles			Volatiles			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Lead Scavenger			Lead Scavenger		
		Analyte Type	COPC			non-COPC			non-COPC			COPC			COPC			non-COPC			COPC			non-COPC			non-COPC			Lead Scavenger			Lead Scavenger		
		Analytical Method	8260			524.2			524.2			8270 SIM			8270 SIM			8270			8270 SIM			8260			524.2			8270			8011			8260		
		Analyte	Xylenes, Total (p/m-, o-xylene)			Xylenes, p/m-			Xylenes, o-			1-Methylnaphthalene			2-Methylnaphthalene			2-Methylnaphthalene			Naphthalene *****			Naphthalene *****			Naphthalene *****			Naphthalene *****			1,2-Dibromoethane *****			1,2-Dibromoethane *****		
		CAS No.	1330-20-7			179601-23-1			95-47-6			90-12-0			91-57-6			91-57-6			91-20-3			91-20-3			91-20-3			91-20-3			106-93-4			106-93-4		
		Unit	µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L		
		DOH EAL	20			20			20			10			10			10			17			17			17			17			0.04			0.04		
		SSRBL	—			—			—			—			—			—			—			—			—			—			—			—		
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW2254-01	RH-B-001	2/16/2005[be]	< 0.50	U			—				—				—				< 0.020	U			—				< 0.020	U			—				—			
RHMW2254-01	RH-B-002	2/16/2005[bf]	< 0.50	U			—				—				—				< 0.022	U			—				< 0.022	U			—				—			
RHMW2254-01	RH-B-003	2/16/2005*[bf]	< 0.50	U			—				—				—				< 0.021	U			—				< 0.021	U			—				—			
RHMW2254-01	RH-B-004	6/28/2005[ae]	< 0.50	U		b	—				—				—				< 0.020	U		b	—				< 0.020	U		b	—				—			
RHMW2254-01	RH-B-005	6/28/2005*[ae]	< 0.50	U		b	—				—				—				< 0.020	U		b	—				< 0.020	U		b	—				—			
RHMW2254-01	RH-B-006	6/28/2005*[af]	< 0.50	U		b	—				—				—				< 0.021	U		b	—				< 0.021	U		b	—				—			
RHMW2254-01	RH-B-007	9/8/2005[ae]	< 0.22	U			—				—				—				< 0.020	U		b	—				**0.085**				—				—			
RHMW2254-01	RH-B-008	9/8/2005[af]	< 0.22	U			—				—				—				< 0.020	U		b	—				< 0.020	U		b	—				—			
RHMW2254-01	RH-B-009	9/8/2005*[af]	< 0.22	U			—				—				—				< 0.020	U		b	—				**0.045**				—				—			
RHMW2254-01	RHMW2254W01	9/20/2005[bd]	< 0.50	U			—				—				—				—				—				< 1.0	U			—				—			< 0.50	U		
RHMW2254-01	RH-B-010	12/6/2005[ae]	< 0.22	U			—				—				—				**0.038**				—				**0.036**				—				—			
RHMW2254-01	RH-B-011	12/6/2005*[ae]	< 0.22	U			—				—				—				**0.022**				—				< 0.024	UJ	b		—				—			
RHMW2254-01	RH-B-012	12/7/2005[af]	< 0.22	U			—				—				—				**0.0071**	**J**			—				**0.011**	**J**			—				—			
RHMW2254-01	RHMW2254-01-GW02	7/10/2006[a]	< 0.50	U			—				—				< 0.26	U			< 0.26	U			—				< 0.26	U			< 1.0	U			—			< 0.50	U		
RHMW2254-01	RHMW2254-01-GW06	12/5/2006[a]	< 0.50	U			—				—				< 0.25	U			< 0.25	U			—				< 0.25	U			< 1.0	U			—			< 0.50	U		
RHMW2254-01	RHMW2254-01-WG07	3/27/2007[a]	< 0.50	U			—				—				< 0.24	U			< 0.24	U			—				< 0.24	U			< 1.0	U			—			< 0.50	U		
RHMW2254-01	RHMW2254-01-WG08	6/12/2007[a]	< 0.50	U			—				—				< 0.25	U			< 0.25	U			—				< 0.25	U			< 1.0	U			—			< 0.50	U		
RHMW2254-01	RHMW2254-01-WG0	9/10/2007[a]	< 0.36	U			—				—				< 0.25	U			< 0.25	U			—				< 0.25	U			< 0.44	U			—			< 0.20	U		
RHMW2254-01	RHMW2254-01-WG10 (RHMW2254-WG10)	1/15/2008[a]	< 0.620	U			—				—				< 0.0150	U			< 0.0150	U			—				< 0.0310	U			< 0.620	U			—			< 0.310	U		
RHMW2254-01	RHMW2254-01-WG10.1	2/6/2008[a]	—				—				—				—				—				—				—				—				—			—			
RHMW2254-01	RHMW2254-01-WG10.1	2/6/2008[a]	—				—				—				—				—				—				—				—				—			—			
RHMW2254-01	RHMW2254-01-WG11 (RHMW2254-WG11)	4/15/2008[a]	< 0.620	U			—				—				< 0.0435	UJ	b		< 0.0561	UJ	b		—				< 0.0332	U			< 0.620	U			—			< 0.310	U		
RHMW2254-01	RHMW2254-01-WG12	7/29/2008[ad]	< 0.620	U			—				—				< 0.0156	U			< 0.0156	U			—				< 0.0323	U			< 0.620	U			—			< 0.310	U		
RHMW2254-01	RHMW2254-01-WG13	10/22/2008[ad]	< 0.620	U			—				—				**0.0276**	**J**			< 0.0150	U			—				**0.0466**	**J**			< 0.620	U			—			< 0.310	U		
RHMW2254-01	RHMW2254-WG13B	12/16/2008[c]	< 0.93	U			—				—				—				—				—				—				< 0.620	U			—			< 0.310	U		
RHMW2254-01	RHMWA01-WG13B	12/16/2008*[c]	< 0.93	U			—				—				—				—				—				—				< 0.620	U			—			< 0.310	U		
RHMW2254-01	RHMW2254-01-WG14	2/4/2009[a]	< 0.620	U			—				—				< 0.0161	U			< 0.0161	U			—				< 0.0333	U			< 0.620	U			—			< 0.310	U		
RHMW2254-01	RHMW2254-01-WG15	5/13/2009[a]	< 0.620	U			—				—				< 0.0156	U			**0.0180**	**J**			—				< 0.0323	U			< 0.620	U			—			< 0.310	U		
RHMW2254-01	RHMW2254-01-WG16	7/15/2009[a]	< 0.620	U			—				—				< 0.0165	U			< 0.0165	U			—				< 0.0341	U			< 0.620	U			—			< 0.310	U		
RHMW2254-01	RHMW2254-WG17	10/14/2009[a]	< 1	U			—				—				< 0.017	U			< 0.017	U			—				< 0.0352	U			< 0.62	U			—			< 0.31	U		
RHMW2254-01	RHMW2254-01-WG18	2010-01-27	< 1.24	U			—				—				< 0.0316	U			< 0.0316	U			—				**0.0375**	**J**			< 1.24	U			—			< 0.620	U		
RHMW2254-01	RHMW2254-01-WG19 (RHMW225-WG19)	2010-04-13	< 1.24	U			—				—				< 0.0330	U			< 0.0330	U			—				< 0.0682	U			< 1.24	U			—			< 0.620	U		
RHMW2254-01	RHMW2254-01-WG20 (RHMW2254-WG20)	2010-07-13	< 1.24	U			—				—				< 0.0320	U			< 0.0320	U			—				< 0.0664	U			< 1.24	U			—			< 0.620	U		
RHMW2254-01	ES004	2010-10-19	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			< 0.40	U		
RHMW2254-01	ES014	1/20/2011[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			< 0.40	U		
RHMW2254-01	ES019	4/19/2011[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			< 0.40	U		
RHMW2254-01	ES040	2011-07-20	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			< 0.40	U		
RHMW2254-01	ES050	2011-10-25	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			< 0.40	U		
RHMW2254-01	ES062	2012-02-01	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			< 0.40	U		
RHMW2254-01	ES074	2012-04-17	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—			< 0.40	U		

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Semivolatiles				Semivolatiles			
		Analyte Type	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Fuel Additive				Fuel Additive			
		Analytical Method	504.1				524.2				8260SIM				8260SIM				8260				524.2				8270				8270/8270 Mod.			
		Analyte	1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				Phenol				2-(2-Methoxyethoxy)-ethanol			
		CAS No.	106-93-4				106-93-4				106-93-4				107-06-2				107-06-2				107-06-2				108-95-2				111-77-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	0.04				0.04				0.04				5				5				5				300				800			
		SSRBL	—				—				—				—				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW2254-01	RH-B-001	2/16/2005[be]	< 0.0083	U		[b]	—				—				—				< 0.50	U			—				—				—			
RHMW2254-01	RH-B-002	2/16/2005[bf]	< 0.0081	U		[b]	—				—				—				< 0.50	U			—				—				—			
RHMW2254-01	RH-B-003	2/16/2005*[bf]	< 0.0082	U		[b]	—				—				—				< 0.50	U			—				—				—			
RHMW2254-01	RH-B-004	6/28/2005[ae]	< 0.0095	U		[b]	—				—				—				< 0.50	U		[b]	—				—				—			
RHMW2254-01	RH-B-005	6/28/2005*[ae]	< 0.0097	U		[b]	—				—				—				< 0.50	U		[b]	—				—				—			
RHMW2254-01	RH-B-006	6/28/2005*[af]	< 0.0095	U		[b]	—				—				—				< 0.50	U		[b]	—				—				—			
RHMW2254-01	RH-B-007	9/8/2005[ae]	< 0.0095	U		[b]	—				—				—				< 0.12	U			—				—				—			
RHMW2254-01	RH-B-008	9/8/2005[af]	< 0.0095	U		[b]	—				—				—				< 0.12	U			—				—				—			
RHMW2254-01	RH-B-009	9/8/2005*[af]	< 0.0095	U		[b]	—				—				—				< 0.12	U			—				—				—			
RHMW2254-01	RHMW2254W01	9/20/2005[bd]	—				—				—				—				< 0.50	U			—				—				—			
RHMW2254-01	RH-B-010	12/6/2005[ae]	< 0.0096	U		[b]	—				—				—				< 0.12	U			—				—				—			
RHMW2254-01	RH-B-011	12/6/2005*[ae]	< 0.0094	U		[b]	—				—				—				< 0.12	U			—				—				—			
RHMW2254-01	RH-B-012	12/7/2005[af]	< 0.0095	U		[b]	—				—				—				< 0.12	U			—				—				—			
RHMW2254-01	RHMW2254-01-GW02	7/10/2006[a]	—				—				—				—				< 0.50	U			—				—				—			
RHMW2254-01	RHMW2254-01-GW06	12/5/2006[a]	—				—				—				—				< 0.50	U			—				—				—			
RHMW2254-01	RHMW2254-01-WG07	3/27/2007[a]	—				—				—				—				< 0.50	U			—				—				—			
RHMW2254-01	RHMW2254-01-WG08	6/12/2007[a]	—				—				—				—				< 0.50	U			—				—				—			
RHMW2254-01	RHMW2254-01-WG0	9/10/2007[a]	—				—				—				—				< 0.20	U			—				—				—			
RHMW2254-01	RHMW2254-01-WG10 (RHMW2254-WG10)	1/15/2008[a]	—				—				—				—				< 0.150	U			—				—				—			
RHMW2254-01	RHMW2254-01-WG10.1	2/6/2008[a]	—				—				—				—				—				—				—				—			
RHMW2254-01	RHMW2254-01-WG10.1	2/6/2008[a]	—				—				—				—				—				—				—				—			
RHMW2254-01	RHMW2254-01-WG11 (RHMW2254-WG11)	4/15/2008[a]	—				—				—				—				< 0.150	U			—				—				—			
RHMW2254-01	RHMW2254-01-WG12	7/29/2008[ad]	—				—				—				—				< 0.150	U			—				—				—			
RHMW2254-01	RHMW2254-01-WG13	10/22/2008[ad]	—				—				—				—				< 0.150	U			—				—				—			
RHMW2254-01	RHMW2254-WG13B	12/16/2008[c]	—				—				—				—				< 0.150	U			—				—				—			
RHMW2254-01	RHMWA01-WG13B	12/16/2008*[c]	—				—				—				—				< 0.150	U			—				—				—			
RHMW2254-01	RHMW2254-01-WG14	2/4/2009[a]	—				—				—				—				< 0.150	U			—				—				—			
RHMW2254-01	RHMW2254-01-WG15	5/13/2009[a]	—				—				—				—				< 0.150	U			—				—				—			
RHMW2254-01	RHMW2254-01-WG16	7/15/2009[a]	—				—				—				—				< 0.150	U			—				—				—			
RHMW2254-01	RHMW2254-WG17	10/14/2009[a]	—				—				—				—				< 0.15	U			—				—				—			
RHMW2254-01	RHMW2254-01-WG18	2010-01-27	—				—				—				—				< 0.300	U			—				—				—			
RHMW2254-01	RHMW2254-01-WG19 (RHMW225-WG19)	2010-04-13	—				—				—				—				< 0.300	U			—				—				—			
RHMW2254-01	RHMW2254-01-WG20 (RHMW2254-WG20)	2010-07-13	—				—				—				—				< 0.300	U			—				—				—			
RHMW2254-01	ES004	2010-10-19	—				—				—				—				< 0.28	U			—				—				—			
RHMW2254-01	ES014	1/20/2011[d]	—				—				—				—				< 0.28	U			—				—				—			
RHMW2254-01	ES019	4/19/2011[d]	—				—				—				—				< 0.28	U			—				—				—			
RHMW2254-01	ES040	2011-07-20	—				—				—				—				< 0.28	U			—				—				—			
RHMW2254-01	ES050	2011-10-25	—				—				—				—				< 0.28	U			—				—				—			
RHMW2254-01	ES062	2012-02-01	—				—				—				—				< 0.28	U			—				—				—			
RHMW2254-01	ES074	2012-04-17	—				—				—				—				< 0.28	U			—				—				—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	TPH				TPH				TPH				TPH				TPH				TPH				Volatiles				Volatiles				Volatiles				Volatiles				Volatiles			
		Analyte Type	COPC				COPC				COPC				COPC				COPC				COPC				COPC				non-COPC				COPC				non-COPC				COPC			
		Analytical Method	8015				8260				8015				8015				8015				8015				8260				524.2				8260				524.2				8260			
		Analyte	TPH-g ****				TPH-g ****				TPH-d				TPH-d with Silica Gel Cleanup				TPH-o				TPH-o with Silica Gel Cleanup				Benzene				Benzene				Ethylbenzene				Ethylbenzene				Toluene			
		CAS No.	Gas				Gas				Diesel				Disel SGC				Oil				Oil SGC				71-43-2				71-43-2				100-41-4				100-41-4				108-88-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	300				300				400				400				500				500				5				5				30				30				40			
		SSRBL	—				—				4500				—				—				—				750				750				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW2254-01	ES077	2012-07-17	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
RHMW2254-01	ES006	2012-10-22	—				< 18	UJ	b		< 20	U			—				—				—				< 0.50	U			—				< 0.50	U			—				**0.71**	**J**			—			
RHMW2254-01	ES014	2013-01-29	—				< 30	U			**22**	**J**		Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW2254-01	ES023	2013-04-23	—				< 30	U			< 20	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW2254-01	ES032	2013-07-23	—				< 30	U			< 20	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW2254-01	ES041	2013-10-22	—				< 21	UJ	b t		< 20	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW2254-01	ES050	1/16/2014[d]	—				—				< 20	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW2254-01	ES060	1/29/2014[d]	—				< 16	UJ	b		< 20	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW2254-01	ES067	3/6/2014[d]	—				—				< 20	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW2254-01	ES075	3/26/2014[d]	—				—				< 10	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW2254-01	ES085	4/22/2014[d]	—				< 30	U			< 10	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW2254-01	ES094	5/28/2014[d]	—				—				< 12	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW2254-01	ES102	6/24/2014[d]	—				—				< 12	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW2254-01	ES107	2014-07-22	—				< 30	U			< 12	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW2254-01	ES117	2014-10-28	—				< 30	U			**22**	**J**		Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW2254-01	ES125	2015-01-27	—				< 30	U			< 12	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW2254-01	ES134	2015-04-21	< 25	U			—				< 14	UJ	b		—				< 37	UJ	b		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
RHMW2254-01	ES149	2015-07-21	< 25	U			—				**17**	**J**			—				**42**	**J**			—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
RHMW2254-01	ERH009	2015-10-20	< 25	U			—				< 16	UJ	b		—				< 53	UJ	b		—				< 0.10	UJ	h		—				< 0.10	UJ	h		—				< 0.99	UJ	t		—			
RHMW2254-01	ERH021	2016-01-20	< 25	U			—				< 21	UJ	b		—				< 54	UJ	b		—				< 0.10	U			—				< 0.10	U			—				< 0.16	UJ	t		—			
RHMW2254-01	ERH037	2016-04-20	< 25	U			—				< 21	U	b f		—				< 61	U	b f		—				< 0.10	U			—				< 0.10	U	f		—				< 0.10	U			—			
RHMW2254-01	ERH051	2016-07-20	< 25	U			—				< 21	U			—				< 27	U	b f		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
RHMW2254-01	ERH088	2016-10-18	—				< 18	UJ	q		< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH092	10/18/2016*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH115	2016-11-14	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH116	11/14/2016*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH135	2016-12-12	—				< 18	U			**14**	**J**		Y	—				**16**	**J**			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH137	12/12/2016*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH161	2017-01-09	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH162	1/9/2017*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH161 (EPA split)	2017-01-09	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW2254-01	ERH162 (EPA split)	1/9/2017*	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW2254-01	ERH205	2017-02-06	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH206	2/6/2017*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH205 (EPA split)	2017-02-06	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW2254-01	ERH206 (EPA split)	2/6/2017*	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW2254-01	ERH257	2017-03-06	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH258	3/6/2017*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH257 (EPA split)	2017-03-06	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW2254-01	ERH258 (EPA split)	3/6/2017*	< 25	UJ	c		—				**100**	**J**			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW2254-01	ERH292	2017-04-03	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH293	4/3/2017*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH329	2017-05-02	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH330	5/2/2017*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH349	2017-06-06	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH350	6/6/2017*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH378	2017-07-05	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW2254-01	ERH379	7/5/2017*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Volatiles			Volatiles			Volatiles			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Lead Scavenger			Lead Scavenger		
		Analyte Type	COPC			non-COPC			non-COPC			COPC			COPC			non-COPC			COPC			non-COPC			non-COPC			Lead Scavenger			Lead Scavenger		
		Analytical Method	8260			524.2			524.2			8270 SIM			8270 SIM			8270			8270 SIM			8260			524.2			8270			8011			8260		
		Analyte	Xylenes, Total (p/m-, o-xylene)			Xylenes, p/m-			Xylenes, o-			1-Methylnaphthalene			2-Methylnaphthalene			2-Methylnaphthalene			Naphthalene *****			Naphthalene *****			Naphthalene *****			Naphthalene *****			1,2-Dibromoethane *****			1,2-Dibromoethane *****		
		CAS No.	1330-20-7			179601-23-1			95-47-6			90-12-0			91-57-6			91-57-6			91-20-3			91-20-3			91-20-3			91-20-3			106-93-4			106-93-4		
		Unit	µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L		
		DOH EAL	20			20			20			10			10			10			17			17			17			17			0.04			0.04		
		SSRBL	—			—			—			—			—			—			—			—			—			—			—			—		
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW2254-01	ES077	2012-07-17	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				< 0.40	U		
RHMW2254-01	ES006	2012-10-22	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.037**	**J**			—				—				< 0.50	U		
RHMW2254-01	ES014	2013-01-29	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.052**	**J**			—				—				< 0.50	U		
RHMW2254-01	ES023	2013-04-23	< 1.0	U			—				—				< 0.051	U			< 0.051	U			—				< 0.051	U			—				—				< 0.50	U		
RHMW2254-01	ES032	2013-07-23	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.099**	**J**			—				—				< 0.50	U		
RHMW2254-01	ES041	2013-10-22	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.036**	**J**			—				—				< 0.50	U		
RHMW2254-01	ES050	1/16/2014[d]	< 1.0	U			—				—				< 0.049	U			< 0.049	U			—				**0.046**	**J**			—				—				< 0.50	U		
RHMW2254-01	ES060	1/29/2014[d]	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.049**	**J**			—				—				< 0.50	U		
RHMW2254-01	ES067	3/6/2014[d]	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.081**	**J**			—				—				—			
RHMW2254-01	ES075	3/26/2014[d]	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				< 0.050	U			—				—				—			
RHMW2254-01	ES085	4/22/2014[d]	< 1.0	U			—				—				< 0.049	U			< 0.049	U			—				< 0.049	U			—				—				< 0.50	U		
RHMW2254-01	ES094	5/28/2014[d]	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				< 0.050	U			—				—				—			
RHMW2254-01	ES102	6/24/2014[d]	< 1.0	U			—				—				< 0.049	U			< 0.049	U			—				< 0.049	U			—				—				—			
RHMW2254-01	ES107	2014-07-22	< 1.0	U			—				—				< 0.048	U			< 0.048	U			—				< 0.048	U			—				—				< 0.50	U		
RHMW2254-01	ES117	2014-10-28	< 1.0	U			—				—				< 0.097	U			< 0.049	U			—				< 0.049	U			—				—				< 0.50	U		
RHMW2254-01	ES125	2015-01-27	< 1.0	U			—				—				< 0.10	U			< 0.050	U			—				< 0.050	U			—				—				< 0.50	U		
RHMW2254-01	ES134	2015-04-21	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—				—				< 0.0040	U			< 0.20	U		
RHMW2254-01	ES149	2015-07-21	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—				—				< 0.0040	U			< 0.20	U		
RHMW2254-01	ERH009	2015-10-20	< 0.20	UJ	h		—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—				—				< 0.0040	U			< 0.20	UJ	h	
RHMW2254-01	ERH021	2016-01-20	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—				—				< 0.0040	U			< 0.20	U		
RHMW2254-01	ERH037	2016-04-20	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—				—				—				—			
RHMW2254-01	ERH051	2016-07-20	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0051	U	b f		—				—				—				—			
RHMW2254-01	ERH088	2016-10-18	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW2254-01	ERH092	10/18/2016*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW2254-01	ERH115	2016-11-14	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW2254-01	ERH116	11/14/2016*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW2254-01	ERH135	2016-12-12	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW2254-01	ERH137	12/12/2016*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW2254-01	ERH161	2017-01-09	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW2254-01	ERH162	1/9/2017*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW2254-01	ERH161 (EPA split)	2017-01-09	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U			—			
RHMW2254-01	ERH162 (EPA split)	1/9/2017*	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U			—			
RHMW2254-01	ERH205	2017-02-06	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW2254-01	ERH206	2/6/2017*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW2254-01	ERH205 (EPA split)	2017-02-06	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c s		< 0.025	UJ	c s		< 0.5	U			< 0.025	UJ	s		—				< 0.2	U			< 0.5	U			—			
RHMW2254-01	ERH206 (EPA split)	2/6/2017*	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c s		< 0.025	UJ	c s		< 0.5	U			< 0.025	UJ	s		—				< 0.2	U			< 0.5	U			—			
RHMW2254-01	ERH257	2017-03-06	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW2254-01	ERH258	3/6/2017*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW2254-01	ERH257 (EPA split)	2017-03-06	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U			—			
RHMW2254-01	ERH258 (EPA split)	3/6/2017*	—				< 0.5	U			< 0.2	U			< 0.026	UJ	c		< 0.026	UJ	c		< 0.5	U			< 0.026	U			—				< 0.2	U			< 0.5	U			—			
RHMW2254-01	ERH292	2017-04-03	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW2254-01	ERH293	4/3/2017*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW2254-01	ERH329	2017-05-02	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW2254-01	ERH330	5/2/2017*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW2254-01	ERH349	2017-06-06	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW2254-01	ERH350	6/6/2017*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW2254-01	ERH378	2017-07-05	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW2254-01	ERH379	7/5/2017*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Semivolatiles				Semivolatiles			
		Analyte Type	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Fuel Additive				Fuel Additive					
		Analytical Method	504.1				524.2				8260SIM				8260SIM				8260				524.2				8270				8270/8270 Mod.			
		Analyte	1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				Phenol				2-(2-Methoxyethoxy)-ethanol			
		CAS No.	106-93-4				106-93-4				106-93-4				107-06-2				107-06-2				107-06-2				108-95-2				111-77-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	0.04				0.04				0.04				5				5				5				300				800			
		SSRBL	—				—				—				—				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW2254-01	ES077	2012-07-17	—				—				—				—				< 0.28	U			—				—				—			
RHMW2254-01	ES006	2012-10-22	—				—				—				—				< 0.50	U			—				—				—			
RHMW2254-01	ES014	2013-01-29	—				—				—				—				< 0.50	U			—				—				—			
RHMW2254-01	ES023	2013-04-23	—				—				—				—				< 0.50	U			—				—				—			
RHMW2254-01	ES032	2013-07-23	—				—				—				—				< 0.50	U			—				—				—			
RHMW2254-01	ES041	2013-10-22	—				—				—				—				< 0.50	U			—				—				—			
RHMW2254-01	ES050	1/16/2014[d]	—				—				—				—				< 0.50	U			—				—				—			
RHMW2254-01	ES060	1/29/2014[d]	—				—				—				—				< 0.50	U			—				—				—			
RHMW2254-01	ES067	3/6/2014[d]	—				—				—				—				—				—				—				—			
RHMW2254-01	ES075	3/26/2014[d]	—				—				—				—				—				—				—				—			
RHMW2254-01	ES085	4/22/2014[d]	—				—				—				—				< 0.50	U			—				—				—			
RHMW2254-01	ES094	5/28/2014[d]	—				—				—				—				—				—				—				—			
RHMW2254-01	ES102	6/24/2014[d]	—				—				—				—				—				—				—				—			
RHMW2254-01	ES107	2014-07-22	—				—				—				—				< 0.50	U			—				—				—			
RHMW2254-01	ES117	2014-10-28	—				—				—				—				< 0.50	U			—				—				—			
RHMW2254-01	ES125	2015-01-27	—				—				—				—				< 0.50	U			—				—				—			
RHMW2254-01	ES134	2015-04-21	—				—				< 0.010	U			< 0.015	U			—				—				—				—			
RHMW2254-01	ES149	2015-07-21	—				—				—				< 0.015	U			—				—				—				—			
RHMW2254-01	ERH009	2015-10-20	—				—				—				< 0.015	U			—				—				—				—			
RHMW2254-01	ERH021	2016-01-20	—				—				—				< 0.015	U			—				—				—				—			
RHMW2254-01	ERH037	2016-04-20	—				—				—				—				—				—				—				—			
RHMW2254-01	ERH051	2016-07-20	—				—				—				—				—				—				—				—			
RHMW2254-01	ERH088	2016-10-18	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	h	
RHMW2254-01	ERH092	10/18/2016*	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	h	
RHMW2254-01	ERH115	2016-11-14	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH116	11/14/2016*	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH135	2016-12-12	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH137	12/12/2016*	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH161	2017-01-09	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH162	1/9/2017*	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH161 (EPA split)	2017-01-09	—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
RHMW2254-01	ERH162 (EPA split)	1/9/2017*	—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
RHMW2254-01	ERH205	2017-02-06	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH206	2/6/2017*	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH205 (EPA split)	2017-02-06	—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
RHMW2254-01	ERH206 (EPA split)	2/6/2017*	—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
RHMW2254-01	ERH257	2017-03-06	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH258	3/6/2017*	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH257 (EPA split)	2017-03-06	—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
RHMW2254-01	ERH258 (EPA split)	3/6/2017*	—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
RHMW2254-01	ERH292	2017-04-03	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH293	4/3/2017*	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH329	2017-05-02	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH330	5/2/2017*	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH349	2017-06-06	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH350	6/6/2017*	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH378	2017-07-05	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH379	7/5/2017*	—				—				—				—				—				—				< 4.00	U			< 80.0	U		

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	TPH			TPH			TPH			TPH			TPH			TPH			Volatiles			Volatiles			Volatiles			Volatiles			Volatiles		
		Analyte Type	COPC			COPC			COPC			COPC			COPC			COPC			COPC			non-COPC			COPC			non-COPC			COPC		
		Analytical Method	8015			8260			8015			8015			8015			8015			8260			524.2			8260			524.2			8260		
		Analyte	TPH-g ****			TPH-g ****			TPH-d			TPH-d with Silica Gel Cleanup			TPH-o			TPH-o with Silica Gel Cleanup			Benzene			Benzene			Ethylbenzene			Ethylbenzene			Toluene			Toluene		
		CAS No.	Gas			Gas			Diesel			Disel SGC			Oil			Oil SGC			71-43-2			71-43-2			100-41-4			100-41-4			108-88-3			108-88-3		
		Unit	µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L		
		DOH EAL	300			300			400			400			500			500			5			5			30			30			40			40		
		SSRBL	—			—			4500			—			—			—			750			750			—			—			—			—		
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW2254-01	ERH409	2017-10-24	—				< 18	U			**65**	**J**	e q	Z	—				< 40	UJ	q		—				< 0.30	U			—				< 0.50	U			—			
RHMW2254-01	ERH410	10/24/2017*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW2254-01	ERH542	2018-03-14	—				< 18	U			< 25	UJ	h		—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW2254-01	ERH543	3/14/2018*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW2254-01	ERH588	2018-04-23	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW2254-01	ERH589	4/23/2018*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW2254-01	ERH634	2018-07-23	—				< 18	U			< 25	U			—				< 40	UJ	l		—				< 0.30	U			—				< 0.50	U			—			
RHMW2254-01	ERH635	7/23/2018*	—				< 18	U			< 25	UJ	s		—				< 40	UJ	l s		—				< 0.30	U			—				< 0.50	U			—			
RHMW2254-01	ERH678	2018-10-22	—				< 18	U			< 25	UJ	h		—				< 40	UJ	h		—				< 0.30	U			—				**1**				—			
RHMW2254-01	ERH679	10/22/2018*	—				< 18	U			< 25	UJ	h		—				< 40	UJ	h		—				< 0.30	U			—				**0.99**	**J**			—			
RHMW2254-01	ERH712	2018-11-13	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW2254-01	ERH713	11/13/2018*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW2254-01	ERH715	2018-11-14	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW2254-01	ERH716	11/14/2018*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW2254-01	ERH719	2018-12-12	—				< 18	U			< 25	UJ	s		< 25	U			< 40	UJ	s		< 40	U			< 0.30	U			—				< 0.50	U			—			
RHMW2254-01	ERH720	12/12/2018*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW2254-01	ERH722	2018-12-13	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW2254-01	ERH723	12/13/2018*	—				< 18	U			< 25	U			< 25	U			< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—			
RHMW2254-01	ERH730	2019-01-23	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW2254-01	ERH731	1/23/2019*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW2254-01	ERH733	2019-01-24	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW2254-01	ERH734	1/24/2019*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW2254-01	ERH782	2019-04-22	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW2254-01	ERH783	4/22/2019*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW2254-01	ERH785	2019-04-23	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW2254-01	ERH786	4/23/2019*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW2254-01	ERH838	2019-07-22	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW2254-01	ERH838	7/22/2019*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW2254-01	ERH907	2019-10-21	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW2254-01	ERH908	10/21/2019*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW2254-01	ERH971	2020-01-21	—				< 18	U			**100**			Z	< 25	U			< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—			
RHMW2254-01	ERH972	1/21/2020*	—				< 18	U			**< 25**	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW2254-01	ERH1039	2020-04-23	—				< 18	U			**180**	**J**	q,l	Z	—				< 300.0	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW2254-01	ERH1040	2020-04-23	—				< 18	U			**280**	**J**	l	Z	—				< 300.0	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW01	RH-W-001	2/17/2005[b]	< 50	U		[b]	—				**1,400**			Y	—				**770**		Y		—				< 0.50	U	[b]		—				< 0.50	U	[b]		—			
RHMW01	RH-W-002	2/17/2005*[b]	< 50	U		[b]	—				**1,500**				—				**890**				—				< 0.50	U	[b]		—				< 0.50	U	[b]		—			
RHMW01	RH-W-003	6/28/2005[a]	< 13	U			—				**1,300**			Z	—				—				—				< 0.50	U	[b]		—				< 0.50	U	[b]		—			
RHMW01	RH-W-004	6/28/2005*[a]	< 13	U			—				**1,100**			Z	—				—				—				< 0.50	U	[b]		—				< 0.50	U	[b]		—			
RHMW01	RH-W-005	9/8/2005[a]	< 13	U			—				**950**			Y	—				**540**		Y		—				< 0.14	U			—				< 0.13	U			—			
RHMW01	RH-W-006	9/8/2005*[a]	< 13	U			—				**1,100**			Y	—				**720**		Y		—				< 0.14	U			—				< 0.13	U			—			
RHMW01	RHMW01W01	9/20/2005[a]	—				—				—				—				—				—				< 0.50	U			—				< 0.50	U			—			
RHMW01	RH-W-007	12/6/2005[a]	< 13	U			—				**670**			Z	—				—				—				< 0.14	U			—				< 0.13	U			—			
RHMW01	RH-W-008	12/6/2005*[a]	< 13	U			—				**740**			Z	—				—				—				< 0.14	U			—				< 0.13	U			—			
RHMW01	RHMW01-GW02	7/10/2006[a]	< 50	U			—				**509**				—				—				—				< 0.50	U			—				< 0.50	U			—			
RHMW01	RHMW01-GW06	12/5/2006[a]	< 50	U			—				**303**				—				—				—				< 0.50	U			—				< 0.50	U			—			
RHMW01	RHMW01-WG07	3/27/2007[a]	< 50	U			—				**307**				—				—				—				< 0.50	U			—				< 0.50	U			—			
RHMW01	RHMW01-WG08	6/12/2007[a]	< 50	U			—				**274**				—				—				—				< 0.50	U			—				< 0.50	U			—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Volatiles			Volatiles			Volatiles			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Lead Scavenger			Lead Scavenger		
		Analyte Type	COPC			non-COPC			non-COPC			COPC			COPC			non-COPC			COPC			non-COPC			non-COPC			Lead Scavenger			Lead Scavenger		
		Analytical Method	8260			524.2			524.2			8270 SIM			8270 SIM			8270			8270 SIM			8260			524.2			8270			8011			8260		
		Analyte	Xylenes, Total (p/m-, o-xylene)			Xylenes, p/m-			Xylenes, o-			1-Methylnaphthalene			2-Methylnaphthalene			2-Methylnaphthalene			Naphthalene *****			Naphthalene *****			Naphthalene *****			Naphthalene *****			1,2-Dibromoethane *****			1,2-Dibromoethane *****		
		CAS No.	1330-20-7			179601-23-1			95-47-6			90-12-0			91-57-6			91-57-6			91-20-3			91-20-3			91-20-3			91-20-3			106-93-4			106-93-4		
		Unit	µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L		
		DOH EAL	20			20			20			10			10			10			17			17			17			17			0.04			0.04		
		SSRBL	—			—			—			—			—			—			—			—			—			—			—			—		
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW2254-01	ERH409	2017-10-24	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW2254-01	ERH410	10/24/2017*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW2254-01	ERH542	2018-03-14	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW2254-01	ERH543	3/14/2018*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW2254-01	ERH588	2018-04-23	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW2254-01	ERH589	4/23/2018*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW2254-01	ERH634	2018-07-23	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW2254-01	ERH635	7/23/2018*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW2254-01	ERH678	2018-10-22	**0.81**	**J**			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW2254-01	ERH679	10/22/2018*	**0.73**	**J**			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW2254-01	ERH712	2018-11-13	< 0.30	UJ	q		—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW2254-01	ERH713	11/13/2018*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW2254-01	ERH715	2018-11-14	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW2254-01	ERH716	11/14/2018*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW2254-01	ERH719	2018-12-12	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW2254-01	ERH720	12/12/2018*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW2254-01	ERH722	2018-12-13	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW2254-01	ERH723	12/13/2018*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW2254-01	ERH730	2019-01-23	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW2254-01	ERH731	1/23/2019*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW2254-01	ERH733	2019-01-24	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW2254-01	ERH734	1/24/2019*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW2254-01	ERH782	2019-04-22	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW2254-01	ERH783	4/22/2019*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW2254-01	ERH785	2019-04-23	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW2254-01	ERH786	4/23/2019*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW2254-01	ERH838	2019-07-22	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW2254-01	ERH838	7/22/2019*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW2254-01	ERH907	2019-10-21	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW2254-01	ERH908	10/21/2019*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW2254-01	ERH971	2020-01-21	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW2254-01	ERH972	1/21/2020*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW2254-01	ERH1039	2020-04-23	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW2254-01	ERH1040	2020-04-23	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW01	RH-W-001	2/17/2005[b]	< 0.50	U	[b]		—				—				—				**0.14**				—				**0.25**				—				—				—			
RHMW01	RH-W-002	2/17/2005*[b]	< 0.50	U	[b]		—				—				—				**0.057**				—				**0.21**				—				—				—			
RHMW01	RH-W-003	6/28/2005[a]	< 0.50	U	[b]		—				—				—				**0.054**				—				**0.073**				—				—				—			
RHMW01	RH-W-004	6/28/2005*[a]	< 0.50	U	[b]		—				—				—				**0.051**				—				**0.055**				—				—				—			
RHMW01	RH-W-005	9/8/2005[a]	< 0.22	U			—				—				—				**0.038**				—				**0.83**				—				—				—			
RHMW01	RH-W-006	9/8/2005*[a]	< 0.22	U			—				—				—				**0.038**				—				**0.78**				—				—				—			
RHMW01	RHMW01W01	9/20/2005[a]	< 0.50	U			—				—				—				—				—				—				< 1.0	U			—				—			< 0.50	U		
RHMW01	RH-W-007	12/6/2005[a]	< 0.33	U			—				—				—				**0.098**				—				**0.51**				—				—				—			
RHMW01	RH-W-008	12/6/2005*[a]	< 0.33	U			—				—				—				**0.11**				—				**0.48**				—				—				—			
RHMW01	RHMW01-GW02	7/10/2006[a]	< 0.50	U			—				—				< 0.25	U			< 0.25	U			—				< 0.25	U			< 1.0	U			—				—			< 0.50	U		
RHMW01	RHMW01-GW06	12/5/2006[a]	< 0.50	U			—				—				< 0.25	U			< 0.25	U			—				< 0.25	U			< 1.0	U			—				—			< 0.50	U		
RHMW01	RHMW01-WG07	3/27/2007[a]	< 0.50	U			—				—				< 0.25	U			< 0.25	U			—				< 0.25	U			< 1.0	U			—				—			< 0.50	U		
RHMW01	RHMW01-WG08	6/12/2007[a]	< 0.50	U			—				—				< 0.25	U			< 0.25	U			—				< 0.25	U			< 1.0	U			—				—			< 0.50	U		

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Semivolatiles				Semivolatiles			
		Analyte Type	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Fuel Additive				Fuel Additive					
		Analytical Method	504.1				524.2				8260SIM				8260SIM				8260				524.2				8270				8270/8270 Mod.			
		Analyte	1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				Phenol				2-(2-Methoxyethoxy)-ethanol			
		CAS No.	106-93-4				106-93-4				106-93-4				107-06-2				107-06-2				107-06-2				108-95-2				111-77-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	0.04				0.04				0.04				5				5				5				300				800			
		SSRBL	—				—				—				—				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW2254-01	ERH409	2017-10-24	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH410	10/24/2017*	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH542	2018-03-14	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH543	3/14/2018*	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH588	2018-04-23	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH589	4/23/2018*	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH634	2018-07-23	—				—				—				—				—				—				< 4.00	UJ	h		< 80.0	U		
RHMW2254-01	ERH635	7/23/2018*	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH678	2018-10-22	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW2254-01	ERH679	10/22/2018*	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW2254-01	ERH712	2018-11-13	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH713	11/13/2018*	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH715	2018-11-14	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH716	11/14/2018*	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH719	2018-12-12	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH720	12/12/2018*	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH722	2018-12-13	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH723	12/13/2018*	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH730	2019-01-23	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW2254-01	ERH731	1/23/2019*	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW2254-01	ERH733	2019-01-24	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW2254-01	ERH734	1/24/2019*	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW2254-01	ERH782	2019-04-22	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW2254-01	ERH783	4/22/2019*	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW2254-01	ERH785	2019-04-23	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW2254-01	ERH786	4/23/2019*	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW2254-01	ERH838	2019-07-22	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH838	7/22/2019*	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH907	2019-10-21	—				—				—				—				—				—				< 4.00	UJ	l		< 80.0	U		
RHMW2254-01	ERH908	10/21/2019*	—				—				—				—				—				—				< 4.00	UJ	l		< 80.0	U		
RHMW2254-01	ERH971	2020-01-21	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH972	1/21/2020*	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH1039	2020-04-23	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW2254-01	ERH1040	2020-04-23	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW01	RH-W-001	2/17/2005[b]	< 0.0083	U			—				—				—				< 0.50	U		b	—				—				—			
RHMW01	RH-W-002	2/17/2005*[b]	< 0.0082	U			—				—				—				< 0.50	U		b	—				—				—			
RHMW01	RH-W-003	6/28/2005[a]	< 0.0095	U			—				—				—				< 0.50	U		b	—				—				—			
RHMW01	RH-W-004	6/28/2005*[a]	< 0.0095	U			—				—				—				< 0.50	U		b	—				—				—			
RHMW01	RH-W-005	9/8/2005[a]	< 0.00096	U			—				—				—				< 0.12	U			—				—				—			
RHMW01	RH-W-006	9/8/2005*[a]	< 0.00096	U			—				—				—				< 0.12	U			—				—				—			
RHMW01	RHMW01W01	9/20/2005[a]	—				—				—				—				< 0.50	U			—				—				—			
RHMW01	RH-W-007	12/6/2005[a]	< 0.0096	U		b	—				—				—				< 0.12	U			—				—				—			
RHMW01	RH-W-008	12/6/2005*[a]	< 0.0095	U		b	—				—				—				< 0.12	U			—				—				—			
RHMW01	RHMW01-GW02	7/10/2006[a]	—				—				—				—				< 0.50	U			—				—				—			
RHMW01	RHMW01-GW06	12/5/2006[a]	—				—				—				—				< 0.50	U			—				—				—			
RHMW01	RHMW01-WG07	3/27/2007[a]	—				—				—				—				< 0.50	U			—				—				—			
RHMW01	RHMW01-WG08	6/12/2007[a]	—				—				—				—				< 0.50	U			—				—				—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	TPH				TPH				TPH				TPH				TPH				TPH				Volatiles				Volatiles				Volatiles				Volatiles				Volatiles			
		Analyte Type	COPC				COPC				COPC				COPC				COPC				COPC				COPC				non-COPC				COPC				non-COPC				COPC			
		Analytical Method	8015				8260				8015				8015				8015				8015				8260				524.2				8260				524.2				8260			
		Analyte	TPH-g ****				TPH-g ****				TPH-d				TPH-d with Silica Gel Cleanup				TPH-o				TPH-o with Silica Gel Cleanup				Benzene				Benzene				Ethylbenzene				Ethylbenzene				Toluene			
		CAS No.	Gas				Gas				Diesel				Disel SGC				Oil				Oil SGC				71-43-2				71-43-2				100-41-4				100-41-4				108-88-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	300				300				400				400				500				500				5				5				30				30				40			
		SSRBL	—				—				4500				—				—				—				750				750				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW01	RHMW01-WG08	6/12/2007[a]	< 50	U			—				**261**				—				—				—				< 0.20	U			—				< 0.20	U			—				< 0.27	U		
RHMW01	RHMW01-WG10	1/15/2008[a]	< 10.0	U			—				**574**			Y	—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U		
RHMW01	RHMW01-WG11	4/15/2008[a]	**13.6**	**J**			—				**427**	**J**			—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U		
RHMW01	RHMW01-WG12	7/29/2008[ad]	< 10.0	U			—				**327**	**J**			—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U		
RHMW01	RHMW01-WG13	10/22/2008[ad]	< 10.0	U			—				**459**				—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U		
RHMW01	RHMW01-WG14	2/4/2009[a]	**14.4**	**J**			—				**387**	**J**			—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U		
RHMW01	RHMW01-WG15	5/13/2009[a]	< 16.6	UJ	b t		—				**373**	**J**			—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U		
RHMW01	RHMW01-WG16	7/15/2009[a]	< 30.0	U			—				**248**	**J**			—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U		
RHMW01	RHMW01-WG17	10/14/2009[a]	< 30	U			—				**299**	**J**			—				—				—				< 0.12	U			—				< 0.31	U			—				< 0.31	U		
RHMW01	RHMW01-WG18	2010-01-27	< 60.0	U			—				**312**	**J**			—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U		
RHMW01	RHMW01-WG19	2010-04-13	< 60.0	U			—				**377**	**J**			—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U		
RHMW01	RHMW01-WG20	2010-07-13	< 60.0	U			—				**228**	**J**			—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U		
RHMW01	ES009	11/3/2010[d]	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U		
RHMW01	ES015	1/20/2011[d]	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U		
RHMW01	ES033	4/28/2011[d]	—				< 12.12	U			**300**			O	—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U		
RHMW01	ES041	2011-07-20	—				< 12.12	U			**290**			O	—				< 212.0	U			—				< 0.32	U			—				< 0.46	U			—				< 0.34	U		
RHMW01	ES057	2011-11-02	—				< 12.12	U			**210**			O	—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U		
RHMW01	ES069	2012-02-14	—				< 12.12	U			**210**			Y	—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U		
RHMW01	ES075	2012-04-17	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U		
RHMW01	ES088	2012-07-20	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U		
RHMW01	ES001	2012-10-22	—				< 20	UJ	b		**85**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW01	ES010	2013-02-04	—				< 13	UJ	t		**79**				—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW01	ES019	2013-04-22	—				< 30	U			**340**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW01	ES028	2013-07-22	—				< 30	UJ	h		**99**			Y	—				—				—				< 0.50	UJ	h		—				< 0.50	UJ	h		—				< 0.50	UJ	h	
RHMW01	ES037	2013-10-21	—				< 21	UJ	b t		**92**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW01	ES048	1/15/2014[d]	—				—				**250**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				**2.5**			
RHMW01	ES056	1/28/2014[d]	—				< 26	UJ	b		**130**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				**1.3**			
RHMW01	ES062	2/24/2014[d]	—				< 30	U			**89**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW01	ES064	3/5/2014[d]	—				—				**93**				—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW01	ES069	3/10/2014[d]	—				—				**38**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW01	ES072	3/25/2014[d]	—				—				**82**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW01	ES077	4/7/2014[d]	—				—				**140**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW01	ES080	4/21/2014[d]	—				< 30	U			**88**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW01	ES091	5/27/2014[d]	—				—				**66**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW01	ES098	6/23/2014[d]	—				—				**77**				—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW01	ES103	2014-07-21	—				< 30	U			**67**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW01	ES113	2014-10-27	—				< 30	U			**120**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW01	ES120X	2015-01-27	—				< 30	U			**33**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW01	ES130	2015-04-20	< 25	U			—				**170**			Y	—				< 23	UJ	b		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U		
RHMW01	ES143	2015-06-25	—				—				**130**			Y	—				**40**	**J**			—				—				—				—				—				—			
RHMW01	ES145	2015-07-20	< 25	U			—				**150**	**J**	s	Y	—				**21**	**J**	s		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U		
RHMW01	ERH011	2015-10-20	< 25	U			—				**330**			Y	—				< 54	UJ	b		—				< 0.10	UJ	h		—				< 0.10	UJ	h		—				< 0.42	UJ	t	
RHMW01	ERH024	2016-01-20	< 25	U			—				**430**			Y	—				< 60	UJ	b		—				< 0.10	U			—				< 0.10	U			—				< 0.17	UJ	t	
RHMW01	ERH039	2016-04-20	< 25	U			—				**360**			Y	—				< 120	U	b f	Y	—				< 0.10	U			—				< 0.10	U			—				< 0.10	U		
RHMW01	ERH053	2016-07-20	< 25	U			—				**250**			Y	—				< 59	U	b f		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U		
RHMW01	ERH090	2016-10-17	—				< 18	U			**120**			O	< 25	U			< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U		

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Volatiles			Volatiles			Volatiles			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Lead Scavenger			Lead Scavenger		
		Analyte Type	COPC			non-COPC			non-COPC			COPC			COPC			non-COPC			COPC			non-COPC			non-COPC			Lead Scavenger			Lead Scavenger		
		Analytical Method	8260			524.2			524.2			8270 SIM			8270 SIM			8270			8270 SIM			8260			524.2			8270			8011			8260		
		Analyte	Xylenes, Total (p/m-, o-xylene)			Xylenes, p/m-			Xylenes, o-			1-Methylnaphthalene			2-Methylnaphthalene			2-Methylnaphthalene			Naphthalene *****			Naphthalene *****			Naphthalene *****			Naphthalene *****			1,2-Dibromoethane *****			1,2-Dibromoethane *****		
		CAS No.	1330-20-7			179601-23-1			95-47-6			90-12-0			91-57-6			91-57-6			91-20-3			91-20-3			91-20-3			91-20-3			106-93-4			106-93-4		
		Unit	µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L		
		DOH EAL	20			20			20			10			10			10			17			17			17			17			0.04			0.04		
		SSRBL	—			—			—			—			—			—			—			—			—			—			—			—		
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW01	RHMW01-WG08	6/12/2007[a]	< 0.36	U			—				—				< 0.25	U			< 0.25	U			—				< 0.25	U			< 0.44	U			—				—				< 0.20	U		
RHMW01	RHMW01-WG10	1/15/2008[a]	< 0.620	U			—				—				**0.0640**				**0.0478**	**J**			—				**0.210**				**5.98**				—				—				< 0.310	U		
RHMW01	RHMW01-WG11	4/15/2008[a]	< 0.620	U			—				—				**0.101**				**0.0789**				—				**0.216**				< 0.620	U			—				—				< 0.310	U		
RHMW01	RHMW01-WG12	7/29/2008[ad]	< 0.620	U			—				—				< 0.0150	U			< 0.0150	U			—				**0.114**				< 0.620	U			—				—				< 0.310	U		
RHMW01	RHMW01-WG13	10/22/2008[ad]	< 0.620	U			—				—				< 0.0150	U			< 0.0150	U			—				**0.103**				< 0.620	U			—				—				< 0.310	U		
RHMW01	RHMW01-WG14	2/4/2009[a]	< 0.620	U			—				—				< 0.0165	U			< 0.0165	U			—				**0.173**				< 0.620	U			—				—				< 0.310	U		
RHMW01	RHMW01-WG15	5/13/2009[a]	< 0.620	U			—				—				< 0.0150	U			< 0.0150	U			—				**0.182**				< 0.620	U			—				—				< 0.310	U		
RHMW01	RHMW01-WG16	7/15/2009[a]	< 0.620	U			—				—				**9.44**				**3.07**				—				**5.61**				< 0.620	U			—				—				< 0.310	U		
RHMW01	RHMW01-WG17	10/14/2009[a]	< 1	U			—				—				< 0.0174	U			< 0.0174	U			—				**0.193**				< 0.62	U			—				—				< 0.31	U		
RHMW01	RHMW01-WG18	2010-01-27	< 1.24	U			—				—				< 0.0334	U			**0.0559**				—				**0.330**				< 1.24	U			—				—				< 0.620	U		
RHMW01	RHMW01-WG19	2010-04-13	< 1.24	U			—				—				< 0.0322	U			< 0.0322	U			—				< 0.0666	U			< 1.24	U			—				—				< 0.620	U		
RHMW01	RHMW01-WG20	2010-07-13	< 1.24	U			—				—				< 0.0316	U			< 0.0316	U			—				**0.184**				< 1.24	U			—				—				< 0.620	U		
RHMW01	ES009	11/3/2010[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				**0.17**	**J**			—				—				—				< 0.40	U		
RHMW01	ES015	1/20/2011[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				< 0.40	U		
RHMW01	ES033	4/28/2011[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				< 0.40	U		
RHMW01	ES041	2011-07-20	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				**0.12**	**J**			—				—				—				< 0.40	U		
RHMW01	ES057	2011-11-02	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				< 0.40	U		
RHMW01	ES069	2012-02-14	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				< 0.40	U		
RHMW01	ES075	2012-04-17	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				< 0.40	U		
RHMW01	ES088	2012-07-20	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				**0.13**	**J**			—				—				—				< 0.40	U		
RHMW01	ES001	2012-10-22	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				< 0.050	U			—				—				—				< 0.50	U		
RHMW01	ES010	2013-02-04	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.10**	**J**			—				—				—				< 0.50	U		
RHMW01	ES019	2013-04-22	< 1.0	U			—				—				< 0.052	U			< 0.052	U			—				< 0.052	U			—				—				—				< 0.50	U		
RHMW01	ES028	2013-07-22	< 1.0	UJ	h		—				—				< 0.050	U			< 0.050	U			—				**0.048**	**J**			—				—				—				< 0.50	UJ	h	
RHMW01	ES037	2013-10-21	< 1.0	U			—				—				< 0.052	U			< 0.052	U			—				< 0.052	U			—				—				—				< 0.50	U		
RHMW01	ES048	1/15/2014[d]	< 1.0	U			—				—				**0.040**	**J**			**0.039**	**J**			—				**0.062**	**J**			—				—				—				< 0.50	U		
RHMW01	ES056	1/28/2014[d]	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.045**	**J**			—				—				—				< 0.50	U		
RHMW01	ES062	2/24/2014[d]	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.037**	**J**			—				—				—				< 0.50	U		
RHMW01	ES064	3/5/2014[d]	< 1.0	U			—				—				< 0.050	U			**0.038**	**J**			—				< 0.050	U			—				—				—				—			
RHMW01	ES069	3/10/2014[d]	< 1.0	U			—				—				< 0.052	U			< 0.052	U			—				< 0.052	U			—				—				—				—			
RHMW01	ES072	3/25/2014[d]	< 1.0	U			—				—				< 0.051	U			< 0.051	U			—				< 0.051	U			—				—				—				—			
RHMW01	ES077	4/7/2014[d]	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				< 0.050	U			—				—				—				—			
RHMW01	ES080	4/21/2014[d]	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				< 0.050	U			—				—				—				< 0.50	U		
RHMW01	ES091	5/27/2014[d]	< 1.0	U			—				—				< 0.051	U			< 0.051	U			—				< 0.051	U			—				—				—				—			
RHMW01	ES098	6/23/2014[d]	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				< 0.050	U			—				—				—				—			
RHMW01	ES103	2014-07-21	< 1.0	U			—				—				< 0.051	U			< 0.051	U			—				< 0.051	U			—				—				—				< 0.50	U		
RHMW01	ES113	2014-10-27	< 1.0	U			—				—				< 0.10	U			< 0.052	U			—				< 0.052	U			—				—				—				< 0.50	U		
RHMW01	ES120X	2015-01-27	< 1.0	U			—				—				< 0.11	U			< 0.054	U			—				< 0.054	U			—				—				—				< 0.50	U		
RHMW01	ES130	2015-04-20	< 0.20	U			—				—				**0.014**	**J**			**0.0093**	**J**			—				**0.056**				—				—				< 0.0040	U			< 0.20	U		
RHMW01	ES143	2015-06-25	—				—				—				**0.0068**	**J**			**0.0058**	**J**			—				**0.040**		X		—				—				—				—			
RHMW01	ES145	2015-07-20	< 0.20	U			—				—				**0.014**	**J**			**0.013**	**J**			—				**0.057**				—				—				< 0.0040	U			< 0.20	U		
RHMW01	ERH011	2015-10-20	< 0.20	UJ	h		—				—				**0.037**				**0.024**				—				**0.20**				—				—				< 0.0040	U			< 0.20	UJ	h	
RHMW01	ERH024	2016-01-20	< 0.20	U			—				—				**0.029**				**0.023**				—				**0.18**				—				—				< 0.0040	U			< 0.004	U		
RHMW01	ERH039	2016-04-20	< 0.20	U			—				—				< 0.024	UJ	f v		< 0.014	UJ	f v		—				< 0.23	UJ	f		—				—				—				—			
RHMW01	ERH053	2016-07-20	< 0.20	U			—				—				**0.032**	**J**	v		**0.0068**	**J**	v		—				**0.21**				—				—				—				—			
RHMW01	ERH090	2016-10-17	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Semivolatiles				Semivolatiles			
		Analyte Type	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Fuel Additive				Fuel Additive					
		Analytical Method	504.1				524.2				8260SIM				8260SIM				8260				524.2				8270				8270/8270 Mod.			
		Analyte	1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				Phenol				2-(2-Methoxyethoxy)-ethanol			
		CAS No.	106-93-4				106-93-4				106-93-4				107-06-2				107-06-2				107-06-2				108-95-2				111-77-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	0.04				0.04				0.04				5				5				5				300				800			
		SSRBL	—				—				—				—				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW01	RHMW01-WG08	6/12/2007[a]	—				—				—				—				< 0.20	U			—				—				—			
RHMW01	RHMW01-WG10	1/15/2008[a]	—				—				—				—				< 0.150	U			—				—				—			
RHMW01	RHMW01-WG11	4/15/2008[a]	—				—				—				—				< 0.150	U			—				—				—			
RHMW01	RHMW01-WG12	7/29/2008[ad]	—				—				—				—				< 0.150	U			—				—				—			
RHMW01	RHMW01-WG13	10/22/2008[ad]	—				—				—				—				< 0.150	U			—				—				—			
RHMW01	RHMW01-WG14	2/4/2009[a]	—				—				—				—				< 0.150	U			—				—				—			
RHMW01	RHMW01-WG15	5/13/2009[a]	—				—				—				—				< 0.150	U			—				—				—			
RHMW01	RHMW01-WG16	7/15/2009[a]	—				—				—				—				< 0.150	U			—				—				—			
RHMW01	RHMW01-WG17	10/14/2009[a]	—				—				—				—				< 0.15	U			—				—				—			
RHMW01	RHMW01-WG18	2010-01-27	—				—				—				—				< 0.300	U			—				—				—			
RHMW01	RHMW01-WG19	2010-04-13	—				—				—				—				< 0.300	U			—				—				—			
RHMW01	RHMW01-WG20	2010-07-13	—				—				—				—				< 0.300	U			—				—				—			
RHMW01	ES009	11/3/2010[d]	—				—				—				—				< 0.28	U			—				—				—			
RHMW01	ES015	1/20/2011[d]	—				—				—				—				< 0.28	U			—				—				—			
RHMW01	ES033	4/28/2011[d]	—				—				—				—				< 0.28	U			—				—				—			
RHMW01	ES041	2011-07-20	—				—				—				—				< 0.28	U			—				—				—			
RHMW01	ES057	2011-11-02	—				—				—				—				< 0.28	U			—				—				—			
RHMW01	ES069	2012-02-14	—				—				—				—				< 0.28	U			—				—				—			
RHMW01	ES075	2012-04-17	—				—				—				—				< 0.28	U			—				—				—			
RHMW01	ES088	2012-07-20	—				—				—				—				< 0.28	U			—				—				—			
RHMW01	ES001	2012-10-22	—				—				—				—				< 0.50	U			—				—				—			
RHMW01	ES010	2013-02-04	—				—				—				—				< 0.50	U			—				—				—			
RHMW01	ES019	2013-04-22	—				—				—				—				< 0.50	U			—				—				—			
RHMW01	ES028	2013-07-22	—				—				—				—				< 0.50	UJ	h		—				—				—			
RHMW01	ES037	2013-10-21	—				—				—				—				< 0.50	U			—				—				—			
RHMW01	ES048	1/15/2014[d]	—				—				—				—				< 0.50	U			—				—				—			
RHMW01	ES056	1/28/2014[d]	—				—				—				—				< 0.50	U			—				—				—			
RHMW01	ES062	2/24/2014[d]	—				—				—				—				< 0.50	U			—				—				—			
RHMW01	ES064	3/5/2014[d]	—				—				—				—				—				—				—				—			
RHMW01	ES069	3/10/2014[d]	—				—				—				—				—				—				—				—			
RHMW01	ES072	3/25/2014[d]	—				—				—				—				—				—				—				—			
RHMW01	ES077	4/7/2014[d]	—				—				—				—				—				—				—				—			
RHMW01	ES080	4/21/2014[d]	—				—				—				—				< 0.50	U			—				—				—			
RHMW01	ES091	5/27/2014[d]	—				—				—				—				—				—				—				—			
RHMW01	ES098	6/23/2014[d]	—				—				—				—				—				—				—				—			
RHMW01	ES103	2014-07-21	—				—				—				—				< 0.50	U			—				—				—			
RHMW01	ES113	2014-10-27	—				—				—				—				< 0.50	UJ	c		—				—				—			
RHMW01	ES120X	2015-01-27	—				—				—				—				< 0.50	U			—				—				—			
RHMW01	ES130	2015-04-20	—				—				< 0.010	U			< 0.015	U			—				—				—				—			
RHMW01	ES143	2015-06-25	—				—				—				—				—				—				—				—			
RHMW01	ES145	2015-07-20	—				—				—				< 0.015	U			—				—				—				—			
RHMW01	ERH011	2015-10-20	—				—				—				< 0.015	U			—				—				—				—			
RHMW01	ERH024	2016-01-20	—				—				—				< 0.015	U			< 0.020	U			—				—				—			
RHMW01	ERH039	2016-04-20	—				—				—				—				—				—				—				—			
RHMW01	ERH053	2016-07-20	—				—				—				—				—				—				—				—			
RHMW01	ERH090	2016-10-17	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	h	

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	TPH				TPH				TPH				TPH				TPH				Volatiles				Volatiles				Volatiles				Volatiles				Volatiles			
		Analyte Type	COPC				COPC				COPC				COPC				COPC				COPC				non-COPC				COPC				non-COPC				COPC			
		Analytical Method	8015				8260				8015				8015				8015				8260				524.2				8260				524.2				8260			
		Analyte	TPH-g ****				TPH-g ****				TPH-d				TPH-d with Silica Gel Cleanup				TPH-o				TPH-o with Silica Gel Cleanup				Benzene				Benzene				Ethylbenzene				Ethylbenzene				Toluene				Toluene			
		CAS No.	Gas				Gas				Diesel				Disel SGC				Oil				Oil SGC				71-43-2				71-43-2				100-41-4				100-41-4				108-88-3				108-88-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	300				300				400				400				500				500				5				5				30				30				40				40			
		SSRBL	—				—				4500				—				—				—				750				750				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW01	ERH117	2016-11-14	—				< 18	U			**94**			O	—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW01	ERH143	2016-12-13	—				< 96	U	f		**< 96**			O	—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW01	ERH172	2017-01-11	—				< 18	U			**88**			O	—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW01	ERH172 (EPA split)	2017-01-11	< 25	UJ	c		—				**280**				—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW01	ERH223	2017-02-08	—				< 18	U			**150**			O	—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW01	ERH223 (EPA split)	2017-02-08	< 25	UJ	c		—				**300**				—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW01	ERH275	2017-03-08	—				< 18	U			**83**			O	—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW01	ERH275 (EPA split)	2017-03-08	< 25	UJ	c		—				**130**	**J**			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW01	ERH310	2017-04-03	—				< 18	U			**97**			O	—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW01	ERH332	2017-05-01	—				< 18	U			**110**			Y	< 51	U	b	Y	< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW01	ERH352	2017-06-05	—				< 18	U			**98**			O	**36**			O	< 40	U			< 40	U			**0.18**	**J**			—				< 0.50	U			—				< 0.30	U			—			
RHMW01	ERH383	2017-07-05	—				< 18	U			**110**			O	< 25	U			< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW01	ERH412	2017-10-25	—				< 18	U			**86**			Y	< 25	U			**67**				< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW01	ERH413	10/25/2017*	—				—				**83**			Y	< 25	UJ	s		**59**				< 40	UJ	s		—				—				—				—				—				—			
RHMW01	ERH412 (EPA split)	2017-10-25	—				—				< 210	U	b	F13	< 75	U			< 300	U			< 300	U			—				—				—				—				—				—			
RHMW01	ERH545	2018-03-12	—				< 18	U			**150**			O	< 25	U			< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW01	ERH545 (EPA split)	2018-03-12	—				—				**180**			F13	< 75	U			< 300	U			< 300	U			—				—				—				—				—				—			
RHMW01	ERH591	2018-04-25	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW01	ERH637	2018-07-24	—				< 18	UJ	s		**350**			O	< 25	U			< 40	U			< 40	U			< 0.30	UJ	s		—				< 0.50	UJ	s		—				< 0.30	UJ	s		—			
RHMW01	ERH637 (EPA split)	2018-07-24	—				—				**160**			F13	< 75	U			< 300	U			< 300	U			—				—				—				—				—				—			
RHMW01	ERH681	2018-10-25	—				< 18	U			**170**	**J**	h	Y	**67**	**J**		O	< 40	UJ	h		< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW01	ERH736	2019-01-22	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	UJ	l		—			
RHMW01	ERH788	2019-04-23	—				< 18	U			**230**			O	**57**			O	< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW01	ERH844	2019-07-23	—				< 18	U			**210**			O	< 25	U			< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW01	ERH910	2019-10-22	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW01	ERH974	2020-01-20	—				< 18	U			**180**	**J**	s	O	**39**	**J**			< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW01	ERH1042	2020-04-20	—				< 18	U			**190**	**J**		Z	< 300.0	U			< 300.0	U			< 300.0	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW02	RHMW02W01	9/20/2005[a]	< 50	U			—				**2,660**				—				—				—				< 2.5	U			—				< 2.5	U			—				< 2.5	U			—			
RHMW02	RHMW02Q01	9/20/2005*[a]	< 50	U			—				**2,500**				—				—				—				< 2.5	U			—				< 2.5	U			—				< 2.5	U			—			
RHMW02	RHMW02-GW02	7/10/2006[a]	**124**	**J**	s		—				**2,800**				—				—				—				< 0.50	U			—				**1.3**				—				< 0.50	U			—			
RHMW02	RHMW05-GW02	7/10/2006*[a]	**119**	**J**	s		—				**2,790**				—				—				—				< 2.5	U			—				< 2.5	U			—				< 2.5	U			—			
RHMW02	RHMW02-GW06	12/5/2006[a]	**110**	**J**	s		—				**2,600**				—				—				—				< 0.50	U			—				**1.2**				—				< 0.50	U			—			
RHMW02	RHMWA01-GW06	12/5/2006*[a]	**138**	**J**	s		—				**2,690**				—				—				—				< 0.50	U			—				**1.1**				—				< 0.50	U			—			
RHMW02	RHMW02-WG07	3/27/2007[a]	**122**	**J**	s		—				**2,750**				—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW02	RHMWA01-WG07	3/27/2007*[a]	**148**	**J**	s		—				**2,250**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW02	RHMW02-WG08	6/12/2007[a]	**52.5**	**J**			—				**2,750**				—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW02	RHMWA01-WG08	6/12/2007*[a]	**56.5**	**J**			—				**2,900**				—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW02	RHMW02-WG09	9/10/2007[a]	**76**	**J**	s		—				**2,810**				—				—				—				< 0.20	U			—				< 0.20	U			—				< 0.27	U			—			
RHMW02	RHMWA01-WG09	9/10/2007*[a]	**78.2**	**J**	s		—				**3,180**				—				—				—				< 0.2	U			—				< 0.20	U			—				< 0.27	U			—			
RHMW02	RHMW02-WG10	1/15/2008[a]	**64.3**	**J**			—				**2,310**			Y	—				—				—				**0.170**	**J**			—				< 0.310	U			—				< 0.310	U			—			
RHMW02	RHMWA01-WG10	1/15/2008*[a]	**66.2**	**J**			—				**3,230**			Y	—				—				—				**0.170**	**J**			—				**0.350**	**J**			—				< 0.310	U			—			
RHMW02	RHMW02-WG11	4/15/2008[a]	**58.9**	**J**			—				**3,120**			Y	—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U			—			
RHMW02	RHMWA01-WG11	4/15/2008*[a]	**58.9**	**J**			—				**3,020**			Y	—				—				—				**0.150**	**J**			—				< 0.310	U			—				< 0.310	U			—			
RHMW02	RHMW02-WG12	7/29/2008[ad]	**61.7**	**J**			—				**4,470**				—				—				—				< 0.120	U			—				**0.580**	**J**			—				< 0.310	U			—			
RHMW02	RHMWA01-WG12	7/29/2008*[ad]	**61.2**	**J**			—				**3,640**				—				—				—				**0.120**	**J**			—				**0.560**	**J**			—				< 0.310	U			—			
RHMW02	RHMW02-WG13	10/22/2008[ad]	**52.8**	**J**			—				**4,540**				—				—				—				**0.140**	**J**			—				**0.450**	**J**			—				< 0.310	U			—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Volatiles			Volatiles			Volatiles			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Lead Scavenger			Lead Scavenger		
		Analyte Type	COPC			non-COPC			non-COPC			COPC			COPC			non-COPC			COPC			non-COPC			non-COPC			Lead Scavenger			Lead Scavenger		
		Analytical Method	8260			524.2			524.2			8270 SIM			8270 SIM			8270			8270 SIM			8260			524.2			8270			8011			8260		
		Analyte	Xylenes, Total (p/m-, o-xylene)			Xylenes, p/m-			Xylenes, o-			1-Methylnaphthalene			2-Methylnaphthalene			2-Methylnaphthalene			Naphthalene *****			Naphthalene *****			Naphthalene *****			Naphthalene *****			1,2-Dibromoethane *****			1,2-Dibromoethane *****		
		CAS No.	1330-20-7			179601-23-1			95-47-6			90-12-0			91-57-6			91-57-6			91-20-3			91-20-3			91-20-3			91-20-3			106-93-4			106-93-4		
		Unit	µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L		
		DOH EAL	20			20			20			10			10			10			17			17			17			17			0.04			0.04		
		SSRBL	—			—			—			—			—			—			—			—			—			—			—			—		
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW01	ERH117	2016-11-14	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW01	ERH143	2016-12-13	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW01	ERH172	2017-01-11	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW01	ERH172 (EPA split)	2017-01-11	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U			—				—			
RHMW01	ERH223	2017-02-08	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW01	ERH223 (EPA split)	2017-02-08	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			**0.13**				—				**0.2**	**J**			< 0.5	U			—				—			
RHMW01	ERH275	2017-03-08	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW01	ERH275 (EPA split)	2017-03-08	—				< 0.5	U			< 0.2	U			< 0.026	UJ	c		< 0.026	UJ	c		< 0.5	U			**0.089**				—				**0.4**	**J**			< 0.5	U			—				—			
RHMW01	ERH310	2017-04-03	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW01	ERH332	2017-05-01	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW01	ERH352	2017-06-05	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW01	ERH383	2017-07-05	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW01	ERH412	2017-10-25	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.50	U		
RHMW01	ERH413	10/25/2017*	—				—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW01	ERH412 (EPA split)	2017-10-25	—				—				—				< 0.025	U			< 0.025	U			—				**0.17**				—				—				—			
RHMW01	ERH545	2018-03-12	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW01	ERH545 (EPA split)	2018-03-12	—				—				—				< 0.025	U			< 0.025	U			—				**0.19**				—				—				—			
RHMW01	ERH591	2018-04-25	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW01	ERH637	2018-07-24	< 0.30	UJ	s		—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW01	ERH637 (EPA split)	2018-07-24	—				—				—				< 0.025	U			< 0.025	U			—				**0.13**				—				—				—			
RHMW01	ERH681	2018-10-25	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW01	ERH736	2019-01-22	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW01	ERH788	2019-04-23	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW01	ERH844	2019-07-23	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW01	ERH910	2019-10-22	< 0.30	U			—				—				< 0.10	UJ	l		< 0.10	UJ	l		—				< 0.10	UJ	l		—				—				—			
RHMW01	ERH974	2020-01-20	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW01	ERH1042	2020-04-20	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW02	RHMW02W01	9/20/2005[a]	< 2.5	U			—				—				**104**				**88.5**				—				**120**				**283**	**J**	c		—				< 2.5	U		
RHMW02	RHMW02Q01	9/20/2005*[a]	< 2.5	U			—				—				**102**				**87.2**				—				**123**				**319**				—				< 2.5	U		
RHMW02	RHMW02-GW02	7/10/2006[a]	< 0.50	U			—				—				**142**				**65.8**				—				**171**				**343**				—				< 0.50	U		
RHMW02	RHMW05-GW02	7/10/2006*[a]	< 2.5	U			—				—				**133**				**67.1**				—				**180**				**335**				—				< 2.5	U		
RHMW02	RHMW02-GW06	12/5/2006[a]	< 0.50	U			—				—				**124**				**45.1**				—				**160**				**257**				—				< 0.50	U		
RHMW02	RHMWA01-GW06	12/5/2006*[a]	< 0.50	U			—				—				**114**				**51.1**				—				**147**				**269**				—				< 0.50	U		
RHMW02	RHMW02-WG07	3/27/2007[a]	< 0.50	U			—				—				**72.1**				**30.3**				—				**105**				**196**				—				< 0.50	U		
RHMW02	RHMWA01-WG07	3/27/2007*[a]	< 0.50	U			—				—				**59.4**				**26.2**				—				**90.1**				**207**				—				< 0.50	U		
RHMW02	RHMW02-WG08	6/12/2007[a]	< 0.5	U			—				—				**67.3**				**26.5**				—				**87.2**				**209**				—				< 0.50	U		
RHMW02	RHMWA01-WG08	6/12/2007*[a]	< 0.50	U			—				—				**88.3**				**33**				—				**128**				**207**				—				< 0.50	U		
RHMW02	RHMW02-WG09	9/10/2007[a]	< 0.36	U			—				—				**109**				**21.5**				—				**144**				**206**				—				< 0.20	U		
RHMW02	RHMWA01-WG09	9/10/2007*[a]	< 0.38	U			—				—				**102**				**19.7**				—				**136**				**264**				—				< 0.20	U		
RHMW02	RHMW02-WG10	1/15/2008[a]	**1.06**				—				—				**67.0**				**23.8**				—				**93.6**				**195**				—				< 0.310	U		
RHMW02	RHMWA01-WG10	1/15/2008*[a]	**1.10**				—				—				**73.2**				**27.6**				—				**102**				**194**				—				< 0.310	U		
RHMW02	RHMW02-WG11	4/15/2008[a]	**0.740**	**J**			—				—				**75.8**				**34.5**				—				**73.0**				**290**				—				< 0.310	U		
RHMW02	RHMWA01-WG11	4/15/2008*[a]	**0.750**	**J**			—				—				**71.9**				**40.8**				—				**105**				**293**				—				< 0.310	U		
RHMW02	RHMW02-WG12	7/29/2008[ad]	< 0.620	U			—				—				**102**				**31.5**				—				**140**				**320**				—				< 0.310	U		
RHMW02	RHMWA01-WG12	7/29/2008*[ad]	< 0.620	U			—				—				**96.0**				**42.2**				—				**132**				**309**				—				< 0.310	U		
RHMW02	RHMW02-WG13	10/22/2008[ad]	**0.450**	**J**			—				—				**72.1**				**13.7**				—				**97.4**				**239**				—				< 0.310	U		

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Semivolatiles				Semivolatiles			
		Analyte Type	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Fuel Additive				Fuel Additive					
		Analytical Method	504.1				524.2				8260SIM				8260SIM				8260				524.2				8270				8270/8270 Mod.			
		Analyte	1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				Phenol				2-(2-Methoxyethoxy)-ethanol			
		CAS No.	106-93-4				106-93-4				106-93-4				107-06-2				107-06-2				107-06-2				108-95-2				111-77-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	0.04				0.04				0.04				5				5				5				300				800			
		SSRBL	—				—				—				—				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW01	ERH117	2016-11-14	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW01	ERH143	2016-12-13	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW01	ERH172	2017-01-11	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW01	ERH172 (EPA split)	2017-01-11	—				< 0.2	U			—				—				—				< 0.2	U			< 2.5	U			—			
RHMW01	ERH223	2017-02-08	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW01	ERH223 (EPA split)	2017-02-08	—				< 0.2	U			—				—				—				< 0.2	U			< 2.5	U			—			
RHMW01	ERH275	2017-03-08	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW01	ERH275 (EPA split)	2017-03-08	—				< 0.2	U			—				—				—				< 0.2	U			< 2.5	U			—			
RHMW01	ERH310	2017-04-03	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW01	ERH332	2017-05-01	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW01	ERH352	2017-06-05	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW01	ERH383	2017-07-05	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW01	ERH412	2017-10-25	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW01	ERH413	10/25/2017*	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW01	ERH412 (EPA split)	2017-10-25	—				—				—				—				—				—				—				—			
RHMW01	ERH545	2018-03-12	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW01	ERH545 (EPA split)	2018-03-12	—				—				—				—				—				—				—				—			
RHMW01	ERH591	2018-04-25	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW01	ERH637	2018-07-24	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW01	ERH637 (EPA split)	2018-07-24	—				—				—				—				—				—				—				—			
RHMW01	ERH681	2018-10-25	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
RHMW01	ERH736	2019-01-22	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
RHMW01	ERH788	2019-04-23	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
RHMW01	ERH844	2019-07-23	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW01	ERH910	2019-10-22	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW01	ERH974	2020-01-20	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
RHMW01	ERH1042	2020-04-20	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW02	RHMW02W01	9/20/2005[a]	—				—				—				—				< 2.5	U			—				—				—			
RHMW02	RHMW02Q01	9/20/2005*[a]	—				—				—				—				< 2.5	U			—				—				—			
RHMW02	RHMW02-GW02	7/10/2006[a]	—				—				—				—				< 0.50	U			—				—				—			
RHMW02	RHMW05-GW02	7/10/2006*[a]	—				—				—				—				< 2.5	U			—				—				—			
RHMW02	RHMW02-GW06	12/5/2006[a]	—				—				—				—				< 0.50	U			—				—				—			
RHMW02	RHMWA01-GW06	12/5/2006*[a]	—				—				—				—				< 0.50	U			—				—				—			
RHMW02	RHMW02-WG07	3/27/2007[a]	—				—				—				—				< 0.50	U			—				—				—			
RHMW02	RHMWA01-WG07	3/27/2007*[a]	—				—				—				—				< 0.50	U			—				—				—			
RHMW02	RHMW02-WG08	6/12/2007[a]	—				—				—				—				< 0.50	U			—				—				—			
RHMW02	RHMWA01-WG08	6/12/2007*[a]	—				—				—				—				< 0.50	U			—				—				—			
RHMW02	RHMW02-WG09	9/10/2007[a]	—				—				—				—				< 0.20	U			—				—				—			
RHMW02	RHMWA01-WG09	9/10/2007*[a]	—				—				—				—				< 0.20	U			—				—				—			
RHMW02	RHMW02-WG10	1/15/2008[a]	—				—				—				—				< 0.150	U			—				—				—			
RHMW02	RHMWA01-WG10	1/15/2008*[a]	—				—				—				—				< 0.150	U			—				—				—			
RHMW02	RHMW02-WG11	4/15/2008[a]	—				—				—				—				< 0.150	U			—				—				—			
RHMW02	RHMWA01-WG11	4/15/2008*[a]	—				—				—				—				< 0.150	U			—				—				—			
RHMW02	RHMW02-WG12	7/29/2008[ad]	—				—				—				—				< 0.150	U			—				—				—			
RHMW02	RHMWA01-WG12	7/29/2008*[ad]	—				—				—				—				< 0.150	U			—				—				—			
RHMW02	RHMW02-WG13	10/22/2008[ad]	—				—				—				—				< 0.150	U			—				—				—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	TPH				TPH				TPH				TPH				TPH				TPH				Volatiles				Volatiles				Volatiles				Volatiles				Volatiles			
		Analyte Type	COPC				COPC				COPC				COPC				COPC				COPC				COPC				non-COPC				COPC				non-COPC				COPC			
		Analytical Method	8015				8260				8015				8015				8015				8015				8260				524.2				8260				524.2				8260			
		Analyte	TPH-g ****				TPH-g ****				TPH-d				TPH-d with Silica Gel Cleanup				TPH-o				TPH-o with Silica Gel Cleanup				Benzene				Benzene				Ethylbenzene				Ethylbenzene				Toluene			
		CAS No.	Gas				Gas				Diesel				Disel SGC				Oil				Oil SGC				71-43-2				71-43-2				100-41-4				100-41-4				108-88-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	300				300				400				400				500				500				5				5				30				30				40			
		SSRBL	—				—				4500				—				—				—				750				750				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW02	RHMWA01-WG13	10/22/2008*[ad]	**52.9**	**J**			—				**6,300**				—				—				—				**0.150**	**J**			—				**0.420**	**J**			—				< 0.310	U			—			
RHMW02	RHMW02-WG14	2/4/2009[a]	**52.3**	**J**			—				**2,840**				—				—				—				**0.260**	**J**			—				**0.490**	**J**			—				< 0.310	U			—			
RHMW02	RHMWA01-WG14	2/4/2009*[a]	**54.3**	**J**			—				**2,840**				—				—				—				**0.240**	**J**			—				**0.520**	**J**			—				< 0.310	U			—			
RHMW02	RHMW02-WG15	5/13/2009[a]	< 39.1	U	b t		—				**1,620**				—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U			—			
RHMW02	RHMWA01-WG15	5/13/2009*[a]	< 36.7	U	b t		—				**2,000**				—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U			—			
RHMW02	RHMW02-WG16	7/15/2009[a]	< 30.0	U			—				**1,450**				—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U			—			
RHMW02	RHMWA01-WG16	7/15/2009*[a]	< 30.0	U			—				**1,300**				—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U			—			
RHMW02	RHMW02-WG17	10/13/2009[a]	**36.9**	**J**			—				**2,570**				—				—				—				< 0.12	U			—				< 0.31	U			—				< 0.31	U			—			
RHMW02	RHMWA01-WG17	10/13/2009*[a]	< 30	U			—				**2,570**				—				—				—				< 0.12	U			—				< 0.31	U			—				< 0.31	U			—			
RHMW02	RHMW02-WG18	2010-01-26	**42.3**	**J**			—				**2,130**			Y	—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U			—			
RHMW02	RHMWA01-WG18	1/26/2010*	**38.1**	**J**			—				**3,410**			Y	—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U			—			
RHMW02	RHMW02-WG19	2010-04-13	**39.3**	**J**			—				**2,350**				—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U			—			
RHMW02	RHMWA01-WG19	4/13/2010*	**39.0**	**J**			—				**2,080**				—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U			—			
RHMW02	RHMW02-WG20	2010-07-13	**46.5**	**J**			—				**3,060**				—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U			—			
RHMW02	RHMWA01-WG20	7/13/2010*	**45.4**	**J**			—				**3,110**				—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U			—			
RHMW02	ES002	2010-10-18	—				**150**			O	**1,700**			O	—				—				—				< 0.32	U			—				**0.25**	**J**			—				< 0.34	U			—			
RHMW02	ES003	10/18/2010*	—				**160**			O	**1,700**			O	—				—				—				< 0.32	U			—				**0.32**	**J**			—				< 0.34	U			—			
RHMW02	ES010	1/18/2011[d]	—				**17**	**J**		O	**1,100**			O	—				—				—				< 0.32	U			—				**0.29**	**J**			—				< 0.34	U			—			
RHMW02	ES011	1/18/2011*[d]	—				**20**			O	**980**			O	—				—				—				< 0.32	U			—				**0.25**	**J**			—				< 0.34	U			—			
RHMW02	ES020	4/19/2011[d]	—				**24**			O	**1,100**			O	—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
RHMW02	ES021	4/19/2011*[d]	—				**29**			O	**1,100**			O	—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
RHMW02	ES037	2011-07-19	—				< 12.12	U			**1,100**			O	—				< 212.0	U			—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
RHMW02	ES038	7/19/2011*	—				< 12.12	U			**1,800**	**J**	s	O	—				< 212.0	U			—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
RHMW02	ES046	2011-10-24	—				< 12.12	U			**750**			O	—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
RHMW02	ES047	10/24/2011*	—				< 12.12	U			**730**			O	—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
RHMW02	ES061	2012-01-26	—				< 12.12	U			**1,700**			O	—				—				—				< 0.32	U			—				**0.30**	**J**			—				< 0.34	U			—			
RHMW02	ES071	2012-04-16	—				< 12.12	U			**1,200**			O	—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
RHMW02	ES072	4/16/2012*	—				< 12.12	U			**1,100**			O	—				—				—				< 0.32	U			—				**0.23**	**J**			—				< 0.34	U			—			
RHMW02	ES082	2012-07-18	—				< 12.12	U			**1,700**			Y	—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U			—			
RHMW02	ES002	2012-10-22	—				**320**				**2,200**			Y	—				—				—				< 0.50	U			—				**0.18**	**J**			—				**0.59**	**J**			—			
RHMW02	ES003	10/22/2012*	—				**360**				**1,800**			Y	—				—				—				< 0.50	U			—				**0.18**	**J**			—				**0.60**	**J**			—			
RHMW02	ES011	2013-01-28	—				**660**				**1,700**			Y	—				—				—				< 0.50	U			—				**0.21**	**J**			—				< 0.50	U			—			
RHMW02	ES012	1/28/2013*	—				**650**				**1,500**			Y	—				—				—				< 0.50	U			—				**0.24**	**J**			—				< 0.50	U			—			
RHMW02	ES020	2013-04-22	—				< 54	UJ	t		**2,600**			Y	—				—				—				< 0.50	U			—				**0.21**	**J**			—				< 0.50	U			—			
RHMW02	ES021	4/22/2013*	—				< 56	UJ	t		**3,300**			Y	—				—				—				< 0.50	U			—				**0.21**	**J**			—				< 0.50	U			—			
RHMW02	ES029	2013-07-22	—				**55**	**J**	h		**2,500**			Y	—				—				—				< 0.50	UJ	h		—				**0.17**	**J**	h		—				< 0.50	UJ	h		—			
RHMW02	ES030	7/22/2013*	—				**61**	**J**	h		**2,600**			Y	—				—				—				< 0.50	UJ	h		—				**0.19**	**J**	h		—				< 0.50	UJ	h		—			
RHMW02	ES038	2013-10-21	—				< 48	UJ	b		**2,400**			Y	—				—				—				< 0.50	U			—				**0.14**	**J**			—				< 0.50	U			—			
RHMW02	ES039	10/21/2013*	—				< 63	UJ	b		**2,400**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW02	ES046	1/15/2014[d]	—				—				**5,000**				—				—				—				< 0.50	U			—				**0.17**	**J**			—				< 0.50	U			—			
RHMW02	ES047	1/15/2014*[d]	—				—				**5,200**				—				—				—				< 0.50	U			—				**0.17**	**J**			—				< 0.50	U			—			
RHMW02	ES057	1/28/2014[d]	—				< 50	U	b		**2,300**			Y	—				—				—				**0.14**	**J**			—				**0.20**	**J**			—				< 0.50	U			—			
RHMW02	ES058	1/28/2014*[d]	—				< 52	U	b		**2,100**			Y	—				—				—				**0.15**	**J**			—				**0.20**	**J**			—				< 0.50	U			—			
RHMW02	ES063	2/24/2014[d]	—				**40**	**J**			**2,200**			Y	—				—				—				< 0.50	U			—				**0.15**	**J**			—				< 0.50	U			—			
RHMW02	ES065	3/5/2014[d]	—				—				**2,100**				—				—				—				< 0.50	U			—				**0.15**	**J**			—				< 0.50	U			—			
RHMW02	ES066	3/5/2014*[d]	—				—				**2,200**				—				—				—				< 0.50	U			—				**0.15**	**J**			—				< 0.50	U			—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Volatiles			Volatiles			Volatiles			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Lead Scavenger			Lead Scavenger		
		Analyte Type	COPC			non-COPC			non-COPC			COPC			COPC			non-COPC			COPC			non-COPC			non-COPC			Lead Scavenger			Lead Scavenger		
		Analytical Method	8260			524.2			524.2			8270 SIM			8270 SIM			8270			8270 SIM			8260			524.2			8270			8011			8260		
		Analyte	Xylenes, Total (p/m-, o-xylene)			Xylenes, p/m-			Xylenes, o-			1-Methylnaphthalene			2-Methylnaphthalene			2-Methylnaphthalene			Naphthalene *****			Naphthalene *****			Naphthalene *****			Naphthalene *****			1,2-Dibromoethane *****			1,2-Dibromoethane *****		
		CAS No.	1330-20-7			179601-23-1			95-47-6			90-12-0			91-57-6			91-57-6			91-20-3			91-20-3			91-20-3			91-20-3			106-93-4			106-93-4		
		Unit	µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L		
		DOH EAL	20			20			20			10			10			10			17			17			17			17			0.04			0.04		
		SSRBL	—			—			—			—			—			—			—			—			—			—			—			—		
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW02	RHMWA01-WG13	10/22/2008*[ad]	**0.490**	J			—				—				**62.4**				**12.7**				—				**82.3**				**245**				—				—			
RHMW02	RHMW02-WG14	2/4/2009[a]	**0.400**	J			—				—				**21.2**	J	s		**10.5**				—				**15.2**				**42.8**				—				—			
RHMW02	RHMWA01-WG14	2/4/2009*[a]	**0.470**	J			—				—				**22.8**				**11.1**				—				**16.6**				**43.0**				—				—			
RHMW02	RHMW02-WG15	5/13/2009[a]	**0.310**	J			—				—				**17.9**				**0.136**				—				**1.17**				< 0.620	U			—				—			
RHMW02	RHMWA01-WG15	5/13/2009*[a]	< 0.620	U			—				—				**24.6**				**0.107**				—				**1.08**				< 0.620	U			—				—			
RHMW02	RHMW02-WG16	7/15/2009[a]	< 0.620	U			—				—				**13.2**				**3.66**				—				**8.37**				**10.1**				—				—			
RHMW02	RHMWA01-WG16	7/15/2009*[a]	< 0.620	U			—				—				**10.6**				**2.58**				—				**6.71**				**11.2**				—				—			
RHMW02	RHMW02-WG17	10/13/2009[a]	< 1	U			—				—				**2.46**				**0.486**				—				**6.77**				**23.3**				—				—			
RHMW02	RHMWA01-WG17	10/13/2009*[a]	< 1	U			—				—				**4.03**				**0.783**				—				**7.82**				**20.0**				—				—			
RHMW02	RHMW02-WG18	2010-01-26	< 1.24	U			—				—				**9.03**				**3.85**				—				**17.3**				**31.5**				—				—			
RHMW02	RHMWA01-WG18	1/26/2010*	< 1.24	U			—				—				**8.26**				**2.65**				—				**15.7**				**9.30**				—				—			
RHMW02	RHMW02-WG19	2010-04-13	< 1.24	U			—				—				**6.61**				**1.69**				—				**14.3**				**20.6**				—				—			
RHMW02	RHMWA01-WG19	4/13/2010*	< 1.24	U			—				—				**5.90**				**1.90**				—				**12.7**				**21.4**				—				—			
RHMW02	RHMW02-WG20	2010-07-13	**0.690**	J			—				—				**7.43**				**1.06**				—				**59.9**				**107**				—				—			
RHMW02	RHMWA01-WG20	7/13/2010*	**0.660**	J			—				—				**7.05**				**0.937**				—				**61.1**				**102**				—				—			
RHMW02	ES002	2010-10-18	**0.60**	J			—				—				**15**				**5.0**				—				**59**				—				—				< 0.40	U		
RHMW02	ES003	10/18/2010*	**0.51**	J			—				—				**15**				**6.3**				—				**54**				—				—				< 0.40	U		
RHMW02	ES010	1/18/2011[d]	**0.48**	J			—				—				**19**				**3.6**				—				**57**				—				—				< 0.40	U		
RHMW02	ES011	1/18/2011*[d]	**0.58**	J			—				—				**23**				**5.6**				—				**63**				—				—				< 0.40	U		
RHMW02	ES020	4/19/2011[d]	**0.41**	J			—				—				**5.1**				**0.43**				—				**3.5**				—				—				< 0.40	U		
RHMW02	ES021	4/19/2011*[d]	**0.41**	J			—				—				**5.2**				**0.53**				—				**4.2**				—				—				< 0.40	U		
RHMW02	ES037	2011-07-19	< 0.38	U			—				—				**0.85**				**0.16**	J			—				**2.2**				—				—				< 0.40	U		
RHMW02	ES038	7/19/2011*	< 0.38	U			—				—				**0.90**				**0.12**	J			—				**2.7**				—				—				< 0.40	U		
RHMW02	ES046	2011-10-24	< 0.38	U			—				—				**0.53**				**0.15**	J			—				**0.80**				—				—				< 0.40	U		
RHMW02	ES047	10/24/2011*	< 0.38	U			—				—				**0.62**				**0.20**				—				**1.0**				—				—				< 0.40	U		
RHMW02	ES061	2012-01-26	< 0.38	U			—				—				**0.57**				**0.17**	J			—				**1.7**				—				—				< 0.40	U		
RHMW02	ES071	2012-04-16	< 0.38	U			—				—				**0.30**				< 0.12	U			—				**0.86**				—				—				< 0.40	U		
RHMW02	ES072	4/16/2012*	< 0.38	U			—				—				**1.2**				**0.61**				—				**2.9**				—				—				< 0.40	U		
RHMW02	ES082	2012-07-18	**0.43**	J			—				—				**4.7**				**0.88**				—				**17**				—				—				< 0.40	U		
RHMW02	ES002	2012-10-22	**0.51**	J			—				—				**24**				**14**				—				**63**				—				—				< 0.50	U		
RHMW02	ES003	10/22/2012*	**0.47**	J			—				—				**21**				**12**				—				**61**				—				—				< 0.50	U		
RHMW02	ES011	2013-01-28	**0.65**	J			—				—				**47**				**35**				—				**110**				—				—				< 0.50	U		
RHMW02	ES012	1/28/2013*	**0.69**	J			—				—				**41**				**31**				—				**100**				—				—				< 0.50	U		
RHMW02	ES020	2013-04-22	**0.58**	J			—				—				**16**				**13**				—				**53**				—				—				< 0.50	U		
RHMW02	ES021	4/22/2013*	**0.58**	J			—				—				**20**				**16**				—				**61**				—				—				< 0.50	U		
RHMW02	ES029	2013-07-22	**0.45**	J	h		—				—				**21**				**9.1**				—				**73**				—				—				< 0.50	UJ	h	
RHMW02	ES030	7/22/2013*	**0.50**	J	h		—				—				**18**				**6.6**				—				**67**				—				—				< 0.50	UJ	h	
RHMW02	ES038	2013-10-21	**0.37**	J			—				—				**9.0**				**9.0**				—				**30**				—				—				< 0.50	U		
RHMW02	ES039	10/21/2013*	**0.37**	J			—				—				**7.5**				**7.5**				—				**25**				—				—				< 0.50	U		
RHMW02	ES046	1/15/2014[d]	**0.48**	J			—				—				**6.0**				**4.9**				—				**18**				—				—				< 0.50	U		
RHMW02	ES047	1/15/2014*[d]	**0.45**	J			—				—				**5.3**				**4.3**				—				**17**				—				—				< 0.50	U		
RHMW02	ES057	1/28/2014[d]	**0.38**	J			—				—				**8.8**				**5.4**				—				**18**				—				—				< 0.50	U		
RHMW02	ES058	1/28/2014*[d]	**0.34**	J			—				—				**9.0**				**5.9**				—				**18**				—				—				< 0.50	U		
RHMW02	ES063	2/24/2014[d]	**0.29**	J			—				—				**5.2**				**2.5**				—				**15**				—				—				< 0.50	U		
RHMW02	ES065	3/5/2014[d]	**0.29**	J			—				—				**2.6**				**1.5**				—				**10**				—				—				—			
RHMW02	ES066	3/5/2014*[d]	**0.32**	J			—				—				**3.9**				**2.9**				—				**13**				—				—				—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Semivolatiles				Semivolatiles			
		Analyte Type	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Fuel Additive				Fuel Additive			
		Analytical Method	504.1				524.2				8260SIM				8260SIM				8260				524.2				8270				8270/8270 Mod.			
		Analyte	1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				Phenol				2-(2-Methoxyethoxy)-ethanol			
		CAS No.	106-93-4				106-93-4				106-93-4				107-06-2				107-06-2				107-06-2				108-95-2				111-77-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	0.04				0.04				0.04				5				5				5				300				800			
		SSRBL	—				—				—				—				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW02	RHMWA01-WG13	10/22/2008*[ad]	—				—				—				—				< 0.150	U			—				—				—			
RHMW02	RHMW02-WG14	2/4/2009[a]	—				—				—				—				< 0.150	U			—				—				—			
RHMW02	RHMWA01-WG14	2/4/2009*[a]	—				—				—				—				< 0.150	U			—				—				—			
RHMW02	RHMW02-WG15	5/13/2009[a]	—				—				—				—				< 0.150	U			—				—				—			
RHMW02	RHMWA01-WG15	5/13/2009*[a]	—				—				—				—				< 0.150	U			—				—				—			
RHMW02	RHMW02-WG16	7/15/2009[a]	—				—				—				—				< 0.150	U			—				—				—			
RHMW02	RHMWA01-WG16	7/15/2009*[a]	—				—				—				—				< 0.150	U			—				—				—			
RHMW02	RHMW02-WG17	10/13/2009[a]	—				—				—				—				< 0.15	U			—				—				—			
RHMW02	RHMWA01-WG17	10/13/2009*[a]	—				—				—				—				< 0.15	U			—				—				—			
RHMW02	RHMW02-WG18	2010-01-26	—				—				—				—				< 0.300	U			—				—				—			
RHMW02	RHMWA01-WG18	1/26/2010*	—				—				—				—				< 0.300	U			—				—				—			
RHMW02	RHMW02-WG19	2010-04-13	—				—				—				—				< 0.300	U			—				—				—			
RHMW02	RHMWA01-WG19	4/13/2010*	—				—				—				—				< 0.300	U			—				—				—			
RHMW02	RHMW02-WG20	2010-07-13	—				—				—				—				< 0.300	U			—				—				—			
RHMW02	RHMWA01-WG20	7/13/2010*	—				—				—				—				< 0.300	U			—				—				—			
RHMW02	ES002	2010-10-18	—				—				—				—				< 0.28	U			—				—				—			
RHMW02	ES003	10/18/2010*	—				—				—				—				< 0.28	U			—				—				—			
RHMW02	ES010	1/18/2011[d]	—				—				—				—				< 0.28	U			—				—				—			
RHMW02	ES011	1/18/2011*[d]	—				—				—				—				< 0.28	U			—				—				—			
RHMW02	ES020	4/19/2011[d]	—				—				—				—				< 0.28	U			—				—				—			
RHMW02	ES021	4/19/2011*[d]	—				—				—				—				< 0.28	U			—				—				—			
RHMW02	ES037	2011-07-19	—				—				—				—				< 0.28	U			—				—				—			
RHMW02	ES038	7/19/2011*	—				—				—				—				< 0.28	U			—				—				—			
RHMW02	ES046	2011-10-24	—				—				—				—				< 0.28	U			—				—				—			
RHMW02	ES047	10/24/2011*	—				—				—				—				< 0.28	U			—				—				—			
RHMW02	ES061	2012-01-26	—				—				—				—				< 0.28	U			—				—				—			
RHMW02	ES071	2012-04-16	—				—				—				—				< 0.28	U			—				—				—			
RHMW02	ES072	4/16/2012*	—				—				—				—				< 0.28	U			—				—				—			
RHMW02	ES082	2012-07-18	—				—				—				—				< 0.28	U			—				—				—			
RHMW02	ES002	2012-10-22	—				—				—				—				< 0.50	U			—				—				—			
RHMW02	ES003	10/22/2012*	—				—				—				—				< 0.50	U			—				—				—			
RHMW02	ES011	2013-01-28	—				—				—				—				< 0.50	U			—				—				—			
RHMW02	ES012	1/28/2013*	—				—				—				—				< 0.50	U			—				—				—			
RHMW02	ES020	2013-04-22	—				—				—				—				< 0.50	U			—				—				—			
RHMW02	ES021	4/22/2013*	—				—				—				—				< 0.50	U			—				—				—			
RHMW02	ES029	2013-07-22	—				—				—				—				< 0.50	UJ	h		—				—				—			
RHMW02	ES030	7/22/2013*	—				—				—				—				< 0.50	UJ	h		—				—				—			
RHMW02	ES038	2013-10-21	—				—				—				—				< 0.50	U			—				—				—			
RHMW02	ES039	10/21/2013*	—				—				—				—				< 0.50	U			—				—				—			
RHMW02	ES046	1/15/2014[d]	—				—				—				—				< 0.50	U			—				—				—			
RHMW02	ES047	1/15/2014*[d]	—				—				—				—				< 0.50	U			—				—				—			
RHMW02	ES057	1/28/2014[d]	—				—				—				—				< 0.50	U			—				—				—			
RHMW02	ES058	1/28/2014*[d]	—				—				—				—				< 0.50	U			—				—				—			
RHMW02	ES063	2/24/2014[d]	—				—				—				—				< 0.50	U			—				—				—			
RHMW02	ES065	3/5/2014[d]	—				—				—				—				—				—				—				—			
RHMW02	ES066	3/5/2014*[d]	—				—				—				—				—				—				—				—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	TPH				TPH				TPH				TPH				TPH				TPH				Volatiles				Volatiles				Volatiles				Volatiles				Volatiles			
		Analyte Type	COPC				COPC				COPC				COPC				COPC				COPC				COPC				non-COPC				COPC				non-COPC				COPC			
		Analytical Method	8015				8260				8015				8015				8015				8015				8260				524.2				8260				524.2				8260			
		Analyte	TPH-g ****				TPH-g ****				TPH-d				TPH-d with Silica Gel Cleanup				TPH-o				TPH-o with Silica Gel Cleanup				Benzene				Benzene				Ethylbenzene				Ethylbenzene				Toluene			
		CAS No.	Gas				Gas				Diesel				Disel SGC				Oil				Oil SGC				71-43-2				71-43-2				100-41-4				100-41-4				108-88-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	300				300				400				400				500				500				5				5				30				30				40			
		SSRBL	—				—				4500				—				—				—				750				750				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW02	ES070	3/10/2014[d]	—				—				**930**				—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW02	ES071	3/10/2014[*d]	—				—				**890**				—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW02	ES073	3/25/2014[d]	—				—				**1,700**			Y	—				—				—				< 0.50	U			—				**0.15**	**J**			—				< 0.50	U		
RHMW02	ES074	3/25/2014[*d]	—				—				**1,700**			Y	—				—				—				< 0.50	U			—				**0.16**	**J**			—				< 0.50	U		
RHMW02	ES078	4/7/2014[d]	—				—				**3,500**			Y	—				—				—				< 0.50	U			—				**0.18**	**J**			—				< 0.50	U		
RHMW02	ES079	4/7/2014[*d]	—				—				**3,300**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW02	ES081	4/21/2014[d]	—				**53**				**1,900**				—				—				—				< 0.50	U			—				**0.17**	**J**			—				< 0.50	U		
RHMW02	ES082	4/21/2014[*d]	—				**50**				**1,500**				—				—				—				< 0.50	U			—				**0.16**	**J**			—				< 0.50	U		
RHMW02	ES092	5/27/2014[d]	—				—				**1,500**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW02	ES093	5/27/2014[*d]	—				—				**1,300**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW02	ES099	6/23/2014[d]	—				—				**1,800**				—				—				—				< 0.50	U			—				**0.16**	**J**			—				< 0.50	U		
RHMW02	ES100	6/23/2014[*d]	—				—				**1,600**				—				—				—				< 0.50	U			—				**0.18**	**J**			—				< 0.50	U		
RHMW02	ES104	2014-07-21	—				**48**	**J**			**1,200**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW02	ES105	7/21/2014*	—				**49**	**J**			**1,300**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW02	ES114	2014-10-27	—				**57**				**2,000**			Y	—				—				—				< 0.50	U			—				**0.15**	**J**			—				< 0.50	U		
RHMW02	ES115	2014-10-27	—				**53**				**2,000**			Y	—				—				—				< 0.50	U			—				**0.14**	**J**			—				< 0.50	U		
RHMW02	ES126	2015-01-28	—				**54**				**1,100**			Y	—				—				—				< 0.50	U			—				**0.16**	**J**			—				< 0.50	U		
RHMW02	ES127	1/28/2015*	—				**59**				**1,700**			Y	—				—				—				< 0.50	U			—				**0.17**	**J**			—				< 0.50	U		
RHMW02	ES131	2015-04-20	**46**	**J**			—				**5,200**			Y	—				**360**			Y	—				**0.090**	**J**			—				**0.18**	**J**			—				< 0.10	U		
RHMW02	ES132	4/20/2015*	**47**	**J**			—				**5,400**			Y	—				**360**			Y	—				**0.080**	**J**			—				**0.19**	**J**			—				< 0.10	U		
RHMW02	ES144	2015-06-25	—				—				**3,800**			Y	—				**250**			Y	—				—				—				—				—				—			
RHMW02	ES146	2015-07-20	**40**	**J**			—				**3,900**	**J**	s	Y	—				**240**	**J**	s	Y	—				< 0.10	U			—				**0.16**	**J**			—				**0.060**	**J**		
RHMW02	ES147	7/20/2015*	**41**	**J**			—				**3,200**			Y	—				**260**			Y	—				**0.10**	**J**			—				**0.17**	**J**			—				< 0.10	U		
RHMW02	ERH012	2015-10-20	**47**	**J**			—				**6,100**			Y	—				**310**			Y	—				**0.090**	**J**	**h**		—				**0.29**	**J**	h		—				< 0.3	UJ	b h t	
RHMW02	ERH013	10/20/2015*	**47**	**J**			—				**6,200**			Y	—				**320**			Y	—				**0.090**	**J**	**h**		—				**0.26**	**J**	h		—				< 0.49	UJ	b h t	
RHMW02	ERH025	2016-01-20	**36**	**J**			—				**6,500**			Y	—				**340**			Y	—				**0.080**	**J**			—				**0.014**	**J**			—				< 0.07	UJ	t	
RHMW02	ERH040	2016-04-20	< 35	U	f		—				**4,400**			Y	—				**390**			Y	—				< 0.10	U			—				< 0.17	U	f		—				< 0.10	U		
RHMW02	ERH041	4/20/2016*	< 35	U	f		—				**3,700**			Y	—				**400**			Y	—				**0.070**	**J**			—				< 0.17	U	f		—				< 0.10	U		
RHMW02	ERH054	2016-07-20	**31**	**J**	s		—				**3,600**			Y	—				**280**			Y	—				**0.070**	**J**			—				< 0.13	U	f		—				< 0.10	U		
RHMW02	ERH055	7/20/2016*	**30**	**J**	s		—				**3,200**			Y	—				**270**			Y	—				**0.080**	**J**			—				< 0.14	U	f		—				< 0.10	U		
RHMW02	ERH091	2016-10-19	—				**35**				**1,300**				**300**			Y	< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW02	ERH124	2016-11-15	—				**26**			Y	**1,300**			O	—				**100**				—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW02	ERH144	2016-12-13	—				< 18	U			**1,300**			O	—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW02	ERH174	2017-01-10	—				**63**			Y	**1,400**			O	—				**42**				—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW02	ERH174 (EPA split)	2017-01-10	**41**	**J**	c		—				**4,000**				—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—			
RHMW02	ERH216	2017-02-07	—				**65**			Y	**1,000**			O	—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW02	ERH216 (EPA split)	2017-02-07	**32**	**J**	c		—				**2,700**				—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—			
RHMW02	ERH265	2017-03-07	—				**73**			W	**1,200**			O	—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW02	ERH265 (EPA split)	2017-03-07	**37**	**J**	c		—				**2,500**				—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—			
RHMW02	ERH300	2017-04-04	—				**57**			W	**940**			O	—				**84**				—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW02	ERH334	2017-05-01	—				**94**			Y	**1,000**			Y	< 480	U	b	Y	< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW02	ERH354	2017-06-05	—				**65**			Y	**1,000**			O	**570**			O	< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW02	ERH391	2017-07-06	—				**33**			Y	**1,000**			O	**250**			O	< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW02	ERH415	2017-10-23	—				**43**			Y	**1300**	**J**	q	O	**230**	**J**	q e	Y	< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW02	ERH416	10/23/2017*	—				**76**			Y	**1,600**			O	**230**			Y	< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW02	ERH415 (EPA split)	2017-10-23	—				—				**3300**			F13	**550**			F3	< 320	U			< 320	U			—				—				—				—				—			
RHMW02	ERH547	2018-03-13	—				**47**			Y	**1,900**			O	**640**			O	< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW02	ERH548	3/13/2018*	—				**42**			Y	**1,800**			O	**460**			O	< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U		

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

			Analyte Class	Volatiles			Volatiles			Volatiles			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Lead Scavenger			Lead Scavenger		
			Analyte Type	COPC			non-COPC			non-COPC			COPC			COPC			non-COPC			COPC			non-COPC			non-COPC			Lead Scavenger			Lead Scavenger		
			Analytical Method	8260			524.2			524.2			8270 SIM			8270 SIM			8270			8270 SIM			8260			524.2			8270			8011			8260		
			Analyte	Xylenes, Total (p/m-, o-xylene)			Xylenes, p/m-			Xylenes, o-			1-Methylnaphthalene			2-Methylnaphthalene			2-Methylnaphthalene			Naphthalene *****			Naphthalene *****			Naphthalene *****			Naphthalene *****			1,2-Dibromoethane *****			1,2-Dibromoethane *****		
			CAS No.	1330-20-7			179601-23-1			95-47-6			90-12-0			91-57-6			91-57-6			91-20-3			91-20-3			91-20-3			91-20-3			106-93-4			106-93-4		
			Unit	µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L		
			DOH EAL	20			20			20			10			10			10			17			17			17			17			0.04			0.04		
			SSRBL	—			—			—			—			—			—			—			—			—			—			—			—		
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW02	ES070	3/10/2014[d]	**0.30**	J			—				—				**3.7**				**2.5**				—				**11**				—				—				—			
RHMW02	ES071	3/10/2014*[d]	**0.31**	J			—				—				**4.2**				**3.0**				—				**12**				—				—				—			
RHMW02	ES073	3/25/2014[d]	**0.38**	J			—				—				**9.0**				**4.9**				—				**33**				—				—				—			
RHMW02	ES074	3/25/2014*[d]	**0.41**	J			—				—				**8.1**				**4.0**				—				**33**				—				—				—			
RHMW02	ES078	4/7/2014[d]	**0.40**	J			—				—				**6.2**				**4.4**				—				**25**				—				—				—			
RHMW02	ES079	4/7/2014*[d]	**0.33**	J			—				—				**9.0**				**7.6**				—				**31**				—				—				—			
RHMW02	ES081	4/21/2014[d]	**0.43**	J			—				—				**8.7**				**8.1**				—				**31**				—				—				< 0.50	U		
RHMW02	ES082	4/21/2014*[d]	**0.42**	J			—				—				**8.3**				**7.7**				—				**32**				—				—				< 0.50	U		
RHMW02	ES092	5/27/2014[d]	**0.31**	J			—				—				**9.3**				**2.7**				—				**34**				—				—				—			
RHMW02	ES093	5/27/2014*[d]	**0.32**	J			—				—				**7.8**				**1.5**				—				**28**				—				—				—			
RHMW02	ES099	6/23/2014[d]	**0.40**	J			—				—				**11**				**3.4**				—				**38**				—				—				—			
RHMW02	ES100	6/23/2014*[d]	**0.37**	J			—				—				**12**				**4.5**				—				**41**				—				—				—			
RHMW02	ES104	2014-07-21	**0.36**	J			—				—				**25**				**20**				—				**71**				—				—				< 0.50	U		
RHMW02	ES105	7/21/2014*	**0.33**	J			—				—				**26**				**22**				—				**76**				—				—				< 0.50	U		
RHMW02	ES114	2014-10-27	**0.32**	J			—				—				**59**				**43**				—				**140**				—				—				< 0.50	U		
RHMW02	ES115	2014-10-27	**0.29**	J			—				—				**54**				**36**				—				**130**				—				—				< 0.50	U		
RHMW02	ES126	2015-01-28	**0.35**	J			—				—				**34**				**7.6**				—				**90**				—				—				< 0.50	U		
RHMW02	ES127	1/28/2015*	**0.35**	J			—				—				**25**				**2.7**				—				**63**				—				—				< 0.50	U		
RHMW02	ES131	2015-04-20	**0.26**	J			—				—				**31**				**15**				—				**39**				—				—				< 0.20	U		
RHMW02	ES132	4/20/2015*	**0.30**	J			—				—				**68**				**37**				—				**140**				—				—				< 0.20	U		
RHMW02	ES144	2015-06-25	—				—				—				**71**				**48**				—				**150**				—				—				—			
RHMW02	ES146	2015-07-20	**0.26**	J			—				—				**65**				**43**				—				**150**				—				—				< 0.20	U		
RHMW02	ES147	7/20/2015*	**0.27**	J			—				—				**66**				**43**				—				**160**				—				—				< 0.20	U		
RHMW02	ERH012	2015-10-20	**0.32**	J	h		—				—				**60**				**27**				—				**120**				—				—				< 0.20	UJ	h	
RHMW02	ERH013	10/20/2015*	**0.30**	J	h		—				—				**57**				**24**				—				**88**				—				—				< 0.20	UJ	h	
RHMW02	ERH025	2016-01-20	**0.21**	J			—				—				**48**				**7.9**				—				**120**				—				—				< 0.20	U		
RHMW02	ERH040	2016-04-20	< 0.16	U	f		—				—				**59**				**38**				—				**100**				—				—				—			
RHMW02	ERH041	4/20/2016*	< 0.18	U	f		—				—				**61**				**39**				—				**110**				—				—				—			
RHMW02	ERH054	2016-07-20	< 0.21	U	f		—				—				**36**				**13**				—				**67**				—				—				—			
RHMW02	ERH055	7/20/2016*	< 0.23	U	f		—				—				**33**				**12**				—				**62**				—				—				—			
RHMW02	ERH091	2016-10-19	< 0.30	U			—				—				**25**				**9.2**				—				**49**				—				—				—			
RHMW02	ERH124	2016-11-15	< 0.30	U			—				—				**29**				**12**				—				**58**				—				—				—			
RHMW02	ERH144	2016-12-13	**0.19**	J			—				—				**17**				**11**				—				**40**				—				—				—			
RHMW02	ERH174	2017-01-10	**0.26**	J			—				—				**25**				**11**				—				**69**				—				—				—			
RHMW02	ERH174 (EPA split)	2017-01-10	—				< 0.5	U			**0.2**	J	s		**33**	J	c		**11**	J	c		**12**				**77**	J	v		—				**110**				**72**				—			
RHMW02	ERH216	2017-02-07	**0.23**	J			—				—				**22**				**16**				—				**57**				—				—				—			
RHMW02	ERH216 (EPA split)	2017-02-07	—				< 0.5	U			< 0.2	U			**28**	J	c v		—				**18**				—				—				**100**	J	s		**64**				—			
RHMW02	ERH265	2017-03-07	< 0.30	U			—				—				**22**				**17**				—				**49**				—				—				—			
RHMW02	ERH265 (EPA split)	2017-03-07	—				< 0.5	U			**0.2**	J			**21**	J	c s v		—				**18**				—				—				**73**				**67**				—			
RHMW02	ERH300	2017-04-04	< 0.30	U			—				—				**20**				**17**				—				**52**				—				—				—			
RHMW02	ERH334	2017-05-01	< 0.30	U			—				—				**28**				**24**				—				**65**				—				—				—			
RHMW02	ERH354	2017-06-05	< 0.30	U			—				—				**25**				**16**				—				**62**				—				—				—			
RHMW02	ERH391	2017-07-06	**1.4**	J			—				—				**14**				**1.5**				—				**56**				—				—				—			
RHMW02	ERH415	2017-10-23	**0.25**	J			—				—				**14**	J	q		**7.4**	J	e q		—				**38**	J	q		—				—				< 0.50	U		
RHMW02	ERH416	10/23/2017*	**0.26**	J			—				—				**15**				**8.6**				—				**37**				—				—				< 0.50	U		
RHMW02	ERH415 (EPA split)	2017-10-23	—				—				—				**19**				**13**				—				**50**				—				—				—			
RHMW02	ERH547	2018-03-13	**0.28**	J			—				—				**20**				**13**				—				**53**				—				—				—			
RHMW02	ERH548	3/13/2018*	**0.37**	J			—				—				**25**				**18**				—				**65**				—				—				—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Semivolatiles				Semivolatiles			
		Analyte Type	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Fuel Additive				Fuel Additive					
		Analytical Method	504.1				524.2				8260SIM				8260SIM				8260				524.2				8270				8270/8270 Mod.			
		Analyte	1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				Phenol				2-(2-Methoxyethoxy)-ethanol			
		CAS No.	106-93-4				106-93-4				106-93-4				107-06-2				107-06-2				107-06-2				108-95-2				111-77-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	0.04				0.04				0.04				5				5				5				300				800			
		SSRBL	—				—				—				—				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW02	ES070	3/10/2014[d]	—				—				—				—				—				—				—				—			
RHMW02	ES071	3/10/2014*[d]	—				—				—				—				—				—				—				—			
RHMW02	ES073	3/25/2014[d]	—				—				—				—				—				—				—				—			
RHMW02	ES074	3/25/2014*[d]	—				—				—				—				—				—				—				—			
RHMW02	ES078	4/7/2014[d]	—				—				—				—				—				—				—				—			
RHMW02	ES079	4/7/2014*[d]	—				—				—				—				—				—				—				—			
RHMW02	ES081	4/21/2014[d]	—				—				—				—				< 0.50	U			—				—				—			
RHMW02	ES082	4/21/2014*[d]	—				—				—				—				< 0.50	U			—				—				—			
RHMW02	ES092	5/27/2014[d]	—				—				—				—				—				—				—				—			
RHMW02	ES093	5/27/2014*[d]	—				—				—				—				—				—				—				—			
RHMW02	ES099	6/23/2014[d]	—				—				—				—				—				—				—				—			
RHMW02	ES100	6/23/2014*[d]	—				—				—				—				—				—				—				—			
RHMW02	ES104	2014-07-21	—				—				—				—				< 0.50	U			—				—				—			
RHMW02	ES105	7/21/2014*	—				—				—				—				< 0.50	U			—				—				—			
RHMW02	ES114	2014-10-27	—				—				—				—				< 0.50	UJ	c		—				—				—			
RHMW02	ES115	2014-10-27	—				—				—				—				< 0.50	UJ	c		—				—				—			
RHMW02	ES126	2015-01-28	—				—				—				—				< 0.50	U			—				—				—			
RHMW02	ES127	1/28/2015*	—				—				—				—				< 0.50	U			—				—				—			
RHMW02	ES131	2015-04-20	—				—				< 0.010	U			< 0.015	U			—				—				—				—			
RHMW02	ES132	4/20/2015*	—				—				< 0.010	U			< 0.015	U			—				—				—				—			
RHMW02	ES144	2015-06-25	—				—				—				—				—				—				—				—			
RHMW02	ES146	2015-07-20	—				—				—				< 0.015	U			—				—				—				—			
RHMW02	ES147	7/20/2015*	—				—				—				< 0.015	U			—				—				—				—			
RHMW02	ERH012	2015-10-20	—				—				—				< 0.015	U			—				—				—				—			
RHMW02	ERH013	10/20/2015*	—				—				—				< 0.015	U			—				—				—				—			
RHMW02	ERH025	2016-01-20	—				—				—				< 0.015	U			—				—				—				—			
RHMW02	ERH040	2016-04-20	—				—				—				—				—				—				—				—			
RHMW02	ERH041	4/20/2016*	—				—				—				—				—				—				—				—			
RHMW02	ERH054	2016-07-20	—				—				—				—				—				—				—				—			
RHMW02	ERH055	7/20/2016*	—				—				—				—				—				—				—				—			
RHMW02	ERH091	2016-10-19	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	h	
RHMW02	ERH124	2016-11-15	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW02	ERH144	2016-12-13	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW02	ERH174	2017-01-10	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW02	ERH174 (EPA split)	2017-01-10	—				< 0.2	U			—				—				—				< 0.2	U			< 2.5	U			—			
RHMW02	ERH216	2017-02-07	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW02	ERH216 (EPA split)	2017-02-07	—				< 0.2	U			—				—				—				< 0.2	U			< 2.5	U			—			
RHMW02	ERH265	2017-03-07	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW02	ERH265 (EPA split)	2017-03-07	—				< 0.2	U			—				—				—				< 0.2	U			< 2.5	U			—			
RHMW02	ERH300	2017-04-04	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW02	ERH334	2017-05-01	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW02	ERH354	2017-06-05	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW02	ERH391	2017-07-06	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW02	ERH415	2017-10-23	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW02	ERH416	10/23/2017*	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW02	ERH415 (EPA split)	2017-10-23	—				—				—				—				—				—				—				—			
RHMW02	ERH547	2018-03-13	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW02	ERH548	3/13/2018*	—				—				—				—				—				—				< 4.00	U			< 80.0	U		

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	TPH				TPH				TPH				TPH				TPH				Volatiles				Volatiles				Volatiles				Volatiles				Volatiles			
		Analyte Type	COPC				COPC				COPC				COPC				COPC				COPC				non-COPC				COPC				non-COPC				COPC			
		Analytical Method	8015				8260				8015				8015				8015				8260				524.2				8260				524.2				8260			
		Analyte	TPH-g ****				TPH-g ****				TPH-d				TPH-d with Silica Gel Cleanup				TPH-o				TPH-o with Silica Gel Cleanup				Benzene				Benzene				Ethylbenzene				Ethylbenzene				Toluene				Toluene			
		CAS No.	Gas				Gas				Diesel				Disel SGC				Oil				Oil SGC				71-43-2				71-43-2				100-41-4				100-41-4				108-88-3				108-88-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	300				300				400				400				500				500				5				5				30				30				40				40			
		SSRBL	—				—				4500				—				—				—				750				750				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW02	ERH547 (EPA split)	2018-03-13	—				—				**2,900**			F13	**430**			F13	< 300	U			< 300	U			—				—				—				—				—			
RHMW02	ERH593	2018-04-24	—				**51**				**2,700**			O	**510**			O	< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW02	ERH594	4/24/2018*	—				**44**				**2,800**			O	**420**			O	< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW02	ERH639	2018-07-24	—				**78**				**2,100**			O	**580**			O	< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW02	ERH640	7/24/2018*	—				**78**				**1500**			O	**260**			O	< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW02	ERH639 (EPA split)	2018-07-24	—				—				**2,400**			F13	**570**			F13	< 300	U			< 300	U			—				—				—				—				—			
RHMW02	ERH683	2018-10-23	—				**81**			Y	**2,000**	**J**	h	O	**370**	**J**	h	O	< 40	UJ	h		< 40	UJ	h		< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW02	ERH684	10/23/2018*	—				**92**			Y	**2,100**	**J**	h	O	**430**	**J**	h	O	< 40	UJ	h		< 40	UJ	h		< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW02	ERH738	2019-01-21	—				**48**			W	**2,400**			O	**420**			O	< 40	U			< 40	U			< 0.30	UJ	s		—				< 0.50	UJ	s		—				< 0.30	UJ	s	
RHMW02	ERH739	1/21/2019*	—				**22**			W	**2,700**			O	**430**			O	< 40	U			< 40	U			< 0.30	UJ	s		—				< 0.50	UJ	s		—				< 0.30	UJ	s	
RHMW02	ERH790	2019-04-24	—				**48**				**2,300**			O	**430**			O	< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW02	ERH791	4/24/2019*	—				**57**				**2,200**			O	**440**			O	< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW02	ERH846	2019-07-23	—				**79**				**2,400**			O	**690**			O	**190**				< 40	U			< 0.30	UJ	s		—				< 0.50	UJ	s		—				< 0.30	UJ	s	
RHMW02	ERH847	7/23/2019*	—				< 18	U			**2,600**			O	**480**			O	**200**				< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW02	ERH912	2019-10-22	—				**81**				**1,700**			O	**520**			O	**200**				< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW02	ERH913	10/22/2019*	—				**74**				**1,800**			O	**430**			O	**190**				< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW02	ERH976	2020-01-20	—				**58**				**1500**	**J**	s	O	**280**			O	< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW02	ERH977	1/20/2020*	—				**49**				**1,700**			O	**360**			O	< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW02	ERH1044	2020-04-22	—				**49**				**1,700**	**J**	l	O	**350**				**260**	**J**	l		< 300.0	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW02	ERH1045	2020-04-22	—				**63**				**1500**	**J**	l	O	**310**	**J**			**290**	**J**	l		< 300.0	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW03	RHMW03W01	9/20/2005[a]	< 0.50	U			—				**162**	**J**		Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW03	RHMW03-GW02	7/10/2006[a]	< 50	U			—				**142**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW03	RHMW03-GW06	12/5/2006[a]	< 50	U			—				< 100	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW03	RHMW03-WG07	3/27/2007[a]	< 50	U			—				**95.7**	**J**			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW03	RHMW03-WG08	6/12/2007[a]	< 50	U			—				**123**	**J**			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW03	RHMW03-WG09	9/10/2007[a]	< 50	U			—				< 96	U			—				—				—				< 0.20	U			—				< 0.20	U			—				< 0.27	U		
RHMW03	RHMW03-WG10	1/15/2008[a]	< 10.0	U			—				**242**	**J**			—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U		
RHMW03	RHMW03-WG11	4/15/2008[a]	< 10.0	U			—				**190**	**J**			—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U		
RHMW03	RHMW03-WG12	7/29/2008[ad]	< 10.0	U			—				**199**	**J**			—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U		
RHMW03	RHMW03-WG13	10/22/2008[ad]	< 10.0	U			—				**244**	**J**			—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U		
RHMW03	RHMW03-WG14	2/4/2009[a]	**16.1**	**J**			—				**207**	**J**			—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U		
RHMW03	RHMW03-WG15	5/13/2009[a]	< 14.8	UJ	b t		—				< 161	U			—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U		
RHMW03	RHMW03-WG16	7/15/2009[a]	< 30.0	U			—				< 150	U			—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U		
RHMW03	RHMW03-WG17	10/14/2009[a]	< 30	U			—				< 163	U			—				—				—				< 0.12	U			—				< 0.31	U			—				< 0.31	U		
RHMW03	RHMW03-WG18	2010-01-27	< 60.0	U			—				< 330	U			—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U		
RHMW03	RHMW03-WG19	2010-04-13	< 60.0	U			—				< 320	U			—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U		
RHMW03	RHMW03-WG20	2010-07-13	< 60.0	U			—				< 324	U			—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U		
RHMW03	ES001	10/18/2010[d]	—				< 12.12	U			**330**			Y	—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U		
RHMW03	ES012	2011-01-19	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U		
RHMW03	ES025	4/20/2011[d]	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U		
RHMW03	ES035	2011-07-19	—				< 12.12	U			< 80.8	U			—				< 212.0	U			—				< 0.32	U			—				< 0.46	U			—				< 0.34	U		
RHMW03	ES049	2011-10-24	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U		
RHMW03	ES060	2012-01-26	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U		
RHMW03	ES073	2012-04-16	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U		
RHMW03	ES081	2012-07-18	—				< 12.12	U			< 80.8	U			—				< 212.0	U			—				< 0.32	U			—				< 0.46	U			—				< 0.34	U		
RHMW03	ES004	2012-10-22	—				< 30	U			**45**	**J**		Y	—				—				—				< 0.50	U			—				< 0.50	U			—				**0.54**	**J**		
RHMW03	ES013	2013-01-28	—				< 30	U			**59**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Volatiles			Volatiles			Volatiles			Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Lead Scavenger				Lead Scavenger			
		Analyte Type	COPC			non-COPC			non-COPC			COPC				COPC				non-COPC				COPC				non-COPC				non-COPC				Lead Scavenger				Lead Scavenger			
		Analytical Method	8260			524.2			524.2			8270 SIM				8270 SIM				8270				8270 SIM				8260				524.2				8270				8011				8260			
		Analyte	Xylenes, Total (p/m-, o-xylene)			Xylenes, p/m-			Xylenes, o-			1-Methylnaphthalene				2-Methylnaphthalene				2-Methylnaphthalene				Naphthalene *****				Naphthalene *****				Naphthalene *****				Naphthalene *****				1,2-Dibromoethane *****				1,2-Dibromoethane *****			
		CAS No.	1330-20-7			179601-23-1			95-47-6			90-12-0				91-57-6				91-57-6				91-20-3				91-20-3				91-20-3				91-20-3				106-93-4				106-93-4			
		Unit	µg/L			µg/L			µg/L			µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	20			20			20			10				10				10				17				17				17				17				0.04				0.04			
		SSRBL	—			—			—			—				—				—				—				—				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW02	ERH547 (EPA split)	2018-03-13	—				—				—				**23**				**15**				—				**50**				—				—				—				—			
RHMW02	ERH593	2018-04-24	< 0.30	U			—				—				**26**				**25**				—				**70**				—				—				—				—			
RHMW02	ERH594	4/24/2018*	< 0.30	U			—				—				**27**				**27**				—				**73**				—				—				—				—			
RHMW02	ERH639	2018-07-24	< 0.30	U			—				—				**16**				**10**				—				**38**				—				—				—				—			
RHMW02	ERH640	7/24/2018*	< 0.30	U			—				—				**19**				**14**				—				**48**				—				—				—				—			
RHMW02	ERH639 (EPA split)	2018-07-24	—				—				—				**19**				**12**				—				**47**				—				—				—				—			
RHMW02	ERH683	2018-10-23	< 0.30	U			—				—				**21**				**20**				—				**51**				—				—				—				—			
RHMW02	ERH684	10/23/2018*	< 0.30	U			—				—				**20**				**18**				—				**49**				—				—				—				—			
RHMW02	ERH738	2019-01-21	< 0.30	UJ	s		—				—				**11**				**8.8**				—				**32**				—				—				—				—			
RHMW02	ERH739	1/21/2019*	< 0.30	UJ	s		—				—				**9.6**				**7.2**				—				**26**				—				—				—				—			
RHMW02	ERH790	2019-04-24	< 0.30	U			—				—				**9.0**				**7.9**				—				**28**				—				—				—				—			
RHMW02	ERH791	4/24/2019*	< 0.30	U			—				—				**8.7**				**7.4**				—				**26**				—				—				—				—			
RHMW02	ERH846	2019-07-23	< 0.30	UJ	s		—				—				**12**				**11**				—				**33**				—				—				—				—			
RHMW02	ERH847	7/23/2019*	< 0.30	U			—				—				**12**				**11**				—				**34**				—				—				—				—			
RHMW02	ERH912	2019-10-22	< 0.30	U			—				—				**30**				**26**				—				**66**				—				—				—				—			
RHMW02	ERH913	10/22/2019*	< 0.30	U			—				—				**31**				**27**				—				**68**				—				—				—				—			
RHMW02	ERH976	2020-01-20	< 0.30	U			—				—				**23**				**23**				—				**52**				—				—				—				—			
RHMW02	ERH977	1/20/2020*	< 0.30	U			—				—				**24**				**23**				—				**57**				—				—				—				—			
RHMW02	ERH1044	2020-04-22	< 0.30	U			—				—				**13**				**12**				—				**33**				—				—				—				—			
RHMW02	ERH1045	2020-04-22	< 0.30	U			—				—				**13**				**11**				—				**32**				—				—				—				—			
RHMW03	RHMW03W01	9/20/2005[a]	< 0.50	U			—				—				< 0.24	U			< 0.24	U			—				< 0.24	U			< 1.0	U			—				—				< 0.50	U		
RHMW03	RHMW03-GW02	7/10/2006[a]	< 0.50	U			—				—				< 0.25	U			< 0.25	U			—				< 0.25	U			< 1.0	U			—				—				< 0.50	U		
RHMW03	RHMW03-GW06	12/5/2006[a]	< 0.50	U			—				—				< 0.25	U			< 0.25	U			—				< 0.25	U			< 1.0	U			—				—				< 0.50	U		
RHMW03	RHMW03-WG07	3/27/2007[a]	< 0.50	U			—				—				< 0.25	U			< 0.25	U			—				< 0.25	U			< 1.0	U			—				—				< 0.50	U		
RHMW03	RHMW03-WG08	6/12/2007[a]	< 0.50	U			—				—				< 0.25	U			< 0.25	U			—				< 0.25	U			< 1.0	U			—				—				< 0.50	U		
RHMW03	RHMW03-WG09	9/10/2007[a]	< 0.36	U			—				—				< 0.25	U			< 0.25	U			—				< 0.25	U			< 0.44	U			—				—				< 0.20	U		
RHMW03	RHMW03-WG10	1/15/2008[a]	< 0.620	U			—				—				< 0.0156	U			< 0.0156	U			—				< 0.0323	U			< 0.620	U			—				—				< 0.310	U		
RHMW03	RHMW03-WG11	4/15/2008[a]	< 0.620	U			—				—				< 0.0268	UJ	b		< 0.0279	UJ	b		—				< 0.0341	U			< 0.620	U			—				—				< 0.310	U		
RHMW03	RHMW03-WG12	7/29/2008[ad]	< 0.620	U			—				—				**0.0294**	**J**			< 0.0156	U			—				**0.0689**	**J**			< 0.620	U			—				—				< 0.310	U		
RHMW03	RHMW03-WG13	10/22/2008[ad]	< 0.620	U			—				—				**0.0658**				**0.0937**				—				**0.219**				< 0.620	U			—				—				< 0.310	U		
RHMW03	RHMW03-WG14	2/4/2009[a]	< 0.620	U			—				—				< 0.0161	U			< 0.0161	U			—				< 0.0333	U			< 0.620	U			—				—				< 0.310	U		
RHMW03	RHMW03-WG15	5/13/2009[a]	< 0.620	U			—				—				< 0.0152	U			< 0.0152	U			—				< 0.0313	U			< 0.620	U			—				—				< 0.310	U		
RHMW03	RHMW03-WG16	7/15/2009[a]	< 0.620	U			—				—				< 0.0158	U			< 0.0158	U			—				< 0.0326	U			< 0.620	U			—				—				< 0.310	U		
RHMW03	RHMW03-WG17	10/14/2009[a]	< 1	U			—				—				< 0.0169	U			< 0.0169	U			—				< 0.0348	U			< 0.62	U			—				—				< 0.31	U		
RHMW03	RHMW03-WG18	2010-01-27	< 1.24	U			—				—				< 0.0322	U			< 0.0322	U			—				< 0.0666	U			< 1.24	U			—				—				< 0.620	U		
RHMW03	RHMW03-WG19	2010-04-13	< 1.24	U			—				—				< 0.0322	U			< 0.0322	U			—				< 0.0666	U			< 1.24	U			—				—				< 0.620	U		
RHMW03	RHMW03-WG20	2010-07-13	< 1.24	U			—				—				< 0.0322	U			< 0.0322	U			—				< 0.0666	U			< 1.24	U			—				—				< 0.620	U		
RHMW03	ES001	10/18/2010[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				< 0.40	U		
RHMW03	ES012	2011-01-19	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				< 0.40	U		
RHMW03	ES025	4/20/2011[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				< 0.40	U		
RHMW03	ES035	2011-07-19	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				< 0.40	U		
RHMW03	ES049	2011-10-24	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				< 0.40	U		
RHMW03	ES060	2012-01-26	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				< 0.40	U		
RHMW03	ES073	2012-04-16	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				< 0.40	U		
RHMW03	ES081	2012-07-18	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				< 0.40	U		
RHMW03	ES004	2012-10-22	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.029**	**J**			—				—				—				< 0.50	U		
RHMW03	ES013	2013-01-28	< 1.0	U			—				—				**0.10**	**J**			**0.069**	**J**			—				**0.32**				—				—				—				< 0.50	U		

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Semivolatiles				Semivolatiles			
		Analyte Type	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Fuel Additive				Fuel Additive					
		Analytical Method	504.1				524.2				8260SIM				8260SIM				8260				524.2				8270				8270/8270 Mod.			
		Analyte	1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				Phenol				2-(2-Methoxyethoxy)-ethanol			
		CAS No.	106-93-4				106-93-4				106-93-4				107-06-2				107-06-2				107-06-2				108-95-2				111-77-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	0.04				0.04				0.04				5				5				5				300				800			
		SSRBL	—				—				—				—				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW02	ERH547 (EPA split)	2018-03-13	—				—				—				—				—				—				—				—			
RHMW02	ERH593	2018-04-24	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW02	ERH594	4/24/2018*	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW02	ERH639	2018-07-24	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW02	ERH640	7/24/2018*	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW02	ERH639 (EPA split)	2018-07-24	—				—				—				—				—				—				—				—			
RHMW02	ERH683	2018-10-23	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
RHMW02	ERH684	10/23/2018*	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
RHMW02	ERH738	2019-01-21	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
RHMW02	ERH739	1/21/2019*	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
RHMW02	ERH790	2019-04-24	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
RHMW02	ERH791	4/24/2019*	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
RHMW02	ERH846	2019-07-23	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW02	ERH847	7/23/2019*	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW02	ERH912	2019-10-22	—				—				—				—				—				—				< 4.00	UJ	I		< 80.0	U		
RHMW02	ERH913	10/22/2019*	—				—				—				—				—				—				< 4.00	UJ	I		< 80.0	U		
RHMW02	ERH976	2020-01-20	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
RHMW02	ERH977	1/20/2020*	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
RHMW02	ERH1044	2020-04-22	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW02	ERH1045	2020-04-22	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW03	RHMW03W01	9/20/2005[a]	—				—				—				—				< 0.50	U			—				—				—			
RHMW03	RHMW03-GW02	7/10/2006[a]	—				—				—				—				< 0.50	U			—				—				—			
RHMW03	RHMW03-GW06	12/5/2006[a]	—				—				—				—				< 0.50	U			—				—				—			
RHMW03	RHMW03-WG07	3/27/2007[a]	—				—				—				—				< 0.50	U			—				—				—			
RHMW03	RHMW03-WG08	6/12/2007[a]	—				—				—				—				< 0.50	U			—				—				—			
RHMW03	RHMW03-WG09	9/10/2007[a]	—				—				—				—				< 0.20	U			—				—				—			
RHMW03	RHMW03-WG10	1/15/2008[a]	—				—				—				—				< 0.150	U			—				—				—			
RHMW03	RHMW03-WG11	4/15/2008[a]	—				—				—				—				< 0.150	U			—				—				—			
RHMW03	RHMW03-WG12	7/29/2008[ad]	—				—				—				—				< 0.150	U			—				—				—			
RHMW03	RHMW03-WG13	10/22/2008[ad]	—				—				—				—				< 0.150	U			—				—				—			
RHMW03	RHMW03-WG14	2/4/2009[a]	—				—				—				—				< 0.150	U			—				—				—			
RHMW03	RHMW03-WG15	5/13/2009[a]	—				—				—				—				< 0.150	U			—				—				—			
RHMW03	RHMW03-WG16	7/15/2009[a]	—				—				—				—				< 0.150	U			—				—				—			
RHMW03	RHMW03-WG17	10/14/2009[a]	—				—				—				—				< 0.15	U			—				—				—			
RHMW03	RHMW03-WG18	2010-01-27	—				—				—				—				< 0.300	U			—				—				—			
RHMW03	RHMW03-WG19	2010-04-13	—				—				—				—				< 0.300	U			—				—				—			
RHMW03	RHMW03-WG20	2010-07-13	—				—				—				—				< 0.300	U			—				—				—			
RHMW03	ES001	10/18/2010[d]	—				—				—				—				< 0.28	U			—				—				—			
RHMW03	ES012	2011-01-19	—				—				—				—				< 0.28	U			—				—				—			
RHMW03	ES025	4/20/2011[d]	—				—				—				—				< 0.28	U			—				—				—			
RHMW03	ES035	2011-07-19	—				—				—				—				< 0.28	U			—				—				—			
RHMW03	ES049	2011-10-24	—				—				—				—				< 0.28	U			—				—				—			
RHMW03	ES060	2012-01-26	—				—				—				—				< 0.28	U			—				—				—			
RHMW03	ES073	2012-04-16	—				—				—				—				< 0.28	U			—				—				—			
RHMW03	ES081	2012-07-18	—				—				—				—				< 0.28	U			—				—				—			
RHMW03	ES004	2012-10-22	—				—				—				—				< 0.50	U			—				—				—			
RHMW03	ES013	2013-01-28	—				—				—				—				< 0.50	U			—				—				—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	TPH				TPH				TPH				TPH				TPH				Volatiles				Volatiles				Volatiles				Volatiles				Volatiles			
		Analyte Type	COPC				COPC				COPC				COPC				COPC				COPC				non-COPC				COPC				non-COPC				COPC			
		Analytical Method	8015				8260				8015				8015				8015				8260				524.2				8260				524.2				8260			
		Analyte	TPH-g ****				TPH-g ****				TPH-d				TPH-d with Silica Gel Cleanup				TPH-o				TPH-o with Silica Gel Cleanup				Benzene				Benzene				Ethylbenzene				Ethylbenzene				Toluene				Toluene			
		CAS No.	Gas				Gas				Diesel				Disel SGC				Oil				Oil SGC				71-43-2				71-43-2				100-41-4				100-41-4				108-88-3				108-88-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	300				300				400				400				500				500				5				5				30				30				40				40			
		SSRBL	—				—				4500				—				—				—				750				750				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW03	ES022	2013-04-22	—				< 30	U			**69**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW03	ES031	2013-07-22	—				< 30	UJ	h		**48**	**J**		Y	—				—				—				< 0.50	UJ	h		—				< 0.50	UJ	h		—				< 0.50	UJ	h		—			
RHMW03	ES040	2013-10-21	—				< 23	UJ	b		**54**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW03	ES059	1/28/2014[d]	—				< 20	UJ	b		**74**				—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW03	ES083	4/21/2014[d]	—				< 30	U			**39**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW03	ES106	2014-07-22	—				< 30	U			**37**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW03	ES116	2014-10-27	—				< 30	U			**80**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW03	ES123	2015-01-28	—				< 30	U			**39**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW03	ES133	2015-04-20	< 25	U			—				**100**			Y	—				**110**			Y	—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
RHMW03	ES148	2015-07-20	< 25	U			—				**130**			Y	—				**150**			Y	—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
RHMW03	ERH014	2015-10-20	< 25	U			—				**130**			Y	—				< 160	UJ	b	Y	—				< 0.10	UJ	h		—				< 0.10	UJ	h		—				< 0.4	UJ	h t		—			
RHMW03	ERH026	2016-01-20	< 25	U			—				**150**			Y	—				< 160	UJ	b	Y	—				< 0.10	U			—				< 0.10	U			—				< 0.14	UJ	t		—			
RHMW03	ERH042	2016-04-20	< 25	U			—				< 95	U	f	Y	—				< 170	U	b f	Y	—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
RHMW03	ERH056	2016-07-20	< 25	U			—				< 70	U	f	Y	—				< 110	U	b f		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
RHMW03	ERH093	2016-10-19	—				< 18	U			**65**			Y	< 25	U			**59**				< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH125	2016-11-15	—				< 18	U			**51**			Y	—				**42**				—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH152	2016-12-14	—				< 18	U			**56**			Y	—				**49**				—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH181	2017-01-12	—				< 18	U			**51**			Y	—				**46**				—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH181 (EPA split)	2017-01-12	< 25	UJ	c		—				**190**				—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW03	ERH231	2017-02-08	—				< 18	U			**67**			Y	—				**71**				—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH231 (EPA split)	2017-02-08	< 25	UJ	c		—				**170**				—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW03	ERH268	2017-03-07	—				< 18	U			**55**			Y	—				**41**				—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH268 (EPA split)	2017-03-07	< 25	UJ	c		—				**170**				—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW03	ERH303	2017-04-04	—				< 18	U			**47**			Y	—				**47**				—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH336	2017-05-01	—				< 18	U			**50**			Y	< 25	U			**46**				< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH356	2017-06-06	—				< 18	U			**46**			Y	**50**			Y	**36**	**J**			**34**	**J**			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH393	2017-07-06	—				< 18	U			**49**			Y	< 25	U			**46**				< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH418	2017-10-23	—				< 18	U			**160**			Y	< 25	U			**160**				< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH419	10/23/2017*	—				—				**210**			O	< 25	U			**200**				< 40	U			—				—				—				—				—				—			
RHMW03	ERH418 (EPA split)	2017-10-23	—				—				< 180	U	b	F6	< 75	U			< 300	U			< 300	U			—				—				—				—				—				—			
RHMW03	ERH550	2018-03-12	—				< 18	U			**190**				< 25	U			**180**			Y	< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH550 (EPA split)	2018-03-12	—				—				**150**			F13	< 75	U			< 300	U			< 300	U			—				—				—				—				—				—			
RHMW03	ERH596	2018-04-25	—				< 18	U			**160**			Y	< 25	U			**110**				< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH642	2018-07-25	—				< 18	U			**300**			Y	< 25	U			**140**				< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH642 (EPA split)	2018-07-25	—				—				**180**			F13	< 75	U			< 300	U			< 300	U			—				—				—				—				—				—			
RHMW03	ERH686	2018-10-23	—				< 18	U			**220**	**J**	h	Y	< 25	UJ	h		**190**	**J**	h		< 40	UJ	h		< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH741	2019-01-22	—				< 18	U			**380**			Y	< 25	U			**310**				< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH793	2019-04-24	—				< 18	U			**300**			Y	< 25	U			**190**			Y	< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH849	2019-07-22	—				< 18	U			**300**			Y	< 25	U			**270**				< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH915	2019-10-21	—				< 18	U			**150**			Y	< 25	U			**230**				< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH979	2020-01-20	—				< 18	U			**260**			Y	< 25	U			**250**			Y	< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW03	ERH1047	2020-04-20	—				< 18	U			**220**	**J**		O	< 300.0	U			**240**	**J**	l		< 300.0	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW04	RHMW04W01	9/19/2005[a]	< 50.0	U			—				**338**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW04	RHMW04-GW02	7/10/2006[a]	< 50.0	U			—				< 100	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U			—			
RHMW04	RHMW04-WG-01	8/4/2009[ad]	< 30.0	U			—				< 157	U			—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U			—			
RHMW04	RHMWA01-WG-01	8/4/2009*[ad]	< 30.0	U			—				< 161	U			—				—				—				**0.250**	**J**			—				< 0.310	U			—				< 0.310	U			—			
RHMW04	RHMW04-WG-02	10/13/2009[abd]	< 30.0	U			—				< 169	U			—				—				—				< 0.12	U			—				< 0.31	U			—				< 0.31	U			—			
RHMW04	RHMWA01-WG-02	10/13/2009*[abd]	< 30.0	U			—				< 174	U			—				—				—				< 0.12	U			—				< 0.31	U			—				< 0.31	U			—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Volatiles			Volatiles			Volatiles			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Lead Scavenger			Lead Scavenger		
		Analyte Type	COPC			non-COPC			non-COPC			COPC			COPC			non-COPC			COPC			non-COPC			non-COPC			Lead Scavenger			Lead Scavenger		
		Analytical Method	8260			524.2			524.2			8270 SIM			8270 SIM			8270			8270 SIM			8260			524.2			8270			8011			8260		
		Analyte	Xylenes, Total (p/m-, o-xylene)			Xylenes, p/m-			Xylenes, o-			1-Methylnaphthalene			2-Methylnaphthalene			2-Methylnaphthalene			Naphthalene *****			Naphthalene *****			Naphthalene *****			Naphthalene *****			1,2-Dibromoethane *****			1,2-Dibromoethane *****		
		CAS No.	1330-20-7			179601-23-1			95-47-6			90-12-0			91-57-6			91-57-6			91-20-3			91-20-3			91-20-3			91-20-3			106-93-4			106-93-4		
		Unit	µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L		
		DOH EAL	20			20			20			10			10			10			17			17			17			17			0.04			0.04		
		SSRBL	—			—			—			—			—			—			—			—			—			—			—			—		
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW03	ES022	2013-04-22	< 1.0	U			—				—				< 0.053	U			< 0.053	U			—				< 0.053	U			—				—				< 0.50	U		
RHMW03	ES031	2013-07-22	< 1.0	UJ	h		—				—				< 0.050	U			< 0.050	U			—				**0.064**	**J**			—				—				< 0.50	UJ	h	
RHMW03	ES040	2013-10-21	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				< 0.050	U			—				—				< 0.50	U		
RHMW03	ES059	1/28/2014[d]	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.15**	**J**			—				—				< 0.50	U		
RHMW03	ES083	4/21/2014[d]	< 1.0	U			—				—				< 0.049	U			< 0.049	U			—				**0.11**	**J**			—				—				< 0.50	U		
RHMW03	ES106	2014-07-22	< 1.0	U			—				—				< 0.047	U			< 0.047	U			—				< 0.047	U			—				—				< 0.50	U		
RHMW03	ES116	2014-10-27	< 1.0	U			—				—				< 0.11	U			< 0.054	U			—				< 0.054	U			—				—				< 0.50	U		
RHMW03	ES123	2015-01-28	< 1.0	U			—				—				< 0.097	U			< 0.048	U			—				< 0.048	U			—				—				< 0.50	U		
RHMW03	ES133	2015-04-20	< 0.20	U			—				—				**0.015**	**J**			**0.0083**	**J**			—				**0.035**				—				—				< 0.20	U		
RHMW03	ES148	2015-07-20	< 0.20	U			—				—				< 0.0052	U			< 0.0052	U			—				< 0.0052	U			—				—				< 0.20	U		
RHMW03	ERH014	2015-10-20	< 0.20	UJ	h		—				—				**0.0039**	**J**			< 0.0034	UJ	b		—				< 0.0094	UJ	b		—				—				< 0.20	UJ	h	
RHMW03	ERH026	2016-01-20	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—				—				< 0.20	U		
RHMW03	ERH042	2016-04-20	< 0.20	U			—				—				< 0.0084	U	f		< 0.0075	U	f		—				< 0.0050	U			—				—				—			
RHMW03	ERH056	2016-07-20	< 0.20	U			—				—				**0.0073**	**J**			**0.0040**	**J**			—				< 0.025	U	f		—				—				—			
RHMW03	ERH093	2016-10-19	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW03	ERH125	2016-11-15	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW03	ERH152	2016-12-14	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW03	ERH181	2017-01-12	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW03	ERH181 (EPA split)	2017-01-12	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U		
RHMW03	ERH231	2017-02-08	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW03	ERH231 (EPA split)	2017-02-08	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U		
RHMW03	ERH268	2017-03-07	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW03	ERH268 (EPA split)	2017-03-07	—				< 0.5	U			< 0.2	U			< 0.027	UJ	c		< 0.027	UJ	c		< 0.5	U			< 0.027	U			—				< 0.2	U			< 0.5	U		
RHMW03	ERH303	2017-04-04	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW03	ERH336	2017-05-01	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW03	ERH356	2017-06-06	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW03	ERH393	2017-07-06	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW03	ERH418	2017-10-23	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.50	U		
RHMW03	ERH419	10/23/2017*	—				—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW03	ERH418 (EPA split)	2017-10-23	—				—				—				< 0.025	U			< 0.025	U			—				< 0.025	U			—				—				—			
RHMW03	ERH550	2018-03-12	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW03	ERH550 (EPA split)	2018-03-12	—				—				—				< 0.025	U			< 0.025	U			—				< 0.025	U			—				—				—			
RHMW03	ERH596	2018-04-25	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW03	ERH642	2018-07-25	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW03	ERH642 (EPA split)	2018-07-25	—				—				—				< 0.027	U			< 0.027	U			—				< 0.027	U			—				—				—			
RHMW03	ERH686	2018-10-23	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW03	ERH741	2019-01-22	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW03	ERH793	2019-04-24	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW03	ERH849	2019-07-22	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW03	ERH915	2019-10-21	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW03	ERH979	2020-01-20	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW03	ERH1047	2020-04-20	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW04	RHMW04W01	9/19/2005[a]	< 0.50	U			—				—				< 0.28	U			< 0.28	U			—				< 0.28	U			< 1.0	U			—				—			
RHMW04	RHMW04-GW02	7/10/2006[a]	< 0.50	U			—				—				< 0.26	U			< 0.26	U			—				< 0.26	U			< 1.0	U			—				—			
RHMW04	RHMW04-WG-01	8/4/2009[ad]	< 0.620	U			—				—				< 0.0162	U			< 0.0162	U			—				< 0.0335	U			< 0.620	U			—				—			
RHMW04	RHMWA01-WG-01	8/4/2009*[ad]	< 0.620	U			—				—				< 0.0167	U			< 0.0167	U			—				< 0.0344	U			< 0.620	U			—				—			
RHMW04	RHMW04-WG-02	10/13/2009[abd]	< 0.62	U			—				—				< 0.0172	U			< 0.0172	U			—				< 0.0356	U			< 0.62	U			—				—			
RHMW04	RHMWA01-WG-02	10/13/2009*[abd]	< 0.62	U			—				—				< 0.0169	U			< 0.0169	U			—				< 0.0348	U			< 0.62	U			—				—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Semivolatiles				Semivolatiles			
		Analyte Type	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Fuel Additive				Fuel Additive					
		Analytical Method	504.1				524.2				8260SIM				8260SIM				8260				524.2				8270				8270/8270 Mod.			
		Analyte	1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				Phenol				2-(2-Methoxyethoxy)-ethanol			
		CAS No.	106-93-4				106-93-4				106-93-4				107-06-2				107-06-2				107-06-2				108-95-2				111-77-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	0.04				0.04				0.04				5				5				5				300				800			
		SSRBL	—				—				—				—				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW03	ES022	2013-04-22	—				—				—				—				< 0.50	U			—				—				—			
RHMW03	ES031	2013-07-22	—				—				—				—				< 0.50	UJ	h		—				—				—			
RHMW03	ES040	2013-10-21	—				—				—				—				< 0.50	U			—				—				—			
RHMW03	ES059	1/28/2014[d]	—				—				—				—				< 0.50	U			—				—				—			
RHMW03	ES083	4/21/2014[d]	—				—				—				—				< 0.50	U			—				—				—			
RHMW03	ES106	2014-07-22	—				—				—				—				< 0.50	U			—				—				—			
RHMW03	ES116	2014-10-27	—				—				—				—				< 0.50	UJ	c		—				—				—			
RHMW03	ES123	2015-01-28	—				—				—				—				< 0.50	U			—				—				—			
RHMW03	ES133	2015-04-20	—				—				< 0.010	U			< 0.015	U			—				—				—				—			
RHMW03	ES148	2015-07-20	—				—				—				< 0.015	U			—				—				—				—			
RHMW03	ERH014	2015-10-20	—				—				—				< 0.015	U			—				—				—				—			
RHMW03	ERH026	2016-01-20	—				—				—				< 0.015	U			—				—				—				—			
RHMW03	ERH042	2016-04-20	—				—				—				—				—				—				—				—			
RHMW03	ERH056	2016-07-20	—				—				—				—				—				—				—				—			
RHMW03	ERH093	2016-10-19	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	h	
RHMW03	ERH125	2016-11-15	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW03	ERH152	2016-12-14	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW03	ERH181	2017-01-12	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW03	ERH181 (EPA split)	2017-01-12	—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
RHMW03	ERH231	2017-02-08	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW03	ERH231 (EPA split)	2017-02-08	—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
RHMW03	ERH268	2017-03-07	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW03	ERH268 (EPA split)	2017-03-07	—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
RHMW03	ERH303	2017-04-04	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW03	ERH336	2017-05-01	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW03	ERH356	2017-06-06	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW03	ERH393	2017-07-06	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW03	ERH418	2017-10-23	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW03	ERH419	10/23/2017*	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW03	ERH418 (EPA split)	2017-10-23	—				—				—				—				—				—				—				—			
RHMW03	ERH550	2018-03-12	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW03	ERH550 (EPA split)	2018-03-12	—				—				—				—				—				—				—				—			
RHMW03	ERH596	2018-04-25	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW03	ERH642	2018-07-25	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW03	ERH642 (EPA split)	2018-07-25	—				—				—				—				—				—				—				—			
RHMW03	ERH686	2018-10-23	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW03	ERH741	2019-01-22	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW03	ERH793	2019-04-24	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW03	ERH849	2019-07-22	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW03	ERH915	2019-10-21	—				—				—				—				—				—				< 4.00	UJ	l		< 80.0	U		
RHMW03	ERH979	2020-01-20	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW03	ERH1047	2020-04-20	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW04	RHMW04W01	9/19/2005[a]	—				—				—				—				< 0.50	U			—				—				—			
RHMW04	RHMW04-GW02	7/10/2006[a]	—				—				—				—				< 0.50	U			—				—				—			
RHMW04	RHMW04-WG-01	8/4/2009[ad]	—				—				—				—				< 0.150	U			—				—				—			
RHMW04	RHMWA01-WG-01	8/4/2009*[ad]	—				—				—				—				< 0.150	U			—				—				—			
RHMW04	RHMW04-WG-02	10/13/2009[abd]	—				—				—				—				< 0.15	U			—				—				—			
RHMW04	RHMWA01-WG-02	10/13/2009*[abd]	—				—				—				—				< 0.15	U			—				—				—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	TPH				TPH				TPH				TPH				TPH				TPH				Volatiles				Volatiles				Volatiles				Volatiles				Volatiles			
		Analyte Type	COPC				COPC				COPC				COPC				COPC				COPC				COPC				non-COPC				COPC				non-COPC				COPC			
		Analytical Method	8015				8260				8015				8015				8015				8015				8260				524.2				8260				524.2				8260			
		Analyte	TPH-g ****				TPH-g ****				TPH-d				TPH-d with Silica Gel Cleanup				TPH-o				TPH-o with Silica Gel Cleanup				Benzene				Benzene				Ethylbenzene				Ethylbenzene				Toluene			
		CAS No.	Gas				Gas				Diesel				Disel SGC				Oil				Oil SGC				71-43-2				71-43-2				100-41-4				100-41-4				108-88-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	300				300				400				400				500				500				5				5				30				30				40			
		SSRBL	—				—				4500				—				—				—				750				750				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW04	RHMW04-WG-03	1/26/2010[d]	< 60.0	U			—				< 334	U			—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U		
RHMW04	RHMWA01-WG-03	1/26/2010[*d]	< 60.0	U			—				< 330	U			—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U		
RHMW04	RHMW04-WG-04	4/26/2010[d]	< 60.0	U			—				< 348	U			—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U		
RHMW04	RHMWA01-WG-04	4/26/2010[*d]	< 60.0	U			—				< 352	U			—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U		
RHMW04	ES112	2014-07-23	—				< 30	U			**17**	**J**		Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW04	ES119	2014-10-29	—				< 30	U			< 12	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW04	ES129	2015-01-29	—				< 30	U			**10**	**J**		Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW04	ES139	2015-04-22	< 25	UJ	s		—				< 21	U			—				< 28	UJ	b		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U		
RHMW04	ES156	2015-08-20	< 25	U			—				< 24	UJ	b		—				< 40	UJ	b		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U		
RHMW04	ERH006	2015-10-19	< 25	U			—				< 22	UJ	b		—				< 53	UJ	b		—				**0.08**	**J**	h		—				< 0.10	UJ	h		—				< 0.42	UJ	h t	
RHMW04	ERH019	2016-01-19	< 25	U			—				< 36	UJ	b		—				< 52	UJ	b		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U		
RHMW04	ERH020	2016-01-19	< 25	U			—				< 29	UJ	b		—				< 53	UJ	b		—				< 0.10	U			—				< 0.10	U			—				< 0.11	UJ	t	
RHMW04	ERH034	2016-04-19	< 25	U			—				< 20	U	b f		—				< 33	U	b f		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U		
RHMW04	ERH048	2016-07-19	< 25	U			—				< 23	U	f		—				< 54	U	b f		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U		
RHMW04	ERH096	2016-10-25	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW04	ERH128	2016-11-14	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW04	ERH138	2016-12-13	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW04	ERH166	2017-01-09	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW04	ERH166 (EPA split)	2017-01-09	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—			
RHMW04	ERH208	2017-02-06	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW04	ERH208 (EPA split)	2017-02-06	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—			
RHMW04	ERH260	2017-03-06	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW04	ERH260 (EPA split)	2017-03-06	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—			
RHMW04	ERH295	2017-04-03	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW04	ERH381	2017-07-05	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW04	ERH421	2017-10-24	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW04	ERH552	2018-03-14	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW04	ERH598	2018-04-25	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW04	ERH644	2018-07-26	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW04	ERH688	2018-10-24	—				< 18	U			< 25	UJ	h		—				< 40	UJ	h		—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW04	ERH743	2019-01-21	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW04	ERH795	2019-04-22	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW04	ERH851	2019-07-23	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW04	ERH917	2019-10-21	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW04	ERH981	2020-01-21	—				< 18	U			**120**			Z	< 25	U			< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW04	ERH1049	2020-04-22	—				< 18	U			**240**	**J**	l	Z	—				< 300.0	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW05	RHMW05-WG15	5/13/2009[a]	< 13.2	UJ	b t		—				**200**	**J**		Z	—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U		
RHMW05	RHMW05-WG16	7/15/2009[a]	< 30.0	U			—				**491**			Z	—				—				—				< 0.120	U			—				< 0.310	U			—				< 0.310	U		
RHMW05	RHMW05-WG17	10/13/2009[a]	< 30.0	U			—				**673**			Z	—				—				—				< 0.12	U			—				< 0.31	U			—				< 0.31	U		
RHMW05	RHMW05-WG18	2010-01-26	< 60.0	U			—				**2,060**			Z	—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U		
RHMW05	RHMW05-WG19	2010-04-13	< 60.0	U			—				< 300	U			—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U		
RHMW05	RHMW05-WG20	2010-07-13	< 60.0	U			—				< 320	U			—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U		
RHMW05	ES005	2010-10-20	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U		
RHMW05	ES013	2011-01-19	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U		
RHMW05	ES024	4/20/2011[d]	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U		
RHMW05	ES039	2011-07-19	—				< 12.12	U			< 80.8	U			—				< 212.0	U			—				< 0.32	U			—				< 0.46	U			—				< 0.34	U		
RHMW05	ES051	2011-10-25	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U		
RHMW05	ES063	2012-02-01	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U		

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Volatiles			Volatiles			Volatiles			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Lead Scavenger			Lead Scavenger		
		Analyte Type	COPC			non-COPC			non-COPC			COPC			COPC			non-COPC			COPC			non-COPC			non-COPC			Lead Scavenger			Lead Scavenger		
		Analytical Method	8260			524.2			524.2			8270 SIM			8270 SIM			8270			8270 SIM			8260			524.2			8270			8011			8260		
		Analyte	Xylenes, Total (p/m-, o-xylene)			Xylenes, p/m-			Xylenes, o-			1-Methylnaphthalene			2-Methylnaphthalene			2-Methylnaphthalene			Naphthalene *****			Naphthalene *****			Naphthalene *****			Naphthalene *****			1,2-Dibromoethane *****			1,2-Dibromoethane *****		
		CAS No.	1330-20-7			179601-23-1			95-47-6			90-12-0			91-57-6			91-57-6			91-20-3			91-20-3			91-20-3			91-20-3			106-93-4			106-93-4		
		Unit	µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L		
		DOH EAL	20			20			20			10			10			10			17			17			17			17			0.04			0.04		
		SSRBL	—			—			—			—			—			—			—			—			—			—			—			—		
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW04	RHMW04-WG-03	1/26/2010[d]	< 1.24	U			—				—				< 0.0326	U			< 0.0326	U			—				< 0.0674	U			< 1.24	U			—				—				< 0.620	U		
RHMW04	RHMWA01-WG-03	1/26/2010[x,d]	< 1.24	U			—				—				< 0.0338	U			< 0.0338	U			—				< 0.0696	U			< 1.24	U			—				—				< 0.620	U		
RHMW04	RHMW04-WG-04	4/26/2010[d]	< 1.24	U			—				—				< 0.0352	U			< 0.0352	U			—				< 0.0730	U			< 1.24	U			—				—				< 0.620	U		
RHMW04	RHMWA01-WG-04	4/26/2010[x,d]	< 1.24	U			—				—				< 0.0352	U			< 0.0352	U			—				< 0.0730	U			< 1.24	U			—				—				< 0.620	U		
RHMW04	ES112	2014-07-23	< 1.0	U			—				—				< 0.052	U			< 0.052	U			—				< 0.052	U			—				—				—				< 0.50	U		
RHMW04	ES119	2014-10-29	< 1.0	U			—				—				< 0.099	U			< 0.050	U			—				< 0.050	U			—				—				—				< 0.50	U		
RHMW04	ES129	2015-01-29	< 1.0	U			—				—				< 0.10	U			< 0.052	U			—				< 0.052	U			—				—				—				< 0.50	U		
RHMW04	ES139	2015-04-22	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—				—				< 0.0040	UJ	h		< 0.20	U		
RHMW04	ES156	2015-08-20	< 0.20	U			—				—				< 0.0050	U			**0.0059**	**J**			—				**0.0075**	**J**			—				—				< 0.0040	U			< 0.20	U		
RHMW04	ERH006	2015-10-19	< 0.20	UJ	h		—				—				**0.0043**	**J**			< 0.0047	UJ	b		—				< 0.0051	UJ	b		—				—				< 0.0040	U			< 0.20	UJ	h	
RHMW04	ERH019	2016-01-19	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—				—				< 0.0040	U			< 0.20	U		
RHMW04	ERH020	2016-01-19	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—				—				< 0.0040	U			< 0.20	U		
RHMW04	ERH034	2016-04-19	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—				—				—				—			
RHMW04	ERH048	2016-07-19	< 0.20	U			—				—				**0.0070**	**J**			**0.0068**	**J**			—				**0.18**				—				—				—				—			
RHMW04	ERH096	2016-10-25	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW04	ERH128	2016-11-14	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW04	ERH138	2016-12-13	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW04	ERH166	2017-01-09	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW04	ERH166 (EPA split)	2017-01-09	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U			—			
RHMW04	ERH208	2017-02-06	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW04	ERH208 (EPA split)	2017-02-06	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U			—			
RHMW04	ERH260	2017-03-06	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW04	ERH260 (EPA split)	2017-03-06	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U			—			
RHMW04	ERH295	2017-04-03	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW04	ERH381	2017-07-05	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW04	ERH421	2017-10-24	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW04	ERH552	2018-03-14	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW04	ERH598	2018-04-25	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW04	ERH644	2018-07-26	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW04	ERH688	2018-10-24	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW04	ERH743	2019-01-21	**0.18**	**J**			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW04	ERH795	2019-04-22	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW04	ERH851	2019-07-23	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW04	ERH917	2019-10-21	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW04	ERH981	2020-01-21	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW04	ERH1049	2020-04-22	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW05	RHMW05-WG15	5/13/2009[a]	< 0.620	U			—				—				< 0.0158	U			< 0.0158	U			—				< 0.0326	U			< 0.620	U			—				—				< 0.310	U		
RHMW05	RHMW05-WG16	7/15/2009[a]	< 0.620	U			—				—				< 0.0165	U			< 0.0165	U			—				< 0.0341	U			< 0.620	U			—				—				< 0.310	U		
RHMW05	RHMW05-WG17	10/13/2009[a]	< 1	U			—				—				< 0.017	U			< 0.017	U			—				< 0.0352	U			< 0.62	U			—				—				< 0.31	U		
RHMW05	RHMW05-WG18	2010-01-26	< 1.24	U			—				—				**0.0207**	**J**			**0.0246**	**J**			—				< 0.0712	U			< 1.24	U			—				—				< 0.620	U		
RHMW05	RHMW05-WG19	2010-04-13	< 1.24	U			—				—				**0.0335**	**J**			< 0.0326	U			—				**0.0752**	**J**			< 1.24	U			—				—				< 0.620	U		
RHMW05	RHMW05-WG20	2010-07-13	< 1.24	U			—				—				< 0.0316	U			< 0.0316	U			—				**0.0643**	**J**			< 1.24	U			—				—				< 0.620	U		
RHMW05	ES005	2010-10-20	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				< 0.40	U		
RHMW05	ES013	2011-01-19	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				< 0.40	U		
RHMW05	ES024	4/20/2011[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				< 0.40	U		
RHMW05	ES039	2011-07-19	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				< 0.40	U		
RHMW05	ES051	2011-10-25	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				< 0.40	U		
RHMW05	ES063	2012-02-01	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				< 0.40	U		

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Semivolatiles				Semivolatiles			
		Analyte Type	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Fuel Additive				Fuel Additive					
		Analytical Method	504.1				524.2				8260SIM				8260SIM				8260				524.2				8270				8270/8270 Mod.			
		Analyte	1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				Phenol				2-(2-Methoxyethoxy)-ethanol			
		CAS No.	106-93-4				106-93-4				106-93-4				107-06-2				107-06-2				107-06-2				108-95-2				111-77-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	0.04				0.04				0.04				5				5				5				300				800			
		SSRBL	—				—				—				—				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW04	RHMW04-WG-03	1/26/2010[d]	—				—				—				—				< 0.300	U			—				—				—			
RHMW04	RHMWA01-WG-03	1/26/2010[*d]	—				—				—				—				< 0.300	U			—				—				—			
RHMW04	RHMW04-WG-04	4/26/2010[d]	—				—				—				—				< 0.300	U			—				—				—			
RHMW04	RHMWA01-WG-04	4/26/2010[*d]	—				—				—				—				< 0.300	U			—				—				—			
RHMW04	ES112	2014-07-23	—				—				—				—				< 0.50	U			—				—				—			
RHMW04	ES119	2014-10-29	—				—				—				—				< 0.50	U			—				—				—			
RHMW04	ES129	2015-01-29	—				—				—				—				< 0.50	U			—				—				—			
RHMW04	ES139	2015-04-22	—				—				< 0.010	U			< 0.015	U			—				—				—				—			
RHMW04	ES156	2015-08-20	—				—				—				< 0.015	U			—				—				—				—			
RHMW04	ERH006	2015-10-19	—				—				—				< 0.015	U			—				—				—				—			
RHMW04	ERH019	2016-01-19	—				—				—				< 0.015	U			—				—				—				—			
RHMW04	ERH020	2016-01-19	—				—				—				< 0.015	U			—				—				—				—			
RHMW04	ERH034	2016-04-19	—				—				—				—				—				—				—				—			
RHMW04	ERH048	2016-07-19	—				—				—				—				—				—				—				—			
RHMW04	ERH096	2016-10-25	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW04	ERH128	2016-11-14	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW04	ERH138	2016-12-13	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW04	ERH166	2017-01-09	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW04	ERH166 (EPA split)	2017-01-09	—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
RHMW04	ERH208	2017-02-06	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW04	ERH208 (EPA split)	2017-02-06	—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
RHMW04	ERH260	2017-03-06	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW04	ERH260 (EPA split)	2017-03-06	—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
RHMW04	ERH295	2017-04-03	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW04	ERH381	2017-07-05	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW04	ERH421	2017-10-24	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW04	ERH552	2018-03-14	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW04	ERH598	2018-04-25	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW04	ERH644	2018-07-26	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW04	ERH688	2018-10-24	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
RHMW04	ERH743	2019-01-21	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
RHMW04	ERH795	2019-04-22	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
RHMW04	ERH851	2019-07-23	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW04	ERH917	2019-10-21	—				—				—				—				—				—				< 4.00	UJ	I		< 80.0	U		
RHMW04	ERH981	2020-01-21	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW04	ERH1049	2020-04-22	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW05	RHMW05-WG15	5/13/2009[a]	—				—				—				—				< 0.150	U			—				—				—			
RHMW05	RHMW05-WG16	7/15/2009[a]	—				—				—				—				< 0.150	U			—				—				—			
RHMW05	RHMW05-WG17	10/13/2009[a]	—				—				—				—				< 0.15	U			—				—				—			
RHMW05	RHMW05-WG18	2010-01-26	—				—				—				—				< 0.300	U			—				—				—			
RHMW05	RHMW05-WG19	2010-04-13	—				—				—				—				< 0.300	U			—				—				—			
RHMW05	RHMW05-WG20	2010-07-13	—				—				—				—				< 0.300	U			—				—				—			
RHMW05	ES005	2010-10-20	—				—				—				—				< 0.28	U			—				—				—			
RHMW05	ES013	2011-01-19	—				—				—				—				< 0.28	U			—				—				—			
RHMW05	ES024	4/20/2011[d]	—				—				—				—				< 0.28	U			—				—				—			
RHMW05	ES039	2011-07-19	—				—				—				—				< 0.28	U			—				—				—			
RHMW05	ES051	2011-10-25	—				—				—				—				< 0.28	U			—				—				—			
RHMW05	ES063	2012-02-01	—				—				—				—				< 0.28	U			—				—				—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	TPH				TPH				TPH				TPH				TPH				TPH				Volatiles				Volatiles				Volatiles				Volatiles				Volatiles			
		Analyte Type	COPC				COPC				COPC				COPC				COPC				COPC				COPC				non-COPC				COPC				non-COPC				COPC			
		Analytical Method	8015				8260				8015				8015				8015				8015				8260				524.2				8260				524.2				8260			
		Analyte	TPH-g ****				TPH-g ****				TPH-d				TPH-d with Silica Gel Cleanup				TPH-o				TPH-o with Silica Gel Cleanup				Benzene				Benzene				Ethylbenzene				Ethylbenzene				Toluene			
		CAS No.	Gas				Gas				Diesel				Disel SGC				Oil				Oil SGC				71-43-2				71-43-2				100-41-4				100-41-4				108-88-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	300				300				400				400				500				500				5				5				30				30				40			
		SSRBL	—				—				4500				—				—				—				750				750				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW05	ES070	2012-04-16	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U		
RHMW05	ES079	2012-07-17	—				< 12.12	U			< 80.8	U			—				< 212.0	U			—				< 0.32	U			—				< 0.46	U			—				< 0.34	U		
RHMW05	ES080	7/17/2012*	—				< 12.12	U			< 80.8	U			—				< 212.0	U			—				< 0.32	U			—				< 0.46	U			—				< 0.34	U		
RHMW05	ES005	2012-10-22	—				< 15	UJ	b		**17**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				**0.31**	**J**		
RHMW05	ES015	2013-01-29	—				< 30	U			**62**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW05	ES024	2013-04-23	—				< 21	UJ	t		**27**	**J**			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW05	ES033	2013-07-23	—				< 30	U			< 20	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW05	ES042	2013-10-22	—				< 17	UJ	b		< 20	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW05	ES049	1/16/2014[d]	—				—				< 20	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW05	ES061	1/29/2014[d]	—				< 23	UJ	b		**16**	**J**		Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW05	ES068	3/6/2014[d]	—				—				< 21	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW05	ES076	3/26/2014[d]	—				—				**17**	**J**		Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW05	ES084	4/22/2014[d]	—				< 30	U			< 10	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW05	ES095	5/28/2014[d]	—				—				< 12	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW05	ES101	6/24/2014[d]	—				—				< 12	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW05	ES108	2014-07-22	—				< 30	U			< 12	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW05	ES118	2014-10-28	—				< 30	U			**16**	**J**		Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW05	ES124	2015-01-27	—				< 30	U			< 13	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
RHMW05	ES135	2015-04-21	< 25	U			—				< 17	UJ	b		—				< 34	UJ	b		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U		
RHMW05	ES142	2015-06-25	—				—				**15**	**J**			—				**41**	**J**			—				—				—				—				—				—			
RHMW05	ES150	2015-07-21	< 25	U			—				**18**	**J**	s		—				**44**	**J**	s		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U		
RHMW05	ERH010	2015-10-20	< 25	U			—				< 20	UJ	b		—				< 54	UJ	b		—				< 0.10	UJ	h		—				< 0.10	UJ	h		—				< 0.59	UJ	t	
RHMW05	ERH022	2016-01-20	< 25	U			—				< 27	UJ	b		—				< 45	UJ	b		—				< 0.10	U			—				< 0.10	U			—				< 0.18	UJ	t	
RHMW05	ERH023	1/20/2016*	< 25	U			—				< 26	UJ	b		—				< 44	UJ	b		—				< 0.10	U			—				< 0.10	U			—				< 0.12	UJ	t	
RHMW05	ERH038	2016-04-20	< 25	U			—				< 22	U	b f		—				< 65	U	b f		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U		
RHMW05	ERH052	2016-07-20	< 25	U			—				< 21	U			—				< 29	U	b f		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U		
RHMW05	ERH089	2016-10-19	—				< 18	U			< 25	U			< 25	U			< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW05	ERH126	2016-11-15	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW05	ERH136	2016-12-12	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW05	ERH164	2017-01-10	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW05	ERH164 (EPA split)	2017-01-10	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—			
RHMW05	ERH212	2017-02-07	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW05	ERH212 (EPA split)	2017-02-07	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—			
RHMW05	ERH278	2017-03-08	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW05	ERH278 (EPA split)	2017-03-08	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—			
RHMW05	ERH313	2017-04-03	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW05	ERH338	2017-05-01	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW05	ERH358	2017-06-06	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW05	ERH387	2017-07-05	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW05	ERH423	2017-10-24	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW05	ERH554	2018-03-13	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW05	ERH600	2018-04-23	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW05	ERH646	2018-07-23	—				< 18	U			< 25	UJ	s		—				< 40	UJ	l s		—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW05	ERH690	2018-10-22	—				< 18	U			< 25	UJ	h		—				< 40	UJ	h		—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW05	ERH745	2019-01-21	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW05	ERH797	2019-04-22	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW05	ERH853	2019-07-22	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW05	ERH919	2019-10-21	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Volatiles			Volatiles			Volatiles			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Lead Scavenger			Lead Scavenger		
		Analyte Type	COPC			non-COPC			non-COPC			COPC			COPC			non-COPC			COPC			non-COPC			non-COPC			Lead Scavenger			Lead Scavenger		
		Analytical Method	8260			524.2			524.2			8270 SIM			8270 SIM			8270			8270 SIM			8260			524.2			8270			8011			8260		
		Analyte	Xylenes, Total (p/m-, o-xylene)			Xylenes, p/m-			Xylenes, o-			1-Methylnaphthalene			2-Methylnaphthalene			2-Methylnaphthalene			Naphthalene *****			Naphthalene *****			Naphthalene *****			Naphthalene *****			1,2-Dibromoethane *****			1,2-Dibromoethane *****		
		CAS No.	1330-20-7			179601-23-1			95-47-6			90-12-0			91-57-6			91-57-6			91-20-3			91-20-3			91-20-3			91-20-3			106-93-4			106-93-4		
		Unit	µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L		
		DOH EAL	20			20			20			10			10			10			17			17			17			17			0.04			0.04		
		SSRBL	—			—			—			—			—			—			—			—			—			—			—			—		
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW05	ES070	2012-04-16	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				< 0.40	U		
RHMW05	ES079	2012-07-17	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				< 0.40	U		
RHMW05	ES080	7/17/2012*	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				< 0.40	U		
RHMW05	ES005	2012-10-22	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.038**	**J**			—				—				—				< 0.50	U		
RHMW05	ES015	2013-01-29	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.075**	**J**			—				—				—				< 0.50	U		
RHMW05	ES024	2013-04-23	< 1.0	U			—				—				< 0.048	U			< 0.048	U			—				**0.033**	**J**			—				—				—				< 0.50	U		
RHMW05	ES033	2013-07-23	< 1.0	U			—				—				< 0.051	U			< 0.051	U			—				**0.033**	**J**			—				—				—				< 0.50	U		
RHMW05	ES042	2013-10-22	< 1.0	U			—				—				< 0.051	U			< 0.051	U			—				**0.17**	**J**			—				—				—				< 0.50	U		
RHMW05	ES049	1/16/2014[d]	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				< 0.050	U			—				—				—				< 0.50	U		
RHMW05	ES061	1/29/2014[d]	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.064**	**J**			—				—				—				< 0.50	U		
RHMW05	ES068	3/6/2014[d]	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.038**	**J**			—				—				—				—			
RHMW05	ES076	3/26/2014[d]	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.092**	**J**			—				—				—				—			
RHMW05	ES084	4/22/2014[d]	< 1.0	U			—				—				< 0.051	U			< 0.051	U			—				**0.066**	**J**			—				—				—				< 0.50	U		
RHMW05	ES095	5/28/2014[d]	< 1.0	U			—				—				< 0.049	U			< 0.049	U			—				< 0.049	U			—				—				—				—			
RHMW05	ES101	6/24/2014[d]	< 1.0	U			—				—				< 0.051	U			< 0.051	U			—				< 0.051	U			—				—				—				—			
RHMW05	ES108	2014-07-22	< 1.0	U			—				—				< 0.049	U			< 0.049	U			—				< 0.049	U			—				—				—				< 0.50	U		
RHMW05	ES118	2014-10-28	< 1.0	U			—				—				< 0.096	U			< 0.048	U			—				< 0.048	U			—				—				—				< 0.50	U		
RHMW05	ES124	2015-01-27	< 1.0	U			—				—				< 0.096	U			< 0.048	U			—				< 0.048	U			—				—				—				< 0.50	U		
RHMW05	ES135	2015-04-21	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—				—				< 0.0040	U			< 0.20	U		
RHMW05	ES142	2015-06-25	—				—				—				**0.0046**	**J**			**0.0029**	**J**			—				< 0.0050	U			—				—				—				—			
RHMW05	ES150	2015-07-21	< 0.20	U			—				—				**0.0041**	**J**			**0.0036**	**J**			—				**0.0058**	**J**			—				—				< 0.0040	U			< 0.20	U		
RHMW05	ERH010	2015-10-20	< 0.20	UJ	h		—				—				**0.0050**	**J**			< 0.0066	UJ	b		—				< 0.0074	UJ	b		—				—				< 0.0040	U			< 0.20	UJ	h	
RHMW05	ERH022	2016-01-20	< 0.20	U			—				—				< 0.0050	U			**0.0031**	**J**			—				< 0.0050	U			—				—				< 0.0040	U			< 0.20	U		
RHMW05	ERH023	1/20/2016*	< 0.20	U			—				—				< 0.0050	U			**0.0039**	**J**			—				**0.0046**	**J**			—				—				< 0.0040	U			< 0.20	U		
RHMW05	ERH038	2016-04-20	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—				—				—				—			
RHMW05	ERH052	2016-07-20	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0060	U	b f		—				—				—				—			
RHMW05	ERH089	2016-10-19	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW05	ERH126	2016-11-15	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW05	ERH136	2016-12-12	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW05	ERH164	2017-01-10	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW05	ERH164 (EPA split)	2017-01-10	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U			—			
RHMW05	ERH212	2017-02-07	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW05	ERH212 (EPA split)	2017-02-07	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U			—			
RHMW05	ERH278	2017-03-08	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW05	ERH278 (EPA split)	2017-03-08	—				< 0.5	U			< 0.2	U			< 0.027	UJ	c		< 0.027	UJ	c		< 0.6	U			< 0.027	U			—				< 0.2	U			< 0.6	U			—			
RHMW05	ERH313	2017-04-03	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW05	ERH338	2017-05-01	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW05	ERH358	2017-06-06	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW05	ERH387	2017-07-05	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW05	ERH423	2017-10-24	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW05	ERH554	2018-03-13	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW05	ERH600	2018-04-23	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW05	ERH646	2018-07-23	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW05	ERH690	2018-10-22	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW05	ERH745	2019-01-21	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW05	ERH797	2019-04-22	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW05	ERH853	2019-07-22	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW05	ERH919	2019-10-21	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Semivolatiles				Semivolatiles			
		Analyte Type	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Fuel Additive				Fuel Additive					
		Analytical Method	504.1				524.2				8260SIM				8260SIM				8260				524.2				8270				8270/8270 Mod.			
		Analyte	1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				Phenol				2-(2-Methoxyethoxy)-ethanol			
		CAS No.	106-93-4				106-93-4				106-93-4				107-06-2				107-06-2				107-06-2				108-95-2				111-77-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	0.04				0.04				0.04				5				5				5				300				800			
		SSRBL	—				—				—				—				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW05	ES070	2012-04-16	—				—				—				—				< 0.28	U			—				—				—			
RHMW05	ES079	2012-07-17	—				—				—				—				< 0.28	U			—				—				—			
RHMW05	ES080	7/17/2012*	—				—				—				—				< 0.28	U			—				—				—			
RHMW05	ES005	2012-10-22	—				—				—				—				< 0.50	U			—				—				—			
RHMW05	ES015	2013-01-29	—				—				—				—				< 0.50	U			—				—				—			
RHMW05	ES024	2013-04-23	—				—				—				—				< 0.50	U			—				—				—			
RHMW05	ES033	2013-07-23	—				—				—				—				< 0.50	U			—				—				—			
RHMW05	ES042	2013-10-22	—				—				—				—				< 0.50	U			—				—				—			
RHMW05	ES049	1/16/2014[d]	—				—				—				—				< 0.50	U			—				—				—			
RHMW05	ES061	1/29/2014[d]	—				—				—				—				< 0.50	U			—				—				—			
RHMW05	ES068	3/6/2014[d]	—				—				—				—				—				—				—				—			
RHMW05	ES076	3/26/2014[d]	—				—				—				—				—				—				—				—			
RHMW05	ES084	4/22/2014[d]	—				—				—				—				< 0.50	U			—				—				—			
RHMW05	ES095	5/28/2014[d]	—				—				—				—				—				—				—				—			
RHMW05	ES101	6/24/2014[d]	—				—				—				—				—				—				—				—			
RHMW05	ES108	2014-07-22	—				—				—				—				< 0.50	U			—				—				—			
RHMW05	ES118	2014-10-28	—				—				—				—				< 0.50	U			—				—				—			
RHMW05	ES124	2015-01-27	—				—				—				—				< 0.50	U			—				—				—			
RHMW05	ES135	2015-04-21	—				—				< 0.010	U			< 0.015	U			—				—				—				—			
RHMW05	ES142	2015-06-25	—				—				—				—				—				—				—				—			
RHMW05	ES150	2015-07-21	—				—				—				< 0.015	U			—				—				—				—			
RHMW05	ERH010	2015-10-20	—				—				—				< 0.015	U			—				—				—				—			
RHMW05	ERH022	2016-01-20	—				—				—				< 0.015	U			—				—				—				—			
RHMW05	ERH023	1/20/2016*	—				—				—				< 0.015	U			—				—				—				—			
RHMW05	ERH038	2016-04-20	—				—				—				—				—				—				—				—			
RHMW05	ERH052	2016-07-20	—				—				—				—				—				—				—				—			
RHMW05	ERH089	2016-10-19	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	h	
RHMW05	ERH126	2016-11-15	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW05	ERH136	2016-12-12	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW05	ERH164	2017-01-10	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW05	ERH164 (EPA split)	2017-01-10	—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
RHMW05	ERH212	2017-02-07	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW05	ERH212 (EPA split)	2017-02-07	—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
RHMW05	ERH278	2017-03-08	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW05	ERH278 (EPA split)	2017-03-08	—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.8	U			—			
RHMW05	ERH313	2017-04-03	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW05	ERH338	2017-05-01	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW05	ERH358	2017-06-06	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW05	ERH387	2017-07-05	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW05	ERH423	2017-10-24	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW05	ERH554	2018-03-13	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW05	ERH600	2018-04-23	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW05	ERH646	2018-07-23	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW05	ERH690	2018-10-22	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW05	ERH745	2019-01-21	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW05	ERH797	2019-04-22	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW05	ERH853	2019-07-22	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW05	ERH919	2019-10-21	—				—				—				—				—				—				< 4.00	UJ	l		< 80.0	U		

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	TPH				TPH				TPH				TPH				TPH				Volatiles				Volatiles				Volatiles				Volatiles				Volatiles			
		Analyte Type	COPC				COPC				COPC				COPC				COPC				COPC				non-COPC				COPC				non-COPC				COPC			
		Analytical Method	8015				8260				8015				8015				8015				8260				524.2				8260				524.2				8260			
		Analyte	TPH-g ****				TPH-g ****				TPH-d				TPH-d with Silica Gel Cleanup				TPH-o				TPH-o with Silica Gel Cleanup				Benzene				Benzene				Ethylbenzene				Ethylbenzene				Toluene				Toluene			
		CAS No.	Gas				Gas				Diesel				Disel SGC				Oil				Oil SGC				71-43-2				71-43-2				100-41-4				100-41-4				108-88-3				108-88-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	300				300				400				400				500				500				5				5				30				30				40				40			
		SSRBL	—				—				4500				—				—				—				750				750				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW05	ERH983	2020-01-21	—				< 18	U			**93**			Z	< 25	UJ	s		**92**			Z	< 40	UJ	s		< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW05	ERH1051	2020-04-21	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	RHMW06-GW-01	10/21/2014[d]	< 20	U			—				< 86	U			—				< 86	U			—				< 0.200	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	RHMW06-GW-02	1/23/2015[d]	< 20	U			—				< 76	U			—				< 76	U			—				< 0.200	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ES140	2015-04-23	< 25	U			—				**20**	**J**			—				< 47	UJ	b		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
RHMW06	ES155	2015-07-28	< 25	U			—				< 20	U			—				< 50	U			—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
RHMW06	ERH004	2015-10-19	< 25	U			—				< 17	UJ	b		—				< 53	UJ	b		—				< 0.10	UJ	h		—				< 0.10	UJ	h		—				< 1.1	UJ	b h t		—			
RHMW06	ERH005	2015-10-19	< 25	U			—				< 21	UJ	b		—				< 53	UJ	b		—				< 0.10	UJ	h		—				< 0.10	UJ	h		—				< 0.5	UJ	b h t		—			
RHMW06	ERH018	2016-01-19	< 25	U			—				< 21	UJ	b		—				< 54	UJ	b		—				< 0.10	U			—				< 0.10	U			—				< 0.1	UJ	t		—			
RHMW06	ERH033	2016-04-19	< 25	U			—				< 28	U	b f		—				< 48	U	b f		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
RHMW06	ERH047	2016-07-19	< 25	U			—				< 23	U			—				< 27	U	b f		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
RHMW06	ERH097	2016-10-19	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ERH120	2016-11-14	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ERH139	2016-12-12	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ERH168	2017-01-09	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ERH168 (EPA split)	2017-01-09	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW06	ERH210	2017-02-07	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ERH210 (EPA split)	2017-02-07	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW06	ERH284	2017-03-07	—				< 18	U			< 25	U			—				**47**			Y	—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ERH284 (EPA split)	2017-03-07	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW06	ERH319	2017-04-03	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ERH369	2017-07-04	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ERH425	2017-10-24	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ERH556	2018-03-12	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ERH602	2018-04-23	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ERH648	2018-07-23	—				< 18	U			< 25	U			—				< 40	UJ	l		—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ERH692	2018-10-23	—				< 18	U			< 25	UJ	h		—				< 40	UJ	h		—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ERH747	2019-01-21	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ERH799	2019-04-22	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ERH855	2019-07-22	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ERH921	2019-10-21	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ERH985	2020-01-20	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW06	ERH1053	2020-04-20	—				< 18	U			< 300.0	U			< 300.0	U			< 300.0	U			< 300.0	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	RHMW07-GW-01	10/20/2014[d]	< 20	U			—				**57**	**J**			—				< 78	U			—				< 0.200	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	RHMW07-GW-01FD	10/20/2014[d]	< 20	U			—				**66**	**J**			—				< 77	U			—				< 0.200	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	RHMW07-GW-02	1/22/2015[d]	< 20	U			—				< 75	U			—				< 75	U			—				< 0.200	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	RHMW07-GW-02FD	1/22/2015*[d]	< 20	U			—				< 81	U			—				< 81	U			—				< 0.200	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	ES141	2015-04-23	< 25	U			—				**26**	**J**			—				< 47	UJ	b		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
RHMW07	ES154	2015-07-27	< 25	U			—				**22**	**J**			—				**48**	**J**			—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
RHMW07	ERH003	2015-10-19	< 25	U			—				< 26	UJ	b		—				< 59	UJ	b		—				< 0.10	UJ	h		—				< 0.10	UJ	h		—				< 0.64	UJ	b h t		—			
RHMW07	ERH017	2016-01-19	< 25	U			—				< 28	UJ	b		—				< 44	UJ	b		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
RHMW07	ERH032	2016-04-19	< 25	U			—				< 26	U	b f		—				< 52	U	b f		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
RHMW07	ERH045	2016-07-19	< 25	U			—				< 22	U			—				< 40	U	b f		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
RHMW07	ERH046	2016-07-19	< 25	U			—				< 17	U	f		—				< 160	U	b		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U			—			
RHMW07	ERH098	2016-10-19	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	ERH121	2016-11-14	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	ERH140	2016-12-13	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	ERH179	2017-01-10	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Volatiles			Volatiles			Volatiles			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Lead Scavenger			Lead Scavenger		
		Analyte Type	COPC			non-COPC			non-COPC			COPC			COPC			non-COPC			COPC			non-COPC			non-COPC			Lead Scavenger			Lead Scavenger		
		Analytical Method	8260			524.2			524.2			8270 SIM			8270 SIM			8270			8270 SIM			8260			524.2			8270			8011			8260		
		Analyte	Xylenes, Total (p/m-, o-xylene)			Xylenes, p/m-			Xylenes, o-			1-Methylnaphthalene			2-Methylnaphthalene			2-Methylnaphthalene			Naphthalene *****			Naphthalene *****			Naphthalene *****			Naphthalene *****			1,2-Dibromoethane *****			1,2-Dibromoethane *****		
		CAS No.	1330-20-7			179601-23-1			95-47-6			90-12-0			91-57-6			91-57-6			91-20-3			91-20-3			91-20-3			91-20-3			106-93-4			106-93-4		
		Unit	µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L		
		DOH EAL	20			20			20			10			10			10			17			17			17			17			0.04			0.04		
		SSRBL	—			—			—			—			—			—			—			—			—			—			—			—		
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW05	ERH983	2020-01-21	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW05	ERH1051	2020-04-21	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW06	RHMW06-GW-01	10/21/2014[d]	< 0.30	U			—				—				< 0.011	U			**0.0064**	**J**			—				< 0.053	U			—				—				< 0.020	U			< 0.50	U		
RHMW06	RHMW06-GW-02	1/23/2015[d]	< 0.30	U			—				—				< 0.010	U			< 0.010	U			—				< 0.052	U			—				—				< 0.020	U			< 0.50	U		
RHMW06	ES140	2015-04-23	< 0.20	U			—				—				< 0.0052	U			< 0.0052	U			—				< 0.0052	U			—				—				< 0.0040	UJ	h		< 0.20	U		
RHMW06	ES155	2015-07-28	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—				—				< 0.0040	U			< 0.20	U		
RHMW06	ERH004	2015-10-19	< 0.20	UJ	h		—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	UJ	b		—				—				< 0.0040	U			< 0.20	UJ	h	
RHMW06	ERH005	2015-10-19	< 0.20	UJ	h		—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—				—				< 0.0040	U			< 0.20	UJ	h	
RHMW06	ERH018	2016-01-19	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—				—				< 0.0040	U			< 0.20	U		
RHMW06	ERH033	2016-04-19	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—				—				—				—			
RHMW06	ERH047	2016-07-19	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0047	U	b f		—				—				—				—			
RHMW06	ERH097	2016-10-19	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW06	ERH120	2016-11-14	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW06	ERH139	2016-12-12	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW06	ERH168	2017-01-09	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW06	ERH168 (EPA split)	2017-01-09	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U			—			
RHMW06	ERH210	2017-02-07	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.10	U			—			
RHMW06	ERH210 (EPA split)	2017-02-07	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c s		< 0.025	UJ	c s		< 0.5	U			< 0.025	UJ	s		—				< 0.2	U			< 0.5	U			—			
RHMW06	ERH284	2017-03-07	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW06	ERH284 (EPA split)	2017-03-07	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U			—			
RHMW06	ERH319	2017-04-03	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW06	ERH369	2017-07-04	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW06	ERH425	2017-10-24	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW06	ERH556	2018-03-12	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW06	ERH602	2018-04-23	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW06	ERH648	2018-07-23	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW06	ERH692	2018-10-23	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW06	ERH747	2019-01-21	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW06	ERH799	2019-04-22	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW06	ERH855	2019-07-22	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW06	ERH921	2019-10-21	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW06	ERH985	2020-01-20	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW06	ERH1053	2020-04-20	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW07	RHMW07-GW-01	10/20/2014[d]	< 0.30	U			—				—				< 0.0096	U			**0.0084**	**J**			—				< 0.048	U			—				—				< 0.020	U			< 0.50	U		
RHMW07	RHMW07-GW-01FD	10/20/2014[d]	< 0.30	U			—				—				< 0.010	U			**0.0060**	**J**			—				< 0.050	U			—				—				< 0.020	U			< 0.50	U		
RHMW07	RHMW07-GW-02	1/22/2015[d]	< 0.30	U			—				—				< 0.011	U			< 0.011	U			—				< 0.055	U			—				—				< 0.020	U			< 0.50	U		
RHMW07	RHMW07-GW-02FD	1/22/2015*[d]	< 0.30	U			—				—				< 0.010	U			< 0.010	U			—				< 0.050	U			—				—				< 0.020	U			< 0.50	U		
RHMW07	ES141	2015-04-23	< 0.20	U			—				—				< 0.0052	U			< 0.0052	U			—				< 0.0052	U			—				—				< 0.0040	UJ	h		< 0.20	U		
RHMW07	ES154	2015-07-27	< 0.20	U			—				—				**0.0051**	**J**			**0.0095**	**J**			—				**0.0060**	**J**			—				—				< 0.0040	U			< 0.20	U		
RHMW07	ERH003	2015-10-19	< 0.20	UJ	h		—				—				**0.0067**	**J**			< 0.01	UJ	b		—				< 0.01	UJ	b		—				—				< 0.0040	U			< 0.20	UJ	h	
RHMW07	ERH017	2016-01-19	< 0.20	U			—				—				**0.0046**	**J**			**0.0077**	**J**			—				**0.0038**	**J**			—				—				< 0.0040	U			< 0.20	U		
RHMW07	ERH032	2016-04-19	< 0.20	U			—				—				< 0.0050	U			< 0.0036	U	f		—				< 0.0050	U			—				—				—				—			
RHMW07	ERH045	2016-07-19	< 0.20	U			—				—				< 0.0050	U			**0.0037**	**J**			—				< 0.0074	U	b f		—				—				—				—			
RHMW07	ERH046	2016-07-19	< 0.20	U			—				—				< 0.0050	U			**0.0033**	**J**			—				< 0.0077	U	b f		—				—				—				—			
RHMW07	ERH098	2016-10-19	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW07	ERH121	2016-11-14	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW07	ERH140	2016-12-13	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW07	ERH179	2017-01-10	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Semivolatiles				Semivolatiles			
		Analyte Type	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Fuel Additive				Fuel Additive					
		Analytical Method	504.1				524.2				8260SIM				8260SIM				8260				524.2				8270				8270/8270 Mod.			
		Analyte	1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				Phenol				2-(2-Methoxyethoxy)-ethanol			
		CAS No.	106-93-4				106-93-4				106-93-4				107-06-2				107-06-2				107-06-2				108-95-2				111-77-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	0.04				0.04				0.04				5				5				5				300				800			
		SSRBL	—				—				—				—				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW05	ERH983	2020-01-21	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW05	ERH1051	2020-04-21	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW06	RHMW06-GW-01	10/21/2014[d]	—				—				—				—				< 0.100	U			—				—				—			
RHMW06	RHMW06-GW-02	1/23/2015[d]	—				—				—				—				< 0.100	U			—				—				—			
RHMW06	ES140	2015-04-23	—				—				< 0.010	U			< 0.015	U			—				—				—				—			
RHMW06	ES155	2015-07-28	—				—				—				< 0.015	U			—				—				—				—			
RHMW06	ERH004	2015-10-19	—				—				—				< 0.015	U			—				—				—				—			
RHMW06	ERH005	2015-10-19	—				—				—				< 0.015	U			—				—				—				—			
RHMW06	ERH018	2016-01-19	—				—				—				< 0.015	U			—				—				—				—			
RHMW06	ERH033	2016-04-19	—				—				—				—				—				—				—				—			
RHMW06	ERH047	2016-07-19	—				—				—				—				—				—				—				—			
RHMW06	ERH097	2016-10-19	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	h	
RHMW06	ERH120	2016-11-14	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW06	ERH139	2016-12-12	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW06	ERH168	2017-01-09	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW06	ERH168 (EPA split)	2017-01-09	—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
RHMW06	ERH210	2017-02-07	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW06	ERH210 (EPA split)	2017-02-07	—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
RHMW06	ERH284	2017-03-07	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW06	ERH284 (EPA split)	2017-03-07	—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
RHMW06	ERH319	2017-04-03	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW06	ERH369	2017-07-04	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW06	ERH425	2017-10-24	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW06	ERH556	2018-03-12	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW06	ERH602	2018-04-23	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW06	ERH648	2018-07-23	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW06	ERH692	2018-10-23	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW06	ERH747	2019-01-21	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW06	ERH799	2019-04-22	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW06	ERH855	2019-07-22	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW06	ERH921	2019-10-21	—				—				—				—				—				—				< 4.00	UJ	l		< 80.0	U		
RHMW06	ERH985	2020-01-20	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW06	ERH1053	2020-04-20	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW07	RHMW07-GW-01	10/20/2014[d]	—				—				—				—				< 0.100	U			—				—				—			
RHMW07	RHMW07-GW-01FD	10/20/2014[d]	—				—				—				—				< 0.100	U			—				—				—			
RHMW07	RHMW07-GW-02	1/22/2015[d]	—				—				—				—				< 0.100	U			—				—				—			
RHMW07	RHMW07-GW-02FD	1/22/2015*[d]	—				—				—				—				< 0.100	U			—				—				—			
RHMW07	ES141	2015-04-23	—				—				< 0.010	U			< 0.015	U			—				—				—				—			
RHMW07	ES154	2015-07-27	—				—				—				< 0.015	U			—				—				—				—			
RHMW07	ERH003	2015-10-19	—				—				—				< 0.015	U			—				—				—				—			
RHMW07	ERH017	2016-01-19	—				—				—				< 0.015	U			—				—				—				—			
RHMW07	ERH032	2016-04-19	—				—				—				—				—				—				—				—			
RHMW07	ERH045	2016-07-19	—				—				—				—				—				—				—				—			
RHMW07	ERH046	2016-07-19	—				—				—				—				—				—				—				—			
RHMW07	ERH098	2016-10-19	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	h	
RHMW07	ERH121	2016-11-14	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW07	ERH140	2016-12-13	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW07	ERH179	2017-01-10	—				—				—				—				—				—				< 4.00	U			< 80.0	U		

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	TPH				TPH				TPH				TPH				TPH				Volatiles				Volatiles				Volatiles				Volatiles				Volatiles			
		Analyte Type	COPC				COPC				COPC				COPC				COPC				COPC				non-COPC				COPC				non-COPC				COPC			
		Analytical Method	8015				8260				8015				8015				8015				8260				524.2				8260				524.2				8260			
		Analyte	TPH-g ****				TPH-g ****				TPH-d				TPH-d with Silica Gel Cleanup				TPH-o				TPH-o with Silica Gel Cleanup				Benzene				Benzene				Ethylbenzene				Ethylbenzene				Toluene				Toluene			
		CAS No.	Gas				Gas				Diesel				Disel SGC				Oil				Oil SGC				71-43-2				71-43-2				100-41-4				100-41-4				108-88-3				108-88-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	300				300				400				400				500				500				5				5				30				30				40				40			
		SSRBL	—				—				4500				—				—				—				750				750				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW07	ERH179 (EPA split)	2017-01-10	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			< 0.2	U		
RHMW07	ERH218	2017-02-08	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	ERH218 (EPA split)	2017-02-08	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW07	ERH270	2017-03-07	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	ERH270 (EPA split)	2017-03-07	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW07	ERH305	2017-04-03	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	ERH371	2017-07-04	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	ERH427	2017-10-25	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	ERH558	2018-03-13	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	ERH604	2018-04-24	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	ERH650	2018-07-24	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	ERH694	2018-10-23	—				< 18	U			< 25	UJ	h		—				< 40	UJ	h		—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	ERH749	2019-01-23	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	UJ	l		—			
RHMW07	ERH801	2019-04-22	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	ERH857	2019-07-22	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	ERH923	2019-10-22	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	ERH987	2020-01-20	—				< 18	U			**120**			Z	< 25	U			**84**			Z	**39**	J		Y	< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW07	ERH1055	2020-04-20	—				< 18	U			< 300.0	UJ	s		< 300.0	U			**150**	**J**	s,l	Z	< 300.0	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH102	2016-10-19	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH122	2016-11-15	—				< 18	U			**33**			Y	< 25	U			**32**	**J**			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH141	2016-12-12	—				< 18	U			**27**	**J**		Y	—				**29**	**J**			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH157	2016-12-21	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH158	12/21/2016*	—				< 18	U			**63**			O	—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH169	2017-01-11	—				< 18	U			**28**	**J**		Y	—				**29**	**J**			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH170	1/11/2017*	—				< 18	U			**23**	**J**		Y	—				**27**	**J**			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH169 (EPA split)	2017-01-11	< 25	UJ	c		—				**160**				—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW08	ERH170 (EPA split)	1/11/2017*	< 25	UJ	c		—				**150**				—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW08	ERH220	2017-02-06	—				< 18	U			**26**	**J**		Y	—				**31**	**J**			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH221	2/6/2017*	—				< 18	U			**25**	**J**		Y	—				**28**	**J**			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH220 (EPA split)	2017-02-06	< 25	UJ	c		—				**130**	**J**			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW08	ERH221 (EPA split)	2/6/2017*	< 25	UJ	c		—				**120**	**J**			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW08	ERH262	2017-03-06	—				< 18	U			**27**	**J**		Y	—				**23**	**J**			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH263	3/6/2017*	—				< 18	U			**25**	**J**		Y	—				**25**	**J**			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH262 (EPA split)	2017-03-06	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW08	ERH263 (EPA split)	3/6/2017*	< 25	UJ	c		—				**98**	**J**			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
RHMW08	ERH297	2017-04-04	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH298	4/4/2017*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH340	2017-05-02	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH360	2017-06-05	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH376	2017-07-04	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH429	2017-10-23	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH560	2018-03-12	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH606	2018-04-23	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH652	2018-07-24	—				< 18	UJ	s		< 25	U			—				< 40	U			—				< 0.30	UJ	s		—				< 0.50	UJ	s		—				< 0.30	UJ	s		—			
RHMW08	ERH696	2018-10-24	—				< 18	U			< 25	UJ	h		—				< 40	UJ	h		—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH751	2019-01-21	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH803	2019-04-23	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH859	2019-08-07	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH925	2019-10-30	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW08	ERH989	2020-01-20	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Volatiles			Volatiles			Volatiles			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Lead Scavenger			Lead Scavenger		
		Analyte Type	COPC			non-COPC			non-COPC			COPC			COPC			non-COPC			COPC			non-COPC			non-COPC			Lead Scavenger			Lead Scavenger		
		Analytical Method	8260			524.2			524.2			8270 SIM			8270 SIM			8270			8270 SIM			8260			524.2			8270			8011			8260		
		Analyte	Xylenes, Total (p/m-, o-xylene)			Xylenes, p/m-			Xylenes, o-			1-Methylnaphthalene			2-Methylnaphthalene			2-Methylnaphthalene			Naphthalene *****			Naphthalene *****			Naphthalene *****			Naphthalene *****			1,2-Dibromoethane *****			1,2-Dibromoethane *****		
		CAS No.	1330-20-7			179601-23-1			95-47-6			90-12-0			91-57-6			91-57-6			91-20-3			91-20-3			91-20-3			91-20-3			106-93-4			106-93-4		
		Unit	µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L		
		DOH EAL	20			20			20			10			10			10			17			17			17			17			0.04			0.04		
		SSRBL	—			—			—			—			—			—			—			—			—			—			—			—		
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW07	ERH179 (EPA split)	2017-01-10	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U			—				—			
RHMW07	ERH218	2017-02-08	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW07	ERH218 (EPA split)	2017-02-08	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U			—				—			
RHMW07	ERH270	2017-03-07	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW07	ERH270 (EPA split)	2017-03-07	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U			—				—			
RHMW07	ERH305	2017-04-03	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW07	ERH371	2017-07-04	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW07	ERH427	2017-10-25	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW07	ERH558	2018-03-13	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW07	ERH604	2018-04-24	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW07	ERH650	2018-07-24	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW07	ERH694	2018-10-23	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW07	ERH749	2019-01-23	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW07	ERH801	2019-04-22	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW07	ERH857	2019-07-22	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW07	ERH923	2019-10-22	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW07	ERH987	2020-01-20	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW07	ERH1055	2020-04-20	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW08	ERH102	2016-10-19	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				< 0.02	U			—			
RHMW08	ERH122	2016-11-15	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				< 0.02	UJ	c		—			
RHMW08	ERH141	2016-12-12	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				< 0.02	U			—			
RHMW08	ERH157	2016-12-21	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				< 0.02	U			—			
RHMW08	ERH158	12/21/2016*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				< 0.02	U			—			
RHMW08	ERH169	2017-01-11	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				< 0.02	U			—			
RHMW08	ERH170	1/11/2017*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				< 0.02	U			—			
RHMW08	ERH169 (EPA split)	2017-01-11	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U			—				—			
RHMW08	ERH170 (EPA split)	1/11/2017*	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U			—				—			
RHMW08	ERH220	2017-02-06	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				< 0.02	U			—			
RHMW08	ERH221	2/6/2017*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				< 0.02	U			—			
RHMW08	ERH220 (EPA split)	2017-02-06	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U			—				—			
RHMW08	ERH221 (EPA split)	2/6/2017*	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U			—				—			
RHMW08	ERH262	2017-03-06	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				< 0.02	U			—			
RHMW08	ERH263	3/6/2017*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				< 0.02	U			—			
RHMW08	ERH262 (EPA split)	2017-03-06	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U			—				—			
RHMW08	ERH263 (EPA split)	3/6/2017*	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U			—				—			
RHMW08	ERH297	2017-04-04	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				< 0.02	U			—			
RHMW08	ERH298	4/4/2017*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				< 0.02	U			—			
RHMW08	ERH340	2017-05-02	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				< 0.02	U			—			
RHMW08	ERH360	2017-06-05	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				< 0.02	U			—			
RHMW08	ERH376	2017-07-04	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				< 0.02	U			—			
RHMW08	ERH429	2017-10-23	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW08	ERH560	2018-03-12	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW08	ERH606	2018-04-23	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW08	ERH652	2018-07-24	< 0.30	UJ	s		—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW08	ERH696	2018-10-24	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW08	ERH751	2019-01-21	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW08	ERH803	2019-04-23	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW08	ERH859	2019-08-07	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW08	ERH925	2019-10-30	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW08	ERH989	2020-01-20	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Semivolatiles				Semivolatiles			
		Analyte Type	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Fuel Additive				Fuel Additive					
		Analytical Method	504.1				524.2				8260SIM				8260SIM				8260				524.2				8270				8270/8270 Mod.			
		Analyte	1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				Phenol				2-(2-Methoxyethoxy)-ethanol			
		CAS No.	106-93-4				106-93-4				106-93-4				107-06-2				107-06-2				107-06-2				108-95-2				111-77-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	0.04				0.04				0.04				5				5				5				300				800			
		SSRBL	—				—				—				—				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW07	ERH179 (EPA split)	2017-01-10	—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
RHMW07	ERH218	2017-02-08	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW07	ERH218 (EPA split)	2017-02-08	—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
RHMW07	ERH270	2017-03-07	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW07	ERH270 (EPA split)	2017-03-07	—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
RHMW07	ERH305	2017-04-03	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW07	ERH371	2017-07-04	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW07	ERH427	2017-10-25	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW07	ERH558	2018-03-13	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW07	ERH604	2018-04-24	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW07	ERH650	2018-07-24	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW07	ERH694	2018-10-23	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW07	ERH749	2019-01-23	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW07	ERH801	2019-04-22	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW07	ERH857	2019-07-22	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW07	ERH923	2019-10-22	—				—				—				—				—				—				< 4.00	UJ	l		< 80.0	U		
RHMW07	ERH987	2020-01-20	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW07	ERH1055	2020-04-20	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW08	ERH102	2016-10-19	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	UJ	h	
RHMW08	ERH122	2016-11-15	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW08	ERH141	2016-12-12	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW08	ERH157	2016-12-21	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW08	ERH158	12/21/2016*	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW08	ERH169	2017-01-11	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW08	ERH170	1/11/2017*	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW08	ERH169 (EPA split)	2017-01-11	—				< 0.0025	U			—				—				—				**3.1**	**J**			< 2.5	U			—			
RHMW08	ERH170 (EPA split)	1/11/2017*	—				< 0.0025	U			—				—				—				**3.1**	**J**			< 2.5	U			—			
RHMW08	ERH220	2017-02-06	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW08	ERH221	2/6/2017*	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW08	ERH220 (EPA split)	2017-02-06	—				< 0.0025	U			—				—				—				**3.9**	**J**			< 2.5	U			—			
RHMW08	ERH221 (EPA split)	2/6/2017*	—				< 0.0025	U			—				—				—				**3.8**	**J**			< 2.5	U			—			
RHMW08	ERH262	2017-03-06	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW08	ERH263	3/6/2017*	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW08	ERH262 (EPA split)	2017-03-06	—				< 0.0025	U			—				—				—				**2.7**	**J**			< 2.5	U			—			
RHMW08	ERH263 (EPA split)	3/6/2017*	—				< 0.0025	U			—				—				—				**2.8**	**J**			< 2.5	U			—			
RHMW08	ERH297	2017-04-04	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW08	ERH298	4/4/2017*	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW08	ERH340	2017-05-02	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW08	ERH360	2017-06-05	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW08	ERH376	2017-07-04	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW08	ERH429	2017-10-23	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW08	ERH560	2018-03-12	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW08	ERH606	2018-04-23	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW08	ERH652	2018-07-24	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW08	ERH696	2018-10-24	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW08	ERH751	2019-01-21	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW08	ERH803	2019-04-23	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW08	ERH859	2019-08-07	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW08	ERH925	2019-10-30	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
RHMW08	ERH989	2020-01-20	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	TPH				TPH				TPH				TPH				TPH				Volatiles				Volatiles				Volatiles				Volatiles				Volatiles			
		Analyte Type	COPC				COPC				COPC				COPC				COPC				COPC				non-COPC				COPC				non-COPC				COPC			
		Analytical Method	8015				8260				8015				8015				8015				8260				524.2				8260				524.2				8260			
		Analyte	TPH-g ****				TPH-g ****				TPH-d				TPH-d with Silica Gel Cleanup				TPH-o				TPH-o with Silica Gel Cleanup				Benzene				Benzene				Ethylbenzene				Ethylbenzene				Toluene				Toluene			
		CAS No.	Gas				Gas				Diesel				Disel SGC				Oil				Oil SGC				71-43-2				71-43-2				100-41-4				100-41-4				108-88-3				108-88-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	300				300				400				400				500				500				5				5				30				30				40				40			
		SSRBL	—				—				4500				—				—				—				750				750				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW08	ERH1057	2020-04-20	—				< 18	U			**150**	**J**	s	Z	< 300.0	U			**170**	**J**	s,l	Z	< 300.0	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW09	ERH103	2016-10-25	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW09	ERH129	2016-11-15	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW09	ERH146	2016-12-12	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW09	ERH178	2017-01-11	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW09	ERH178 (EPA split)	2017-01-11	< 25	UJ	c		—				< 71	U			—				< 290	U			—				—				< 0.2	U			—				< 0.2	U			< 0.2	U		
RHMW09	ERH225	2017-02-08	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW09	ERH247	2/8/2017*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW09	ERH225 (EPA split)	2017-02-08	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			< 0.2	U		
RHMW09	ERH247 (EPA split)	2/8/2017*	< 25	UJ	c		—				< 71	U			—				< 280	U			—				—				< 0.2	U			—				< 0.2	U			< 0.2	U		
RHMW09	ERH272	2017-03-07	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW09	ERH272 (EPA split)	2017-03-07	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			< 0.2	U		
RHMW09	ERH307	2017-04-04	—				< 18	UJ	q		< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW09	ERH314	4/4/2017*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW09	ERH385	2017-07-05	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW09	ERH431	2017-10-24	—				< 18	U			< 25	UJ	s		—				< 40	UJ	s		—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW09	ERH562	2018-03-13	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW09	ERH608	2018-04-25	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW09	ERH654	2018-07-25	—				< 18	UJ	s		< 25	U			—				< 40	U			—				< 0.30	UJ	s		—				< 0.50	UJ	s		—				< 0.30	UJ	s		—			
RHMW09	ERH698	2018-10-23	—				< 18	U			< 25	UJ	h		—				< 40	UJ	h		—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW09	ERH753	2019-01-22	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	UJ	s		—				< 0.50	UJ	s		—				< 0.30	UJ	s		—			
RHMW09	ERH805	2019-04-23	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW09	ERH861	2019-07-23	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW09	ERH927	2019-10-22	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW09	ERH991	2020-01-21	—				< 18	U			**100**			Z	< 25	U			**98**			Z	< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW09	ERH1059	2020-04-21	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW10	ERH345	2017-05-04	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW10	ERH346	5/4/2017*	—				< 18	U			**89**			Z	**56**			Z	**190**				**140**				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW10	ERH365	2017-06-05	—				< 18	U			< 25	UJ	h		< 25	UJ	h		< 40	U			< 40	UJ	h		< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW10	ERH366	6/5/2017*	—				< 18	U			< 25	UJ	h		< 25	UJ	h		< 40	U			< 40	UJ	h		< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW10	ERH373	2017-07-04	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	UJ	q		—				< 0.50	UJ	q		—				< 0.30	UJ	q		—			
RHMW10	ERH374	7/4/2017*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW10	ERH433	2017-10-25	—				< 18	U			< 25	U			—				**61**				—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW10	ERH564	2018-03-13	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW10	ERH610	2018-04-24	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW10	ERH656	2018-07-24	—				< 18	UJ	s		< 25	U			—				< 40	U			—				< 0.30	UJ	s		—				< 0.50	UJ	s		—				< 0.30	UJ	s		—			
RHMW10	ERH700	2018-10-31	—				< 18	U			**120**	**J**	s	W	< 25	U			**62**	**J**	s		< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW10	ERH755	2019-01-24	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW10	ERH807	2019-04-23	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW10	ERH863	2019-07-24	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW10	ERH929	2019-11-13	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW10	ERH993	2020-01-28	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW10	ERH1061	2020-04-21	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW11-01	ERH573	2018-03-21	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW11-01	ERH619	2018-05-02	—				< 18	U			< 340	U	b		< 25	U			< 450	U	b		< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW11-01	ERH674	2018-07-30	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW11-02	ERH575	2018-03-22	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW11-02	ERH621	2018-04-30	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			
RHMW11-02	ERH672	2018-08-01	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U			—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Volatiles			Volatiles			Volatiles			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Lead Scavenger			Lead Scavenger		
		Analyte Type	COPC			non-COPC			non-COPC			COPC			COPC			non-COPC			COPC			non-COPC			non-COPC			Lead Scavenger			Lead Scavenger		
		Analytical Method	8260			524.2			524.2			8270 SIM			8270 SIM			8270			8270 SIM			8260			524.2			8270			8011			8260		
		Analyte	Xylenes, Total (p/m-, o-xylene)			Xylenes, p/m-			Xylenes, o-			1-Methylnaphthalene			2-Methylnaphthalene			2-Methylnaphthalene			Naphthalene *****			Naphthalene *****			Naphthalene *****			Naphthalene *****			1,2-Dibromoethane *****			1,2-Dibromoethane *****		
		CAS No.	1330-20-7			179601-23-1			95-47-6			90-12-0			91-57-6			91-57-6			91-20-3			91-20-3			91-20-3			91-20-3			106-93-4			106-93-4		
		Unit	µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L		
		DOH EAL	20			20			20			10			10			10			17			17			17			17			0.04			0.04		
		SSRBL	—			—			—			—			—			—			—			—			—			—			—			—		
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW08	ERH1057	2020-04-20	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
RHMW09	ERH103	2016-10-25	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.02	U			—			
RHMW09	ERH129	2016-11-15	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.02	UJ	c		—			
RHMW09	ERH146	2016-12-12	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.02	U			—			
RHMW09	ERH178	2017-01-11	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.02	U			—			
RHMW09	ERH178 (EPA split)	2017-01-11	—				< 0.5	U			< 0.2	U			< 0.024	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.024	U			—				< 0.2	U			< 0.5	U			—			
RHMW09	ERH225	2017-02-08	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.02	U			< 0.50	U		
RHMW09	ERH247	2/8/2017*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.02	U			< 0.50	U		
RHMW09	ERH225 (EPA split)	2017-02-08	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				**1.0**				< 0.5	U			—			
RHMW09	ERH247 (EPA split)	2/8/2017*	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U			—			
RHMW09	ERH272	2017-03-07	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.02	U			—			
RHMW09	ERH272 (EPA split)	2017-03-07	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U			—			
RHMW09	ERH307	2017-04-04	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.02	U			< 0.50	U		
RHMW09	ERH314	4/4/2017*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.02	U			< 0.50	U		
RHMW09	ERH385	2017-07-05	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.02	U			—			
RHMW09	ERH431	2017-10-24	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW09	ERH562	2018-03-13	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW09	ERH608	2018-04-25	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW09	ERH654	2018-07-25	< 0.30	UJ	s		—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW09	ERH698	2018-10-23	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW09	ERH753	2019-01-22	< 0.30	UJ	s		—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW09	ERH805	2019-04-23	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW09	ERH861	2019-07-23	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW09	ERH927	2019-10-22	< 0.30	U			—				—				< 0.10	UJ	l		< 0.10	UJ	l		—				< 0.10	UJ	l		—				—				—				—			
RHMW09	ERH991	2020-01-21	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW09	ERH1059	2020-04-21	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW10	ERH345	2017-05-04	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				< 0.02	U			—			
RHMW10	ERH346	5/4/2017*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				< 0.02	U			—			
RHMW10	ERH365	2017-06-05	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				< 0.02	U			—			
RHMW10	ERH366	6/5/2017*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				< 0.02	U			—			
RHMW10	ERH373	2017-07-04	< 0.30	UJ	q		—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				< 0.02	U			—			
RHMW10	ERH374	7/4/2017*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				< 0.02	U			—			
RHMW10	ERH433	2017-10-25	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				< 0.02	U			—			
RHMW10	ERH564	2018-03-13	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				< 0.02	U			—			
RHMW10	ERH610	2018-04-24	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				< 0.02	U			—			
RHMW10	ERH656	2018-07-24	< 0.30	UJ	s		—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW10	ERH700	2018-10-31	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW10	ERH755	2019-01-24	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW10	ERH807	2019-04-23	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW10	ERH863	2019-07-24	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW10	ERH929	2019-11-13	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW10	ERH993	2020-01-28	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW10	ERH1061	2020-04-21	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW11-01	ERH573	2018-03-21	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				< 0.02	U			—			
RHMW11-01	ERH619	2018-05-02	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				< 0.019	U			—			
RHMW11-01	ERH674	2018-07-30	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				< 0.019	U			—			
RHMW11-02	ERH575	2018-03-22	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				< 0.02	U			—			
RHMW11-02	ERH621	2018-04-30	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				< 0.02	U			—			
RHMW11-02	ERH672	2018-08-01	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				< 0.019	U			—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Semivolatiles				Semivolatiles			
		Analyte Type	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Fuel Additive				Fuel Additive					
		Analytical Method	504.1				524.2				8260SIM				8260SIM				8260				524.2				8270				8270/8270 Mod.			
		Analyte	1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				Phenol				2-(2-Methoxyethoxy)-ethanol			
		CAS No.	106-93-4				106-93-4				106-93-4				107-06-2				107-06-2				107-06-2				108-95-2				111-77-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	0.04				0.04				0.04				5				5				5				300				800			
		SSRBL	—				—				—				—				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW08	ERH1057	2020-04-20	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW09	ERH103	2016-10-25	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW09	ERH129	2016-11-15	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW09	ERH146	2016-12-12	—				—				—				—				< 0.30	U			—				**1.1**	**J**			< 80.0	U		
RHMW09	ERH178	2017-01-11	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW09	ERH178 (EPA split)	2017-01-11	—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
RHMW09	ERH225	2017-02-08	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW09	ERH247	2/8/2017*	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW09	ERH225 (EPA split)	2017-02-08	—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
RHMW09	ERH247 (EPA split)	2/8/2017*	—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
RHMW09	ERH272	2017-03-07	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW09	ERH272 (EPA split)	2017-03-07	—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
RHMW09	ERH307	2017-04-04	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW09	ERH314	4/4/2017*	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW09	ERH385	2017-07-05	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW09	ERH431	2017-10-24	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW09	ERH562	2018-03-13	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW09	ERH608	2018-04-25	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW09	ERH654	2018-07-25	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW09	ERH698	2018-10-23	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
RHMW09	ERH753	2019-01-22	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
RHMW09	ERH805	2019-04-23	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
RHMW09	ERH861	2019-07-23	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW09	ERH927	2019-10-22	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW09	ERH991	2020-01-21	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW09	ERH1059	2020-04-21	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW10	ERH345	2017-05-04	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW10	ERH346	5/4/2017*	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW10	ERH365	2017-06-05	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW10	ERH366	6/5/2017*	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW10	ERH373	2017-07-04	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW10	ERH374	7/4/2017*	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW10	ERH433	2017-10-25	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW10	ERH564	2018-03-13	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW10	ERH610	2018-04-24	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW10	ERH656	2018-07-24	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW10	ERH700	2018-10-31	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
RHMW10	ERH755	2019-01-24	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
RHMW10	ERH807	2019-04-23	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
RHMW10	ERH863	2019-07-24	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW10	ERH929	2019-11-13	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW10	ERH993	2020-01-28	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW10	ERH1061	2020-04-21	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW11-01	ERH573	2018-03-21	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW11-01	ERH619	2018-05-02	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW11-01	ERH674	2018-07-30	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW11-02	ERH575	2018-03-22	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW11-02	ERH621	2018-04-30	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW11-02	ERH672	2018-08-01	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	TPH			TPH			TPH			TPH			TPH			TPH			Volatiles			Volatiles			Volatiles			Volatiles			Volatiles		
		Analyte Type	COPC			COPC			COPC			COPC			COPC			COPC			COPC			non-COPC			COPC			non-COPC			COPC		
		Analytical Method	8015			8260			8015			8015			8015			8015			8260			524.2			8260			524.2			8260		
		Analyte	TPH-g ****			TPH-g ****			TPH-d			TPH-d with Silica Gel Cleanup			TPH-o			TPH-o with Silica Gel Cleanup			Benzene			Benzene			Ethylbenzene			Ethylbenzene			Toluene			Toluene		
		CAS No.	Gas			Gas			Diesel			Disel SGC			Oil			Oil SGC			71-43-2			71-43-2			100-41-4			100-41-4			108-88-3			108-88-3		
		Unit	µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L		
		DOH EAL	300			300			400			400			500			500			5			5			30			30			40			40		
		SSRBL	—			—			4500			—			—			—			750			750			—			—			—			—		
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW11-03	ERH579	2018-03-27	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW11-03	ERH623	2018-04-30	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW11-03	ERH670	2018-08-01	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW11-04	ERH577	2018-03-27	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW11-04	ERH625	2018-04-26	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW11-04	ERH668	2018-08-02	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW11-05	ERH581	2018-03-28	—				< 18	U			< 25	U			—				< 40	U			—				< 0.26	U	t		—				< 0.50	U			—			
RHMW11-05	ERH582	3/28/2018*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.24	U	t		—				< 0.50	U			—			
RHMW11-05	ERH627	2018-05-01	—				< 18	U			< 380	U	b		< 25	U			< 530	U	b		< 40	U			< 0.30	U			—				< 0.50	U			—			
RHMW11-05	ERH628	5/1/2018*	—				< 18	U			< 300	U	b		< 25	U			< 400	U	b		< 40	U			< 0.30	UJ	s		—				< 0.50	UJ	s		—			
RHMW11-05	ERH665	2018-07-31	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW11-05	ERH666	7/31/2018*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	UJ	s		—				< 0.50	UJ	s		—			
RHMW11-05	ERH709	2018-10-29	—				< 18	U			< 110	U	f	Y	< 25	U			< 120	U	f		< 40	U			< 0.30	U			—				< 0.50	U			—			
RHMW11-05	ERH710	10/29/2018*	—				< 18	U			—				—				—				—				< 0.30	U			—				< 0.50	U			—			
RHMW11-05	ERH764	2019-01-28	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW11-05	ERH816	2019-04-29	—				< 18	U			< 25	UJ	l		—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW11-05	ERH878	2019-08-01	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW11-05	ERH938	2019-10-29	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW11-05	ERH1002	2020-01-30	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW11-05	ERH1070	2020-04-20	—				< 18	U			< 260	U	f	Z	< 300.0	U			**240**	**J**	l	Z	< 300.0	U			< 0.30	U			—				< 0.50	U			—			
RHMW11-07	ERH874	2019-08-05	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW11-07	ERH940	2019-10-30	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW13-01	ERH1023	2020-03-03	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW13-02	ERH1025	2020-03-04	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW13-03	ERH1027	2020-03-05	—				< 18	U			< 300.0	U			—				< 300.0	U			—				< 0.30	UJ	s		—				< 0.50	UJ	s		—			
RHMW13-03	ERH1076	2020-04-23	—				< 18	U			< 200	UJ	f,l	Z	—				< 300.0	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW13-04	ERH1029	2020-03-09	—				< 18	U			**220**	**J**		Z	< 300.0	U			**240**	**J**		Z	< 300.0	U			< 0.30	U			—				< 0.50	U			—			
RHMW13-04	ERH1078	2020-04-27	—				< 18	U			< 160	U	b,f	Z	< 300.0	U			< 300.0	U			< 300.0	U			< 0.30	U			—				< 0.50	U			—			
RHMW13-05	ERH1031	2020-03-10	—				< 18	U			**240**	**J**		Z	< 300.0	U			**240**	**J**		Z	< 300.0	U			< 0.30	U			—				< 0.50	U			—			
RHMW13-05	ERH1032	2020-03-10	—				< 18	U			**200**	**J**		Z	< 300.0	U			**170**	**J**		Z	< 300.0	U			< 0.30	U			—				< 0.50	U			—			
RHMW13-05	ERH1080	2020-04-28	—				< 18	U			< 210	U	b,f	Z	< 300.0	U			< 300.0	U			< 300.0	U			< 0.30	U			—				< 0.50	U			—			
RHMW13-05	ERH1081	2020-04-28	—				< 18	U			< 180	U	b,f	Z	< 300.0	U			< 300.0	U			< 300.0	U			< 0.30	U			—				< 0.50	U			—			
RHMW14-01	ERH942	2019-10-21	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW14-01	ERH1004	2020-01-20	—				< 18	U			< 160	U	f	Z	< 25	U			< 95	U	f	Z	< 40	U			< 0.30	U			—				< 0.50	U			—			
RHMW14-02	ERH944	2019-10-22	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW14-02	ERH1006	2020-01-21	—				< 18	U			< 130	U	f	Z	< 25	U			< 110	U	f	Z	< 40	U			< 0.30	U			—				< 0.50	U			—			
RHMW14-03	ERH882	2019-07-30	—				< 18	UJ	q		< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW14-03	ERH883	7/30/2019*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW14-03	ERH946	2019-10-28	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW14-03	ERH947	10/28/2019*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW14-03	ERH1008	2020-01-22	—				< 18	U			< 25	UJ	l		—				< 40	UJ	l		—				< 0.30	U			—				< 0.50	U			—			
RHMW14-03	ERH1009	1/22/2020*	—				< 18	U			< 25	UJ	l		< 25	U			< 220	UJ	f l	W	< 74	U	f	W	< 0.30	U			—				< 0.50	U			—			
RHMW14-03	ERH1072	2020-04-21	—				< 18	U			< 300.0	U			< 300.0	U			**150**	**J**	l	Z	< 300.0	U			< 0.30	U			—				< 0.50	U			—			
RHMW14-04	ERH880	2019-07-29	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW14-04	ERH949	2019-10-24	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW14-05	ERH872	2019-07-31	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW14-05	ERH951	2019-10-23	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW14-07	ERH876	2019-08-06	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			
RHMW14-07	ERH953	2019-10-23	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Volatiles			Volatiles			Volatiles			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Lead Scavenger			Lead Scavenger		
		Analyte Type	COPC			non-COPC			non-COPC			COPC			COPC			non-COPC			COPC			non-COPC			non-COPC			Lead Scavenger			Lead Scavenger		
		Analytical Method	8260			524.2			524.2			8270 SIM			8270 SIM			8270			8270 SIM			8260			524.2			8270			8011			8260		
		Analyte	Xylenes, Total (p/m-, o-xylene)			Xylenes, p/m-			Xylenes, o-			1-Methylnaphthalene			2-Methylnaphthalene			2-Methylnaphthalene			Naphthalene *****			Naphthalene *****			Naphthalene *****			Naphthalene *****			1,2-Dibromoethane *****			1,2-Dibromoethane *****		
		CAS No.	1330-20-7			179601-23-1			95-47-6			90-12-0			91-57-6			91-57-6			91-20-3			91-20-3			91-20-3			91-20-3			106-93-4			106-93-4		
		Unit	µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L		
		DOH EAL	20			20			20			10			10			10			17			17			17			17			0.04			0.04		
		SSRBL	—			—			—			—			—			—			—			—			—			—			—			—		
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW11-03	ERH579	2018-03-27	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.02	U			—			
RHMW11-03	ERH623	2018-04-30	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.02	U			—			
RHMW11-03	ERH670	2018-08-01	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW11-04	ERH577	2018-03-27	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.02	U			—			
RHMW11-04	ERH625	2018-04-26	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW11-04	ERH668	2018-08-02	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW11-05	ERH581	2018-03-28	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.02	U			—			
RHMW11-05	ERH582	3/28/2018*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.02	U			—			
RHMW11-05	ERH627	2018-05-01	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW11-05	ERH628	5/1/2018*	< 0.30	UJ	s		—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW11-05	ERH665	2018-07-31	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW11-05	ERH666	7/31/2018*	< 0.30	UJ	s		—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW11-05	ERH709	2018-10-29	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW11-05	ERH710	10/29/2018*	< 0.30	U			—				—				—				—				—				—				—				—				< 0.019	U			—			
RHMW11-05	ERH764	2019-01-28	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW11-05	ERH816	2019-04-29	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW11-05	ERH878	2019-08-01	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW11-05	ERH938	2019-10-29	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW11-05	ERH1002	2020-01-30	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW11-05	ERH1070	2020-04-20	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
RHMW11-07	ERH874	2019-08-05	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW11-07	ERH940	2019-10-30	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW13-01	ERH1023	2020-03-03	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW13-02	ERH1025	2020-03-04	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW13-03	ERH1027	2020-03-05	< 0.30	UJ	s		—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW13-03	ERH1076	2020-04-23	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW13-04	ERH1029	2020-03-09	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW13-04	ERH1078	2020-04-27	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW13-05	ERH1031	2020-03-10	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW13-05	ERH1032	2020-03-10	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW13-05	ERH1080	2020-04-28	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW13-05	ERH1081	2020-04-28	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW14-01	ERH942	2019-10-21	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW14-01	ERH1004	2020-01-20	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW14-02	ERH944	2019-10-22	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW14-02	ERH1006	2020-01-21	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW14-03	ERH882	2019-07-30	< 0.30	UJ	q		—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW14-03	ERH883	7/30/2019*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW14-03	ERH946	2019-10-28	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW14-03	ERH947	10/28/2019*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW14-03	ERH1008	2020-01-22	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW14-03	ERH1009	1/22/2020*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW14-03	ERH1072	2020-04-21	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW14-04	ERH880	2019-07-29	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW14-04	ERH949	2019-10-24	< 0.30	U			—				—				< 0.10	UJ	l		< 0.10	UJ	l		—				< 0.10	UJ	l		—				—				< 0.019	U			—			
RHMW14-05	ERH872	2019-07-31	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW14-05	ERH951	2019-10-23	< 0.30	U			—				—				< 0.10	UJ	l		< 0.10	UJ	l		—				< 0.10	UJ	l		—				—				< 0.019	U			—			
RHMW14-07	ERH876	2019-08-06	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW14-07	ERH953	2019-10-23	< 0.30	U			—				—				< 0.10	UJ	l		< 0.10	UJ	l		—				< 0.10	UJ	l		—				—				< 0.019	U			—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Semivolatiles				Semivolatiles			
		Analyte Type	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Fuel Additive				Fuel Additive					
		Analytical Method	504.1				524.2				8260SIM				8260SIM				8260				524.2				8270				8270/8270 Mod.			
		Analyte	1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				Phenol				2-(2-Methoxyethoxy)-ethanol			
		CAS No.	106-93-4				106-93-4				106-93-4				107-06-2				107-06-2				107-06-2				108-95-2				111-77-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	0.04				0.04				0.04				5				5				5				300				800			
		SSRBL	—				—				—				—				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW11-03	ERH579	2018-03-27	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW11-03	ERH623	2018-04-30	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW11-03	ERH670	2018-08-01	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW11-04	ERH577	2018-03-27	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW11-04	ERH625	2018-04-26	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW11-04	ERH668	2018-08-02	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW11-05	ERH581	2018-03-28	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW11-05	ERH582	3/28/2018*	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW11-05	ERH627	2018-05-01	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW11-05	ERH628	5/1/2018*	—				—				—				—				< 0.30	UJ	s		—				< 4.00	U			< 80.0	U		
RHMW11-05	ERH665	2018-07-31	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW11-05	ERH666	7/31/2018*	—				—				—				—				< 0.30	UJ	s		—				< 4.00	U			< 80.0	U		
RHMW11-05	ERH709	2018-10-29	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	UJ	I	
RHMW11-05	ERH710	10/29/2018*	—				—				—				—				< 0.30	U			—				—				—			
RHMW11-05	ERH764	2019-01-28	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW11-05	ERH816	2019-04-29	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW11-05	ERH878	2019-08-01	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
RHMW11-05	ERH938	2019-10-29	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW11-05	ERH1002	2020-01-30	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW11-05	ERH1070	2020-04-20	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
RHMW11-07	ERH874	2019-08-05	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW11-07	ERH940	2019-10-30	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	UJ	I	
RHMW13-01	ERH1023	2020-03-03	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	UJ	I	
RHMW13-02	ERH1025	2020-03-04	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	UJ	I	
RHMW13-03	ERH1027	2020-03-05	—				—				—				—				< 0.30	UJ	c,s		—				< 4.00	U			< 80.0	UJ	I	
RHMW13-03	ERH1076	2020-04-23	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW13-04	ERH1029	2020-03-09	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW13-04	ERH1078	2020-04-27	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	UJ	I	
RHMW13-05	ERH1031	2020-03-10	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW13-05	ERH1032	2020-03-10	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW13-05	ERH1080	2020-04-28	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	UJ	I	
RHMW13-05	ERH1081	2020-04-28	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	UJ	I	
RHMW14-01	ERH942	2019-10-21	—				—				—				—				< 0.30	U			—				< 4.00	UJ	I		< 80.0	U		
RHMW14-01	ERH1004	2020-01-20	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW14-02	ERH944	2019-10-22	—				—				—				—				< 0.30	U			—				< 4.00	UJ	I		< 80.0	U		
RHMW14-02	ERH1006	2020-01-21	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW14-03	ERH882	2019-07-30	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	UJ	I	
RHMW14-03	ERH883	7/30/2019*	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	UJ	I	
RHMW14-03	ERH946	2019-10-28	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW14-03	ERH947	10/28/2019*	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW14-03	ERH1008	2020-01-22	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	UJ	I	
RHMW14-03	ERH1009	1/22/2020*	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	UJ	I	
RHMW14-03	ERH1072	2020-04-21	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW14-04	ERH880	2019-07-29	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	UJ	I	
RHMW14-04	ERH949	2019-10-24	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW14-05	ERH872	2019-07-31	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	UJ	I	
RHMW14-05	ERH951	2019-10-23	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW14-07	ERH876	2019-08-06	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW14-07	ERH953	2019-10-23	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	TPH				TPH				TPH				TPH				TPH				Volatiles				Volatiles				Volatiles				Volatiles				Volatiles			
		Analyte Type	COPC				COPC				COPC				COPC				COPC				COPC				non-COPC				COPC				non-COPC				COPC			
		Analytical Method	8015				8260				8015				8015				8015				8260				524.2				8260				524.2				8260			
		Analyte	TPH-g****				TPH-g****				TPH-d				TPH-d with Silica Gel Cleanup				TPH-o				TPH-o with Silica Gel Cleanup				Benzene				Benzene				Ethylbenzene				Ethylbenzene				Toluene				Toluene			
		CAS No.	Gas				Gas				Diesel				Disel SGC				Oil				Oil SGC				71-43-2				71-43-2				100-41-4				100-41-4				108-88-3				108-88-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	300				300				400				400				500				500				5				5				30				30				40				40			
		SSRBL	—				—				4500				—				—				—				750				750				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW15-01	ERH955	2019-11-04	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW15-02	ERH957	2019-11-05	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW15-03	ERH959	2019-11-07	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW15-03	ERH1011	2020-01-27	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW15-04	ERH961	2019-10-31	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW15-04	ERH1013	2020-01-28	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW15-05	ERH963	2019-11-06	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW15-05	ERH964	11/6/2019*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW15-05	ERH1015	2020-01-29	—				< 18	U			< 220	U	f	Z	< 25	U			< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U		
RHMW15-05	ERH1074	2020-04-22	—				< 18	U			< 160	UJ	f,l	Z	—				< 300.0	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
HDMW2253-03	HDMW2253-03-WG-02	10/13/2009[abd]	< 30	U			—				< 185	U			—				—				—				< 0.12	U			—				< 0.31	U			—				< 0.31	U		
HDMW2253-03	HDMW2253-03-WG-03	1/26/2010[d]	< 60.0	U			—				**322**	**J**			—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U		
HDMW2253-03	HDMW2253-03-WG-04	4/26/2010[d]	< 60.0	U			—				< 352	U			—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U		
HDMW2253-03	HDMW2253-03-WG-05	7/8/2010[d]	< 60.0	U			—				< 320	U			—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U		
HDMW2253-03	ES006	10/21/2010[d]	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U		
HDMW2253-03	ES016	1/21/2011[d]	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U		
HDMW2253-03	ES028	4/21/2011[d]	—				< 12.12	U			< 80.8	U			—				—				—				**0.42**	**J**			—				< 0.46	U			—				< 0.34	U		
HDMW2253-03	ES043	7/21/2011[d]	—				< 12.12	U			< 80.8	U			—				< 212.0	U			—				< 0.32	U			—				< 0.46	U			—				< 0.34	U		
HDMW2253-03	ES053	2011-10-26	—				< 12.12	U			< 80.8	U			—				—				—				**0.92**	**J**			—				< 0.46	U			—				< 0.34	U		
HDMW2253-03	ES057	2012-01-24	—				< 12.12	U			< 80.8	U			—				< 212.0	U			—				< 0.32	U			—				< 0.46	U			—				< 0.34	U		
HDMW2253-03	ES076	2012-04-26	—				< 12.12	U			**160**			Y	—				—				—				**0.20**	**J**			—				< 0.46	U			—				< 0.34	U		
HDMW2253-03	ES083	2012-07-19	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U		
HDMW2253-03	ES009	2012-11-07	—				< 15	UJ	b	h	**25**	**J**		Y	—				—				—				< 0.50	UJ	h		—				< 0.50	UJ	h		—				< 0.50	UJ	h	
HDMW2253-03	ES018	2013-01-30	—				< 30	U			**600**				—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
HDMW2253-03	ES027	2013-04-24	—				< 30	U			**45**	**J**			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
HDMW2253-03	ES036	2013-07-24	—				< 30	U			< 21	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
HDMW2253-03	ES045	2013-10-23	—				< 15	UJ	b		< 20	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
HDMW2253-03	ES051	1/22/2014[d]	—				—				**18**	**J**		Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
HDMW2253-03	ES052	1/22/2014*[d]	—				—				**18**	**J**		Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
HDMW2253-03	ES055	1/27/2014[d]	—				< 27	UJ	b		**35**	**J**		Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
HDMW2253-03	ES088***	4/23/2014[d]	—				< 27	UJ	b		**220**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
HDMW2253-03	ES111	2014-07-23	—				< 30	U			< 12	U			—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
HDMW2253-03	ES120	2014-10-22	—				< 30	U			**14**	**J**		Y	—				—				—				< 0.50	U			—				< 0.50	U			—				**3.8**			
HDMW2253-03	ES128	2015-01-29	—				< 30	U			**16**	**J**		Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
HDMW2253-03	ES136	2015-04-22	< 25	U			—				**13**	**J**			—				< 55	UJ	b		—				< 0.10	U			—				< 0.10	U			—				**0.070**	**J**		
HDMW2253-03	ES151	2015-07-22	< 25	U			—				< 18	UJ	b		—				< 77	UJ	b		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U		
HDMW2253-03	ERH001	2015-10-19	**16**	**J**			—				< 21	UJ	b		—				< 56	UJ	b		—				< 0.10	UJ	h		—				< 0.10	UJ	h		—				< 0.37	UJ	h t	
HDMW2253-03	ERH015	2016-01-19	< 25	U			—				< 43	UJ	b		—				< 63	UJ	b		—				< 0.10	U			—				< 0.10	U			—				< 0.24	UJ	t	
HDMW2253-03	ERH029	2016-04-19	< 21	U	f		—				< 25	U	b f		—				< 48	U	b f		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U		
HDMW2253-03	ERH043	2016-07-19	< 25	U			—				< 13	U	f		—				< 32	U	b f		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U		
HDMW2253-03	ERH095	2016-10-18	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
HDMW2253-03	ERH127	2016-11-16	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
HDMW2253-03	ERH145	2016-12-13	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
HDMW2253-03	ERH176	2017-01-10	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
HDMW2253-03	ERH176 (EPA split)	2017-01-10	< 25	UJ	c		—				< 71	U			—				< 290	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
HDMW2253-03	ERH214	2017-02-07	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
HDMW2253-03	ERH214 (EPA split)	2017-02-07	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Volatiles			Volatiles			Volatiles			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Lead Scavenger			Lead Scavenger		
		Analyte Type	COPC			non-COPC			non-COPC			COPC			COPC			non-COPC			COPC			non-COPC			non-COPC			Lead Scavenger			Lead Scavenger		
		Analytical Method	8260			524.2			524.2			8270 SIM			8270 SIM			8270			8270 SIM			8260			524.2			8270			8011			8260		
		Analyte	Xylenes, Total (p/m-, o-xylene)			Xylenes, p/m-			Xylenes, o-			1-Methylnaphthalene			2-Methylnaphthalene			2-Methylnaphthalene			Naphthalene *****			Naphthalene *****			Naphthalene *****			Naphthalene *****			1,2-Dibromoethane *****			1,2-Dibromoethane *****		
		CAS No.	1330-20-7			179601-23-1			95-47-6			90-12-0			91-57-6			91-57-6			91-20-3			91-20-3			91-20-3			91-20-3			106-93-4			106-93-4		
		Unit	µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L		
		DOH EAL	20			20			20			10			10			10			17			17			17			17			0.04			0.04		
		SSRBL	—			—			—			—			—			—			—			—			—			—			—			—		
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW15-01	ERH955	2019-11-04	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW15-02	ERH957	2019-11-05	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW15-03	ERH959	2019-11-07	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW15-03	ERH1011	2020-01-27	< 0.30	U			—				—				< 0.10	UJ	s		< 0.10	UJ	s		—				< 0.10	UJ	s		—				—				< 0.019	U			—			
RHMW15-04	ERH961	2019-10-31	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW15-04	ERH1013	2020-01-28	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW15-05	ERH963	2019-11-06	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW15-05	ERH964	11/6/2019*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW15-05	ERH1015	2020-01-29	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
RHMW15-05	ERH1074	2020-04-22	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.019	U			—			
HDMW2253-03	HDMW2253-03-WG-02	10/13/2009[abd]	< 0.62	U			—				—				< 0.0169	U			< 0.0169	U			—				< 0.035	U			< 0.62	U			—				—				< 0.31	U		
HDMW2253-03	HDMW2253-03-WG-03	1/26/2010[d]	< 1.24	U			—				—				< 0.0500	U			< 0.0500	U			—				< 0.103	U			< 1.24	U			—				—				< 0.620	U		
HDMW2253-03	HDMW2253-03-WG-04	4/26/2010[d]	< 1.24	U			—				—				< 0.0348	U			< 0.0348	U			—				< 0.0720	U			< 1.24	U			—				—				< 0.620	U		
HDMW2253-03	HDMW2253-03-WG-05	7/8/2010[d]	< 1.24	U			—				—				< 0.0348	U			< 0.0348	U			—				**0.0596**	**J**			< 1.24	U			—				—				< 0.620	U		
HDMW2253-03	ES006	10/21/2010[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				< 0.40	U		
HDMW2253-03	ES016	1/21/2011[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				< 0.40	U		
HDMW2253-03	ES028	4/21/2011[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				< 0.40	U		
HDMW2253-03	ES043	7/21/2011[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				< 0.40	U		
HDMW2253-03	ES053	2011-10-26	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				< 0.40	U		
HDMW2253-03	ES057	2012-01-24	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				< 0.40	U		
HDMW2253-03	ES076	2012-04-26	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				< 0.40	U		
HDMW2253-03	ES083	2012-07-19	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				< 0.40	U		
HDMW2253-03	ES009	2012-11-07	< 1.0	UJ	h		—				—				< 0.050	U			< 0.050	U			—				< 0.050	U			—				—				—				< 0.50	UJ	h	
HDMW2253-03	ES018	2013-01-30	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.037**	**J**			—				—				—				< 0.50	U		
HDMW2253-03	ES027	2013-04-24	< 1.0	U			—				—				< 0.052	U			< 0.052	U			—				**0.16**	**J**			—				—				—				< 0.50	U		
HDMW2253-03	ES036	2013-07-24	< 1.0	U			—				—				< 0.047	U			< 0.047	U			—				**0.030**	**J**			—				—				—				< 0.50	U		
HDMW2253-03	ES045	2013-10-23	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.041**	**J**			—				—				—				< 0.50	U		
HDMW2253-03	ES051	1/22/2014[d]	< 1.0	U			—				—				< 0.051	U			< 0.051	U			—				< 0.051	U			—				—				—				—			
HDMW2253-03	ES052	1/22/2014*[d]	< 1.0	U			—				—				< 0.051	U			< 0.051	U			—				< 0.051	U			—				—				—				—			
HDMW2253-03	ES055	1/27/2014[d]	< 1.0	U			—				—				< 0.051	U			< 0.051	U			—				**0.064**	**J**			—				—				—				< 0.50	U		
HDMW2253-03	ES088***	4/23/2014[d]	< 1.0	U			—				—				< 0.051	U			< 0.051	U			—				< 0.051	U			—				—				—				< 0.50	U		
HDMW2253-03	ES111	2014-07-23	< 1.0	U			—				—				< 0.053	U			< 0.053	U			—				< 0.053	U			—				—				—				< 0.50	U		
HDMW2253-03	ES120	2014-10-22	< 1.0	U			—				—				< 0.10	U			< 0.051	U			—				< 0.051	U			—				—				—				< 0.50	U		
HDMW2253-03	ES128	2015-01-29	< 1.0	U			—				—				< 0.11	U			< 0.053	U			—				< 0.053	U			—				—				—				< 0.50	U		
HDMW2253-03	ES136	2015-04-22	< 0.20	U			—				—				< 0.0052	U			< 0.0052	U			—				< 0.0052	U			—				—				< 0.0040	UJ	h		< 0.20	U		
HDMW2253-03	ES151	2015-07-22	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—				—				< 0.0040	U			< 0.20	U		
HDMW2253-03	ERH001	2015-10-19	< 0.20	UJ	h		—				—				< 0.0050	U			< 0.0050	UJ	b		—				< 0.0042	UJ	b		—				—				< 0.0040	U			< 0.20	UJ	h	
HDMW2253-03	ERH015	2016-01-19	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—				—				< 0.0040	U			< 0.20	U		
HDMW2253-03	ERH029	2016-04-19	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—				—				—				—			
HDMW2253-03	ERH043	2016-07-19	< 0.20	U			—				—				< 0.0050	U			**0.0027**	**J**			—				< 0.015	U	b f		—				—				—				—			
HDMW2253-03	ERH095	2016-10-18	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
HDMW2253-03	ERH127	2016-11-16	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
HDMW2253-03	ERH145	2016-12-13	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
HDMW2253-03	ERH176	2017-01-10	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—			
HDMW2253-03	ERH176 (EPA split)	2017-01-10	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U			—			
HDMW2253-03	ERH214	2017-02-07	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				< 0.5	U			—			
HDMW2253-03	ERH214 (EPA split)	2017-02-07	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c s		< 0.025	UJ	c s		< 0.5	U			< 0.025	UJ	s		—				< 0.2	U			< 0.5	U			—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Semivolatiles				Semivolatiles			
		Analyte Type	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Fuel Additive				Fuel Additive			
		Analytical Method	504.1				524.2				8260SIM				8260SIM				8260				524.2				8270				8270/8270 Mod.			
		Analyte	1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				Phenol				2-(2-Methoxyethoxy)-ethanol			
		CAS No.	106-93-4				106-93-4				106-93-4				107-06-2				107-06-2				107-06-2				108-95-2				111-77-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	0.04				0.04				0.04				5				5				5				300				800			
		SSRBL	—				—				—				—				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
RHMW15-01	ERH955	2019-11-04	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW15-02	ERH957	2019-11-05	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW15-03	ERH959	2019-11-07	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW15-03	ERH1011	2020-01-27	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	UJ	I	
RHMW15-04	ERH961	2019-10-31	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	UJ	I	
RHMW15-04	ERH1013	2020-01-28	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW15-05	ERH963	2019-11-06	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW15-05	ERH964	11/6/2019*	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW15-05	ERH1015	2020-01-29	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
RHMW15-05	ERH1074	2020-04-22	—				—				—				—				< 0.30	U			—				< 4.00	U			< 80.0	U		
HDMW2253-03	HDMW2253-03-WG-02	10/13/2009[abd]	—				—				—				—				< 0.15	U			—				—				—			
HDMW2253-03	HDMW2253-03-WG-03	1/26/2010[d]	—				—				—				—				< 0.300	U			—				—				—			
HDMW2253-03	HDMW2253-03-WG-04	4/26/2010[d]	—				—				—				—				< 0.300	U			—				—				—			
HDMW2253-03	HDMW2253-03-WG-05	7/8/2010[d]	—				—				—				—				< 0.300	U			—				—				—			
HDMW2253-03	ES006	10/21/2010[d]	—				—				—				—				< 0.28	U			—				—				—			
HDMW2253-03	ES016	1/21/2011[d]	—				—				—				—				< 0.28	U			—				—				—			
HDMW2253-03	ES028	4/21/2011[d]	—				—				—				—				< 0.28	U			—				—				—			
HDMW2253-03	ES043	7/21/2011[d]	—				—				—				—				< 0.28	U			—				—				—			
HDMW2253-03	ES053	2011-10-26	—				—				—				—				< 0.28	U			—				—				—			
HDMW2253-03	ES057	2012-01-24	—				—				—				—				< 0.28	U			—				—				—			
HDMW2253-03	ES076	2012-04-26	—				—				—				—				< 0.28	U			—				—				—			
HDMW2253-03	ES083	2012-07-19	—				—				—				—				< 0.28	U			—				—				—			
HDMW2253-03	ES009	2012-11-07	—				—				—				—				< 0.50	UJ	h		—				—				—			
HDMW2253-03	ES018	2013-01-30	—				—				—				—				< 0.50	U			—				—				—			
HDMW2253-03	ES027	2013-04-24	—				—				—				—				< 0.50	U			—				—				—			
HDMW2253-03	ES036	2013-07-24	—				—				—				—				< 0.50	U			—				—				—			
HDMW2253-03	ES045	2013-10-23	—				—				—				—				< 0.50	U			—				—				—			
HDMW2253-03	ES051	1/22/2014[d]	—				—				—				—				—				—				—				—			
HDMW2253-03	ES052	1/22/2014*[d]	—				—				—				—				—				—				—				—			
HDMW2253-03	ES055	1/27/2014[d]	—				—				—				—				< 0.50	U			—				—				—			
HDMW2253-03	ES088***	4/23/2014[d]	—				—				—				—				< 0.50	U			—				—				—			
HDMW2253-03	ES111	2014-07-23	—				—				—				—				< 0.50	U			—				—				—			
HDMW2253-03	ES120	2014-10-22	—				—				—				—				< 0.50	U			—				—				—			
HDMW2253-03	ES128	2015-01-29	—				—				—				—				< 0.50	U			—				—				—			
HDMW2253-03	ES136	2015-04-22	—				—				< 0.010	U			< 0.015	U			—				—				—				—			
HDMW2253-03	ES151	2015-07-22	—				—				—				< 0.015	U			—				—				—				—			
HDMW2253-03	ERH001	2015-10-19	—				—				—				< 0.015	U			—				—				—				—			
HDMW2253-03	ERH015	2016-01-19	—				—				—				< 0.015	U			—				—				—				—			
HDMW2253-03	ERH029	2016-04-19	—				—				—				—				—				—				—				—			
HDMW2253-03	ERH043	2016-07-19	—				—				—				—				—				—				—				—			
HDMW2253-03	ERH095	2016-10-18	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	h	
HDMW2253-03	ERH127	2016-11-16	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
HDMW2253-03	ERH145	2016-12-13	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
HDMW2253-03	ERH176	2017-01-10	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
HDMW2253-03	ERH176 (EPA split)	2017-01-10	—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.4	U			—			
HDMW2253-03	ERH214	2017-02-07	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
HDMW2253-03	ERH214 (EPA split)	2017-02-07	—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	TPH				TPH				TPH				TPH				TPH				Volatiles				Volatiles				Volatiles				Volatiles				Volatiles			
		Analyte Type	COPC				COPC				COPC				COPC				COPC				COPC				non-COPC				COPC				non-COPC				COPC			
		Analytical Method	8015				8260				8015				8015				8015				8260				524.2				8260				524.2				8260			
		Analyte	TPH-g****				TPH-g****				TPH-d				TPH-d with Silica Gel Cleanup				TPH-o				TPH-o with Silica Gel Cleanup				Benzene				Benzene				Ethylbenzene				Ethylbenzene				Toluene				Toluene			
		CAS No.	Gas				Gas				Diesel				Disel SGC				Oil				Oil SGC				71-43-2				71-43-2				100-41-4				100-41-4				108-88-3				108-88-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	300				300				400				400				500				500				5				5				30				30				40				40			
		SSRBL	—				—				4500				—				—				—				750				750				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
HDMW2253-03	ERH280	2017-03-08	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
HDMW2253-03	ERH280 (EPA split)	2017-03-08	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—			
HDMW2253-03	ERH437	2017-10-31	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
HDMW2253-03	ERH568	2018-03-12	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
HDMW2253-03	ERH614	2018-04-23	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
HDMW2253-03	ERH660	2018-07-23	—				< 18	UJ	s		< 25	UJ	s		—				< 40	UJ	l s		—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
HDMW2253-03	ERH704	2018-10-22	—				< 18	U			< 25	UJ	h		—				< 40	UJ	h		—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
HDMW2253-03	ERH759	2019-02-07	—				< 18	UJ	c l		< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
HDMW2253-03	ERH811	2019-04-25	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
HDMW2253-03	ERH867	2019-07-25	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
HDMW2253-03	ERH931	2019-10-23	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
HDMW2253-03	ERH997	2020-01-23	—				< 18	U			< 25	UJ	l		—				< 40	UJ	l		—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
HDMW2253-03	ERH1065	2020-04-23	—				< 18	U			**190**	**J**	l	Z	—				< 300.0	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
OWDFMW01	OWDFMW01-WG-01	8/4/2009[ad]	< 30.0	U			—				< 171	U			—				—				—				**0.470**				—				< 0.310	U			—				< 0.310	U		
OWDFMW01	OWDFMW01-WG-02	10/13/2009[abd]	< 30	U			—				< 167	U			—				—				—				< 0.12	U			—				< 0.31	U			—				< 0.31	U		
OWDFMW01	OWDFMW01-WG-03	1/26/2010[d]	< 60.0	U			—				**1,490**				—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U		
OWDFMW01	OWDFMW01-WG-04	4/26/2010[d]	< 60.0	U			—				**288**	**J**			—				—				—				< 0.240	U			—				< 0.620	U			—				< 0.620	U		
OWDFMW01	ES007	10/21/2010[d]	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U		
OWDFMW01	ES008	10/21/2010*[d]	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U		
OWDFMW01	ES017	1/21/2011[d]	—				< 12.12	U			< 80.8	U			—				—				—				**0.54**	**J**			—				< 0.46	U			—				< 0.34	U		
OWDFMW01	ES018	1/21/2011*[d]	—				< 12.12	U			< 80.8	U			—				—				—				**0.69**	**J**			—				< 0.46	U			—				< 0.34	U		
OWDFMW01	ES029	4/21/2011[d]	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				**0.21**	**J**		
OWDFMW01	ES031	4/21/2011*[d]	—				< 12.12	U			< 80.8	U			—				—				—				**0.29**	**J**			—				< 0.46	U			—				< 0.34	U		
OWDFMW01	ES044	7/21/2011[d]	—				< 12.12	U			< 80.8	U			—				< 212.0	U			—				< 0.32	U			—				< 0.46	U			—				< 0.34	U		
OWDFMW01	ES045	7/21/2011*[d]	—				< 12.12	U			< 80.8	U			—				< 212.0	U			—				< 0.32	U			—				< 0.46	U			—				< 0.34	U		
OWDFMW01	ES055	10/26/2011[d]	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U		
OWDFMW01	ES056	10/26/2011*[d]	—				< 12.12	U			< 80.8	U			—				—				—				< 0.32	U			—				< 0.46	U			—				< 0.34	U		
OWDFMW01	ES058	2012-01-24	—				< 12.12	U			< 80.8	U			—				< 212.0	U			—				**0.70**	**J**			—				< 0.46	U			—				< 0.34	U		
OWDFMW01	ES059	1/24/2012*	—				< 12.12	U			< 80.8	U			—				< 212.0	U			—				**0.58**	**J**			—				< 0.46	U			—				< 0.34	U		
OWDFMW01	ES077	2012-04-26	—				< 12.12	U			**220**			W	—				—				—				**0.71**	**J**			—				< 0.46	U			—				< 0.34	U		
OWDFMW01	ES084	2012-07-19	—				< 12.12	U			< 80.8	U			—				—				—				**1.3**				—				< 0.46	U			—				< 0.34	U		
OWDFMW01	ES008	2012-11-07	—				< 17	UJ	b h		**2,500**			Y	—				—				—				**0.38**	**J**	h		—				< 0.50	UJ	h		—				< 0.50	UJ	h	
OWDFMW01	ES007	11/7/2012*	—				< 30	UJ	h		**2,500**			Y	—				—				—				**0.49**	**J**	h		—				< 0.50	UJ	h		—				< 0.50	UJ	h	
OWDFMW01	ES016	2013-01-30	—				< 30	U			**1,000**				—				—				—				**0.39**	**J**			—				< 0.50	U			—				< 0.50	U		
OWDFMW01	ES017	1/30/2013*	—				< 30	U			**1,000**				—				—				—				**0.17**	**J**			—				< 0.50	U			—				< 0.50	U		
OWDFMW01	ES025	2013-04-24	—				< 30	U			**1,900**			Y	—				—				—				**0.82**	**J**			—				< 0.50	U			—				< 0.50	U		
OWDFMW01	ES026	4/24/2013*	—				< 30	U			**1,600**			Y	—				—				—				**0.67**	**J**			—				< 0.50	U			—				< 0.50	U		
OWDFMW01	ES034	2013-07-24	—				< 30	U			**470**			Y	—				—				—				**0.42**	**J**			—				< 0.50	U			—				< 0.50	U		
OWDFMW01	ES035	7/24/2013*	—				< 30	U			**340**			Y	—				—				—				**0.44**	**J**			—				< 0.50	U			—				< 0.50	U		
OWDFMW01	ES043	2013-10-23	—				< 17	UJ	b		**170**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
OWDFMW01	ES044	10/23/2013*	—				< 14	UJ	b		**200**			Y	—				—				—				**0.17**	**J**			—				< 0.50	U			—				< 0.50	U		
OWDFMW01	ES053	1/27/2014[d]	—				< 26	UJ	b		**170**			Y	—				—				—				**0.15**	**J**			—				< 0.50	U			—				< 0.50	U		
OWDFMW01	ES054	1/27/2014*[d]	—				< 23	UJ	b		**140**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
OWDFMW01	ES086	4/23/2014[d]	—				< 30	U			**270**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
OWDFMW01	ES087***	4/23/2014*[d]	—				< 31	UJ	b		**32**			Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
OWDFMW01	ES109	2014-07-24	—				< 30	U			**17**	**J**		Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Volatiles				Volatiles				Volatiles				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Semivolatiles (PAHs)				Lead Scavenger				Lead Scavenger			
		Analyte Type	COPC				non-COPC				non-COPC				COPC				COPC				non-COPC				non-COPC				COPC				non-COPC				Lead Scavenger				Lead Scavenger			
		Analytical Method	8260				524.2				524.2				8270 SIM				8270 SIM				8270				8270 SIM				8260				524.2				8270				8011				8260			
		Analyte	Xylenes, Total (p/m-, o-xylene)				Xylenes, p/m-				Xylenes, o-				1-Methylnaphthalene				2-Methylnaphthalene				2-Methylnaphthalene				Naphthalene *****				Naphthalene *****				Naphthalene *****				Naphthalene *****				1,2-Dibromoethane *****				1,2-Dibromoethane *****			
		CAS No.	1330-20-7				179601-23-1				95-47-6				90-12-0				91-57-6				91-57-6				91-20-3				91-20-3				91-20-3				91-20-3				106-93-4				106-93-4			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	20				20				20				10				10				10				17				17				17				17				0.04				0.04			
		SSRBL	—				—				—				—				—				—				—				—				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
HDMW2253-03	ERH280	2017-03-08	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—				—			
HDMW2253-03	ERH280 (EPA split)	2017-03-08	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U			—				—			
HDMW2253-03	ERH437	2017-10-31	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—				—			
HDMW2253-03	ERH568	2018-03-12	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—				—			
HDMW2253-03	ERH614	2018-04-23	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—				—			
HDMW2253-03	ERH660	2018-07-23	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—				—			
HDMW2253-03	ERH704	2018-10-22	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—				—			
HDMW2253-03	ERH759	2019-02-07	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—				—			
HDMW2253-03	ERH811	2019-04-25	< 0.30	U			—				—				< 0.10	UJ	s		< 0.10	UJ	s		—				< 0.10	UJ	s		—				—				—				—				—			
HDMW2253-03	ERH867	2019-07-25	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—				—			
HDMW2253-03	ERH931	2019-10-23	< 0.30	U			—				—				< 0.10	UJ	l		< 0.10	UJ	l		—				< 0.10	UJ	l		—				—				—				—				—			
HDMW2253-03	ERH997	2020-01-23	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—				—			
HDMW2253-03	ERH1065	2020-04-23	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—				—				—			
OWDFMW01	OWDFMW01-WG-01	8/4/2009[ad]	< 0.620	U			—				—				< 0.0164	U			< 0.0164	U			—				< 0.0339	U			< 0.620	U			—				—				—				< 0.310	U		
OWDFMW01	OWDFMW01-WG-02	10/13/2009[abd]	< 0.62	U			—				—				< 0.0168	U			< 0.0168	U			—				< 0.0346	U			< 0.62	U			—				—				—				< 0.31	U		
OWDFMW01	OWDFMW01-WG-03	1/26/2010[d]	< 1.24	U			—				—				< 0.0320	U			< 0.0320	U			—				< 0.0664	U			< 1.24	U			—				—				—				< 0.620	U		
OWDFMW01	OWDFMW01-WG-04	4/26/2010[d]	< 1.24	U			—				—				< 0.0352	U			< 0.0352	U			—				< 0.0730	U			< 1.24	U			—				—				—				< 0.620	U		
OWDFMW01	ES007	10/21/2010[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				—				< 0.40	U		
OWDFMW01	ES008	10/21/2010*[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				—				< 0.40	U		
OWDFMW01	ES017	1/21/2011[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				—				< 0.40	U		
OWDFMW01	ES018	1/21/2011*[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				—				< 0.40	U		
OWDFMW01	ES029	4/21/2011[d]	**0.39**	**J**			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				—				< 0.40	U		
OWDFMW01	ES031	4/21/2011*[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				—				< 0.40	U		
OWDFMW01	ES044	7/21/2011[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				—				< 0.40	U		
OWDFMW01	ES045	7/21/2011*[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				—				< 0.40	U		
OWDFMW01	ES055	10/26/2011[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				—				< 0.40	U		
OWDFMW01	ES056	10/26/2011*[d]	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				—				< 0.40	U		
OWDFMW01	ES058	2012-01-24	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				—				< 0.40	U		
OWDFMW01	ES059	1/24/2012*	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				—				< 0.40	U		
OWDFMW01	ES077	2012-04-26	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				—				< 0.40	U		
OWDFMW01	ES084	2012-07-19	< 0.38	U			—				—				< 0.12	U			< 0.12	U			—				< 0.10	U			—				—				—				—				< 0.40	U		
OWDFMW01	ES008	2012-11-07	< 1	UJ	h		—				—				< 0.050	U			< 0.050	U			—				**0.025**	**J**			—				—				—				—				< 0.50	UJ	h	
OWDFMW01	ES007	11/7/2012*	< 1	UJ	h		—				—				< 0.050	U			< 0.050	U			—				**0.035**	**J**			—				—				—				—				< 0.50	UJ	h	
OWDFMW01	ES016	2013-01-30	< 1	U			—				—				< 0.050	U			< 0.050	U			—				**0.032**	**J**			—				—				—				—				< 0.50	U		
OWDFMW01	ES017	1/30/2013*	< 1	U			—				—				< 0.050	U			< 0.050	U			—				**0.039**	**J**			—				—				—				—				< 0.50	U		
OWDFMW01	ES025	2013-04-24	< 1.0	U			—				—				< 0.051	U			< 0.051	U			—				**0.063**	**J**			—				—				—				—				< 0.50	U		
OWDFMW01	ES026	4/24/2013*	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.068**	**J**			—				—				—				—				< 0.50	U		
OWDFMW01	ES034	2013-07-24	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.081**	**J**			—				—				—				—				< 0.50	U		
OWDFMW01	ES035	7/24/2013*	< 1.0	U			—				—				< 0.048	U			< 0.048	U			—				**0.12**	**J**			—				—				—				—				< 0.50	U		
OWDFMW01	ES043	2013-10-23	< 1.0	U			—				—				< 0.049	U			< 0.049	U			—				< 0.049	U			—				—				—				—				< 0.50	U		
OWDFMW01	ES044	10/23/2013*	< 1.0	U			—				—				< 0.049	U			< 0.049	U			—				< 0.049	U			—				—				—				—				< 0.50	U		
OWDFMW01	ES053	1/27/2014[d]	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.093**	**J**			—				—				—				—				< 0.50	U		
OWDFMW01	ES054	1/27/2014*[d]	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.085**	**J**			—				—				—				—				< 0.50	U		
OWDFMW01	ES086	4/23/2014[d]	< 1.0	U			—				—				< 0.049	U			< 0.049	U			—				**0.035**	**J**			—				—				—				—				< 0.50	U		
OWDFMW01	ES087***	4/23/2014*[d]	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.035**	**J**			—				—				—				—				< 0.50	U		
OWDFMW01	ES109	2014-07-24	< 1.0	U			—				—				< 0.051	U			< 0.051	U			—				**0.031**	**J**			—				—				—				—				< 0.50	U		

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Semivolatiles				Semivolatiles			
		Analyte Type	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Fuel Additive				Fuel Additive					
		Analytical Method	504.1				524.2				8260SIM				8260SIM				8260				524.2				8270				8270/8270 Mod.			
		Analyte	1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				Phenol				2-(2-Methoxyethoxy)-ethanol			
		CAS No.	106-93-4				106-93-4				106-93-4				107-06-2				107-06-2				107-06-2				108-95-2				111-77-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	0.04				0.04				0.04				5				5				5				300				800			
		SSRBL	—				—				—				—				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
HDMW2253-03	ERH280	2017-03-08	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
HDMW2253-03	ERH280 (EPA split)	2017-03-08	—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
HDMW2253-03	ERH437	2017-10-31	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
HDMW2253-03	ERH568	2018-03-12	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
HDMW2253-03	ERH614	2018-04-23	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
HDMW2253-03	ERH660	2018-07-23	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
HDMW2253-03	ERH704	2018-10-22	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
HDMW2253-03	ERH759	2019-02-07	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
HDMW2253-03	ERH811	2019-04-25	—				—				—				—				—				—				< 4.00	UJ	h		< 80.0	UJ	I	
HDMW2253-03	ERH867	2019-07-25	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
HDMW2253-03	ERH931	2019-10-23	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
HDMW2253-03	ERH997	2020-01-23	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	I	
HDMW2253-03	ERH1065	2020-04-23	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
OWDFMW01	OWDFMW01-WG-01	8/4/2009[ad]	—				—				—				—				< 0.150	U			—				—				—			
OWDFMW01	OWDFMW01-WG-02	10/13/2009[abd]	—				—				—				—				< 0.15	U			—				—				—			
OWDFMW01	OWDFMW01-WG-03	1/26/2010[d]	—				—				—				—				< 0.300	U			—				—				—			
OWDFMW01	OWDFMW01-WG-04	4/26/2010[d]	—				—				—				—				< 0.300	U			—				—				—			
OWDFMW01	ES007	10/21/2010[d]	—				—				—				—				< 0.28	U			—				—				—			
OWDFMW01	ES008	10/21/2010*[d]	—				—				—				—				< 0.28	U			—				—				—			
OWDFMW01	ES017	1/21/2011[d]	—				—				—				—				< 0.28	U			—				—				—			
OWDFMW01	ES018	1/21/2011*[d]	—				—				—				—				< 0.28	U			—				—				—			
OWDFMW01	ES029	4/21/2011[d]	—				—				—				—				< 0.28	U			—				—				—			
OWDFMW01	ES031	4/21/2011*[d]	—				—				—				—				< 0.28	U			—				—				—			
OWDFMW01	ES044	7/21/2011[d]	—				—				—				—				< 0.28	U			—				—				—			
OWDFMW01	ES045	7/21/2011*[d]	—				—				—				—				< 0.28	U			—				—				—			
OWDFMW01	ES055	10/26/2011[d]	—				—				—				—				< 0.28	U			—				—				—			
OWDFMW01	ES056	10/26/2011*[d]	—				—				—				—				< 0.28	U			—				—				—			
OWDFMW01	ES058	2012-01-24	—				—				—				—				< 0.28	U			—				—				—			
OWDFMW01	ES059	1/24/2012*	—				—				—				—				< 0.28	U			—				—				—			
OWDFMW01	ES077	2012-04-26	—				—				—				—				< 0.28	U			—				—				—			
OWDFMW01	ES084	2012-07-19	—				—				—				—				< 0.28	U			—				—				—			
OWDFMW01	ES008	2012-11-07	—				—				—				—				< 0.50	UJ	h		—				—				—			
OWDFMW01	ES007	11/7/2012*	—				—				—				—				< 0.50	UJ	h		—				—				—			
OWDFMW01	ES016	2013-01-30	—				—				—				—				< 0.50	U			—				—				—			
OWDFMW01	ES017	1/30/2013*	—				—				—				—				< 0.50	U			—				—				—			
OWDFMW01	ES025	2013-04-24	—				—				—				—				< 0.50	U			—				—				—			
OWDFMW01	ES026	4/24/2013*	—				—				—				—				< 0.50	U			—				—				—			
OWDFMW01	ES034	2013-07-24	—				—				—				—				< 0.50	U			—				—				—			
OWDFMW01	ES035	7/24/2013*	—				—				—				—				< 0.50	U			—				—				—			
OWDFMW01	ES043	2013-10-23	—				—				—				—				< 0.50	U			—				—				—			
OWDFMW01	ES044	10/23/2013*	—				—				—				—				< 0.50	U			—				—				—			
OWDFMW01	ES053	1/27/2014[d]	—				—				—				—				< 0.50	U			—				—				—			
OWDFMW01	ES054	1/27/2014*[d]	—				—				—				—				< 0.50	U			—				—				—			
OWDFMW01	ES086	4/23/2014[d]	—				—				—				—				< 0.50	U			—				—				—			
OWDFMW01	ES087***	4/23/2014*[d]	—				—				—				—				< 0.50	U			—				—				—			
OWDFMW01	ES109	2014-07-24	—				—				—				—				< 0.50	U			—				—				—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	TPH				TPH				TPH				TPH				TPH				Volatiles				Volatiles				Volatiles				Volatiles				Volatiles			
		Analyte Type	COPC				COPC				COPC				COPC				COPC				COPC				non-COPC				COPC				non-COPC				COPC			
		Analytical Method	8015				8260				8015				8015				8015				8260				524.2				8260				524.2				8260			
		Analyte	TPH-g ****				TPH-g ****				TPH-d				TPH-d with Silica Gel Cleanup				TPH-o				TPH-o with Silica Gel Cleanup				Benzene				Benzene				Ethylbenzene				Ethylbenzene				Toluene				Toluene			
		CAS No.	Gas				Gas				Diesel				Disel SGC				Oil				Oil SGC				71-43-2				71-43-2				100-41-4				100-41-4				108-88-3				108-88-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	300				300				400				400				500				500				5				5				30				30				40				40			
		SSRBL	—				—				4500				—				—				—				750				750				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
OWDFMW01	ES110	7/24/2014*	—				< 30	U			**15**	**J**		Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
OWDFMW01	ES121	2014-10-22	—				< 30	U			**19**	**J**		Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
OWDFMW01	ES122	10/22/2014*	—				< 30	U			**19**	**J**		Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
OWDFMW01	ES121X	2015-01-26	—				< 30	U			**24**	**J**		Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
OWDFMW01	ES122X	1/26/2015*	—				< 30	U			**16**	**J**		Y	—				—				—				< 0.50	U			—				< 0.50	U			—				< 0.50	U		
OWDFMW01	ES137	2015-04-22	< 25	U			—				**120**			Z	—				< 110	UJ	b	Z	—				**0.070**	**J**			—				< 0.10	U			—				< 0.10	U		
OWDFMW01	ES138	4/22/2015*	< 25	U			—				**120**			Z	—				**140**			Z	—				< 0.10	U			—				< 0.10	U			—				< 0.10	U		
OWDFMW01	ES152	2015-07-22	< 25	U			—				**3,100**			Z	—				**390**			Z	—				< 0.10	U			—				< 0.10	U			—				< 0.10	U		
OWDFMW01	ES153	7/22/2015*	< 25	U			—				**3,000**			Z	—				**330**			Z	—				< 0.10	U			—				< 0.10	U			—				**0.060**	**J**		
OWDFMW01	ERH002	2015-10-19	< 25	U			—				**680**			Z	—				**100**	**J**			—				< 0.10	UJ	h		—				< 0.10	UJ			—				< 0.4	UJ	t	
OWDFMW01	ERH016	2016-01-19	< 25	U			—				**320**			Z	—				< 69	UJ	b		—				< 0.10	U			—				< 0.10	U			—				< 0.18	UJ	t	
OWDFMW01	ERH030	2016-04-19	< 13	U	f		—				< 38	U	b f		—				< 56	U	b f		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U		
OWDFMW01	ERH031	2016-04-19	< 9	U	f		—				< 36	U	b f		—				< 67	U	b f		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U		
OWDFMW01	ERH044	2016-07-19	< 25	U			—				< 16	U	f		—				< 40	U	b f		—				< 0.10	U			—				< 0.10	U			—				< 0.10	U		
OWDFMW01	ERH104	2016-10-20	—				< 18	U			**54**			Y	—				**110**				—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
OWDFMW01	ERH105	10/20/2016*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
OWDFMW01	ERH118	2016-11-15	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
OWDFMW01	ERH119	11/15/2016*	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
OWDFMW01	ERH147	2016-12-14	—				< 18	U			< 58	U		Z	—				**39**	**J**			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
OWDFMW01	ERH148	12/14/2016*	—				< 18	U			< 57	U		Z	—				**46**				—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
OWDFMW01	ERH184	2017-01-12	—				< 18	U			< 25	U			—				**45**			Y	—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
OWDFMW01	ERH184 (EPA split)	2017-01-12	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
OWDFMW01	ERH227	2017-02-09	—				< 18	U			< 23	U		Z	—				**44**				—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
OWDFMW01	ERH227 (EPA split)	2017-02-09	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
OWDFMW01	ERH286	2017-03-08	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
OWDFMW01	ERH286 (EPA split)	2017-03-08	< 25	UJ	c		—				< 75	U			—				< 300	U			—				—				< 0.2	U			—				< 0.2	U			—				< 0.2	U		
OWDFMW01	ERH321	2017-04-04	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
OWDFMW01	ERH389	2017-07-05	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
OWDFMW01	ERH435	2017-10-26	—				< 18	U			**110**			Y	—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
OWDFMW01	ERH566	2018-03-14	—				< 18	U			**310**	**J**	s	Z	< 25	U			< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U		
OWDFMW01	ERH612	2018-04-26	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
OWDFMW01	ERH658	2018-07-26	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
OWDFMW01	ERH702	2018-10-24	—				< 18	U			**250**	**J**	h	Y	< 25	UJ	h		**160**	**J**	h		< 40	UJ	h		< 0.30	U			—				< 0.50	U			—				< 0.30	U		
OWDFMW01	ERH757	2019-01-23	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	UJ	s		—				< 0.50	UJ	s		—				< 0.30	UJ	s	
OWDFMW01	ERH809	2019-04-25	—				< 18	U			< 25	U			—				< 40	U			—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
OWDFMW01	ERH865	2019-07-24	—				< 18	U			**210**			O	< 25	U			< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U		
OWDFMW01	ERH865	2019-07-24	—				< 18	U			**210**			O	< 25	U			< 40	U			< 40	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U		
OWDFMW01	ERH995	2020-01-22	—				< 18	U			**120**			Z	—				**120**			Z	—				< 0.30	U			—				< 0.50	U			—				< 0.30	U		
OWDFMW01	ERH1063	2020-04-22	—				< 18	U			**450**	**J**	l	Z	< 300.0	U			**280**	**J**	l	Z	< 300.0	U			< 0.30	U			—				< 0.50	U			—				< 0.30	U		

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Volatiles			Volatiles			Volatiles			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Semivolatiles (PAHs)			Lead Scavenger			Lead Scavenger		
		Analyte Type	COPC			non-COPC			non-COPC			COPC			COPC			non-COPC			COPC			non-COPC			non-COPC			Lead Scavenger			Lead Scavenger		
		Analytical Method	8260			524.2			524.2			8270 SIM			8270 SIM			8270			8270 SIM			8260			524.2			8270			8011			8260		
		Analyte	Xylenes, Total (p/m-, o-xylene)			Xylenes, p/m-			Xylenes, o-			1-Methylnaphthalene			2-Methylnaphthalene			2-Methylnaphthalene			Naphthalene *****			Naphthalene *****			Naphthalene *****			Naphthalene *****			1,2-Dibromoethane *****			1,2-Dibromoethane *****		
		CAS No.	1330-20-7			179601-23-1			95-47-6			90-12-0			91-57-6			91-57-6			91-20-3			91-20-3			91-20-3			91-20-3			106-93-4			106-93-4		
		Unit	µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L			µg/L		
		DOH EAL	20			20			20			10			10			10			17			17			17			17			0.04			0.04		
		SSRBL	—			—			—			—			—			—			—			—			—			—			—			—		
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
OWDFMW01	ES110	7/24/2014*	< 1.0	U			—				—				< 0.050	U			< 0.050	U			—				**0.027**	**J**			—				—				< 0.50	U		
OWDFMW01	ES121	2014-10-22	< 1.0	U			—				—				< 0.10	U			< 0.052	U			—				**0.047**	**J**			—				—				< 0.50	U		
OWDFMW01	ES122	10/22/2014*	< 1.0	U			—				—				< 0.10	U			< 0.052	U			—				< 0.052	U			—				—				< 0.50	U		
OWDFMW01	ES121X	2015-01-26	< 1.0	U			—				—				< 0.10	U			< 0.052	U			—				< 0.052	U			—				—				< 0.50	U		
OWDFMW01	ES122X	1/26/2015*	< 1.0	U			—				—				< 0.10	U			< 0.051	U			—				< 0.051	U			—				—				< 0.50	U		
OWDFMW01	ES137	2015-04-22	< 0.20	U			—				—				**0.023**				**0.017**	**J**			—				**0.025**				—				—				< 0.20	U		
OWDFMW01	ES138	4/22/2015*	< 0.20	U			—				—				**0.020**				**0.015**	**J**			—				**0.023**				—				—				< 0.20	U		
OWDFMW01	ES152	2015-07-22	< 0.20	U			—				—				**0.0088**	**J**			**0.0086**	**J**			—				**0.014**	**J**			—				—				< 0.20	U		
OWDFMW01	ES153	7/22/2015*	< 0.20	U			—				—				**0.0096**	**J**			**0.0097**	**J**			—				**0.016**	**J**			—				—				< 0.20	U		
OWDFMW01	ERH002	2015-10-19	< 0.20	UJ	h		—				—				**0.019**	**J**			< 0.013	UJ	b		—				**0.025**				—				—				< 0.20	UJ	h	
OWDFMW01	ERH016	2016-01-19	< 0.20	U			—				—				**0.030**				**0.020**				—				**0.024**				—				—				< 0.20	U		
OWDFMW01	ERH030	2016-04-19	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—				—				—			
OWDFMW01	ERH031	2016-04-19	< 0.20	U			—				—				< 0.0050	U			< 0.0050	U			—				< 0.0050	U			—				—				—			
OWDFMW01	ERH044	2016-07-19	< 0.20	U			—				—				< 0.0050	U			**0.0027**	**J**			—				< 0.019	U	b f		—				—				—			
OWDFMW01	ERH104	2016-10-20	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
OWDFMW01	ERH105	10/20/2016*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
OWDFMW01	ERH118	2016-11-15	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
OWDFMW01	ERH119	11/15/2016*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
OWDFMW01	ERH147	2016-12-14	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
OWDFMW01	ERH148	12/14/2016*	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
OWDFMW01	ERH184	2017-01-12	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
OWDFMW01	ERH184 (EPA split)	2017-01-12	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U			—			
OWDFMW01	ERH227	2017-02-09	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
OWDFMW01	ERH227 (EPA split)	2017-02-09	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	UJ	h		< 0.025	U			—				< 0.2	U			< 0.5	UJ	h		—			
OWDFMW01	ERH286	2017-03-08	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
OWDFMW01	ERH286 (EPA split)	2017-03-08	—				< 0.5	U			< 0.2	U			< 0.025	UJ	c		< 0.025	UJ	c		< 0.5	U			< 0.025	U			—				< 0.2	U			< 0.5	U			—			
OWDFMW01	ERH321	2017-04-04	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
OWDFMW01	ERH389	2017-07-05	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
OWDFMW01	ERH435	2017-10-26	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
OWDFMW01	ERH566	2018-03-14	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
OWDFMW01	ERH612	2018-04-26	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
OWDFMW01	ERH658	2018-07-26	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
OWDFMW01	ERH702	2018-10-24	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
OWDFMW01	ERH757	2019-01-23	< 0.30	UJ	s		—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
OWDFMW01	ERH809	2019-04-25	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
OWDFMW01	ERH865	2019-07-24	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
OWDFMW01	ERH865	2019-07-24	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
OWDFMW01	ERH995	2020-01-22	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			
OWDFMW01	ERH1063	2020-04-22	< 0.30	U			—				—				< 0.10	U			< 0.10	U			—				< 0.10	U			—				—				—			

Table A.1: Cumulative Groundwater COPC Results, First Quarter 2020 Groundwater Monitoring Event (cont'd)
Red Hill Bulk Fuel Storage Facility, JBPHH, O'ahu, Hawai'i

		Analyte Class	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Semivolatiles				Semivolatiles			
		Analyte Type	Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Lead Scavenger				Fuel Additive				Fuel Additive					
		Analytical Method	504.1				524.2				8260SIM				8260SIM				8260				524.2				8270				8270/8270 Mod.			
		Analyte	1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dibromoethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				1,2-Dichloroethane *****				Phenol				2-(2-Methoxyethoxy)-ethanol			
		CAS No.	106-93-4				106-93-4				106-93-4				107-06-2				107-06-2				107-06-2				108-95-2				111-77-3			
		Unit	µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L				µg/L			
		DOH EAL	0.04				0.04				0.04				5				5				5				300				800			
		SSRBL	—				—				—				—				—				—				—				—			
Well Name	Sample ID	Date Sampled	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note	Result	Q	rc	note
OWDFMW01	ES110	7/24/2014*	—				—				—				—				< 0.50	U			—				—				—			
OWDFMW01	ES121	2014-10-22	—				—				—				—				< 0.50	U			—				—				—			
OWDFMW01	ES122	10/22/2014*	—				—				—				—				< 0.50	UJ	c		—				—				—			
OWDFMW01	ES121X	2015-01-26	—				—				—				—				< 0.50	U			—				—				—			
OWDFMW01	ES122X	1/26/2015*	—				—				—				—				< 0.50	U			—				—				—			
OWDFMW01	ES137	2015-04-22	—				—				< 0.010	U			**0.010**	**J**			—				—				—				—			
OWDFMW01	ES138	4/22/2015*	—				—				< 0.010	U			**0.0081**	**J**			—				—				—				—			
OWDFMW01	ES152	2015-07-22	—				—				—				**0.012**	**J**			—				—				—				—			
OWDFMW01	ES153	7/22/2015*	—				—				—				**0.012**	**J**			—				—				—				—			
OWDFMW01	ERH002	2015-10-19	—				—				< 0.010	U			**0.0009**	**J**			—				—				—				—			
OWDFMW01	ERH016	2016-01-19	—				—				—				**0.0096**	**J**			—				—				—				—			
OWDFMW01	ERH030	2016-04-19	—				—				—				—				—				—				—				—			
OWDFMW01	ERH031	2016-04-19	—				—				—				—				—				—				—				—			
OWDFMW01	ERH044	2016-07-19	—				—				—				—				—				—				—				—			
OWDFMW01	ERH104	2016-10-20	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
OWDFMW01	ERH105	10/20/2016*	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
OWDFMW01	ERH118	2016-11-15	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
OWDFMW01	ERH119	11/15/2016*	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
OWDFMW01	ERH147	2016-12-14	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
OWDFMW01	ERH148	12/14/2016*	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
OWDFMW01	ERH184	2017-01-12	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
OWDFMW01	ERH184 (EPA split)	2017-01-12	—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
OWDFMW01	ERH227	2017-02-09	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
OWDFMW01	ERH227 (EPA split)	2017-02-09	—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	UJ	h		—			
OWDFMW01	ERH286	2017-03-08	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
OWDFMW01	ERH286 (EPA split)	2017-03-08	—				< 0.0025	U			—				—				—				< 0.0025	U			< 2.5	U			—			
OWDFMW01	ERH321	2017-04-04	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
OWDFMW01	ERH389	2017-07-05	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
OWDFMW01	ERH435	2017-10-26	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
OWDFMW01	ERH566	2018-03-14	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
OWDFMW01	ERH612	2018-04-26	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
OWDFMW01	ERH658	2018-07-26	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
OWDFMW01	ERH702	2018-10-24	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
OWDFMW01	ERH757	2019-01-23	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
OWDFMW01	ERH809	2019-04-25	—				—				—				—				—				—				< 4.00	U			< 80.0	UJ	l	
OWDFMW01	ERH865	2019-07-24	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
OWDFMW01	ERH865	2019-07-24	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
OWDFMW01	ERH995	2020-01-22	—				—				—				—				—				—				< 4.00	U			< 80.0	U		
OWDFMW01	ERH1063	2020-04-22	—				—				—				—				—				—				< 4.00	U			< 80.0	U		

First Quarter 2020 Groundwater Monitoring Event

Table A.1 Notes:

A data verification effort was conducted after the Second Quarter 2018 groundwater monitoring event to verify reported values and make data qualification consistent with the current data validation procedures. As such, data presented in the Third Quarter 2018 groundwater monitoring event (and succeeding) cumulative data tables may differ from data presented in cumulative data tables in previous reports.

Table A.1-6 presents a comparison of values, qualifiers, and notes between pre- and post-data verification.

DOH Tier 1 Environmental Action Levels, Table D-1b. Groundwater Action Levels (Groundwater IS a current or potential drinking water resource, surface water body IS NOT located within 150 meters of release site).

Grey highlight	Exceeds EAL
Bold	Detected value
*	Duplicate sample
***	Samples ES087 and ES088 possibly switched prior to analysis.
****	TPH-g analyzed by either 8015 or 8260.
*****	Analyzed by either 8260, 8260 SIM, 8011, 504.1, and/or 524.2.
%D	percent difference
%R	percent recovery
%RSD	percent relative standard deviation
µg/L	micrograms per liter
COPC	chemical of potential concern
DL	detection limit
DOH	Department of Health, State of Hawai'i
EAL	environmental action level
ID	identification
MDL	method detection limit
MRL	method reporting limit
QC	quality control
r	correlation coefficient
r^2	coefficient of determination
RL	reporting limit
RPD	relative percent difference
RRF	relative response factor
TPH	total petroleum hydrocarbons
TPH-g	total petroleum hydrocarbons-gasoline range organics
a	MDL values were used for non-detects.
b	MRL values were used for non-detects.
c	No analytical lab reports found, could not verify results.
d	No analytical lab reports available, used data table from groundwater monitoring report.
e	Results from stilling basin, pumps offline.
f	Results from stilling basin, pumps online.
g	Analyzed by Method 6010B.
h	Analyzed by Method 6020.
k	Analyzed by Method 200.8.

Result Qualifiers (Q)

J	Estimated value.
U	The compound was analyzed for but not detected above the stated limit.

Reason Codes (rc)

b	Presumed contamination from preparation (method blank).
c	Calibration %RSD, r, r^2, or %D were noncompliant.
e	Matrix Spike/Matrix Spike Duplicate or Duplicate RPD was high.
f	Presumed contamination from field blank or equipment rinsate.
h	Holding times were exceeded.
i	Internal standard performance was unsatisfactory.
l	Laboratory Control Sample/Laboratory Control Sample Duplicate %R or RPD was not within control limits.
m	Instrument performance check was noncompliant.
q	Matrix Spike/Matrix Spike Duplicate recovery was poor.
r	Calibration RRF was <0.05.
s	Surrogate recovery was outside QC limits.
t	Presumed contamination from trip blank.
v	Unusual problems found with the data. Description of the problem can be found in the associated laboratory or groundwater monitoring report.

Data Notes (note)

I	RL/DL elevated due to chromatographic interference.
W	Chromatographic signature was mostly non-petroleum hydrocarbon peaks.
X	Possible high bias due to matrix interference.
Y, F13	Chromatographic pattern was inconsistent with the profile of the reference fuel standard; or, fuel or product type: mixed or unknown
Z	Chromatographic signature does not resemble a petroleum product.
O, F4	Chromatogram is main match to hydrocarbons in diesel fuel range; or, fuel type: diesel fuel
F3	Fuel type: kerosene or jet fuel
F6	Product type: hydraulic fluid

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Appendix A.2:
Groundwater COPC Graphs

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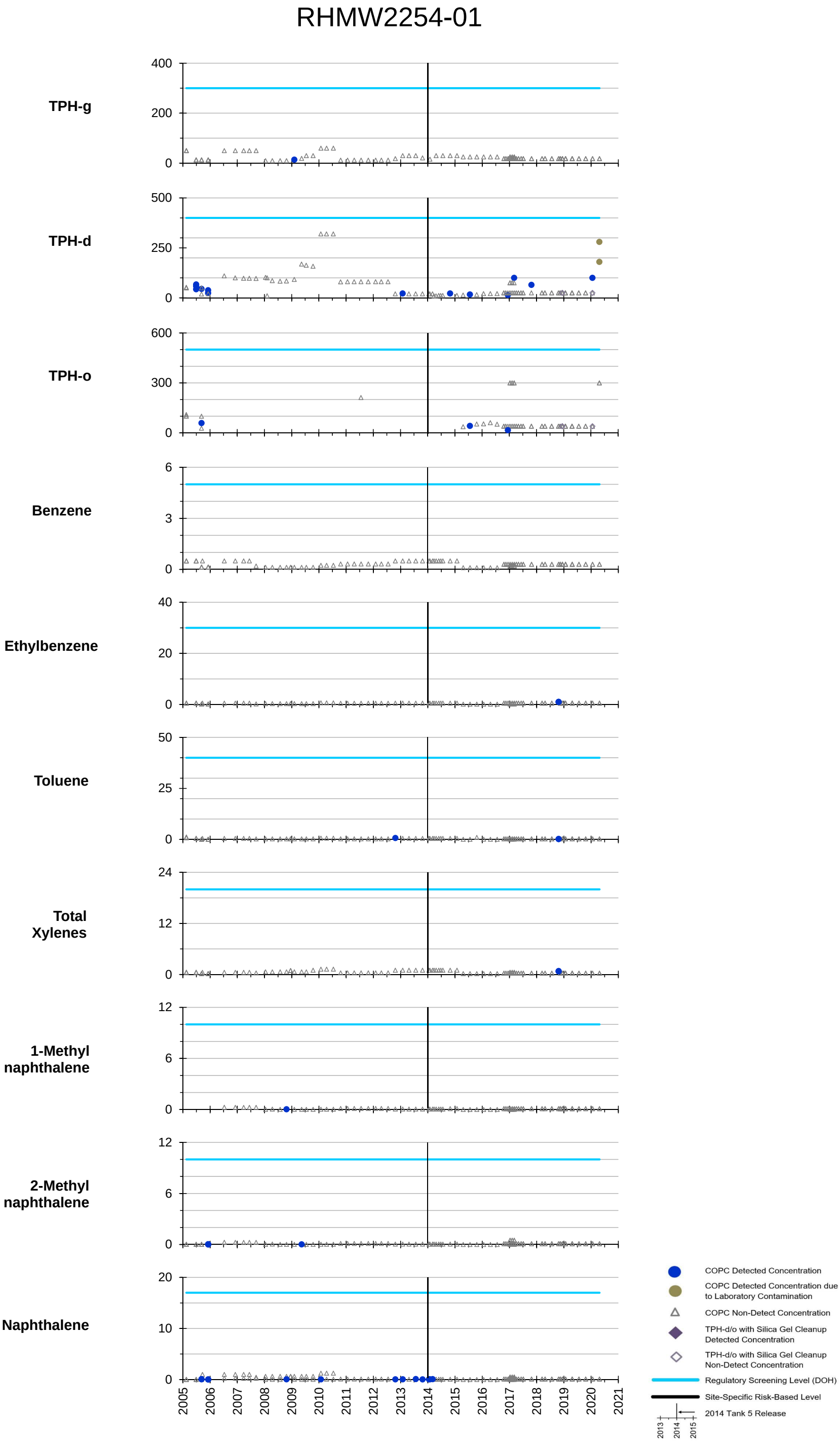
Appendix A.2 Groundwater Concentration Graphs

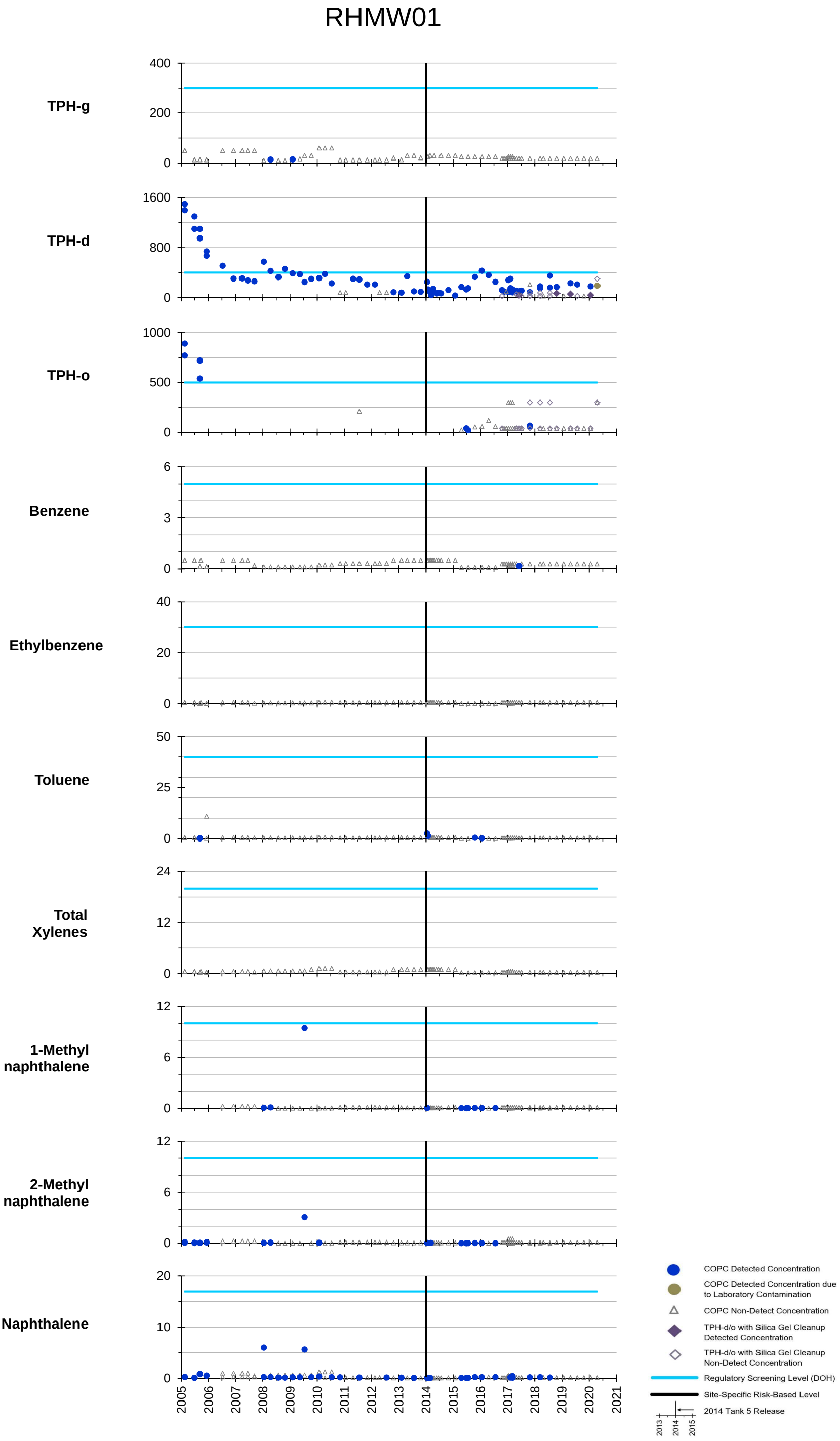


All results in micrograms per liter (µg/L or parts per billion).

EPA Region 9 Laboratory split sampling data from First to Third Quarters 2017 included in the graphs.

Laboratory reporting limits for TPH-d and TPH-o were raised in March 2020 in accordance with the most current DoD QSM (2019), TNI Manual (2016), and 40 CFR Part 136 (Methods Update Rule 2017).

Appendix A.2 Groundwater Concentration Graphs



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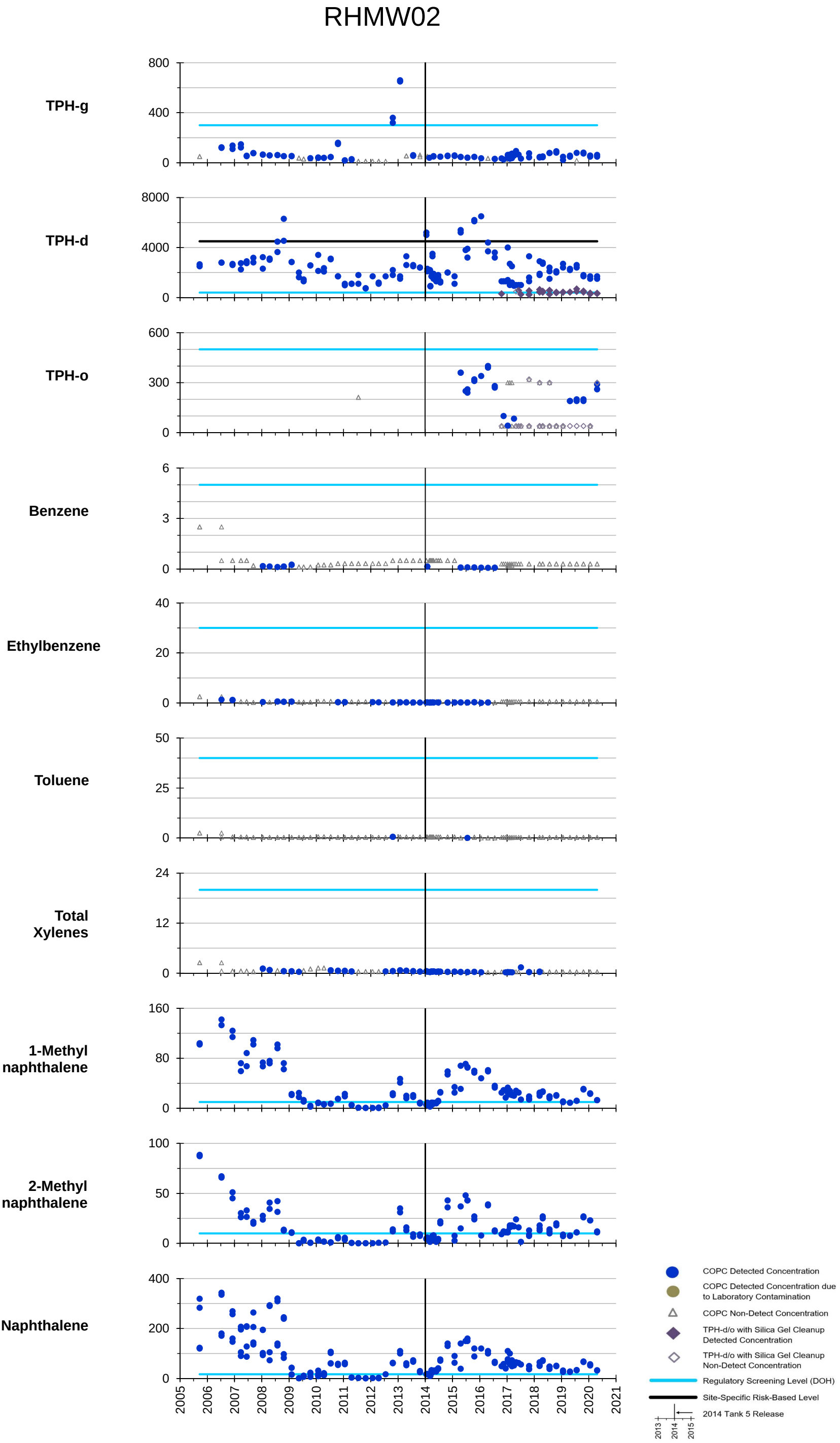
Appendix A.2 Groundwater Concentration Graphs



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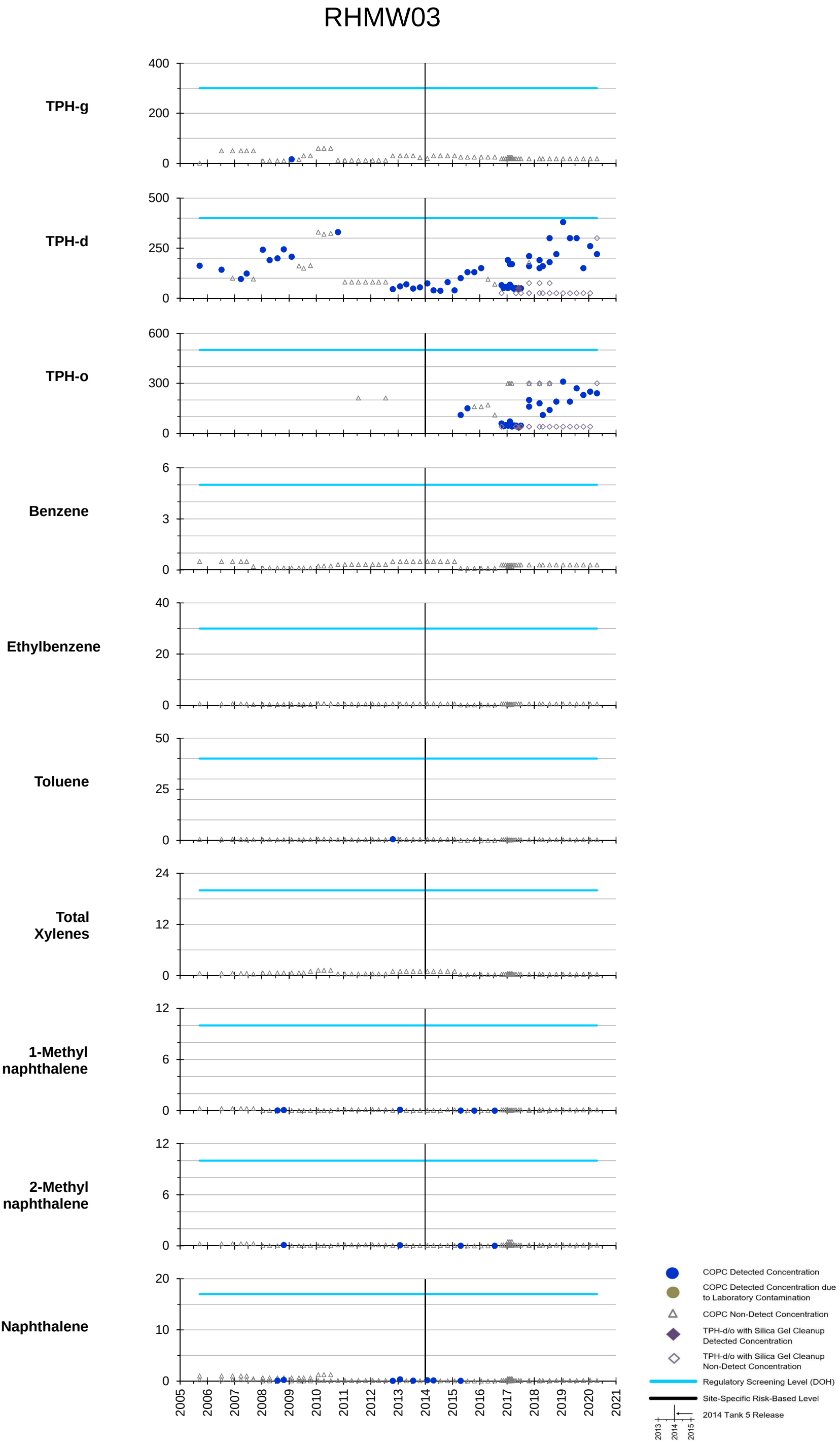
Appendix A.2 Groundwater Concentration Graphs



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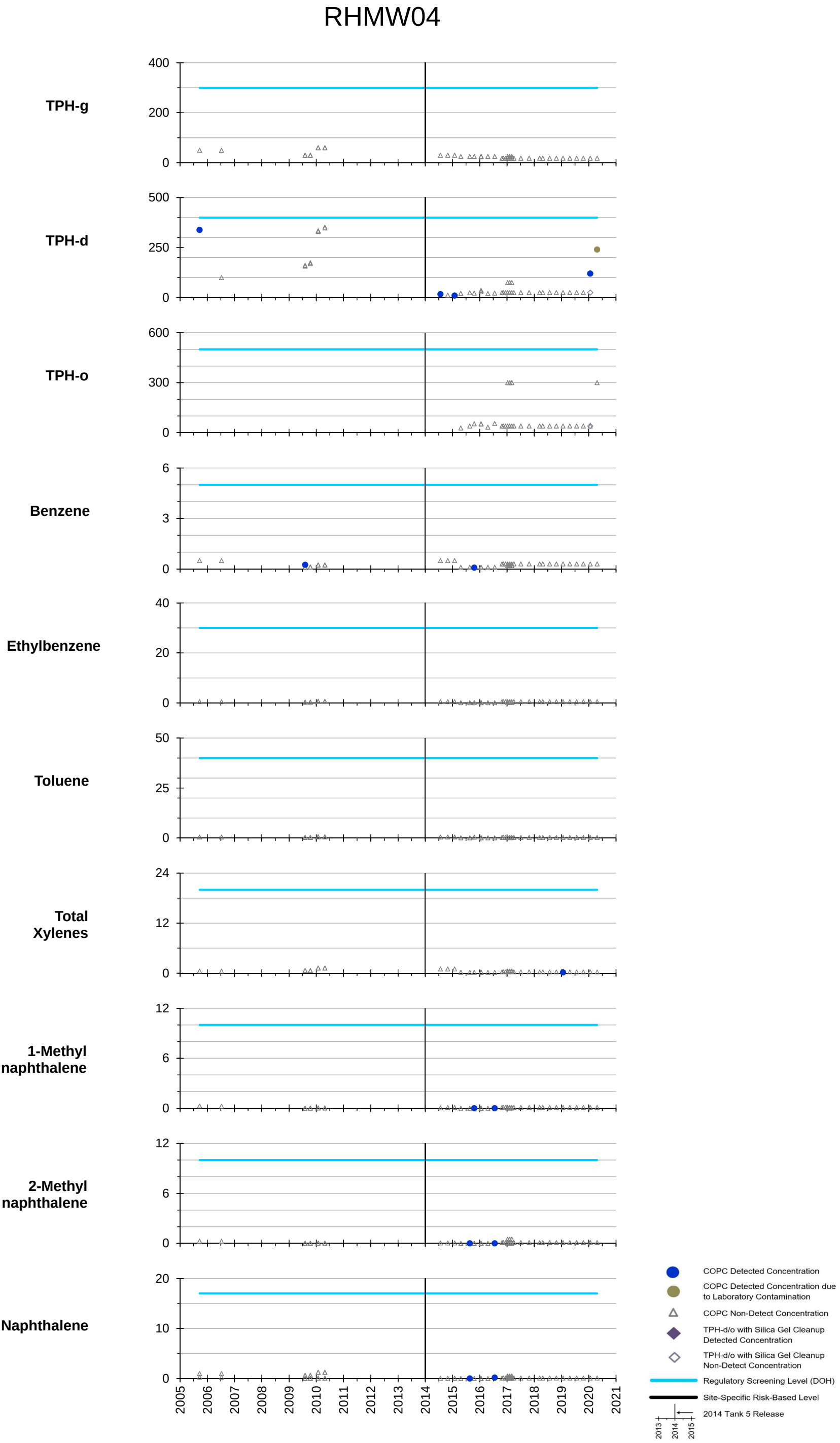
Appendix A.2 Groundwater Concentration Graphs



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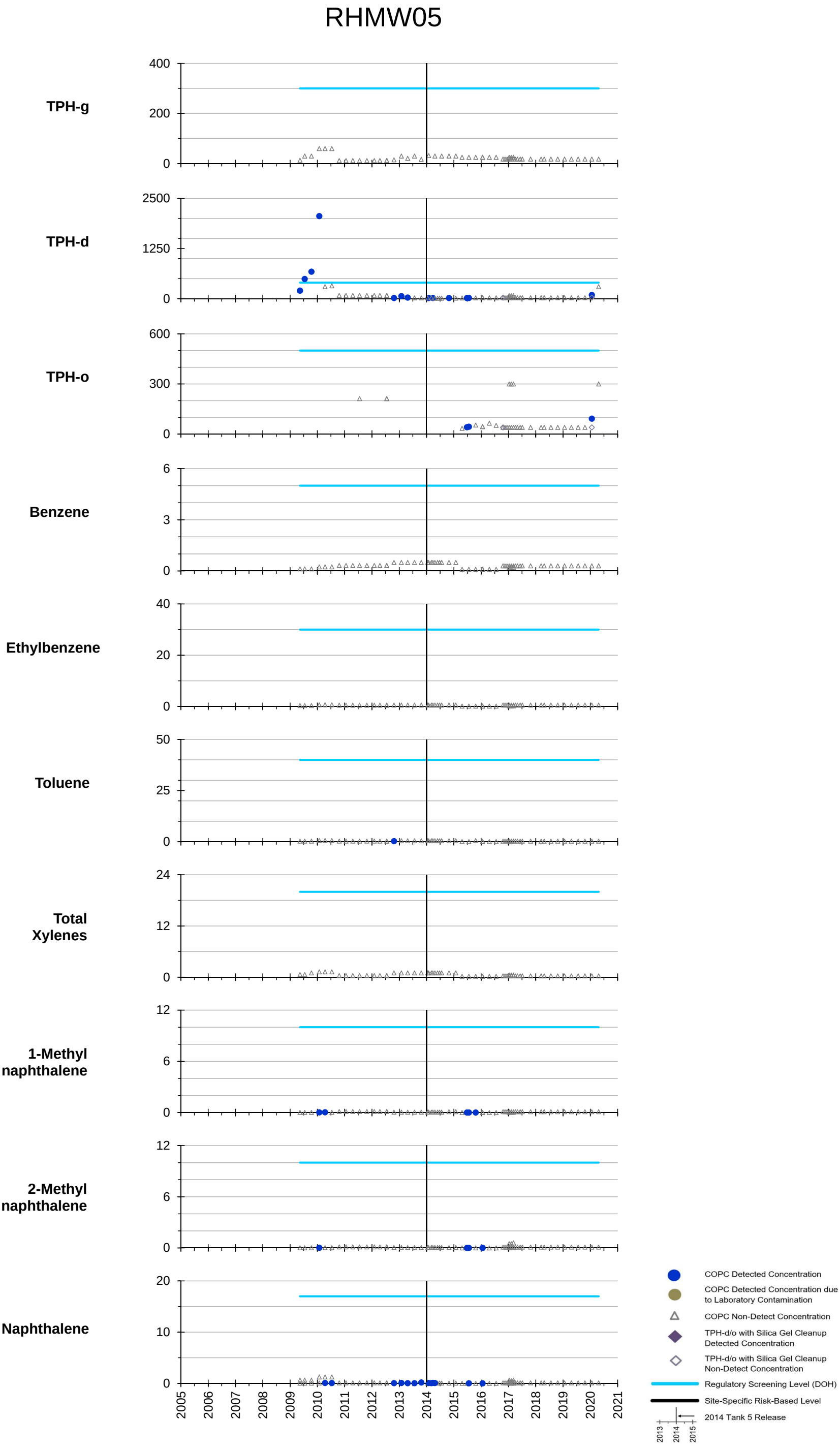

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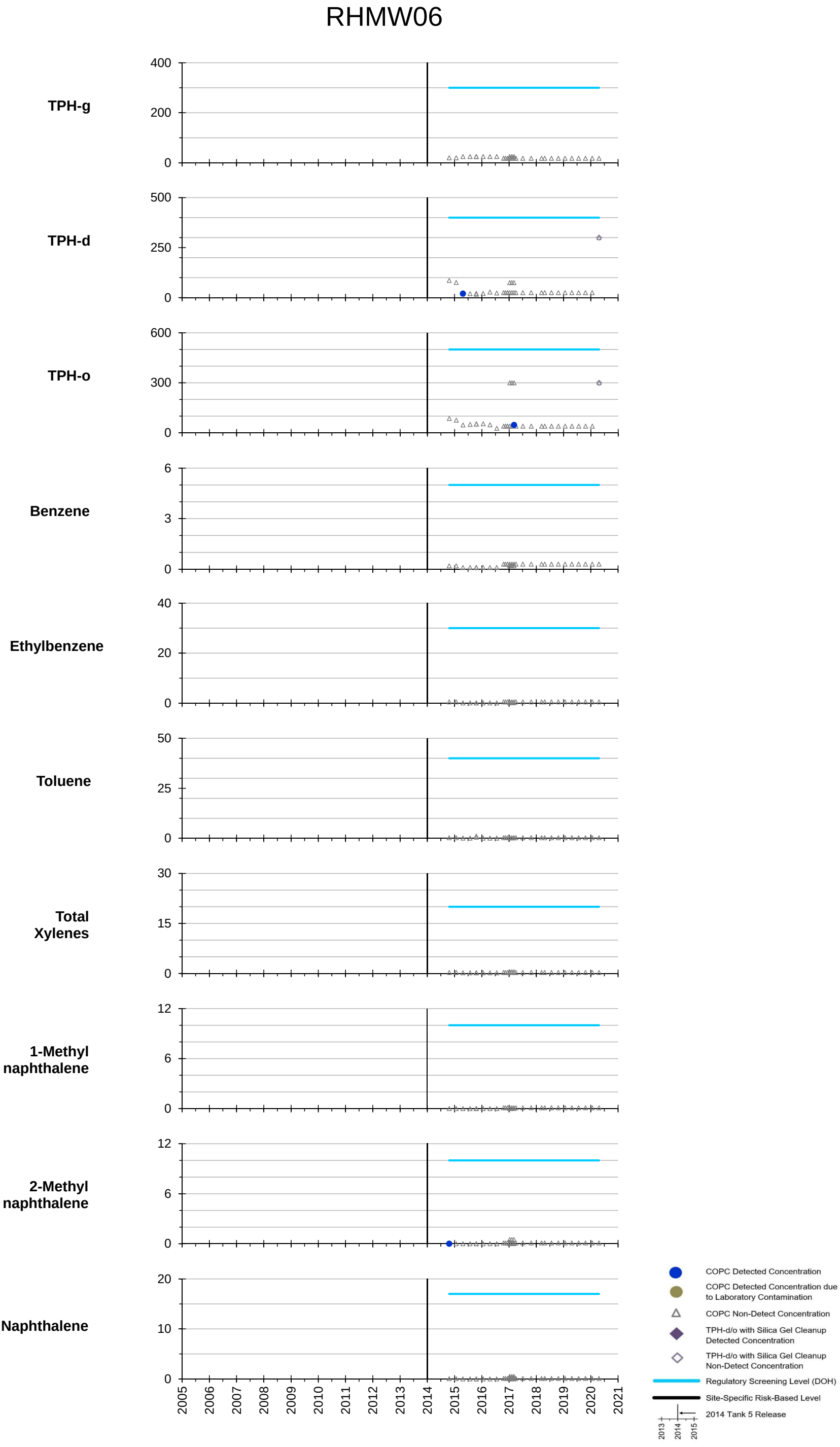

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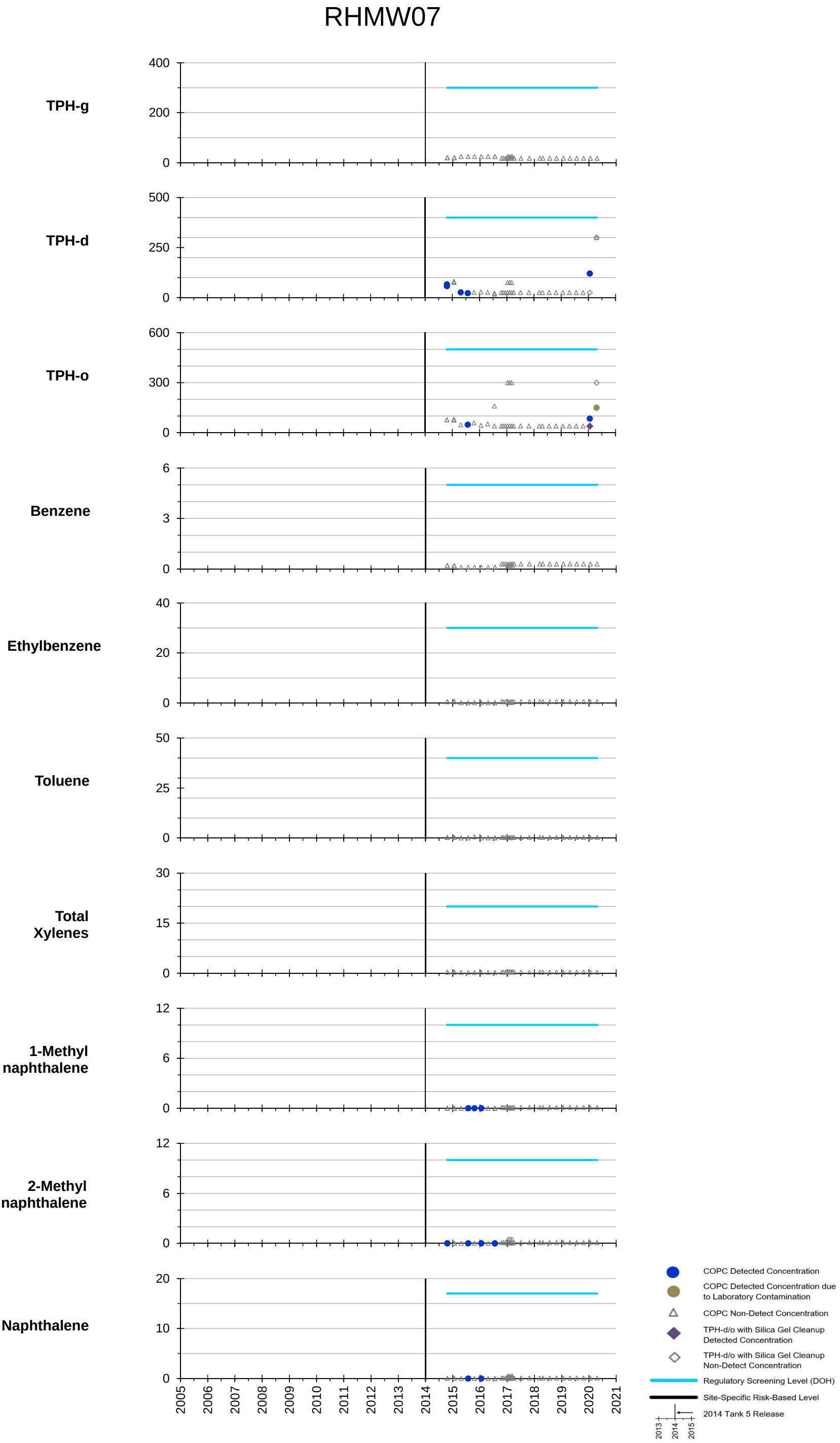
Appendix A.2 Groundwater Concentration Graphs



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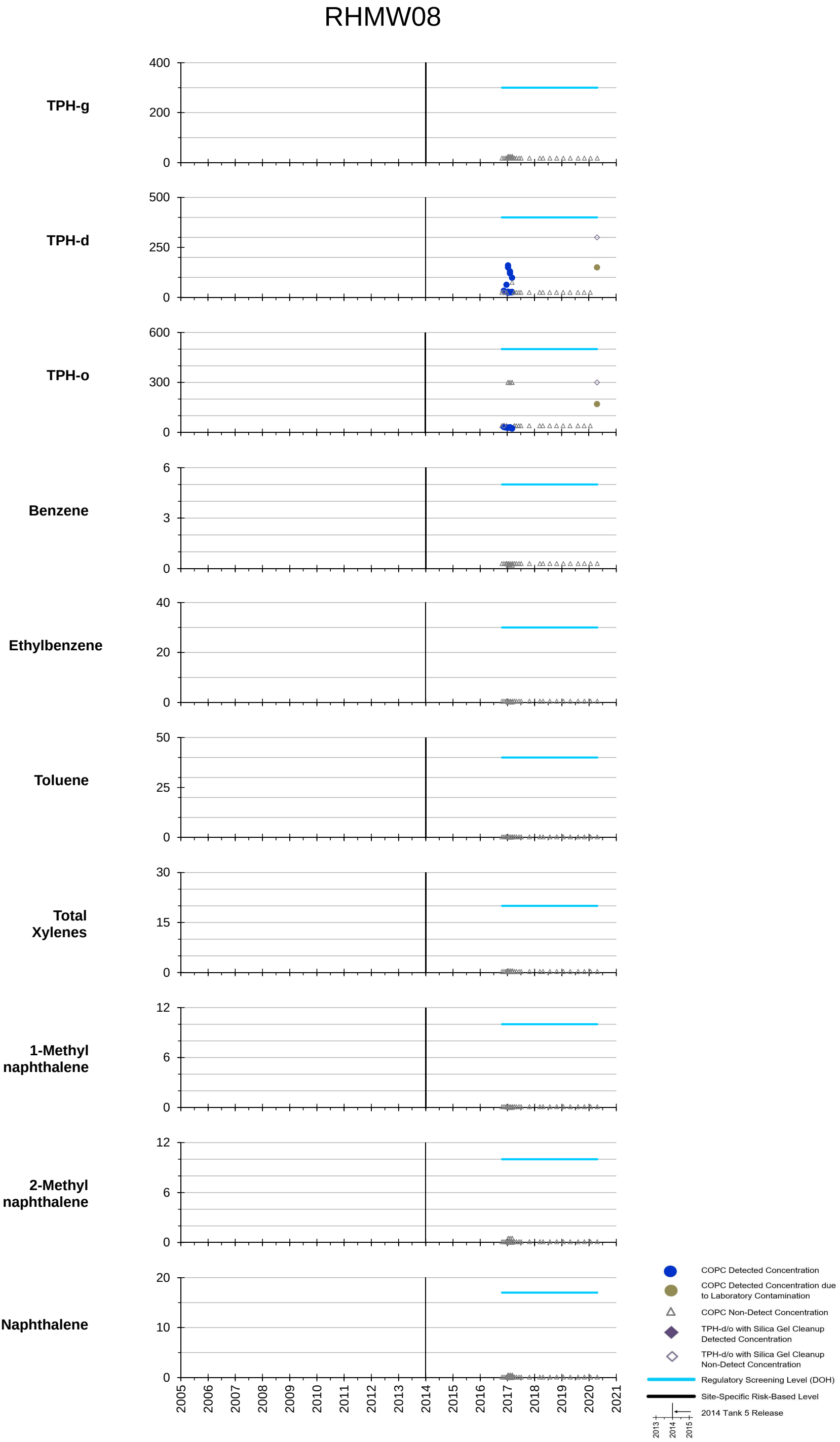

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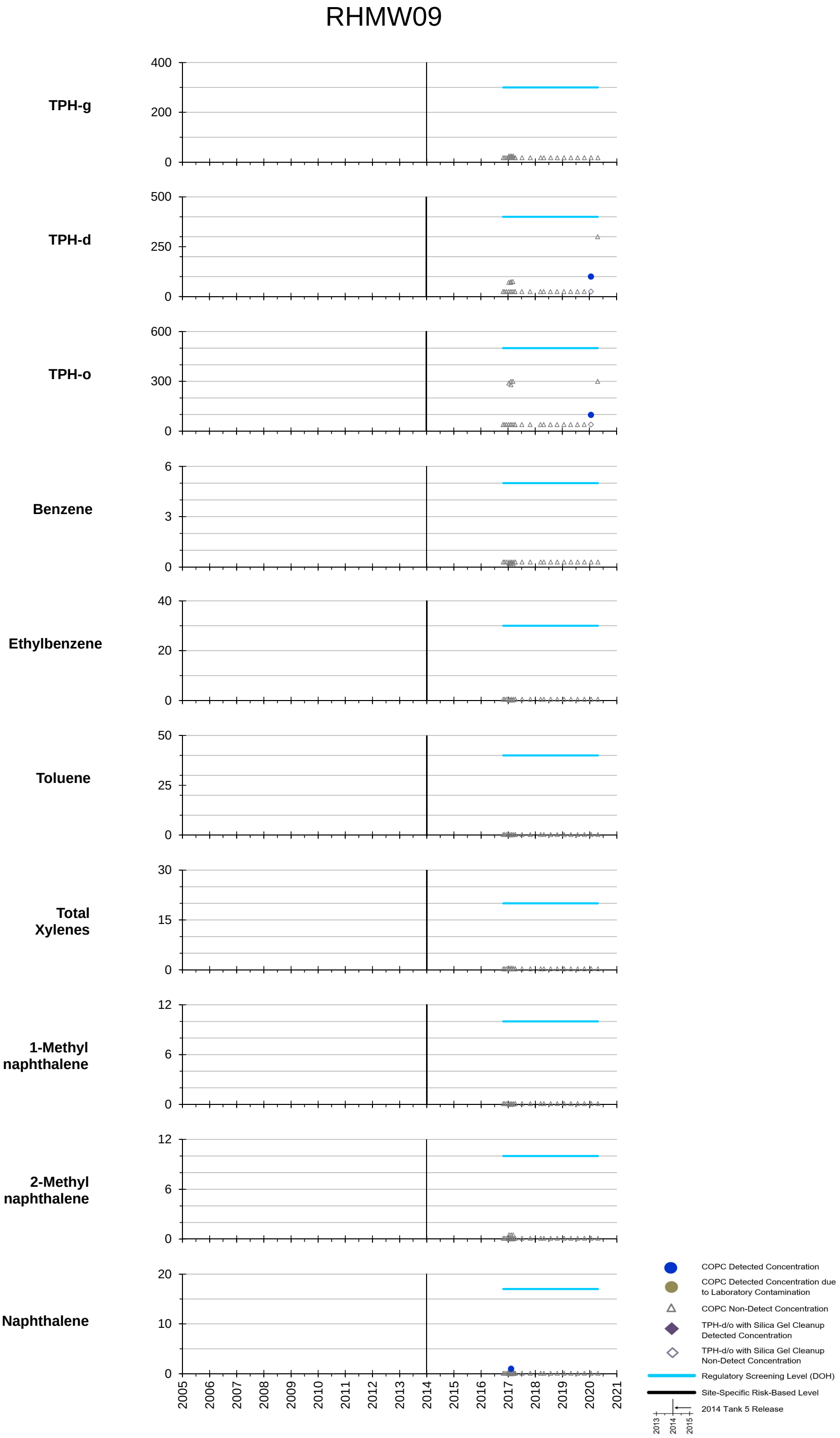
Appendix A.2 Groundwater Concentration Graphs



All results in micrograms per liter (µg/L or parts per billion).

EPA Region 9 Laboratory split sampling data from First to Third Quarters 2017 included in the graphs.

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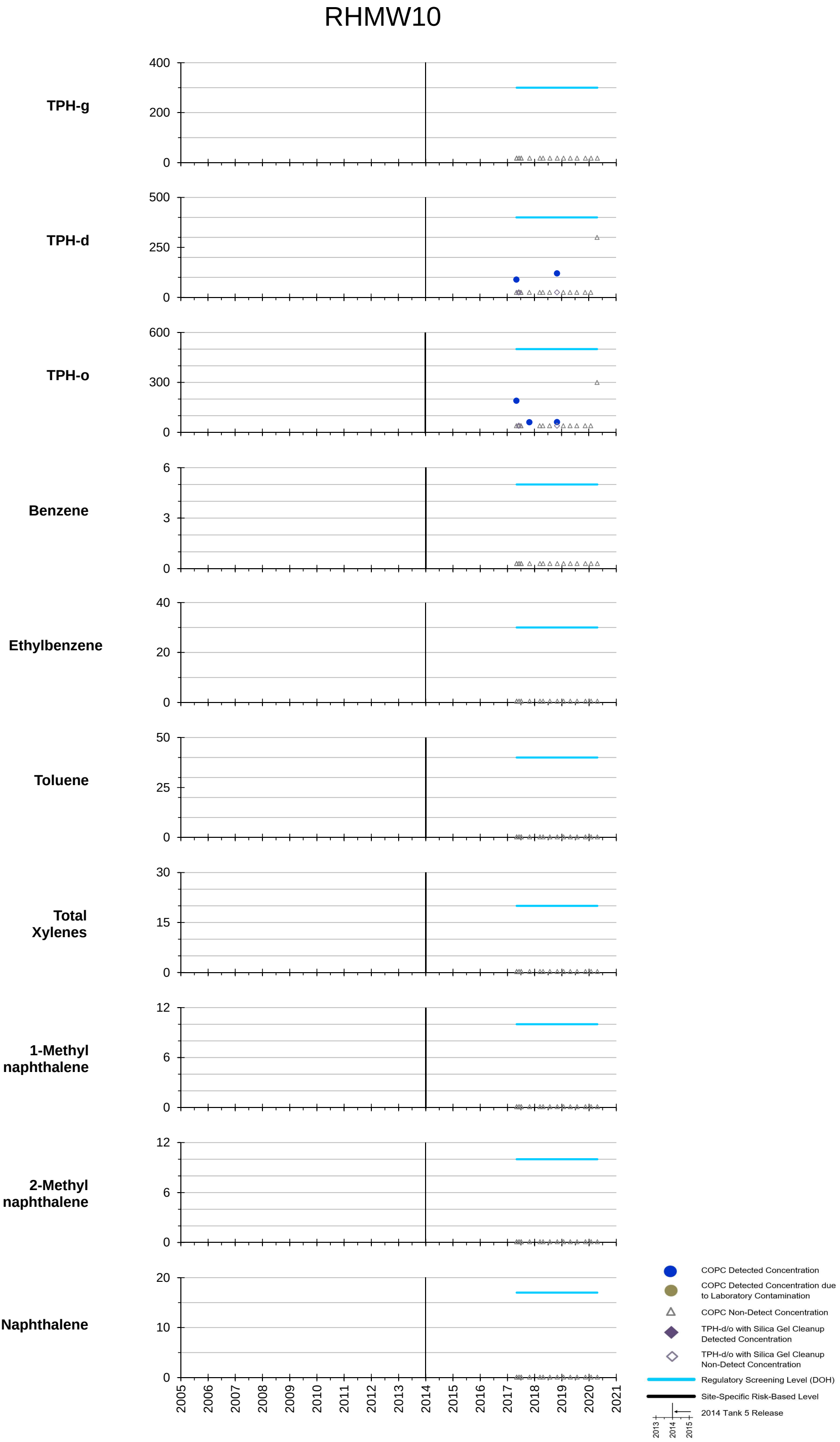

All results in micrograms per liter (µg/L or parts per billion).

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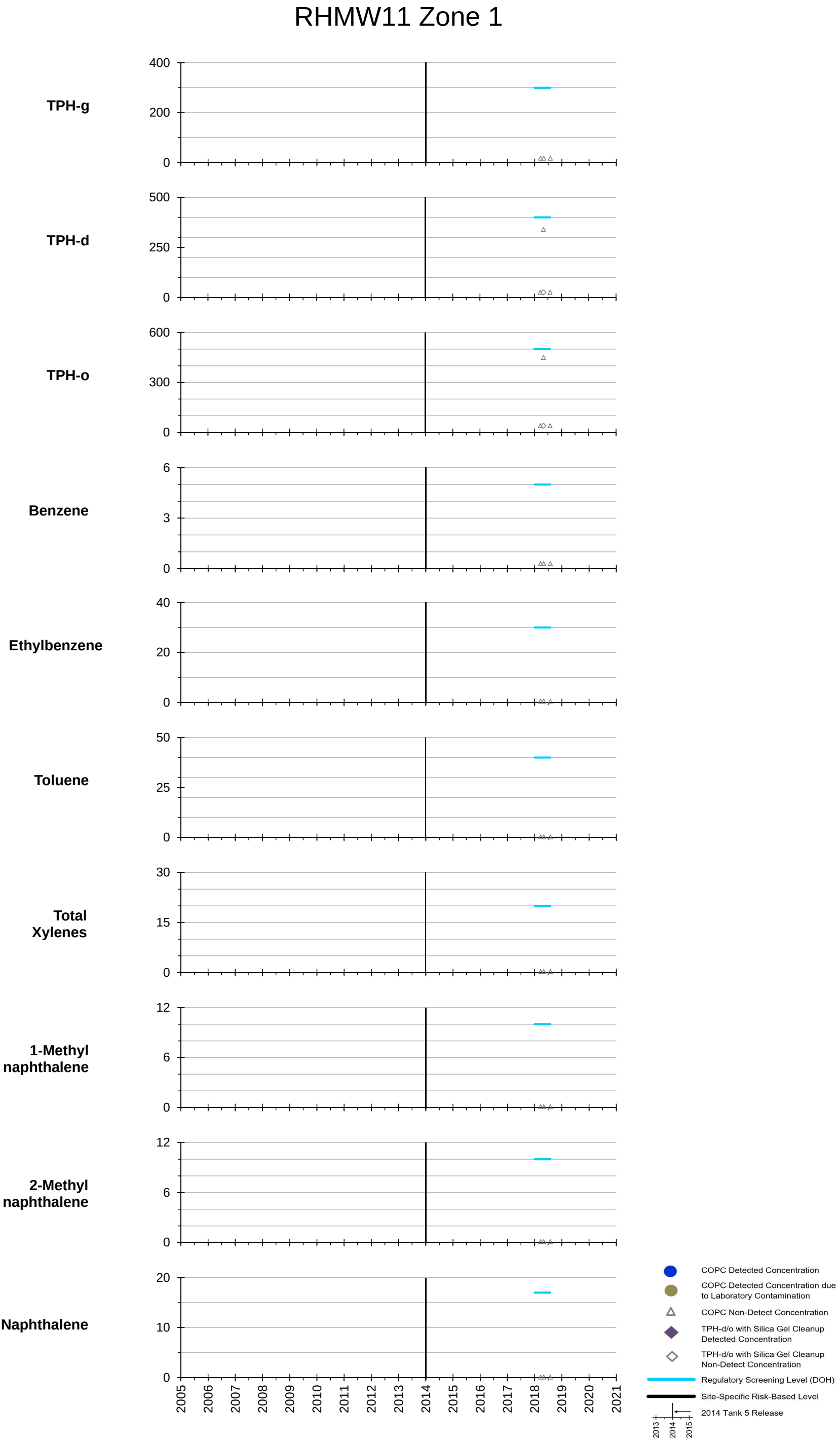

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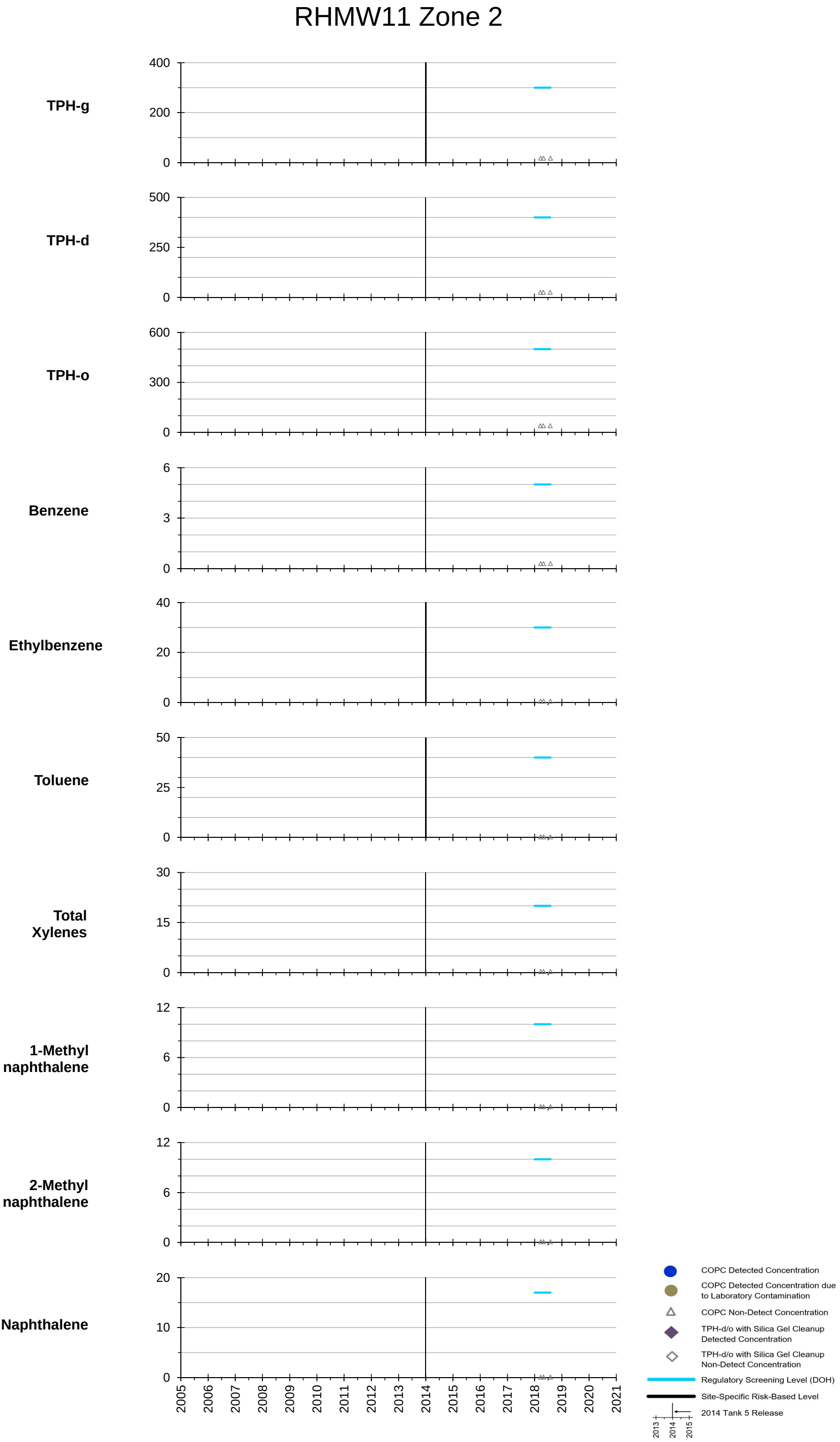
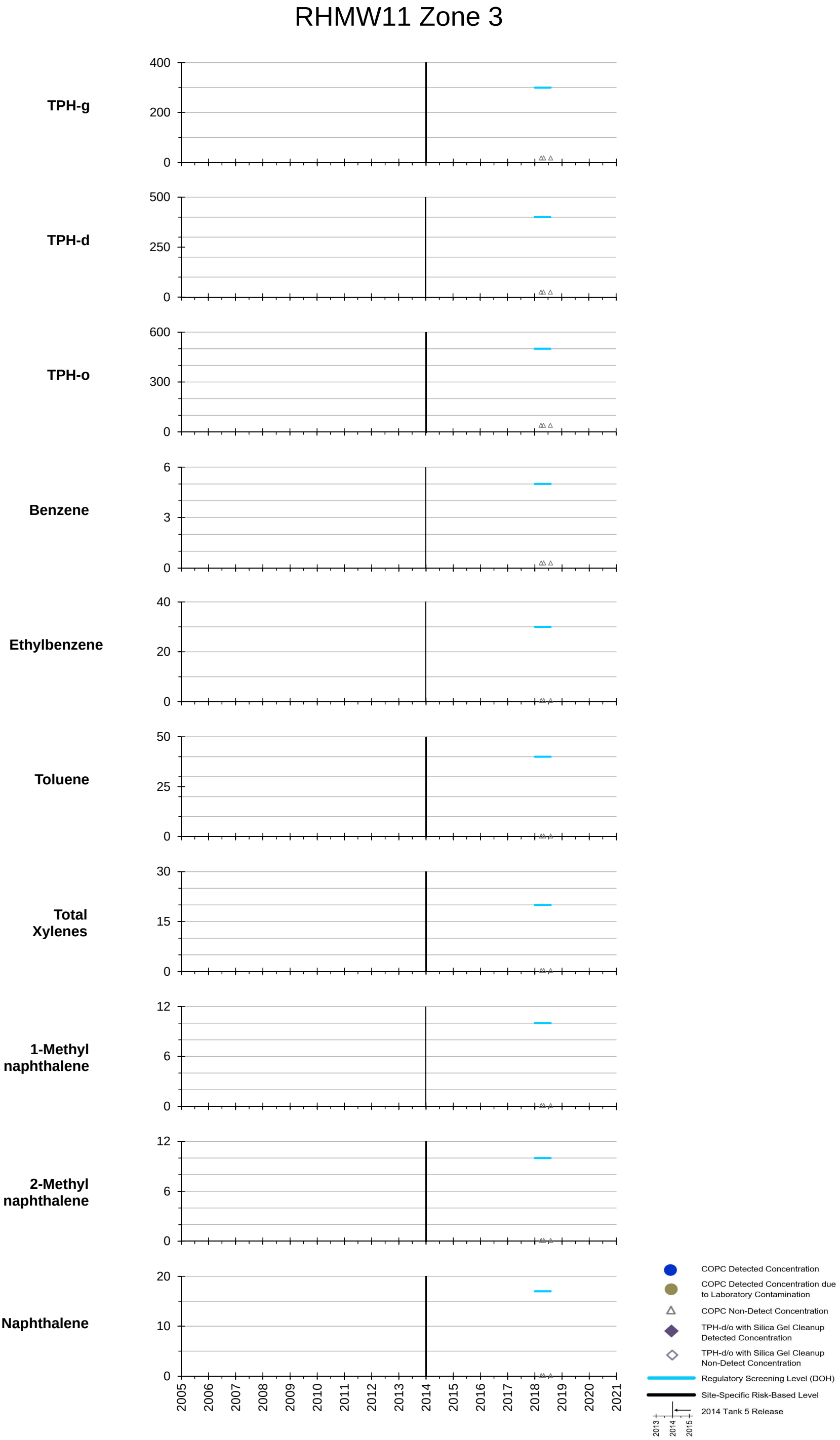


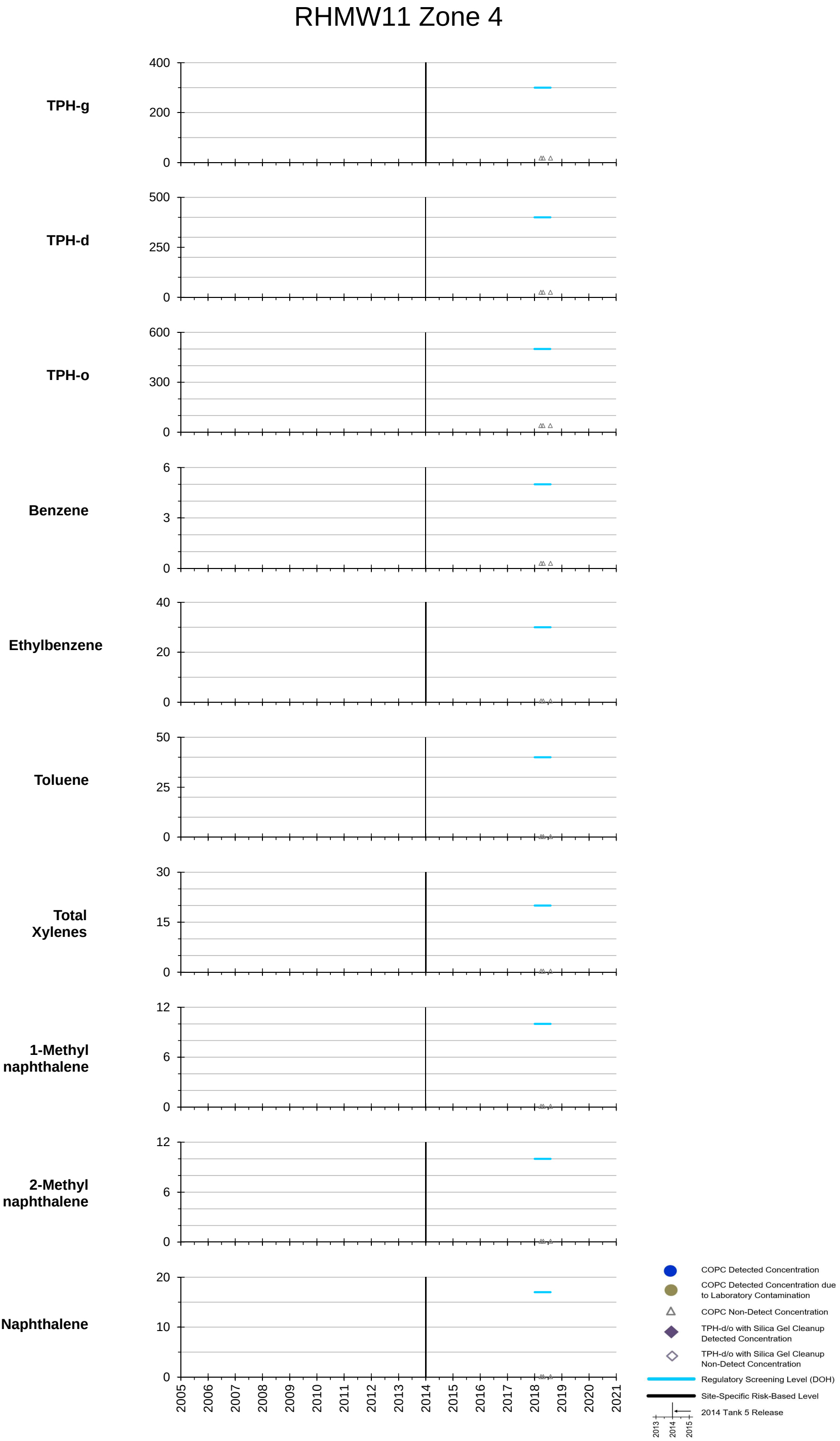
All results in micrograms per liter (µg/L or parts per billion).

Appendix A.2 Groundwater Concentration Graphs



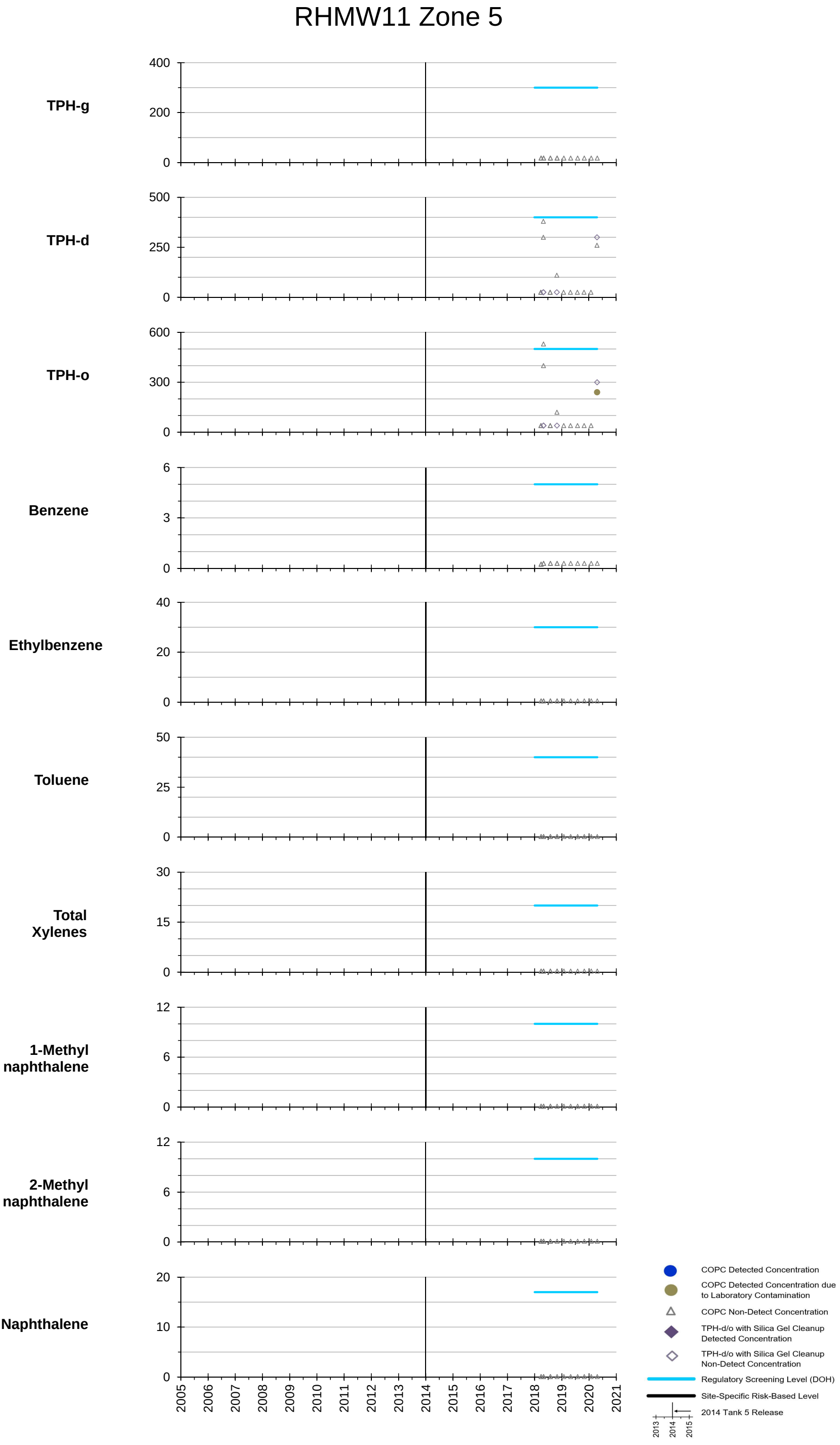
All results in micrograms per liter (µg/L or parts per billion).

Appendix A.2 Groundwater Concentration Graphs



All results in micrograms per liter (µg/L or parts per billion).

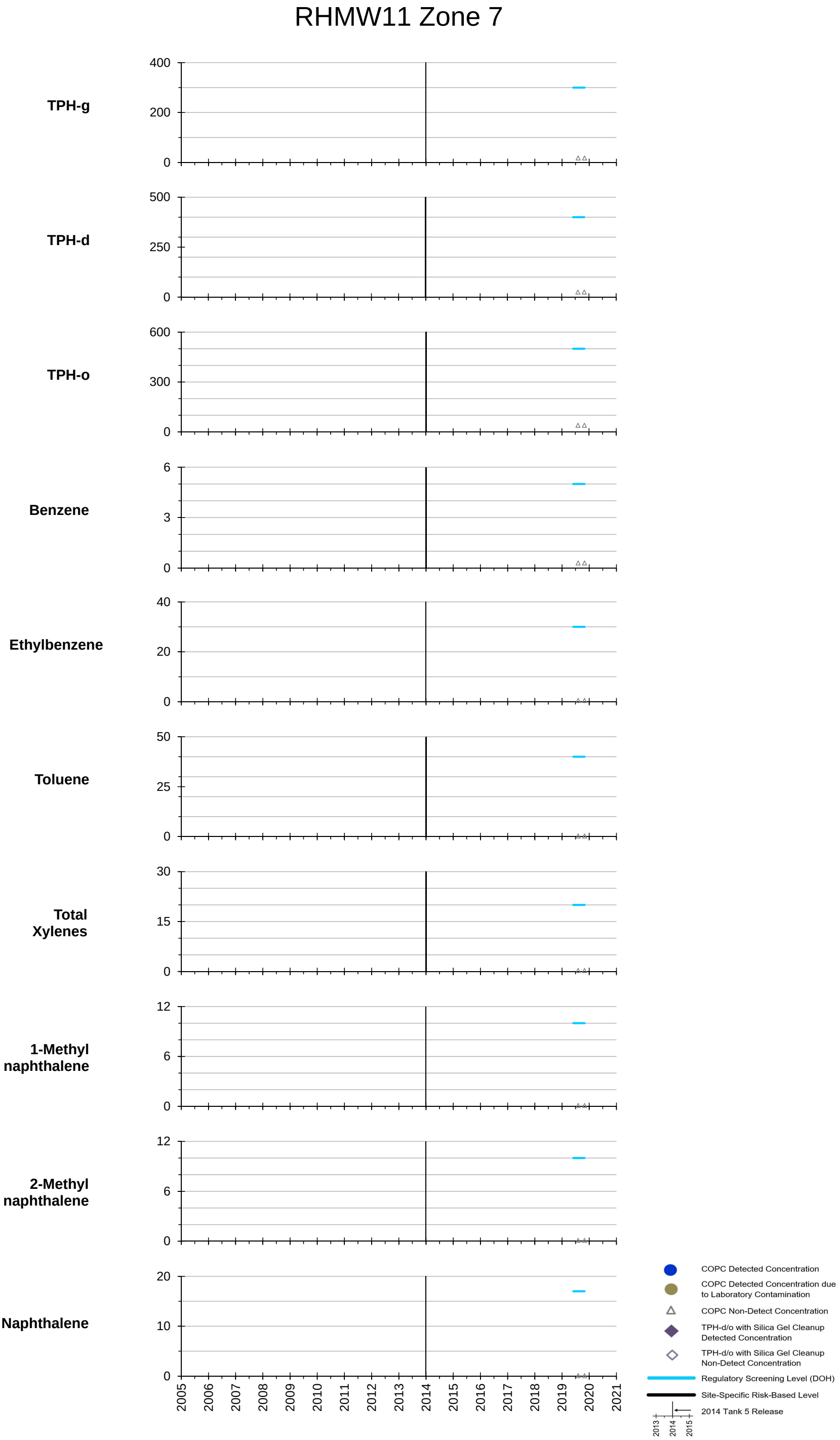
Appendix A.2 Groundwater Concentration Graphs



All results in micrograms per liter (µg/L or parts per billion).

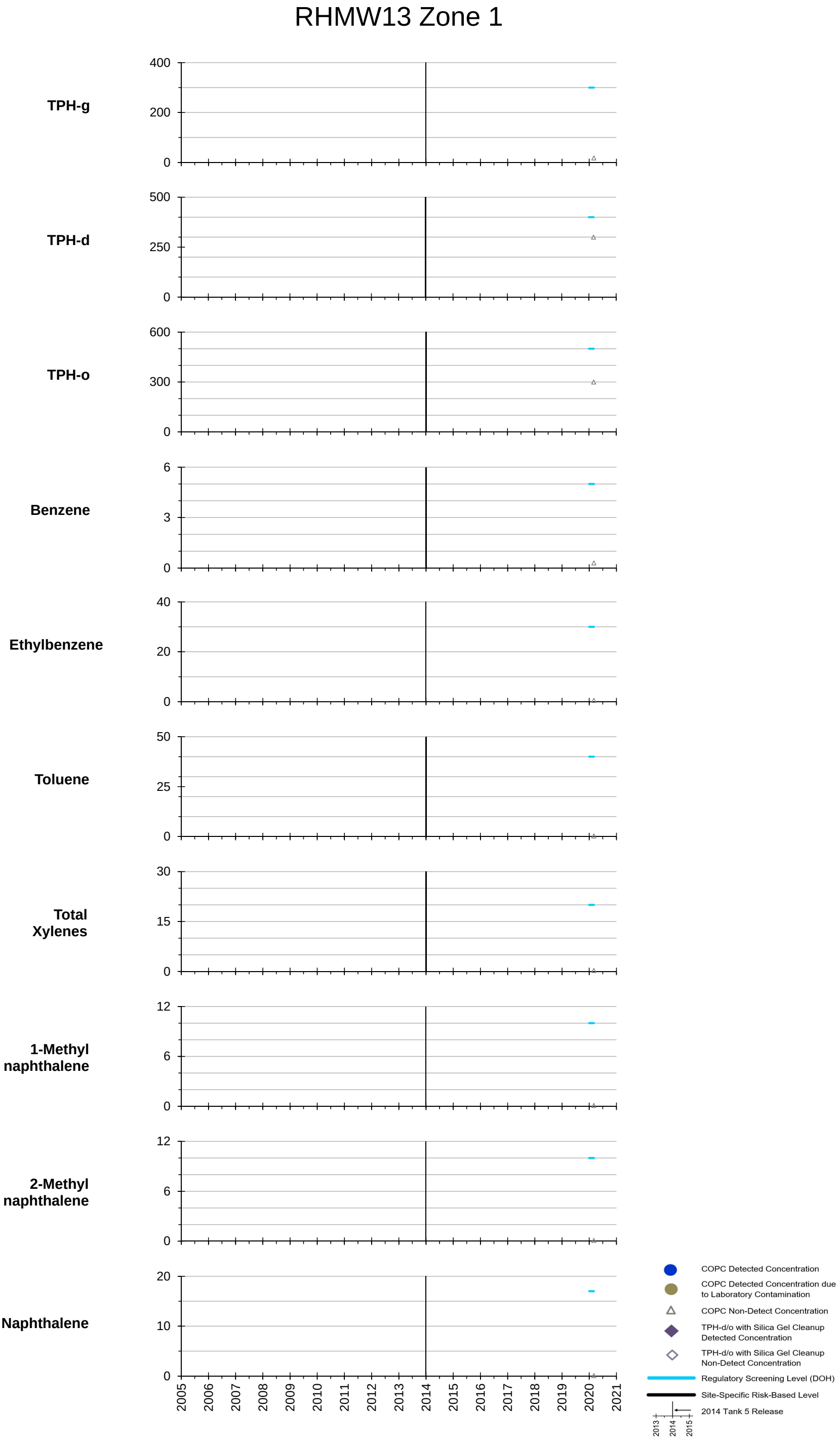
Laboratory reporting limits for TPH-d and TPH-o were raised in March 2020 in accordance with the most current DoD QSM (2019), TNI Manual (2016), and 40 CFR Part 136 (Methods Update Rule 2017).

Appendix A.2 Groundwater Concentration Graphs



All results in micrograms per liter (µg/L or parts per billion).

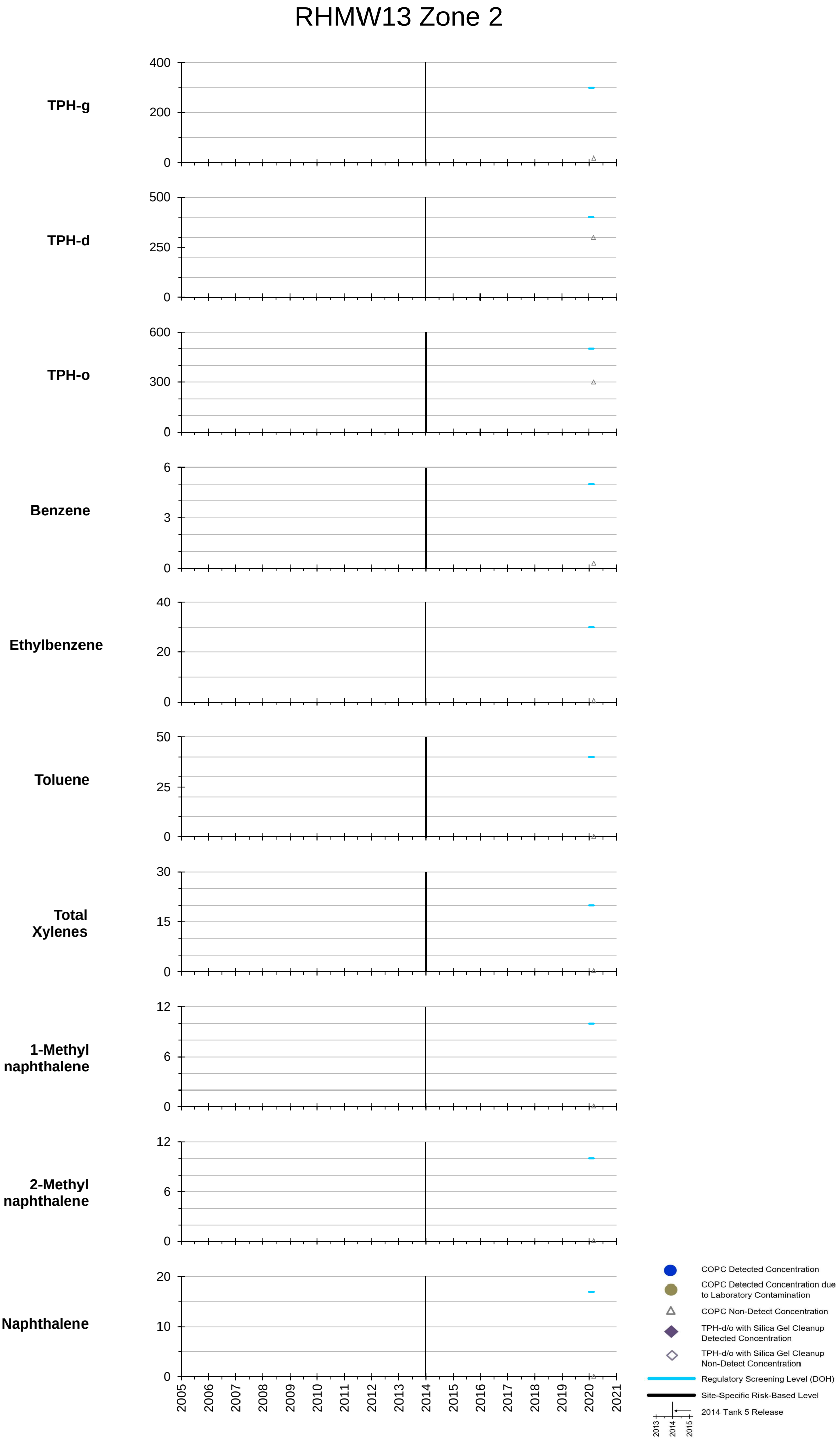
Appendix A.2 Groundwater Concentration Graphs



All results in micrograms per liter (µg/L or parts per billion).

Laboratory reporting limits for TPH-d and TPH-o were raised in March 2020 in accordance with the most current DoD QSM (2019), TNI Manual (2016), and 40 CFR Part 136 (Methods Update Rule 2017).

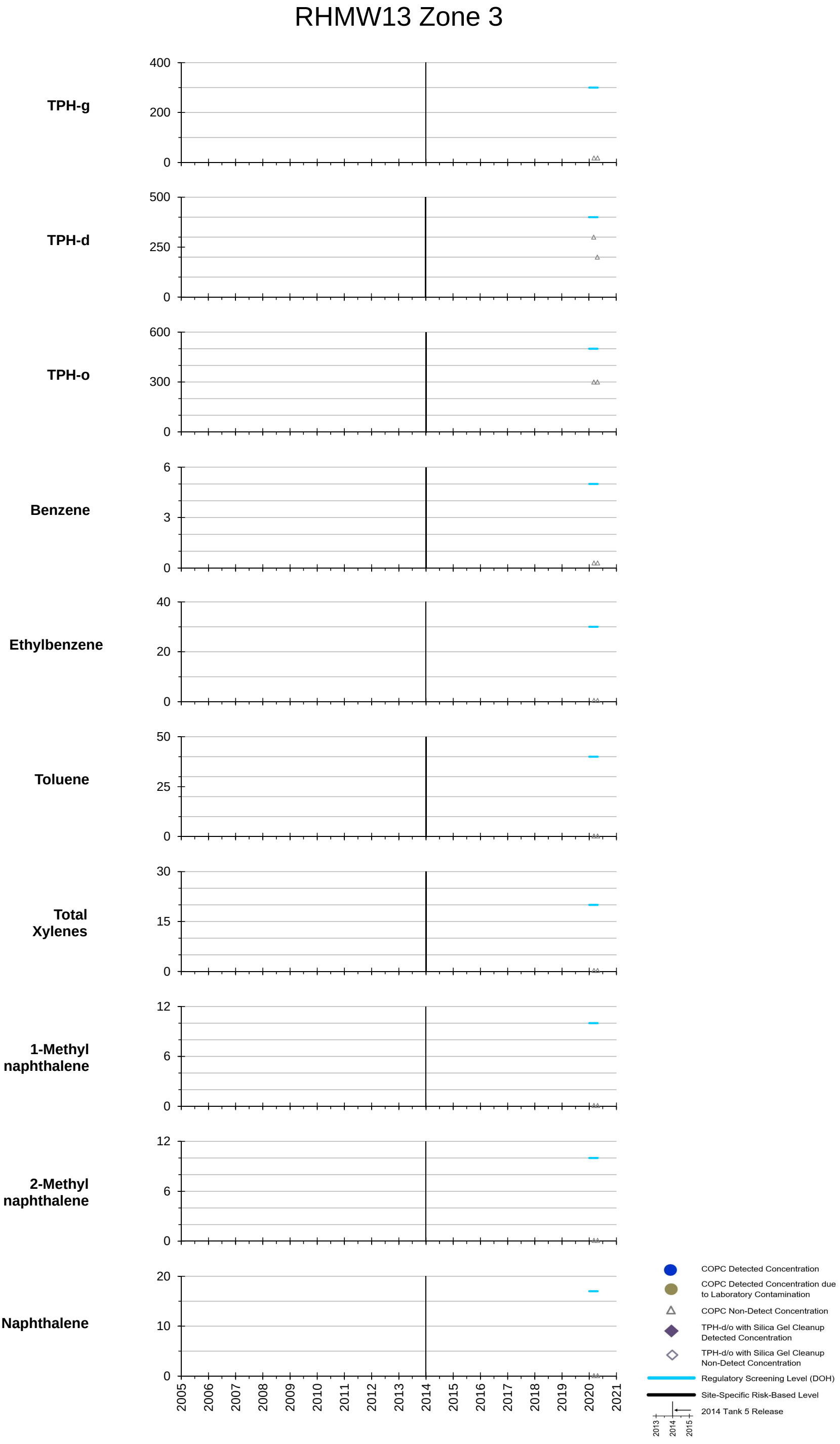
Appendix A.2 Groundwater Concentration Graphs



All results in micrograms per liter (µg/L or parts per billion).

Laboratory reporting limits for TPH-d and TPH-o were raised in March 2020 in accordance with the most current DoD QSM (2019), TNI Manual (2016), and 40 CFR Part 136 (Methods Update Rule 2017).

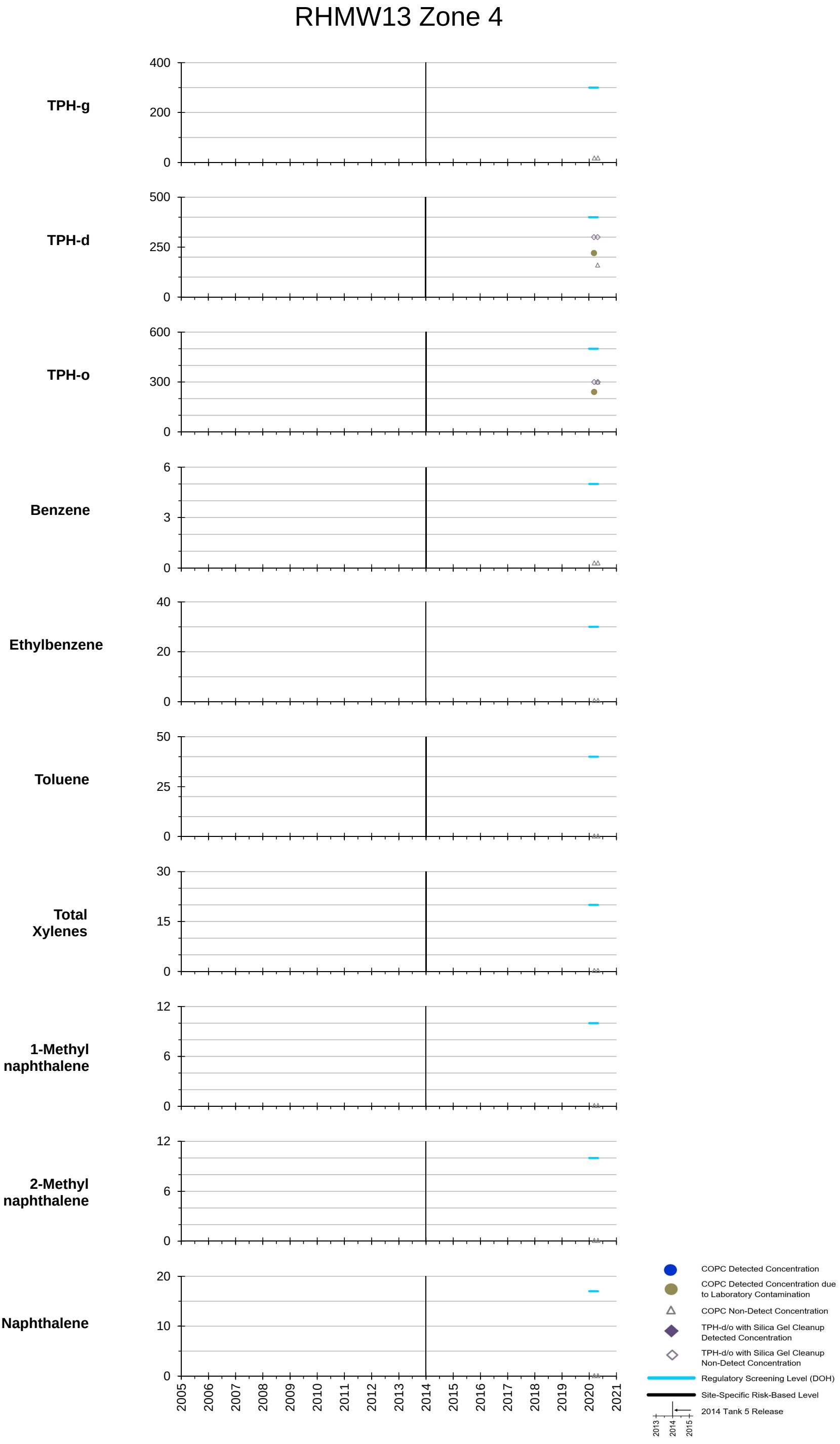
Appendix A.2 Groundwater Concentration Graphs



All results in micrograms per liter (µg/L or parts per billion).

Laboratory reporting limits for TPH-d and TPH-o were raised in March 2020 in accordance with the most current DoD QSM (2019), TNI Manual (2016), and 40 CFR Part 136 (Methods Update Rule 2017).

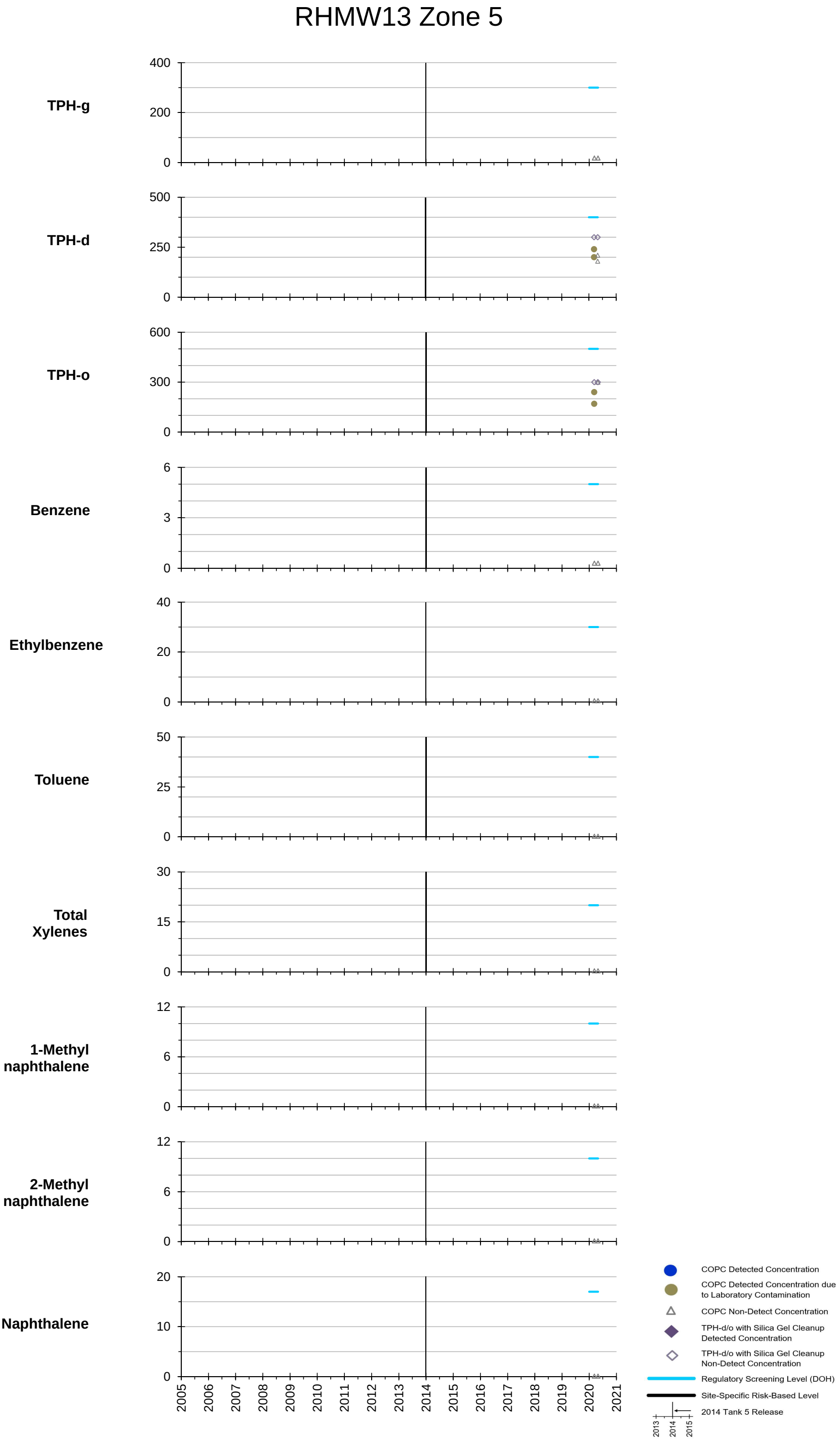
Appendix A.2 Groundwater Concentration Graphs



All results in micrograms per liter (µg/L or parts per billion).

Laboratory reporting limits for TPH-d and TPH-o were raised in March 2020 in accordance with the most current DoD QSM (2019), TNI Manual (2016), and 40 CFR Part 136 (Methods Update Rule 2017).

Appendix A.2 Groundwater Concentration Graphs

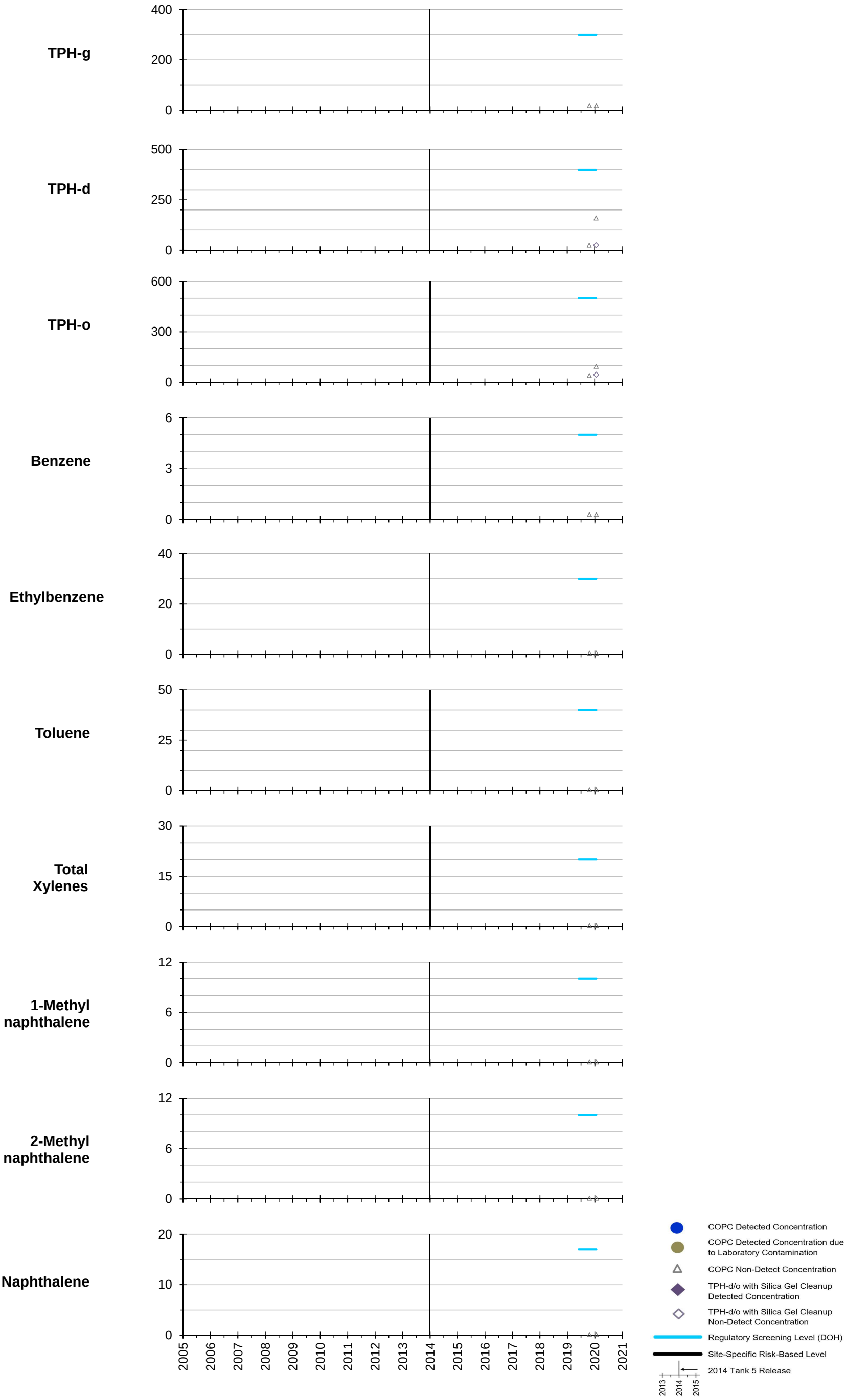


All results in micrograms per liter (µg/L or parts per billion).

Laboratory reporting limits for TPH-d and TPH-o were raised in March 2020 in accordance with the most current DoD QSM (2019), TNI Manual (2016), and 40 CFR Part 136 (Methods Update Rule 2017).

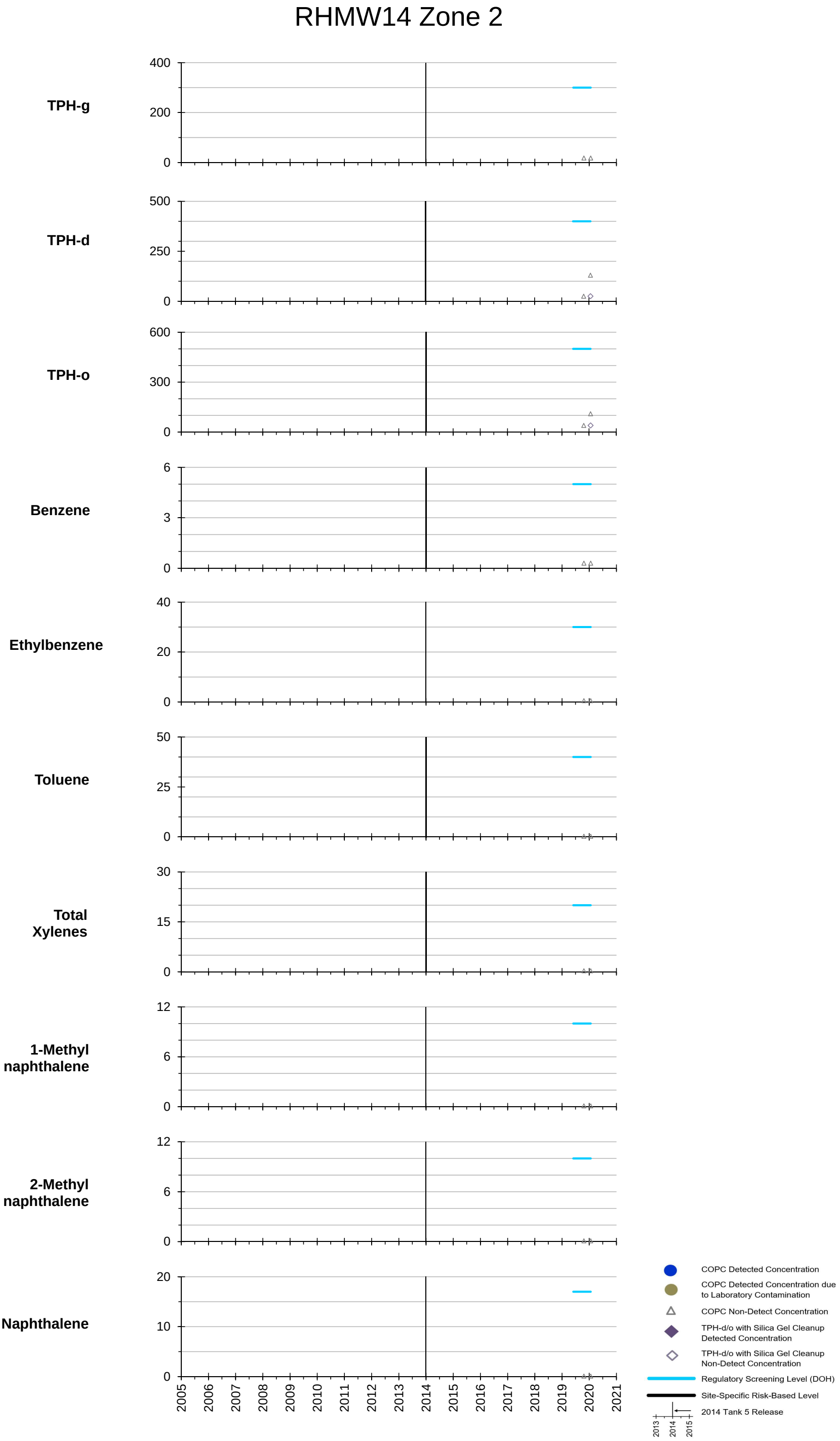
Appendix A.2 Groundwater Concentration Graphs

RHMW14 Zone 1



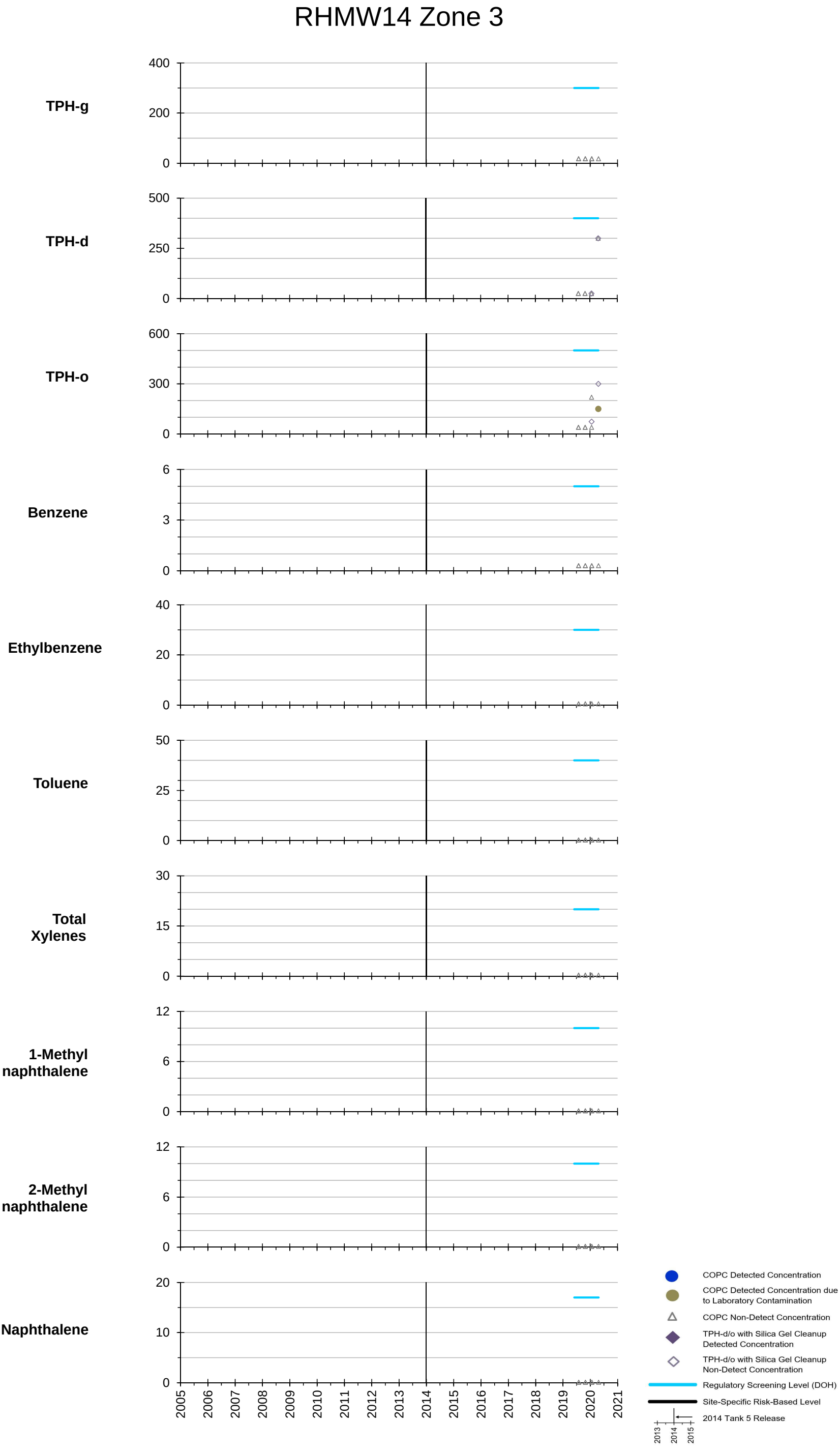
All results in micrograms per liter (µg/L or parts per billion).

Appendix A.2 Groundwater Concentration Graphs



All results in micrograms per liter (µg/L or parts per billion).

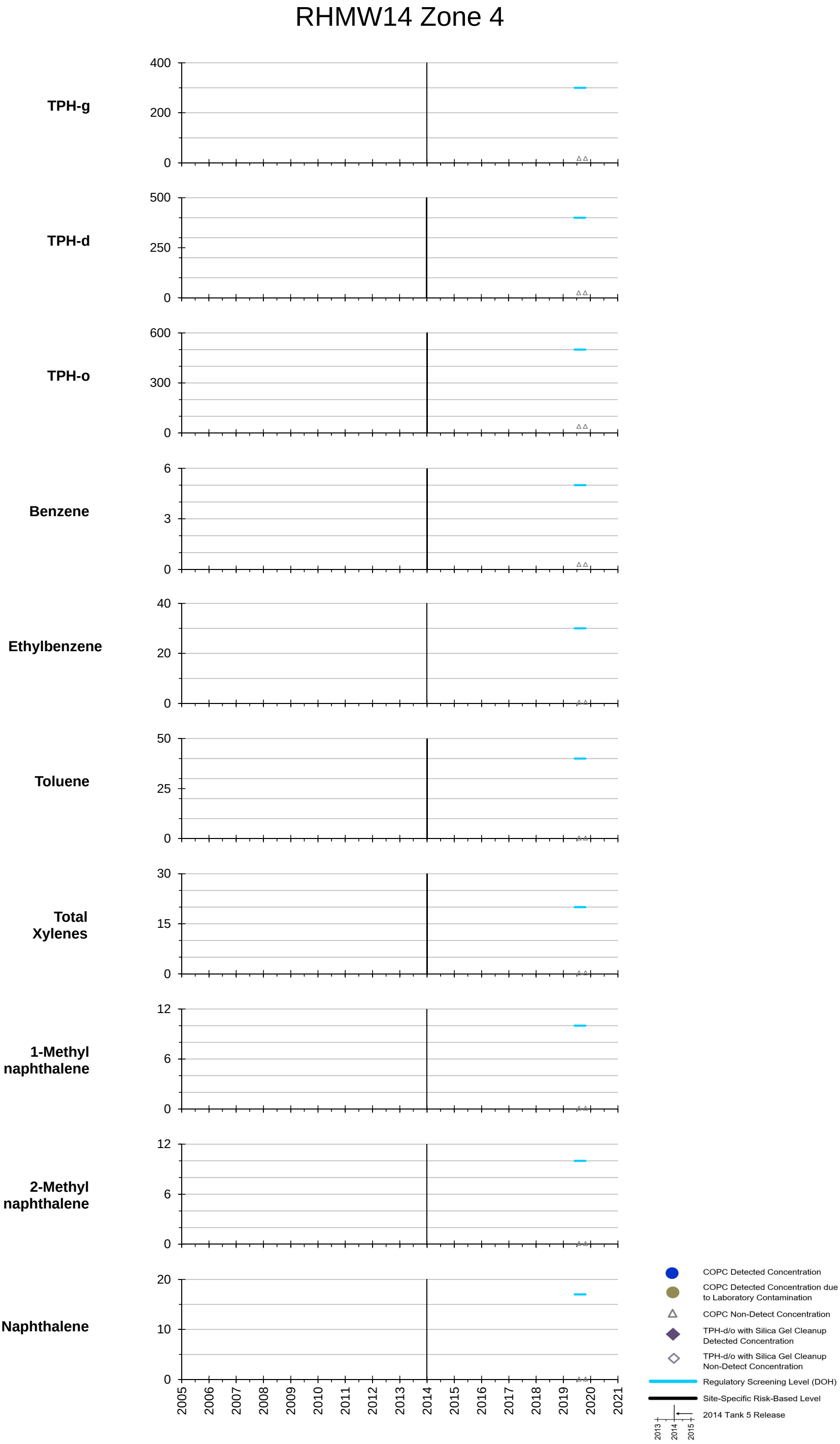
Appendix A.2 Groundwater Concentration Graphs



All results in micrograms per liter (µg/L or parts per billion).

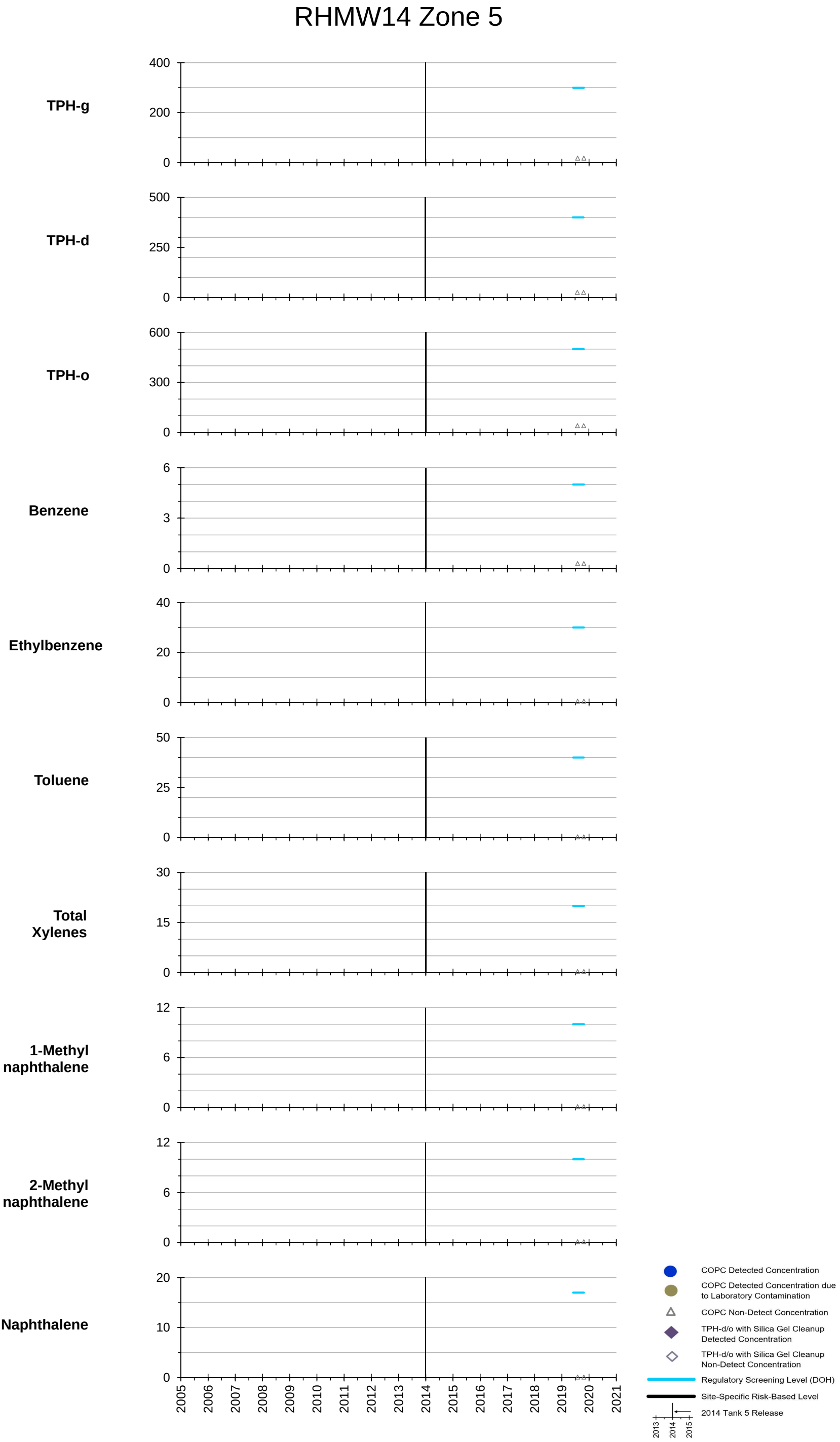
Laboratory reporting limits for TPH-d and TPH-o were raised in March 2020 in accordance with the most current DoD QSM (2019), TNI Manual (2016), and 40 CFR Part 136 (Methods Update Rule 2017).

Appendix A.2 Groundwater Concentration Graphs



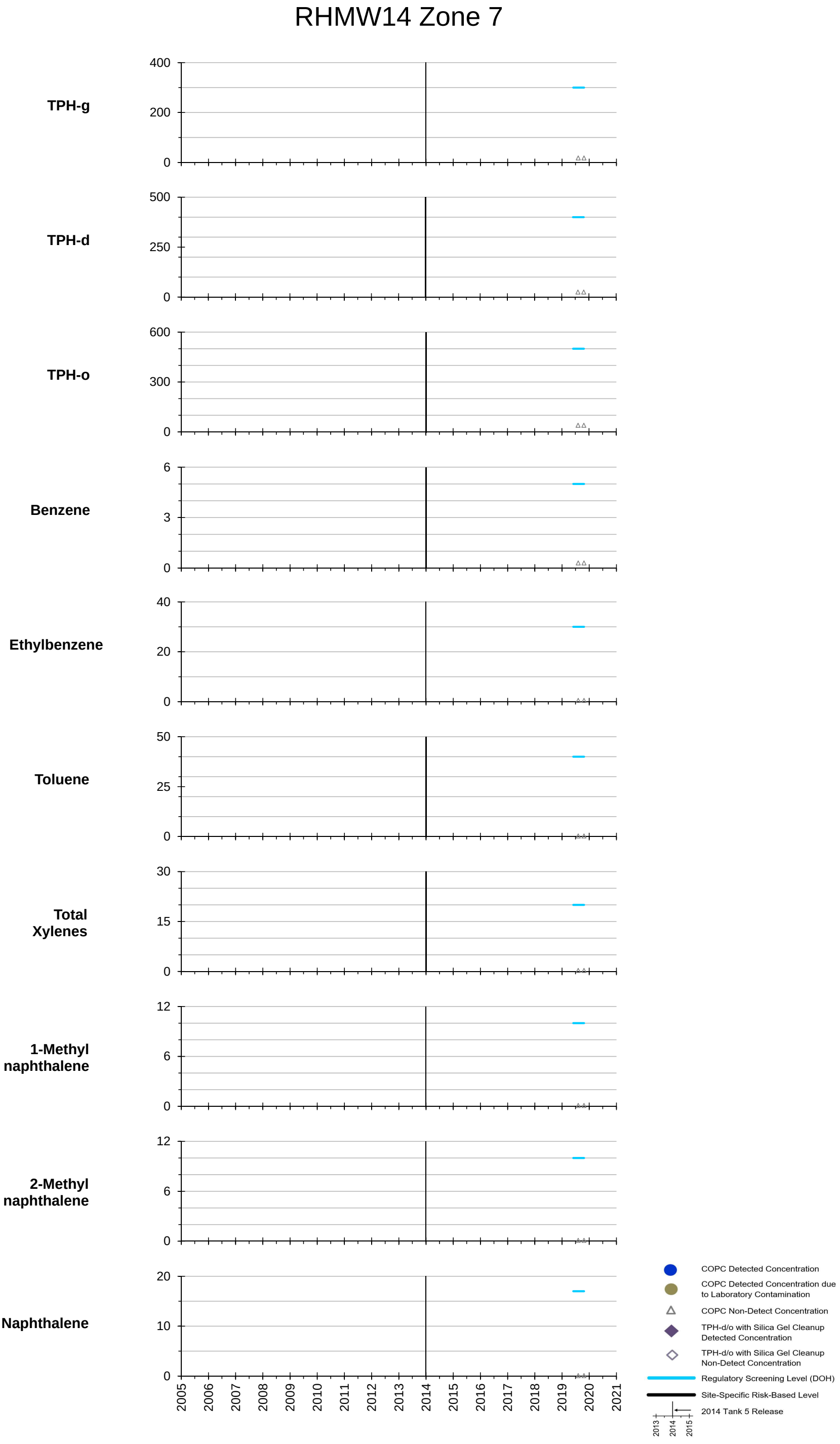
All results in micrograms per liter (µg/L or parts per billion).

Appendix A.2 Groundwater Concentration Graphs



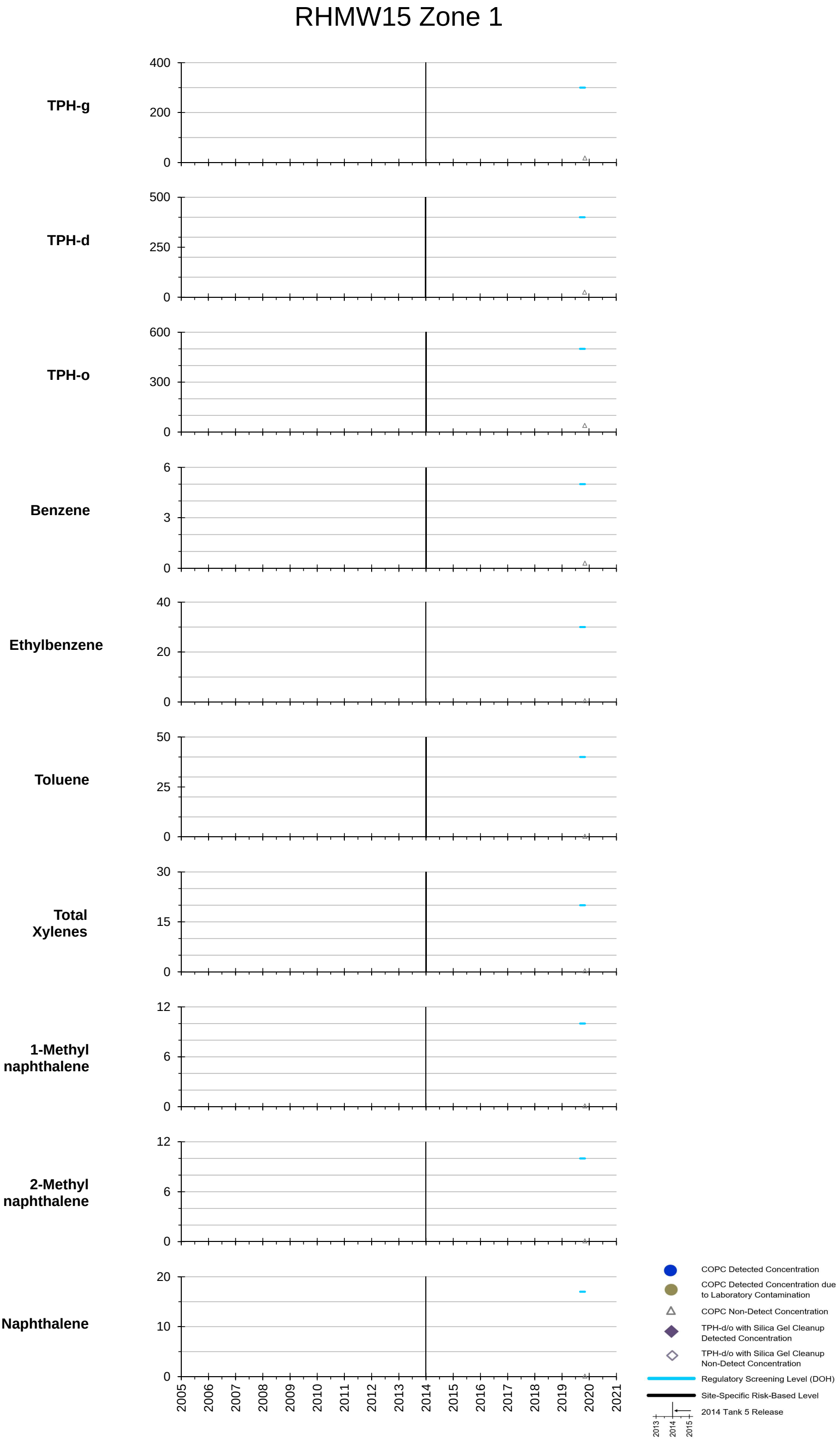
All results in micrograms per liter (µg/L or parts per billion).

Appendix A.2 Groundwater Concentration Graphs



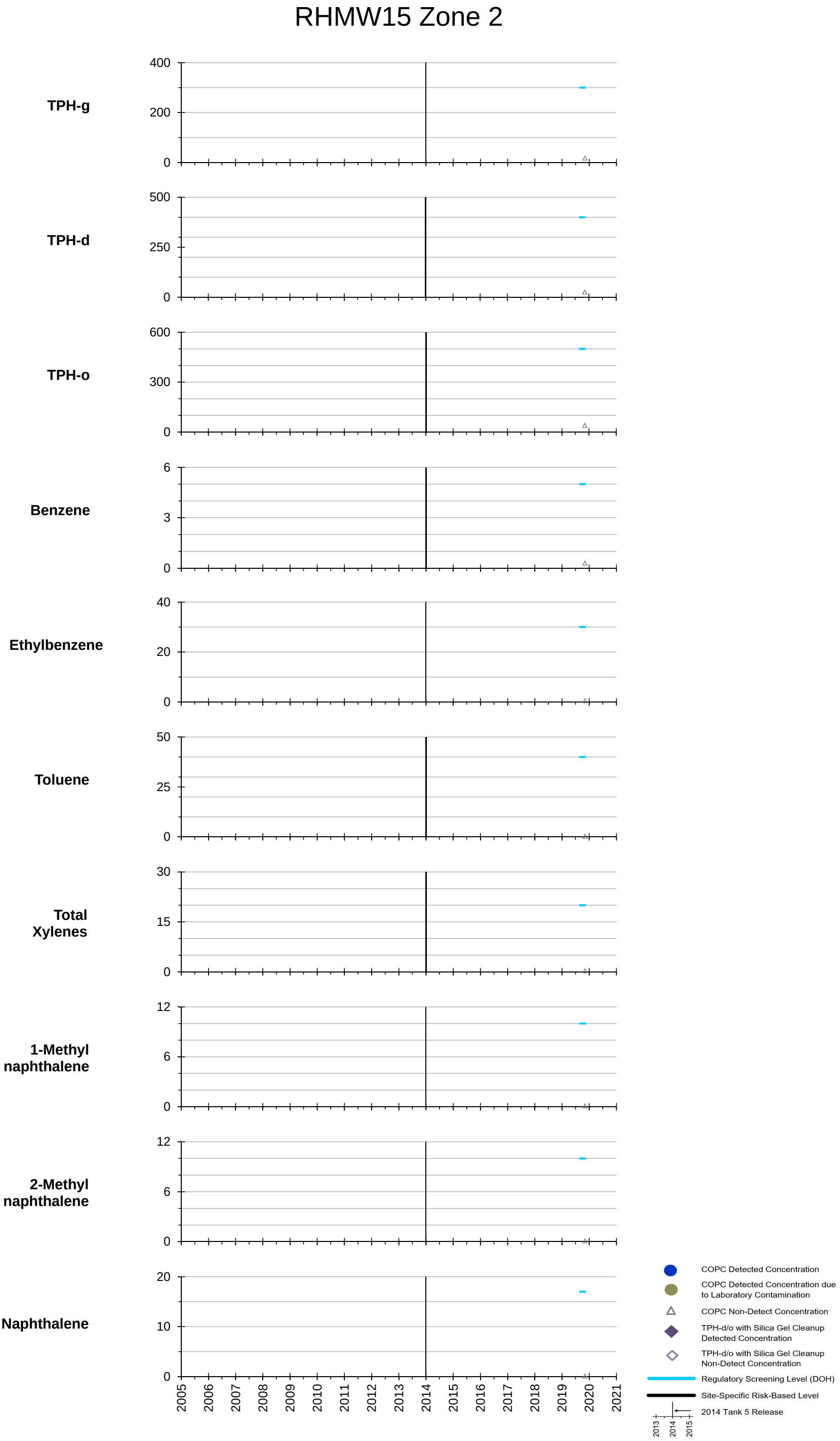
All results in micrograms per liter (µg/L or parts per billion).

Appendix A.2 Groundwater Concentration Graphs



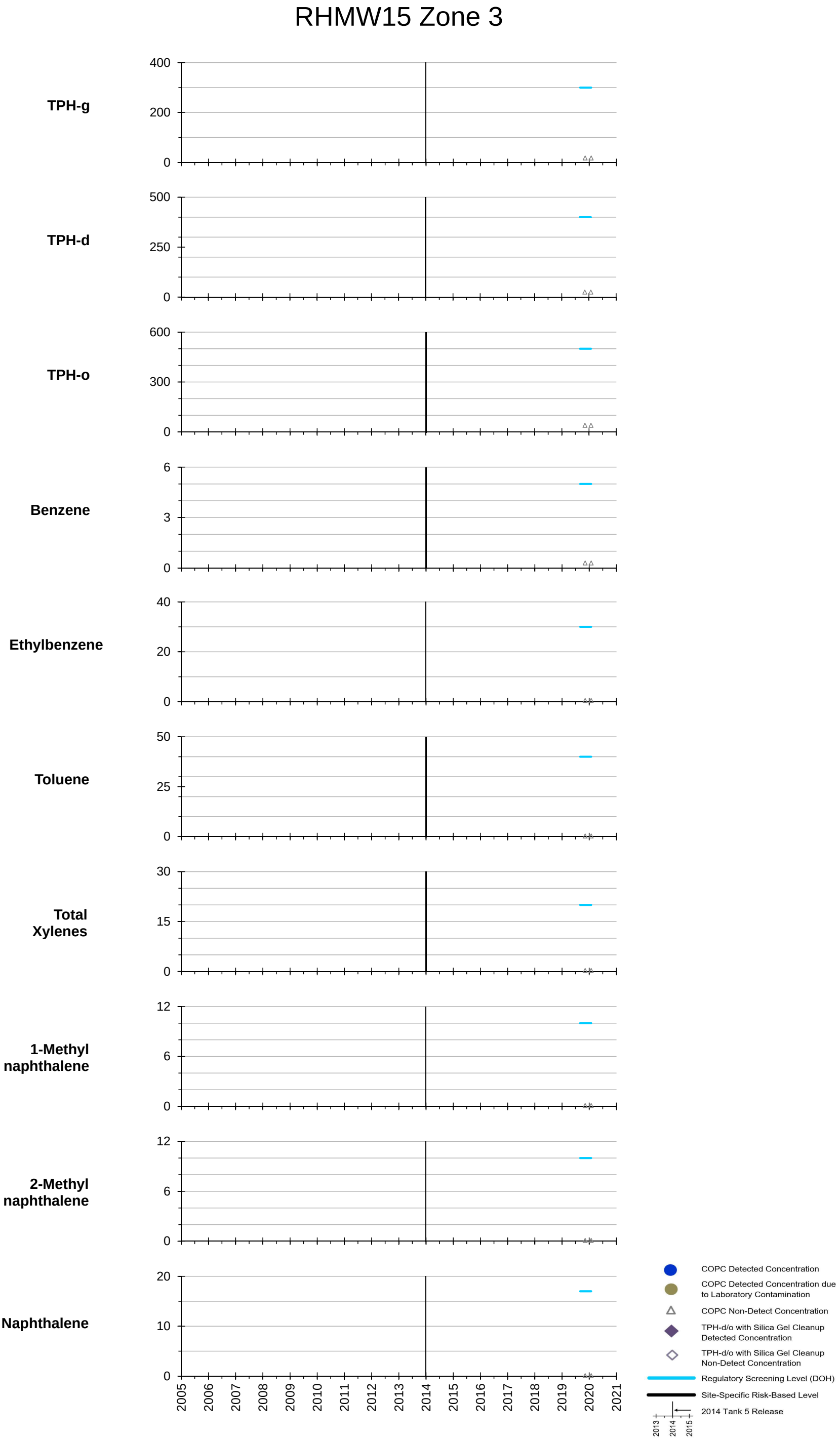
All results in micrograms per liter (µg/L or parts per billion).

Appendix A.2 Groundwater Concentration Graphs



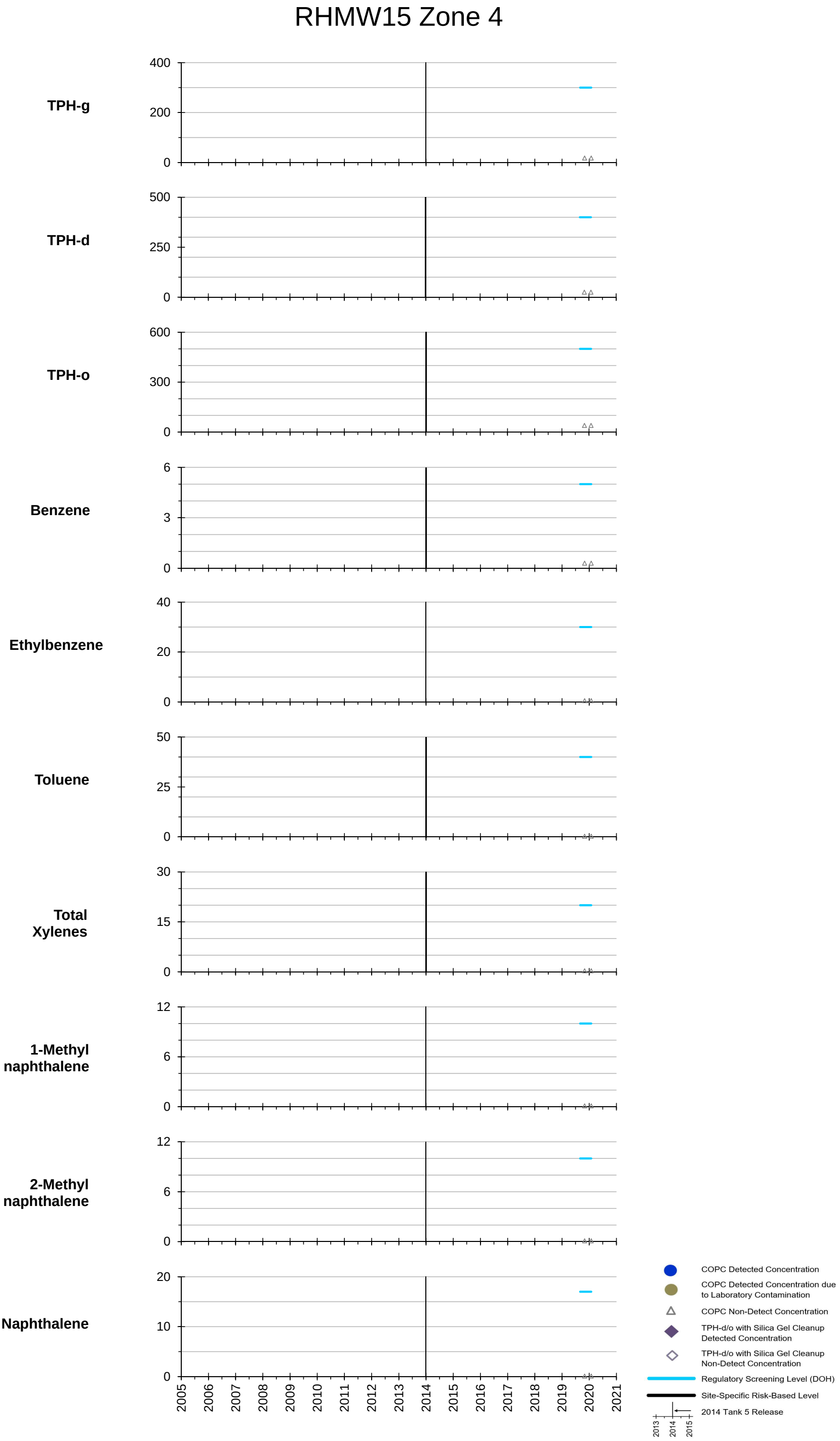
All results in micrograms per liter (µg/L or parts per billion).

Appendix A.2 Groundwater Concentration Graphs



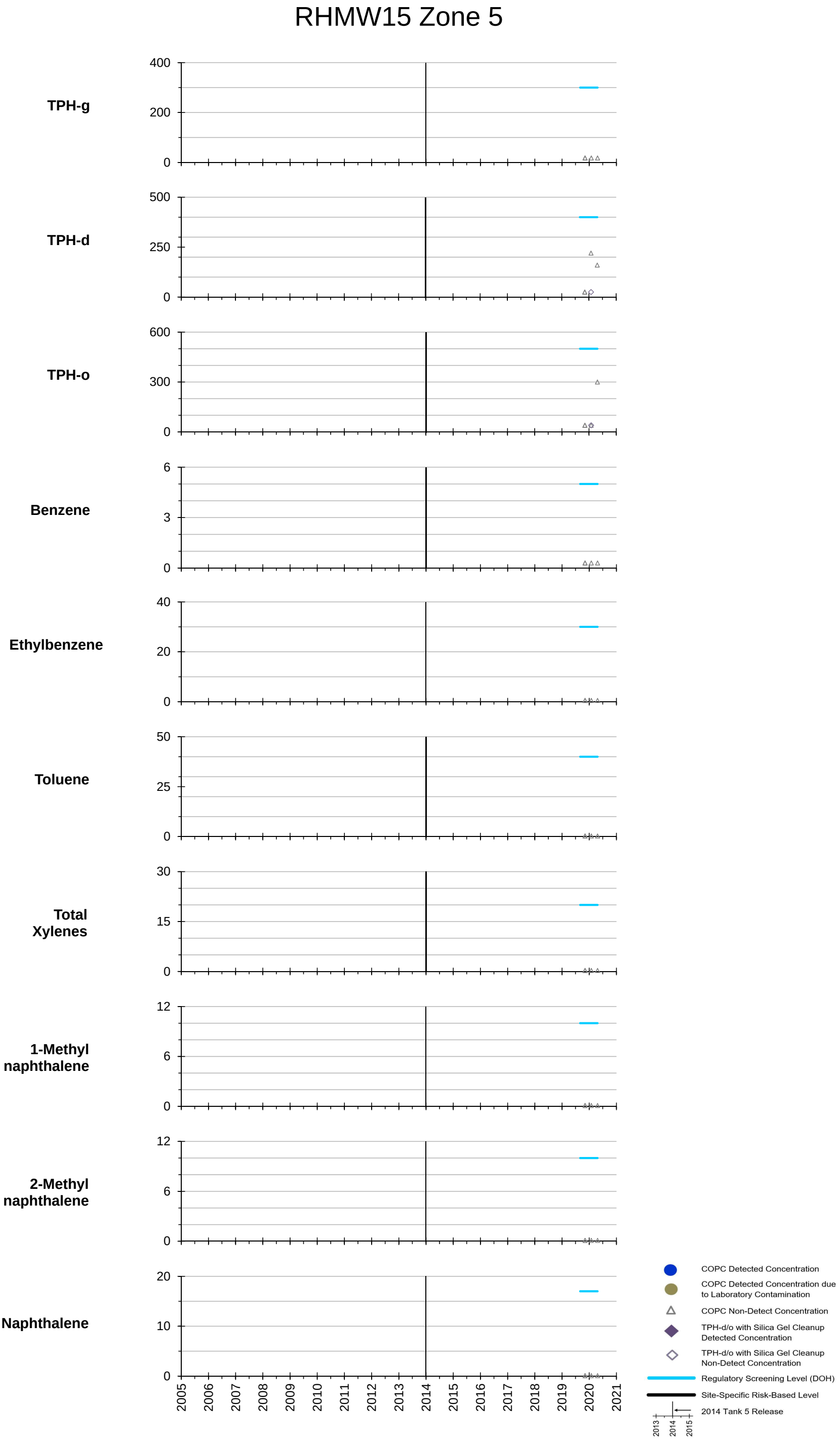
All results in micrograms per liter (µg/L or parts per billion).

Appendix A.2 Groundwater Concentration Graphs



All results in micrograms per liter (µg/L or parts per billion).

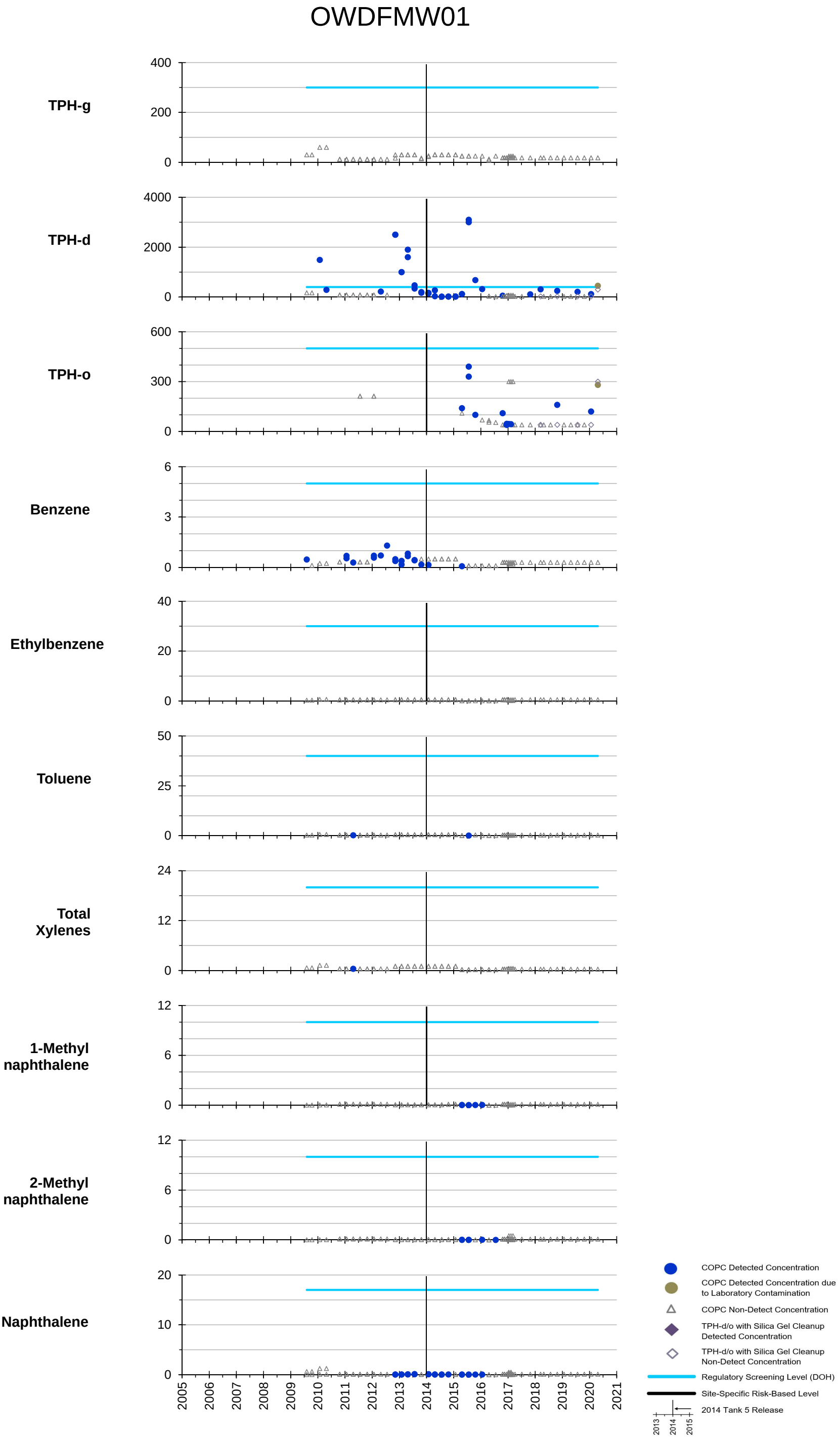
Appendix A.2 Groundwater Concentration Graphs



All results in micrograms per liter (µg/L or parts per billion).

Laboratory reporting limits for TPH-d and TPH-o were raised in March 2020 in accordance with the most current DoD QSM (2019), TNI Manual (2016), and 40 CFR Part 136 (Methods Update Rule 2017).

Appendix A.2 Groundwater Concentration Graphs

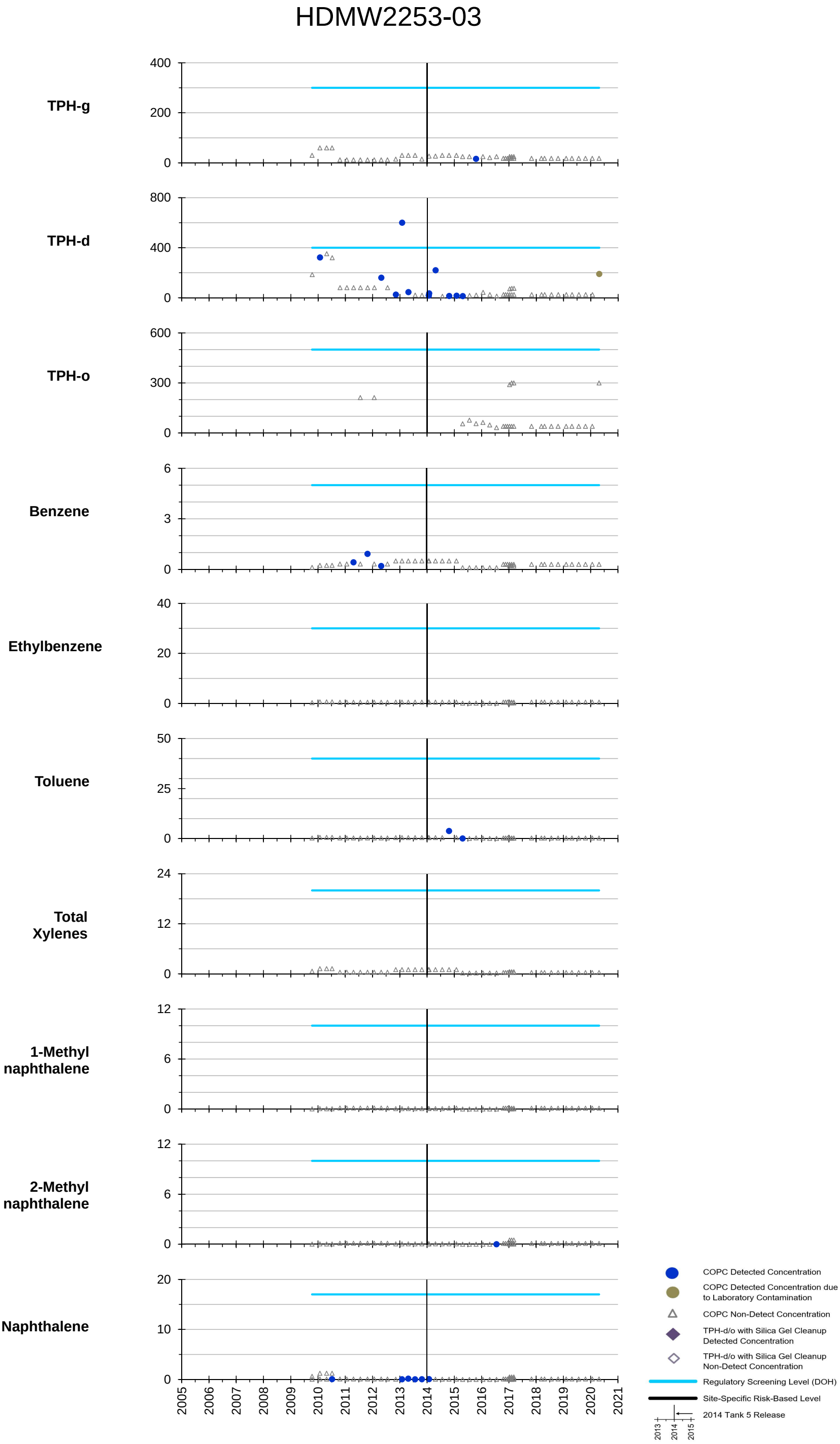


All results in micrograms per liter (µg/L or parts per billion).

EPA Region 9 Laboratory split sampling data from First to Third Quarters 2017 included in the graphs.

Laboratory reporting limits for TPH-d and TPH-o were raised in March 2020 in accordance with the most current DoD QSM (2019), TNI Manual (2016), and 40 CFR Part 136 (Methods Update Rule 2017).

Appendix A.2 Groundwater Concentration Graphs



All results in micrograms per liter (µg/L or parts per billion).

EPA Region 9 Laboratory split sampling data from First to Third Quarters 2017 included in the graphs.

Laboratory reporting limits for TPH-d and TPH-o were raised in March 2020 in accordance with the most current DoD QSM (2019), TNI Manual (2016), and 40 CFR Part 136 (Methods Update Rule 2017).

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Appendix A.3:
Natural Attenuation Parameter Graphs

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Appendix A.3.1:
Cumulative Natural Attenuation Parameter Graphs

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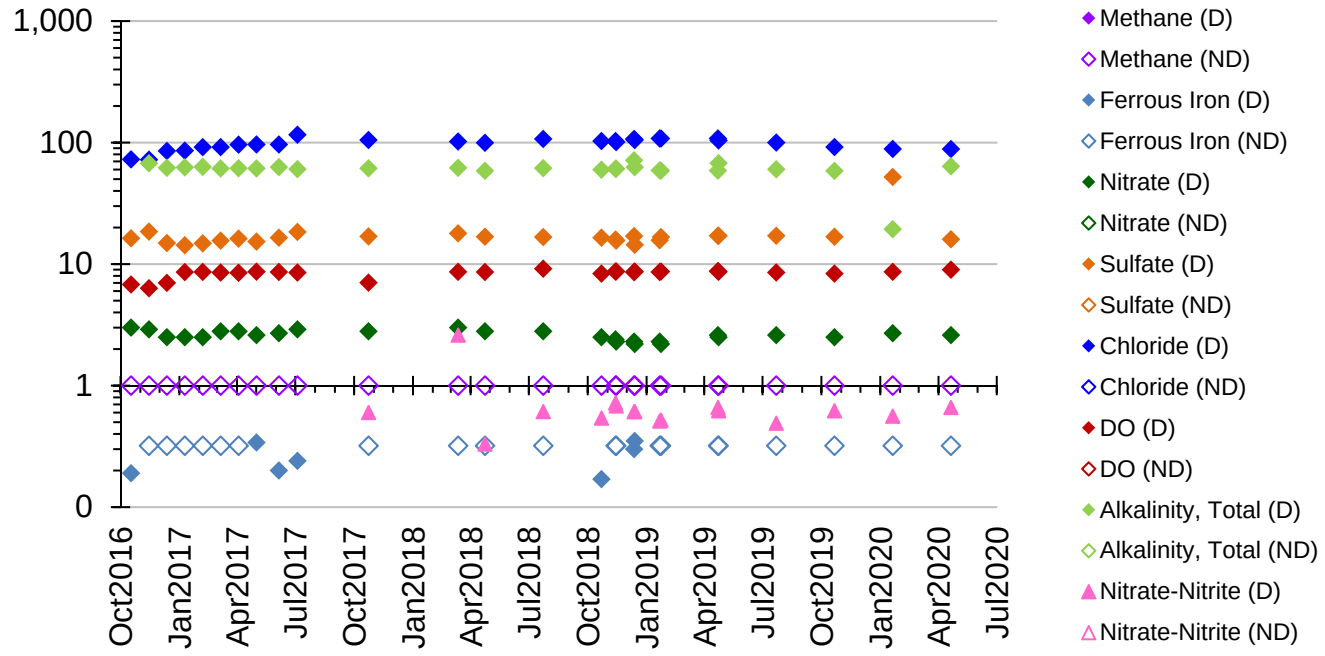
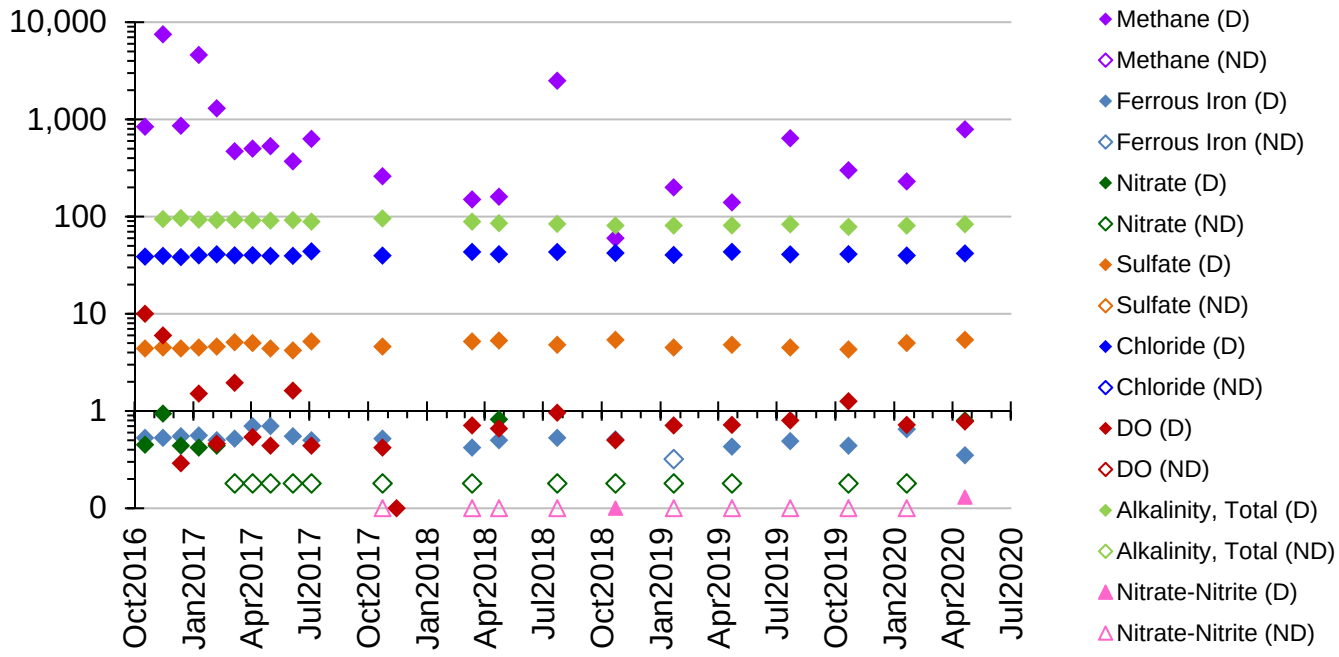
Appendix A.3.1 Cumulative Natural Attenuation Parameters Graphs

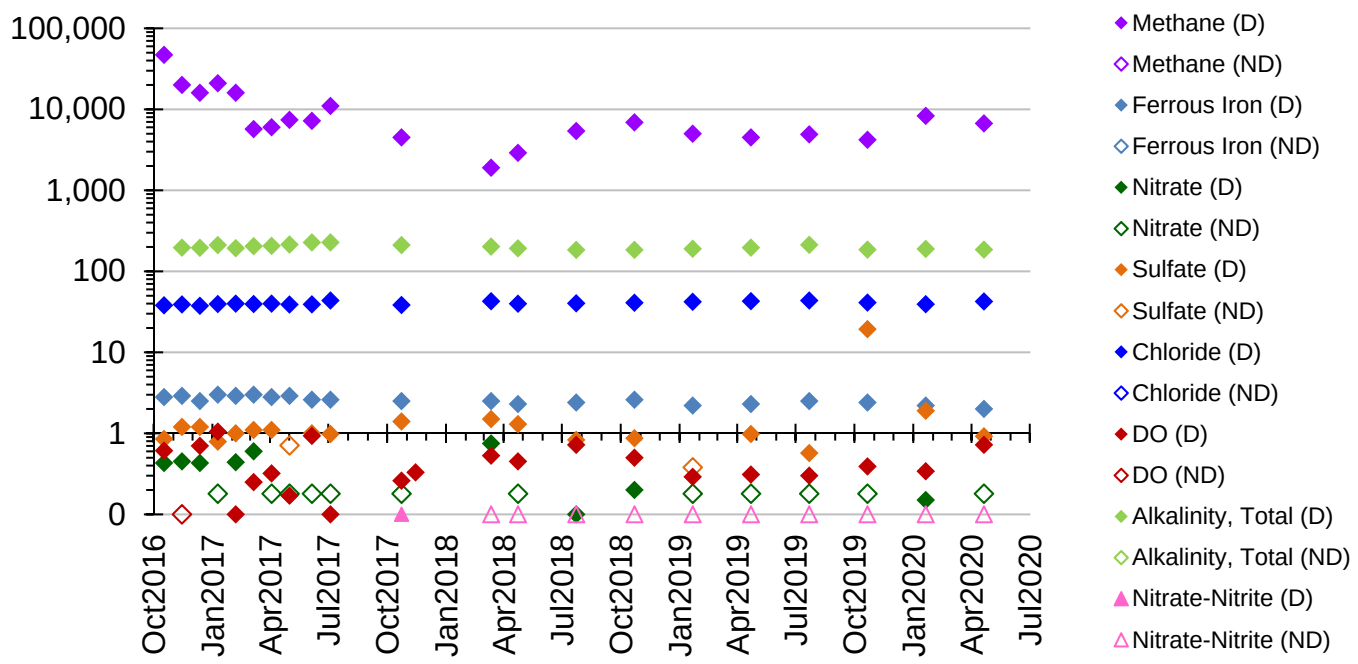
RHMW2254-01 NAPs



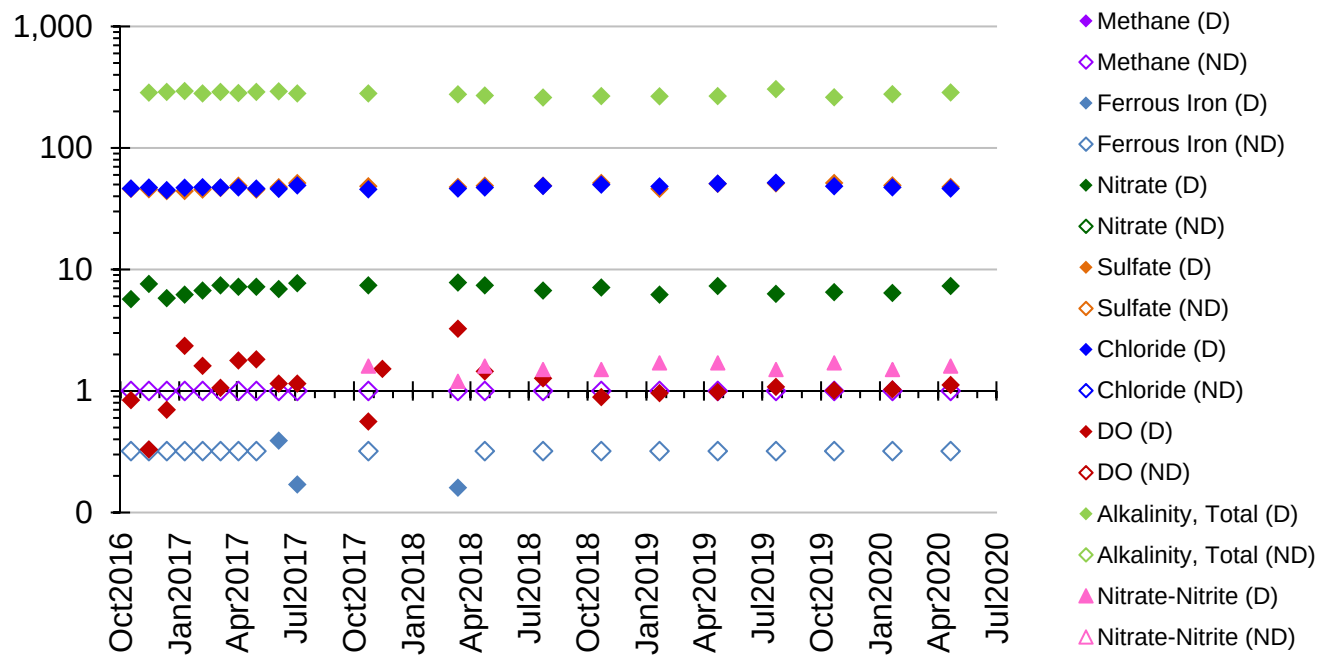
RHMW01 NAPs



RHMW02 NAPs



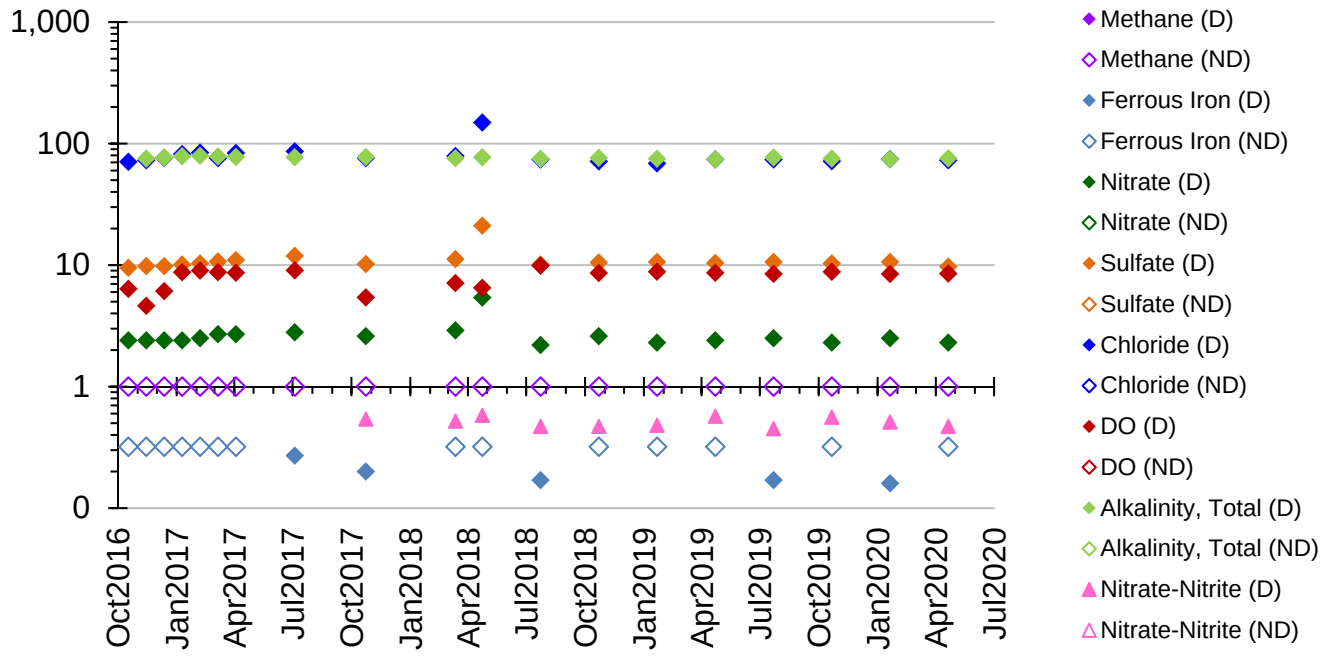
RHMW03 NAPs



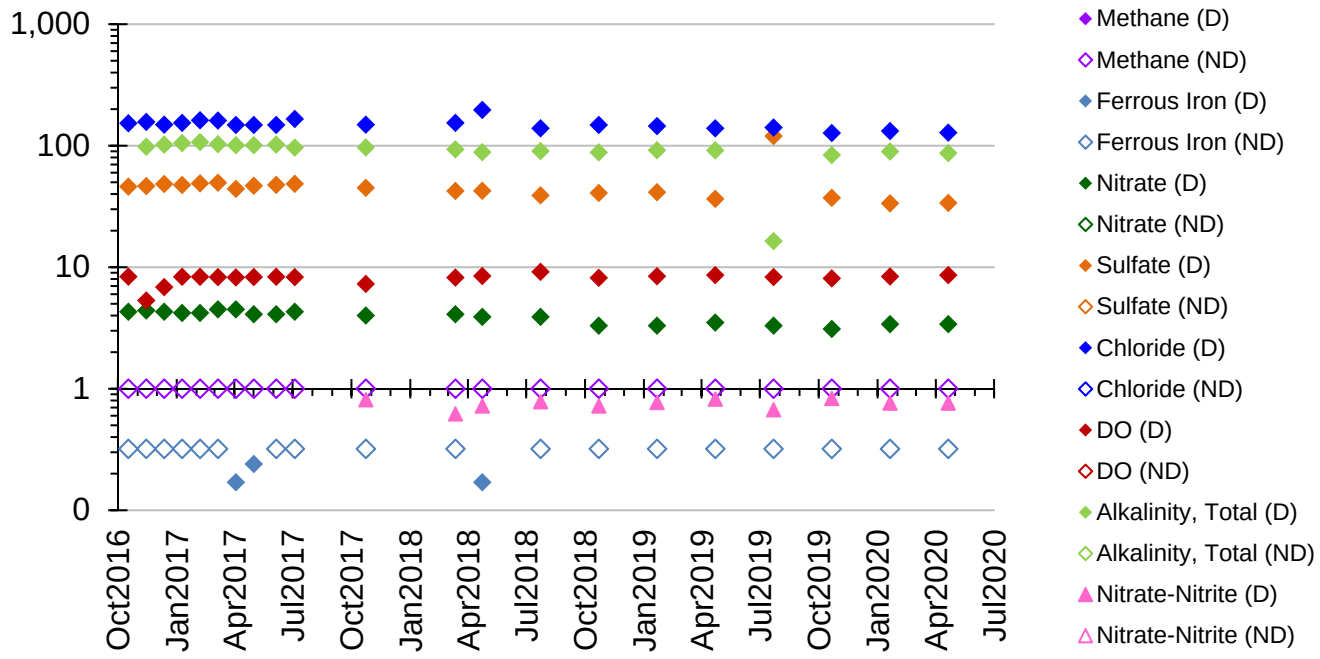
Methane results in micrograms per liter (µg/L or parts per billion).
All other results in milligrams per liter (mg/L or parts per million).

Appendix A.3.1 Cumulative Natural Attenuation Parameters Graphs

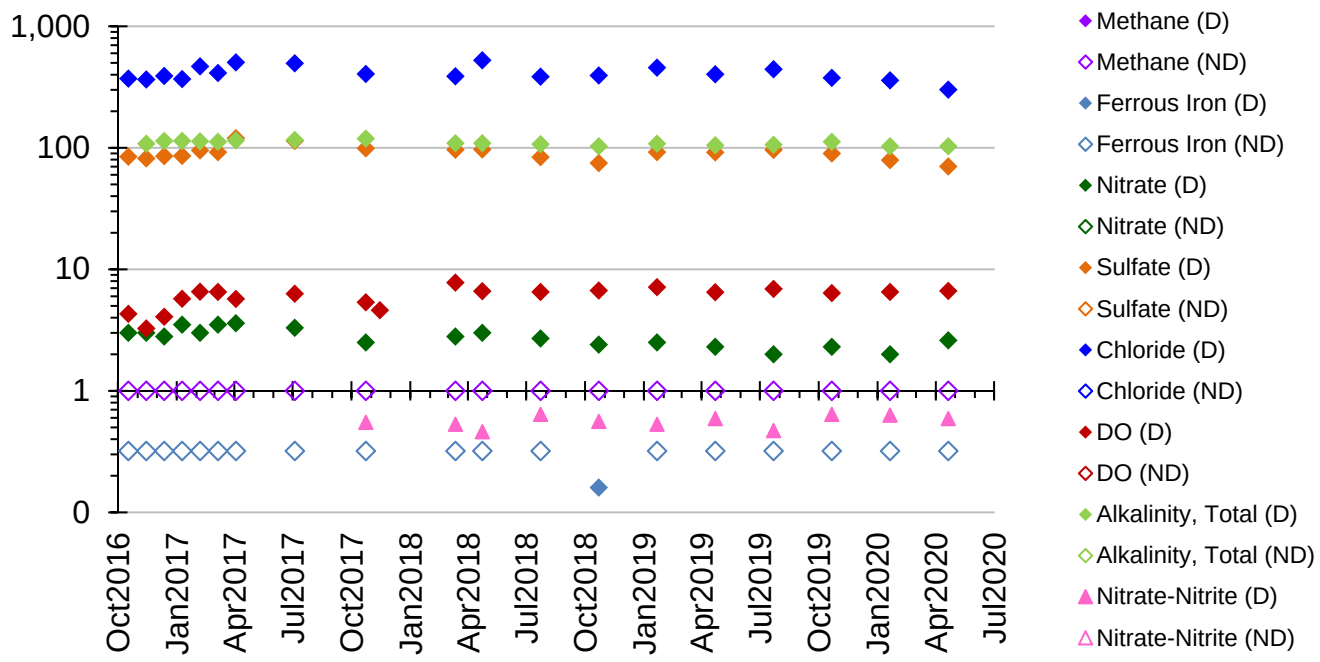
RHMW04 NAPs



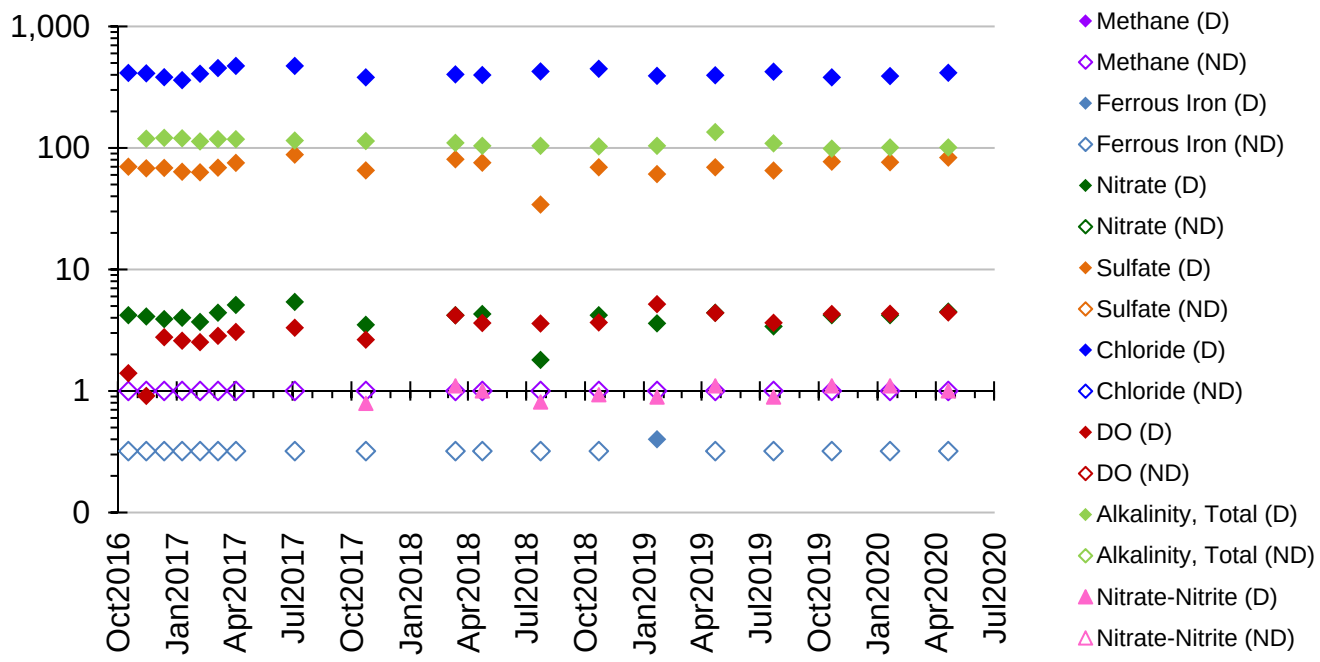
RHMW05 NAPs



RHMW06 NAPs



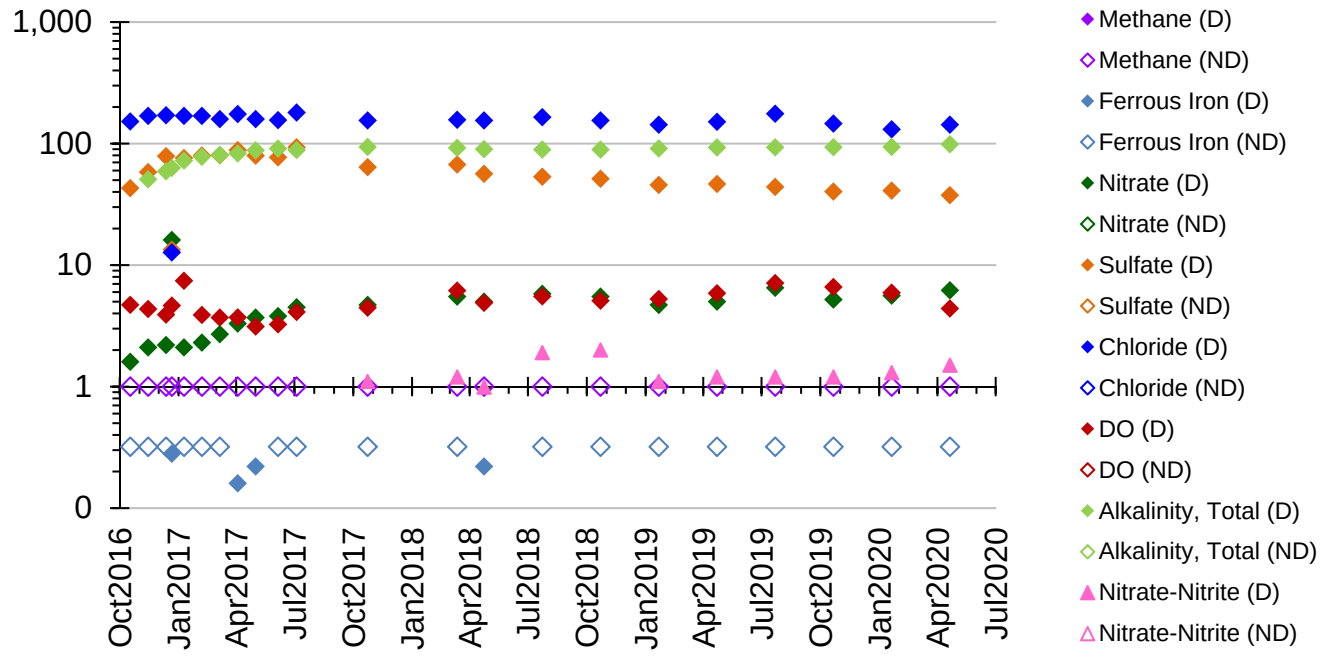
RHMW07 NAPs



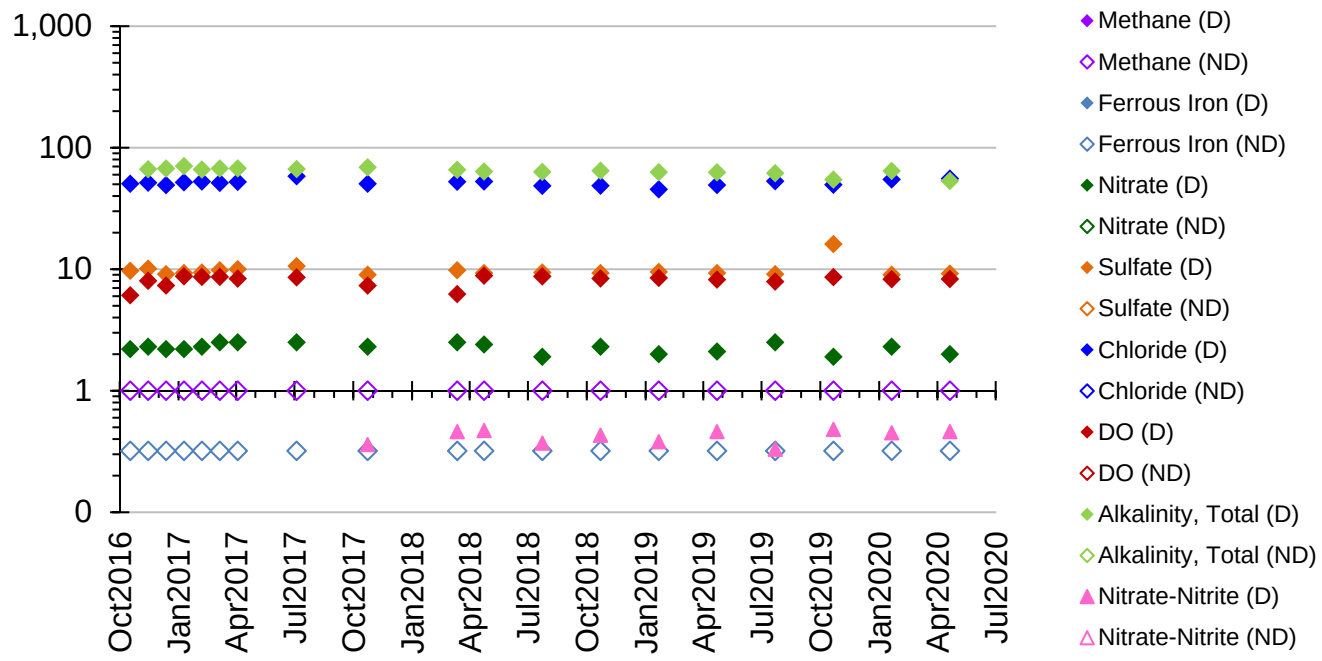
Methane results in micrograms per liter (µg/L or parts per billion).
All other results in milligrams per liter (mg/L or parts per million).

Appendix A.3.1 Cumulative Natural Attenuation Parameters Graphs

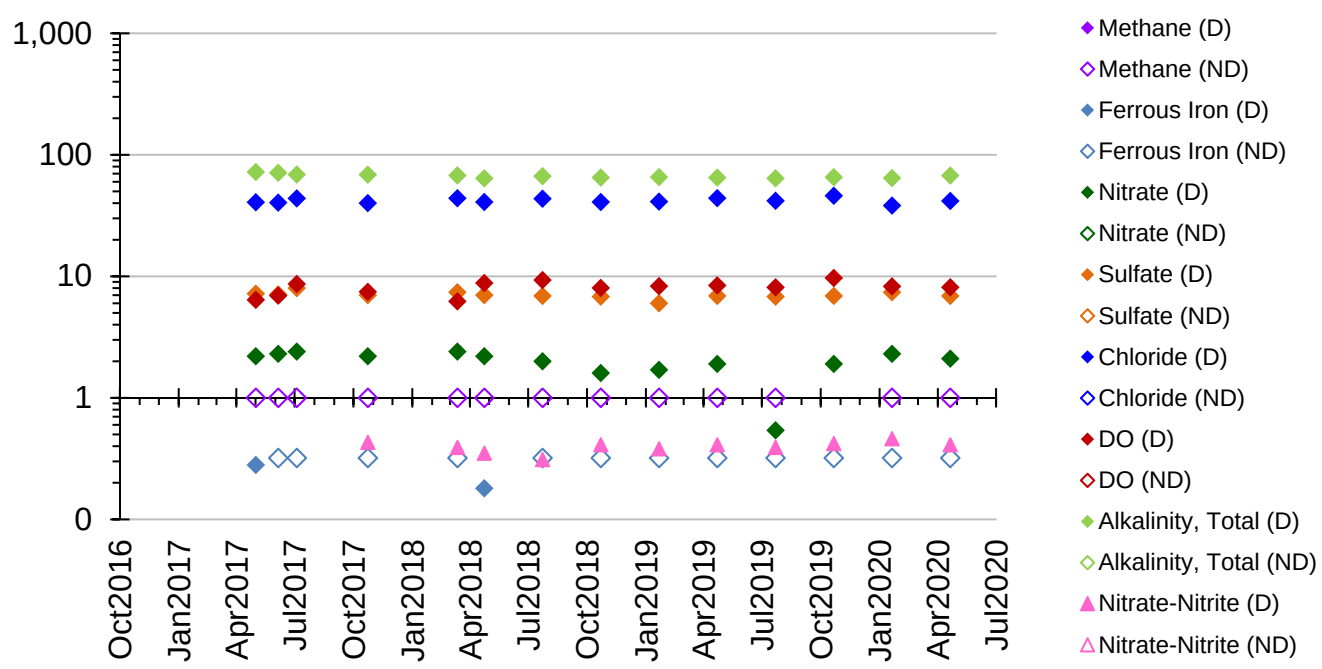
RHMW08 NAPs



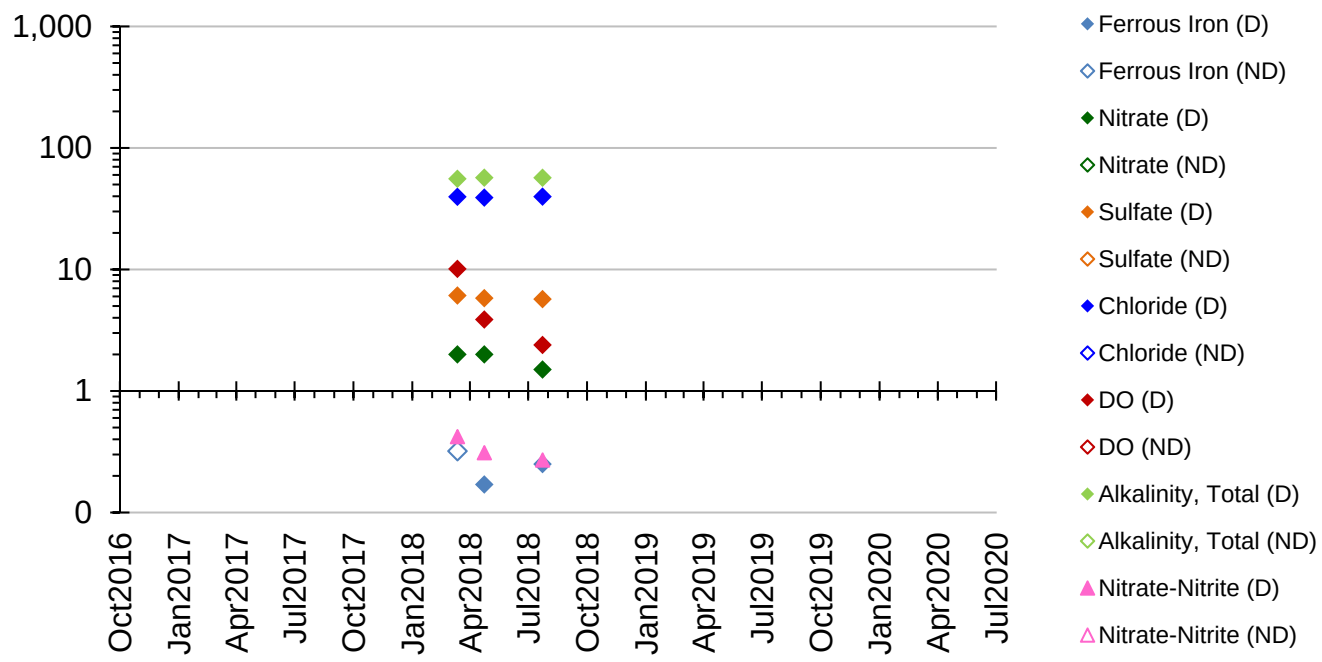
RHMW09 NAPs



RHMW10 NAPs



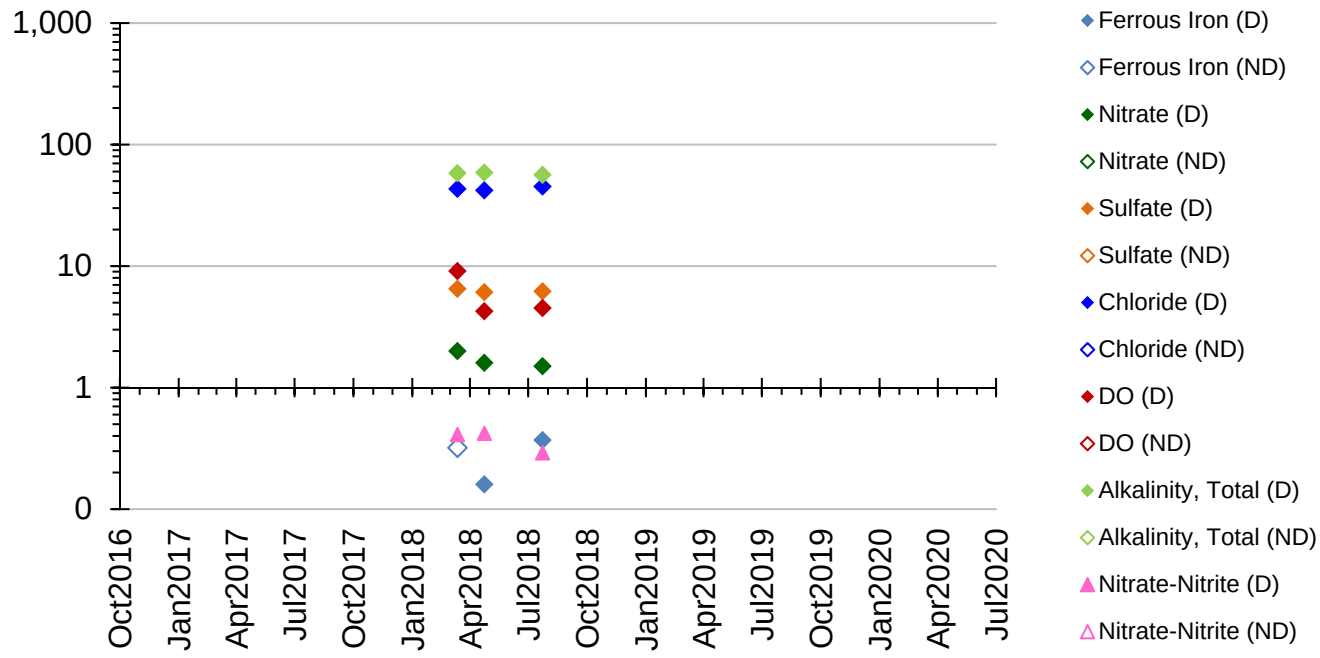
RHMW11 Zone 1 NAPs



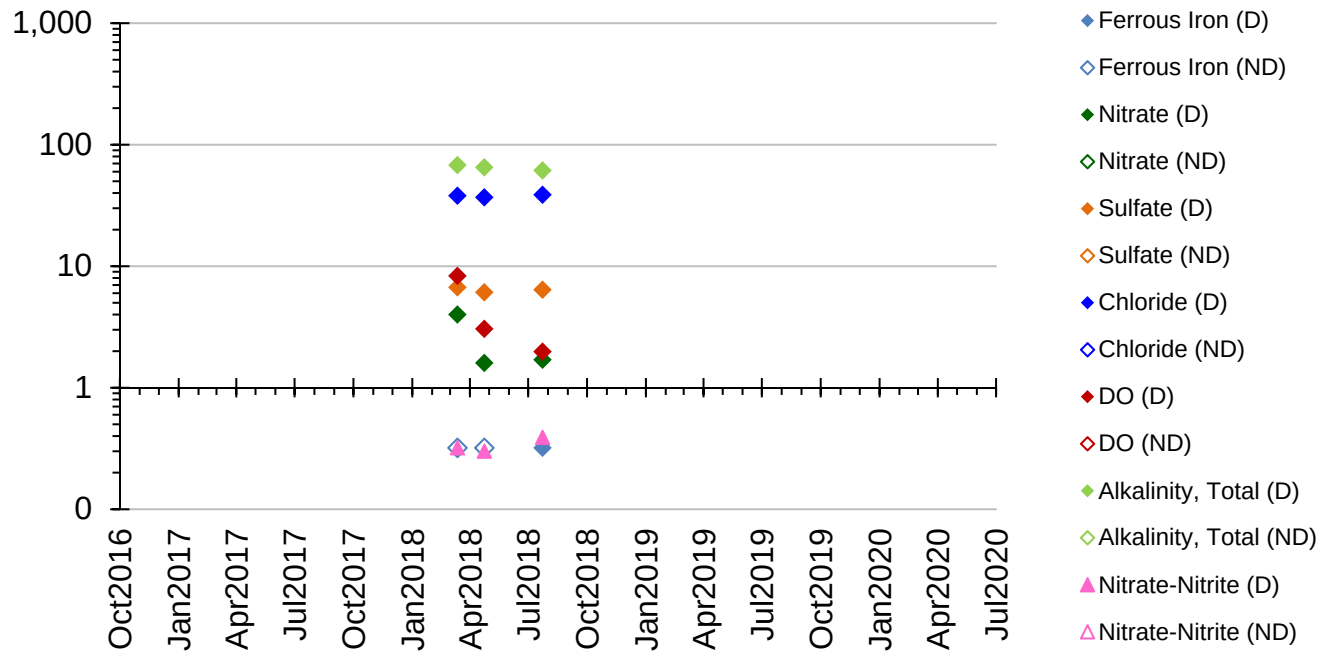
Methane results in micrograms per liter (µg/L or parts per billion).
All other results in milligrams per liter (mg/L or parts per million).

Appendix A.3.1 Cumulative Natural Attenuation Parameters Graphs

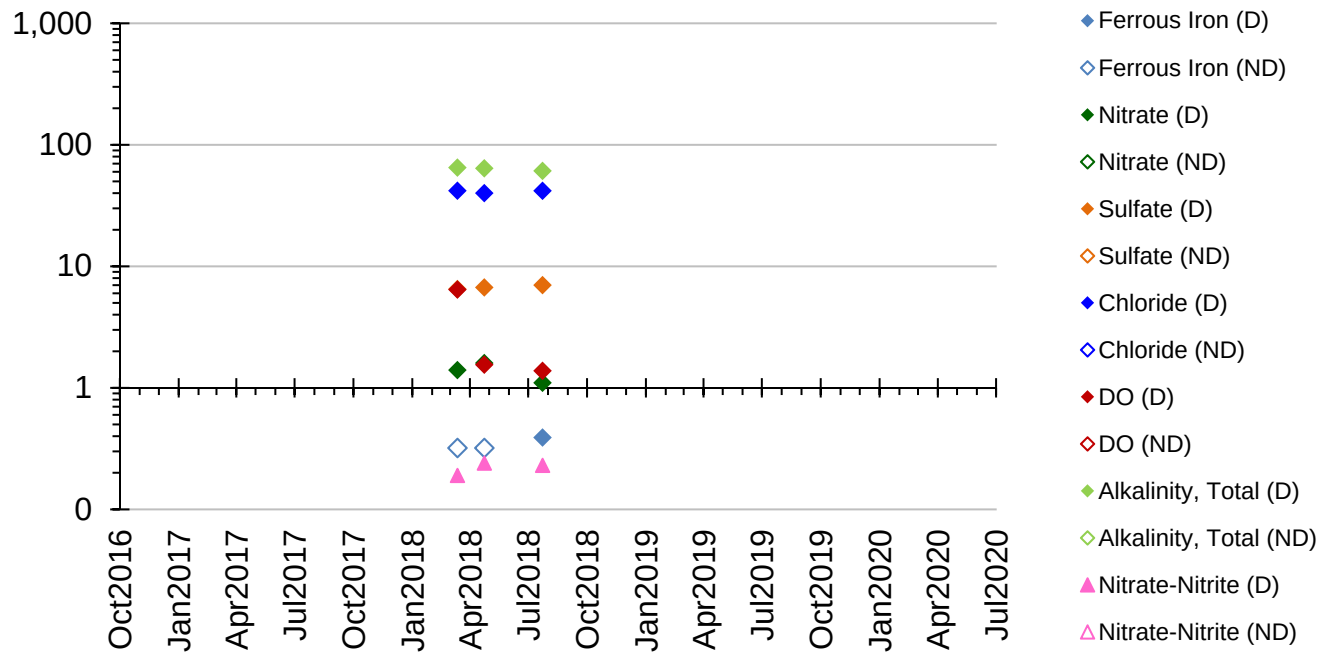
RHMW11 Zone 2 NAPs



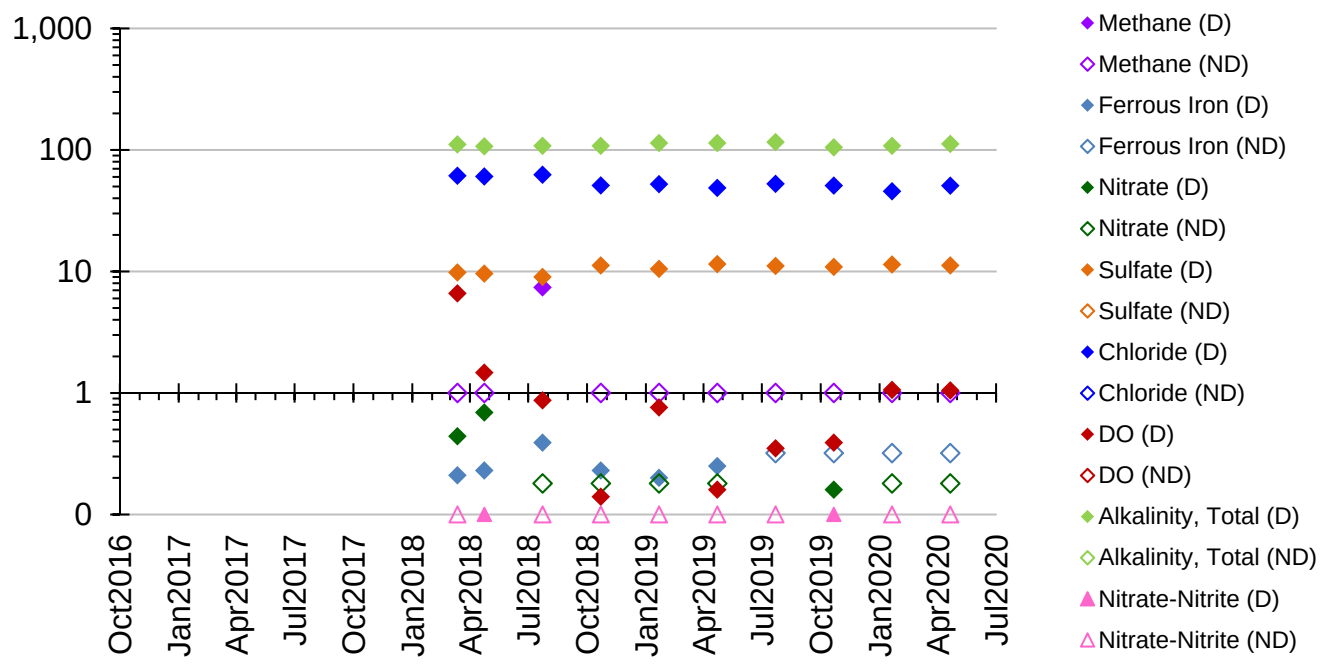
RHMW11 Zone 3 NAPs



RHMW11 Zone 4 NAPs



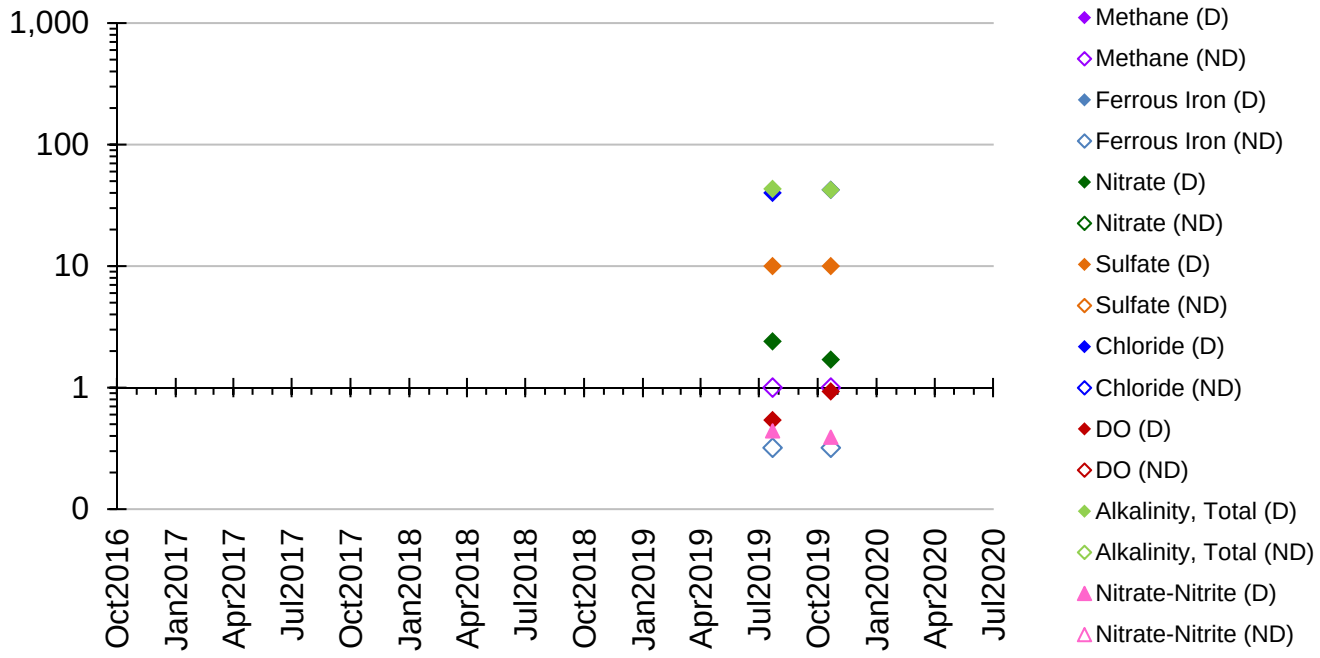
RHMW11 Zone 5 NAPs



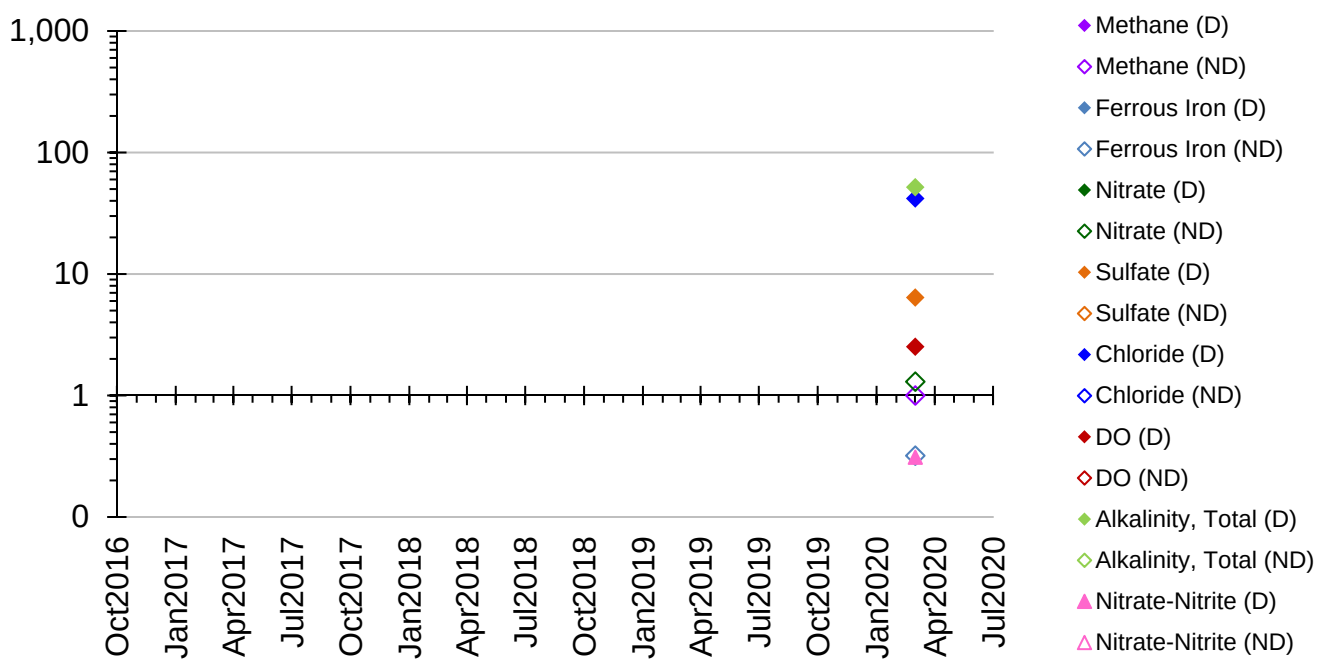
Methane results in micrograms per liter (µg/L or parts per billion).
All other results in milligrams per liter (mg/L or parts per million).

Appendix A.3.1 Cumulative Natural Attenuation Parameters Graphs

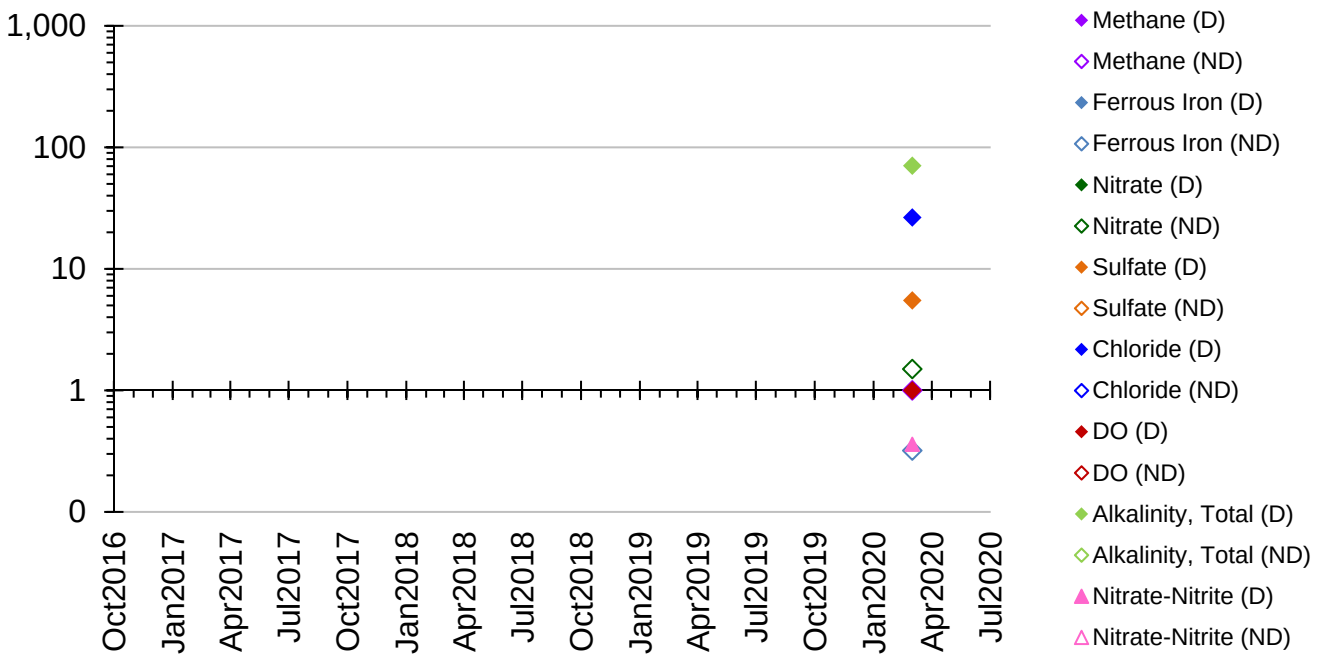
RHMW11 Zone 7 NAPs



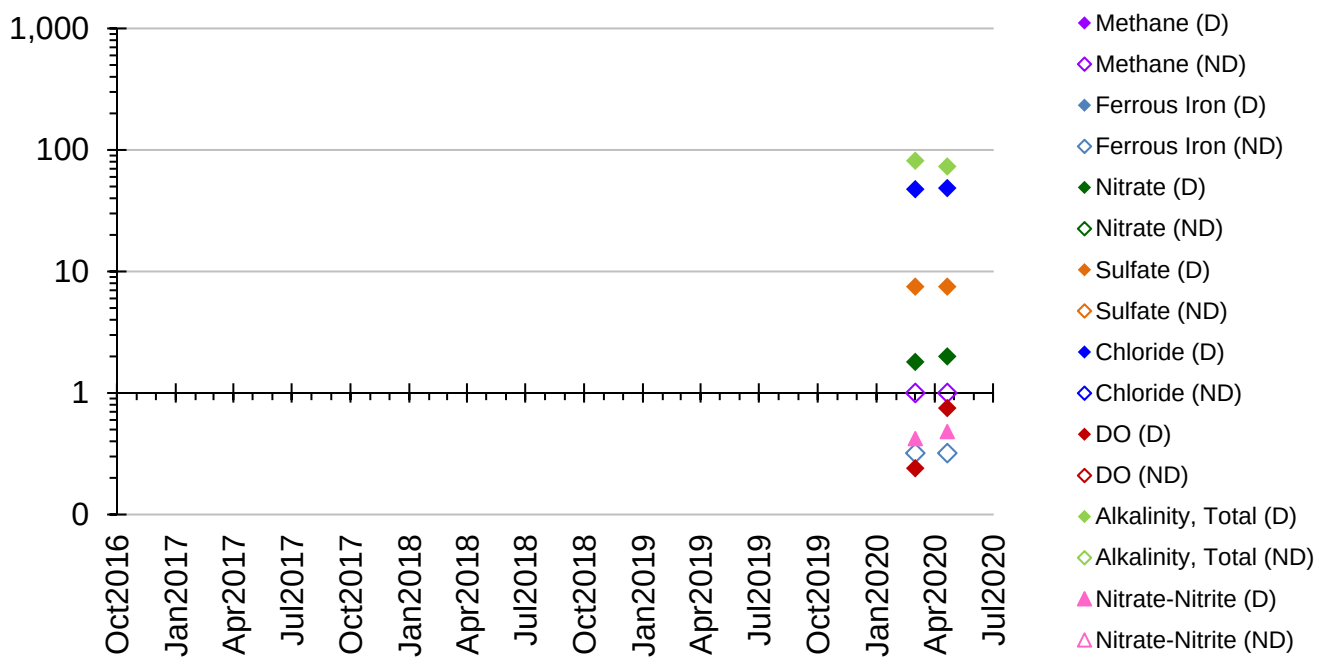
RHMW13 Zone 1 NAPs



RHMW13 Zone 2 NAPs



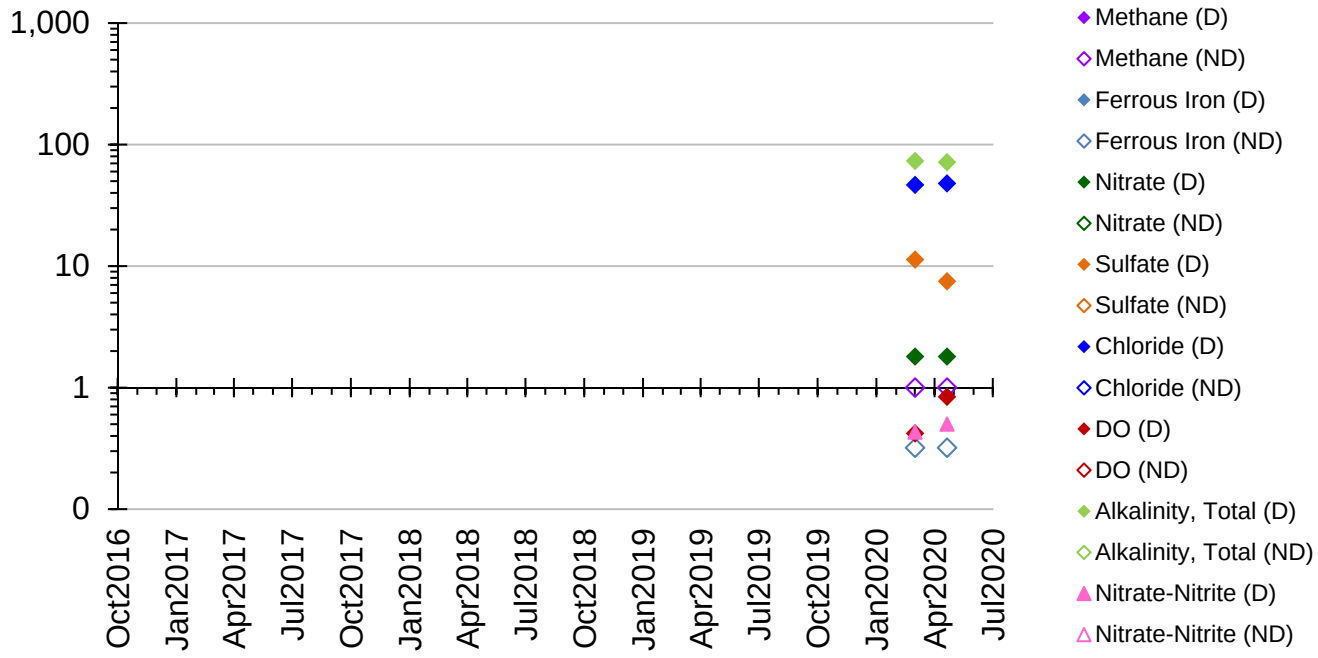
RHMW13 Zone 3 NAPs



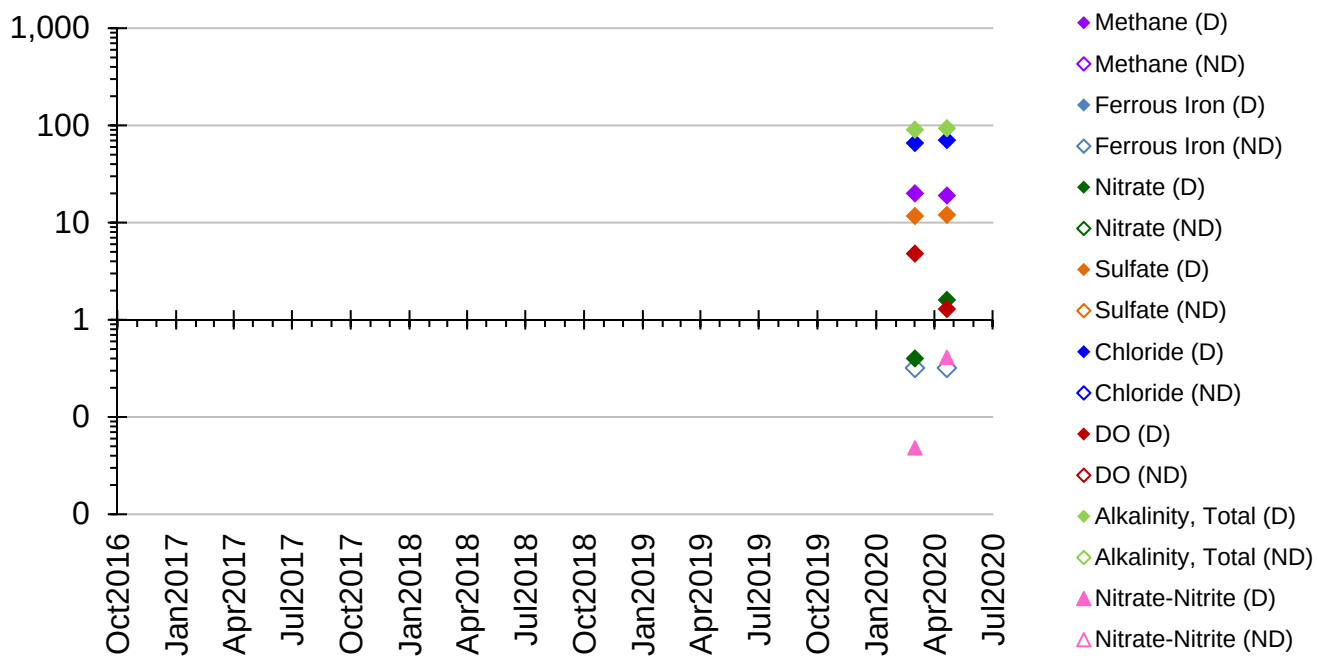
Methane results in micrograms per liter (µg/L or parts per billion).
All other results in milligrams per liter (mg/L or parts per million).

Appendix A.3.1 Cumulative Natural Attenuation Parameters Graphs

RHMW13 Zone 4 NAPs



RHMW13 Zone 5 NAPs



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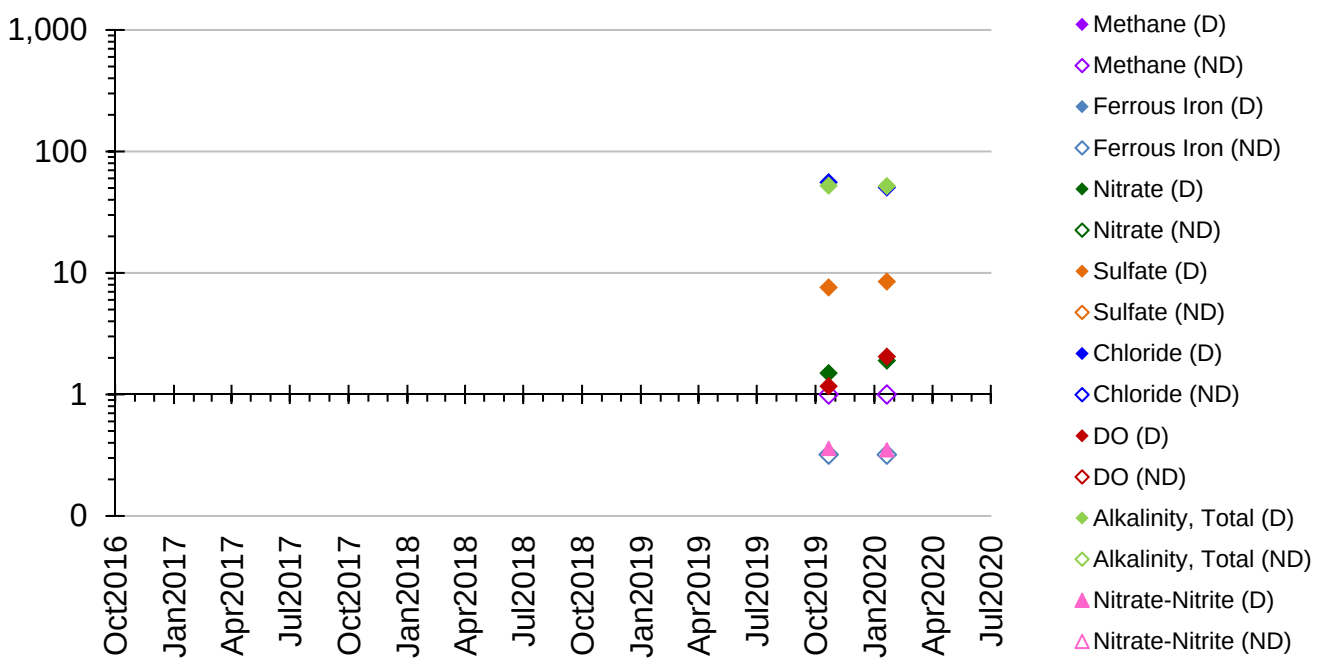

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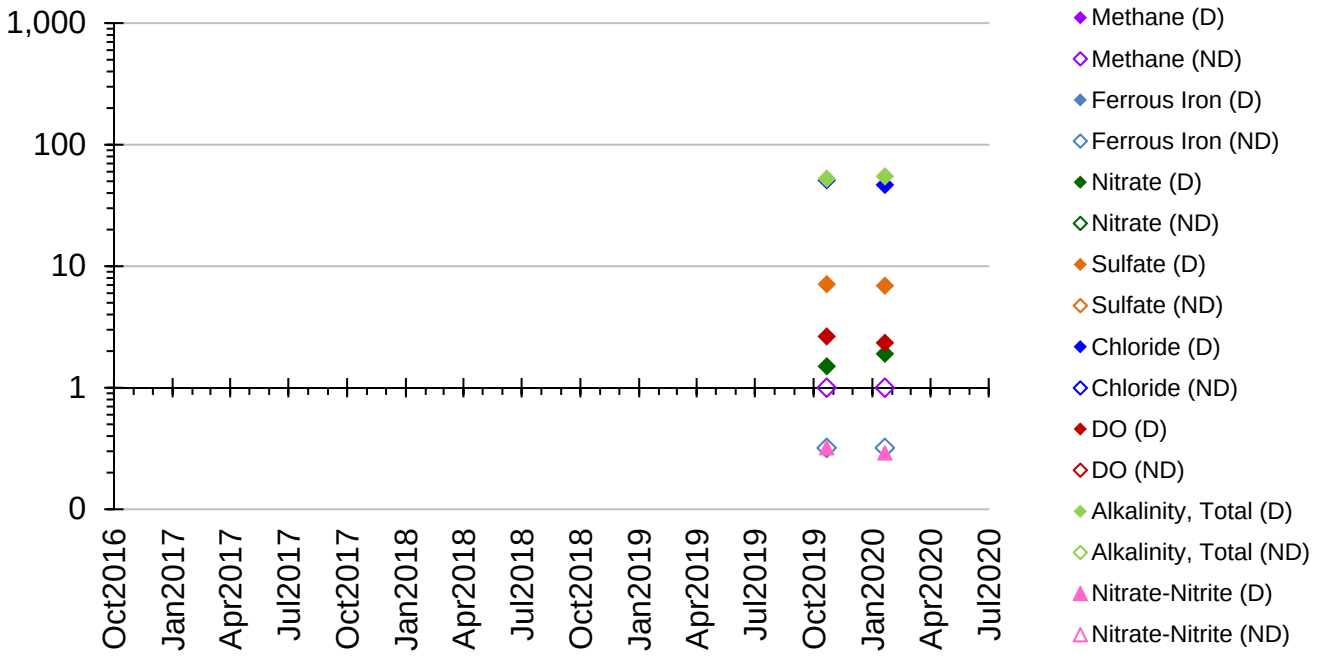
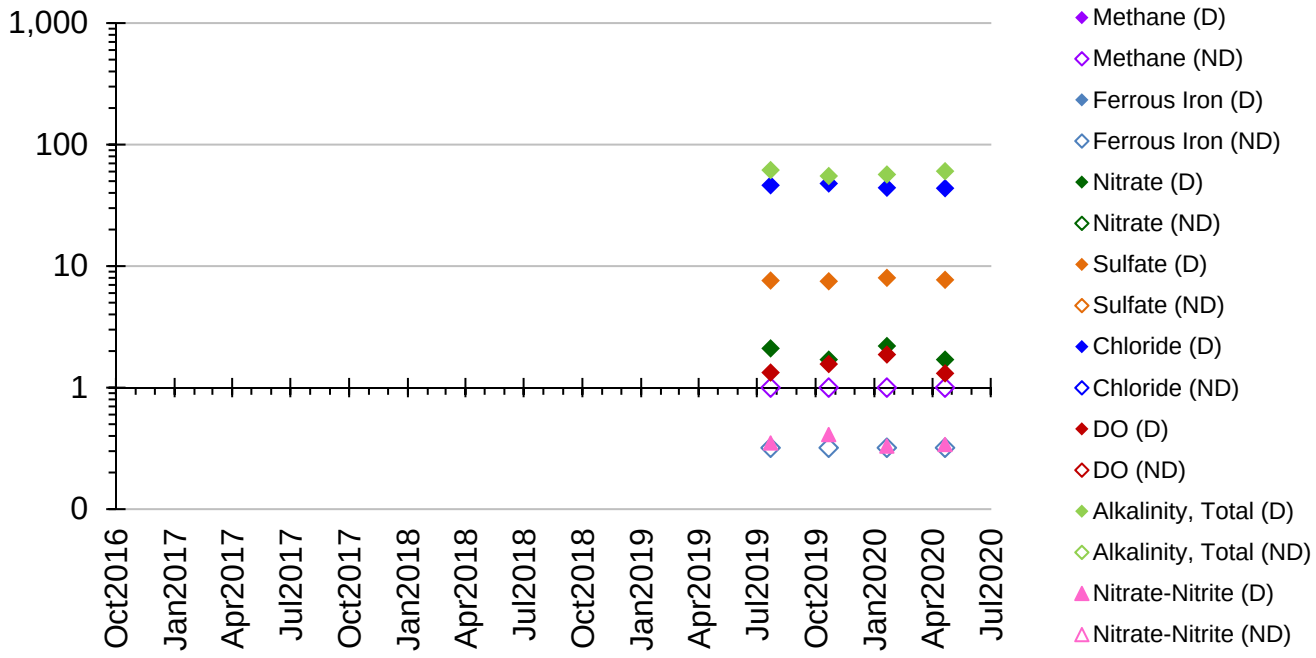


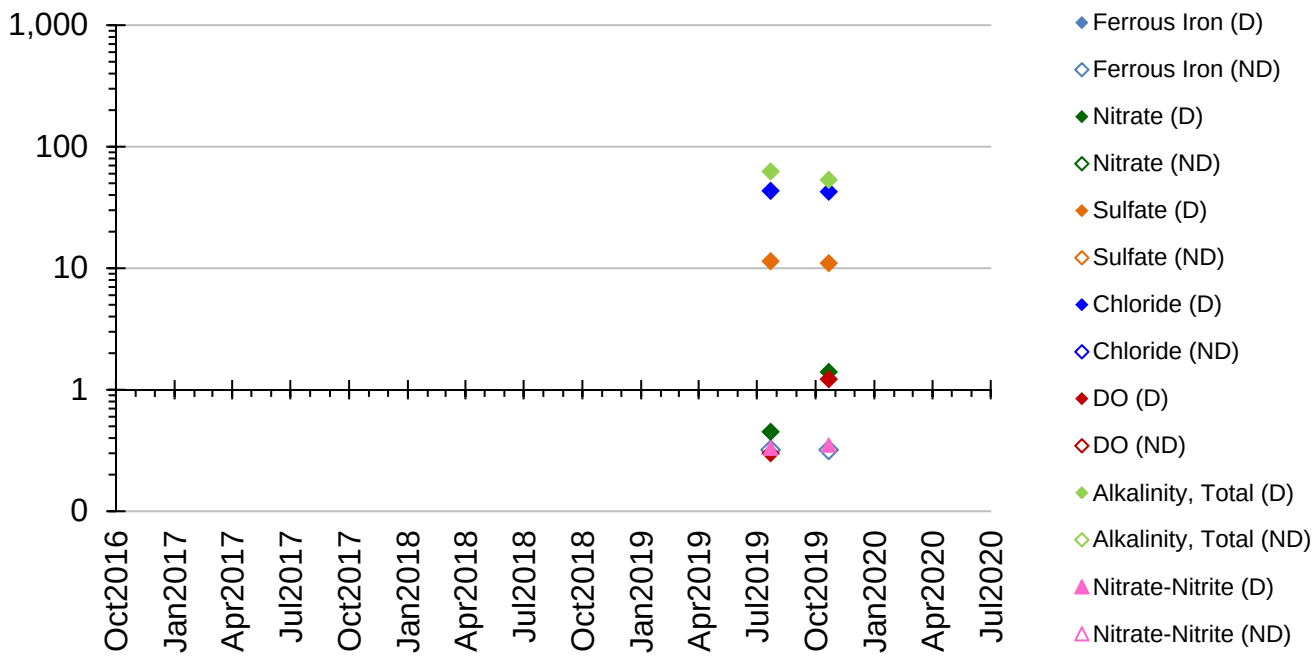
Methane results in micrograms per liter (µg/L or parts per billion).
All other results in milligrams per liter (mg/L or parts per million).

Appendix A.3.1 Cumulative Natural Attenuation Parameters Graphs

RHMW14 Zone 3 NAPs



RHMW14 Zone 4 NAPs



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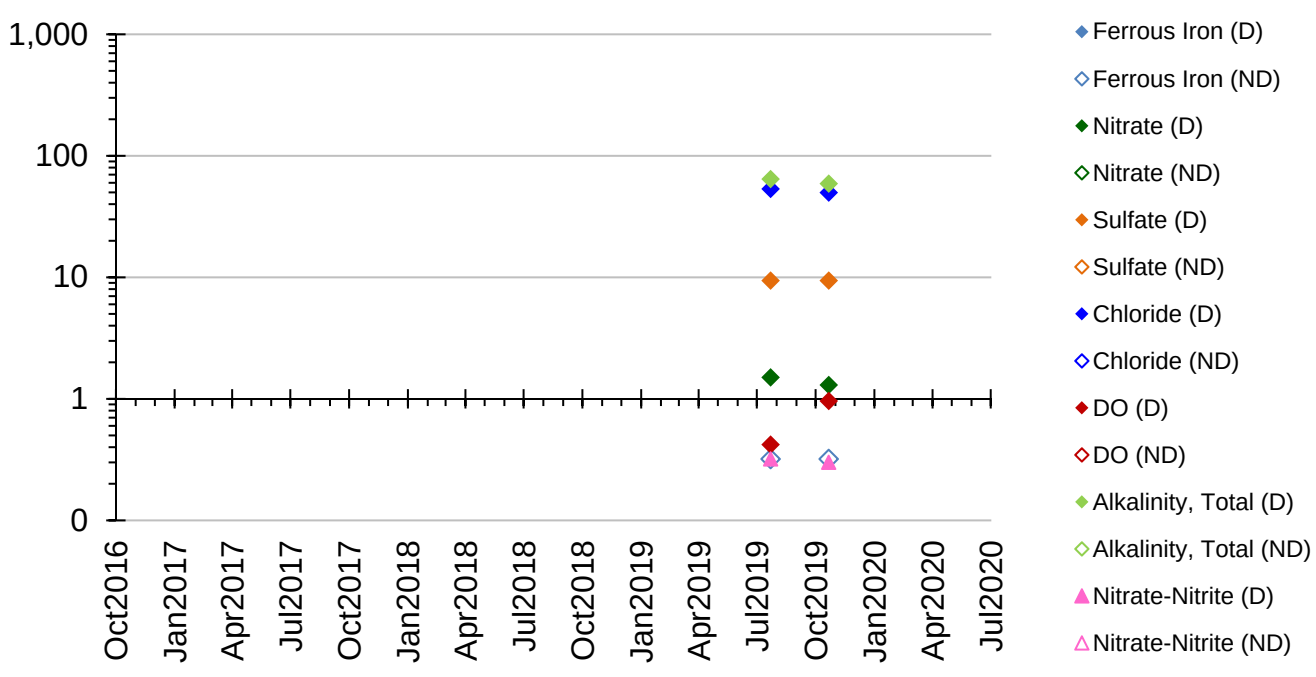
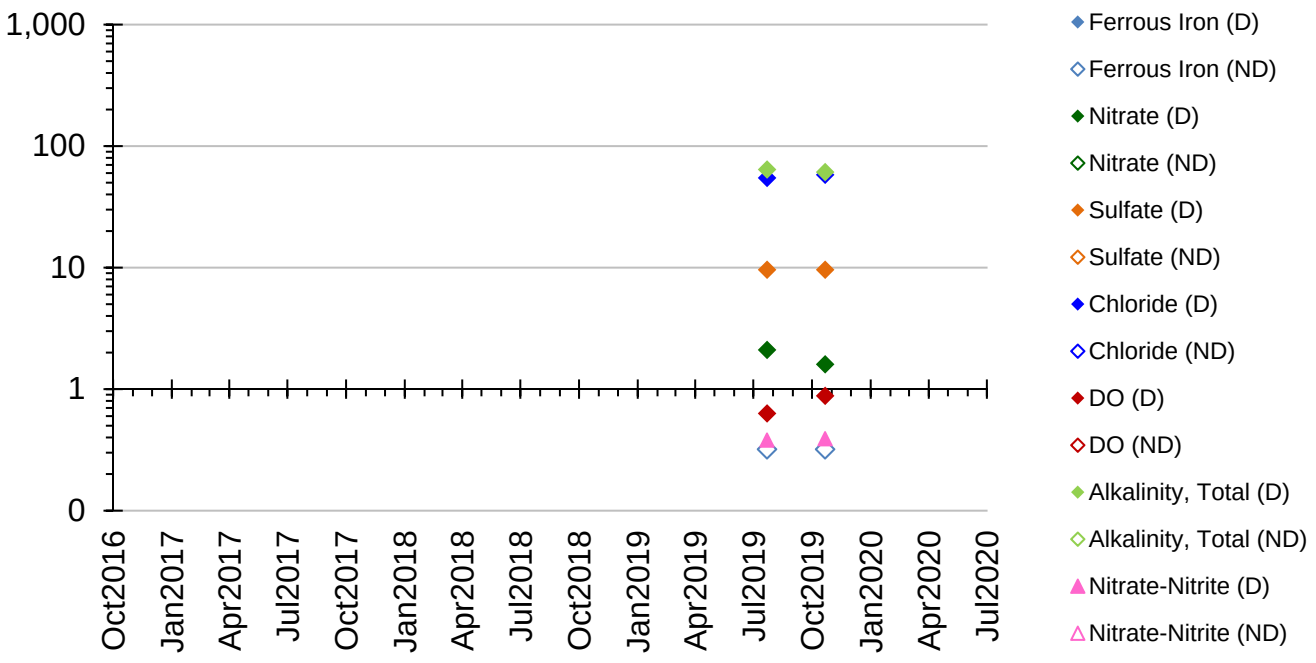


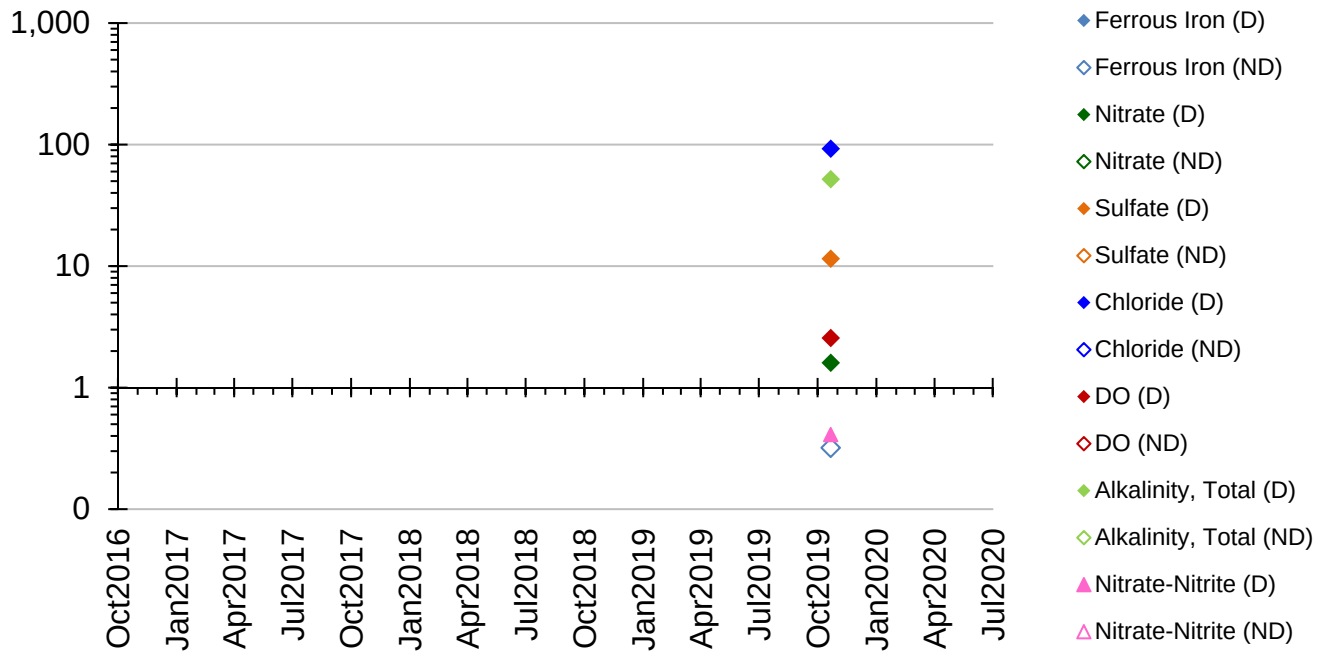
RHMW14 Zone 7 NAPs



Methane results in micrograms per liter (µg/L or parts per billion).
All other results in milligrams per liter (mg/L or parts per million).

Appendix A.3.1 Cumulative Natural Attenuation Parameters Graphs

RHMW15 Zone 1 NAPs



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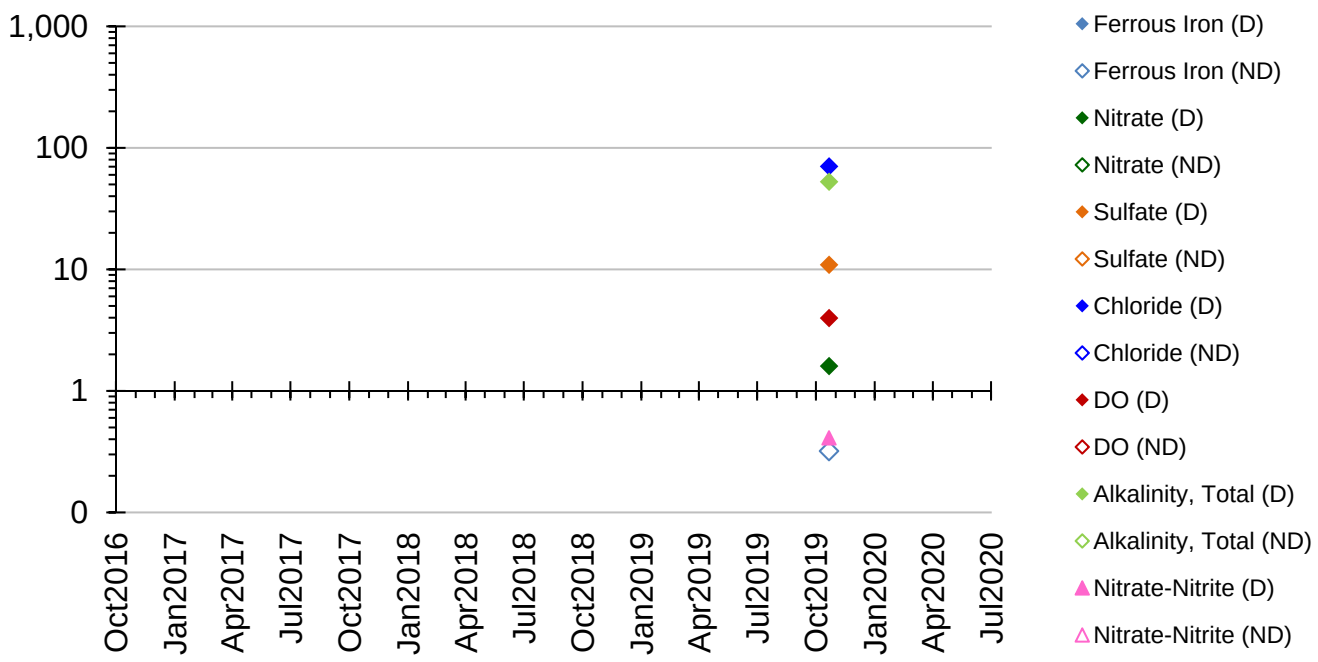
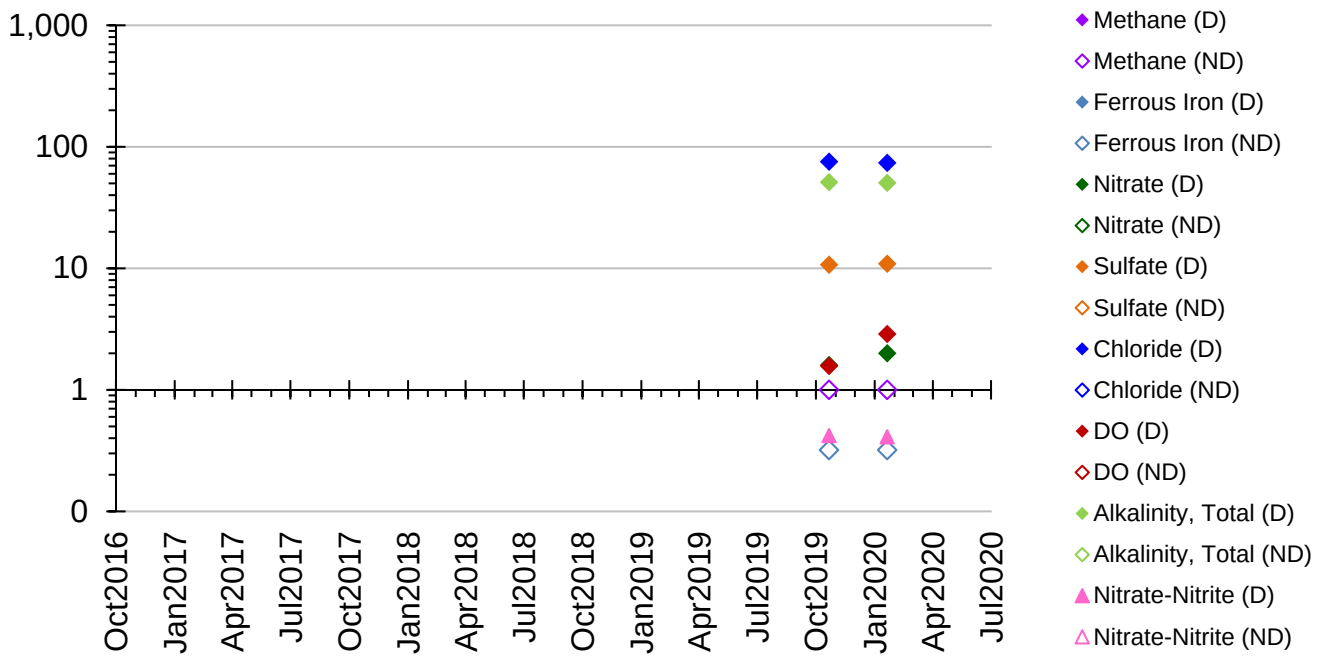
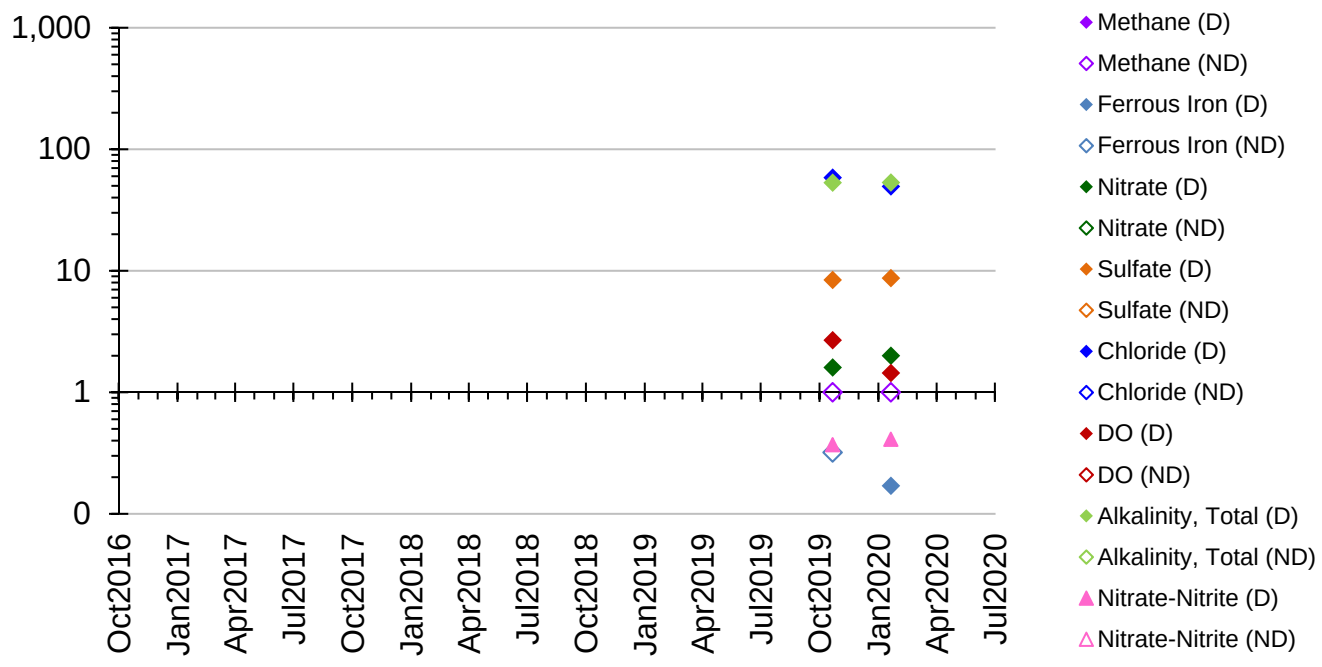


RHMW15 Zone 3 NAPs



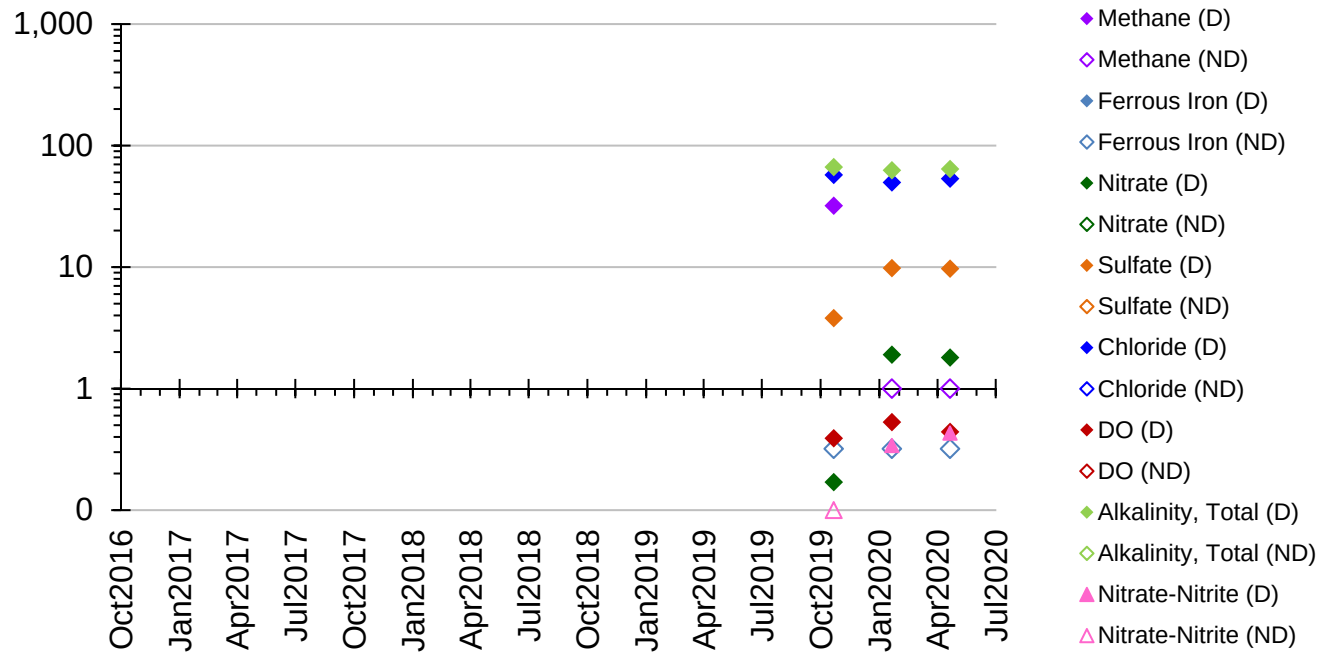
RHMW15 Zone 4 NAPs



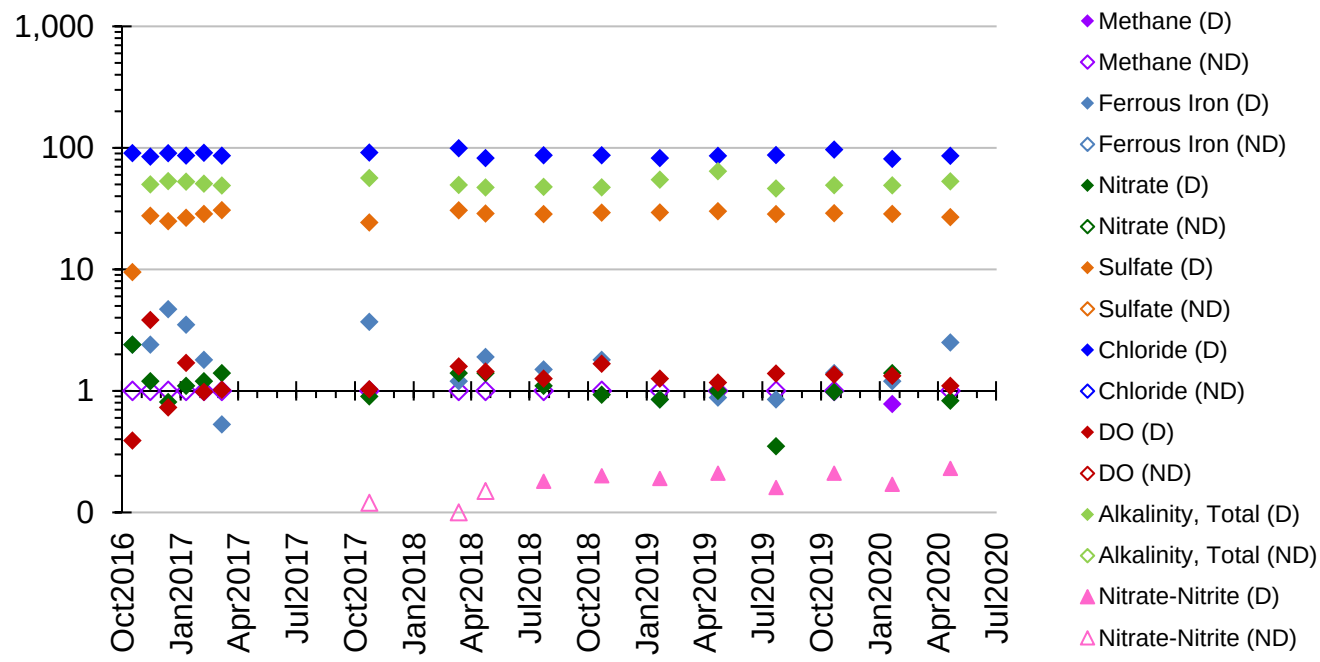
Methane results in micrograms per liter (µg/L or parts per billion).
All other results in milligrams per liter (mg/L or parts per million).

Appendix A.3.1 Cumulative Natural Attenuation Parameters Graphs

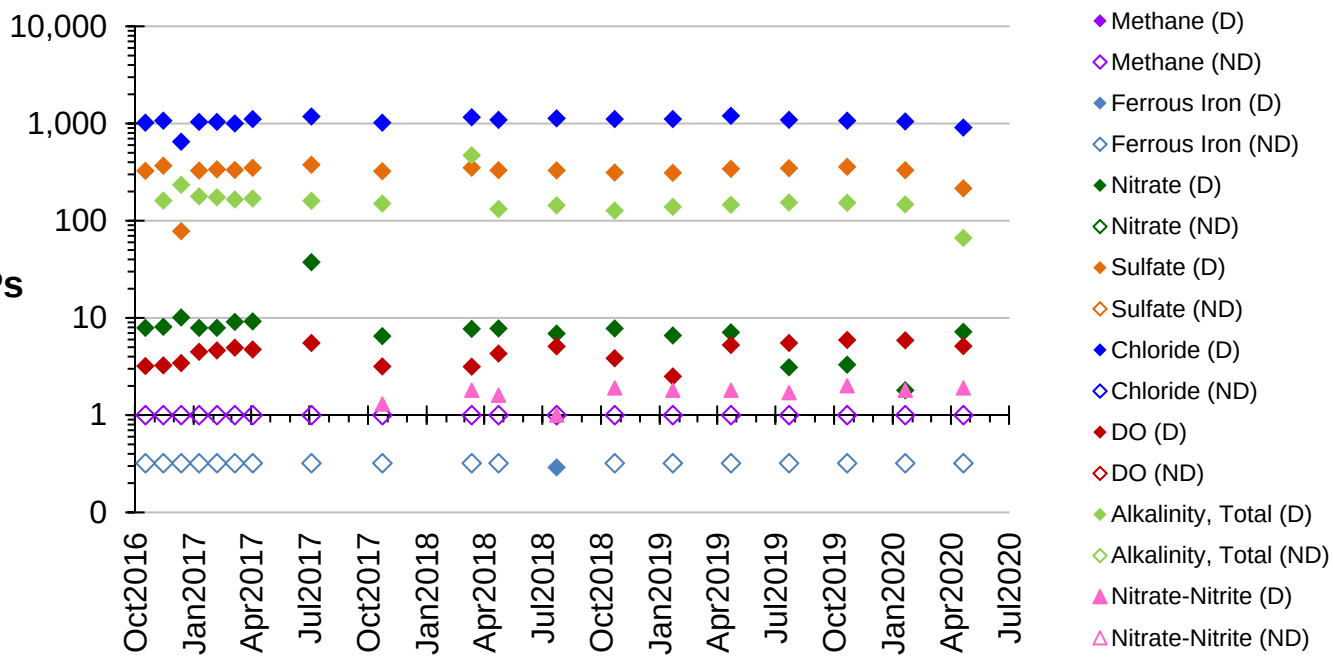
RHMW15 Zone 5 NAPs



HDMW2253-03 NAPs



OWDFMW01 NAPs



Methane results in micrograms per liter (µg/L or parts per billion).
All other results in milligrams per liter (mg/L or parts per million).

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Appendix A.3.2:
Second Quarter 2020 Natural Attenuation Parameter Graphs

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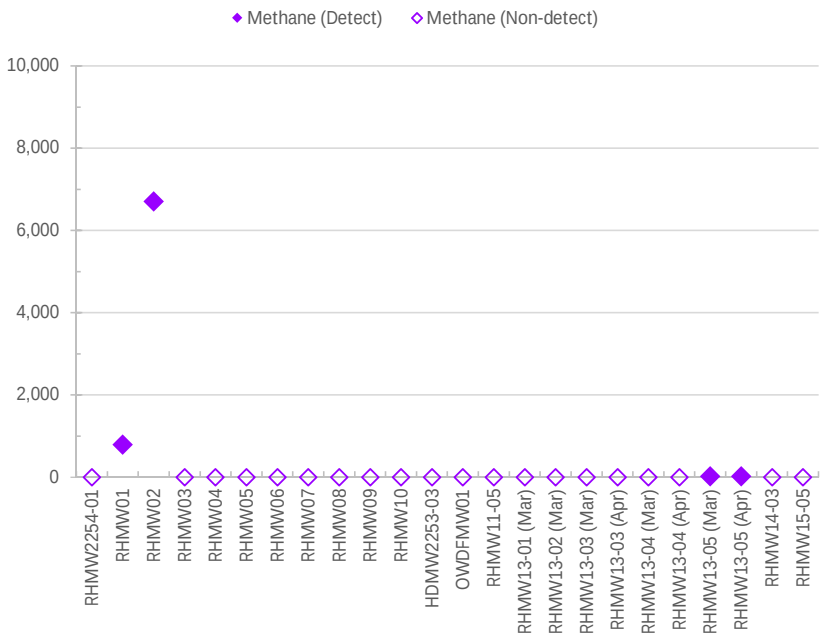
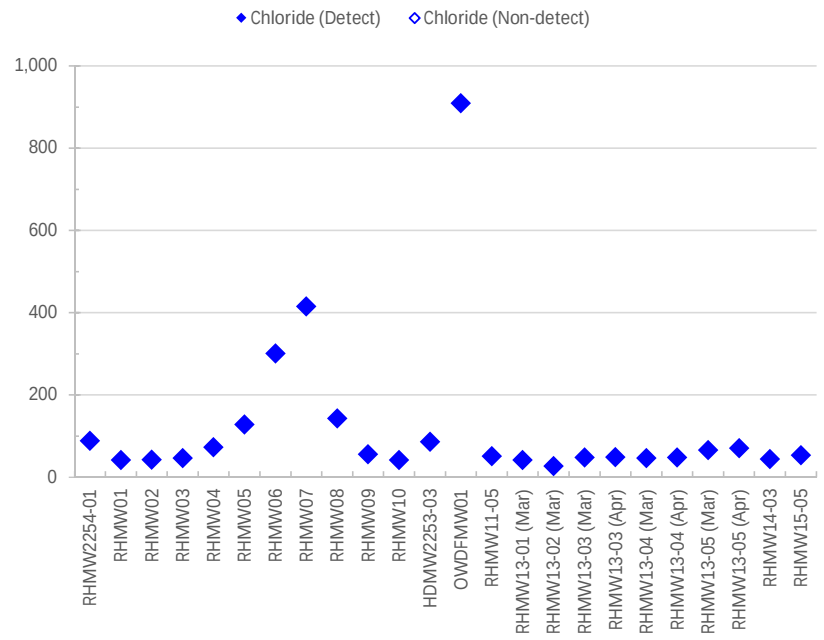
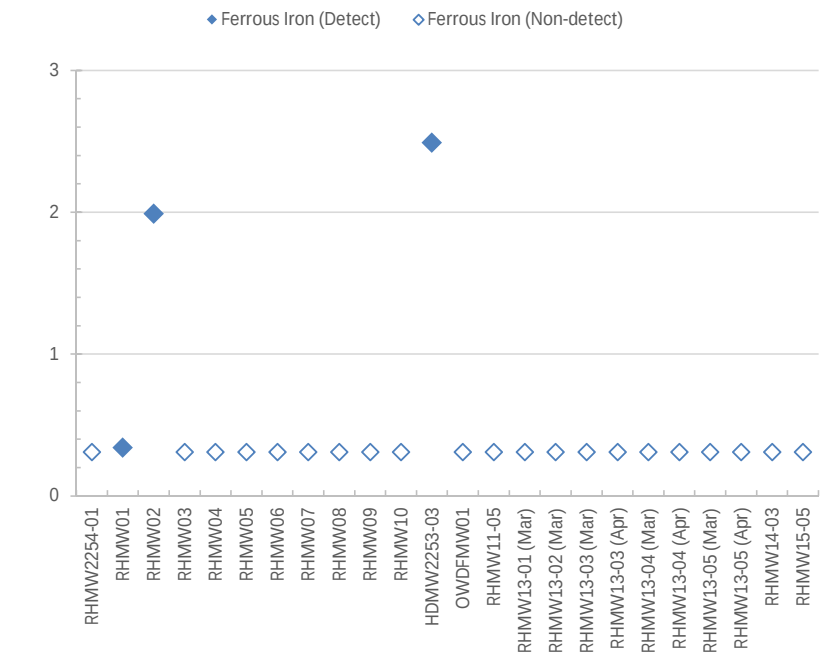
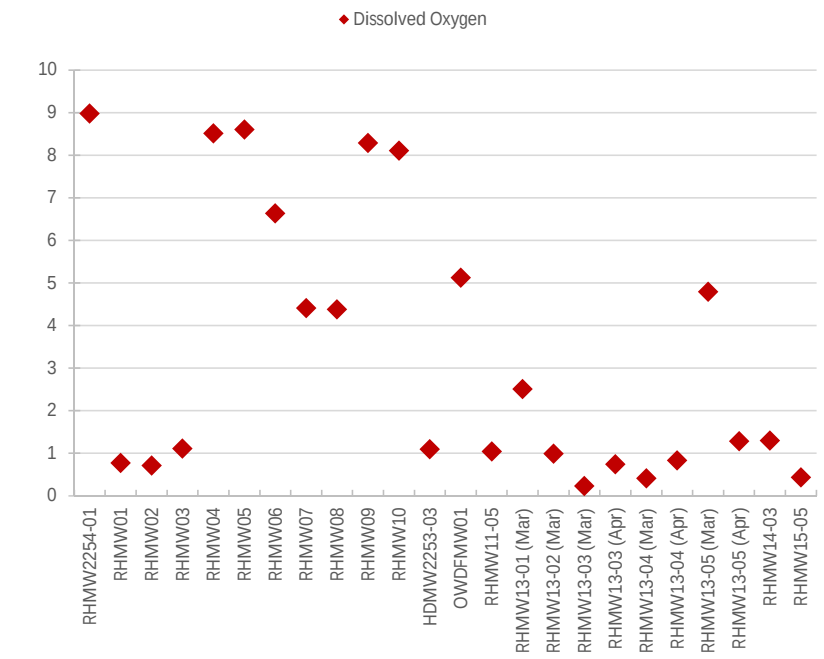
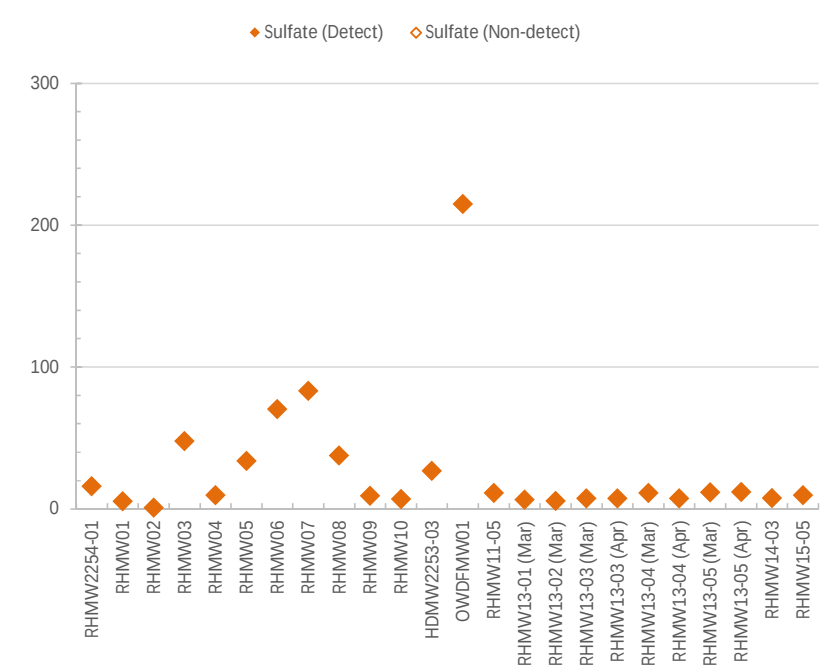
Appendix A.3.2 March 2020 and Second Quarter (April) 2020 Natural Attenuation Parameters

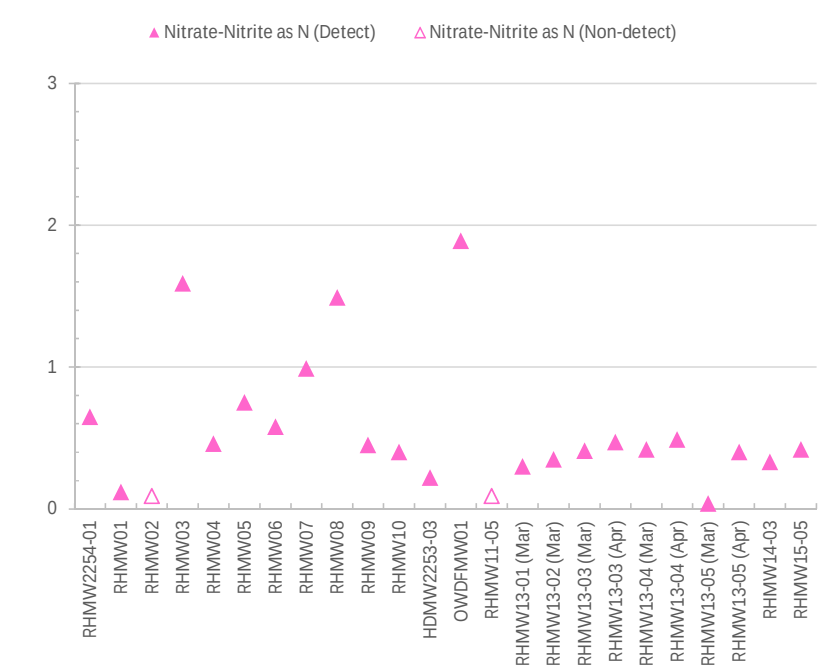


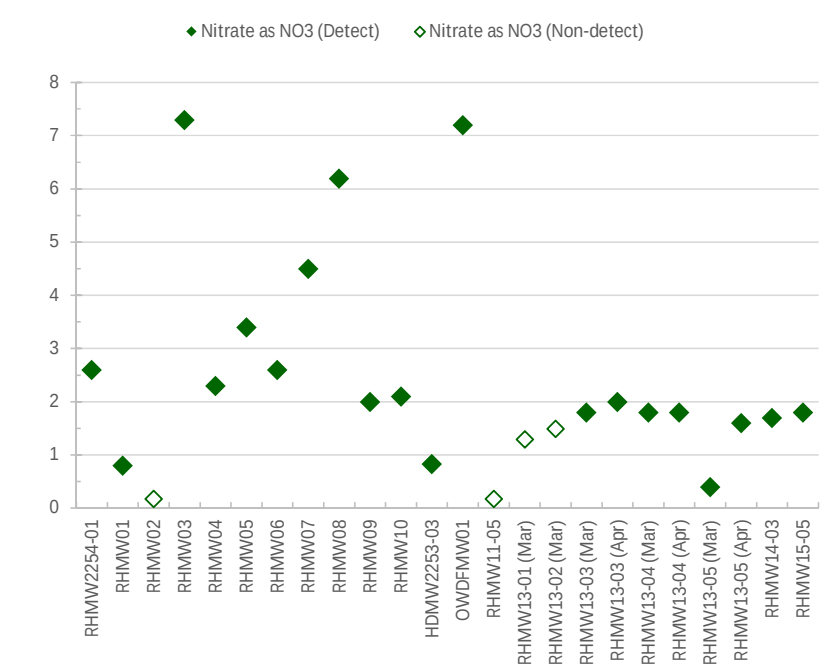


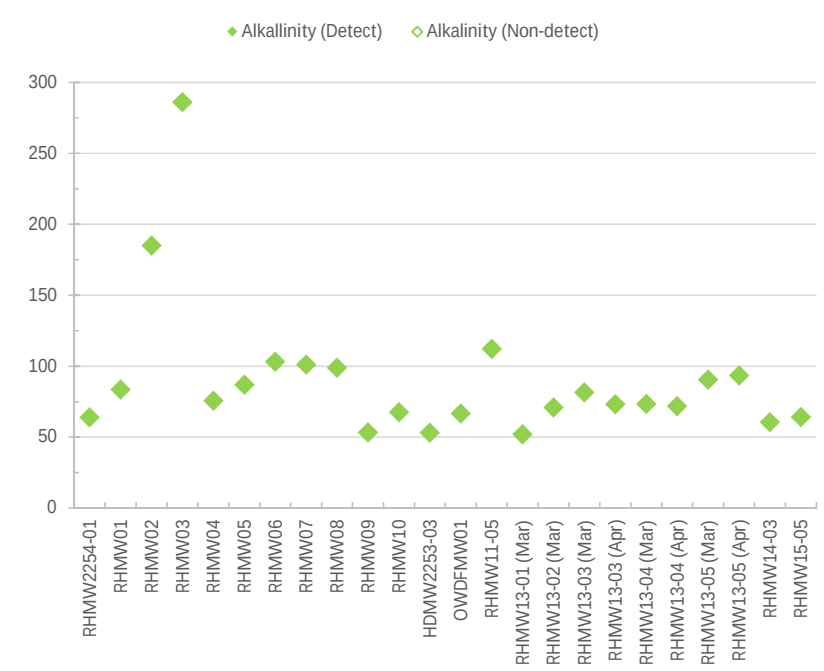












Methane results in micrograms per liter (µg/L). All other results in milligrams per liter (mg/L).

RHMW13 Zones 1, 2, and 3 were only sampled during the initial monitoring event (March 2020), in accordance with the SAP Revision 01 (DON 2017).

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Appendix A.4:
Depth to Water

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Table A.4-1: Depth to Groundwater (ft btoc) in Red Hill Groundwater Monitoring Wells, First Quarter 2020 Groundwater Monitoring Event

Sample Date [a,b]	RHMW2254-01	RHMW01	RHMW02	RHMW03	RHMW04	RHMW05	RHMW06	RHMW07	RHMW08	RHMW09	RHMW10	HDMW2253-03	OWDFMW01
23-Apr-2020	—	82.93	85.68	101.82	—	82.27	—	—	—	—	—	—	—
23-Apr-2020 [c]	—	—	—	—	—	—	—	—	—	—	—	206.82	—
22-Apr-2020 [c]	—	—	85.56	—	293.21	—	—	—	—	—	—	—	119.25
21-Apr-2020 [c]	—	—	—	—	—	82.31	—	—	—	376.56	476.70	—	—
20-Apr-2020 [c]	—	82.87	—	101.78	—	—	240.23	197.42	291.54	—	—	—	—
29-Jan-2020	—	—	85.88	102.17	—	82.52	—	—	—	—	—	—	—
28-Jan-2020 [c]	—	—	—	—	—	—	—	—	—	—	476.89	—	—
23-Jan-2020 [c]	—	—	—	—	—	—	—	—	—	—	—	206.99	—
22-Jan-2020 [c]	—	—	—	—	—	—	—	—	—	—	—	—	119.22
21-Jan-2020 [c]	—	—	—	—	293.27	82.24	—	—	—	376.54	—	—	—
20-Jan-2020 [c]	—	82.87	85.51	101.74	—	—	240.25	197.47	291.55	—	—	—	—
13-Nov-2019 [c]	—	—	—	—	—	—	—	—	—	—	477.02	—	—
30-Oct-2019 [c]	—	—	—	—	—	—	—	—	291.96	—	—	—	—
29-Oct-2019	—	83.15	85.84	102.19	—	82.09	—	—	—	—	—	—	—
24-Oct-2019 [c]	—	—	—	—	—	—	—	—	—	—	—	206.99	—
23-Oct-2019 [c]	—	—	—	—	—	—	—	—	—	—	—	—	119.34
22-Oct-2019 [c]	—	83.11	85.80	—	—	—	—	197.46	—	376.70	—	—	—
21-Oct-2019 [c]	—	—	—	101.87	293.36	82.32	240.34	—	—	—	—	—	—
7-Aug-2019 [c]	—	—	—	—	—	—	—	—	291.30	—	—	—	—
29-Jul-2019	—	82.67	85.34	101.57	—	82.06	—	—	—	—	—	—	—
25-Jul-2019 [c]	—	—	—	—	—	—	—	—	—	—	—	206.23	—
24-Jul-2019 [c]	—	—	—	—	—	—	—	—	—	—	476.27	—	118.97
23-Jul-2019 [c]	—	82.58	85.25	—	292.80	—	—	—	—	376.14	—	—	—
22-Jul-2019 [c]	—	—	—	101.48	—	82.04	239.83	196.93	—	—	—	—	—
26-Apr-2019	—	82.45	85.18	101.41	—	81.88	—	—	—	—	—	—	—
25-Apr-2019 [c]	—	—	—	—	—	—	—	—	—	—	—	205.97	118.92
24-Apr-2019 [c]	—	—	85.16	102.41	—	—	—	—	—	—	476.19	—	—
23-Apr-2019 [c]	—	82.47	—	—	—	—	—	—	291.08	375.98	—	—	—
22-Apr-2019 [c]	—	—	—	—	292.81	81.98	239.91	197.05	—	—	—	—	—
7-Feb-2019 [c]	—	—	—	—	—	—	—	—	—	—	—	205.81	—
24-Jan-2019	—	82.30	84.96	101.22	—	81.66	—	—	—	—	—	—	—
24-Jan-2019 [c]	81.01	—	—	—	—	—	—	—	—	—	476.15	—	—
23-Jan-2019 [c]	82.64	—	—	—	—	—	—	196.99	—	—	—	—	118.85
22-Jan-2019 [c]	—	82.39	—	101.19	—	—	—	—	—	375.99	—	—	—
21-Jan-2019 [c]	—	—	85.00	—	292.48	81.80	239.57	—	290.98	—	—	—	—
13-Dec-2018 [c]	81.16	—	—	—	—	—	—	—	—	—	—	—	—
12-Dec-2018 [c]	82.81	—	—	—	—	—	—	—	—	—	—	—	—
14-Nov-2018 [c]	81.14	—	—	—	—	—	—	—	—	—	—	—	—
13-Nov-2018 [c]	82.53	—	—	—	—	—	—	—	—	—	—	—	—
31-Oct-2018 [c]	—	—	—	—	—	—	—	—	—	—	476.54	—	—
30-Oct-2018	—	82.64	85.34	101.58	—	81.99	—	—	—	—	—	—	—
25-Oct-2018 [c]	—	82.76	—	—	—	—	—	—	—	—	—	—	—
24-Oct-2018 [c]	—	—	—	—	293.09	—	—	—	291.59	—	—	—	119.28
23-Oct-2018 [c]	—	—	85.53	101.71	—	—	240.16	197.58	—	376.39	—	—	—
22-Oct-2018 [c]	81.73	—	—	—	—	82.14	—	—	—	—	—	206.65	—
21-Aug-2018	—	—	86.32	102.58	—	—	—	—	—	—	—	—	—
26-Jul-2018 [c]	—	—	—	—	293.80	—	—	—	—	—	—	—	119.74
25-Jul-2018	—	83.55	86.33	102.58	—	82.89	—	—	—	—	—	—	—
24-Jul-2018 [c]	—	—	—	102.48	—	—	—	—	—	377.21	—	—	—
24-Jul-2018 [c]	—	83.65	86.19	—	—	—	—	197.97	292.35	—	476.89	—	—
23-Jul-2018 [c]	82.26	—	—	—	—	82.92	240.77	—	—	—	—	207.36	—
Jun-2018	—	83.63	86.34	102.57	—	82.99	—	—	—	—	—	—	—
22-May-2018	—	83.61	86.29	102.56	—	82.97	—	—	—	—	—	—	—
26-Apr-2018	—	—	—	—	—	—	—	—	—	—	—	—	119.80
25-Apr-2018	—	83.47	86.14	102.38	—	82.86	—	—	—	—	—	—	—
25-Apr-2018	—	83.43	—	102.33	293.63	—	—	—	—	377.28	—	—	—
24-Apr-2018	—	—	86.19	—	—	—	—	197.50	—	—	477.30	—	—
23-Apr-2018	82.08	—	—	—	—	82.73	240.65	—	292.04	—	—	207.33	—
20-Mar-2018	—	83.56	86.24	102.55	—	82.89	—	—	—	—	—	—	—
14-Mar-2018	82.40	—	—	—	293.82	—	—	—	—	—	—	—	119.62
13-Mar-2018	—	—	86.24	—	—	82.92	—	198.30	—	377.40	477.40	—	—
12-Mar-2018	—	83.44	—	102.40	—	—	240.81	—	292.25	—	—	207.43	—
21-Nov-2017	—	83.66	—	102.62	—	—	—	—	—	—	—	—	—
15-Nov-2017	—	—	86.28	—	—	—	—	—	—	—	—	—	—
14-Nov-2017	—	—	—	—	—	—	240.96	—	—	—	—	—	—
31-Oct-2017	—	—	—	—	—	—	—	—	—	—	—	207.59	—
26-Oct-2017	—	—	—	—	—	—	—	—	—	—	—	—	119.81
25-Oct-2017	—	83.79	—	—	—	—	—	198.06	—	—	477.79	—	—
24-Oct-2017	81.36	—	—	—	294.07	83.21	—	—	—	377.73	—	—	—
23-Oct-2017	—	—	86.38	102.76	—	—	241.18	—	292.77	—	—	—	—
21-Jul-2017	—	83.43	86.50	—	—	82.81	—	—	—	—	—	—	—
06-Jul-2017	—	—	85.88	102.09	—	—	—	—	—	—	—	—	—
05-Jul-2017	82.14	82.11	—	—	293.38	82.49	—	—	—	377.23	—	—	119.39
04-Jul-2017	—	—	—	—	—	—	240.55	197.78	292.14	—	477.26	—	—
22-Jun-2017	—	82.94	85.59	101.89	—	82.30	—	—	—	—	—	—	—
06-Jun-2017	82.66	—	—	101.76	—	82.17	—	—	—	—	—	—	—
05-Jun-2017	—	82.80	85.42	—	—	—	—	—	291.68	—	477.20	—	—
26-May-2017	—	82.45	85.13	101.39	—	81.80	—	—	—	—	—	—	—
04-May-2017	—	—	—	—	—	—	—	—	—	—	476.45	—	—
02-May-2017	80.12	—	—	—	—	—	—	—	291.42	—	—	—	—
01-May-2017	—	82.50	85.09	101.34	—	81.82	—	—	—		—	—	—
20-Apr-2017	—	82.59	85.25	101.50	—	81.94	—	—	—	—	—	—	—
04-Apr-2017	—	—	85.27	101.55	—	—	—	—	291.38	376.70	—	—	118.87
03-Apr-2017	80.23	82.43	—	—	292.78	81.81	239.86	197.07	—	—	—	—	—
24-Mar-2017	—	82.49	85.19	101.45	—	81.84	—	—	—	—	—	—	—
08-Mar-2017	—	82.28	—	—	—	81.61	—	—	—	—	—	206.13	188.61
07-Mar-2017	—	—	84.99	101.30	—	—	239.63	197.08	—	376.30	—	—	—
06-Mar-2017	80.06	—	—	—	292.62	—	—	—	291.19	—	—	—	—
22-Feb-2017	—	82.37	85.01	101.31	—	81.72	—	—	—	—	—	—	—
09-Feb-2017	—	—	—	—	—	—	—	—	—	—	—	—	119.03
08-Feb-2017	—	82.69	—	101.55	—	—	—	197.25	—	376.67	—	—	—
07-Feb-2017	—	—	85.24	—	—	81.91	239.90	—	—	—	—	206.32	—
06-Feb-2017	80.29	—	—	—	292.85	—	—	—	291.51	—	—	—	—
31-Jan-2017	—	82.45	85.13	101.46	—	82.04	—	—	—	—	—	—	—
12-Jan-2017	—	—	—	101.59	—	—	—	—	—	—	—	—	118.93
11-Jan-2017	—	82.70	—	—	—	—	—	—	291.26	376.10	—	—	—
10-Jan-2017	—	—	85.29	—	—	82.10	—	197.02	—	—	—	206.12	—
09-Jan-2017	80.39	—	—	—	292.48	—	239.76	—	—	—	—	—	—
21-Dec-2016	—	—	—	—	—	—	—	—	291.69	—	—	—	—
20-Dec-2016	—	82.67	85.36	101.61	—	82.01	—	—	—	—	—	—	—

Table A.4-1: Depth to Groundwater (ft btoc) in Red Hill Groundwater Monitoring Wells, First Quarter 2020 Groundwater Monitoring Event (cont'd)

Sample Date [a,b]	RHMW2254-01	RHMW01	RHMW02	RHMW03	RHMW04	RHMW05	RHMW06	RHMW07	RHMW08	RHMW09	RHMW10	HDMW2253-03	OWDFMW01
14-Dec-2016	—	—	—	101.81	—	—	—	—	—	—	—	—	119.09
13-Dec-2016	—	82.88	85.51	—	292.61	—	—	197.13	—	—	—	206.33	—
12-Dec-2016	80.49	—	—	—	—	82.12	240.04	—	291.42	376.28	—	—	—
18-Nov-2016	80.45	82.85	85.55	101.78	293.11	82.19	240.17	197.45	291.63	376.74	—	—	119.07
17-Nov-2016	—	82.92	85.56	101.82	—	82.24	—	—	—	—	—	—	—
16-Nov-2016	—	—	—	—	—	—	—	—	—	—	—	206.83	—
15-Nov-2016	—	—	85.35	101.87	—	82.25	—	—	291.81	377.05	—	—	119.29
14-Nov-2016	80.52	82.87	—	—	293.22	—	240.31	197.56	—	—	—	—	—
25-Oct-2016	—	—	—	—	293.33	—	—	—	—	377.09	—	—	—
20-Oct-2016	80.68	—	—	—	—	—	—	—	—	—	—	—	119.39
19-Oct-2016	—	83.01	85.69	101.95	—	82.39	—	—	—	—	—	—	—
19-Oct-2016	—	—	85.69	102.02	—	82.37	240.47	197.68	291.94	—	—	—	—
18-Oct-2016	80.68	—	—	—	—	—	—	—	—	—	—	207.02	—
17-Oct-2016	—	83.00	—	—	—	—	—	—	—	—	—	—	—
21-Sep-2016	—	83.13	85.74	102.06	—	82.44	—	—	—	—	—	—	—
23-Aug-2016	—	83.27	85.96	102.20	—	82.63	—	—	—	—	—	—	—
20-Jul-2016	80.96	83.32	85.99	102.31	—	82.63	—	—	—	—	—	—	—
19-Jul-2016	—	—	—	—	293.60	—	240.70	197.79	—	—	—	207.42	119.65
21-Jun-2016	—	83.16	85.77	102.03	—	82.54	—	—	—	—	—	—	—
23-May-2016	—	83.14	85.81	102.03	—	82.50	—	—	—	—	—	—	—
20-Apr-2016	80.57	82.97	85.63	101.91	—	82.31	—	—	—	—	—	—	—
19-Apr-2016	—	—	—	—	293.21	—	240.35	197.76	—	—	—	206.97	119.28
15-Mar-2016	—	82.89	85.60	101.82	—	82.26	—	—	—	—	—	—	—
17-Feb-2016	—	83.17	85.81	102.10	—	—	—	—	—	—	—	—	—
20-Jan-2016	81.00	83.31	85.97	102.21	—	—	—	—	—	—	—	—	—
19-Jan-2016	—	—	—	—	293.61	—	240.69	198.24	—	—	—	207.42	119.82
17-Dec-2015	—	83.76	86.36	102.56	—	83.18	—	—	—	—	—	—	—
18-Nov-2015	—	84.25	86.93	103.24	—	84.62	—	—	—	—	—	—	—
20-Oct-2015	82.34	84.00	86.38	103.38	—	—	—	—	—	—	—	—	—
19-Oct-2015	—	—	—	—	294.61	—	241.69	198.88	—	—	—	208.40	120.88
23-Sep-2015	—	84.26	86.91	103.21	—	83.63	—	—	—	—	—	—	—
27-Aug-2015	—	84.44	87.13	103.41	—	83.69	—	—	—	—	—	—	—
20-Aug-2015	—	—	—	—	295.10	—	—	—	—	—	—	—	—
28-Jul-2015	—	—	—	—	—	—	241.98	—	—	—	—	—	—
27-Jul-2015	—	—	—	—	—	—	—	198.61	—	—	—	—	—
22-Jul-2015	—	—	—	—	—	—	—	—	—	—	—	208.69	120.99
21-Jul-2015	82.24	—	—	—	—	83.76	—	—	—	—	—	—	—
20-Jul-2015	—	84.58	87.24	103.44	—	—	—	—	—	—	—	—	—
25-Jun-2015	—	84.58	87.28	103.57	—	83.75	—	—	—	—	—	—	—
28-May-2015	—	84.29	86.97	103.24	—	83.95	—	—	—	—	—	—	—
23-Apr-2015	—	—	—	—	—	—	—	198.40	—	—	—	—	—
22-Apr-2015	—	—	—	—	294.43	—	241.59	—	—	—	—	—	120.68
21-Apr-2015	82.99	—	—	—	—	83.72	—	—	—	—	—	—	—
20-Apr-2015	—	84.33	86.97	103.18	—	—	—	—	—	—	—	—	—
26-Mar-2015		83.83	86.04	102.79	—	83.24	—	—	—	—	—	—	—
27-Feb-2015		83.68	86.28	102.52	—	83.06	—	—	—	—	—	—	—
29-Jan-2015	—	—	—	—	293.91	—	—	—	—	—	—	206.67	—
28-Jan-2015	—	—	86.35	102.63	—	—	—	—	—	—	—	—	—
27-Jan-2015	81.37	83.63	—	—	—	83.03	—	—	—	—	—	—	—
26-Jan-2015	—	—	—	—	—	—	—	—	—	—	—	—	120.54
23-Dec-2014	—	83.67	86.37	102.64		83.05	—	—	—	—	—	—	—
20-Nov-2014	—	83.87	86.56	102.78		83.35	—	—	—	—	—	—	—
28-Oct-2014	83.44	—	—	—	—	83.21	—	—	—	—	—	—	—
27-Oct-2014	—	83.79	86.51	102.78	—	—	—	—	—	—	—	—	—
22-Oct-2014	—	—	—	—	—	—	—	—	—	—	—	207.99	120.49
25-Sep-2014	—	84.64	87.27	103.51	—	84.10	—	—	—	—	—	—	—
27-Aug-2014	—	84.01	86.65	102.87	—	83.04	—	—	—	—	—	—	—
24-Jul-2014	—	—	—	—	—	—	—	—	—	—	—	—	120.57
23-Jul-2014	—	—	—	—	294.33	—	—	—	—	—	—	208.08	—
22-Jul-2014	82.19	—	—	102.98	—	83.49	—	—	—	—	—	—	—
21-Jul-2014	—	84.13	86.80	—	—	—	—	—	—	—	—	—	—
23-Jun-2014	—	84.06	86.72	103.99	—	83.54	—	—	—	—	—	—	—
10-Jun-2014	—	83.93	86.55	—	—	83.34	—	—	—	—	—	—	—
27-May-2014	—	83.91	86.60	102.85	—	83.31	—	—	—	—	—	—	—
22-May-2014	—	83.81	86.47	—	—	83.15	—	—	—	—	—	—	—
08-May-2014	—	84.03	86.68	—	—	83.46	—	—	—	—	—	—	—
21-Apr-2014	—	83.93	86.58	102.80	—	83.27	—	—	—	—	—	—	—
07-Apr-2014	—	83.42	86.43	—	—	83.21	—	—	—	—	—	—	—
28-Mar-2014	—	83.76	86.42	102.65	—	83.18	—	—	—	—	—	—	—
24-Feb-2014	—	83.54	86.24	102.47	—	82.97	—	—	—	—	—	—	—
10-Feb-2014	—	84.49	86.16	102.47	—	82.83	—	—	—	—	—	—	—
04-Feb-2014	81.08	83.54	86.20	—	—	82.89	—	—	—	—	—	207.72	—
03-Feb-2014	81.08	83.54	86.20	—	—	82.91	—	—	—	—	—	207.72	—
31-Jan-2014	81.03	83.53	86.19	—	—	82.88	—	—	—	—	—	207.73	—
30-Jan-2014	81.09	83.53	86.21	—	—	82.93	—	—	—	—	—	207.67	—
29-Jan-2014	80.35	83.56	86.22	—	—	82.94	—	—	—	—	—	207.75	—
28-Jan-2014	80.40	83.56	86.25	102.52	—	82.94	—	—	—	—	—	207.76	—
27-Jan-2014	80.33	83.55	86.23	—	—	82.93	—	—	—	—	—	207.8	—
24-Jan-2014	80.38	83.57	86.23	—	—	82.93	—	—	—	—	—	207.75	—
23-Jan-2014	80.40	83.58	86.24	—	—	82.94	—	—	—	—	—	207.8	—
22-Jan-2014	80.40	83.53	86.20	—	—	82.87	—	—	—	—	—	207.66	—
16-Jan-2014	80.60	—	—	—	—	83.09	—	—	—	—	—	—	—
15-Jan-2014	—	83.94	86.62	—	—	—	—	—	—	—	—	—	—
23-Dec-2013	—	84.09	86.72	103.00	—	83.72	—	—	—	—	—	—	—
21-Nov-2013	—	84.26	86.91	103.16	—	83.70	—	—	—	—	—	—	—
23-Oct-2013	—	—	—	—	—	—	—	—	—	—	—	—	120.74
22-Oct-2013	—	84.47	87.08	103.31	—	83.80	—	—	—	—	—	—	—
21-Oct-2013	—	84.47	87.08	103.31	—	—	—	—	—	—	—	—	—
26-Sep-2013	—	84.57	87.20	103.43	—	84.00	—	—	—	—	—	—	—
29-Aug-2013	—	84.66	86.28	103.50	—	84.09	—	—	—	—	—	—	—
24-Jul-2013	—	—	—	—	—	—	—	—	—	—	—	—	120.72
23-Jul-2013	82.56	—	—	—	—	83.85	—	—	—	—	—	—	—
22-Jul-2013	—	84.29	86.96	103.23	—	—	—	—	—	—	—	—	—
13-Jul-2013	—	84.29	86.96	103.23	—	83.85	—	—	—	—	—	—	—
27-Jun-2013	—	84.22	86.86	103.12	—	83.66	—	—	—	—	—	—	—
30-May-2013	—	84.03	86.69	102.95	—	83.41	—	—	—	—	—	—	—
25-Apr-2013	—	83.84	86.50	102.78	—	83.41	—	—	—	—	—	—	—
24-Apr-2013	—	—	—	—	—	—	—	—	—	—	—	208.03	120.15
23-Apr-2013	82.61	—	—	—	—	83.41	—		—	—	—	—	—
22-Apr-2013	—	83.84	86.50	102.78	—	—	—	—	—	—	—	—	—
28-Mar-2013	—	83.82	86.48	102.75	—	83.19	—	—	—	—	—	—	—
28-Feb-2013	—	84.04	86.62	102.87	—	83.43	—	—	—	—	—	—	—
04-Feb-2013	—	84.04	—	—	—	—	—	—	—	—	—	—	—
01-Feb-2013	—	—	86.62	102.87	—	83.43	—	—	—	—	—	—	—
30-Jan-2013	—	—	—	—	—	—	—	—	—	—	—	208.15	120.55
29-Jan-2013	82.78	—	—	—	—	83.61	—	—	—	—	—	—	—

Table A.4-1: Depth to Groundwater (ft btoc) in Red Hill Groundwater Monitoring Wells, First Quarter 2020 Groundwater Monitoring Event (cont'd)

Sample Date [a,b]	RHMW2254-01	RHMW01	RHMW02	RHMW03	RHMW04	RHMW05	RHMW06	RHMW07	RHMW08	RHMW09	RHMW10	HDMW2253-03	OWDFMW01
28-Jan-2013	—	—	86.75	102.98	—	—	—	—	—	—	—	—	—
13-Jan-2013	—	84.05	86.87	103.14	—	83.70	—	—	—	—	—	—	—
12-Dec-2012	—	84.21	86.87	103.14	—	83.70	—	—	—	—	—	—	—
07-Nov-2012	—	—	—	—	—	—	—	—	—	—	—	208.20	—
12-Nov-2012	—	84.23	86.85	103.10	—	83.70	—	—	—	—	—	—	—
23-Oct-2012	83.05	—	—	—	—	83.72	—	—	—	—	—	—	—
22-Oct-2012	—	84.19	86.81	103.05	—	—	—	—	—	—	—	—	—
Oct-2012	—	84.19	86.81	103.50	—	83.72	—	—	—	—	—	—	—
Aug-2012	—	84.19	86.81	103.30	—	83.62	—	—	—	—	—	—	—
20-Jul-2012	—	84.05	—	—	—	—	—	—	—	—	—	—	—
19-Jul-2012	—	—	—	—	—	—	—	—	—	—	—	207.87	120.15
18-Jul-2012	—	—	86.70	103.09	—	—	—	—	—	—	—	—	—
17-Jul-2012	—	—	—	—	—	83.50	—	—	—	—	—	—	—
Jul-2012	—	84.20	86.64	102.89	—	83.41	—	—	—	—	—	—	—
Jun-2012	—	84.34	86.95	103.17	—	83.97	—	—	—	—	—	—	—
May-2012	—	84.09	86.71	102.98	—	83.53	—	—	—	—	—	—	—
26-Apr-2012	—	—	—	—	—	—	—	—	—	—	—	207.76	120.29
17-Apr-2012	—	83.60	—	—	—	—	—	—	—	—	—	—	—
16-Apr-2012	—	—	86.34	102.71	—	83.17	—	—	—	—	—	—	—
Mar-2012	—	83.41	86.51	102.45	—	82.79	—	—	—	—	—	—	—
14-Feb-2012	—	83.75	—	—	—	—	—	—	—	—	—	—	—
01-Feb-2012	—	—	—	—	—	83.15	—	—	—	—	—	—	—
Feb-2012	—	83.80	86.41	102.71	—	83.20	—	—	—	—	—	—	—
26-Jan-2012	—	—	86.31	102.56	—	—	—	—	—	—	—	—	—
24-Jan-2012	—	—	—	—	—	—	—	—	—	—	—	207.60	120.02
Jan-2012	—	83.57	86.18	102.56	—	82.90	—	—	—	—	—	—	—
Dec-2011	—	83.49	86.10	102.36	—	82.85	—	—	—	—	—	—	—
02-Nov-2011	—	83.71	—	—	—	—	—	—	—	—	—	—	—
Nov-2011	—	83.60	86.25	102.47	—	83.00	—	—	—	—	—	—	—
26-Oct-2011	—	—	—	—	—	—	—	—	—	—	—	207.73	120.12
25-Oct-2011	—	—	—	—	—	83.15	—	—	—	—	—	—	—
24-Oct-2011	—	—	86.38	102.90	—	—	—	—	—	—	—	—	—
Oct-2011	—	83.71	—	—	—	—	—	—	—	—	—	—	—
Sep-2011	—	83.81	86.44	102.69	—	83.21	—	—	—	—	—	—	—
Aug-2011	—	83.81	86.42	102.66	—	83.21	—	—	—	—	—	—	—
20-Jul-2011	—	83.60	—	—	—	—	—	—	—	—	—	—	—
19-Jul-2011	—	—	86.28	102.49	—	83.08	—	—	—	—	—	—	—
Jul-2011	—	83.57	86.22	102.44	—	82.99	—	—	—	—	—	—	—
Jun-2011	—	83.41	86.11	102.33	—	82.81	—	—	—	—	—	—	—
May-2011	—	83.39	86.05	102.69	—	82.72	—	—	—	—	—	—	—
Apr-2011	—	83.54	86.18	102.39	—	82.90	—	—	—	—	—	—	—
Mar-2011	—	83.77	86.39	102.87	—	83.20	—	—	—	—	—	—	—
Feb-2011	—	83.82	86.48	103.02	—	83.20	—	—	—	—	—	—	—
Jan-2011	—	85.32	86.91	103.41	—	83.65	—	—	—	—	—	—	—
Dec-2010	—	84.87	87.55	103.98	—	84.22	—	—	—	—	—	—	—
Nov-2010	—	85.20	87.84	104.30	—	84.60	—	—	—	—	—	—	—
Oct-2010	—	85.29	87.91	104.13	—	84.75	—	—	—	—	—	—	—
Sep-2010	—	85.30	87.92	104.13	—	84.71	—	—	—	—	—	—	—
Jul-2010	—	85.03	87.66	103.89	—	84.48	—	—	—	—	—	—	—
Jun-2010	—	84.87	87.51	103.74	—	84.30	—	—	—	—	—	—	—
May-2010	—	84.80	87.43	103.66	—	84.23	—	—	—	—	—	—	—
Apr-2010	—	84.75	87.37	103.60	—	84.17	—	—	—	—	—	—	—
Mar-2010	—	84.53	87.15	103.38	—	83.96	—	—	—	—	—	—	—
Feb-2010	—	84.24	86.89	103.14	—	83.60	—	—	—	—	—	—	—
Jan-2010	—	84.36	87.00	103.22	—	83.75	—	—	—	—	—	—	—
Dec-2009	—	84.12	86.75	103.00	—	83.53	—	—	—	—	—	—	—
Nov-2009	—	83.91	86.56	102.81	—	83.25	—	—	—	—	—	—	—
Oct-2009	—	84.24	86.87	103.07	—	83.62	—	—	—	—	—	—	—
Sep-2009	—	84.21	86.84	103.07	—	83.61	—	—	—	—	—	—	—
Aug-2009	—	84.04	86.71	102.84	—	83.51	—	—	—	—	—	—	—
Jul-2009	—	83.75	86.42	102.67	—	83.09	—	—	—	—	—	—	—
May-2009	—	83.50	86.15	102.41	—	—	—	—	—	—	—	—	—
Apr-2009 [b]	—	83.72	86.37	102.59	—	—	—	—	—	—	—	—	—
Mar-2009	—	83.82	86.44	102.64	—	—	—	—	—	—	—	—	—
Feb-2009	—	—	86.35	102.56	—	—	—	—	—	—	—	—	—
Jan-2009	—	83.13	85.79	102.04	—	—	—	—	—	—	—	—	—
Nov-2008	—	83.91	86.56	102.80	—	—	—	—	—	—	—	—	—
Oct-2008	—	83.80	86.45	102.49	—	—	—	—	—	—	—	—	—
Jul-2008	—	83.37	86.10	102.45	—	—	—	—	—	—	—	—	—
Jan-2008	—	84.67	86.23	—	—	—	—	—	—	—	—	—	—
Sep-2007	—	—	86.80	103.44	—	—	—	—	—	—	—	—	—
28-Jun-2005	87.00	83.56	—	—	—	—	—	—	—	—	—	—	—
17-Feb-2005	86.48	82.64	—	—	—	—	—	—	—	—	—	—	—

Notes:

—	no data
btoc	below top of casing
ft	foot or feet
LTM	long-term monitoring
PVC	polyvinyl chloride

[a] Dates in month year format (e.g., Sep 2007) were obtained from oil/water interface reports, and exact dates were not available.

[b] The April 2009 measurements were pushed back a week (to 5/6/2009) due to the RHMW05 installation.

[c] The measurements have been corrected based on water level tape calibration and gyroscopic survey. See associated groundwater monitoring report.

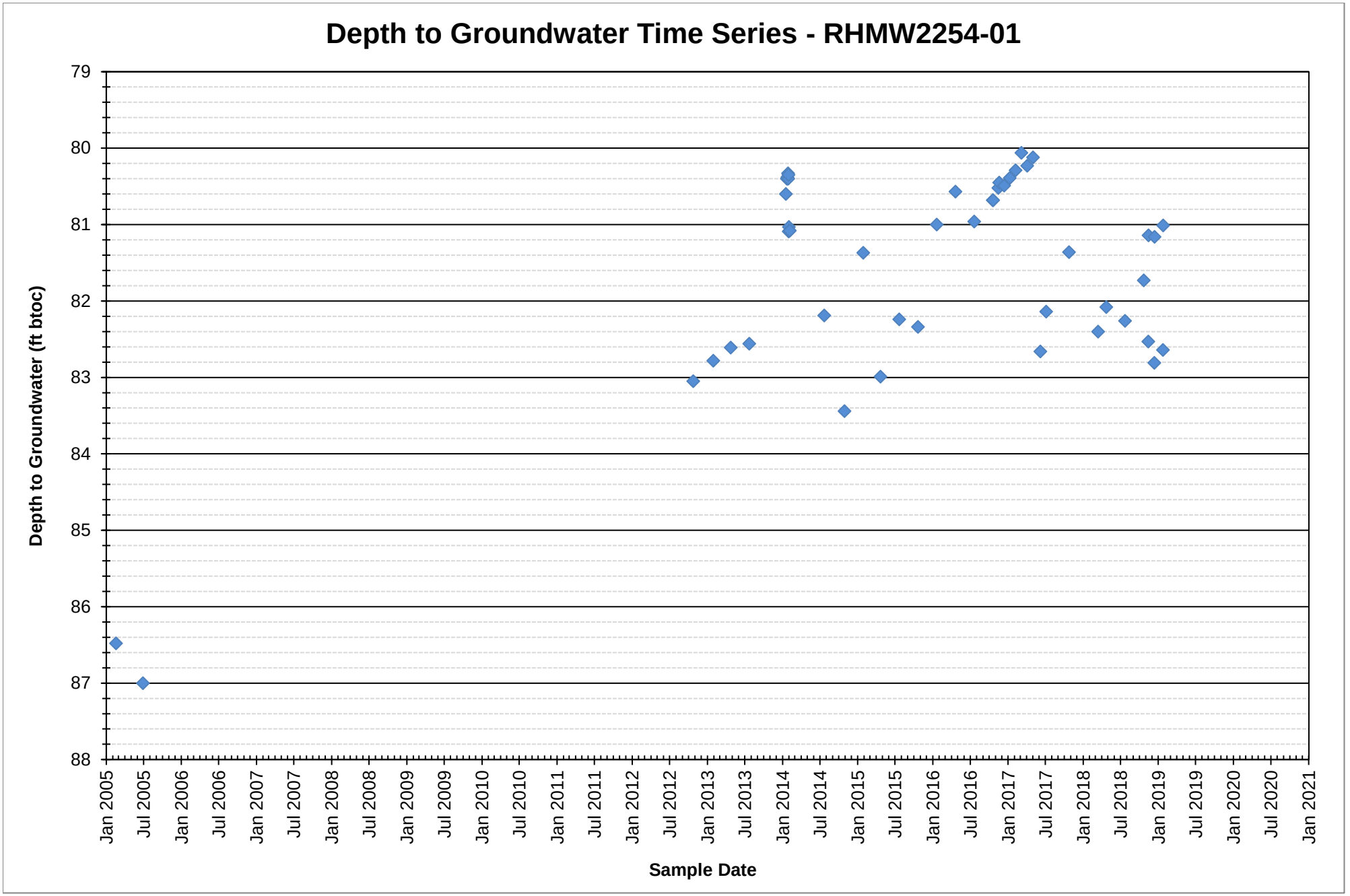
Source:

Depth to groundwater values from recent oil/water interface reports and from the Appendix A Groundwater Tables GW-9, GW-10, GW-14, GW-15, and GW-17 through GW-24 in:

Department of the Navy. 2007. *Existing Data Summary and Evaluation Report for Groundwater Flow and Contaminant Fate and Transport Modeling, Red Hill Bulk Fuel Storage Facility, Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i; March 5, 2017 [Revision 00].* Prepared by AECOM Technical Services, Inc., Honolulu, HI. Prepared for Defense Logistics Agency Energy, Fort Belvoir, VA, under Naval Facilities Engineering Command, Hawaii, JBPHH HI.

Reference points for these depth to water measurements may have varied over time:

- Reference points for data prior to October 2016 are unknown.
- Reference points for RHMW01 to RHMW05, OWDFMW01, and HDMW2253-03 are the tops of permanent casings.
- Reference point for RHMW2254-01 was the top of the PVC casing for data prior to March 2018, and the high precision survey mark for data from March 2018 onwards.
- Reference points for RHMW06 to RHMW10 from October 2016 to July 2017 groundwater LTM events were the tops of the stand tubes (RHMW06 and RHMW07) and the tops of the slip rings (RHMW08, RHMW09, and RHMW10).
- Reference points for RHMW06 to RHMW10 from October 2017 groundwater LTM event onwards are the high precision survey mark on the tops of the gray plates.


Depth to Groundwater Time Series - RHMW2254-01
Depth to Groundwater (ft btoc)
79
80
81
82
83
84
85
86
87
88
Jan 2005
Jul 2005
Jan 2006
Jul 2006
Jan 2007
Jul 2007
Jan 2008
Jul 2008
Jan 2009
Jul 2009
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Jan 2011
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Jul 2013
Jan 2014
Jul 2014
Jan 2015
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Jan 2016
Jul 2016
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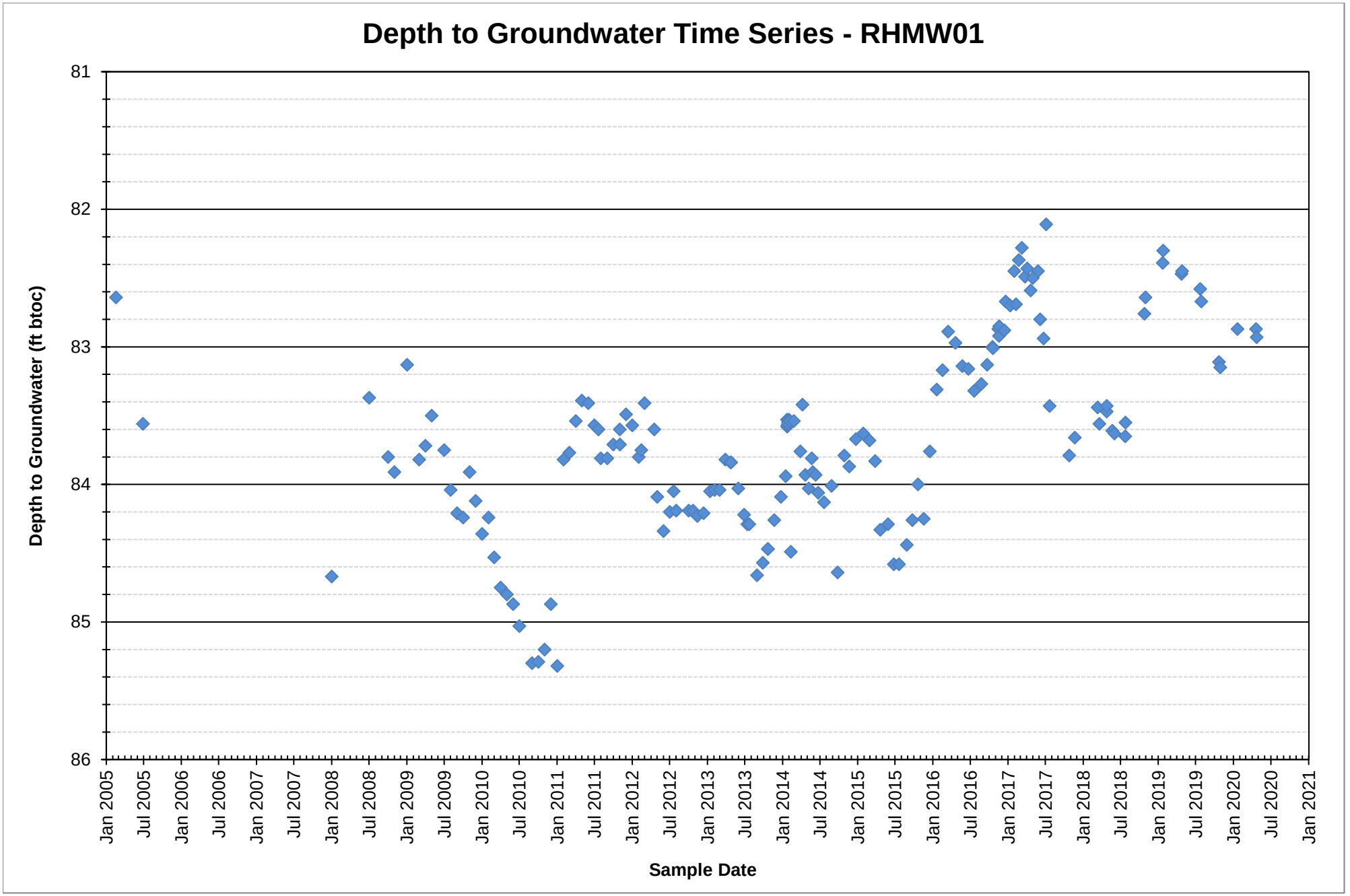
Jul 2017
Jan 2018
Jul 2018
Jan 2019
Jul 2019
Jan 2020
Jul 2020
Jan 2021
Sample Date


Depth to Groundwater Time Series - RHMW01
Depth to Groundwater (ft btoc)
81
82
83
84
85
86
Jan 2005
Jul 2005
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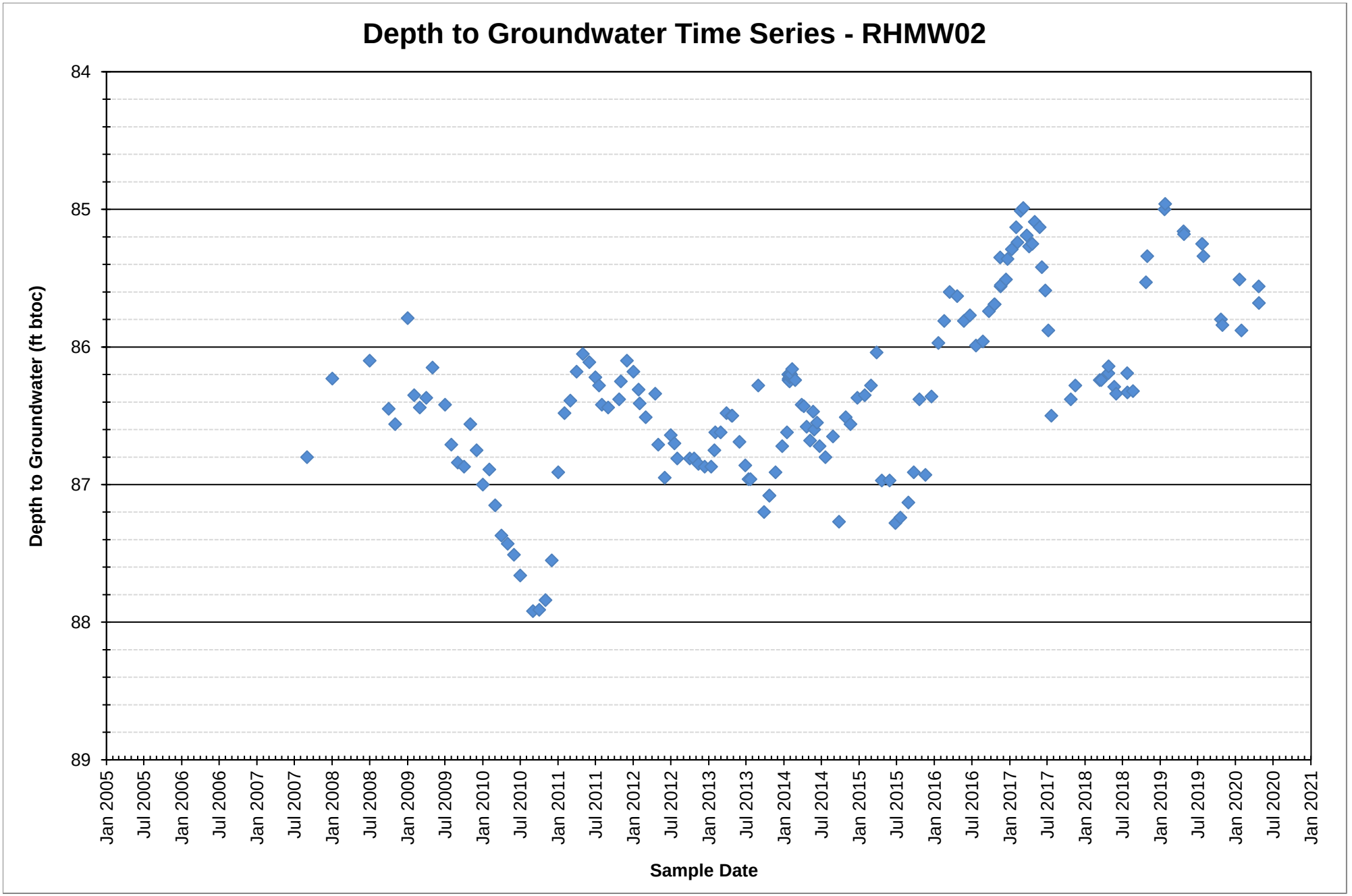
Sample Date


Depth to Groundwater Time Series - RHMW02
Depth to Groundwater (ft btoc)
84
85
86
87
88
89
Jan 2005
Jul 2005
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Jan 2007
Jul 2007
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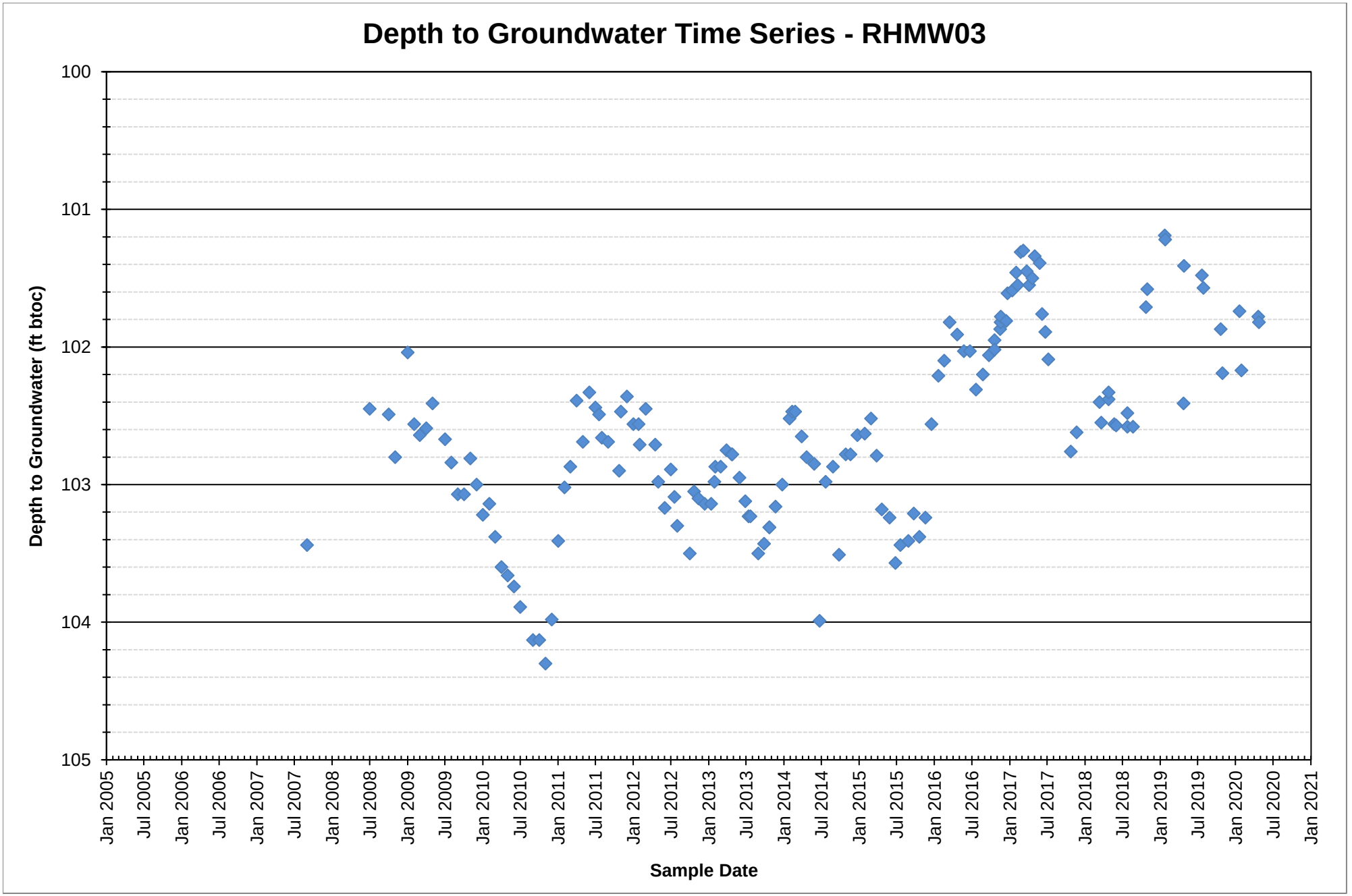
Sample Date


Depth to Groundwater Time Series - RHMW03
Depth to Groundwater (ft btoc)
100
101
102
103
104
105
Jan 2005
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Jan 2007
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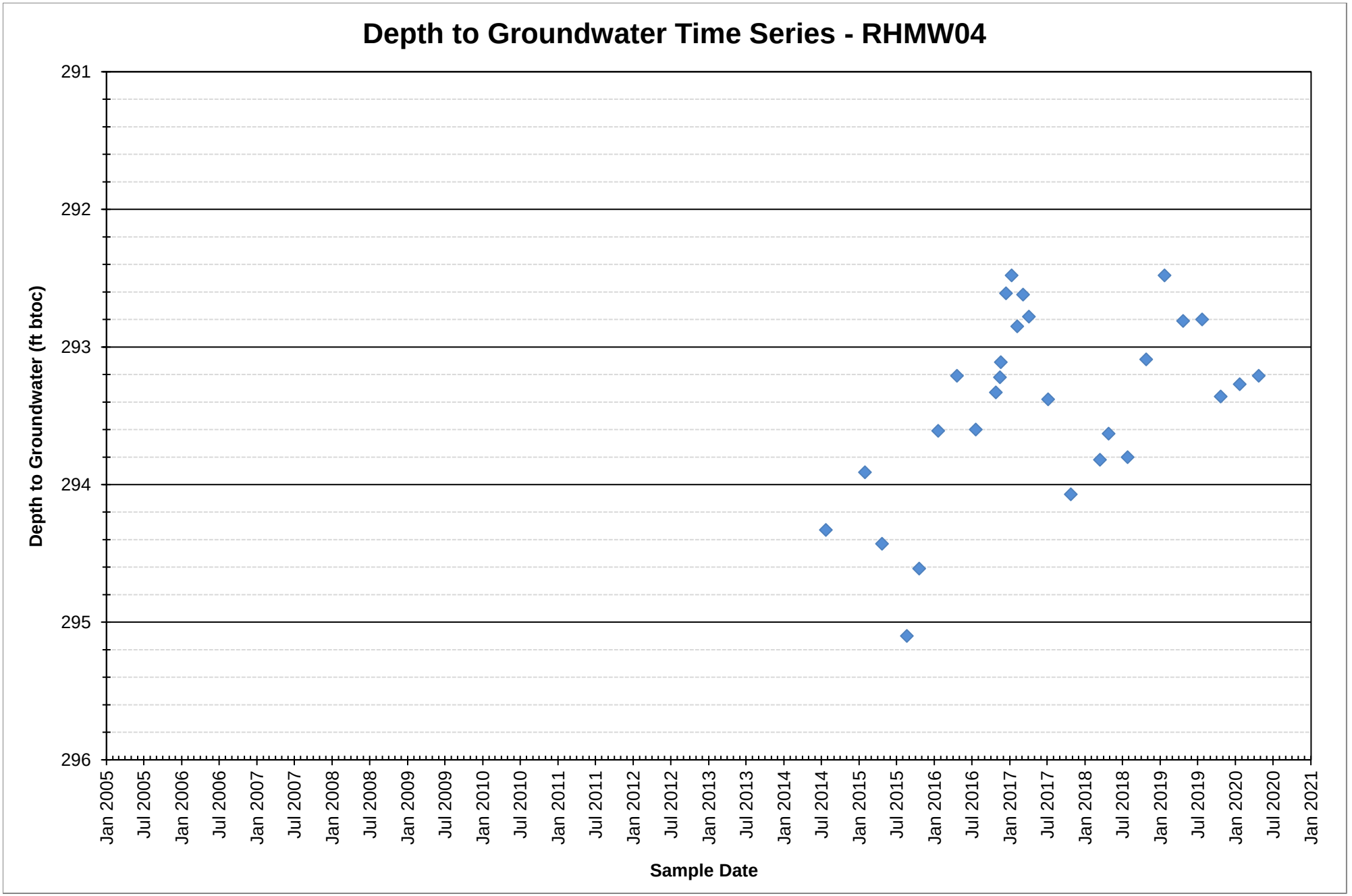
Sample Date


Depth to Groundwater Time Series - RHMW04
Depth to Groundwater (ft btoc)
291
292
293
294
295
296
Jan 2005
Jul 2005
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Jan 2007
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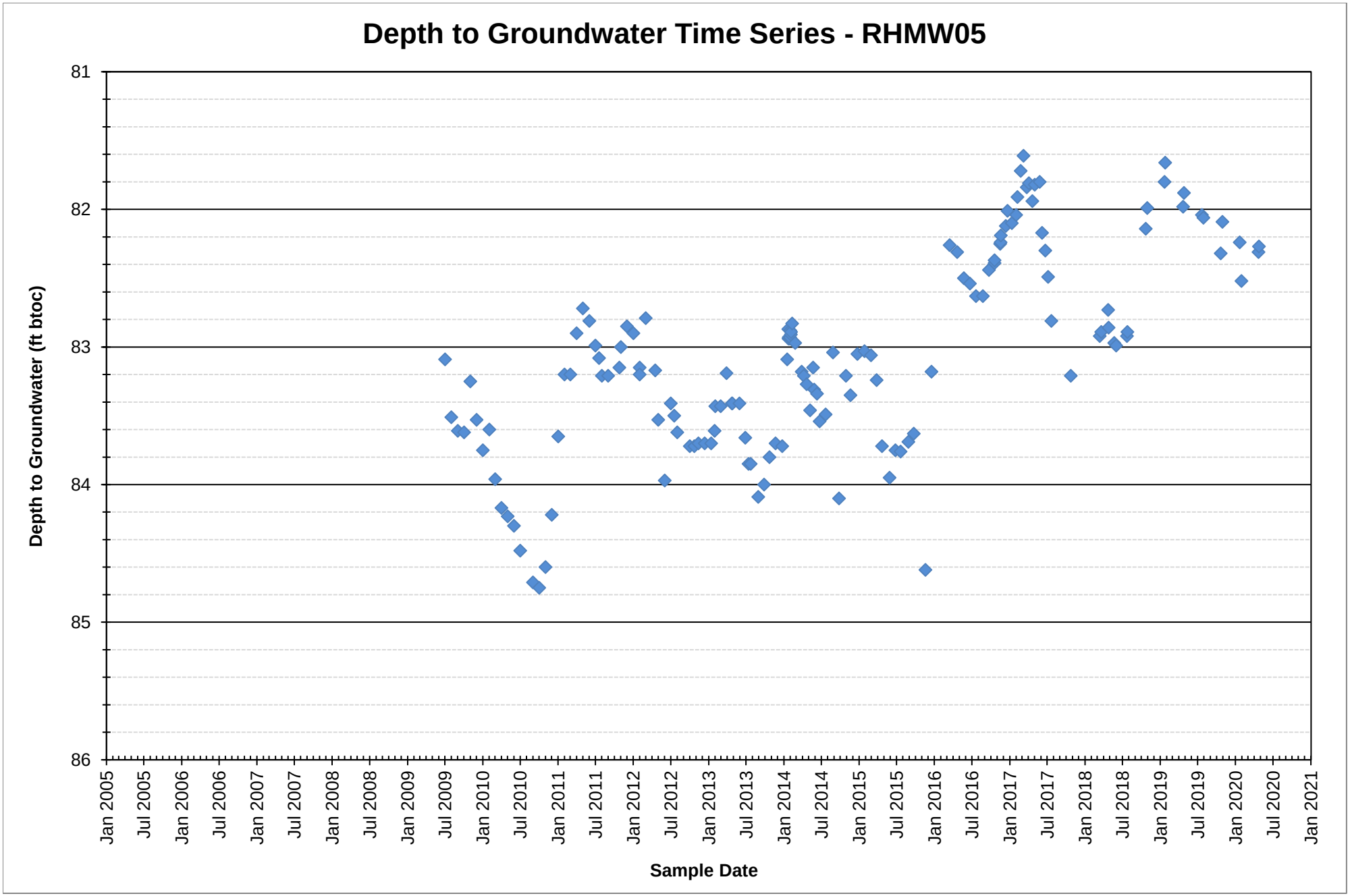
Sample Date


Depth to Groundwater Time Series - RHMW05
Depth to Groundwater (ft btoc)
81
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Jan 2005
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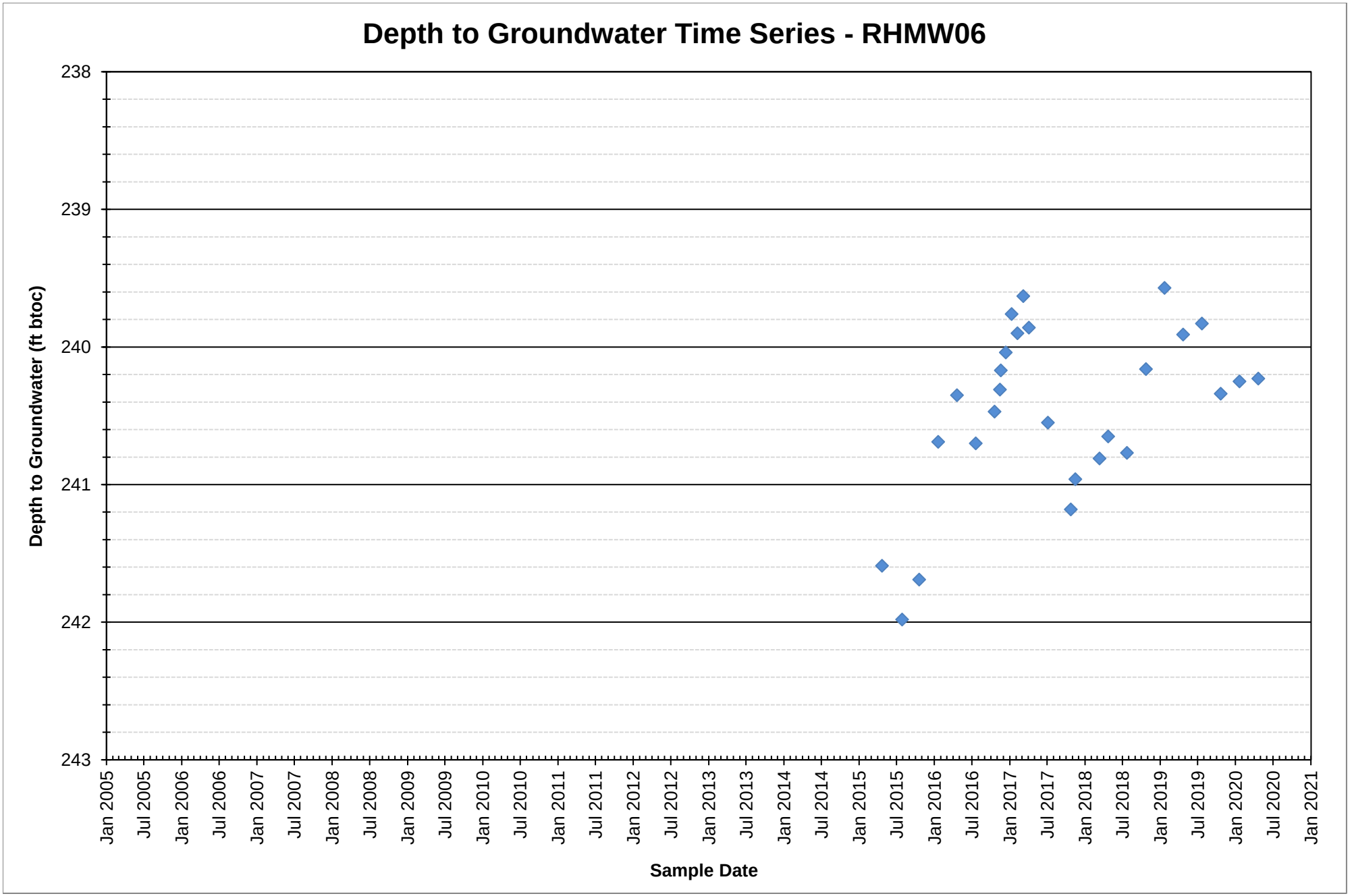
Sample Date


Depth to Groundwater Time Series - RHMW06
Depth to Groundwater (ft btoc)
238
239
240
241
242
243
Jan 2005
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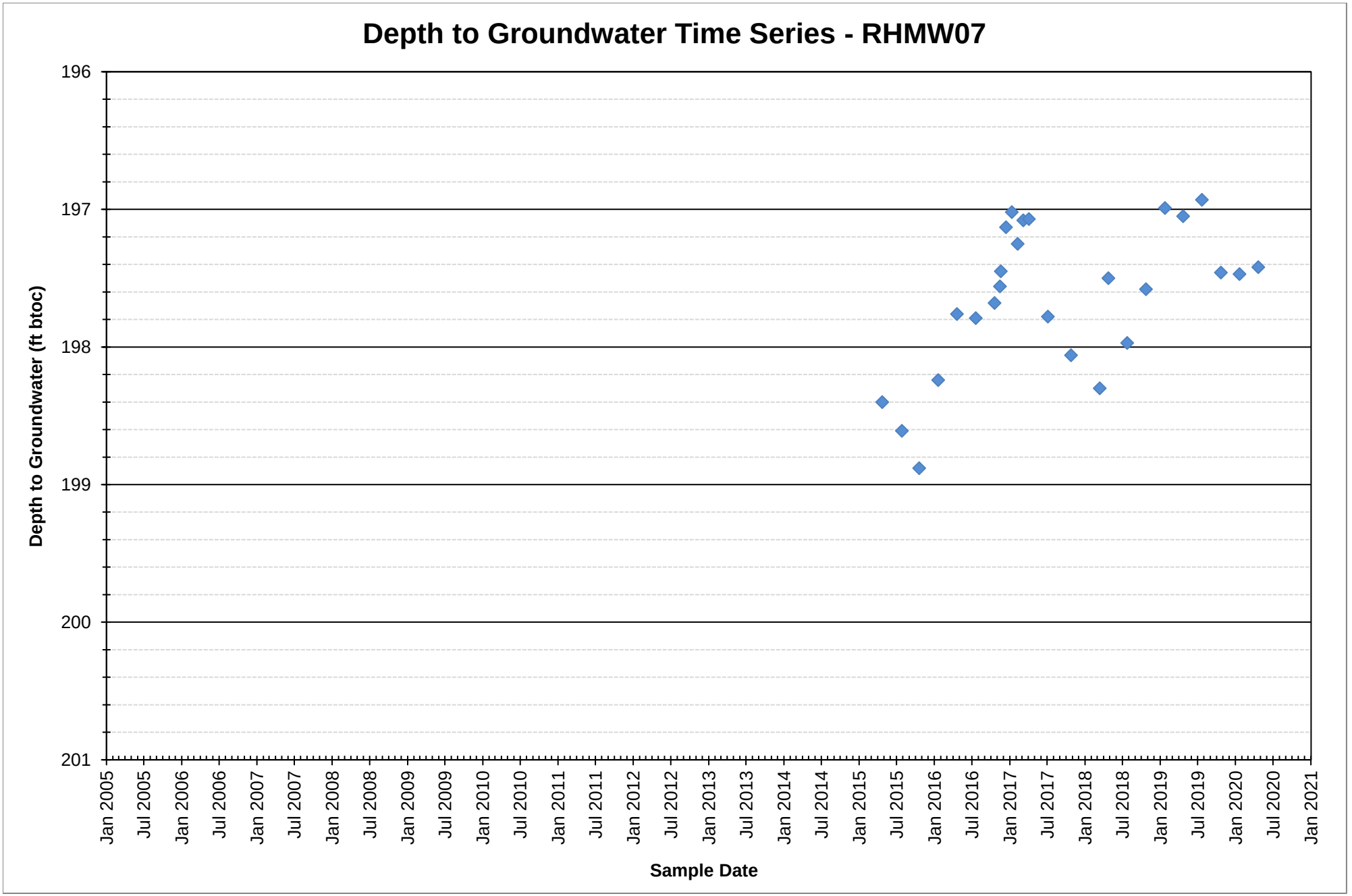
Sample Date


Depth to Groundwater Time Series - RHMW07
Depth to Groundwater (ft btoc)
196
197
198
199
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Jan 2005
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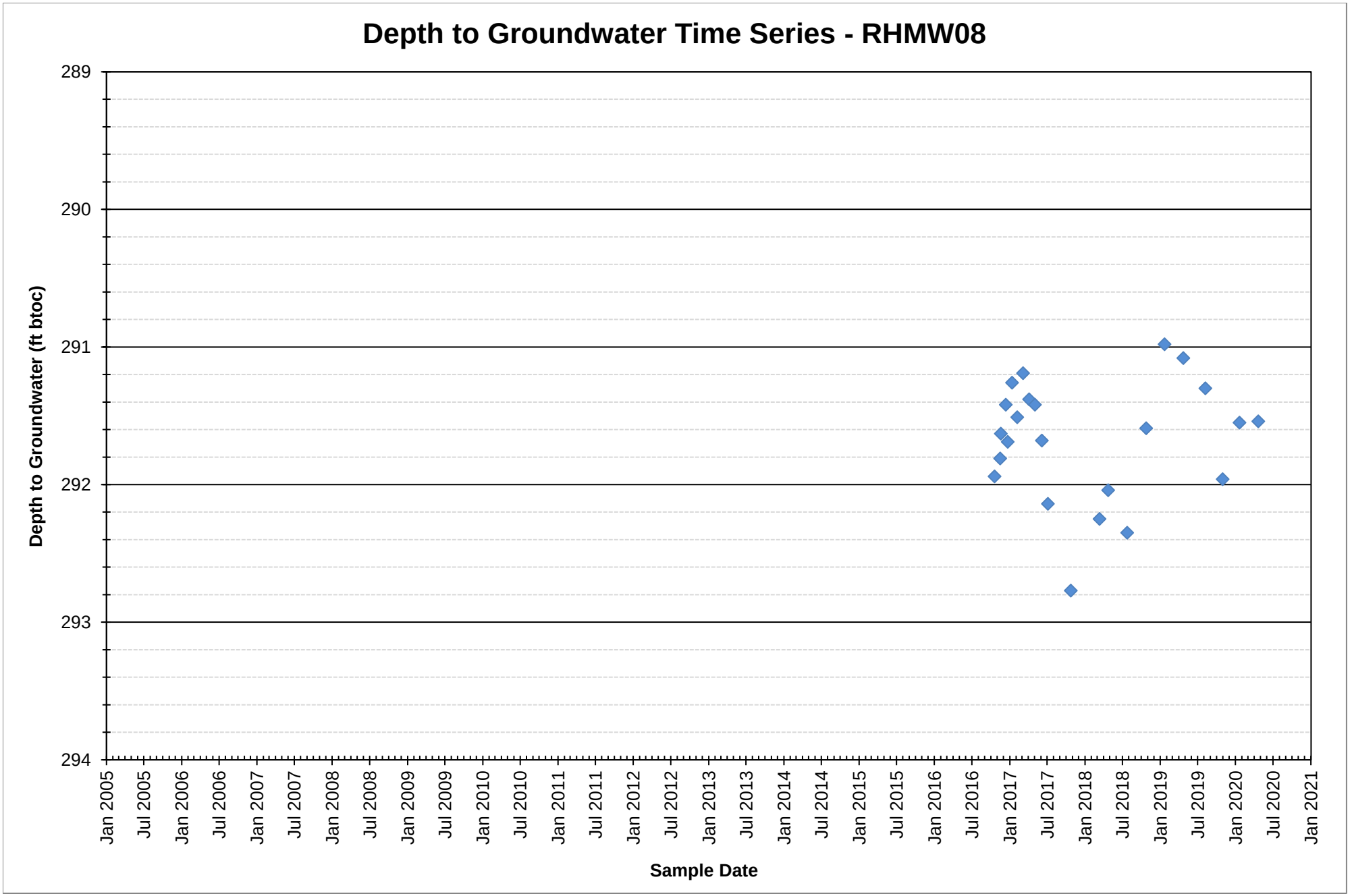
Sample Date


Depth to Groundwater Time Series - RHMW08
Depth to Groundwater (ft btoc)
289
290
291
292
293
294
Jan 2005
Jul 2005
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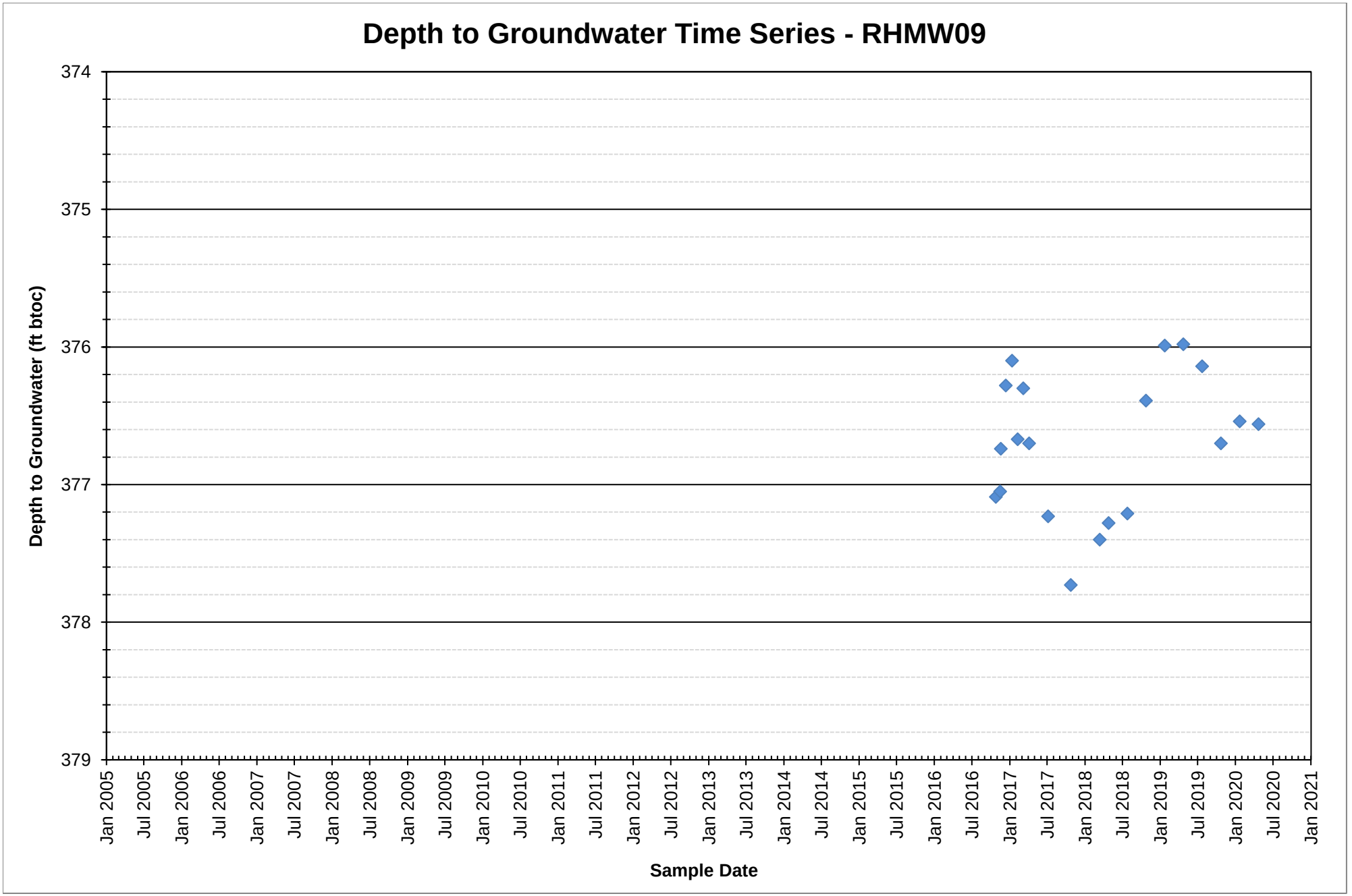
Sample Date


Depth to Groundwater Time Series - RHMW09
Depth to Groundwater (ft btoc)
374
375
376
377
378
379
Jan 2005
Jul 2005
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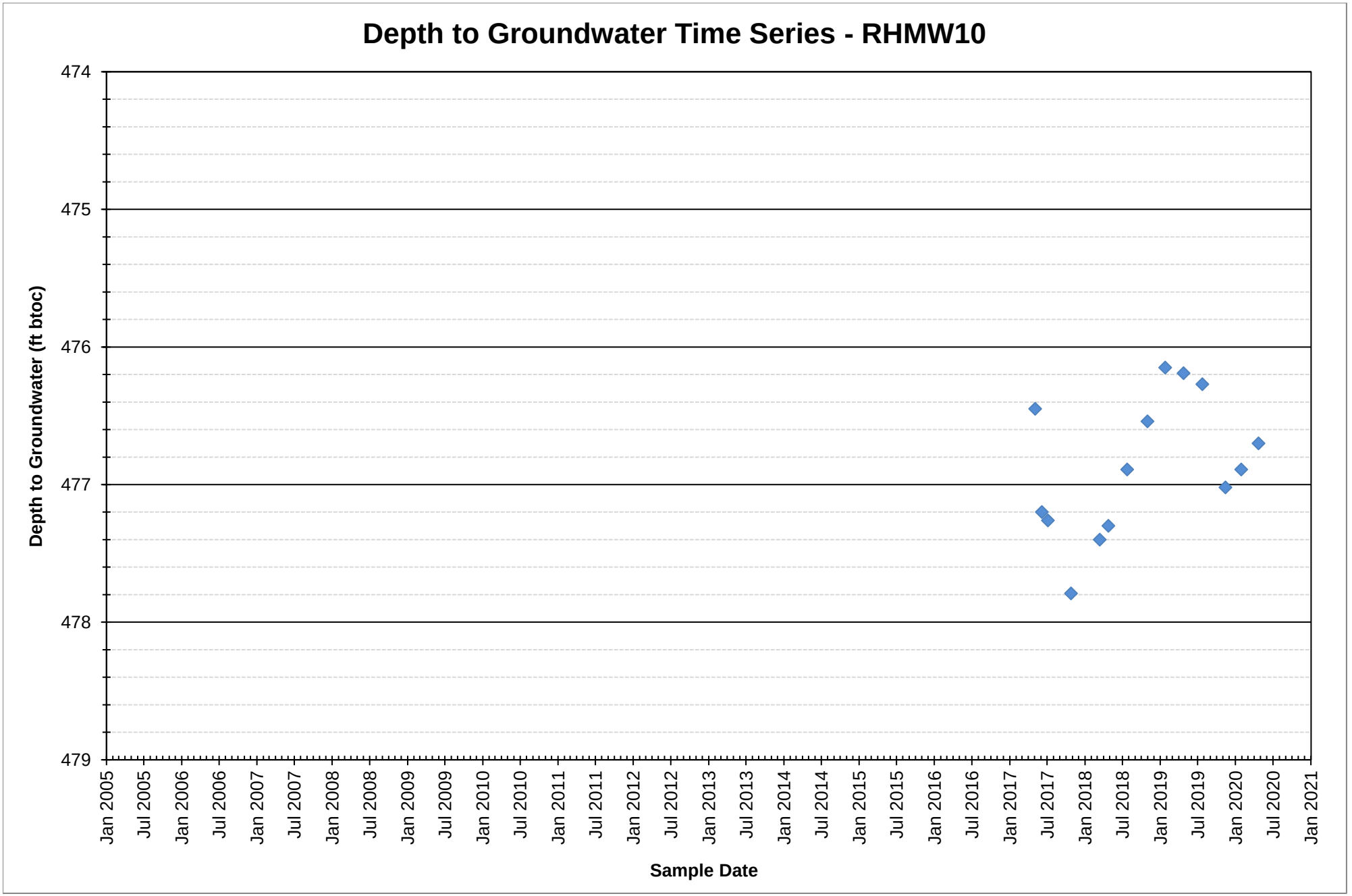
Sample Date


Depth to Groundwater Time Series - RHMW10
Depth to Groundwater (ft btoc)
474
475
476
477
478
479
Jan 2005
Jul 2005
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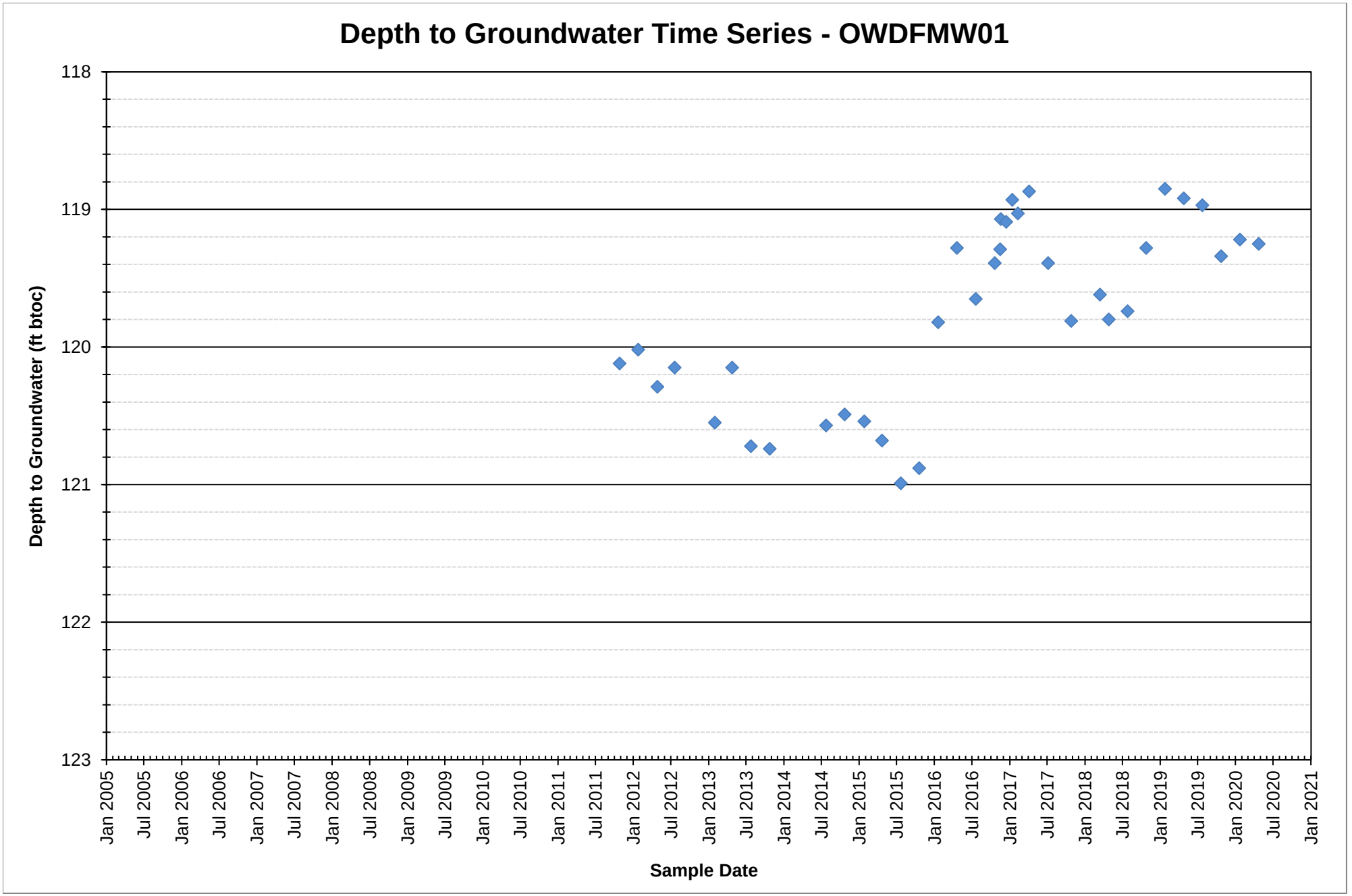
Sample Date


Depth to Groundwater Time Series - OWDFMW01
Depth to Groundwater (ft btoc)
118
119
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123
Jan 2005
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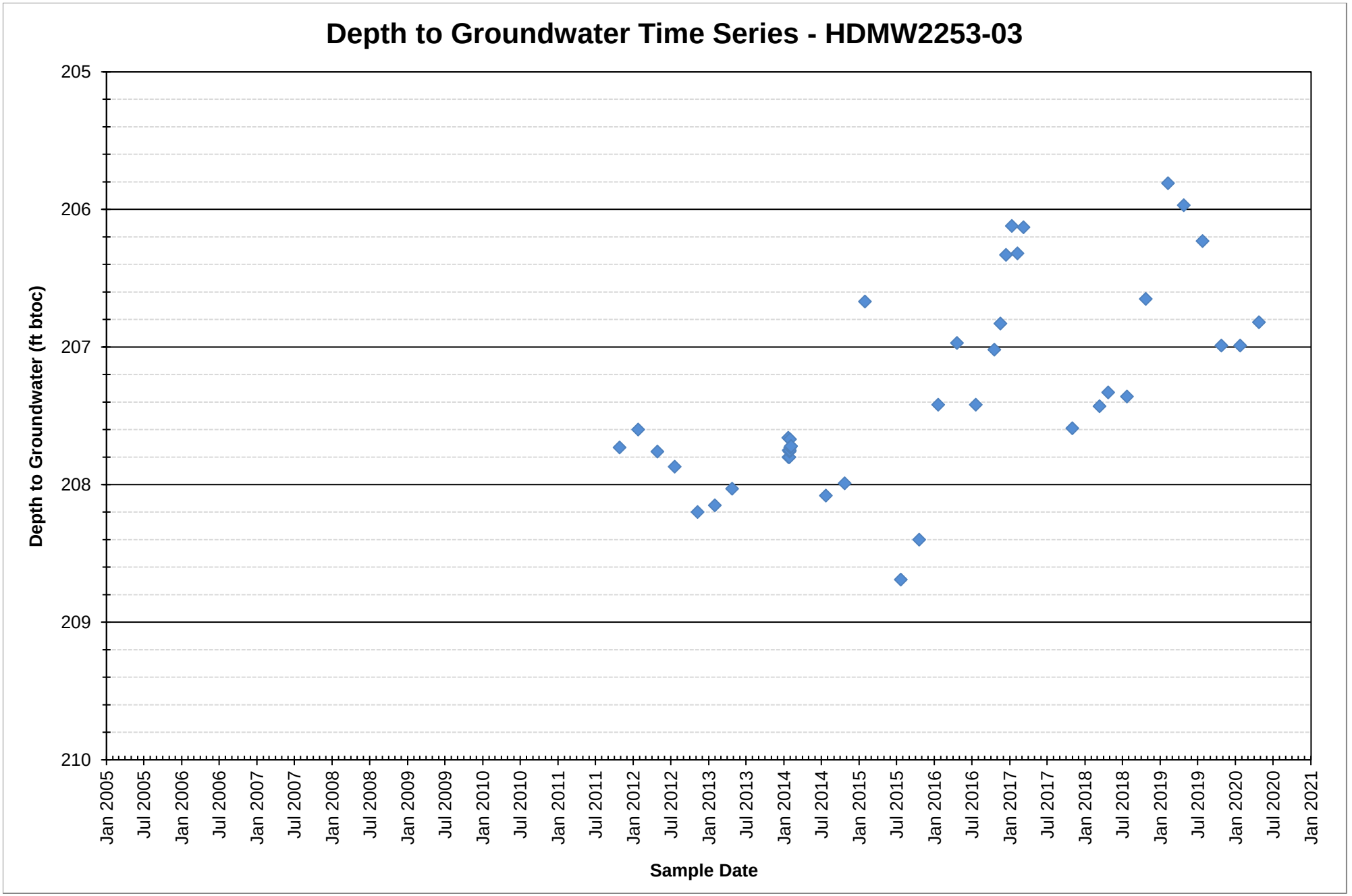
Sample Date


Depth to Groundwater Time Series - HDMW2253-03
Depth to Groundwater (ft btoc)
205
206
207
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209
210
Jan 2005
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Jan 2021
Sample Date

Appendix B:
Field Activity Documentation,
Second Quarter 2020
(on CD-ROM at end of document)

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Appendix B.1:
Groundwater Sampling Logs

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Westbay Well Groundwater Sampling

Field Data Sheet

Project: 60571032 Red Hill
Monitoring Well No.: RHMW13
Sampling Zone No(s).: Zone 1
Sampled by: BM, DM, EB

Ambiant VOCs (ppm): 0.0
Headspace VOCs (ppm): 0.0
Start Time: 916 Atm. Reading: 14.68
End Time: 1418 Atm. Reading: 14.70

Date: 2020-03-03
Sheet: 1 of 1
Sampling Equipment: EMS5285

Time	Port No.	Run No.	Surface Function Tests (probe in flushing collar)						Position Sampler					Sample Collection Checks (probe located at sampling zone in Westbay casing)							Comments (volume recovered)
			Shoe Out	Close Valve	Check Vacuum	Open Valve	Evacuate Bottles (3-5 psi)	Close Valve	Shoe In	Arm In	Locate Port	Arm Out	Land Probe	Pressure in Westbay (psi)	Shoe Out	Zone Pressure (psi)	Open Valve	Zone Pressure (psi)	Close Valve	Shoe In	Pressure in Westbay (psi)	
938	1	1	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	83.06	✔	93.66	✔	93.66	✔	✔	83.08	Parameters
1001	1	2	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	83.05	✔	93.67	✔	93.67	✔	✔	83.06	VOAs
1024	1	3	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	83.03	✔	93.62	✔	93.66	✔	✔	83.03	PAHs, PID=0.4ppm
1046	1	4	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	83.01	✔	93.66	✔	93.67	✔	✔	83.08	SVOCs, PID=0.2ppm
1108	1	5	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	83.03	✔	93.67	✔	93.64	✔	✔	83.03	SVOCs, PID=0.1ppm
1126	1	6	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	83.03	✔	93.64	✔	93.62	✔	✔	82.99	SVOCs+TPH d/o PID=0.2ppm
1151	1	7	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	83.03	✔	93.66	✔	93.66	✔	✔	82.98	TPH d/o+Nitrate/Nitrite, PID=0.7ppm
1211	1	8	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	82.98	✔	93.66	✔	93.64	✔	✔	82.96	Bromide, silicas, metals
1232	1	9	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	82.97	✔	93.66	✔	93.64	✔	✔	82.96	Parameters
1256	1	10	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	82.90	✔	93.65	✔	93.66	✔	✔	82.95	Filters DOC
1318	1	11	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	82.95	✔	93.65	✔	93.63	✔	✔	82.90	DOH samples
1358	1	12	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	82.88	✔	93.64	✔	93.65	✔	✔	82.93	Parameters

TIME	Liters Removed	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP. (°C)	ORP (mV)	SAL (psu)	Comments
1004	1	160.57	8.10	0.24	2.52	3.60	24.08	121.7	0.1	
1257	10	159.11	8.20	0.24	2.44	1.60	23.95	104.1	0.1	
1420	12	154.00	8.21	0.23	2.03	1.83	26.25	103.4	0.1	

Sample Identification Numbers: ERH1023 (N) & ERH1022 (TB)
Sample Start Time: 1030 End Time: 1330
Appearance of Sample: COLOR: Clear
SEDIMENT: None
OTHER: N/A

Sampling Order: --
--

Notes: ERH 1022 -> 0900 ERH 1023 -> 1030

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED:

24 Primary

VOAs
HCl: **4**
Unpres: **3**
H2SO4: **4 (2 filtered)**

Amber
1-L: **2**
500-mL: **3**
1-L (800 mL): **2**

Poly
250 mL H2SO4: **1**
250 mL HCl (brown): **1 filtered**
250 mL unpres.: **3 (1 filtered)**
500 mL HNO3: **1**

Westbay Well Groundwater Sampling

Field Data Sheet

Time	Port No.	Run No.	Surface Function Tests (probe in flushing collar)						Position Sampler					Sample Collection Checks (probe located at sampling zone in Westbay casing)								Comments (volume recovered)
			Shoe Out	Close Valve	Check Vacuum	Open Valve	Evacuate Bottles (3-5 psi)	Close Valve	Shoe In	Arm In	Locate Port	Arm Out	Land Probe	Pressure in Westbay (psi)	Shoe Out	Zone Pressure (psi)	Open Valve	Zone Pressure (psi)	Close Valve	Shoe In	Pressure in Westbay (psi)	

Westbay Well Groundwater Sampling

Field Data Sheet

Project: 60571032 Red Hill
Monitoring Well No.: RHMW13
Sampling Zone No(s).: Zone 2
Sampled by: BM, DM, JF

Ambiant VOCs (ppm): 0.0
Headspace VOCs (ppm): 0.0
Start Time: 913 Atm. Reading: 14.60
End Time: 1329 Atm. Reading: 14.66

Date: 2020-03-04
Sheet: 1 of 1
Sampling Equipment: EMS5285

Time	Port No.	Run No.	Surface Function Tests (probe in flushing collar)						Position Sampler					Sample Collection Checks (probe located at sampling zone in Westbay casing)								Comments (volume recovered)
			Shoe Out	Close Valve	Check Vacuum	Open Valve	Evacuate Bottles (3-5 psi)	Close Valve	Shoe In	Arm In	Locate Port	Arm Out	Land Probe	Pressure in Westbay (psi)	Shoe Out	Zone Pressure (psi)	Open Valve	Zone Pressure (psi)	Close Valve	Shoe In	Pressure in Westbay (psi)	
915	2	1	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	45.42	✔	56.35	✔	56.36	✔	✔	45.46	Parameters
941	2	2	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	45.33	✔	56.39	✔	56.37	✔	✔	45.44	VOAs, SVOCs, PID=1.0ppm
1002	2	3	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	45.34	✔	56.37	✔	56.38	✔	✔	45.42	SVOCs
1022	2	4	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	45.36	✔	56.37	✔	56.40	✔	✔	45.39	SVOCs, PAHs, PID=0.3ppm
1042	2	5	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	45.23	✔	56.35	✔	56.37	✔	✔	45.38	PAHs
1100	2	6	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	45.34	✔	56.37	✔	56.37	✔	✔	45.39	PAHs, TPH d/o, PID=0.2ppm
1127	2	7	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	45.12	✔	56.37	✔	56.35	✔	✔	45.33	Parameters
1145	2	8	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	45.24	✔	56.36	✔	56.34	✔	✔	45.36	TPH d/o, si, nitrate/nitrite, PID=0.1ppm
1205	2	9	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	45.31	✔	56.35	✔	56.35	✔	✔	45.34	Nitrate/nitrite, bromide, metals
1225	2	10	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	45.45	✔	56.36	✔	56.35	✔	✔	45.31	Metals, DOH, filters, si
1243	2	11	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	45.21	✔	56.36	✔	56.35	✔	✔	45.30	filter, Fe
1310	2	12	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	45.31	✔	56.31	✔	56.34	✔	✔	45.30	Parameters

TIME	Liters Removed	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP. (°C)	ORP (mV)	SAL (psu)	Comments
945	1	146.52	7.87	0.23	1.00	6.78	23.77	155.0	0.1	
1150	7	144.22	137.91	0.21	1.47	6.08	28.52	116.1	0.1	
1533	12	131.34	7.90	0.21	0.88	8.50	27.83	153.6	0.1	

Sample Identification Numbers: ERH1025 (N) & ERH1024 (TB)
Sample Start Time: 1015 End Time: 1314
Appearance of Sample: COLOR: Clear
SEDIMENT: None
OTHER: N/A

Sampling Order: --
--

Notes: ERH 1025 -> 1015 ERH 1024 -> 0930

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED:

24 Primary

VOAs	**Amber**	**Poly**
HCl: **4**	1-L: **2**	250 mL H2SO4: **1**
Unpres: **3**	500-mL: **3**	250 mL HCl (brown): **1 filtered**
H2SO4: **4 (2 filtered)**	1-L (800 mL): **2**	250 mL unpres.: **3 (1 filtered)**
		500 mL HNO3: **1**

Westbay Well Groundwater Sampling

Field Data Sheet

Time	Port No.	Run No.	Surface Function Tests (probe in flushing collar)						Position Sampler					Sample Collection Checks (probe located at sampling zone in Westbay casing)								Comments (volume recovered)
			Shoe Out	Close Valve	Check Vacuum	Open Valve	Evacuate Bottles (3-5 psi)	Close Valve	Shoe In	Arm In	Locate Port	Arm Out	Land Probe	Pressure in Westbay (psi)	Shoe Out	Zone Pressure (psi)	Open Valve	Zone Pressure (psi)	Close Valve	Shoe In	Pressure in Westbay (psi)	

Westbay Well Groundwater Sampling

Field Data Sheet

Project: 60571032 Red Hill | Ambiant VOCs (ppm): 0.0 | Date: 2020-03-05

Monitoring Well No.: RHMW13 | Headspace VOCs (ppm): 0.0 | Sheet: 1 of 1

Sampling Zone No(s).: Zone 3 286.5 | Start Time: 806 | Atm. Reading: 14.68 | Sampling Equipment: EMS5285

Sampled by: BM, CE, EB | End Time: 1238 | Atm. Reading: 14.70

Time	Port No.	Run No.	Surface Function Tests (probe in flushing collar)						Position Sampler					Sample Collection Checks (probe located at sampling zone in Westbay casing)								Comments (volume recovered)
			Shoe Out	Close Valve	Check Vacuum	Open Valve	Evacuate Bottles (3-5 psi)	Close Valve	Shoe In	Arm In	Locate Port	Arm Out	Land Probe	Pressure in Westbay (psi)	Shoe Out	Zone Pressure (psi)	Open Valve	Zone Pressure (psi)	Close Valve	Shoe In	Pressure in Westbay (psi)	
807	3	1	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	28.34	✔	39.42	✔	39.42	✔	✔	28.40	Parameters
835	3	2	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	28.34	✔	39.43	✔	39.42	✔	✔	28.42	VOAs, SVOCs
855	3	3	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	28.42	✔	39.42	✔	39.42	✔	✔	28.39	VOAs, SVOCs, PID=0.0ppm
915	3	4	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	28.41	✔	39.41	✔	39.42	✔	✔	28.40	SVOCs, PAHs
936	3	5	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	28.41	✔	39.44	✔	39.42	✔	✔	28.36	PAHs, PID=0.4ppm
959	3	6	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	28.39	✔	39.45	✔	39.42	✔	✔	28.41	PAH, TPH d/o
1034	3	7	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	28.34	✔	39.45	✔	39.45	✔	✔	28.36	Parameters
1052	3	8	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	28.36	✔	39.41	✔	39.44	✔	✔	28.34	TPH d/o, PID=0.0ppm
1114	3	9	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	28.31	✔	39.45	✔	39.44	✔	✔	28.34	TPH d/o, polys, PID=0.0ppm
1133	3	10	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	28.31	✔	39.44	✔	39.40	✔	✔	28.29	Poly, metals, DOHs sample, filters, PID=0.0ppm
1153	3	11	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	28.31	✔	39.46	✔	39.45	✔	✔	28.32	Filters
1220	3	12	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	28.30	✔	39.44	✔	39.42	✔	✔	28.26	Parameters

TIME	Liters Removed	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP. (°C)	ORP (mV)	SAL (psu)	Comments
842	1	196.37	7.95	0.30	0.24	0.98	20.46	119.8	0.1	
1055	8	184.90	7.87	0.28	0.62	0.99	25.02	126.6	0.1	
1242	12	150.31	7.95	0.24	0.97	0.92	25.99	122.0	0.1	

Sample Identification Numbers: ERH1027 (N) & ERH1026 (TB)

Sample Start Time: 900 | End Time: 1245

Appearance of Sample: COLOR: Clear

SEDIMENT: None

OTHER: N/A

Sampling Order: --

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Notes: ERH 1026 (TB) -> 0815 ERH1027 -> 0900

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED:

24 Primary

VOAs	**Amber**	**Poly**
HCl: **4**	1-L: **2**	250 mL H2SO4: **1**
Unpres: **3**	500-mL: **3**	250 mL HCl (brown): **1 filtered**
H2SO4: **4 (2 filtered)**	1-L (800 mL): **2**	250 mL unpres.: **3 (1 filtered)**
		500 mL HNO3: **1**

Westbay Well Groundwater Sampling

Field Data Sheet

Time	Port No.	Run No.	Surface Function Tests (probe in flushing collar)						Position Sampler					Sample Collection Checks (probe located at sampling zone in Westbay casing)								Comments (volume recovered)
			Shoe Out	Close Valve	Check Vacuum	Open Valve	Evacuate Bottles (3-5 psi)	Close Valve	Shoe In	Arm In	Locate Port	Arm Out	Land Probe	Pressure in Westbay (psi)	Shoe Out	Zone Pressure (psi)	Open Valve	Zone Pressure (psi)	Close Valve	Shoe In	Pressure in Westbay (psi)	

Westbay Well Groundwater Sampling

Field Data Sheet

Project: 60571032 Red Hill
Monitoring Well No.: RHMW13
Sampling Zone No(s).: Zone 4
Sampled by: BM, CE, DH

Ambiant VOCs (ppm): 0.0
Headspace VOCs (ppm): 0.3
Start Time: 749 Atm. Reading: 14.70
End Time: 1721 Atm. Reading: 14.70

Date: 2020-03-09
Sheet: 1 of 2
Sampling Equipment: EMS5285

Time	Port No.	Run No.	Surface Function Tests (probe in flushing collar)						Position Sampler					Sample Collection Checks (probe located at sampling zone in Westbay casing)							Comments (volume recovered)
			Shoe Out	Close Valve	Check Vacuum	Open Valve	Evacuate Bottles (3-5 psi)	Close Valve	Shoe In	Arm In	Locate Port	Arm Out	Land Probe	Pressure in Westbay (psi)	Shoe Out	Zone Pressure (psi)	Open Valve	Zone Pressure (psi)	Close Valve	Shoe In	Pressure in Westbay (psi)	
750	4	1	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.78	✔	20.82	✔	20.82	✔	✔	14.83	Parameters
817	4	2	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.78	✔	20.80	✔	20.80	✔	✔	14.91	VOAs
846	4	3	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.78	✔	20.81	✔	20.81	✔	✔	14.89	VOAs, SVOCs
905	4	4	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.78	✔	20.82	✔	20.82	✔	✔	14.89	Valve closed, SVOCs, PID=0.0
936	4	5	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.79	✔	20.81	✔	20.82	✔	✔	14.87	SVOCs, PID=3.3
958	4	6	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.79	✔	20.84	✔	20.82	✔	✔	14.84	SVOCs, PID=1.7
1017	4	7	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.78	✔	20.82	✔	20.79	✔	✔	14.87	SVOCs, PID=0.4
1038	4	8	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.79	✔	20.84	✔	20.80	✔	✔	14.87	SVOCs, PID=2.0
1059	4	9	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.79	✔	20.84	✔	20.80	✔	✔	14.87	SVOCs, PID=1.4
1121	4	10	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.79	✔	20.84	✔	20.80	✔	✔	14.86	SVOCs, PID=0.9
1144	4	11	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.78	✔	20.84	✔	20.82	✔	✔	14.81	SVOCs, PID=1.5
1208	4	12	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.76	✔	20.84	✔	20.82	✔	✔	14.86	PAH

TIME	Liters Removed	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP. (°C)	ORP (mV)	SAL (psu)	Comments
824	1	216.46	8.09	0.33	0.42	1.78	20.78	126.6	0.20	
1327	14	200.26	8.08	0.31	1.01	1.31	25.4	95.2	0.20	
1525	26	182.15	8.06	0.31	0.82	1.42	24.82	83.5	0.10	

Sample Identification Numbers: ERH1029 (N) & ERH1028 (TB)
Sample Start Time: 845 End Time: 1705
Appearance of Sample: COLOR: None
SEDIMENT: None
OTHER: None

Sampling Order: --
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Notes: ERH 1028 -> 0755 ERH1029 -> 0845

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED:

24 Primary

VOAs	**Amber**	**Poly**
HCl: **4**	1-L: **2**	250 mL H2SO4: **1**
Unpres: **3**	500-mL: **3**	250 mL HCl (brown): **1 filtered**
H2SO4: **4 (2 filtered)**	1-L (800 mL): **2**	250 mL unpres.: **3 (1 filtered)**
		500 mL HNO3: **1**

Westbay Well Groundwater Sampling

Field Data Sheet

Time	Port No.	Run No.	Surface Function Tests (probe in flushing collar)						Position Sampler					Sample Collection Checks (probe located at sampling zone in Westbay casing)								Comments (volume recovered)
			Shoe Out	Close Valve	Check Vacuum	Open Valve	Evacuate Bottles (3-5 psi)	Close Valve	Shoe In	Arm In	Locate Port	Arm Out	Land Probe	Pressure in Westbay (psi)	Shoe Out	Zone Pressure (psi)	Open Valve	Zone Pressure (psi)	Close Valve	Shoe In	Pressure in Westbay (psi)	
1229	4	13	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.78	✔	20.82	✔	20.84	✔	✔	14.81	PAH, PID=1.0
1251	4	14	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.76	✔	20.82	✔	20.84	✔	✔	14.86	Parameters
1323	4	15	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.76	✔	20.84	✔	20.82	✔	✔	14.81	PAH, PID=1.0
1348	4	16	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.75	✔	20.81	✔	20.82	✔	✔	14.83	PAH
1407	4	17	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.76	✔	20.82	✔	20.84	✔	✔	14.79	PAH, TPH d/o, PID=0.4
1427	4	18	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.79	✔	20.81	✔	20.82	✔	✔	14.84	TPH d/o, PID=0.1
1446	4	19	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.76	✔	20.81	✔	20.84	✔	✔	14.81	TPH d/o, polys, metals, PID=0.1
1506	4	20	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.73	✔	20.79	✔	20.79	✔	✔	14.81	Polys
1523	4	21	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.75	✔	20.85	✔	20.82	✔	✔	14.83	Filters, DOH
1543	4	22	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.75	✔	20.81	✔	20.84	✔	✔	14.84	TPH d/o, PID=0.0
1605	4	23	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.73	✔	20.82	✔	20.80	✔	✔	14.79	TPH d/o
1624	4	24	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.76	✔	20.81	✔	20.81	✔	✔	14.84	TPH d/o
1642	4	25	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.73	✔	20.81	✔	20.79	✔	✔	14.81	TPH d/o
1703	4	26	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.71	✔	20.82	✔	20.79	✔	✔	14.78	Parameters

Westbay Well Groundwater Sampling

Field Data Sheet

Project: 60571032 Red Hill
Monitoring Well No.: RHMW13
Sampling Zone No(s).: Zone 5
Sampled by: CE, DM, DH

Ambiant VOCs (ppm): 0.1
Headspace VOCs (ppm): 2.6
Start Time: 747 Atm. Reading: 14.69
End Time: 1529 Atm. Reading: 14.61

Date: 2020-03-10
Sheet: 1 of 2
Sampling Equipment: EMS5285

Time	Port No.	Run No.	Surface Function Tests (probe in flushing collar)						Position Sampler					Sample Collection Checks (probe located at sampling zone in Westbay casing)								Comments (volume recovered)
			Shoe Out	Close Valve	Check Vacuum	Open Valve	Evacuate Bottles (3-5 psi)	Close Valve	Shoe In	Arm In	Locate Port	Arm Out	Land Probe	Pressure in Westbay (psi)	Shoe Out	Zone Pressure (psi)	Open Valve	Zone Pressure (psi)	Close Valve	Shoe In	Pressure in Westbay (psi)	
748	5A	1	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.76	✔	15.18	✔	15.21	✔	✔	14.84	Parameters
823	5A	2	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.77	✔	15.18	✔	15.18	✔	✔	14.81	VOAs, PID=106.4, 20.2, 62.1, 30.2
841	5A	3	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.76	✔	15.15	✔	15.18	✔	✔	14.86	VOAs, SVOCs, PID=4.5, 8.1, 1.1, 10.1
908	5A	4	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.76	✔	15.18	✔	15.18	✔	✔	14.87	SVOCs, PID=5.7, 0.6, 1.8, 9.3
931	5A	5	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.76	✔	15.15	✔	15.20	✔	✔	14.84	SVOCs, PID=2.4, 2.1, 2.5, 6.7
955	5A	6	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.76	✔	15.17	✔	15.18	✔	✔	14.87	SVOCs, PID=0.7, 2.0, 2.4, 4.9
1015	5A	7	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.73	✔	15.17	✔	15.18	✔	✔	14.84	SVOCs
1037	5A	8	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.75	✔	15.15	✔	15.18	✔	✔	14.81	SVOCs, PAHs
1102	5A	9	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.76	✔	15.14	✔	15.18	✔	✔	14.83	PAHs
1125	5A	10	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.73	✔	15.17	✔	15.17	✔	✔	14.84	Parameters
1146	5A	11	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.76	✔	15.12	✔	15.15	✔	✔	14.83	PAHs
1206	5A	12	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.78	✔	15.15	✔	15.15	✔	✔	14.81	PAHs, PID=2.9

TIME	Liters Removed	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP. (°C)	ORP (mV)	SAL (psu)	Comments
824	1	242.43	7.99	0.42	4.80	1.95	19.86	137.8	0.2	
1151	10	253.53	8.80	0.40	2.02	2.15	26.49	85.2	0.2	
1532	21	192.21	8.77	0.30	1.10	0.73	26.67	60.5	0.1	

Sample Identification Numbers: ERH1031 (N) & ERH1032 (FD) & ERH1030 (TB)
Sample Start Time: 830 End Time: 1515
Appearance of Sample: COLOR: Clear
SEDIMENT: None
OTHER: none

Sampling Order: --
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Notes: ERH 1030 -> 0750

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED:

24 Primary

VOAs	**Amber**	**Poly**
HCl: **4**	1-L: **2**	250 mL H2SO4: **1**
Unpres: **3**	500-mL: **3**	250 mL HCl (brown): **1 filtered**
H2SO4: **4 (2 filtered)**	1-L (800 mL): **2**	250 mL unpres.: **3 (1 filtered)**
		500 mL HNO3: **1**

Westbay Well Groundwater Sampling

Field Data Sheet

Time	Port No.	Run No.	Surface Function Tests (probe in flushing collar)						Position Sampler					Sample Collection Checks (probe located at sampling zone in Westbay casing)								Comments (volume recovered)
			Shoe Out	Close Valve	Check Vacuum	Open Valve	Evacuate Bottles (3-5 psi)	Close Valve	Shoe In	Arm In	Locate Port	Arm Out	Land Probe	Pressure in Westbay (psi)	Shoe Out	Zone Pressure (psi)	Open Valve	Zone Pressure (psi)	Close Valve	Shoe In	Pressure in Westbay (psi)	
1226	5A	13	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.70	✔	15.16	✔	15.15	✔	✔	14.81	PAHs, TPH d/o, PID=2.6
1245	5A	14	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.72	✔	15.17	✔	15.14	✔	✔	14.83	TPH d/o, PID=3.2
1304	5A	15	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.72	✔	15.11	✔	15.11	✔	✔	14.80	TPH d/o, PID=1.2
1324	5A	16	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.77	✔	15.16	✔	15.16	✔	✔	14.80	TPH d/o, PID=3.0
1350	5A	17	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.77	✔	15.18	✔	15.16	✔	✔	14.82	TPH d/o, metals, PID=1.8
1409	5A	18	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.72	✔	15.17	✔	15.15	✔	✔	14.80	Polys, PID=1.4
1429	5A	19	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.72	✔	15.11	✔	15.14	✔	✔	14.80	Polys, filters, DOH, PID=1.6
1448	5A	20	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.71	✔	15.15	✔	15.16	✔	✔	14.80	Filters, PID=0.3
1511	5A	21	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	14.71	✔	15.13	✔	15.11	✔	✔	14.81	Parameters

Red Hill Groundwater Sampling Log

WELL NO. **RHMW2254-01** LOCATION: Inside Tunnel PROJECT NO. 60571032

DATE: 2020-04-23 TIME: 7:45 CLIMATIC CONDITIONS: Inside Tunnel

Depth to groundwater		Final Depth	Depth to Product	Depth to bottom		Purge			
Previous (ft btoc)	Current (ft btoc)	(ft btoc)	(ft btoc)	Previous (ft btoc)	Current (ft btoc)	Flow rate (mL/min)	Start Time	Total Volume (gal)	Battery Pack
*82.70	NM								Deep cycle
**82.66	NM	NM	NM	115.79	NM	275	8:00	3.75	JCH200 225910 18
Pump settings:				Pressure (PSI)		Discharge (sec)		Fill (sec)	
Previous/Actual:				50	50	50	25	35	35

Headspace VOCs:	0.0	ppm	Ambient VOCs	0.0	ppm
Headspace O_2:	20.9	%	Ambient O_2:	20.9	%
Headspace LEL:	0.0	%	Ambient LEL:	0.0	%
Ambient CO:	0.0	ppm	Ambient H_2S:	0.0	%

O/W Interface Probe Type/Water Level Meter: not used Serial Number: not used

Gas Detector Type: MultiRAE Serial Number: 4778

Water Quality Meter Type: Smart Troll Serial Number: 197259

Stabilization:+/- 0.2 ºC, +/- 3% conductivity, +/- 10% DO, +/- 0.1 pH, +/-10 mv ORP, turb=as low as possible (< 10 NTU ideal) for 3 consecutive readings following a min of 5 readings

Depth to water measured from outside casing (free fall). Measure to survey mark.

* 200' Oil/Water Interface Probe measurement

** 500' Calibrated Water Level Meter measurement (N-1)

SAMPLING EQUIPMENT: Dedicated bladder pump

APPEARANCE OF SAMPLE: COLOR: clear

SEDIMENT: none

ODOR/OTHER: none

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED: 16 Primary + 11 Dup + 18 MS/MSD = 45 Total

VOAs	Amber	Poly
HCl: 4+4+4 = **12**	1-L: 2+2+4 = **8**	250 mL H2SO4: **1**
H2SO4: 2 = **2**	1-L (800 mL): 2+2+4 = **8**	250 mL HCl (brown): **1 filtered**
	500-mL: 3+3+6 = **12**	250 mL unpreserved: **1**

SAMPLE IDENTIFICATION NUMBER(S) **ERH 1039 (N, MS/MSD)** **ERH 1040 (Dup)** **ERH 1038 (Trip Blank)**

DATE: 2020-04-23 TIME: Start: 8:45 End: 10:00 Start: 8:15

DECONTAMINATION PROCEDURES: Alconox, DI Alconox, DI H2O, Isopropyl, and DI H2O wash

NOTES: Was the pump on or off? Off

SAMPLED BY: MM, KL, DH SAMPLES DELIVERED TO: APPL TRANSPORTER: FedEx

Red Hill Groundwater Sampling Log

WELL NO.	**RHMW2254-01**		LOCATION:	Inside Tunnel			PROJECT NO.		60571032	
TIME	DTW**	LITERS REMOVED	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP (°C)	ORP (Mv)	SAL (psu)
8:00					Water at surface					
8:07	NM	3	323.12	6.04	0.50	8.64	0.36	19.54	104.20	0.2
8:11	NM	4	328.59	6.67	0.51	8.97	0.28	18.71	96.0	0.2
8:15	NM	5.5	329.90	6.88	0.51	8.97	0.22	18.57	93.9	0.2
8:19	NM	6.8	330.22	7.01	0.51	8.96	0.19	18.55	91.9	0.2
8:23	NM	7.8	329.23	7.11	0.51	8.97	0.17	18.51	91.1	0.2
8:27	NM	8.7	328.87	7.18	0.51	8.98	0.19	18.50	89.3	0.2
8:31	NM	10.1	328.50	7.24	0.51	8.98	0.15	18.50	88.5	0.2
8:35	NM	11	329.15	7.25	0.51	8.99	0.14	18.51	88.4	0.2
8:45					Start sampling					

Red Hill Groundwater Sampling Log

WELL NO. **OWDFMW01** LOCATION: Outside Tunnel PROJECT NO. 60571032

DATE: 2020-04-22 TIME: 0700 CLIMATIC CONDITIONS: sunny, 75°F

Depth to groundwater		Final Depth	Depth to Product	Depth to bottom		Purge			
Previous (ft btoc)	Current (ft btoc)	(ft btoc)	(ft btoc)	Previous (ft btoc)	Current (ft btoc)	Flow rate (mL/min)	Start Time	Total Volume (gal)	Nitrogen used
*119.36	119.38*								start:1200
**119.28	119.31**	119.82	NA	NM	NM	80	0838	2.66	end:0
Pump settings:				Pressure (PSI)		Discharge (sec)		Fill (sec)	
Previous/Actual:				65	65	13	13	17	17

Headspace VOCs: 0.0 ppm Ambient VOCs 0.0 ppm

O/W Interface Probe Type/Water Level Meter: Heron / Solinst Serial Number: 01-5920 / N-1

Gas Detector Type: MultiRAE Serial Number: 4778

Water Quality Meter Type: Smart Troll Serial Number: 197259

Stabilization:+/- 0.2 ºC, +/- 3% conductivity, +/- 10% DO, +/- 0.1 pH, +/-10 mv ORP, turb=as low as possible (< 10 NTU ideal) for 3 consecutive readings following a min of 5 readings

Depth to water measured from outside casing (free fall). Measure to survey mark.

* 500' Oil/Water Interface Probe measurement

** 1000' Calibrated Water Level Meter measurement (N-1)

SAMPLING EQUIPMENT: Dedicated bladder pump

APPEARANCE OF SAMPLE: COLOR: clear

SEDIMENT: none

ODOR/OTHER: none

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED: 16 Primary = 16 Total

VOAs	Amber	Poly
HCl: **4**	1-L: **2**	250 mL H2SO4: **1**
H2SO4: **2**	1-L (800 mL): **2**	250 mL HCl (brown): **1 filtered**
	500-mL: **3**	250 mL unpreserved: **1**

SAMPLE IDENTIFICATION NUMBER(S) **ERH 1063 (N)** **ERH 1062 (Trip Blank)**

DATE: 2020-04-22 TIME: Start: 1015 End: 1150 Start: 0740

DECONTAMINATION PROCEDURES: Alconox, DI Alconox, DI H2O, Isopropyl, and DI H2O wash

NOTES: At 11:00 AM gas had run out and sampling was paused. A new gas cylinder was hooked up and resumed at 11:25

SAMPLED BY: DH, KL, MM SAMPLES DELIVERED TO: APPL TRANSPORTER: FedEx

Red Hill Groundwater Sampling Log

WELL NO.	**OWDFMW01**		LOCATION:	Outside Tunnel			PROJECT NO.		60571032	
TIME	DTW**	LITERS REMOVED	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP (°C)	ORP (Mv)	SAL (psu)
0838					Water at surface					
0852	119.56	2	2531.21	9.25	3.90	10.5	7.33	23.40	89.4	2.1
0856	119.56	2.6	2485.01	11.03	3.81	10.3	8.62	23.77	71.1	2.0
0900	119.64	3	2566.88	11.54	3.95	9.93	7.98	23.51	78.5	2.1
0904	119.85	3.4	2572.98	11.56	3.96	8.39	5.72	23.42	78.8	2.1
0908	119.85	3.8	2572.96	11.57	3.96	7.78	7.04	23.29	73.3	2.1
0912	119.81	4.3	2576.79	11.57	3.96	8.21	9.80	23.11	66.6	2.1
0916	119.81	4.8	2551.22	11.51	3.93	7.51	13.5	22.96	62.6	2.1
0920	119.78	5	2493.94	11.14	3.85	6.88	8.06	23.09	63.1	2.1
0924	119.76	5.4	2545.31	10.32	3.92	6.50	8.60	23.15	68.6	2.1
0925					Changed flow rate to 90 mL/min					
0928	119.76	5.8	2600.14	9.68	4.0	6.24	5.85	23.15	72.5	2.2
0932	119.80	6.5	2819.09	9.03	4.34	5.77	3.17	22.96	79.4	2.4
0936					Changed flow rate to 100 mL/min					
0936	119.80	6.8	2881.73	8.90	4.42	5.67	2.56	23.02	80.2	2.4
0940	119.78	7.1	2911.18	8.76	4.48	5.50	2.35	23.10	81.4	2.4
0944	119.77	7.3	2923.13	8.70	4.49	5.41	0.98	22.95	81.5	2.4
0948	119.77	7.9	2918.63	8.67	4.49	5.35	1.83	23.06	80.9	2.4
0952	119.77	8.3	2928.10	8.63	4.50	5.28	1.74	23.15	80.9	2.4
0956	119.77	8.6	2931.52	8.58	4.51	5.24	1.55	23.20	81.0	2.4
1000	119.78	9	2943.59	8.53	4.53	5.18	2.15	23.24	80.7	2.4
1004	119.78	9.3	2945.87	8.52	4.53	5.15	1.53	23.20	80.6	2.4
1008	119.78	9.8	2947.30	8.51	4.54	5.13	1.39	23.18	80.5	2.5
1015					Start sampling					

Red Hill Groundwater Sampling Log

WELL NO.	**RHMW01**	LOCATION:	Inside Tunnel	PROJECT NO.	60571032
DATE:	2020-04-20	TIME:	1031	CLIMATIC CONDITIONS:	Inside Tunnel

Depth to groundwater		Final Depth	Depth to Product	Depth to bottom		Purge			
Previous (ft btoc)	Current (ft btoc)	(ft btoc)	(ft btoc)	Previous (ft btoc)	Current (ft btoc)	Flow rate (mL/min)	Start Time	Total Volume (gal)	Battery Pack
*82.92	82.92*	82.91	NA	99.8	--	80	1044	1.0	Deep cycle
**82.89	82.89**								JCH200225910 18
Pump settings:				Pressure (PSI)		Discharge (sec)		Fill (sec)	
Previous/Actual:				45	45	7	7	8	8

Headspace VOCs:	0.0	ppm	Ambient VOCs	0.0	ppm
Headspace O_2:	20.9	%	Ambient O_2:	20.9	%
Headspace LEL:	0.0	%	Ambient LEL:	0.0	%
Ambient CO:	0.0	ppm	Ambient H_2S:	0.0	%

O/W Interface Probe Type/Water Level Meter	Heron/Solinst	Serial Number:	01-5920 / N-1
Gas Detector Type:	MultiRAE	Serial Number:	EA04778
Water Quality Meter Type:	Smart Troll	Serial Number:	197259

Stabilization:+/- 0.2 ºC, +/- 3% conductivity, +/- 10% DO, +/- 0.1 pH, +/-10 mv ORP, turb=as low as possible (< 10 NTU ideal) for 3 consecutive readings following a min of 5 readings

Depth to water measured from outside casing (free fall). Measure to survey mark.

* 200' Oil/Water Interface Probe measurement

** 500' Calibrated Water Level Meter measurement (N-1)

SAMPLING EQUIPMENT: Dedicated bladder pump

APPEARANCE OF SAMPLE:
COLOR: clear
SEDIMENT: none
ODOR/OTHER: none

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED: 16 Primary + 2 Lab Study = 18 Total

VOAs	Amber	Poly	Lab Study
HCl: **4**	1-L: **2**	250 mL H2SO4: **1**	1-L amber: **2**
H2SO4: **2**	1-L (800 mL): **2**	250 mL HCl (brown): **1 filtered**	
	500-mL: **3**	250 mL unpreserved: **1**	

SAMPLE IDENTIFICATION NUMBER(S) **ERH 1042 (N)** **ERH 1041 (Trip Blank)**

DATE: 2020-04-20 TIME: Start: 1145 End: 1351 Start: 1130

ERH 1082 (Lab Study)

Start: 1145 End: 1351

DECONTAMINATION PROCEDURES: Alconox, DI Alconox, DI H2O, Isopropyl, and DI H2O wash

NOTES: At around 1235 water stopped discharging. Pulled pump up 10 ft, shake up and down, and restarted sampling. 1313 pull up pump because of air bubbles. Bladder is collapsed, replace bladder, continue sampling after flow reestablished.

SAMPLED BY: DH, KL, MM SAMPLES DELIVERED TO: APPL TRANSPORTER: FedEx

Red Hill Groundwater Sampling Log

WELL NO.	RHMW01		LOCATION:	Inside Tunnel			PROJECT NO.	60571032		
TIME	DTW**	LITERS REMOVED	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP (°C)	ORP (Mv)	SAL (psu)
1044					water to surface					
1105	82.87	0.7	206.88	7.17	0.32	2.23	0.13	22.61	10.4	0.2
1109	82.87	1.0	206.79	7.11	0.32	1.40	0.08	22.39	8.7	0.2
1113	82.87	1.3	207.19	7.07	0.32	1.10	0.13	22.20	7.4	0.2
1117	82.87	1.6	207.50	7.06	0.32	0.98	0.10	22.06	5.7	0.2
1121	82.88	1.9	208.02	7.05	0.32	0.92	0.12	21.90	4.0	0.2
1125	82.88	2.2	208.33	7.04	0.32	0.88	0.14	21.81	3.0	0.2
1129	82.88	2.5	208.72	7.04	0.32	0.83	0.04	21.67	1.7	0.2
1133	82.88	2.8	209.02	7.03	0.32	0.81	0.09	21.55	0.8	0.2
1137	82.88	3.1	209.46	7.03	0.32	0.78	0.08	21.47	-0.4	0.2
1141	82.88	3.4	209.58	7.03	0.32	0.78	0.05	21.45	-0.9	0.2
1145					start sampling					

Red Hill Groundwater Sampling Log

WELL NO. **RHMW02** LOCATION: Inside Tunnel PROJECT NO. 60571032

DATE: 2020-04-22 TIME: 1320 CLIMATIC CONDITIONS: Inside Tunnel

Depth to groundwater		Final Depth	Depth to Product	Depth to bottom		Purge			
Previous (ft btoc)	Current (ft btoc)	(ft btoc)	(ft btoc)	Previous (ft btoc)	Current (ft btoc)	Flow rate (mL/min)	Start Time	Total Volume (gal)	Battery Pack
*85.64	85.65*	85.66	no product	99	NM	275	1433	3.4	Deep cycle
**85.59	85.64**								JCH2002 2591018
Pump settings:				Pressure (PSI)		Discharge (sec)		Fill (sec)	
Previous/Actual:				48	48	25	25	35	35

Headspace VOCs:	0.0	ppm	Ambient VOCs	0.0	ppm
Headspace O_2:	15.5	%	Ambient O_2:	20.9	%
Headspace LEL:	0.0	%	Ambient LEL:	0.0	%
Ambient CO:	0.0	ppm	Ambient H_2S:	0.0	%

O/W Interface Probe Type/Water Level Meter: Heron / Solinst Serial Number: 01-5920 / N-1

Gas Detector Type: MultiRAE Serial Number: 4778

Water Quality Meter Type: Smart Troll Serial Number: 197259

Stabilization:+/- 0.2 ºC, +/- 3% conductivity, +/- 10% DO, +/- 0.1 pH, +/-10 mv ORP, turb=as low as possible (< 10 NTU ideal) for 3 consecutive readings following a min of 5 readings

Depth to water measured from outside casing (free fall). Measure to survey mark.

* 200' Oil/Water Interface Probe measurement

** 500' Calibrated Water Level Meter measurement (N-1)

SAMPLING EQUIPMENT: Dedicated bladder pump

APPEARANCE OF SAMPLE: COLOR: clear

SEDIMENT: none

ODOR/OTHER: none

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED: 16 Primary + 11 Dup + 4 Lab Study = 31 Total

VOAs	Amber	Poly	Lab Study
HCl: **4**	1-L: **2**	250 mL H2SO4: **1**	1-L amber: **4**
H2SO4: **2**	1-L (800 mL): **2**	250 mL HCl (brown): **1 filtered**	
	500-mL: **3**	250 mL unpreserved: **1**	

SAMPLE IDENTIFICATION NUMBER(S) **ERH 1044 (N), ERH 1045 (Dup)** **ERH 1043 (Trip Blank)**

DATE: 2020-04-22 TIME: Start: 1510 End: 1552 Start: 1450

ERH 1083 (Lab), ERH 1084 (Lab Dup)

Start: 1510 End: 1552

DECONTAMINATION PROCEDURES: Alconox, DI Alconox, DI H2O, Isopropyl, and DI H2O wash

NOTES: New pump installed

SAMPLED BY: DH, KL, MM SAMPLES DELIVERED TO: APPL TRANSPORTER: FedEx

Red Hill Groundwater Sampling Log

WELL NO.	RHMW02		LOCATION:	Inside Tunnel			PROJECT NO.	60571032		
TIME	DTW**	LITERS REMOVED	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP (°C)	ORP (Mv)	SAL (psu)
1433					water to the surface					
1438	85.64	2	343.83	7.86	0.53	1.99	1.96	23.22	-19.1	0.2
1442	85.64	4	337.36	7.09	0.52	0.80	1.39	21.19	-33.7	0.3
1446	85.64	5	336.33	6.82	0.52	0.72	1.08	20.87	-36.2	0.3
1450	85.64	6	336.05	6.75	0.52	0.67	0.88	20.78	-37.7	0.3
1454	85.67	7	336.31	6.71	0.52	0.72	0.72	20.65	-39.0	0.3
1458	85.67	8	336.11	6.67	0.52	0.74	0.69	20.61	-39.9	0.3
1502	85.67	9	336.19	6.67	0.52	0.72	0.58	20.57	-40.0	0.3
1510					Begin sampling					

Red Hill Groundwater Sampling Log

WELL NO.	**RHMW03**	LOCATION:	Inside Tunnel	PROJECT NO.	60571032
DATE:	2020-04-20	TIME:	0745	CLIMATIC CONDITIONS:	Inside Tunnel

Depth to groundwater		Final Depth	Depth to Product	Depth to bottom		Purge			
Previous (ft btoc)	Current (ft btoc)	(ft btoc)	(ft btoc)	Previous (ft btoc)	Current (ft btoc)	Flow rate (mL/min)	Start Time	Total Volume (gal)	Battery Pack
*101.87	101.9*	102.08	N/A	117.3	NM	250	0805	3	Deep cycle
**101.81	101.85**								JCH 20022591018
Pump settings:				Pressure (PSI)		Discharge (sec)		Fill (sec)	
Previous/Actual:				55	55	25	25	35	35

Headspace VOCs:	0.2	ppm	Ambient VOCs	0.0	ppm
Headspace O_2:	20.9	%	Ambient O_2:	20.9	%
Headspace LEL:	0.0	%	Ambient LEL:	0.0	%
Ambient CO:	0.0	ppm	Ambient H_2S:	0.0	%

O/W Interface Probe Type/Water Level Meter	Heron / Solinst	Serial Number:	01-5920 / N-1
Gas Detector Type:	MultiRAE	Serial Number:	4778
Water Quality Meter Type:	Smart Troll	Serial Number:	197259

Stabilization:+/- 0.2 ºC, +/- 3% conductivity, +/- 10% DO, +/- 0.1 pH, +/-10 mv ORP, turb=as low as possible (< 10 NTU ideal) for 3 consecutive readings following a min of 5 readings

Depth to water measured from outside casing (free fall). Measure to survey mark.

* 200' Oil/Water Interface Probe measurement

** 500' Calibrated Water Level Meter measurement (N-1)

SAMPLING EQUIPMENT: Dedicated bladder pump

APPEARANCE OF SAMPLE:
COLOR: clear
SEDIMENT: none
ODOR/OTHER: none

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED: 16 Primary + 2 Lab Study = 18 Total

VOAs	Amber	Poly	Lab Study
HCl: **4**	1-L: **2**	250 mL H2SO4: **1**	1-L amber: **2**
H2SO4: **2**	1-L (800 mL): **2**	250 mL HCl (brown): **1 filtered**	
	500-mL: **3**	250 mL unpreserved: **1**	

SAMPLE IDENTIFICATION NUMBER(S): **ERH 1047 (N)** **ERH 1046 (Trip Blank)**

DATE: 2020-04-20 TIME: Start: 0845 End: 0918 Start: 0820

ERH 1085 (Lab Study)

Start: 0845 End: 0918

DECONTAMINATION PROCEDURES: Alconox, DI Alconox, DI H2O, Isopropyl, and DI H2O wash

NOTES: none

SAMPLED BY: DH, KL, MM SAMPLES DELIVERED TO: APPL TRANSPORTER: FedEx

Red Hill Groundwater Sampling Log

WELL NO.	RHMW03		LOCATION:	Inside Tunnel			PROJECT NO.		60571032	
TIME	DTW**	LITERS REMOVED	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP (°C)	ORP (Mv)	SAL (psu)
0805					Water to surface					
0815	102.14	1.9	536.35	6.97	0.83	2.25	2.16	24.50	83.1	0.4
0819	102.11	2.3	521.75	6.83	0.80	1.17	2.02	25.26	68.8	0.4
0823	102.14	3.3	521.17	6.83	0.80	1.10	1.65	25.02	64.3	0.4
0827	102.16	5	523.35	6.84	0.80	1.12	0.72	24.69	61.7	0.4
0831	102.16	6	523.16	6.85	0.80	1.12	0.32	24.59	59.4	0.4
0835	102.16	7	523.23	6.86	0.80	1.13	0.17	24.52	57.8	0.4
0839	102.11	8	523.51	6.87	0.81	1.12	0.09	24.46	56.7	0.4
0845					Start sampling					

Red Hill Groundwater Sampling Log

WELL NO. **RHMW04** LOCATION: Outside Tunnel PROJECT NO. 60571032

DATE: 2020-04-22 TIME: 8:45 CLIMATIC CONDITIONS: 79°F, sunny, light wind, 66% humidity

Depth to groundwater		Final Depth	Depth to Product	Depth to bottom		Purge			
Previous (ft btoc)	Current (ft btoc)	(ft btoc)	(ft btoc)	Previous (ft btoc)	Current (ft btoc)	Flow rate (mL/min)	Start Time	Total Volume (L)	Nitrogen used (psi)
*293.40	293.37*								Start: 2200
**293.32	293.26**	293.21	-	305	-	250	9:20	12	End: 1600
Pump settings:				Pressure (PSI)		Discharge (sec)		Fill (sec)	
Previous/Actual:				140	145	28	28	32	32

Headspace VOCs: 0.0 ppm Ambient VOCs: 0.0 ppm

O/W Interface Probe Type/Water Level Meter: Heron rental/ Solinst N-2 Serial Number: Heron 1042-T / Solinst N-2

Gas Detector Type: MiniRAE 3000 Serial Number: 592-914105

Water Quality Meter Type: In-situ Smartroll MP Serial Number: 589976

Stabilization:+/- 0.2 ºC, +/- 3% conductivity, +/- 10% DO, +/- 0.1 pH, +/-10 mv ORP, turb=as low as possible (< 10 NTU ideal) for 3 consecutive readings following a min of 5 readings

Depth to water measured from outside casing (free fall). Measure to survey mark.

* 500' Oil/Water Interface Probe measurement (different model than usual)

** 1000' Calibrated Water Level Meter measurement (N-2)

SAMPLING EQUIPMENT: Dedicated bladder pump

APPEARANCE OF SAMPLE: COLOR: clear

SEDIMENT: none

ODOR/OTHER: none

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED: 16 Primary = 16 Total

VOAs	Amber	Poly
HCl: **4**	1-L: **2**	250 mL H2SO4: **1**
H2SO4: **2**	1-L (800 mL): **2**	250 mL HCl (brown): **1 filtered**
	500-mL: **3**	250 mL unpreserved: **1**

SAMPLE IDENTIFICATION NUMBER(S) **ERH 1049 (N)** **ERH 1048 (Trip Blank)**

DATE: 2020-04-22 TIME: Start: 10:15 End: 10:52 Start: 9:45

DECONTAMINATION PROCEDURES: Alconox, DI Alconox, DI H2O, Isopropyl, and DI H2O wash

NOTES: Collected isotope sample for DOH

SAMPLED BY: GM, RS SAMPLES DELIVERED TO: APPL TRANSPORTER: FedEx

Red Hill Groundwater Sampling Log

WELL NO.	**RHMW04**		LOCATION:	Outside Tunnel			PROJECT NO.		60571032	
TIME	DTW**	LITERS REMOVED	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP (°C)	ORP (Mv)	SAL (psu)
9:24					Water at surface					
9:37	-	-	276.88	7.36	0.42	7.46	0.12	23.19	134.8	0.2
9:40	293.25	4.5	276.44	7.36	0.42	7.68	0.15	22.81	123.9	0.2
9:45	293.25	6.0	275.50	7.37	0.42	8.07	0.03	22.65	117.4	0.2
9:50	293.25	7.0	275.01	7.37	0.42	8.63	0.08	22.60	113.6	0.2
9:55	293.25	8.0	274.32	7.38	0.42	8.57	0.09	22.64	114.1	0.2
10:00	293.24	9.75	273.41	7.38	0.42	8.50	0.03	22.67	113.6	0.2
10:05	293.23	11.0	273.96	7.38	0.42	8.51	0.03	22.60	113.3	0.2
10:10	293.24	12.0	273.35	7.38	0.42	8.52	0.02	22.00	113.6	0.2
10:15	Start sampling. Reduce flow to 100 mL/min to fill VOAs. Return to 250 mL/min for ambers.									

Red Hill Groundwater Sampling Log

WELL NO. **RHMW05** LOCATION: Inside Tunnel PROJECT NO. 60571032

DATE: 2020-04-21 TIME: 0910 CLIMATIC CONDITIONS: Inside Tunnel

Depth to groundwater		Final Depth	Depth to Product	Depth to bottom		Purge			
Previous (ft btoc)	Current (ft btoc)	(ft btoc)	(ft btoc)	Previous (ft btoc)	Current (ft btoc)	Flow rate (mL/min)	Start Time	Total Volume (L)	Battery Pack
*82.32	82.42	82.40	N/A	93	NM	230	0922	6	Deep cycle
**82.27	82.34								JCH 20020591018
Pump settings:				Pressure (PSI)		Discharge (sec)		Fill (sec)	
Previous/Actual:				45	45	25	25	35	35

Headspace VOCs:	0.2	ppm	Ambient VOCs	0.0	ppm
Headspace O_2:	0.0	%	Ambient O_2:	20.9	%
Headspace LEL:	0.0	%	Ambient LEL:	0.0	%
Ambient CO:	0.0	ppm	Ambient H_2S:	0.0	%

O/W Interface Probe Type/Water Level Meter: Heron / Solinst Serial Number: 01-5920 / N-1

Gas Detector Type: MultiRAE Serial Number: 4778

Water Quality Meter Type: Smart Troll Serial Number: 197259

Stabilization:+/- 0.2 ºC, +/- 3% conductivity, +/- 10% DO, +/- 0.1 pH, +/-10 mv ORP, turb=as low as possible (< 10 NTU ideal) for 3 consecutive readings following a min of 5 readings

Depth to water measured from outside casing (free fall). Measure to survey mark.

* 200' Oil/Water Interface Probe measurement

** 500' Calibrated Water Level Meter measurement (N-1)

SAMPLING EQUIPMENT: Dedicated bladder pump

APPEARANCE OF SAMPLE: COLOR: clear

SEDIMENT: none

ODOR/OTHER: none

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED: 16 Primary = 16 Total

VOAs	Amber	Poly
HCl: **4**	1-L: **2**	250 mL H2SO4: **1**
H2SO4: **2**	1-L (800 mL): **2**	250 mL HCl (brown): **1 filtered**
	500-mL: **3**	250 mL unpreserved: **1**

SAMPLE IDENTIFICATION NUMBER(S) **ERH 1051 (N)** **ERH 1050 (Trip Blank)**

DATE: 2020-04-21 TIME: Start: 1000 End: 1040 Start: 0930

DECONTAMINATION PROCEDURES: Alconox, DI Alconox, DI H2O, Isopropyl, and DI H2O wash

NOTES: none

SAMPLED BY: DH, KL, MM SAMPLES DELIVERED TO: APPL TRANSPORTER: FedEx

Red Hill Groundwater Sampling Log

WELL NO.	**RHMW05**		LOCATION:	Inside Tunnel			PROJECT NO.		60571032	
TIME	DTW**	LITERS REMOVED	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP (°C)	ORP (Mv)	SAL (psu)
0922					Water at surface					
0928	82.39	0.4	462.16	8.09	0.71	8.63	1.73	22.17	116.9	0.4
0932	82.39	0.8	461.86	7.86	0.71	8.59	1.26	21.99	101.2	0.4
0936	82.39	1.8	460.99	7.92	0.71	8.60	0.57	21.94	94.4	0.3
0940	82.41	2.7	460.95	7.96	0.71	8.59	0.30	21.98	91.5	0.3
0944	82.39	3.6	460.86	8.00	0.71	8.60	0.21	21.99	89.4	0.3
0948	82.39	4.5	460.91	8.02	0.71	8.61	0.09	21.92	87.7	0.3
1000					Start sampling					

Red Hill Groundwater Sampling Log

WELL NO. **RHMW06** LOCATION: Outside Tunnel PROJECT NO. 60571032

DATE: 2020-04-20 TIME: 9:55 CLIMATIC CONDITIONS: sunny, light winds

75°F, 73% humidity

Depth to groundwater		Final Depth	Depth to Product	Depth to bottom		Purge			
Previous (ft btoc)	Current (ft btoc)	(ft btoc)	(ft btoc)	Previous (ft btoc)	Current (ft btoc)	Flow rate (mL/min)	Start Time	Total Volume (L)	Nitrogen used
*240.37	240.42*								start: 1100
**240.28	240.26**	240.28	N/A	263.2	-	270	1019	11	end: 200
Pump settings:				Pressure (PSI)		Discharge (sec)		Fill (sec)	
Previous/Actual:				120	120	25	25	25	25

Headspace VOCs: 0.0 ppm Ambient VOCs: 0.0 ppm

O/W Interface Probe Type/Water Level Meter: Rental Heron/ Solinst N-2 Serial Number: Heron 01-5881 / Solinst N-2

Gas Detector Type: MiniRAE Serial Number: 592-914105

Water Quality Meter Type: In-Situ Smartroll MP Serial Number: 440279

Stabilization:+/- 0.2 ºC, +/- 3% conductivity, +/- 10% DO, +/- 0.1 pH, +/-10 mv ORP, turb=as low as possible (< 10 NTU ideal) for 3 consecutive readings following a min of 5 readings

Depth to water measured from outside casing (free fall). Measure to survey mark.

* 500' Oil/Water Interface Probe measurement

** 1000' Calibrated Water Level Meter measurement (N-2)

SAMPLING EQUIPMENT: Dedicated bladder pump

APPEARANCE OF SAMPLE: COLOR: clear

SEDIMENT: none

ODOR/OTHER: none

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED: 16 Primary = 16 Total

VOAs	Amber	Poly
HCl: **4**	1-L: **2**	250 mL H2SO4: **1**
H2SO4: **2**	1-L (800 mL): **2**	250 mL HCl (brown): **1 filtered**
	500-mL: **3**	250 mL unpreserved: **1**

SAMPLE IDENTIFICATION NUMBER(S) **ERH 1053 (N)** **ERH 1052 (Trip Blank)**

DATE: 2020-04-20 TIME: Start: 1105 End: 1136 Start: 1025

DECONTAMINATION PROCEDURES: Alconox, DI Alconox, DI H2O, Isopropyl, and DI H2O wash

NOTES: Standpipe measurement with N-2 = 240.36

SAMPLED BY: CE, RS, GM SAMPLES DELIVERED TO: APPL TRANSPORTER: FedEx

Red Hill Groundwater Sampling Log

WELL NO.	**RHMW06**		LOCATION:	Outside Tunnel			PROJECT NO.			60571032
TIME	DTW**	LITERS REMOVED	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP (°C)	ORP (Mv)	SAL (psu)
1024					Water at surface					
1027	240.29	-	949.47	7.15	1.46	6.92	0.20	26.65	73.2	0.8
1032	240.30	3	1003.53	6.96	1.55	6.94	0.04	23.52	65.5	0.8
1037	240.29	3.75	1007.59	6.95	1.55	6.83	0.10	23.38	60.6	0.8
1042	240.29	5	1008.64	6.95	1.55	6.83	0.02	23.36	56.9	0.8
1047	240.29	7	1008.69	6.95	1.55	6.70	0.03	23.43	54.2	0.8
1052	240.29	8	1009.37	6.95	1.55	6.67	0.02	23.34	52.8	0.8
1057	240.30	11	1009.51	6.95	1.55	6.64	0.02	23.43	51.5	0.8
1105	tart sampling. Reduce flow rate to 100 mL/min for VOAs. Returned to ~250 mL/min for amber samplin									

Red Hill Groundwater Sampling Log

WELL NO. **RHMW07** LOCATION: Outside Tunnel PROJECT NO. 60571032

DATE: 2020-04-20 TIME: 7:20 CLIMATIC CONDITIONS: sunny, light wind

72°F, 73% humidity

Depth to groundwater		Final Depth	Depth to Product	Depth to bottom		Purge			
Previous (ft btoc)	Current (ft btoc)	(ft btoc)	(ft btoc)	Previous (ft btoc)	Current (ft btoc)	Flow rate (mL/min)	Start Time	Total Volume (L)	Nitrogen used
*197.57	*197.50								start:1500
**197.50	**197.45	197.91	NA	217.76	-	200	7:48	6.5	end:1100
Pump settings:				Pressure (PSI)		Discharge (sec)		Fill (sec)	
Previous/Actual:				95	95	30	30	30	30

Headspace VOCs: 0.0 ppm Ambient VOCs: 0.0 ppm

O/W Interface Probe Type/Water Level Meter: Rental Heron/ Solinst N-2 Serial Number: Heron 01-5881/Solinst N-2

Gas Detector Type: MiniRAE Serial Number: 592-914105

Water Quality Meter Type: In-situ Smartroll MP Serial Number: 440279

Stabilization:+/- 0.2 ºC, +/- 3% conductivity, +/- 10% DO, +/- 0.1 pH, +/-10 mv ORP, turb=as low as possible (< 10 NTU ideal) for 3 consecutive readings following a min of 5 readings

Depth to water measured from outside casing (free fall). Measure to survey mark.

* 500' Oil/Water Interface Probe measurement

** 1000' Calibrated Water Level Meter measurement (N-2)

SAMPLING EQUIPMENT: Dedicated bladder pump

APPEARANCE OF SAMPLE: COLOR: clear

SEDIMENT: none

ODOR/OTHER: none

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED: 16 Primary = 16 Total

VOAs	Amber	Poly
HCl: **4**	1-L: **2**	250 mL H2SO4: **1**
H2SO4: **2**	1-L (800 mL): **2**	250 mL HCl (brown): **1 filtered**
	500-mL: **3**	250 mL unpreserved: **1**

SAMPLE IDENTIFICATION NUMBER(S) **ERH 1055 (N)** **ERH 1054 (Trip Blank)**

DATE: 2020-04-20 TIME: Start: 8:35 End: 9:19 Start: 8:10

DECONTAMINATION PROCEDURES: Alconox, DI Alconox, DI H2O, Isopropyl, and DI H2O wash

NOTES: Standpipe measurement with N-2 = 197.49 at 07:26

SAMPLED BY: CE, RS, GM SAMPLES DELIVERED TO: APPL TRANSPORTER: FedEx

Red Hill Groundwater Sampling Log

WELL NO.	RHMW07		LOCATION:	Outside Tunnel			PROJECT NO.			60571032
TIME	DTW**	LITERS REMOVED	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP (°C)	ORP (Mv)	SAL (psu)
7:50					Water at surface					
7:59	197.67	1	1101.76	7.31	1.70	7.96	0.47	24.38	122	0.9
8:05	197.7	2.5	1118.51	7.13	1.72	7.47	0.11	23.94	85.6	0.9
8:10	197.74	3	1121.06	7.06	1.72	5.59	0.10	23.91	72.4	0.9
8:15	197.73	4	1120.63	7.05	1.72	5.42	0.13	23.89	66.0	0.9
8:20	197.8	4.5	1114.68	7.05	1.71	4.87	0.02	23.89	60.7	0.9
8:25	197.79	5.5	1106.97	7.04	1.70	4.57	0.05	23.97	57.0	0.9
8:30	197.84	6.5	1102.63	7.05	1.70	4.42	0.04	23.88	54.7	0.9
8:35	Collect sample. Flow rate at approx 100 mL/min for VOAs. Increased flow rate to 150 mL/min									

Red Hill Groundwater Sampling Log

WELL NO. **RHMW08** LOCATION: Outside Tunnel PROJECT NO. 60571032

DATE: 2020-04-20 TIME: 1230 CLIMATIC CONDITIONS: sunny, 80°F, 62% humidity

Depth to groundwater		Final Depth	Depth to Product	Depth to bottom		Purge			
Previous (ft btoc)	Current (ft btoc)	(ft btoc)	(ft btoc)	Previous (ft btoc)	Current (ft btoc)	Flow rate (mL/min)	Start Time	Total Volume (L)	Nitrogen used
*261.69	*291.70								start: 2300
**291.61	**291.60	**291.68	N/A	311.3	-	250	1240	24.5	end: 400
Pump settings:				Pressure (PSI)		Discharge (sec)		Fill (sec)	
Previous/Actual:				140	140	30	30	26	26

Headspace VOCs: 0.0 ppm Ambient VOCs: 0.0 ppm

O/W Interface Probe Type/Water Level Meter: Rental Heron/ Solinst N-2 Serial Number: Heron 01-5881/Solinst N-2

Gas Detector Type: MiniRAE Serial Number: 592-914105

Water Quality Meter Type: In-situ Smartroll MP Serial Number: 440279

Stabilization:+/- 0.2 ºC, +/- 3% conductivity, +/- 10% DO, +/- 0.1 pH, +/-10 mv ORP, turb=as low as possible (< 10 NTU ideal) for 3 consecutive readings following a min of 5 readings

Depth to water measured from outside casing (free fall). Measure to survey mark.

* 500' Oil/Water Interface Probe measurement

** 1000' Calibrated Water Level Meter measurement (N-2)

SAMPLING EQUIPMENT: Dedicated bladder pump

APPEARANCE OF SAMPLE: COLOR: clear

SEDIMENT: none

ODOR/OTHER: none

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED: 16 Primary = 16 Total

VOAs	Amber	Poly
HCl: **4**	1-L: **2**	250 mL H2SO4: **1**
H2SO4: **2**	1-L (800 mL): **2**	250 mL HCl (brown): **1 filtered**
	500-mL: **3**	250 mL unpreserved: **1**

SAMPLE IDENTIFICATION NUMBER(S) **ERH 1057 (N)** **ERH 1056 (Trip Blank)**

DATE: 2020-04-20 TIME: Start: 1445 End: 1528 Start: 1255

DECONTAMINATION PROCEDURES: Alconox, DI Alconox, DI H2O, Isopropyl, and DI H2O wash

NOTES: Faint odor from adit entrance

SAMPLED BY: CE, RS, GM SAMPLES DELIVERED TO: APPL TRANSPORTER: FedEx

Red Hill Groundwater Sampling Log

WELL NO.	**RHMW08**		LOCATION:	Outside Tunnel			PROJECT NO.		60571032	
TIME	DTW**	LITERS REMOVED	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP (°C)	ORP (Mv)	SAL (psu)
1248	Water at surface									
1252	291.73	1.5	479.52	8.13	0.74	6.68	0.2	29.31	20.0	0.4
1257	-	-	507.70	8.10	0.79	7.49	-	25.03	28.4	0.4
1258	paused monitoring for spot check on ORP > 218.72 mV									
1306	291.71	5.5	497.61	8.02	0.77	5.69	1.15	25.74	117.2	0.4
1311	291.72	-	510.41	8.01	0.79	5.3	0.89	24.37	52.3	0.4
1316	291.72	8.5	511.38	8.02	0.79	5.26	0.78	24.11	47.1	0.4
1321	291.75	9.75	510.09	8.03	0.79	4.93	0.71	24.06	44.0	0.4
1326	291.72	11	508.87	8.02	0.78	7.67	0.52	24.10	42.3	0.4
1331	291.71	13	507.88	8.02	0.78	4.79	-	24.02	41.3	0.4
1335	stopped parameters to calibrate: pH 10 => 9.98, pH 7 => 7.12, pH 4 => 4.07, ORP 228 => 219.7, Sp. Cond 4490 => 4444									
1354	Begin purging after calibration									
1410	291.73	17	518.16	7.85	0.80	6.17	0.38	24.36	59.7	0.4
1415	291.73	18.5	517.29	7.85	0.79	6.30	0.35	24.18	54.5	0.4
1420	291.74	19.5	514.17	7.85	0.79	6.31	0.38	24.10	50.9	0.4
1425	291.74	21	513.23	7.85	0.79	5.48	0.30	24.11	48.6	0.4
1430	291.74	22	511.45	7.85	0.79	4.50	0.29	24.09	45.4	0.4
1435	291.74	23.25	509.58	7.86	0.78	4.47	0.28	24.06	43.4	0.4
1440	291.73	24.5	507.98	7.86	0.78	4.39	0.28	24.08	42.6	0.4
1445	Start sampling. Lower flow rate to 100 mL/min. Returned to approx 250 mL/min for ambers.									

Red Hill Groundwater Sampling Log

WELL NO. **RHMW09** LOCATION: Outside Tunnel PROJECT NO. 60571032

DATE: 2020-04-21 TIME: 1102 CLIMATIC CONDITIONS: mostly cloudy, 79°F, 67% humidity

Depth to groundwater		Final Depth	Depth to Product	Depth to bottom		Purge			
Previous (ft btoc)	Current (ft btoc)	(ft btoc)	(ft btoc)	Previous (ft btoc)	Current (ft btoc)	Flow rate (mL/min)	Start Time	Total Volume (L)	Nitrogen used
*376.92	*376.96								start: 2000
**376.82	**376.84	376.85	N/A	396.69	-	300	1115	13	end: 200
Pump settings:				Pressure (PSI)		Discharge (sec)		Fill (sec)	
Previous/Actual:				180	180	40	40	40	40

Headspace VOCs: 0.0 ppm Ambient VOCs: 0.0 ppm

O/W Interface Probe Type/Water Level Meter: Rental Heron/ Solinst N-2 Serial Number: Heron 01-5881/Solinst N-2

Gas Detector Type: MiniRAE Serial Number: 592-914105

Water Quality Meter Type: In-situ Smartroll MP Serial Number: 440279

Stabilization:+/- 0.2 ºC, +/- 3% conductivity, +/- 10% DO, +/- 0.1 pH, +/-10 mv ORP, turb=as low as possible (< 10 NTU ideal) for 3 consecutive readings following a min of 5 readings

Depth to water measured from outside casing (free fall). Measure to survey mark.

* 500' Oil/Water Interface Probe measurement

** 1000' Calibrated Water Level Meter measurement (N-2)

SAMPLING EQUIPMENT: Dedicated bladder pump

APPEARANCE OF SAMPLE: COLOR: clear

SEDIMENT: none

ODOR/OTHER: none

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED: 16 Primary = 16 Total

VOAs	Amber	Poly
HCl: **4**	1-L: **2**	250 mL H2SO4: **1**
H2SO4: **2**	1-L (800 mL): **2**	250 mL HCl (brown): **1 filtered**
	500-mL: **3**	250 mL unpreserved: **1**

SAMPLE IDENTIFICATION NUMBER(S) **ERH 1059 (N)** **ERH 1058 (Trip Blank)**

DATE: 2020-04-21 TIME: Start: 1220 End: 1256 Start: 1130

DECONTAMINATION PROCEDURES: Alconox, DI Alconox, DI H2O, Isopropyl, and DI H2O wash

NOTES: None

SAMPLED BY: CE, RS, GM SAMPLES DELIVERED TO: APPL TRANSPORTER: FedEx

Red Hill Groundwater Sampling Log

WELL NO.	**RHMW09**		LOCATION:	Outside Tunnel			PROJECT NO.		60571032	
TIME	DTW**	LITERS REMOVED	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP (°C)	ORP (Mv)	SAL (psu)
1124					Water at surface					
1135	376.85	-	216.54	7.91	0.33	8.18	0.32	25.15	67.7	0.2
1140	376.85	4.5	217.55	7.65	0.33	8.15	0.05	24.20	63.2	0.2
1145	376.86	5.75	219.21	7.64	0.33	8.42	0.04	24.44	62.4	0.2
1150	376.86	7.5	217.82	7.57	0.34	8.64	-	24.53	60.5	0.2
1155	376.86	8.5	217.72	7.55	0.34	8.61	0.03	24.23	58.9	0.2
1200	376.86	9	217.49	7.55	0.33	8.22	0.02	24.17	58.8	0.2
1205	376.86	10.25	217.65	7.54	0.34	8.61	0.00	24.15	57.6	0.2
1210	376.86	11.25	217.52	7.54	0.33	8.37	0.02	24.03	57.4	0.2
1215	376.86	13	219.12	7	0.33	8.30	0.03	24.18	57.8	0.2
1220	Start sampling. Reduce flow to 100 mL/min. Resumed flow at approx 300 mL/min for ambers.									

Red Hill Groundwater Sampling Log

WELL NO. **RHMW10** LOCATION: Outside Tunnel PROJECT NO. 60571032

DATE: 2020-04-21 TIME: 7:40 CLIMATIC CONDITIONS: few clouds, 71°F, 81% humidity

Depth to groundwater		Final Depth	Depth to Product	Depth to bottom		Purge			
Previous (ft btoc)	Current (ft btoc)	(ft btoc)	(ft btoc)	Previous (ft btoc)	Current (ft btoc)	Flow rate (mL/min)	Start Time	Total Volume (L)	Nitrogen used
*476.95	*476.96	**476.85	N/A	497.37	-	300	8:08	14	start: 2300/2600
**476.82	**476.83								end: empty/2000
Pump settings:				Pressure (PSI)		Discharge (sec)		Fill (sec)	
Previous/Actual:				230	230	40	40	40	40

Headspace VOCs: 0.0 ppm Ambient VOCs: 0.0 ppm

O/W Interface Probe Type/Water Level Meter: Rental Heron/Solinst Serial Number: Heron 01-5881/Solinst N-2

Gas Detector Type: MiniRAE 3000 Serial Number: 592-914105

Water Quality Meter Type: In-situ Smartroll MP Serial Number: 440279

Stabilization:+/- 0.2 ºC, +/- 3% conductivity, +/- 10% DO, +/- 0.1 pH, +/-10 mv ORP, turb=as low as possible (< 10 NTU ideal) for 3 consecutive readings following a min of 5 readings

Depth to water measured from outside casing (free fall). Measure to survey mark.

* 500' Oil/Water Interface Probe measurement

** 1000' Calibrated Water Level Meter measurement (N-2)

SAMPLING EQUIPMENT: Dedicated bladder pump

APPEARANCE OF SAMPLE: COLOR: clear

SEDIMENT: none

ODOR/OTHER: none

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED: 16 Primary = 16 Total

VOAs	Amber	Poly
HCl: **4**	1-L: **2**	250 mL H2SO4: **1**
H2SO4: **2**	1-L (800 mL): **2**	250 mL HCl (brown): **1 filtered**
	500-mL: **3**	250 mL unpreserved: **1**

SAMPLE IDENTIFICATION NUMBER(S) **ERH 1061 (N)** **ERH 1060 (Trip Blank)**

DATE: 2020-04-21 TIME: Start: 9:15 End: 9:48 Start: 8:30

DECONTAMINATION PROCEDURES: Alconox, DI Alconox, DI H2O, Isopropyl, and DI H2O wash

NOTES: None

SAMPLED BY: CE, RS, GM SAMPLES DELIVERED TO: APPL TRANSPORTER: FedEx

Red Hill Groundwater Sampling Log

WELL NO.	**RHMW10**		LOCATION:	Outside Tunnel			PROJECT NO.			60571032
TIME	DTW**	LITERS REMOVED	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP (°C)	ORP (Mv)	SAL (psu)
8:20					Water at surface					
8:30	476.83	4	1.95	7.63	0.30	7.83	0.04	24.59	145.8	0.1
8:35	476.83	5	188.02	7.76	0.29	8.41	0.05	23.74	91.0	0.1
8:40	-	6	187.16	7.57	0.29	7.75	-	23.75	86.3	0.1
8:45	476.84	8	187.67	7.52	0.29	8.40	0.03	23.69	77.3	0.1
8:50	476.83	8.75	188.49	7.51	0.29	8.43	0.07	23.52	75.4	0.1
8:55	476.83	10	187.91	7.52	0.29	8.24	0.00	23.50	71.7	0.1
9:00	476.83	11.5	187.83	7.51	0.29	8.19	0.00	23.56	71.6	0.1
9:05	476.83	12	188.19	7.51	0.29	8.16	0.04	23.50	69.9	0.1
9:10	476.83	14	188.19	7.51	0.29	8.12	0.00	23.43	69.2	0.1
9:15	Begin sampling. Lowered to 100 mL/min for VOAs. Resumed flow at approx 300 mL/min for ambers.									

Red Hill Groundwater Sampling Log

WELL NO. **HDMW2253-03** LOCATION: Outside Tunnel PROJECT NO. 60571032

DATE: 2020-04-23 TIME: 8:00 CLIMATIC CONDITIONS: sunny/overcast, 79°F, light wind, 62% humidity

Depth to groundwater		Final Depth	Depth to Product	Depth to bottom		Purge			
Previous (ft btoc)	Current (ft btoc)	(ft btoc)	(ft btoc)	Previous (ft btoc)	Current (ft btoc)	Flow rate (mL/min)	Start Time	Total Volume (L)	Nitrogen used
*207.03	[a]*206.89								start:1700
**207.02	**206.85	**206.82	N/A	1575	N/A	250	8:30	16.25	end: 900
Pump settings:				Pressure (PSI)		Discharge (sec)		Fill (sec)	
Previous/Actual:				145	145	30	30	30	30

Headspace VOCs: 0.0 ppm Ambient VOCs: 0.0 ppm

O/W Interface Probe Type/Water Level Meter: Heron dipper T/Solinst Serial Number: Heron 1042-T/Solinst N-2

Gas Detector Type: MiniRAE Serial Number: 592-914105

Water Quality Meter Type: In-situ Smartroll MP Serial Number: 440279

Stabilization:+/- 0.2 ºC, +/- 3% conductivity, +/- 10% DO, +/- 0.1 pH, +/-10 mv ORP, turb=as low as possible (< 10 NTU ideal) for 3 consecutive readings following a min of 5 readings

Depth to water measured from outside casing (free fall). Measure to survey mark.

* 500' Oil/Water Interface Probe measurement

** 1000' Calibrated Water Level Meter measurement (N-2)

SAMPLING EQUIPMENT: Dedicated bladder pump

APPEARANCE OF SAMPLE: COLOR: mostly clear (started slightly rust colored)

SEDIMENT: none

ODOR/OTHER: none

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED: 16 Primary = 16 Total + 1 DOH sample

VOAs	Amber	Poly
HCl: **4**	1-L: **2**	250 mL H2SO4: **1**
H2SO4: **2**	1-L (800 mL): **2**	250 mL HCl (brown): **1 filtered**
	500-mL: **3**	250 mL unpreserved: **1**

SAMPLE IDENTIFICATION NUMBER(S) **ERH 1065 (N)** **ERH 1064 (Trip Blank)**

DATE: 2020-04-23 TIME: Start: 9:30 End: 10:25 Start: 8:30

DECONTAMINATION PROCEDURES: Alconox, DI Alconox, DI H2O, Isopropyl, and DI H2O wash

NOTES: [a] = reading taken before pump deployment during event.

> Collect additional 40mL VOA for DOH isotope

SAMPLED BY: GM, DM, RS SAMPLES DELIVERED TO: APPL TRANSPORTER: FedEx

Red Hill Groundwater Sampling Log

WELL NO.	**HDMW2253-03**		LOCATION:	Outside Tunnel			PROJECT NO.		60571032	
TIME	DTW**	LITERS REMOVED	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP (°C)	ORP (Mv)	SAL (psu)
8:40					Water at surface					
8:51	206.82	3	307.97	6.46	0.47	4.62	42.9	24.19	-10.3	0.2
8:55	206.82	4.5	311.96	6.46	0.48	3.53	42.9	23.18	-7.8	0.2
9:00	206.82	5.9	311.77	6.47	0.48	2.97	39.8	23.07	-6.4	0.2
9:05	206.83	7.1	311.30	6.46	0.48	2.62	38.6	23.03	-3.4	0.2
9:10	206.84	8.2	311.38	6.46	0.48	2.40	34.1	23.02	-0.6	0.2
9:15	206.82	9.7	311.79	6.47	0.48	1.98	34.5	23.03	-2.6	0.2
9:20	206.84	10.9	311.53	6.47	0.48	1.83	34.3	23.02	-2.9	0.2
9:22					Paused purge to re-calibrate ORP sensor. Calibrated to 220.1					
9:28					Purging resumed					
9:30	206.83	13	310.13	6.41	0.48	2.07	34.0	23.88	1.97	0.2
9:35	206.83	14	312.31	6.44	0.48	1.38	29.8	23.25	3.0	0.2
9:40	206.83	15.5	312.20	6.44	0.48	1.19	28.2	23.13	1.2	0.2
9:45	206.83	16.25	312.11	6.45	0.48	1.10	27.3	23.19	0.7	0.2
9:47	Stop purge. Reduce flow rate to 150 mL/min for VOA collection. Restore flow rate to 250 mL/min									

Westbay Well Groundwater Sampling

Field Data Sheet

Project: 60571032 Red Hill
Monitoring Well No.: RHMW11
Sampling Zone No(s).: Zone 5
Sampled by: BM, TV, EB

Ambiant VOCs (ppm): 0.0
Headspace VOCs (ppm): 0.0
Start Time: 10:33 Atm. Reading: 14.71
End Time: 15:10 Atm. Reading: 14.75

Date: 2020-04-20
Sheet: 1 of 1
Sampling Equipment: EMS 5285

Time	Port No.	Run No.	Surface Function Tests (probe in flushing collar)						Position Sampler					Sample Collection Checks (probe located at sampling zone in Westbay casing)								Comments (volume recovered)
			Shoe Out	Close Valve	Check Vacuum	Open Valve	Evacuate Bottles (3-5 psi)	Close Valve	Shoe In	Arm In	Locate Port	Arm Out	Land Probe	Pressure in Westbay (psi)	Shoe Out	Zone Pressure (psi)	Open Valve	Zone Pressure (psi)	Close Valve	Shoe In	Pressure in Westbay (psi)	
10:36	5	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	74.34	✓	55.61	✓	55.62	✓	✓	74.32	parameters
11:02	5	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	74.31	✓	55.59	✓	55.60	✓	✓	74.31	VOAs, SVOCs
11:23	5	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	74.28	✓	55.60	✓	55.60	✓	✓	74.24	SVOCs, PID = 0.0 ppm
11:45	5	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	74.22	✓	55.60	✓	55.60	✓	✓	74.19	SVOCs, PAHs
12:04	5	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	74.17	✓	55.56	✓	55.58	✓	✓	74.18	parameters
12:57	5	6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	74.12	✓	55.57	✓	55.58	✓	✓	74.13	vaccum wouldn't hold, PAHs
13:15	5	7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	74.08	✓	55.57	✓	55.59	✓	✓	74.14	TPHd/o
13:47	5	8	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	74.09	✓	55.58	✓	55.59	✓	✓	74.07	TPHd/o and poly, PID = 0.0 ppm
14:07	5	9	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	74.00	✓	55.57	✓	55.60	✓	✓	74.03	poly
14:26	5	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	74.09	✓	55.56	✓	55.57	✓	✓	74.01	Fe poly, PID = 0.0 ppm
14:49	5	11	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	74.00	✓	55.56	✓	55.60	✓	✓	73.98	parameters

TIME	Liters Removed	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP. (°C)	ORP (mV)	SAL (psu)	Comments
11:04	1	213.09	7.43	0.32	1.05	2.67	32.19	169.6	0.2	
12:29	5	243.07	8.04	0.37	1.80	0.47	29.47	69.0	0.2	
15:17	11	238.63	7.37	0.37	0.55	0.35	31.61	68.3	0.2	

Sample Identification Numbers: ERH1070 (N) & ERH1069 (TB) at 09:15
Sample Start Time: 11:20 End Time: 14:50
Appearance of Sample: COLOR: None
SEDIMENT: None
OTHER: N/A
Notes: None

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED:

16 Primary

VOAs	**Amber**	**Poly**
HCl: **4**	1-L: **2**	250 mL H2SO4: **1**
H2SO4: **2**	500-mL: **3**	250 mL HCl (brown): **1 filtered**
	1-L (800 mL): **2**	250 mL unpres.: **1**

Westbay Well Groundwater Sampling

Field Data Sheet

Time	Port No.	Run No.	Surface Function Tests (probe in flushing collar)						Position Sampler					Sample Collection Checks (probe located at sampling zone in Westbay casing)								Comments (volume recovered)
			Shoe Out	Close Valve	Check Vacuum	Open Valve	Evacuate Bottles (3-5 psi)	Close Valve	Shoe In	Arm In	Locate Port	Arm Out	Land Probe	Pressure in Westbay (psi)	Shoe Out	Zone Pressure (psi)	Open Valve	Zone Pressure (psi)	Close Valve	Shoe In	Pressure in Westbay (psi)	

Westbay Well Groundwater Sampling

Field Data Sheet

Project: 60571032 Red Hill
Monitoring Well No.: RHMW13
Sampling Zone No(s).: Zone 3
Sampled by: EB, BM, TV

Ambiant VOCs (ppm): 0.0
Headspace VOCs (ppm): 0.0
Start Time: 8:13 Atm. Reading: 14.71
End Time: 12:13 Atm. Reading: 14.70

Date: 2020-04-23
Sheet: 1 of 1
Sampling Equipment: EMS 5285

Time	Port No.	Run No.	Surface Function Tests (probe in flushing collar)						Position Sampler					Sample Collection Checks (probe located at sampling zone in Westbay casing)								Comments (volume recovered)
			Shoe Out	Close Valve	Check Vacuum	Open Valve	Evacuate Bottles (3-5 psi)	Close Valve	Shoe In	Arm In	Locate Port	Arm Out	Land Probe	Pressure in Westbay (psi)	Shoe Out	Zone Pressure (psi)	Open Valve	Zone Pressure (psi)	Close Valve	Shoe In	Pressure in Westbay (psi)	
8:14	3	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	28.30	✓	39.7	✓	39.73	✓	✓	28.34	parameters
8:44	3	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	28.28	✓	39.70	✓	39.72	✓	✓	28.32	VOAs, SVOCs, PID = 5.7 ppm
9:13	3	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	28.24	✓	39.72	✓	39.73	✓	✓	28.26	SVOCs, PID = 0.0 ppm
9:30	3	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	28.31	✓	39.74	✓	39.73	✓	✓	28.30	SVOCs, PAHs, PID = 0.0 ppm
9:49	3	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	28.30	✓	39.74	✓	39.73	✓	✓	28.28	PAHs, PID = 0.0 ppm
10:09	3	6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	28.24	✓	39.75	✓	39.70	✓	✓	28.28	PAHs, TPHd/o, PID = 0.0 ppm
10:33	3	7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	28.24	✓	39.72	✓	39.73	✓	✓	28.25	parameters
10:52	3	8	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	28.27	✓	39.73	✓	39.75	✓	✓	28.28	TPHd/o, poly, PID = 0.0 ppm
11:13	3	9	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	28.25	✓	39.72	✓	39.70	✓	✓	28.26	TPHd/o, poly
11:32	3	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	28.27	✓	39.74	✓	39.71	✓	✓	28.25	polys, Fe poly
11:51	3	11	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	28.22	✓	39.71	✓	39.73	✓	✓	28.20	parameters

TIME	Liters Removed	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP. (°C)	ORP (mV)	SAL (psu)	Comments
8:41	1	103.23	7.01	0.16	0.75	1.15	23.34	120.7	0.1	
10:57	7	173.83	7.99	0.27	1.42	1.05	25.62	138.2	0.1	
12:18	11	188.04	7.93	0.29	2.35	0.22	27.64	125.5	0.1	

Sample Identification Numbers: ERH1076 (N) & ERH1075 (TB)
Sample Start Time: 9:12 End Time: 12:02
Appearance of Sample: COLOR: clear
SEDIMENT: none
OTHER: N/A

Sampling Order:

Notes: ERH1075 at 08:25

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED:

19 Primary

VOAs	**Amber**	**Poly**
HCl: **4**	1-L: **2**	250 mL H2SO4: **1**
Unpres: **3**	500-mL: **3**	250 mL HCl (brown): **1 filtered**
H2SO4: **2**	1-L (800 mL): **2**	250 mL unpres.: **1**

Westbay Well Groundwater Sampling

Field Data Sheet

Time	Port No.	Run No.	Surface Function Tests (probe in flushing collar)						Position Sampler					Sample Collection Checks (probe located at sampling zone in Westbay casing)								Comments (volume recovered)
			Shoe Out	Close Valve	Check Vacuum	Open Valve	Evacuate Bottles (3-5 psi)	Close Valve	Shoe In	Arm In	Locate Port	Arm Out	Land Probe	Pressure in Westbay (psi)	Shoe Out	Zone Pressure (psi)	Open Valve	Zone Pressure (psi)	Close Valve	Shoe In	Pressure in Westbay (psi)	

Westbay Well Groundwater Sampling

Field Data Sheet

Project: 60571032 Red Hill
Monitoring Well No.: RHMW13
Sampling Zone No(s).: Zone 4
Sampled by: TV, BM, DH

Ambiant VOCs (ppm): 0.0 / 0.3
Headspace VOCs (ppm): 0.0
Start Time: 8:47 Atm. Reading: 14.67
End Time: 13:41 Atm. Reading: 14.69

Date: 2020-04-27
Sheet: 1 of 1
Sampling Equipment: EMS 5285

Time	Port No.	Run No.	Surface Function Tests (probe in flushing collar)						Position Sampler					Sample Collection Checks (probe located at sampling zone in Westbay casing)								Comments (volume recovered)
			Shoe Out	Close Valve	Check Vacuum	Open Valve	Evacuate Bottles (3-5 psi)	Close Valve	Shoe In	Arm In	Locate Port	Arm Out	Land Probe	Pressure in Westbay (psi)	Shoe Out	Zone Pressure (psi)	Open Valve	Zone Pressure (psi)	Close Valve	Shoe In	Pressure in Westbay (psi)	
8:50	4	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.78	✓	21.04	✓	21.10	✓	✓	14.76	parameters
9:11	4	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.88	✓	21.12	✓	21.10	✓	✓	14.92	VOAs, SVOCs, PID = 6.3 ppm
9:35	4	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.80	✓	21.07	✓	21.07	✓	✓	14.88	SVOCs, PID = 1.2 ppm
9:54	4	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.80	✓	21.09	✓	21.10	✓	✓	14.81	SVOCs, PID = 0.0 ppm
10:16	4	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.80	✓	21.11	✓	21.10	✓	✓	14.90	SVOCs, PAHs, PID = 0.0 ppm
10:37	4	6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.79	✓	21.11	✓	21.08	✓	✓	14.89	parameters
11:05	4	7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.8	✓	21.10	✓	21.12	✓	✓	14.86	PAHs, PID = 0.0 ppm
11:26	4	8	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.88	✓	21.07	✓	21.11	✓	✓	14.86	TPHd/o, PID = 0.0 ppm
11:50	4	9	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.8	✓							valve open, bring up to decon
12:19	4	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.76	✓	21.09	✓	21.10	✓	✓	14.86	TPHd/o, poly, PID = 0.0 ppm
12:41	4	11	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.78	✓	21.10	✓	21.11	✓	✓	14.87	polys, PID = 0.0 ppm
13:01	4	12	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.74	✓	21.10	✓	21.10	✓	✓	14.85	polys, PID = 0.0 ppm
13:25	4	13	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.78	✓	21.10	✓	21.10	✓	✓	14.82	parameters

TIME	Liters Removed	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP. (°C)	ORP (mV)	SAL (psu)	Comments
9:15	1	156.38	7.44	0.33	0.84	1.20	24.38	163.4	0.2	
11:14	6	224.07	7.89	0.22	0.77	1.67	28.99	135.8	0.2	
13:49	13	135.20	8.02	0.28	0.79	1.60	28.15	108.8	0.1	

Sample Identification Numbers: ERH1078 (N) & ERH1077 (TB)
Sample Start Time: 9:30 End Time: 13:29
Appearance of Sample: COLOR: clear
SEDIMENT: none
OTHER: No odor

Sampling Order:

Notes: ERH1077 at 08:08

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED:

19 Primary

VOAs	**Amber**	**Poly**
HCl: **4**	1-L: **2**	250 mL H2SO4: **1**
Unpres: **3**	500-mL: **3**	250 mL HCl (brown): **1 filtered**
H2SO4: **2**	1-L (800 mL): **2**	250 mL unpres.: **1**

Westbay Well Groundwater Sampling

Field Data Sheet

Time	Port No.	Run No.	Surface Function Tests (probe in flushing collar)						Position Sampler					Sample Collection Checks (probe located at sampling zone in Westbay casing)								Comments (volume recovered)
			Shoe Out	Close Valve	Check Vacuum	Open Valve	Evacuate Bottles (3-5 psi)	Close Valve	Shoe In	Arm In	Locate Port	Arm Out	Land Probe	Pressure in Westbay (psi)	Shoe Out	Zone Pressure (psi)	Open Valve	Zone Pressure (psi)	Close Valve	Shoe In	Pressure in Westbay (psi)	

Westbay Well Groundwater Sampling

Field Data Sheet

Project: 60571032 Red Hill
Monitoring Well No.: RHMW13
Sampling Zone No(s).: Zone 5
Sampled by: DH, BM, TV

Ambiant VOCs (ppm): 0.0
Headspace VOCs (ppm): 0.0
Start Time: 7:52 Atm. Reading: 14.72
End Time: 17:24 Atm. Reading: 14.68

Date: 2020-04-28
Sheet: 1 of 2
Sampling Equipment: EMS 5285

Time	Port No.	Run No.	Surface Function Tests (probe in flushing collar)						Position Sampler					Sample Collection Checks (probe located at sampling zone in Westbay casing)								Comments (volume recovered)
			Shoe Out	Close Valve	Check Vacuum	Open Valve	Evacuate Bottles (3-5 psi)	Close Valve	Shoe In	Arm In	Locate Port	Arm Out	Land Probe	Pressure in Westbay (psi)	Shoe Out	Zone Pressure (psi)	Open Valve	Zone Pressure (psi)	Close Valve	Shoe In	Pressure in Westbay (psi)	
9:30	5a	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.80	✓	15.46	✓	15.44	✓	✓	14.87	parameters
9:55	5a	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.81	✓	15.47	✓	15.50	✓	✓	14.91	VOAs, PID = 9.7 ppm
10:17	5a	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.81	✓	15.44	✓	15.51	✓	✓	14.90	VOAs, SVOCs, PID = 0.0 ppm
10:38	5a	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.79	✓	15.45	✓	15.46	✓	✓	14.88	SVOCs, PID = 0.0 ppm
11:00	5a	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.81	✓	15.44	✓	15.51	✓	✓	14.88	SVOCs, PID = 0.0 ppm
11:27	5a	6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.80	✓	15.48	✓	15.50	✓	✓	14.90	SVOCs, PID = 0.0 ppm
11:57	5a	7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.79	✓	15.43	✓	15.50	✓	✓	14.87	SVOCs, PID = 0.0 ppm
12:19	5a	8	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.83	✓	15.45	✓	15.50	✓	✓	14.88	SVOCSs, PAHs, PID = 0.0 ppm
12:42	5a	9	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.83	✓	14.48	✓	15.53	✓	✓	14.90	parameters
13:06	5a	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.80	✓	15.41	✓	15.52	✓	✓	14.90	PAHs, PID = 0.0 ppm
13:31	5a	11	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.83	✓	15.44	✓	15.50	✓	✓	14.90	PAHs, PID = 0.0 ppm
13:54	5a	12	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.78	✓	15.42	✓	15.50	✓	✓	14.88	PAHs, PID = 0.0 ppm
14:18	5a	13	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.84	✓	15.44	✓	15.47	✓	✓	14.90	PAHs, TPHd/o, PID = 0.0 ppm
14:41	5a	14	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.79	✓	15.44	✓	15.50	✓	✓	14.88	TPHd/o

TIME	Liters Removed	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP. (°C)	ORP (mV)	SAL (psu)	Comments
9:59	1	209.25	6.41	0.32	1.29	2.63	30.63	196.1	0.2	
13:10	9	267.75	7.42	0.32	0.51	2.13	27.54	141.2	0.2	
17:05	19	287.20	7.91	0.45	0.77	1.27	27.27	129.2	0.2	

Sample Identification Numbers: ERH1080 (N) & ERH1081 (FD) & ERH1079 (TB)
Sample Start Time: 10:20 End Time: 17:35
Appearance of Sample: COLOR: clear
SEDIMENT: none
OTHER: No odor

Sampling Order:

Notes: ERH1079 at 07:02

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED:

19 Primary + 14 Dup = 33 Total

VOAs	**Amber**	**Poly**
HCl: 4+4=**8**	1-L: 2+2= **4**	250 mL H2SO4: **1**
Unpres: 3+3=**6**	500-mL: 3+3= **6**	250 mL HCl (brown): **1 filtered**
H2SO4: **2**	1-L (800 mL): 2+2= **4**	250 mL unpres.: **1**

Westbay Well Groundwater Sampling

Field Data Sheet

Time	Port No.	Run No.	Surface Function Tests (probe in flushing collar)						Position Sampler					Sample Collection Checks (probe located at sampling zone in Westbay casing)								Comments (volume recovered)
			Shoe Out	Close Valve	Check Vacuum	Open Valve	Evacuate Bottles (3-5 psi)	Close Valve	Shoe In	Arm In	Locate Port	Arm Out	Land Probe	Pressure in Westbay (psi)	Shoe Out	Zone Pressure (psi)	Open Valve	Zone Pressure (psi)	Close Valve	Shoe In	Pressure in Westbay (psi)	
15:04	5a	15	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.78	✓	15.42	✓	15.45	✓	✓	14.85	TPHd/o, PID = 0.0 ppm
15:26	5a	16	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.78	✓	15.46	✓	15.48	✓	✓	14.88	TPHd/o, PID = 0.0 ppm
15:55	5a	17	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.76	✓	15.44	✓	15.48	✓	✓	14.88	TPHd/o, polys
16:20	5a	18	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.78	✓	15.73	✓					slipped out of place, see book 16 page 85
16:39	5a	19	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.74	✓	15.44	✓	15.46	✓	✓	14.86	parameters
17:02	5a	20	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.79	✓	15.40	✓	15.48	✓	✓	14.88	polys, filter, PID = 3.0 ppm

Westbay Well Groundwater Sampling

Field Data Sheet

Project: 60571032 Red Hill
Monitoring Well No.: RHMW14
Sampling Zone No(s).: Zone 3
Sampled by: BL, TV, EB

Ambiant VOCs (ppm): 2.9
Headspace VOCs (ppm): 2.9
Start Time: 8:26 Atm. Reading: 14.78
End Time: 12:41 Atm. Reading: 14.74

Date: 2020-04-21
Sheet: 1 of 1
Sampling Equipment: EMS 5285

Time	Port No.	Run No.	Surface Function Tests (probe in flushing collar)						Position Sampler					Sample Collection Checks (probe located at sampling zone in Westbay casing)								Comments (volume recovered)
			Shoe Out	Close Valve	Check Vacuum	Open Valve	Evacuate Bottles (3-5 psi)	Close Valve	Shoe In	Arm In	Locate Port	Arm Out	Land Probe	Pressure in Westbay (psi)	Shoe Out	Zone Pressure (psi)	Open Valve	Zone Pressure (psi)	Close Valve	Shoe In	Pressure in Westbay (psi)	
8:29	3	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	41.28	✓	85.80	✓	85.77	✓	✓	41.29	Physical parameters
8:47	3	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	41.30	✓	85.79	✓	85.80	✓	✓	41.26	VOCs VOAs, SVOCs
9:08	3	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	41.27	✓	85.81	✓	85.79	✓	✓	41.28	SVOCs, PID = 0.0 ppm
9:27	3	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	41.25	✓	85.80	✓	85.79	✓	✓	41.23	SVOCs, PAHs
9:47	3	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	41.18	✓	85.79	✓	85.79	✓	✓	41.23	PAHs, TPH, PID = 0.0 ppm
10:05	3	6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	41.20	✓	85.78	✓	85.77	✓	✓	41.21	TPH
10:25	3	7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	41.20	✓	85.79	✓	85.79	✓	✓	41.20	Gw parameters
10:40	3	8	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	41.23	✓	85.77	✓	85.79	✓	✓	41.20	TPH, polys
11:00	3	9	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	41.13	✓	85.79	✓	85.79	✓	✓	41.20	Polys, filter
11:25	3	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	41.15	✓	85.80	✓	85.77	✓	✓	41.18	Extra volume
11:50	3	11	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	41.22	✓	85.78	✓	85.77	✓	✓	41.13	Parameters
12:41	3	12	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	40.10	✓	85.78	✓	85.77	✓	✓	40.12	DOH sample

TIME	Liters Removed	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP. (°C)	ORP (mV)	SAL (psu)	Comments
8:50	1	170.51	8.02	0.26	1.31	0.45	25.44	150.6	0.1	-
10:40	~7	166.89	7.44	0.26	0.96	1.02	28.22	150.7	0.1	-
12:12	~11	166.68	7.45	0.26	1.55	0.92	28.78	152.2	0.1	-

Sample Identification Numbers: ERH1072 (N) & ERH1071 (TB)
Sample Start Time: 9:00 End Time: 12:41
Appearance of Sample: COLOR: Clear
SEDIMENT: N/A
OTHER: N/A

Sampling Order:
Notes: ERH1071 at 08:30

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED:

19 Primary

VOAs	**Amber**	**Poly**
HCl: **4**	1-L: **2**	250 mL H2SO4: **1**
Unpres: **3**	500-mL: **3**	250 mL HCl (brown): **1 filtered**
H2SO4: **2**	1-L (800 mL): **2**	250 mL unpres.: **1**

Westbay Well Groundwater Sampling

Field Data Sheet

Time	Port No.	Run No.	Surface Function Tests (probe in flushing collar)						Position Sampler					Sample Collection Checks (probe located at sampling zone in Westbay casing)								Comments (volume recovered)
			Shoe Out	Close Valve	Check Vacuum	Open Valve	Evacuate Bottles (3-5 psi)	Close Valve	Shoe In	Arm In	Locate Port	Arm Out	Land Probe	Pressure in Westbay (psi)	Shoe Out	Zone Pressure (psi)	Open Valve	Zone Pressure (psi)	Close Valve	Shoe In	Pressure in Westbay (psi)	

Westbay Well Groundwater Sampling

Field Data Sheet

Project: 60571032 Red Hill
Monitoring Well No.: RHMW15
Sampling Zone No(s).: Zone 5
Sampled by: BM, EB, TV

Ambiant VOCs (ppm): 0.0
Headspace VOCs (ppm): 0.0
Start Time: 8:10 Atm. Reading: 14.65
End Time: 18:25 Atm. Reading: 14.68

Date: 2020-04-22
Sheet: 1 of 2
Sampling Equipment: EMS 5285

Time	Port No.	Run No.	Surface Function Tests (probe in flushing collar)						Position Sampler					Sample Collection Checks (probe located at sampling zone in Westbay casing)								Comments (volume recovered)
			Shoe Out	Close Valve	Check Vacuum	Open Valve	Evacuate Bottles (3-5 psi)	Close Valve	Shoe In	Arm In	Locate Port	Arm Out	Land Probe	Pressure in Westbay (psi)	Shoe Out	Zone Pressure (psi)	Open Valve	Zone Pressure (psi)	Close Valve	Shoe In	Pressure in Westbay (psi)	
8:13	5a	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.80	✓	17.79	✓	17.76	✓	✓	14.93	parameters
8:36	5a	2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.82	✓	17.77	✓	17.76	✓	✓	14.91	VOAs
8:58	5a	3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.80	✓	17.81	✓	17.76	✓	✓	14.91	VOAs, SVOCs, PID = 0.0 ppm
9:24	5a	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.81	✓	17.77	✓	17.83	✓	✓	14.91	SVOCs, PID = 0.0 ppm
9:46	5a	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.77	✓	17.83	✓	17.81	✓	✓	14.90	SVOCs, PID = 0.0 ppm
10:06	5a	6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.79	✓	17.80	✓	17.80	✓	✓	14.91	SVOCs, PID = 0.0 ppm
10:24	5a	7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.79	✓	17.74	✓	17.80	✓	✓	14.85	SVOCs
10:47	5a	8	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.79	✓	17.76	✓	17.77	✓	✓	14.86	SVOCs
11:06	5a	9	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.79	✓	17.79	✓	17.82	✓	✓	14.78	SVOCs
11:28	5a	10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.82	✓	17.75	✓	17.83	✓	✓	14.90	SVOCs, PID = 0.0 ppm
11:47	5a	11	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.78	✓	17.73	✓	17.80	✓	✓	14.87	SVOCs and PAHs
12:10	5a	12	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.76	✓	17.80	✓	17.82	✓	✓	14.89	PAHs
12:37	5a	13	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.79	✓	17.72	✓	17.80	✓	✓	14.89	parameters (not enough water)
12:54	5a	14	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.77	✓	17.80	✓	17.81	✓	✓	14.86	PAHs, PID = 0.0 ppm

TIME	Liters Removed	TDS (ppm)	pH	SP. COND. (mS/cm)	D.O. (mg/L)	TURB. (NTU)	TEMP. (°C)	ORP (mV)	SAL (ppt)	Comments
8:41	1	226.52	7.99	0.35	0.44	1.12	22.87	51.4	0.2	
13:35	15	203.14	7.81	0.31	1.26	0.92	29.16	32.6	0.1	
16:33	28	156.32	8.21	0.24	1.60	0.18	25.14	24.8	0.1	

Sample Identification Numbers: ERH1074 (N, MS/MSD), ERH1073 (TB)
Sample Start Time: 8:46 End Time: 15:58
Appearance of Sample: COLOR: clear
SEDIMENT: none
OTHER: N/A

Sampling Order:

Notes: ERH1073 at 08:19

LABORATORY ANALYSIS PARAMETERS AND PRESERVATIVES / NUMBER AND TYPES OF SAMPLE CONTAINERS USED:

19 Primary + 24 MS/MSD = 43 Total

VOAs	**Amber**	Poly
HCl: **4 + 4 = 8**	1-L: **2 + 4 = 6**	250 mL H2SO4: **1**
Unpres: **3 + 6 = 9**	500-mL: **3 + 6 = 9**	250 mL HCl (brown): **1 filtered**
H2SO4: **2**	1-L (800 mL): **2 + 4 = 6**	250 mL unpres.: **1**

Westbay Well Groundwater Sampling

Field Data Sheet

Time	Port No.	Run No.	Surface Function Tests (probe in flushing collar)						Position Sampler					Sample Collection Checks (probe located at sampling zone in Westbay casing)								Comments (volume recovered)
			Shoe Out	Close Valve	Check Vacuum	Open Valve	Evacuate Bottles (3-5 psi)	Close Valve	Shoe In	Arm In	Locate Port	Arm Out	Land Probe	Pressure in Westbay (psi)	Shoe Out	Zone Pressure (psi)	Open Valve	Zone Pressure (psi)	Close Valve	Shoe In	Pressure in Westbay (psi)	
13:16	5a	15	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.79	✓	17.78	✓	17.79	✓	✓	14.91	parameters
13:40	5a	16	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.73	✓	17.77	✓	17.83	✓	✓	14.88	PAHs, PID = 0.0 ppm
13:59	5a	17	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.80	✓	17.75	✓	17.77	✓	✓	14.85	PAHs, PID = 0.0 ppm
14:22	5a	18	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.79	✓	17.78	✓	17.83	✓	✓	14.91	PAHs
14:44	5a	19	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.82	✓	17.80	✓	17.82	✓	✓	14.89	PAHs, TPHd/o, PID = 0.0 ppm
15:07	5a	20	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.75	✓	17.76	✓	17.84	✓	✓	14.90	TPHd/o
15:29	5a	21	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.78	✓	17.74	✓	17.80	✓	✓	14.87	TPHd/o
15:53	5a	22	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.79	✓	17.73	✓	17.82	✓	✓	14.84	TPHd/o
16:13	5a	23	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.77	✓	17.74	✓	17.83	✓	✓	14.83	TPHd/o
16:35	5a	24	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.77	✓	17.74	✓	17.85	✓	✓	14.82	TPHd/o
16:54	5a	25	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.76	✓	17.77	✓	17.78	✓	✓	14.87	TPHd/o, poly
17:15	5a	26	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.78	✓	17.77	✓	17.78	✓	✓	14.84	poly filter
17:35	5a	27	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.76	✓	17.79	✓	17.80	✓	✓	14.85	poly filter
18:05	5a	28	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	14.81	✓	17.72	✓	17.80	✓	✓	14.86	parameters

Appendix B.2:
Tape Correction

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For Participant

Owner: **U.S. Navy**
Tape ID: **N-1**
Make: **Solinst**
Serial number: **133795**
Length: **500 feet**
Dates: **9/13/2017 - 9/15/2017**

Table 1. Correction table for Solinst 500-foot tape (serial number 133795; tape identifier N-1), tested 9/13/2017 to 9/15/2017.

Tape interval, in feet		[1]Correction to add to depth to water, in feet
From	To	
0.00	*6.41*	*0.00*
6.42	14.02	0.00
14.03	52.17	-0.01
52.18	90.33	-0.02
90.34	128.49	-0.03
128.50	166.64	-0.04
166.65	204.80	-0.05
204.81	242.96	-0.06
242.97	392.45	-0.07
392.46	*500.00*	*-0.07*

Values in red italics are extrapolated outside the range defined by the shallowest and deepest test measurements

[1]Use of the indicated correction values is expected to improve accuracy in water-level measurements made with this tape. However, because of scatter in the calibration data, the indicated corrections for this tape may contain uncertainty on the order of 0.01 - 0.02 feet.

Table 2. Depth-to-water measurements and errors for Solinst 500-foot tape (serial number 133795; tape identifier N-1), tested 9/13/2017 to 9/15/2017.

Well site	Reference tape depth to water, in feet	N-1 depth to water, in feet	[1]Error, in feet
Halawa Kiosk	6.40	6.42	-0.02
Moanalua	17.60	17.61	-0.01
Halawa	43.37	43.39	-0.02
Waiawa	69.97	69.96	0.01
Waialae Shaft	152.41	152.44	-0.03
Kapakahi	261.97	262.04	-0.07
Waipio	392.38	392.45	-0.07

[1]Negative error indicates tape shortening; positive error indicates tape stretch

For Participant

Owner:	**U.S. Navy**
Tape ID:	**N-2**
Make:	**Solinst**
Serial number:	**133937**
Length:	**1,000 feet**
Dates:	**9/13/2017 - 9/15/2017**

Table 1. Correction table for Solinst 1,000-foot tape (serial number 133937; tape identifier N-2), tested 9/13/2017 to 9/15/2017.

Tape interval, in feet		[1]Correction to add to depth to water, in feet
From	To	
0.00	*6.40*	*0.01*
6.41	8.23	0.01
8.24	80.71	0.00
80.72	161.31	-0.01
161.32	253.61	-0.02
253.62	364.91	-0.03
364.92	516.53	-0.04
516.54	593.17	-0.05
593.18	*764.02*	*-0.05*
764.03	*1000.00*	*-0.06*

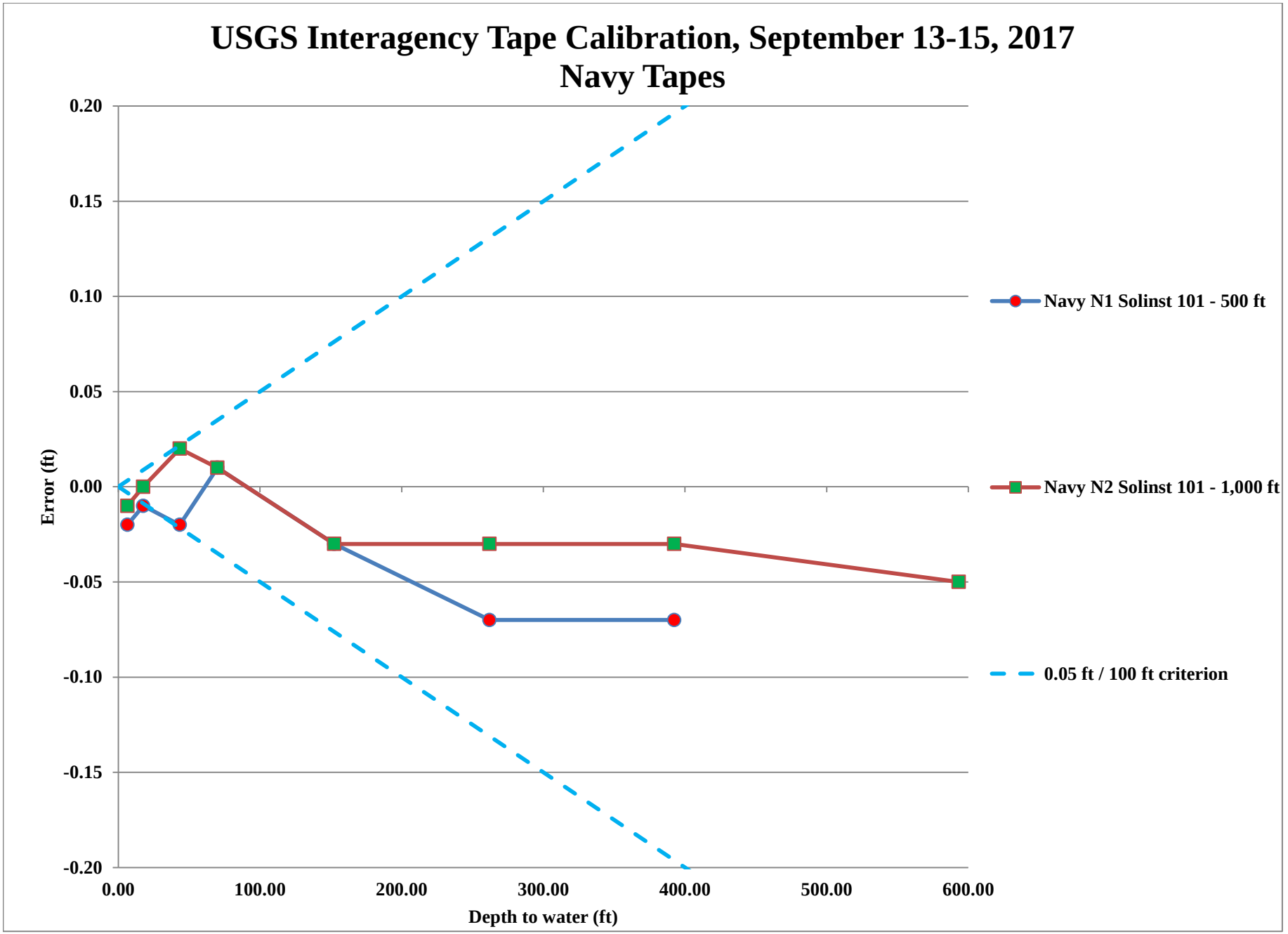
Values in red italics are extrapolated outside the range defined by the shallowest and deepest test measurements

[1]Use of the indicated correction values is expected to improve accuracy in water-level measurements made with this tape. However, because of scatter in the calibration data, the indicated corrections for this tape may contain uncertainty on the order of 0.01 - 0.02 feet.

Table 2. Depth-to-water measurements and errors for Solinst 1,000-foot tape (serial number 133937; tape identifier N-2), tested 9/13/2017 to 9/15/2017.

Well site	Reference tape depth to water, in feet	N-2 depth to water, in feet	[1]Error, in feet
Halawa Kiosk	6.40	6.41	-0.01
Moanalua	17.60	17.60	0.00
Halawa	43.37	43.35	0.02
Waiawa	69.97	69.96	0.01
Waialae Shaft	152.41	152.44	-0.03
Kapakahi	261.97	262.00	-0.03
Waipio	392.38	392.41	-0.03
Poliwai	593.12	593.17	-0.05

[1]Negative error indicates tape shortening; positive error indicates tape stretch


USGS Interagency Tape Calibration, September 13-15, 2017
Navy Tapes
0.20
0.15
0.10
0.05
0.00
-0.05
-0.10
-0.15
-0.20
Error (ft)
0.00
100.00
200.00
300.00
400.00
500.00
600.00
Depth to water (ft)
Navy N1 Solinst 101 - 500 ft
Navy N2 Solinst 101 - 1,000 ft
0.05 ft / 100 ft criterion

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Appendix B.3:
Instrument Calibration Log

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AECOM

Americas

Instrument Calibration Log

S3AM-127-FM10

PDR-1000AN	Instrument Information
Instrument Name: Personal Data RAM	Manufacturer: Thermo electron
Serial Number: 6529	Last Service Date:
Parameter(s): dust particulate in mg/m³	Calibration Gas: Fresh air
Calibration Procedure: zero in dust-free environment	

Daily Calibration Results	
Date: 4/8/20	Calibration Result: pass
Name: Dominic Mariano	Signature:
Notes:	
Date: 4/9/20	Calibration Result: pass
Name: Caitlin Ellis	Signature:
Notes:	
Date: 4/10/20	Calibration Result: pass
Name: Caitlin Ellis	Signature:
Notes:	
Date: 4/13/20	Calibration Result: pass
Name: Caitlin Ellis	Signature:
Notes:	

Project: Red Hill CTO18F0126

Job No.: 60571032

Date: 4.8.20

Operator: D. Mariano

Instrument: PDR-1000 AN

Calibration: pass

AECOM

Americas

Instrument Calibration Log

S3AM-127-FM10

PDR-1000AN	Instrument Information
Instrument Name: personal Data Ram	Manufacturer: Thermo electron
Serial Number: 6529	Last Service Date: —
Parameter(s): dust particulate in mg/m^3	Calibration Gas: fresh air
Calibration Procedure: zero cal in dust free environment	

Daily Calibration Results	
Date: 4/14/20	Calibration Result: pass
Name: Caitlin Ellis	Signature:
Notes:	
Date: 4/15/20	Calibration Result: pass
Name: Caitlin Ellis	Signature:
Notes:	
Date: 4/16/20	Calibration Result: pass
Name: Jack Flaherty	Signature:
Notes:	
Date: 4/17/20	Calibration Result: pass
Name: Bonna Mintz	Signature:
Notes:	

Project: Red Hill CTO18F0126
Date: 4/14/20
Instrument: dust meter

Job No.: 60571032
Operator: CE, DM
Calibration: pass

AECOM

Americas

Instrument Calibration Log

S3AM-127-FM10

PDR-1000AN Instrument Information	
Instrument Name: Personal data RAM	Manufacturer: Thermo electron
Serial Number: 6529	Last Service Date:
Parameter(s): dustpartmlab.mg/m3	Calibration Gas: fresh air
Calibration Procedure: zero cal : indust free environment	

Daily Calibration Results	
Date: 4/18/20	Calibration Result: pass
Name: Bianca Minte	Signature:
Notes:	
Date: 4/20/20	Calibration Result: pass
Name: Dominic Mariano	Signature:
Notes:	
Date: 4/21/20	Calibration Result: okay / pass
Name: Jack Flaherty	Signature:
Notes:	
Date: 4/22/20	Calibration Result: pass
Name: Caitlin Ellis	Signature:
Notes:	

Project: Red Hill CTO18F0126
Date: 4/18/20
Instrument: Dustmaster

Job No.: 60571032
Operator: mmdz
Calibration: pass

Americas

Instrument Calibration Log

S3AM-127-FM10

Instrument Information	
Instrument Name: PDR-1000AN Personal Data Ram	Manufacturer: Thermo electron
Serial Number: 6529	Last Service Date: N/A
Parameter(s): dust particulate	Calibration Gas: fresh air
Calibration Procedure: calibrate in dust free environment	

Daily Calibration Results	
Date: 4/23/20	Calibration Result: pass
Name: Caitlin Ellis	Signature:
Notes:	
Date: 4/24/20	Calibration Result: pass
Name: Dominic Mariano	Signature:
Notes:	
Date: 4/25/20	Calibration Result: pass
Name: Dominic Mariano	Signature:
Notes:	
Date: 4/27/20	Calibration Result: pass
Name: Dominic Mariano	Signature:
Notes:	

Project: Red Hill CTO18F0126
Date: 4/23/20
Instrument: dust monitor

Job No.: 60571032
Operator: CE
Calibration: pass

AECOM

Americas

Instrument Calibration Log

S3AM-127-FM10

Instrument Information			
Instrument Name:	Personal data Ram PDR-1000AN	Manufacturer:	Thermo-electron
Serial Number:	6529	Last Service Date:	N/A
Parameter(s):	dust particulate	Calibration Gas:	fresh air
Calibration Procedure:	calibrate in dust free environment		

Daily Calibration Results			
Date:	4/28/20	Calibration Result:	pass
Name:	Caitlin Ellis	Signature:	
Notes:			
Date:	4/29/20	Calibration Result:	pass
Name:	Caitlin Ellis	Signature:	
Notes:			
Date:	4/30/20	Calibration Result:	pass
Name:	Caitlin Ellis	Signature:	
Notes:			
Date:	5/1/20	Calibration Result:	pass
Name:	Dominic Marino	Signature:	
Notes:			

Project: Red Hill CTO18F0126
Date: 4/28/20
Instrument: dust monitor

Job No.: 60571032
Operator: CE
Calibration: pass

Calibration Report: ORP Calibration Report
2020-02-28 09:03:02
Probe: 589976
User Defined: 232.0 mV
Offset: 4.4 mV
Stability: Full

Calibration Report: RDO Calibration Report
2020-02-28 08:59:07
Probe: 589976
Slope: 0.9878
Offset: -0.0000
Stability: Full

Calibration Report: Conductivity Calibration Report
2020-02-28 08:55:03
Probe: 589976
Cell Constant: 1.1031
Stability: Full

Calibration Report: pH Calibration Report
2020-02-28 08:53:37
Probe: 589976
4.00 pH
Slope: -59.16 mV/pH
Offset: 6.96 pH

Stability: Full

HAWAII ENVIRONMENTAL RENTAL INC.

Certificate of Calibration

Instrument Type: **MINIRAE RAE 3000** Serial Number: 908165

Calibration Gas	Lot Number	Result
Isobutylene 100 ppm	**987369**	**100ppm**

Calibrated by: _____ Calibration Date: 4-6-2020

Certificate of Calibration

Instrument Type: **MINIRAE RAE 3000** Serial Number: 908699

Calibration Gas	Lot Number	Result
Isobutylene 100 ppm	**987369**	**100ppm**

Calibrated by: _____ Calibration Date: 01/27/20

AECOM

Americas

Instrument Calibration Log

S3AM-127-FM10

Instrument Information	
Instrument Name: MiniRae RAE 3000	Manufacturer: RAE
Serial Number: 908699 / 908165	Last Service Date: 01/27/2020 / 4-6-2020
Parameter(s): VOCs	Calibration Gas: Isobutylene 100 ppm
Calibration Procedure: zero cal with fresh air span cal with isobutylene 100 ppm	

Daily Calibration Results	
Date: 1/27/2020	Calibration Result: zero ⇒ 0.0 ppm span ⇒ 100.0 ppm
Name: Caitlin Ellis	Signature:
Notes:	
Date: 4-8-2020	Calibration Result: zero ⇒ 0.0 pass span ⇒ 100.0 pass
Name: Dominic Mariano	Signature:
Notes: Dmca 908165 calibrated w/ isobutylene LOT # 987369	
Date: 4/9/20	Calibration Result: zero ⇒ 0.0 ppm Span ⇒ 100.1 ppm
Name: Caitlin Ellis	Signature:
Notes:	
Date: 4/10/20	Calibration Result: zero ⇒ 0.0 ppm Span ⇒ 100.0 ppm
Name: Caitlin Ellis	Signature:
Notes:	

Project: Red Hill CTO18F0126
Date: 4/8/20
Instrument: MiniRAE PID

Job No.: 60571032
Operator: CE; DM
Calibration: pass

AECOM

Americas

Instrument Calibration Log

S3AM-127-FM10

Instrument Information	
Instrument Name: Minirae 3000	Manufacturer: RAE
Serial Number: 908165	Last Service Date: 4/6/20
Parameter(s): VOCs	Calibration Gas: Isobutylene 100 ppm
Calibration Procedure: Zero cal w/ fresh air Span cal w/ 100 ppm isobutylene	

Daily Calibration Results	
Date: 4/13/20	Calibration Result: Zero ⇒ 0.0 ppm Span ⇒ 100.0 ppm
Name: Caitlin Ellis	Signature:
Notes:	
Date: 4/14/20	Calibration Result: Zero ⇒ 0.0 ppm Span ⇒ 100.0 ppm
Name: Caitlin Ellis	Signature:
Notes:	
Date: 4/15/20	Calibration Result: Zero ⇒ 0.0 ppm Span ⇒ 100.0 ppm
Name: Caitlin Ellis	Signature:
Notes:	
Date: 4/1/20	Calibration Result: Zero → 0.0 ppm Span → 100.0 ppm
Name: Jack Flaherty	Signature:
Notes:	

Project: Red Hill CTO18F0126
Date: 4.16.20
Instrument: PID

Job No.: 60571032
Operator: JF
Calibration: pass

AECOM

Americas

Instrument Calibration Log

S3AM-127-FM10

Instrument Information	
Instrument Name: Mini Rae 3000	Manufacturer: RAE
Serial Number: 908165	Last Service Date: 4/16/20
Parameter(s): VOCs	Calibration Gas: isobutylene 100 ppm
Calibration Procedure: zero cal w/fresh air span cal w/100 ppm isobutylene	

Daily Calibration Results	
Date: 4/17/20	Calibration Result: 0.0 ppm 100.0 ppm
Name: Bianca Mintz	Signature:
Notes:	
Date:	Calibration Result: 0.0 ppm 100.1 ppm
Name: 4/18/20	Signature:
Notes: Bianca Mintz	
Date:	Calibration Result:
Name:	Signature:
Notes:	
Date:	Calibration Result:
Name:	Signature:
Notes:	

Project: Red Hill CTO18F0126

Job No.: 60571032

Date: 4/19/20

Operator: Mintz

Instrument: MiniRae

Calibration:

AECOM

Americas

Instrument Calibration Log

S3AM-127-FM10

Instrument Information	
Instrument Name: Mini Rae 3000	Manufacturer: Rae Systems
Serial Number: 908165	Last Service Date: 4/6/20
Parameter(s): VOCs	Calibration Gas: isobutylene 100 ppm
Calibration Procedure: zero in fresh air span cal with 100 ppm isobutylene	

Daily Calibration Results	
Date: 4.20.20	Calibration Result: span ⇒ 100.0 zero ⇒ 0.0
Name: Dominic Mariano	Signature:
Notes:	
Date: 4.21.2020	Calibration Result: span ⇒ 100.0 zero ⇒ 0.00
Name: ~~4.21.20~~ Dominic Mariano	Signature:
Notes: ~~Dominic Mariano~~ moisture filter missing	
Date: 4/22/20	Calibration Result: zero ⇒ 0.0 span ⇒ 100.0
Name: Caitlin Ellis	Signature:
Notes:	
Date: 4/23/20	Calibration Result: zero ⇒ 0.0 span ⇒ 100.0
Name: Caitlin Ellis	Signature:
Notes:	

Project: Red Hill CTO18F0126

Date: 4.20.2020

Instrument: mini Rae 3k

Job No.: 60571032

Operator: D. Mariano

Calibration: pass

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Instrument Calibration Log

S3AM-127-FM10

Instrument Information	
Instrument Name: MiniRae 3000	Manufacturer: Rae Systems
Serial Number: 408165	Last Service Date: 4/6/2020
Parameter(s): VOCs	Calibration Gas: isobutylene
Calibration Procedure: Open/fresh air calibration to zero span calibration	

Daily Calibration Results	
Date: 4/24/20	Calibration Result: 0.0 ⇒ pass 100.0 ⇒ span pass
Name: Dominic Mariano	Signature:
Notes:	
Date: 4/25/20	Calibration Result: 0.0 ⇒ pass 99.8 ⇒ span
Name: Dominic Mariano	Signature:
Notes:	
Date: 4/27/20	Calibration Result: Pass zero = 0.0 span = 100.1
Name: Dominic Mariano	Signature:
Notes:	
Date: 4/28/20	Calibration Result: pass zero ⇒ 0.0 span ⇒ 100.1
Name: Caitlin Ellis	Signature:
Notes:	

Project: Red Hill CTO18F0126
Date: 4/24/20
Instrument: MiniRae 3000

Job No.: 60571032
Operator: D. Mariano
Calibration: pass

AECOM

Americas

Instrument Calibration Log

S3AM-127-FM10

Instrument Information	
Instrument Name: MiniRae 3000	Manufacturer: Rae Systems
Serial Number: 908165	Last Service Date: 4/6/20
Parameter(s): VOCs	Calibration Gas: Isobutylene 100 ppm
Calibration Procedure: zero cal with fresh air Span Cal w/ 100 ppm Isobutylene gas.	

Daily Calibration Results	
Date: 4/29/20	Calibration Result: zero 0.0 ppm span 100.1 ppm
Name: Caitlin Ellis	Signature:
Notes:	
Date: 4/30/20	Calibration Result: zero ⇒ 0.0 ppm span ⇒ 100.0 ppm
Name: Caitlin Ellis	Signature:
Notes:	
Date: 5/1/20	Calibration Result: zero ⇒ 0.0 ppm span ⇒ 100.0 ppm
Name: Dominic Mariano	Signature:
Notes:	
Date:	Calibration Result:
Name:	Signature:
Notes:	

Project: Red Hill CTO18F0126
Date: 4/29/20
Instrument: MiniRae PID

Job No.: 60571032
Operator: CE
Calibration: pass

Certificate of Calibration

Instrument Type: **MINIRAE RAE 3000** Serial Number: 908165

Calibration Gas	Lot Number	Result
Isobutylene 100 ppm	**987369**	**100ppm**

Calibrated by: _____ Calibration Date: 02/11/20

HAWAII ENVIRONMENTAL RENTAL INC.

Certificate of Calibration

Instrument Type: **QUEST NoisePro**

Serial Number:

Calibration Calibrator- ~~114 DB~~ 102 DB Calibration= ~~114 DB~~ 102 DB

Calibrated by: _____ Calibration Date: 4-6-2020

Hawaii Environmental Rental
(808) 436-5575

AECOM

Americas

Instrument Calibration Log

S3AM-127-FM10

Instrument Information	
Instrument Name: Quest Noise Pro	Manufacturer: Quest
Serial Number: NXD035003 / NXJ050035	Last Service Date: 1/27/2020 / 4/6/2020
Parameter(s): Noise, dB	Calibration Gas: 114 DB
Calibration Procedure: Calibrate with 114 DB Calibrator or calibrate with 102 DB calibrator	

Daily Calibration Results	
Date: 1/27/2020	Calibration Result: 114 dB
Name: Caitlin Ellis	Signature:
Notes:	
Date: 4/8/2020	Calibration Result: 102.0 dB
Name: Dominic Mariano	Signature:
Notes: Davis SN # NXJ050035 calibrated to 102dB w/ Davis PEG 120023	
Date: 4/9/20	Calibration Result: 102.0 dB
Name: Caitlin Ellis	Signature:
Notes:	
Date: 4/10/20	Calibration Result: 102.0 dB
Name: Caitlin Ellis	Signature:
Notes:	

Project: Red Hill CTO18F0126
Date: 4/8/2020
Instrument: No

Job No.: 60571032
Operator: D. Mariano
Calibration: Pass

AECOM

Americas

Instrument Calibration Log

S3AM-127-FM10

Instrument Information	
Instrument Name: Quest Noise Pro	Manufacturer: Quest
Serial Number: NXJ050035	Last Service Date: 4/6/20
Parameter(s): Noise dB	Calibration Gas: 102.0 DB
Calibration Procedure: calibrate w/ 102.0 dB calibrator	

Daily Calibration Results	
Date: 4/13/20	Calibration Result: pass
Name: Caitlin Ellis	Signature:
Notes:	
Date: 4/14/20	Calibration Result: pass 102.0 dB
Name: Caitlin Ellis	Signature:
Notes:	
Date: 4/15/20	Calibration Result: pass 102.0 dB
Name: Caitlin Ellis	Signature:
Notes:	
Date: 4/16/20	Calibration Result: pass 102.0 dB
Name: Jack Flaherty	Signature:
Notes:	

Project: Red Hill CTO18F0126
Date: 4/13/20
Instrument: Noise dosimeter

Job No.: 60571032
Operator: CE, DM
Calibration: pass

AECOM

Americas

Instrument Calibration Log

S3AM-127-FM10

Instrument Information			
Instrument Name:	Quest Noise Pro	Manufacturer:	Quest
Serial Number:	NXJ 050035	Last Service Date:	4/6/20
Parameter(s):	Noise dB	Calibration Gas:	102.0 dB
Calibration Procedure:	Calibrate w/ 102.0 dB Calibrator		

Daily Calibration Results			
Date:	4/22/20	Calibration Result:	102.0 dB
Name:	Caitlin Ellis	Signature:	
Notes:			
Date:	4/23/20	Calibration Result:	102.0dB
Name:	Caitlin Ellis	Signature:	
Notes:			
Date:	4/24/20	Calibration Result:	102.0dB
Name:	Dominic Mariano	Signature:	
Notes:			
Date:	4/25/20	Calibration Result:	102.0 dB
Name:	Dominic Mariano	Signature:	
Notes:			

Project: Red Hill CTO18F0126
Date: 4/22/20
Instrument: Noise dosimeter

Job No.: 60571032
Operator: CE
Calibration: pass

AECOM

Americas

Instrument Calibration Log

S3AM-127-FM10

Instrument Information	
Instrument Name: Quest Noise Pro	Manufacturer: Quest
Serial Number: NX5050035	Last Service Date: 4/6/20
Parameter(s): noise, dB	Calibration Gas: 102.0 dB emitter
Calibration Procedure: calibrate with 102.0 dB noise emitter	

Daily Calibration Results	
Date: 4/27/20	Calibration Result: 102.0 dB
Name: Dominic Mariano	Signature:
Notes:	
Date: 4/28/20	Calibration Result: 102.0 dB
Name: Caitlin Ellis	Signature:
Notes:	
Date: 4/29/20	Calibration Result: 102.0 dB
Name: Caitlin Ellis	Signature:
Notes:	
Date: 4/30/20	Calibration Result: 102.0 dB
Name: Caitlin Ellis	Signature:
Notes:	

Project: Red Hill CTO18F0126

Job No.: 60571032

Date: 4/27/20

Operator: D. Mariano

Instrument: Noise Pro

Calibration: pass

AECOM

Americas

Instrument Calibration Log

S3AM-127-FM10

Instrument Information	
Instrument Name: Quest noise pro	Manufacturer: Quest
Serial Number: NXJ050035	Last Service Date: 4/6/20
Parameter(s): noise, dB	Calibration Gas: 102.0 dB emitter
Calibration Procedure: calibrate with 102.0 dB noise emitter	

Daily Calibration Results	
Date: 5/1/20	Calibration Result: pass, 102.0 dB
Name: Dominic Mariano	Signature:
Notes:	
Date:	Calibration Result:
Name:	Signature:
Notes:	
Date:	Calibration Result:
Name:	Signature:
Notes:	
Date:	Calibration Result:
Name:	Signature:
Notes:	

Project: Red Hill CTO18F0126

Date: 5/1/20

Instrument: Quest Noise Pro

Job No.: 60571032

Operator: D Mariano

Calibration: pass

Americas

Instrument Calibration Log

S3AM-127-FM10

Instrument Information	
Instrument Name: Horiba U-52	Manufacturer: Horiba
Serial Number: R1CF5BRX	Last Service Date: —
Parameter(s): °C, pH, conductivity, DO, TDS, ORP	Calibration Gas: Auto-Cal solution
Calibration Procedure: Submerge in auto-cal solution	

Daily Calibration Results	
Date:	Calibration Result: ~~pH 4 => 4.00 cond => 4.49 mS/cm DO => 11.08~~
Name:	Signature:
Notes:	
Date: 4/20/20	Calibration Result: pH => 4.00 pass cond => 4.50 mS/cm MTU => 0.0 = DO => 9.12 mg/L DO 113.3% DO
Name: Dominic Marrano	Signature:
Notes: Auto-cal only	
Date: 4/21/20	Calibration Result: pH = 4.00 NTU = 0.0 Cond: 4.51 mS/cm DO = 9.77 mg/L ; 127.7%
Name: Jack Flaherty	Signature:
Notes: Auto cal only	
Date:	Calibration Result:
Name:	Signature:
Notes:	

Project: Red Hill CTO18F0126

Date: 4/20/20

Instrument: Horiba U-52

Job No.: 60571032

Operator: DM

Calibration: ~~Pass~~ Auto-cal only

AECOM

Americas

Instrument Calibration Log

S3AM-127-FM10

Instrument Information	
Instrument Name: Smart Troll	Manufacturer: In-situ
Serial Number: 515139	Last Service Date:
Parameter(s): pH, temp, ORP, RDO, cond.	Calibration Gas: Sol'n: pH7, 10; Autocal, ORP
Calibration Procedure: ① Autocal for cond. ② autocal @ pH4 ③ pH10 ④ pH7 ⑤ ORP ⑥ RDO ② ① Lot # 19150080 CCP 11/2020 ④ Lot# 1907 0141 RDO 11/2022 ③ Lot # 18449291 11/2020 ⑤ lot #19280059 11/2022	

Daily Calibration Results	
Date: 4/16/20	Calibration Result: Cond. 4490 → 42848 µS/cm pH4 → 3.91 pH10 → 9.65 pH7 → 6.91 ORP → 229.7 RDO → 108.6% 9.76 mg/L
Name: Jack Flaherty	Signature:
Notes: no cal cert available in case; unable to fill in Last service date. µS/cm	
Date: 4/17/20	Calibration Result: 10 pH 4359 pH4 ⇒ 3.92 pH 7 → 6.96 pH 10 ⇒ 9.73 RDO = 105.4. ORP ⇒ 225.1 mV 9.29 mg/L 1435
Name: Dominic Mariano	Signature:
Notes: started at 1435 and at 1453	
Date:	Calibration Result:
Name:	Signature:
Notes:	
Date:	Calibration Result:
Name:	Signature:
Notes:	

Project: Red Hill CTO18F0126

Date: 4/17/20

Instrument: Smart troll

Job No.: 60571032

Operator: DM

Calibration: pass

Smart troll "loaned" from april 2020 LTM

Appendix C:
Analytical Documentation,
Second Quarter 2020
(on CD-ROM at end of document)

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Appendix C.1:
Analytical Laboratory Reports

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

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

Data Validatable Report

April 7, 2020

AECOM
1001 Bishop Street, Suite 1600
Honolulu, Hawaii 96813

Attn: Margie Pascua

Title: Report of Data: Case 91585

Project: 60571032 CV18F0126 Red Hill Fuel Storage. HI

Contract #: Prime contract # for DoD: NAVY CLEAN N62742-17-F-1800, CV18F0126
Subcontract: 18S-22209-HI27

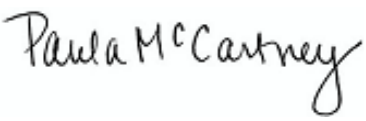
Dear Ms. Pascua:

Seven water samples were received March 5, 2020. Written results for the requested analyses are being provided on this April 7, 2020.

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

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

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



Paula McCartney, Laboratory Director
APPL, Inc.

PM/lac
Enclosure
cc: File

Data Validation Package
for
60571032 CV18F0126 Red Hill Fuel Storage
APPL SDG 91585
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CASE NARRATIVE

Case Narrative

ARF: 91585

Project: 60571032 CV18F0126 Red Hill Fuel Storage. HI

Sample Receipt Information:

Seven water samples were received March 5, 2020, at 3.4°C, 1.4°C, 2.4°C, and 5.4°C. The sample group was assigned Analytical Request Form (ARF) number 91585.

Sample Preparation and Analysis Information:

For the EPA 8011 analysis, the samples were extracted according to APPL SOP method MWE012.

For the EPA 8015B analysis, the sample was extracted according to EPA method 3520C. The sample extracts were silica gel cleaned according to APPL's SOP CLN004 and placed on hold.

For the EPA 8270D Phenol analysis, the samples were extracted according to EPA method 3520C.

For the EPA 8270D SIM analysis, the samples were extracted according to EPA method 3520C.

For the APPL SOP ANA2MEE analysis, the samples were extracted according to EPA method 3535.

For the EPA 8260B analysis, the samples were purged according to EPA method 5030B.

For the RSK-175 analysis, the samples were allowed to equilibrate for 10 minutes at 40°C and a portion of the headspace was analyzed.

For the EPA 6010C analysis, the sample was digested according to EPA method 3010A.

For the EPA 9060A, 300.0, 353.2, SM 2320B, SM 4500-SiD and SM 3500FeB analyses, the sample was prepared according to the methods.

Only the portion of the injection log relative to these samples is included. A full sequence log is available upon request. Measurement uncertainty can be reported upon request.

Analytical Exceptions, Deviations and Abnormalities.

APPL SOP ANA2MEE: In the LCS/LCSD, the RPD exceeded the 20% limit.

Two internal standard responses exceeded the limit. These internal standards are not associated with the target compound

SDG	Received	Client ID	APPL ID	Collected DateTime	Matrix	Method	Method Description
91585	03/05/20	ERH1022	BA07941	03/03/20 9:00:00 AM	WATER	8011	EPA 8011
91585	03/05/20	ERH1022	BA07941	03/03/20 9:00:00 AM	WATER	EPA 8260B	EPA 8260B BTEX & 1,2-DCA WATER
91585	03/05/20	ERH1022	BA07941	03/03/20 9:00:00 AM	WATER	EPA 8260-GAS	EPA 8260 with GAS
91585	03/05/20	ERH1022	BA07941	03/03/20 9:00:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
91585	03/05/20	ERH1022	BA07941	03/03/20 9:00:00 AM	WATER	RSK 175	METHANE BY RSK 175
91585	03/05/20	ERH1023	BA07942	03/03/20 10:30:00 AM	WATER	SM 2320B	Wetlab 2320B - Water
91585	03/05/20	ERH1023	BA07942	03/03/20 10:30:00 AM	WATER	EPA 300.0	Wetlab 300.0 - Water
91585	03/05/20	ERH1023	BA07942	03/03/20 10:30:00 AM	WATER	SM3500FeB	Ferrous Iron
91585	03/05/20	ERH1023	BA07942	03/03/20 10:30:00 AM	WATER	EPA 353.2	EPA 353.2 - WATER
91585	03/05/20	ERH1023	BA07942	03/03/20 10:30:00 AM	WATER	6010C/3010A	EPA 6010C TOTAL
91585	03/05/20	ERH1023	BA07942	03/03/20 10:30:00 AM	WATER	8011	EPA 8011
91585	03/05/20	ERH1023	BA07942	03/03/20 10:30:00 AM	WATER	EPA 8260B	EPA 8260B BTEX & 1,2-DCA WATER
91585	03/05/20	ERH1023	BA07942	03/03/20 10:30:00 AM	WATER	EPA 8270D	EPA 8270D WATER
91585	03/05/20	ERH1023	BA07942	03/03/20 10:30:00 AM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
91585	03/05/20	ERH1023	BA07942	03/03/20 10:30:00 AM	WATER	EPA 8015B-eHL	EPA 8015B TPH LIQ-LIQ
91585	03/05/20	ERH1023	BA07942	03/03/20 10:30:00 AM	WATER	SW846 9060A	9060A DOC
91585	03/05/20	ERH1023	BA07942	03/03/20 10:30:00 AM	WATER	EPA 8260-GAS	EPA 8260 with GAS
91585	03/05/20	ERH1023	BA07942	03/03/20 10:30:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
91585	03/05/20	ERH1023	BA07942	03/03/20 10:30:00 AM	WATER	RSK 175	METHANE BY RSK 175
91585	03/05/20	ERH1023	BA07942	03/03/20 10:30:00 AM	WATER	8270D-SIM	EPA 8270D SIM LIQ-LIQ
91585	03/05/20	ERH1023	BA07942	03/03/20 10:30:00 AM	WATER	SM 4500-Si D	Silica W
91585	03/05/20	ERH1023	BA07942	03/03/20 10:30:00 AM	WATER	SM 4500-Si D	SILICA W - DISSOLVED
91585	03/05/20	ERH1023	BA07942	03/03/20 10:30:00 AM	WATER	SW846 9060A	9060A TOC
91585	03/05/20	ERH1024	BA07943	03/04/20 9:30:00 AM	WATER	8011	EPA 8011
91585	03/05/20	ERH1024	BA07943	03/04/20 9:30:00 AM	WATER	EPA 8260B	EPA 8260B BTEX & 1,2-DCA WATER
91585	03/05/20	ERH1024	BA07943	03/04/20 9:30:00 AM	WATER	EPA 8260-GAS	EPA 8260 with GAS
91585	03/05/20	ERH1024	BA07943	03/04/20 9:30:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
91585	03/05/20	ERH1024	BA07943	03/04/20 9:30:00 AM	WATER	RSK 175	METHANE BY RSK 175
91585	03/05/20	ERH1025	BA07944	03/04/20 10:15:00 AM	WATER	SM 2320B	Wetlab 2320B - Water
91585	03/05/20	ERH1025	BA07944	03/04/20 10:15:00 AM	WATER	EPA 300.0	Wetlab 300.0 - Water
91585	03/05/20	ERH1025	BA07944	03/04/20 10:15:00 AM	WATER	SM3500FeB	Ferrous Iron
91585	03/05/20	ERH1025	BA07944	03/04/20 10:15:00 AM	WATER	EPA 353.2	EPA 353.2 - WATER
91585	03/05/20	ERH1025	BA07944	03/04/20 10:15:00 AM	WATER	6010C/3010A	EPA 6010C TOTAL
91585	03/05/20	ERH1025	BA07944	03/04/20 10:15:00 AM	WATER	8011	EPA 8011
91585	03/05/20	ERH1025	BA07944	03/04/20 10:15:00 AM	WATER	EPA 8260B	EPA 8260B BTEX & 1,2-DCA WATER

91585	03/05/20	ERH1025	BA07944	03/04/20 10:15:00 AM	WATER	EPA 8270D	EPA 8270D WATER
91585	03/05/20	ERH1025	BA07944	03/04/20 10:15:00 AM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
91585	03/05/20	ERH1025	BA07944	03/04/20 10:15:00 AM	WATER	EPA 8015B-eHL	EPA 8015B TPH LIQ-LIQ
91585	03/05/20	ERH1025	BA07944	03/04/20 10:15:00 AM	WATER	SW846 9060A	9060A DOC
91585	03/05/20	ERH1025	BA07944	03/04/20 10:15:00 AM	WATER	EPA 8260-GAS	EPA 8260 with GAS
91585	03/05/20	ERH1025	BA07944	03/04/20 10:15:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
91585	03/05/20	ERH1025	BA07944	03/04/20 10:15:00 AM	WATER	RSK 175	METHANE BY RSK 175
91585	03/05/20	ERH1025	BA07944	03/04/20 10:15:00 AM	WATER	8270D-SIM	EPA 8270D SIM LIQ-LIQ
91585	03/05/20	ERH1025	BA07944	03/04/20 10:15:00 AM	WATER	SM 4500-Si D	Silica W
91585	03/05/20	ERH1025	BA07944	03/04/20 10:15:00 AM	WATER	SM 4500-Si D	SILICA W - DISSOLVED
91585	03/05/20	ERH1025	BA07944	03/04/20 10:15:00 AM	WATER	SW846 9060A	9060A TOC
91585	03/05/20	ERH1033	BA07945	03/04/20 7:55:00 AM	WATER	8011	EPA 8011
91585	03/05/20	ERH1033	BA07945	03/04/20 7:55:00 AM	WATER	EPA 8260B	EPA 8260B BTEX & 1,2-DCA WATER
91585	03/05/20	ERH1033	BA07945	03/04/20 7:55:00 AM	WATER	EPA 8260-GAS	EPA 8260 with GAS
91585	03/05/20	ERH1033	BA07945	03/04/20 7:55:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
91585	03/05/20	ERH1034	BA07946	03/04/20 8:15:00 AM	WATER	8011	EPA 8011
91585	03/05/20	ERH1034	BA07946	03/04/20 8:15:00 AM	WATER	EPA 8260B	EPA 8260B BTEX & 1,2-DCA WATER
91585	03/05/20	ERH1034	BA07946	03/04/20 8:15:00 AM	WATER	EPA 8270D	EPA 8270D WATER
91585	03/05/20	ERH1034	BA07946	03/04/20 8:15:00 AM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
91585	03/05/20	ERH1034	BA07946	03/04/20 8:15:00 AM	WATER	EPA 8015B-eHL	EPA 8015B TPH LIQ-LIQ
91585	03/05/20	ERH1034	BA07946	03/04/20 8:15:00 AM	WATER	EPA 8260-GAS	EPA 8260 with GAS
91585	03/05/20	ERH1034	BA07946	03/04/20 8:15:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
91585	03/05/20	ERH1034	BA07946	03/04/20 8:15:00 AM	WATER	8270D-SIM	EPA 8270D SIM LIQ-LIQ
91585	03/05/20	ERH1035	BA07947	03/04/20 8:35:00 AM	WATER	8011	EPA 8011
91585	03/05/20	ERH1035	BA07947	03/04/20 8:35:00 AM	WATER	EPA 8260B	EPA 8260B BTEX & 1,2-DCA WATER
91585	03/05/20	ERH1035	BA07947	03/04/20 8:35:00 AM	WATER	EPA 8270D	EPA 8270D WATER
91585	03/05/20	ERH1035	BA07947	03/04/20 8:35:00 AM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
91585	03/05/20	ERH1035	BA07947	03/04/20 8:35:00 AM	WATER	EPA 8015B-eHL	EPA 8015B TPH LIQ-LIQ
91585	03/05/20	ERH1035	BA07947	03/04/20 8:35:00 AM	WATER	EPA 8260-GAS	EPA 8260 with GAS
91585	03/05/20	ERH1035	BA07947	03/04/20 8:35:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
91585	03/05/20	ERH1035	BA07947	03/04/20 8:35:00 AM	WATER	8270D-SIM	EPA 8270D SIM LIQ-LIQ

APPL Inc.
Abbreviations and Flags

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

Abbreviations	DESCRIPTION
CCB	Continuing calibration blank
CCV	Continuing calibration verification
DF	Dilution factor
DL	Detection limit
ICB	Initial calibration blank
ICV	Initial calibration verification
LCS	Laboratory control spike
LOD	Limit of detection
LOQ	Limit of quantitation
MS	Matrix spike
MSD	Matrix spike duplicate
PQL	Practical quantitation limit
RL	Reporting limit
RPD	Relative percent difference
RT	Retention time

SAMPLE RECORDS MANAGEMENT

CHAIN OF CUSTODY,

ARF, CRF, AND

CLIENT COMMUNICATION

APPL - Analysis Request Form 91585

Client: **AECOM**
Address: **1001 Bishop Street, Suite 1600**
Honolulu, HI 96813
Attn: **Margie Pascua**
Phone: **808-356-5373** Fax: **808-523-8950**
Job: **60571032 CV18F0126 Red Hill Fuel Storage**
PO #: **18S-22209-HI27 PO# 102604**
Chain of Custody (Y/N): **Y** # **134,136-138**
RAD Screen (Y/N): **Y** pH (Y/N): **Y**
Turn Around Type: **1 WEEK**

Received by: **AAR**
Date Received: **03/05/20** Time: **10:00**
Delivered by: **FEDEX**
Shuttle Custody Seals (Y/N): **Y** Time Zone: **-10**
Chest Temp(s): **3.4,1.4,2.4,5.4°C**
Color: **VFRG/L-PurBrn/NM-BIT**
Samples Chilled until Placed in Refrig/Freezer: **Y**
Project Manager: **Libby Cheesebor**
QC Report Type: **DVP4DOD/EQUIS/HI**
Due Date: **03/12/20**

Comments:
PM: login and F1s to Margie.Pascua@aecom.com
AN: 7 day TAT for Form 1s; 21 day TAT for PKG STYLE 1; DOD v5.1; DOD Forms: LOD database
Wetlab: NO3, CL, SO4, BR, & F by EPA 300 and NO3-N & NO2-N by 353.2
report MS/MSD/DUPs when AECOM sample used
TPH D & O both with and w/o SGC, reverse surrogate for the SGC; analyze SGC if detections
RSK: Methane only; 8011: EDB only; $87DC53W5: report phenol only
FR: email ftp info to Margie, Stella, trommelfanger@lab-data.com & jcanlas@lab-data.com
EDD: AECOM EQuIS EDD 2.5.3 Red Hill 87DMEE->3535A to Margie.Pascua@aecom.com & jecklund@lab-data.com

Sample Distribution:
GC: 7-$8011, 4-$87DC53W5, 4-$87DMEEW5, 4-$DOC53W5LIQ, 4-$SIM53LIQ51
Extractions: 7-_MWE012, 4-_LIQ003, 4-_LIQ005, 4-_MWE2MEE
VOA: 7-$86BTOTXDCAW, 7-$GASBL, 7-$GRO86BW, 4-$RSKMETH
Metals: 2-$61CDOD5W(Ca,Mg,Mn,K,Na)
Wetlab: 2-$232W(HCO3,CO3,ALK), 2-$300W, 2-$35FE, 2-$35OF, 2-$DOCW53, 2-$SIO2, 2-$SIO2D, 2-$TOCW53
Other: 2-_M3010

Charges:

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

	Client ID	APPL ID	Sampled	Analyses Requested
1.	ERH1022	LCSD BA07941W	03/03/20 09:00	$8011, $86BTOTXDCAW, $GASBL, $GRO86BW, $RSKMETH -- See comments
2.	ERH1023	LCSD BA07942W	03/03/20 10:30	$232W(HCO3,CO3,ALK), $300W, $35FE, $35OF, $61CDOD5W(Ca,Mg,Mn,K,Na), $8011, $86BTOTXDCAW, $87DC53W5, $87DMEEW5, $DOC53W5LIQ, $DOCW53, $GASBL, $GRO86BW, $RSKMETH, $SIM53LIQ51, $SIO2, $SIO2D, $TOCW53 -- See comments
3.	ERH1024	LCSD BA07943W	03/04/20 09:30	$8011, $86BTOTXDCAW, $GASBL, $GRO86BW, $RSKMETH -- See comments

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

4.	ERH1025	LCSD BA07944W	03/04/20 10:15	$232W(HCO3,CO3,ALK), $300W, $35FE, $35OF, $61CDOD5W(Ca,Mg,Mn,K,Na), $8011, $86BTOTXDCAW, $87DC53W5, $87DMEEW5, $DOC53W5LIQ, $DOCW53, $GASBL, $GRO86BW, $RSKMETH, $SIM53LIQ51, $SIO2, $SIO2D, $TOCW53 -- See comments
5.	ERH1033	LCSD BA07945W	03/04/20 07:55	$8011, $86BTOTXDCAW, $GASBL, $GRO86BW -- See comments
6.	ERH1034	LCSD BA07946W	03/04/20 08:15	$8011, $86BTOTXDCAW, $87DC53W5, $87DMEEW5, $DOC53W5LIQ, $GASBL, $GRO86BW, $SIM53LIQ51 -- See comments
7.	ERH1035	LCSD BA07947W	03/04/20 08:35	$8011, $86BTOTXDCAW, $87DC53W5, $87DMEEW5, $DOC53W5LIQ, $GASBL, $GRO86BW, $SIM53LIQ51 -- See comments

APPL Sample Receipt Form

ARF# **91585**

Sample	Container Type	Count	p
BA07941	[13] VOAs - HCL	4	NA
	[15] VOAs - NP	3	NA
BA07942	[3] PL 250mL	1	NA
	[4] PL 125mL	2	NA
	[6] PL 500mL - HNO3	1	1.7
	[10] PL 250mL - H2SO4	1	1.7
	[13] VOAs - HCL	4	NA
	[15] VOAs - NP	3	NA
	[17] Amber Liter	4	NA
	[32] Clear VOA - H2SO4	4	NA
	[38] 250mL brn poly, HCl prsvd	1	1.7
	[40] 500mL Amber, unprsrvd	3	NA
BA07943	[13] VOAs - HCL	4	NA
	[15] VOAs - NP	3	NA
BA07944	[3] PL 250mL	1	NA
	[4] PL 125mL	2	NA
	[6] PL 500mL - HNO3	1	1.7
	[10] PL 250mL - H2SO4	1	1.7
	[13] VOAs - HCL	4	NA
	[15] VOAs - NP	3	NA
	[17] Amber Liter	4	NA
	[32] Clear VOA - H2SO4	4	NA
	[38] 250mL brn poly, HCl prsvd	1	1.7
	[40] 500mL Amber, unprsrvd	3	NA
BA07945	[13] VOAs - HCL	4	NA
	[15] VOAs - NP	3	NA
BA07946	[13] VOAs - HCL	4	NA
	[15] VOAs - NP	3	NA
	[17] Amber Liter	4	NA
	[40] 500mL Amber, unprsrvd	3	NA
BA07947	[13] VOAs - HCL	4	NA
	[15] VOAs - NP	3	NA
	[17] Amber Liter	4	NA
	[40] 500mL Amber, unprsrvd	3	NA

Sample	Container Type	Count	p

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com
Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

CHAIN OF CUSTODY RECORD

C.O.C. 136

Report to: PLEASE PRINT	Invoice to: PLEASE PRINT
Company Name: AECOM Phone: 808-356-5373	Company Name: AECOM Phone: 808-529-7249
Address: 1001 Bishop St, Suite 1600 Honolulu, HI 96813 Fax: 808-523-8950	Address: 1001 Bishop St, Suite 1600 Honolulu, HI 96813 Fax: 808-523-8950
Attn: Margie Pascua	Attn: Mary Basano
Email: margie.pascua@aecom.com	Email: mary.basano@aecom.com; usapimaging@aecom.com

Project Name/Number: CV18F0126 / 60571032
Purchase Order Number: 102604
Sampler (Print): BM, CE, EB DM
Sampler (Signature): MP for BM, CE, EB DM
Date Shipped: MM/DD/YY
Carrier: FedEx
Waybill No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil	8260C BTEX,TPH-g	8260C DCA 8011 EDB	8015C TPH-d/o	3630/8015C TPH-d/o w/ SGT	8270DSIM PAHs short list	8270D Phenol, TICs	8270D 2-(2-methoxy ethoxy)-ethanol	RSK175M Methane	SM3500-Fe Ferrous Iron	353.2 Nitrate-Nitrite N	SM2320B Alkalinity 300.0 Nitrate,Sulfate,Chloride	300.0 Bromide/Fluoride 8010 Total Ca,Mg,Mn,K,Na SM4500 Total & Dissolved Silica	9060A TOC
ERH 1022	Trip Blank	03/03/20	0900	HST	7	X			X	X						X					
ERH 1023	RHMW13-01	03/03/20	1030	HST	2	X			X	X	X	X*	X	X	X	X	X	X	X	X	X

EB 03/04/20

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*Analyze TPH w/SGT only if TPH-d/o detected.

TPH-d/o & PAHs need liquid-liquid extraction.

Shuttle Temperature:

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

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

Relinquished by sampler: AECOM Estelle BONNY	Date 03/04/20	Time 1245	Received by:	Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date 3-5-20	Time 1000	Received at lab by:

See page 2 for Container Preservative and Sampling Information

91585

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com

Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

CHAIN OF CUSTODY RECORD

C.O.C. 138

Report to: PLEASE PRINT

Company Name: AECOM Phone: 808-356-5373

Address: 1001 Bishop St, Suite 1600
Honolulu, HI 96813 Fax: 808-523-8950

Attn: Margie Pascua

Email: margie.pascua@aecom.com

Invoice to: PLEASE PRINT

Company Name: AECOM Phone: 808-529-7249

Address: 1001 Bishop St, Suite 1600
Honolulu, HI 96813 Fax: 808-523-8950

Attn: Mary Basano

Email: mary.basano@aecom.com; usapimaging@aecom.com

Project Name/Number: CV18F0126 / 60571032

Purchase Order Number: 102604

Sampler (Print): BM, DM, JF

Sampler (Signature): MP for BM, DM, JF

Date Shipped: MM/DD/YY

Carrier: FedEx

Waybill No.:

Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	8260C BTEX,TPH-g	8260C DCA 8011 EDB	8015C TPH-d/o	3630/8015C TPH-d/o w/ SGT	8270DSIM PAHs short list	8270D Phenol, TICs	8270D 2-(2-methoxy ethoxy)-ethanol	RSK175M Methane	SM3500-Fe Ferrous Iron	353.2 Nitrate-Nitrite N	SM2320B Alkalinity 300.0 Nitrate,Sulfate,Chloride	300.0 Bromide/Fluoride 8010 Total Ca,Mg,Mn,K,Na SM4500 Total & Dissolved Silica	9060A TOC	
ERH 1035	Equipment Blank	03/04/20	0835	HST	7	X			X	X	X	X*	X	X	X							see other coolers for VOAs

EB 03/04/20

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*Analyze TPH w/SGT only if TPH-d/o detected.

TPH-d/o & PAHs need liquid-liquid extraction.

5.0/5.4 3.0/3.4

Shuttle Temperature: 1.0/1.4 R1@10.4 2.0/2.4

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

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

Relinquished by sampler: AECOM Estelle Bonny	Date 03/04/20	Time 1410	Received by:	Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date 3.5.20	Time 1000	Received at lab by:

See page 2 for Container Preservative and Sampling Information

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Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

CHAIN OF CUSTODY RECORD

C.O.C. 134

Report to: PLEASE PRINT

Company Name: AECOM Phone: 808-356-5373

Address: 1001 Bishop St, Suite 1600
Honolulu, HI 96813
Fax: 808-523-8950

Attn: Margie Pascua

Email: margie.pascua@aecom.com

Invoice to: PLEASE PRINT

Company Name: AECOM Phone: 808-529-7249

Address: 1001 Bishop St, Suite 1600
Honolulu, HI 96813
Fax: 808-523-8950

Attn: Mary Basano

Email: mary.basano@aecom.com; usapimaging@aecom.com

Project Name/Number: CV18F0126 / 60571032

Purchase Order Number: 102604

Sampler (Print): BM, DM, EB JF

Sampler (Signature): MP for BM, DM, EB JF

Date Shipped: MM/DD/YY

Carrier: FedEx

Waybill No.:

Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil	8260C BTEX,TPH-g	8260C DCA 8011 EDB	8015C TPH-d/o	3630/8015C TPH-d/o w/ SGT	8270DSIM PAHs short list	8270D Phenol, ~~Hes~~ Ed	8270D 2-(2-methoxy ethoxy)-ethanol	RSK175M Methane	SM3500-Fe Ferrous Iron	353.2 Nitrate-Nitrite N	SM2320B Alkalinity 300.0 Nitrate,Sulfate,Chloride	300.0 Bromide/Fluoride 6010 Total Ca,Mg,Mn,K,Na SM4500 Total & Dissolved Silica	9060A TOC	~~8015~~
ERH 1024	Trip Blank	03/04/20	0930	HST	7	X			X	X						X						
ERH 1025	RHMW13-02	03/04/20	1015	HST	24	X			X	X	X	X*	X	X	X	X	X	X	X	X	X	X

EB 03/04/20

*Analyze TPH w/SGT only if TPH-d/o detected.

TPH-d/o & PAHs need liquid-liquid extraction.

Page 16 of 707

Shuttle Temperature:

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

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

Relinquished by sampler: AECOM	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Estelle BONNY	03/04/20	1355					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					3-5-20	1000	

See page 2 for Container Preservative and Sampling Information

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com

Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

CHAIN OF CUSTODY RECORD

C.O.C. 137

Report to: PLEASE PRINT

Company Name: AECOM Phone: 808-356-5373

Address: 1001 Bishop St, Suite 1600
Honolulu, HI 96813 Fax: 808-523-8950

Attn: Margie Pascua

Email: margie.pascua@aecom.com

Invoice to: PLEASE PRINT

Company Name: AECOM Phone: 808-529-7249

Address: 1001 Bishop St, Suite 1600
Honolulu, HI 96813 Fax: 808-523-8950

Attn: Mary Basano

Email: mary.basano@aecom.com; usapimaging@aecom.com

Project Name/Number: CV18F0126 / 60571032

Purchase Order Number: 102604

Sampler (Print): BM, DM, JF

Sampler (Signature): MP for BM, DM, JF

Date Shipped: MM/DD/YY

Carrier: FedEx

Waybill No.:

Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil	8260C BTEX,TPH-g	8260C DCA 8011 EDB	8015C TPH-d/o	3630/8015C TPH-d/o w/ SGT	8270DSIM PAHs short list	8270D Phenol, 5-Hex	8270D 2-(2-methoxy ethoxy)-ethanol	RSK175M Methane	SM3500-Fe Ferrous Iron	353.2 Nitrate-Nitrite N	SM2320B Alkalinity 300.0 Nitrate,Sulfate,Chloride	300.0 Bromide/Fluoride 6010 Total Ca,Mg,Mn,K,Na SM4500 Total & Dissolved Silica	9060A TOC	
ERH 1033	Trip Blank	03/04/20	0755	HST	7	X			X	X												
ERH 1034	Field Blank	03/04/20	0815	HST	14	X			X	X	X	X*	X	X	X							
ERH 1035	Equipment Blank	03/04/20	0835	HST	7	X			X	X	X	X*	X	X	X							see other cooler
						EB			03/04/20													

*Analyze TPH w/SGT only if TPH-d/o detected.

TPH-d/o & PAHs need liquid-liquid extraction.

Page 17 of 707

Shuttle Temperature:

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

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

Relinquished by sampler: AECOM	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Estelle BONNY	03/04/20	1405					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					3-5-20	1000	

See page 2 for Container Preservative and Sampling Information

Libby Cheeseborough

From: Pascua, Margie Fabian. <Margie.Pascua@aecom.com>
Sent: Tuesday, March 10, 2020 2:14 PM
To: Libby Cheeseborough
Subject: RE: 91585 & 91607 logins

Categories: Red Category

Hi Libby,

The codes look fine, but couple of minor comment on the Cooler Receipt Form:
SDG 91585 - Item# 22 has "NO" instead of "YES"
SDG 91607 – temperature reading is missing

Thank you,

Margie Pascua
Environmental Scientist
Environment, West Region, Pacific District
Direct 808.356.5373

From: Libby Cheeseborough <libby@applinc.com>
Sent: Tuesday, March 10, 2020 7:10 AM
To: Pascua, Margie Fabian. <Margie.Pascua@aecom.com>
Subject: 91585 & 91607 logins

Hi Margie,
Please see attached logins and let me know if there are any changes.

Thank you,
Libby

Libby Cheeseborough
Project Manager

Agriculture & Priority Pollutants Laboratories, Inc.
WOSB. NELAP Accredited.
d. 559.862.2109 t. 559.275.2175 f. 559.275.4422
a. 908 N. Temperance Ave., Clovis, CA 93611

Website • Email

COOLER RECEIPT FORM **ARF: 91585**

1) Project: 60571032 CV18F0126 Red Hill Fuel Storage Date Received: 03/05/20

2) Coolers: Number of Coolers: 4

3) YES Were custody seals present and intact?
How many? 8 Name/Date on seal? see below

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

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

6) YES Were cooler temperatures acceptable?

7) Serial number of certified NIST thermometer use R1 @ +0.4°C

8) Cooler temp(s): In °C. Thermometer Temp / Corrected Temp

1: 3.0°C/ 3.4°C	2: 1.0°C/ 1.4°C	3: 2.0°C/ 2.4°C	4: 5.0°C/ 5.4°C	5:	6:
7:	8:	9:	10:	11:	12:

Chain of custody:

9) YES Was a chain of custody received?

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

Sample Labels:

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

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

Sample Containers:

13) YES Were all containers sealed in separate bags?

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

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

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

17) Yes Were bubbles present in volatile samples?
If yes, the following were received with air bubbles:
Larger than a pea:
Smaller than a pea: BA07945W01

Preservation _Hold time:

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

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

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

21) NA Was the pH of the "basic" preserved samples for Cyanide > 12, Sulfide >9, Hexchrom >9?

22) ~~Yes~~ ~~NO~~ Were unpreserved VOA Vials received?

23) ~~NO~~ ~~NA~~ Are unpreserved VOA vials noted in the ADD TEST FIELD on the ARF?
pH strip lot number: HC982588
Lab notified if pH was not adequate:

Notes/Deficiencies:

CUSTODY SEAL
APPL, Inc. (559) 275-2175
Initials EB Date 03/04/20

Unpreserved VOA vials were received, however the do not need to be notated in the add test field.
AA 3/10/20

Personnel receiving samples: ZG Second reviewer: ZG
Personnel labeling samples: ZG
Project manager notified: ZG Date/Time of notification 03/05/20
Name of client notified: Date/Time of notification

SAMPLE RESULTS

EPA 8011

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91585

Sample ID: ERH1022

APPL ID: BA07941

Sample Collection Date: 03/03/20

QCG: #8011-200309A-250610

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8011	EDB	0.019 U	0.02	0.019	0.010	ug/L	03/09/20	03/09/20
8011	SURROGATE: 1,3-DIBROMOPROPANE	94.0	70-132			%	03/09/20	03/09/20

Quant Method:	8010310A.M
Run #:	0228118
Instrument:	Herbie
Sequence:	200228
Dilution Factor:	1
Initials:	GAG

Printed: 03/11/20 3:42:14 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8011

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Pascua

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91585

Sample ID: ERH1023

APPL ID: BA07942

Sample Collection Date: 03/03/20

QCG: #8011-200309A-250610

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8011	EDB	0.019 U	0.02	0.019	0.010	ug/L	03/09/20	03/09/20
8011	SURROGATE: 1,3-DIBROMOPROPANE	93.0	70-132			%	03/09/20	03/09/20

Quant Method:	8010310A.M
Run #:	0228119
Instrument:	Herbie
Sequence:	200228
Dilution Factor:	1
Initials:	GAG

Printed: 03/11/20 3:42:14 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8011

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91585

Sample ID: ERH1024

APPL ID: BA07943

Sample Collection Date: 03/04/20

QCG: #8011-200309A-250610

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8011	EDB	0.019 U	0.02	0.019	0.010	ug/L	03/09/20	03/09/20
8011	SURROGATE: 1,3-DIBROMOPROPANE	94.2	70-132			%	03/09/20	03/09/20

Quant Method:	8010310A.M
Run #:	0228120
Instrument:	Herbie
Sequence:	200228
Dilution Factor:	1
Initials:	GAG

Printed: 03/11/20 3:42:14 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8011

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91585

Sample ID: ERH1025

APPL ID: BA07944

Sample Collection Date: 03/04/20

QCG: #8011-200309A-250610

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8011	EDB	0.019 U	0.02	0.019	0.010	ug/L	03/09/20	03/09/20
8011	SURROGATE: 1,3-DIBROMOPROPANE	97.1	70-132			%	03/09/20	03/09/20

Quant Method:	8010310A.M
Run #:	0228121
Instrument:	Herbie
Sequence:	200228
Dilution Factor:	1
Initials:	GAG

Printed: 03/11/20 3:42:14 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8011

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1033

Sample Collection Date: 03/04/20

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 91585

APPL ID: BA07945

QCG: #8011-200309A-250610

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8011	EDB	0.019 U	0.02	0.019	0.010	ug/L	03/09/20	03/09/20
8011	SURROGATE: 1,3-DIBROMOPROPANE	90.7	70-132			%	03/09/20	03/09/20

Quant Method:	8010310A.M
Run #:	0228122
Instrument:	Herbie
Sequence:	200228
Dilution Factor:	1
Initials:	GAG

Printed: 03/11/20 3:42:14 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8011

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Pascua

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91585

Sample ID: ERH1034

APPL ID: BA07946

Sample Collection Date: 03/04/20

QCG: #8011-200309A-250610

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8011	EDB	0.019 U	0.02	0.019	0.010	ug/L	03/09/20	03/09/20
8011	SURROGATE: 1,3-DIBROMOPROPANE	96.3	70-132			%	03/09/20	03/09/20

Quant Method:	8010310A.M
Run #:	0228123
Instrument:	Herbie
Sequence:	200228
Dilution Factor:	1
Initials:	GAG

Printed: 03/11/20 3:42:14 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8011

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1035

Sample Collection Date: 03/04/20

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 91585

APPL ID: BA07947

QCG: #8011-200309A-250610

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8011	EDB	0.019 U	0.02	0.019	0.010	ug/L	03/09/20	03/09/20
8011	SURROGATE: 1,3-DIBROMOPROPANE	97.8	70-132			%	03/09/20	03/09/20

Quant Method:	8010310A.M
Run #:	0228124
Instrument:	Herbie
Sequence:	200228
Dilution Factor:	1
Initials:	GAG

Printed: 03/11/20 3:42:14 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPH LIQ-LIQ

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91585

Sample ID: ERH1023

APPL ID: BA07942

Sample Collection Date: 03/03/20

QCG: #DOC53-200306A-250629

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	03/06/20	03/10/20
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	03/06/20	03/10/20
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	104	60-142			%	03/06/20	03/10/20
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	84.6	56-125			%	03/06/20	03/10/20

Quant Method:	DOC0310.M
Run #:	310013
Instrument:	Apollo
Sequence:	200310
Dilution Factor:	1
Initials:	SSE

Printed: 04/06/20 7:51:13 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPH LIQ-LIQ

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91585

Sample ID: ERH1025

APPL ID: BA07944

Sample Collection Date: 03/04/20

QCG: #DOC53-200306A-250629

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	03/06/20	03/10/20
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	03/06/20	03/10/20
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	104	60-142			%	03/06/20	03/10/20
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	81.8	56-125			%	03/06/20	03/10/20

Quant Method:	DOC0310.M
Run #:	310014
Instrument:	Apollo
Sequence:	200310
Dilution Factor:	1
Initials:	SSE

Printed: 04/06/20 7:51:13 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPH LIQ-LIQ

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91585

Sample ID: ERH1034

APPL ID: BA07946

Sample Collection Date: 03/04/20

QCG: #DOC53-200306A-250629

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	03/06/20	03/10/20
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	03/06/20	03/10/20
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	103	60-142			%	03/06/20	03/10/20
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	80.9	56-125			%	03/06/20	03/10/20

Quant Method:	DOC0310.M
Run #:	310015
Instrument:	Apollo
Sequence:	200310
Dilution Factor:	1
Initials:	SSE

Printed: 04/06/20 7:51:13 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPH LIQ-LIQ

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91585

Sample ID: ERH1035

APPL ID: BA07947

Sample Collection Date: 03/04/20

QCG: #DOC53-200306A-250629

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	03/06/20	03/10/20
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	03/06/20	03/10/20
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	104	60-142			%	03/06/20	03/10/20
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	79.8	56-125			%	03/06/20	03/10/20

Quant Method:	DOC0310.M
Run #:	310016
Instrument:	Apollo
Sequence:	200310
Dilution Factor:	1
Initials:	SSE

Printed: 04/06/20 7:51:13 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91585

Sample ID: ERH1023

APPL ID: BA07942

Sample Collection Date: 03/03/20

QCG: #87DC5-200306A-250635

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	03/06/20	03/10/20
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHENO	94.9	43-140			%	03/06/20	03/10/20
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	83.7	44-119			%	03/06/20	03/10/20
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	101	19-119			%	03/06/20	03/10/20
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	103	44-120			%	03/06/20	03/10/20
EPA 8270D	SURROGATE: PHENOL-D6 (S)	108	10-115			%	03/06/20	03/10/20
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	75.8	50-134			%	03/06/20	03/10/20

Quant Method: Y1219.M
Run #: 0207Y185
Instrument: Yoda
Sequence: Y200207
Dilution Factor: 1
Initials: JPR

Printed: 03/11/20 12:57:13 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91585

Sample ID: ERH1025

APPL ID: BA07944

Sample Collection Date: 03/04/20

QCG: #87DC5-200306A-250635

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	03/06/20	03/10/20
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHENO	95.6	43-140			%	03/06/20	03/10/20
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	81.0	44-119			%	03/06/20	03/10/20
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	88.7	19-119			%	03/06/20	03/10/20
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	94.6	44-120			%	03/06/20	03/10/20
EPA 8270D	SURROGATE: PHENOL-D6 (S)	95.4	10-115			%	03/06/20	03/10/20
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	70.2	50-134			%	03/06/20	03/10/20

Quant Method: Y1219.M
Run #: 0207Y186
Instrument: Yoda
Sequence: Y200207
Dilution Factor: 1
Initials: JPR

Printed: 03/11/20 12:57:13 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91585

Sample ID: ERH1034

APPL ID: BA07946

Sample Collection Date: 03/04/20

QCG: #87DC5-200306A-250635

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	03/06/20	03/10/20
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHENO	98.0	43-140			%	03/06/20	03/10/20
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	83.1	44-119			%	03/06/20	03/10/20
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	92.8	19-119			%	03/06/20	03/10/20
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	97.9	44-120			%	03/06/20	03/10/20
EPA 8270D	SURROGATE: PHENOL-D6 (S)	101	10-115			%	03/06/20	03/10/20
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	71.0	50-134			%	03/06/20	03/10/20

Quant Method: Y1219.M
Run #: 0207Y187
Instrument: Yoda
Sequence: Y200207
Dilution Factor: 1
Initials: JPR

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91585

Sample ID: ERH1035

APPL ID: BA07947

Sample Collection Date: 03/04/20

QCG: #87DC5-200306A-250635

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	03/06/20	03/10/20
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHENO	99.9	43-140			%	03/06/20	03/10/20
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	84.0	44-119			%	03/06/20	03/10/20
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	94.4	19-119			%	03/06/20	03/10/20
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	98.7	44-120			%	03/06/20	03/10/20
EPA 8270D	SURROGATE: PHENOL-D6 (S)	103	10-115			%	03/06/20	03/10/20
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	71.4	50-134			%	03/06/20	03/10/20

Quant Method: Y1219.M
Run #: 0207Y188
Instrument: Yoda
Sequence: Y200207
Dilution Factor: 1
Initials: JPR

Printed: 03/11/20 12:57:13 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D SIM LIQ-LIQ

AECOM
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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91585

Sample ID: ERH1023

APPL ID: BA07942

Sample Collection Date: 03/03/20

QCG: #SIM53-200306A-250658

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	03/06/20	03/11/20
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	03/06/20	03/11/20
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	03/06/20	03/11/20
8270D-SIM	SURROGATE: 2-METHYLNAPHTHALEN	96.3	39-114			%	03/06/20	03/11/20
8270D-SIM	SURROGATE: FLUORANTHENE-D10 (S	93.2	58-120			%	03/06/20	03/11/20

Quant Method: L0204.M
Run #: 0204L256
Instrument: Linus
Sequence: L200204
Dilution Factor: 1
Initials: MA

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D SIM LIQ-LIQ

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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91585

Sample ID: ERH1025

APPL ID: BA07944

Sample Collection Date: 03/04/20

QCG: #SIM53-200306A-250658

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	03/06/20	03/11/20
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	03/06/20	03/11/20
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	03/06/20	03/11/20
8270D-SIM	SURROGATE: 2-METHYLNAPHTHALEN	96.3	39-114			%	03/06/20	03/11/20
8270D-SIM	SURROGATE: FLUORANTHENE-D10 (S	97.0	58-120			%	03/06/20	03/11/20

Quant Method: L0204.M
Run #: 0204L257
Instrument: Linus
Sequence: L200204
Dilution Factor: 1
Initials: MA

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D SIM LIQ-LIQ

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APPL Inc.
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Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91585

Sample ID: ERH1034

APPL ID: BA07946

Sample Collection Date: 03/04/20

QCG: #SIM53-200306A-250658

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	03/06/20	03/11/20
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	03/06/20	03/11/20
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	03/06/20	03/11/20
8270D-SIM	SURROGATE: 2-METHYLNAPHTHALEN	99.4	39-114			%	03/06/20	03/11/20
8270D-SIM	SURROGATE: FLUORANTHENE-D10 (S	96.9	58-120			%	03/06/20	03/11/20

Quant Method: L0204.M
Run #: 0204L258
Instrument: Linus
Sequence: L200204
Dilution Factor: 1
Initials: MA

Printed: 03/11/20 5:26:30 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D SIM LIQ-LIQ

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APPL Inc.
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Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91585

Sample ID: ERH1035

APPL ID: BA07947

Sample Collection Date: 03/04/20

QCG: #SIM53-200306A-250658

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	03/06/20	03/11/20
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	03/06/20	03/11/20
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	03/06/20	03/11/20
8270D-SIM	SURROGATE: 2-METHYLNAPHTHALEN	98.3	39-114			%	03/06/20	03/11/20
8270D-SIM	SURROGATE: FLUORANTHENE-D10 (S	95.3	58-120			%	03/06/20	03/11/20

Quant Method: L0204.M
Run #: 0204L259
Instrument: Linus
Sequence: L200204
Dilution Factor: 1
Initials: MA

Printed: 03/11/20 5:26:30 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D MODIFIED WATER

AECOM
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Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91585

Sample ID: ERH1023

APPL ID: BA07942

Sample Collection Date: 03/03/20

QCG: #87DME-200310A-250694

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	03/10/20	03/11/20

Quant Method:	YMEE0122.M
Run #:	0122Y065
Instrument:	Yoda
Sequence:	Y200122M
Dilution Factor:	1
Initials:	DPO

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91585

Sample ID: ERH1025

APPL ID: BA07944

Sample Collection Date: 03/04/20

QCG: #87DME-200310A-250694

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	03/10/20	03/11/20

Quant Method:	YMEE0122.M
Run #:	0122Y066
Instrument:	Yoda
Sequence:	Y200122M
Dilution Factor:	1
Initials:	DPO

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1034

Sample Collection Date: 03/04/20

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 91585

APPL ID: BA07946

QCG: #87DME-200310A-250694

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	03/10/20	03/11/20

Quant Method:	YMEE0122.M
Run #:	0122Y067
Instrument:	Yoda
Sequence:	Y200122M
Dilution Factor:	1
Initials:	DPO

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1035

Sample Collection Date: 03/04/20

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 91585

APPL ID: BA07947

QCG: #87DME-200310A-250694

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	03/10/20	03/11/20

Quant Method:	YMEE0122.M
Run #:	0122Y068
Instrument:	Yoda
Sequence:	Y200122M
Dilution Factor:	1
Initials:	DPO

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX & 1,2-DCA WATER

AECOM
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APPL Inc.
908 North Temperance Avenue
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Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91585

Sample ID: ERH 1022

APPL ID: BA07941

Sample Collection Date: 03/03/20

QCG: #86BTO-200305BT-250509

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	03/05/20	03/05/20
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	03/05/20	03/05/20
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	03/05/20	03/05/20
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	03/05/20	03/05/20
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	03/05/20	03/05/20
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	102	81-118			%	03/05/20	03/05/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	94.9	85-114			%	03/05/20	03/05/20
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	101	80-119			%	03/05/20	03/05/20
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	97.3	89-112			%	03/05/20	03/05/20

Quant Method: T0226W.M
Run #: 0305t24
Instrument: Thor
Sequence: T200226
Dilution Factor: 1
Initials: DPO

Printed: 03/06/20 10:40:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX & 1,2-DCA WATER

AECOM
1001 Bishop Street, Suite 1600
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908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91585

Sample ID: ERH 1023

APPL ID: BA07942

Sample Collection Date: 03/03/20

QCG: #86BTO-200305BT-250509

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	03/05/20	03/05/20
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	03/05/20	03/05/20
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	03/05/20	03/05/20
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	03/05/20	03/05/20
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	03/05/20	03/05/20
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	107	81-118			%	03/05/20	03/05/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	99.6	85-114			%	03/05/20	03/05/20
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	109	80-119			%	03/05/20	03/05/20
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	101	89-112			%	03/05/20	03/05/20

Quant Method: T0226W.M
Run #: 0305T25
Instrument: Thor
Sequence: T200226
Dilution Factor: 1
Initials: DPO

Printed: 03/06/20 10:40:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX & 1,2-DCA WATER

AECOM
1001 Bishop Street, Suite 1600
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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91585

Sample ID: ERH 1024

APPL ID: BA07943

Sample Collection Date: 03/04/20

QCG: #86BTO-200305BT-250509

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	03/05/20	03/05/20
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	03/05/20	03/05/20
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	03/05/20	03/05/20
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	03/05/20	03/05/20
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	03/05/20	03/05/20
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	112	81-118			%	03/05/20	03/05/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	99.3	85-114			%	03/05/20	03/05/20
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	112	80-119			%	03/05/20	03/05/20
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	102	89-112			%	03/05/20	03/05/20

Quant Method: T0226W.M
Run #: 0305T26
Instrument: Thor
Sequence: T200226
Dilution Factor: 1
Initials: DPO

Printed: 03/06/20 10:40:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX & 1,2-DCA WATER

AECOM
1001 Bishop Street, Suite 1600
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908 North Temperance Avenue
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Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91585

Sample ID: ERH 1025

APPL ID: BA07944

Sample Collection Date: 03/04/20

QCG: #86BTO-200305BT-250509

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	03/05/20	03/05/20
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	03/05/20	03/05/20
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	03/05/20	03/05/20
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	03/05/20	03/05/20
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	03/05/20	03/05/20
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	100	81-118			%	03/05/20	03/05/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	90.9	85-114			%	03/05/20	03/05/20
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	100	80-119			%	03/05/20	03/05/20
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	93.2	89-112			%	03/05/20	03/05/20

Quant Method: T0226W.M
Run #: 0305T27
Instrument: Thor
Sequence: T200226
Dilution Factor: 1
Initials: DPO

Printed: 03/06/20 10:40:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX & 1,2-DCA WATER

AECOM
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908 North Temperance Avenue
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Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91585

Sample ID: ERH 1033

APPL ID: BA07945

Sample Collection Date: 03/04/20

QCG: #86BTO-200305BT-250509

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	03/05/20	03/05/20
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	03/05/20	03/05/20
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	03/05/20	03/05/20
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	03/05/20	03/05/20
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	03/05/20	03/05/20
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	108	81-118			%	03/05/20	03/05/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	96.9	85-114			%	03/05/20	03/05/20
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	108	80-119			%	03/05/20	03/05/20
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	100	89-112			%	03/05/20	03/05/20

Quant Method: T0226W.M
Run #: 0305T28
Instrument: Thor
Sequence: T200226
Dilution Factor: 1
Initials: DPO

Printed: 03/06/20 10:40:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX & 1,2-DCA WATER

AECOM
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908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91585

Sample ID: ERH 1034

APPL ID: BA07946

Sample Collection Date: 03/04/20

QCG: #86BTO-200305BT-250509

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	03/05/20	03/05/20
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	03/05/20	03/05/20
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	03/05/20	03/05/20
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	03/05/20	03/05/20
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	03/05/20	03/05/20
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	107	81-118			%	03/05/20	03/05/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	94.9	85-114			%	03/05/20	03/05/20
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	107	80-119			%	03/05/20	03/05/20
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	98.4	89-112			%	03/05/20	03/05/20

Quant Method: T0226W.M
Run #: 0305T29
Instrument: Thor
Sequence: T200226
Dilution Factor: 1
Initials: DPO

Printed: 03/06/20 10:40:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX & 1,2-DCA WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91585

Sample ID: ERH 1035

APPL ID: BA07947

Sample Collection Date: 03/04/20

QCG: #86BTO-200305BT-250509

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	03/05/20	03/05/20
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	03/05/20	03/05/20
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	03/05/20	03/05/20
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	03/05/20	03/05/20
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	03/05/20	03/05/20
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	112	81-118			%	03/05/20	03/05/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	100	85-114			%	03/05/20	03/05/20
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	111	80-119			%	03/05/20	03/05/20
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	103	89-112			%	03/05/20	03/05/20

Quant Method: T0226W.M
Run #: 0305T30
Instrument: Thor
Sequence: T200226
Dilution Factor: 1
Initials: DPO

Printed: 03/06/20 10:40:15 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91585

Sample ID: ERH 1022

APPL ID: BA07941

Sample Collection Date: 03/03/20

QCG: #GRO86-200305BT1-25051

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	03/05/20	03/05/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	94.9	85-114			%	03/05/20	03/05/20

Quant Method: TGAS0219.M
Run #: 0305T24
Instrument: Thor
Sequence: T200226
Dilution Factor: 1
Initials: DPO

Printed: 03/06/20 10:37:33 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91585

Sample ID: ERH 1023

APPL ID: BA07942

Sample Collection Date: 03/03/20

QCG: #GRO86-200305BT1-25051

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	03/05/20	03/05/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	99.6	85-114			%	03/05/20	03/05/20

Quant Method: TGAS0219.M
Run #: 0305T25
Instrument: Thor
Sequence: T200226
Dilution Factor: 1
Initials: DPO

Printed: 03/06/20 10:37:33 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91585

Sample ID: ERH 1024

APPL ID: BA07943

Sample Collection Date: 03/04/20

QCG: #GRO86-200305BT1-25051

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	03/05/20	03/05/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	99.3	85-114			%	03/05/20	03/05/20

Quant Method: TGAS0219.M
Run #: 0305T26
Instrument: Thor
Sequence: T200226
Dilution Factor: 1
Initials: DPO

Printed: 03/06/20 10:37:33 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91585

Sample ID: ERH 1025

APPL ID: BA07944

Sample Collection Date: 03/04/20

QCG: #GRO86-200305BT1-25051

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	03/05/20	03/05/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	90.9	85-114			%	03/05/20	03/05/20

Quant Method: TGAS0219.M
Run #: 0305T27
Instrument: Thor
Sequence: T200226
Dilution Factor: 1
Initials: DPO

Printed: 03/06/20 10:37:33 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Pascua

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91585

Sample ID: ERH 1033

APPL ID: BA07945

Sample Collection Date: 03/04/20

QCG: #GRO86-200305BT1-25051

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	03/05/20	03/05/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	96.9	85-114			%	03/05/20	03/05/20

Quant Method:	TGAS0219.M
Run #:	0305T28
Instrument:	Thor
Sequence:	T200226
Dilution Factor:	1
Initials:	DPO

Printed: 03/06/20 10:37:33 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91585

Sample ID: ERH 1034

APPL ID: BA07946

Sample Collection Date: 03/04/20

QCG: #GRO86-200305BT1-25051

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	03/05/20	03/05/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	94.9	85-114			%	03/05/20	03/05/20

Quant Method: TGAS0219.M
Run #: 0305T29
Instrument: Thor
Sequence: T200226
Dilution Factor: 1
Initials: DPO

Printed: 03/06/20 10:37:33 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Pascua

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91585

Sample ID: ERH 1035

APPL ID: BA07947

Sample Collection Date: 03/04/20

QCG: #GRO86-200305BT1-25051

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	03/05/20	03/05/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	100	85-114			%	03/05/20	03/05/20

Quant Method: TGAS0219.M
Run #: 0305T30
Instrument: Thor
Sequence: T200226
Dilution Factor: 1
Initials: DPO

Printed: 03/06/20 10:37:33 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91585

Sample ID: ERH1022

APPL ID: BA07941

Sample Collection Date: 03/03/20

QCG: #RSKME-200309A-250619

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	03/09/20	03/09/20

Quant Method:	RSK1002.M
Run #:	0309R20
Instrument:	Rocky
Sequence:	191002
Dilution Factor:	1
Initials:	GAG

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APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91585

Sample ID: ERH1023

APPL ID: BA07942

Sample Collection Date: 03/03/20

QCG: #RSKME-200309A-250619

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	03/09/20	03/09/20

Quant Method:	RSK1002.M
Run #:	0309R21
Instrument:	Rocky
Sequence:	191002
Dilution Factor:	1
Initials:	GAG

Printed: 03/10/20 3:30:35 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
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Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91585

Sample ID: ERH1024

APPL ID: BA07943

Sample Collection Date: 03/04/20

QCG: #RSKME-200309A-250619

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	03/09/20	03/09/20

Quant Method:	RSK1002.M
Run #:	0309R22
Instrument:	Rocky
Sequence:	191002
Dilution Factor:	1
Initials:	GAG

Printed: 03/10/20 3:30:35 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91585

Sample ID: ERH1025

APPL ID: BA07944

Sample Collection Date: 03/04/20

QCG: #RSKME-200309A-250619

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	03/09/20	03/09/20

Quant Method:	RSK1002.M
Run #:	0309R23
Instrument:	Rocky
Sequence:	191002
Dilution Factor:	1
Initials:	GAG

Printed: 03/10/20 3:30:35 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

Metals Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91585

Sample ID: ERH1023

APPL ID: BA07942

Sample Collection Date: 03/03/20

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	CALCIUM (CA)	12100	1000	75.0	27.5	ug/L	1	03/06/20	03/12/20
6010C/3010A	MAGNESIUM (MG)	9320	500	30.0	12.9	ug/L	1	03/06/20	03/12/20
6010C/3010A	MANGANESE (MN)	2.6 J	10.0	4.00	1.23	ug/L	1	03/06/20	03/12/20
6010C/3010A	POTASSIUM (K)	1870 J	3000	500.0	220.0	ug/L	1	03/06/20	03/12/20
6010C/3010A	SODIUM (NA)	21600	5000	500.0	111.1	ug/L	1	03/06/20	03/12/20

J = Estimated value.

Printed: 03/26/20 6:43:30 PM

APPL-F1-SC-NoMC-REG MDLs

Metals Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91585

Sample ID: ERH1025

APPL ID: BA07944

Sample Collection Date: 03/04/20

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	CALCIUM (CA)	10300	1000	75.0	27.5	ug/L	1	03/06/20	03/12/20
6010C/3010A	MAGNESIUM (MG)	9710	500	30.0	12.9	ug/L	1	03/06/20	03/12/20
6010C/3010A	MANGANESE (MN)	5.9 J	10.0	4.00	1.23	ug/L	1	03/06/20	03/12/20
6010C/3010A	POTASSIUM (K)	1700 J	3000	500.0	220.0	ug/L	1	03/06/20	03/12/20
6010C/3010A	SODIUM (NA)	23500	5000	500.0	111.1	ug/L	1	03/06/20	03/12/20

J = Estimated value.

Printed: 03/26/20 6:43:30 PM

APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1023

APPL ID: BA07942

Sample Collection Date: 03/03/20

ARF: 91585

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	BROMIDE	0.21 J	0.5	0.16	0.05	mg/L	1	03/05/20	03/05/20
EPA 300.0	CHLORIDE	41.8	1.0	0.20	0.08	mg/L	1	03/05/20	03/05/20
EPA 300.0	FLUORIDE	0.09 U	0.1	0.09	0.08	mg/L	1	03/05/20	03/05/20
EPA 300.0	NITRATE	1.3	0.5	0.18	0.04	mg/L	1	03/05/20	03/05/20
EPA 300.0	SULFATE	6.4	1.0	0.20	0.09	mg/L	1	03/05/20	03/05/20

J = Estimated value.

Printed: 03/20/20 3:34:03 PM

APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1025

APPL ID: BA07944

Sample Collection Date: 03/04/20

ARF: 91585

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	BROMIDE	0.19 J	0.5	0.16	0.05	mg/L	1	03/05/20	03/05/20
EPA 300.0	CHLORIDE	26.5	1.0	0.20	0.08	mg/L	1	03/05/20	03/05/20
EPA 300.0	FLUORIDE	0.09 U	0.1	0.09	0.08	mg/L	1	03/05/20	03/05/20
EPA 300.0	NITRATE	1.5	0.5	0.18	0.04	mg/L	1	03/05/20	03/05/20
EPA 300.0	SULFATE	5.5	1.0	0.20	0.09	mg/L	1	03/05/20	03/05/20

J = Estimated value.

Printed: 03/20/20 3:34:03 PM

APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1023

APPL ID: BA07942

Sample Collection Date: 03/03/20

ARF: 91585

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 353.2	NITRATE-NITRITE-N	0.31	0.10	0.090	0.028	mg/L	1	03/06/20	03/06/20
SM 2320B	BICARBONATE AS CACO3	51.8	2.0	1.70	0.85	mg/L	1	03/09/20	03/09/20
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	03/09/20	03/09/20
SM 2320B	TOTAL ALKALINITY AS CACO	51.8	2.0	1.70	0.85	mg/L	1	03/09/20	03/09/20
SM 4500-Si D	SILICA W	40.4	5.0	4.00	2.65	mg/L	5	03/09/20	03/09/20
SM 4500-Si D	DISSOLVED SILICA	41.6	5.0	4.00	2.65	mg/L	5	03/09/20	03/09/20
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	03/05/20	03/05/20
SW846 9060A	DISSOLVED ORGANIC CARB	19.9	0.93	0.350	0.130	mg/L	1	03/11/20	03/11/20
SW846 9060A	TOTAL ORGANIC CARBON	7.0	0.93	0.350	0.130	mg/L	1	03/07/20	03/07/20

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APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1025

APPL ID: BA07944

Sample Collection Date: 03/04/20

ARF: 91585

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 353.2	NITRATE-NITRITE-N	0.36	0.10	0.090	0.028	mg/L	1	03/06/20	03/06/20
SM 2320B	BICARBONATE AS CACO3	70.7	2.0	1.70	0.85	mg/L	1	03/09/20	03/09/20
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	03/09/20	03/09/20
SM 2320B	TOTAL ALKALINITY AS CACO	70.7	2.0	1.70	0.85	mg/L	1	03/09/20	03/09/20
SM 4500-Si D	SILICA W	47.9	5.0	4.00	2.65	mg/L	5	03/09/20	03/09/20
SM 4500-Si D	DISSOLVED SILICA	42.9	5.0	4.00	2.65	mg/L	5	03/09/20	03/09/20
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	03/05/20	03/05/20
SW846 9060A	DISSOLVED ORGANIC CARB	0.32 J	0.93	0.350	0.130	mg/L	1	03/11/20	03/11/20
SW846 9060A	TOTAL ORGANIC CARBON	7.0	0.93	0.350	0.130	mg/L	1	03/07/20	03/07/20

J = Estimated value.

Printed: 03/20/20 3:00:55 PM

APPL-F1-SC-NoMC-REG MDLs

QC FORMS

8011

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91585

Case No: 91585 Date Analyzed: 03/09/20

Matrix: WATER Instrument: Herbie

APPL ID.	Client Sample No.	SURROGATE: 1,3-DIBROMOPROPANE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
200309A-BLK	Blank	70-132	92.6				
200309A-LCS	Lab Control Spike	70-132	100				
200309A-LCSD	Lab Control SpikeD	70-132	99.6				
BA07941	ERH1022	70-132	94.0				
BA07942	ERH1023	70-132	93.0				
BA07943	ERH1024	70-132	94.2				
BA07944	ERH1025	70-132	97.1				
BA07945	ERH1033	70-132	90.7				
BA07946	ERH1034	70-132	96.3				
BA07947	ERH1035	70-132	97.8				

Comments: Batch: #8011-200309A

8011

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	91585
Case No:	91585	Date Analyzed:	03/09/20
Matrix:	WATER	Instrument:	Herbie
Blank ID:	200309A-BLK	Time Analyzed:	2051

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200309A-BLK	Blank	0228115	03/09/20 2051
200309A-LCS	Lab Control Spike	0228116	03/09/20 2111
200309A-LCSD	Lab Control SpikeD	0228117	03/09/20 2131
BA07941	ERH1022	0228118	03/09/20 2152
BA07942	ERH1023	0228119	03/09/20 2212
BA07943	ERH1024	0228120	03/09/20 2232
BA07944	ERH1025	0228121	03/09/20 2252
BA07945	ERH1033	0228122	03/09/20 2312
BA07946	ERH1034	0228123	03/09/20 2332
BA07947	ERH1035	0228124	03/09/20 2352

Comments: Batch: #8011-200309A

Method Blank
EPA 8011

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **200309W-07941 - 250610**
Batch ID: #8011-200309A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	EDB	0.019 U	0.02	0.019	0.010	ug/L	03/09/20	03/09/20
BLANK	SURROGATE: 1,3-DIBROMOPRO	92.6	70-132			%	03/09/20	03/09/20

Quant Method:8010310A.M
Run #:0228115
Instrument:Herbie
Sequence:200228
Initials:GAG

GC SC-Blank-REG MDLs-DOD
Printed: 03/11/20 3:42:14 PM

8011

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91585
Case No:	91585	Date Analyzed:	03/09/20
Matrix:	WATER	Instrument:	Herbie
LCS ID:	200309A-LCS	Time Analyzed:	2111

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200309A-BLK	Blank	0228115	03/09/20 2051
200309A-LCS	Lab Control Spike	0228116	03/09/20 2111
200309A-LCSD	Lab Control SpikeD	0228117	03/09/20 2131
BA07941	ERH1022	0228118	03/09/20 2152
BA07942	ERH1023	0228119	03/09/20 2212
BA07943	ERH1024	0228120	03/09/20 2232
BA07944	ERH1025	0228121	03/09/20 2252
BA07945	ERH1033	0228122	03/09/20 2312
BA07946	ERH1034	0228123	03/09/20 2332
BA07947	ERH1035	0228124	03/09/20 2352

Comments: Batch: #8011-200309A

Laboratory Control Spike Recoveries
EPA 8011

APPL ID: **200309W-07941 LCS - 250610**
Batch ID: #8011-200309A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
EDB	0.250	0.244	0.246	97.6	98.4	60-140	0.82	25
SURROGATE: 1,3-DIBROMOPROPANE (	0.250	0.250	0.249	100	99.6	70-132		

Comments:

Primary	SPK	DUP
Quant Method :	8010310A.M	8010310A.M
Extraction Date :	03/09/20	03/09/20
Analysis Date :	03/09/20	03/09/20
Instrument :	Herbie	Herbie
Run :	0228116	0228117
Initials :	GAG	

EPA 8015B-eHL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91585

Case No: 91585 Date Analyzed: 03/10/20

Matrix: WATER Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: OCTACOSANE (S)			SURROGATE: ORTHO-TERPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
200306A-BLK	Blank	60-142	106		56-125	81.5	
200306A-LCS	Lab Control Spike	60-142	97.5		56-125	90.9	
200306A-LCSD	Lab Control SpikeD	60-142	103		56-125	90.8	
BA07942	ERH1023	60-142	104		56-125	84.6	
BA07944	ERH1025	60-142	104		56-125	81.8	
BA07946	ERH1034	60-142	103		56-125	80.9	
BA07947	ERH1035	60-142	104		56-125	79.8	

Comments: Batch: #DOC53-200306A

EPA 8015B-eH

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91585

Case No: 91585 Date Analyzed: 03/10/20

Matrix: WATER Instrument: Apollo

Blank ID: 200306A-BLK Time Analyzed: 1335

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200306A-BLK	Blank	310010	03/10/20 1335
200306A-LCS	Lab Control Spike	310011	03/10/20 1358
200306A-LCSD	Lab Control SpikeD	310012	03/10/20 1420
BA07942	ERH1023	310013	03/10/20 1443
BA07944	ERH1025	310014	03/10/20 1506
BA07946	ERH1034	310015	03/10/20 1528
BA07947	ERH1035	310016	03/10/20 1551

Comments: Batch: #DOC53-200306A

Method Blank
EPA 8015B TPH LIQ-LIQ

Blank Name/QCG: **200306W-07942 - 250629**
Batch ID: #DOC53-200306A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	03/06/20	03/10/20
BLANK	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	03/06/20	03/10/20
BLANK	SURROGATE: OCTACOSANE (S)	106	60-142			%	03/06/20	03/10/20
BLANK	SURROGATE: ORTHO-TERPHEN	81.5	56-125			%	03/06/20	03/10/20

Quant Method: DOC0310.M
Run #: 310010
Instrument: Apollo
Sequence: 200310
Initials: SSE

GC SC-Blank-REG MDLs-DOD
Printed: 04/06/20 8:12:38 AM

EPA 8015B-eH

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91585
Case No:	91585	Date Analyzed:	03/10/20
Matrix:	WATER	Instrument:	Apollo
LCS ID:	200306A-LCS	Time Analyzed:	1358

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200306A-BLK	Blank	310010	03/10/20 1335
200306A-LCS	Lab Control Spike	310011	03/10/20 1358
200306A-LCSD	Lab Control SpikeD	310012	03/10/20 1420
BA07942	ERH1023	310013	03/10/20 1443
BA07944	ERH1025	310014	03/10/20 1506
BA07946	ERH1034	310015	03/10/20 1528
BA07947	ERH1035	310016	03/10/20 1551

Comments: Batch: #DOC53-200306A

Laboratory Control Spike Recoveries
EPA 8015B TPH LIQ-LIQ

APPL ID: **200306W-07942 LCS - 250629**
Batch ID: #DOC53-200306A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
DIESEL (C10-C24)	1250	1190	1290	95.2	103	36-132	8.1	30
OIL (C24-C40)	1250	1210	1310	96.8	105	41-113	7.9	30
SURROGATE: OCTACOSANE (S)	75.0	73.1	77.1	97.5	103	60-142		
SURROGATE: ORTHO-TERPHENYL (S)	75.0	68.2	68.1	90.9	90.8	56-125		

Comments:

Primary	SPK	DUP
Quant Method :	DOC0310.M	DOC0310.M
Extraction Date :	03/06/20	03/06/20
Analysis Date :	03/10/20	03/10/20
Instrument :	Apollo	Apollo
Run :	310011	310012
Initials :	SSE	

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91585

Case No: 91585 Date Analyzed: 03/10/20

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2,4,6-TRIBROMOPHENOL (S)			SURROGATE: 2-FLUORBIPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
200306A-BLK	Blank	43-140	105		44-119	91.2	
200306A-LCS	Lab Control Spike	43-140	100		44-119	85.6	
200306A-LCSD	Lab Control SpikeD	43-140	92.0		44-119	78.2	
BA07942	ERH1023	43-140	94.9		44-119	83.7	
BA07944	ERH1025	43-140	95.6		44-119	81.0	
BA07946	ERH1034	43-140	98.0		44-119	83.1	
BA07947	ERH1035	43-140	99.9		44-119	84.0	

Comments: Batch: #87DC5-200306A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91585

Case No: 91585 Date Analyzed: 03/10/20

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2-FLUOROPHENOL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
200306A-BLK	Blank	19-119	100		44-120	106	
200306A-LCS	Lab Control Spike	19-119	96.4		44-120	102	
200306A-LCSD	Lab Control SpikeD	19-119	84.8		44-120	94.4	
BA07942	ERH1023	19-119	101		44-120	103	
BA07944	ERH1025	19-119	88.7		44-120	94.6	
BA07946	ERH1034	19-119	92.8		44-120	97.9	
BA07947	ERH1035	19-119	94.4		44-120	98.7	

Comments: Batch: #87DC5-200306A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91585

Case No: 91585 Date Analyzed: 03/10/20

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: PHENOL-D6 (S)			SURROGATE: TERPHENYL-D14 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
200306A-BLK	Blank	10-115	104		50-134	77.1	
200306A-LCS	Lab Control Spike	10-115	110		50-134	56.6	
200306A-LCSD	Lab Control SpikeD	10-115	98.4		50-134	54.0	
BA07942	ERH1023	10-115	108		50-134	75.8	
BA07944	ERH1025	10-115	95.4		50-134	70.2	
BA07946	ERH1034	10-115	101		50-134	71.0	
BA07947	ERH1035	10-115	103		50-134	71.4	

Comments: Batch: #87DC5-200306A

EPA 8270D

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91585

Case No: 91585 Date Analyzed: 03/10/20

Matrix: WATER Instrument: Yoda

Blank ID: 200306A-BLK Time Analyzed: 0953

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200306A-BLK	Blank	0207Y179	03/10/20 0953
200306A-LCS	Lab Control Spike	0207Y182	03/10/20 1116
200306A-LCSD	Lab Control SpikeD	0207Y183	03/10/20 1144
BA07942	ERH1023	0207Y185	03/10/20 1236
BA07944	ERH1025	0207Y186	03/10/20 1304
BA07946	ERH1034	0207Y187	03/10/20 1332
BA07947	ERH1035	0207Y188	03/10/20 1400

Comments: Batch: #87DC5-200306A

Method Blank
EPA 8270D WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **200306W-07942 - 250635**
Batch ID: #87DC5-200306A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	03/06/20	03/10/20
BLANK	SURROGATE: 2,4,6-TRIBROMOP	105	43-140			%	03/06/20	03/10/20
BLANK	SURROGATE: 2-FLUORBIPHENY	91.2	44-119			%	03/06/20	03/10/20
BLANK	SURROGATE: 2-FLUOROPHENO	100	19-119			%	03/06/20	03/10/20
BLANK	SURROGATE: NITROBENZENE-	106	44-120			%	03/06/20	03/10/20
BLANK	SURROGATE: PHENOL-D6 (S)	104	10-115			%	03/06/20	03/10/20
BLANK	SURROGATE: TERPHENYL-D14 (	77.1	50-134			%	03/06/20	03/10/20

Quant Method: Y1219.M
Run #: 0207Y179
Instrument: Yoda
Sequence: Y200207
Initials: JPR

GC SC-Blank-REG MDLs-DOD
Printed: 03/11/20 12:57:12 PM

EPA 8270D

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 91585

Case No: 91585 Date Analyzed: 03/10/20

Matrix: WATER Instrument: Yoda

LCS ID: 200306A-LCS Time Analyzed: 1116

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200306A-BLK	Blank	0207Y179	03/10/20 0953
200306A-LCS	Lab Control Spike	0207Y182	03/10/20 1116
200306A-LCSD	Lab Control SpikeD	0207Y183	03/10/20 1144
BA07942	ERH1023	0207Y185	03/10/20 1236
BA07944	ERH1025	0207Y186	03/10/20 1304
BA07946	ERH1034	0207Y187	03/10/20 1332
BA07947	ERH1035	0207Y188	03/10/20 1400

Comments: Batch: #87DC5-200306A

Laboratory Control Spike Recoveries
EPA 8270D WATER

APPL ID: **200306W-07942 LCS - 250635**
Batch ID: #87DC5-200306A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
PHENOL	62.5	67.1	59.9	107	95.8	10-115	11.3	20
SURROGATE: 2,4,6-TRIBROMOPHENOL	250	251	230	100	92.0	43-140		
SURROGATE: 2-FLUORBIPHENYL (S)	125	107	97.7	85.6	78.2	44-119		
SURROGATE: 2-FLUOROPHENOL (S)	250	241	212	96.4	84.8	19-119		
SURROGATE: NITROBENZENE-D5 (S)	125	127	118	102	94.4	44-120		
SURROGATE: PHENOL-D6 (S)	250	275	246	110	98.4	10-115		
SURROGATE: TERPHENYL-D14 (S)	125	70.7	67.5	56.6	54.0	50-134		

Comments:

Primary	SPK	DUP
Quant Method :	Y1219.M	Y1219.M
Extraction Date :	03/06/20	03/06/20
Analysis Date :	03/10/20	03/10/20
Instrument :	Yoda	Yoda
Run :	0207Y182	0207Y183
Initials :	JPR	

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Soil
ID: 1219Y002.D

SDG No:
Date Analyzed: 12/19/19
Instrument: Yoda
Time Analyzed: 8:50

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/ml 8270 11/21/1	1219Y003.D	12/19/19 9:06
2		4ug/ml 8270 11/21/19	1219Y004.D	12/19/19 9:33
3		5ug/ml 8270 11/21/19	1219Y005.D	12/19/19 10:01
4		10ug/ml 8270 11/21/1	1219Y006.D	12/19/19 10:28
5		20ug/ml 8270 11/21/1	1219Y007.D	12/19/19 10:56
6		40ug/ml 8270 11/21/1	1219Y008.D	12/19/19 11:24
7		60ug/ml 8270 11/21/1	1219Y009.D	12/19/19 11:51
8		80ug/ml 8270 11/21/1	1219Y010.D	12/19/19 12:19
9		100ug/ml 8270 11/21/	1219Y011.D	12/19/19 12:46
10		SS 8270 11/22/19	1219Y012.D	12/19/19 13:14
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.04% of mass 198	39.5
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	1.0
127	10 - 80% of mass 198	51.3
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.7
275	10 - 60% of mass 198	29.4
365	1 - 100% of mass 198	3.5
441	0.01 - 24% of mass 442	4.6
442	50 - 500% of mass 198	102.9
443	15 - 24% of mass 442	20.0

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 91585
Matrix: Water
ID: 0207Y175.D

SDG No: 91585
Date Analyzed: 03/10/20
Instrument: Yoda
Time Analyzed: 6:47

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/ml 8270 03/04/2	0207Y176.D	03/10/20 7:25
2	Blank	200306A BLK 1/800	0207Y179.D	03/10/20 9:53
3	Lab Control Spike	200306A LCS-1 1/800	0207Y182.D	03/10/20 11:16
4	Lab Control SpikeD	200306A LCSD-1 1/800	0207Y183.D	03/10/20 11:44
5	ERH1023	BA07942W20 1/800	0207Y185.D	03/10/20 12:36
6	ERH1025	BA07944W19 1/800	0207Y186.D	03/10/20 13:04
7	ERH1034	BA07946W10 1/800	0207Y187.D	03/10/20 13:32
8	ERH1035	BA07947W10 1/800	0207Y188.D	03/10/20 14:00
9		50ug/ml 8270 03/04/2	0207Y195.D	03/10/20 17:13
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	10 - 80% of mass 198	35.4
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.2
127	10 - 80% of mass 198	47.5
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.8
275	10 - 60% of mass 198	30.9
365	1 - 100% of mass 198	3.9
441	0.01 - 24% of mass 442	11.2
442	50 - 500% of mass 198	119.0
443	15 - 24% of mass 442	19.5

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0207Y176.D Date Analyzed: 03/10/20

Instrument ID: Yoda Time Analyzed: 7:25

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

		1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	149299	5.33	621457	6.78	397588	8.80
	UPPER LIMIT	298598	5.50	1242914	6.95	795176	8.97
	LOWER LIMIT	74650	5.16	310729	6.61	198794	8.63
	SAMPLE NO.						
01	200306A BLK 1/800	141977	5.33	599377	6.77	446746	8.79
02	200306A LCS-1 1/800	137429	5.33	593731	6.78	459137	8.80
03	200306A LCSD-1 1/800	146744	5.33	616827	6.78	478510	8.80
04	BA07942W20 1/800	139857	5.33	628180	6.77	507918	8.79
05	BA07944W19 1/800	150325	5.33	648097	6.77	502155	8.79
06	BA07946W10 1/800	155316	5.33	669465	6.77	529064	8.79
07	BA07947W10 1/800	146471	5.33	644565	6.77	498151	8.79
08	50ug/ml 8270 03/04/20 (	173427	5.33	694628	6.78	433099	8.79
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

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

8270D-SIM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91585

Case No: 91585 Date Analyzed: 03/11/20

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: 2-METHYLNAPHTHALENE-D10 (S)			SURROGATE: FLUORANTHENE-D10 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
200306A-LCS	Lab Control Spike	39-114	92.8		58-120	89.9	
200306A-LCSD	Lab Control SpikeD	39-114	95.7		58-120	92.6	
BA07942	ERH1023	39-114	96.3		58-120	93.2	
BA07944	ERH1025	39-114	96.3		58-120	97.0	
BA07946	ERH1034	39-114	99.4		58-120	96.9	
BA07947	ERH1035	39-114	98.3		58-120	95.3	
200306A-BLK	Blank	39-114	98.8		58-120	95.9	

Comments: Batch: #SIM53-200306A

8270D-SIM

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91585

Case No: 91585 Date Analyzed: 03/11/20

Matrix: WATER Instrument: Linus

Blank ID: 200306A-BLK Time Analyzed: 1441

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200306A-LCS	Lab Control Spike	0204L253	03/11/20 1014
200306A-LCSD	Lab Control SpikeD	0204L254	03/11/20 1036
BA07942	ERH1023	0204L256	03/11/20 1120
BA07944	ERH1025	0204L257	03/11/20 1142
BA07946	ERH1034	0204L258	03/11/20 1204
BA07947	ERH1035	0204L259	03/11/20 1226
200306A-BLK	Blank	0204L260	03/11/20 1441

Comments: Batch: #SIM53-200306A

Method Blank
EPA 8270D SIM LIQ-LIQ

Blank Name/QCG: **200306W-07942 - 250658**
Batch ID: #SIM53-200306A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	03/06/20	03/11/20
BLANK	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	03/06/20	03/11/20
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	03/06/20	03/11/20
BLANK	SURROGATE: 2-METHYLNAPHT	98.8	39-114			%	03/06/20	03/11/20
BLANK	SURROGATE: FLUORANTHENE-	95.9	58-120			%	03/06/20	03/11/20

Quant Method:L0204.M
Run #:0204L260
Instrument:Linus
Sequence:L200204
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 03/11/20 5:26:50 PM

8270D-SIM

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 91585

Case No: 91585 Date Analyzed: 03/11/20

Matrix: WATER Instrument: Linus

LCS ID: 200306A-LCS Time Analyzed: 1014

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200306A-LCS	Lab Control Spike	0204L253	03/11/20 1014
200306A-LCSD	Lab Control SpikeD	0204L254	03/11/20 1036
BA07942	ERH1023	0204L256	03/11/20 1120
BA07944	ERH1025	0204L257	03/11/20 1142
BA07946	ERH1034	0204L258	03/11/20 1204
BA07947	ERH1035	0204L259	03/11/20 1226
200306A-BLK	Blank	0204L260	03/11/20 1441

Comments: Batch: #SIM53-200306A

Laboratory Control Spike Recoveries
EPA 8270D SIM LIQ-LIQ

APPL ID: **200306W-07942 LCS - 250658**
Batch ID: #SIM53-200306A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
1-METHYLNAPHTHALENE	6.25	5.42	5.66	86.7	90.6	41-115	4.3	20
2-METHYLNAPHTHALENE	6.25	5.68	5.96	90.9	95.4	39-114	4.8	20
NAPHTHALENE	6.25	5.26	5.50	84.2	88.0	43-114	4.5	20
SURROGATE: 2-METHYLNAPHTHALEN	6.25	5.80	5.98	92.8	95.7	39-114		
SURROGATE: FLUORANTHENE-D10 (S)	6.25	5.62	5.79	89.9	92.6	58-120		

Comments:

Primary	SPK	DUP
Quant Method :	L0204.M	L0204.M
Extraction Date :	03/06/20	03/06/20
Analysis Date :	03/11/20	03/11/20
Instrument :	Linus	Linus
Run :	0204L253	0204L254
Initials :	MA	

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Water
ID: 0204L002.D

SDG No:
Date Analyzed: 02/04/20
Instrument: Linus
Time Analyzed: 9:32

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.1 SIM 02/03/20	0204L003.D	02/04/20 9:48
2		0.2 SIM 02/03/20	0204L004.D	02/04/20 10:09
3		0.5 SIM 02/03/20	0204L005.D	02/04/20 10:31
4		1 SIM 02/03/20	0204L006.D	02/04/20 10:53
5		5 SIM 02/03/20	0204L007.D	02/04/20 11:15
6		10 SIM 02/03/20	0204L008.D	02/04/20 11:37
7		50 SIM 02/03/20	0204L009.D	02/04/20 11:59
8		100 SIM 02/03/20	0204L010.D	02/04/20 12:21
9		SS SIM 02/03/20	0204L011.D	02/04/20 13:21
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.1% of mass 198	18.6
68	0 - 2.05% of mass 69	0.0
70	0 - 2% of mass 69	0.4
127	10 - 80% of mass 198	40.9
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.3
275	10 - 60% of mass 198	30.0
365	1 - 100% of mass 198	4.7
441	0.01 - 24% of mass 442	15.8
442	50 - 500% of mass 198	200.3
443	15 - 24% of mass 442	19.3

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 91585
Matrix: Water
ID: 0204L250.D

SDG No: 91585
Date Analyzed: 03/11/20
Instrument: Linus
Time Analyzed: 9:14

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		5 SIM 02/03/20 (2)	0204L251.D	03/11/20 9:30
2	Lab Control Spike	200306A LCS-2 1/800	0204L253.D	03/11/20 10:14
3	Lab Control SpikeD	200306A LCSD-2 1/800	0204L254.D	03/11/20 10:36
4	ERH1023	BA07942W20 1/800	0204L256.D	03/11/20 11:20
5	ERH1025	BA07944W19 1/800	0204L257.D	03/11/20 11:42
6	ERH1034	BA07946W10 1/800	0204L258.D	03/11/20 12:04
7	ERH1035	BA07947W10 1/800	0204L259.D	03/11/20 12:26
8	Blank	200306A BLK 1/800	0204L260.D	03/11/20 14:41
9		5 SIM 02/03/20 (2)	0204L261.D	03/11/20 15:03
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.1% of mass 198	13.6
68	0 - 2.05% of mass 69	0.0
70	0 - 2% of mass 69	1.3
127	10 - 80% of mass 198	35.3
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.2
275	10 - 60% of mass 198	30.1
365	1 - 100% of mass 198	4.5
441	0.01 - 24% of mass 442	15.7
442	50 - 500% of mass 198	226.4
443	15 - 24% of mass 442	22.0

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0204L251.D Date Analyzed: 03/11/20

Instrument ID: Linus Time Analyzed: 9:30

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

		Napthalene-D8(IS)		Acenaphthene-D10(IS)		Phenanthrene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	110513	4.14	63254	6.14	123834	7.87
	UPPER LIMIT	221026	4.31	126508	6.31	247668	8.04
	LOWER LIMIT	55257	3.97	31627	5.97	61917	7.70
	SAMPLE NO.						
01	200306A LCS-2 1/800	88548	4.14	50346	6.14	101560	7.87
02	200306A LCSD-2 1/800	83672	4.14	48226	6.14	97984	7.87
03	BA07942W20 1/800	85320	4.14	49838	6.14	99239	7.87
04	BA07944W19 1/800	82444	4.15	48270	6.14	95338	7.87
05	BA07946W10 1/800	81086	4.15	48174	6.14	95264	7.87
06	BA07947W10 1/800	81188	4.14	47974	6.14	95909	7.87
07	200306A BLK 1/800	87364	4.14	51490	6.14	101241	7.87
08	5 SIM 02/03/20 (2)	104502	4.14	61726	6.14	129152	7.87
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

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

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0204L251.D Date Analyzed: 03/11/20

Instrument ID: Linus Time Analyzed: 9:30

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

		Chrysene-D12(IS)		Perylene-D12(IS)			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	163443	10.98	197525	13.40		
	UPPER LIMIT	326886	11.15	395050	13.57		
	LOWER LIMIT	81722	10.81	98763	13.23		
	SAMPLE NO.						
01	200306A LCS-2 1/800	131893	10.98	154453	13.40		
02	200306A LCSD-2 1/800	127448	10.98	149130	13.40		
03	BA07942W20 1/800	133449	10.98	159420	13.40		
04	BA07944W19 1/800	128752	10.98	155654	13.40		
05	BA07946W10 1/800	128092	10.98	153898	13.40		
06	BA07947W10 1/800	128522	10.98	151279	13.40		
07	200306A BLK 1/800	135464	10.99	157570	13.40		
08	5 SIM 02/03/20 (2)	172093	10.99	206121	13.40		
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

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

EPA 8270D

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91585

Case No: 91585 Date Analyzed: 03/11/20

Matrix: WATER Instrument: Yoda

Blank ID: 200310A-BLK Time Analyzed: 1321

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200310A-BLK	Blank	0122Y062	03/11/20 1321
200310A-LCS	Lab Control Spike	0122Y063	03/11/20 1345
200310A-LCSD	Lab Control SpikeD	0122Y064	03/11/20 1409
BA07942	ERH1023	0122Y065	03/11/20 1433
BA07944	ERH1025	0122Y066	03/11/20 1458
BA07946	ERH1034	0122Y067	03/11/20 1522
BA07947	ERH1035	0122Y068	03/11/20 1546

Comments: Batch: #87DME-200310A

Method Blank
EPA 8270D MODIFIED WATER

Blank Name/QCG: **200310W-07942 - 250694**
Batch ID: #87DME-200310A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2-(2-METHOXYETHOXY)-ETHAN	80.0 U	100	80.0	40.0	ug/L	03/10/20	03/11/20

Quant Method:YMEE0122.M
Run #:0122Y062
Instrument:Yoda
Sequence: Y200122M
Initials:DPO

GC SC-Blank-REG MDLs-DOD
Printed: 03/12/20 2:01:31 PM

EPA 8270D

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 91585

Case No: 91585 Date Analyzed: 03/11/20

Matrix: WATER Instrument: Yoda

LCS ID: 200310A-LCS Time Analyzed: 1345

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200310A-BLK	Blank	0122Y062	03/11/20 1321
200310A-LCS	Lab Control Spike	0122Y063	03/11/20 1345
200310A-LCSD	Lab Control SpikeD	0122Y064	03/11/20 1409
BA07942	ERH1023	0122Y065	03/11/20 1433
BA07944	ERH1025	0122Y066	03/11/20 1458
BA07946	ERH1034	0122Y067	03/11/20 1522
BA07947	ERH1035	0122Y068	03/11/20 1546

Comments: Batch: #87DME-200310A

Laboratory Control Spike Recoveries
EPA 8270D MODIFIED WATER

APPL ID: **200310W-07942 LCS - 250694**
Batch ID: #87DME-200310A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
2-(2-METHOXYETHOXY)-ETHANOL	80.0	92.7	71.5	116	89.4	30-130	25.8 #	20

= Recovery is outside QC limits.

Comments:

Primary	SPK	DUP
Quant Method :	YMEE0122.M	YMEE0122.M
Extraction Date :	03/10/20	03/10/20
Analysis Date :	03/11/20	03/11/20
Instrument :	Yoda	Yoda
Run :	0122Y063	0122Y064
Initials :	DPO	

Printed: 03/12/20 2:01:22 PM
APPL Standard LCSD

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No:
Case No: Date Analyzed: 01/22/20
Matrix: Water Instrument: Yoda
ID: 0122Y002.D Time Analyzed: 15:31

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/ml MEE 01/22/20	0122Y003.D	01/22/20 15:46
2		100ug/ml MEE 01/22/2	0122Y004.D	01/22/20 16:10
3		200ug/ml MEE 01/22/2	0122Y005.D	01/22/20 16:33
4		400ug/ml MEE 01/22/2	0122Y006.D	01/22/20 16:57
5		500ug/ml MEE 01/22/2	0122Y007.D	01/22/20 17:21
6		600ug/ml MEE 01/22/2	0122Y008.D	01/22/20 17:45
7		800ug/ml MEE 01/22/2	0122Y009.D	01/22/20 18:08
8		1000ug/ml MEE 01/22/	0122Y010.D	01/22/20 18:32
9		SS MEE 01/22/20	0122Y011.D	01/22/20 18:55
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	10 - 80% of mass 198	33.6
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.1
127	10 - 80% of mass 198	48.1
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.9
275	10 - 60% of mass 198	31.2
365	1 - 100% of mass 198	4.1
441	0.01 - 24% of mass 442	16.1
442	50 - 500% of mass 198	125.5
443	15 - 24% of mass 442	19.5

Form 5
Tune Summary

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 91585
Matrix: Water
ID: 0122Y060.D

SDG No: 91585
Date Analyzed: 03/11/20
Instrument: Yoda
Time Analyzed: 8:14

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		500ug/ml MEE 01/29/2	0122Y061.D	03/11/20 12:17
2	Blank	200310A BLK 2/500	0122Y062.D	03/11/20 13:21
3	Lab Control Spike	200310A LCS-1 2/500	0122Y063.D	03/11/20 13:45
4	Lab Control SpikeD	200310A LCSD-1 2/500	0122Y064.D	03/11/20 14:09
5	ERH1023	BA07942W17 2/500	0122Y065.D	03/11/20 14:33
6	ERH1025	BA07944W23 2/500	0122Y066.D	03/11/20 14:58
7	ERH1034	BA07946W14 2/500	0122Y067.D	03/11/20 15:22
8	ERH1035	BA07947W14 2/500	0122Y068.D	03/11/20 15:46
9		500ug/ml MEE 01/29/2	0122Y070.D	03/11/20 16:33
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	10 - 80% of mass 198	38.0
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.6
127	10 - 80% of mass 198	49.5
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.8
275	10 - 60% of mass 198	30.6
365	1 - 100% of mass 198	3.9
441	0.01 - 24% of mass 442	3.5
442	50 - 500% of mass 198	117.3
443	15 - 24% of mass 442	19.5

Form 5
Tune Summary

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0122Y061.D Date Analyzed: 03/11/20

Instrument ID: Yoda Time Analyzed: 12:17

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

		1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	146062	5.08	656576	6.53	449239	8.55
	UPPER LIMIT	292124	5.25	1313152	6.70	898478	8.72
	LOWER LIMIT	73031	4.91	328288	6.36	224620	8.38
	SAMPLE NO.						
01	200310A BLK 2/500	109201	5.10	471459	6.53	307405	8.55
02	200310A LCS-1 2/500	108945	5.10	485876	6.53	313345	8.55
03	200310A LCSD-1 2/500	157033	5.09	703401	6.53	473090	8.55
04	BA07942W17 2/500	114049	5.10	498948	6.53	329705	8.55
05	BA07944W23 2/500	109120	5.10	486582	6.53	335592	8.55
06	BA07946W14 2/500	105136	5.10	477589	6.53	319310	8.55
07	BA07947W14 2/500	111146	5.10	507161	6.53	344558	8.55
08	500ug/ml MEE 01/29/20	146912	5.11	671591	6.53	455457	8.55
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

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

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0122Y061.D Date Analyzed: 03/11/20

Instrument ID: Yoda Time Analyzed: 12:17

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

		Phenanthrene-D10(IS)		Chrysene-D12(IS)		Perylene-D12(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	933061	10.27	865781	13.35	875278	15.07
	UPPER LIMIT	1866122	10.44	1731562	13.52	1750556	15.24
	LOWER LIMIT	466531	10.10	432891	13.18	437639	14.90
	SAMPLE NO.						
01	200310A BLK 2/500	608630	10.28	138279 *	13.36	103305 *	15.06
02	200310A LCS-1 2/500	678411	10.27	517306	13.35	583969	15.07
03	200310A LCSD-1 2/500	989310	10.28	374227 *	13.35	348266 *	15.07
04	BA07942W17 2/500	710922	10.27	661098	13.35	673864	15.07
05	BA07944W23 2/500	744976	10.27	562342	13.35	530880	15.07
06	BA07946W14 2/500	669789	10.27	478171	13.35	449057	15.07
07	BA07947W14 2/500	740554	10.27	533641	13.35	483997	15.07
08	500ug/ml MEE 01/29/20	925579	10.27	795809	13.35	755680	15.07
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

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

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91585

Case No: 91585 Date Analyzed: 03/05/20

Matrix: WATER Instrument: Thor

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
200305BT-LCS	Lab Control Spike	81-118	98.8		85-114	102	
200305BT-LCSD	Lab Control SpikeD	81-118	97.6		85-114	102	
200305BT-BLK	Blank	81-118	98.0		85-114	92.3	
BA07941	ERH 1022	81-118	102		85-114	94.9	
BA07942	ERH 1023	81-118	107		85-114	99.6	
BA07943	ERH 1024	81-118	112		85-114	99.3	
BA07944	ERH 1025	81-118	100		85-114	90.9	
BA07945	ERH 1033	81-118	108		85-114	96.9	
BA07946	ERH 1034	81-118	107		85-114	94.9	
BA07947	ERH 1035	81-118	112		85-114	100	

Comments: Batch: #86BTO-200305BT

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91585

Case No: 91585 Date Analyzed: 03/05/20

Matrix: WATER Instrument: Thor

APPL ID.	Client Sample No.	SURROGATE: DIBROMOFLUOROMETHANE (S)			SURROGATE: TOLUENE-D8 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
200305BT-LCS	Lab Control Spike	80-119	105		89-112	102	
200305BT-LCSD	Lab Control SpikeD	80-119	104		89-112	102	
200305BT-BLK	Blank	80-119	98.5		89-112	94.4	
BA07941	ERH 1022	80-119	101		89-112	97.3	
BA07942	ERH 1023	80-119	109		89-112	101	
BA07943	ERH 1024	80-119	112		89-112	102	
BA07944	ERH 1025	80-119	100		89-112	93.2	
BA07945	ERH 1033	80-119	108		89-112	100	
BA07946	ERH 1034	80-119	107		89-112	98.4	
BA07947	ERH 1035	80-119	111		89-112	103	

Comments: Batch: #86BTO-200305BT

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91585

Case No: 91585 Date Analyzed: 03/05/20

Matrix: WATER Instrument: Thor

Blank ID: 200305BT-BLK Time Analyzed: 1601

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200305BT-LCS	Lab Control Spike	0305T12	03/05/20 1242
200305BT-LCSD	Lab Control SpikeD	0305T13	03/05/20 1310
200305BT-BLK	Blank	0305T19	03/05/20 1601
BA07941	ERH 1022	0305t24	03/05/20 1822
BA07942	ERH 1023	0305T25	03/05/20 1851
BA07943	ERH 1024	0305T26	03/05/20 1919
BA07944	ERH 1025	0305T27	03/05/20 1948
BA07945	ERH 1033	0305T28	03/05/20 2016
BA07946	ERH 1034	0305T29	03/05/20 2044
BA07947	ERH 1035	0305T30	03/05/20 2113

Comments: Batch: #86BTO-200305BT

Method Blank
EPA 8260B BTEX & 1,2-DCA WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **200305W-07941 - 250509**
Batch ID: #86BTO-200305BT

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	03/05/20	03/05/20
BLANK	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	03/05/20	03/05/20
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	03/05/20	03/05/20
BLANK	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	03/05/20	03/05/20
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	03/05/20	03/05/20
BLANK	SURROGATE: 1,2-DICHLOROET	98.0	81-118			%	03/05/20	03/05/20
BLANK	SURROGATE: 4-BROMOFLUORO	92.3	85-114			%	03/05/20	03/05/20
BLANK	SURROGATE: DIBROMOFLUOR	98.5	80-119			%	03/05/20	03/05/20
BLANK	SURROGATE: TOLUENE-D8 (S)	94.4	89-112			%	03/05/20	03/05/20

Quant Method: TGAS0219.M
Run #: 0305T19
Instrument: Thor
Sequence: T200226
Initials: DPO

GC SC-Blank-REG MDLs-DOD
Printed: 03/06/20 10:44:06 AM

EPA 8260B

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 91585

Case No: 91585 Date Analyzed: 03/05/20

Matrix: WATER Instrument: Thor

LCS ID: 200305BT-LCS Time Analyzed: 1242

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200305BT-LCS	Lab Control Spike	0305T12	03/05/20 1242
200305BT-LCSD	Lab Control SpikeD	0305T13	03/05/20 1310
200305BT-BLK	Blank	0305T19	03/05/20 1601
BA07941	ERH 1022	0305t24	03/05/20 1822
BA07942	ERH 1023	0305T25	03/05/20 1851
BA07943	ERH 1024	0305T26	03/05/20 1919
BA07944	ERH 1025	0305T27	03/05/20 1948
BA07945	ERH 1033	0305T28	03/05/20 2016
BA07946	ERH 1034	0305T29	03/05/20 2044
BA07947	ERH 1035	0305T30	03/05/20 2113

Comments: Batch: #86BTO-200305BT

Laboratory Control Spike Recoveries
EPA 8260B BTEX & 1,2-DCA WATER

APPL ID: **200305W-07941 LCS - 250509**
Batch ID: #86BTO-200305BT

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
1,2-DICHLOROETHANE	10.00	8.47	8.77	84.7	87.7	73-128	3.5	20
BENZENE	10.00	9.75	9.71	97.5	97.1	79-120	0.41	20
ETHYLBENZENE	10.00	9.75	9.87	97.5	98.7	79-121	1.2	20
TOLUENE	10.00	9.81	10.0	98.1	100	80-121	1.9	20
XYLENES (TOTAL)	30.0	30.5	30.3	102	101	79-121	0.66	20
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	24.7	24.4	98.8	97.6	81-118		
SURROGATE: 4-BROMOFLUOROBENZE	25.0	25.5	25.4	102	102	85-114		
SURROGATE: DIBROMOFLUOROMETH	25.0	26.3	26.0	105	104	80-119		
SURROGATE: TOLUENE-D8 (S)	25.0	25.6	25.5	102	102	89-112		

Comments:

Primary	SPK	DUP
Quant Method :	T0226W.M	T0226W.M
Extraction Date :	03/05/20	03/05/20
Analysis Date :	03/05/20	03/05/20
Instrument :	Thor	Thor
Run :	0305T12	0305T13
Initials :	DPO	

Printed: 03/06/20 10:43:46 AM
APPL Standard LCSD

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No:
Case No: Date Analyzed: 02/26/20
Matrix: Water Instrument: Thor
ID: 0226t10.D Time Analyzed: 11:54

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.3ug/L VOC STD 2/26	0226T12.D	02/26/20 13:00
2		0.5ug/L VOC STD 2/26	0226T13.D	02/26/20 13:28
3		1ug/L VOC STD 2/26/2	0226T14.D	02/26/20 13:56
4		2ug/L VOC STD 2/26/2	0226T15.D	02/26/20 14:25
5		5ug/L VOC STD 2/26/2	0226T16.D	02/26/20 14:53
6		10ug/L VOC STD 2/26/	0226T17.D	02/26/20 15:21
7		20ug/L VOC STD 2/26/	0226T18.D	02/26/20 15:50
8		100ug/L VOC STD 2/26	0226T20.D	02/26/20 16:46
9		(SS) 10ug/L VOC STD	0226T22.D	02/26/20 17:43
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	15.6
75	30 - 60% of mass 95	48.0
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	7.6
173	0 - 2.05% of mass 174	0.0
174	50 - 200% of mass 95	94.7
175	5 - 9% of mass 174	7.5
176	95 - 101% of mass 174	97.5
177	5 - 9% of mass 176	6.2

Form 5
Tune Summary

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No: 91585
Case No: 91585 Date Analyzed: 03/05/20
Matrix: Water Instrument: Thor
ID: 0305T10.D Time Analyzed: 11:52

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		200305B CCV 10ug/L	0305T11.D	03/05/20 12:14
2	Lab Control Spike	200305B LCS 10ug/L	0305T12.D	03/05/20 12:42
3	Lab Control SpikeD	200305B LCSD 10ug/L	0305T13.D	03/05/20 13:10
4	Blank	200305B BLK	0305T19.D	03/05/20 16:01
5	ERH1022	BA07941W01	0305T24.D	03/05/20 18:22
6	ERH1023	BA07942W01	0305T25.D	03/05/20 18:51
7	ERH1024	BA07943W01	0305T26.D	03/05/20 19:19
8	ERH1025	BA07944W01	0305T27.D	03/05/20 19:48
9	ERH1033	BA07945W01	0305T28.D	03/05/20 20:16
10	ERH1034	BA07946W01	0305T29.D	03/05/20 20:44
11	ERH1035	BA07947W01	0305T30.D	03/05/20 21:13
12		Ending CCV 10ug/L 3/	0305T39.D	03/06/20 1:29
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	17.3
75	30 - 60% of mass 95	46.6
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	7.6
173	0 - 2.05% of mass 174	0.0
174	50 - 200% of mass 95	96.0
175	5 - 9% of mass 174	8.3
176	95 - 101% of mass 174	99.9
177	5 - 9% of mass 176	6.0

Form 5
Tune Summary

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0226T17.D Date Analyzed: 02/26/20

Instrument ID: Thor Time Analyzed: 15:21

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

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	802951	6.46	643777	9.92	365286	12.47
	UPPER LIMIT	1605902	6.63	1287554	10.09	730572	12.64
	LOWER LIMIT	401476	6.29	321889	9.75	182643	12.30
	SAMPLE NO.						
01	200305B CCV 10ug/L	814204	6.45	653596	9.91	365741	12.47
02	200305B LCS 10ug/L	798665	6.46	645430	9.92	370850	12.48
03	200305B LCSD 10ug/L	790507	6.46	647949	9.92	365778	12.48
04	200305B BLK	708044	6.46	582815	9.92	316777	12.47
05	BA07941W01	655956	6.46	539078	9.92	292044	12.48
06	BA07942W01	647119	6.46	536433	9.92	291741	12.48
07	BA07943W01	638068	6.46	533469	9.92	294078	12.48
08	BA07944W01	634154	6.46	526303	9.92	284537	12.47
09	BA07945W01	621127	6.46	515779	9.92	277650	12.47
10	BA07946W01	623579	6.46	515954	9.92	281515	12.48
11	BA07947W01	608416	6.46	508895	9.92	276345	12.47
12	Ending CCV 10ug/L 3/5/	614198	6.46	509066	9.92	295156	12.48
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

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

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91585

Case No: 91585 Date Analyzed: 03/05/20

Matrix: WATER Instrument: Thor

APPL ID.	Client Sample No.	SURROGATE: 4-BROMOFLUOROBENZENE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
200305BT1-LCS	Lab Control Spike	85-114	97.6				
200305BT1-LCSD	Lab Control SpikeD	85-114	92.8				
200305BT1-BLK	Blank	85-114	92.3				
BA07941	ERH 1022	85-114	94.9				
BA07942	ERH 1023	85-114	99.6				
BA07943	ERH 1024	85-114	99.3				
BA07944	ERH 1025	85-114	90.9				
BA07945	ERH 1033	85-114	96.9				
BA07946	ERH 1034	85-114	94.9				
BA07947	ERH 1035	85-114	100				

Comments: Batch: #GRO86-200305BT

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91585

Case No: 91585 Date Analyzed: 03/05/20

Matrix: WATER Instrument: Thor

Blank ID: 200305BT1-BLK Time Analyzed: 1601

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200305BT1-LCS	Lab Control Spike	0305T15	03/05/20 1407
200305BT1-LCSD	Lab Control SpikeD	0305T16	03/05/20 1435
200305BT1-BLK	Blank	0305T19	03/05/20 1601
BA07941	ERH 1022	0305T24	03/05/20 1822
BA07942	ERH 1023	0305T25	03/05/20 1851
BA07943	ERH 1024	0305T26	03/05/20 1919
BA07944	ERH 1025	0305T27	03/05/20 1948
BA07945	ERH 1033	0305T28	03/05/20 2016
BA07946	ERH 1034	0305T29	03/05/20 2044
BA07947	ERH 1035	0305T30	03/05/20 2113

Comments: Batch: #GRO86-200305BT

Method Blank
EPA 8260B GRO WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **200305W-07941 - 250512**
Batch ID: #GRO86-200305BT1

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	03/05/20	03/05/20
BLANK	SURROGATE: 4-BROMOFLUOR	92.3	85-114			%	03/05/20	03/05/20

Quant Method: TGAS0219.M
Run #: 0305T19
Instrument: Thor
Sequence: T200226
Initials: DPO

GC SC-Blank-REG MDLs-DOD
Printed: 03/06/20 10:25:08 AM

EPA 8260B

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 91585

Case No: 91585 Date Analyzed: 03/05/20

Matrix: WATER Instrument: Thor

LCS ID: 200305BT1-LCS Time Analyzed: 1407

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200305BT1-LCS	Lab Control Spike	0305T15	03/05/20 1407
200305BT1-LCSD	Lab Control SpikeD	0305T16	03/05/20 1435
200305BT1-BLK	Blank	0305T19	03/05/20 1601
BA07941	ERH 1022	0305T24	03/05/20 1822
BA07942	ERH 1023	0305T25	03/05/20 1851
BA07943	ERH 1024	0305T26	03/05/20 1919
BA07944	ERH 1025	0305T27	03/05/20 1948
BA07945	ERH 1033	0305T28	03/05/20 2016
BA07946	ERH 1034	0305T29	03/05/20 2044
BA07947	ERH 1035	0305T30	03/05/20 2113

Comments: Batch: #GRO86-200305BT

Laboratory Control Spike Recoveries
EPA 8260B GRO WATER

APPL ID: **200305W-07941 LCS - 250512**
Batch ID: #GRO86-200305BT1

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
GASOLINE RANGE ORGANICS	300	293	275	97.7	91.7	78-122	6.3	20
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.4	23.2	97.6	92.8	85-114		

Comments:

Primary	SPK	DUP
Quant Method :	TGAS0219.M	TGAS0219.M
Extraction Date :	03/05/20	03/05/20
Analysis Date :	03/05/20	03/05/20
Instrument :	Thor	Thor
Run :	0305T15	0305T16
Initials :	DPO	

Printed: 03/06/20 10:25:11 AM
APPL Standard LCSD

RSK 175

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91585

Case No: 91585 Date Analyzed: 03/09/20

Matrix: WATER Instrument: Rocky

Blank ID: 200309A-BLK Time Analyzed: 1255

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200309A-LCS	Lab Control Spike	0309R04	03/09/20 1213
200309A-LCSD	Lab Control SpikeD	0309R06	03/09/20 1233
200309A-BLK	Blank	0309R07	03/09/20 1255
BA07941	ERH1022	0309R20	03/09/20 1413
BA07942	ERH1023	0309R21	03/09/20 1417
BA07943	ERH1024	0309R22	03/09/20 1420
BA07944	ERH1025	0309R23	03/09/20 1425

Comments: Batch: #RSKME-200309A

Method Blank
METHANE

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **200309W-07941 - 250619**
Batch ID: #RSKME-200309A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	METHANE	1.00 U	5.0	1.00	0.25	ug/L	03/09/20	03/09/20

Quant Method: RSK1002.M
Run #: 0309R07
Instrument: Rocky
Sequence: 191002
Initials: GAG

GC SC-Blank-REG MDLs-DOD
Printed: 03/10/20 3:30:35 PM

RSK 175

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 91585

Case No: 91585 Date Analyzed: 03/09/20

Matrix: WATER Instrument: Rocky

LCS ID: 200309A-LCS Time Analyzed: 1213

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200309A-LCS	Lab Control Spike	0309R04	03/09/20 1213
200309A-LCSD	Lab Control SpikeD	0309R06	03/09/20 1233
200309A-BLK	Blank	0309R07	03/09/20 1255
BA07941	ERH1022	0309R20	03/09/20 1413
BA07942	ERH1023	0309R21	03/09/20 1417
BA07943	ERH1024	0309R22	03/09/20 1420
BA07944	ERH1025	0309R23	03/09/20 1425

Comments: Batch: #RSKME-200309A

Laboratory Control Spike Recoveries
METHANE

APPL ID: **200309W-07941 LCS - 250619**
Batch ID: #RSKME-200309A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
METHANE	83.4	94.6	100	113	120	72-125	5.5	30

Comments:

Primary	SPK	DUP
Quant Method :	RSK1002.M	RSK1002.M
Extraction Date :	03/09/20	03/09/20
Analysis Date :	03/09/20	03/09/20
Instrument :	Rocky	Rocky
Run :	0309R04	0309R06
Initials :	GAG	

6010C/3010A

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	91585
Case No:	91585	Date Analyzed:	03/12/20
Matrix:	WATER	Instrument:	Cyrus
Blank ID:	200306A-BLK	Time Analyzed:	1529

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200306A-LCSD	Lab Control SpikeD	200312A	03/12/20 1538
200306A-LCS	Lab Control Spike	200312A	03/12/20 1534
200306A-BLK	Blank	200312A	03/12/20 1529
BA07944	ERH1025	200312A	03/12/20 1547
BA07942	ERH1023	200312A	03/12/20 1543

Comments: Batch: #61CDO-200306A

METALS BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
6010C	CALCIUM (CA)	75.0 U	1000	75.0	27.5	ug/L	03/06/20	03/12/20	#61CDO-200306A-BA07942
6010C	MAGNESIUM (MG)	30.0 U	500	30.0	12.9	ug/L	03/06/20	03/12/20	#61CDO-200306A-BA07942
6010C	MANGANESE (MN)	4.00 U	10.0	4.00	1.23	ug/L	03/06/20	03/12/20	#61CDO-200306A-BA07942
6010C	POTASSIUM (K)	500.0 U	3000	500.0	220.0	ug/L	03/06/20	03/12/20	#61CDO-200306A-BA07942
6010C	SODIUM (NA)	500.0 U	5000	500.0	111.1	ug/L	03/06/20	03/12/20	#61CDO-200306A-BA07942

6010C/3010A

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91585
Case No:	91585	Date Analyzed:	03/12/20
Matrix:	WATER	Instrument:	Cyrus
LCS ID:	200306A-LCS	Time Analyzed:	1534

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200306A-LCSD	Lab Control SpikeD	200312A	03/12/20 1538
200306A-LCS	Lab Control Spike	200312A	03/12/20 1534
200306A-BLK	Blank	200312A	03/12/20 1529
BA07944	ERH1025	200312A	03/12/20 1547
BA07942	ERH1023	200312A	03/12/20 1543

Comments: Batch: #61CDO-200306A

Laboratory Control Spike Recoveries
METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl ug/L	SPK Res ug/L	DUP Res ug/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
EPA 6010C	CALCIUM (CA)	25000	24800	25200	99.2	101	1.6	20	87-113	03/06/20	03/12/20	03/06/20	03/12/20	#61CDO-200306A-BA0794
EPA 6010C	MAGNESIUM (MG)	25000	24800	25200	99.2	101	1.6	20	85-113	03/06/20	03/12/20	03/06/20	03/12/20	#61CDO-200306A-BA0794
EPA 6010C	MANGANESE (MN)	250	250	254	100	102	1.6	20	90-114	03/06/20	03/12/20	03/06/20	03/12/20	#61CDO-200306A-BA0794
EPA 6010C	POTASSIUM (K)	5000	5020	5100	100	102	1.6	20	86-114	03/06/20	03/12/20	03/06/20	03/12/20	#61CDO-200306A-BA0794
EPA 6010C	SODIUM (NA)	25000	24200	24400	96.8	97.6	0.8	20	87-115	03/06/20	03/12/20	03/06/20	03/12/20	#61CDO-200306A-BA0794

Comments:

EPA 300.0

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	91585
Case No:	91585	Date Analyzed:	03/05/20
Matrix:	WATER	Instrument:	Charlie
Blank ID:	200306A-BLK	Time Analyzed:	0955

APPL ID.	Client Sample No.	File ID.	Date Analyzed
BA07942	ERH1023	17	03/05/20 1717
BA07944	ERH1025	18	03/05/20 1743
200306A-BLK	Blank	2	03/05/20 0955
200306A-LCS	Lab Control Spike	3	03/05/20 1020
200306A-LCSD	Lab Control SpikeD	4	03/05/20 1046

Comments: Batch: #300W-200306A

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
EPA 300.0	BROMIDE	0.16 U	0.5	0.16	0.05	mg/L	03/05/20	03/05/20	#300W-200306A-BA07942
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	03/05/20	03/05/20	#300W-200306A-BA07942
EPA 300.0	FLUORIDE	0.09 U	0.1	0.09	0.08	mg/L	03/05/20	03/05/20	#300W-200306A-BA07942
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	03/05/20	03/05/20	#300W-200306A-BA07942
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	03/05/20	03/05/20	#300W-200306A-BA07942

EPA 300.0

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91585
Case No:	91585	Date Analyzed:	03/05/20
Matrix:	WATER	Instrument:	Charlie
LCS ID:	200306A-LCS	Time Analyzed:	1020

APPL ID.	Client Sample No.	File ID.	Date Analyzed
BA07942	ERH1023	17	03/05/20 1717
BA07944	ERH1025	18	03/05/20 1743
200306A-BLK	Blank	2	03/05/20 0955
200306A-LCS	Lab Control Spike	3	03/05/20 1020
200306A-LCSD	Lab Control SpikeD	4	03/05/20 1046

Comments: Batch: #300W-200306A

Laboratory Control Spike Recoveries

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
EPA 300.0	BROMIDE	12.5	12.2	12.2	97.6	97.6	0.0	20	90-110	03/05/20	03/05/20	03/05/20	03/05/20	#300W-200306A-BA07942
EPA 300.0	CHLORIDE	25.0	23.6	23.6	94.4	94.4	0.0	20	90-110	03/05/20	03/05/20	03/05/20	03/05/20	#300W-200306A-BA07942
EPA 300.0	FLUORIDE	5.00	4.89	4.87	97.8	97.4	0.41	20	90-110	03/05/20	03/05/20	03/05/20	03/05/20	#300W-200306A-BA07942
EPA 300.0	NITRATE	22.1	21.4	21.4	96.8	96.8	0.0	20	90-110	03/05/20	03/05/20	03/05/20	03/05/20	#300W-200306A-BA07942
EPA 300.0	SULFATE	25.0	24.7	24.8	98.8	99.2	0.40	20	90-110	03/05/20	03/05/20	03/05/20	03/05/20	#300W-200306A-BA07942

Comments:

EPA 353.2

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91585

Case No: 91585 Date Analyzed: 03/06/20

Matrix: WATER Instrument: EVE

Blank ID: 200306A-BLK Time Analyzed: 1041

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200306A-BLK	Blank	12	03/06/20 1041
200306A-LCS	Lab Control Spike	13	03/06/20 1043
200306A-LCSD	Lab Control SpikeD	14	03/06/20 1045
200306A-MS	Matrix Spike	16	03/06/20 1050
200306A-MSD	Matrix SpikeD	17	03/06/20 1051
BA07942	ERH1023	18	03/06/20 1052
BA07944	ERH1025	19	03/06/20 1053

Comments: Batch: #35OF-200306A

SM 2320B

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	91585
Case No:	91585	Date Analyzed:	03/09/20
Matrix:	WATER	Instrument:	Tiamo
Blank ID:	200309A-BLK	Time Analyzed:	1633

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200309A-BLK	Blank	1	03/09/20 1633
200309A-LCS	Lab Control Spike	2	03/09/20 1636
200309A-LCSD	Lab Control SpikeD	3	03/09/20 1647
BA07942	ERH1023	4	03/09/20 1659
BA07944	ERH1025	5	03/09/20 1722

Comments: Batch: #232W-200309A

SM 4500-Si D

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91585

Case No: 91585 Date Analyzed: 03/09/20

Matrix: WATER Instrument: Manual Spec

Blank ID: 200309A-BLK Time Analyzed: 1507

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200309A-BLK	Blank	61	03/09/20 1507
200309A-LCS	Lab Control Spike	62	03/09/20 1507
200309A-LCSD	Lab Control SpikeD	63	03/09/20 1508
BA07944	ERH1025	64	03/09/20 1509
BA07942	ERH1023	65	03/09/20 1509

Comments: Batch: #SIO2-200309A

SM 4500-Si D

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	91585
Case No:	91585	Date Analyzed:	03/09/20
Matrix:	WATER	Instrument:	Manual Spec
Blank ID:	200309A-BLK	Time Analyzed:	1507

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200309A-BLK	Blank	61	03/09/20 1507
200309A-LCS	Lab Control Spike	62	03/09/20 1507
200309A-LCSD	Lab Control SpikeD	63	03/09/20 1508
BA07942	ERH1023	69	03/09/20 1511
BA07944	ERH1025	71	03/09/20 1512

Comments: Batch: #SIO2D-200309A

SM3500FeB

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91585

Case No: 91585 Date Analyzed: 03/05/20

Matrix: WATER Instrument: Manual Spec

Blank ID: A200305-BLK Time Analyzed: 1319

APPL ID.	Client Sample No.	File ID.	Date Analyzed
A200305-BLK	Blank	23	03/05/20 1319
A200305-LCS	Lab Control Spike	25	03/05/20 1320
BA07942	ERH1023	26	03/05/20 1321
A200305-LCSD	Lab Control SpikeD	27	03/05/20 1321
BA07944	ERH1025	28	03/05/20 1322
A200305-MS	Matrix Spike	29	03/05/20 1322
A200305-MSD	Matrix SpikeD	30	03/05/20 1323

Comments: Batch: #35FE-A200305

SW846 9060A

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91585

Case No: 91585 Date Analyzed: 03/11/20

Matrix: WATER Instrument: TICTOC

Blank ID: 200311A-BLK Time Analyzed: 1941

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200311A-BLK	Blank	33	03/11/20 1941
200311A-LCS	Lab Control Spike	34	03/11/20 2019
200311A-LCSD	Lab Control SpikeD	35	03/11/20 2059
BA07942	ERH1023	36	03/11/20 2140
BA07944	ERH1025	37	03/11/20 2217

Comments: Batch: #DOCW5-200311A

SW846 9060A

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91585

Case No: 91585 Date Analyzed: 03/07/20

Matrix: WATER Instrument: TICTOC

Blank ID: 200306A-BLK Time Analyzed: 1932

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200306A-BLK	Blank	33	03/07/20 1932
200306A-LCS	Lab Control Spike	34	03/07/20 2011
200306A-LCSD	Lab Control SpikeD	35	03/07/20 2051
BA07942	ERH1023	37	03/07/20 2210
BA07944	ERH1025	38	03/07/20 2248

Comments: Batch: #TOCW5-200306A

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
SM 2320B	BICARBONATE AS	1.9 J	2.0	1.70	0.85	mg/L	03/09/20	03/09/20	#232W-200309A-BA08034
SM 2320B	CARBONATE AS C	1.70 U	2.0	1.70	0.85	mg/L	03/09/20	03/09/20	#232W-200309A-BA08034
SM 2320B	TOTAL ALKALINITY	1.9 J	2.0	1.70	0.85	mg/L	03/09/20	03/09/20	#232W-200309A-BA08034
EPA 353.2	NITRATE-NITRITE-	0.090 U	0.10	0.090	0.028	mg/L	03/06/20	03/06/20	#35OF-200306A-BA07942
SW846 90	DISSOLVED ORGA	0.350 U	0.93	0.350	0.130	mg/L	03/11/20	03/11/20	#DOCW5-200311A-BA07942
SM 4500-S	SILICA W	0.80 U	1.0	0.80	0.53	mg/L	03/09/20	03/09/20	#SIO2-200309A-BA08034
SM 4500-S	DISSOLVED SILICA	0.80 U	1.0	0.80	0.53	mg/L	03/09/20	03/09/20	#SIO2D-200309A-BA08034
SW846 90	TOTAL ORGANIC C	0.350 U	0.93	0.350	0.130	mg/L	03/07/20	03/07/20	#TOCW5-200306A-BA07942
SM3500Fe	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	03/05/20	03/05/20	#35FE-A200305-BA07944

Wetlab SC-Blank-REG MDLs
Printed: 03/20/20 3:02:52 PM

EPA 353.2

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 91585

Case No: 91585 Date Analyzed: 03/06/20

Matrix: WATER Instrument: EVE

LCS ID: 200306A-LCS Time Analyzed: 1043

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200306A-BLK	Blank	12	03/06/20 1041
200306A-LCS	Lab Control Spike	13	03/06/20 1043
200306A-LCSD	Lab Control SpikeD	14	03/06/20 1045
200306A-MS	Matrix Spike	16	03/06/20 1050
200306A-MSD	Matrix SpikeD	17	03/06/20 1051
BA07942	ERH1023	18	03/06/20 1052
BA07944	ERH1025	19	03/06/20 1053

Comments: Batch: #35OF-200306A

SM 2320B

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91585
Case No:	91585	Date Analyzed:	03/09/20
Matrix:	WATER	Instrument:	Tiamo
LCS ID:	200309A-LCS	Time Analyzed:	1636

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200309A-BLK	Blank	1	03/09/20 1633
200309A-LCS	Lab Control Spike	2	03/09/20 1636
200309A-LCSD	Lab Control SpikeD	3	03/09/20 1647
BA07942	ERH1023	4	03/09/20 1659
BA07944	ERH1025	5	03/09/20 1722

Comments: Batch: #232W-200309A

SM 4500-Si D

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 91585

Case No: 91585 Date Analyzed: 03/09/20

Matrix: WATER Instrument: Manual Spec

LCS ID: 200309A-LCS Time Analyzed: 1507

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200309A-BLK	Blank	61	03/09/20 1507
200309A-LCS	Lab Control Spike	62	03/09/20 1507
200309A-LCSD	Lab Control SpikeD	63	03/09/20 1508
BA07944	ERH1025	64	03/09/20 1509
BA07942	ERH1023	65	03/09/20 1509

Comments: Batch: #SIO2-200309A

SM 4500-Si D

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91585
Case No:	91585	Date Analyzed:	03/09/20
Matrix:	WATER	Instrument:	Manual Spec
LCS ID:	200309A-LCS	Time Analyzed:	1507

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200309A-BLK	Blank	61	03/09/20 1507
200309A-LCS	Lab Control Spike	62	03/09/20 1507
200309A-LCSD	Lab Control SpikeD	63	03/09/20 1508
BA07942	ERH1023	69	03/09/20 1511
BA07944	ERH1025	71	03/09/20 1512

Comments: Batch: #SIO2D-200309A

SM3500FeB

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 91585

Case No: 91585 Date Analyzed: 03/05/20

Matrix: WATER Instrument: Manual Spec

LCS ID: A200305-LCS Time Analyzed: 1320

APPL ID.	Client Sample No.	File ID.	Date Analyzed
A200305-BLK	Blank	23	03/05/20 1319
A200305-LCS	Lab Control Spike	25	03/05/20 1320
BA07942	ERH1023	26	03/05/20 1321
A200305-LCSD	Lab Control SpikeD	27	03/05/20 1321
BA07944	ERH1025	28	03/05/20 1322
A200305-MS	Matrix Spike	29	03/05/20 1322
A200305-MSD	Matrix SpikeD	30	03/05/20 1323

Comments: Batch: #35FE-A200305

SW846 9060A

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91585
Case No:	91585	Date Analyzed:	03/11/20
Matrix:	WATER	Instrument:	TICTOC
LCS ID:	200311A-LCS	Time Analyzed:	2019

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200311A-BLK	Blank	33	03/11/20 1941
200311A-LCS	Lab Control Spike	34	03/11/20 2019
200311A-LCSD	Lab Control SpikeD	35	03/11/20 2059
BA07942	ERH1023	36	03/11/20 2140
BA07944	ERH1025	37	03/11/20 2217

Comments: Batch: #DOCW5-200311A

SW846 9060A

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91585
Case No:	91585	Date Analyzed:	03/07/20
Matrix:	WATER	Instrument:	TICTOC
LCS ID:	200306A-LCS	Time Analyzed:	2011

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200306A-BLK	Blank	33	03/07/20 1932
200306A-LCS	Lab Control Spike	34	03/07/20 2011
200306A-LCSD	Lab Control SpikeD	35	03/07/20 2051
BA07942	ERH1023	37	03/07/20 2210
BA07944	ERH1025	38	03/07/20 2248

Comments: Batch: #TOCW5-200306A

Laboratory Control Spike Recoveries

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
EPA 353.2	NITRATE-NITRITE-N	3.00	2.94	2.90	98.0	96.7	1.4	20	90-110	03/06/20	03/06/20	03/06/20	03/06/20	#35OF-200306A-BA07942
SM 2320B	BICARBONATE AS CACO3	250	252	253	101	101	0.40	20	90-110	03/09/20	03/09/20	03/09/20	03/09/20	#232W-200309A-BA08034
SM 2320B	TOTAL ALKALINITY AS CA	239	264	265	110	111 #	0.38	20	90-110	03/09/20	03/09/20	03/09/20	03/09/20	#232W-200309A-BA08034
SM 4500-Si	SILICA W	4.00	3.98	4.02	99.5	100	1.00	20	80-120	03/09/20	03/09/20	03/09/20	03/09/20	#SIO2-200309A-BA08034
SM 4500-Si	DISSOLVED SILICA	4.00	3.98	4.02	99.5	100	1.00	20	80-120	03/09/20	03/09/20	03/09/20	03/09/20	#SIO2D-200309A-BA08034
SW846 90	DISSOLVED ORGANIC CA	5.00	4.83	4.44	96.6	88.8 #	8.4	20	90-110	03/11/20	03/11/20	03/11/20	03/11/20	#DOCW5-200311A-BA079
SW846 90	TOTAL ORGANIC CARBO	5.00	4.17	4.16	83.4	83.2	0.24	20	80-120	03/07/20	03/07/20	03/07/20	03/07/20	#TOCW5-200306A-BA079

= Recovery is outside QC limits.

Comments:

Laboratory Control Spike Recoveries

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
SM3500Fe	FERROUS IRON	3.00	2.96	2.97	98.7	99.0	0.34	20	80-120	03/05/20	03/05/20	03/05/20	03/05/20	#35FE-A200305-BA07944

Comments:

Matrix Spike Recoveries

WETLAB

APPL ID: **200306W-07942 MS - 250515**

Sample ID: BA07942

Client ID: ERH1023

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	Matrix Res mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
EPA 353.2	NITRATE-NITRITE-N	3.23	0.31	3.63	3.90	103	111 #	7.2	20	90-110	03/06/20	03/06/20	03/06/20	03/06/20	250515	BA07942

= Recovery is outside QC limits.

Comments:

Matrix Spike Recoveries

WETLAB

APPL ID: **200305W-07944 MS - 250478**

Sample ID: BA07944

Client ID: ERH1025

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	Matrix Res mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
SM3500Fe	FERROUS IRON	3.00	0.10	3.03	3.07	97.7	99.0	1.3	20	80-120	03/05/20	03/05/20	03/05/20	03/05/20	250478	BA07944

Comments:

ORGANICS
Calibration Data

DBCP/EDB/1,2,3-TCP Analysis by
504 8011

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 03/09/20
Matrix: Water Instrument: Herbie Initials:

0228108 D 0228109.D 0228110.D 0228111.D 0228112.D 0228113 D

		Compound	1	2	3	4	5	6					Avg	%RSD	Type	r^2	Q
1	TM	EDB	937275	1029830	868434	823757	822656	741122					870512	12	TM		
2	TML	1,2,3-TCP	97400	284865	240708	214442	209667	197990					207512	30	TM	0.995	
3	S	1,3-DIBROMOPROPANE(S)		1220120	1000750	914832	907431	842764					977179	15	S		
4	TM	DBCP	3178525	3425345	2940274	2780219	2807878	2785953					2986366	8.8	TM		
5		Signal #2											0	0			
6																	
7																	
8																	
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1.869772

DBCP/EDB/1,2,3-TCP Analysis by
504 8011

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 03/09/20
Matrix: Water Instrument: Herbie Initials:

			0228108.D	0228109.D	0228110.D	0228111 D	0228112.D	0228113.D									
		Compound	1	2	3	4	5	6					Avg	%RSD	Type	r^2	Q
36	TM	EDB #2	4387075	4433730	3806364	3665041	3563247	3375349					3871801	11	TM		
37	TM	1,2,3-TCP #2	575650	780360	675902	645387	614787	584029					646019	12	TM		
38	S	1,3-DIBROMOPROPANE(S) #2	3207200	3306615	2780894	2626504	2541838	2390573					2808937	13	S		
39	TM	DBCP #2	12149950	12798270	11009248	11150725	11107429	10919693					11522552	6.7	TM		
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1.227865

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228108.D\ECD1A.CH Vial: 8
Signal #2 : G:\HERBIE\DATA\200228\0228108.D\ECD2B.CH
Acq On : 03-09-20 18:28:49 Operator: MA,SS
Sample : 8011 1 3/9/20 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 10 9:07 2020 Quant Results File: 8010310A.RES

Quant Method : G:\HERBIE\DATA\200228\8010310A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Thu Jan 30 13:05:38 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

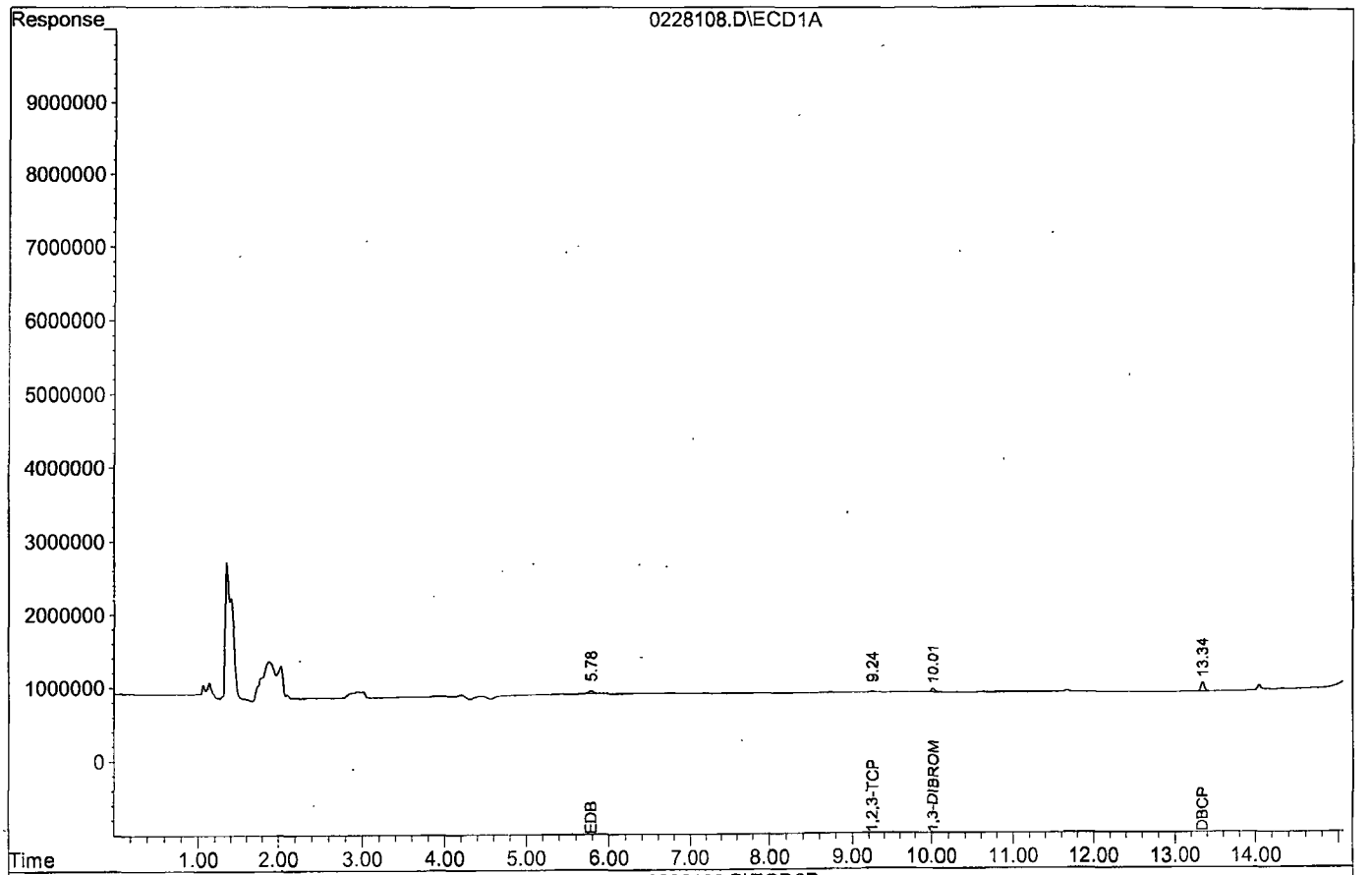
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	System Monitoring Compounds							
3)	S 1,3-DIBROMOPROPA	10.01	11.04	47733	128288	0.027	0.026	
	Spiked Amount 0.350			Recovery =		7.71%	7.43%	
	Target Compounds							
1)	TM EDB	5.78	7.22	37491	175483	0.024	0.026	
2)	TM 1,2,3-TCP	9.24	10.45	3896	23026	0.007	0.018	#
4)	TM DBCP	13.34	14.09	127141	485998	0.024	0.024	
	Target Compounds							

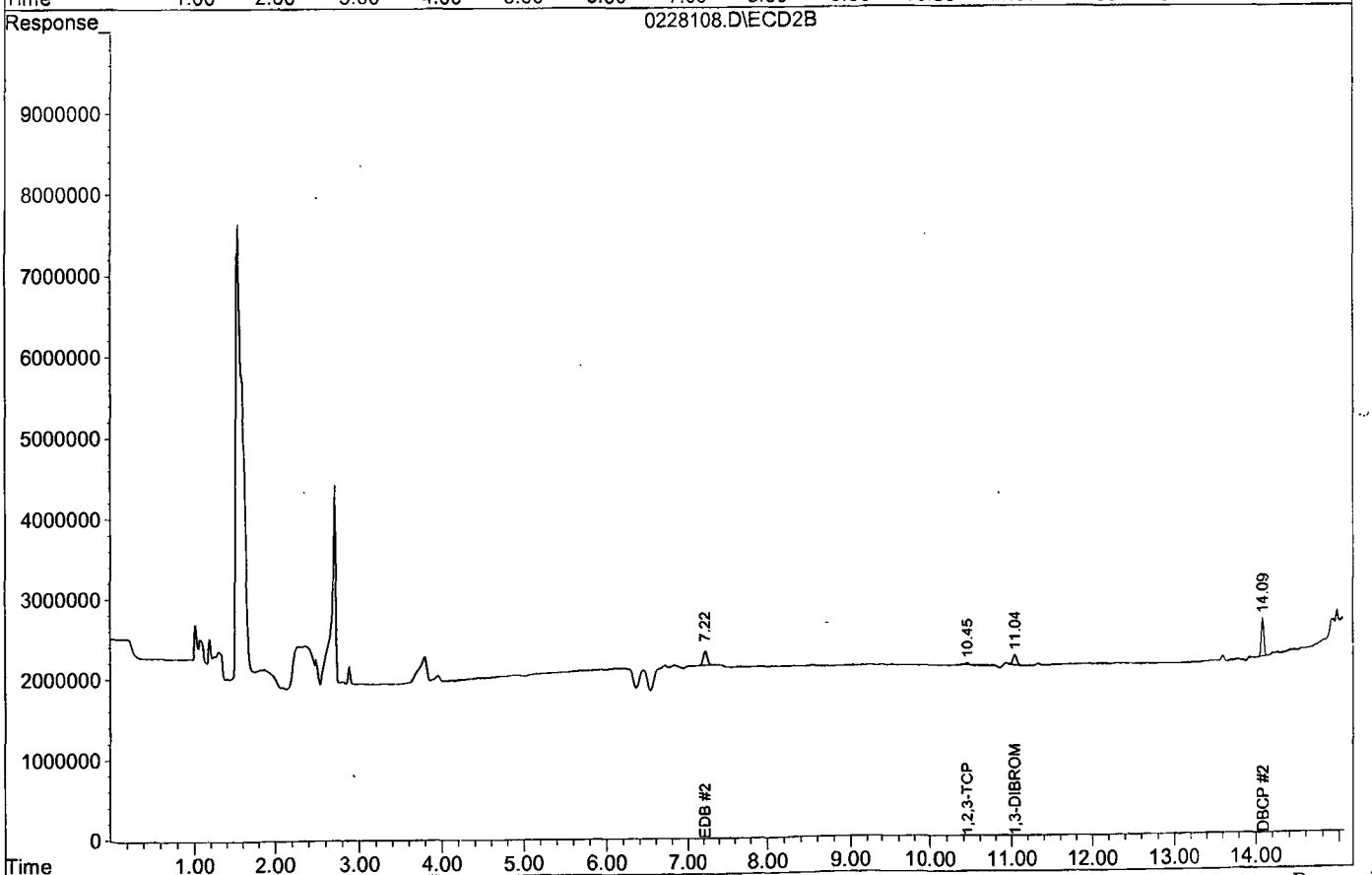
(f)=RT Delta > 1/2 Window (#)=Amounts differ >25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\200228\0228108.D
Acq On : 03-09-20 18:28:49
Sample : 8011 1 3/9/20
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010310A.M

Vial: 8
Operator: MA,SS
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228109.D\ECD1A.CH Vial: 9
Signal #2 : G:\HERBIE\DATA\200228\0228109.D\ECD2B.CH
Acq On : 03-09-20 18:49:17 Operator: MA,SS
Sample : 8011 2 3/9/20 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 10 9:07 2020 Quant Results File: 8010310A.RES

Quant Method : G:\HERBIE\DATA\200228\8010310A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 10 09:07:23 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.01	11.03	244024	661323	0.138	0.132
Spiked Amount	0.350			Recovery	=	39.43%	37.71%
	Target Compounds						
1) TM	EDB	5.78	7.21	205966	886746	0.132	0.133
2) TM	1,2,3-TCP	9.24	10.44	56973	156072	0.107	0.125
4) TM	DBCP	13.34	14.08	685069	2559654	0.128	0.125

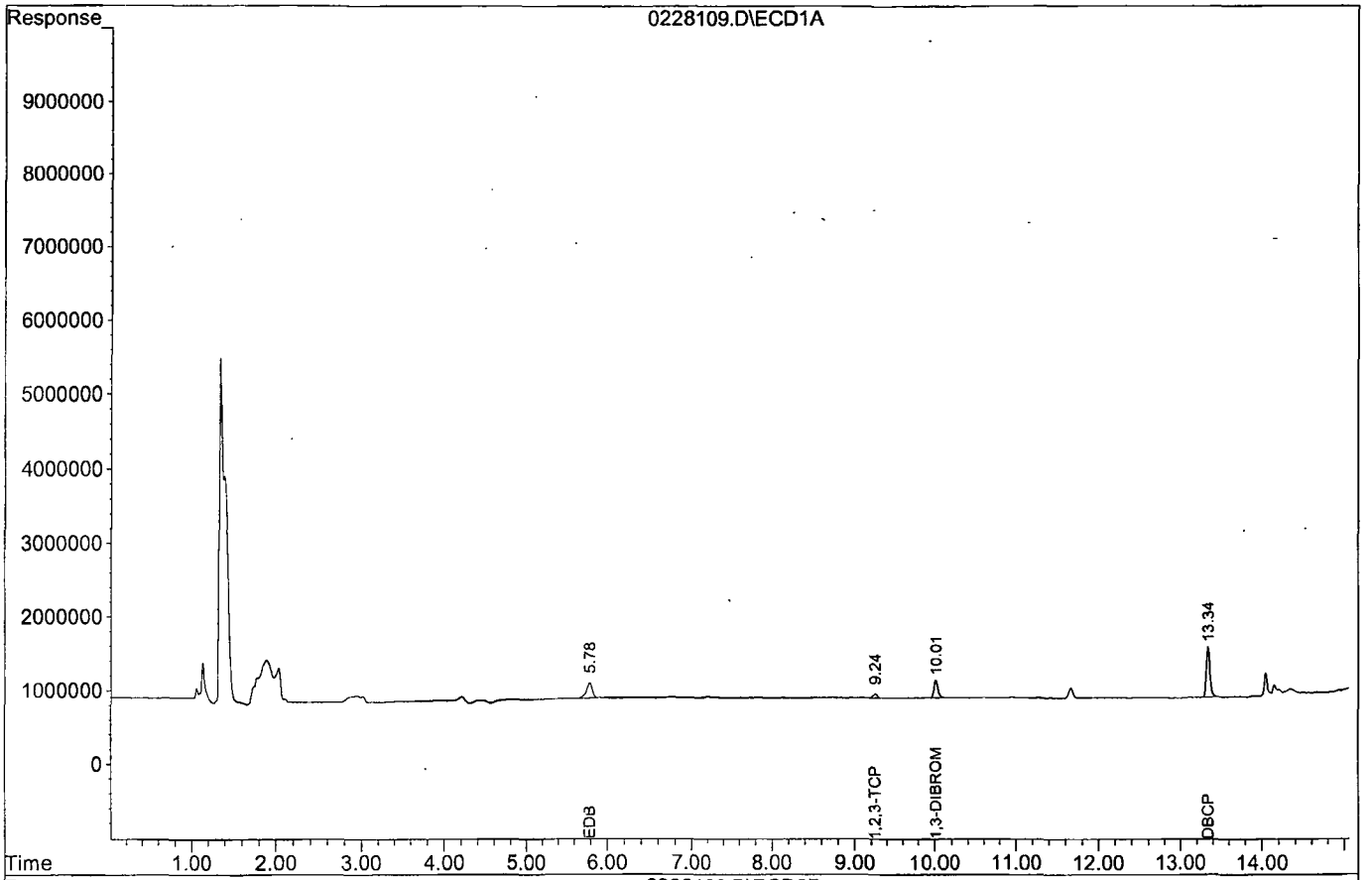
Target Compounds

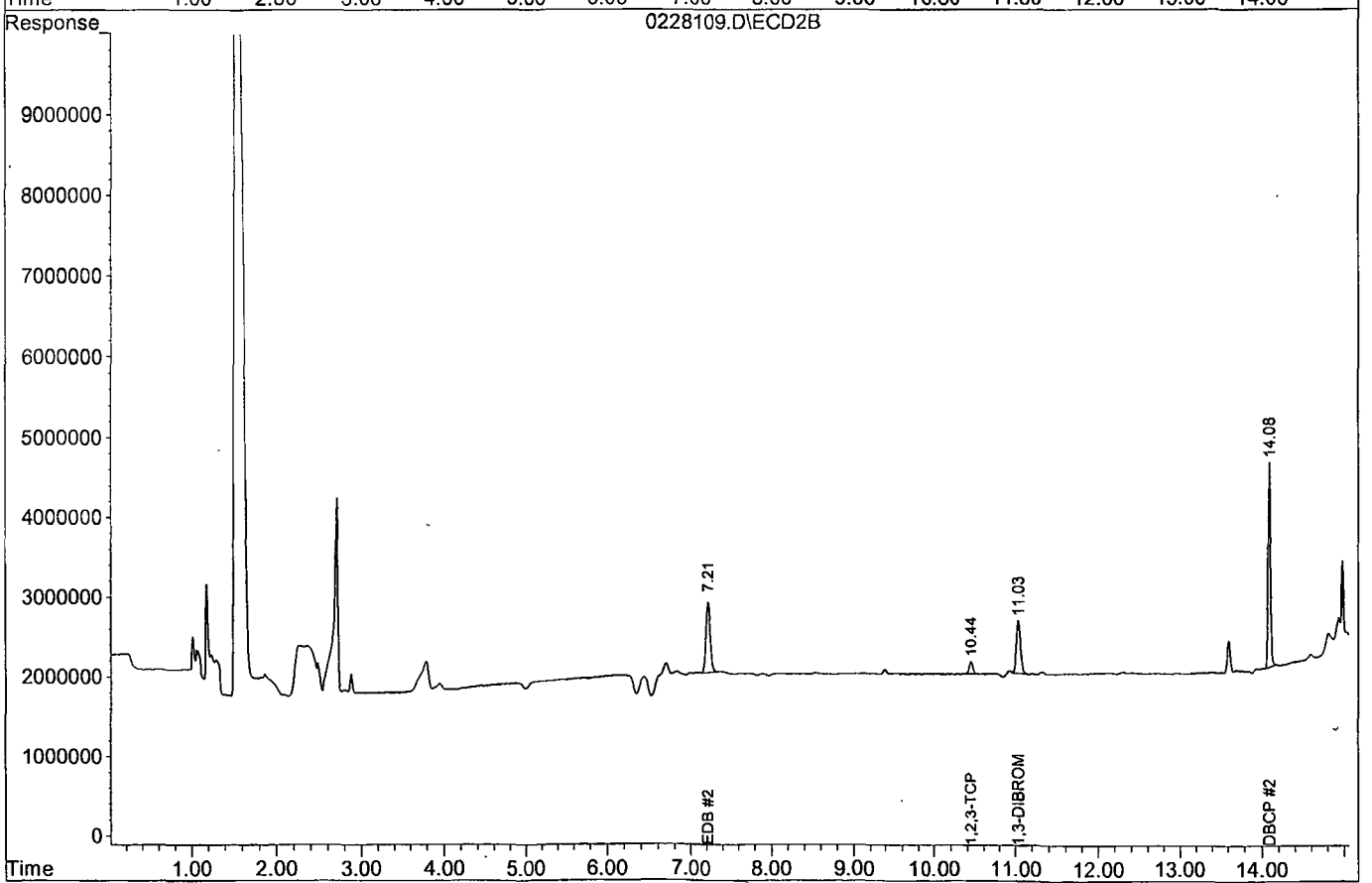
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\200228\0228109.D
Acq On : 03-09-20 18:49:17
Sample : 8011 2 3/9/20
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010310A.M

Vial: 9
Operator: MA,SS
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228110.D\ECD1A.CH Vial: 10
Signal #2 : G:\HERBIE\DATA\200228\0228110.D\ECD2B.CH
Acq On : 03-09-20 19:09:45 Operator: MA,SS
Sample : 8011 3 3/9/20 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 10 9:07 2020 Quant Results File: 8010310A.RES

Quant Method : G:\HERBIE\DATA\200228\8010310A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 10 09:07:23 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

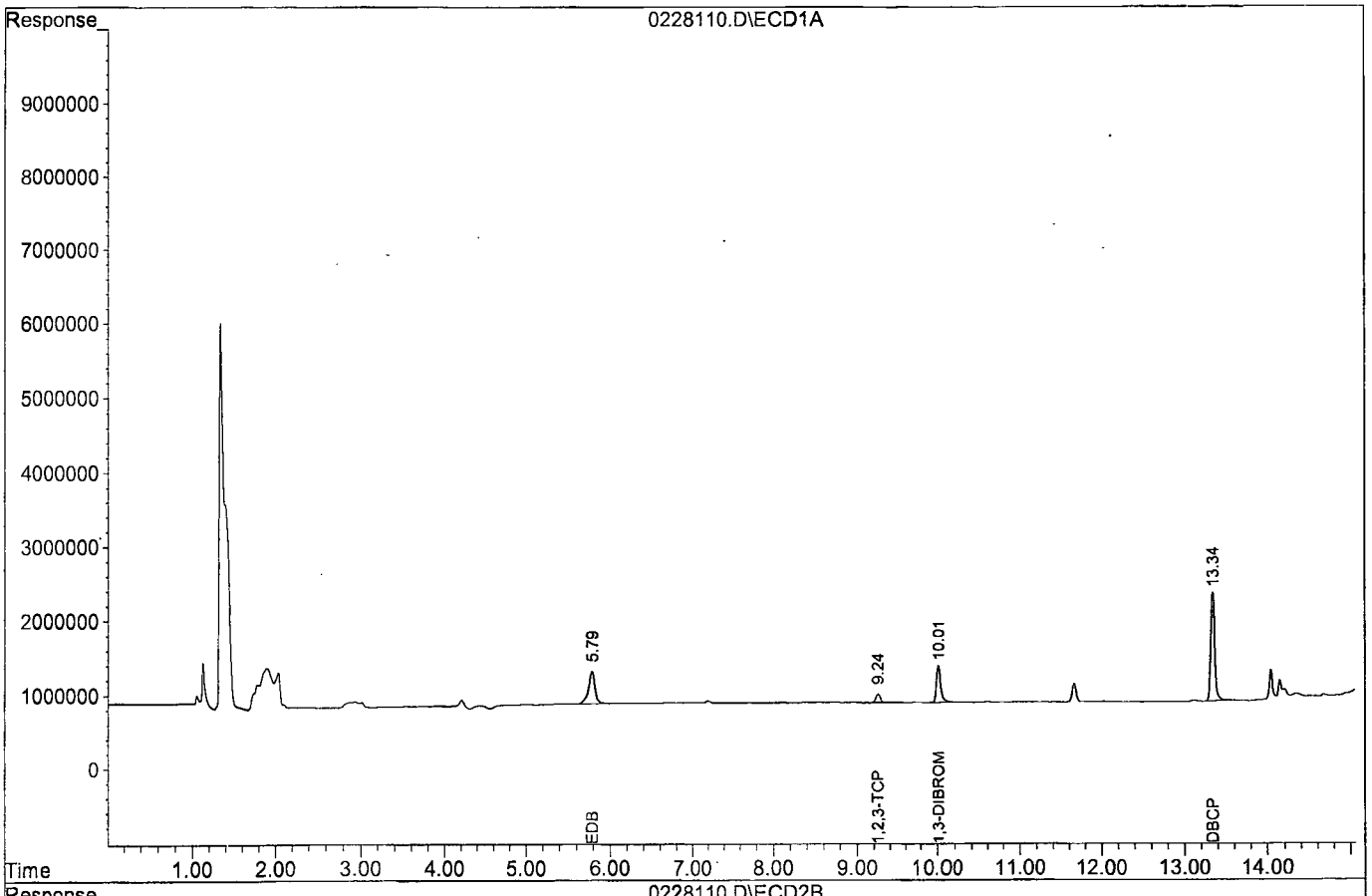
Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
3) S 1,3-DIBROMOPROPA	10.01	11.03	500375	1390447	0.283	0.279
Spiked Amount 0.350			Recovery =		80.86%	79.71%
Target Compounds						
1) TM EDB	5.79	7.21	434217	1903182	0.279	0.286
2) TM 1,2,3-TCP	9.24	10.44	120354	337951	0.226	0.270
4) TM DBCP	13.34	14.08	1470137	5504624	0.275	0.268
Target Compounds						

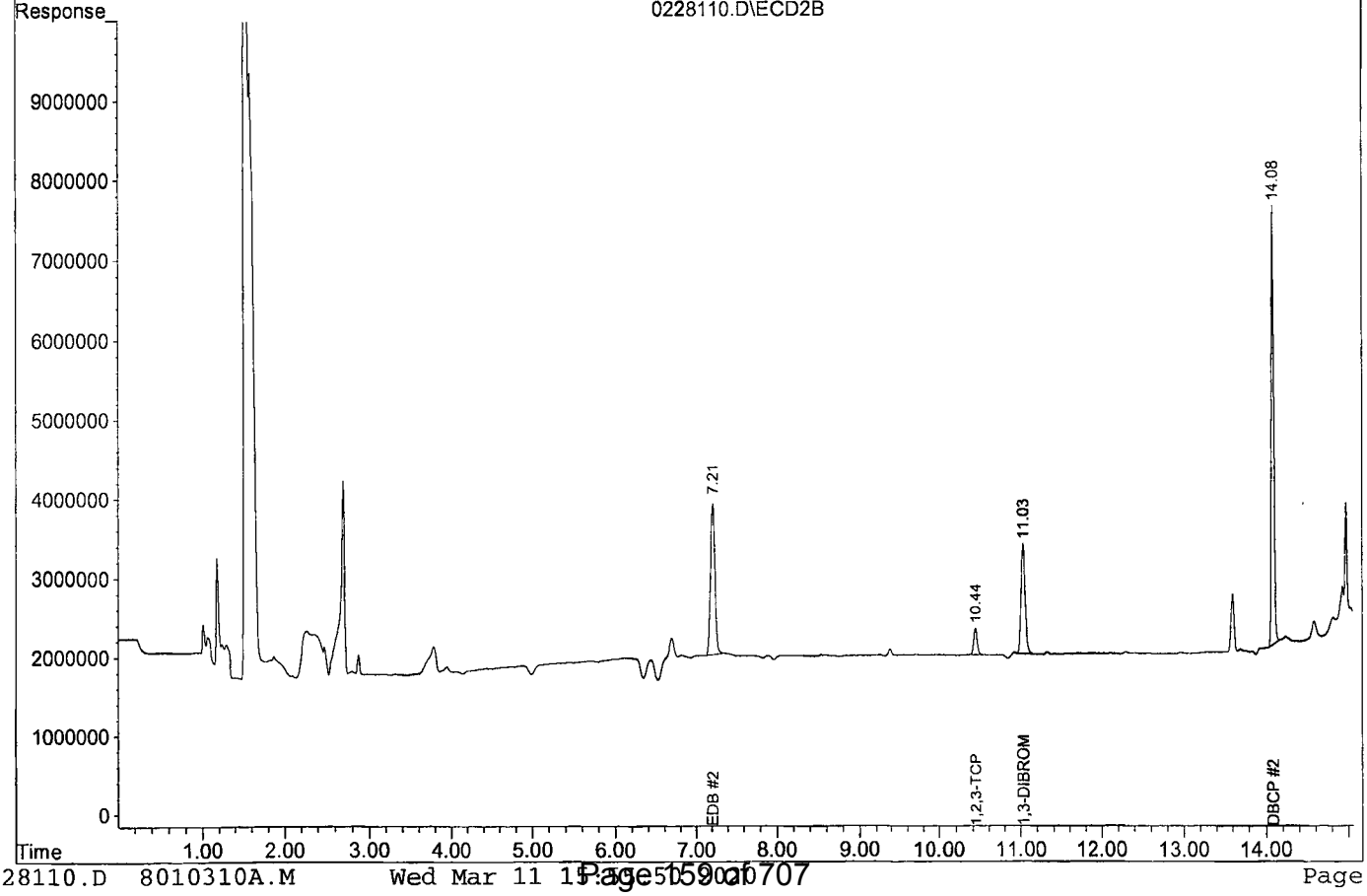
(f)=RT Delta > 1/2 Window (#)=Amounts di[illegible] by >25% (m)=manual int.
0228110.D 8010310A.M Wed Mar 11 15:55:49 2020

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\200228\0228110.D
Acq On : 03-09-20 19:09:45
Sample : 8011 3 3/9/20
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010310A.M

Vial: 10
Operator: MA,SS
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228111.D\ECD1A.CH Vial: 11
Signal #2 : G:\HERBIE\DATA\200228\0228111.D\ECD2B.CH
Acq On : 03-09-20 19:30:04 Operator: MA,SS
Sample : 8011 4 3/9/20 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 10 9:07 2020 Quant Results File: 8010310A.RES

Quant Method : G:\HERBIE\DATA\200228\8010310A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 10 09:07:23 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	System Monitoring Compounds							
3) S	1,3-DIBROMOPROPA	10.01	11.03	914832	2626504	0.517	0.526	
Spiked Amount	0.350			Recovery	=	147.71%	150.29%	
	Target Compounds							
1) TM	EDB	5.78	7.21	823757	3665041	0.530	0.551	
2) TM	1,2,3-TCP	9.24	10.44	214442	645387	0.403	0.516	#
4) TM	DBCP	13.34	14.08	2780219	11150725	0.519	0.543	

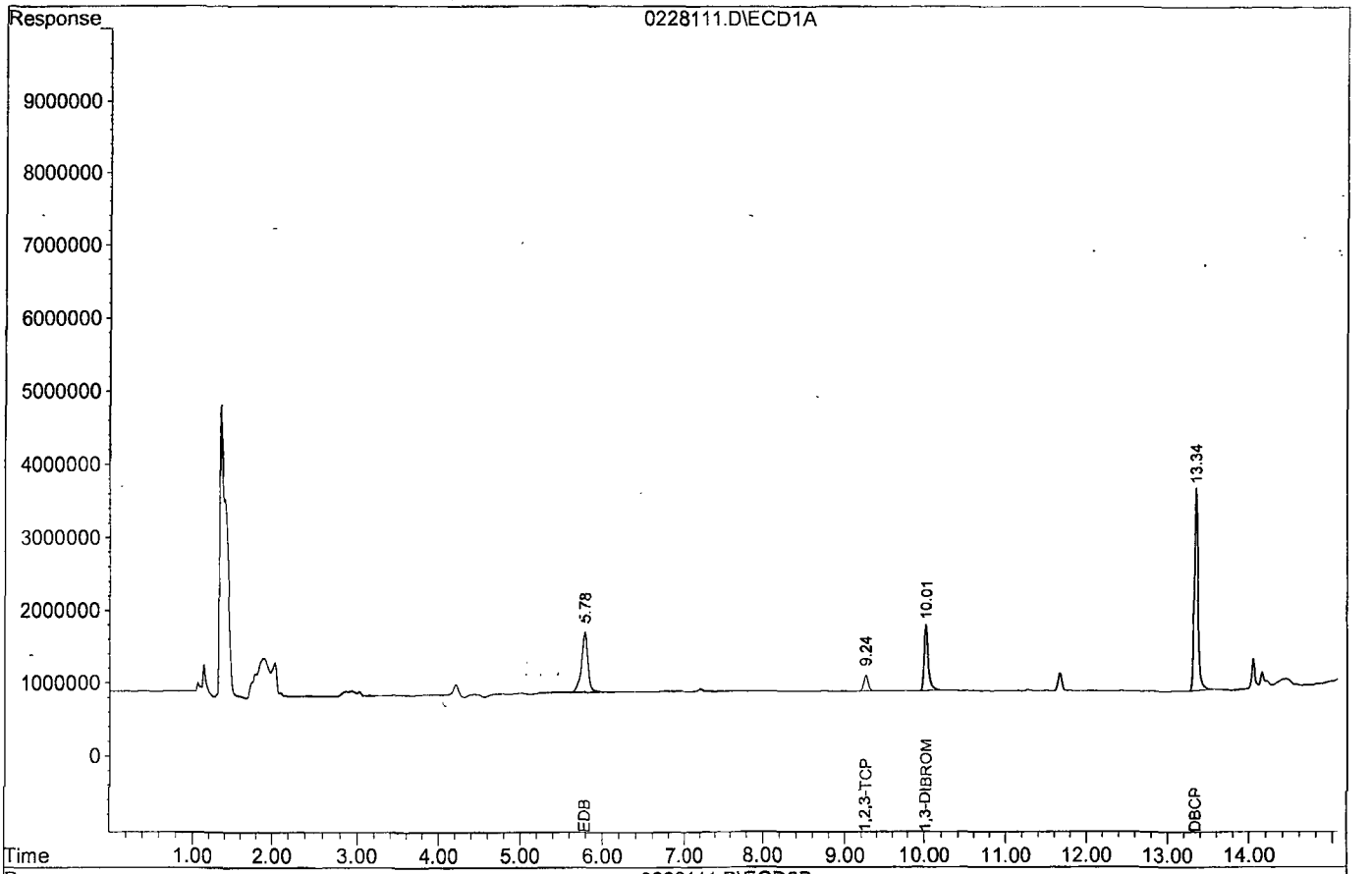
Target Compounds

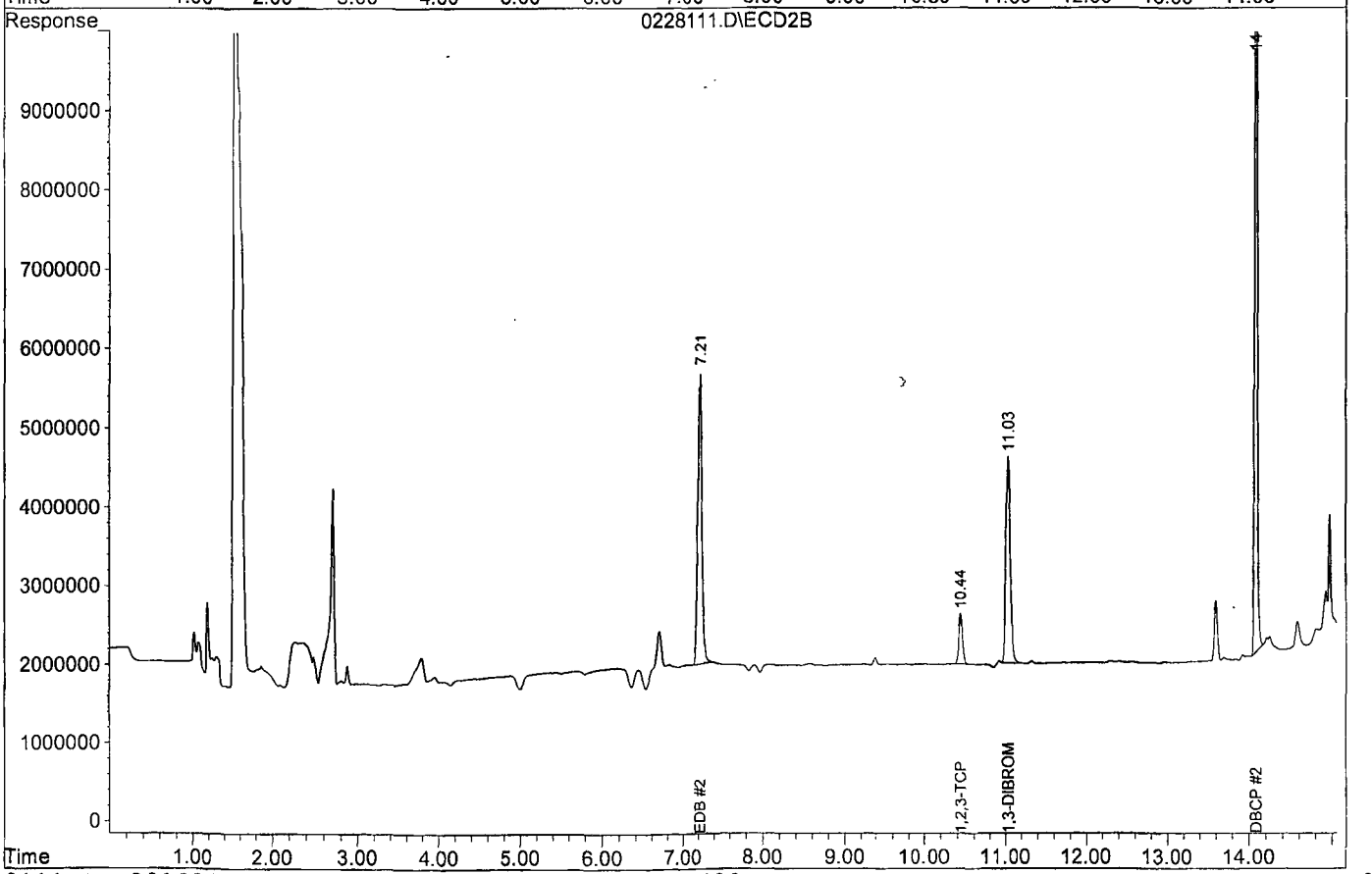
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
0228111.D 8010310A.M Wed Mar 11 15:55:52 2020

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\200228\0228111.D
Acq On : 03-09-20 19:30:04
Sample : 8011 4 3/9/20
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010310A.M

Vial: 11
Operator: MA,SS
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228112.D\ECD1A.CH Vial: 12
Signal #2 : G:\HERBIE\DATA\200228\0228112.D\ECD2B.CH
Acq On : 03-09-20 19:50:22 Operator: MA,SS
Sample : 8011 5 3/9/20 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 10 9:07 2020 Quant Results File: 8010310A.RES

Quant Method : G:\HERBIE\DATA\200228\8010310A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 10 09:07:23 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.01	11.03	1361147	3812757	0.769	0.764
Spiked Amount	0.350			Recovery	=	219.71%	218.29%
	Target Compounds						
1) TM	EDB	5.79	7.21	1233984	5344871	0.793	0.803
2) TM	1,2,3-TCP	9.25	10.44	314501	922181	0.591	0.737
4) TM	DBCP	13.34	14.08	4211817	16661144	0.787	0.811

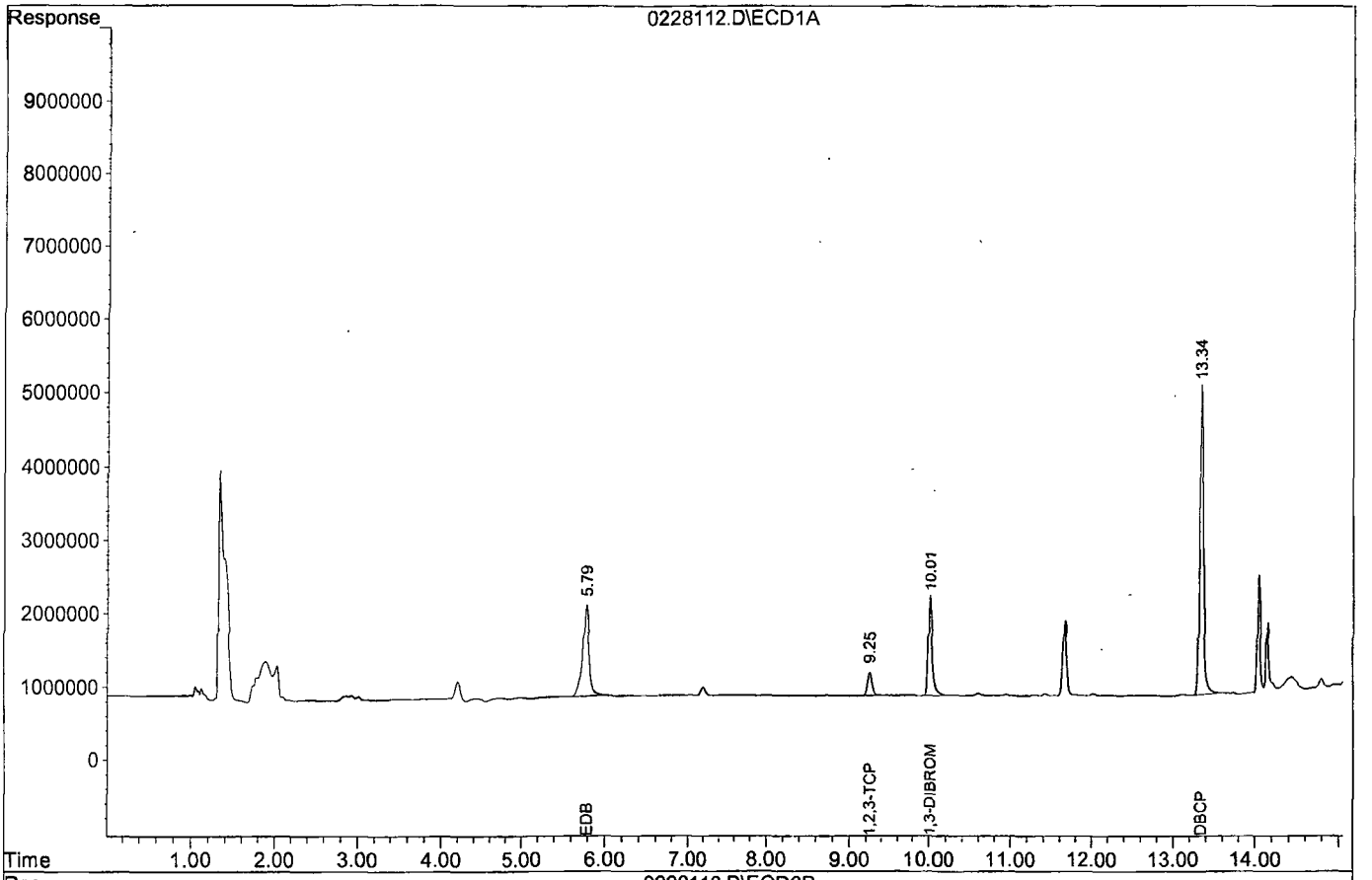
Target Compounds

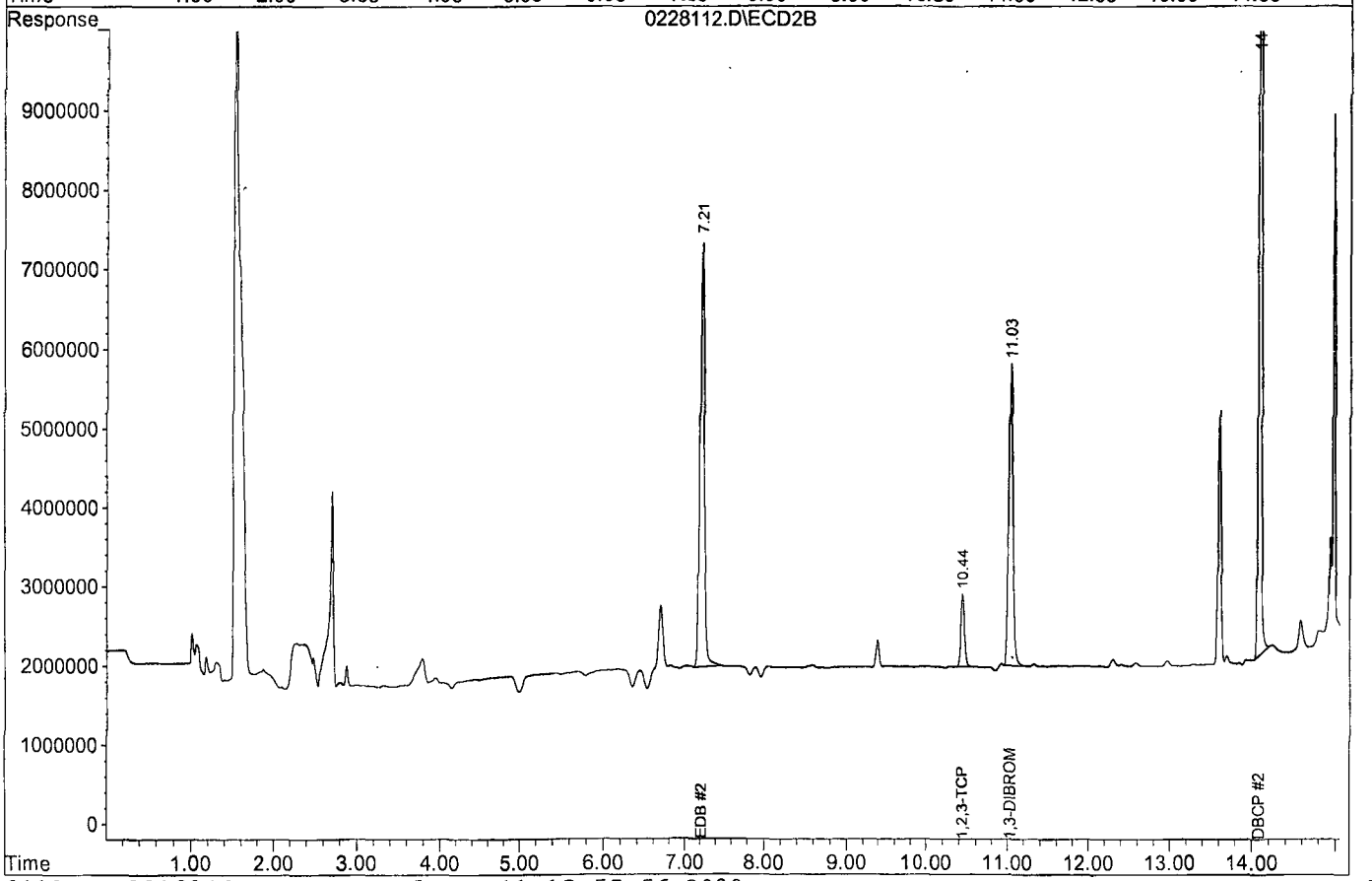
(f)=RT Delta > 1/2 Window (#)=Amounts differ by >25% (m)=manual int.
0228112.D 8010310A.M Wed Mar 11 15:55:54 2020

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\200228\0228112.D
Acq On : 03-09-20 19:50:22
Sample : 8011 5 3/9/20
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010310A.M

Vial: 12
Operator: MA,SS
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228113.D\ECD1A.CH Vial: 13
Signal #2 : G:\HERBIE\DATA\200228\0228113.D\ECD2B.CH
Acq On : 03-09-20 20:10:46 Operator: MA,SS
Sample : 8011 6 3/9/20 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 10 9:07 2020 Quant Results File: 8010310A.RES

Quant Method : G:\HERBIE\DATA\200228\8010310A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 10 09:07:23 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	System Monitoring Compounds							
3) S	1,3-DIBROMOPROPA	10.01	11.03	1685528	4781145	0.952	0.958	
Spiked Amount	0.350			Recovery	=	272.00%	273.71%	
	Target Compounds							
1) TM	EDB	5.78	7.21	1482244	6750698	0.953	1.014	
2) TM	1,2,3-TCP	9.25	10.44	395980	1168057	0.745	0.934	#
4) TM	DBCP	13.34	14.08	5571905	21839385	1.041	1.064	

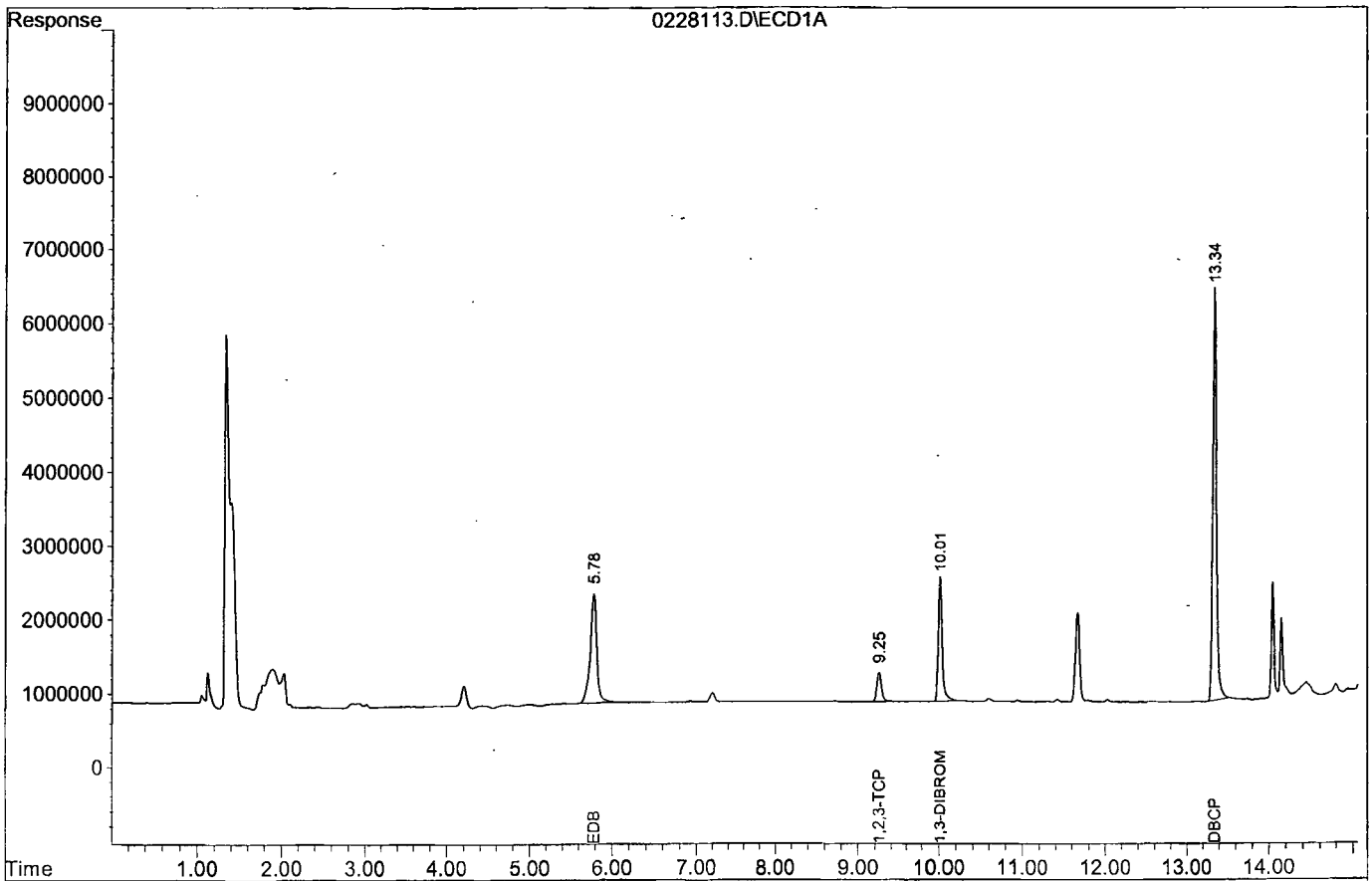
Target Compounds

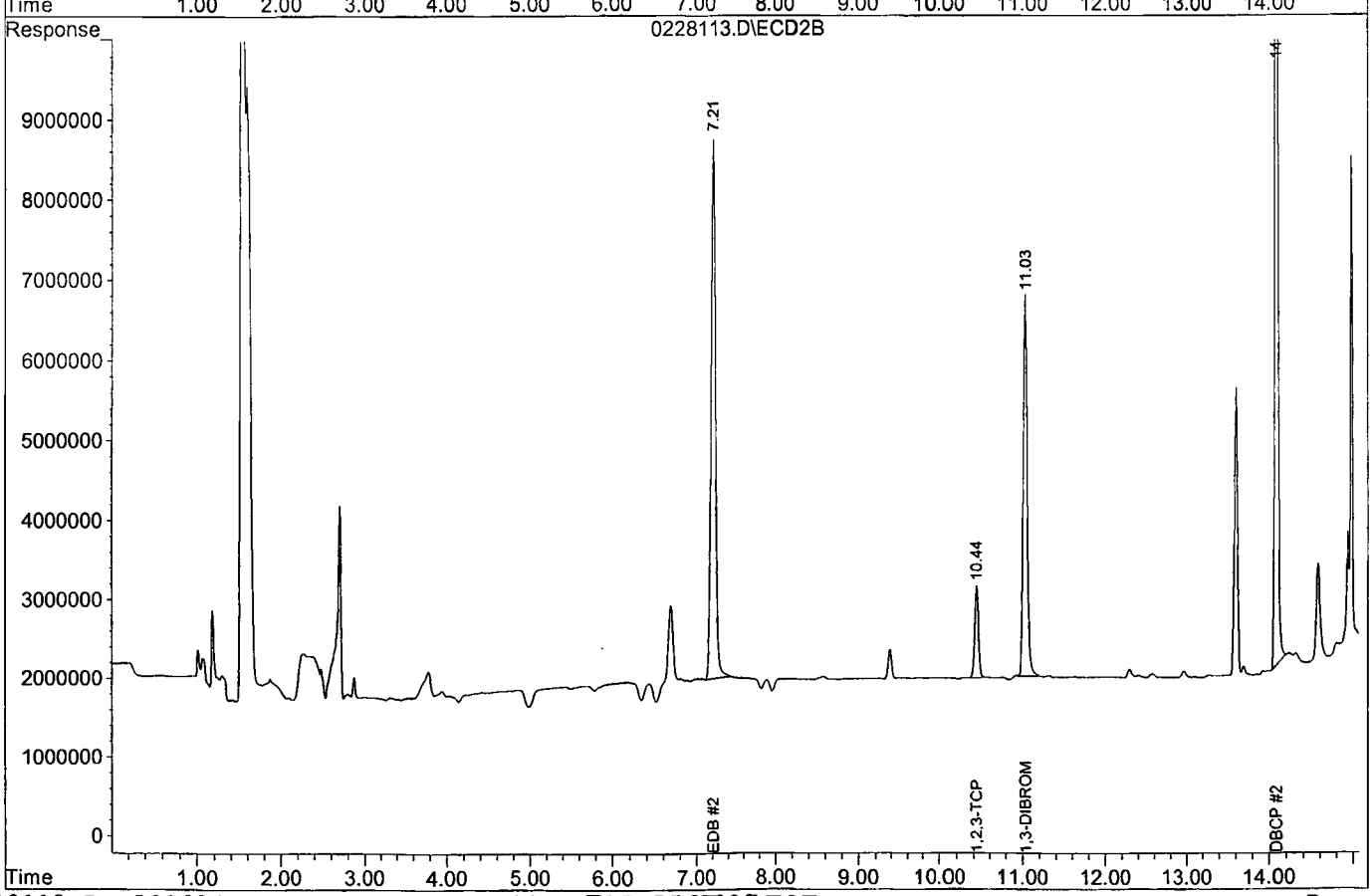
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\200228\0228113.D
Acq On : 03-09-20 20:10:46
Sample : 8011 6 3/9/20
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010310A.M

Vial: 13
Operator: MA,SS
Inst : Herbie
Multiplr: 1.00





DBCP/EDB/1,2,3-TCP Analysis by
504 8011

Form 7

Second Source Calibration

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

SDG No:
Date Analyzed: 03/09/20
Instrument: Herbie
Initial Cal. Date: 03/09/20
Data File: 0228114.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	EDB	870512	834075	4.2	TM	
2	TML	1,2,3-TCP	207512	244675	18	TML	8.0
3	TM	DBCP	2986370	2947850	1.3	TM	
4							
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39							
40							
		Average			7.8		

DBCP/EDB/1,2,3-TCP Analysis by
504 8011

Form 7

Second Source Calibration

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

SDG No:
Date Analyzed: 03/09/20
Instrument: Herbie
Cal. Date: 03/09/20
Data File: 0228114.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	EDB	3871800	3526590	8.9	TM	
42	TM	1,2,3-TCP	646019	674420	4.4	TM	
43	TM	DBCP	11522600	11025300	4.3	TM	
44							
45							
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80							
		Average			5.9		

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228114.D\ECD1A.CH Vial: 14
Signal #2 : G:\HERBIE\DATA\200228\0228114.D\ECD2B.CH
Acq On : 03-09-20 20:31:04 Operator: MA,SS
Sample : 8011 SS 3/9/20 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 10 9:07 2020 Quant Results File: 8010310A.RES

Quant Method : G:\HERBIE\DATA\200228\8010310A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 10 09:07:23 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.01	11.03	684334	1896553	0.387	0.380
Spiked Amount	0.350			Recovery	=	110.57%	108.57%
	Target Compounds						
1) TM	EDB	5.78	7.21	166815	705318	0.107	0.106
2) TM	1,2,3-TCP	9.24	10.44	48935	134884	0.092	0.108
4) TM	DBCP	13.34	14.08	589570	2205069	0.110	0.107
	Target Compounds						

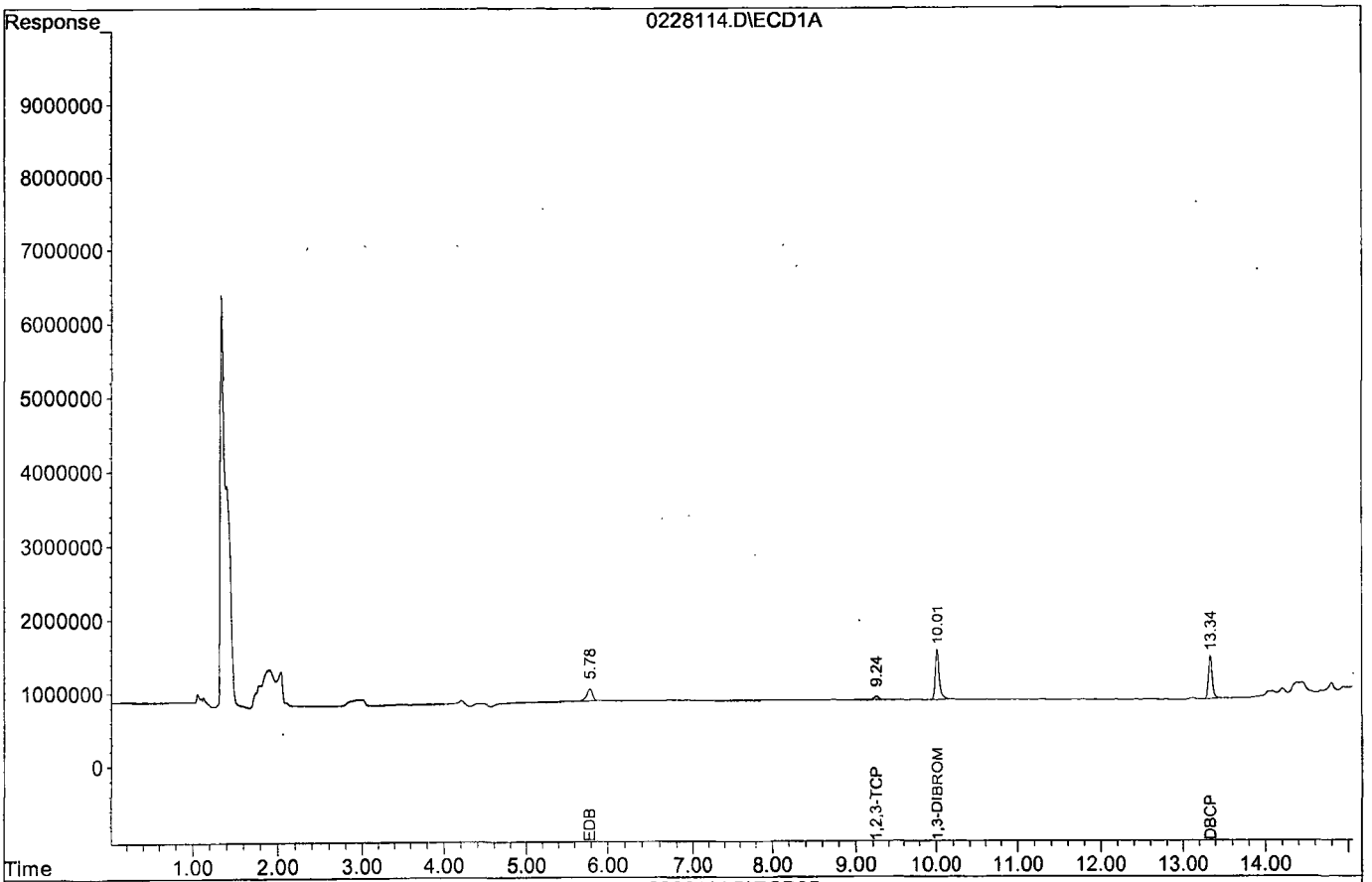
(f)=RT Delta > 1/2 Window (#)=Amounts differ >25% (m)=manual int.

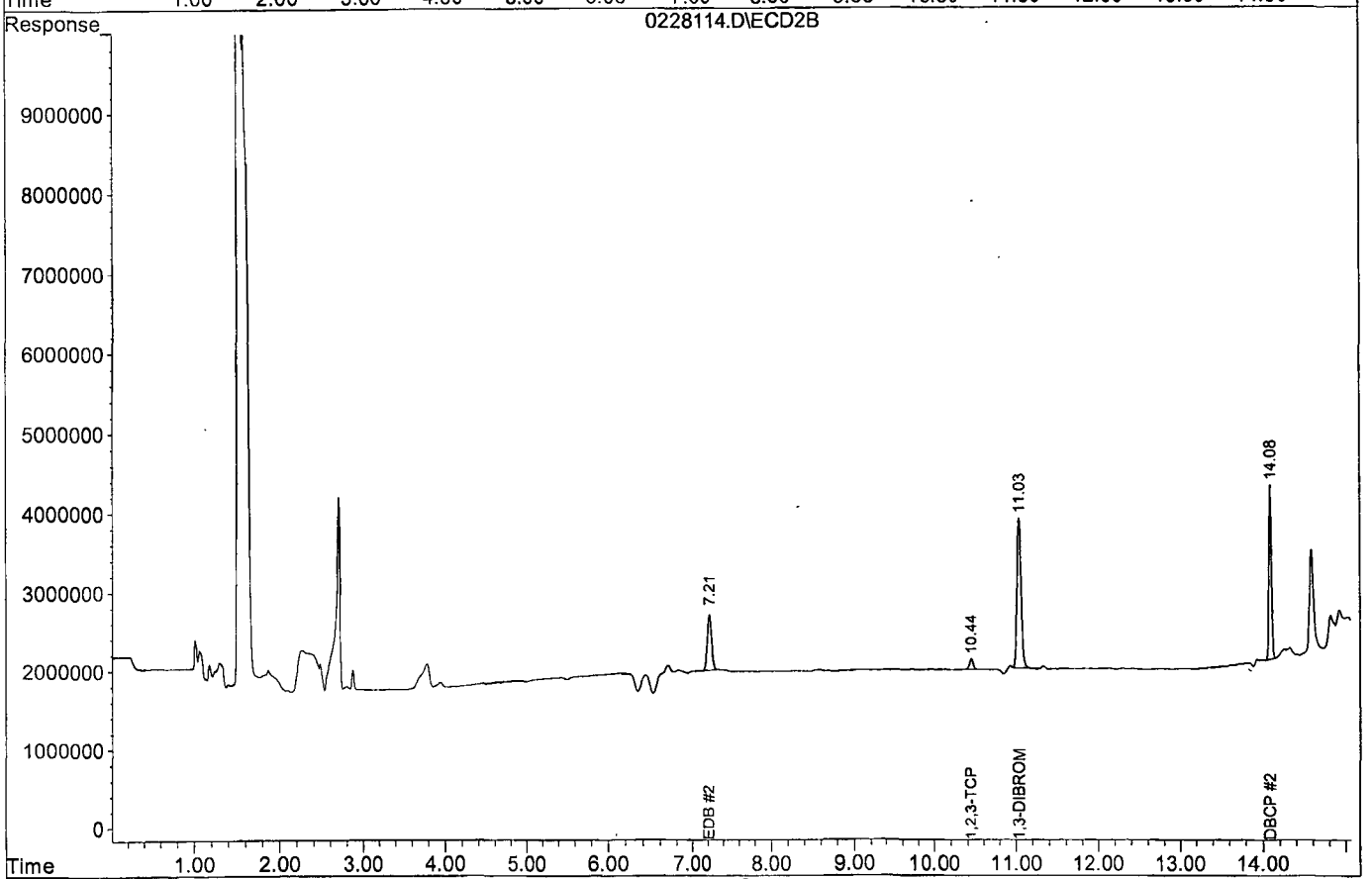
0228114.D 8010310A.M Wed Mar 11 15:56:00 2020

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\200228\0228114.D
Acq On : 03-09-20 20:31:04
Sample : 8011 SS 3/9/20
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010310A.M

Vial: 14
Operator: MA,SS
Inst : Herbie
Multiplr: 1.00





DBCP/EDB/1,2,3-TCP Analysis by
504 8011

Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 03/10/20
Instrument: Herbie
Initial Cal. Date: 03/09/20
Data File: 0228128.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	EDB	870512	888346	2.0	TM	
2	TML	1,2,3-TCP	207512	253736	22	TML	16
3	S	1,3-DIBROMOPROPANE(S)	977179	1028750	5.3	S	
4	TM	DBCP	2986370	3086770	3.4	TM	
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38							
39							
40							
		Average			8.2		

DBCP/EDB/1,2,3-TCP Analysis by
504 8011

Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 03/10/20
Instrument: Herbie
Cal. Date: 03/09/20
Data File: 0228128.D

		Compound	MEAN	CCRF	%D	%Drift	
41	TM	EDB	3871800	3941460	1.8	TM	
42	TM	1,2,3-TCP	646019	709316	9.8	TM	
43	S	1,3-DIBROMOPROPANE(S)	2808940	2914120	3.7	S	
44	TM	DBCP	11522600	11552300	0.26	TM	
45							
46							
47							
48							
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80							
		Average			3.9		

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\200228\0228128.D\ECD1A.CH Vial: 28
Acq On : 03-10-20 1:13:30 Operator: MA,SS
Sample : 8011 3 3/9/20 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile : rteint.p

Data File : G:\HERBIE\DATA\200228\0228128.D\ECD2B.CH Vial: 28
Acq On : 03-10-20 1:13:29 Operator: MA,SS
Sample : 8011 3 3/9/20 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile : rteint2.p
Quant Time: Mar 10 9:15 2020 Quant Results File: 8010310A.RES

Quant Method : G:\HERBIE\DATA\200228\8010310A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 10 09:12:32 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.01	11.03	514374	1457058	0.263	0.259
Spiked Amount	0.350			Recovery	=	75.14%	74.00%
	Target Compounds						
1) TM	EDB	5.78	7.21	444173	1970732	0.255	0.254
2) TM	1,2,3-TCP	9.24	10.44	126868	354658	0.291	0.274
4) TM	DBCP	13.34	14.08	1543384	5776146	0.258	0.251

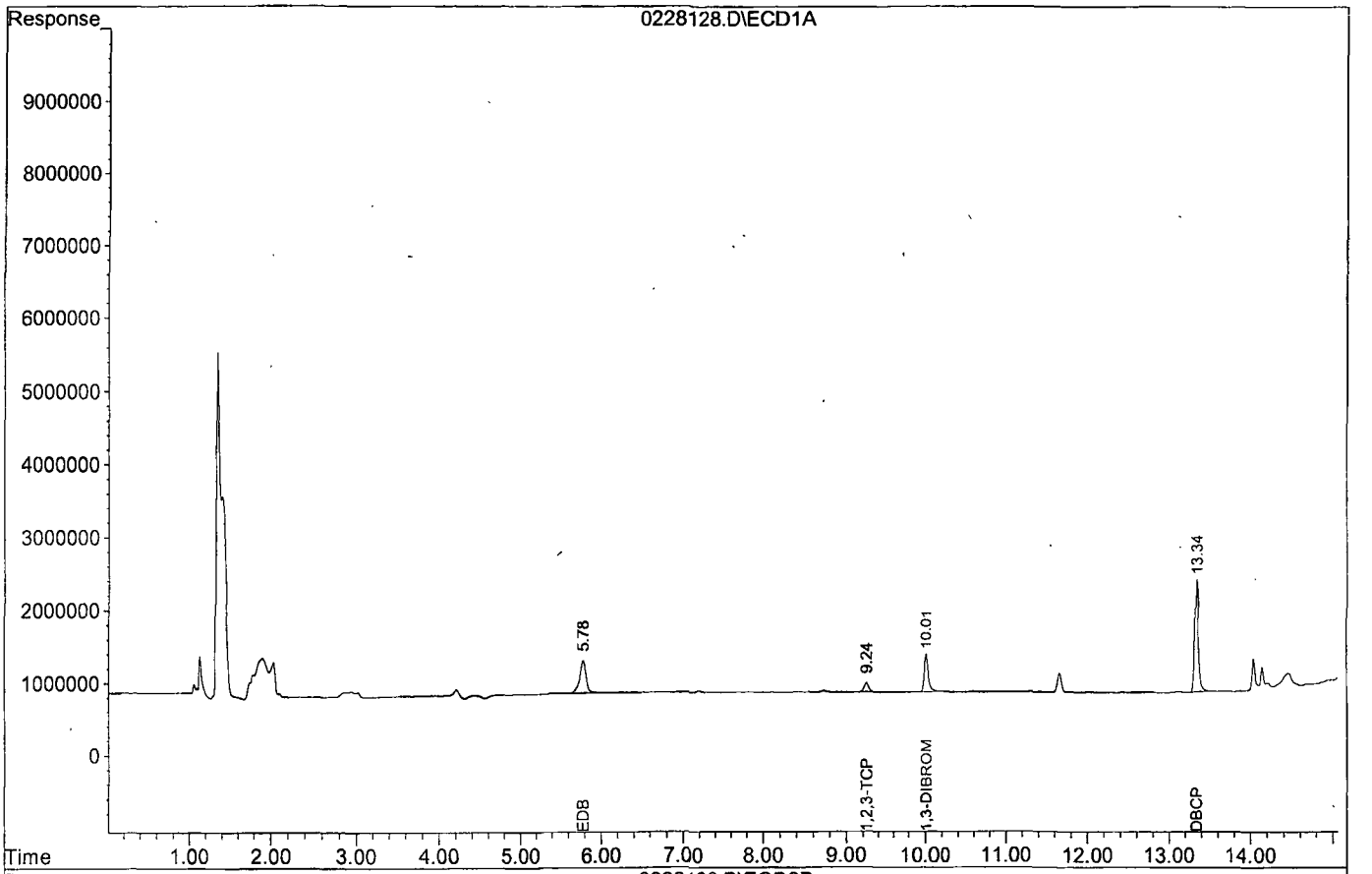
Target Compounds

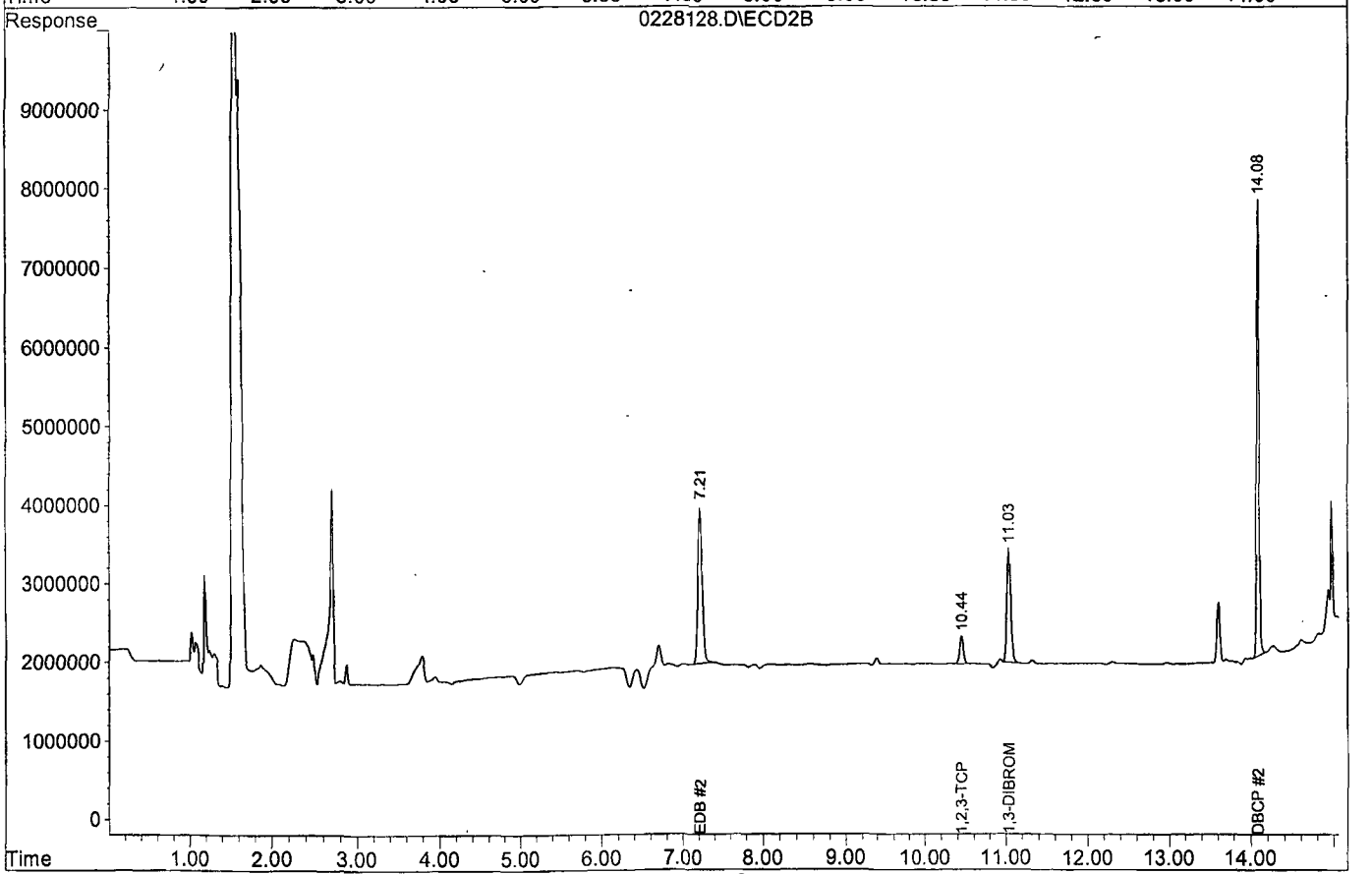
(f)=RT Delta > 1/2 Window (#)=Amounts di (m)=manual int.

0228128.D 8010310A.M Wed Mar 11 15:56:37 2020 Page 1

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\200228\0228128.D Vial: 28
Acq On : 03-10-20 1:13:30 Operator: MA,SS
Sample : 8011 3 3/9/20 Inst : Herbie
Misc : water Multiplr: 1.00
Quant Method : G:\HERBIE\DATA\200228\8010310A.M





ORGANICS
Raw Data

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228118.D\ECD1A.CH Vial: 18
Signal #2 : G:\HERBIE\DATA\200228\0228118.D\ECD2B.CH
Acq On : 03-09-20 21:52:01 Operator: MA,SS
Sample : BA07941W05 2/35.10 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 10 10:34 2020 Quant Results File: 8010310A.RES

Quant Method : G:\HERBIE\DATA\200228\8010310A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 10 09:12:32 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

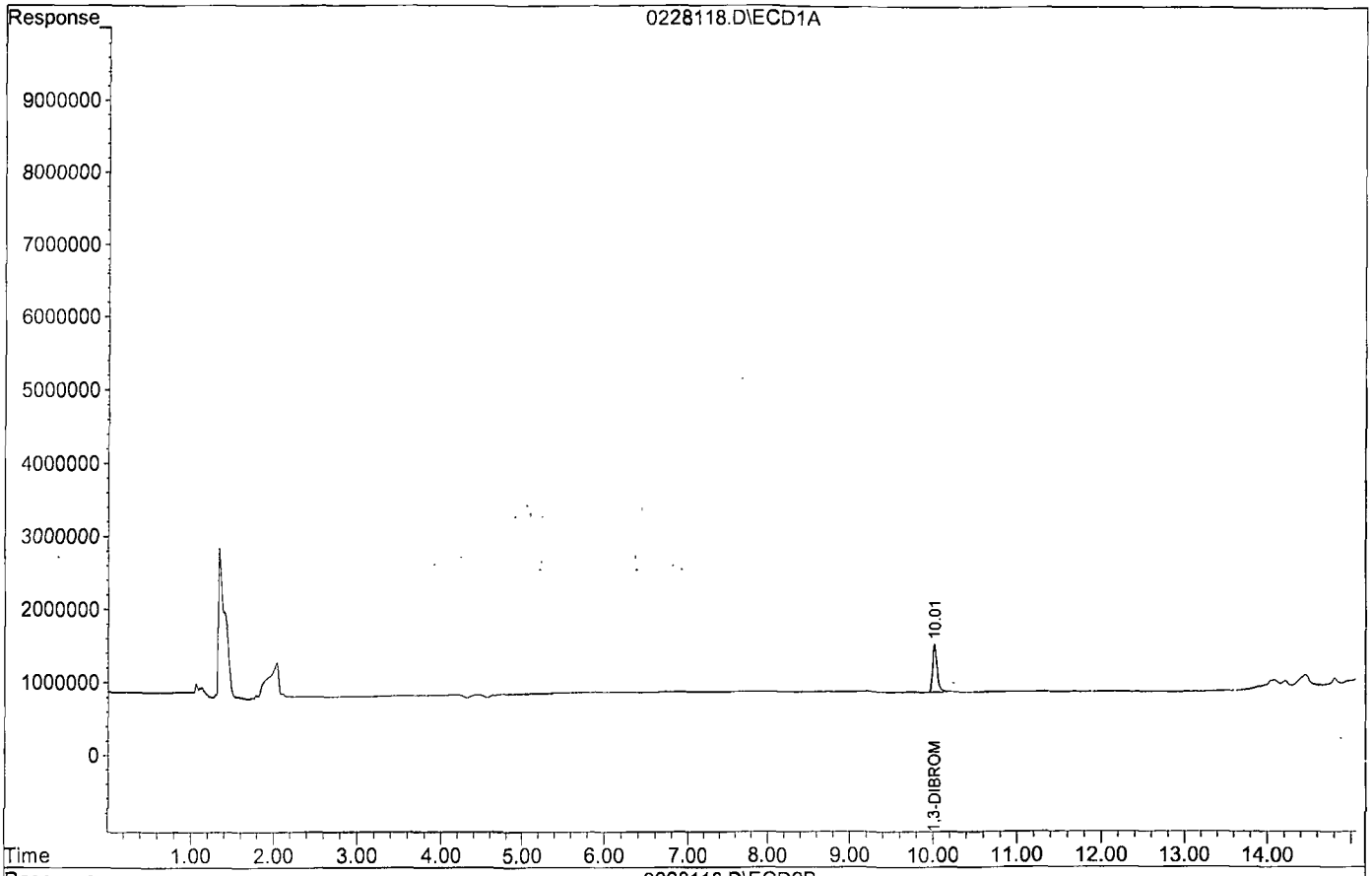
Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

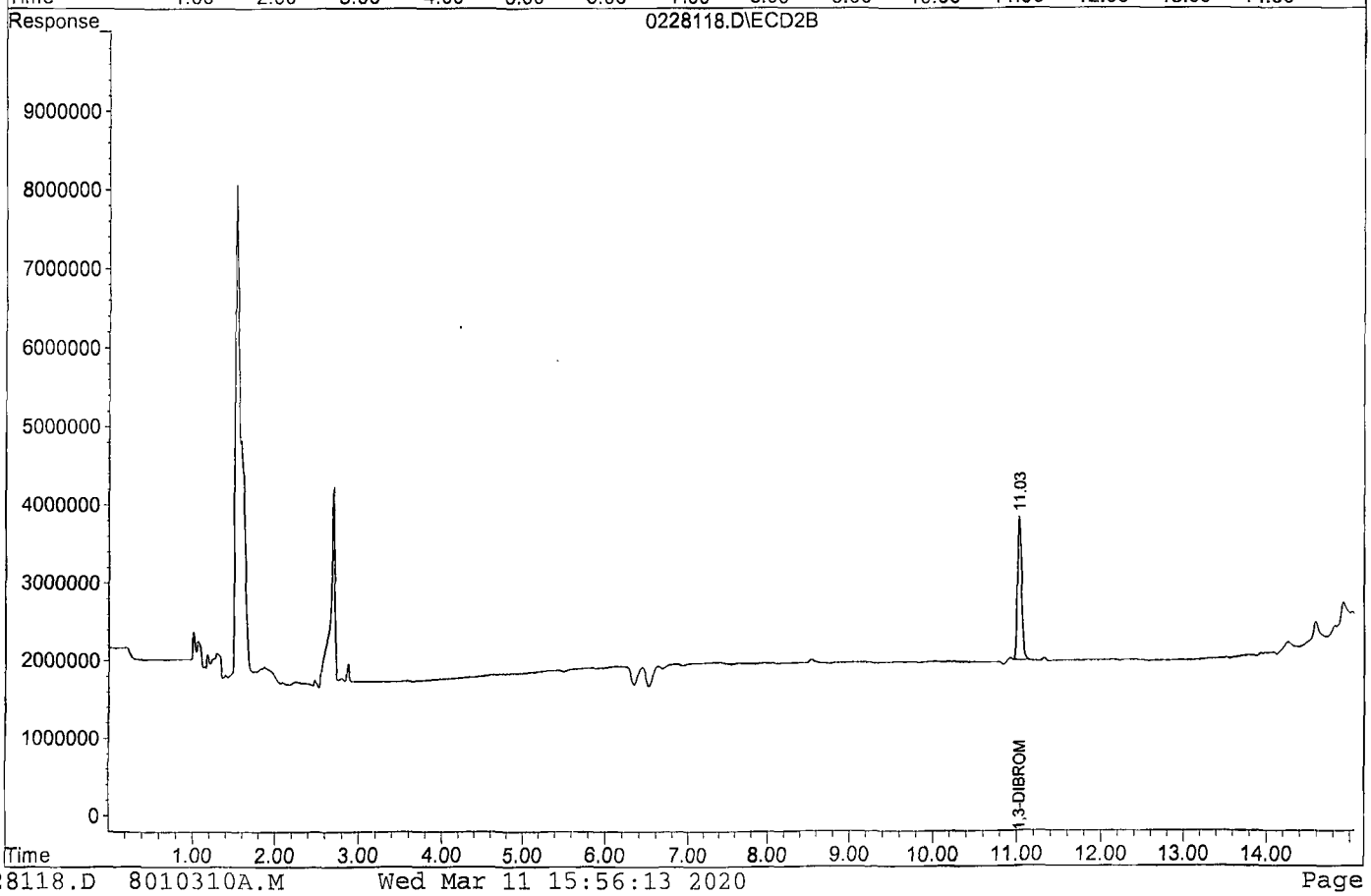
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.01	11.03	658687	1846681	0.336	0.328
Spiked Amount	0.349			Recovery	=	96.27%	93.98%
	Target Compounds						
	Target Compounds						
1) TM	EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM	DBCP	0.00	0.00	0	0	N.D. d	N.D. d

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : G:\HERBIE\DATA\200228\0228118.D
Acq On : 03-09-20 21:52:01
Sample : BA07941W05 2/35.10
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010310A.M

Vial: 18
Operator: MA,SS
Inst : Herbie
Multiplr: 1.00





Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228119.D\ECD1A.CH Vial: 19
Signal #2 : G:\HERBIE\DATA\200228\0228119.D\ECD2B.CH
Acq On : 03-09-20 22:12:17 Operator: MA,SS
Sample : BA07942W06 2/35.73 Inst : Herbie
Misc : water Multiplr: 0.98
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 10 10:34 2020 Quant Results File: 8010310A.RES

Quant Method : G:\HERBIE\DATA\200228\8010310A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 10 09:12:32 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

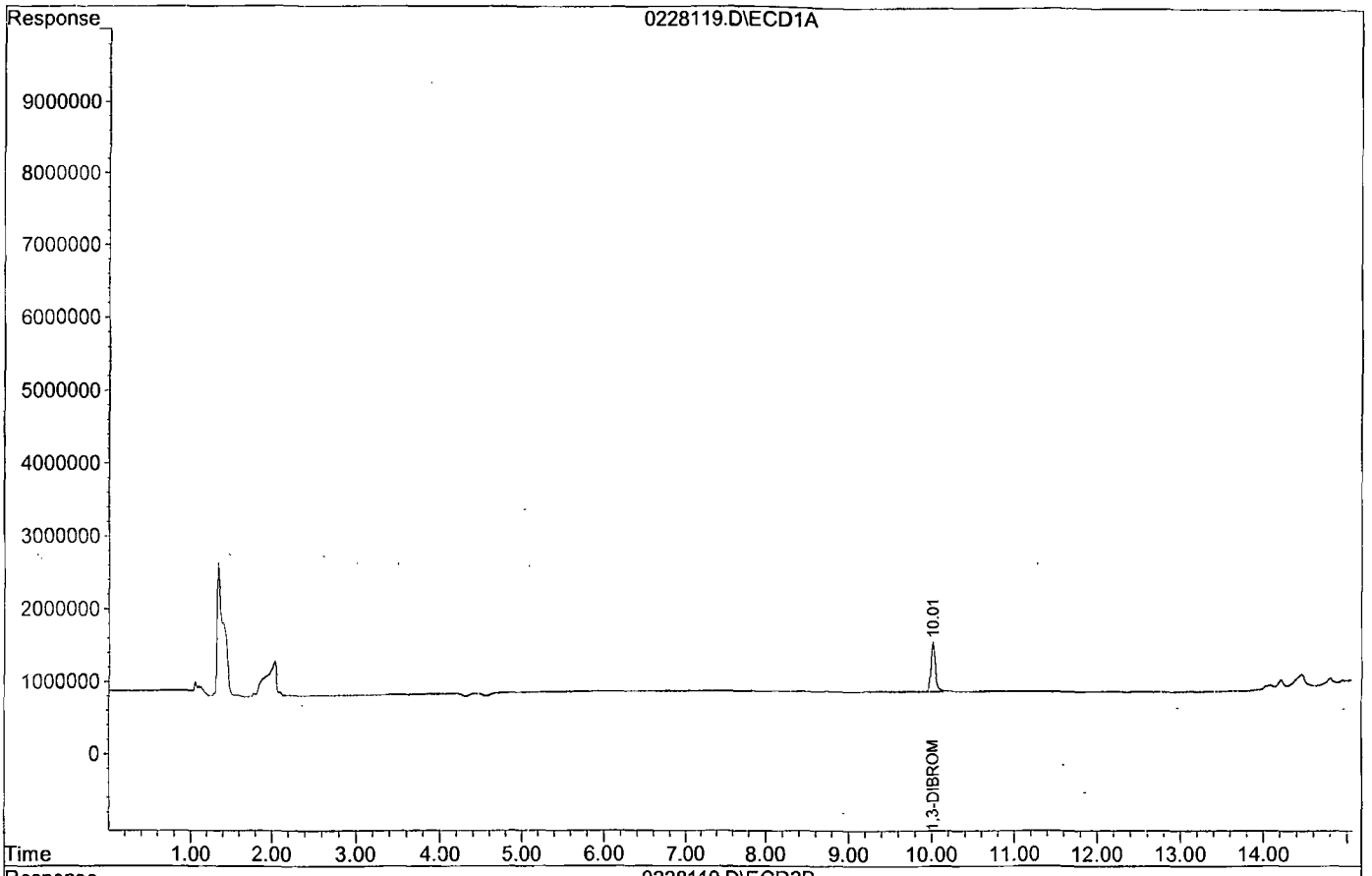
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.01	11.03	682526	1830564	0.342	0.319
Spiked Amount	0.343			Recovery	=	99.75%	93.04%
	Target Compounds						
	Target Compounds						
1) TM	EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM	DBCP	0.00	0.00	0	0	N.D. d	N.D. d

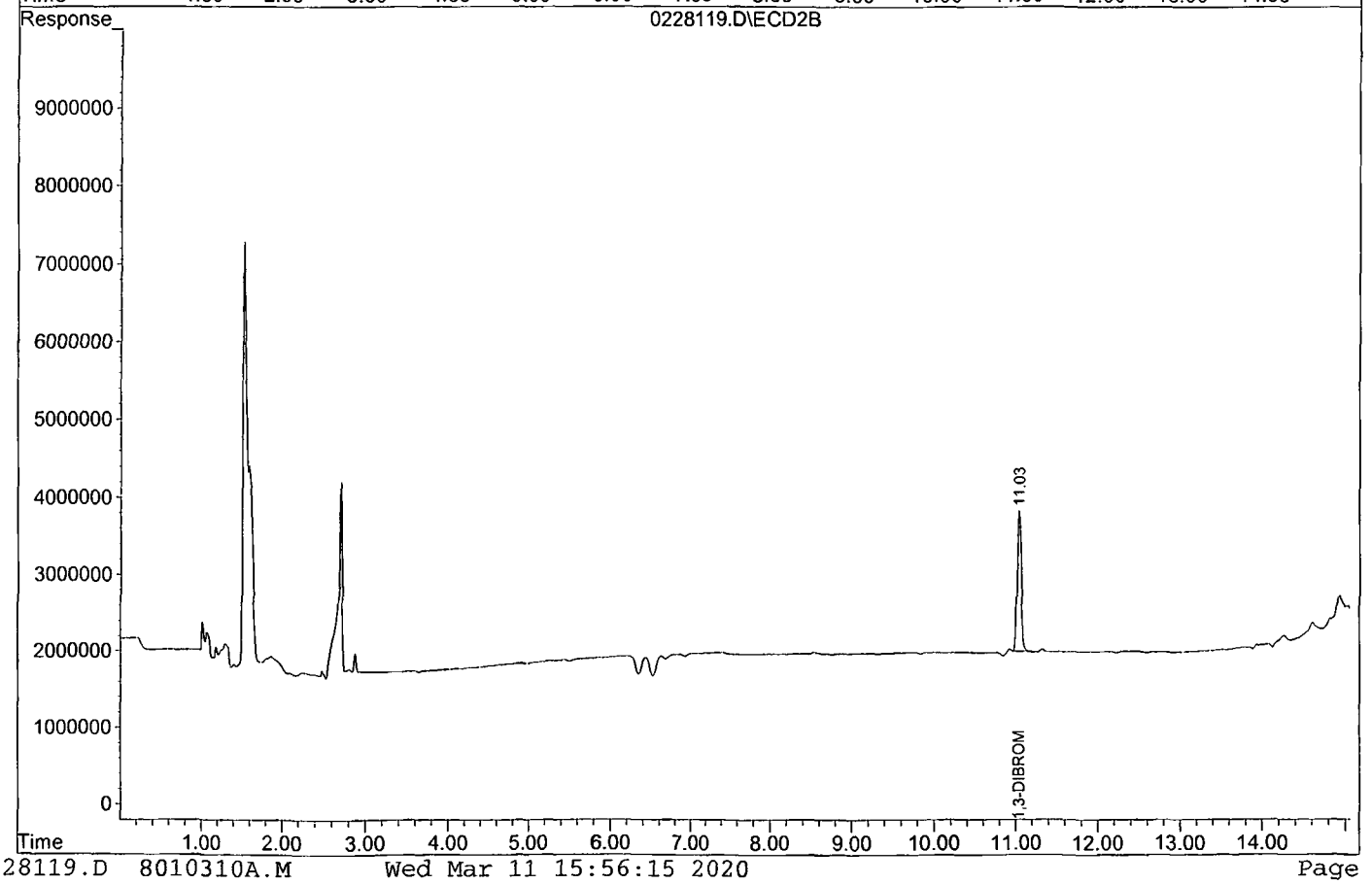
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\200228\0228119.D
Acq On : 03-09-20 22:12:17
Sample : BA07942W06 2/35.73
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010310A.M

Vial: 19
Operator: MA,SS
Inst : Herbie
Multiplr: 0.98





Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228120.D\ECD1A.CH Vial: 20
Signal #2 : G:\HERBIE\DATA\200228\0228120.D\ECD2B.CH
Acq On : 03-09-20 22:32:25 Operator: MA,SS
Sample : BA07943W06 2/35.60 Inst : Herbie
Misc : water Multiplr: 0.98
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 10 10:35 2020 Quant Results File: 8010310A.RES

Quant Method : G:\HERBIE\DATA\200228\8010310A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 10 09:12:32 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

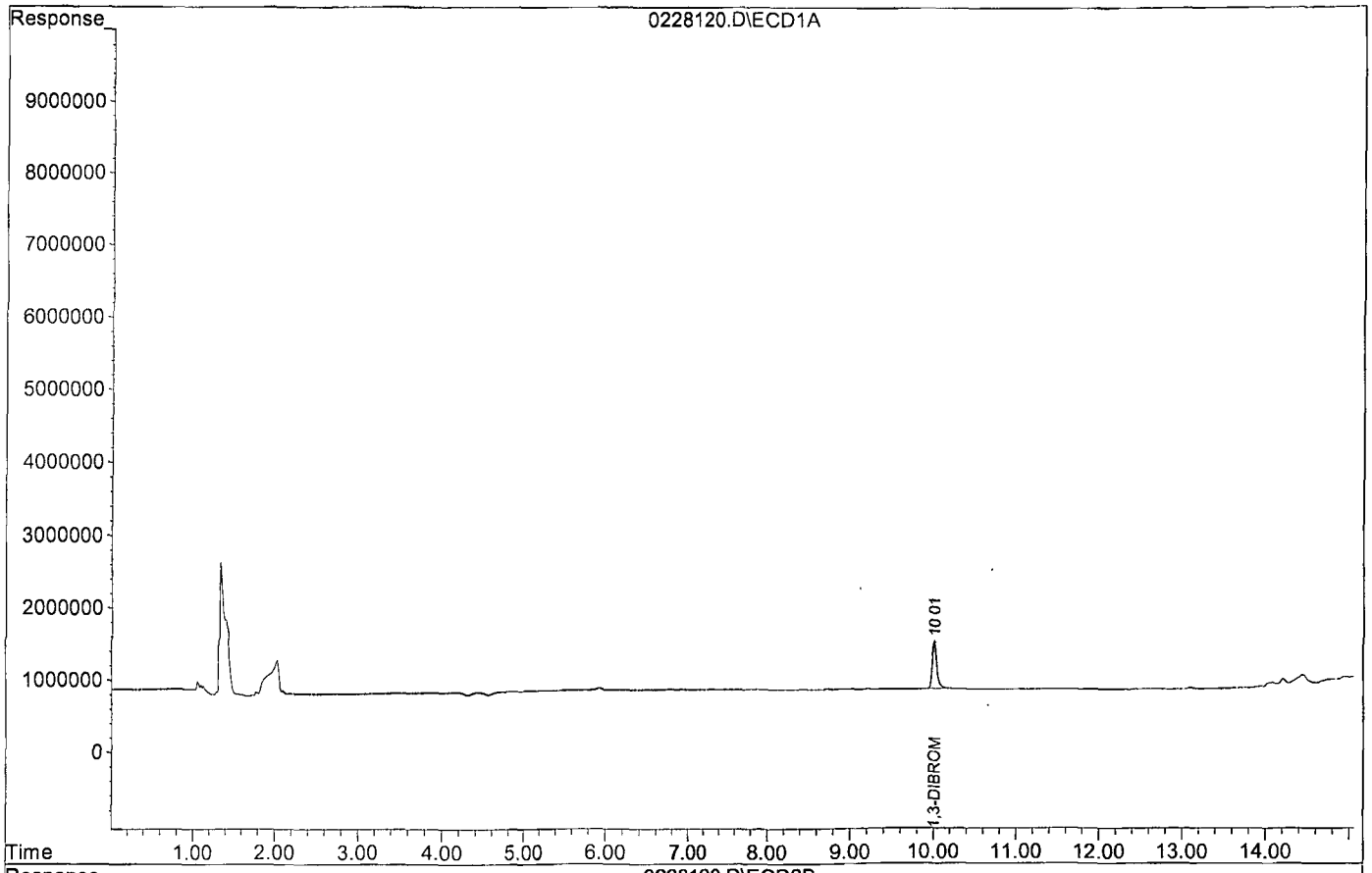
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.01	11.03	665195	1852863	0.335	0.324
Spiked Amount	0.344			Recovery	=	97.36%	94.16%
	Target Compounds						
	Target Compounds						
1) TM	EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM	DBCP	0.00	0.00	0	0	N.D. d	N.D. d

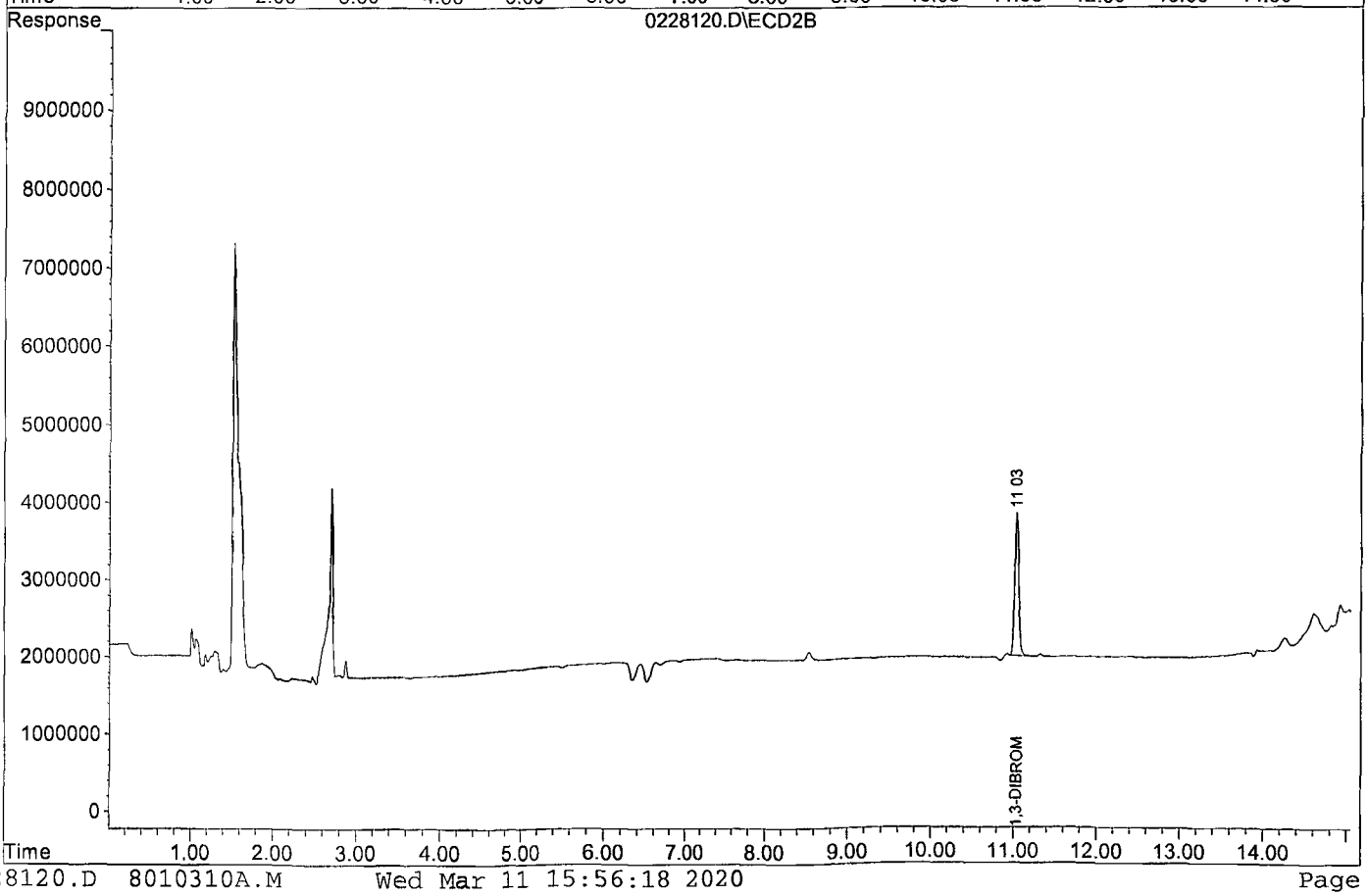
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\200228\0228120.D
Acq On : 03-09-20 22:32:25
Sample : BA07943W06 2/35.60
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010310A.M

Vial: 20
Operator: MA,SS
Inst : Herbie
Multiplr: 0.98





Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228121.D\ECD1A.CH Vial: 21
Signal #2 : G:\HERBIE\DATA\200228\0228121.D\ECD2B.CH
Acq On : 03-09-20 22:52:32 Operator: MA,SS
Sample : BA07944W05 2/35.52 Inst : Herbie
Misc : water Multiplr: 0.99
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 10 10:35 2020 Quant Results File: 8010310A.RES

Quant Method : G:\HERBIE\DATA\200228\8010310A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 10 09:12:32 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

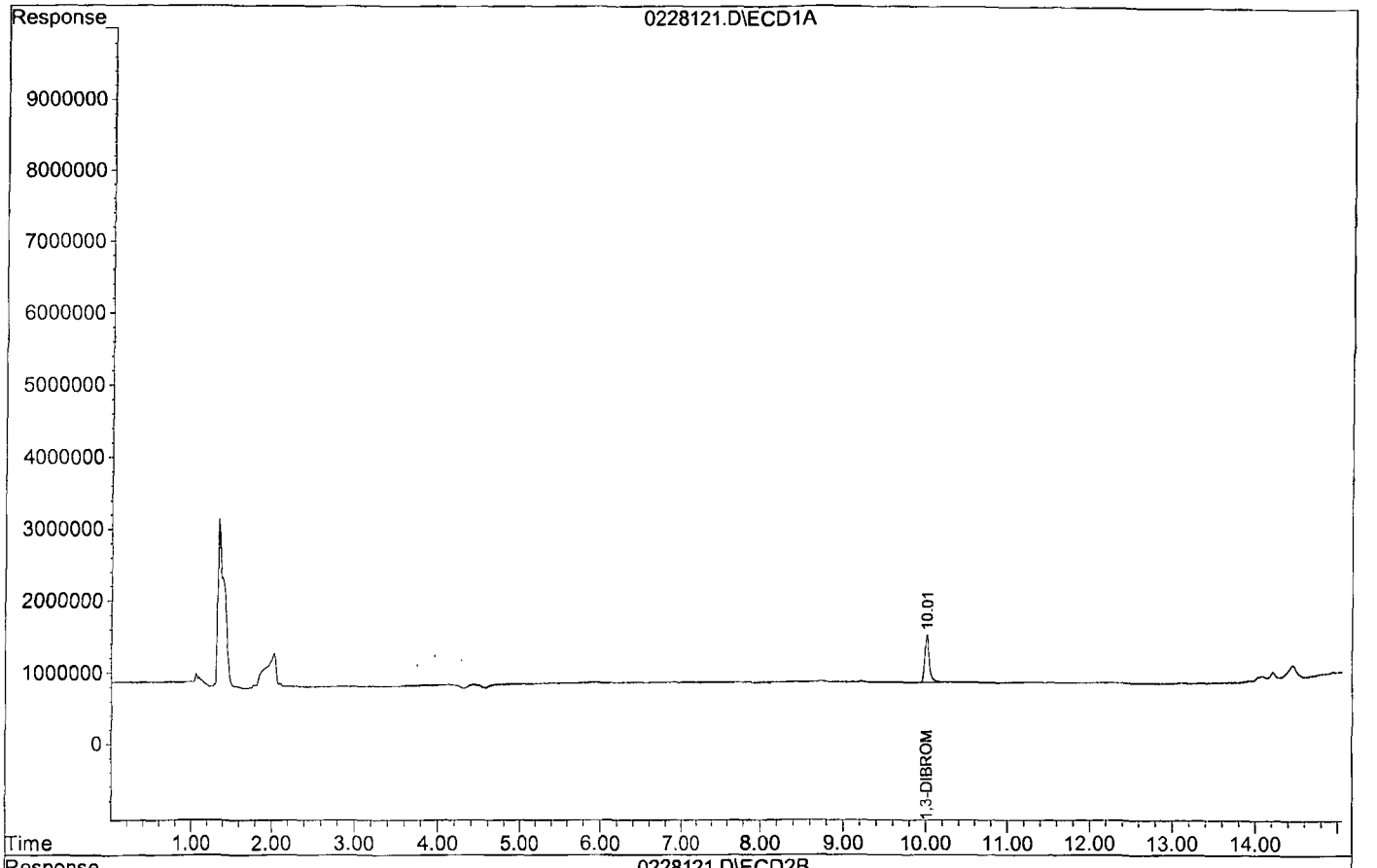
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.01	11.03	659644	1907522	0.333	0.335
	Spiked Amount 0.345			Recovery =		96.56%	97.14%
	Target Compounds						
	Target Compounds						
1) TM	EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM	DBCP	0.00	0.00	0	0	N.D. d	N.D. d

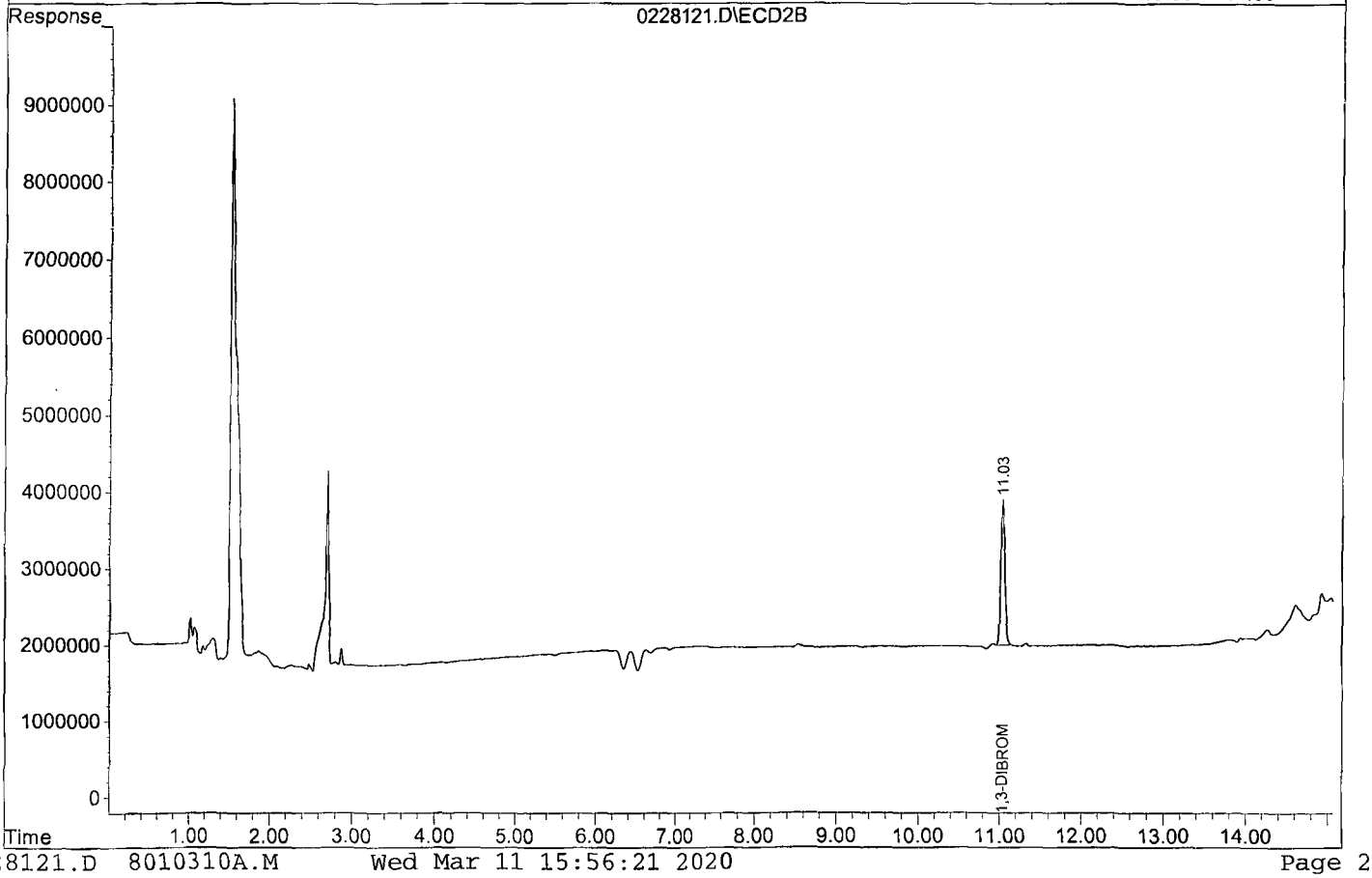
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\200228\0228121.D
Acq On : 03-09-20 22:52:32
Sample : BA07944W05 2/35.52
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010310A.M

Vial: 21
Operator: MA,SS
Inst : Herbie
Multiplr: 0.99





Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228122.D\ECD1A.CH Vial: 22
Signal #2 : G:\HERBIE\DATA\200228\0228122.D\ECD2B.CH
Acq On : 03-09-20 23:12:46 Operator: MA,SS
Sample : BA07945W05 2/35.71 Inst : Herbie
Misc : water Multiplr: 0.98
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 10 10:36 2020 Quant Results File: 8010310A.RES

Quant Method : G:\HERBIE\DATA\200228\8010310A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 10 09:12:32 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

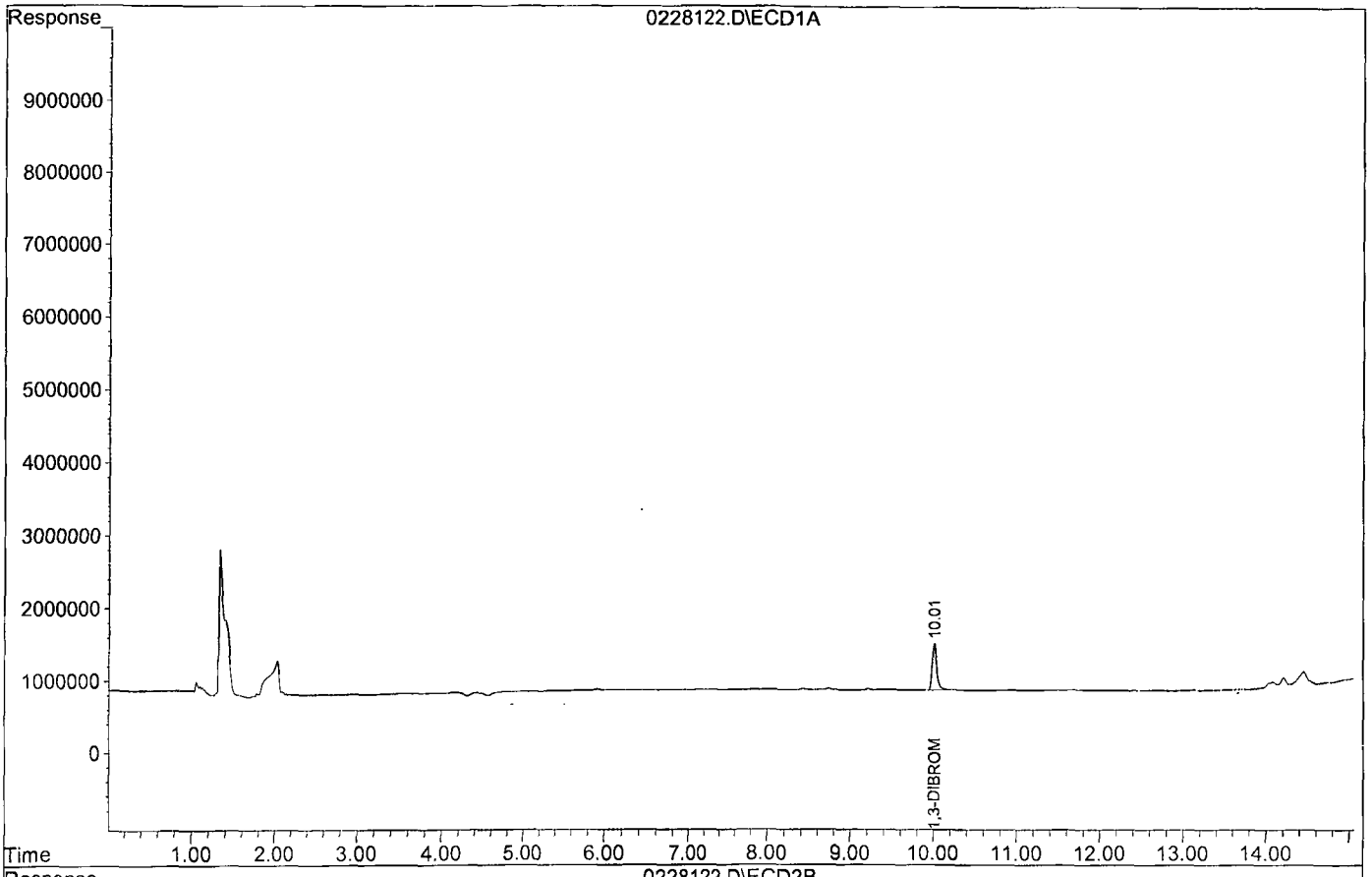
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.01	11.03	648309	1779848	0.325	0.311
Spiked Amount	0.343			Recovery	=	94.74%	90.66%
	Target Compounds						
	Target Compounds						
1) TM	EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM	DBCP	0.00	0.00	0	0	N.D. d	N.D. d

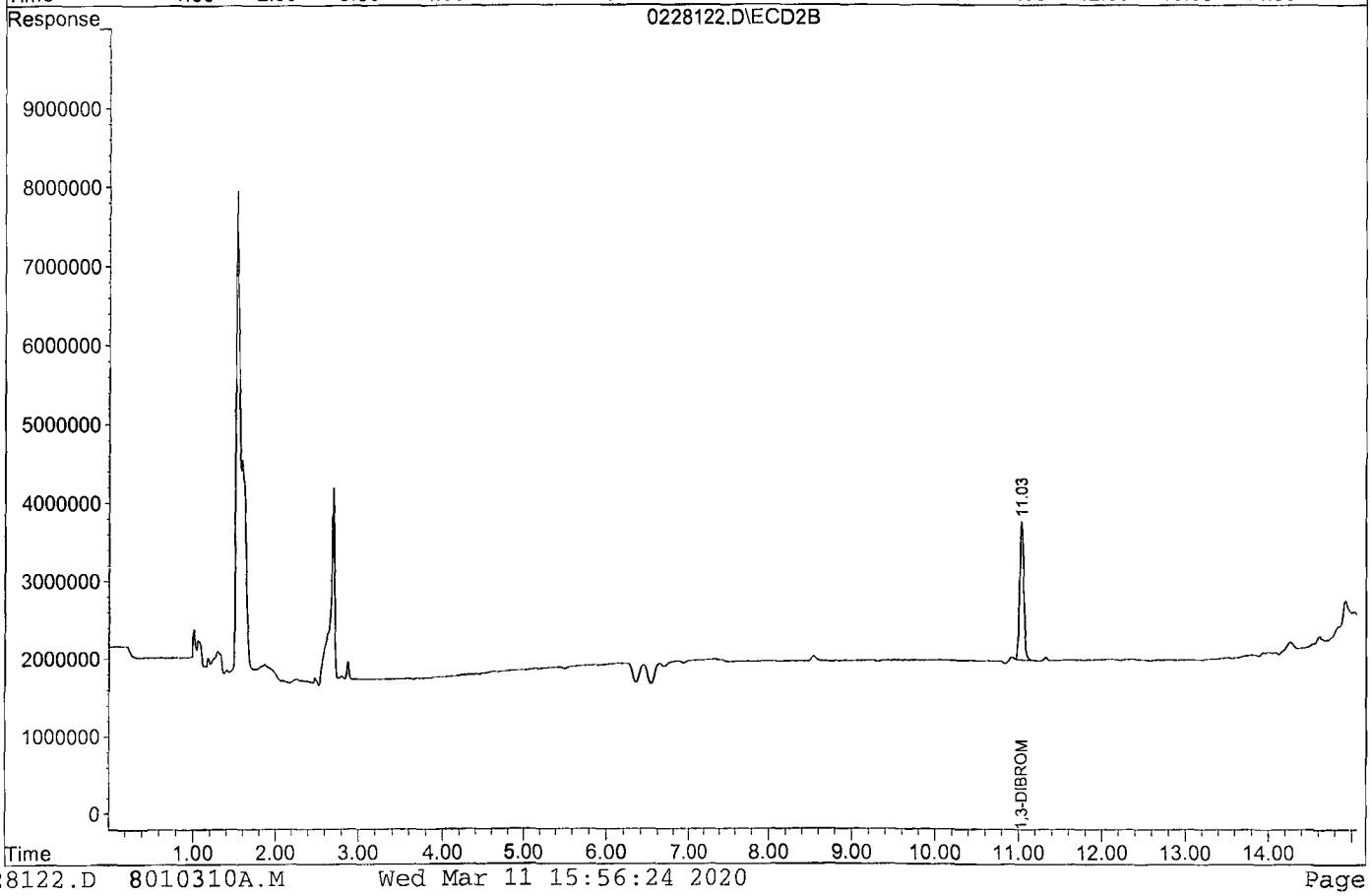
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\200228\0228122.D
Acq On : 03-09-20 23:12:46
Sample : BA07945W05 2/35.71
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010310A.M

Vial: 22
Operator: MA,SS
Inst : Herbie
Multiplr: 0.98





Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228123.D\ECD1A.CH Vial: 23
Signal #2 : G:\HERBIE\DATA\200228\0228123.D\ECD2B.CH
Acq On : 03-09-20 23:32:51 Operator: MA,SS
Sample : BA07946W05 2/35.41 Inst : Herbie
Misc : water Multiplr: 0.99
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 10 10:36 2020 Quant Results File: 8010310A.RES

Quant Method : G:\HERBIE\DATA\200228\8010310A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 10 09:12:32 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

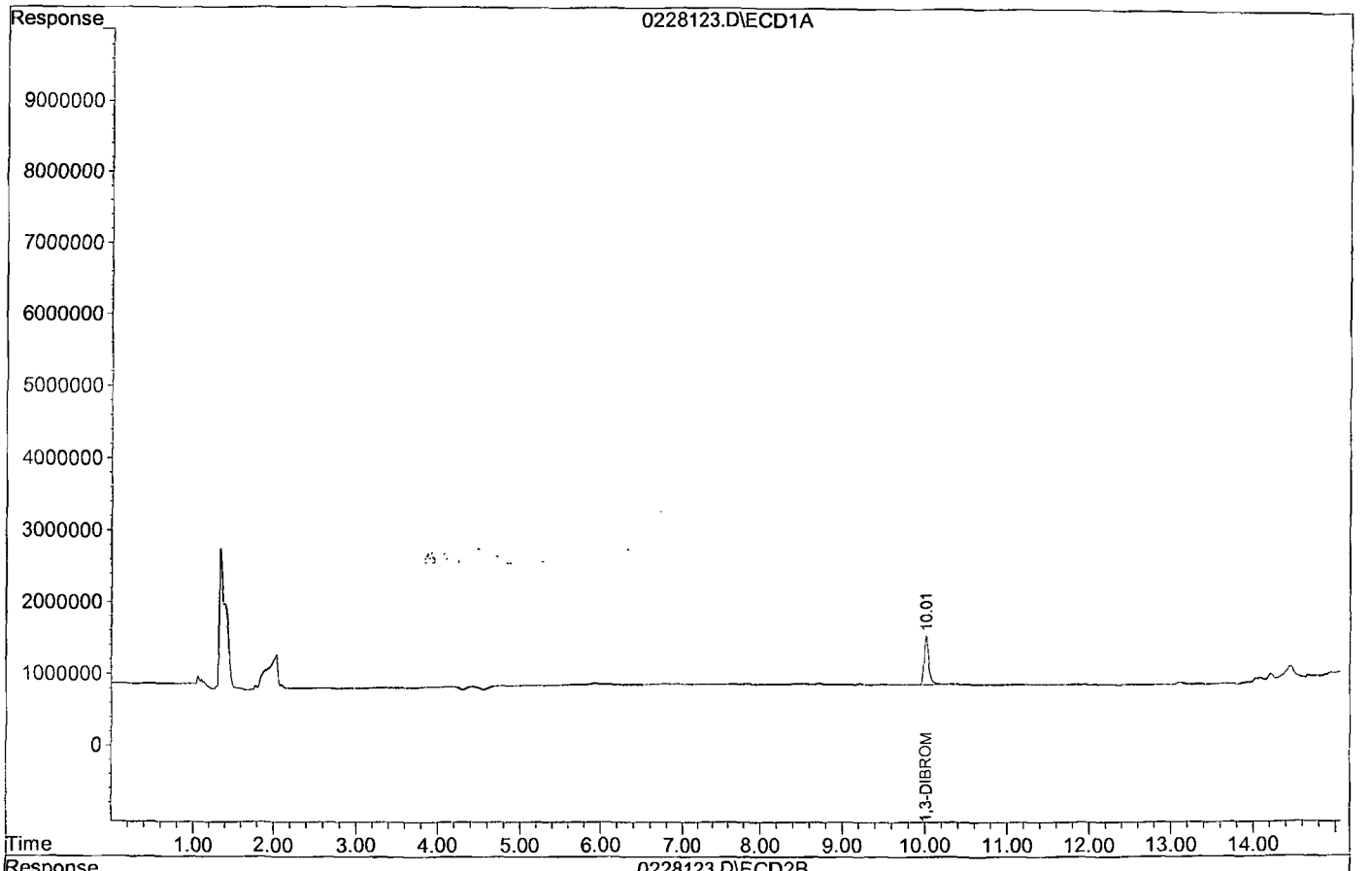
Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

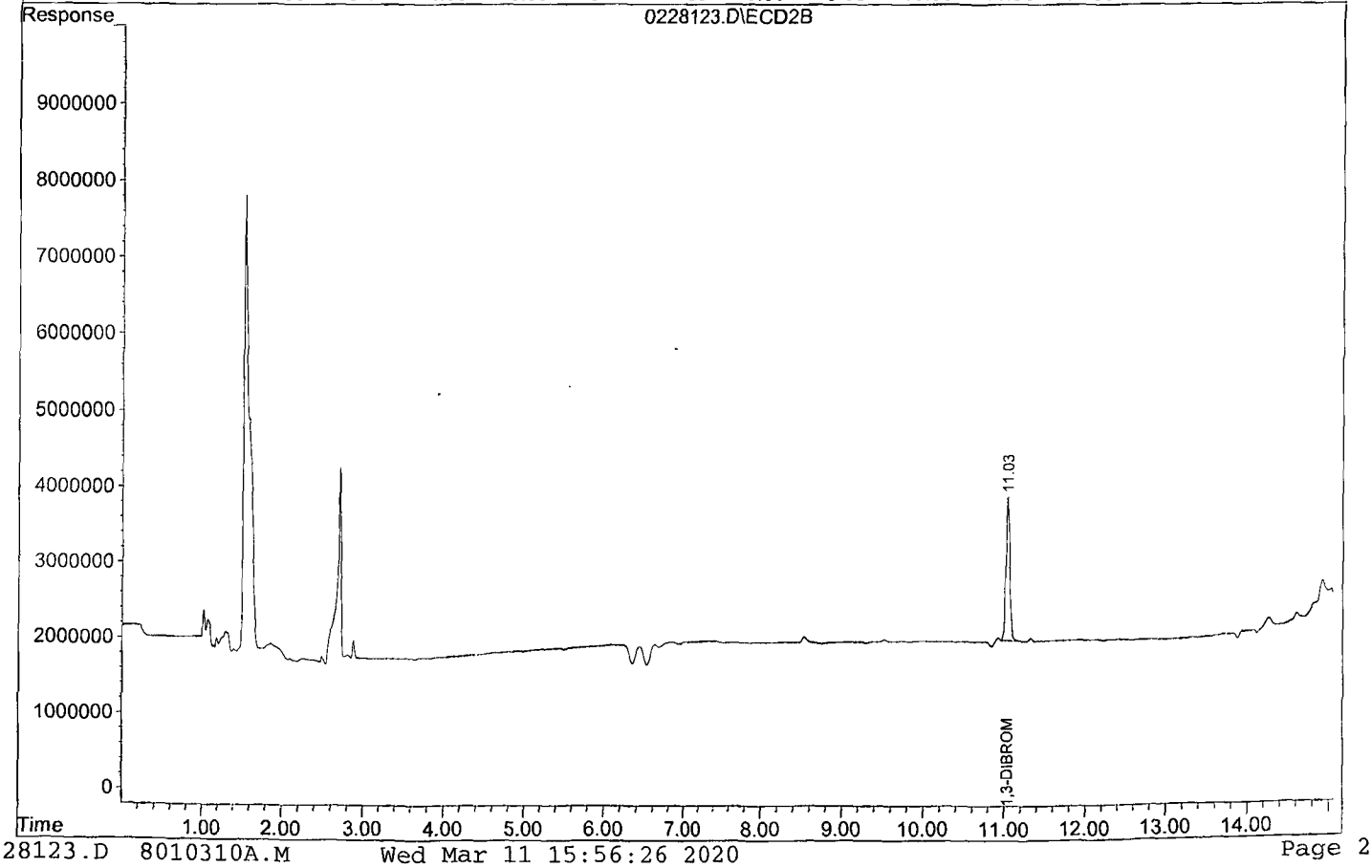
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.01	11.03	682844	1894846	0.345	0.333
Spiked Amount	0.346			Recovery	=	99.73%	96.26%
	Target Compounds						
	Target Compounds						
1) TM	EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM	DBCP	0.00	0.00	0	0	N.D. d	N.D. d

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : G:\HERBIE\DATA\200228\0228123.D
Acq On : 03-09-20 23:32:51
Sample : BA07946W05 2/35.41
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010310A.M

Vial: 23
Operator: MA,SS
Inst : Herbie
Multiplr: 0.99





Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228124.D\ECD1A.CH Vial: 24
Signal #2 : G:\HERBIE\DATA\200228\0228124.D\ECD2B.CH
Acq On : 03-09-20 23:52:56 Operator: MA,SS
Sample : BA07947W07 2/35.44 Inst : Herbie
Misc : water Multiplr: 0.99
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 10 10:37 2020 Quant Results File: 8010310A.RES

Quant Method : G:\HERBIE\DATA\200228\8010310A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 10 09:12:32 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

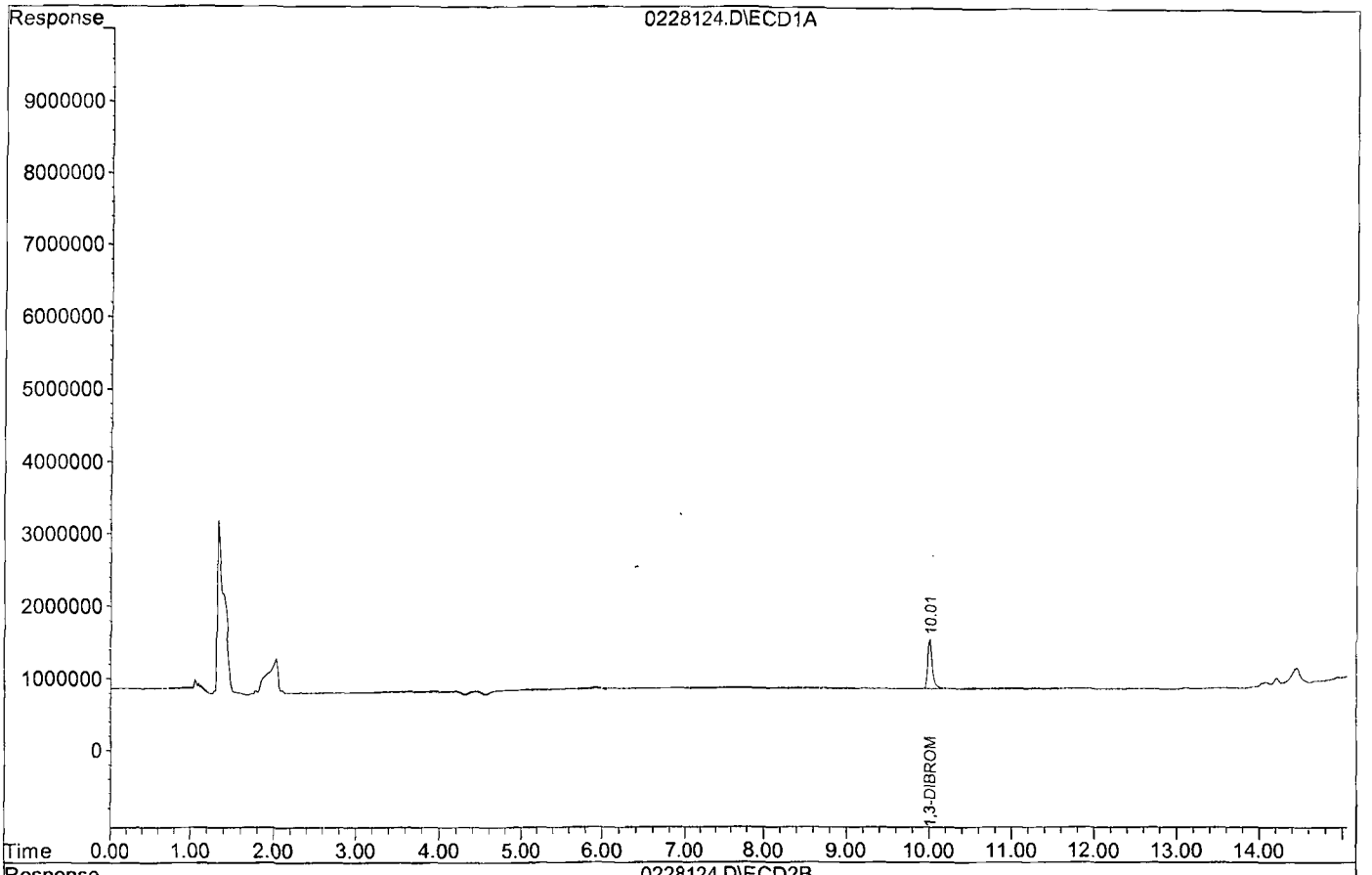
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.01	11.03	680413	1923097	0.344	0.338
Spiked Amount	0.346			Recovery	=	99.52%	97.79%
	Target Compounds						
	Target Compounds						
1) TM	EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM	DBCP	0.00	0.00	0	0	N.D. d	N.D. d

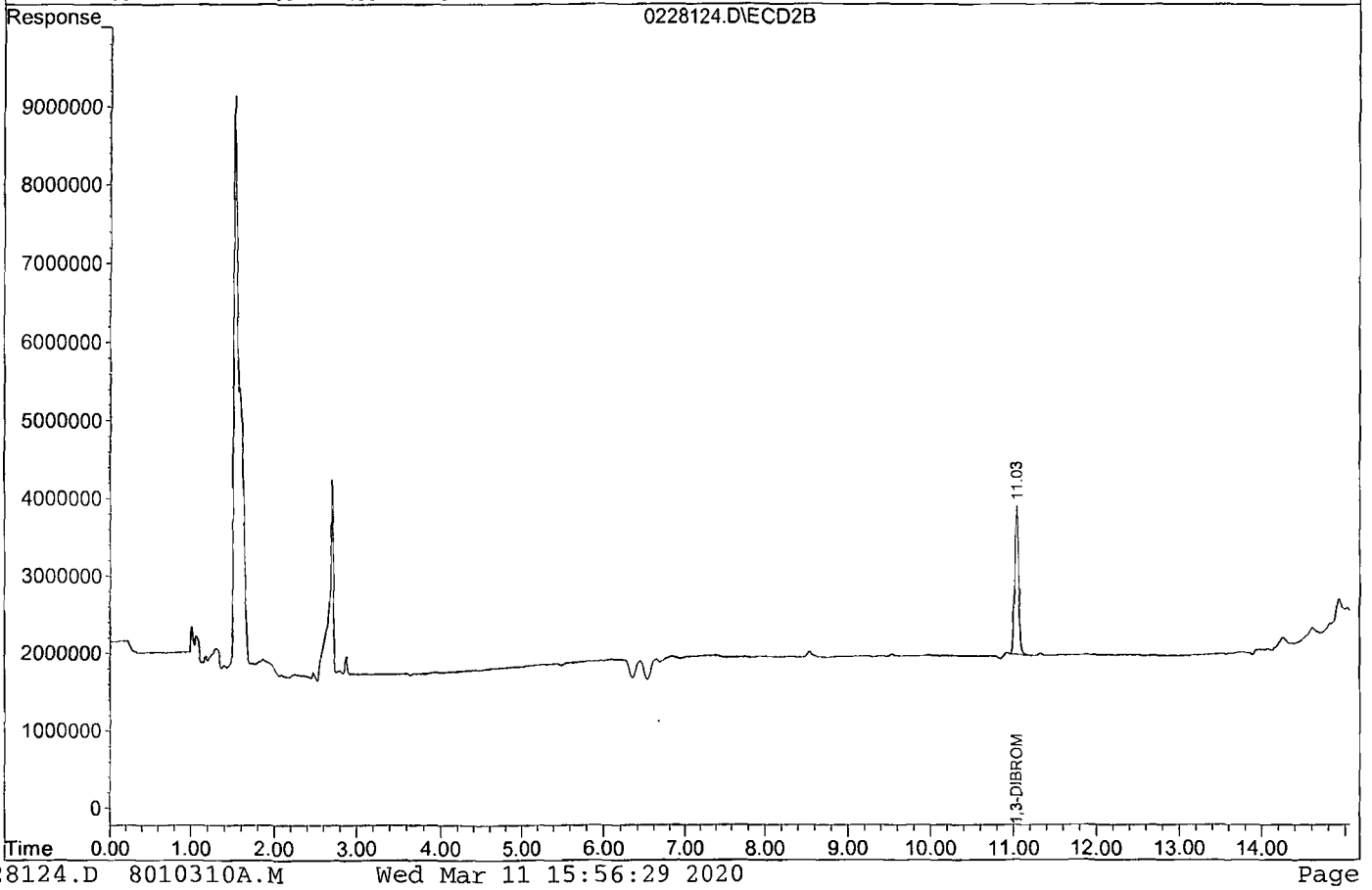
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\200228\0228124.D
Acq On : 03-09-20 23:52:56
Sample : BA07947W07 2/35.44
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010310A.M

Vial: 24
Operator: MA,SS
Inst : Herbie
Multiplr: 0.99





Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228115.D\ECD1A.CH Vial: 15
Signal #2 : G:\HERBIE\DATA\200228\0228115.D\ECD2B.CH
Acq On : 03-09-20 20:51:19 Operator: MA,SS
Sample : 200309A BLK 2/35.02 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 10 10:33 2020 Quant Results File: 8010310A.RES

Quant Method : G:\HERBIE\DATA\200228\8010310A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 10 09:12:32 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

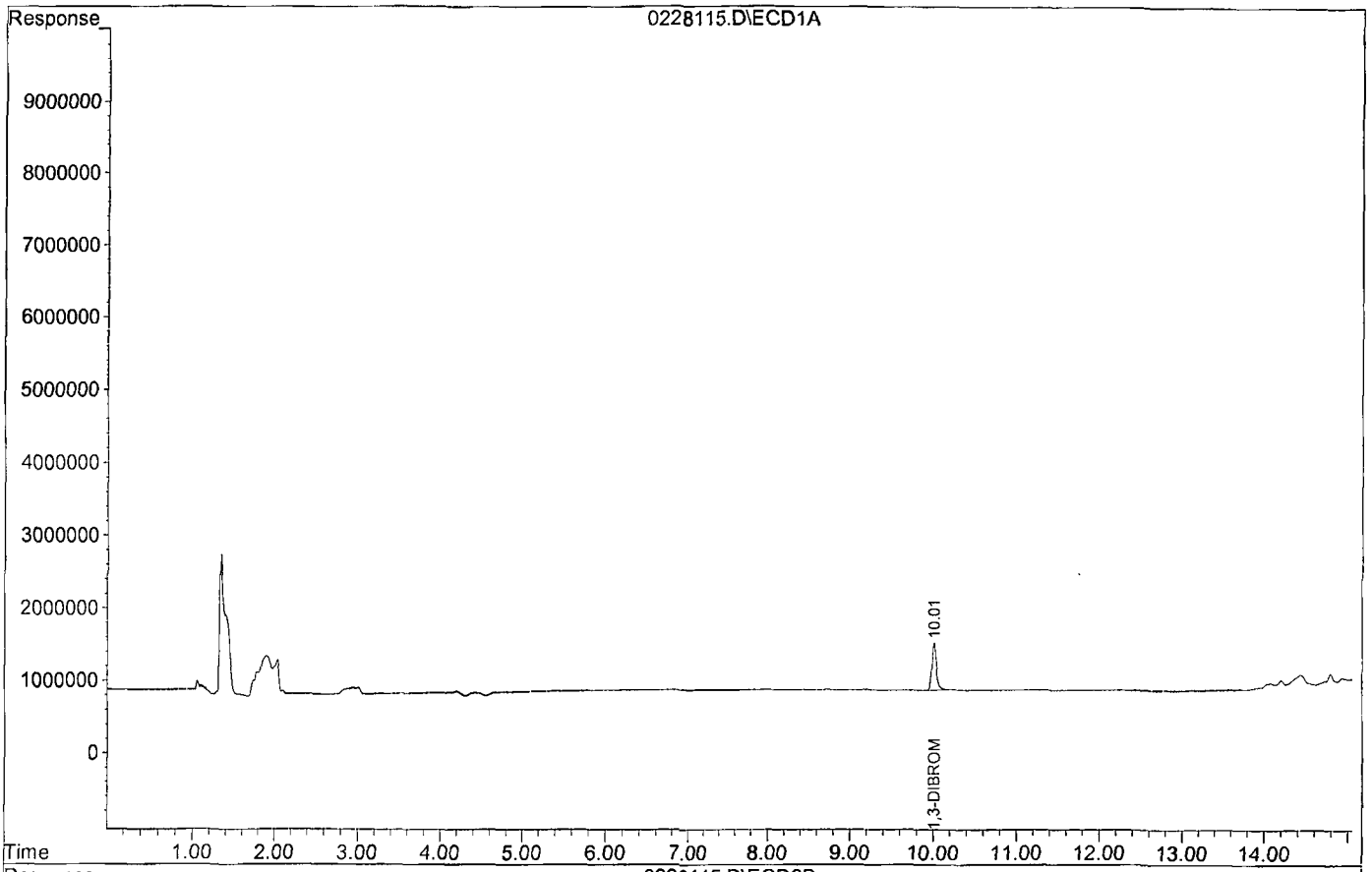
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.01	11.03	649596	1823252	0.332	0.324
Spiked Amount	0.350			Recovery	=	94.91%	92.62%
	Target Compounds						
	Target Compounds						
1) TM	EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM	DBCP	0.00	0.00	0	0	N.D. d	N.D. d

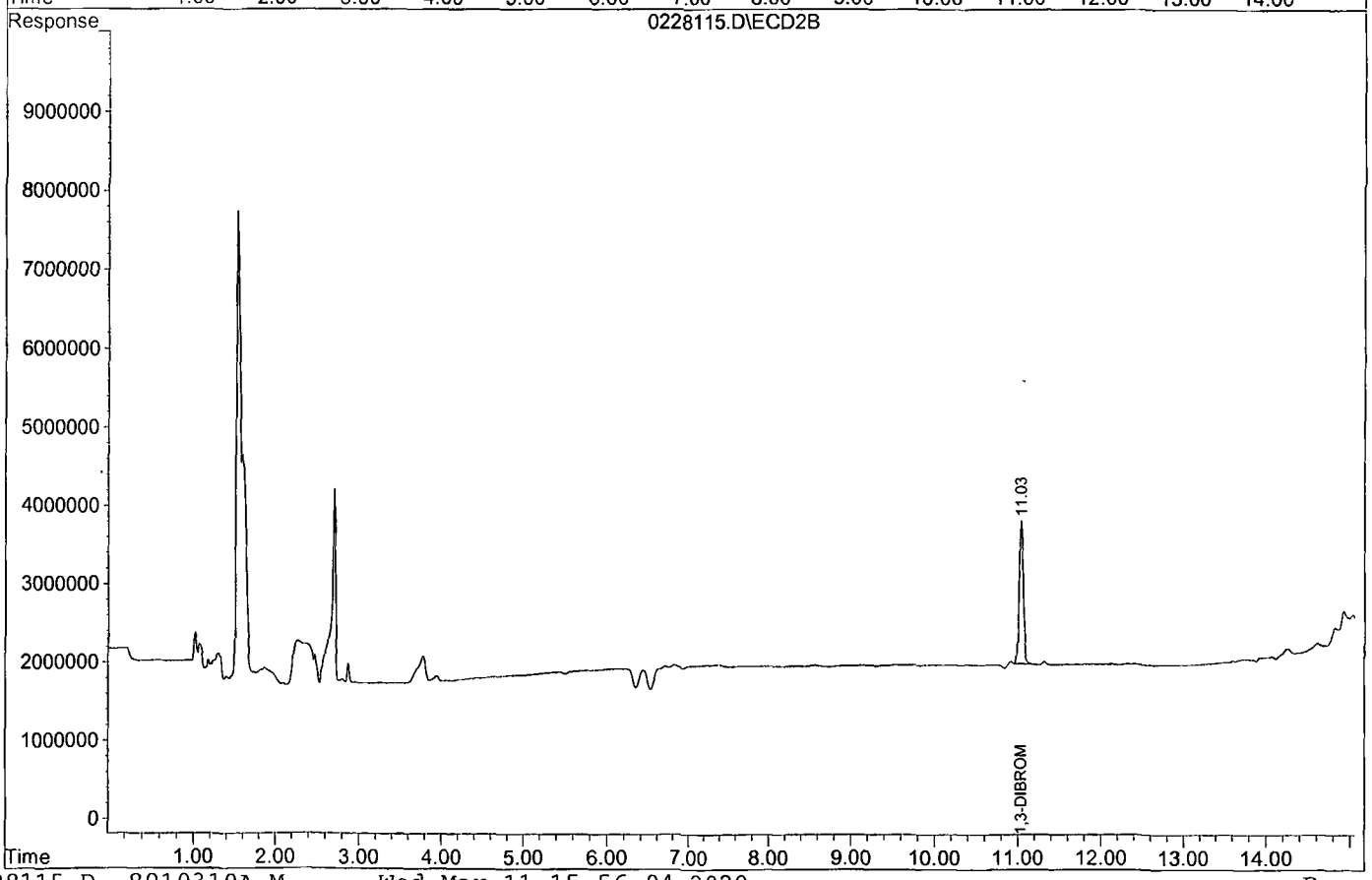
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\200228\0228115.D
Acq On : 03-09-20 20:51:19
Sample : 200309A BLK 2/35.02
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010310A.M

Vial: 15
Operator: MA,SS
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228116.D\ECD1A.CH Vial: 16
Signal #2 : G:\HERBIE\DATA\200228\0228116.D\ECD2B.CH
Acq On : 03-09-20 21:11:40 Operator: MA,SS
Sample : 200309A LCS-1 2/35.12 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 10 10:27 2020 Quant Results File: 8010310A.RES

Quant Method : G:\HERBIE\DATA\200228\8010310A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 10 09:12:32 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

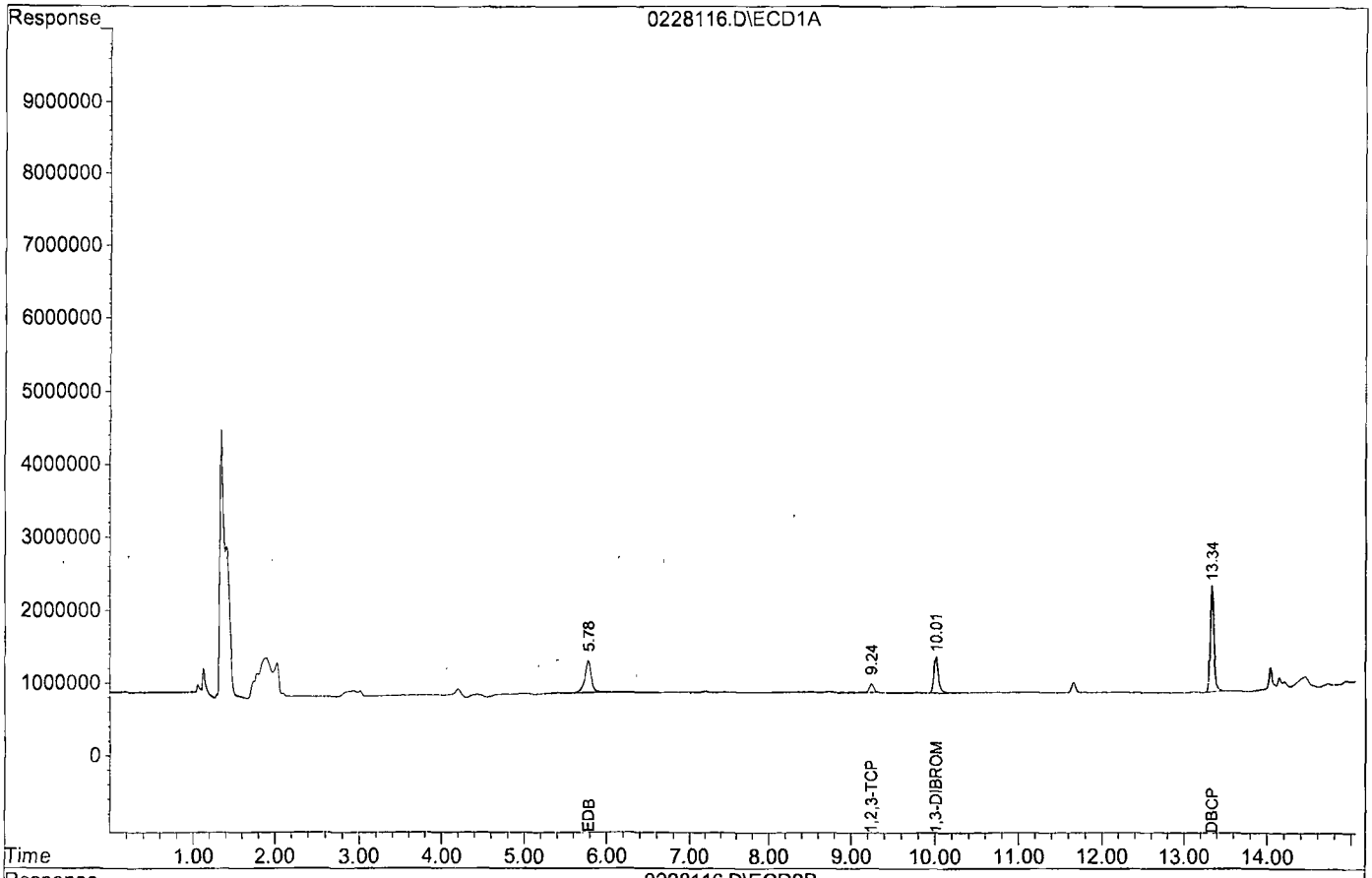
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.01	11.03	495253	1407147	0.253	0.250
Spiked Amount	0.349			Recovery	=	72.53%	71.67%
	Target Compounds						
1) TM	EDB	5.78	7.21	436200	1893237	0.250	0.244
2) TM	1,2,3-TCP	9.24	10.44	118323	338573	0.268	0.261
4) TM	DBCP	13.34	14.08	1461118	5538792	0.244	0.240

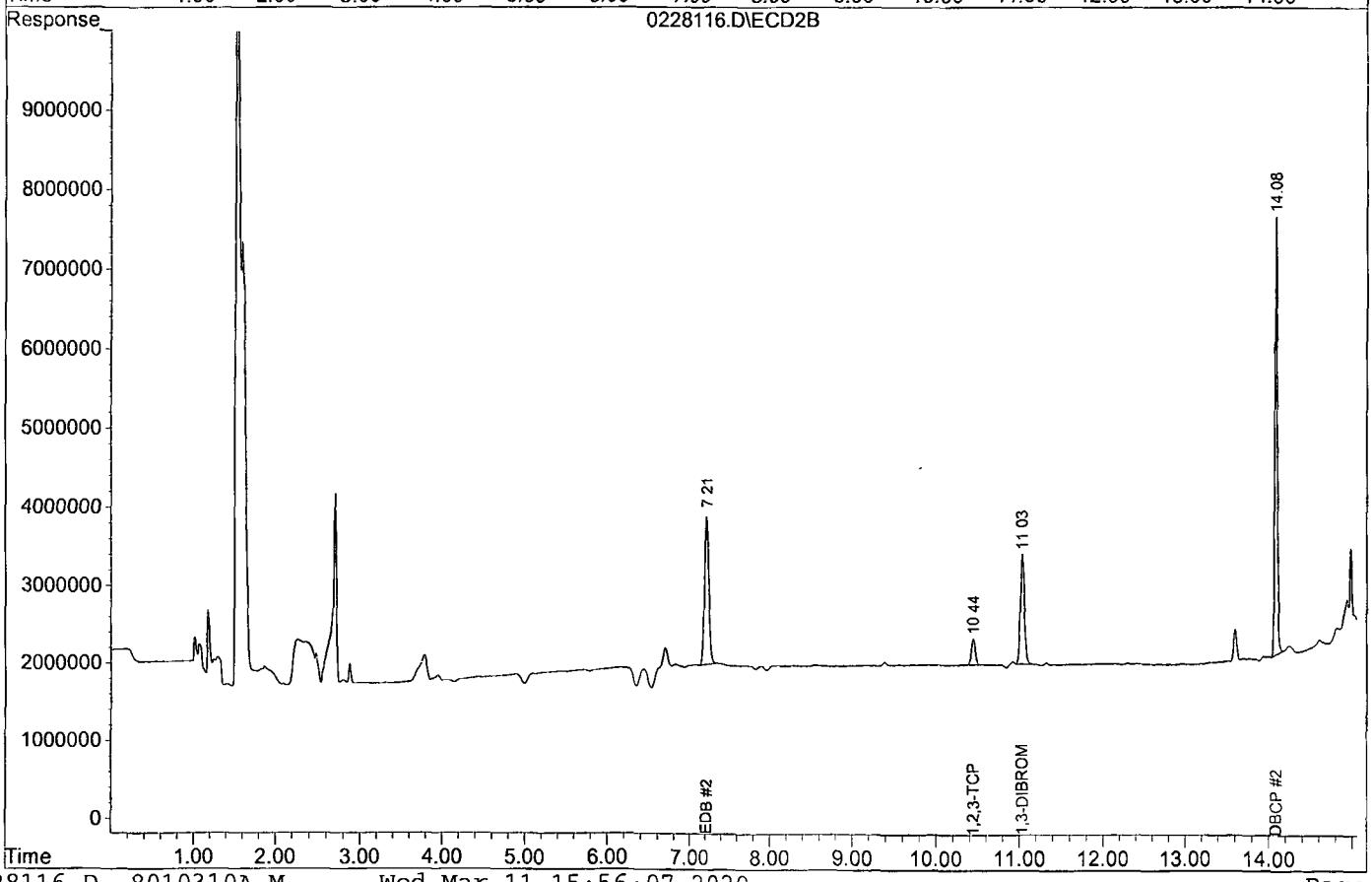
Target Compounds

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\200228\0228116.D Vial: 16
Acq On : 03-09-20 21:11:40 Operator: MA,SS
Sample : 200309A LCS-1 2/35.12 Inst : Herbie
Misc : water Multiplr: 1.00
Quant Method : G:\HERBIE\DATA\200228\8010310A.M





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228117.D\ECD1A.CH Vial: 17
Signal #2 : G:\HERBIE\DATA\200228\0228117.D\ECD2B.CH
Acq On : 03-09-20 21:31:50 Operator: MA,SS
Sample : 200309A LCSD-1 2/35.13 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 10 10:27 2020 Quant Results File: 8010310A.RES

Quant Method : G:\HERBIE\DATA\200228\8010310A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 10 09:12:32 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.01	11.03	510498	1404518	0.260	0.249
Spiked Amount	0.349			Recovery	=	74.56%	71.41%
	Target Compounds						
1) TM	EDB	5.78	7.21	436020	1912195	0.250	0.246
2) TM	1,2,3-TCP	9.24	10.44	121298	344596	0.276	0.266
4) TM	DBCP	13.33	14.08	1506482	5474147	0.251	0.237

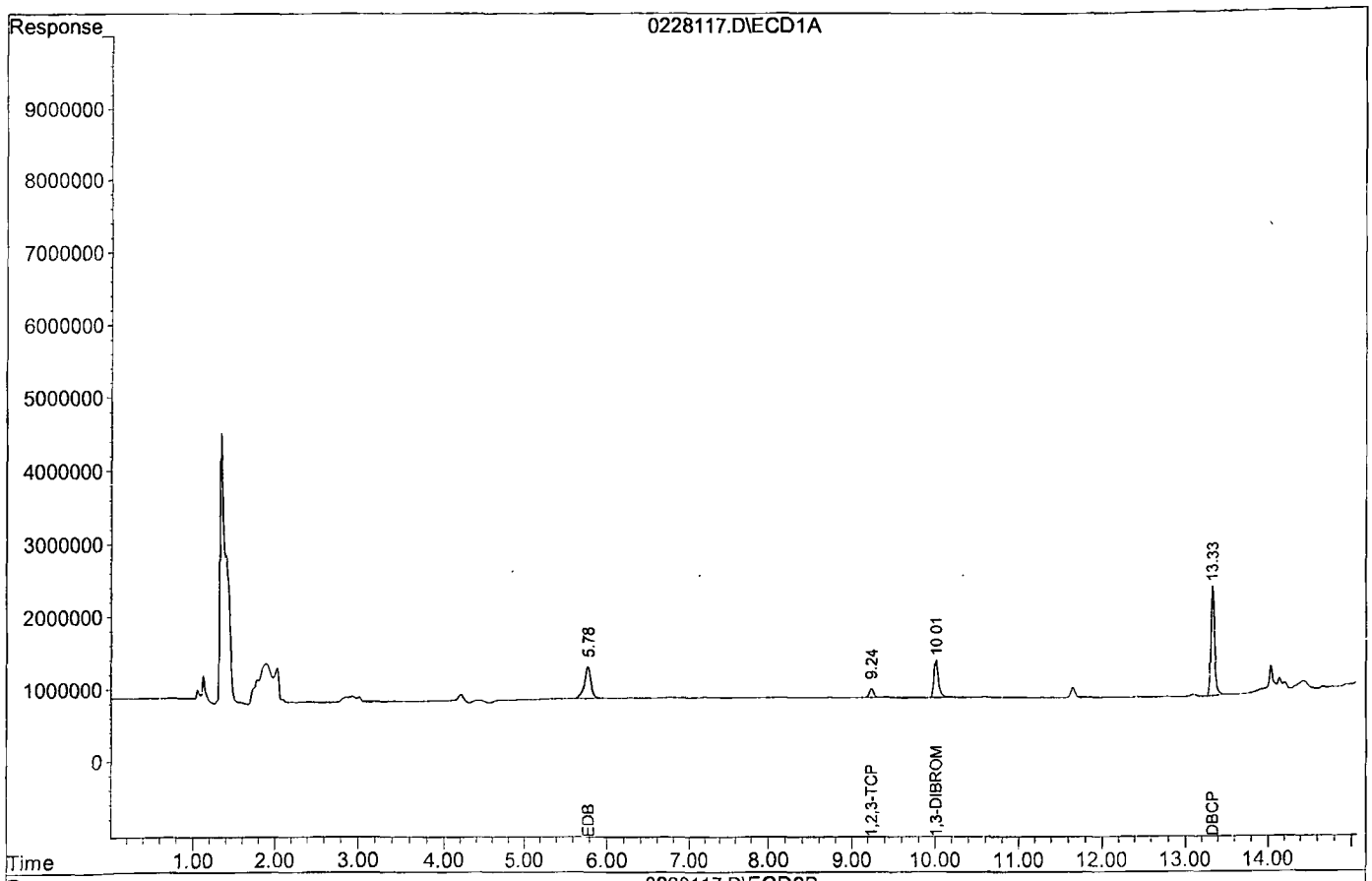
Target Compounds

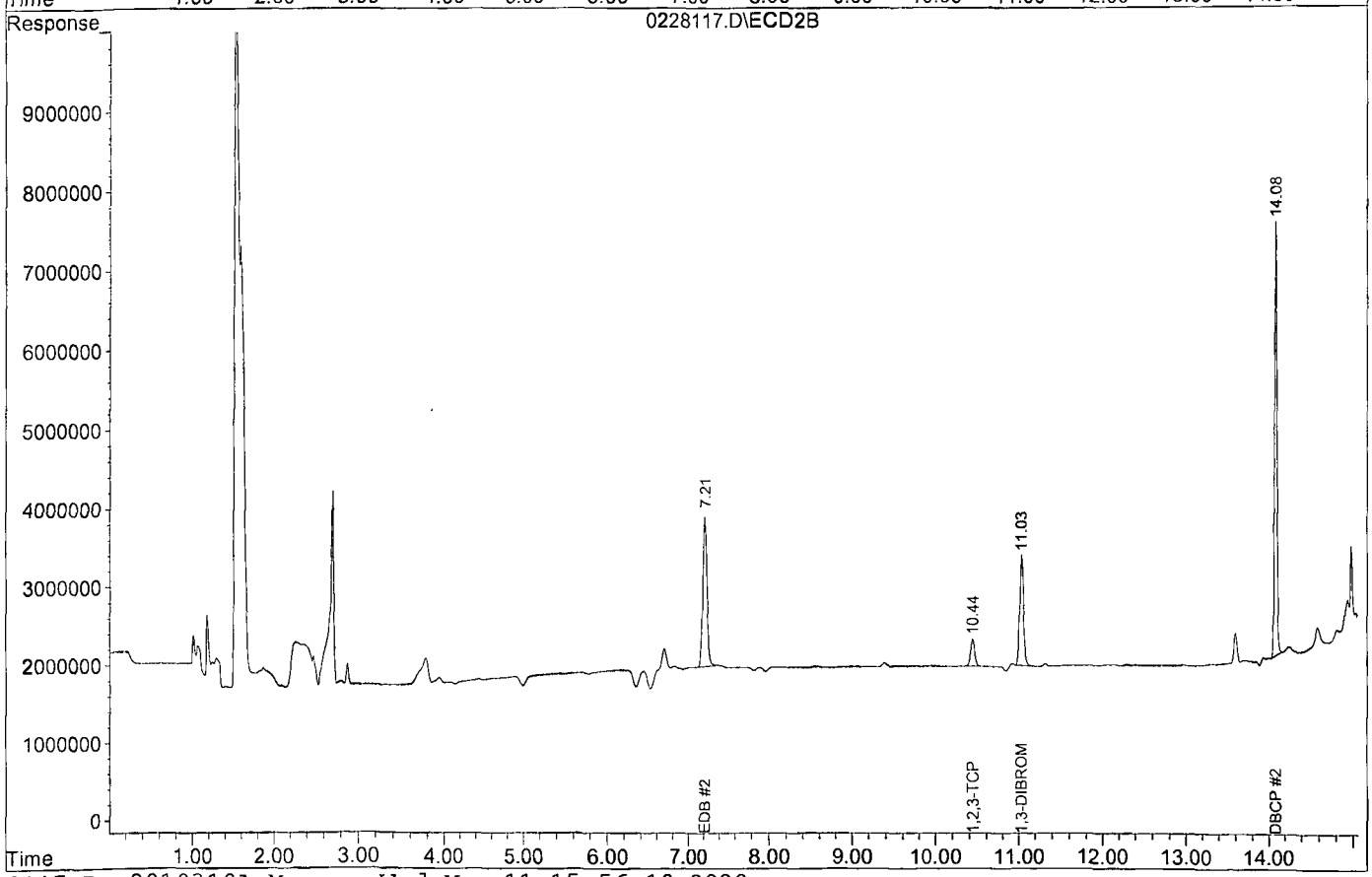
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\200228\0228117.D
Acq On : 03-09-20 21:31:50
Sample : 200309A LCSD-1 2/35.13
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010310A.M

Vial: 17
Operator: MA,SS
Inst : Herbie
Multiplr: 1.00





Organic Extraction Worksheet

Method	EPA Method 8011 DBCP/EDB	Extraction Set	200309A	Extraction Method	MWE012	Units	mL

Spiked ID 1	504.1 Spike 2-4-20 5-8-20		Surrogate ID 1	504.1 Surrogate 1-8-20 5-8-20	
Spiked ID 2	504.1 SS Spike 8-7-19 4-16-20		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	03/09/20 9:40	
Spiked ID 8			Ext. End Time:	03/09/20 11:00	
			GC Requires Extract By:		

pH1			Water Bath Temp 1 °C	
pH2			Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: KY **Date** 03/09/20 **Witnessed By:** DL **Date** 03/09/20

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	200309A Blk				0.035	1 equip	35.02	2	7	03/09/20 9:40	
2	200309A LCS-1		0.250	1	NA	NA equip	35.12	2	7	03/09/20 9:40	
3	200309A LCSD-1		0.250	1	NA	NA equip	35.13	2	7	03/09/20 9:40	
4	BA07941	BA07941W05			0.035	1 equip	35.10	2	7	03/09/20 9:40	91585
5	BA07942	BA07942W06			0.035	1 equip	35.73	2	7	03/09/20 9:40	91585
6	BA07943	BA07943W06			0.035	1 equip	35.60	2	7	03/09/20 9:40	91585
7	BA07944	BA07944W05			0.035	1 equip	35.52	2	7	03/09/20 9:40	91585
8	BA07945	BA07945W05			0.035	1 equip	35.71	2	7	03/09/20 9:40	91585
9	BA07946	BA07946W05			0.035	1 equip	35.41	2	7	03/09/20 9:40	91585
10	BA07947	BA07947W07			0.035	1 equip	35.44	2	7	03/09/20 9:40	91585
11	BA08033	BA08033W05			0.035	1 equip	35.44	2	7	03/09/20 14:00	91607
12	BA08034	BA08034W05			0.035	1 equip	35.63	2	7	03/09/20 14:00	91607
13	M STD 1		0.020	1	NA	NA equip	35.56	2	7	03/09/20 9:40	
14	M STD 2		0.100	1	NA	NA equip	35.08	2	7	03/09/20 9:40	
15	M STD 3		0.250	1	NA	NA equip	35.07	2	7	03/09/20 9:40	
16	M STD 4		0.500	1	NA	NA equip	35.16	2	7	03/09/20 9:40	

Solvent and Lot#	
Scale Blance ID	WB1
pH strip	HC998032
NaCL	19A035211
GC2 Hexane (2mLs)	DV910

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	GA
Date	3/7/20
Time	12:00
Refrigerator	HOBART

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

Modified	03/09/20 2:18:12 PM

Reviewed By: KY **Date** 03/09/20

Organic Extraction Worksheet

Method	EPA Method 8011 DBCP/EDB	Extraction Set	200309A	Extraction Method	MWE012	Units	mL

Spiked ID 1	504.1 Spike 2-4-20 5-8-20		Surrogate ID 1	504.1 Surrogate 1-8-20 5-8-20	
Spiked ID 2	504.1 SS Spike 8-7-19 4-16-20		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	03/09/20 9:40	
Spiked ID 8			Ext. End Time:	03/09/20 11:00	
			GC Requires Extract By:		

pH1			Water Bath Temp 1 °C	
pH2			Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: KY **Date** 03/09/20 **Witnessed By:** DL **Date** 03/09/20

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
17	M STD 5		0.750	1	NA	NA	35.52	2	7	03/09/20 9:40	
						equip					
18	M STD 6		1	1	NA	NA	35.19	2	7	03/09/20 9:40	
						equip					
19	SS		0.100	2	0.035	1	35.42	2	7	03/09/20 9:40	
						equip					

Solvent and Lot#	
Scale Blance ID	WB1
pH strip	HC998032
NaCL	19A035211
GC2 Hexane (2mLs)	DV910

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

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

Modified	03/09/20 2:18:12 PM

Reviewed By: KY **Date** 03/09/20

Name of Final Standard: 504/8011 Spike
Prep Date: 02/04/20
Exp Date: 05/08/20
Prep'd By (Initials): GA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
504/8011 Stock	APPL	504/8011 Stock	0.35 ug/mL	01/08/20	05/08/20	2.5 mL	25 mL	Methanol #208858	0.035 ug/mL

Name of Final Standard: 504/8011 SS SPK
Prep Date: 08/07/19
Exp Date: 04/16/20
Prep'd By (Initials): GA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
504/8011 SS Stock	APPL	504/8011 SS Stock	0.35 ug/mL	01/22/19	01/06/20	1 mL	10 mL	Methanol #042317C	0.035 ug/mL

Re-certified on 01/16/20 against 504/8011 Spike (prep. 01.08.20). Extended expiration by 3 months. Injection #1126237 on Herbie 191126 sequence. GA

Name of Final Standard: 504/8011 Surrogate
Prep Date: 01/08/20
Exp Date: 05/08/20
Prep'd By (Initials): GA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
1,3 DBP Stock	APPL	1,3 DBP Stock	100 ug/mL	01/07/20	01/07/21	35 uL	10 mL	Methanol #208858	0.35ug/ml

Injection Log

Directory: G:\HERBIE\DATA\200228\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	8	0228108.D	1	8011 1 3/9/20	water	03-09-20 18:28:49
2	9	0228109.D	1	8011 2 3/9/20	water	03-09-20 18:49:17
3	10	0228110.D	1	8011 3 3/9/20	water	03-09-20 19:09:45
4	11	0228111.D	1	8011 4 3/9/20	water	03-09-20 19:30:04
5	12	0228112.D	1	8011 5 3/9/20	water	03-09-20 19:50:22
6	13	0228113.D	1	8011 6 3/9/20	water	03-09-20 20:10:46
7	14	0228114.D	1	8011 SS 3/9/20	water	03-09-20 20:31:04
8	15	0228115.D	0.99943	200309A BLK 2/35.02	water	03-09-20 20:51:19
9	16	0228116.D	0.99658	200309A LCS-1 2/35.12	water	03-09-20 21:11:40
10	17	0228117.D	0.9963	200309A LCSD-1 2/35.13	water	03-09-20 21:31:50
11	18	0228118.D	0.99715	BA07941W05 2/35.10	water	03-09-20 21:52:01
12	19	0228119.D	0.97957	BA07942W06 2/35.73	water	03-09-20 22:12:17
13	20	0228120.D	0.98315	BA07943W06 2/35.60	water	03-09-20 22:32:25
14	21	0228121.D	0.98536	BA07944W05 2/35.52	water	03-09-20 22:52:32
15	22	0228122.D	0.98012	BA07945W05 2/35.71	water	03-09-20 23:12:46
16	23	0228123.D	0.98842	BA07946W05 2/35.41	water	03-09-20 23:32:51
17	24	0228124.D	0.98758	BA07947W07 2/35.44	water	03-09-20 23:52:56
20	28	0228128.D	1	8011 3 3/9/20	water	03-10-20 1:13:30

ORGANICS
Calibration Data

TPH Extractables
DOC0310

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 03/10/20
Matrix: Water Instrument: Apollo
Initials: SS/M

			310003 D	310004.D	310005.D	310006.D	310007.D	310008.D										
		Compound	1	2	3	4	5	6					Avg	%RSD	Type	r^2	Q
1	HATM	Diesel (C10-C24)	1402793	2048774	1956346	1950680	1978298	2168778					1917612	14	HATM		
2	HBTM	Motor Oil (C24-C40)	1787356	1629558	1383257	1334462	1324161	1387579					1474395	13	HBTM		
3	SA	Ortho-Terphenyl(S)	2782070	2786055	2347676	2294556	2308475	2544283					2510519	9.2	SA		
4	SA	Octacosane(S)	1771075	1912436	1683790	1654254	1670744	1785274					1746262	5.6	SA		
5																	
6																	
7																	
8																	
9																	
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1.184705

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310003.D Vial: 3
Acq On : 3-10-20 9:37:22 Operator: SS
Sample : Diesel Motor Oil-1 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 10 11:58 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

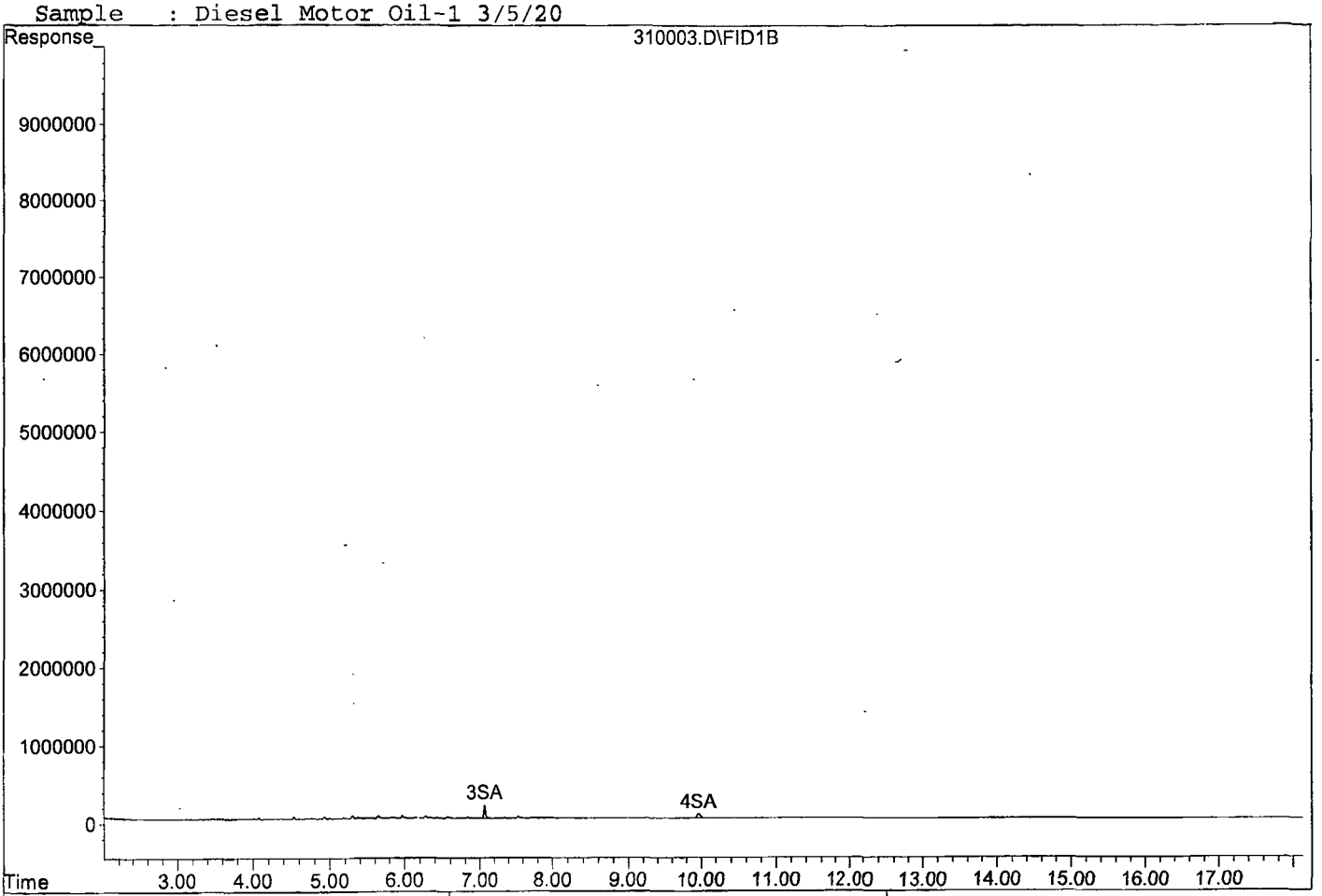
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

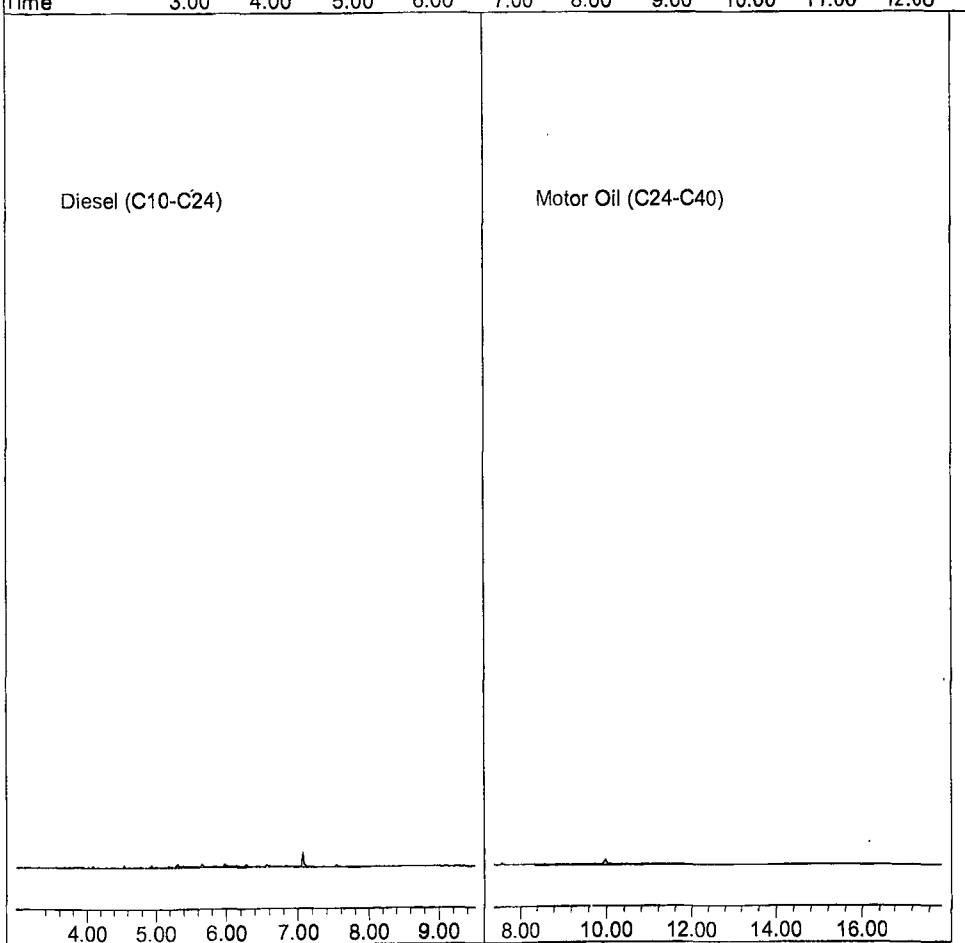
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.06	2782070	0.554 ppb
Surrogate Spike 30.000	Recovery =		1.85%
4) SA Octacosane(S)	9.97	1771075	0.507 ppb
Surrogate Spike 30.000	Recovery =		1.69%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	28055866	7.315 ppb
2) HBTM Motor Oil (C24-C40)	12.60	35747115	12.123 ppb

Target Compounds

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

Data File: G:\APOLLO\DATA\200310\310003.D
Sample : Diesel Motor Oil-1 3/5/20





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310004.D Vial: 4
Acq On : 3-10-20 9:59:49 Operator: SS
Sample : Diesel Motor Oil-2 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 10 11:58 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

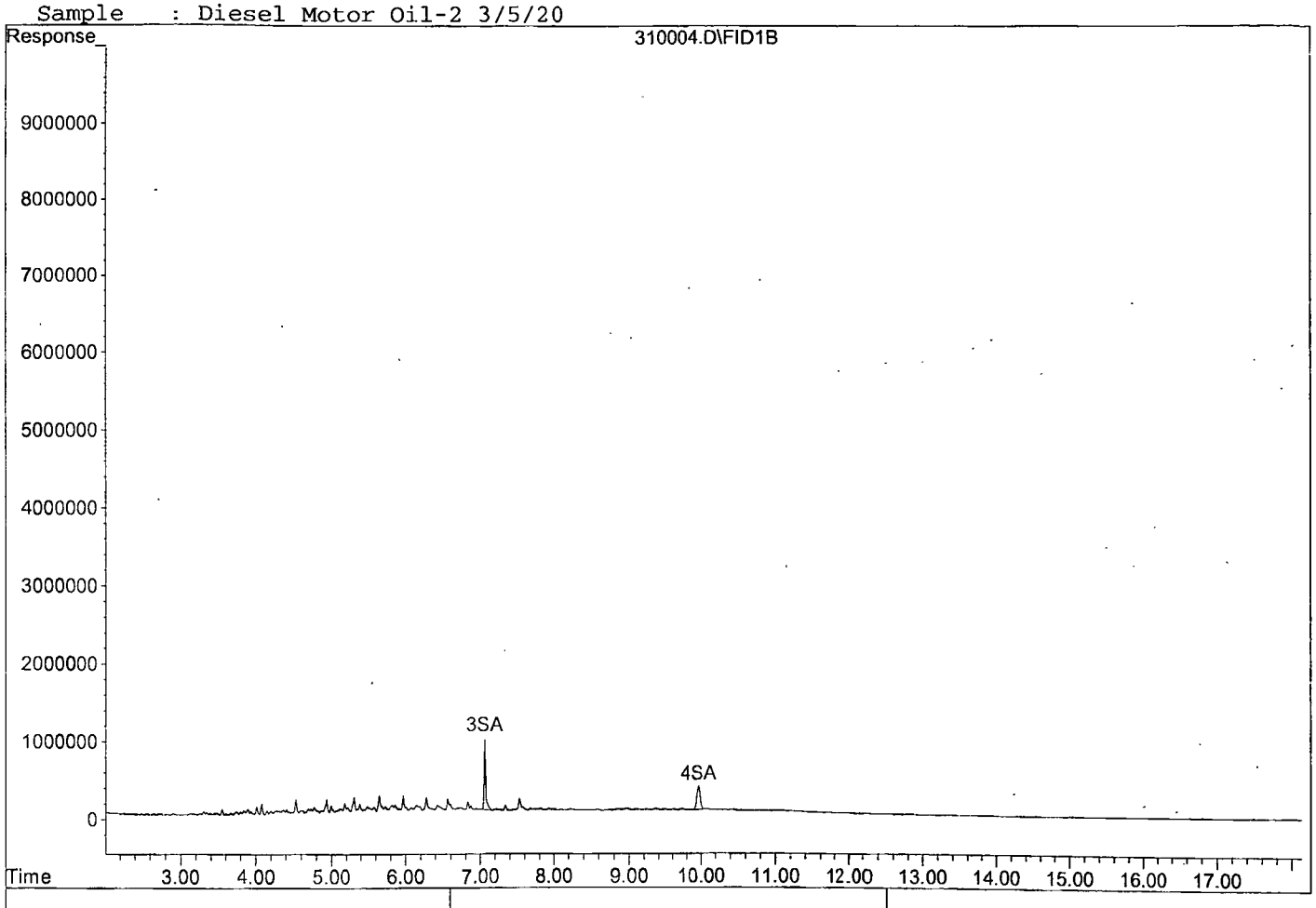
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

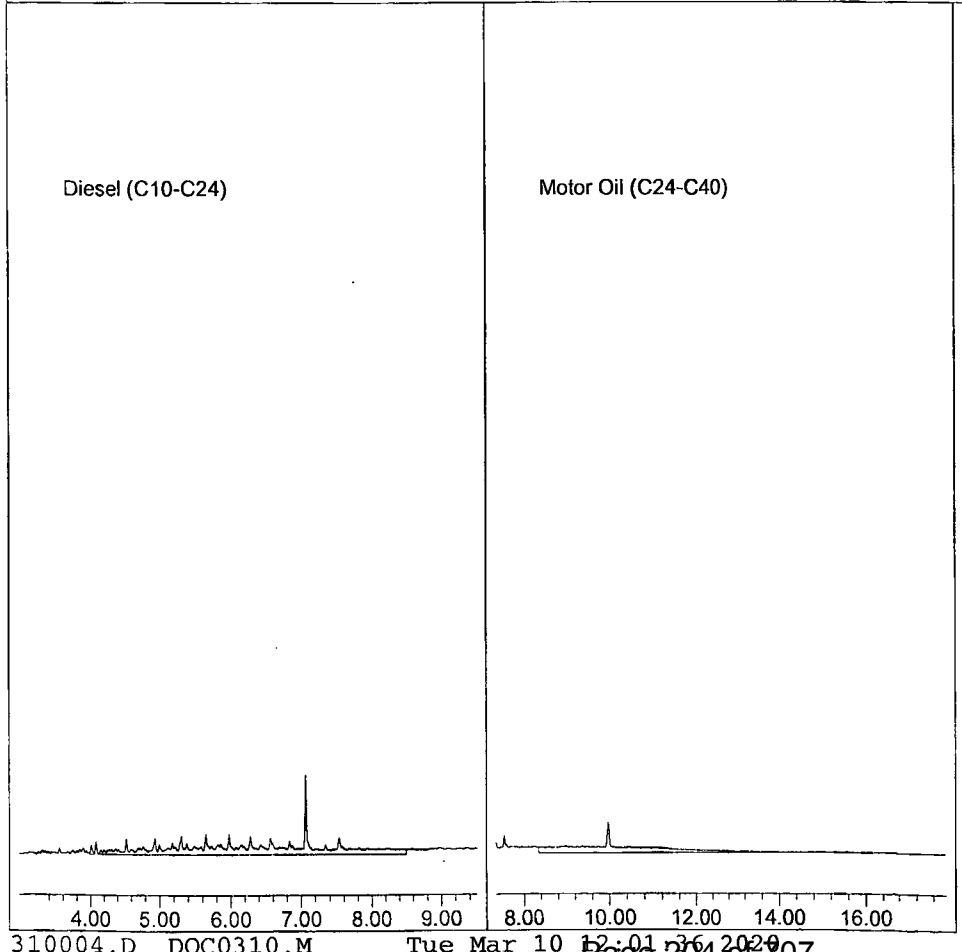
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.06	13930276	2.774 ppb
Surrogate Spike 30.000	Recovery =		9.25%
4) SA Octacosane(S)	9.97	9562178	2.738 ppb
Surrogate Spike 30.000	Recovery =		9.13%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	204877430	53.420 ppb
2) HBTM Motor Oil (C24-C40)	12.60	162955782	55.262 ppb

Target Compounds

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

Data File: G:\APOLLO\DATA\200310\310004.D
Sample : Diesel Motor Oil-2 3/5/20





310004.D DOC0310.M Tue Mar 10 12:01:36 2020

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310005.D Vial: 5
Acq On : 3-10-20 10:22:19 Operator: SS
Sample : Diesel Motor Oil-3 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 10 11:58 2020 Quant Results File: DOC0310.RES

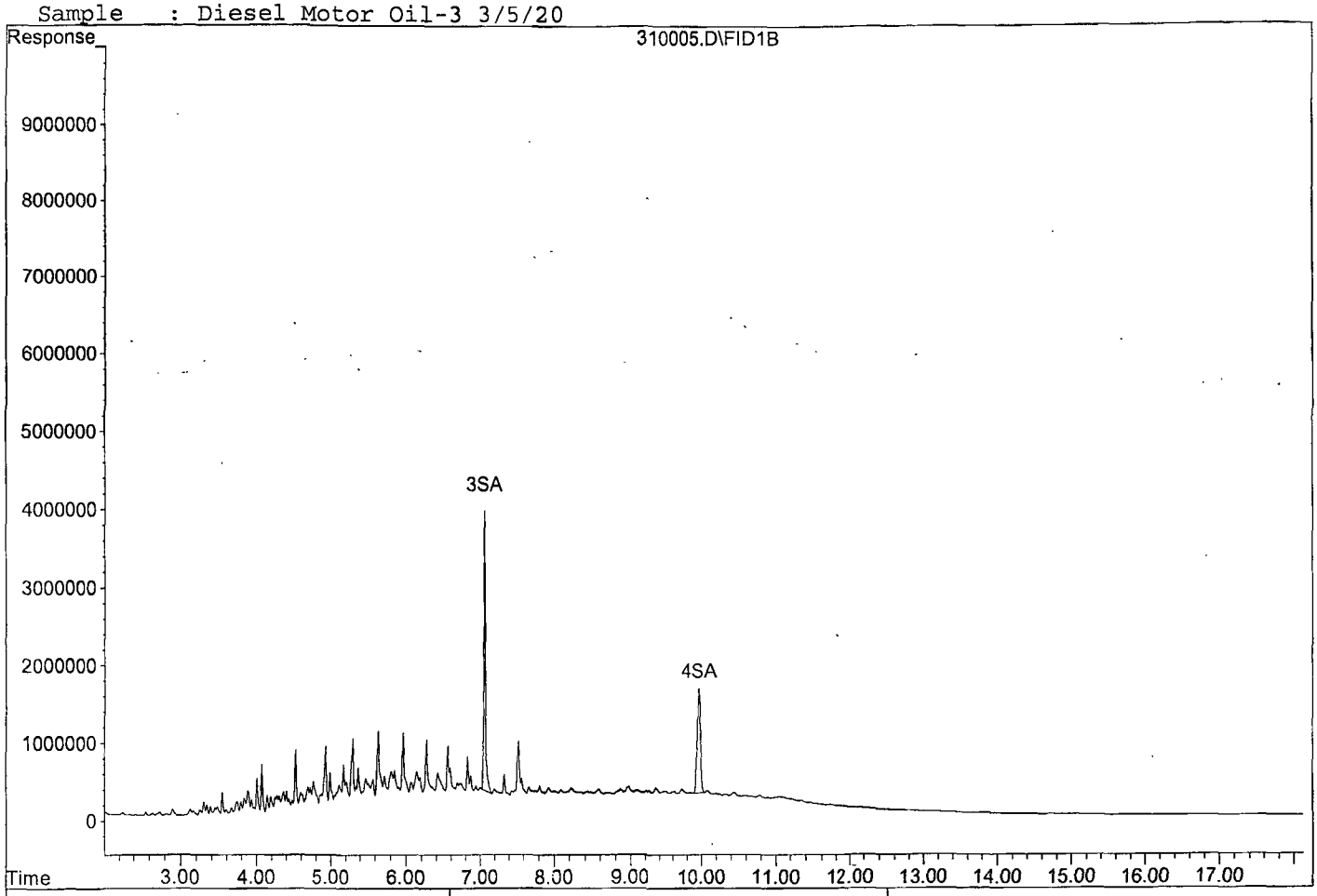
Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

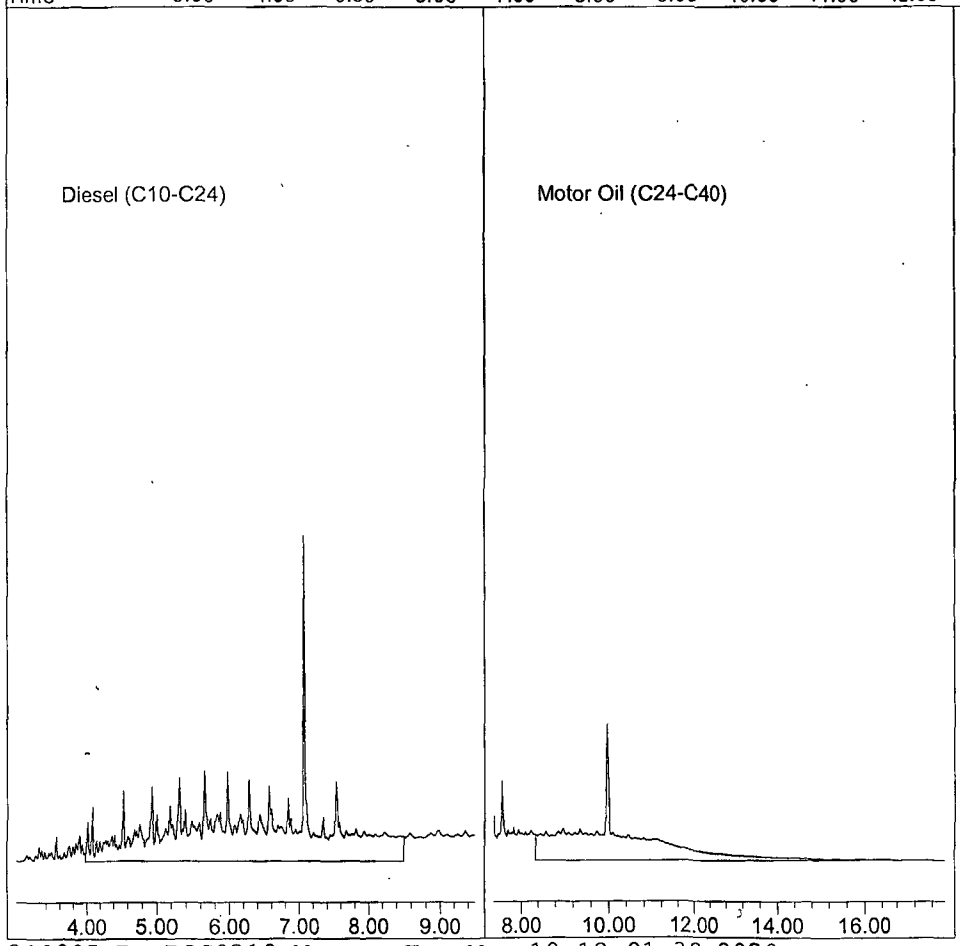
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.06	58691912	11.689 ppb
Surrogate Spike 30.000	Recovery =		38.96%
4) SA Octacosane(S)	9.97	42094760	12.053 ppb
Surrogate Spike 30.000	Recovery =		40.18%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	978173133	255.050 ppb
2) HBTM Motor Oil (C24-C40)	12.60	691628331	234.546 ppb
Target Compounds			

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

Data File: G:\APOLLO\DATA\200310\310005.D
Sample : Diesel Motor Oil-3 3/5/20





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310006.D Vial: 6
Acq On : 3-10-20 10:44:50 Operator: SS
Sample : Diesel Motor Oil-4 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 10 11:58 2020 Quant Results File: DOC0310.RES

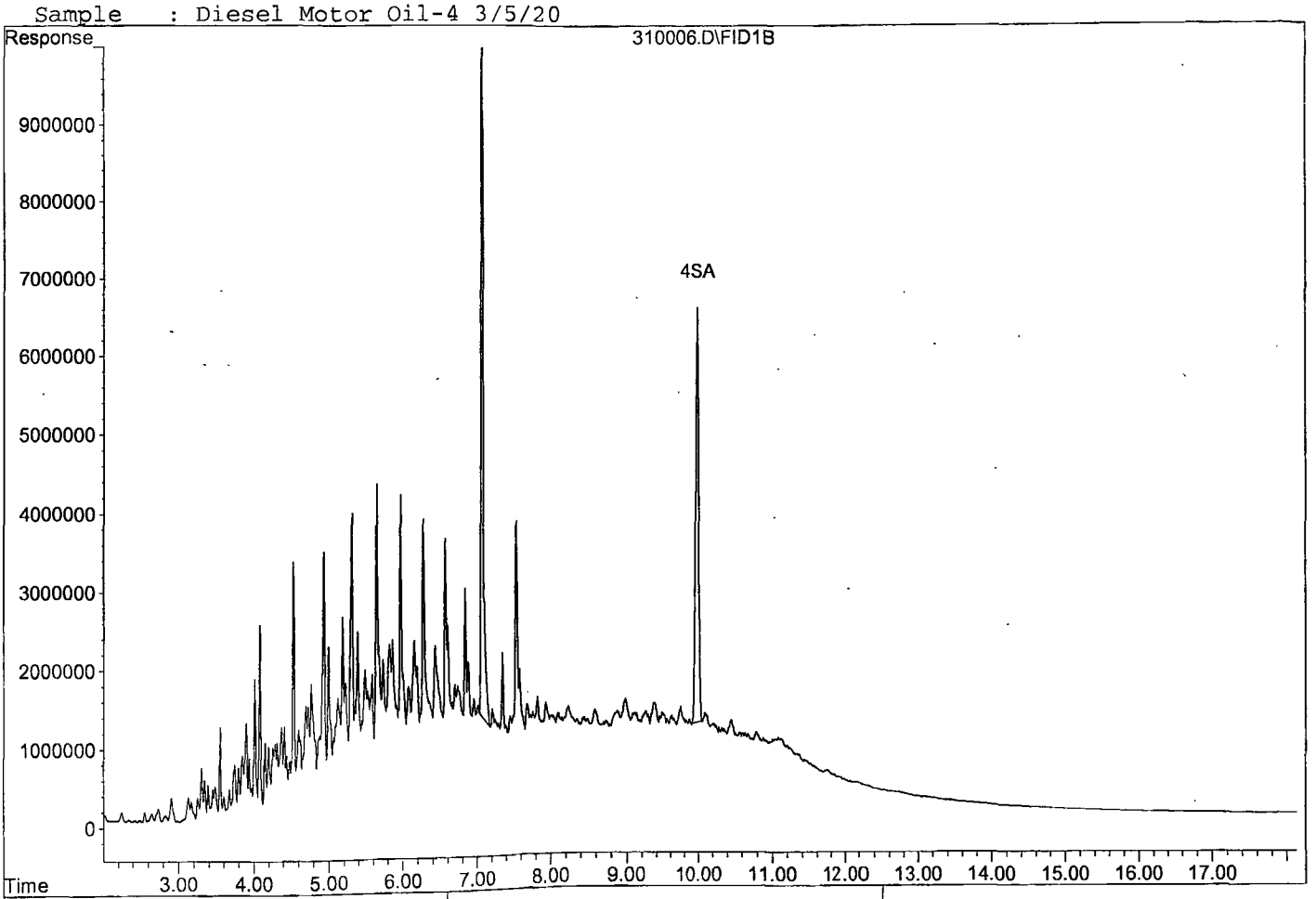
Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

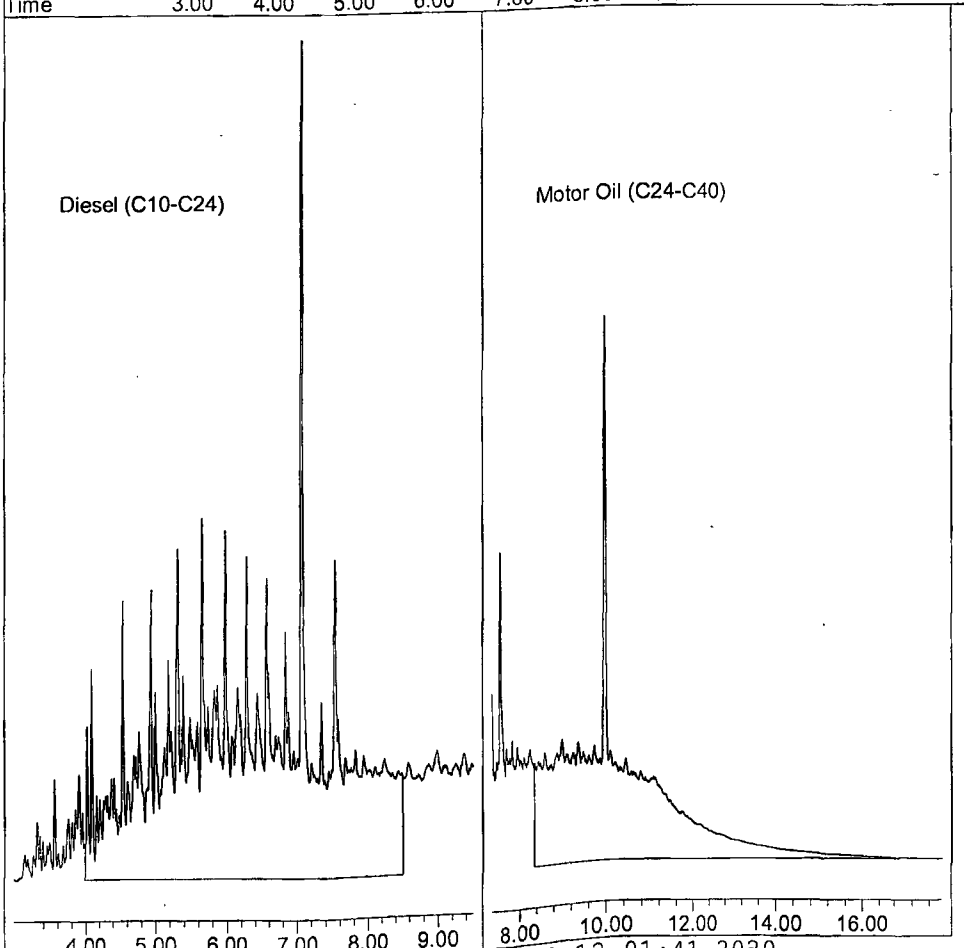
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.07	229455620	45.699 ppb
Surrogate Spike 30.000		Recovery =	152.33%
4) SA Octacosane(S)	9.98	165425400	47.366 ppb
Surrogate Spike 30.000		Recovery =	157.89%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	3901360613	1017.245 ppb
2) HBTM Motor Oil (C24-C40)	12.60	2668923786	905.091 ppb
Target Compounds			

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

Data File: G:\APOLLO\DATA\200310\310006.D
Sample : Diesel Motor Oil-4 3/5/20





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310007.D Vial: 7
Acq On : 3-10-20 11:07:20 Operator: SS
Sample : Diesel Motor Oil-5 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 10 11:58 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

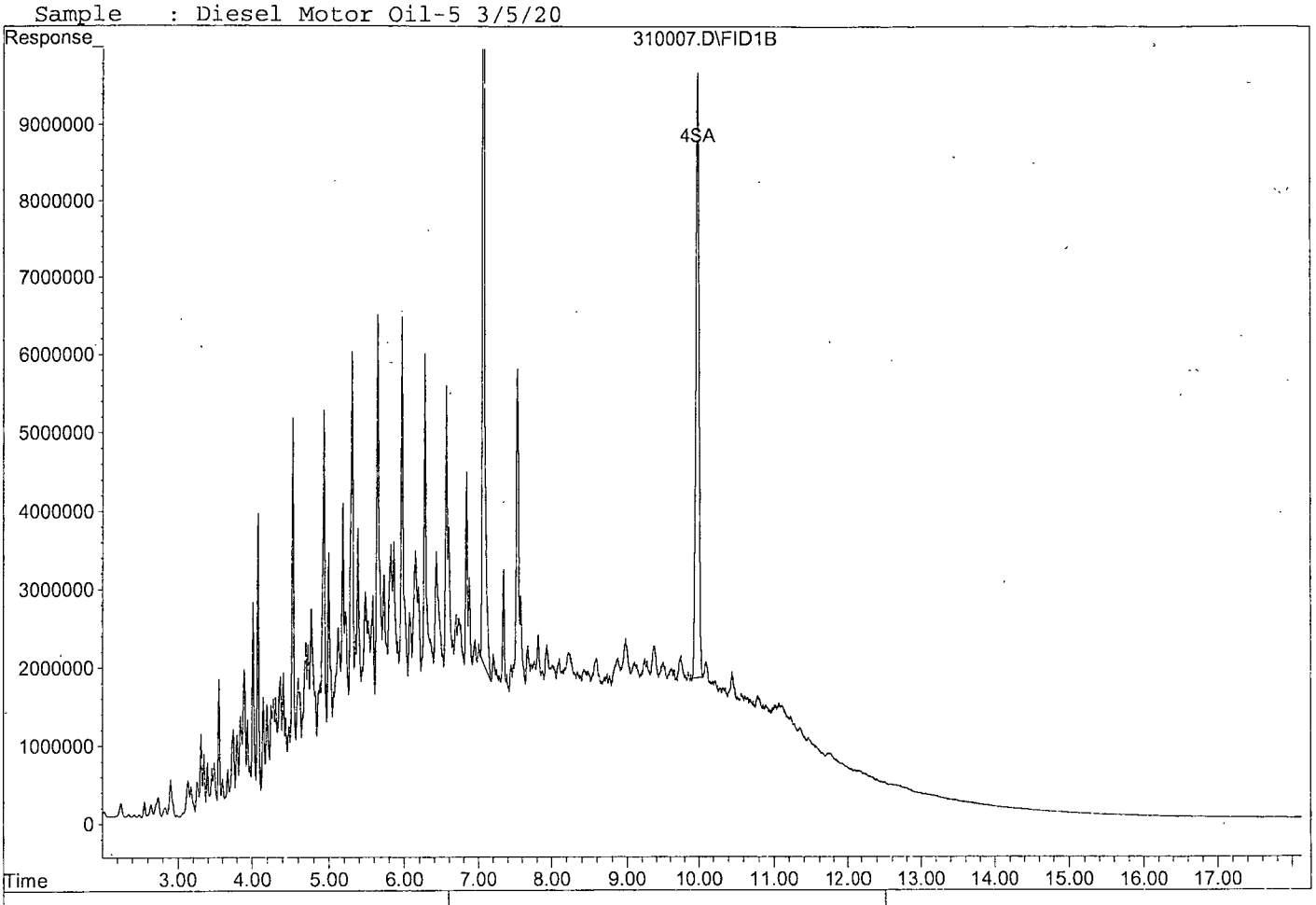
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

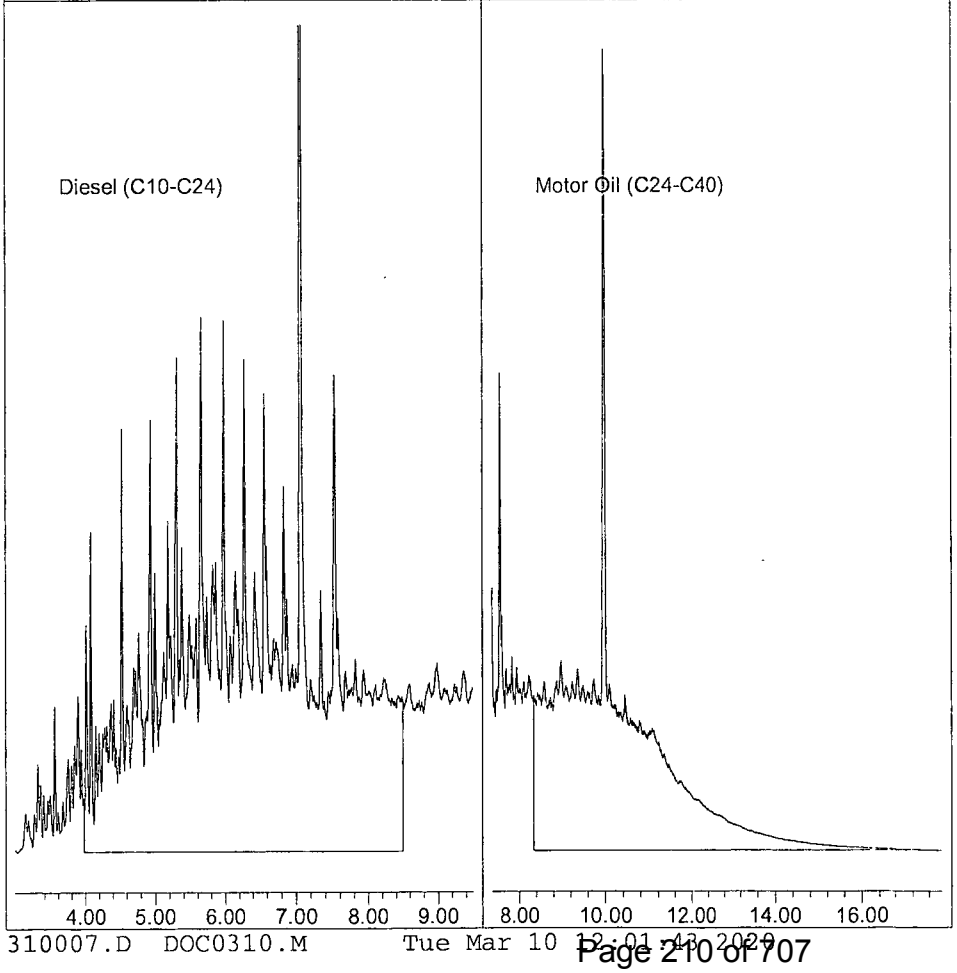
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.07	346271320	68.964 ppb
Surrogate Spike 30.000	Recovery =		229.88%
4) SA Octacosane(S)	9.98	250611670	71.757 ppb
Surrogate Spike 30.000	Recovery =		239.19%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	5934893648	1547.470 ppb
2) HBTM Motor Oil (C24-C40)	12.60	3972483300	1347.157 ppb
Target Compounds			

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

Quantitation Report

Data File: G:\APOLLO\DATA\200310\310007.D
Sample : Diesel Motor Oil-5 3/5/20





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310008.D Vial: 8
Acq On : 3-10-20 11:29:51 Operator: SS
Sample : Diesel Motor Oil-6 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 10 11:58 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

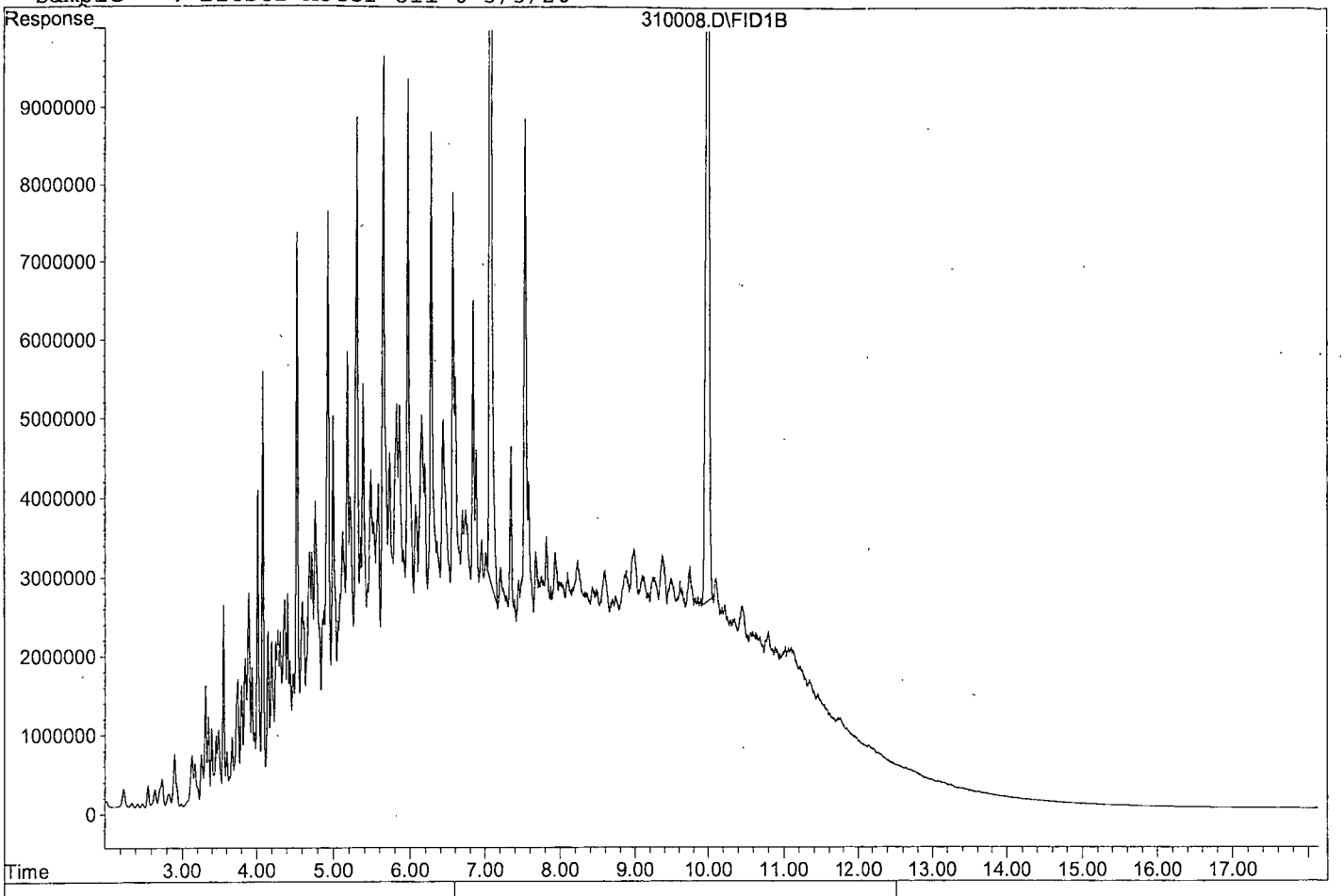
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

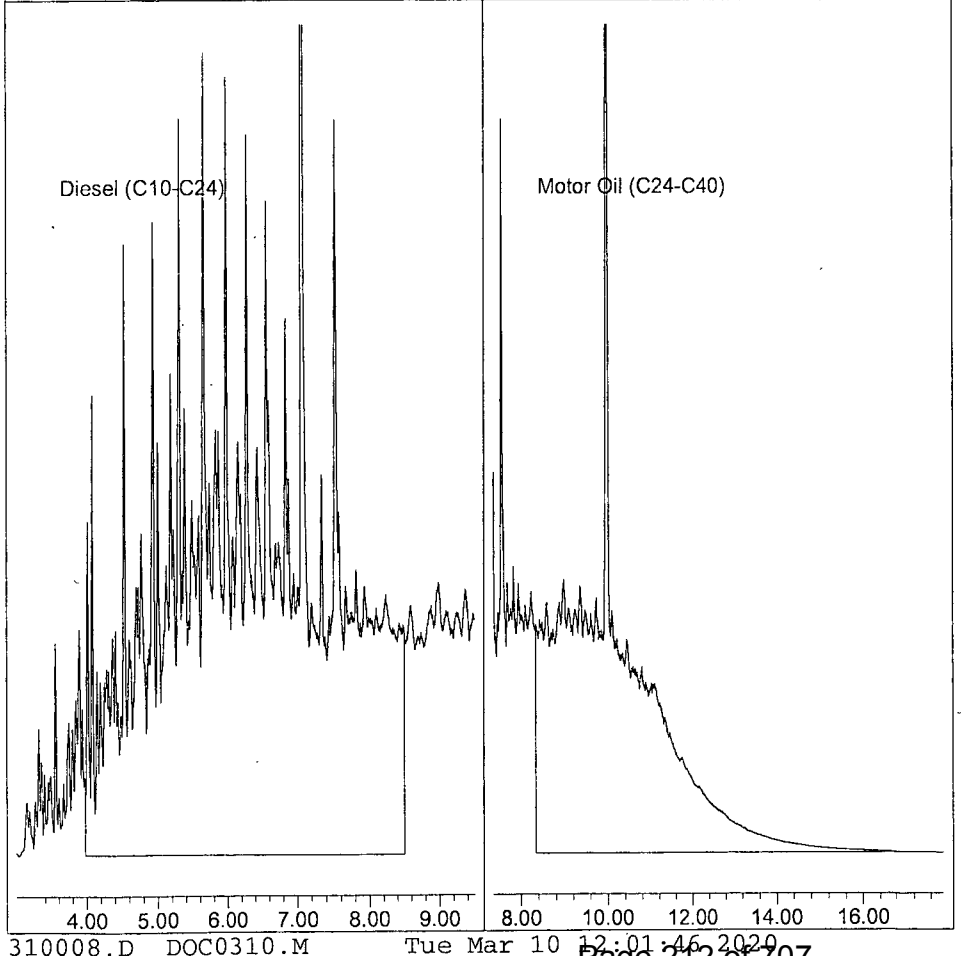
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.07	508856564	101.345	ppb
Surrogate Spike 30.000		Recovery =	337.82%	
4) SA Octacosane(S)	9.99	357054728	102.234	ppb
Surrogate Spike 30.000		Recovery =	340.78%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.24	8675111292	2261.957	ppb
2) HBTM Motor Oil (C24-C40)	12.60	5550316563	1882.235	ppb

Target Compounds

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

Data File: G:\APOLLO\DATA\200310\310008.D
Sample : Diesel Motor Oil-6 3/5/20





310008.D DOC0310.M Tue Mar 10 12:01:46 2020

TPH Extractables
DOC0310

Form 7

Second Source Calibration

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

SDG No:
Date Analyzed: 03/10/20
Instrument: Apollo
Initial Cal. Date: 03/10/20
Data File: 310009.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1917610	2127840	11	HATM	
2	HBTM	Motor Oil (C24-C40)	1474400	1535490	4.1	HBTM	
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
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28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			7.6		

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310009.D Vial: 9
Acq On : 3-10-20 11:52:24 Operator: SS
Sample : Diesel Motor Oil-SS 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 10 12:11 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

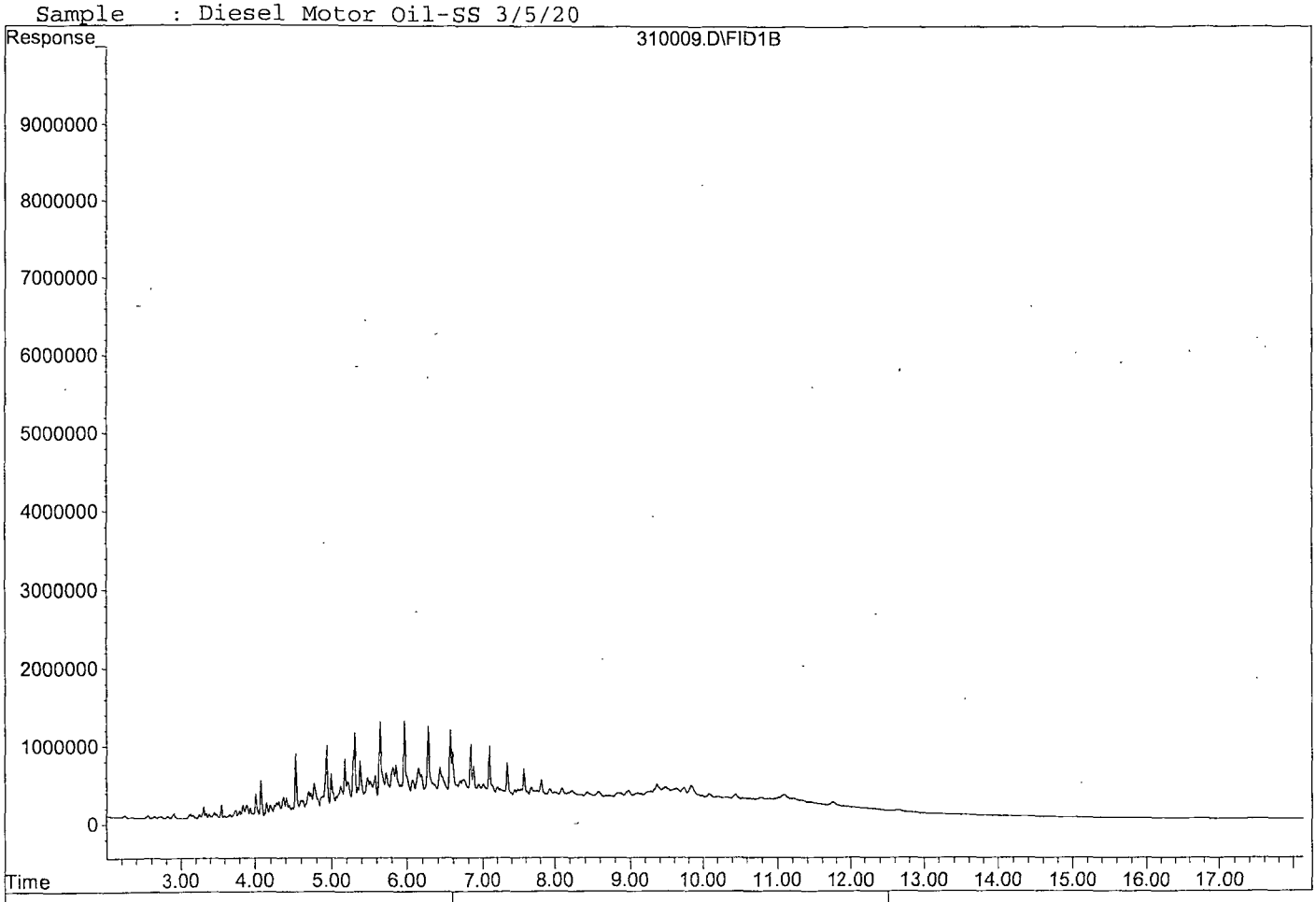
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

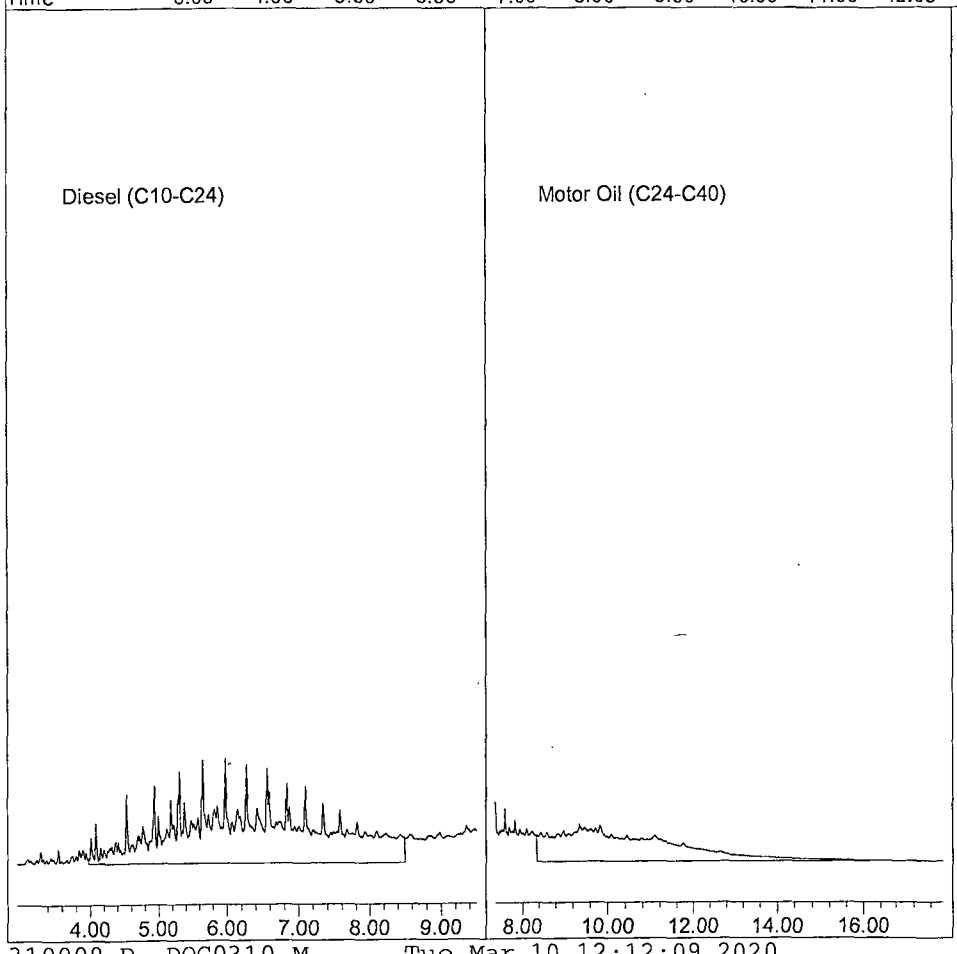
Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
3) SA Ortho-Terphenyl(S)	0.00	0	N.D.	ppb	d
Surrogate Spike 30.000	Recovery	=	0.00%		
4) SA Octacosane(S)	0.00	0	N.D.	ppb	d
Surrogate Spike 30.000	Recovery	=	0.00%		
Target Compounds					
1) HATM Diesel (C10-C24)	6.24	1063920828	277.408	ppb	
2) HBTM Motor Oil (C24-C40)	12.60	767745055	260.359	ppb	

Target Compounds

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

Data File: G:\APOLLO\DATA\200310\310009.D
Sample : Diesel Motor Oil-SS 3/5/20





TPH Extractables
DOC0310

Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 03/10/20
Instrument: Apollo
Initial Cal. Date: 03/10/20
Data File: 310017.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1917610	2052430	7.0	HATM	
2	HBTM	Motor Oil (C24-C40)	1474400	1464750	0.65	HBTM	
3	SA	Ortho-Terphenyl(S)	2510520	2454740	2.2	SA	
4	SA	Octacosane(S)	1746260	1822960	4.4	SA	
5							
6							
7							
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33							
34							
35							
36							
37							
38							
39							
40							
		Average			3.6		

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310017.D Vial: 17
Acq On : 3-10-20 16:14:14 Operator: SS
Sample : Diesel Motor Oil-CCV 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 10 16:32 2020 Quant Results File: DOC0310.RES

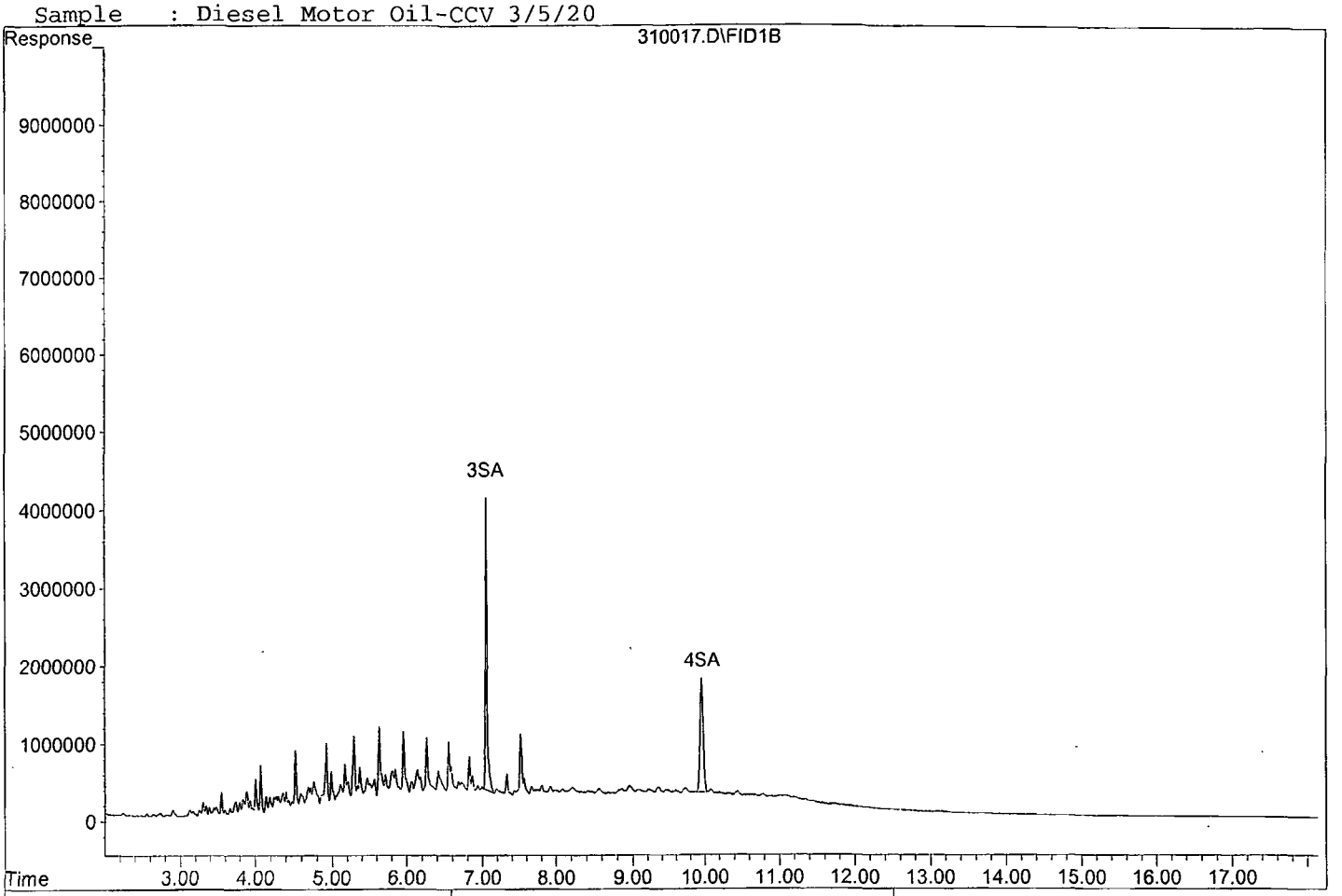
Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

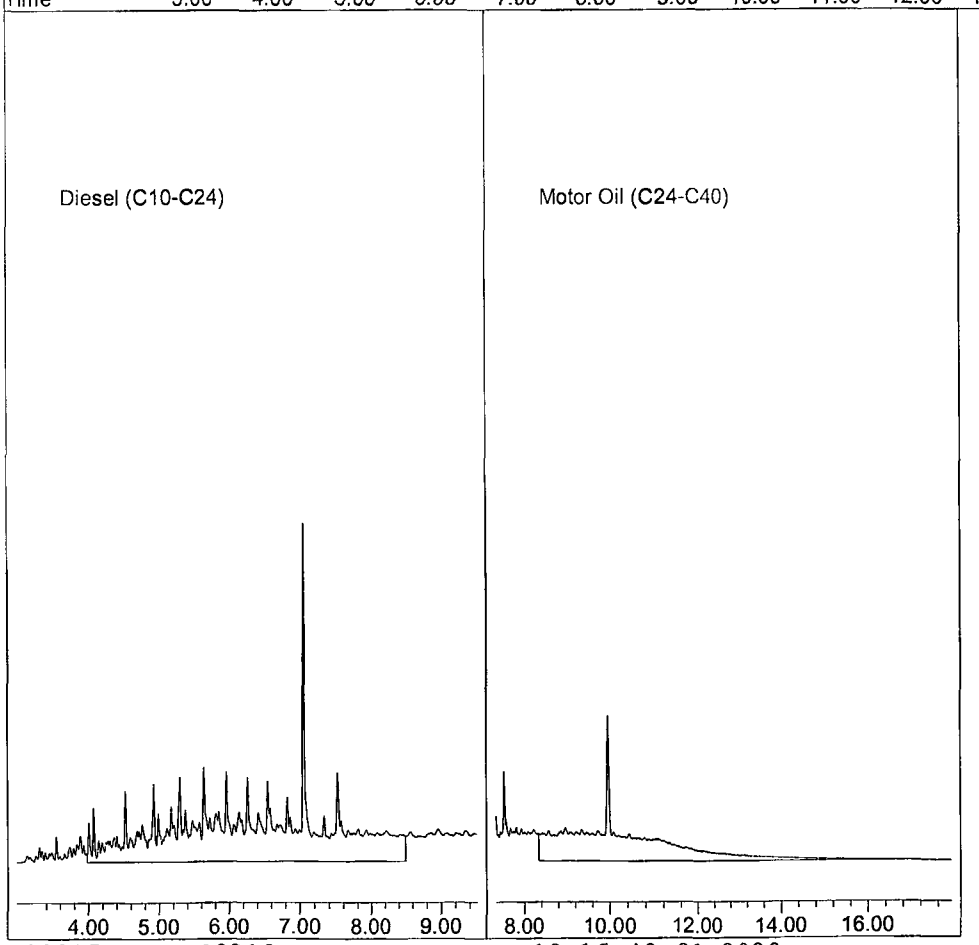
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.06	61368559	12.222 ppb
Surrogate Spike 30.000		Recovery =	40.74%
4) SA Octacosane(S)	9.96	45573992	13.049 ppb
Surrogate Spike 30.000		Recovery =	43.50%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	1026212525	267.576 ppb
2) HBTM Motor Oil (C24-C40)	12.60	732374095	248.364 ppb
Target Compounds			

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

Data File: G:\APOLLO\DATA\200310\310017.D
Sample : Diesel Motor Oil-CCV 3/5/20





ORGANICS
Raw Data

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310013.D Vial: 13
Acq On : 3-10-20 14:43:26 Operator: SS
Sample : BA07942W21 2/800 Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Mar 10 15:30 2020 Quant Results File: DOC0310.RES

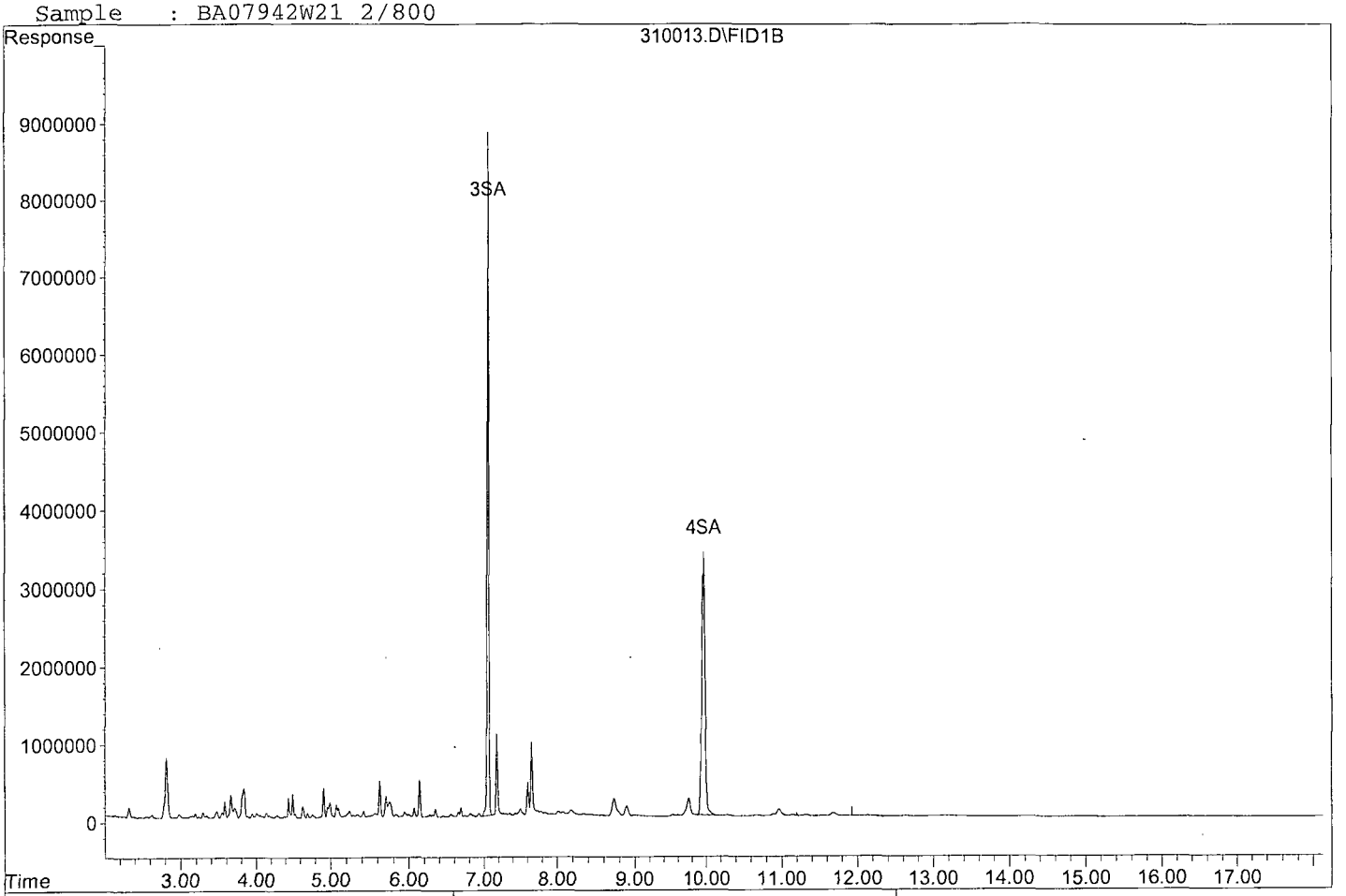
Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

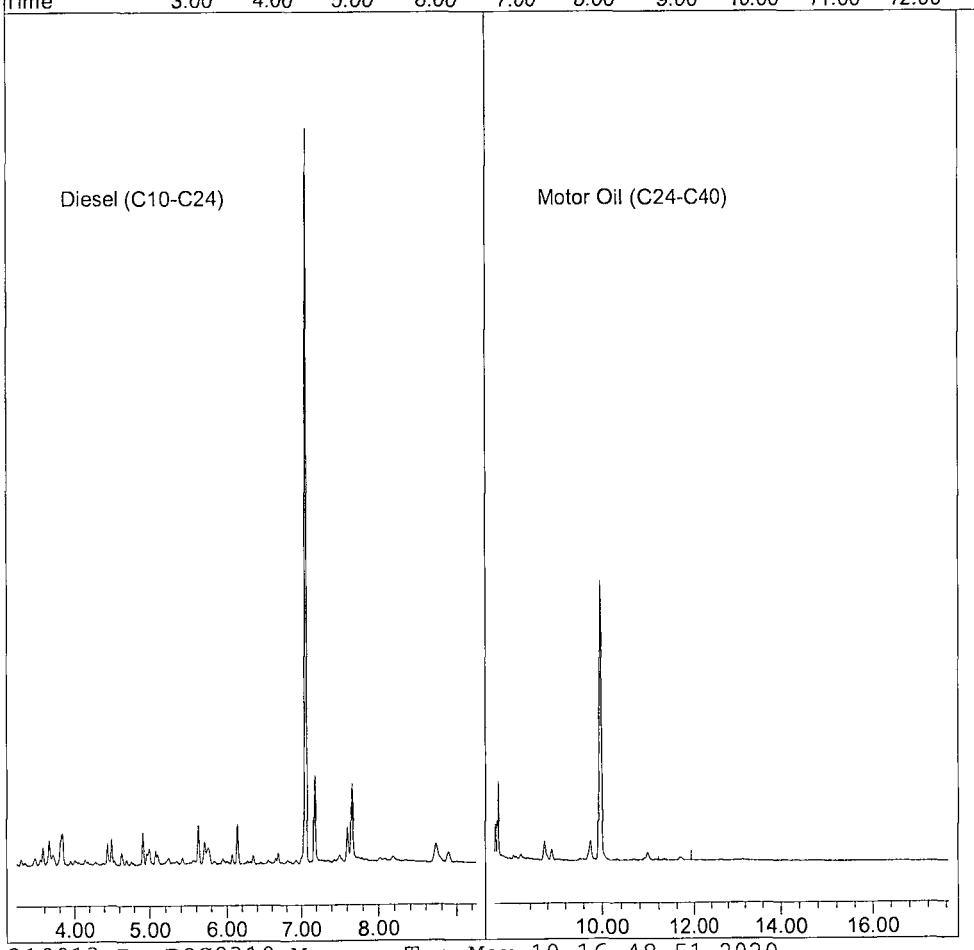
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.06	127383211	63.425	ppb
Surrogate Spike 75.000		Recovery =	84.57%	
4) SA Octacosane(S)	9.96	109243219	78.198	ppb
Surrogate Spike 75.000		Recovery =	104.26%	
Target Compounds				
Target Compounds				
1) HATM Diesel (C10-C24)	0.00	0	N.D.	ppb
2) HBTM Motor Oil (C24-C40)	0.00	0	N.D.	ppb

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

Data File: G:\APOLLO\DATA\200310\310013.D
Sample : BA07942W21 2/800





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310014.D Vial: 14
Acq On : 3-10-20 15:06:04 Operator: SS
Sample : BA07944W21 2/800 Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Mar 10 15:29 2020 Quant Results File: DOC0310.RES

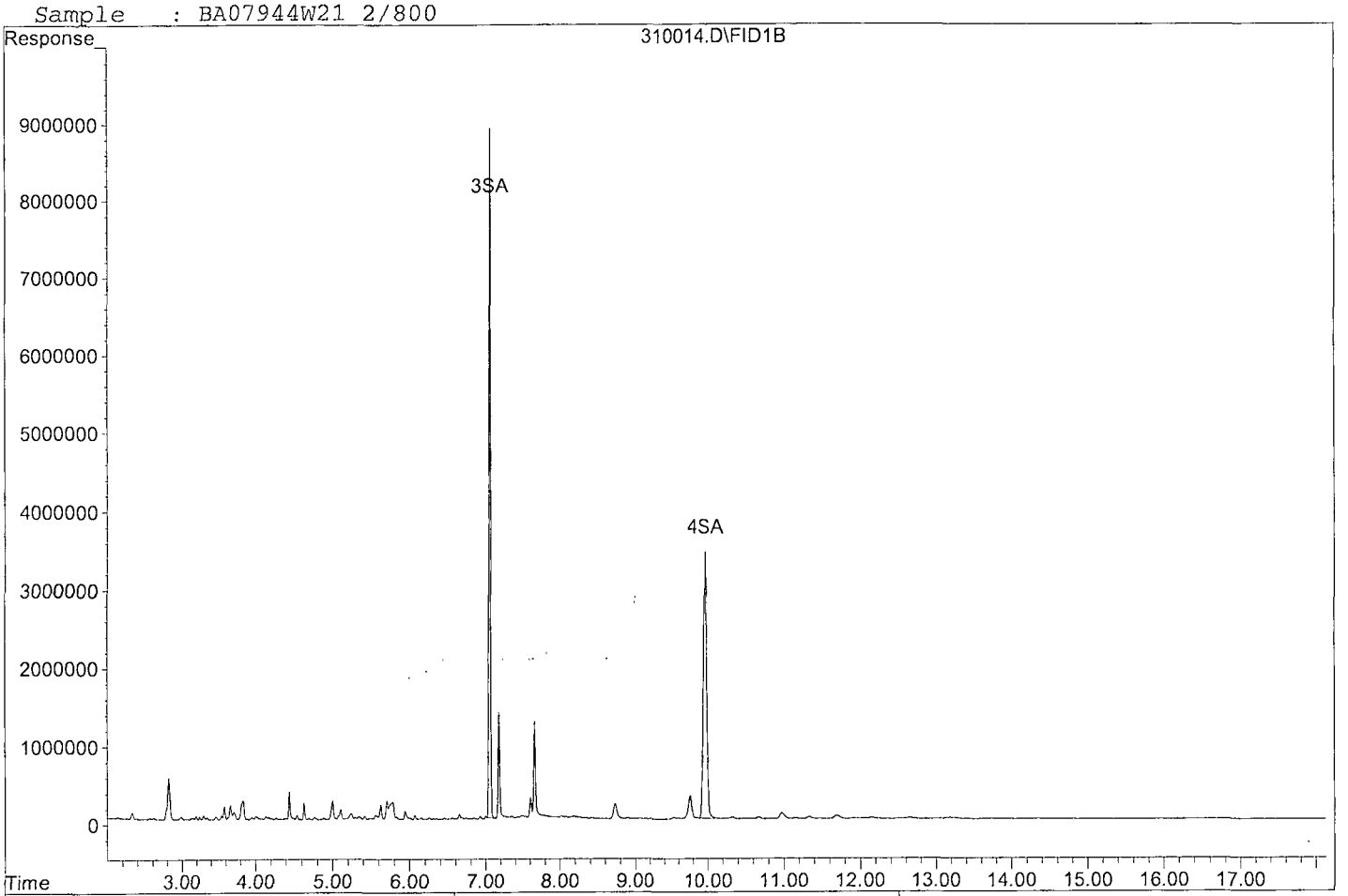
Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

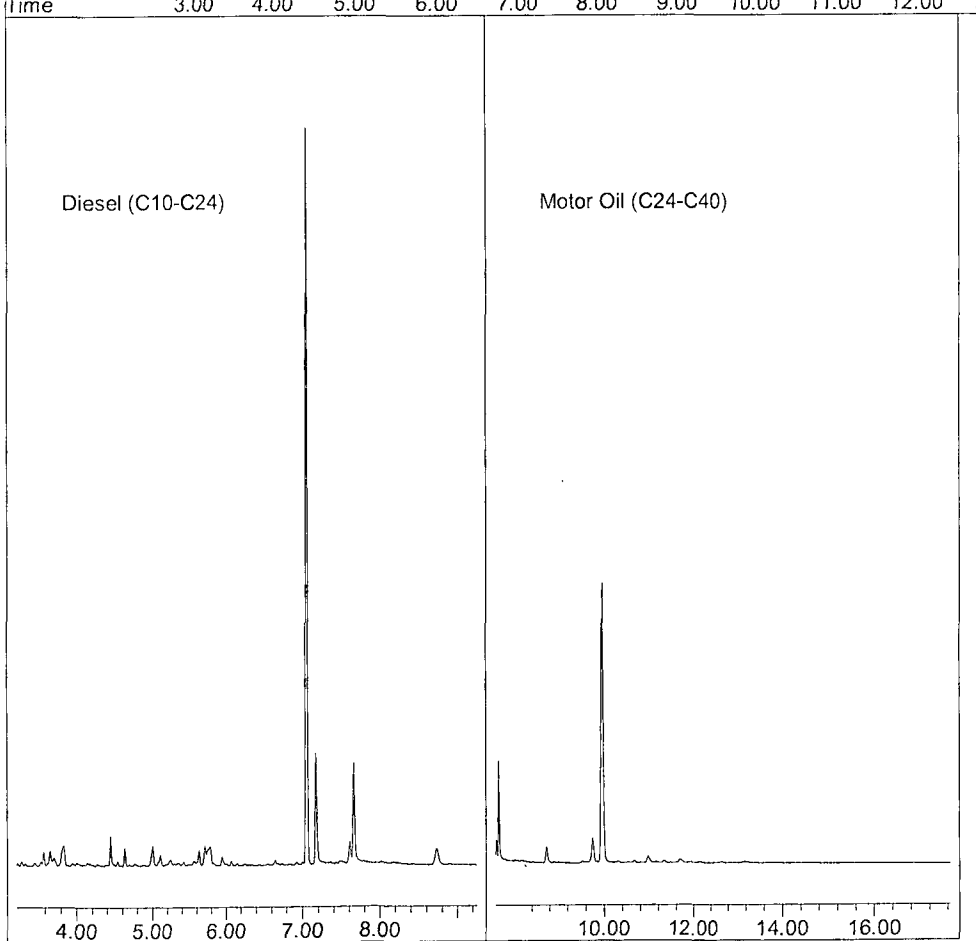
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.06	123144005	61.314	ppb
Surrogate Spike 75.000		Recovery =	81.75%	
4) SA Octacosane(S)	9.97	109382777	78.298	ppb
Surrogate Spike 75.000		Recovery =	104.40%	
Target Compounds				
Target Compounds				
1) HATM Diesel (C10-C24)	0.00	0	N.D.	ppb
2) HBTM Motor Oil (C24-C40)	0.00	0	N.D.	ppb

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

Data File: G:\APOLLO\DATA\200310\310014.D
Sample : BA07944W21 2/800





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310015.D Vial: 15
Acq On : 3-10-20 15:28:48 Operator: SS
Sample : BA07946W11 2/800 Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Mar 10 16:03 2020 Quant Results File: DOC0310.RES

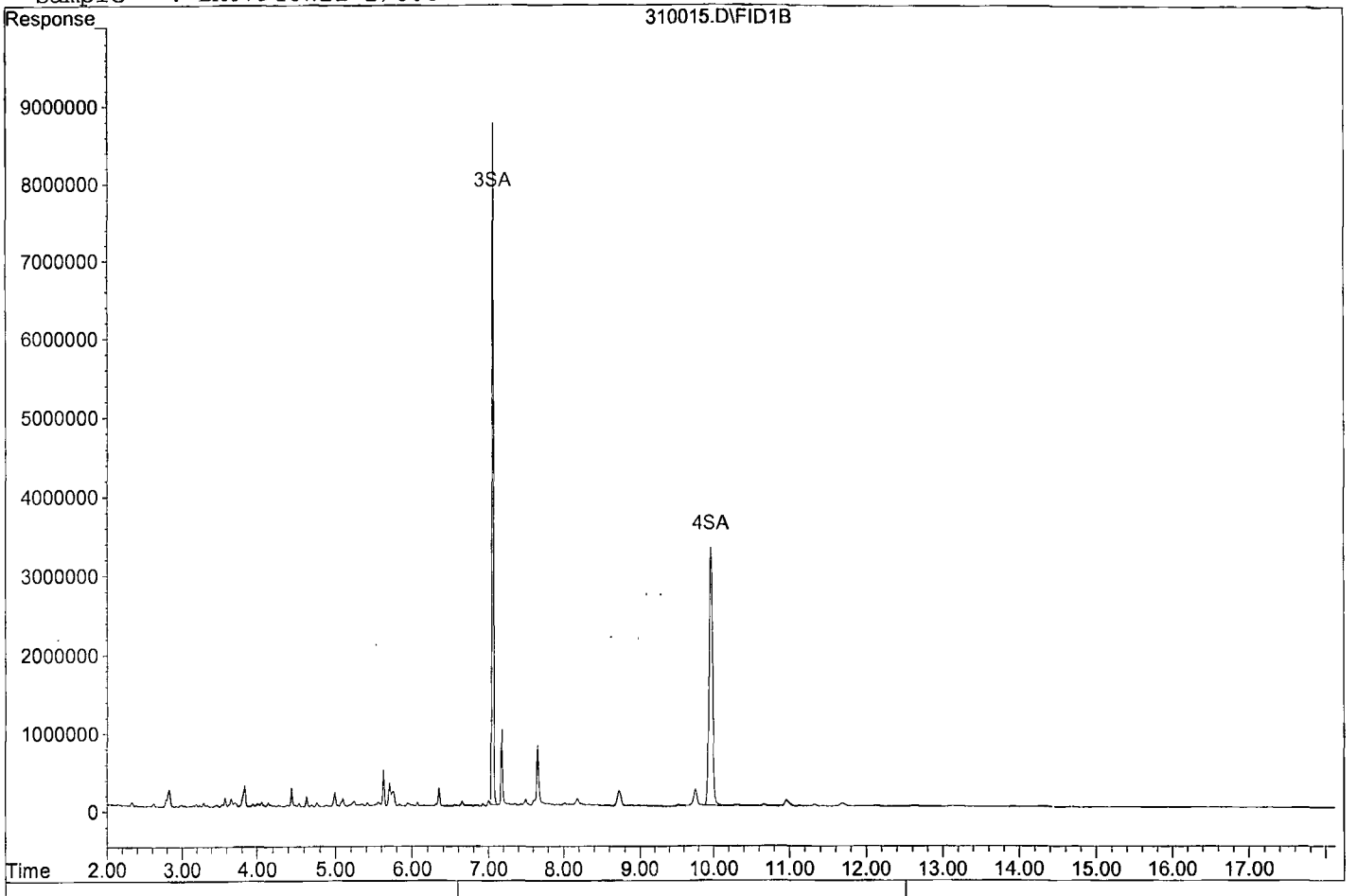
Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

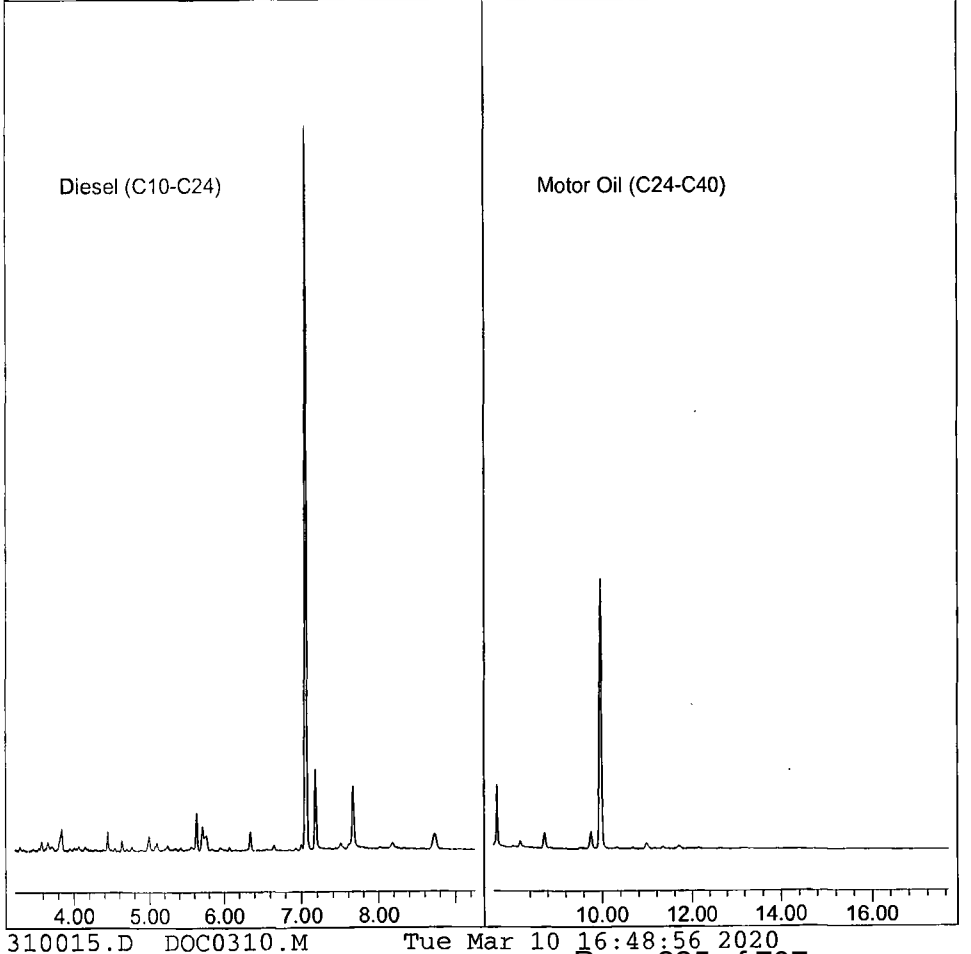
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.06	121925068	60.707	ppb
Surrogate Spike 75.000		Recovery =	80.94%	
4) SA Octacosane(S)	9.96	108228955	77.472	ppb
Surrogate Spike 75.000		Recovery =	103.30%	
Target Compounds				
Target Compounds				
1) HATM Diesel (C10-C24)	0.00	0	N.D.	ppb
2) HBTM Motor Oil (C24-C40)	0.00	0	N.D.	ppb

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

Data File: G:\APOLLO\DATA\200310\310015.D
Sample : BA07946W11 2/800





310015.D DOC0310.M Tue Mar 10 16:48:56 2020

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310016.D Vial: 16
Acq On : 3-10-20 15:51:32 Operator: SS
Sample : BA07947W13 2/800 Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Mar 10 16:29 2020 Quant Results File: DOC0310.RES

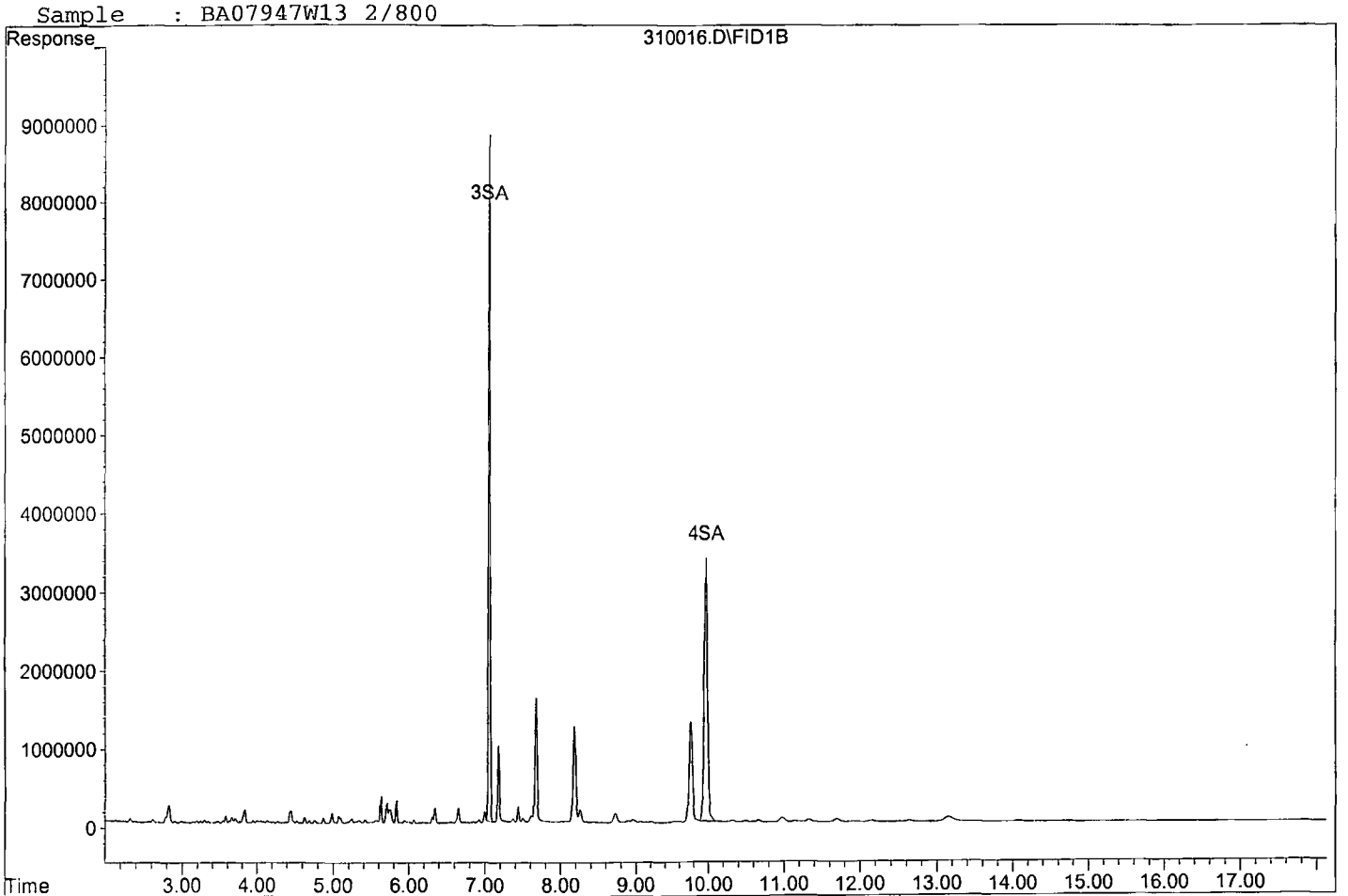
Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

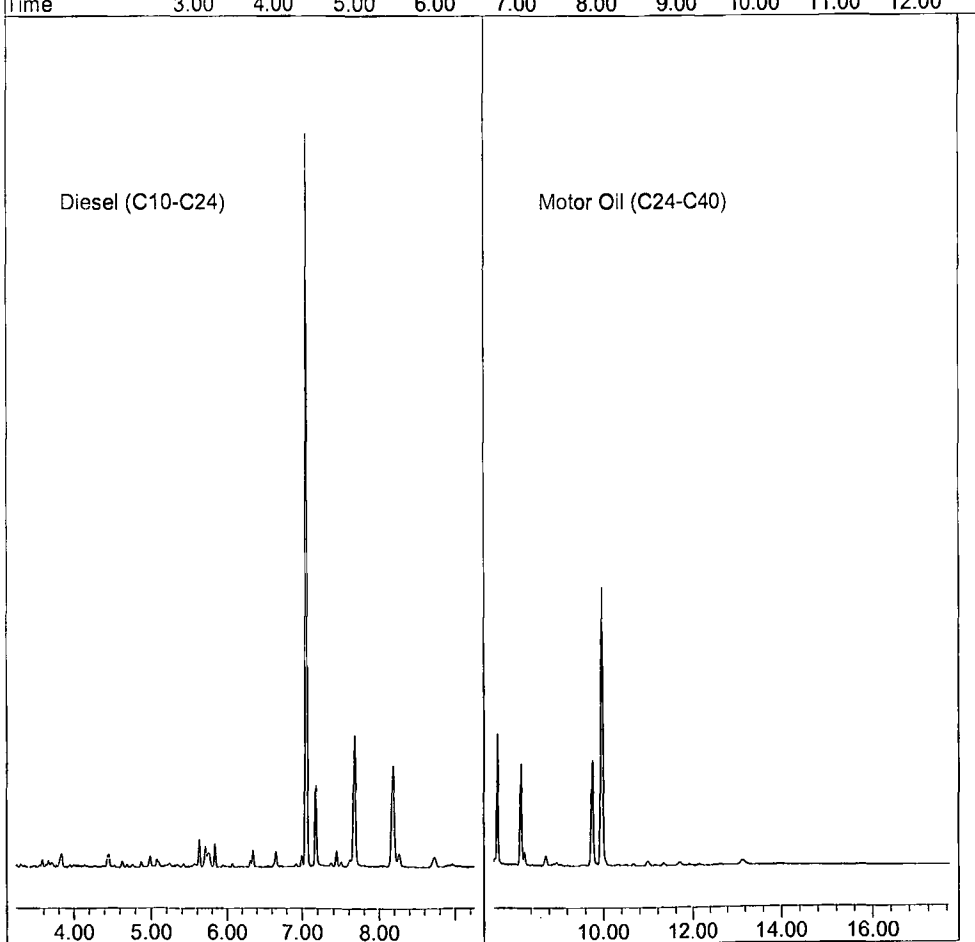
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.06	120172527	59.834	ppb
Surrogate Spike 75.000		Recovery =	79.78%	
4) SA Octacosane(S)	9.97	108651077	77.774	ppb
Surrogate Spike 75.000		Recovery =	103.70%	
Target Compounds				
Target Compounds				
1) HATM Diesel (C10-C24)	0.00	0	N.D.	ppb
2) HBTM Motor Oil (C24-C40)	0.00	0	N.D.	ppb

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

Data File: G:\APOLLO\DATA\200310\310016.D
Sample : BA07947W13 2/800





310016.D DOC0310.M Tue Mar 10 16:48:59 2020

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310010.D Vial: 10
Acq On : 3-10-20 13:35:44 Operator: SS
Sample : 200306A BLK 2/800 Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Mar 10 15:31 2020 Quant Results File: DOC0310.RES

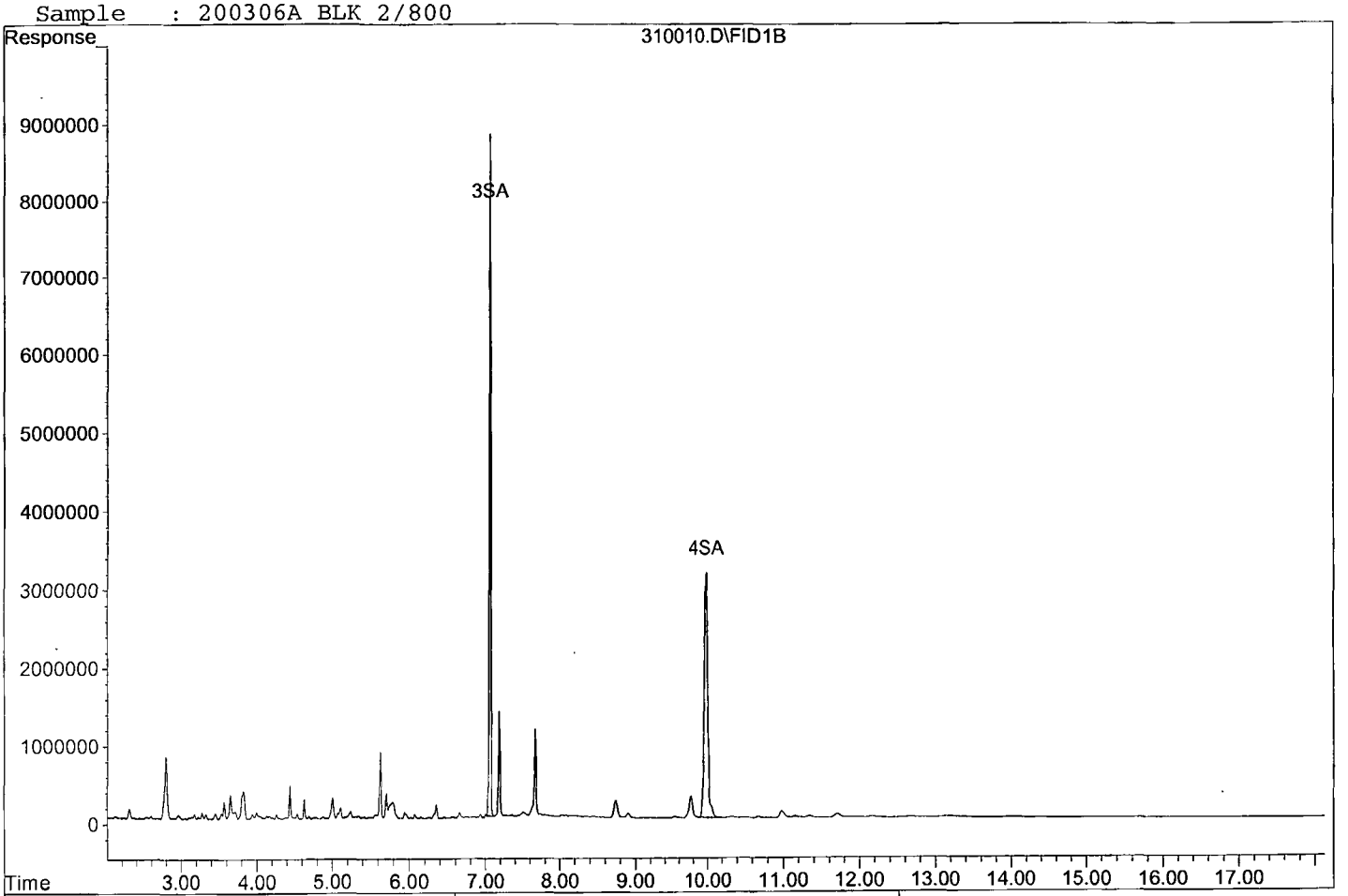
Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

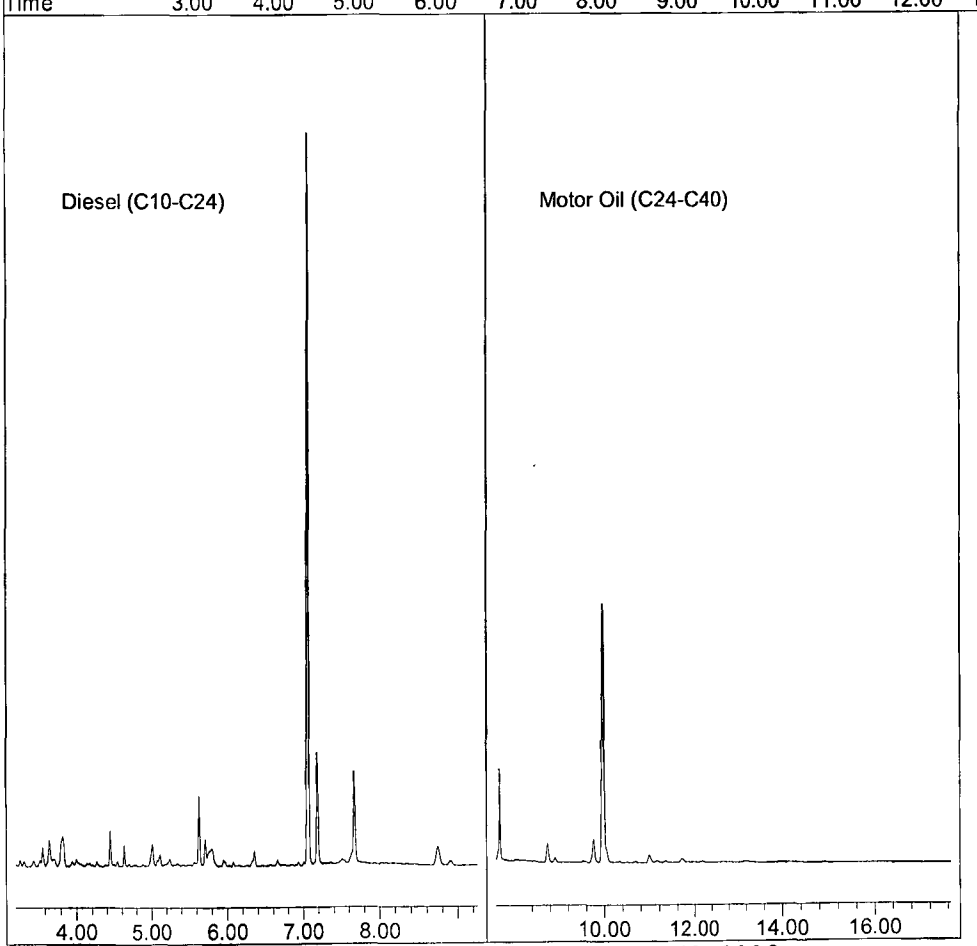
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.06	122820475	61.153	ppb
Surrogate Spike 75.000		Recovery =	81.54%	
4) SA Octacosane(S)	9.98	110966714	79.432	ppb
Surrogate Spike 75.000		Recovery =	105.91%	
Target Compounds				
Target Compounds				
1) HATM Diesel (C10-C24)	0.00	0	N.D.	ppb
2) HBTM Motor Oil (C24-C40)	0.00	0	N.D.	ppb

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

Data File: G:\APOLLO\DATA\200310\310010.D
Sample : 200306A BLK 2/800





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310011.D Vial: 11
Acq On : 3-10-20 13:58:13 Operator: SS
Sample : 200306A LCS-1 2/800 Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Mar 10 14:26 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

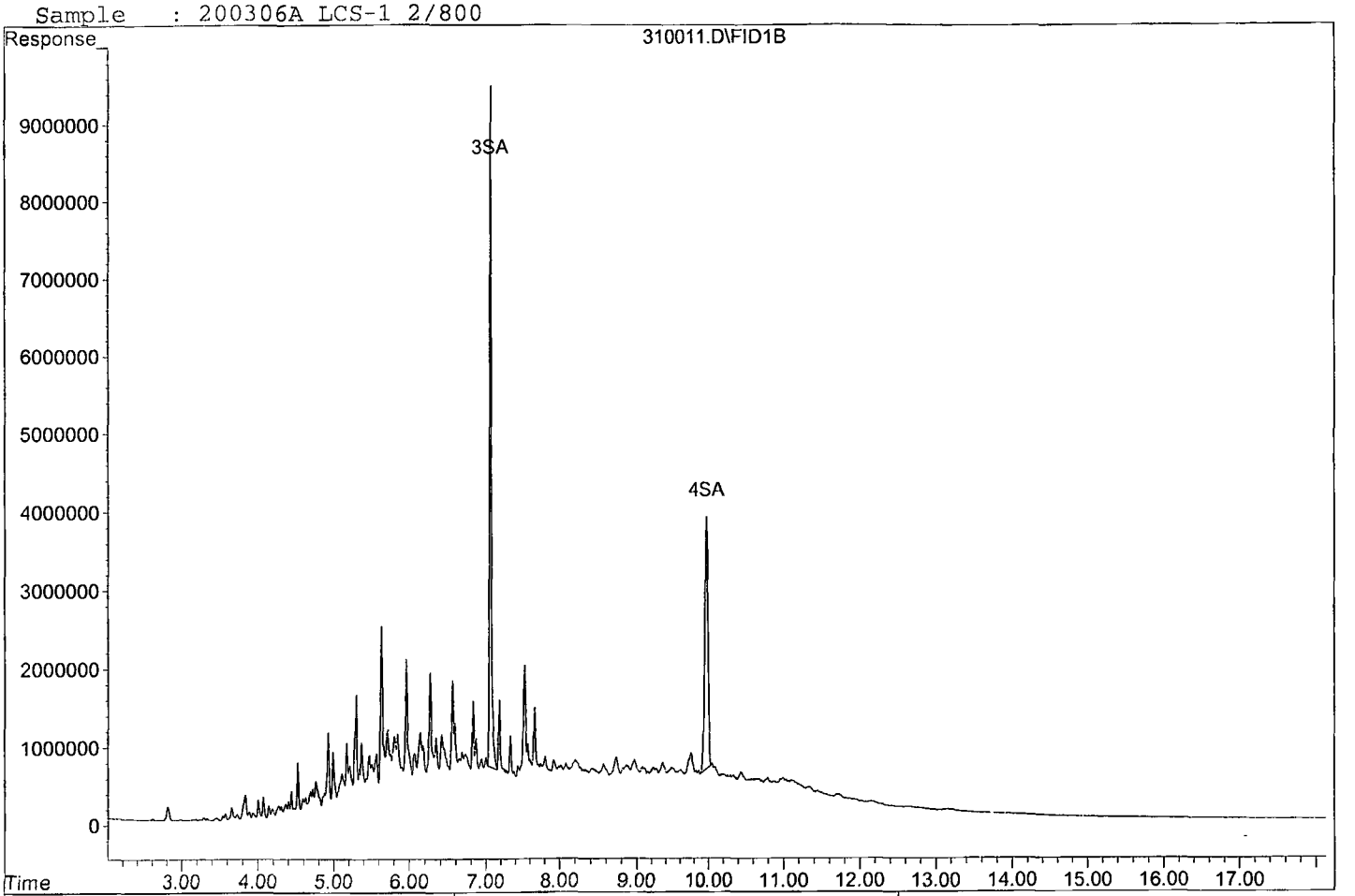
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

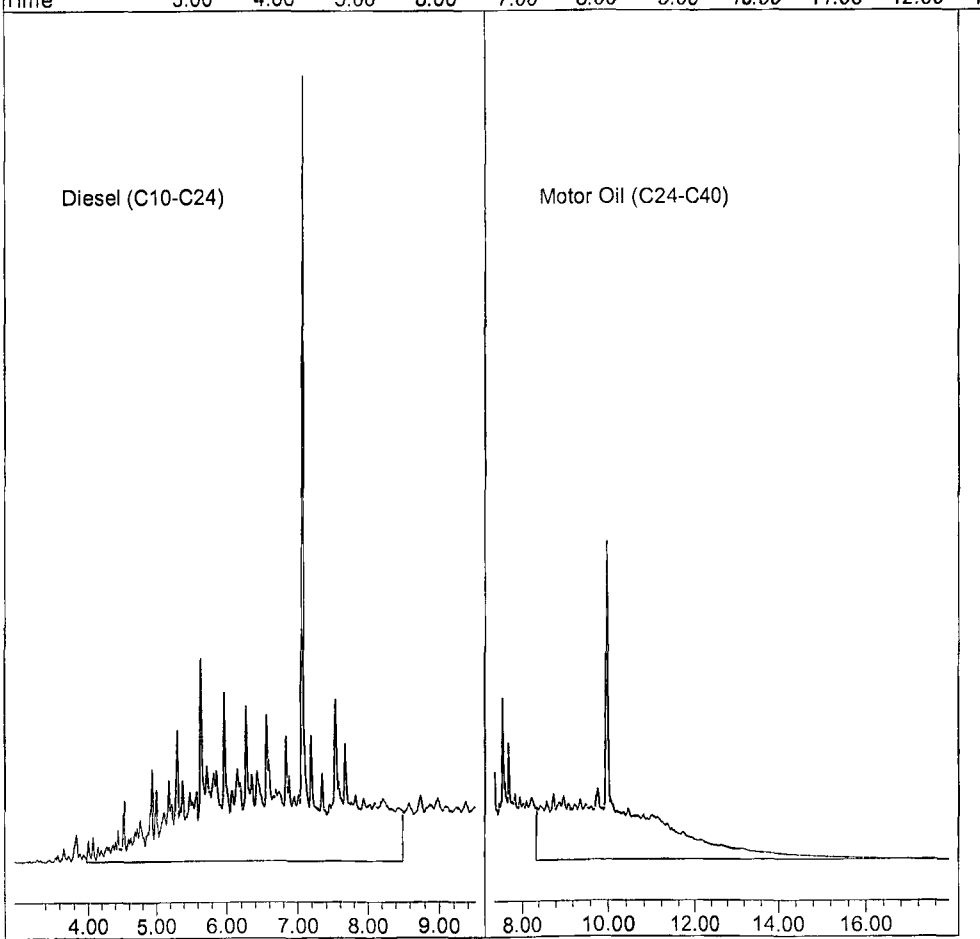
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.06	136959621	68.193	ppb
Surrogate Spike 75.000		Recovery =	90.92%	
4) SA Octacosane(S)	9.97	102131181	73.107	ppb
Surrogate Spike 75.000		Recovery =	97.48%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.24	1825385954	1189.882	ppb
2) HBTM Motor Oil (C24-C40)	12.60	1425643258	1208.668	ppb

Target Compounds

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

Data File: G:\APOLLO\DATA\200310\310011.D
Sample : 200306A LCS-1 2/800





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310012.D Vial: 12
Acq On : 3-10-20 14:20:46 Operator: SS
Sample : 200306A LCSD-1 2/800 Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Mar 10 15:28 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

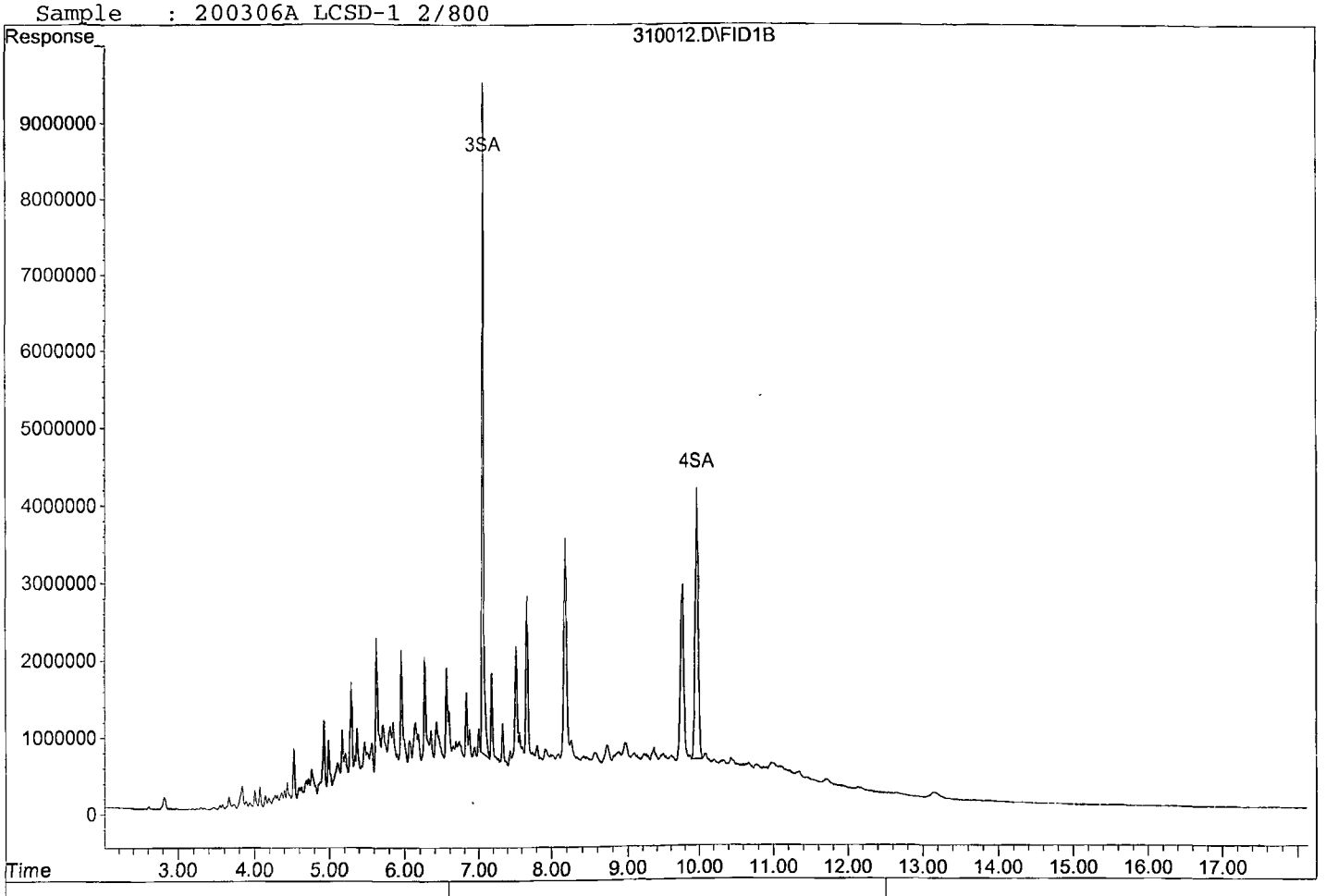
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

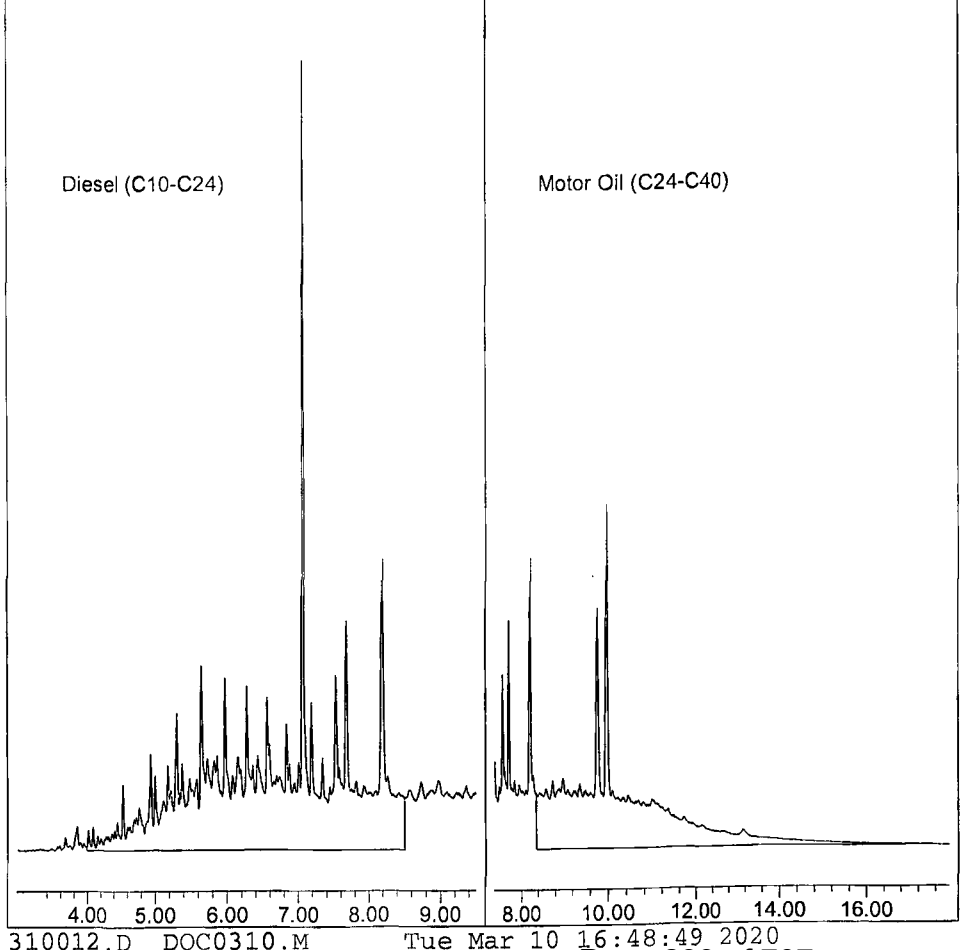
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.06	136860803	68.144	ppb
Surrogate Spike 75.000		Recovery =	90.86%	
4) SA Octacosane(S)	9.97	107642569	77.052	ppb
Surrogate Spike 75.000		Recovery =	102.74%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.24	1975298191	1287.603	ppb
2) HBTM Motor Oil (C24-C40)	12.60	1546116575	1310.806	ppb

Target Compounds

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

Data File: G:\APOLLO\DATA\200310\310012.D
Sample : 200306A LCSD-1 2/800





310012.D DOC0310.M Tue Mar 10 16:48:49 2020

Diesel / Motor Oil Calibration Curve

Prepared: 03/05/20

Expires: 02/13/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference to APPL Prep Date	Exp. Date	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel / Motor Oil Calibration STD	Restek	Diesel / Motor Oil - 1	2,000	Prepared 03/05/20	02/13/21	N/A	5uL	1mL	MC	10
Diesel / Motor Oil Calibration STD	Restek	Diesel / Motor Oil -2	2,000	Prepared 03/05/20	02/13/21	N/A	25uL	1mL	MC	50
Diesel / Motor Oil Calibration STD	Restek	Diesel / Motor Oil - 3	2,000	Prepared 03/05/20	02/13/21	N/A	125uL	1mL	MC	250
Diesel / Motor Oil Calibration STD	Restek	Diesel / Motor Oil - 4	2,000	Prepared 03/05/20	02/13/21	N/A	500uL	1mL	MC	1000
Diesel / Motor Oil Calibration STD	Restek	Diesel / Motor Oil - 5	2,000	Prepared 03/05/20	02/13/21	N/A	750uL	1mL	MC	1500
Diesel / Motor Oil Calibration STD	Restek	Diesel / Motor Oil - 6	2,000	Prepared 03/05/20	02/13/21	N/A	100uL	100uL	N/A	2,000

Diesel Motor Oil Mix

Prepared: 02/10/20 **Prepared By (Initials): SS**

Expires: 02/10/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel Fuel #2	Restek	31258	50,000	**A0149169-49607**	**01/15/21**	**06/30/26**	3.6 mL	7.2 mL	NA	25,000
Motor Oil Composite	Restek	31464	50,000	**A0153577-49614**	**01/15/21**	**11/30/26**	3.6 mL			25,000

THC Surrogate

Prepared: 02/24/20

Expires: 02/24/21

Prepared By (Initials): SS

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
O-terphenyl / Octacosane Mix	Phenova	ALO-130161	600	**CL14921-4984**	**02/24/21**	**02/28/24**	N/A	N/A	N/A	600

Diesel / Motor Oil CCV

Prepared: 03/05/20

Expires: 02/13/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference to APPL Prep Date	Exp. Date	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel / Motor Oil STD	Restek	Diesel / Motor Oil CCV	2,000	03/05/20	02/13/21	02/13/21	1250uL	10mL	MC	250

Diesel / Motor Oil Second Source

Prepared: 12/23/19

Expires: 07/18/20

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel Fuel #2 Second Source	O2SI	G34-011598-03	50,000	**G34-319187-38959**	**10/13/20**	**09/29/21**	50uL	10mL	MC	250
Motor Oil Second Source	O2SI	116390-02-SS	50,000	**010918-39582**	**07/18/20**	**03/05/22**	50uL			

Organic Extraction Worksheet

Method	Continuous Liq/Liq TPH-Diesel/MO 3520C	Extraction Set	200306A	Extraction Method	LIQ005	Units	mL

Spiked ID 1	Diesel Motor Oil Mix 2-10-20 2-10-21		Surrogate ID 1	THC Surrogate 2-24-20 2-24-21	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	03/06/20 11:00	
Spiked ID 8			Ext. End Time:	03/07/20 7:30	
			GC Requires Extract By:		

pH1	2	03/06/20 7:40	Water Bath Temp 1 °C	35/38.5 °C
pH2			Water Bath Temp 2 °C	35/34.5
pH3			Water Bath Temp 3 °C	35/34.4 °C

Spiked By: DL **Date** 03/06/20 **Witnessed By:** KY **Date** 03/06/20

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	200306A Blk				0.100	1	800	2	2	03/06/20 10:20	
						equip	E-HP29 E-WB1				
2	200306A LCS-1		0.040	1	0.100	1	800	2	2	03/06/20 10:20	
						equip	E-HP30 E-WB2				
3	200306A LCSD-1		0.040	1	0.100	1	800	2	2	03/06/20 10:20	
						equip	E-HP17 E-WB3				
4	BA07942	BA07942W21			0.100	1	800	2	2	03/06/20 10:20	91585
						equip	E-HP16 E-WB1				
5	BA07944	BA07944W21			0.100	1	800	2	2	03/06/20 10:20	91585
						equip	E-HP15 E-WB2				
6	BA07946	BA07946W11			0.100	1	800	2	2	03/06/20 10:20	91585
						equip	E-HP14 E-WB3				
7	BA07947	BA07947W13			0.100	1	800	2	2	03/06/20 10:20	91585
						equip	E-HP13 E-WB1				

Solvent and Lot#	
1+1 HCL	2-15-20
PH Strips	HC998032
Dicholormethane (DCM)	59289
Filter Paper	400171
Sodium Sulfate (Na2SO4)	2019020631

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	SS
Date	3/9/20
Time	14:30
Refrigerator	HOBART

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL
Concentration	DL

Modified	03/10/20 8:43:04 AM

Reviewed By: KY **Date** 03/09/20

Injection Log

Directory: G:\APOLLO\DATA\200310\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	3	310003.D	1	Diesel Motor Oil-1 3/5/20	water	3-10-20 9:37:22
2	4	310004.D	1	Diesel Motor Oil-2 3/5/20	water	3-10-20 9:59:49
3	5	310005.D	1	Diesel Motor Oil-3 3/5/20	water	3-10-20 10:22:19
4	6	310006.D	1	Diesel Motor Oil-4 3/5/20	water	3-10-20 10:44:50
5	7	310007.D	1	Diesel Motor Oil-5 3/5/20	water	3-10-20 11:07:20
6	8	310008.D	1	Diesel Motor Oil-6 3/5/20	water	3-10-20 11:29:51
7	9	310009.D	1	Diesel Motor Oil-SS 3/5/20	water	3-10-20 11:52:24
8	10	310010.D	2.5	200306A BLK 2/800	water	3-10-20 13:35:44
9	11	310011.D	2.5	200306A LCS-1 2/800	water	3-10-20 13:58:13
10	12	310012.D	2.5	200306A LCSD-1 2/800	water	3-10-20 14:20:46
11	13	310013.D	2.5	BA07942W21 2/800	water	3-10-20 14:43:26
12	14	310014.D	2.5	BA07944W21 2/800	water	3-10-20 15:06:04
13	15	310015.D	2.5	BA07946W11 2/800	water	3-10-20 15:28:48
14	16	310016.D	2.5	BA07947W13 2/800	water	3-10-20 15:51:32
15	17	310017.D	1	Diesel Motor Oil-CCV 3/5/20	water	3-10-20 16:14:14

ORGANICS
Calibration Data

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/19/19
Matrix: Instrument: Yoda
Initials:

		Compound	4	5	10	20	40	50	60	80	91		Avg	%RSD	Type	r^2	Q	MRF
			1219Y004.D	1219Y005.D	1219Y006.D	1219Y007.D	1219Y008.D	1219Y003.D	1219Y009.D	1219Y010.D	1219Y011.D							
1	I	1,4-dichlorobenzene-D4(IS)	ISTD															
2		1,4-Dioxane	0.5052	0.5856	0.6410	0.5627	0.5805	0.5963	0.6744	0.6671	0.6074		0.60	8.8				
3	TM	n-Nitrosodimethylamine	1.092	1.156	1.069	0.9475	1.038	1.123	1.210	1.250	1.165		1.1	8.3	TM			
4	TM	Pyridine	2.280	2.408	2.771	2.400	2.420	2.500	2.834	2.907	2.763		2.6	8.9	TM			
5	S	2-Fluorophenol (S)	1.525	1.320	1.432	1.300	1.319	1.484	1.561	1.672	1.583		1.5	9.1	S			
6	S	Phenol-D6 (S)	1.895	1.660	1.756	1.615	1.647	1.920	2.000	2.210	2.108		1.9	11	S			
7	*TM	Phenol	1.874	1.910	2.112	1.928	2.040	2.339	2.470	2.610	2.555		2.2	13	*TM			0.800
8	TM	Aniline	1.334	1.308	1.389	1.427	1.419	1.463	1.661	1.551	1.396		1.4	7.6	TM			
9	TM	Bis (2-chloroethyl) ether	0.9219	0.9198	1.036	0.9251	0.9557	1.056	1.119	1.151	1.107		1.0	9.1	TM			0.700
10	TM	2-Chlorophenol	1.386	1.438	1.555	1.396	1.440	1.608	1.703	1.757	1.686		1.6	9.2	TM			0.800
11	TM	1,3-DCB	1.540	1.631	1.750	1.502	1.582	1.715	1.840	1.921	1.849		1.7	8.7	TM			
12	*TM	1,4-DCB	1.544	1.652	1.762	1.558	1.630	1.757	1.903	1.978	1.905		1.7	9.1	*TM			
13	TM	Benzyl alcohol	0.7777	0.8093	0.9119	0.8082	0.8456	0.9912	1.002	1.065	1.018		0.91	12	TM			
14	TM	1,2-DCB	1.448	1.499	1.651	1.429	1.487	1.659	1.774	1.842	1.807		1.6	10.0	TM			
15	TM	2-Methylphenol	1.219	1.234	1.309	1.185	1.252	1.417	1.495	1.568	1.511		1.4	11	TM			0.700
16	TM	Bis (2-chloroisopropyl) ether	1.212	1.245	1.332	1.184	1.244	1.395	1.475	1.549	1.485		1.3	10.0	TM			
17	TM	Acetophenone	2.010	2.013	2.231	2.067	2.158	2.442	2.558	2.698	2.600		2.3	12	TM			0.010
18	TM	3&4-Methylphenol	1.542	1.554	1.716	1.541	1.629	1.904	1.973	2.123	2.050		1.8	13	TM			0.600
19	**TM	n-Nitrosodi-n-propylamine	1.263	1.297	1.414	1.295	1.361	1.591	1.666	1.776	1.701		1.5	13	**TM			0.500
20	TM	Hexachloroethane	0.6270	0.6828	0.7293	0.6605	0.6729	0.7406	0.7887	0.8348	0.8027		0.73	9.8	TM			0.300
21	I	Napthalene-D8(IS)	ISTD															
22	S	Nitrobenzene-D5(S)	0.5318	0.4774	0.4864	0.4745	0.4719	0.4933	0.5032	0.5240	0.5147		0.50	4.5	S			
23	TM	Nitrobenzene	0.4642	0.5003	0.5125	0.4754	0.5054	0.5308	0.5427	0.5516	0.5571		0.52	6.4	TM			0.200
24	TM	Isophorone	0.7546	0.7674	0.8060	0.7539	0.7961	0.8472	0.8485	0.8787	0.8684		0.81	6.0	TM			0.400
25	*TM	2-Nitrophenol	0.1803	0.1912	0.2042	0.1970	0.2076	0.2181	0.2244	0.2306	0.2309		0.21	8.6	*TM			0.100
26	TM	2,4-Dimethylphenol	0.3048	0.3153	0.3305	0.3095	0.3230	0.3472	0.3501	0.3640	0.3704		0.33	7.1	TM			0.200
27	TML	Benzoic acid	0.0946	0.1138	0.1879	0.2336	0.2825	0.2721	0.2855	0.3030	0.3030		0.23	35	TML	0.998		
28	TM	Bis (2-chloroethoxy) methane	0.3781	0.3943	0.4143	0.3907	0.4119	0.4361	0.4454	0.4624	0.4662		0.42	7.6	TM			0.300
29	*TM	2,4-Dichlorophenol	0.2893	0.2989	0.3168	0.3008	0.3208	0.3413	0.3480	0.3629	0.3610		0.33	8.5	*TM			0.200
30	TM	1,2,4-Trichlorobenzene	0.3149	0.3503	0.3569	0.3288	0.3583	0.3733	0.3895	0.4028	0.4041		0.36	8.6	TM			
31	TM	3,4-Dimethylphenol	0.5088	0.4953	0.5614	0.5223	0.5395	0.5890	0.5844	0.6060	0.6089		0.56	7.6	TM			
32	TM	Naphthalene	0.9866	1.025	1.068	1.000	1.055	1.118	1.145	1.187	1.210		1.1	7.4	TM			0.700
33	TM	4-Chloroaniline	0.4130	0.4102	0.4466	0.4160	0.4341	0.4535	0.4589	0.4596	0.4467		0.44	4.6	TM			0.010
34	TM	2,6-Dichlorophenol	0.2696	0.2967	0.3074	0.2937	0.3088	0.3382	0.3396	0.3625	0.3634		0.32	10	TM			
35	TM	Hexachloropropene	0.2671	0.2881	0.2978	0.2893	0.3112	0.3320	0.3401	0.3527	0.3589		0.32	10	TM			

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/19/19
Matrix: Instrument: Yoda Initials:

		Compound	4	5	10	20	40	50	60	80	91		Avg	%RSD	Type		Q	
36	*TM	Hexachlorobutadiene	0.2198	0.2305	0.2457	0.2253	0.2401	0.2518	0.2615	0.2734	0.2764		0.25	8.3	*TM			0.010
37	TM	Caprolactum	0.1360	0.1418	0.1459	0.1372	0.1421	0.1515	0.1509	0.1569	0.1569		0.15	5.4	TM			0.010
38	*TM	4-Chloro-3-methylphenol	0.3433	0.3492	0.3767	0.3527	0.3826	0.4117	0.4148	0.4325	0.4262		0.39	8.9	*TM			0.200
39	TM	2-Methylnaphthalene	0.6528	0.6825	0.7189	0.6672	0.7074	0.7659	0.7721	0.8038	0.8214		0.73	8.3	TM			0.400
40	TM	1-Methylnaphthalene	0.6774	0.7258	0.7430	0.6772	0.7340	0.7929	0.8094	0.8459	0.8492		0.76	8.6	TM			
41	I	Acenaphthene-D10(IS)	ISTD															
42	**TML	Hexachlorocyclopentadiene	0.1728	0.2331	0.2484	0.3602	0.4060	0.4718	0.4812	0.5045	0.4482		0.37	33	**TML	0.991		0.050
43	TM	1,2,4,5-Tetrachlorobenzene	0.5593	0.5899	0.5937	0.5643	0.6173	0.6743	0.6677	0.7241	0.7440		0.64	11	TM			0.010
44	*TM	2,4,6-Trichlorophenol	0.3671	0.3707	0.4007	0.3830	0.4055	0.4458	0.4421	0.4627	0.4769		0.42	9.8	*TM			0.200
45	TM	2,4,5-Trichlorophenol	0.4207	0.4236	0.4252	0.4143	0.4421	0.4723	0.4724	0.4964	0.5050		0.45	7.7	TM			0.200
46	S	2-Fluorobiphenyl(S)	1.577	1.423	1.350	1.366	1.373	1.489	1.494	1.591	1.634		1.5	7.2	S			
47	TM	1,1'-Biphenyl	1.395	1.444	1.455	1.418	1.494	1.625	1.612	1.736	1.784		1.6	9.2	TM			0.010
48	TM	2-Chloronaphthalene	1.127	1.156	1.195	1.149	1.201	1.307	1.296	1.382	1.417		1.2	8.5	TM			0.800
49	TM	2-Nitroaniline	0.4167	0.4376	0.4565	0.4486	0.4606	0.5021	0.4976	0.5202	0.5237		0.47	8.1	TM			0.010
50	TM	Dimethyl phthalate	1.422	1.455	1.461	1.410	1.474	1.591	1.590	1.671	1.690		1.5	7.0	TM			0.010
51	TM	2,6-DNT	0.2885	0.2872	0.3086	0.3140	0.3290	0.3597	0.3549	0.3784	0.3815		0.33	11	TM			0.200
52	TM	Acenaphthylene	1.710	1.793	1.808	1.775	1.875	2.023	2.023	2.114	2.167		1.9	8.5	TM			0.900
53	TM	3-Nitroaniline	0.3591	0.3544	0.3786	0.3695	0.3887	0.4218	0.4188	0.4298	0.4424		0.40	8.3	TM			0.010
54	*TM	Acenaphthene	1.085	1.127	1.137	1.078	1.162	1.275	1.255	1.332	1.363		1.2	8.9	*TM			0.900
55	**TML	2,4-Dinitrophenol	0.0287	0.0331	0.0777	0.1240	0.1723	0.1832	0.1984	0.2141	0.2201		0.14	55	**TML	0.993		0.010
56	**TM	4-Nitrophenol	0.0290	0.0284	0.0307	0.0282	0.0302	0.0332	0.0320	0.0336	0.0352		0.03	7.9	**TM			0.010
57	TM	Dibenzofuran	1.623	1.671	1.677	1.629	1.734	1.930	1.924	2.084	2.153		1.8	11	TM			0.800
58	TM	2,4-DNT	0.3958	0.4169	0.4457	0.4462	0.4784	0.5343	0.5256	0.5800	0.5904		0.49	14	TM			0.200
59	TM	2,3,4,6-Tetrachlorophenol	0.2835	0.3006	0.3178	0.3136	0.3386	0.3682	0.3763	0.3904	0.3993		0.34	12	TM			0.010
60	TM	Diethyl phthalate	1.467	1.516	1.534	1.474	1.545	1.655	1.632	1.704	1.733		1.6	6.3	TM			0.010
61	TM	4-Chlorophenyl phenyl ether		0.7633	0.7429	0.7444	0.8104	0.9246	0.9212	1.040	1.072		0.88	15	TM			0.400
62	TM	Fluorene	1.306	1.349	1.363	1.361	1.475	1.673	1.668	1.846	1.932		1.6	15	TM			0.900
63	TM	4-Nitroaniline	0.3151	0.3031	0.3294	0.3142	0.3263	0.3501	0.3462	0.3402	0.3445		0.33	5.0	TM			0.010
64	S	2,4,6-Tribromophenol(S)	0.2342	0.2311	0.2068	0.2116	0.2324	0.2576	0.2590	0.2918	0.3127		0.25	14	S			
65	I	Phenanthrene-D10(IS)	ISTD															
66	TM	4,6-Dinitro-2-methylphenol			0.1237	0.1331	0.1507	0.1615	0.1663	0.1780	0.1783		0.16	14	TM			0.010
67	TM	Diphenyl amine		0.5674	0.5878	0.5670	0.6272	0.6767	0.6917	0.7384	0.7531		0.65	11	TM			
68	*TM	n-Nitrosodiphenylamine		0.5674	0.5878	0.5670	0.6272	0.6767	0.6917	0.7384	0.7531		0.65	11	*TM			0.010
69	TM	1,2-Diphenylhydrazine	0.8725	0.8825	0.9231	0.8661	0.9237	0.9667	0.9904	1.038	1.013		0.94	6.7	TM			
70	TM	4-Bromophenyl phenyl ether	0.2168	0.2117	0.2303	0.2234	0.2447	0.2591	0.2603	0.2775	0.2827		0.25	11	TM			0.100

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/19/19
Matrix: Instrument: Yoda Initials:

		Compound	4	5	10	20	40	50	60	80	91		Avg	%RSD	Type		Q	
71	TM	Hexachlorobenzene	0.2189	0.2230	0.2350	0.2209	0.2419	0.2639	0.2678	0.2781	0.2827		0.25	10	TM			0.100
72	TM	Atrazine		0.2202	0.2285	0.2039	0.2199	0.2039	0.2312	0.2400	0.2413		0.22	6.5	TM			0.010
73	*TM	Pentachlorophenol				0.1167	0.1380	0.1587	0.1560	0.1693	0.1761		0.15	14	*TM			0.050
74	TM	Phenanthrene	1.008	1.029	1.058	1.008	1.079	1.131	1.159	1.215	1.247		1.1	8.0	TM			0.700
75	TM	Anthracene	1.024	1.060	1.108	1.058	1.130	1.203	1.210	1.282	1.310		1.2	8.9	TM			0.700
76	TM	Carbazol	0.9547	0.9719	1.001	0.9555	1.020	1.099	1.107	1.168	1.177		1.1	8.5	TM			0.010
77	TM	Di-n-butylphthalate	1.254	1.280	1.325	1.308	1.422	1.524	1.557	1.600	1.659		1.4	11	TM			0.010
78		2-Nitrodiphenylamine	0.2581	0.2591	0.2987	0.3023	0.3376	0.3611	0.3621	0.3733	0.3885		0.33	15				
79	*TM	Fluoranthene	1.136	1.164	1.219	1.161	1.277	1.377	1.374	1.473	1.455		1.3	10	*TM			0.600
80	I	Chrysene-D12(IS)	ISTD															
81	TM	Benzidine	0.4294	0.4321	0.4090	0.3966	0.3741						0.41	5.9	TM			
82	TM	Pyrene	1.234	1.320	1.294	1.198	1.211	1.149	1.140	1.104	1.141		1.2	6.1	TM			0.600
83	S	Terphenyl-D14(S)	1.144	1.050	0.9741	0.9361	0.9110	0.8552	0.8740	0.8455	0.9945		0.95	10	S			
84	TM	Butyl benzylphthalate	0.6241	0.6476	0.6440	0.6034	0.6057	0.5784	0.5714	0.5550	0.5770		0.60	5.5	TM			0.010
85	TM	3,3'-Dichlorobenzidine	0.4406	0.4474	0.4653	0.4210	0.4166	0.4318	0.3803	0.3533	0.3523		0.41	9.9	TM			0.010
86	TM	Benz (a) anthracene	1.378	1.384	1.377	1.254	1.272	1.281	1.262	1.262	1.284		1.3	4.3	TM			0.800
87	TM	Bis (2-ethylhexyl) phthalate	0.9872	1.026	1.020	0.9806	0.9843	1.006	0.9951	1.003	1.032		1.0	1.9	TM			0.010
88	TM	Chrysene	1.126	1.256	1.202	1.146	1.157	1.110	1.070	1.065	1.090		1.1	5.5	TM			0.700
89	*TM	Di-n-octylphthalate	1.492	1.569	1.601	1.470	1.479	1.480	1.436	1.394	1.414		1.5	4.6	*TM			0.010
90	I	Perylene-D12(IS)	ISTD															
91	TM	Benzo (b) fluoranthene	1.200	1.183	1.189	1.231	1.306	1.417	1.414	1.408	1.411		1.3	8.2	TM			0.700
92	TM	Benzo (k) fluoranthene	1.036	1.129	1.146	1.047	1.126	1.214	1.174	1.322	1.406		1.2	10	TM			0.700
93	*TM	Benzo (a) pyrene	1.048	1.092	1.101	1.069	1.126	1.226	1.213	1.267	1.293		1.2	7.8	*TM			0.700
94	TM	Indeno (1,2,3-cd) pyrene	1.218	1.270	1.279	1.250	1.330	1.445	1.416	1.464	1.494		1.4	7.7	TM			0.500
95	TM	Dibenz (a,h) anthracene	1.044	1.127	1.135	1.106	1.175	1.293	1.267	1.331	1.359		1.2	9.2	TM			0.400
96	TM	Benzo (g,h,i) perylene	0.9656	1.022	1.029	1.003	1.043	1.124	1.098	1.126	1.148		1.1	6.0	TM			0.500
97																		
98																		
99																		
100																		
101																		
102																		
103																		
104																		
105																		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y003.D Vial: 3
Acq On : 19 Dec 19 9:06 Operator: MA,SS
Sample : 50ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.38	152	196599	40.00000	ppb	0.00
21) Napthalene-D8(IS)	6.83	136	821661	40.00000	ppb	0.00
41) Acenaphthene-D10(IS)	8.84	164	498864	40.00000	ppb	0.00
65) Phenanthrene-D10(IS)	10.57	188	965840	40.00000	ppb	0.00
80) Chrysene-D12(IS)	13.67	240	1196016	40.00000	ppb	0.00
90) Perylene-D12(IS)	15.49	264	1033039	40.00000	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.82	112	729337	101.21407	ppb	0.00
Spiked Amount 200.000			Recovery = 50.607%			
6) Phenol-D6 (S)	5.00	99	943605	102.78046	ppb	0.00
Spiked Amount 200.000			Recovery = 51.390%			
22) Nitrobenzene-D5(S)	6.01	82	506628	49.57999	ppb	0.00
Spiked Amount 100.000			Recovery = 49.580%			
46) 2-Fluorobiphenyl(S)	8.06	172	928304	50.38731	ppb	0.00
Spiked Amount 100.000			Recovery = 50.387%			
64) 2,4,6-Tribromophenol(S)	9.77	330	321251	103.61865	ppb	0.00
Spiked Amount 200.000			Recovery = 51.810%			
83) Terphenyl-D14(S)	12.43	244	1278597	44.83129	ppb	0.00
Spiked Amount 100.000			Recovery = 44.831%			
Target Compounds						Qvalue
3) n-Nitrosodimethylamine	1.91	42	275394	50.17040	ppb	100
4) Pyridine	1.92	79	614275	48.30945	ppb	100
7) Phenol	5.02	94	574851	53.05712	ppb	100
8) Aniline	5.01	93	359488	50.84319	ppb	100
9) Bis (2-chloroethyl) ether	5.08	63	259464	51.69417	ppb	100
10) 2-Chlorophenol	5.15	128	395131	51.79401	ppb	100
11) 1,3-DCB	5.31	146	421373	50.33398	ppb	100
12) 1,4-DCB	5.40	146	431772	50.39583	ppb	100
13) Benzyl alcohol	5.54	108	243593	54.20799	ppb	100
14) 1,2-DCB	5.57	146	407782	51.15484	ppb	100
15) 2-Methylphenol	5.68	107	348274	52.31608	ppb	100
16) Bis (2-chloroisopropyl) et	5.69	45	342864	51.79894	ppb	100
17) Acetophenone	5.84	105	600018	52.87990	ppb	100
18) 3&4-Methylphenol	5.86	107	935580	106.86276	ppb	100
19) n-Nitrosodi-n-propylamine	5.85	70	391093	53.58916	ppb	100
20) Hexachloroethane	5.95	117	182011	50.96658	ppb	100
23) Nitrobenzene	6.04	77	545143	51.47563	ppb	100
24) Isophorone	6.31	82	870177	52.07890	ppb	100
25) 2-Nitrophenol	6.39	139	223955	52.07765	ppb	100
26) 2,4-Dimethylphenol	6.44	122	356638	51.82729	ppb	100
27) Benzoic acid	6.60	105	279476	47.48334	ppb	100
28) Bis (2-chloroethoxy) metha	6.54	93	447865	51.64725	ppb	100
29) 2,4-Dichlorophenol	6.68	162	350537	52.24411	ppb	100
30) 1,2,4-Trichlorobenzene	6.76	180	383401	51.23105	ppb	100
31) 3,4-Dimethylphenol	6.79	107	604918	52.84249	ppb	100
32) Naphthalene	6.84	128	1148204	51.36025	ppb	100
33) 4-Chloroaniline	6.91	127	465735	51.81136	ppb	100
34) 2,6-Dichlorophenol	6.92	162	347372	52.84673	ppb	100
35) Hexachloropropene	6.95	213	340941	52.64986	ppb	100
36) Hexachlorobutadiene	6.98	225	258626	50.94087	ppb	100
37) Caprolactum	7.34	55	155640	51.68587	ppb	100
38) 4-Chloro-3-methylphenol	7.48	107	422799	53.08472	ppb	100

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

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y003.D Vial: 3
Acq On : 19 Dec 19 9:06 Operator: MA,SS
Sample : 50ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	2-Methylnaphthalene	7.63	142	786668	52.28541	ppb	100
40)	1-Methylnaphthalene	7.75	142	814338	52.04963	ppb	100
42)	Hexachlorocyclopentadiene	7.82	237	294208	51.41653	ppb	100
43)	1,2,4,5-Tetrachlorobenzene	7.84	216	420454	52.91044	ppb	100
44)	2,4,6-Trichlorophenol	7.97	196	277989	53.43197	ppb	100
45)	2,4,5-Trichlorophenol	8.02	196	294494	52.19170	ppb	100
47)	1,1'-Biphenyl	8.17	154	1013613	52.38680	ppb	100
48)	2-Chloronaphthalene	8.20	162	814737	52.35985	ppb	100
49)	2-Nitroaniline	8.32	65	313105	52.99430	ppb	100
50)	Dimethyl phthalate	8.53	163	992101	52.01547	ppb	100
51)	2,6-DNT	8.61	165	224309	53.92342	ppb	100
52)	Acenaphthylene	8.68	152	1261631	52.66138	ppb	100
53)	3-Nitroaniline	8.32	138	263026	53.26882	ppb	100
54)	Acenaphthene	8.89	154	794988	53.04993	ppb	100
55)	2,4-Dinitrophenol	8.92	184	114232	46.68381	ppb	100
56)	4-Nitrophenol	8.60	65	20732	53.32779	ppb	100
57)	Dibenzofuran	9.08	168	1203351	52.86739	ppb	100
58)	2,4-DNT	9.07	165	333192	54.48047	ppb	100
59)	2,3,4,6-Tetrachlorophenol	9.24	232	229610	53.65092	ppb	100
60)	Diethyl phthalate	9.35	149	1031999	52.22569	ppb	100
61)	4-Chlorophenyl phenyl ethe	9.48	204	576562	52.69605	ppb	100
62)	Fluorene	9.48	166	1043084	53.86740	ppb	100
63)	4-Nitroaniline	8.80	138	218292	53.05517	ppb	100
66)	4,6-Dinitro-2-methylphenol	9.56	198	195000	51.78616	ppb	100
67)	Diphenyl amine	9.63	169	1633943	103.92069	ppb	100
68)	n-Nitrosodiphenylamine	9.63	169	1633943	103.92069	ppb	100
69)	1,2-Diphenylhydrazine	9.67	77	1167037	51.32296	ppb	100
70)	4-Bromophenyl phenyl ether	10.05	248	312755	52.83109	ppb	100
71)	Hexachlorobenzene	10.13	284	318617	53.20114	ppb	100
72)	Atrazine	10.25	200	123091	22.79679	ppb	100
73)	Pentachlorophenol	10.36	266	191605	52.04610	ppb	100
74)	Phenanthrene	10.60	178	1365637	51.23790	ppb	100
75)	Anthracene	10.67	178	1452175	52.12221	ppb	100
76)	Carbazol	10.85	167	1327202	52.32019	ppb	100
77)	Di-n-butylphthalate	11.25	149	1840279	53.05379	ppb	100
78)	2-Nitrodiphenylamine	11.43	167	218003	27.62865	ppb	100
79)	Fluoranthene	11.99	202	1662853	53.26539	ppb	100
81)	Benzidine	12.14	184	328745	26.93277	ppb	100
82)	Pyrene	12.25	202	1717114	47.89582	ppb	100
84)	Butyl benzylphthalate	13.00	149	864776	48.14287	ppb	100
85)	3,3'-Dichlorobenzidine	13.62	252	645596	52.39866	ppb	100
86)	Benz (a) anthracene	13.66	228	1915683	49.05514	ppb	100
87)	Bis (2-ethylhexyl) phthala	13.67	149	1504164	50.11549	ppb	100
88)	Chrysene	13.69	228	1660091	48.87974	ppb	100
89)	Di-n-octylphthalate	14.42	149	2213014	49.95022	ppb	100
91)	Benzo (b) fluoranthene	14.96	252	1830066	54.23818	ppb	100
92)	Benzo (k) fluoranthene	14.99	252	1567732	51.53429	ppb	100
93)	Benzo (a) pyrene	15.42	252	1583146	52.86784	ppb	100
94)	Indeno (1,2,3-cd) pyrene	17.36	276	1864158	53.40274	ppb	100
95)	Dibenz (a,h) anthracene	17.40	278	1668227	53.64701	ppb	100
96)	Benzo (g,h,i) perylene	17.93	276	1451452	52.91619	ppb	100

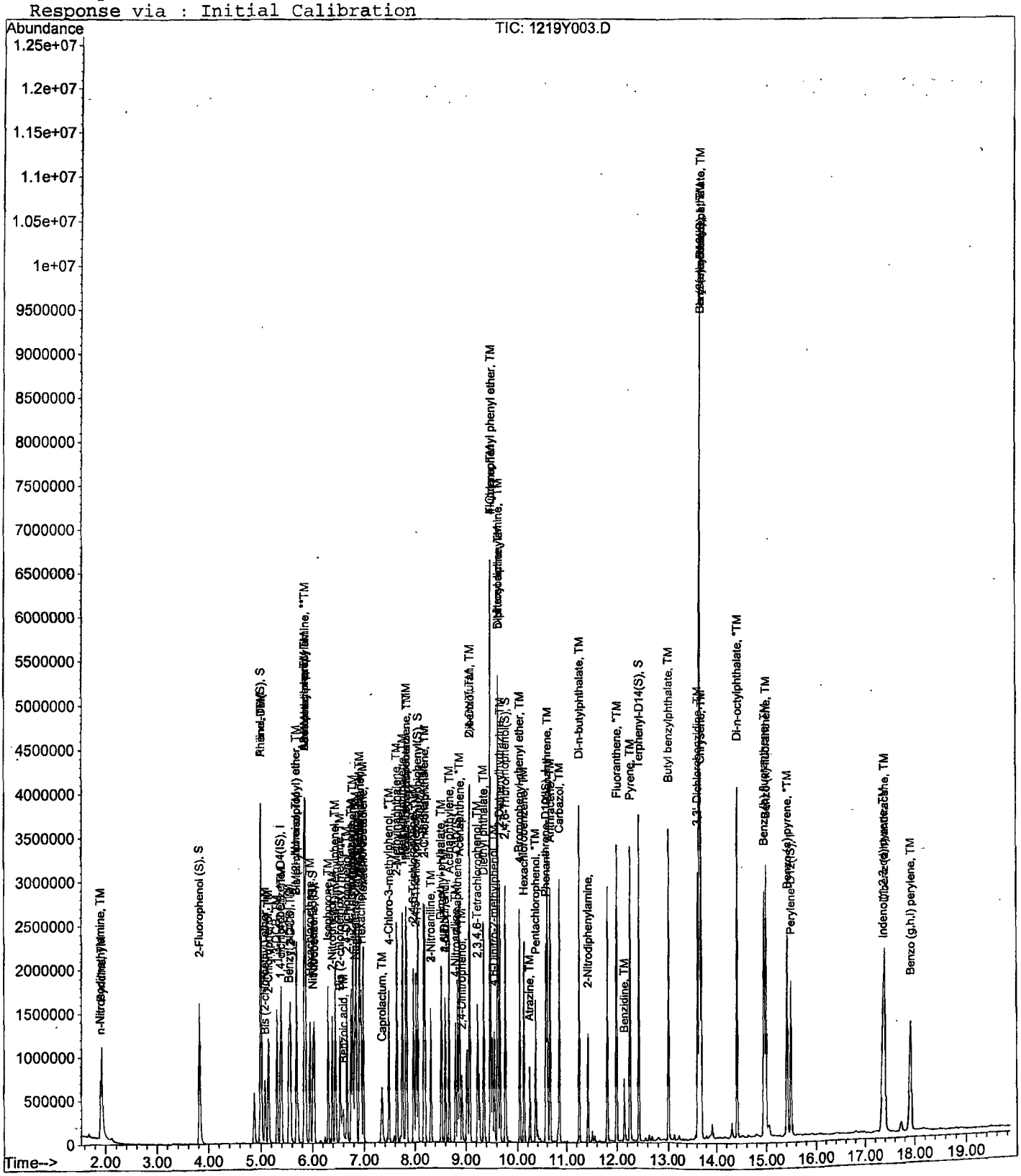
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y003.D Vial: 3
Acq On : 19 Dec 19 9:06 Operator: MA,SS
Sample : 50ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y004.D Vial: 4
Acq On : 19 Dec 19 9:33 Operator: MA,SS
Sample : 4ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.38	152	172988	40.00000	ppb		0.00
21) Napthalene-D8(IS)	6.82	136	714555	40.00000	ppb		0.00
41) Acenaphthene-D10(IS)	8.84	164	436036	40.00000	ppb		0.00
65) Phenanthrene-D10(IS)	10.57	188	836785	40.00000	ppb		0.00
80) Chrysene-D12(IS)	13.66	240	796002	40.00000	ppb		0.00
90) Perylene-D12(IS)	15.49	264	872764	40.00000	ppb		0.00
System Monitoring Compounds							
5) 2-Fluorophenol (S)	3.81	112	52772	8.32303	ppb		0.00
Spiked Amount 200.000			Recovery	= 4.162%			
6) Phenol-D6 (S)	4.99	99	65554	8.11493	ppb		0.00
Spiked Amount 200.000			Recovery	= 4.058%			
22) Nitrobenzene-D5(S)	6.00	82	37998	4.27597	ppb		0.00
Spiked Amount 100.000			Recovery	= 4.276%			
46) 2-Fluorobiphenyl(S)	8.05	172	68746	4.26912	ppb		0.00
Spiked Amount 100.000			Recovery	= 4.269%			
64) 2,4,6-Tribromophenol(S)	9.76	330	20427	7.53803	ppb		0.00
Spiked Amount 200.000			Recovery	= 3.769%			
83) Terphenyl-D14(S)	12.42	244	91079	4.79831	ppb		0.00
Spiked Amount 100.000			Recovery	= 4.798%			
Target Compounds							Qvalue
2) 1,4-Dioxane	1.69	58	874	0.33558		#	1
3) n-Nitrosodimethylamine	1.91	42	18895	3.91206	ppb		92
4) Pyridine	1.94	79	39443	3.52537	ppb		97
7) Phenol	5.00	94	32421	3.40079	ppb	#	53
8) Aniline	5.00	93	23080	3.70979	ppb		98
9) Bis (2-chloroethyl) ether	5.07	63	15947	3.61084	ppb		98
10) 2-Chlorophenol	5.15	128	23984	3.57294	ppb		97
11) 1,3-DCB	5.31	146	26641	3.61668	ppb		96
12) 1,4-DCB	5.40	146	26701	3.54187	ppb		97
13) Benzyl alcohol	5.54	108	13453	3.40238	ppb		91
14) 1,2-DCB	5.56	146	25057	3.57234	ppb		95
15) 2-Methylphenol	5.68	107	21086	3.59976	ppb		96
16) Bis (2-chloroisopropyl) et	5.69	45	20972	3.60084	ppb		88
17) Acetophenone	5.83	105	34769	3.48244	ppb		99
18) 3&4-Methylphenol	5.85	107	53356	6.92618	ppb		99
19) n-Nitrosodi-n-propylamine	5.83	70	21845	3.40184	ppb		96
20) Hexachloroethane	5.95	117	10847	3.45194	ppb		89
23) Nitrobenzene	6.02	77	33923	3.68335	ppb		96
24) Isophorone	6.29	82	53920	3.71074	ppb		99
25) 2-Nitrophenol	6.38	139	12884	3.44507	ppb		94
26) 2,4-Dimethylphenol	6.44	122	21783	3.64004	ppb		96
27) Benzoic acid	6.62	105	383	4.14033	ppb		88
28) Bis (2-chloroethoxy) metha	6.53	93	27014	3.58217	ppb		100
29) 2,4-Dichlorophenol	6.67	162	20671	3.54260	ppb		94
30) 1,2,4-Trichlorobenzene	6.75	180	22503	3.45762	ppb		97
31) 3,4-Dimethylphenol	6.78	107	36358	3.65211	ppb		95
32) Naphthalene	6.84	128	70495	3.62596	ppb		99
33) 4-Chloroaniline	6.90	127	29511	3.77509	ppb		98
34) 2,6-Dichlorophenol	6.91	162	19262	3.36963	ppb		97
35) Hexachloropropene	6.94	213	19085	3.38897	ppb		98
36) Hexachlorobutadiene	6.98	225	15703	3.55659	ppb		98
37) Caprolactum	7.27	55	9715	3.70980	ppb		95

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

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y004.D Vial: 4
Acq On : 19 Dec 19 9:33 Operator: MA,SS
Sample : 4ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.47	107	24530	3.54152	ppb		91
39)	2-Methylnaphthalene	7.63	142	46644	3.56485	ppb		99
40)	1-Methylnaphthalene	7.75	142	48402	3.55740	ppb		100
42)	Hexachlorocyclopentadiene	7.81	237	7536	5.21250	ppb	#	93
43)	1,2,4,5-Tetrachlorobenzene	7.83	216	24386	3.51094	ppb		93
44)	2,4,6-Trichlorophenol	7.97	196	16008	3.52023	ppb		99
45)	2,4,5-Trichlorophenol	8.02	196	18343	3.71925	ppb		96
47)	1,1'-Biphenyl	8.17	154	60838	3.59736	ppb	#	96
48)	2-Chloronaphthalene	8.19	162	49132	3.61248	ppb		100
49)	2-Nitroaniline	8.31	65	18170	3.51847	ppb		94
50)	Dimethyl phthalate	8.52	163	62019	3.72016	ppb		98
51)	2,6-DNT	8.59	165	12579	3.45969	ppb	#	77
52)	Acenaphthylene	8.67	152	74543	3.55981	ppb		99
53)	3-Nitroaniline	8.31	138	15660	3.62849	ppb		93
54)	Acenaphthene	8.88	154	47294	3.61069	ppb		99
55)	2,4-Dinitrophenol	8.92	184	1251	7.22384	ppb		91
56)	4-Nitrophenol	8.59	65	1264	3.71980	ppb	#	77
57)	Dibenzofuran	9.07	168	70771	3.55722	ppb		96
58)	2,4-DNT	9.06	165	17259	3.22866	ppb		90
59)	2,3,4,6-Tetrachlorophenol	9.23	232	12362	3.30472	ppb		98
60)	Diethyl phthalate	9.34	149	63987	3.70473	ppb		97
61)	4-Chlorophenyl phenyl ethe	9.47	204	30630	3.20287	ppb		93
62)	Fluorene	9.47	166	56939	3.36416	ppb		97
63)	4-Nitroaniline	8.79	138	13740	3.82064	ppb		87
66)	4,6-Dinitro-2-methylphenol	9.54	198	6235	1.91120	ppb	#	71
67)	Diphenyl amine	9.61	169	91072	6.68561	ppb		97
68)	n-Nitrosodiphenylamine	9.61	169	91072	6.68561	ppb		97
69)	1,2-Diphenylhydrazine	9.66	77	73012	3.70606	ppb		97
70)	4-Bromophenyl phenyl ether	10.05	248	18141	3.53702	ppb		88
71)	Hexachlorobenzene	10.12	284	18320	3.53076	ppb		95
72)	Atrazine	10.23	200	8587	1.83561	ppb		94
73)	Pentachlorophenol	10.35	266	6168	1.93382	ppb		87
74)	Phenanthrene	10.60	178	84389	3.65454	ppb		99
75)	Anthracene	10.65	178	85709	3.55076	ppb		99
76)	Carbazol	10.85	167	79889	3.63505	ppb		100
77)	Di-n-butylphthalate	11.25	149	104948	3.49219	ppb		99
78)	2-Nitrodiphenylamine	11.42	167	10800	1.57984	ppb		97
79)	Fluoranthene	11.99	202	95072	3.51508	ppb		99
81)	Benzidine	12.14	184	34176	4.20694	ppb		97
82)	Pyrene	12.25	202	98209	4.11597	ppb		99
84)	Butyl benzylphthalate	12.99	149	49680	4.15559	ppb		98
85)	3,3'-Dichlorobenzidine	13.61	252	35070	4.27679	ppb		98
86)	Benz (a) anthracene	13.64	228	109656	4.21906	ppb		98
87)	Bis (2-ethylhexyl) phthala	13.66	149	78577	3.93364	ppb		98
88)	Chrysene	13.69	228	89653	3.96629	ppb		97
89)	Di-n-octylphthalate	14.41	149	118795	4.02879	ppb		100
91)	Benzo (b) fluoranthene	14.94	252	104695	3.67269	ppb		97
92)	Benzo (k) fluoranthene	14.98	252	90442	3.51896	ppb		97
93)	Benzo (a) pyrene	15.39	252	91485	3.61610	ppb		99
94)	Indeno (1,2,3-cd) pyrene	17.32	276	106261	3.60309	ppb		99
95)	Dibenz (a,h) anthracene	17.35	278	91091	3.46725	ppb		99
96)	Benzo (g,h,i) perylene	17.88	276	84272	3.63655	ppb		98

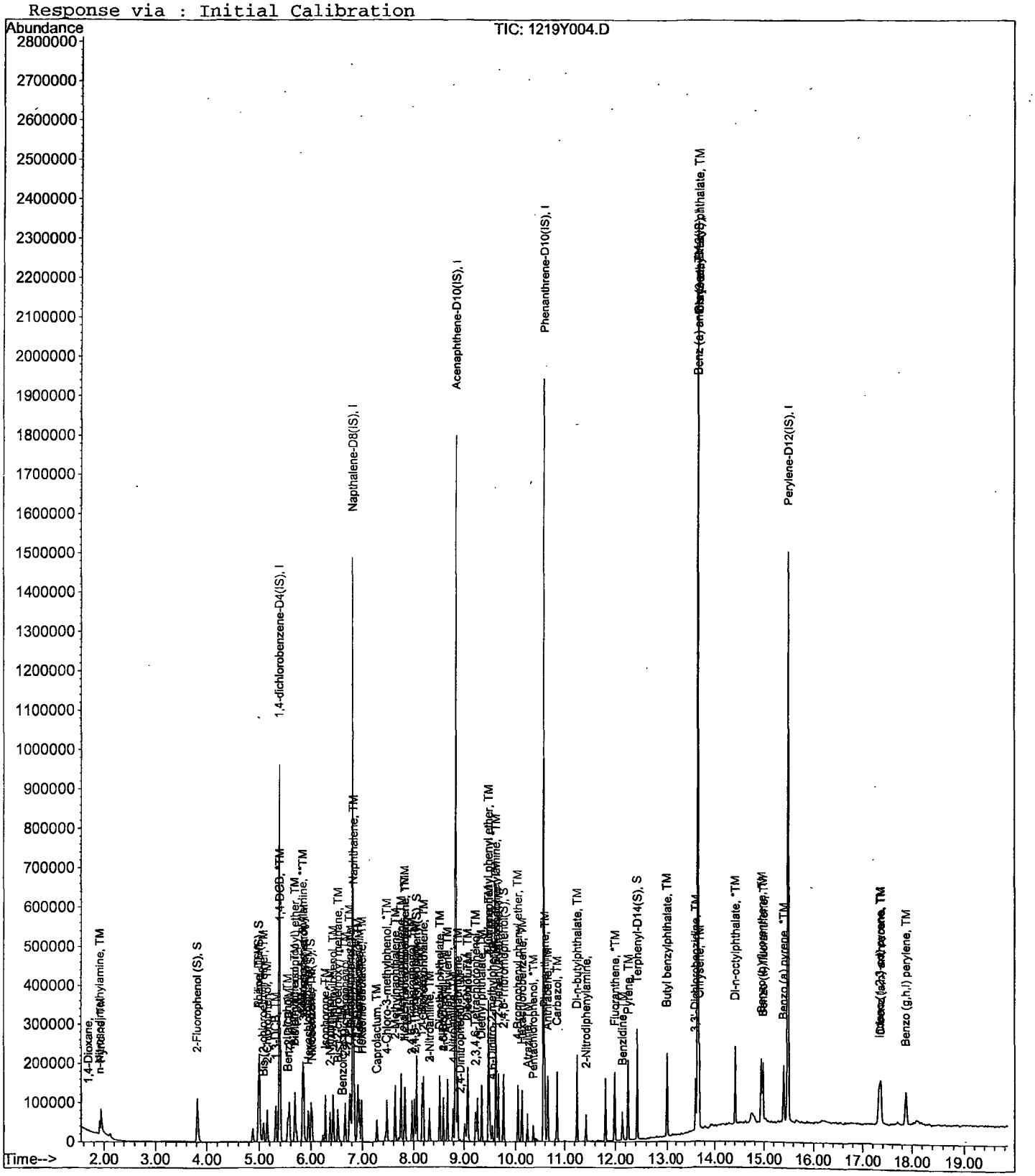
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y004.D Vial: 4
Acq On : 19 Dec 19 9:33 Operator: MA,SS
Sample : 4ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y005.D Vial: 5
Acq On : 19 Dec 19 10:01 Operator: MA,SS
Sample : 5ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.38	152	171722	40.00000	ppb		0.00
21) Napthalene-D8(IS)	6.82	136	688709	40.00000	ppb		0.00
41) Acenaphthene-D10(IS)	8.84	164	415788	40.00000	ppb		0.00
65) Phenanthrene-D10(IS)	10.57	188	806286	40.00000	ppb		0.00
80) Chrysene-D12(IS)	13.66	240	749085	40.00000	ppb		0.00
90) Perylene-D12(IS)	15.48	264	827486	40.00000	ppb		0.00
System Monitoring Compounds							
5) 2-Fluorophenol (S)	3.82	112	56647	9.00005	ppb		0.00
Spiked Amount 200.000			Recovery	= 4.500%			
6) Phenol-D6 (S)	4.99	99	71276	8.88831	ppb		0.00
Spiked Amount 200.000			Recovery	= 4.444%			
22) Nitrobenzene-D5(S)	6.00	82	41101	4.79873	ppb		0.00
Spiked Amount 100.000			Recovery	= 4.799%			
46) 2-Fluorobiphenyl(S)	8.05	172	73943	4.81547	ppb		0.00
Spiked Amount 100.000			Recovery	= 4.815%			
64) 2,4,6-Tribromophenol(S)	9.76	330	24023	9.29674	ppb		0.00
Spiked Amount 200.000			Recovery	= 4.649%			
83) Terphenyl-D14(S)	12.43	244	98299	5.50304	ppb		0.00
Spiked Amount 100.000			Recovery	= 5.503%			
Target Compounds							Qvalue
2) 1,4-Dioxane	1.69	58	1257	0.48619			57
3) n-Nitrosodimethylamine	1.91	42	24805	5.17354	ppb		91
4) Pyridine	1.93	79	51683	4.65342	ppb		99
7) Phenol	5.01	94	41003	4.33271	ppb	#	74
8) Aniline	5.01	93	28072	4.54545	ppb	#	95
9) Bis (2-chloroethyl) ether	5.08	63	19744	4.50355	ppb		96
10) 2-Chlorophenol	5.14	128	30870	4.63266	ppb		93
11) 1,3-DCB	5.31	146	35002	4.78677	ppb		98
12) 1,4-DCB	5.40	146	35465	4.73910	ppb		100
13) Benzyl alcohol	5.54	108	17372	4.42592	ppb		98
14) 1,2-DCB	5.57	146	32182	4.62197	ppb		99
15) 2-Methylphenol	5.67	107	26493	4.55618	ppb		95
16) Bis (2-chloroisopropyl) et	5.69	45	26718	4.62124	ppb	#	67
17) Acetophenone	5.83	105	43206	4.35939	ppb		99
18) 3&4-Methylphenol	5.85	107	66732	8.72640	ppb		94
19) n-Nitrosodi-n-propylamine	5.83	70	27839	4.36723	ppb		93
20) Hexachloroethane	5.95	117	14656	4.69849	ppb		96
23) Nitrobenzene	6.03	77	43068	4.85180	ppb		97
24) Isophorone	6.30	82	66063	4.71704	ppb		97
25) 2-Nitrophenol	6.39	139	16456	4.56533	ppb		95
26) 2,4-Dimethylphenol	6.44	122	27145	4.70628	ppb		97
27) Benzoic acid	6.54	105	9801	5.88822	ppb		100
28) Bis (2-chloroethoxy) metha	6.54	93	33945	4.67017	ppb		97
29) 2,4-Dichlorophenol	6.67	162	25735	4.57598	ppb		95
30) 1,2,4-Trichlorobenzene	6.75	180	30156	4.80740	ppb		94
31) 3,4-Dimethylphenol	6.78	107	42637	4.44355	ppb		94
32) Naphthalene	6.84	128	88283	4.71131	ppb		98
33) 4-Chloroaniline	6.90	127	35310	4.68641	ppb		95
34) 2,6-Dichlorophenol	6.92	162	25539	4.63537	ppb		98
35) Hexachloropropene	6.95	213	24798	4.56869	ppb		99
36) Hexachlorobutadiene	6.98	225	19841	4.66245	ppb		95
37) Caprolactum	7.28	55	12209	4.83713	ppb		92

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

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y005.D Vial: 5
Acq On : 19 Dec 19 10:01 Operator: MA,SS
Sample : 5ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.47	107	30060	4.50279	ppb		96
39)	2-Methylnaphthalene	7.63	142	58756	4.65906	ppb		98
40)	1-Methylnaphthalene	7.74	142	62484	4.76473	ppb		98
42)	Hexachlorocyclopentadiene	7.82	237	12113	6.16888	ppb		98
43)	1,2,4,5-Tetrachlorobenzene	7.83	216	30658	4.62889	ppb		96
44)	2,4,6-Trichlorophenol	7.97	196	19264	4.44253	ppb		97
45)	2,4,5-Trichlorophenol	8.01	196	22015	4.68116	ppb		91
47)	1,1'-Biphenyl	8.17	154	75024	4.65222	ppb		96
48)	2-Chloronaphthalene	8.20	162	60077	4.63233	ppb		98
49)	2-Nitroaniline	8.31	65	22742	4.61826	ppb		95
50)	Dimethyl phthalate	8.52	163	75613	4.75645	ppb		98
51)	2,6-DNT	8.60	165	14927	4.30540	ppb		93
52)	Acenaphthylene	8.67	152	93201	4.66757	ppb		99
53)	3-Nitroaniline	8.31	138	18418	4.47535	ppb		98
54)	Acenaphthene	8.88	154	58572	4.68948	ppb		98
55)	2,4-Dinitrophenol	8.92	184	1722	7.44591	ppb		91
56)	4-Nitrophenol	8.59	65	1476	4.55522	ppb	#	77
57)	Dibenzofuran	9.08	168	86867	4.57889	ppb		98
58)	2,4-DNT	9.06	165	21667	4.25065	ppb		92
59)	2,3,4,6-Tetrachlorophenol	9.23	232	15625	4.38043	ppb		96
60)	Diethyl phthalate	9.34	149	78770	4.78273	ppb		98
61)	4-Chlorophenyl phenyl ethe	9.47	204	39671	4.35026	ppb		91
62)	Fluorene	9.48	166	70132	4.34543	ppb		99
63)	4-Nitroaniline	8.79	138	15753	4.59371	ppb		95
66)	4,6-Dinitro-2-methylphenol	9.54	198	8632	2.74604	ppb		91
67)	Diphenyl amine	9.61	169	114377	8.71405	ppb		99
68)	n-Nitrosodiphenylamine	9.61	169	114377	8.71405	ppb		99
69)	1,2-Diphenylhydrazine	9.66	77	88947	4.68570	ppb		98
70)	4-Bromophenyl phenyl ether	10.05	248	21340	4.31813	ppb		90
71)	Hexachlorobenzene	10.12	284	22472	4.49479	ppb		86
72)	Atrazine	10.23	200	11098	2.46211	ppb		96
73)	Pentachlorophenol	10.36	266	7741	2.51880	ppb		98
74)	Phenanthrene	10.59	178	103714	4.66133	ppb		100
75)	Anthracene	10.66	178	106832	4.59326	ppb		100
76)	Carbazol	10.84	167	97952	4.62553	ppb		96
77)	Di-n-butylphthalate	11.25	149	129031	4.45598	ppb		99
78)	2-Nitrodiphenylamine	11.42	167	13059	1.98255	ppb		90
79)	Fluoranthene	11.98	202	117296	4.50081	ppb		99
81)	Benzidine	12.14	184	40456	5.29189	ppb		98
82)	Pyrene	12.24	202	123613	5.50514	ppb		99
84)	Butyl benzylphthalate	13.00	149	60635	5.38961	ppb		84
85)	3,3'-Dichlorobenzidine	13.61	252	41891	5.42858	ppb		97
86)	Benz (a) anthracene	13.65	228	129610	5.29914	ppb		99
87)	Bis (2-ethylhexyl) phthala	13.66	149	96081	5.11117	ppb		97
88)	Chrysene	13.68	228	117620	5.52948	ppb		98
89)	Di-n-octylphthalate	14.41	149	146932	5.29512	ppb		94
91)	Benzo (b) fluoranthene	14.94	252	122331	4.52617	ppb		99
92)	Benzo (k) fluoranthene	14.97	252	116734	4.79047	ppb		99
93)	Benzo (a) pyrene	15.40	252	112984	4.71025	ppb		99
94)	Indeno (1,2,3-cd) pyrene	17.32	276	131399	4.69925	ppb		100
95)	Dibenz (a,h) anthracene	17.36	278	116553	4.67918	ppb		98
96)	Benzo (g,h,i) perylene	17.88	276	105710	4.81125	ppb		98

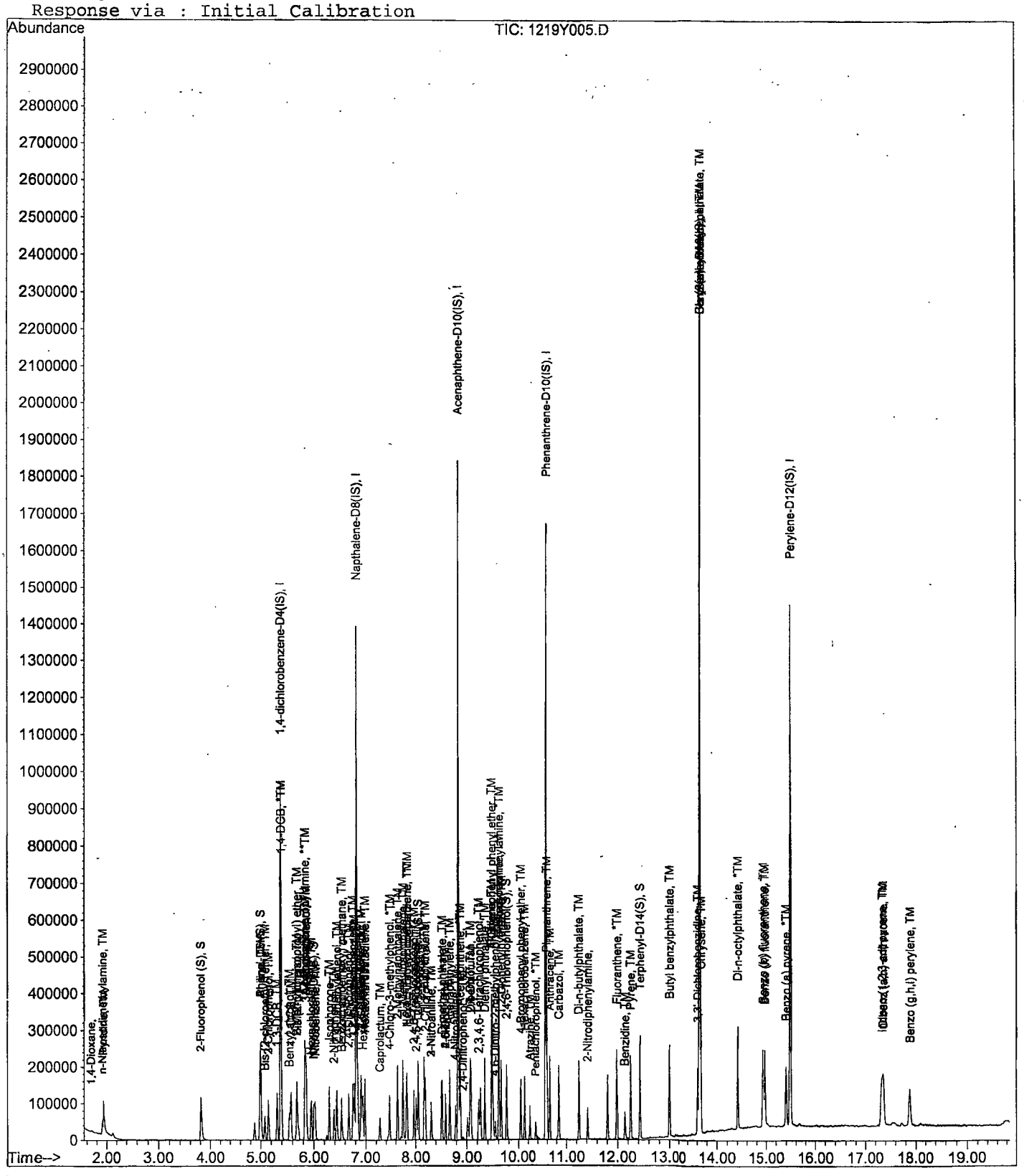
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y005.D Vial: 5
Acq On : 19 Dec 19 10:01 Operator: MA,SS
Sample : 5ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y006.D Vial: 6
Acq On : 19 Dec 19 10:28 Operator: MA,SS
Sample : 10ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.38	152	160128	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.82	136	678749	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.84	164	424690	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.57	188	801834	40.00000 ppb	0.00
80) Chrysene-D12(IS)	13.66	240	780754	40.00000 ppb	0.00
90) Perylene-D12(IS)	15.49	264	843433	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.81	112	114683	19.54005 ppb	0.00
Spiked Amount 200.000			Recovery =	9.770%	
6) Phenol-D6 (S)	4.99	99	140612	18.80428 ppb	0.00
Spiked Amount 200.000			Recovery =	9.402%	
22) Nitrobenzene-D5(S)	6.00	82	82528	9.77692 ppb	0.00
Spiked Amount 100.000			Recovery =	9.777%	
46) 2-Fluorobiphenyl(S)	8.05	172	143294	9.13627 ppb	0.00
Spiked Amount 100.000			Recovery =	9.136%	
64) 2,4,6-Tribromophenol(S)	9.76	330	43913	16.63783 ppb	0.00
Spiked Amount 200.000			Recovery =	8.319%	
83) Terphenyl-D14(S)	12.42	244	190140	10.21278 ppb	0.00
Spiked Amount 100.000			Recovery =	10.213%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.68	58	2566	1.06435	52
3) n-Nitrosodimethylamine	1.91	42	42801	9.57329 ppb	97
4) Pyridine	1.93	79	110941	10.71212 ppb	94
7) Phenol	5.00	94	84538	9.57975 ppb #	63
8) Aniline	5.00	93	55616	9.65744 ppb	99
9) Bis (2-chloroethyl) ether	5.08	63	41459	10.14139 ppb	88
10) 2-Chlorophenol	5.15	128	62253	10.01873 ppb	95
11) 1,3-DCB	5.31	146	70075	10.27713 ppb	100
12) 1,4-DCB	5.40	146	70537	10.10814 ppb	96
13) Benzyl alcohol	5.54	108	36507	9.97444 ppb	96
14) 1,2-DCB	5.57	146	66098	10.18031 ppb	98
15) 2-Methylphenol	5.68	107	52416	9.66701 ppb	97
16) Bis (2-chloroisopropyl) et	5.68	45	53318	9.88979 ppb	97
17) Acetophenone	5.83	105	89316	9.66428 ppb	99
18) 3&4-Methylphenol	5.85	107	137362	19.26310 ppb	99
19) n-Nitrosodi-n-propylamine	5.83	70	56624	9.52602 ppb	91
20) Hexachloroethane	5.95	117	29197	10.03784 ppb	91
23) Nitrobenzene	6.03	77	87342	9.98385 ppb	97
24) Isophorone	6.30	82	136764	9.90854 ppb	95
25) 2-Nitrophenol	6.38	139	34642	9.75163 ppb	93
26) 2,4-Dimethylphenol	6.44	122	56086	9.86663 ppb	99
27) Benzoic acid	6.56	105	31884	10.06729 ppb	97
28) Bis (2-chloroethoxy) metha	6.54	93	70309	9.81509 ppb	96
29) 2,4-Dichlorophenol	6.67	162	53758	9.69907 ppb	96
30) 1,2,4-Trichlorobenzene	6.75	180	60558	9.79569 ppb	98
31) 3,4-Dimethylphenol	6.78	107	95265	10.07404 ppb	96
32) Naphthalene	6.85	128	181256	9.81486 ppb	99
33) 4-Chloroaniline	6.90	127	75779	10.20513 ppb	99
34) 2,6-Dichlorophenol	6.92	162	52155	9.60512 ppb	94
35) Hexachloropropene	6.94	213	50541	9.44812 ppb	98
36) Hexachlorobutadiene	6.98	225	41688	9.94005 ppb	97
37) Caprolactum	7.29	55	24764	9.95531 ppb	100

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

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y006.D Vial: 6
Acq On : 19 Dec 19 10:28 Operator: MA,SS
Sample : 10ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38) 4-Chloro-3-methylphenol	7.47	107	63915	9.71453 ppb		93
39) 2-Methylnaphthalene	7.63	142	121988	9.81498 ppb		99
40) 1-Methylnaphthalene	7.75	142	126080	9.75534 ppb		99
42) Hexachlorocyclopentadiene	7.82	237	26368	8.82866 ppb		96
43) 1,2,4,5-Tetrachlorobenzene	7.83	216	63033	9.31753 ppb		97
44) 2,4,6-Trichlorophenol	7.97	196	42547	9.60622 ppb		98
45) 2,4,5-Trichlorophenol	8.01	196	45140	9.39716 ppb		97
47) 1,1'-Biphenyl	8.17	154	154500	9.37969 ppb		96
48) 2-Chloronaphthalene	8.19	162	126872	9.57760 ppb		97
49) 2-Nitroaniline	8.31	65	48463	9.63517 ppb		99
50) Dimethyl phthalate	8.52	163	155090	9.55148 ppb		98
51) 2,6-DNT	8.59	165	32770	9.25374 ppb	#	70
52) Acenaphthylene	8.67	152	192011	9.41448 ppb		99
53) 3-Nitroaniline	8.31	138	40201	9.56360 ppb		97
54) Acenaphthene	8.88	154	120735	9.46384 ppb		97
55) 2,4-Dinitrophenol	8.92	184	8250	10.11323 ppb		88
56) 4-Nitrophenol	8.59	65	3263	9.85915 ppb	#	77
57) Dibenzofuran	9.07	168	178082	9.19022 ppb		96
58) 2,4-DNT	9.06	165	47326	9.08984 ppb		90
59) 2,3,4,6-Tetrachlorophenol	9.23	232	33746	9.26230 ppb		98
60) Diethyl phthalate	9.34	149	162823	9.67901 ppb		98
61) 4-Chlorophenyl phenyl ethe	9.47	204	78878	8.46834 ppb		92
62) Fluorene	9.47	166	144714	8.77864 ppb		99
63) 4-Nitroaniline	8.78	138	34976	9.98551 ppb		86
66) 4,6-Dinitro-2-methylphenol	9.54	198	24792	7.93070 ppb	#	66
67) Diphenyl amine	9.61	169	235673	18.05492 ppb		99
68) n-Nitrosodiphenylamine	9.61	169	235673	18.05492 ppb		99
69) 1,2-Diphenylhydrazine	9.66	77	185037	9.80181 ppb		98
70) 4-Bromophenyl phenyl ether	10.05	248	46172	9.39474 ppb		84
71) Hexachlorobenzene	10.12	284	47111	9.47534 ppb		96
72) Atrazine	10.23	200	22903	5.10929 ppb		98
73) Pentachlorophenol	10.35	266	20850	6.82194 ppb		98
74) Phenanthrene	10.59	178	212082	9.58474 ppb		99
75) Anthracene	10.66	178	222026	9.59905 ppb		100
76) Carbazol	10.85	167	200728	9.53149 ppb		99
77) Di-n-butylphthalate	11.24	149	265654	9.22507 ppb		99
78) 2-Nitrodiphenylamine	11.42	167	29937	4.57011 ppb		96
79) Fluoranthene	11.99	202	244432	9.43127 ppb		99
81) Benzidine	12.14	184	79841	10.02007 ppb		98
82) Pyrene	12.25	202	252604	10.79348 ppb		100
84) Butyl benzylphthalate	13.00	149	125700	10.71979 ppb		83
85) 3,3'-Dichlorobenzidine	13.61	252	90819	11.29169 ppb		98
86) Benz (a) anthracene	13.65	228	268781	10.54344 ppb		99
87) Bis (2-ethylhexyl) phthala	13.66	149	199052	10.15935 ppb		96
88) Chrysene	13.69	228	234598	10.58142 ppb		100
89) Di-n-octylphthalate	14.41	149	312547	10.80666 ppb		97
91) Benzo (b) fluoranthene	14.94	252	250643	9.09830 ppb		99
92) Benzo (k) fluoranthene	14.98	252	241683	9.73053 ppb		98
93) Benzo (a) pyrene	15.40	252	232116	9.49384 ppb		98
94) Indeno (1,2,3-cd) pyrene	17.32	276	269635	9.46070 ppb		99
95) Dibenz (a,h) anthracene	17.36	278	239335	9.42677 ppb		98
96) Benzo (g,h,i) perylene	17.88	276	217021	9.69067 ppb		98

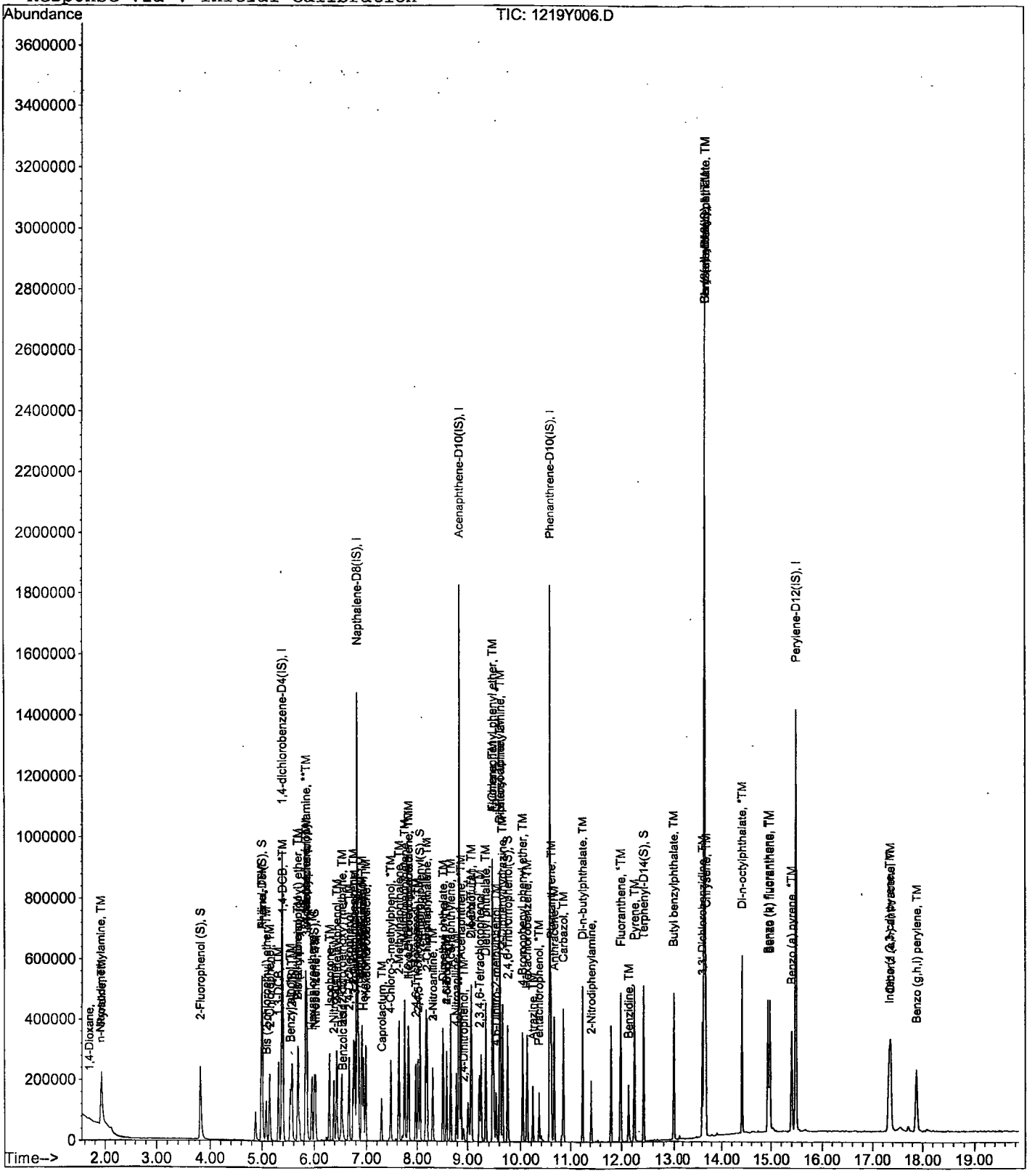
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y006.D Vial: 6
Acq On : 19 Dec 19 10:28 Operator: MA,SS
Sample : 10ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y007.D Vial: 7
Acq On : 19 Dec 19 10:56 Operator: MA,SS
Sample : 20ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.38	152	194747	40.00000 ppb		0.00
21) Napthalene-D8(IS)	6.82	136	781182	40.00000 ppb		0.00
41) Acenaphthene-D10(IS)	8.84	164	473595	40.00000 ppb		0.00
65) Phenanthrene-D10(IS)	10.57	188	902012	40.00000 ppb		0.00
80) Chrysene-D12(IS)	13.66	240	912227	40.00000 ppb		0.00
90) Perylene-D12(IS)	15.49	264	942777	40.00000 ppb		0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.82	112	253075	35.45459 ppb		0.00
Spiked Amount 200.000			Recovery =	17.728%		
6) Phenol-D6 (S)	4.99	99	314450	34.57661 ppb		-0.01
Spiked Amount 200.000			Recovery =	17.289%		
22) Nitrobenzene-D5(S)	6.01	82	185338	19.07753 ppb		0.00
Spiked Amount 100.000			Recovery =	19.078%		
46) 2-Fluorobiphenyl(S)	8.06	172	323480	18.49496 ppb		0.00
Spiked Amount 100.000			Recovery =	18.495%		
64) 2,4,6-Tribromophenol(S)	9.77	330	100215	34.04876 ppb		0.00
Spiked Amount 200.000			Recovery =	17.025%		
83) Terphenyl-D14(S)	12.43	244	426966	19.62795 ppb		0.00
Spiked Amount 100.000			Recovery =	19.628%		
Target Compounds						Qvalue
2) 1,4-Dioxane	1.68	58	5479	1.86864		96
3) n-Nitrosodimethylamine	1.90	42	92263	16.96802 ppb		95
4) Pyridine	1.92	79	233730	18.55642 ppb		98
7) Phenol	5.00	94	187775	17.49592 ppb	#	74
8) Aniline	5.00	93	138944	19.83804 ppb	#	95
9) Bis (2-chloroethyl) ether	5.08	63	90085	18.11872 ppb		96
10) 2-Chlorophenol	5.14	128	135911	17.98472 ppb		92
11) 1,3-DCB	5.31	146	146244	17.63531 ppb		97
12) 1,4-DCB	5.39	146	151686	17.87295 ppb		97
13) Benzyl alcohol	5.54	108	78697	17.67939 ppb		99
14) 1,2-DCB	5.57	146	139110	17.61682 ppb		99
15) 2-Methylphenol	5.68	107	115359	17.49348 ppb		97
16) Bis (2-chloroisopropyl) et	5.69	45	115311	17.58653 ppb	#	78
17) Acetophenone	5.83	105	201308	17.91010 ppb		98
18) 3&4-Methylphenol	5.85	107	300091	34.60262 ppb		97
19) n-Nitrosodi-n-propylamine	5.84	70	126055	17.43683 ppb		98
20) Hexachloroethane	5.95	117	64312	18.17985 ppb		94
23) Nitrobenzene	6.03	77	185983	18.47162 ppb		95
24) Isophorone	6.29	82	294453	18.53577 ppb		99
25) 2-Nitrophenol	6.39	139	76958	18.82282 ppb		95
26) 2,4-Dimethylphenol	6.44	122	120904	18.48043 ppb		97
27) Benzoic acid	6.55	105	91223	18.97597 ppb		98
28) Bis (2-chloroethoxy) metha	6.54	93	152615	18.51133 ppb		98
29) 2,4-Dichlorophenol	6.67	162	117474	18.41559 ppb		95
30) 1,2,4-Trichlorobenzene	6.76	180	128436	18.05125 ppb		99
31) 3,4-Dimethylphenol	6.78	107	204008	18.74452 ppb		98
32) Naphthalene	6.84	128	390776	18.38554 ppb		99
33) 4-Chloroaniline	6.91	127	162474	19.01124 ppb		96
34) 2,6-Dichlorophenol	6.92	162	114733	18.35913 ppb		98
35) Hexachloropropene	6.94	213	112998	18.35394 ppb		99
36) Hexachlorobutadiene	6.98	225	87981	18.22735 ppb		99
37) Caprolactum	7.31	55	53587	18.71761 ppb		97

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

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y007.D Vial: 7
Acq On : 19 Dec 19 10:56 Operator: MA,SS
Sample : 20ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38) 4-Chloro-3-methylphenol	7.47	107	137771	18.19424 ppb		96
39) 2-Methylnaphthalene	7.63	142	260607	18.21862 ppb		100
40) 1-Methylnaphthalene	7.74	142	264522	17.78341 ppb		98
42) Hexachlorocyclopentadiene	7.82	237	85296	18.35365 ppb		100
43) 1,2,4,5-Tetrachlorobenzene	7.83	216	133618	17.71181 ppb		96
44) 2,4,6-Trichlorophenol	7.97	196	90696	18.36271 ppb		100
45) 2,4,5-Trichlorophenol	8.02	196	98112	18.31564 ppb		96
47) 1,1'-Biphenyl	8.17	154	335661	18.27366 ppb		98
48) 2-Chloronaphthalene	8.20	162	272066	18.41748 ppb		97
49) 2-Nitroaniline	8.31	65	106234	18.93990 ppb		92
50) Dimethyl phthalate	8.52	163	333975	18.44445 ppb		99
51) 2,6-DNT	8.60	165	74351	18.82750 ppb		86
52) Acenaphthylene	8.68	152	420370	18.48275 ppb		100
53) 3-Nitroaniline	8.32	138	87497	18.66563 ppb		95
54) Acenaphthene	8.87	154	255265	17.94281 ppb		98
55) 2,4-Dinitrophenol	8.92	184	29356	17.54041 ppb		89
56) 4-Nitrophenol	8.60	65	6688	18.12107 ppb		98
57) Dibenzofuran	9.08	168	385855	17.85643 ppb		100
58) 2,4-DNT	9.07	165	105670	18.20007 ppb		87
59) 2,3,4,6-Tetrachlorophenol	9.23	232	74261	18.27773 ppb	#	91
60) Diethyl phthalate	9.35	149	348940	18.60076 ppb		97
61) 4-Chlorophenyl phenyl ethe	9.48	204	176280	16.97111 ppb		98
62) Fluorene	9.48	166	322306	17.53276 ppb		98
63) 4-Nitroaniline	8.79	138	74412	19.05057 ppb		97
66) 4,6-Dinitro-2-methylphenol	9.54	198	60050	17.07595 ppb		84
67) Diphenyl amine	9.62	169	511426	34.82898 ppb		100
68) n-Nitrosodiphenylamine	9.62	169	511426	34.82898 ppb		100
69) 1,2-Diphenylhydrazine	9.66	77	390616	18.39374 ppb		94
70) 4-Bromophenyl phenyl ether	10.04	248	100768	18.22640 ppb		94
71) Hexachlorobenzene	10.13	284	99643	17.81524 ppb		93
72) Atrazine	10.24	200	45987	9.11959 ppb		96
73) Pentachlorophenol	10.36	266	52653	15.31431 ppb		98
74) Phenanthrene	10.60	178	454835	18.27270 ppb		99
75) Anthracene	10.66	178	477063	18.33464 ppb		99
76) Carbazol	10.85	167	430950	18.19081 ppb		98
77) Di-n-butylphthalate	11.25	149	590040	18.21407 ppb		99
78) 2-Nitrodiphenylamine	11.42	167	68173	9.25129 ppb		92
79) Fluoranthene	11.98	202	523700	17.96250 ppb		98
81) Benzidine	12.14	184	180875	19.42829 ppb		98
82) Pyrene	12.25	202	546244	19.97649 ppb		99
84) Butyl benzylphthalate	13.00	149	275238	20.08958 ppb		92
85) 3,3'-Dichlorobenzidine	13.61	252	192045	20.43603 ppb		98
86) Benz (a) anthracene	13.65	228	571831	19.19829 ppb		99
87) Bis (2-ethylhexyl) phthala	13.66	149	447267	19.53789 ppb		98
88) Chrysene	13.69	228	522873	20.18493 ppb		100
89) Di-n-octylphthalate	14.41	149	670387	19.83868 ppb	#	92
91) Benzo (b) fluoranthene	14.94	252	580450	18.84998 ppb		99
92) Benzo (k) fluoranthene	14.98	252	493722	17.78340 ppb		99
93) Benzo (a) pyrene	15.40	252	504143	18.44727 ppb		98
94) Indeno (1,2,3-cd) pyrene	17.33	276	588328	18.46750 ppb		99
95) Dibenz (a,h) anthracene	17.37	278	521335	18.37025 ppb		99
96) Benzo (g,h,i) perylene	17.90	276	472757	18.88564 ppb		99

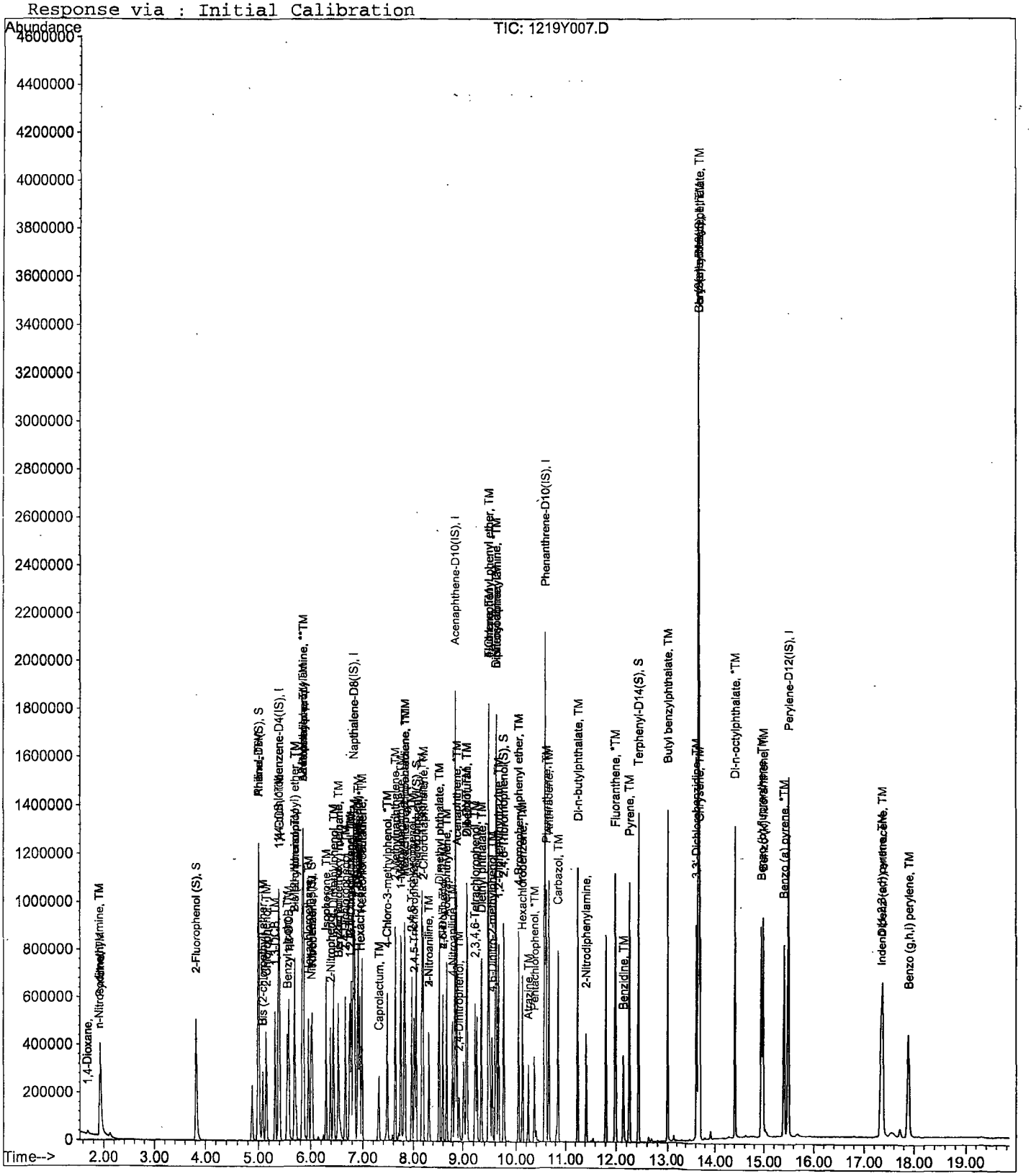
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y007.D Vial: 7
Acq On : 19 Dec 19 10:56 Operator: MA,SS
Sample : 20ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y008.D Vial: 8
Acq On : 19 Dec 19 11:24 Operator: MA,SS
Sample : 40ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.38	152	182216	40.00000	ppb		0.00
21) Napthalene-D8(IS)	6.82	136	710542	40.00000	ppb		0.00
41) Acenaphthene-D10(IS)	8.84	164	434485	40.00000	ppb		0.00
65) Phenanthrene-D10(IS)	10.58	188	813606	40.00000	ppb		0.00
80) Chrysene-D12(IS)	13.66	240	894163	40.00000	ppb		0.00
90) Perylene-D12(IS)	15.49	264	870632	40.00000	ppb		0.00
System Monitoring Compounds							
5) 2-Fluorophenol (S)	3.82	112	480507	71.94609	ppb		0.00
Spiked Amount 200.000			Recovery = 35.973%				
6) Phenol-D6 (S)	5.00	99	600312	70.54921	ppb		0.00
Spiked Amount 200.000			Recovery = 35.275%				
22) Nitrobenzene-D5(S)	6.01	82	335277	37.94232	ppb		0.00
Spiked Amount 100.000			Recovery = 37.942%				
46) 2-Fluorobiphenyl(S)	8.06	172	596646	37.18391	ppb		0.00
Spiked Amount 100.000			Recovery = 37.184%				
64) 2,4,6-Tribromophenol(S)	9.77	330	201973	74.79872	ppb		0.00
Spiked Amount 200.000			Recovery = 37.400%				
83) Terphenyl-D14(S)	12.43	244	814625	38.20548	ppb		0.00
Spiked Amount 100.000			Recovery = 38.205%				
Target Compounds							Qvalue
3) n-Nitrosodimethylamine	1.91	42	188163	36.98470	ppb		96
4) Pyridine	1.93	79	440907	37.41201	ppb		99
7) Phenol	5.01	94	371632	37.00806	ppb		79
8) Aniline	5.01	93	258560	39.45523	ppb	#	91
9) Bis (2-chloroethyl) ether	5.08	63	174139	37.43306	ppb		97
10) 2-Chlorophenol	5.15	128	262410	37.11194	ppb		94
11) 1,3-DCB	5.31	146	288290	37.15515	ppb		99
12) 1,4-DCB	5.40	146	297071	37.41064	ppb		98
13) Benzyl alcohol	5.55	108	154077	36.99399	ppb		97
14) 1,2-DCB	5.57	146	270886	36.66402	ppb		100
15) 2-Methylphenol	5.69	107	228108	36.97000	ppb		98
16) Bis (2-chloroisopropyl) et	5.69	45	226589	36.93453	ppb	#	78
17) Acetophenone	5.83	105	393243	37.39230	ppb		98
18) 3&4-Methylphenol	5.85	107	593695	73.16504	ppb		97
19) n-Nitrosodi-n-propylamine	5.84	70	248031	36.66888	ppb		97
20) Hexachloroethane	5.95	117	122615	37.04471	ppb		94
23) Nitrobenzene	6.03	77	359196	39.22163	ppb		95
24) Isophorone	6.30	82	565650	39.14758	ppb		98
25) 2-Nitrophenol	6.39	139	147502	39.66353	ppb		93
26) 2,4-Dimethylphenol	6.45	122	229476	38.56303	ppb		98
27) Benzoic acid	6.58	105	202255	40.40161	ppb		99
28) Bis (2-chloroethoxy) metha	6.54	93	292655	39.02644	ppb		98
29) 2,4-Dichlorophenol	6.67	162	227943	39.28553	ppb		96
30) 1,2,4-Trichlorobenzene	6.75	180	254586	39.33847	ppb		96
31) 3,4-Dimethylphenol	6.78	107	383358	38.72525	ppb		98
32) Naphthalene	6.85	128	749802	38.78445	ppb		100
33) 4-Chloroaniline	6.91	127	308474	39.68328	ppb		97
34) 2,6-Dichlorophenol	6.92	162	219445	38.60574	ppb		97
35) Hexachloropropene	6.95	213	221138	39.48974	ppb		99
36) Hexachlorobutadiene	6.99	225	170617	38.86148	ppb		100
37) Caprolactum	7.32	55	100984	38.77985	ppb		95
38) 4-Chloro-3-methylphenol	7.48	107	271819	39.46556	ppb		95

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

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y008.D Vial: 8
Acq On : 19 Dec 19 11:24 Operator: MA,SS
Sample : 40ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	2-Methylnaphthalene	7.63	142	502608	38.62970	ppb		99
40)	1-Methylnaphthalene	7.75	142	521546	38.54859	ppb		98
42)	Hexachlorocyclopentadiene	7.82	237	176384	36.58253	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.83	216	268214	38.75357	ppb		97
44)	2,4,6-Trichlorophenol	7.97	196	176195	38.88432	ppb		99
45)	2,4,5-Trichlorophenol	8.02	196	192075	39.08438	ppb		94
47)	1,1'-Biphenyl	8.17	154	649127	38.52004	ppb		98
48)	2-Chloronaphthalene	8.20	162	521946	38.51358	ppb		97
49)	2-Nitroaniline	8.31	65	200138	38.89341	ppb		95
50)	Dimethyl phthalate	8.53	163	640502	38.55712	ppb		99
51)	2,6-DNT	8.60	165	142948	39.45629	ppb		86
52)	Acenaphthylene	8.67	152	814666	39.04333	ppb		99
53)	3-Nitroaniline	8.32	138	168892	39.27271	ppb		93
54)	Acenaphthene	8.88	154	504832	38.67929	ppb		99
55)	2,4-Dinitrophenol	8.92	184	74846	36.78536	ppb		86
56)	4-Nitrophenol	8.60	65	13109	38.71590	ppb		95
57)	Dibenzofuran	9.08	168	753264	37.99707	ppb		98
58)	2,4-DNT	9.07	165	207839	39.01941	ppb		89
59)	2,3,4,6-Tetrachlorophenol	9.23	232	147125	39.47119	ppb		94
60)	Diethyl phthalate	9.35	149	671228	39.00159	ppb		98
61)	4-Chlorophenyl phenyl ethe	9.47	204	352091	36.94829	ppb		88
62)	Fluorene	9.48	166	641030	38.00953	ppb		98
63)	4-Nitroaniline	8.79	138	141770	39.56230	ppb		88
66)	4,6-Dinitro-2-methylphenol	9.56	198	122593	38.64878	ppb		99
67)	Diphenyl amine	9.62	169	1020591	77.05626	ppb		100
68)	n-Nitrosodiphenylamine	9.62	169	1020591	77.05626	ppb		100
69)	1,2-Diphenylhydrazine	9.66	77	751770	39.24670	ppb		94
70)	4-Bromophenyl phenyl ether	10.05	248	199129	39.93106	ppb		88
71)	Hexachlorobenzene	10.12	284	196806	39.01049	ppb	#	84
72)	Atrazine	10.24	200	89439	19.66371	ppb		99
73)	Pentachlorophenol	10.35	266	112272	36.20294	ppb		96
74)	Phenanthrene	10.60	178	877664	39.09087	ppb		99
75)	Anthracene	10.66	178	919645	39.18457	ppb		99
76)	Carbazol	10.85	167	830000	38.84199	ppb		98
77)	Di-n-butylphthalate	11.25	149	1156611	39.58322	ppb		98
78)	2-Nitrodiphenylamine	11.42	167	137354	20.66472	ppb		92
79)	Fluoranthene	11.99	202	1038608	39.49426	ppb		98
81)	Benzidine	12.14	184	334522	36.65784	ppb		99
82)	Pyrene	12.26	202	1083004	40.40627	ppb		100
84)	Butyl benzylphthalate	13.00	149	541594	40.32946	ppb		87
85)	3,3'-Dichlorobenzidine	13.61	252	372475	40.43680	ppb		100
86)	Benz (a) anthracene	13.65	228	1137597	38.96454	ppb		99
87)	Bis (2-ethylhexyl) phthala	13.66	149	880088	39.22141	ppb		97
88)	Chrysene	13.69	228	1034971	40.76106	ppb		99
89)	Di-n-octylphthalate	14.41	149	1322580	39.92965	ppb		97
91)	Benzo (b) fluoranthene	14.95	252	1137431	39.99867	ppb		98
92)	Benzo (k) fluoranthene	14.99	252	981428	38.27939	ppb		98
93)	Benzo (a) pyrene	15.40	252	980057	38.83327	ppb		98
94)	Indeno (1,2,3-cd) pyrene	17.34	276	1157206	39.33449	ppb		99
95)	Dibenz (a,h) anthracene	17.37	278	1022289	39.00732	ppb		98
96)	Benzo (g,h,i) perylene	17.91	276	908299	39.29134	ppb		98

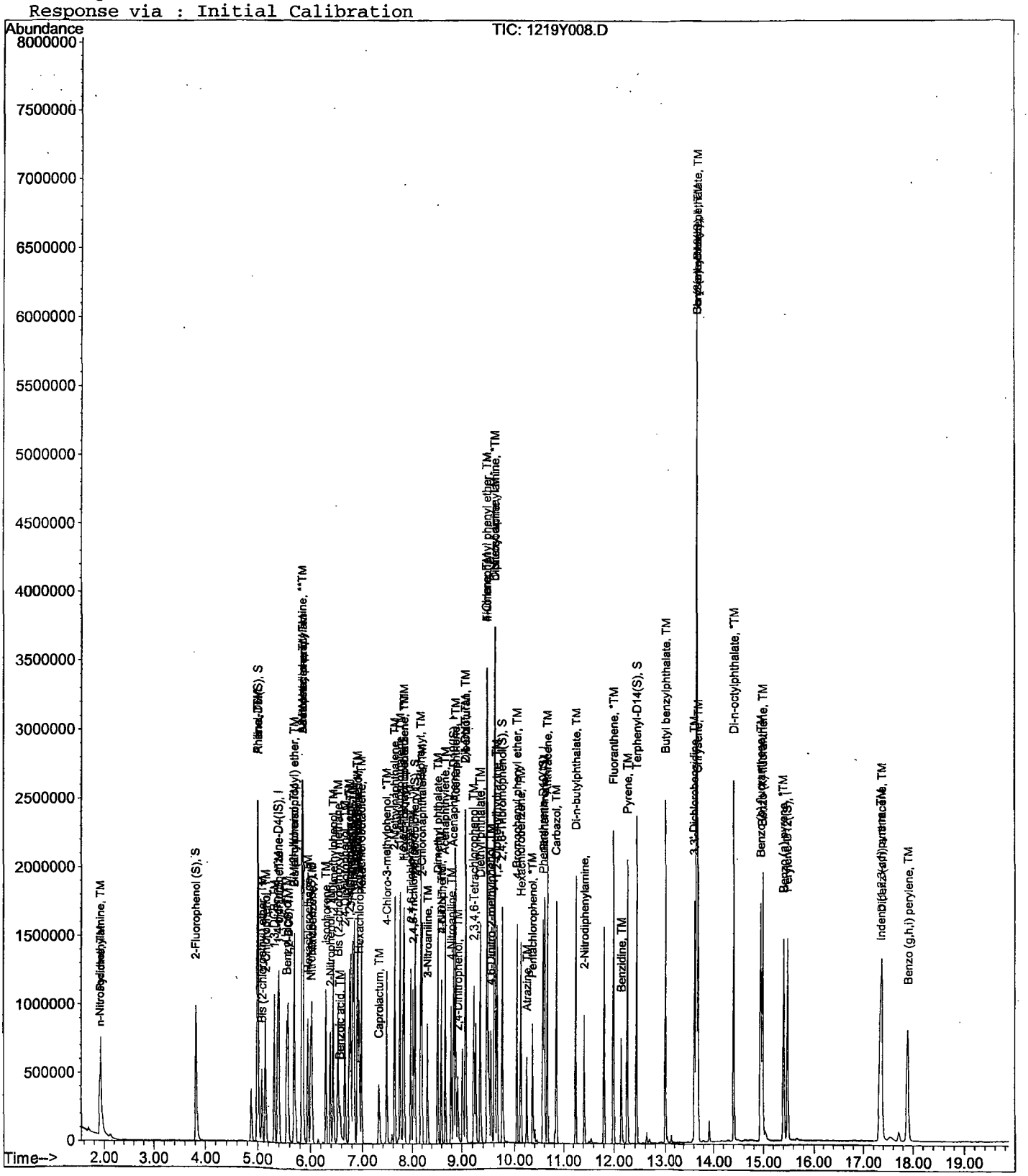
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y008.D Vial: 8
Acq On : 19 Dec 19 11:24 Operator: MA,SS
Sample : 40ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y009.D Vial: 9
Acq On : 19 Dec 19 11:51 Operator: MA,SS
Sample : 60ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.38	152	160953	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.82	136	685348	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.84	164	424996	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.57	188	796514	40.00000 ppb	0.00
80) Chrysene-D12(IS)	13.67	240	1005038	40.00000 ppb	0.00
90) Perylene-D12(IS)	15.49	264	865168	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.82	112	753971	127.80550 ppb	0.00
Spiked Amount 200.000			Recovery =	63.903%	
6) Phenol-D6 (S)	5.00	99	965746	128.48885 ppb	0.00
Spiked Amount 200.000			Recovery =	64.245%	
22) Nitrobenzene-D5(S)	6.01	82	517338	60.69782 ppb	0.00
Spiked Amount 100.000			Recovery =	60.698%	
46) 2-Fluorobiphenyl(S)	8.06	172	952099	60.66112 ppb	0.00
Spiked Amount 100.000			Recovery =	60.661%	
64) 2,4,6-Tribromophenol(S)	9.77	330	330216	125.02270 ppb	0.00
Spiked Amount 200.000			Recovery =	62.512%	
83) Terphenyl-D14(S)	12.43	244	1317552	54.97558 ppb	0.00
Spiked Amount 100.000			Recovery =	54.976%	
Target Compounds					Qvalue
3) n-Nitrosodimethylamine	1.91	42	292234	65.02884 ppb	100
4) Pyridine	1.92	79	684285	65.73377 ppb	98
7) Phenol	5.02	94	596449	67.24251 ppb	95
8) Aniline	5.01	93	400896	69.25679 ppb	95
9) Bis (2-chloroethyl) ether	5.09	63	270061	65.72167 ppb	94
10) 2-Chlorophenol	5.15	128	411267	65.84829 ppb	99
11) 1,3-DCB	5.31	146	444136	64.80266 ppb	98
12) 1,4-DCB	5.40	146	459470	65.50576 ppb	96
13) Benzyl alcohol	5.54	108	241965	65.77083 ppb	97
14) 1,2-DCB	5.57	146	428400	65.64329 ppb	99
15) 2-Methylphenol	5.68	107	361008	66.23892 ppb	99
16) Bis (2-chloroisopropyl) et	5.69	45	356163	65.72491 ppb	99
17) Acetophenone	5.84	105	617676	66.49198 ppb	99
18) 3&4-Methylphenol	5.86	107	952694	132.91717 ppb	99
19) n-Nitrosodi-n-propylamine	5.85	70	402101	67.29988 ppb	98
20) Hexachloroethane	5.95	117	190409	65.12647 ppb	97
23) Nitrobenzene	6.04	77	557986	63.16784 ppb	99
24) Isophorone	6.31	82	872286	62.58851 ppb	99
25) 2-Nitrophenol	6.39	139	230690	64.31331 ppb	99
26) 2,4-Dimethylphenol	6.44	122	359953	62.71309 ppb	100
27) Benzoic acid	6.60	105	293487	58.72692 ppb	99
28) Bis (2-chloroethoxy) metha	6.55	93	457869	63.30278 ppb	97
29) 2,4-Dichlorophenol	6.68	162	357701	63.91535 ppb	100
30) 1,2,4-Trichlorobenzene	6.76	180	400374	64.13977 ppb	98
31) 3,4-Dimethylphenol	6.79	107	600730	62.91404 ppb	100
32) Naphthalene	6.84	128	1176746	63.10625 ppb	99
33) 4-Chloroaniline	6.91	127	471729	62.91587 ppb	98
34) 2,6-Dichlorophenol	6.92	162	349158	63.68349 ppb	98
35) Hexachloropropene	6.95	213	349669	64.73761 ppb	100
36) Hexachlorobutadiene	6.98	225	268805	63.47650 ppb	100
37) Caprolactum	7.34	55	155158	61.77408 ppb	97
38) 4-Chloro-3-methylphenol	7.48	107	426464	64.19474 ppb	100

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

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y009.D Vial: 9
Acq On : 19 Dec 19 11:51 Operator: MA,SS
Sample : 60ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	2-Methylnaphthalene	7.63	142	793770	63.25069	ppb		99
40)	1-Methylnaphthalene	7.75	142	832076	63.76134	ppb		100
42)	Hexachlorocyclopentadiene	7.82	237	306752	62.07183	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.84	216	425660	62.87574	ppb		99
44)	2,4,6-Trichlorophenol	7.97	196	281816	63.58234	ppb		98
45)	2,4,5-Trichlorophenol	8.02	196	301154	62.64854	ppb		97
47)	1,1'-Biphenyl	8.18	154	1027471	62.33279	ppb		97
48)	2-Chloronaphthalene	8.20	162	825988	62.30917	ppb		99
49)	2-Nitroaniline	8.32	65	317213	63.02131	ppb		100
50)	Dimethyl phthalate	8.53	163	1013833	62.39365	ppb		99
51)	2,6-DNT	8.61	165	226254	63.84462	ppb		99
52)	Acenaphthylene	8.68	152	1289574	63.18347	ppb		100
53)	3-Nitroaniline	8.32	138	266968	63.46450	ppb		100
54)	Acenaphthene	8.89	154	800171	62.67644	ppb		100
55)	2,4-Dinitrophenol	8.93	184	126506	58.66929	ppb	#	78
56)	4-Nitrophenol	8.60	65	20413	61.63346	ppb		97
57)	Dibenzofuran	9.08	168	1226638	63.25710	ppb		99
58)	2,4-DNT	9.07	165	335087	64.31335	ppb		96
59)	2,3,4,6-Tetrachlorophenol	9.24	232	239911	65.80120	ppb		99
60)	Diethyl phthalate	9.35	149	1040635	61.81596	ppb		99
61)	4-Chlorophenyl phenyl ethe	9.48	204	587260	63.00279	ppb		99
62)	Fluorene	9.48	166	1063405	64.46185	ppb		99
63)	4-Nitroaniline	8.80	138	220693	62.96160	ppb		95
66)	4,6-Dinitro-2-methylphenol	9.56	198	198681	63.98043	ppb		99
67)	Diphenyl amine	9.63	169	1652863	127.47170	ppb		100
68)	n-Nitrosodiphenylamine	9.63	169	1652863	127.47170	ppb		100
69)	1,2-Diphenylhydrazine	9.67	77	1183313	63.10133	ppb		99
70)	4-Bromophenyl phenyl ether	10.05	248	310984	63.69937	ppb		97
71)	Hexachlorobenzene	10.13	284	320014	64.79369	ppb		100
72)	Atrazine	10.24	200	138142	31.02308	ppb		96
73)	Pentachlorophenol	10.36	266	186384	61.39058	ppb		99
74)	Phenanthrene	10.60	178	1384259	62.97746	ppb		99
75)	Anthracene	10.66	178	1445744	62.92265	ppb		99
76)	Carbazol	10.85	167	1323037	63.24352	ppb		99
77)	Di-n-butylphthalate	11.25	149	1860030	65.02262	ppb		99
78)	2-Nitrodiphenylamine	11.42	167	216308	33.24157	ppb		91
79)	Fluoranthene	11.99	202	1641246	63.74949	ppb		99
81)	Benzidine	12.14	184	513732	50.08562	ppb		99
82)	Pyrene	12.25	202	1718860	57.05497	ppb		100
84)	Butyl benzylphthalate	13.00	149	861484	57.07291	ppb		96
85)	3,3'-Dichlorobenzidine	13.62	252	573326	55.37523	ppb		98
86)	Benz (a) anthracene	13.65	228	1901953	57.95823	ppb		100
87)	Bis (2-ethylhexyl) phthala	13.67	149	1500100	59.47733	ppb		99
88)	Chrysene	13.69	228	1612879	56.51364	ppb		100
89)	Di-n-octylphthalate	14.41	149	2164466	58.13779	ppb	#	89
91)	Benzo (b) fluoranthene	14.96	252	1834489	64.91869	ppb		99
92)	Benzo (k) fluoranthene	14.99	252	1524121	59.82190	ppb		99
93)	Benzo (a) pyrene	15.41	252	1574220	62.77002	ppb		98
94)	Indeno (1,2,3-cd) pyrene	17.36	276	1835591	62.78747	ppb		99
95)	Dibenz (a,h) anthracene	17.39	278	1644729	63.15402	ppb		99
96)	Benzo (g,h,i) perylene	17.92	276	1423801	61.97998	ppb		98

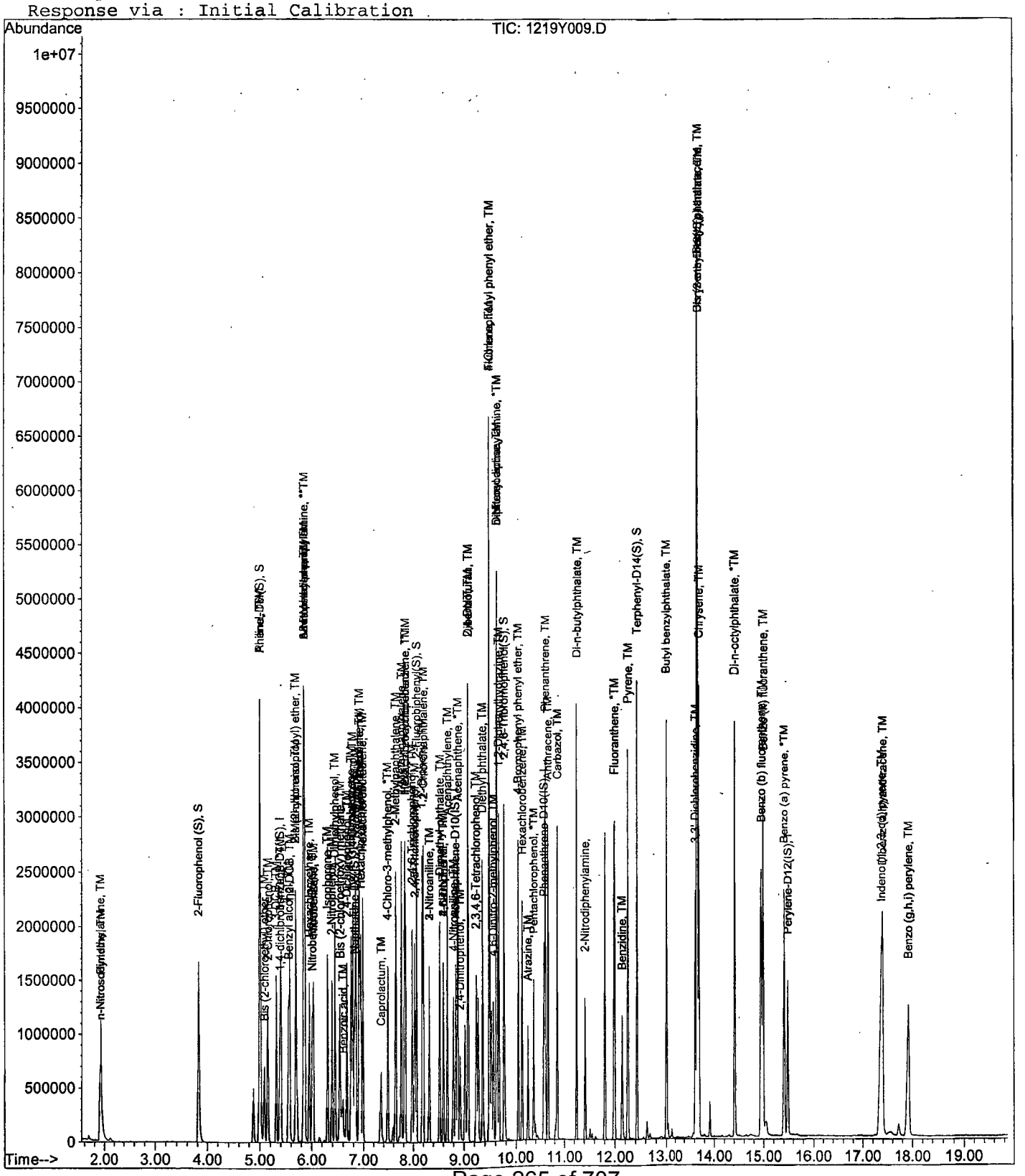
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y009.D Vial: 9
Acq On : 19 Dec 19 11:51 Operator: MA,SS
Sample : 60ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y010.D Vial: 10
Acq On : 19 Dec 19 12:19 Operator: MA,SS
Sample : 80ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.38	152	160754	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.83	136	692959	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.84	164	424996	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.58	188	805372	40.00000 ppb	0.00
80) Chrysene-D12(IS)	13.67	240	1113628	40.00000 ppb	0.00
90) Perylene-D12(IS)	15.49	264	871956	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.82	112	1075001	182.44881 ppb	0.00
Spiked Amount 200.000			Recovery =	91.225%	
6) Phenol-D6 (S)	5.01	99	1420883	189.27713 ppb	0.01
Spiked Amount 200.000			Recovery =	94.638%	
22) Nitrobenzene-D5(S)	6.02	82	726169	84.26361 ppb	0.01
Spiked Amount 100.000			Recovery =	84.264%	
46) 2-Fluorobiphenyl(S)	8.06	172	1352303	86.15933 ppb	0.00
Spiked Amount 100.000			Recovery =	86.159%	
64) 2,4,6-Tribromophenol(S)	9.78	330	496073	187.81763 ppb	0.01
Spiked Amount 200.000			Recovery =	93.909%	
83) Terphenyl-D14(S)	12.43	244	1883191	70.91511 ppb	0.00
Spiked Amount 100.000			Recovery =	70.915%	
Target Compounds					Qvalue
3) n-Nitrosodimethylamine	1.91	42	401885	89.53944 ppb	99
4) Pyridine	1.93	79	934760	89.90605 ppb	98
7) Phenol	5.02	94	839274	94.73526 ppb	88
8) Aniline	5.01	93	498688	86.25749 ppb	85
9) Bis (2-chloroethyl) ether	5.09	63	369777	90.09981 ppb	97
10) 2-Chlorophenol	5.16	128	564852	90.55087 ppb	97
11) 1,3-DCB	5.31	146	617727	90.24242 ppb	99
12) 1,4-DCB	5.41	146	635798	90.75672 ppb	96
13) Benzyl alcohol	5.55	108	342328	93.16664 ppb	96
14) 1,2-DCB	5.57	146	592153	90.84732 ppb	100
15) 2-Methylphenol	5.69	107	504104	92.60913 ppb	99
16) Bis (2-chloroisopropyl) et	5.69	45	497984	92.00976 ppb	91
17) Acetophenone	5.85	105	867366	93.48636 ppb	88
18) 3&4-Methylphenol	5.87	107	1364847	190.65532 ppb	96
19) n-Nitrosodi-n-propylamine	5.85	70	570874	95.66579 ppb	96
20) Hexachloroethane	5.95	117	268399	91.91539 ppb	98
23) Nitrobenzene	6.04	77	764484	85.59428 ppb	97
24) Isophorone	6.32	82	1217808	86.42078 ppb	99
25) 2-Nitrophenol	6.39	139	319613	88.12521 ppb	99
26) 2,4-Dimethylphenol	6.45	122	504451	86.92306 ppb	97
27) Benzoic acid	6.62	105	419869	81.40378 ppb	98
28) Bis (2-chloroethoxy) metha	6.55	93	640818	87.62335 ppb	98
29) 2,4-Dichlorophenol	6.68	162	502883	88.87008 ppb	99
30) 1,2,4-Trichlorobenzene	6.76	180	558246	88.44856 ppb	99
31) 3,4-Dimethylphenol	6.79	107	839926	86.99873 ppb	99
32) Naphthalene	6.84	128	1644894	87.24311 ppb	100
33) 4-Chloroaniline	6.92	127	636919	84.01473 ppb	94
34) 2,6-Dichlorophenol	6.93	162	502385	90.62439 ppb	94
35) Hexachloropropene	6.95	213	488764	89.49574 ppb	100
36) Hexachlorobutadiene	6.98	225	378957	88.50528 ppb	99
37) Caprolactum	7.36	55	217497	85.64244 ppb	97
38) 4-Chloro-3-methylphenol	7.49	107	599365	89.23025 ppb	95

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

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y010.D Vial: 10
Acq On : 19 Dec 19 12:19 Operator: MA,SS
Sample : 80ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	2-Methylnaphthalene	7.63	142	1113998	87.79274	ppb		100
40)	1-Methylnaphthalene	7.75	142	1172330	88.84806	ppb		99
42)	Hexachlorocyclopentadiene	7.82	237	428800	85.24955	ppb		98
43)	1,2,4,5-Tetrachlorobenzene	7.84	216	615504	90.91826	ppb		100
44)	2,4,6-Trichlorophenol	7.97	196	393255	88.72482	ppb		100
45)	2,4,5-Trichlorophenol	8.02	196	421934	87.77419	ppb		97
47)	1,1'-Biphenyl	8.18	154	1475278	89.49955	ppb		97
48)	2-Chloronaphthalene	8.20	162	1174670	88.61232	ppb		99
49)	2-Nitroaniline	8.32	65	442197	87.85212	ppb		97
50)	Dimethyl phthalate	8.53	163	1419958	87.38754	ppb		100
51)	2,6-DNT	8.61	165	321665	90.76781	ppb		90
52)	Acenaphthylene	8.68	152	1796603	88.02567	ppb		100
53)	3-Nitroaniline	8.32	138	365367	86.85624	ppb		96
54)	Acenaphthene	8.89	154	1132422	88.70127	ppb		100
55)	2,4-Dinitrophenol	8.93	184	181951	81.43622	ppb		87
56)	4-Nitrophenol	8.61	65	28530	86.14131	ppb		100
57)	Dibenzofuran	9.08	168	1771319	91.34602	ppb		99
58)	2,4-DNT	9.08	165	492992	94.62011	ppb		89
59)	2,3,4,6-Tetrachlorophenol	9.24	232	331804	91.00501	ppb		99
60)	Diethyl phthalate	9.36	149	1448375	86.03660	ppb		97
61)	4-Chlorophenyl phenyl ethe	9.48	204	883654	94.80072	ppb		99
62)	Fluorene	9.48	166	1569501	95.14055	ppb		100
63)	4-Nitroaniline	8.80	138	289183	82.50114	ppb		92
66)	4,6-Dinitro-2-methylphenol	9.56	198	286670	91.29983	ppb	#	77
67)	Diphenyl amine	9.63	169	2378602	181.42435	ppb		100
68)	n-Nitrosodiphenylamine	9.63	169	2378602	181.42435	ppb		100
69)	1,2-Diphenylhydrazine	9.67	77	1671934	88.17691	ppb		99
70)	4-Bromophenyl phenyl ether	10.05	248	446909	90.53429	ppb		96
71)	Hexachlorobenzene	10.13	284	447867	89.68291	ppb		96
72)	Atrazine	10.25	200	193291	42.93067	ppb		99
73)	Pentachlorophenol	10.36	266	272701	88.83349	ppb		100
74)	Phenanthrene	10.60	178	1957324	88.06988	ppb		100
75)	Anthracene	10.67	178	2064260	88.85398	ppb		100
76)	Carbazol	10.85	167	1880718	88.91287	ppb		99
77)	Di-n-butylphthalate	11.25	149	2576769	89.08752	ppb		99
78)	2-Nitrodiphenylamine	11.43	167	300682	45.69969	ppb		97
79)	Fluoranthene	12.00	202	2372919	91.15549	ppb		99
81)	Benzidine	12.14	184	645213	56.77039	ppb		100
82)	Pyrene	12.26	202	2459441	73.67696	ppb		100
84)	Butyl benzylphthalate	13.00	149	1236168	73.90991	ppb		99
85)	3,3'-Dichlorobenzidine	13.62	252	786783	68.58216	ppb		100
86)	Benz (a) anthracene	13.66	228	2811632	77.32433	ppb		100
87)	Bis (2-ethylhexyl) phthala	13.67	149	2233399	79.91714	ppb		98
88)	Chrysene	13.69	228	2371032	74.97755	ppb		100
89)	Di-n-octylphthalate	14.42	149	3105415	75.27828	ppb		100
91)	Benzo (b) fluoranthene	14.96	252	2455809	86.22935	ppb		99
92)	Benzo (k) fluoranthene	14.99	252	2306290	89.81741	ppb		99
93)	Benzo (a) pyrene	15.42	252	2209159	87.40166	ppb		99
94)	Indeno (1,2,3-cd) pyrene	17.37	276	2551188	86.58555	ppb		98
95)	Dibenz (a,h) anthracene	17.41	278	2321142	88.43297	ppb		99
96)	Benzo (g,h,i) perylene	17.94	276	1961989	84.74315	ppb		99

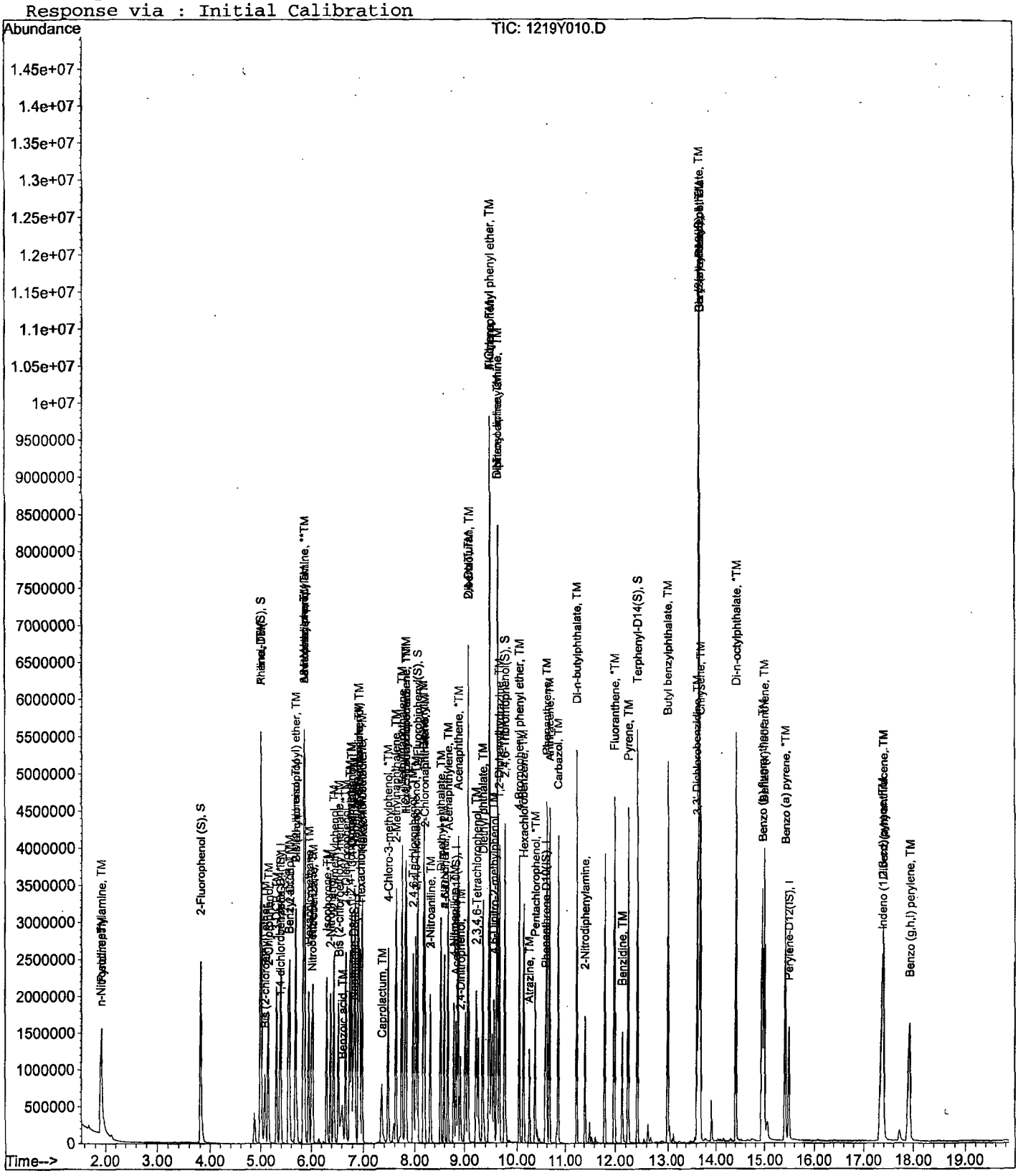
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y010.D Vial: 10
Acq On : 19 Dec 19 12:19 Operator: MA,SS
Sample : 80ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y011.D Vial: 11
Acq On : 19 Dec 19 12:46 Operator: MA,SS
Sample : 100ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.39	152	167721	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.82	136	690825	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.85	164	415501	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.57	188	801375	40.00000 ppb	0.00
80) Chrysene-D12(IS)	13.66	240	1091847	40.00000 ppb	0.00
90) Perylene-D12(IS)	15.49	264	847047	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.83	112	1327145	215.88621 ppb	0.00
Spiked Amount 200.000			Recovery	= 107.943%	
6) Phenol-D6 (S)	5.00	99	1768177	225.75631 ppb	0.00
Spiked Amount 200.000			Recovery	= 112.878%	
22) Nitrobenzene-D5(S)	6.02	82	888862	103.46088 ppb	0.00
Spiked Amount 100.000			Recovery	= 103.461%	
46) 2-Fluorobiphenyl(S)	8.06	172	1696969	110.58977 ppb	0.00
Spiked Amount 100.000			Recovery	= 110.590%	
64) 2,4,6-Tribromophenol(S)	9.78	330	649730	251.61496 ppb	0.00
Spiked Amount 200.000			Recovery	= 125.808%	
83) Terphenyl-D14(S)	12.44	244	2470353	94.88156 ppb	0.00
Spiked Amount 100.000			Recovery	= 94.882%	
Target Compounds					Qvalue
3) n-Nitrosodimethylamine	1.90	42	444670	94.95651 ppb	93
4) Pyridine	1.92	79	1054326	97.19369 ppb	99
7) Phenol	5.02	94	975068	105.49142 ppb	96
8) Aniline	5.01	93	532480	88.27659 ppb	97
9) Bis (2-chloroethyl) ether	5.09	63	422559	98.68376 ppb	98
10) 2-Chlorophenol	5.15	128	643242	98.83407 ppb	96
11) 1,3-DCB	5.32	146	705388	98.76806 ppb	98
12) 1,4-DCB	5.40	146	726887	99.44911 ppb	97
13) Benzyl alcohol	5.55	108	388291	101.28607 ppb	99
14) 1,2-DCB	5.57	146	689593	101.40173 ppb	99
15) 2-Methylphenol	5.69	107	576392	101.49063 ppb	99
16) Bis (2-chloroisopropyl) et	5.69	45	566462	100.31448 ppb	80
17) Acetophenone	5.85	105	992228	102.50184 ppb	98
18) 3&4-Methylphenol	5.87	107	1564530	209.47066 ppb	100
19) n-Nitrosodi-n-propylamine	5.86	70	649091	104.25487 ppb	100
20) Hexachloroethane	5.95	117	306272	100.52845 ppb	93
23) Nitrobenzene	6.04	77	875644	98.34300 ppb	93
24) Isophorone	6.31	82	1364800	97.15113 ppb	100
25) 2-Nitrophenol	6.40	139	362836	100.35190 ppb	90
26) 2,4-Dimethylphenol	6.45	122	582120	100.61623 ppb	97
27) Benzoic acid	6.63	105	476161	92.04260 ppb	97
28) Bis (2-chloroethoxy) metha	6.55	93	732731	100.50073 ppb	100
29) 2,4-Dichlorophenol	6.68	162	567413	100.58365 ppb	96
30) 1,2,4-Trichlorobenzene	6.76	180	635162	100.94600 ppb	98
31) 3,4-Dimethylphenol	6.80	107	956954	99.42657 ppb	97
32) Naphthalene	6.85	128	1900914	101.13354 ppb	100
33) 4-Chloroaniline	6.92	127	702041	92.89091 ppb	97
34) 2,6-Dichlorophenol	6.93	162	571198	103.35574 ppb	96
35) Hexachloropropene	6.94	213	564125	103.61389 ppb	100
36) Hexachlorobutadiene	6.99	225	434421	101.77230 ppb	99
37) Caprolactum	7.36	55	246611	97.40644 ppb	95
38) 4-Chloro-3-methylphenol	7.48	107	669864	100.03382 ppb	91

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

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y011.D Vial: 11
Acq On : 19 Dec 19 12:46 Operator: MA,SS
Sample : 100ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
39)	2-Methylnaphthalene	7.64	142	1291010	102.05711 ppb		99
40)	1-Methylnaphthalene	7.75	142	1334685	101.46501 ppb		100
42)	Hexachlorocyclopentadiene	7.82	237	423680	86.11588 ppb		100
43)	1,2,4,5-Tetrachlorobenzene	7.84	216	703291	106.25957 ppb		98
44)	2,4,6-Trichlorophenol	7.97	196	450783	104.02822 ppb		99
45)	2,4,5-Trichlorophenol	8.03	196	477360	101.57366 ppb		94
47)	1,1'-Biphenyl	8.18	154	1686770	104.66841 ppb		98
48)	2-Chloronaphthalene	8.21	162	1339298	103.33995 ppb		97
49)	2-Nitroaniline	8.33	65	495048	100.59966 ppb		91
50)	Dimethyl phthalate	8.53	163	1597157	100.53896 ppb		99
51)	2,6-DNT	8.61	165	360589	104.07665 ppb	#	75
52)	Acenaphthylene	8.68	152	2048709	102.67159 ppb		99
53)	3-Nitroaniline	8.33	138	418230	101.69501 ppb		96
54)	Acenaphthene	8.88	154	1288641	103.24434 ppb		99
55)	2,4-Dinitrophenol	8.93	184	208042	94.10192 ppb		96
56)	4-Nitrophenol	8.61	65	33255	102.70213 ppb		98
57)	Dibenzofuran	9.09	168	2035181	107.35164 ppb		93
58)	2,4-DNT	9.08	165	558092	109.56255 ppb		97
59)	2,3,4,6-Tetrachlorophenol	9.24	232	377431	105.88489 ppb		96
60)	Diethyl phthalate	9.36	149	1638573	99.55906 ppb		99
61)	4-Chlorophenyl phenyl ethe	9.48	204	1013272	111.19063 ppb		94
62)	Fluorene	9.49	166	1826006	113.21893 ppb		99
63)	4-Nitroaniline	8.80	138	325641	95.02525 ppb		82
66)	4,6-Dinitro-2-methylphenol	9.57	198	325138	104.06776 ppb		97
67)	Diphenyl amine	9.63	169	2746000	210.49174 ppb		100
68)	n-Nitrosodiphenylamine	9.63	169	2746000	210.49174 ppb		100
69)	1,2-Diphenylhydrazine	9.66	77	1846029	97.84419 ppb		96
70)	4-Bromophenyl phenyl ether	10.05	248	515407	104.93130 ppb		83
71)	Hexachlorobenzene	10.13	284	515422	103.72521 ppb		89
72)	Atrazine	10.25	200	217511	48.55098 ppb		96
73)	Pentachlorophenol	10.36	266	321253	105.17146 ppb		98
74)	Phenanthrene	10.60	178	2272938	102.78104 ppb		100
75)	Anthracene	10.67	178	2388824	103.33737 ppb		100
76)	Carbazol	10.86	167	2146142	101.96712 ppb		98
77)	Di-n-butylphthalate	11.26	149	3023885	105.06726 ppb		98
78)	2-Nitrodiphenylamine	11.43	167	350286	53.50438 ppb		97
79)	Fluoranthene	11.99	202	2652267	102.39480 ppb		98
81)	Benzidine	12.14	184	709638	63.68453 ppb		99
82)	Pyrene	12.26	202	2834840	86.61682 ppb		99
84)	Butyl benzylphthalate	13.01	149	1433320	87.40709 ppb	#	79
85)	3,3'-Dichlorobenzidine	13.62	252	875135	77.80538 ppb		99
86)	Benz (a) anthracene	13.66	228	3190283	89.48810 ppb		100
87)	Bis (2-ethylhexyl) phthala	13.66	149	2564215	93.58504 ppb		99
88)	Chrysene	13.70	228	2706844	87.30426 ppb		100
89)	Di-n-octylphthalate	14.42	149	3511144	86.81146 ppb		97
91)	Benzo (b) fluoranthene	14.95	252	2718531	98.26115 ppb		98
92)	Benzo (k) fluoranthene	15.00	252	2709650	108.62927 ppb		99
93)	Benzo (a) pyrene	15.42	252	2492274	101.50223 ppb		98
94)	Indeno (1,2,3-cd) pyrene	17.37	276	2878800	100.57766 ppb		100
95)	Dibenz (a,h) anthracene	17.40	278	2618904	102.71152 ppb		99
96)	Benzo (g,h,i) perylene	17.94	276	2213051	98.39806 ppb		100

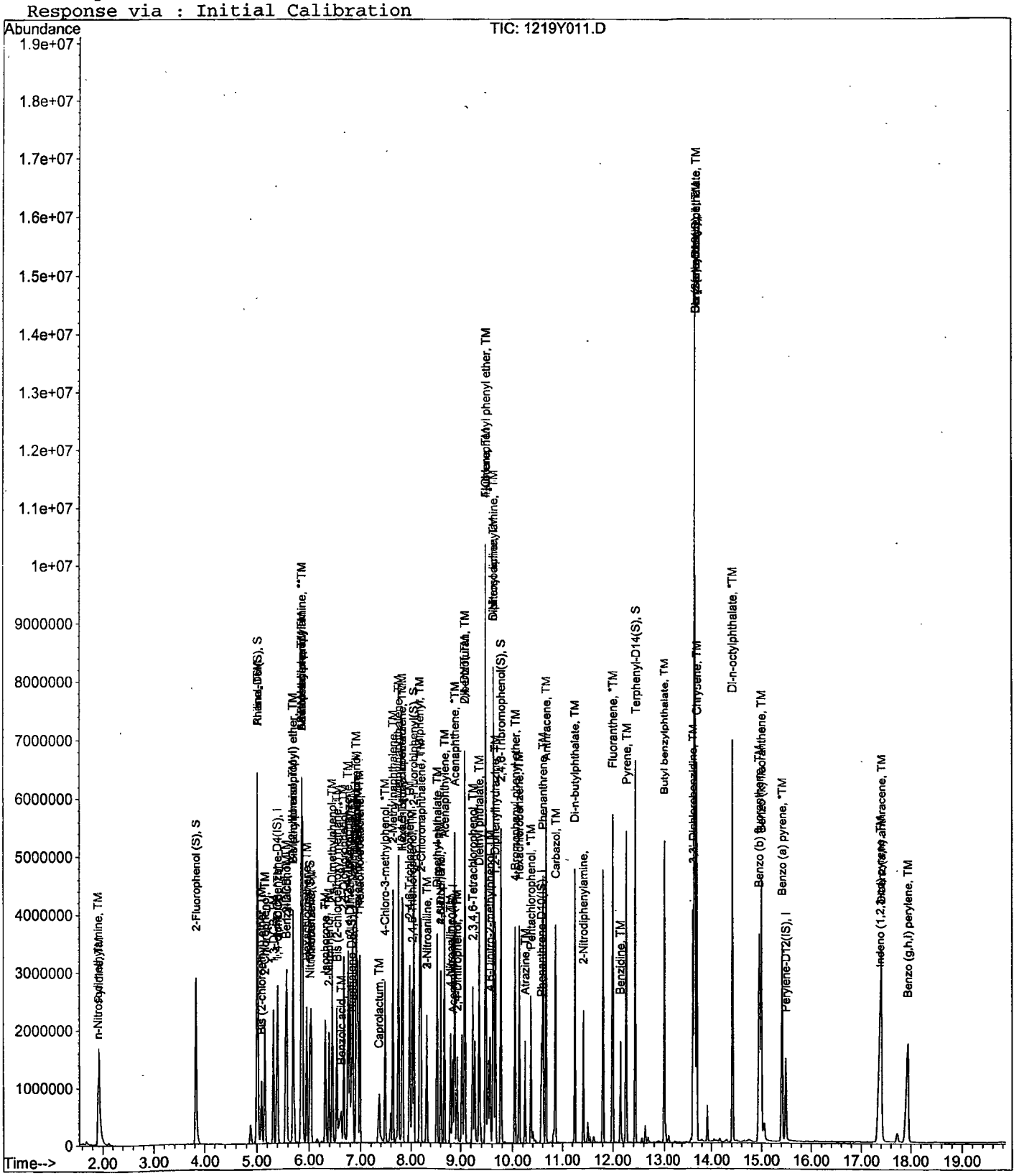
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y011.D Vial: 11
Acq On : 19 Dec 19 12:46 Operator: MA,SS
Sample : 100ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration



Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Second Source Calibration

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

SDG No:
Date Analyzed: 12/19/19
Instrument: Yoda
Initial Cal. Date: 12/19/19
Data File: 1219Y012.D

		Compound	MEAN	CCRF	%D		%Drift
1		1,4-Dioxane	0.6022	0.6376	5.9		
2	TM	n-Nitrosodimethylamine	1.117	1.180	5.6	TM	
3	TM	Pyridine	2.587	2.639	2.0	TM	
4	*TM	Phenol	2.204	2.243	1.7	*TM	
5	TM	Aniline	1.439	1.657	15	TM	
6	TM	Bis (2-chloroethyl) ether	1.021	1.080	5.7	TM	
7	TM	2-Chlorophenol	1.552	1.607	3.6	TM	
8	TM	1,3-DCB	1.703	1.753	2.9	TM	
9	*TM	1,4-DCB	1.743	1.793	2.8	*TM	
10	TM	Benzyl alcohol	0.9143	0.9743	6.6	TM	
11	TM	1,2-DCB	1.622	1.674	3.2	TM	
12	TM	2-Methylphenol	1.354	1.404	3.7	TM	
13	TM	Bis (2-chloroisopropyl) ether	1.347	1.393	3.4	TM	
14	TM	Acetophenone	2.309	2.421	4.9	TM	
15	TM	3&4-Methylphenol	1.781	1.810	1.6	TM	
16	**TM	n-Nitrosodi-n-propylamine	1.485	1.540	3.7	**TM	
17	TM	Hexachloroethane	0.7266	0.7587	4.4	TM	
18	TM	Nitrobenzene	0.5156	0.5309	3.0	TM	
19	TM	Isophorone	0.8134	0.8514	4.7	TM	
20	*TM	2-Nitrophenol	0.2094	0.2223	6.2	*TM	
21	TM	2,4-Dimethylphenol	0.3350	0.3505	4.6	TM	
22	TML	Benzoic acid	0.2307	0.3085	34	TML	6.6
23	TM	Bis (2-chloroethoxy) methane	0.4222	0.4476	6.0	TM	
24	*TM	2,4-Dichlorophenol	0.3266	0.3400	4.1	*TM	
25	TM	1,2,4-Trichlorobenzene	0.3643	0.3811	4.6	TM	
26	TM	3,4-Dimethylphenol	0.5573	0.5842	4.8	TM	
27	TM	Naphthalene	1.088	1.154	6.0	TM	
28	TM	4-Chloroaniline	0.4376	0.4640	6.0	TM	
29	TM	2,6-Dichlorophenol	0.3200	0.3394	6.1	TM	
30	TM	Hexachloropropene	0.3152	0.3339	5.9	TM	
31	*TM	Hexachlorobutadiene	0.2472	0.2560	3.6	*TM	
32	TM	Caprolactum	0.1466	0.1538	4.9	TM	
33	*TM	4-Chloro-3-methylphenol	0.3877	0.4161	7.3	*TM	
34	TM	2-Methylnaphthalene	0.7325	0.7990	9.1	TM	
35	TM	1-Methylnaphthalene	0.7616	0.7886	3.5	TM	
36	**TML	Hexachlorocyclopentadiene	0.3696	0.4521	22	**TML	1.1
37	TM	1,2,4,5-Tetrachlorobenzene	0.6372	0.6766	6.2	TM	
38	*TM	2,4,6-Trichlorophenol	0.4172	0.4464	7.0	*TM	
39	TM	2,4,5-Trichlorophenol	0.4524	0.4860	7.4	TM	
40	TM	1,1'-Biphenyl	1.551	1.646	6.1	TM	
		Average			6.2		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/19/19
Instrument: Yoda
Cal. Date: 12/19/19
Data File: 1219Y012.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	2-Chloronaphthalene	1.248	1.287	3.1	TM	
42	TM	2-Nitroaniline	0.4737	0.5330	13	TM	
43	TM	Dimethyl phthalate	1.529	1.612	5.4	TM	
44	TM	2,6-DNT	0.3335	0.3594	7.8	TM	
45	TM	Acenaphthylene	1.921	2.039	6.2	TM	
46	TM	3-Nitroaniline	0.3959	0.4440	12	TM	
47	*TM	Acenaphthene	1.202	1.272	5.8	*TM	
48	**TML	2,4-Dinitrophenol	0.1391	0.1930	39	**TML	2.4
49	**TM	4-Nitrophenol	0.0312	0.0331	6.3	**TM	
50	TM	Dibenzofuran	1.825	1.991	9.1	TM	
51	TM	2,4-DNT	0.4904	0.5209	6.2	TM	
52	TM	2,3,4,6-Tetrachlorophenol	0.3432	0.3772	9.9	TM	
53	TM	Diethyl phthalate	1.584	1.664	5.0	TM	
54	TM	4-Chlorophenyl phenyl ether	0.8773	0.8972	2.3	TM	
55	TM	Fluorene	1.553	1.642	5.8	TM	
56	TM	4-Nitroaniline	0.3299	0.3692	12	TM	
57	TM	4,6-Dinitro-2-methylphenol	0.1559	0.1668	7.0	TM	
58	TM	Diphenyl amine	0.6512	0.7094	8.9	TM	
59	*TM	n-Nitrosodiphenylamine	0.6512	0.7094	8.9	*TM	
60	TM	1,2-Diphenylhydrazine	0.9417	0.9917	5.3	TM	
61	TM	4-Bromophenyl phenyl ether	0.2452	0.2643	7.8	TM	
62	TM	Hexachlorobenzene	0.2480	0.2730	10	TM	
63	TM	Atrazine	0.2236	0.2354	5.3	TM	
64	*TM	Pentachlorophenol	0.1525	0.1514	0.68	*TM	
65	TM	Phenanthrene	1.104	1.206	9.2	TM	
66	TM	Anthracene	1.154	1.246	8.0	TM	
67	TM	Carbazol	1.051	1.136	8.1	TM	
68	TM	Di-n-butylphthalate	1.437	1.529	6.5	TM	
69		2-Nitrodiphenylamine	0.3268	0.3682	13		
70	*TM	Fluoranthene	1.293	1.392	7.7	*TM	
71	TM	Benzidine	0.4082	0.3716	9.0	TM	
72	TM	Pyrene	1.199	1.267	5.7	TM	
73	TM	Butyl benzylphthalate	0.6008	0.6332	5.4	TM	
74	TM	3,3'-Dichlorobenzidine	0.4121	0.4458	8.2	TM	
75	TM	Benz (a) anthracene	1.306	1.401	7.3	TM	
76	TM	Bis (2-ethylhexyl) phthalate	1.004	1.044	4.0	TM	
77	TM	Chrysene	1.136	1.200	5.6	TM	
78	*TM	Di-n-octylphthalate	1.482	1.554	4.8	*TM	
79	TM	Benzo (b) fluoranthene	1.306	1.367	4.6	TM	
80	TM	Benzo (k) fluoranthene	1.178	1.349	14	TM	
		Average			8.1		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/19/19
Instrument: Yoda
Cal. Date: 12/19/19
Data File: 1219Y012.D

		Compound	MEAN	CCRF	%D	%Drift	
81	*TM	Benzo (a) pyrene	1.160	1.260	8.7	*TM	
82	TM	Indeno (1,2,3-cd) pyrene	1.352	1.394	3.1	TM	
83	TM	Dibenz (a,h) anthracene	1.204	1.302	8.1	TM	
84	TM	Benzo (g,h,i) perylene	1.062	1.208	14	TM	
85							
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119							
120							
		Average			8.5		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y012.D Vial: 12
Acq On : 19 Dec 19 13:14 Operator: MA,SS
Sample : SS 8270 11/22/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.38	152	154648	40.00000 ppb		0.00
21) Napthalene-D8(IS)	6.82	136	627218	40.00000 ppb		0.00
41) Acenaphthene-D10(IS)	8.84	164	380731	40.00000 ppb		0.00
65) Phenanthrene-D10(IS)	10.57	188	716758	40.00000 ppb		0.00
80) Chrysene-D12(IS)	13.66	240	829696	40.00000 ppb		0.00
90) Perylene-D12(IS)	15.48	264	760670	40.00000 ppb		-0.01
System Monitoring Compounds						
5) 2-Fluorophenol (S)	0.00	112	0	0.00000 ppb		
Spiked Amount 200.000			Recovery =	0.000%		
6) Phenol-D6 (S)	0.00	99	0	0.00000 ppb		
Spiked Amount 200.000			Recovery =	0.000%		
22) Nitrobenzene-D5(S)	5.95	82	52711	6.75760 ppb		-0.06
Spiked Amount 100.000			Recovery =	6.758%		
46) 2-Fluorobiphenyl(S)	8.02	172	554	0.03940 ppb		-0.04
Spiked Amount 100.000			Recovery =	0.039%		
64) 2,4,6-Tribromophenol(S)	0.00	330	0	0.00000 ppb		
Spiked Amount 200.000			Recovery =	0.000%		
83) Terphenyl-D14(S)	12.43	244	297	0.01501 ppb		0.00
Spiked Amount 100.000			Recovery =	0.015%		
Target Compounds						Qvalue
3) n-Nitrosodimethylamine	1.90	42	228024	52.80932 ppb		98
4) Pyridine	1.92	79	510199	51.00889 ppb		99
7) Phenol	5.00	94	433587	50.87467 ppb		79
8) Aniline	5.00	93	320384	57.60447 ppb	#	92
9) Bis (2-chloroethyl) ether	5.08	63	208721	52.86493 ppb		99
10) 2-Chlorophenol	5.15	128	310728	51.77926 ppb		99
11) 1,3-DCB	5.31	146	338803	51.44923 ppb		98
12) 1,4-DCB	5.39	146	346514	51.41595 ppb		99
13) Benzyl alcohol	5.54	108	188349	53.28425 ppb		98
14) 1,2-DCB	5.57	146	323570	51.60169 ppb		98
15) 2-Methylphenol	5.68	107	271451	51.83733 ppb		99
16) Bis (2-chloroisopropyl) et	5.69	45	269286	51.71896 ppb		86
17) Acetophenone	5.84	105	467976	52.43085 ppb		97
18) 3&4-Methylphenol	5.86	107	699849	101.62178 ppb		99
19) n-Nitrosodi-n-propylamine	5.84	70	297756	51.86739 ppb		93
20) Hexachloroethane	5.95	117	146655	52.20615 ppb		96
23) Nitrobenzene	6.03	77	416218	51.48566 ppb		93
24) Isophorone	6.30	82	667515	52.33466 ppb		98
25) 2-Nitrophenol	6.39	139	174251	53.08111 ppb		98
26) 2,4-Dimethylphenol	6.44	122	274826	52.31942 ppb		99
27) Benzoic acid	6.58	105	241867	53.28837 ppb		98
28) Bis (2-chloroethoxy) metha	6.54	93	350898	53.00967 ppb		98
29) 2,4-Dichlorophenol	6.68	162	266533	52.03896 ppb		99
30) 1,2,4-Trichlorobenzene	6.76	180	298756	52.29628 ppb		100
31) 3,4-Dimethylphenol	6.79	107	458062	52.41857 ppb		99
32) Naphthalene	6.84	128	904563	53.00552 ppb		100
33) 4-Chloroaniline	6.91	127	363799	53.01781 ppb		98
34) 2,6-Dichlorophenol	6.92	162	266063	53.02515 ppb		98
35) Hexachloropropene	6.94	213	261770	52.95562 ppb		98
36) Hexachlorobutadiene	6.98	225	200685	51.78252 ppb		99
37) Caprolactum	7.32	55	120598	52.46442 ppb		93
38) 4-Chloro-3-methylphenol	7.47	107	326264	53.66349 ppb		90

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

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y012.D Vial: 12
Acq On : 19 Dec 19 13:14 Operator: MA,SS
Sample : SS 8270 11/22/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	2-Methylnaphthalene	7.63	142	626418	54.54154	ppb		99
40)	1-Methylnaphthalene	7.75	142	618310	51.77181	ppb		99
42)	Hexachlorocyclopentadiene	7.82	237	215168	49.43015	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.84	216	321980	53.09037	ppb		99
44)	2,4,6-Trichlorophenol	7.97	196	212425	53.49868	ppb		99
45)	2,4,5-Trichlorophenol	8.02	196	231296	53.71023	ppb		96
47)	1,1'-Biphenyl	8.17	154	783426	53.05320	ppb		99
48)	2-Chloronaphthalene	8.20	162	612398	51.56780	ppb		99
49)	2-Nitroaniline	8.32	65	253652	56.25244	ppb		98
50)	Dimethyl phthalate	8.52	163	767054	52.69465	ppb		98
51)	2,6-DNT	8.60	165	171054	53.88004	ppb	#	66
52)	Acenaphthylene	8.68	152	970447	53.07569	ppb		100
53)	3-Nitroaniline	8.32	138	211306	56.07253	ppb		99
54)	Acenaphthene	8.87	154	605219	52.91767	ppb		99
55)	2,4-Dinitrophenol	8.92	184	91847	48.82234	ppb		96
56)	4-Nitrophenol	8.60	65	15775	53.16743	ppb		98
57)	Dibenzofuran	9.08	168	947587	54.54797	ppb		100
58)	2,4-DNT	9.07	165	247899	53.11106	ppb		94
59)	2,3,4,6-Tetrachlorophenol	9.24	232	179532	54.96575	ppb		98
60)	Diethyl phthalate	9.35	149	791693	52.49593	ppb		99
61)	4-Chlorophenyl phenyl ethe	9.48	204	426980	51.13326	ppb		98
62)	Fluorene	9.48	166	781637	52.89027	ppb		99
63)	4-Nitroaniline	8.80	138	175684	55.94819	ppb		89
66)	4,6-Dinitro-2-methylphenol	9.55	198	149456	53.48414	ppb		90
67)	Diphenyl amine	9.62	169	1271157	108.94241	ppb		99
68)	n-Nitrosodiphenylamine	9.62	169	1271157	108.94241	ppb		99
69)	1,2-Diphenylhydrazine	9.66	77	888538	52.65453	ppb		98
70)	4-Bromophenyl phenyl ether	10.04	248	236821	53.90613	ppb		97
71)	Hexachlorobenzene	10.13	284	244573	55.02919	ppb		97
72)	Atrazine	10.24	200	105442	26.31441	ppb		97
73)	Pentachlorophenol	10.36	266	135671	49.65935	ppb		99
74)	Phenanthrene	10.60	178	1080229	54.61406	ppb		99
75)	Anthracene	10.66	178	1116406	53.99563	ppb		100
76)	Carbazol	10.85	167	1017680	54.06002	ppb		99
77)	Di-n-butylphthalate	11.25	149	1370271	53.23188	ppb		99
78)	2-Nitrodiphenylamine	11.42	167	164948	28.16935	ppb		89
79)	Fluoranthene	11.99	202	1247416	53.84374	ppb		99
81)	Benzidine	12.14	184	385367	45.51080	ppb		99
82)	Pyrene	12.25	202	1314061	52.83625	ppb		99
84)	Butyl benzylphthalate	13.00	149	656686	52.69920	ppb		91
85)	3,3'-Dichlorobenzidine	13.62	252	462307	54.08886	ppb	#	99
86)	Benz (a) anthracene	13.65	228	1453439	53.65073	ppb		99
87)	Bis (2-ethylhexyl) phthala	13.66	149	1082924	52.01071	ppb	#	98
88)	Chrysene	13.69	228	1244504	52.82157	ppb		100
89)	Di-n-octylphthalate	14.41	149	1611191	52.42256	ppb	#	91
91)	Benzo (b) fluoranthene	14.94	252	1300001	52.32418	ppb		99
92)	Benzo (k) fluoranthene	14.99	252	1282239	57.24188	ppb		98
93)	Benzo (a) pyrene	15.41	252	1198281	54.34376	ppb		99
94)	Indeno (1,2,3-cd) pyrene	17.35	276	1325649	51.57388	ppb		99
95)	Dibenz (a,h) anthracene	17.38	278	1237782	54.05738	ppb		100
96)	Benzo (g,h,i) perylene	17.91	276	1148610	56.86944	ppb		99

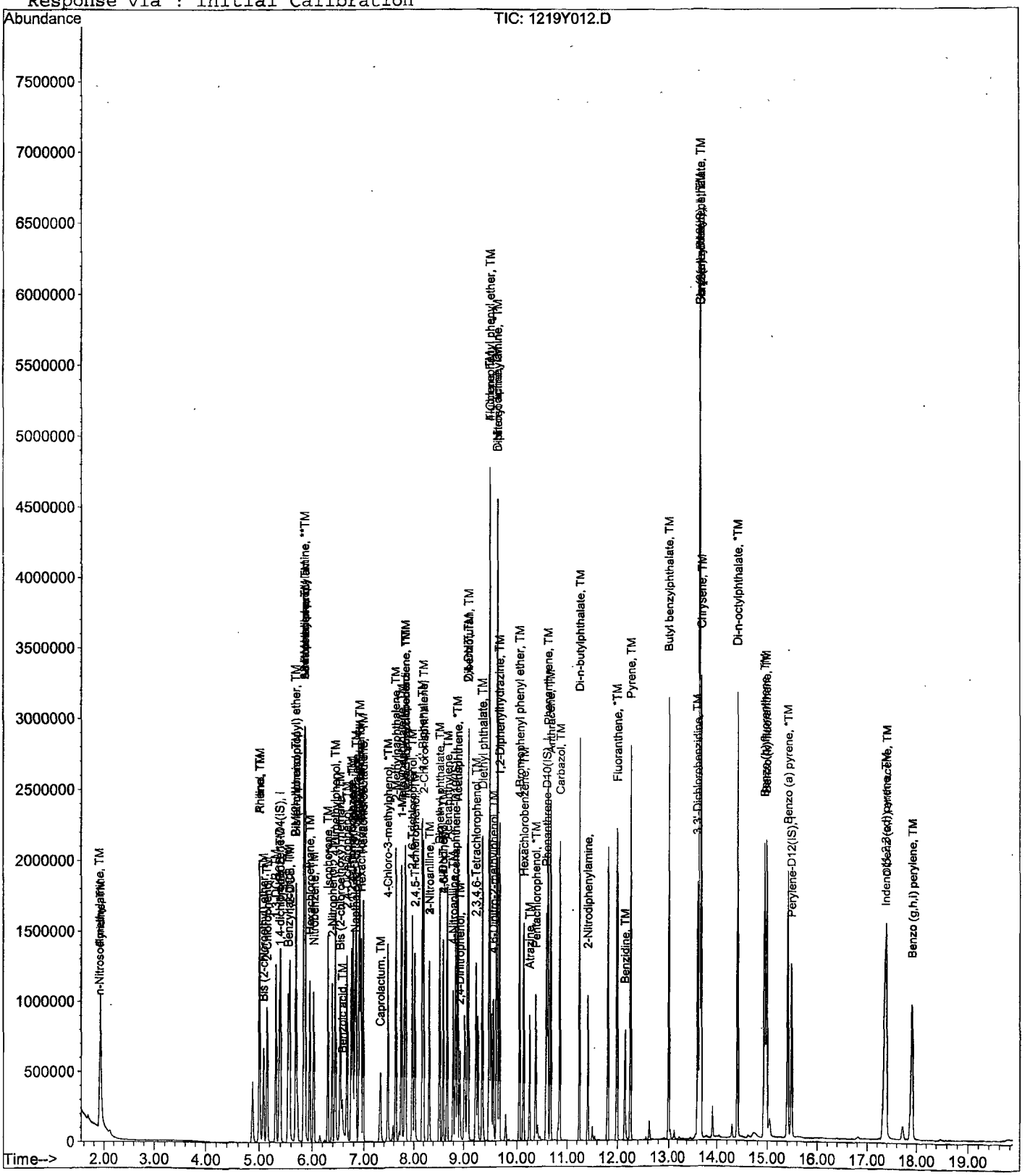
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y012.D Vial: 12
Acq On : 19 Dec 19 13:14 Operator: MA,SS
Sample : SS 8270 11/22/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration



Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 03/10/20
Instrument: Yoda
Initial Cal. Date: 12/19/19
Data File: 0207Y176.D

		Compound	MEAN	CCRF	%D	%Drift		
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I		
2	TM	n-Nitrosodimethylamine	1.117	1.357	22	TM		*NT
3	TM	Pyridine	2.587	3.274	27	TM		*NT
4	S	2-Fluorophenol (S)	1.466	1.397	4.7	S		
5	S	Phenol-D6 (S)	1.868	1.968	5.4	S		
6	*TM	Phenol	2.204	2.404	9.1	*TM		
7	TM	Aniline	1.439	1.873	30	TM		*NT
8	TM	Bis (2-chloroethyl) ether	1.021	1.118	9.5	TM		
9	TM	2-Chlorophenol	1.552	1.617	4.2	TM		
10	TM	1,3-DCB	1.703	1.771	4.0	TM		
11	*TM	1,4-DCB	1.743	1.845	5.8	*TM		
12	TM	Benzyl alcohol	0.9143	0.9921	8.5	TM		
13	TM	1,2-DCB	1.622	1.693	4.4	TM		
14	TM	2-Methylphenol	1.354	1.437	6.1	TM		
15	TM	Bis (2-chloroisopropyl) ether	1.347	1.495	11	TM		
16	TM	Acetophenone	2.309	2.424	5.0	TM		
17	TM	3&4-Methylphenol	1.781	1.905	7.0	TM		
18	**TM	n-Nitrosodi-n-propylamine	1.485	1.616	8.8	**TM		
19	TM	Hexachloroethane	0.7266	0.7769	6.9	TM		
20	I	Napthalene-D8(IS)	ISTD			I		
21	S	Nitrobenzene-D5(S)	0.4975	0.5070	1.9	S		
22	TM	Nitrobenzene	0.5156	0.5455	5.8	TM		
23	TM	Isophorone	0.8134	0.8670	6.6	TM		
24	*TM	2-Nitrophenol	0.2094	0.2208	5.5	*TM		
25	TM	2,4-Dimethylphenol	0.3350	0.3578	6.8	TM		
26	TML	Benzoic acid	0.2307	0.3398	47	TML		17
27	TM	Bis (2-chloroethoxy) methane	0.4222	0.4452	5.5	TM		
28	*TM	2,4-Dichlorophenol	0.3266	0.3480	6.5	*TM		
29	TM	1,2,4-Trichlorobenzene	0.3643	0.3827	5.0	TM		
30	TM	3,4-Dimethylphenol	0.5573	0.5870	5.3	TM		
31	TM	Naphthalene	1.088	1.141	4.8	TM		
32	TM	4-Chloroaniline	0.4376	0.4698	7.4	TM		
33	TM	2,6-Dichlorophenol	0.3200	0.3468	8.4	TM		
34	TM	Hexachloropropene	0.3152	0.3390	7.5	TM		
35	*TM	Hexachlorobutadiene	0.2472	0.2606	5.4	*TM		
36	TM	Caprolactum	0.1466	0.1647	12	TM		
37	*TM	4-Chloro-3-methylphenol	0.3877	0.4145	6.9	*TM		
38	TM	2-Methylnaphthalene	0.7325	0.7779	6.2	TM		
39	TM	1-Methylnaphthalene	0.7616	0.8087	6.2	TM		
40	I	Acenaphthene-D10(IS)	ISTD			I		
		Average			9.2			

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 03/10/20
Instrument: Yoda
Cal. Date: 12/19/19
Data File: 0207Y176.D

		Compound	MEAN	CCRF	%D		%Drift
41	**TML	Hexachlorocyclopentadiene	0.3696	0.3575	3.3	**TML	20
42	TM	1,2,4,5-Tetrachlorobenzene	0.6372	0.6226	2.3	TM	
43	*TM	2,4,6-Trichlorophenol	0.4172	0.4273	2.4	*TM	
44	TM	2,4,5-Trichlorophenol	0.4524	0.4444	1.8	TM	
45	S	2-Fluorobiphenyl(S)	1.477	1.428	3.3	S	
46	TM	1,1'-Biphenyl	1.551	1.594	2.8	TM	
47	TM	2-Chloronaphthalene	1.248	1.275	2.2	TM	
48	TM	2-Nitroaniline	0.4737	0.4980	5.1	TM	
49	TM	Dimethyl phthalate	1.529	1.597	4.4	TM	
50	TM	2,6-DNT	0.3335	0.3496	4.8	TM	
51	TM	Acenaphthylene	1.921	1.994	3.8	TM	
52	TM	3-Nitroaniline	0.3959	0.4138	4.5	TM	
53	*TM	Acenaphthene	1.202	1.240	3.2	*TM	
54	**TML	2,4-Dinitrophenol	0.1391	0.2017	45	**TML	1.4
55	**TM	4-Nitrophenol	0.0312	0.0337	8.1	**TM	
56	TM	Dibenzofuran	1.825	1.974	8.1	TM	
57	TM	2,4-DNT	0.4904	0.5567	14	TM	
58	TM	2,3,4,6-Tetrachlorophenol	0.3432	0.3604	5.0	TM	
59	TM	Diethyl phthalate	1.584	1.683	6.2	TM	
60	TM	4-Chlorophenyl phenyl ether	0.8773	0.9189	4.7	TM	
61	TM	Fluorene	1.553	1.650	6.3	TM	
62	TM	4-Nitroaniline	0.3299	0.3398	3.0	TM	
63	S	2,4,6-Tribromophenol(S)	0.2486	0.2259	9.1	S	
64	I	Phenanthrene-D10(IS)	ISTD			I	
65	TM	4,6-Dinitro-2-methylphenol	0.1559	0.1596	2.4	TM	
66	TM	Diphenyl amine	0.6512	0.6401	1.7	TM	
67	*TM	n-Nitrosodiphenylamine	0.6512	0.6401	1.7	*TM	
68	TM	1,2-Diphenylhydrazine	0.9417	0.9767	3.7	TM	
69	TM	4-Bromophenyl phenyl ether	0.2452	0.2424	1.1	TM	
70	TM	Hexachlorobenzene	0.2480	0.2391	3.6	TM	
71	TM	Atrazine	0.2236	0.2247	0.48	TM	
72	*TM	Pentachlorophenol	0.1525	0.1390	8.9	*TM	
73	TM	Phenanthrene	1.104	1.127	2.1	TM	
74	TM	Anthracene	1.154	1.197	3.7	TM	
75	TM	Carbazol	1.051	1.089	3.7	TM	
76	TM	Di-n-butylphthalate	1.437	1.498	4.3	TM	
77		2-Nitrodiphenylamine	0.3268	0.3746	15		
78	*TM	Fluoranthene	1.293	1.355	4.8	*TM	
79	I	Chrysene-D12(IS)	ISTD			I	
80	TM	Benzidine	0.4082	0.3421	16	TM	
		Average			6.0		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 03/10/20
Instrument: Yoda
Cal. Date: 12/19/19
Data File: 0207Y176.D

		Compound	MEAN	CCRF	%D	%Drift	
81	TM	Pyrene	1.199	1.122	6.4	TM	
82	S	Terphenyl-D14(S)	0.9538	0.8325	13	S	
83	TM	Butyl benzylphthalate	0.6008	0.5695	5.2	TM	
84	TM	3,3'-Dichlorobenzidine	0.4121	0.3893	5.5	TM	
85	TM	Benz (a) anthracene	1.306	1.233	5.6	TM	
86	TM	Bis (2-ethylhexyl) phthalate	1.004	0.9863	1.7	TM	
87	TM	Chrysene	1.136	1.077	5.1	TM	
88	*TM	Di-n-octylphthalate	1.482	1.365	7.9	*TM	
89	I	Perylene-D12(IS)	ISTD			I	
90	TM	Benzo (b) fluoranthene	1.306	1.310	0.25	TM	
91	TM	Benzo (k) fluoranthene	1.178	1.358	15	TM	
92	*TM	Benzo (a) pyrene	1.160	1.211	4.4	*TM	
93	TM	Indeno (1,2,3-cd) pyrene	1.352	1.430	5.8	TM	
94	TM	Dibenz (a,h) anthracene	1.204	1.279	6.3	TM	
95	TM	Benzo (g,h,i) perylene	1.062	1.102	3.8	TM	
96							
97							
98							
99							
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117							
118							
119							
120							
		Average			6.1		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200207\0207Y176.D Vial: 76
Acq On : 10 Mar 20 7:25 Operator: MA,SS
Sample : 50ug/ml 8270 03/04/20 (1) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Mar 10 8:59 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	149299	40.00000 ppb	-0.04
21) Napthalene-D8(IS)	6.78	136	621457	40.00000 ppb	-0.04
41) Acenaphthene-D10(IS)	8.80	164	397588	40.00000 ppb	-0.04
65) Phenanthrene-D10(IS)	10.53	188	788351	40.00000 ppb	-0.04
80) Chrysene-D12(IS)	13.62	240	995118	40.00000 ppb	-0.04
90) Perylene-D12(IS)	15.44	264	806987	40.00000 ppb	-0.05
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.73	112	521301	95.26330 ppb	-0.08
Spiked Amount 200.000			Recovery =	47.632%	
6) Phenol-D6 (S)	4.94	99	734582	105.36224 ppb	-0.05
Spiked Amount 200.000			Recovery =	52.681%	
22) Nitrobenzene-D5(S)	5.96	82	393826	50.95692 ppb	-0.04
Spiked Amount 100.000			Recovery =	50.957%	
46) 2-Fluorobiphenyl(S)	8.01	172	709580	48.32604 ppb	-0.05
Spiked Amount 100.000			Recovery =	48.326%	
64) 2,4,6-Tribromophenol(S)	9.73	330	224559	90.88094 ppb	-0.04
Spiked Amount 200.000			Recovery =	45.441%	
83) Terphenyl-D14(S)	12.39	244	1035572	43.64056 ppb	-0.03
Spiked Amount 100.000			Recovery =	43.641%	
Target Compounds					Qvalue
3) n-Nitrosodimethylamine	1.85	42	253321	60.76992 ppb	89
4) Pyridine	1.87	79	610969	63.27219 ppb	94
7) Phenol	4.96	94	448630	54.52568 ppb	94
8) Aniline	4.95	93	349504	65.09160 ppb	88
9) Bis (2-chloroethyl) ether	5.03	63	208620	54.73244 ppb	97
10) 2-Chlorophenol	5.10	128	301721	52.07969 ppb	98
11) 1,3-DCB	5.26	146	330490	51.98491 ppb	97
12) 1,4-DCB	5.35	146	344307	52.91885 ppb	96
13) Benzyl alcohol	5.50	108	185155	54.25732 ppb	99
14) 1,2-DCB	5.51	146	315870	52.17848 ppb	98
15) 2-Methylphenol	5.64	107	268114	53.03445 ppb	99
16) Bis (2-chloroisopropyl) et	5.64	45	278953	55.49508 ppb	89
17) Acetophenone	5.79	105	452359	52.49694 ppb	100
18) 3&4-Methylphenol	5.81	107	711090	106.95336 ppb	98
19) n-Nitrosodi-n-propylamine	5.80	70	301529	54.40645 ppb	99
20) Hexachloroethane	5.90	117	144987	53.46152 ppb	84
23) Nitrobenzene	5.99	77	423730	52.90077 ppb	99
24) Isophorone	6.26	82	673483	53.29205 ppb	99
25) 2-Nitrophenol	6.34	139	171543	52.74061 ppb	95
26) 2,4-Dimethylphenol	6.41	122	277946	53.40389 ppb	95
27) Benzoic acid	6.56	105	263954	58.28066 ppb	95
28) Bis (2-chloroethoxy) metha	6.50	93	345875	52.73522 ppb	99
29) 2,4-Dichlorophenol	6.63	162	270332	53.26998 ppb	98
30) 1,2,4-Trichlorobenzene	6.71	180	297301	52.52402 ppb	98
31) 3,4-Dimethylphenol	6.74	107	456004	52.66681 ppb	100
32) Naphthalene	6.80	128	886159	52.40845 ppb	100
33) 4-Chloroaniline	6.87	127	364982	53.68329 ppb	96
34) 2,6-Dichlorophenol	6.88	162	269378	54.18349 ppb	95
35) Hexachloropropene	6.90	213	263349	53.76892 ppb	99
36) Hexachlorobutadiene	6.93	225	202419	52.71412 ppb	98
37) Caprolactum	7.29	55	127912	56.16212 ppb	92
38) 4-Chloro-3-methylphenol	7.44	107	322017	53.45594 ppb	95

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

Data File : M:\YODA\DATA\Y200207\0207Y176.D Vial: 76
Acq On : 10 Mar 20 7:25 Operator: MA,SS
Sample : 50ug/ml 8270 03/04/20 (1) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Mar 10 8:59 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
39)	2-Methylnaphthalene	7.59	142	604324	53.10562 ppb		100
40)	1-Methylnaphthalene	7.71	142	628189	53.08659 ppb		100
42)	Hexachlorocyclopentadiene	7.77	237	177664	39.88302 ppb		100
43)	1,2,4,5-Tetrachlorobenzene	7.79	216	309439	48.85926 ppb		99
44)	2,4,6-Trichlorophenol	7.93	196	212385	51.22079 ppb		99
45)	2,4,5-Trichlorophenol	7.97	196	220862	49.11282 ppb		92
47)	1,1'-Biphenyl	8.13	154	792324	51.38086 ppb		97
48)	2-Chloronaphthalene	8.15	162	633446	51.07865 ppb		99
49)	2-Nitroaniline	8.27	65	247496	52.56010 ppb		92
50)	Dimethyl phthalate	8.48	163	793851	52.22333 ppb		99
51)	2,6-DNT	8.56	165	173751	52.40913 ppb	#	75
52)	Acenaphthylene	8.63	152	990993	51.90144 ppb		100
53)	3-Nitroaniline	8.28	138	205629	52.25257 ppb		95
54)	Acenaphthene	8.84	154	616180	51.59180 ppb		98
55)	2,4-Dinitrophenol	8.89	184	100220	50.71256 ppb		85
56)	4-Nitrophenol	8.56	65	16749	54.05678 ppb		97
57)	Dibenzofuran	9.03	168	980894	54.07126 ppb		95
58)	2,4-DNT	9.03	165	276651	56.75804 ppb		96
59)	2,3,4,6-Tetrachlorophenol	9.19	232	179106	52.51041 ppb		93
60)	Diethyl phthalate	9.31	149	836424	53.11049 ppb		97
61)	4-Chlorophenyl phenyl ethe	9.43	204	456659	52.36884 ppb		94
62)	Fluorene	9.43	166	820267	53.15093 ppb		99
63)	4-Nitroaniline	8.75	138	168890	51.50421 ppb		86
66)	4,6-Dinitro-2-methylphenol	9.51	198	157307	51.18146 ppb	#	71
67)	Diphenyl amine	9.58	169	1261575	98.30232 ppb		99
68)	n-Nitrosodiphenylamine	9.58	169	1261575	98.30232 ppb		99
69)	1,2-Diphenylhydrazine	9.62	77	962518	51.85869 ppb		97
70)	4-Bromophenyl phenyl ether	10.01	248	238830	49.42649 ppb	#	83
71)	Hexachlorobenzene	10.08	284	235664	48.20930 ppb	#	83
72)	Atrazine	10.20	200	110712	25.12047 ppb		98
73)	Pentachlorophenol	10.32	266	136946	45.57391 ppb		98
74)	Phenanthrene	10.55	178	1111061	51.07160 ppb		99
75)	Anthracene	10.62	178	1179582	51.87015 ppb		99
76)	Carbazol	10.81	167	1073339	51.83878 ppb		98
77)	Di-n-butylphthalate	11.20	149	1475849	52.12670 ppb		99
78)	2-Nitrodiphenylamine	11.38	167	184586	28.66035 ppb		94
79)	Fluoranthene	11.95	202	1335302	52.40302 ppb		98
81)	Benzidine	12.10	184	425513	41.89837 ppb		98
82)	Pyrene	12.22	202	1395763	46.79210 ppb		99
84)	Butyl benzylphthalate	12.96	149	708364	47.39660 ppb		86
85)	3,3'-Dichlorobenzidine	13.57	252	484190	47.23214 ppb		98
86)	Benz (a) anthracene	13.61	228	1533122	47.18457 ppb		99
87)	Bis (2-ethylhexyl) phthala	13.62	149	1226815	49.12678 ppb		95
88)	Chrysene	13.65	228	1340171	47.42634 ppb		99
89)	Di-n-octylphthalate	14.36	149	1698229	46.06933 ppb	#	88
91)	Benzo (b) fluoranthene	14.90	252	1321170	50.12418 ppb		98
92)	Benzo (k) fluoranthene	14.94	252	1369913	57.64580 ppb		100
93)	Benzo (a) pyrene	15.36	252	1221602	52.22164 ppb		99
94)	Indeno (1,2,3-cd) pyrene	17.28	276	1442039	52.88201 ppb		98
95)	Dibenz (a,h) anthracene	17.31	278	1290536	53.12644 ppb		98
96)	Benzo (g,h,i) perylene	17.83	276	1111876	51.89105 ppb		97

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

Quantitation Report

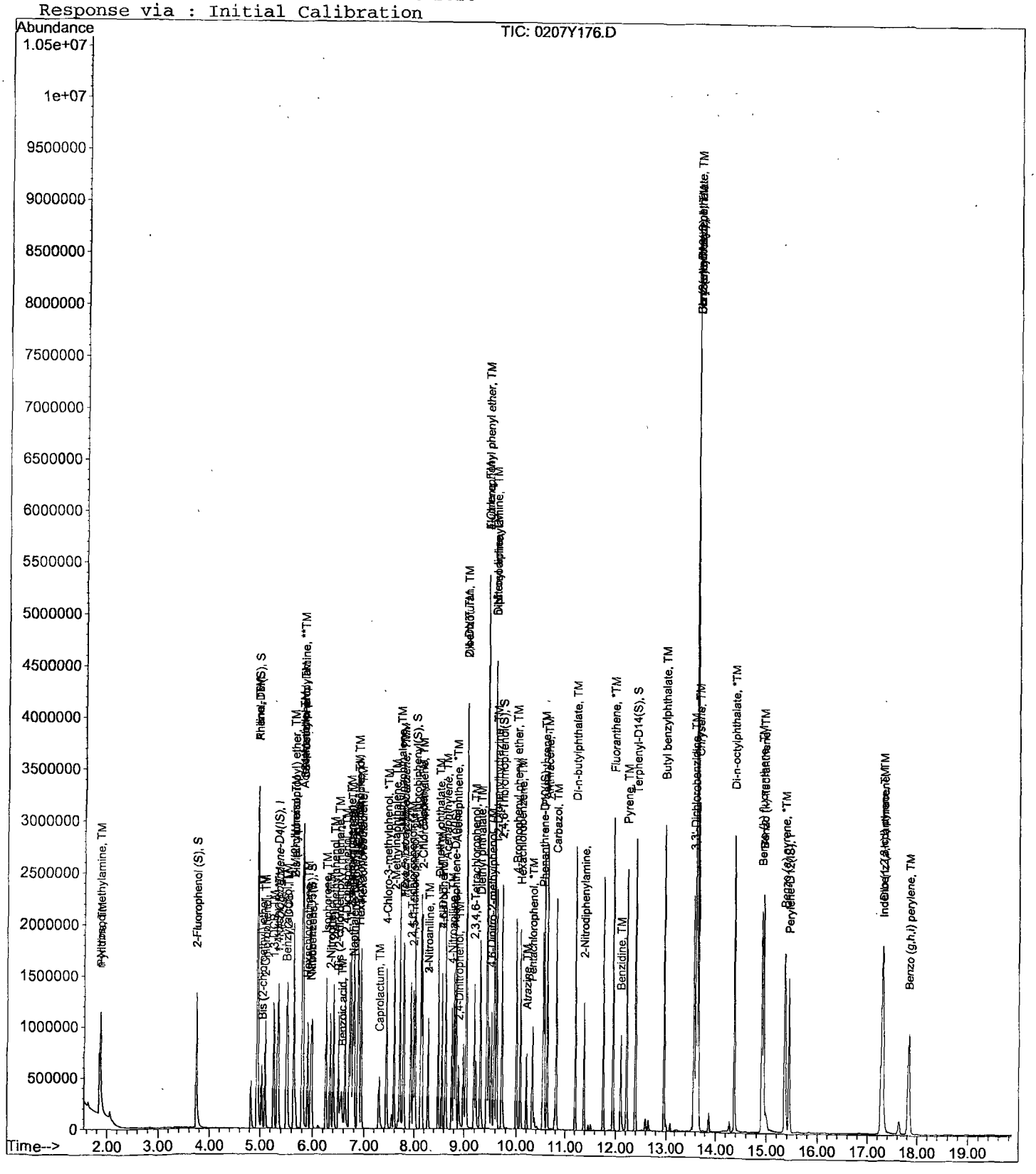
Data File : M:\YODA\DATA\Y200207\0207Y176.D
Acq On : 10 Mar 20 7:25
Sample : 50ug/ml 8270 03/04/20 (1)
Misc :

Vial: 76
Operator: MA,SS
Inst : Yoda
Multiplr: 1.00

Quant Time: Mar 10 8:59 2020

Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Ending Continuing Calibration

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

SDG No:
Date Analyzed: 03/10/20
Instrument: Yoda
Initial Cal. Date: 12/19/19
Data File: 0207Y195.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2		1,4-Dioxane	0.6022	0.4291	29		
3	TM	n-Nitrosodimethylamine	1.117	0.7202	36	TM	
4	TM	Pyridine	2.587	1.676	35	TM	
5	S	2-Fluorophenol (S)	1.466	1.264	14	S	
6	S	Phenol-D6 (S)	1.868	1.732	7.3	S	
7	*TM	Phenol	2.204	1.311	41	*TM	
8	TM	Aniline	1.439	1.030	28	TM	
9	TM	Bis (2-chloroethyl) ether	1.021	0.6157	40	TM	
10	TM	2-Chlorophenol	1.552	0.9039	42	TM	
11	TM	1,3-DCB	1.703	0.9993	41	TM	
12	*TM	1,4-DCB	1.743	1.033	41	*TM	
13	TM	Benzyl alcohol	0.9143	0.5507	40	TM	
14	TM	1,2-DCB	1.622	0.9401	42	TM	
15	TM	2-Methylphenol	1.354	0.8026	41	TM	
16	TM	Bis (2-chloroisopropyl) ether	1.347	0.8223	39	TM	
17	TM	Acetophenone	2.309	1.327	43	TM	
18	TM	3&4-Methylphenol	1.781	1.032	42	TM	
19	**TM	n-Nitrosodi-n-propylamine	1.485	0.8799	41	**TM	
20	TM	Hexachloroethane	0.7266	0.4431	39	TM	
21	I	Napthalene-D8(IS)	ISTD			I	
22	S	Nitrobenzene-D5(S)	0.4975	0.4788	3.8	S	
23	TM	Nitrobenzene	0.5156	0.3220	38	TM	
24	TM	Isophorone	0.8134	0.5069	38	TM	
25	*TM	2-Nitrophenol	0.2094	0.1277	39	*TM	
26	TM	2,4-Dimethylphenol	0.3350	0.2090	38	TM	
27	TML	Benzoic acid	0.2307	0.1851	20	TML	33
28	TM	Bis (2-chloroethoxy) methane	0.4222	0.2604	38	TM	
29	*TM	2,4-Dichlorophenol	0.3266	0.1992	39	*TM	
30	TM	1,2,4-Trichlorobenzene	0.3643	0.2204	40	TM	
31	TM	3,4-Dimethylphenol	0.5573	0.3414	39	TM	
32	TM	Naphthalene	1.088	0.6649	39	TM	
33	TM	4-Chloroaniline	0.4376	0.2699	38	TM	
34	TM	2,6-Dichlorophenol	0.3200	0.1972	38	TM	
35	TM	Hexachloropropene	0.3152	0.1917	39	TM	
36	*TM	Hexachlorobutadiene	0.2472	0.1503	39	*TM	
37	TM	Caprolactum	0.1466	0.0941	36	TM	
38	*TM	4-Chloro-3-methylphenol	0.3877	0.2367	39	*TM	
39	TM	2-Methylnaphthalene	0.7325	0.4486	39	TM	
40	TM	1-Methylnaphthalene	0.7616	0.4666	39	TM	
		Average			35.8		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 03/10/20
Instrument: Yoda
Cal. Date: 12/19/19
Data File: 0207Y195.D

		Compound	MEAN	CCRF	%D		%Drift	
41	I	Acenaphthene-D10(IS)	ISTD			I		
42	**TML	Hexachlorocyclopentadiene	0.3696	0.1924	48	**TML	54	*NT
43	TM	1,2,4,5-Tetrachlorobenzene	0.6372	0.3677	42	TM		
44	*TM	2,4,6-Trichlorophenol	0.4172	0.2462	41	*TM		
45	TM	2,4,5-Trichlorophenol	0.4524	0.2649	41	TM		
46	S	2-Fluorobiphenyl(S)	1.477	1.392	5.7	S		
47	TM	1,1'-Biphenyl	1.551	0.9402	39	TM		
48	TM	2-Chloronaphthalene	1.248	0.7618	39	TM		
49	TM	2-Nitroaniline	0.4737	0.2945	38	TM		
50	TM	Dimethyl phthalate	1.529	0.9397	39	TM		
51	TM	2,6-DNT	0.3335	0.2049	39	TM		
52	TM	Acenaphthylene	1.921	1.182	38	TM		
53	TM	3-Nitroaniline	0.3959	0.2449	38	TM		
54	*TM	Acenaphthene	1.202	0.7190	40	*TM		
55	**TML	2,4-Dinitrophenol	0.1391	0.0966	31	**TML	44	
56	**TM	4-Nitrophenol	0.0312	0.0188	40	**TM		
57	TM	Dibenzofuran	1.825	1.128	38	TM		
58	TM	2,4-DNT	0.4904	0.3118	36	TM		
59	TM	2,3,4,6-Tetrachlorophenol	0.3432	0.2024	41	TM		
60	TM	Diethyl phthalate	1.584	0.9885	38	TM		
61	TM	4-Chlorophenyl phenyl ether	0.8773	0.5196	41	TM		
62	TM	Fluorene	1.553	0.9440	39	TM		
63	TM	4-Nitroaniline	0.3299	0.2060	38	TM		
64	S	2,4,6-Tribromophenol(S)	0.2486	0.2162	13	S		
65	I	Phenanthrene-D10(IS)	ISTD			I		
66	TM	4,6-Dinitro-2-methylphenol	0.1559	0.0885	43	TM		
67	TM	Diphenyl amine	0.6512	0.3674	44	TM		
68	*TM	n-Nitrosodiphenylamine	0.6512	0.3674	44	*TM		
69	TM	1,2-Diphenylhydrazine	0.9417	0.5860	38	TM		
70	TM	4-Bromophenyl phenyl ether	0.2452	0.1455	41	TM		
71	TM	Hexachlorobenzene	0.2480	0.1418	43	TM		
72	TM	Atrazine	0.2236	0.1312	41	TM		
73	*TM	Pentachlorophenol	0.1525	0.0763	50	*TM		
74	TM	Phenanthrene	1.104	0.6650	40	TM		
75	TM	Anthracene	1.154	0.7087	39	TM		
76	TM	Carbazol	1.051	0.6375	39	TM		
77	TM	Di-n-butylphthalate	1.437	0.8644	40	TM		
78		2-Nitrodiphenylamine	0.3268	0.2164	34			
79	*TM	Fluoranthene	1.293	0.7877	39	*TM		
80	I	Chrysene-D12(IS)	ISTD			I		
		Average			38.3			

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 03/10/20
Instrument: Yoda
Cal. Date: 12/19/19
Data File: 0207Y195.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	Benzidine	0.4082	0.2087	49	TM	
82	TM	Pyrene	1.199	0.7066	41	TM	
83	S	Terphenyl-D14(S)	0.9538	0.8470	11	S	
84	TM	Butyl benzylphthalate	0.6008	0.3524	41	TM	
85	TM	3,3'-Dichlorobenzidine	0.4121	0.2538	38	TM	
86	TM	Benz (a) anthracene	1.306	0.7598	42	TM	
87	TM	Bis (2-ethylhexyl) phthalate	1.004	0.6133	39	TM	
88	TM	Chrysene	1.136	0.6545	42	TM	
89	*TM	Di-n-octylphthalate	1.482	0.8448	43	*TM	
90	I	Perylene-D12(IS)	ISTD			I	
91	TM	Benzo (b) fluoranthene	1.306	0.8478	35	TM	
92	TM	Benzo (k) fluoranthene	1.178	0.7153	39	TM	
93	*TM	Benzo (a) pyrene	1.160	0.7108	39	*TM	
94	TM	Indeno (1,2,3-cd) pyrene	1.352	0.8306	39	TM	
95	TM	Dibenz (a,h) anthracene	1.204	0.7344	39	TM	
96	TM	Benzo (g,h,i) perylene	1.062	0.6583	38	TM	
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			38.3		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200207\0207Y195.D Vial: 95
Acq On : 10 Mar 20 17:13 Operator: MA,SS
Sample : 50ug/ml 8270 03/04/20 (2) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Mar 11 8:59 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	173427	40.00000	ppb		-0.04
21) Napthalene-D8(IS)	6.78	136	694628	40.00000	ppb		-0.04
41) Acenaphthene-D10(IS)	8.79	164	433099	40.00000	ppb		-0.04
65) Phenanthrene-D10(IS)	10.53	188	846158	40.00000	ppb		-0.04
80) Chrysene-D12(IS)	13.62	240	986854	40.00000	ppb		-0.04
90) Perylene-D12(IS)	15.43	264	850602	40.00000	ppb		-0.05
System Monitoring Compounds							
5) 2-Fluorophenol (S)	3.74	112	548126	86.22985	ppb		-0.07
Spiked Amount 200.000			Recovery =	43.115%			
6) Phenol-D6 (S)	4.94	99	750893	92.71777	ppb		-0.05
Spiked Amount 200.000			Recovery =	46.359%			
22) Nitrobenzene-D5(S)	5.96	82	415704	48.12179	ppb		-0.04
Spiked Amount 100.000			Recovery =	48.122%			
46) 2-Fluorobiphenyl(S)	8.01	172	753806	47.12871	ppb		-0.04
Spiked Amount 100.000			Recovery =	47.129%			
64) 2,4,6-Tribromophenol(S)	9.72	330	234097	86.97297	ppb		-0.04
Spiked Amount 200.000			Recovery =	43.487%			
83) Terphenyl-D14(S)	12.39	244	1044803	44.39827	ppb		-0.04
Spiked Amount 100.000			Recovery =	44.398%			
Target Compounds							Qvalue
2) 1,4-Dioxane	1.63	58	9302	3.56250			95
3) n-Nitrosodimethylamine	1.85	42	156129	32.24343	ppb		93
4) Pyridine	1.87	79	363250	32.38467	ppb		91
7) Phenol	4.96	94	284110	29.72621	ppb		91
8) Aniline	4.95	93	223232	35.79064	ppb	#	89
9) Bis (2-chloroethyl) ether	5.03	63	133466	30.14392	ppb		92
10) 2-Chlorophenol	5.10	128	195949	29.11696	ppb		97
11) 1,3-DCB	5.27	146	216632	29.33471	ppb		98
12) 1,4-DCB	5.35	146	223840	29.61709	ppb		97
13) Benzyl alcohol	5.50	108	119389	30.11809	ppb		99
14) 1,2-DCB	5.52	146	203796	28.98137	ppb		97
15) 2-Methylphenol	5.64	107	173984	29.62703	ppb		99
16) Bis (2-chloroisopropyl) et	5.65	45	178251	30.52780	ppb		87
17) Acetophenone	5.80	105	287655	28.73842	ppb		99
18) 3&4-Methylphenol	5.81	107	447232	57.90858	ppb		99
19) n-Nitrosodi-n-propylamine	5.80	70	190748	29.62931	ppb		93
20) Hexachloroethane	5.90	117	96047	30.48851	ppb		82
23) Nitrobenzene	5.98	77	279597	31.22943	ppb		89
24) Isophorone	6.26	82	440154	31.16013	ppb		97
25) 2-Nitrophenol	6.34	139	110878	30.49835	ppb		95
26) 2,4-Dimethylphenol	6.40	122	181428	31.18714	ppb		99
27) Benzoic acid	6.55	105	160743	33.60658	ppb		98
28) Bis (2-chloroethoxy) metha	6.50	93	226126	30.84544	ppb		99
29) 2,4-Dichlorophenol	6.63	162	172954	30.49120	ppb		97
30) 1,2,4-Trichlorobenzene	6.71	180	191372	30.24815	ppb		99
31) 3,4-Dimethylphenol	6.74	107	296403	30.62737	ppb		100
32) Naphthalene	6.80	128	577302	30.54580	ppb		100
33) 4-Chloroaniline	6.86	127	234322	30.83469	ppb		99
34) 2,6-Dichlorophenol	6.88	162	171246	30.81656	ppb		94
35) Hexachloropropene	6.90	213	166445	30.40389	ppb		99
36) Hexachlorobutadiene	6.94	225	130481	30.40058	ppb		99
37) Caprolactum	7.28	55	81692	32.09006	ppb		97

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

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200207\0207Y195.D Vial: 95
Acq On : 10 Mar 20 17:13 Operator: MA,SS
Sample : 50ug/ml 8270 03/04/20 (2) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Mar 11 8:59 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.44	107	205537	30.52572	ppb		99
39)	2-Methylnaphthalene	7.60	142	389479	30.62058	ppb		98
40)	1-Methylnaphthalene	7.71	142	405140	30.63081	ppb		99
42)	Hexachlorocyclopentadiene	7.77	237	104176	23.23117	ppb		100
43)	1,2,4,5-Tetrachlorobenzene	7.79	216	199044	28.85141	ppb		97
44)	2,4,6-Trichlorophenol	7.93	196	133289	29.50957	ppb		95
45)	2,4,5-Trichlorophenol	7.98	196	143425	29.27823	ppb		95
47)	1,1'-Biphenyl	8.13	154	509008	30.30186	ppb		99
48)	2-Chloronaphthalene	8.15	162	412441	30.53077	ppb		100
49)	2-Nitroaniline	8.27	65	159452	31.08595	ppb		98
50)	Dimethyl phthalate	8.49	163	508730	30.72267	ppb		99
51)	2,6-DNT	8.56	165	110917	30.71311	ppb		90
52)	Acenaphthylene	8.64	152	639950	30.76812	ppb		100
53)	3-Nitroaniline	8.27	138	132568	30.92488	ppb		96
54)	Acenaphthene	8.84	154	389259	29.91974	ppb		99
55)	2,4-Dinitrophenol	8.89	184	52294	27.79448	ppb		99
56)	4-Nitrophenol	8.55	65	10187	30.18239	ppb	#	92
57)	Dibenzofuran	9.04	168	610556	30.89698	ppb		99
58)	2,4-DNT	9.04	165	168825	31.79640	ppb		96
59)	2,3,4,6-Tetrachlorophenol	9.19	232	109586	29.49419	ppb		96
60)	Diethyl phthalate	9.30	149	535136	31.19350	ppb		99
61)	4-Chlorophenyl phenyl ethe	9.43	204	281301	29.61408	ppb		97
62)	Fluorene	9.43	166	511032	30.39834	ppb		98
63)	4-Nitroaniline	8.76	138	111503	31.21558	ppb		96
66)	4,6-Dinitro-2-methylphenol	9.52	198	93603	28.37413	ppb		90
67)	Diphenyl amine	9.57	169	777193	56.42190	ppb		100
68)	n-Nitrosodiphenylamine	9.57	169	777193	56.42190	ppb		100
69)	1,2-Diphenylhydrazine	9.62	77	619790	31.11182	ppb		98
70)	4-Bromophenyl phenyl ether	10.00	248	153912	29.67642	ppb		99
71)	Hexachlorobenzene	10.08	284	150028	28.59420	ppb		92
72)	Atrazine	10.20	200	69394	14.66976	ppb		95
73)	Pentachlorophenol	10.32	266	80733	25.03146	ppb		99
74)	Phenanthrene	10.56	178	703317	30.12041	ppb		99
75)	Anthracene	10.61	178	749633	30.71187	ppb		99
76)	Carbazol	10.81	167	674310	30.34210	ppb		99
77)	Di-n-butylphthalate	11.21	149	914285	30.08625	ppb		100
78)	2-Nitrodiphenylamine	11.38	167	114420	16.55209	ppb		97
79)	Fluoranthene	11.95	202	833102	30.46093	ppb		99
81)	Benzidine	12.10	184	257499	25.56710	ppb		99
82)	Pyrene	12.21	202	871696	29.46779	ppb		99
84)	Butyl benzylphthalate	12.95	149	434714	29.33027	ppb		99
85)	3,3'-Dichlorobenzidine	13.57	252	313129	30.80114	ppb		99
86)	Benz (a) anthracene	13.60	228	937286	29.08821	ppb		99
87)	Bis (2-ethylhexyl) phthala	13.62	149	756517	30.54777	ppb		98
88)	Chrysene	13.65	228	807324	28.80905	ppb		99
89)	Di-n-octylphthalate	14.36	149	1042157	28.50824	ppb		97
91)	Benzo (b) fluoranthene	14.90	252	901475	32.44758	ppb		99
92)	Benzo (k) fluoranthene	14.94	252	760589	30.36441	ppb		98
93)	Benzo (a) pyrene	15.36	252	755807	30.65292	ppb		99
94)	Indeno (1,2,3-cd) pyrene	17.27	276	883142	30.72569	ppb		98
95)	Dibenz (a,h) anthracene	17.30	278	780872	30.49724	ppb		98
96)	Benzo (g,h,i) perylene	17.82	276	699979	30.99283	ppb		100

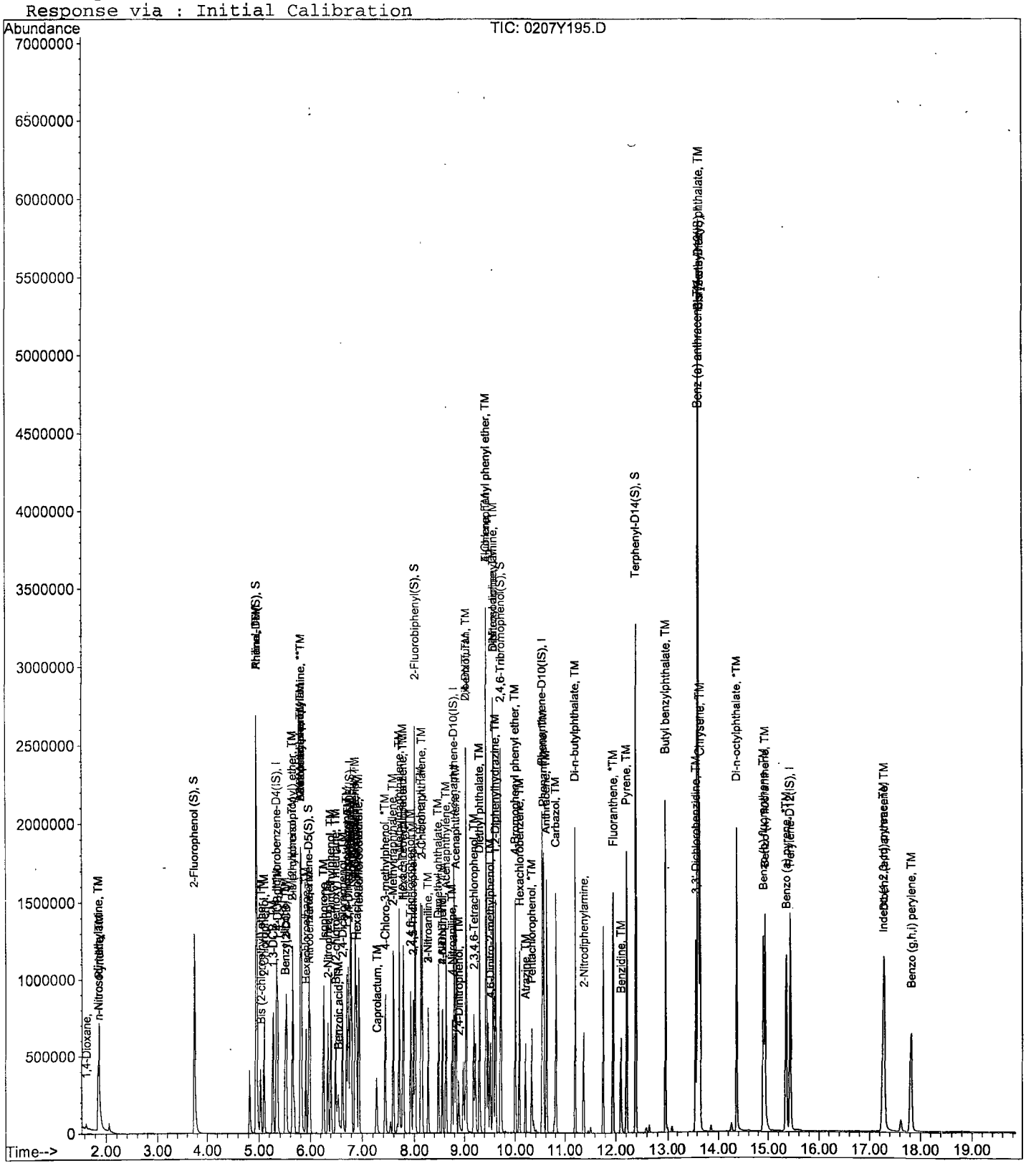
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200207\0207Y195.D Vial: 95
Acq On : 10 Mar 20 17:13 Operator: MA,SS
Sample : 50ug/ml 8270 03/04/20 (2) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Mar 11 8:59 2020 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



ORGANICS
Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y200207\0207Y185.D Vial: 85
Acq On : 10 Mar 20 12:36 Operator: MA,SS
Sample : BA07942W20 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 11 9:18 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	139857	40.00000 ppb	-0.04
21) Napthalene-D8(IS)	6.77	136	628180	40.00000 ppb	-0.05
41) Acenaphthene-D10(IS)	8.79	164	507918	40.00000 ppb	-0.05
65) Phenanthrene-D10(IS)	10.53	188	1048552	40.00000 ppb	-0.04
80) Chrysene-D12(IS)	13.62	240	975269	40.00000 ppb	-0.04
90) Perylene-D12(IS)	15.43	264	1030049	40.00000 ppb	-0.06
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.73	112	1039589	253.50203 ppb	-0.08
Spiked Amount 250.000			Recovery	= 101.401%	
6) Phenol-D6 (S)	4.94	99	1416932	271.19172 ppb	-0.05
Spiked Amount 250.000			Recovery	= 108.477%	
22) Nitrobenzene-D5(S)	5.96	82	806245	129.00389 ppb	-0.04
Spiked Amount 125.000			Recovery	= 103.203%	
46) 2-Fluorobiphenyl(S)	8.01	172	1570852	104.68026 ppb	-0.05
Spiked Amount 125.000			Recovery	= 83.744%	
64) 2,4,6-Tribromophenol(S)	9.72	330	598940	237.17851 ppb	-0.05
Spiked Amount 250.000			Recovery	= 94.872%	
83) Terphenyl-D14(S)	12.39	244	1763820	94.80351 ppb	-0.03
Spiked Amount 125.000			Recovery	= 75.843%	

Target Compounds Qvalue

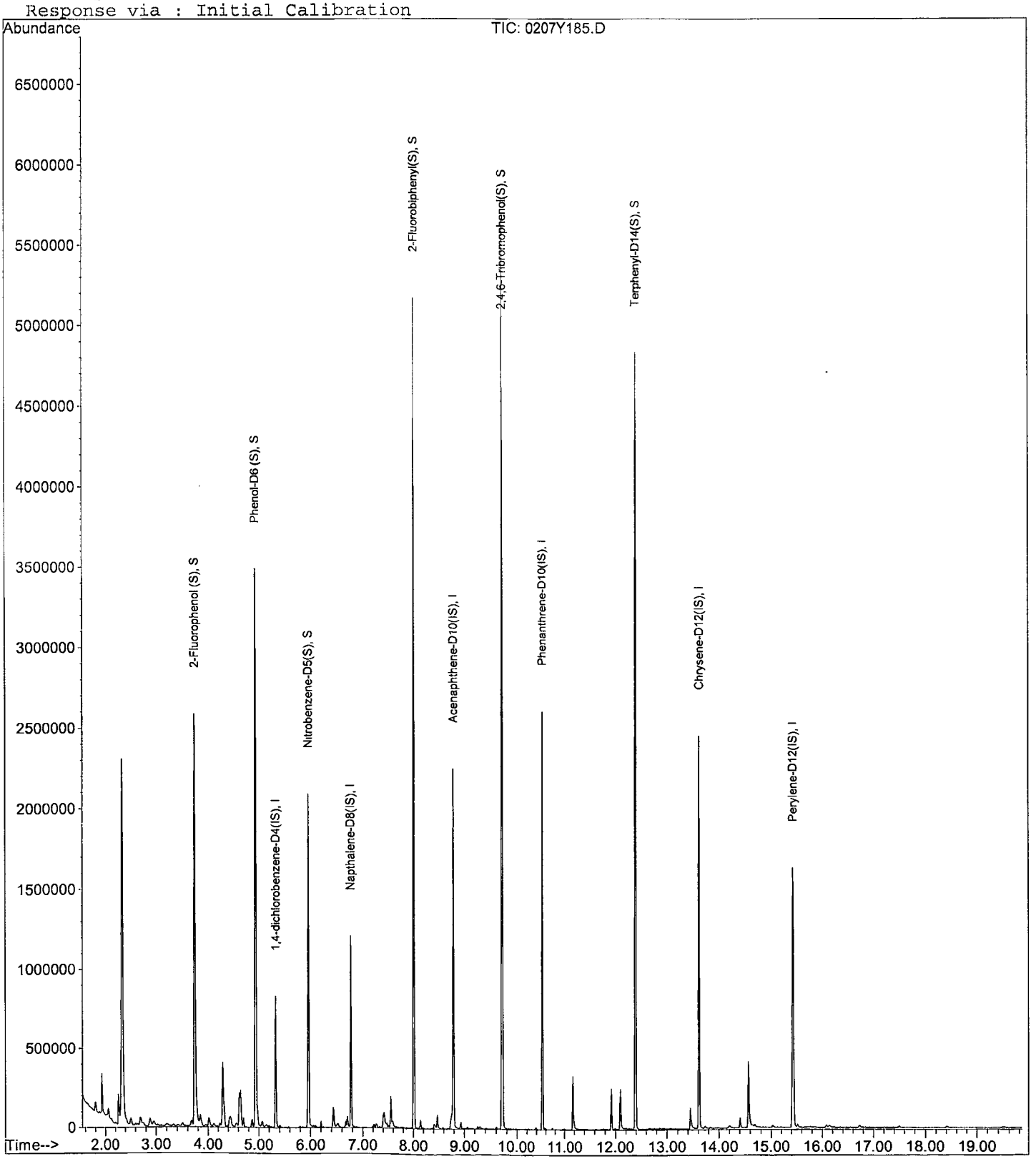
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200207\0207Y185.D Vial: 85
Acq On : 10 Mar 20 12:36 Operator: MA,SS
Sample : BA07942W20 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 11 9:18 2020 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y200207\0207Y186.D Vial: 86
Acq On : 10 Mar 20 13:04 Operator: MA,SS
Sample : BA07944W19 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 11 9:19 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	150325	40.00000 ppb	-0.04
21) Napthalene-D8(IS)	6.77	136	648097	40.00000 ppb	-0.05
41) Acenaphthene-D10(IS)	8.79	164	502155	40.00000 ppb	-0.05
65) Phenanthrene-D10(IS)	10.53	188	1043234	40.00000 ppb	-0.04
80) Chrysene-D12(IS)	13.61	240	988944	40.00000 ppb	-0.05
90) Perylene-D12(IS)	15.43	264	1033851	40.00000 ppb	-0.05
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.73	112	977371	221.73396 ppb	-0.08
Spiked Amount 250.000			Recovery =	88.694%	
6) Phenol-D6 (S)	4.94	99	1339786	238.57001 ppb	-0.05
Spiked Amount 250.000			Recovery =	95.428%	
22) Nitrobenzene-D5(S)	5.96	82	762130	118.19768 ppb	-0.04
Spiked Amount 125.000			Recovery =	94.558%	
46) 2-Fluorobiphenyl(S)	8.01	172	1502418	101.26891 ppb	-0.05
Spiked Amount 125.000			Recovery =	81.015%	
64) 2,4,6-Tribromophenol(S)	9.72	330	596432	238.89594 ppb	-0.05
Spiked Amount 250.000			Recovery =	95.558%	
83) Terphenyl-D14(S)	12.38	244	1656312	87.79404 ppb	-0.04
Spiked Amount 125.000			Recovery =	70.235%	

Target Compounds Qvalue

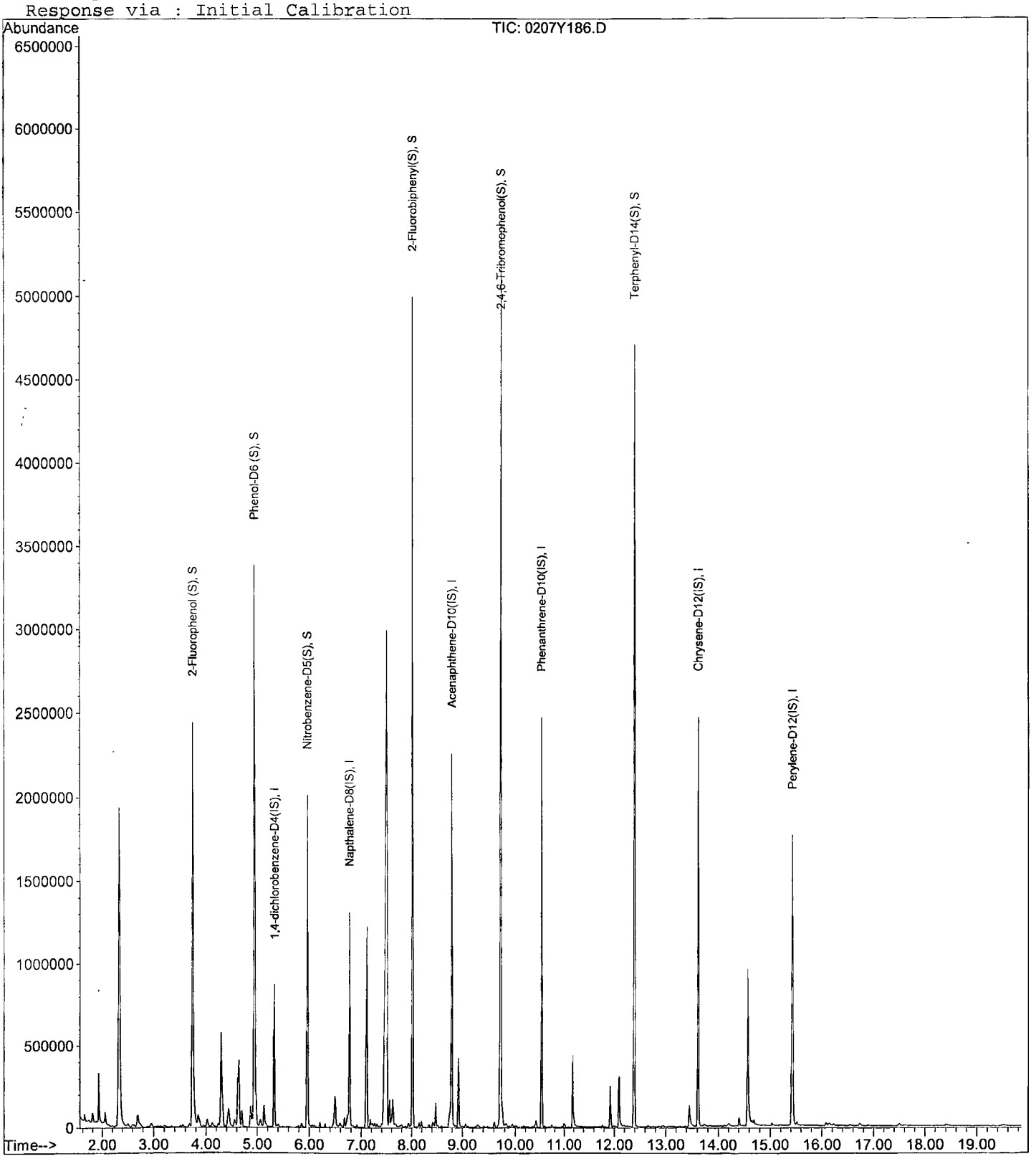
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200207\0207Y186.D Vial: 86
Acq On : 10 Mar 20 13:04 Operator: MA,SS
Sample : BA07944W19 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 11 9:19 2020 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y200207\0207Y187.D Vial: 87
Acq On : 10 Mar 20 13:32 Operator: MA,SS
Sample : BA07946W10 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 11 9:19 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	155316	40.00000 ppb	-0.03
21) Napthalene-D8(IS)	6.77	136	669465	40.00000 ppb	-0.04
41) Acenaphthene-D10(IS)	8.79	164	529064	40.00000 ppb	-0.04
65) Phenanthrene-D10(IS)	10.53	188	1077201	40.00000 ppb	-0.03
80) Chrysene-D12(IS)	13.61	240	1018125	40.00000 ppb	-0.04
90) Perylene-D12(IS)	15.43	264	1092357	40.00000 ppb	-0.05
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.74	112	1056113	231.89862 ppb	-0.07
Spiked Amount 250.000			Recovery =	92.760%	
6) Phenol-D6 (S)	4.94	99	1457910	251.26161 ppb	-0.04
Spiked Amount 250.000			Recovery =	100.505%	
22) Nitrobenzene-D5(S)	5.96	82	815272	122.40370 ppb	-0.04
Spiked Amount 125.000			Recovery =	97.923%	
46) 2-Fluorobiphenyl(S)	8.02	172	1623628	103.87271 ppb	-0.04
Spiked Amount 125.000			Recovery =	83.098%	
64) 2,4,6-Tribromophenol(S)	9.72	330	644492	245.01628 ppb	-0.04
Spiked Amount 250.000			Recovery =	98.006%	
83) Terphenyl-D14(S)	12.39	244	1723797	88.75230 ppb	-0.04
Spiked Amount 125.000			Recovery =	71.002%	

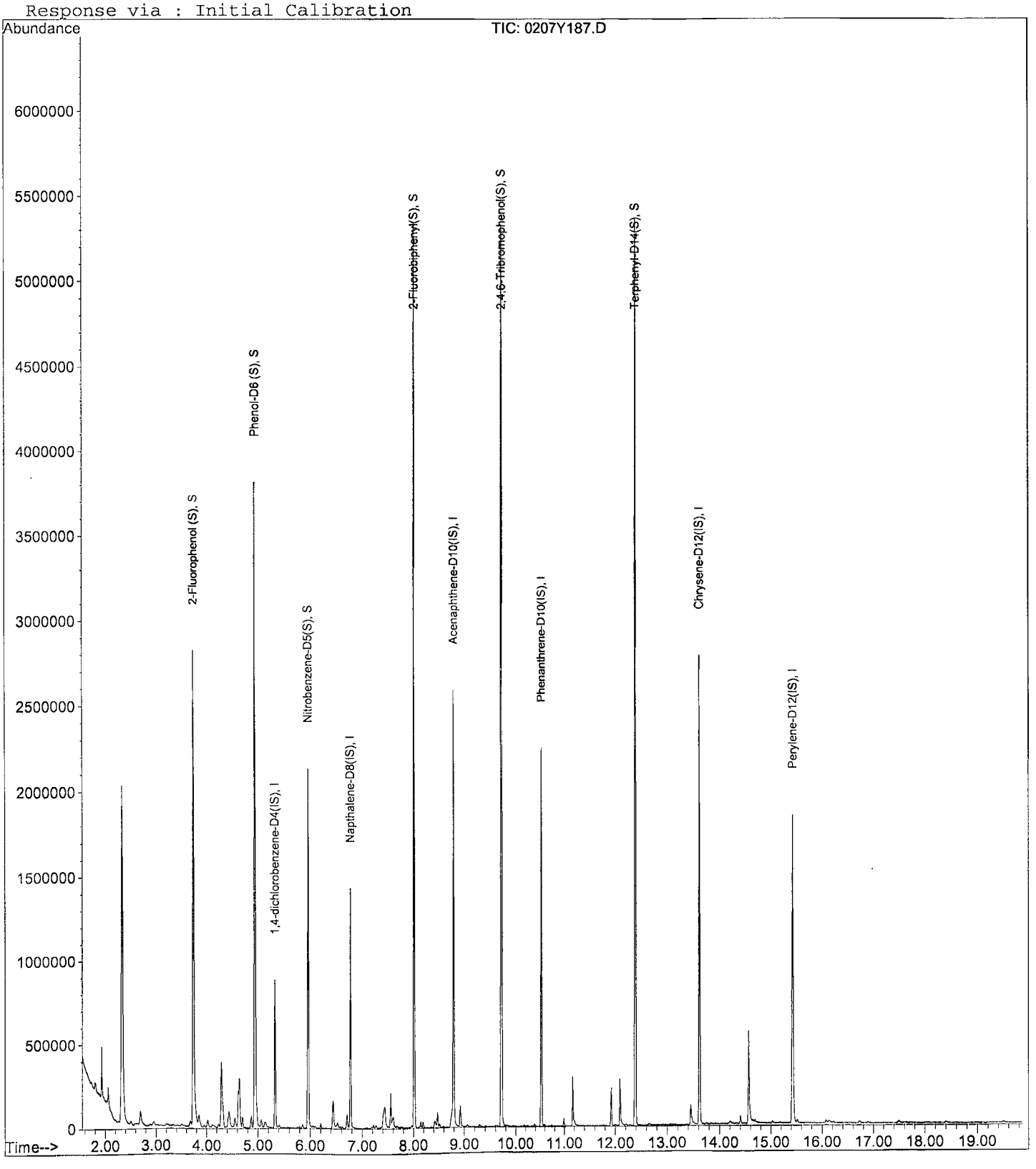
Target Compounds Qvalue

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

Data File : M:\YODA\DATA\Y200207\0207Y187.D Vial: 87
Acq On : 10 Mar 20 13:32 Operator: MA,SS
Sample : BA07946W10 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 11 9:19 2020 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y200207\0207Y188.D Vial: 88
Acq On : 10 Mar 20 14:00 Operator: MA,SS
Sample : BA07947W10 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 11 9:20 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	146471	40.00000 ppb	-0.03
21) Napthalene-D8(IS)	6.77	136	644565	40.00000 ppb	-0.04
41) Acenaphthene-D10(IS)	8.79	164	498151	40.00000 ppb	-0.04
65) Phenanthrene-D10(IS)	10.53	188	1017006	40.00000 ppb	-0.03
80) Chrysene-D12(IS)	13.61	240	977243	40.00000 ppb	-0.04
90) Perylene-D12(IS)	15.43	264	997337	40.00000 ppb	-0.05
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.74	112	1013875	236.06779 ppb	-0.07
Spiked Amount 250.000			Recovery	= 94.427%	
6) Phenol-D6 (S)	4.94	99	1402344	256.27990 ppb	-0.04
Spiked Amount 250.000			Recovery	= 102.512%	
22) Nitrobenzene-D5(S)	5.96	82	791123	123.36648 ppb	-0.04
Spiked Amount 125.000			Recovery	= 98.693%	
46) 2-Fluorobiphenyl(S)	8.01	172	1545919	105.03859 ppb	-0.04
Spiked Amount 125.000			Recovery	= 84.031%	
64) 2,4,6-Tribromophenol(S)	9.72	330	618381	249.67828 ppb	-0.04
Spiked Amount 250.000			Recovery	= 99.871%	
83) Terphenyl-D14(S)	12.39	244	1664795	89.30027 ppb	-0.04
Spiked Amount 125.000			Recovery	= 71.440%	

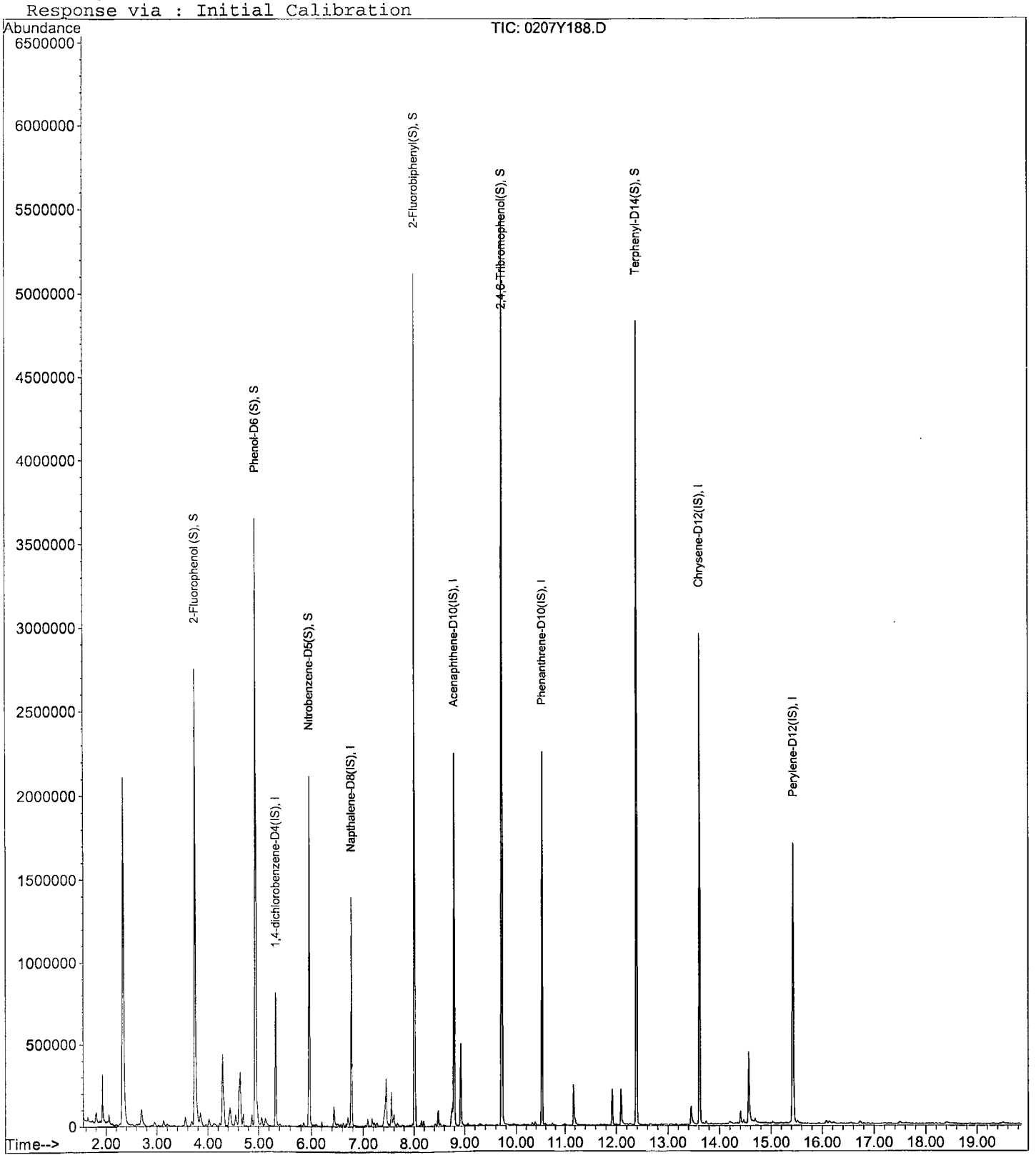
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0207Y188.D Y1219.M Wed Mar 11 09:28:06 2020 Page 1

Data File : M:\YODA\DATA\Y200207\0207Y188.D Vial: 88
Acq On : 10 Mar 20 14:00 Operator: MA,SS
Sample : BA07947W10 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 11 9:20 2020 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y200207\0207Y179.D Vial: 79
Acq On : 10 Mar 20 9:53 Operator: MA,SS
Sample : 200306A BLK 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 11 9:12 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	141977	40.00000	ppb	-0.04
21) Napthalene-D8(IS)	6.77	136	599377	40.00000	ppb	-0.05
41) Acenaphthene-D10(IS)	8.79	164	446746	40.00000	ppb	-0.05
65) Phenanthrene-D10(IS)	10.53	188	974708	40.00000	ppb	-0.04
80) Chrysene-D12(IS)	13.61	240	904973	40.00000	ppb	-0.05
90) Perylene-D12(IS)	15.43	264	650422	40.00000	ppb	-0.06
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.73	112	1044227	250.83082	ppb	-0.08
Spiked Amount 250.000			Recovery = 100.332%			
6) Phenol-D6 (S)	4.95	99	1374666	259.17364	ppb	-0.04
Spiked Amount 250.000			Recovery = 103.670%			
22) Nitrobenzene-D5(S)	5.96	82	788215	132.17962	ppb	-0.04
Spiked Amount 125.000			Recovery = 105.744%			
46) 2-Fluorobiphenyl(S)	8.01	172	1503851	113.93765	ppb	-0.05
Spiked Amount 125.000			Recovery = 91.150%			
64) 2,4,6-Tribromophenol(S)	9.72	330	584025	262.93984	ppb	-0.05
Spiked Amount 250.000			Recovery = 105.176%			
83) Terphenyl-D14(S)	12.38	244	1663025	96.32915	ppb	-0.04
Spiked Amount 125.000			Recovery = 77.063%			

Target Compounds Qvalue

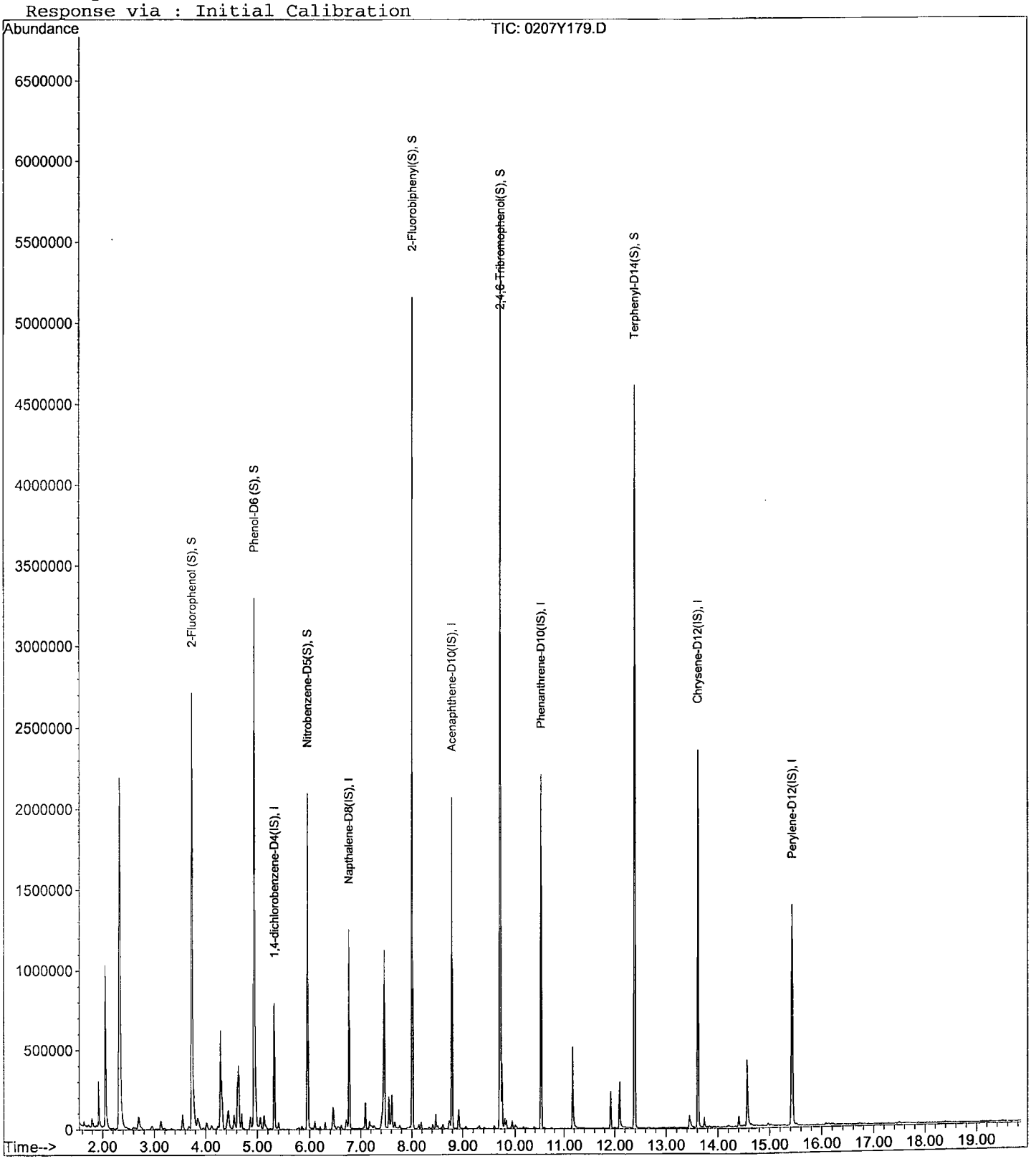
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200207\0207Y179.D Vial: 79
Acq On : 10 Mar 20 9:53 Operator: MA,SS
Sample : 200306A BLK 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 11 9:12 2020 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y200207\0207Y182.D Vial: 82
Acq On : 10 Mar 20 11:16 Operator: MA,SS
Sample : 200306A LCS-1 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 11 9:03 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	137429	40.00000 ppb		-0.04
21) Napthalene-D8(IS)	6.78	136	593731	40.00000 ppb		-0.04
41) Acenaphthene-D10(IS)	8.80	164	459137	40.00000 ppb		-0.04
65) Phenanthrene-D10(IS)	10.53	188	938290	40.00000 ppb		-0.04
80) Chrysene-D12(IS)	13.62	240	1162815	40.00000 ppb		-0.04
90) Perylene-D12(IS)	15.44	264	945024	40.00000 ppb		-0.05
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.74	112	969965	240.70308 ppb		-0.07
Spiked Amount 250.000			Recovery	= 96.281%		
6) Phenol-D6 (S)	4.95	99	1413523	275.31896 ppb		-0.04
Spiked Amount 250.000			Recovery	= 110.128%		
22) Nitrobenzene-D5(S)	5.97	82	749148	126.82293 ppb		-0.03
Spiked Amount 125.000			Recovery	= 101.458%		
46) 2-Fluorobiphenyl(S)	8.01	172	1447942	106.74118 ppb		-0.05
Spiked Amount 125.000			Recovery	= 85.393%		
64) 2,4,6-Tribromophenol(S)	9.73	330	573222	251.11126 ppb		-0.04
Spiked Amount 250.000			Recovery	= 100.444%		
83) Terphenyl-D14(S)	12.38	244	1567664	70.67030 ppb		-0.04
Spiked Amount 125.000			Recovery	= 56.536%		
Target Compounds						Qvalue
2) 1,4-Dioxane	1.63	58	11968	7.23017		76
3) n-Nitrosodimethylamine	1.85	42	192534	62.72106 ppb		94
4) Pyridine	1.88	79	271130	38.12938 ppb		96
7) Phenol	4.96	94	406749	67.13172 ppb		85
8) Aniline	4.96	93	129568	32.76869 ppb	#	29
9) Bis (2-chloroethyl) ether	5.03	63	185168	65.96952 ppb		98
10) 2-Chlorophenol	5.10	128	278806	65.35119 ppb		98
11) 1,3-DCB	5.27	146	272885	58.28908 ppb		98
12) 1,4-DCB	5.35	146	281384	58.72898 ppb		97
13) Benzyl alcohol	5.50	108	171828	68.37627 ppb		99
14) 1,2-DCB	5.52	146	273068	61.25512 ppb		98
15) 2-Methylphenol	5.64	107	243369	65.37209 ppb		98
16) Bis (2-chloroisopropyl) et	5.65	45	248965	67.25897 ppb		95
17) Acetophenone	5.79	105	419806	66.15884 ppb		98
18) 3&4-Methylphenol	5.81	107	649813	132.72318 ppb		98
19) n-Nitrosodi-n-propylamine	5.80	70	267032	65.42943 ppb		99
20) Hexachloroethane	5.90	117	107801	53.97884 ppb		81
23) Nitrobenzene	5.99	77	413013	67.46335 ppb		97
24) Isophorone	6.26	82	612695	63.43245 ppb		99
25) 2-Nitrophenol	6.34	139	170535	68.59889 ppb		96
26) 2,4-Dimethylphenol	6.41	122	247870	62.31145 ppb		95
27) Benzoic acid	6.57	105	253894	73.31197 ppb		96
28) Bis (2-chloroethoxy) metha	6.50	93	321418	64.11848 ppb		99
29) 2,4-Dichlorophenol	6.63	162	258713	66.70136 ppb		99
30) 1,2,4-Trichlorobenzene	6.71	180	251891	58.22448 ppb		99
31) 3,4-Dimethylphenol	6.74	107	416507	62.93932 ppb		99
32) Naphthalene	6.80	128	805650	62.34010 ppb		100
33) 4-Chloroaniline	6.86	127	195274	37.57885 ppb		97
34) 2,6-Dichlorophenol	6.88	162	252683	66.49857 ppb		93
35) Hexachloropropene	6.90	213	104333	27.87101 ppb		98
36) Hexachlorobutadiene	6.94	225	146821	50.02594 ppb		97
37) Caprolactum	7.29	55	114500	65.77624 ppb		98

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

Data File : M:\YODA\DATA\Y200207\0207Y182.D Vial: 82
Acq On : 10 Mar 20 11:16 Operator: MA,SS
Sample : 200306A LCS-1 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 11 9:03 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

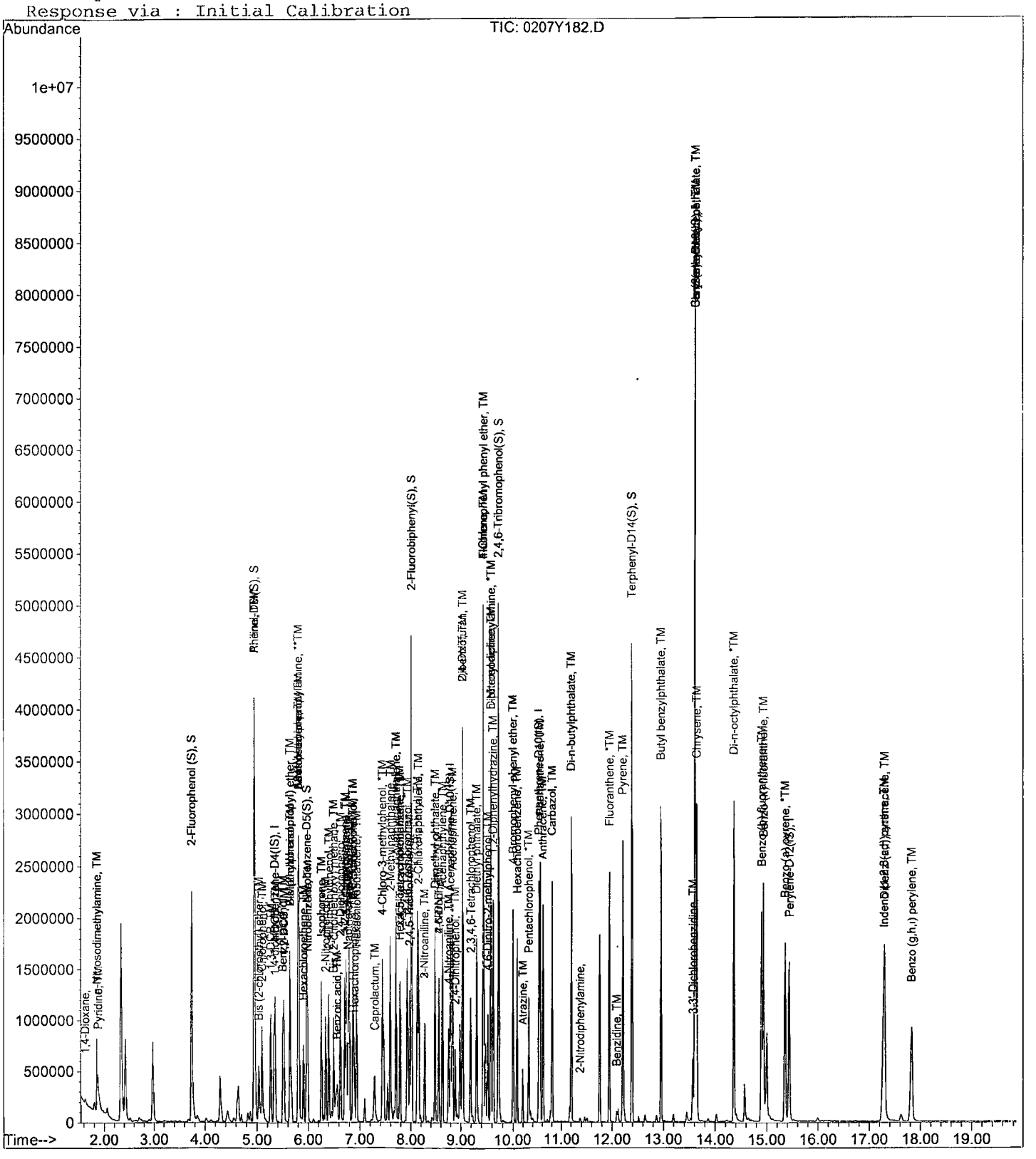
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.44	107	313555	68.10238	ppb		91
39)	2-Methylnaphthalene	7.60	142	550792	63.32710	ppb		100
40)	1-Methylnaphthalene	7.71	142	560848	62.01133	ppb		99
42)	Hexachlorocyclopentadiene	7.77	237	22632	9.74496	ppb		96
43)	1,2,4,5-Tetrachlorobenzene	7.79	216	267012	45.63558	ppb		98
44)	2,4,6-Trichlorophenol	7.93	196	208504	54.42994	ppb		99
45)	2,4,5-Trichlorophenol	7.99	196	218341	52.55453	ppb		94
47)	1,1'-Biphenyl	8.13	154	716502	50.29409	ppb		97
48)	2-Chloronaphthalene	8.15	162	579459	50.57705	ppb		99
49)	2-Nitroaniline	8.27	65	221624	50.94550	ppb		97
50)	Dimethyl phthalate	8.49	163	772542	55.01089	ppb		100
51)	2,6-DNT	8.56	165	164773	53.79807	ppb		83
52)	Acenaphthylene	8.63	152	877910	49.76910	ppb		100
53)	3-Nitroaniline	8.28	138	187924	51.69000	ppb		92
54)	Acenaphthene	8.84	154	562636	50.99195	ppb		99
55)	2,4-Dinitrophenol	8.89	184	106059	58.79370	ppb		93
56)	4-Nitrophenol	8.56	65	15755	55.04029	ppb		99
57)	Dibenzofuran	9.03	168	889146	53.05404	ppb		97
58)	2,4-DNT	9.03	165	246625	54.76880	ppb		97
59)	2,3,4,6-Tetrachlorophenol	9.19	232	170814	54.20754	ppb		97
60)	Diethyl phthalate	9.30	149	781448	53.70997	ppb		99
61)	4-Chlorophenyl phenyl ethe	9.43	204	412772	51.23800	ppb		97
62)	Fluorene	9.43	166	751631	52.71829	ppb		98
63)	4-Nitroaniline	8.76	138	124840	41.20914	ppb		91
66)	4,6-Dinitro-2-methylphenol	9.52	198	147177	50.29179	ppb	#	76
67)	Diphenyl amine	9.58	169	1091900	89.35649	ppb		99
68)	n-Nitrosodiphenylamine	9.58	169	1091900	89.35649	ppb		99
69)	1,2-Diphenylhydrazine	9.62	77	868310	49.13376	ppb		99
70)	4-Bromophenyl phenyl ether	10.00	248	219278	47.66049	ppb		97
71)	Hexachlorobenzene	10.08	284	218528	46.95017	ppb		90
72)	Atrazine	10.19	200	62184	14.81850	ppb		96
73)	Pentachlorophenol	10.31	266	137436	48.03524	ppb		99
74)	Phenanthrene	10.56	178	1016175	49.05719	ppb		99
75)	Anthracene	10.62	178	1038324	47.95290	ppb		99
76)	Carbazol	10.81	167	980025	49.71043	ppb		99
77)	Di-n-butylphthalate	11.21	149	1361495	50.50413	ppb		100
78)	2-Nitrodiphenylamine	11.38	167	5779	0.94238	ppb		94
79)	Fluoranthene	11.95	202	1231351	50.75177	ppb		99
81)	Benzidine	12.10	184	159	0.01675	ppb	#	1
82)	Pyrene	12.21	202	1274875	45.71960	ppb		99
84)	Butyl benzylphthalate	12.95	149	640118	45.81680	ppb		99
85)	3,3'-Dichlorobenzidine	13.57	252	162713	16.97923	ppb		99
86)	Benz (a) anthracene	13.61	228	1400780	46.11765	ppb		100
87)	Bis (2-ethylhexyl) phthala	13.62	149	1228850	52.63953	ppb		99
88)	Chrysene	13.65	228	1228946	46.52283	ppb		99
89)	Di-n-octylphthalate	14.36	149	1561867	45.32457	ppb		96
91)	Benzo (b) fluoranthene	14.90	252	1298032	52.56633	ppb		99
92)	Benzo (k) fluoranthene	14.94	252	1166043	52.37487	ppb		99
93)	Benzo (a) pyrene	15.35	252	1062729	48.49277	ppb		99
94)	Indeno (1,2,3-cd) pyrene	17.28	276	1284762	50.29067	ppb		98
95)	Dibenz (a,h) anthracene	17.30	278	1161391	51.03319	ppb		100
96)	Benzo (g,h,i) perylene	17.82	276	995057	49.56987	ppb		98

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

Data File : M:\YODA\DATA\Y200207\0207Y182.D Vial: 82
Acq On : 10 Mar 20 11:16 Operator: MA,SS
Sample : 200306A LCS-1 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 11 9:03 2020 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y200207\0207Y183.D Vial: 83
Acq On : 10 Mar 20 11:44 Operator: MA,SS
Sample : 200306A LCSD-1 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 11 9:03 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	146744	40.00000 ppb		-0.04
21) Napthalene-D8(IS)	6.78	136	616827	40.00000 ppb		-0.04
41) Acenaphthene-D10(IS)	8.80	164	478510	40.00000 ppb		-0.04
65) Phenanthrene-D10(IS)	10.53	188	964643	40.00000 ppb		-0.04
80) Chrysene-D12(IS)	13.62	240	1165897	40.00000 ppb		-0.04
90) Perylene-D12(IS)	15.44	264	910330	40.00000 ppb		-0.05
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.74	112	912585	212.08842 ppb		-0.07
Spiked Amount 250.000			Recovery = 84.835%			
6) Phenol-D6 (S)	4.95	99	1348499	245.98119 ppb		-0.04
Spiked Amount 250.000			Recovery = 98.392%			
22) Nitrobenzene-D5(S)	5.97	82	721633	117.59068 ppb		-0.03
Spiked Amount 125.000			Recovery = 94.073%			
46) 2-Fluorobiphenyl(S)	8.01	172	1380879	97.67597 ppb		-0.05
Spiked Amount 125.000			Recovery = 78.141%			
64) 2,4,6-Tribromophenol(S)	9.73	330	546636	229.76975 ppb		-0.04
Spiked Amount 250.000			Recovery = 91.908%			
83) Terphenyl-D14(S)	12.39	244	1501510	67.50915 ppb		-0.03
Spiked Amount 125.000			Recovery = 54.007%			
Target Compounds						Qvalue
3) n-Nitrosodimethylamine	1.85	42	196756	60.02774 ppb		97
4) Pyridine	1.89	79	229406	30.21378 ppb		97
7) Phenol	4.97	94	387338	59.87002 ppb		89
8) Aniline	4.96	93	87672	20.76540 ppb	#	1
9) Bis (2-chloroethyl) ether	5.03	63	179628	59.93348 ppb		100
10) 2-Chlorophenol	5.10	128	270600	59.40147 ppb		98
11) 1,3-DCB	5.26	146	259230	51.85741 ppb		98
12) 1,4-DCB	5.35	146	269732	52.72342 ppb		97
13) Benzyl alcohol	5.50	108	162185	60.44219 ppb		98
14) 1,2-DCB	5.52	146	261703	54.97919 ppb		98
15) 2-Methylphenol	5.64	107	236968	59.61216 ppb		97
16) Bis (2-chloroisopropyl) et	5.65	45	242882	61.45048 ppb		95
17) Acetophenone	5.79	105	398978	58.88521 ppb		98
18) 3&4-Methylphenol	5.81	107	624433	119.44343 ppb		97
19) n-Nitrosodi-n-propylamine	5.80	70	256012	58.74734 ppb		98
20) Hexachloroethane	5.91	117	103484	48.52796 ppb		99
23) Nitrobenzene	5.99	77	401097	63.06377 ppb		96
24) Isophorone	6.26	82	596740	59.46736 ppb		100
25) 2-Nitrophenol	6.34	139	161274	62.44451 ppb		94
26) 2,4-Dimethylphenol	6.41	122	248528	60.13752 ppb		96
27) Benzoic acid	6.57	105	259503	72.20824 ppb		97
28) Bis (2-chloroethoxy) metha	6.50	93	306163	58.78846 ppb		100
29) 2,4-Dichlorophenol	6.63	162	251145	62.32572 ppb		96
30) 1,2,4-Trichlorobenzene	6.71	180	245220	54.56011 ppb		98
31) 3,4-Dimethylphenol	6.74	107	408682	59.44449 ppb		99
32) Naphthalene	6.81	128	786175	58.55536 ppb		99
33) 4-Chloroaniline	6.87	127	105581	19.55740 ppb		98
34) 2,6-Dichlorophenol	6.88	162	246861	62.53384 ppb		95
35) Hexachloropropene	6.90	213	92346	23.74518 ppb		99
36) Hexachlorobutadiene	6.94	225	137929	45.23650 ppb		98
37) Caprolactum	7.28	55	112461	62.18589 ppb		91
38) 4-Chloro-3-methylphenol	7.45	107	303955	63.54541 ppb		99

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

Data File : M:\YODA\DATA\Y200207\0207Y183.D Vial: 83
Acq On : 10 Mar 20 11:44 Operator: MA,SS
Sample : 200306A LCSD-1 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 11 9:03 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	2-Methylnaphthalene	7.59	142	532485	58.92990	ppb		100
40)	1-Methylnaphthalene	7.71	142	540200	57.49192	ppb		98
42)	Hexachlorocyclopentadiene	7.77	237	25984	10.25035	ppb		98
43)	1,2,4,5-Tetrachlorobenzene	7.79	216	256948	42.13755	ppb		99
44)	2,4,6-Trichlorophenol	7.93	196	208133	52.13335	ppb		99
45)	2,4,5-Trichlorophenol	7.98	196	215758	49.83025	ppb		96
47)	1,1'-Biphenyl	8.13	154	697756	46.99530	ppb		97
48)	2-Chloronaphthalene	8.16	162	562591	47.11670	ppb		95
49)	2-Nitroaniline	8.28	65	211622	46.67680	ppb		90
50)	Dimethyl phthalate	8.49	163	736922	50.34999	ppb		99
51)	2,6-DNT	8.56	165	160517	50.28668	ppb		80
52)	Acenaphthylene	8.63	152	840148	45.70007	ppb		100
53)	3-Nitroaniline	8.28	138	179397	47.34681	ppb		94
54)	Acenaphthene	8.84	154	544760	47.37297	ppb		99
55)	2,4-Dinitrophenol	8.88	184	108917	58.05651	ppb		90
56)	4-Nitrophenol	8.56	65	15593	52.26889	ppb		96
57)	Dibenzofuran	9.03	168	856519	49.03811	ppb		98
58)	2,4-DNT	9.03	165	239780	51.09288	ppb		97
59)	2,3,4,6-Tetrachlorophenol	9.19	232	170687	51.97422	ppb		96
60)	Diethyl phthalate	9.30	149	753010	49.66001	ppb		99
61)	4-Chlorophenyl phenyl ethe	9.43	204	403038	48.00420	ppb		97
62)	Fluorene	9.43	166	728950	49.05753	ppb		100
63)	4-Nitroaniline	8.75	138	67443	21.36131	ppb		88
66)	4,6-Dinitro-2-methylphenol	9.52	198	144921	48.16804	ppb	#	83
67)	Diphenyl amine	9.58	169	806666	64.21071	ppb		98
68)	n-Nitrosodiphenylamine	9.58	169	806666	64.21071	ppb		98
69)	1,2-Diphenylhydrazine	9.62	77	786477	43.28742	ppb		100
70)	4-Bromophenyl phenyl ether	10.00	248	211426	44.69843	ppb		97
71)	Hexachlorobenzene	10.08	284	209199	43.71799	ppb	#	88
72)	Atrazine	10.19	200	46476	10.77270	ppb		98
73)	Pentachlorophenol	10.31	266	142164	48.33031	ppb		99
74)	Phenanthrene	10.55	178	976191	45.83945	ppb		99
75)	Anthracene	10.62	178	991496	44.53930	ppb		100
76)	Carbazol	10.81	167	901885	44.49713	ppb		99
77)	Di-n-butylphthalate	11.20	149	1303363	47.02694	ppb		99
78)	2-Nitrodiphenylamine	11.38	167	7232	1.14711	ppb		95
79)	Fluoranthene	11.95	202	1192037	47.78918	ppb		100
82)	Pyrene	12.21	202	1230436	44.00928	ppb		99
84)	Butyl benzylphthalate	12.95	149	615796	43.95942	ppb		94
85)	3,3'-Dichlorobenzidine	13.57	252	12459	1.29667	ppb		96
86)	Benz (a) anthracene	13.61	228	1346210	44.20389	ppb		99
87)	Bis (2-ethylhexyl) phthala	13.62	149	1186851	50.70605	ppb		98
88)	Chrysene	13.65	228	1181195	44.59698	ppb		99
89)	Di-n-octylphthalate	14.36	149	1485520	42.99506	ppb	#	93
91)	Benzo (b) fluoranthene	14.90	252	1220470	51.30898	ppb		100
92)	Benzo (k) fluoranthene	14.94	252	1131523	52.76133	ppb		100
93)	Benzo (a) pyrene	15.35	252	1008235	47.75955	ppb		98
94)	Indeno (1,2,3-cd) pyrene	17.27	276	1237243	50.27634	ppb		98
95)	Dibenz (a,h) anthracene	17.30	278	1114777	50.85179	ppb		99
96)	Benzo (g,h,i) perylene	17.83	276	961410	49.71900	ppb		99

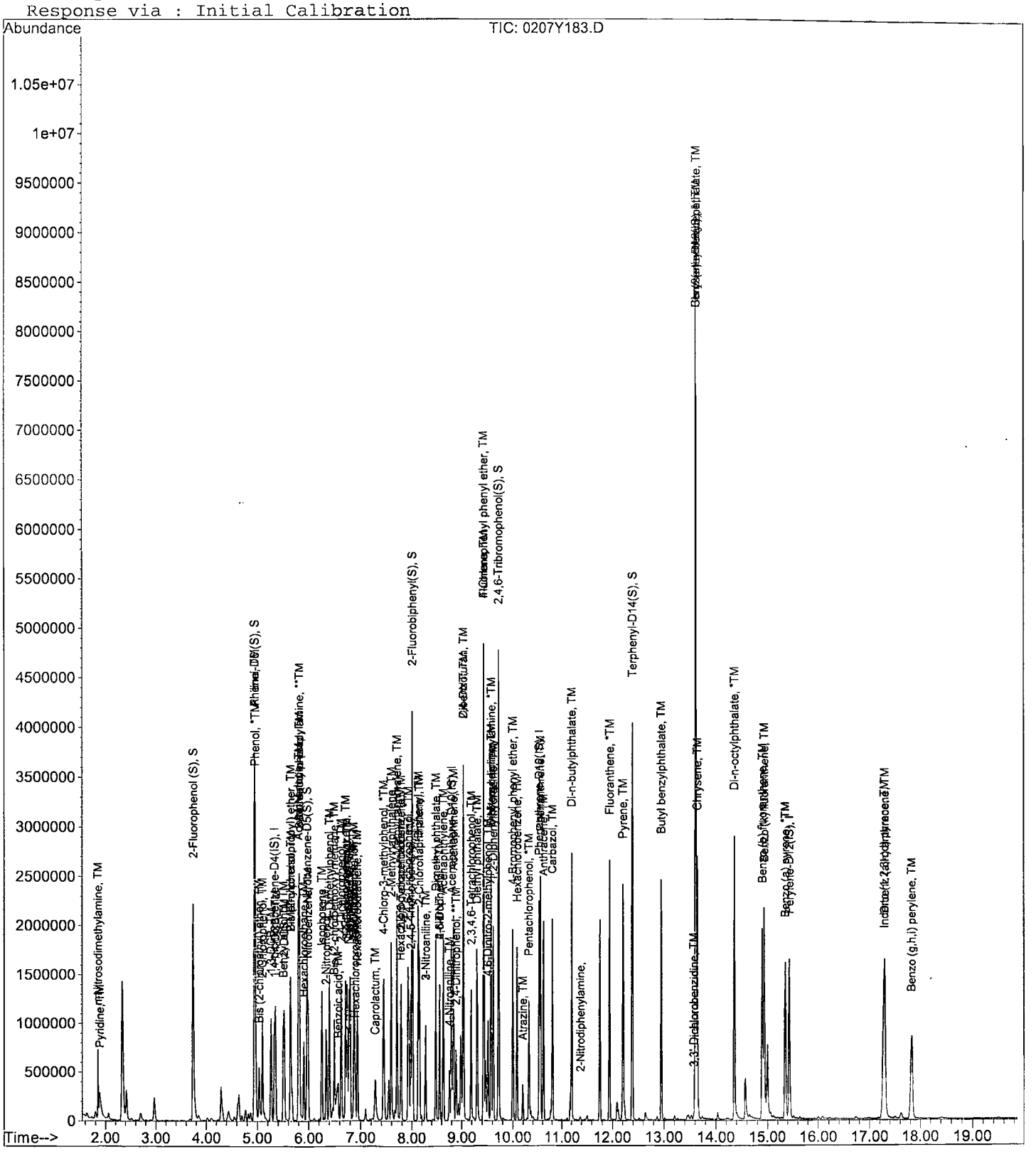
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200207\0207Y183.D Vial: 83
Acq On : 10 Mar 20 11:44 Operator: MA,SS
Sample : 200306A LCSD-1 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 11 9:03 2020 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration

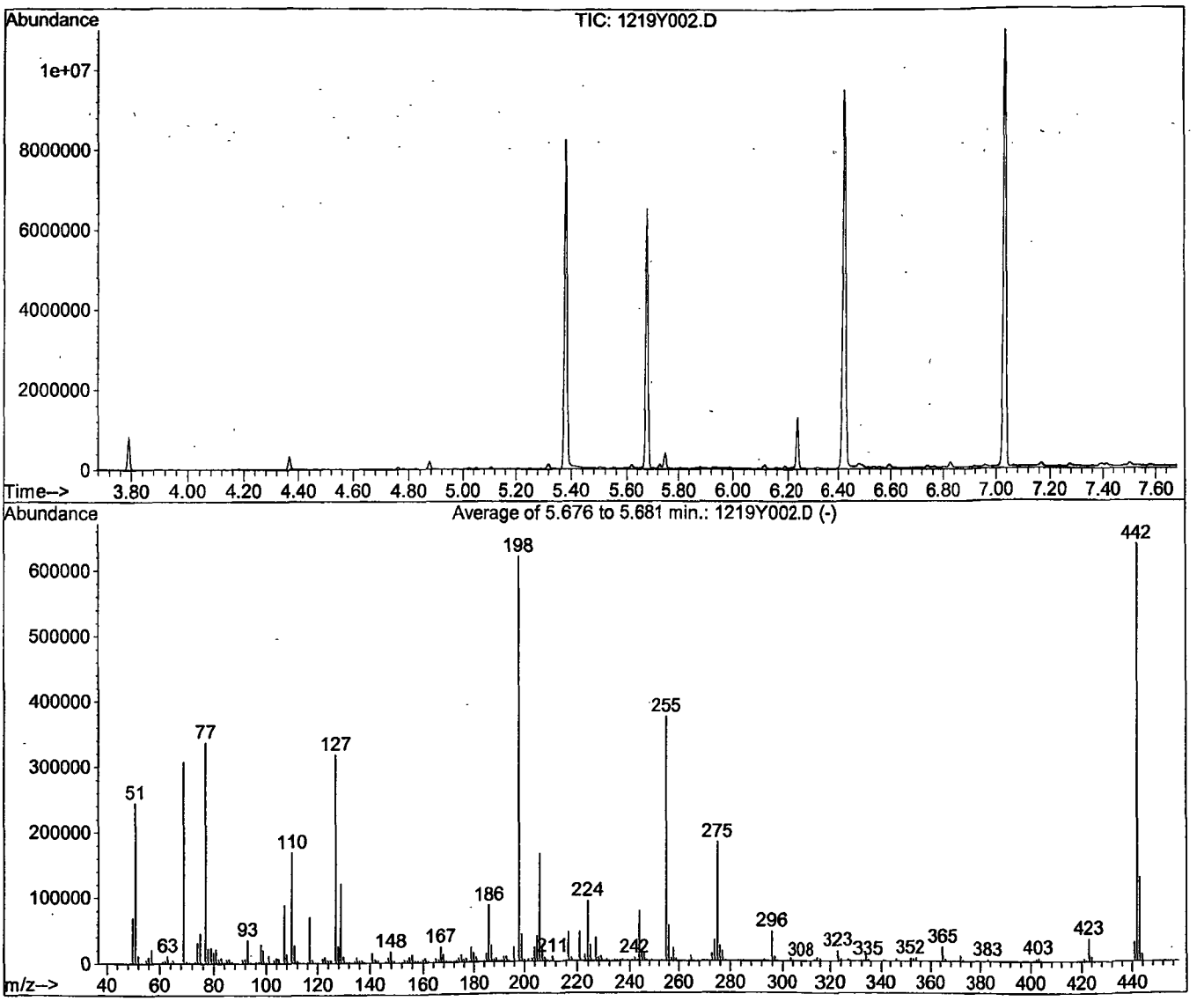


DFTPP

Data File : M:\YODA\DATA\Y191219\1219Y002.D
Acq On : 19 Dec 19 8:50
Sample : SV TUNE 10/01/19
Misc :

Vial: 2
Operator: MA,SS
Inst : Yoda
Multiplr: 1.00

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C



Spectrum Information: Average of 5.676 to 5.681 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	39.5	245061	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	1.0	3141	PASS
127	198	10	80	51.3	318211	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	620800	PASS
199	198	5	9	6.7	41381	PASS
275	198	10	60	29.4	182251	PASS
365	198	1	100	3.5	21877	PASS
441	442	0.01	24	4.6	29075	PASS
442	198	50	500	102.9	638805	PASS
443	442	15	24	20.0	127973	PASS

Data File Name:	**1219Y002.D**
Data File Path:	**M:\YODA\DATA\Y191219**
Operator:	**MA,SS**
Date Acquired:	**19 Dec 2019 08:50**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/01/19**
Vial Number:	**2**
Instrument Name:	**Yoda**

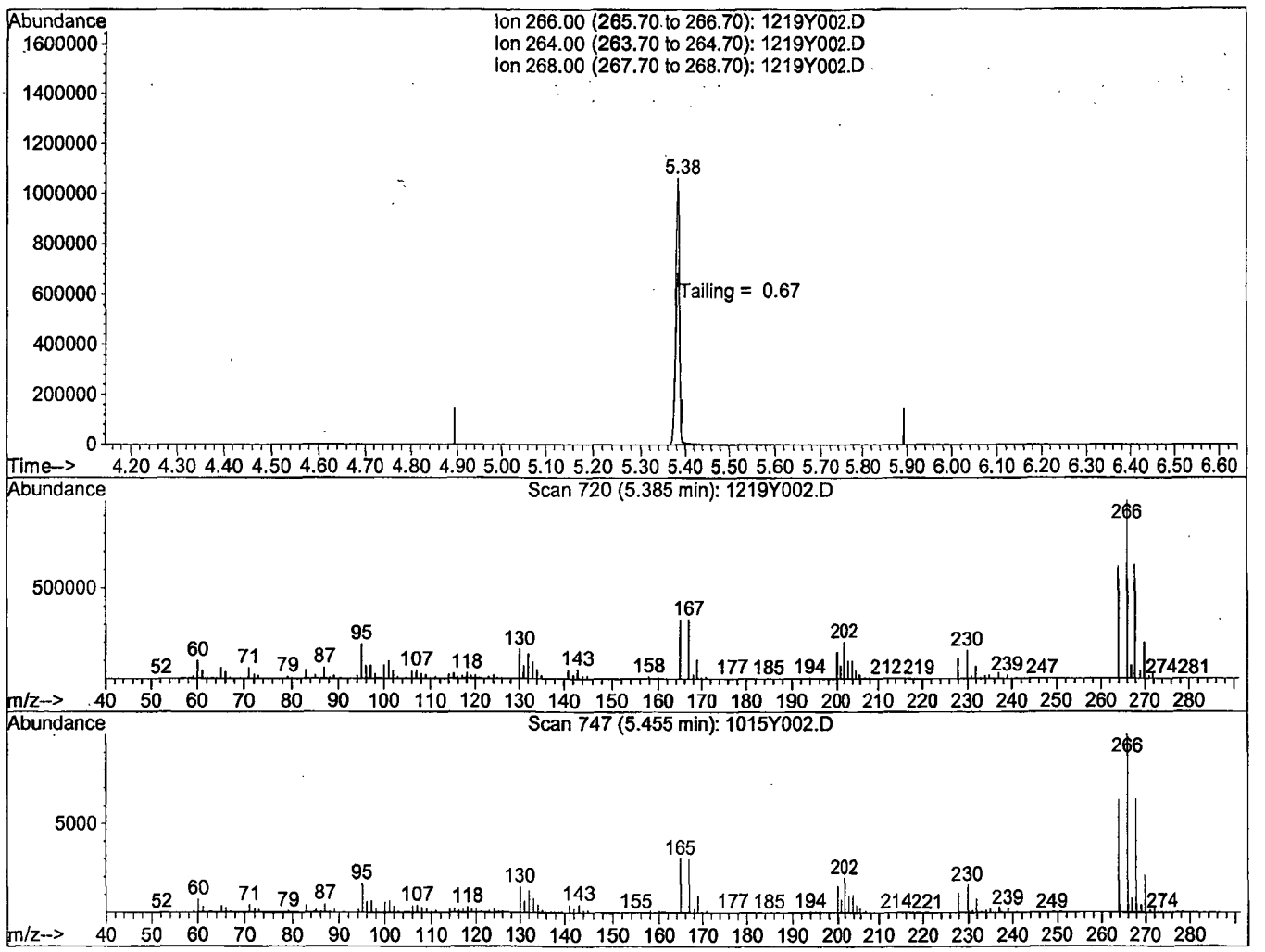
#	Name	Ret Time	Target Response
1)	DDT	7.02	83598600
2)	DDD	6.79	322054
3)	DDE	6.59	610218

Breakdown **1.10**

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y002.D Vial: 2
Acq On : 19 Dec 19 8:50 Operator: MA,SS
Sample : SV TUNE 10/01/19 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Dec 19 16:49 2019 Quant Results File: temp.res

Method : M:\YODA\DATA\Y191219\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Tue Dec 10 08:34:10 2019
Response via : Single Level Calibration



TIC: 1219Y002.D

(5) Pentachlorophenol

5.38min 0.0000

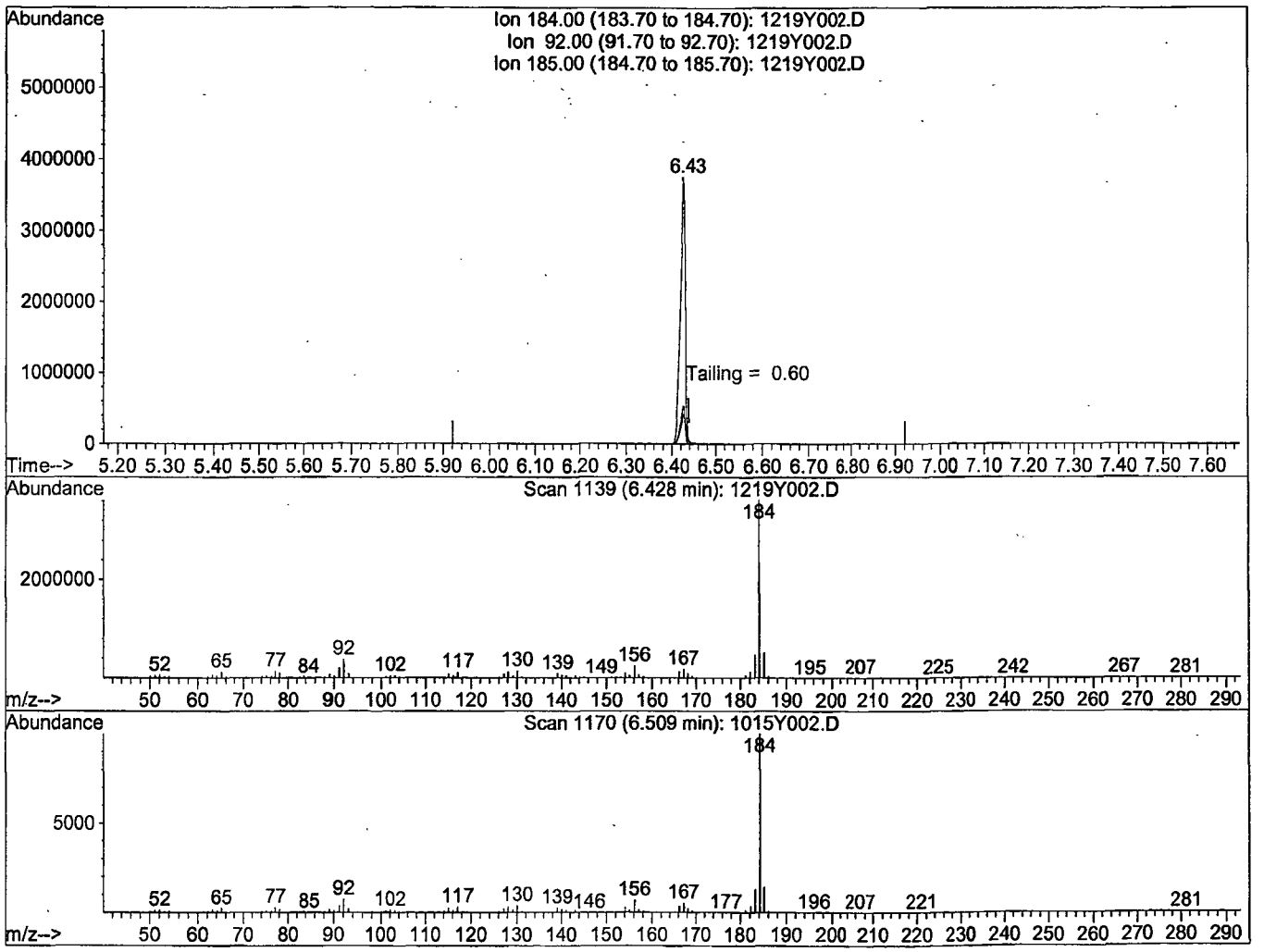
response 6507700

Ion	Exp%	Act%
266.00	100	100
264.00	65.60	64.20
268.00	64.10	63.98
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y002.D Vial: 2
Acq On : 19 Dec 19 8:50 Operator: MA,SS
Sample : SV TUNE 10/01/19 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Dec 19 16:49 2019 Quant Results File: temp.res

Method : M:\YODA\DATA\Y191219\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Tue Dec 10 08:34:10 2019
Response via : Single Level Calibration



TIC: 1219Y002.D

(6) Benzidine

6.43min 0.0000

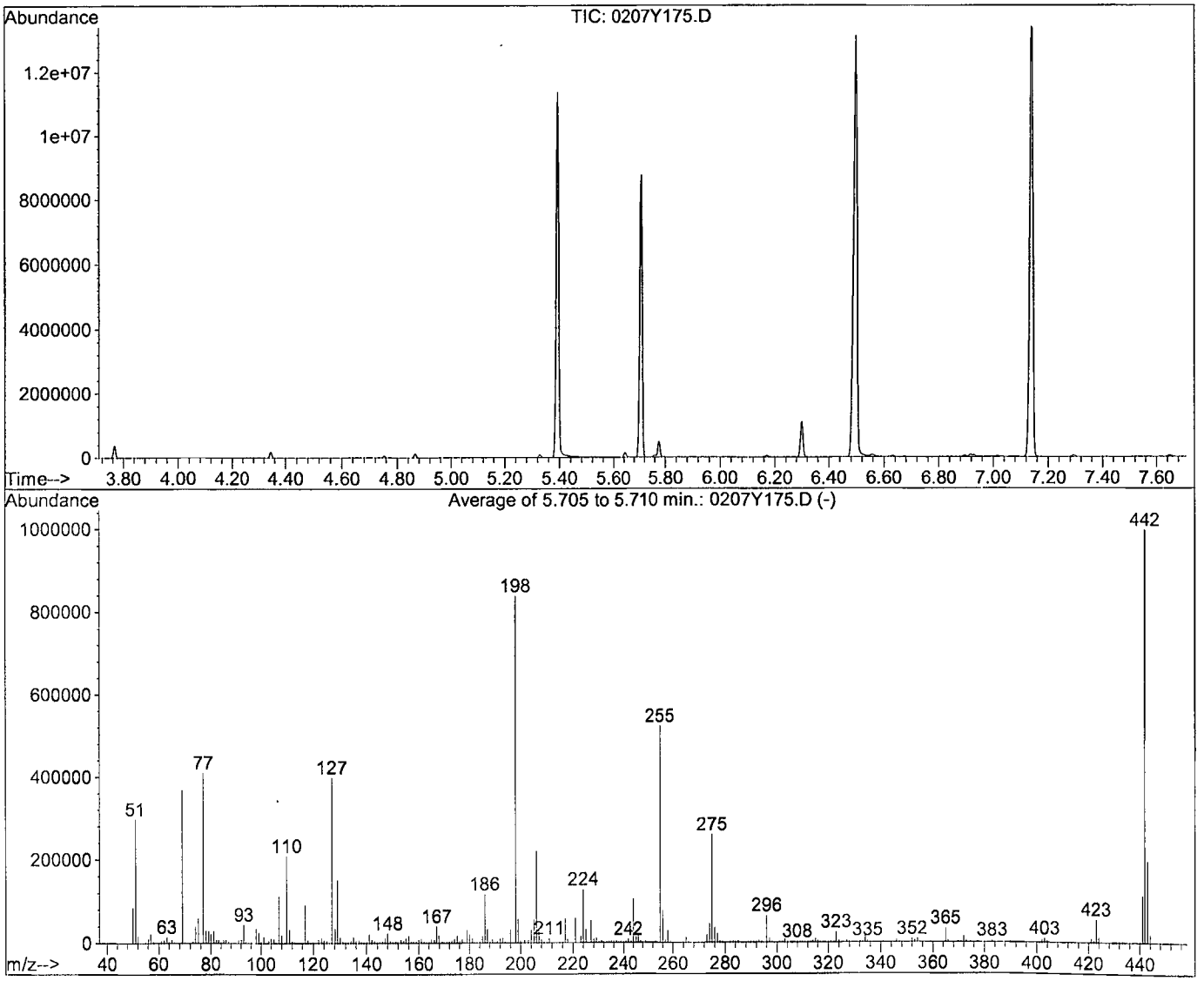
response 29741628

Ion	Exp%	Act%
184.00	100	100
92.00	10.30	10.56
185.00	14.50	14.29
0.00	0.00	0.00

Data File : M:\YODA\DATA\Y200207\0207Y175.D
Acq On : 10 Mar 20 6:47
Sample : SV TUNE 10/01/19
Misc :

Vial: 75
Operator: MA,SS
Inst : Yoda
Multiplr: 1.00

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C



Spectrum Information: Average of 5.705 to 5.710 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	35.4	295915	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.2	711	PASS
127	198	10	80	47.5	397461	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	836843	PASS
199	198	5	9	6.8	56864	PASS
275	198	10	60	30.9	258432	PASS
365	198	1	100	3.9	32448	PASS
441	442	0.01	24	11.2	111808	PASS
442	198	50	500	119.0	995584	PASS
443	442	15	24	19.5	194261	PASS

Data File Name:	**0207Y175.D**
Data File Path:	**M:\YODA\DATA\Y200207**
Operator:	**MA,SS**
Date Acquired:	**10 Mar 2020 06:47**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/01/19**
Vial Number:	**75**
Instrument Name:	**Yoda**

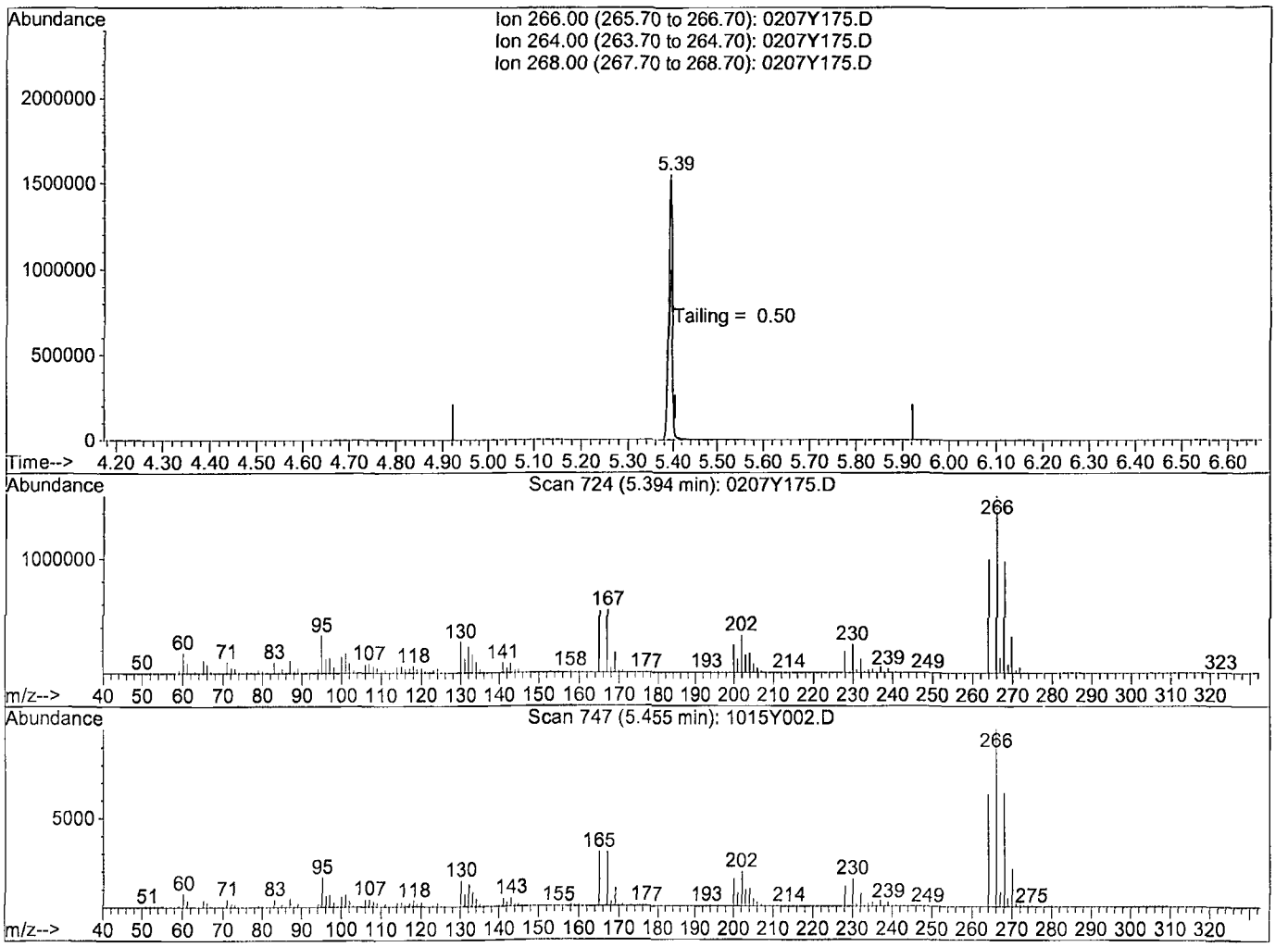
#	Name	Ret Time	Target Response
1)	DDT	6.97	112225000
2)	DDD	6.77	171613
3)	DDE	6.65	192004

Breakdown **0.32**

Quantitation Report

Data File : M:\YODA\DATA\Y200207\0207Y175.D Vial: 75
Acq On : 10 Mar 20 6:47 Operator: MA,SS
Sample : SV TUNE 10/01/19 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Mar 12 7:59 2020 Quant Results File: temp.res

Method : M:\YODA\DATA\Y191219\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Sun Feb 23 13:13:38 2020
Response via : Single Level Calibration



TIC: 0207Y175.D

(5) Pentachlorophenol

5.39min 0.0000

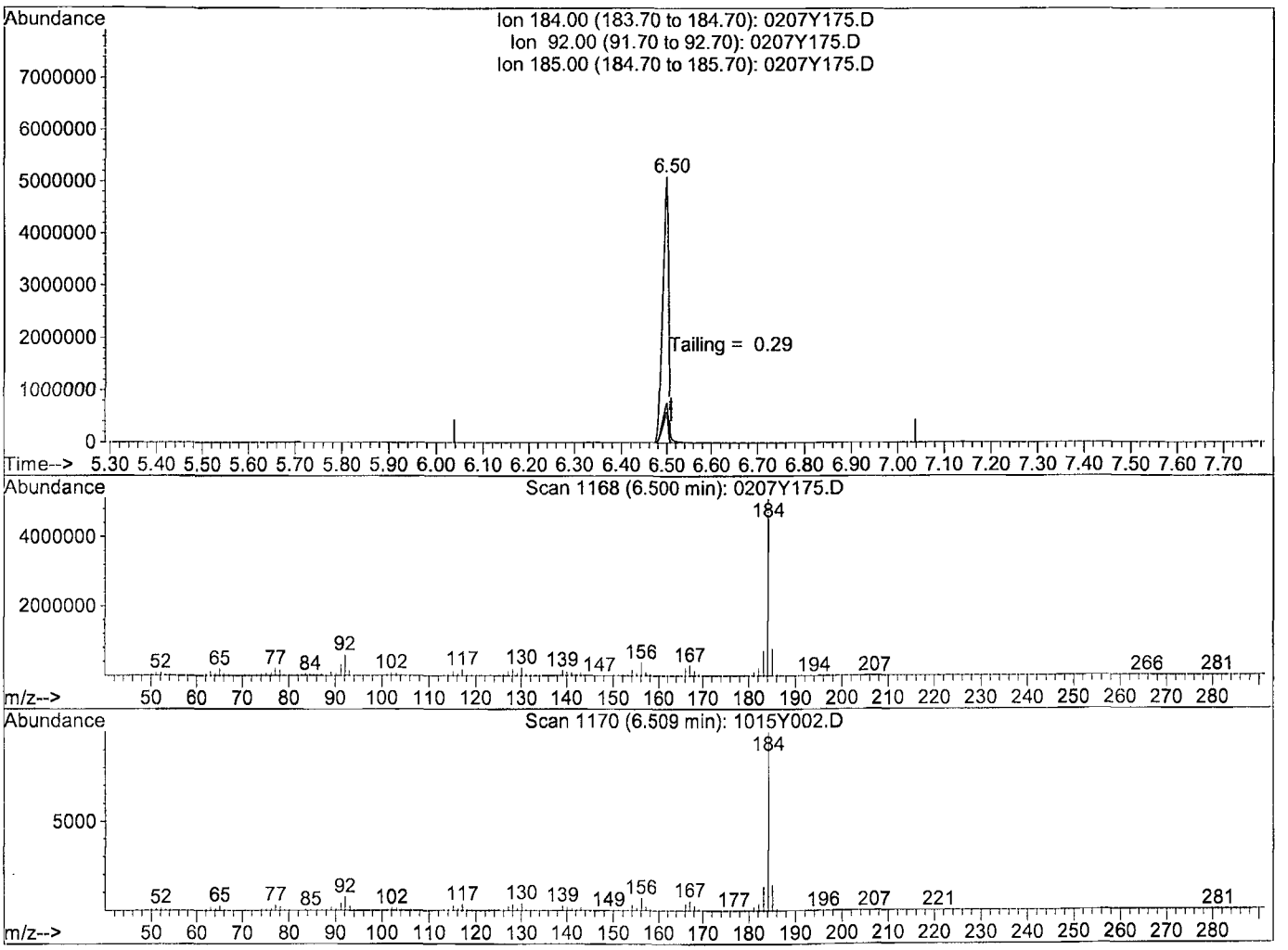
response 9790778

Ion	Exp%	Act%
266.00	100	100
264.00	62.40	62.99
268.00	62.40	63.13
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y200207\0207Y175.D Vial: 75
Acq On : 10 Mar 20 6:47 Operator: MA,SS
Sample : SV TUNE 10/01/19 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Mar 12 7:59 2020 Quant Results File: temp.res

Method : M:\YODA\DATA\Y191219\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Sun Feb 23 13:13:38 2020
Response via : Single Level Calibration



TIC: 0207Y175.D

(6) Benzidine

6.50min 0.0000

response 46262867

Ion	Exp%	Act%
184.00	100	100
92.00	11.90	10.57
185.00	14.20	14.60
0.00	0.00	0.00

Organic Extraction Worksheet

Method	Continuous Liquid/Liquid SVOC 3520C	Extraction Set	200306A	Extraction Method	LIQ003	Units	mL

Spiked ID 1	8270T Spike 1-29-20 1-29-21		Surrogate ID 1	8270 Surrogate 11-19-19 11-19-20	
Spiked ID 2	Sim Spike 12-19-19 11-13-20		Surrogate ID 2	SIM Surrogate 12-17-19 12-17-20	
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	03/06/20 11:00	
Spiked ID 8			Ext. End Time:	03/07/20 7:30	
			GC Requires Extract By:		

pH1	2	03/06/20 8:00	Water Bath Temp 1 °C	75/74.9 E-WB6 °
pH2	14	03/07/20 11:00	Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: DL **Date** 03/06/20 **Witnessed By:** KY **Date** 03/06/20

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	200306A Blk				1,0.050	1,2	800	1	2/1	03/06/20 7:50	
						equip	E-HP51 E-WB6				
2	200306A LCS-1		1	1	1	1	800	1	2/1	03/06/20 7:50	
						equip	E-HP50 E-WB6				
3	200306A LCS-2		0.125	2	0.050	2	800	1	2/1	03/06/20 7:50	
						equip	E-HP48 E-WB6				
4	200306A LCSD-1		1	1	1	1	800	1	2/1	03/06/20 7:50	
						equip	E-HP49 E-WB6				
5	200306A LCSD-2		0.125	2	0.050	2	800	1	2/1	03/06/20 7:50	
						equip	E-HP47 E-WB6				
6	BA07942	BA07942W20			1,0.050	1,2	800	1	2/1	03/06/20 7:50	91585
						equip	E-HP25 E-WB6				
7	BA07944	BA07944W19			1,0.050	1,2	800	1	2/1	03/06/20 7:50	91585
						equip	E-HP26 E-WB6				
8	BA07946	BA07946W10			1,0.050	1,2	800	1	2/1	03/06/20 7:50	91585
						equip	E-HP27 E-WB6				
9	BA07947	BA07947W10			1,0.050	1,2	800	1	2/1	03/06/20 7:50	91585
						equip	E-HP28 E-WB6				

Solvent and Lot#	
PH Strips	HC998032
Dichloromethane (DCM)	59289
1+1 H2SO4	2-26-20
10N NaOH	3-2-20
Filter Paper	400171
Na2SO4	2019020631

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	MA
Date	3/9/20
Time	4:00
Refrigerator	GC-C

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL
Concentration	DL

Modified	03/10/20 8:48:58 AM

Reviewed By: KY **Date** 03/10/20

Name of Final Standard	8270 Full Scan Stock Spike	Prep'd By (Initials)	JP
Prep Date	011/21/2019		
Exp Date	011/21/2020		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
10001	Absolute	10001	2000	081419 - 49302	08/14/22	1.0 mL	11 mL	NA	181.82 ug/mL
10002	Absolute	10002	2000	090919-49211	09/09/22	1.0 mL	*	*	181.82 ug/mL
10004	Absolute	10004	2000	071618-99221	07/16/23	1.0 mL	*	*	181.82 ug/mL
10005	Absolute	10005	2000	032018-40234	03/20/23	1.0 mL	*	*	181.82 ug/mL
10006	Absolute	10006	2000	030119-49242	03/01/22	1.0 mL	*	*	181.82 ug/mL
10007	Absolute	10007	2000	080116-40254	08/01/21	1.0 mL	*	*	181.82 ug/mL
10018	Absolute	10018	2000	051719-49262	05/17/24	1.0 mL	*	*	181.82 ug/mL
70023	Absolute	70023	1000	012819-49268	01/28/24	1.0 mL	*	*	90.91ug/mL
82705	Absolute	82705	2000	090919-49293	09/09/22	1.0 mL	*	*	181.82 ug/mL
94552	Absolute	94552	various	053119-49284	05/31/21	1.0 mL	*	*	various
72304	Absolute	70023	1000	090519-49455 - 41159	09/05/24	1.0 mL	*	*	90.91ug/mL

Name of Final Standard	8270 Internal Standard Ampules (2)	Prep'd By (Initials)	JP
Prep Date	11/20/19		
Exp Date	11/20/20		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Semivolatile Internal Standard	Restek	31206	2000 ug/mL	**A0151843-49411 A0151843-49412**	**07/31/25**	2 mL	2 mL	NA	2000ug/mL

Name of Final Standard	**8270 SS STOCK**	**Prep'd By (Initials)**	**JP**
Prep Date	**11/20/19**		
Exp Date	**11/20/20**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
10001	Absolute	10001	2000 ug/mL	051019-40534	05/10/21	1.0 mL	20 mL	**Methanol Lot 208858**	100 ug/mL
10002	Absolute	10002	2000 ug/mL	020217-39199	02/02/20	1.0 mL	*	*	100 ug/mL
10004	Absolute	10004	2000 ug/mL	051018-39196	05/10/21	1.0 mL	*	*	100 ug/mL
10005	Absolute	10005	2000 ug/mL	031618-39207	03/16/23	1.0 mL	*	*	100 ug/mL
10006	Absolute	10006	2000 ug/mL	011718-39208	01/17/21	1.0 mL	*	*	100 ug/mL
10007	Absolute	10007	2000 ug/mL	060118-39213	06/01/23	1.0 mL	*	*	100 ug/mL
10018	Absolute	10018	2000 ug/mL	062718-40535	06/27/23	1.0 mL	*	*	100 ug/mL
70023	Absolute	70023	1000 ug/mL	051618-39214	05/16/23	1.0 mL	*	*	50 ug/mL
82705	Absolute	82705	2000 ug/mL	090617-40540	09/06/20	1.0 mL	*	*	100 ug/mL
94552	Absolute	94552	various	013118-40542	01/31/20	1.0 mL	*	*	various
72304	Absolute	72304	1000 ug/mL	110719-49477	11/07/24	1.0 mL	*	*	50 ug/mL

Name of Final Standard	**8270 Full Scan Second Source**	**Prep'd By (Initials)**	**JP**
Prep Date	**11/22/19**		
Exp Date	**11/22/20**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 SS Stock	APPL	8270 SS Stock	100:50 ug/mL	**11/20/19**	**11/20/20**	100 uL	200uL	**MC DW717 150uL**	50:25 ug/mL
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	**11/20/19**	**11/20/19**	4 uL	*	*	*

Name of Final Standard	8270 Full Scan Standard Curve	Prep'd By (Initials)	JP
Prep Date	011/21/2019		
Exp Date	011/21/2020		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 Stock	APPL	8270 Stock	182:91 ug/mL	011/21/2019	011/21/2020	4.4 uL	200uL	MC DW717 150uL	4 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200:400 ug/mL	07/10/19	06/24/20	4 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	011/20/2019	07/31/25	4 uL	*	*	*
8270 Stock	APPL	8270 Stock	182:91 ug/mL	011/21/2019	011/21/2020	11 uL	400uL	MC DW717 150uL	5 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200:400 ug/mL	07/10/19	06/24/20	10 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	011/20/2019	07/31/25	8 uL	*	*	*
8270 Stock	APPL	8270 Stock	182:91 ug/mL	011/21/2019	011/21/2020	11 uL	200uL	MC DW717 150uL	10 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200:400 ug/mL	07/10/19	06/24/20	10 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	011/20/2019	07/31/25	4 uL	*	*	*
8270 Stock	APPL	8270 Stock	182:91 ug/mL	011/21/2019	011/21/2020	11 uL	100uL	MC DW717 150uL	20 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200:400 ug/mL	07/10/19	06/24/20	10 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	011/20/2019	07/31/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	182:91 ug/mL	011/21/2019	011/21/2020	22 uL	100uL	MC DW717 150uL	40 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200:400 ug/mL	07/10/19	06/24/20	20 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	011/20/2019	07/31/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	182:91 ug/mL	011/21/2019	011/21/2020	55 uL	200 uL	MC DW717 150uL	50 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200:400 ug/mL	07/10/19	06/24/20	50 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	011/20/2019	07/31/25	4 uL	*	*	*
8270 Stock	APPL	8270 Stock	182:91 ug/mL	011/21/2019	011/21/2020	33 uL	100uL	MC DW717 150uL	60 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200:400 ug/mL	07/10/19	06/24/20	30 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	011/20/2019	07/31/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	182:91 ug/mL	011/21/2019	011/21/2020	44 uL	100uL	MC DW717 150uL	80 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200:400 ug/mL	07/10/19	06/24/20	40 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	011/20/2019	07/31/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	182:91 ug/mL	011/21/2019	011/21/2020	50 uL	100uL	na	91 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200:400 ug/mL	07/10/19	06/24/20	50 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	011/20/2019	07/31/25	2 uL	*	*	*

Name of Final Standard	**Semivolatile (SV) Tuning Solution**
Prep Date	**10/01/19**
Exp Date	**11/30/20**

Prep'd By (Initials) **JP**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Semivolatile GC/MS Tuning Standard	Ultra Scientific	GCM-150-1	1,000 ug/mL	CR3789-38879	**11/30/20**	1,250 uL	25 mL	**MC #58240**	50 ug/mL

Name of Final Standard	**8270 Full Scan Spike**
Prep Date	**12/04/19**
Exp Date	**12/04/20**

Prep'd By (Initials) **JP**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
10001	Absolute	10001	2000	081419 - 49299	08/14/22	1.0 mL	40 mL	**Methanol Lot# 208858**	50 ug/mL
10002	Absolute	10002	2000	090919-49208	09/09/22	1.0 mL	*	*	50 ug/mL
10004	Absolute	10004	2000	071618-49218	07/16/23	1.0 mL	*	*	50 ug/mL
10005	Absolute	10005	2000	032018-49228	03/20/23	1.0 mL	*	*	50 ug/mL
10006	Absolute	10006	2000	030119-49239	03/01/22	1.0 mL	*	*	50 ug/mL
10007	Absolute	10007	2000	080116-40249	08/01/21	1.0 mL	*	*	50 ug/mL
10018	Absolute	10018	2000	051719-49259	05/17/24	1.0 mL	*	*	50 ug/mL
70023	Absolute	70023	1000	012819-49275	01/28/24	1.0 mL	*	*	25 ug/mL
82705	Absolute	82705	2000	090919-49290	09/09/22	1.0 mL	*	*	50 ug/mL
94552	Absolute	94552	various	053119-49286	05/31/21	1.0 mL	*	*	various

Name of Final Standard	8270 Full Scan Standard Curve	Prep'd By (Initials)	JP
Prep Date	01/16/20		
Exp Date	06/24/20		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 Stock	APPL	8270 Stock	182:91 ug/mL	011/21/2019	011/21/2020	55 uL	200 uL	MC DW717 150uL	50 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200.400 ug/mL	07/10/19	06/24/20	50 uL	"	"	"
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	011/20/2019	07/31/25	4 uL	"	"	"

Injection Log

Directory: M:\YODA\DATA\Y191219\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	1219Y002.D	1	SV TUNE 10/01/19		19 Dec 19 8:50
2	3	1219Y003.D	1	50ug/ml 8270 11/21/19		19 Dec 19 9:06
3	4	1219Y004.D	1	4ug/ml 8270 11/21/19		19 Dec 19 9:33
4	5	1219Y005.D	1	5ug/ml 8270 11/21/19		19 Dec 19 10:01
5	6	1219Y006.D	1	10ug/ml 8270 11/21/19		19 Dec 19 10:28
6	7	1219Y007.D	1	20ug/ml 8270 11/21/19		19 Dec 19 10:56
7	8	1219Y008.D	1	40ug/ml 8270 11/21/19		19 Dec 19 11:24
8	9	1219Y009.D	1	60ug/ml 8270 11/21/19		19 Dec 19 11:51
9	10	1219Y010.D	1	80ug/ml 8270 11/21/19		19 Dec 19 12:19
10	11	1219Y011.D	1	100ug/ml 8270 11/21/19		19 Dec 19 12:46
11	12	1219Y012.D	1	SS 8270 11/22/19		19 Dec 19 13:14
12	75	0207Y175.D	1	SV TUNE 10/01/19		10 Mar 20 6:47
13	76	0207Y176.D	1	50ug/ml 8270 03/04/20 (1)		10 Mar 20 7:25
14	79	0207Y179.D	1.25	200306A BLK 1/800		10 Mar 20 9:53
15	82	0207Y182.D	1.25	200306A LCS-1 1/800		10 Mar 20 11:16
16	83	0207Y183.D	1.25	200306A LCSD-1 1/800		10 Mar 20 11:44
17	85	0207Y185.D	1.25	BA07942W20 1/800		10 Mar 20 12:36
18	86	0207Y186.D	1.25	BA07944W19 1/800		10 Mar 20 13:04
19	87	0207Y187.D	1.25	BA07946W10 1/800		10 Mar 20 13:32
20	88	0207Y188.D	1.25	BA07947W10 1/800		10 Mar 20 14:00
21	95	0207Y195.D	1	50ug/ml 8270 03/04/20 (2)		10 Mar 20 17:13

ORGANICS
Calibration Data

PAH by GCMS SIM
EPA 8270 SIM

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 02/04/20
Matrix: Instrument: Linus Initials: MA

			0204L003.D	0204L004.D	0204L005.D	0204L006 D	0204L007.D	0204L008 D	0204L009.D	0204L010.D								
		Compound	0.1	0.2	0.5	1	5	10	50	100			Avg	%RSD	Type	r^2	Q	MRF
1	I	Napthalene-D8(IS)																
2	TM	Naphthalene	1.120	1.131	1.072	1.083	1.129	1.047	0.9772	0.9334			1.1	6.9	TM			0.700
3	S	2-Methylnaphthalene-D10 (2M	1.257	1.211	1.175	1.198	1.255	1.218	1.180	1.133			1.2	3.5	S			
4	TM	2-Methylnaphthalene	0.6849	0.6892	0.6742	0.6957	0.7468	0.6960	0.6554	0.6145			0.68	5.5	TM			0.400
5	TM	1-Methylnaphthalene	0.7412	0.7479	0.7192	0.7336	0.7676	0.7029	0.6628	0.6175			0.71	7.0	TM			
6	I	Acenaphthene-D10(IS)																
7	TM	Acenaphthylene	3.869	3.855	3.806	3.892	4.393	4.113	3.818	3.434			3.9	7.0	TM			0.900
8	*TM	Acenaphthene	1.372	1.277	1.234	1.238	1.309	1.218	1.155	1.036			1.2	8.3	*TM			0.900
9	TM	Fluorene	1.476	1.471	1.412	1.485	1.636	1.549	1.427	1.385			1.5	5.5	TM			0.900
10	I	Phenanthrene-D10(IS)																
11	TM	Phenanthrene	1.231	1.222	1.179	1.198	1.290	1.205	1.041	0.9371			1.2	9.9	TM			0.700
12	TM	Anthracene	1.002	1.028	0.9886	1.045	1.160	1.099	0.9848	0.8800			1.0	8.1	TM			0.700
13	S	Fluoranthene-D10 (FRT)	1.457	1.470	1.320	1.355	1.491	1.476	1.437	1.389			1.4	4.4	S			
14	*TM	Fluoranthene	1.604	1.635	1.531	1.601	1.817	1.668	1.480	1.357			1.6	8.6	*TM			0.600
15	I	Chrysene-D12(IS)																
16	TM	Pyrene	1.291	1.315	1.240	1.301	1.386	1.308	1.220	1.113			1.3	6.4	TM			0.600
17	TM	Benz (a) anthracene	1.177	1.123	1.047	1.077	1.191	1.159	1.141	1.081			1.1	4.6	TM			0.800
18	TM	Chrysene	1.461	1.411	1.370	1.360	1.367	1.267	1.174	1.065			1.3	10	TM			0.700
19	TM	Indeno (1,2,3-cd) pyrene	1.438	1.382	1.382	1.402	1.574	1.526	1.551	1.517			1.5	5.4	TM			0.500
20	I	Perylene-D12(IS)																
21	TM	Benzo (b) fluoranthene	0.8206	0.8277	0.8502	0.9180	1.141	1.084	1.118	1.129			0.99	15	TM			0.700
22	TM	Benzo (k) fluoranthene	1.252	1.341	1.294	1.323	1.396	1.330	1.094	1.089			1.3	9.1	TM			0.700
23	*TM	Benzo (a) pyrene	0.8229	0.8399	0.9301	0.9711	1.126	1.087	1.069	1.029			0.98	12	*TM			0.700
24	TM	Dibenz (a,h) anthracene	0.9746	0.9893	0.9980	1.034	1.209	1.157	1.169	1.136			1.1	8.7	TM			0.400
25	TM	Benzo (g,h,i) perylene	1.063	1.069	1.094	1.118	1.274	1.216	1.188	1.145			1.1	6.5	TM			0.500
26																		
27																		
28																		
29																		
30																		
31																		
32																		
33																		
34																		
35																		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L003.D Vial: 3
Acq On : 4 Feb 20 9:48 Operator: MA
Sample : 0.1 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:38:46 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.19	136	98990	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.18	164	52942	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.91	188	98572	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.01	240	123137	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.43	264	142515	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	4.96	152	2488	0.05046	ppb		0.00
Spiked Amount 5.000			Recovery =	1.000%			
13) Fluoranthene-D10 (FRT)	9.28	212	2873	0.04174	ppb		0.00
Spiked Amount 5.000			Recovery =	0.840%			
Target Compounds							Qvalue
2) Naphthalene	4.21	128	4434	0.09312	ppb		99
4) 2-Methylnaphthalene	5.00	142	2712	0.09372	ppb		100
5) 1-Methylnaphthalene	5.11	142	2935	0.09787	ppb		97
7) Acenaphthylene	6.02	152	8194	0.08489	ppb		100
8) Acenaphthene	6.22	154	2905	0.10261	ppb		96
9) Fluorene	6.82	166	3126	0.09002	ppb		94
11) Phenanthrene	7.93	178	4855	0.08909	ppb		99
12) Anthracene	7.99	178	3951	0.08269	ppb		98
14) Fluoranthene	9.30	202	6323	0.08364	ppb	#	92
16) Pyrene	9.57	202	6359	0.07717	ppb	#	94
17) Benz (a) anthracene	11.00	228	5798	0.08414	ppb		99
18) Chrysene	11.04	228	7198	0.09744	ppb		99
19) Indeno (1,2,3-cd) pyrene	14.93	276	7083	0.09610	ppb	#	99
21) Benzo (b) fluoranthene	12.79	252	4678	0.06579	ppb	#	99
22) Benzo (k) fluoranthene	12.85	252	7135	0.09052	ppb		98
23) Benzo (a) pyrene	13.35	252	4691	0.07030	ppb		98
24) Dibenz (a,h) anthracene	14.97	278	5556	0.08385	ppb		99
25) Benzo (g,h,i) perylene	15.29	276	6060	0.08386	ppb		97

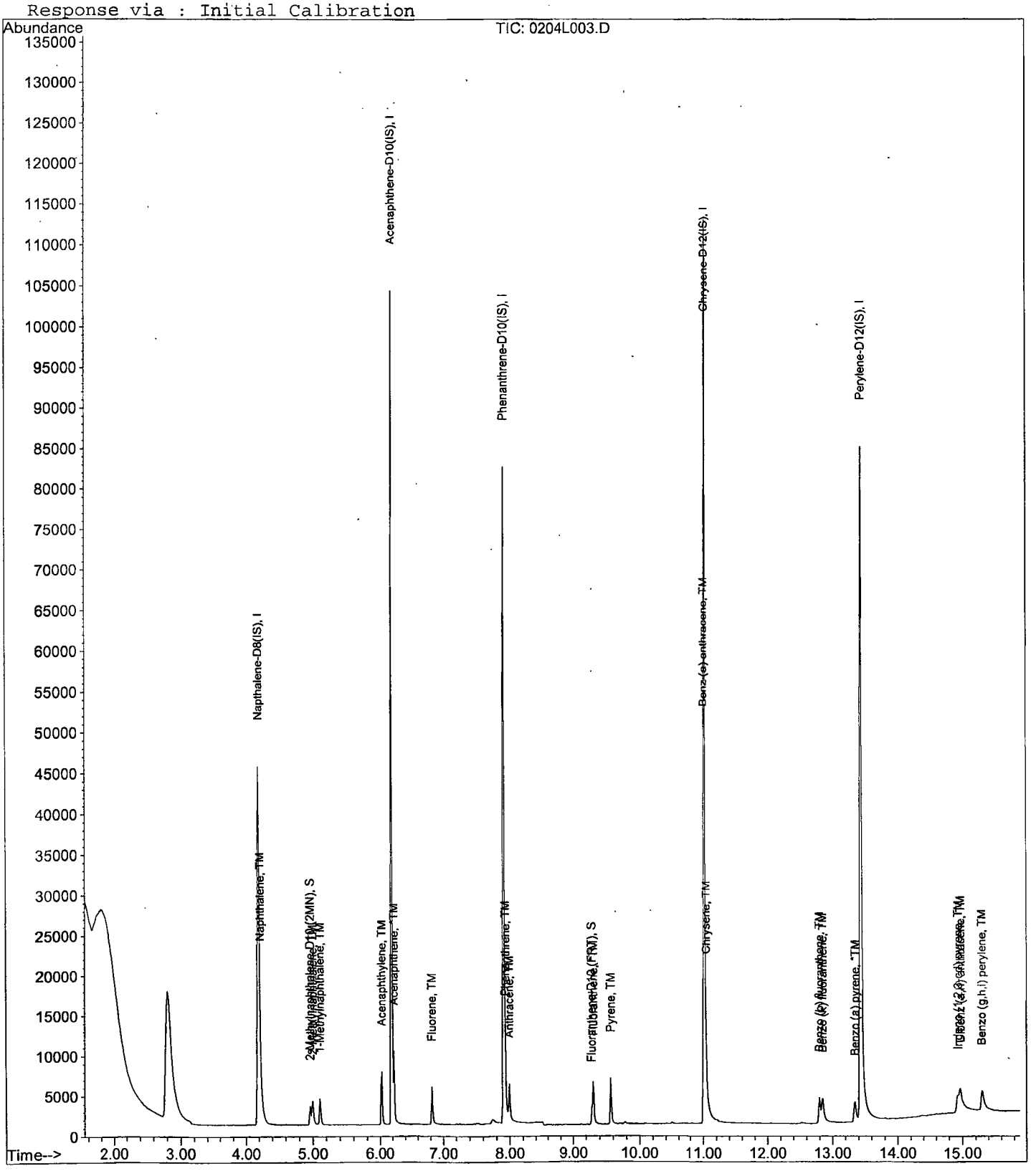
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L003.D Vial: 3
Acq On : 4 Feb 20 9:48 Operator: MA
Sample : 0.1 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L004.D Vial: 4
Acq On : 4 Feb 20 10:09 Operator: MA
Sample : 0.2 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:42:22 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.19	136	95871	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.18	164	51059	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.91	188	94452	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.01	240	119835	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.43	264	136582	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	4.96	152	4644	0.09724	ppb		0.00
Spiked Amount 5.000			Recovery =	1.940%			
13) Fluoranthene-D10 (FRT)	9.28	212	5554	0.08422	ppb		0.00
Spiked Amount 5.000			Recovery =	1.680%			
Target Compounds							Qvalue
2) Naphthalene	4.21	128	8673	0.18807	ppb		99
4) 2-Methylnaphthalene	5.00	142	5286	0.18862	ppb		99
5) 1-Methylnaphthalene	5.11	142	5736	0.19749	ppb		100
7) Acenaphthylene	6.02	152	15747	0.16915	ppb		99
8) Acenaphthene	6.22	154	5216	0.19104	ppb		99
9) Fluorene	6.82	166	6007	0.17936	ppb		96
11) Phenanthrene	7.93	178	9231	0.17678	ppb		99
12) Anthracene	7.99	178	7770	0.16971	ppb		99
14) Fluoranthene	9.30	202	12353	0.17053	ppb	#	93
16) Pyrene	9.57	202	12608	0.15723	ppb	#	91
17) Benz (a) anthracene	11.00	228	10767	0.16055	ppb		99
18) Chrysene	11.04	228	13529	0.18818	ppb		99
19) Indeno (1,2,3-cd) pyrene	14.92	276	13247	0.18469	ppb	#	100
21) Benzo (b) fluoranthene	12.79	252	9044	0.13271	ppb		99
22) Benzo (k) fluoranthene	12.85	252	14654	0.19398	ppb		98
23) Benzo (a) pyrene	13.35	252	9177	0.14350	ppb	#	97
24) Dibenz (a,h) anthracene	14.97	278	10810	0.17022	ppb		99
25) Benzo (g,h,i) perylene	15.29	276	11681	0.16867	ppb		98

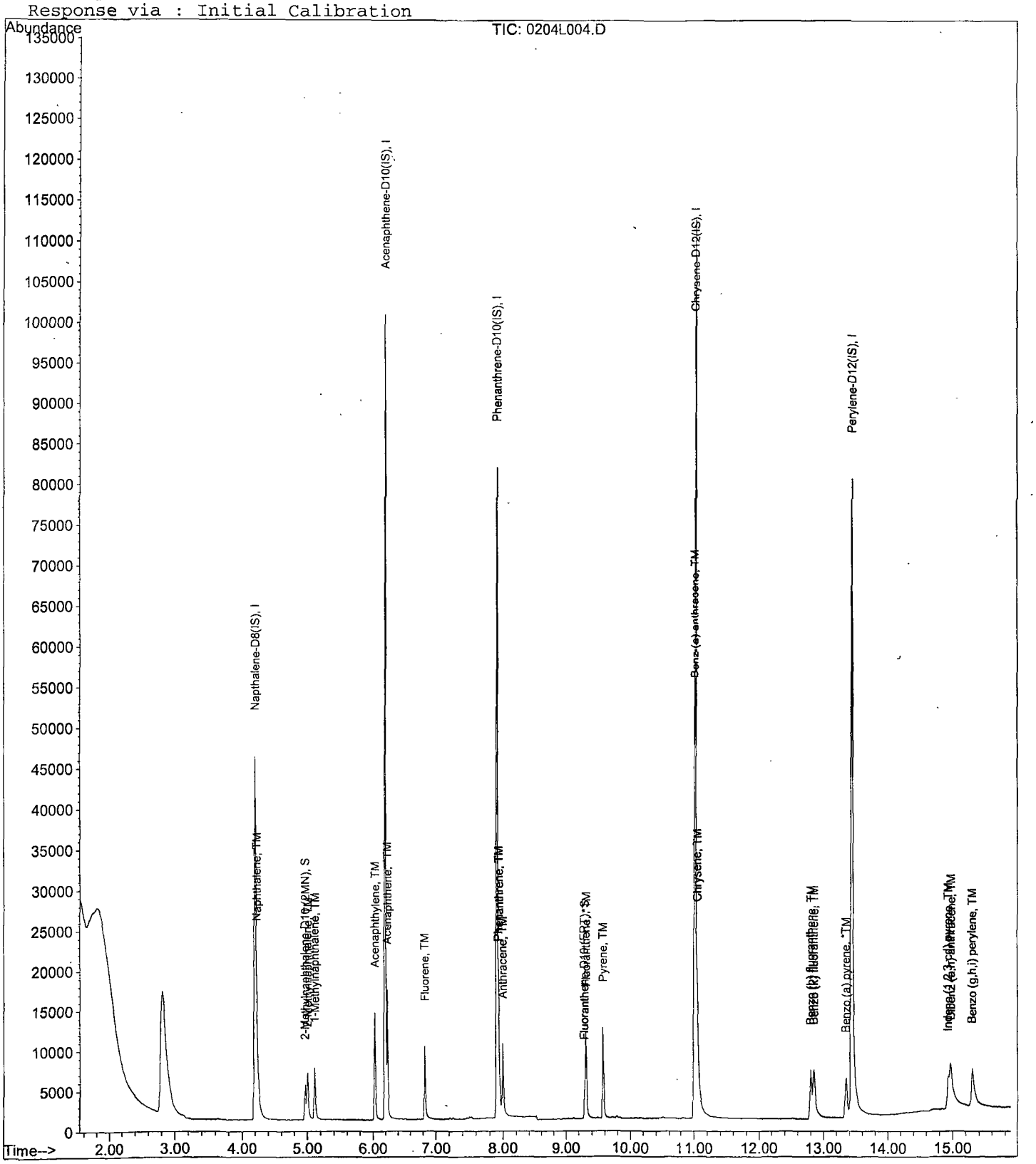
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L004.D Vial: 4
Acq On : 4 Feb 20 10:09 Operator: MA
Sample : 0.2 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L005.D Vial: 5
Acq On : 4 Feb 20 10:31 Operator: MA
Sample : 0.5 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:42:22 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.19	136	93485	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.18	164	49653	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.91	188	91991	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.01	240	112785	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.43	264	128599	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	4.96	152	10986	0.23591	ppb		0.00
Spiked Amount 5.000			Recovery = 4.720%				
13) Fluoranthene-D10 (FRT)	9.28	212	12142	0.18904	ppb		0.00
Spiked Amount 5.000			Recovery = 3.780%				
Target Compounds							Qvalue
2) Naphthalene	4.21	128	20052	0.44592	ppb		100
4) 2-Methylnaphthalene	5.00	142	12606	0.46129	ppb		100
5) 1-Methylnaphthalene	5.11	142	13447	0.47479	ppb		99
7) Acenaphthylene	6.02	152	37792	0.41744	ppb		100
8) Acenaphthene	6.22	154	12256	0.46158	ppb		99
9) Fluorene	6.82	166	14018	0.43041	ppb		96
11) Phenanthrene	7.93	178	21699	0.42667	ppb		98
12) Anthracene	7.99	178	18188	0.40788	ppb		98
14) Fluoranthene	9.30	202	28175	0.39935	ppb	#	93
16) Pyrene	9.57	202	27975	0.37067	ppb	#	93
17) Benz (a) anthracene	11.00	228	23610	0.37407	ppb		100
18) Chrysene	11.04	228	30897	0.45662	ppb		99
19) Indeno (1,2,3-cd) pyrene	14.92	276	31178	0.46186	ppb	#	100
21) Benzo (b) fluoranthene	12.79	252	21866	0.34077	ppb		98
22) Benzo (k) fluoranthene	12.85	252	33289	0.46801	ppb		98
23) Benzo (a) pyrene	13.35	252	23923	0.39730	ppb		98
24) Dibenz (a,h) anthracene	14.96	278	25669	0.42930	ppb	#	95
25) Benzo (g,h,i) perylene	15.29	276	28135	0.43148	ppb		99

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

Quantitation Report

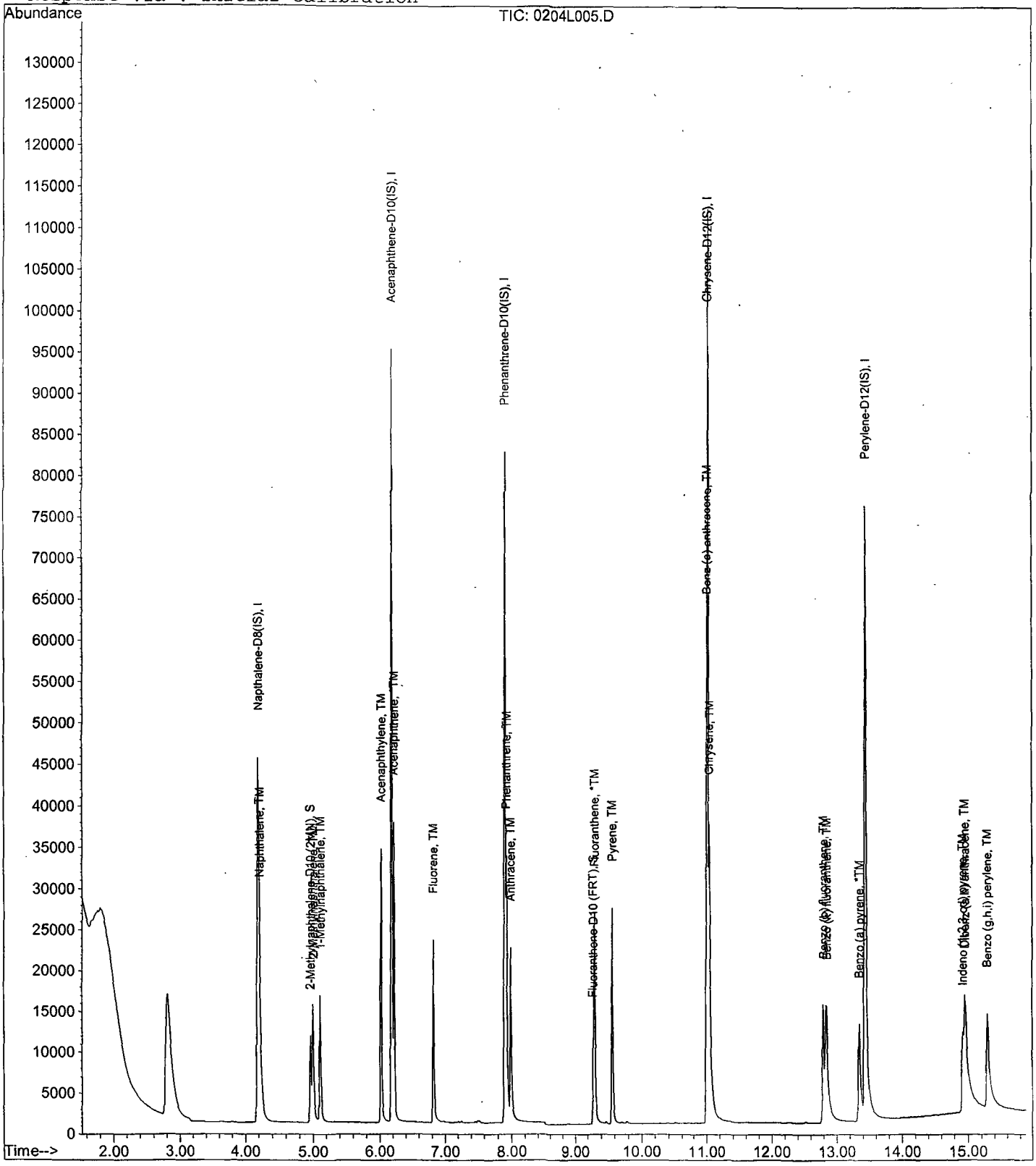
Data File : M:\LINUS\DATA\L200204\0204L005.D
Acq On : 4 Feb 20 10:31
Sample : 0.5 SIM 02/03/20
Misc :

Vial: 5
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Feb 4 12:42 2020

Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L006.D Vial: 6
Acq On : 4 Feb 20 10:53 Operator: MA
Sample : 1 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:42:22 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	4.19	136	95074	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	6.18	164	50320	2.50000 ppb	0.00
10) Phenanthrene-D10(IS)	7.91	188	93982	2.50000 ppb	0.00
15) Chrysene-D12(IS)	11.01	240	115986	2.50000 ppb	0.00
20) Perylene-D12(IS)	13.43	264	130643	2.50000 ppb	0.00
System Monitoring Compounds					
3) 2-Methylnaphthalene-D10 (2	4.96	152	22777	0.48093 ppb	0.00
Spiked Amount 5.000			Recovery =	9.620%	
13) Fluoranthene-D10 (FRT)	9.28	212	25468	0.38812 ppb	0.00
Spiked Amount 5.000			Recovery =	7.760%	
Target Compounds					Qvalue
2) Naphthalene	4.21	128	41177	0.90039 ppb	100
4) 2-Methylnaphthalene	5.00	142	26456	0.95192 ppb	99
5) 1-Methylnaphthalene	5.11	142	27900	0.96864 ppb	98
7) Acenaphthylene	6.02	152	78337	0.85382 ppb	100
8) Acenaphthene	6.22	154	24913	0.92584 ppb	99
9) Fluorene	6.82	166	29892	0.90564 ppb	99
11) Phenanthrene	7.93	178	45036	0.86678 ppb	99
12) Anthracene	7.99	178	39270	0.86199 ppb	99
14) Fluoranthene	9.30	202	60200	0.83519 ppb	97
16) Pyrene	9.57	202	60381	0.77797 ppb	96
17) Benz (a) anthracene	11.00	228	49969	0.76984 ppb	99
18) Chrysene	11.04	228	63085	0.90659 ppb	99
19) Indeno (1,2,3-cd) pyrene	14.92	276	65048	0.93700 ppb	98
21) Benzo (b) fluoranthene	12.79	252	47971	0.73591 ppb	99
22) Benzo (k) fluoranthene	12.84	252	69126	0.95663 ppb	98
23) Benzo (a) pyrene	13.35	252	50746	0.82958 ppb	97
24) Dibenz (a,h) anthracene	14.96	278	54045	0.88973 ppb	97
25) Benzo (g,h,i) perylene	15.29	276	58422	0.88195 ppb	99

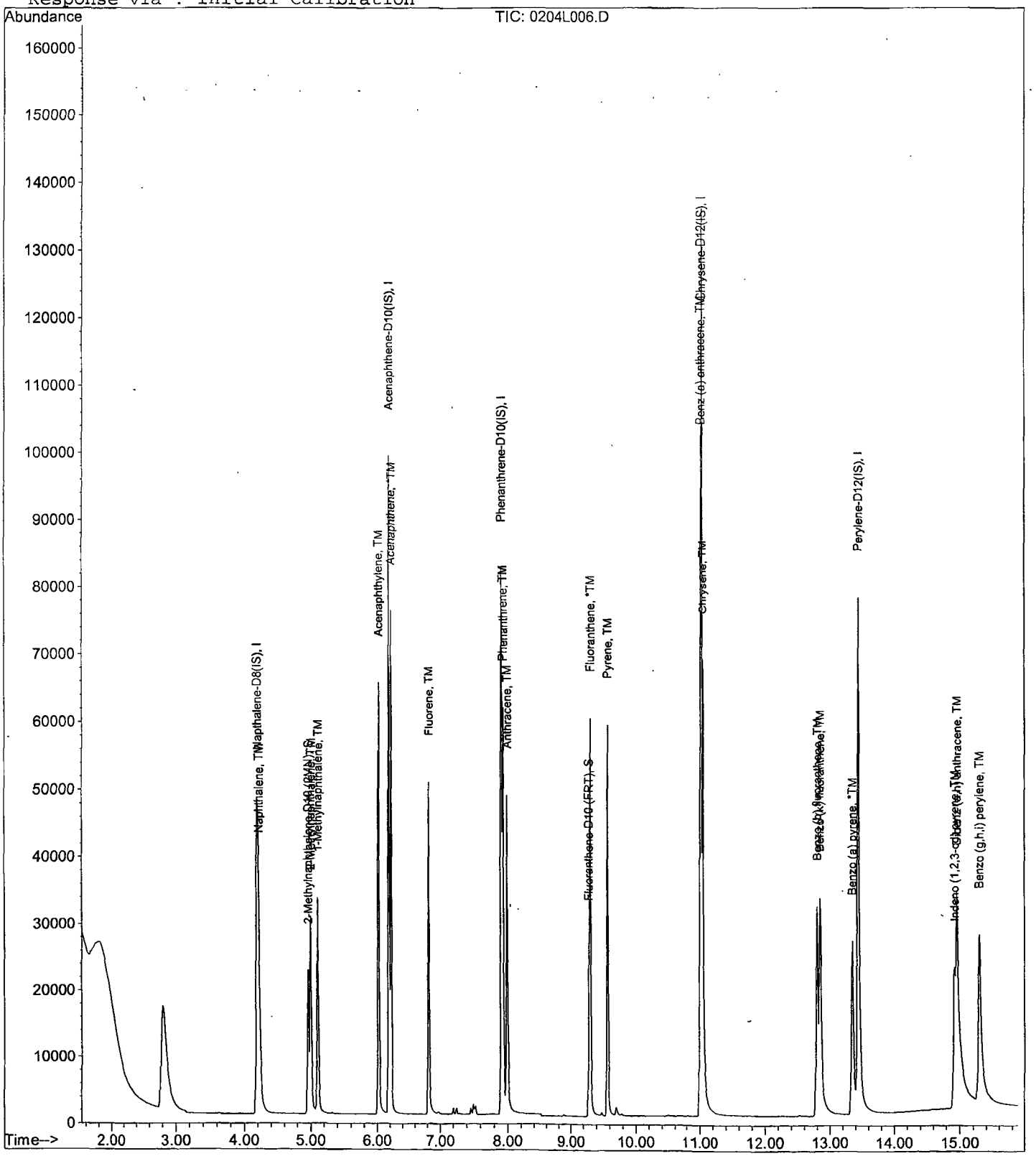
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L006.D Vial: 6
Acq On : 4 Feb 20 10:53 Operator: MA
Sample : 1 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L007.D Vial: 7
Acq On : 4 Feb 20 11:15 Operator: MA
Sample : 5 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:42:22 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.19	136	93559	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.18	164	49173	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.91	188	92273	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.01	240	120189	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.43	264	131131	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	4.96	152	117393	2.51887 ppb		0.00
Spiked Amount 5.000			Recovery	= 50.380%		
13) Fluoranthene-D10 (FRT)	9.28	212	137624	2.13617 ppb		0.00
Spiked Amount 5.000			Recovery	= 42.720%		
Target Compounds						Qvalue
2) Naphthalene	4.21	128	211249	4.69404 ppb		100
4) 2-Methylnaphthalene	5.00	142	139742	5.10952 ppb		100
5) 1-Methylnaphthalene	5.11	142	143640	5.06770 ppb		100
7) Acenaphthylene	6.02	152	431994	4.81826 ppb		100
8) Acenaphthene	6.22	154	128780	4.89745 ppb		100
9) Fluorene	6.82	166	160921	4.98915 ppb		100
11) Phenanthrene	7.93	178	238077	4.66698 ppb		100
12) Anthracene	7.99	178	213985	4.78406 ppb		100
14) Fluoranthene	9.30	202	335331	4.73840 ppb		100
16) Pyrene	9.57	202	333150	4.14232 ppb		100
17) Benz (a) anthracene	11.00	228	286178	4.25478 ppb		100
18) Chrysene	11.04	228	328507	4.55588 ppb		100
19) Indeno (1,2,3-cd) pyrene	14.91	276	378390	5.26003 ppb	#	100
21) Benzo (b) fluoranthene	12.79	252	299210	4.57302 ppb		100
22) Benzo (k) fluoranthene	12.84	252	366067	5.04713 ppb		100
23) Benzo (a) pyrene	13.34	252	295305	4.80957 ppb		100
24) Dibenz (a,h) anthracene	14.96	278	317098	5.20088 ppb		100
25) Benzo (g,h,i) perylene	15.28	276	334159	5.02577 ppb		100

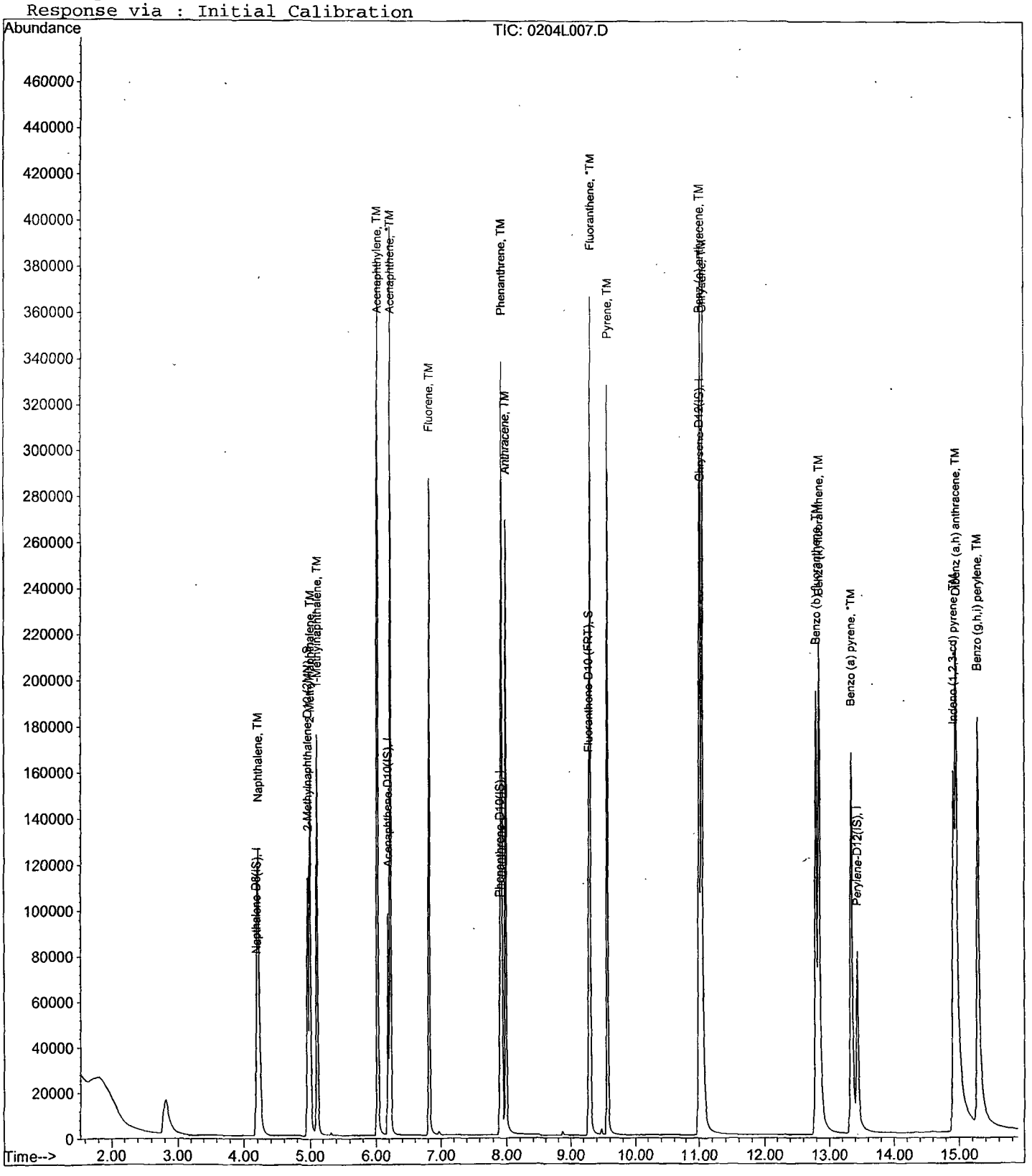
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L007.D Vial: 7
Acq On : 4 Feb 20 11:15 Operator: MA
Sample : 5 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L008.D Vial: 8
Acq On : 4 Feb 20 11:37 Operator: MA
Sample : 10 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:42:22 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	4.19	136	98020	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	6.18	164	51392	2.50000 ppb	0.00
10) Phenanthrene-D10(IS)	7.91	188	97154	2.50000 ppb	0.00
15) Chrysene-D12(IS)	11.01	240	126338	2.50000 ppb	0.00
20) Perylene-D12(IS)	13.43	264	139162	2.50000 ppb	0.00
System Monitoring Compounds					
3) 2-Methylnaphthalene-D10 (2	4.96	152	238748	4.88961 ppb	0.00
Spiked Amount 5.000			Recovery = 97.800%		
13) Fluoranthene-D10 (FRT)	9.28	212	286889	4.22932 ppb	0.00
Spiked Amount 5.000			Recovery = 84.580%		
Target Compounds					Qvalue
2) Naphthalene	4.21	128	410435	8.70497 ppb	100
4) 2-Methylnaphthalene	5.00	142	272886	9.52368 ppb	99
5) 1-Methylnaphthalene	5.11	142	275593	9.28058 ppb	98
7) Acenaphthylene	6.02	152	845596	9.02415 ppb	99
8) Acenaphthene	6.22	154	250345	9.10944 ppb	98
9) Fluorene	6.82	166	318435	9.44639 ppb	99
11) Phenanthrene	7.93	178	468302	8.71883 ppb	100
12) Anthracene	7.99	178	427236	9.07184 ppb	100
14) Fluoranthene	9.30	202	648356	8.70132 ppb	99
16) Pyrene	9.57	202	660769	7.81599 ppb	100
17) Benz (a) anthracene	11.00	228	585928	8.28736 ppb	99
18) Chrysene	11.04	228	640149	8.44578 ppb	99
19) Indeno (1,2,3-cd) pyrene	14.92	276	770951	10.19544 ppb #	94
21) Benzo (b) fluoranthene	12.79	252	603563	8.69229 ppb	99
22) Benzo (k) fluoranthene	12.84	252	740450	9.61977 ppb	99
23) Benzo (a) pyrene	13.35	252	605339	9.29007 ppb #	96
24) Dibenz (a,h) anthracene	14.96	278	643860	9.95084 ppb	99
25) Benzo (g,h,i) perylene	15.28	276	676724	9.59060 ppb	97

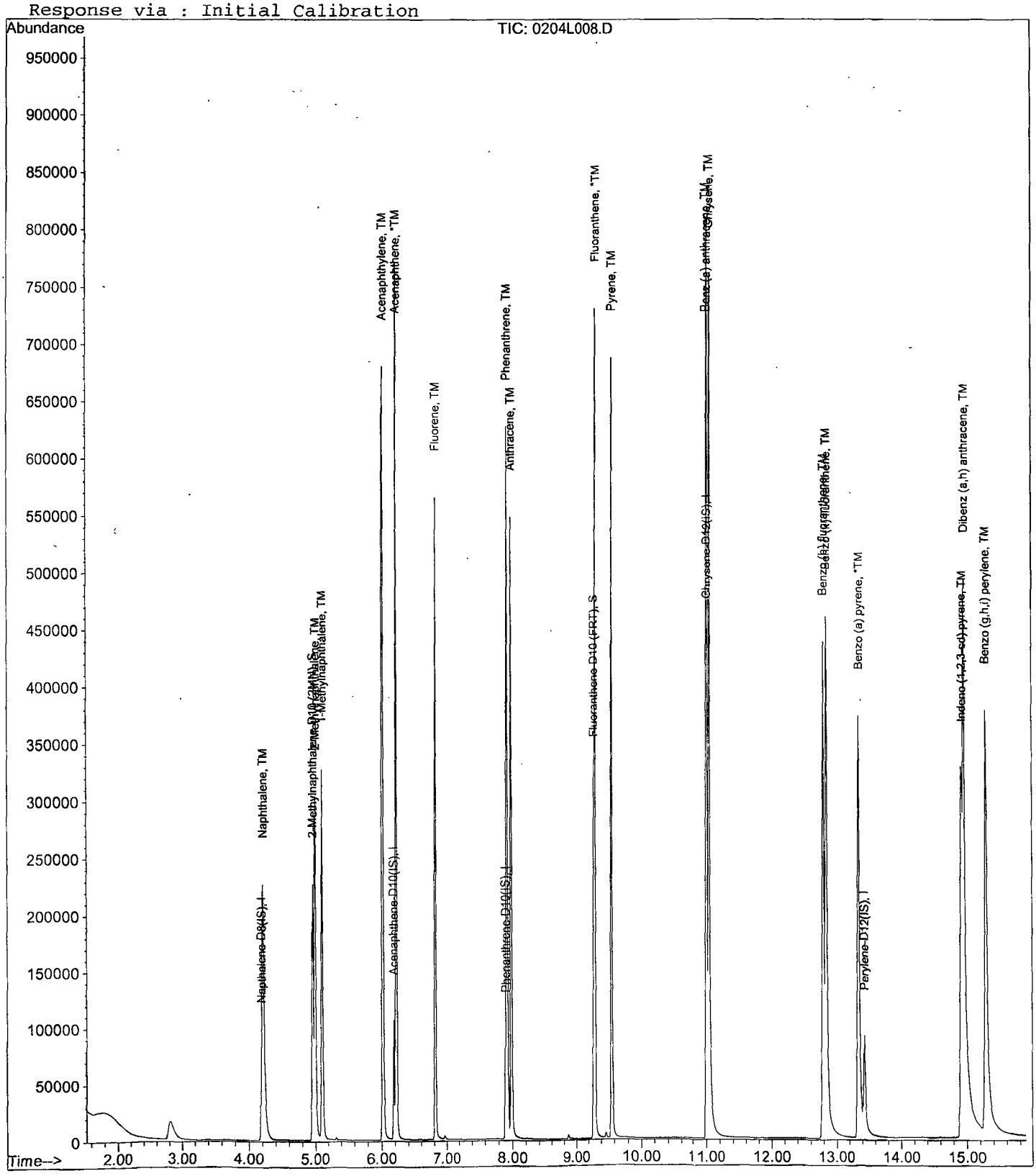
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L008.D Vial: 8
Acq On : 4 Feb 20 11:37 Operator: MA
Sample : 10 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L010.D Vial: 10
Acq On : 4 Feb 20 12:21 Operator: MA
Sample : 100 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:49 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:48:59 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.19	136	94154	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.18	164	49526	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.91	188	95687	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.03	240	125316	2.50000 ppb		0.02
20) Perylene-D12(IS)	13.45	264	141618	2.50000 ppb		0.01
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	4.96	152	2132841	47.06510 ppb		0.00
Spiked Amount 5.000			Recovery = 941.300%			
13) Fluoranthene-D10 (FRT)	9.29	212	2657919	48.74975 ppb		0.01
Spiked Amount 5.000			Recovery = 975.000%			
Target Compounds						Qvalue
2) Naphthalene	4.21	128	3515265	87.92823 ppb		98
4) 2-Methylnaphthalene	5.00	142	2314267	90.08958 ppb		99
5) 1-Methylnaphthalene	5.11	142	2325445	86.77018 ppb		99
7) Acenaphthylene	6.02	152	6802585	88.10489 ppb		97
8) Acenaphthene	6.23	154	2052134	84.22717 ppb		97
9) Fluorene	6.83	166	2744719	93.60760 ppb		100
11) Phenanthrene	7.94	178	3586911	80.58577 ppb		95
12) Anthracene	8.00	178	3368369	85.99155 ppb		95
14) Fluoranthene	9.33	202	5194710	85.53200 ppb		95
16) Pyrene	9.58	202	5580274	87.52935 ppb	#	84
17) Benz (a) anthracene	11.02	228	5418653	96.12929 ppb		94
18) Chrysene	11.08	228	5338591	81.34404 ppb		95
19) Indeno (1,2,3-cd) pyrene	14.99	276	7605000	103.10512 ppb	#	84
21) Benzo (b) fluoranthene	12.84	252	6397741	114.52991 ppb		95
22) Benzo (k) fluoranthene	12.90	252	6168270	86.51444 ppb		100
23) Benzo (a) pyrene	13.38	252	5827644	104.49972 ppb		95
24) Dibenz (a,h) anthracene	15.01	278	6436791	104.88555 ppb	#	94
25) Benzo (g,h,i) perylene	15.35	276	6483695	99.89693 ppb	#	93

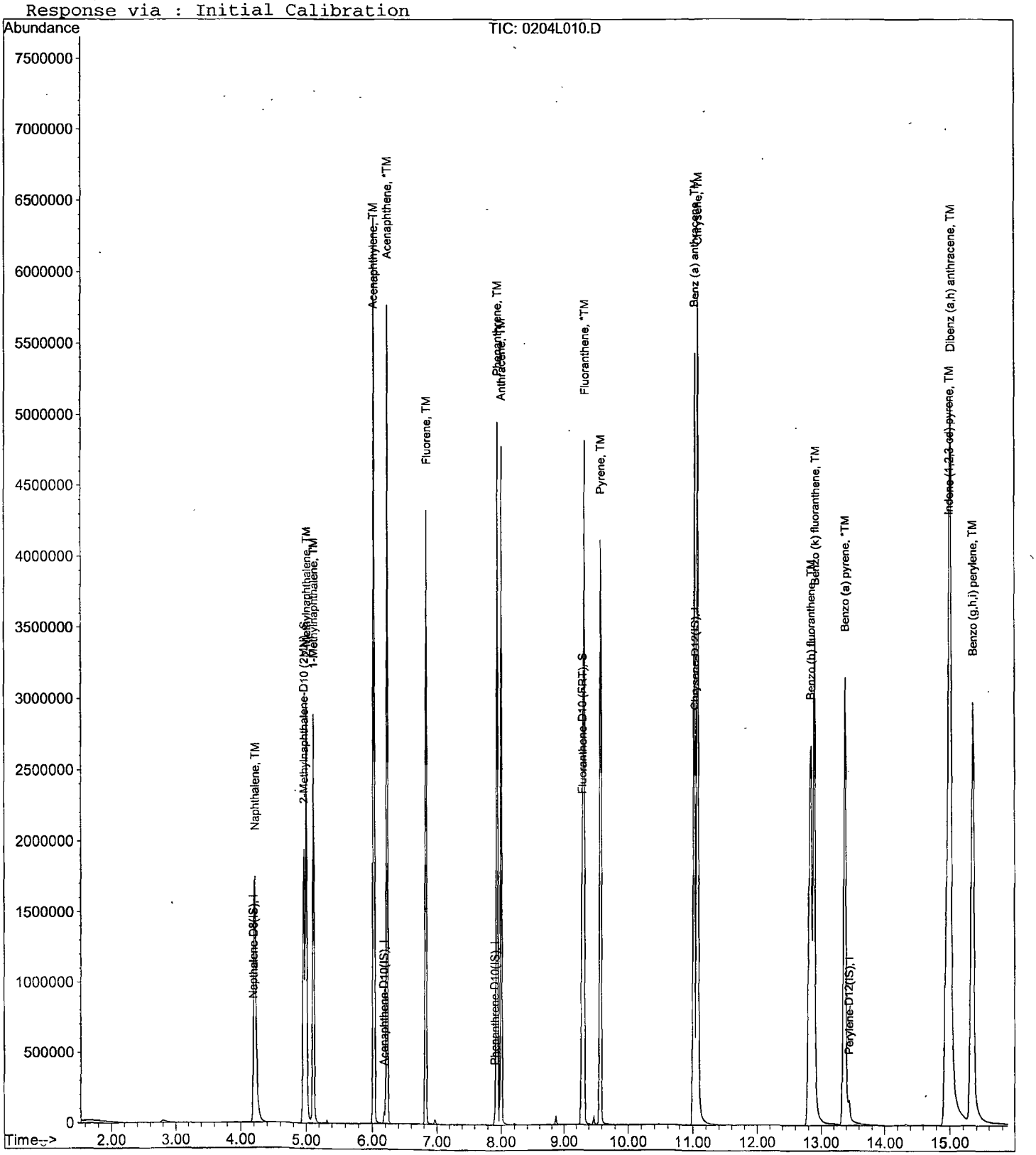
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L010.D Vial: 10
Acq On : 4 Feb 20 12:21 Operator: MA
Sample : 100 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:49 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration



PAH by GCMS SIM
EPA 8270 SIM

Form 7

Second Source Calibration

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

SDG No:
Date Analyzed: 4 Feb 20 13:21
Instrument: Linus
Initial Cal. Date: 02/04/20
Data File: 0204L011.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	Naphthalene	1.062	1.033	2.7	TM	
2	TM	2-Methylnaphthalene	0.6821	0.6822	0.02	TM	
3	TM	1-Methylnaphthalene	0.7116	0.6901	3.0	TM	
4	TM	Acenaphthylene	3.897	3.871	0.68	TM	
5	*TM	Acenaphthene	1.230	1.178	4.2	*TM	
6	TM	Fluorene	1.480	1.459	1.5	TM	
7	TM	Phenanthrene	1.163	1.148	1.3	TM	
8	TM	Anthracene	1.023	1.104	7.8	TM	
9	*TM	Fluoranthene	1.587	1.568	1.2	*TM	
10	TM	Pyrene	1.272	1.242	2.3	TM	
11	TM	Benz (a) anthracene	1.125	1.066	5.2	TM	
12	TM	Chrysene	1.309	1.222	6.7	TM	
13	TM	Indeno (1,2,3-cd) pyrene	1.471	1.421	3.4	TM	
14	TM	Benzo (b) fluoranthene	0.9861	0.9690	1.7	TM	
15	TM	Benzo (k) fluoranthene	1.265	1.329	5.1	TM	
16	*TM	Benzo (a) pyrene	0.9845	1.048	6.4	*TM	
17	TM	Dibenz (a,h) anthracene	1.083	1.080	0.29	TM	
18	TM	Benzo (g,h,i) perylene	1.146	1.138	0.70	TM	
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			3.0		

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L011.D Vial: 11
Acq On : 4 Feb 20 13:21 Operator: MA
Sample : SS SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 13:39 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.19	136	96451	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.18	164	52672	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.91	188	97686	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.01	240	126057	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.43	264	136401	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	0.00	152	0d	0.00000	ppb		
Spiked Amount 5.000			Recovery	= 0.000%			
13) Fluoranthene-D10 (FRT)	0.00	212	0d	0.00000	ppb		
Spiked Amount 5.000			Recovery	= 0.000%			
Target Compounds							Qvalue
2) Naphthalene	4.21	128	199297	4.86635	ppb		100
4) 2-Methylnaphthalene	5.00	142	131606	5.00114	ppb		100
5) 1-Methylnaphthalene	5.11	142	133123	4.84897	ppb		100
7) Acenaphthylene	6.02	152	407798	4.96620	ppb		100
8) Acenaphthene	6.22	154	124072	4.78822	ppb		100
9) Fluorene	6.82	166	153651	4.92722	ppb		99
11) Phenanthrene	7.93	178	224305	4.93625	ppb		99
12) Anthracene	7.99	178	215622	5.39200	ppb		100
14) Fluoranthene	9.30	202	306319	4.94040	ppb		98
16) Pyrene	9.57	202	313161	4.88321	ppb		98
17) Benz (a) anthracene	11.00	228	268691	4.73868	ppb		100
18) Chrysene	11.05	228	308124	4.66728	ppb	#	96
19) Indeno (1,2,3-cd) pyrene	14.92	276	358273	4.82875	ppb	#	95
21) Benzo (b) fluoranthene	12.79	252	264332	4.91296	ppb		99
22) Benzo (k) fluoranthene	12.84	252	362562	5.25367	ppb		99
23) Benzo (a) pyrene	13.35	252	285781	5.32055	ppb		97
24) Dibenz (a,h) anthracene	14.96	278	294697	4.98566	ppb		98
25) Benzo (g,h,i) perylene	15.29	276	310388	4.96518	ppb		99

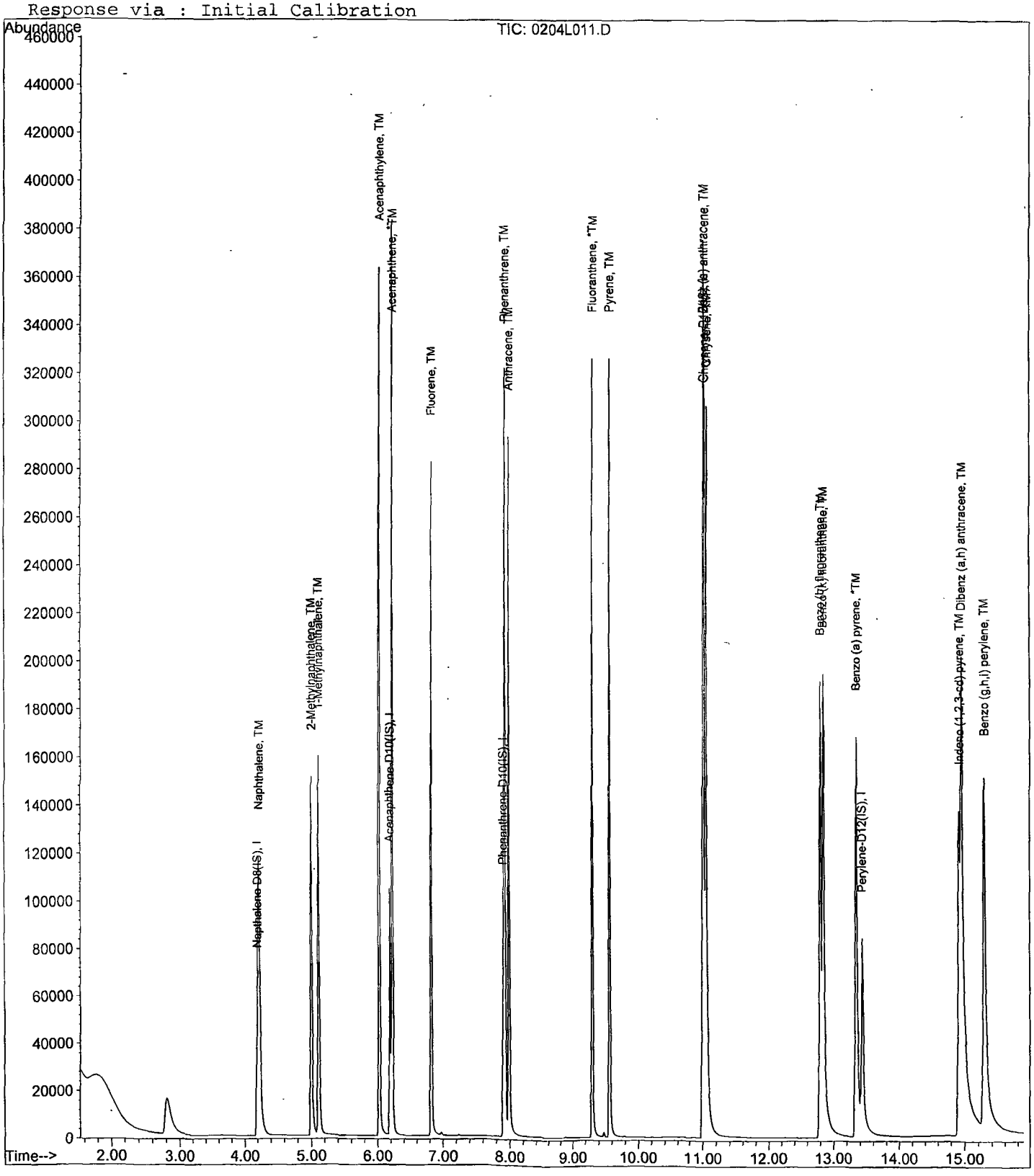
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L011.D Vial: 11
Acq On : 4 Feb 20 13:21 Operator: MA
Sample : SS SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 13:39 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration



PAH by GCMS SIM
EPA 8270 SIM

Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 03/11/20
Instrument: Linus
Initial Cal. Date: 02/04/20
Data File: 0204L251.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Napthalene-D8(IS)	ISTD			I	
2	TM	Naphthalene	1.062	1.004	5.4	TM	
3	S	2-Methylnaphthalene-D10 (2MN)	1.203	1.254	4.2	S	
4	TM	2-Methylnaphthalene	0.6821	0.6970	2.2	TM	
5	TM	1-Methylnaphthalene	0.7116	0.6944	2.4	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	TM	Acenaphthylene	3.897	3.747	3.9	TM	
8	*TM	Acenaphthene	1.230	1.111	9.7	*TM	
9	TM	Fluorene	1.480	1.444	2.4	TM	
10	I	Phenanthrene-D10(IS)	ISTD			I	
11	TM	Phenanthrene	1.163	1.080	7.1	TM	
12	TM	Anthracene	1.023	0.9917	3.1	TM	
13	S	Fluoranthene-D10 (FRT)	1.424	1.391	2.3	S	
14	*TM	Fluoranthene	1.587	1.530	3.6	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.272	1.173	7.8	TM	
17	TM	Benz (a) anthracene	1.125	1.181	5.0	TM	
18	TM	Chrysene	1.309	1.168	11	TM	
19	TM	Indeno (1,2,3-cd) pyrene	1.471	1.613	9.6	TM	
20	I	Perylene-D12(IS)	ISTD			I	
21	TM	Benzo (b) fluoranthene	0.9861	1.070	8.5	TM	
22	TM	Benzo (k) fluoranthene	1.265	1.119	12	TM	
23	*TM	Benzo (a) pyrene	0.9845	1.002	1.7	*TM	
24	TM	Dibenz (a,h) anthracene	1.083	1.147	5.9	TM	
25	TM	Benzo (g,h,i) perylene	1.146	1.144	0.18	TM	
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			5.4		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L251.D Vial: 51
Acq On : 11 Mar 20 9:30 Operator: MA
Sample : 5 SIM 02/03/20 (2) Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Mar 11 10:54 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.14	136	110513	2.50000	ppb		-0.01
6) Acenaphthene-D10(IS)	6.14	164	63254	2.50000	ppb		-0.01
10) Phenanthrene-D10(IS)	7.87	188	123834	2.50000	ppb		-0.01
15) Chrysene-D12(IS)	10.98	240	163443	2.50000	ppb		-0.02
20) Perylene-D12(IS)	13.40	264	197525	2.50000	ppb		-0.01
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	4.91	152	138605	2.60582	ppb		0.00
Spiked Amount 5.000			Recovery = 52.120%				
13) Fluoranthene-D10 (FRT)	9.25	212	172288	2.44174	ppb		0.00
Spiked Amount 5.000			Recovery = 48.840%				
Target Compounds							Qvalue
2) Naphthalene	4.17	128	221889	4.72859	ppb		100
4) 2-Methylnaphthalene	4.95	142	154064	5.10961	ppb		99
5) 1-Methylnaphthalene	5.07	142	153486	4.87931	ppb		96
7) Acenaphthylene	5.99	152	474066	4.80740	ppb		100
8) Acenaphthene	6.18	154	140520	4.51575	ppb		99
9) Fluorene	6.78	166	182726	4.87931	ppb		98
11) Phenanthrene	7.89	178	267542	4.64454	ppb		98
12) Anthracene	7.95	178	245608	4.84498	ppb		99
14) Fluoranthene	9.27	202	379030	4.82230	ppb		95
16) Pyrene	9.53	202	383359	4.61046	ppb		96
17) Benz (a) anthracene	10.97	228	386133	5.25220	ppb		100
18) Chrysene	11.01	228	381769	4.46005	ppb	#	95
19) Indeno (1,2,3-cd) pyrene	14.89	276	527412	5.48241	ppb	#	87
21) Benzo (b) fluoranthene	12.75	252	422713	5.42543	ppb		99
22) Benzo (k) fluoranthene	12.80	252	442202	4.42483	ppb		98
23) Benzo (a) pyrene	13.30	252	395688	5.08711	ppb		98
24) Dibenz (a,h) anthracene	14.92	278	453080	5.29319	ppb		97
25) Benzo (g,h,i) perylene	15.25	276	451800	4.99082	ppb	#	97

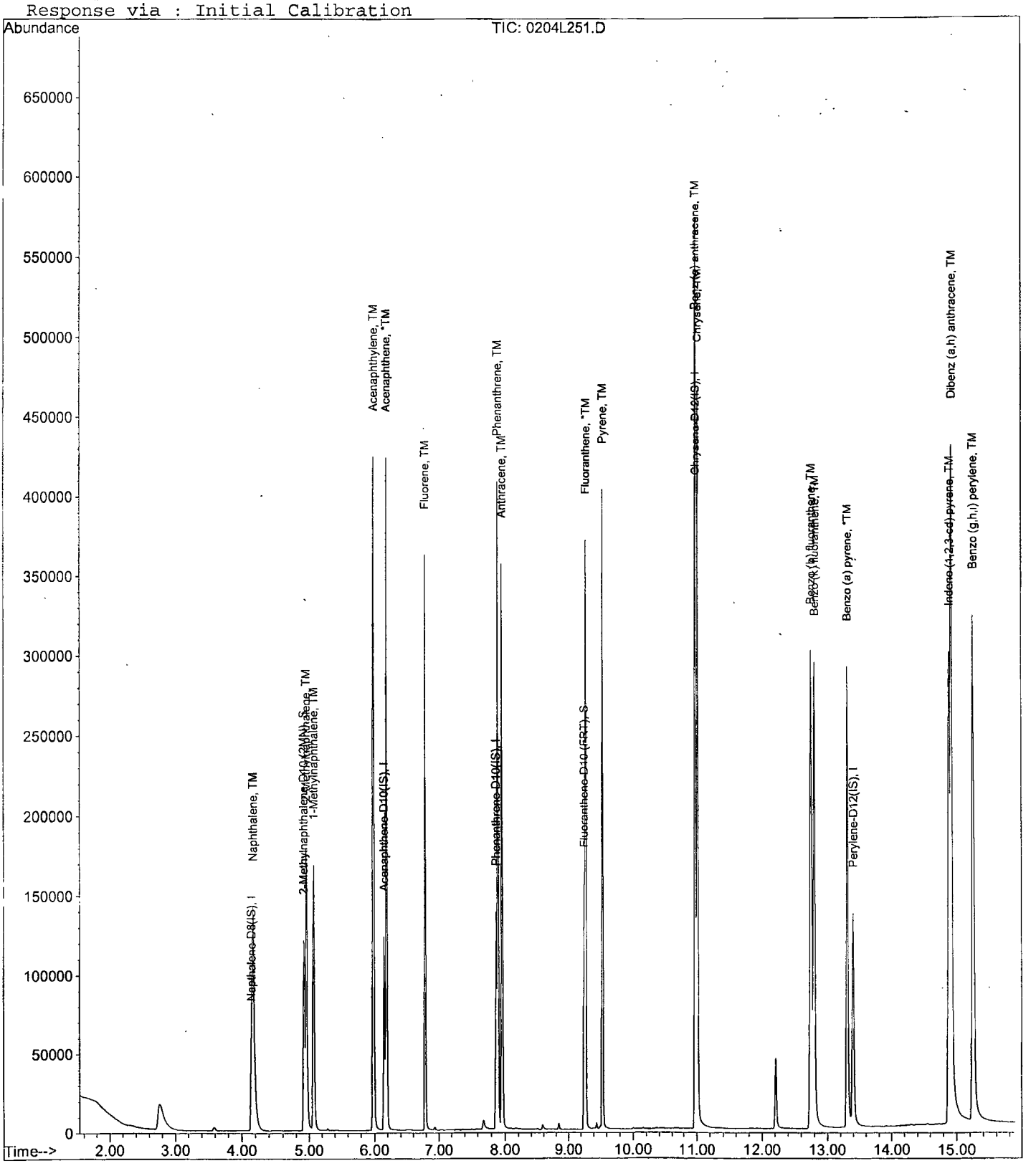
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L251.D Vial: 51
Acq On : 11 Mar 20 9:30 Operator: MA
Sample : 5 SIM 02/03/20 (2) Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Mar 11 10:54 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration



PAH by GCMS SIM
EPA 8270 SIM

Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 03/11/20
Instrument: Linus
Initial Cal. Date: 02/04/20
Data File: 0204L261.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	TM	Naphthalene	1.062	1.022	3.8	TM	
3	S	2-Methylnaphthalene-D10 (2MN)	1.203	1.323	9.9	S	
4	TM	2-Methylnaphthalene	0.6821	0.7153	4.9	TM	
5	TM	1-Methylnaphthalene	0.7116	0.7140	0.34	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	TM	Acenaphthylene	3.897	3.833	1.7	TM	
8	*TM	Acenaphthene	1.230	1.126	8.4	*TM	
9	TM	Fluorene	1.480	1.480	0.01	TM	
10	I	Phenanthrene-D10(IS)	ISTD			I	
11	TM	Phenanthrene	1.163	1.047	10.0	TM	
12	TM	Anthracene	1.023	0.9468	7.5	TM	
13	S	Fluoranthene-D10 (FRT)	1.424	1.368	4.0	S	
14	*TM	Fluoranthene	1.587	1.489	6.2	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.272	1.110	13	TM	
17	TM	Benz (a) anthracene	1.125	1.165	3.6	TM	
18	TM	Chrysene	1.309	1.068	18	TM	
19	TM	Indeno (1,2,3-cd) pyrene	1.471	1.555	5.7	TM	
20	I	Perylene-D12(IS)	ISTD			I	
21	TM	Benzo (b) fluoranthene	0.9861	1.021	3.6	TM	
22	TM	Benzo (k) fluoranthene	1.265	1.109	12	TM	
23	*TM	Benzo (a) pyrene	0.9845	0.9705	1.4	*TM	
24	TM	Dibenz (a,h) anthracene	1.083	1.110	2.5	TM	
25	TM	Benzo (g,h,i) perylene	1.146	1.107	3.4	TM	
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			6.0		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L261.D Vial: 61
Acq On : 11 Mar 20 15:03 Operator: MA
Sample : 5 SIM 02/03/20 (2) Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Mar 11 16:21 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.14	136	104502	2.50000	ppb		-0.01
6) Acenaphthene-D10(IS)	6.14	164	61726	2.50000	ppb		-0.01
10) Phenanthrene-D10(IS)	7.87	188	129152	2.50000	ppb		-0.01
15) Chrysene-D12(IS)	10.99	240	172093	2.50000	ppb		-0.01
20) Perylene-D12(IS)	13.40	264	206121	2.50000	ppb		-0.01
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	4.93	152	138228	2.74822	ppb		0.00
Spiked Amount 5.000			Recovery	= 54.960%			
13) Fluoranthene-D10 (FRT)	9.26	212	176677	2.40084	ppb		0.00
Spiked Amount 5.000			Recovery	= 48.020%			
Target Compounds							Qvalue
2) Naphthalene	4.17	128	213508	4.81170	ppb		100
4) 2-Methylnaphthalene	4.95	142	149504	5.24358	ppb		99
5) 1-Methylnaphthalene	5.07	142	149235	5.01706	ppb		95
7) Acenaphthylene	5.99	152	473200	4.91740	ppb		100
8) Acenaphthene	6.18	154	139013	4.57791	ppb		99
9) Fluorene	6.78	166	182744	5.00059	ppb		97
11) Phenanthrene	7.89	178	270404	4.50093	ppb		98
12) Anthracene	7.95	178	244559	4.62564	ppb		99
14) Fluoranthene	9.27	202	384613	4.69184	ppb	#	94
16) Pyrene	9.53	202	381930	4.36240	ppb	#	94
17) Benz (a) anthracene	10.97	228	400814	5.17786	ppb		99
18) Chrysene	11.02	228	367527	4.07785	ppb		99
19) Indeno (1,2,3-cd) pyrene	14.89	276	535246	5.28418	ppb	#	90
21) Benzo (b) fluoranthene	12.75	252	420955	5.17755	ppb		99
22) Benzo (k) fluoranthene	12.80	252	457255	4.38464	ppb		99
23) Benzo (a) pyrene	13.30	252	400067	4.92891	ppb		98
24) Dibenz (a,h) anthracene	14.92	278	457636	5.12345	ppb		99
25) Benzo (g,h,i) perylene	15.25	276	456170	4.82895	ppb	#	95

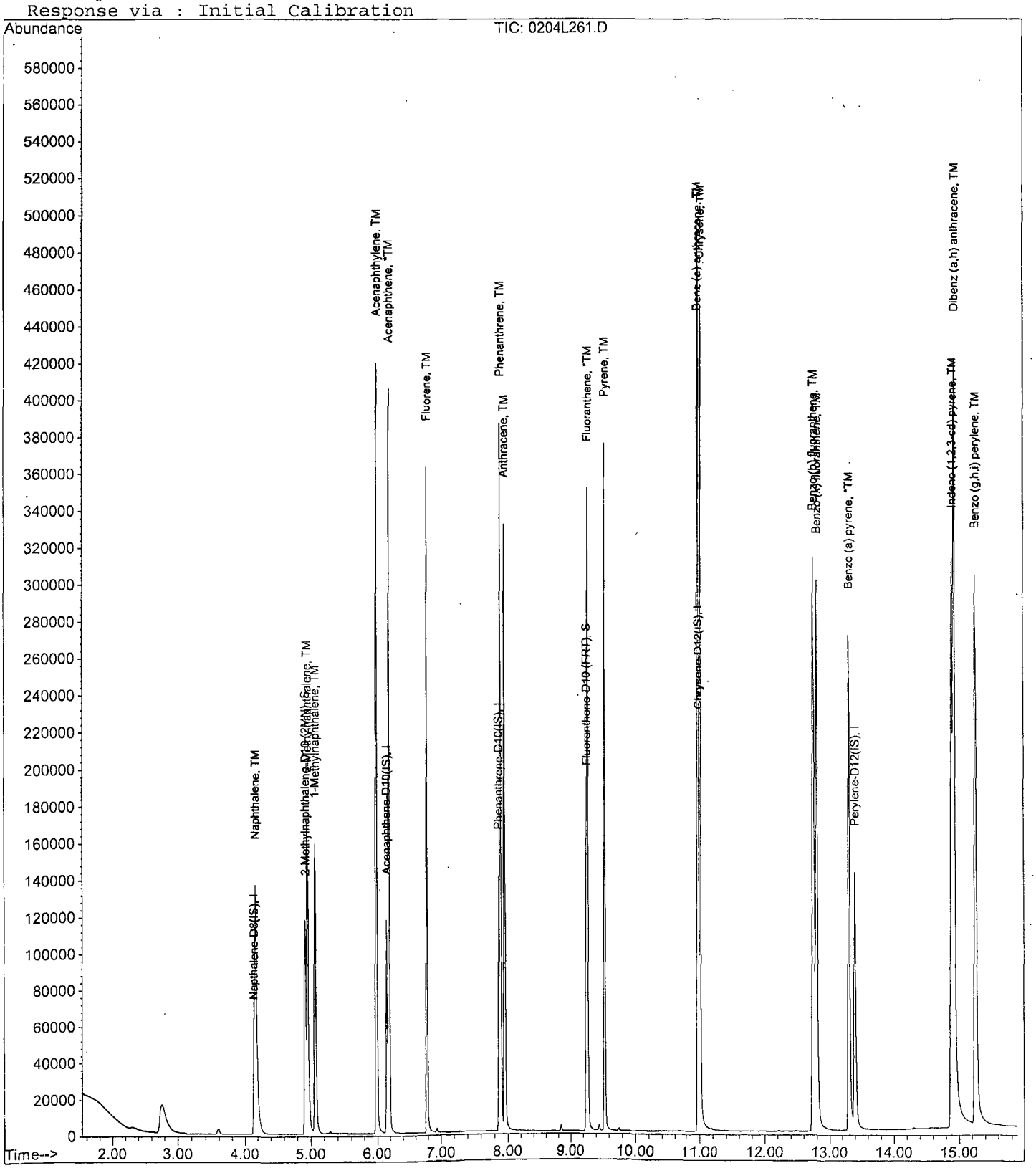
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L261.D Vial: 61
Acq On : 11 Mar 20 15:03 Operator: MA
Sample : 5 SIM 02/03/20 (2) Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Mar 11 16:21 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration



ORGANICS
Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L256.D Vial: 56
Acq On : 11 Mar 20 11:20 Operator: MA
Sample : BA07942W20 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Mar 11 13:35 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	4.14	136	85320	2.50000	ppb	-0.01
6) Acenaphthene-D10(IS)	6.14	164	49838	2.50000	ppb	-0.01
10) Phenanthrene-D10(IS)	7.87	188	99239	2.50000	ppb	-0.01
15) Chrysene-D12(IS)	10.98	240	133449	2.50000	ppb	-0.02
20) Perylene-D12(IS)	13.40	264	159420	2.50000	ppb	-0.01
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	4.93	152	197655	6.01653	ppb	0.00
Spiked Amount 6.250			Recovery = 96.272%			
13) Fluoranthene-D10 (FRT)	9.25	212	263501	5.82497	ppb	0.00
Spiked Amount 6.250			Recovery = 93.200%			

Target Compounds Qvalue

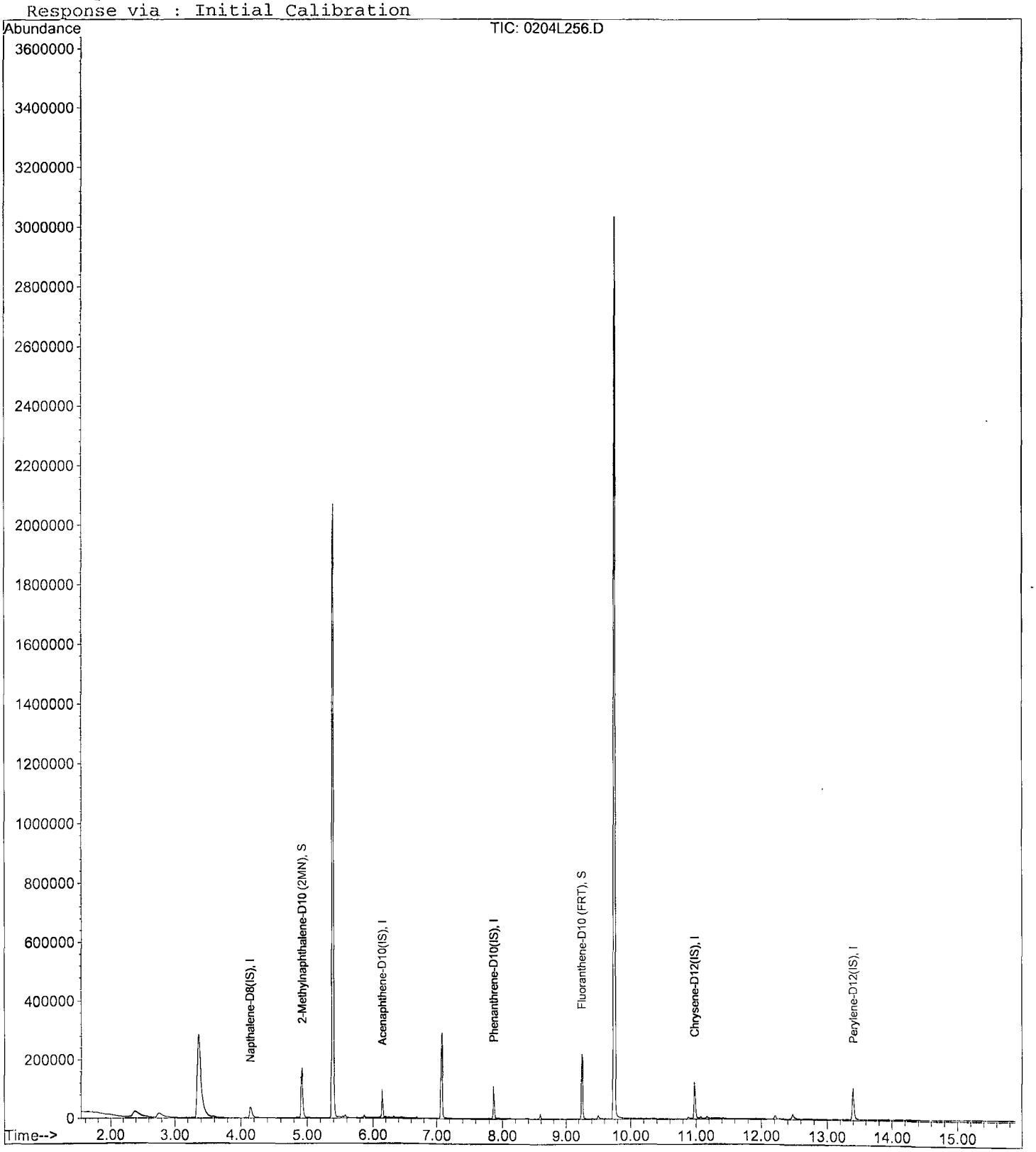
(#) = qualifier out of range (m) = manual integration
0204L256.D L0204.M Wed Mar 11 17:45:47 2020 Page 1

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L256.D Vial: 56
Acq On : 11 Mar 20 11:20 Operator: MA
Sample : BA07942W20 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Mar 11 13:35 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L257.D Vial: 57
Acq On : 11 Mar 20 11:42 Operator: MA
Sample : BA07944W19 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Mar 11 13:36 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	4.15	136	82444	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	6.14	164	48270	2.50000 ppb	-0.01
10) Phenanthrene-D10(IS)	7.87	188	95338	2.50000 ppb	-0.01
15) Chrysene-D12(IS)	10.98	240	128752	2.50000 ppb	-0.02
20) Perylene-D12(IS)	13.40	264	155654	2.50000 ppb	-0.01
System Monitoring Compounds					
3) 2-Methylnaphthalene-D10 (2	4.93	152	191082	6.01936 ppb	0.00
Spiked Amount 6.250			Recovery	= 96.304%	
13) Fluoranthene-D10 (FRT)	9.25	212	263575	6.06501 ppb	0.00
Spiked Amount 6.250			Recovery	= 97.040%	

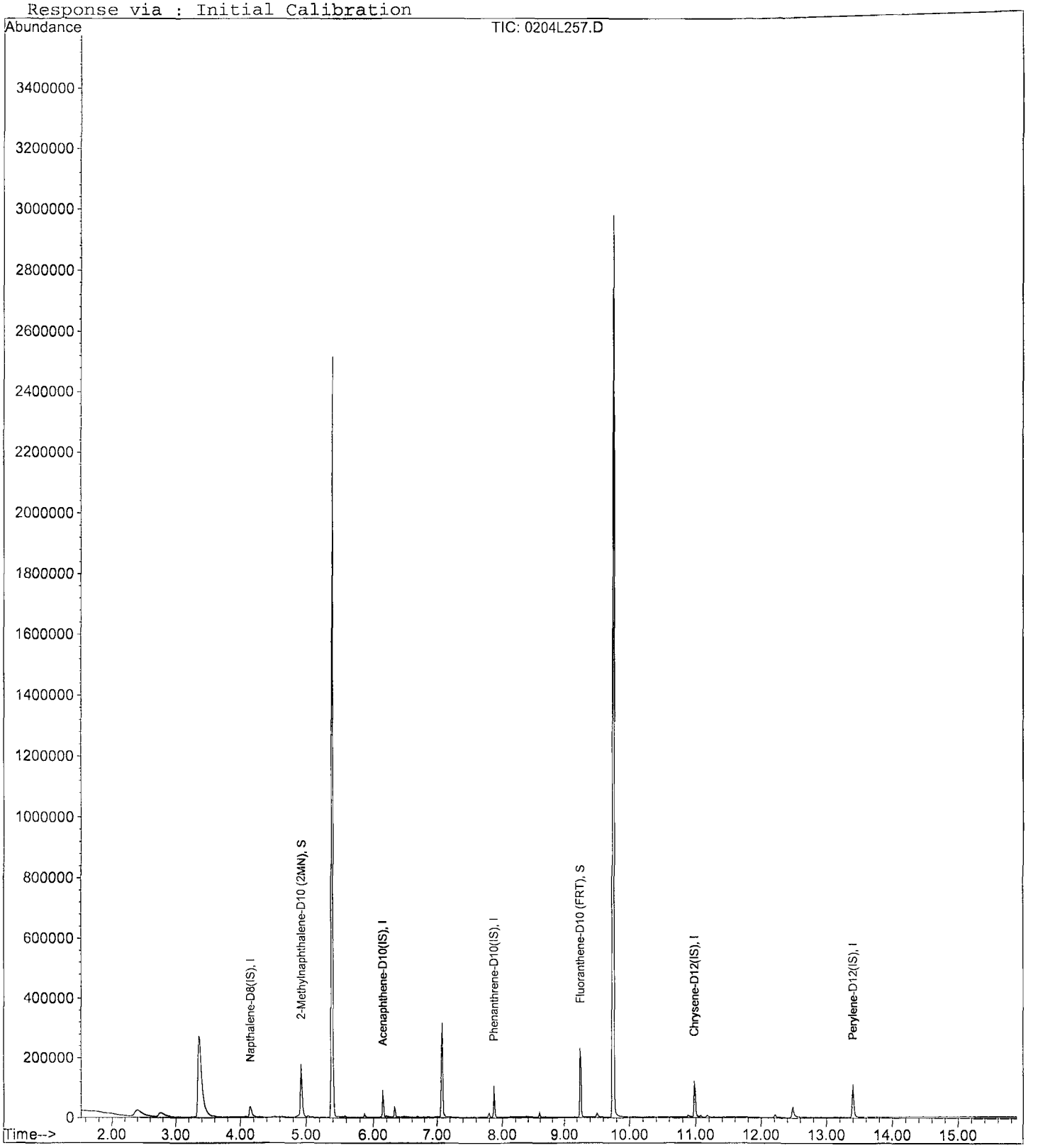
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0204L257.D L0204.M Wed Mar 11 17:45:52 2020 Page 1

Data File : M:\LINUS\DATA\L200204\0204L257.D Vial: 57
Acq On : 11 Mar 20 11:42 Operator: MA
Sample : BA07944W19 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Mar 11 13:36 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L258.D Vial: 58
Acq On : 11 Mar 20 12:04 Operator: MA
Sample : BA07946W10 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Mar 11 13:36 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	4.15	136	81086	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	6.14	164	48174	2.50000	ppb	-0.01
10) Phenanthrene-D10(IS)	7.87	188	95264	2.50000	ppb	-0.01
15) Chrysene-D12(IS)	10.98	240	128092	2.50000	ppb	-0.02
20) Perylene-D12(IS)	13.40	264	153898	2.50000	ppb	-0.01
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	4.93	152	193950	6.21203	ppb	0.00
Spiked Amount 6.250			Recovery = 99.392%			
13) Fluoranthene-D10 (FRT)	9.25	212	262895	6.05407	ppb	0.00
Spiked Amount 6.250			Recovery = 96.864%			

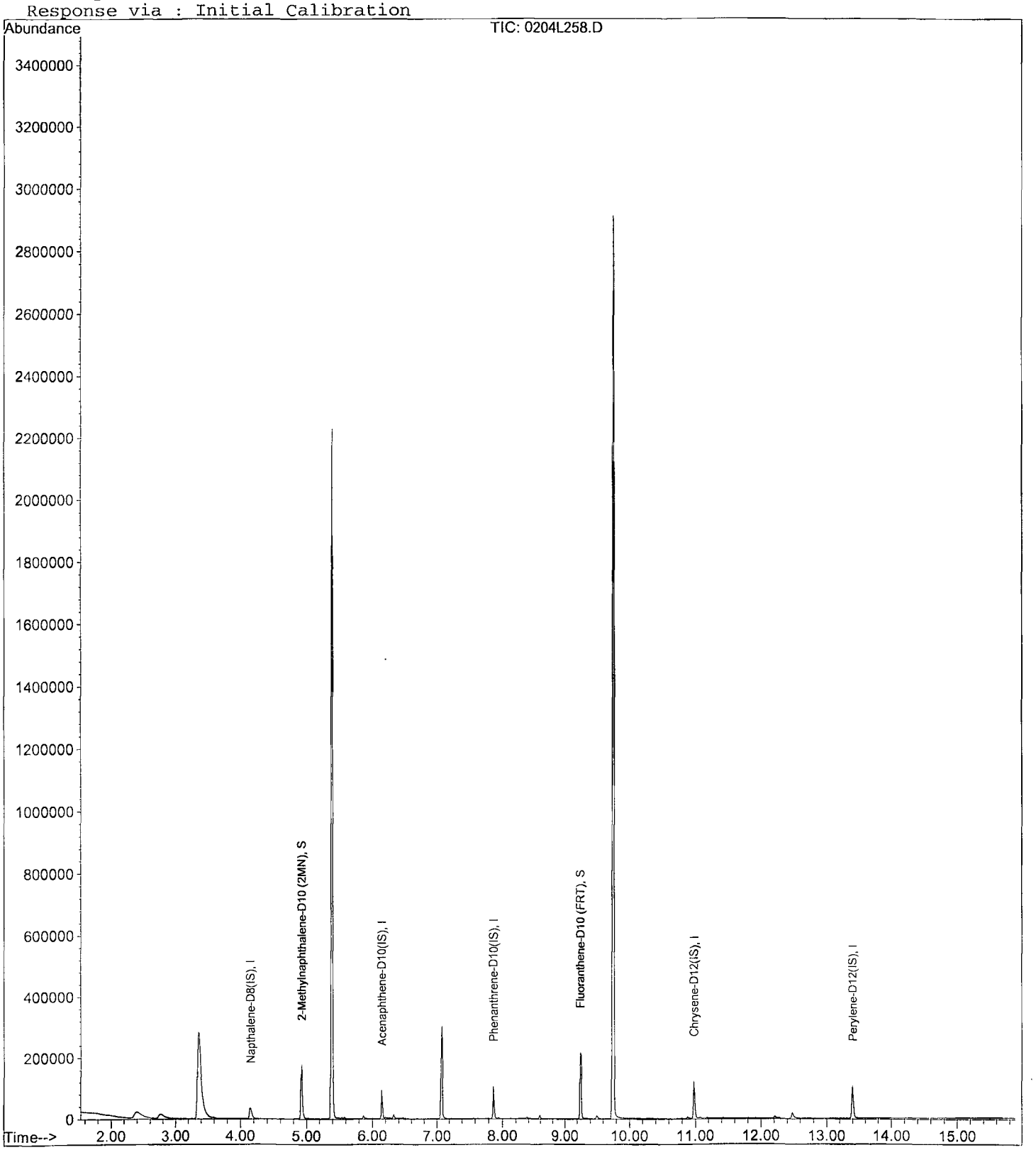
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0204L258.D L0204.M Wed Mar 11 17:45:58 2020 Page 1

Data File : M:\LINUS\DATA\L200204\0204L258.D Vial: 58
Acq On : 11 Mar 20 12:04 Operator: MA
Sample : BA07946W10 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Mar 11 13:36 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L259.D Vial: 59
Acq On : 11 Mar 20 12:26 Operator: MA
Sample : BA07947W10 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Mar 11 15:35 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	4.14	136	81188	2.50000 ppb	-0.01
6) Acenaphthene-D10(IS)	6.14	164	47974	2.50000 ppb	-0.01
10) Phenanthrene-D10(IS)	7.87	188	95909	2.50000 ppb	-0.01
15) Chrysene-D12(IS)	10.98	240	128522	2.50000 ppb	-0.02
20) Perylene-D12(IS)	13.40	264	151279	2.50000 ppb	-0.01
System Monitoring Compounds					
3) 2-Methylnaphthalene-D10 (2	4.93	152	192011	6.14219 ppb	0.00
Spiked Amount 6.250			Recovery =	98.272%	
13) Fluoranthene-D10 (FRT)	9.25	212	260350	5.95514 ppb	0.00
Spiked Amount 6.250			Recovery =	95.280%	

Target Compounds Qvalue

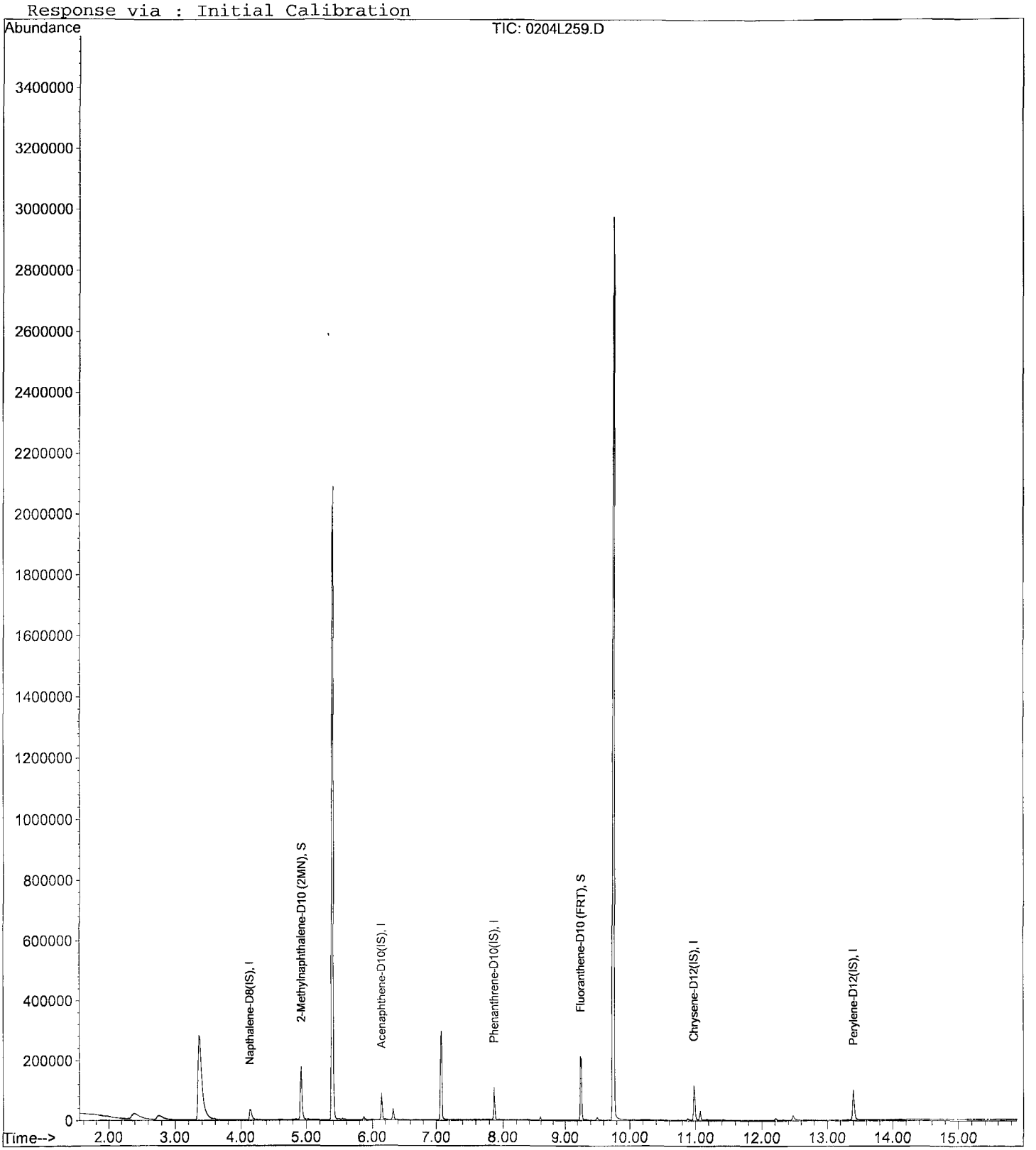
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L259.D Vial: 59
Acq On : 11 Mar 20 12:26 Operator: MA
Sample : BA07947W10 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Mar 11 15:35 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L260.D Vial: 60
Acq On : 11 Mar 20 14:41 Operator: MA
Sample : 200306A BLK 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Mar 11 16:07 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	4.14	136	87364	2.50000 ppb	-0.01
6) Acenaphthene-D10(IS)	6.14	164	51490	2.50000 ppb	-0.01
10) Phenanthrene-D10(IS)	7.87	188	101241	2.50000 ppb	-0.01
15) Chrysene-D12(IS)	10.99	240	135464	2.50000 ppb	-0.01
20) Perylene-D12(IS)	13.40	264	157570	2.50000 ppb	-0.01
System Monitoring Compounds					
3) 2-Methylnaphthalene-D10 (2	4.93	152	207639	6.17257 ppb	0.00
Spiked Amount 6.250			Recovery	= 98.768%	
13) Fluoranthene-D10 (FRT)	9.26	212	276595	5.99351 ppb	0.00
Spiked Amount 6.250			Recovery	= 95.904%	

Target Compounds Qvalue

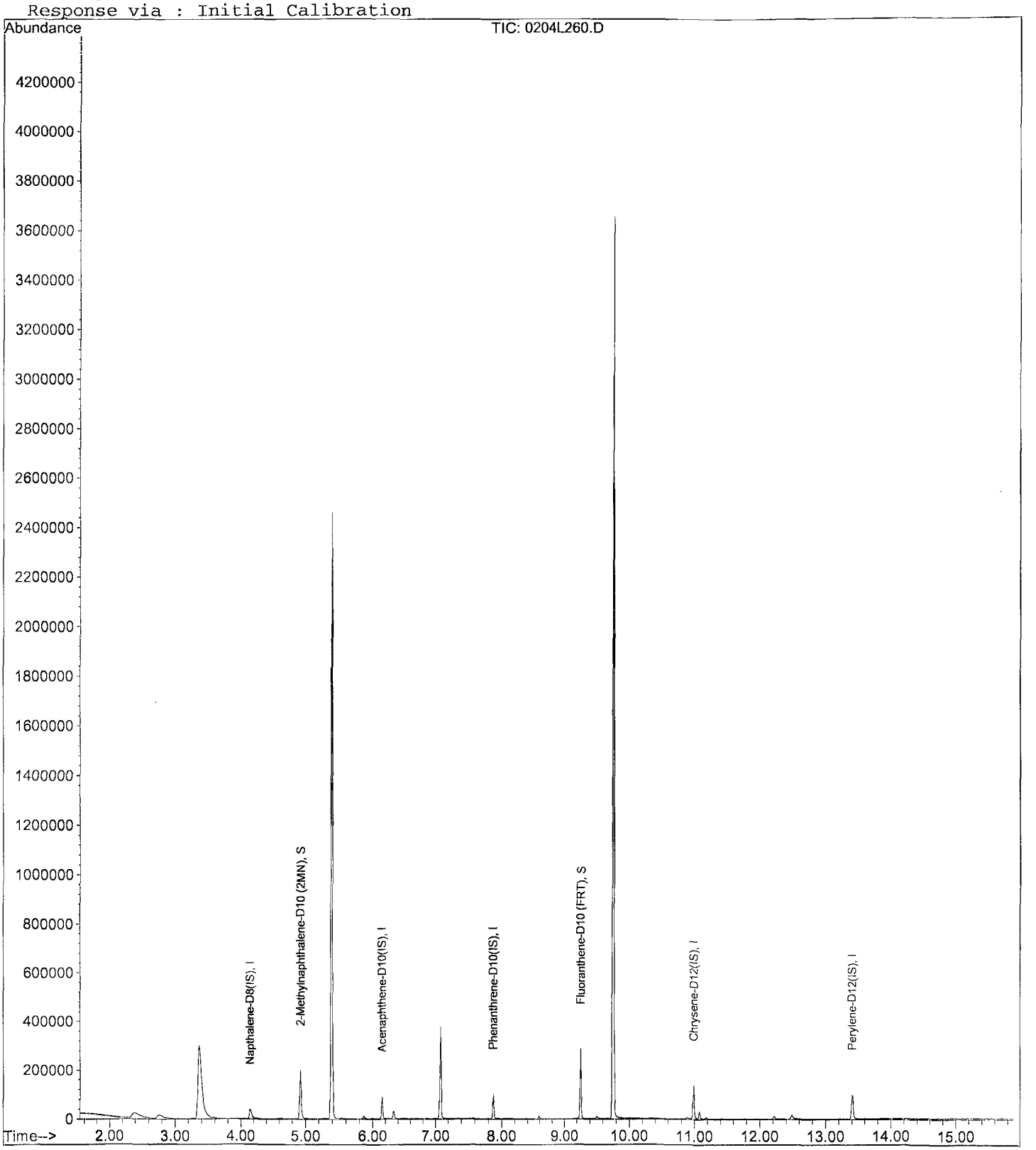
(#) = qualifier out of range (m) = manual integration
0204L260.D L0204.M Wed Mar 11 17:46:08 2020 Page 1

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L260.D Vial: 60
Acq On : 11 Mar 20 14:41 Operator: MA
Sample : 200306A BLK 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Mar 11 16:07 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L253.D Vial: 53
Acq On : 11 Mar 20 10:14 Operator: MA
Sample : 200306A LCS-2 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Mar 11 12:21 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.14	136	88548	2.50000 ppb		-0.01
6) Acenaphthene-D10(IS)	6.14	164	50346	2.50000 ppb		-0.01
10) Phenanthrene-D10(IS)	7.87	188	101560	2.50000 ppb		-0.01
15) Chrysene-D12(IS)	10.98	240	131893	2.50000 ppb		-0.02
20) Perylene-D12(IS)	13.40	264	154453	2.50000 ppb		-0.01
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	4.91	152	197807	5.80166 ppb		0.00
Spiked Amount 6.250			Recovery = 92.832%			
13) Fluoranthene-D10 (FRT)	9.25	212	259976	5.61570 ppb		0.00
Spiked Amount 6.250			Recovery = 89.856%			
Target Compounds						Qvalue
2) Naphthalene	4.17	128	158208	5.25979 ppb		100
4) 2-Methylnaphthalene	4.95	142	109734	5.67770 ppb		99
5) 1-Methylnaphthalene	5.07	142	109313	5.42134 ppb		96
7) Acenaphthylene	5.99	152	336831	5.36434 ppb		100
8) Acenaphthene	6.18	154	103932	5.24535 ppb		97
9) Fluorene	6.78	166	136787	5.73636 ppb		99
11) Phenanthrene	7.89	178	203558	5.38600 ppb		99
12) Anthracene	7.95	178	173242	5.20870 ppb		99
14) Fluoranthene	9.27	202	286383	5.55335 ppb		96
16) Pyrene	9.53	202	290910	5.41941 ppb		95
17) Benz (a) anthracene	10.97	228	289672	6.10331 ppb		99
18) Chrysene	11.01	228	291554	5.27610 ppb	#	95
19) Indeno (1,2,3-cd) pyrene	14.89	276	394606	6.35389 ppb	#	87
21) Benzo (b) fluoranthene	12.75	252	321129	6.58876 ppb		99
22) Benzo (k) fluoranthene	12.80	252	333549	5.33545 ppb		98
23) Benzo (a) pyrene	13.30	252	269239	5.53340 ppb		97
24) Dibenz (a,h) anthracene	14.92	278	343271	6.41085 ppb		98
25) Benzo (g,h,i) perylene	15.25	276	342473	6.04767 ppb	#	96

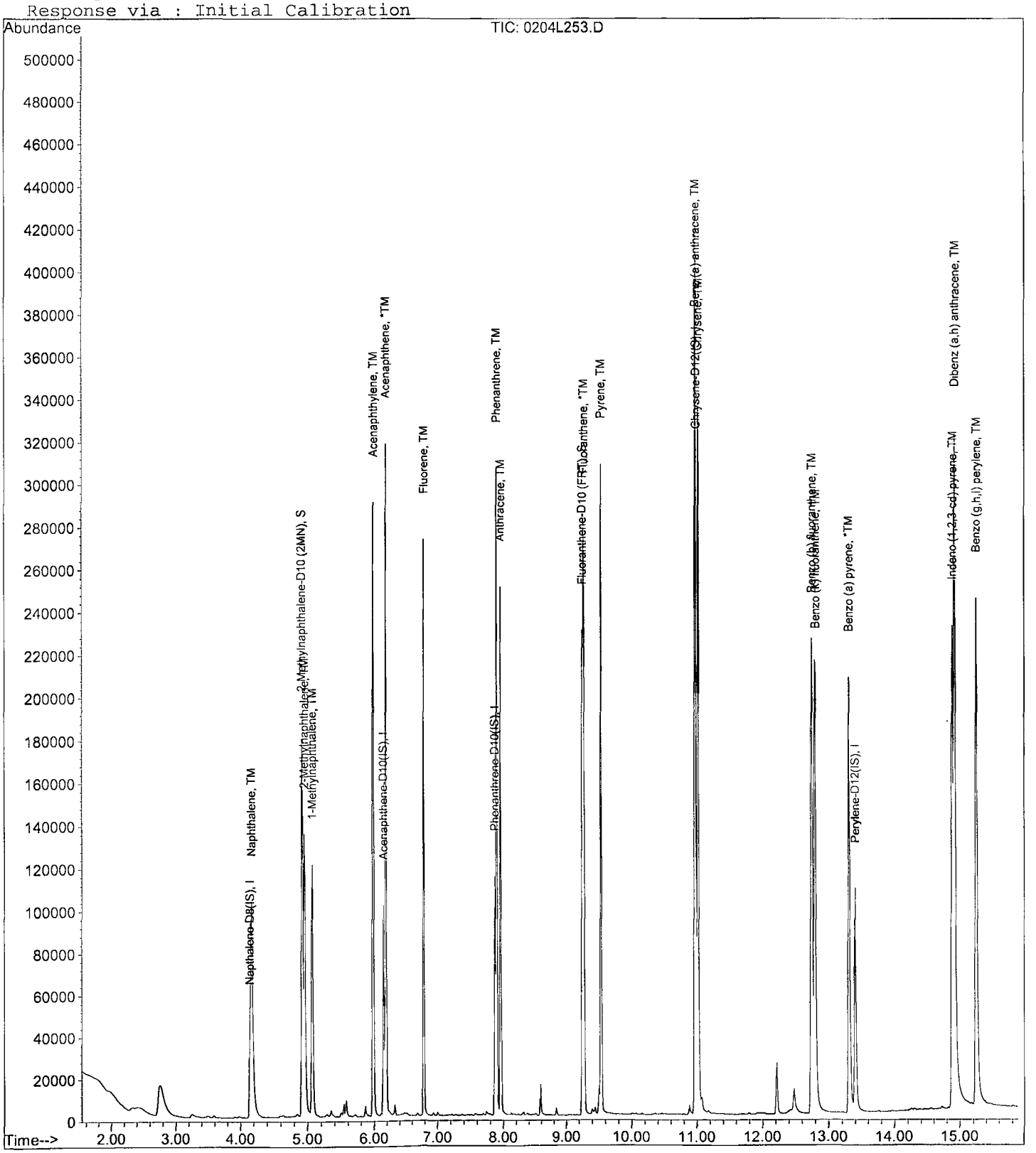
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L253.D Vial: 53
Acq On : 11 Mar 20 10:14 Operator: MA
Sample : 200306A LCS-2 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Mar 11 12:21 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L254.D Vial: 54
Acq On : 11 Mar 20 10:36 Operator: MA
Sample : 200306A LCSD-2 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Mar 11 12:21 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.14	136	83672	2.50000	ppb		-0.01
6) Acenaphthene-D10(IS)	6.14	164	48226	2.50000	ppb		-0.01
10) Phenanthrene-D10(IS)	7.87	188	97984	2.50000	ppb		-0.01
15) Chrysene-D12(IS)	10.98	240	127448	2.50000	ppb		-0.02
20) Perylene-D12(IS)	13.40	264	149130	2.50000	ppb		-0.01
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	4.91	152	192573	5.97729	ppb		0.00
Spiked Amount 6.250			Recovery = 95.632%				
13) Fluoranthene-D10 (FRT)	9.25	212	258716	5.79244	ppb		0.00
Spiked Amount 6.250			Recovery = 92.672%				
Target Compounds							Qvalue
2) Naphthalene	4.17	128	156404	5.50284	ppb		100
4) 2-Methylnaphthalene	4.95	142	108835	5.95934	ppb		99
5) 1-Methylnaphthalene	5.07	142	107777	5.65665	ppb		95
7) Acenaphthylene	5.99	152	337927	5.61838	ppb		100
8) Acenaphthene	6.18	154	103194	5.43705	ppb		98
9) Fluorene	6.78	166	137091	6.00184	ppb		99
11) Phenanthrene	7.89	178	204119	5.59795	ppb		99
12) Anthracene	7.95	178	174099	5.42551	ppb		99
14) Fluoranthene	9.27	202	286532	5.75902	ppb		97
16) Pyrene	9.53	202	288753	5.56683	ppb		95
17) Benz (a) anthracene	10.97	228	284811	6.21019	ppb		100
18) Chrysene	11.01	228	290664	5.44345	ppb	#	95
19) Indeno (1,2,3-cd) pyrene	14.89	276	393897	6.56368	ppb	#	87
21) Benzo (b) fluoranthene	12.75	252	317723	6.75156	ppb		99
22) Benzo (k) fluoranthene	12.80	252	336151	5.56900	ppb		99
23) Benzo (a) pyrene	13.30	252	268876	5.72318	ppb		99
24) Dibenz (a,h) anthracene	14.92	278	343785	6.64962	ppb		98
25) Benzo (g,h,i) perylene	15.25	276	339428	6.20784	ppb	#	96

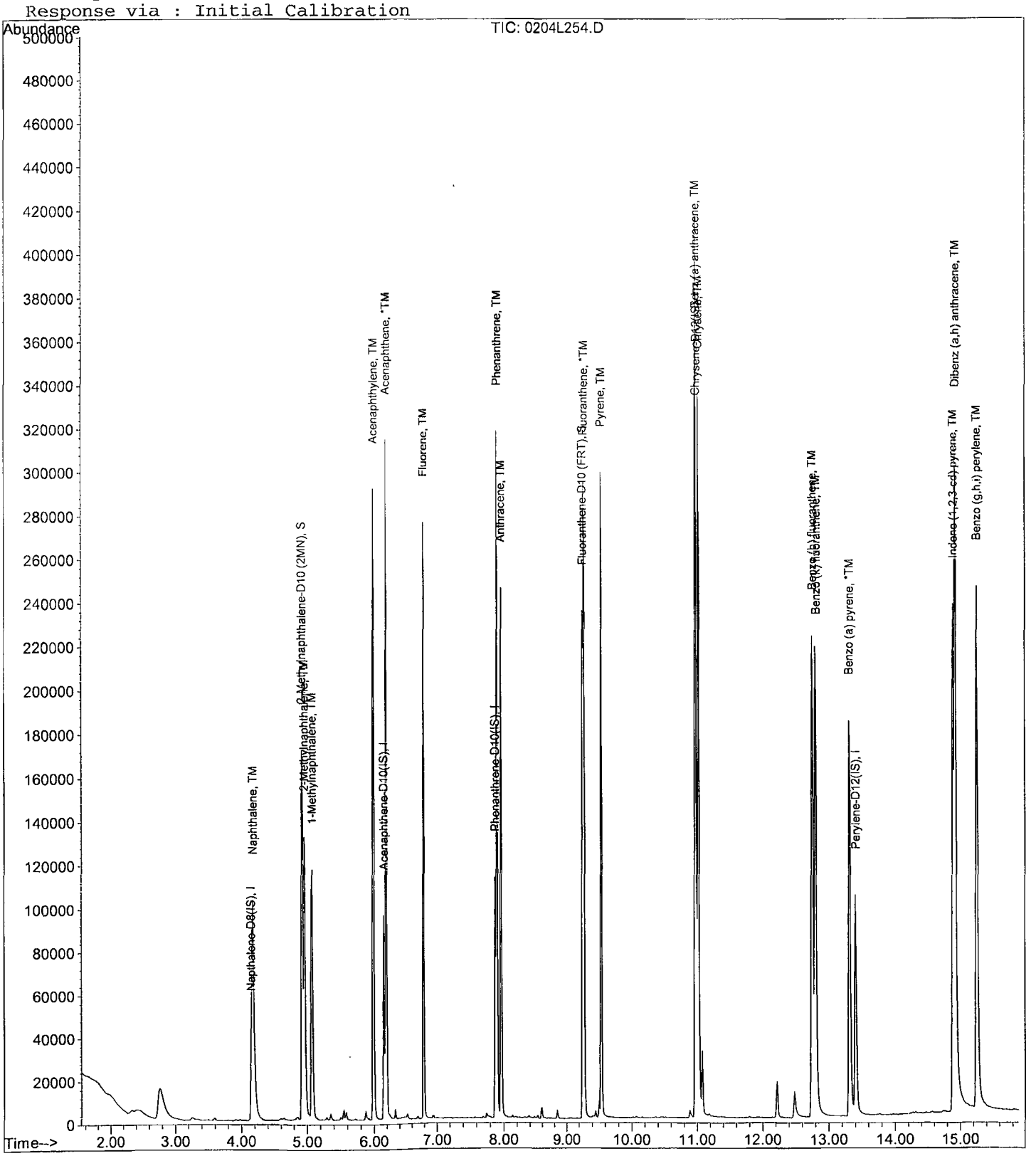
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L254.D Vial: 54
Acq On : 11 Mar 20 10:36 Operator: MA
Sample : 200306A LCSD-2 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Mar 11 12:21 2020 Quant Results File: L0204.RES

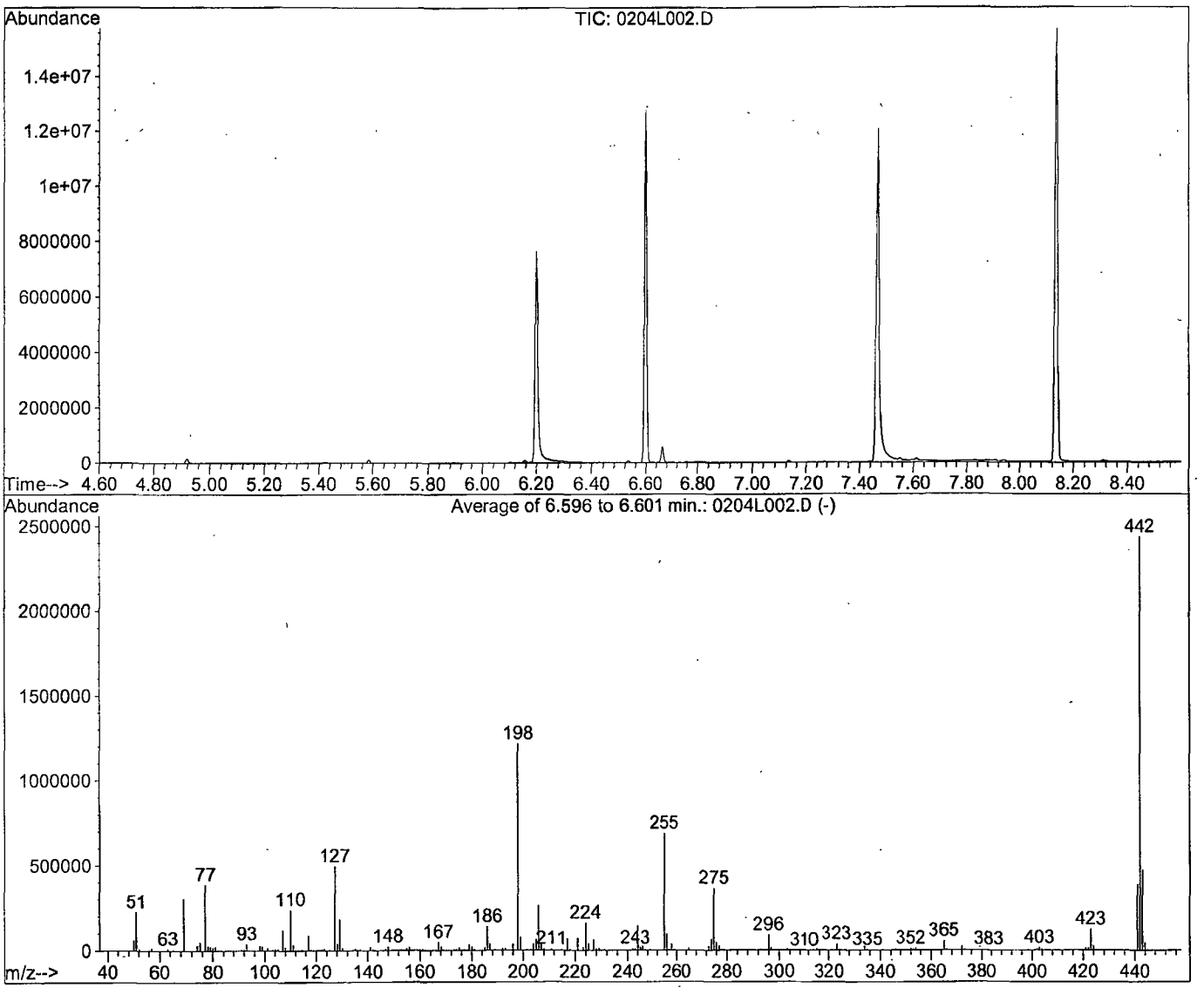
Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration



DFTPP

Data File : M:\LINUS\DATA\L200204\0204L002.D Vial: 2
Acq On : 4 Feb 20 9:32 Operator: MA
Sample : SV Tune 10/01/19 Inst : Linus
Misc : Multiplr: 1.00

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270



AutoFind: Scans 1611, 1612, 1613; Background Corrected with Scan 1602

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	18.6	226705	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.4	1215	PASS
127	198	10	80	40.9	497237	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	1216619	PASS
199	198	5	9	6.3	77030	PASS
275	198	10	60	30.0	364907	PASS
365	198	1	100	4.7	56864	PASS
441	442	0.01	24	15.8	386027	PASS
442	198	50	500	200.3	2437461	PASS
443	442	15	24	19.3	470891	PASS

Data File Name:	**0204L002.D**
Data File Path:	**M:\LINUS\DATA\L200204**
Operator:	**MA**
Date Acquired:	**4 Feb 20 9:32**
Method File:	**DFTPP2.M**
Sample Name:	**SV Tune 10/01/19**
Vial Number:	**2**
Instrument Name:	**Linus**

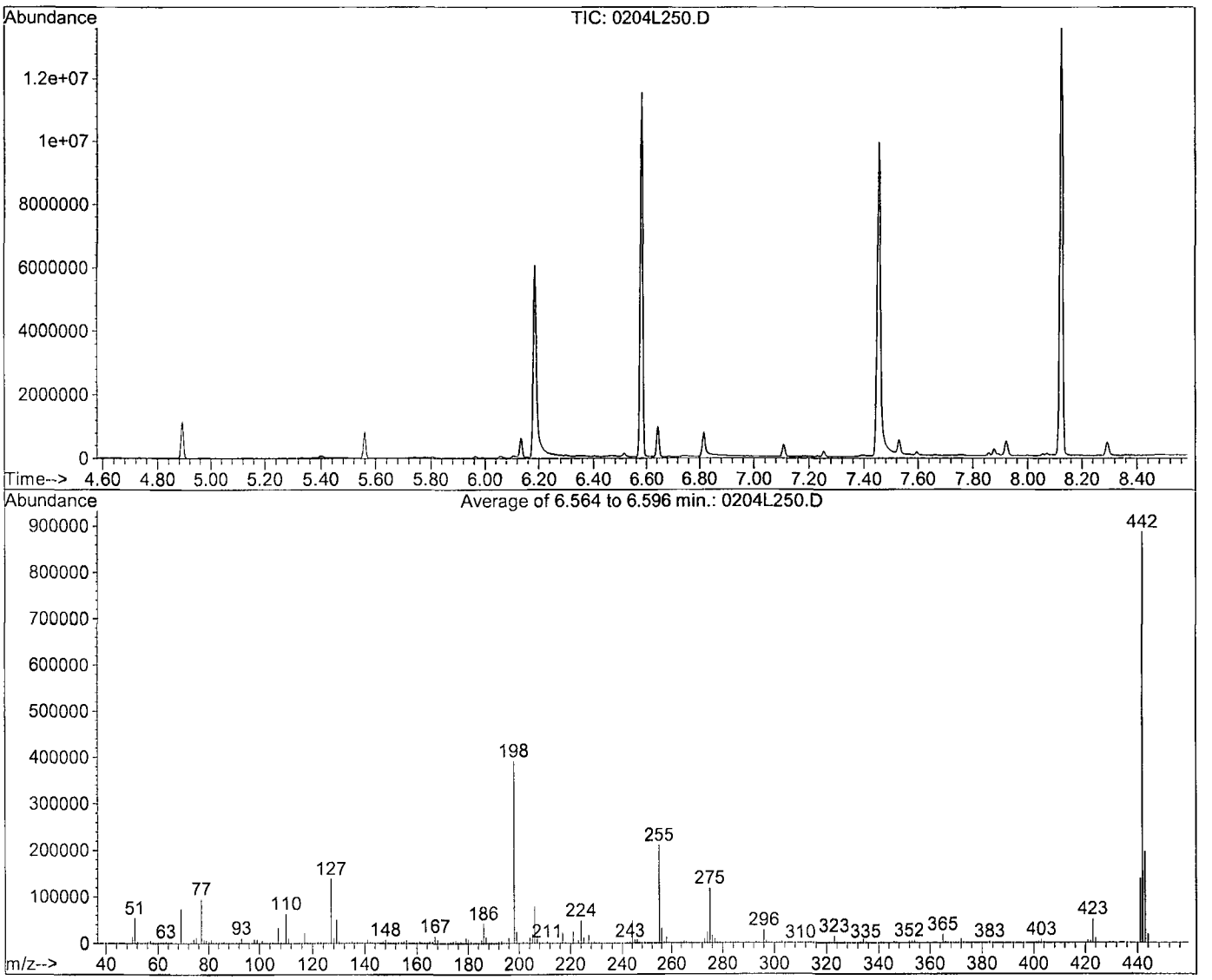
#	Name	Ret Time	Target Response
1)	DDT	8.16	112940000
2)	DDD	7.91	651825
3)	DDE	7.63	587422

Breakdown **1.09**

Data File : M:\LINUS\DATA\L200204\0204L250.D
Acq On : 11 Mar 20 9:14
Sample : SV TUNE 10/01/19
Misc :

Vial: 50
Operator: MA
Inst : Linus
Multiplr: 1.00

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270



Spectrum Information: Average of 6.564 to 6.596 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	13.6	53194	PASS
68	69	0.00	2	0.0	15	PASS
70	69	0.00	2	1.3	971	PASS
127	198	10	80	35.3	138498	PASS
197	198	0.00	2	0.0	22	PASS
198	198	100	100	100.0	392090	PASS
199	198	5	9	6.2	24280	PASS
275	198	10	60	30.1	117832	PASS
365	198	1	100	4.5	17795	PASS
441	442	0.01	24	15.7	139324	PASS
442	198	50	500	226.4	887597	PASS
443	442	15	24	22.0	195451	PASS

Data File Name:	**0204L250.D**
Data File Path:	**M:\LINUS\DATA\L200204**
Operator:	**MA**
Date Acquired:	**11 Mar 2020 09:14**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/01/19**
Vial Number:	**50**
Instrument Name:	**Linus**

#	Name	Ret Time	Target Response
1)	DDT	8.16	99430800
2)	DDD	7.88	1645320
3)	DDE	7.62	680540

Breakdown **2.29**

Organic Extraction Worksheet

Method	Continuous Liquid/Liquid SVOC 3520C	Extraction Set	200306A	Extraction Method	LIQ003	Units	mL

Spiked ID 1	8270T Spike 1-29-20 1-29-21		Surrogate ID 1	8270 Surrogate 11-19-19 11-19-20	
Spiked ID 2	Sim Spike 12-19-19 11-13-20		Surrogate ID 2	SIM Surrogate 12-17-19 12-17-20	
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	03/06/20 11:00	
Spiked ID 8			Ext. End Time:	03/07/20 7:30	
			GC Requires Extract By:		

pH1	2	03/06/20 8:00	Water Bath Temp 1 °C	75/74.9 E-WB6 °
pH2	14	03/07/20 11:00	Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: DL **Date** 03/06/20 **Witnessed By:** KY **Date** 03/06/20

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	200306A Blk				1,0.050	1,2	800	1	2/1	03/06/20 7:50	
						equip	E-HP51 E-WB6				
2	200306A LCS-1		1	1	1	1	800	1	2/1	03/06/20 7:50	
						equip	E-HP50 E-WB6				
3	200306A LCS-2		0.125	2	0.050	2	800	1	2/1	03/06/20 7:50	
						equip	E-HP48 E-WB6				
4	200306A LCSD-1		1	1	1	1	800	1	2/1	03/06/20 7:50	
						equip	E-HP49 E-WB6				
5	200306A LCSD-2		0.125	2	0.050	2	800	1	2/1	03/06/20 7:50	
						equip	E-HP47 E-WB6				
6	BA07942	BA07942W20			1,0.050	1,2	800	1	2/1	03/06/20 7:50	91585
						equip	E-HP25 E-WB6				
7	BA07944	BA07944W19			1,0.050	1,2	800	1	2/1	03/06/20 7:50	91585
						equip	E-HP26 E-WB6				
8	BA07946	BA07946W10			1,0.050	1,2	800	1	2/1	03/06/20 7:50	91585
						equip	E-HP27 E-WB6				
9	BA07947	BA07947W10			1,0.050	1,2	800	1	2/1	03/06/20 7:50	91585
						equip	E-HP28 E-WB6				

Solvent and Lot#	
PH Strips	HC998032
Dichloromethane (DCM)	59289
1+1 H2SO4	2-26-20
10N NaOH	3-2-20
Filter Paper	400171
Na2SO4	2019020631

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	MA
Date	3/9/20
Time	4:00 pm
Refrigerator	GC-C

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL
Concentration	DL

Modified	03/10/20 8:48:58 AM

Reviewed By: KY **Date** 03/10/20

Name of Final Standard: **SIM Curve**
Prep Date: 02/03/20
Exp Date: 08/10/20
Prep'd By (Initials): MA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
1.0 ug/mL SIM	APPL	1.0 ug/mL SIM	1.0 ug/mL	02/03/20	08/10/20	10 uL	100uL	MC 59130 90uL	0 1 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	10/28/19	10/28/20	2 uL	"	"	2.5ug/mL
1.0 ug/mL SIM	APPL	1.0 ug/mL SIM	1.0 ug/mL	02/03/20	08/10/20	20 uL	100uL	MC 59130 80uL	0.2 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	10/28/19	10/28/20	2 uL	"	"	2.5ug/mL
5.0 ug/mL SIM	APPL	5.0 ug/mL SIM	5.0 ug/mL	02/03/20	08/10/20	10 uL	100uL	MC 59130 90uL	0.5 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	10/28/19	10/28/20	2 uL	"	"	2.5ug/mL
5.0 ug/mL SIM	APPL	5.0 ug/mL SIM	5.0 ug/mL	02/03/20	08/10/20	20 uL	100uL	MC 59130 80 uL	1.0 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	10/28/19	10/28/20	2 uL	"	"	2.5ug/mL
SIM STOCK	APPL	PAH SIM STOCK	200 ug/mL	08/10/19	08/10/20	5 uL	200uL	MC 59130 190 uL	5.0 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	12/17/19	12/17/20	5 uL	"	"	2.5ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	10/28/19	10/28/20	4 uL	"	"	2.5ug/mL
SIM STOCK	APPL	PAH SIM STOCK	200 ug/mL	08/10/19	08/10/20	5 uL	100 uL	MC 59130 80 uL	10 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	12/17/19	12/17/20	5 uL	"	"	5 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	10/28/19	10/28/20	2 uL	"	"	2.5ug/mL
SIM STOCK	APPL	PAH SIM STOCK	200 ug/mL	08/10/19	08/10/20	25 uL	100uL	MC 59130 50 uL	50 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	12/17/19	12/17/20	25 uL	"	"	25 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	10/28/19	10/28/20	2 uL	"	"	2.5ug/mL
SIM STOCK	APPL	PAH SIM STOCK	200 ug/mL	08/10/19	08/10/20	50 uL	100uL	na	100 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	12/17/19	12/17/20	50 uL	"	"	50 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	10/28/19	10/28/20	2 uL	"	"	2.5ug/mL

Name of Final Standard: **8270 PAH SIM Second Source**
Prep Date: 02/03/20
Exp Date: 10/28/20
Prep'd By (Initials): MA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
PAH SIM SS Stock	Phenova	AL0-130490	200 ug/mL	CL13117-40623. Open 7/24/19	12/31/22	5 uL	200uL	MC 59130 195uL	5 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	10/28/19	10/28/20	4 uL	"	"	2.5ug/mL

Name of Final Standard	**PAH SIM Stock (Ampule)**
Prep Date	**08/10/19**
Exp Date	**08/10/20**

Prep'd By (I **MA**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Custom PAH SIM Mix	Phenova	ALO-130490	200 ug/mL	**CL13121-41102**	**08/10/20**	1000 uL	1mL	**NA**	200ug/mL

Name of Final Standard	**SIM Surrogate**	**Prep'd By (Initials)**	**MA**
Prep Date	**12/17/19**		
Exp Date	**12/17/20**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Sim Surrogate Deuterated	Restek	33913	2000 ug/mL	**A0149554-41363,41364, 41365,41366**	**04/30/25**	2500 uL	50 mL	**Acetone #0231086**	100 ug/mL

Name of Final Standard	**8270 SIM PAH Internal Standard**
Prep Date	**10/28/19**
Exp Date	**10/28/20**

Prep'd By (Initials) **MA**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
SV Internal Standard	Restek	31206	2000 ug/mL	**A0151843-49414**	**07/35/25**	625uL	10mL	**MC 59130**	125 ug/mL

Name of Final Standard	**SIM Spike**
Prep Date	**12/19/19**
Exp Date	**11/31/20**

Prep'd By (Initials) **GA**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Custom PAH Sim Mix	Phenova	AL0-130490	200 ug/mL	**CL13121- 41222 41223 41256 41257 41258 41259**	**11/13/20 12/31/22**	5 mL	25 mL	**Acetone 0231086**	40 ug/mL

Injection Log

Directory: M:\LINUS\DATA\L200204\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	0204L002.D	1	SV Tune 10/01/19		4 Feb 20 9:32
2	3	0204L003.D	1	0.1 SIM 02/03/20		4 Feb 20 9:48
3	4	0204L004.D	1	0.2 SIM 02/03/20		4 Feb 20 10:09
4	5	0204L005.D	1	0.5 SIM 02/03/20		4 Feb 20 10:31
5	6	0204L006.D	1	1 SIM 02/03/20		4 Feb 20 10:53
6	7	0204L007.D	1	5 SIM 02/03/20		4 Feb 20 11:15
7	8	0204L008.D	1	10 SIM 02/03/20		4 Feb 20 11:37
8	9	0204L009.D	1	50 SIM 02/03/20		4 Feb 20 11:59
9	10	0204L010.D	1	100 SIM 02/03/20		4 Feb 20 12:21
10	11	0204L011.D	1	SS SIM 02/03/20		4 Feb 20 13:21
11	50	0204L250.D	1	SV TUNE 10/01/19		11 Mar 20 9:14
12	51	0204L251.D	1	5 SIM 02/03/20 (2)		11 Mar 20 9:30
13	53	0204L253.D	1.25	200306A LCS-2 1/800		11 Mar 20 10:14
14	54	0204L254.D	1.25	200306A LCSD-2 1/800		11 Mar 20 10:36
15	56	0204L256.D	1.25	BA07942W20 1/800		11 Mar 20 11:20
16	57	0204L257.D	1.25	BA07944W19 1/800		11 Mar 20 11:42
17	58	0204L258.D	1.25	BA07946W10 1/800		11 Mar 20 12:04
18	59	0204L259.D	1.25	BA07947W10 1/800		11 Mar 20 12:26
19	60	0204L260.D	1.25	200306A BLK 1/800		11 Mar 20 14:41
20	61	0204L261.D	1	5 SIM 02/03/20 (2)		11 Mar 20 15:03

ORGANICS
Calibration Data

2MEE
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/22/20
Matrix: Instrument: Yoda
Initials:

		Compound	0122Y003.D	0122Y004.D	0122Y005.D	0122Y006 D	0122Y007.D	0122Y008 D	0122Y009.D	0122Y010 D			Avg	%RSD	Type	r^2	Q	MRF
1	I	1,4-dichlorobenzene-D4(IS)																
2	TM	2-(2-Methoxyethoxy)ethanol	0.1821	0.2585	0.2387	0.2203	0.2137	0.2203	0.2856	0.2603			0.23	14	TM			
3	I	Napthalene-D8(IS)																
4	I	Acenaphthene-D10(IS)																
5	I	Phenanthrene-D10(IS)																
6	I	Chrysene-D12(IS)																
7	I	Perylene-D12(IS)																
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Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y003.D Vial: 3
Acq On : 22 Jan 20 15:46 Operator: MA,SS
Sample : 50ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.15	152	171017	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.56	136	665562	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.59	164	409494	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.31	188	788135	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.39	240	679346	40.00000	ppb	0.00
7) Perylene-D12(IS)	15.12	264	699262	40.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.33	45	38926	38.75395	ppb	99

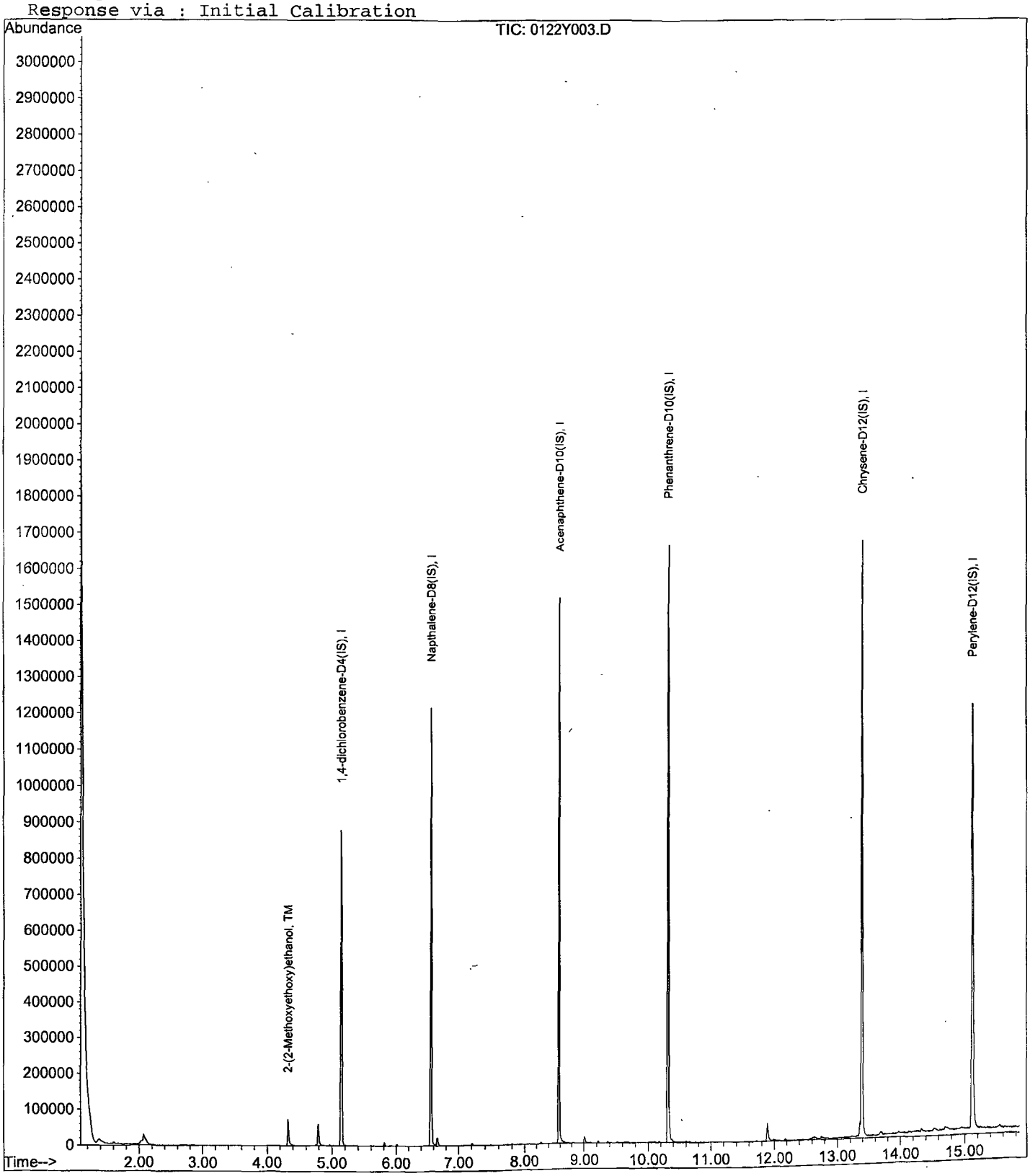
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y003.D Vial: 3
Acq On : 22 Jan 20 15:46 Operator: MA,SS
Sample : 50ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y004.D Vial: 4
Acq On : 22 Jan 20 16:10 Operator: MA,SS
Sample : 100ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.15	152	158778	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.57	136	642353	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.58	164	393654	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.31	188	759584	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.39	240	664524	40.00000	ppb	0.00
7) Perylene-D12(IS)	15.12	264	676233	40.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.32	45	102613	110.03417	ppb	98

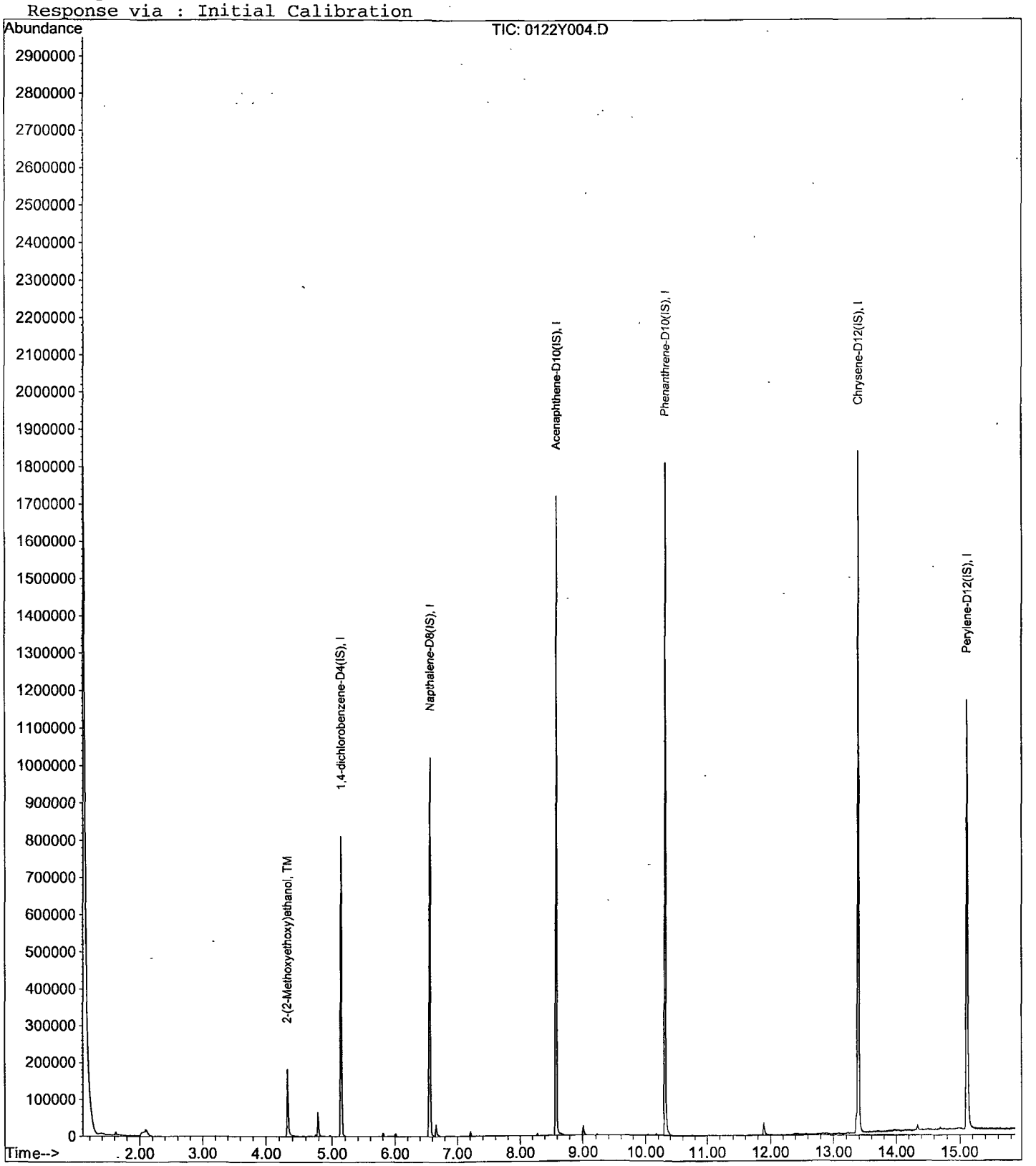
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y004.D Vial: 4
Acq On : 22 Jan 20 16:10 Operator: MA,SS
Sample : 100ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y005.D Vial: 5
Acq On : 22 Jan 20 16:33 Operator: MA,SS
Sample : 200ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.15	152	155385	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.57	136	636024	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.58	164	388934	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.31	188	754620	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.39	240	621602	40.00000	ppb	0.00
7) Perylene-D12(IS)	15.12	264	626915	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.33	45	185455	203.20994	ppb	100

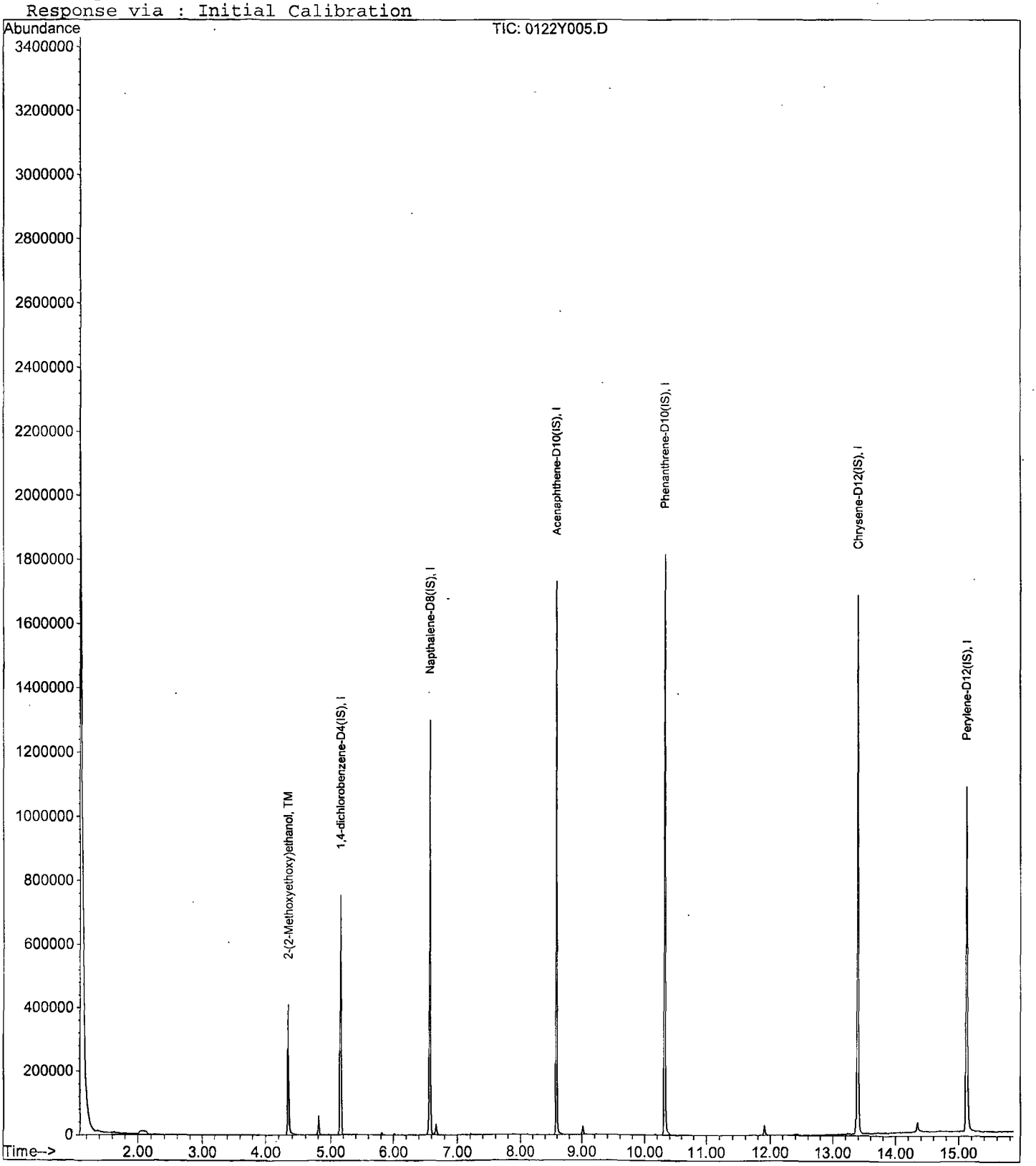
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y005.D Vial: 5
Acq On : 22 Jan 20 16:33 Operator: MA,SS
Sample : 200ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y006.D Vial: 6
Acq On : 22 Jan 20 16:57 Operator: MA,SS
Sample : 400ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.15	152	156027	40.00000 ppb	0.00
3) Napthalene-D8(IS)	6.57	136	648446	40.00000 ppb	0.00
4) Acenaphthene-D10(IS)	8.58	164	399790	40.00000 ppb	0.00
5) Phenanthrene-D10(IS)	10.31	188	767514	40.00000 ppb	0.00
6) Chrysene-D12(IS)	13.39	240	672840	40.00000 ppb	0.00
7) Perylene-D12(IS)	15.12	264	695421	40.00000 ppb	0.00

System Monitoring Compounds

Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.34	45	343734	375.09237 ppb	98

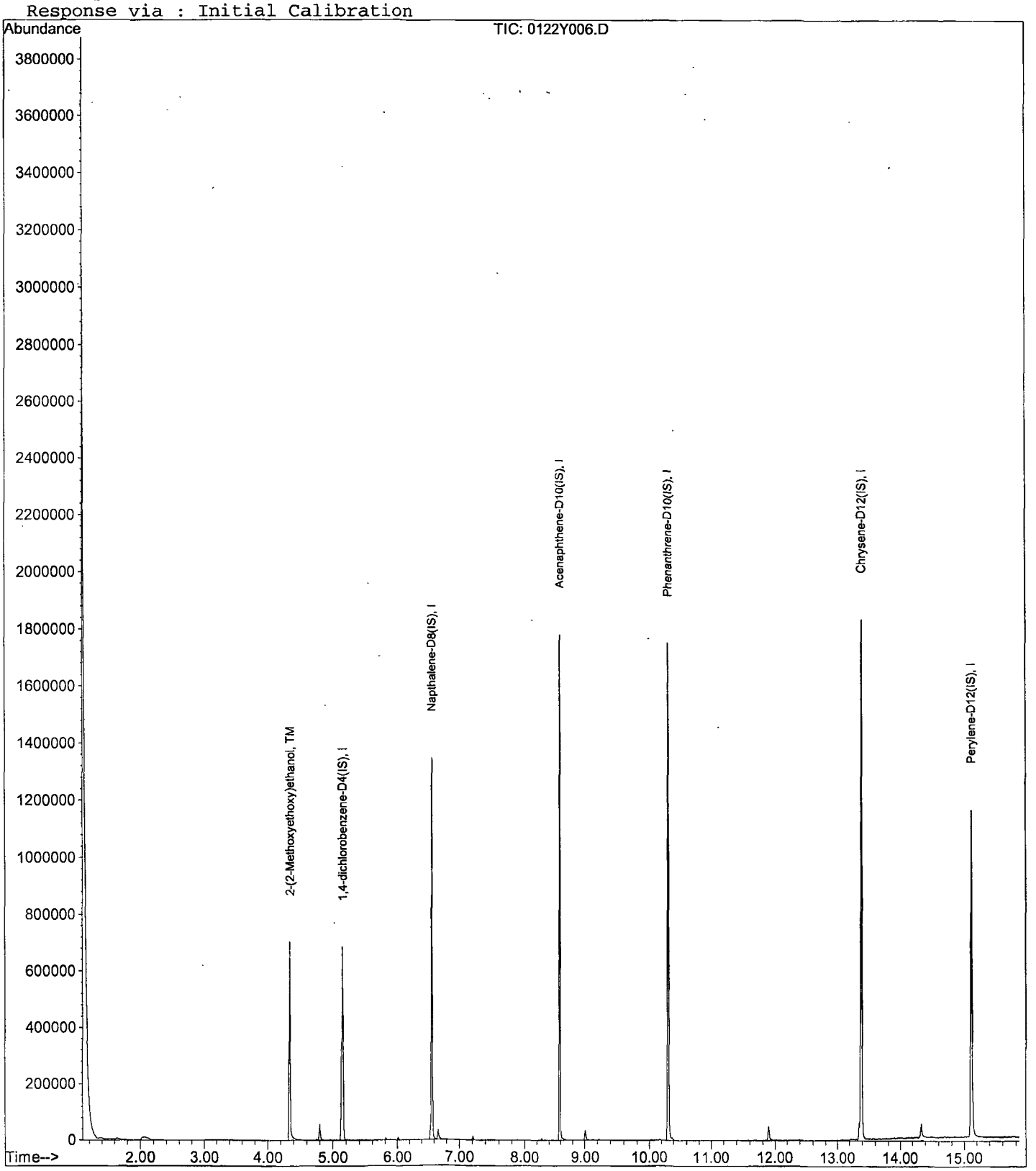
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y006.D Vial: 6
Acq On : 22 Jan 20 16:57 Operator: MA,SS
Sample : 400ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y007.D Vial: 7
Acq On : 22 Jan 20 17:21 Operator: MA,SS
Sample : 500ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.15	152	160036	40.00000 ppb	0.00
3) Napthalene-D8(IS)	6.57	136	657892	40.00000 ppb	0.00
4) Acenaphthene-D10(IS)	8.59	164	410790	40.00000 ppb	0.00
5) Phenanthrene-D10(IS)	10.31	188	788159	40.00000 ppb	0.00
6) Chrysene-D12(IS)	13.39	240	699023	40.00000 ppb	0.00
7) Perylene-D12(IS)	15.12	264	751183	40.00000 ppb	0.00

System Monitoring Compounds

Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.34	45	427461	454.77262 ppb	100

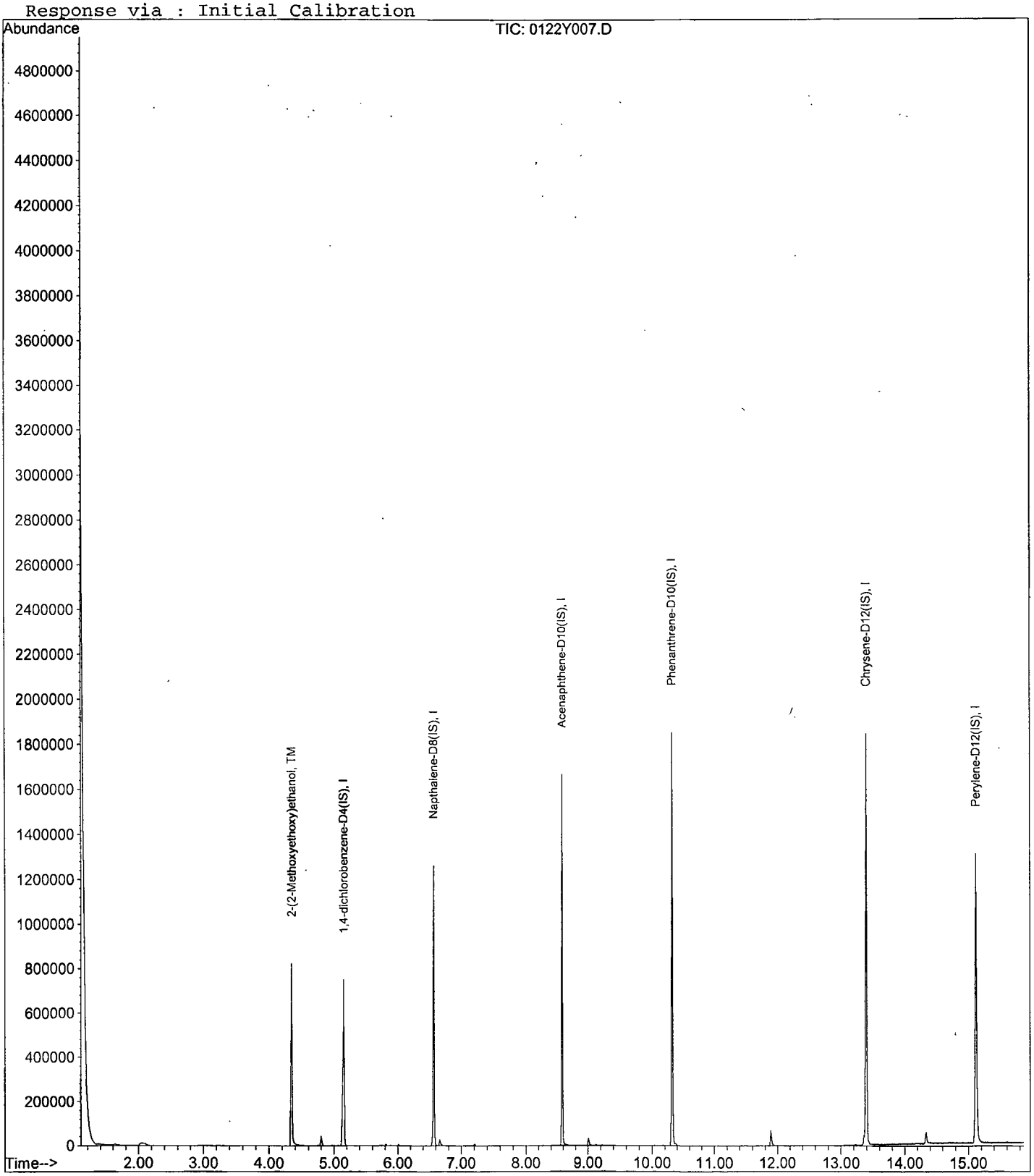
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y007.D Vial: 7
Acq On : 22 Jan 20 17:21 Operator: MA,SS
Sample : 500ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y008.D Vial: 8
Acq On : 22 Jan 20 17:45 Operator: MA,SS
Sample : 600ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.15	152	156507	40.00000 ppb	0.00
3) Napthalene-D8(IS)	6.57	136	664381	40.00000 ppb	0.00
4) Acenaphthene-D10(IS)	8.59	164	408801	40.00000 ppb	0.00
5) Phenanthrene-D10(IS)	10.31	188	788845	40.00000 ppb	0.00
6) Chrysene-D12(IS)	13.39	240	676569	40.00000 ppb	0.00
7) Perylene-D12(IS)	15.12	264	692003	40.00000 ppb	0.00

System Monitoring Compounds

Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.35	45	517114	562.55893 ppb	99

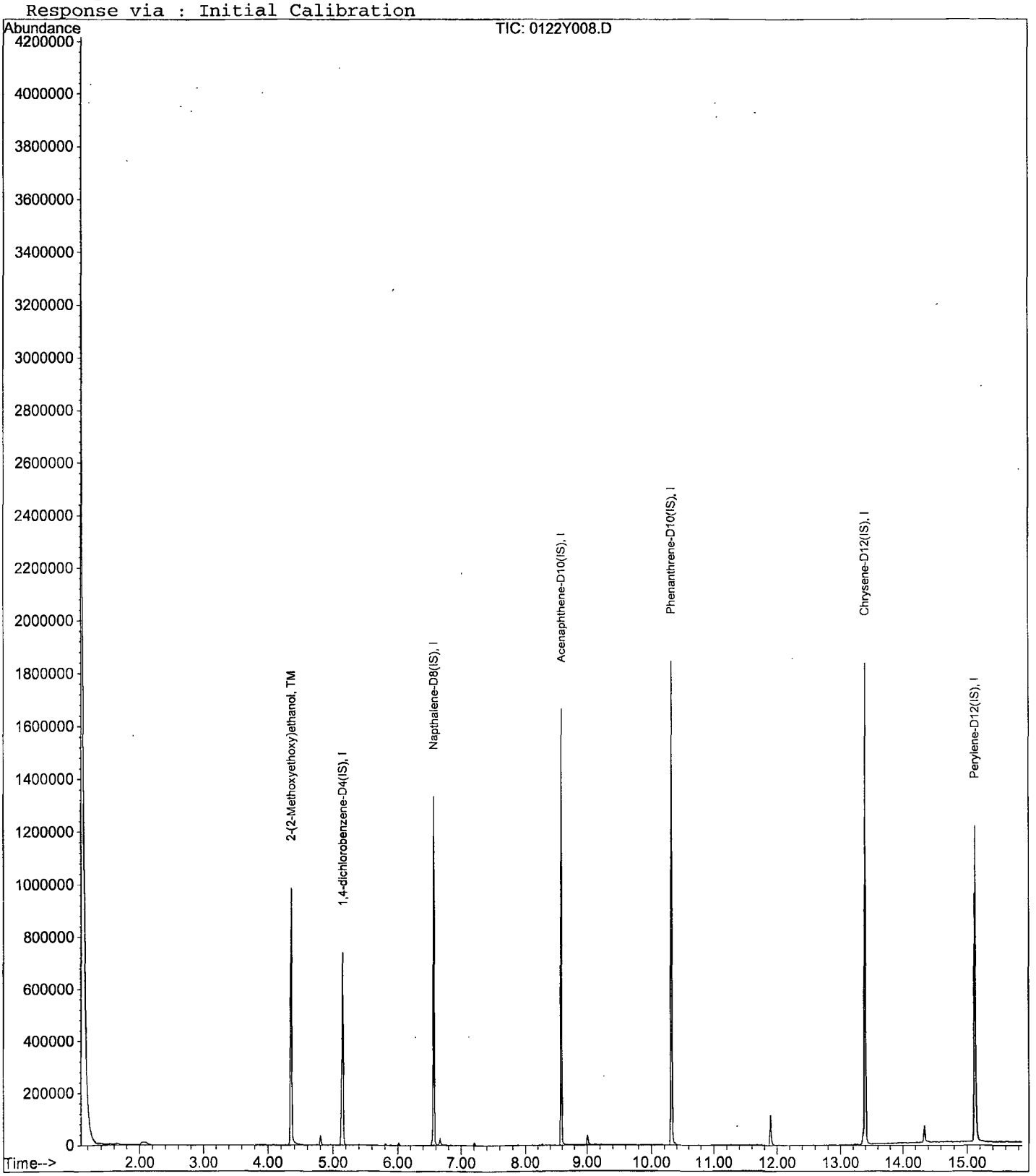
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y008.D Vial: 8
Acq On : 22 Jan 20 17:45 Operator: MA,SS
Sample : 600ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y009.D Vial: 9
Acq On : 22 Jan 20 18:08 Operator: MA,SS
Sample : 800ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.15	152	125205	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.57	136	550099	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.58	164	372511	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.31	188	750924	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.39	240	643830	40.00000	ppb	0.00
7) Perylene-D12(IS)	15.12	264	637032	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.36	45	715213	972.58871	ppb	98

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

Quantitation Report

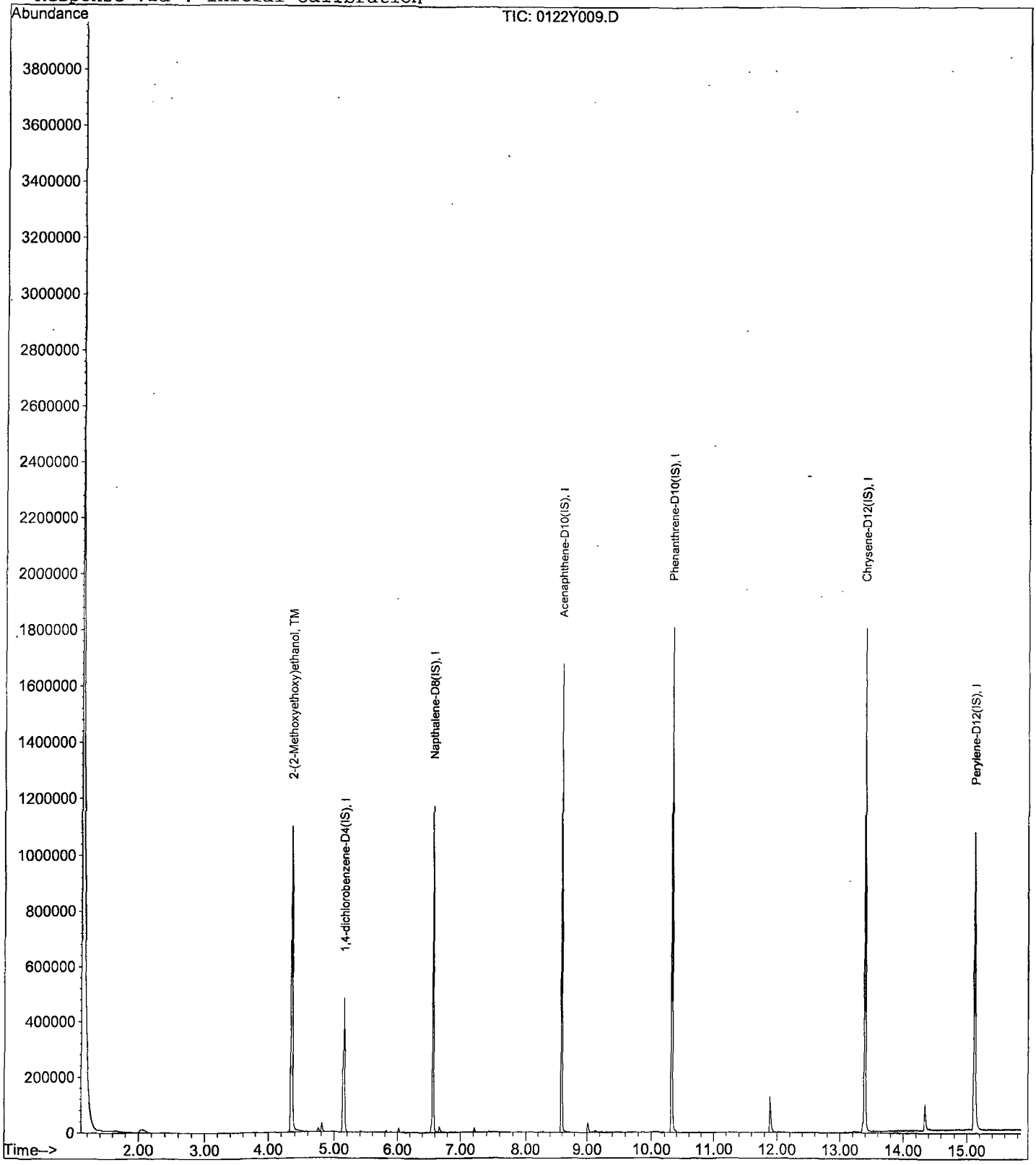
Data File : M:\YODA\DATA\Y200122M\0122Y009.D
Acq On : 22 Jan 20 18:08
Sample : 800ug/ml MEE 01/22/20
Misc : soil

Vial: 9
Operator: MA,SS
Inst : Yoda
Multiplr: 1.00

Quant Time: Jan 23 10:02 2020

Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y010.D Vial: 10
Acq On : 22 Jan 20 18:32 Operator: MA,SS
Sample : 1000ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.15	152	145736	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.57	136	643934	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.58	164	429609	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.31	188	848518	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.39	240	708250	40.00000	ppb	0.00
7) Perylene-D12(IS)	15.12	264	727830	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.36	45	948330	1107.91933	ppb	99

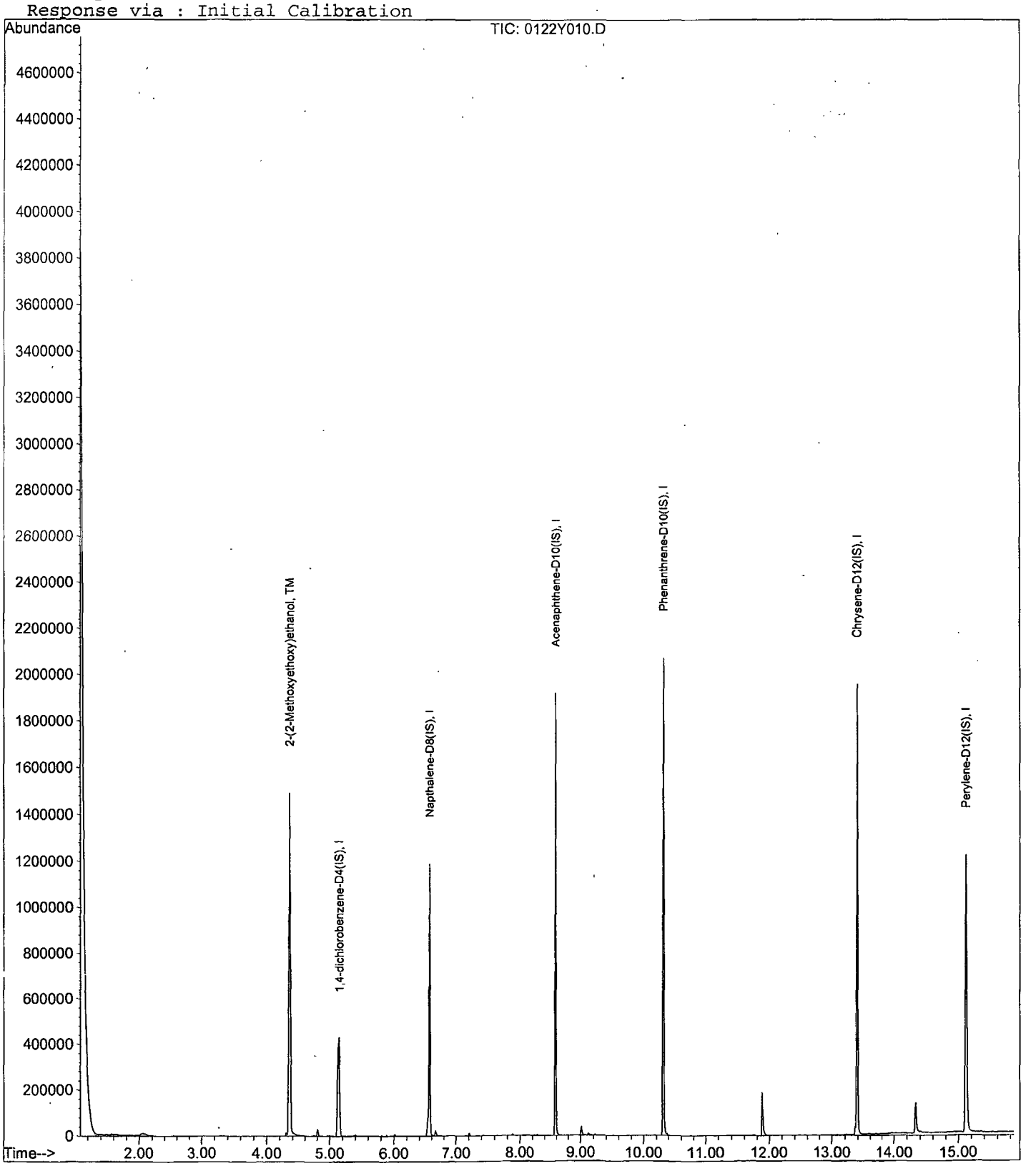
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y010.D Vial: 10
Acq On : 22 Jan 20 18:32 Operator: MA,SS
Sample : 1000ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration



2MEE
EPA 8270

Form 7

Second Source Calibration

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

SDG No:
Date Analyzed: 01/22/20
Instrument: Yoda
Initial Cal. Date: 01/22/20
Data File: 0122Y011.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	2-(2-Methoxyethoxy)ethanol	0.2349	0.2425	3.2	TM	
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
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31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			3.2		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y011.D Vial: 11
Acq On : 22 Jan 20 18:55 Operator: MA,SS
Sample : SS MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 9:55 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 09:54:44 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.15	152	173956	40.00000 ppb	0.00
3) Napthalene-D8(IS)	6.57	136	686273	40.00000 ppb	0.00
4) Acenaphthene-D10(IS)	8.59	164	422630	40.00000 ppb	0.00
5) Phenanthrene-D10(IS)	10.31	188	806716	40.00000 ppb	0.00
6) Chrysene-D12(IS)	13.39	240	723146	40.00000 ppb	0.00
7) Perylene-D12(IS)	0.00	264	0	0.00000 ppb	-14.73

System Monitoring Compounds

Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.33	45	527290	516.09021 ppb	93

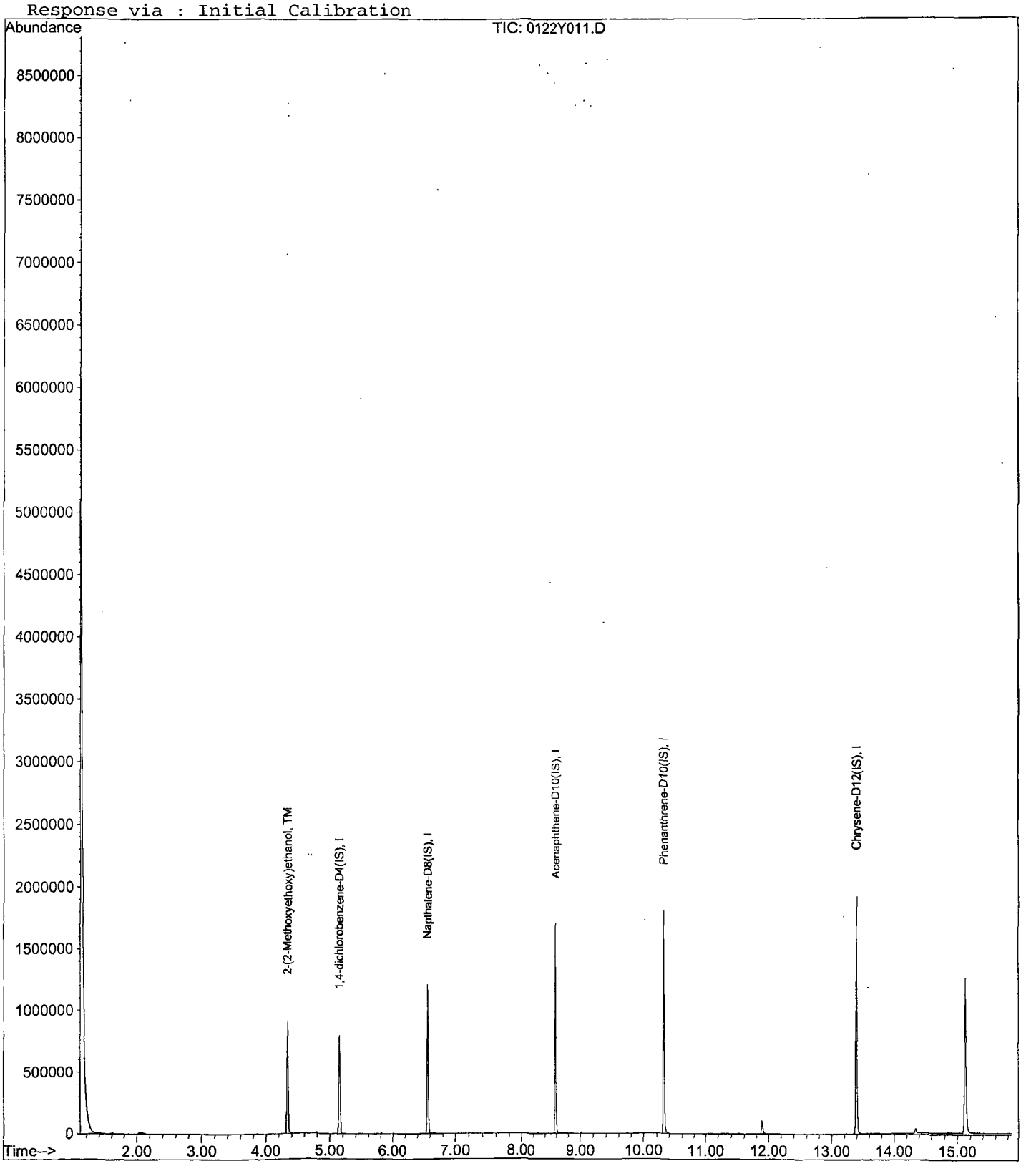
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y011.D Vial: 11
Acq On : 22 Jan 20 18:55 Operator: MA,SS
Sample : SS MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 9:55 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 09:54:44 2020
Response via : Initial Calibration



2MEE
EPA 8270

Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 03/11/20
Instrument: Yoda
Initial Cal. Date: 01/22/20
Data File: 0122Y061.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	2-(2-Methoxyethoxy)ethanol	0.2349	0.2053	13	TM	
3	I	Napthalene-D8(IS)	ISTD			I	
4	I	Acenaphthene-D10(IS)	ISTD			I	
5	I	Phenanthrene-D10(IS)	ISTD			I	
6	I	Chrysene-D12(IS)	ISTD			I	
7	I	Perylene-D12(IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
14							
15							
16							
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29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			13.0		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y061.D Vial: 61
Acq On : 11 Mar 20 12:17 Operator: MA,SS
Sample : 500ug/ml MEE 01/29/20 (2) Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 11 13:19 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Feb 04 07:32:40 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.08	152	146062	40.00	ppb	-0.07
3) Napthalene-D8(IS)	6.53	136	656576	40.00	ppb	-0.04
4) Acenaphthene-D10(IS)	8.55	164	449239	40.00	ppb	-0.04
5) Phenanthrene-D10(IS)	10.27	188	933061	40.00	ppb	-0.04
6) Chrysene-D12(IS)	13.35	240	865781	40.00	ppb	-0.04
7) Perylene-D12(IS)	15.07	264	875278	40.00	ppb	-0.05

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.28	45	374921	437.04	ppb	97

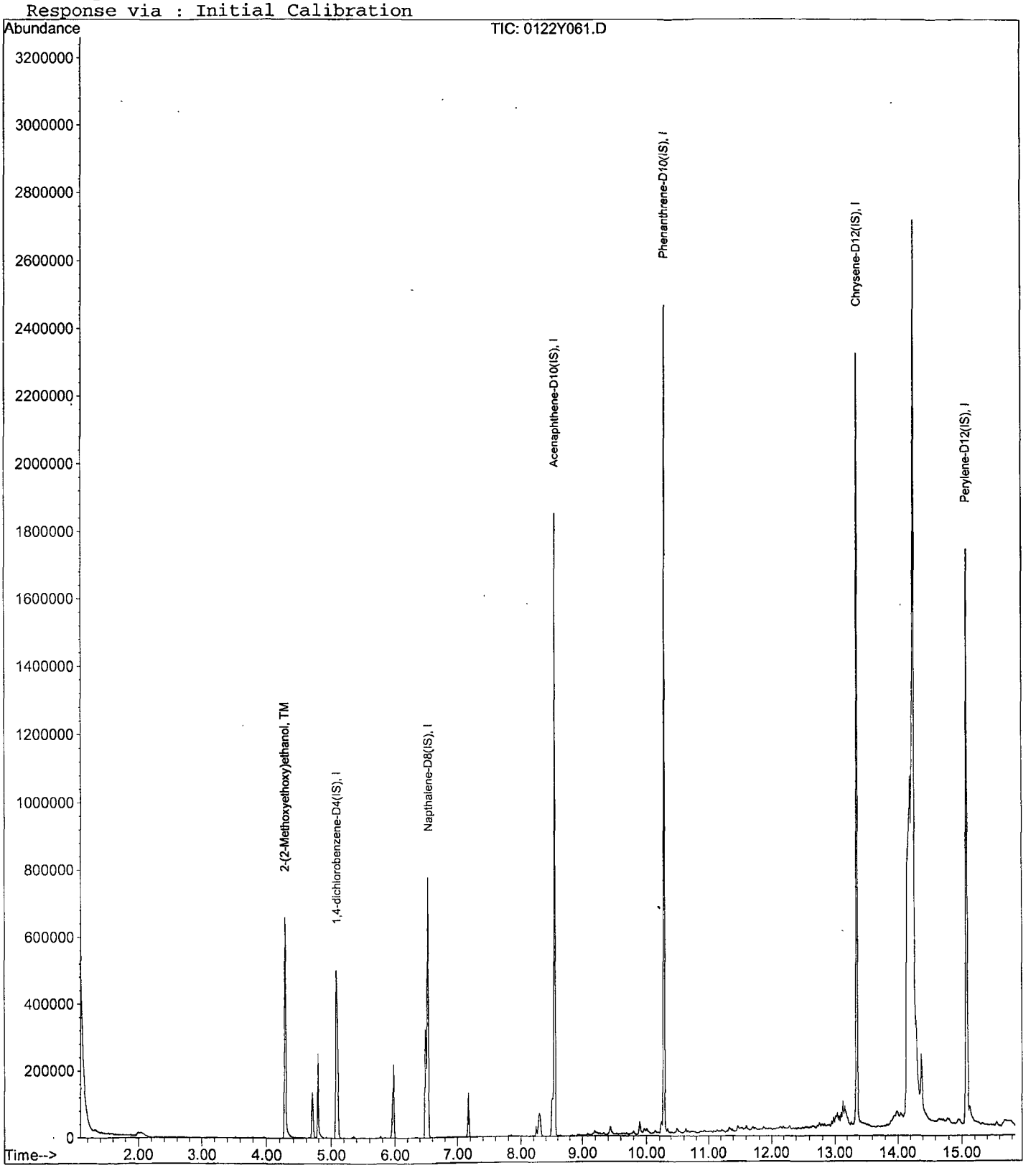
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y061.D Vial: 61
Acq On : 11 Mar 20 12:17 Operator: MA,SS
Sample : 500ug/ml MEE 01/29/20 (2) Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 11 13:19 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Mar 11 17:34:56 2020
Response via : Initial Calibration



2MEE
EPA 8270

Form 7

Ending Continuing Calibration

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

SDG No:
Date Analyzed: 03/11/20
Instrument: Yoda
Initial Cal. Date: 01/22/20
Data File: 0122Y070.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	2-(2-Methoxyethoxy)ethanol	0.2349	0.2621	12	TM	
3	I	Napthalene-D8(IS)	ISTD			I	
4	I	Acenaphthene-D10(IS)	ISTD			I	
5	I	Phenanthrene-D10(IS)	ISTD			I	
6	I	Chrysene-D12(IS)	ISTD			I	
7	I	Perylene-D12(IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
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28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			12.0		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y070.D Vial: 70
Acq On : 11 Mar 20 16:33 Operator: MA,SS
Sample : 500ug/ml MEE 01/29/20 (1) Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 11 17:35 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Mar 11 17:34:56 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.11	152	146912	40.00 ppb	0.00
3) Napthalene-D8(IS)	6.53	136	671591	40.00 ppb	-0.04
4) Acenaphthene-D10(IS)	8.55	164	455457	40.00 ppb	-0.04
5) Phenanthrene-D10(IS)	10.27	188	925579	40.00 ppb	-0.04
6) Chrysene-D12(IS)	13.35	240	795809	40.00 ppb	-0.04
7) Perylene-D12(IS)	15.07	264	755680	40.00 ppb	-0.05
System Monitoring Compounds					
Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.31	45	481344	557.85 ppb	100

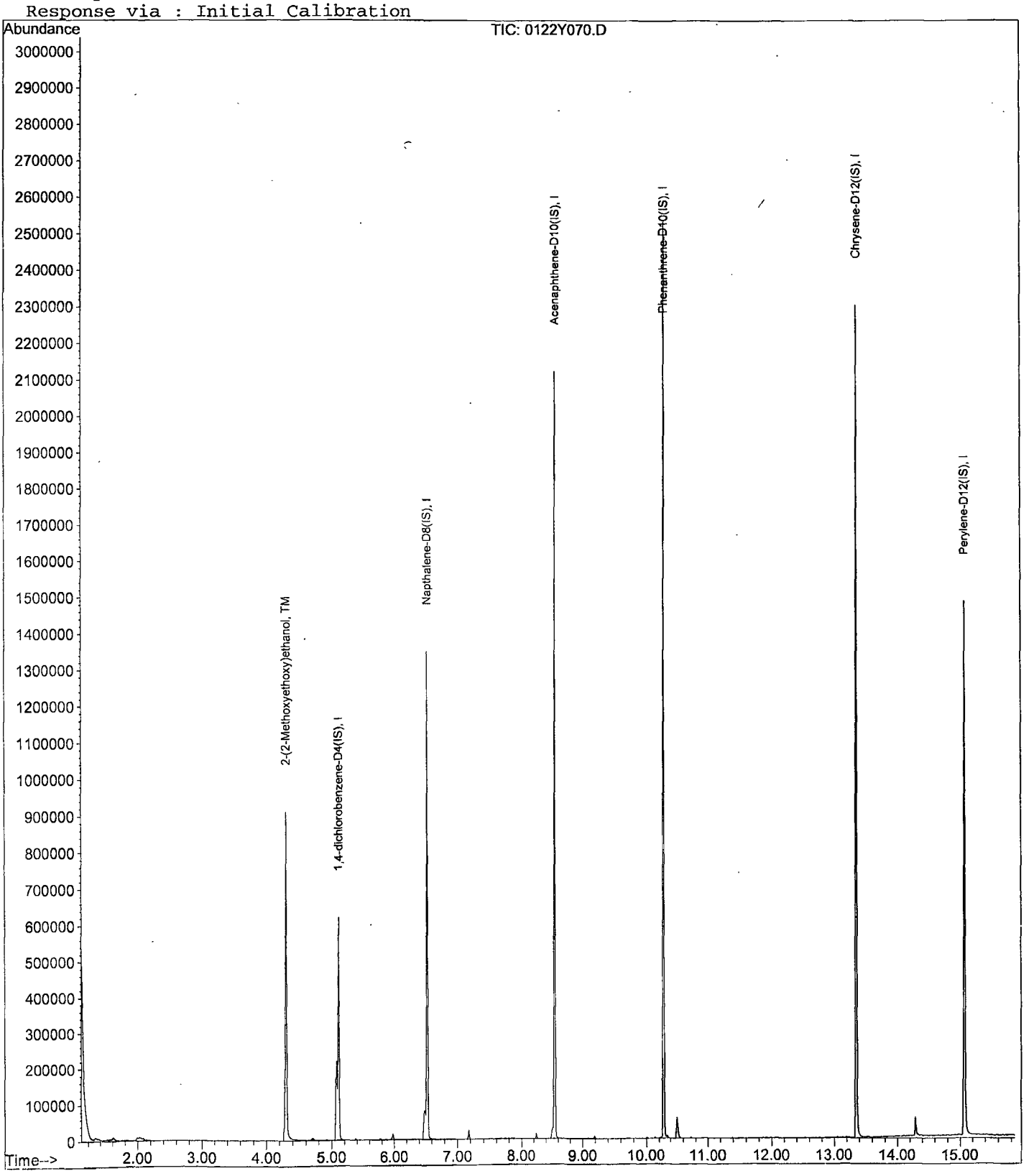
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y070.D Vial: 70
Acq On : 11 Mar 20 16:33 Operator: MA,SS
Sample : 500ug/ml MEE 01/29/20 (1) Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 11 17:35 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Mar 11 17:34:56 2020
Response via : Initial Calibration



ORGANICS
Raw Data

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y065.D Vial: 65
Acq On : 11 Mar 20 14:33 Operator: MA,SS
Sample : BA07942W17 2/500 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 11 15:57 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Mar 11 14:46:52 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.10	152	114049	40.00 ppb	-0.05
3) Napthalene-D8(IS)	6.53	136	498948	40.00 ppb	-0.04
4) Acenaphthene-D10(IS)	8.55	164	329705	40.00 ppb	-0.04
5) Phenanthrene-D10(IS)	10.27	188	710922	40.00 ppb	-0.04
6) Chrysene-D12(IS)	13.35	240	661098	40.00 ppb	-0.04
7) Perylene-D12(IS)	15.07	264	673864	40.00 ppb	-0.05

System Monitoring Compounds

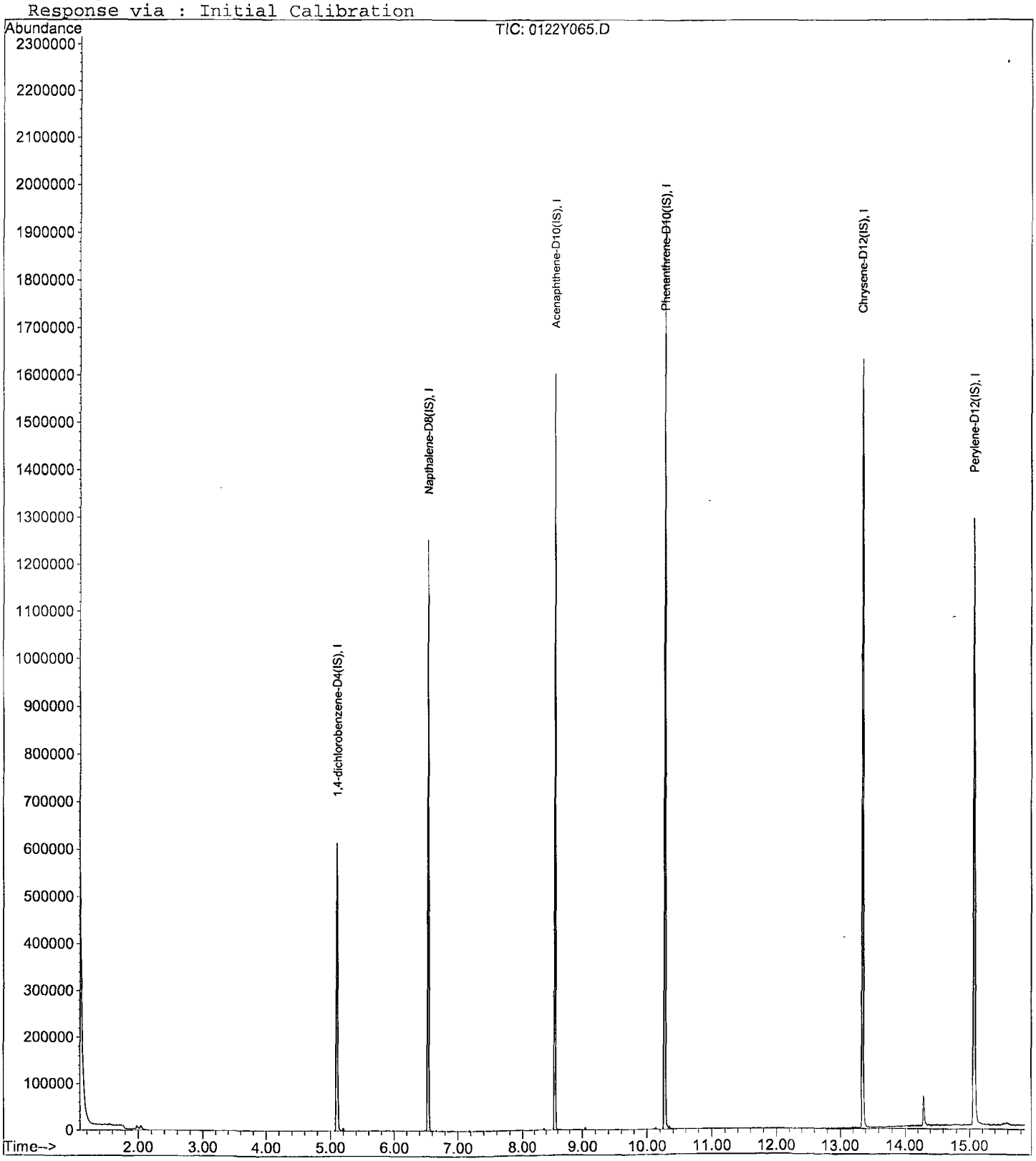
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0122Y065.D YMEE0122.M Thu Mar 12 14:51:16 2020 Page 1

Data File : M:\YODA\DATA\Y200122M\0122Y065.D Vial: 65
Acq On : 11 Mar 20 14:33 Operator: MA,SS
Sample : BA07942W17 2/500 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 11 15:57 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Mar 11 17:34:56 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y066.D Vial: 66
Acq On : 11 Mar 20 14:58 Operator: MA,SS
Sample : BA07944W23 2/500 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 11 15:57 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Mar 11 14:46:52 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.10	152	109120	40.00 ppb	-0.05
3) Napthalene-D8(IS)	6.53	136	486582	40.00 ppb	-0.04
4) Acenaphthene-D10(IS)	8.55	164	335592	40.00 ppb	-0.04
5) Phenanthrene-D10(IS)	10.27	188	744976	40.00 ppb	-0.04
6) Chrysene-D12(IS)	13.35	240	562342	40.00 ppb	-0.04
7) Perylene-D12(IS)	15.07	264	530880	40.00 ppb	-0.05

System Monitoring Compounds

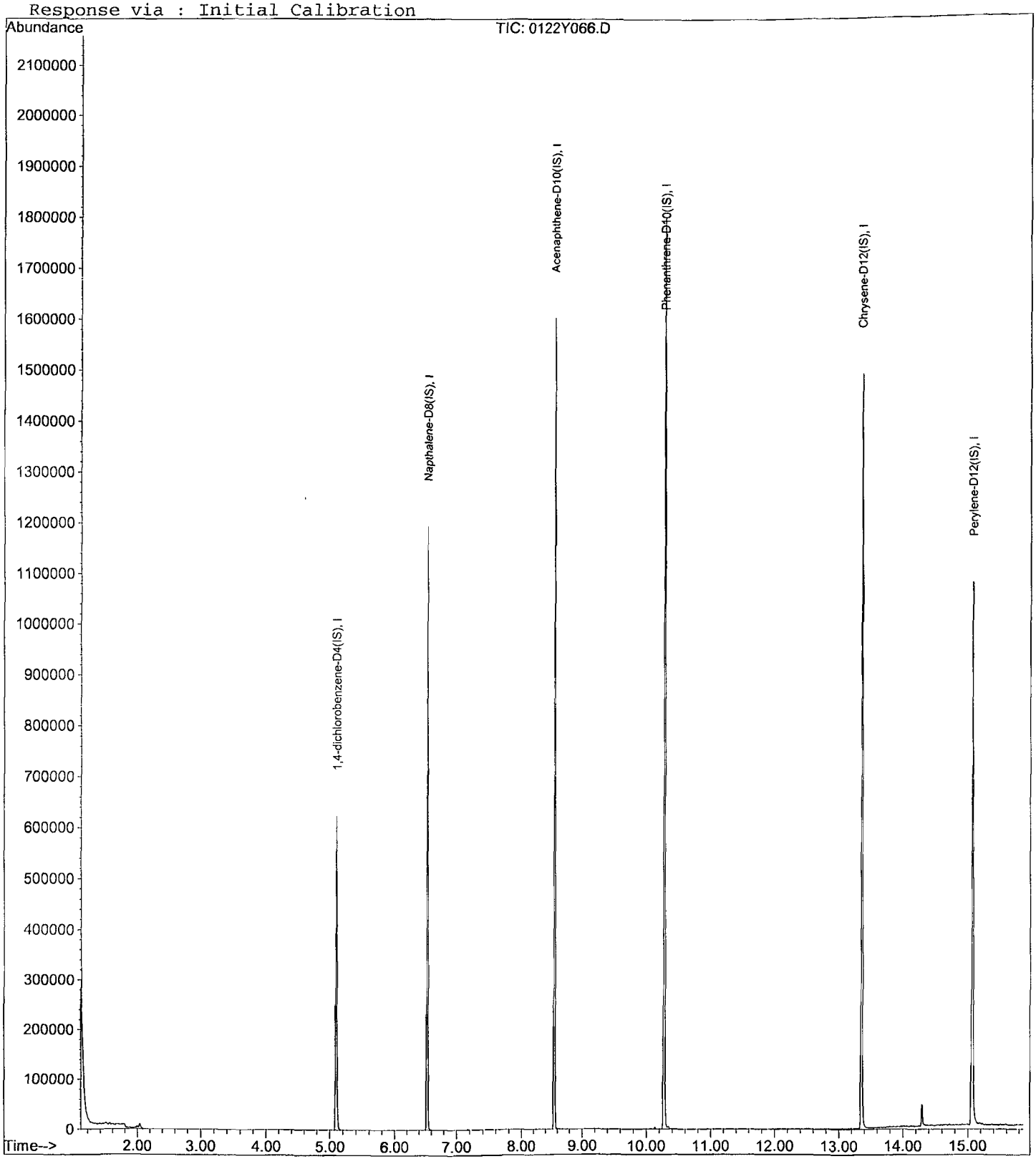
Target Compounds Qvalue

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

Data File : M:\YODA\DATA\Y200122M\0122Y066.D Vial: 66
Acq On : 11 Mar 20 14:58 Operator: MA,SS
Sample : BA07944W23 2/500 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 11 15:57 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Mar 11 17:34:56 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y067.D Vial: 67
Acq On : 11 Mar 20 15:22 Operator: MA,SS
Sample : BA07946W14 2/500 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 11 16:22 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Mar 11 14:46:52 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.10	152	105136	40.00 ppb	-0.05
3) Napthalene-D8(IS)	6.53	136	477589	40.00 ppb	-0.04
4) Acenaphthene-D10(IS)	8.55	164	319310	40.00 ppb	-0.04
5) Phenanthrene-D10(IS)	10.27	188	669789	40.00 ppb	-0.04
6) Chrysene-D12(IS)	13.35	240	478171	40.00 ppb	-0.04
7) Perylene-D12(IS)	15.07	264	449057	40.00 ppb	-0.05

System Monitoring Compounds

Target Compounds Qvalue

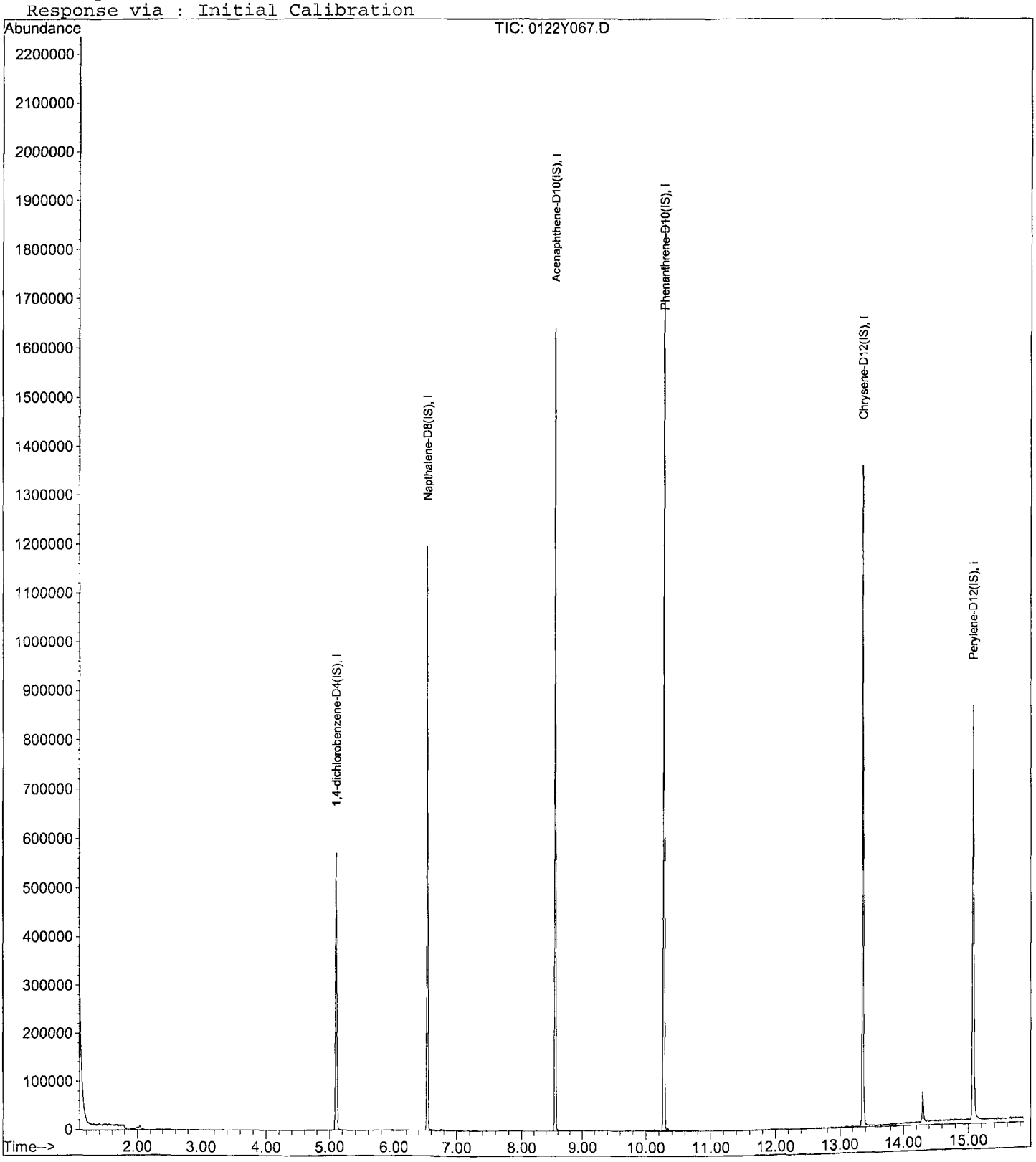
(#) = qualifier out of range (m) = manual integration
0122Y067.D YMEE0122.M Thu Mar 12 14:51:21 2020 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y067.D Vial: 67
Acq On : 11 Mar 20 15:22 Operator: MA,SS
Sample : BA07946W14 2/500 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 11 16:22 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Mar 11 17:34:56 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y068.D Vial: 68
Acq On : 11 Mar 20 15:46 Operator: MA,SS
Sample : BA07947W14 2/500 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 11 17:09 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Mar 11 14:46:52 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.10	152	111146	40.00 ppb	-0.05
3) Napthalene-D8(IS)	6.53	136	507161	40.00 ppb	-0.04
4) Acenaphthene-D10(IS)	8.55	164	344558	40.00 ppb	-0.04
5) Phenanthrene-D10(IS)	10.27	188	740554	40.00 ppb	-0.04
6) Chrysene-D12(IS)	13.35	240	533641	40.00 ppb	-0.04
7) Perylene-D12(IS)	15.07	264	483997	40.00 ppb	-0.05

System Monitoring Compounds

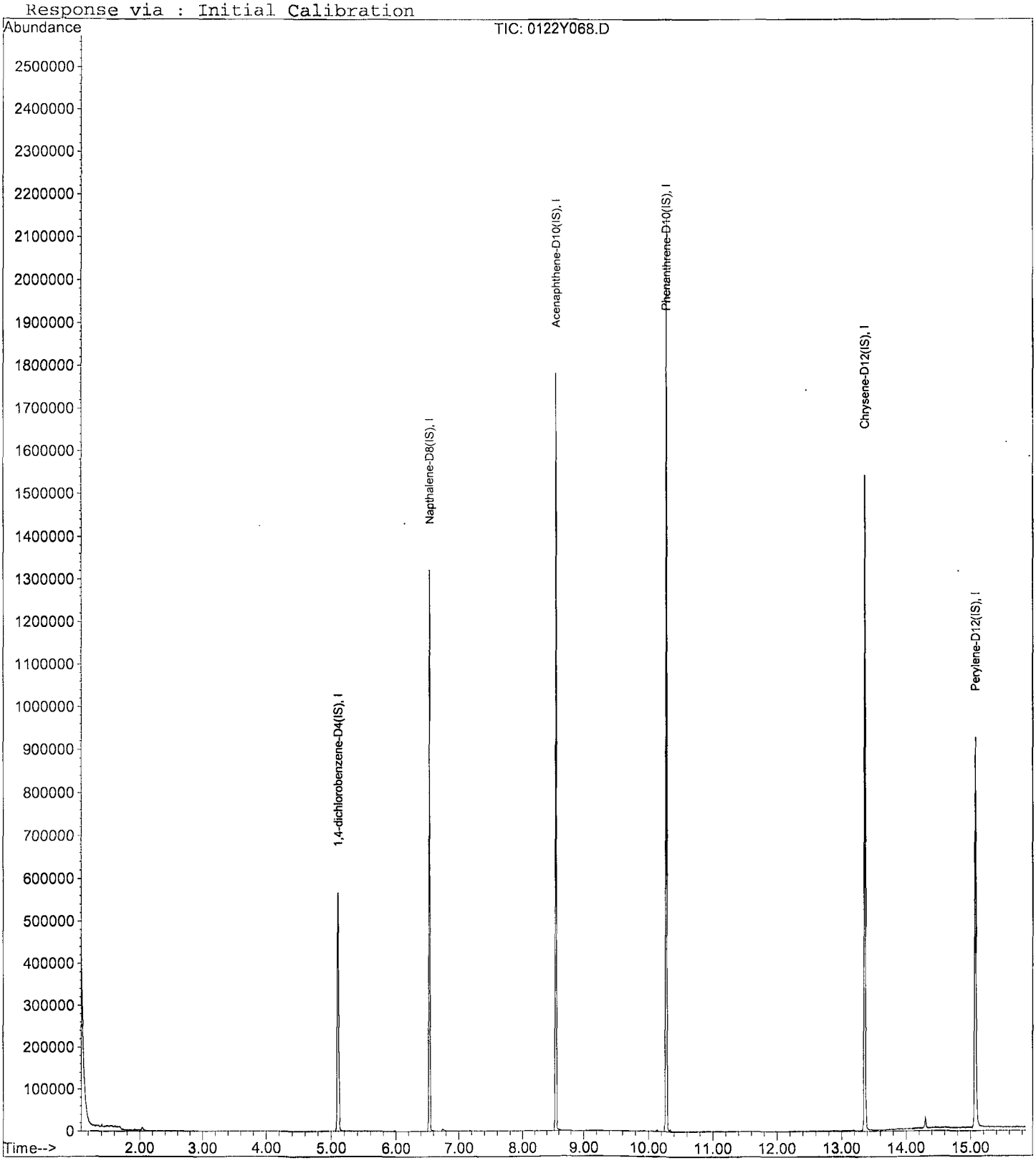
Target Compounds Qvalue

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

Data File : M:\YODA\DATA\Y200122M\0122Y068.D Vial: 68
Acq On : 11 Mar 20 15:46 Operator: MA,SS
Sample : BA07947W14 2/500 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 11 17:09 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Mar 11 17:34:56 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y062.D Vial: 62
Acq On : 11 Mar 20 13:21 Operator: MA,SS
Sample : 200310A BLK 2/500 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 11 14:46 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Feb 04 07:32:40 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.10	152	109201	40.00 ppb	-0.06
3) Napthalene-D8(IS)	6.53	136	471459	40.00 ppb	-0.04
4) Acenaphthene-D10(IS)	8.55	164	307405	40.00 ppb	-0.04
5) Phenanthrene-D10(IS)	10.28	188	608630	40.00 ppb	-0.04
6) Chrysene-D12(IS)	13.36	240	138279	40.00 ppb	-0.04
7) Perylene-D12(IS)	15.06	264	103305	40.00 ppb	-0.06

System Monitoring Compounds

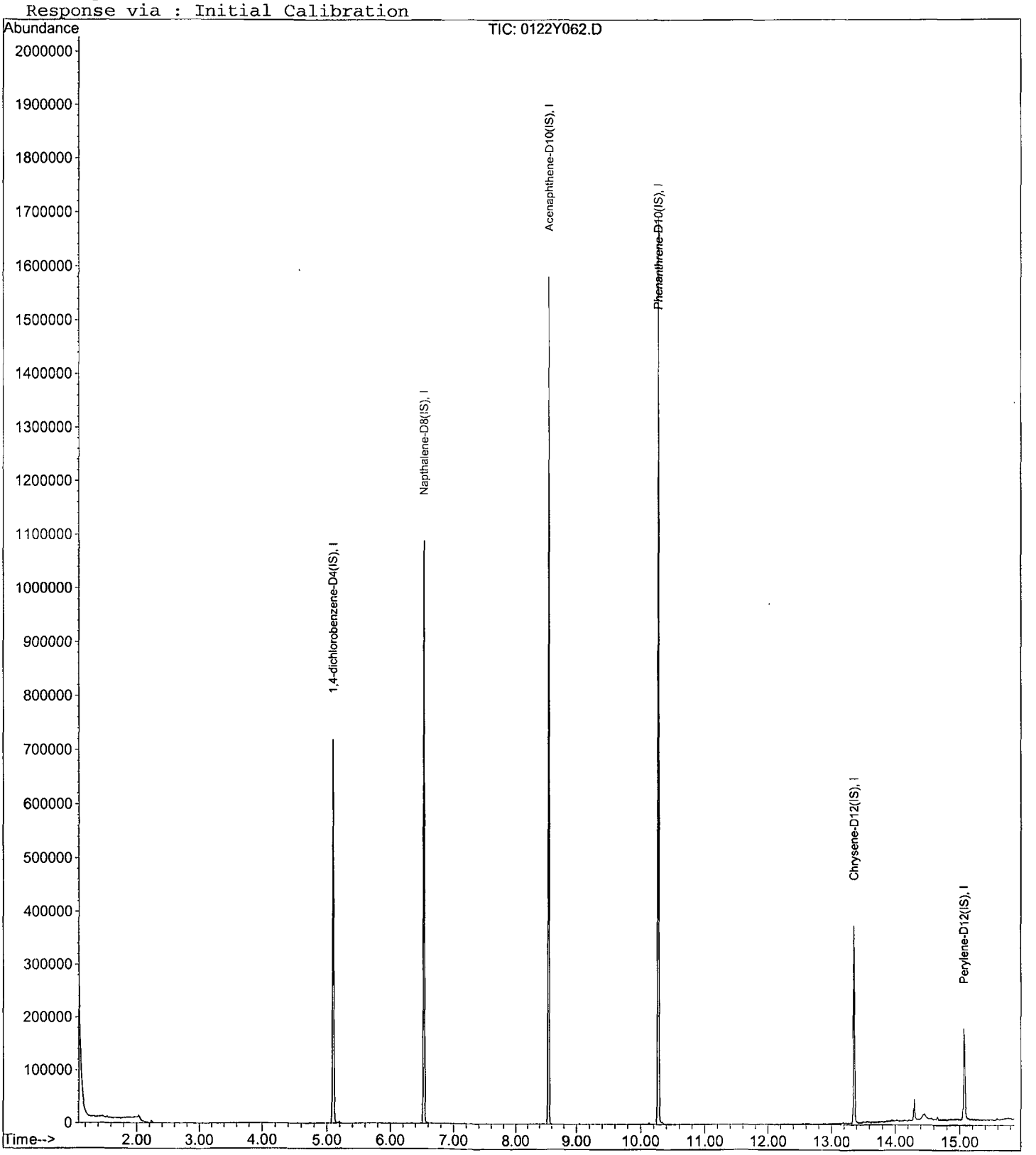
Target Compounds Qvalue

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

Data File : M:\YODA\DATA\Y200122M\0122Y062.D Vial: 62
Acq On : 11 Mar 20 13:21 Operator: MA,SS
Sample : 200310A BLK 2/500 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 11 14:46 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Mar 11 17:34:56 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y063.D Vial: 63
Acq On : 11 Mar 20 13:45 Operator: MA,SS
Sample : 200310A LCS-1 2/500 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 11 14:46 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Mar 11 14:46:52 2020
Response via : Initial Calibration
DataAcq Meth : GED

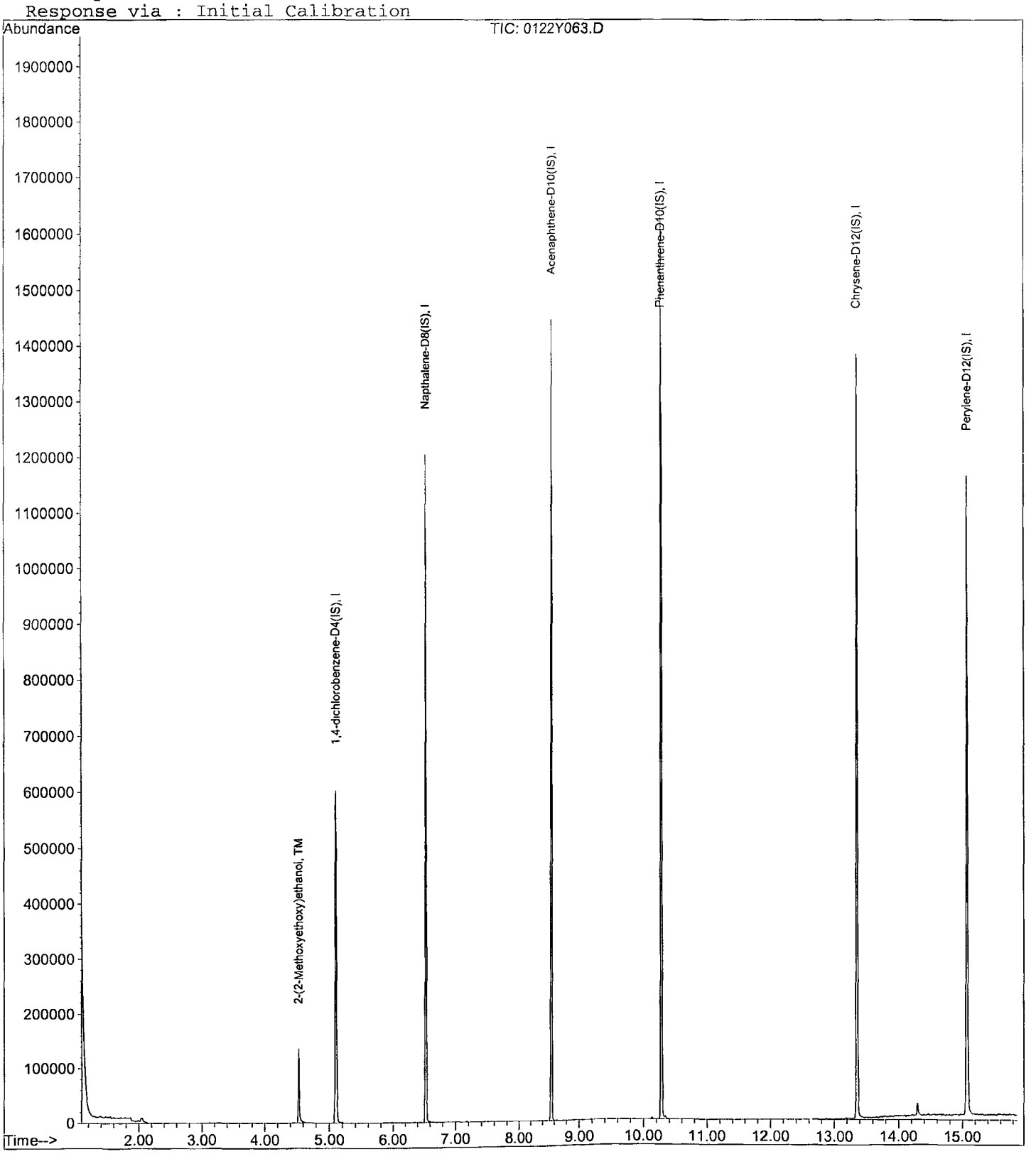
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.10	152	108945	40.00	ppb	-0.05
3) Napthalene-D8(IS)	6.53	136	485876	40.00	ppb	-0.04
4) Acenaphthene-D10(IS)	8.55	164	313345	40.00	ppb	-0.04
5) Phenanthrene-D10(IS)	10.27	188	678411	40.00	ppb	-0.04
6) Chrysene-D12(IS)	13.35	240	517306	40.00	ppb	-0.04
7) Perylene-D12(IS)	15.07	264	583969	40.00	ppb	-0.05
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.53	45	59322	92.71	ppb	100

(#) = qualifier out of range (m) = manual integration
0122Y063.D YMEE0122.M Thu Mar 12 14:51:49 2020 Page 1

Data File : M:\YODA\DATA\Y200122M\0122Y063.D Vial: 63
Acq On : 11 Mar 20 13:45 Operator: MA,SS
Sample : 200310A LCS-1 2/500 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 11 14:46 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Mar 11 17:34:56 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y064.D Vial: 64
Acq On : 11 Mar 20 14:09 Operator: MA,SS
Sample : 200310A LCSD-1 2/500 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 11 15:22 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Mar 11 14:46:52 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.09	152	157033	40.00 ppb	-0.06
3) Napthalene-D8(IS)	6.53	136	703401	40.00 ppb	-0.04
4) Acenaphthene-D10(IS)	8.55	164	473090	40.00 ppb	-0.04
5) Phenanthrene-D10(IS)	10.28	188	989310	40.00 ppb	-0.03
6) Chrysene-D12(IS)	13.35	240	374227	40.00 ppb	-0.04
7) Perylene-D12(IS)	15.07	264	348266	40.00 ppb	-0.05
System Monitoring Compounds					
Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.55	45	65950	71.51 ppb	95

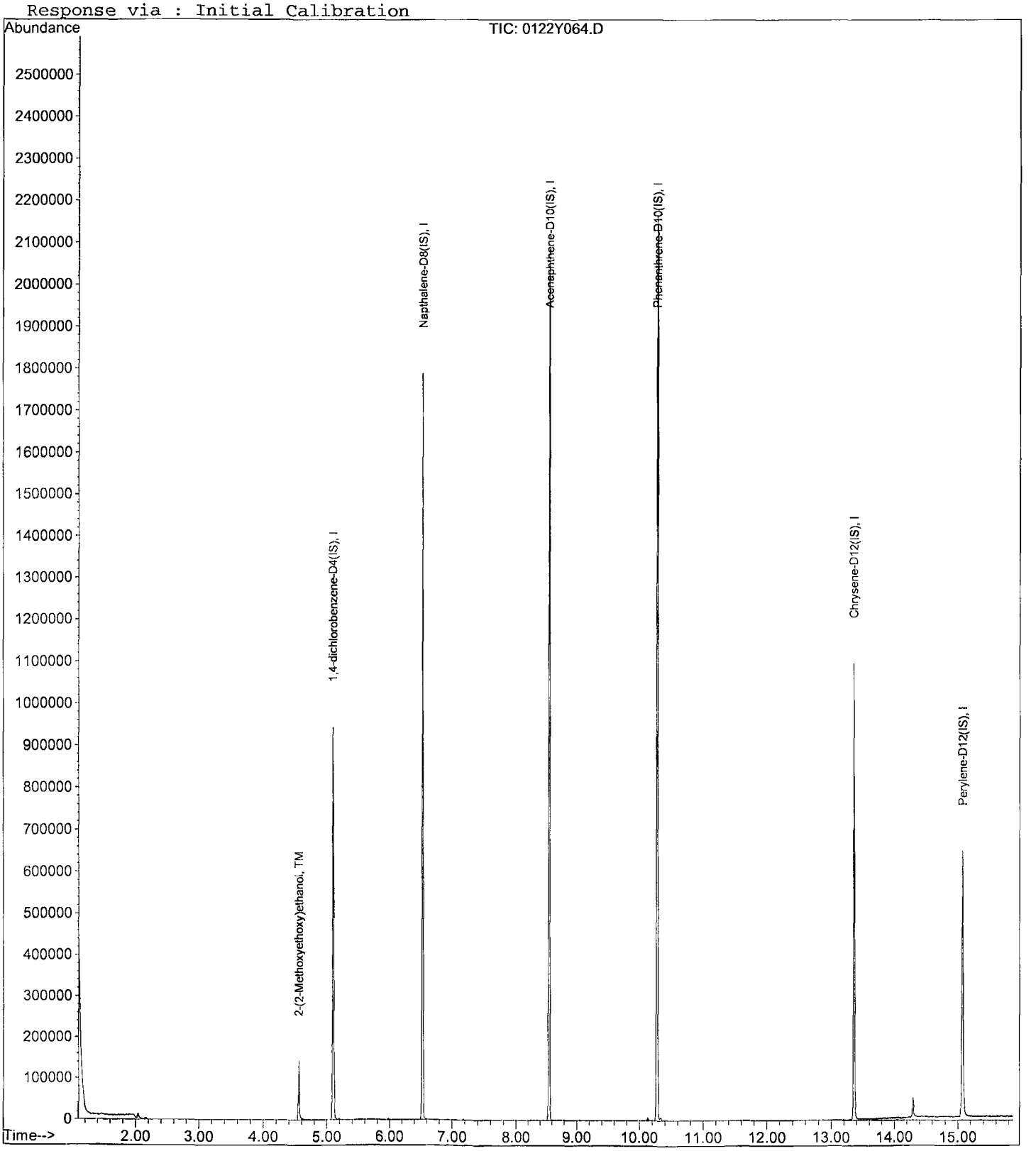
(#) = qualifier out of range (m) = manual integration
0122Y064.D YMEE0122.M Thu Mar 12 14:51:52 2020 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y064.D Vial: 64
Acq On : 11 Mar 20 14:09 Operator: MA,SS
Sample : 200310A LCSD-1 2/500 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 11 15:22 2020 Quant Results File: YMEE0122.RES

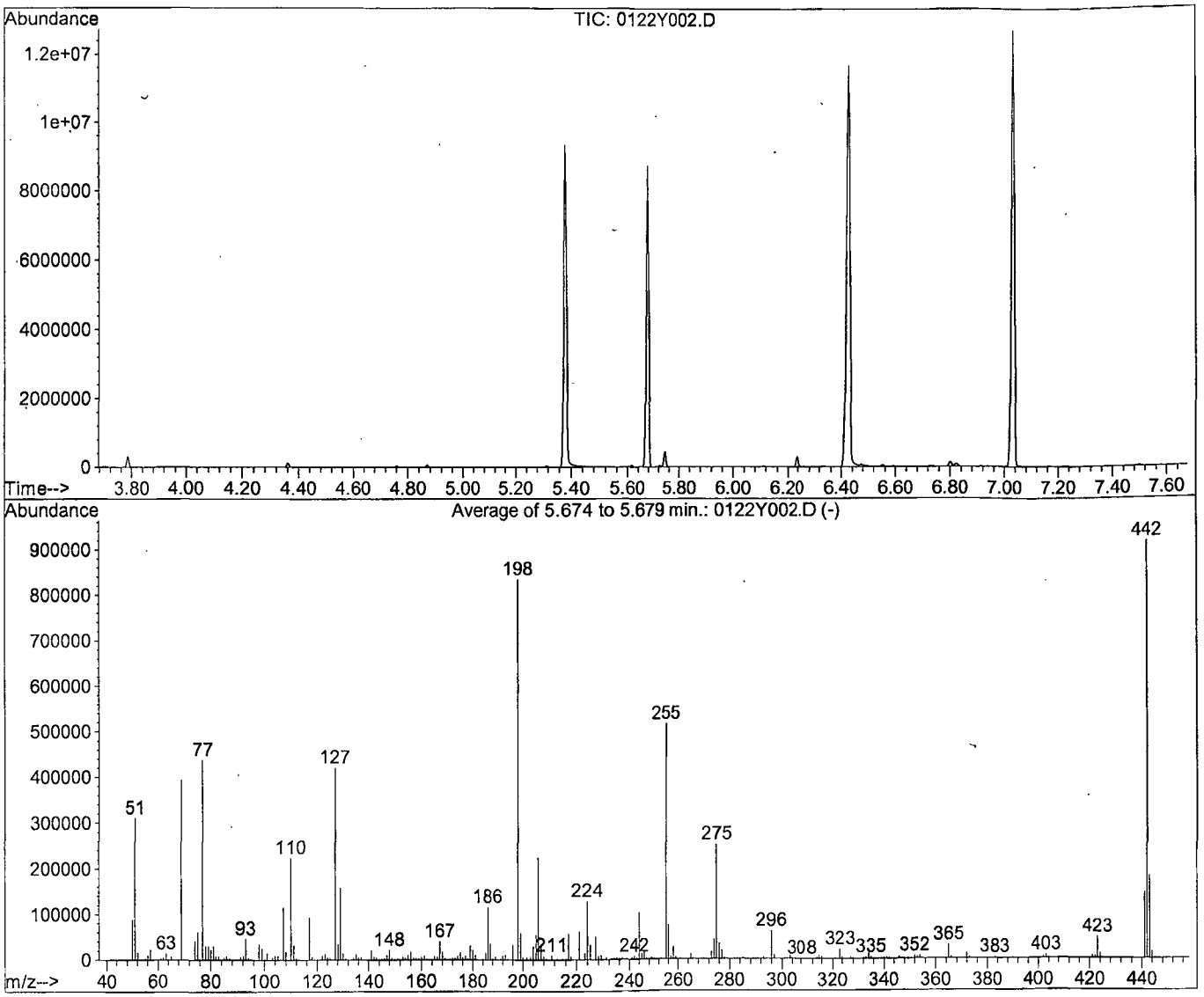
Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Mar 11 17:34:56 2020
Response via : Initial Calibration



Data File : M:\YODA\DATA\Y200122M\0122Y002.D
Acq On : 22 Jan 20 15:31
Sample : SV Tune 10/11/18
Misc :

Vial: 2
Operator: MA,SS
Inst : Yoda
Multiplr: 1.00

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C

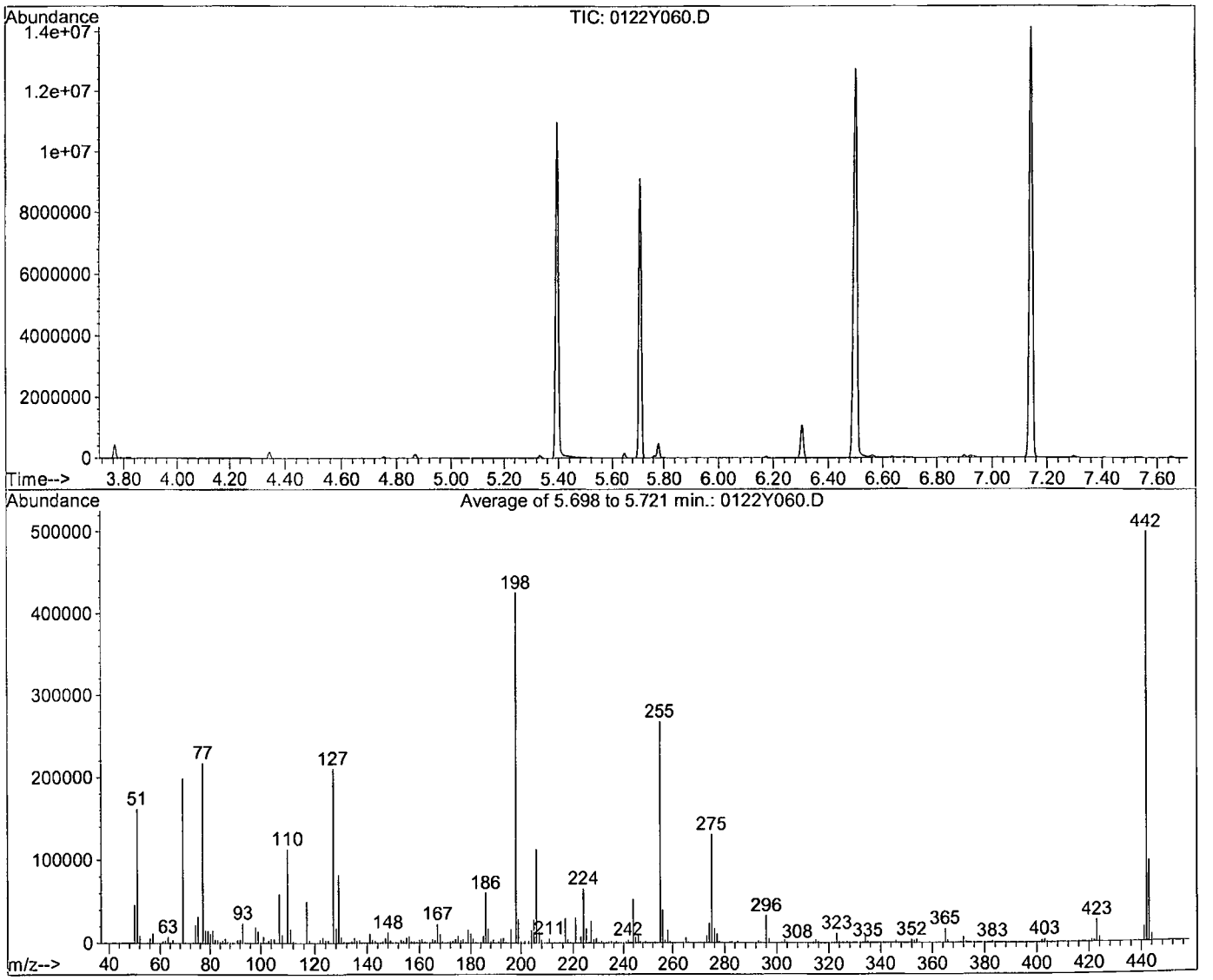


Spectrum Information: Average of 5.674 to 5.679 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	37.2	310756	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.2	963	PASS
127	198	10	80	50.4	420821	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	835008	PASS
199	198	5	9	7.1	58973	PASS
275	198	10	60	30.1	251435	PASS
365	198	1	100	3.7	30675	PASS
441	442	0.01	24	15.9	145797	PASS
442	198	50	500	109.9	917909	PASS
443	442	15	24	19.8	181739	PASS

Data File : M:\YODA\DATA\Y200122M\0122Y060.D Vial: 61
Acq On : 11 Mar 20 8:14 Operator: MA
Sample : SV TUNE 10/01/19 Inst : Yoda
Misc : Multiplr: 1.00

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C



Spectrum Information: Average of 5.698 to 5.721 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	38.0	161422	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.6	1169	PASS
127	198	10	80	49.5	210344	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	425226	PASS
199	198	5	9	6.8	28884	PASS
275	198	10	60	30.7	130430	PASS
365	198	1	100	3.9	16671	PASS
441	442	0.01	24	3.5	17754	PASS
442	198	50	500	117.7	500454	PASS
443	442	15	24	19.4	97325	PASS

Data File Name:	**0122Y002.D**
Data File Path:	**M:\YODA\DATA\Y200122M**
Operator:	**MA,SS**
Date Acquired:	**22 Jan 2020 15:31**
Method File:	**DFTPP2.M**
Sample Name:	**SV Tune 10/11/18**
Vial Number:	**2**
Instrument Name:	**Yoda**

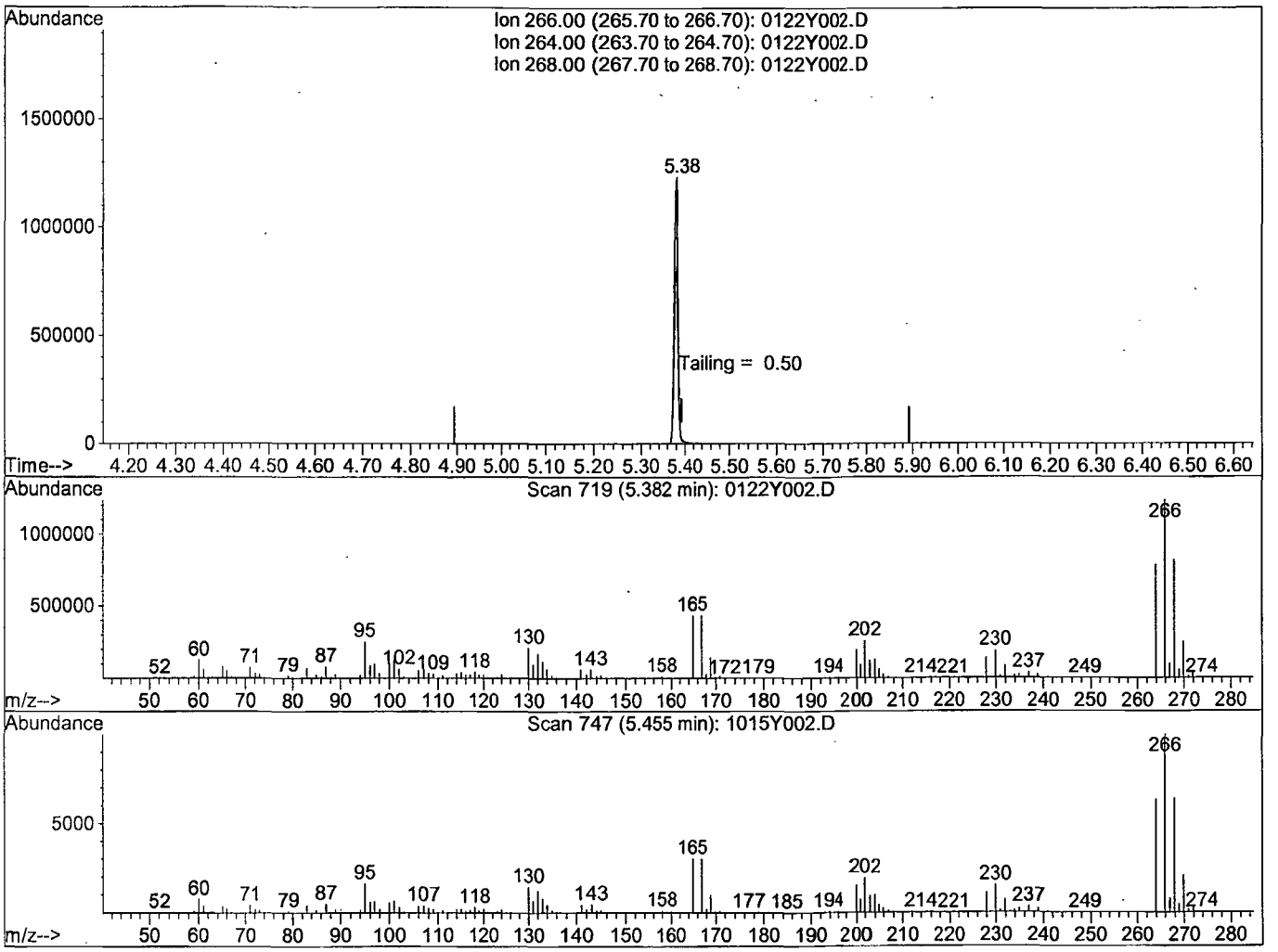
#	Name	Ret Time	Target Response
1)	DDT	7.02	96603900
2)	DDD	6.79	987534
3)	DDE	6.59	119819

Breakdown **1.13**

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y002.D Vial: 2
Acq On : 22 Jan 20 15:31 Operator: MA,SS
Sample : SV Tune 10/11/18 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Jan 23 9:58 2020 Quant Results File: temp.res

Method : M:\YODA\DATA\Y191219\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Tue Dec 10 08:34:10 2019
Response via : Single Level Calibration



TIC: 0122Y002.D

(5) Pentachlorophenol

5.38min 0.0000

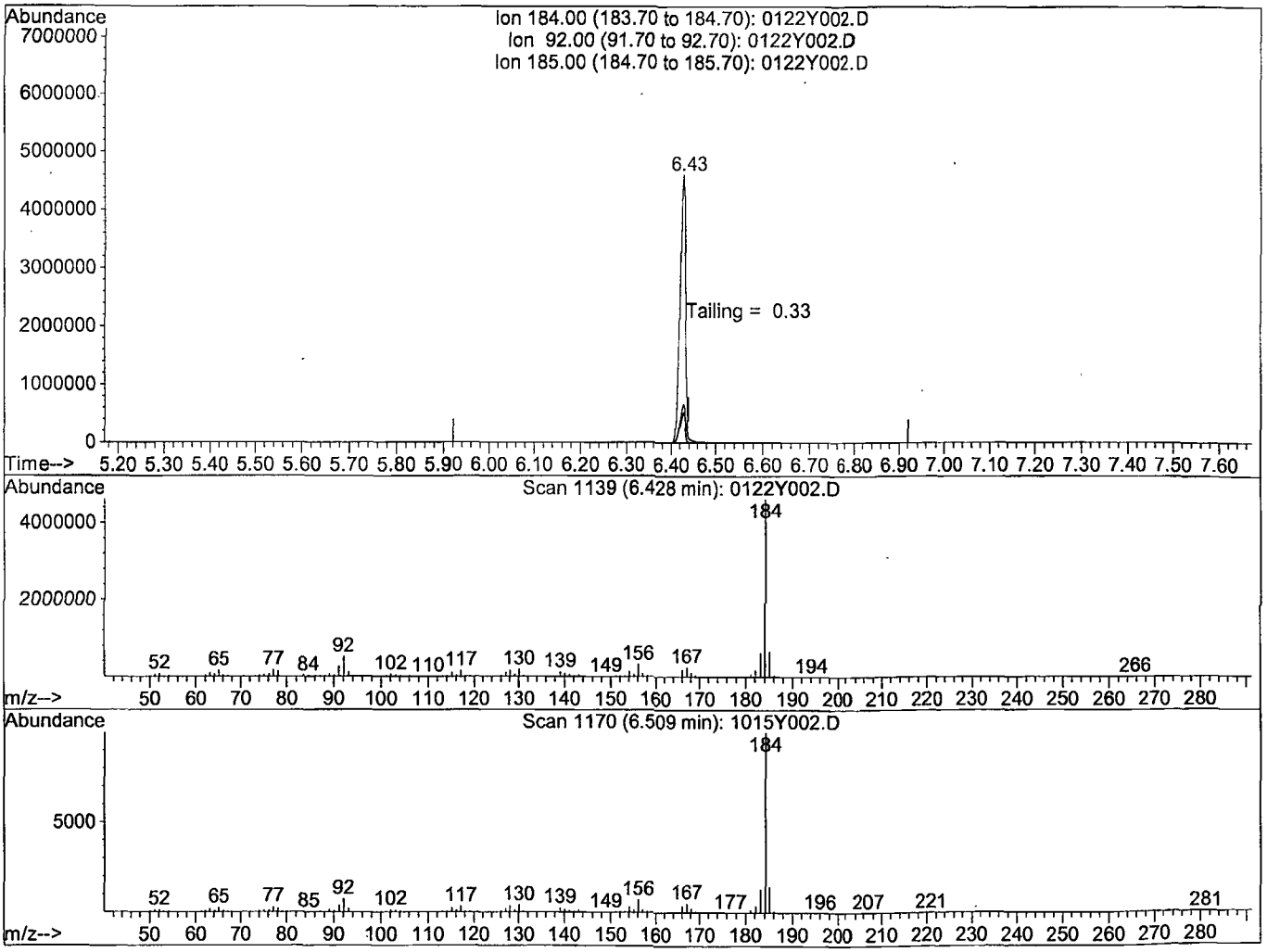
response 7823618

Ion	Exp%	Act%
266.00	100	100
264.00	65.60	63.49
268.00	64.10	65.10
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y002.D Vial: 2
Acq On : 22 Jan 20 15:31 Operator: MA,SS
Sample : SV Tune 10/11/18 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Jan 23 9:58 2020 Quant Results File: temp.res

Method : M:\YODA\DATA\Y191219\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Tue Dec 10 08:34:10 2019
Response via : Single Level Calibration



TIC: 0122Y002.D

(6) Benzidine

6.43min 0.0000

response 41313552

Ion	Exp%	Act%
184.00	100	100
92.00	10.30	10.42
185.00	14.50	14.34
0.00	0.00	0.00

Organic Extraction Worksheet

Method	Solid Phase Extraction of 2MEE in Water	Extraction Set	191106A	Extraction Method	MWE2MEE	Units	mL

Spiked ID 1	Diethylene Glycol 1-31-19 EXP 1-31-20		Surrogate ID 1		
Spiked ID 2	2MEE SS 10320ug/mL 10/28/19 exp 10/28/20		Surrogate ID 2		
Spiked ID 3	Diethylene Glycol 11-5-19 exp 11-5-20		Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	no	
Spiked ID 7			Ext. Start Time:	11/06/19 6:25	
Spiked ID 8			Ext. End Time:	11/06/19 13:30	
			GC Requires Extract By:		

M STD AND SS PREPARATION MA 1/21/20

pH1			Water Bath Temp 1 °C		
pH2			Water Bath Temp 2 °C		
pH3			Water Bath Temp 3 °C		

Spiked By: DL **Date** 11/06/19 **Witnessed By:** CFM **Date** 11/06/19

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	191106A Blk				NA	NA equip	500	2	7Y	11/06/19 6:25	
2	191106A LCS-1		0.040	1	NA	NA equip	500	2	7Y	11/06/19 6:25	
3	191106A LCSD-1		0.040	1	NA	NA equip	500	2	7Y	11/06/19 6:25	
4	BA02214	BA02214W18			NA	NA equip	500	2	7Y	11/06/19 6:25	90611
5	BA02216	BA02216W10			NA	NA equip	500	2	7Y	11/06/19 6:25	90611
6	BA02301	BA02301W22			NA	NA equip	500	2	7Y	11/06/19 6:25	90625
7	M STD		1	3	na	na equip	500	2	7Y	11/06/19 6:25	
8	SS		0.097	2	NA	NA equip	500	2	7Y	11/06/19 6:25	

Solvent and Lot#	
ENVI-Carb Plus 400MG/1ML	11694501
Reverible Tube Lot:	11694501
PH Strip	HC863463
Di Water	11/6/19
Dichloromethane	59130
Methanol	59129

Extraction COC Transfer	
Extraction lab employee Initials	SS
GC analyst's initials	MA
Date	
Time	
Refrigerator	Hobart

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL
Concentration	DL

Modified	11/06/19 6:07:34 AM

Reviewed By: **Date**

Name of Final Standard MEE Curve **Prep'd By (Initials)** JP

Prep Date 01/22/20

Exp Date 11/05/20

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
MEE M STD Stock	APPL		2000 ug/mL	11/05/19	11/05/20	5 uL	200uL	Methanol 195uL Lot# 235140	50 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	11/20/19	11/20/20	4 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/05/19	11/05/20	5 uL	100uL	Methanol 95uL Lot# 235140	100 ug/mL
SV Internal Standard	APPL	8271 Internal Standard	2000 ug/mL	11/20/19	11/20/20	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/05/19	11/05/20	10 uL	100uL	Methanol 90uL Lot# 235140	200 ug/mL
SV Internal Standard	APPL	8272 Internal Standard	2000 ug/mL	11/20/19	11/20/20	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/05/19	11/05/20	20 uL	100uL	Methanol 80 uL Lot# 235140	400 ug/mL
SV Internal Standard	APPL	8273 Internal Standard	2000 ug/mL	11/20/19	11/20/20	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/05/19	11/05/20	50 uL	200 uL	Methanol 150 uL Lot# 235140	500 ug/mL
SV Internal Standard	APPL	8274 Internal Standard	2000 ug/mL	11/20/19	11/20/20	4 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/05/19	11/05/20	30 uL	100uL	Methanol 70 uL Lot# 235140	600 ug/mL
SV Internal Standard	APPL	8275 Internal Standard	2000 ug/mL	11/20/19	11/20/20	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/05/19	11/05/20	40 uL	100uL	Methanol 60 uL Lot# 235140	800 ug/mL
SV Internal Standard	APPL	8276 Internal Standard	2000 ug/mL	11/20/19	11/20/20	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/05/19	11/05/20	50 uL	100uL	Methanol 50uL Lot# 235140	1000 ug/mL
SV Internal Standard	APPL	8277 Internal Standard	2000 ug/mL	11/20/19	11/20/20	2 uL	*	*	*

Name of Final Standard MEE Second Source **Prep'd By (Initials)** JP

Prep Date 01/22/20

Exp Date 10/28/20

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
MEE SS	APPL		2000 ug/mL	10/28/19	10/28/20	50 uL	200uL	Methanol 150uL Lot# 235140	500 ug/mL
SV Internal Standard	APPL	8277 Internal Standard	2000 ug/mL	11/20/19	11/20/20	4 uL	*	*	*

Name of Final Standard Diethylene Glycol **Prep'd By (Initials)** MA

Prep Date 11/05/19

Exp Date 11/05/20

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc.(range)
Diethylene glycol methyl ether	AccuStandard	S-72273	2000 ug/mL	**218101558-39890**	12/01/20	1.0 mL	2 mL	Methanol #208858	1000 ug/mL

Given to Extraction to do **MEE M STD Stock** (used for ICAL) Final concentration 2000ug/L

Name of Final Standard 2MEE Second Source Stock **Prep'd By (Initials)** JP

Prep Date 10/28/19
Exp Date 10/28/20

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Methoxyethanol-Neat	Chem Service	N-12404-1G	Neat 99.5%	**7079100 - 39417**	**07/31/22**	0.1022g	10 mL	**MC #56258**	10220 ug/mL

Given to Extraction to do **MEE SS** (used for ICAL SS)
0.097ml were spiked in 500ml of water and extracted on 04/29/19 . Final concentration is 2000ug/L

Name of Final Standard	**MEE Curve**	**Prep'd By (Initials)**	**JP**
Prep Date	**01/29/20**		
Exp Date	**11/05/20**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
MEE M STD Stock	APPL		2000 ug/mL	**11/05/19**	**11/05/20**	50 uL	200 uL	**Methanol 150 uL**	500 ug/mL
SV Internal Standard	APPL	Internal Standard	2000 ug/mL	**11/20/19**	**11/20/20**	4 uL	*	*	*

Injection Log

Directory: M:\YODA\DATA\Y200122M\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
2	0122Y002.D	1	SV Tune 10/11/18		22 Jan 20 15:31
3	0122Y003.D	1	50ug/ml MEE 01/22/20	soil	22 Jan 20 15:46
4	0122Y004.D	1	100ug/ml MEE 01/22/20	soil	22 Jan 20 16:10
5	0122Y005.D	1	200ug/ml MEE 01/22/20	soil	22 Jan 20 16:33
6	0122Y006.D	1	400ug/ml MEE 01/22/20	soil	22 Jan 20 16:57
7	0122Y007.D	1	500ug/ml MEE 01/22/20	soil	22 Jan 20 17:21
8	0122Y008.D	1	600ug/ml MEE 01/22/20	soil	22 Jan 20 17:45
9	0122Y009.D	1	800ug/ml MEE 01/22/20	soil	22 Jan 20 18:08
10	0122Y010.D	1	1000ug/ml MEE 01/22/20	soil	22 Jan 20 18:32
11	0122Y011.D	1	SS MEE 01/22/20	soil	22 Jan 20 18:55
61	0122Y060.D	1	SV TUNE 10/01/19		11 Mar 20 8:14
61	0122Y061.D	1	500ug/ml MEE 01/29/20 (2)	soil	11 Mar 20 12:17
62	0122Y062.D	1	200310A BLK 2/500	soil	11 Mar 20 13:21
63	0122Y063.D	1	200310A LCS-1 2/500	soil	11 Mar 20 13:45
64	0122Y064.D	1	200310A LCSD-1 2/500	soil	11 Mar 20 14:09
65	0122Y065.D	1	BA07942W17 2/500	soil	11 Mar 20 14:33
66	0122Y066.D	1	BA07944W23 2/500	soil	11 Mar 20 14:58
67	0122Y067.D	1	BA07946W14 2/500	soil	11 Mar 20 15:22
68	0122Y068.D	1	BA07947W14 2/500	soil	11 Mar 20 15:46
70	0122Y070.D	1	500ug/ml MEE 01/29/20 (1)	soil	11 Mar 20 16:33

ORGANICS
Calibration Data

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 02/26/20
Matrix: Instrument: Thor Initials: DP

			0226T12.D	0226T13 D	0226T14 D	0226T15.D	0226T16 D	0226T17 D	0226T18.D	0226T20 D								
		Compound	1	2	3	4	5	6	7	9			Avg	%RSD	Type	r^2	Q	MRF
1	I	Fluorobenzene (IS)																
2	TM	Chlorotrifluoroethene													TM			
3	TM	Dichlorodifluoromethane		0.0879	0.1071	0.1094	0.0967	0.1060	0.1100	0.1049			0.10	7.8	TM			
4	TML	Freon 114		0.0996	0.0869	0.0877	0.0434	0.0851	0.0568	0.0876			0.08	26	TML	0.995		
5	TM**L	Chloromethane		0.1545	0.1291	0.1172	0.1102	0.1098	0.1050				0.12	15	TM**L	1.000		
6	TM*	Vinyl chloride		0.1167	0.1069	0.0926	0.0958	0.0950	0.0958	0.0921			0.10	9.2	TM*			
7	TM	2-Chloro-1,1,1-trifluoroethane													TM			
8	TML	Bromomethane		0.1231	0.0974	0.0801	0.0691	0.0693	0.0588				0.08	28	TML	0.995		
9	TML	Chloroethane		0.0227	0.0201	0.0153	0.0130	0.0129	0.0133				0.02	26	TML	0.999		
10	TM	Dichlorofluoromethane		0.1740	0.1583	0.1600	0.1341	0.1491	0.1418	0.1431			0.15	8.9	TM			
11	TM	Trichlorofluoromethane		0.1189	0.1326	0.1473	0.1242	0.1394	0.1390	0.1280			0.13	7.4	TM			
12	TM	Diethyl ether													TM			
13	TM	1,2 Dichlorotrifluoroethane													TM			
14	TM	Acrolein		0.0071	0.0073	0.0070	0.0074	0.0080	0.0077	0.0071			0.01	5.2	TM			
15	TML	Acetone		0.1404	0.0742	0.0395	0.0242	0.0197	0.0187	0.0149			0.05	97	TML	0.999		
16	TML	Freon-113		0.0626	0.0766	0.0677	0.0493	0.0694	0.0525	0.0698			0.06	15	TML	0.997		
17	TM*	1,1-DCE		0.1197	0.1299	0.1145	0.1067	0.1174	0.1065	0.1114			0.12	7.1	TM*			
18	TM	2-Propanol													TM			
19	TM	Acetonitrile		0.0032	0.0038	0.0035	0.0034	0.0035	0.0036	0.0032			0.00	6.3	TM			
20	TM	t-Butanol	0.0043	0.0040	0.0040	0.0036	0.0039	0.0037	0.0037	0.0034			0.00	7.3	TM			
21	TML	Methyl Acetate		0.1255	0.1036	0.0814	0.0733	0.0764	0.0779	0.0746			0.09	22	TML	1.000		
22	TMQ	Iodomethane			0.0344	0.0288	0.0282	0.0347	0.0587	0.1011			0.05	60	TMQ	1.000		
23	TM	Acrylonitrile		0.0213	0.0261	0.0275	0.0259	0.0281	0.0312	0.0310			0.03	12	TM			
24	TML	Methylene chloride		0.3088	0.2252	0.1913	0.1286	0.1279	0.1202	0.1132			0.17	42	TML	1.000		
25	TM	Carbon disulfide		0.2167	0.2086	0.1984	0.1897	0.2001	0.1935	0.2108			0.20	4.8	TM			
26	TM	Methyl t-butyl ether (MtBE)		0.2651	0.2716	0.2732	0.2458	0.2770	0.2742	0.2674			0.27	3.9	TM			
27	TM	Trans-1,2-DCE		0.1333	0.1375	0.1235	0.1047	0.1198	0.1175	0.1167			0.12	9.0	TM			
28	TM	Hexane													TM			
29	TM	Diisopropyl Ether		0.3077	0.2983	0.2833	0.2542	0.2867	0.2926	0.2934			0.29	5.9	TM			
30	TM**	2,2-Dichloro-1,1,1-trifluoroethane													TM**			
31	TM**	1,1-DCA		0.1517	0.1616	0.1489	0.1447	0.1591	0.1541	0.1533			0.15	3.8	TM**			
32	TM	Vinyl Acetate		0.0764	0.0652	0.0639	0.0602	0.0700	0.0668	0.0668			0.07	7.6	TM			
33	TM	Ethyl tert Butyl Ether		0.2679	0.3049	0.2944	0.2540	0.2881	0.2856	0.2942			0.28	6.1	TM			
34	TML	MEK (2-Butanone)		0.1008	0.0621	0.0592	0.0563	0.0488	0.0437	0.0442			0.06	33	TML	1.000		
35	TM	Cis-1,2-DCE		0.1568	0.1646	0.1529	0.1366	0.1529	0.1514	0.1497			0.15	5.5	TM			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 02/26/20
Matrix: Instrument: Thor Initials: DP

		Compound	1	2	3	4	5	6	7	9			Avg	%RSD	Type		Q	MRF
36	TM	2,2-Dichloropropane		0.1409	0.1414	0.1385	0.1180	0.1316	0.1268	0.1271			0.13	6.6	TM			
37	TM	2-Methylpentane													TM			
38	TM	3-Methylpentane													TM			
39	TM*	Chloroform		0.1822	0.1863	0.1821	0.1703	0.1868	0.1841	0.1797			0.18	3.1	TM*			
40	TM	Bromochloromethane		0.0856	0.0884	0.0842	0.0788	0.0872	0.0872	0.0826			0.08	3.9	TM			
41	SL	Dibromofluoromethane(S)	0.5694	0.5286	0.3701	0.3890	0.3251	0.3224	0.2998	0.2730			0.38	28	SL	0.999		
42	TM	1,1,1-TCA		0.1429	0.1621	0.1449	0.1316	0.1506	0.1507	0.1535			0.15	6.5	TM			
43	TML	Cyclohexane		0.1383	0.1513	0.1299	0.0942	0.1312	0.1013	0.1332			0.13	16	TML	0.998		
44	TM	1,1-Dichloropropene		0.1354	0.1251	0.1201	0.1060	0.1201	0.1131	0.1195			0.12	7.7	TM			
45	TML	2,2,4-Trimethylpentane		0.2605	0.2563	0.2299	0.1583	0.2329	0.1835	0.2467			0.22	17	TML	0.997		
46	SL	1,2-DCA-D4(S)	0.6334	0.6287	0.4336	0.4469	0.3744	0.3656	0.3474	0.3095			0.44	28	SL	0.998		
47	TM	Carbon Tetrachloride		0.0912	0.1248	0.1332	0.1017	0.1307	0.1200	0.1316			0.12	14	TM			
48	TM	Tert Amyl Methyl Ether		0.2581	0.2800	0.2668	0.2470	0.2802	0.2846	0.2867			0.27	5.5	TM			
49	TM	Methylcyclopentane													TM			
50	TM	1,2-DCA		0.1948	0.1795	0.1547	0.1504	0.1568	0.1579	0.1477			0.16	11	TM			
51	TM	Benzene		0.3698	0.4093	0.4155	0.3542	0.3954	0.3961	0.3904			0.39	5.5	TM			
52	TM	TCE		0.1430	0.1382	0.1231	0.1144	0.1225	0.1194	0.1181			0.13	8.6	TM			
53	TM	2-Pentanone		0.0795	0.0806	0.0793	0.0814	0.0804	0.0818	0.0770			0.08	2.0	TM			
54	TM*	1,2-Dichloropropane		0.1160	0.1140	0.1159	0.0990	0.1097	0.1052	0.1043			0.11	6.0	TM*			
55	TM	Bromodichloromethane		0.1226	0.1350	0.1338	0.1240	0.1428	0.1424	0.1466			0.14	6.9	TM			
56	TML	Methyl Cyclohexane		0.1400	0.1427	0.1390	0.0880	0.1284	0.0995	0.1361			0.12	18	TML	0.997		
57	TM	Dibromomethane		0.0895	0.0854	0.0879	0.0809	0.0871	0.0934	0.0887			0.09	4.4	TM			
58	TM	MIBK (methyl isobutyl ketone)		0.1112	0.1051	0.1011	0.1250	0.1050	0.0967	0.1053			0.11	8.5	TM			
59	TM	1-Bromo-2-chloroethane		0.0857	0.0874	0.0762	0.0780	0.0803	0.0802	0.0785			0.08	5.1	TM			
60	TM	2-Chloroethyl vinyl ether													TM			
61	TM	Cis-1,3-Dichloropropene		0.1581	0.1719	0.1459	0.1413	0.1599	0.1644	0.1708			0.16	7.4	TM			
62	TM*	Toluene		0.4743	0.4873	0.4323	0.4051	0.4470	0.4603	0.4534			0.45	6.0	TM*			
63	TM	Trans-1,3-Dichloropropene		0.1489	0.1505	0.1305	0.1275	0.1426	0.1437	0.1579			0.14	7.6	TM			
64	TM	1,1,2-TCA		0.1000	0.1087	0.0996	0.0912	0.1029	0.1032	0.1020			0.10	5.2	TM			
65	TML	2-Hexanone		0.0874	0.0798	0.0343	0.0707	0.0686	0.0677	0.0733			0.07	24	TML	0.999		
66	I	Chlorobenzene-D5 (IS)																
67	SL	Toluene-D8(S)	2.664	2.602	1.764	1.858	1.525	1.534	1.423	1.277			1.8	29	SL	0.999		
68	TM	1,2-EDB		0.1352	0.1307	0.1315	0.1203	0.1372	0.1362	0.1307			0.13	4.3	TM			
69	TM	Tetrachloroethene		0.2079	0.1778	0.1770	0.1548	0.1705	0.1565	0.1549			0.17	11	TM			
70	TM	1-Chlorohexane		0.1347	0.1342	0.1368	0.1246	0.1505	0.1322	0.1526			0.14	7.3	TM			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 02/26/20
Matrix: Instrument: Thor Initials: DP

		Compound	1	2	3	4	5	6	7	9			Avg	%RSD	Type		Q	MRF
71	TM	1,1,1,2-Tetrachloroethane		0.1384	0.1285	0.1314	0.1300	0.1440	0.1444	0.1455			0.14	5.4	TM			
72	TM	m&p-Xylene		0.4813	0.4715	0.4453	0.4221	0.4753	0.4840	0.4904			0.47	5.3	TM			
73	TM	o-Xylene		0.5069	0.4914	0.4790	0.4594	0.5072	0.5231	0.5266			0.50	4.8	TM			
74	TM	Styrene		0.3684	0.3723	0.3806	0.3452	0.3965	0.4118	0.4362			0.39	7.8	TM			
75	SL	4-Bromofluorobenzene(S)	1.034	0.9822	0.6831	0.6993	0.5950	0.5952	0.5653	0.5362			0.71	27	SL	1.000		
76	TM	1,3-Dichloropropane		0.2053	0.2287	0.2096	0.2060	0.2207	0.2191	0.2092			0.21	4.1	TM			
77	TM	Dibromochloromethane		0.1544	0.1309	0.1387	0.1209	0.1429	0.1443	0.1543			0.14	8.6	TM			
78	TM**	Chlorobenzene		0.4043	0.3982	0.3705	0.3447	0.3871	0.3851	0.3754			0.38	5.2	TM**			
79	TM*	Ethylbenzene		0.5822	0.6436	0.6283	0.5560	0.6203	0.6198	0.6316			0.61	5.1	TM*			
80	TM**	Bromoform		0.0885	0.0914	0.1013	0.0919	0.1035	0.1098	0.1240			0.10	12	TM**			
81	I	1,4-Dichlorobenzene-D (IS)																
82	TM	Isopropylbenzene		1.061	1.083	1.058	0.9162	1.090	1.043	0.9930			1.0	5.9	TM			
83	TM**	1,1,2,2-Tetrachloroethane		0.2632	0.2894	0.2692	0.2351	0.2775	0.2702	0.2590			0.27	6.4	TM**			
84	TM	1,2,3-Trichloropropane		0.1007	0.1072	0.1054	0.0877	0.1017	0.0992	0.0934			0.10	6.8	TM			
85	TM	t-1,4-Dichloro-2-Butene		0.0525	0.0710	0.0517	0.0495	0.0525	0.0561	0.0556			0.06	13	TM			
86	TM	Bromobenzene		0.6219	0.6065	0.5719	0.4969	0.5584	0.5557	0.5095			0.56	8.2	TM			
87	TM	n-Propylbenzene		1.216	1.288	1.155	1.061	1.207	1.168	1.154			1.2	5.9	TM			
88	TM	4-Ethyltoluene		1.117	1.065	0.9779	0.9122	1.033	1.024	0.9939			1.0	6.4	TM			
89	TM	2-Chlorotoluene		1.039	0.9486	0.8942	0.7526	0.8785	0.8644	0.8163			0.88	10	TM			
90	TM	1,3,5-Trimethylbenzene		0.9096	0.8489	0.8683	0.8077	0.9365	0.9384	0.8775			0.88	5.4	TM			
91	TM	4-Chlorotoluene		0.8691	0.8537	0.8572	0.7687	0.8995	0.8953	0.8538			0.86	5.0	TM			
92	TM	Tert-Butylbenzene		0.8384	0.8172	0.8667	0.7815	0.9370	0.8957	0.8836			0.86	6.1	TM			
93	TM	1,2,4-Trimethylbenzene		1.035	0.8978	0.9236	0.7970	0.9465	0.9619	0.9102			0.92	7.8	TM			
94	TM	Sec-Butylbenzene		1.154	1.129	1.055	0.9371	1.081	1.053	1.079			1.1	6.5	TM			
95	TM	p-Isopropyltoluene		0.9829	0.9638	0.9303	0.8074	0.9563	0.9357	0.9585			0.93	6.2	TM			
96	TM	Benzyl Chloride		0.3548	0.3165	0.3030	0.2819	0.2855	0.3056	0.3538			0.31	9.4	TM			
97	TM	1,3-DCB		0.6463	0.6162	0.5662	0.5031	0.5675	0.5623	0.5535			0.57	8.0	TM			
98	TM	1,4-DCB		0.7068	0.6203	0.6010	0.5307	0.6015	0.5805	0.5643			0.60	9.2	TM			
99	TM	n-Butylbenzene		0.8767	0.7707	0.7480	0.6402	0.7713	0.7281	0.7867			0.76	9.3	TM			
100	TM	1,2-DCB		0.6407	0.6282	0.5679	0.5220	0.5885	0.5787	0.5765			0.59	6.7	TM			
101	TML	Hexachloroethane		0.0840	0.1111	0.1218	0.1299	0.1533	0.1576	0.1648			0.13	22	TML	1.000		
102	TML	1,2-Dibromo-3-chloropropane		0.0323	0.0600	0.0696	0.0582	0.0651	0.0710	0.0735			0.06	23	TML	1.000		
103	TM	1,2,4-Trichlorobenzene		0.4775	0.4114	0.3807	0.3309	0.3731	0.3898	0.4153			0.40	11	TM			
104	TM	Hexachlorobutadiene		0.1498	0.1474	0.2083	0.1720	0.1954	0.1841	0.2130			0.18	15	TM			
105	TM	Naphthalene		0.1336	0.1275	0.0982	0.0871	0.1048	0.1069	0.1154			0.11	15	TM			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 02/26/20
Matrix: Instrument: Thor Initials: DP

		Compound	1	2	3	4	5	6	7	9			Avg	%RSD	Type		Q	MRF
106	TM	1,2,3-Trichlorobenzene		0.4114	0.3888	0.3501	0.3119	0.3700	0.3858	0.3913			0.37	8.8	TM			
107																		
108																		
109																		
110																		
111																		
112																		
113																		
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138																		
139																		
140																		

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0226T12.D Vial: 2
Acq On : 26 Feb 20 13:00 Operator:
Sample : 0.3ug/L VOC STD 2/26/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 28 15:51 2020 Quant Results File: T0226W.RES

Quant Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 28 14:51:02 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.46	96	797543	25.00	ppb		0.00
66) Chlorobenzene-D5 (IS)	9.92	117	642016	25.00	ppb		0.00
81) 1,4-Dichlorobenzene-D (IS)	12.47	152	354032	25.00	ppb		0.00
System Monitoring Compounds							
41) Dibromofluoromethane(S)	5.60	111	90792	5.41	ppb		0.00
Spiked Amount 25.000			Recovery =	21.628%			
46) 1,2-DCA-D4(S)	6.01	65	101003	4.88	ppb		0.00
Spiked Amount 25.000			Recovery =	19.520%			
67) Toluene-D8(S)	8.32	98	342114	5.07	ppb		0.00
Spiked Amount 25.000			Recovery =	20.268%			
75) 4-Bromofluorobenzene(S)	11.21	95	132732	5.93	ppb		0.00
Spiked Amount 25.000			Recovery =	23.700%			
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.14	85	1159	0.35	ppb		93
4) Freon 114	1.24	85	923	1.81	ppb		97
5) Chloromethane	1.28	50	1658	0.21	ppb		97
6) Vinyl chloride	1.37	62	984	0.31	ppb		92
9) Chloroethane	1.75	66	300	0.43	ppb	#	41
10) Dichlorofluoromethane	1.93	67	1676	0.35	ppb		92
11) Trichlorofluoromethane	1.98	101	1557	0.37	ppb		97
14) Acrolein	2.39	55	1993	8.47	ppb		98
15) Acetone	2.56	43	2061	0.35	ppb		94
16) Freon-113	2.52	101	956	1.40	ppb	#	49
17) 1,1-DCE	2.50	61	1211	0.33	ppb		91
19) Acetonitrile	2.86	40	1302	11.90	ppb	#	60
20) t-Butanol	3.29	59	1371	11.22	ppb		96
21) Methyl Acetate	2.97	43	1040	0.11	ppb	#	52
22) Iodomethane	2.64	142	762	3.55	ppb	#	79
23) Acrylonitrile	3.39	52	269	0.31	ppb	#	36
24) Methylene chloride	3.06	49	3420	-0.18	ppb		88
25) Carbon disulfide	2.70	76	2659	0.41	ppb		96
26) Methyl t-butyl ether (MtBE	3.48	73	2923	0.34	ppb	#	81
27) Trans-1,2-DCE	3.43	61	1492	0.38	ppb	#	68
29) Diisopropyl Ether	4.28	45	2784	0.30	ppb	#	82
31) 1,1-DCA	4.06	63	1610	0.33	ppb	#	81
32) Vinyl Acetate	4.21	43	753	0.35	ppb	#	79
33) Ethyl tert Butyl Ether	4.82	59	3140	0.35	ppb		92
34) MEK (2-Butanone)	5.00	43	1652	0.47	ppb	#	51
35) Cis-1,2-DCE	4.93	61	1584	0.33	ppb	#	76
36) 2,2-Dichloropropane	4.92	77	1438	0.34	ppb	#	81
39) Chloroform	5.40	83	1698	0.29	ppb		84
40) Bromochloromethane	5.25	49	847	0.31	ppb	#	80
42) 1,1,1-TCA	5.63	97	1448	0.31	ppb	#	83
43) Cyclohexane	5.69	56	1419	1.28	ppb	#	72
44) 1,1-Dichloropropene	5.85	75	1641	0.43	ppb	#	88
45) 2,2,4-Trimethylpentane	6.27	57	2630	1.49	ppb		96
47) Carbon Tetrachloride	5.83	117	1337	0.35	ppb	#	48
48) Tert Amyl Methyl Ether	6.31	73	3139	0.36	ppb	#	71
50) 1,2-DCA	6.11	62	1751	0.34	ppb	#	72
51) Benzene	6.10	78	4490	0.36	ppb	#	87
52) TCE	6.91	130	1841	0.46	ppb		84
53) 2-Pentanone	7.16	43	26527	10.39	ppb		98

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0226T12.D Vial: 2
Acq On : 26 Feb 20 13:00 Operator:
Sample : 0.3ug/L VOC STD 2/26/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 28 15:51 2020 Quant Results File: T0226W.RES

Quant Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 28 14:51:02 2020
Response via : Initial Calibration
DataAcq Meth : T8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
54)	1,2-Dichloropropane	7.15	63	1141	0.33	ppb	#	83
55)	Bromodichloromethane	7.50	83	1468	0.34	ppb		95
56)	Methyl Cyclohexane	7.15	83	1333	1.46	ppb		82
57)	Dibromomethane	7.29	174	763	0.27	ppb	#	78
58)	MIBK (methyl isobutyl ket	8.22	43	1125	0.33	ppb	#	85
59)	1-Bromo-2-chloroethane	7.83	63	918	0.36	ppb		92
61)	Cis-1,3-Dichloropropene	8.03	75	1938	0.38	ppb	#	96
62)	Toluene	8.40	91	4645	0.32	ppb		98
63)	Trans-1,3-Dichloropropene	8.65	75	1897	0.42	ppb	#	62
64)	1,1,2-TCA	8.84	97	1062	0.33	ppb		90
65)	2-Hexanone	9.15	43	948	1.12	ppb	#	75
68)	1,2-EDB	9.39	107	998	0.30	ppb	#	89
69)	Tetrachloroethene	9.02	166	1500	0.34	ppb		88
70)	1-Chlorohexane	9.95	91	2497	0.70	ppb	#	81
71)	1,1,1,2-Tetrachloroethane	10.04	131	990	0.28	ppb		95
72)	m&p-Xylene	10.22	91	8609	0.72	ppb		93
73)	o-Xylene	10.65	91	4153	0.32	ppb		94
74)	Styrene	10.66	104	3151	0.32	ppb	#	85
76)	1,3-Dichloropropane	9.02	76	1959	0.36	ppb	#	88
77)	Dibromochloromethane	9.27	129	988	0.27	ppb		90
78)	Chlorobenzene	9.95	112	3619	0.37	ppb		95
79)	Ethylbenzene	10.09	91	5469	0.35	ppb		99
80)	Bromoform	10.83	173	430	0.16	ppb	#	73
82)	Isopropylbenzene	11.06	105	5338	0.36	ppb	#	86
83)	1,1,2,2-Tetrachloroethane	11.36	83	1300	0.34	ppb		91
84)	1,2,3-Trichloropropane	11.40	110	374	0.27	ppb	#	31
85)	t-1,4-Dichloro-2-Butene	11.42	53	174	0.22	ppb	#	23
86)	Bromobenzene	11.37	77	3033	0.38	ppb	#	89
87)	n-Propylbenzene	11.51	91	5733	0.34	ppb		99
88)	4-Ethyltoluene	11.64	105	5524	0.38	ppb		91
89)	2-Chlorotoluene	11.59	91	4737	0.38	ppb		92
90)	1,3,5-Trimethylbenzene	11.71	105	4461	0.36	ppb		94
91)	4-Chlorotoluene	11.71	91	4773	0.39	ppb		97
92)	Tert-Butylbenzene	12.06	119	4157	0.34	ppb	#	80
93)	1,2,4-Trimethylbenzene	12.11	105	5100	0.39	ppb		95
94)	Sec-Butylbenzene	12.30	105	5214	0.34	ppb		98
95)	p-Isopropyltoluene	12.46	119	4222	0.32	ppb		97
96)	Benzyl Chloride	12.64	91	1285	0.29	ppb	#	86
97)	1,3-DCB	12.41	146	3362	0.41	ppb		93
98)	1,4-DCB	12.50	146	3468	0.41	ppb	#	89
99)	n-Butylbenzene	12.91	91	3864	0.36	ppb		100
100)	1,2-DCB	12.91	146	3169	0.38	ppb	#	83
101)	Hexachloroethane	13.20	201	161	0.71	ppb	#	79
102)	1,2-Dibromo-3-chloropropan	13.74	157	83	0.66	ppb	#	26
103)	1,2,4-Trichlorobenzene	14.67	180	3025	0.54	ppb	#	68
104)	Hexachlorobutadiene	14.88	225	879	0.34	ppb	#	76
105)	Naphthalene	14.93	127	1112	0.71	ppb	#	47
106)	1,2,3-Trichlorobenzene	15.20	180	2549	0.48	ppb	#	66

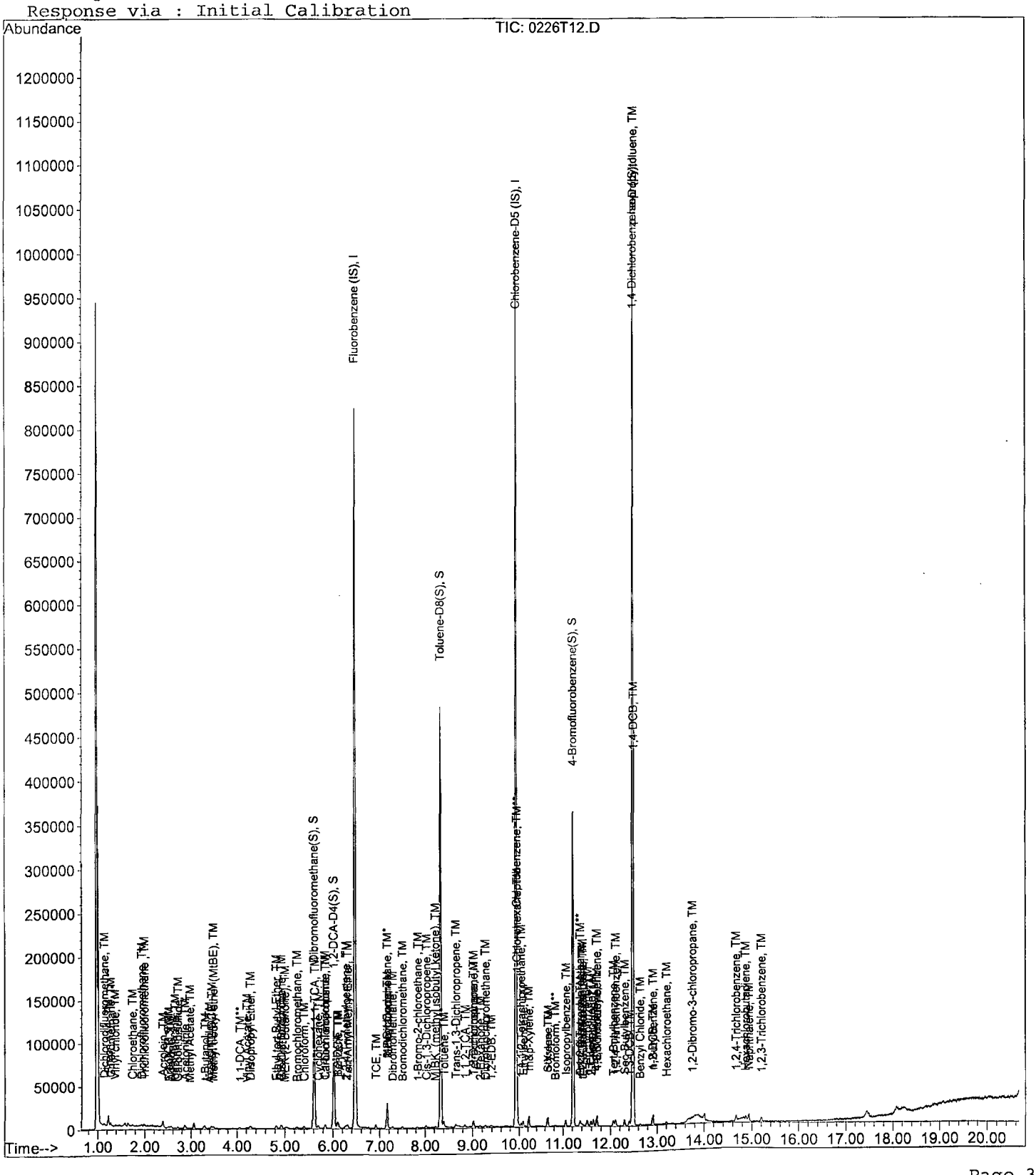
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200226\0226T12.D Vial: 2
Acq On : 26 Feb 20 13:00 Operator:
Sample : 0.3ug/L VOC STD 2/26/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 28 15:51 2020 Quant Results File: T0226W.RES

Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 02 12:37:16 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0226T13.D Vial: 3
Acq On : 26 Feb 20 13:28 Operator:
Sample : 0.5ug/L VOC STD 2/26/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 28 15:51 2020 Quant Results File: T0226W.RES

Quant Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 28 14:51:02 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.46	96	798358	25.00	ppb		0.00
66) Chlorobenzene-D5 (IS)	9.92	117	638111	25.00	ppb		0.00
81) 1,4-Dichlorobenzene-D (IS)	12.48	152	346514	25.00	ppb		0.00
System Monitoring Compounds							
41) Dibromofluoromethane(S)	5.60	111	84407	4.63	ppb		0.00
Spiked Amount 25.000			Recovery = 18.524%				
46) 1,2-DCA-D4(S)	6.02	65	100291	4.79	ppb		0.00
Spiked Amount 25.000			Recovery = 19.176%				
67) Toluene-D8(S)	8.33	98	332075	4.81	ppb		0.00
Spiked Amount 25.000			Recovery = 19.248%				
75) 4-Bromofluorobenzene(S)	11.21	95	125376	5.43	ppb		0.00
Spiked Amount 25.000			Recovery = 21.712%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.14	85	1403	0.43	ppb	#	83
4) Freon 114	1.24	85	1591	2.05	ppb		98
5) Chloromethane	1.28	50	2467	0.45	ppb		97
6) Vinyl chloride	1.37	62	1864	0.59	ppb		93
8) Bromomethane	1.65	94	1965	0.48	ppb	#	77
9) Chloroethane	1.74	66	363	0.58	ppb	#	66
10) Dichlorofluoromethane	1.93	67	2778	0.57	ppb		99
11) Trichlorofluoromethane	1.99	101	1899	0.45	ppb		88
14) Acrolein	2.39	55	5634	23.93	ppb		87
15) Acetone	2.56	43	2213	0.67	ppb		91
16) Freon-113	2.53	101	1000	1.42	ppb	#	67
17) 1,1-DCE	2.50	61	1911	0.52	ppb	#	89
19) Acetonitrile	2.86	40	2537	23.16	ppb		89
20) t-Butanol	3.29	59	3225	26.36	ppb	#	87
21) Methyl Acetate	2.97	43	2004	0.52	ppb	#	89
22) Iodomethane	2.64	142	836	3.57	ppb	#	79
23) Acrylonitrile	3.38	52	340	0.39	ppb	#	61
24) Methylene chloride	3.06	49	4930	0.24	ppb		91
25) Carbon disulfide	2.71	76	3460	0.53	ppb	#	78
26) Methyl t-butyl ether (MtBE	3.49	73	4233	0.50	ppb	#	74
27) Trans-1,2-DCE	3.43	61	2128	0.55	ppb		91
29) Diisopropyl Ether	4.30	45	4913	0.53	ppb	#	66
31) 1,1-DCA	4.06	63	2422	0.49	ppb	#	91
32) Vinyl Acetate	4.22	43	1220	0.57	ppb		95
33) Ethyl tert Butyl Ether	4.82	59	4277	0.47	ppb	#	79
34) MEK (2-Butanone)	4.99	43	1610	0.44	ppb	#	51
35) Cis-1,2-DCE	4.94	61	2503	0.52	ppb	#	87
36) 2,2-Dichloropropane	4.93	77	2250	0.53	ppb	#	10
39) Chloroform	5.40	83	2910	0.50	ppb		97
40) Bromochloromethane	5.24	49	1367	0.50	ppb		93
42) 1,1,1-TCA	5.62	97	2281	0.48	ppb	#	69
43) Cyclohexane	5.70	56	2209	1.46	ppb	#	86
44) 1,1-Dichloropropene	5.85	75	2162	0.56	ppb	#	91
45) 2,2,4-Trimethylpentane	6.28	57	4159	1.68	ppb		92
47) Carbon Tetrachloride	5.83	117	1456	0.38	ppb		92
48) Tert Amyl Methyl Ether	6.32	73	4121	0.47	ppb		95
50) 1,2-DCA	6.11	62	3111	0.60	ppb	#	72
51) Benzene	6.10	78	5904	0.47	ppb		97
52) TCE	6.92	130	2284	0.57	ppb	#	73

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0226T13.D Vial: 3
Acq On : 26 Feb 20 13:28 Operator:
Sample : 0.5ug/L VOC STD 2/26/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 28 15:51 2020 Quant Results File: T0226W.RES

Quant Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 28 14:51:02 2020
Response via : Initial Calibration
DataAcq Meth : T8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
53)	2-Pentanone	7.15	43	63359	24.80	ppb		99
54)	1,2-Dichloropropane	7.16	63	1852	0.53	ppb	#	83
55)	Bromodichloromethane	7.50	83	1958	0.45	ppb		95
56)	Methyl Cyclohexane	7.15	83	2236	1.67	ppb	#	78
57)	Dibromomethane	7.28	174	1429	0.51	ppb		94
58)	MIBK (methyl isobutyl ket	8.22	43	1776	0.52	ppb	#	88
59)	1-Bromo-2-chloroethane	7.84	63	1369	0.53	ppb		91
61)	Cis-1,3-Dichloropropene	8.02	75	2524	0.50	ppb	#	89
62)	Toluene	8.40	91	7573	0.53	ppb		97
63)	Trans-1,3-Dichloropropene	8.65	75	2378	0.52	ppb	#	80
64)	1,1,2-TCA	8.86	97	1596	0.49	ppb	#	80
65)	2-Hexanone	9.15	43	1396	1.31	ppb	#	79
68)	1,2-EDB	9.38	107	1726	0.51	ppb	#	80
69)	Tetrachloroethene	9.01	166	2654	0.61	ppb	#	77
70)	1-Chlorohexane	9.95	91	1719	0.49	ppb		93
71)	1,1,1,2-Tetrachloroethane	10.04	131	1767	0.50	ppb	#	89
72)	m&p-Xylene	10.22	91	12286	1.03	ppb	#	85
73)	o-Xylene	10.65	91	6471	0.51	ppb		99
74)	Styrene	10.66	104	4702	0.48	ppb		94
76)	1,3-Dichloropropane	9.03	76	2621	0.48	ppb	#	80
77)	Dibromochloromethane	9.27	129	1971	0.55	ppb		94
78)	Chlorobenzene	9.95	112	5161	0.53	ppb	#	86
79)	Ethylbenzene	10.09	91	7432	0.48	ppb		95
80)	Bromoform	10.83	173	1130	0.44	ppb		97
82)	Isopropylbenzene	11.06	105	7353	0.51	ppb	#	86
83)	1,1,2,2-Tetrachloroethane	11.36	83	1824	0.49	ppb		98
84)	1,2,3-Trichloropropane	11.41	110	698	0.51	ppb	#	41
85)	t-1,4-Dichloro-2-Butene	11.42	53	364	0.47	ppb	#	23
86)	Bromobenzene	11.37	77	4310	0.56	ppb		92
87)	n-Propylbenzene	11.51	91	8428	0.52	ppb		96
88)	4-Ethyltoluene	11.64	105	7741	0.55	ppb		96
89)	2-Chlorotoluene	11.59	91	7204	0.59	ppb		90
90)	1,3,5-Trimethylbenzene	11.71	105	6304	0.51	ppb	#	80
91)	4-Chlorotoluene	11.71	91	6023	0.51	ppb		98
92)	Tert-Butylbenzene	12.06	119	5810	0.49	ppb		91
93)	1,2,4-Trimethylbenzene	12.11	105	7175	0.56	ppb		94
94)	Sec-Butylbenzene	12.30	105	8001	0.54	ppb		92
95)	p-Isopropyltoluene	12.46	119	6812	0.53	ppb		98
96)	Benzyl Chloride	12.64	91	2459	0.56	ppb		94
97)	1,3-DCB	12.40	146	4479	0.56	ppb		96
98)	1,4-DCB	12.50	146	4898	0.59	ppb		93
99)	n-Butylbenzene	12.91	91	6076	0.58	ppb		97
100)	1,2-DCB	12.91	146	4440	0.55	ppb	#	90
101)	Hexachloroethane	13.20	201	582	0.89	ppb	#	78
102)	1,2-Dibromo-3-chloropropan	13.74	157	224	0.80	ppb	#	63
103)	1,2,4-Trichlorobenzene	14.67	180	3309	0.60	ppb		96
104)	Hexachlorobutadiene	14.89	225	1038	0.41	ppb	#	71
105)	Naphthalene	14.93	127	926	0.60	ppb		70
106)	1,2,3-Trichlorobenzene	15.21	180	2851	0.55	ppb		93

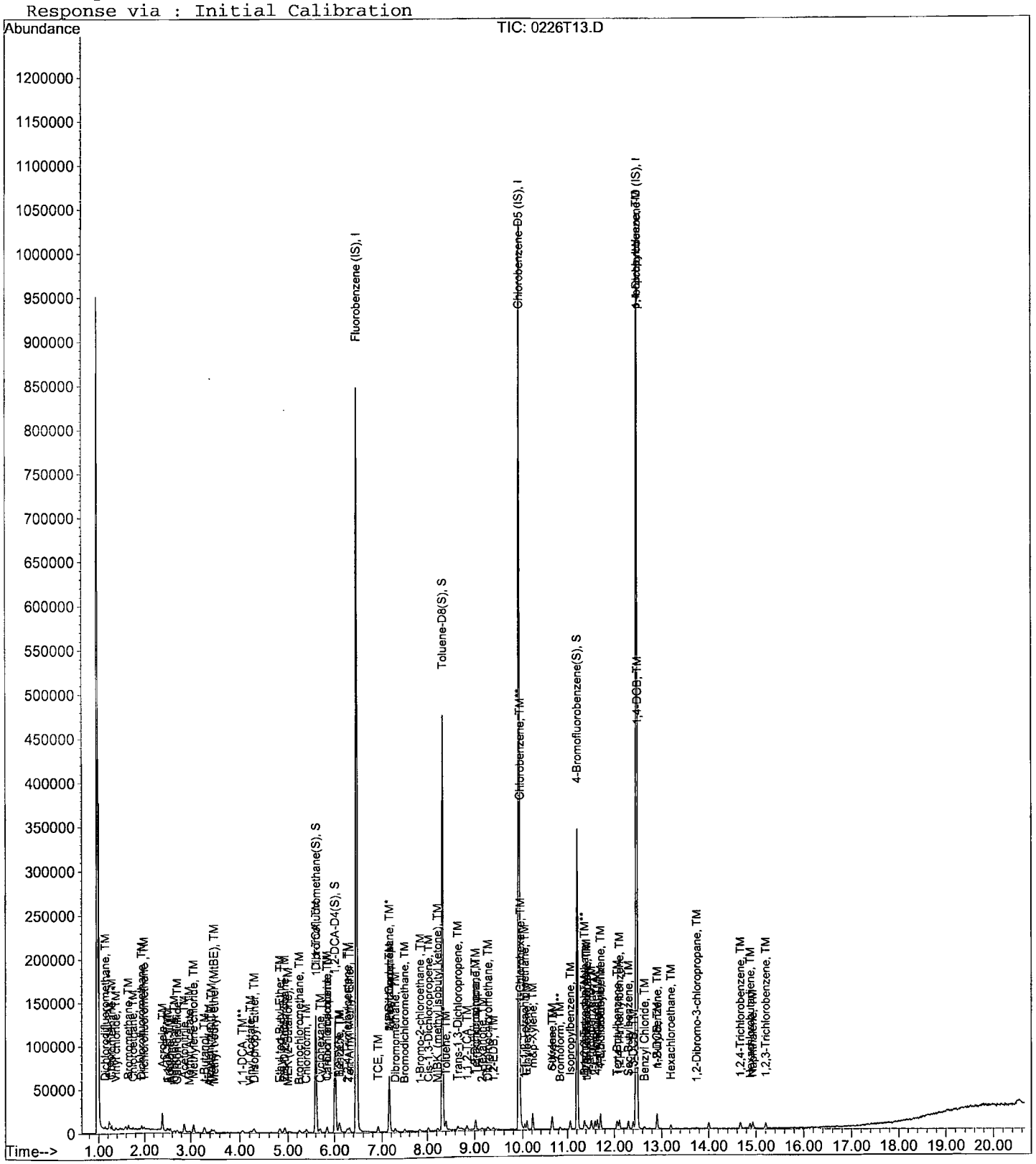
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200226\0226T13.D Vial: 3
Acq On : 26 Feb 20 13:28 Operator:
Sample : 0.5ug/L VOC STD 2/26/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 28 15:51 2020 Quant Results File: T0226W.RES

Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 02 12:37:16 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0226T14.D Vial: 4
Acq On : 26 Feb 20 13:56 Operator:
Sample : 1ug/L VOC STD 2/26/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 28 15:51 2020 Quant Results File: T0226W.RES

Quant Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 28 14:51:02 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.46	96	774369	25.00	ppb		0.00
66) Chlorobenzene-D5 (IS)	9.92	117	629081	25.00	ppb		0.00
81) 1,4-Dichlorobenzene-D (IS)	12.47	152	342316	25.00	ppb		0.00
System Monitoring Compounds							
41) Dibromofluoromethane(S)	5.60	111	114641	8.68	ppb		0.00
Spiked Amount 25.000			Recovery	=	34.720%		
46) 1,2-DCA-D4(S)	6.02	65	134233	8.82	ppb		0.00
Spiked Amount 25.000			Recovery	=	35.276%		
67) Toluene-D8(S)	8.33	98	443982	8.61	ppb		0.00
Spiked Amount 25.000			Recovery	=	34.432%		
75) 4-Bromofluorobenzene(S)	11.21	95	171890	9.15	ppb		0.00
Spiked Amount 25.000			Recovery	=	36.592%		
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.14	85	3316	1.04	ppb		91
4) Freon 114	1.24	85	2692	2.47	ppb		90
5) Chloromethane	1.28	50	4000	0.95	ppb		97
6) Vinyl chloride	1.37	62	3311	1.08	ppb		93
8) Bromomethane	1.65	94	3017	1.05	ppb		88
9) Chloroethane	1.75	66	623	1.26	ppb	#	27
10) Dichlorofluoromethane	1.93	67	4903	1.04	ppb	#	87
11) Trichlorofluoromethane	1.99	101	4106	1.00	ppb		91
14) Acrolein	2.39	55	11277	49.39	ppb		90
15) Acetone	2.56	43	2261	0.93	ppb	#	88
16) Freon-113	2.53	101	2374	2.07	ppb	#	77
17) 1,1-DCE	2.50	61	4023	1.13	ppb	#	91
19) Acetonitrile	2.86	40	5823	54.80	ppb		89
20) t-Butanol	3.29	59	6153	51.85	ppb	#	87
21) Methyl Acetate	2.97	43	3208	1.07	ppb		97
22) Iodomethane	2.64	142	1064	3.65	ppb	#	80
23) Acrylonitrile	3.38	52	807	0.95	ppb	#	53
24) Methylene chloride	3.06	49	6975	0.87	ppb		92
25) Carbon disulfide	2.71	76	6460	1.03	ppb		96
26) Methyl t-butyl ether (MtBE	3.48	73	8414	1.01	ppb	#	88
27) Trans-1,2-DCE	3.43	61	4259	1.13	ppb	#	81
29) Diisopropyl Ether	4.29	45	9239	1.04	ppb	#	81
31) 1,1-DCA	4.05	63	5004	1.05	ppb	#	80
32) Vinyl Acetate	4.22	43	2021	0.97	ppb	#	93
33) Ethyl tert Butyl Ether	4.82	59	9443	1.07	ppb		97
34) MEK (2-Butanone)	5.01	43	1922	0.70	ppb		91
35) Cis-1,2-DCE	4.93	61	5098	1.08	ppb		91
36) 2,2-Dichloropropane	4.93	77	4381	1.07	ppb	#	57
39) Chloroform	5.40	83	5771	1.03	ppb		89
40) Bromochloromethane	5.25	49	2739	1.04	ppb		84
42) 1,1,1-TCA	5.62	97	5021	1.10	ppb		93
43) Cyclohexane	5.69	56	4686	2.08	ppb		90
44) 1,1-Dichloropropene	5.85	75	3874	1.04	ppb		96
45) 2,2,4-Trimethylpentane	6.27	57	7939	2.19	ppb		100
47) Carbon Tetrachloride	5.84	117	3865	1.05	ppb		96
48) Tert Amyl Methyl Ether	6.32	73	8673	1.03	ppb	#	88
50) 1,2-DCA	6.12	62	5559	1.10	ppb		96
51) Benzene	6.10	78	12678	1.05	ppb	#	86
52) TCE	6.91	130	4280	1.10	ppb		96

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0226T14.D Vial: 4
Acq On : 26 Feb 20 13:56 Operator:
Sample : 1ug/L VOC STD 2/26/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 28 15:51 2020 Quant Results File: T0226W.RES

Quant Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 28 14:51:02 2020
Response via : Initial Calibration
DataAcq Meth : T8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
53)	2-Pentanone	7.15	43	124674	50.31	ppb		94
54)	1,2-Dichloropropane	7.16	63	3530	1.04	ppb	#	83
55)	Bromodichloromethane	7.50	83	4181	1.00	ppb		99
56)	Methyl Cyclohexane	7.15	83	4421	2.20	ppb		98
57)	Dibromomethane	7.28	174	2645	0.98	ppb		97
58)	MIBK (methyl isobutyl ket	8.22	43	3256	0.98	ppb	#	81
59)	1-Bromo-2-chloroethane	7.83	63	2706	1.08	ppb		95
61)	Cis-1,3-Dichloropropene	8.03	75	5323	1.08	ppb		98
62)	Toluene	8.40	91	15093	1.08	ppb		98
63)	Trans-1,3-Dichloropropene	8.65	75	4662	1.05	ppb		91
64)	1,1,2-TCA	8.84	97	3367	1.08	ppb	#	87
65)	2-Hexanone	9.15	43	2472	1.80	ppb		95
68)	1,2-EDB	9.39	107	3290	0.99	ppb	#	95
69)	Tetrachloroethene	9.02	166	4475	1.04	ppb		93
70)	1-Chlorohexane	9.95	91	3377	0.97	ppb	#	71
71)	1,1,1,2-Tetrachloroethane	10.05	131	3234	0.93	ppb	#	83
72)	m&p-Xylene	10.22	91	23731	2.02	ppb		93
73)	o-Xylene	10.65	91	12366	0.98	ppb		92
74)	Styrene	10.66	104	9369	0.96	ppb		96
76)	1,3-Dichloropropane	9.03	76	5754	1.07	ppb		97
77)	Dibromochloromethane	9.27	129	3294	0.93	ppb		95
78)	Chlorobenzene	9.95	112	10021	1.05	ppb		95
79)	Ethylbenzene	10.09	91	16195	1.05	ppb		95
80)	Bromoform	10.84	173	2301	0.90	ppb		93
82)	Isopropylbenzene	11.06	105	14832	1.05	ppb		96
83)	1,1,2,2-Tetrachloroethane	11.36	83	3963	1.09	ppb		99
84)	1,2,3-Trichloropropane	11.40	110	1468	1.08	ppb	#	79
85)	t-1,4-Dichloro-2-Butene	11.43	53	972	1.28	ppb		89
86)	Bromobenzene	11.37	77	8305	1.08	ppb		94
87)	n-Propylbenzene	11.51	91	17635	1.09	ppb		94
88)	4-Ethyltoluene	11.64	105	14582	1.05	ppb		92
89)	2-Chlorotoluene	11.59	91	12989	1.07	ppb		97
90)	1,3,5-Trimethylbenzene	11.70	105	11624	0.96	ppb		98
91)	4-Chlorotoluene	11.71	91	11689	1.00	ppb		100
92)	Tert-Butylbenzene	12.06	119	11190	0.95	ppb		87
93)	1,2,4-Trimethylbenzene	12.11	105	12293	0.97	ppb		93
94)	Sec-Butylbenzene	12.30	105	15462	1.06	ppb		91
95)	p-Isopropyltoluene	12.46	119	13197	1.03	ppb		98
96)	Benzyl Chloride	12.64	91	4334	1.01	ppb	#	84
97)	1,3-DCB	12.40	146	8438	1.07	ppb		95
98)	1,4-DCB	12.50	146	8493	1.03	ppb	#	88
99)	n-Butylbenzene	12.91	91	10553	1.01	ppb		93
100)	1,2-DCB	12.90	146	8602	1.07	ppb		93
101)	Hexachloroethane	13.21	201	1521	1.31	ppb	#	83
102)	1,2-Dibromo-3-chloropropan	13.75	157	822	1.40	ppb		98
103)	1,2,4-Trichlorobenzene	14.67	180	5633	1.04	ppb	#	70
104)	Hexachlorobutadiene	14.87	225	2018	0.81	ppb		87
105)	Naphthalene	14.94	127	1746	1.15	ppb	#	32
106)	1,2,3-Trichlorobenzene	15.21	180	5324	1.04	ppb		99

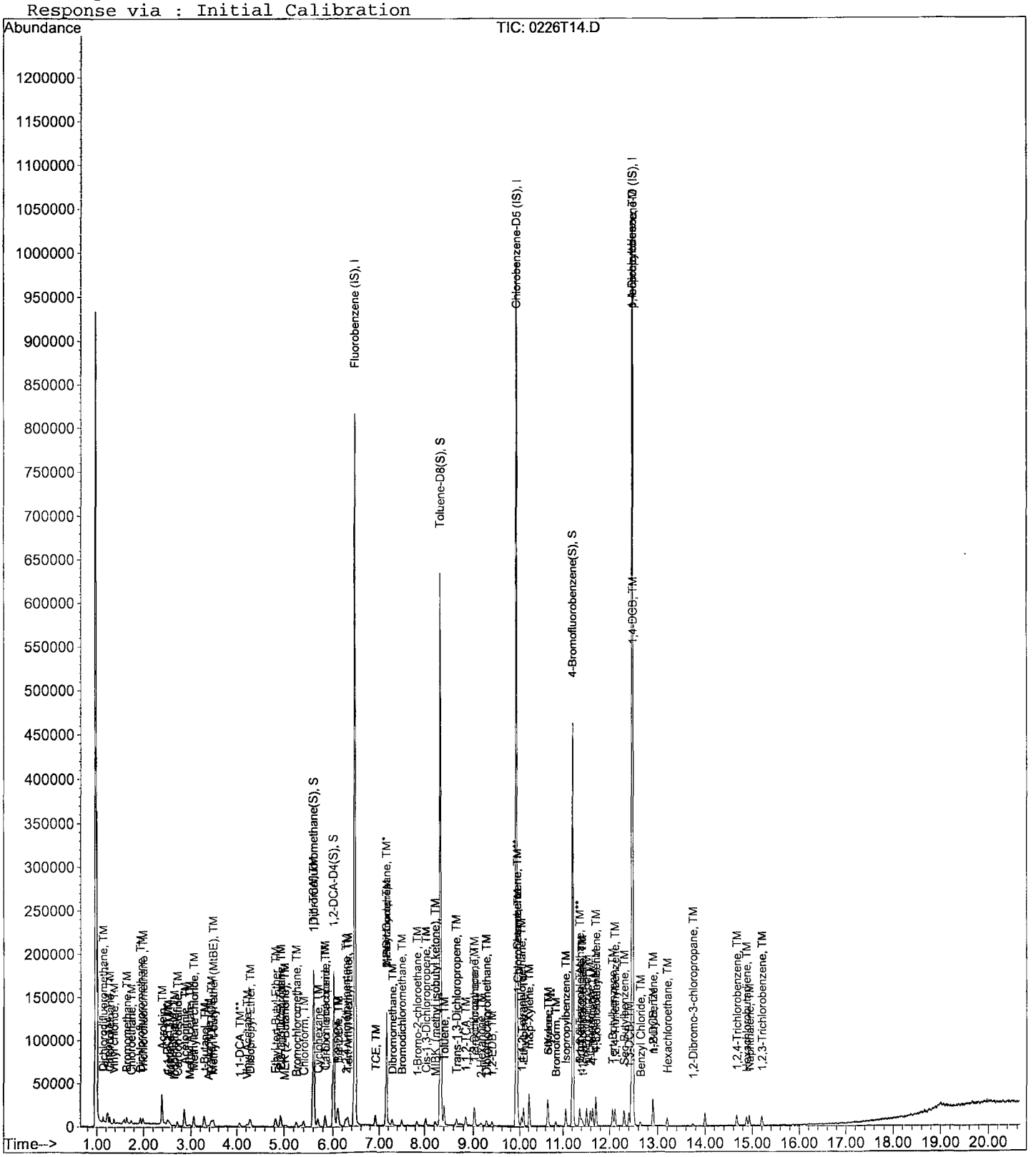
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200226\0226T14.D Vial: 4
Acq On : 26 Feb 20 13:56 Operator:
Sample : 1ug/L VOC STD 2/26/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 28 15:51 2020 Quant Results File: T0226W.RES

Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 02 12:37:16 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0226T15.D Vial: 5
Acq On : 26 Feb 20 14:25 Operator:
Sample : 2ug/L VOC STD 2/26/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 28 15:51 2020 Quant Results File: T0226W.RES

Quant Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 28 14:51:02 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.46	96	794325	25.00	ppb		0.00
66) Chlorobenzene-D5 (IS)	9.92	117	638468	25.00	ppb		0.00
81) 1,4-Dichlorobenzene-D (IS)	12.47	152	347920	25.00	ppb		0.00
System Monitoring Compounds							
41) Dibromofluoromethane(S)	5.60	111	123536	9.40	ppb		0.00
Spiked Amount 25.000			Recovery =	37.584%			
46) 1,2-DCA-D4(S)	6.02	65	141988	9.28	ppb		0.00
Spiked Amount 25.000			Recovery =	37.100%			
67) Toluene-D8(S)	8.33	98	474507	9.37	ppb		0.00
Spiked Amount 25.000			Recovery =	37.496%			
75) 4-Bromofluorobenzene(S)	11.21	95	178631	9.46	ppb		0.00
Spiked Amount 25.000			Recovery =	37.860%			
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.14	85	6955	2.12	ppb	#	88
4) Freon 114	1.24	85	5573	3.48	ppb		84
5) Chloromethane	1.28	50	7447	1.96	ppb		99
6) Vinyl chloride	1.37	62	5883	1.87	ppb		98
8) Bromomethane	1.64	94	5089	2.05	ppb		87
9) Chloroethane	1.75	66	971	2.06	ppb		77
10) Dichlorofluoromethane	1.93	67	10168	2.11	ppb		100
11) Trichlorofluoromethane	1.98	101	9362	2.22	ppb		93
14) Acrolein	2.39	55	16744	71.49	ppb		97
15) Acetone	2.56	43	2507	1.34	ppb		94
16) Freon-113	2.52	101	4304	2.91	ppb		89
17) 1,1-DCE	2.50	61	7276	1.99	ppb		88
19) Acetonitrile	2.86	40	8326	76.39	ppb		96
20) t-Butanol	3.29	59	8672	71.24	ppb		96
21) Methyl Acetate	2.97	43	5149	1.85	ppb		92
22) Iodomethane	2.65	142	1829	3.88	ppb	#	89
23) Acrylonitrile	3.38	52	1750	2.02	ppb		92
24) Methylene chloride	3.05	49	12155	2.27	ppb		97
25) Carbon disulfide	2.71	76	12605	1.96	ppb		98
26) Methyl t-butyl ether (MtBE	3.48	73	17362	2.04	ppb		95
27) Trans-1,2-DCE	3.43	61	7849	2.03	ppb		98
29) Diisopropyl Ether	4.29	45	18005	1.97	ppb		97
31) 1,1-DCA	4.06	63	9459	1.94	ppb	#	89
32) Vinyl Acetate	4.22	43	4062	1.91	ppb	#	86
33) Ethyl tert Butyl Ether	4.82	59	18710	2.07	ppb		100
34) MEK (2-Butanone)	5.00	43	3765	1.99	ppb	#	82
35) Cis-1,2-DCE	4.94	61	9713	2.01	ppb	#	87
36) 2,2-Dichloropropane	4.92	77	8802	2.10	ppb	#	86
39) Chloroform	5.40	83	11574	2.01	ppb		99
40) Bromochloromethane	5.25	49	5350	1.98	ppb		89
42) 1,1,1-TCA	5.61	97	9208	1.96	ppb		93
43) Cyclohexane	5.69	56	8257	2.89	ppb	#	92
44) 1,1-Dichloropropene	5.85	75	7635	2.00	ppb		98
45) 2,2,4-Trimethylpentane	6.27	57	14612	3.01	ppb		94
47) Carbon Tetrachloride	5.84	117	8463	2.24	ppb		95
48) Tert Amyl Methyl Ether	6.31	73	16955	1.96	ppb	#	89
50) 1,2-DCA	6.11	62	9830	1.90	ppb		98
51) Benzene	6.10	78	26402	2.13	ppb		92
52) TCE	6.92	130	7824	1.96	ppb		89

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0226T15.D Vial: 5
Acq On : 26 Feb 20 14:25 Operator:
Sample : 2ug/L VOC STD 2/26/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 28 15:51 2020 Quant Results File: T0226W.RES

Quant Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 28 14:51:02 2020
Response via : Initial Calibration
DataAcq Meth : T8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
53)	2-Pentanone	7.15	43	188503	74.16	ppb		98
54)	1,2-Dichloropropane	7.16	63	7366	2.12	ppb	#	92
55)	Bromodichloromethane	7.50	83	8502	1.98	ppb	#	83
56)	Methyl Cyclohexane	7.15	83	8833	3.19	ppb		95
57)	Dibromomethane	7.29	174	5584	2.01	ppb	#	84
58)	MIBK (methyl isobutyl ket	8.22	43	6423	1.89	ppb		93
59)	1-Bromo-2-chloroethane	7.83	63	4845	1.88	ppb		93
61)	Cis-1,3-Dichloropropene	8.02	75	9273	1.84	ppb		98
62)	Toluene	8.40	91	27470	1.92	ppb		94
63)	Trans-1,3-Dichloropropene	8.65	75	8295	1.82	ppb	#	84
64)	1,1,2-TCA	8.85	97	6328	1.97	ppb		99
65)	2-Hexanone	9.15	43	4355	2.57	ppb	#	89
68)	1,2-EDB	9.38	107	6717	2.00	ppb		88
69)	Tetrachloroethene	9.02	166	9041	2.07	ppb		94
70)	1-Chlorohexane	9.95	91	6986	1.98	ppb		97
71)	1,1,1,2-Tetrachloroethane	10.04	131	6714	1.91	ppb		94
72)	m&p-Xylene	10.22	91	45499	3.81	ppb		96
73)	o-Xylene	10.65	91	24470	1.92	ppb		94
74)	Styrene	10.66	104	19443	1.97	ppb		96
76)	1,3-Dichloropropane	9.03	76	10708	1.96	ppb		100
77)	Dibromochloromethane	9.27	129	7085	1.97	ppb		100
78)	Chlorobenzene	9.95	112	18926	1.95	ppb		97
79)	Ethylbenzene	10.09	91	32095	2.05	ppb		95
80)	Bromoform	10.84	173	5175	2.00	ppb		95
82)	Isopropylbenzene	11.06	105	29450	2.04	ppb		100
83)	1,1,2,2-Tetrachloroethane	11.36	83	7492	2.02	ppb	#	92
84)	1,2,3-Trichloropropane	11.41	110	2935	2.12	ppb	#	74
85)	t-1,4-Dichloro-2-Butene	11.42	53	1440	1.86	ppb		100
86)	Bromobenzene	11.37	77	15918	2.04	ppb		97
87)	n-Propylbenzene	11.51	91	32159	1.96	ppb		96
88)	4-Ethyltoluene	11.64	105	27219	1.92	ppb		96
89)	2-Chlorotoluene	11.59	91	24889	2.02	ppb		95
90)	1,3,5-Trimethylbenzene	11.70	105	24168	1.96	ppb		97
91)	4-Chlorotoluene	11.71	91	23860	2.00	ppb		96
92)	Tert-Butylbenzene	12.06	119	24123	2.02	ppb		93
93)	1,2,4-Trimethylbenzene	12.11	105	25706	2.00	ppb		96
94)	Sec-Butylbenzene	12.30	105	29362	1.97	ppb		95
95)	p-Isopropyltoluene	12.46	119	25893	1.99	ppb		99
96)	Benzyl Chloride	12.64	91	8433	1.93	ppb		98
97)	1,3-DCB	12.40	146	15760	1.97	ppb		96
98)	1,4-DCB	12.50	146	16727	2.00	ppb		90
99)	n-Butylbenzene	12.91	91	20820	1.97	ppb		98
100)	1,2-DCB	12.90	146	15807	1.94	ppb		93
101)	Hexachloroethane	13.21	201	3390	2.11	ppb		91
102)	1,2-Dibromo-3-chloropropan	13.75	157	1936	2.47	ppb		87
103)	1,2,4-Trichlorobenzene	14.67	180	10596	1.92	ppb		84
104)	Hexachlorobutadiene	14.88	225	5799	2.30	ppb		93
105)	Naphthalene	14.94	127	2734	1.78	ppb		78
106)	1,2,3-Trichlorobenzene	15.21	180	9744	1.88	ppb		91

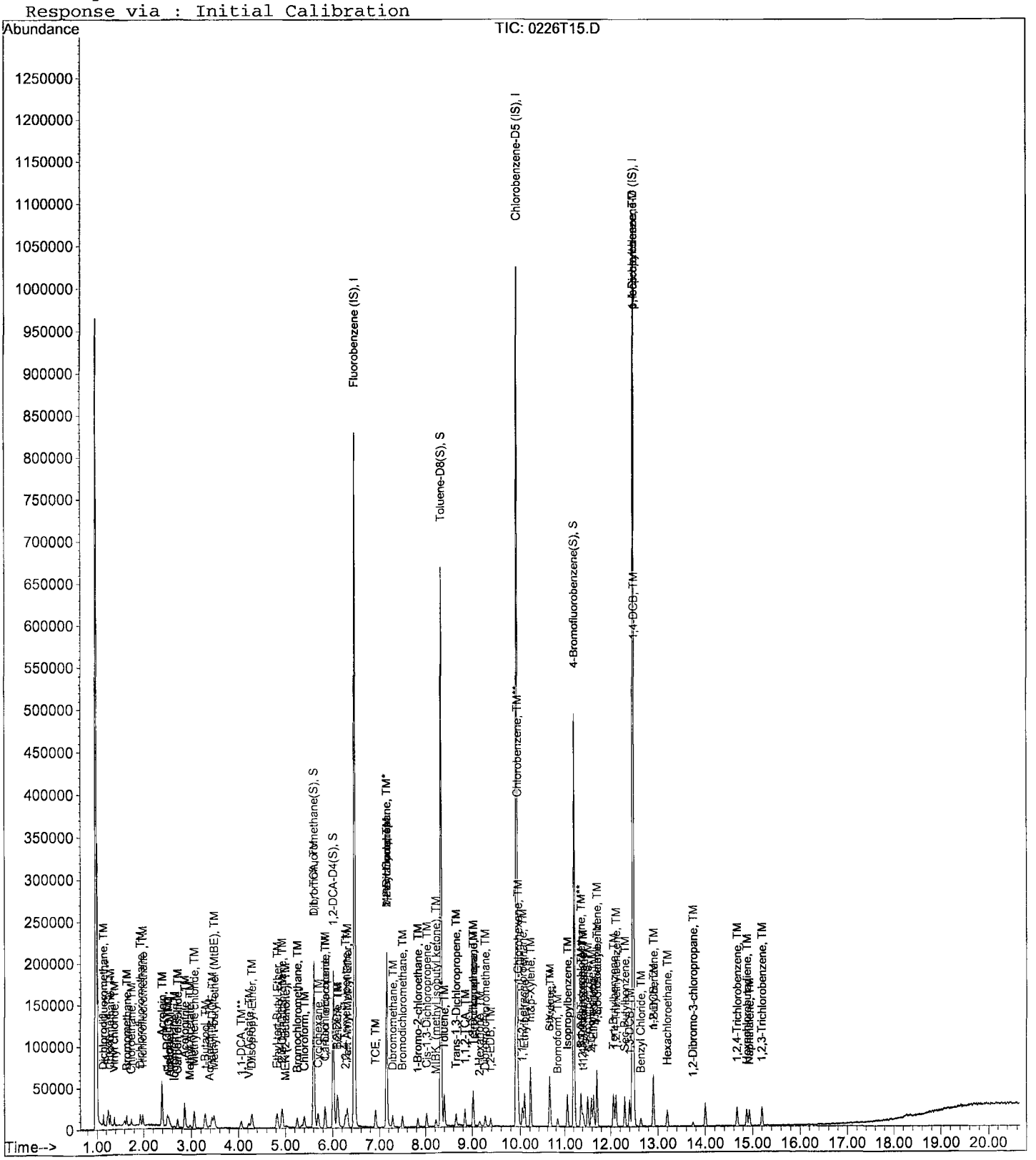
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200226\0226T15.D Vial: 5
Acq On : 26 Feb 20 14:25 Operator:
Sample : 2ug/L VOC STD 2/26/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 28 15:51 2020 Quant Results File: T0226W.RES

Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 02 12:37:16 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0226T16.D Vial: 6
Acq On : 26 Feb 20 14:53 Operator:
Sample : 5ug/L VOC STD 2/26/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 28 15:51 2020 Quant Results File: T0226W.RES

Quant Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 28 14:51:02 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.46	96	780532	25.00	ppb		0.00
66) Chlorobenzene-D5 (IS)	9.92	117	632182	25.00	ppb		0.00
81) 1,4-Dichlorobenzene-D (IS)	12.48	152	362830	25.00	ppb		0.00
System Monitoring Compounds							
41) Dibromofluoromethane(S)	5.60	111	253547	25.60	ppb		0.00
Spiked Amount 25.000			Recovery = 102.388%				
46) 1,2-DCA-D4(S)	6.02	65	292079	25.76	ppb		0.00
Spiked Amount 25.000			Recovery = 103.040%				
67) Toluene-D8(S)	8.33	98	964349	25.39	ppb		0.00
Spiked Amount 25.000			Recovery = 101.568%				
75) 4-Bromofluorobenzene(S)	11.21	95	376130	24.74	ppb		0.00
Spiked Amount 25.000			Recovery = 98.964%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.14	85	15091	4.69	ppb		91
4) Freon 114	1.24	85	6782	3.95	ppb		86
5) Chloromethane	1.28	50	17208	5.00	ppb		95
6) Vinyl chloride	1.37	62	14955	4.83	ppb		99
8) Bromomethane	1.64	94	10792	4.99	ppb		91
9) Chloroethane	1.74	66	2033	4.72	ppb		93
10) Dichlorofluoromethane	1.93	67	20939	4.43	ppb		92
11) Trichlorofluoromethane	1.99	101	19388	4.68	ppb		94
14) Acrolein	2.39	55	23184	100.73	ppb		99
15) Acetone	2.56	43	3767	4.25	ppb		99
16) Freon-113	2.52	101	7692	4.50	ppb		97
17) 1,1-DCE	2.50	61	16664	4.64	ppb		94
19) Acetonitrile	2.86	40	10551	98.52	ppb		86
20) t-Butanol	3.29	59	12208	102.06	ppb		93
21) Methyl Acetate	2.97	43	11444	4.60	ppb		95
22) Iodomethane	2.64	142	4405	4.69	ppb	#	90
23) Acrylonitrile	3.38	52	4045	4.75	ppb	#	92
24) Methylene chloride	3.06	49	20083	4.60	ppb		93
25) Carbon disulfide	2.71	76	29617	4.68	ppb		97
26) Methyl t-butyl ether (MtBE	3.48	73	38369	4.59	ppb		94
27) Trans-1,2-DCE	3.43	61	16348	4.30	ppb		96
29) Diisopropyl Ether	4.28	45	39679	4.41	ppb		96
31) 1,1-DCA	4.05	63	22582	4.72	ppb		94
32) Vinyl Acetate	4.22	43	9403	4.49	ppb		97
33) Ethyl tert Butyl Ether	4.82	59	39645	4.47	ppb		96
34) MEK (2-Butanone)	4.99	43	8760	5.68	ppb		98
35) Cis-1,2-DCE	4.93	61	21321	4.49	ppb		91
36) 2,2-Dichloropropane	4.92	77	18420	4.47	ppb	#	88
39) Chloroform	5.40	83	26582	4.69	ppb		96
40) Bromochloromethane	5.25	49	12303	4.64	ppb		95
42) 1,1,1-TCA	5.61	97	20544	4.45	ppb		95
43) Cyclohexane	5.69	56	14703	4.47	ppb		95
44) 1,1-Dichloropropene	5.84	75	16548	4.42	ppb	#	86
45) 2,2,4-Trimethylpentane	6.27	57	24708	4.35	ppb		99
47) Carbon Tetrachloride	5.84	117	15883	4.27	ppb		96
48) Tert Amyl Methyl Ether	6.31	73	38564	4.54	ppb		97
50) 1,2-DCA	6.11	62	23483	4.61	ppb		95
51) Benzene	6.10	78	55269	4.54	ppb		100
52) TCE	6.91	130	17865	4.56	ppb		96

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0226T16.D Vial: 6
Acq On : 26 Feb 20 14:53 Operator:
Sample : 5ug/L VOC STD 2/26/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 28 15:51 2020 Quant Results File: T0226W.RES

Quant Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 28 14:51:02 2020
Response via : Initial Calibration
DataAcq Meth : T8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
53)	2-Pentanone	7.15	43	254096	101.73	ppb		97
54)	1,2-Dichloropropane	7.16	63	15457	4.54	ppb	#	94
55)	Bromodichloromethane	7.50	83	19358	4.58	ppb		98
56)	Methyl Cyclohexane	7.15	83	13741	4.38	ppb		98
57)	Dibromomethane	7.28	174	12626	4.62	ppb		93
58)	MIBK (methyl isobutyl ket	8.22	43	15611	4.67	ppb		98
59)	1-Bromo-2-chloroethane	7.83	63	12183	4.82	ppb		97
61)	Cis-1,3-Dichloropropene	8.02	75	22052	4.45	ppb		98
62)	Toluene	8.40	91	63233	4.49	ppb		94
63)	Trans-1,3-Dichloropropene	8.65	75	19901	4.45	ppb		98
64)	1,1,2-TCA	8.85	97	14244	4.51	ppb		92
65)	2-Hexanone	9.15	43	11040	5.51	ppb	#	97
68)	1,2-EDB	9.38	107	15214	4.57	ppb	#	95
69)	Tetrachloroethene	9.02	166	19572	4.52	ppb		97
70)	1-Chlorohexane	9.95	91	15760	4.52	ppb		98
71)	1,1,1,2-Tetrachloroethane	10.04	131	16442	4.73	ppb		95
72)	m&p-Xylene	10.22	91	106727	9.04	ppb		97
73)	o-Xylene	10.65	91	58087	4.60	ppb		100
74)	Styrene	10.66	104	43644	4.46	ppb		98
76)	1,3-Dichloropropane	9.03	76	26049	4.81	ppb		97
77)	Dibromochloromethane	9.27	129	15292	4.29	ppb		84
78)	Chlorobenzene	9.95	112	43583	4.53	ppb		96
79)	Ethylbenzene	10.09	91	70296	4.54	ppb		95
80)	Bromoform	10.84	173	11622	4.53	ppb		93
82)	Isopropylbenzene	11.06	105	66486	4.43	ppb		100
83)	1,1,2,2-Tetrachloroethane	11.36	83	17062	4.42	ppb	#	93
84)	1,2,3-Trichloropropane	11.40	110	6363	4.41	ppb		87
85)	t-1,4-Dichloro-2-Butene	11.43	53	3592	4.45	ppb	#	73
86)	Bromobenzene	11.37	77	36061	4.44	ppb		94
87)	n-Propylbenzene	11.51	91	77009	4.50	ppb		98
88)	4-Ethyltoluene	11.64	105	66196	4.48	ppb		99
89)	2-Chlorotoluene	11.59	91	54611	4.25	ppb		96
90)	1,3,5-Trimethylbenzene	11.71	105	58614	4.57	ppb		95
91)	4-Chlorotoluene	11.71	91	55785	4.49	ppb		96
92)	Tert-Butylbenzene	12.06	119	56709	4.54	ppb		98
93)	1,2,4-Trimethylbenzene	12.11	105	57834	4.31	ppb		98
94)	Sec-Butylbenzene	12.30	105	68002	4.38	ppb		93
95)	p-Isopropyltoluene	12.46	119	58589	4.32	ppb		98
96)	Benzyl Chloride	12.64	91	20457	4.48	ppb		98
97)	1,3-DCB	12.40	146	36510	4.39	ppb		96
98)	1,4-DCB	12.50	146	38514	4.42	ppb		98
99)	n-Butylbenzene	12.91	91	46456	4.21	ppb		99
100)	1,2-DCB	12.90	146	37877	4.45	ppb		99
101)	Hexachloroethane	13.20	201	9423	4.56	ppb		93
102)	1,2-Dibromo-3-chloropropan	13.74	157	4223	4.52	ppb		99
103)	1,2,4-Trichlorobenzene	14.67	180	24014	4.17	ppb		90
104)	Hexachlorobutadiene	14.88	225	12480	4.74	ppb		88
105)	Naphthalene	14.94	127	6322	3.94	ppb		71
106)	1,2,3-Trichlorobenzene	15.20	180	22634	4.18	ppb		95

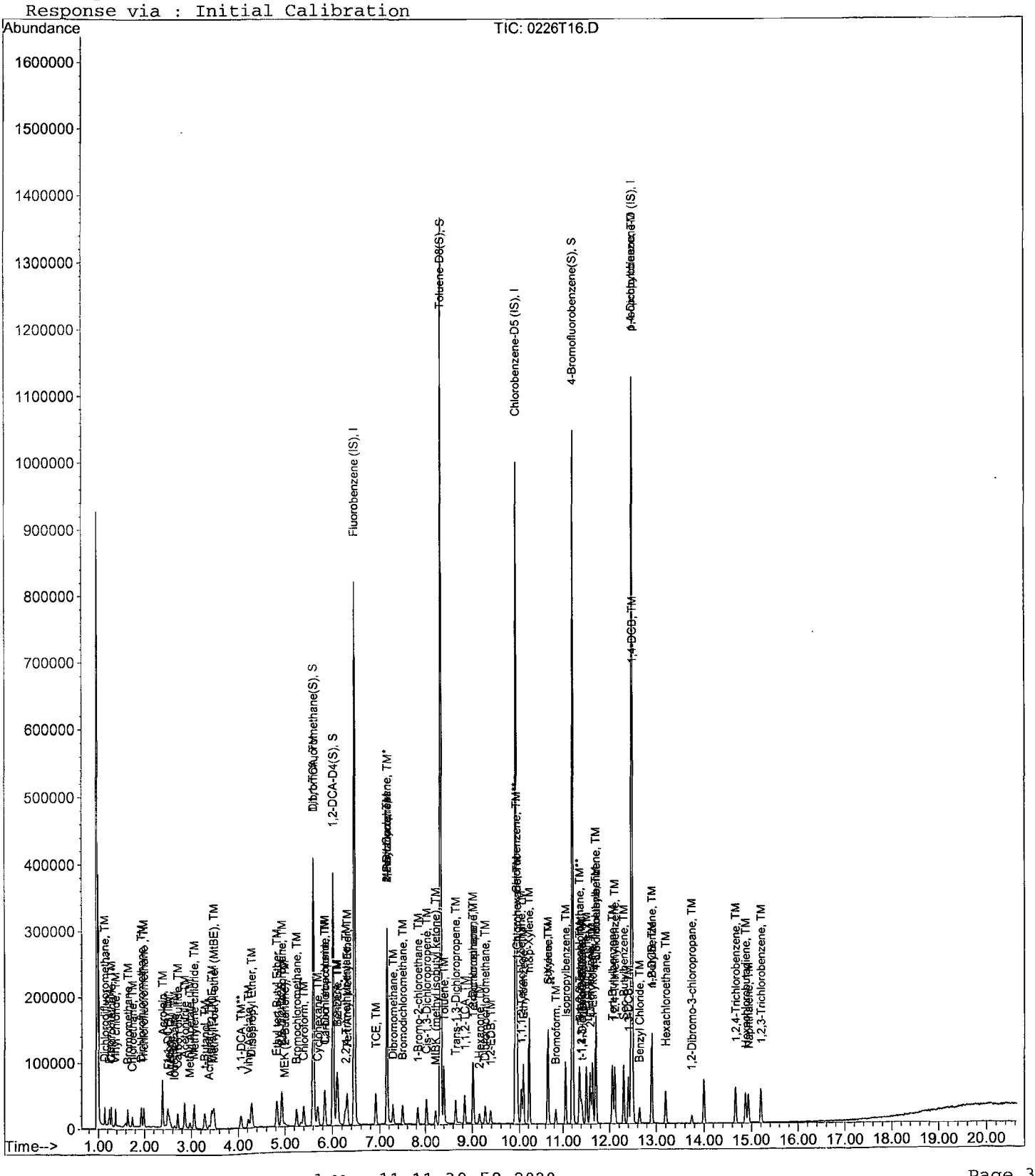
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200226\0226T16.D Vial: 6
Acq On : 26 Feb 20 14:53 Operator:
Sample : 5ug/L VOC STD 2/26/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 28 15:51 2020 Quant Results File: T0226W.RES

Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 02 12:37:16 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0226T17.D Vial: 7
Acq On : 26 Feb 20 15:21 Operator:
Sample : 10ug/L VOC STD 2/26/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 28 15:51 2020 Quant Results File: T0226W.RES

Quant Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 28 14:51:02 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	802951	25.00	ppb	0.00
66) Chlorobenzene-D5 (IS)	9.92	117	643777	25.00	ppb	0.00
81) 1,4-Dichlorobenzene-D (IS)	12.47	152	365286	25.00	ppb	0.00
System Monitoring Compounds						
41) Dibromofluoromethane(S)	5.60	111	258881	25.37	ppb	0.00
Spiked Amount 25.000			Recovery = 101.460%			
46) 1,2-DCA-D4(S)	6.02	65	293395	25.02	ppb	0.00
Spiked Amount 25.000			Recovery = 100.068%			
67) Toluene-D8(S)	8.33	98	987244	25.56	ppb	0.00
Spiked Amount 25.000			Recovery = 102.228%			
75) 4-Bromofluorobenzene(S)	11.21	95	383192	24.75	ppb	0.00
Spiked Amount 25.000			Recovery = 99.012%			
Target Compounds						Qvalue
3) Dichlorodifluoromethane	1.14	85	34056	10.28	ppb	100
4) Freon 114	1.24	85	27320	11.15	ppb	100
5) Chloromethane	1.28	50	35264	10.26	ppb	100
6) Vinyl chloride	1.37	62	30506	9.57	ppb	100
8) Bromomethane	1.64	94	22242	10.49	ppb	100
9) Chloroethane	1.74	66	4155	9.66	ppb	100
10) Dichlorofluoromethane	1.93	67	47894	9.84	ppb	100
11) Trichlorofluoromethane	1.98	101	44787	10.50	ppb	100
14) Acrolein	2.39	55	32240	136.16	ppb	100
15) Acetone	2.56	43	6340	9.59	ppb	100
16) Freon-113	2.52	101	22295	10.90	ppb	100
17) 1,1-DCE	2.50	61	37704	10.19	ppb	100
19) Acetonitrile	2.86	40	13960	126.71	ppb	100
20) t-Butanol	3.29	59	15024	122.10	ppb	100
21) Methyl Acetate	2.97	43	24461	9.91	ppb	100
22) Iodomethane	2.64	142	11157	6.69	ppb	100
23) Acrylonitrile	3.38	52	9023	10.29	ppb	100
24) Methylene chloride	3.06	49	41099	10.28	ppb	100
25) Carbon disulfide	2.71	76	64273	9.88	ppb	100
26) Methyl t-butyl ether (MtBE	3.48	73	88973	10.35	ppb	100
27) Trans-1,2-DCE	3.44	61	38468	9.83	ppb	100
29) Diisopropyl Ether	4.28	45	92069	9.95	ppb	100
31) 1,1-DCA	4.06	63	51096	10.38	ppb	100
32) Vinyl Acetate	4.22	43	22493	10.44	ppb	100
33) Ethyl tert Butyl Ether	4.82	59	92541	10.14	ppb	100
34) MEK (2-Butanone)	4.99	43	15610	10.36	ppb	100
35) Cis-1,2-DCE	4.93	61	49103	10.05	ppb	100
36) 2,2-Dichloropropane	4.92	77	42253	9.96	ppb	100
39) Chloroform	5.40	83	59986	10.28	ppb	100
40) Bromochloromethane	5.25	49	27934	10.25	ppb	100
42) 1,1,1-TCA	5.62	97	48354	10.17	ppb	100
43) Cyclohexane	5.70	56	42152	10.78	ppb	100
44) 1,1-Dichloropropene	5.85	75	38589	10.02	ppb	100
45) 2,2,4-Trimethylpentane	6.27	57	74795	10.56	ppb	100
47) Carbon Tetrachloride	5.84	117	41994	10.99	ppb	100
48) Tert Amyl Methyl Ether	6.31	73	89999	10.31	ppb	100
50) 1,2-DCA	6.11	62	50353	9.61	ppb	100
51) Benzene	6.09	78	126944	10.13	ppb	100
52) TCE	6.92	130	39329	9.76	ppb	100

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0226T17.D Vial: 7
Acq On : 26 Feb 20 15:21 Operator:
Sample : 10ug/L VOC STD 2/26/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 28 15:51 2020 Quant Results File: T0226W.RES

Quant Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 28 14:51:02 2020
Response via : Initial Calibration
DataAcq Meth : T8260

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
53)	2-Pentanone	7.15	43	322671	125.58 ppb	100
54)	1,2-Dichloropropane	7.16	63	35232	10.05 ppb	100
55)	Bromodichloromethane	7.50	83	45864	10.55 ppb	100
56)	Methyl Cyclohexane	7.15	83	41255	10.56 ppb	100
57)	Dibromomethane	7.29	174	27990	9.95 ppb	100
58)	MIBK (methyl isobutyl ket	8.22	43	33725	9.81 ppb	100
59)	1-Bromo-2-chloroethane	7.83	63	25800	9.93 ppb	100
61)	Cis-1,3-Dichloropropene	8.02	75	51371	10.07 ppb	100
62)	Toluene	8.40	91	143559	9.90 ppb	100
63)	Trans-1,3-Dichloropropene	8.65	75	45752	9.96 ppb	100
64)	1,1,2-TCA	8.84	97	33060	10.18 ppb	100
65)	2-Hexanone	9.15	43	22039	10.02 ppb	100
68)	1,2-EDB	9.38	107	35329	10.42 ppb	100
69)	Tetrachloroethene	9.02	166	43905	9.95 ppb	100
70)	1-Chlorohexane	9.95	91	38767	10.91 ppb	100
71)	1,1,1,2-Tetrachloroethane	10.04	131	37082	10.48 ppb	100
72)	m&p-Xylene	10.22	91	244797	20.35 ppb	100
73)	o-Xylene	10.65	91	130612	10.16 ppb	100
74)	Styrene	10.66	104	102100	10.24 ppb	100
76)	1,3-Dichloropropane	9.03	76	56820	10.31 ppb	100
77)	Dibromochloromethane	9.27	129	36790	10.14 ppb	100
78)	Chlorobenzene	9.95	112	99689	10.17 ppb	100
79)	Ethylbenzene	10.09	91	159745	10.14 ppb	100
80)	Bromoform	10.84	173	26655	10.20 ppb	100
82)	Isopropylbenzene	11.06	105	159203	10.53 ppb	100
83)	1,1,2,2-Tetrachloroethane	11.36	83	40543	10.42 ppb	100
84)	1,2,3-Trichloropropane	11.40	110	14864	10.24 ppb	100
85)	t-1,4-Dichloro-2-Butene	11.42	53	7677	9.45 ppb	100
86)	Bromobenzene	11.37	77	81595	9.97 ppb	100
87)	n-Propylbenzene	11.51	91	176389	10.24 ppb	100
88)	4-Ethyltoluene	11.64	105	150999	10.16 ppb	100
89)	2-Chlorotoluene	11.59	91	128358	9.93 ppb	100
90)	1,3,5-Trimethylbenzene	11.71	105	136831	10.60 ppb	100
91)	4-Chlorotoluene	11.71	91	131434	10.50 ppb	100
92)	Tert-Butylbenzene	12.06	119	136909	10.90 ppb	100
93)	1,2,4-Trimethylbenzene	12.11	105	138295	10.24 ppb	100
94)	Sec-Butylbenzene	12.30	105	157948	10.10 ppb	100
95)	p-Isopropyltoluene	12.46	119	139724	10.24 ppb	100
96)	Benzyl Chloride	12.64	91	41719	9.08 ppb	100
97)	1,3-DCB	12.40	146	82916	9.89 ppb	100
98)	1,4-DCB	12.50	146	87894	10.01 ppb	100
99)	n-Butylbenzene	12.91	91	112692	10.15 ppb	100
100)	1,2-DCB	12.90	146	85989	10.04 ppb	100
101)	Hexachloroethane	13.20	201	22399	9.89 ppb	100
102)	1,2-Dibromo-3-chloropropan	13.74	157	9510	9.40 ppb	100
103)	1,2,4-Trichlorobenzene	14.67	180	54519	9.40 ppb	100
104)	Hexachlorobutadiene	14.88	225	28554	10.77 ppb	100
105)	Naphthalene	14.94	127	15308	9.48 ppb	100
106)	1,2,3-Trichlorobenzene	15.20	180	54065	9.93 ppb	100

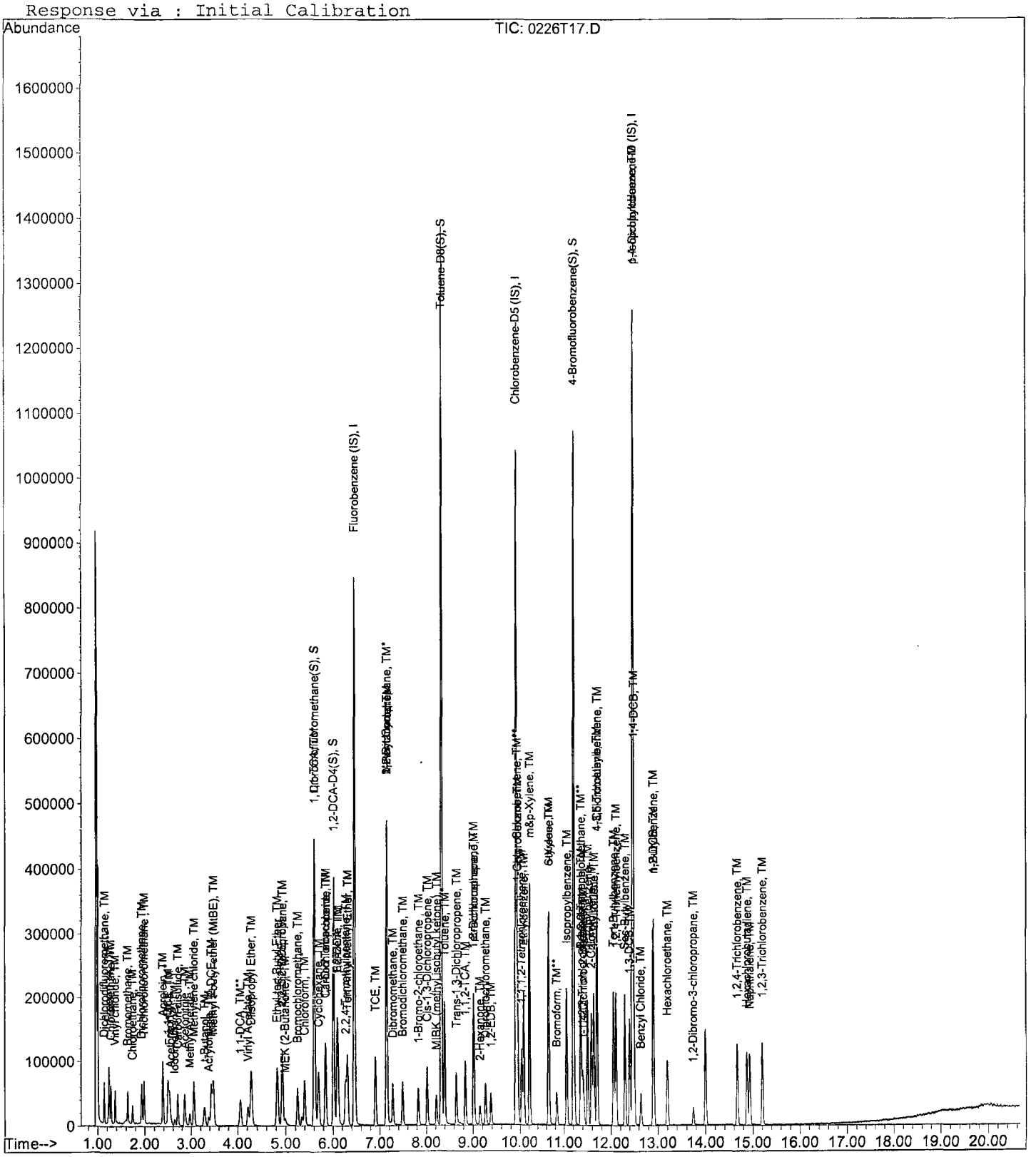
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200226\0226T17.D Vial: 7
Acq On : 26 Feb 20 15:21 Operator:
Sample : 10ug/L VOC STD 2/26/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 28 15:51 2020 Quant Results File: T0226W.RES

Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 02 12:37:16 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0226T18.D Vial: 8
Acq On : 26 Feb 20 15:50 Operator:
Sample : 20ug/L VOC STD 2/26/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 28 15:51 2020 Quant Results File: T0226W.RES

Quant Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 28 14:51:02 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.46	96	796726	25.00	ppb		0.00
66) Chlorobenzene-D5 (IS)	9.92	117	645189	25.00	ppb		0.00
81) 1,4-Dichlorobenzene-D (IS)	12.47	152	375677	25.00	ppb		0.00
System Monitoring Compounds							
41) Dibromofluoromethane(S)	5.60	111	477643	51.88	ppb		0.00
Spiked Amount 25.000			Recovery =	207.520%			
46) 1,2-DCA-D4(S)	6.02	65	553095	52.75	ppb		0.00
Spiked Amount 25.000			Recovery =	210.996%			
67) Toluene-D8(S)	8.33	98	1836970	52.46	ppb		0.00
Spiked Amount 25.000			Recovery =	209.828%			
75) 4-Bromofluorobenzene(S)	11.21	95	729505	50.70	ppb		0.00
Spiked Amount 25.000			Recovery =	202.816%			
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.14	85	70104	21.33	ppb		96
4) Freon 114	1.24	85	36230	14.40	ppb		96
5) Chloromethane	1.28	50	66922	19.88	ppb		96
6) Vinyl chloride	1.37	62	61031	19.29	ppb		99
8) Bromomethane	1.64	94	37487	18.16	ppb		100
9) Chloroethane	1.74	66	8498	20.22	ppb		98
10) Dichlorofluoromethane	1.93	67	90367	18.72	ppb		99
11) Trichlorofluoromethane	1.98	101	88566	20.93	ppb		97
14) Acrolein	2.39	55	36936	157.22	ppb		98
15) Acetone	2.56	43	11912	21.86	ppb		95
16) Freon-113	2.53	101	33474	15.99	ppb		92
17) 1,1-DCE	2.49	61	67851	18.49	ppb		95
19) Acetonitrile	2.86	40	17091	156.34	ppb		99
20) t-Butanol	3.29	59	17456	142.97	ppb		96
21) Methyl Acetate	2.97	43	49620	20.59	ppb		99
22) Iodomethane	2.64	142	37371	14.68	ppb		92
23) Acrylonitrile	3.38	52	19879	22.85	ppb	#	86
24) Methylene chloride	3.06	49	76600	20.31	ppb		97
25) Carbon disulfide	2.71	76	123296	19.10	ppb		98
26) Methyl t-butyl ether (MtBE	3.48	73	174765	20.48	ppb		97
27) Trans-1,2-DCE	3.43	61	74912	19.29	ppb		97
29) Diisopropyl Ether	4.28	45	186262	20.29	ppb		93
31) 1,1-DCA	4.05	63	98206	20.10	ppb		97
32) Vinyl Acetate	4.21	43	42552	19.91	ppb		100
33) Ethyl tert Butyl Ether	4.83	59	182014	20.10	ppb		98
34) MEK (2-Butanone)	4.99	43	27965	19.28	ppb		97
35) Cis-1,2-DCE	4.93	61	96473	19.90	ppb	#	87
36) 2,2-Dichloropropane	4.93	77	80793	19.20	ppb	#	88
39) Chloroform	5.40	83	117313	20.26	ppb		94
40) Bromochloromethane	5.25	49	55582	20.55	ppb		97
42) 1,1,1-TCA	5.62	97	96022	20.35	ppb		97
43) Cyclohexane	5.69	56	64571	16.12	ppb		98
44) 1,1-Dichloropropene	5.85	75	72091	18.86	ppb		96
45) 2,2,4-Trimethylpentane	6.27	57	116953	15.97	ppb		97
47) Carbon Tetrachloride	5.84	117	76465	20.16	ppb		98
48) Tert Amyl Methyl Ether	6.31	73	181373	20.93	ppb		98
50) 1,2-DCA	6.11	62	100658	19.36	ppb		97
51) Benzene	6.09	78	252352	20.30	ppb		97
52) TCE	6.91	130	76092	19.02	ppb		97

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0226T18.D Vial: 8
Acq On : 26 Feb 20 15:50 Operator:
Sample : 20ug/L VOC STD 2/26/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 28 15:51 2020 Quant Results File: T0226W.RES

Quant Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 28 14:51:02 2020
Response via : Initial Calibration
DataAcq Meth : T8260

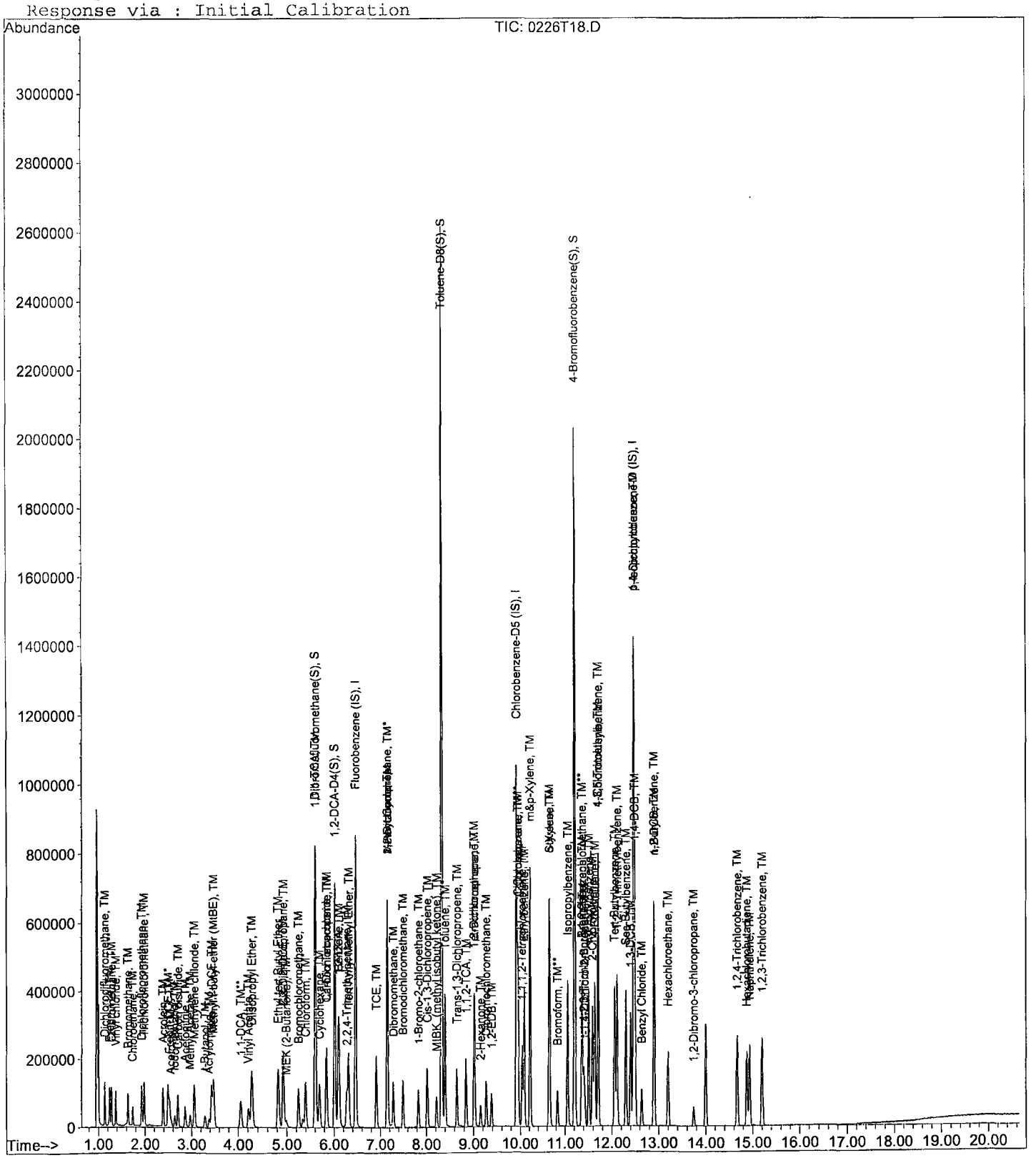
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
53)	2-Pentanone	7.15	43	391003	153.36	ppb		100
54)	1,2-Dichloropropane	7.16	63	67022	19.27	ppb	#	96
55)	Bromodichloromethane	7.49	83	90760	21.05	ppb		94
56)	Methyl Cyclohexane	7.15	83	63403	15.72	ppb		99
57)	Dibromomethane	7.29	174	59516	21.33	ppb		94
58)	MIBK (methyl isobutyl ket	8.22	43	61612	18.06	ppb		99
59)	1-Bromo-2-chloroethane	7.83	63	51120	19.82	ppb		96
61)	Cis-1,3-Dichloropropene	8.02	75	104788	20.69	ppb		98
62)	Toluene	8.40	91	293360	20.39	ppb		94
63)	Trans-1,3-Dichloropropene	8.65	75	91547	20.08	ppb		99
64)	1,1,2-TCA	8.85	97	65793	20.42	ppb		97
65)	2-Hexanone	9.15	43	43149	19.08	ppb		95
68)	1,2-EDB	9.38	107	70298	20.68	ppb		95
69)	Tetrachloroethene	9.02	166	80770	18.27	ppb		95
70)	1-Chlorohexane	9.95	91	68232	19.17	ppb		96
71)	1,1,1,2-Tetrachloroethane	10.04	131	74518	21.00	ppb		97
72)	m&p-Xylene	10.22	91	499669	41.45	ppb		99
73)	o-Xylene	10.65	91	270041	20.96	ppb		98
74)	Styrene	10.66	104	212576	21.27	ppb		99
76)	1,3-Dichloropropane	9.03	76	113103	20.47	ppb		100
77)	Dibromochloromethane	9.27	129	74480	20.48	ppb		88
78)	Chlorobenzene	9.95	112	198775	20.23	ppb		97
79)	Ethylbenzene	10.09	91	319957	20.27	ppb		99
80)	Bromoform	10.84	173	56696	21.64	ppb		96
82)	Isopropylbenzene	11.06	105	313405	20.15	ppb		99
83)	1,1,2,2-Tetrachloroethane	11.36	83	81206	20.30	ppb		97
84)	1,2,3-Trichloropropane	11.40	110	29820	19.97	ppb		94
85)	t-1,4-Dichloro-2-Butene	11.43	53	16865	20.20	ppb		90
86)	Bromobenzene	11.37	77	167011	19.84	ppb		96
87)	n-Propylbenzene	11.51	91	350933	19.82	ppb		96
88)	4-Ethyltoluene	11.64	105	307716	20.12	ppb		99
89)	2-Chlorotoluene	11.59	91	259792	19.54	ppb		99
90)	1,3,5-Trimethylbenzene	11.70	105	282041	21.24	ppb		98
91)	4-Chlorotoluene	11.71	91	269064	20.90	ppb		98
92)	Tert-Butylbenzene	12.06	119	269190	20.83	ppb		96
93)	1,2,4-Trimethylbenzene	12.11	105	289094	20.81	ppb		96
94)	Sec-Butylbenzene	12.30	105	316407	19.68	ppb		98
95)	p-Isopropyltoluene	12.46	119	281206	20.05	ppb		98
96)	Benzyl Chloride	12.64	91	91851	19.44	ppb		98
97)	1,3-DCB	12.40	146	168999	19.61	ppb		98
98)	1,4-DCB	12.50	146	174474	19.33	ppb		98
99)	n-Butylbenzene	12.91	91	218814	19.15	ppb		96
100)	1,2-DCB	12.90	146	173911	19.75	ppb		93
101)	Hexachloroethane	13.20	201	47361	19.66	ppb		96
102)	1,2-Dibromo-3-chloropropan	13.74	157	21326	19.80	ppb		91
103)	1,2,4-Trichlorobenzene	14.67	180	117138	19.64	ppb		86
104)	Hexachlorobutadiene	14.88	225	55329	20.29	ppb		93
105)	Naphthalene	14.94	127	32137	19.35	ppb		82
106)	1,2,3-Trichlorobenzene	15.20	180	115953	20.70	ppb		98

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

Data File : M:\THOR\DATA\T200226\0226T18.D Vial: 8
Acq On : 26 Feb 20 15:50 Operator:
Sample : 20ug/L VOC STD 2/26/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 28 15:51 2020 Quant Results File: T0226W.RES

Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 02 12:37:16 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0226T20.D Vial: 10
Acq On : 26 Feb 20 16:46 Operator:
Sample : 100ug/L VOC STD 2/26/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 28 15:51 2020 Quant Results File: T0226W.RES

Quant Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 28 14:51:02 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.46	96	760373	25.00	ppb		0.00
66) Chlorobenzene-D5 (IS)	9.92	117	635810	25.00	ppb		0.00
81) 1,4-Dichlorobenzene-D (IS)	12.48	152	408318	25.00	ppb		0.00
System Monitoring Compounds							
41) Dibromofluoromethane(S)	5.60	111	830096	98.98	ppb		0.00
Spiked Amount 25.000			Recovery =	395.912%			
46) 1,2-DCA-D4(S)	6.02	65	941300	98.61	ppb		0.00
Spiked Amount 25.000			Recovery =	394.428%			
67) Toluene-D8(S)	8.33	98	3247508	98.75	ppb		0.00
Spiked Amount 25.000			Recovery =	394.980%			
75) 4-Bromofluorobenzene(S)	11.21	95	1363633	99.85	ppb		0.00
Spiked Amount 25.000			Recovery =	399.396%			
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.14	85	319168	101.74	ppb		95
4) Freon 114	1.24	85	266509	101.01	ppb		100
5) Chloromethane	1.28	50	296165	93.24	ppb		97
6) Vinyl chloride	1.37	62	280254	92.82	ppb		98
8) Bromomethane	1.63	94	140133	72.59	ppb		98
9) Chloroethane	1.72	66	36424	91.82	ppb		97
10) Dichlorofluoromethane	1.93	67	434932	94.40	ppb		100
11) Trichlorofluoromethane	1.97	101	389344	96.41	ppb		99
14) Acrolein	2.39	55	48288	215.36	ppb		87
15) Acetone	2.57	43	45463	99.84	ppb		98
16) Freon-113	2.52	101	212149	100.70	ppb		97
17) 1,1-DCE	2.49	61	338772	96.73	ppb		98
19) Acetonitrile	2.87	40	21587	206.90	ppb		97
20) t-Butanol	3.31	59	23240	199.44	ppb		97
21) Methyl Acetate	2.97	43	226626	99.79	ppb		97
22) Iodomethane	2.64	142	306906	101.09	ppb		94
23) Acrylonitrile	3.38	52	94092	113.33	ppb		90
24) Methylene chloride	3.06	49	344299	99.91	ppb		99
25) Carbon disulfide	2.70	76	641147	104.08	ppb		99
26) Methyl t-butyl ether (MtBE	3.48	73	813248	99.86	ppb		96
27) Trans-1,2-DCE	3.43	61	354983	95.78	ppb		96
29) Diisopropyl Ether	4.29	45	893903	102.04	ppb		95
31) 1,1-DCA	4.06	63	466229	99.98	ppb		97
32) Vinyl Acetate	4.22	43	203072	99.57	ppb		99
33) Ethyl tert Butyl Ether	4.83	59	894933	103.55	ppb		99
34) MEK (2-Butanone)	4.99	43	134526	100.06	ppb		97
35) Cis-1,2-DCE	4.93	61	455019	98.36	ppb	#	88
36) 2,2-Dichloropropane	4.93	77	386501	96.24	ppb		93
39) Chloroform	5.40	83	546610	98.94	ppb		97
40) Bromochloromethane	5.25	49	250884	97.21	ppb		92
42) 1,1,1-TCA	5.62	97	466923	103.71	ppb		97
43) Cyclohexane	5.69	56	405041	100.69	ppb		99
44) 1,1-Dichloropropene	5.85	75	363512	99.67	ppb		95
45) 2,2,4-Trimethylpentane	6.27	57	750220	100.74	ppb		99
47) Carbon Tetrachloride	5.84	117	400129	110.53	ppb		98
48) Tert Amyl Methyl Ether	6.31	73	872031	105.44	ppb		96
50) 1,2-DCA	6.11	62	449177	90.54	ppb		97
51) Benzene	6.10	78	1187381	100.08	ppb		100
52) TCE	6.91	130	359098	94.06	ppb		97

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0226T20.D Vial: 10
Acq On : 26 Feb 20 16:46 Operator:
Sample : 100ug/L VOC STD 2/26/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 28 15:51 2020 Quant Results File: T0226W.RES

Quant Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 28 14:51:02 2020
Response via : Initial Calibration
DataAcq Meth : T8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
53)	2-Pentanone	7.16	43	526834	216.52	ppb		99
54)	1,2-Dichloropropane	7.16	63	317368	95.60	ppb		97
55)	Bromodichloromethane	7.50	83	445595	108.27	ppb		96
56)	Methyl Cyclohexane	7.15	83	413877	100.79	ppb		93
57)	Dibromomethane	7.29	174	269831	101.33	ppb		97
58)	MIBK (methyl isobutyl ket	8.22	43	320387	98.39	ppb		99
59)	1-Bromo-2-chloroethane	7.83	63	238784	97.02	ppb		95
61)	Cis-1,3-Dichloropropene	8.02	75	519578	107.51	ppb		98
62)	Toluene	8.40	91	1378876	100.44	ppb		97
63)	Trans-1,3-Dichloropropene	8.65	75	480071	110.31	ppb		96
64)	1,1,2-TCA	8.85	97	310025	100.84	ppb		97
65)	2-Hexanone	9.15	43	223023	100.20	ppb		97
68)	1,2-EDB	9.39	107	332316	99.22	ppb		100
69)	Tetrachloroethene	9.02	166	393888	90.39	ppb		96
70)	1-Chlorohexane	9.96	91	388024	110.61	ppb		97
71)	1,1,1,2-Tetrachloroethane	10.04	131	370020	105.84	ppb		96
72)	m&p-Xylene	10.22	91	2494391	209.96	ppb		100
73)	o-Xylene	10.65	91	1339358	105.52	ppb		98
74)	Styrene	10.66	104	1109324	112.63	ppb		99
76)	1,3-Dichloropropane	9.03	76	532152	97.74	ppb		100
77)	Dibromochloromethane	9.27	129	392473	109.51	ppb		93
78)	Chlorobenzene	9.95	112	954749	98.59	ppb		96
79)	Ethylbenzene	10.09	91	1606219	103.25	ppb		98
80)	Bromoform	10.84	173	315302	122.14	ppb		97
82)	Isopropylbenzene	11.06	105	1621761	95.95	ppb		100
83)	1,1,2,2-Tetrachloroethane	11.36	83	423005	97.28	ppb		97
84)	1,2,3-Trichloropropane	11.40	110	152612	94.05	ppb		95
85)	t-1,4-Dichloro-2-Butene	11.43	53	90814	100.05	ppb	#	79
86)	Bromobenzene	11.37	77	832223	90.97	ppb		99
87)	n-Propylbenzene	11.51	91	1884014	97.89	ppb		98
88)	4-Ethyltoluene	11.64	105	1623325	97.67	ppb		99
89)	2-Chlorotoluene	11.59	91	1333227	92.25	ppb		100
90)	1,3,5-Trimethylbenzene	11.71	105	1433259	99.28	ppb		98
91)	4-Chlorotoluene	11.71	91	1394491	99.65	ppb		97
92)	Tert-Butylbenzene	12.06	119	1443097	102.74	ppb		99
93)	1,2,4-Trimethylbenzene	12.11	105	1486616	98.44	ppb		98
94)	Sec-Butylbenzene	12.30	105	1762396	100.87	ppb		98
95)	p-Isopropyltoluene	12.46	119	1565534	102.68	ppb		98
96)	Benzyl Chloride	12.64	91	577944	112.53	ppb		99
97)	1,3-DCB	12.40	146	904031	96.50	ppb		97
98)	1,4-DCB	12.50	146	921668	93.94	ppb		98
99)	n-Butylbenzene	12.91	91	1284818	103.48	ppb		96
100)	1,2-DCB	12.90	146	941551	98.37	ppb		96
101)	Hexachloroethane	13.20	201	269147	100.09	ppb		90
102)	1,2-Dibromo-3-chloropropan	13.74	157	120019	100.11	ppb		96
103)	1,2,4-Trichlorobenzene	14.67	180	678247	104.62	ppb		93
104)	Hexachlorobutadiene	14.88	225	347841	117.39	ppb		93
105)	Naphthalene	14.94	127	188452	104.41	ppb		92
106)	1,2,3-Trichlorobenzene	15.20	180	639154	104.98	ppb		97

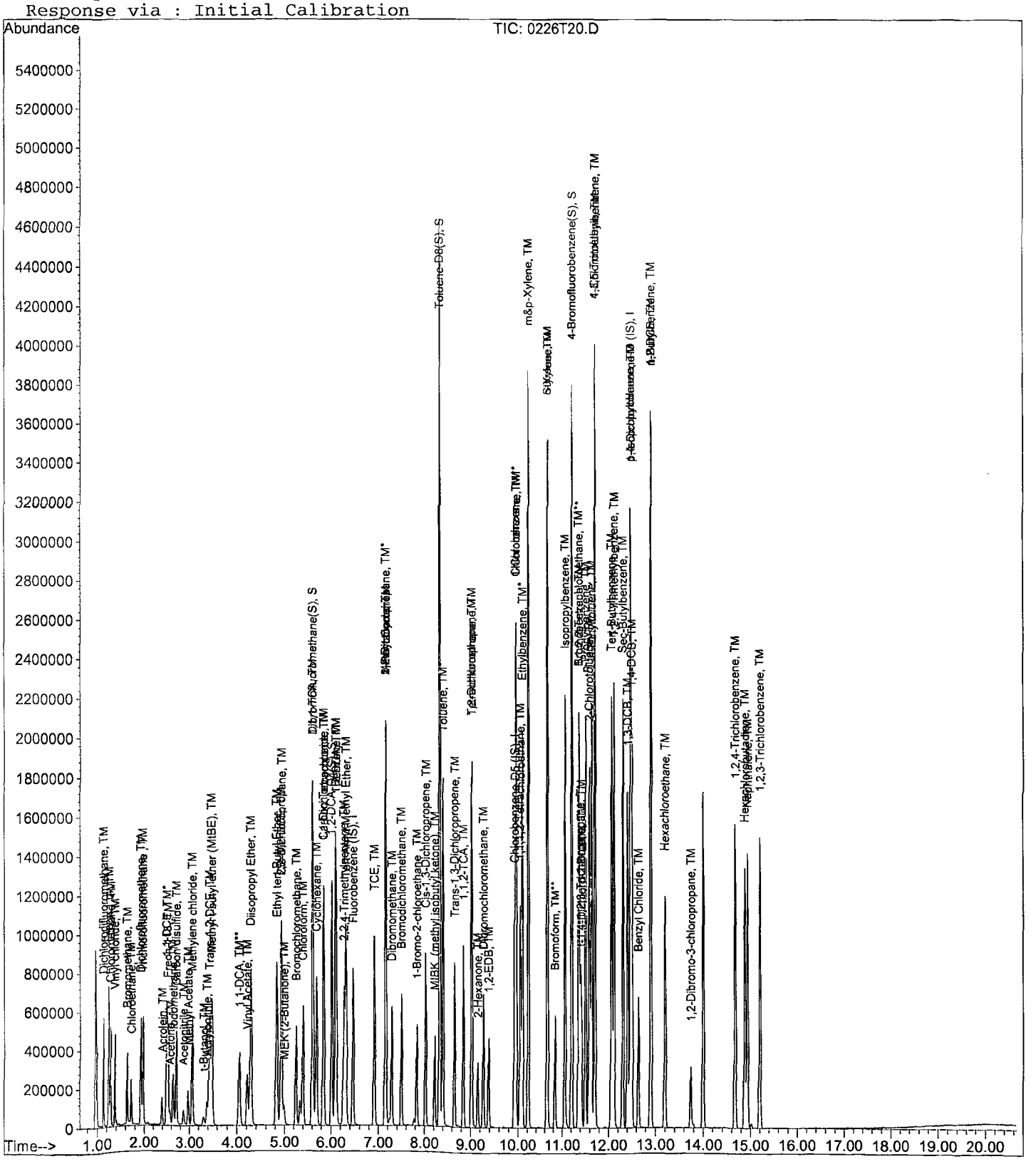
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200226\0226T20.D Vial: 10
Acq On : 26 Feb 20 16:46 Operator:
Sample : 100ug/L VOC STD 2/26/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 28 15:51 2020 Quant Results File: T0226W.RES

Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 02 12:37:16 2020
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

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

SDG No:
Date Analyzed: 02/26/20
Instrument: Thor
Initial Cal. Date: 02/26/20
Data File: 0226T22.D

		Compound	MEAN	CCRF	%D		%Drift	
1	TM	Dichlorodifluoromethane	0.1031	0.1217	18	TM		
2	TML	Freon 114	0.0782	0.0846	8.3	TML	11	
3	TM**L	Chloromethane	0.1210	0.1260	4.2	TM**L	18	
4	TM*	Vinyl chloride	0.0993	0.1046	5.4	TM*		
5	TML	Bromomethane	0.0830	0.0826	0.43	TML	26	* NT
6	TML	Chloroethane	0.0162	0.0173	6.4	TML	30	* NT
7	TM	Dichlorofluoromethane	0.1515	0.1697	12	TM		
8	TM	Trichlorofluoromethane	0.1328	0.1439	8.4	TM		
9	TM	1,2 Dichlorotrifluoroethane	0.0000	0.0004	0.00	TM		
10	TM	Acrolein	0.0074	0.0036	52	TM		* NT
11	TML	Acetone	0.0474	0.0232	51	TML	20	
12	TML	Freon-113	0.0640	0.0737	15	TML	15	
13	TM*	1,1-DCE	0.1152	0.1222	6.1	TM*		
14	TM	2-Propanol	0.0000	0.0000	0.00	TM		
15	TM	Acetonitrile	0.0034	0.0034	1.7	TM		
16	TM	t-Butanol	0.0038	0.0038	2.0	TM		
17	TML	Methyl Acetate	0.0875	0.0755	14	TML	1.8	
18	TMQ	Iodomethane	0.0477	0.0403	16	TMQ	10	
19	TM	Acrylonitrile	0.0273	0.0325	19	TM		
20	TML	Methylene chloride	0.1736	0.1261	27	TML	1.1	
21	TM	Carbon disulfide	0.2025	0.2343	16	TM		
22	TM	Methyl t-butyl ether (MtBE)	0.2678	0.2942	9.9	TM		
23	TM	Trans-1,2-DCE	0.1219	0.1255	2.9	TM		
24	TM	Hexane	0.0000	0.0002	0.00	TM		
25	TM	Diisopropyl Ether	0.2880	0.3082	7.0	TM		
26	TM**	1,1-DCA	0.1533	0.1720	12	TM**		
27	TM	Vinyl Acetate	0.0671	0.0564	16	TM		
28	TM	Ethyl tert Butyl Ether	0.2842	0.3067	7.9	TM		
29	TML	MEK (2-Butanone)	0.0593	0.0456	23	TML	3.2	
30	TM	Cis-1,2-DCE	0.1521	0.1566	2.9	TM		
31	TM	2,2-Dichloropropane	0.1320	0.1279	3.1	TM		
32	TM*	Chloroform	0.1817	0.1858	2.3	TM*		
33	TM	Bromochloromethane	0.0849	0.0881	3.8	TM		
34	TM	1,1,1-TCA	0.1480	0.1535	3.7	TM		
35	TML	Cyclohexane	0.1256	0.1318	4.9	TML	8.2	
36	TM	1,1-Dichloropropene	0.1199	0.1258	4.9	TM		
37	TML	2,2,4-Trimethylpentane	0.2240	0.2464	10.0	TML	11	
38	TM	Carbon Tetrachloride	0.1190	0.1294	8.7	TM		
39	TM	Tert Amyl Methyl Ether	0.2719	0.2978	9.5	TM		
40	TM	1,2-DCA	0.1631	0.1549	5.1	TM		
		Average			10.5			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 02/26/20
Instrument: Thor
Cal. Date: 02/26/20
Data File: 0226T22.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	Benzene	0.3901	0.4068	4.3	TM	
42	TM	TCE	0.1255	0.1306	4.0	TM	
43	TM	2-Pentanone	0.0800	0.0770	3.7	TM	
44	TM*	1,2-Dichloropropane	0.1092	0.1056	3.2	TM*	
45	TM	Bromodichloromethane	0.1353	0.1442	6.6	TM	
46	TML	Methyl Cyclohexane	0.1248	0.1437	15	TML	17
47	TM	Dibromomethane	0.0876	0.0880	0.55	TM	
48	TM	MIBK (methyl isobutyl ketone)	0.1071	0.1057	1.2	TM	
49	TM	1-Bromo-2-chloroethane	0.0809	0.0852	5.3	TM	
50	TM	Cis-1,3-Dichloropropene	0.1589	0.1594	0.32	TM	
51	TM*	Toluene	0.4514	0.4736	4.9	TM*	
52	TM	Trans-1,3-Dichloropropene	0.1431	0.1391	2.8	TM	
53	TM	1,1,2-TCA	0.1011	0.1015	0.42	TM	
54	TML	2-Hexanone	0.0688	0.0665	3.3	TML	2.6
55	TM	1,2-EDB	0.1317	0.1265	3.9	TM	
56	TM	Tetrachloroethene	0.1713	0.1629	4.9	TM	
57	TM	1-Chlorohexane	0.1379	0.1591	15	TM	
58	TM	1,1,1,2-Tetrachloroethane	0.1375	0.1408	2.4	TM	
59	TM	m&p-Xylene	0.4671	0.4849	3.8	TM	
60	TM	o-Xylene	0.4991	0.5056	1.3	TM	
61	TM	Styrene	0.3873	0.4020	3.8	TM	
62	TM	1,3-Dichloropropane	0.2141	0.2121	0.91	TM	
63	TM	Dibromochloromethane	0.1409	0.1407	0.12	TM	
64	TM**	Chlorobenzene	0.3808	0.3864	1.5	TM**	
65	TM*	Ethylbenzene	0.6117	0.6313	3.2	TM*	
66	TM**	Bromoform	0.1015	0.1053	3.8	TM**	
67	TM	Isopropylbenzene	1.035	1.069	3.3	TM	
68	TM**	1,1,2,2-Tetrachloroethane	0.2662	0.2536	4.7	TM**	
69	TM	1,2,3-Trichloropropane	0.0994	0.1017	2.3	TM	
70	TM	t-1,4-Dichloro-2-Butene	0.0556	0.0549	1.2	TM	
71	TM	Bromobenzene	0.5601	0.5553	0.85	TM	
72	TM	n-Propylbenzene	1.178	1.245	5.6	TM	
73	TM	4-Ethyltoluene	1.018	1.141	12	TM	
74	TM	2-Chlorotoluene	0.8849	0.9009	1.8	TM	
75	TM	1,3,5-Trimethylbenzene	0.8839	0.9574	8.3	TM	
76	TM	4-Chlorotoluene	0.8568	0.9259	8.1	TM	
77	TM	Tert-Butylbenzene	0.8600	0.9311	8.3	TM	
78	TM	1,2,4-Trimethylbenzene	0.9246	0.9642	4.3	TM	
79	TM	Sec-Butylbenzene	1.070	1.123	5.0	TM	
80	TM	p-Isopropyltoluene	0.9336	0.9737	4.3	TM	
		Average			4.3		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 02/26/20
Matrix: 0 Instrument: Thor
Cal. Date: 02/26/20
Data File: 0226T22.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	Benzyl Chloride	0.3145	0.2751	13	TM	
82	TM	1,3-DCB	0.5736	0.5943	3.6	TM	
83	TM	1,4-DCB	0.6007	0.6089	1.4	TM	
84	TM	n-Butylbenzene	0.7602	0.7985	5.0	TM	
85	TM	1,2-DCB	0.5861	0.5924	1.1	TM	
86	TML	Hexachloroethane	0.1318	0.1520	15	TML	1.9
87	TML	1,2-Dibromo-3-chloropropane	0.0614	0.0667	8.7	TML	3.8
88	TM	1,2,4-Trichlorobenzene	0.3969	0.4208	6.0	TM	
89	TM	Hexachlorobutadiene	0.1814	0.2139	18	TM	
90	TM	Naphthalene	0.1105	0.1229	11	TM	
91	TM	1,2,3-Trichlorobenzene	0.3728	0.3987	7.0	TM	
92							
93							
94							
95							
96							
97							
98							
99							
100							
101							
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113							
114							
115							
116							
117							
118							
119							
120							
		Average			8.2		

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0226T22.D Vial: 12
Acq On : 26 Feb 20 17:43 Operator:
Sample : (SS) 10ug/L VOC STD 2/26/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 3 8:26 2020 Quant Results File: T0226W.RES

Quant Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 02 12:37:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.46	96	792564	25.00	ppb		0.00
66) Chlorobenzene-D5 (IS)	9.92	117	648437	25.00	ppb		0.00
81) 1,4-Dichlorobenzene-D (IS)	12.48	152	366954	25.00	ppb		0.00
System Monitoring Compounds							
41) Dibromofluoromethane(S)	5.60	111	250283	24.73	ppb		0.00
Spiked Amount 25.000			Recovery = 98.924%				
46) 1,2-DCA-D4(S)	6.02	65	285562	24.59	ppb		0.00
Spiked Amount 25.000			Recovery = 98.348%				
67) Toluene-D8(S)	8.33	98	958819	24.43	ppb		0.00
Spiked Amount 25.000			Recovery = 97.736%				
75) 4-Bromofluorobenzene(S)	11.21	95	382476	24.49	ppb		0.00
Spiked Amount 25.000			Recovery = 97.968%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.14	85	38584	11.80	ppb		92
4) Freon 114	1.24	85	26833	11.10	ppb		94
5) Chloromethane	1.28	50	39960	11.82	ppb		99
6) Vinyl chloride	1.37	62	33176	10.54	ppb		99
8) Bromomethane	1.64	94	26186	12.61	ppb		97
9) Chloroethane	1.74	66	5476	13.00	ppb		89
10) Dichlorofluoromethane	1.93	67	53784	11.20	ppb		98
11) Trichlorofluoromethane	1.98	101	45632	10.84	ppb		100
14) Acrolein	2.39	55	14103	60.34	ppb		95
15) Acetone	2.56	43	7343	11.97	ppb		98
16) Freon-113	2.53	101	23359	11.51	ppb		92
17) 1,1-DCE	2.50	61	38751	10.61	ppb		93
19) Acetonitrile	2.86	40	13367	122.91	ppb		99
20) t-Butanol	3.29	59	14876	122.48	ppb		97
21) Methyl Acetate	2.97	43	23928	9.82	ppb		99
22) Iodomethane	2.64	142	12767	8.97	ppb	#	84
23) Acrylonitrile	3.38	52	10302	11.90	ppb		91
24) Methylene chloride	3.06	49	39962	10.11	ppb		96
25) Carbon disulfide	2.71	76	74271	11.57	ppb		98
26) Methyl t-butyl ether (MtBE	3.48	73	93274	10.99	ppb		93
27) Trans-1,2-DCE	3.43	61	39771	10.29	ppb		98
29) Diisopropyl Ether	4.29	45	97710	10.70	ppb		97
31) 1,1-DCA	4.06	63	54526	11.22	ppb		94
32) Vinyl Acetate	4.22	43	17880	8.41	ppb		96
33) Ethyl tert Butyl Ether	4.83	59	97237	10.79	ppb		100
34) MEK (2-Butanone)	4.99	43	14463	9.68	ppb		93
35) Cis-1,2-DCE	4.93	61	49642	10.29	ppb		86
36) 2,2-Dichloropropane	4.93	77	40545	9.69	ppb	#	91
39) Chloroform	5.40	83	58899	10.23	ppb		93
40) Bromochloromethane	5.25	49	27923	10.38	ppb		91
42) 1,1,1-TCA	5.62	97	48666	10.37	ppb		93
43) Cyclohexane	5.69	56	41774	10.82	ppb		90
44) 1,1-Dichloropropene	5.84	75	39869	10.49	ppb		95
45) 2,2,4-Trimethylpentane	6.27	57	78110	11.10	ppb		99
47) Carbon Tetrachloride	5.84	117	41018	10.87	ppb		95
48) Tert Amyl Methyl Ether	6.31	73	94399	10.95	ppb		99
50) 1,2-DCA	6.11	62	49092	9.49	ppb		97
51) Benzene	6.10	78	128974	10.43	ppb		99
52) TCE	6.91	130	41391	10.40	ppb		96

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0226T22.D Vial: 12
Acq On : 26 Feb 20 17:43 Operator:
Sample : (SS) 10ug/L VOC STD 2/26/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 3 8:26 2020 Quant Results File: T0226W.RES

Quant Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 02 12:37:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

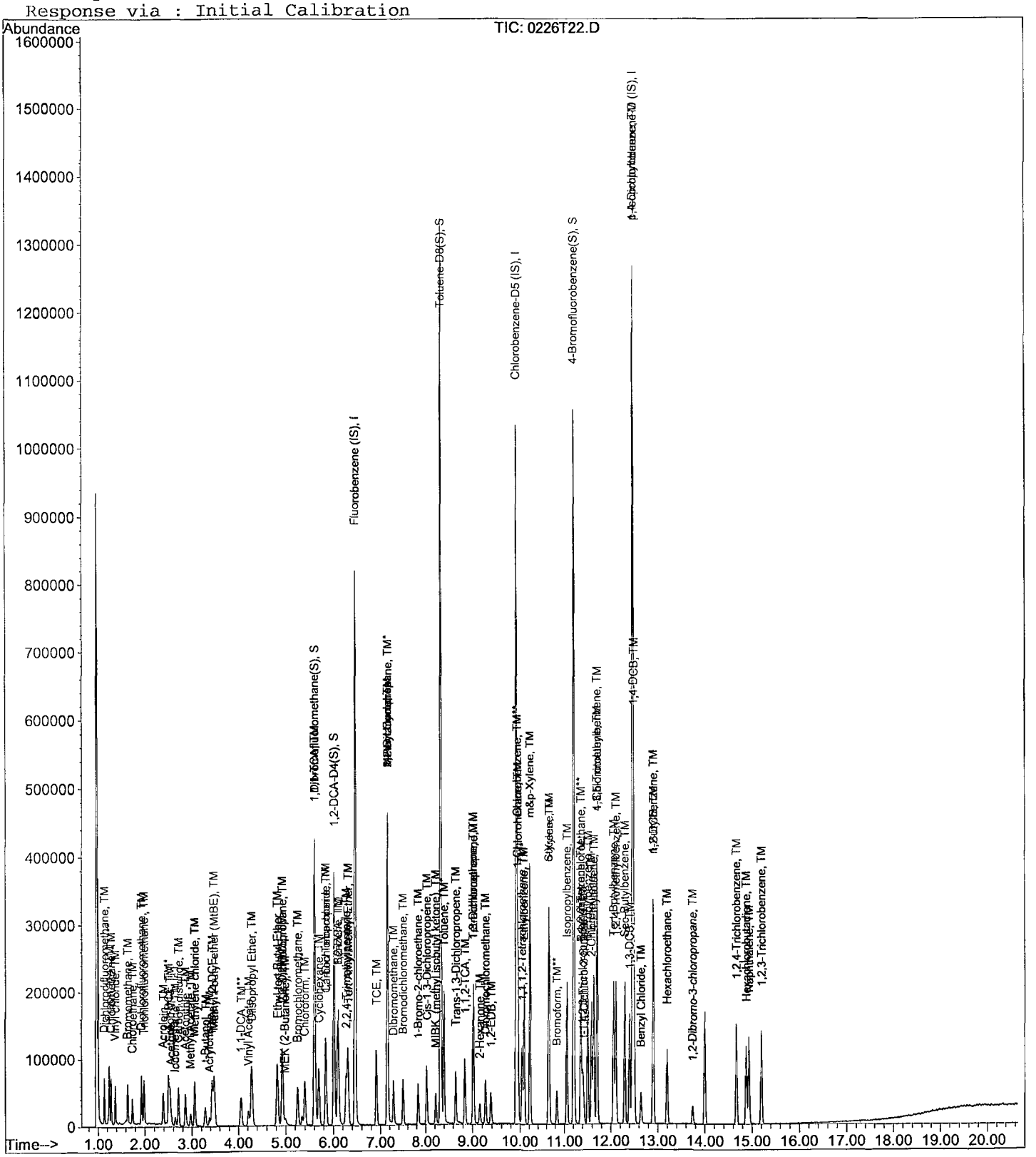
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
53)	2-Pentanone	7.15	43	305167	120.32 ppb	99
54)	1,2-Dichloropropane	7.16	63	33480	9.68 ppb	99
55)	Bromodichloromethane	7.50	83	45716	10.66 ppb	99
56)	Methyl Cyclohexane	7.15	83	45548	11.67 ppb	98
57)	Dibromomethane	7.28	174	27909	10.05 ppb	95
58)	MIBK (methyl isobutyl ket	8.22	43	33519	9.88 ppb	98
59)	1-Bromo-2-chloroethane	7.83	63	27016	10.53 ppb	96
61)	Cis-1,3-Dichloropropene	8.02	75	50536	10.03 ppb	98
62)	Toluene	8.40	91	150156	10.49 ppb	96
63)	Trans-1,3-Dichloropropene	8.65	75	44098	9.72 ppb	95
64)	1,1,2-TCA	8.85	97	32183	10.04 ppb	93
65)	2-Hexanone	9.15	43	21097	9.74 ppb	93
68)	1,2-EDB	9.38	107	32809	9.61 ppb	96
69)	Tetrachloroethene	9.02	166	42247	9.51 ppb	97
70)	1-Chlorohexane	9.96	91	41266	11.53 ppb	98
71)	1,1,1,2-Tetrachloroethane	10.04	131	36517	10.24 ppb	96
72)	m&p-Xylene	10.22	91	251541	20.76 ppb	100
73)	o-Xylene	10.65	91	131144	10.13 ppb	98
74)	Styrene	10.66	104	104268	10.38 ppb	97
76)	1,3-Dichloropropane	9.03	76	55024	9.91 ppb	93
77)	Dibromochloromethane	9.27	129	36507	9.99 ppb	92
78)	Chlorobenzene	9.95	112	100213	10.15 ppb	95
79)	Ethylbenzene	10.09	91	163739	10.32 ppb	100
80)	Bromoform	10.84	173	27317	10.38 ppb	96
82)	Isopropylbenzene	11.06	105	156959	10.33 ppb	99
83)	1,1,2,2-Tetrachloroethane	11.36	83	37221	9.53 ppb	99
84)	1,2,3-Trichloropropane	11.40	110	14925	10.23 ppb	93
85)	t-1,4-Dichloro-2-Butene	11.43	53	8057	9.88 ppb	94
86)	Bromobenzene	11.37	77	81515	9.91 ppb	96
87)	n-Propylbenzene	11.51	91	182743	10.56 ppb	96
88)	4-Ethyltoluene	11.64	105	167415	11.21 ppb	97
89)	2-Chlorotoluene	11.59	91	132238	10.18 ppb	98
90)	1,3,5-Trimethylbenzene	11.71	105	140524	10.83 ppb	98
91)	4-Chlorotoluene	11.71	91	135910	10.81 ppb	97
92)	Tert-Butylbenzene	12.06	119	136662	10.83 ppb	96
93)	1,2,4-Trimethylbenzene	12.11	105	141526	10.43 ppb	97
94)	Sec-Butylbenzene	12.30	105	164882	10.50 ppb	95
95)	p-Isopropyltoluene	12.46	119	142924	10.43 ppb	99
96)	Benzyl Chloride	12.64	91	40383	8.75 ppb	98
97)	1,3-DCB	12.40	146	87232	10.36 ppb	95
98)	1,4-DCB	12.50	146	89372	10.14 ppb	99
99)	n-Butylbenzene	12.91	91	117205	10.50 ppb	97
100)	1,2-DCB	12.90	146	86955	10.11 ppb	97
101)	Hexachloroethane	13.20	201	22312	9.81 ppb	96
102)	1,2-Dibromo-3-chloropropan	13.75	157	9797	9.62 ppb	98
103)	1,2,4-Trichlorobenzene	14.67	180	61763	10.60 ppb	91
104)	Hexachlorobutadiene	14.87	225	31401	11.79 ppb	93
105)	Naphthalene	14.94	127	18046	11.13 ppb	98
106)	1,2,3-Trichlorobenzene	15.20	180	58518	10.70 ppb	97

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

Data File : M:\THOR\DATA\T200226\0226T22.D Vial: 12
Acq On : 26 Feb 20 17:43 Operator:
Sample : (SS) 10ug/L VOC STD 2/26/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 3 8:26 2020 Quant Results File: T0226W.RES

Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 02 12:37:16 2020
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 5 Mar 20 12:14
Instrument: Thor
Initial Cal. Date: 02/26/20
Data File: 0305t11.D

		Compound	MEAN	CCRF	%D		%Drift	
1	I	Fluorobenzene (IS)	ISTD			I		
2	TM	Dichlorodifluoromethane	0.1031	0.1006	2.5	TM		
3	TML	Freon 114	0.0782	0.0841	7.6	TML	10	
4	TM**L	Chloromethane	0.1210	0.1035	14	TM**L	3.5	
5	TM*	Vinyl chloride	0.0993	0.0916	7.7	TM*		
6	TML	Bromomethane	0.0830	0.0712	14	TML	8.1	
7	TML	Chloroethane	0.0162	0.0128	21	TML	4.8	
8	TM	Dichlorofluoromethane	0.1515	0.1513	0.12	TM		
9	TM	Trichlorofluoromethane	0.1328	0.1480	11	TM		
10	TM	Diethyl ether	0.0000	0.0001	0.00	TM		
11	TM	1,2 Dichlorotrifluoroethane	0.0000	0.0001	0.00	TM		
12	TM	Acrolein	0.0074	0.0055	26	TM		* NT
13	TML	Acetone	0.0474	0.0133	72	TML	49	* NT
14	TML	Freon-113	0.0640	0.0811	27	TML	26	* NT
15	TM*	1,1-DCE	0.1152	0.1192	3.5	TM*		
16	TM	2-Propanol	0.0000	0.0001	0.00	TM		
17	TM	Acetonitrile	0.0034	0.0026	24	TM		* NT
18	TM	t-Butanol	0.0038	0.0028	28	TM		* NT
19	TML	Methyl Acetate	0.0875	0.0598	32	TML	23	* NT
20	TMQ	Iodomethane	0.0477	0.0400	16	TMQ	11	
21	TM	Acrylonitrile	0.0273	0.0241	12	TM		
22	TML	Methylene chloride	0.1736	0.1147	34	TML	9.1	
23	TM	Carbon disulfide	0.2025	0.1970	2.8	TM		
24	TM	Methyl t-butyl ether (MtBE)	0.2678	0.2485	7.2	TM		
25	TM	Trans-1,2-DCE	0.1219	0.1205	1.2	TM		
26	TM	Hexane	0.0000	0.0579	0.00	TM		
27	TM	Diisopropyl Ether	0.2880	0.2870	0.37	TM		
28	TM**	1,1-DCA	0.1533	0.1585	3.4	TM**		
29	TM	Vinyl Acetate	0.0671	0.0635	5.3	TM		
30	TM	Ethyl tert Butyl Ether	0.2842	0.2724	4.1	TM		
31	TML	MEK (2-Butanone)	0.0593	0.0362	39	TML	25	* NT
32	TM	Cis-1,2-DCE	0.1521	0.1503	1.2	TM		
33	TM	2,2-Dichloropropane	0.1320	0.1424	7.8	TM		
34	TM*	Chloroform	0.1817	0.1871	3.0	TM*		
35	TM	Bromochloromethane	0.0849	0.0804	5.3	TM		
36	SL	Dibromofluoromethane(S)	0.3847	0.3096	20	SL	3.4	
37	TM	1,1,1-TCA	0.1480	0.1570	6.1	TM		
38	TML	Cyclohexane	0.1256	0.1335	6.2	TML	9.4	
39	TM	1,1-Dichloropropene	0.1199	0.1278	6.6	TM		
40	TML	2,2,4-Trimethylpentane	0.2240	0.2733	22	TML	22	* NT
		Average			12.7			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 5 Mar 20 12:14
Instrument: Thor
Cal. Date: 02/26/20
Data File: 0305t11.D

		Compound	MEAN	CCRF	%D	%Drift		
41	SL	1,2-DCA-D4(S)	0.4424	0.3307	25	SL	12	
42	TM	Carbon Tetrachloride	0.1190	0.1344	13	TM		
43	TM	Tert Amyl Methyl Ether	0.2719	0.2643	2.8	TM		
44	TM	1,2-DCA	0.1631	0.1478	9.4	TM		
45	TM	Benzene	0.3901	0.4032	3.4	TM		
46	TM	TCE	0.1255	0.1268	1.0	TM		
47	TM	2-Pentanone	0.0800	0.0586	27	TM		* NT
48	TM*	1,2-Dichloropropane	0.1092	0.1094	0.24	TM*		
49	TM	Bromodichloromethane	0.1353	0.1483	9.6	TM		
50	TML	Methyl Cyclohexane	0.1248	0.1434	15	TML	17	
51	TM	Dibromomethane	0.0876	0.0862	1.6	TM		
52	TM	MIBK (methyl isobutyl ketone)	0.1071	0.0771	28	TM		* NT
53	TM	1-Bromo-2-chloroethane	0.0809	0.0744	8.1	TM		
54	TM	Cis-1,3-Dichloropropene	0.1589	0.1654	4.1	TM		
55	TM*	Toluene	0.4514	0.4763	5.5	TM*		
56	TM	Trans-1,3-Dichloropropene	0.1431	0.1424	0.50	TM		
57	TM	1,1,2-TCA	0.1011	0.1023	1.2	TM		
58	TML	2-Hexanone	0.0688	0.0506	26	TML	24	* NT
59	I	Chlorobenzene-D5 (IS)	ISTD			I		
60	SL	Toluene-D8(S)	1.831	1.482	19	SL	2.0	
61	TM	1,2-EDB	0.1317	0.1274	3.2	TM		
62	TM	Tetrachloroethene	0.1713	0.1888	10	TM		
63	TM	1-Chlorohexane	0.1379	0.1801	31	TM		* NT
64	TM	1,1,1,2-Tetrachloroethane	0.1375	0.1497	8.9	TM		
65	TM	m&p-Xylene	0.4671	0.5253	12	TM		
66	TM	o-Xylene	0.4991	0.5504	10	TM		
67	TM	Styrene	0.3873	0.4145	7.0	TM		
68	SL	4-Bromofluorobenzene(S)	0.7112	0.5973	16	SL	0.58	
69	TM	1,3-Dichloropropane	0.2141	0.2132	0.40	TM		
70	TM	Dibromochloromethane	0.1409	0.1484	5.3	TM		
71	TM**	Chlorobenzene	0.3808	0.4176	9.7	TM**		
72	TM*	Ethylbenzene	0.6117	0.6727	10.0	TM*		
73	TM**	Bromoform	0.1015	0.1060	4.5	TM**		
74	I	1,4-Dichlorobenzene-D (IS)	ISTD			I		
75	TM	Isopropylbenzene	1.035	1.207	17	TM		
76	TM**	1,1,2,2-Tetrachloroethane	0.2662	0.2479	6.9	TM**		
77	TM	1,2,3-Trichloropropane	0.0994	0.0914	8.0	TM		
78	TM	t-1,4-Dichloro-2-Butene	0.0556	0.0490	12	TM		
79	TM	Bromobenzene	0.5601	0.5734	2.4	TM		
80	TM	n-Propylbenzene	1.178	1.398	19	TM		
		Average			10.4			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 5 Mar 20 12:14
Matrix: 0 Instrument: Thor
Cal. Date: 02/26/20
Data File: 0305t11.D

		Compound	MEAN	CCRF	%D		%Drift	
81	TM	4-Ethyltoluene	1.018	1.170	15	TM		
82	TM	2-Chlorotoluene	0.8849	0.9715	9.8	TM		
83	TM	1,3,5-Trimethylbenzene	0.8839	1.062	20	TM		
84	TM	4-Chlorotoluene	0.8568	1.019	19	TM		
85	TM	Tert-Butylbenzene	0.8600	1.047	22	TM		* NT
86	TM	1,2,4-Trimethylbenzene	0.9246	1.064	15	TM		
87	TM	Sec-Butylbenzene	1.070	1.276	19	TM		
88	TM	p-Isopropyltoluene	0.9336	1.135	22	TM		* NT
89	TM	Benzyl Chloride	0.3145	0.3163	0.60	TM		
90	TM	1,3-DCB	0.5736	0.6606	15	TM		
91	TM	1,4-DCB	0.6007	0.6805	13	TM		
92	TM	n-Butylbenzene	0.7602	0.9217	21	TM		* NT
93	TM	1,2-DCB	0.5861	0.6313	7.7	TM		
94	TML	Hexachloroethane	0.1318	0.1798	36	TML	15	
95	TML	1,2-Dibromo-3-chloropropane	0.0614	0.0588	4.2	TML	15	
96	TM	1,2,4-Trichlorobenzene	0.3969	0.4241	6.8	TM		
97	TM	Hexachlorobutadiene	0.1814	0.2475	36	TM		* NT
98	TM	Naphthalene	0.1105	0.0915	17	TM		
99	TM	1,2,3-Trichlorobenzene	0.3728	0.3889	4.3	TM		
100								
101								
102								
103								
104								
105								
106								
107								
108								
109								
110								
111								
112								
113								
114								
115								
116								
117								
118								
119								
120								
		Average			16.0			

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0305t11.D Vial: 1
Acq On : 5 Mar 20 12:14 Operator:
Sample : 200305B CCV 10ug/L Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 10:48 2020 Quant Results File: T0226W.RES

Quant Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 02 12:37:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.45	96	814204	25.00	ppb		0.00
66) Chlorobenzene-D5 (IS)	9.91	117	653596	25.00	ppb		0.00
81) 1,4-Dichlorobenzene-D (IS)	12.47	152	365741	25.00	ppb		0.00
System Monitoring Compounds							
41) Dibromofluoromethane(S)	5.59	111	252088	24.14	ppb		0.00
Spiked Amount 25.000			Recovery = 96.564%				
46) 1,2-DCA-D4(S)	6.01	65	269246	22.09	ppb		0.00
Spiked Amount 25.000			Recovery = 88.356%				
67) Toluene-D8(S)	8.32	98	968353	24.49	ppb		0.00
Spiked Amount 25.000			Recovery = 97.976%				
75) 4-Bromofluorobenzene(S)	11.21	95	390403	24.85	ppb		0.00
Spiked Amount 25.000			Recovery = 99.416%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.14	85	32752	9.75	ppb		98
4) Freon 114	1.24	85	27396	11.04	ppb		96
5) Chloromethane	1.28	50	33696	9.65	ppb		99
6) Vinyl chloride	1.37	62	29827	9.23	ppb		95
8) Bromomethane	1.64	94	23204	10.81	ppb		100
9) Chloroethane	1.74	66	4153	9.52	ppb		86
10) Dichlorofluoromethane	1.93	67	49275	9.99	ppb		99
11) Trichlorofluoromethane	1.98	101	48201	11.15	ppb		97
14) Acrolein	2.38	55	22192	92.43	ppb		98
15) Acetone	2.55	43	4332	5.11	ppb		98
16) Freon-113	2.52	101	26398	12.56	ppb		96
17) 1,1-DCE	2.49	61	38805	10.35	ppb		95
19) Acetonitrile	2.85	40	10675	95.55	ppb		99
20) t-Butanol	3.28	59	11231	90.01	ppb		100
21) Methyl Acetate	2.96	43	19460	7.70	ppb		95
22) Iodomethane	2.64	142	13035	8.93	ppb		91
23) Acrylonitrile	3.37	52	7834	8.81	ppb		85
24) Methylene chloride	3.05	49	37341	9.09	ppb		92
25) Carbon disulfide	2.70	76	64145	9.72	ppb		98
26) Methyl t-butyl ether (MtBE	3.47	73	80922	9.28	ppb		97
27) Trans-1,2-DCE	3.42	61	39230	9.88	ppb		93
29) Diisopropyl Ether	4.27	45	93460	9.96	ppb		96
31) 1,1-DCA	4.05	63	51619	10.34	ppb		93
32) Vinyl Acetate	4.20	43	20680	9.47	ppb		98
33) Ethyl tert Butyl Ether	4.81	59	88715	9.59	ppb		96
34) MEK (2-Butanone)	4.98	43	11801	7.54	ppb	#	87
35) Cis-1,2-DCE	4.92	61	48950	9.88	ppb	#	83
36) 2,2-Dichloropropane	4.92	77	46367	10.78	ppb		94
39) Chloroform	5.39	83	60922	10.30	ppb		95
40) Bromochloromethane	5.24	49	26176	9.47	ppb		95
42) 1,1,1-TCA	5.61	97	51142	10.61	ppb		95
43) Cyclohexane	5.69	56	43474	10.94	ppb		97
44) 1,1-Dichloropropene	5.84	75	41617	10.66	ppb		97
45) 2,2,4-Trimethylpentane	6.26	57	89015	12.19	ppb		98
47) Carbon Tetrachloride	5.83	117	43773	11.29	ppb		99
48) Tert Amyl Methyl Ether	6.30	73	86064	9.72	ppb		100
50) 1,2-DCA	6.11	62	48121	9.06	ppb		97
51) Benzene	6.09	78	131325	10.34	ppb		98
52) TCE	6.91	130	41294	10.10	ppb		95

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0305t11.D Vial: 1
Acq On : 5 Mar 20 12:14 Operator:
Sample : 200305B CCV 10ug/L Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 10:48 2020 Quant Results File: T0226W.RES

Quant Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 02 12:37:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

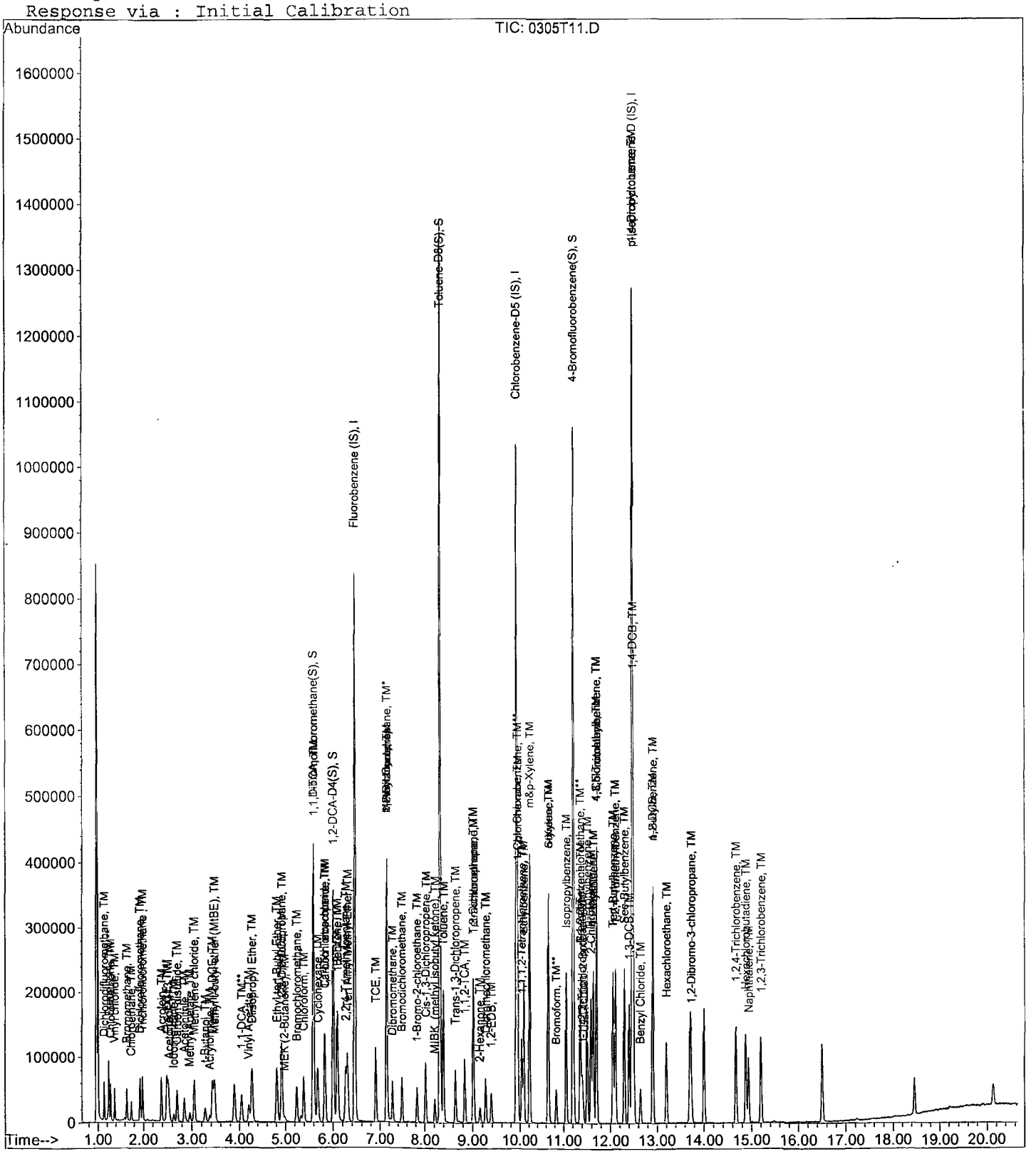
	Compound	R.T.	Qlon	Response	Conc Unit	Qvalue
53)	2-Pentanone	7.15	43	238626	91.59 ppb	99
54)	1,2-Dichloropropane	7.15	63	35634	10.02 ppb	97
55)	Bromodichloromethane	7.49	83	48314	10.96 ppb	98
56)	Methyl Cyclohexane	7.14	83	46699	11.65 ppb	96
57)	Dibromomethane	7.28	174	28071	9.84 ppb	96
58)	MIBK (methyl isobutyl ket	8.21	43	25102	7.20 ppb	98
59)	1-Bromo-2-chloroethane	7.83	63	24216	9.19 ppb	96
61)	Cis-1,3-Dichloropropene	8.02	75	53872	10.41 ppb	95
62)	Toluene	8.40	91	155120	10.55 ppb	96
63)	Trans-1,3-Dichloropropene	8.65	75	46367	9.95 ppb	97
64)	1,1,2-TCA	8.84	97	33317	10.12 ppb	94
65)	2-Hexanone	9.15	43	16488	7.58 ppb	97
68)	1,2-EDB	9.38	107	33316	9.68 ppb	93
69)	Tetrachloroethene	9.01	166	49361	11.02 ppb	94
70)	1-Chlorohexane	9.95	91	47073	13.05 ppb	93
71)	1,1,1,2-Tetrachloroethane	10.04	131	39143	10.89 ppb	97
72)	m&p-Xylene	10.22	91	274689	22.49 ppb	98
73)	o-Xylene	10.65	91	143883	11.03 ppb	98
74)	Styrene	10.66	104	108376	10.70 ppb	98
76)	1,3-Dichloropropane	9.02	76	55745	9.96 ppb	98
77)	Dibromochloromethane	9.27	129	38798	10.53 ppb	91
78)	Chlorobenzene	9.95	112	109165	10.97 ppb	93
79)	Ethylbenzene	10.09	91	175860	11.00 ppb	96
80)	Bromoform	10.83	173	27723	10.45 ppb	90
82)	Isopropylbenzene	11.06	105	176546	11.66 ppb	98
83)	1,1,2,2-Tetrachloroethane	11.36	83	36274	9.31 ppb	90
84)	1,2,3-Trichloropropane	11.40	110	13375	9.20 ppb	96
85)	t-1,4-Dichloro-2-Butene	11.42	53	7170	8.82 ppb	94
86)	Bromobenzene	11.36	77	83887	10.24 ppb	98
87)	n-Propylbenzene	11.51	91	204516	11.86 ppb	95
88)	4-Ethyltoluene	11.64	105	171239	11.50 ppb	98
89)	2-Chlorotoluene	11.59	91	142131	10.98 ppb	95
90)	1,3,5-Trimethylbenzene	11.70	105	155346	12.01 ppb	95
91)	4-Chlorotoluene	11.71	91	149145	11.90 ppb	94
92)	Tert-Butylbenzene	12.06	119	153169	12.17 ppb	93
93)	1,2,4-Trimethylbenzene	12.11	105	155628	11.51 ppb	97
94)	Sec-Butylbenzene	12.30	105	186742	11.93 ppb	97
95)	p-Isopropyltoluene	12.46	119	166011	12.16 ppb	98
96)	Benzyl Chloride	12.64	91	46278	10.06 ppb	98
97)	1,3-DCB	12.40	146	96642	11.52 ppb	97
98)	1,4-DCB	12.50	146	99551	11.33 ppb	98
99)	n-Butylbenzene	12.91	91	134839	12.12 ppb	98
100)	1,2-DCB	12.90	146	92362	10.77 ppb	94
101)	Hexachloroethane	13.20	201	26302	11.49 ppb	95
102)	1,2-Dibromo-3-chloropropan	13.74	157	8601	8.55 ppb	95
103)	1,2,4-Trichlorobenzene	14.67	180	62044	10.68 ppb	100
104)	Hexachlorobutadiene	14.87	225	36203	13.64 ppb	90
105)	Naphthalene	14.94	127	13384	8.28 ppb	93
106)	1,2,3-Trichlorobenzene	15.20	180	56898	10.43 ppb	100

(#) = qualifier out of range (m) = manual integration
0305t11.D T0226W.M Wed Mar 11 11:32:32 2020

Data File : M:\THOR\DATA\T200226\0305t11.D Vial: 1
Acq On : 5 Mar 20 12:14 Operator:
Sample : 200305B CCV 10ug/L Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 10:48 2020 Quant Results File: T0226W.RES

Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 02 12:37:16 2020
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

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

SDG No:
Date Analyzed: 6 Mar 20 1:29
Instrument: Thor
Initial Cal. Date: 02/26/20
Data File: 0305t39.D

		Compound	MEAN	CCRF	%D		%Drift	
1	I	Fluorobenzene (IS)	ISTD			I		
2	TM	Dichlorodifluoromethane	0.1031	0.0870	16	TM		
3	TML	Freon 114	0.0782	0.0646	17	TML	12	
4	TM**L	Chloromethane	0.1210	0.0935	23	TM**L	13	
5	TM*	Vinyl chloride	0.0993	0.0815	18	TM*		
6	TML	Bromomethane	0.0830	0.0678	18	TML	2.7	
7	TML	Chloroethane	0.0162	0.0105	36	TML	23	
8	TM	Dichlorofluoromethane	0.1515	0.1360	10	TM		
9	TM	Trichlorofluoromethane	0.1328	0.1309	1.4	TM		
10	TM	1,2 Dichlorotrifluoroethane	0.0000	0.0003	0.00	TM		
11	TM	Acrolein	0.0074	0.0047	36	TM		
12	TML	Acetone	0.0474	0.0157	67	TML	32	
13	TML	Freon-113	0.0640	0.0644	0.59	TML	1.8	
14	TM*	1,1-DCE	0.1152	0.1000	13	TM*		
15	TM	2-Propanol	0.0000	0.0002	0.00	TM		
16	TM	Acetonitrile	0.0034	0.0029	15	TM		
17	TM	t-Butanol	0.0038	0.0034	12	TM		
18	TML	Methyl Acetate	0.0875	0.0666	24	TML	14	
19	TMQ	Iodomethane	0.0477	0.0165	65	TMQ	53	* NT
20	TM	Acrylonitrile	0.0273	0.0264	3.1	TM		
21	TML	Methylene chloride	0.1736	0.1085	38	TML	15	
22	TM	Carbon disulfide	0.2025	0.1663	18	TM		
23	TM	Methyl t-butyl ether (MtBE)	0.2678	0.2563	4.3	TM		
24	TM	Trans-1,2-DCE	0.1219	0.1032	15	TM		
25	TM	Hexane	0.0000	0.0350	0.00	TM		
26	TM	Diisopropyl Ether	0.2880	0.2647	8.1	TM		
27	TM**	1,1-DCA	0.1533	0.1512	1.4	TM**		
28	TM	Vinyl Acetate	0.0671	0.0249	63	TM		* NT
29	TM	Ethyl tert Butyl Ether	0.2842	0.2562	9.8	TM		
30	TML	MEK (2-Butanone)	0.0593	0.0433	27	TML	8.5	
31	TM	Cis-1,2-DCE	0.1521	0.1407	7.5	TM		
32	TM	2,2-Dichloropropane	0.1320	0.1084	18	TM		
33	TM*	Chloroform	0.1817	0.1850	1.9	TM*		
34	TM	Bromochloromethane	0.0849	0.0794	6.4	TM		
35	SL	Dibromofluoromethane(S)	0.3847	0.3387	12	SL	7.7	
36	TM	1,1,1-TCA	0.1480	0.1562	5.5	TM		
37	TML	Cyclohexane	0.1256	0.1088	13	TML	9.0	
38	TM	1,1-Dichloropropene	0.1199	0.1066	11	TM		
39	TML	2,2,4-Trimethylpentane	0.2240	0.1854	17	TML	14	
40	SL	1,2-DCA-D4(S)	0.4424	0.3892	12	SL	8.1	
		Average			17.0			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 6 Mar 20 1:29
Instrument: Thor
Cal. Date: 02/26/20
Data File: 0305t39.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	Carbon Tetrachloride	0.1190	0.1335	12	TM	
42	TM	Tert Amyl Methyl Ether	0.2719	0.2615	3.8	TM	
43	TM	1,2-DCA	0.1631	0.1541	5.5	TM	
44	TM	Benzene	0.3901	0.3657	6.2	TM	
45	TM	TCE	0.1255	0.1211	3.6	TM	
46	TM	2-Pentanone	0.0800	0.0699	13	TM	
47	TM*	1,2-Dichloropropane	0.1092	0.1008	7.6	TM*	
48	TM	Bromodichloromethane	0.1353	0.1518	12	TM	
49	TML	Methyl Cyclohexane	0.1248	0.1132	9.3	TML	5.6
50	TM	Dibromomethane	0.0876	0.0873	0.32	TM	
51	TM	MIBK (methyl isobutyl ketone)	0.1071	0.0870	19	TM	
52	TM	1-Bromo-2-chloroethane	0.0809	0.0735	9.1	TM	
53	TM	Cis-1,3-Dichloropropene	0.1589	0.1485	6.6	TM	
54	TM*	Toluene	0.4514	0.4259	5.6	TM*	
55	TM	Trans-1,3-Dichloropropene	0.1431	0.1450	1.3	TM	
56	TM	1,1,2-TCA	0.1011	0.1012	0.07	TM	
57	TML	2-Hexanone	0.0688	0.0566	18	TML	16
58	I	Chlorobenzene-D5 (IS)	ISTD			I	
59	SL	Toluene-D8(S)	1.831	1.521	17	SL	1.2
60	TM	1,2-EDB	0.1317	0.1253	4.8	TM	
61	TM	Tetrachloroethene	0.1713	0.1585	7.5	TM	
62	TM	1-Chlorohexane	0.1379	0.1330	3.6	TM	
63	TM	1,1,1,2-Tetrachloroethane	0.1375	0.1516	10	TM	
64	TM	m&p-Xylene	0.4671	0.4443	4.9	TM	
65	TM	o-Xylene	0.4991	0.4863	2.6	TM	
66	TM	Styrene	0.3873	0.3597	7.1	TM	
67	SL	4-Bromofluorobenzene(S)	0.7112	0.6062	15	SL	1.1
68	TM	1,3-Dichloropropane	0.2141	0.2027	5.3	TM	
69	TM	Dibromochloromethane	0.1409	0.1523	8.1	TM	
70	TM**	Chlorobenzene	0.3808	0.3690	3.1	TM**	
71	TM*	Ethylbenzene	0.6117	0.5768	5.7	TM*	
72	TM**	Bromoform	0.1015	0.1123	11	TM**	
73	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
74	TM	Isopropylbenzene	1.035	0.9988	3.5	TM	
75	TM**	1,1,2,2-Tetrachloroethane	0.2662	0.2322	13	TM**	
76	TM	1,2,3-Trichloropropane	0.0994	0.0975	1.9	TM	
77	TM	t-1,4-Dichloro-2-Butene	0.0556	0.0423	24	TM	
78	TM	Bromobenzene	0.5601	0.5115	8.7	TM	
79	TM	n-Propylbenzene	1.178	1.097	6.9	TM	
80	TM	4-Ethyltoluene	1.018	0.9403	7.6	TM	
		Average			8.0		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 6 Mar 20 1:29
Instrument: Thor
Cal. Date: 02/26/20
Data File: 0305t39.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	2-Chlorotoluene	0.8849	0.8309	6.1	TM	
82	TM	1,3,5-Trimethylbenzene	0.8839	0.8886	0.54	TM	
83	TM	4-Chlorotoluene	0.8568	0.8227	4.0	TM	
84	TM	Tert-Butylbenzene	0.8600	0.8363	2.8	TM	
85	TM	1,2,4-Trimethylbenzene	0.9246	0.8846	4.3	TM	
86	TM	Sec-Butylbenzene	1.070	1.006	6.0	TM	
87	TM	p-Isopropyltoluene	0.9336	0.8602	7.9	TM	
88	TM	Benzyl Chloride	0.3145	0.2072	34	TM	
89	TM	1,3-DCB	0.5736	0.5431	5.3	TM	
90	TM	1,4-DCB	0.6007	0.5706	5.0	TM	
91	TM	n-Butylbenzene	0.7602	0.6887	9.4	TM	
92	TM	1,2-DCB	0.5861	0.5644	3.7	TM	
93	TML	Hexachloroethane	0.1318	0.1686	28	TML	8.1
94	TML	1,2-Dibromo-3-chloropropane	0.0614	0.0601	2.1	TML	13
95	TM	1,2,4-Trichlorobenzene	0.3969	0.3450	13	TM	
96	TM	Hexachlorobutadiene	0.1814	0.1996	10	TM	
97	TM	Naphthalene	0.1105	0.0847	23	TM	
98	TM	1,2,3-Trichlorobenzene	0.3728	0.3368	9.6	TM	
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			9.7		

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0305t39.D Vial: 29
Acq On : 6 Mar 20 1:29 Operator:
Sample : Ending CCV 10ug/L 3/5/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 10:47 2020 Quant Results File: T0226W.RES

Quant Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 02 12:37:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.46	96	614198	25.00	ppb		0.00
66) Chlorobenzene-D5 (IS)	9.92	117	509066	25.00	ppb		0.00
81) 1,4-Dichlorobenzene-D (IS)	12.48	152	295156	25.00	ppb		0.00
System Monitoring Compounds							
41) Dibromofluoromethane(S)	5.60	111	208029	26.92	ppb		0.00
Spiked Amount 25.000			Recovery =	107.696%			
46) 1,2-DCA-D4(S)	6.02	65	239076	27.03	ppb		0.00
Spiked Amount 25.000			Recovery =	108.112%			
67) Toluene-D8(S)	8.33	98	774255	25.30	ppb		0.00
Spiked Amount 25.000			Recovery =	101.200%			
75) 4-Bromofluorobenzene(S)	11.21	95	308613	25.29	ppb		0.00
Spiked Amount 25.000			Recovery =	101.144%			
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.14	85	21368	8.43	ppb		96
4) Freon 114	1.24	85	15872	8.82	ppb		100
5) Chloromethane	1.28	50	22968	8.69	ppb		98
6) Vinyl chloride	1.37	62	20032	8.21	ppb		97
8) Bromomethane	1.64	94	16666	10.27	ppb		96
9) Chloroethane	1.74	66	2568	7.75	ppb		76
10) Dichlorofluoromethane	1.93	67	33408	8.98	ppb		99
11) Trichlorofluoromethane	1.98	101	32170	9.86	ppb		100
14) Acrolein	2.38	55	14444	79.75	ppb		89
15) Acetone	2.55	43	3867	6.80	ppb		97
16) Freon-113	2.52	101	15815	10.18	ppb		90
17) 1,1-DCE	2.49	61	24559	8.68	ppb		92
19) Acetonitrile	2.85	40	8953	106.23	ppb		92
20) t-Butanol	3.28	59	10400	110.49	ppb		93
21) Methyl Acetate	2.96	43	16367	8.63	ppb		94
22) Iodomethane	2.64	142	4046	4.67	ppb	#	91
23) Acrylonitrile	3.37	52	6498	9.69	ppb		89
24) Methylene chloride	3.05	49	26645	8.54	ppb		97
25) Carbon disulfide	2.70	76	40851	8.21	ppb		98
26) Methyl t-butyl ether (MtBE	3.48	73	62964	9.57	ppb		95
27) Trans-1,2-DCE	3.43	61	25347	8.47	ppb		93
29) Diisopropyl Ether	4.28	45	65024	9.19	ppb		98
31) 1,1-DCA	4.05	63	37157	9.86	ppb		98
32) Vinyl Acetate	4.21	43	6110	3.71	ppb	#	93
33) Ethyl tert Butyl Ether	4.83	59	62954	9.02	ppb		99
34) MEK (2-Butanone)	4.99	43	10635	9.15	ppb		99
35) Cis-1,2-DCE	4.93	61	34577	9.25	ppb	#	83
36) 2,2-Dichloropropane	4.92	77	26629	8.21	ppb		96
39) Chloroform	5.40	83	45463	10.19	ppb		89
40) Bromochloromethane	5.24	49	19512	9.36	ppb		88
42) 1,1,1-TCA	5.62	97	38378	10.55	ppb		97
43) Cyclohexane	5.69	56	26732	9.10	ppb		96
44) 1,1-Dichloropropene	5.85	75	26193	8.89	ppb		97
45) 2,2,4-Trimethylpentane	6.27	57	45548	8.64	ppb		100
47) Carbon Tetrachloride	5.84	117	32796	11.22	ppb		89
48) Tert Amyl Methyl Ether	6.31	73	64239	9.62	ppb		95
50) 1,2-DCA	6.11	62	37851	9.45	ppb	#	94
51) Benzene	6.09	78	89856	9.38	ppb		99
52) TCE	6.92	130	29743	9.64	ppb		93

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0305t39.D Vial: 29
Acq On : 6 Mar 20 1:29 Operator:
Sample : Ending CCV 10ug/L 3/5/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 10:47 2020 Quant Results File: T0226W.RES

Quant Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 02 12:37:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
53)	2-Pentanone	7.15	43	214756	109.27	ppb		99
54)	1,2-Dichloropropane	7.16	63	24765	9.24	ppb		97
55)	Bromodichloromethane	7.50	83	37290	11.22	ppb		98
56)	Methyl Cyclohexane	7.15	83	27802	9.44	ppb		93
57)	Dibromomethane	7.29	174	21442	9.97	ppb		94
58)	MIBK (methyl isobutyl ket	8.22	43	21382	8.13	ppb		100
59)	1-Bromo-2-chloroethane	7.83	63	18064	9.09	ppb		93
61)	Cis-1,3-Dichloropropene	8.02	75	36473	9.34	ppb		95
62)	Toluene	8.40	91	104630	9.44	ppb		100
63)	Trans-1,3-Dichloropropene	8.65	75	35617	10.13	ppb		94
64)	1,1,2-TCA	8.85	97	24851	10.01	ppb		96
65)	2-Hexanone	9.15	43	13915	8.40	ppb	#	93
68)	1,2-EDB	9.38	107	25521	9.52	ppb		95
69)	Tetrachloroethene	9.02	166	32266	9.25	ppb		97
70)	1-Chlorohexane	9.95	91	27082	9.64	ppb		98
71)	1,1,1,2-Tetrachloroethane	10.04	131	30869	11.03	ppb		95
72)	m&p-Xylene	10.22	91	180934	19.02	ppb		99
73)	o-Xylene	10.65	91	99014	9.74	ppb		97
74)	Styrene	10.66	104	73252	9.29	ppb		98
76)	1,3-Dichloropropane	9.03	76	41270	9.47	ppb		100
77)	Dibromochloromethane	9.27	129	31019	10.81	ppb		95
78)	Chlorobenzene	9.95	112	75144	9.69	ppb		96
79)	Ethylbenzene	10.09	91	117459	9.43	ppb		98
80)	Bromoform	10.84	173	22869	11.06	ppb		99
82)	Isopropylbenzene	11.06	105	117921	9.65	ppb		99
83)	1,1,2,2-Tetrachloroethane	11.36	83	27410	8.72	ppb		98
84)	1,2,3-Trichloropropane	11.40	110	11512	9.81	ppb		94
85)	t-1,4-Dichloro-2-Butene	11.43	53	4997	7.62	ppb		91
86)	Bromobenzene	11.37	77	60385	9.13	ppb		91
87)	n-Propylbenzene	11.51	91	129554	9.31	ppb		96
88)	4-Ethyltoluene	11.64	105	111010	9.24	ppb		99
89)	2-Chlorotoluene	11.59	91	98097	9.39	ppb		97
90)	1,3,5-Trimethylbenzene	11.71	105	104916	10.05	ppb		92
91)	4-Chlorotoluene	11.71	91	97134	9.60	ppb		93
92)	Tert-Butylbenzene	12.06	119	98736	9.72	ppb		98
93)	1,2,4-Trimethylbenzene	12.11	105	104433	9.57	ppb		97
94)	Sec-Butylbenzene	12.30	105	118784	9.40	ppb		96
95)	p-Isopropyltoluene	12.46	119	101562	9.21	ppb		100
96)	Benzyl Chloride	12.64	91	24460	6.59	ppb		97
97)	1,3-DCB	12.40	146	64115	9.47	ppb		97
98)	1,4-DCB	12.50	146	67367	9.50	ppb		97
99)	n-Butylbenzene	12.91	91	81304	9.06	ppb		95
100)	1,2-DCB	12.90	146	66630	9.63	ppb		95
101)	Hexachloroethane	13.20	201	19909	10.81	ppb		95
102)	1,2-Dibromo-3-chloropropan	13.74	157	7095	8.72	ppb		91
103)	1,2,4-Trichlorobenzene	14.67	180	40727	8.69	ppb		99
104)	Hexachlorobutadiene	14.88	225	23564	11.00	ppb		91
105)	Naphthalene	14.94	127	10005	7.67	ppb		98
106)	1,2,3-Trichlorobenzene	15.20	180	39769	9.04	ppb		91

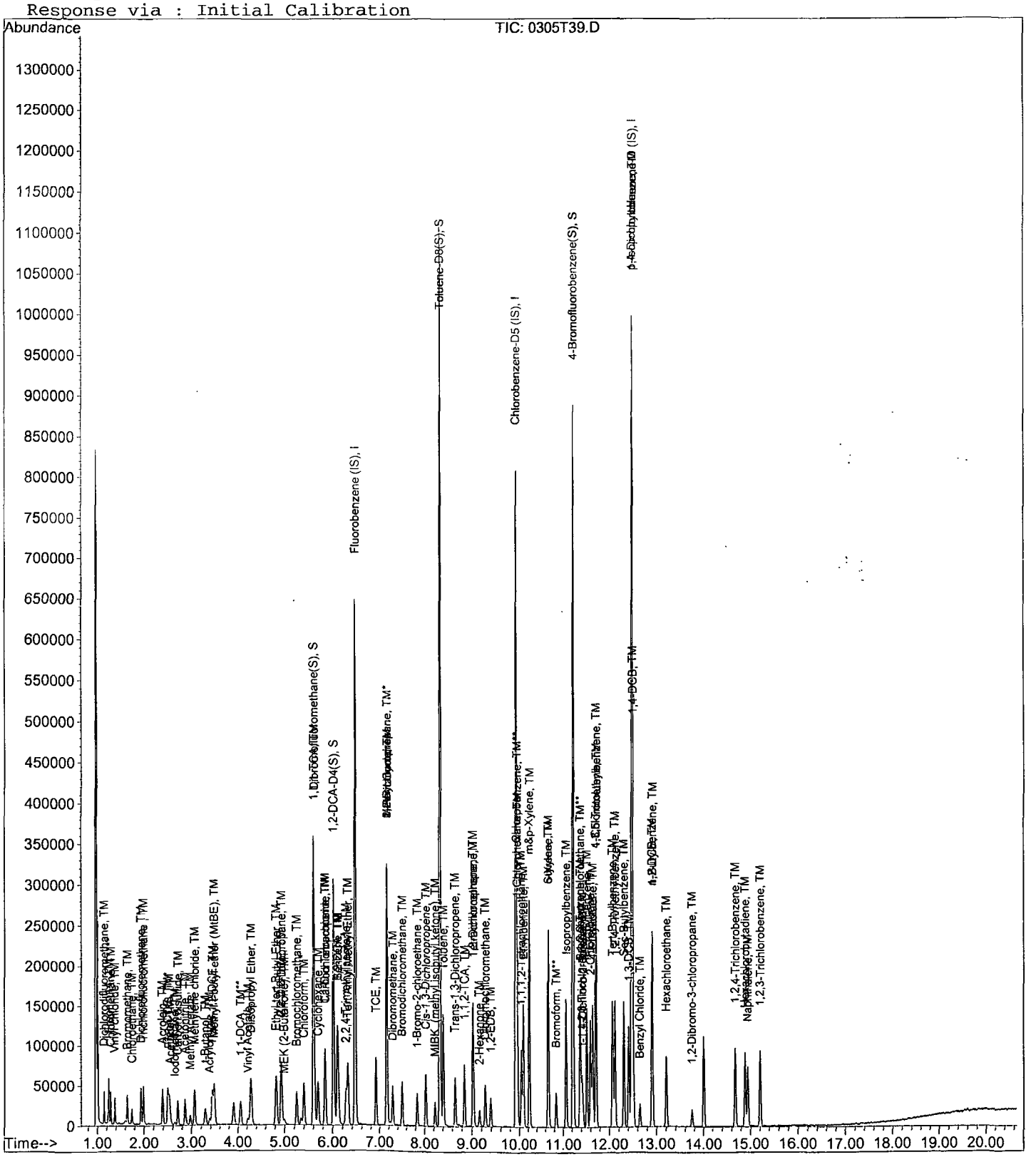
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200226\0305t39.D Vial: 29
Acq On : 6 Mar 20 1:29 Operator:
Sample : Ending CCV 10ug/L 3/5/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 10:47 2020 Quant Results File: T0226W.RES

Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 02 12:37:16 2020
Response via : Initial Calibration



ORGANICS
Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200226\0305T24.D Vial: 14
Acq On : 5 Mar 20 18:22 Operator:
Sample : BA07941W01 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 10:53 2020 Quant Results File: T0226W.RES

Quant Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 02 12:37:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	655956	25.00	ppb	0.00
66) Chlorobenzene-D5 (IS)	9.92	117	539078	25.00	ppb	0.00
81) 1,4-Dichlorobenzene-D (IS)	12.48	152	292044	25.00	ppb	0.00
System Monitoring Compounds						
41) Dibromofluoromethane(S)	5.60	111	211316	25.34	ppb	0.00
Spiked Amount 25.000			Recovery = 101.360%			
46) 1,2-DCA-D4(S)	6.02	65	243744	25.54	ppb	0.00
Spiked Amount 25.000			Recovery = 102.156%			
67) Toluene-D8(S)	8.33	98	794265	24.33	ppb	0.00
Spiked Amount 25.000			Recovery = 97.304%			
75) 4-Bromofluorobenzene(S)	11.21	95	309471	23.73	ppb	0.00
Spiked Amount 25.000			Recovery = 94.912%			

Target Compounds Qvalue

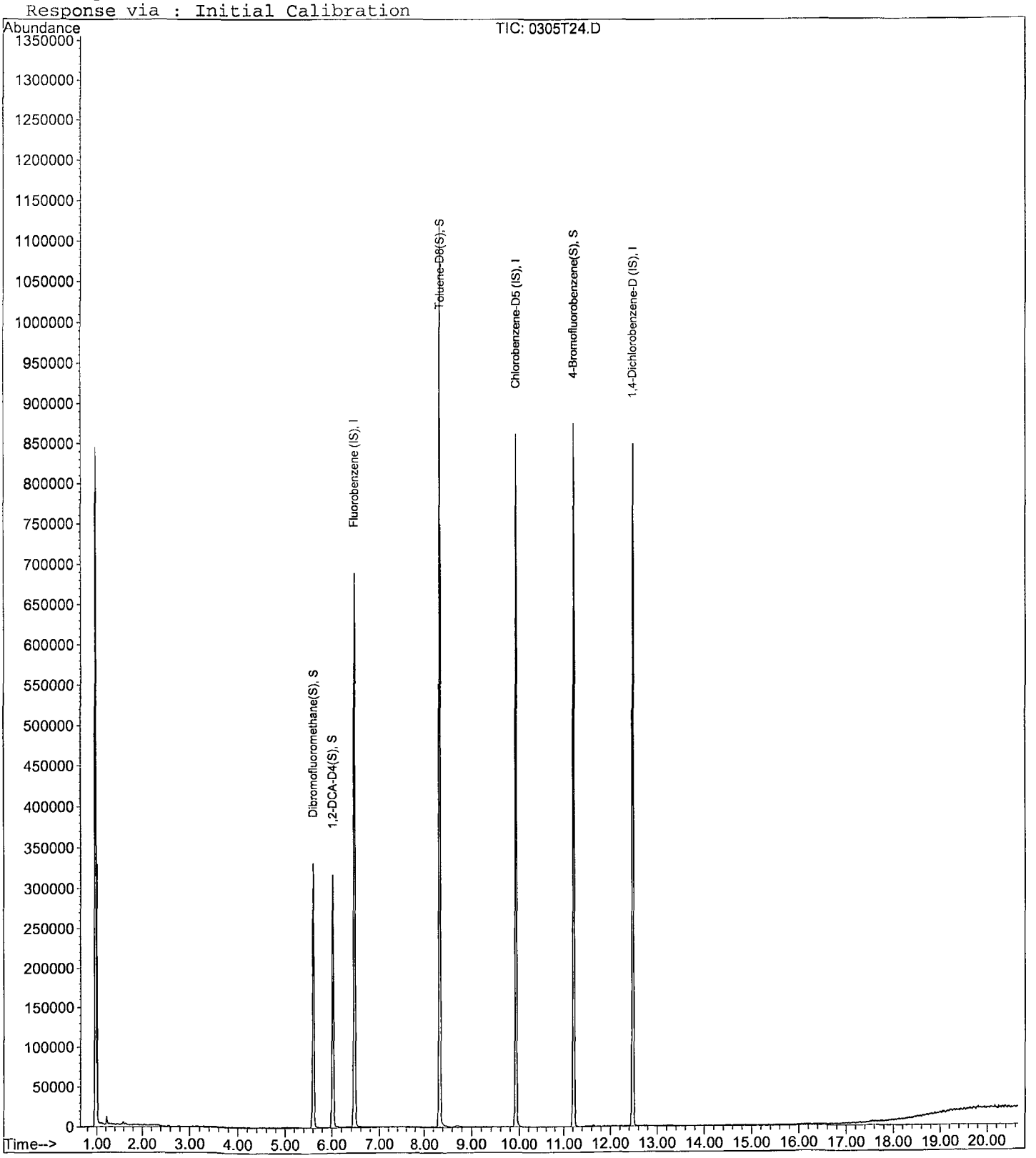
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200226\0305T24.D Vial: 14
Acq On : 5 Mar 20 18:22 Operator:
Sample : BA07941W01 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 10:53 2020 Quant Results File: T0226W.RES

Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 02 12:37:16 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200226\0305T25.D Vial: 15
Acq On : 5 Mar 20 18:51 Operator:
Sample : BA07942W01 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 10:54 2020 Quant Results File: T0226W.RES

Quant Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 02 12:37:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	647119	25.00	ppb	0.00
66) Chlorobenzene-D5 (IS)	9.92	117	536433	25.00	ppb	0.00
81) 1,4-Dichlorobenzene-D (IS)	12.48	152	291741	25.00	ppb	0.00
System Monitoring Compounds						
41) Dibromofluoromethane(S)	5.60	111	221007	27.19	ppb	0.00
Spiked Amount 25.000			Recovery = 108.776%			
46) 1,2-DCA-D4(S)	6.02	65	250430	26.84	ppb	0.00
Spiked Amount 25.000			Recovery = 107.352%			
67) Toluene-D8(S)	8.33	98	817365	25.36	ppb	0.00
Spiked Amount 25.000			Recovery = 101.424%			
75) 4-Bromofluorobenzene(S)	11.21	95	321031	24.91	ppb	0.00
Spiked Amount 25.000			Recovery = 99.636%			

Target Compounds Qvalue

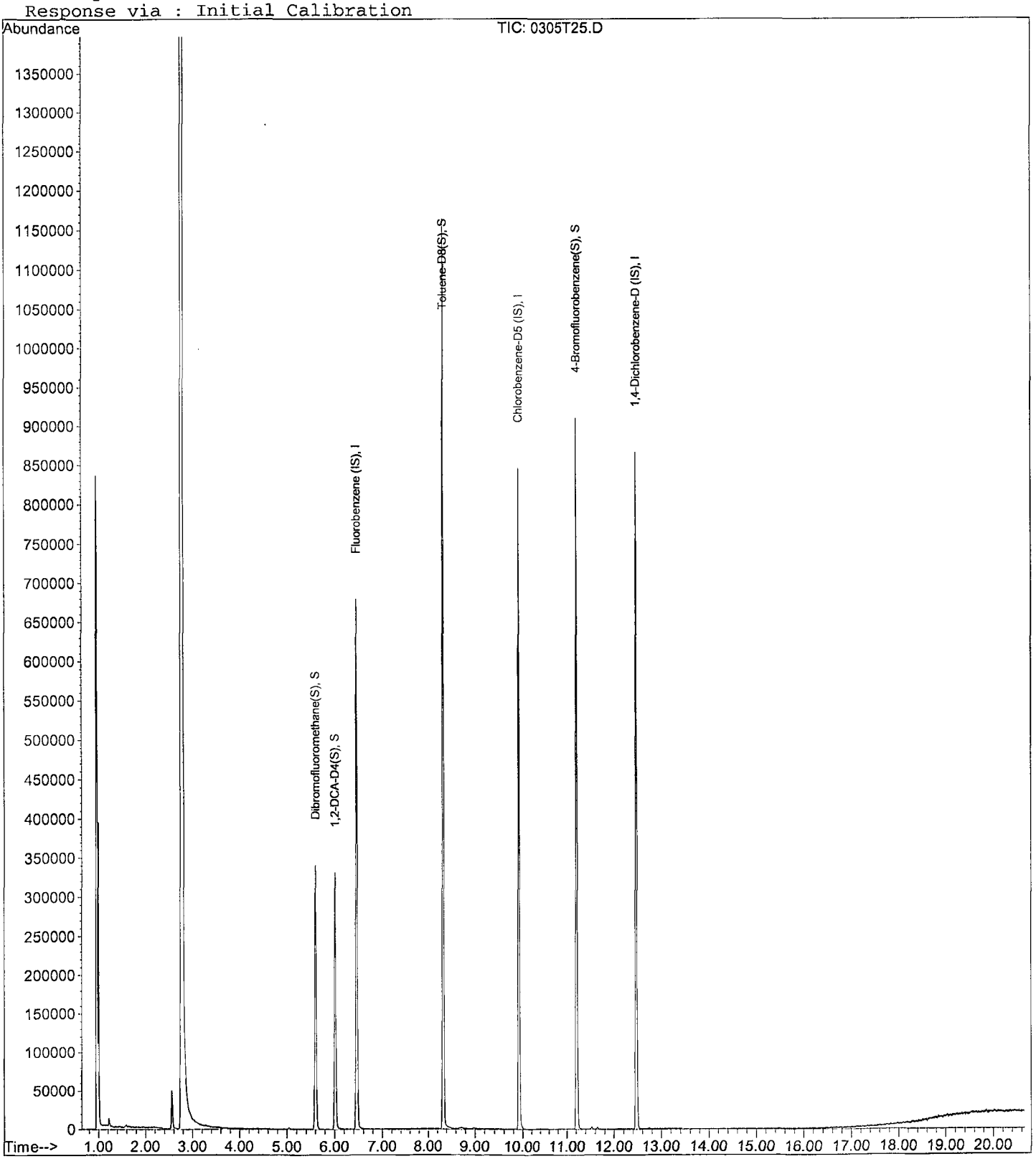
(#) = qualifier out of range (m) = manual integration
0305T25.D T0226W.M Wed Mar 11 11:35:47 2020 Page 1

Quantitation Report

Data File : M:\THOR\DATA\T200226\0305T25.D Vial: 15
Acq On : 5 Mar 20 18:51 Operator:
Sample : BA07942W01 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 10:54 2020 Quant Results File: T0226W.RES

Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 02 12:37:16 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200226\0305T26.D Vial: 16
Acq On : 5 Mar 20 19:19 Operator:
Sample : BA07943W01 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 10:54 2020 Quant Results File: T0226W.RES

Quant Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 02 12:37:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	638068	25.00	ppb	0.00
66) Chlorobenzene-D5 (IS)	9.92	117	533469	25.00	ppb	0.00
81) 1,4-Dichlorobenzene-D (IS)	12.48	152	294078	25.00	ppb	0.00
System Monitoring Compounds						
41) Dibromofluoromethane(S)	5.60	111	223795	28.08	ppb	0.00
Spiked Amount 25.000			Recovery = 112.304%			
46) 1,2-DCA-D4(S)	6.02	65	254922	27.89	ppb	0.00
Spiked Amount 25.000			Recovery = 111.580%			
67) Toluene-D8(S)	8.33	98	817344	25.53	ppb	0.00
Spiked Amount 25.000			Recovery = 102.116%			
75) 4-Bromofluorobenzene(S)	11.21	95	318419	24.83	ppb	0.00
Spiked Amount 25.000			Recovery = 99.332%			

Target Compounds Qvalue

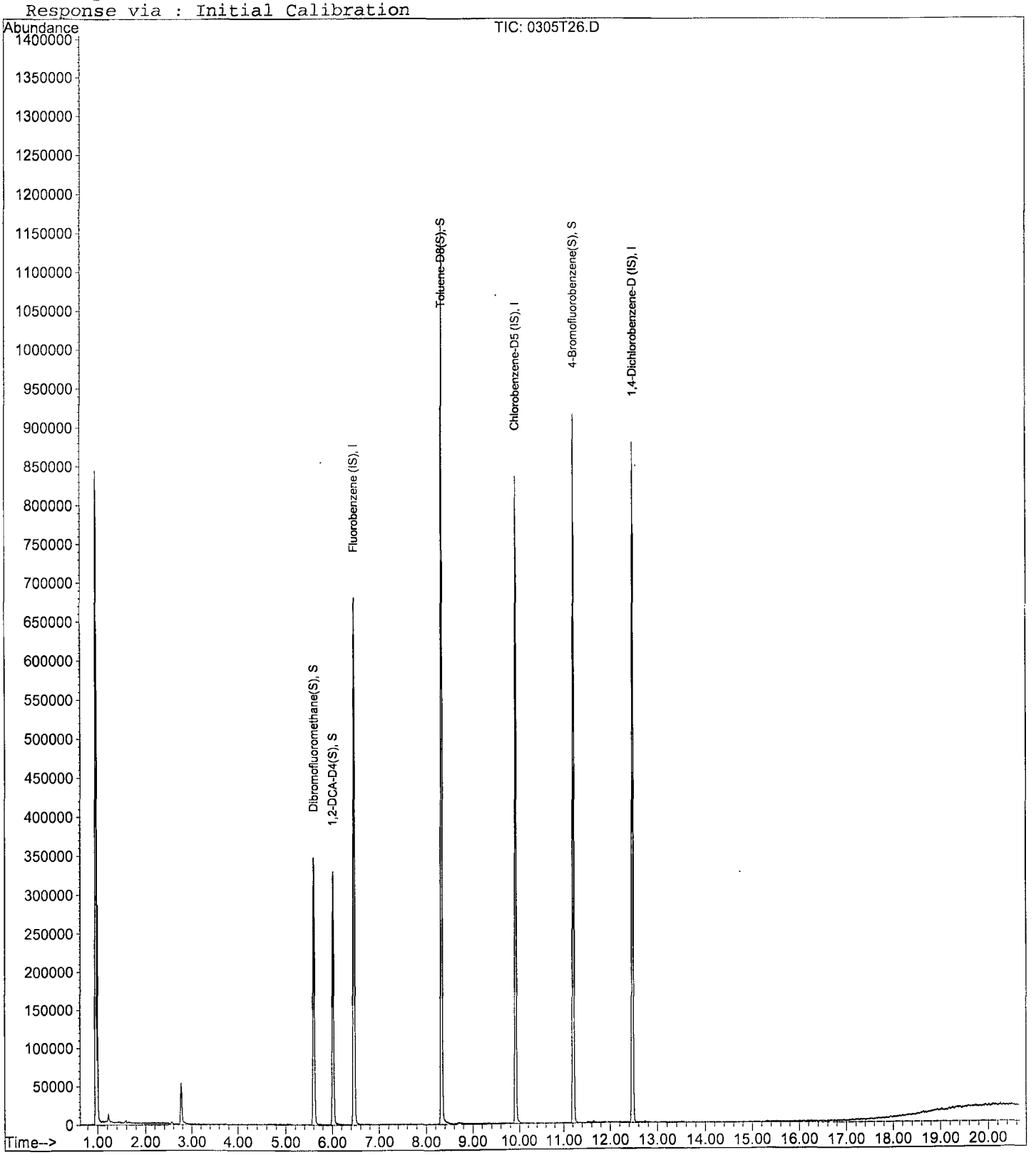
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200226\0305T26.D Vial: 16
Acq On : 5 Mar 20 19:19 Operator:
Sample : BA07943W01 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 10:54 2020 Quant Results File: T0226W.RES

Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 02 12:37:16 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200226\0305T27.D Vial: 17
Acq On : 5 Mar 20 19:48 Operator:
Sample : BA07944W01 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 10:54 2020 Quant Results File: T0226W.RES

Quant Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 02 12:37:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	634154	25.00	ppb	0.00
66) Chlorobenzene-D5 (IS)	9.92	117	526303	25.00	ppb	0.00
81) 1,4-Dichlorobenzene-D (IS)	12.47	152	284537	25.00	ppb	0.00
System Monitoring Compounds						
41) Dibromofluoromethane(S)	5.60	111	202402	25.05	ppb	0.00
Spiked Amount 25.000			Recovery =	100.220%		
46) 1,2-DCA-D4(S)	6.02	65	232039	25.06	ppb	0.00
Spiked Amount 25.000			Recovery =	100.236%		
67) Toluene-D8(S)	8.33	98	748786	23.29	ppb	0.00
Spiked Amount 25.000			Recovery =	93.156%		
75) 4-Bromofluorobenzene(S)	11.21	95	291293	22.73	ppb	0.00
Spiked Amount 25.000			Recovery =	90.916%		

Target Compounds Qvalue

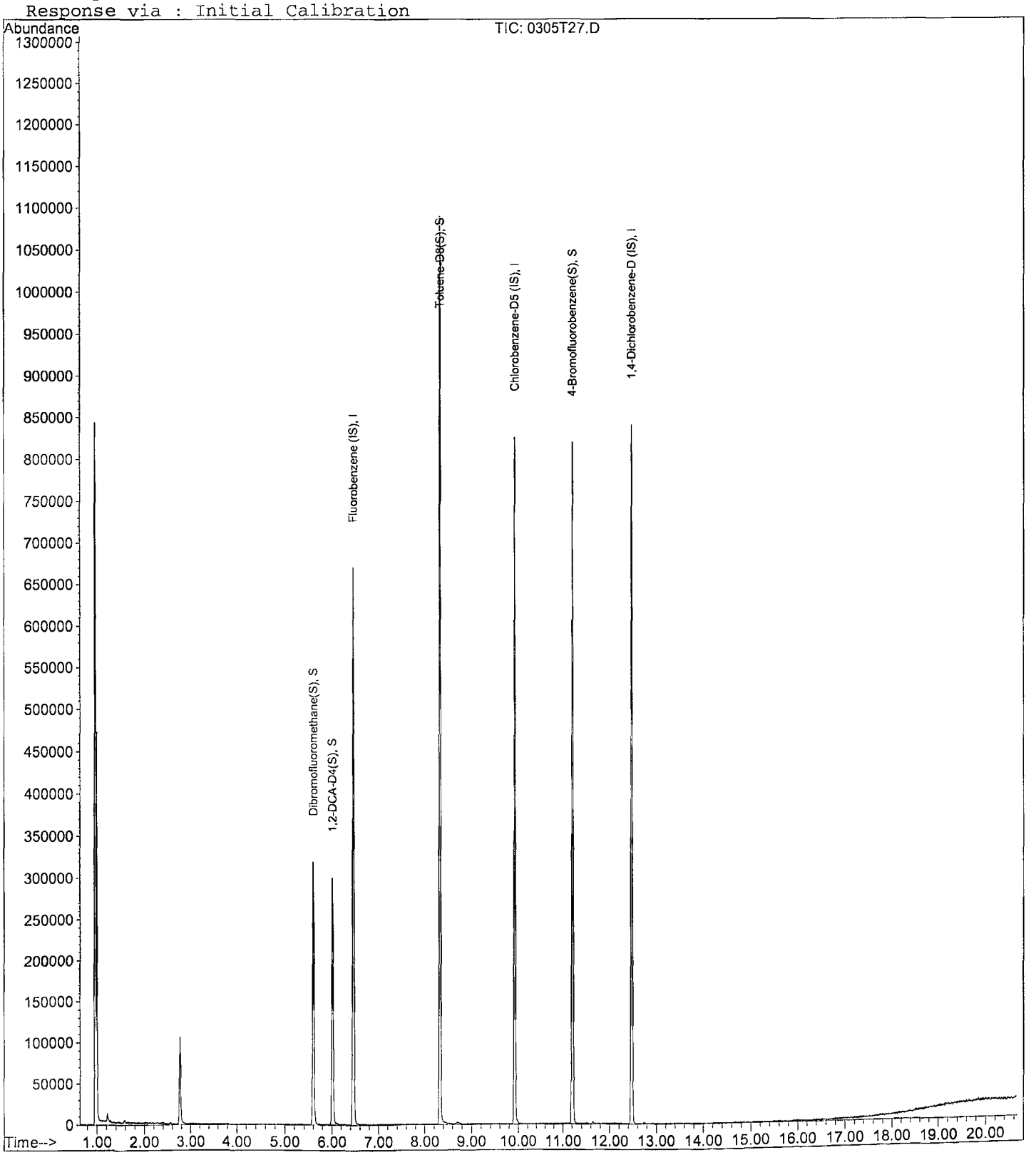
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200226\0305T27.D Vial: 17
Acq On : 5 Mar 20 19:48 Operator:
Sample : BA07944W01 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 10:54 2020 Quant Results File: T0226W.RES

Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 02 12:37:16 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200226\0305T28.D Vial: 18
Acq On : 5 Mar 20 20:16 Operator:
Sample : BA07945W01 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 10:54 2020 Quant Results File: T0226W.RES

Quant Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 02 12:37:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	621127	25.00	ppb	0.00
66) Chlorobenzene-D5 (IS)	9.92	117	515779	25.00	ppb	0.00
81) 1,4-Dichlorobenzene-D (IS)	12.47	152	277650	25.00	ppb	0.00
System Monitoring Compounds						
41) Dibromofluoromethane(S)	5.60	111	210675	26.97	ppb	0.00
Spiked Amount 25.000			Recovery =	107.880%		
46) 1,2-DCA-D4(S)	6.02	65	241356	26.97	ppb	0.00
Spiked Amount 25.000			Recovery =	107.888%		
67) Toluene-D8(S)	8.33	98	777605	25.03	ppb	0.00
Spiked Amount 25.000			Recovery =	100.108%		
75) 4-Bromofluorobenzene(S)	11.21	95	301366	24.22	ppb	0.00
Spiked Amount 25.000			Recovery =	96.892%		

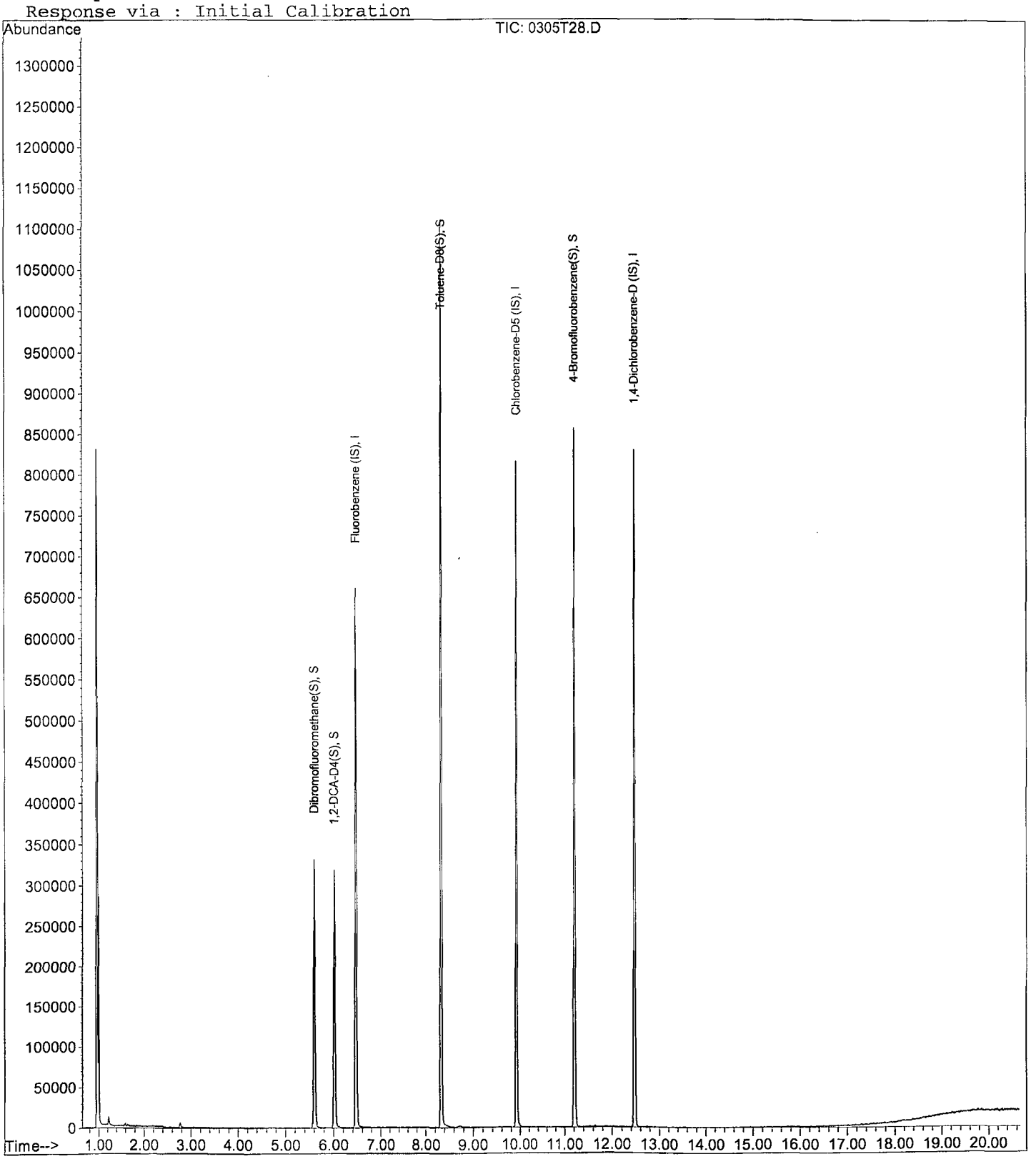
Target Compounds Qvalue

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

Data File : M:\THOR\DATA\T200226\0305T28.D Vial: 18
Acq On : 5 Mar 20 20:16 Operator:
Sample : BA07945W01 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 10:54 2020 Quant Results File: T0226W.RES

Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 02 12:37:16 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200226\0305T29.D Vial: 19
Acq On : 5 Mar 20 20:44 Operator:
Sample : BA07946W01 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 10:55 2020 Quant Results File: T0226W.RES

Quant Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 02 12:37:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	623579	25.00	ppb	0.00
66) Chlorobenzene-D5 (IS)	9.92	117	515954	25.00	ppb	0.00
81) 1,4-Dichlorobenzene-D (IS)	12.48	152	281515	25.00	ppb	0.00
System Monitoring Compounds						
41) Dibromofluoromethane(S)	5.60	111	209573	26.67	ppb	0.00
Spiked Amount 25.000			Recovery = 106.692%			
46) 1,2-DCA-D4(S)	6.02	65	240763	26.76	ppb	0.00
Spiked Amount 25.000			Recovery = 107.052%			
67) Toluene-D8(S)	8.33	98	767202	24.60	ppb	0.00
Spiked Amount 25.000			Recovery = 98.416%			
75) 4-Bromofluorobenzene(S)	11.21	95	296298	23.74	ppb	0.00
Spiked Amount 25.000			Recovery = 94.948%			

Target Compounds Qvalue

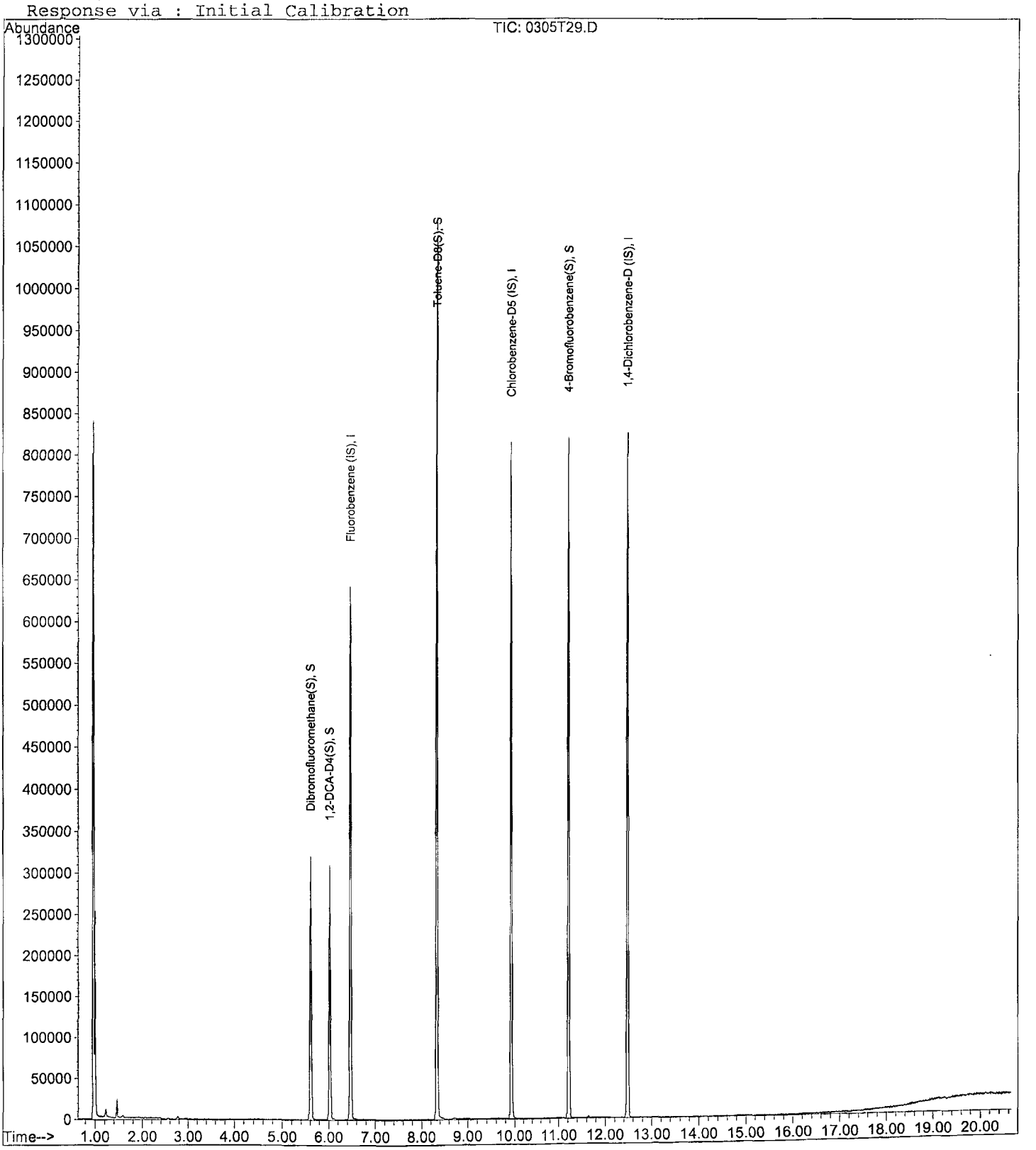
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200226\0305T29.D Vial: 19
Acq On : 5 Mar 20 20:44 Operator:
Sample : BA07946W01 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 10:55 2020 Quant Results File: T0226W.RES

Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 02 12:37:16 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200226\0305T30.D Vial: 20
Acq On : 5 Mar 20 21:13 Operator:
Sample : BA07947W01 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 10:55 2020 Quant Results File: T0226W.RES

Quant Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 02 12:37:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	608416	25.00	ppb	0.00
66) Chlorobenzene-D5 (IS)	9.92	117	508895	25.00	ppb	0.00
81) 1,4-Dichlorobenzene-D (IS)	12.47	152	276345	25.00	ppb	0.00
System Monitoring Compounds						
41) Dibromofluoromethane(S)	5.60	111	211391	27.76	ppb	0.00
Spiked Amount 25.000			Recovery = 111.044%			
46) 1,2-DCA-D4(S)	6.02	65	243848	28.00	ppb	0.00
Spiked Amount 25.000			Recovery = 112.008%			
67) Toluene-D8(S)	8.33	98	782417	25.64	ppb	0.00
Spiked Amount 25.000			Recovery = 102.556%			
75) 4-Bromofluorobenzene(S)	11.21	95	305911	25.04	ppb	0.00
Spiked Amount 25.000			Recovery = 100.156%			

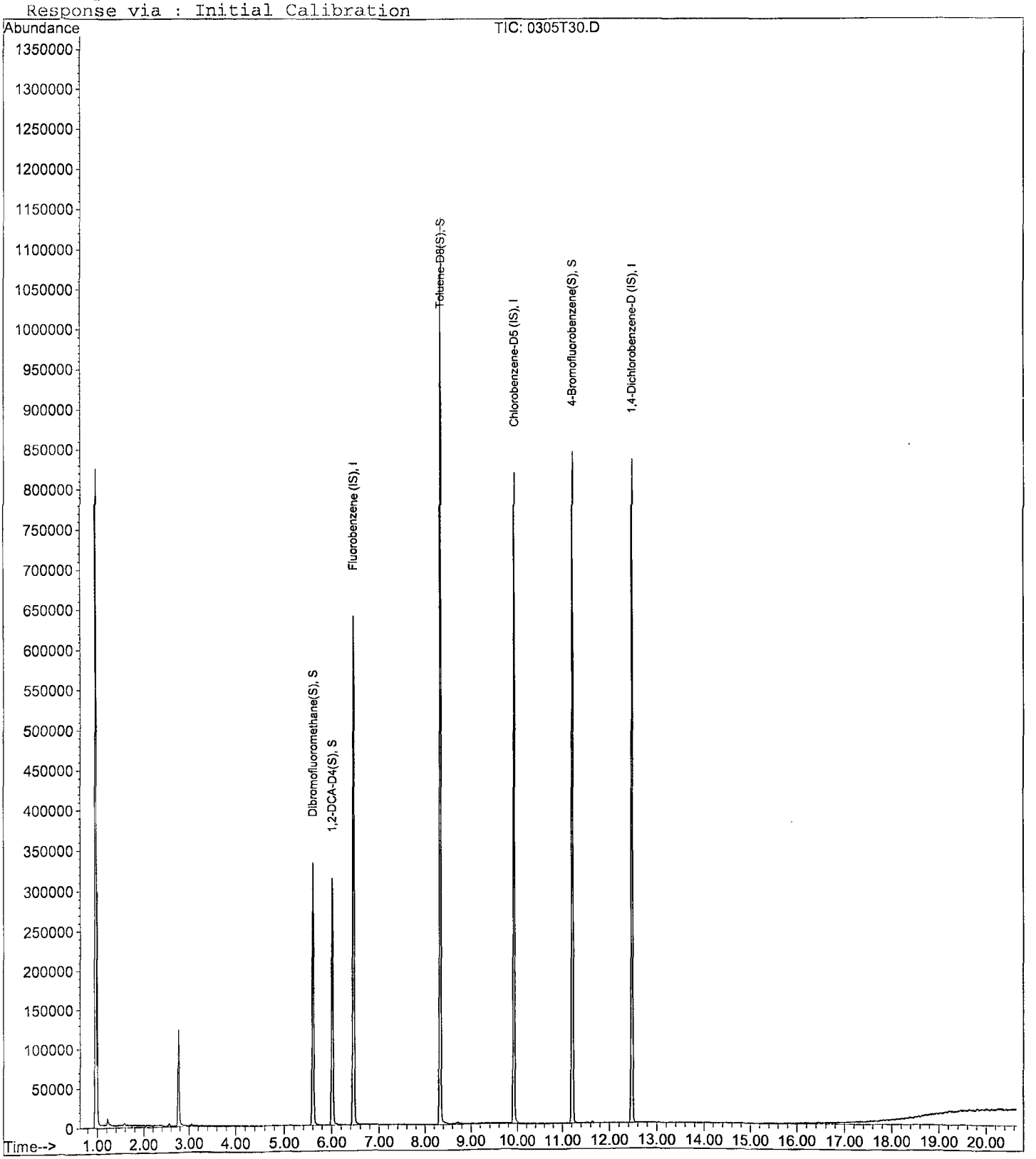
Target Compounds Qvalue

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

Data File : M:\THOR\DATA\T200226\0305T30.D Vial: 20
Acq On : 5 Mar 20 21:13 Operator:
Sample : BA07947W01 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 10:55 2020 Quant Results File: T0226W.RES

Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 02 12:37:16 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200226\0305t19.D Vial: 9
Acq On : 5 Mar 20 16:01 Operator:
Sample : 200305B BLK Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 11 11:35 2020 Quant Results File: T0226W.RES

Quant Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 02 12:37:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	708044	25.00	ppb	0.00
66) Chlorobenzene-D5 (IS)	9.92	117	582815	25.00	ppb	0.00
81) 1,4-Dichlorobenzene-D (IS)	12.47	152	316777	25.00	ppb	0.00
System Monitoring Compounds						
41) Dibromofluoromethane(S)	5.60	111	222818	24.63	ppb	0.00
Spiked Amount 25.000			Recovery =	98.508%		
46) 1,2-DCA-D4(S)	6.02	65	254410	24.50	ppb	0.00
Spiked Amount 25.000			Recovery =	98.016%		
67) Toluene-D8(S)	8.33	98	837777	23.59	ppb	0.00
Spiked Amount 25.000			Recovery =	94.364%		
75) 4-Bromofluorobenzene(S)	11.21	95	326743	23.08	ppb	0.00
Spiked Amount 25.000			Recovery =	92.304%		

Target Compounds Qvalue

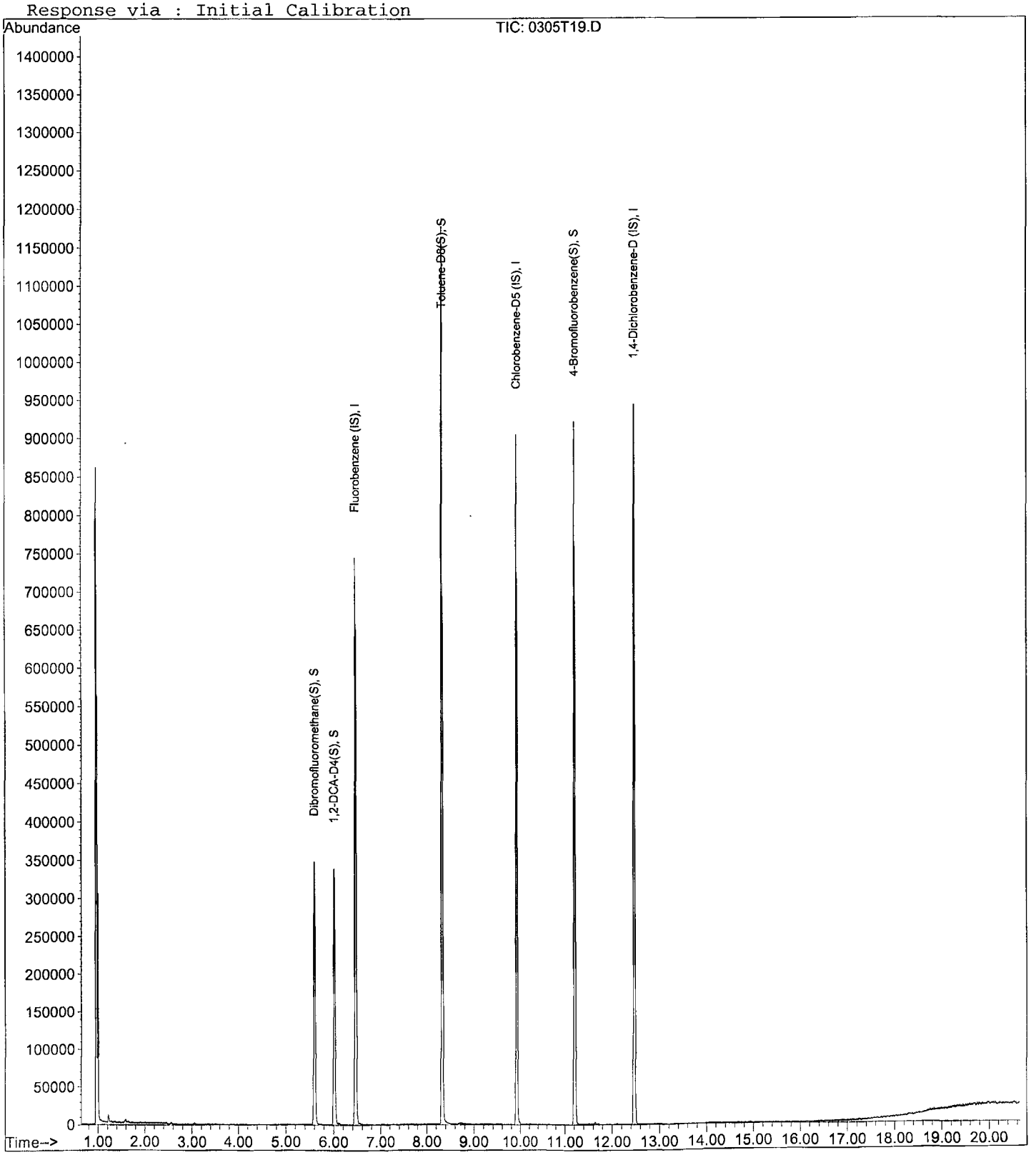
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200226\0305t19.D Vial: 9
Acq On : 5 Mar 20 16:01 Operator:
Sample : 200305B BLK Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 11 11:35 2020 Quant Results File: T0226W.RES

Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 02 12:37:16 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0305t12.D Vial: 2
Acq On : 5 Mar 20 12:42 Operator:
Sample : 200305B LCS 10ug/L Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 10:48 2020 Quant Results File: T0226W.RES

Quant Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 02 12:37:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.46	96	798665	25.00	ppb		0.00
66) Chlorobenzene-D5 (IS)	9.92	117	645430	25.00	ppb		0.00
81) 1,4-Dichlorobenzene-D (IS)	12.48	152	370850	25.00	ppb		0.00
System Monitoring Compounds							
41) Dibromofluoromethane(S)	5.60	111	265509	26.32	ppb		0.00
Spiked Amount 25.000			Recovery = 105.300%				
46) 1,2-DCA-D4(S)	6.01	65	288946	24.71	ppb		0.00
Spiked Amount 25.000			Recovery = 98.848%				
67) Toluene-D8(S)	8.33	98	990638	25.58	ppb		0.00
Spiked Amount 25.000			Recovery = 102.340%				
75) 4-Bromofluorobenzene(S)	11.21	95	393552	25.46	ppb		0.00
Spiked Amount 25.000			Recovery = 101.828%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.14	85	27640	8.39	ppb		92
4) Freon 114	1.24	85	22053	9.33	ppb		98
5) Chloromethane	1.28	50	29232	8.50	ppb		96
6) Vinyl chloride	1.37	62	27566	8.69	ppb		96
8) Bromomethane	1.64	94	21453	10.16	ppb		92
9) Chloroethane	1.74	66	4361	10.21	ppb		90
10) Dichlorofluoromethane	1.93	67	46531	9.62	ppb		97
11) Trichlorofluoromethane	1.98	101	42499	10.02	ppb		98
14) Acrolein	2.38	55	22456	95.35	ppb		92
15) Acetone	2.55	43	4406	5.45	ppb		98
16) Freon-113	2.52	101	21070	10.41	ppb		97
17) 1,1-DCE	2.49	61	31066	8.44	ppb		97
19) Acetonitrile	2.85	40	11868	108.30	ppb		96
20) t-Butanol	3.28	59	13183	107.71	ppb		97
21) Methyl Acetate	2.96	43	21181	8.58	ppb		95
22) Iodomethane	2.64	142	15035	10.13	ppb		91
23) Acrylonitrile	3.38	52	8055	9.24	ppb	#	78
24) Methylene chloride	3.05	49	35039	8.65	ppb		96
25) Carbon disulfide	2.71	76	57444	8.88	ppb		98
26) Methyl t-butyl ether (MtBE	3.48	73	84500	9.88	ppb	#	89
27) Trans-1,2-DCE	3.43	61	34452	8.85	ppb		96
29) Diisopropyl Ether	4.28	45	87808	9.54	ppb		95
31) 1,1-DCA	4.05	63	46271	9.45	ppb		96
32) Vinyl Acetate	4.21	43	20200	9.43	ppb		99
33) Ethyl tert Butyl Ether	4.82	59	86863	9.57	ppb		98
34) MEK (2-Butanone)	4.98	43	12056	7.89	ppb		97
35) Cis-1,2-DCE	4.93	61	47375	9.75	ppb	#	88
36) 2,2-Dichloropropane	4.92	77	40709	9.65	ppb	#	90
39) Chloroform	5.40	83	56341	9.71	ppb		93
40) Bromochloromethane	5.25	49	24299	8.96	ppb		95
42) 1,1,1-TCA	5.61	97	47639	10.07	ppb		95
43) Cyclohexane	5.69	56	36433	9.49	ppb		95
44) 1,1-Dichloropropene	5.84	75	36749	9.59	ppb		97
45) 2,2,4-Trimethylpentane	6.27	57	73451	10.44	ppb		99
47) Carbon Tetrachloride	5.84	117	40873	10.75	ppb		95
48) Tert Amyl Methyl Ether	6.31	73	85247	9.81	ppb		99
50) 1,2-DCA	6.11	62	44146	8.47	ppb		99
51) Benzene	6.09	78	121451	9.75	ppb		97
52) TCE	6.91	130	37072	9.24	ppb		96

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0305t12.D Vial: 2
Acq On : 5 Mar 20 12:42 Operator:
Sample : 200305B LCS 10ug/L Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 10:48 2020 Quant Results File: T0226W.RES

Quant Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 02 12:37:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
53)	2-Pentanone	7.15	43	274585	107.44	ppb		100
54)	1,2-Dichloropropane	7.16	63	32117	9.21	ppb	#	95
55)	Bromodichloromethane	7.50	83	45028	10.42	ppb		99
56)	Methyl Cyclohexane	7.14	83	39413	10.19	ppb		98
57)	Dibromomethane	7.29	174	27337	9.77	ppb		91
58)	MIBK (methyl isobutyl ket	8.22	43	29049	8.49	ppb		100
59)	1-Bromo-2-chloroethane	7.83	63	23376	9.04	ppb		95
61)	Cis-1,3-Dichloropropene	8.02	75	49887	9.83	ppb		100
62)	Toluene	8.40	91	141453	9.81	ppb		97
63)	Trans-1,3-Dichloropropene	8.65	75	44748	9.79	ppb		93
64)	1,1,2-TCA	8.85	97	32261	9.99	ppb		92
65)	2-Hexanone	9.15	43	18535	8.59	ppb		97
68)	1,2-EDB	9.38	107	32474	9.55	ppb		92
69)	Tetrachloroethene	9.01	166	41016	9.27	ppb		96
70)	1-Chlorohexane	9.95	91	39894	11.20	ppb		94
71)	1,1,1,2-Tetrachloroethane	10.04	131	37309	10.51	ppb		93
72)	m&p-Xylene	10.22	91	245740	20.38	ppb		98
73)	o-Xylene	10.65	91	130257	10.11	ppb		99
74)	Styrene	10.66	104	101686	10.17	ppb		98
76)	1,3-Dichloropropane	9.03	76	54082	9.78	ppb		98
77)	Dibromochloromethane	9.27	129	38610	10.61	ppb		92
78)	Chlorobenzene	9.95	112	98389	10.01	ppb		92
79)	Ethylbenzene	10.09	91	153967	9.75	ppb		98
80)	Bromoform	10.84	173	28993	11.06	ppb		98
82)	Isopropylbenzene	11.06	105	159540	10.39	ppb		99
83)	1,1,2,2-Tetrachloroethane	11.36	83	39540	10.01	ppb		99
84)	1,2,3-Trichloropropane	11.40	110	14144	9.60	ppb		88
85)	t-1,4-Dichloro-2-Butene	11.43	53	7235	8.78	ppb	#	84
86)	Bromobenzene	11.37	77	79071	9.52	ppb		90
87)	n-Propylbenzene	11.51	91	176810	10.11	ppb		98
88)	4-Ethyltoluene	11.64	105	151995	10.07	ppb		96
89)	2-Chlorotoluene	11.59	91	128606	9.80	ppb		98
90)	1,3,5-Trimethylbenzene	11.71	105	137927	10.52	ppb		97
91)	4-Chlorotoluene	11.71	91	132343	10.41	ppb		96
92)	Tert-Butylbenzene	12.06	119	139538	10.94	ppb		93
93)	1,2,4-Trimethylbenzene	12.11	105	141585	10.32	ppb		98
94)	Sec-Butylbenzene	12.30	105	165637	10.44	ppb		97
95)	p-Isopropyltoluene	12.46	119	142510	10.29	ppb		98
96)	Benzyl Chloride	12.64	91	49695	10.65	ppb		98
97)	1,3-DCB	12.40	146	87347	10.27	ppb		94
98)	1,4-DCB	12.50	146	89403	10.03	ppb		96
99)	n-Butylbenzene	12.91	91	117659	10.43	ppb		98
100)	1,2-DCB	12.90	146	88091	10.13	ppb		97
101)	Hexachloroethane	13.20	201	26084	11.25	ppb		96
102)	1,2-Dibromo-3-chloropropan	13.74	157	9319	9.09	ppb		98
103)	1,2,4-Trichlorobenzene	14.67	180	61576	10.46	ppb		88
104)	Hexachlorobutadiene	14.88	225	31565	11.73	ppb		91
105)	Naphthalene	14.94	127	15370	9.38	ppb		97
106)	1,2,3-Trichlorobenzene	15.20	180	57656	10.43	ppb		91

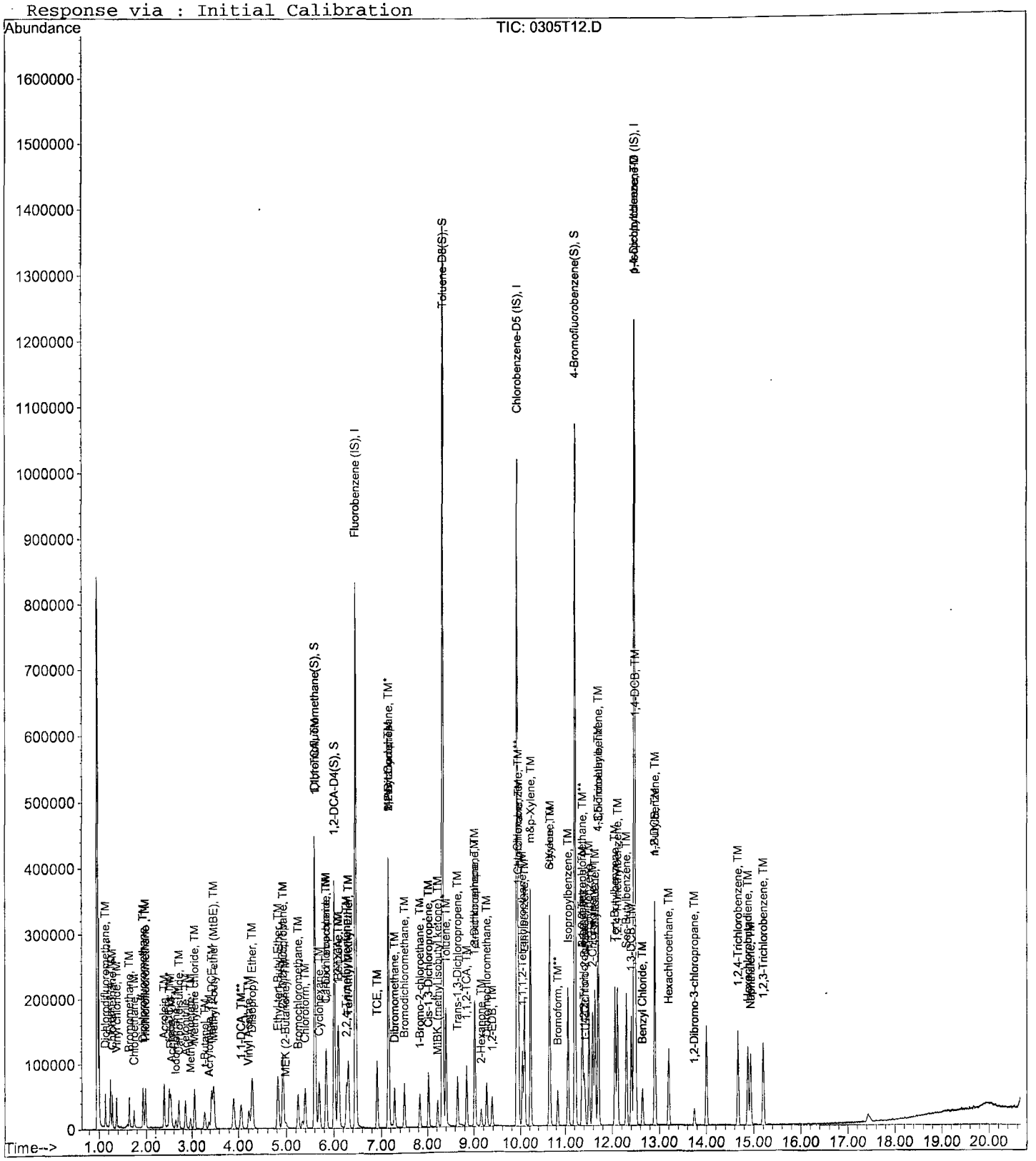
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200226\0305t12.D Vial: 2
Acq On : 5 Mar 20 12:42 Operator:
Sample : 200305B LCS 10ug/L Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 10:48 2020 Quant Results File: T0226W.RES

Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 02 12:37:16 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0305T13.D Vial: 3
Acq On : 5 Mar 20 13:10 Operator:
Sample : 200305B LCSD 10ug/L Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 10:48 2020 Quant Results File: T0226W.RES

Quant Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 02 12:37:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.46	96	790507	25.00	ppb		0.00
66) Chlorobenzene-D5 (IS)	9.92	117	647949	25.00	ppb		0.00
81) 1,4-Dichlorobenzene-D (IS)	12.48	152	365778	25.00	ppb		0.00
System Monitoring Compounds							
41) Dibromofluoromethane(S)	5.60	111	260323	26.03	ppb		0.00
Spiked Amount 25.000			Recovery = 104.100%				
46) 1,2-DCA-D4(S)	6.01	65	283269	24.42	ppb		0.00
Spiked Amount 25.000			Recovery = 97.684%				
67) Toluene-D8(S)	8.33	98	992860	25.53	ppb		0.00
Spiked Amount 25.000			Recovery = 102.132%				
75) 4-Bromofluorobenzene(S)	11.21	95	394397	25.41	ppb		0.00
Spiked Amount 25.000			Recovery = 101.620%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.14	85	27096	8.31	ppb		100
4) Freon 114	1.24	85	21883	9.34	ppb		98
5) Chloromethane	1.28	50	28760	8.45	ppb		100
6) Vinyl chloride	1.37	62	26459	8.43	ppb		97
8) Bromomethane	1.64	94	20972	10.03	ppb		97
9) Chloroethane	1.74	66	3765	8.87	ppb		90
10) Dichlorofluoromethane	1.93	67	43734	9.13	ppb		99
11) Trichlorofluoromethane	1.98	101	41426	9.87	ppb		98
14) Acrolein	2.38	55	22608	96.99	ppb		97
15) Acetone	2.55	43	4955	6.75	ppb		97
16) Freon-113	2.53	101	21902	10.88	ppb	#	86
17) 1,1-DCE	2.49	61	33363	9.16	ppb		96
19) Acetonitrile	2.85	40	11762	108.44	ppb		96
20) t-Butanol	3.29	59	13580	112.10	ppb		99
21) Methyl Acetate	2.96	43	21042	8.62	ppb		97
22) Iodomethane	2.64	142	15411	10.42	ppb		91
23) Acrylonitrile	3.37	52	7877	9.13	ppb		94
24) Methylene chloride	3.05	49	34835	8.69	ppb		94
25) Carbon disulfide	2.70	76	58303	9.10	ppb		98
26) Methyl t-butyl ether (MtBE	3.48	73	82423	9.73	ppb		96
27) Trans-1,2-DCE	3.43	61	33788	8.77	ppb		99
29) Diisopropyl Ether	4.28	45	87716	9.63	ppb		99
31) 1,1-DCA	4.05	63	48484	10.00	ppb		98
32) Vinyl Acetate	4.21	43	19992	9.43	ppb		99
33) Ethyl tert Butyl Ether	4.82	59	86337	9.61	ppb		99
34) MEK (2-Butanone)	4.99	43	12378	8.21	ppb		94
35) Cis-1,2-DCE	4.93	61	46286	9.62	ppb	#	86
36) 2,2-Dichloropropane	4.92	77	43051	10.31	ppb		96
39) Chloroform	5.40	83	55550	9.67	ppb		98
40) Bromochloromethane	5.24	49	24588	9.16	ppb		93
42) 1,1,1-TCA	5.62	97	47173	10.08	ppb		98
43) Cyclohexane	5.69	56	36331	9.55	ppb		92
44) 1,1-Dichloropropene	5.85	75	35993	9.49	ppb		95
45) 2,2,4-Trimethylpentane	6.27	57	72296	10.39	ppb		98
47) Carbon Tetrachloride	5.84	117	40877	10.86	ppb		97
48) Tert Amyl Methyl Ether	6.31	73	84579	9.84	ppb		100
50) 1,2-DCA	6.11	62	45239	8.77	ppb		99
51) Benzene	6.09	78	119833	9.71	ppb		98
52) TCE	6.91	130	38151	9.61	ppb		96

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0305T13.D Vial: 3
Acq On : 5 Mar 20 13:10 Operator:
Sample : 200305B LCSD 10ug/L Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 10:48 2020 Quant Results File: T0226W.RES

Quant Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 02 12:37:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

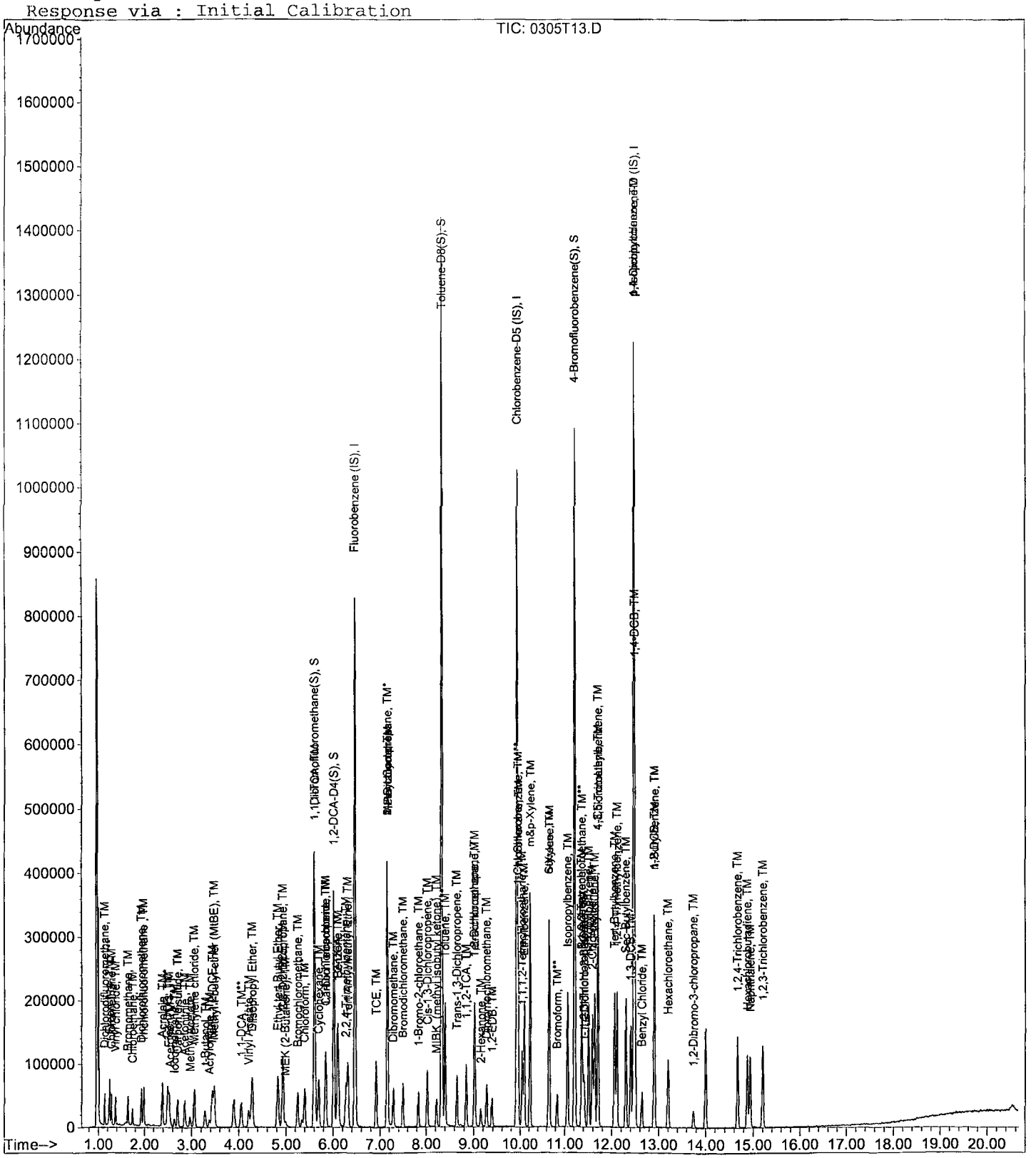
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
53)	2-Pentanone	7.15	43	282878	111.82	ppb		100
54)	1,2-Dichloropropane	7.16	63	33286	9.64	ppb	#	96
55)	Bromodichloromethane	7.50	83	44242	10.34	ppb		97
56)	Methyl Cyclohexane	7.15	83	41653	10.80	ppb		83
57)	Dibromomethane	7.29	174	28642	10.35	ppb		93
58)	MIBK (methyl isobutyl ket	8.22	43	30383	8.97	ppb		94
59)	1-Bromo-2-chloroethane	7.83	63	25216	9.86	ppb		98
61)	Cis-1,3-Dichloropropene	8.02	75	50808	10.11	ppb		97
62)	Toluene	8.40	91	142887	10.01	ppb		95
63)	Trans-1,3-Dichloropropene	8.65	75	46343	10.24	ppb		92
64)	1,1,2-TCA	8.84	97	32834	10.27	ppb		96
65)	2-Hexanone	9.15	43	18989	8.86	ppb		98
68)	1,2-EDB	9.38	107	33353	9.77	ppb		94
69)	Tetrachloroethene	9.02	166	43838	9.87	ppb		95
70)	1-Chlorohexane	9.95	91	37502	10.49	ppb		96
71)	1,1,1,2-Tetrachloroethane	10.04	131	36785	10.32	ppb		91
72)	m&p-Xylene	10.22	91	245014	20.24	ppb		98
73)	o-Xylene	10.65	91	130561	10.09	ppb		94
74)	Styrene	10.66	104	99161	9.88	ppb		99
76)	1,3-Dichloropropane	9.03	76	52626	9.48	ppb		98
77)	Dibromochloromethane	9.27	129	38370	10.51	ppb		90
78)	Chlorobenzene	9.95	112	99147	10.05	ppb		96
79)	Ethylbenzene	10.09	91	156442	9.87	ppb		99
80)	Bromoform	10.83	173	28475	10.82	ppb		98
82)	Isopropylbenzene	11.06	105	157184	10.38	ppb		98
83)	1,1,2,2-Tetrachloroethane	11.36	83	40456	10.39	ppb		99
84)	1,2,3-Trichloropropane	11.40	110	13762	9.47	ppb		95
85)	t-1,4-Dichloro-2-Butene	11.42	53	7335	9.02	ppb		88
86)	Bromobenzene	11.37	77	81528	9.95	ppb		98
87)	n-Propylbenzene	11.51	91	177263	10.28	ppb		97
88)	4-Ethyltoluene	11.64	105	150975	10.14	ppb		98
89)	2-Chlorotoluene	11.59	91	128735	9.94	ppb		99
90)	1,3,5-Trimethylbenzene	11.71	105	135471	10.48	ppb		98
91)	4-Chlorotoluene	11.71	91	135137	10.78	ppb		95
92)	Tert-Butylbenzene	12.06	119	136056	10.81	ppb		98
93)	1,2,4-Trimethylbenzene	12.11	105	141258	10.44	ppb		97
94)	Sec-Butylbenzene	12.30	105	167196	10.68	ppb		99
95)	p-Isopropyltoluene	12.46	119	144188	10.56	ppb		97
96)	Benzyl Chloride	12.64	91	47885	10.41	ppb		99
97)	1,3-DCB	12.40	146	88446	10.54	ppb		98
98)	1,4-DCB	12.50	146	90485	10.29	ppb		97
99)	n-Butylbenzene	12.91	91	121103	10.89	ppb		98
100)	1,2-DCB	12.90	146	86703	10.11	ppb		94
101)	Hexachloroethane	13.20	201	24274	10.65	ppb		97
102)	1,2-Dibromo-3-chloropropan	13.74	157	9524	9.40	ppb		94
103)	1,2,4-Trichlorobenzene	14.67	180	59396	10.23	ppb		92
104)	Hexachlorobutadiene	14.87	225	31797	11.98	ppb		94
105)	Naphthalene	14.94	127	15158	9.37	ppb		82
106)	1,2,3-Trichlorobenzene	15.20	180	56340	10.33	ppb		91

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

Data File : M:\THOR\DATA\T200226\0305T13.D Vial: 3
Acq On : 5 Mar 20 13:10 Operator:
Sample : 200305B LCSD 10ug/L Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

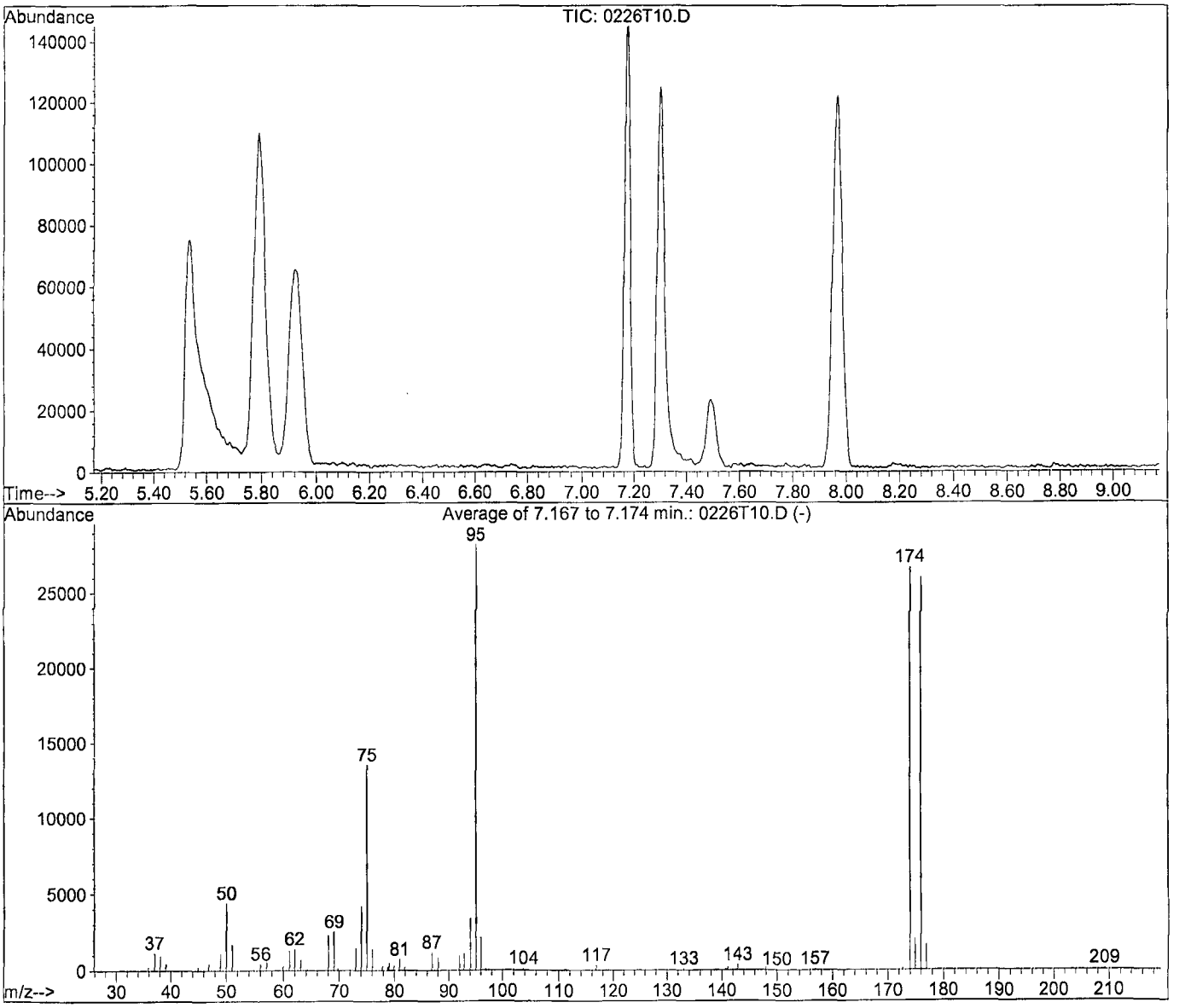
Quant Time: Mar 6 10:48 2020 Quant Results File: T0226W.RES

Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 02 12:37:16 2020
Response via : Initial Calibration



Data File : M:\THOR\DATA\T200226\0226t10.D Vial: 1
Acq On : 26 Feb 20 11:54 Operator:
Sample : 25ug/L BFB 2/13/20 Inst : Thor
Misc : 2uL Multiplr: 1.00

Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B

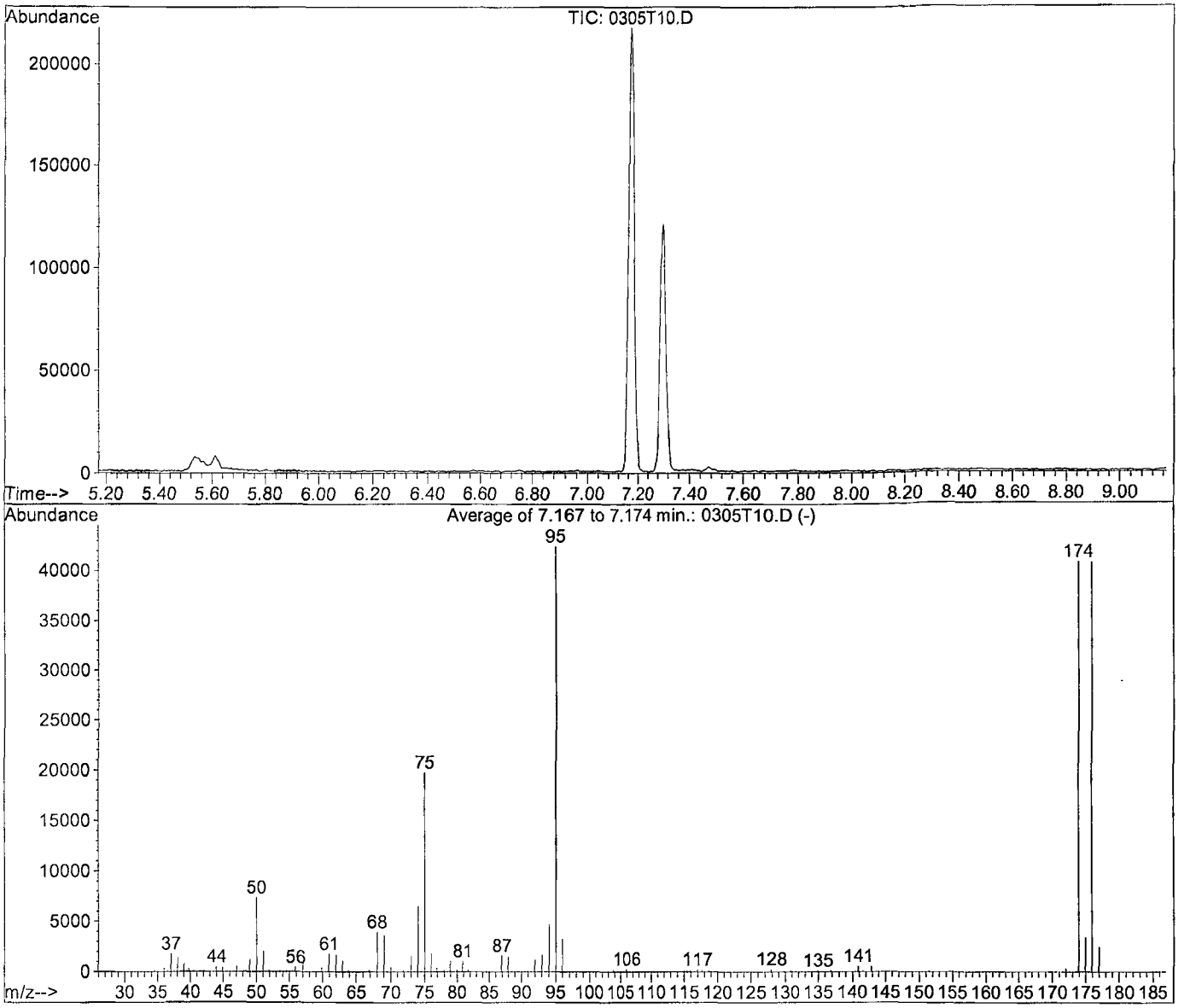


Spectrum Information: Average of 7.167 to 7.174 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.6	4394	PASS
75	95	30	60	48.0	13530	PASS
95	95	100	100	100.0	28184	PASS
96	95	5	9	7.6	2139	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	200	94.7	26701	PASS
175	174	5	9	7.5	1991	PASS
176	174	95	101	97.5	26037	PASS
177	176	5	9	6.2	1621	PASS

Data File : M:\THOR\DATA\T200226\0305t10.D Vial: 1
Acq On : 5 Mar 20 11:52 Operator:
Sample : 25ug/L BFB 2/13/20 Inst : Thor
Misc : 2uL Multiplr: 1.00

Method : M:\THOR\DATA\T200226\T0226W.M (RTE Integrator)
Title : METHOD 8260B



Spectrum Information: Average of 7.167 to 7.174 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.3	7349	PASS
75	95	30	60	46.6	19755	PASS
95	95	100	100	100.0	42432	PASS
96	95	5	9	7.6	3221	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	200	96.0	40755	PASS
175	174	5	9	8.3	3371	PASS
176	174	95	101	99.9	40701	PASS
177	176	5	9	6.0	2455	PASS

0305t10.D T0226W.M Wed Mar 11 11:34:20 2020

Thor 8260 Standard Prep

Thor 8260 Water Calibration Curve

0.3ug/L

Prepared By (Initials): CH

Prepared: 02/26/20

Expires: 03/27/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	O2SI	0.3ug/L	5	Prepared 02/26/20	04/26/20	N/A	3uL	50mL	P&T Water	0.3
VOA STD. 10	O2SI		5	Prepared 02/26/20	04/26/20	N/A	3uL			0.3
VOA STD. 12	O2SI		5	Prepared 02/26/20	04/26/20	N/A	3uL			0.3
VOA STD. TBA	Various		250	Prepared 02/26/20	03/11/20	N/A	2uL			10

0.5ug/L

Prepared: 02/26/20

Expires: 03/27/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	O2SI	0.5ug/L	5	Prepared 02/26/20	04/26/20	N/A	5uL	50mL	P&T Water	0.5
VOA STD. 10	O2SI		5	Prepared 02/26/20	04/26/20	N/A	5uL			0.5
VOA STD. 12	O2SI		5	Prepared 02/26/20	04/26/20	N/A	5uL			0.5
VOA STD. TBA	Various		250	Prepared 02/26/20	03/11/20	N/A	5uL			25

1.0ug/L

Prepared: 02/26/20

Expires: 03/27/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	O2SI	1.0ug/L	5	Prepared 02/26/20	04/26/20	N/A	10uL	50mL	P&T Water	1
VOA STD. 10	O2SI		5	Prepared 02/26/20	04/26/20	N/A	10uL			1
VOA STD. 12	O2SI		5	Prepared 02/26/20	04/26/20	N/A	10uL			1
VOA STD. TBA	Various		250	Prepared 02/26/20	03/11/20	N/A	10uL			50

2.0ug/L

Prepared: 02/26/20

Expires: 03/27/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	O2SI	2.0ug/L	5	Prepared 02/26/20	04/26/20	N/A	20uL	50mL	P&T Water	2
VOA STD. 10	O2SI		5	Prepared 02/26/20	04/26/20	N/A	20uL			2
VOA STD. 12	O2SI		5	Prepared 02/26/20	04/26/20	N/A	20uL			2
VOA STD. TBA	Various		250	Prepared 02/26/20	03/11/20	N/A	15uL			75

5ug/L

Prepared: 02/26/20

Expires: 03/27/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	5ug/L	50	Prepared 02/26/20	04/26/20	N/A	5uL	50mL	P&T Water	5
VOA STD. 8	Phenova		50	Prepared 02/26/20	03/11/20	N/A	5uL			5
VOA STD. 1	O2SI		50	Prepared 02/26/20	04/26/20	N/A	5uL			5
VOA STD. 2	O2SI		50	Prepared 02/26/20	04/26/20	N/A	5uL			5
VOA STD. TBA	Various		250	Prepared 02/26/20	03/11/20	N/A	20uL			100

10ug/L

Prepared: 02/26/20

Expires: 03/27/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	10ug/L	50	Prepared 02/26/20	04/26/20	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova		50	Prepared 02/26/20	03/11/20	N/A	10uL			10
VOA STD. 1	O2SI		50	Prepared 02/26/20	04/26/20	N/A	10uL			10
VOA STD. 2	O2SI		50	Prepared 02/26/20	04/26/20	N/A	10uL			10
VOA STD. TBA	Various		250	Prepared 02/26/20	03/11/20	N/A	25uL			125

20ug/L

Prepared: 02/26/20

Expires: 03/27/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	20ug/L	50	Prepared 02/26/20	04/26/20	N/A	20uL	50mL	P&T Water	20
VOA STD. 8	Phenova		50	Prepared 02/26/20	03/11/20	N/A	20uL			20
VOA STD. 1	O2SI		50	Prepared 02/26/20	04/26/20	N/A	20uL			20
VOA STD. 2	O2SI		50	Prepared 02/26/20	04/26/20	N/A	20uL			20
VOA STD. TBA	Various		250	Prepared 02/26/20	03/11/20	N/A	30uL			150

40ug/L

Prepared: 02/26/20

Expires: 03/27/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	40ug/L	50	Prepared 02/26/20	04/26/20	N/A	40uL	50mL	P&T Water	40
VOA STD. 8	Phenova		50	Prepared 02/26/20	03/11/20	N/A	40uL			40
VOA STD. 1	O2SI		50	Prepared 02/26/20	04/26/20	N/A	40uL			40
VOA STD. 2	O2SI		50	Prepared 02/26/20	04/26/20	N/A	40uL			40
VOA STD. TBA	Various		250	Prepared 02/26/20	03/11/20	N/A	35uL			175

100ug/L

Prepared: 02/26/20

Expires: 03/27/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	100ug/L	50	Prepared 02/26/20	04/26/20	N/A	100uL	50mL	P&T Water	100
VOA STD. 8	Phenova		50	Prepared 02/26/20	03/11/20	N/A	100uL			100
VOA STD. 1	O2SI		50	Prepared 02/26/20	04/26/20	N/A	100uL			100
VOA STD. 2	O2SI		50	Prepared 02/26/20	04/26/20	N/A	100uL			100
VOA STD. TBA	Various		250	Prepared 02/26/20	03/11/20	N/A	40uL			200

Thor 8260 Water Second Source (SS)

Prepared: 02/26/20

Prepared By (Initials): CH

Expires: 03/27/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 4	Phenova	8260 Water SS	50	Prepared 02/26/20	04/26/20	N/A	10uL	50mL	P&T Water	10
VOA STD. 5	O2SI	8260 Water SS	50	Prepared 02/26/20	04/26/20	N/A	10uL			10
VOA STD. 6	Various	8260 Water SS	50	Prepared 02/26/20	02/26/20	N/A	10uL			10
Voa STD. TBA	Various	8260 Water SS	250	Prepared 02/26/20	02/26/20	N/A	25uL			250

8260 Water Continuing Calibrations (CCV)/ Lab Control Spikes (LCS)

Prepared: 02/26/20

Prepared By (Initials): CH

Expires: 02/27/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	CCV/ LCS	50	Prepared 02/26/20	04/26/20	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova	CCV/ LCS	50	Prepared 02/26/20	03/11/20	N/A	10uL			10
VOA STD. 1	O2SI	CCV/ LCS	50	Prepared 02/26/20	04/26/20	N/A	10uL			10
VOA STD. 2	O2SI	CCV/ LCS	50	Prepared 02/26/20	04/26/20	N/A	10uL			10
VOA STD. TBA	Various	CCV/ LCS	250	Prepared 02/26/20	03/11/20	N/A	25uL			125

LCS (X4 Ketones)

Prepared: 02/26/20

Prepared By (Initials): CH

Expires: 02/27/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	LCS X4 Ketones	50	Prepared 02/26/20	04/26/20	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova	LCS X4 Ketones	50	Prepared 02/26/20	03/11/20	N/A	10uL			10
VOA STD. 1	O2SI	LCS X4 Ketones	50	Prepared 02/26/20	04/26/20	N/A	10uL			10
VOA STD. 2	O2SI	LCS X4 Ketones	50	Prepared 02/26/20	04/26/20	N/A	40uL			40
VOA STD. TBA	Various	LCS X4 Ketones	250	Prepared 02/26/20	03/11/20	N/A	25uL			125

Primary and Secondary Working Standards

Primary Standards

VOA STD 7

Prepared: 02/26/20 A
Expires: 04/26/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Gasses STD	Phenova	ALO-101206	2,000	CL14052-49490	02/26/21	08/31/24	100uL	4mL	Methanol	50
Hexachloroethane	Absolute	70199	1,000	091818-49640	02/18/21	09/18/23	200uL			50
Benzyl Chloride	Accusta	M-8010-01	1,000	011320-49733	02/18/21	01/13/21	200uL			50

VOA STD 8

Prepared: 02/26/20 B
Expires: 03/11/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Additions STD	Phenova	ALO-130175	2,000	CL12744-49506	02/18/21	08/31/20	100uL	4mL	Methanol	50
502.2 Cal. Std.	Phenova	ALO-101200	2,000	CL14379-49508	02/18/21	10/31/24	100uL			50
Vinyl Acetate	Phenova	ALO-101228	2,000	CL14964-49837	02/18/21	03/11/20	100uL			50

VOA STD TBA

Prepared: 02/26/20 C
Expires: 03/11/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Custom VOC Mix	Phenova	ALO-130176	2,000	CL12929-49789	02/18/21	11/30/20	500uL	4mL	Methanol	250
Acrolein	Phenova	ALO-130549	10,000	CL14963-49838	02/18/21	03/11/20	100uL			250

VOA STD 1

Prepared: 02/26/20 D
Expires: 04/26/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
2-CEVE	Absolute	82408	2,000	011320-49738	02/18/21	01/13/23	50	2mL	Methanol	50

VOA STD 2

Prepared: 02/26/20 E
Expires: 04/26/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Ketones Std.	Phenova	ALO-109211	2,000	CL12730-49779	02/18/21	08/31/28	100	4mL	Methanol	50

VOA STD 9

Prepared: 02/26/20 F
Expires: 04/26/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA STD. 7		VOA STD. 9	50	Prepared 02/26/20	02/18/21	N/A	200uL	2mL	Methanol	5
VOA STD. 8			50	Prepared 02/26/20	02/18/21	N/A	200uL			5

VOA STD. 10

Prepared: 02/26/20 G
Expires: 04/26/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA STD. 1		VOA STD. 10	50	Prepared 02/26/20	02/18/21	N/A	200uL	2mL	Methanol	5

VOA STD. 12

Prepared: 02/26/20 H
Expires: 04/26/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA STD. 2		VOA STD. 12	50	Prepared 02/26/20	02/18/21	N/A	200uL	2mL	Methanol	5

Second Source (SS) Standards

VOA STD. 3

Prepared: 02/26/20 I
Expires: 04/26/20
Methanol Lot No. DW117-US-0095

Prepared By (Initials): CH

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Ketones Standard	Phenova	ALO-101211	2,000	**CL13994-49784**	**02/18/21**	**08/31/29**	50uL	2mL	Methanol	50

VOA STD. Gases

Prepared: 02/26/20 J
Expires: 04/26/20
Methanol Lot No. DW117-US-0095

Prepared By (Initials): CH

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
8260 Gases (SS)	Phenova	ALO-101206	2,000	**CL14057-49854**	**02/26/21**	**08/31/24**	50uL	2mL	Methanol	50

VOA STD. 6

Prepared: 02/26/20 K
Expires: 02/26/20
Methanol Lot No. DW117-US-0095

Prepared By (Initials): CH

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
502.2 Calibration STD. (54-compounds)	Phenova	ALO-101200	2,000	**CL14631-49689**	**02/18/21**	**10/31/24**	50uL	2mL	Methanol	50
Vinyl Acetate	Phenova	ALO-101228	2,000	**CL14898-49751**	**02/05/21**	**02/26/20**	50uL			50
Hexachloroethane	Accustan	AS-E0011	1,000	**219061767-49741**	**02/18/21**	**08/28/29**	100uL			50
Benzyl Chloride	Accustan	M-8010-01	200	**219041664-49645**	**02/18/21**	**05/22/21**	500uL			50

VOA STD. TBA

Prepared: 02/26/20 L
Expires: 02/26/20
Methanol Lot No. DW117-US-0095

Prepared By (Initials): CH

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Custom VOA Mix (4-3)	Phenova	ALO-130176	2,000	**CL12929-49683**	**02/18/21**	**11/30/20**	250uL	2mL	Methanol	250
Acrolein	Phenova	ALO-101224	10,000	**CL14902-49752**	**02/05/21**	**02/26/20**	50uL			250

VOA STD. 0

Prepared: 02/26/20 M
Expires: 04/26/20
Methanol Lot No. DW117-US-0095

Prepared By (Initials): CH

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Addition STD.	Phenova	ALO-130175	2,000	**CL14058-49850**	**02/18/21**	**08/31/21**	50uL	2mL	Methanol	50

VOA STD. 2-CEVE

Prepared: 02/26/20 N
Expires: 04/26/20
Methanol Lot No. DW117-US-0095

Prepared By (Initials): CH

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
2-CEVE (SS)	Absolute	82408	2,000	**121119-49535**	**02/18/21**	**12/11/22**	50uL	2mL	Methanol	50

Injection Log

Directory: M:\THOR\DATA\T200226\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	0226T10.D	1	25ug/L BFB 2/13/20	2uL	26 Feb 20 11:54
2	0226T12.D	1	0.3ug/L VOC STD 2/26/20	IS&S 2/6/20, 2/19/20	26 Feb 20 13:00
3	0226T13.D	1	0.5ug/L VOC STD 2/26/20	IS&S 2/6/20, 2/19/20	26 Feb 20 13:28
4	0226T14.D	1	1ug/L VOC STD 2/26/20	IS&S 2/6/20, 2/19/20	26 Feb 20 13:56
5	0226T15.D	1	2ug/L VOC STD 2/26/20	IS&S 2/6/20, 2/19/20	26 Feb 20 14:25
6	0226T16.D	1	5ug/L VOC STD 2/26/20	IS&S 2/6/20, 2/19/20	26 Feb 20 14:53
7	0226T17.D	1	10ug/L VOC STD 2/26/20	IS&S 2/6/20, 2/19/20	26 Feb 20 15:21
8	0226T18.D	1	20ug/L VOC STD 2/26/20	IS&S 2/6/20, 2/19/20	26 Feb 20 15:50
10	0226T20.D	1	100ug/L VOC STD 2/26/20	IS&S 2/6/20, 2/19/20	26 Feb 20 16:46
12	0226T22.D	1	(SS) 10ug/L VOC STD 2/26/20	IS&S 2/6/20, 2/19/20	26 Feb 20 17:43
1	0305T10.D	1	25ug/L BFB 2/13/20	2uL	5 Mar 20 11:52
1	0305T11.D	1	200305B CCV 10ug/L	IS&S 2/6/20, 2/19/20	5 Mar 20 12:14
2	0305T12.D	1	200305B LCS 10ug/L	IS&S 2/6/20, 2/19/20	5 Mar 20 12:42
3	0305T13.D	1	200305B LCSD 10ug/L	IS&S 2/6/20, 2/19/20	5 Mar 20 13:10
9	0305T19.D	1	200305B BLK	IS&S 2/6/20, 2/19/20	5 Mar 20 16:01
14	0305T24.D	1	BA07941W01	IS&S 2/6/20, 2/19/20	5 Mar 20 18:22
15	0305T25.D	1	BA07942W01	IS&S 2/6/20, 2/19/20	5 Mar 20 18:51
16	0305T26.D	1	BA07943W01	IS&S 2/6/20, 2/19/20	5 Mar 20 19:19
17	0305T27.D	1	BA07944W01	IS&S 2/6/20, 2/19/20	5 Mar 20 19:48
18	0305T28.D	1	BA07945W01	IS&S 2/6/20, 2/19/20	5 Mar 20 20:16
19	0305T29.D	1	BA07946W01	IS&S 2/6/20, 2/19/20	5 Mar 20 20:44
20	0305T30.D	1	BA07947W01	IS&S 2/6/20, 2/19/20	5 Mar 20 21:13
29	0305T39.D	1	Ending CCV 10ug/L 3/5/20	IS&S 2/6/20, 2/19/20	6 Mar 20 1:29

ORGANICS
Calibration Data

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 02/20/20
Matrix: Instrument: Thor
Initials: DP

			0220T32.D	0220T33.D	0220T34.D	0220T35.D	0220T36.D	0220T37.D	0220T38.D									
		Compound	1	2	3	4	5	6	7				Avg	%RSD	Type	r^2	Q	MRF
1	I	Fluorobenzene (IS)																
2	TMHBL	Gasoline C6-C10	15.2	6.312	3.332	1.357	0.8700	0.7292	0.6656				4.1	131	TMHBL	0.999		
3	I	Chlorobenzene-D5 (IS)																
4	I	1,4-Dichlorobenzene-D (IS)																
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
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35																		

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200219B\0220T32.D Vial: 32
Acq On : 20 Feb 20 22:37 Operator:
Sample : 20ug/L Gas Std 2/20/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 21 11:25 2020 Quant Results File: TGAS0219.RES

Quant Method : M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 07 14:54:37 2020
Response via : Initial Calibration
DataAcq Meth : T8260

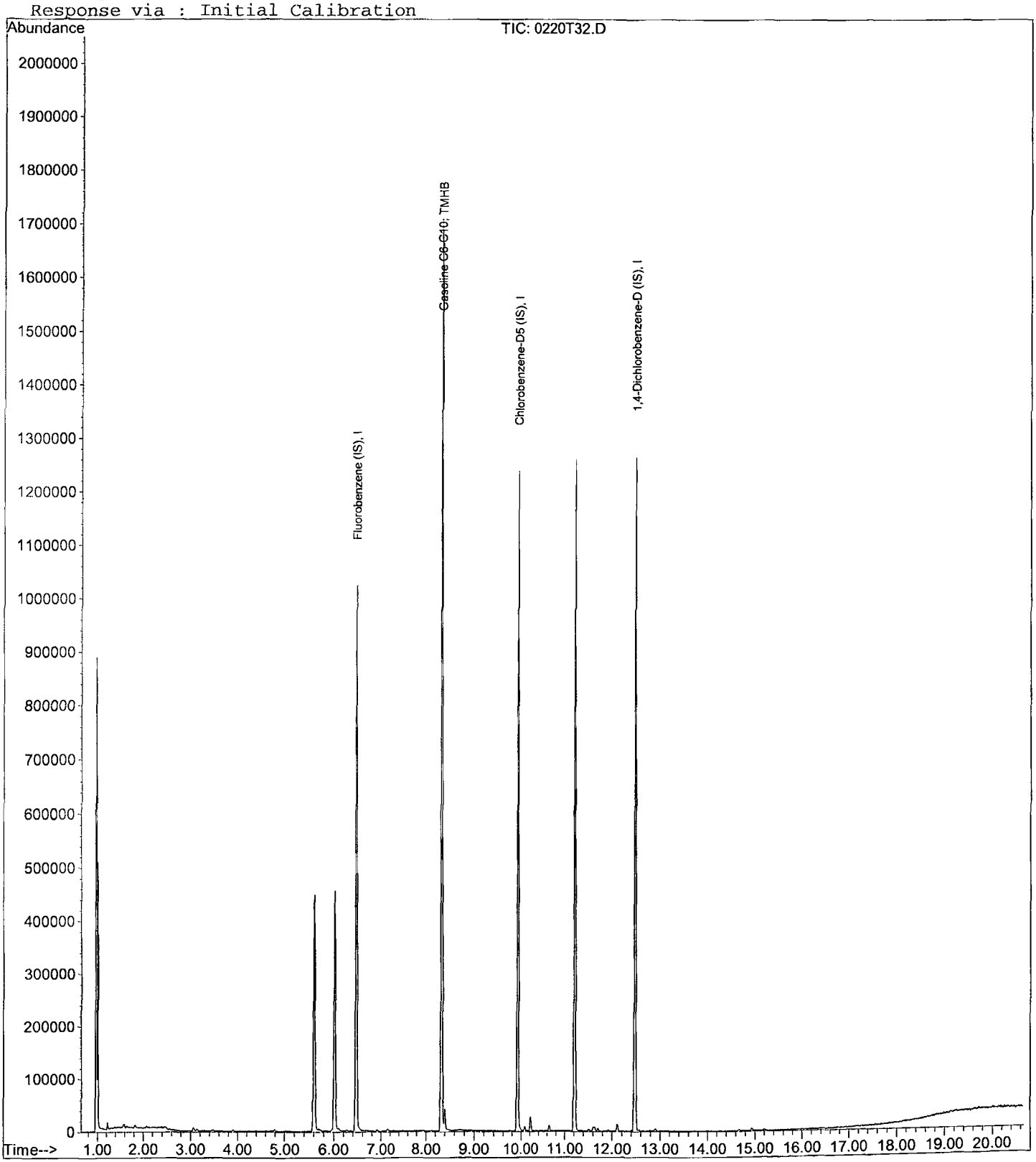
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.47	TIC	1023451	25.00	ppb	-0.04
3) Chlorobenzene-D5 (IS)	9.92	TIC	1237312	25.00	ppb	-0.03
4) 1,4-Dichlorobenzene-D (IS)	12.48	TIC	1264237	25.00	ppb	-0.04
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.33	TIC	12451968m	72.48	ppb	100

(#) = qualifier out of range (m) = manual integration
0220T32.D TGAS0219.M Wed Mar 11 14:22:06 2020 Page 1

Data File : M:\THOR\DATA\T200219B\0220T32.D Vial: 32
Acq On : 20 Feb 20 22:37 Operator:
Sample : 20ug/L Gas Std 2/20/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 21 11:25 2020 Quant Results File: TGAS0219.RES

Method : M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200219B\0220T33.D Vial: 33
Acq On : 20 Feb 20 23:05 Operator:
Sample : 50ug/L Gas Std 2/20/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 4 15:53 2020 Quant Results File: TGAS0219.RES

Quant Method : M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration
DataAcq Meth : T8260

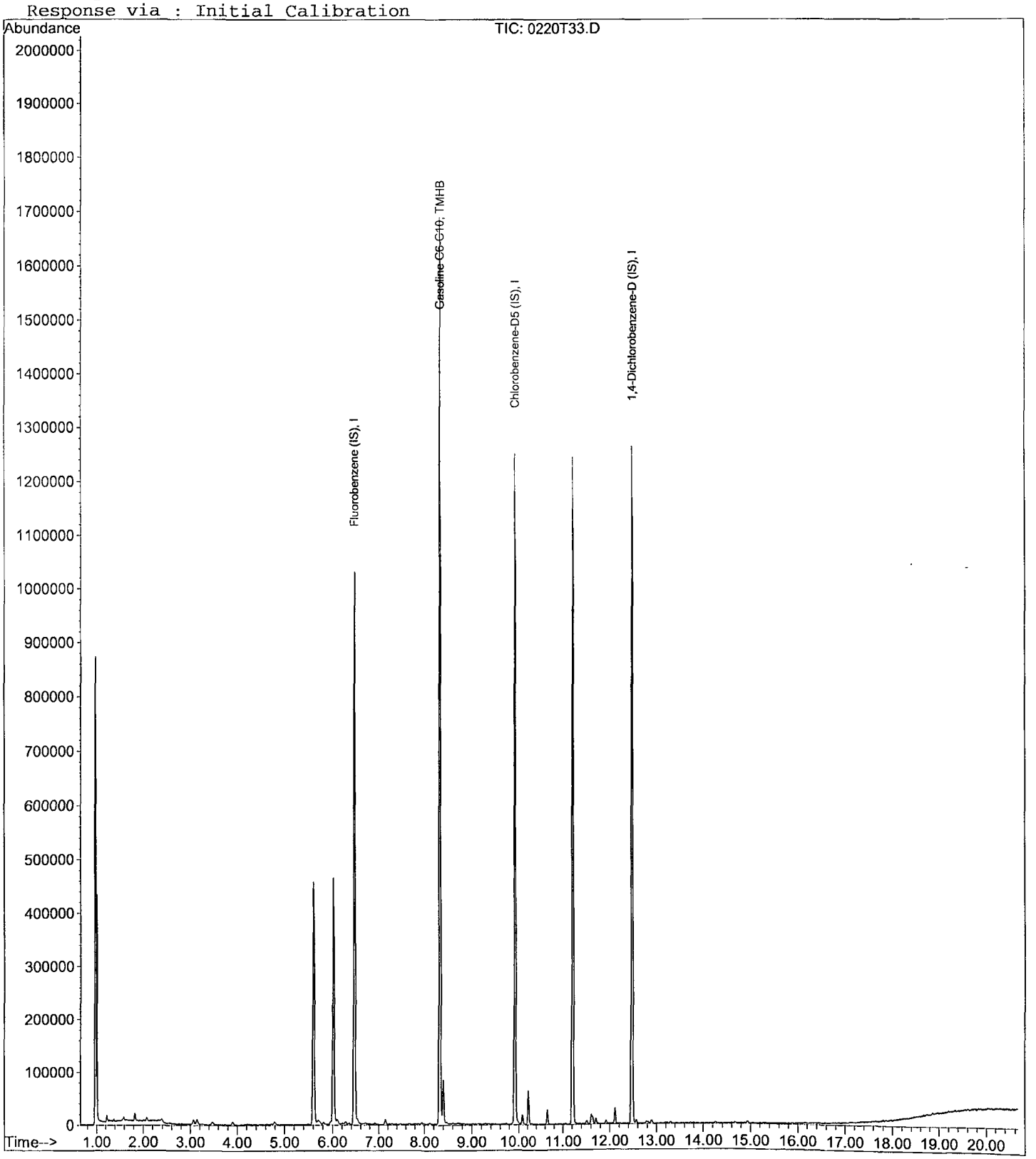
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	TIC	1030269	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.92	TIC	1249707	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.48	TIC	1262425	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.33	TIC	12998272m	49.70	ppb	100

(#) = qualifier out of range (m) = manual integration
0220T33.D TGAS0219.M Wed Mar 11 14:22:09 2020 Page 1

Data File : M:\THOR\DATA\T200219B\0220T33.D Vial: 33
Acq On : 20 Feb 20 23:05 Operator:
Sample : 50ug/L Gas Std 2/20/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 4 15:53 2020 Quant Results File: TGAS0219.RES

Method : M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200219B\0220T34.D Vial: 34
Acq On : 20 Feb 20 23:34 Operator:
Sample : 100ug/L Gas Std 2/20/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 21 11:29 2020 Quant Results File: TGAS0219.RES

Quant Method : M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 07 14:54:37 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	TIC	1028975	25.00	ppb	-0.04
3) Chlorobenzene-D5 (IS)	9.92	TIC	1199926	25.00	ppb	-0.03
4) 1,4-Dichlorobenzene-D (IS)	12.48	TIC	1271198	25.00	ppb	-0.04
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.33	TIC	13712736m	161.09	ppb	100

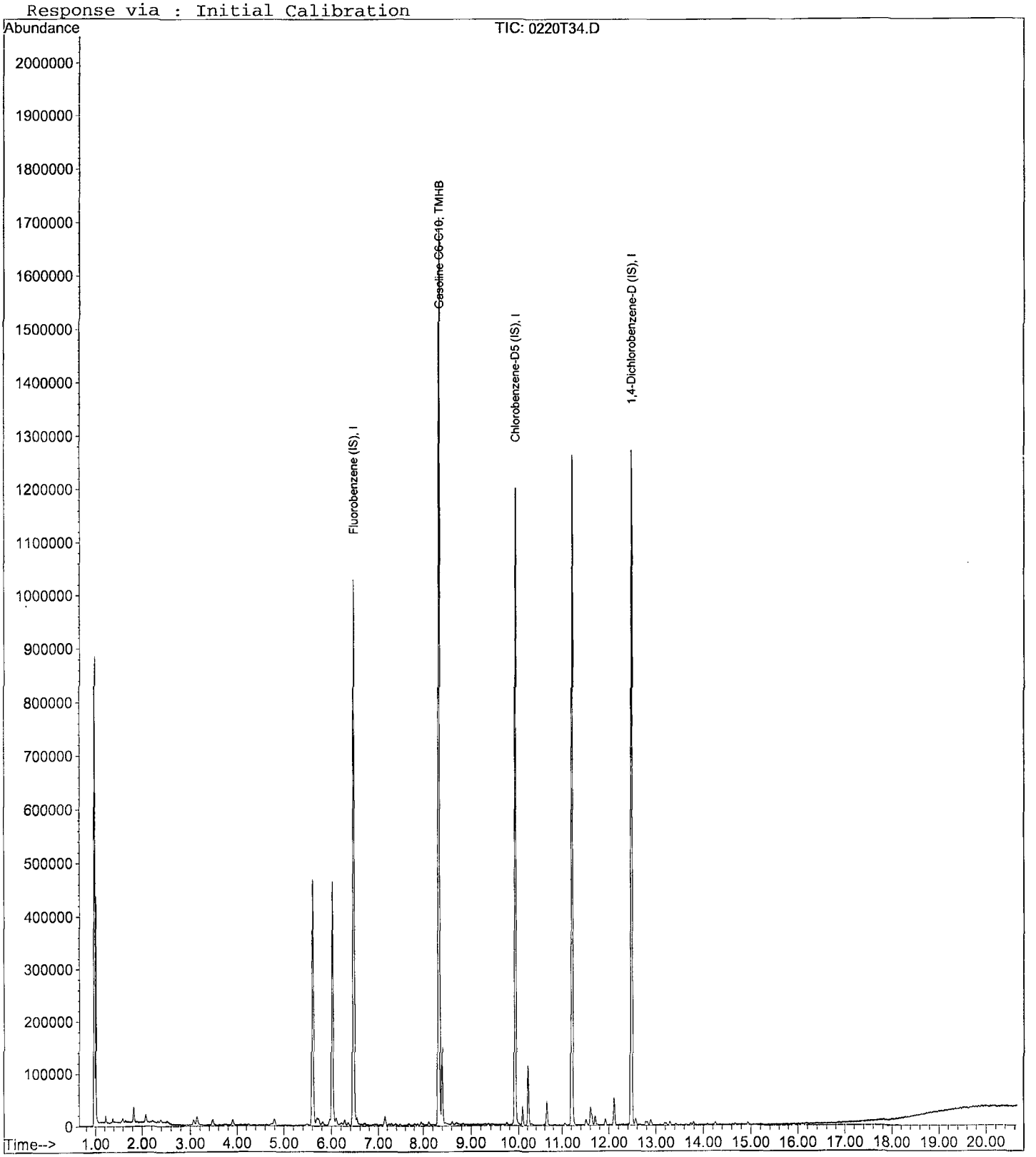
(#) = qualifier out of range (m) = manual integration
0220T34.D TGAS0219.M Wed Mar 11 14:22:11 2020 Page 1

Quantitation Report

Data File : M:\THOR\DATA\T200219B\0220T34.D Vial: 34
Acq On : 20 Feb 20 23:34 Operator:
Sample : 100ug/L Gas Std 2/20/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 21 11:29 2020 Quant Results File: TGAS0219.RES

Method : *M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)*
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200219B\0220T35.D Vial: 35
Acq On : 21 Feb 20 00:02 Operator:
Sample : 300ug/L Gas Std 2/20/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 21 11:29 2020 Quant Results File: TGAS0219.RES

Quant Method : M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 07 14:54:37 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	TIC	1004678	25.00	ppb	-0.04
3) Chlorobenzene-D5 (IS)	9.92	TIC	1216520	25.00	ppb	-0.03
4) 1,4-Dichlorobenzene-D (IS)	12.48	TIC	1272423	25.00	ppb	-0.04

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	8.33	TIC	16365972m	387.47	ppb	100

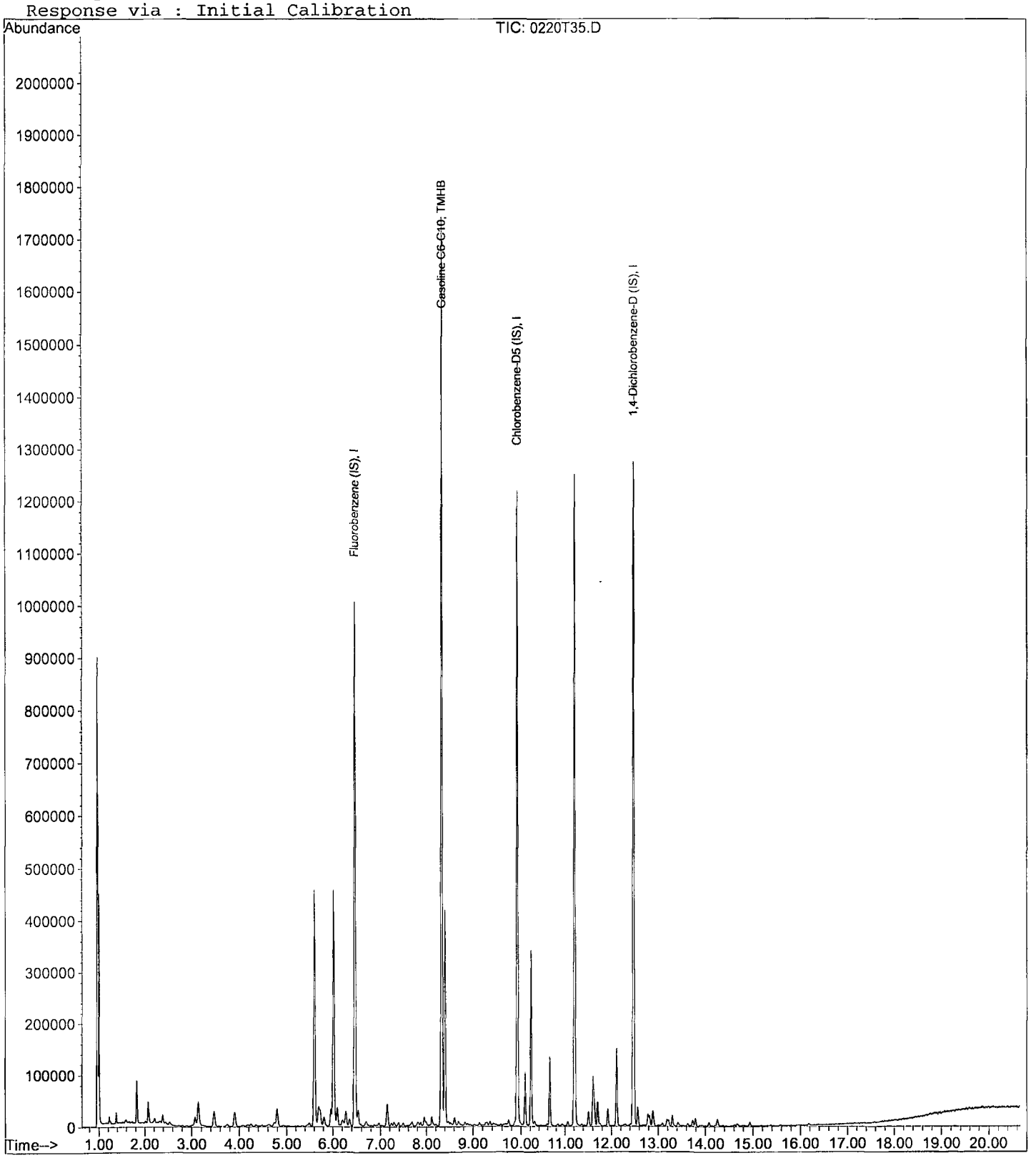
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200219B\0220T35.D Vial: 35
Acq On : 21 Feb 20 00:02 Operator:
Sample : 300ug/L Gas Std 2/20/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 21 11:29 2020 Quant Results File: TGAS0219.RES

Method : M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200219B\0220T36.D Vial: 36
Acq On : 21 Feb 20 00:30 Operator:
Sample : 600ug/L Gas Std 2/20/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 21 11:29 2020 Quant Results File: TGAS0219.RES

Quant Method : M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 07 14:54:37 2020
Response via : Initial Calibration
DataAcq Meth : T8260

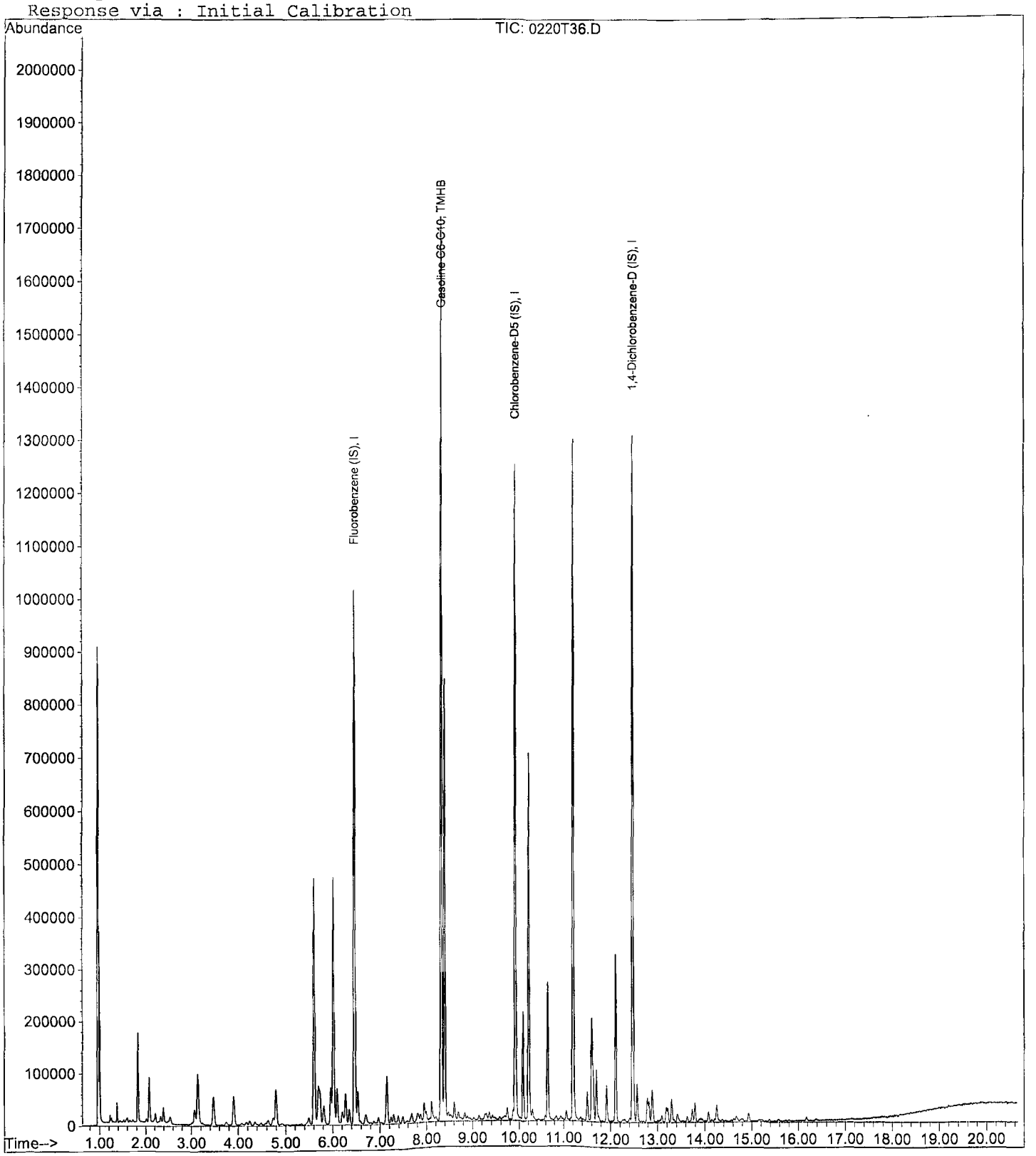
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.47	TIC	1014311	25.00	ppb	-0.04
3) Chlorobenzene-D5 (IS)	9.92	TIC	1246842	25.00	ppb	-0.03
4) 1,4-Dichlorobenzene-D (IS)	12.48	TIC	1305150	25.00	ppb	-0.04
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.33	TIC	21178091m	738.10	ppb	100

(#) = qualifier out of range (m) = manual integration
0220T36.D TGAS0219.M Wed Mar 11 14:22:16 2020 Page 1

Data File : M:\THOR\DATA\T200219B\0220T36.D Vial: 36
Acq On : 21 Feb 20 00:30 Operator:
Sample : 600ug/L Gas Std 2/20/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 21 11:29 2020 Quant Results File: TGAS0219.RES

Method : M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200219B\0220T37.D Vial: 37
Acq On : 21 Feb 20 00:58 Operator:
Sample : 800ug/L Gas Std 2/20/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 21 11:30 2020 Quant Results File: TGAS0219.RES

Quant Method : M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 07 14:54:37 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	TIC	1015677	25.00	ppb	-0.04
3) Chlorobenzene-D5 (IS)	9.92	TIC	1252450	25.00	ppb	-0.03
4) 1,4-Dichlorobenzene-D (IS)	12.48	TIC	1276985	25.00	ppb	-0.04

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	8.33	TIC	23699026m	925.57	ppb	100

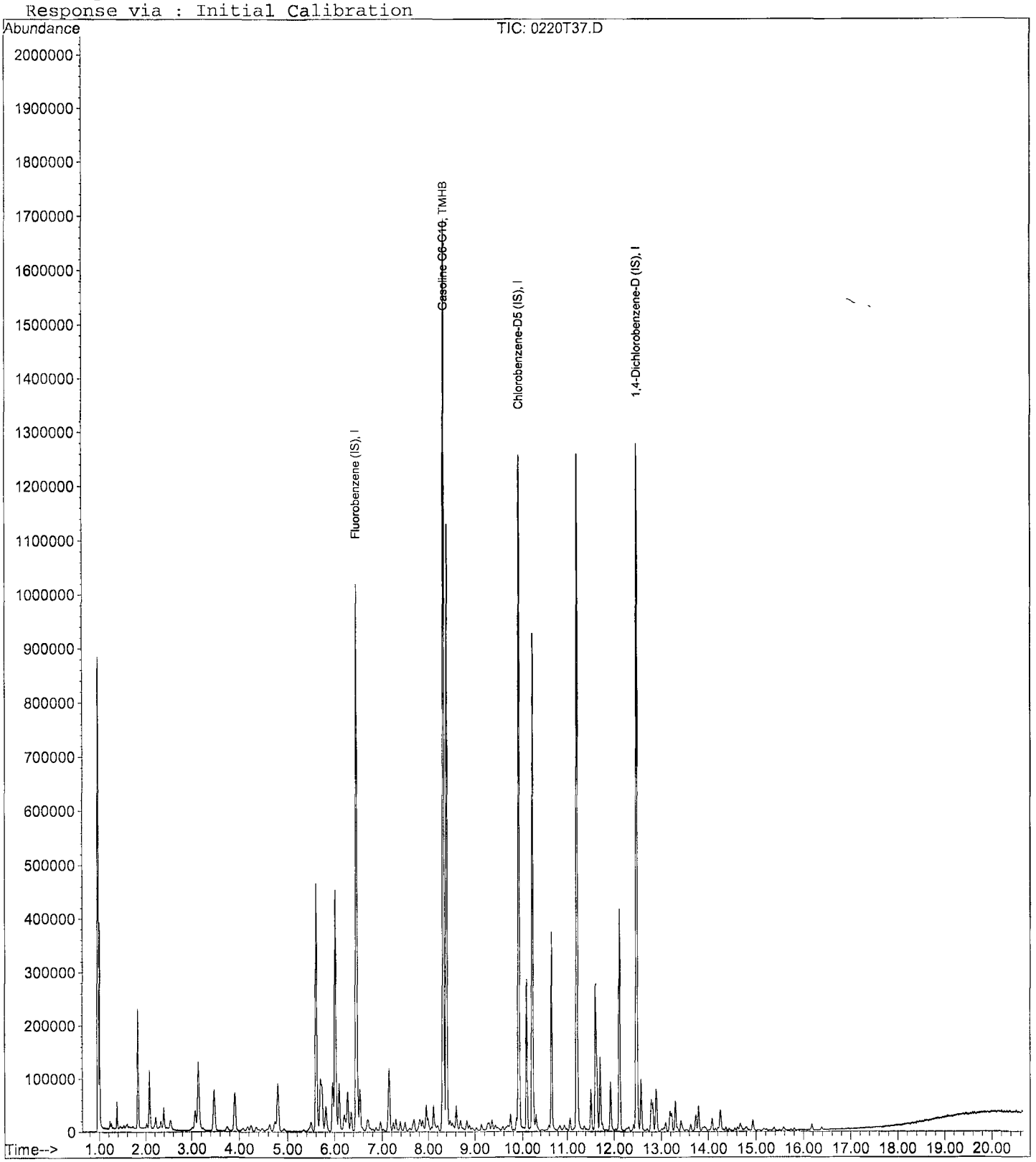
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200219B\0220T37.D Vial: 37
Acq On : 21 Feb 20 00:58 Operator:
Sample : 800ug/L Gas Std 2/20/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 21 11:30 2020 Quant Results File: TGAS0219.RES

Method : M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200219B\0220T38.D Vial: 38
Acq On : 21 Feb 20 1:27 Operator:
Sample : 1000ug/L Gas Std 2/20/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 21 11:30 2020 Quant Results File: TGAS0219.RES

Quant Method : M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 07 14:54:37 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	TIC	1010092	25.00	ppb	-0.04
3) Chlorobenzene-D5 (IS)	9.92	TIC	1251246	25.00	ppb	-0.03
4) 1,4-Dichlorobenzene-D (IS)	12.48	TIC	1290547	25.00	ppb	-0.04

System Monitoring Compounds

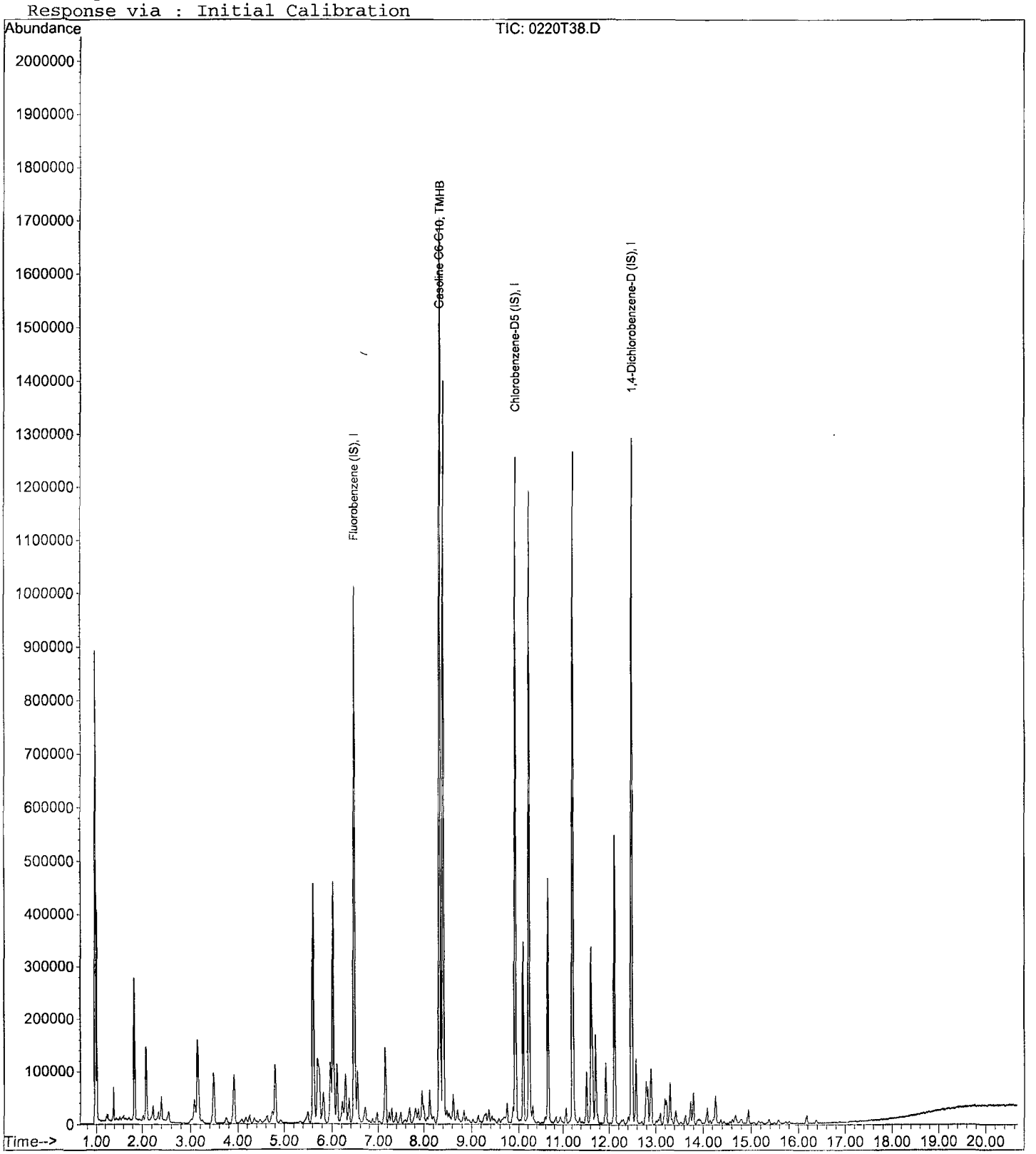
Target Compounds						Qvalue
2) Gasoline C6-C10	8.33	TIC	26891820m	1176.91	ppb	100

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

Data File : M:\THOR\DATA\T200219B\0220T38.D Vial: 38
Acq On : 21 Feb 20 1:27 Operator:
Sample : 1000ug/L Gas Std 2/20/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 21 11:30 2020 Quant Results File: TGAS0219.RES

Method : M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

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

SDG No:
Date Analyzed: 02/21/20
Instrument: Thor
Initial Cal. Date: 02/20/20
Data File: 0220T40.D

		Compound	MEAN	CCRF	%D		%Drift
1	TMHB	Gasoline C6-C10	4.068	1.338	67	TMHBL	5.3
2							
3							
4							
5							
6							
7							
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35							
36							
37							
38							
39							
40							
		Average			67.0		

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200219B\0220T40.D Vial: 40
Acq On : 21 Feb 20 2:23 Operator:
Sample : (SS) 300ug/L Gas Std 2/20/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 21 11:37 2020 Quant Results File: TGAS0219.RES

Quant Method : M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	TIC	1011881	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.92	TIC	1237804	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.48	TIC	1271376	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	8.33	TIC	16240804m	284.21	ppb	100

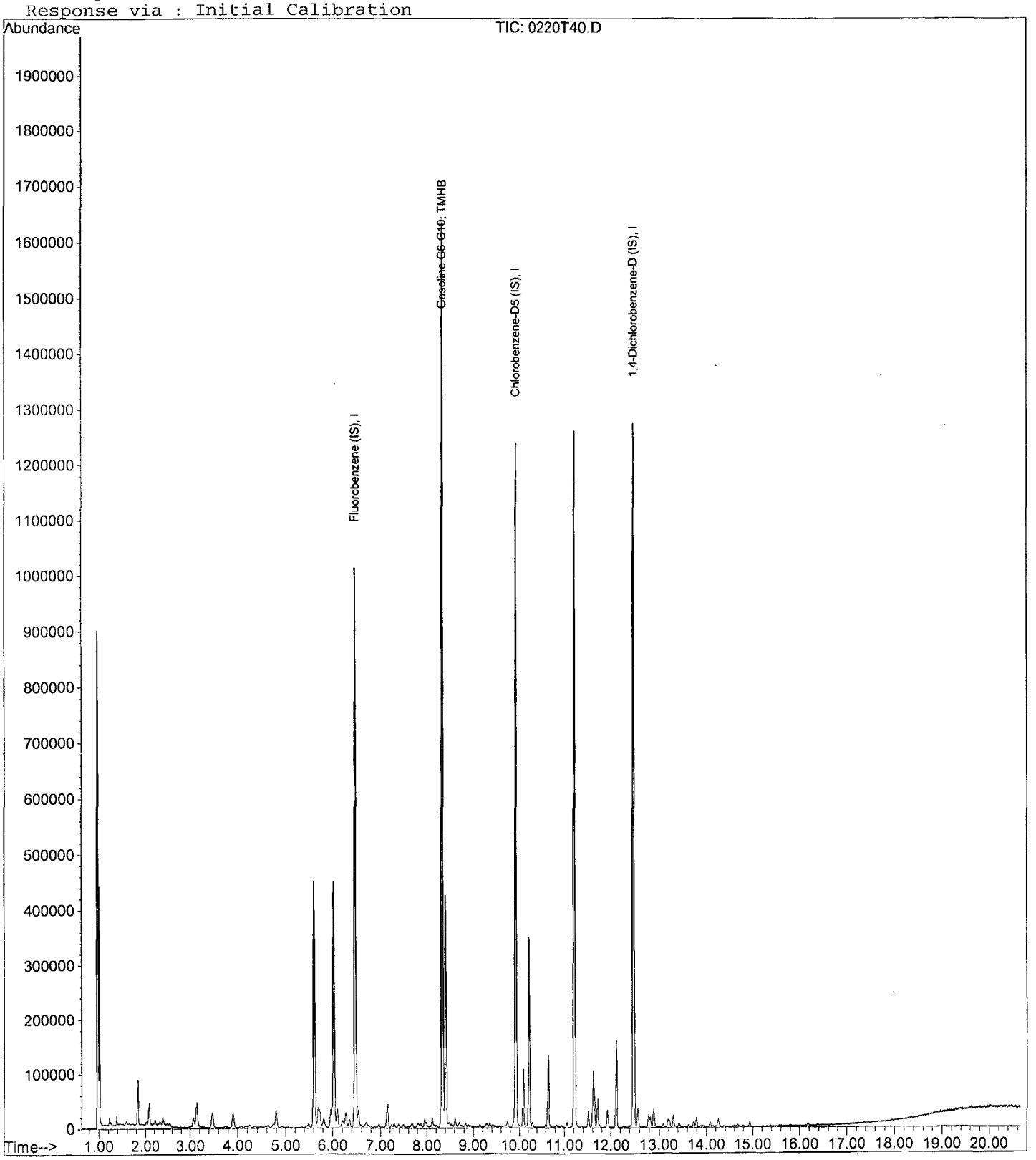
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200219B\0220T40.D Vial: 40
Acq On : 21 Feb 20 2:23 Operator:
Sample : (SS) 300ug/L Gas Std 2/20/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 21 11:37 2020 Quant Results File: TGAS0219.RES

Method : M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 02/26/20
Matrix: Instrument: Thor
Initials: DP

		Compound	0226T12 D	0226T13.D	0226T14 D	0226T15 D	0226T16 D	0226T17.D	0226T18 D	0226T20 D			Avg	%RSD	Type	r^2	Q	MRF
			1	2	3	4	5	6	7	9								
1	I	Fluorobenzene (IS)																
2	SL	Dibromofluoromethane(S)	0.5694	0.5286	0.3701	0.3890	0.3251	0.3224	0.2998	0.2730			0.38	28	SL	0.999		
3	SL	1,2-DCA-D4(S)	0.6334	0.6287	0.4336	0.4469	0.3744	0.3656	0.3474	0.3095			0.44	28	SL	0.998		
4	I	Chlorobenzene-D5 (IS)																
5	SL	Toluene-D8(S)	2.664	2.602	1.764	1.858	1.525	1.534	1.423	1.277			1.8	29	SL	0.999		
6	SL	4-Bromofluorobenzene(S)	1.034	0.9822	0.6831	0.6993	0.5950	0.5952	0.5653	0.5362			0.71	27	SL	1.000		
7	I	1,4-Dichlorobenzene-D (IS)																
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Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0226T12.D Vial: 2
Acq On : 26 Feb 20 13:00 Operator:
Sample : 0.3ug/L VOC STD 2/26/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 28 14:58 2020 Quant Results File: TSUR0226.RES

Quant Method : M:\THOR\DATA\T200226\TSUR0226.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Feb 27 08:26:36 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	797543	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.92	117	642016	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.47	152	354032	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.60	111	90792	5.41	ppb	0.00
Spiked Amount 25.000			Recovery =	21.628%		
3) 1,2-DCA-D4(S)	6.01	65	101003	4.88	ppb	0.00
Spiked Amount 25.000			Recovery =	19.520%		
5) Toluene-D8(S)	8.32	98	342114	5.07	ppb	0.00
Spiked Amount 25.000			Recovery =	20.268%		
6) 4-Bromofluorobenzene(S)	11.21	95	132732	5.93	ppb	0.00
Spiked Amount 25.000			Recovery =	23.700%		

Target Compounds Qvalue

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0226T13.D Vial: 3
Acq On : 26 Feb 20 13:28 Operator:
Sample : 0.5ug/L VOC STD 2/26/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 28 14:58 2020 Quant Results File: TSUR0226.RES

Quant Method : M:\THOR\DATA\T200226\TSUR0226.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Feb 27 08:26:36 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	798358	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.92	117	638111	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.48	152	346514	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.60	111	84407	4.63	ppb	0.00
Spiked Amount 25.000			Recovery =	18.524%		
3) 1,2-DCA-D4(S)	6.02	65	100291	4.79	ppb	0.00
Spiked Amount 25.000			Recovery =	19.176%		
5) Toluene-D8(S)	8.33	98	332075	4.81	ppb	0.00
Spiked Amount 25.000			Recovery =	19.248%		
6) 4-Bromofluorobenzene(S)	11.21	95	125376	5.43	ppb	0.00
Spiked Amount 25.000			Recovery =	21.712%		

Target Compounds Qvalue

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0226T14.D Vial: 4
Acq On : 26 Feb 20 13:56 Operator:
Sample : 1ug/L VOC STD 2/26/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 28 14:58 2020 Quant Results File: TSUR0226.RES

Quant Method : M:\THOR\DATA\T200226\TSUR0226.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Feb 27 08:26:36 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	774369	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.92	117	629081	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.47	152	342316	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.60	111	114641	8.68	ppb	0.00
Spiked Amount 25.000			Recovery =	34.720%		
3) 1,2-DCA-D4(S)	6.02	65	134233	8.82	ppb	0.00
Spiked Amount 25.000			Recovery =	35.276%		
5) Toluene-D8(S)	8.33	98	443982	8.61	ppb	0.00
Spiked Amount 25.000			Recovery =	34.432%		
6) 4-Bromofluorobenzene(S)	11.21	95	171890	9.15	ppb	0.00
Spiked Amount 25.000			Recovery =	36.592%		

Target Compounds Qvalue

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0226T15.D Vial: 5
Acq On : 26 Feb 20 14:25 Operator:
Sample : 2ug/L VOC STD 2/26/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 28 14:58 2020 Quant Results File: TSUR0226.RES

Quant Method : M:\THOR\DATA\T200226\TSUR0226.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Feb 27 08:26:36 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	794325	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.92	117	638468	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.47	152	347920	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.60	111	123536	9.40	ppb	0.00
Spiked Amount 25.000			Recovery =	37.584%		
3) 1,2-DCA-D4(S)	6.02	65	141988	9.28	ppb	0.00
Spiked Amount 25.000			Recovery =	37.100%		
5) Toluene-D8(S)	8.33	98	474507	9.37	ppb	0.00
Spiked Amount 25.000			Recovery =	37.496%		
6) 4-Bromofluorobenzene(S)	11.21	95	178631	9.46	ppb	0.00
Spiked Amount 25.000			Recovery =	37.860%		

Target Compounds Qvalue

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0226T16.D Vial: 6
Acq On : 26 Feb 20 14:53 Operator:
Sample : 5ug/L VOC STD 2/26/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 28 14:58 2020 Quant Results File: TSUR0226.RES

Quant Method : M:\THOR\DATA\T200226\TSUR0226.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Feb 27 08:26:36 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	780532	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.92	117	632182	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.48	152	362830	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.60	111	253547	25.60	ppb	0.00
Spiked Amount 25.000			Recovery =	102.388%		
3) 1,2-DCA-D4(S)	6.02	65	292079	25.76	ppb	0.00
Spiked Amount 25.000			Recovery =	103.040%		
5) Toluene-D8(S)	8.33	98	964349	25.39	ppb	0.00
Spiked Amount 25.000			Recovery =	101.568%		
6) 4-Bromofluorobenzene(S)	11.21	95	376130	24.74	ppb	0.00
Spiked Amount 25.000			Recovery =	98.964%		

Target Compounds Qvalue

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0226T17.D Vial: 7
Acq On : 26 Feb 20 15:21 Operator:
Sample : 10ug/L VOC STD 2/26/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 28 14:58 2020 Quant Results File: TSUR0226.RES

Quant Method : M:\THOR\DATA\T200226\TSUR0226.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Feb 27 08:26:36 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	802951	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.92	117	643777	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.47	152	365286	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.60	111	258881	25.37	ppb	0.00
Spiked Amount 25.000			Recovery =	101.460%		
3) 1,2-DCA-D4(S)	6.02	65	293395	25.02	ppb	0.00
Spiked Amount 25.000			Recovery =	100.068%		
5) Toluene-D8(S)	8.33	98	987244	25.56	ppb	0.00
Spiked Amount 25.000			Recovery =	102.228%		
6) 4-Bromofluorobenzene(S)	11.21	95	383192	24.75	ppb	0.00
Spiked Amount 25.000			Recovery =	99.012%		

Target Compounds Qvalue

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0226T18.D Vial: 8
Acq On : 26 Feb 20 15:50 Operator:
Sample : 20ug/L VOC STD 2/26/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 28 14:58 2020 Quant Results File: TSUR0226.RES

Quant Method : M:\THOR\DATA\T200226\TSUR0226.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Feb 27 08:26:36 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	796726	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.92	117	645189	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.47	152	375677	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.60	111	477643	51.88	ppb	0.00
Spiked Amount 25.000			Recovery =	207.520%		
3) 1,2-DCA-D4(S)	6.02	65	553095	52.75	ppb	0.00
Spiked Amount 25.000			Recovery =	210.996%		
5) Toluene-D8(S)	8.33	98	1836970	52.46	ppb	0.00
Spiked Amount 25.000			Recovery =	209.828%		
6) 4-Bromofluorobenzene(S)	11.21	95	729505	50.70	ppb	0.00
Spiked Amount 25.000			Recovery =	202.816%		

Target Compounds Qvalue

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0226T20.D Vial: 10
Acq On : 26 Feb 20 16:46 Operator:
Sample : 100ug/L VOC STD 2/26/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 28 14:58 2020 Quant Results File: TSUR0226.RES

Quant Method : M:\THOR\DATA\T200226\TSUR0226.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Feb 27 08:26:36 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	760373	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.92	117	635810	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.48	152	408318	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.60	111	830096	98.98	ppb	0.00
Spiked Amount 25.000			Recovery =	395.912%		
3) 1,2-DCA-D4(S)	6.02	65	941300	98.61	ppb	0.00
Spiked Amount 25.000			Recovery =	394.428%		
5) Toluene-D8(S)	8.33	98	3247508	98.75	ppb	0.00
Spiked Amount 25.000			Recovery =	394.980%		
6) 4-Bromofluorobenzene(S)	11.21	95	1363633	99.85	ppb	0.00
Spiked Amount 25.000			Recovery =	399.396%		

Target Compounds Qvalue

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

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 5 Mar 20 13:39
Instrument: Thor
Initial Cal. Date: 02/26/20
Data File: 0305T14.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	4.068	1.353	67	TMHBL	1.1
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
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40							
		Average			67.0		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 5 Mar 20 13:39
Instrument: Thor
Initial Cal. Date: 02/26/20
Data File: 0305T14.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	SL	Dibromofluoromethane(S)	0.3847	0.3247	16	SL	2.3
3	SL	1,2-DCA-D4(S)	0.4424	0.3604	19	SL	1.6
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	SL	Toluene-D8(S)	1.831	1.484	19	SL	1.8
6	SL	4-Bromofluorobenzene(S)	0.7112	0.5834	18	SL	3.3
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
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		Average			18.0		

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200226\0305T14.D Vial: 4
Acq On : 5 Mar 20 13:39 Operator:
Sample : 200305B CCV 300ug/L Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 10:50 2020 Quant Results File: TGAS0219.RES

Quant Method : M:\THOR\DATA\T200226\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	TIC	787096	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.92	TIC	966074	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.48	TIC	1002706	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.33	TIC	12776607m	296.67	ppb	100

(#) = qualifier out of range (m) = manual integration
0305T14.D TGAS0219.M Wed Mar 11 14:23:55 2020 Page 1

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0305T14.D Vial: 4
Acq On : 5 Mar 20 13:39 Operator:
Sample : 200305B CCV 300ug/L Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 10:57 2020 Quant Results File: TSUR0226.RES

Quant Method : M:\THOR\DATA\T200226\TSUR0226.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Feb 27 08:26:36 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	751751	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.92	117	622122	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.48	152	344666	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.60	111	244079	25.58	ppb	0.00
Spiked Amount 25.000			Recovery = 102.328%			
3) 1,2-DCA-D4(S)	6.02	65	270907	24.59	ppb	0.00
Spiked Amount 25.000			Recovery = 98.372%			
5) Toluene-D8(S)	8.33	98	923190	24.54	ppb	0.00
Spiked Amount 25.000			Recovery = 98.168%			
6) 4-Bromofluorobenzene(S)	11.21	95	362919	24.18	ppb	0.00
Spiked Amount 25.000			Recovery = 96.712%			

Target Compounds Qvalue

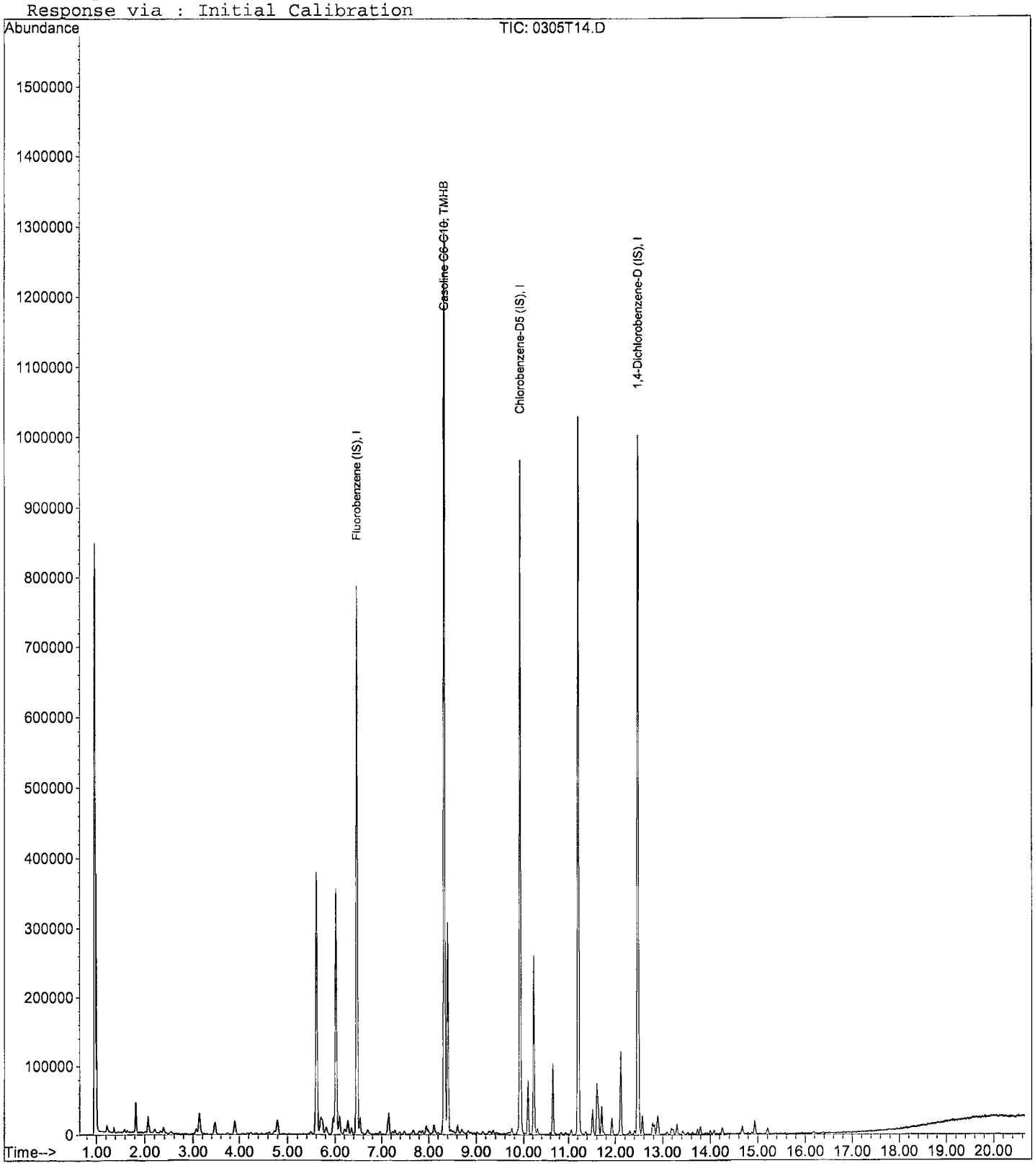
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200226\0305T14.D Vial: 4
Acq On : 5 Mar 20 13:39 Operator:
Sample : 200305B CCV 300ug/L Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 10:50 2020 Quant Results File: TGAS0219.RES

Method : M:\THOR\DATA\T200226\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

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

SDG No:
Date Analyzed: 6 Mar 20 1:57
Instrument: Thor
Initial Cal. Date: 02/26/20
Data File: 0305t40.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	4.068	1.315	68	TMHBL	11
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
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		Average			68.0		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

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

SDG No:
Date Analyzed: 6 Mar 20 1:57
Instrument: Thor
Initial Cal. Date: 02/26/20
Data File: 0305t40.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	SL	Dibromofluoromethane(S)	0.3847	0.3241	16	SL	2.1
3	SL	1,2-DCA-D4(S)	0.4424	0.3728	16	SL	2.6
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	SL	Toluene-D8(S)	1.831	1.445	21	SL	5.1
6	SL	4-Bromofluorobenzene(S)	0.7112	0.5659	20	SL	6.7
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
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34							
35							
36							
37							
38							
39							
40							
		Average			18.3		

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200226\0305t40.D Vial: 30
Acq On : 6 Mar 20 1:57 Operator:
Sample : Ending CCV 300ug/L 3/5/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 10:57 2020 Quant Results File: TGAS0219.RES

Quant Method : M:\THOR\DATA\T200226\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	TIC	618832	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.92	TIC	783276	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.47	TIC	805028	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.33	TIC	9767209m	265.99	ppb	100

(#) = qualifier out of range (m) = manual integration
0305t40.D TGAS0219.M Wed Mar 11 14:24:28 2020 Page 1

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0305t40.D Vial: 30
Acq On : 6 Mar 20 1:57 Operator:
Sample : Ending CCV 300ug/L 3/5/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 10:57 2020 Quant Results File: TSUR0226.RES

Quant Method : M:\THOR\DATA\T200226\TSUR0226.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Feb 27 08:26:36 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	590092	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.92	117	491544	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.47	152	274060	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.60	111	191265	25.53	ppb	0.00
Spiked Amount 25.000			Recovery =	102.116%		
3) 1,2-DCA-D4(S)	6.02	65	219981	25.64	ppb	0.00
Spiked Amount 25.000			Recovery =	102.560%		
5) Toluene-D8(S)	8.33	98	710053	23.74	ppb	0.00
Spiked Amount 25.000			Recovery =	94.940%		
6) 4-Bromofluorobenzene(S)	11.21	95	278155	23.33	ppb	0.00
Spiked Amount 25.000			Recovery =	93.324%		

Target Compounds Qvalue

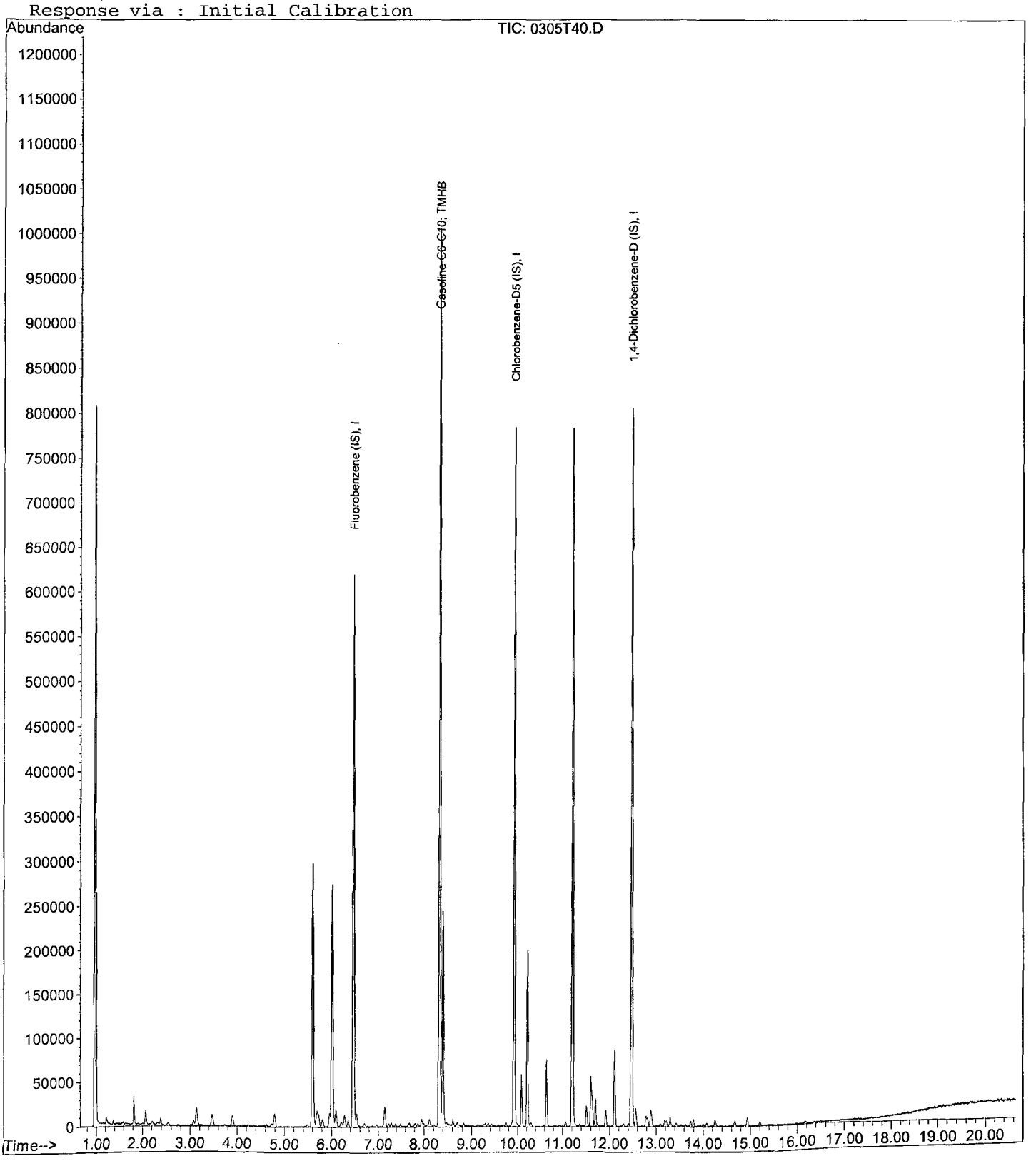
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200226\0305t40.D Vial: 30
Acq On : 6 Mar 20 1:57 Operator:
Sample : Ending CCV 300ug/L 3/5/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 10:57 2020 Quant Results File: TGAS0219.RES

Method : M:\THOR\DATA\T200226\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration



ORGANICS
Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200226\0305T24.D Vial: 14
Acq On : 5 Mar 20 18:22 Operator:
Sample : BA07941W01 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 11:07 2020 Quant Results File: TGAS0219.RES

Quant Method : M:\THOR\DATA\T200226\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	TIC	688721	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.92	TIC	861482	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.47	TIC	849197	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0305T24.D TGAS0219.M Wed Mar 11 14:26:30 2020 Page 1

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0305T24.D Vial: 14
Acq On : 5 Mar 20 18:22 Operator:
Sample : BA07941W01 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 11:15 2020 Quant Results File: TSUR0226.RES

Quant Method : M:\THOR\DATA\T200226\TSUR0226.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Feb 27 08:26:36 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	655956	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.92	117	539078	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.48	152	292044	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.60	111	211316	25.34	ppb	0.00
Spiked Amount 25.000			Recovery = 101.360%			
3) 1,2-DCA-D4(S)	6.02	65	243744	25.54	ppb	0.00
Spiked Amount 25.000			Recovery = 102.156%			
5) Toluene-D8(S)	8.33	98	794265	24.33	ppb	0.00
Spiked Amount 25.000			Recovery = 97.304%			
6) 4-Bromofluorobenzene(S)	11.21	95	309471	23.73	ppb	0.00
Spiked Amount 25.000			Recovery = 94.912%			

Target Compounds Qvalue

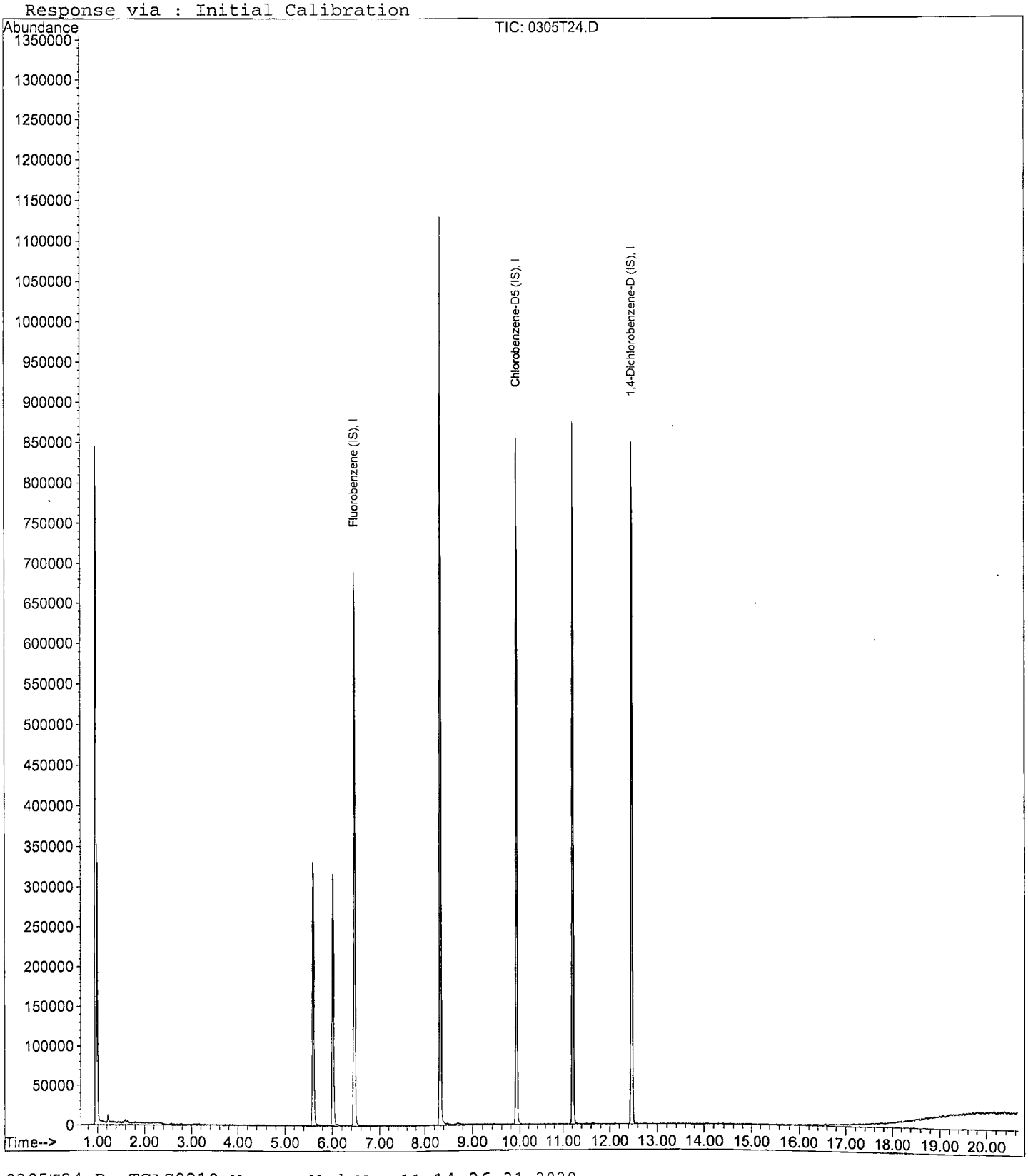
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200226\0305T24.D Vial: 14
Acq On : 5 Mar 20 18:22 Operator:
Sample : BA07941W01 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 11:07 2020 Quant Results File: TGAS0219.RES

Method : M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200226\0305T25.D Vial: 15
Acq On : 5 Mar 20 18:51 Operator:
Sample : BA07942W01 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 11:07 2020 Quant Results File: TGAS0219.RES

Quant Method : M:\THOR\DATA\T200226\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	TIC	678064	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.92	TIC	844812	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.48	TIC	865712	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0305T25.D TGAS0219.M Wed Mar 11 14:26:32 2020 Page 1

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0305T25.D Vial: 15
Acq On : 5 Mar 20 18:51 Operator:
Sample : BA07942W01 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 11:15 2020 Quant Results File: TSUR0226.RES

Quant Method : M:\THOR\DATA\T200226\TSUR0226.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Feb 27 08:26:36 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	647119	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.92	117	536433	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.48	152	291741	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.60	111	221007	27.19	ppb	0.00
Spiked Amount 25.000			Recovery = 108.776%			
3) 1,2-DCA-D4(S)	6.02	65	250430	26.84	ppb	0.00
Spiked Amount 25.000			Recovery = 107.352%			
5) Toluene-D8(S)	8.33	98	817365	25.36	ppb	0.00
Spiked Amount 25.000			Recovery = 101.424%			
6) 4-Bromofluorobenzene(S)	11.21	95	321031	24.91	ppb	0.00
Spiked Amount 25.000			Recovery = 99.636%			

Target Compounds Qvalue

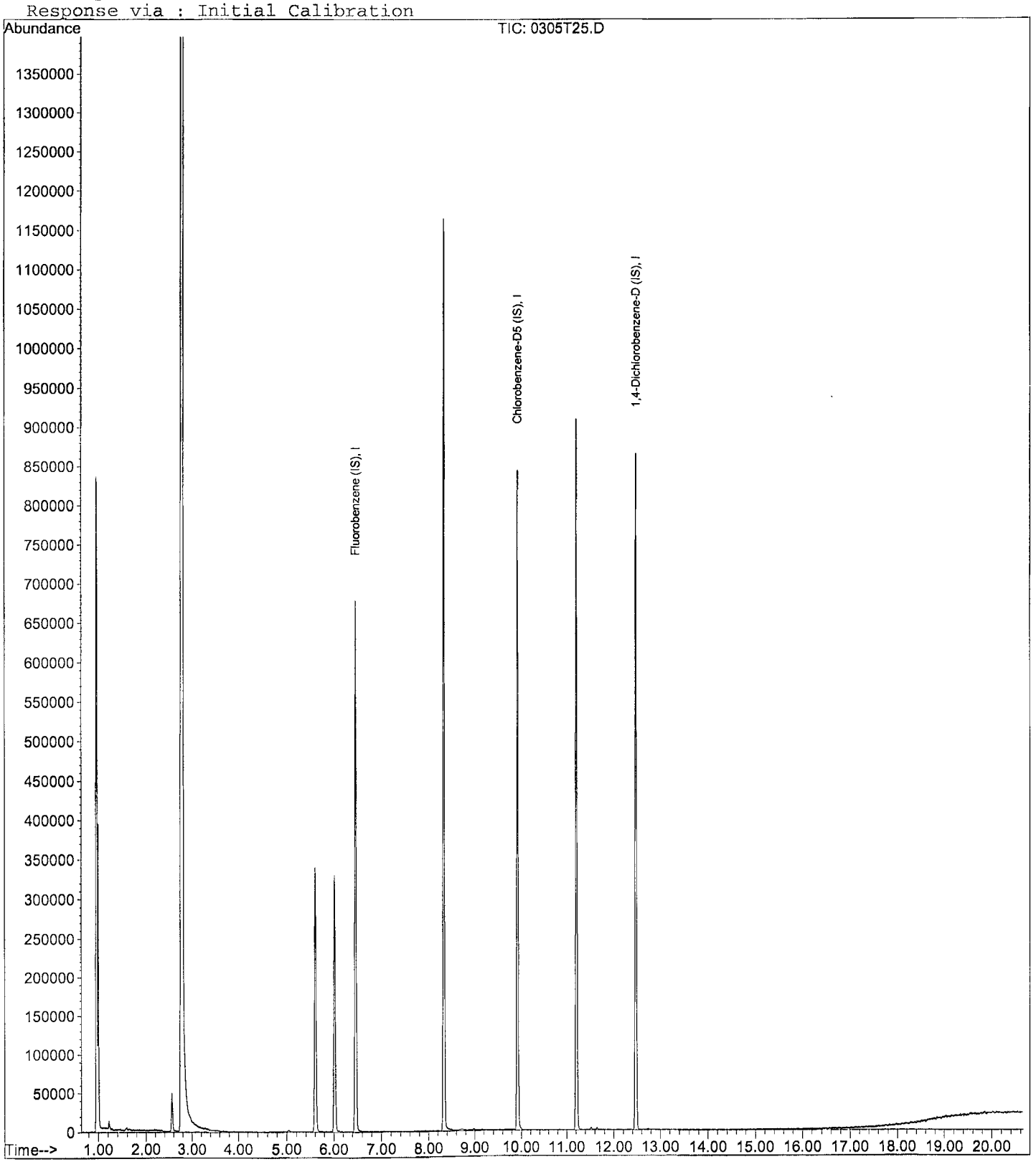
(#) = qualifier out of range (m) = manual integration
0305T25.D TSUR0226.M Wed Mar 11 14:27:16 2020 Page 1

Quantitation Report

Data File : M:\THOR\DATA\T200226\0305T25.D Vial: 15
Acq On : 5 Mar 20 18:51 Operator:
Sample : BA07942W01 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 11:07 2020 Quant Results File: TGAS0219.RES

Method : M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200226\0305T26.D Vial: 16
Acq On : 5 Mar 20 19:19 Operator:
Sample : BA07943W01 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 11:07 2020 Quant Results File: TGAS0219.RES

Quant Method : M:\THOR\DATA\T200226\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	TIC	679511	25.00 ppb	0.00
3) Chlorobenzene-D5 (IS)	9.92	TIC	836042	25.00 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.48	TIC	879018	25.00 ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0305T26.D Vial: 16
Acq On : 5 Mar 20 19:19 Operator:
Sample : BA07943W01 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 11:15 2020 Quant Results File: TSUR0226.RES

Quant Method : M:\THOR\DATA\T200226\TSUR0226.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Feb 27 08:26:36 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	638068	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.92	117	533469	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.48	152	294078	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.60	111	223795	28.08	ppb	0.00
Spiked Amount 25.000			Recovery =	112.304%		
3) 1,2-DCA-D4(S)	6.02	65	254922	27.89	ppb	0.00
Spiked Amount 25.000			Recovery =	111.580%		
5) Toluene-D8(S)	8.33	98	817344	25.53	ppb	0.00
Spiked Amount 25.000			Recovery =	102.116%		
6) 4-Bromofluorobenzene(S)	11.21	95	318419	24.83	ppb	0.00
Spiked Amount 25.000			Recovery =	99.332%		

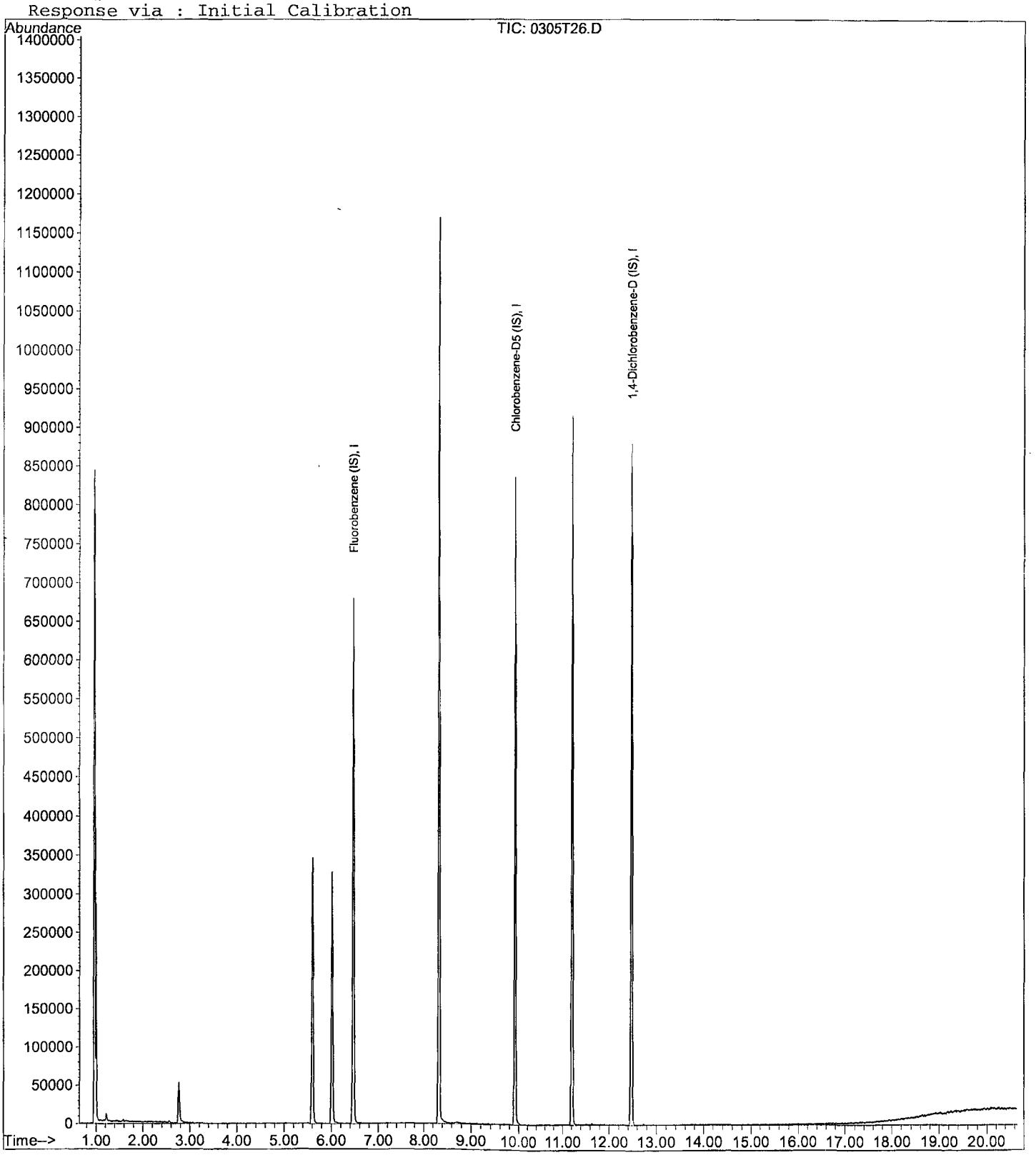
Target Compounds Qvalue

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

Data File : M:\THOR\DATA\T200226\0305T26.D Vial: 16
Acq On : 5 Mar 20 19:19 Operator:
Sample : BA07943W01 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 11:07 2020 Quant Results File: TGAS0219.RES

Method : M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200226\0305T27.D Vial: 17
Acq On : 5 Mar 20 19:48 Operator:
Sample : BA07944W01 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 11:07 2020 Quant Results File: TGAS0219.RES

Quant Method : M:\THOR\DATA\T200226\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	TIC	669109	25.00 ppb	0.00
3) Chlorobenzene-D5 (IS)	9.92	TIC	824980	25.00 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.47	TIC	839699	25.00 ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0305T27.D Vial: 17
Acq On : 5 Mar 20 19:48 Operator:
Sample : BA07944W01 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 11:15 2020 Quant Results File: TSUR0226.RES

Quant Method : M:\THOR\DATA\T200226\TSUR0226.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Feb 27 08:26:36 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	634154	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.92	117	526303	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.47	152	284537	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.60	111	202402	25.05	ppb	0.00
Spiked Amount 25.000			Recovery =	100.220%		
3) 1,2-DCA-D4(S)	6.02	65	232039	25.06	ppb	0.00
Spiked Amount 25.000			Recovery =	100.236%		
5) Toluene-D8(S)	8.33	98	748786	23.29	ppb	0.00
Spiked Amount 25.000			Recovery =	93.156%		
6) 4-Bromofluorobenzene(S)	11.21	95	291293	22.73	ppb	0.00
Spiked Amount 25.000			Recovery =	90.916%		

Target Compounds Qvalue

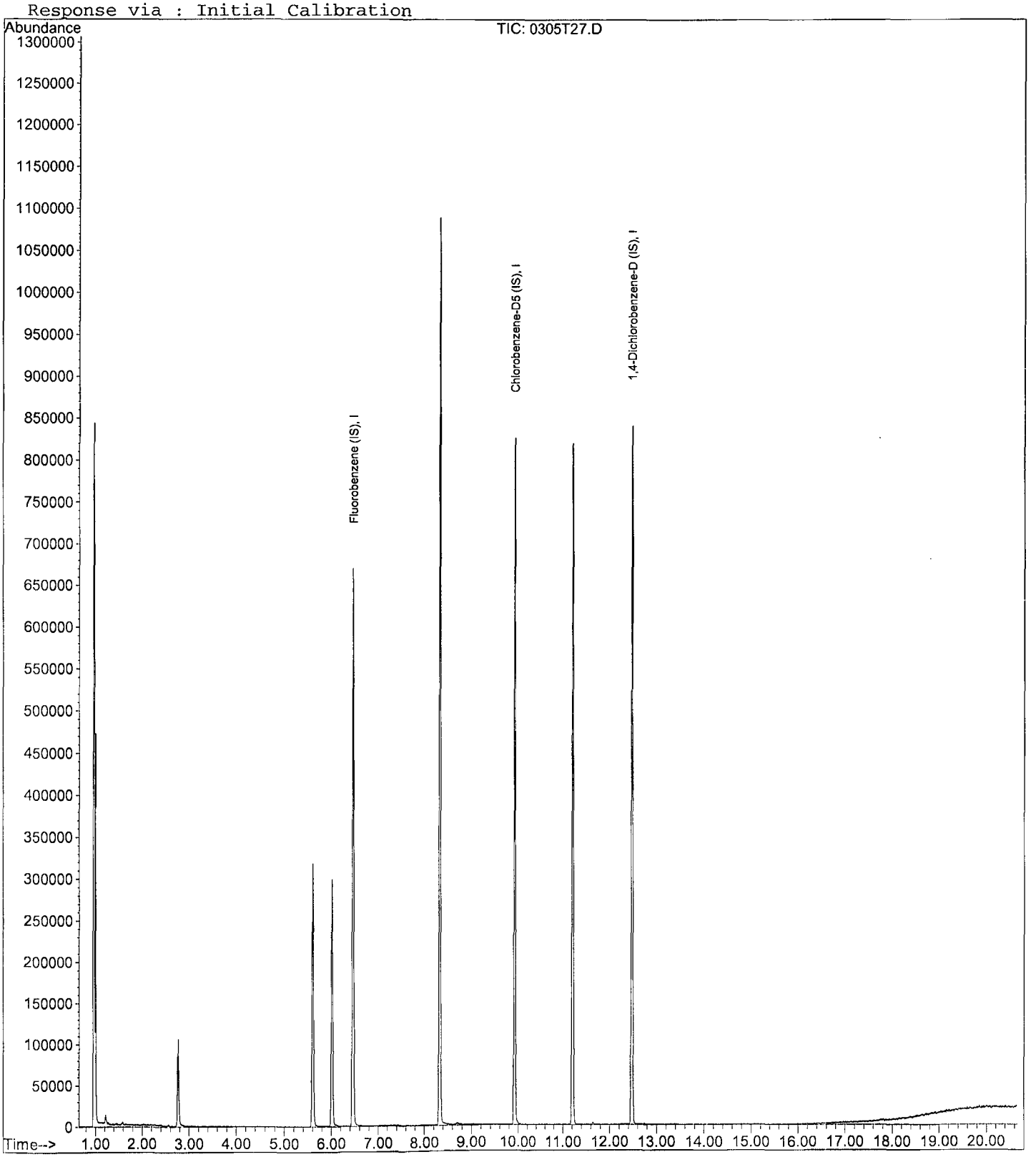
(#) = qualifier out of range (m) = manual integration
0305T27.D TSUR0226.M Wed Mar 11 14:27:19 2020 Page 1

Quantitation Report

Data File : M:\THOR\DATA\T200226\0305T27.D Vial: 17
Acq On : 5 Mar 20 19:48 Operator:
Sample : BA07944W01 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 11:07 2020 Quant Results File: TGAS0219.RES

Method : M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200226\0305T28.D Vial: 18
Acq On : 5 Mar 20 20:16 Operator:
Sample : BA07945W01 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 11:07 2020 Quant Results File: TGAS0219.RES

Quant Method : M:\THOR\DATA\T200226\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	TIC	659438	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.92	TIC	815463	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.47	TIC	829501	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0305T28.D Vial: 18
Acq On : 5 Mar 20 20:16 Operator:
Sample : BA07945W01 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 11:15 2020 Quant Results File: TSUR0226.RES

Quant Method : M:\THOR\DATA\T200226\TSUR0226.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Feb 27 08:26:36 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	621127	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.92	117	515779	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.47	152	277650	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.60	111	210675	26.97	ppb	0.00
Spiked Amount 25.000			Recovery =	107.880%		
3) 1,2-DCA-D4(S)	6.02	65	241356	26.97	ppb	0.00
Spiked Amount 25.000			Recovery =	107.888%		
5) Toluene-D8(S)	8.33	98	777605	25.03	ppb	0.00
Spiked Amount 25.000			Recovery =	100.108%		
6) 4-Bromofluorobenzene(S)	11.21	95	301366	24.22	ppb	0.00
Spiked Amount 25.000			Recovery =	96.892%		

Target Compounds Qvalue

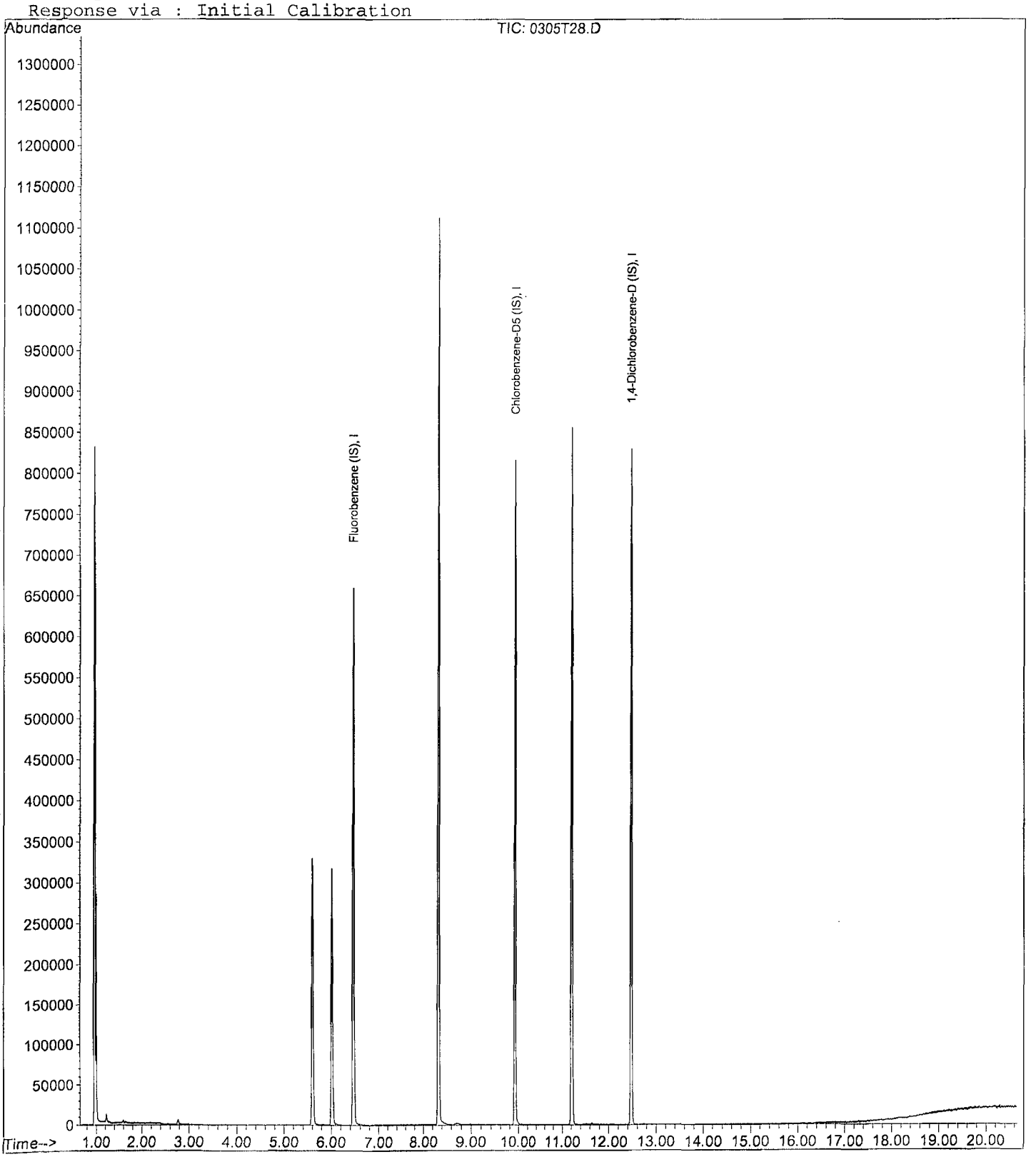
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200226\0305T28.D Vial: 18
Acq On : 5 Mar 20 20:16 Operator:
Sample : BA07945W01 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 11:07 2020 Quant Results File: TGAS0219.RES

Method : M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200226\0305T29.D Vial: 19
Acq On : 5 Mar 20 20:44 Operator:
Sample : BA07946W01 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 11:07 2020 Quant Results File: TGAS0219.RES

Quant Method : M:\THOR\DATA\T200226\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	TIC	641410	25.00 ppb	0.00
3) Chlorobenzene-D5 (IS)	9.92	TIC	814707	25.00 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.47	TIC	825413	25.00 ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0305T29.D Vial: 19
Acq On : 5 Mar 20 20:44 Operator:
Sample : BA07946W01 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 11:15 2020 Quant Results File: TSUR0226.RES

Quant Method : M:\THOR\DATA\T200226\TSUR0226.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Feb 27 08:26:36 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	623579	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.92	117	515954	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.48	152	281515	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.60	111	209573	26.67	ppb	0.00
Spiked Amount 25.000			Recovery =	106.692%		
3) 1,2-DCA-D4(S)	6.02	65	240763	26.76	ppb	0.00
Spiked Amount 25.000			Recovery =	107.052%		
5) Toluene-D8(S)	8.33	98	767202	24.60	ppb	0.00
Spiked Amount 25.000			Recovery =	98.416%		
6) 4-Bromofluorobenzene(S)	11.21	95	296298	23.74	ppb	0.00
Spiked Amount 25.000			Recovery =	94.948%		

Target Compounds Qvalue

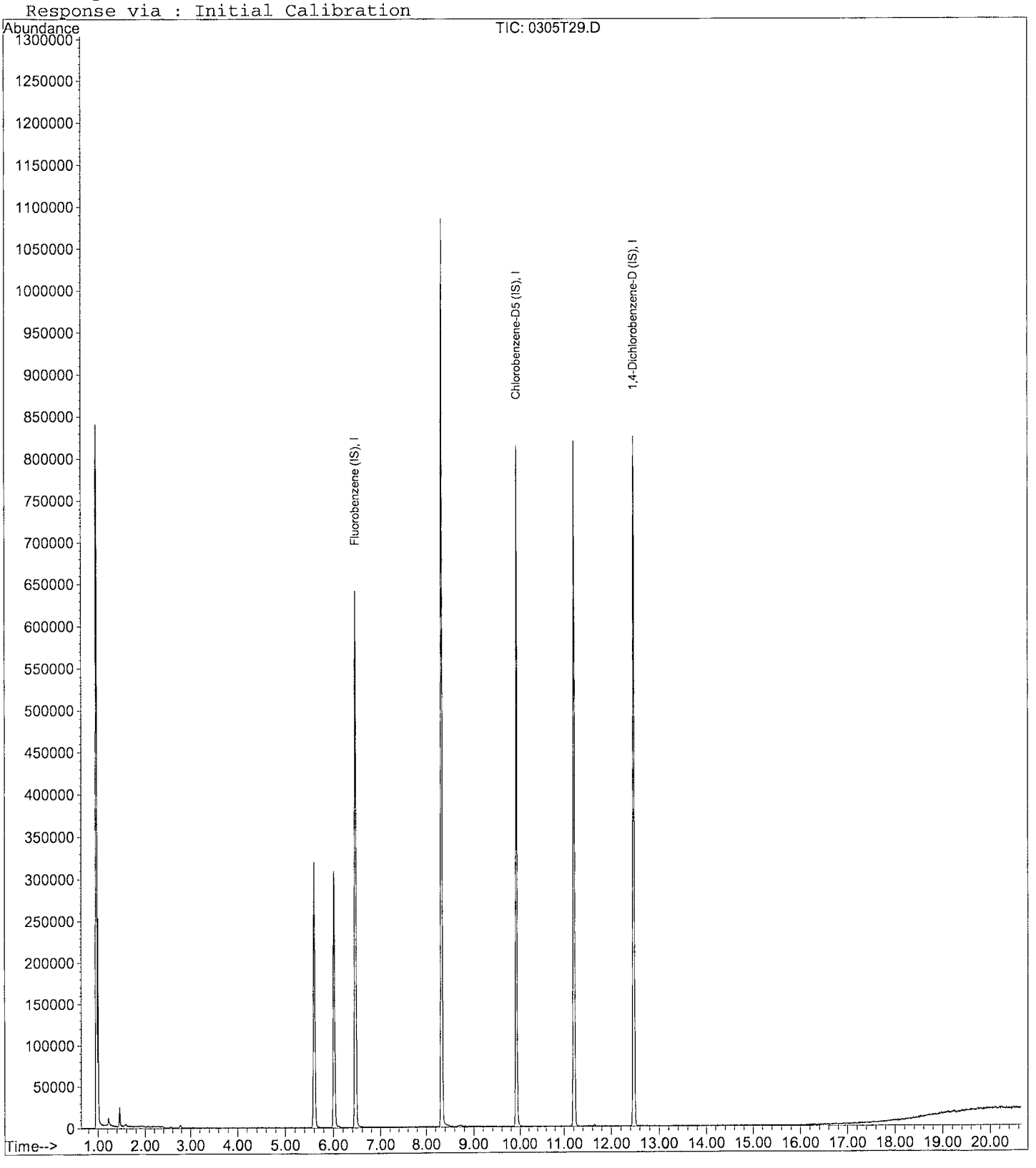
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200226\0305T29.D Vial: 19
Acq On : 5 Mar 20 20:44 Operator:
Sample : BA07946W01 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 11:07 2020 Quant Results File: TGAS0219.RES

Method : M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200226\0305T30.D Vial: 20
Acq On : 5 Mar 20 21:13 Operator:
Sample : BA07947W01 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 11:07 2020 Quant Results File: TGAS0219.RES

Quant Method : M:\THOR\DATA\T200226\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	TIC	639114	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.92	TIC	817482	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.47	TIC	834031	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0305T30.D Vial: 20
Acq On : 5 Mar 20 21:13 Operator:
Sample : BA07947W01 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 11:15 2020 Quant Results File: TSUR0226.RES

Quant Method : M:\THOR\DATA\T200226\TSUR0226.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Feb 27 08:26:36 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	608416	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.92	117	508895	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.47	152	276345	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.60	111	211391	27.76	ppb	0.00
Spiked Amount 25.000			Recovery = 111.044%			
3) 1,2-DCA-D4(S)	6.02	65	243848	28.00	ppb	0.00
Spiked Amount 25.000			Recovery = 112.008%			
5) Toluene-D8(S)	8.33	98	782417	25.64	ppb	0.00
Spiked Amount 25.000			Recovery = 102.556%			
6) 4-Bromofluorobenzene(S)	11.21	95	305911	25.04	ppb	0.00
Spiked Amount 25.000			Recovery = 100.156%			

Target Compounds Qvalue

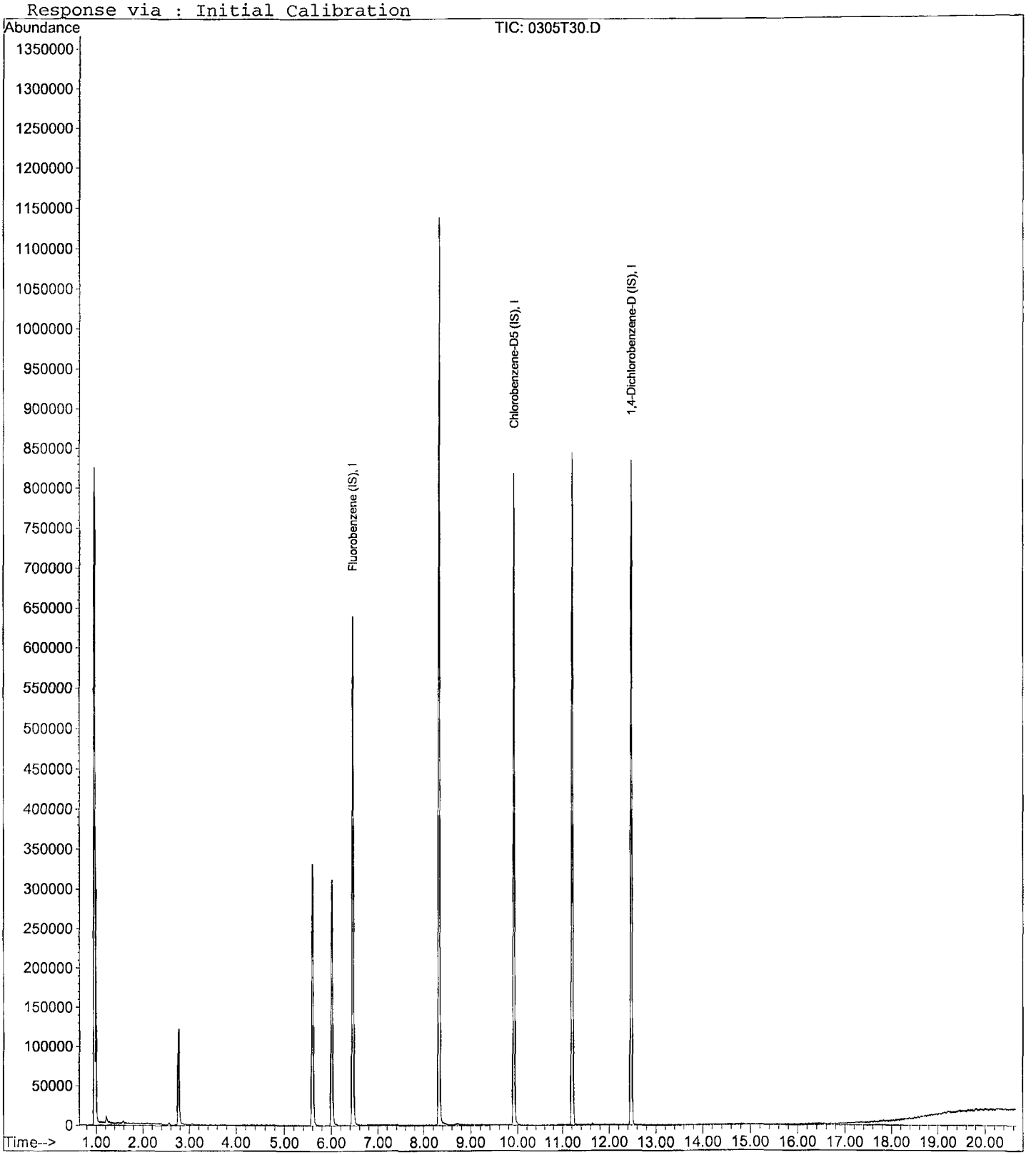
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200226\0305T30.D Vial: 20
Acq On : 5 Mar 20 21:13 Operator:
Sample : BA07947W01 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 11:07 2020 Quant Results File: TGAS0219.RES

Method : M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200226\0305t19.D Vial: 9
Acq On : 5 Mar 20 16:01 Operator:
Sample : 200305B BLK Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 11:08 2020 Quant Results File: TGAS0219.RES

Quant Method : M:\THOR\DATA\T200226\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	TIC	744228	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.92	TIC	904466	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.47	TIC	943296	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0305t19.D Vial: 9
Acq On : 5 Mar 20 16:01 Operator:
Sample : 200305B BLK Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 11:15 2020 Quant Results File: TSUR0226.RES

Quant Method : M:\THOR\DATA\T200226\TSUR0226.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Feb 27 08:26:36 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	708044	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.92	117	582815	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.47	152	316777	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.60	111	222818	24.63	ppb	0.00
Spiked Amount 25.000			Recovery = 98.508%			
3) 1,2-DCA-D4(S)	6.02	65	254410	24.50	ppb	0.00
Spiked Amount 25.000			Recovery = 98.016%			
5) Toluene-D8(S)	8.33	98	837777	23.59	ppb	0.00
Spiked Amount 25.000			Recovery = 94.364%			
6) 4-Bromofluorobenzene(S)	11.21	95	326743	23.08	ppb	0.00
Spiked Amount 25.000			Recovery = 92.304%			

Target Compounds Qvalue

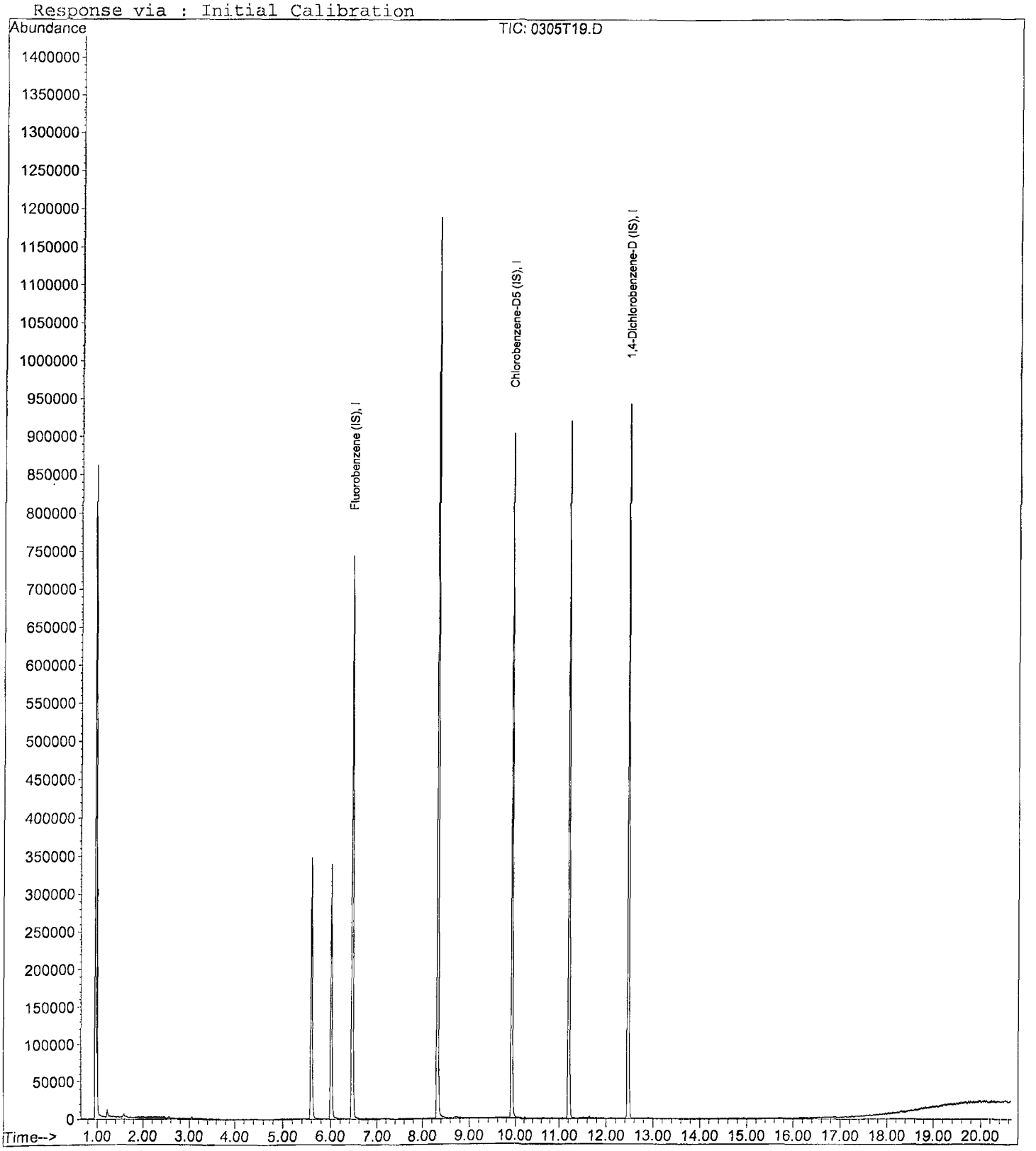
(#) = qualifier out of range (m) = manual integration
0305t19.D TSUR0226.M Wed Mar 11 14:26:15 2020 Page 1

Quantitation Report

Data File : M:\THOR\DATA\T200226\0305t19.D Vial: 9
Acq On : 5 Mar 20 16:01 Operator:
Sample : 200305B BLK Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 11:08 2020 Quant Results File: TGAS0219.RES

Method : M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200226\0305t15.D Vial: 5
Acq On : 5 Mar 20 14:07 Operator:
Sample : 200305B LCS 300ug/L Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 10:50 2020 Quant Results File: TGAS0219.RES

Quant Method : M:\THOR\DATA\T200226\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	TIC	778847	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.92	TIC	985595	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.47	TIC	1010507	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	8.33	TIC	12595399m	292.52	ppb	100

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0305t15.D Vial: 5
Acq On : 5 Mar 20 14:07 Operator:
Sample : 200305B LCS 300ug/L Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 11:15 2020 Quant Results File: TSUR0226.RES

Quant Method : M:\THOR\DATA\T200226\TSUR0226.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Feb 27 08:26:36 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	758092	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.92	117	618466	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.47	152	346975	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.60	111	245273	25.47	ppb	0.00
Spiked Amount 25.000			Recovery = 101.892%			
3) 1,2-DCA-D4(S)	6.02	65	272961	24.57	ppb	0.00
Spiked Amount 25.000			Recovery = 98.268%			
5) Toluene-D8(S)	8.33	98	922114	24.69	ppb	0.00
Spiked Amount 25.000			Recovery = 98.744%			
6) 4-Bromofluorobenzene(S)	11.21	95	363454	24.39	ppb	0.00
Spiked Amount 25.000			Recovery = 97.548%			

Target Compounds Qvalue

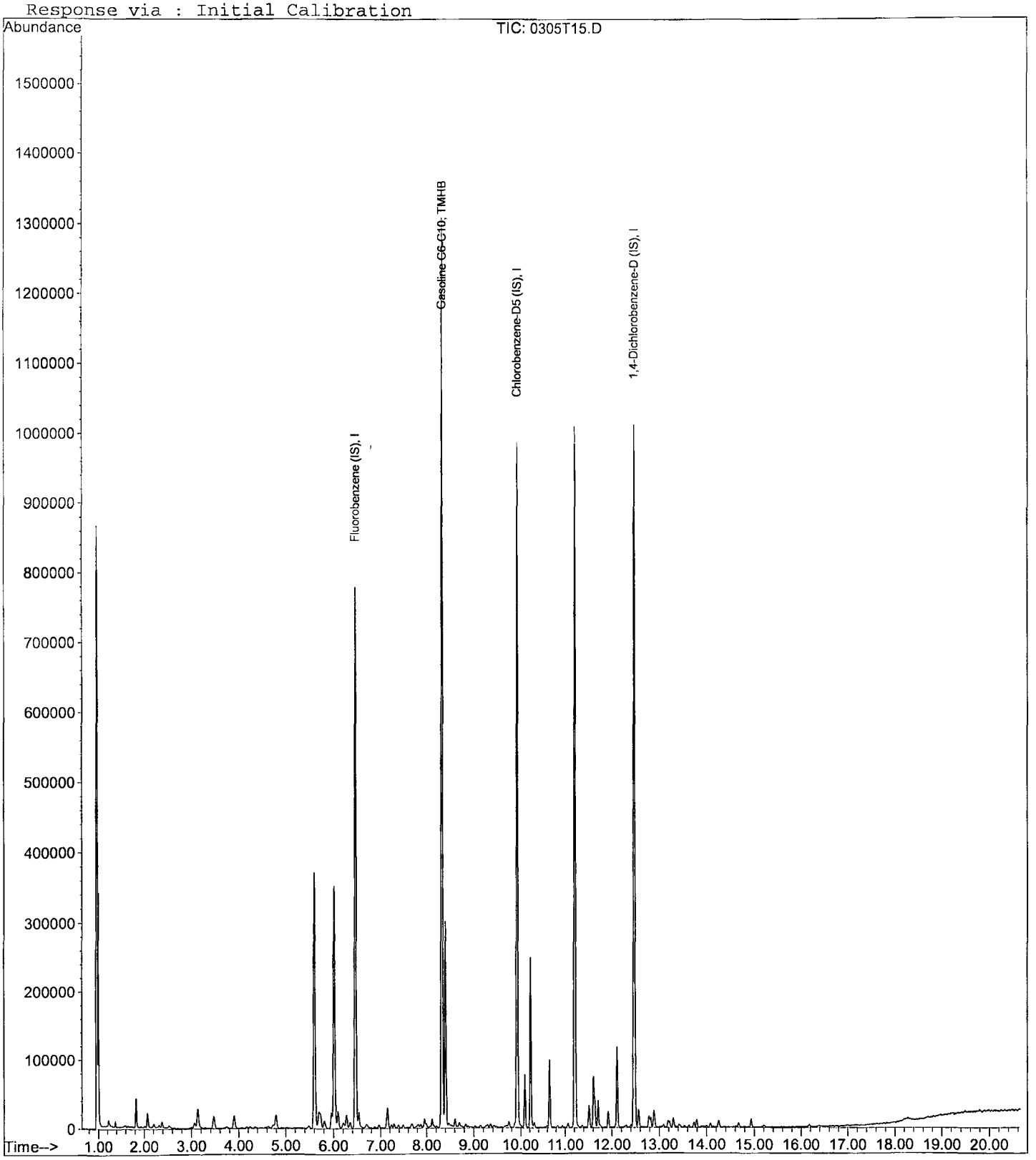
(#) = qualifier out of range (m) = manual integration
0305t15.D TSUR0226.M Wed Mar 11 14:25:43 2020 Page 1

Quantitation Report

Data File : M:\THOR\DATA\T200226\0305t15.D Vial: 5
Acq On : 5 Mar 20 14:07 Operator:
Sample : 200305B LCS 300ug/L Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 10:50 2020 Quant Results File: TGAS0219.RES

Method : M:\THOR\DATA\T200226\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200226\0305T16.D Vial: 6
Acq On : 5 Mar 20 14:35 Operator:
Sample : 200305B LCSD 300ug/L Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 10:51 2020 Quant Results File: TGAS0219.RES

Quant Method : M:\THOR\DATA\T200226\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	TIC	767525	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.92	TIC	932945	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.48	TIC	956761	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.33	TIC	12219739m	275.39	ppb	100

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200226\0305T16.D Vial: 6
Acq On : 5 Mar 20 14:35 Operator:
Sample : 200305B LCSD 300ug/L Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 11:15 2020 Quant Results File: TSUR0226.RES

Quant Method : M:\THOR\DATA\T200226\TSUR0226.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Thu Feb 27 08:26:36 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	732521	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.92	117	606685	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.48	152	336129	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.60	111	228138	24.32	ppb	0.00
Spiked Amount 25.000			Recovery = 97.264%			
3) 1,2-DCA-D4(S)	6.02	65	261306	24.29	ppb	0.00
Spiked Amount 25.000			Recovery = 97.140%			
5) Toluene-D8(S)	8.33	98	873316	23.63	ppb	0.00
Spiked Amount 25.000			Recovery = 94.528%			
6) 4-Bromofluorobenzene(S)	11.21	95	341444	23.18	ppb	0.00
Spiked Amount 25.000			Recovery = 92.728%			

Target Compounds Qvalue

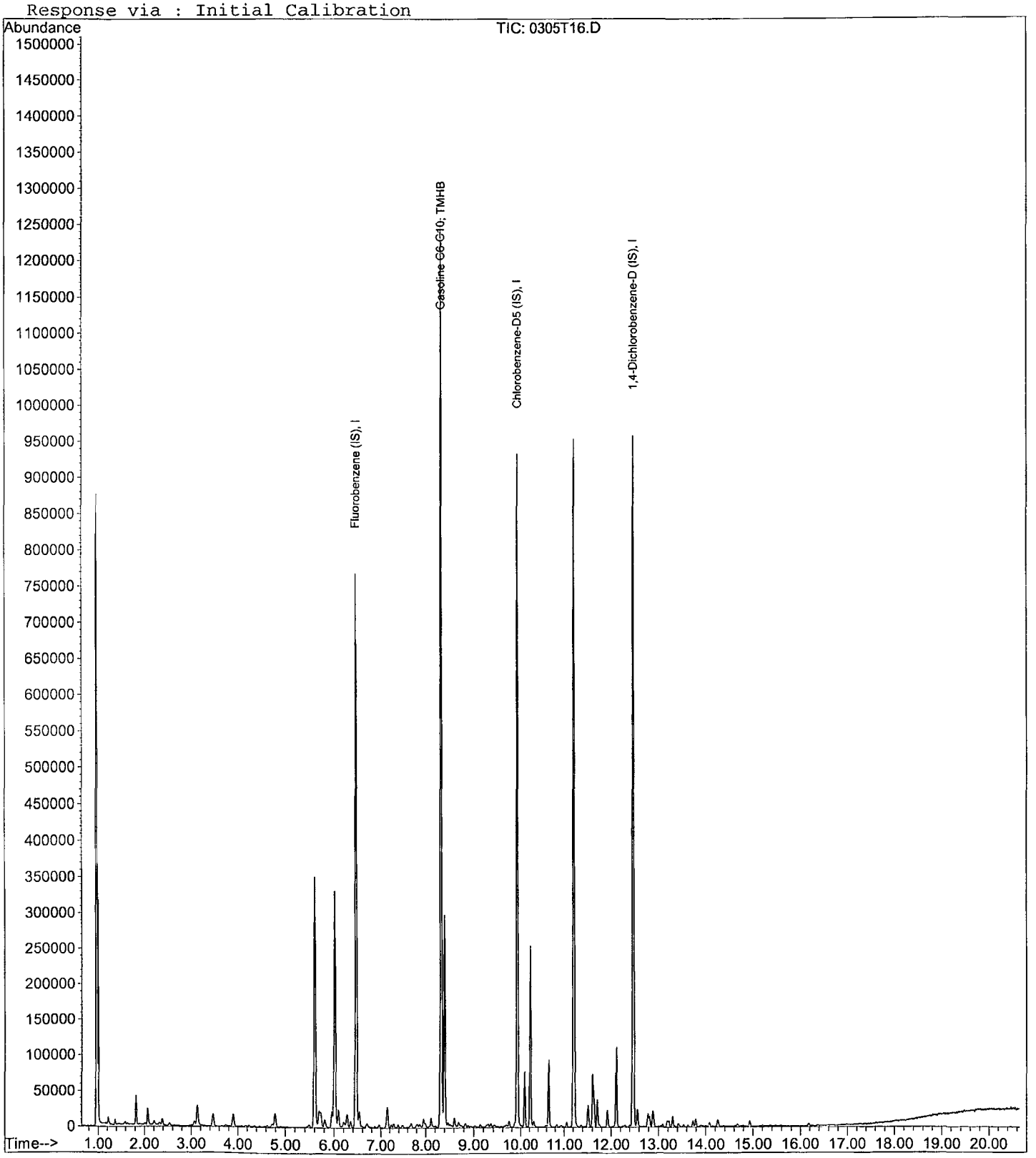
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200226\0305T16.D Vial: 6
Acq On : 5 Mar 20 14:35 Operator:
Sample : 200305B LCSD 300ug/L Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 6 10:51 2020 Quant Results File: TGAS0219.RES

Method : M:\THOR\DATA\T200226\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration



Thor Gas Standard Prep

Gas Primary Working Standard

Prepared: 01/06/20 — Prepared By (Initials): DG

Expires: 01/05/21

Methanol Lot No. 58019-00962

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
50,000ug/mL Gas STD	Restek	30205	50,000	A0132443-39859	01/06/21	12/31/24	80uL	2mL	Methanol	2,000

Gas Second Source (SS) Working Standard

Prepared: 01/06/20 — Prepared By (Initials): DG

Expires: 01/05/21

Methanol Lot No. 56019-00862

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Gasoline (50,000ppm)	Phenova	ALO-101543	50,000	CL11750-40999	01/06/21	02/28/27	80uL	2mL	Methanol	2,000

Thor Gas Calibration Curve

Prepared: 02/20/20 — Prepared By (Initials): DG

Expires: 04/20/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA Gasses Standards	Phenova	20ug/L	2,000	Prepared 01/06/20	01/05/21	N/A	1uL	100mL	P&T Water	20
VOA Gasses Standards	Phenova	50ug/L	2,000	Prepared 01/06/20	01/05/21	N/A	2.5uL	100mL	P&T Water	50
VOA Gasses Standards	Phenova	100ug/L	2,000	Prepared 01/06/20	01/05/21	N/A	5uL	100mL	P&T Water	100
VOA Gasses Standards	Phenova	300ug/L	2,000	Prepared 01/06/20	01/05/21	N/A	15uL	100mL	P&T Water	300
VOA Gasses Standards	Phenova	600ug/L	2,000	Prepared 01/06/20	01/05/21	N/A	30uL	100mL	P&T Water	600
VOA Gasses Standards	Phenova	800ug/L	2,000	Prepared 01/06/20	01/05/21	N/A	40uL	100mL	P&T Water	800
VOA Gasses Standards	Phenova	1,000ug/L	2,000	Prepared 01/06/20	01/05/21	N/A	50uL	100mL	P&T Water	1,000

Thor Gas Second Source

Prepared: 02/20/20 — Prepared By (Initials): DG

Expires: 04/20/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
50,000ug/mL Gas STD	Phenova	SS 300ug/L	2,000	Prepared 01/06/20	01/05/21	N/A	15uL	100mL	P&T Water	300

Thor Gas Continuing Calibrations/Lab Control Spikes

Prepared: 02/20/20 — Prepared By (Initials): DG

Expires: 02/21/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Gasses Standards	Phenova	300ug/L	2,000	Prepared 01/06/20	01/05/21	N/A	15uL	100mL	P&T Water	300

Thor 8260 Standard Prep

Thor 8260 Water Calibration Curve

0.3ug/L

Prepared By (Initials): CH

Prepared: 02/26/20

Expires: 03/27/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	O2SI	0.3ug/L	5	Prepared 02/26/20	04/26/20	N/A	3uL	50mL	P&T Water	0.3
VOA STD. 10	O2SI		5	Prepared 02/26/20	04/26/20	N/A	3uL			0.3
VOA STD. 12	O2SI		5	Prepared 02/26/20	04/26/20	N/A	3uL			0.3
VOA STD. TBA	Various		250	Prepared 02/26/20	03/11/20	N/A	2uL			10

0.5ug/L

Prepared: 02/26/20

Expires: 03/27/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	O2SI	0.5ug/L	5	Prepared 02/26/20	04/26/20	N/A	5uL	50mL	P&T Water	0.5
VOA STD. 10	O2SI		5	Prepared 02/26/20	04/26/20	N/A	5uL			0.5
VOA STD. 12	O2SI		5	Prepared 02/26/20	04/26/20	N/A	5uL			0.5
VOA STD. TBA	Various		250	Prepared 02/26/20	03/11/20	N/A	5uL			25

1.0ug/L

Prepared: 02/26/20

Expires: 03/27/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	O2SI	1.0ug/L	5	Prepared 02/26/20	04/26/20	N/A	10uL	50mL	P&T Water	1
VOA STD. 10	O2SI		5	Prepared 02/26/20	04/26/20	N/A	10uL			1
VOA STD. 12	O2SI		5	Prepared 02/26/20	04/26/20	N/A	10uL			1
VOA STD. TBA	Various		250	Prepared 02/26/20	03/11/20	N/A	10uL			50

2.0ug/L

Prepared: 02/26/20

Expires: 03/27/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	O2SI	2.0ug/L	5	Prepared 02/26/20	04/26/20	N/A	20uL	50mL	P&T Water	2
VOA STD. 10	O2SI		5	Prepared 02/26/20	04/26/20	N/A	20uL			2
VOA STD. 12	O2SI		5	Prepared 02/26/20	04/26/20	N/A	20uL			2
VOA STD. TBA	Various		250	Prepared 02/26/20	03/11/20	N/A	15uL			75

5ug/L

Prepared: 02/26/20

Expires: 03/27/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	5ug/L	50	Prepared 02/26/20	04/26/20	N/A	5uL	50mL	P&T Water	5
VOA STD. 8	Phenova		50	Prepared 02/26/20	03/11/20	N/A	5uL			5
VOA STD. 1	O2SI		50	Prepared 02/26/20	04/26/20	N/A	5uL			5
VOA STD. 2	O2SI		50	Prepared 02/26/20	04/26/20	N/A	5uL			5
VOA STD. TBA	Various		250	Prepared 02/26/20	03/11/20	N/A	20uL			100

10ug/L

Prepared: 02/26/20

Expires: 03/27/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	10ug/L	50	Prepared 02/26/20	04/26/20	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova		50	Prepared 02/26/20	03/11/20	N/A	10uL			10
VOA STD. 1	O2SI		50	Prepared 02/26/20	04/26/20	N/A	10uL			10
VOA STD. 2	O2SI		50	Prepared 02/26/20	04/26/20	N/A	10uL			10
VOA STD. TBA	Various		250	Prepared 02/26/20	03/11/20	N/A	25uL			125

20ug/L

Prepared: 02/26/20

Expires: 03/27/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	20ug/L	50	Prepared 02/26/20	04/26/20	N/A	20uL	50mL	P&T Water	20
VOA STD. 8	Phenova		50	Prepared 02/26/20	03/11/20	N/A	20uL			20
VOA STD. 1	O2SI		50	Prepared 02/26/20	04/26/20	N/A	20uL			20
VOA STD. 2	O2SI		50	Prepared 02/26/20	04/26/20	N/A	20uL			20
VOA STD. TBA	Various		250	Prepared 02/26/20	03/11/20	N/A	30uL			150

40ug/L

Prepared: 02/26/20

Expires: 03/27/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	40ug/L	50	Prepared 02/26/20	04/26/20	N/A	40uL	50mL	P&T Water	40
VOA STD. 8	Phenova		50	Prepared 02/26/20	03/11/20	N/A	40uL			40
VOA STD. 1	O2SI		50	Prepared 02/26/20	04/26/20	N/A	40uL			40
VOA STD. 2	O2SI		50	Prepared 02/26/20	04/26/20	N/A	40uL			40
VOA STD. TBA	Various		250	Prepared 02/26/20	03/11/20	N/A	35uL			175

100ug/L

Prepared: 02/26/20

Expires: 03/27/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	100ug/L	50	Prepared 02/26/20	04/26/20	N/A	100uL	50mL	P&T Water	100
VOA STD. 8	Phenova		50	Prepared 02/26/20	03/11/20	N/A	100uL			100
VOA STD. 1	O2SI		50	Prepared 02/26/20	04/26/20	N/A	100uL			100
VOA STD. 2	O2SI		50	Prepared 02/26/20	04/26/20	N/A	100uL			100
VOA STD. TBA	Various		250	Prepared 02/26/20	03/11/20	N/A	40uL			200

Thor 8260 Water Second Source (SS)

Prepared: 02/26/20

Prepared By (Initials): CH

Expires: 03/27/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 4	Phenova	8260 Water SS	50	Prepared 02/26/20	04/26/20	N/A	10uL	50mL	P&T Water	10
VOA STD. 5	O2SI	8260 Water SS	50	Prepared 02/26/20	04/26/20	N/A	10uL			10
VOA STD. 6	Various	8260 Water SS	50	Prepared 02/26/20	02/26/20	N/A	10uL			10
Voa STD. TBA	Various	8260 Water SS	250	Prepared 02/26/20	02/26/20	N/A	25uL			250

8260 Water Continuing Calibrations (CCV)/ Lab Control Spikes (LCS)

Prepared: 02/26/20

Prepared By (Initials): CH

Expires: 02/27/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	CCV/ LCS	50	Prepared 02/26/20	04/26/20	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova	CCV/ LCS	50	Prepared 02/26/20	03/11/20	N/A	10uL			10
VOA STD. 1	O2SI	CCV/ LCS	50	Prepared 02/26/20	04/26/20	N/A	10uL			10
VOA STD. 2	O2SI	CCV/ LCS	50	Prepared 02/26/20	04/26/20	N/A	10uL			10
VOA STD. TBA	Various	CCV/ LCS	250	Prepared 02/26/20	03/11/20	N/A	25uL			125

LCS (X4 Ketones)

Prepared: 02/26/20

Prepared By (Initials): CH

Expires: 02/27/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	LCS X4 Ketones	50	Prepared 02/26/20	04/26/20	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova	LCS X4 Ketones	50	Prepared 02/26/20	03/11/20	N/A	10uL			10
VOA STD. 1	O2SI	LCS X4 Ketones	50	Prepared 02/26/20	04/26/20	N/A	10uL			10
VOA STD. 2	O2SI	LCS X4 Ketones	50	Prepared 02/26/20	04/26/20	N/A	40uL			40
VOA STD. TBA	Various	LCS X4 Ketones	250	Prepared 02/26/20	03/11/20	N/A	25uL			125

Primary and Secondary Working Standards

Primary Standards

VOA STD 7

Prepared: 02/26/20 A
Expires: 04/26/20
Methanol Lot No. DW117-US-0095

Prepared By (Initials): CH

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Gasses STD	Phenova	ALO-101206	2,000	CL14052-49490	02/26/21	08/31/24	100uL	4mL	Methanol	50
Hexachloroethane	Absolute	70199	1,000	091818-49640	02/18/21	09/18/23	200uL			50
Benzyl Chloride	Accusta	M-8010-01	1,000	011320-49733	02/18/21	01/13/21	200uL			50

VOA STD 8

Prepared: 02/26/20 B
Expires: 03/11/20
Methanol Lot No. DW117-US-0095

Prepared By (Initials): CH

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Additions STD	Phenova	ALO-130175	2,000	CL12744-49506	02/18/21	08/31/20	100uL	4mL	Methanol	50
502.2 Cal. Std.	Phenova	ALO-101200	2,000	CL14379-49508	02/18/21	10/31/24	100uL			50
Vinyl Acetate	Phenova	ALO-101228	2,000	CL14964-49837	02/18/21	03/11/20	100uL			50

VOA STD TBA

Prepared: 02/26/20 C
Expires: 03/11/20
Methanol Lot No. DW117-US-0095

Prepared By (Initials): CH

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Custom VOC Mix	Phenova	ALO-130176	2,000	CL12929-49789	02/18/21	11/30/20	500uL	4mL	Methanol	250
Acrolein	Phenova	ALO-130549	10,000	CL14963-49838	02/18/21	03/11/20	100uL			250

VOA STD 1

Prepared: 02/26/20 D
Expires: 04/26/20
Methanol Lot No. DW117-US-0095

Prepared By (Initials): CH

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
2-CEVE	Absolute	82408	2,000	011320-49738	02/18/21	01/13/23	50	2mL	Methanol	50

VOA STD 2

Prepared: 02/26/20 E
Expires: 04/26/20
Methanol Lot No. DW117-US-0095

Prepared By (Initials): CH

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Ketones Std.	Phenova	ALO-109211	2,000	CL12730-49779	02/18/21	08/31/26	100	4mL	Methanol	50

VOA STD 9

Prepared: 02/26/20 F
Expires: 04/26/20
Methanol Lot No. DW117-US-0095

Prepared By (Initials): CH

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA STD. 7		VOA STD. 9	50	Prepared 02/26/20	02/18/21	N/A	200uL	2mL	Methanol	5
VOA STD. 8			50	Prepared 02/26/20	02/18/21	N/A	200uL			5

VOA STD. 10

Prepared: 02/26/20 G
Expires: 04/26/20
Methanol Lot No. DW117-US-0095

Prepared By (Initials): CH

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA STD. 1		VOA STD. 10	50	Prepared 02/26/20	02/18/21	N/A	200uL	2mL	Methanol	5

VOA STD. 12

Prepared: 02/26/20 H
Expires: 04/26/20
Methanol Lot No. DW117-US-0095

Prepared By (Initials): CH

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA STD. 2		VOA STD. 12	50	Prepared 02/26/20	02/18/21	N/A	200uL	2mL	Methanol	5

Second Source (SS) Standards

VOA STD. 3

Prepared: 02/26/20 I
Expires: 04/26/20
Methanol Lot No. DW117-US-0095

Prepared By (Initials): CH

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Ketones Standard	Phenova	ALO-101211	2,000	CL13994-49784	02/18/21	08/31/29	50uL	2mL	Methanol	50

VOA STD. Gases

Prepared: 02/26/20 J
Expires: 04/26/20
Methanol Lot No. DW117-US-0095

Prepared By (Initials): CH

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
8260 Gases (SS)	Phenova	ALO-101206	2,000	CL14057-49854	02/26/21	08/31/24	50uL	2mL	Methanol	50

VOA STD. 6

Prepared: 02/26/20 K
Expires: 02/26/20
Methanol Lot No. DW117-US-0095

Prepared By (Initials): CH

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
502.2 Calibration STD. (54-compounds)	Phenova	ALO-101200	2,000	CL14831-49689	02/18/21	10/31/24	50uL	2mL	Methanol	50
Vinyl Acetate	Phenova	ALO-101228	2,000	CL14898-49751	02/05/21	02/26/20	50uL			50
Hexachloroethane	Accustan	AS-E0011	1,000	219061767-49741	02/18/21	06/28/29	100uL			50
Benzyl Chloride	Accustan	M-8010-01	200	219041664-49645	02/18/21	05/22/21	500uL			50

VOA STD. TBA

Prepared: 02/26/20 L
Expires: 02/26/20
Methanol Lot No. DW117-US-0095

Prepared By (Initials): CH

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Custom VOA Mix (4-3)	Phenova	ALO-130176	2,000	CL12929-49683	02/18/21	11/30/20	250uL	2mL	Methanol	250
Acrolein	Phenova	ALO-101224	10,000	CL14902-49752	02/05/21	02/26/20	50uL			250

VOA STD. 0

Prepared: 02/26/20 M
Expires: 04/26/20
Methanol Lot No. DW117-US-0095

Prepared By (Initials): CH

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Addition STD.	Phenova	ALO-130175	2,000	CL14058-49850	02/18/21	08/31/21	50uL	2mL	Methanol	50

VOA STD. 2-CEVE

Prepared: 02/26/20 N
Expires: 04/26/20
Methanol Lot No. DW117-US-0095

Prepared By (Initials): CH

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
2-CEVE (SS)	Absolute	82408	2,000	121119-49635	02/18/21	12/11/22	50uL	2mL	Methanol	50

Injection Log

Directory: M:\THOR\DATA\T200219B\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
32	0220T32.D	1	20ug/L Gas Std 2/20/20	IS&S 2/6/20, 2/19/20	20 Feb 20 22:37
33	0220T33.D	1	50ug/L Gas Std 2/20/20	IS&S 2/6/20, 2/19/20	20 Feb 20 23:05
34	0220T34.D	1	100ug/L Gas Std 2/20/20	IS&S 2/6/20, 2/19/20	20 Feb 20 23:34
35	0220T35.D	1	300ug/L Gas Std 2/20/20	IS&S 2/6/20, 2/19/20	21 Feb 20 00:02
36	0220T36.D	1	600ug/L Gas Std 2/20/20	IS&S 2/6/20, 2/19/20	21 Feb 20 00:30
37	0220T37.D	1	800ug/L Gas Std 2/20/20	IS&S 2/6/20, 2/19/20	21 Feb 20 00:58
38	0220T38.D	1	1000ug/L Gas Std 2/20/20	IS&S 2/6/20, 2/19/20	21 Feb 20 1:27
40	0220T40.D	1	(SS) 300ug/L Gas Std 2/20/20	IS&S 2/6/20, 2/19/20	21 Feb 20 2:23
2	0226T12.D	1	0.3ug/L VOC STD 2/26/20	IS&S 2/6/20, 2/19/20	26 Feb 20 13:00
3	0226T13.D	1	0.5ug/L VOC STD 2/26/20	IS&S 2/6/20, 2/19/20	26 Feb 20 13:28
4	0226T14.D	1	1ug/L VOC STD 2/26/20	IS&S 2/6/20, 2/19/20	26 Feb 20 13:56
5	0226T15.D	1	2ug/L VOC STD 2/26/20	IS&S 2/6/20, 2/19/20	26 Feb 20 14:25
6	0226T16.D	1	5ug/L VOC STD 2/26/20	IS&S 2/6/20, 2/19/20	26 Feb 20 14:53
7	0226T17.D	1	10ug/L VOC STD 2/26/20	IS&S 2/6/20, 2/19/20	26 Feb 20 15:21
8	0226T18.D	1	20ug/L VOC STD 2/26/20	IS&S 2/6/20, 2/19/20	26 Feb 20 15:50
10	0226T20.D	1	100ug/L VOC STD 2/26/20	IS&S 2/6/20, 2/19/20	26 Feb 20 16:46
4	0305T14.D	1	200305B CCV 300ug/L	IS&S 2/6/20, 2/19/20	5 Mar 20 13:39
5	0305T15.D	1	200305B LCS 300ug/L	IS&S 2/6/20, 2/19/20	5 Mar 20 14:07
6	0305T16.D	1	200305B LCSD 300ug/L	IS&S 2/6/20, 2/19/20	5 Mar 20 14:35
9	0305T19.D	1	200305B BLK	IS&S 2/6/20, 2/19/20	5 Mar 20 16:01
14	0305T24.D	1	BA07941W01	IS&S 2/6/20, 2/19/20	5 Mar 20 18:22
15	0305T25.D	1	BA07942W01	IS&S 2/6/20, 2/19/20	5 Mar 20 18:51
16	0305T26.D	1	BA07943W01	IS&S 2/6/20, 2/19/20	5 Mar 20 19:19
17	0305T27.D	1	BA07944W01	IS&S 2/6/20, 2/19/20	5 Mar 20 19:48
18	0305T28.D	1	BA07945W01	IS&S 2/6/20, 2/19/20	5 Mar 20 20:16
19	0305T29.D	1	BA07946W01	IS&S 2/6/20, 2/19/20	5 Mar 20 20:44
20	0305T30.D	1	BA07947W01	IS&S 2/6/20, 2/19/20	5 Mar 20 21:13
30	0305T40.D	1	Ending CCV 300ug/L 3/5/20	IS&S 2/6/20, 2/19/20	6 Mar 20 1:57

ORGANICS
Calibration Data

RSK 175
RSK 175

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 10/02/19
Matrix: Instrument: 7890
Initials:

1002R02.D 1002R03.D 1002R04.D 1002R05.D 1002R06.D 1002R07.D 1002R08.D

		Compound	1	2	3	4	5	6	7				Avg	%RSD	Type	r^2	Q
1	ATM	Methane	63820	40452	36215	45202	48427	44031	45774				46274	19	ATM		
2	ATM	Ethane	42546	31037	26553	34655	37738	32771	32974				34039	15	ATM		
3	ATM	Ethene	32900	24299	20841	27689	29847	25551	26297				26775	15	ATM		
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1.377886

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\191002RS\1002R02.D Vial: 2
Acq On : 2 Oct 19 17:45 Operator: GA
Sample : RSK STD 1 10/2/19 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 2 18:11 2019 Quant Results File: RSK1002.RES

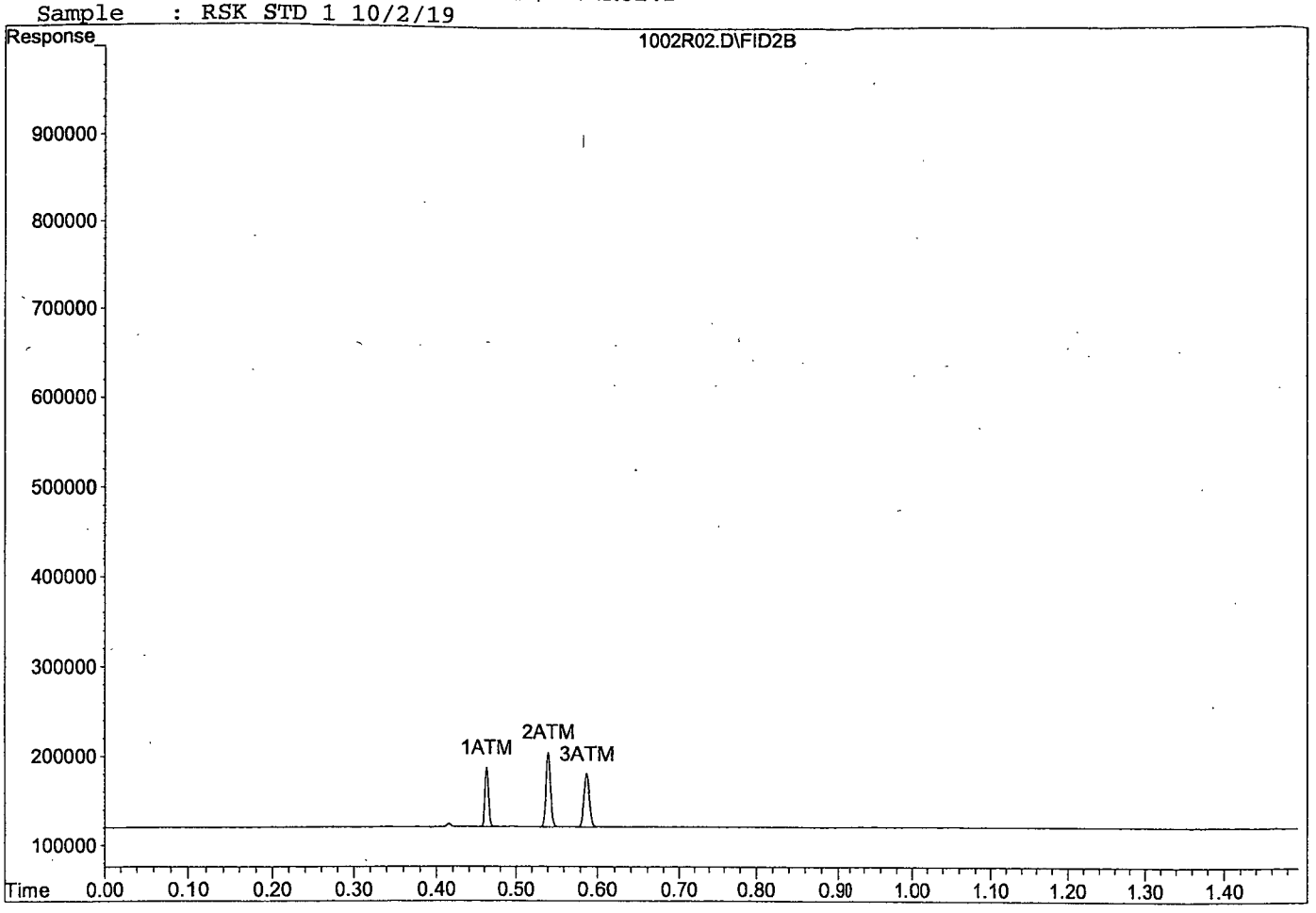
Method : G:\ROCKY\DATA\190929RS\RSK1002.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Oct 02 18:14:49 2019
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.46	66373	8.306 ppb
2) ATM Ethane	0.54	83177	6.216 ppb
3) ATM Ethene	0.59	60042	5.640 ppb

Target Compounds

Data File: G:\ROCKY\DATA\191002RS\1002R02.D
Sample : RSK STD 1 10/2/19



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\191002RS\1002R03.D Vial: 3
Acq On : 2 Oct 19 17:50 Operator: GA
Sample : RSK STD 2 10/2/19 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 2 18:11 2019 Quant Results File: RSK1002.RES

Method : G:\ROCKY\DATA\190929RS\RSK1002.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Oct 02 18:14:49 2019
Response via : Multiple Level Calibration

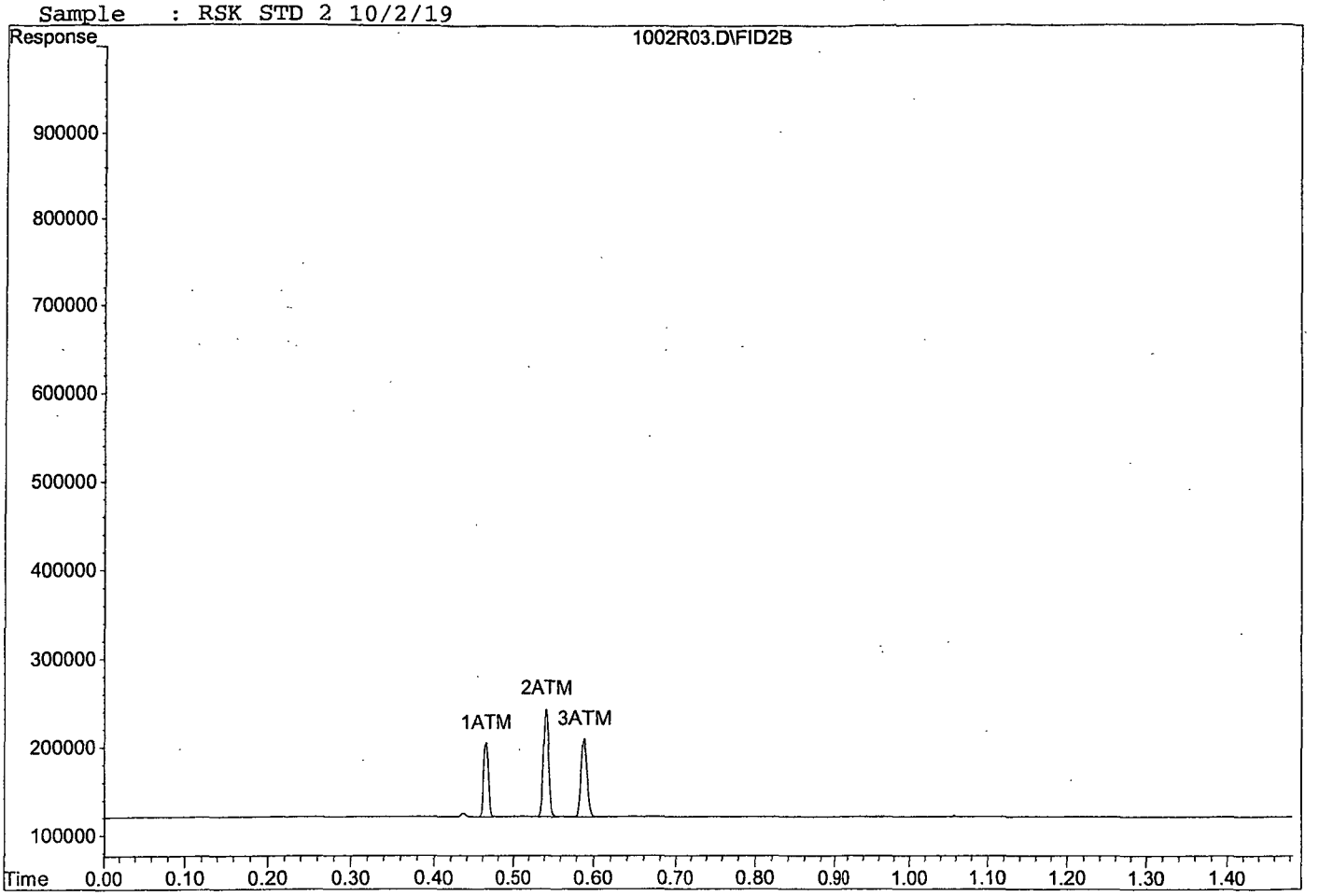
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.46	84140	9.332 ppb
2) ATM Ethane	0.54	121200	9.058 ppb
3) ATM Ethene	0.59	88693	8.332 ppb

Target Compounds

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

Data File: G:\ROCKY\DATA\191002RS\1002R03.D
Sample : RSK STD 2 10/2/19



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\191002RS\1002R04.D Vial: 4
Acq On : 2 Oct 19 17:52 Operator: GA
Sample : RSK STD 3 10/2/19 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 2 18:11 2019 Quant Results File: RSK1002.RES

Method : G:\ROCKY\DATA\190929RS\RSK1002.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Oct 02 18:14:49 2019
Response via : Multiple Level Calibration

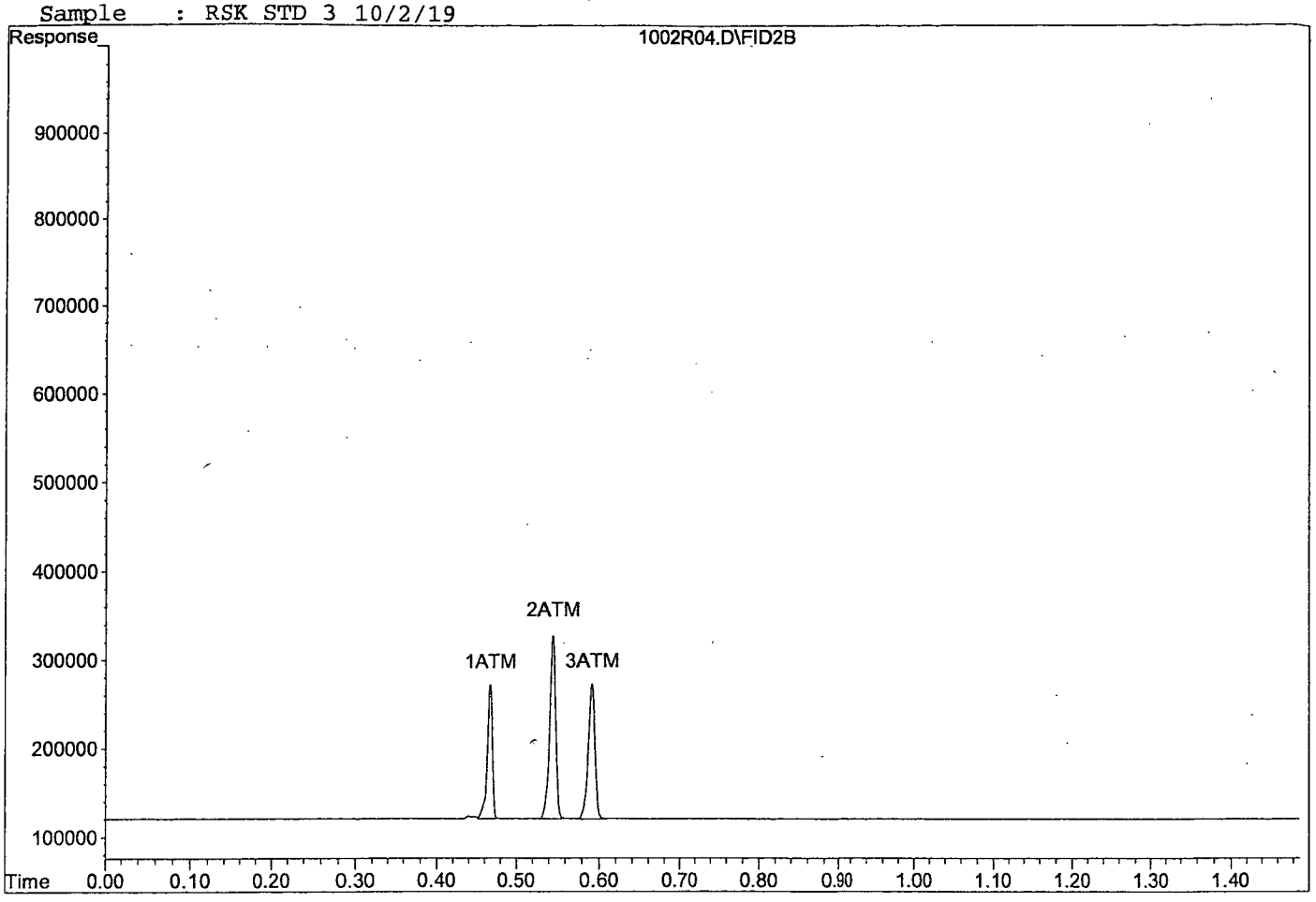
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.47	151018	13.195 ppb
2) ATM Ethane	0.55	207113	15.479 ppb
3) ATM Ethene	0.59	152138	14.292 ppb

Target Compounds

Quantitation Report

Data File: G:\ROCKY\DATA\191002RS\1002R04.D
Sample : RSK STD 3 10/2/19



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\191002RS\1002R05.D Vial: 5
Acq On : 2 Oct 19 17:57 Operator: GA
Sample : RSK STD 4 10/2/19 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 2 18:11 2019 Quant Results File: RSK1002.RES

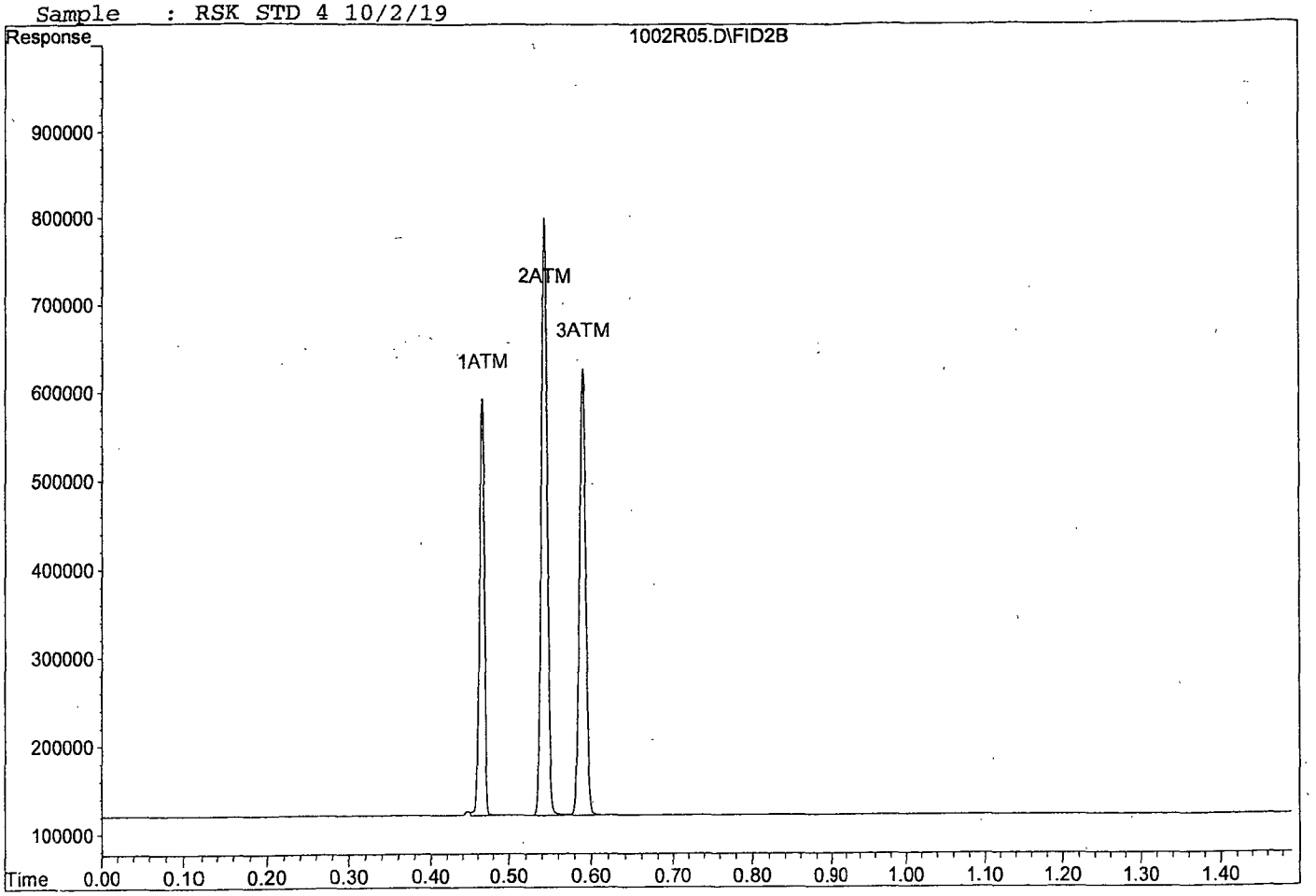
Method : G:\ROCKY\DATA\190929RS\RSK1002.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Oct 02 18:14:49 2019
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.47	471234	31.689 ppb
2) ATM Ethane	0.54	677330	50.623 ppb
3) ATM Ethene	0.59	504779	47.419 ppb

Target Compounds

Data File: G:\ROCKY\DATA\191002RS\1002R05.D
Sample : RSK STD 4 10/2/19



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\191002RS\1002R06.D Vial: 6
Acq On : 2 Oct 19 17:59 Operator: GA
Sample : RSK STD 5 10/2/19 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 2 18:11 2019 Quant Results File: RSK1002.RES

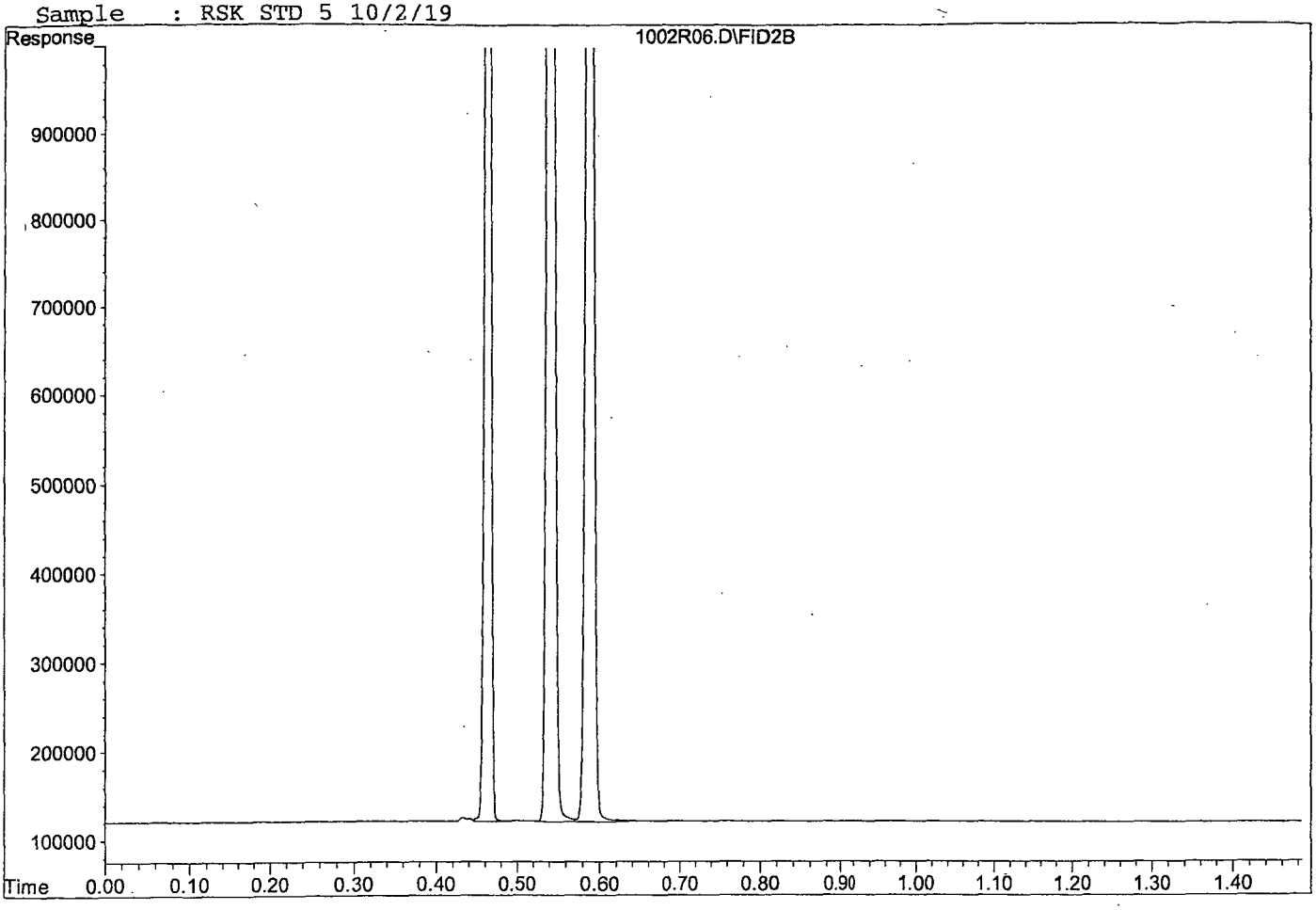
Method : G:\ROCKY\DATA\190929RS\RSK1002.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Oct 02 18:14:49 2019
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.46	2019402	121.105 ppb
2) ATM Ethane	0.54	2950189	220.492 ppb
3) ATM Ethene	0.59	2176445	204.454 ppb

Target Compounds

Data File: G:\ROCKY\DATA\191002RS\1002R06.D
Sample : RSK STD 5 10/2/19



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\191002RS\1002R07.D Vial: 7
Acq On : 2 Oct 19 18:05 Operator: GA
Sample : RSK STD 6 10/2/19 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 2 18:11 2019 Quant Results File: RSK1002.RES

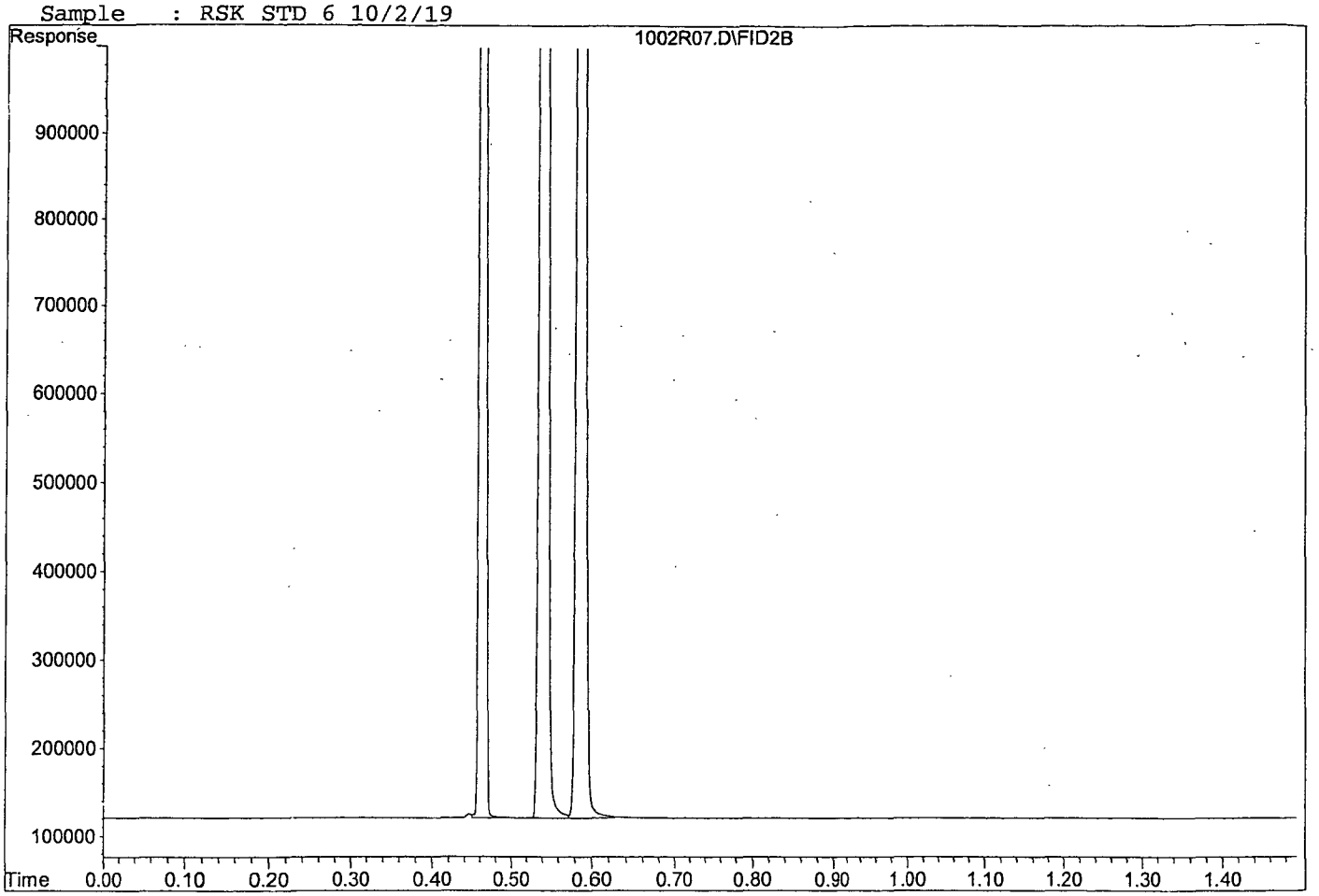
Method : G:\ROCKY\DATA\190929RS\RSK1002.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Oct 02 18:14:49 2019
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.46	4590194	269.583 ppb
2) ATM Ethane	0.54	6405030	478.702 ppb
3) ATM Ethene	0.59	4657966	437.567 ppb

Target Compounds

Data File: G:\ROCKY\DATA\191002RS\1002R07.D
Sample : RSK STD 6 10/2/19



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\191002RS\1002R08.D Vial: 8
Acq On : 2 Oct 19 18:07 Operator: GA
Sample : RSK STD 7 10/2/19 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 2 18:11 2019 Quant Results File: RSK1002.RES

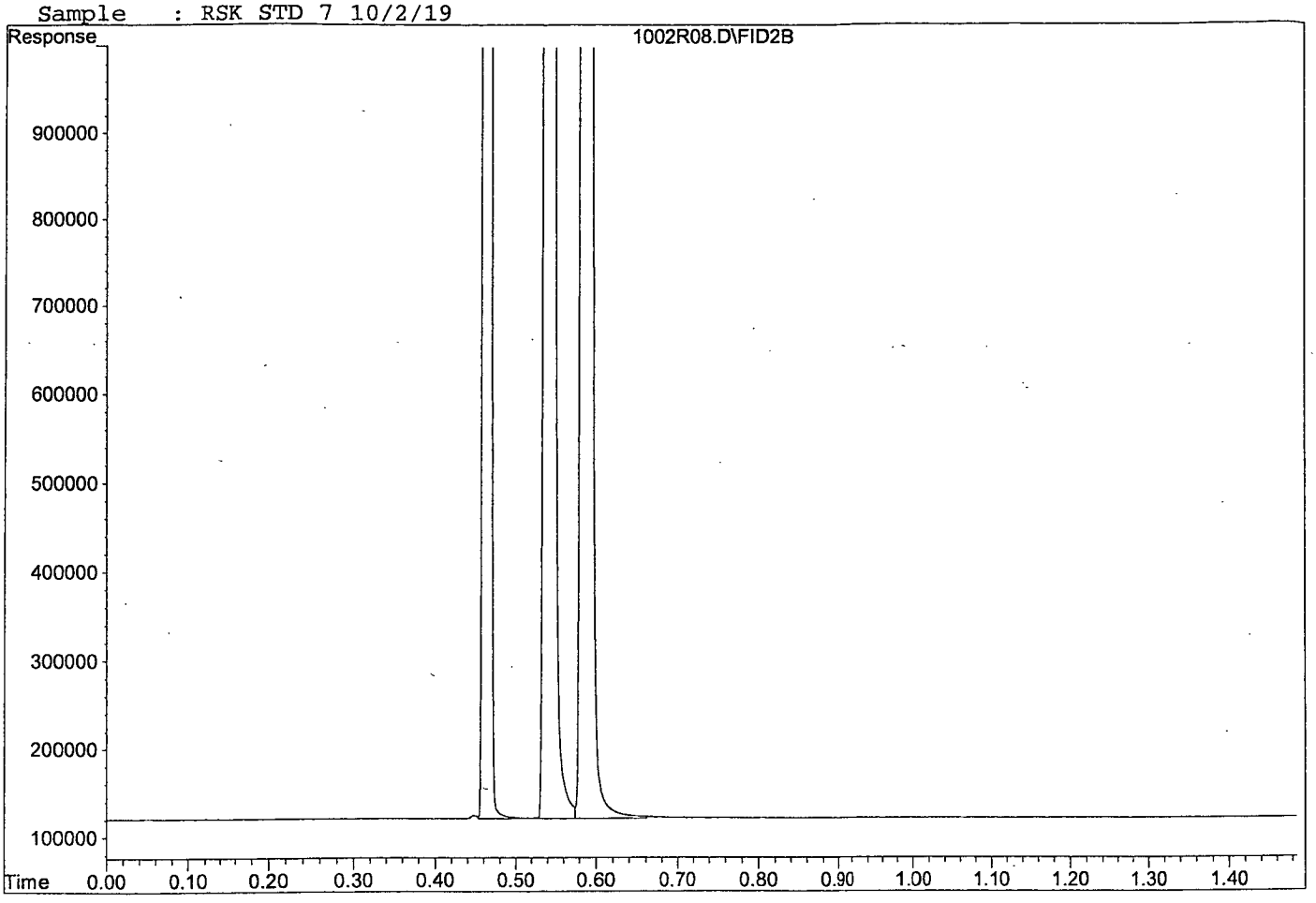
Method : G:\ROCKY\DATA\190929RS\RSK1002.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Oct 02 18:14:49 2019
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.46	19087907	1106.909	ppb
2) ATM Ethane	0.54	25777712	1926.584	ppb
3) ATM Ethene	0.59	19176068	1801.389	ppb

Target Compounds

Data File: G:\ROCKY\DATA\191002RS\1002R08.D
Sample : RSK STD 7 10/2/19



RSK 175
RSK 175

Form 7

Second Source Calibration

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

SDG No:
Date Analyzed: 2 Oct 19 18:24
Instrument: 7890
Initial Cal. Date: 10/02/19
Data File: 1002R10.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATM	Methane	46275	50203	8.5	ATM	
2	ATM	Ethane	34039	37011	8.7	ATM	
3	ATM	Ethene	26775	28699	7.2	ATM	
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
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31							
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33							
34							
35							
36							
37							
38							
39							
40							
		Average			8.1		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\191002RS\1002R10.D Vial: 10
Acq On : 2 Oct 19 18:24 Operator: GA
Sample : SS RSK STD 5 10/2/19 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 2 18:27 2019 Quant Results File: RSK1002.RES

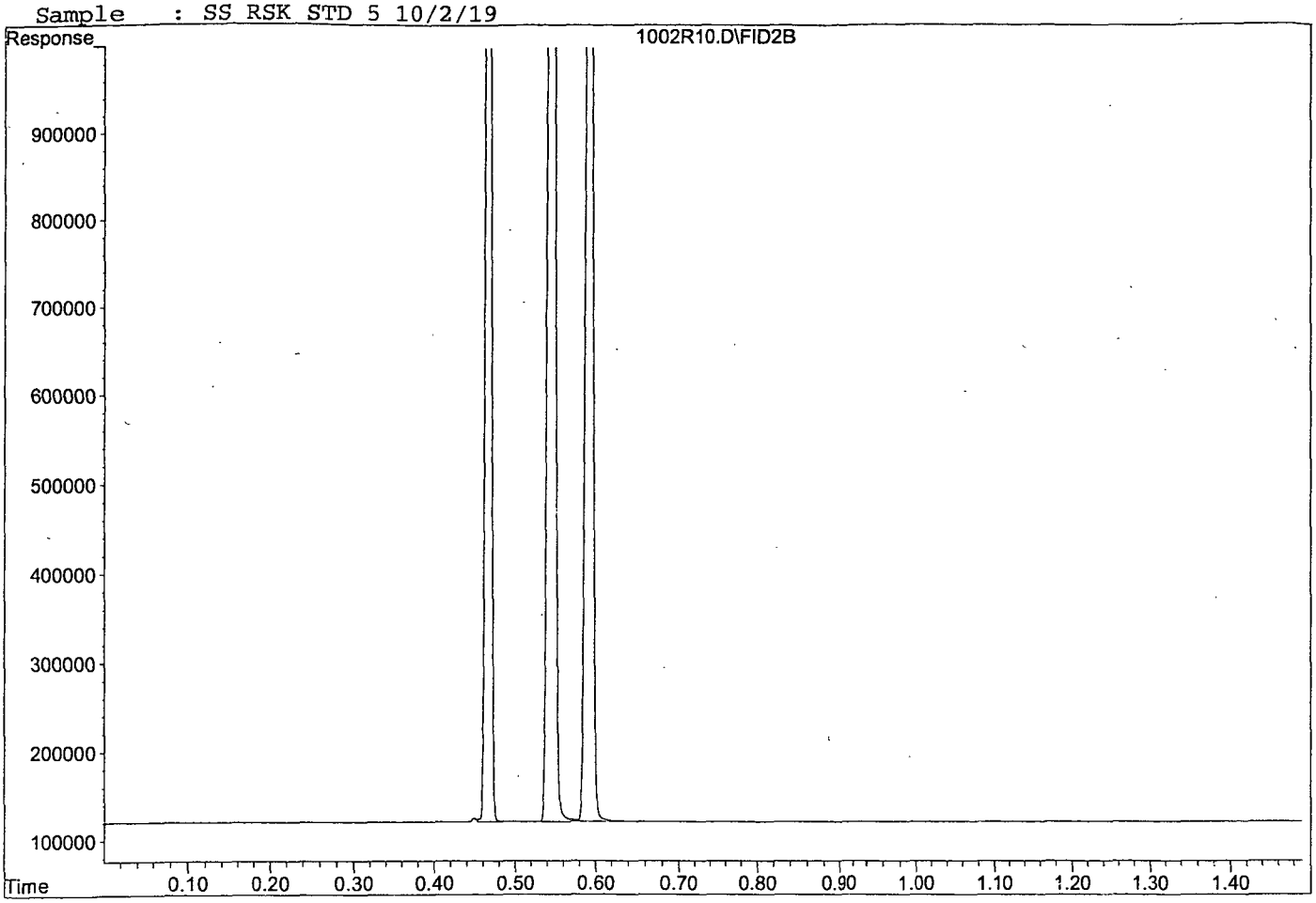
Method : G:\ROCKY\DATA\190929RS\RSK1002.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Oct 02 18:14:49 2019
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.47	2093456	90.480	ppb
2) ATM Ethane	0.54	2893356	170.002	ppb
3) ATM Ethene	0.59	2092707	156.318	ppb

Target Compounds

Data File: G:\ROCKY\DATA\191002RS\1002R10.D
Sample : SS RSK STD 5 10/2/19



Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 9 Mar 20 12:13
Instrument: 7890
Initial Cal. Date: 10/02/19
Data File: 0309R04.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATM	Methane	46275	52482	13	ATM	
2	ATM	Ethane	34039	35900	5.5	ATM	
3	ATM	Ethene	26775	28457	6.3	ATM	
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
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15							
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33							
34							
35							
36							
37							
38							
39							
40							
		Average			8.3		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\191002RS\0309R04.D Vial: 4
Acq On : 9 Mar 20 12:13 Operator: GA
Sample : 200309A LCS/CCV RSK STD 5 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 9 12:16 2020 Quant Results File: RSK1002.RES

Method : G:\ROCKY\DATA\190929RS\RSK1002.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Feb 26 12:29:53 2020
Response via : Multiple Level Calibration

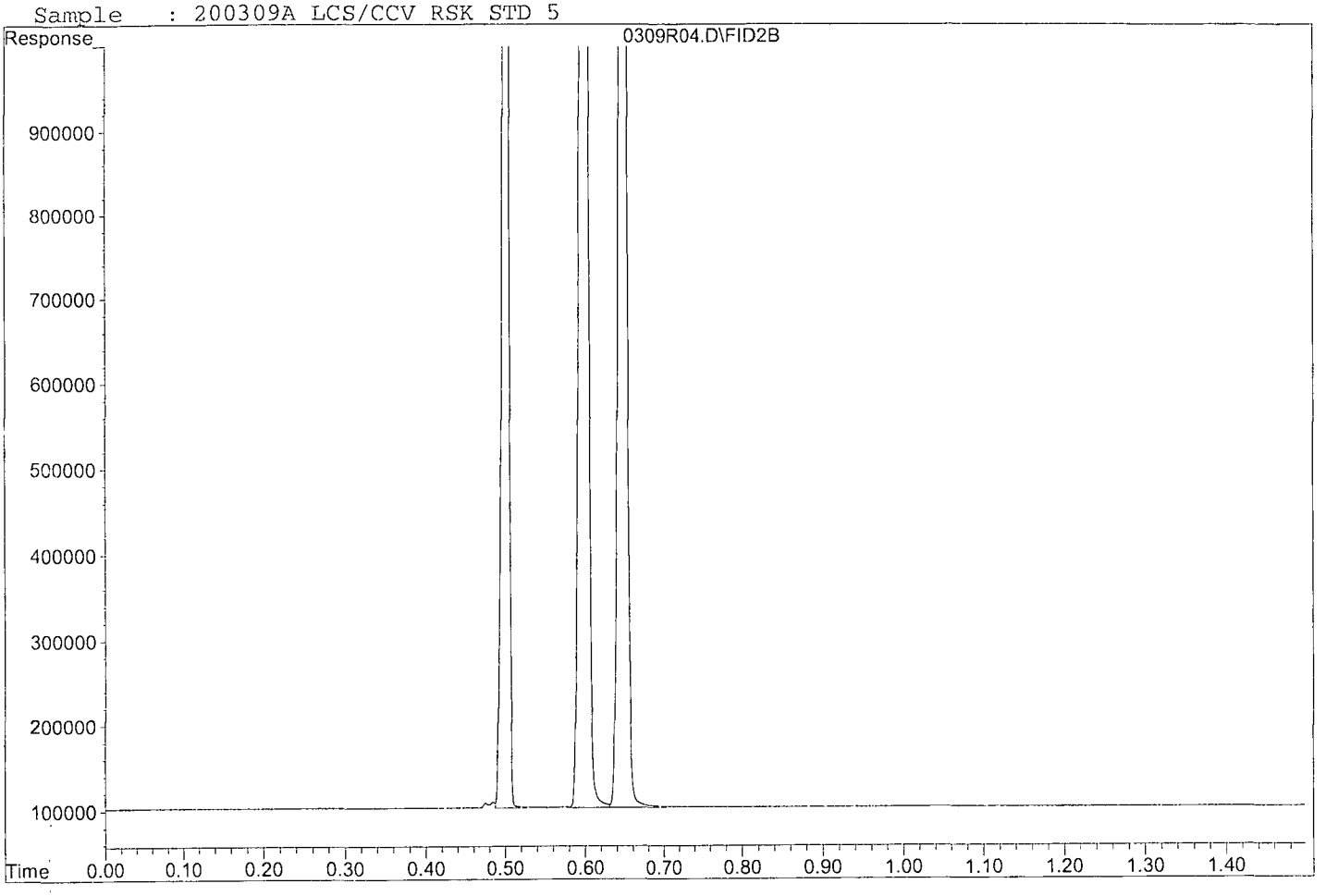
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.50	2188510	94.588 ppb
2) ATM Ethane	0.60	2806450	164.896 ppb
3) ATM Ethene	0.65	2075054	154.999 ppb

Target Compounds

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

Data File: G:\ROCKY\DATA\191002RS\0309R04.D
Sample : 200309A LCS/CCV RSK STD 5



Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 9 Mar 20 14:48
Instrument: 7890
Initial Cal. Date: 10/02/19
Data File: 0309R29.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATM	Methane	46275	54944	19	ATM	
2	ATM	Ethane	34039	37525	10	ATM	
3	ATM	Ethene	26775	28844	7.7	ATM	
4							
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31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			12.2		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\191002RS\0309R29.D Vial: 29
Acq On : 9 Mar 20 14:48 Operator: GA
Sample : ENDING CCV RSK STD 5 3/9/20 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 9 14:57 2020 Quant Results File: RSK1002.RES

Method : G:\ROCKY\DATA\190929RS\RSK1002.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Feb 26 12:29:53 2020
Response via : Multiple Level Calibration

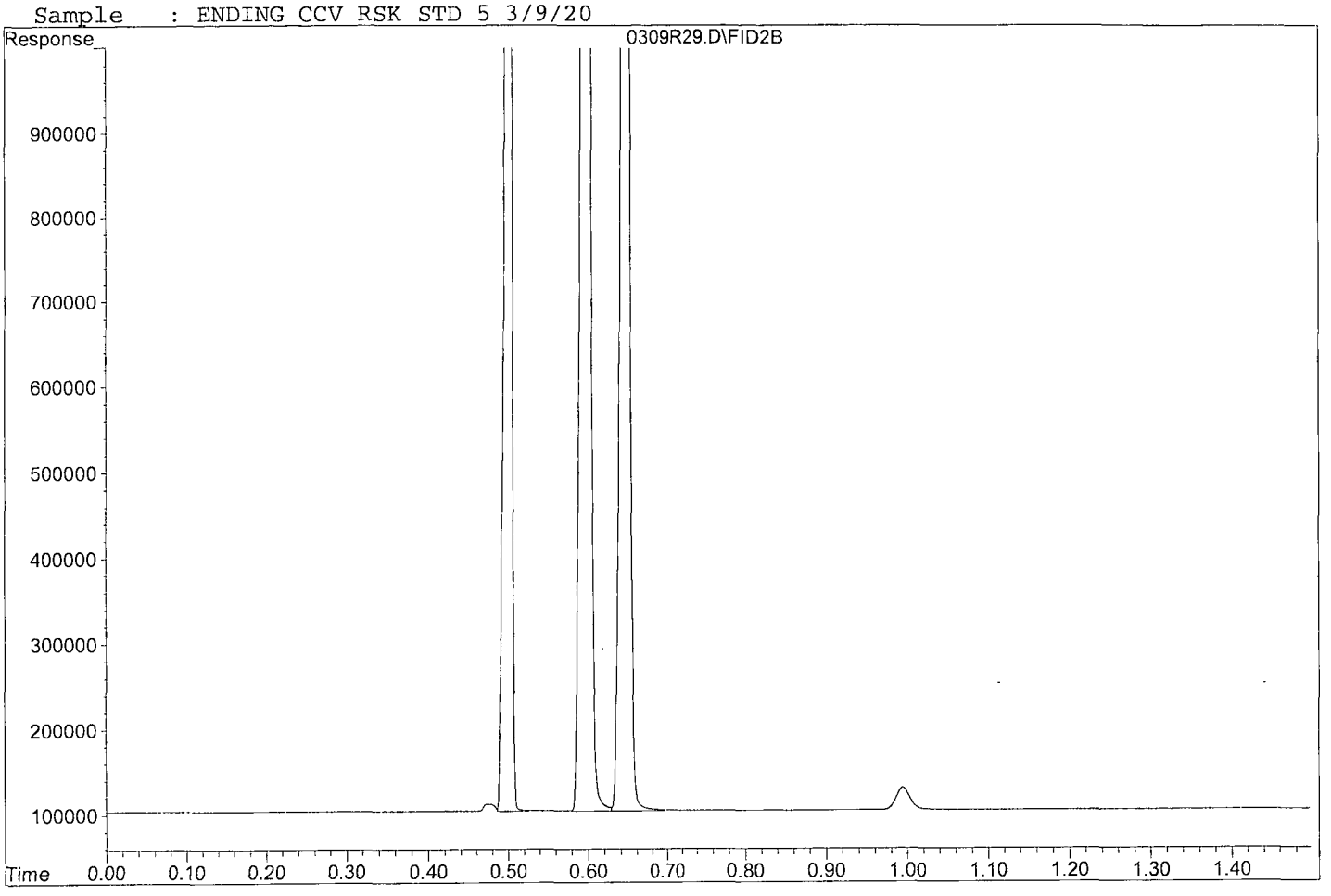
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.50	2291175	99.025 ppb
2) ATM Ethane	0.60	2933551	172.363 ppb
3) ATM Ethene	0.65	2103318	157.111 ppb

Target Compounds

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

Data File: G:\ROCKY\DATA\191002RS\0309R29.D
Sample : ENDING CCV RSK STD 5 3/9/20



ORGANICS
Raw Data

Quantitation Report (QT Reviewed)

Data File : G:\ROCKY\DATA\191002RS\0309R20.D Vial: 20
Acq On : 9 Mar 20 14:13 Operator: GA
Sample : BA07941W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 9 14:16 2020 Quant Results File: RSK1002.RES

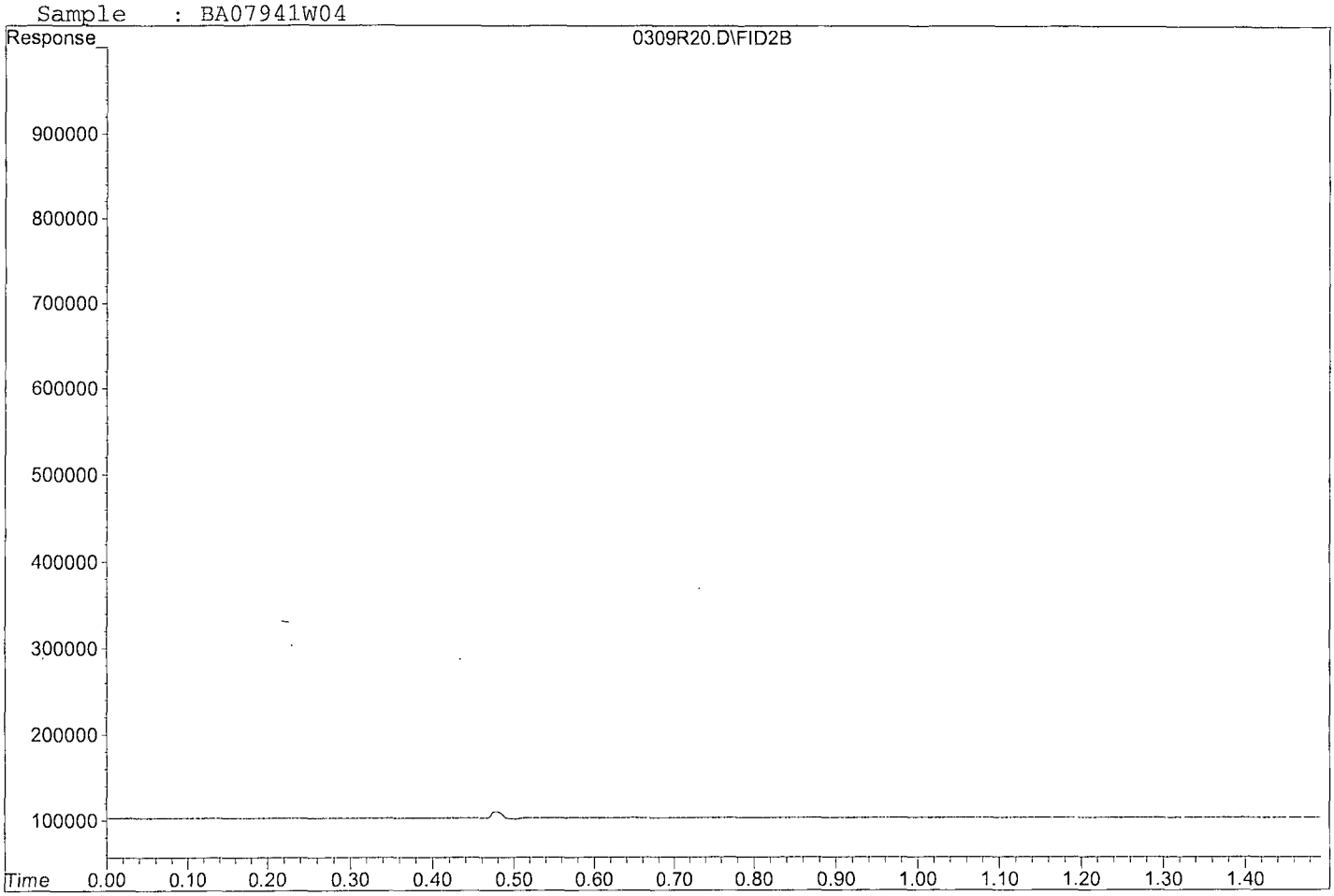
Method : G:\ROCKY\DATA\190929RS\RSK1002.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Feb 26 12:29:53 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units	
Target Compounds					
Target Compounds					
1) ATM Methane	0.00	0	N.D.	ppb	d
2) ATM Ethane	0.00	0	N.D.	ppb	d
3) ATM Ethene	0.00	0	N.D.	ppb	d

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

Data File: G:\ROCKY\DATA\191002RS\0309R20.D
Sample : BA07941W04



Quantitation Report (QT Reviewed)

Data File : G:\ROCKY\DATA\191002RS\0309R21.D Vial: 21
Acq On : 9 Mar 20 14:17 Operator: GA
Sample : BA07942W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 9 14:19 2020 Quant Results File: RSK1002.RES

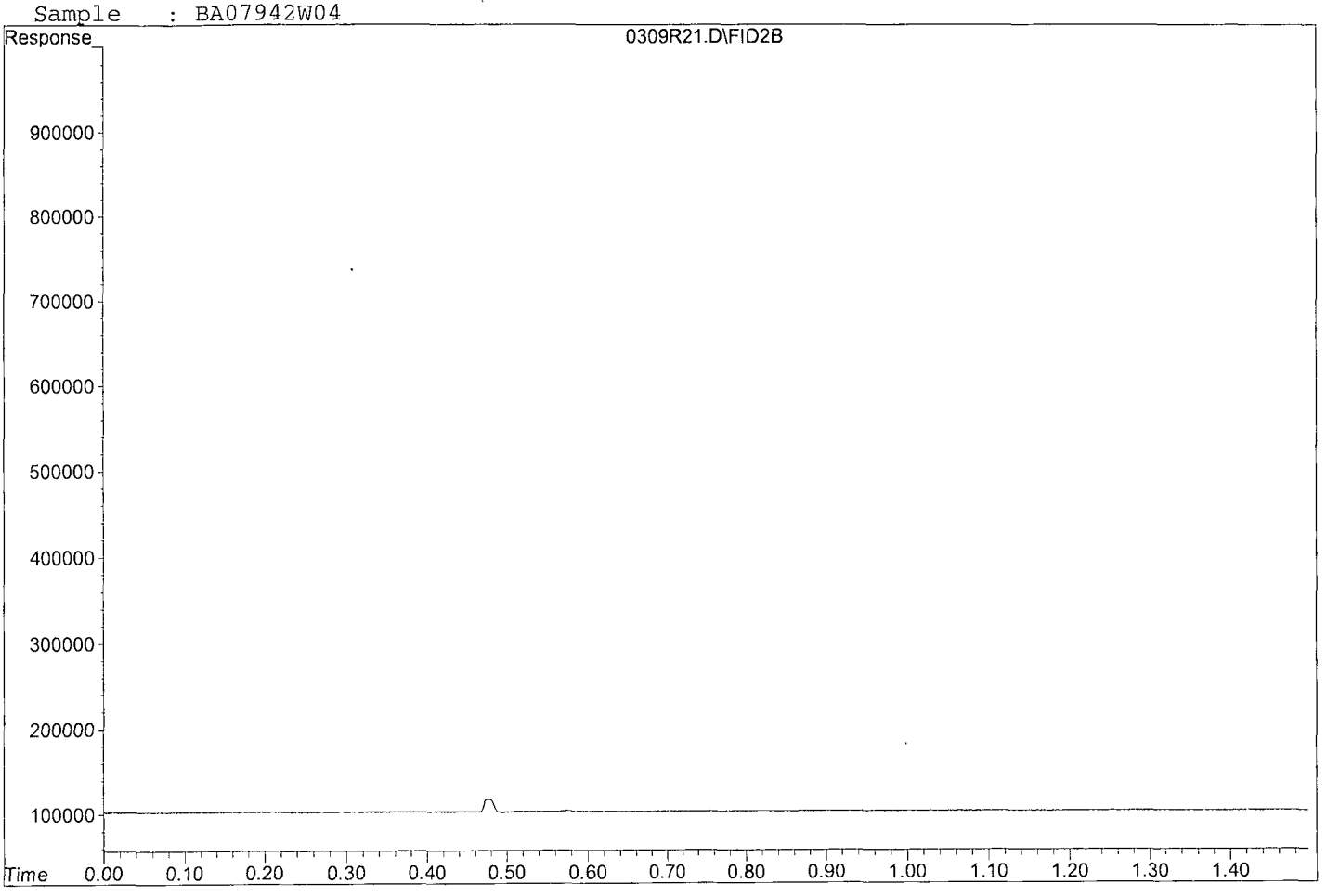
Method : G:\ROCKY\DATA\190929RS\RSK1002.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Feb 26 12:29:53 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units	
Target Compounds					
Target Compounds					
1) ATM Methane	0.00	0	N.D.	ppb	d
2) ATM Ethane	0.00	0	N.D.	ppb	d
3) ATM Ethene	0.00	0	N.D.	ppb	d

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

Data File: G:\ROCKY\DATA\191002RS\0309R21.D
Sample : BA07942W04



Quantitation Report (QT Reviewed)

Data File : G:\ROCKY\DATA\191002RS\0309R22.D Vial: 22
Acq On : 9 Mar 20 14:20 Operator: GA
Sample : BA07943W02 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 9 14:24 2020 Quant Results File: RSK1002.RES

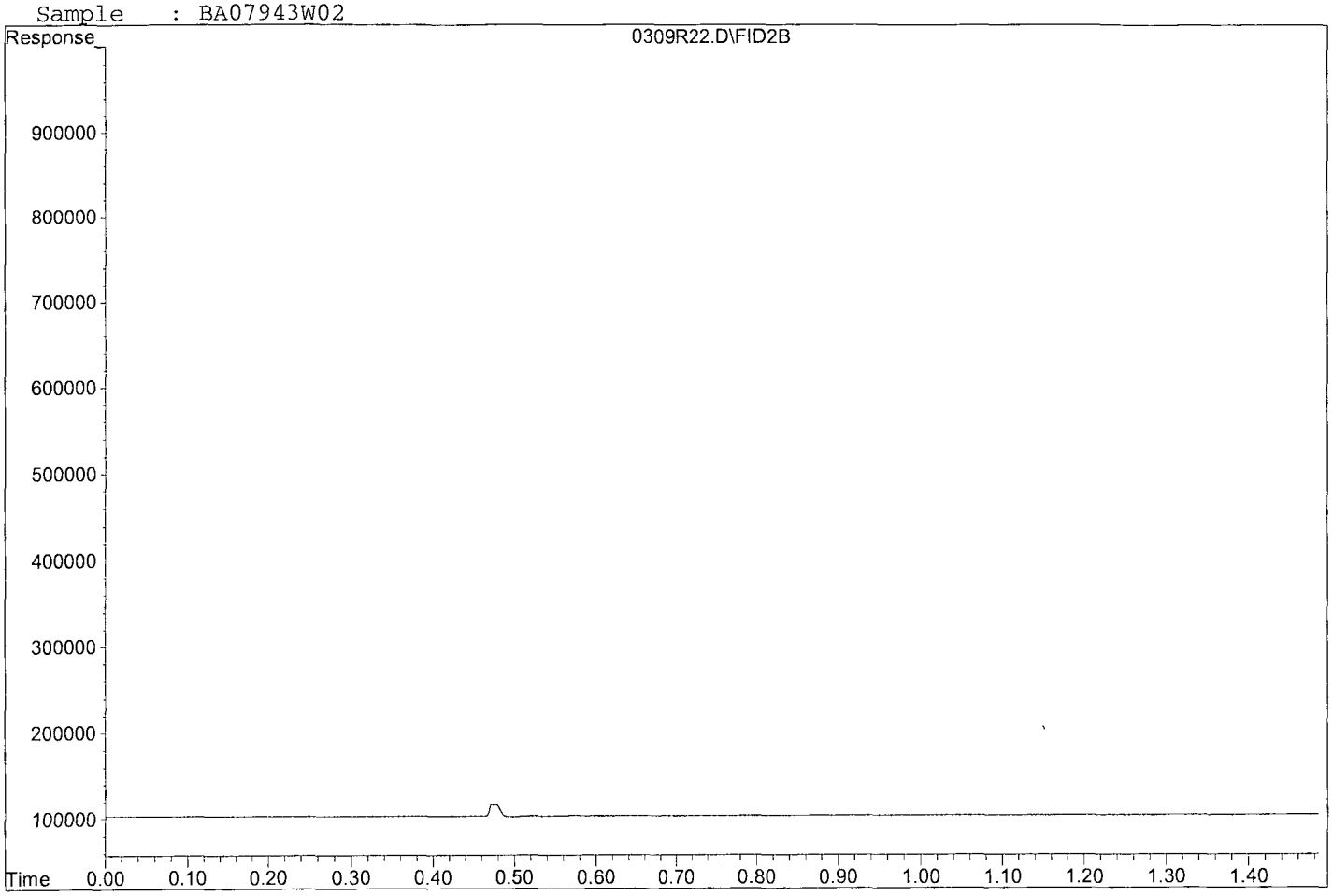
Method : G:\ROCKY\DATA\190929RS\RSK1002.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Feb 26 12:29:53 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units	
Target Compounds					
Target Compounds					
1) ATM Methane	0.00	0	N.D.	ppb	d
2) ATM Ethane	0.00	0	N.D.	ppb	d
3) ATM Ethene	0.00	0	N.D.	ppb	d

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

Data File: G:\ROCKY\DATA\191002RS\0309R22.D
Sample : BA07943W02



Quantitation Report (QT Reviewed)

Data File : G:\ROCKY\DATA\191002RS\0309R23.D Vial: 23
Acq On : 9 Mar 20 14:25 Operator: GA
Sample : BA07944W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 9 14:29 2020 Quant Results File: RSK1002.RES

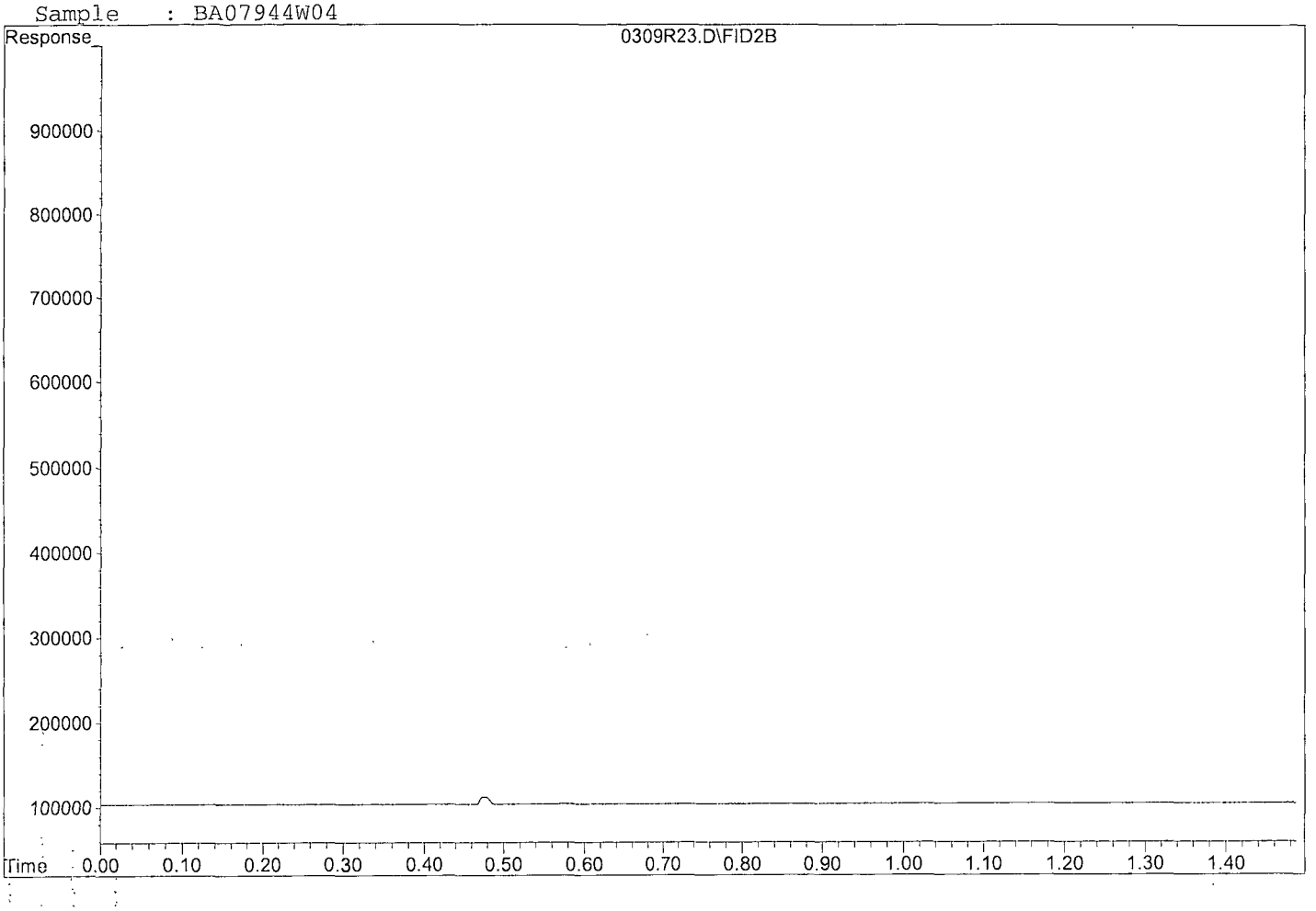
Method : G:\ROCKY\DATA\190929RS\RSK1002.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Feb 26 12:29:53 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units	
Target Compounds					
Target Compounds					
1) ATM Methane	0.00	0	N.D.	ppb	d
2) ATM Ethane	0.00	0	N.D.	ppb	d
3) ATM Ethene	0.00	0	N.D.	ppb	d

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

Data File: G:\ROCKY\DATA\191002RS\0309R23.D
Sample : BA07944W04



Quantitation Report (QT Reviewed)

Data File : G:\ROCKY\DATA\191002RS\0309R07.D Vial: 7
Acq On : 9 Mar 20 12:55 Operator: GA
Sample : 200309A BLK Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 9 13:04 2020 Quant Results File: RSK1002.RES

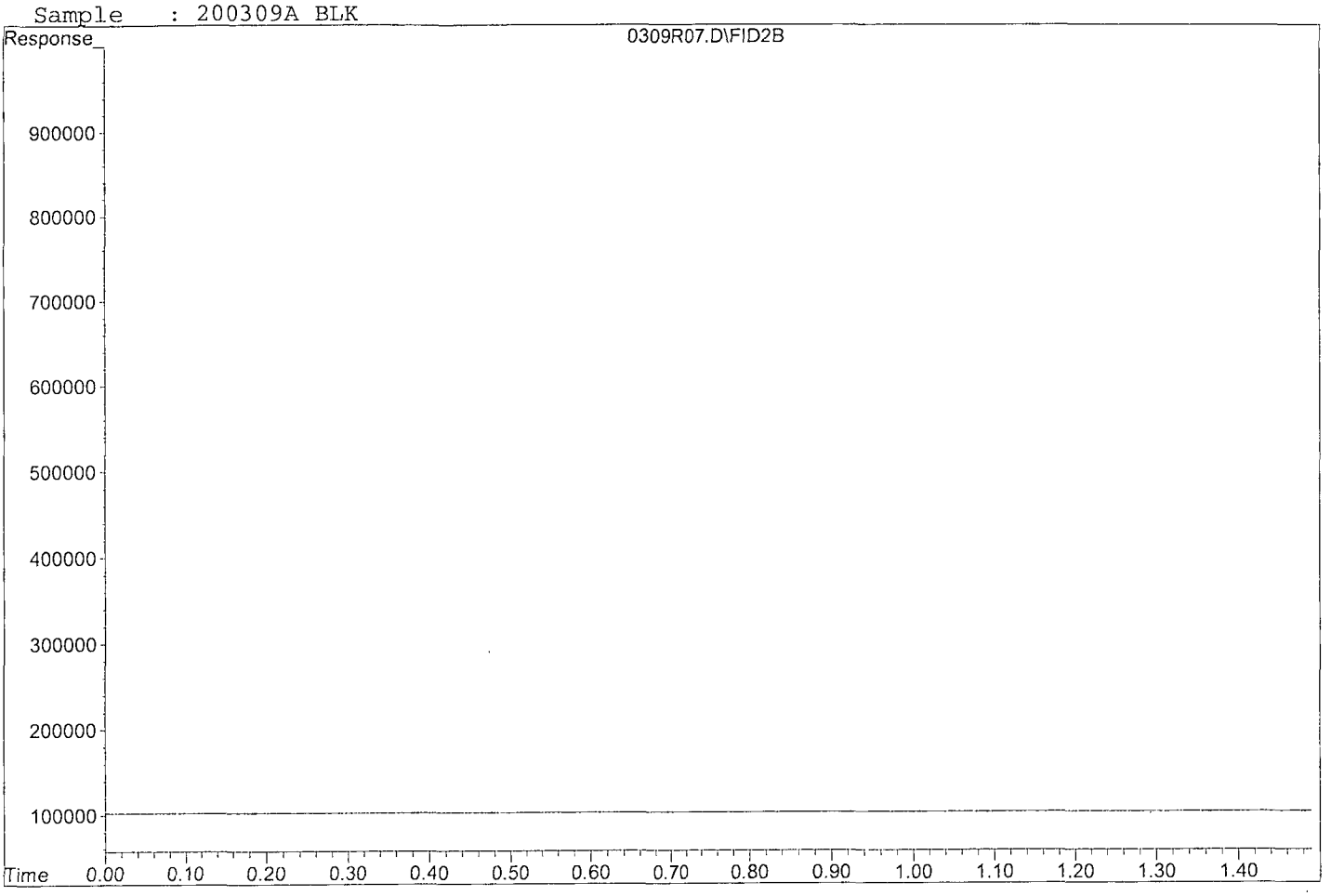
Method : G:\ROCKY\DATA\190929RS\RSK1002.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Feb 26 12:29:53 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units	
Target Compounds					
Target Compounds					
1) ATM Methane	0.00	0	N.D.	ppb	d
2) ATM Ethane	0.00	0	N.D.	ppb	d
3) ATM Ethene	0.00	0	N.D.	ppb	d

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

Data File: G:\ROCKY\DATA\191002RS\0309R07.D
Sample : 200309A BLK



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\191002RS\0309R04.D Vial: 4
Acq On : 9 Mar 20 12:13 Operator: GA
Sample : 200309A LCS/CCV RSK STD 5 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 9 12:16 2020 Quant Results File: RSK1002.RES

Method : G:\ROCKY\DATA\190929RS\RSK1002.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Feb 26 12:29:53 2020
Response via : Multiple Level Calibration

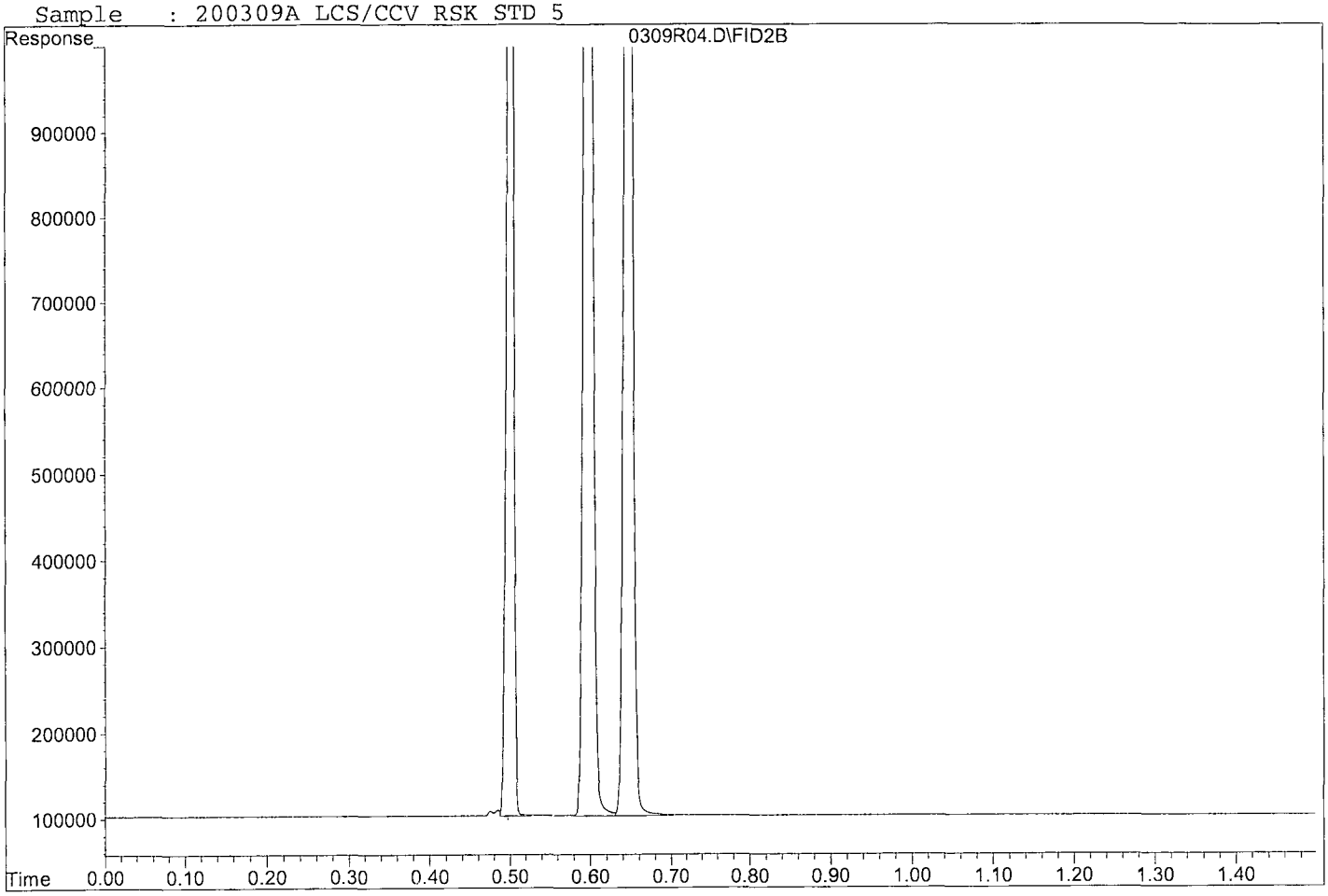
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.50	2188510	94.588 ppb
2) ATM Ethane	0.60	2806450	164.896 ppb
3) ATM Ethene	0.65	2075054	154.999 ppb

Target Compounds

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

Data File: G:\ROCKY\DATA\191002RS\0309R04.D
Sample : 200309A LCS/CCV RSK STD 5



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\191002RS\0309R06.D Vial: 6
Acq On : 9 Mar 20 12:33 Operator: GA
Sample : 200309A LCSD Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 9 12:37 2020 Quant Results File: RSK1002.RES

Method : G:\ROCKY\DATA\190929RS\RSK1002.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Feb 26 12:29:53 2020
Response via : Multiple Level Calibration

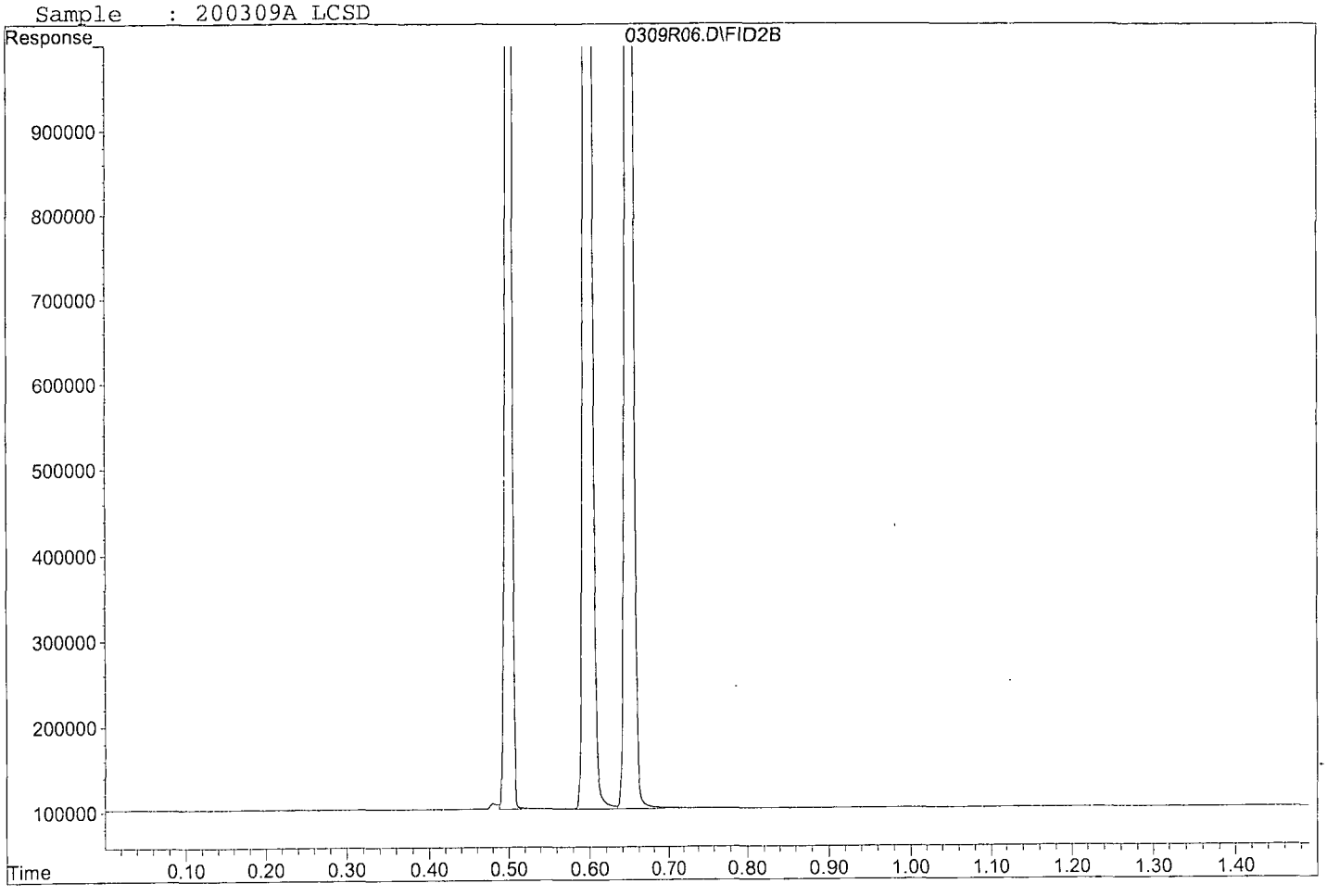
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.50	2322986	100.400 ppb
2) ATM Ethane	0.60	2955802	173.671 ppb
3) ATM Ethene	0.65	2145402	160.254 ppb

Target Compounds

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

Data File: G:\ROCKY\DATA\191002RS\0309R06.D
Sample : 200309A LCSD



Primary Stock Source

10,000ppmV **Manufacture Expiration:** 09/21/21

RSK Gas Mix (Scott Specialty Gas) CAT#X04NI97CP140001 LOT#160-401558175-1

1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

RSK Calibration Curve (prepared in 1.0 L Tedlar Bags at room temp) **01/02/19** **10/02/19**

Analyte	Conc Std 1 (1/2 = LOD) (ug/L)	Conc Std 2 (LOQ Chk) (ug/L)	Conc Std 3 (ug/L)	Conc Std 4 (ug/L)	Conc Std 5 (ug/L)	Conc Std 6 (ug/L)	Conc Std 7 (ug/L)
Methane (MW 16.04)	2.08	4.16	8.34	20.85	83.40	208.5	834.0
Ethane (MW 30.07)	3.91	7.81	15.6	39.09	156.35	390.9	1563.5
Ethene (MW 28.05)	3.65	7.30	14.6	36.46	145.84	364.6	1458.4
Stock Source	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1
Stock Conc (ppmv)	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV
Stock Aliquot (mL)	0.010	0.020	0.040	0.100	0.400	1.00	4.00
Final Volume P&T Water	32 mL	32 mL	32 mL	32 mL	32 mL	32 mL	32 mL

Second Source Stock Standard 10,000ppmV **Manufacturer Exp date 9-21-2021**

RSK Gas Mix (Scott Specialty Gas) Cat.# 23452, Lot # 160-401303032-1-39774

1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

Second Source **Expires 10/03/19** **GA 10/02/19**

2.0mL of SS from tank into 980 mL Nitrogen

final conc: 13.3ug/L Methane, 25.0 ug/L Ethane, and 23.3 ug/L Ethene

CCV/LCS/LCSD **GA 03/09/20**

Spike 0.400mL of 10,000ppmV into 32mL DI water, with 8mL Nitrogen headspace

final conc: 83.40ug/L Methane, 156.35ug/L Ethane, and 145.84ug/L Ethene

Injection Log

Directory: G:\ROCKY\DATA\191002RS\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
9	2	1002R02.D	1	RSK STD 1 10/2/19		2 Oct 19 17:45
10	3	1002R03.D	1	RSK STD 2 10/2/19		2 Oct 19 17:50
11	4	1002R04.D	1	RSK STD 3 10/2/19		2 Oct 19 17:52
12	5	1002R05.D	1	RSK STD 4 10/2/19		2 Oct 19 17:57
13	6	1002R06.D	1	RSK STD 5 10/2/19		2 Oct 19 17:59
14	7	1002R07.D	1	RSK STD 6 10/2/19		2 Oct 19 18:05
15	8	1002R08.D	1	RSK STD 7 10/2/19		2 Oct 19 18:07
16	10	1002R10.D	1	SS RSK STD 5 10/2/19		2 Oct 19 18:24
1	4	0309R04.D	1	200309A LCS/CCV RSK STD 5		9 Mar 20 12:13
2	6	0309R06.D	1	200309A LCSD		9 Mar 20 12:33
3	7	0309R07.D	1	200309A BLK		9 Mar 20 12:55
4	20	0309R20.D	1	BA07941W04		9 Mar 20 14:13
5	21	0309R21.D	1	BA07942W04		9 Mar 20 14:17
6	22	0309R22.D	1	BA07943W02		9 Mar 20 14:20
7	23	0309R23.D	1	BA07944W04		9 Mar 20 14:25
8	29	0309R29.D	1	ENDING CCV RSK STD 5 3/9/20		9 Mar 20 14:48

METALS

Calibration Data

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM
ARF No: 91585 SDG: 91585

Analysis Date: 03/12/20 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 12:27	%R(1)	True CCV1	Found 14:40	%R(1)	True CCV1	Found 15:51	%R(1)	
Calcium (Ca)	12500	12974.4	104	25000	25664.2	103	25000	25682.6	103	P
Potassium (K)	12500	12856.0	103	10000	10348.2	103	10000	10236.0	102	P
Magnesium (Mg)	12500	12925.8	103	25000	25910.3	104	25000	25930.8	104	P
Manganese (Mn)	500	514.17	103	500	510.3	102	500	504.77	101	P
Sodium (Na)	12500	12743.3	102	12500	12503.6	100	12500	12581.2	101	P

(1) Control Limits: Metals 90-110 ILM02.0

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 91585 SDG: 91585

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analysis Date: 03/12/20

Analyte	Initial Calibration Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
	12:31		14:44		15:56				11:56		
Calcium (Ca)	1000.00	U	1000.00	U	1000.00	U			1000.00	U	P
Potassium (K)	3000.00	U	3000.00	U	3000.00	U			3000.00	U	P
Magnesium (Mg)	500.00	U	500.00	U	500.00	U			500.00	U	P
Manganese (Mn)	10.00	U	10.00	U	10.00	U			10.00	U	P
Sodium (Na)	5000.00	U	5000.00	U	5000.00	U			5000.00	U	P

A.P.P.L. INC.
4
ICP INTERFERENCE CHECK SAMPLE

Lab Name:	A.P.P.L. INC.	Contract:	AECOM
ARF No.:	91585	SDG:	91585
ICP ID Number:	Cyrus	ICS Source:	Environmental Express

Analysis Date: 03/12/20 Concentration Units: ug/L

Analyte	True		Initial Found		
	Sol A	Sol AB	Sol A 12:53	Sol AB 12:57	%R(1)
Calcium (Ca)	100000	100000	104111.73	103649.36	104
Potassium (K)			-0.72	-10.65	
Magnesium (Mg)	100000	100000	105901.31	105624.66	106
Manganese (Mn)		250	0.07	251.74	101
Sodium (Na)			-2.69	-9.86	

(1) Control Limits: Metals 80-120

Low Level ICV

Sample Name	Acq Date Time	Run Sequence	Analyte	Actual Conc (ug/L)	Spiked Conc (ug/L)	Control Limits	% Recovery	QC Flag
LLICV	3/12/20 12:35 PM	200312A	Calcium	46.63	50	80-120%	93	
LLICV	3/12/20 12:35 PM	200312A	Potassium	507.2	500	80-120%	101	
LLICV	3/12/20 12:35 PM	200312A	Magnesium	21.35	25	80-120%	85	
LLICV	3/12/20 12:35 PM	200312A	Manganese	1.04	1	80-120%	104	
LLICV	3/12/20 12:35 PM	200312A	Sodium	489.3	500	80-120%	98	

Solution Name: Blank

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
Blank	03/12/20 11:56:04 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	0.00	ug/L	47.80	0.00
Ag C (338.289 nm)	0.00	ug/L	5.27	0.00
Al (237.312 nm)	0.00	ug/L	11.41	0.00
Al C (308.215 nm)	0.00	ug/L	4136.77	0.00
Al C (396.152 nm)	0.00	ug/L	209.56	0.00
Al RAD (396.152 nm)	0.00	ug/L	23.46	0.00
As (188.980 nm)	0.00	ug/L	-4.05	0.00
As C (193.696 nm)	0.00	ug/L	12.85	0.00
B (249.678 nm)	0.00	ug/L	33.45	0.00
Ba (233.527 nm)	0.00	ug/L	13.16	0.00
Ba (455.403 nm)	0.00	ug/L	358.04	0.00
Ba RAD (233.527 nm)	0.00	ug/L	1.52	0.00
Be (313.107 nm)	0.00	ug/L	55.79	0.00
Be C (234.861 nm)	0.00	ug/L	1.83	0.00
Ca (315.887 nm)	0.00	ug/L	43.26	0.00
Ca RAD (315.887 nm)	0.00	ug/L	22.13	0.00
Cd (214.439 nm)	0.00	ug/L	9.56	0.00
Cd C (226.502 nm)	0.00	ug/L	16.62	0.00
Cd C (228.802 nm)	0.00	ug/L	0.80	0.00
Co (228.615 nm)	0.00	ug/L	35.06	0.00
Co C (230.786 nm)	0.00	ug/L	23.96	0.00
Cr (267.716 nm)	0.00	ug/L	20.02	0.00
Cr C (205.560 nm)	0.00	ug/L	17.24	0.00
Cu (327.395 nm)	0.00	ug/L	29.03	0.00
Cu C (324.754 nm)	0.00	ug/L	694.42	0.00
Fe (259.940 nm)	0.00	ug/L	36.54	0.00
Fe (261.187 nm)	0.00	ug/L	31.53	0.00
Fe C (238.204 nm)	0.00	ug/L	53.08	0.00
Fe RAD (259.940 nm)	0.00	ug/L	6.50	0.00
Fe RAD (261.187 nm)	0.00	ug/L	10.96	0.00
K RAD (766.491 nm)	0.00	ug/L	89.29	0.00
Mg C (279.078 nm)	0.00	ug/L	32.14	0.00
Mg RAD (279.078 nm)	0.00	ug/L	5.92	0.00
Mn (257.610 nm)	0.00	ug/L	51.81	0.00
Mn C (260.568 nm)	0.00	ug/L	14.67	0.00
Mo (202.032 nm)	0.00	ug/L	10.28	0.00
Mo C (203.846 nm)	0.00	ug/L	3.76	0.00
Mo C (204.598 nm)	0.00	ug/L	9.77	0.00
Na RAD (588.995 nm)	0.00	ug/L	2033.29	0.00
Na RAD (589.592 nm)	0.00	ug/L	-14.49	0.00
Ni (231.604 nm)	0.00	ug/L	17.23	0.00
Ni C (221.648 nm)	0.00	ug/L	4.16	0.00
P (213.618 nm)	0.00	ug/L	7.75	0.00
P C (214.914 nm)	0.00	ug/L	3.10	0.00

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	0.00	ug/L	35.01	0.00
Sb (206.834 nm)	0.00	ug/L	23.13	0.00
Sb (217.582 nm)	0.00	ug/L	12.84	0.00
Sb C (231.146 nm)	0.00	ug/L	8.16	0.00
Se (196.026 nm)	0.00	ug/L	9.94	0.00
Sn (189.925 nm)	0.00	ug/L	11.85	0.00
Sr RAD (421.552 nm)	0.00	ug/L	13.79	0.00
Ti (334.941 nm)	0.00	ug/L	-0.45	0.00
Tl (190.794 nm)	0.00	ug/L	1.45	0.00
V (292.401 nm)	0.00	ug/L	14.98	0.00
V C (311.837 nm)	0.00	ug/L	32.98	0.00
Zn (206.200 nm)	0.00	ug/L	19.57	0.00
Zn C (202.548 nm)	0.00	ug/L	44.52	0.00
Zn RAD (206.200 nm)	0.00	ug/L	4.34	0.00

Solution Name: Standard 1

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
Standard 1	03/12/20 12:00:29 PM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)		ug/L	71.16	
Ag C (338.289 nm)		ug/L	12.00	
Al (237.312 nm)	50.00	ug/L	134.00	50.00
Al C (308.215 nm)	50.00	ug/L	4748.27	50.00
Al C (396.152 nm)	50.00	ug/L	2021.18	50.00
Al RAD (396.152 nm)	50.00	ug/L	286.97	50.00
As (188.980 nm)		ug/L	-1.96	
As C (193.696 nm)		ug/L	23.47	
B (249.678 nm)	25.00	ug/L	498.14	25.00
Ba (233.527 nm)	1.50	ug/L	144.98	1.50
Ba (455.403 nm)	1.50	ug/L	3218.03	1.50
Ba RAD (233.527 nm)	1.50	ug/L	14.80	1.50
Be (313.107 nm)	1.00	ug/L	1812.02	1.00
Be C (234.861 nm)	1.00	ug/L	618.30	1.00
Ca (315.887 nm)	50.00	ug/L	971.09	50.00
Ca RAD (315.887 nm)	50.00	ug/L	95.04	50.00
Cd (214.439 nm)		ug/L	35.00	
Cd C (226.502 nm)		ug/L	45.04	
Cd C (228.802 nm)		ug/L	8.72	
Co (228.615 nm)		ug/L	73.16	
Co C (230.786 nm)		ug/L	90.15	
Cr (267.716 nm)		ug/L	47.07	
Cr C (205.560 nm)		ug/L	43.48	
Cu (327.395 nm)		ug/L	148.47	
Cu C (324.754 nm)		ug/L	825.71	
Fe (259.940 nm)	25.00	ug/L	1245.75	25.00
Fe (261.187 nm)	25.00	ug/L	273.01	25.00
Fe C (238.204 nm)	25.00	ug/L	2142.28	25.00
Fe RAD (259.940 nm)	25.00	ug/L	138.19	25.00
Fe RAD (261.187 nm)	25.00	ug/L	43.58	25.00
K RAD (766.491 nm)	500.00	ug/L	801.71	500.00
Mg C (279.078 nm)	25.00	ug/L	255.78	25.00
Mg RAD (279.078 nm)	25.00	ug/L	26.93	25.00
Mn (257.610 nm)	1.00	ug/L	407.89	1.00
Mn C (260.568 nm)	1.00	ug/L	88.28	1.00
Mo (202.032 nm)		ug/L	33.67	
Mo C (203.846 nm)		ug/L	9.40	
Mo C (204.598 nm)		ug/L	19.58	
Na RAD (588.995 nm)	500.00	ug/L	12861.30	500.00
Na RAD (589.592 nm)	500.00	ug/L	6948.97	500.00
Ni (231.604 nm)		ug/L	26.69	
Ni C (221.648 nm)		ug/L	20.73	
P (213.618 nm)	12.50	ug/L	56.80	12.50
P C (214.914 nm)	12.50	ug/L	21.94	12.50

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)		ug/L	51.40	
Sb (206.834 nm)		ug/L	27.33	
Sb (217.582 nm)		ug/L	19.30	
Sb C (231.146 nm)		ug/L	11.00	
Se (196.026 nm)		ug/L	14.79	
Sn (189.925 nm)		ug/L	29.43	
Sr RAD (421.552 nm)	1.00	ug/L	483.12	1.00
Ti (334.941 nm)		ug/L	804.90	
Tl (190.794 nm)		ug/L	2.28	
V (292.401 nm)		ug/L	18.64	
V C (311.837 nm)		ug/L	57.63	
Zn (206.200 nm)	25.00	ug/L	976.89	25.00
Zn C (202.548 nm)	25.00	ug/L	2512.65	25.00
Zn RAD (206.200 nm)	25.00	ug/L	52.52	25.00

Solution Name: Standard 2

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
Standard 2	03/12/20 12:04:54 PM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	1.00	ug/L	118.44	1.00
Ag C (338.289 nm)	1.00	ug/L	23.44	1.00
Al (237.312 nm)	100.00	ug/L	250.33	100.00
Al C (308.215 nm)	100.00	ug/L	5081.72	100.00
Al C (396.152 nm)	100.00	ug/L	3720.70	100.00
Al RAD (396.152 nm)	100.00	ug/L	554.10	100.00
As (188.980 nm)	4.00	ug/L	4.88	4.00
As C (193.696 nm)	4.00	ug/L	25.64	4.00
B (249.678 nm)	50.00	ug/L	896.24	50.00
Ba (233.527 nm)	3.00	ug/L	271.93	3.00
Ba (455.403 nm)	3.00	ug/L	5830.03	3.00
Ba RAD (233.527 nm)	3.00	ug/L	26.93	3.00
Be (313.107 nm)	2.00	ug/L	3426.33	2.00
Be C (234.861 nm)	2.00	ug/L	1203.97	2.00
Ca (315.887 nm)	100.00	ug/L	1797.15	100.00
Ca RAD (315.887 nm)	100.00	ug/L	168.51	100.00
Cd (214.439 nm)	0.50	ug/L	59.91	0.50
Cd C (226.502 nm)	0.50	ug/L	76.31	0.50
Cd C (228.802 nm)	0.50	ug/L	15.13	0.50
Co (228.615 nm)	5.00	ug/L	101.15	5.00
Co C (230.786 nm)	5.00	ug/L	143.60	5.00
Cr (267.716 nm)	1.00	ug/L	75.62	1.00
Cr C (205.560 nm)	1.00	ug/L	60.42	1.00
Cu (327.395 nm)	5.00	ug/L	259.99	5.00
Cu C (324.754 nm)	5.00	ug/L	897.68	5.00
Fe (259.940 nm)	50.00	ug/L	2352.16	50.00
Fe (261.187 nm)	50.00	ug/L	487.20	50.00
Fe C (238.204 nm)	50.00	ug/L	4045.58	50.00
Fe RAD (259.940 nm)	50.00	ug/L	275.51	50.00
Fe RAD (261.187 nm)	50.00	ug/L	68.17	50.00
K RAD (766.491 nm)	1000.00	ug/L	1456.40	1000.00
Mg C (279.078 nm)	50.00	ug/L	454.57	50.00
Mg RAD (279.078 nm)	50.00	ug/L	44.75	50.00
Mn (257.610 nm)	2.00	ug/L	722.17	2.00
Mn C (260.568 nm)	2.00	ug/L	158.99	2.00
Mo (202.032 nm)	2.00	ug/L	51.22	2.00
Mo C (203.846 nm)	2.00	ug/L	10.80	2.00
Mo C (204.598 nm)	2.00	ug/L	27.04	2.00
Na RAD (588.995 nm)	1000.00	ug/L	23892.14	1000.00
Na RAD (589.592 nm)	1000.00	ug/L	14035.64	1000.00
Ni (231.604 nm)	2.00	ug/L	52.33	2.00
Ni C (221.648 nm)	2.00	ug/L	41.41	2.00
P (213.618 nm)	25.00	ug/L	105.81	25.00
P C (214.914 nm)	25.00	ug/L	32.43	25.00

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	3.00	ug/L	61.55	3.00
Sb (206.834 nm)	4.00	ug/L	32.79	4.00
Sb (217.582 nm)	4.00	ug/L	26.00	4.00
Sb C (231.146 nm)	4.00	ug/L	19.05	4.00
Se (196.026 nm)		ug/L	11.59	
Sn (189.925 nm)	6.00	ug/L	49.00	6.00
Sr RAD (421.552 nm)	2.00	ug/L	959.17	2.00
Ti (334.941 nm)	5.00	ug/L	1513.51	5.00
Tl (190.794 nm)		ug/L	8.36	
V (292.401 nm)	1.00	ug/L	33.59	1.00
V C (311.837 nm)	1.00	ug/L	50.54	1.00
Zn (206.200 nm)	50.00	ug/L	1935.08	50.00
Zn C (202.548 nm)	50.00	ug/L	4835.49	50.00
Zn RAD (206.200 nm)	50.00	ug/L	104.29	50.00

Solution Name: Standard 3

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
Standard 3	03/12/20 12:09:20 PM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	3.00	ug/L	274.83	3.00
Ag C (338.289 nm)	3.00	ug/L	19.56	3.00
Al (237.312 nm)		ug/L	748.10	
Al C (308.215 nm)		ug/L	6954.79	
Al C (396.152 nm)		ug/L	10694.33	
Al RAD (396.152 nm)		ug/L	1584.07	
As (188.980 nm)		ug/L	42.38	
As C (193.696 nm)		ug/L	47.53	
B (249.678 nm)	150.00	ug/L	2668.25	150.00
Ba (233.527 nm)		ug/L	789.23	
Ba (455.403 nm)		ug/L	16816.22	
Ba RAD (233.527 nm)		ug/L	76.28	
Be (313.107 nm)	6.00	ug/L	10075.32	6.00
Be C (234.861 nm)	6.00	ug/L	3596.59	6.00
Ca (315.887 nm)	300.00	ug/L	5478.18	300.00
Ca RAD (315.887 nm)	300.00	ug/L	477.36	300.00
Cd (214.439 nm)	1.50	ug/L	171.20	1.50
Cd C (226.502 nm)	1.50	ug/L	175.64	1.50
Cd C (228.802 nm)	1.50	ug/L	40.03	1.50
Co (228.615 nm)		ug/L	234.02	
Co C (230.786 nm)		ug/L	370.33	
Cr (267.716 nm)	3.00	ug/L	206.52	3.00
Cr C (205.560 nm)	3.00	ug/L	159.69	3.00
Cu (327.395 nm)		ug/L	735.36	
Cu C (324.754 nm)		ug/L	1295.92	
Fe (259.940 nm)	150.00	ug/L	6925.56	150.00
Fe (261.187 nm)	150.00	ug/L	1366.88	150.00
Fe C (238.204 nm)	150.00	ug/L	11885.55	150.00
Fe RAD (259.940 nm)	150.00	ug/L	796.66	150.00
Fe RAD (261.187 nm)	150.00	ug/L	177.24	150.00
K RAD (766.491 nm)	3000.00	ug/L	4227.72	3000.00
Mg C (279.078 nm)	150.00	ug/L	1322.69	150.00
Mg RAD (279.078 nm)	150.00	ug/L	132.92	150.00
Mn (257.610 nm)	6.00	ug/L	2078.43	6.00
Mn C (260.568 nm)	6.00	ug/L	451.26	6.00
Mo (202.032 nm)	6.00	ug/L	122.63	6.00
Mo C (203.846 nm)	6.00	ug/L	39.61	6.00
Mo C (204.598 nm)	6.00	ug/L	79.51	6.00
Na RAD (588.995 nm)	3000.00	ug/L	67138.71	3000.00
Na RAD (589.592 nm)	3000.00	ug/L	41747.93	3000.00
Ni (231.604 nm)	6.00	ug/L	141.29	6.00
Ni C (221.648 nm)	6.00	ug/L	104.39	6.00
P (213.618 nm)		ug/L	291.81	
P C (214.914 nm)		ug/L	98.10	

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)		ug/L	106.85	
Sb (206.834 nm)		ug/L	49.37	
Sb (217.582 nm)		ug/L	43.18	
Sb C (231.146 nm)		ug/L	36.23	
Se (196.026 nm)		ug/L	33.48	
Sn (189.925 nm)		ug/L	134.45	
Sr RAD (421.552 nm)	6.00	ug/L	2827.88	6.00
Ti (334.941 nm)		ug/L	4499.93	
Tl (190.794 nm)		ug/L	21.69	
V (292.401 nm)	3.00	ug/L	116.90	3.00
V C (311.837 nm)	3.00	ug/L	79.97	3.00
Zn (206.200 nm)	150.00	ug/L	5817.97	150.00
Zn C (202.548 nm)	150.00	ug/L	14625.15	150.00
Zn RAD (206.200 nm)	150.00	ug/L	309.12	150.00

Solution Name: Standard 4

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
Standard 4	03/12/20 12:13:46 PM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	5.00	ug/L	434.57	5.00
Ag C (338.289 nm)	5.00	ug/L	29.90	5.00
Al (237.312 nm)	200.00	ug/L	485.41	200.00
Al C (308.215 nm)	200.00	ug/L	5966.32	200.00
Al C (396.152 nm)	200.00	ug/L	7012.63	200.00
Al RAD (396.152 nm)	200.00	ug/L	1052.08	200.00
As (188.980 nm)	10.00	ug/L	31.19	10.00
As C (193.696 nm)	10.00	ug/L	41.92	10.00
B (249.678 nm)		ug/L	212.09	
Ba (233.527 nm)	10.00	ug/L	853.89	10.00
Ba (455.403 nm)	10.00	ug/L	18285.16	10.00
Ba RAD (233.527 nm)	10.00	ug/L	85.67	10.00
Be (313.107 nm)	10.00	ug/L	16728.37	10.00
Be C (234.861 nm)	10.00	ug/L	5937.21	10.00
Ca (315.887 nm)	500.00	ug/L	8701.14	500.00
Ca RAD (315.887 nm)	500.00	ug/L	742.54	500.00
Cd (214.439 nm)	10.00	ug/L	1054.09	10.00
Cd C (226.502 nm)	10.00	ug/L	1023.66	10.00
Cd C (228.802 nm)	10.00	ug/L	243.56	10.00
Co (228.615 nm)	10.00	ug/L	163.83	10.00
Co C (230.786 nm)	10.00	ug/L	253.62	10.00
Cr (267.716 nm)	10.00	ug/L	633.53	10.00
Cr C (205.560 nm)	10.00	ug/L	470.13	10.00
Cu (327.395 nm)	10.00	ug/L	466.22	10.00
Cu C (324.754 nm)	10.00	ug/L	1079.38	10.00
Fe (259.940 nm)	200.00	ug/L	8901.83	200.00
Fe (261.187 nm)	200.00	ug/L	1749.19	200.00
Fe C (238.204 nm)	200.00	ug/L	15297.65	200.00
Fe RAD (259.940 nm)	200.00	ug/L	1030.29	200.00
Fe RAD (261.187 nm)	200.00	ug/L	230.00	200.00
K RAD (766.491 nm)		ug/L	381.79	
Mg C (279.078 nm)	500.00	ug/L	4294.79	500.00
Mg RAD (279.078 nm)	500.00	ug/L	414.96	500.00
Mn (257.610 nm)	10.00	ug/L	3391.60	10.00
Mn C (260.568 nm)	10.00	ug/L	724.20	10.00
Mo (202.032 nm)	10.00	ug/L	190.83	10.00
Mo C (203.846 nm)	10.00	ug/L	61.87	10.00
Mo C (204.598 nm)	10.00	ug/L	122.50	10.00
Na RAD (588.995 nm)		ug/L	7445.97	
Na RAD (589.592 nm)		ug/L	3540.32	
Ni (231.604 nm)	10.00	ug/L	214.85	10.00
Ni C (221.648 nm)	10.00	ug/L	166.77	10.00
P (213.618 nm)	50.00	ug/L	190.32	50.00
P C (214.914 nm)	50.00	ug/L	63.77	50.00

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	10.00	ug/L	110.87	10.00
Sb (206.834 nm)	10.00	ug/L	47.31	10.00
Sb (217.582 nm)	10.00	ug/L	35.07	10.00
Sb C (231.146 nm)	10.00	ug/L	34.76	10.00
Se (196.026 nm)	10.00	ug/L	27.13	10.00
Sn (189.925 nm)	10.00	ug/L	80.21	10.00
Sr RAD (421.552 nm)	10.00	ug/L	4569.68	10.00
Ti (334.941 nm)	10.00	ug/L	2988.15	10.00
Tl (190.794 nm)	10.00	ug/L	19.29	10.00
V (292.401 nm)	10.00	ug/L	354.91	10.00
V C (311.837 nm)	10.00	ug/L	479.22	10.00
Zn (206.200 nm)		ug/L	406.13	
Zn C (202.548 nm)		ug/L	1030.42	
Zn RAD (206.200 nm)		ug/L	25.19	

Solution Name: Standard 5

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
Standard 5	03/12/20 12:18:11 PM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	250.00	ug/L	20131.75	250.00
Ag C (338.289 nm)	250.00	ug/L	1409.78	250.00
Al (237.312 nm)	10000.00	ug/L	24257.05	10000.00
Al C (308.215 nm)	10000.00	ug/L	98703.84	10000.00
Al C (396.152 nm)	10000.00	ug/L	364367.12	10000.00
Al RAD (396.152 nm)	10000.00	ug/L	50925.90	10000.00
As (188.980 nm)	500.00	ug/L	1954.82	500.00
As C (193.696 nm)	500.00	ug/L	1405.73	500.00
B (249.678 nm)	500.00	ug/L	8874.60	500.00
Ba (233.527 nm)	500.00	ug/L	42424.53	500.00
Ba (455.403 nm)	500.00	ug/L	896737.79	500.00
Ba RAD (233.527 nm)	500.00	ug/L	3986.97	500.00
Be (313.107 nm)	500.00	ug/L	859755.55	500.00
Be C (234.861 nm)	500.00	ug/L	306126.69	500.00
Ca (315.887 nm)	25000.00	ug/L	438115.68	25000.00
Ca RAD (315.887 nm)	25000.00	ug/L	36402.33	25000.00
Cd (214.439 nm)	500.00	ug/L	52092.58	500.00
Cd C (226.502 nm)	500.00	ug/L	50287.96	500.00
Cd C (228.802 nm)	500.00	ug/L	12662.29	500.00
Co (228.615 nm)	500.00	ug/L	6030.32	500.00
Co C (230.786 nm)	500.00	ug/L	11019.01	500.00
Cr (267.716 nm)	500.00	ug/L	30774.13	500.00
Cr C (205.560 nm)	500.00	ug/L	22613.38	500.00
Cu (327.395 nm)	500.00	ug/L	23174.62	500.00
Cu C (324.754 nm)	500.00	ug/L	20105.14	500.00
Fe (259.940 nm)	10000.00	ug/L	438524.76	10000.00
Fe (261.187 nm)	10000.00	ug/L	84417.43	10000.00
Fe C (238.204 nm)	10000.00	ug/L	749768.56	10000.00
Fe RAD (259.940 nm)	10000.00	ug/L	50236.08	10000.00
Fe RAD (261.187 nm)	10000.00	ug/L	10537.56	10000.00
K RAD (766.491 nm)	10000.00	ug/L	13965.85	10000.00
Mg C (279.078 nm)	25000.00	ug/L	214347.06	25000.00
Mg RAD (279.078 nm)	25000.00	ug/L	20581.98	25000.00
Mn (257.610 nm)	500.00	ug/L	164089.05	500.00
Mn C (260.568 nm)	500.00	ug/L	35203.94	500.00
Mo (202.032 nm)	500.00	ug/L	9130.27	500.00
Mo C (203.846 nm)	500.00	ug/L	2809.45	500.00
Mo C (204.598 nm)	500.00	ug/L	5996.05	500.00
Na RAD (588.995 nm)	12500.00	ug/L	268392.42	12500.00
Na RAD (589.592 nm)	12500.00	ug/L	171158.15	12500.00
Ni (231.604 nm)	500.00	ug/L	9641.81	500.00
Ni C (221.648 nm)	500.00	ug/L	7730.05	500.00
P (213.618 nm)	2500.00	ug/L	9451.40	2500.00
P C (214.914 nm)	2500.00	ug/L	3123.88	2500.00

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	500.00	ug/L	3845.84	500.00
Sb (206.834 nm)	500.00	ug/L	1237.32	500.00
Sb (217.582 nm)	500.00	ug/L	1711.81	500.00
Sb C (231.146 nm)	500.00	ug/L	1054.44	500.00
Se (196.026 nm)	500.00	ug/L	957.45	500.00
Sn (189.925 nm)	500.00	ug/L	3425.72	500.00
Sr RAD (421.552 nm)	500.00	ug/L	226611.41	500.00
Ti (334.941 nm)	500.00	ug/L	150643.29	500.00
Tl (190.794 nm)	500.00	ug/L	933.88	500.00
V (292.401 nm)	500.00	ug/L	17399.52	500.00
V C (311.837 nm)	500.00	ug/L	29362.80	500.00
Zn (206.200 nm)	500.00	ug/L	17929.87	500.00
Zn C (202.548 nm)	500.00	ug/L	45868.80	500.00
Zn RAD (206.200 nm)	500.00	ug/L	960.12	500.00

Solution Name: Standard 6

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
Standard 6	03/12/20 12:22:37 PM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	500.00	ug/L	40244.76	500.00
Ag C (338.289 nm)	500.00	ug/L	2824.59	500.00
Al (237.312 nm)	20000.00	ug/L	48382.88	20000.00
Al C (308.215 nm)	20000.00	ug/L	197575.60	20000.00
Al C (396.152 nm)	20000.00	ug/L	744185.35	20000.00
Al RAD (396.152 nm)	20000.00	ug/L	101412.96	20000.00
As (188.980 nm)	1000.00	ug/L	3938.88	1000.00
As C (193.696 nm)	1000.00	ug/L	2803.98	1000.00
B (249.678 nm)	1000.00	ug/L	18119.96	1000.00
Ba (233.527 nm)	1000.00	ug/L	84539.94	1000.00
Ba (455.403 nm)	1000.00	ug/L	1794467.67	1000.00
Ba RAD (233.527 nm)	1000.00	ug/L	7804.73	1000.00
Be (313.107 nm)	1000.00	ug/L	1720594.77	1000.00
Be C (234.861 nm)	1000.00	ug/L	612381.66	1000.00
Ca (315.887 nm)	50000.00	ug/L	868419.05	50000.00
Ca RAD (315.887 nm)	50000.00	ug/L	71844.75	50000.00
Cd (214.439 nm)	1000.00	ug/L	102872.72	1000.00
Cd C (226.502 nm)	1000.00	ug/L	99728.20	1000.00
Cd C (228.802 nm)	1000.00	ug/L	25373.06	1000.00
Co (228.615 nm)	1000.00	ug/L	11925.24	1000.00
Co C (230.786 nm)	1000.00	ug/L	21846.85	1000.00
Cr (267.716 nm)	1000.00	ug/L	61272.81	1000.00
Cr C (205.560 nm)	1000.00	ug/L	44832.26	1000.00
Cu (327.395 nm)	1000.00	ug/L	46801.43	1000.00
Cu C (324.754 nm)	1000.00	ug/L	39741.90	1000.00
Fe (259.940 nm)	20000.00	ug/L	863951.68	20000.00
Fe (261.187 nm)	20000.00	ug/L	167730.74	20000.00
Fe C (238.204 nm)	20000.00	ug/L	1481548.39	20000.00
Fe RAD (259.940 nm)	20000.00	ug/L	98624.53	20000.00
Fe RAD (261.187 nm)	20000.00	ug/L	20736.91	20000.00
K RAD (766.491 nm)	20000.00	ug/L	27756.93	20000.00
Mg C (279.078 nm)	50000.00	ug/L	430813.98	50000.00
Mg RAD (279.078 nm)	50000.00	ug/L	40802.61	50000.00
Mn (257.610 nm)	1000.00	ug/L	325640.09	1000.00
Mn C (260.568 nm)	1000.00	ug/L	69811.14	1000.00
Mo (202.032 nm)	1000.00	ug/L	18284.91	1000.00
Mo C (203.846 nm)	1000.00	ug/L	5615.26	1000.00
Mo C (204.598 nm)	1000.00	ug/L	12021.75	1000.00
Na RAD (588.995 nm)	25000.00	ug/L	519511.97	25000.00
Na RAD (589.592 nm)	25000.00	ug/L	340418.44	25000.00
Ni (231.604 nm)	1000.00	ug/L	19080.64	1000.00
Ni C (221.648 nm)	1000.00	ug/L	15291.25	1000.00
P (213.618 nm)	5000.00	ug/L	19032.73	5000.00
P C (214.914 nm)	5000.00	ug/L	6260.09	5000.00

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	1000.00	ug/L	7605.28	1000.00
Sb (206.834 nm)	1000.00	ug/L	2447.81	1000.00
Sb (217.582 nm)	1000.00	ug/L	3442.36	1000.00
Sb C (231.146 nm)	1000.00	ug/L	2093.97	1000.00
Se (196.026 nm)	1000.00	ug/L	1918.71	1000.00
Sn (189.925 nm)	1000.00	ug/L	6677.65	1000.00
Sr RAD (421.552 nm)	1000.00	ug/L	449717.51	1000.00
Ti (334.941 nm)	1000.00	ug/L	302368.51	1000.00
Tl (190.794 nm)	1000.00	ug/L	1863.11	1000.00
V (292.401 nm)	1000.00	ug/L	34777.33	1000.00
V C (311.837 nm)	1000.00	ug/L	59142.75	1000.00
Zn (206.200 nm)	1000.00	ug/L	34565.89	1000.00
Zn C (202.548 nm)	1000.00	ug/L	90707.11	1000.00
Zn RAD (206.200 nm)	1000.00	ug/L	1866.55	1000.00

Solution Name: ICV

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
ICV	03/12/20 12:27:02 PM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	253.94	ug/L	20459.20	253.94
Ag C (338.289 nm)	Uncal	ug/L	1436.61 Q	Uncal
Al (237.312 nm)	12841.39	ug/L	31073.43	12841.39
Al C (308.215 nm)	12673.24	ug/L	125691.68	12673.24
Al C (396.152 nm)	12855.45	ug/L	465752.32	12855.45
Al RAD (396.152 nm)	12866.92	ug/L	65452.28	12866.92
As (188.980 nm)	512.91 Q	ug/L	2009.47 Q	512.91 Q
As C (193.696 nm)	507.79	ug/L	1430.04	507.79
B (249.678 nm)	510.42	ug/L	9126.46	510.42
Ba (233.527 nm)	520.80	ug/L	44125.72	520.80
Ba (455.403 nm)	517.34	ug/L	929560.57	517.34
Ba RAD (233.527 nm)	525.50	ug/L	4125.86	525.50
Be (313.107 nm)	518.80	ug/L	876092.51	518.80
Be C (234.861 nm)	509.49	ug/L	311295.15	509.49
Ca (315.887 nm)	12915.04	ug/L	226675.66	12915.04
Ca RAD (315.887 nm)	12974.45	ug/L	18799.68	12974.45
Cd (214.439 nm)	515.52	ug/L	53527.36	515.52
Cd C (226.502 nm)	517.14	ug/L	51878.90	517.14
Cd C (228.802 nm)	511.76	ug/L	12967.18	511.76
Co (228.615 nm)	522.64	ug/L	6326.99	522.64
Co C (230.786 nm)	524.62	ug/L	11550.81	524.62
Cr (267.716 nm)	515.18	ug/L	31626.44	515.18
Cr C (205.560 nm)	516.36	ug/L	23219.38	516.36
Cu (327.395 nm)	510.58	ug/L	23795.23	510.58
Cu C (324.754 nm)	514.36	ug/L	20728.17	514.36
Fe (259.940 nm)	12717.31	ug/L	562978.43	12717.31
Fe (261.187 nm)	12871.75	ug/L	109120.11	12871.75
Fe C (238.204 nm)	12685.24	ug/L	970899.61	12685.24
Fe RAD (259.940 nm)	12964.14	ug/L	64821.75	12964.14
Fe RAD (261.187 nm)	13022.04	ug/L	13612.53	13022.04
K RAD (766.491 nm)	12856.07	ug/L	17861.36	12856.07
Mg C (279.078 nm)	12947.42	ug/L	111074.03	12947.42
Mg RAD (279.078 nm)	12925.81	ug/L	10588.35	12925.81
Mn (257.610 nm)	514.17	ug/L	168502.80	514.17
Mn C (260.568 nm)	515.87	ug/L	36128.56	515.87
Mo (202.032 nm)	500.84	ug/L	9153.17	500.84
Mo C (203.846 nm)	Uncal	ug/L	2808.80 Q	Uncal
Mo C (204.598 nm)	500.46	ug/L	6013.55	500.46
Na RAD (588.995 nm)	12743.31	ug/L	275686.79	12743.31
Na RAD (589.592 nm)	12735.30	ug/L	175364.53	12735.30
Ni (231.604 nm)	521.09	ug/L	10051.22	521.09
Ni C (221.648 nm)	524.54	ug/L	8074.22	524.54
P (213.618 nm)	2546.01	ug/L	9636.98	2546.01
P C (214.914 nm)	2528.91	ug/L	3167.09	2528.91

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	516.20	ug/L	3968.13	516.20
Sb (206.834 nm)	482.78	ug/L	1195.32	482.78
Sb (217.582 nm)	Uncal	ug/L	1663.33 Q	Uncal
Sb C (231.146 nm)	480.84	ug/L	1014.02	480.84
Se (196.026 nm)	506.32 Q	ug/L	972.53 Q	506.32 Q
Sn (189.925 nm)	258.29	ug/L	1747.58	258.29
Sr RAD (421.552 nm)	513.19	ug/L	233050.51	513.19
Ti (334.941 nm)	505.45	ug/L	152495.41	505.45
Tl (190.794 nm)	503.99	ug/L	946.21	503.99
V (292.401 nm)	508.39	ug/L	17718.91	508.39
V C (311.837 nm)	Uncal	ug/L	29833.49 Q	Uncal
Zn (206.200 nm)	488.59	ug/L	18481.88	488.59
Zn C (202.548 nm)	501.82	ug/L	47606.45	501.82
Zn RAD (206.200 nm)	524.25	ug/L	991.18	524.25

Solution Name: ICB

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
ICB	03/12/20 12:31:27 PM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	0.09	ug/L	45.37	0.09
Ag C (338.289 nm)	Uncal	ug/L	12.66 Z	Uncal
Al (237.312 nm)	0.07	ug/L	11.24	0.07
Al C (308.215 nm)	12.88	ug/L	4255.96	12.88
Al C (396.152 nm)	1.37	ug/L	254.79	1.37
Al RAD (396.152 nm)	-0.47	ug/L	31.14	-0.47
As (188.980 nm)	0.29 Z	ug/L	-4.85 Z	0.29 Z
As C (193.696 nm)	1.00	ug/L	16.61	1.00
B (249.678 nm)	1.05	ug/L	45.74	1.05
Ba (233.527 nm)	0.01	ug/L	18.21	0.01
Ba (455.403 nm)	-0.02	ug/L	395.63	-0.02
Ba RAD (233.527 nm)	-0.23	ug/L	1.98	-0.23
Be (313.107 nm)	0.04	ug/L	92.88	0.04
Be C (234.861 nm)	0.07	ug/L	26.38	0.07
Ca (315.887 nm)	0.50	ug/L	60.10	0.50
Ca RAD (315.887 nm)	-1.23	ug/L	22.72	-1.23
Cd (214.439 nm)	0.00	ug/L	9.36	0.00
Cd C (226.502 nm)	0.06	ug/L	27.90	0.06
Cd C (228.802 nm)	-0.06	ug/L	-0.39	-0.06
Co (228.615 nm)	-0.02	ug/L	40.08	-0.02
Co C (230.786 nm)	-0.27	ug/L	27.02	-0.27
Cr (267.716 nm)	0.15	ug/L	28.59	0.15
Cr C (205.560 nm)	-0.04	ug/L	21.13	-0.04
Cu (327.395 nm)	0.17	ug/L	19.04	0.17
Cu C (324.754 nm)	0.66	ug/L	720.28	0.66
Fe (259.940 nm)	0.01	ug/L	62.88	0.01
Fe (261.187 nm)	-1.55	ug/L	41.09	-1.55
Fe C (238.204 nm)	-0.27	ug/L	104.68	-0.27
Fe RAD (259.940 nm)	0.45	ug/L	13.73	0.45
Fe RAD (261.187 nm)	-3.25	ug/L	13.12	-3.25
K RAD (766.491 nm)	7.06	ug/L	98.42	7.06
Mg C (279.078 nm)	3.30	ug/L	56.46	3.30
Mg RAD (279.078 nm)	-1.18	ug/L	7.08	-1.18
Mn (257.610 nm)	0.01	ug/L	64.38	0.01
Mn C (260.568 nm)	-0.01	ug/L	18.36	-0.01
Mo (202.032 nm)	0.38	ug/L	19.31	0.38
Mo C (203.846 nm)	Uncal	ug/L	4.73 Z	Uncal
Mo C (204.598 nm)	0.07	ug/L	4.70	0.07
Na RAD (588.995 nm)	-20.21	ug/L	1937.59	-20.21
Na RAD (589.592 nm)	-0.26	ug/L	17.29	-0.26
Ni (231.604 nm)	-0.30	ug/L	10.88	-0.30
Ni C (221.648 nm)	-0.32	ug/L	6.60	-0.32
P (213.618 nm)	1.86	ug/L	15.67	1.86
P C (214.914 nm)	2.38	ug/L	5.92	2.38

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	-0.37	ug/L	33.24	-0.37
Sb (206.834 nm)	-0.76	ug/L	21.39	-0.76
Sb (217.582 nm)	Uncal	ug/L	20.03 Z	Uncal
Sb C (231.146 nm)	2.55 Z	ug/L	17.75 Z	2.55 Z
Se (196.026 nm)	-0.35 Z	ug/L	7.62 Z	-0.35 Z
Sn (189.925 nm)	-0.36	ug/L	10.02	-0.36
Sr RAD (421.552 nm)	0.05	ug/L	45.79	0.05
Ti (334.941 nm)	0.01	ug/L	2.16	0.01
Tl (190.794 nm)	1.21	ug/L	3.04	1.21
V (292.401 nm)	-0.04	ug/L	1.58	-0.04
V C (311.837 nm)	Uncal	ug/L	29.04 Z	Uncal
Zn (206.200 nm)	-1.33	ug/L	23.67	-1.33
Zn C (202.548 nm)	0.10	ug/L	54.96	0.10
Zn RAD (206.200 nm)	-2.23	ug/L	2.49	-2.23

Solution Name: LLICV

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
LLICV	03/12/20 12:35:52 PM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	0.45	ug/L	73.85	0.45
Ag C (338.289 nm)	Uncal	ug/L	19.49 R	Uncal
Al (237.312 nm)	51.42	ug/L	135.47	51.42
Al C (308.215 nm)	59.20	ug/L	4700.27	59.20
Al C (396.152 nm)	48.67	ug/L	1967.54	48.67
Al RAD (396.152 nm)	50.37	ug/L	289.62	50.37
As (188.980 nm)	3.10 R	ug/L	6.22 R	3.10 R
As C (193.696 nm)	3.13 R	ug/L	22.55 R	3.13 R
B (249.678 nm)	25.75	ug/L	485.39	25.75
Ba (233.527 nm)	1.50	ug/L	143.94	1.50
Ba (455.403 nm)	1.49	ug/L	3113.57	1.49
Ba RAD (233.527 nm)	1.61	ug/L	16.42	1.61
Be (313.107 nm)	1.00	ug/L	1711.45	1.00
Be C (234.861 nm)	1.02	ug/L	610.37	1.02
Ca (315.887 nm)	50.73	ug/L	941.55	50.73
Ca RAD (315.887 nm)	46.34	ug/L	91.56	46.34
Cd (214.439 nm)	0.27	ug/L	37.71	0.27
Cd C (226.502 nm)	0.24	ug/L	46.28	0.24
Cd C (228.802 nm)	0.35 R	ug/L	9.99 R	0.35 R
Co (228.615 nm)	2.58	ug/L	71.56	2.58
Co C (230.786 nm)	2.16	ug/L	80.41	2.16
Cr (267.716 nm)	0.48	ug/L	48.91	0.48
Cr C (205.560 nm)	0.42	ug/L	42.10	0.42
Cu (327.395 nm)	2.71	ug/L	137.35	2.71
Cu C (324.754 nm)	3.10 R	ug/L	815.31 R	3.10 R
Fe (259.940 nm)	25.94	ug/L	1210.59	25.94
Fe (261.187 nm)	24.83	ug/L	264.62	24.83
Fe C (238.204 nm)	25.66	ug/L	2088.64	25.66
Fe RAD (259.940 nm)	26.20	ug/L	142.49	26.20
Fe RAD (261.187 nm)	22.29	ug/L	39.79	22.29
K RAD (766.491 nm)	507.23	ug/L	789.87	507.23
Mg C (279.078 nm)	26.71	ug/L	257.24	26.71
Mg RAD (279.078 nm)	21.35	ug/L	25.52	21.35
Mn (257.610 nm)	1.04	ug/L	402.52	1.04
Mn C (260.568 nm)	1.03	ug/L	91.22	1.03
Mo (202.032 nm)	1.20 R	ug/L	34.28 R	1.20 R
Mo C (203.846 nm)	Uncal	ug/L	13.01 R	Uncal
Mo C (204.598 nm)	1.09	ug/L	16.99	1.09
Na RAD (588.995 nm)	489.26	ug/L	12864.56	489.26
Na RAD (589.592 nm)	506.65	ug/L	6996.55	506.65
Ni (231.604 nm)	0.88	ug/L	33.74	0.88
Ni C (221.648 nm)	0.70 R	ug/L	22.37 R	0.70 R
P (213.618 nm)	11.58	ug/L	52.19	11.58
P C (214.914 nm)	12.33	ug/L	18.37	12.33

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	1.12 R	ug/L	44.60 R	1.12 R
Sb (206.834 nm)	1.20 R	ug/L	26.15 R	1.20 R
Sb (217.582 nm)	Uncal	ug/L	21.89 R	Uncal
Sb C (231.146 nm)	1.50 R	ug/L	15.56 R	1.50 R
Se (196.026 nm)	3.44 R	ug/L	14.83 R	3.44 R
Sn (189.925 nm)	3.27	ug/L	34.42	3.27
Sr RAD (421.552 nm)	1.04	ug/L	492.83	1.04
Ti (334.941 nm)	2.60	ug/L	784.46	2.60
Tl (190.794 nm)	1.07 R	ug/L	2.81 R	1.07 R
V (292.401 nm)	0.42	ug/L	17.94	0.42
V C (311.837 nm)	Uncal	ug/L	32.75 R	Uncal
Zn (206.200 nm)	23.84	ug/L	971.88	23.84
Zn C (202.548 nm)	25.42	ug/L	2454.34	25.42
Zn RAD (206.200 nm)	24.47	ug/L	52.65	24.47

Solution Name: ICSA

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
ICSA	03/12/20 12:53:28 PM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	-0.17	ug/L	26.29	-0.17
Ag C (338.289 nm)	Uncal	ug/L	21.40 K	Uncal
Al (237.312 nm)	106610.56	ug/L	257877.10	106610.56
Al C (308.215 nm)	107138.87 o	ug/L	1031788.07	107138.87 o
Al C (396.152 nm)	109411.61 o	ug/L	3962436.53	109411.61 o
Al RAD (396.152 nm)	105396.22 o	ug/L	535895.44	105396.22 o
As (188.980 nm)	-0.52 K	ug/L	-9.19 K	-0.52 K
As C (193.696 nm)	0.71	ug/L	19.61	0.71
B (249.678 nm)	1.86	ug/L	55.41	1.86
Ba (233.527 nm)	0.00	ug/L	80.50	0.00
Ba (455.403 nm)	0.07	ug/L	554.06	0.07
Ba RAD (233.527 nm)	1.23 K	ug/L	13.46 K	1.23 K
Be (313.107 nm)	0.08	ug/L	159.70	0.08
Be C (234.861 nm)	0.13	ug/L	66.73	0.13
Ca (315.887 nm)	104162.85	ug/L	1827531.48	104162.85
Ca RAD (315.887 nm)	104111.73	ug/L	150636.35	104111.73
Cd (214.439 nm)	-0.08	ug/L	74.06	-0.08
Cd C (226.502 nm)	-0.20	ug/L	599.64	-0.20
Cd C (228.802 nm)	0.22	ug/L	9.16	0.22
Co (228.615 nm)	-4.08 K	ug/L	91.70 K	-4.08 K
Co C (230.786 nm)	-3.34 K	ug/L	159.46 K	-3.34 K
Cr (267.716 nm)	0.13	ug/L	41.87	0.13
Cr C (205.560 nm)	0.06	ug/L	25.54	0.06
Cu (327.395 nm)	0.73	ug/L	55.65	0.73
Cu C (324.754 nm)	0.86	ug/L	727.84	0.86
Fe (259.940 nm)	96231.82 o	ug/L	4259645.72	96231.82 o
Fe (261.187 nm)	100045.67 o	ug/L	847768.65	100045.67 o
Fe C (238.204 nm)	93361.81 o	ug/L	7144908.55	93361.81 o
Fe RAD (259.940 nm)	99492.93 o	ug/L	497396.05	99492.93 o
Fe RAD (261.187 nm)	101005.96 o	ug/L	105474.52	101005.96 o
K RAD (766.491 nm)	-0.72	ug/L	87.66	-0.72
Mg C (279.078 nm)	106600.57 o	ug/L	914307.16	106600.57 o
Mg RAD (279.078 nm)	105901.31	ug/L	86692.64	105901.31
Mn (257.610 nm)	0.07	ug/L	516.71	0.07
Mn C (260.568 nm)	6.08 K	ug/L	444.69 K	6.08 K
Mo (202.032 nm)	0.03	ug/L	12.95	0.03
Mo C (203.846 nm)	Uncal	ug/L	13.25 K	Uncal
Mo C (204.598 nm)	1.63 K	ug/L	23.45 K	1.63 K
Na RAD (588.995 nm)	-2.69	ug/L	2313.25	-2.69
Na RAD (589.592 nm)	15.21	ug/L	230.21	15.21
Ni (231.604 nm)	3.96 K	ug/L	93.86 K	3.96 K
Ni C (221.648 nm)	3.71 K	ug/L	68.52 K	3.71 K
P (213.618 nm)	-0.09	ug/L	8.38	-0.09
P C (214.914 nm)	35.21 K	ug/L	46.95 K	35.21 K

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	-2.62 K	ug/L	29.58 K	-2.62 K
Sb (206.834 nm)	5.80 K	ug/L	40.92 K	5.80 K
Sb (217.582 nm)	Uncal	ug/L	28.99 K	Uncal
Sb C (231.146 nm)	-2.89 K	ug/L	6.42 K	-2.89 K
Se (196.026 nm)	0.62 K	ug/L	9.47 K	0.62 K
Sn (189.925 nm)	0.11	ug/L	13.18	0.11
Sr RAD (421.552 nm)	0.96	ug/L	456.40	0.96
Ti (334.941 nm)	-0.03	ug/L	-7.61	-0.03
Tl (190.794 nm)	0.83	ug/L	2.39	0.83
V (292.401 nm)	1.16 K	ug/L	57.31 K	1.16 K
V C (311.837 nm)	Uncal	ug/L	27.24 K	Uncal
Zn (206.200 nm)	1.72	ug/L	138.50	1.72
Zn C (202.548 nm)	2.78	ug/L	309.03	2.78
Zn RAD (206.200 nm)	2.19	ug/L	10.79	2.19

Solution Name: ICSAB

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
ICSAB	03/12/20 12:57:54 PM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	526.47	ug/L	42371.65	526.47
Ag C (338.289 nm)	Uncal	ug/L	2975.43	Uncal
Al (237.312 nm)	106469.56	ug/L	257537.04	106469.56
Al C (308.215 nm)	107071.80 o	ug/L	1031144.79	107071.80 o
Al C (396.152 nm)	109054.93 o	ug/L	3949519.69	109054.93 o
Al RAD (396.152 nm)	104785.96 o	ug/L	532792.70	104785.96 o
As (188.980 nm)	258.09 G	ug/L	1007.05 G	258.09 G
As C (193.696 nm)	249.67	ug/L	713.71	249.67
B (249.678 nm)	1.71	ug/L	60.82	1.71
Ba (233.527 nm)	258.19	ug/L	21943.96	258.19
Ba (455.403 nm)	259.62	ug/L	466695.62	259.62
Ba RAD (233.527 nm)	252.31	ug/L	1982.93	252.31
Be (313.107 nm)	260.91	ug/L	440614.59	260.91
Be C (234.861 nm)	253.84	ug/L	155087.60	253.84
Ca (315.887 nm)	104008.85	ug/L	1824847.97	104008.85
Ca RAD (315.887 nm)	103649.36	ug/L	149970.43	103649.36
Cd (214.439 nm)	499.44	ug/L	51936.31	499.44
Cd C (226.502 nm)	504.43	ug/L	51131.35	504.43
Cd C (228.802 nm)	511.94	ug/L	12973.91	511.94
Co (228.615 nm)	245.88	ug/L	3101.64	245.88
Co C (230.786 nm)	249.14	ug/L	5696.20	249.14
Cr (267.716 nm)	256.28	ug/L	15756.12	256.28
Cr C (205.560 nm)	254.93	ug/L	11474.98	254.93
Cu (327.395 nm)	267.92	ug/L	12500.88	267.92
Cu C (324.754 nm)	266.05	ug/L	11056.61	266.05
Fe (259.940 nm)	95898.74 o	ug/L	4244901.97	95898.74 o
Fe (261.187 nm)	99914.16 o	ug/L	846654.35	99914.16 o
Fe C (238.204 nm)	93019.53 o	ug/L	7118714.37	93019.53 o
Fe RAD (259.940 nm)	99095.17 o	ug/L	495407.57	99095.17 o
Fe RAD (261.187 nm)	100712.30 o	ug/L	105167.92	100712.30 o
K RAD (766.491 nm)	-10.65	ug/L	73.93	-10.65
Mg C (279.078 nm)	106554.98 o	ug/L	913916.16	106554.98 o
Mg RAD (279.078 nm)	105624.66	ug/L	86466.19	105624.66
Mn (257.610 nm)	251.74	ug/L	82940.13	251.74
Mn C (260.568 nm)	257.52	ug/L	18044.94	257.52
Mo (202.032 nm)	248.69	ug/L	4551.26	248.69
Mo C (203.846 nm)	Uncal	ug/L	1418.20 G	Uncal
Mo C (204.598 nm)	250.91	ug/L	3016.83	250.91
Na RAD (588.995 nm)	-9.86	ug/L	2159.61	-9.86
Na RAD (589.592 nm)	-8.26	ug/L	-92.95	-8.26
Ni (231.604 nm)	503.02	ug/L	9707.30	503.02
Ni C (221.648 nm)	503.49	ug/L	7750.57	503.49
P (213.618 nm)	0.60	ug/L	15.89	0.60
P C (214.914 nm)	35.55	ug/L	49.04	35.55

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	503.39	ug/L	3883.35	503.39
Sb (206.834 nm)	242.63	ug/L	615.64	242.63
Sb (217.582 nm)	Uncal	ug/L	818.16 G	Uncal
Sb C (231.146 nm)	234.23	ug/L	500.20	234.23
Se (196.026 nm)	248.81 G	ug/L	482.12 G	248.81 G
Sn (189.925 nm)	-0.53	ug/L	8.85	-0.53
Sr RAD (421.552 nm)	0.88	ug/L	421.63	0.88
Ti (334.941 nm)	-0.06	ug/L	-3.96	-0.06
Tl (190.794 nm)	255.91	ug/L	481.22	255.91
V (292.401 nm)	258.02	ug/L	9003.75	258.02
V C (311.837 nm)	Uncal	ug/L	15021.80	Uncal
Zn (206.200 nm)	460.06	ug/L	17407.03	460.06
Zn C (202.548 nm)	481.40	ug/L	45671.35	481.40
Zn RAD (206.200 nm)	495.11	ug/L	936.46	495.11

Solution Name: CCV

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
CCV	03/12/20 2:40:26 PM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	248.67	ug/L	20035.35	248.67
Ag C (338.289 nm)	Uncal	ug/L	1403.32	Uncal
Al (237.312 nm)	10055.48	ug/L	24334.93	10055.48
Al C (308.215 nm)	9933.87	ug/L	99416.18	9933.87
Al C (396.152 nm)	10189.51	ug/L	369207.79	10189.51
Al RAD (396.152 nm)	10089.96	ug/L	51333.51	10089.96
As (188.980 nm)	506.24 Q	ug/L	1983.27 Q	506.24 Q
As C (193.696 nm)	494.51	ug/L	1392.92	494.51
B (249.678 nm)	496.72	ug/L	8882.27	496.72
Ba (233.527 nm)	508.82	ug/L	43109.45	508.82
Ba (455.403 nm)	509.48	ug/L	915435.83	509.48
Ba RAD (233.527 nm)	511.69	ug/L	4017.53	511.69
Be (313.107 nm)	513.17	ug/L	866584.38	513.17
Be C (234.861 nm)	510.58	ug/L	311957.99	510.58
Ca (315.887 nm)	25384.84	ug/L	445436.43	25384.84
Ca RAD (315.887 nm)	25664.26	ug/L	37154.17	25664.26
Cd (214.439 nm)	499.61	ug/L	51888.62	499.61
Cd C (226.502 nm)	516.62	ug/L	51812.18	516.62
Cd C (228.802 nm)	505.54	ug/L	12809.52	505.54
Co (228.615 nm)	507.74	ug/L	6147.95	507.74
Co C (230.786 nm)	499.32	ug/L	10992.13	499.32
Cr (267.716 nm)	503.59	ug/L	30914.64	503.59
Cr C (205.560 nm)	506.35	ug/L	22769.55	506.35
Cu (327.395 nm)	500.43	ug/L	23322.12	500.43
Cu C (324.754 nm)	508.46	ug/L	20498.36	508.46
Fe (259.940 nm)	10201.51	ug/L	451619.55	10201.51
Fe (261.187 nm)	10163.60	ug/L	86173.16	10163.60
Fe C (238.204 nm)	9961.64	ug/L	762468.70	9961.64
Fe RAD (259.940 nm)	10123.02	ug/L	50618.42	10123.02
Fe RAD (261.187 nm)	10365.28	ug/L	10838.67	10365.28
K RAD (766.491 nm)	10348.29	ug/L	14394.51	10348.29
Mg C (279.078 nm)	25687.05	ug/L	220337.71	25687.05
Mg RAD (279.078 nm)	25910.35	ug/L	21216.74	25910.35
Mn (257.610 nm)	510.30	ug/L	167225.02	510.30
Mn C (260.568 nm)	512.24	ug/L	35874.33	512.24
Mo (202.032 nm)	510.69	ug/L	9332.97	510.69
Mo C (203.846 nm)	Uncal	ug/L	2861.71 Q	Uncal
Mo C (204.598 nm)	508.72	ug/L	6112.74	508.72
Na RAD (588.995 nm)	12503.69	ug/L	270547.60	12503.69
Na RAD (589.592 nm)	12302.65	ug/L	169407.65	12302.65
Ni (231.604 nm)	510.45	ug/L	9848.79	510.45
Ni C (221.648 nm)	510.20	ug/L	7853.77	510.20
P (213.618 nm)	2529.18	ug/L	9572.80	2529.18
P C (214.914 nm)	2492.65	ug/L	3121.73	2492.65

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	505.78	ug/L	3888.97	505.78
Sb (206.834 nm)	504.04	ug/L	1246.82	504.04
Sb (217.582 nm)	Uncal	ug/L	1767.03 Q	Uncal
Sb C (231.146 nm)	505.54	ug/L	1065.48	505.54
Se (196.026 nm)	503.68 Q	ug/L	967.50 Q	503.68 Q
Sn (189.925 nm)	514.66	ug/L	3469.89	514.66
Sr RAD (421.552 nm)	511.41	ug/L	232242.26	511.41
Ti (334.941 nm)	518.23	ug/L	156350.19	518.23
Tl (190.794 nm)	513.44	ug/L	963.74	513.44
V (292.401 nm)	510.28	ug/L	17784.63	510.28
V C (311.837 nm)	Uncal	ug/L	29919.27 Q	Uncal
Zn (206.200 nm)	477.67	ug/L	18070.60	477.67
Zn C (202.548 nm)	485.79	ug/L	46087.22	485.79
Zn RAD (206.200 nm)	519.44	ug/L	982.14	519.44

Solution Name: CCB

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
CCB	03/12/20 2:44:51 PM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	0.11	ug/L	47.25	0.11
Ag C (338.289 nm)	Uncal	ug/L	15.58 Z	Uncal
Al (237.312 nm)	-0.40	ug/L	10.10	-0.40
Al C (308.215 nm)	31.95	ug/L	4438.89	31.95
Al C (396.152 nm)	0.98	ug/L	240.55	0.98
Al RAD (396.152 nm)	0.57	ug/L	36.41	0.57
As (188.980 nm)	-0.85 Z	ug/L	-9.30 Z	-0.85 Z
As C (193.696 nm)	1.34	ug/L	17.58	1.34
B (249.678 nm)	0.53	ug/L	36.42	0.53
Ba (233.527 nm)	0.02	ug/L	18.38	0.02
Ba (455.403 nm)	0.02	ug/L	475.58	0.02
Ba RAD (233.527 nm)	0.30	ug/L	6.16	0.30
Be (313.107 nm)	0.07	ug/L	140.48	0.07
Be C (234.861 nm)	0.11	ug/L	51.83	0.11
Ca (315.887 nm)	3.37	ug/L	110.45	3.37
Ca RAD (315.887 nm)	-5.18	ug/L	17.02	-5.18
Cd (214.439 nm)	0.06	ug/L	15.31	0.06
Cd C (226.502 nm)	0.05	ug/L	26.74	0.05
Cd C (228.802 nm)	0.38 Z	ug/L	10.81 Z	0.38 Z
Co (228.615 nm)	-0.30	ug/L	36.73	-0.30
Co C (230.786 nm)	-0.26	ug/L	27.43	-0.26
Cr (267.716 nm)	0.15	ug/L	28.62	0.15
Cr C (205.560 nm)	-0.11	ug/L	18.05	-0.11
Cu (327.395 nm)	0.45	ug/L	31.85	0.45
Cu C (324.754 nm)	-0.21	ug/L	686.10	-0.21
Fe (259.940 nm)	0.71	ug/L	94.11	0.71
Fe (261.187 nm)	-1.09	ug/L	44.95	-1.09
Fe C (238.204 nm)	0.52	ug/L	164.56	0.52
Fe RAD (259.940 nm)	-0.49	ug/L	9.03	-0.49
Fe RAD (261.187 nm)	-2.72	ug/L	13.68	-2.72
K RAD (766.491 nm)	21.35	ug/L	118.17	21.35
Mg C (279.078 nm)	5.57	ug/L	75.87	5.57
Mg RAD (279.078 nm)	0.93	ug/L	8.80	0.93
Mn (257.610 nm)	0.07	ug/L	83.69	0.07
Mn C (260.568 nm)	0.02	ug/L	20.46	0.02
Mo (202.032 nm)	0.33	ug/L	18.39	0.33
Mo C (203.846 nm)	Uncal	ug/L	3.82 Z	Uncal
Mo C (204.598 nm)	0.66	ug/L	11.83	0.66
Na RAD (588.995 nm)	-2.80	ug/L	2311.05	-2.80
Na RAD (589.592 nm)	5.53	ug/L	96.93	5.53
Ni (231.604 nm)	-0.01	ug/L	16.44	-0.01
Ni C (221.648 nm)	-0.49	ug/L	3.97	-0.49
P (213.618 nm)	1.30	ug/L	13.60	1.30
P C (214.914 nm)	3.43	ug/L	7.23	3.43

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	0.24	ug/L	37.92	0.24
Sb (206.834 nm)	-1.50	ug/L	19.59	-1.50
Sb (217.582 nm)	Uncal	ug/L	12.73 Z	Uncal
Sb C (231.146 nm)	-0.49	ug/L	11.42	-0.49
Se (196.026 nm)	-0.45 Z	ug/L	7.42 Z	-0.45 Z
Sn (189.925 nm)	-0.29	ug/L	10.46	-0.29
Sr RAD (421.552 nm)	0.06	ug/L	49.03	0.06
Ti (334.941 nm)	0.00	ug/L	-0.41	0.00
Tl (190.794 nm)	0.68	ug/L	2.06	0.68
V (292.401 nm)	-0.13	ug/L	-1.31	-0.13
V C (311.837 nm)	Uncal	ug/L	43.43 Z	Uncal
Zn (206.200 nm)	-1.43	ug/L	20.08	-1.43
Zn C (202.548 nm)	0.13	ug/L	58.28	0.13
Zn RAD (206.200 nm)	-1.64	ug/L	3.60	-1.64

Solution Name: CCV

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
CCV	03/12/20 3:51:51 PM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	246.41	ug/L	19853.52	246.41
Ag C (338.289 nm)	Uncal	ug/L	1396.98	Uncal
Al (237.312 nm)	9929.49	ug/L	24030.15	9929.49
Al C (308.215 nm)	9830.36	ug/L	98423.36	9830.36
Al C (396.152 nm)	10075.68	ug/L	365085.83	10075.68
Al RAD (396.152 nm)	10096.66	ug/L	51367.56	10096.66
As (188.980 nm)	498.48	ug/L	1952.78	498.48
As C (193.696 nm)	492.14	ug/L	1386.30	492.14
B (249.678 nm)	496.77	ug/L	8883.05	496.77
Ba (233.527 nm)	503.86	ug/L	42689.75	503.86
Ba (455.403 nm)	504.03	ug/L	905652.33	504.03
Ba RAD (233.527 nm)	514.28	ug/L	4037.83	514.28
Be (313.107 nm)	508.70	ug/L	859047.26	508.70
Be C (234.861 nm)	505.48	ug/L	308843.34	505.48
Ca (315.887 nm)	25082.79	ug/L	440136.94	25082.79
Ca RAD (315.887 nm)	25682.67	ug/L	37180.73	25682.67
Cd (214.439 nm)	495.05	ug/L	51418.93	495.05
Cd C (226.502 nm)	511.33	ug/L	51282.55	511.33
Cd C (228.802 nm)	500.65	ug/L	12685.58	500.65
Co (228.615 nm)	501.54	ug/L	6073.98	501.54
Co C (230.786 nm)	495.16	ug/L	10900.59	495.16
Cr (267.716 nm)	498.92	ug/L	30628.37	498.92
Cr C (205.560 nm)	501.12	ug/L	22534.69	501.12
Cu (327.395 nm)	494.59	ug/L	23049.76	494.59
Cu C (324.754 nm)	503.27	ug/L	20296.22	503.27
Fe (259.940 nm)	10084.46	ug/L	446438.81	10084.46
Fe (261.187 nm)	10043.67	ug/L	85157.01	10043.67
Fe C (238.204 nm)	9843.49	ug/L	753426.43	9843.49
Fe RAD (259.940 nm)	10136.35	ug/L	50685.08	10136.35
Fe RAD (261.187 nm)	10369.43	ug/L	10843.00	10369.43
K RAD (766.491 nm)	10236.08	ug/L	14239.39	10236.08
Mg C (279.078 nm)	25359.87	ug/L	217531.63	25359.87
Mg RAD (279.078 nm)	25930.88	ug/L	21233.54	25930.88
Mn (257.610 nm)	504.77	ug/L	165414.72	504.77
Mn C (260.568 nm)	506.35	ug/L	35462.17	506.35
Mo (202.032 nm)	505.21	ug/L	9232.95	505.21
Mo C (203.846 nm)	Uncal	ug/L	2830.07 Q	Uncal
Mo C (204.598 nm)	502.75	ug/L	6041.00	502.75
Na RAD (588.995 nm)	12581.21	ug/L	272210.15	12581.21
Na RAD (589.592 nm)	12233.71	ug/L	168458.55	12233.71
Ni (231.604 nm)	505.57	ug/L	9755.82	505.57
Ni C (221.648 nm)	504.75	ug/L	7770.07	504.75
P (213.618 nm)	2504.12	ug/L	9477.35	2504.12
P C (214.914 nm)	2467.85	ug/L	3090.69	2467.85

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	499.64	ug/L	3842.46	499.64
Sb (206.834 nm)	498.11	ug/L	1232.41	498.11
Sb (217.582 nm)	Uncal	ug/L	1740.38 Q	Uncal
Sb C (231.146 nm)	499.77	ug/L	1053.46	499.77
Se (196.026 nm)	498.90 Q	ug/L	958.40 Q	498.90 Q
Sn (189.925 nm)	510.24	ug/L	3440.18	510.24
Sr RAD (421.552 nm)	509.71	ug/L	231469.90	509.71
Ti (334.941 nm)	511.59	ug/L	154348.71	511.59
Tl (190.794 nm)	507.03	ug/L	951.74	507.03
V (292.401 nm)	505.39	ug/L	17614.18	505.39
V C (311.837 nm)	Uncal	ug/L	29647.05 Q	Uncal
Zn (206.200 nm)	474.34	ug/L	17945.11	474.34
Zn C (202.548 nm)	482.18	ug/L	45744.39	482.18
Zn RAD (206.200 nm)	522.75	ug/L	988.37	522.75

Solution Name: CCB

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
CCB	03/12/20 3:56:15 PM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	0.12	ug/L	47.94	0.12
Ag C (338.289 nm)	Uncal	ug/L	14.69 Z	Uncal
Al (237.312 nm)	5.55	ug/L	24.49	5.55
Al C (308.215 nm)	41.23	ug/L	4527.83	41.23
Al C (396.152 nm)	2.74	ug/L	304.32	2.74
Al RAD (396.152 nm)	0.21	ug/L	34.59	0.21
As (188.980 nm)	-1.17	ug/L	-10.56	-1.17
As C (193.696 nm)	-0.05	ug/L	13.69	-0.05
B (249.678 nm)	0.60	ug/L	37.73	0.60
Ba (233.527 nm)	0.09	ug/L	24.74	0.09
Ba (455.403 nm)	0.09	ug/L	599.09	0.09
Ba RAD (233.527 nm)	0.05	ug/L	4.18	0.05
Be (313.107 nm)	0.17	ug/L	314.31	0.17
Be C (234.861 nm)	0.15	ug/L	78.05	0.15
Ca (315.887 nm)	6.20	ug/L	160.21	6.20
Ca RAD (315.887 nm)	4.80	ug/L	31.45	4.80
Cd (214.439 nm)	0.12	ug/L	21.25	0.12
Cd C (226.502 nm)	0.08	ug/L	29.57	0.08
Cd C (228.802 nm)	0.23	ug/L	6.87	0.23
Co (228.615 nm)	-0.07	ug/L	39.55	-0.07
Co C (230.786 nm)	-0.35	ug/L	25.28	-0.35
Cr (267.716 nm)	0.09	ug/L	24.90	0.09
Cr C (205.560 nm)	0.12	ug/L	28.24	0.12
Cu (327.395 nm)	0.28	ug/L	24.01	0.28
Cu C (324.754 nm)	-0.20	ug/L	686.50	-0.20
Fe (259.940 nm)	2.04	ug/L	152.87	2.04
Fe (261.187 nm)	0.47	ug/L	58.23	0.47
Fe C (238.204 nm)	1.72	ug/L	256.32	1.72
Fe RAD (259.940 nm)	1.11	ug/L	17.03	1.11
Fe RAD (261.187 nm)	-3.62	ug/L	12.74	-3.62
K RAD (766.491 nm)	19.54	ug/L	115.68	19.54
Mg C (279.078 nm)	7.16	ug/L	89.56	7.16
Mg RAD (279.078 nm)	6.44	ug/L	13.32	6.44
Mn (257.610 nm)	0.11	ug/L	96.58	0.11
Mn C (260.568 nm)	0.12	ug/L	27.50	0.12
Mo (202.032 nm)	0.25	ug/L	17.00	0.25
Mo C (203.846 nm)	Uncal	ug/L	7.34 Z	Uncal
Mo C (204.598 nm)	0.33	ug/L	7.76	0.33
Na RAD (588.995 nm)	-4.47	ug/L	2275.16	-4.47
Na RAD (589.592 nm)	4.24	ug/L	79.15	4.24
Ni (231.604 nm)	0.03	ug/L	17.21	0.03
Ni C (221.648 nm)	-0.13	ug/L	9.54	-0.13
P (213.618 nm)	0.75	ug/L	11.51	0.75
P C (214.914 nm)	0.10	ug/L	3.07	0.10

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	-0.43	ug/L	32.74	-0.43
Sb (206.834 nm)	-1.38	ug/L	19.89	-1.38
Sb (217.582 nm)	Uncal	ug/L	14.41 Z	Uncal
Sb C (231.146 nm)	0.33	ug/L	13.13	0.33
Se (196.026 nm)	0.00 Z	ug/L	8.27 Z	0.00 Z
Sn (189.925 nm)	-0.10	ug/L	11.74	-0.10
Sr RAD (421.552 nm)	0.12	ug/L	74.50	0.12
Ti (334.941 nm)	0.04	ug/L	11.64	0.04
Tl (190.794 nm)	0.79	ug/L	2.26	0.79
V (292.401 nm)	0.06	ug/L	5.04	0.06
V C (311.837 nm)	Uncal	ug/L	40.53 Z	Uncal
Zn (206.200 nm)	-1.34	ug/L	23.52	-1.34
Zn C (202.548 nm)	0.25	ug/L	68.82	0.25
Zn RAD (206.200 nm)	-2.32	ug/L	2.33	-2.32

METALS

Raw Data

Solution Name: BA07942W24 DF5

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
BA07942W24 DF5	03/12/20 3:43:00 PM	1	1	5

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	0.20	ug/L	54.11	1.00
Ag C (338.289 nm)	Uncal	ug/L	6.94	Uncal
Al (237.312 nm)	13.84	ug/L	44.55	69.18
Al C (308.215 nm)	41.11	ug/L	4526.72	205.55
Al C (396.152 nm)	11.88	ug/L	635.35	59.41
Al RAD (396.152 nm)	9.24	ug/L	80.49	46.19
As (188.980 nm)	0.30	ug/L	-4.81	1.48
As C (193.696 nm)	-1.76	ug/L	8.94	-8.78
B (249.678 nm)	4.92	ug/L	114.61	24.61
Ba (233.527 nm)	1.19	ug/L	117.65	5.94
Ba (455.403 nm)	1.20	ug/L	2586.52	6.00
Ba RAD (233.527 nm)	0.75	ug/L	9.68	3.74
Be (313.107 nm)	0.06	ug/L	128.40	0.30
Be C (234.861 nm)	0.08	ug/L	32.32	0.38
Ca (315.887 nm)	2401.01	ug/L	42173.61	12005.05
Ca RAD (315.887 nm)	2427.88	ug/L	3536.31	12139.38
Cd (214.439 nm)	0.07	ug/L	16.87	0.37
Cd C (226.502 nm)	0.01	ug/L	22.90	0.05
Cd C (228.802 nm)	0.14	ug/L	4.64	0.69
Co (228.615 nm)	-0.42	ug/L	35.34	-2.08
Co C (230.786 nm)	-0.30	ug/L	26.57	-1.48
Cr (267.716 nm)	1.91	ug/L	136.86	9.57
Cr C (205.560 nm)	1.76	ug/L	102.24	8.82
Cu (327.395 nm)	0.75	ug/L	45.83	3.74
Cu C (324.754 nm)	-0.22	ug/L	685.80	-1.11
Fe (259.940 nm)	26.50	ug/L	1235.56	132.51
Fe (261.187 nm)	25.65	ug/L	271.51	128.23
Fe C (238.204 nm)	25.96	ug/L	2111.34	129.78
Fe RAD (259.940 nm)	25.37	ug/L	138.32	126.85
Fe RAD (261.187 nm)	23.06	ug/L	40.59	115.29
K RAD (766.491 nm)	374.93	ug/L	606.97	1874.63
Mg C (279.078 nm)	1887.29	ug/L	16214.82	9436.46
Mg RAD (279.078 nm)	1863.30	ug/L	1533.23	9316.49
Mn (257.610 nm)	0.51	ug/L	229.14	2.56
Mn C (260.568 nm)	0.41	ug/L	47.87	2.05
Mo (202.032 nm)	0.40	ug/L	19.66	2.00
Mo C (203.846 nm)	Uncal	ug/L	9.64	Uncal
Mo C (204.598 nm)	0.86	ug/L	14.18	4.30
Na RAD (588.995 nm)	4318.77	ug/L	94998.98	21593.83
Na RAD (589.592 nm)	4212.93	ug/L	58025.87	21064.67
Ni (231.604 nm)	1.14	ug/L	38.97	5.72
Ni C (221.648 nm)	0.96	ug/L	26.28	4.79
P (213.618 nm)	11.11	ug/L	50.41	55.57
P C (214.914 nm)	8.70	ug/L	13.82	43.49

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	-0.99	ug/L	28.43	-4.97
Sb (206.834 nm)	-1.06	ug/L	20.66	-5.32
Sb (217.582 nm)	Uncal	ug/L	15.91	Uncal
Sb C (231.146 nm)	-0.73	ug/L	10.92	-3.65
Se (196.026 nm)	0.91	ug/L	10.00	4.53
Sn (189.925 nm)	-0.53	ug/L	8.89	-2.63
Sr RAD (421.552 nm)	16.27	ug/L	7408.09	81.33
Ti (334.941 nm)	0.88	ug/L	266.39	4.41
Tl (190.794 nm)	0.92	ug/L	2.51	4.59
V (292.401 nm)	2.46	ug/L	88.96	12.31
V C (311.837 nm)	Uncal	ug/L	60.31	Uncal
Zn (206.200 nm)	-0.45	ug/L	56.79	-2.26
Zn C (202.548 nm)	0.98	ug/L	138.46	4.90
Zn RAD (206.200 nm)	-1.28	ug/L	4.28	-6.42

Solution Name: BA07944W24 DF5

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
BA07944W24 DF5	03/12/20 3:47:25 PM	1	1	5

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	-0.07	ug/L	32.42	-0.35
Ag C (338.289 nm)	Uncal	ug/L	14.30	Uncal
Al (237.312 nm)	9.89	ug/L	35.02	49.43
Al C (308.215 nm)	45.40	ug/L	4567.82	226.98
Al C (396.152 nm)	9.41	ug/L	545.80	47.05
Al RAD (396.152 nm)	6.69	ug/L	67.55	33.46
As (188.980 nm)	0.16	ug/L	-5.34	0.80
As C (193.696 nm)	1.55	ug/L	18.17	7.77
B (249.678 nm)	6.75	ug/L	147.07	33.73
Ba (233.527 nm)	0.84	ug/L	88.50	4.21
Ba (455.403 nm)	0.91	ug/L	2074.91	4.57
Ba RAD (233.527 nm)	0.89	ug/L	10.79	4.45
Be (313.107 nm)	0.01	ug/L	50.16	0.07
Be C (234.861 nm)	0.04	ug/L	8.08	0.18
Ca (315.887 nm)	2029.21	ug/L	35651.11	10146.06
Ca RAD (315.887 nm)	2069.28	ug/L	3017.64	10346.39
Cd (214.439 nm)	0.03	ug/L	12.69	0.17
Cd C (226.502 nm)	-0.05	ug/L	17.99	-0.24
Cd C (228.802 nm)	0.00	ug/L	1.02	-0.02
Co (228.615 nm)	-0.56	ug/L	33.80	-2.78
Co C (230.786 nm)	-0.14	ug/L	30.34	-0.69
Cr (267.716 nm)	1.06	ug/L	84.56	5.30
Cr C (205.560 nm)	0.91	ug/L	63.90	4.55
Cu (327.395 nm)	0.32	ug/L	25.95	1.61
Cu C (324.754 nm)	-0.34	ug/L	681.31	-1.68
Fe (259.940 nm)	181.66	ug/L	8103.61	908.32
Fe (261.187 nm)	180.19	ug/L	1581.00	900.94
Fe C (238.204 nm)	178.10	ug/L	13754.34	890.48
Fe RAD (259.940 nm)	178.90	ug/L	905.85	894.50
Fe RAD (261.187 nm)	179.12	ug/L	203.53	895.59
K RAD (766.491 nm)	340.38	ug/L	559.21	1701.89
Mg C (279.078 nm)	1934.10	ug/L	16616.28	9670.51
Mg RAD (279.078 nm)	1941.09	ug/L	1596.91	9705.45
Mn (257.610 nm)	1.17	ug/L	446.51	5.87
Mn C (260.568 nm)	1.06	ug/L	93.64	5.32
Mo (202.032 nm)	0.45	ug/L	20.60	2.25
Mo C (203.846 nm)	Uncal	ug/L	6.00	Uncal
Mo C (204.598 nm)	0.29	ug/L	7.33	1.45
Na RAD (588.995 nm)	4706.38	ug/L	103312.54	23531.92
Na RAD (589.592 nm)	4538.42	ug/L	62507.31	22692.12
Ni (231.604 nm)	0.34	ug/L	23.25	1.69
Ni C (221.648 nm)	0.44	ug/L	18.34	2.21
P (213.618 nm)	16.01	ug/L	68.78	80.07
P C (214.914 nm)	19.33	ug/L	27.11	96.66

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	-0.29	ug/L	33.86	-1.45
Sb (206.834 nm)	0.03	ug/L	23.30	0.13
Sb (217.582 nm)	Uncal	ug/L	15.78	Uncal
Sb C (231.146 nm)	2.74	ug/L	18.16	13.72
Se (196.026 nm)	2.97	ug/L	13.94	14.87
Sn (189.925 nm)	-1.00	ug/L	5.69	-5.02
Sr RAD (421.552 nm)	14.46	ug/L	6588.98	72.31
Ti (334.941 nm)	0.59	ug/L	177.92	2.95
Tl (190.794 nm)	0.33	ug/L	1.42	1.67
V (292.401 nm)	3.96	ug/L	141.24	19.81
V C (311.837 nm)	Uncal	ug/L	135.17	Uncal
Zn (206.200 nm)	-0.09	ug/L	70.58	-0.44
Zn C (202.548 nm)	1.30	ug/L	168.54	6.49
Zn RAD (206.200 nm)	-0.18	ug/L	6.36	-0.88

Solution Name: 200306A BLK

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
200306A BLK	03/12/20 3:29:44 PM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	-0.06	ug/L	32.99	-0.06
Ag C (338.289 nm)	Uncal	ug/L	7.64	Uncal
Al (237.312 nm)	4.68	ug/L	22.39	4.68
Al C (308.215 nm)	32.18	ug/L	4441.08	32.18
Al C (396.152 nm)	2.51	ug/L	295.84	2.51
Al RAD (396.152 nm)	1.78	ug/L	42.60	1.78
As (188.980 nm)	0.17	ug/L	-5.30	0.17
As C (193.696 nm)	0.62	ug/L	15.55	0.62
B (249.678 nm)	-0.01	ug/L	26.86	-0.01
Ba (233.527 nm)	-0.01	ug/L	16.29	-0.01
Ba (455.403 nm)	-0.02	ug/L	401.54	-0.02
Ba RAD (233.527 nm)	-0.27	ug/L	1.70	-0.27
Be (313.107 nm)	0.03	ug/L	80.51	0.03
Be C (234.861 nm)	0.01	ug/L	-6.67	0.01
Ca (315.887 nm)	3.77	ug/L	117.55	3.77
Ca RAD (315.887 nm)	1.37	ug/L	26.49	1.37
Cd (214.439 nm)	0.05	ug/L	13.90	0.05
Cd C (226.502 nm)	0.05	ug/L	26.46	0.05
Cd C (228.802 nm)	0.23	ug/L	6.90	0.23
Co (228.615 nm)	-0.93	ug/L	29.07	-0.93
Co C (230.786 nm)	-0.55	ug/L	21.01	-0.55
Cr (267.716 nm)	0.11	ug/L	26.37	0.11
Cr C (205.560 nm)	0.06	ug/L	25.80	0.06
Cu (327.395 nm)	0.19	ug/L	19.80	0.19
Cu C (324.754 nm)	-0.38	ug/L	679.73	-0.38
Fe (259.940 nm)	4.78	ug/L	273.91	4.78
Fe (261.187 nm)	4.31	ug/L	90.76	4.31
Fe C (238.204 nm)	4.46	ug/L	466.25	4.46
Fe RAD (259.940 nm)	3.96	ug/L	31.28	3.96
Fe RAD (261.187 nm)	-0.12	ug/L	16.40	-0.12
K RAD (766.491 nm)	10.81	ug/L	103.61	10.81
Mg C (279.078 nm)	5.26	ug/L	73.22	5.26
Mg RAD (279.078 nm)	4.51	ug/L	11.73	4.51
Mn (257.610 nm)	0.05	ug/L	77.02	0.05
Mn C (260.568 nm)	-0.04	ug/L	16.19	-0.04
Mo (202.032 nm)	0.32	ug/L	18.19	0.32
Mo C (203.846 nm)	Uncal	ug/L	3.09	Uncal
Mo C (204.598 nm)	0.63	ug/L	11.38	0.63
Na RAD (588.995 nm)	15.31	ug/L	2699.37	15.31
Na RAD (589.592 nm)	31.98	ug/L	461.18	31.98
Ni (231.604 nm)	-0.56	ug/L	5.69	-0.56
Ni C (221.648 nm)	-0.02	ug/L	11.20	-0.02
P (213.618 nm)	2.41	ug/L	17.74	2.41
P C (214.914 nm)	1.42	ug/L	4.71	1.42

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	0.20	ug/L	37.57	0.20
Sb (206.834 nm)	0.42	ug/L	24.27	0.42
Sb (217.582 nm)	Uncal	ug/L	16.79	Uncal
Sb C (231.146 nm)	-0.87	ug/L	10.62	-0.87
Se (196.026 nm)	1.82	ug/L	11.74	1.82
Sn (189.925 nm)	-0.10	ug/L	11.75	-0.10
Sr RAD (421.552 nm)	-0.02	ug/L	14.22	-0.02
Ti (334.941 nm)	0.04	ug/L	13.10	0.04
Tl (190.794 nm)	-0.33	ug/L	0.17	-0.33
V (292.401 nm)	-0.13	ug/L	-1.58	-0.13
V C (311.837 nm)	Uncal	ug/L	55.86	Uncal
Zn (206.200 nm)	-0.33	ug/L	61.39	-0.33
Zn C (202.548 nm)	1.28	ug/L	167.04	1.28
Zn RAD (206.200 nm)	-1.18	ug/L	4.46	-1.18

Solution Name: 200306A LCS

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
200306A LCS	03/12/20 3:34:08 PM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	97.50	ug/L	7879.06	97.50
Ag C (338.289 nm)	Uncal	ug/L	553.97	Uncal
Al (237.312 nm)	1979.77	ug/L	4800.49	1979.77
Al C (308.215 nm)	2008.29	ug/L	23395.49	2008.29
Al C (396.152 nm)	2018.41	ug/L	73299.75	2018.41
Al RAD (396.152 nm)	1970.47	ug/L	10051.89	1970.47
As (188.980 nm)	239.64	ug/L	935.75	239.64
As C (193.696 nm)	238.55	ug/L	679.01	238.55
B (249.678 nm)	237.35	ug/L	4258.77	237.35
Ba (233.527 nm)	251.90	ug/L	21348.31	251.90
Ba (455.403 nm)	250.77	ug/L	450810.08	250.77
Ba RAD (233.527 nm)	249.00	ug/L	1957.01	249.00
Be (313.107 nm)	49.63	ug/L	83833.73	49.63
Be C (234.861 nm)	48.82	ug/L	29815.92	48.82
Ca (315.887 nm)	24897.88	ug/L	436866.74	24897.88
Ca RAD (315.887 nm)	24757.88	ug/L	35838.58	24757.88
Cd (214.439 nm)	48.24	ug/L	5057.06	48.24
Cd C (226.502 nm)	50.17	ug/L	5051.77	50.17
Cd C (228.802 nm)	48.95	ug/L	1241.35	48.95
Co (228.615 nm)	249.05	ug/L	3046.60	249.05
Co C (230.786 nm)	246.83	ug/L	5442.91	246.83
Cr (267.716 nm)	251.49	ug/L	15447.85	251.49
Cr C (205.560 nm)	251.37	ug/L	11315.23	251.37
Cu (327.395 nm)	250.18	ug/L	11664.56	250.18
Cu C (324.754 nm)	251.49	ug/L	10489.72	251.49
Fe (259.940 nm)	1012.24	ug/L	44868.16	1012.24
Fe (261.187 nm)	1011.78	ug/L	8627.29	1011.78
Fe C (238.204 nm)	993.69	ug/L	76170.28	993.69
Fe RAD (259.940 nm)	986.22	ug/L	4941.77	986.22
Fe RAD (261.187 nm)	1006.99	ug/L	1067.90	1006.99
K RAD (766.491 nm)	5016.83	ug/L	7024.11	5016.83
Mg C (279.078 nm)	25093.25	ug/L	215244.93	25093.25
Mg RAD (279.078 nm)	24757.10	ug/L	20272.75	24757.10
Mn (257.610 nm)	249.57	ug/L	81801.17	249.57
Mn C (260.568 nm)	252.16	ug/L	17669.70	252.16
Mo (202.032 nm)	252.98	ug/L	4629.55	252.98
Mo C (203.846 nm)	Uncal	ug/L	1423.13	Uncal
Mo C (204.598 nm)	252.29	ug/L	3033.44	252.29
Na RAD (588.995 nm)	24184.45	ug/L	521074.15	24184.45
Na RAD (589.592 nm)	23801.61	ug/L	327729.01	23801.61
Ni (231.604 nm)	250.01	ug/L	4860.26	250.01
Ni C (221.648 nm)	250.41	ug/L	3860.55	250.41
P (213.618 nm)	1947.44	ug/L	7358.21	1947.44
P C (214.914 nm)	1926.70	ug/L	2412.76	1926.70

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	248.34	ug/L	1933.25	248.34
Sb (206.834 nm)	228.45	ug/L	577.72	228.45
Sb (217.582 nm)	Uncal	ug/L	815.54	Uncal
Sb C (231.146 nm)	233.68	ug/L	499.19	233.68
Se (196.026 nm)	222.18	ug/L	431.44	222.18
Sn (189.925 nm)	252.55	ug/L	1709.04	252.55
Sr RAD (421.552 nm)	246.79	ug/L	112084.78	246.79
Ti (334.941 nm)	255.39	ug/L	77050.78	255.39
Tl (190.794 nm)	250.31	ug/L	470.66	250.31
V (292.401 nm)	253.54	ug/L	8842.80	253.54
V C (311.837 nm)	Uncal	ug/L	14817.23	Uncal
Zn (206.200 nm)	454.44	ug/L	17195.28	454.44
Zn C (202.548 nm)	469.08	ug/L	44503.24	469.08
Zn RAD (206.200 nm)	493.23	ug/L	932.93	493.23

Solution Name: 200306A LCSD

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
200306A LCSD	03/12/20 3:38:33 PM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	99.55	ug/L	8044.04	99.55
Ag C (338.289 nm)	Uncal	ug/L	566.03	Uncal
Al (237.312 nm)	2011.10	ug/L	4876.29	2011.10
Al C (308.215 nm)	2038.52	ug/L	23685.47	2038.52
Al C (396.152 nm)	2050.82	ug/L	74473.40	2050.82
Al RAD (396.152 nm)	2003.56	ug/L	10220.17	2003.56
As (188.980 nm)	244.28	ug/L	953.99	244.28
As C (193.696 nm)	240.20	ug/L	683.60	240.20
B (249.678 nm)	241.18	ug/L	4327.12	241.18
Ba (233.527 nm)	255.99	ug/L	21694.48	255.99
Ba (455.403 nm)	254.49	ug/L	457494.29	254.49
Ba RAD (233.527 nm)	254.09	ug/L	1996.94	254.09
Be (313.107 nm)	50.43	ug/L	85192.24	50.43
Be C (234.861 nm)	49.58	ug/L	30279.94	49.58
Ca (315.887 nm)	25295.49	ug/L	443842.53	25295.49
Ca RAD (315.887 nm)	25211.60	ug/L	36494.92	25211.60
Cd (214.439 nm)	48.98	ug/L	5134.89	48.98
Cd C (226.502 nm)	50.79	ug/L	5113.85	50.79
Cd C (228.802 nm)	49.96	ug/L	1266.85	49.96
Co (228.615 nm)	253.28	ug/L	3097.48	253.28
Co C (230.786 nm)	251.04	ug/L	5535.23	251.04
Cr (267.716 nm)	256.06	ug/L	15727.95	256.06
Cr C (205.560 nm)	255.83	ug/L	11515.43	255.83
Cu (327.395 nm)	254.63	ug/L	11871.60	254.63
Cu C (324.754 nm)	255.61	ug/L	10649.99	255.61
Fe (259.940 nm)	1028.54	ug/L	45589.67	1028.54
Fe (261.187 nm)	1028.22	ug/L	8766.61	1028.22
Fe C (238.204 nm)	1011.73	ug/L	77550.87	1011.73
Fe RAD (259.940 nm)	1005.02	ug/L	5035.76	1005.02
Fe RAD (261.187 nm)	1023.31	ug/L	1084.93	1023.31
K RAD (766.491 nm)	5098.18	ug/L	7136.56	5098.18
Mg C (279.078 nm)	25500.75	ug/L	218739.87	25500.75
Mg RAD (279.078 nm)	25194.37	ug/L	20630.68	25194.37
Mn (257.610 nm)	253.87	ug/L	83209.01	253.87
Mn C (260.568 nm)	256.18	ug/L	17951.18	256.18
Mo (202.032 nm)	259.01	ug/L	4739.53	259.01
Mo C (203.846 nm)	Uncal	ug/L	1456.12	Uncal
Mo C (204.598 nm)	257.40	ug/L	3094.82	257.40
Na RAD (588.995 nm)	24411.39	ug/L	525941.38	24411.39
Na RAD (589.592 nm)	24199.81	ug/L	333211.63	24199.81
Ni (231.604 nm)	253.30	ug/L	4923.60	253.30
Ni C (221.648 nm)	254.30	ug/L	3920.42	254.30
P (213.618 nm)	1978.57	ug/L	7476.34	1978.57
P C (214.914 nm)	1952.47	ug/L	2445.00	1952.47

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	251.98	ug/L	1960.93	251.98
Sb (206.834 nm)	234.94	ug/L	593.48	234.94
Sb (217.582 nm)	Uncal	ug/L	829.28	Uncal
Sb C (231.146 nm)	244.16	ug/L	521.02	244.16
Se (196.026 nm)	226.15	ug/L	439.00	226.15
Sn (189.925 nm)	256.84	ug/L	1737.86	256.84
Sr RAD (421.552 nm)	250.55	ug/L	113790.50	250.55
Ti (334.941 nm)	260.59	ug/L	78620.82	260.59
Tl (190.794 nm)	252.19	ug/L	474.21	252.19
V (292.401 nm)	257.76	ug/L	8989.87	257.76
V C (311.837 nm)	Uncal	ug/L	15053.75	Uncal
Zn (206.200 nm)	460.60	ug/L	17427.61	460.60
Zn C (202.548 nm)	477.41	ug/L	45292.67	477.41
Zn RAD (206.200 nm)	499.86	ug/L	945.38	499.86

ICP-OES Calibration Standard Prep

Prepared: 03/12/20
Expires: 03/19/20
1% HNO3 / 5% HCl Prep: 03/12/20
Prepared By (Initials): PW

Calibration Standard 3

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. Range (ug/mL)	Lot Number - QA Number/ APPL Prep Date	Exp Date	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. Range (ug/L)
Solution A	Texas Scientific	HP1810-250	200 - 5,000	m2meb662248-38391	10/11/20	500uL	100mL	1% HNO3 / 5% HCl	1000 - 25,000
Solution B	Texas Scientific	HP1810-250	4000 - 10,000	m2meb662249-38389	10/11/20	500uL			2000 - 50,000
Solution C	Texas Scientific	HP1810-250	100 - 200	m2meb662250-38394	10/11/20	500uL			500 - 1000
Calibration Standard 2									
ICP-OES Calib Standard 3	Texas Scientific	Standard 2/CCV1	0.5 - 50	Prepared 03/12/20	03/19/20	25mL	50mL	1% HNO3 / 5% HCl	250 - 25,000
Calibration Standard 1									
200.7 LDL	O2SI	160634-01-01	0.05 - 100	10080366-3-41267	02/07/21	250uL	50mL	1% HNO3 / 5% HCl	0.25 - 200

ICP-OES ICV (SS)

Prepared: 03/12/20
Expires: 08/09/19
1% HNO3 / 5% HCl Prep: 03/12/20
Prepared By (Initials): PW

ICP-OES ICV 1

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. Range (ug/mL)	Lot Number - QA Number	Exp Date	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. Range (ug/mL)
QCS ICV Soln A	CPI	4400-070615RH01	50 - 500	10062445-11-49481	05/14/21	250uL	50mL	1% HNO3 / 5% HCl	0.25 - 2.5
QCS ICV Soln B	CPI	4400-070615RH01	2,500	10062445-12-49482	05/14/21	250uL			12.5

ICP-OES ICV Ba

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. Range (ug/mL)	Lot Number - QA Number	Exp Date	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. Range (ug/mL)
Custom 23 Element Mix #314	O2SI	161314-01-03	5 - 25,00	1064561-8-38870	08/09/19	1mL	50mL	1% HNO3 / 5% HCl	0.1 - 50
Custom 23 Element Mix #315	O2SI	161314-01-03	10 - 25	1064561-7-38869	08/09/19	1mL			0.2 - 0.5

ICP-OES CCV2

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. Range (ug/mL)	APPL Prep Date	Exp Date	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. Range (ug/mL)
ICP-OES Calib Standard 3	Texas Scientific	CCV2	0.5 - 50	Prepared 03/12/20	03/19/20	15mL	40mL	1% HNO3 / 5% HCl	0.15 - 15

ICP-OES Low Levels (LLICV)

Prepared: 03/12/20
Expires: 03/26/20
1% HNO3 / 5% HCl Prep: 03/12/20
Prepared By (Initials): PW

LLICV

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. Range ug/mL	Lot Number - QA Number	Exp Date	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. Range (ug/L)
200.7 LDL	O2SI	160634-01-01	0.05 - 100	10080366-3-41267	02/07/21	250uL	50mL	1% HNO3 / 5% HCl	0.25 - 200
LLICVX2									
200.7 LDL	O2SI	160634-01-01	0.05 - 100	10080366-3-41267	02/07/21	500uL	50mL	1% HNO3 / 5% HCl	0.50 - 400
LLICVX6									
200.7 LDL	O2SI	160634-01-01	0.05 - 100	10080366-3-41267	02/07/21	1.5mL	50mL	1% HNO3 / 5% HCl	1.5 - 1,200
LLICVX10									
200.7 LDL	O2SI	160634-01-01	0.05 - 100	10080366-3-41267	02/07/21	2.5mL	50mL	1% HNO3 / 5% HCl	2.5 - 2,000
LLICV 10									
ICP-OES Calib Standard 3	Texas Scientific	HP1810-250	0.5 - 50	10080366-3-41267	03/19/20	500uL	50mL	1% HNO3 / 5% HCl	5 - 500
LLICV 50									
ICP-OES Calib Standard 3	Texas Scientific	HP1810-250	0.5 - 50	10080366-3-41267	03/19/20	2.5mL	50mL	1% HNO3 / 5% HCl	25 - 2,500

ICP-OES Interference Check Solution A

Prepared: 03/12/20
Expires: 03/26/20
1% HNO3 / 5% HCl Prep: 03/12/20
Prepared By (Initials): PW

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp Date	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Aluminum	Inorganic Ventures	35-APPLTSP-6010ICSA	10,000	N2-MEB670092-39414	07/25/22	500uL	50mL	1% HNO3 / 5% HCl	100
Calcium			10,000						100
Magnesium			10,000						100
Iron			10,000						100
ICP-OES Interference Check Solution AB									
Aluminum	Inorganic Ventures	35-APPLTSP-6010ICSA	10,000	N2-MEB670092-39414	07/25/22	500uL	50mL	1% HNO3 / 5% HCl	100
Calcium			10,000						100
Magnesium			10,000						100
Iron			10,000						100
Special Mix (Interference)	O2SI	160495-01-01	100	10081266-2-49725	07/13/21	250uL			0.5

ICP-OES Internal Standards

Prepared: 03/12/20
Expires: 04/12/20
1% HNO3 / 5% HCl Prep: 03/12/20
Prepared By (Initials): PW

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (mg/L)	Lot Number - QA Number	Exp Date	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (mg/L)
Yttrium	O2SI	060039-04-03	1,000	10083563-2-49726	07/13/21	4mL	2L	1% HNO3 / 5% HCl	2

Metals Digestion Worksheet

Method Name 3010A Digestion **Prep Method** M3010 **Set** 200306A **Units** mL

Spikes			
Spiked ID 1	LCSW LOT# 10064561-13-49551 Pipette AP-21		
Spiked ID 2	LCSW LOT# 10064561-14-49600		
Spiked ID 3			
Spiked ID 4			
Spiked By	NM	Date:	03/06/20 6:38:00 AM
Witnessed By	N/A	Date:	03/06/20 6:38:00 AM

Starting Temp:	SLOT 27 THERM:MT1 92.2C
Ending Temp:	SLOT 27 94.2C
Temperature Type:	Mod Block
Sufficient Vol for Matrix QC:	YES
End Date/Time	03/06/20 10:55

	Sample	Sample Container	Spike Amount	Spike ID	Digested Amount	Final Volume	Start Date/Time	Comments
1	200306A Blk				50mL	50mL	03/06/20 6:38	equip: Modblock2
2	200306A LCS		500uL	1+2	50mL	50mL	03/06/20 6:38	equip: Modblock2
3	200306A LCSD		500uL	1+2	50mL	50mL	03/06/20 6:38	equip: Modblock2
4	BA07873	BA07873W07			50mL	50mL	03/06/20 6:38	equip: Modblock2 91561
5	BA07874	BA07874W07			50mL	50mL	03/06/20 6:38	equip: Modblock2 91561
6	BA07875	BA07875W07			50mL	50mL	03/06/20 6:38	equip: Modblock2 91561
7	BA07876	BA07876W05			50mL	50mL	03/06/20 6:38	equip: Modblock2 91562
8	BA07877	BA07877W05			50mL	50mL	03/06/20 6:38	equip: Modblock2 91562
9	BA07878	BA07878W05			50mL	50mL	03/06/20 6:38	equip: Modblock2 91562
10	BA07879	BA07879W05			50mL	50mL	03/06/20 6:38	equip: Modblock2 91562
11	BA07880	BA07880W06			50mL	50mL	03/06/20 6:38	equip: Modblock2 91568
12	BA07916	BA07916W05			50mL	50mL	03/06/20 6:38	equip: Modblock2 91573
13	BA07917	BA07917W05			50mL	50mL	03/06/20 6:38	equip: Modblock2 91573
14	BA07918	BA07918W14			50mL	50mL	03/06/20 6:38	equip: Modblock2 91573
15	BA07918 DUP	BA07918W14			50mL	50mL	03/06/20 6:38	equip: Modblock2
16	BA07918 MS	BA07918W14	500uL	1+2	50mL	50mL	03/06/20 6:38	equip: Modblock2
17	BA07919	BA07919W05			50mL	50mL	03/06/20 6:38	equip: Modblock2 91573
18	BA07920	BA07920W05			50mL	50mL	03/06/20 6:38	equip: Modblock2 91573
19	BA07942	BA07942W24			50mL	50mL	03/06/20 6:38	equip: Modblock2 91585
20	BA07944	BA07944W24			50mL	50mL	03/06/20 6:38	equip: Modblock2 91585

Solvent and Lot#
HNO3 BDH 1119070 16966
1:1 HCL 1-28-20
50mL vessel 191115

Sample COC Transfer	
Sample prep employee Initials	nm
Analyst's initials	
Date	
Time	
Moved to	

Technician's Initials	
Scanned By	nm
Sample Preparation	nm
Digestion	nm
Bring up to volume	
Modified	03/05/20 1:58:25 PM

Reviewed By: **Date:**

6010C/3010A Injection Log

Directory: K:\ICP-OES Cyrus\Backup Excel\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	12 Mar 2020	11:56	Blank		200312A200	1.
2	12 Mar 2020	12:00	Standard 1		200312A200	1.
3	12 Mar 2020	12:04	Standard 2		200312A200	1.
4	12 Mar 2020	12:09	Standard 3		200312A200	1.
5	12 Mar 2020	12:13	Standard 4		200312A200	1.
6	12 Mar 2020	12:18	Standard 5		200312A200	1.
7	12 Mar 2020	12:22	Standard 6		200312A200	1.
8	12 Mar 2020	12:27	ICV		200312A200	1.
9	12 Mar 2020	12:31	ICB		200312A200	1.
10	12 Mar 2020	12:35	LLICV		200312A200	1.
14	12 Mar 2020	12:53	ICSA		200312A200	1.
15	12 Mar 2020	12:57	ICSAB		200312A200	1.
34	12 Mar 2020	14:40	CCV		200312A200	1.
35	12 Mar 2020	14:44	CCB		200312A200	1.
41	12 Mar 2020	15:29	200306A BLK		200312A200	1.
42	12 Mar 2020	15:34	200306A LCS		200312A200	1.
43	12 Mar 2020	15:38	200306A LCSD		200312A200	1.
44	12 Mar 2020	15:43	BA07942W24 DF5		200312A200	5.
45	12 Mar 2020	15:47	BA07944W24 DF5		200312A200	5.
46	12 Mar 2020	15:51	CCV		200312A200	1.
47	12 Mar 2020	15:56	CCB		200312A200	1.

INORGANIC ANALYSIS
Calibration Data

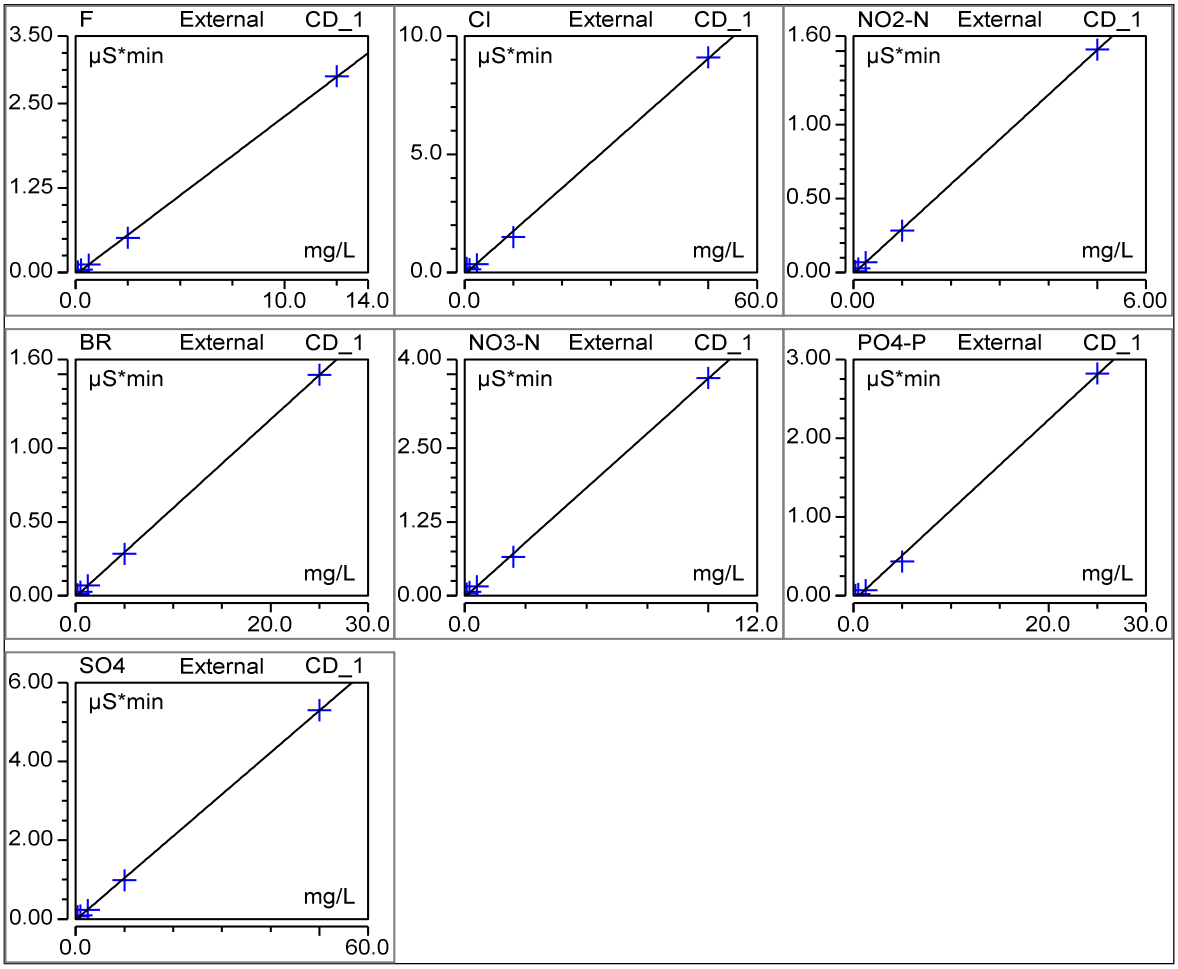
Calibration Batch Report

Sequence:	**200228 2 eceltric booglao**	*Injection Volume:*	**25.00**
Instrument Method:	**Anions IM**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**28-Feb-2020 / 09:36**	*Run Time:*	**22**

Calibration Summary

Peak Name	Eval.Type	Cal.Type	Points	Offset (C0)	Slope (C1)	Curve (C2)	Coeff.Det. %
F	Area	Lin, WithOffset	5.000	-0.028	0.234	0.000	99.9562
Cl	Area	Lin, WithOffset	5.000	-0.073	0.183	0.000	99.8196
NO2-N	Area	Lin, WithOffset	5.000	-0.007	0.303	0.000	99.9875
BR	Area	Lin, WithOffset	5.000	-0.006	0.060	0.000	99.9911
NO3-N	Area	Lin, WithOffset	5.000	-0.024	0.370	0.000	99.9532
PO4-P	Area	Lin, WithOffset	5.000	-0.060	0.115	0.000	99.8379
SO4	Area	Lin, WithOffset	5.000	-0.022	0.106	0.000	99.9715

Injection Name	Amount mg/L CD_1 F	Amount mg/L CD_1 Cl	Amount mg/L CD_1 NO2-N	Amount mg/L CD_1 BR	Amount mg/L CD_1 NO3-N	Amount mg/L CD_1 PO4-P	Amount mg/L CD_1 SO4
Cal 1 2020.02.27	0.194	1.5079	0.0558	0.2735	0.1689	0.6294	0.8646
Cal 2	0.309	1.1706	0.1152	0.5521	0.2402	0.7271	1.0692
Cal 3	0.624	2.3202	0.2524	1.2661	0.4937	1.1388	2.3754
Cal 5	2.312	8.6307	0.9589	4.8260	1.8480	4.3213	9.4871
Cal 8	12.536	50.2706	5.0077	25.0324	10.0292	25.1333	50.1037

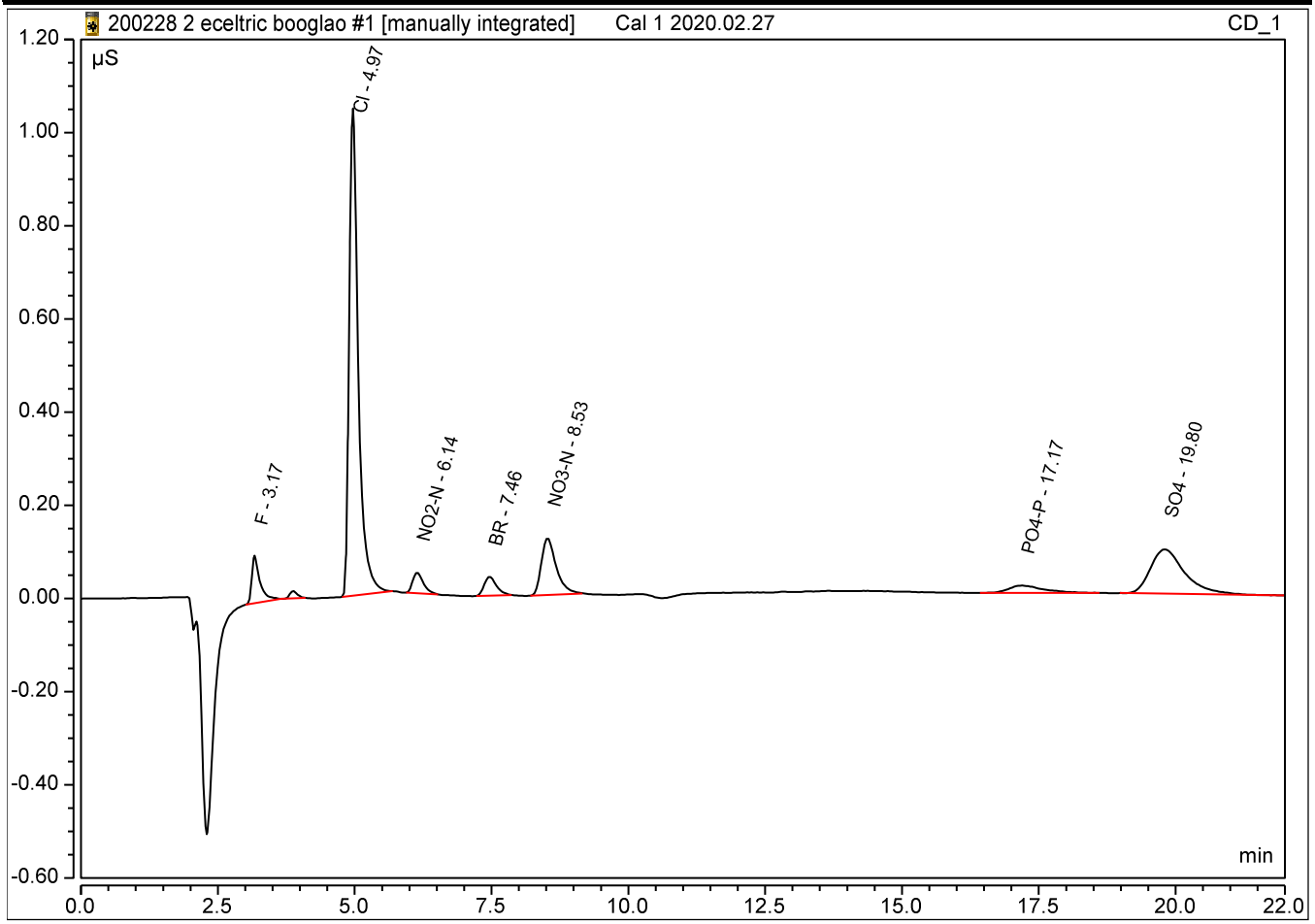


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200228 2 eceltric booglao

Peak Integration Report

Sample Name:	**Cal 1 2020.02.27**	*Inj. Vol.:*	**25uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.02.28**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**28-Feb-2020 / 07:59**	*Run Time:*	**22.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.17	**F**	BMB	0.018	0.102	0.19	0.1	194.3%
3	4.97	**Cl**	BMB	0.203	1.046	1.51	0.4	377.0%
4	6.14	**NO2-N**	BMB	0.010	0.044	0.06	0.04	139.6%
5	7.46	**BR**	BMB	0.011	0.041	0.27	0.2	136.8%
6	8.53	**NO3-N**	BMB	0.038	0.122	0.17	0.08	211.1%
7	17.17	**PO4-P**	BMB*	0.012	0.016	0.63	0.2	314.7%
8	19.80	**SO4**	BMB*	0.069	0.095	0.86	0.4	216.1%

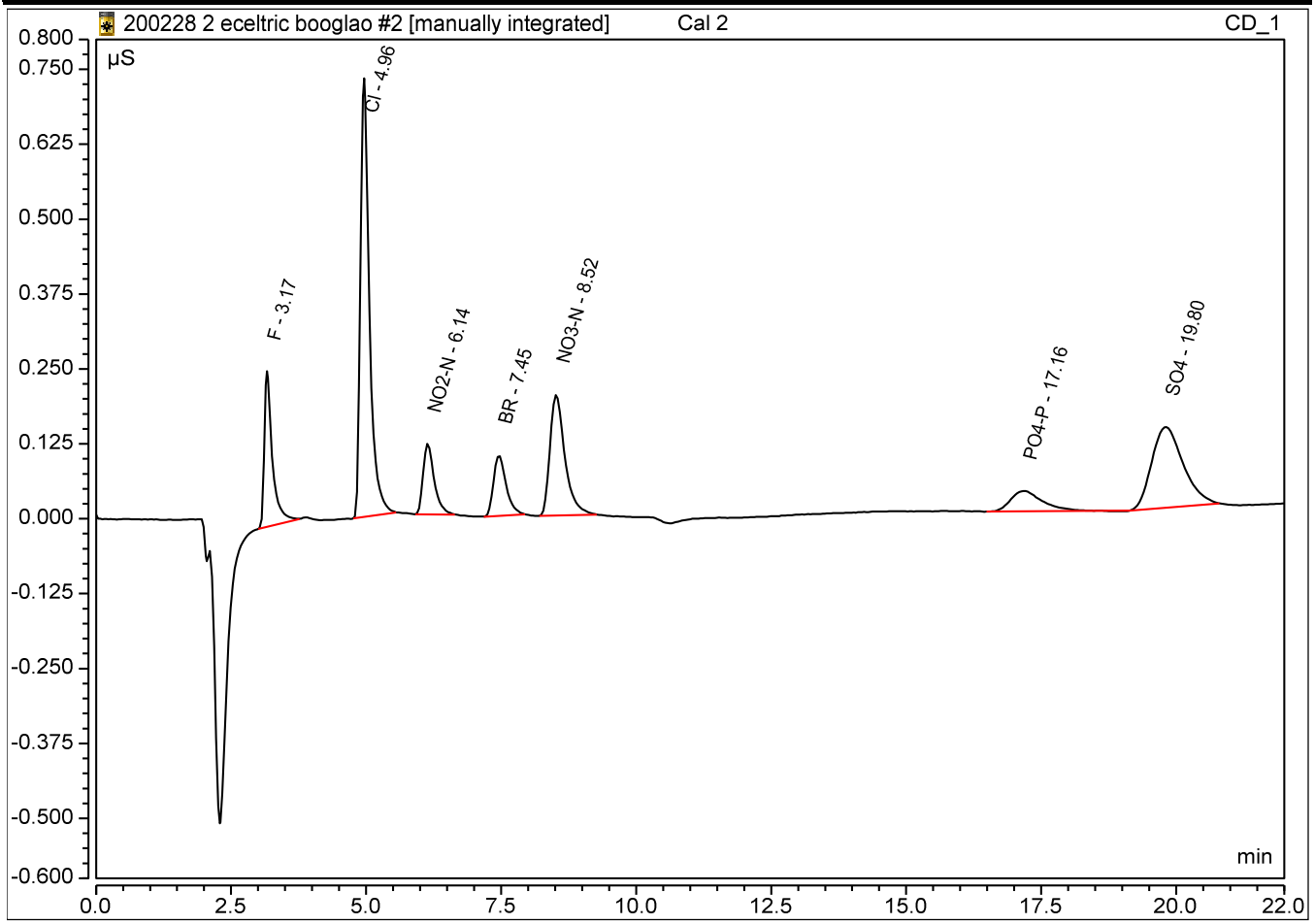


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200228 2 eceltric booglao

Peak Integration Report

Sample Name:	**Cal 2**	*Inj. Vol.:*	**25uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.02.28**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**28-Feb-2020 / 08:23**	*Run Time:*	**22.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.17	**F**	BMB	0.045	0.260	0.31	0.25	123.6%
2	4.96	**Cl**	BMB	0.141	0.732	1.17	1	117.1%
3	6.14	**NO2-N**	BMB	0.028	0.118	0.12	0.1	115.2%
4	7.45	**BR**	BMB	0.027	0.101	0.55	0.5	110.4%
5	8.52	**NO3-N**	BMB	0.065	0.202	0.24	0.2	120.1%
6	17.16	**PO4-P**	BMB*	0.023	0.034	0.73	0.5	145.4%
7	19.80	**SO4**	BMB	0.091	0.135	1.07	1	106.9%

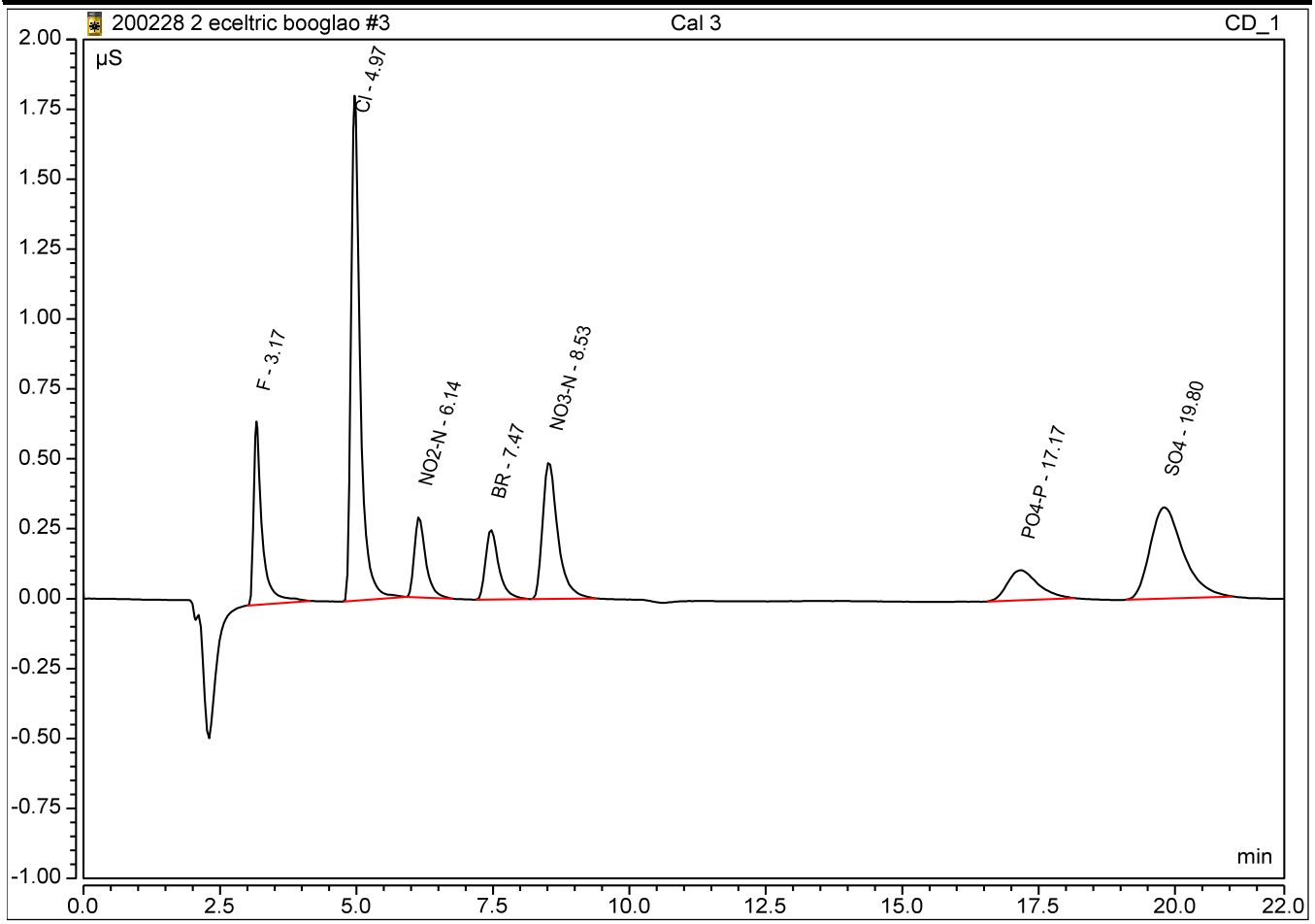


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200228 2 eceltric booglao

Peak Integration Report

Sample Name:	**Cal 3**	*Inj. Vol.:*	**25uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.02.28**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**28-Feb-2020 / 08:48**	*Run Time:*	**22.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.17	**F**	BMB	0.118	0.656	0.62	0.625	99.9%
2	4.97	**Cl**	BMB	0.351	1.805	2.32	2.5	92.8%
3	6.14	**NO2-N**	BMB	0.070	0.288	0.25	0.25	101.0%
4	7.47	**BR**	BMB	0.070	0.249	1.27	1.25	101.3%
5	8.53	**NO3-N**	BMB	0.159	0.490	0.49	0.5	98.7%
6	17.17	**PO4-P**	BMB	0.070	0.108	1.14	1.25	91.1%
7	19.80	**SO4**	BMB	0.230	0.327	2.38	2.5	95.0%

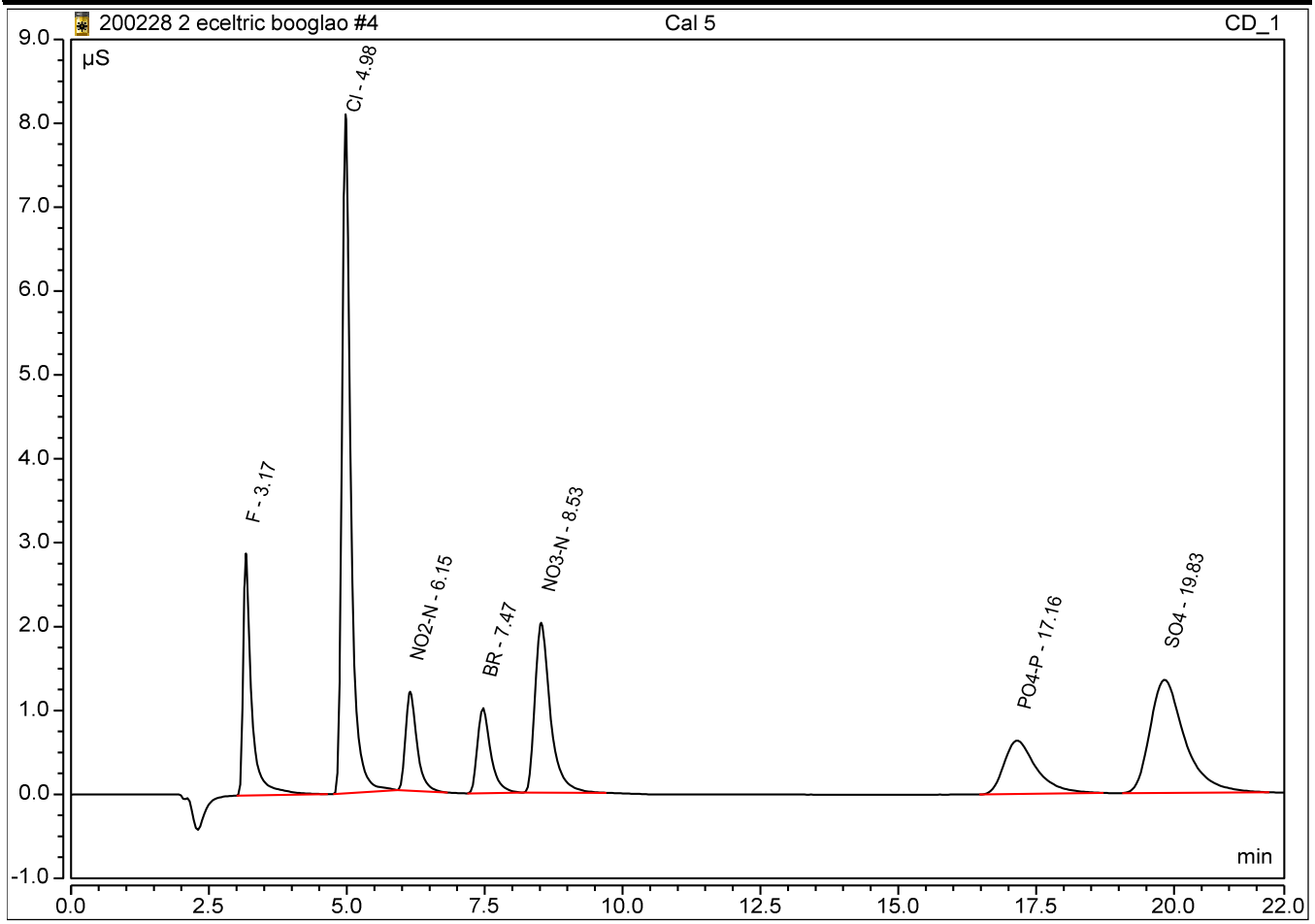


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200228 2 eceltric booglao

Peak Integration Report

Sample Name:	**Cal 5**	*Inj. Vol.:*	**25uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.02.28**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**28-Feb-2020 / 09:12**	*Run Time:*	**22.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.17	**F**	BMB	0.513	2.884	2.31	2.5	92.5%
2	4.98	**Cl**	BMB	1.503	8.096	8.63	10	86.3%
3	6.15	**NO2-N**	BMB	0.283	1.182	0.96	1	95.9%
4	7.47	**BR**	BMB	0.284	1.017	4.83	5	96.5%
5	8.53	**NO3-N**	BMB	0.660	2.026	1.85	2	92.4%
6	17.16	**PO4-P**	BMB	0.435	0.636	4.32	5	86.4%
7	19.83	**SO4**	BMB	0.985	1.349	9.49	10	94.9%

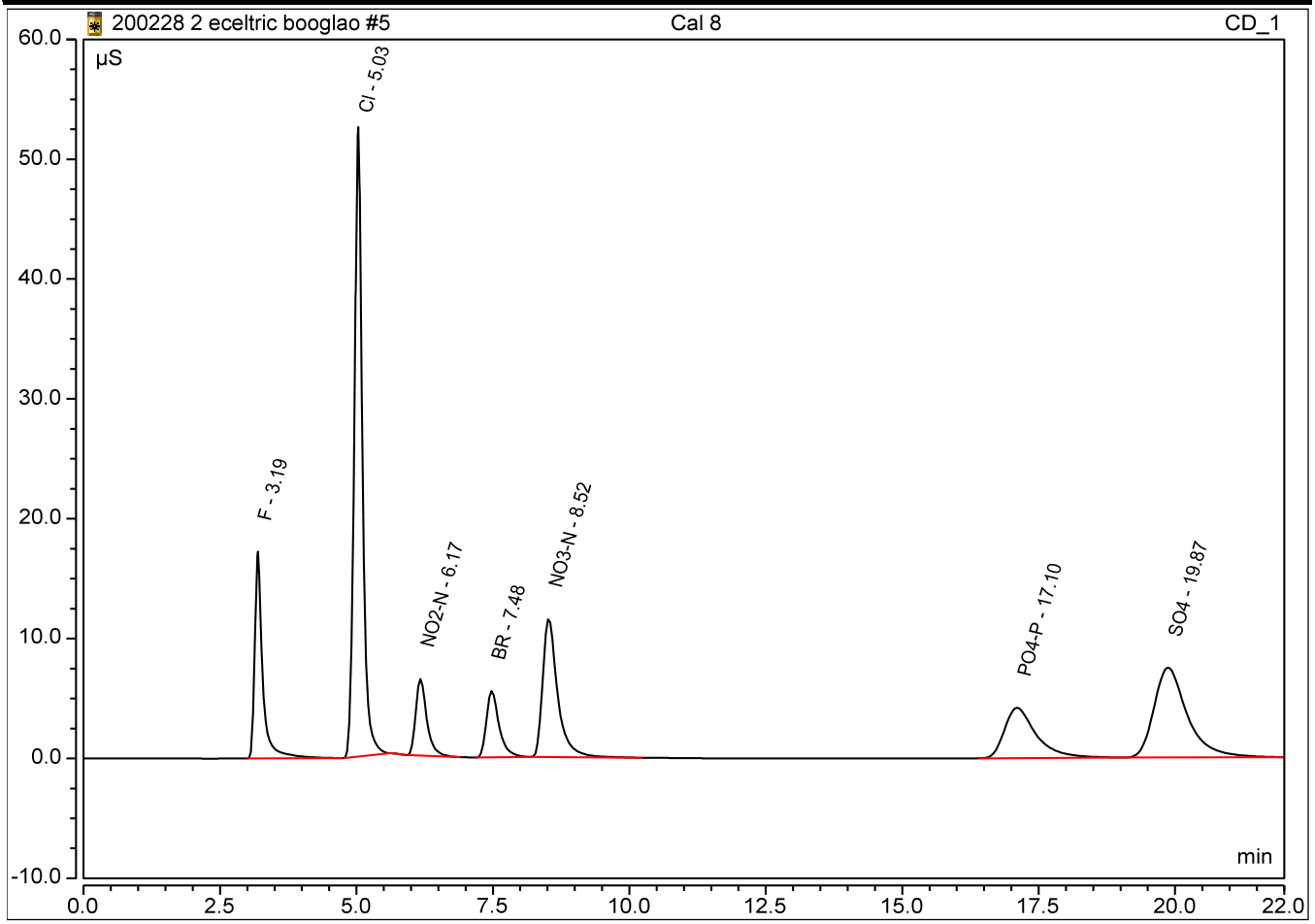


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200228 2 eceltric booglao

Peak Integration Report

Sample Name:	**Cal 8**	*Inj. Vol.:*	**25uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.02.28**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**28-Feb-2020 / 09:36**	*Run Time:*	**22.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.19	**F**	BMB	2.907	17.263	12.54	12.5	100.3%
2	5.03	**Cl**	BMB	9.105	52.531	50.27	50	100.5%
4	6.17	**NO2-N**	BMB	1.509	6.407	5.01	5	100.2%
5	7.48	**BR**	BMB	1.496	5.532	25.03	25	100.1%
6	8.52	**NO3-N**	BMB	3.686	11.563	10.03	10	100.3%
7	17.10	**PO4-P**	BMB	2.821	4.199	25.13	25	100.5%
8	19.87	**SO4**	BMB	5.300	7.485	50.10	50	100.2%

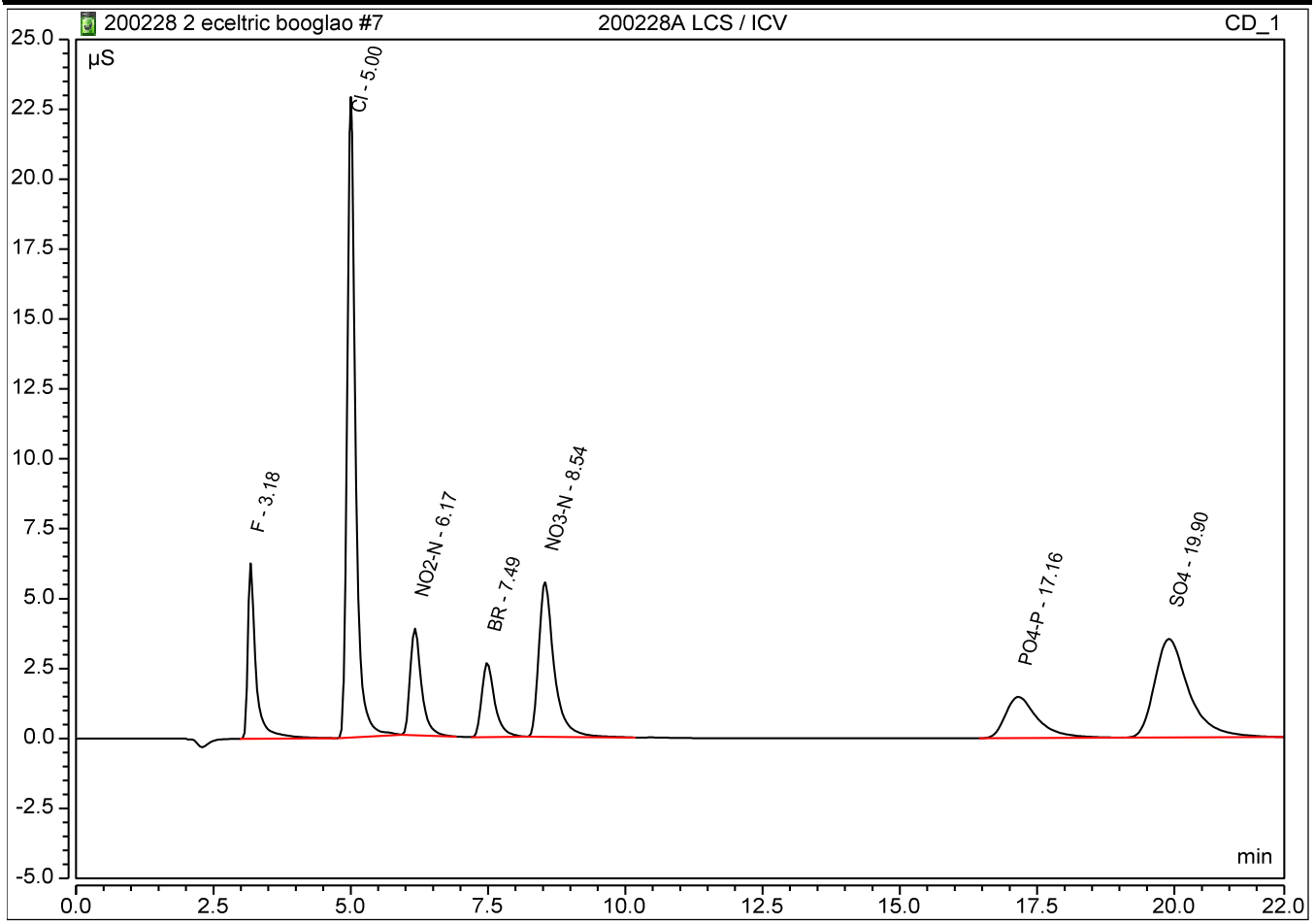


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200228 2 eceltric booglao

Peak Integration Report

Sample Name:	**200228A LCS / ICV**	*Inj. Vol.:*	**25uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.02.28**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**28-Feb-2020 / 10:25**	*Run Time:*	**22.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.18	**F**	BMB	1.079	6.264	4.73	5	94.5%
2	5.00	**Cl**	BMB	4.046	22.906	22.56	25	90.3%
3	6.17	**NO2-N**	BMB	0.911	3.816	3.03	3.04	99.8%
4	7.49	**BR**	BMB	0.731	2.655	12.28	12.5	98.2%
5	8.54	**NO3-N**	BMB	1.797	5.529	4.92	5	98.4%
6	17.16	**PO4-P**	BMB	1.010	1.478	9.34	10	93.4%
7	19.90	**SO4**	BMB	2.549	3.524	24.20	25	96.8%



Algorithm Check
y = Peak Area
x = mg/L S04

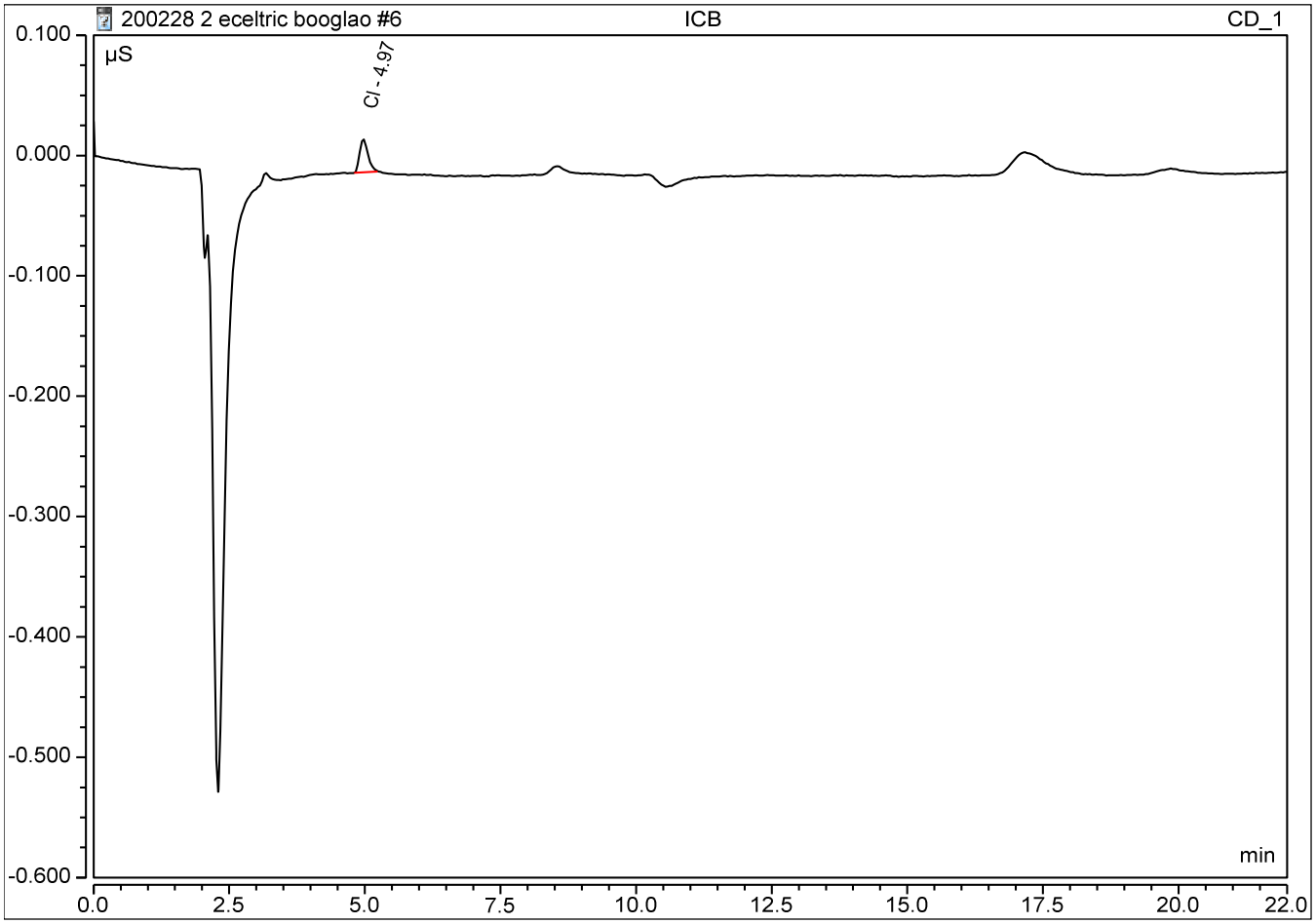
y = 0.1062 x + -0.0224
y = 2.5487 therefor x =

Logged on User: BW
Instrument: Charlie System_1
Sequence: 200228 2 eceltric booglao

Peak Integration Report

Sample Name:	**ICB**	*Inj. Vol.:*	**25uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.02.28**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**28-Feb-2020 / 10:01**	*Run Time:*	**22.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	4.97	**Cl**	BMB	0.005	0.028	0.43		

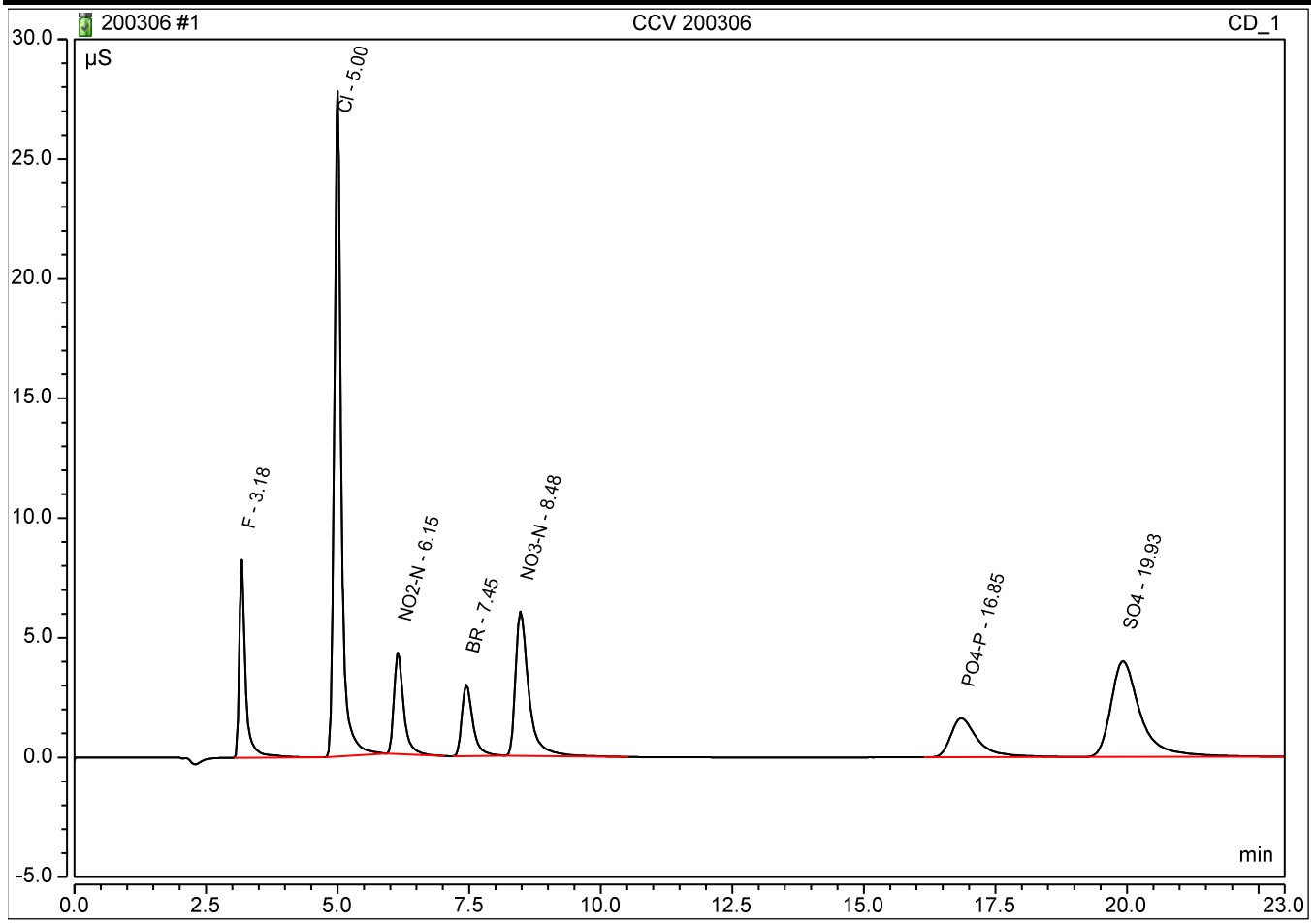


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200306

Peak Integration Report

Sample Name:	**CCV 200306**	*Inj. Vol.:*	**25uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.02.28**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**05-Mar-2020 / 09:29**	*Run Time:*	**23.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.18	**F**	BMB	1.140	8.266	4.99	5	99.8%
2	5.00	**Cl**	BMB	4.262	27.803	23.75	25	95.0%
3	6.15	**NO2-N**	BMB	0.902	4.232	3.00	3.04	98.7%
4	7.45	**BR**	BMB	0.727	2.998	12.21	12.5	97.7%
5	8.48	**NO3-N**	BMB	1.769	6.035	4.85	5	96.9%
6	16.85	**PO4-P**	BMB	0.988	1.634	9.14	10	91.4%
7	19.93	**SO4**	BMB	2.617	4.001	24.85	25	99.4%

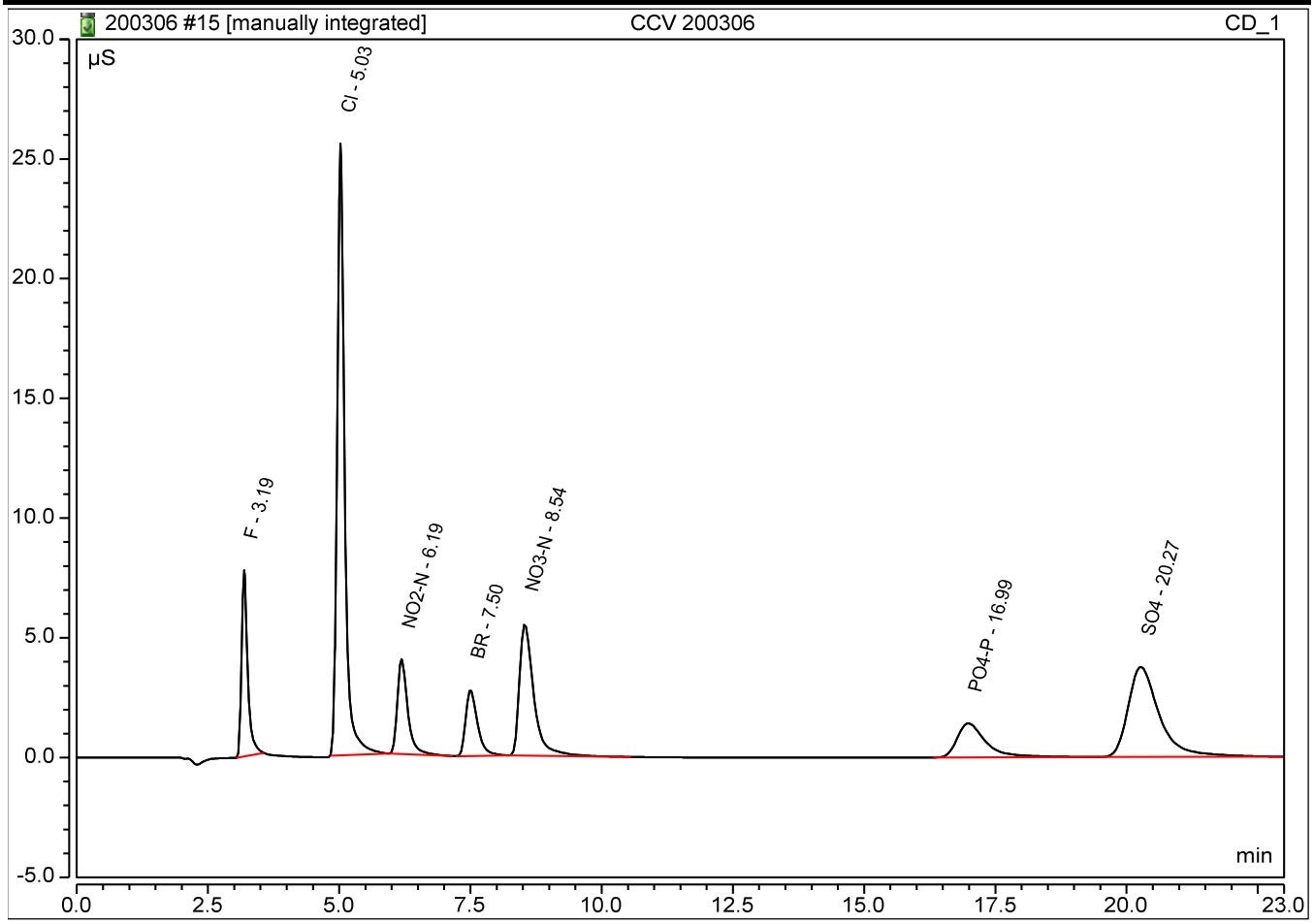


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200306

Peak Integration Report

Sample Name:	**CCV 200306**	*Inj. Vol.:*	**25uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.02.28**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**05-Mar-2020 / 15:25**	*Run Time:*	**23.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.19	**F**	BMB	1.042	7.782	4.57	5	91.4%
2	5.03	**Cl**	BMB*	4.194	25.550	23.37	25	93.5%
3	6.19	**NO2-N**	BMB	0.915	3.961	3.04	3.04	100.2%
4	7.50	**BR**	BMB	0.723	2.777	12.15	12.5	97.2%
5	8.54	**NO3-N**	BMB	1.758	5.519	4.82	5	96.3%
6	16.99	**PO4-P**	BMB	0.916	1.425	8.51	10	85.1%
7	20.27	**SO4**	BMB	2.613	3.761	24.81	25	99.2%

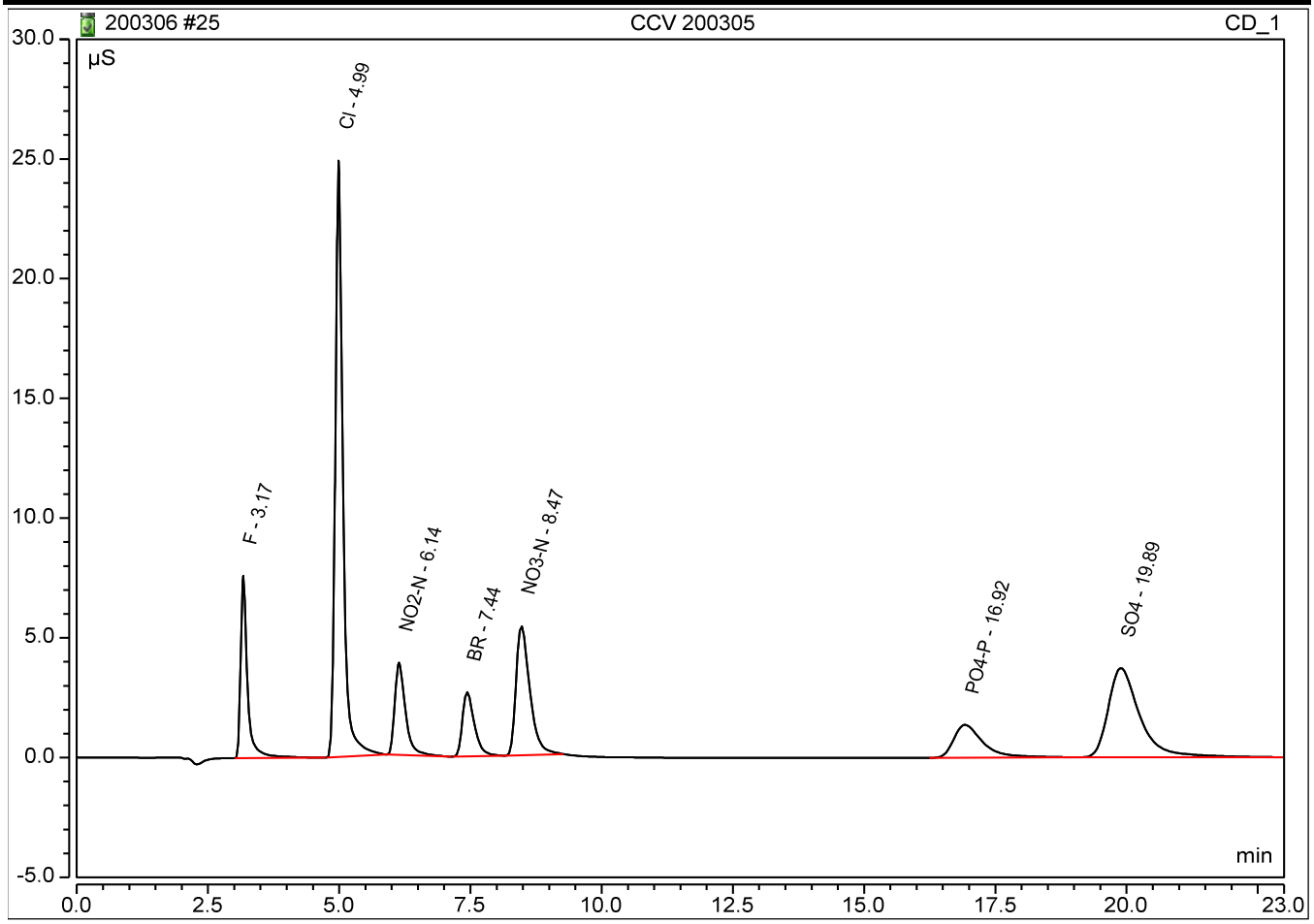


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200306

Peak Integration Report

Sample Name:	**CCV 200305**	*Inj. Vol.:*	**25uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.02.28**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**05-Mar-2020 / 20:41**	*Run Time:*	**23.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.17	**F**	BMB	1.150	7.610	5.03	5	100.6%
2	4.99	**Cl**	BMB	4.200	24.908	23.40	25	93.6%
3	6.14	**NO2-N**	BMB	0.918	3.854	3.06	3.04	100.5%
4	7.44	**BR**	BMB	0.717	2.694	12.05	12.5	96.4%
5	8.47	**NO3-N**	BMB	1.660	5.415	4.55	5	91.0%
6	16.92	**PO4-P**	BMB	0.896	1.375	8.34	10	83.4%
7	19.89	**SO4**	BMB	2.607	3.726	24.75	25	99.0%

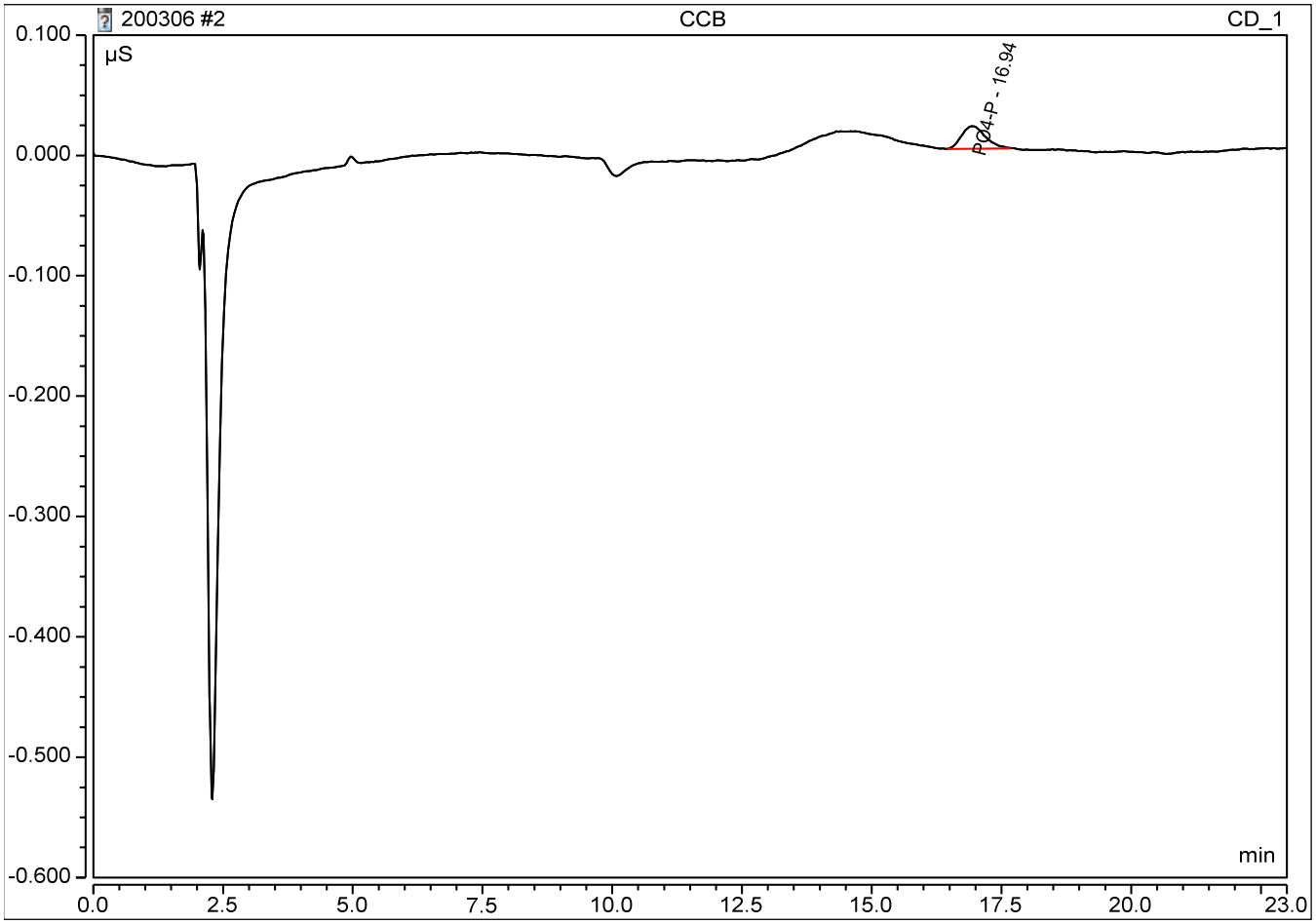


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200306

Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.02.28**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**05-Mar-2020 / 09:55**	*Run Time:*	**23.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	16.94	**PO4-P**	BMB	0.010	0.019	0.61		

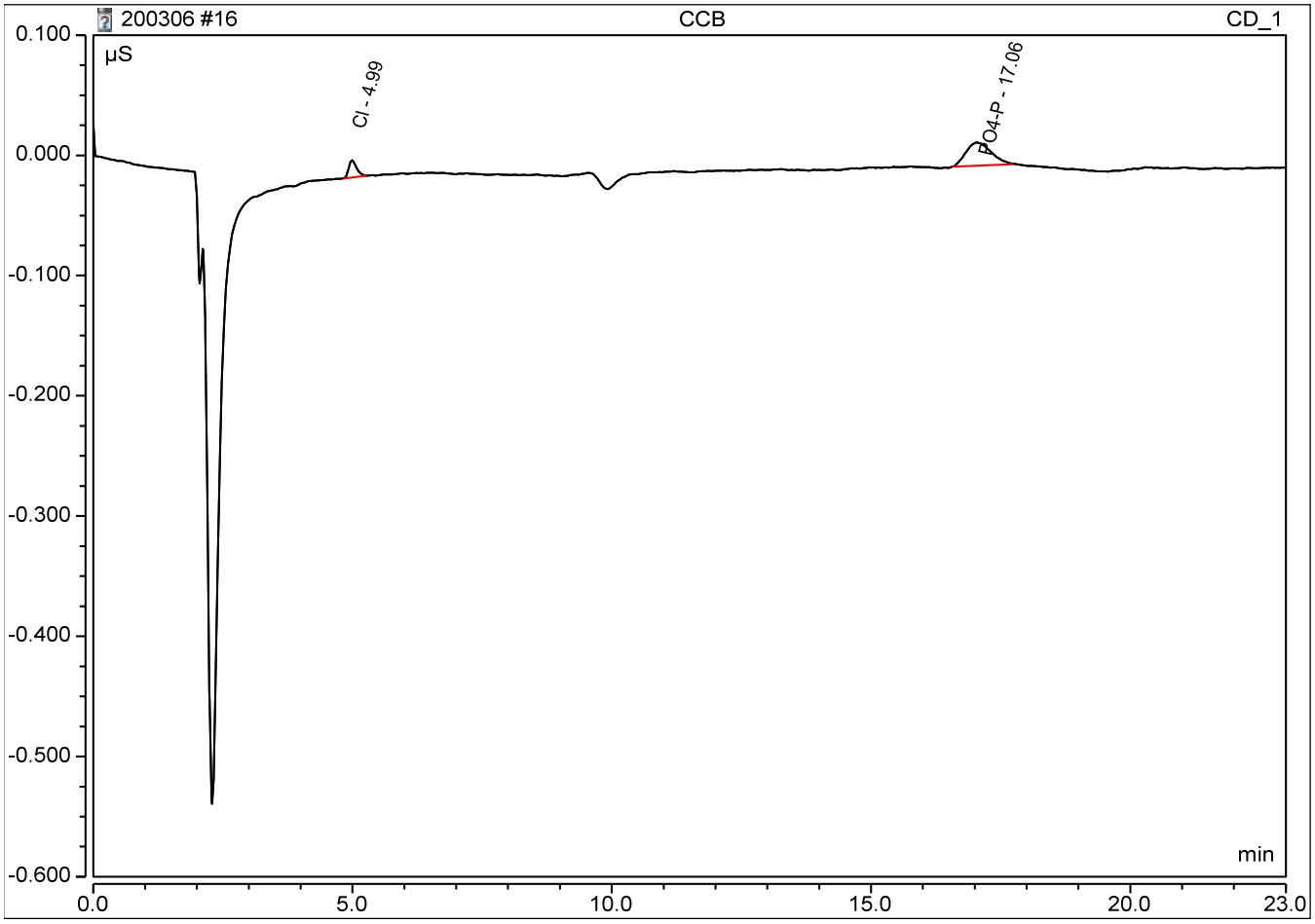


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200306

Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.02.28**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**05-Mar-2020 / 15:50**	*Run Time:*	**23.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	4.99	**Cl**	BMB	0.003	0.015	0.41		
2	17.06	**PO4-P**	BMB	0.011	0.020	0.62		

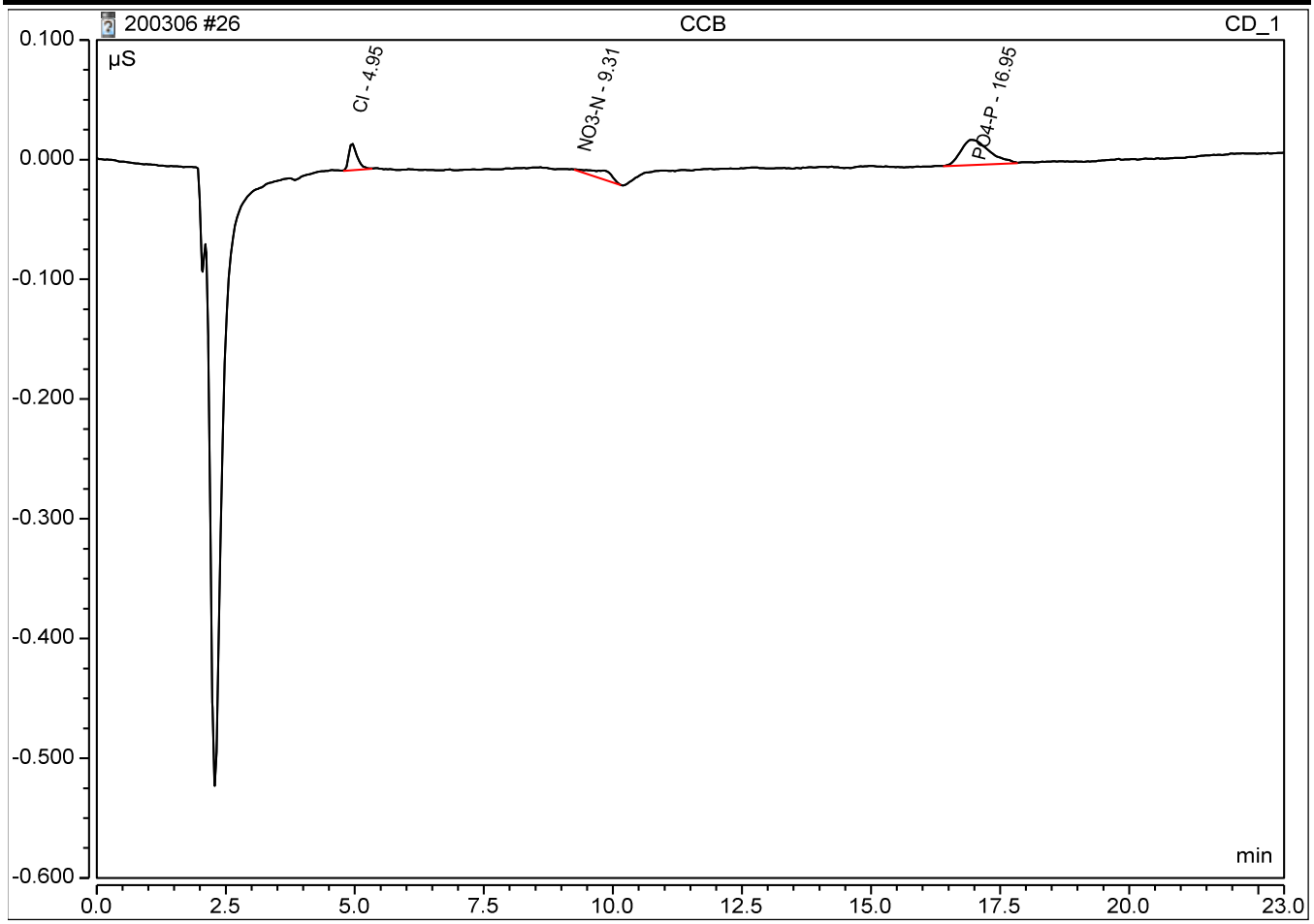


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200306

Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.02.28**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**05-Mar-2020 / 21:06**	*Run Time:*	**23.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	4.95	**Cl**	BMB	0.004	0.022	0.42		
2	9.31	**NO3-N**	BMB	0.004	0.001	0.07		
3	16.95	**PO4-P**	BMB	0.013	0.021	0.64		



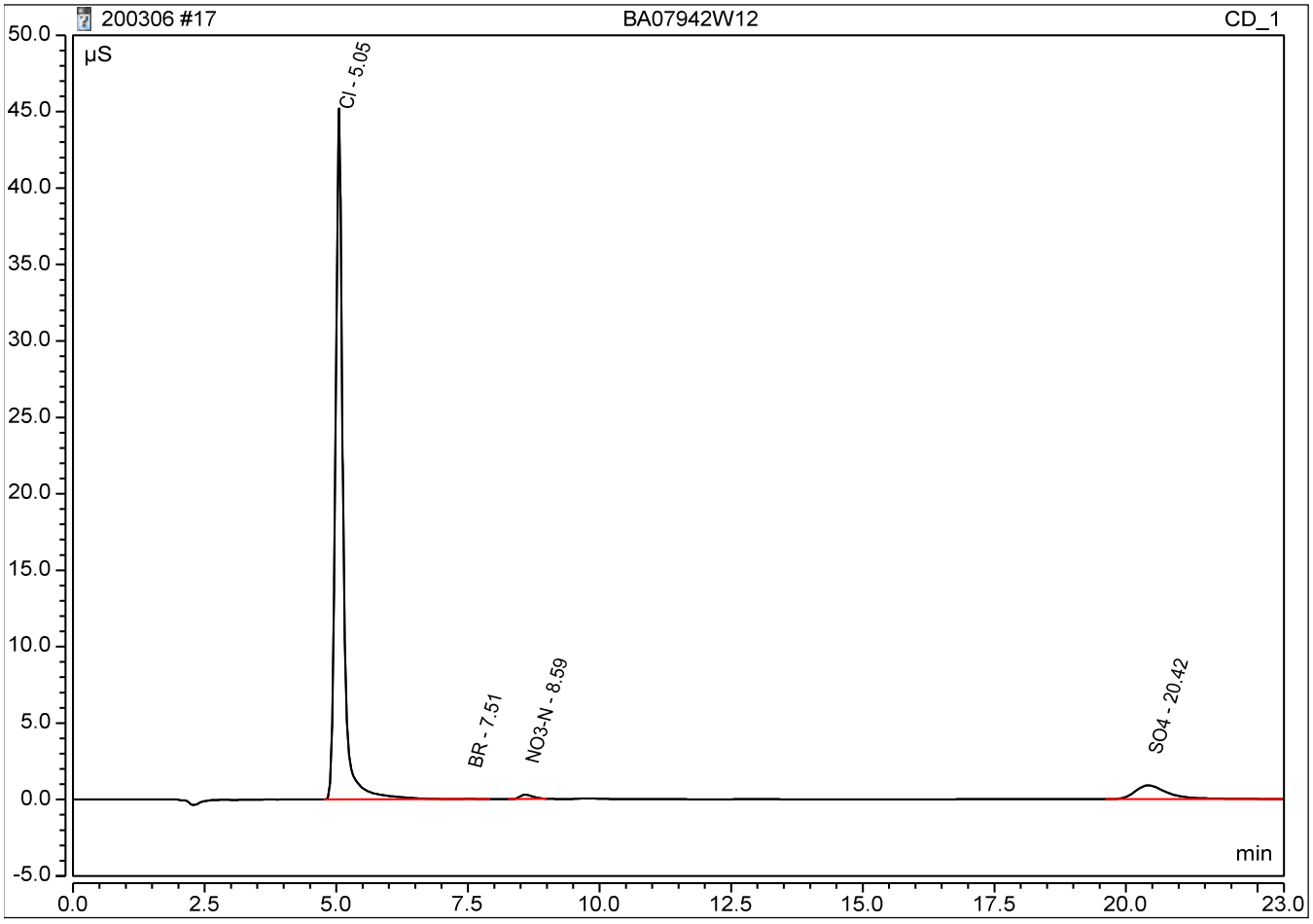
INORGANIC ANALYSIS
Raw Data

Logged on User: BW
Instrument: Charlie System_1
Sequence: 200306

Peak Integration Report

Sample Name:	**BA07942W12**	*Inj. Vol.:*	**25uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.02.28**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**05-Mar-2020 / 17:17**	*Run Time:*	**23.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	5.05	**Cl**	BMB	7.559	45.205	41.80		
2	7.51	**BR**	BMB	0.007	0.029	0.21		
3	8.59	**NO3-N**	BMB	0.082	0.285	0.29		
4	20.42	**SO4**	BMB	0.660	0.899	6.43		

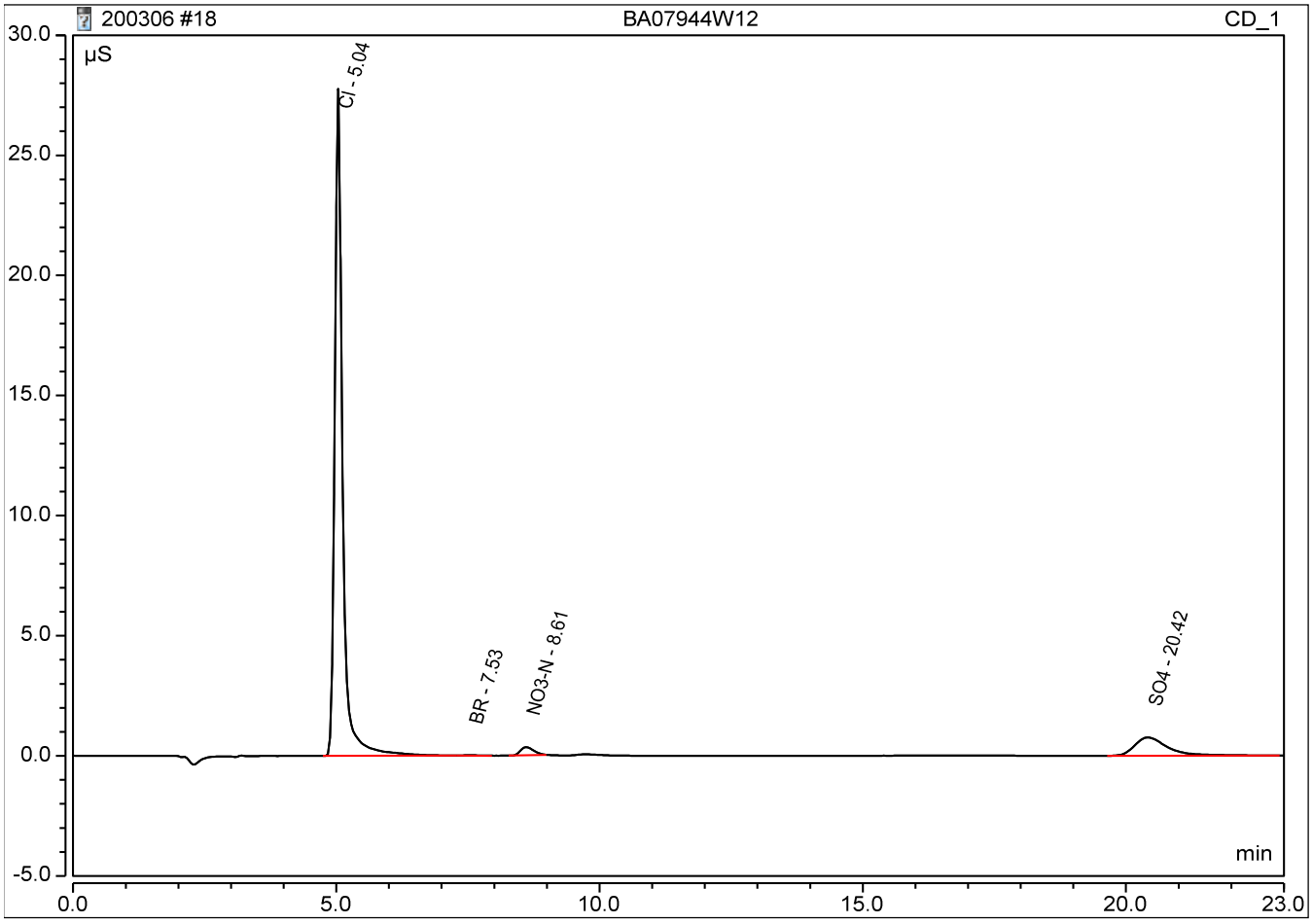


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200306

Peak Integration Report

Sample Name:	**BA07944W12**	*Inj. Vol.:*	**25uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.02.28**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**05-Mar-2020 / 17:43**	*Run Time:*	**23.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	5.04	**Cl**	BMB	4.770	27.764	26.53		
2	7.53	**BR**	BMB	0.005	0.021	0.19		
3	8.61	**NO3-N**	BMB	0.099	0.343	0.33		
4	20.42	**SO4**	BMB	0.558	0.762	5.46		

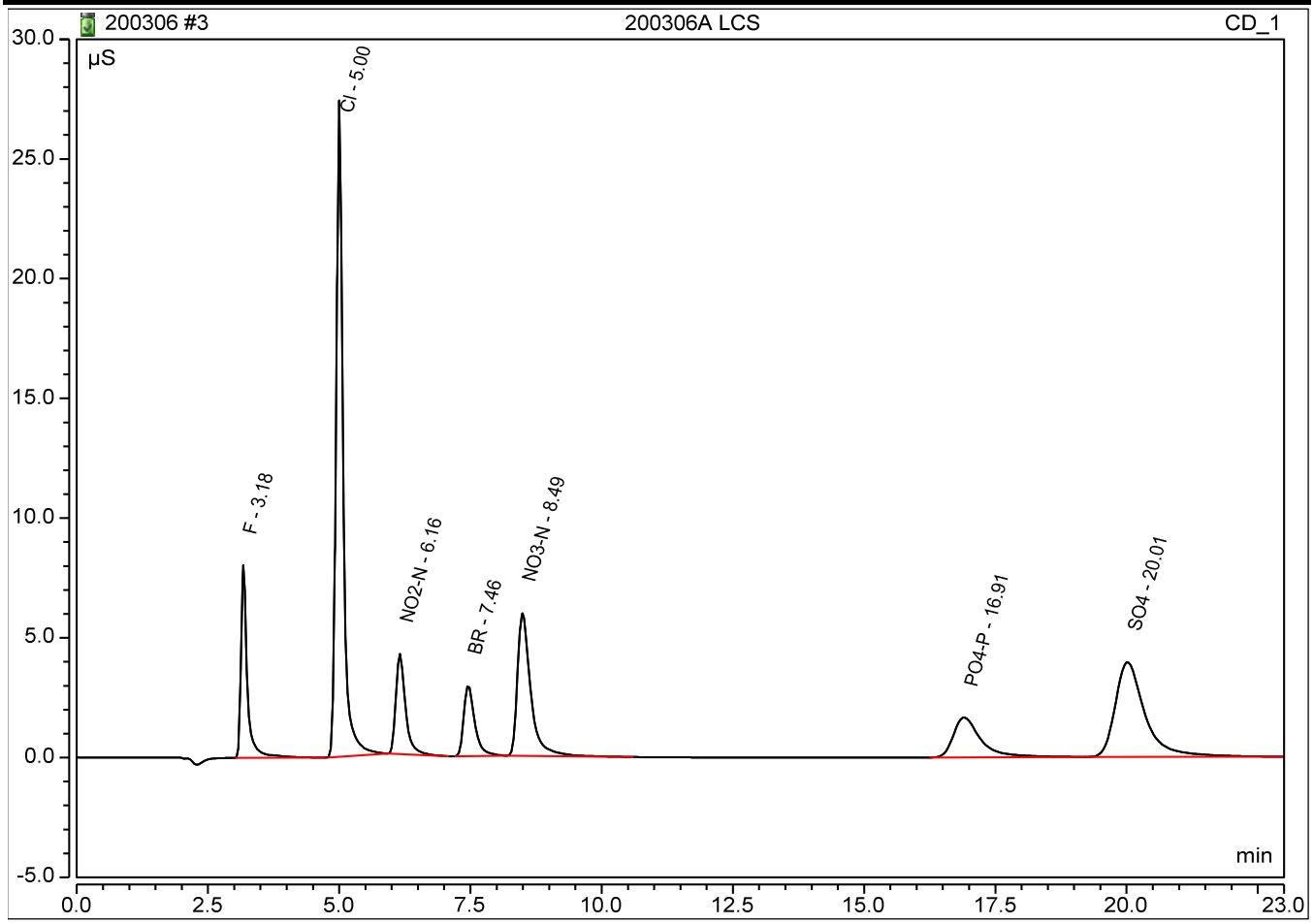


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200306

Peak Integration Report

Sample Name:	**200306A LCS**	*Inj. Vol.:*	**25uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.02.28**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**05-Mar-2020 / 10:20**	*Run Time:*	**23.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.18	**F**	BMB	1.118	8.044	4.89	5	97.9%
2	5.00	**Cl**	BMB	4.235	27.404	23.59	25	94.4%
3	6.16	**NO2-N**	BMB	0.902	4.191	3.00	3.04	98.8%
4	7.46	**BR**	BMB	0.726	2.966	12.19	12.5	97.5%
5	8.49	**NO3-N**	BMB	1.766	5.958	4.84	5	96.8%
6	16.91	**PO4-P**	BMB	1.019	1.671	9.42	10	94.2%
7	20.01	**SO4**	BMB	2.606	3.962	24.74	25	98.9%



Algorithm Check
y = Peak Area
x = mg/L S04

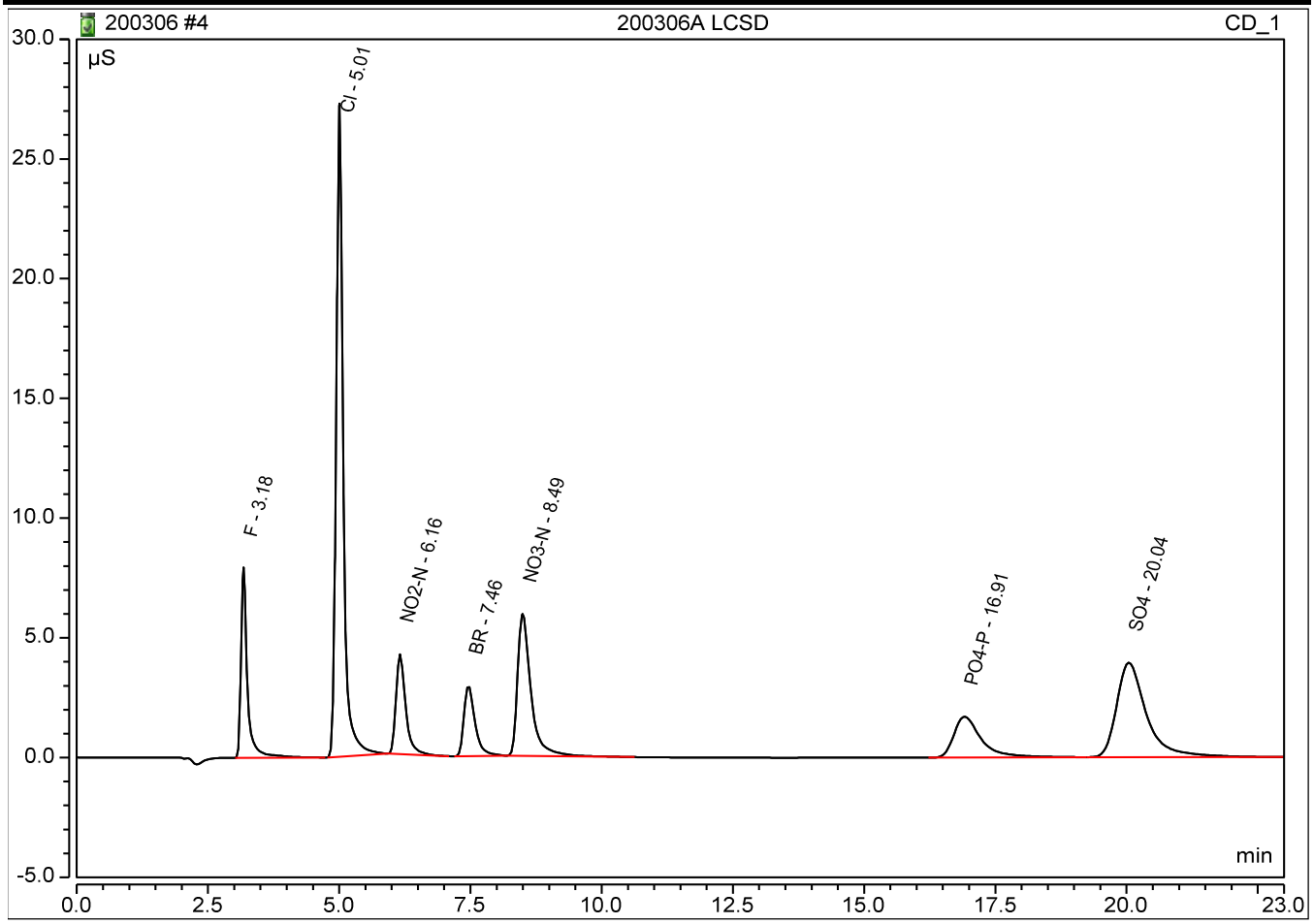
y = 0.1062 x + -0.0224
y = 2.6055 therefor x =

Logged on User: BW
Instrument: Charlie System_1
Sequence: 200306

Peak Integration Report

Sample Name:	**200306A LCSD**	*Inj. Vol.:*	**25uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.02.28**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**05-Mar-2020 / 10:46**	*Run Time:*	**23.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.18	**F**	BMB	1.113	7.947	4.87	5	97.4%
2	5.01	**Cl**	BMB	4.238	27.272	23.61	25	94.5%
3	6.16	**NO2-N**	BMB	0.904	4.176	3.01	3.04	99.0%
4	7.46	**BR**	BMB	0.726	2.955	12.20	12.5	97.6%
5	8.49	**NO3-N**	BMB	1.767	5.933	4.84	5	96.8%
6	16.91	**PO4-P**	BMB	1.043	1.711	9.62	10	96.2%
7	20.04	**SO4**	BMB	2.608	3.944	24.76	25	99.1%



Algorithm Check
y = Peak Area
x = mg/L S04

y = 0.1062 x + -0.0224
y = 2.6084 therefor x = 24.5160 CD 200306

Anion Chromatography Working Standard

Prep Date: 01/24/20

Exp Date: 01/25/20

Prep'd By (Initials): CD

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Ion Chromatography Standard Fluoride 1000 µg/mL in H2O	o2si	O2SI-062002-01-01	1000	687393-38-40744	10/30/20	312.5 µL	25 mL	Millipore Water	12.5
Ion Chromatography Standard Nitrite 1000 µg/mL in H2O	Inorganic Ventures	ICN021	1000	N2-NOX672889-40759	05/01/20	411 µL	25 mL	Millipore Water	5 as NO2-N
Ion Chromatography Standard Chloride 5000 µg/mL in H2O	o2si	062001-08-03	5000	10084781-1-39578	02/21/20	250 µL	25 mL	Millipore Water	50
Ortho-Phosphate as P Standard	Ultra Scientific	ICC-005A	1000	G34-CP-3323-39057	08/31/23	625 µL	25 mL	Millipore Water	25
Ion Chromatography Standard Nitrate as N 1000 µg/mL in H2O	o2si	062003-01-03	1000	880117-4-39577	02/21/20	250 µL	25 mL	Millipore Water	10
Bromide Standard	Ultra Scientific	ICC-001	1000	CR-5372-39521	12/31/21	625 µL	25 mL	Millipore Water	25
Sulfate Standard	Agilent	ICC-006	1000	CS-0688-41050	03/31/22	1250 µL	25 mL	Millipore Water	50

Anion Chromatography Calibration Curve

Prep Date: 01/24/20

Exp Date: 01/25/20

Prep'd By (Initials): CD

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. Range (ug/mL)	Reference To APPL Prep Date	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc. Range (µg/mL)
Anion Chromatography Working Standard	Varies	ICal1	5.0-50.0	Prepared 01/24/20	01/25/20	200 µL	25000 µL	Millipore Water	0.04-0.40
Anion Chromatography Working Standard	Varies	ICal2	5.0-50.0	Prepared 01/24/20	01/25/20	20 µL	1000 µL	Millipore Water	0.1-1.0
Anion Chromatography Working Standard	Varies	ICal3	5.0-50.0	Prepared 01/24/20	01/25/20	50 µL	1000 µL	Millipore Water	0.25-2.5
Anion Chromatography Working Standard	Varies	ICal4	5.0-50.0	Prepared 01/24/20	01/25/20	100 µL	1000 µL	Millipore Water	0.5-5.0
Anion Chromatography Working Standard	Varies	ICal5	5.0-50.0	Prepared 01/24/20	01/25/20	200 µL	1000 µL	Millipore Water	1.0-10.0
Anion Chromatography Working Standard	Varies	ICal6	5.0-50.0	Prepared 01/24/20	01/25/20	500 µL	1000 µL	Millipore Water	2.5-25.0
Anion Chromatography Working Standard	Varies	ICal7	5.0-50.0	Prepared 01/24/20	01/25/20	700 µL	1000 µL	Millipore Water	3.5-35.0
Anion Chromatography Working Standard	Varies	ICal8	5.0-50.0	Prepared 01/24/20	01/25/20	1000 µL	1000 µL	Millipore Water	5.0-50.0

Anion Chromatography LCS/ICV

Prep Date: See injection Log

Exp Date: 24 hours after prep

Prep'd By (Initials): CD

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. Range (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Flouride	Inorganic Ventures	ICF1	993-999	K-F652018-39801**	04/23/20	125 µL	25 mL	Millipore Water	5
Nitrite	Inorganic Ventures	ICNO21	993-1001	M2-NOX660562-40468	08/25/21	250 µL	25 mL	Millipore Water	10
Chloride	Inorganic Ventures	ICCL1	995-1001	N2CL664868-39905	03/07/22	625 µL	25 mL	Millipore Water	25
O-Phosphate as P	Inorganic Ventures	ICPPO41	1001-1009	M2-POX655826-39803**	04/23/20	250 µL	25 mL	Millipore Water	10
Nitrate as N	Inorganic Ventures	ICNNO31	997-1005	P2-NOX675324-49391	02/14/23	125 µL	25 mL	Millipore Water	5
Ion Chromatography Standard Bromide, 1000 µg/mL in H2O	CPI International	4400-IC8M	995-1005	1011817-12-49602	06/05/21	312.5 µL	25 mL	Millipore Water	12.5
Sulfate	Inorganic Ventures	ICSO41	998-1006	N2-SOX664928-39507**	05/27/20	625 µL	25 mL	Millipore Water	25

Anion Chromatography CCV

Prep Date: See injection Log

Exp Date: 24 hours after prep

**Recertified with CCV Standards listed below on 191021; extended exp. date by 6 mo.

Prep'd By (Initials): CD

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Ion Chromatography Standard Fluoride 1000 µg/mL in H2O	o2si	O2SI-062002-01-01	1000	687393-38-40744	10/30/20	125 µL	25 mL	Millipore Water	5
Ion Chromatography Standard Nitrite 1000 µg/mL in H2O	Inorganic Ventures	ICN021	1000	N2-NOX672889-40759	05/01/20	250 µL	25 mL	Millipore Water	10
Ion Chromatography Standard Chloride 5000 µg/mL in H2O	o2si	062001-08-03	5000	10084781-1-39578	02/21/20	125 µL	25 mL	Millipore Water	25
Ortho-Phosphate as P Standard	Ultra Scientific	ICC-005A	1000	G34-CP-3323-39057	08/31/23	250 µL	25 mL	Millipore Water	10
Ion Chromatography Standard Nitrate as N 1000 µg/mL in H2O	o2si	062003-01-03	1000	880117-4-39577	02/21/20	125 µL	25 mL	Millipore Water	5
Bromide Standard	Ultra Scientific	ICC-001	1000	CR-5372-39521	12/31/21	312.5 µL	25 mL	Millipore Water	12.5
Sulfate Standard	Agilent	ICC-006	1000	CS-0688-41050	03/31/22	625 µL	25 mL	Millipore Water	25

Method 300 and 9056 Injection Log

No.	Position	Injection Description	Inject Time		Type	Comment
1	GB6	Cal 1 2020.02.27	28/Feb/2020	07:59	Calibration Standard	
2	GB7	Cal 2	28/Feb/2020	08:23	Calibration Standard	
3	GB8	Cal 3	28/Feb/2020	08:48	Calibration Standard	
4	GC1	Cal 5	28/Feb/2020	09:12	Calibration Standard	
5	GC2	Cal 8	28/Feb/2020	09:36	Calibration Standard	
6	R1	ICB	28/Feb/2020	10:01	Unknown	
7	R3	200228A LCS / ICV	28/Feb/2020	10:25	Check Standard	
8	R3	200228A LCSD	28/Feb/2020	10:50	Check Standard	
9	RA1	BA07633W07	28/Feb/2020	12:31	Unknown	
10	RA2	BA07634W07	28/Feb/2020	12:56	Unknown	
11	RA3	BA07231W08 df20	28/Feb/2020	13:20	Unknown	
12	RA4	BA07231W08 MS df20	28/Feb/2020	13:45	Unknown	
13	RA5	BA07231W08 MSD df20	28/Feb/2020	14:09	Unknown	
14	R2	CCV 200228	28/Feb/2020	14:33	Check Standard	
15	R1	CCB	28/Feb/2020	14:59	Unknown	
16	BA1	ICV	28/Feb/2020	18:31	Check Standard	
17	BA2	BA07742W01 df5	28/Feb/2020	18:56	Unknown	
18	BA3	BA07743W05	28/Feb/2020	19:22	Unknown	
19	BA4	BA07743W05 MS	28/Feb/2020	19:47	Unknown	
20	BA5	BA07743W05 MSD	28/Feb/2020	20:12	Unknown	
21	BA6	BA07744W05	28/Feb/2020	20:38	Unknown	
22	BA7	BA07745W05	28/Feb/2020	21:03	Unknown	
23	BA8	BA07746W05	28/Feb/2020	21:28	Unknown	
24	BB1	BA07747W05	28/Feb/2020	21:54	Unknown	
25	BB2	BA07755W04	28/Feb/2020	22:19	Unknown	
26	BB3	BA07756W04 df5	28/Feb/2020	22:45	Unknown	
27	BB4	BA07759W04	28/Feb/2020	23:10	Unknown	
28	BB5	BA07760W04 df10	28/Feb/2020	23:35	Unknown	
29	R2	CCV 200228	29/Feb/2020	00:01	Check Standard	
30	R1	CCB	29/Feb/2020	00:26	Unknown	
31	BB6	BA07761W04 df5	29/Feb/2020	00:52	Unknown	
32	BB7	BA07762W04 df20	29/Feb/2020	01:17	Unknown	
33	BB8	BA07765W04 df20	29/Feb/2020	01:42	Unknown	
34	BC1	BA07766W04 df10	29/Feb/2020	02:08	Unknown	
35	BC2	BA07767W04 df10	29/Feb/2020	02:33	Unknown	
36	BC3	BA07768W05 df10	29/Feb/2020	02:58	Unknown	
37	BC4	BA07769W05 df10	29/Feb/2020	03:24	Unknown	
38	BC5	BA07770W05 df10	29/Feb/2020	03:49	Unknown	
39	BC6	BA07785W01	29/Feb/2020	04:15	Unknown	
40	BC7	BA07748W01	29/Feb/2020	04:40	Unknown	
41	R2	CCV 200228	29/Feb/2020	05:05	Check Standard	
42	R1	CCB	29/Feb/2020	05:31	Unknown	
43	BC8	BA07749W01	29/Feb/2020	05:56	Unknown	
44	BD1	BA07749W01 MS	29/Feb/2020	06:22	Unknown	
45	BD2	BA07749W01 MSD	29/Feb/2020	06:47	Unknown	
46	BD3	BA07750W01	29/Feb/2020	07:12	Unknown	
47	BD4	BA07751W01	29/Feb/2020	07:38	Unknown	
48	R2	CCV 200228	29/Feb/2020	08:03	Check Standard	
49	R1	CCB	29/Feb/2020	08:29	Unknown	
50	BA2	BA07742W01 df20	29/Feb/2020	08:54	Unknown	
51	BB2	BA07755W04 df2	29/Feb/2020	09:19	Unknown	
52	BB3	BA07756W04 df20	29/Feb/2020	09:45	Unknown	
53	BB4	BA07759W04 df5	29/Feb/2020	10:10	Unknown	
54	BB5	BA07760W04 df50	29/Feb/2020	10:35	Unknown	
55	BB7	BA07762W04 df100	29/Feb/2020	11:01	Unknown	
56	BC7	BA07748W01 df5	29/Feb/2020	11:26	Unknown	
57	BC8	BA07749W01 df5	29/Feb/2020	11:52	Unknown	
58	BB7	BA07762W04	29/Feb/2020	12:17	Unknown	
59	BB8	BA07762W04 df100	29/Feb/2020	12:43	Unknown	
60	BD3	BA07750W01 df5	29/Feb/2020	13:08	Unknown	
61	BD4	BA07751W01 df5	29/Feb/2020	13:33	Unknown	
62	R2	CCV 200228	29/Feb/2020	13:59	Check Standard	
63	R1	CCB	29/Feb/2020	14:24	Unknown	

Method 300 and 9056 Injection Log

No.	Position	Injection Description	Inject Time		Type	Comment
1	R2	CCV 200306	05/Mar/2020	09:29	Check Standard	
2	R1	CCB	05/Mar/2020	09:55	Unknown	
3	R2	200306A LCS	05/Mar/2020	10:20	Check Standard	
4	R2	200306A LCSD	05/Mar/2020	10:46	Check Standard	
5	BA1	BA07882W04	05/Mar/2020	11:11	Unknown	
6	BA2	BA07916W04	05/Mar/2020	11:36	Unknown	
7	BA3	BA07917W04	05/Mar/2020	12:02	Unknown	
8	BA4	BA07918W11	05/Mar/2020	12:27	Unknown	
9	BA5	BA07918W11 MS	05/Mar/2020	12:53	Unknown	
10	BA6	BA07918W11 MSD	05/Mar/2020	13:18	Unknown	
11	BA7	BA07919W04	05/Mar/2020	13:43	Unknown	
12	BA8	BA07920W04	05/Mar/2020	14:09	Unknown	
13	BB1	BA07883W04	05/Mar/2020	14:34	Unknown	
14	BB2	BA07922W01 df5	05/Mar/2020	15:00	Unknown	
15	R2	CCV 200306	05/Mar/2020	15:25	Check Standard	
16	R1	CCB	05/Mar/2020	15:50	Unknown	
17	GA1	BA07942W12	05/Mar/2020	17:17	Unknown	
18	GA2	BA07944W12	05/Mar/2020	17:43	Unknown	
19	GA3	BA07971	05/Mar/2020	18:08	Unknown	
20	GA4	BA07968W02	05/Mar/2020	18:34	Unknown	
21	GA5	BA07968W02 df5	05/Mar/2020	18:59	Unknown	
22	GA6	BA07969W02	05/Mar/2020	19:24	Unknown	
23	GA7	BA07969W02 MS	05/Mar/2020	19:50	Unknown	
24	GA8	BA07969W02 MSD	05/Mar/2020	20:15	Unknown	
25	R2	CCV 200305	05/Mar/2020	20:41	Check Standard	
26	R1	CCB	05/Mar/2020	21:06	Unknown	
27	BB3	BA07346W16 df10	05/Mar/2020	21:31	Unknown	
28	BB4	BA07346W16 MS df10	05/Mar/2020	21:57	Unknown	
29	BB5	BA07346W16 MSD df10	05/Mar/2020	22:22	Unknown	
30	BB6	BA07417W01	05/Mar/2020	22:48	Unknown	
31	BB7	BA07417W01 df5	05/Mar/2020	23:13	Unknown	
32	BB8	BA07418W01	05/Mar/2020	23:38	Unknown	
33	BC1	BA07418W01 df5	06/Mar/2020	00:04	Unknown	
34	BC2	BA07419W04	06/Mar/2020	00:29	Unknown	
35	BC3	BA07419W04 df5	06/Mar/2020	00:54	Unknown	
36	BC4	BA07420W07	06/Mar/2020	01:20	Unknown	
37	BC5	BA07420W07 df10	06/Mar/2020	01:45	Unknown	
38	BC6	BA07421W01	06/Mar/2020	02:11	Unknown	
39	BC7	BA07421W01 df5	06/Mar/2020	02:36	Unknown	
40	BC8	BA07422W01	06/Mar/2020	03:01	Unknown	
41	BD1	BA07422W01 df5	06/Mar/2020	03:27	Unknown	
42	BD2	BA07423W04	06/Mar/2020	03:52	Unknown	
43	BD3	BA07423W04 df5	06/Mar/2020	04:18	Unknown	
44	BD4	BA07424W07	06/Mar/2020	04:43	Unknown	NDF 50 NO3
45	BD5	BA07424W07 df10	06/Mar/2020	05:08	Unknown	
46	BD6	BA07481W01	06/Mar/2020	05:34	Unknown	
47	BD7	BA07481W01 df5	06/Mar/2020	05:59	Unknown	
48	R2	CCV 200305	06/Mar/2020	06:24	Check Standard	
49	R1	CCB	06/Mar/2020	06:50	Unknown	
50	BD8	BA07482W01	06/Mar/2020	07:15	Unknown	
51	BE1	BA07482W01 df5	06/Mar/2020	07:41	Unknown	
52	BE2	BA07483W01	06/Mar/2020	08:06	Unknown	
53	BE3	BA07483W01 df5	06/Mar/2020	08:31	Unknown	
54	BE4	BA07484W01	06/Mar/2020	08:57	Unknown	
55	BE5	BA07484W01 df5	06/Mar/2020	09:22	Unknown	
56	RA8	BA07424W07 df50	06/Mar/2020	09:48	Unknown	NO3
57	BE6	BA07488W01	06/Mar/2020	10:13	Unknown	
58	BE7	BA07488W01 df5	06/Mar/2020	10:38	Unknown	
59	BE8	BA07489W01	06/Mar/2020	11:04	Unknown	
60	RA1	BA07489W01 df5	06/Mar/2020	11:29	Unknown	
61	RA2	BA07451W06	06/Mar/2020	11:55	Unknown	
62	RA3	BA07451W06 df5	06/Mar/2020	12:20	Unknown	
63	RA4	BA07455W06	06/Mar/2020	12:45	Unknown	
64	RA5	BA07460W06	06/Mar/2020	13:11	Unknown	
65	RA6	BA07461W06	06/Mar/2020	13:36	Unknown	
66	RA7	BA07461W06 df5	06/Mar/2020	14:01	Unknown	
67	R2	200305B LCS	06/Mar/2020	14:27	Check Standard	
68	R2	200305B LCSD	06/Mar/2020	14:52	Check Standard	
69	R2	CCV 200305	06/Mar/2020	15:18	Check Standard	
70	R1	CCB	06/Mar/2020	15:43	Unknown	
71	R2	200305B LCS	06/Mar/2020	17:24	Check Standard	
72	BA1	BA07527W06 DF2	06/Mar/2020	17:49	Unknown	
73	BA2	BA07527W06 DF50	06/Mar/2020	18:15	Unknown	
74	BA3	BA07530W06 DF20	06/Mar/2020	18:40	Unknown	
75	BA4	BA07526W06 DF2	06/Mar/2020	19:06	Unknown	
76	BA5	BA07529W06 DF50	06/Mar/2020	19:31	Unknown	
77	BA6	BA07528W06 DF10	06/Mar/2020	19:56	Unknown	
78	R2	200305B LCSD	06/Mar/2020	20:22	Check Standard	
79	BA7	BA08031W04	06/Mar/2020	20:47	Unknown	
80	BA8	BA08031W04 MS	06/Mar/2020	21:13	Unknown	
81	BB1	BA08031W04 MSD	06/Mar/2020	21:38	Unknown	
82	BB2	BA08034	06/Mar/2020	22:03	Unknown	
83	BB3	BA07377W03	06/Mar/2020	22:29	Unknown	
84	BB4	BA07377W03 df5	06/Mar/2020	22:54	Unknown	
85	BB5	BA07377W03 df10	06/Mar/2020	23:19	Unknown	
86	R2	CCV 200305	06/Mar/2020	23:45	Check Standard	
87	R1	CCB	07/Mar/2020	00:10	Unknown	
88	R2	stop	n.a.		Unknown	

INORGANIC ANALYSIS
Calibration and Raw Data

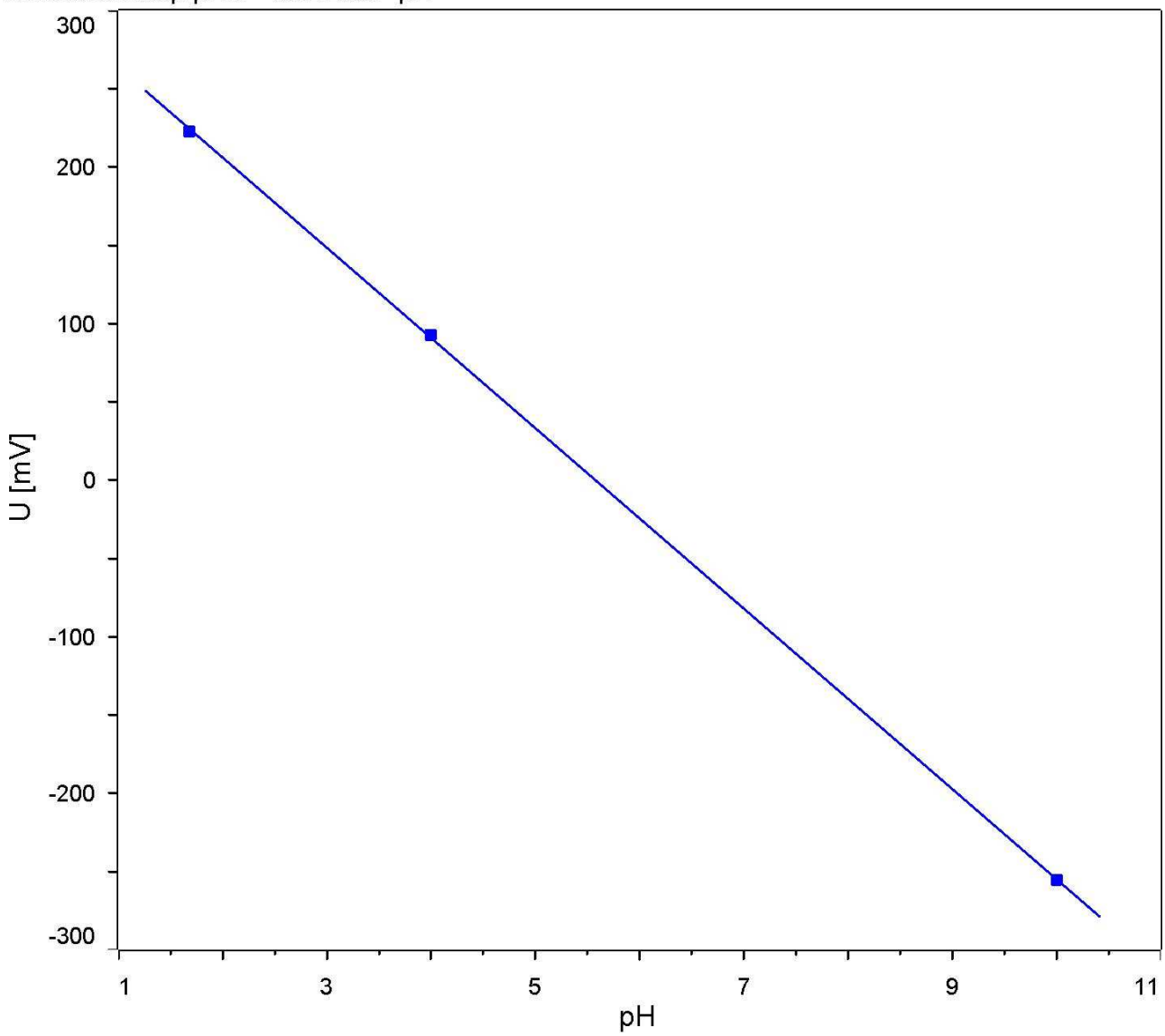
Timao Calibration Curve

2020-03-09 12:42:52

Calculations

Buffer 7	7.06	
Formula	'MEAS pH.EME'	
MEAS pH.EME	7.0642	
Slope	98.60	
Formula	'Calibration loop pH.SLO'	
Calibration loop pH.SLO	98.6	
pH(as)	5.58	
Formula	'Calibration loop pH.ENP'	
Calibration loop pH.ENP	5.575	
Res19	21.5	°C
Formula	'CAL MEAS pH.ETE'	
CAL MEAS pH.ETE	21.5027	

Calibration loop pH.1 - CAL LOOP pH



Metrohm 814/809 Titrando Data

Sample ID	Analysis Date/Time	Method	Titration Volume (to 8.3)	Titration Volume (total)	OH	CO3	HCO3	Total Alk	Unit	Sample Vol	N	Batch	Initials
BA07944W12	2020-03-09 17:22:31 UTC-8	Alkalinity	0.000	1.758	0.00	0.00	70.67	70.67	mg/L	25 mL	0.0201	200203A	AR
BA07942W12	2020-03-09 16:59:36 UTC-8	Alkalinity	0.000	1.288	0.00	0.00	51.78	51.78	mg/L	25 mL	0.0201	200203A	AR
200309A LCSD	2020-03-09 16:47:54 UTC-8	Alkalinity	0.144	6.586	0.00	11.58	253.18	264.76	mg/L	25 mL	0.0201	200309A	AR
200309A LCS	2020-03-09 16:36:27 UTC-8	Alkalinity	0.148	6.576	0.00	11.90	252.46	264.36	mg/L	25 mL	0.0201	200309A	AR
200309A BLK	2020-03-09 16:33:05 UTC-8	Alkalinity	0.000	0.046	0.00	0.00	1.85	1.85	mg/L	25 mL	0.0201	200309A	AR

Tiamo Alkalinity Standard Prep

Prep Date:

Exp Date:

Prep'd By (Initials): AR

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Unit	Conc	Lot Number - QA Number	Prep/Opened	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc
Sulfuric Acid (H2SO4)	J.T.Baker	NA	NA	167828	NA	NA	PURCHASED	NA	NA	NA
0.10N Sulfuric Acid (H2SO4)	J.T.Baker	Normality	0.1N	167828	05/24/19	05/24/20	3ml	1L	DI	0.10N
0.02N Sulfuric Acid (H2SO4)	J.T.Baker	Normality	0.02N	167828	05/24/19	05/24/20	200mL	1L	DI	0.02N
Inorganic Spike(NaHCO3)	BDH	NA	NA	1575C510	10/18/18	08/14/20	PURCHASED	NA	NA	NA
Inorganic Spike Solution	BDH	Milligrams/Liters	250mg/L	1575C510	09/17/19	03/17/20	3.5g	500mL	DI	250mg/L
Standarizing Solution(NaCO3)	J.T.Baker	Normality	1N	178494	07/25/17	07/25/19	PURCHASED	NA	NA	NA

Tiamo pH Buffer Reference Standards

Prep Date: Daily

Exp Date: Daily

Prep'd By (Initials): AR

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Units	pH	Lot Number - QA Number	Opened	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
pH 1.68 Buffer	ORION	pH Units	1.68	WX1-40709	04/22/19	01/01/21	NA	NA	NA	NA
pH 4.00 Buffer	RICCA	pH Units	4	1807191-39782	04/22/19	01/01/21	NA	NA	NA	NA
pH 10.01 Buffer	VWR	pH Units	10.01	0903980-40707	04/22/19	08/27/20	NA	NA	NA	NA
pH 7.00 Buffer	Ricca	pH Units	7	1805M17 - 39765	10/11/18	05/01/20	NA	NA	NA	NA

Ferrous Iron — Rev 2, 04-05-19

Method SM3500Fe | Units mg/L | Instrument: Genisis Spectrometer
Analyte Fe2+ | QCG: 200305A | Wavelength: 510 nm
Analyist fjr | Final Volume: 50mL | Units: mg/L

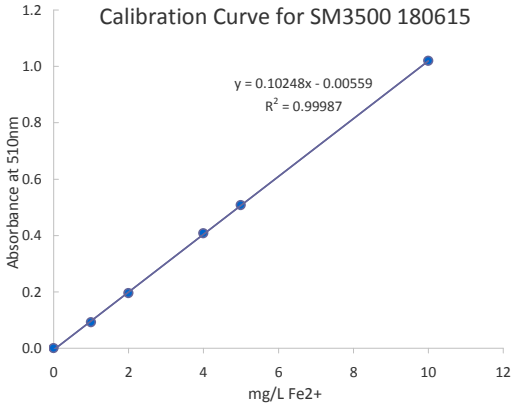
Date	Time	Appl ID	[Fe2+]	Absorbance	% Recovery
06/28/19	12:48	ICB	0.00	0.000	
06/28/19	12:49	Ical 1	1.00	0.092	95.2%
06/28/19	12:50	Ical 2	2.00	0.195	97.9%
06/28/19	12:51	Ical 3	4.00	0.408	100.9%
06/28/19	12:51	Ical 4	5.00	0.507	100.0%
06/28/19	12:52	Ical 5	10.00	1.019	100.0%
06/28/19	13:08	ICV	3.00	0.326	107.9%
06/28/19	12:53	ICB	0.00	0.002	

Slope	0.102479592
Intercept	-0.005591837
Coefficient of Determination	0.999872044

Algortithm Check:	Appl ID	Absorbance	Result
	LCS 200305A	0.298	2.96

Result = (Absorbance-Raw Blk-Intercept)/ Slope

Test:	FJR	03/05/20	2.96



Date	Time	Appl ID	DF	Raw Result	SubSample Amount	Raw BLK	Calc Conc	Result	QC True	% Recovery
03/05/20	13:20	CCV 4.0 200305A	1	0.399	25mL		3.95	3.95	4.00	98.7%
03/05/20	13:19	CCB 200305A	1	0.000	25mL		0.05	0.05		
03/05/20	13:20	LCS 200305A	1	0.298	25mL		2.96	2.96	3.00	98.7%
03/05/20	13:21	LCSD 200305A	1	0.299	25mL		2.97	2.97	3.00	99.1%
03/05/20	13:21	BA07942W16	1	0.006	25mL		0.11	0.11		
03/05/20	13:22	BA07944W16	1	0.005	25mL		0.10	0.10		
03/05/20	13:22	BA07944W16 MS	1	0.305	25mL		3.03	3.03		
03/05/20	13:23	BA07944W16 MSD	1	0.309	25mL		3.07	3.07		
03/05/20	13:24	CCV 4.0 200305A	1	0.398	25mL		3.94	3.94	4.00	98.5%
03/05/20	13:24	CCB 200305A	1	0.002	25mL		0.07	0.07		

Standard Prep

	Ferrous Iron Standards		Prep'd By (Initials)		FJR		
Prep Date	06/28/18						
Exp Date	06/28/19						
Stock Label	Supplier	Batch Number	Exp Date	Aliquot from Stock	Final Volume	Solvent	Ferrous Iron Concentration
Ferrous Ammonium Sulfate	J.T.Baker	0000184592	08/21/20	0.351	250mL	5ml H2SO4 (0000167828) Diluted with water	200ug/L
Ferrous Sulfate	Mallinckrodt	Lot 5056 KDRX	NA	0.250	250mL	5ml H2SO4 (0000167828) Diluted with water	200ug/L
Ferrous Iron CCV/LCS/MS/ICV			Prep'd By (Initials)		FJR		
Prep Date	See Injection Log						
Exp Date	24 Hours						
Initial Standard Information	Supplier	Batch Number	Exp Date	Final Standard Information			
Ferrous Iron CCV	J.T.Baker	0000184592	06/14/19	500uL	25mL	Deionized water	4mg/L
Ferrous Iron ICV/LCS	Mallinckrodt	Lot 5056 KDRX	06/14/19	375uL	25mL	Deionized water	3mg/L
	Ferrous Iron Calibration Curve		Prep'd By (Initials)		FJR		
Prep Date	06/28/18						
Exp Date	06/28/19						
Final Standard Information							
Point Label	Supplier	Batch Number	Exp Date	Aliquot from Stock (mL)	Final Volume	Solvent	Ferrous Iron Concentration
CCB	J.T.Baker	0000184592	06/14/19	0	25mL	Deionized water	0mg/L
Ical 1	J.T.Baker	0000184592	06/14/19	0.125	25mL	Deionized water	1mg/L
Ical 2	J.T.Baker	0000184592	06/14/19	0.25	25mL	Deionized water	2mg/L
Ical 3	J.T.Baker	0000184592	06/14/19	0.5	25mL	Deionized water	4mg/L
Ical 4	J.T.Baker	0000184592	06/14/19	0.625	25mL	Deionized water	5mg/L
Ical 5	J.T.Baker	0000184592	06/14/19	1.25	25mL	Deionized water	10mg/L
ICV	Mallinckrodt	Lot 5056 KDRX	06/14/19	0.375	25mL	Deionized water	3mg/L

Reagent Prep

Reagent	Chemical Lot #	Chemical	Chemical Expiration Date	Amount	Date Prep
Colorizer	0747C107	1,10-phenanthroline	na	1.001	01/03/20
		10% HCL conc	na	enough to dissolve	01/03/20
Buffer	Z28B018	Ammonia Acetate	na	248	01/03/20
	2018071399	Glacial Acetic Acid	06/27/20	700mL	

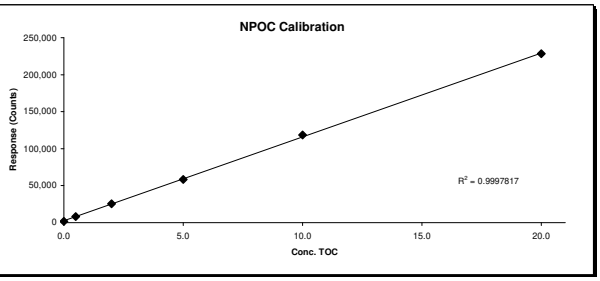
TOTAL ORGANIC CARBON

Method: WetChem | Units mg/L | Instrument: Tic Toc

Analyte: TOC | QCG: 200307A

Analyist: AR | Final Volume: 40mL

Date	Time	Appl ID	[TOC]	Raw	% Recovery
01/15/20	13:42	QC blank	0.00	1639	
01/15/20	14:25	Ical 1	0.50	8021	
01/15/20	15:01	Ical 2	2.00	25461	
01/15/20	15:37	Ical 3	5.00	58252	
01/15/20	16:13	Ical 4	10.00	118315	
01/15/20	16:49	Ical 5	20.00	228427	
01/16/20	15:11	ICB	0.08	906	
01/16/20	14:33	ICV	5.20	59018	104.0%



Date	Time	Appl ID	DF	Raw Result	SubSample Amount	Filter Blank Subtract	Calc Conc	Result	Range (mg/L)	QC True	% Recovery
2020-03-07	06:52 PM	CCV	1	51652	40mL	0.000	4.043	4.04	2.11	5.00	80.9%
2020-03-07	07:32 PM	CCB	1	467	40mL	0.000	0	0.00	0.00		
2020-03-07	08:11 PM	200306A LCS	1	53113	40mL	0.000	4.172	4.17	0.08	5.00	83.4%
2020-03-07	08:51 PM	200306A LCSD	1	53008	40mL	0.000	4.162	4.16	0.04	5.00	83.2%
2020-03-07	09:32 PM	BA07770W DF 2	2	144117	40mL	0.000	12.666	25.33	2.60		
2020-03-07	10:10 PM	BA07942W11	1	79362	40mL	0.000	6.962	6.96	4.46		
2020-03-07	10:48 PM	BA07944W10	1	79552	40mL	0.000	6.979	6.98	0.38		
2020-03-07	11:26 PM	CCV	1	54871	40mL	0.000	4.327	4.33	0.10	5.00	86.5%
2020-03-08	12:06 AM	CCB	1	364	40mL	0.000	0	0.00	0.00		

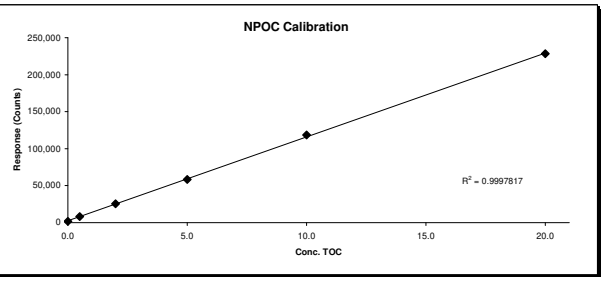
TOTAL ORGANIC CARBON

Method: WetChem | Units mg/L | Instrument: Tic Toc

Analyte: DOC | QCG: 200311A

Analyist: AR | Final Volume: 40mL

Date	Time	Appl ID	[TOC]	Raw	% Recovery
01/15/20	13:42	QC blank	0.00	1639	
01/15/20	14:25	Ical 1	0.50	8021	
01/15/20	15:01	Ical 2	2.00	25461	
01/15/20	15:37	Ical 3	5.00	58252	
01/15/20	16:13	Ical 4	10.00	118315	
01/15/20	16:49	Ical 5	20.00	228427	
01/16/20	15:11	ICB	0.08	906	
01/16/20	14:33	ICV	5.20	59018	104.0%



Date	Time	Appl ID	DF	Raw Result	SubSample Amount	Filter Blank Subtract	Calc Conc	Result	Range (mg/L)	QC True	% Recovery
2020-03-11	06:23 PM	55#1	1	3403	40mL	0.000	0	0.00	0.00		
2020-03-11	07:01 PM	CCV	1	57333	40mL	0.000	4.751	4.75	0.03	5.00	95.0%
2020-03-11	07:41 PM	CCB	1	785	40mL	0.000	0	0.00	0.00		
2020-03-11	08:19 PM	200311A LCS	1	58240	40mL	0.000	4.831	4.83	0.03	5.00	96.6%
2020-03-11	08:59 PM	200311A LCSD	1	53765	40mL	0.000	4.437	4.44	1.43	5.00	88.7%
2020-03-11	09:40 PM	BA07942W11	1	226646	40mL	0.000	19.937	19.94	1.17		
2020-03-11	10:17 PM	BA07944W09	1	3939	40mL	0.000	0.317	0.32	0.04		
2020-03-11	10:52 PM	BA08034W09	1	4839	40mL	0.000	0.397	0.40	0.01		
2020-03-11	11:28 PM	CCV	1	57788	40mL	0.000	4.791	4.79	0.04	5.00	95.8%
2020-03-12	12:08 AM	CCB	1	2094	40mL	0.000	0	0.00	0.00		

Name of Final Standard **TOC Calibration Curve** **Prep'd By (Initials)** **HH**

Prep Date **01/15/20**

Exp Date **02/12/20**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	20 uL	40 mL	**DI Water**	0.5 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	100 uL	40 mL	**DI Water**	2 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	250 uL	40 mL	**DI Water**	5 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	500 uL	40 mL	**DI Water**	10 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	1000 uL	40 mL	**DI Water**	20 ppm

Name of Final Standard **ICV (TOC)** **Prep'd By (Initials)** **AR**

Prep Date **01/16/20**

Exp Date **02/13/20**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
1000 PPM ICV TOC Intermediate	APPL Inc.	Prep: 2/11/19	1000 mg/L	**Prep: 2/11/19**	**02/13/20**	500 uL	40mL	**DI Water**	10 ppm

Name of Final Standard **CCV (TOC)** **Prep'd By (Initials)** **AR**

Prep Date **See Data**

Exp Date **1 year**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	200 uL	40 mL	**DI Water**	5 ppm

Name of Final Standard **TOC LCS/LCSD** **Prep'd By (Initials)** **AR**

Prep Date **See Data**

Exp Date **1 year**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	ULTRA Scientific	IQC-106-5	1000 mg/L	**CR-0328-37639**	**02/28/19**	200 uL	40 mL	**DI Water**	5 ppm

Silica

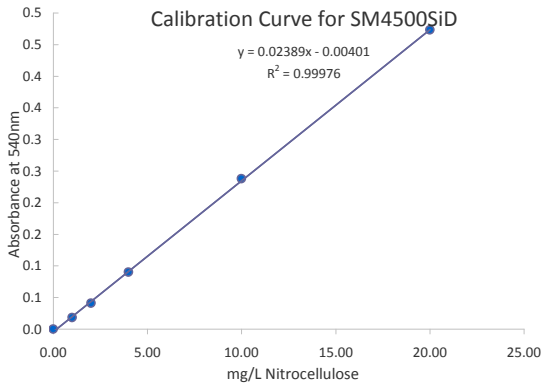
Rev 2, 04/05/19 controlled copy

Method SM4500SiD | Units mg/L | Instrument: Genisis Spectrometer

Analyte Silica | QCG: 200309A | Wavelength: 410 nm

Analyist FJR | Final Volume: 25mL | Units: mg/L

Date	Time	Appl ID	[SiO2]	Absorbance	% Recovery
03/09/20	14:59	ICB	0.00	0.000	
03/09/20	15:00	Ical 1	1.00	0.018	92.1%
03/09/20	15:01	Ical 2	2.00	0.041	94.2%
03/09/20	15:01	Ical 3	4.00	0.090	102.5%
03/09/20	15:02	Ical 4	10.00	0.238	101.3%
03/09/20	15:03	Ical 5	20.00	0.473	99.8%
03/09/20	15:04	ICV	4.00	0.099	107.8%
03/09/20	15:04	ICB	0.00	-0.001	



Slope	0.023892999
Intercept	-0.00400683
Coefficient of Determination	0.999760897

Algortithm Check:	Appl ID	Absorbance	Result
	200309A 4 LCS	0.091	3.98

Result = (Absorbance-Raw Blk-Intercept)/ Slope

Test:	03/09/20	FJR	3.980

	Date	Time	Appl ID	DF	Raw Result	Sample Amount	Raw BLK	Calc Conc	Result	QC True	% Recovery
id	03/09/20	14:59	ICB	1	0.000	25.0mL		0.17	0.17		
id	03/09/20	15:00	Ical 1	1	0.018	25.0mL		0.92	0.92	1.00	92.1%
id	03/09/20	15:01	Ical 2	1	0.041	25.0mL		1.88	1.88	2.00	94.2%
id	03/09/20	15:01	Ical 3	1	0.094	25.0mL		4.10	4.10	4.00	102.5%
id	03/09/20	15:02	Ical 4	1	0.238	25.0mL		10.13	10.13	10.00	101.3%
id	03/09/20	15:03	Ical 5	1	0.473	25.0mL		19.96	19.96	20.00	99.8%
id	03/09/20	15:04	ICV	1	0.099	25.0mL		4.31	4.31	4.00	107.8%
id	03/09/20	15:04	ICB	1	-0.001	25.0mL		0.13	0.13		
	03/09/20	15:05	200309A CCV1 4	1	0.235	25mL		10.00	10.00	10.00	100.0%
	03/09/20	15:06	200309A CCB	1	-0.001	25mL		0.13	0.13		
	03/09/20	15:07	200309A BLK	1	-0.002	25mL		0.08	0.08		
	03/09/20	15:07	200309A 4 LCS	1	0.091	25mL		3.98	3.98	4.00	99.4%
	03/09/20	15:08	200309A 4 LCSD	1	0.092	25mL		4.02	4.02	4.00	100.5%
	03/09/20	15:09	BA07942W14 T	5	0.189	25mL		8.08	40.39		
	03/09/20	15:09	BA07944W13 T	5	0.225	25mL		9.58	47.92		
	03/09/20	15:10	BA08034W18 T	5	0.240	25mL		10.21	51.06		
	03/09/20	15:10	BA08034W18 T MS	5	0.332	25mL		14.06	70.31		
	03/09/20	15:11	BA08034W18 T MSD	5	0.333	25mL		14.10	70.52		
	03/09/20	15:11	BA07942W14 D	5	0.195	25mL		8.33	41.65		
	03/09/20	15:12	BA07944W13 D	5	0.201	25mL		8.58	42.90		
	03/09/20	15:12	BA08034W17 D	5	0.218	25mL		9.29	46.46		
	03/09/20	15:13	BA08034W17 D MS	5	0.309	25mL		13.10	65.50		
	03/09/20	15:13	BA08034W17 D MSD	5	0.311	25mL		13.18	65.92		
	03/09/20	15:13	200309ACCV1 3	1	0.092	25mL		4.02	4.02	4.00	100.5%
	03/09/20	15:14	200309A CCB	1	-0.001	25mL		0.13	0.13		

Silica Standard Prep

Spike Amount (uL)*	Final Volume (mL)	Final Concentration (ppm)
25	25	1
50	25	2
100 (CCV2)	25	4
250 (CCV1)	25	10
500	25	20

*Curve Spiked with 1000 ppm SiO_2 o2si lot 1098096-37186 (exp: 4/29/18)

ICV/LCS = 4ppm SiO_2
100 uL of 1000 ppm SiO_2 Ultra Scientific Lot P01064-32895 (exp: 11/30/19) brought up to 25mL with DI

MS = 4ppm SiO_2
100 uL of 1000 ppm SiO_2 Ultra Scientific Lot P01064-32895 (exp: 11/30/19) brought up to 25mL with sample

Prep: 10/25/19
Exp: 10/25/19

Initials: FJR

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

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

Data Validatable Report

April 6, 2020

AECOM
1001 Bishop Street, Suite 1600
Honolulu, Hawaii 96813

Attn: Margie Pascua

Title: Report of Data: Case 91607

Project: 60571032 CV18F0126 Red Hill Fuel Storage, HI

Contract #: Prime contract # for DoD: NAVY CLEAN N62742-17-F-1800, CV18F0126
Subcontract: 18S-22209-HI27

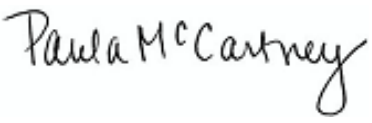
Dear Ms. Pascua:

Two water samples were received March 6, 2020. Written results for the requested analyses are being provided on this April 6, 2020.

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

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

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



Paula McCartney, Laboratory Director
APPL, Inc.

PM/lac
Enclosure
cc: File

Data Validation Package
for
60571032 CV18F0126 Red Hill Fuel Storage
APPL SDG 91607
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CASE NARRATIVE

Case Narrative

ARF: 91607

Project: 60571032 CV18F0126 Red Hill Fuel Storage. HI

Sample Receipt Information:

Two water samples were received March 6, 2020, at 5.8°C. The sample group was assigned Analytical Request Form (ARF) number 91607.

Sample Preparation and Analysis Information:

For the EPA 8011 analysis, the samples were extracted according to APPL SOP method MWE012.

For the EPA 8015B analysis, the sample was extracted according to EPA method 3520C. The sample extracts were silica gel cleaned according to APPL's SOP CLN004 and placed on hold.

For the EPA 8270D Phenol analysis, the samples were extracted according to EPA method 3520C.

For the EPA 8270D SIM analysis, the samples were extracted according to EPA method 3520C.

For the APPL SOP ANA2MEE analysis, the samples were extracted according to EPA method 3535.

For the EPA 8260B analysis, the samples were purged according to EPA method 5030B.

For the RSK-175 analysis, the samples were allowed to equilibrate for 10 minutes at 40°C and a portion of the headspace was analyzed.

For the EPA 6010C analysis, the sample was digested according to EPA method 3010A.

For the EPA 9060A, 300.0, 353.2, SM 2320B, SM 4500-SiD and SM 3500FeB analyses, the sample was prepared according to the methods.

Only the portion of the injection log relative to these samples is included. A full sequence log is available upon request. Measurement uncertainty can be reported upon request.

Analytical Exceptions, Deviations and Abnormalities.

APPL SOP ANA2MEE: In the LCS/LCSD, the RPD exceeded the 20% limit.

Two internal standard responses exceeded the limit. These internal standards are not associated with the target compound

EPA 8260B: The surrogate Toluene-d8 recovered below the lower control limit in the two samples, LCS/LCSD, and Method Blank. The samples were re-injected with the surrogate recovering below the lower control limit.

The surrogate 1,2-Dichloroethane-d4 recovered above the upper control limit in the two samples and the Method Blank. No compounds were detected in the samples.

Inorganics: For the SM 2320B analysis, the LCSD recovers above control limits at 111%.

For the EPA 9060A analysis, the LCSD recovers below project control limits at 88.8%.

SDG	Received	Client ID	APPL ID	Collected DateTime	Matrix	Method	Method Description
91607	03/06/20	ERH1026	BA08033	03/05/20 8:15:00 AM	WATER	8011	EPA 8011
91607	03/06/20	ERH1026	BA08033	03/05/20 8:15:00 AM	WATER	EPA 8260B	EPA 8260B BTEX & 1,2-DCA WATER
91607	03/06/20	ERH1026	BA08033	03/05/20 8:15:00 AM	WATER	EPA 8260-GAS	EPA 8260 with GAS
91607	03/06/20	ERH1026	BA08033	03/05/20 8:15:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
91607	03/06/20	ERH1026	BA08033	03/05/20 8:15:00 AM	WATER	RSK 175	METHANE BY RSK 175
91607	03/06/20	ERH1027	BA08034	03/05/20 9:00:00 AM	WATER	SM 2320B	Wetlab 2320B - Water
91607	03/06/20	ERH1027	BA08034	03/05/20 9:00:00 AM	WATER	EPA 300.0	Wetlab 300.0 - Water
91607	03/06/20	ERH1027	BA08034	03/05/20 9:00:00 AM	WATER	SM3500FeB	Ferrous Iron
91607	03/06/20	ERH1027	BA08034	03/05/20 9:00:00 AM	WATER	EPA 353.2	EPA 353.2 - WATER
91607	03/06/20	ERH1027	BA08034	03/05/20 9:00:00 AM	WATER	6010C/3010A	EPA 6010C TOTAL
91607	03/06/20	ERH1027	BA08034	03/05/20 9:00:00 AM	WATER	8011	EPA 8011
91607	03/06/20	ERH1027	BA08034	03/05/20 9:00:00 AM	WATER	EPA 8260B	EPA 8260B BTEX & 1,2-DCA WATER
91607	03/06/20	ERH1027	BA08034	03/05/20 9:00:00 AM	WATER	EPA 8270D	EPA 8270D WATER
91607	03/06/20	ERH1027	BA08034	03/05/20 9:00:00 AM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
91607	03/06/20	ERH1027	BA08034	03/05/20 9:00:00 AM	WATER	EPA 8015B-eHL	EPA 8015B TPH LIQ-LIQ
91607	03/06/20	ERH1027	BA08034	03/05/20 9:00:00 AM	WATER	SW846 9060A	9060A DOC
91607	03/06/20	ERH1027	BA08034	03/05/20 9:00:00 AM	WATER	EPA 8260-GAS	EPA 8260 with GAS
91607	03/06/20	ERH1027	BA08034	03/05/20 9:00:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
91607	03/06/20	ERH1027	BA08034	03/05/20 9:00:00 AM	WATER	RSK 175	METHANE BY RSK 175
91607	03/06/20	ERH1027	BA08034	03/05/20 9:00:00 AM	WATER	8270D-SIM	EPA 8270D SIM LIQ-LIQ
91607	03/06/20	ERH1027	BA08034	03/05/20 9:00:00 AM	WATER	SM 4500-Si D	Silica W
91607	03/06/20	ERH1027	BA08034	03/05/20 9:00:00 AM	WATER	SM 4500-Si D	SILICA W - DISSOLVED
91607	03/06/20	ERH1027	BA08034	03/05/20 9:00:00 AM	WATER	SW846 9060A	9060A TOC

APPL Inc.
Abbreviations and Flags

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

Abbreviations	DESCRIPTION
CCB	Continuing calibration blank
CCV	Continuing calibration verification
DF	Dilution factor
DL	Detection limit
ICB	Initial calibration blank
ICV	Initial calibration verification
LCS	Laboratory control spike
LOD	Limit of detection
LOQ	Limit of quantitation
MS	Matrix spike
MSD	Matrix spike duplicate
PQL	Practical quantitation limit
RL	Reporting limit
RPD	Relative percent difference
RT	Retention time

SAMPLE RECORDS MANAGEMENT

CHAIN OF CUSTODY,

ARF, CRF, AND

CLIENT COMMUNICATION

APPL - Analysis Request Form

91607

Client: AECOM
Address: 1001 Bishop Street, Suite 1600
Honolulu, HI 96813
Attn: Margie Pascua
Phone: 808-356-5373 Fax: 808-523-8950
Job: 60571032 CV18F0126 Red Hill Fuel Storage
PO #: 18S-22209-HI27 PO# 102604
Chain of Custody (Y/N): Y # 133
RAD Screen (Y/N): Y pH (Y/N): Y
Turn Around Type: 1 WEEK

Received by: RBR
Date Received: 03/06/20 Time: 10:00
Delivered by: FEDEX
Shuttle Custody Seals (Y/N): Y Time Zone: -10
Chest Temp(s): 5.8°C
Color: VFRG/A-Gr/SF-BlRed
Samples Chilled until Placed in Refrig/Freezer: Y
Project Manager: Libby Cheesebor
QC Report Type: DVP4DOD/EQUIS/HI
Due Date: 03/13/20

Comments:
PM: login and F1s to Margie.Pascua@aecom.com
AN: 7 day TAT for Form 1s; 21 day TAT for PKG STYLE 1; DOD v5.1; DOD Forms: LOD database
Wetlab: NO3, CL, SO4, BR, F by EPA 300 and NO3-N & NO2-N by 353.2
report MS/MSD/Dups when AECOM sample used
TPH D & O both with and w/o SGC, reverse surrogate for the SGC; analyze SGC if detections
RSK: Methane only; 8011: EDB only; $87DC53W5: report phenol
FR: email ftp info to Margie, Stella, trommelfanger@lab-data.com & jcanlas@lab-data.com
EDD: AECOM EQuIS EDD 2.5.3 Red Hill 87DMEE->3535A to Margie.Pascua@aecom.com & jecklund@lab-data.com

Sample Distribution:
GC: 2-$8011, 1-$87DC53W5, 1-$87DMEEW5, 1-$DOC53W5LIQ, 1-$SIM53LIQ51
Extractions: 2-_MWE012, 1-_LIQ003, 1-_LIQ005, 1-_MWE2MEE
VOA: 2-$86BTOTXDCAW, 2-$GASBL, 2-$GRO86BW, 2-$RSKMETH
Metals: 1-$61CDOD5W(Ca,Mg,Mn,K,Na)
Wetlab: 1-$232W(HCO3,CO3,ALK), 1-$300W, 1-$35FE, 1-$35OF, 1-$DOCW53, 1-$SIO2, 1-$SIO2D, 1-$TOCW53
Other: 1-_M3010

Charges:

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

	Client ID	APPL ID	Sampled	Analyses Requested
1.	ERH1026	BA08033W LCSD	03/05/20 08:15	$8011, $86BTOTXDCAW, $GASBL, $GRO86BW, $RSKMETH -- see comments
2.	ERH1027	BA08034W LCSD	03/05/20 09:00	$232W(HCO3,CO3,ALK), $300W, $35FE, $35OF, $61CDOD5W(Ca,Mg,Mn,K,Na), $8011, $86BTOTXDCAW, $87DC53W5, $87DMEEW5, $DOC53W5LIQ, $DOCW53, $GASBL, $GRO86BW, $RSKMETH, $SIM53LIQ51, $SIO2, $SIO2D, $TOCW53 -- see comments

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

APPL Sample Receipt Form

ARF# **91607**

Sample	Container Type	Count	p
BA08033	[13] VOAs - HCL	4	NA
	[15] VOAs - NP	3	NA
BA08034	[4] PL 125mL	2	NA
	[6] PL 500mL - HNO3	1	1.6
	[10] PL 250mL - H2SO4	1	1.6
	[13] VOAs - HCL	4	NA
	[15] VOAs - NP	3	NA
	[17] Amber Liter	4	NA
	[32] Clear VOA - H2SO4	4	NA
	[38] 250mL brn poly, HCl prsvd	1	1.6
	[40] 500mL Amber, unprsrvd	3	NA

Sample	Container Type	Count	p

91607 ~~ERO 0.0°C 5.8/5.8°C~~ RB 3/6/20

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com
Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

CHAIN OF CUSTODY RECORD

C.O.C. 133

Report to: PLEASE PRINT	Invoice to: PLEASE PRINT
Company Name: AECOM Phone: 808-356-5373	Company Name: AECOM Phone: 808-529-7249
Address: 1001 Bishop St, Suite 1600 Honolulu, HI 96813 Fax: 808-523-8950	Address: 1001 Bishop St, Suite 1600 Honolulu, HI 96813 Fax: 808-523-8950
Attn: Margie Pascua	Attn: Mary Basano
Email: margie.pascua@aecom.com	Email: mary.basano@aecom.com; usapimaging@aecom.com

Project Name/Number: CV18F0126 / 60571032
Purchase Order Number: 102604
Sampler (Print): BM, CE, EB
Sampler (Signature): MP for BM, CE, EB

Date Shipped: 03/05/20
Carrier: FedEx
Waybill No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil	8260C BTEX,TPH-g	8260C DCA 8011 EDB	8015C TPH-d/o	3630/8015C TPH-d/o w/ SGT	8270DSIM PAHs short list	8270D Phenol, ~~THeo~~ EB	8270D 2-(2-methoxy ethoxy)-ethanol	RSK175M Methane	SM3500-Fe Ferrous Iron	353.2 Nitrate-Nitrite N	SM2320B Alkalinity 300.0 Nitrate,Sulfate,Chlbride	300.0 Bromide/Fluoride 6010 Total Ca,Mg,Mn,K,Na SM4500 Total & Dissolved Silica	9060A TOC / DOC
ERH 1026	Trip Blank			HST		X			X	X						X					
ERH 1027	RHMW13-03			HST		X			X	X	X	X*	X	X	X	X	X	X	X	X	X

*Analyze TPH w/SGT only if TPH-d/o detected.

TPH-d/o & PAHs need liquid-liquid extraction.

Page 12 of 617

Shuttle Temperature: IR @ 0.0°C 5.8/5.8°C

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

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

Relinquished by sampler: AECOM	Date: 03/05/20	Time: 14:00	Received by:	Relinquished by:	Date	Time	Received by:
Relinquished by: JF ~~John Flaherty~~	Date	Time	Received by:	Relinquished by:	Date: 3/6/20	Time: 10:00	Received at lab by:

See page 2 for Container Preservative and Sampling Information

Libby Cheeseborough

From: Pascua, Margie Fabian. <Margie.Pascua@aecom.com>
Sent: Tuesday, March 10, 2020 2:14 PM
To: Libby Cheeseborough
Subject: RE: 91585 & 91607 logins

Categories: Red Category

Hi Libby,

The codes look fine, but couple of minor comment on the Cooler Receipt Form:
SDG 91585 - Item# 22 has "NO" instead of "YES"
SDG 91607 – temperature reading is missing

Thank you,

Margie Pascua
Environmental Scientist
Environment, West Region, Pacific District
Direct 808.356.5373

From: Libby Cheeseborough <libby@applinc.com>
Sent: Tuesday, March 10, 2020 7:10 AM
To: Pascua, Margie Fabian. <Margie.Pascua@aecom.com>
Subject: 91585 & 91607 logins

Hi Margie,
Please see attached logins and let me know if there are any changes.

Thank you,
Libby

Libby Cheeseborough
Project Manager

Agriculture & Priority Pollutants Laboratories, Inc.
WOSB. NELAP Accredited.
d. 559.862.2109 t. 559.275.2175 f. 559.275.4422
a. 908 N. Temperance Ave., Clovis, CA 93611

Website • Email

DoD accredited for ISM, Dioxins and PCB congeners.
Now DoD Certified for PFAS. Contact your PM for details.

COOLER RECEIPT FORM **ARF: 91607**

1) Project: 60571032 CV18F0126 Red Hill Fuel Storage Date Received: 03/06/20

2) Coolers: Number of Coolers: 1

3) YES Were custody seals present and intact?
How many? 2 Name/Date on seal? see below

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

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

6) YES Were cooler temperatures acceptable?

7) Serial number of certified NIST thermometer use IR CF:—°C +0.0°C AA 3/10/20

8) Cooler temp(s): In °C. Thermometer Temp / Corrected Temp
1: 5.8/5.8 2: ____ 3: ____ 4: ____ 5: ____ 6: ____
7: ____ 8: ____ 9: ____ 10: ____ 11: ____ 12: ____

Chain of custody:

9) YES Was a chain of custody received?

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

Sample Labels:

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

12) ~~YES~~ NO Did all container labels agree with custody papers?

Sample Containers:

13) YES Were all containers sealed in separate bags?

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

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

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

17) NA Were bubbles present in volatile samples?
If yes, the following were received with air bubbles:
Larger than a pea: ____
Smaller than a pea: ____

Preservation Hold time:

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

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

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

21) NA Was the pH of the "basic" preserved samples for Cyanide > 12, Sulfide >9, Hexchrom >9?

22) Yes Were unpreserved VOA Vials received?

23) No Are unpreserved VOA vials noted in the ADD TEST FIELD on the ARF?
pH strip lot number: HC982588
Lab notified if pH was not adequate: ____

Notes/Deficiencies:
Unpreserved VOA for extractions, no notation needed. COC had no time, date, or container count.

CUSTODY SEAL
APPL, Inc. (559) 275-2175
Initials RS/BT Date 3/5/2020

Personnel receiving samples: RB Second reviewer: AA
Personnel labeling samples: AD
Project manager notified: RB Date/Time of notification 03/09/20
Name of client notified: ____ Date/Time of notification ____

SAMPLE RESULTS

EPA 8011

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91607

Sample ID: ERH1026

APPL ID: BA08033

Sample Collection Date: 03/05/20

QCG: #8011-200309A-250610

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8011	EDB	0.019 U	0.02	0.019	0.010	ug/L	03/09/20	03/10/20
8011	SURROGATE: 1,3-DIBROMOPROPANE	97.8	70-132			%	03/09/20	03/10/20

Quant Method:	8010310A.M
Run #:	0228125
Instrument:	Herbie
Sequence:	200228
Dilution Factor:	1
Initials:	GAG

Printed: 03/11/20 3:51:02 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8011

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91607

Sample ID: ERH1027

APPL ID: BA08034

Sample Collection Date: 03/05/20

QCG: #8011-200309A-250610

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8011	EDB	0.019 U	0.02	0.019	0.010	ug/L	03/09/20	03/10/20
8011	SURROGATE: 1,3-DIBROMOPROPANE	96.9	70-132			%	03/09/20	03/10/20

Quant Method:	8010310A.M
Run #:	0228126
Instrument:	Herbie
Sequence:	200228
Dilution Factor:	1
Initials:	GAG

Printed: 03/11/20 3:51:02 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPH LIQ-LIQ

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91607

Sample ID: ERH1027

APPL ID: BA08034

Sample Collection Date: 03/05/20

QCG: #DOC53-200310A-250718

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	03/10/20	03/12/20
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	03/10/20	03/12/20
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	111	60-142			%	03/10/20	03/12/20
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	81.7	56-125			%	03/10/20	03/12/20

Quant Method:	DOC0310.M
Run #:	310104
Instrument:	Apollo
Sequence:	200310
Dilution Factor:	1
Initials:	SSE

Printed: 04/06/20 7:46:43 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91607

Sample ID: ERH1027

APPL ID: BA08034

Sample Collection Date: 03/05/20

QCG: #87DC5-200310A-250719

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	03/10/20	03/12/20
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHENO	81.5	43-140			%	03/10/20	03/12/20
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	73.1	44-119			%	03/10/20	03/12/20
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	60.7	19-119			%	03/10/20	03/12/20
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	72.4	44-120			%	03/10/20	03/12/20
EPA 8270D	SURROGATE: PHENOL-D6 (S)	47.8	10-115			%	03/10/20	03/12/20
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	93.1	50-134			%	03/10/20	03/12/20

Quant Method: Y1219.M
Run #: 0207Y222
Instrument: Yoda
Sequence: Y200207
Dilution Factor: 1
Initials: LPO

Printed: 03/13/20 10:39:21 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D SIM LIQ-LIQ

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91607

Sample ID: ERH1027

APPL ID: BA08034

Sample Collection Date: 03/05/20

QCG: #SIM53-200310A-250726

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	03/10/20	03/13/20
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	03/10/20	03/13/20
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	03/10/20	03/13/20
8270D-SIM	SURROGATE: 2-METHYLNAPHTHALEN	101	39-114			%	03/10/20	03/13/20
8270D-SIM	SURROGATE: FLUORANTHENE-D10 (S	92.1	58-120			%	03/10/20	03/13/20

Quant Method: L0204.M
Run #: 0204L271
Instrument: Linus
Sequence: L200204
Dilution Factor: 1
Initials: MA

Printed: 03/13/20 2:20:52 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91607

Sample ID: ERH1027

APPL ID: BA08034

Sample Collection Date: 03/05/20

QCG: #87DME-200310A-250694

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	03/10/20	03/11/20

Quant Method:	YMEE0122.M
Run #:	0122Y069
Instrument:	Yoda
Sequence:	Y200122M
Dilution Factor:	1
Initials:	DPO

Printed: 03/12/20 2:44:08 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX & 1,2-DCA WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91607

Sample ID: ERH1026

APPL ID: BA08033

Sample Collection Date: 03/05/20

QCG: #86BTO-200311AT-250689

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	03/11/20	03/11/20
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	03/11/20	03/11/20
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	03/11/20	03/11/20
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	03/11/20	03/11/20
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	03/11/20	03/11/20
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	123 #	81-118			%	03/11/20	03/11/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	87.5	85-114			%	03/11/20	03/11/20
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	103	80-119			%	03/11/20	03/11/20
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	88.4 #	89-112			%	03/11/20	03/11/20

= Recovery (or RPD) is outside QC limits.

Quant Method: T0309W.M
Run #: 0311T19
Instrument: Thor
Sequence: T200309
Dilution Factor: 1
Initials: DPO

Printed: 03/12/20 3:45:41 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX & 1,2-DCA WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91607

Sample ID: ERH1027

APPL ID: BA08034

Sample Collection Date: 03/05/20

QCG: #86BTO-200311AT-250689

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	03/11/20	03/11/20
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	03/11/20	03/11/20
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	03/11/20	03/11/20
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	03/11/20	03/11/20
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	03/11/20	03/11/20
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	127 #	81-118			%	03/11/20	03/11/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	89.1	85-114			%	03/11/20	03/11/20
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	106	80-119			%	03/11/20	03/11/20
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	89.1	89-112			%	03/11/20	03/11/20

= Recovery (or RPD) is outside QC limits.

Quant Method: T0309W.M
Run #: 0311T20
Instrument: Thor
Sequence: T200309
Dilution Factor: 1
Initials: DPO

Printed: 03/12/20 3:45:41 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91607

Sample ID: ERH1026

APPL ID: BA08033

Sample Collection Date: 03/05/20

QCG: #GRO86-200311AT-250683

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	03/11/20	03/11/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	87.5	85-114			%	03/11/20	03/11/20

Quant Method: TGAS0219.M
Run #: 0311T19
Instrument: Thor
Sequence: T200309
Dilution Factor: 1
Initials: DPO

Printed: 03/12/20 4:13:44 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91607

Sample ID: ERH1027

APPL ID: BA08034

Sample Collection Date: 03/05/20

QCG: #GRO86-200311AT-250683

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	03/11/20	03/11/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	89.1	85-114			%	03/11/20	03/11/20

Quant Method: TGAS0219.M
Run #: 0311T20
Instrument: Thor
Sequence: T200309
Dilution Factor: 1
Initials: DPO

Printed: 03/12/20 4:13:44 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
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Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91607

Sample ID: ERH1026

APPL ID: BA08033

Sample Collection Date: 03/05/20

QCG: #RSKME-200310A-250620

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	03/10/20	03/10/20

Quant Method:	RSK1002.M
Run #:	0310R07
Instrument:	Rocky
Sequence:	191002
Dilution Factor:	1
Initials:	GAG

Printed: 03/10/20 4:17:15 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91607

Sample ID: ERH1027

APPL ID: BA08034

Sample Collection Date: 03/05/20

QCG: #RSKME-200310A-250620

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	03/10/20	03/10/20

Quant Method:	RSK1002.M
Run #:	0310R08
Instrument:	Rocky
Sequence:	191002
Dilution Factor:	1
Initials:	GAG

Printed: 03/10/20 4:17:15 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

Metals Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91607

Sample ID: ERH1027

APPL ID: BA08034

Sample Collection Date: 03/05/20

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	CALCIUM (CA)	11400	1000	75.0	27.5	ug/L	1	03/10/20	03/13/20
6010C/3010A	MAGNESIUM (MG)	12100	500	30.0	12.9	ug/L	1	03/10/20	03/13/20
6010C/3010A	MANGANESE (MN)	1.4 J	10.0	4.00	1.23	ug/L	1	03/10/20	03/13/20
6010C/3010A	POTASSIUM (K)	1960 J	3000	500.0	220.0	ug/L	1	03/10/20	03/13/20
6010C/3010A	SODIUM (NA)	33900	5000	500.0	111.1	ug/L	1	03/10/20	03/13/20

J = Estimated value.

Printed: 03/26/20 6:47:02 PM

APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1027

APPL ID: BA08034

Sample Collection Date: 03/05/20

ARF: 91607

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	BROMIDE	0.22 J	0.5	0.16	0.05	mg/L	1	03/06/20	03/06/20
EPA 300.0	CHLORIDE	47.5	1.0	0.20	0.08	mg/L	1	03/06/20	03/06/20
EPA 300.0	FLUORIDE	0.25	0.1	0.09	0.08	mg/L	1	03/06/20	03/06/20
EPA 300.0	NITRATE	1.8	0.5	0.18	0.04	mg/L	1	03/06/20	03/06/20
EPA 300.0	SULFATE	7.5	1.0	0.20	0.09	mg/L	1	03/06/20	03/06/20

J = Estimated value.

Printed: 03/30/20 11:13:55 AM

APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1027

APPL ID: BA08034

Sample Collection Date: 03/05/20

ARF: 91607

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 353.2	NITRATE-NITRITE-N	0.42	0.10	0.090	0.028	mg/L	1	03/10/20	03/10/20
SM 2320B	BICARBONATE AS CACO3	81.5	2.0	1.70	0.85	mg/L	1	03/09/20	03/09/20
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	03/09/20	03/09/20
SM 2320B	TOTAL ALKALINITY AS CACO	81.5	2.0	1.70	0.85	mg/L	1	03/09/20	03/09/20
SM 4500-Si D	SILICA W	51.1	5.0	4.00	2.65	mg/L	5	03/09/20	03/09/20
SM 4500-Si D	DISSOLVED SILICA	46.5	5.0	4.00	2.65	mg/L	5	03/09/20	03/09/20
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	03/09/20	03/09/20
SW846 9060A	DISSOLVED ORGANIC CARB	0.40 J	0.93	0.350	0.130	mg/L	1	03/11/20	03/11/20
SW846 9060A	TOTAL ORGANIC CARBON	18.5	0.93	0.350	0.130	mg/L	1	03/13/20	03/13/20

J = Estimated value.

Printed: 03/30/20 10:15:34 AM

APPL-F1-SC-NoMC-REG MDLs

QC FORMS

8011

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91607

Case No: 91607 Date Analyzed: 03/09/20

Matrix: WATER Instrument: Herbie

APPL ID.	Client Sample No.	SURROGATE: 1,3-DIBROMOPROPANE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
200309A-BLK	Blank	70-132	92.6				
200309A-LCS	Lab Control Spike	70-132	100				
200309A-LCSD	Lab Control SpikeD	70-132	99.6				
BA08033	ERH1026	70-132	97.8				
BA08034	ERH1027	70-132	96.9				

Comments: Batch: #8011-200309A

8011

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	91607
Case No:	91607	Date Analyzed:	03/09/20
Matrix:	WATER	Instrument:	Herbie
Blank ID:	200309A-BLK	Time Analyzed:	2051

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200309A-BLK	Blank	0228115	03/09/20 2051
200309A-LCS	Lab Control Spike	0228116	03/09/20 2111
200309A-LCSD	Lab Control SpikeD	0228117	03/09/20 2131
BA08033	ERH1026	0228125	03/10/20 0013
BA08034	ERH1027	0228126	03/10/20 0033

Comments: Batch: #8011-200309A

Method Blank
EPA 8011

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **200309W-07941 - 250610**
Batch ID: #8011-200309A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	EDB	0.019 U	0.02	0.019	0.010	ug/L	03/09/20	03/09/20
BLANK	SURROGATE: 1,3-DIBROMOPRO	92.6	70-132			%	03/09/20	03/09/20

Quant Method:8010310A.M
Run #:0228115
Instrument:Herbie
Sequence:200228
Initials:GAG

GC SC-Blank-REG MDLs-DOD
Printed: 03/11/20 3:51:02 PM

8011

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 91607

Case No: 91607 Date Analyzed: 03/09/20

Matrix: WATER Instrument: Herbie

LCS ID: 200309A-LCS Time Analyzed: 2111

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200309A-BLK	Blank	0228115	03/09/20 2051
200309A-LCS	Lab Control Spike	0228116	03/09/20 2111
200309A-LCSD	Lab Control SpikeD	0228117	03/09/20 2131
BA08033	ERH1026	0228125	03/10/20 0013
BA08034	ERH1027	0228126	03/10/20 0033

Comments: Batch: #8011-200309A

Laboratory Control Spike Recoveries
EPA 8011

APPL ID: **200309W-07941 LCS - 250610**
Batch ID: #8011-200309A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
EDB	0.250	0.244	0.246	97.6	98.4	60-140	0.82	25
SURROGATE: 1,3-DIBROMOPROPANE (	0.250	0.250	0.249	100	99.6	70-132		

Comments:

Primary	SPK	DUP
Quant Method :	8010310A.M	8010310A.M
Extraction Date :	03/09/20	03/09/20
Analysis Date :	03/09/20	03/09/20
Instrument :	Herbie	Herbie
Run :	0228116	0228117
Initials :	GAG	

EPA 8015B-eHL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91607

Case No: 91607 Date Analyzed: 03/12/20

Matrix: WATER Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: OCTACOSANE (S)			SURROGATE: ORTHO-TERPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
200310A-BLK	Blank	60-142	111		56-125	85.1	
200310A-LCS	Lab Control Spike	60-142	103		56-125	94.5	
200310A-LCSD	Lab Control SpikeD	60-142	105		56-125	94.5	
BA08034	ERH1027	60-142	111		56-125	81.7	

Comments: Batch: #DOC53-200310A

EPA 8015B-eH

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	91607
Case No:	91607	Date Analyzed:	03/12/20
Matrix:	WATER	Instrument:	Apollo
Blank ID:	200310A-BLK	Time Analyzed:	0921

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200310A-BLK	Blank	310101	03/12/20 0921
200310A-LCS	Lab Control Spike	310102	03/12/20 0944
200310A-LCSD	Lab Control SpikeD	310103	03/12/20 1006
BA08034	ERH1027	310104	03/12/20 1029

Comments: Batch: #DOC53-200310A

Method Blank
EPA 8015B TPH LIQ-LIQ

Blank Name/QCG: **200310W-08034 - 250718**
Batch ID: #DOC53-200310A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	03/10/20	03/12/20
BLANK	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	03/10/20	03/12/20
BLANK	SURROGATE: OCTACOSANE (S)	111	60-142			%	03/10/20	03/12/20
BLANK	SURROGATE: ORTHO-TERPHEN	85.1	56-125			%	03/10/20	03/12/20

Quant Method: DOC0310.M
Run #: 310101
Instrument: Apollo
Sequence: 200310
Initials: SSE

GC SC-Blank-REG MDLs-DOD
Printed: 04/06/20 8:08:03 AM

EPA 8015B-eH

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91607
Case No:	91607	Date Analyzed:	03/12/20
Matrix:	WATER	Instrument:	Apollo
LCS ID:	200310A-LCS	Time Analyzed:	0944

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200310A-BLK	Blank	310101	03/12/20 0921
200310A-LCS	Lab Control Spike	310102	03/12/20 0944
200310A-LCSD	Lab Control SpikeD	310103	03/12/20 1006
BA08034	ERH1027	310104	03/12/20 1029

Comments: Batch: #DOC53-200310A

Laboratory Control Spike Recoveries
EPA 8015B TPH LIQ-LIQ

APPL ID: **200310W-08034 LCS - 250718**
Batch ID: #DOC53-200310A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
DIESEL (C10-C24)	1250	1280	1250	102	100	36-132	2.4	30
OIL (C24-C40)	1250	1260	1280	101	102	41-113	1.6	30
SURROGATE: OCTACOSANE (S)	75.0	77.0	79.0	103	105	60-142		
SURROGATE: ORTHO-TERPHENYL (S)	75.0	70.9	70.9	94.5	94.5	56-125		

Comments:

Primary	SPK	DUP
Quant Method :	DOC0310.M	DOC0310.M
Extraction Date :	03/10/20	03/10/20
Analysis Date :	03/12/20	03/12/20
Instrument :	Apollo	Apollo
Run :	310102	310103
Initials :	SSE	

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91607

Case No: 91607 Date Analyzed: 03/12/20

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2,4,6-TRIBROMOPHENOL (S)			SURROGATE: 2-FLUORBIPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
200310A-BLK	Blank	43-140	81.7		44-119	70.6	
200310A-LCS	Lab Control Spike	43-140	84.0		44-119	73.9	
200310A-LCSD	Lab Control SpikeD	43-140	85.6		44-119	73.5	
BA08034	ERH1027	43-140	81.5		44-119	73.1	

Comments: Batch: #87DC5-200310A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91607

Case No: 91607 Date Analyzed: 03/12/20

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2-FLUOROPHENOL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
200310A-BLK	Blank	19-119	62.6		44-120	69.0	
200310A-LCS	Lab Control Spike	19-119	63.6		44-120	73.3	
200310A-LCSD	Lab Control SpikeD	19-119	62.4		44-120	71.7	
BA08034	ERH1027	19-119	60.7		44-120	72.4	

Comments: Batch: #87DC5-200310A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91607

Case No: 91607 Date Analyzed: 03/12/20

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: PHENOL-D6 (S)			SURROGATE: TERPHENYL-D14 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
200310A-BLK	Blank	10-115	64.4		50-134	91.0	
200310A-LCS	Lab Control Spike	10-115	72.8		50-134	74.2	
200310A-LCSD	Lab Control SpikeD	10-115	70.8		50-134	73.9	
BA08034	ERH1027	10-115	47.8		50-134	93.1	

Comments: Batch: #87DC5-200310A

EPA 8270D

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	91607
Case No:	91607	Date Analyzed:	03/12/20
Matrix:	WATER	Instrument:	Yoda
Blank ID:	200310A-BLK	Time Analyzed:	1630

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200310A-BLK	Blank	0207Y219	03/12/20 1630
200310A-LCS	Lab Control Spike	0207Y220	03/12/20 1658
200310A-LCSD	Lab Control SpikeD	0207Y221	03/12/20 1727
BA08034	ERH1027	0207Y222	03/12/20 1755

Comments: Batch: #87DC5-200310A

Method Blank
EPA 8270D WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **200310W-08034 - 250719**
Batch ID: #87DC5-200310A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	03/10/20	03/12/20
BLANK	SURROGATE: 2,4,6-TRIBROMOP	81.7	43-140			%	03/10/20	03/12/20
BLANK	SURROGATE: 2-FLUORBIPHENY	70.6	44-119			%	03/10/20	03/12/20
BLANK	SURROGATE: 2-FLUOROPHENO	62.6	19-119			%	03/10/20	03/12/20
BLANK	SURROGATE: NITROBENZENE-	69.0	44-120			%	03/10/20	03/12/20
BLANK	SURROGATE: PHENOL-D6 (S)	64.4	10-115			%	03/10/20	03/12/20
BLANK	SURROGATE: TERPHENYL-D14 (	91.0	50-134			%	03/10/20	03/12/20

Quant Method: Y1219.M
Run #: 0207Y219
Instrument: Yoda
Sequence: Y200207
Initials: LPO

GC SC-Blank-REG MDLs-DOD
Printed: 03/13/20 10:39:20 AM

EPA 8270D

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91607
Case No:	91607	Date Analyzed:	03/12/20
Matrix:	WATER	Instrument:	Yoda
LCS ID:	200310A-LCS	Time Analyzed:	1658

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200310A-BLK	Blank	0207Y219	03/12/20 1630
200310A-LCS	Lab Control Spike	0207Y220	03/12/20 1658
200310A-LCSD	Lab Control SpikeD	0207Y221	03/12/20 1727
BA08034	ERH1027	0207Y222	03/12/20 1755

Comments: Batch: #87DC5-200310A

Laboratory Control Spike Recoveries
EPA 8270D WATER

APPL ID: **200310W-08034 LCS - 250719**
Batch ID: #87DC5-200310A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
PHENOL	62.5	46.4	44.9	74.2	71.8	10-115	3.3	20
SURROGATE: 2,4,6-TRIBROMOPHENOL	250	210	214	84.0	85.6	43-140		
SURROGATE: 2-FLUORBIPHENYL (S)	125	92.4	91.9	73.9	73.5	44-119		
SURROGATE: 2-FLUOROPHENOL (S)	250	159	156	63.6	62.4	19-119		
SURROGATE: NITROBENZENE-D5 (S)	125	91.6	89.6	73.3	71.7	44-120		
SURROGATE: PHENOL-D6 (S)	250	182	177	72.8	70.8	10-115		
SURROGATE: TERPHENYL-D14 (S)	125	92.8	92.4	74.2	73.9	50-134		

Comments:

Primary	SPK	DUP
Quant Method :	Y1219.M	Y1219.M
Extraction Date :	03/10/20	03/10/20
Analysis Date :	03/12/20	03/12/20
Instrument :	Yoda	Yoda
Run :	0207Y220	0207Y221
Initials :	LPO	

Printed: 03/13/20 10:39:27 AM
APPL Standard LCSD

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Soil
ID: 1219Y002.D

SDG No:
Date Analyzed: 12/19/19
Instrument: Yoda
Time Analyzed: 8:50

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/ml 8270 11/21/1	1219Y003.D	12/19/19 9:06
2		4ug/ml 8270 11/21/19	1219Y004.D	12/19/19 9:33
3		5ug/ml 8270 11/21/19	1219Y005.D	12/19/19 10:01
4		10ug/ml 8270 11/21/1	1219Y006.D	12/19/19 10:28
5		20ug/ml 8270 11/21/1	1219Y007.D	12/19/19 10:56
6		40ug/ml 8270 11/21/1	1219Y008.D	12/19/19 11:24
7		60ug/ml 8270 11/21/1	1219Y009.D	12/19/19 11:51
8		80ug/ml 8270 11/21/1	1219Y010.D	12/19/19 12:19
9		100ug/ml 8270 11/21/	1219Y011.D	12/19/19 12:46
10		SS 8270 11/22/19	1219Y012.D	12/19/19 13:14
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.04% of mass 198	39.5
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	1.0
127	10 - 80% of mass 198	51.3
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.7
275	10 - 60% of mass 198	29.4
365	1 - 100% of mass 198	3.5
441	0.01 - 24% of mass 442	4.6
442	50 - 500% of mass 198	102.9
443	15 - 24% of mass 442	20.0

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No: 91607
Case No: 91607 Date Analyzed: 03/12/20
Matrix: Water Instrument: Yoda
ID: 0207Y201.D Time Analyzed: 8:05

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/ml 8270 03/04/2	0207Y202.D	03/12/20 8:20
2	Blank	200310A BLK 1/800	0207Y219.D	03/12/20 16:30
3	Lab Control Spike	200310A LCS-1 1/800	0207Y220.D	03/12/20 16:58
4	Lab Control SpikeD	200310A LCSD-1 1/800	0207Y221.D	03/12/20 17:27
5	ERH1027	BA08034W22 1/800	0207Y222.D	03/12/20 17:55
6		50ug/ml 8270 03/04/2	0207Y223.D	03/12/20 18:23
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	10 - 80% of mass 198	33.9
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.5
127	10 - 80% of mass 198	46.9
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.8
275	10 - 60% of mass 198	31.1
365	1 - 100% of mass 198	3.9
441	0.01 - 24% of mass 442	16.7
442	50 - 500% of mass 198	127.7
443	15 - 24% of mass 442	19.4

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0207Y202.D Date Analyzed: 03/12/20

Instrument ID: Yoda Time Analyzed: 8:20

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

		1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	148017	5.34	617539	6.78	390666	8.80
	UPPER LIMIT	296034	5.51	1235078	6.95	781332	8.97
	LOWER LIMIT	74009	5.17	308770	6.61	195333	8.63
	SAMPLE NO.						
01	200310A BLK 1/800	214685	5.33	885713	6.77	553236	8.79
02	200310A LCS-1 1/800	209026	5.33	819179	6.78	519779	8.80
03	200310A LCSD-1 1/800	210869	5.34	821750	6.78	513387	8.80
04	BA08034W22 1/800	200865	5.34	827014	6.78	525104	8.80
05	50ug/ml 8270 03/04/20 (	188848	5.34	755544	6.78	469946	8.79
06							
07							
08							
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20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

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

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0207Y202.D Date Analyzed: 03/12/20

Instrument ID: Yoda Time Analyzed: 8:20

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

		Phenanthrene-D10(IS)		Chrysene-D12(IS)		Perylene-D12(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	757567	10.53	961658	13.62	803610	15.44
	UPPER LIMIT	1515134	10.70	1923316	13.79	1607220	15.61
	LOWER LIMIT	378784	10.36	480829	13.45	401805	15.27
	SAMPLE NO.						
01	200310A BLK 1/800	1078880	10.53	993766	13.62	1064960	15.44
02	200310A LCS-1 1/800	991200	10.53	1205900	13.62	1032650	15.44
03	200310A LCSD-1 1/800	983934	10.53	1165680	13.63	1031210	15.44
04	BA08034W22 1/800	1008610	10.53	934437	13.62	1007700	15.44
05	50ug/ml 8270 03/04/20 (	902367	10.53	1064820	13.62	894826	15.44
06							
07							
08							
09							
10							
11							
12							
13							
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17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

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

8270D-SIM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91607

Case No: 91607 Date Analyzed: 03/13/20

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: 2-METHYLNAPHTHALENE-D10 (S)			SURROGATE: FLUORANTHENE-D10 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
200310A-BLK	Blank	39-114	101		58-120	101	
200310A-LCS	Lab Control Spike	39-114	96.5		58-120	95.0	
200310A-LCSD	Lab Control SpikeD	39-114	95.8		58-120	92.3	
BA08034	ERH1027	39-114	101		58-120	92.1	

Comments: Batch: #SIM53-200310A

8270D-SIM

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91607

Case No: 91607 Date Analyzed: 03/13/20

Matrix: WATER Instrument: Linus

Blank ID: 200310A-BLK Time Analyzed: 1035

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200310A-BLK	Blank	0204L268	03/13/20 1035
200310A-LCS	Lab Control Spike	0204L269	03/13/20 1057
200310A-LCSD	Lab Control SpikeD	0204L270	03/13/20 1119
BA08034	ERH1027	0204L271	03/13/20 1141

Comments: Batch: #SIM53-200310A

Method Blank
EPA 8270D SIM LIQ-LIQ

Blank Name/QCG: **200310W-08034 - 250726**
Batch ID: #SIM53-200310A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	03/10/20	03/13/20
BLANK	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	03/10/20	03/13/20
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	03/10/20	03/13/20
BLANK	SURROGATE: 2-METHYLNAPHT	101	39-114			%	03/10/20	03/13/20
BLANK	SURROGATE: FLUORANTHENE-	101	58-120			%	03/10/20	03/13/20

Quant Method:L0204.M
Run #:0204L268
Instrument:Linus
Sequence:L200204
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 03/13/20 2:21:18 PM

8270D-SIM

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91607
Case No:	91607	Date Analyzed:	03/13/20
Matrix:	WATER	Instrument:	Linus
LCS ID:	200310A-LCS	Time Analyzed:	1057

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200310A-BLK	Blank	0204L268	03/13/20 1035
200310A-LCS	Lab Control Spike	0204L269	03/13/20 1057
200310A-LCSD	Lab Control SpikeD	0204L270	03/13/20 1119
BA08034	ERH1027	0204L271	03/13/20 1141

Comments: Batch: #SIM53-200310A

Laboratory Control Spike Recoveries
EPA 8270D SIM LIQ-LIQ

APPL ID: **200310W-08034 LCS - 250726**
Batch ID: #SIM53-200310A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
1-METHYLNAPHTHALENE	6.25	5.73	5.53	91.7	88.5	41-115	3.6	20
2-METHYLNAPHTHALENE	6.25	5.85	5.84	93.6	93.4	39-114	0.17	20
NAPHTHALENE	6.25	5.46	5.38	87.4	86.1	43-114	1.5	20
SURROGATE: 2-METHYLNAPHTHALEN	6.25	6.03	5.99	96.5	95.8	39-114		
SURROGATE: FLUORANTHENE-D10 (S)	6.25	5.94	5.77	95.0	92.3	58-120		

Comments:

Primary	SPK	DUP
Quant Method :	L0204.M	L0204.M
Extraction Date :	03/10/20	03/10/20
Analysis Date :	03/13/20	03/13/20
Instrument :	Linus	Linus
Run :	0204L269	0204L270
Initials :	MA	

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Water
ID: 0204L002.D

SDG No:
Date Analyzed: 02/04/20
Instrument: Linus
Time Analyzed: 9:32

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.1 SIM 02/03/20	0204L003.D	02/04/20 9:48
2		0.2 SIM 02/03/20	0204L004.D	02/04/20 10:09
3		0.5 SIM 02/03/20	0204L005.D	02/04/20 10:31
4		1 SIM 02/03/20	0204L006.D	02/04/20 10:53
5		5 SIM 02/03/20	0204L007.D	02/04/20 11:15
6		10 SIM 02/03/20	0204L008.D	02/04/20 11:37
7		50 SIM 02/03/20	0204L009.D	02/04/20 11:59
8		100 SIM 02/03/20	0204L010.D	02/04/20 12:21
9		SS SIM 02/03/20	0204L011.D	02/04/20 13:21
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.1% of mass 198	18.6
68	0 - 2.05% of mass 69	0.0
70	0 - 2% of mass 69	0.4
127	10 - 80% of mass 198	40.9
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.3
275	10 - 60% of mass 198	30.0
365	1 - 100% of mass 198	4.7
441	0.01 - 24% of mass 442	15.8
442	50 - 500% of mass 198	200.3
443	15 - 24% of mass 442	19.3

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No: 91607
Case No: 91607 Date Analyzed: 03/13/20
Matrix: Water Instrument: Linus
ID: 0204L263.D Time Analyzed: 8:49

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		5 SIM 02/03/20 (1)	0204L264.D	03/13/20 9:05
2	Blank	200310A BLK 1/800	0204L268.D	03/13/20 10:35
3	Lab Control Spike	200310A LCS-2 1/800	0204L269.D	03/13/20 10:57
4	Lab Control SpikeD	200310A LCSD-2 1/800	0204L270.D	03/13/20 11:19
5	ERH1027	BA08034W22 1/800	0204L271.D	03/13/20 11:41
6		5 SIM 02/03/20 (1)	0204L272.D	03/13/20 12:05
7				
8				
9				
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12				
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14				
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17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.1% of mass 198	12.9
68	0 - 2.05% of mass 69	0.0
70	0 - 2% of mass 69	0.5
127	10 - 80% of mass 198	34.8
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.2
275	10 - 60% of mass 198	32.9
365	1 - 100% of mass 198	4.9
441	0.01 - 24% of mass 442	16.0
442	50 - 500% of mass 198	243.6
443	15 - 24% of mass 442	20.0

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0204L264.D Date Analyzed: 03/13/20

Instrument ID: Linus Time Analyzed: 9:05

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

		Napthalene-D8(IS)		Acenaphthene-D10(IS)		Phenanthrene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	103369	4.14	59116	6.14	118925	7.87
	UPPER LIMIT	206738	4.31	118232	6.31	237850	8.04
	LOWER LIMIT	51685	3.97	29558	5.97	59463	7.70
	SAMPLE NO.						
01	200310A BLK 1/800	87144	4.15	50760	6.14	100519	7.87
02	200310A LCS-2 1/800	86189	4.15	49801	6.14	98689	7.87
03	200310A LCSD-2 1/800	88972	4.15	51383	6.14	103742	7.87
04	BA08034W22 1/800	83991	4.14	49268	6.14	97385	7.87
05	5 SIM 02/03/20 (1)	103356	4.15	61152	6.14	129745	7.87
06							
07							
08							
09							
10							
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12							
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15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

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

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0204L264.D Date Analyzed: 03/13/20

Instrument ID: Linus Time Analyzed: 9:05

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

		Chrysene-D12(IS)		Perylene-D12(IS)			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	155598	10.99	193690	13.40		
	UPPER LIMIT	311196	11.16	387380	13.57		
	LOWER LIMIT	77799	10.82	96845	13.23		
	SAMPLE NO.						
01	200310A BLK 1/800	134162	10.99	162661	13.40		
02	200310A LCS-2 1/800	130859	10.98	157145	13.40		
03	200310A LCSD-2 1/800	134059	10.98	161501	13.40		
04	BA08034W22 1/800	130497	10.98	150537	13.40		
05	5 SIM 02/03/20 (1)	173506	10.99	206040	13.40		
06							
07							
08							
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22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

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

EPA 8270D

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	91607
Case No:	91607	Date Analyzed:	03/11/20
Matrix:	WATER	Instrument:	Yoda
Blank ID:	200310A-BLK	Time Analyzed:	1321

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200310A-BLK	Blank	0122Y062	03/11/20 1321
200310A-LCS	Lab Control Spike	0122Y063	03/11/20 1345
200310A-LCSD	Lab Control SpikeD	0122Y064	03/11/20 1409
BA08034	ERH1027	0122Y069	03/11/20 1610

Comments: Batch: #87DME-200310A

Method Blank
EPA 8270D MODIFIED WATER

Blank Name/QCG: **200310W-07942 - 250694**
Batch ID: #87DME-200310A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2-(2-METHOXYETHOXY)-ETHAN	80.0 U	100	80.0	40.0	ug/L	03/10/20	03/11/20

Quant Method: YMEE0122.M
Run #: 0122Y062
Instrument: Yoda
Sequence: Y200122M
Initials: DPO

GC SC-Blank-REG MDLs-DOD
Printed: 03/12/20 2:44:44 PM

EPA 8270D

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91607
Case No:	91607	Date Analyzed:	03/11/20
Matrix:	WATER	Instrument:	Yoda
LCS ID:	200310A-LCS	Time Analyzed:	1345

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200310A-BLK	Blank	0122Y062	03/11/20 1321
200310A-LCS	Lab Control Spike	0122Y063	03/11/20 1345
200310A-LCSD	Lab Control SpikeD	0122Y064	03/11/20 1409
BA08034	ERH1027	0122Y069	03/11/20 1610

Comments: Batch: #87DME-200310A

Laboratory Control Spike Recoveries
EPA 8270D MODIFIED WATER

APPL ID: **200310W-07942 LCS - 250694**
Batch ID: #87DME-200310A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
2-(2-METHOXYETHOXY)-ETHANOL	80.0	92.7	71.5	116	89.4	30-130	25.8 #	20

= Recovery is outside QC limits.

Comments:

Primary	SPK	DUP
Quant Method :	YMEE0122.M	YMEE0122.M
Extraction Date :	03/10/20	03/10/20
Analysis Date :	03/11/20	03/11/20
Instrument :	Yoda	Yoda
Run :	0122Y063	0122Y064
Initials :	DPO	

Printed: 03/12/20 2:44:35 PM
APPL Standard LCSD

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No:
Case No: Date Analyzed: 01/22/20
Matrix: Water Instrument: Yoda
ID: 0122Y002.D Time Analyzed: 15:31

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/ml MEE 01/22/20	0122Y003.D	01/22/20 15:46
2		100ug/ml MEE 01/22/2	0122Y004.D	01/22/20 16:10
3		200ug/ml MEE 01/22/2	0122Y005.D	01/22/20 16:33
4		400ug/ml MEE 01/22/2	0122Y006.D	01/22/20 16:57
5		500ug/ml MEE 01/22/2	0122Y007.D	01/22/20 17:21
6		600ug/ml MEE 01/22/2	0122Y008.D	01/22/20 17:45
7		800ug/ml MEE 01/22/2	0122Y009.D	01/22/20 18:08
8		1000ug/ml MEE 01/22/	0122Y010.D	01/22/20 18:32
9		SS MEE 01/22/20	0122Y011.D	01/22/20 18:55
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	10 - 80% of mass 198	33.6
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.1
127	10 - 80% of mass 198	48.1
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.9
275	10 - 60% of mass 198	31.2
365	1 - 100% of mass 198	4.1
441	0.01 - 24% of mass 442	16.1
442	50 - 500% of mass 198	125.5
443	15 - 24% of mass 442	19.5

Form 5
Tune Summary

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 91607
Matrix: Water
ID: 0122Y060.D

SDG No: 91607
Date Analyzed: 03/11/20
Instrument: Yoda
Time Analyzed: 8:14

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		500ug/ml MEE 01/29/2	0122Y061.D	03/11/20 12:17
2	Blank	200310A BLK 2/500	0122Y062.D	03/11/20 13:21
3	Lab Control Spike	200310A LCS-1 2/500	0122Y063.D	03/11/20 13:45
4	Lab Control SpikeD	200310A LCSD-1 2/500	0122Y064.D	03/11/20 14:09
5	ERH1027	BA08034W12 2/500	0122Y069.D	03/11/20 16:10
6		500ug/ml MEE 01/29/2	0122Y070.D	03/11/20 16:33
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	10 - 80% of mass 198	38.0
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.6
127	10 - 80% of mass 198	49.5
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.8
275	10 - 60% of mass 198	30.6
365	1 - 100% of mass 198	3.9
441	0.01 - 24% of mass 442	3.5
442	50 - 500% of mass 198	117.3
443	15 - 24% of mass 442	19.5

Form 5
Tune Summary

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0122Y061.D Date Analyzed: 03/11/20

Instrument ID: Yoda Time Analyzed: 12:17

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

	1,4-dichlorobenzene-D4(IS)				Napthalene-D8(IS)				Acenaphthene-D10(IS)			
	AREA	#	RT	#	AREA	#	RT	#	AREA	#	RT	#
12 HOUR STD	146062		5.08		656576		6.53		449239		8.55	
UPPER LIMIT	292124		5.25		1313152		6.70		898478		8.72	
LOWER LIMIT	73031		4.91		328288		6.36		224620		8.38	
SAMPLE NO.												
01 200310A BLK 2/500	109201		5.10		471459		6.53		307405		8.55	
02 200310A LCS-1 2/500	108945		5.10		485876		6.53		313345		8.55	
03 200310A LCSD-1 2/500	157033		5.09		703401		6.53		473090		8.55	
04 BA08034W12 2/500	85465		5.09		395465		6.52		274818		8.55	
05 500ug/ml MEE 01/29/20	146912		5.11		671591		6.53		455457		8.55	
06												
07												
08												
09												
10												
11												
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16												
17												
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19												
20												
21												
22												

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

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

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0122Y061.D Date Analyzed: 03/11/20

Instrument ID: Yoda Time Analyzed: 12:17

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

		Phenanthrene-D10(IS)		Chrysene-D12(IS)		Perylene-D12(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	933061	10.27	865781	13.35	875278	15.07
	UPPER LIMIT	1866122	10.44	1731562	13.52	1750556	15.24
	LOWER LIMIT	466531	10.10	432891	13.18	437639	14.90
	SAMPLE NO.						
01	200310A BLK 2/500	608630	10.28	138279 *	13.36	103305 *	15.06
02	200310A LCS-1 2/500	678411	10.27	517306	13.35	583969	15.07
03	200310A LCSD-1 2/500	989310	10.28	374227 *	13.35	348266 *	15.07
04	BA08034W12 2/500	579193	10.27	312197 *	13.35	265089 *	15.07
05	500ug/ml MEE 01/29/20	925579	10.27	795809	13.35	755680	15.07
06							
07							
08							
09							
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16							
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18							
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21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

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

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91607

Case No: 91607 Date Analyzed: 03/11/20

Matrix: WATER Instrument: Thor

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
200311AT-LCS	Lab Control Spike	81-118	112		85-114	88.0	
200311AT-LCSD	Lab Control SpikeD	81-118	118		85-114	91.2	
200311AT-BLK	Blank	81-118	125	#	85-114	87.9	
BA08033	ERH1026	81-118	123	#	85-114	87.5	
BA08034	ERH1027	81-118	127	#	85-114	89.1	

Comments: Batch: #86BTO-200311AT

= Recovery outside of Control Limits on Sample.

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91607

Case No: 91607 Date Analyzed: 03/11/20

Matrix: WATER Instrument: Thor

APPL ID.	Client Sample No.	SURROGATE: DIBROMOFLUOROMETHANE (S)			SURROGATE: TOLUENE-D8 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
200311AT-LCS	Lab Control Spike	80-119	92.8		89-112	82.4	*
200311AT-LCSD	Lab Control SpikeD	80-119	98.0		89-112	88.8	*
200311AT-BLK	Blank	80-119	104		89-112	87.5	#
BA08033	ERH1026	80-119	103		89-112	88.4	#
BA08034	ERH1027	80-119	106		89-112	89.1	

Comments: Batch: #86BTO-200311AT

* = Recovery outside of Control Limits on QC Sample.

= Recovery outside of Control Limits on Sample.

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91607

Case No: 91607 Date Analyzed: 03/11/20

Matrix: WATER Instrument: Thor

Blank ID: 200311AT-BLK Time Analyzed: 1653

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200311AT-LCS	Lab Control Spike	0311T09	03/11/20 1218
200311AT-LCSD	Lab Control SpikeD	0311T12	03/11/20 1403
200311AT-BLK	Blank	0311T18	03/11/20 1653
BA08033	ERH1026	0311T19	03/11/20 1722
BA08034	ERH1027	0311T20	03/11/20 1750

Comments: Batch: #86BTO-200311AT

Method Blank
EPA 8260B BTEX & 1,2-DCA WATER

Blank Name/QCG: **200311W-08033 - 250689**
Batch ID: #86BTO-200311AT

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	03/11/20	03/11/20
BLANK	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	03/11/20	03/11/20
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	03/11/20	03/11/20
BLANK	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	03/11/20	03/11/20
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	03/11/20	03/11/20
BLANK	SURROGATE: 1,2-DICHLOROET	125 #	81-118			%	03/11/20	03/11/20
BLANK	SURROGATE: 4-BROMOFLUORO	87.9	85-114			%	03/11/20	03/11/20
BLANK	SURROGATE: DIBROMOFLUOR	104	80-119			%	03/11/20	03/11/20
BLANK	SURROGATE: TOLUENE-D8 (S)	87.5 #	89-112			%	03/11/20	03/11/20

= Recovery (or RPD) is outside QC limits.

Quant Method: T0309W.M
Run #: 0311T18
Instrument: Thor
Sequence: T200309
Initials: DPO

GC SC-Blank-REG MDLs-DOD
Printed: 03/12/20 3:48:43 PM

EPA 8260B

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91607
Case No:	91607	Date Analyzed:	03/11/20
Matrix:	WATER	Instrument:	Thor
LCS ID:	200311AT-LCS	Time Analyzed:	1218

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200311AT-LCS	Lab Control Spike	0311T09	03/11/20 1218
200311AT-LCSD	Lab Control SpikeD	0311T12	03/11/20 1403
200311AT-BLK	Blank	0311T18	03/11/20 1653
BA08033	ERH1026	0311T19	03/11/20 1722
BA08034	ERH1027	0311T20	03/11/20 1750

Comments: Batch: #86BTO-200311AT

Laboratory Control Spike Recoveries
EPA 8260B BTEX & 1,2-DCA WATER

APPL ID: **200311W-08033 LCS - 250689**
Batch ID: #86BTO-200311AT

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
1,2-DICHLOROETHANE	10.00	12.5	12.8	125	128	73-128	2.4	20
BENZENE	10.00	10.7	11.0	107	110	79-120	2.8	20
ETHYLBENZENE	10.00	10.5	11.2	105	112	79-121	6.5	20
TOLUENE	10.00	10.8	11.0	108	110	80-121	1.8	20
XYLENES (TOTAL)	30.0	32.4	33.5	108	112	79-121	3.3	20
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	28.0	29.4	112	118	81-118		
SURROGATE: 4-BROMOFLUOROBENZE	25.0	22.0	22.8	88.0	91.2	85-114		
SURROGATE: DIBROMOFLUOROMETH	25.0	23.2	24.5	92.8	98.0	80-119		
SURROGATE: TOLUENE-D8 (S)	25.0	20.6	22.2	82.4 #	88.8 #	89-112		

= Recovery is outside QC limits.

Comments:

Primary	SPK	DUP
Quant Method :	T0309W.M	T0309W.M
Extraction Date :	03/11/20	03/11/20
Analysis Date :	03/11/20	03/11/20
Instrument :	Thor	Thor
Run :	0311T09	0311T12
Initials :	DPO	

Printed: 03/12/20 3:48:28 PM
APPL Standard LCSD

Lab Name: APPL Inc.
Case No:
Matrix: Water
ID: 0309t00.D

SDG No:
Date Analyzed: 03/09/20
Instrument: Thor
Time Analyzed: 6:17

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.3ug/L VOC STD 3/9/	0309T02.D	03/09/20 7:22
2		0.5ug/L VOC STD 3/9/	0309T03.D	03/09/20 7:51
3		1ug/L VOC STD 3/9/20	0309T04.D	03/09/20 8:19
4		2ug/L VOC STD 3/9/20	0309T05.D	03/09/20 8:47
5		5ug/L VOC STD 3/9/20	0309T06.D	03/09/20 9:16
6		10ug/L VOC STD 3/9/2	0309T07.D	03/09/20 9:44
7		20ug/L VOC STD 3/9/2	0309T08.D	03/09/20 10:12
8		40ug/L VOC STD 3/9/2	0309T09.D	03/09/20 10:41
9		100ug/L VOC STD 3/9/	0309T10.D	03/09/20 11:09
10		(SS) 10ug/L VOC STD	0309T12.D	03/09/20 12:06
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	19.7
75	30 - 60% of mass 95	47.5
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	8.5
173	0 - 2.05% of mass 174	0.8
174	50 - 200% of mass 95	90.1
175	5 - 9% of mass 174	7.6
176	95 - 101% of mass 174	100.0
177	5 - 9% of mass 176	6.6

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 91607
Matrix: Water
ID: 0311t06.D

SDG No: 91607
Date Analyzed: 03/11/20
Instrument: Thor
Time Analyzed: 10:55

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1	Lab Control Spike	200311A CCV/LCS 10ug	0311T09.D	03/11/20 12:18
2	Lab Control SpikeD	200311A LCSD 10ug/L	0311T12.D	03/11/20 14:03
3	Blank	200311A BLK	0311T18.D	03/11/20 16:53
4	ERH1026	BA08033W02	0311T19.D	03/11/20 17:22
5	ERH1027	BA08034W02	0311T20.D	03/11/20 17:50
6		Ending CCV 10ug/L 3/	0311T24.D	03/11/20 19:44
7				
8				
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11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	20.6
75	30 - 60% of mass 95	55.4
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	7.6
173	0 - 2.05% of mass 174	0.5
174	50 - 200% of mass 95	108.8
175	5 - 9% of mass 174	6.2
176	95 - 101% of mass 174	97.3
177	5 - 9% of mass 176	6.7

Form 5
Tune Summary

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0309T07.D Date Analyzed: 9 Mar 20 9:44

Instrument ID: Thor Time Analyzed: 9 Mar 20 9:44

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

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	900488	6.46	732303	9.92	418026	12.48
	UPPER LIMIT	1800976	6.63	1464606	10.09	836052	12.65
	LOWER LIMIT	450244	6.29	366152	9.75	209013	12.31
	SAMPLE NO.						
01	200311A CCV/LCS 10ug	511672	6.46	435046	9.92	253740	12.48
02	200311A LCSD 10ug/L	517077	6.46	432165	9.92	249888	12.48
03	200311A BLK	499468	6.46	427620	9.92	231567	12.48
04	BA08033W02	497886	6.46	423033	9.92	230076	12.48
05	BA08034W02	500750	6.46	427853	9.92	236893	12.48
06	Ending CCV 10ug/L 3/11	509850	6.46	439795	9.92	259394	12.48
07							
08							
09							
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13							
14							
15							
16							
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22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

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

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91607

Case No: 91607 Date Analyzed: 03/11/20

Matrix: WATER Instrument: Thor

APPL ID.	Client Sample No.	SURROGATE: 4-BROMOFLUOROBENZENE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
200311AT-LCS	Lab Control Spike	85-114	93.2				
200311AT-LCSD	Lab Control SpikeD	85-114	89.2				
200311AT-BLK	Blank	85-114	87.9				
BA08033	ERH1026	85-114	87.5				
BA08034	ERH1027	85-114	89.1				

Comments: Batch: #GRO86-200311AT

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91607

Case No: 91607 Date Analyzed: 03/11/20

Matrix: WATER Instrument: Thor

Blank ID: 200311AT-BLK Time Analyzed: 1653

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200311AT-LCS	Lab Control Spike	0311T13	03/11/20 1431
200311AT-LCSD	Lab Control SpikeD	0311T14	03/11/20 1459
200311AT-BLK	Blank	0311T18	03/11/20 1653
BA08033	ERH1026	0311T19	03/11/20 1722
BA08034	ERH1027	0311T20	03/11/20 1750

Comments: Batch: #GRO86-200311AT

Method Blank
EPA 8260B GRO WATER

Blank Name/QCG: **200311W-08033 - 250683**
Batch ID: #GRO86-200311AT

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	03/11/20	03/11/20
BLANK	SURROGATE: 4-BROMOFLUORO	87.9	85-114			%	03/11/20	03/11/20

Quant Method: TGAS0219.M
Run #: 0311T18
Instrument: Thor
Sequence: T200309
Initials: DPO

GC SC-Blank-REG MDLs-DOD
Printed: 03/12/20 4:14:42 PM

EPA 8260B

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 91607

Case No: 91607 Date Analyzed: 03/11/20

Matrix: WATER Instrument: Thor

LCS ID: 200311AT-LCS Time Analyzed: 1431

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200311AT-LCS	Lab Control Spike	0311T13	03/11/20 1431
200311AT-LCSD	Lab Control SpikeD	0311T14	03/11/20 1459
200311AT-BLK	Blank	0311T18	03/11/20 1653
BA08033	ERH1026	0311T19	03/11/20 1722
BA08034	ERH1027	0311T20	03/11/20 1750

Comments: Batch: #GRO86-200311AT

Laboratory Control Spike Recoveries
EPA 8260B GRO WATER

APPL ID: **200311W-08033 LCS - 250683**
Batch ID: #GRO86-200311AT

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
GASOLINE RANGE ORGANICS	300	313	304	104	101	78-122	2.9	20
SURROGATE: 4-BROMOFLUOROBENZE	25.0	23.3	22.3	93.2	89.2	85-114		

Comments:

Primary	SPK	DUP
Quant Method :	TGAS0219.M	TGAS0219.M
Extraction Date :	03/11/20	03/11/20
Analysis Date :	03/11/20	03/11/20
Instrument :	Thor	Thor
Run :	0311T13	0311T14
Initials :	DPO	

Printed: 03/12/20 4:14:25 PM
APPL Standard LCSD

RSK 175

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91607

Case No: 91607 Date Analyzed: 03/10/20

Matrix: WATER Instrument: Rocky

Blank ID: 200310A-BLK Time Analyzed: 1247

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200310A-LCS	Lab Control Spike	0310R03	03/10/20 1227
200310A-LCSD	Lab Control SpikeD	0310R05	03/10/20 1241
200310A-BLK	Blank	0310R06	03/10/20 1247
BA08033	ERH1026	0310R07	03/10/20 1251
BA08034	ERH1027	0310R08	03/10/20 1255

Comments: Batch: #RSKME-200310A

Method Blank
METHANE

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **200310W-08033 - 250620**
Batch ID: #RSKME-200310A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	METHANE	1.00 U	5.0	1.00	0.25	ug/L	03/10/20	03/10/20

Quant Method: RSK1002.M
Run #: 0310R06
Instrument: Rocky
Sequence: 191002
Initials: GAG

GC SC-Blank-REG MDLs-DOD
Printed: 03/10/20 4:17:15 PM

RSK 175

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91607
Case No:	91607	Date Analyzed:	03/10/20
Matrix:	WATER	Instrument:	Rocky
LCS ID:	200310A-LCS	Time Analyzed:	1227

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200310A-LCS	Lab Control Spike	0310R03	03/10/20 1227
200310A-LCSD	Lab Control SpikeD	0310R05	03/10/20 1241
200310A-BLK	Blank	0310R06	03/10/20 1247
BA08033	ERH1026	0310R07	03/10/20 1251
BA08034	ERH1027	0310R08	03/10/20 1255

Comments: Batch: #RSKME-200310A

Laboratory Control Spike Recoveries
METHANE

APPL ID: **200310W-08033 LCS - 250620**
Batch ID: #RSKME-200310A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
METHANE	83.4	69.6	92.7	83.5	111	72-125	28.5	30

Comments:

Primary	SPK	DUP
Quant Method :	RSK1002.M	RSK1002.M
Extraction Date :	03/10/20	03/10/20
Analysis Date :	03/10/20	03/10/20
Instrument :	Rocky	Rocky
Run :	0310R03	0310R05
Initials :	GAG	

6010C/3010A

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91607

Case No: 91607 Date Analyzed: 03/13/20

Matrix: WATER Instrument: Cyrus

Blank ID: 200310A-BLK Time Analyzed: 1233

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200310A-LCSD	Lab Control SpikeD	200313A	03/13/20 1242
200310A-LCS	Lab Control Spike	200313A	03/13/20 1237
200310A-BLK	Blank	200313A	03/13/20 1233
BA08034	ERH1027	200313A	03/13/20 1251

Comments: Batch: #61CDO-200310A

METALS BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
6010C	CALCIUM (CA)	75.0 U	1000	75.0	27.5	ug/L	03/10/20	03/13/20	#61CDO-200310A-BA08034
6010C	MAGNESIUM (MG)	30.0 U	500	30.0	12.9	ug/L	03/10/20	03/13/20	#61CDO-200310A-BA08034
6010C	MANGANESE (MN)	4.00 U	10.0	4.00	1.23	ug/L	03/10/20	03/13/20	#61CDO-200310A-BA08034
6010C	POTASSIUM (K)	500.0 U	3000	500.0	220.0	ug/L	03/10/20	03/13/20	#61CDO-200310A-BA08034
6010C	SODIUM (NA)	500.0 U	5000	500.0	111.1	ug/L	03/10/20	03/13/20	#61CDO-200310A-BA08034

6010C/3010A

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91607
Case No:	91607	Date Analyzed:	03/13/20
Matrix:	WATER	Instrument:	Cyrus
LCS ID:	200310A-LCS	Time Analyzed:	1237

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200310A-LCSD	Lab Control SpikeD	200313A	03/13/20 1242
200310A-LCS	Lab Control Spike	200313A	03/13/20 1237
200310A-BLK	Blank	200313A	03/13/20 1233
BA08034	ERH1027	200313A	03/13/20 1251

Comments: Batch: #61CDO-200310A

Laboratory Control Spike Recoveries
METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl ug/L	SPK Res ug/L	DUP Res ug/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
EPA 6010C	CALCIUM (CA)	25000	23800	23600	95.2	94.4	0.8	20	87-113	03/10/20	03/13/20	03/10/20	03/13/20	#61CDO-200310A-BA0803
EPA 6010C	MAGNESIUM (MG)	25000	25100	24900	100	99.6	0.8	20	85-113	03/10/20	03/13/20	03/10/20	03/13/20	#61CDO-200310A-BA0803
EPA 6010C	MANGANESE (MN)	250	253	250	101	100	1.2	20	90-114	03/10/20	03/13/20	03/10/20	03/13/20	#61CDO-200310A-BA0803
EPA 6010C	POTASSIUM (K)	5000	5010	4940	100	98.8	1.4	20	86-114	03/10/20	03/13/20	03/10/20	03/13/20	#61CDO-200310A-BA0803
EPA 6010C	SODIUM (NA)	25000	24900	24800	99.6	99.2	0.4	20	87-115	03/10/20	03/13/20	03/10/20	03/13/20	#61CDO-200310A-BA0803

Comments:

EPA 300.0

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91607

Case No: 91607 Date Analyzed: 03/06/20

Matrix: WATER Instrument: Charlie

Blank ID: 200305B1-BLK Time Analyzed: 1543

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200305B1-BLK	Blank	71	03/06/20 1543
200305B1-LCS	Lab Control Spike	72	03/06/20 1724
200305B1-LCSD	Lab Control SpikeD	79	03/06/20 2022
BA08034	ERH1027	83	03/06/20 2203

Comments: Batch: #300W-200305B1

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
EPA 300.0	BROMIDE	0.16 U	0.5	0.16	0.05	mg/L	03/06/20	03/06/20	#300W-200305B1-BA08034
EPA 300.0	CHLORIDE	0.43 J	1.0	0.20	0.08	mg/L	03/06/20	03/06/20	#300W-200305B1-BA08034
EPA 300.0	FLUORIDE	0.09 U	0.1	0.09	0.08	mg/L	03/06/20	03/06/20	#300W-200305B1-BA08034
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	03/06/20	03/06/20	#300W-200305B1-BA08034
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	03/06/20	03/06/20	#300W-200305B1-BA08034

J = Estimated value.

Wetlab SC-Blank-REG MDLs
Printed: 03/30/20 11:13:55 AM

EPA 300.0

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91607
Case No:	91607	Date Analyzed:	03/06/20
Matrix:	WATER	Instrument:	Charlie
LCS ID:	200305B1-LCS	Time Analyzed:	1724

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200305B1-BLK	Blank	71	03/06/20 1543
200305B1-LCS	Lab Control Spike	72	03/06/20 1724
200305B1-LCSD	Lab Control SpikeD	79	03/06/20 2022
BA08034	ERH1027	83	03/06/20 2203

Comments: Batch: #300W-200305B1

Laboratory Control Spike Recoveries

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
EPA 300.0	BROMIDE	12.5	11.6	11.6	92.8	92.8	0.0	20	90-110	03/06/20	03/06/20	03/06/20	03/06/20	#300W-200305B1-BA0803
EPA 300.0	CHLORIDE	25	22.8	22.8	91.2	91.2	0.0	20	90-110	03/06/20	03/06/20	03/06/20	03/06/20	#300W-200305B1-BA0803
EPA 300.0	FLUORIDE	5.00	4.83	4.86	96.6	97.2	0.62	20	90-110	03/06/20	03/06/20	03/06/20	03/06/20	#300W-200305B1-BA0803
EPA 300.0	NITRATE	22.1	20.4	20.6	92.3	93.2	0.98	20	90-110	03/06/20	03/06/20	03/06/20	03/06/20	#300W-200305B1-BA0803
EPA 300.0	SULFATE	25.0	23.8	24.4	95.2	97.6	2.5	20	90-110	03/06/20	03/06/20	03/06/20	03/06/20	#300W-200305B1-BA0803

Comments:

EPA 353.2

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91607

Case No: 91607 Date Analyzed: 03/10/20

Matrix: WATER Instrument: EVE

Blank ID: 200310A-BLK Time Analyzed: 1125

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200310A-BLK	Blank	12	03/10/20 1125
200310A-LCS	Lab Control Spike	13	03/10/20 1127
200310A-LCSD	Lab Control SpikeD	14	03/10/20 1130
BA08034	ERH1027	38	03/10/20 1216

Comments: Batch: #35OF-200310A

SM 2320B

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	91607
Case No:	91607	Date Analyzed:	03/09/20
Matrix:	WATER	Instrument:	Tiamo
Blank ID:	200309A-BLK	Time Analyzed:	1633

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200309A-BLK	Blank	1	03/09/20 1633
200309A-LCS	Lab Control Spike	2	03/09/20 1636
200309A-LCSD	Lab Control SpikeD	3	03/09/20 1647
BA08034	ERH1027	7	03/09/20 1800

Comments: Batch: #232W-200309A

SM 4500-Si D

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91607

Case No: 91607 Date Analyzed: 03/09/20

Matrix: WATER Instrument: Manual Spec

Blank ID: 200309A-BLK Time Analyzed: 1507

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200309A-BLK	Blank	61	03/09/20 1507
200309A-LCS	Lab Control Spike	62	03/09/20 1507
200309A-LCSD	Lab Control SpikeD	63	03/09/20 1508
BA08034	ERH1027	66	03/09/20 1510
200309A-MS	Matrix Spike	67	03/09/20 1510
200309A-MSD	Matrix SpikeD	68	03/09/20 1511

Comments: Batch: #SIO2-200309A

SM 4500-Si D

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91607

Case No: 91607 Date Analyzed: 03/09/20

Matrix: WATER Instrument: Manual Spec

Blank ID: 200309A-BLK Time Analyzed: 1507

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200309A-BLK	Blank	61	03/09/20 1507
200309A-LCS	Lab Control Spike	62	03/09/20 1507
200309A-LCSD	Lab Control SpikeD	63	03/09/20 1508
BA08034	ERH1027	70	03/09/20 1512
200309A-MSD	Matrix SpikeD	72	03/09/20 1513
200309A-MS	Matrix Spike	73	03/09/20 1513

Comments: Batch: #SIO2D-200309A

SM3500FeB

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91607

Case No: 91607 Date Analyzed: 03/09/20

Matrix: WATER Instrument: Manual Spec

Blank ID: A200309-BLK Time Analyzed: 1656

APPL ID.	Client Sample No.	File ID.	Date Analyzed
A200309-BLK	Blank	24	03/09/20 1656
A200309-LCSD	Lab Control SpikeD	26	03/09/20 1657
A200309-LCS	Lab Control Spike	27	03/09/20 1657
BA08034	ERH1027	28	03/09/20 1658
A200309-MS	Matrix Spike	30	03/09/20 1659
A200309-MSD	Matrix SpikeD	31	03/09/20 1659

Comments: Batch: #35FE-A200309

SW846 9060A

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91607

Case No: 91607 Date Analyzed: 03/11/20

Matrix: WATER Instrument: TICTOC

Blank ID: 200311A-BLK Time Analyzed: 1941

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200311A-BLK	Blank	33	03/11/20 1941
200311A-LCS	Lab Control Spike	34	03/11/20 2019
200311A-LCSD	Lab Control SpikeD	35	03/11/20 2059
BA08034	ERH1027	38	03/11/20 2252

Comments: Batch: #DOCW5-200311A

SW846 9060A

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	91607
Case No:	91607	Date Analyzed:	03/12/20
Matrix:	WATER	Instrument:	TICTOC
Blank ID:	200312A-BLK	Time Analyzed:	2256

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200312A-BLK	Blank	31	03/12/20 2256
200312A-LCS	Lab Control Spike	32	03/12/20 2336
200312A-LCSD	Lab Control SpikeD	33	03/13/20 0017
BA08034	ERH1027	34	03/13/20 0055

Comments: Batch: #TOCW5-200312A

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
SM 2320B	BICARBONATE AS	1.9 J	2.0	1.70	0.85	mg/L	03/09/20	03/09/20	#232W-200309A-BA08034
SM 2320B	CARBONATE AS C	1.70 U	2.0	1.70	0.85	mg/L	03/09/20	03/09/20	#232W-200309A-BA08034
SM 2320B	TOTAL ALKALINITY	1.9 J	2.0	1.70	0.85	mg/L	03/09/20	03/09/20	#232W-200309A-BA08034
SM3500Fe	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	03/09/20	03/09/20	#35FE-A200309-BA08034
EPA 353.2	NITRATE-NITRITE-	0.090 U	0.10	0.090	0.028	mg/L	03/10/20	03/10/20	#35OF-200310A-BA08034
SW846 90	DISSOLVED ORGA	0.350 U	0.93	0.350	0.130	mg/L	03/11/20	03/11/20	ǂDOCW5-200311A-BA07942
SM 4500-S	SILICA W	0.80 U	1.0	0.80	0.53	mg/L	03/09/20	03/09/20	#SIO2-200309A-BA08034
SM 4500-S	DISSOLVED SILICA	0.80 U	1.0	0.80	0.53	mg/L	03/09/20	03/09/20	#SIO2D-200309A-BA08034
SW846 90	TOTAL ORGANIC C	0.350 U	0.93	0.350	0.130	mg/L	03/12/20	03/12/20	#TOCW5-200312A-BA08034

Wetlab SC-Blank-REG MDLs
Printed: 03/30/20 11:10:47 AM

EPA 353.2

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91607
Case No:	91607	Date Analyzed:	03/10/20
Matrix:	WATER	Instrument:	EVE
LCS ID:	200310A-LCS	Time Analyzed:	1127

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200310A-BLK	Blank	12	03/10/20 1125
200310A-LCS	Lab Control Spike	13	03/10/20 1127
200310A-LCSD	Lab Control SpikeD	14	03/10/20 1130
BA08034	ERH1027	38	03/10/20 1216

Comments: Batch: #35OF-200310A

SM 2320B

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91607
Case No:	91607	Date Analyzed:	03/09/20
Matrix:	WATER	Instrument:	Tiamo
LCS ID:	200309A-LCS	Time Analyzed:	1636

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200309A-BLK	Blank	1	03/09/20 1633
200309A-LCS	Lab Control Spike	2	03/09/20 1636
200309A-LCSD	Lab Control SpikeD	3	03/09/20 1647
BA08034	ERH1027	7	03/09/20 1800

Comments: Batch: #232W-200309A

SM 4500-Si D

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91607
Case No:	91607	Date Analyzed:	03/09/20
Matrix:	WATER	Instrument:	Manual Spec
LCS ID:	200309A-LCS	Time Analyzed:	1507

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200309A-BLK	Blank	61	03/09/20 1507
200309A-LCS	Lab Control Spike	62	03/09/20 1507
200309A-LCSD	Lab Control SpikeD	63	03/09/20 1508
BA08034	ERH1027	66	03/09/20 1510
200309A-MS	Matrix Spike	67	03/09/20 1510
200309A-MSD	Matrix SpikeD	68	03/09/20 1511

Comments: Batch: #SIO2-200309A

SM 4500-Si D

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 91607

Case No: 91607 Date Analyzed: 03/09/20

Matrix: WATER Instrument: Manual Spec

LCS ID: 200309A-LCS Time Analyzed: 1507

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200309A-BLK	Blank	61	03/09/20 1507
200309A-LCS	Lab Control Spike	62	03/09/20 1507
200309A-LCSD	Lab Control SpikeD	63	03/09/20 1508
BA08034	ERH1027	70	03/09/20 1512
200309A-MSD	Matrix SpikeD	72	03/09/20 1513
200309A-MS	Matrix Spike	73	03/09/20 1513

Comments: Batch: #SIO2D-200309A

SM3500FeB

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91607
Case No:	91607	Date Analyzed:	03/09/20
Matrix:	WATER	Instrument:	Manual Spec
LCS ID:	A200309-LCS	Time Analyzed:	1657

APPL ID.	Client Sample No.	File ID.	Date Analyzed
A200309-BLK	Blank	24	03/09/20 1656
A200309-LCSD	Lab Control SpikeD	26	03/09/20 1657
A200309-LCS	Lab Control Spike	27	03/09/20 1657
BA08034	ERH1027	28	03/09/20 1658
A200309-MS	Matrix Spike	30	03/09/20 1659
A200309-MSD	Matrix SpikeD	31	03/09/20 1659

Comments: Batch: #35FE-A200309

SW846 9060A

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91607
Case No:	91607	Date Analyzed:	03/11/20
Matrix:	WATER	Instrument:	TICTOC
LCS ID:	200311A-LCS	Time Analyzed:	2019

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200311A-BLK	Blank	33	03/11/20 1941
200311A-LCS	Lab Control Spike	34	03/11/20 2019
200311A-LCSD	Lab Control SpikeD	35	03/11/20 2059
BA08034	ERH1027	38	03/11/20 2252

Comments: Batch: #DOCW5-200311A

SW846 9060A

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91607
Case No:	91607	Date Analyzed:	03/12/20
Matrix:	WATER	Instrument:	TICTOC
LCS ID:	200312A-LCS	Time Analyzed:	2336

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200312A-BLK	Blank	31	03/12/20 2256
200312A-LCS	Lab Control Spike	32	03/12/20 2336
200312A-LCSD	Lab Control SpikeD	33	03/13/20 0017
BA08034	ERH1027	34	03/13/20 0055

Comments: Batch: #TOCW5-200312A

Laboratory Control Spike Recoveries

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
EPA 353.2	NITRATE-NITRITE-N	3.00	3.00	2.91	100	97.0	3.0	20	90-110	03/10/20	03/10/20	03/10/20	03/10/20	#35OF-200310A-BA08034
SM 2320B	BICARBONATE AS CACO3	250	252	253	101	101	0.40	20	90-110	03/09/20	03/09/20	03/09/20	03/09/20	#232W-200309A-BA08034
SM 2320B	TOTAL ALKALINITY AS CA	239	264	265	110	111 #	0.38	20	90-110	03/09/20	03/09/20	03/09/20	03/09/20	#232W-200309A-BA08034
SM 4500-Si	SILICA W	4.00	3.98	4.02	99.5	100	1.00	20	80-120	03/09/20	03/09/20	03/09/20	03/09/20	#SIO2-200309A-BA08034
SM 4500-Si	DISSOLVED SILICA	4.00	3.98	4.02	99.5	100	1.00	20	80-120	03/09/20	03/09/20	03/09/20	03/09/20	#SIO2D-200309A-BA08034
SM3500Fe	FERROUS IRON	3.00	2.93	2.92	97.7	97.3	0.34	20	80-120	03/09/20	03/09/20	03/09/20	03/09/20	#35FE-A200309-BA08034
SW846 90	DISSOLVED ORGANIC CA	5.00	4.83	4.44	96.6	88.8 #	8.4	20	90-110	03/11/20	03/11/20	03/11/20	03/11/20	#DOCW5-200311A-BA079
SW846 90	TOTAL ORGANIC CARBO	5.00	5.02	4.40	100	88.0	13.2	20	80-120	03/12/20	03/12/20	03/12/20	03/13/20	#TOCW5-200312A-BA080

= Recovery is outside QC limits.

Comments:

Matrix Spike Recoveries

WETLAB

APPL ID: **200309W-08034 MS - 250572**

Sample ID: BA08034

Client ID: ERH1027

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	Matrix Res mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
SM 4500-Si	SILICA W	20.0	51.1	70.3	70.5	96.0	97.0	0.28	20	80-120	03/09/20	03/09/20	03/09/20	03/09/20	250572	BA08034
SM 4500-Si	DISSOLVED SILICA	4.00	46.5	65.5	65.9	475 #	485 #	0.61	20	80-120	03/09/20	03/09/20	03/09/20	03/09/20	250574	BA08034
SM3500Fe	FERROUS IRON	3.00	0.074	2.97	3.03	96.5	98.5	2.0	20	80-120	03/09/20	03/09/20	03/09/20	03/09/20	250576	BA08034

= Recovery is outside QC limits.

Comments:

ORGANICS
Calibration Data

DBCP/EDB/1,2,3-TCP Analysis by
504 8011

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 03/09/20
Matrix: Water Instrument: Herbie Initials:

0228108 D 0228109 D 0228110.D 0228111 D 0228112.D 0228113 D

		Compound	1	2	3	4	5	6					Avg	%RSD	Type	r^2	Q
1	TM	EDB	937275	1029830	868434	823757	822656	741122					870512	12	TM		
2	TML	1,2,3-TCP	97400	284865	240708	214442	209667	197990					207512	30	TM	0.995	
3	S	1,3-DIBROMOPROPANE(S)		1220120	1000750	914832	907431	842764					977179	15	S		
4	TM	DBCP	3178525	3425345	2940274	2780219	2807878	2785953					2986366	8.8	TM		
5		Signal #2											0	0			
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DBCP/EDB/1,2,3-TCP Analysis by
504 8011

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 03/09/20
Matrix: Water Instrument: Herbie Initials:

0228108.D 0228109.D 0228110 D 0228111 D 0228112 D 0228113 D

		Compound	1	2	3	4	5	6					Avg	%RSD	Type	r^2	Q
36	TM	EDB #2	4387075	4433730	3806364	3665041	3563247	3375349					3871801	11	TM		
37	TM	1,2,3-TCP #2	575650	780360	675902	645387	614787	584029					646019	12	TM		
38	S	1,3-DIBROMOPROPANE(S) #2	3207200	3306615	2780894	2626504	2541838	2390573					2808937	13	S		
39	TM	DBCP #2	12149950	12798270	11009248	11150725	11107429	10919693					11522552	6 7	TM		
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Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228108.D\ECD1A.CH Vial: 8
Signal #2 : G:\HERBIE\DATA\200228\0228108.D\ECD2B.CH
Acq On : 03-09-20 18:28:49 Operator: MA,SS
Sample : 8011 1 3/9/20 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 10 9:07 2020 Quant Results File: 8010310A.RES

Quant Method : G:\HERBIE\DATA\200228\8010310A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Thu Jan 30 13:05:38 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

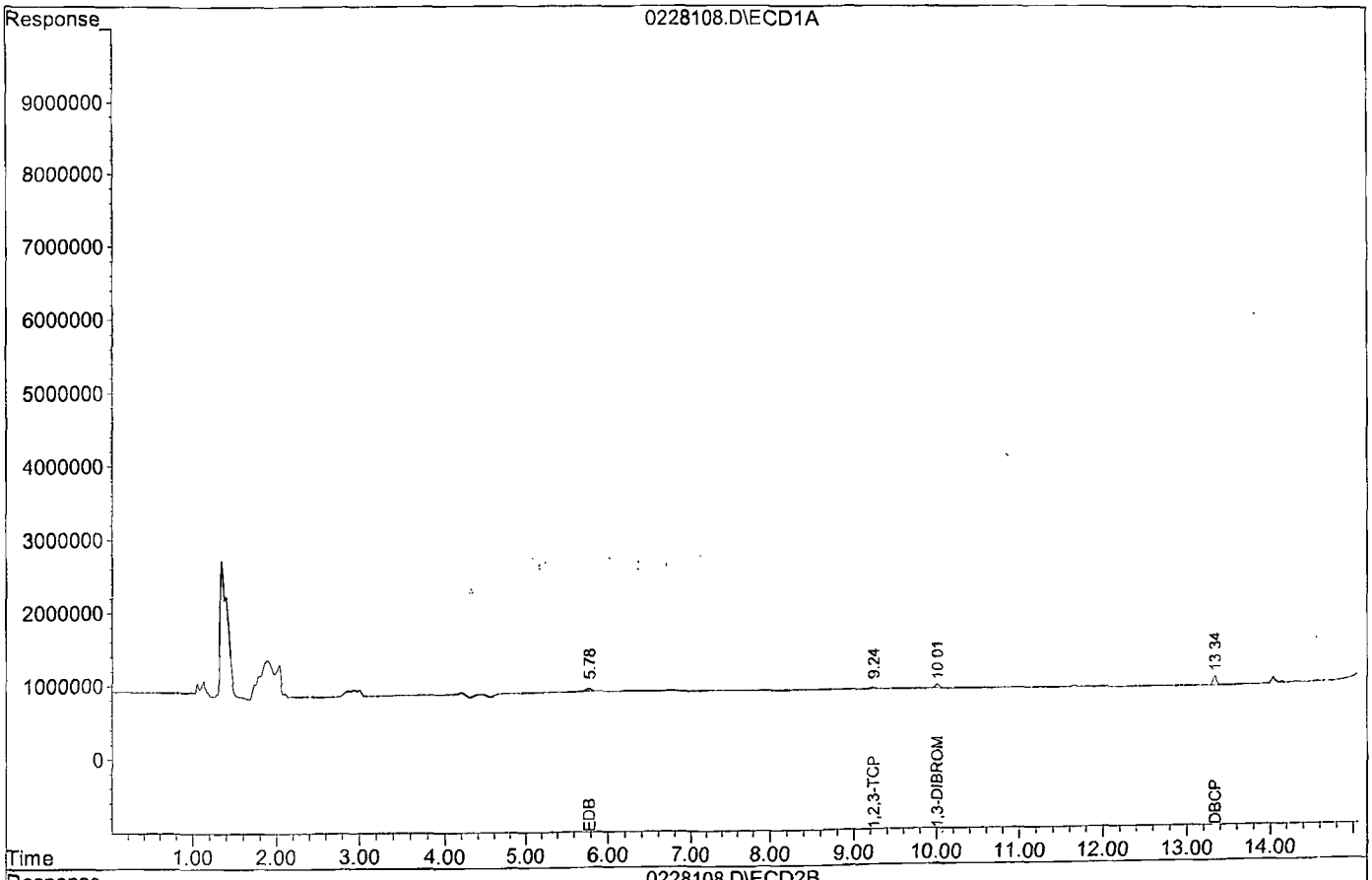
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	System Monitoring Compounds							
3) S	1,3-DIBROMOPROPA	10.01	11.04	47733	128288	0.027	0.026	
	Spiked Amount 0.350			Recovery =		7.71%	7.43%	
	Target Compounds							
1) TM	EDB	5.78	7.22	37491	175483	0.024	0.026	
2) TM	1,2,3-TCP	9.24	10.45	3896	23026	0.007	0.018	#
4) TM	DBCP	13.34	14.09	127141	485998	0.024	0.024	
	Target Compounds							

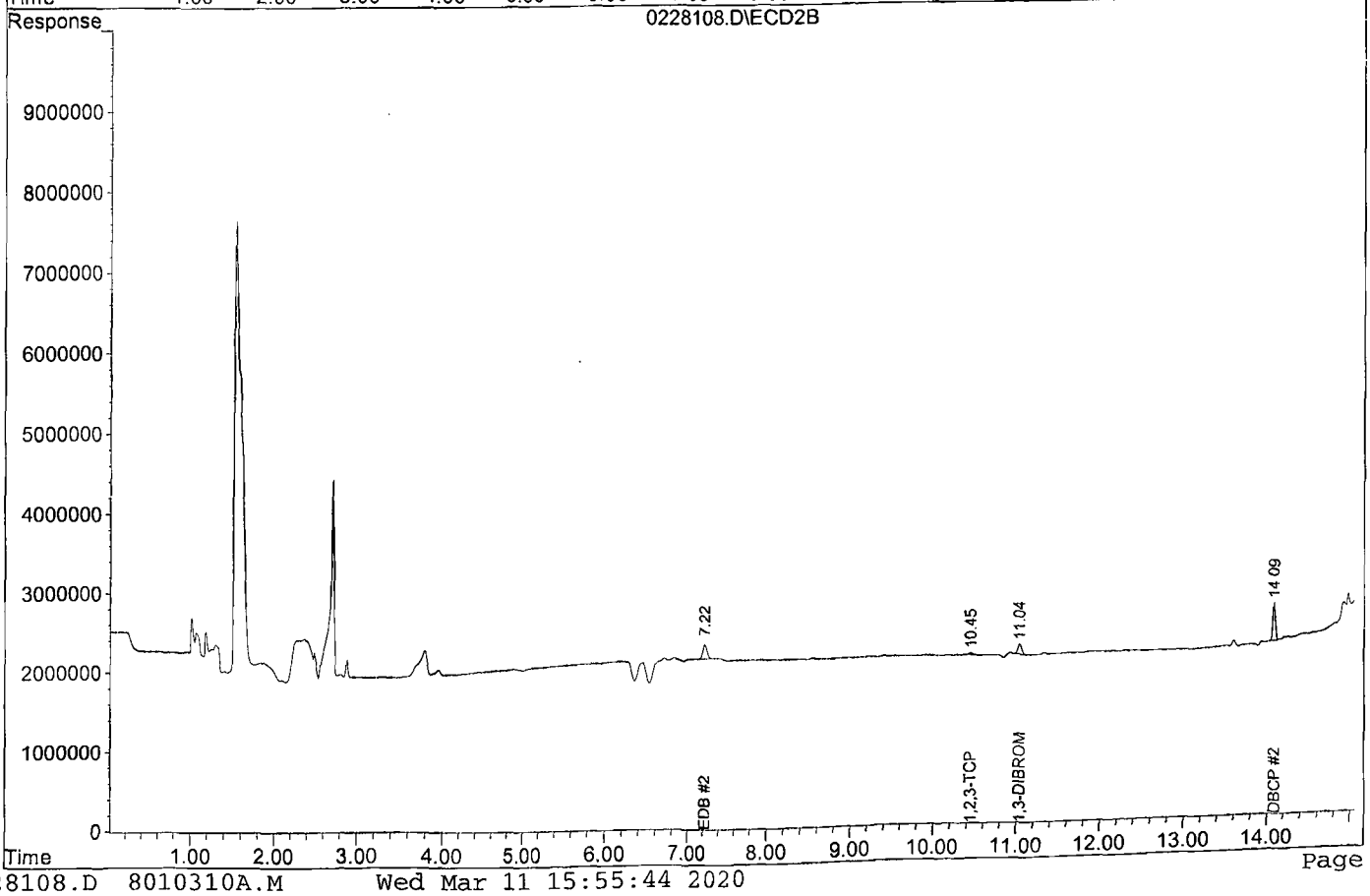
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\200228\0228108.D
Acq On : 03-09-20 18:28:49
Sample : 8011 1 3/9/20
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010310A.M

Vial: 8
Operator: MA,SS
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228109.D\ECD1A.CH Vial: 9
Signal #2 : G:\HERBIE\DATA\200228\0228109.D\ECD2B.CH
Acq On : 03-09-20 18:49:17 Operator: MA,SS
Sample : 8011 2 3/9/20 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 10 9:07 2020 Quant Results File: 8010310A.RES

Quant Method : G:\HERBIE\DATA\200228\8010310A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 10 09:07:23 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.01	11.03	244024	661323	0.138	0.132
Spiked Amount	0.350			Recovery	=	39.43%	37.71%
	Target Compounds						
1) TM	EDB	5.78	7.21	205966	886746	0.132	0.133
2) TM	1,2,3-TCP	9.24	10.44	56973	156072	0.107	0.125
4) TM	DBCP	13.34	14.08	685069	2559654	0.128	0.125

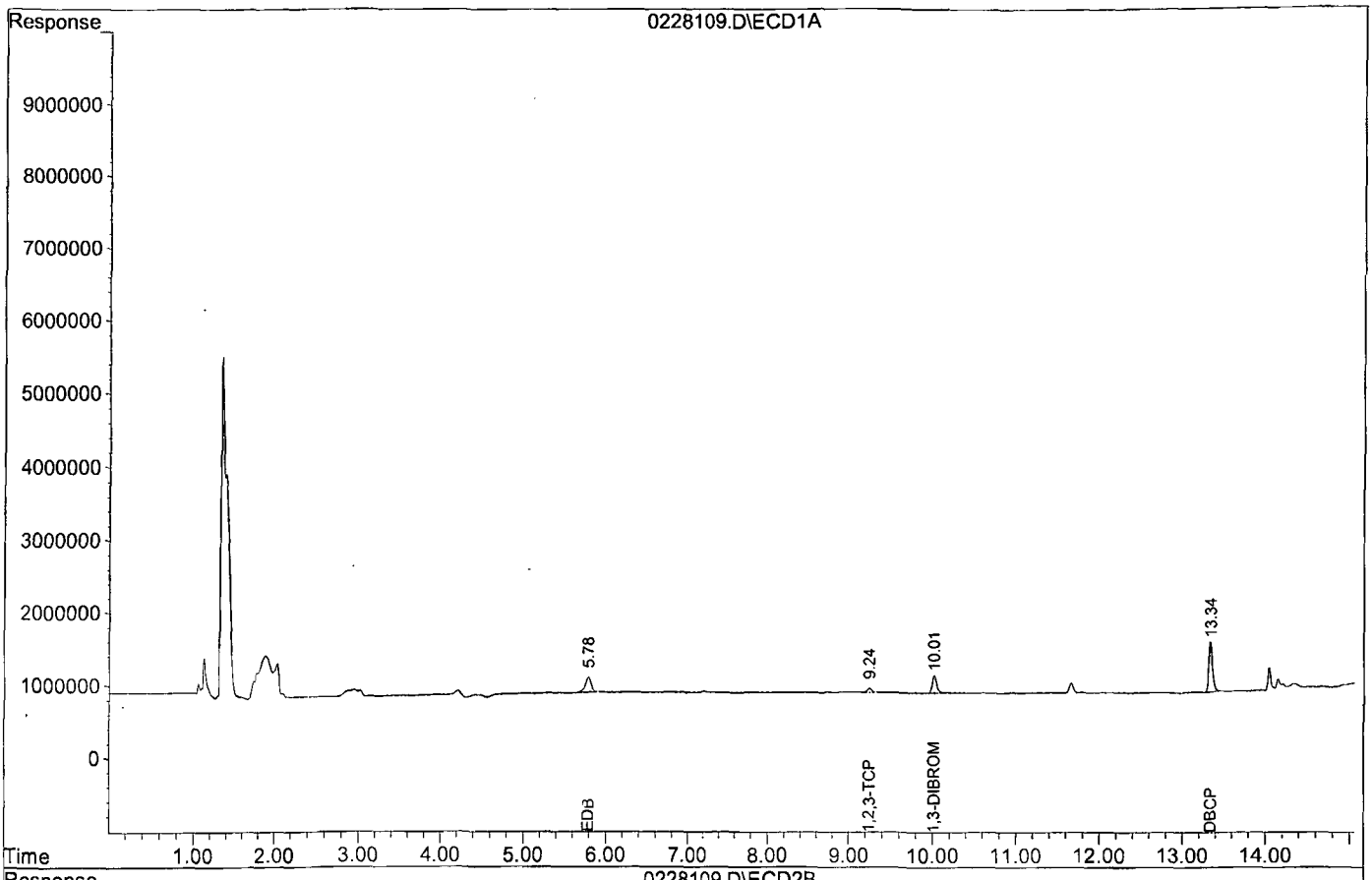
Target Compounds

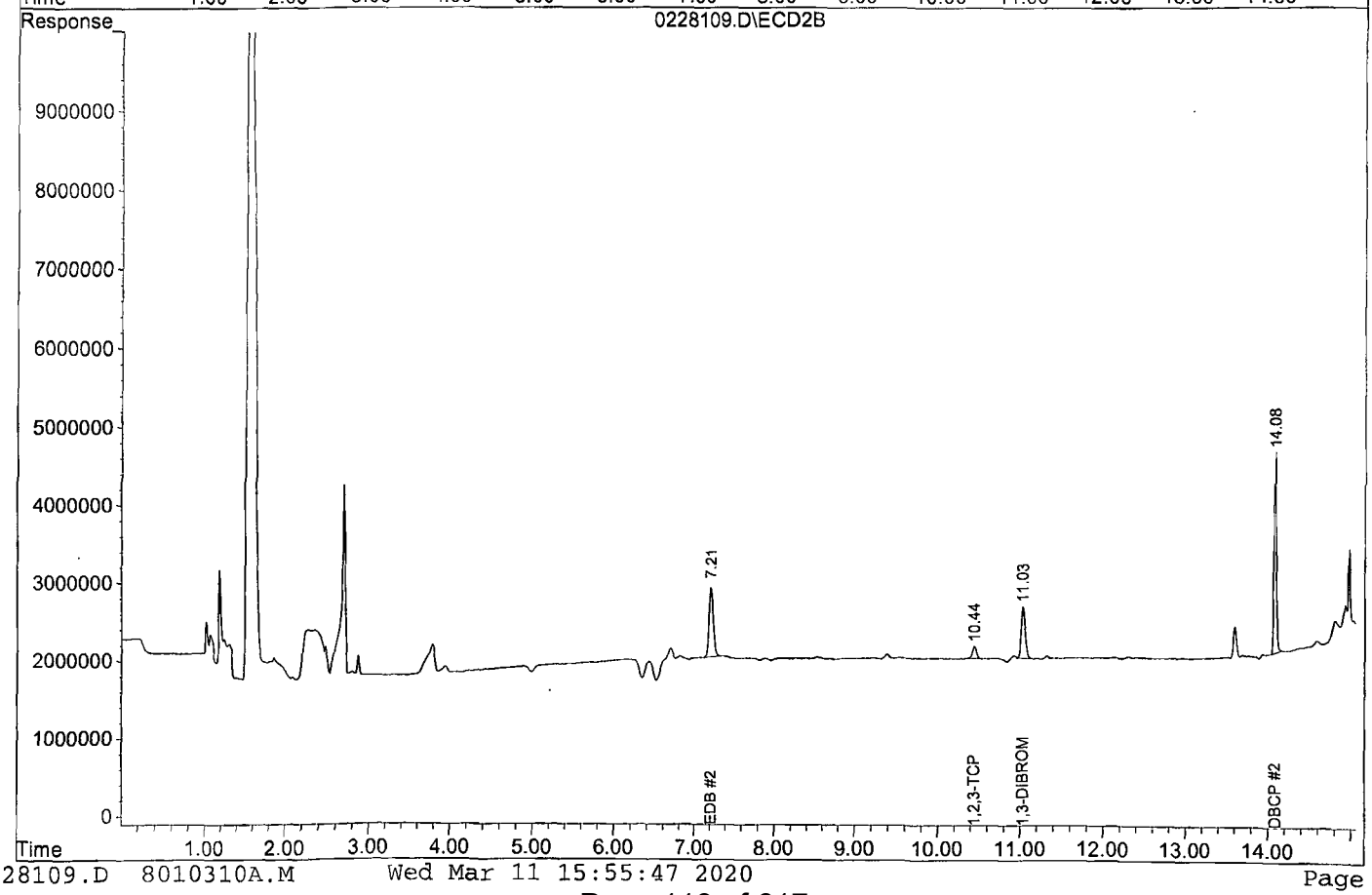
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\200228\0228109.D
Acq On : 03-09-20 18:49:17
Sample : 8011 2 3/9/20
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010310A.M

Vial: 9
Operator: MA,SS
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228110.D\ECD1A.CH Vial: 10
Signal #2 : G:\HERBIE\DATA\200228\0228110.D\ECD2B.CH
Acq On : 03-09-20 19:09:45 Operator: MA,SS
Sample : 8011 3 3/9/20 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 10 9:07 2020 Quant Results File: 8010310A.RES

Quant Method : G:\HERBIE\DATA\200228\8010310A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 10 09:07:23 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.01	11.03	500375	1390447	0.283	0.279
Spiked Amount	0.350			Recovery	=	80.86%	79.71%
	Target Compounds						
1) TM	EDB	5.79	7.21	434217	1903182	0.279	0.286
2) TM	1,2,3-TCP	9.24	10.44	120354	337951	0.226	0.270
4) TM	DBCP	13.34	14.08	1470137	5504624	0.275	0.268

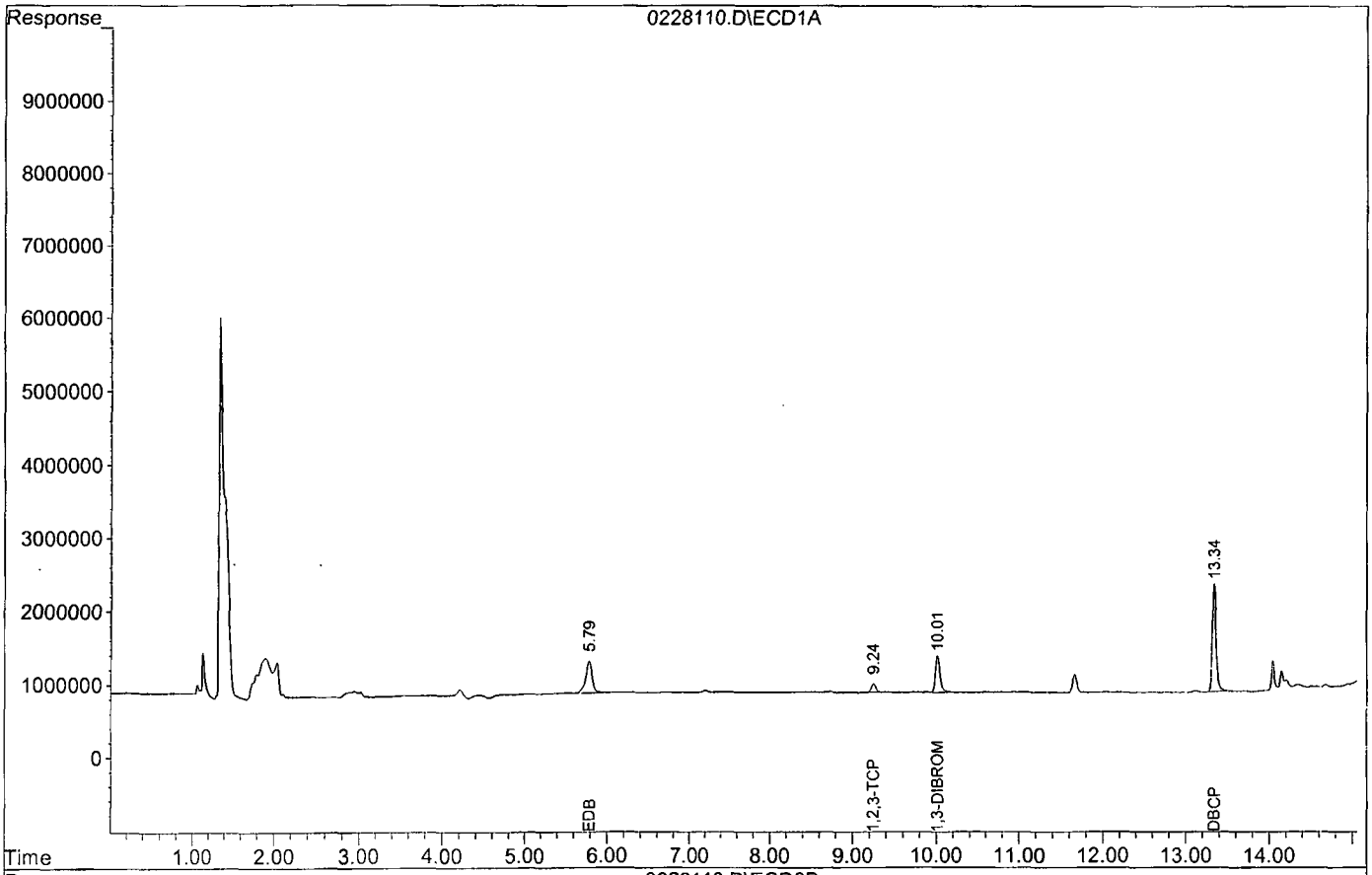
Target Compounds

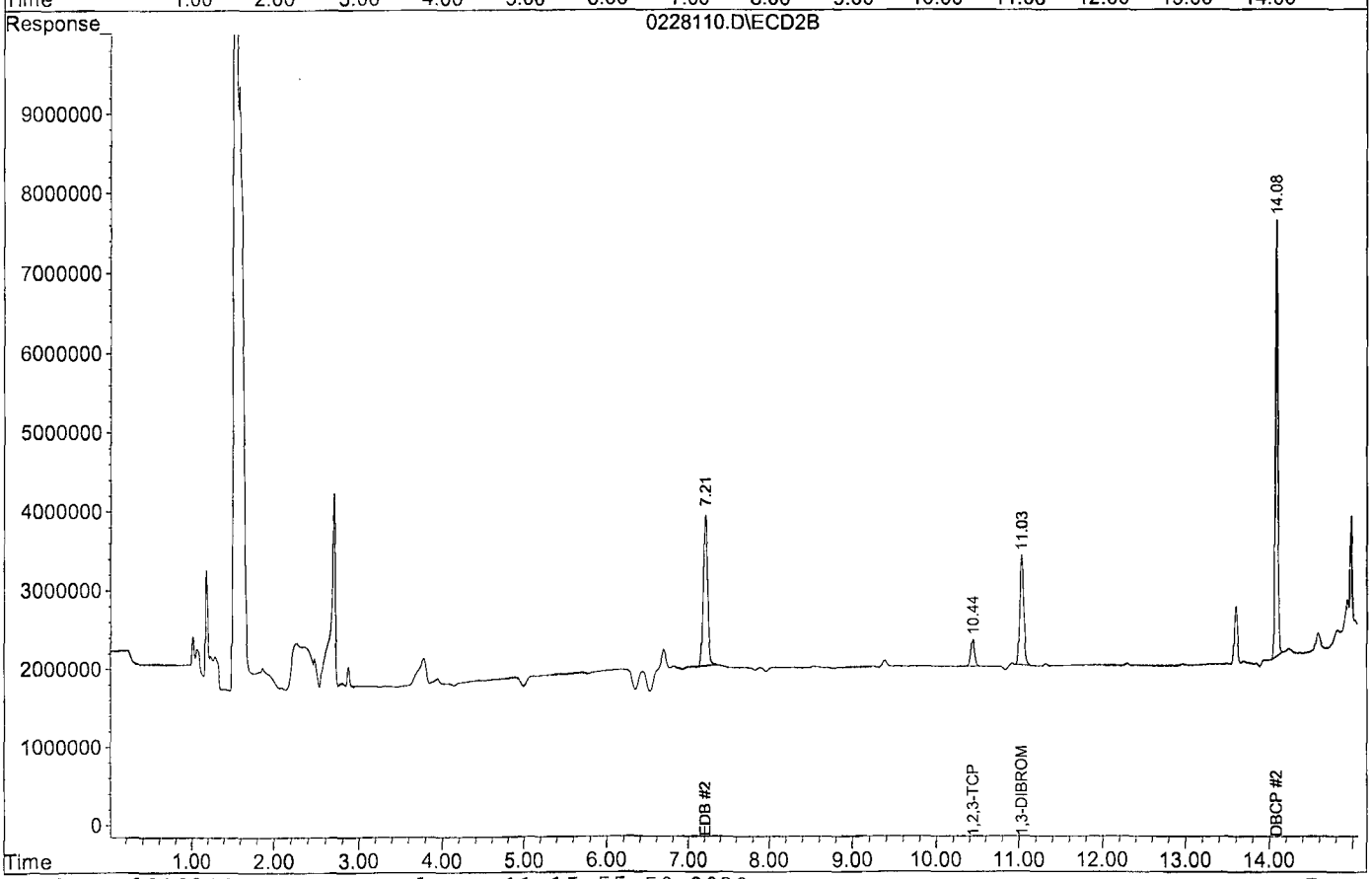
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\200228\0228110.D
Acq On : 03-09-20 19:09:45
Sample : 8011 3 3/9/20
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010310A.M

Vial: 10
Operator: MA,SS
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228111.D\ECD1A.CH Vial: 11
Signal #2 : G:\HERBIE\DATA\200228\0228111.D\ECD2B.CH
Acq On : 03-09-20 19:30:04 Operator: MA,SS
Sample : 8011 4 3/9/20 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 10 9:07 2020 Quant Results File: 8010310A.RES

Quant Method : G:\HERBIE\DATA\200228\8010310A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 10 09:07:23 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	System Monitoring Compounds							
3)	S 1,3-DIBROMOPROPA	10.01	11.03	914832	2626504	0.517	0.526	
	Spiked Amount 0.350			Recovery	=	147.71%	150.29%	
	Target Compounds							
1)	TM EDB	5.78	7.21	823757	3665041	0.530	0.551	
2)	TM 1,2,3-TCP	9.24	10.44	214442	645387	0.403	0.516	#
4)	TM DBCP	13.34	14.08	2780219	11150725	0.519	0.543	

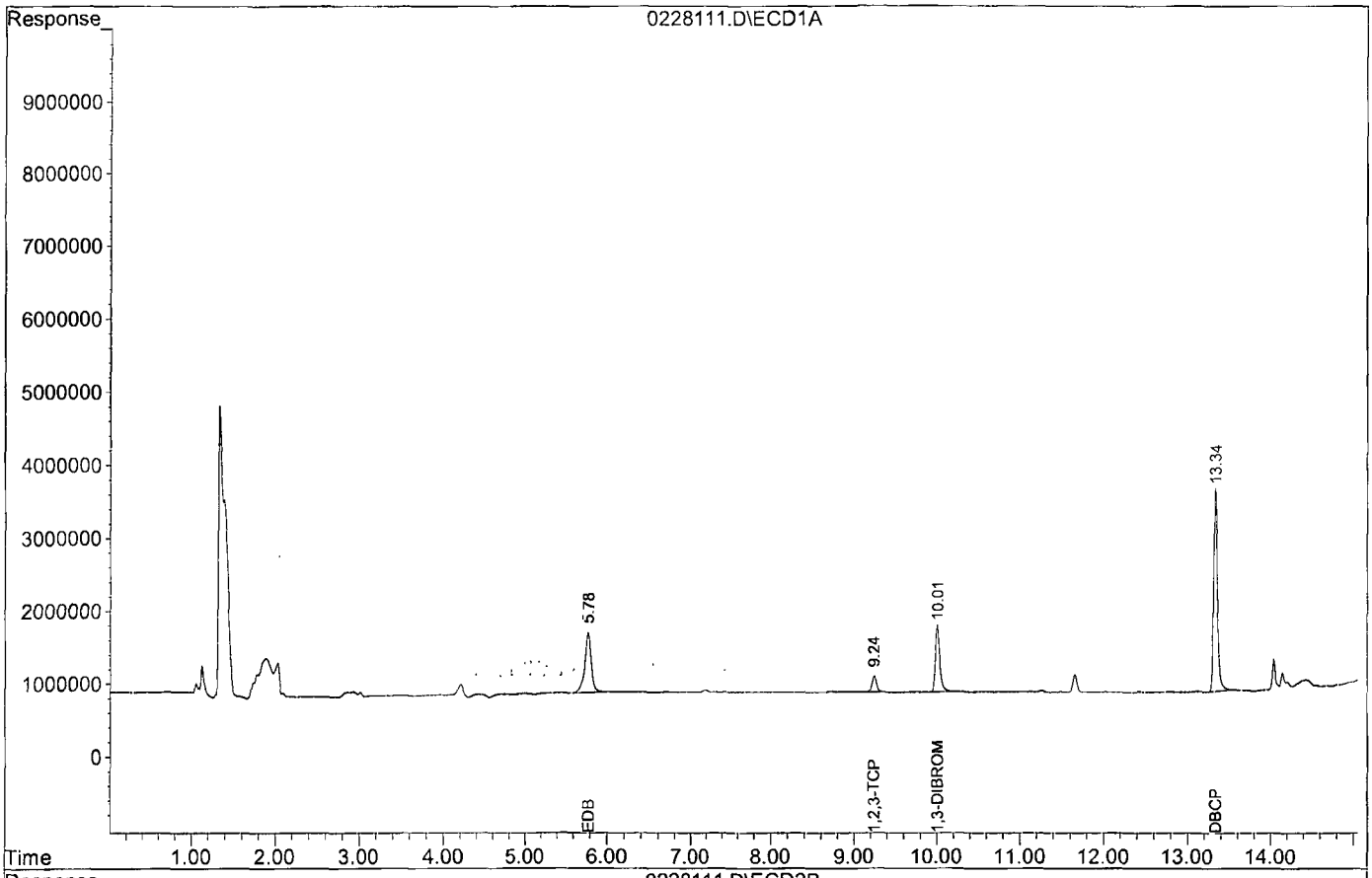
Target Compounds

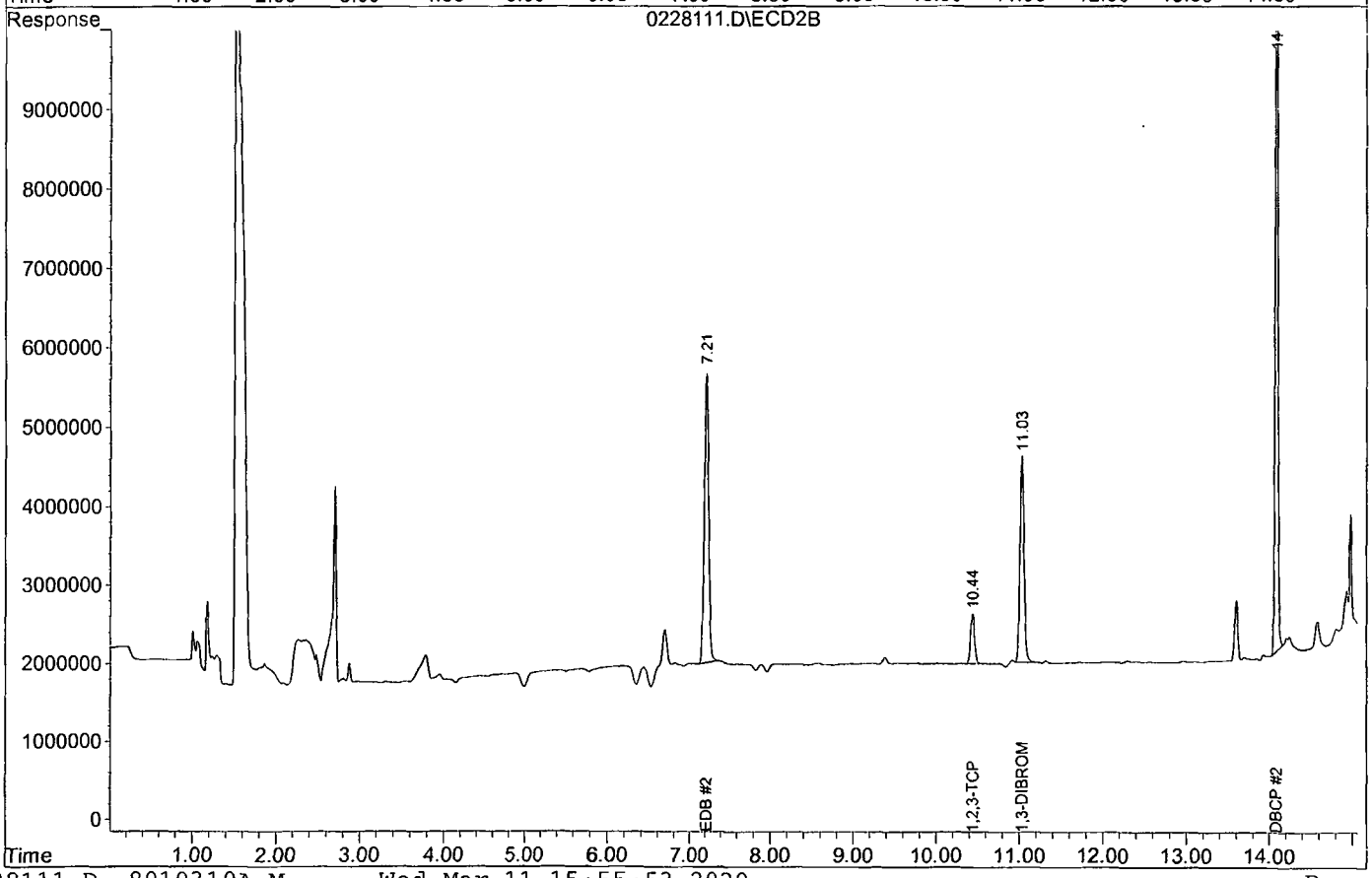
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\200228\0228111.D
Acq On : 03-09-20 19:30:04
Sample : 8011 4 3/9/20
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010310A.M

Vial: 11
Operator: MA,SS
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228112.D\ECD1A.CH Vial: 12
Signal #2 : G:\HERBIE\DATA\200228\0228112.D\ECD2B.CH
Acq On : 03-09-20 19:50:22 Operator: MA,SS
Sample : 8011 5 3/9/20 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 10 9:07 2020 Quant Results File: 8010310A.RES

Quant Method : G:\HERBIE\DATA\200228\8010310A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 10 09:07:23 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3)	S 1,3-DIBROMOPROPA	10.01	11.03	1361147	3812757	0.769	0.764
	Spiked Amount 0.350			Recovery	=	219.71%	218.29%
	Target Compounds						
1)	TM EDB	5.79	7.21	1233984	5344871	0.793	0.803
2)	TM 1,2,3-TCP	9.25	10.44	314501	922181	0.591	0.737
4)	TM DBCP	13.34	14.08	4211817	16661144	0.787	0.811

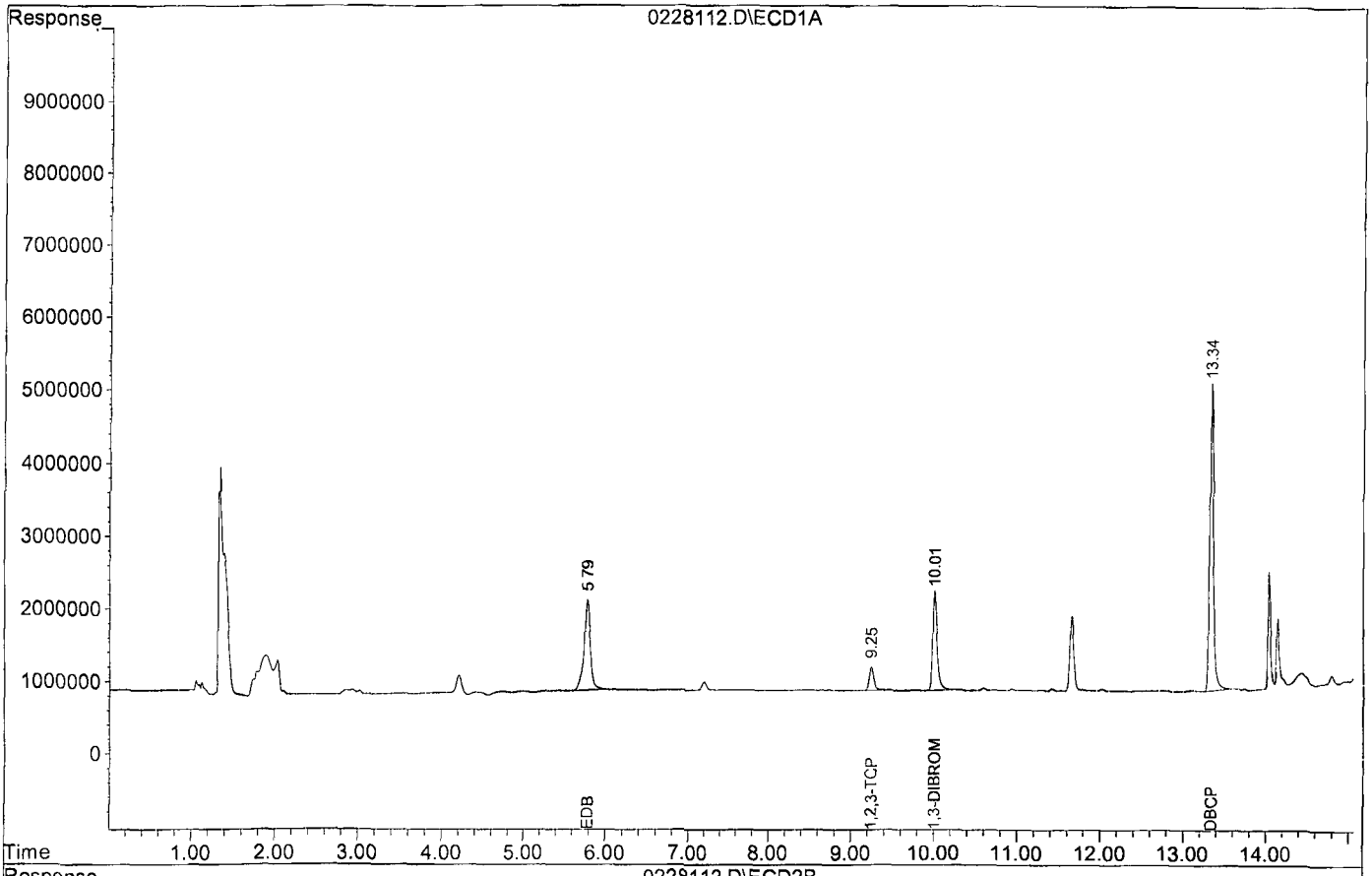
Target Compounds

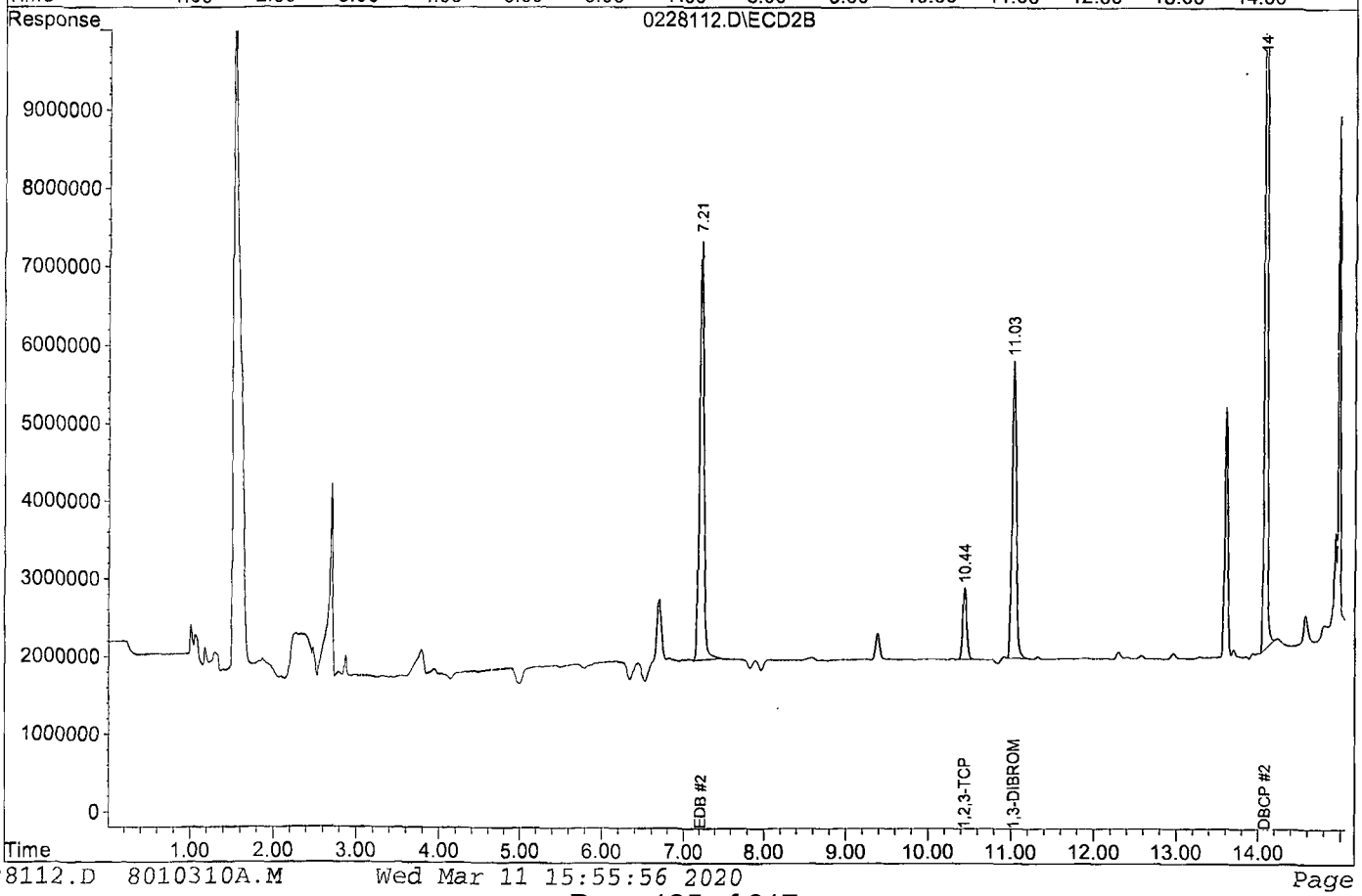
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\200228\0228112.D
Acq On : 03-09-20 19:50:22
Sample : 8011 5 3/9/20
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010310A.M

Vial: 12
Operator: MA,SS
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228113.D\ECD1A.CH Vial: 13
Signal #2 : G:\HERBIE\DATA\200228\0228113.D\ECD2B.CH
Acq On : 03-09-20 20:10:46 Operator: MA,SS
Sample : 8011 6 3/9/20 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 10 9:07 2020 Quant Results File: 8010310A.RES

Quant Method : G:\HERBIE\DATA\200228\8010310A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 10 09:07:23 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
	System Monitoring Compounds							
3) S	1,3-DIBROMOPROPA	10.01	11.03	1685528	4781145	0.952	0.958	
Spiked Amount	0.350			Recovery	=	272.00%	273.71%	
	Target Compounds							
1) TM	EDB	5.78	7.21	1482244	6750698	0.953	1.014	
2) TM	1,2,3-TCP	9.25	10.44	395980	1168057	0.745	0.934	#
4) TM	DBCP	13.34	14.08	5571905	21839385	1.041	1.064	

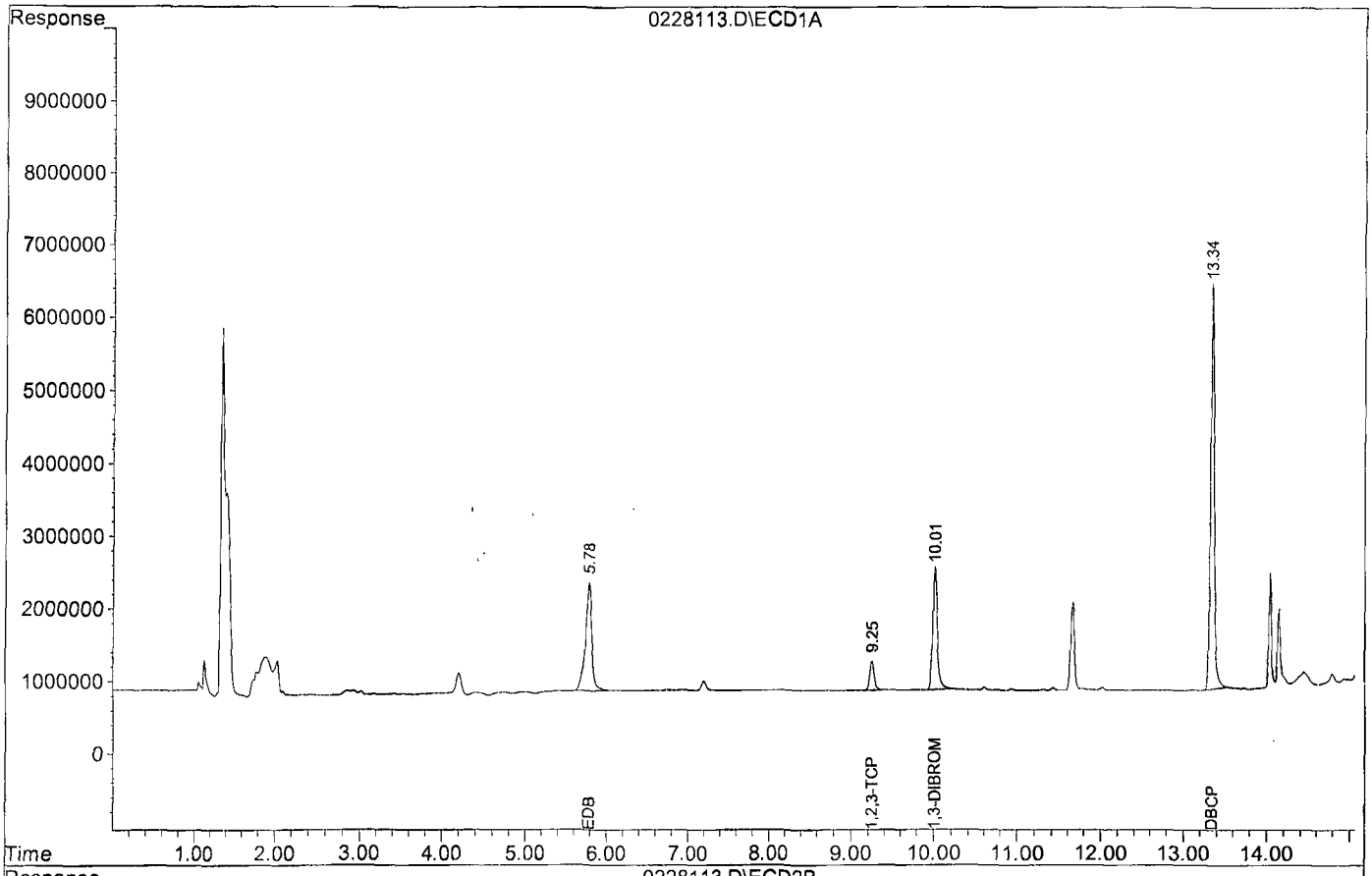
Target Compounds

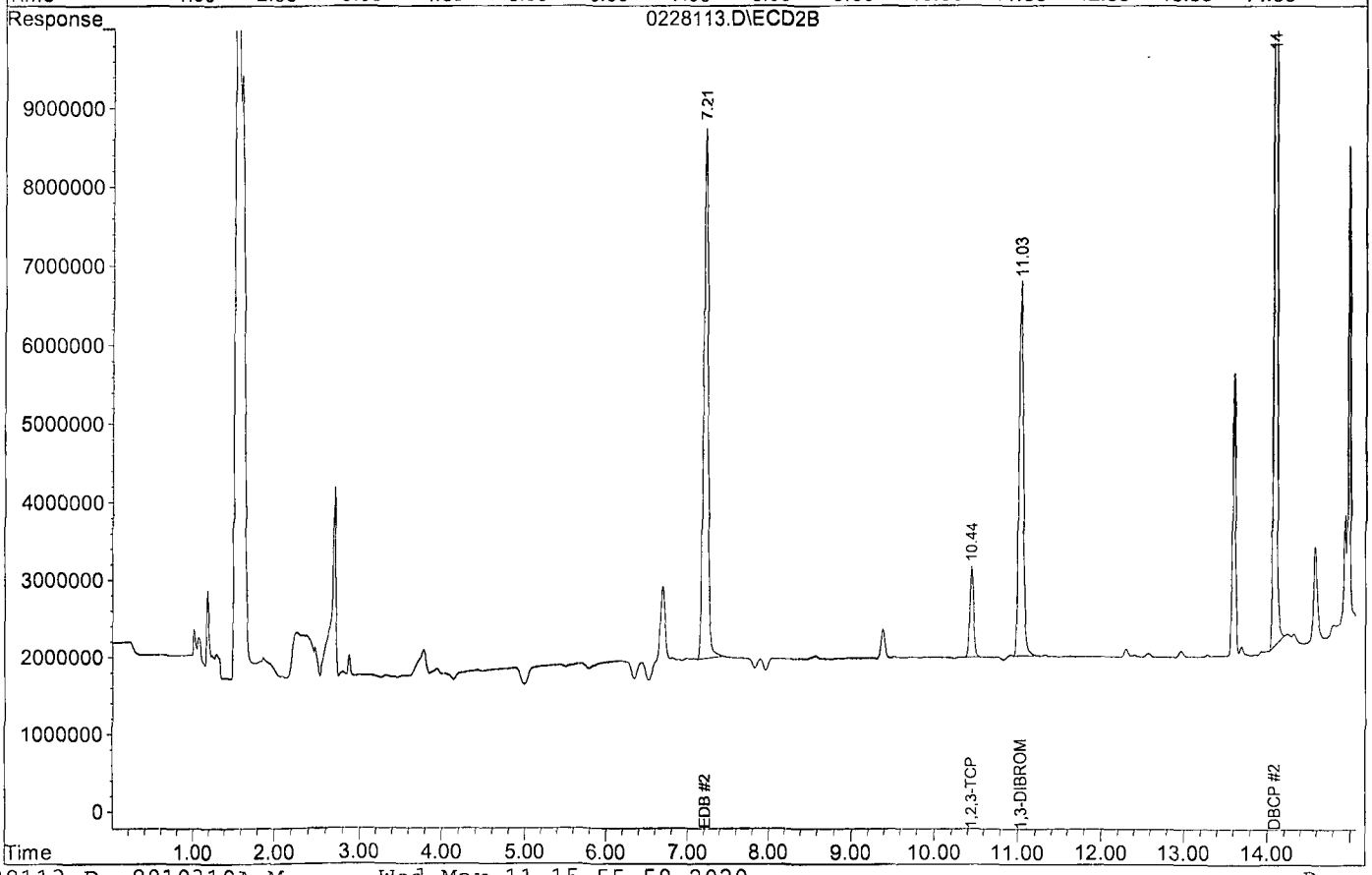
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\200228\0228113.D
Acq On : 03-09-20 20:10:46
Sample : 8011 6 3/9/20
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010310A.M

Vial: 13
Operator: MA,SS
Inst : Herbie
Multiplr: 1.00





DBCP/EDB/1,2,3-TCP Analysis by
504 8011

Form 7

Second Source Calibration

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

SDG No:
Date Analyzed: 03/09/20
Instrument: Herbie
Initial Cal. Date: 03/09/20
Data File: 0228114.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	EDB	870512	834075	4.2	TM	
2	TML	1,2,3-TCP	207512	244675	18	TML	8.0
3	TM	DBCP	2986370	2947850	1.3	TM	
4							
5							
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31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			7.8		

DBCP/EDB/1,2,3-TCP Analysis by
504 8011

Form 7

Second Source Calibration

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

SDG No:
Date Analyzed: 03/09/20
Instrument: Herbie
Cal. Date: 03/09/20
Data File: 0228114.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	EDB	3871800	3526590	8.9	TM	
42	TM	1,2,3-TCP	646019	674420	4.4	TM	
43	TM	DBCP	11522600	11025300	4.3	TM	
44							
45							
46							
47							
48							
49							
50							
51							
52							
53							
54							
55							
56							
57							
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67							
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							
79							
80							
		Average			5.9		

Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228114.D\ECD1A.CH Vial: 14
Signal #2 : G:\HERBIE\DATA\200228\0228114.D\ECD2B.CH
Acq On : 03-09-20 20:31:04 Operator: MA,SS
Sample : 8011 SS 3/9/20 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 10 9:07 2020 Quant Results File: 8010310A.RES

Quant Method : G:\HERBIE\DATA\200228\8010310A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 10 09:07:23 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3)	S 1,3-DIBROMOPROPA	10.01	11.03	684334	1896553	0.387	0.380
	Spiked Amount 0.350			Recovery	=	110.57%	108.57%
	Target Compounds						
1)	TM EDB	5.78	7.21	166815	705318	0.107	0.106
2)	TM 1,2,3-TCP	9.24	10.44	48935	134884	0.092	0.108
4)	TM DBCP	13.34	14.08	589570	2205069	0.110	0.107

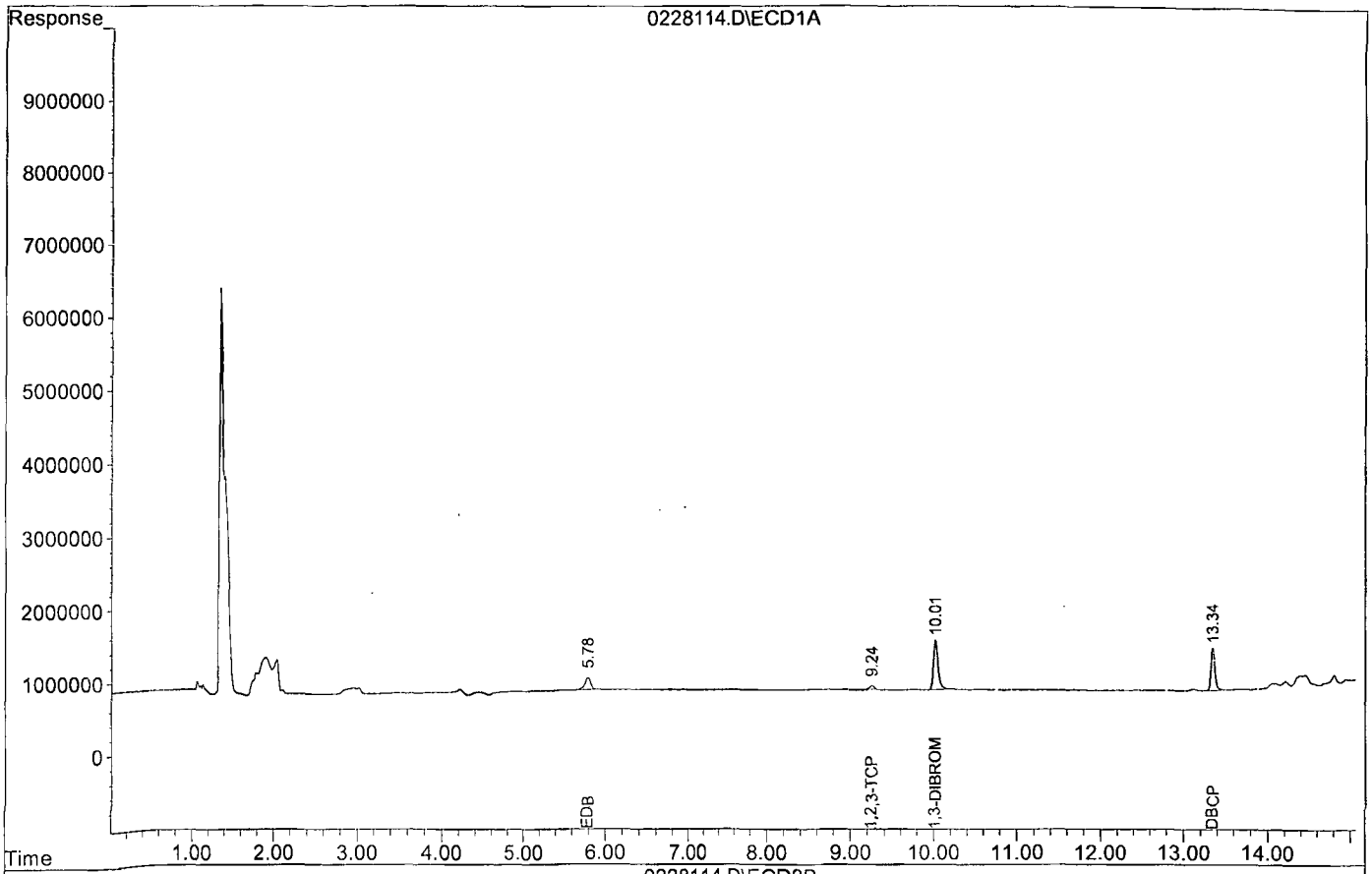
Target Compounds

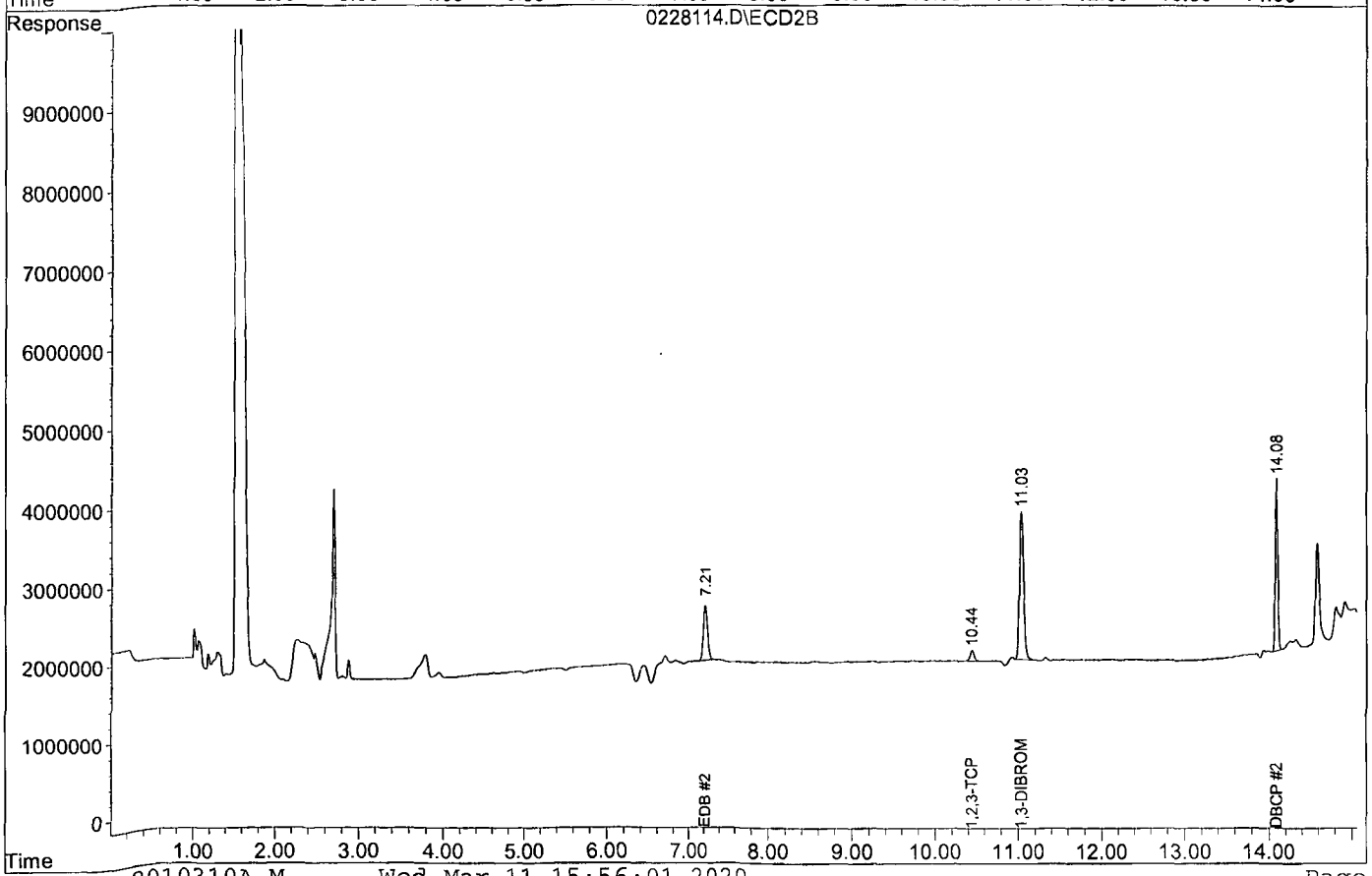
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\200228\0228114.D
Acq On : 03-09-20 20:31:04
Sample : 8011 SS 3/9/20
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010310A.M

Vial: 14
Operator: MA,SS
Inst : Herbie
Multiplr: 1.00





DBCP/EDB/1,2,3-TCP Analysis by
504 8011

Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 03/10/20
Instrument: Herbie
Initial Cal. Date: 03/09/20
Data File: 0228128.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	EDB	870512	888346	2.0	TM	
2	TML	1,2,3-TCP	207512	253736	22	TML	16
3	S	1,3-DIBROMOPROPANE(S)	977179	1028750	5.3	S	
4	TM	DBCP	2986370	3086770	3.4	TM	
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
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28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			8.2		

DBCP/EDB/1,2,3-TCP Analysis by
504 8011

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 03/10/20
Matrix: Water Instrument: Herbie
Cal. Date: 03/09/20
Data File: 0228128.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	EDB	3871800	3941460	1.8	TM	
42	TM	1,2,3-TCP	646019	709316	9.8	TM	
43	S	1,3-DIBROMOPROPANE(S)	2808940	2914120	3.7	S	
44	TM	DBCP	11522600	11552300	0.26	TM	
45							
46							
47							
48							
49							
50							
51							
52							
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54							
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67							
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							
79							
80							
		Average			3.9		

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\200228\0228128.D\ECD1A.CH Vial: 28
Acq On : 03-10-20 1:13:30 Operator: MA,SS
Sample : 8011 3 3/9/20 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile : rteint.p

Data File : G:\HERBIE\DATA\200228\0228128.D\ECD2B.CH Vial: 28
Acq On : 03-10-20 1:13:29 Operator: MA,SS
Sample : 8011 3 3/9/20 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile : rteint2.p
Quant Time: Mar 10 9:15 2020 Quant Results File: 8010310A.RES

Quant Method : G:\HERBIE\DATA\200228\8010310A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 10 09:12:32 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.01	11.03	514374	1457058	0.263	0.259
Spiked Amount	0.350			Recovery	=	75.14%	74.00%
	Target Compounds						
1) TM	EDB	5.78	7.21	444173	1970732	0.255	0.254
2) TM	1,2,3-TCP	9.24	10.44	126868	354658	0.291	0.274
4) TM	DBCP	13.34	14.08	1543384	5776146	0.258	0.251

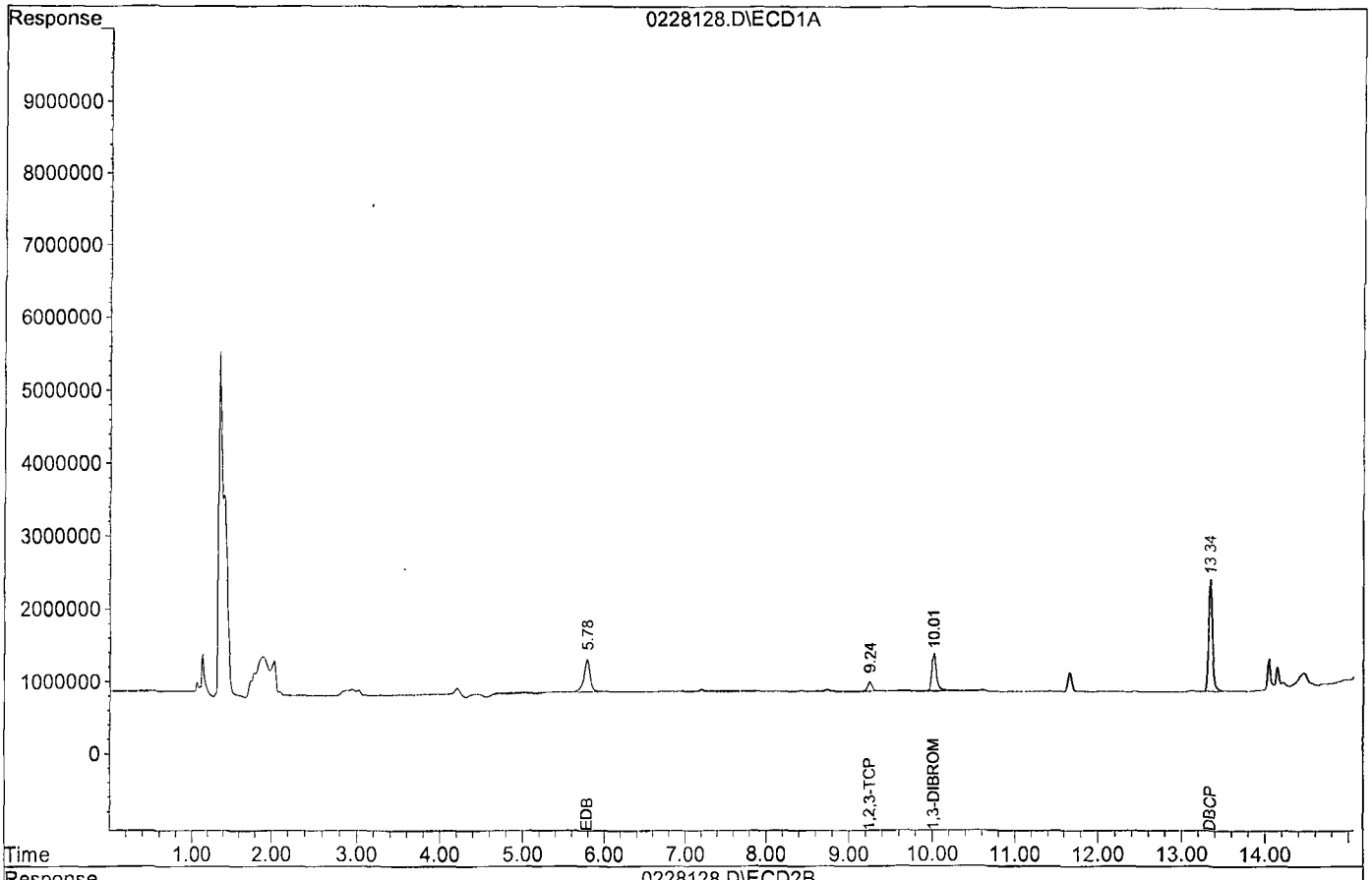
Target Compounds

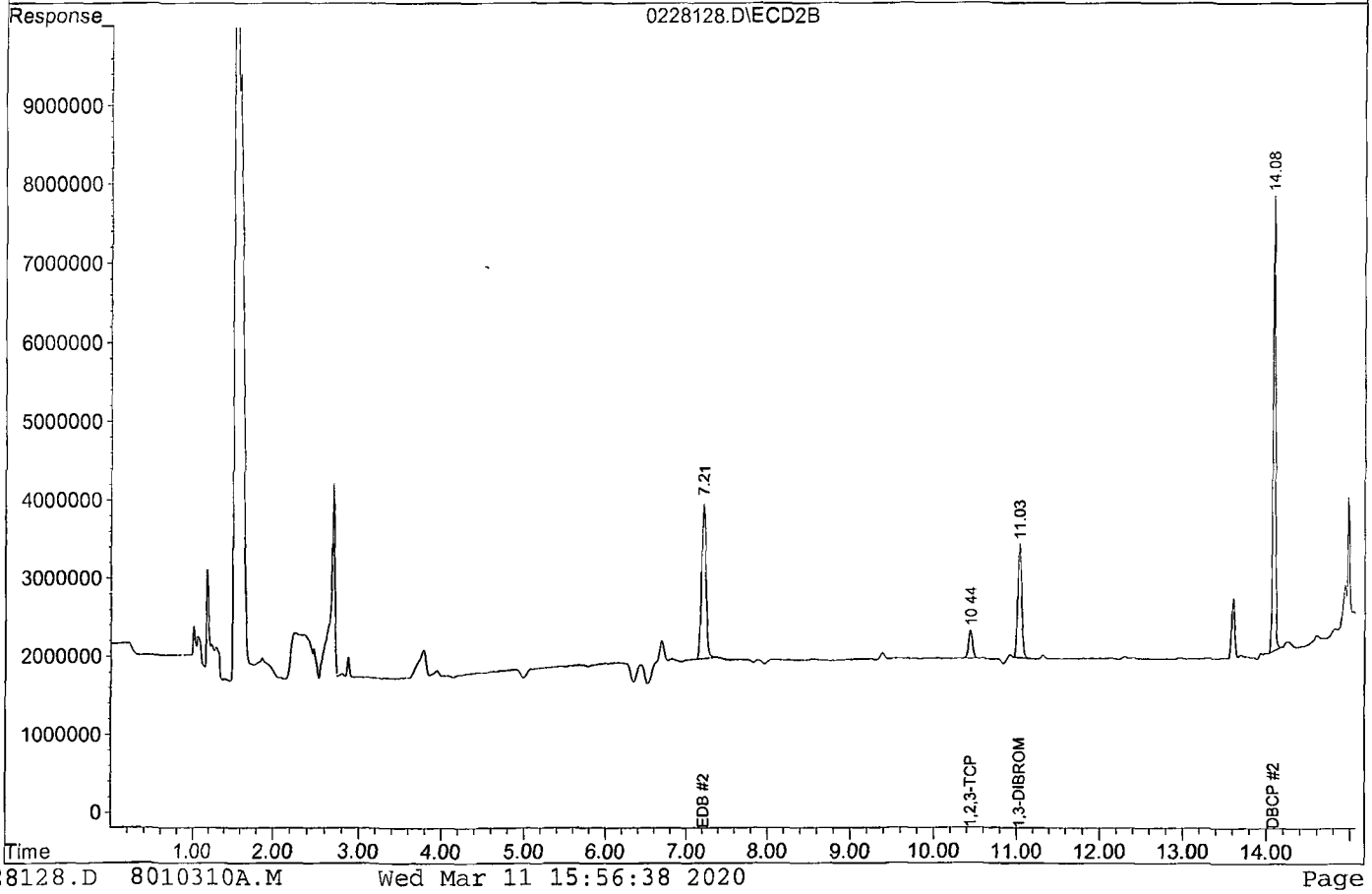
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\200228\0228128.D
Acq On : 03-10-20 1:13:30
Sample : 8011 3 3/9/20
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010310A.M

Vial: 28
Operator: MA,SS
Inst : Herbie
Multiplr: 1.00





ORGANICS
Raw Data

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228125.D\ECD1A.CH Vial: 25
Signal #2 : G:\HERBIE\DATA\200228\0228125.D\ECD2B.CH
Acq On : 03-10-20 0:13:08 Operator: MA,SS
Sample : BA08033W01 2/35.00 Inst : Herbie
Misc : water Multiplr: 0.99
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 10 10:37 2020 Quant Results File: 8010310A.RES

Quant Method : G:\HERBIE\DATA\200228\8010310A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 10 09:12:32 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

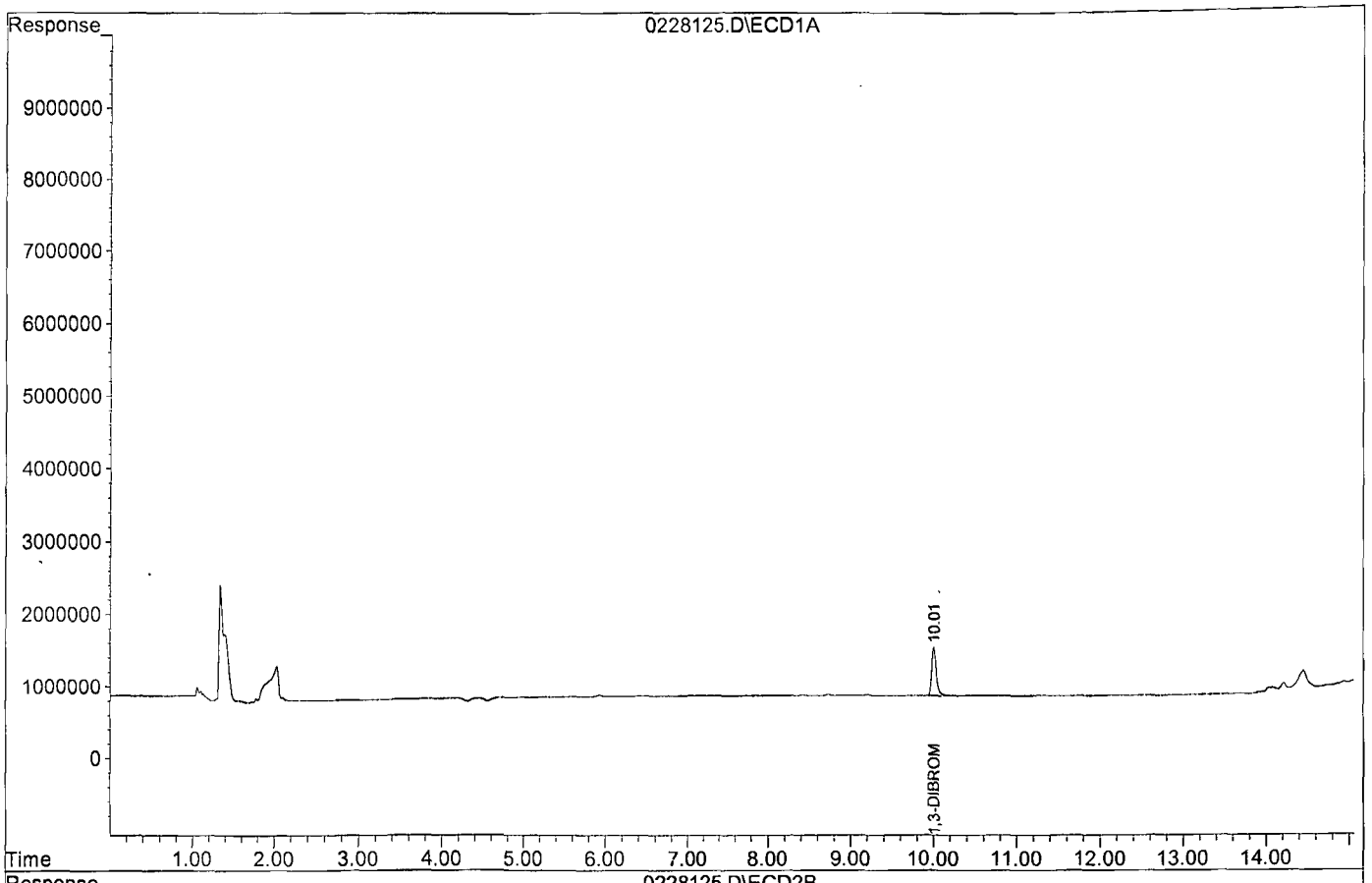
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.01	11.03	669193	1924907	0.338	0.338
Spiked Amount	0.346			Recovery =		97.79%	97.79%
	Target Compounds						
	Target Compounds						
1) TM	EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM	DBCP	0.00	0.00	0	0	N.D. d	N.D. d

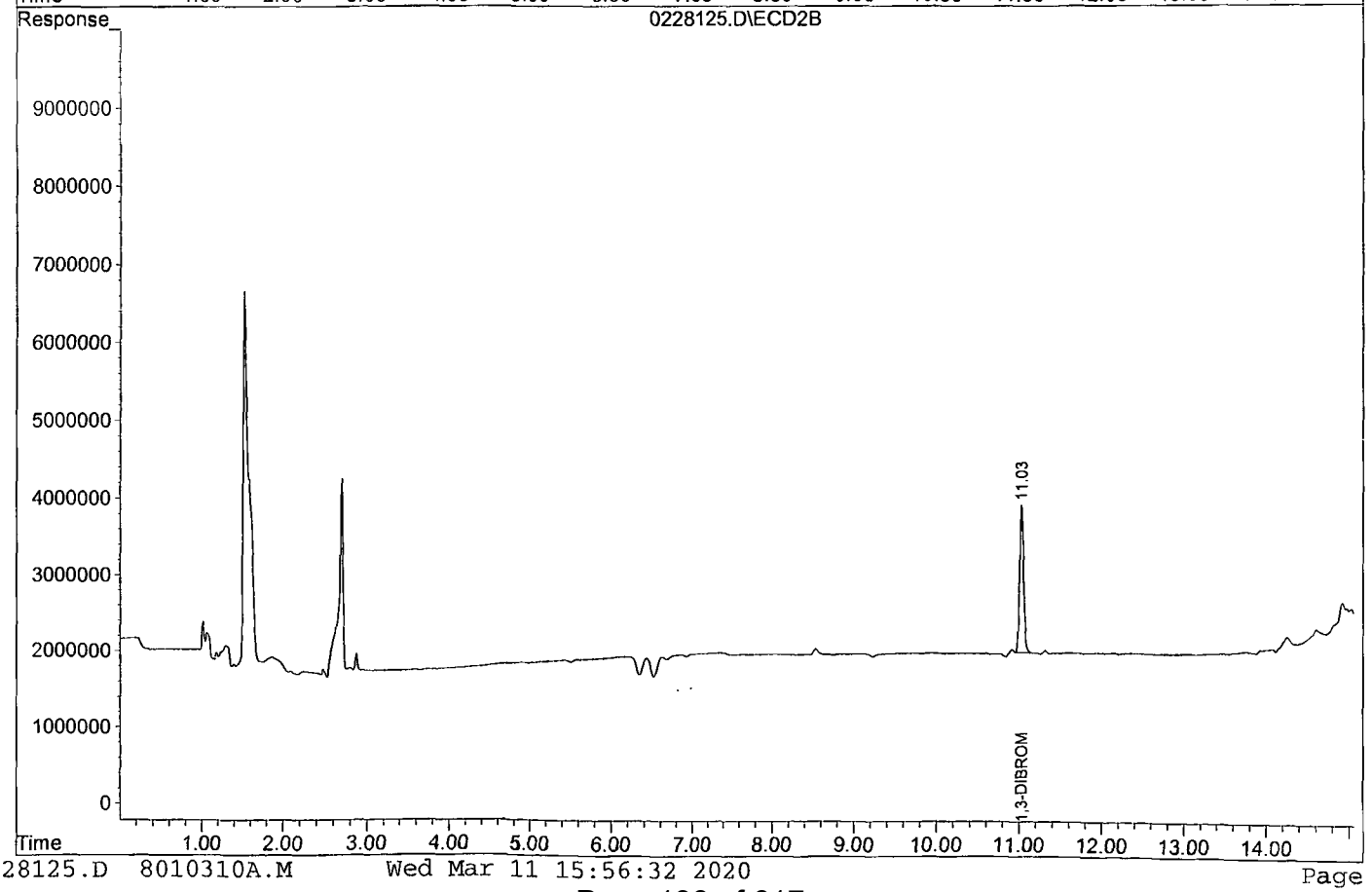
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\200228\0228125.D
Acq On : 03-10-20 0:13:08
Sample : BA08033W01 2/35.00
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010310A.M

Vial: 25
Operator: MA,SS
Inst : Herbie
Multiplr: 0.99





Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228126.D\ECD1A.CH Vial: 26
Signal #2 : G:\HERBIE\DATA\200228\0228126.D\ECD2B.CH
Acq On : 03-10-20 0:33:14 Operator: MA,SS
Sample : BA08034W01 2/35.00 Inst : Herbie
Misc : water Multiplr: 0.98
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 10 10:38 2020 Quant Results File: 8010310A.RES

Quant Method : G:\HERBIE\DATA\200228\8010310A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 10 09:12:32 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

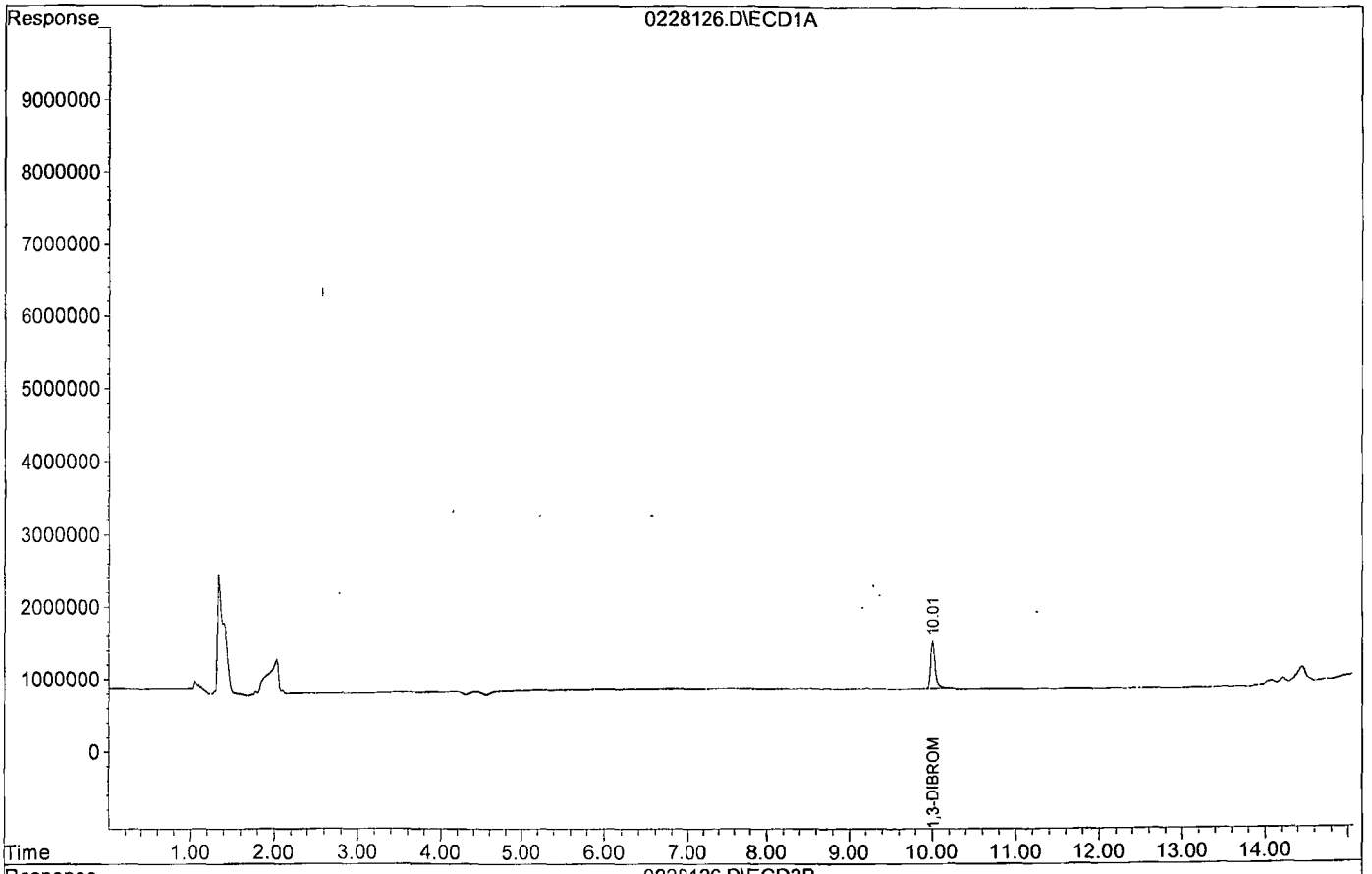
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.01	11.03	671094	1904992	0.337	0.333
Spiked Amount	0.344			Recovery	=	98.02%	96.86%
	Target Compounds						
	Target Compounds						
1) TM	EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM	DBCP	0.00	0.00	0	0	N.D. d	N.D. d

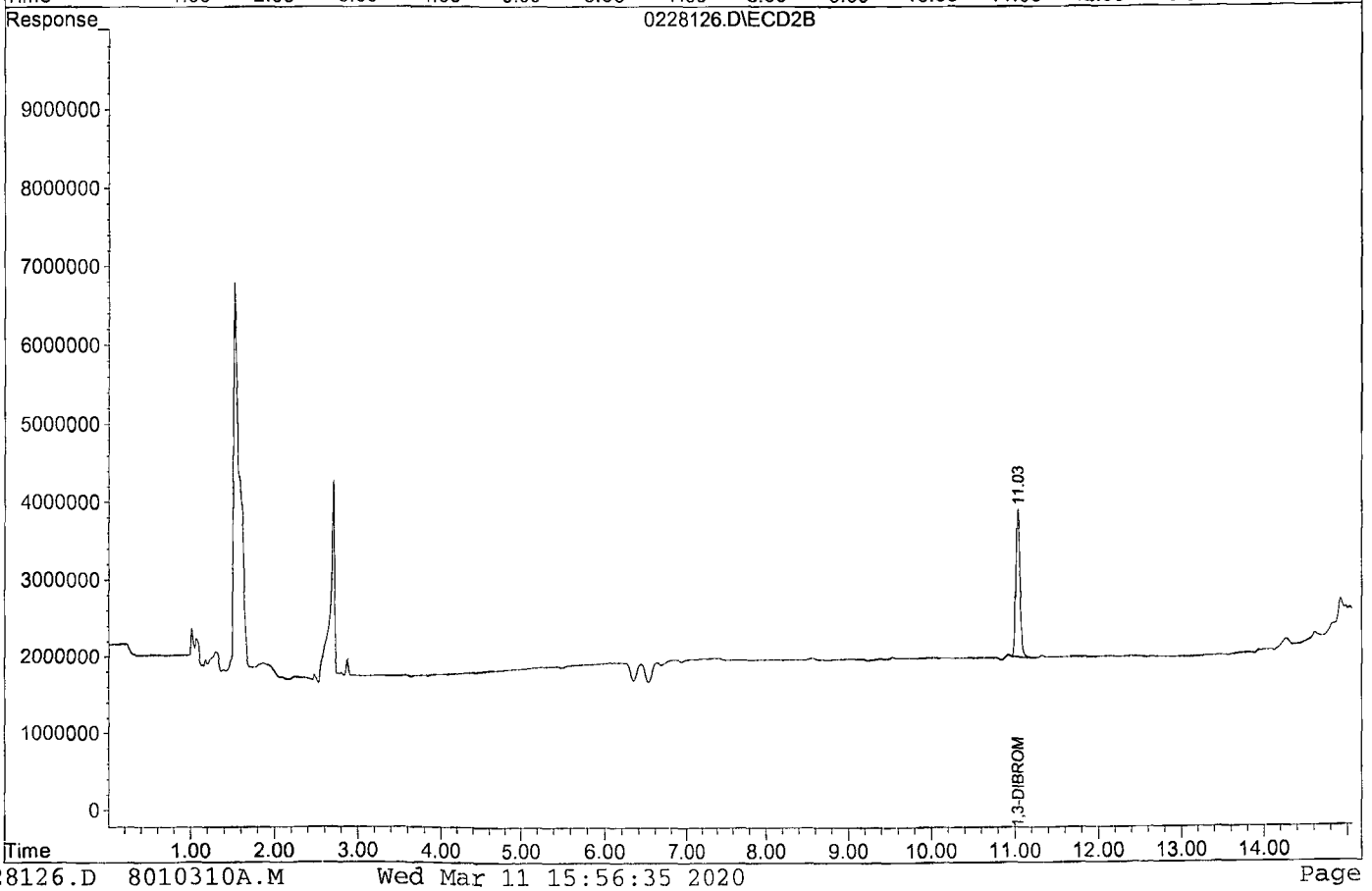
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\200228\0228126.D
Acq On : 03-10-20 0:33:14
Sample : BA08034W01 2/35.00
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010310A.M

Vial: 26
Operator: MA,SS
Inst : Herbie
Multiplr: 0.98





Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228115.D\ECD1A.CH Vial: 15
Signal #2 : G:\HERBIE\DATA\200228\0228115.D\ECD2B.CH
Acq On : 03-09-20 20:51:19 Operator: MA,SS
Sample : 200309A BLK 2/35.02 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 10 10:33 2020 Quant Results File: 8010310A.RES

Quant Method : G:\HERBIE\DATA\200228\8010310A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 10 09:12:32 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

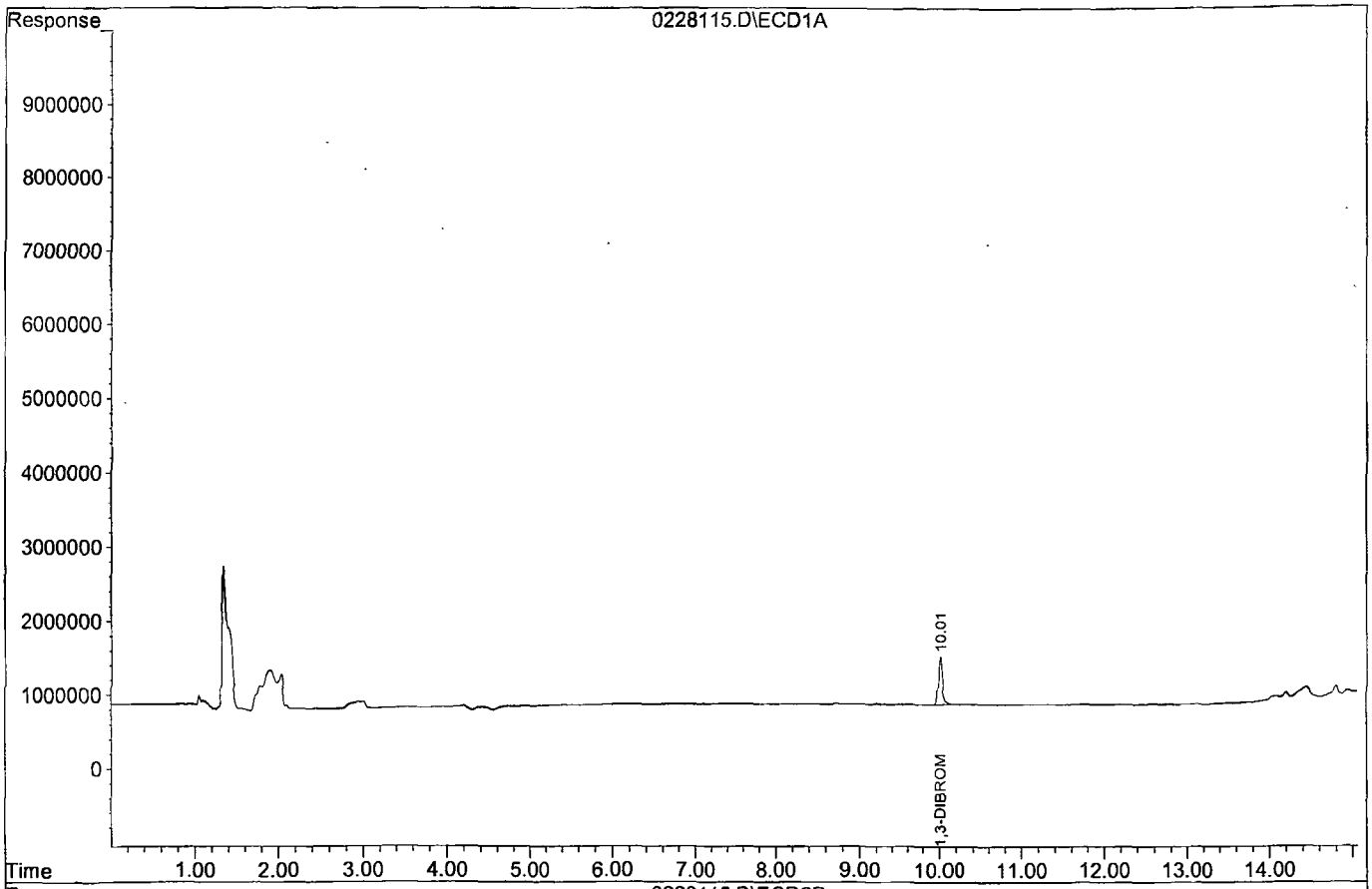
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.01	11.03	649596	1823252	0.332	0.324
Spiked Amount	0.350			Recovery	=	94.91%	92.62%
	Target Compounds						
	Target Compounds						
1) TM	EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM	DBCP	0.00	0.00	0	0	N.D. d	N.D. d

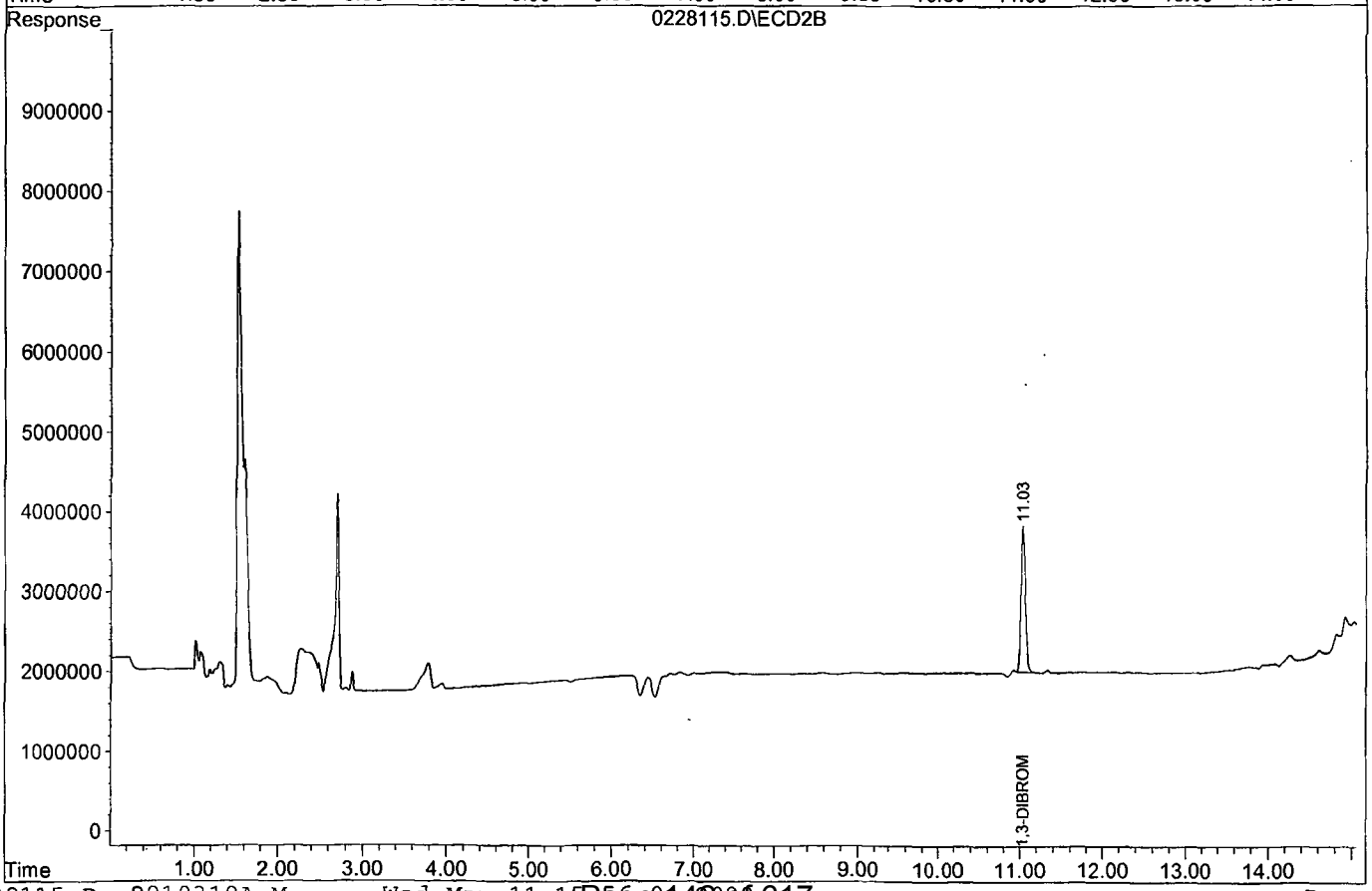
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\200228\0228115.D
Acq On : 03-09-20 20:51:19
Sample : 200309A BLK 2/35.02
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010310A.M

Vial: 15
Operator: MA,SS
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228116.D\ECD1A.CH Vial: 16
Signal #2 : G:\HERBIE\DATA\200228\0228116.D\ECD2B.CH
Acq On : 03-09-20 21:11:40 Operator: MA,SS
Sample : 200309A LCS-1 2/35.12 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 10 10:27 2020 Quant Results File: 8010310A.RES

Quant Method : G:\HERBIE\DATA\200228\8010310A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 10 09:12:32 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.01	11.03	495253	1407147	0.253	0.250
Spiked Amount	0.349			Recovery	=	72.53%	71.67%
	Target Compounds						
1) TM	EDB	5.78	7.21	436200	1893237	0.250	0.244
2) TM	1,2,3-TCP	9.24	10.44	118323	338573	0.268	0.261
4) TM	DBCP	13.34	14.08	1461118	5538792	0.244	0.240

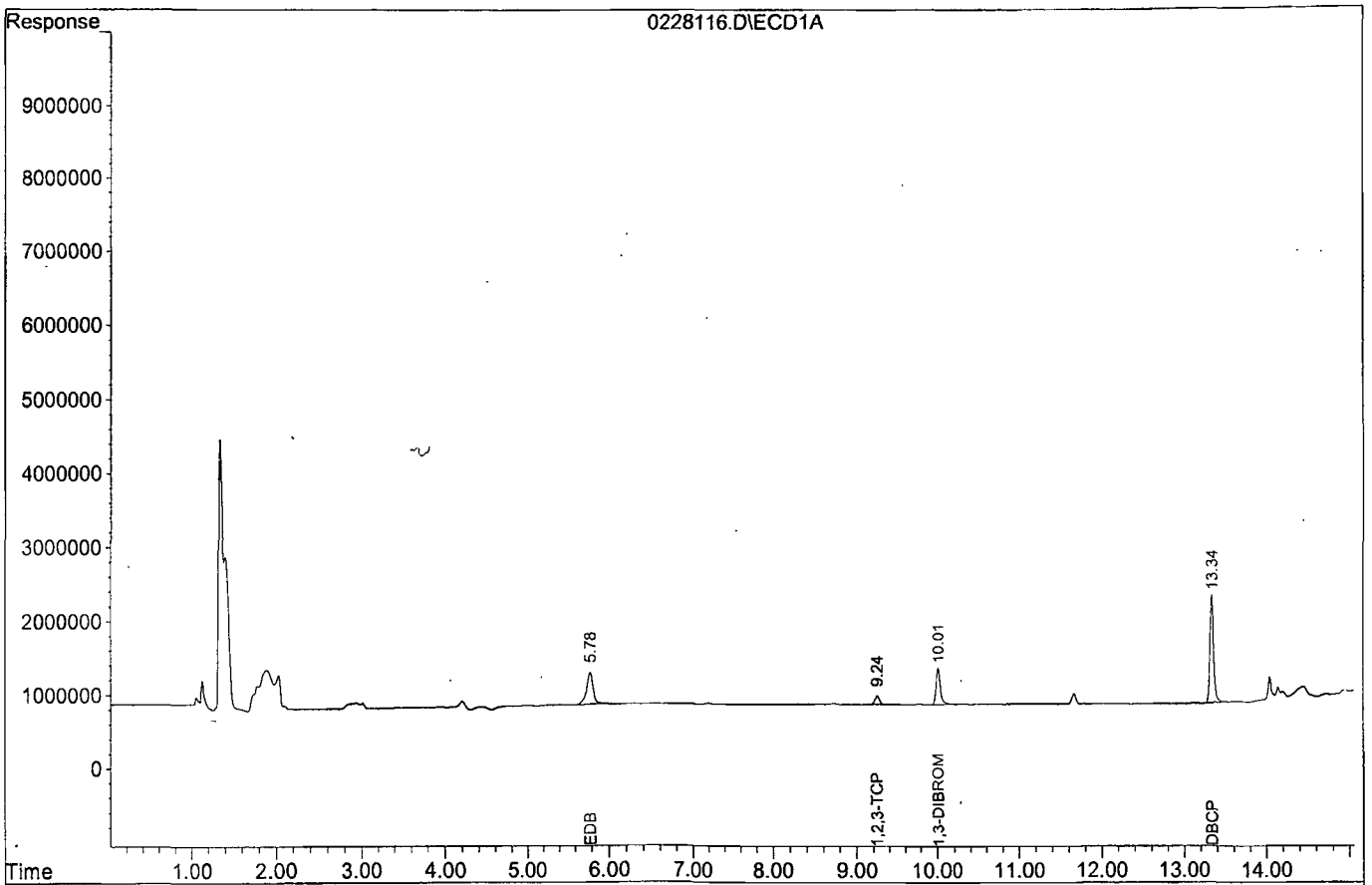
Target Compounds

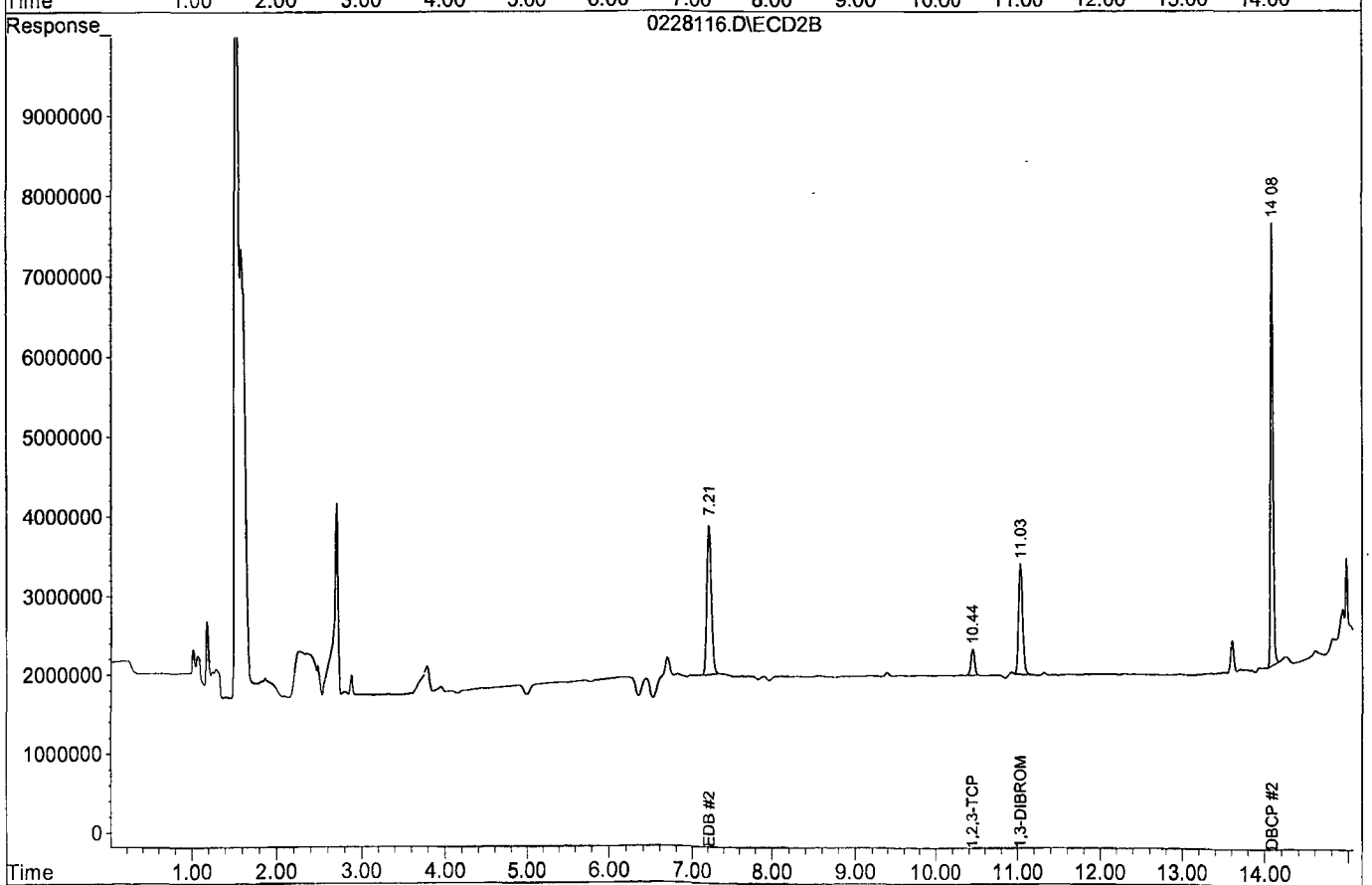
(f)=RT Delta > 1/2 Window (#)=Amounts di[illegible] (m)=manual int.
0228116.D 8010310A.M Wed Mar 11 15:56:06 2020

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\200228\0228116.D
Acq On : 03-09-20 21:11:40
Sample : 200309A LCS-1 2/35.12
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010310A.M

Vial: 16
Operator: MA,SS
Inst : Herbie
Multiplr: 1.00





Quantitation Report (Not Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228117.D\ECD1A.CH Vial: 17
Signal #2 : G:\HERBIE\DATA\200228\0228117.D\ECD2B.CH
Acq On : 03-09-20 21:31:50 Operator: MA,SS
Sample : 200309A LCSD-1 2/35.13 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 10 10:27 2020 Quant Results File: 8010310A.RES

Quant Method : G:\HERBIE\DATA\200228\8010310A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 10 09:12:32 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

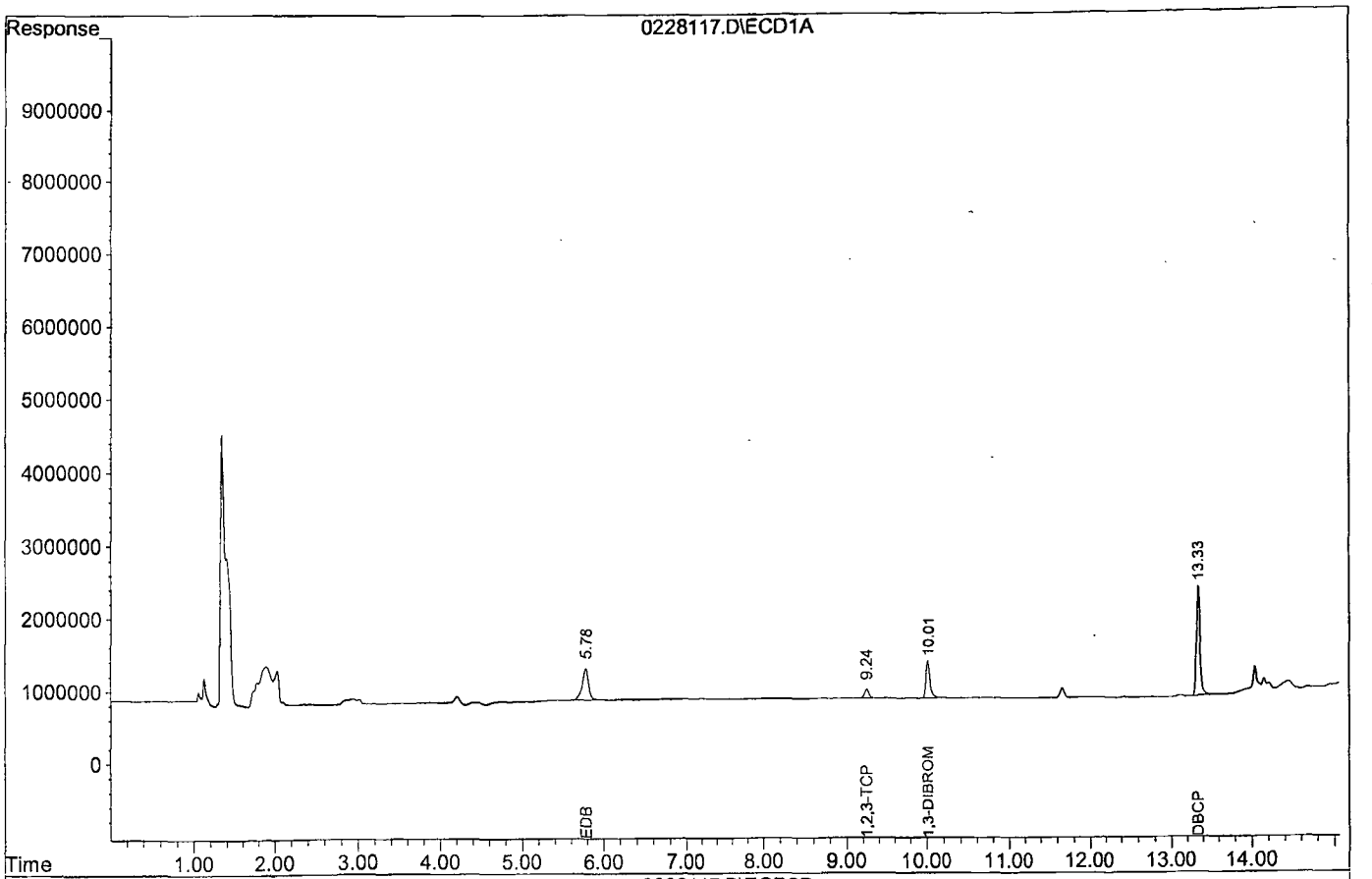
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.01	11.03	510498	1404518	0.260	0.249
Spiked Amount	0.349			Recovery	=	74.56%	71.41%
	Target Compounds						
1) TM	EDB	5.78	7.21	436020	1912195	0.250	0.246
2) TM	1,2,3-TCP	9.24	10.44	121298	344596	0.276	0.266
4) TM	DBCP	13.33	14.08	1506482	5474147	0.251	0.237
	Target Compounds						

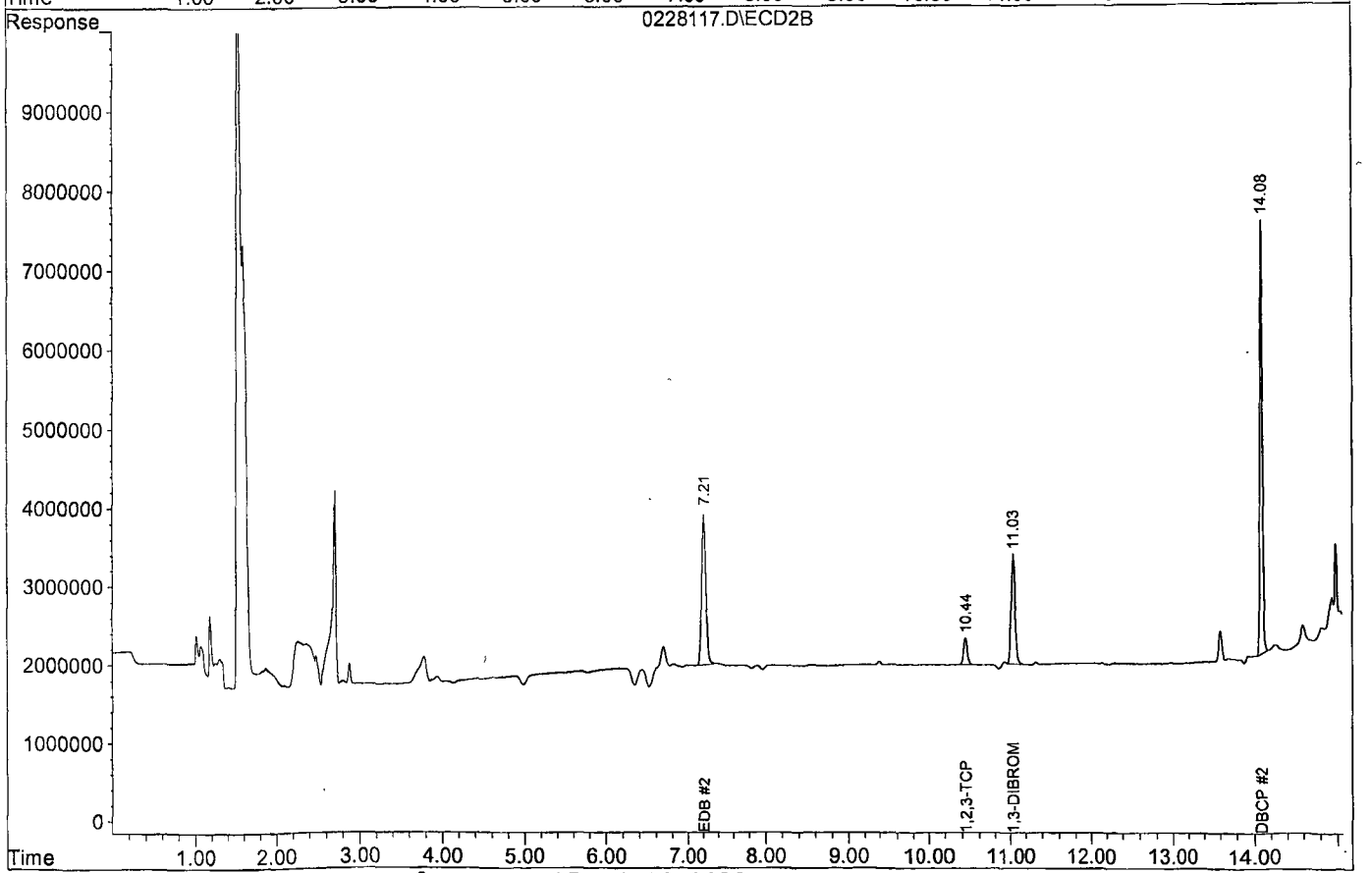
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : G:\HERBIE\DATA\200228\0228117.D
Acq On : 03-09-20 21:31:50
Sample : 200309A LCSD-1 2/35.13
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010310A.M

Vial: 17
Operator: MA,SS
Inst : Herbie
Multiplr: 1.00





Organic Extraction Worksheet

Method	EPA Method 8011 DBCP/EDB	Extraction Set	200309A	Extraction Method	MWE012	Units	mL

Spiked ID 1	504.1 Spike 2-4-20 5-8-20		Surrogate ID 1	504.1 Surrogate 1-8-20 5-8-20	
Spiked ID 2	504.1 SS Spike 8-7-19 4-16-20		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	03/09/20 9:40	
Spiked ID 8			Ext. End Time:	03/09/20 11:00	
			GC Requires Extract By:		

pH1			Water Bath Temp 1 °C	
pH2			Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: KY **Date** 03/09/20 **Witnessed By:** DL **Date** 03/09/20

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	200309A Blk				0.035	1 equip	35.02	2	7	03/09/20 9:40	
2	200309A LCS-1		0.250	1	NA	NA equip	35.12	2	7	03/09/20 9:40	
3	200309A LCSD-1		0.250	1	NA	NA equip	35.13	2	7	03/09/20 9:40	
4	BA07941	BA07941W05			0.035	1 equip	35.10	2	7	03/09/20 9:40	91585
5	BA07942	BA07942W06			0.035	1 equip	35.73	2	7	03/09/20 9:40	91585
6	BA07943	BA07943W06			0.035	1 equip	35.60	2	7	03/09/20 9:40	91585
7	BA07944	BA07944W05			0.035	1 equip	35.52	2	7	03/09/20 9:40	91585
8	BA07945	BA07945W05			0.035	1 equip	35.71	2	7	03/09/20 9:40	91585
9	BA07946	BA07946W05			0.035	1 equip	35.41	2	7	03/09/20 9:40	91585
10	BA07947	BA07947W07			0.035	1 equip	35.44	2	7	03/09/20 9:40	91585
11	BA08033	BA08033W05			0.035	1 equip	35.44	2	7	03/09/20 14:00	91607
12	BA08034	BA08034W05			0.035	1 equip	35.63	2	7	03/09/20 14:00	91607
13	M STD 1		0.020	1	NA	NA equip	35.56	2	7	03/09/20 9:40	
14	M STD 2		0.100	1	NA	NA equip	35.08	2	7	03/09/20 9:40	
15	M STD 3		0.250	1	NA	NA equip	35.07	2	7	03/09/20 9:40	
16	M STD 4		0.500	1	NA	NA equip	35.16	2	7	03/09/20 9:40	

Solvent and Lot#	
Scale Blance ID	WB1
pH strip	HC998032
NaCL	19A035211
GC2 Hexane (2mLs)	DV910

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	GA
Date	3/7/20
Time	12:00
Refrigerator	HOBART

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

Modified	03/09/20 2:18:12 PM

Reviewed By: KY **Date** 03/09/20

Organic Extraction Worksheet

Method	EPA Method 8011 DBCP/EDB	Extraction Set	200309A	Extraction Method	MWE012	Units	mL

Spiked ID 1	504.1 Spike 2-4-20 5-8-20		Surrogate ID 1	504.1 Surrogate 1-8-20 5-8-20	
Spiked ID 2	504.1 SS Spike 8-7-19 4-16-20		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	03/09/20 9:40	
Spiked ID 8			Ext. End Time:	03/09/20 11:00	
			GC Requires Extract By:		

pH1			Water Bath Temp 1 °C	
pH2			Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: KY **Date** 03/09/20 **Witnessed By:** DL **Date** 03/09/20

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
17	M STD 5		0.750	1	NA	NA	35.52	2	7	03/09/20 9:40	
						equip					
18	M STD 6		1	1	NA	NA	35.19	2	7	03/09/20 9:40	
						equip					
19	SS		0.100	2	0.035	1	35.42	2	7	03/09/20 9:40	
						equip					

Solvent and Lot#	
Scale Blance ID	WB1
pH strip	HC998032
NaCL	19A035211
GC2 Hexane (2mLs)	DV910

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

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

Modified	03/09/20 2:18:12 PM

Reviewed By: KY **Date** 03/09/20

Name of Final Standard 504/8011 Spike **Prep'd By (Initials)** GA

Prep Date 02/04/20

Exp Date 05/08/20

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
504/8011 Stock	APPL	504/8011 Stock	0.35 ug/mL	01/08/20	05/08/20	2.5 mL	25 mL	Methanol #208858	0.035 ug/mL

Name of Final Standard 504/8011 SS SPK **Prep'd By (Initials)** GA

Prep Date 08/07/19

Exp Date 04/16/20

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
504/8011 SS Stock	APPL	504/8011 SS Stock	0.35 ug/mL	01/22/19	01/06/20	1 mL	10 mL	Methanol #042317C	0.035 ug/mL

Re-certified on 01/16/20 against 504/8011 Spike (prep. 01.08.20). Extended expiration by 3 months. Injection #1126237 on Herbie 191126 sequence. GA

Name of Final Standard 504/8011 Surrogate **Prep'd By (Initials)** GA

Prep Date 01/08/20

Exp Date 05/08/20

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
1,3 DBP Stock	APPL	1,3 DBP Stock	100 ug/mL	01/07/20	01/07/21	35 uL	10 mL	Methanol #208858	0.35ug/ml

Injection Log

Directory: G:\HERBIE\DATA\200228\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	8	0228108.D	1	8011 1 3/9/20	water	03-09-20 18:28:49
2	9	0228109.D	1	8011 2 3/9/20	water	03-09-20 18:49:17
3	10	0228110.D	1	8011 3 3/9/20	water	03-09-20 19:09:45
4	11	0228111.D	1	8011 4 3/9/20	water	03-09-20 19:30:04
5	12	0228112.D	1	8011 5 3/9/20	water	03-09-20 19:50:22
6	13	0228113.D	1	8011 6 3/9/20	water	03-09-20 20:10:46
7	14	0228114.D	1	8011 SS 3/9/20	water	03-09-20 20:31:04
8	15	0228115.D	0.99943	200309A BLK 2/35.02	water	03-09-20 20:51:19
9	16	0228116.D	0.99658	200309A LCS-1 2/35.12	water	03-09-20 21:11:40
10	17	0228117.D	0.9963	200309A LCSD-1 2/35.13	water	03-09-20 21:31:50
18	25	0228125.D	0.98758	BA08033W01 2/35.00	water	03-10-20 0:13:08
19	26	0228126.D	0.98232	BA08034W01 2/35.00	water	03-10-20 0:33:14
20	28	0228128.D	1	8011 3 3/9/20	water	03-10-20 1:13:30

ORGANICS
Calibration Data

TPH Extractables
DOC0310

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 03/10/20
Matrix: Water Instrument: Apollo
Initials: SS/M

			310003.D	310004.D	310005.D	310006.D	310007.D	310008.D									
		Compound	1	2	3	4	5	6					Avg	%RSD	Type	r^2	Q
1	HATM	Diesel (C10-C24)	1402793	2048774	1956346	1950680	1978298	2168778					1917612	14	HATM		
2	HBTM	Motor Oil (C24-C40)	1787356	1629558	1383257	1334462	1324161	1387579					1474395	13	HBTM		
3	SA	Ortho-Terphenyl(S)	2782070	2786055	2347676	2294556	2308475	2544283					2510519	9.2	SA		
4	SA	Octacosane(S)	1771075	1912436	1683790	1654254	1670744	1785274					1746262	5.6	SA		
5																	
6																	
7																	
8																	
9																	
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1.184705

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310003.D Vial: 3
Acq On : 3-10-20 9:37:22 Operator: SS
Sample : Diesel Motor Oil-1 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 10 11:58 2020 Quant Results File: DOC0310.RES

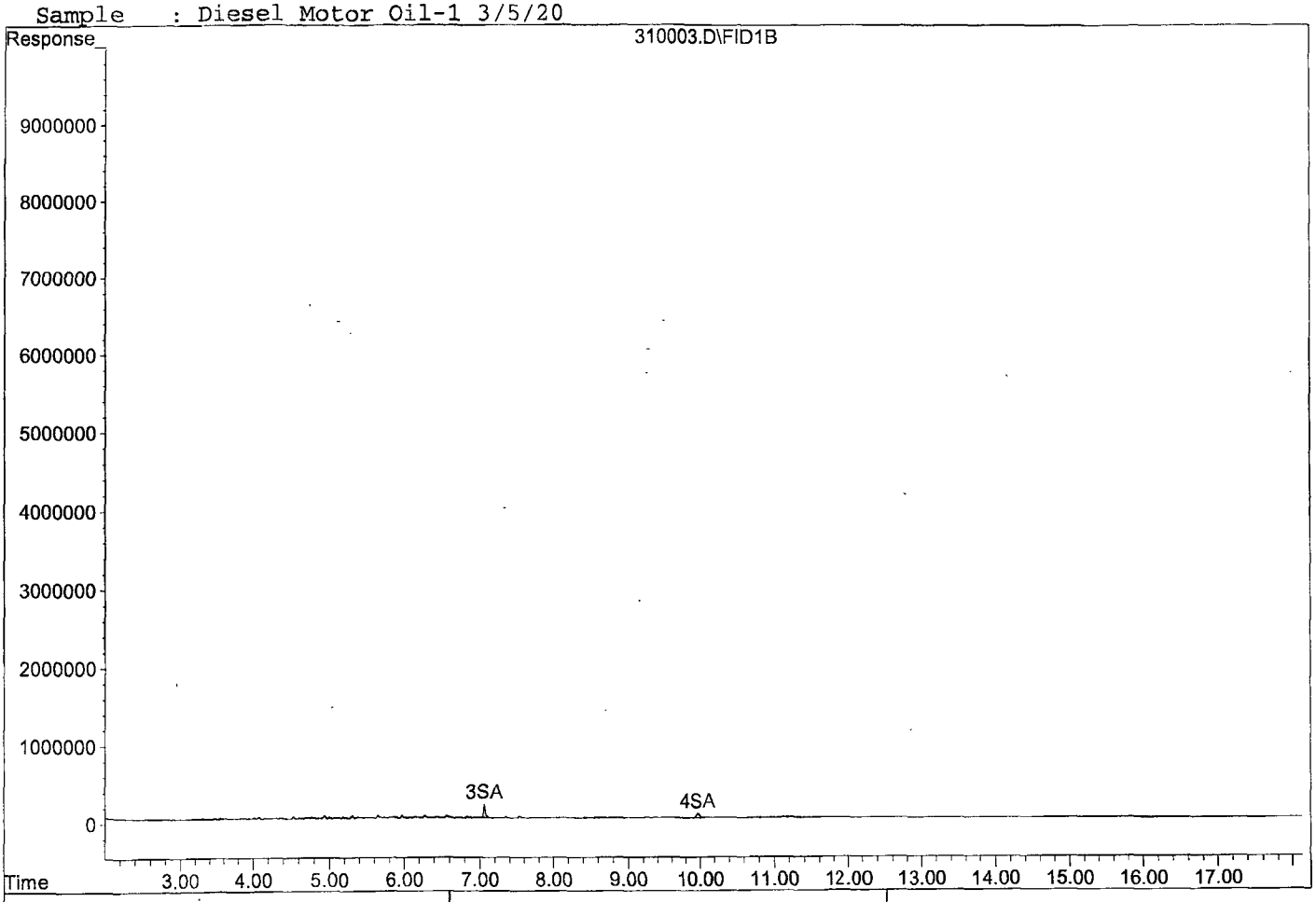
Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

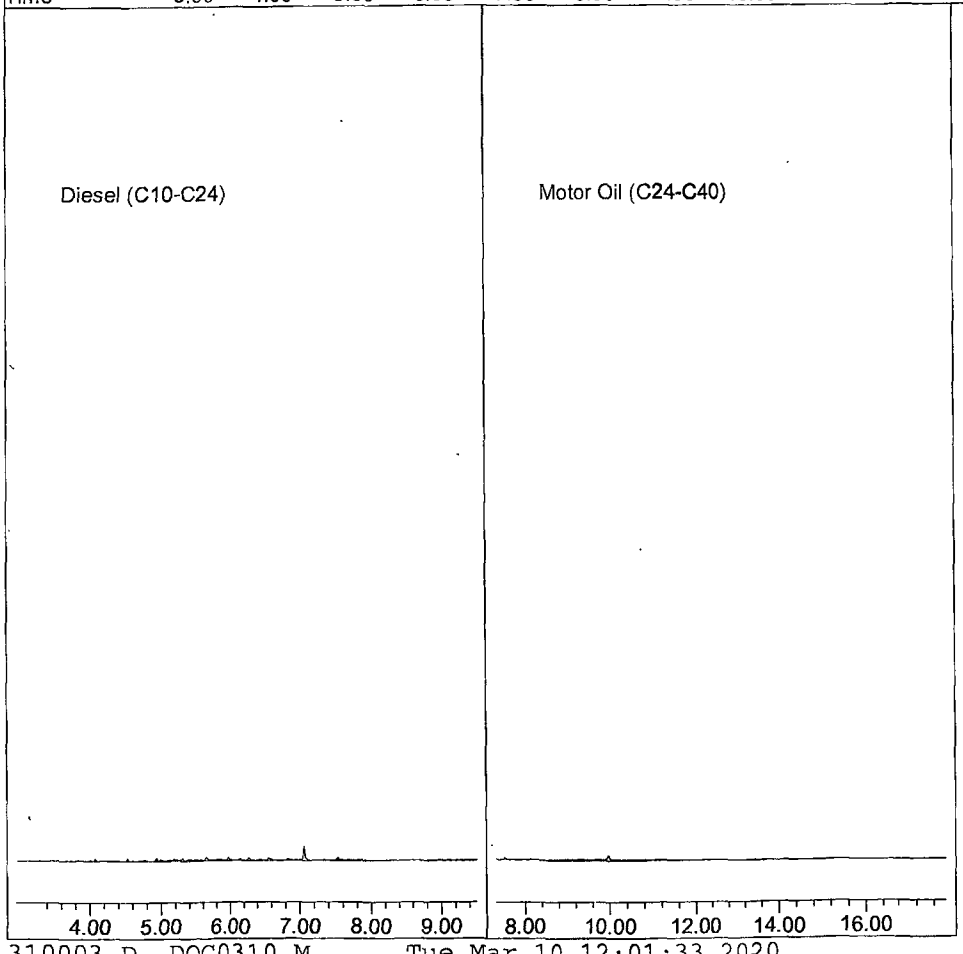
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.06	2782070	0.554 ppb
Surrogate Spike 30.000	Recovery =		1.85%
4) SA Octacosane(S)	9.97	1771075	0.507 ppb
Surrogate Spike 30.000	Recovery =		1.69%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	28055866	7.315 ppb
2) HBTM Motor Oil (C24-C40)	12.60	35747115	12.123 ppb
Target Compounds			

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

Data File: G:\APOLLO\DATA\200310\310003.D
Sample : Diesel Motor Oil-1 3/5/20





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310004.D Vial: 4
Acq On : 3-10-20 9:59:49 Operator: SS
Sample : Diesel Motor Oil-2 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 10 11:58 2020 Quant Results File: DOC0310.RES

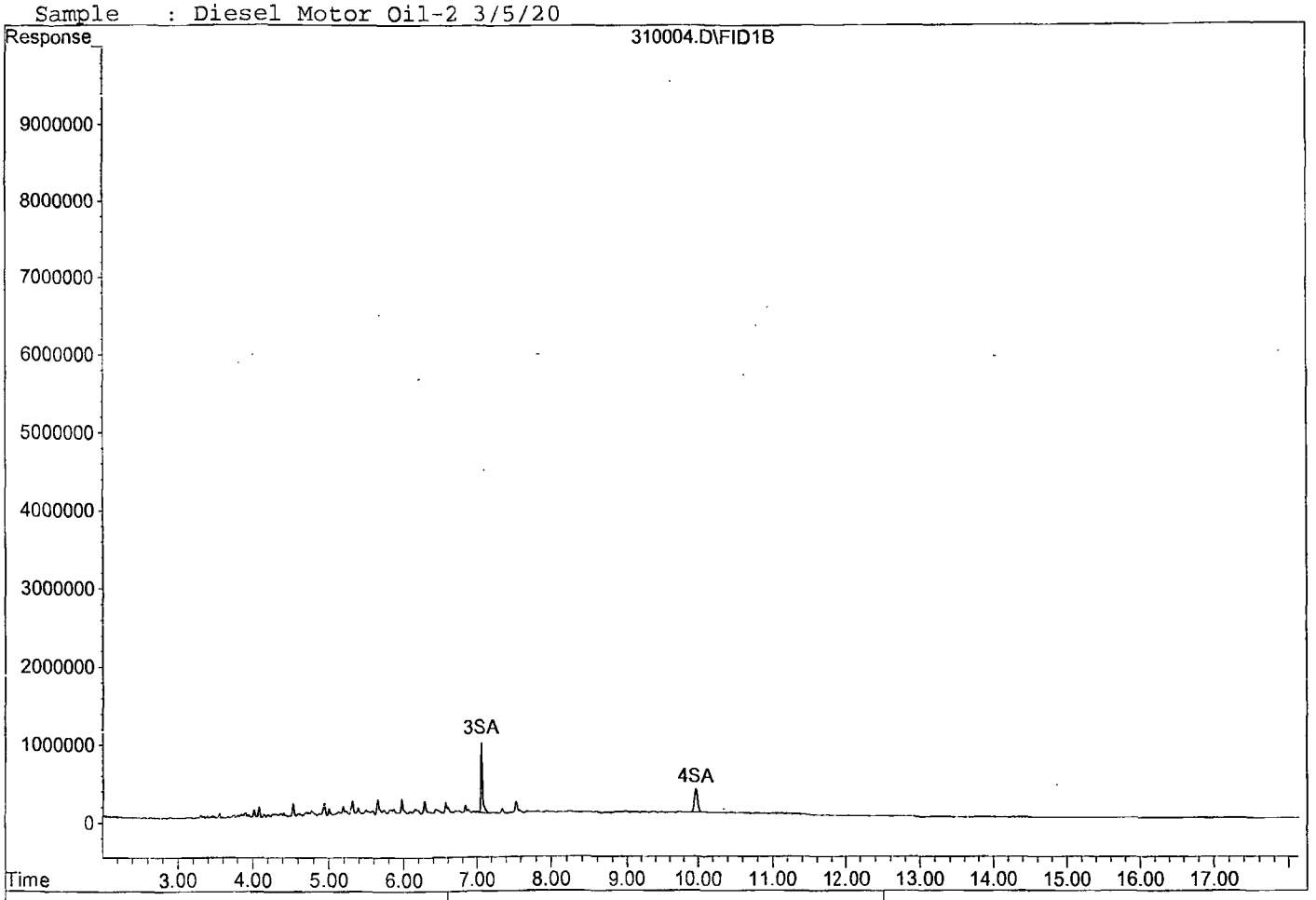
Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

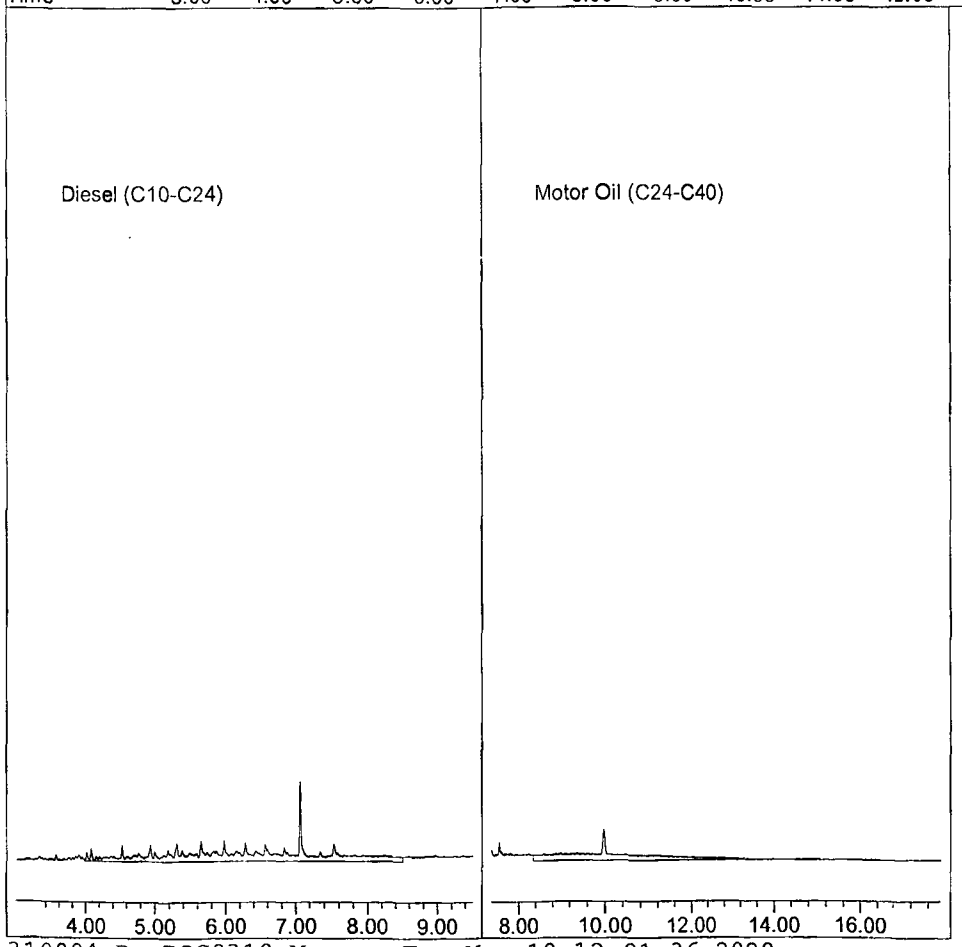
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.06	13930276	2.774 ppb
Surrogate Spike 30.000	Recovery =		9.25%
4) SA Octacosane(S)	9.97	9562178	2.738 ppb
Surrogate Spike 30.000	Recovery =		9.13%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	204877430	53.420 ppb
2) HBTM Motor Oil (C24-C40)	12.60	162955782	55.262 ppb
Target Compounds			

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

Data File: G:\APOLLO\DATA\200310\310004.D
Sample : Diesel Motor Oil-2 3/5/20





310004.D DOC0310.M Tue Mar 10 12:01:36 2020

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310005.D Vial: 5
Acq On : 3-10-20 10:22:19 Operator: SS
Sample : Diesel Motor Oil-3 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 10 11:58 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

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

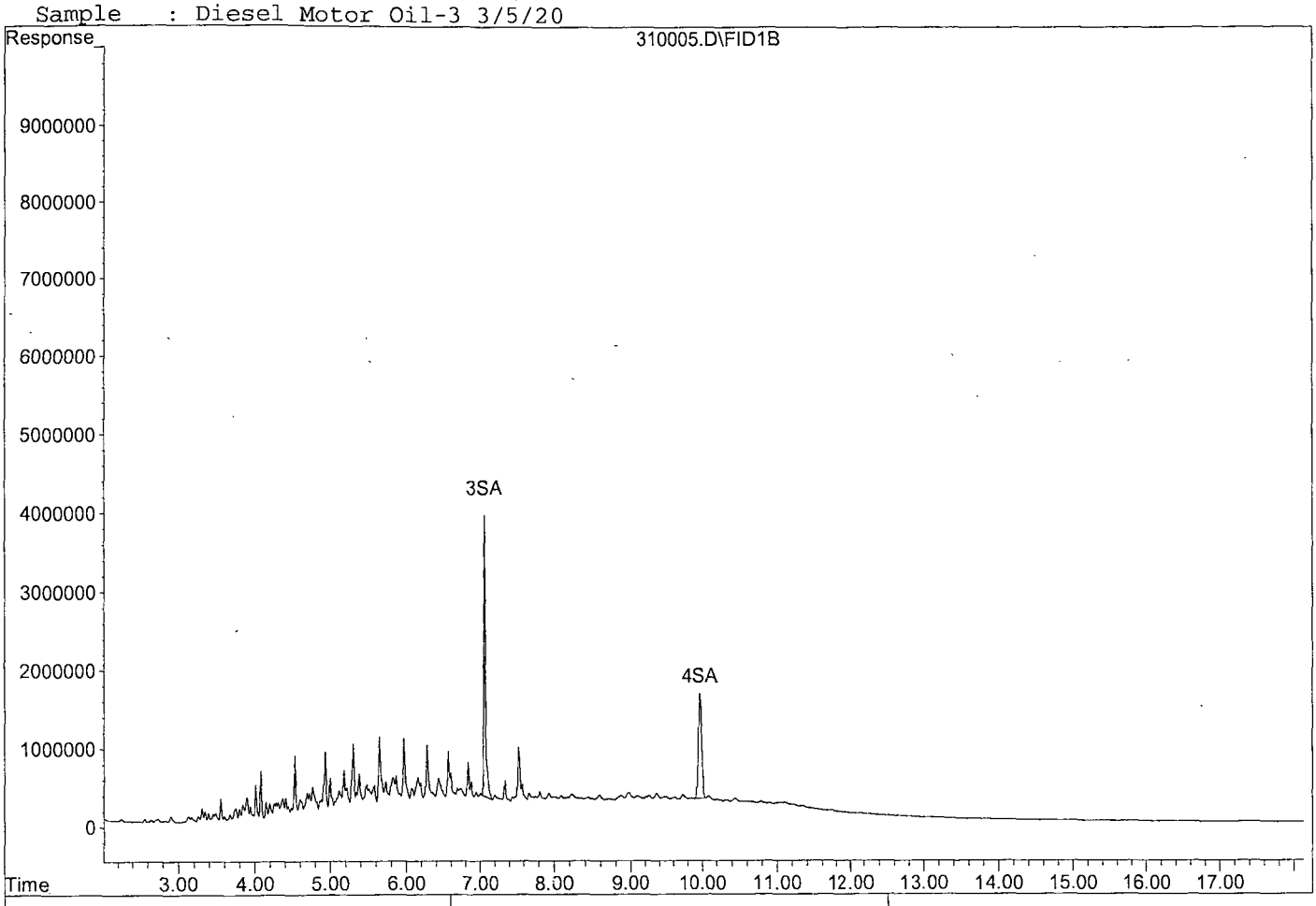
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.06	58691912	11.689 ppb
Surrogate Spike 30.000	Recovery =		38.96%
4) SA Octacosane(S)	9.97	42094760	12.053 ppb
Surrogate Spike 30.000	Recovery =		40.18%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	978173133	255.050 ppb
2) HBTM Motor Oil (C24-C40)	12.60	691628331	234.546 ppb

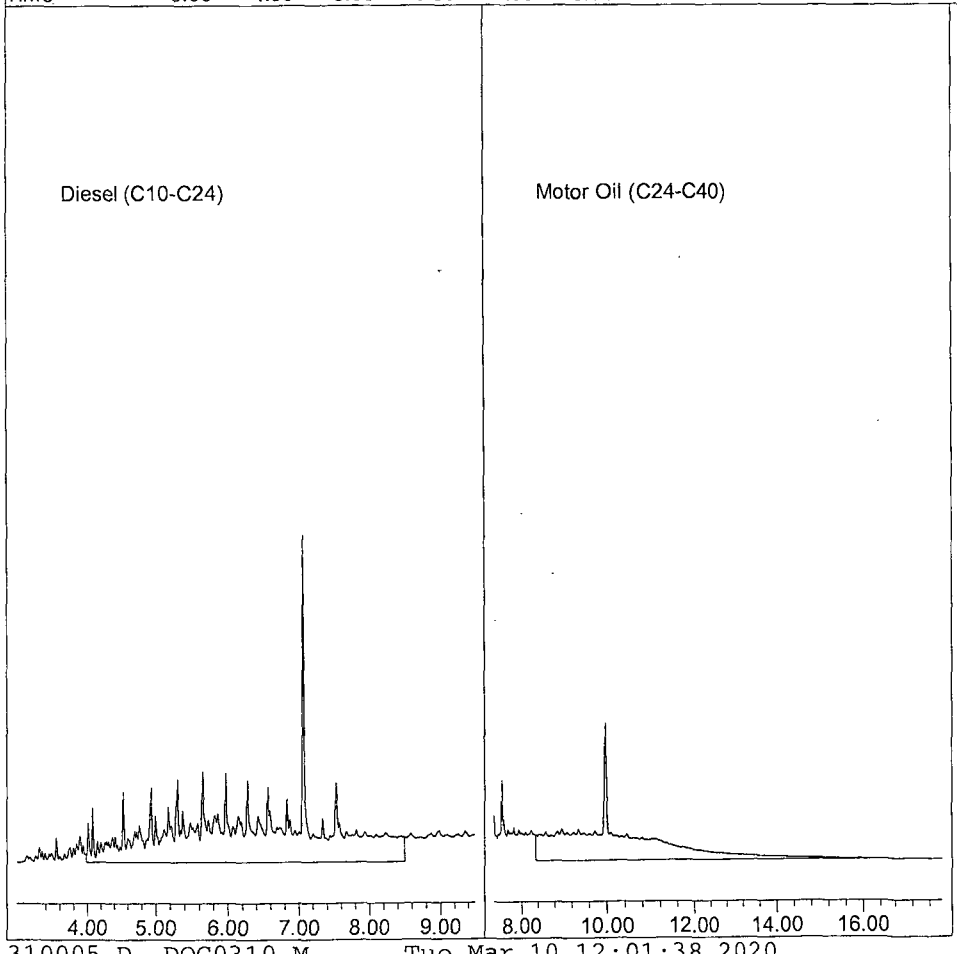
Target Compounds

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

Quantitation Report

Data File: G:\APOLLO\DATA\200310\310005.D
Sample : Diesel Motor Oil-3 3/5/20





310005.D DOC0310.M Tue Mar 10 12:01:38 2020

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310006.D Vial: 6
Acq On : 3-10-20 10:44:50 Operator: SS
Sample : Diesel Motor Oil-4 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 10 11:58 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

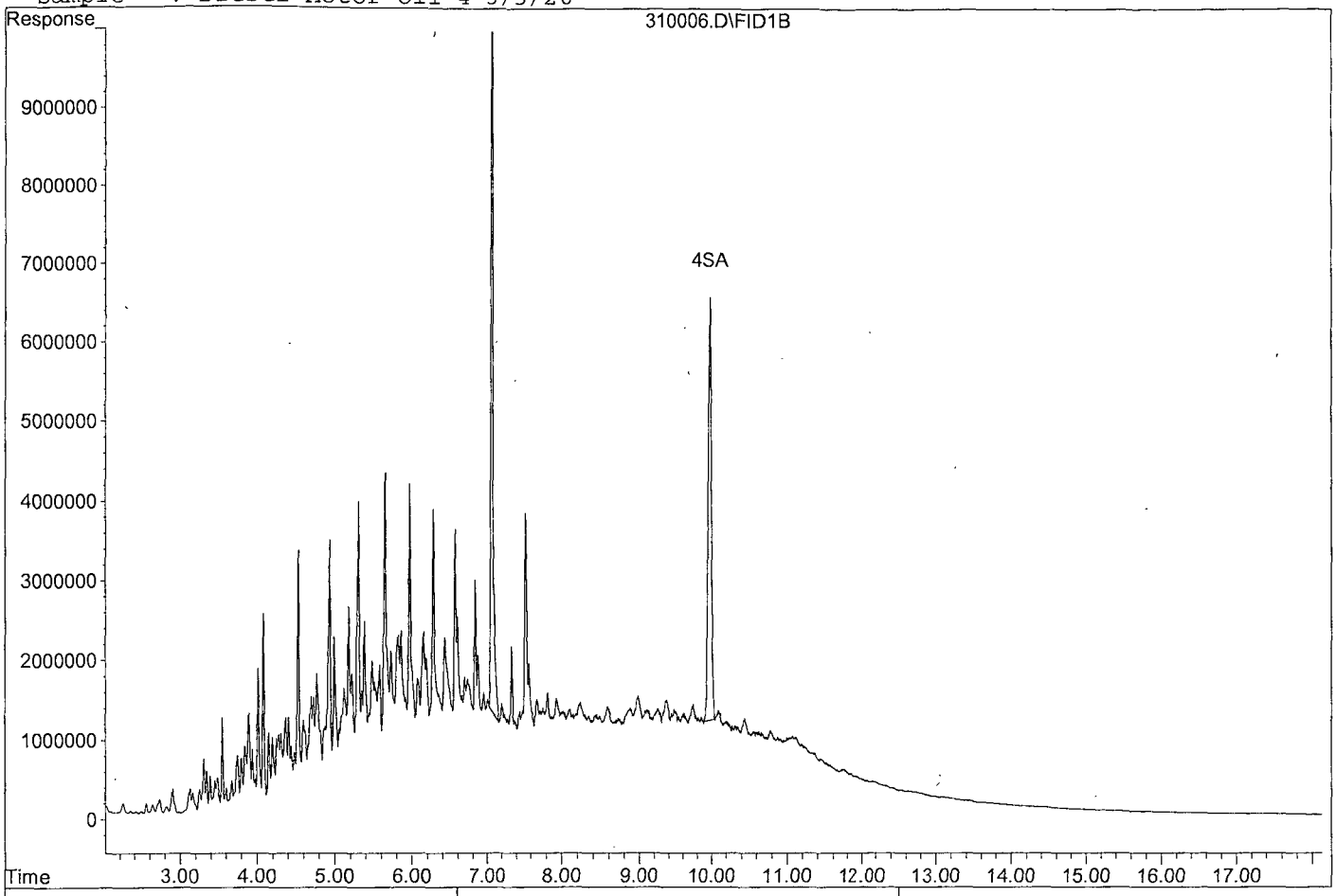
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

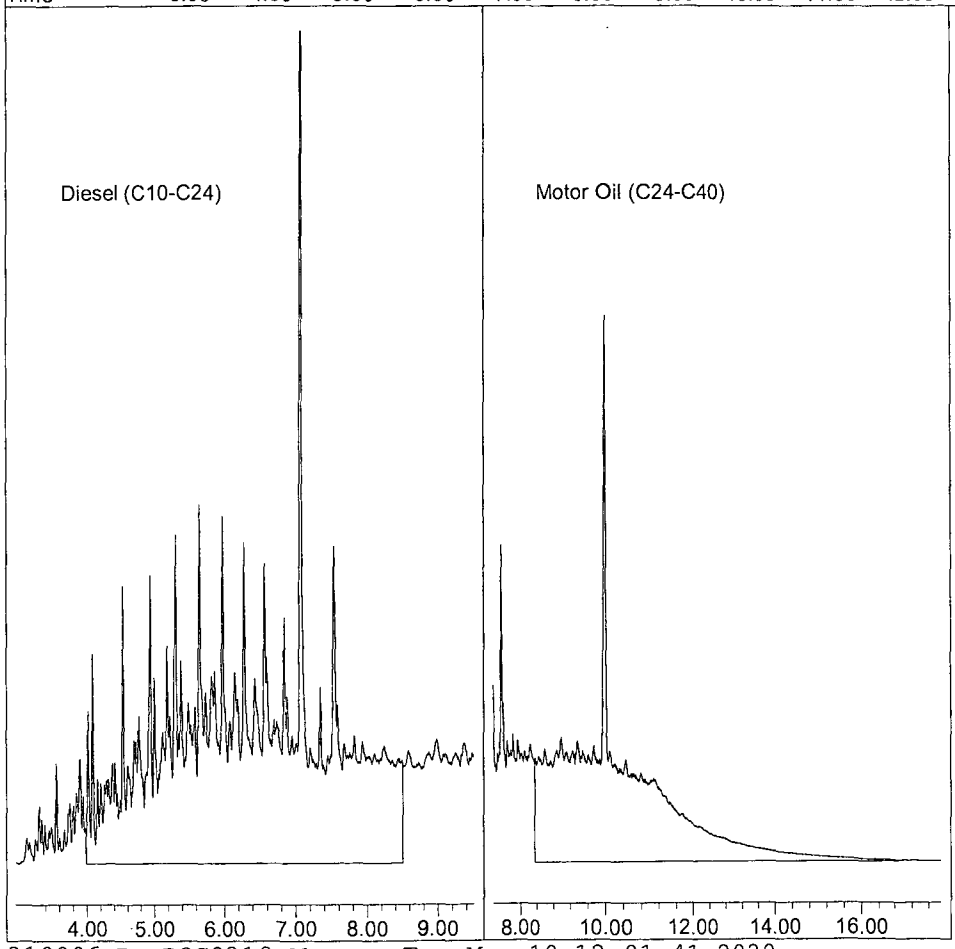
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.07	229455620	45.699	ppb
Surrogate Spike 30.000		Recovery =	152.33%	
4) SA Octacosane(S)	9.98	165425400	47.366	ppb
Surrogate Spike 30.000		Recovery =	157.89%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.24	3901360613	1017.245	ppb
2) HBTM Motor Oil (C24-C40)	12.60	2668923786	905.091	ppb

Target Compounds

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

Data File: G:\APOLLO\DATA\200310\310006.D
Sample : Diesel Motor Oil-4 3/5/20





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310007.D Vial: 7
Acq On : 3-10-20 11:07:20 Operator: SS
Sample : Diesel Motor Oil-5 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 10 11:58 2020 Quant Results File: DOC0310.RES

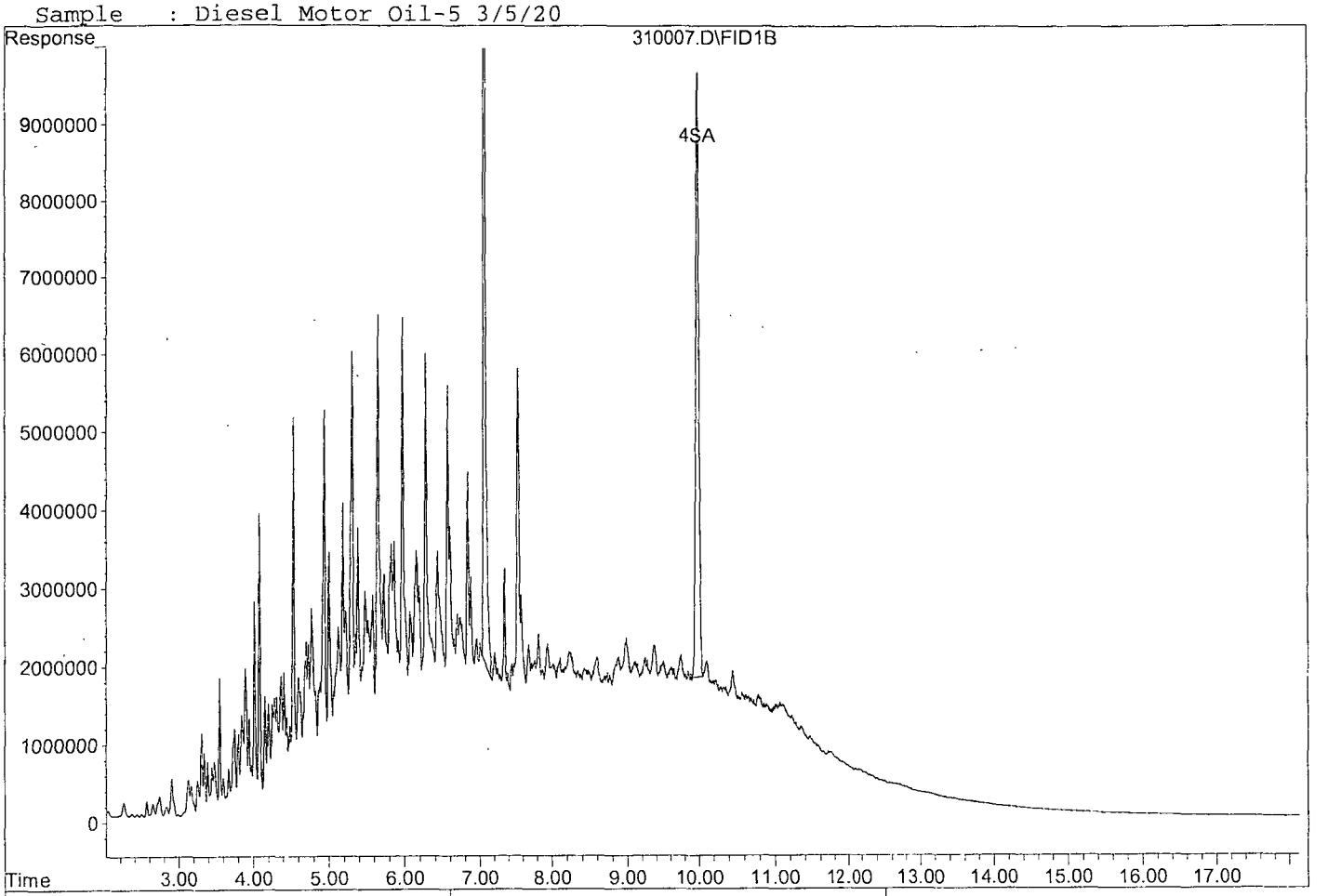
Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

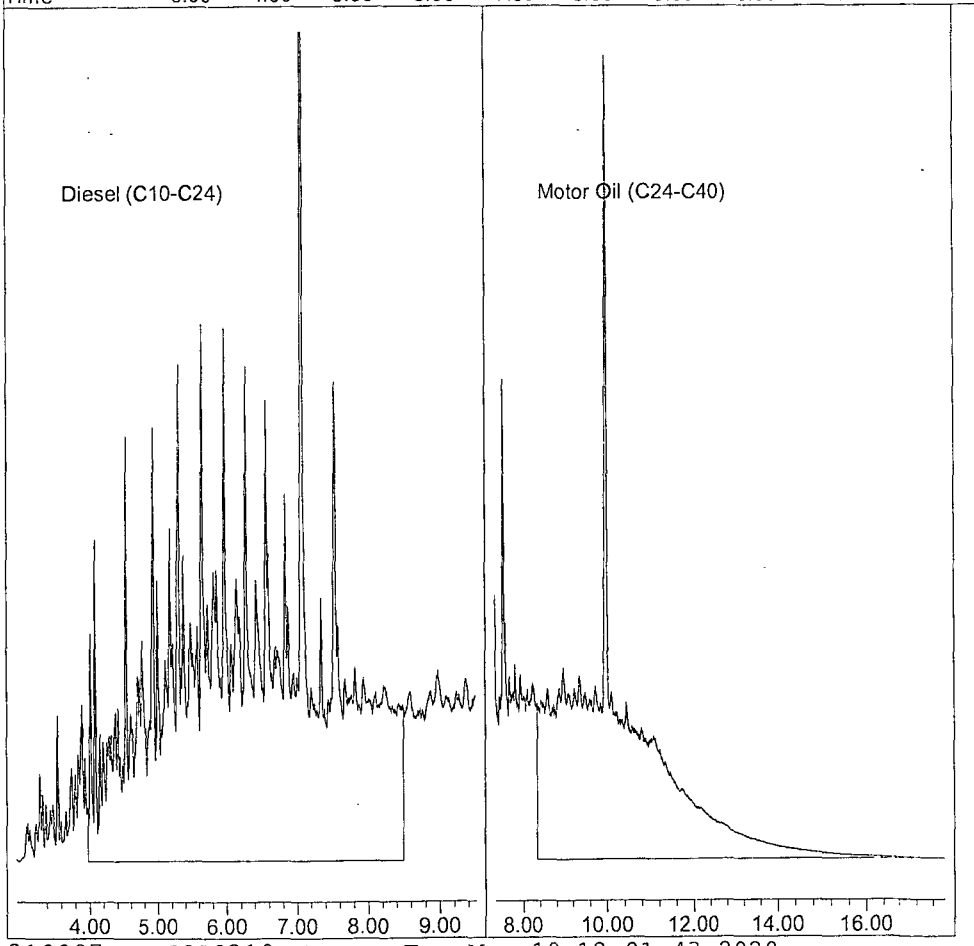
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.07	346271320	68.964 ppb
Surrogate Spike 30.000		Recovery =	229.88%
4) SA Octacosane(S)	9.98	250611670	71.757 ppb
Surrogate Spike 30.000		Recovery =	239.19%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	5934893648	1547.470 ppb
2) HBTM Motor Oil (C24-C40)	12.60	3972483300	1347.157 ppb
Target Compounds			

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

Data File: G:\APOLLO\DATA\200310\310007.D
Sample : Diesel Motor Oil-5 3/5/20





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310008.D Vial: 8
Acq On : 3-10-20 11:29:51 Operator: SS
Sample : Diesel Motor Oil-6 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 10 11:58 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

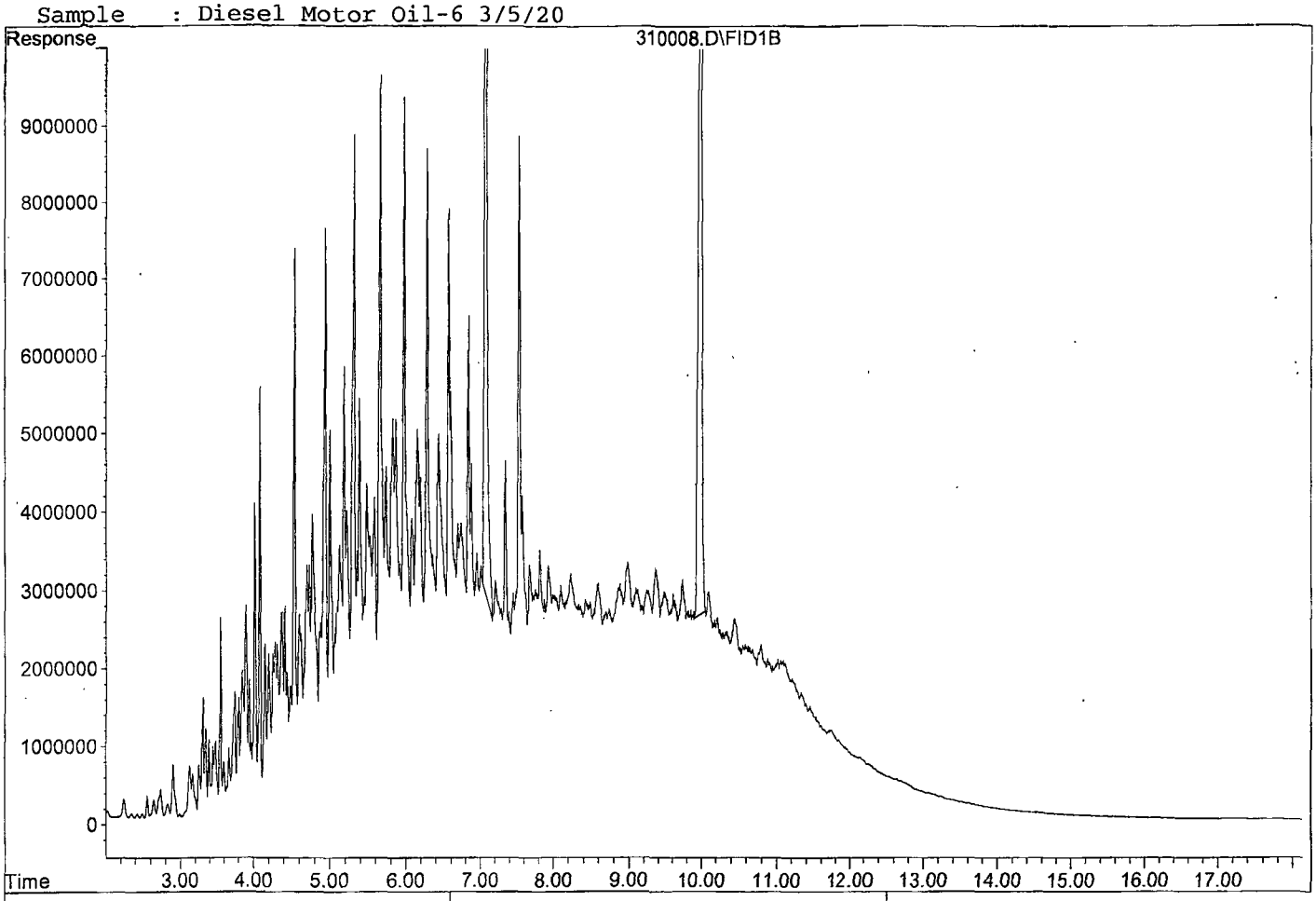
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

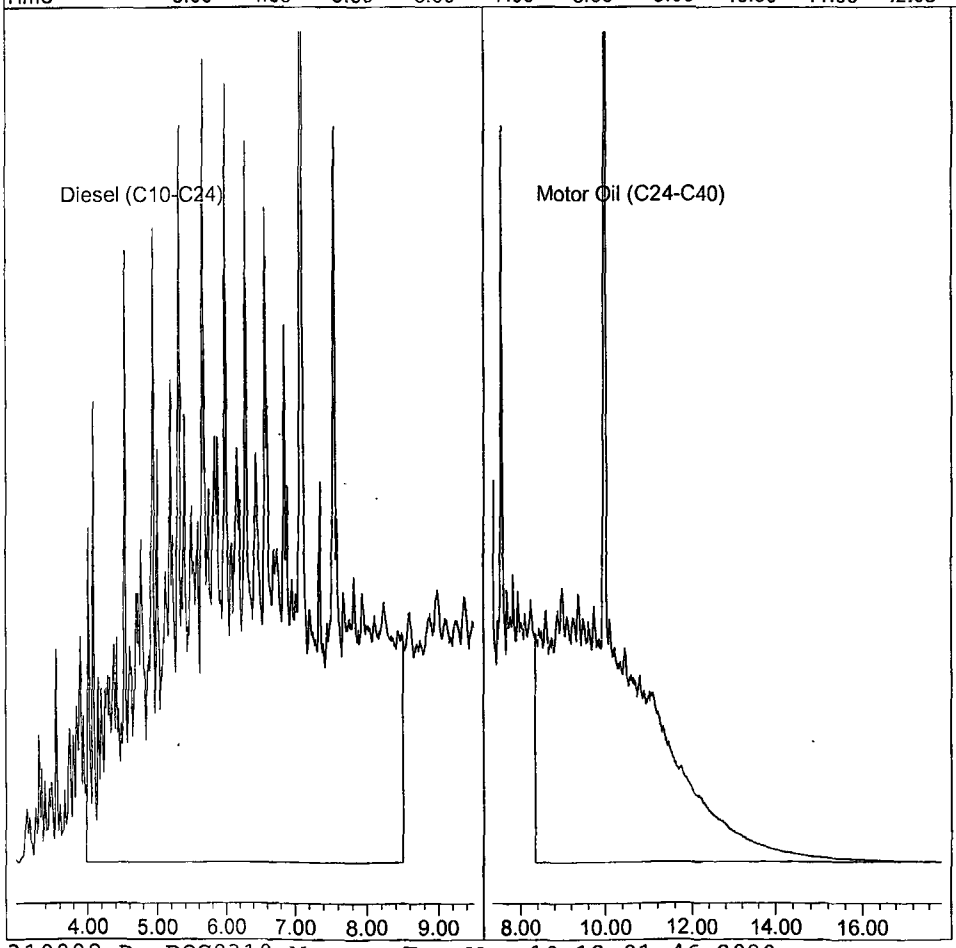
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.07	508856564	101.345	ppb
Surrogate Spike 30.000		Recovery =	337.82%	
4) SA Octacosane(S)	9.99	357054728	102.234	ppb
Surrogate Spike 30.000		Recovery =	340.78%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.24	8675111292	2261.957	ppb
2) HBTM Motor Oil (C24-C40)	12.60	5550316563	1882.235	ppb

Target Compounds

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

Data File: G:\APOLLO\DATA\200310\310008.D
Sample : Diesel Motor Oil-6 3/5/20





TPH Extractables
DOC0310

Form 7

Second Source Calibration

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

SDG No:
Date Analyzed: 03/10/20
Instrument: Apollo
Initial Cal. Date: 03/10/20
Data File: 310009.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1917610	2127840	11	HATM	
2	HBTM	Motor Oil (C24-C40)	1474400	1535490	4.1	HBTM	
3							
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39							
40							
		Average			7.6		

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310009.D Vial: 9
Acq On : 3-10-20 11:52:24 Operator: SS
Sample : Diesel Motor Oil-SS 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 10 12:11 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

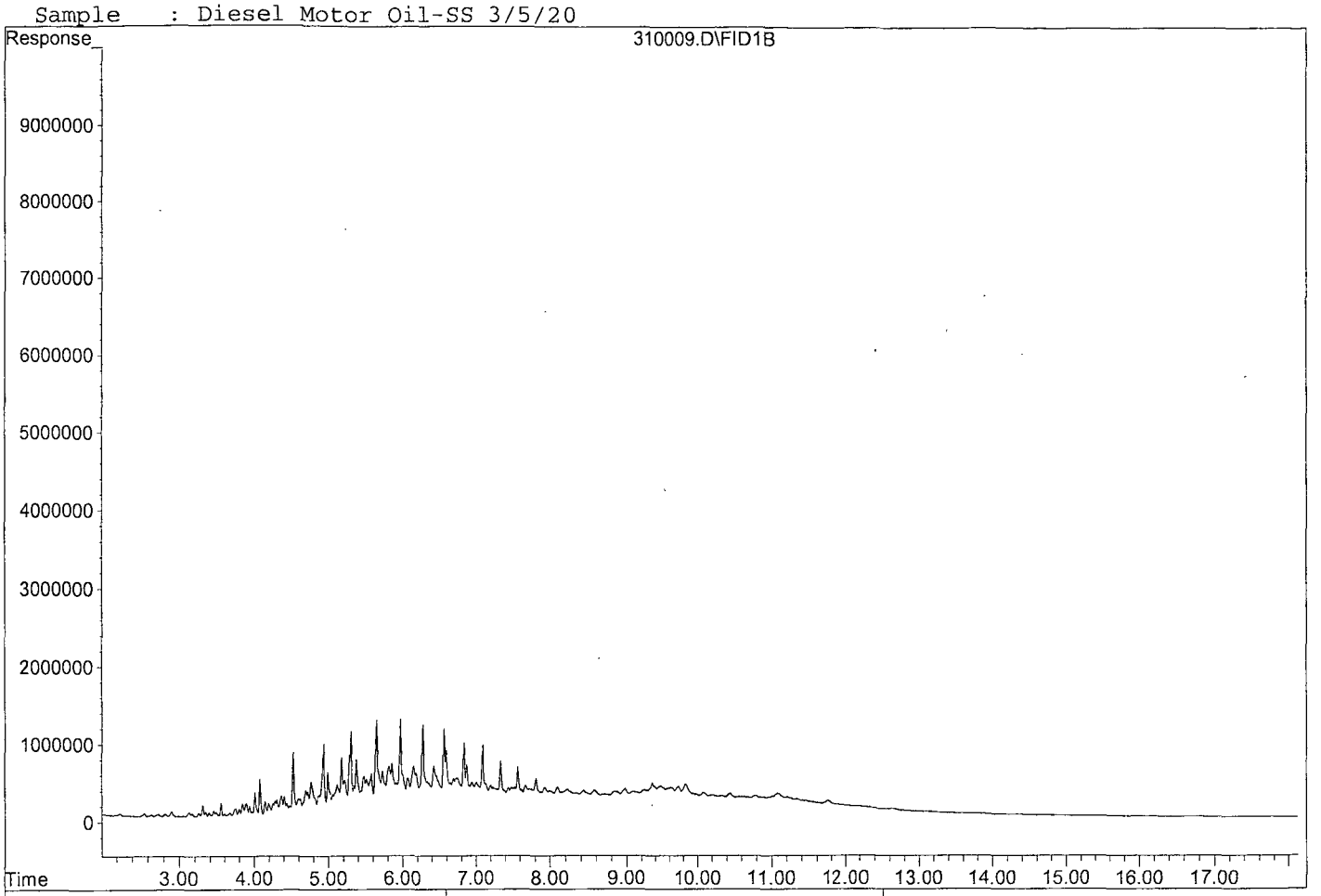
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

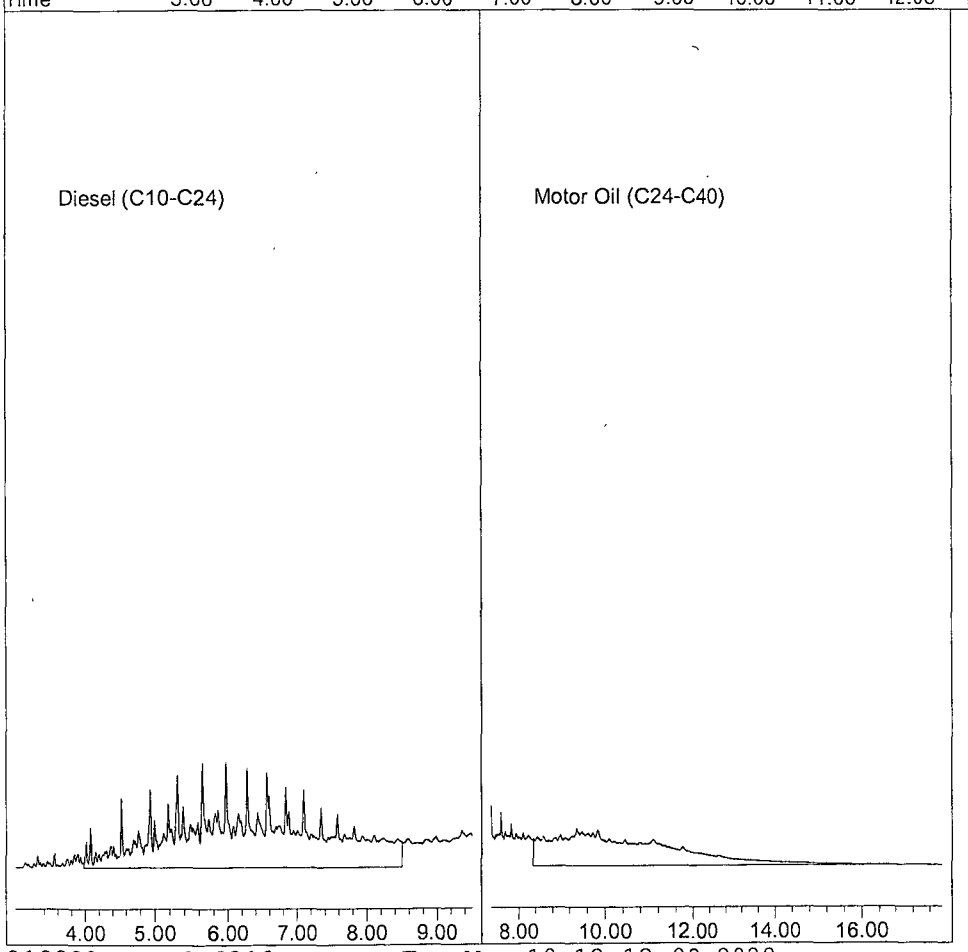
Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
3) SA Ortho-Terphenyl(S)	0.00	0	N.D.	ppb	d
Surrogate Spike 30.000	Recovery	=	0.00%		
4) SA Octacosane(S)	0.00	0	N.D.	ppb	d
Surrogate Spike 30.000	Recovery	=	0.00%		
Target Compounds					
1) HATM Diesel (C10-C24)	6.24	1063920828	277.408	ppb	
2) HBTM Motor Oil (C24-C40)	12.60	767745055	260.359	ppb	

Target Compounds

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

Data File: G:\APOLLO\DATA\200310\310009.D
Sample : Diesel Motor Oil-SS 3/5/20





TPH Extractables
DOC0310

Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 03/12/20
Instrument: Apollo
Initial Cal. Date: 03/10/20
Data File: 310100.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1917610	2046800	6.7	HATM	
2	HBTM	Motor Oil (C24-C40)	1474400	1483920	0.65	HBTM	
3	SA	Ortho-Terphenyl(S)	2510520	2441550	2.7	SA	
4	SA	Octacosane(S)	1746260	1841860	5.5	SA	
5							
6							
7							
8							
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29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			3.9		

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310100.D Vial: 100
Acq On : 3-12-20 8:59:11 Operator: SS
Sample : Diesel Motor Oil-CCV 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 12 9:46 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

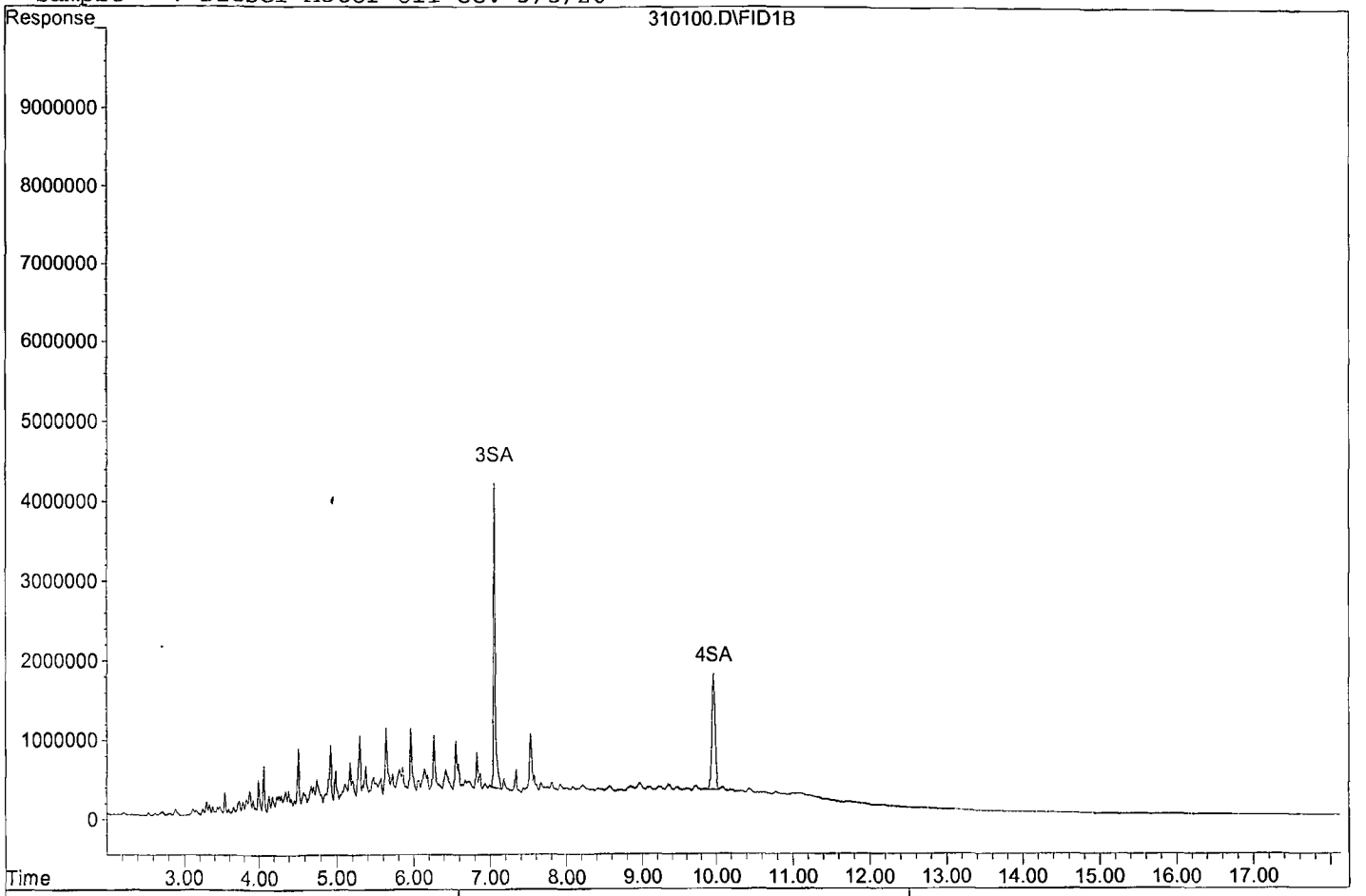
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

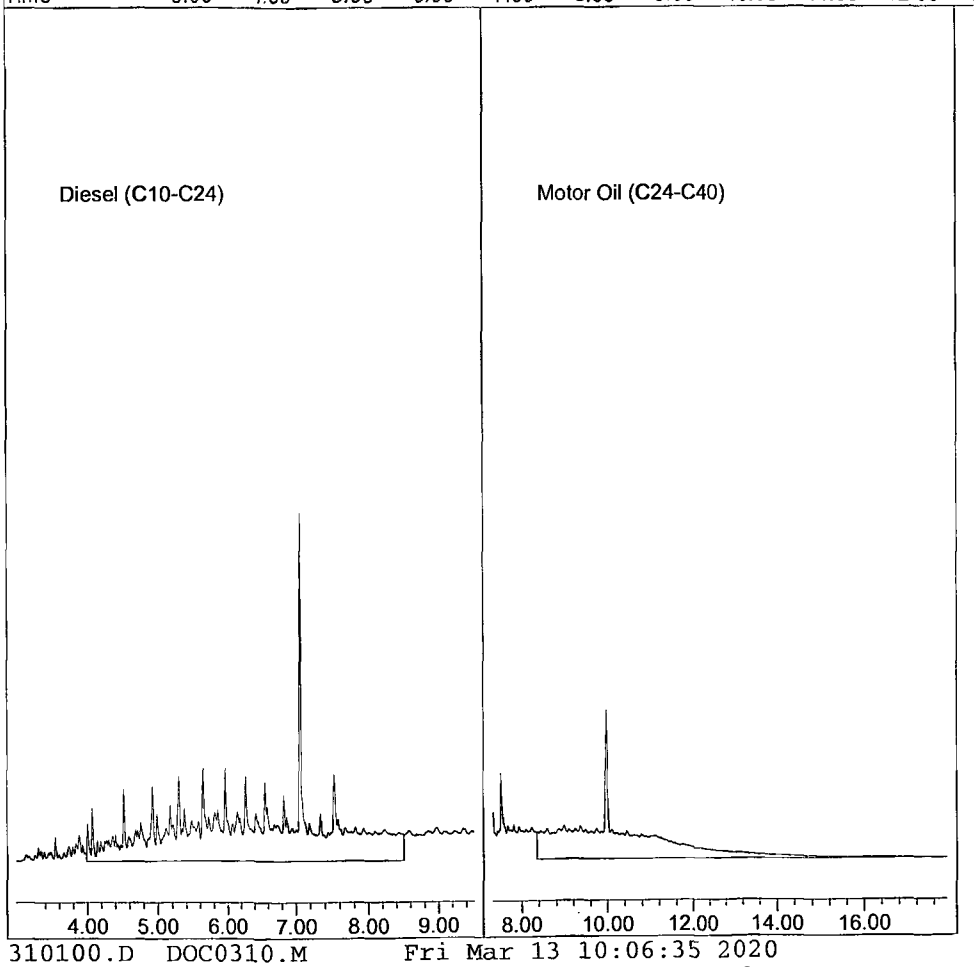
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.06	61038704	12.157 ppb
Surrogate Spike 30.000		Recovery =	40.52%
4) SA Octacosane(S)	9.97	46046521	13.184 ppb
Surrogate Spike 30.000		Recovery =	43.95%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	1023400976	266.843 ppb
2) HBTM Motor Oil (C24-C40)	12.60	741960585	251.615 ppb

Target Compounds

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

Data File: G:\APOLLO\DATA\200310\310100.D
Sample : Diesel Motor Oil-CCV 3/5/20





310100.D DOC0310.M Fri Mar 13 10:06:35 2020

TPH Extractables
DOC0310

Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 03/12/20
Instrument: Apollo
Initial Cal. Date: 03/10/20
Data File: 310105.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1917610	2191380	14	HATM	
2	HBTM	Motor Oil (C24-C40)	1474400	1536570	4.2	HBTM	
3	SA	Ortho-Terphenyl(S)	2510520	2567180	2.3	SA	
4	SA	Octacosane(S)	1746260	1945560	11	SA	
5							
6							
7							
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33							
34							
35							
36							
37							
38							
39							
40							
		Average			7.9		

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310105.D Vial: 5
Acq On : 3-12-20 10:51:39 Operator: SS
Sample : Diesel Motor Oil-CCV 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 12 11:12 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

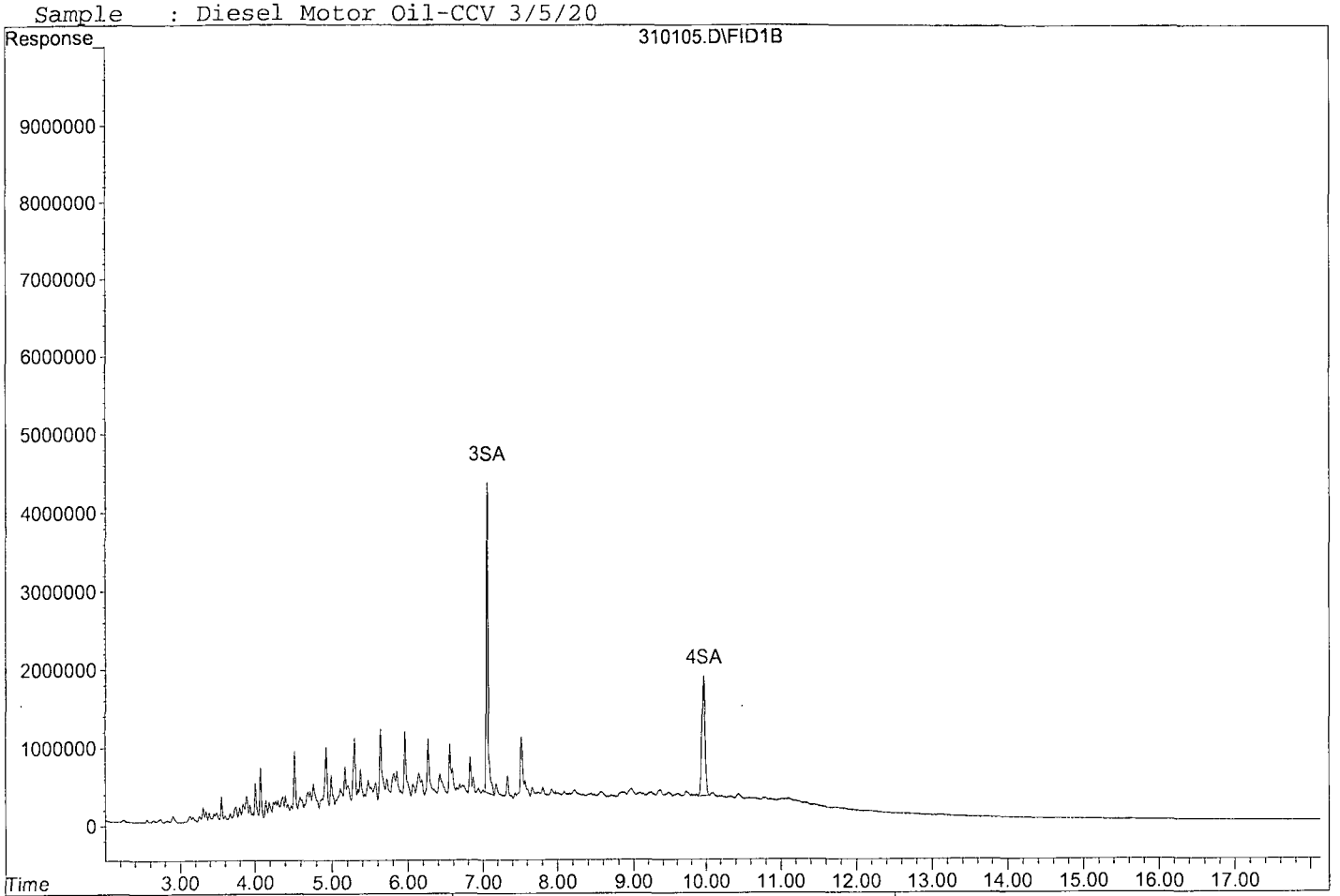
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

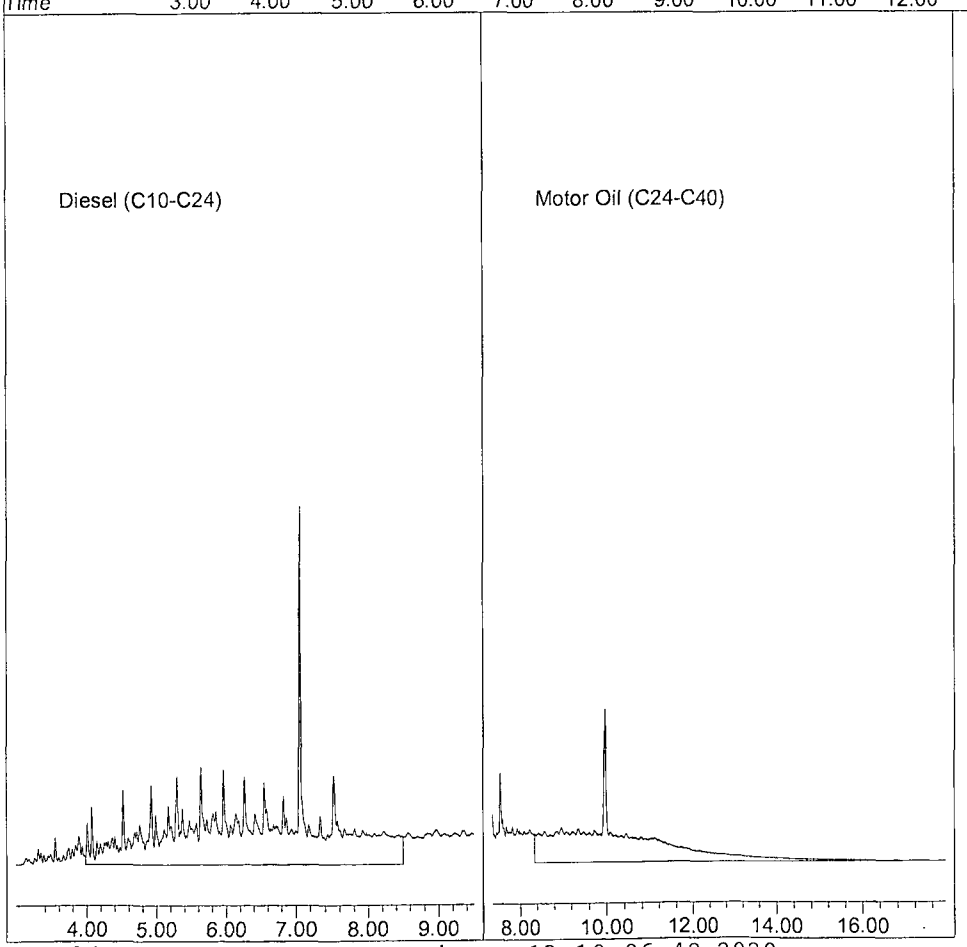
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.06	64179424	12.782 ppb
Surrogate Spike 30.000	Recovery =		42.61%
4) SA Octacosane(S)	9.97	48639052	13.927 ppb
Surrogate Spike 30.000	Recovery =		46.42%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	1095688538	285.691 ppb
2) HBTM Motor Oil (C24-C40)	12.60	768282671	260.542 ppb

Target Compounds

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

Data File: G:\APOLLO\DATA\200310\310105.D
Sample : Diesel Motor Oil-CCV 3/5/20





310105.D DOC0310.M Fri Mar 13 10:06:48 2020

ORGANICS
Raw Data

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310104.D Vial: 4
Acq On : 3-12-20 10:29:05 Operator: SS
Sample : BA08034W21 2/800 Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Mar 13 10:05 2020 Quant Results File: DOC0310.RES

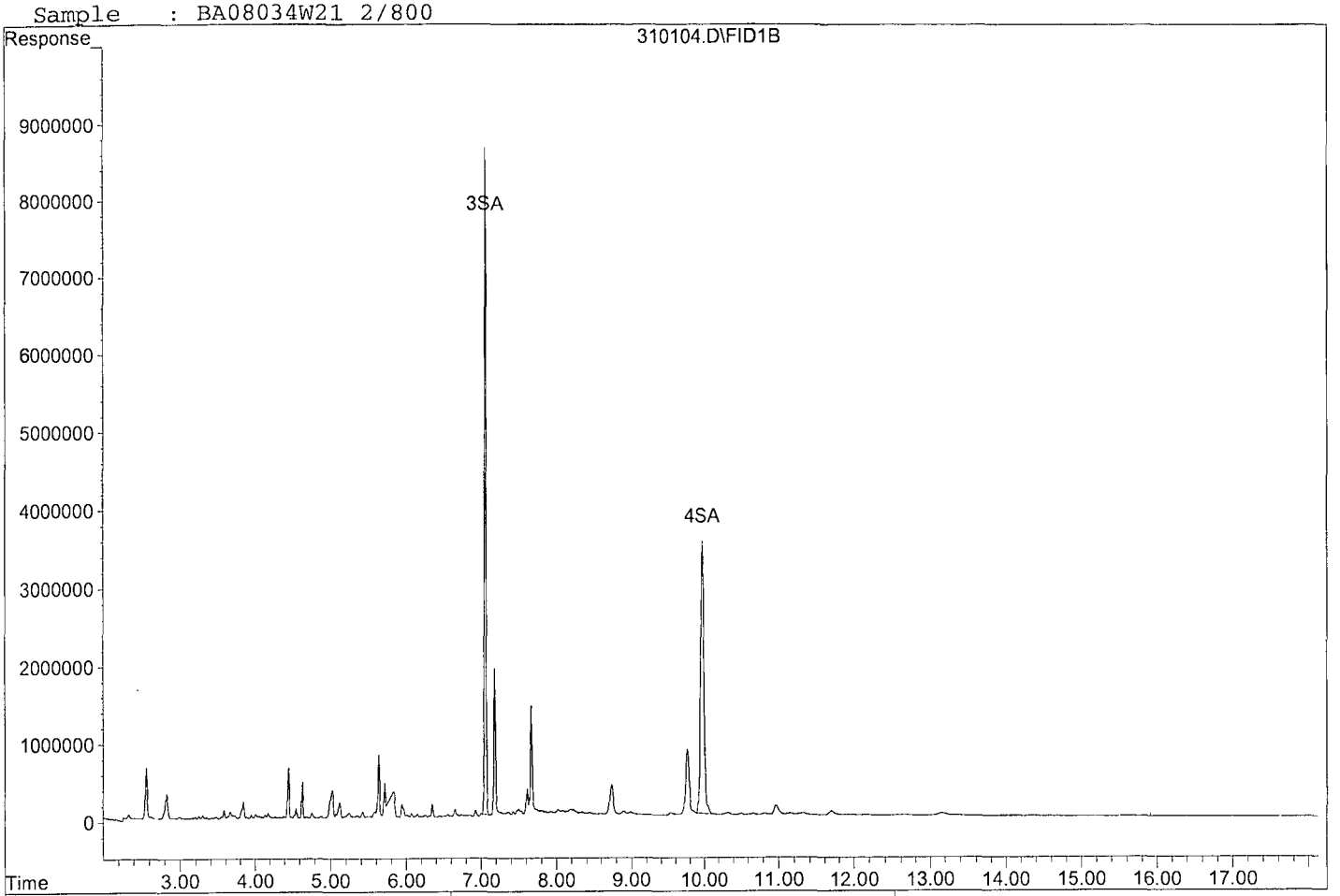
Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

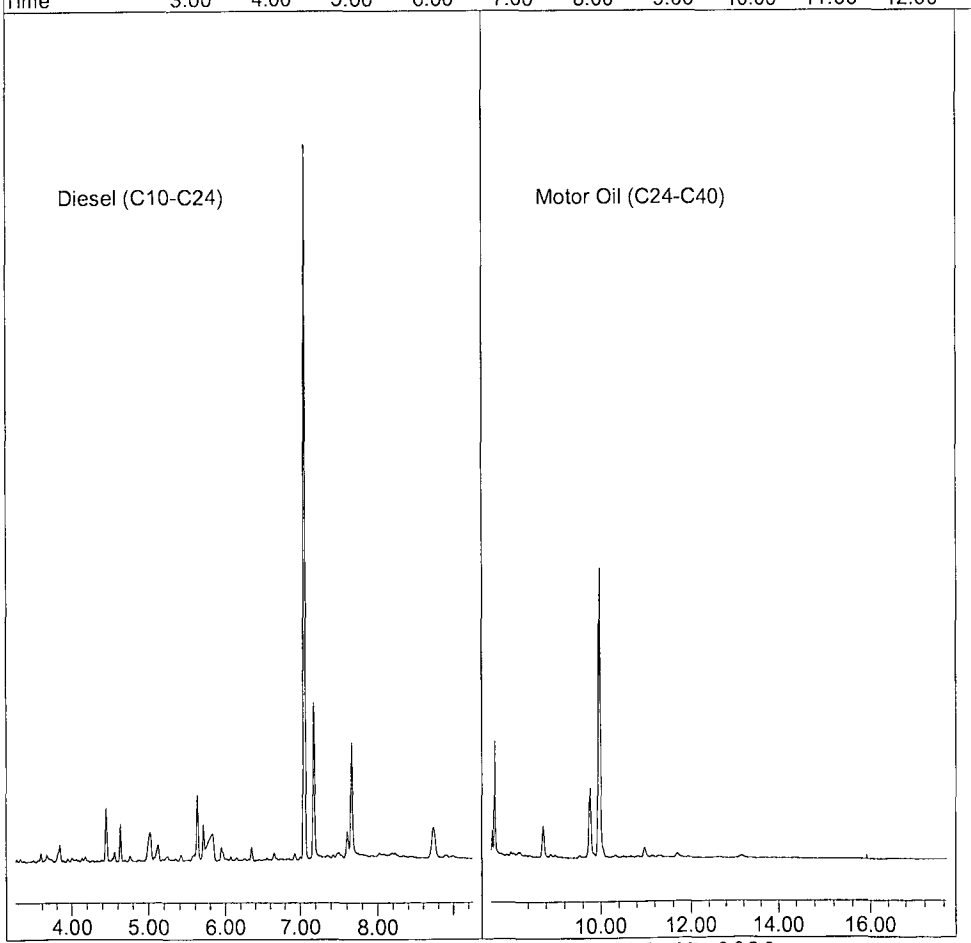
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.06	123080183	61.282	ppb
Surrogate Spike 75.000	Recovery =		81.71%	
4) SA Octacosane(S)	9.97	116501716	83.394	ppb
Surrogate Spike 75.000	Recovery =		111.19%	
Target Compounds				
Target Compounds				
1) HATM Diesel (C10-C24)	0.00	0	N.D.	ppb
2) HBTM Motor Oil (C24-C40)	0.00	0	N.D.	ppb

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

Data File: G:\APOLLO\DATA\200310\310104.D
Sample : BA08034W21 2/800





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310101.D Vial: 1
Acq On : 3-12-20 9:21:35 Operator: SS
Sample : 200310A BLK 2/800 Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Mar 13 10:05 2020 Quant Results File: DOC0310.RES

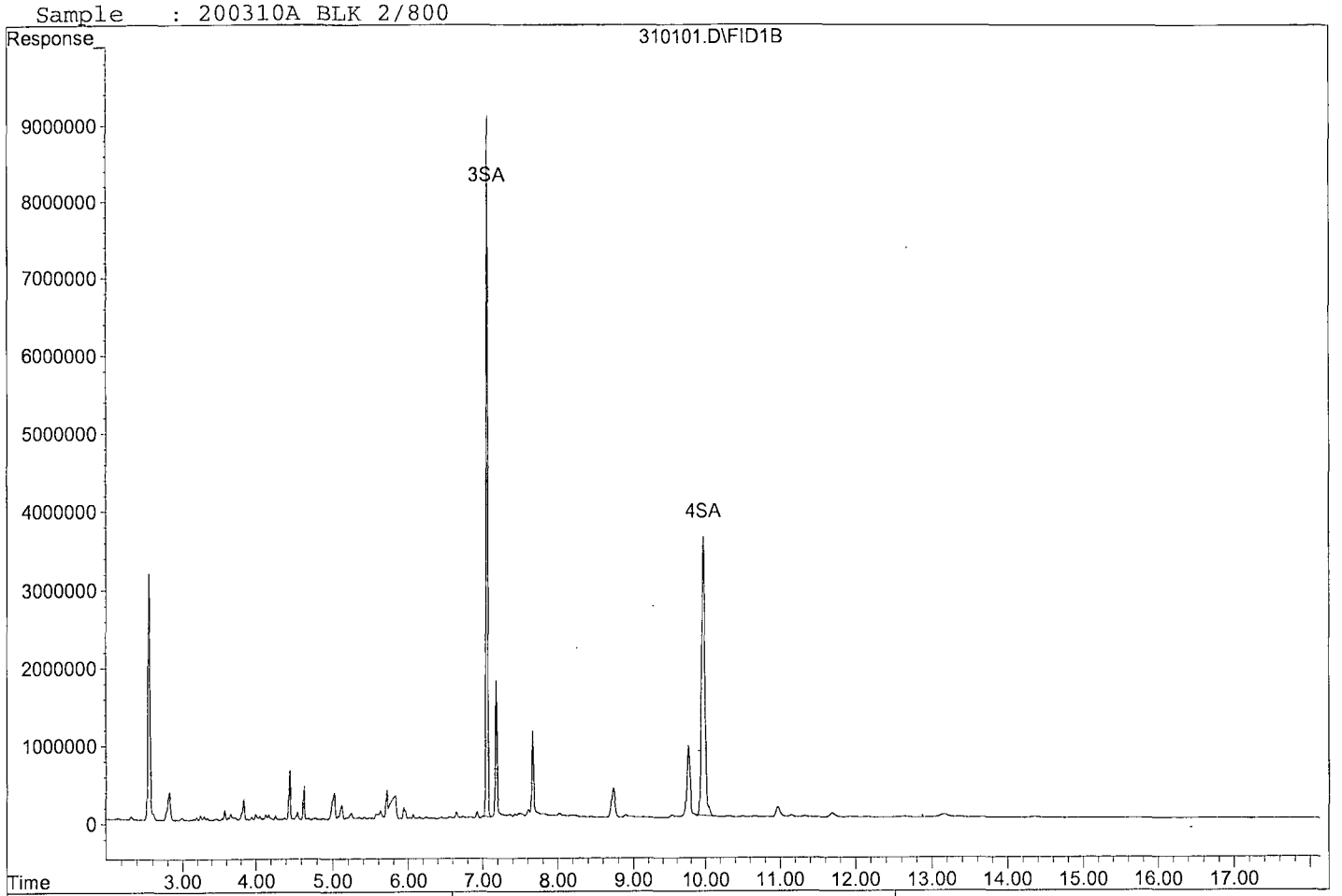
Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

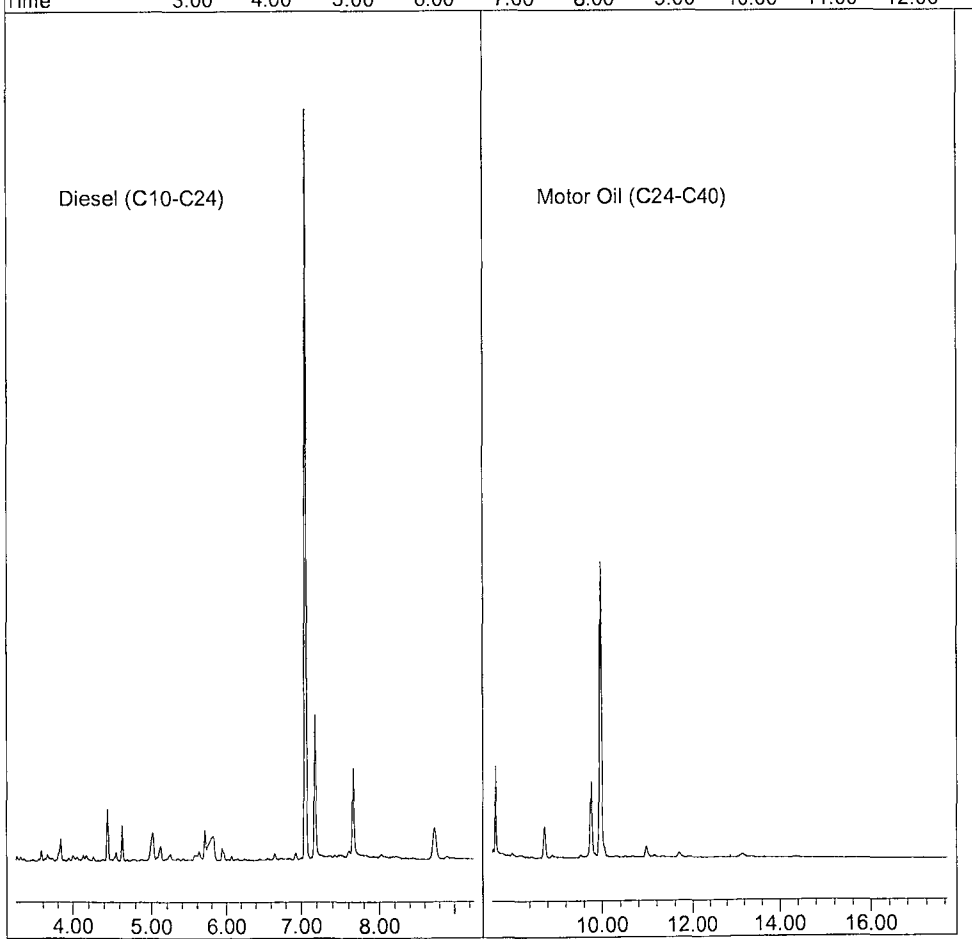
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.06	128159127	63.811	ppb
Surrogate Spike 75.000		Recovery =	85.08%	
4) SA Octacosane(S)	9.97	116580158	83.450	ppb
Surrogate Spike 75.000		Recovery =	111.27%	
Target Compounds				
Target Compounds				
1) HATM Diesel (C10-C24)	0.00	0	N.D.	ppb
2) HBTM Motor Oil (C24-C40)	0.00	0	N.D.	ppb

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

Data File: G:\APOLLO\DATA\200310\310101.D
Sample : 200310A BLK 2/800





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310102.D Vial: 2
Acq On : 3-12-20 9:44:03 Operator: SS
Sample : 200310A LCS-1 2/800 Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Mar 13 10:04 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

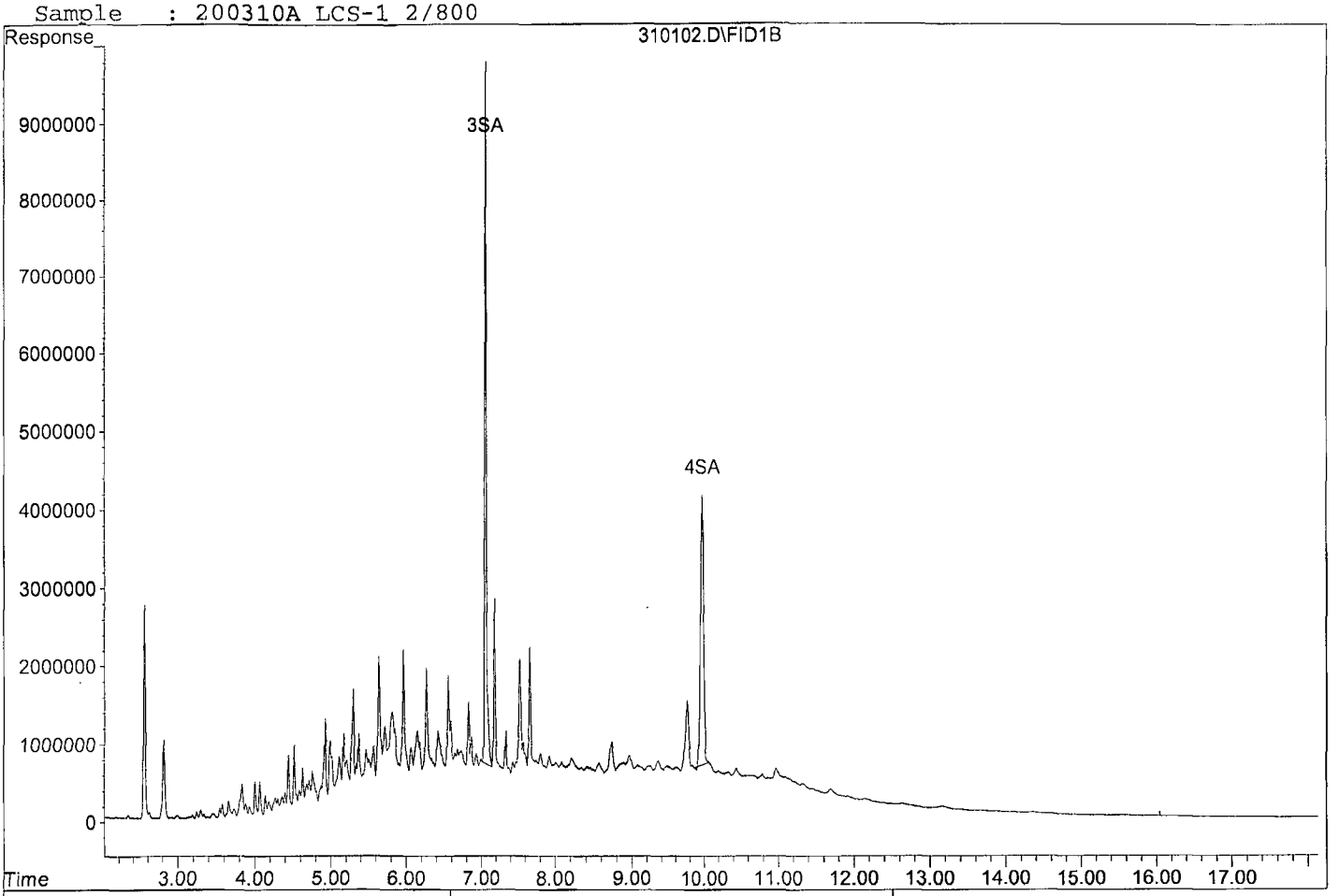
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

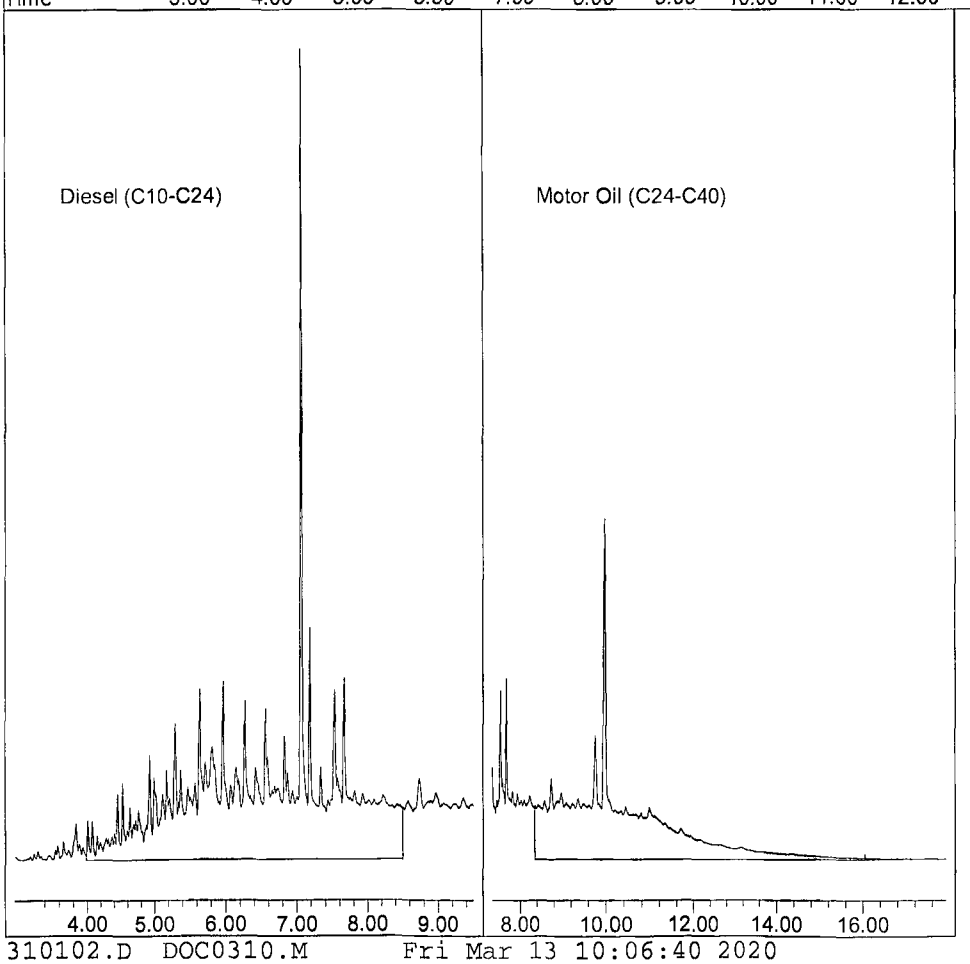
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.06	142343297	70.873	ppb
Surrogate Spike 75.000		Recovery =	94.50%	
4) SA Octacosane(S)	9.97	107572763	77.002	ppb
Surrogate Spike 75.000		Recovery =	102.67%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.24	1965369365	1281.131	ppb
2) HBTM Motor Oil (C24-C40)	12.60	1489067309	1262.439	ppb

Target Compounds

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

Data File: G:\APOLLO\DATA\200310\310102.D
Sample : 200310A LCS-1 2/800





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310103.D Vial: 3
Acq On : 3-12-20 10:06:32 Operator: SS
Sample : 200310A LCSD-1 2/800 Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Mar 13 10:04 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

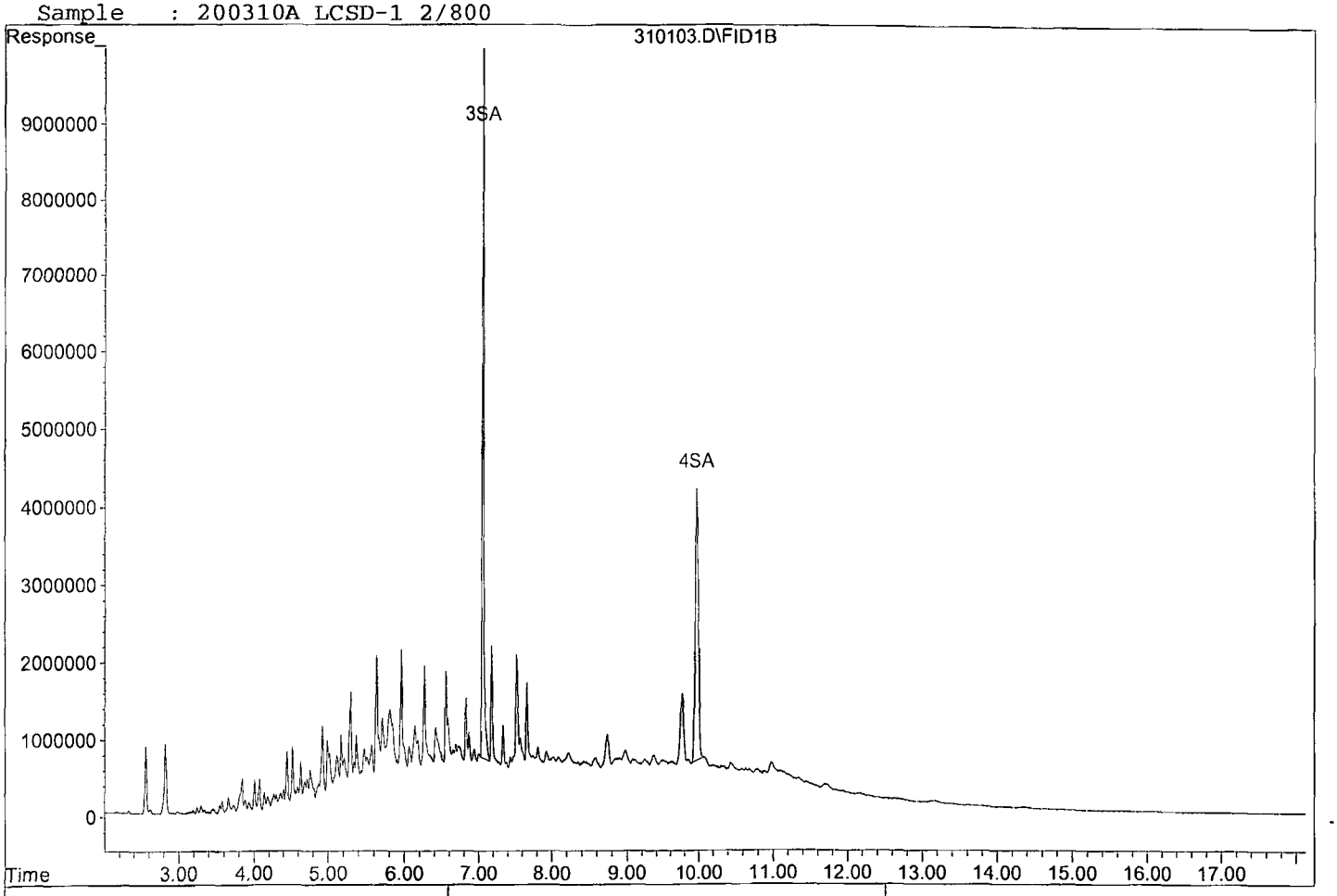
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

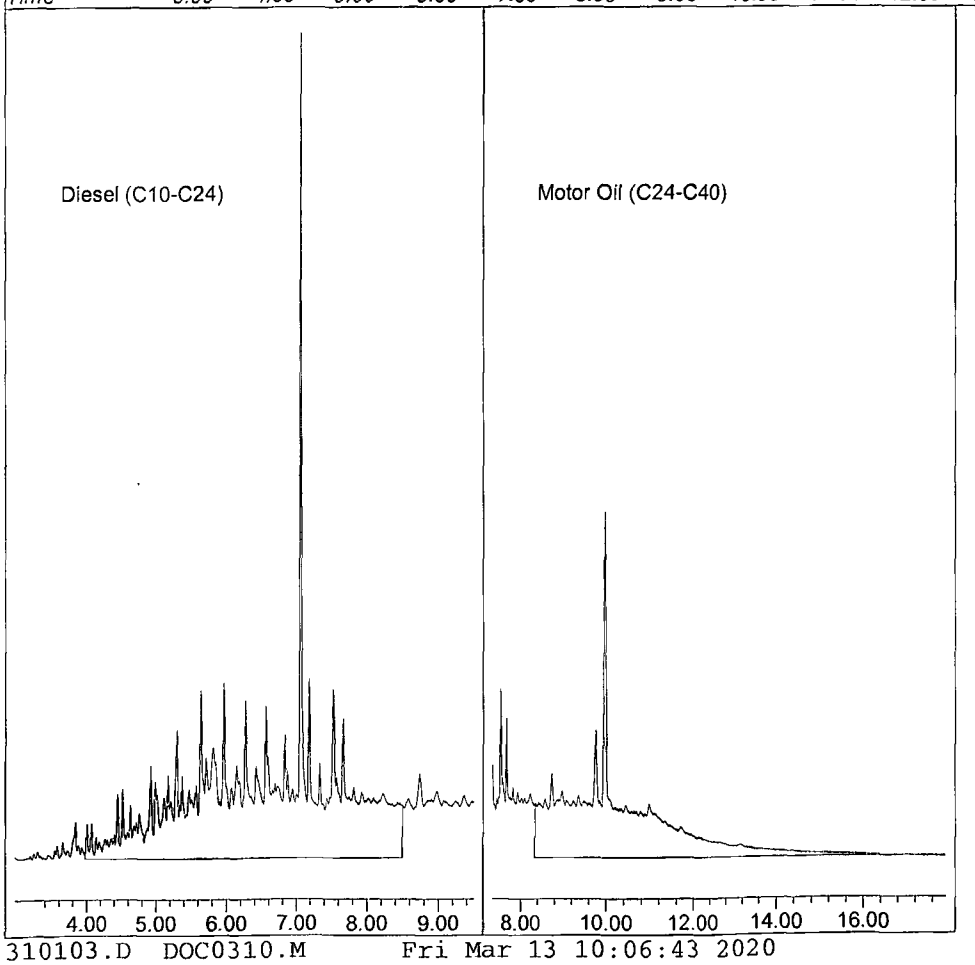
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.06	142402629	70.903	ppb
Surrogate Spike 75.000	Recovery =		94.54%	
4) SA Octacosane(S)	9.98	110369461	79.004	ppb
Surrogate Spike 75.000	Recovery =		105.34%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.24	1912316027	1246.548	ppb
2) HBTM Motor Oil (C24-C40)	12.60	1505102119	1276.033	ppb

Target Compounds

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

Data File: G:\APOLLO\DATA\200310\310103.D
Sample : 200310A LCSD-1 2/800





310103.D DOC0310.M Fri Mar 13 10:06:43 2020 Page 2

Diesel Motor Oil Mix

Prepared: 02/10/20 **Prepared By (Initials): SS**

Expires: 02/10/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel Fuel #2	Restek	31258	50,000	**A0149169-49607**	**01/15/21**	**06/30/26**	3.6 mL	7.2 mL	NA	25,000
Motor Oil Composite	Restek	31464	50,000	**A0153577-49614**	**01/15/21**	**11/30/26**	3.6 mL			25,000

Diesel / Motor Oil Calibration Standard

Prepared: 02/13/20

Expires: 02/13/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel Fuel #2	Restek	31258	50,000	**A0149169-49611**	**12/23/20**	**06/30/26**	400uL	10mL	MC	2000
Motor Oil	Restek	31464	50,000	**A0147736-41326**	**12/23/20**	**05/31/26**	400uL			2000
THC Surrogate	Phenova	ALO-130161	600	**CL13256-49469**	11/30/20	**11/28/24**	1666uL			100

THC Surrogate

Prepared: 02/24/20 **Prepared By (Initials): SS**

Expires: 02/24/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
O-terphenyl / Octacosane Mix	Phenova	ALO-130161	600	**CL14921-4984**	**02/24/21**	**02/28/24**	N/A	N/A	N/A	600

Diesel / Motor Oil Calibration Curve

Prepared: 03/05/20
Expires: 02/13/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference to APPL Prep Date	Exp. Date	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel / Motor Oil Calibration STD	Restek	Diesel / Motor Oil - 1	2,000	Prepared 03/05/20	02/13/21	N/A	5uL	1mL	MC	10
Diesel / Motor Oil Calibration STD	Restek	Diesel / Motor Oil -2	2,000	Prepared 03/05/20	02/13/21	N/A	25uL	1mL	MC	50
Diesel / Motor Oil Calibration STD	Restek	Diesel / Motor Oil - 3	2,000	Prepared 03/05/20	02/13/21	N/A	125uL	1mL	MC	250
Diesel / Motor Oil Calibration STD	Restek	Diesel / Motor Oil - 4	2,000	Prepared 03/05/20	02/13/21	N/A	500uL	1mL	MC	1000
Diesel / Motor Oil Calibration STD	Restek	Diesel / Motor Oil - 5	2,000	Prepared 03/05/20	02/13/21	N/A	750uL	1mL	MC	1500
Diesel / Motor Oil Calibration STD	Restek	Diesel / Motor Oil - 6	2,000	Prepared 03/05/20	02/13/21	N/A	100uL	100uL	N/A	2,000

Diesel / Motor Oil CCV

Prepared: 03/05/20

Expires: 02/13/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference to APPL Prep Date	Exp. Date	Exp Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel / Motor Oil STD	Restek	Diesel / Motor Oil CCV	2,000	03/05/20	02/13/21	02/13/21	1250uL	10mL	MC	250

Organic Extraction Worksheet

Method	Continuous Liq/Liq TPH-Diesel/MO 3520C	Extraction Set	200310A	Extraction Method	LIQ005	Units	mL

Spiked ID 1	Diesel Motor Oil Mix 2-10-20 2-10-21		Surrogate ID 1	THC Surrogate 2-24-20 2-24-21	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	03/10/20 13:30	
Spiked ID 8			Ext. End Time:	03/11/20 6:35	
			GC Requires Extract By:		

pH1	2	03/10/20 12:20	Water Bath Temp 1 °C	39/38.5 °C
pH2			Water Bath Temp 2 °C	35/38.5
pH3			Water Bath Temp 3 °C	35/38.4 °C

Spiked By: DL **Date** 03/10/20 **Witnessed By:** KY **Date** 03/10/20

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	200310A Blk				0.100	1	800	2	2	03/10/20 12:25	
						equip	E-HP26 e-wb1				
2	200310A LCS-1		0.040	1	0.100	1	800	2	2	03/10/20 12:25	
						equip	E-HP27 E-WB2				
3	200310A LCSD-1		0.040	1	0.100	1	800	2	2	03/10/20 12:25	
						equip	E-HP28 E-WB2				
4	BA08034	BA08034W21			0.100	1	800	2	2	03/10/20 12:25	91607
						equip	E-HP29 E-WB3				

Solvent and Lot#	
1+1 HCL	12-15-20
PH Strips	HC998032
Dicholormethane (DCM)	59239
Filter Paper	400171
Sodium Sulfate (Na2SO4)	2019020631

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	SS
Date	3/12/20
Time	7:55
Refrigerator	Hobart

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL
Concentration	DL

Modified	03/11/20 11:08:09 AM

Reviewed By: KY **Date** 03/11/20

Injection Log

Directory: G:\APOLLO\DATA\200310\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	3	310003.D	1	Diesel Motor Oil-1 3/5/20	water	3-10-20 9:37:22
2	4	310004.D	1	Diesel Motor Oil-2 3/5/20	water	3-10-20 9:59:49
3	5	310005.D	1	Diesel Motor Oil-3 3/5/20	water	3-10-20 10:22:19
4	6	310006.D	1	Diesel Motor Oil-4 3/5/20	water	3-10-20 10:44:50
5	7	310007.D	1	Diesel Motor Oil-5 3/5/20	water	3-10-20 11:07:20
6	8	310008.D	1	Diesel Motor Oil-6 3/5/20	water	3-10-20 11:29:51
7	9	310009.D	1	Diesel Motor Oil-SS 3/5/20	water	3-10-20 11:52:24
8	100	310100.D	1	Diesel Motor Oil-CCV 3/5/20	water	3-12-20 8:59:11
9	1	310101.D	2.5	200310A BLK 2/800	water	3-12-20 9:21:35
10	2	310102.D	2.5	200310A LCS-1 2/800	water	3-12-20 9:44:03
11	3	310103.D	2.5	200310A LCSD-1 2/800	water	3-12-20 10:06:32
12	4	310104.D	2.5	BA08034W21 2/800	water	3-12-20 10:29:05
13	5	310105.D	1	Diesel Motor Oil-CCV 3/5/20	water	3-12-20 10:51:39

ORGANICS
Calibration Data

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/19/19
Matrix: Instrument: Yoda
Initials: HA

			1219Y004.D	1219Y005.D	1219Y006.D	1219Y007.D	1219Y008.D	1219Y003 D	1219Y009.D	1219Y010.D	1219Y011.D							
		Compound	4	5	10	20	40	50	60	80	91		Avg	%RSD	Type	r^2	Q	MRF
1	I	1,4-dichlorobenzene-D4(IS)	ISTD															
2		1,4-Dioxane	0.5052	0.5856	0.6410	0.5627	0.5805	0.5963	0.6744	0.6671	0.6074		0.60	8.8				
3	TM	n-Nitrosodimethylamine	1.092	1.156	1.069	0.9475	1.038	1.123	1.210	1.250	1.165		1.1	8.3	TM			
4	TM	Pyridine	2.280	2.408	2.771	2.400	2.420	2.500	2.834	2.907	2.763		2.6	8.9	TM			
5	S	2-Fluorophenol (S)	1.525	1.320	1.432	1.300	1.319	1.484	1.561	1.672	1.583		1.5	9.1	S			
6	S	Phenol-D6 (S)	1.895	1.660	1.756	1.615	1.647	1.920	2.000	2.210	2.108		1.9	11	S			
7	*TM	Phenol	1.874	1.910	2.112	1.928	2.040	2.339	2.470	2.610	2.555		2.2	13	*TM			0.800
8	TM	Aniline	1.334	1.308	1.389	1.427	1.419	1.463	1.661	1.551	1.396		1.4	7.6	TM			
9	TM	Bis (2-chloroethyl) ether	0.9219	0.9198	1.036	0.9251	0.9557	1.056	1.119	1.151	1.107		1.0	9.1	TM			0.700
10	TM	2-Chlorophenol	1.386	1.438	1.555	1.396	1.440	1.608	1.703	1.757	1.686		1.6	9.2	TM			0.800
11	TM	1,3-DCB	1.540	1.631	1.750	1.502	1.582	1.715	1.840	1.921	1.849		1.7	8.7	TM			
12	*TM	1,4-DCB	1.544	1.652	1.762	1.558	1.630	1.757	1.903	1.978	1.905		1.7	9.1	*TM			
13	TM	Benzyl alcohol	0.7777	0.8093	0.9119	0.8082	0.8456	0.9912	1.002	1.065	1.018		0.91	12	TM			
14	TM	1,2-DCB	1.448	1.499	1.651	1.429	1.487	1.659	1.774	1.842	1.807		1.6	10.0	TM			
15	TM	2-Methylphenol	1.219	1.234	1.309	1.185	1.252	1.417	1.495	1.568	1.511		1.4	11	TM			0.700
16	TM	Bis (2-chloroisopropyl) ether	1.212	1.245	1.332	1.184	1.244	1.395	1.475	1.549	1.485		1.3	10.0	TM			
17	TM	Acetophenone	2.010	2.013	2.231	2.067	2.158	2.442	2.558	2.698	2.600		2.3	12	TM			0.010
18	TM	3&4-Methylphenol	1.542	1.554	1.716	1.541	1.629	1.904	1.973	2.123	2.050		1.8	13	TM			0.600
19	**TM	n-Nitrosodi-n-propylamine	1.263	1.297	1.414	1.295	1.361	1.591	1.666	1.776	1.701		1.5	13	**TM			0.500
20	TM	Hexachloroethane	0.6270	0.6828	0.7293	0.6605	0.6729	0.7406	0.7887	0.8348	0.8027		0.73	9.8	TM			0.300
21	I	Napthalene-D8(IS)	ISTD															
22	S	Nitrobenzene-D5(S)	0.5318	0.4774	0.4864	0.4745	0.4719	0.4933	0.5032	0.5240	0.5147		0.50	4.5	S			
23	TM	Nitrobenzene	0.4642	0.5003	0.5125	0.4754	0.5054	0.5308	0.5427	0.5516	0.5571		0.52	6.4	TM			0.200
24	TM	Isophorone	0.7546	0.7674	0.8060	0.7539	0.7961	0.8472	0.8485	0.8787	0.8684		0.81	6.0	TM			0.400
25	*TM	2-Nitrophenol	0.1803	0.1912	0.2042	0.1970	0.2076	0.2181	0.2244	0.2306	0.2309		0.21	8.6	*TM			0.100
26	TM	2,4-Dimethylphenol	0.3048	0.3153	0.3305	0.3095	0.3230	0.3472	0.3501	0.3640	0.3704		0.33	7.1	TM			0.200
27	TML	Benzoic acid	0.0946	0.1138	0.1879	0.2336	0.2825	0.2721	0.2855	0.3030	0.3030		0.23	35	TML	0.998		
28	TM	Bis (2-chloroethoxy) methane	0.3781	0.3943	0.4143	0.3907	0.4119	0.4361	0.4454	0.4624	0.4662		0.42	7.6	TM			0.300
29	*TM	2,4-Dichlorophenol	0.2893	0.2989	0.3168	0.3008	0.3208	0.3413	0.3480	0.3629	0.3610		0.33	8.5	*TM			0.200
30	TM	1,2,4-Trichlorobenzene	0.3149	0.3503	0.3569	0.3288	0.3583	0.3733	0.3895	0.4028	0.4041		0.36	8.6	TM			
31	TM	3,4-Dimethylphenol	0.5088	0.4953	0.5614	0.5223	0.5395	0.5890	0.5844	0.6060	0.6089		0.56	7.6	TM			
32	TM	Naphthalene	0.9866	1.025	1.068	1.000	1.055	1.118	1.145	1.187	1.210		1.1	7.4	TM			0.700
33	TM	4-Chloroaniline	0.4130	0.4102	0.4466	0.4160	0.4341	0.4535	0.4589	0.4596	0.4467		0.44	4.6	TM			0.010
34	TM	2,6-Dichlorophenol	0.2696	0.2967	0.3074	0.2937	0.3088	0.3382	0.3396	0.3625	0.3634		0.32	10	TM			
35	TM	Hexachloropropene	0.2671	0.2881	0.2978	0.2893	0.3112	0.3320	0.3401	0.3527	0.3589		0.32	10	TM			

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/19/19
Matrix: Instrument: Yoda Initials:

		Compound	4	5	10	20	40	50	60	80	91		Avg	%RSD	Type		Q	
36	*TM	Hexachlorobutadiene	0.2198	0.2305	0.2457	0.2253	0.2401	0.2518	0.2615	0.2734	0.2764		0.25	8.3	*TM			0.010
37	TM	Caprolactum	0.1360	0.1418	0.1459	0.1372	0.1421	0.1515	0.1509	0.1569	0.1569		0.15	5.4	TM			0.010
38	*TM	4-Chloro-3-methylphenol	0.3433	0.3492	0.3767	0.3527	0.3826	0.4117	0.4148	0.4325	0.4262		0.39	8.9	*TM			0.200
39	TM	2-Methylnaphthalene	0.6528	0.6825	0.7189	0.6672	0.7074	0.7659	0.7721	0.8038	0.8214		0.73	8.3	TM			0.400
40	TM	1-Methylnaphthalene	0.6774	0.7258	0.7430	0.6772	0.7340	0.7929	0.8094	0.8459	0.8492		0.76	8.6	TM			
41	I	Acenaphthene-D10(IS)	ISTD															
42	**TML	Hexachlorocyclopentadiene	0.1728	0.2331	0.2484	0.3602	0.4060	0.4718	0.4812	0.5045	0.4482		0.37	33	**TML	0.991		0.050
43	TM	1,2,4,5-Tetrachlorobenzene	0.5593	0.5899	0.5937	0.5643	0.6173	0.6743	0.6677	0.7241	0.7440		0.64	11	TM			0.010
44	*TM	2,4,6-Trichlorophenol	0.3671	0.3707	0.4007	0.3830	0.4055	0.4458	0.4421	0.4627	0.4769		0.42	9.8	*TM			0.200
45	TM	2,4,5-Trichlorophenol	0.4207	0.4236	0.4252	0.4143	0.4421	0.4723	0.4724	0.4964	0.5050		0.45	7.7	TM			0.200
46	S	2-Fluorobiphenyl(S)	1.577	1.423	1.350	1.366	1.373	1.489	1.494	1.591	1.634		1.5	7.2	S			
47	TM	1,1'-Biphenyl	1.395	1.444	1.455	1.418	1.494	1.625	1.612	1.736	1.784		1.6	9.2	TM			0.010
48	TM	2-Chloronaphthalene	1.127	1.156	1.195	1.149	1.201	1.307	1.296	1.382	1.417		1.2	8.5	TM			0.800
49	TM	2-Nitroaniline	0.4167	0.4376	0.4565	0.4486	0.4606	0.5021	0.4976	0.5202	0.5237		0.47	8.1	TM			0.010
50	TM	Dimethyl phthalate	1.422	1.455	1.461	1.410	1.474	1.591	1.590	1.671	1.690		1.5	7.0	TM			0.010
51	TM	2,6-DNT	0.2885	0.2872	0.3086	0.3140	0.3290	0.3597	0.3549	0.3784	0.3815		0.33	11	TM			0.200
52	TM	Acenaphthylene	1.710	1.793	1.808	1.775	1.875	2.023	2.023	2.114	2.167		1.9	8.5	TM			0.900
53	TM	3-Nitroaniline	0.3591	0.3544	0.3786	0.3695	0.3887	0.4218	0.4188	0.4298	0.4424		0.40	8.3	TM			0.010
54	*TM	Acenaphthene	1.085	1.127	1.137	1.078	1.162	1.275	1.255	1.332	1.363		1.2	8.9	*TM			0.900
55	**TML	2,4-Dinitrophenol	0.0287	0.0331	0.0777	0.1240	0.1723	0.1832	0.1984	0.2141	0.2201		0.14	55	**TML	0.993		0.010
56	**TM	4-Nitrophenol	0.0290	0.0284	0.0307	0.0282	0.0302	0.0332	0.0320	0.0336	0.0352		0.03	7.9	**TM			0.010
57	TM	Dibenzofuran	1.623	1.671	1.677	1.629	1.734	1.930	1.924	2.084	2.153		1.8	11	TM			0.800
58	TM	2,4-DNT	0.3958	0.4169	0.4457	0.4462	0.4784	0.5343	0.5256	0.5800	0.5904		0.49	14	TM			0.200
59	TM	2,3,4,6-Tetrachlorophenol	0.2835	0.3006	0.3178	0.3136	0.3386	0.3682	0.3763	0.3904	0.3993		0.34	12	TM			0.010
60	TM	Diethyl phthalate	1.467	1.516	1.534	1.474	1.545	1.655	1.632	1.704	1.733		1.6	6.3	TM			0.010
61	TM	4-Chlorophenyl phenyl ether		0.7633	0.7429	0.7444	0.8104	0.9246	0.9212	1.040	1.072		0.88	15	TM			0.400
62	TM	Fluorene	1.306	1.349	1.363	1.361	1.475	1.673	1.668	1.846	1.932		1.6	15	TM			0.900
63	TM	4-Nitroaniline	0.3151	0.3031	0.3294	0.3142	0.3263	0.3501	0.3462	0.3402	0.3445		0.33	5.0	TM			0.010
64	S	2,4,6-Tribromophenol(S)	0.2342	0.2311	0.2068	0.2116	0.2324	0.2576	0.2590	0.2918	0.3127		0.25	14	S			
65	I	Phenanthrene-D10(IS)	ISTD															
66	TM	4,6-Dinitro-2-methylphenol			0.1237	0.1331	0.1507	0.1615	0.1663	0.1780	0.1783		0.16	14	TM			0.010
67	TM	Diphenyl amine		0.5674	0.5878	0.5670	0.6272	0.6767	0.6917	0.7384	0.7531		0.65	11	TM			
68	*TM	n-Nitrosodiphenylamine		0.5674	0.5878	0.5670	0.6272	0.6767	0.6917	0.7384	0.7531		0.65	11	*TM			0.010
69	TM	1,2-Diphenylhydrazine	0.8725	0.8825	0.9231	0.8661	0.9237	0.9667	0.9904	1.038	1.013		0.94	6.7	TM			
70	TM	4-Bromophenyl phenyl ether	0.2168	0.2117	0.2303	0.2234	0.2447	0.2591	0.2603	0.2775	0.2827		0.25	11	TM			0.100

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No: _____
Case No: _____ Initial Cal. Date: 12/19/19
Matrix: _____ Instrument: Yoda Initials: _____

		Compound	4	5	10	20	40	50	60	80	91		Avg	%RSD	Type		Q	
71	TM	Hexachlorobenzene	0.2189	0.2230	0.2350	0.2209	0.2419	0.2639	0.2678	0.2781	0.2827		0.25	10	TM			0.100
72	TM	Atrazine		0.2202	0.2285	0.2039	0.2199	0.2039	0.2312	0.2400	0.2413		0.22	6.5	TM			0.010
73	*TM	Pentachlorophenol				0.1167	0.1380	0.1587	0.1560	0.1693	0.1761		0.15	14	*TM			0.050
74	TM	Phenanthrene	1.008	1.029	1.058	1.008	1.079	1.131	1.159	1.215	1.247		1.1	8.0	TM			0.700
75	TM	Anthracene	1.024	1.060	1.108	1.058	1.130	1.203	1.210	1.282	1.310		1.2	8.9	TM			0.700
76	TM	Carbazol	0.9547	0.9719	1.001	0.9555	1.020	1.099	1.107	1.168	1.177		1.1	8.5	TM			0.010
77	TM	Di-n-butylphthalate	1.254	1.280	1.325	1.308	1.422	1.524	1.557	1.600	1.659		1.4	11	TM			0.010
78		2-Nitrodiphenylamine	0.2581	0.2591	0.2987	0.3023	0.3376	0.3611	0.3621	0.3733	0.3885		0.33	15				
79	*TM	Fluoranthene	1.136	1.164	1.219	1.161	1.277	1.377	1.374	1.473	1.455		1.3	10	*TM			0.600
80	I	Chrysene-D12(IS)	ISTD															
81	TM	Benzidine	0.4294	0.4321	0.4090	0.3966	0.3741						0.41	5.9	TM			
82	TM	Pyrene	1.234	1.320	1.294	1.198	1.211	1.149	1.140	1.104	1.141		1.2	6.1	TM			0.600
83	S	Terphenyl-D14(S)	1.144	1.050	0.9741	0.9361	0.9110	0.8552	0.8740	0.8455	0.9945		0.95	10	S			
84	TM	Butyl benzylphthalate	0.6241	0.6476	0.6440	0.6034	0.6057	0.5784	0.5714	0.5550	0.5770		0.60	5.5	TM			0.010
85	TM	3,3'-Dichlorobenzidine	0.4406	0.4474	0.4653	0.4210	0.4166	0.4318	0.3803	0.3533	0.3523		0.41	9.9	TM			0.010
86	TM	Benz (a) anthracene	1.378	1.384	1.377	1.254	1.272	1.281	1.262	1.262	1.284		1.3	4.3	TM			0.800
87	TM	Bis (2-ethylhexyl) phthalate	0.9872	1.026	1.020	0.9806	0.9843	1.006	0.9951	1.003	1.032		1.0	1.9	TM			0.010
88	TM	Chrysene	1.126	1.256	1.202	1.146	1.157	1.110	1.070	1.065	1.090		1.1	5.5	TM			0.700
89	*TM	Di-n-octylphthalate	1.492	1.569	1.601	1.470	1.479	1.480	1.436	1.394	1.414		1.5	4.6	*TM			0.010
90	I	Perylene-D12(IS)	ISTD															
91	TM	Benzo (b) fluoranthene	1.200	1.183	1.189	1.231	1.306	1.417	1.414	1.408	1.411		1.3	8.2	TM			0.700
92	TM	Benzo (k) fluoranthene	1.036	1.129	1.146	1.047	1.126	1.214	1.174	1.322	1.406		1.2	10	TM			0.700
93	*TM	Benzo (a) pyrene	1.048	1.092	1.101	1.069	1.126	1.226	1.213	1.267	1.293		1.2	7.8	*TM			0.700
94	TM	Indeno (1,2,3-cd) pyrene	1.218	1.270	1.279	1.250	1.330	1.445	1.416	1.464	1.494		1.4	7.7	TM			0.500
95	TM	Dibenz (a,h) anthracene	1.044	1.127	1.135	1.106	1.175	1.293	1.267	1.331	1.359		1.2	9.2	TM			0.400
96	TM	Benzo (g,h,i) perylene	0.9656	1.022	1.029	1.003	1.043	1.124	1.098	1.126	1.148		1.1	6.0	TM			0.500
97																		
98																		
99																		
100																		
101																		
102																		
103																		
104																		
105																		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y003.D Vial: 3
Acq On : 19 Dec 19 9:06 Operator: MA,SS
Sample : 50ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.38	152	196599	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.83	136	821661	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.84	164	498864	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.57	188	965840	40.00000 ppb	0.00
80) Chrysene-D12(IS)	13.67	240	1196016	40.00000 ppb	0.00
90) Perylene-D12(IS)	15.49	264	1033039	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.82	112	729337	101.21407 ppb	0.00
Spiked Amount 200.000			Recovery =	50.607%	
6) Phenol-D6 (S)	5.00	99	943605	102.78046 ppb	0.00
Spiked Amount 200.000			Recovery =	51.390%	
22) Nitrobenzene-D5(S)	6.01	82	506628	49.57999 ppb	0.00
Spiked Amount 100.000			Recovery =	49.580%	
46) 2-Fluorobiphenyl(S)	8.06	172	928304	50.38731 ppb	0.00
Spiked Amount 100.000			Recovery =	50.387%	
64) 2,4,6-Tribromophenol(S)	9.77	330	321251	103.61865 ppb	0.00
Spiked Amount 200.000			Recovery =	51.810%	
83) Terphenyl-D14(S)	12.43	244	1278597	44.83129 ppb	0.00
Spiked Amount 100.000			Recovery =	44.831%	
Target Compounds					Qvalue
3) n-Nitrosodimethylamine	1.91	42	275394	50.17040 ppb	100
4) Pyridine	1.92	79	614275	48.30945 ppb	100
7) Phenol	5.02	94	574851	53.05712 ppb	100
8) Aniline	5.01	93	359488	50.84319 ppb	100
9) Bis (2-chloroethyl) ether	5.08	63	259464	51.69417 ppb	100
10) 2-Chlorophenol	5.15	128	395131	51.79401 ppb	100
11) 1,3-DCB	5.31	146	421373	50.33398 ppb	100
12) 1,4-DCB	5.40	146	431772	50.39583 ppb	100
13) Benzyl alcohol	5.54	108	243593	54.20799 ppb	100
14) 1,2-DCB	5.57	146	407782	51.15484 ppb	100
15) 2-Methylphenol	5.68	107	348274	52.31608 ppb	100
16) Bis (2-chloroisopropyl) et	5.69	45	342864	51.79894 ppb	100
17) Acetophenone	5.84	105	600018	52.87990 ppb	100
18) 3&4-Methylphenol	5.86	107	935580	106.86276 ppb	100
19) n-Nitrosodi-n-propylamine	5.85	70	391093	53.58916 ppb	100
20) Hexachloroethane	5.95	117	182011	50.96658 ppb	100
23) Nitrobenzene	6.04	77	545143	51.47563 ppb	100
24) Isophorone	6.31	82	870177	52.07890 ppb	100
25) 2-Nitrophenol	6.39	139	223955	52.07765 ppb	100
26) 2,4-Dimethylphenol	6.44	122	356638	51.82729 ppb	100
27) Benzoic acid	6.60	105	279476	47.48334 ppb	100
28) Bis (2-chloroethoxy) metha	6.54	93	447865	51.64725 ppb	100
29) 2,4-Dichlorophenol	6.68	162	350537	52.24411 ppb	100
30) 1,2,4-Trichlorobenzene	6.76	180	383401	51.23105 ppb	100
31) 3,4-Dimethylphenol	6.79	107	604918	52.84249 ppb	100
32) Naphthalene	6.84	128	1148204	51.36025 ppb	100
33) 4-Chloroaniline	6.91	127	465735	51.81136 ppb	100
34) 2,6-Dichlorophenol	6.92	162	347372	52.84673 ppb	100
35) Hexachloropropene	6.95	213	340941	52.64986 ppb	100
36) Hexachlorobutadiene	6.98	225	258626	50.94087 ppb	100
37) Caprolactum	7.34	55	155640	51.68587 ppb	100
38) 4-Chloro-3-methylphenol	7.48	107	422799	53.08472 ppb	100

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

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y003.D Vial: 3
Acq On : 19 Dec 19 9:06 Operator: MA,SS
Sample : 50ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
39)	2-Methylnaphthalene	7.63	142	786668	52.28541	ppb	100
40)	1-Methylnaphthalene	7.75	142	814338	52.04963	ppb	100
42)	Hexachlorocyclopentadiene	7.82	237	294208	51.41653	ppb	100
43)	1,2,4,5-Tetrachlorobenzene	7.84	216	420454	52.91044	ppb	100
44)	2,4,6-Trichlorophenol	7.97	196	277989	53.43197	ppb	100
45)	2,4,5-Trichlorophenol	8.02	196	294494	52.19170	ppb	100
47)	1,1'-Biphenyl	8.17	154	1013613	52.38680	ppb	100
48)	2-Chloronaphthalene	8.20	162	814737	52.35985	ppb	100
49)	2-Nitroaniline	8.32	65	313105	52.99430	ppb	100
50)	Dimethyl phthalate	8.53	163	992101	52.01547	ppb	100
51)	2,6-DNT	8.61	165	224309	53.92342	ppb	100
52)	Acenaphthylene	8.68	152	1261631	52.66138	ppb	100
53)	3-Nitroaniline	8.32	138	263026	53.26882	ppb	100
54)	Acenaphthene	8.89	154	794988	53.04993	ppb	100
55)	2,4-Dinitrophenol	8.92	184	114232	46.68381	ppb	100
56)	4-Nitrophenol	8.60	65	20732	53.32779	ppb	100
57)	Dibenzofuran	9.08	168	1203351	52.86739	ppb	100
58)	2,4-DNT	9.07	165	333192	54.48047	ppb	100
59)	2,3,4,6-Tetrachlorophenol	9.24	232	229610	53.65092	ppb	100
60)	Diethyl phthalate	9.35	149	1031999	52.22569	ppb	100
61)	4-Chlorophenyl phenyl ethe	9.48	204	576562	52.69605	ppb	100
62)	Fluorene	9.48	166	1043084	53.86740	ppb	100
63)	4-Nitroaniline	8.80	138	218292	53.05517	ppb	100
66)	4,6-Dinitro-2-methylphenol	9.56	198	195000	51.78616	ppb	100
67)	Diphenyl amine	9.63	169	1633943	103.92069	ppb	100
68)	n-Nitrosodiphenylamine	9.63	169	1633943	103.92069	ppb	100
69)	1,2-Diphenylhydrazine	9.67	77	1167037	51.32296	ppb	100
70)	4-Bromophenyl phenyl ether	10.05	248	312755	52.83109	ppb	100
71)	Hexachlorobenzene	10.13	284	318617	53.20114	ppb	100
72)	Atrazine	10.25	200	123091	22.79679	ppb	100
73)	Pentachlorophenol	10.36	266	191605	52.04610	ppb	100
74)	Phenanthrene	10.60	178	1365637	51.23790	ppb	100
75)	Anthracene	10.67	178	1452175	52.12221	ppb	100
76)	Carbazol	10.85	167	1327202	52.32019	ppb	100
77)	Di-n-butylphthalate	11.25	149	1840279	53.05379	ppb	100
78)	2-Nitrodiphenylamine	11.43	167	218003	27.62865	ppb	100
79)	Fluoranthene	11.99	202	1662853	53.26539	ppb	100
81)	Benzidine	12.14	184	328745	26.93277	ppb	100
82)	Pyrene	12.25	202	1717114	47.89582	ppb	100
84)	Butyl benzylphthalate	13.00	149	864776	48.14287	ppb	100
85)	3,3'-Dichlorobenzidine	13.62	252	645596	52.39866	ppb	100
86)	Benz (a) anthracene	13.66	228	1915683	49.05514	ppb	100
87)	Bis (2-ethylhexyl) phthala	13.67	149	1504164	50.11549	ppb	100
88)	Chrysene	13.69	228	1660091	48.87974	ppb	100
89)	Di-n-octylphthalate	14.42	149	2213014	49.95022	ppb	100
91)	Benzo (b) fluoranthene	14.96	252	1830066	54.23818	ppb	100
92)	Benzo (k) fluoranthene	14.99	252	1567732	51.53429	ppb	100
93)	Benzo (a) pyrene	15.42	252	1583146	52.86784	ppb	100
94)	Indeno (1,2,3-cd) pyrene	17.36	276	1864158	53.40274	ppb	100
95)	Dibenz (a,h) anthracene	17.40	278	1668227	53.64701	ppb	100
96)	Benzo (g,h,i) perylene	17.93	276	1451452	52.91619	ppb	100

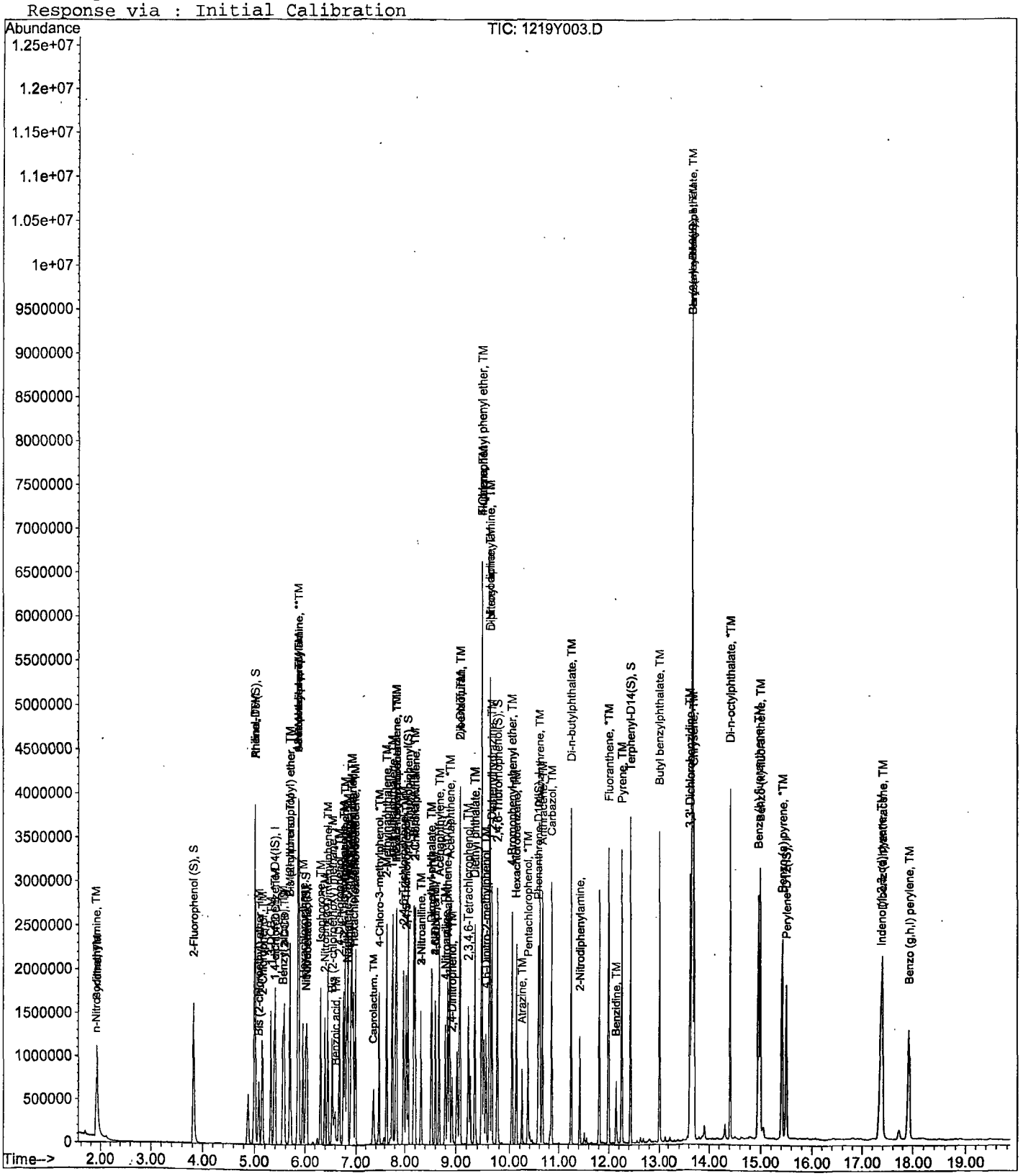
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y003.D Vial: 3
Acq On : 19 Dec 19 9:06 Operator: MA,SS
Sample : 50ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y004.D Vial: 4
Acq On : 19 Dec 19 9:33 Operator: MA,SS
Sample : 4ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.38	152	172988	40.00000 ppb		0.00
21) Napthalene-D8(IS)	6.82	136	714555	40.00000 ppb		0.00
41) Acenaphthene-D10(IS)	8.84	164	436036	40.00000 ppb		0.00
65) Phenanthrene-D10(IS)	10.57	188	836785	40.00000 ppb		0.00
80) Chrysene-D12(IS)	13.66	240	796002	40.00000 ppb		0.00
90) Perylene-D12(IS)	15.49	264	872764	40.00000 ppb		0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.81	112	52772	8.32303 ppb		0.00
Spiked Amount 200.000			Recovery	= 4.162%		
6) Phenol-D6 (S)	4.99	99	65554	8.11493 ppb		0.00
Spiked Amount 200.000			Recovery	= 4.058%		
22) Nitrobenzene-D5(S)	6.00	82	37998	4.27597 ppb		0.00
Spiked Amount 100.000			Recovery	= 4.276%		
46) 2-Fluorobiphenyl(S)	8.05	172	68746	4.26912 ppb		0.00
Spiked Amount 100.000			Recovery	= 4.269%		
64) 2,4,6-Tribromophenol(S)	9.76	330	20427	7.53803 ppb		0.00
Spiked Amount 200.000			Recovery	= 3.769%		
83) Terphenyl-D14(S)	12.42	244	91079	4.79831 ppb		0.00
Spiked Amount 100.000			Recovery	= 4.798%		
Target Compounds						Qvalue
2) 1,4-Dioxane	1.69	58	874	0.33558	#	1
3) n-Nitrosodimethylamine	1.91	42	18895	3.91206 ppb		92
4) Pyridine	1.94	79	39443	3.52537 ppb		97
7) Phenol	5.00	94	32421	3.40079 ppb	#	53
8) Aniline	5.00	93	23080	3.70979 ppb		98
9) Bis (2-chloroethyl) ether	5.07	63	15947	3.61084 ppb		98
10) 2-Chlorophenol	5.15	128	23984	3.57294 ppb		97
11) 1,3-DCB	5.31	146	26641	3.61668 ppb		96
12) 1,4-DCB	5.40	146	26701	3.54187 ppb		97
13) Benzyl alcohol	5.54	108	13453	3.40238 ppb		91
14) 1,2-DCB	5.56	146	25057	3.57234 ppb		95
15) 2-Methylphenol	5.68	107	21086	3.59976 ppb		96
16) Bis (2-chloroisopropyl) et	5.69	45	20972	3.60084 ppb		88
17) Acetophenone	5.83	105	34769	3.48244 ppb		99
18) 3&4-Methylphenol	5.85	107	53356	6.92618 ppb		99
19) n-Nitrosodi-n-propylamine	5.83	70	21845	3.40184 ppb		96
20) Hexachloroethane	5.95	117	10847	3.45194 ppb		89
23) Nitrobenzene	6.02	77	33923	3.68335 ppb		96
24) Isophorone	6.29	82	53920	3.71074 ppb		99
25) 2-Nitrophenol	6.38	139	12884	3.44507 ppb		94
26) 2,4-Dimethylphenol	6.44	122	21783	3.64004 ppb		96
27) Benzoic acid	6.62	105	383	4.14033 ppb		88
28) Bis (2-chloroethoxy) metha	6.53	93	27014	3.58217 ppb		100
29) 2,4-Dichlorophenol	6.67	162	20671	3.54260 ppb		94
30) 1,2,4-Trichlorobenzene	6.75	180	22503	3.45762 ppb		97
31) 3,4-Dimethylphenol	6.78	107	36358	3.65211 ppb		95
32) Naphthalene	6.84	128	70495	3.62596 ppb		99
33) 4-Chloroaniline	6.90	127	29511	3.77509 ppb		98
34) 2,6-Dichlorophenol	6.91	162	19262	3.36963 ppb		97
35) Hexachloropropene	6.94	213	19085	3.38897 ppb		98
36) Hexachlorobutadiene	6.98	225	15703	3.55659 ppb		98
37) Caprolactum	7.27	55	9715	3.70980 ppb		95

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

Data File : M:\YODA\DATA\Y191219\1219Y004.D Vial: 4
Acq On : 19 Dec 19 9:33 Operator: MA,SS
Sample : 4ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.47	107	24530	3.54152	ppb		91
39)	2-Methylnaphthalene	7.63	142	46644	3.56485	ppb		99
40)	1-Methylnaphthalene	7.75	142	48402	3.55740	ppb		100
42)	Hexachlorocyclopentadiene	7.81	237	7536	5.21250	ppb	#	93
43)	1,2,4,5-Tetrachlorobenzene	7.83	216	24386	3.51094	ppb		93
44)	2,4,6-Trichlorophenol	7.97	196	16008	3.52023	ppb		99
45)	2,4,5-Trichlorophenol	8.02	196	18343	3.71925	ppb		96
47)	1,1'-Biphenyl	8.17	154	60838	3.59736	ppb	#	96
48)	2-Chloronaphthalene	8.19	162	49132	3.61248	ppb		100
49)	2-Nitroaniline	8.31	65	18170	3.51847	ppb		94
50)	Dimethyl phthalate	8.52	163	62019	3.72016	ppb		98
51)	2,6-DNT	8.59	165	12579	3.45969	ppb	#	77
52)	Acenaphthylene	8.67	152	74543	3.55981	ppb		99
53)	3-Nitroaniline	8.31	138	15660	3.62849	ppb		93
54)	Acenaphthene	8.88	154	47294	3.61069	ppb		99
55)	2,4-Dinitrophenol	8.92	184	1251	7.22384	ppb		91
56)	4-Nitrophenol	8.59	65	1264	3.71980	ppb	#	77
57)	Dibenzofuran	9.07	168	70771	3.55722	ppb		96
58)	2,4-DNT	9.06	165	17259	3.22866	ppb		90
59)	2,3,4,6-Tetrachlorophenol	9.23	232	12362	3.30472	ppb		98
60)	Diethyl phthalate	9.34	149	63987	3.70473	ppb		97
61)	4-Chlorophenyl phenyl ethe	9.47	204	30630	3.20287	ppb		93
62)	Fluorene	9.47	166	56939	3.36416	ppb		97
63)	4-Nitroaniline	8.79	138	13740	3.82064	ppb		87
66)	4,6-Dinitro-2-methylphenol	9.54	198	6235	1.91120	ppb	#	71
67)	Diphenyl amine	9.61	169	91072	6.68561	ppb		97
68)	n-Nitrosodiphenylamine	9.61	169	91072	6.68561	ppb		97
69)	1,2-Diphenylhydrazine	9.66	77	73012	3.70606	ppb		97
70)	4-Bromophenyl phenyl ether	10.05	248	18141	3.53702	ppb		88
71)	Hexachlorobenzene	10.12	284	18320	3.53076	ppb		95
72)	Atrazine	10.23	200	8587	1.83561	ppb		94
73)	Pentachlorophenol	10.35	266	6168	1.93382	ppb		87
74)	Phenanthrene	10.60	178	84389	3.65454	ppb		99
75)	Anthracene	10.65	178	85709	3.55076	ppb		99
76)	Carbazol	10.85	167	79889	3.63505	ppb		100
77)	Di-n-butylphthalate	11.25	149	104948	3.49219	ppb		99
78)	2-Nitrodiphenylamine	11.42	167	10800	1.57984	ppb		97
79)	Fluoranthene	11.99	202	95072	3.51508	ppb		99
81)	Benzidine	12.14	184	34176	4.20694	ppb		97
82)	Pyrene	12.25	202	98209	4.11597	ppb		99
84)	Butyl benzylphthalate	12.99	149	49680	4.15559	ppb		98
85)	3,3'-Dichlorobenzidine	13.61	252	35070	4.27679	ppb		98
86)	Benz (a) anthracene	13.64	228	109656	4.21906	ppb		98
87)	Bis (2-ethylhexyl) phthala	13.66	149	78577	3.93364	ppb		98
88)	Chrysene	13.69	228	89653	3.96629	ppb		97
89)	Di-n-octylphthalate	14.41	149	118795	4.02879	ppb		100
91)	Benzo (b) fluoranthene	14.94	252	104695	3.67269	ppb		97
92)	Benzo (k) fluoranthene	14.98	252	90442	3.51896	ppb		97
93)	Benzo (a) pyrene	15.39	252	91485	3.61610	ppb		99
94)	Indeno (1,2,3-cd) pyrene	17.32	276	106261	3.60309	ppb		99
95)	Dibenz (a,h) anthracene	17.35	278	91091	3.46725	ppb		99
96)	Benzo (g,h,i) perylene	17.88	276	84272	3.63655	ppb		98

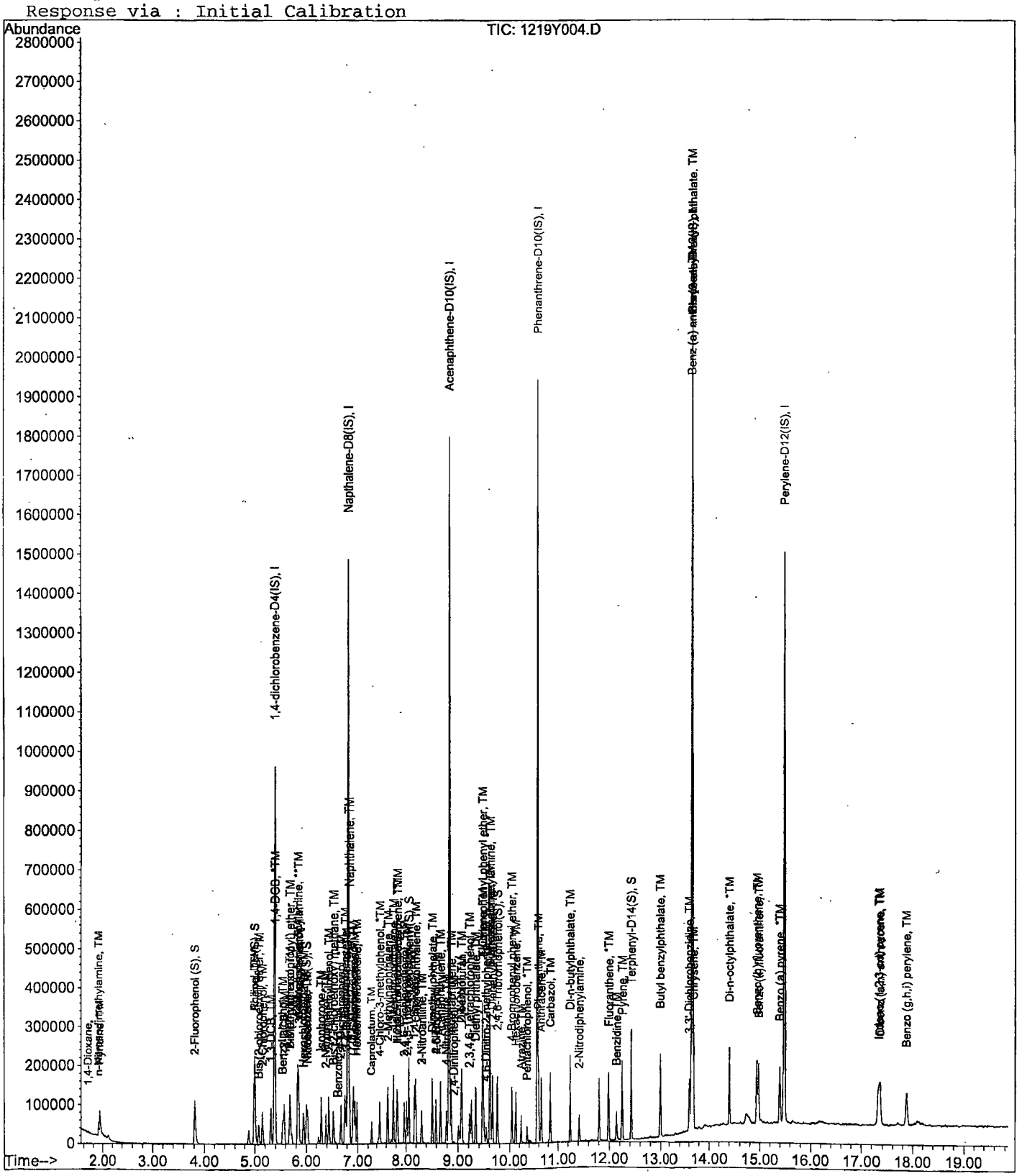
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y004.D Vial: 4
Acq On : 19 Dec 19 9:33 Operator: MA,SS
Sample : 4ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y005.D Vial: 5
Acq On : 19 Dec 19 10:01 Operator: MA,SS
Sample : 5ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.38	152	171722	40.00000 ppb		0.00
21) Napthalene-D8(IS)	6.82	136	688709	40.00000 ppb		0.00
41) Acenaphthene-D10(IS)	8.84	164	415788	40.00000 ppb		0.00
65) Phenanthrene-D10(IS)	10.57	188	806286	40.00000 ppb		0.00
80) Chrysene-D12(IS)	13.66	240	749085	40.00000 ppb		0.00
90) Perylene-D12(IS)	15.48	264	827486	40.00000 ppb		0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.82	112	56647	9.00005 ppb		0.00
Spiked Amount 200.000			Recovery	= 4.500%		
6) Phenol-D6 (S)	4.99	99	71276	8.88831 ppb		0.00
Spiked Amount 200.000			Recovery	= 4.444%		
22) Nitrobenzene-D5(S)	6.00	82	41101	4.79873 ppb		0.00
Spiked Amount 100.000			Recovery	= 4.799%		
46) 2-Fluorobiphenyl(S)	8.05	172	73943	4.81547 ppb		0.00
Spiked Amount 100.000			Recovery	= 4.815%		
64) 2,4,6-Tribromophenol(S)	9.76	330	24023	9.29674 ppb		0.00
Spiked Amount 200.000			Recovery	= 4.649%		
83) Terphenyl-D14(S)	12.43	244	98299	5.50304 ppb		0.00
Spiked Amount 100.000			Recovery	= 5.503%		
Target Compounds						Qvalue
2) 1,4-Dioxane	1.69	58	1257	0.48619		57
3) n-Nitrosodimethylamine	1.91	42	24805	5.17354 ppb		91
4) Pyridine	1.93	79	51683	4.65342 ppb		99
7) Phenol	5.01	94	41003	4.33271 ppb	#	74
8) Aniline	5.01	93	28072	4.54545 ppb	#	95
9) Bis (2-chloroethyl) ether	5.08	63	19744	4.50355 ppb		96
10) 2-Chlorophenol	5.14	128	30870	4.63266 ppb		93
11) 1,3-DCB	5.31	146	35002	4.78677 ppb		98
12) 1,4-DCB	5.40	146	35465	4.73910 ppb		100
13) Benzyl alcohol	5.54	108	17372	4.42592 ppb		98
14) 1,2-DCB	5.57	146	32182	4.62197 ppb		99
15) 2-Methylphenol	5.67	107	26493	4.55618 ppb		95
16) Bis (2-chloroisopropyl) et	5.69	45	26718	4.62124 ppb	#	67
17) Acetophenone	5.83	105	43206	4.35939 ppb		99
18) 3&4-Methylphenol	5.85	107	66732	8.72640 ppb		94
19) n-Nitrosodi-n-propylamine	5.83	70	27839	4.36723 ppb		93
20) Hexachloroethane	5.95	117	14656	4.69849 ppb		96
23) Nitrobenzene	6.03	77	43068	4.85180 ppb		97
24) Isophorone	6.30	82	66063	4.71704 ppb		97
25) 2-Nitrophenol	6.39	139	16456	4.56533 ppb		95
26) 2,4-Dimethylphenol	6.44	122	27145	4.70628 ppb		97
27) Benzoic acid	6.54	105	9801	5.88822 ppb		100
28) Bis (2-chloroethoxy) metha	6.54	93	33945	4.67017 ppb		97
29) 2,4-Dichlorophenol	6.67	162	25735	4.57598 ppb		95
30) 1,2,4-Trichlorobenzene	6.75	180	30156	4.80740 ppb		94
31) 3,4-Dimethylphenol	6.78	107	42637	4.44355 ppb		94
32) Naphthalene	6.84	128	88283	4.71131 ppb		98
33) 4-Chloroaniline	6.90	127	35310	4.68641 ppb		95
34) 2,6-Dichlorophenol	6.92	162	25539	4.63537 ppb		98
35) Hexachloropropene	6.95	213	24798	4.56869 ppb		99
36) Hexachlorobutadiene	6.98	225	19841	4.66245 ppb		95
37) Caprolactum	7.28	55	12209	4.83713 ppb		92

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

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y005.D Vial: 5
Acq On : 19 Dec 19 10:01 Operator: MA,SS
Sample : 5ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38) 4-Chloro-3-methylphenol	7.47	107	30060	4.50279 ppb		96
39) 2-Methylnaphthalene	7.63	142	58756	4.65906 ppb		98
40) 1-Methylnaphthalene	7.74	142	62484	4.76473 ppb		98
42) Hexachlorocyclopentadiene	7.82	237	12113	6.16888 ppb		98
43) 1,2,4,5-Tetrachlorobenzene	7.83	216	30658	4.62889 ppb		96
44) 2,4,6-Trichlorophenol	7.97	196	19264	4.44253 ppb		97
45) 2,4,5-Trichlorophenol	8.01	196	22015	4.68116 ppb		91
47) 1,1'-Biphenyl	8.17	154	75024	4.65222 ppb		96
48) 2-Chloronaphthalene	8.20	162	60077	4.63233 ppb		98
49) 2-Nitroaniline	8.31	65	22742	4.61826 ppb		95
50) Dimethyl phthalate	8.52	163	75613	4.75645 ppb		98
51) 2,6-DNT	8.60	165	14927	4.30540 ppb		93
52) Acenaphthylene	8.67	152	93201	4.66757 ppb		99
53) 3-Nitroaniline	8.31	138	18418	4.47535 ppb		98
54) Acenaphthene	8.88	154	58572	4.68948 ppb		98
55) 2,4-Dinitrophenol	8.92	184	1722	7.44591 ppb		91
56) 4-Nitrophenol	8.59	65	1476	4.55522 ppb	#	77
57) Dibenzofuran	9.08	168	86867	4.57889 ppb		98
58) 2,4-DNT	9.06	165	21667	4.25065 ppb		92
59) 2,3,4,6-Tetrachlorophenol	9.23	232	15625	4.38043 ppb		96
60) Diethyl phthalate	9.34	149	78770	4.78273 ppb		98
61) 4-Chlorophenyl phenyl ethe	9.47	204	39671	4.35026 ppb		91
62) Fluorene	9.48	166	70132	4.34543 ppb		99
63) 4-Nitroaniline	8.79	138	15753	4.59371 ppb		95
66) 4,6-Dinitro-2-methylphenol	9.54	198	8632	2.74604 ppb		91
67) Diphenyl amine	9.61	169	114377	8.71405 ppb		99
68) n-Nitrosodiphenylamine	9.61	169	114377	8.71405 ppb		99
69) 1,2-Diphenylhydrazine	9.66	77	88947	4.68570 ppb		98
70) 4-Bromophenyl phenyl ether	10.05	248	21340	4.31813 ppb		90
71) Hexachlorobenzene	10.12	284	22472	4.49479 ppb		86
72) Atrazine	10.23	200	11098	2.46211 ppb		96
73) Pentachlorophenol	10.36	266	7741	2.51880 ppb		98
74) Phenanthrene	10.59	178	103714	4.66133 ppb		100
75) Anthracene	10.66	178	106832	4.59326 ppb		100
76) Carbazol	10.84	167	97952	4.62553 ppb		96
77) Di-n-butylphthalate	11.25	149	129031	4.45598 ppb		99
78) 2-Nitrodiphenylamine	11.42	167	13059	1.98255 ppb		90
79) Fluoranthene	11.98	202	117296	4.50081 ppb		99
81) Benzidine	12.14	184	40456	5.29189 ppb		98
82) Pyrene	12.24	202	123613	5.50514 ppb		99
84) Butyl benzylphthalate	13.00	149	60635	5.38961 ppb		84
85) 3,3'-Dichlorobenzidine	13.61	252	41891	5.42858 ppb		97
86) Benz (a) anthracene	13.65	228	129610	5.29914 ppb		99
87) Bis (2-ethylhexyl) phthala	13.66	149	96081	5.11117 ppb		97
88) Chrysene	13.68	228	117620	5.52948 ppb		98
89) Di-n-octylphthalate	14.41	149	146932	5.29512 ppb		94
91) Benzo (b) fluoranthene	14.94	252	122331	4.52617 ppb		99
92) Benzo (k) fluoranthene	14.97	252	116734	4.79047 ppb		99
93) Benzo (a) pyrene	15.40	252	112984	4.71025 ppb		99
94) Indeno (1,2,3-cd) pyrene	17.32	276	131399	4.69925 ppb		100
95) Dibenz (a,h) anthracene	17.36	278	116553	4.67918 ppb		98
96) Benzo (g,h,i) perylene	17.88	276	105710	4.81125 ppb		98

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

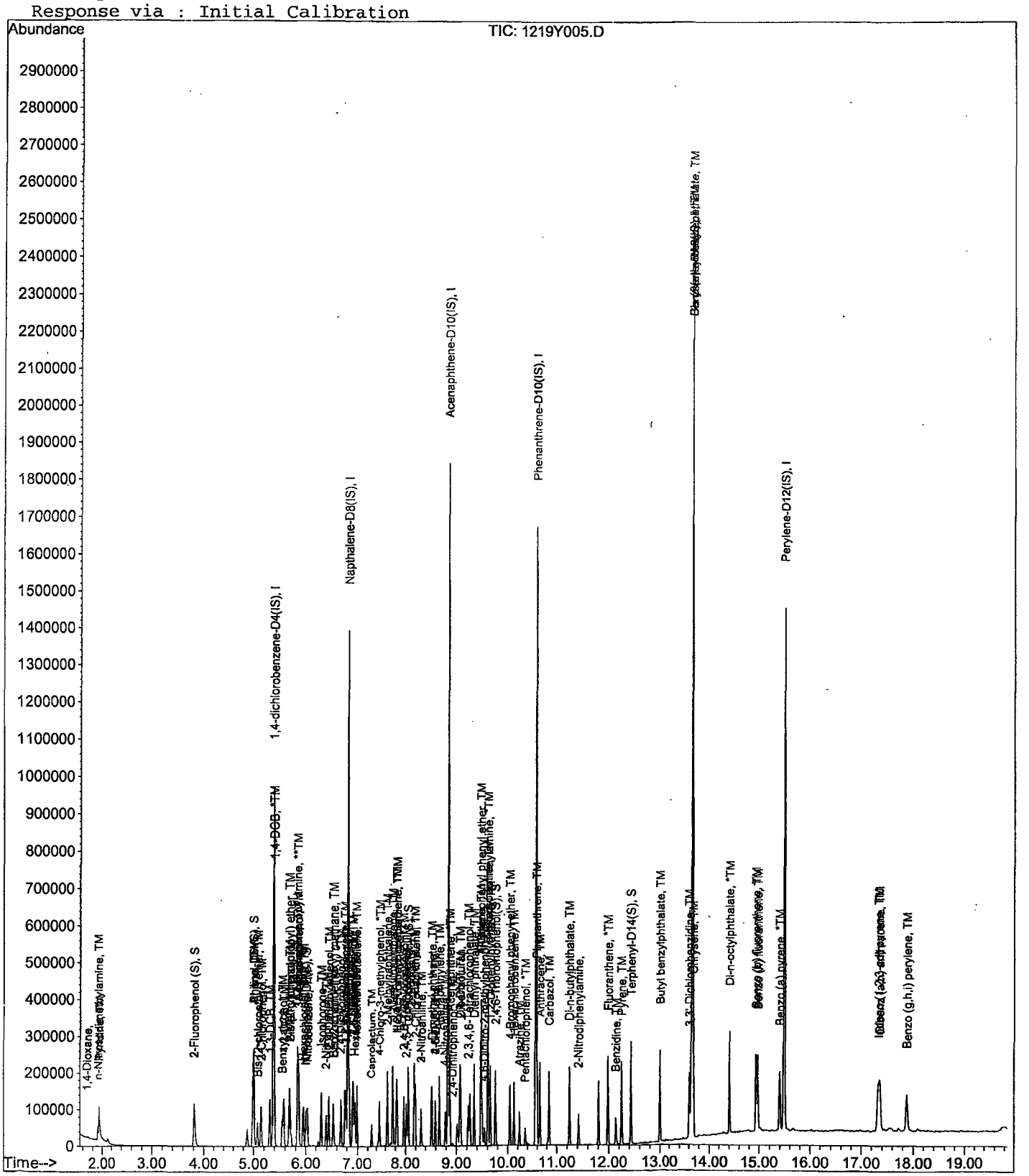
Data File : M:\YODA\DATA\Y191219\1219Y005.D
Acq On : 19 Dec 19 10:01
Sample : 5ug/ml 8270 11/21/19
Misc :

Vial: 5
Operator: MA,SS
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 20 12:40 2019

Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y006.D Vial: 6
Acq On : 19 Dec 19 10:28 Operator: MA,SS
Sample : 10ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.38	152	160128	40.00000 ppb		0.00
21) Napthalene-D8(IS)	6.82	136	678749	40.00000 ppb		0.00
41) Acenaphthene-D10(IS)	8.84	164	424690	40.00000 ppb		0.00
65) Phenanthrene-D10(IS)	10.57	188	801834	40.00000 ppb		0.00
80) Chrysene-D12(IS)	13.66	240	780754	40.00000 ppb		0.00
90) Perylene-D12(IS)	15.49	264	843433	40.00000 ppb		0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.81	112	114683	19.54005 ppb		0.00
Spiked Amount 200.000			Recovery =	9.770%		
6) Phenol-D6 (S)	4.99	99	140612	18.80428 ppb		0.00
Spiked Amount 200.000			Recovery =	9.402%		
22) Nitrobenzene-D5(S)	6.00	82	82528	9.77692 ppb		0.00
Spiked Amount 100.000			Recovery =	9.777%		
46) 2-Fluorobiphenyl(S)	8.05	172	143294	9.13627 ppb		0.00
Spiked Amount 100.000			Recovery =	9.136%		
64) 2,4,6-Tribromophenol(S)	9.76	330	43913	16.63783 ppb		0.00
Spiked Amount 200.000			Recovery =	8.319%		
83) Terphenyl-D14(S)	12.42	244	190140	10.21278 ppb		0.00
Spiked Amount 100.000			Recovery =	10.213%		
Target Compounds						Qvalue
2) 1,4-Dioxane	1.68	58	2566	1.06435		52
3) n-Nitrosodimethylamine	1.91	42	42801	9.57329 ppb		97
4) Pyridine	1.93	79	110941	10.71212 ppb		94
7) Phenol	5.00	94	84538	9.57975 ppb	#	63
8) Aniline	5.00	93	55616	9.65744 ppb		99
9) Bis (2-chloroethyl) ether	5.08	63	41459	10.14139 ppb		88
10) 2-Chlorophenol	5.15	128	62253	10.01873 ppb		95
11) 1,3-DCB	5.31	146	70075	10.27713 ppb		100
12) 1,4-DCB	5.40	146	70537	10.10814 ppb		96
13) Benzyl alcohol	5.54	108	36507	9.97444 ppb		96
14) 1,2-DCB	5.57	146	66098	10.18031 ppb		98
15) 2-Methylphenol	5.68	107	52416	9.66701 ppb		97
16) Bis (2-chloroisopropyl) et	5.68	45	53318	9.88979 ppb		97
17) Acetophenone	5.83	105	89316	9.66428 ppb		99
18) 3&4-Methylphenol	5.85	107	137362	19.26310 ppb		99
19) n-Nitrosodi-n-propylamine	5.83	70	56624	9.52602 ppb		91
20) Hexachloroethane	5.95	117	29197	10.03784 ppb		91
23) Nitrobenzene	6.03	77	87342	9.98385 ppb		97
24) Isophorone	6.30	82	136764	9.90854 ppb		95
25) 2-Nitrophenol	6.38	139	34642	9.75163 ppb		93
26) 2,4-Dimethylphenol	6.44	122	56086	9.86663 ppb		99
27) Benzoic acid	6.56	105	31884	10.06729 ppb		97
28) Bis (2-chloroethoxy) metha	6.54	93	70309	9.81509 ppb		96
29) 2,4-Dichlorophenol	6.67	162	53758	9.69907 ppb		96
30) 1,2,4-Trichlorobenzene	6.75	180	60558	9.79569 ppb		98
31) 3,4-Dimethylphenol	6.78	107	95265	10.07404 ppb		96
32) Naphthalene	6.85	128	181256	9.81486 ppb		99
33) 4-Chloroaniline	6.90	127	75779	10.20513 ppb		99
34) 2,6-Dichlorophenol	6.92	162	52155	9.60512 ppb		94
35) Hexachloropropene	6.94	213	50541	9.44812 ppb		98
36) Hexachlorobutadiene	6.98	225	41688	9.94005 ppb		97
37) Caprolactum	7.29	55	24764	9.95531 ppb		100

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

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y006.D Vial: 6
Acq On : 19 Dec 19 10:28 Operator: MA,SS
Sample : 10ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.47	107	63915	9.71453	ppb		93
39)	2-Methylnaphthalene	7.63	142	121988	9.81498	ppb		99
40)	1-Methylnaphthalene	7.75	142	126080	9.75534	ppb		99
42)	Hexachlorocyclopentadiene	7.82	237	26368	8.82866	ppb		96
43)	1,2,4,5-Tetrachlorobenzene	7.83	216	63033	9.31753	ppb		97
44)	2,4,6-Trichlorophenol	7.97	196	42547	9.60622	ppb		98
45)	2,4,5-Trichlorophenol	8.01	196	45140	9.39716	ppb		97
47)	1,1'-Biphenyl	8.17	154	154500	9.37969	ppb		96
48)	2-Chloronaphthalene	8.19	162	126872	9.57760	ppb		97
49)	2-Nitroaniline	8.31	65	48463	9.63517	ppb		99
50)	Dimethyl phthalate	8.52	163	155090	9.55148	ppb		98
51)	2,6-DNT	8.59	165	32770	9.25374	ppb	#	70
52)	Acenaphthylene	8.67	152	192011	9.41448	ppb		99
53)	3-Nitroaniline	8.31	138	40201	9.56360	ppb		97
54)	Acenaphthene	8.88	154	120735	9.46384	ppb		97
55)	2,4-Dinitrophenol	8.92	184	8250	10.11323	ppb		88
56)	4-Nitrophenol	8.59	65	3263	9.85915	ppb	#	77
57)	Dibenzofuran	9.07	168	178082	9.19022	ppb		96
58)	2,4-DNT	9.06	165	47326	9.08984	ppb		90
59)	2,3,4,6-Tetrachlorophenol	9.23	232	33746	9.26230	ppb		98
60)	Diethyl phthalate	9.34	149	162823	9.67901	ppb		98
61)	4-Chlorophenyl phenyl ethe	9.47	204	78878	8.46834	ppb		92
62)	Fluorene	9.47	166	144714	8.77864	ppb		99
63)	4-Nitroaniline	8.78	138	34976	9.98551	ppb		86
66)	4,6-Dinitro-2-methylphenol	9.54	198	24792	7.93070	ppb	#	66
67)	Diphenyl amine	9.61	169	235673	18.05492	ppb		99
68)	n-Nitrosodiphenylamine	9.61	169	235673	18.05492	ppb		99
69)	1,2-Diphenylhydrazine	9.66	77	185037	9.80181	ppb		98
70)	4-Bromophenyl phenyl ether	10.05	248	46172	9.39474	ppb		84
71)	Hexachlorobenzene	10.12	284	47111	9.47534	ppb		96
72)	Atrazine	10.23	200	22903	5.10929	ppb		98
73)	Pentachlorophenol	10.35	266	20850	6.82194	ppb		98
74)	Phenanthrene	10.59	178	212082	9.58474	ppb		99
75)	Anthracene	10.66	178	222026	9.59905	ppb		100
76)	Carbazol	10.85	167	200728	9.53149	ppb		99
77)	Di-n-butylphthalate	11.24	149	265654	9.22507	ppb		99
78)	2-Nitrodiphenylamine	11.42	167	29937	4.57011	ppb		96
79)	Fluoranthene	11.99	202	244432	9.43127	ppb		99
81)	Benzidine	12.14	184	79841	10.02007	ppb		98
82)	Pyrene	12.25	202	252604	10.79348	ppb		100
84)	Butyl benzylphthalate	13.00	149	125700	10.71979	ppb		83
85)	3,3'-Dichlorobenzidine	13.61	252	90819	11.29169	ppb		98
86)	Benz (a) anthracene	13.65	228	268781	10.54344	ppb		99
87)	Bis (2-ethylhexyl) phthala	13.66	149	199052	10.15935	ppb		96
88)	Chrysene	13.69	228	234598	10.58142	ppb		100
89)	Di-n-octylphthalate	14.41	149	312547	10.80666	ppb		97
91)	Benzo (b) fluoranthene	14.94	252	250643	9.09830	ppb		99
92)	Benzo (k) fluoranthene	14.98	252	241683	9.73053	ppb		98
93)	Benzo (a) pyrene	15.40	252	232116	9.49384	ppb		98
94)	Indeno (1,2,3-cd) pyrene	17.32	276	269635	9.46070	ppb		99
95)	Dibenz (a,h) anthracene	17.36	278	239335	9.42677	ppb		98
96)	Benzo (g,h,i) perylene	17.88	276	217021	9.69067	ppb		98

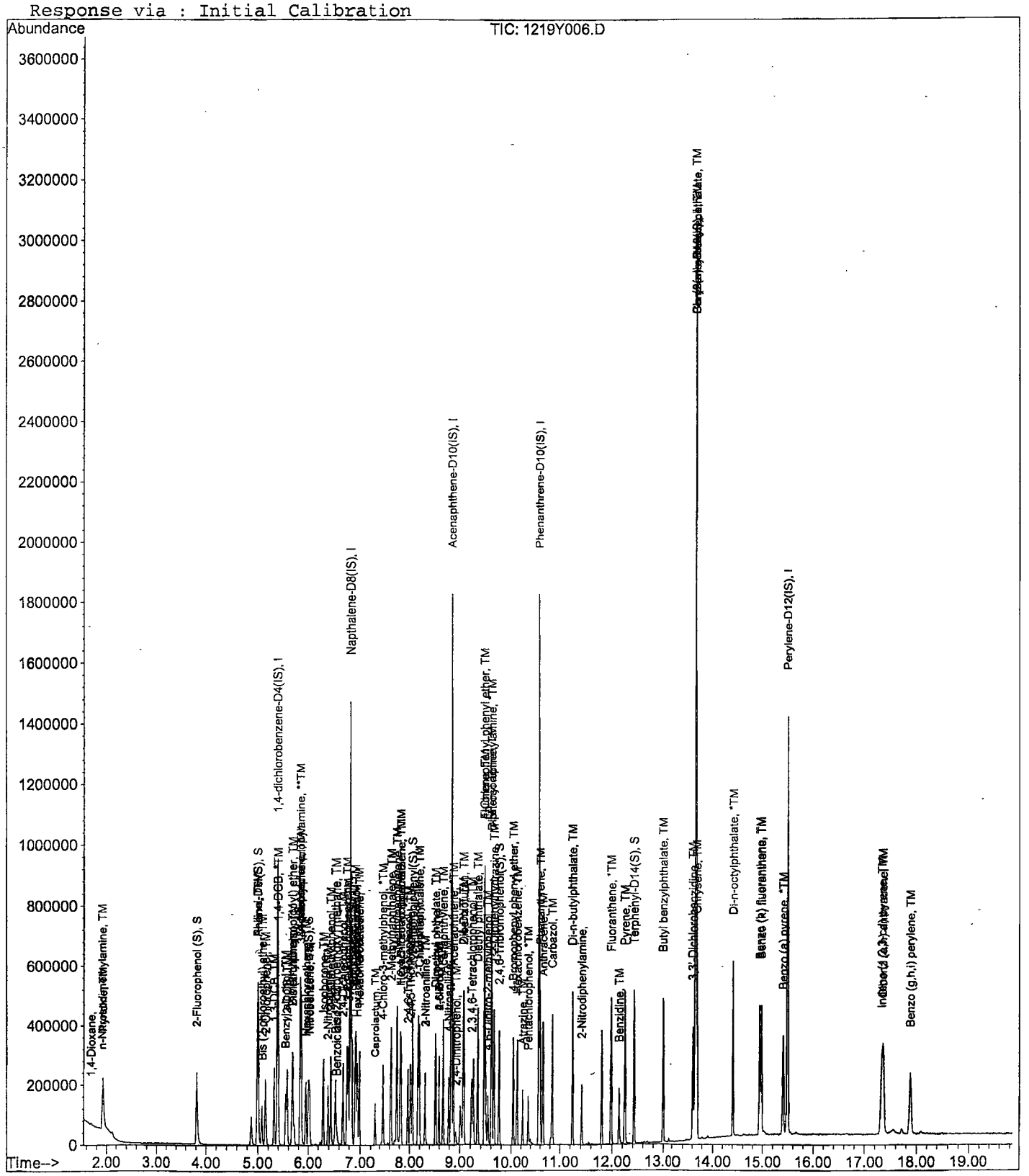
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y006.D Vial: 6
Acq On : 19 Dec 19 10:28 Operator: MA,SS
Sample : 10ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y007.D Vial: 7
Acq On : 19 Dec 19 10:56 Operator: MA,SS
Sample : 20ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.38	152	194747	40.00000	ppb		0.00
21) Napthalene-D8(IS)	6.82	136	781182	40.00000	ppb		0.00
41) Acenaphthene-D10(IS)	8.84	164	473595	40.00000	ppb		0.00
65) Phenanthrene-D10(IS)	10.57	188	902012	40.00000	ppb		0.00
80) Chrysene-D12(IS)	13.66	240	912227	40.00000	ppb		0.00
90) Perylene-D12(IS)	15.49	264	942777	40.00000	ppb		0.00
System Monitoring Compounds							
5) 2-Fluorophenol (S)	3.82	112	253075	35.45459	ppb		0.00
Spiked Amount 200.000			Recovery = 17.728%				
6) Phenol-D6 (S)	4.99	99	314450	34.57661	ppb		-0.01
Spiked Amount 200.000			Recovery = 17.289%				
22) Nitrobenzene-D5(S)	6.01	82	185338	19.07753	ppb		0.00
Spiked Amount 100.000			Recovery = 19.078%				
46) 2-Fluorobiphenyl(S)	8.06	172	323480	18.49496	ppb		0.00
Spiked Amount 100.000			Recovery = 18.495%				
64) 2,4,6-Tribromophenol(S)	9.77	330	100215	34.04876	ppb		0.00
Spiked Amount 200.000			Recovery = 17.025%				
83) Terphenyl-D14(S)	12.43	244	426966	19.62795	ppb		0.00
Spiked Amount 100.000			Recovery = 19.628%				
Target Compounds							Qvalue
2) 1,4-Dioxane	1.68	58	5479	1.86864			96
3) n-Nitrosodimethylamine	1.90	42	92263	16.96802	ppb		95
4) Pyridine	1.92	79	233730	18.55642	ppb		98
7) Phenol	5.00	94	187775	17.49592	ppb	#	74
8) Aniline	5.00	93	138944	19.83804	ppb	#	95
9) Bis (2-chloroethyl) ether	5.08	63	90085	18.11872	ppb		96
10) 2-Chlorophenol	5.14	128	135911	17.98472	ppb		92
11) 1,3-DCB	5.31	146	146244	17.63531	ppb		97
12) 1,4-DCB	5.39	146	151686	17.87295	ppb		97
13) Benzyl alcohol	5.54	108	78697	17.67939	ppb		99
14) 1,2-DCB	5.57	146	139110	17.61682	ppb		99
15) 2-Methylphenol	5.68	107	115359	17.49348	ppb		97
16) Bis (2-chloroisopropyl) et	5.69	45	115311	17.58653	ppb	#	78
17) Acetophenone	5.83	105	201308	17.91010	ppb		98
18) 3&4-Methylphenol	5.85	107	300091	34.60262	ppb		97
19) n-Nitrosodi-n-propylamine	5.84	70	126055	17.43683	ppb		98
20) Hexachloroethane	5.95	117	64312	18.17985	ppb		94
23) Nitrobenzene	6.03	77	185983	18.47162	ppb		95
24) Isophorone	6.29	82	294453	18.53577	ppb		99
25) 2-Nitrophenol	6.39	139	76958	18.82282	ppb		95
26) 2,4-Dimethylphenol	6.44	122	120904	18.48043	ppb		97
27) Benzoic acid	6.55	105	91223	18.97597	ppb		98
28) Bis (2-chloroethoxy) metha	6.54	93	152615	18.51133	ppb		98
29) 2,4-Dichlorophenol	6.67	162	117474	18.41559	ppb		95
30) 1,2,4-Trichlorobenzene	6.76	180	128436	18.05125	ppb		99
31) 3,4-Dimethylphenol	6.78	107	204008	18.74452	ppb		98
32) Naphthalene	6.84	128	390776	18.38554	ppb		99
33) 4-Chloroaniline	6.91	127	162474	19.01124	ppb		96
34) 2,6-Dichlorophenol	6.92	162	114733	18.35913	ppb		98
35) Hexachloropropene	6.94	213	112998	18.35394	ppb		99
36) Hexachlorobutadiene	6.98	225	87981	18.22735	ppb		99
37) Caprolactum	7.31	55	53587	18.71761	ppb		97

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

Data File : M:\YODA\DATA\Y191219\1219Y007.D Vial: 7
Acq On : 19 Dec 19 10:56 Operator: MA,SS
Sample : 20ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.47	107	137771	18.19424	ppb		96
39)	2-Methylnaphthalene	7.63	142	260607	18.21862	ppb		100
40)	1-Methylnaphthalene	7.74	142	264522	17.78341	ppb		98
42)	Hexachlorocyclopentadiene	7.82	237	85296	18.35365	ppb		100
43)	1,2,4,5-Tetrachlorobenzene	7.83	216	133618	17.71181	ppb		96
44)	2,4,6-Trichlorophenol	7.97	196	90696	18.36271	ppb		100
45)	2,4,5-Trichlorophenol	8.02	196	98112	18.31564	ppb		96
47)	1,1'-Biphenyl	8.17	154	335661	18.27366	ppb		98
48)	2-Chloronaphthalene	8.20	162	272066	18.41748	ppb		97
49)	2-Nitroaniline	8.31	65	106234	18.93990	ppb		92
50)	Dimethyl phthalate	8.52	163	333975	18.44445	ppb		99
51)	2,6-DNT	8.60	165	74351	18.82750	ppb		86
52)	Acenaphthylene	8.68	152	420370	18.48275	ppb		100
53)	3-Nitroaniline	8.32	138	87497	18.66563	ppb		95
54)	Acenaphthene	8.87	154	255265	17.94281	ppb		98
55)	2,4-Dinitrophenol	8.92	184	29356	17.54041	ppb		89
56)	4-Nitrophenol	8.60	65	6688	18.12107	ppb		98
57)	Dibenzofuran	9.08	168	385855	17.85643	ppb		100
58)	2,4-DNT	9.07	165	105670	18.20007	ppb		87
59)	2,3,4,6-Tetrachlorophenol	9.23	232	74261	18.27773	ppb	#	91
60)	Diethyl phthalate	9.35	149	348940	18.60076	ppb		97
61)	4-Chlorophenyl phenyl ethe	9.48	204	176280	16.97111	ppb		98
62)	Fluorene	9.48	166	322306	17.53276	ppb		98
63)	4-Nitroaniline	8.79	138	74412	19.05057	ppb		97
66)	4,6-Dinitro-2-methylphenol	9.54	198	60050	17.07595	ppb		84
67)	Diphenyl amine	9.62	169	511426	34.82898	ppb		100
68)	n-Nitrosodiphenylamine	9.62	169	511426	34.82898	ppb		100
69)	1,2-Diphenylhydrazine	9.66	77	390616	18.39374	ppb		94
70)	4-Bromophenyl phenyl ether	10.04	248	100768	18.22640	ppb		94
71)	Hexachlorobenzene	10.13	284	99643	17.81524	ppb		93
72)	Atrazine	10.24	200	45987	9.11959	ppb		96
73)	Pentachlorophenol	10.36	266	52653	15.31431	ppb		98
74)	Phenanthrene	10.60	178	454835	18.27270	ppb		99
75)	Anthracene	10.66	178	477063	18.33464	ppb		99
76)	Carbazol	10.85	167	430950	18.19081	ppb		98
77)	Di-n-butylphthalate	11.25	149	590040	18.21407	ppb		99
78)	2-Nitrodiphenylamine	11.42	167	68173	9.25129	ppb		92
79)	Fluoranthene	11.98	202	523700	17.96250	ppb		98
81)	Benzidine	12.14	184	180875	19.42829	ppb		98
82)	Pyrene	12.25	202	546244	19.97649	ppb		99
84)	Butyl benzylphthalate	13.00	149	275238	20.08958	ppb		92
85)	3,3'-Dichlorobenzidine	13.61	252	192045	20.43603	ppb		98
86)	Benz (a) anthracene	13.65	228	571831	19.19829	ppb		99
87)	Bis (2-ethylhexyl) phthala	13.66	149	447267	19.53789	ppb		98
88)	Chrysene	13.69	228	522873	20.18493	ppb		100
89)	Di-n-octylphthalate	14.41	149	670387	19.83868	ppb	#	92
91)	Benzo (b) fluoranthene	14.94	252	580450	18.84998	ppb		99
92)	Benzo (k) fluoranthene	14.98	252	493722	17.78340	ppb		99
93)	Benzo (a) pyrene	15.40	252	504143	18.44727	ppb		98
94)	Indeno (1,2,3-cd) pyrene	17.33	276	588328	18.46750	ppb		99
95)	Dibenz (a,h) anthracene	17.37	278	521335	18.37025	ppb		99
96)	Benzo (g,h,i) perylene	17.90	276	472757	18.88564	ppb		99

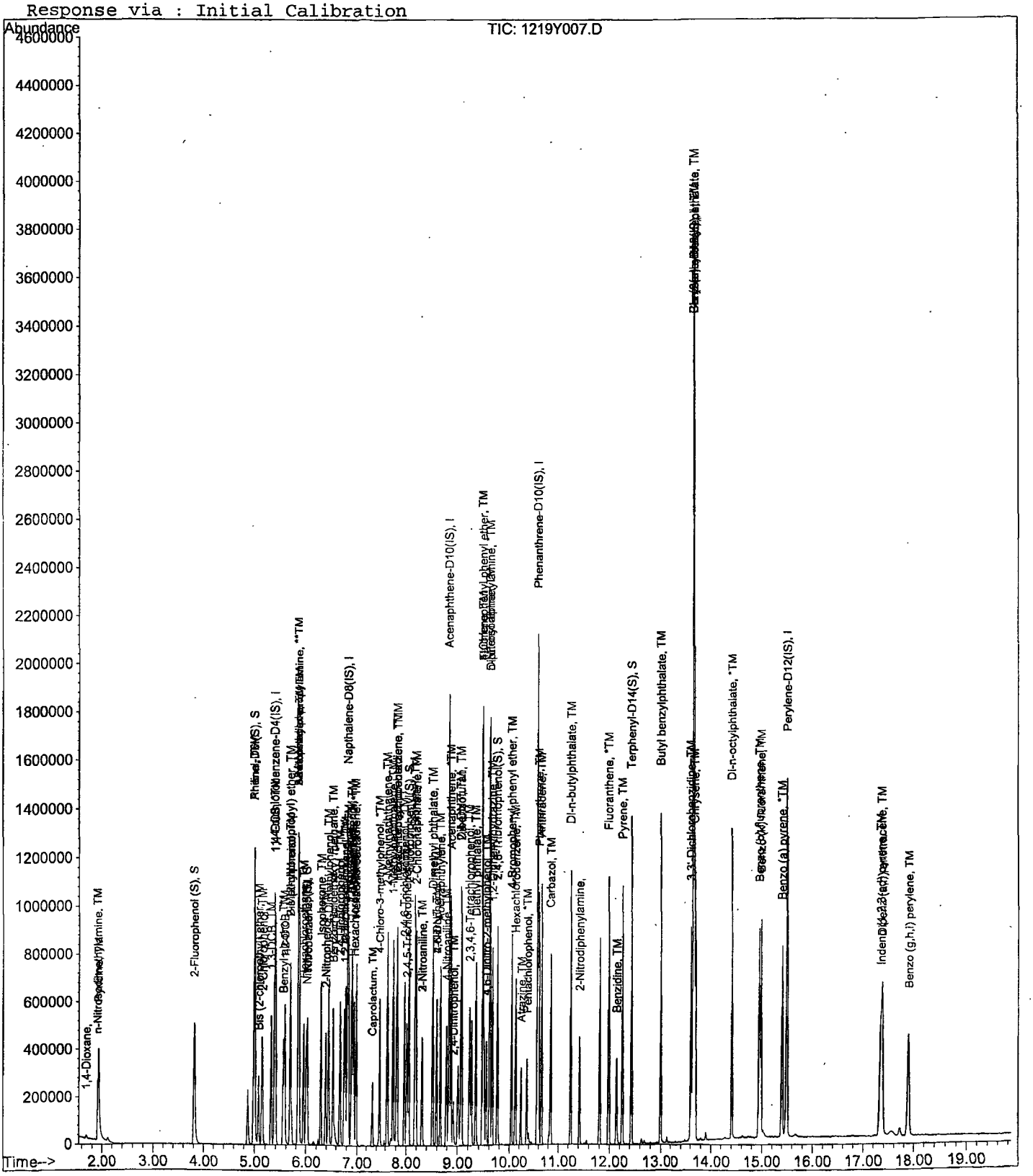
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y007.D Vial: 7
Acq On : 19 Dec 19 10:56 Operator: MA,SS
Sample : 20ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y008.D Vial: 8
Acq On : 19 Dec 19 11:24 Operator: MA,SS
Sample : 40ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.38	152	182216	40.00000 ppb		0.00
21) Napthalene-D8(IS)	6.82	136	710542	40.00000 ppb		0.00
41) Acenaphthene-D10(IS)	8.84	164	434485	40.00000 ppb		0.00
65) Phenanthrene-D10(IS)	10.58	188	813606	40.00000 ppb		0.00
80) Chrysene-D12(IS)	13.66	240	894163	40.00000 ppb		0.00
90) Perylene-D12(IS)	15.49	264	870632	40.00000 ppb		0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.82	112	480507	71.94609 ppb		0.00
Spiked Amount 200.000			Recovery = 35.973%			
6) Phenol-D6 (S)	5.00	99	600312	70.54921 ppb		0.00
Spiked Amount 200.000			Recovery = 35.275%			
22) Nitrobenzene-D5(S)	6.01	82	335277	37.94232 ppb		0.00
Spiked Amount 100.000			Recovery = 37.942%			
46) 2-Fluorobiphenyl(S)	8.06	172	596646	37.18391 ppb		0.00
Spiked Amount 100.000			Recovery = 37.184%			
64) 2,4,6-Tribromophenol(S)	9.77	330	201973	74.79872 ppb		0.00
Spiked Amount 200.000			Recovery = 37.400%			
83) Terphenyl-D14(S)	12.43	244	814625	38.20548 ppb		0.00
Spiked Amount 100.000			Recovery = 38.205%			
Target Compounds						Qvalue
3) n-Nitrosodimethylamine	1.91	42	188163	36.98470 ppb		96
4) Pyridine	1.93	79	440907	37.41201 ppb		99
7) Phenol	5.01	94	371632	37.00806 ppb		79
8) Aniline	5.01	93	258560	39.45523 ppb	#	91
9) Bis (2-chloroethyl) ether	5.08	63	174139	37.43306 ppb		97
10) 2-Chlorophenol	5.15	128	262410	37.11194 ppb		94
11) 1,3-DCB	5.31	146	288290	37.15515 ppb		99
12) 1,4-DCB	5.40	146	297071	37.41064 ppb		98
13) Benzyl alcohol	5.55	108	154077	36.99399 ppb		97
14) 1,2-DCB	5.57	146	270886	36.66402 ppb		100
15) 2-Methylphenol	5.69	107	228108	36.97000 ppb		98
16) Bis (2-chloroisopropyl) et	5.69	45	226589	36.93453 ppb	#	78
17) Acetophenone	5.83	105	393243	37.39230 ppb		98
18) 3&4-Methylphenol	5.85	107	593695	73.16504 ppb		97
19) n-Nitrosodi-n-propylamine	5.84	70	248031	36.66888 ppb		97
20) Hexachloroethane	5.95	117	122615	37.04471 ppb		94
23) Nitrobenzene	6.03	77	359196	39.22163 ppb		95
24) Isophorone	6.30	82	565650	39.14758 ppb		98
25) 2-Nitrophenol	6.39	139	147502	39.66353 ppb		93
26) 2,4-Dimethylphenol	6.45	122	229476	38.56303 ppb		98
27) Benzoic acid	6.58	105	202255	40.40161 ppb		99
28) Bis (2-chloroethoxy) metha	6.54	93	292655	39.02644 ppb		98
29) 2,4-Dichlorophenol	6.67	162	227943	39.28553 ppb		96
30) 1,2,4-Trichlorobenzene	6.75	180	254586	39.33847 ppb		96
31) 3,4-Dimethylphenol	6.78	107	383358	38.72525 ppb		98
32) Naphthalene	6.85	128	749802	38.78445 ppb		100
33) 4-Chloroaniline	6.91	127	308474	39.68328 ppb		97
34) 2,6-Dichlorophenol	6.92	162	219445	38.60574 ppb		97
35) Hexachloropropene	6.95	213	221138	39.48974 ppb		99
36) Hexachlorobutadiene	6.99	225	170617	38.86148 ppb		100
37) Caprolactum	7.32	55	100984	38.77985 ppb		95
38) 4-Chloro-3-methylphenol	7.48	107	271819	39.46556 ppb		95

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

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y008.D Vial: 8
Acq On : 19 Dec 19 11:24 Operator: MA,SS
Sample : 40ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	2-Methylnaphthalene	7.63	142	502608	38.62970	ppb		99
40)	1-Methylnaphthalene	7.75	142	521546	38.54859	ppb		98
42)	Hexachlorocyclopentadiene	7.82	237	176384	36.58253	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.83	216	268214	38.75357	ppb		97
44)	2,4,6-Trichlorophenol	7.97	196	176195	38.88432	ppb		99
45)	2,4,5-Trichlorophenol	8.02	196	192075	39.08438	ppb		94
47)	1,1'-Biphenyl	8.17	154	649127	38.52004	ppb		98
48)	2-Chloronaphthalene	8.20	162	521946	38.51358	ppb		97
49)	2-Nitroaniline	8.31	65	200138	38.89341	ppb		95
50)	Dimethyl phthalate	8.53	163	640502	38.55712	ppb		99
51)	2,6-DNT	8.60	165	142948	39.45629	ppb		86
52)	Acenaphthylene	8.67	152	814666	39.04333	ppb		99
53)	3-Nitroaniline	8.32	138	168892	39.27271	ppb		93
54)	Acenaphthene	8.88	154	504832	38.67929	ppb		99
55)	2,4-Dinitrophenol	8.92	184	74846	36.78536	ppb		86
56)	4-Nitrophenol	8.60	65	13109	38.71590	ppb		95
57)	Dibenzofuran	9.08	168	753264	37.99707	ppb		98
58)	2,4-DNT	9.07	165	207839	39.01941	ppb		89
59)	2,3,4,6-Tetrachlorophenol	9.23	232	147125	39.47119	ppb		94
60)	Diethyl phthalate	9.35	149	671228	39.00159	ppb		98
61)	4-Chlorophenyl phenyl ethe	9.47	204	352091	36.94829	ppb		88
62)	Fluorene	9.48	166	641030	38.00953	ppb		98
63)	4-Nitroaniline	8.79	138	141770	39.56230	ppb		88
66)	4,6-Dinitro-2-methylphenol	9.56	198	122593	38.64878	ppb		99
67)	Diphenyl amine	9.62	169	1020591	77.05626	ppb		100
68)	n-Nitrosodiphenylamine	9.62	169	1020591	77.05626	ppb		100
69)	1,2-Diphenylhydrazine	9.66	77	751770	39.24670	ppb		94
70)	4-Bromophenyl phenyl ether	10.05	248	199129	39.93106	ppb		88
71)	Hexachlorobenzene	10.12	284	196806	39.01049	ppb	#	84
72)	Atrazine	10.24	200	89439	19.66371	ppb		99
73)	Pentachlorophenol	10.35	266	112272	36.20294	ppb		96
74)	Phenanthrene	10.60	178	877664	39.09087	ppb		99
75)	Anthracene	10.66	178	919645	39.18457	ppb		99
76)	Carbazol	10.85	167	830000	38.84199	ppb		98
77)	Di-n-butylphthalate	11.25	149	1156611	39.58322	ppb		98
78)	2-Nitrodiphenylamine	11.42	167	137354	20.66472	ppb		92
79)	Fluoranthene	11.99	202	1038608	39.49426	ppb		98
81)	Benzidine	12.14	184	334522	36.65784	ppb		99
82)	Pyrene	12.26	202	1083004	40.40627	ppb		100
84)	Butyl benzylphthalate	13.00	149	541594	40.32946	ppb		87
85)	3,3'-Dichlorobenzidine	13.61	252	372475	40.43680	ppb		100
86)	Benz (a) anthracene	13.65	228	1137597	38.96454	ppb		99
87)	Bis (2-ethylhexyl) phthala	13.66	149	880088	39.22141	ppb		97
88)	Chrysene	13.69	228	1034971	40.76106	ppb		99
89)	Di-n-octylphthalate	14.41	149	1322580	39.92965	ppb		97
91)	Benzo (b) fluoranthene	14.95	252	1137431	39.99867	ppb		98
92)	Benzo (k) fluoranthene	14.99	252	981428	38.27939	ppb		98
93)	Benzo (a) pyrene	15.40	252	980057	38.83327	ppb		98
94)	Indeno (1,2,3-cd) pyrene	17.34	276	1157206	39.33449	ppb		99
95)	Dibenz (a,h) anthracene	17.37	278	1022289	39.00732	ppb		98
96)	Benzo (g,h,i) perylene	17.91	276	908299	39.29134	ppb		98

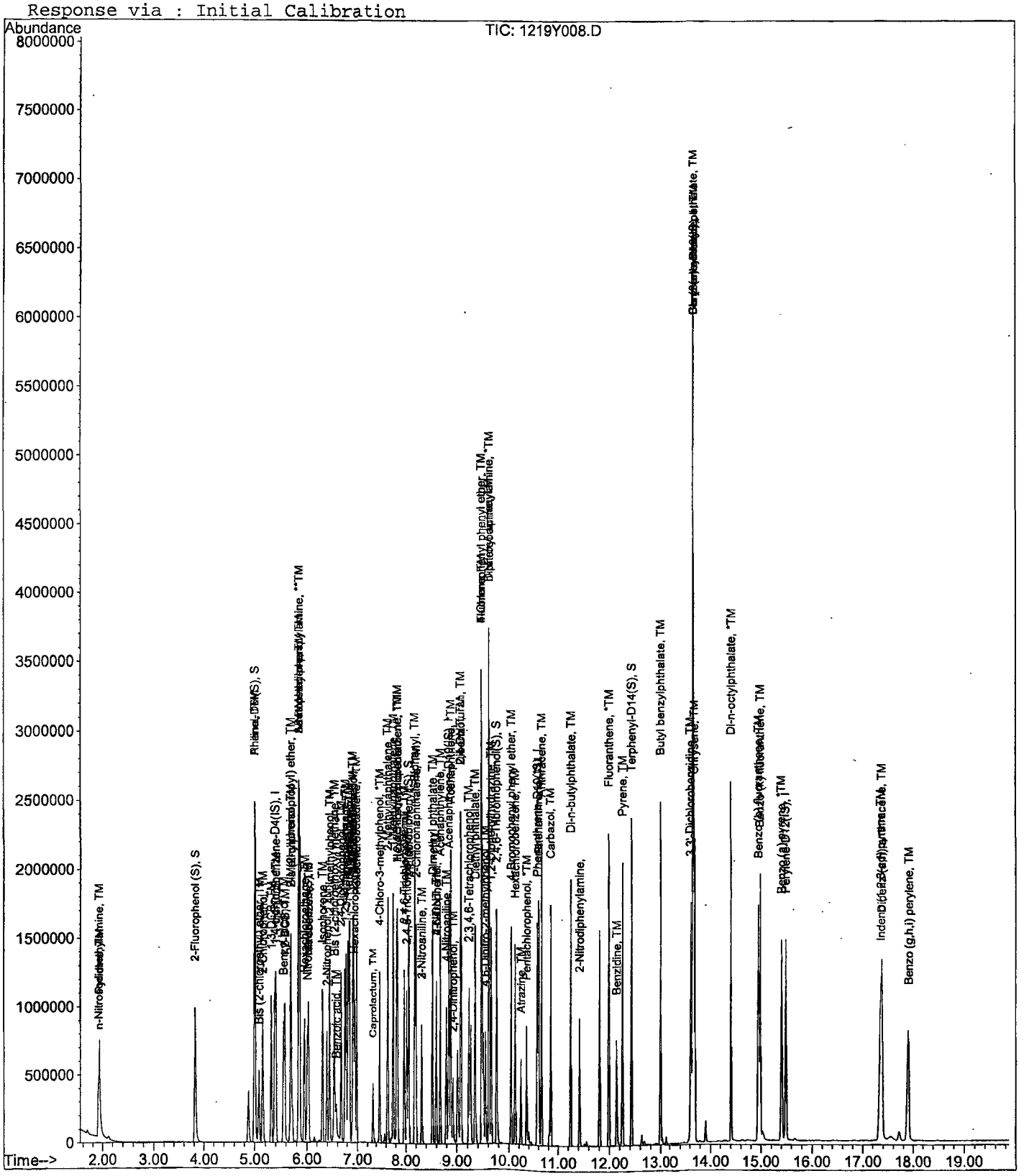
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y008.D Vial: 8
Acq On : 19 Dec 19 11:24 Operator: MA,SS
Sample : 40ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y009.D Vial: 9
Acq On : 19 Dec 19 11:51 Operator: MA,SS
Sample : 60ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.38	152	160953	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.82	136	685348	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.84	164	424996	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.57	188	796514	40.00000 ppb	0.00
80) Chrysene-D12(IS)	13.67	240	1005038	40.00000 ppb	0.00
90) Perylene-D12(IS)	15.49	264	865168	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.82	112	753971	127.80550 ppb	0.00
Spiked Amount 200.000			Recovery =	63.903%	
6) Phenol-D6 (S)	5.00	99	965746	128.48885 ppb	0.00
Spiked Amount 200.000			Recovery =	64.245%	
22) Nitrobenzene-D5(S)	6.01	82	517338	60.69782 ppb	0.00
Spiked Amount 100.000			Recovery =	60.698%	
46) 2-Fluorobiphenyl(S)	8.06	172	952099	60.66112 ppb	0.00
Spiked Amount 100.000			Recovery =	60.661%	
64) 2,4,6-Tribromophenol(S)	9.77	330	330216	125.02270 ppb	0.00
Spiked Amount 200.000			Recovery =	62.512%	
83) Terphenyl-D14(S)	12.43	244	1317552	54.97558 ppb	0.00
Spiked Amount 100.000			Recovery =	54.976%	
Target Compounds					Qvalue
3) n-Nitrosodimethylamine	1.91	42	292234	65.02884 ppb	100
4) Pyridine	1.92	79	684285	65.73377 ppb	98
7) Phenol	5.02	94	596449	67.24251 ppb	95
8) Aniline	5.01	93	400896	69.25679 ppb	95
9) Bis (2-chloroethyl) ether	5.09	63	270061	65.72167 ppb	94
10) 2-Chlorophenol	5.15	128	411267	65.84829 ppb	99
11) 1,3-DCB	5.31	146	444136	64.80266 ppb	98
12) 1,4-DCB	5.40	146	459470	65.50576 ppb	96
13) Benzyl alcohol	5.54	108	241965	65.77083 ppb	97
14) 1,2-DCB	5.57	146	428400	65.64329 ppb	99
15) 2-Methylphenol	5.68	107	361008	66.23892 ppb	99
16) Bis (2-chloroisopropyl) et	5.69	45	356163	65.72491 ppb	99
17) Acetophenone	5.84	105	617676	66.49198 ppb	99
18) 3&4-Methylphenol	5.86	107	952694	132.91717 ppb	99
19) n-Nitrosodi-n-propylamine	5.85	70	402101	67.29988 ppb	98
20) Hexachloroethane	5.95	117	190409	65.12647 ppb	97
23) Nitrobenzene	6.04	77	557986	63.16784 ppb	99
24) Isophorone	6.31	82	872286	62.58851 ppb	99
25) 2-Nitrophenol	6.39	139	230690	64.31331 ppb	99
26) 2,4-Dimethylphenol	6.44	122	359953	62.71309 ppb	100
27) Benzoic acid	6.60	105	293487	58.72692 ppb	99
28) Bis (2-chloroethoxy) metha	6.55	93	457869	63.30278 ppb	97
29) 2,4-Dichlorophenol	6.68	162	357701	63.91535 ppb	100
30) 1,2,4-Trichlorobenzene	6.76	180	400374	64.13977 ppb	98
31) 3,4-Dimethylphenol	6.79	107	600730	62.91404 ppb	100
32) Naphthalene	6.84	128	1176746	63.10625 ppb	99
33) 4-Chloroaniline	6.91	127	471729	62.91587 ppb	98
34) 2,6-Dichlorophenol	6.92	162	349158	63.68349 ppb	98
35) Hexachloropropene	6.95	213	349669	64.73761 ppb	100
36) Hexachlorobutadiene	6.98	225	268805	63.47650 ppb	100
37) Caprolactum	7.34	55	155158	61.77408 ppb	97
38) 4-Chloro-3-methylphenol	7.48	107	426464	64.19474 ppb	100

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

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y009.D Vial: 9
Acq On : 19 Dec 19 11:51 Operator: MA,SS
Sample : 60ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	2-Methylnaphthalene	7.63	142	793770	63.25069	ppb		99
40)	1-Methylnaphthalene	7.75	142	832076	63.76134	ppb		100
42)	Hexachlorocyclopentadiene	7.82	237	306752	62.07183	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.84	216	425660	62.87574	ppb		99
44)	2,4,6-Trichlorophenol	7.97	196	281816	63.58234	ppb		98
45)	2,4,5-Trichlorophenol	8.02	196	301154	62.64854	ppb		97
47)	1,1'-Biphenyl	8.18	154	1027471	62.33279	ppb		97
48)	2-Chloronaphthalene	8.20	162	825988	62.30917	ppb		99
49)	2-Nitroaniline	8.32	65	317213	63.02131	ppb		100
50)	Dimethyl phthalate	8.53	163	1013833	62.39365	ppb		99
51)	2,6-DNT	8.61	165	226254	63.84462	ppb		99
52)	Acenaphthylene	8.68	152	1289574	63.18347	ppb		100
53)	3-Nitroaniline	8.32	138	266968	63.46450	ppb		100
54)	Acenaphthene	8.89	154	800171	62.67644	ppb		100
55)	2,4-Dinitrophenol	8.93	184	126506	58.66929	ppb	#	78
56)	4-Nitrophenol	8.60	65	20413	61.63346	ppb		97
57)	Dibenzofuran	9.08	168	1226638	63.25710	ppb		99
58)	2,4-DNT	9.07	165	335087	64.31335	ppb		96
59)	2,3,4,6-Tetrachlorophenol	9.24	232	239911	65.80120	ppb		99
60)	Diethyl phthalate	9.35	149	1040635	61.81596	ppb		99
61)	4-Chlorophenyl phenyl ethe	9.48	204	587260	63.00279	ppb		99
62)	Fluorene	9.48	166	1063405	64.46185	ppb		99
63)	4-Nitroaniline	8.80	138	220693	62.96160	ppb		95
66)	4,6-Dinitro-2-methylphenol	9.56	198	198681	63.98043	ppb		99
67)	Diphenyl amine	9.63	169	1652863	127.47170	ppb		100
68)	n-Nitrosodiphenylamine	9.63	169	1652863	127.47170	ppb		100
69)	1,2-Diphenylhydrazine	9.67	77	1183313	63.10133	ppb		99
70)	4-Bromophenyl phenyl ether	10.05	248	310984	63.69937	ppb		97
71)	Hexachlorobenzene	10.13	284	320014	64.79369	ppb		100
72)	Atrazine	10.24	200	138142	31.02308	ppb		96
73)	Pentachlorophenol	10.36	266	186384	61.39058	ppb		99
74)	Phenanthrene	10.60	178	1384259	62.97746	ppb		99
75)	Anthracene	10.66	178	1445744	62.92265	ppb		99
76)	Carbazol	10.85	167	1323037	63.24352	ppb		99
77)	Di-n-butylphthalate	11.25	149	1860030	65.02262	ppb		99
78)	2-Nitrodiphenylamine	11.42	167	216308	33.24157	ppb		91
79)	Fluoranthene	11.99	202	1641246	63.74949	ppb		99
81)	Benzidine	12.14	184	513732	50.08562	ppb		99
82)	Pyrene	12.25	202	1718860	57.05497	ppb		100
84)	Butyl benzylphthalate	13.00	149	861484	57.07291	ppb		96
85)	3,3'-Dichlorobenzidine	13.62	252	573326	55.37523	ppb		98
86)	Benz (a) anthracene	13.65	228	1901953	57.95823	ppb		100
87)	Bis (2-ethylhexyl) phthala	13.67	149	1500100	59.47733	ppb		99
88)	Chrysene	13.69	228	1612879	56.51364	ppb		100
89)	Di-n-octylphthalate	14.41	149	2164466	58.13779	ppb	#	89
91)	Benzo (b) fluoranthene	14.96	252	1834489	64.91869	ppb		99
92)	Benzo (k) fluoranthene	14.99	252	1524121	59.82190	ppb		99
93)	Benzo (a) pyrene	15.41	252	1574220	62.77002	ppb		98
94)	Indeno (1,2,3-cd) pyrene	17.36	276	1835591	62.78747	ppb		99
95)	Dibenz (a,h) anthracene	17.39	278	1644729	63.15402	ppb		99
96)	Benzo (g,h,i) perylene	17.92	276	1423801	61.97998	ppb		98

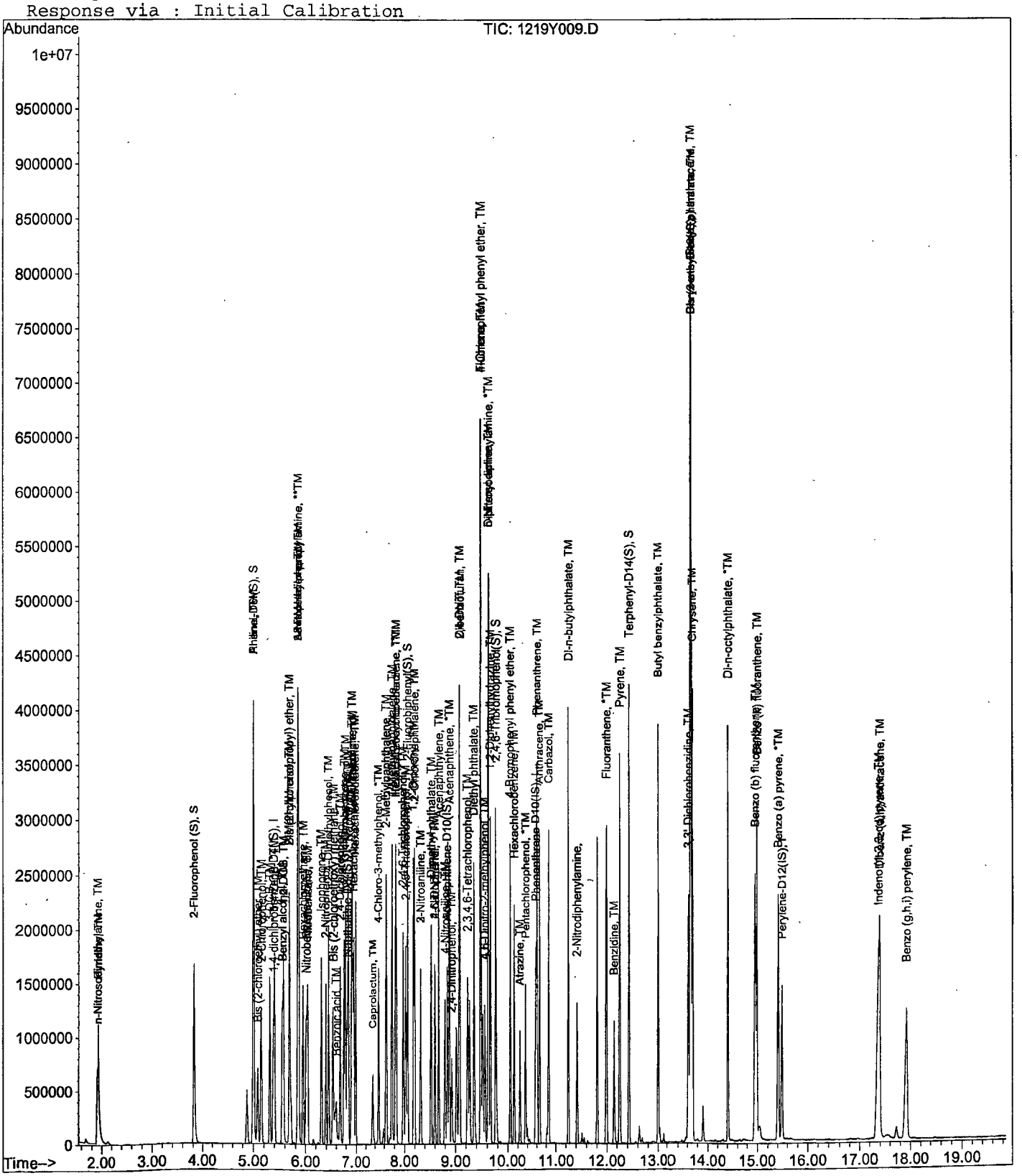
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y009.D Vial: 9
Acq On : 19 Dec 19 11:51 Operator: MA,SS
Sample : 60ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y010.D Vial: 10
Acq On : 19 Dec 19 12:19 Operator: MA,SS
Sample : 80ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.38	152	160754	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.83	136	692959	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.84	164	424996	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.58	188	805372	40.00000 ppb	0.00
80) Chrysene-D12(IS)	13.67	240	1113628	40.00000 ppb	0.00
90) Perylene-D12(IS)	15.49	264	871956	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.82	112	1075001	182.44881 ppb	0.00
Spiked Amount 200.000			Recovery =	91.225%	
6) Phenol-D6 (S)	5.01	99	1420883	189.27713 ppb	0.01
Spiked Amount 200.000			Recovery =	94.638%	
22) Nitrobenzene-D5(S)	6.02	82	726169	84.26361 ppb	0.01
Spiked Amount 100.000			Recovery =	84.264%	
46) 2-Fluorobiphenyl(S)	8.06	172	1352303	86.15933 ppb	0.00
Spiked Amount 100.000			Recovery =	86.159%	
64) 2,4,6-Tribromophenol(S)	9.78	330	496073	187.81763 ppb	0.01
Spiked Amount 200.000			Recovery =	93.909%	
83) Terphenyl-D14(S)	12.43	244	1883191	70.91511 ppb	0.00
Spiked Amount 100.000			Recovery =	70.915%	
Target Compounds					Qvalue
3) n-Nitrosodimethylamine	1.91	42	401885	89.53944 ppb	99
4) Pyridine	1.93	79	934760	89.90605 ppb	98
7) Phenol	5.02	94	839274	94.73526 ppb	88
8) Aniline	5.01	93	498688	86.25749 ppb	85
9) Bis (2-chloroethyl) ether	5.09	63	369777	90.09981 ppb	97
10) 2-Chlorophenol	5.16	128	564852	90.55087 ppb	97
11) 1,3-DCB	5.31	146	617727	90.24242 ppb	99
12) 1,4-DCB	5.41	146	635798	90.75672 ppb	96
13) Benzyl alcohol	5.55	108	342328	93.16664 ppb	96
14) 1,2-DCB	5.57	146	592153	90.84732 ppb	100
15) 2-Methylphenol	5.69	107	504104	92.60913 ppb	99
16) Bis (2-chloroisopropyl) et	5.69	45	497984	92.00976 ppb	91
17) Acetophenone	5.85	105	867366	93.48636 ppb	88
18) 3&4-Methylphenol	5.87	107	1364847	190.65532 ppb	96
19) n-Nitrosodi-n-propylamine	5.85	70	570874	95.66579 ppb	96
20) Hexachloroethane	5.95	117	268399	91.91539 ppb	98
23) Nitrobenzene	6.04	77	764484	85.59428 ppb	97
24) Isophorone	6.32	82	1217808	86.42078 ppb	99
25) 2-Nitrophenol	6.39	139	319613	88.12521 ppb	99
26) 2,4-Dimethylphenol	6.45	122	504451	86.92306 ppb	97
27) Benzoic acid	6.62	105	419869	81.40378 ppb	98
28) Bis (2-chloroethoxy) metha	6.55	93	640818	87.62335 ppb	98
29) 2,4-Dichlorophenol	6.68	162	502883	88.87008 ppb	99
30) 1,2,4-Trichlorobenzene	6.76	180	558246	88.44856 ppb	99
31) 3,4-Dimethylphenol	6.79	107	839926	86.99873 ppb	99
32) Naphthalene	6.84	128	1644894	87.24311 ppb	100
33) 4-Chloroaniline	6.92	127	636919	84.01473 ppb	94
34) 2,6-Dichlorophenol	6.93	162	502385	90.62439 ppb	94
35) Hexachloropropene	6.95	213	488764	89.49574 ppb	100
36) Hexachlorobutadiene	6.98	225	378957	88.50528 ppb	99
37) Caprolactum	7.36	55	217497	85.64244 ppb	97
38) 4-Chloro-3-methylphenol	7.49	107	599365	89.23025 ppb	95

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

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y010.D Vial: 10
Acq On : 19 Dec 19 12:19 Operator: MA,SS
Sample : 80ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	2-Methylnaphthalene	7.63	142	1113998	87.79274	ppb		100
40)	1-Methylnaphthalene	7.75	142	1172330	88.84806	ppb		99
42)	Hexachlorocyclopentadiene	7.82	237	428800	85.24955	ppb		98
43)	1,2,4,5-Tetrachlorobenzene	7.84	216	615504	90.91826	ppb		100
44)	2,4,6-Trichlorophenol	7.97	196	393255	88.72482	ppb		100
45)	2,4,5-Trichlorophenol	8.02	196	421934	87.77419	ppb		97
47)	1,1'-Biphenyl	8.18	154	1475278	89.49955	ppb		97
48)	2-Chloronaphthalene	8.20	162	1174670	88.61232	ppb		99
49)	2-Nitroaniline	8.32	65	442197	87.85212	ppb		97
50)	Dimethyl phthalate	8.53	163	1419958	87.38754	ppb		100
51)	2,6-DNT	8.61	165	321665	90.76781	ppb		90
52)	Acenaphthylene	8.68	152	1796603	88.02567	ppb		100
53)	3-Nitroaniline	8.32	138	365367	86.85624	ppb		96
54)	Acenaphthene	8.89	154	1132422	88.70127	ppb		100
55)	2,4-Dinitrophenol	8.93	184	181951	81.43622	ppb		87
56)	4-Nitrophenol	8.61	65	28530	86.14131	ppb		100
57)	Dibenzofuran	9.08	168	1771319	91.34602	ppb		99
58)	2,4-DNT	9.08	165	492992	94.62011	ppb		89
59)	2,3,4,6-Tetrachlorophenol	9.24	232	331804	91.00501	ppb		99
60)	Diethyl phthalate	9.36	149	1448375	86.03660	ppb		97
61)	4-Chlorophenyl phenyl ethe	9.48	204	883654	94.80072	ppb		99
62)	Fluorene	9.48	166	1569501	95.14055	ppb		100
63)	4-Nitroaniline	8.80	138	289183	82.50114	ppb		92
66)	4,6-Dinitro-2-methylphenol	9.56	198	286670	91.29983	ppb	#	77
67)	Diphenyl amine	9.63	169	2378602	181.42435	ppb		100
68)	n-Nitrosodiphenylamine	9.63	169	2378602	181.42435	ppb		100
69)	1,2-Diphenylhydrazine	9.67	77	1671934	88.17691	ppb		99
70)	4-Bromophenyl phenyl ether	10.05	248	446909	90.53429	ppb		96
71)	Hexachlorobenzene	10.13	284	447867	89.68291	ppb		96
72)	Atrazine	10.25	200	193291	42.93067	ppb		99
73)	Pentachlorophenol	10.36	266	272701	88.83349	ppb		100
74)	Phenanthrene	10.60	178	1957324	88.06988	ppb		100
75)	Anthracene	10.67	178	2064260	88.85398	ppb		100
76)	Carbazol	10.85	167	1880718	88.91287	ppb		99
77)	Di-n-butylphthalate	11.25	149	2576769	89.08752	ppb		99
78)	2-Nitrodiphenylamine	11.43	167	300682	45.69969	ppb		97
79)	Fluoranthene	12.00	202	2372919	91.15549	ppb		99
81)	Benzidine	12.14	184	645213	56.77039	ppb		100
82)	Pyrene	12.26	202	2459441	73.67696	ppb		100
84)	Butyl benzylphthalate	13.00	149	1236168	73.90991	ppb		99
85)	3,3'-Dichlorobenzidine	13.62	252	786783	68.58216	ppb		100
86)	Benz (a) anthracene	13.66	228	2811632	77.32433	ppb		100
87)	Bis (2-ethylhexyl) phthala	13.67	149	2233399	79.91714	ppb		98
88)	Chrysene	13.69	228	2371032	74.97755	ppb		100
89)	Di-n-octylphthalate	14.42	149	3105415	75.27828	ppb		100
91)	Benzo (b) fluoranthene	14.96	252	2455809	86.22935	ppb		99
92)	Benzo (k) fluoranthene	14.99	252	2306290	89.81741	ppb		99
93)	Benzo (a) pyrene	15.42	252	2209159	87.40166	ppb		99
94)	Indeno (1,2,3-cd) pyrene	17.37	276	2551188	86.58555	ppb		98
95)	Dibenz (a,h) anthracene	17.41	278	2321142	88.43297	ppb		99
96)	Benzo (g,h,i) perylene	17.94	276	1961989	84.74315	ppb		99

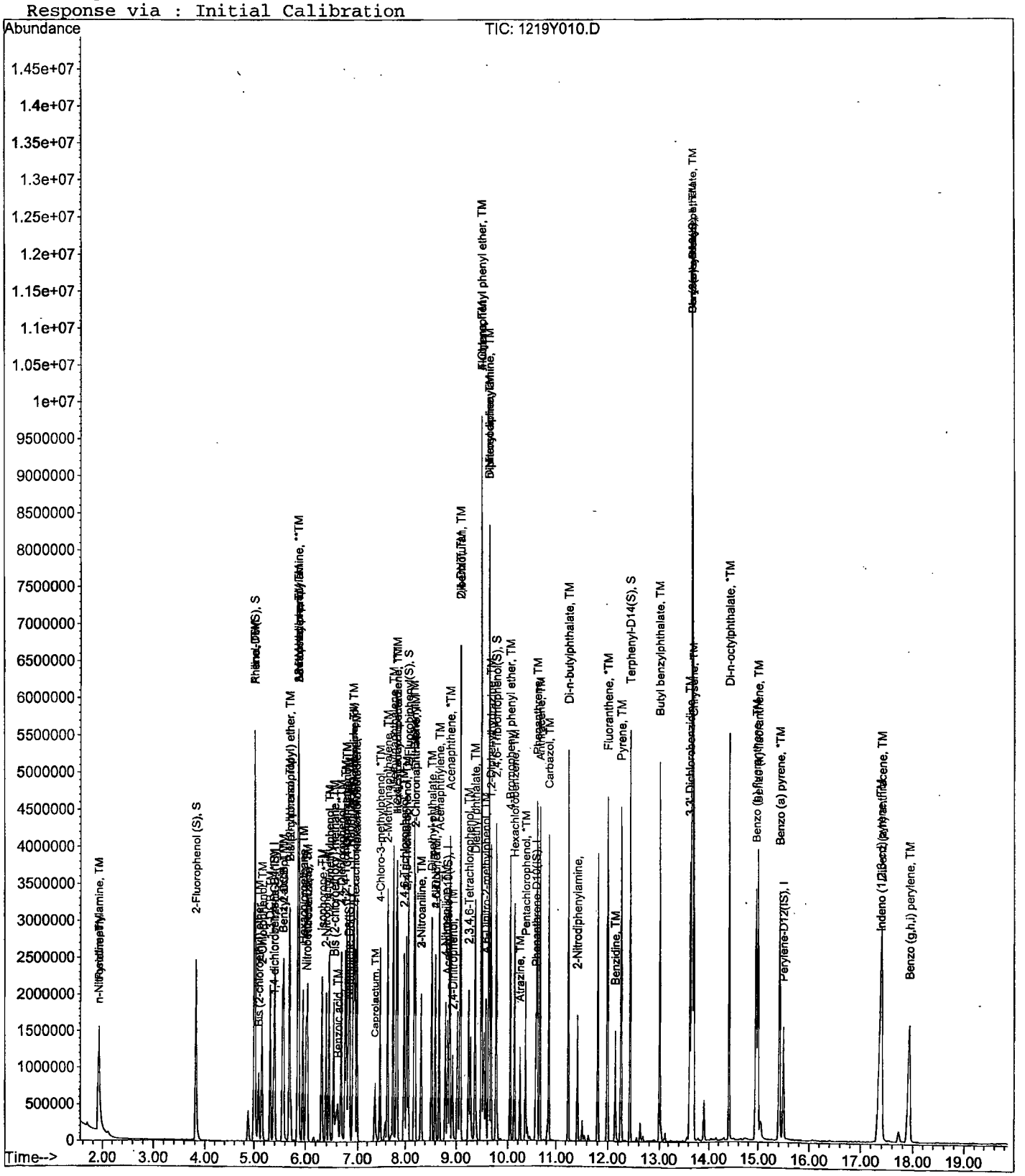
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y010.D Vial: 10
Acq On : 19 Dec 19 12:19 Operator: MA,SS
Sample : 80ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y011.D Vial: 11
Acq On : 19 Dec 19 12:46 Operator: MA,SS
Sample : 100ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.39	152	167721	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.82	136	690825	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.85	164	415501	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.57	188	801375	40.00000 ppb	0.00
80) Chrysene-D12(IS)	13.66	240	1091847	40.00000 ppb	0.00
90) Perylene-D12(IS)	15.49	264	847047	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.83	112	1327145	215.88621 ppb	0.00
Spiked Amount 200.000			Recovery	= 107.943%	
6) Phenol-D6 (S)	5.00	99	1768177	225.75631 ppb	0.00
Spiked Amount 200.000			Recovery	= 112.878%	
22) Nitrobenzene-D5(S)	6.02	82	888862	103.46088 ppb	0.00
Spiked Amount 100.000			Recovery	= 103.461%	
46) 2-Fluorobiphenyl(S)	8.06	172	1696969	110.58977 ppb	0.00
Spiked Amount 100.000			Recovery	= 110.590%	
64) 2,4,6-Tribromophenol(S)	9.78	330	649730	251.61496 ppb	0.00
Spiked Amount 200.000			Recovery	= 125.808%	
83) Terphenyl-D14(S)	12.44	244	2470353	94.88156 ppb	0.00
Spiked Amount 100.000			Recovery	= 94.882%	
Target Compounds					Qvalue
3) n-Nitrosodimethylamine	1.90	42	444670	94.95651 ppb	93
4) Pyridine	1.92	79	1054326	97.19369 ppb	99
7) Phenol	5.02	94	975068	105.49142 ppb	96
8) Aniline	5.01	93	532480	88.27659 ppb	97
9) Bis (2-chloroethyl) ether	5.09	63	422559	98.68376 ppb	98
10) 2-Chlorophenol	5.15	128	643242	98.83407 ppb	96
11) 1,3-DCB	5.32	146	705388	98.76806 ppb	98
12) 1,4-DCB	5.40	146	726887	99.44911 ppb	97
13) Benzyl alcohol	5.55	108	388291	101.28607 ppb	99
14) 1,2-DCB	5.57	146	689593	101.40173 ppb	99
15) 2-Methylphenol	5.69	107	576392	101.49063 ppb	99
16) Bis (2-chloroisopropyl) et	5.69	45	566462	100.31448 ppb	80
17) Acetophenone	5.85	105	992228	102.50184 ppb	98
18) 3&4-Methylphenol	5.87	107	1564530	209.47066 ppb	100
19) n-Nitrosodi-n-propylamine	5.86	70	649091	104.25487 ppb	100
20) Hexachloroethane	5.95	117	306272	100.52845 ppb	93
23) Nitrobenzene	6.04	77	875644	98.34300 ppb	93
24) Isophorone	6.31	82	1364800	97.15113 ppb	100
25) 2-Nitrophenol	6.40	139	362836	100.35190 ppb	90
26) 2,4-Dimethylphenol	6.45	122	582120	100.61623 ppb	97
27) Benzoic acid	6.63	105	476161	92.04260 ppb	97
28) Bis (2-chloroethoxy) metha	6.55	93	732731	100.50073 ppb	100
29) 2,4-Dichlorophenol	6.68	162	567413	100.58365 ppb	96
30) 1,2,4-Trichlorobenzene	6.76	180	635162	100.94600 ppb	98
31) 3,4-Dimethylphenol	6.80	107	956954	99.42657 ppb	97
32) Naphthalene	6.85	128	1900914	101.13354 ppb	100
33) 4-Chloroaniline	6.92	127	702041	92.89091 ppb	97
34) 2,6-Dichlorophenol	6.93	162	571198	103.35574 ppb	96
35) Hexachloropropene	6.94	213	564125	103.61389 ppb	100
36) Hexachlorobutadiene	6.99	225	434421	101.77230 ppb	99
37) Caprolactum	7.36	55	246611	97.40644 ppb	95
38) 4-Chloro-3-methylphenol	7.48	107	669864	100.03382 ppb	91

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

Data File : M:\YODA\DATA\Y191219\1219Y011.D Vial: 11
Acq On : 19 Dec 19 12:46 Operator: MA,SS
Sample : 100ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
39)	2-Methylnaphthalene	7.64	142	1291010	102.05711 ppb		99
40)	1-Methylnaphthalene	7.75	142	1334685	101.46501 ppb		100
42)	Hexachlorocyclopentadiene	7.82	237	423680	86.11588 ppb		100
43)	1,2,4,5-Tetrachlorobenzene	7.84	216	703291	106.25957 ppb		98
44)	2,4,6-Trichlorophenol	7.97	196	450783	104.02822 ppb		99
45)	2,4,5-Trichlorophenol	8.03	196	477360	101.57366 ppb		94
47)	1,1'-Biphenyl	8.18	154	1686770	104.66841 ppb		98
48)	2-Chloronaphthalene	8.21	162	1339298	103.33995 ppb		97
49)	2-Nitroaniline	8.33	65	495048	100.59966 ppb		91
50)	Dimethyl phthalate	8.53	163	1597157	100.53896 ppb		99
51)	2,6-DNT	8.61	165	360589	104.07665 ppb	#	75
52)	Acenaphthylene	8.68	152	2048709	102.67159 ppb		99
53)	3-Nitroaniline	8.33	138	418230	101.69501 ppb		96
54)	Acenaphthene	8.88	154	1288641	103.24434 ppb		99
55)	2,4-Dinitrophenol	8.93	184	208042	94.10192 ppb		96
56)	4-Nitrophenol	8.61	65	33255	102.70213 ppb		98
57)	Dibenzofuran	9.09	168	2035181	107.35164 ppb		93
58)	2,4-DNT	9.08	165	558092	109.56255 ppb		97
59)	2,3,4,6-Tetrachlorophenol	9.24	232	377431	105.88489 ppb		96
60)	Diethyl phthalate	9.36	149	1638573	99.55906 ppb		99
61)	4-Chlorophenyl phenyl ethe	9.48	204	1013272	111.19063 ppb		94
62)	Fluorene	9.49	166	1826006	113.21893 ppb		99
63)	4-Nitroaniline	8.80	138	325641	95.02525 ppb		82
66)	4,6-Dinitro-2-methylphenol	9.57	198	325138	104.06776 ppb		97
67)	Diphenyl amine	9.63	169	2746000	210.49174 ppb		100
68)	n-Nitrosodiphenylamine	9.63	169	2746000	210.49174 ppb		100
69)	1,2-Diphenylhydrazine	9.66	77	1846029	97.84419 ppb		96
70)	4-Bromophenyl phenyl ether	10.05	248	515407	104.93130 ppb		83
71)	Hexachlorobenzene	10.13	284	515422	103.72521 ppb		89
72)	Atrazine	10.25	200	217511	48.55098 ppb		96
73)	Pentachlorophenol	10.36	266	321253	105.17146 ppb		98
74)	Phenanthrene	10.60	178	2272938	102.78104 ppb		100
75)	Anthracene	10.67	178	2388824	103.33737 ppb		100
76)	Carbazol	10.86	167	2146142	101.96712 ppb		98
77)	Di-n-butylphthalate	11.26	149	3023885	105.06726 ppb		98
78)	2-Nitrodiphenylamine	11.43	167	350286	53.50438 ppb		97
79)	Fluoranthene	11.99	202	2652267	102.39480 ppb		98
81)	Benzidine	12.14	184	709638	63.68453 ppb		99
82)	Pyrene	12.26	202	2834840	86.61682 ppb		99
84)	Butyl benzylphthalate	13.01	149	1433320	87.40709 ppb	#	79
85)	3,3'-Dichlorobenzidine	13.62	252	875135	77.80538 ppb		99
86)	Benz (a) anthracene	13.66	228	3190283	89.48810 ppb		100
87)	Bis (2-ethylhexyl) phthala	13.66	149	2564215	93.58504 ppb		99
88)	Chrysene	13.70	228	2706844	87.30426 ppb		100
89)	Di-n-octylphthalate	14.42	149	3511144	86.81146 ppb		97
91)	Benzo (b) fluoranthene	14.95	252	2718531	98.26115 ppb		98
92)	Benzo (k) fluoranthene	15.00	252	2709650	108.62927 ppb		99
93)	Benzo (a) pyrene	15.42	252	2492274	101.50223 ppb		98
94)	Indeno (1,2,3-cd) pyrene	17.37	276	2878800	100.57766 ppb		100
95)	Dibenz (a,h) anthracene	17.40	278	2618904	102.71152 ppb		99
96)	Benzo (g,h,i) perylene	17.94	276	2213051	98.39806 ppb		100

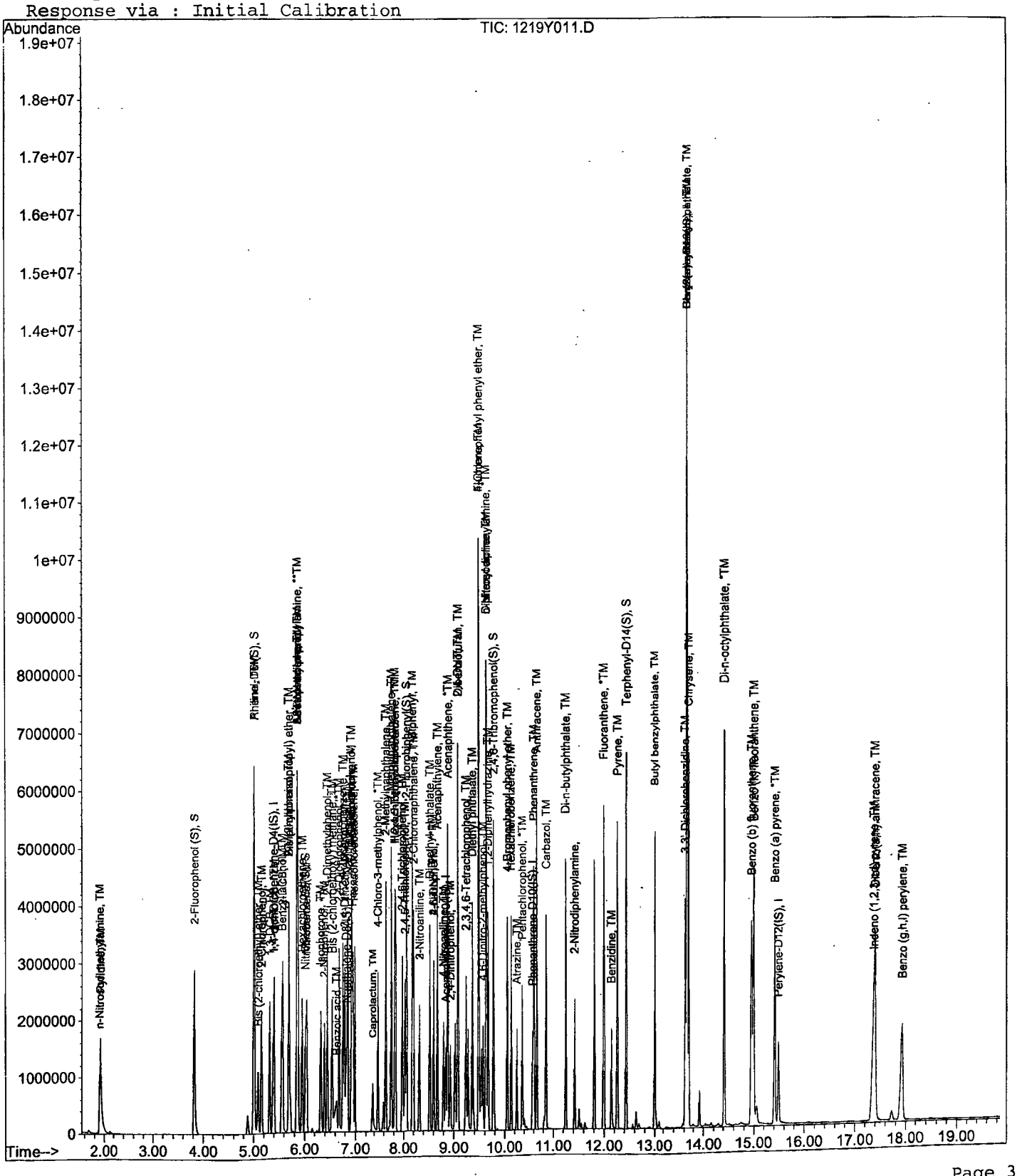
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y011.D Vial: 11
Acq On : 19 Dec 19 12:46 Operator: MA,SS
Sample : 100ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration



Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Second Source Calibration

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

SDG No:
Date Analyzed: 12/19/19
Instrument: Yoda
Initial Cal. Date: 12/19/19
Data File: 1219Y012.D

		Compound	MEAN	CCRF	%D		%Drift
1		1,4-Dioxane	0.6022	0.6376	5.9		
2	TM	n-Nitrosodimethylamine	1.117	1.180	5.6	TM	
3	TM	Pyridine	2.587	2.639	2.0	TM	
4	*TM	Phenol	2.204	2.243	1.7	*TM	
5	TM	Aniline	1.439	1.657	15	TM	
6	TM	Bis (2-chloroethyl) ether	1.021	1.080	5.7	TM	
7	TM	2-Chlorophenol	1.552	1.607	3.6	TM	
8	TM	1,3-DCB	1.703	1.753	2.9	TM	
9	*TM	1,4-DCB	1.743	1.793	2.8	*TM	
10	TM	Benzyl alcohol	0.9143	0.9743	6.6	TM	
11	TM	1,2-DCB	1.622	1.674	3.2	TM	
12	TM	2-Methylphenol	1.354	1.404	3.7	TM	
13	TM	Bis (2-chloroisopropyl) ether	1.347	1.393	3.4	TM	
14	TM	Acetophenone	2.309	2.421	4.9	TM	
15	TM	3&4-Methylphenol	1.781	1.810	1.6	TM	
16	**TM	n-Nitrosodi-n-propylamine	1.485	1.540	3.7	**TM	
17	TM	Hexachloroethane	0.7266	0.7587	4.4	TM	
18	TM	Nitrobenzene	0.5156	0.5309	3.0	TM	
19	TM	Isophorone	0.8134	0.8514	4.7	TM	
20	*TM	2-Nitrophenol	0.2094	0.2223	6.2	*TM	
21	TM	2,4-Dimethylphenol	0.3350	0.3505	4.6	TM	
22	TML	Benzoic acid	0.2307	0.3085	34	TML	6.6
23	TM	Bis (2-chloroethoxy) methane	0.4222	0.4476	6.0	TM	
24	*TM	2,4-Dichlorophenol	0.3266	0.3400	4.1	*TM	
25	TM	1,2,4-Trichlorobenzene	0.3643	0.3811	4.6	TM	
26	TM	3,4-Dimethylphenol	0.5573	0.5842	4.8	TM	
27	TM	Naphthalene	1.088	1.154	6.0	TM	
28	TM	4-Chloroaniline	0.4376	0.4640	6.0	TM	
29	TM	2,6-Dichlorophenol	0.3200	0.3394	6.1	TM	
30	TM	Hexachloropropene	0.3152	0.3339	5.9	TM	
31	*TM	Hexachlorobutadiene	0.2472	0.2560	3.6	*TM	
32	TM	Caprolactum	0.1466	0.1538	4.9	TM	
33	*TM	4-Chloro-3-methylphenol	0.3877	0.4161	7.3	*TM	
34	TM	2-Methylnaphthalene	0.7325	0.7990	9.1	TM	
35	TM	1-Methylnaphthalene	0.7616	0.7886	3.5	TM	
36	**TML	Hexachlorocyclopentadiene	0.3696	0.4521	22	**TML	1.1
37	TM	1,2,4,5-Tetrachlorobenzene	0.6372	0.6766	6.2	TM	
38	*TM	2,4,6-Trichlorophenol	0.4172	0.4464	7.0	*TM	
39	TM	2,4,5-Trichlorophenol	0.4524	0.4860	7.4	TM	
40	TM	1,1'-Biphenyl	1.551	1.646	6.1	TM	
		Average			6.2		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/19/19
Instrument: Yoda
Cal. Date: 12/19/19
Data File: 1219Y012.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	2-Chloronaphthalene	1.248	1.287	3.1	TM	
42	TM	2-Nitroaniline	0.4737	0.5330	13	TM	
43	TM	Dimethyl phthalate	1.529	1.612	5.4	TM	
44	TM	2,6-DNT	0.3335	0.3594	7.8	TM	
45	TM	Acenaphthylene	1.921	2.039	6.2	TM	
46	TM	3-Nitroaniline	0.3959	0.4440	12	TM	
47	*TM	Acenaphthene	1.202	1.272	5.8	*TM	
48	**TML	2,4-Dinitrophenol	0.1391	0.1930	39	**TML	2.4
49	**TM	4-Nitrophenol	0.0312	0.0331	6.3	**TM	
50	TM	Dibenzofuran	1.825	1.991	9.1	TM	
51	TM	2,4-DNT	0.4904	0.5209	6.2	TM	
52	TM	2,3,4,6-Tetrachlorophenol	0.3432	0.3772	9.9	TM	
53	TM	Diethyl phthalate	1.584	1.664	5.0	TM	
54	TM	4-Chlorophenyl phenyl ether	0.8773	0.8972	2.3	TM	
55	TM	Fluorene	1.553	1.642	5.8	TM	
56	TM	4-Nitroaniline	0.3299	0.3692	12	TM	
57	TM	4,6-Dinitro-2-methylphenol	0.1559	0.1668	7.0	TM	
58	TM	Diphenyl amine	0.6512	0.7094	8.9	TM	
59	*TM	n-Nitrosodiphenylamine	0.6512	0.7094	8.9	*TM	
60	TM	1,2-Diphenylhydrazine	0.9417	0.9917	5.3	TM	
61	TM	4-Bromophenyl phenyl ether	0.2452	0.2643	7.8	TM	
62	TM	Hexachlorobenzene	0.2480	0.2730	10	TM	
63	TM	Atrazine	0.2236	0.2354	5.3	TM	
64	*TM	Pentachlorophenol	0.1525	0.1514	0.68	*TM	
65	TM	Phenanthrene	1.104	1.206	9.2	TM	
66	TM	Anthracene	1.154	1.246	8.0	TM	
67	TM	Carbazol	1.051	1.136	8.1	TM	
68	TM	Di-n-butylphthalate	1.437	1.529	6.5	TM	
69		2-Nitrodiphenylamine	0.3268	0.3682	13		
70	*TM	Fluoranthene	1.293	1.392	7.7	*TM	
71	TM	Benzidine	0.4082	0.3716	9.0	TM	
72	TM	Pyrene	1.199	1.267	5.7	TM	
73	TM	Butyl benzylphthalate	0.6008	0.6332	5.4	TM	
74	TM	3,3'-Dichlorobenzidine	0.4121	0.4458	8.2	TM	
75	TM	Benz (a) anthracene	1.306	1.401	7.3	TM	
76	TM	Bis (2-ethylhexyl) phthalate	1.004	1.044	4.0	TM	
77	TM	Chrysene	1.136	1.200	5.6	TM	
78	*TM	Di-n-octylphthalate	1.482	1.554	4.8	*TM	
79	TM	Benzo (b) fluoranthene	1.306	1.367	4.6	TM	
80	TM	Benzo (k) fluoranthene	1.178	1.349	14	TM	
		Average			8.1		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/19/19
Instrument: Yoda
Cal. Date: 12/19/19
Data File: 1219Y012.D

		Compound	MEAN	CCRF	%D		%Drift
81	*TM	Benzo (a) pyrene	1.160	1.260	8.7	*TM	
82	TM	Indeno (1,2,3-cd) pyrene	1.352	1.394	3.1	TM	
83	TM	Dibenz (a,h) anthracene	1.204	1.302	8.1	TM	
84	TM	Benzo (g,h,i) perylene	1.062	1.208	14	TM	
85							
86							
87							
88							
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112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			8.5		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y012.D Vial: 12
Acq On : 19 Dec 19 13:14 Operator: MA,SS
Sample : SS 8270 11/22/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.38	152	154648	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.82	136	627218	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.84	164	380731	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.57	188	716758	40.00000 ppb	0.00
80) Chrysene-D12(IS)	13.66	240	829696	40.00000 ppb	0.00
90) Perylene-D12(IS)	15.48	264	760670	40.00000 ppb	-0.01
System Monitoring Compounds					
5) 2-Fluorophenol (S)	0.00	112	0	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
6) Phenol-D6 (S)	0.00	99	0	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
22) Nitrobenzene-D5(S)	5.95	82	52711	6.75760 ppb	-0.06
Spiked Amount 100.000			Recovery =	6.758%	
46) 2-Fluorobiphenyl(S)	8.02	172	554	0.03940 ppb	-0.04
Spiked Amount 100.000			Recovery =	0.039%	
64) 2,4,6-Tribromophenol(S)	0.00	330	0	0.00000 ppb	
Spiked Amount 200.000			Recovery =	0.000%	
83) Terphenyl-D14(S)	12.43	244	297	0.01501 ppb	0.00
Spiked Amount 100.000			Recovery =	0.015%	
Target Compounds					Qvalue
3) n-Nitrosodimethylamine	1.90	42	228024	52.80932 ppb	98
4) Pyridine	1.92	79	510199	51.00889 ppb	99
7) Phenol	5.00	94	433587	50.87467 ppb	79
8) Aniline	5.00	93	320384	57.60447 ppb #	92
9) Bis (2-chloroethyl) ether	5.08	63	208721	52.86493 ppb	99
10) 2-Chlorophenol	5.15	128	310728	51.77926 ppb	99
11) 1,3-DCB	5.31	146	338803	51.44923 ppb	98
12) 1,4-DCB	5.39	146	346514	51.41595 ppb	99
13) Benzyl alcohol	5.54	108	188349	53.28425 ppb	98
14) 1,2-DCB	5.57	146	323570	51.60169 ppb	98
15) 2-Methylphenol	5.68	107	271451	51.83733 ppb	99
16) Bis (2-chloroisopropyl) et	5.69	45	269286	51.71896 ppb	86
17) Acetophenone	5.84	105	467976	52.43085 ppb	97
18) 3&4-Methylphenol	5.86	107	699849	101.62178 ppb	99
19) n-Nitrosodi-n-propylamine	5.84	70	297756	51.86739 ppb	93
20) Hexachloroethane	5.95	117	146655	52.20615 ppb	96
23) Nitrobenzene	6.03	77	416218	51.48566 ppb	93
24) Isophorone	6.30	82	667515	52.33466 ppb	98
25) 2-Nitrophenol	6.39	139	174251	53.08111 ppb	98
26) 2,4-Dimethylphenol	6.44	122	274826	52.31942 ppb	99
27) Benzoic acid	6.58	105	241867	53.28837 ppb	98
28) Bis (2-chloroethoxy) metha	6.54	93	350898	53.00967 ppb	98
29) 2,4-Dichlorophenol	6.68	162	266533	52.03896 ppb	99
30) 1,2,4-Trichlorobenzene	6.76	180	298756	52.29628 ppb	100
31) 3,4-Dimethylphenol	6.79	107	458062	52.41857 ppb	99
32) Naphthalene	6.84	128	904563	53.00552 ppb	100
33) 4-Chloroaniline	6.91	127	363799	53.01781 ppb	98
34) 2,6-Dichlorophenol	6.92	162	266063	53.02515 ppb	98
35) Hexachloropropene	6.94	213	261770	52.95562 ppb	98
36) Hexachlorobutadiene	6.98	225	200685	51.78252 ppb	99
37) Caprolactum	7.32	55	120598	52.46442 ppb	93
38) 4-Chloro-3-methylphenol	7.47	107	326264	53.66349 ppb	90

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

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y012.D Vial: 12
Acq On : 19 Dec 19 13:14 Operator: MA,SS
Sample : SS 8270 11/22/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39) 2-Methylnaphthalene	7.63	142	626418	54.54154	ppb		99
40) 1-Methylnaphthalene	7.75	142	618310	51.77181	ppb		99
42) Hexachlorocyclopentadiene	7.82	237	215168	49.43015	ppb		99
43) 1,2,4,5-Tetrachlorobenzene	7.84	216	321980	53.09037	ppb		99
44) 2,4,6-Trichlorophenol	7.97	196	212425	53.49868	ppb		99
45) 2,4,5-Trichlorophenol	8.02	196	231296	53.71023	ppb		96
47) 1,1'-Biphenyl	8.17	154	783426	53.05320	ppb		99
48) 2-Chloronaphthalene	8.20	162	612398	51.56780	ppb		99
49) 2-Nitroaniline	8.32	65	253652	56.25244	ppb		98
50) Dimethyl phthalate	8.52	163	767054	52.69465	ppb		98
51) 2,6-DNT	8.60	165	171054	53.88004	ppb	#	66
52) Acenaphthylene	8.68	152	970447	53.07569	ppb		100
53) 3-Nitroaniline	8.32	138	211306	56.07253	ppb		99
54) Acenaphthene	8.87	154	605219	52.91767	ppb		99
55) 2,4-Dinitrophenol	8.92	184	91847	48.82234	ppb		96
56) 4-Nitrophenol	8.60	65	15775	53.16743	ppb		98
57) Dibenzofuran	9.08	168	947587	54.54797	ppb		100
58) 2,4-DNT	9.07	165	247899	53.11106	ppb		94
59) 2,3,4,6-Tetrachlorophenol	9.24	232	179532	54.96575	ppb		98
60) Diethyl phthalate	9.35	149	791693	52.49593	ppb		99
61) 4-Chlorophenyl phenyl ethe	9.48	204	426980	51.13326	ppb		98
62) Fluorene	9.48	166	781637	52.89027	ppb		99
63) 4-Nitroaniline	8.80	138	175684	55.94819	ppb		89
66) 4,6-Dinitro-2-methylphenol	9.55	198	149456	53.48414	ppb		90
67) Diphenyl amine	9.62	169	1271157	108.94241	ppb		99
68) n-Nitrosodiphenylamine	9.62	169	1271157	108.94241	ppb		99
69) 1,2-Diphenylhydrazine	9.66	77	888538	52.65453	ppb		98
70) 4-Bromophenyl phenyl ether	10.04	248	236821	53.90613	ppb		97
71) Hexachlorobenzene	10.13	284	244573	55.02919	ppb		97
72) Atrazine	10.24	200	105442	26.31441	ppb		97
73) Pentachlorophenol	10.36	266	135671	49.65935	ppb		99
74) Phenanthrene	10.60	178	1080229	54.61406	ppb		99
75) Anthracene	10.66	178	1116406	53.99563	ppb		100
76) Carbazol	10.85	167	1017680	54.06002	ppb		99
77) Di-n-butylphthalate	11.25	149	1370271	53.23188	ppb		99
78) 2-Nitrodiphenylamine	11.42	167	164948	28.16935	ppb		89
79) Fluoranthene	11.99	202	1247416	53.84374	ppb		99
81) Benzidine	12.14	184	385367	45.51080	ppb		99
82) Pyrene	12.25	202	1314061	52.83625	ppb		99
84) Butyl benzylphthalate	13.00	149	656686	52.69920	ppb		91
85) 3,3'-Dichlorobenzidine	13.62	252	462307	54.08886	ppb	#	99
86) Benz (a) anthracene	13.65	228	1453439	53.65073	ppb		99
87) Bis (2-ethylhexyl) phthala	13.66	149	1082924	52.01071	ppb	#	98
88) Chrysene	13.69	228	1244504	52.82157	ppb		100
89) Di-n-octylphthalate	14.41	149	1611191	52.42256	ppb	#	91
91) Benzo (b) fluoranthene	14.94	252	1300001	52.32418	ppb		99
92) Benzo (k) fluoranthene	14.99	252	1282239	57.24188	ppb		98
93) Benzo (a) pyrene	15.41	252	1198281	54.34376	ppb		99
94) Indeno (1,2,3-cd) pyrene	17.35	276	1325649	51.57388	ppb		99
95) Dibenz (a,h) anthracene	17.38	278	1237782	54.05738	ppb		100
96) Benzo (g,h,i) perylene	17.91	276	1148610	56.86944	ppb		99

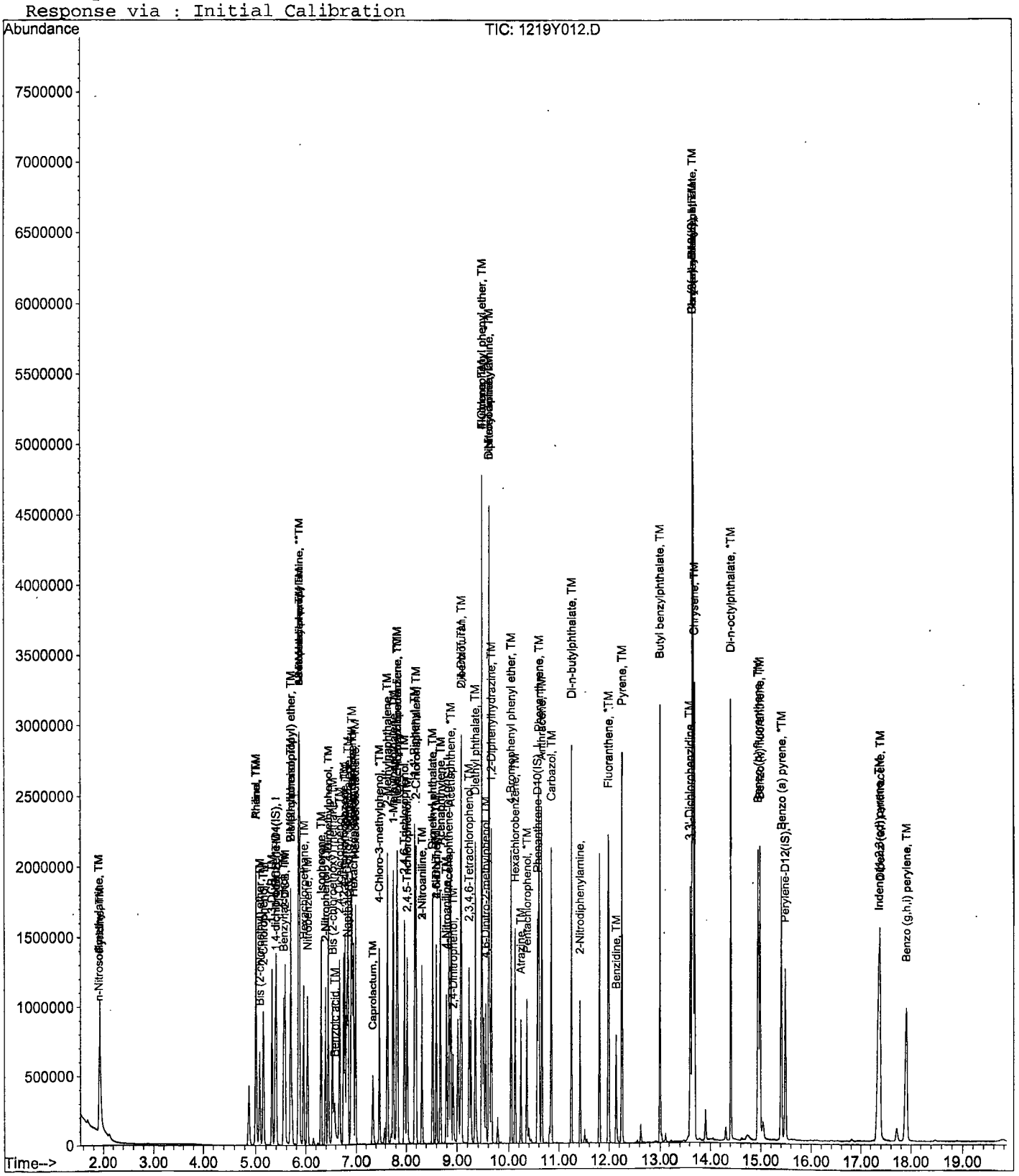
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y012.D Vial: 12
Acq On : 19 Dec 19 13:14 Operator: MA,SS
Sample : SS 8270 11/22/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration



Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 03/12/20
Matrix: Instrument: Yoda
Initial Cal. Date: 12/19/19
Data File: 0207Y202.D

		Compound	MEAN	CCRF	%D		%Drift	
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I		
2		1,4-Dioxane	0.6022	0.7169	19			
3	TM	n-Nitrosodimethylamine	1.117	1.309	17	TM		
4	TM	Pyridine	2.587	3.193	23	TM		*NT
5	S	2-Fluorophenol (S)	1.466	1.410	3.8	S		
6	S	Phenol-D6 (S)	1.868	1.950	4.4	S		
7	*TM	Phenol	2.204	2.400	8.9	*TM		
8	TM	Aniline	1.439	1.561	8.5	TM		
9	TM	Bis (2-chloroethyl) ether	1.021	1.138	11	TM		
10	TM	2-Chlorophenol	1.552	1.632	5.2	TM		
11	TM	1,3-DCB	1.703	1.796	5.4	TM		
12	*TM	1,4-DCB	1.743	1.843	5.7	*TM		
13	TM	Benzyl alcohol	0.9143	0.9887	8.1	TM		
14	TM	1,2-DCB	1.622	1.709	5.4	TM		
15	TM	2-Methylphenol	1.354	1.461	7.9	TM		
16	TM	Bis (2-chloroisopropyl) ether	1.347	1.525	13	TM		
17	TM	Acetophenone	2.309	2.442	5.8	TM		
18	TM	3&4-Methylphenol	1.781	1.910	7.2	TM		
19	**TM	n-Nitrosodi-n-propylamine	1.485	1.628	9.7	**TM		
20	TM	Hexachloroethane	0.7266	0.7966	9.6	TM		
21	I	Napthalene-D8(IS)	ISTD			I		
22	S	Nitrobenzene-D5(S)	0.4975	0.5139	3.3	S		
23	TM	Nitrobenzene	0.5156	0.5564	7.9	TM		
24	TM	Isophorone	0.8134	0.8841	8.7	TM		
25	*TM	2-Nitrophenol	0.2094	0.2193	4.8	*TM		
26	TM	2,4-Dimethylphenol	0.3350	0.3609	7.7	TM		
27	TML	Benzoic acid	0.2307	0.3249	41	TML	12	
28	TM	Bis (2-chloroethoxy) methane	0.4222	0.4442	5.2	TM		
29	*TM	2,4-Dichlorophenol	0.3266	0.3469	6.2	*TM		
30	TM	1,2,4-Trichlorobenzene	0.3643	0.3845	5.5	TM		
31	TM	3,4-Dimethylphenol	0.5573	0.5915	6.1	TM		
32	TM	Naphthalene	1.088	1.155	6.1	TM		
33	TM	4-Chloroaniline	0.4376	0.4624	5.7	TM		
34	TM	2,6-Dichlorophenol	0.3200	0.3465	8.3	TM		
35	TM	Hexachloropropene	0.3152	0.3495	11	TM		
36	*TM	Hexachlorobutadiene	0.2472	0.2651	7.3	*TM		
37	TM	Caprolactum	0.1466	0.1677	14	TM		
38	*TM	4-Chloro-3-methylphenol	0.3877	0.4182	7.8	*TM		
39	TM	2-Methylnaphthalene	0.7325	0.7791	6.4	TM		
40	TM	1-Methylnaphthalene	0.7616	0.8088	6.2	TM		
		Average			9.2			

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 03/12/20
Instrument: Yoda
Cal. Date: 12/19/19
Data File: 0207Y202.D

		Compound	MEAN	CCRF	%D		%Drift	
41	I	Acenaphthene-D10(IS)	ISTD			I		
42	**TML	Hexachlorocyclopentadiene	0.3696	0.3253	12	**TML	27	*NT
43	TM	1,2,4,5-Tetrachlorobenzene	0.6372	0.6378	0.10	TM		
44	*TM	2,4,6-Trichlorophenol	0.4172	0.4339	4.0	*TM		
45	TM	2,4,5-Trichlorophenol	0.4524	0.4509	0.33	TM		
46	S	2-Fluorobiphenyl(S)	1.477	1.436	2.8	S		
47	TM	1,1'-Biphenyl	1.551	1.639	5.7	TM		
48	TM	2-Chloronaphthalene	1.248	1.286	3.1	TM		
49	TM	2-Nitroaniline	0.4737	0.5123	8.1	TM		
50	TM	Dimethyl phthalate	1.529	1.603	4.8	TM		
51	TM	2,6-DNT	0.3335	0.3543	6.2	TM		
52	TM	Acenaphthylene	1.921	1.998	4.0	TM		
53	TM	3-Nitroaniline	0.3959	0.4151	4.9	TM		
54	*TM	Acenaphthene	1.202	1.241	3.3	*TM		
55	**TML	2,4-Dinitrophenol	0.1391	0.2056	48	**TML	3.1	
56	**TM	4-Nitrophenol	0.0312	0.0365	17	**TM		
57	TM	Dibenzofuran	1.825	1.950	6.8	TM		
58	TM	2,4-DNT	0.4904	0.5345	9.0	TM		
59	TM	2,3,4,6-Tetrachlorophenol	0.3432	0.3522	2.6	TM		
60	TM	Diethyl phthalate	1.584	1.702	7.4	TM		
61	TM	4-Chlorophenyl phenyl ether	0.8773	0.9013	2.7	TM		
62	TM	Fluorene	1.553	1.666	7.3	TM		
63	TM	4-Nitroaniline	0.3299	0.3451	4.6	TM		
64	S	2,4,6-Tribromophenol(S)	0.2486	0.2311	7.0	S		
65	I	Phenanthrene-D10(IS)	ISTD			I		
66	TM	4,6-Dinitro-2-methylphenol	0.1559	0.1620	3.9	TM		
67	TM	Diphenyl amine	0.6512	0.6508	0.06	TM		
68	*TM	n-Nitrosodiphenylamine	0.6512	0.6508	0.06	*TM		
69	TM	1,2-Diphenylhydrazine	0.9417	1.024	8.7	TM		
70	TM	4-Bromophenyl phenyl ether	0.2452	0.2494	1.7	TM		
71	TM	Hexachlorobenzene	0.2480	0.2500	0.80	TM		
72	TM	Atrazine	0.2236	0.2242	0.27	TM		
73	*TM	Pentachlorophenol	0.1525	0.1454	4.6	*TM		
74	TM	Phenanthrene	1.104	1.153	4.4	TM		
75	TM	Anthracene	1.154	1.207	4.6	TM		
76	TM	Carbazol	1.051	1.106	5.3	TM		
77	TM	Di-n-butylphthalate	1.437	1.520	5.8	TM		
78		2-Nitrodiphenylamine	0.3268	0.3733	14			
79	*TM	Fluoranthene	1.293	1.371	6.0	*TM		
80	I	Chrysene-D12(IS)	ISTD			I		
		Average			6.3			

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 03/12/20
Instrument: Yoda
Cal. Date: 12/19/19
Data File: 0207Y202.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	Benzidine	0.4082	0.3342	18	TM	
82	TM	Pyrene	1.199	1.134	5.4	TM	
83	S	Terphenyl-D14(S)	0.9538	0.8386	12	S	
84	TM	Butyl benzylphthalate	0.6008	0.5754	4.2	TM	
85	TM	3,3'-Dichlorobenzidine	0.4121	0.4098	0.55	TM	
86	TM	Benz (a) anthracene	1.306	1.246	4.6	TM	
87	TM	Bis (2-ethylhexyl) phthalate	1.004	0.9845	1.9	TM	
88	TM	Chrysene	1.136	1.075	5.4	TM	
89	*TM	Di-n-octylphthalate	1.482	1.399	5.6	*TM	
90	I	Perylene-D12(IS)	ISTD			I	
91	TM	Benzo (b) fluoranthene	1.306	1.299	0.58	TM	
92	TM	Benzo (k) fluoranthene	1.178	1.340	14	TM	
93	*TM	Benzo (a) pyrene	1.160	1.227	5.8	*TM	
94	TM	Indeno (1,2,3-cd) pyrene	1.352	1.431	5.9	TM	
95	TM	Dibenz (a,h) anthracene	1.204	1.278	6.1	TM	
96	TM	Benzo (g,h,i) perylene	1.062	1.110	4.5	TM	
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			6.3		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200207\0207Y202.D Vial: 2
Acq On : 12 Mar 20 8:20 Operator: MA,SS
Sample : 50ug/ml 8270 03/04/20 (1) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Mar 12 9:34 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.34	152	148017	40.00000 ppb	-0.03
21) Napthalene-D8(IS)	6.78	136	617539	40.00000 ppb	-0.04
41) Acenaphthene-D10(IS)	8.80	164	390666	40.00000 ppb	-0.04
65) Phenanthrene-D10(IS)	10.53	188	757567	40.00000 ppb	-0.04
80) Chrysene-D12(IS)	13.62	240	961658	40.00000 ppb	-0.04
90) Perylene-D12(IS)	15.44	264	803610	40.00000 ppb	-0.05
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.77	112	521927	96.20378 ppb	-0.04
Spiked Amount 200.000			Recovery = 48.102%		
6) Phenol-D6 (S)	4.96	99	721653	104.40431 ppb	-0.03
Spiked Amount 200.000			Recovery = 52.202%		
22) Nitrobenzene-D5(S)	5.97	82	396662	51.64950 ppb	-0.03
Spiked Amount 100.000			Recovery = 51.649%		
46) 2-Fluorobiphenyl(S)	8.01	172	701254	48.60521 ppb	-0.05
Spiked Amount 100.000			Recovery = 48.605%		
64) 2,4,6-Tribromophenol(S)	9.73	330	225705	92.96323 ppb	-0.04
Spiked Amount 200.000			Recovery = 46.482%		
83) Terphenyl-D14(S)	12.39	244	1008075	43.95991 ppb	-0.03
Spiked Amount 100.000			Recovery = 43.960%		
Target Compounds					Qvalue
2) 1,4-Dioxane	1.66	58	13264	5.95194	99
3) n-Nitrosodimethylamine	1.88	42	242164	58.59659 ppb	90
4) Pyridine	1.90	79	590779	61.71121 ppb	98
7) Phenol	4.97	94	444064	54.43819 ppb	82
8) Aniline	4.96	93	288832	54.25795 ppb	87
9) Bis (2-chloroethyl) ether	5.04	63	210644	55.74209 ppb	98
10) 2-Chlorophenol	5.11	128	302008	52.58073 ppb	93
11) 1,3-DCB	5.27	146	332246	52.71377 ppb	97
12) 1,4-DCB	5.36	146	340972	52.86017 ppb	97
13) Benzyl alcohol	5.51	108	182928	54.06901 ppb	97
14) 1,2-DCB	5.52	146	316185	52.68290 ppb	98
15) 2-Methylphenol	5.64	107	270287	53.92734 ppb	98
16) Bis (2-chloroisopropyl) et	5.64	45	282164	56.62006 ppb	80
17) Acetophenone	5.79	105	451860	52.89321 ppb	99
18) 3&4-Methylphenol	5.82	107	706868	107.23918 ppb	98
19) n-Nitrosodi-n-propylamine	5.80	70	301276	54.83163 ppb	92
20) Hexachloroethane	5.90	117	147387	54.81718 ppb	90
23) Nitrobenzene	5.99	77	429500	53.96133 ppb	92
24) Isophorone	6.27	82	682460	54.34501 ppb	97
25) 2-Nitrophenol	6.35	139	169320	52.38743 ppb	96
26) 2,4-Dimethylphenol	6.41	122	278555	53.86047 ppb	100
27) Benzoic acid	6.56	105	250827	55.91157 ppb	95
28) Bis (2-chloroethoxy) metha	6.50	93	342890	52.61180 ppb	100
29) 2,4-Dichlorophenol	6.63	162	267743	53.09454 ppb	94
30) 1,2,4-Trichlorobenzene	6.71	180	296811	52.77014 ppb	96
31) 3,4-Dimethylphenol	6.75	107	456576	53.06744 ppb	99
32) Naphthalene	6.80	128	891476	53.05741 ppb	99
33) 4-Chloroaniline	6.87	127	356930	52.83205 ppb	100
34) 2,6-Dichlorophenol	6.88	162	267467	54.14044 ppb	97
35) Hexachloropropene	6.90	213	269802	55.43595 ppb	98
36) Hexachlorobutadiene	6.94	225	204625	53.62670 ppb	100
37) Caprolactum	7.30	55	129414	57.18211 ppb	92

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

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200207\0207Y202.D Vial: 2
Acq On : 12 Mar 20 8:20 Operator: MA,SS
Sample : 50ug/ml 8270 03/04/20 (1) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Mar 12 9:34 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.44	107	322781	53.92272	ppb		90
39)	2-Methylnaphthalene	7.59	142	601418	53.18556	ppb		98
40)	1-Methylnaphthalene	7.71	142	624294	53.09216	ppb		100
42)	Hexachlorocyclopentadiene	7.77	237	158848	36.63476	ppb		100
43)	1,2,4,5-Tetrachlorobenzene	7.79	216	311456	50.04909	ppb		98
44)	2,4,6-Trichlorophenol	7.93	196	211886	52.00587	ppb		99
45)	2,4,5-Trichlorophenol	7.98	196	220212	49.83592	ppb		99
47)	1,1'-Biphenyl	8.13	154	800581	52.83619	ppb		98
48)	2-Chloronaphthalene	8.16	162	627987	51.53569	ppb		96
49)	2-Nitroaniline	8.28	65	250182	54.07191	ppb		96
50)	Dimethyl phthalate	8.48	163	782593	52.39492	ppb		99
51)	2,6-DNT	8.56	165	172992	53.10474	ppb	#	62
52)	Acenaphthylene	8.63	152	975837	52.01322	ppb		99
53)	3-Nitroaniline	8.28	138	202729	52.42842	ppb		97
54)	Acenaphthene	8.84	154	605919	51.63157	ppb		99
55)	2,4-Dinitrophenol	8.89	184	100401	51.57284	ppb		83
56)	4-Nitrophenol	8.56	65	17806	58.48646	ppb		98
57)	Dibenzofuran	9.03	168	952132	53.41574	ppb		93
58)	2,4-DNT	9.03	165	261006	54.49709	ppb		85
59)	2,3,4,6-Tetrachlorophenol	9.19	232	171996	51.31936	ppb	#	89
60)	Diethyl phthalate	9.31	149	831152	53.71083	ppb		97
61)	4-Chlorophenyl phenyl ethe	9.43	204	440151	51.37009	ppb		91
62)	Fluorene	9.44	166	813786	53.66529	ppb		99
63)	4-Nitroaniline	8.75	138	168509	52.29853	ppb	#	77
66)	4,6-Dinitro-2-methylphenol	9.52	198	153391	51.93535	ppb	#	63
67)	Diphenyl amine	9.58	169	1232486	99.93814	ppb		99
68)	n-Nitrosodiphenylamine	9.58	169	1232486	99.93814	ppb		99
69)	1,2-Diphenylhydrazine	9.62	77	969503	54.35762	ppb		95
70)	4-Bromophenyl phenyl ether	10.01	248	236201	50.86877	ppb		86
71)	Hexachlorobenzene	10.08	284	236749	50.39927	ppb	#	78
72)	Atrazine	10.20	200	106163	25.06714	ppb		97
73)	Pentachlorophenol	10.32	266	137716	47.69248	ppb		97
74)	Phenanthrene	10.55	178	1091430	52.20788	ppb		99
75)	Anthracene	10.62	178	1143191	52.31266	ppb		100
76)	Carbazol	10.81	167	1047364	52.63978	ppb		99
77)	Di-n-butylphthalate	11.21	149	1439469	52.90774	ppb		98
78)	2-Nitrodiphenylamine	11.38	167	176759	28.56031	ppb		94
79)	Fluoranthene	11.95	202	1298150	53.01518	ppb		98
81)	Benzidine	12.10	184	401707	40.93056	ppb		99
82)	Pyrene	12.22	202	1363035	47.28483	ppb		99
84)	Butyl benzylphthalate	12.96	149	691692	47.89139	ppb		86
85)	3,3'-Dichlorobenzidine	13.57	252	492629	49.72739	ppb		98
86)	Benz (a) anthracene	13.61	228	1497882	47.70400	ppb		99
87)	Bis (2-ethylhexyl) phthala	13.62	149	1183424	49.03808	ppb		95
88)	Chrysene	13.65	228	1292245	47.32147	ppb		99
89)	Di-n-octylphthalate	14.36	149	1681790	47.21080	ppb	#	88
91)	Benzo (b) fluoranthene	14.90	252	1304758	49.70954	ppb		99
92)	Benzo (k) fluoranthene	14.94	252	1346123	56.88275	ppb		97
93)	Benzo (a) pyrene	15.36	252	1232369	52.90330	ppb		99
94)	Indeno (1,2,3-cd) pyrene	17.28	276	1437869	52.95068	ppb		98
95)	Dibenz (a,h) anthracene	17.30	278	1283391	53.05432	ppb		99
96)	Benzo (g,h,i) perylene	17.83	276	1114924	52.25195	ppb		98

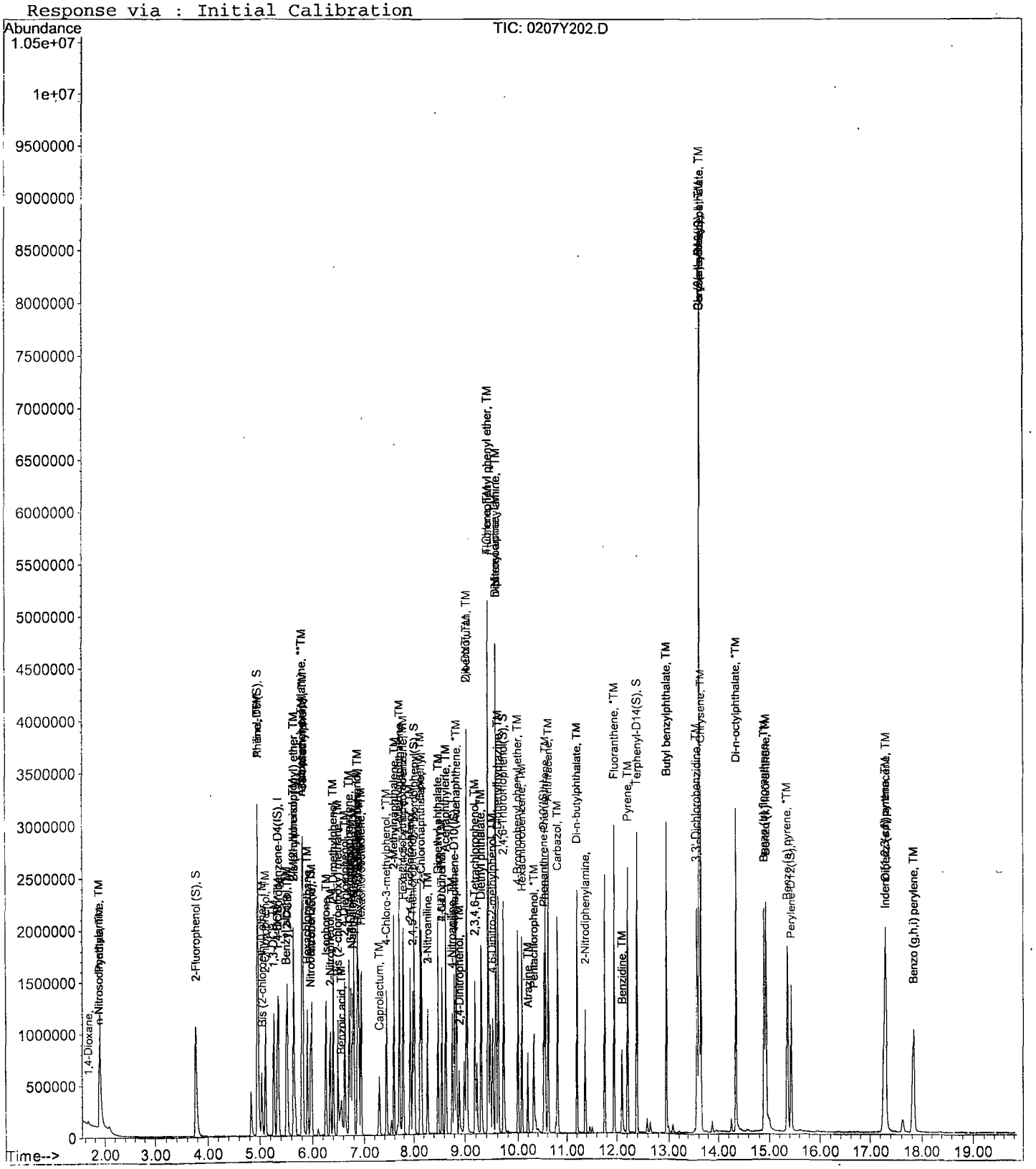
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200207\0207Y202.D Vial: 2
Acq On : 12 Mar 20 8:20 Operator: MA,SS
Sample : 50ug/ml 8270 03/04/20 (1) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Mar 12 9:34 2020 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Ending Continuing Calibration

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

SDG No:
Date Analyzed: 03/12/20
Instrument: Yoda
Initial Cal. Date: 12/19/19
Data File: 0207Y223.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2		1,4-Dioxane	0.6022	0.3885	35		
3	TM	n-Nitrosodimethylamine	1.117	0.7301	35	TM	
4	TM	Pyridine	2.587	1.776	31	TM	
5	S	2-Fluorophenol (S)	1.466	1.262	14	S	
6	S	Phenol-D6 (S)	1.868	1.720	7.9	S	
7	*TM	Phenol	2.204	1.318	40	*TM	
8	TM	Aniline	1.439	0.9234	36	TM	
9	TM	Bis (2-chloroethyl) ether	1.021	0.6109	40	TM	
10	TM	2-Chlorophenol	1.552	0.9120	41	TM	
11	TM	1,3-DCB	1.703	0.9951	42	TM	
12	*TM	1,4-DCB	1.743	1.029	41	*TM	
13	TM	Benzyl alcohol	0.9143	0.5527	40	TM	
14	TM	1,2-DCB	1.622	0.9534	41	TM	
15	TM	2-Methylphenol	1.354	0.7898	42	TM	
16	TM	Bis (2-chloroisopropyl) ether	1.347	0.8272	39	TM	
17	TM	Acetophenone	2.309	1.342	42	TM	
18	TM	3&4-Methylphenol	1.781	1.040	42	TM	
19	**TM	n-Nitrosodi-n-propylamine	1.485	0.8792	41	**TM	
20	TM	Hexachloroethane	0.7266	0.4374	40	TM	
21	I	Napthalene-D8(IS)	ISTD			I	
22	S	Nitrobenzene-D5(S)	0.4975	0.4734	4.8	S	
23	TM	Nitrobenzene	0.5156	0.3209	38	TM	
24	TM	Isophorone	0.8134	0.5047	38	TM	
25	*TM	2-Nitrophenol	0.2094	0.1298	38	*TM	
26	TM	2,4-Dimethylphenol	0.3350	0.2068	38	TM	
27	TML	Benzoic acid	0.2307	0.1916	17	TML	31
28	TM	Bis (2-chloroethoxy) methane	0.4222	0.2559	39	TM	
29	*TM	2,4-Dichlorophenol	0.3266	0.2031	38	*TM	
30	TM	1,2,4-Trichlorobenzene	0.3643	0.2244	38	TM	
31	TM	3,4-Dimethylphenol	0.5573	0.3413	39	TM	
32	TM	Naphthalene	1.088	0.6572	40	TM	
33	TM	4-Chloroaniline	0.4376	0.2729	38	TM	
34	TM	2,6-Dichlorophenol	0.3200	0.2004	37	TM	
35	TM	Hexachloropropene	0.3152	0.1982	37	TM	
36	*TM	Hexachlorobutadiene	0.2472	0.1551	37	*TM	
37	TM	Caprolactum	0.1466	0.0938	36	TM	
38	*TM	4-Chloro-3-methylphenol	0.3877	0.2412	38	*TM	
39	TM	2-Methylnaphthalene	0.7325	0.4532	38	TM	
40	TM	1-Methylnaphthalene	0.7616	0.4677	39	TM	
		Average			35.7		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 03/12/20
Instrument: Yoda
Cal. Date: 12/19/19
Data File: 0207Y223.D

		Compound	MEAN	CCRF	%D		%Drift	
41	I	Acenaphthene-D10(IS)	ISTD			I		
42	**TML	Hexachlorocyclopentadiene	0.3696	0.1993	46	**TML	52	*NT
43	TM	1,2,4,5-Tetrachlorobenzene	0.6372	0.3719	42	TM		
44	*TM	2,4,6-Trichlorophenol	0.4172	0.2559	39	*TM		
45	TM	2,4,5-Trichlorophenol	0.4524	0.2674	41	TM		
46	S	2-Fluorobiphenyl(S)	1.477	1.398	5.4	S		
47	TM	1,1'-Biphenyl	1.551	0.9365	40	TM		
48	TM	2-Chloronaphthalene	1.248	0.7538	40	TM		
49	TM	2-Nitroaniline	0.4737	0.2932	38	TM		
50	TM	Dimethyl phthalate	1.529	0.9457	38	TM		
51	TM	2,6-DNT	0.3335	0.2074	38	TM		
52	TM	Acenaphthylene	1.921	1.175	39	TM		
53	TM	3-Nitroaniline	0.3959	0.2457	38	TM		
54	*TM	Acenaphthene	1.202	0.7380	39	*TM		
55	**TML	2,4-Dinitrophenol	0.1391	0.1154	17	**TML	36	
56	**TM	4-Nitrophenol	0.0312	0.0206	34	**TM		
57	TM	Dibenzofuran	1.825	1.130	38	TM		
58	TM	2,4-DNT	0.4904	0.3112	37	TM		
59	TM	2,3,4,6-Tetrachlorophenol	0.3432	0.2043	40	TM		
60	TM	Diethyl phthalate	1.584	0.9971	37	TM		
61	TM	4-Chlorophenyl phenyl ether	0.8773	0.5235	40	TM		
62	TM	Fluorene	1.553	0.9631	38	TM		
63	TM	4-Nitroaniline	0.3299	0.2054	38	TM		
64	S	2,4,6-Tribromophenol(S)	0.2486	0.2231	10	S		
65	I	Phenanthrene-D10(IS)	ISTD			I		
66	TM	4,6-Dinitro-2-methylphenol	0.1559	0.0930	40	TM		
67	TM	Diphenyl amine	0.6512	0.3774	42	TM		
68	*TM	n-Nitrosodiphenylamine	0.6512	0.3774	42	*TM		
69	TM	1,2-Diphenylhydrazine	0.9417	0.5981	36	TM		
70	TM	4-Bromophenyl phenyl ether	0.2452	0.1461	40	TM		
71	TM	Hexachlorobenzene	0.2480	0.1455	41	TM		
72	TM	Atrazine	0.2236	0.1341	40	TM		
73	*TM	Pentachlorophenol	0.1525	0.0793	48	*TM		
74	TM	Phenanthrene	1.104	0.6753	39	TM		
75	TM	Anthracene	1.154	0.7077	39	TM		
76	TM	Carbazol	1.051	0.6385	39	TM		
77	TM	Di-n-butylphthalate	1.437	0.8806	39	TM		
78		2-Nitrodiphenylamine	0.3268	0.2210	32			
79	*TM	Fluoranthene	1.293	0.7945	39	*TM		
80	I	Chrysene-D12(IS)	ISTD			I		
		Average			37.0			

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 03/12/20
Instrument: Yoda
Cal. Date: 12/19/19
Data File: 0207Y223.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	Benzidine	0.4082	0.2090	49	TM	
82	TM	Pyrene	1.199	0.7023	41	TM	
83	S	Terphenyl-D14(S)	0.9538	0.8538	10	S	
84	TM	Butyl benzylphthalate	0.6008	0.3501	42	TM	
85	TM	3,3'-Dichlorobenzidine	0.4121	0.2594	37	TM	
86	TM	Benz (a) anthracene	1.306	0.7592	42	TM	
87	TM	Bis (2-ethylhexyl) phthalate	1.004	0.6195	38	TM	
88	TM	Chrysene	1.136	0.6485	43	TM	
89	*TM	Di-n-octylphthalate	1.482	0.8415	43	*TM	
90	I	Perylene-D12(IS)	ISTD			I	
91	TM	Benzo (b) fluoranthene	1.306	0.8406	36	TM	
92	TM	Benzo (k) fluoranthene	1.178	0.7370	37	TM	
93	*TM	Benzo (a) pyrene	1.160	0.7248	37	*TM	
94	TM	Indeno (1,2,3-cd) pyrene	1.352	0.8347	38	TM	
95	TM	Dibenz (a,h) anthracene	1.204	0.7448	38	TM	
96	TM	Benzo (g,h,i) perylene	1.062	0.6505	39	TM	
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			38.0		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200207\0207Y223.D Vial: 23
Acq On : 12 Mar 20 18:23 Operator: MA,SS
Sample : 50ug/ml 8270 03/04/20 (2) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Mar 13 9:15 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.34	152	188848	40.00000 ppb		-0.03
21) Napthalene-D8(IS)	6.78	136	755544	40.00000 ppb		-0.03
41) Acenaphthene-D10(IS)	8.79	164	469946	40.00000 ppb		-0.04
65) Phenanthrene-D10(IS)	10.53	188	902367	40.00000 ppb		-0.03
80) Chrysene-D12(IS)	13.62	240	1064817	40.00000 ppb		-0.03
90) Perylene-D12(IS)	15.44	264	894826	40.00000 ppb		-0.04
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.76	112	595628	86.05115 ppb		-0.05
Spiked Amount 200.000			Recovery =	43.026%		
6) Phenol-D6 (S)	4.95	99	811955	92.07064 ppb		-0.04
Spiked Amount 200.000			Recovery =	46.036%		
22) Nitrobenzene-D5(S)	5.97	82	447107	47.58407 ppb		-0.03
Spiked Amount 100.000			Recovery =	47.584%		
46) 2-Fluorobiphenyl(S)	8.01	172	821272	47.32081 ppb		-0.04
Spiked Amount 100.000			Recovery =	47.321%		
64) 2,4,6-Tribromophenol(S)	9.72	330	262153	89.75993 ppb		-0.04
Spiked Amount 200.000			Recovery =	44.880%		
83) Terphenyl-D14(S)	12.39	244	1136430	44.75610 ppb		-0.04
Spiked Amount 100.000			Recovery =	44.756%		
Target Compounds						Qvalue
3) n-Nitrosodimethylamine	1.88	42	172348	32.68648 ppb		97
4) Pyridine	1.90	79	419339	34.33234 ppb		98
7) Phenol	4.97	94	311117	29.89379 ppb		85
8) Aniline	4.96	93	217984	32.09534 ppb	#	91
9) Bis (2-chloroethyl) ether	5.04	63	144212	29.91127 ppb		97
10) 2-Chlorophenol	5.11	128	215297	29.37956 ppb		97
11) 1,3-DCB	5.27	146	234902	29.21126 ppb		99
12) 1,4-DCB	5.36	146	242872	29.51117 ppb		96
13) Benzyl alcohol	5.51	108	130479	30.22790 ppb		95
14) 1,2-DCB	5.53	146	225052	29.39074 ppb		99
15) 2-Methylphenol	5.65	107	186431	29.15420 ppb		98
16) Bis (2-chloroisopropyl) et	5.65	45	195275	30.71246 ppb		87
17) Acetophenone	5.80	105	316876	29.07265 ppb		99
18) 3&4-Methylphenol	5.82	107	491008	58.38522 ppb		97
19) n-Nitrosodi-n-propylamine	5.81	70	207551	29.60674 ppb		97
20) Hexachloroethane	5.91	117	103252	30.09922 ppb		94
23) Nitrobenzene	5.99	77	303035	31.11838 ppb		96
24) Isophorone	6.26	82	476619	31.02119 ppb		99
25) 2-Nitrophenol	6.35	139	122556	30.99260 ppb		92
26) 2,4-Dimethylphenol	6.41	122	195274	30.86088 ppb		95
27) Benzoic acid	6.55	105	180976	34.64318 ppb		96
28) Bis (2-chloroethoxy) metha	6.50	93	241680	30.30914 ppb		98
29) 2,4-Dichlorophenol	6.63	162	191829	31.09214 ppb		98
30) 1,2,4-Trichlorobenzene	6.72	180	211936	30.79765 ppb		97
31) 3,4-Dimethylphenol	6.74	107	322328	30.62088 ppb		99
32) Naphthalene	6.80	128	620632	30.19084 ppb		99
33) 4-Chloroaniline	6.87	127	257716	31.17887 ppb		94
34) 2,6-Dichlorophenol	6.88	162	189230	31.30734 ppb		96
35) Hexachloropropene	6.90	213	187185	31.43562 ppb		99
36) Hexachlorobutadiene	6.94	225	146490	31.37871 ppb		99
37) Caprolactum	7.28	55	88593	31.99506 ppb		96
38) 4-Chloro-3-methylphenol	7.44	107	227836	31.10934 ppb		97

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

Data File : M:\YODA\DATA\Y200207\0207Y223.D Vial: 23
Acq On : 12 Mar 20 18:23 Operator: MA,SS
Sample : 50ug/ml 8270 03/04/20 (2) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Mar 13 9:15 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	2-Methylnaphthalene	7.60	142	427986	30.93510	ppb		100
40)	1-Methylnaphthalene	7.71	142	441719	30.70378	ppb		99
42)	Hexachlorocyclopentadiene	7.77	237	117048	23.91967	ppb		98
43)	1,2,4,5-Tetrachlorobenzene	7.79	216	218468	29.18401	ppb		99
44)	2,4,6-Trichlorophenol	7.93	196	150309	30.66851	ppb		98
45)	2,4,5-Trichlorophenol	7.99	196	157055	29.54683	ppb		95
47)	1,1'-Biphenyl	8.14	154	550104	30.18066	ppb		96
48)	2-Chloronaphthalene	8.15	162	442828	30.20996	ppb		99
49)	2-Nitroaniline	8.27	65	172241	30.94638	ppb		96
50)	Dimethyl phthalate	8.49	163	555541	30.91911	ppb		99
51)	2,6-DNT	8.56	165	121856	31.09652	ppb		89
52)	Acenaphthylene	8.64	152	690242	30.58409	ppb		100
53)	3-Nitroaniline	8.27	138	144303	31.02301	ppb	#	93
54)	Acenaphthene	8.83	154	433530	30.70984	ppb		99
55)	2,4-Dinitrophenol	8.89	184	67768	31.88855	ppb		98
56)	4-Nitrophenol	8.56	65	12106	33.05577	ppb		99
57)	Dibenzofuran	9.04	168	664077	30.97050	ppb		97
58)	2,4-DNT	9.04	165	182822	31.73284	ppb		93
59)	2,3,4,6-Tetrachlorophenol	9.19	232	120015	29.76844	ppb		97
60)	Diethyl phthalate	9.31	149	585729	31.46559	ppb		99
61)	4-Chlorophenyl phenyl ethe	9.43	204	307550	29.83884	ppb		99
62)	Fluorene	9.43	166	565730	31.01346	ppb		98
63)	4-Nitroaniline	8.76	138	120635	31.12414	ppb		95
66)	4,6-Dinitro-2-methylphenol	9.52	198	104885	29.81360	ppb		94
67)	Diphenyl amine	9.57	169	851363	57.95646	ppb		99
68)	n-Nitrosodiphenylamine	9.57	169	851363	57.95646	ppb		99
69)	1,2-Diphenylhydrazine	9.62	77	674685	31.75778	ppb		98
70)	4-Bromophenyl phenyl ether	10.00	248	164829	29.80169	ppb		99
71)	Hexachlorobenzene	10.08	284	164147	29.33641	ppb		92
73)	Pentachlorophenol	10.32	266	89404	25.99323	ppb		98
74)	Phenanthrene	10.56	178	761760	30.59117	ppb		99
75)	Anthracene	10.61	178	798254	30.66669	ppb		100
76)	Carbazol	10.81	167	720205	30.38858	ppb		99
77)	Di-n-butylphthalate	11.21	149	993335	30.65141	ppb		100
79)	Fluoranthene	11.95	202	896146	30.72501	ppb		100
81)	Benzidine	12.10	184	278176	25.59786	ppb		99
82)	Pyrene	12.21	202	934769	29.28632	ppb		99
84)	Butyl benzylphthalate	12.95	149	465934	29.13498	ppb		98
85)	3,3'-Dichlorobenzidine	13.57	252	345269	31.47596	ppb		98
86)	Benz (a) anthracene	13.61	228	1010556	29.06587	ppb		99
87)	Bis (2-ethylhexyl) phthala	13.62	149	824624	30.85992	ppb		99
88)	Chrysene	13.65	228	863196	28.54752	ppb		99
89)	Di-n-octylphthalate	14.36	149	1120089	28.39669	ppb		95
91)	Benzo (b) fluoranthene	14.90	252	940211	32.16931	ppb		99
92)	Benzo (k) fluoranthene	14.94	252	824331	31.28270	ppb		98
93)	Benzo (a) pyrene	15.36	252	810729	31.25535	ppb		99
94)	Indeno (1,2,3-cd) pyrene	17.28	276	933689	30.87885	ppb		97
95)	Dibenz (a,h) anthracene	17.30	278	833121	30.92976	ppb		100
96)	Benzo (g,h,i) perylene	17.83	276	727582	30.62288	ppb		99

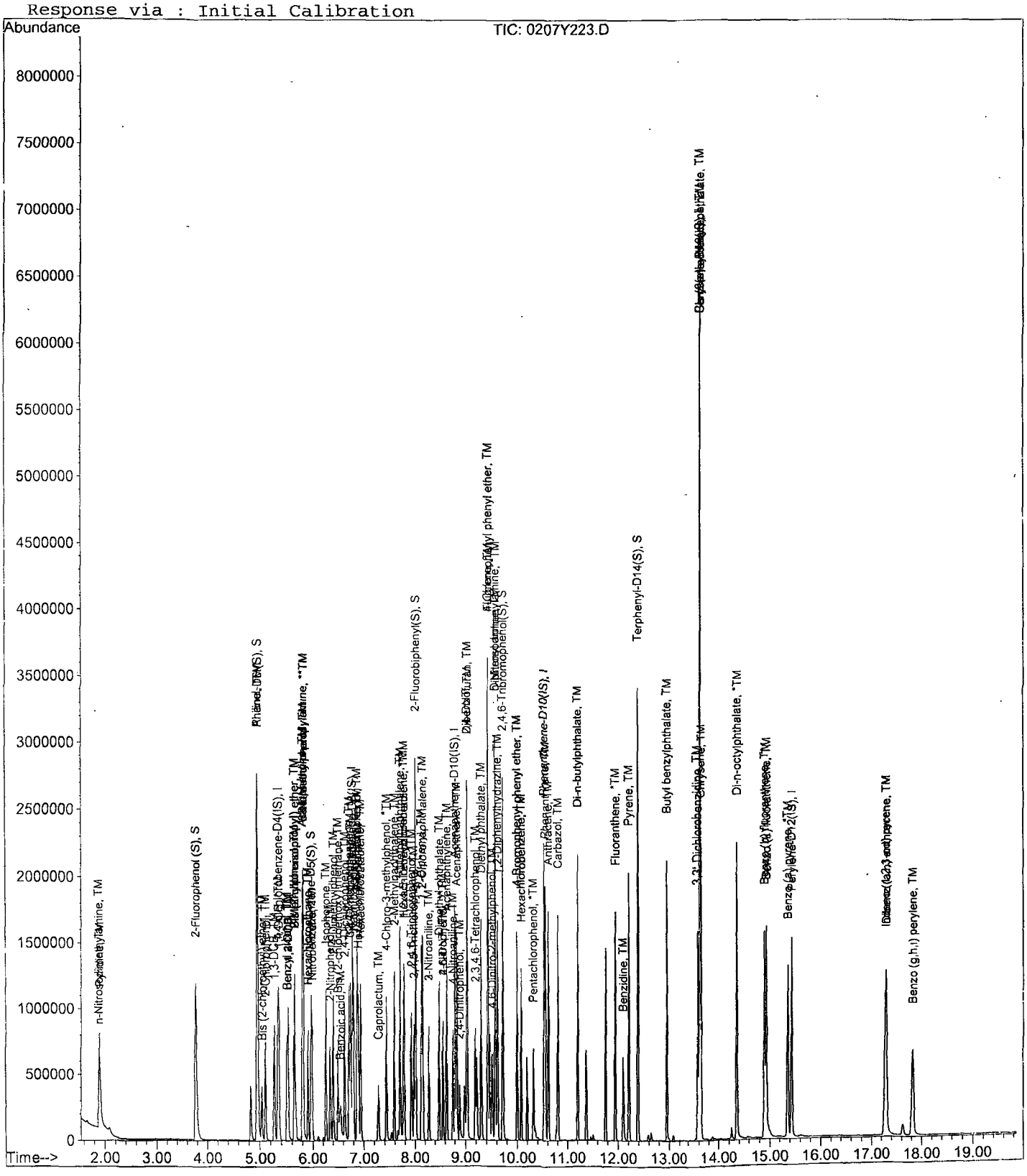
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200207\0207Y223.D Vial: 23
Acq On : 12 Mar 20 18:23 Operator: MA,SS
Sample : 50ug/ml 8270 03/04/20 (2) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Mar 13 9:15 2020 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



ORGANICS
Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y200207\0207Y222.D Vial: 22
Acq On : 12 Mar 20 17:55 Operator: MA,SS
Sample : BA08034W22 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 13 9:44 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.34	152	200865	40.00000 ppb	-0.03
21) Napthalene-D8(IS)	6.78	136	827014	40.00000 ppb	-0.04
41) Acenaphthene-D10(IS)	8.80	164	525104	40.00000 ppb	-0.04
65) Phenanthrene-D10(IS)	10.53	188	1008611	40.00000 ppb	-0.04
80) Chrysene-D12(IS)	13.62	240	934437	40.00000 ppb	-0.04
90) Perylene-D12(IS)	15.44	264	1007699	40.00000 ppb	-0.05
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.76	112	894459	151.86586 ppb	-0.05
Spiked Amount 250.000			Recovery =	60.746%	
6) Phenol-D6 (S)	4.95	99	896554	119.47686 ppb	-0.04
Spiked Amount 250.000			Recovery =	47.791%	
22) Nitrobenzene-D5(S)	5.97	82	744939	90.53734 ppb	-0.03
Spiked Amount 125.000			Recovery =	72.430%	
46) 2-Fluorobiphenyl(S)	8.01	172	1416618	91.31257 ppb	-0.05
Spiked Amount 125.000			Recovery =	73.050%	
64) 2,4,6-Tribromophenol(S)	9.72	330	532052	203.79540 ppb	-0.05
Spiked Amount 250.000			Recovery =	81.518%	
83) Terphenyl-D14(S)	12.39	244	2074447	116.37157 ppb	-0.03
Spiked Amount 125.000			Recovery =	93.098%	

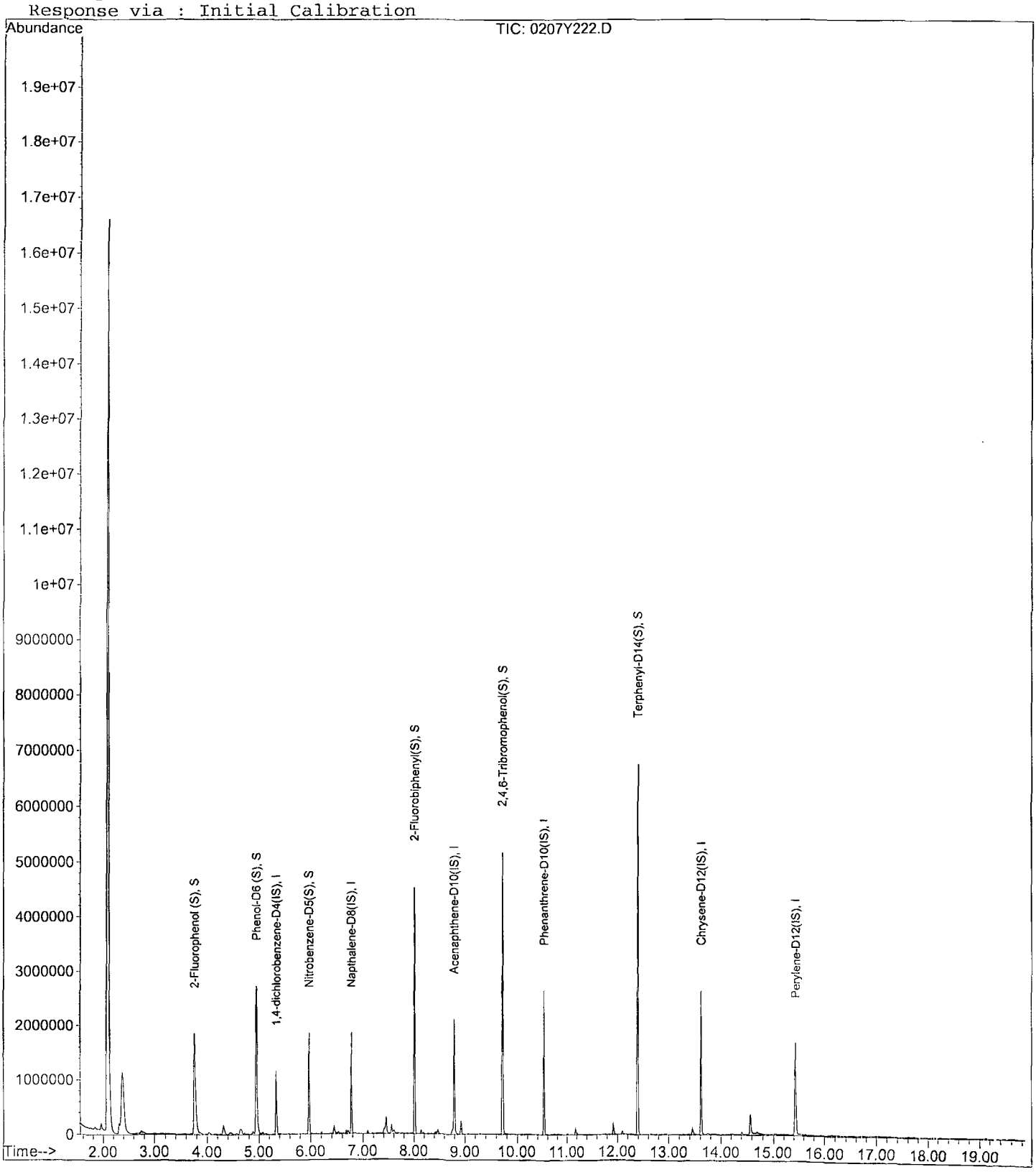
Target Compounds Qvalue

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

Data File : M:\YODA\DATA\Y200207\0207Y222.D Vial: 22
Acq On : 12 Mar 20 17:55 Operator: MA,SS
Sample : BA08034W22 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 13 9:44 2020 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y200207\0207Y219.D Vial: 19
Acq On : 12 Mar 20 16:30 Operator: MA,SS
Sample : 200310A BLK 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 13 9:35 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	214685	40.00000 ppb	-0.04
21) Napthalene-D8(IS)	6.77	136	885713	40.00000 ppb	-0.04
41) Acenaphthene-D10(IS)	8.79	164	553236	40.00000 ppb	-0.04
65) Phenanthrene-D10(IS)	10.53	188	1078882	40.00000 ppb	-0.04
80) Chrysene-D12(IS)	13.62	240	993766	40.00000 ppb	-0.04
90) Perylene-D12(IS)	15.44	264	1064964	40.00000 ppb	-0.04
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.76	112	985740	156.59023 ppb	-0.05
Spiked Amount 250.000			Recovery =	62.636%	
6) Phenol-D6 (S)	4.95	99	1290492	160.90341 ppb	-0.04
Spiked Amount 250.000			Recovery =	64.361%	
22) Nitrobenzene-D5(S)	5.96	82	759648	86.20635 ppb	-0.04
Spiked Amount 125.000			Recovery =	68.965%	
46) 2-Fluorobiphenyl(S)	8.01	172	1442418	88.24779 ppb	-0.04
Spiked Amount 125.000			Recovery =	70.598%	
64) 2,4,6-Tribromophenol(S)	9.72	330	561482	204.13197 ppb	-0.04
Spiked Amount 250.000			Recovery =	81.653%	
83) Terphenyl-D14(S)	12.40	244	2157197	113.78899 ppb	-0.03
Spiked Amount 125.000			Recovery =	91.031%	

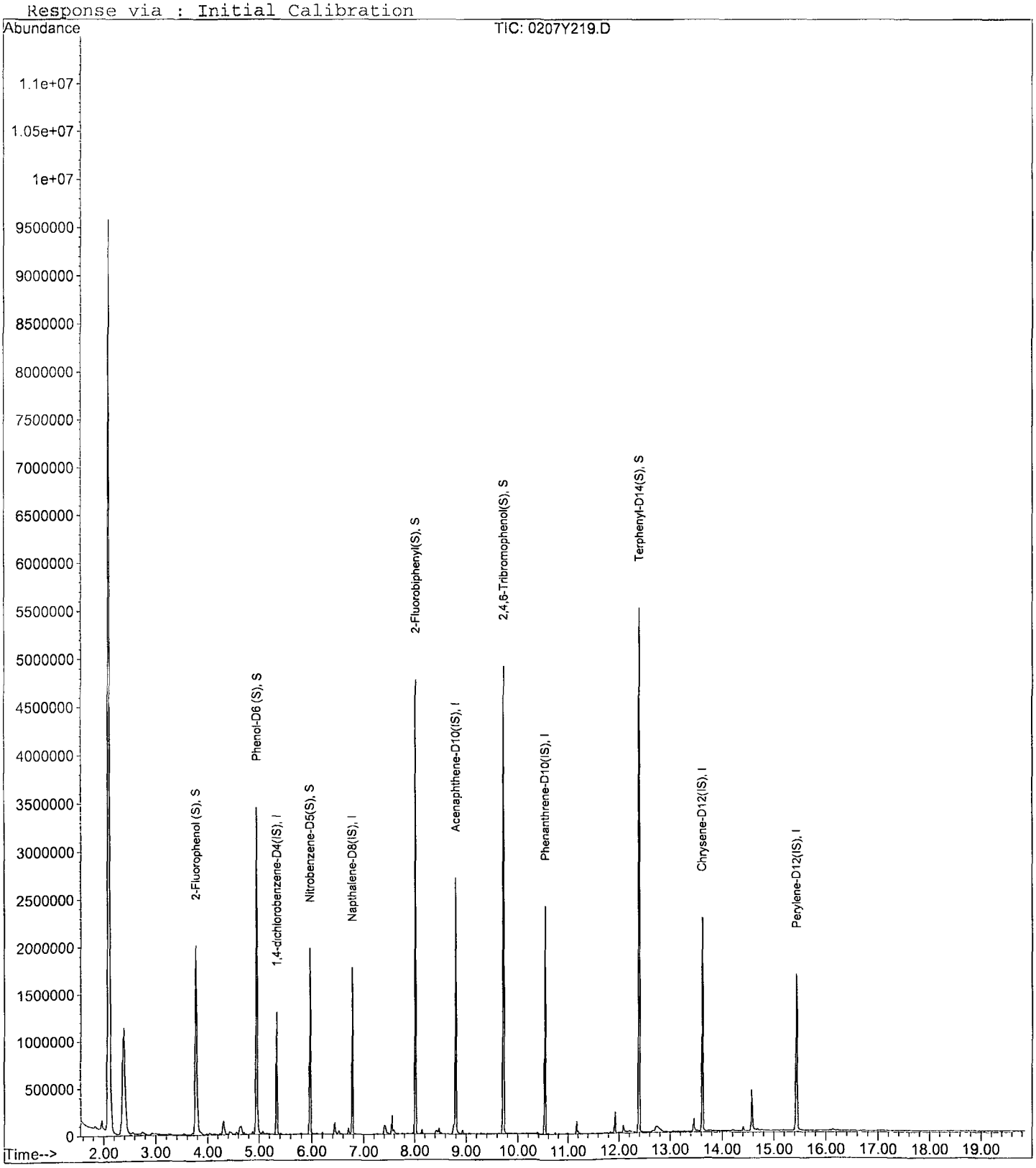
Target Compounds Qvalue

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

Data File : M:\YODA\DATA\Y200207\0207Y219.D Vial: 19
Acq On : 12 Mar 20 16:30 Operator: MA,SS
Sample : 200310A BLK 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 13 9:35 2020 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200207\0207Y220.D Vial: 20
Acq On : 12 Mar 20 16:58 Operator: MA,SS
Sample : 200310A LCS-1 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 13 9:32 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	209026	40.00000 ppb	-0.03
21) Napthalene-D8(IS)	6.78	136	819179	40.00000 ppb	-0.03
41) Acenaphthene-D10(IS)	8.80	164	519779	40.00000 ppb	-0.04
65) Phenanthrene-D10(IS)	10.53	188	991200	40.00000 ppb	-0.03
80) Chrysene-D12(IS)	13.62	240	1205898	40.00000 ppb	-0.03
90) Perylene-D12(IS)	15.44	264	1032649	40.00000 ppb	-0.04
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.76	112	976483	159.31929 ppb	-0.05
Spiked Amount 250.000			Recovery	= 63.728%	
6) Phenol-D6 (S)	4.96	99	1418982	181.71392 ppb	-0.03
Spiked Amount 250.000			Recovery	= 72.686%	
22) Nitrobenzene-D5(S)	5.97	82	746143	91.55101 ppb	-0.03
Spiked Amount 125.000			Recovery	= 73.241%	
46) 2-Fluorobiphenyl(S)	8.02	172	1419615	92.44320 ppb	-0.04
Spiked Amount 125.000			Recovery	= 73.954%	
64) 2,4,6-Tribromophenol(S)	9.72	330	542460	209.91072 ppb	-0.04
Spiked Amount 250.000			Recovery	= 83.964%	
83) Terphenyl-D14(S)	12.40	244	2135394	92.82437 ppb	-0.03
Spiked Amount 125.000			Recovery	= 74.259%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.67	58	12579	4.99633	90
3) n-Nitrosodimethylamine	1.88	42	224262	48.03300 ppb	95
4) Pyridine	1.90	79	391404	36.18975 ppb	99
7) Phenol	4.97	94	427204	46.35693 ppb	92
8) Aniline	4.96	93	298176	49.58064 ppb #	86
9) Bis (2-chloroethyl) ether	5.05	63	186800	43.75547 ppb	99
10) 2-Chlorophenol	5.11	128	283934	43.75693 ppb	98
11) 1,3-DCB	5.27	146	285918	40.15384 ppb	98
12) 1,4-DCB	5.35	146	295725	40.58067 ppb	99
13) Benzyl alcohol	5.51	108	172247	45.06519 ppb	97
14) 1,2-DCB	5.53	146	278588	41.08772 ppb	100
15) 2-Methylphenol	5.65	107	245850	43.41856 ppb	99
16) Bis (2-chloroisopropyl) et	5.65	45	253924	45.10179 ppb	89
17) Acetophenone	5.80	105	427296	44.27374 ppb	98
18) 3&4-Methylphenol	5.82	107	649524	87.22313 ppb	100
19) n-Nitrosodi-n-propylamine	5.81	70	279596	45.04212 ppb	96
20) Hexachloroethane	5.91	117	114486	37.69044 ppb	98
23) Nitrobenzene	5.99	77	416248	49.27961 ppb	95
24) Isophorone	6.26	82	623928	46.81797 ppb	99
25) 2-Nitrophenol	6.35	139	163570	47.68899 ppb	93
26) 2,4-Dimethylphenol	6.41	122	249947	45.54102 ppb	95
27) Benzoic acid	6.57	105	223394	48.59647 ppb	98
28) Bis (2-chloroethoxy) metha	6.50	93	323884	46.82884 ppb	99
29) 2,4-Dichlorophenol	6.63	162	259813	48.54989 ppb	99
30) 1,2,4-Trichlorobenzene	6.72	180	259034	43.39709 ppb	98
31) 3,4-Dimethylphenol	6.74	107	418014	45.78271 ppb	100
32) Naphthalene	6.80	128	809515	45.40011 ppb	99
33) 4-Chloroaniline	6.86	127	323996	45.19076 ppb	96
34) 2,6-Dichlorophenol	6.88	162	257064	49.03300 ppb	94
35) Hexachloropropene	6.90	213	110154	21.32761 ppb	99
36) Hexachlorobutadiene	6.94	225	152804	37.73573 ppb	99
37) Caprolactum	7.28	55	108395	45.13191 ppb	94

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

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200207\0207Y220.D Vial: 20
Acq On : 12 Mar 20 16:58 Operator: MA,SS
Sample : 200310A LCS-1 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 13 9:32 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38)	4-Chloro-3-methylphenol	7.44	107	313638	49.37284	ppb	98
39)	2-Methylnaphthalene	7.59	142	550063	45.83797	ppb	99
40)	1-Methylnaphthalene	7.71	142	564916	45.27106	ppb	99
42)	Hexachlorocyclopentadiene	7.77	237	46328	13.76407	ppb	99
43)	1,2,4,5-Tetrachlorobenzene	7.79	216	274003	41.36678	ppb	99
44)	2,4,6-Trichlorophenol	7.93	196	207757	47.90741	ppb	100
45)	2,4,5-Trichlorophenol	7.98	196	214401	45.58534	ppb	92
47)	1,1'-Biphenyl	8.13	154	717420	44.48326	ppb	99
48)	2-Chloronaphthalene	8.16	162	577603	44.53319	ppb	100
49)	2-Nitroaniline	8.28	65	224982	45.68360	ppb	96
50)	Dimethyl phthalate	8.49	163	770337	48.45414	ppb	99
51)	2,6-DNT	8.56	165	164331	47.39403	ppb	88
52)	Acenaphthylene	8.64	152	900504	45.09403	ppb	100
53)	3-Nitroaniline	8.28	138	186456	45.30271	ppb	95
54)	Acenaphthene	8.83	154	567511	45.43306	ppb	99
55)	2,4-Dinitrophenol	8.89	184	96007	48.69616	ppb	100
56)	4-Nitrophenol	8.55	65	15558	48.01087	ppb	98
57)	Dibenzofuran	9.04	168	896122	47.23198	ppb	99
58)	2,4-DNT	9.04	165	244786	48.01824	ppb	97
59)	2,3,4,6-Tetrachlorophenol	9.19	232	168399	47.20623	ppb	97
60)	Diethyl phthalate	9.31	149	783525	47.56979	ppb	100
61)	4-Chlorophenyl phenyl ethe	9.44	204	414865	45.48962	ppb	99
62)	Fluorene	9.44	166	756927	46.89583	ppb	99
63)	4-Nitroaniline	8.76	138	160318	46.74612	ppb	94
66)	4,6-Dinitro-2-methylphenol	9.52	198	147401	47.67969	ppb	83
67)	Diphenyl amine	9.58	169	1085723	84.10815	ppb	99
68)	n-Nitrosodiphenylamine	9.58	169	1085723	84.10815	ppb	99
69)	1,2-Diphenylhydrazine	9.62	77	884536	47.38016	ppb	97
70)	4-Bromophenyl phenyl ether	10.00	248	219588	45.18017	ppb	95
71)	Hexachlorobenzene	10.09	284	221071	44.96118	ppb	97
72)	Atrazine	10.20	200	93830	21.16621	ppb	97
73)	Pentachlorophenol	10.32	266	132925	43.97865	ppb	99
74)	Phenanthrene	10.56	178	1021069	46.66218	ppb	99
75)	Anthracene	10.61	178	1037615	45.36219	ppb	100
76)	Carbazol	10.81	167	985692	47.32901	ppb	100
77)	Di-n-butylphthalate	11.21	149	1372249	48.18585	ppb	100
78)	2-Nitrodiphenylamine	11.38	167	6076	0.93793	ppb	78
79)	Fluoranthene	11.95	202	1208907	47.16698	ppb	99
81)	Benzidine	12.10	184	134156	13.62600	ppb	97
82)	Pyrene	12.21	202	1256557	43.45273	ppb	99
84)	Butyl benzylphthalate	12.95	149	625535	43.17341	ppb	99
85)	3,3'-Dichlorobenzidine	13.58	252	309126	31.10508	ppb	97
86)	Benz (a) anthracene	13.61	228	1396531	44.33512	ppb	99
87)	Bis (2-ethylhexyl) phthala	13.62	149	1180461	48.76013	ppb	99
88)	Chrysene	13.65	228	1192233	43.52057	ppb	99
89)	Di-n-octylphthalate	14.36	149	1532699	42.88906	ppb	97
91)	Benzo (b) fluoranthene	14.90	252	1242551	46.04968	ppb	99
92)	Benzo (k) fluoranthene	14.94	252	1130574	46.47265	ppb	99
93)	Benzo (a) pyrene	15.36	252	1048957	43.80284	ppb	98
94)	Indeno (1,2,3-cd) pyrene	17.28	276	1244875	44.59442	ppb	98
95)	Dibenz (a,h) anthracene	17.31	278	1122771	45.14977	ppb	100
96)	Benzo (g,h,i) perylene	17.84	276	970943	44.26430	ppb	98

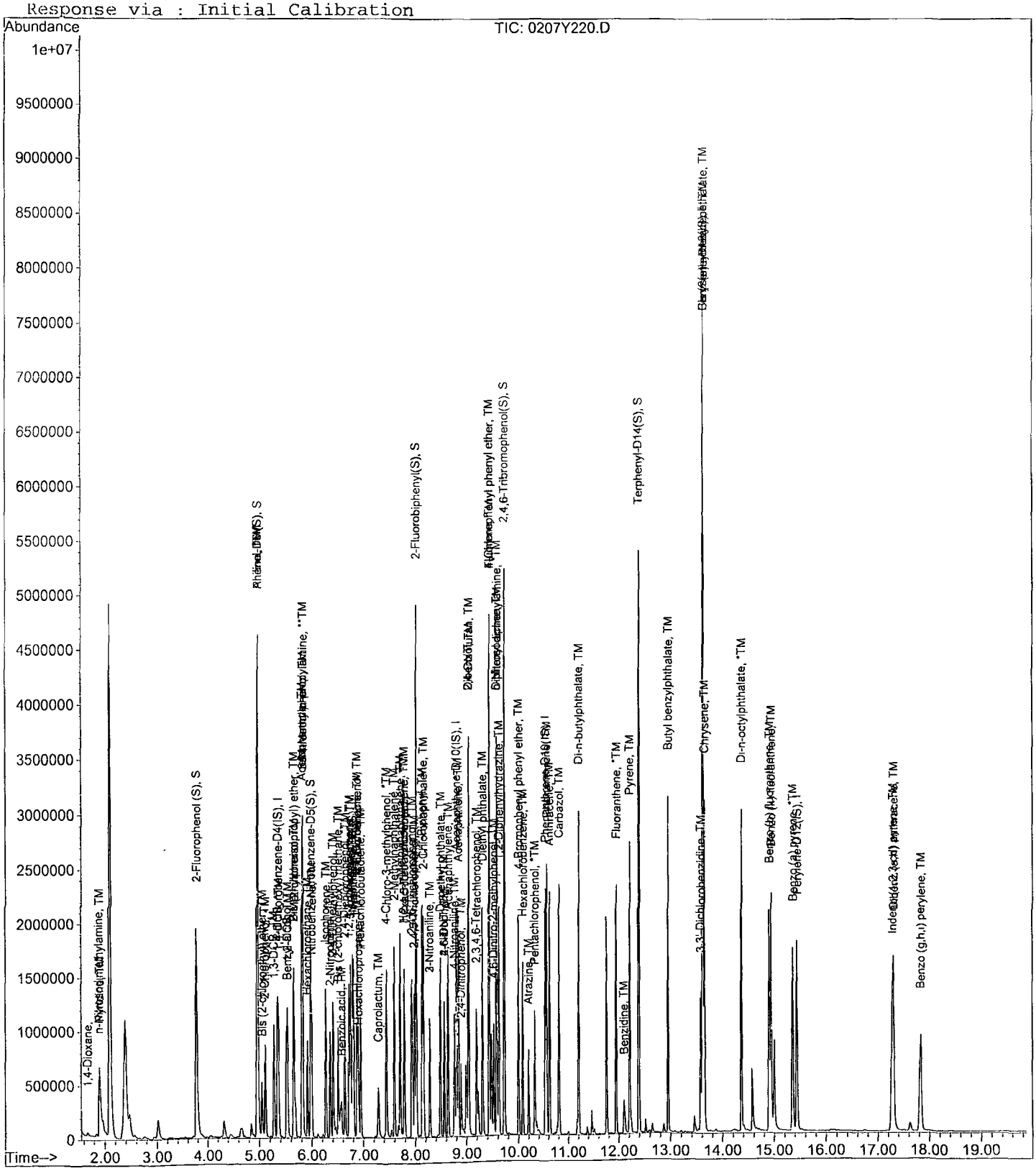
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200207\0207Y220.D Vial: 20
Acq On : 12 Mar 20 16:58 Operator: MA,SS
Sample : 200310A LCS-1 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 13 9:32 2020 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200207\0207Y221.D Vial: 21
Acq On : 12 Mar 20 17:27 Operator: MA,SS
Sample : 200310A LCSD-1 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 13 9:32 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.34	152	210869	40.00000 ppb		-0.03
21) Napthalene-D8(IS)	6.78	136	821750	40.00000 ppb		-0.04
41) Acenaphthene-D10(IS)	8.80	164	513387	40.00000 ppb		-0.04
65) Phenanthrene-D10(IS)	10.53	188	983934	40.00000 ppb		-0.04
80) Chrysene-D12(IS)	13.63	240	1165679	40.00000 ppb		-0.03
90) Perylene-D12(IS)	15.44	264	1031210	40.00000 ppb		-0.05
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.76	112	965973	156.22705 ppb		-0.05
Spiked Amount 250.000			Recovery =	62.491%		
6) Phenol-D6 (S)	4.96	99	1391406	176.62524 ppb		-0.03
Spiked Amount 250.000			Recovery =	70.650%		
22) Nitrobenzene-D5(S)	5.97	82	732523	89.59865 ppb		-0.03
Spiked Amount 125.000			Recovery =	71.679%		
46) 2-Fluorobiphenyl(S)	8.02	172	1393652	91.88246 ppb		-0.04
Spiked Amount 125.000			Recovery =	73.506%		
64) 2,4,6-Tribromophenol(S)	9.73	330	545702	213.79439 ppb		-0.04
Spiked Amount 250.000			Recovery =	85.518%		
83) Terphenyl-D14(S)	12.39	244	2055708	92.44364 ppb		-0.03
Spiked Amount 125.000			Recovery =	73.955%		
Target Compounds						Qvalue
2) 1,4-Dioxane	1.66	58	10452	4.11521		77
3) n-Nitrosodimethylamine	1.88	42	225378	47.85013 ppb		85
4) Pyridine	1.91	79	431109	39.51254 ppb		97
7) Phenol	4.97	94	417723	44.93196 ppb	#	70
8) Aniline	4.97	93	256960	42.35381 ppb		87
9) Bis (2-chloroethyl) ether	5.04	63	188757	43.82744 ppb		99
10) 2-Chlorophenol	5.11	128	277877	42.44921 ppb		96
11) 1,3-DCB	5.27	146	280971	39.11422 ppb		99
12) 1,4-DCB	5.36	146	292355	39.76759 ppb		98
13) Benzyl alcohol	5.51	108	167278	43.38263 ppb		98
14) 1,2-DCB	5.53	146	279226	40.82189 ppb		98
15) 2-Methylphenol	5.65	107	242342	42.42496 ppb		99
16) Bis (2-chloroisopropyl) et	5.65	45	254181	44.75285 ppb	#	76
17) Acetophenone	5.80	105	416236	42.75083 ppb		96
18) 3&4-Methylphenol	5.82	107	644713	85.82038 ppb		98
19) n-Nitrosodi-n-propylamine	5.80	70	272069	43.44647 ppb		93
20) Hexachloroethane	5.91	117	114068	37.22462 ppb		87
23) Nitrobenzene	5.99	77	407109	48.04685 ppb		91
24) Isophorone	6.27	82	612273	45.79966 ppb		95
25) 2-Nitrophenol	6.35	139	161023	46.79953 ppb		94
26) 2,4-Dimethylphenol	6.41	122	244679	44.44169 ppb		100
27) Benzoic acid	6.56	105	225412	48.85214 ppb		94
28) Bis (2-chloroethoxy) metha	6.50	93	310638	44.77314 ppb		100
29) 2,4-Dichlorophenol	6.63	162	252594	47.05323 ppb		95
30) 1,2,4-Trichlorobenzene	6.71	180	254804	42.55486 ppb		98
31) 3,4-Dimethylphenol	6.75	107	415910	45.40975 ppb		96
32) Naphthalene	6.81	128	799691	44.70883 ppb		99
33) 4-Chloroaniline	6.87	127	313224	43.55160 ppb		99
34) 2,6-Dichlorophenol	6.88	162	247983	47.15288 ppb		96
35) Hexachloropropene	6.90	213	115769	22.34464 ppb		99
36) Hexachlorobutadiene	6.95	225	155027	38.16493 ppb		99
37) Caprolactum	7.29	55	110820	45.99724 ppb		94

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

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200207\0207Y221.D Vial: 21
Acq On : 12 Mar 20 17:27 Operator: MA,SS
Sample : 200310A LCSD-1 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 13 9:32 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.44	107	304333	47.75816	ppb		94
39)	2-Methylnaphthalene	7.59	142	538534	44.73682	ppb		99
40)	1-Methylnaphthalene	7.71	142	553696	44.23309	ppb		100
42)	Hexachlorocyclopentadiene	7.77	237	43568	13.33365	ppb		100
43)	1,2,4,5-Tetrachlorobenzene	7.79	216	264312	40.40053	ppb		98
44)	2,4,6-Trichlorophenol	7.93	196	201358	47.00994	ppb		99
45)	2,4,5-Trichlorophenol	7.98	196	207354	44.63594	ppb		97
47)	1,1'-Biphenyl	8.13	154	703186	44.14354	ppb		98
48)	2-Chloronaphthalene	8.16	162	569789	44.47770	ppb		96
49)	2-Nitroaniline	8.28	65	219188	45.06125	ppb		93
50)	Dimethyl phthalate	8.49	163	748328	47.65582	ppb		99
51)	2,6-DNT	8.56	165	161417	47.13324	ppb	#	69
52)	Acenaphthylene	8.63	152	867349	43.97452	ppb		100
53)	3-Nitroaniline	8.28	138	184286	45.33295	ppb		95
54)	Acenaphthene	8.84	154	557658	45.20011	ppb		99
55)	2,4-Dinitrophenol	8.89	184	100085	50.93059	ppb		90
56)	4-Nitrophenol	8.56	65	14826	46.32162	ppb		100
57)	Dibenzofuran	9.04	168	861883	45.99294	ppb		96
58)	2,4-DNT	9.03	165	238896	47.44631	ppb		88
59)	2,3,4,6-Tetrachlorophenol	9.19	232	163451	46.38967	ppb	#	91
60)	Diethyl phthalate	9.31	149	750374	46.12432	ppb		98
61)	4-Chlorophenyl phenyl ethe	9.43	204	405035	44.96472	ppb		92
62)	Fluorene	9.43	166	740959	46.47809	ppb		99
63)	4-Nitroaniline	8.75	138	154643	45.65280	ppb		79
66)	4,6-Dinitro-2-methylphenol	9.52	198	140139	45.66540	ppb	#	72
67)	Diphenyl amine	9.58	169	1092267	85.23995	ppb		99
68)	n-Nitrosodiphenylamine	9.58	169	1092267	85.23995	ppb		99
69)	1,2-Diphenylhydrazine	9.62	77	857966	46.29631	ppb		97
70)	4-Bromophenyl phenyl ether	10.01	248	217336	45.04704	ppb		84
71)	Hexachlorobenzene	10.08	284	212592	43.55601	ppb	#	80
72)	Atrazine	10.20	200	92490	21.01800	ppb		98
73)	Pentachlorophenol	10.32	266	129814	43.26653	ppb		100
74)	Phenanthrene	10.56	178	975702	44.91821	ppb		99
75)	Anthracene	10.62	178	1032000	45.44988	ppb		100
76)	Carbazol	10.81	167	955994	46.24201	ppb		97
77)	Di-n-butylphthalate	11.21	149	1291933	45.70060	ppb		99
78)	2-Nitrodiphenylamine	11.38	167	5367	0.83460	ppb		96
79)	Fluoranthene	11.95	202	1169786	45.97766	ppb		99
81)	Benzidine	12.11	184	72296	7.59634	ppb		99
82)	Pyrene	12.22	202	1224448	43.80330	ppb		99
84)	Butyl benzylphthalate	12.96	149	609096	43.48927	ppb		85
85)	3,3'-Dichlorobenzidine	13.57	252	302802	31.51999	ppb		98
86)	Benz (a) anthracene	13.61	228	1371105	45.02976	ppb		100
87)	Bis (2-ethylhexyl) phthala	13.62	149	1123624	48.01377	ppb		96
88)	Chrysene	13.66	228	1170131	44.18751	ppb		100
89)	Di-n-octylphthalate	14.36	149	1488557	43.09101	ppb	#	89
91)	Benzo (b) fluoranthene	14.90	252	1127633	41.84906	ppb		99
92)	Benzo (k) fluoranthene	14.94	252	1182387	48.67027	ppb		99
93)	Benzo (a) pyrene	15.36	252	1021945	42.73441	ppb		99
94)	Indeno (1,2,3-cd) pyrene	17.28	276	1223134	43.87675	ppb		99
95)	Dibenz (a,h) anthracene	17.31	278	1090203	43.90130	ppb		99
96)	Benzo (g,h,i) perylene	17.83	276	945856	43.18078	ppb		98

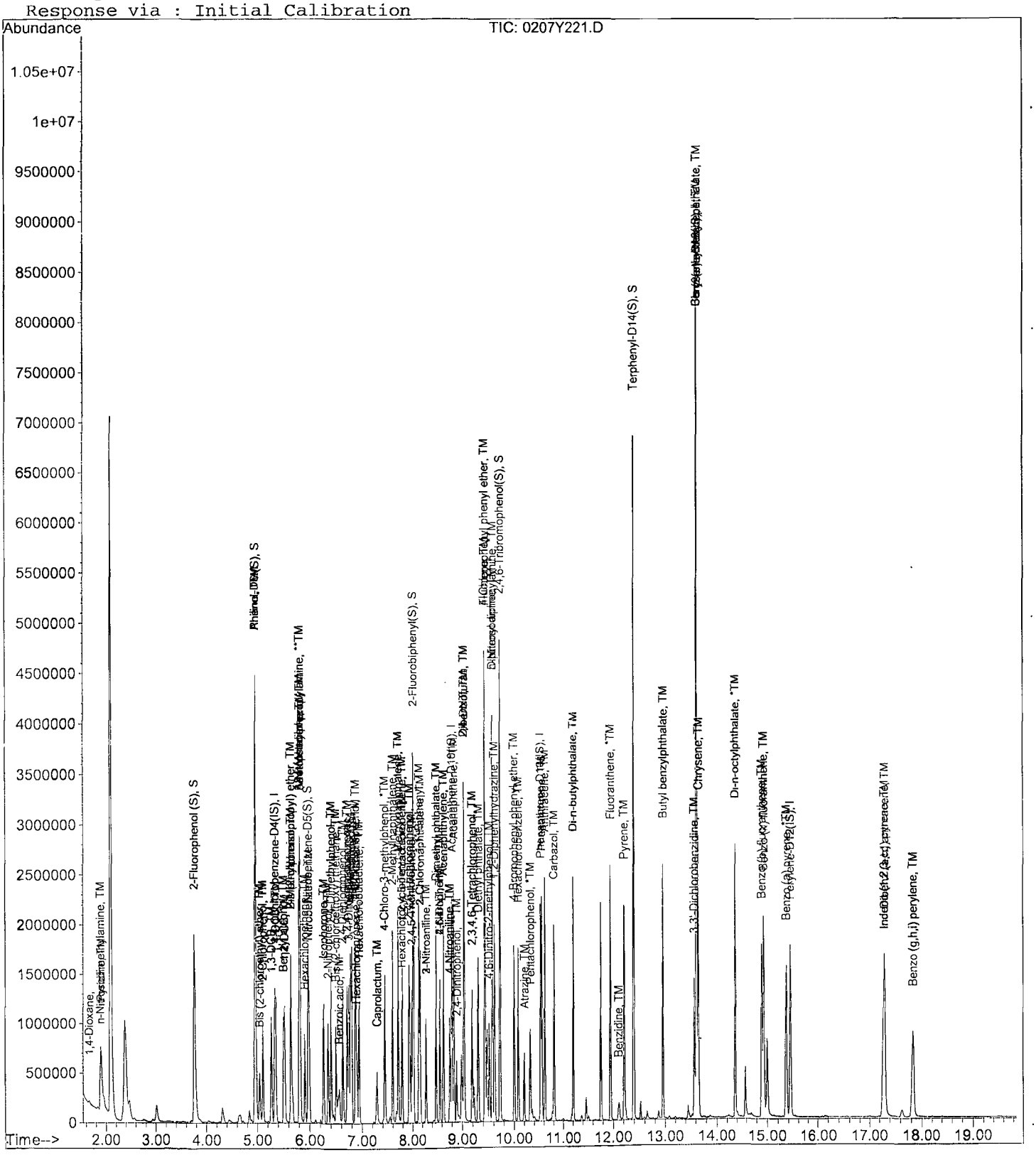
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200207\0207Y221.D Vial: 21
Acq On : 12 Mar 20 17:27 Operator: MA,SS
Sample : 200310A LCSD-1 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 13 9:32 2020 Quant Results File: Y1219.RES

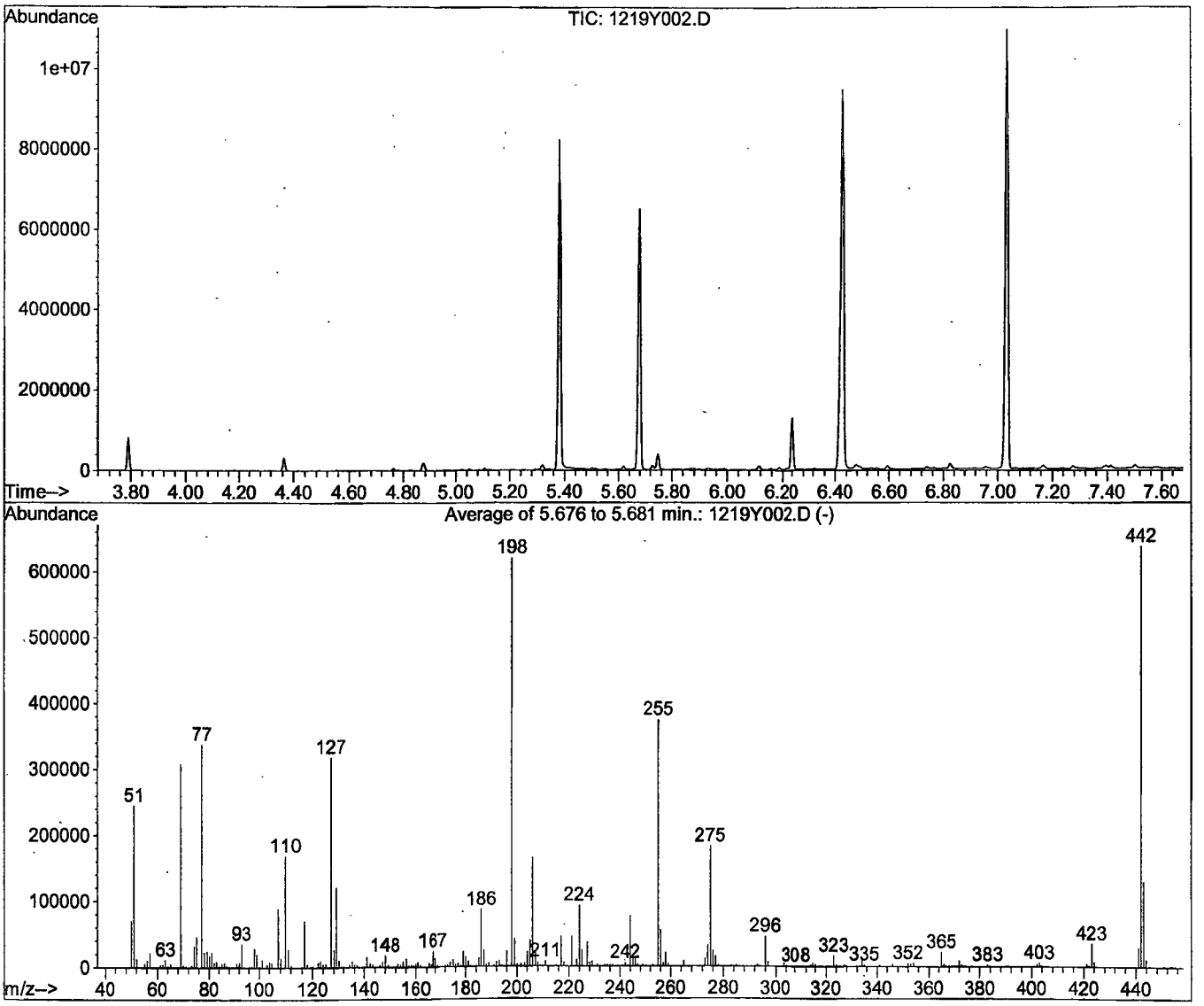
Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



Data File : M:\YODA\DATA\Y191219\1219Y002.D
Acq On : 19 Dec 19 8:50
Sample : SV TUNE 10/01/19
Misc :

Vial: 2
Operator: MA,SS
Inst : Yoda
Multiplr: 1.00

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C



Spectrum Information: Average of 5.676 to 5.681 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	39.5	245061	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	1.0	3141	PASS
127	198	10	80	51.3	318211	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	620800	PASS
199	198	5	9	6.7	41381	PASS
275	198	10	60	29.4	182251	PASS
365	198	1	100	3.5	21877	PASS
441	442	0.01	24	4.6	29075	PASS
442	198	50	500	102.9	638805	PASS
443	442	15	24	20.0	127973	PASS

Data File Name:	**1219Y002.D**
Data File Path:	**M:\YODA\DATA\Y191219**
Operator:	**MA,SS**
Date Acquired:	**19 Dec 2019 08:50**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/01/19**
Vial Number:	**2**
Instrument Name:	**Yoda**

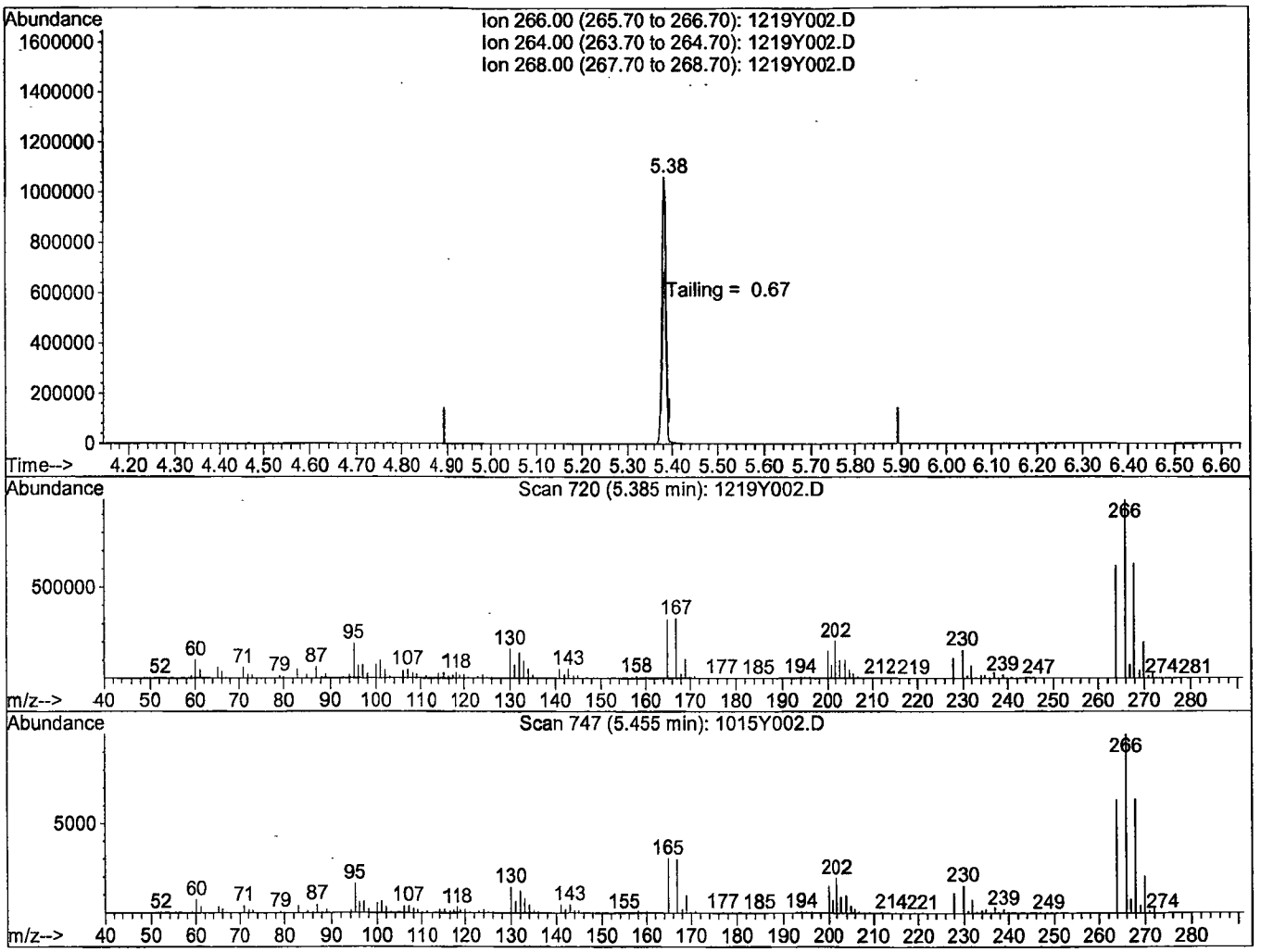
#	Name	Ret Time	Target Response
1)	DDT	7.02	83598600
2)	DDD	6.79	322054
3)	DDE	6.59	610218

Breakdown **1.10**

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y002.D Vial: 2
Acq On : 19 Dec 19 8:50 Operator: MA,SS
Sample : SV TUNE 10/01/19 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Dec 19 16:49 2019 Quant Results File: temp.res

Method : M:\YODA\DATA\Y191219\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Tue Dec 10 08:34:10 2019
Response via : Single Level Calibration



TIC: 1219Y002.D

(5) Pentachlorophenol

5.38min 0.0000

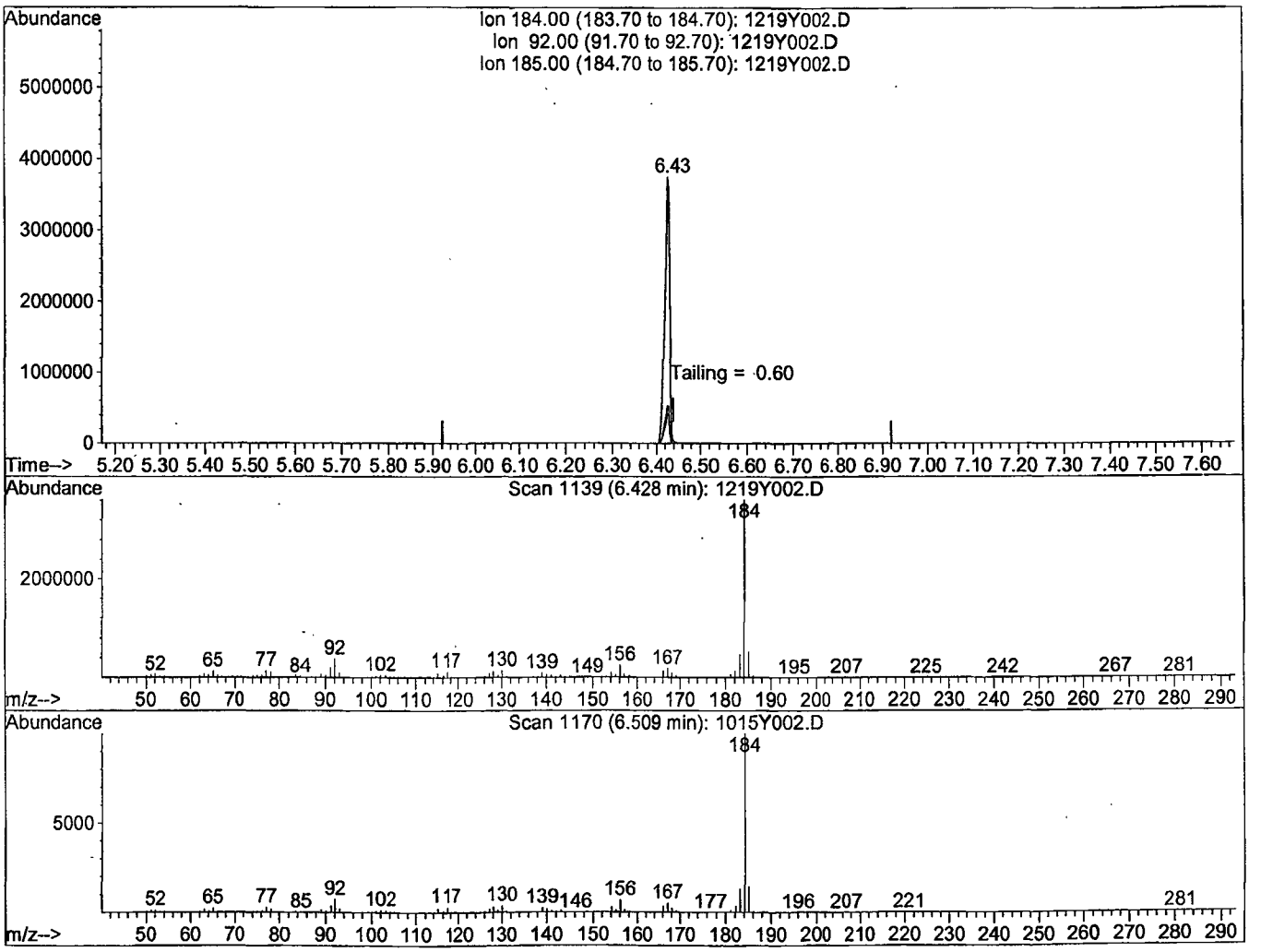
response 6507700

Ion	Exp%	Act%
266.00	100	100
264.00	65.60	64.20
268.00	64.10	63.98
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y002.D Vial: 2
Acq On : 19 Dec 19 8:50 Operator: MA,SS
Sample : SV TUNE 10/01/19 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Dec 19 16:49 2019 Quant Results File: temp.res

Method : M:\YODA\DATA\Y191219\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Tue Dec 10 08:34:10 2019
Response via : Single Level Calibration



TIC: 1219Y002.D

(6) Benzidine

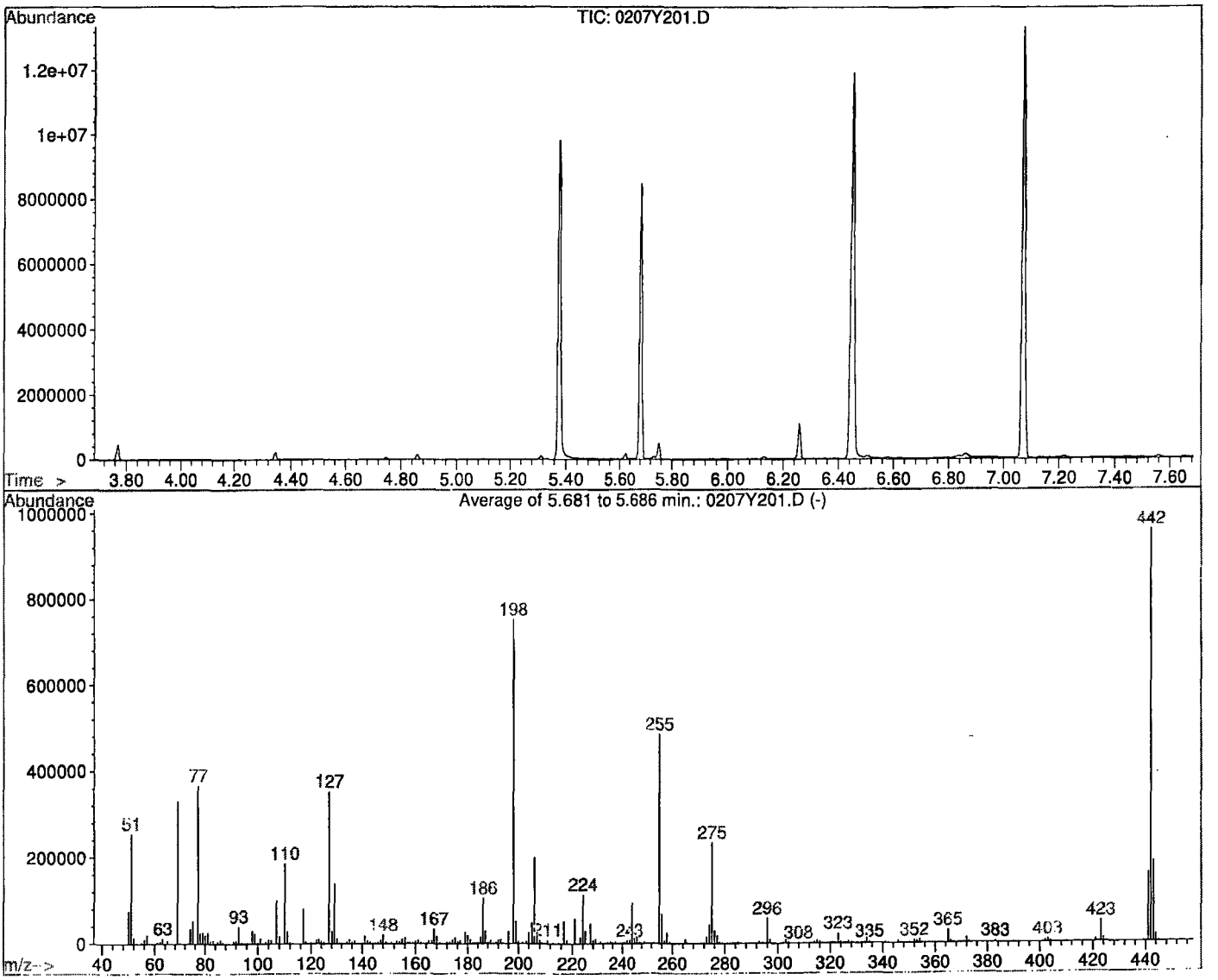
6.43min 0.0000

response 29741628

Ion	Exp%	Act%
184.00	100	100
92.00	10.30	10.56
185.00	14.50	14.29
0.00	0.00	0.00

Data File : M:\YODA\DATA\Y200207\0207Y201.D Vial: 1
Acq On : 12 Mar 20 8:05 Operator: MA,SS
Sample : SV TUNE 10/01/19 Inst : Yoda
Misc : Multiplr: 1.00

Method : M:\YODA\DATA\Y191219\DFTPP2.M (Chemstation Integrator)
Title :



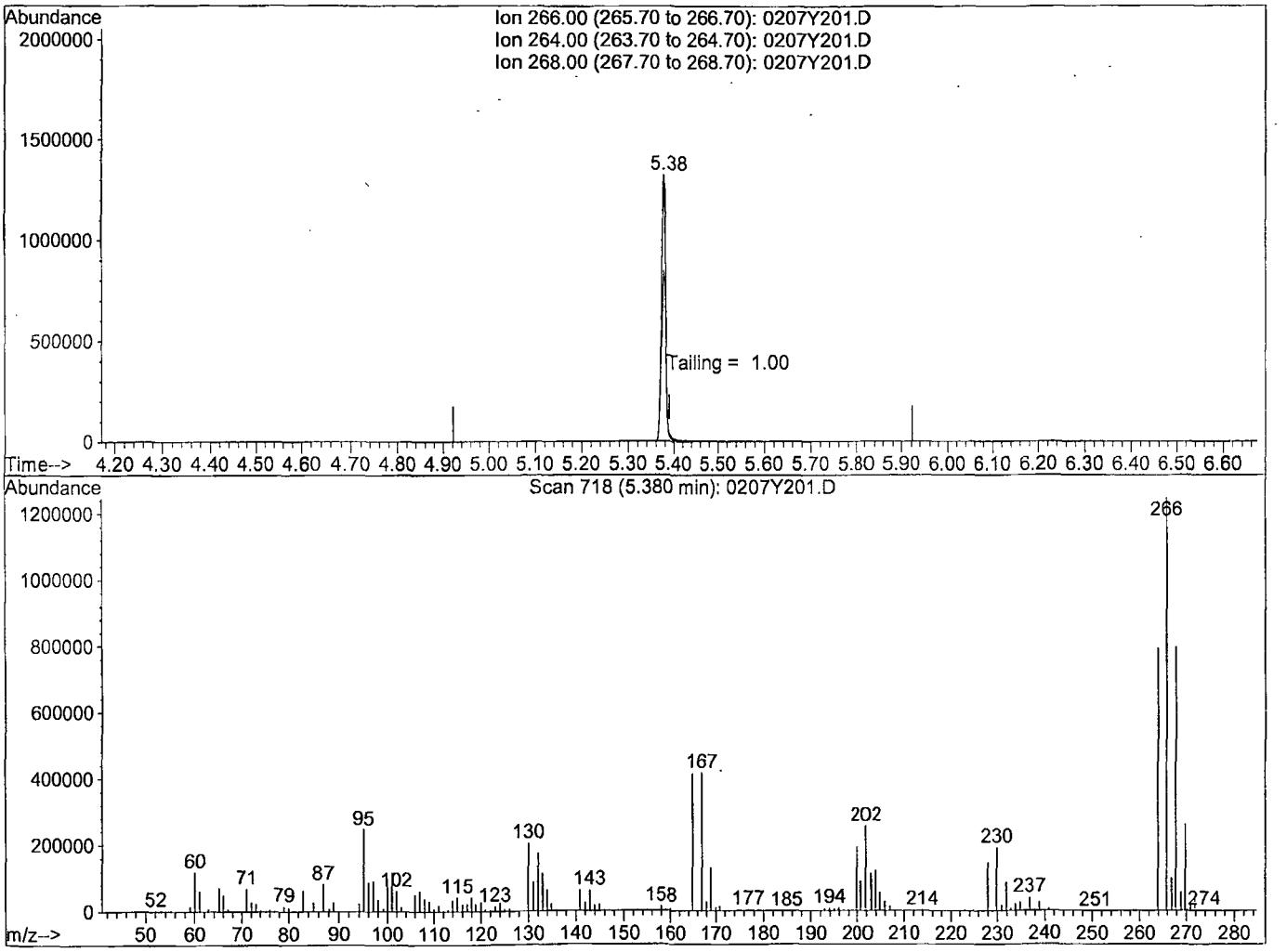
Spectrum Information: Average of 5.681 to 5.686 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	33.9	255157	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.5	1774	PASS
127	198	10	80	46.9	352768	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	752384	PASS
199	198	5	9	6.8	50885	PASS
275	198	10	60	31.1	233749	PASS
365	198	1	100	3.9	29459	PASS
441	442	0.01	24	16.7	160021	PASS
442	198	50	500	127.7	960427	PASS
443	442	15	24	19.4	186667	PASS

Quantitation Report

Data File : M:\YODA\DATA\Y200207\0207Y201.D Vial: 1
Acq On : 12 Mar 20 8:05 Operator: MA,SS
Sample : SV TUNE 10/01/19 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Mar 12 9:14 2020 Quant Results File: temp.res

Method : M:\YODA\DATA\Y191219\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Sun Feb 23 13:13:38 2020
Response via : Single Level Calibration



TIC: 0207Y201.D

(5) Pentachlorophenol

5.38min 0.0000

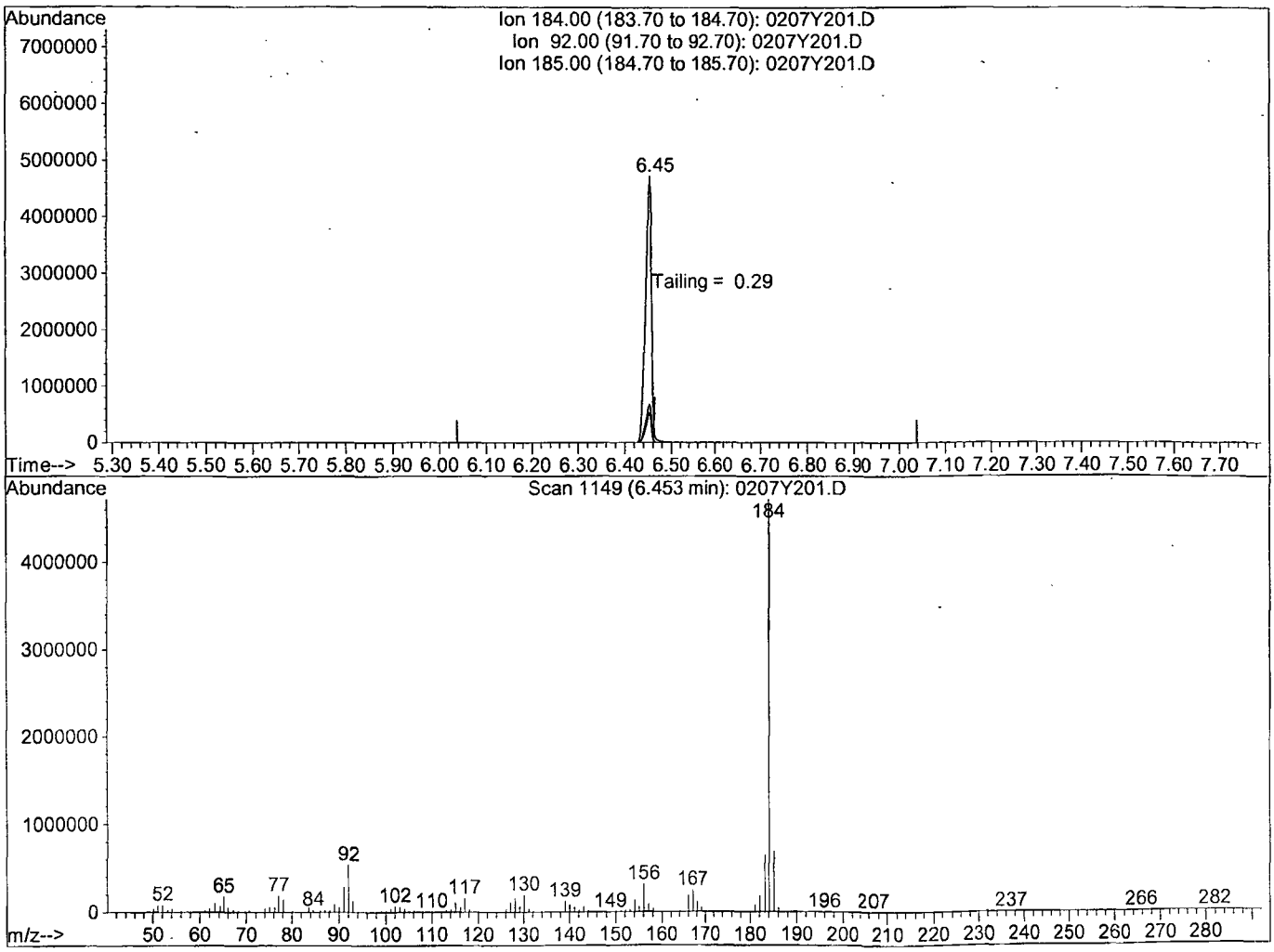
response 8796110

Ion	Exp%	Act%
266.00	100	100
264.00	62.40	62.70
268.00	62.40	63.26
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y200207\0207Y201.D Vial: 1
Acq On : 12 Mar 20 8:05 Operator: MA,SS
Sample : SV TUNE 10/01/19 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Mar 12 9:14 2020 Quant Results File: temp.res

Method : M:\YODA\DATA\Y191219\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Sun Feb 23 13:13:38 2020
Response via : Single Level Calibration



TIC: 0207Y201.D

(6) Benzidine

6.45min 0.0000

response 42207559

Ion	Exp%	Act%
184.00	100	100
92.00	11.90	10.46
185.00	14.20	14.38
0.00	0.00	0.00

Data File Name:	**0207Y201.D**
Data File Path:	**M:\YODA\DATA\Y200207**
Operator:	**MA,SS**
Date Acquired:	**12 Mar 2020 08:05**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/01/19**
Vial Number:	**1**
Instrument Name:	**Yoda**

#	Name	Ret Time	Target Response
1)	DDT	6.97	104187000
2)	DDD	6.77	157808
3)	DDE	6.65	137016

Breakdown **0.28**

Name of Final Standard	8270 Full Scan Stock Spike	Prep'd By (Initials)	JP
Prep Date	011/21/2019		
Exp Date	011/21/2020		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
10001	Absolute	10001	2000	081419 - 49302	08/14/22	1.0 mL	11 mL	NA	181.82 ug/mL
10002	Absolute	10002	2000	090919-49211	09/09/22	1.0 mL	*	*	181.82 ug/mL
10004	Absolute	10004	2000	071618-99221	07/16/23	1.0 mL	*	*	181.82 ug/mL
10005	Absolute	10005	2000	032018-40234	03/20/23	1.0 mL	*	*	181.82 ug/mL
10006	Absolute	10006	2000	030119-49242	03/01/22	1.0 mL	*	*	181.82 ug/mL
10007	Absolute	10007	2000	080116-40254	08/01/21	1.0 mL	*	*	181.82 ug/mL
10018	Absolute	10018	2000	051719-49262	05/17/24	1.0 mL	*	*	181.82 ug/mL
70023	Absolute	70023	1000	012819-49268	01/28/24	1.0 mL	*	*	90.91ug/mL
82705	Absolute	82705	2000	090919-49293	09/09/22	1.0 mL	*	*	181.82 ug/mL
94552	Absolute	94552	various	053119-49284	05/31/21	1.0 mL	*	*	various
72304	Absolute	70023	1000	090519-49455 - 41159	09/05/24	1.0 mL	*	*	90.91ug/mL

Name of Final Standard	8270 Internal Standard Ampules (2)	Prep'd By (Initials)	JP
Prep Date	11/20/19		
Exp Date	11/20/20		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Semivolatile Internal Standard	Restek	31206	2000 ug/mL	**A0151843-49411 A0151843-49412**	**07/31/25**	2 mL	2 mL	NA	2000ug/mL

Name of Final Standard	**8270 SS STOCK**
Prep Date	**11/20/19**
Exp Date	**11/20/20**

Prep'd By (Initials): **JP**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
10001	Absolute	10001	2000 ug/mL	051019-40534	05/10/21	1.0 mL	20 mL	**Methanol Lot 208858**	100 ug/mL
10002	Absolute	10002	2000 ug/mL	020217-39199	02/02/20	1.0 mL	*	*	100 ug/mL
10004	Absolute	10004	2000 ug/mL	051018-39196	05/10/21	1.0 mL	*	*	100 ug/mL
10005	Absolute	10005	2000 ug/mL	031618-39207	03/16/23	1.0 mL	*	*	100 ug/mL
10006	Absolute	10006	2000 ug/mL	011718-39208	01/17/21	1.0 mL	*	*	100 ug/mL
10007	Absolute	10007	2000 ug/mL	060118-39213	06/01/23	1.0 mL	*	*	100 ug/mL
10018	Absolute	10018	2000 ug/mL	062718-40535	06/27/23	1.0 mL	*	*	100 ug/mL
70023	Absolute	70023	1000 ug/mL	051618-39214	05/16/23	1.0 mL	*	*	50 ug/mL
82705	Absolute	82705	2000 ug/mL	090617-40540	09/06/20	1.0 mL	*	*	100 ug/mL
94552	Absolute	94552	various	013118-40542	01/31/20	1.0 mL	*	*	various
72304	Absolute	72304	1000 ug/mL	110719-49477	11/07/24	1.0 mL	*	*	50 ug/mL

Name of Final Standard	**8270 Full Scan Second Source**
Prep Date	**11/22/19**
Exp Date	**11/22/20**

Prep'd By (Initials): **JP**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 SS Stock	APPL	8270 SS Stock	100:50 ug/mL	**11/20/19**	**11/20/20**	100 uL	200uL	**MC DW717 150uL**	50:25 ug/mL
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	**11/20/19**	**11/20/19**	4 uL	*	*	*

Name of Final Standard	8270 Full Scan Standard Curve	Prep'd By (Initials)	JP
Prep Date	011/21/2019		
Exp Date	011/21/2020		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 Stock	APPL	8270 Stock	182:91 ug/mL	011/21/2019	011/21/2020	4.4 uL	200uL	MC DW717 150uL	4 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200:400 ug/mL	07/10/19	06/24/20	4 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	011/20/2019	07/31/25	4 uL	*	*	*
8270 Stock	APPL	8270 Stock	182:91 ug/mL	011/21/2019	011/21/2020	11 uL	400uL	MC DW717 150uL	5 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200:400 ug/mL	07/10/19	06/24/20	10 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	011/20/2019	07/31/25	8 uL	*	*	*
8270 Stock	APPL	8270 Stock	182:91 ug/mL	011/21/2019	011/21/2020	11 uL	200uL	MC DW717 150uL	10 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200:400 ug/mL	07/10/19	06/24/20	10 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	011/20/2019	07/31/25	4 uL	*	*	*
8270 Stock	APPL	8270 Stock	182:91 ug/mL	011/21/2019	011/21/2020	11 uL	100uL	MC DW717 150uL	20 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200:400 ug/mL	07/10/19	06/24/20	10 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	011/20/2019	07/31/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	182:91 ug/mL	011/21/2019	011/21/2020	22 uL	100uL	MC DW717 150uL	40 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200:400 ug/mL	07/10/19	06/24/20	20 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	011/20/2019	07/31/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	182:91 ug/mL	011/21/2019	011/21/2020	55 uL	200 uL	MC DW717 150uL	50 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200:400 ug/mL	07/10/19	06/24/20	50 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	011/20/2019	07/31/25	4 uL	*	*	*
8270 Stock	APPL	8270 Stock	182:91 ug/mL	011/21/2019	011/21/2020	33 uL	100uL	MC DW717 150uL	60 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200:400 ug/mL	07/10/19	06/24/20	30 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	011/20/2019	07/31/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	182:91 ug/mL	011/21/2019	011/21/2020	44 uL	100uL	MC DW717 150uL	80 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200:400 ug/mL	07/10/19	06/24/20	40 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	011/20/2019	07/31/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	182:91 ug/mL	011/21/2019	011/21/2020	50 uL	100uL	na	91 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200:400 ug/mL	07/10/19	06/24/20	50 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	011/20/2019	07/31/25	2 uL	*	*	*

Name of Final Standard	Semivolatile (SV) Tuning Solution	Prep'd By (Initials)	JP
Prep Date	10/01/19		
Exp Date	11/30/20		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Semivolatile GC/MS Tuning Standard	Ultra Scientific	GCM-150-1	1,000 ug/mL	CR3789-38879	11/30/20	1,250 uL	25 mL	MC #58240	50 ug/mL

Name of Final Standard	**8270 Full Scan Spike**	**Prep'd By (Initials)**	**JP**
Prep Date	**12/04/19**		
Exp Date	**12/04/20**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
10001	Absolute	10001	2000	081419 - 49299	08/14/22	1.0 mL	40 mL	**Methanol Lot# 208858**	50 ug/mL
10002	Absolute	10002	2000	090919-49208	09/09/22	1.0 mL	*	*	50 ug/mL
10004	Absolute	10004	2000	071618-49218	07/16/23	1.0 mL	*	*	50 ug/mL
10005	Absolute	10005	2000	032018-49228	03/20/23	1.0 mL	*	*	50 ug/mL
10006	Absolute	10006	2000	030119-49239	03/01/22	1.0 mL	*	*	50 ug/mL
10007	Absolute	10007	2000	080116-40249	08/01/21	1.0 mL	*	*	50 ug/mL
10018	Absolute	10018	2000	051719-49259	05/17/24	1.0 mL	*	*	50 ug/mL
70023	Absolute	70023	1000	012819-49275	01/28/24	1.0 mL	*	*	25 ug/mL
82705	Absolute	82705	2000	090919-49290	09/09/22	1.0 mL	*	*	50 ug/mL
94552	Absolute	94552	various	053119-49286	05/31/21	1.0 mL	*	*	various

Name of Final Standard	8270 Full Scan Standard Curve	Prep'd By (Initials)	JP
Prep Date	01/16/20		
Exp Date	06/24/20		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 Stock	APPL	8270 Stock	182-91 ug/mL	011/21/2019	011/21/2020	55 uL	200 uL	MC DW717 150uL	50 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200 400 ug/mL	07/10/19	06/24/20	50 uL	"	"	"
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	011/20/2019	07/31/25	4 uL	"	"	"

Organic Extraction Worksheet

Method	Continuous Liquid/Liquid SVOC 3520C	Extraction Set	200310A	Extraction Method	LIQ003	Units	mL

Spiked ID 1	8270T Spike 1-29-20 1-29-21		Surrogate ID 1	8270 Surrogate 11-19-19 11-19-20	
Spiked ID 2	Sim Spike 12-19-19 11-13-20		Surrogate ID 2	SIM Surrogate 12-17-19 12-17-20	
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	03/10/20 12:25	
Spiked ID 8			Ext. End Time:	03/11/20 6:35	
			GC Requires Extract By:		

pH1	2	03/10/20 12:30	Water Bath Temp 1 °C	77/76.9 e-wb6 °C
pH2	14	03/11/20 11:15	Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: DL **Date** 03/10/20 **Witnessed By:** KY **Date** 03/10/20

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	200310A Blk				1,0.050	1,2	800	1	2/1	03/10/20 12:25	
						equip	E-HP51 e-wb6				
2	200310A LCS-1		1	1	1	1	800	1	2/1	03/10/20 12:25	
						equip	E-HP50 e-wb6				
3	200310A LCS-2		0.125	2	0.050	2	800	1	2/1	03/10/20 12:25	
						equip	E-HP48 e-wb6				
4	200310A LCSD-1		1	1	1	1	800	1	2/1	03/10/20 12:25	
						equip	E-HP49 e-wb6				
5	200310A LCSD-2		0.125	2	0.050	2	800	1	2/1	03/10/20 12:25	
						equip	E-HP47 e-wb6				
6	BA08034	BA08034W22			1,0.050	1,2	800	1	2/1	03/10/20 12:25	91607
						equip	E-HP25 e-wb6				

Solvent and Lot#	
PH Strips	HC998032
Dichloromethane (DCM)	59239
1+1 H2SO4	2-26-20
10N NaOH	3-2-20
Filter Paper	400171
Na2SO4	2019020631

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

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

Modified	03/12/20 12:00:29 PM

Reviewed By: KY **Date** 03/12/20

Injection Log

Directory: M:\YODA\DATA\Y191219\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	1219Y002.D	1	SV TUNE 10/01/19		19 Dec 19 8:50
2	3	1219Y003.D	1	50ug/ml 8270 11/21/19		19 Dec 19 9:06
3	4	1219Y004.D	1	4ug/ml 8270 11/21/19		19 Dec 19 9:33
4	5	1219Y005.D	1	5ug/ml 8270 11/21/19		19 Dec 19 10:01
5	6	1219Y006.D	1	10ug/ml 8270 11/21/19		19 Dec 19 10:28
6	7	1219Y007.D	1	20ug/ml 8270 11/21/19		19 Dec 19 10:56
7	8	1219Y008.D	1	40ug/ml 8270 11/21/19		19 Dec 19 11:24
8	9	1219Y009.D	1	60ug/ml 8270 11/21/19		19 Dec 19 11:51
9	10	1219Y010.D	1	80ug/ml 8270 11/21/19		19 Dec 19 12:19
10	11	1219Y011.D	1	100ug/ml 8270 11/21/19		19 Dec 19 12:46
11	12	1219Y012.D	1	SS 8270 11/22/19		19 Dec 19 13:14
12	1	0207Y201.D	1	SV TUNE 10/01/19		12 Mar 20 8:05
13	2	0207Y202.D	1	50ug/ml 8270 03/04/20 (1)		12 Mar 20 8:20
14	19	0207Y219.D	1.25	200310A BLK 1/800		12 Mar 20 16:30
15	20	0207Y220.D	1.25	200310A LCS-1 1/800		12 Mar 20 16:58
16	21	0207Y221.D	1.25	200310A LCSD-1 1/800		12 Mar 20 17:27
17	22	0207Y222.D	1.25	BA08034W22 1/800		12 Mar 20 17:55
18	23	0207Y223.D	1	50ug/ml 8270 03/04/20 (2)		12 Mar 20 18:23

ORGANICS
Calibration Data

PAH by GCMS SIM
EPA 8270 SIM

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 02/04/20
Matrix: Instrument: Linus Initials: MA

			0204L003.D	0204L004.D	0204L005.D	0204L006 D	0204L007.D	0204L008.D	0204L009.D	0204L010 D								
		Compound	0.1	0.2	0.5	1	5	10	50	100			Avg	%RSD	Type	r^2	Q	MRF
1	I	Napthalene-D8(IS)																
2	TM	Naphthalene	1.120	1.131	1.072	1.083	1.129	1.047	0.9772	0.9334			1.1	6.9	TM			0.700
3	S	2-Methylnaphthalene-D10 (2M	1.257	1.211	1.175	1.198	1.255	1.218	1.180	1.133			1.2	3.5	S			
4	TM	2-Methylnaphthalene	0.6849	0.6892	0.6742	0.6957	0.7468	0.6960	0.6554	0.6145			0.68	5.5	TM			0.400
5	TM	1-Methylnaphthalene	0.7412	0.7479	0.7192	0.7336	0.7676	0.7029	0.6628	0.6175			0.71	7.0	TM			
6	I	Acenaphthene-D10(IS)																
7	TM	Acenaphthylene	3.869	3.855	3.806	3.892	4.393	4.113	3.818	3.434			3.9	7.0	TM			0.900
8	*TM	Acenaphthene	1.372	1.277	1.234	1.238	1.309	1.218	1.155	1.036			1.2	8.3	*TM			0.900
9	TM	Fluorene	1.476	1.471	1.412	1.485	1.636	1.549	1.427	1.385			1.5	5.5	TM			0.900
10	I	Phenanthrene-D10(IS)																
11	TM	Phenanthrene	1.231	1.222	1.179	1.198	1.290	1.205	1.041	0.9371			1.2	9.9	TM			0.700
12	TM	Anthracene	1.002	1.028	0.9886	1.045	1.160	1.099	0.9848	0.8800			1.0	8.1	TM			0.700
13	S	Fluoranthene-D10 (FRT)	1.457	1.470	1.320	1.355	1.491	1.476	1.437	1.389			1.4	4.4	S			
14	*TM	Fluoranthene	1.604	1.635	1.531	1.601	1.817	1.668	1.480	1.357			1.6	8.6	*TM			0.600
15	I	Chrysene-D12(IS)																
16	TM	Pyrene	1.291	1.315	1.240	1.301	1.386	1.308	1.220	1.113			1.3	6.4	TM			0.600
17	TM	Benz (a) anthracene	1.177	1.123	1.047	1.077	1.191	1.159	1.141	1.081			1.1	4.6	TM			0.800
18	TM	Chrysene	1.461	1.411	1.370	1.360	1.367	1.267	1.174	1.065			1.3	10	TM			0.700
19	TM	Indeno (1,2,3-cd) pyrene	1.438	1.382	1.382	1.402	1.574	1.526	1.551	1.517			1.5	5.4	TM			0.500
20	I	Perylene-D12(IS)																
21	TM	Benzo (b) fluoranthene	0.8206	0.8277	0.8502	0.9180	1.141	1.084	1.118	1.129			0.99	15	TM			0.700
22	TM	Benzo (k) fluoranthene	1.252	1.341	1.294	1.323	1.396	1.330	1.094	1.089			1.3	9.1	TM			0.700
23	*TM	Benzo (a) pyrene	0.8229	0.8399	0.9301	0.9711	1.126	1.087	1.069	1.029			0.98	12	*TM			0.700
24	TM	Dibenz (a,h) anthracene	0.9746	0.9893	0.9980	1.034	1.209	1.157	1.169	1.136			1.1	8.7	TM			0.400
25	TM	Benzo (g,h,i) perylene	1.063	1.069	1.094	1.118	1.274	1.216	1.188	1.145			1.1	6.5	TM			0.500
26																		
27																		
28																		
29																		
30																		
31																		
32																		
33																		
34																		
35																		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L003.D Vial: 3
Acq On : 4 Feb 20 9:48 Operator: MA
Sample : 0.1 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:38:46 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.19	136	98990	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.18	164	52942	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.91	188	98572	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.01	240	123137	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.43	264	142515	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	4.96	152	2488	0.05046 ppb		0.00
Spiked Amount 5.000			Recovery	= 1.000%		
13) Fluoranthene-D10 (FRT)	9.28	212	2873	0.04174 ppb		0.00
Spiked Amount 5.000			Recovery	= 0.840%		
Target Compounds						Qvalue
2) Naphthalene	4.21	128	4434	0.09312 ppb		99
4) 2-Methylnaphthalene	5.00	142	2712	0.09372 ppb		100
5) 1-Methylnaphthalene	5.11	142	2935	0.09787 ppb		97
7) Acenaphthylene	6.02	152	8194	0.08489 ppb		100
8) Acenaphthene	6.22	154	2905	0.10261 ppb		96
9) Fluorene	6.82	166	3126	0.09002 ppb		94
11) Phenanthrene	7.93	178	4855	0.08909 ppb		99
12) Anthracene	7.99	178	3951	0.08269 ppb		98
14) Fluoranthene	9.30	202	6323	0.08364 ppb	#	92
16) Pyrene	9.57	202	6359	0.07717 ppb	#	94
17) Benz (a) anthracene	11.00	228	5798	0.08414 ppb		99
18) Chrysene	11.04	228	7198	0.09744 ppb		99
19) Indeno (1,2,3-cd) pyrene	14.93	276	7083	0.09610 ppb	#	99
21) Benzo (b) fluoranthene	12.79	252	4678	0.06579 ppb	#	99
22) Benzo (k) fluoranthene	12.85	252	7135	0.09052 ppb		98
23) Benzo (a) pyrene	13.35	252	4691	0.07030 ppb		98
24) Dibenz (a,h) anthracene	14.97	278	5556	0.08385 ppb		99
25) Benzo (g,h,i) perylene	15.29	276	6060	0.08386 ppb		97

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

Quantitation Report

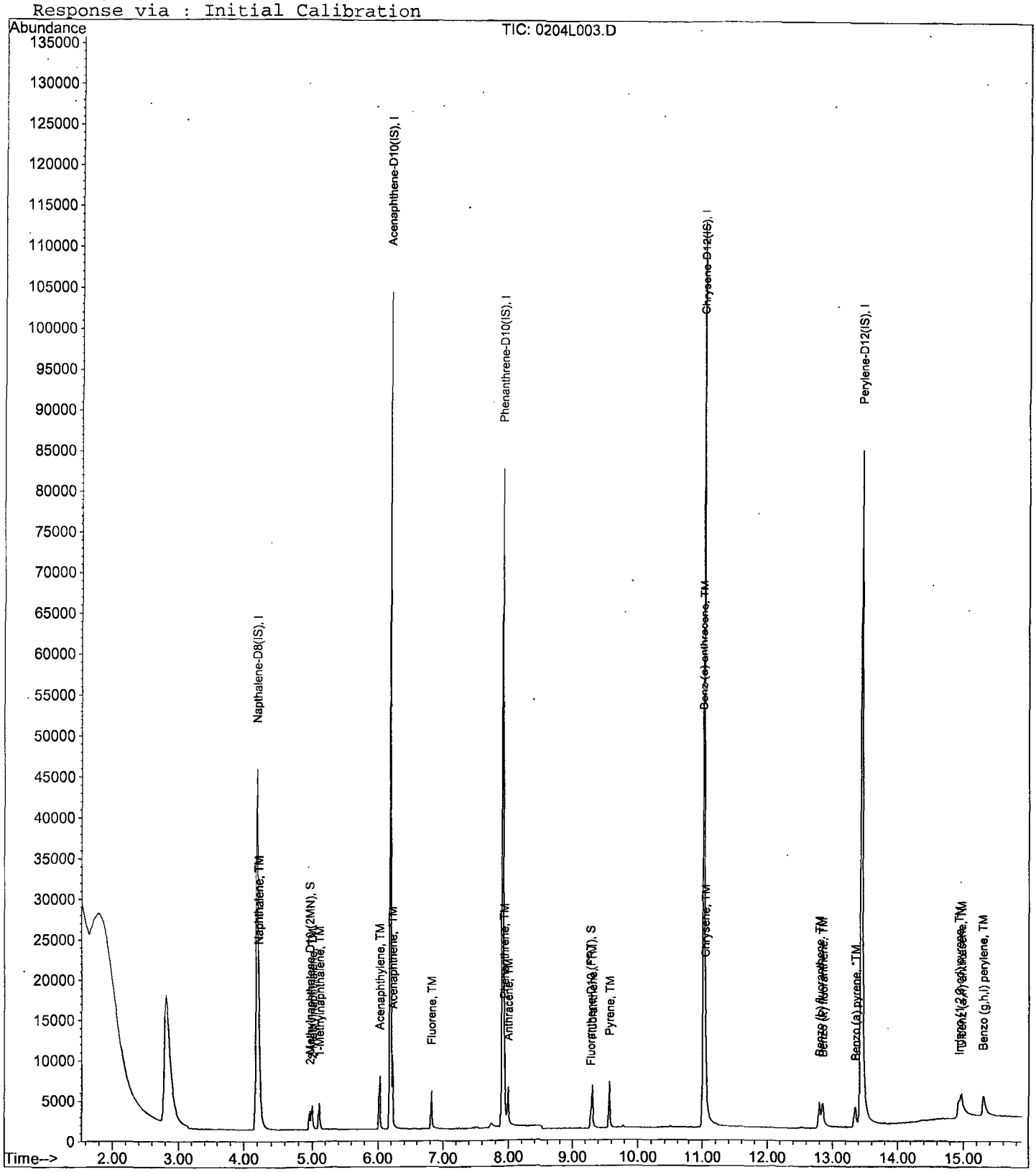
Data File : M:\LINUS\DATA\L200204\0204L003.D
Acq On : 4 Feb 20 9:48
Sample : 0.1 SIM 02/03/20
Misc :

Vial: 3
Operator: MA
Inst : Linus
Multiplr: 1.00

Quant Time: Feb 4 12:42 2020

Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L004.D Vial: 4
Acq On : 4 Feb 20 10:09 Operator: MA
Sample : 0.2 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:42:22 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.19	136	95871	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.18	164	51059	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.91	188	94452	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.01	240	119835	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.43	264	136582	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	4.96	152	4644	0.09724	ppb		0.00
Spiked Amount 5.000			Recovery =	1.940%			
13) Fluoranthene-D10 (FRT)	9.28	212	5554	0.08422	ppb		0.00
Spiked Amount 5.000			Recovery =	1.680%			
Target Compounds							Qvalue
2) Naphthalene	4.21	128	8673	0.18807	ppb		99
4) 2-Methylnaphthalene	5.00	142	5286	0.18862	ppb		99
5) 1-Methylnaphthalene	5.11	142	5736	0.19749	ppb		100
7) Acenaphthylene	6.02	152	15747	0.16915	ppb		99
8) Acenaphthene	6.22	154	5216	0.19104	ppb		99
9) Fluorene	6.82	166	6007	0.17936	ppb		96
11) Phenanthrene	7.93	178	9231	0.17678	ppb		99
12) Anthracene	7.99	178	7770	0.16971	ppb		99
14) Fluoranthene	9.30	202	12353	0.17053	ppb	#	93
16) Pyrene	9.57	202	12608	0.15723	ppb	#	91
17) Benz (a) anthracene	11.00	228	10767	0.16055	ppb		99
18) Chrysene	11.04	228	13529	0.18818	ppb		99
19) Indeno (1,2,3-cd) pyrene	14.92	276	13247	0.18469	ppb	#	100
21) Benzo (b) fluoranthene	12.79	252	9044	0.13271	ppb		99
22) Benzo (k) fluoranthene	12.85	252	14654	0.19398	ppb		98
23) Benzo (a) pyrene	13.35	252	9177	0.14350	ppb	#	97
24) Dibenz (a,h) anthracene	14.97	278	10810	0.17022	ppb		99
25) Benzo (g,h,i) perylene	15.29	276	11681	0.16867	ppb		98

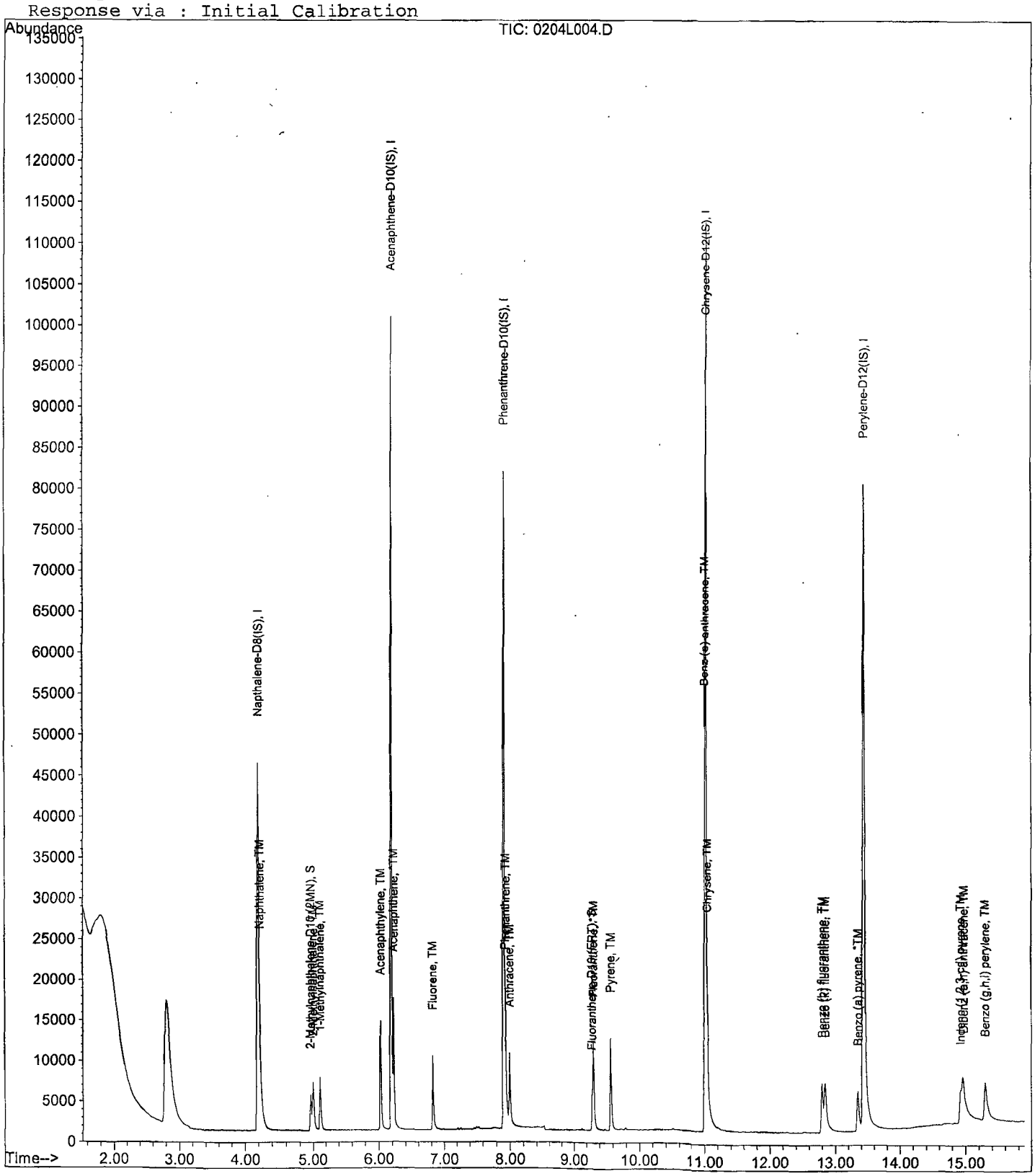
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L004.D Vial: 4
Acq On : 4 Feb 20 10:09 Operator: MA
Sample : 0.2 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L005.D Vial: 5
Acq On : 4 Feb 20 10:31 Operator: MA
Sample : 0.5 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:42:22 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.19	136	93485	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.18	164	49653	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.91	188	91991	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.01	240	112785	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.43	264	128599	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	4.96	152	10986	0.23591	ppb		0.00
Spiked Amount 5.000			Recovery =	4.720%			
13) Fluoranthene-D10 (FRT)	9.28	212	12142	0.18904	ppb		0.00
Spiked Amount 5.000			Recovery =	3.780%			
Target Compounds							Qvalue
2) Naphthalene	4.21	128	20052	0.44592	ppb		100
4) 2-Methylnaphthalene	5.00	142	12606	0.46129	ppb		100
5) 1-Methylnaphthalene	5.11	142	13447	0.47479	ppb		99
7) Acenaphthylene	6.02	152	37792	0.41744	ppb		100
8) Acenaphthene	6.22	154	12256	0.46158	ppb		99
9) Fluorene	6.82	166	14018	0.43041	ppb		96
11) Phenanthrene	7.93	178	21699	0.42667	ppb		98
12) Anthracene	7.99	178	18188	0.40788	ppb		98
14) Fluoranthene	9.30	202	28175	0.39935	ppb	#	93
16) Pyrene	9.57	202	27975	0.37067	ppb	#	93
17) Benz (a) anthracene	11.00	228	23610	0.37407	ppb		100
18) Chrysene	11.04	228	30897	0.45662	ppb		99
19) Indeno (1,2,3-cd) pyrene	14.92	276	31178	0.46186	ppb	#	100
21) Benzo (b) fluoranthene	12.79	252	21866	0.34077	ppb		98
22) Benzo (k) fluoranthene	12.85	252	33289	0.46801	ppb		98
23) Benzo (a) pyrene	13.35	252	23923	0.39730	ppb		98
24) Dibenz (a,h) anthracene	14.96	278	25669	0.42930	ppb	#	95
25) Benzo (g,h,i) perylene	15.29	276	28135	0.43148	ppb		99

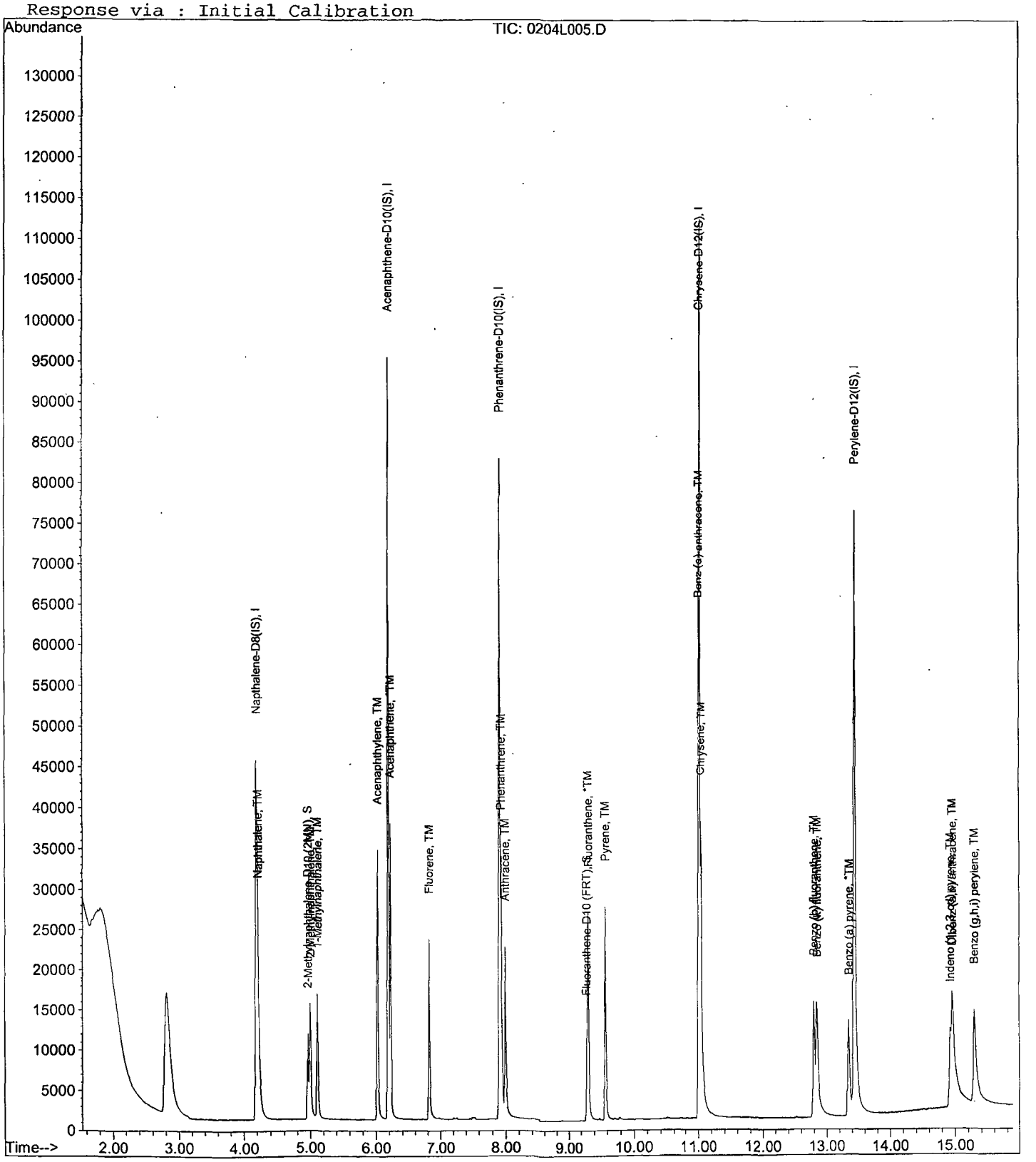
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L005.D Vial: 5
Acq On : 4 Feb 20 10:31 Operator: MA
Sample : 0.5 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L006.D Vial: 6
Acq On : 4 Feb 20 10:53 Operator: MA
Sample : 1 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:42:22 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	4.19	136	95074	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	6.18	164	50320	2.50000	ppb	0.00
10) Phenanthrene-D10(IS)	7.91	188	93982	2.50000	ppb	0.00
15) Chrysene-D12(IS)	11.01	240	115986	2.50000	ppb	0.00
20) Perylene-D12(IS)	13.43	264	130643	2.50000	ppb	0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	4.96	152	22777	0.48093	ppb	0.00
Spiked Amount 5.000			Recovery =	9.620%		
13) Fluoranthene-D10 (FRT)	9.28	212	25468	0.38812	ppb	0.00
Spiked Amount 5.000			Recovery =	7.760%		
Target Compounds						Qvalue
2) Naphthalene	4.21	128	41177	0.90039	ppb	100
4) 2-Methylnaphthalene	5.00	142	26456	0.95192	ppb	99
5) 1-Methylnaphthalene	5.11	142	27900	0.96864	ppb	98
7) Acenaphthylene	6.02	152	78337	0.85382	ppb	100
8) Acenaphthene	6.22	154	24913	0.92584	ppb	99
9) Fluorene	6.82	166	29892	0.90564	ppb	99
11) Phenanthrene	7.93	178	45036	0.86678	ppb	99
12) Anthracene	7.99	178	39270	0.86199	ppb	99
14) Fluoranthene	9.30	202	60200	0.83519	ppb	97
16) Pyrene	9.57	202	60381	0.77797	ppb	96
17) Benz (a) anthracene	11.00	228	49969	0.76984	ppb	99
18) Chrysene	11.04	228	63085	0.90659	ppb	99
19) Indeno (1,2,3-cd) pyrene	14.92	276	65048	0.93700	ppb	98
21) Benzo (b) fluoranthene	12.79	252	47971	0.73591	ppb	99
22) Benzo (k) fluoranthene	12.84	252	69126	0.95663	ppb	98
23) Benzo (a) pyrene	13.35	252	50746	0.82958	ppb	97
24) Dibenz (a,h) anthracene	14.96	278	54045	0.88973	ppb	97
25) Benzo (g,h,i) perylene	15.29	276	58422	0.88195	ppb	99

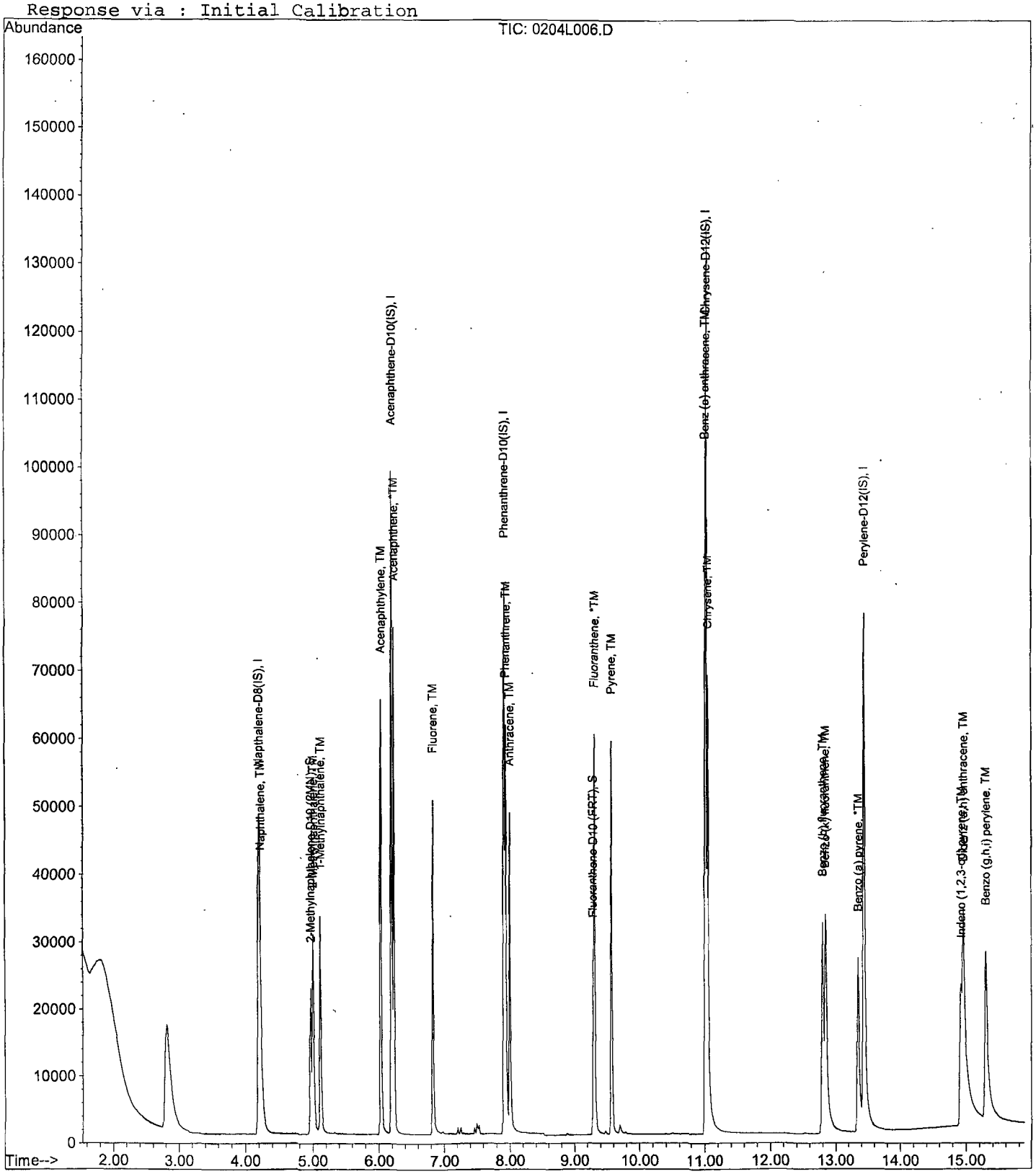
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L006.D Vial: 6
Acq On : 4 Feb 20 10:53 Operator: MA
Sample : 1 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L007.D Vial: 7
Acq On : 4 Feb 20 11:15 Operator: MA
Sample : 5 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:42:22 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.19	136	93559	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.18	164	49173	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.91	188	92273	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.01	240	120189	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.43	264	131131	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	4.96	152	117393	2.51887	ppb		0.00
Spiked Amount 5.000			Recovery	= 50.380%			
13) Fluoranthene-D10 (FRT)	9.28	212	137624	2.13617	ppb		0.00
Spiked Amount 5.000			Recovery	= 42.720%			
Target Compounds							Qvalue
2) Naphthalene	4.21	128	211249	4.69404	ppb		100
4) 2-Methylnaphthalene	5.00	142	139742	5.10952	ppb		100
5) 1-Methylnaphthalene	5.11	142	143640	5.06770	ppb		100
7) Acenaphthylene	6.02	152	431994	4.81826	ppb		100
8) Acenaphthene	6.22	154	128780	4.89745	ppb		100
9) Fluorene	6.82	166	160921	4.98915	ppb		100
11) Phenanthrene	7.93	178	238077	4.66698	ppb		100
12) Anthracene	7.99	178	213985	4.78406	ppb		100
14) Fluoranthene	9.30	202	335331	4.73840	ppb		100
16) Pyrene	9.57	202	333150	4.14232	ppb		100
17) Benz (a) anthracene	11.00	228	286178	4.25478	ppb		100
18) Chrysene	11.04	228	328507	4.55588	ppb		100
19) Indeno (1,2,3-cd) pyrene	14.91	276	378390	5.26003	ppb	#	100
21) Benzo (b) fluoranthene	12.79	252	299210	4.57302	ppb		100
22) Benzo (k) fluoranthene	12.84	252	366067	5.04713	ppb		100
23) Benzo (a) pyrene	13.34	252	295305	4.80957	ppb		100
24) Dibenz (a,h) anthracene	14.96	278	317098	5.20088	ppb		100
25) Benzo (g,h,i) perylene	15.28	276	334159	5.02577	ppb		100

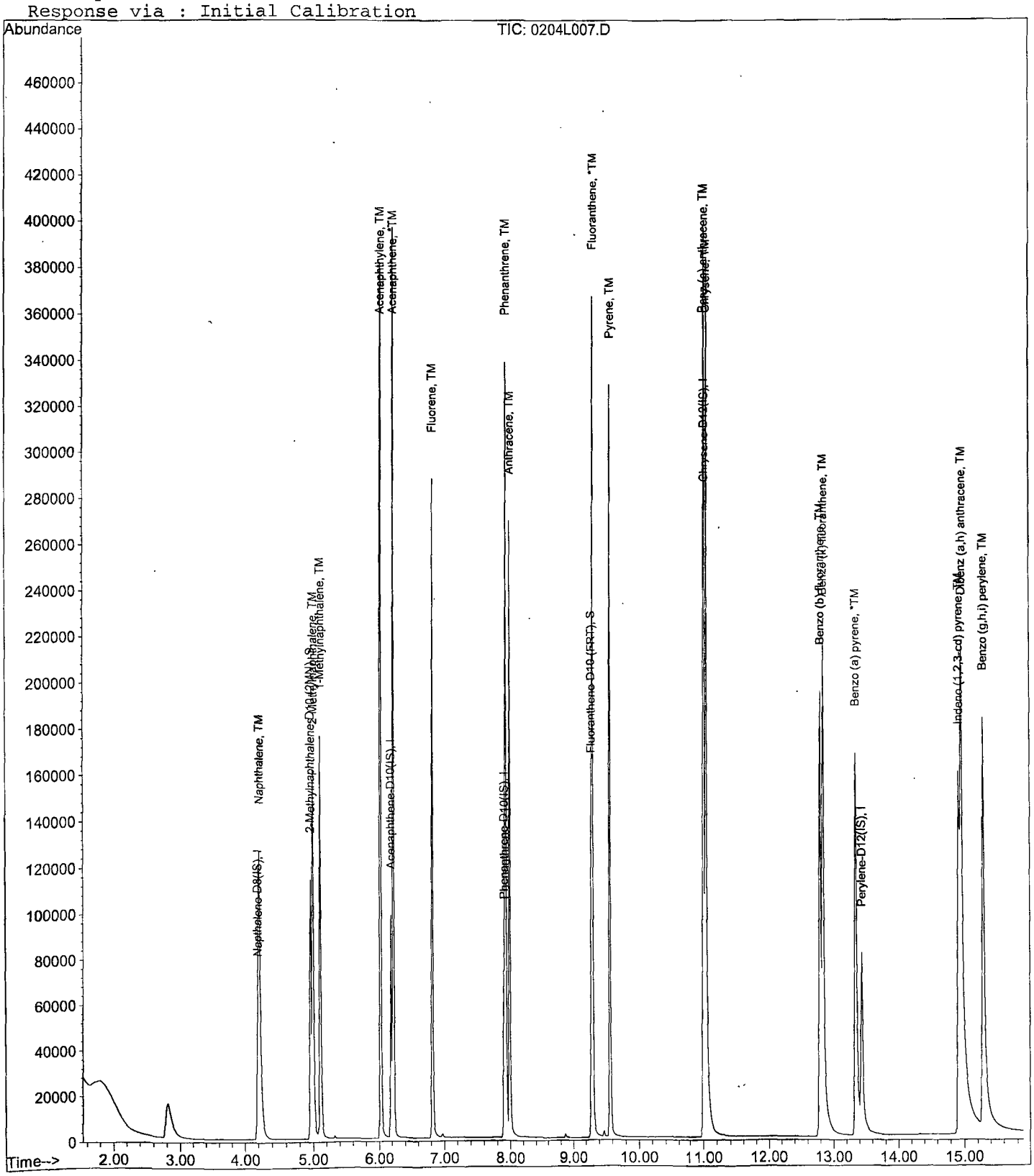
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L007.D Vial: 7
Acq On : 4 Feb 20 11:15 Operator: MA
Sample : 5 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L008.D Vial: 8
Acq On : 4 Feb 20 11:37 Operator: MA
Sample : 10 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:42:22 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.19	136	98020	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.18	164	51392	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.91	188	97154	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.01	240	126338	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.43	264	139162	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	4.96	152	238748	4.88961 ppb		0.00
Spiked Amount 5.000			Recovery	= 97.800%		
13) Fluoranthene-D10 (FRT)	9.28	212	286889	4.22932 ppb		0.00
Spiked Amount 5.000			Recovery	= 84.580%		
Target Compounds						Qvalue
2) Naphthalene	4.21	128	410435	8.70497 ppb		100
4) 2-Methylnaphthalene	5.00	142	272886	9.52368 ppb		99
5) 1-Methylnaphthalene	5.11	142	275593	9.28058 ppb		98
7) Acenaphthylene	6.02	152	845596	9.02415 ppb		99
8) Acenaphthene	6.22	154	250345	9.10944 ppb		98
9) Fluorene	6.82	166	318435	9.44639 ppb		99
11) Phenanthrene	7.93	178	468302	8.71883 ppb		100
12) Anthracene	7.99	178	427236	9.07184 ppb		100
14) Fluoranthene	9.30	202	648356	8.70132 ppb		99
16) Pyrene	9.57	202	660769	7.81599 ppb		100
17) Benz (a) anthracene	11.00	228	585928	8.28736 ppb		99
18) Chrysene	11.04	228	640149	8.44578 ppb		99
19) Indeno (1,2,3-cd) pyrene	14.92	276	770951	10.19544 ppb	#	94
21) Benzo (b) fluoranthene	12.79	252	603563	8.69229 ppb		99
22) Benzo (k) fluoranthene	12.84	252	740450	9.61977 ppb		99
23) Benzo (a) pyrene	13.35	252	605339	9.29007 ppb	#	96
24) Dibenz (a,h) anthracene	14.96	278	643860	9.95084 ppb		99
25) Benzo (g,h,i) perylene	15.28	276	676724	9.59060 ppb		97

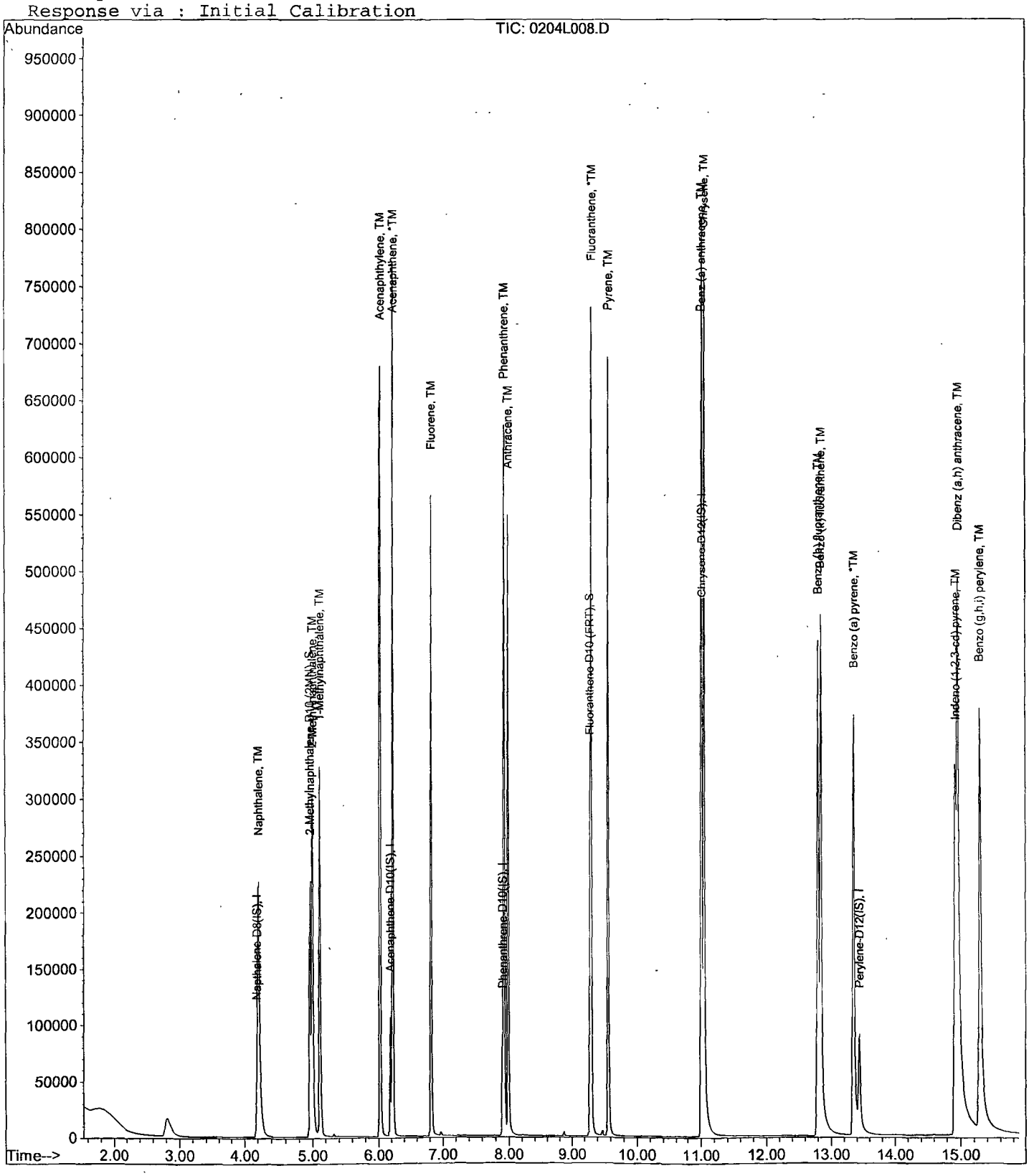
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L008.D Vial: 8
Acq On : 4 Feb 20 11:37 Operator: MA
Sample : 10 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L009.D Vial: 9
Acq On : 4 Feb 20 11:59 Operator: MA
Sample : 50 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 13:42 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:42:22 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.19	136	91741	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.18	164	48249	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.91	188	92859	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.02	240	119843	2.50000	ppb		0.01
20) Perylene-D12(IS)	13.43	264	135287	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	4.96	152	1082689	23.69132	ppb		0.00
Spiked Amount 5.000			Recovery = 473.820%				
13) Fluoranthene-D10 (FRT)	9.28	212	1334204	20.57858	ppb		0.00
Spiked Amount 5.000			Recovery = 411.580%				
Target Compounds							Qvalue
2) Naphthalene	4.21	128	1792980	40.63028	ppb		99
4) 2-Methylnaphthalene	5.00	142	1202511	44.83983	ppb		98
5) 1-Methylnaphthalene	5.11	142	1216206	43.75878	ppb		98
7) Acenaphthylene	6.02	152	3684033	41.87685	ppb		98
8) Acenaphthene	6.22	154	1114731	43.20461	ppb		98
9) Fluorene	6.82	166	1376652	43.49873	ppb		99
11) Phenanthrene	7.93	178	1932753	37.64827	ppb		97
12) Anthracene	7.99	178	1828963	40.63210	ppb		97
14) Fluoranthene	9.32	202	2749439	38.60579	ppb		97
16) Pyrene	9.58	202	2924684	36.46993	ppb		98
17) Benz (a) anthracene	11.01	228	2735399	40.78626	ppb		97
18) Chrysene	11.07	228	2813476	39.13121	ppb		97
19) Indeno (1,2,3-cd) pyrene	14.95	276	3717110	51.82101	ppb		98
21) Benzo (b) fluoranthene	12.82	252	3024809	44.80994	ppb		97
22) Benzo (k) fluoranthene	12.82	252	2960397	39.56247	ppb		97
23) Benzo (a) pyrene	13.36	252	2893742	45.68194	ppb		97
24) Dibenz (a,h) anthracene	14.99	278	3162117	50.27021	ppb	#	95
25) Benzo (g,h,i) perylene	15.32	276	3213468	46.84602	ppb		94

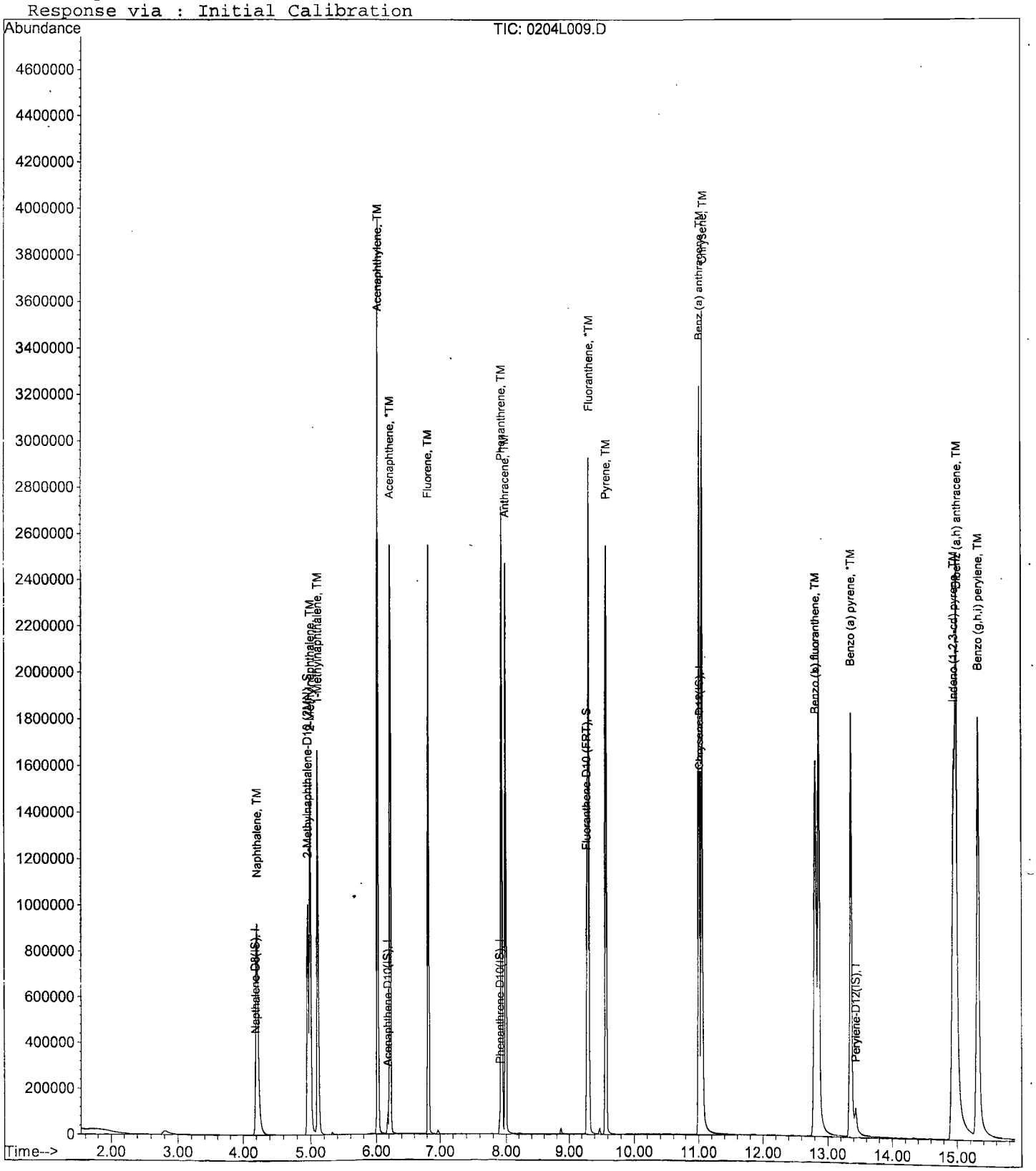
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L009.D Vial: 9
Acq On : 4 Feb 20 11:59 Operator: MA
Sample : 50 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 13:42 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L010.D Vial: 10
Acq On : 4 Feb 20 12:21 Operator: MA
Sample : 100 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:49 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:48:59 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.19	136	94154	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.18	164	49526	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.91	188	95687	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.03	240	125316	2.50000	ppb		0.02
20) Perylene-D12(IS)	13.45	264	141618	2.50000	ppb		0.01
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	4.96	152	2132841	47.06510	ppb		0.00
Spiked Amount 5.000			Recovery = 941.300%				
13) Fluoranthene-D10 (FRT)	9.29	212	2657919	48.74975	ppb		0.01
Spiked Amount 5.000			Recovery = 975.000%				
Target Compounds							Qvalue
2) Naphthalene	4.21	128	3515265	87.92823	ppb		98
4) 2-Methylnaphthalene	5.00	142	2314267	90.08958	ppb		99
5) 1-Methylnaphthalene	5.11	142	2325445	86.77018	ppb		99
7) Acenaphthylene	6.02	152	6802585	88.10489	ppb		97
8) Acenaphthene	6.23	154	2052134	84.22717	ppb		97
9) Fluorene	6.83	166	2744719	93.60760	ppb		100
11) Phenanthrene	7.94	178	3586911	80.58577	ppb		95
12) Anthracene	8.00	178	3368369	85.99155	ppb		95
14) Fluoranthene	9.33	202	5194710	85.53200	ppb		95
16) Pyrene	9.58	202	5580274	87.52935	ppb	#	84
17) Benz (a) anthracene	11.02	228	5418653	96.12929	ppb		94
18) Chrysene	11.08	228	5338591	81.34404	ppb		95
19) Indeno (1,2,3-cd) pyrene	14.99	276	7605000	103.10512	ppb	#	84
21) Benzo (b) fluoranthene	12.84	252	6397741	114.52991	ppb		95
22) Benzo (k) fluoranthene	12.90	252	6168270	86.51444	ppb		100
23) Benzo (a) pyrene	13.38	252	5827644	104.49972	ppb		95
24) Dibenz (a,h) anthracene	15.01	278	6436791	104.88555	ppb	#	94
25) Benzo (g,h,i) perylene	15.35	276	6483695	99.89693	ppb	#	93

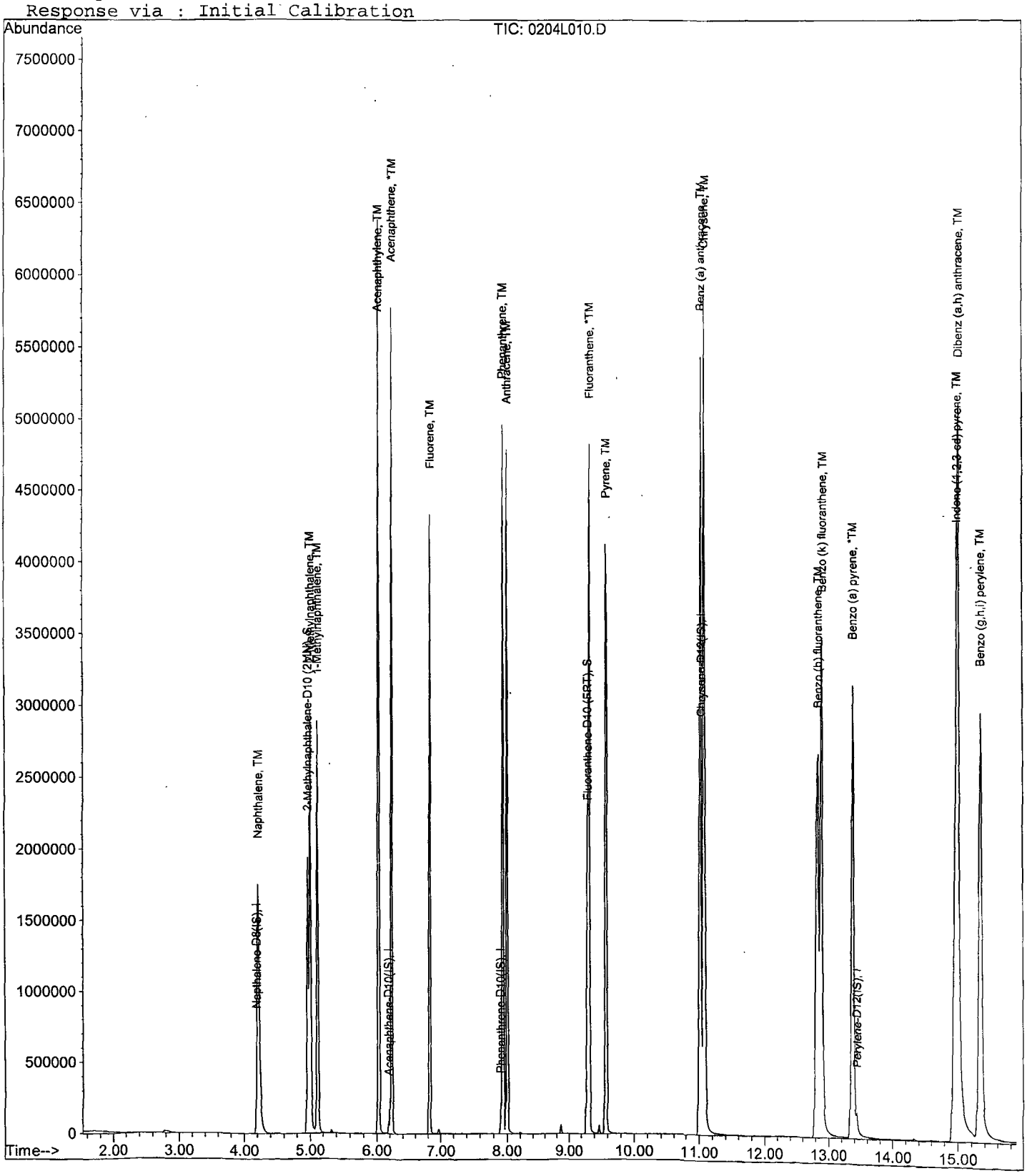
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L010.D Vial: 10
Acq On : 4 Feb 20 12:21 Operator: MA
Sample : 100 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:49 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration



PAH by GCMS SIM
EPA 8270 SIM

Form 7

Second Source Calibration

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

SDG No:
Date Analyzed: 4 Feb 20 13:21
Instrument: Linus
Initial Cal. Date: 02/04/20
Data File: 0204L011.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	Naphthalene	1.062	1.033	2.7	TM	
2	TM	2-Methylnaphthalene	0.6821	0.6822	0.02	TM	
3	TM	1-Methylnaphthalene	0.7116	0.6901	3.0	TM	
4	TM	Acenaphthylene	3.897	3.871	0.68	TM	
5	*TM	Acenaphthene	1.230	1.178	4.2	*TM	
6	TM	Fluorene	1.480	1.459	1.5	TM	
7	TM	Phenanthrene	1.163	1.148	1.3	TM	
8	TM	Anthracene	1.023	1.104	7.8	TM	
9	*TM	Fluoranthene	1.587	1.568	1.2	*TM	
10	TM	Pyrene	1.272	1.242	2.3	TM	
11	TM	Benz (a) anthracene	1.125	1.066	5.2	TM	
12	TM	Chrysene	1.309	1.222	6.7	TM	
13	TM	Indeno (1,2,3-cd) pyrene	1.471	1.421	3.4	TM	
14	TM	Benzo (b) fluoranthene	0.9861	0.9690	1.7	TM	
15	TM	Benzo (k) fluoranthene	1.265	1.329	5.1	TM	
16	*TM	Benzo (a) pyrene	0.9845	1.048	6.4	*TM	
17	TM	Dibenz (a,h) anthracene	1.083	1.080	0.29	TM	
18	TM	Benzo (g,h,i) perylene	1.146	1.138	0.70	TM	
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			3.0		

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L011.D Vial: 11
Acq On : 4 Feb 20 13:21 Operator: MA
Sample : SS SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 13:39 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	4.19	136	96451	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	6.18	164	52672	2.50000 ppb	0.00
10) Phenanthrene-D10(IS)	7.91	188	97686	2.50000 ppb	0.00
15) Chrysene-D12(IS)	11.01	240	126057	2.50000 ppb	0.00
20) Perylene-D12(IS)	13.43	264	136401	2.50000 ppb	0.00
System Monitoring Compounds					
3) 2-Methylnaphthalene-D10 (2	0.00	152	0d	0.00000 ppb	
Spiked Amount 5.000			Recovery =	0.000%	
13) Fluoranthene-D10 (FRT)	0.00	212	0d	0.00000 ppb	
Spiked Amount 5.000			Recovery =	0.000%	
Target Compounds					Qvalue
2) Naphthalene	4.21	128	199297	4.86635 ppb	100
4) 2-Methylnaphthalene	5.00	142	131606	5.00114 ppb	100
5) 1-Methylnaphthalene	5.11	142	133123	4.84897 ppb	100
7) Acenaphthylene	6.02	152	407798	4.96620 ppb	100
8) Acenaphthene	6.22	154	124072	4.78822 ppb	100
9) Fluorene	6.82	166	153651	4.92722 ppb	99
11) Phenanthrene	7.93	178	224305	4.93625 ppb	99
12) Anthracene	7.99	178	215622	5.39200 ppb	100
14) Fluoranthene	9.30	202	306319	4.94040 ppb	98
16) Pyrene	9.57	202	313161	4.88321 ppb	98
17) Benz (a) anthracene	11.00	228	268691	4.73868 ppb	100
18) Chrysene	11.05	228	308124	4.66728 ppb #	96
19) Indeno (1,2,3-cd) pyrene	14.92	276	358273	4.82875 ppb #	95
21) Benzo (b) fluoranthene	12.79	252	264332	4.91296 ppb	99
22) Benzo (k) fluoranthene	12.84	252	362562	5.25367 ppb	99
23) Benzo (a) pyrene	13.35	252	285781	5.32055 ppb	97
24) Dibenz (a,h) anthracene	14.96	278	294697	4.98566 ppb	98
25) Benzo (g,h,i) perylene	15.29	276	310388	4.96518 ppb	99

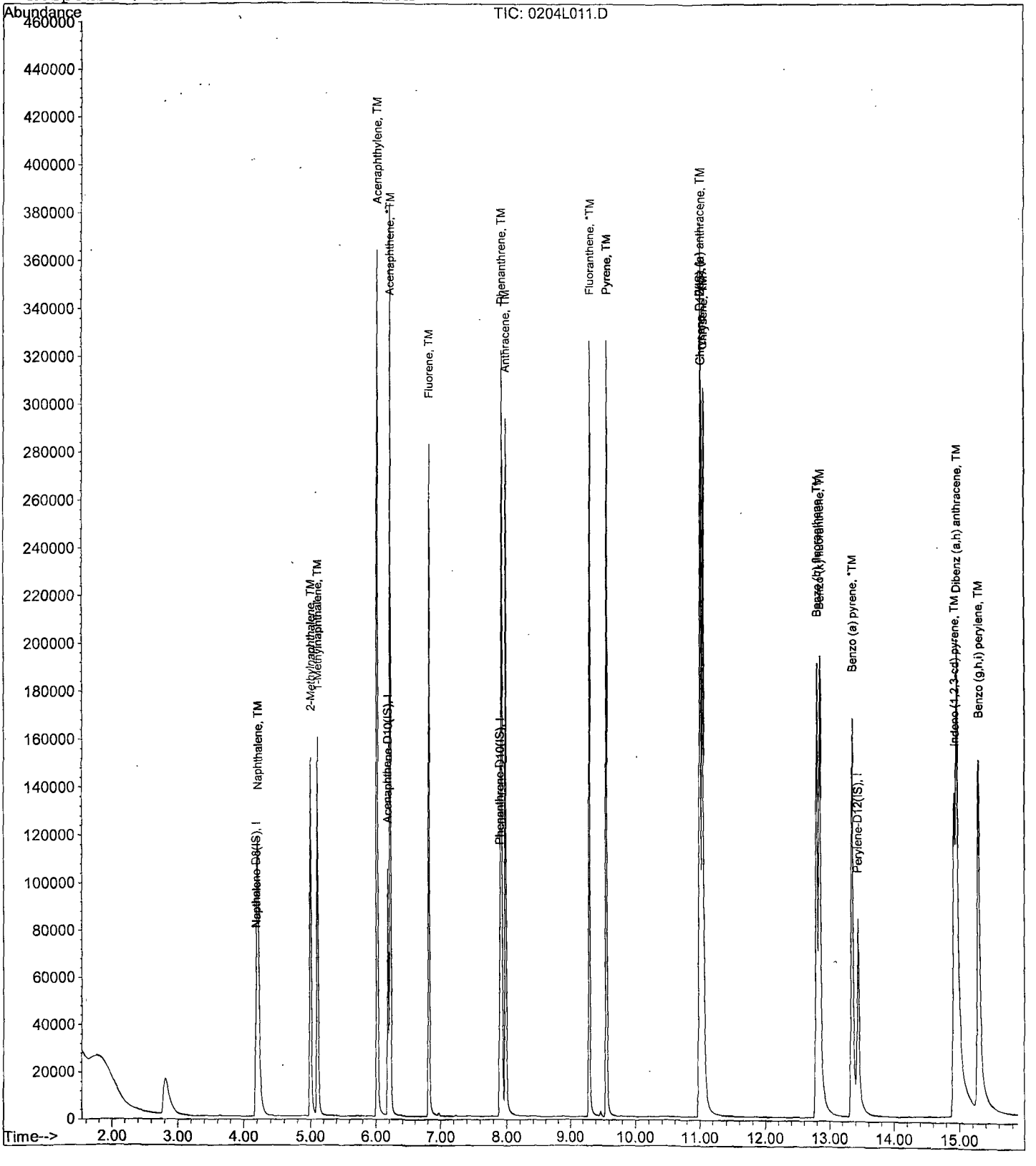
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L011.D Vial: 11
Acq On : 4 Feb 20 13:21 Operator: MA
Sample : SS SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 13:39 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration



PAH by GCMS SIM
EPA 8270 SIM

Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 03/13/20
Instrument: Linus
Initial Cal. Date: 02/04/20
Data File: 0204L264.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	TM	Naphthalene	1.062	1.001	5.7	TM	
3	S	2-Methylnaphthalene-D10 (2MN)	1.203	1.260	4.7	S	
4	TM	2-Methylnaphthalene	0.6821	0.7045	3.3	TM	
5	TM	1-Methylnaphthalene	0.7116	0.7038	1.1	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	TM	Acenaphthylene	3.897	3.874	0.59	TM	
8	*TM	Acenaphthene	1.230	1.117	9.2	*TM	
9	TM	Fluorene	1.480	1.479	0.09	TM	
10	I	Phenanthrene-D10(IS)	ISTD			I	
11	TM	Phenanthrene	1.163	1.069	8.0	TM	
12	TM	Anthracene	1.023	0.9895	3.3	TM	
13	S	Fluoranthene-D10 (FRT)	1.424	1.410	1.0	S	
14	*TM	Fluoranthene	1.587	1.516	4.5	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.272	1.161	8.7	TM	
17	TM	Benz (a) anthracene	1.125	1.231	9.5	TM	
18	TM	Chrysene	1.309	1.115	15	TM	
19	TM	Indeno (1,2,3-cd) pyrene	1.471	1.648	12	TM	
20	I	Perylene-D12(IS)	ISTD			I	
21	TM	Benzo (b) fluoranthene	0.9861	1.106	12	TM	
22	TM	Benzo (k) fluoranthene	1.265	1.051	17	TM	
23	*TM	Benzo (a) pyrene	0.9845	0.9914	0.71	*TM	
24	TM	Dibenz (a,h) anthracene	1.083	1.144	5.6	TM	
25	TM	Benzo (g,h,i) perylene	1.146	1.133	1.1	TM	
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			6.2		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L264.D Vial: 64
Acq On : 13 Mar 20 9:05 Operator: MA
Sample : 5 SIM 02/03/20 (1) Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Mar 13 10:23 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.14	136	103369	2.50000	ppb		-0.01
6) Acenaphthene-D10(IS)	6.14	164	59116	2.50000	ppb		-0.01
10) Phenanthrene-D10(IS)	7.87	188	118925	2.50000	ppb		-0.01
15) Chrysene-D12(IS)	10.99	240	155598	2.50000	ppb		-0.01
20) Perylene-D12(IS)	13.40	264	193690	2.50000	ppb		-0.01
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	4.93	152	130279	2.61857	ppb		0.00
Spiked Amount 5.000			Recovery = 52.380%				
13) Fluoranthene-D10 (FRT)	9.26	212	167687	2.47463	ppb		0.00
Spiked Amount 5.000			Recovery = 49.500%				
Target Compounds							Qvalue
2) Naphthalene	4.17	128	206895	4.71377	ppb		100
4) 2-Methylnaphthalene	4.96	142	145651	5.16444	ppb		96
5) 1-Methylnaphthalene	5.07	142	145509	4.94542	ppb		95
7) Acenaphthylene	5.99	152	458089	4.97055	ppb		100
8) Acenaphthene	6.18	154	132069	4.54125	ppb		98
9) Fluorene	6.78	166	174832	4.99531	ppb		97
11) Phenanthrene	7.89	178	254349	4.59777	ppb		98
12) Anthracene	7.95	178	235343	4.83412	ppb		98
14) Fluoranthene	9.28	202	360620	4.77746	ppb		94
16) Pyrene	9.53	202	361256	4.56369	ppb	#	90
17) Benz (a) anthracene	10.97	228	383200	5.47510	ppb		99
18) Chrysene	11.02	228	347043	4.25878	ppb		98
19) Indeno (1,2,3-cd) pyrene	14.89	276	512839	5.59970	ppb		96
21) Benzo (b) fluoranthene	12.75	252	428319	5.60623	ppb	#	98
22) Benzo (k) fluoranthene	12.80	252	407025	4.15348	ppb		100
23) Benzo (a) pyrene	13.32	252	384060	5.03538	ppb	#	96
24) Dibenz (a,h) anthracene	14.93	278	443309	5.28158	ppb	#	96
25) Benzo (g,h,i) perylene	15.26	276	438853	4.94379	ppb	#	98

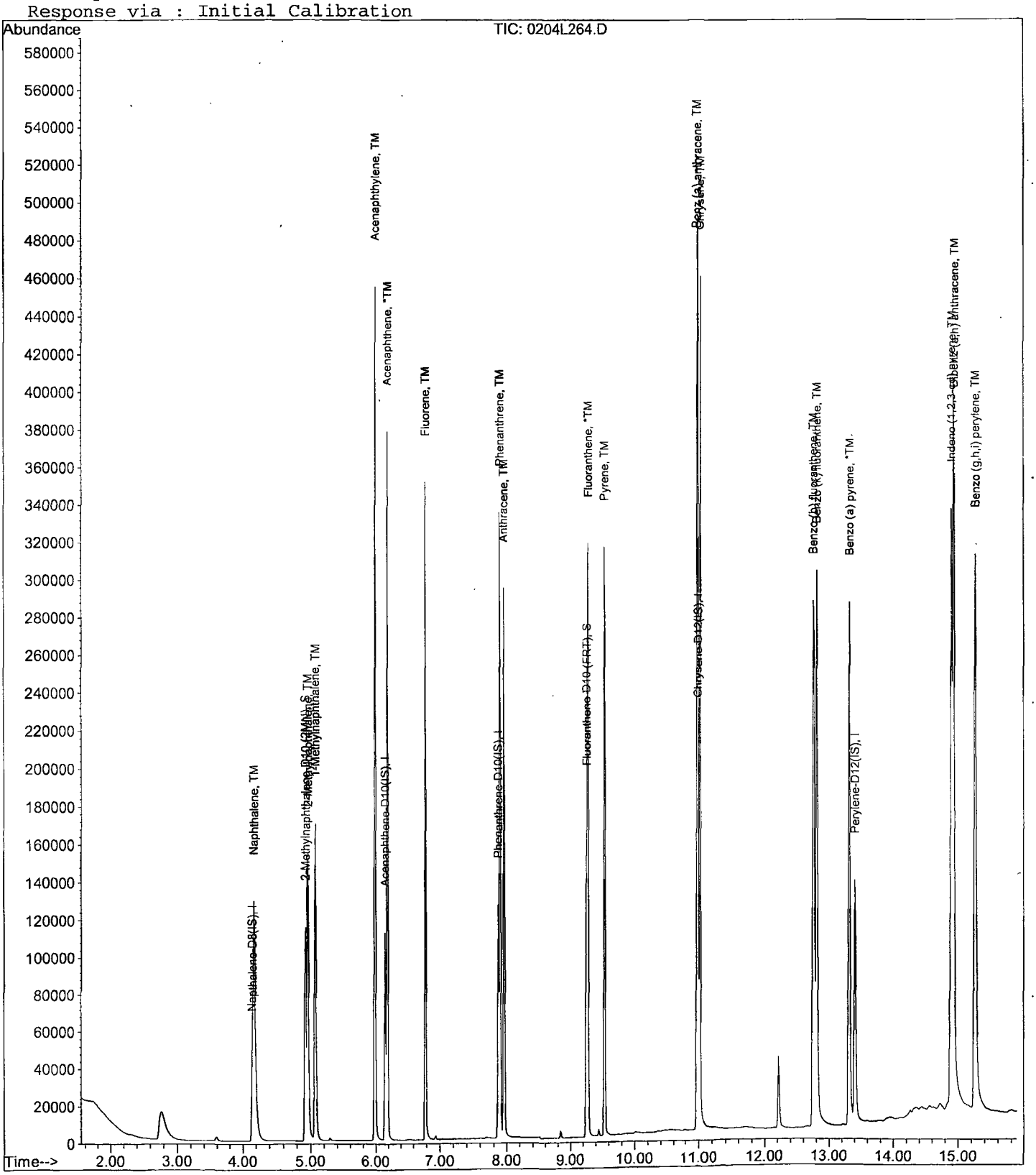
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L264.D Vial: 64
Acq On : 13 Mar 20 9:05 Operator: MA
Sample : 5 SIM 02/03/20 (1) Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Mar 13 10:23 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration



PAH by GCMS SIM
EPA 8270 SIM

Form 7

Ending Continuing Calibration

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

SDG No:
Date Analyzed: 03/13/20
Instrument: Linus
Initial Cal. Date: 02/04/20
Data File: 0204L272.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	TM	Naphthalene	1.062	1.026	3.3	TM	
3	S	2-Methylnaphthalene-D10 (2MN)	1.203	1.310	8.9	S	
4	TM	2-Methylnaphthalene	0.6821	0.7157	4.9	TM	
5	TM	1-Methylnaphthalene	0.7116	0.7209	1.3	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	TM	Acenaphthylene	3.897	3.893	0.11	TM	
8	*TM	Acenaphthene	1.230	1.128	8.2	*TM	
9	TM	Fluorene	1.480	1.481	0.03	TM	
10	I	Phenanthrene-D10(IS)	ISTD			I	
11	TM	Phenanthrene	1.163	1.039	11	TM	
12	TM	Anthracene	1.023	0.9409	8.1	TM	
13	S	Fluoranthene-D10 (FRT)	1.424	1.410	1.00	S	
14	*TM	Fluoranthene	1.587	1.492	6.0	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.272	1.108	13	TM	
17	TM	Benz (a) anthracene	1.125	1.171	4.2	TM	
18	TM	Chrysene	1.309	1.073	18	TM	
19	TM	Indeno (1,2,3-cd) pyrene	1.471	1.547	5.2	TM	
20	I	Perylene-D12(IS)	ISTD			I	
21	TM	Benzo (b) fluoranthene	0.9861	1.126	14	TM	
22	TM	Benzo (k) fluoranthene	1.265	1.020	19	TM	
23	*TM	Benzo (a) pyrene	0.9845	0.9782	0.64	*TM	
24	TM	Dibenz (a,h) anthracene	1.083	1.119	3.3	TM	
25	TM	Benzo (g,h,i) perylene	1.146	1.115	2.7	TM	
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			6.6		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L272.D Vial: 72
Acq On : 13 Mar 20 12:05 Operator: MA
Sample : 5 SIM 02/03/20 (1) Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Mar 13 13:22 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.15	136	103356	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.14	164	61152	2.50000 ppb		-0.01
10) Phenanthrene-D10(IS)	7.87	188	129745	2.50000 ppb		-0.01
15) Chrysene-D12(IS)	10.99	240	173506	2.50000 ppb		-0.01
20) Perylene-D12(IS)	13.40	264	206040	2.50000 ppb		-0.01
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	4.93	152	135415	2.72214 ppb		0.00
Spiked Amount 5.000			Recovery = 54.440%			
13) Fluoranthene-D10 (FRT)	9.26	212	182973	2.47503 ppb		0.00
Spiked Amount 5.000			Recovery = 49.500%			
Target Compounds						Qvalue
2) Naphthalene	4.18	128	212137	4.83381 ppb		100
4) 2-Methylnaphthalene	4.96	142	147945	5.24644 ppb		98
5) 1-Methylnaphthalene	5.07	142	149018	5.06531 ppb		97
7) Acenaphthylene	5.99	152	476163	4.99464 ppb		100
8) Acenaphthene	6.18	154	138015	4.58770 ppb		98
9) Fluorene	6.78	166	181074	5.00140 ppb		97
11) Phenanthrene	7.89	178	269634	4.46760 ppb		98
12) Anthracene	7.95	178	244152	4.59683 ppb		98
14) Fluoranthene	9.28	202	387153	4.70124 ppb	#	93
16) Pyrene	9.53	202	384568	4.35676 ppb	#	90
17) Benz (a) anthracene	10.97	228	406499	5.20854 ppb		99
18) Chrysene	11.02	228	372324	4.09744 ppb		99
19) Indeno (1,2,3-cd) pyrene	14.89	276	536960	5.25793 ppb	#	94
21) Benzo (b) fluoranthene	12.75	252	464152	5.71110 ppb	#	98
22) Benzo (k) fluoranthene	12.80	252	420186	4.03077 ppb		99
23) Benzo (a) pyrene	13.32	252	403088	4.96808 ppb	#	96
24) Dibenz (a,h) anthracene	14.92	278	461000	5.16314 ppb		98
25) Benzo (g,h,i) perylene	15.26	276	459593	4.86710 ppb		98

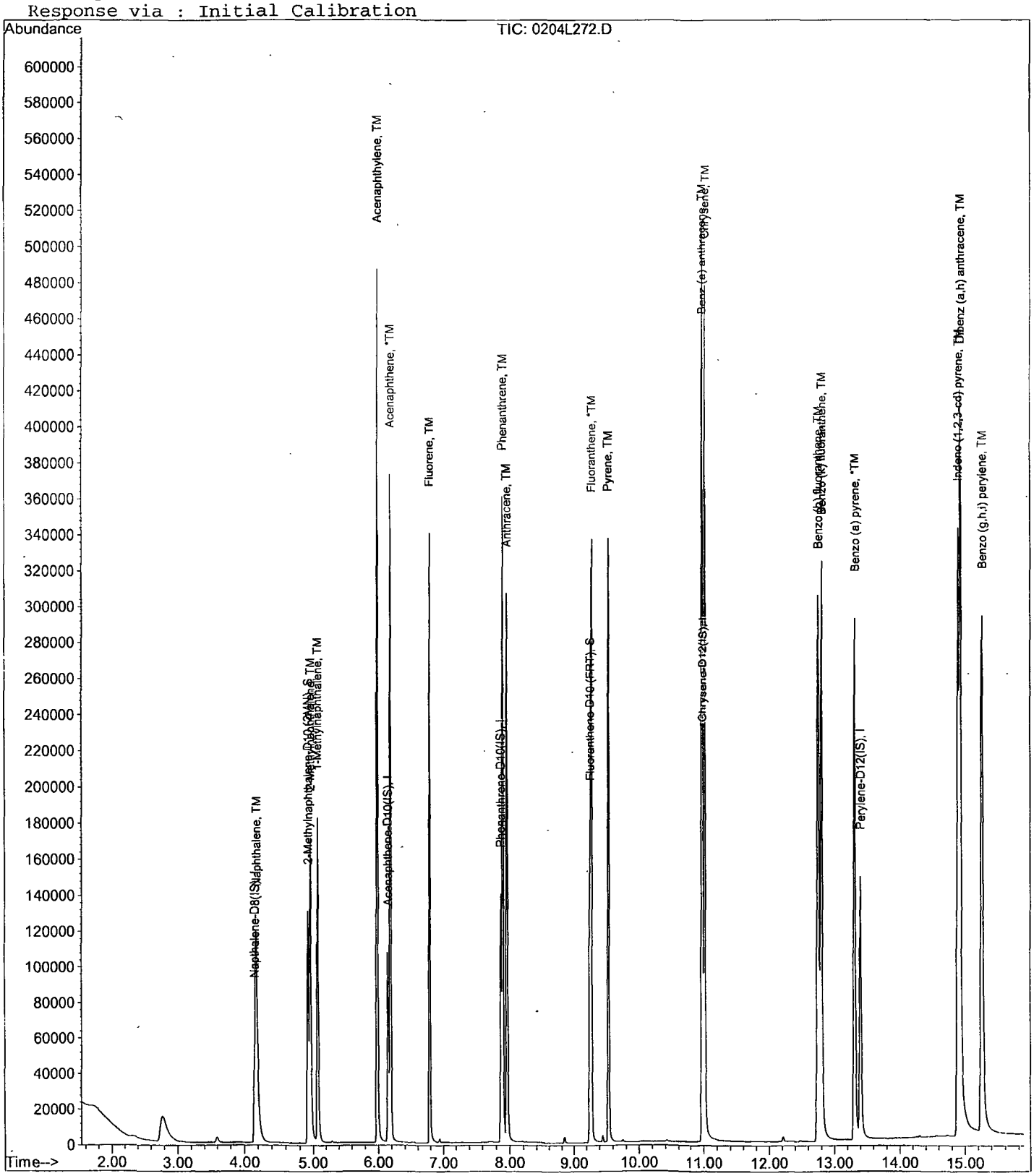
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L272.D Vial: 72
Acq On : 13 Mar 20 12:05 Operator: MA
Sample : 5 SIM 02/03/20 (1) Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Mar 13 13:22 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration



ORGANICS
Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L271.D Vial: 71
Acq On : 13 Mar 20 11:41 Operator: MA
Sample : BA08034W22 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Mar 13 13:01 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	4.14	136	83991	2.50000	ppb	-0.01
6) Acenaphthene-D10(IS)	6.14	164	49268	2.50000	ppb	-0.01
10) Phenanthrene-D10(IS)	7.87	188	97385	2.50000	ppb	-0.01
15) Chrysene-D12(IS)	10.98	240	130497	2.50000	ppb	-0.02
20) Perylene-D12(IS)	13.40	264	150537	2.50000	ppb	-0.01
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	4.93	152	203621	6.29621	ppb	0.00
Spiked Amount 6.250			Recovery	= 100.736%		
13) Fluoranthene-D10 (FRT)	9.26	212	255515	5.75596	ppb	0.00
Spiked Amount 6.250			Recovery	= 92.096%		

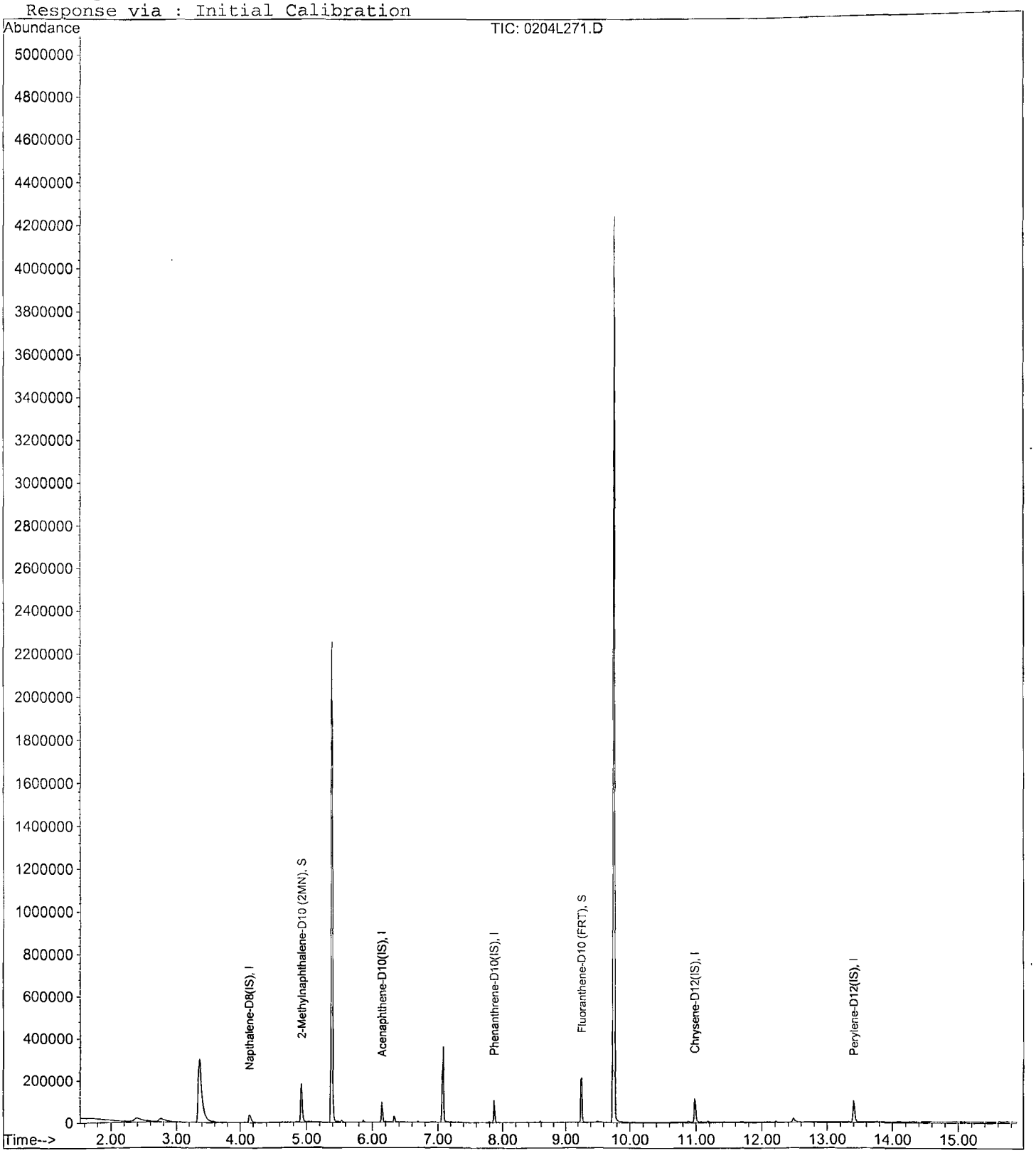
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0204L271.D L0204.M Fri Mar 13 14:30:38 2020 Page 1

Data File : M:\LINUS\DATA\L200204\0204L271.D Vial: 71
Acq On : 13 Mar 20 11:41 Operator: MA
Sample : BA08034W22 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Mar 13 13:01 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L268.D Vial: 68
Acq On : 13 Mar 20 10:35 Operator: MA
Sample : 200310A BLK 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Mar 13 11:55 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	4.15	136	87144	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	6.14	164	50760	2.50000	ppb	-0.01
10) Phenanthrene-D10(IS)	7.87	188	100519	2.50000	ppb	-0.01
15) Chrysene-D12(IS)	10.99	240	134162	2.50000	ppb	-0.01
20) Perylene-D12(IS)	13.40	264	162661	2.50000	ppb	-0.01
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	4.93	152	210980	6.28772	ppb	0.00
Spiked Amount 6.250			Recovery = 100.608%			
13) Fluoranthene-D10 (FRT)	9.26	212	290637	6.34302	ppb	0.00
Spiked Amount 6.250			Recovery = 101.488%			

Target Compounds Qvalue

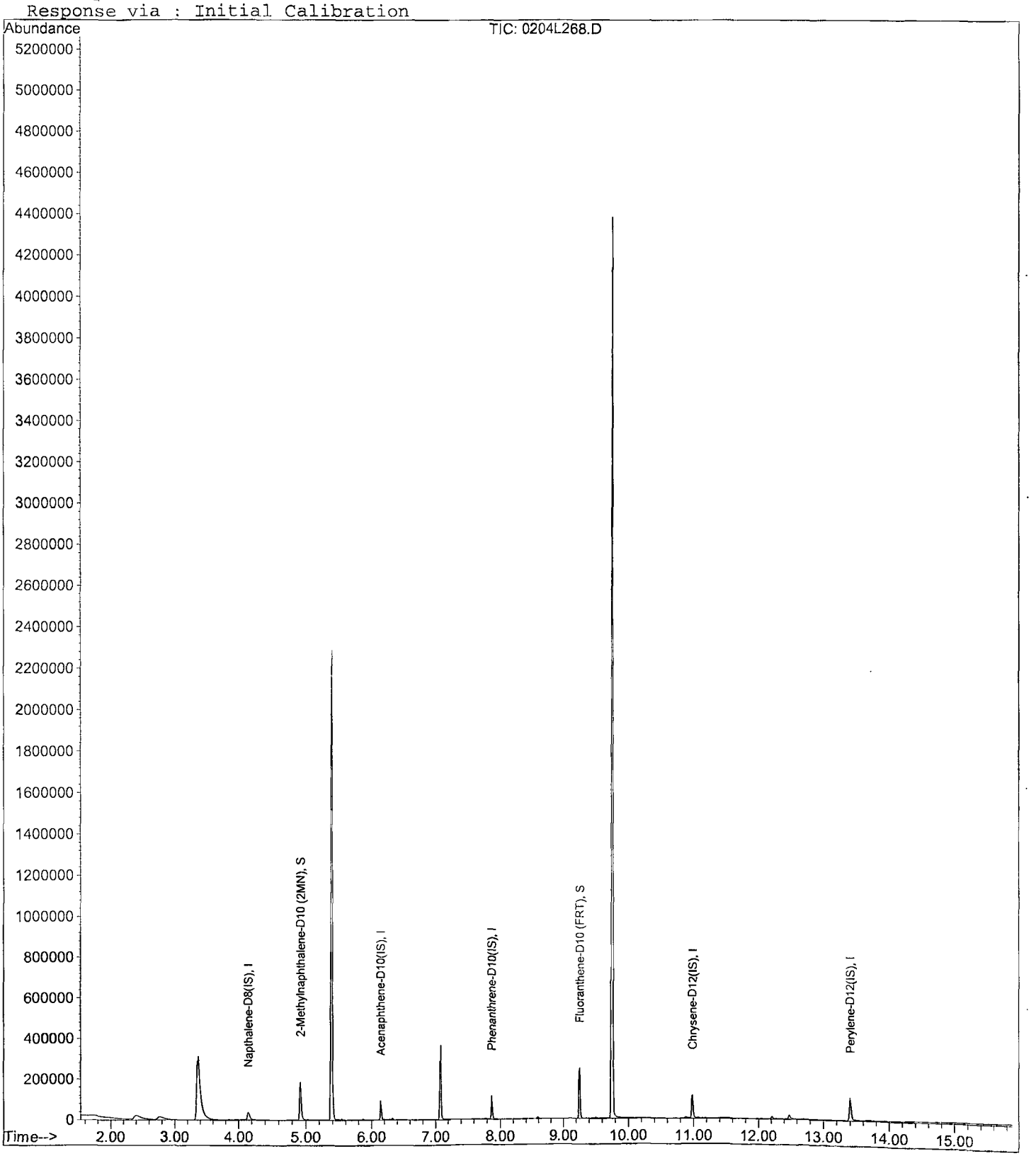
(#) = qualifier out of range (m) = manual integration
0204L268.D L0204.M Fri Mar 13 14:30:22 2020 Page 1

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L268.D Vial: 68
Acq On : 13 Mar 20 10:35 Operator: MA
Sample : 200310A BLK 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Mar 13 11:55 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L269.D Vial: 69
Acq On : 13 Mar 20 10:57 Operator: MA
Sample : 200310A LCS-2 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Mar 13 12:26 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.15	136	86189	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.14	164	49801	2.50000 ppb		-0.01
10) Phenanthrene-D10(IS)	7.87	188	98689	2.50000 ppb		-0.01
15) Chrysene-D12(IS)	10.98	240	130859	2.50000 ppb		-0.02
20) Perylene-D12(IS)	13.40	264	157145	2.50000 ppb		-0.01
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	4.93	152	200003	6.02662 ppb		0.00
Spiked Amount 6.250			Recovery	= 96.432%		
13) Fluoranthene-D10 (FRT)	9.26	212	267342	5.94281 ppb		0.00
Spiked Amount 6.250			Recovery	= 95.088%		
Target Compounds						Qvalue
2) Naphthalene	4.17	128	159966	5.46380 ppb		99
4) 2-Methylnaphthalene	4.96	142	109962	5.84522 ppb		97
5) 1-Methylnaphthalene	5.07	142	112436	5.72884 ppb		95
7) Acenaphthylene	5.99	152	357670	5.75856 ppb		100
8) Acenaphthene	6.18	154	105340	5.37459 ppb		99
9) Fluorene	6.78	166	140987	5.97720 ppb		98
11) Phenanthrene	7.89	178	209971	5.71730 ppb		99
12) Anthracene	7.95	178	185797	5.74869 ppb		99
14) Fluoranthene	9.27	202	293259	5.85212 ppb	#	94
16) Pyrene	9.53	202	296821	5.57321 ppb		94
17) Benz (a) anthracene	10.97	228	298647	6.34213 ppb		100
18) Chrysene	11.02	228	299525	5.46317 ppb		100
19) Indeno (1,2,3-cd) pyrene	14.89	276	414321	6.72405 ppb	#	91
21) Benzo (b) fluoranthene	12.75	252	325000	6.55396 ppb	#	99
22) Benzo (k) fluoranthene	12.80	252	352667	5.54463 ppb		99
23) Benzo (a) pyrene	13.32	252	290617	5.87045 ppb	#	95
24) Dibenz (a,h) anthracene	14.92	278	358682	6.58391 ppb		100
25) Benzo (g,h,i) perylene	15.25	276	356323	6.18445 ppb	#	94

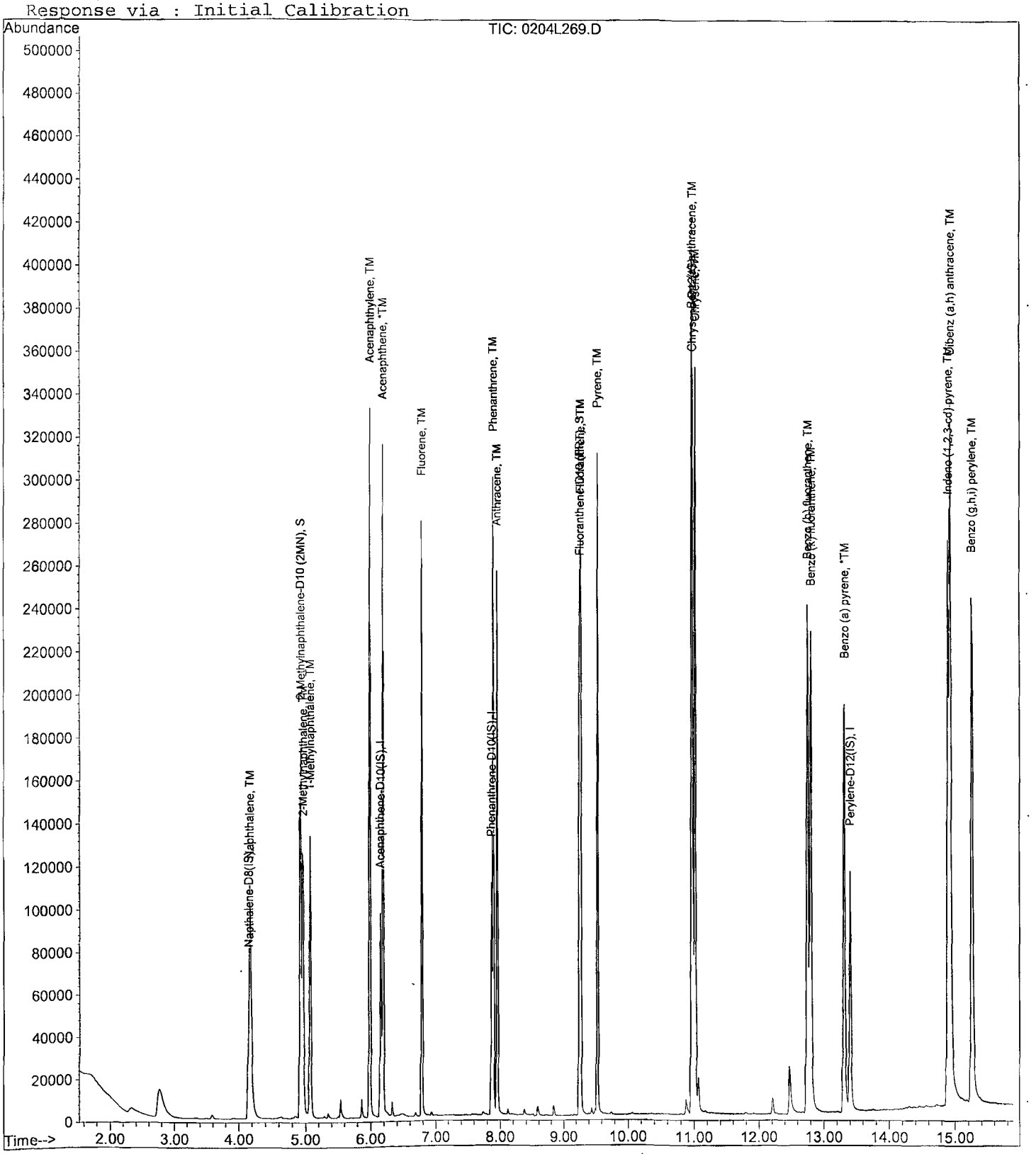
(#) = qualifier out of range (m) = manual integration
0204L269.D L0204.M Fri Mar 13 14:30:27 2020 Page 1

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L269.D Vial: 69
Acq On : 13 Mar 20 10:57 Operator: MA
Sample : 200310A LCS-2 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Mar 13 12:26 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L270.D Vial: 70
Acq On : 13 Mar 20 11:19 Operator: MA
Sample : 200310A LCSD-2 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Mar 13 13:00 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.15	136	88972	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.14	164	51383	2.50000	ppb		-0.01
10) Phenanthrene-D10(IS)	7.87	188	103742	2.50000	ppb		-0.01
15) Chrysene-D12(IS)	10.98	240	134059	2.50000	ppb		-0.02
20) Perylene-D12(IS)	13.40	264	161501	2.50000	ppb		-0.01
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	4.93	152	205354	5.99431	ppb		0.00
Spiked Amount 6.250			Recovery = 95.904%				
13) Fluoranthene-D10 (FRT)	9.26	212	272973	5.77243	ppb		0.00
Spiked Amount 6.250			Recovery = 92.352%				
Target Compounds							Qvalue
2) Naphthalene	4.18	128	162651	5.38174	ppb		100
4) 2-Methylnaphthalene	4.96	142	113445	5.84174	ppb		97
5) 1-Methylnaphthalene	5.07	142	112088	5.53247	ppb		97
7) Acenaphthylene	5.99	152	362451	5.65587	ppb		100
8) Acenaphthene	6.18	154	107025	5.29243	ppb		100
9) Fluorene	6.78	166	143512	5.89692	ppb		97
11) Phenanthrene	7.89	178	211112	5.46838	ppb		98
12) Anthracene	7.95	178	186010	5.47496	ppb		99
14) Fluoranthene	9.28	202	295356	5.60688	ppb	#	92
16) Pyrene	9.53	202	297897	5.45990	ppb	#	92
17) Benz (a) anthracene	10.97	228	302013	6.26052	ppb		100
18) Chrysene	11.02	228	302211	5.38059	ppb		99
19) Indeno (1,2,3-cd) pyrene	14.89	276	419249	6.64161	ppb	#	92
21) Benzo (b) fluoranthene	12.75	252	326990	6.41623	ppb	#	99
22) Benzo (k) fluoranthene	12.80	252	356420	5.45249	ppb		99
23) Benzo (a) pyrene	13.32	252	296291	5.82363	ppb	#	95
24) Dibenz (a,h) anthracene	14.92	278	363035	6.48407	ppb		99
25) Benzo (g,h,i) perylene	15.25	276	360629	6.09037	ppb	#	93

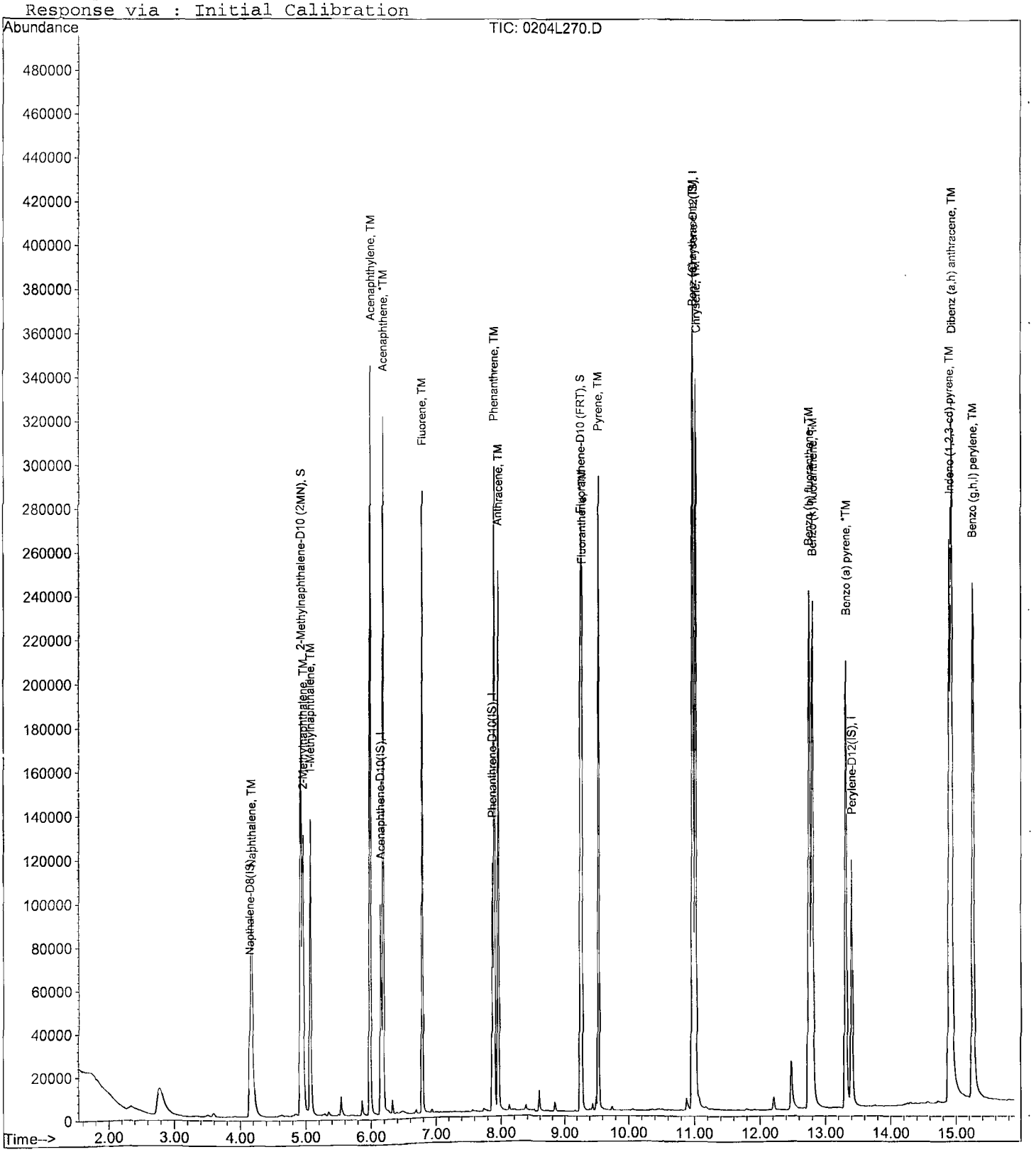
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L270.D Vial: 70
Acq On : 13 Mar 20 11:19 Operator: MA
Sample : 200310A LCSD-2 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Mar 13 13:00 2020 Quant Results File: L0204.RES

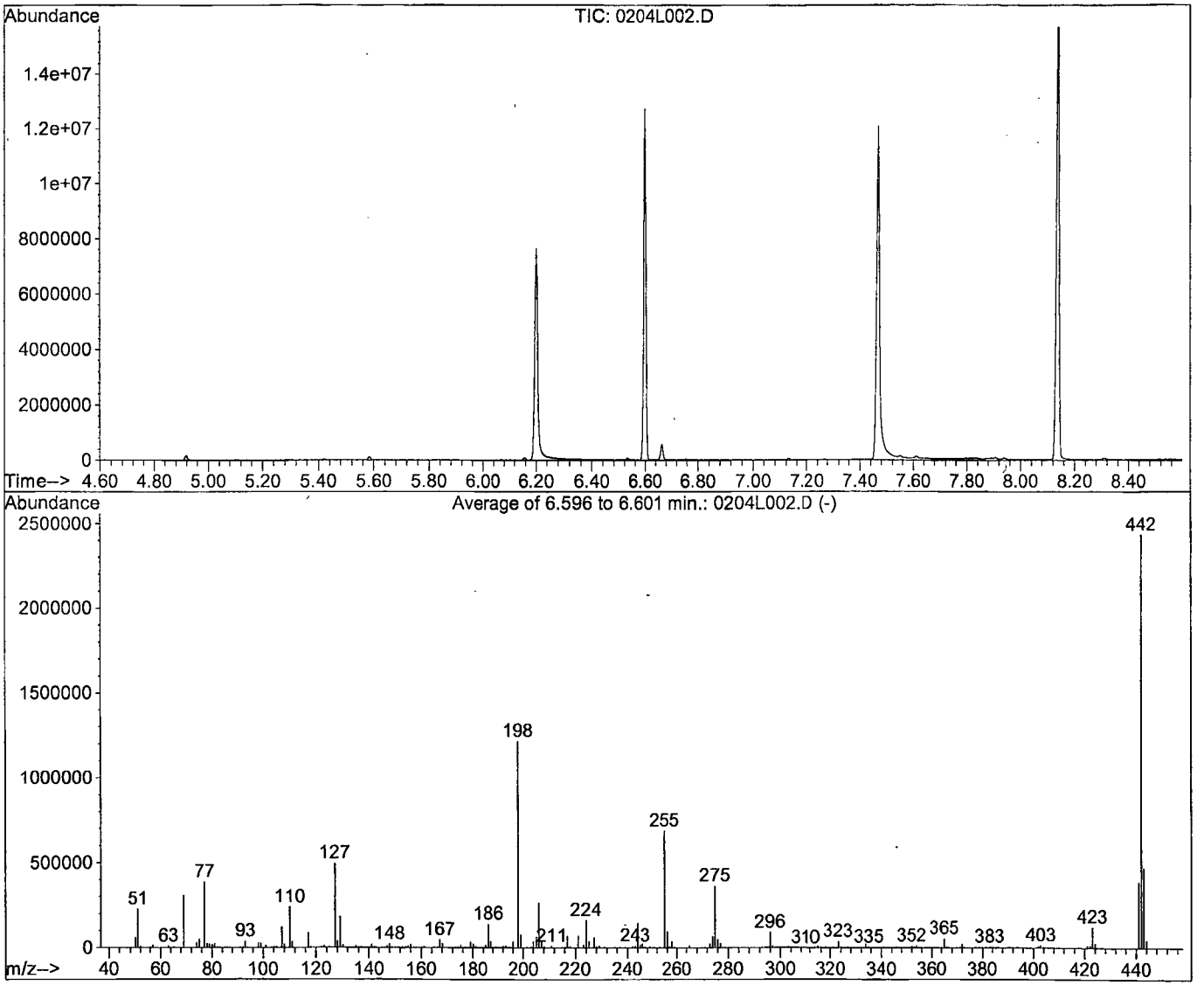
Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration



DFTPP

Data File : M:\LINUS\DATA\L200204\0204L002.D Vial: 2
Acq On : 4 Feb 20 9:32 Operator: MA
Sample : SV Tune 10/01/19 Inst : Linus
Misc : Multiplr: 1.00

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270



AutoFind: Scans 1611, 1612, 1613; Background Corrected with Scan 1602

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	18.6	226705	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.4	1215	PASS
127	198	10	80	40.9	497237	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	1216619	PASS
199	198	5	9	6.3	77030	PASS
275	198	10	60	30.0	364907	PASS
365	198	1	100	4.7	56864	PASS
441	442	0.01	24	15.8	386027	PASS
442	198	50	500	200.3	2437461	PASS
443	442	15	24	19.3	470891	PASS

Data File Name:	**0204L002.D**
Data File Path:	**M:\LINUS\DATA\L200204**
Operator:	**MA**
Date Acquired:	**4 Feb 20 9:32**
Method File:	**DFTPP2.M**
Sample Name:	**SV Tune 10/01/19**
Vial Number:	**2**
Instrument Name:	**Linus**

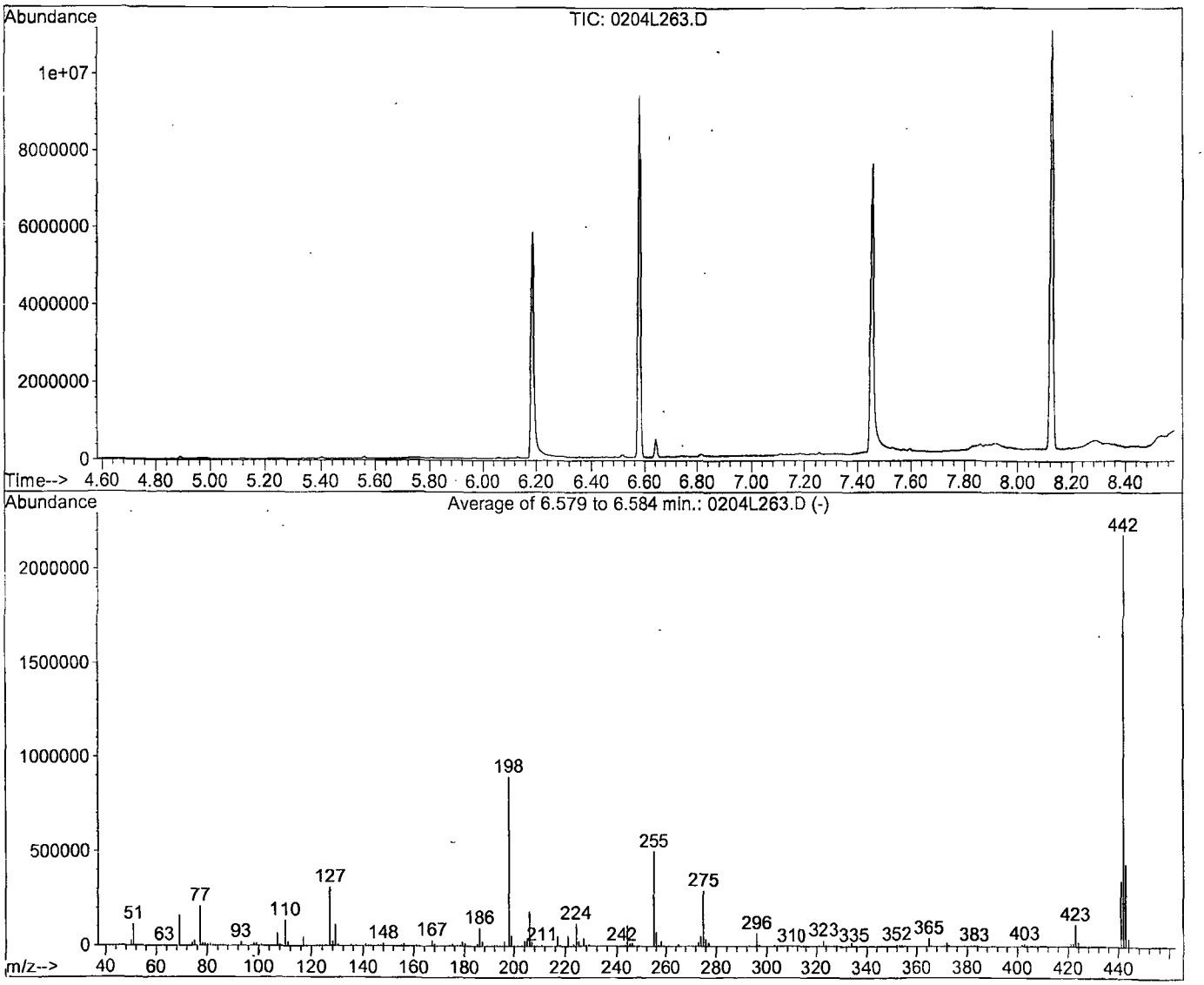
#	Name	Ret Time	Target Response
1)	DDT	8.16	112940000
2)	DDD	7.91	651825
3)	DDE	7.63	587422

Breakdown **1.09**

Data File : M:\LINUS\DATA\L200204\0204L263.D
Acq On : 13 Mar 20 8:49
Sample : SV TUNE 10/01/19
Misc :

Vial: 63
Operator: MA
Inst : Linus
Multiplr: 1.00

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270



AutoFind: Scans 1604, 1605, 1606; Background Corrected with Scan 1593

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	12.9	115870	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.5	868	PASS
127	198	10	80	34.8	312057	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	897707	PASS
199	198	5	9	6.2	55793	PASS
275	198	10	60	32.9	295083	PASS
365	198	1	100	4.9	44085	PASS
441	442	0.01	24	16.0	350123	PASS
442	198	50	500	243.6	2187093	PASS
443	442	15	24	20.0	438464	PASS

Data File Name:	**0204L263.D**
Data File Path:	**M:\LINUS\DATA\L200204**
Operator:	**MA**
Date Acquired:	**13 Mar 2020 08:49**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/01/19**
Vial Number:	**63**
Instrument Name:	**Linus**

#	Name	Ret Time	Target Response
1)	DDT	8.16	80227700
2)	DDD	7.88	1344430
3)	DDE	7.62	215070

Breakdown **1.91**

Name of Final Standard SIM Curve

Prep Date 02/03/20

Exp Date 08/10/20

Prep'd By (Initials) MA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
1.0 ug/mL SIM	APPL	1.0 ug/mL SIM	1.0 ug/mL	02/03/20	08/10/20	10 uL	100uL	MC 59130 90uL	0.1 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	10/28/19	10/28/20	2 uL			2.5ug/mL
1.0 ug/mL SIM	APPL	1.0 ug/mL SIM	1.0 ug/mL	02/03/20	08/10/20	20 uL	100uL	MC 59130 80uL	0.2 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	10/28/19	10/28/20	2 uL	"	"	2.5ug/mL
5.0 ug/mL SIM	APPL	5.0 ug/mL SIM	5.0 ug/mL	02/03/20	08/10/20	10 uL	100uL	MC 59130 90uL	0.5 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	10/28/19	10/28/20	2 uL	"	"	2.5ug/mL
5.0 ug/mL SIM	APPL	5.0 ug/mL SIM	5.0 ug/mL	02/03/20	08/10/20	20 uL	100uL	MC 59130 80 uL	1.0 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	10/28/19	10/28/20	2 uL	"	"	2.5ug/mL
SIM STOCK	APPL	PAH SIM STOCK	200 ug/mL	08/10/19	08/10/20	5 uL	200uL	MC 59130 190 uL	5.0 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	12/17/19	12/17/20	5 uL	"	"	2.5ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	10/28/19	10/28/20	4 uL	"	"	2.5ug/mL
SIM STOCK	APPL	PAH SIM STOCK	200 ug/mL	08/10/19	08/10/20	5 uL	100 uL	MC 59130 80 uL	10 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	12/17/19	12/17/20	5 uL	"	"	5 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	10/28/19	10/28/20	2 uL	"	"	2.5ug/mL
SIM STOCK	APPL	PAH SIM STOCK	200	08/10/19	08/10/20	25 uL	100uL	MC 59130 50 uL	50 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	12/17/19	12/17/20	25 uL	"	"	25 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	10/28/19	10/28/20	2 uL	"	"	2.5ug/mL
SIM STOCK	APPL	PAH SIM STOCK	200 ug/mL	08/10/19	08/10/20	50 uL	100uL	na	100 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	12/17/19	12/17/20	50 uL	"	"	50 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	10/28/19	10/28/20	2 uL	"	"	2.5ug/mL

Name of Final Standard 8270 PAH SIM Second Source

Prep Date 02/03/20

Exp Date 10/28/20

Prep'd By (Initials) MA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
PAH SIM SS Stock	Phenova	AL0-130490	200 ug/mL	CL13117-40623. Open 7/24/19	12/31/22	5 uL	200uL	MC 59130 195uL	5 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	10/28/19	10/28/20	4 uL	"	"	2.5ug/mL

Name of Final Standard	**PAH SIM Stock (Ampule)**
Prep Date	**08/10/19**
Exp Date	**08/10/20**

Prep'd By (I **MA**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Custom PAH SIM Mix	Phenova	ALO-130490	200 ug/mL	**CL13121-41102**	**08/10/20**	**1000 uL**	**1mL**	**NA**	**200ug/mL**

Name of Final Standard	**SIM Surrogate**	**Prep'd By (Initials)**	**MA**
Prep Date	**12/17/19**		
Exp Date	**12/17/20**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Sim Surrogate Deuterated	Restek	33913	2000 ug/mL	**A0149554-41363,41364, 41365,41366**	**04/30/25**	2500 uL	50 mL	**Acetone #0231086**	100 ug/mL

Name of Final Standard	**8270 SIM PAH Internal Standard**
Prep Date	**10/28/19**
Exp Date	**10/28/20**

Prep'd By (Initials) **MA**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
SV Internal Standard	Restek	31206	2000 ug/mL	**A0151843-49414**	**07/35/25**	625uL	10mL	**MC 59130**	125 ug/mL

Name of Final Standard	SIM Spike
Prep Date	12/19/19
Exp Date	11/31/20

Prep'd By (Initials) GA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Custom PAH Sim Mix	Phenova	AL0-130490	200 ug/mL	CL13121- 41222 41223 41256 41257 41258 41259	11/13/20 12/31/22	5 mL	25 mL	Acetone 0231086	40 ug/mL

Organic Extraction Worksheet

Method	Continuous Liquid/Liquid SVOC 3520C	Extraction Set	200310A	Extraction Method	LIQ003	Units	mL

Spiked ID 1	8270T Spike 1-29-20 1-29-21		Surrogate ID 1	8270 Surrogate 11-19-19 11-19-20	
Spiked ID 2	Sim Spike 12-19-19 11-13-20		Surrogate ID 2	SIM Surrogate 12-17-19 12-17-20	
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	03/10/20 12:25	
Spiked ID 8			Ext. End Time:	03/11/20 6:35	
			GC Requires Extract By:		

pH1	2	03/10/20 12:30	Water Bath Temp 1 °C	77/76.9 e-wb6 °C
pH2	14	03/11/20 11:15	Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: DL **Date** 03/10/20 **Witnessed By:** KY **Date** 03/10/20

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	200310A Blk				1,0.050	1,2	800	1	2/1	03/10/20 12:25	
						equip	E-HP51 e-wb6				
2	200310A LCS-1		1	1	1	1	800	1	2/1	03/10/20 12:25	
						equip	E-HP50 e-wb6				
3	200310A LCS-2		0.125	2	0.050	2	800	1	2/1	03/10/20 12:25	
						equip	E-HP48 e-wb6				
4	200310A LCSD-1		1	1	1	1	800	1	2/1	03/10/20 12:25	
						equip	E-HP49 e-wb6				
5	200310A LCSD-2		0.125	2	0.050	2	800	1	2/1	03/10/20 12:25	
						equip	E-HP47 e-wb6				
6	BA08034	BA08034W22			1,0.050	1,2	800	1	2/1	03/10/20 12:25	91607
						equip	E-HP25 e-wb6				

Solvent and Lot#	
PH Strips	HC998032
Dichloromethane (DCM)	59239
1+1 H2SO4	2-26-20
10N NaOH	3-2-20
Filter Paper	400171
Na2SO4	2019020631

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	HA
Date	3/12/20
Time	13:00
Refrigerator	6C-C

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

Modified	03/12/20 12:00:29 PM

Reviewed By: KY **Date** 03/12/20

Injection Log

Directory: M:\LINUS\DATA\L200204\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	0204L002.D	1	SV Tune 10/01/19		4 Feb 20 9:32
2	3	0204L003.D	1	0.1 SIM 02/03/20		4 Feb 20 9:48
3	4	0204L004.D	1	0.2 SIM 02/03/20		4 Feb 20 10:09
4	5	0204L005.D	1	0.5 SIM 02/03/20		4 Feb 20 10:31
5	6	0204L006.D	1	1 SIM 02/03/20		4 Feb 20 10:53
6	7	0204L007.D	1	5 SIM 02/03/20		4 Feb 20 11:15
7	8	0204L008.D	1	10 SIM 02/03/20		4 Feb 20 11:37
8	9	0204L009.D	1	50 SIM 02/03/20		4 Feb 20 11:59
9	10	0204L010.D	1	100 SIM 02/03/20		4 Feb 20 12:21
10	11	0204L011.D	1	SS SIM 02/03/20		4 Feb 20 13:21
11	63	0204L263.D	1	SV TUNE 10/01/19		13 Mar 20 8:49
12	64	0204L264.D	1	5 SIM 02/03/20 (1)		13 Mar 20 9:05
13	68	0204L268.D	1.25	200310A BLK 1/800		13 Mar 20 10:35
14	69	0204L269.D	1.25	200310A LCS-2 1/800		13 Mar 20 10:57
15	70	0204L270.D	1.25	200310A LCSD-2 1/800		13 Mar 20 11:19
16	71	0204L271.D	1.25	BA08034W22 1/800		13 Mar 20 11:41
17	72	0204L272.D	1	5 SIM 02/03/20 (1)		13 Mar 20 12:05

ORGANICS
Calibration Data

2MEE
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/22/20
Matrix: Instrument: Yoda
Initials:

		Compound	1	2	3	4	5	6	7	8			Avg	%RSD	Type	r^2	Q	MRF
			0122Y003.D	0122Y004.D	0122Y005.D	0122Y006.D	0122Y007.D	0122Y008.D	0122Y009 D	0122Y010 D								
1	I	1,4-dichlorobenzene-D4(IS)																
2	TM	2-(2-Methoxyethoxy)ethanol	0.1821	0.2585	0.2387	0.2203	0.2137	0.2203	0.2856	0.2603			0.23	14	TM			
3	I	Napthalene-D8(IS)																
4	I	Acenaphthene-D10(IS)																
5	I	Phenanthrene-D10(IS)																
6	I	Chrysene-D12(IS)																
7	I	Perylene-D12(IS)																
8																		
9																		
10																		
11																		
12																		
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Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y003.D Vial: 3
Acq On : 22 Jan 20 15:46 Operator: MA,SS
Sample : 50ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.15	152	171017	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.56	136	665562	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.59	164	409494	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.31	188	788135	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.39	240	679346	40.00000	ppb	0.00
7) Perylene-D12(IS)	15.12	264	699262	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.33	45	38926	38.75395	ppb	99

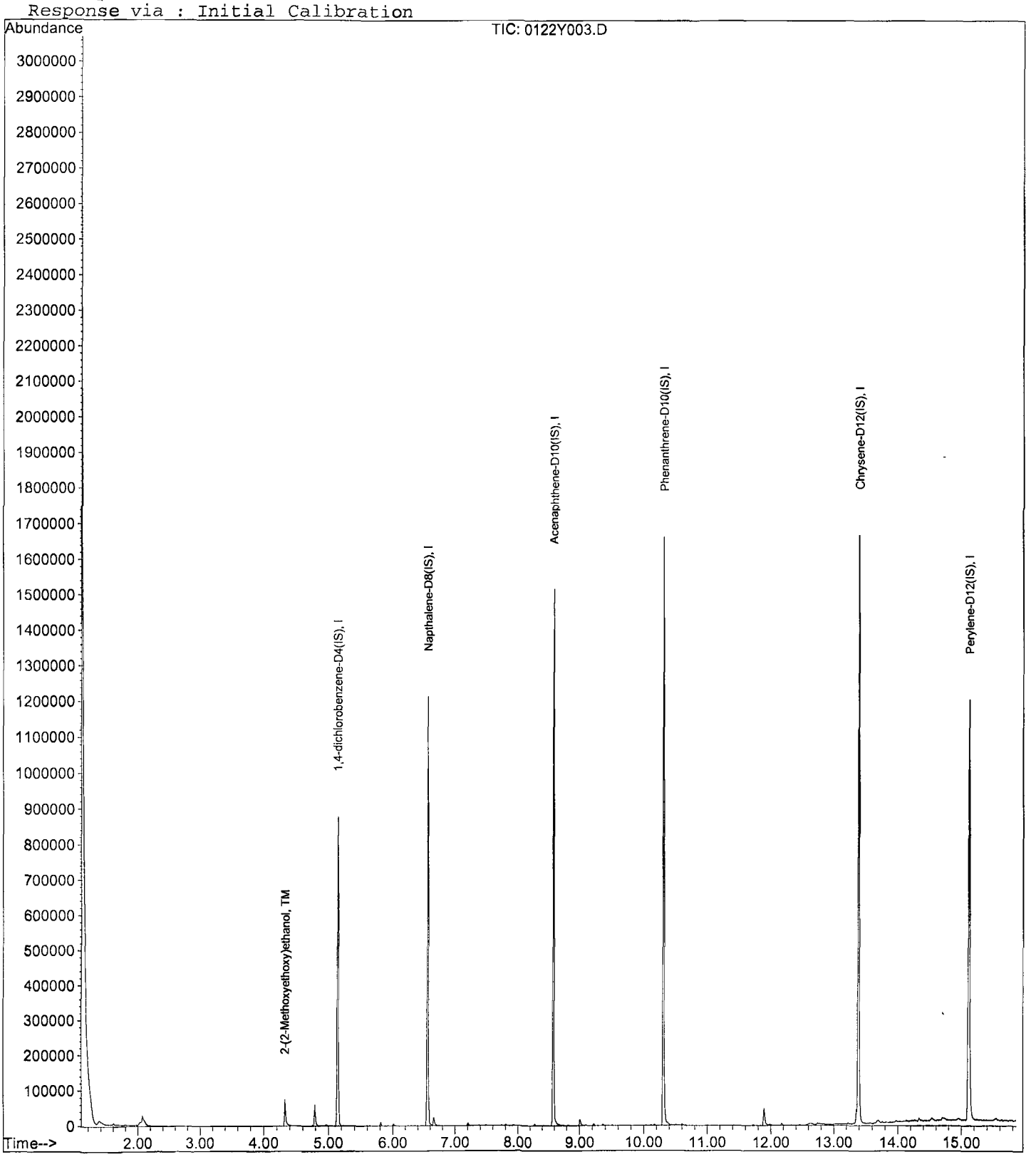
(#) = qualifier out of range (m) = manual integration
0122Y003.D YMEE0122.M Thu Jan 23 10:03:45 2020 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y003.D Vial: 3
Acq On : 22 Jan 20 15:46 Operator: MA,SS
Sample : 50ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y004.D Vial: 4
Acq On : 22 Jan 20 16:10 Operator: MA,SS
Sample : 100ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.15	152	158778	40.00000 ppb	0.00
3) Napthalene-D8(IS)	6.57	136	642353	40.00000 ppb	0.00
4) Acenaphthene-D10(IS)	8.58	164	393654	40.00000 ppb	0.00
5) Phenanthrene-D10(IS)	10.31	188	759584	40.00000 ppb	0.00
6) Chrysene-D12(IS)	13.39	240	664524	40.00000 ppb	0.00
7) Perylene-D12(IS)	15.12	264	676233	40.00000 ppb	0.00

System Monitoring Compounds

Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.32	45	102613	110.03417 ppb	98

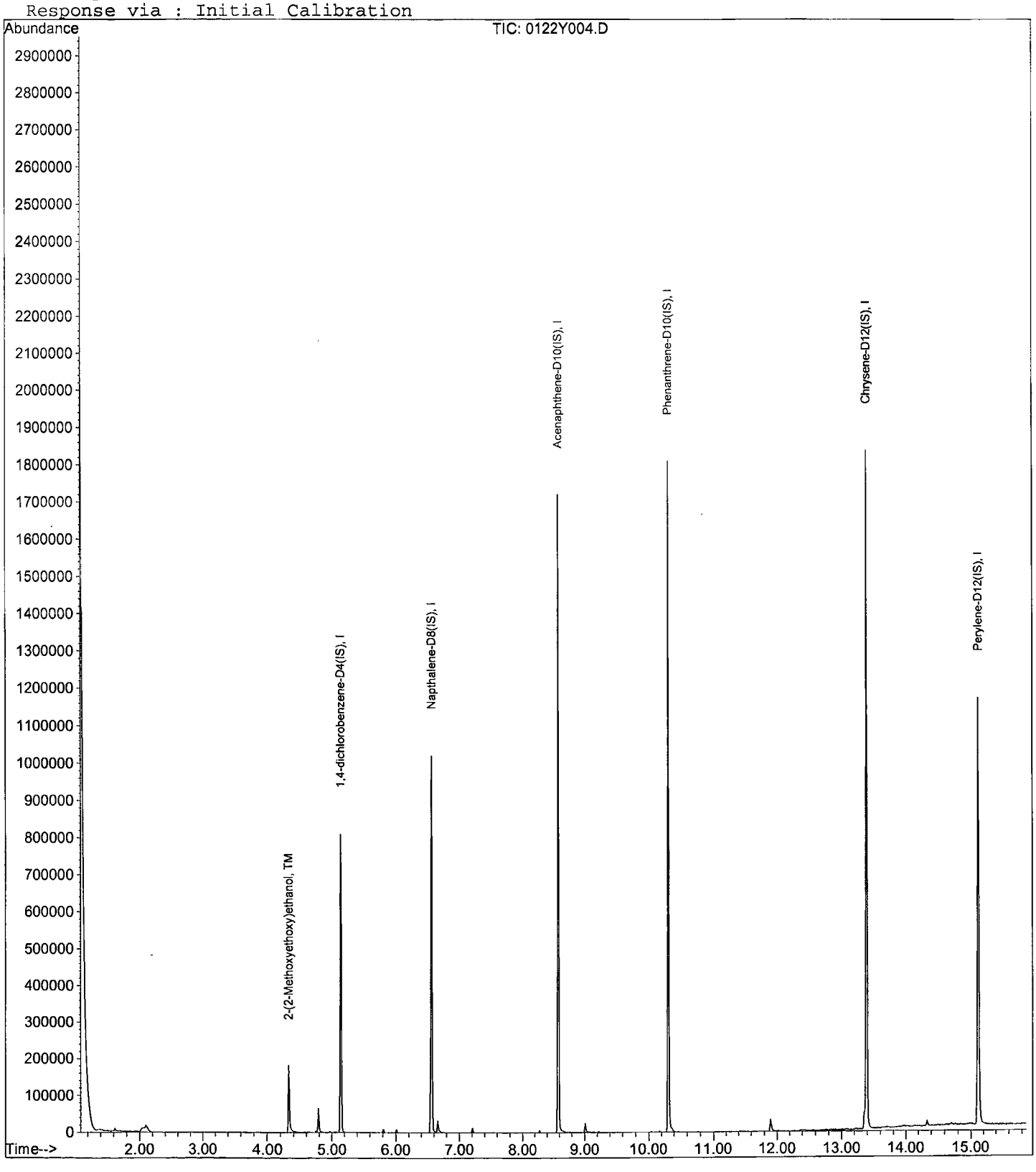
(#) = qualifier out of range (m) = manual integration
0122Y004.D YMEE0122.M Thu Jan 23 10:03:48 2020 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y004.D Vial: 4
Acq On : 22 Jan 20 16:10 Operator: MA,SS
Sample : 100ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y005.D Vial: 5
Acq On : 22 Jan 20 16:33 Operator: MA,SS
Sample : 200ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.15	152	155385	40.00000 ppb	0.00
3) Napthalene-D8(IS)	6.57	136	636024	40.00000 ppb	0.00
4) Acenaphthene-D10(IS)	8.58	164	388934	40.00000 ppb	0.00
5) Phenanthrene-D10(IS)	10.31	188	754620	40.00000 ppb	0.00
6) Chrysene-D12(IS)	13.39	240	621602	40.00000 ppb	0.00
7) Perylene-D12(IS)	15.12	264	626915	40.00000 ppb	0.00

System Monitoring Compounds

Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.33	45	185455	203.20994 ppb	100

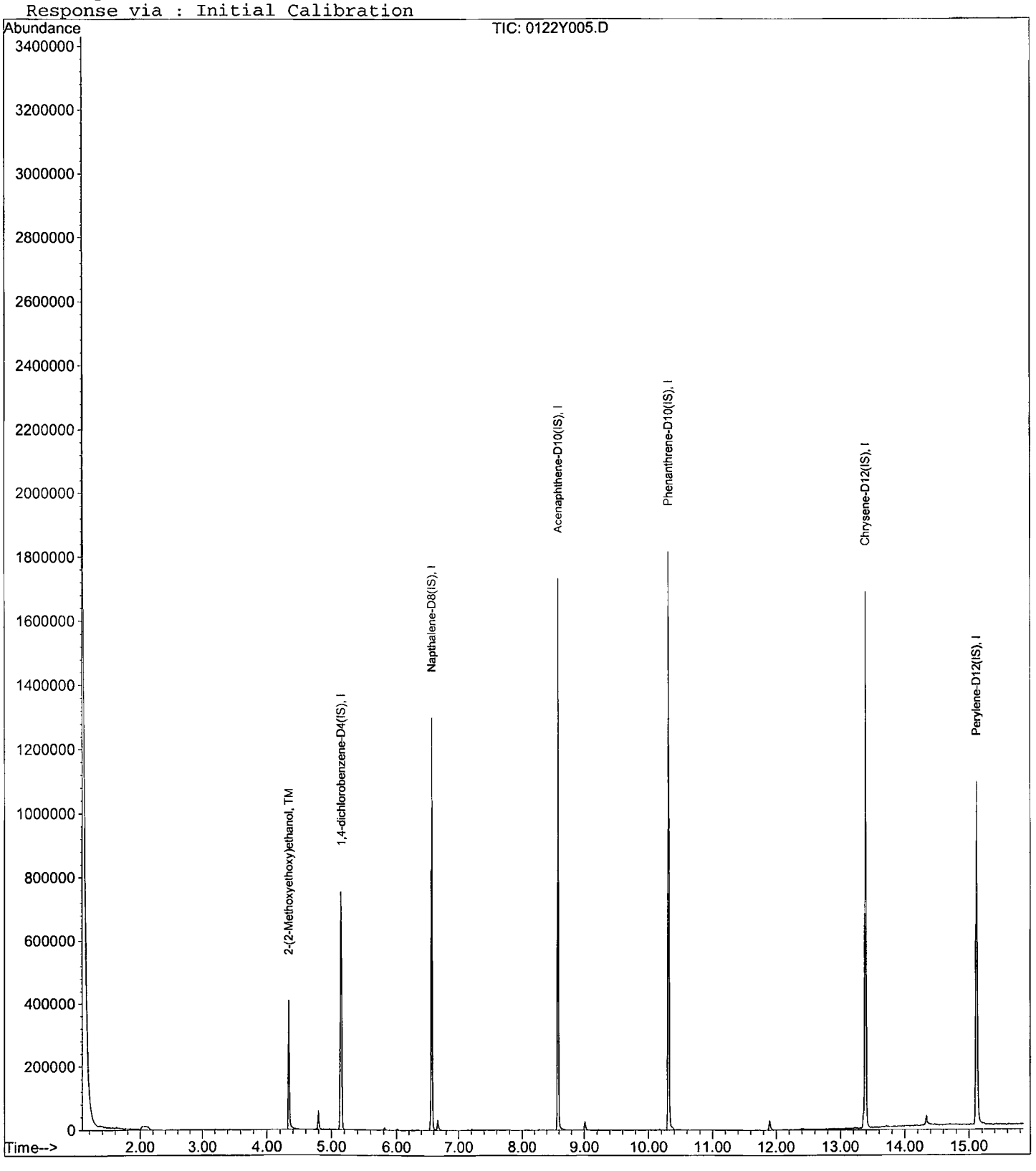
(#) = qualifier out of range (m) = manual integration
0122Y005.D YMEE0122.M Thu Jan 23 10:03:50 2020 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y005.D Vial: 5
Acq On : 22 Jan 20 16:33 Operator: MA,SS
Sample : 200ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y006.D Vial: 6
Acq On : 22 Jan 20 16:57 Operator: MA,SS
Sample : 400ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.15	152	156027	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.57	136	648446	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.58	164	399790	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.31	188	767514	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.39	240	672840	40.00000	ppb	0.00
7) Perylene-D12(IS)	15.12	264	695421	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.34	45	343734	375.09237	ppb	98

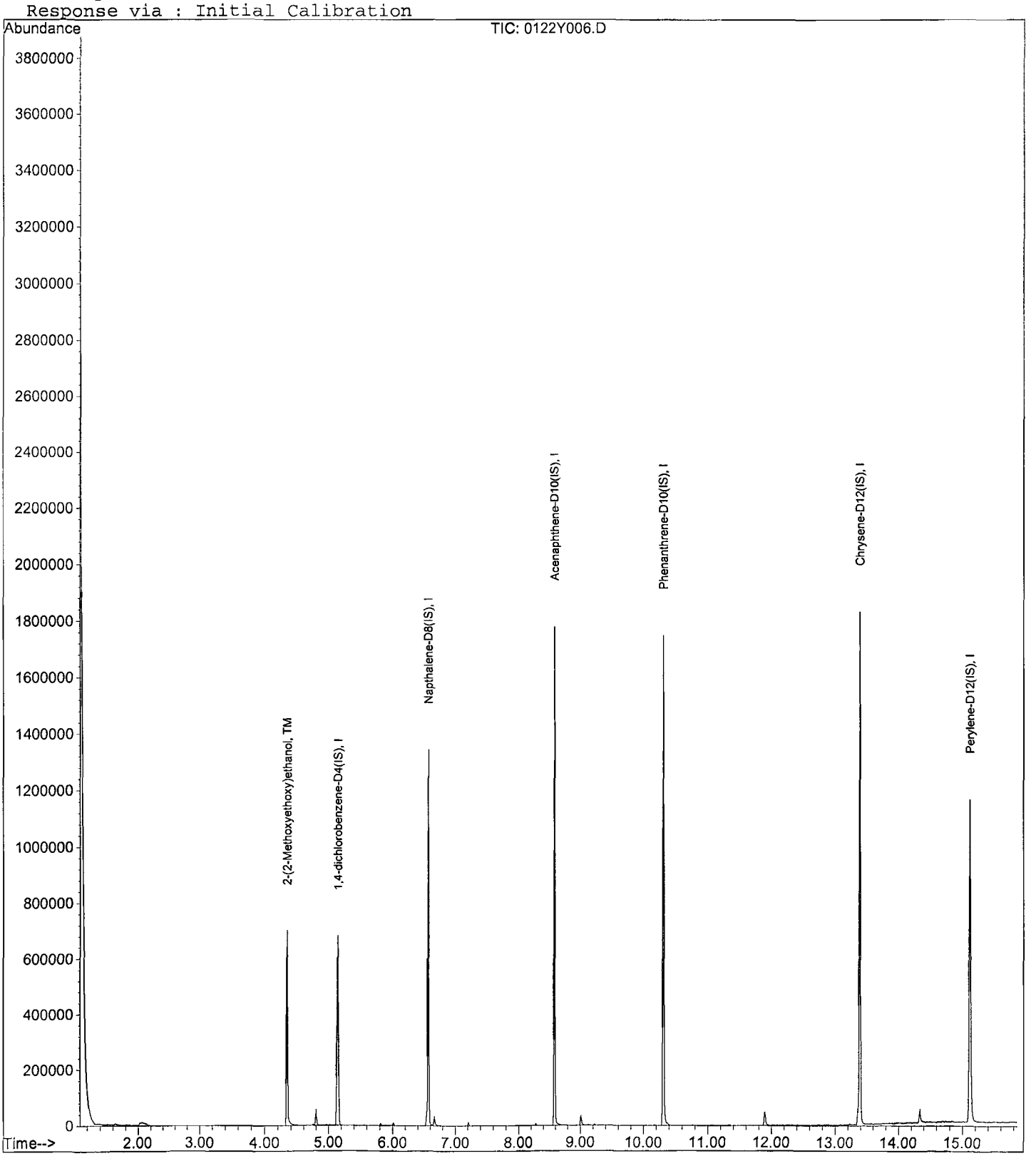
(#) = qualifier out of range (m) = manual integration
0122Y006.D YMEE0122.M Thu Jan 23 10:03:52 2020 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y006.D Vial: 6
Acq On : 22 Jan 20 16:57 Operator: MA,SS
Sample : 400ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y007.D Vial: 7
Acq On : 22 Jan 20 17:21 Operator: MA,SS
Sample : 500ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.15	152	160036	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.57	136	657892	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.59	164	410790	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.31	188	788159	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.39	240	699023	40.00000	ppb	0.00
7) Perylene-D12(IS)	15.12	264	751183	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.34	45	427461	454.77262	ppb	100

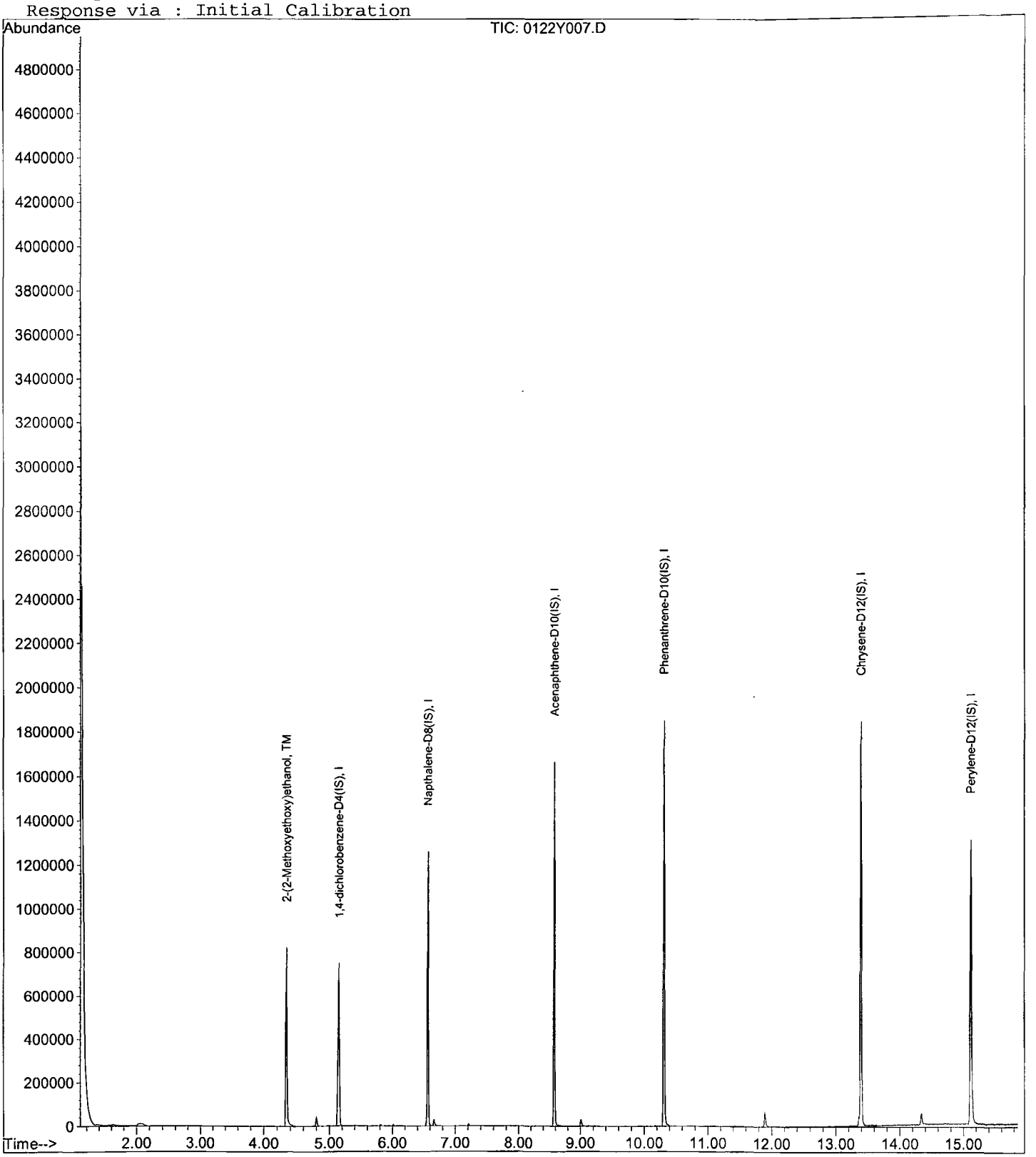
(#) = qualifier out of range (m) = manual integration
0122Y007.D YMEE0122.M Thu Jan 23 10:03:55 2020 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y007.D Vial: 7
Acq On : 22 Jan 20 17:21 Operator: MA,SS
Sample : 500ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y008.D Vial: 8
Acq On : 22 Jan 20 17:45 Operator: MA,SS
Sample : 600ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.15	152	156507	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.57	136	664381	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.59	164	408801	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.31	188	788845	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.39	240	676569	40.00000	ppb	0.00
7) Perylene-D12(IS)	15.12	264	692003	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.35	45	517114	562.55893	ppb	99

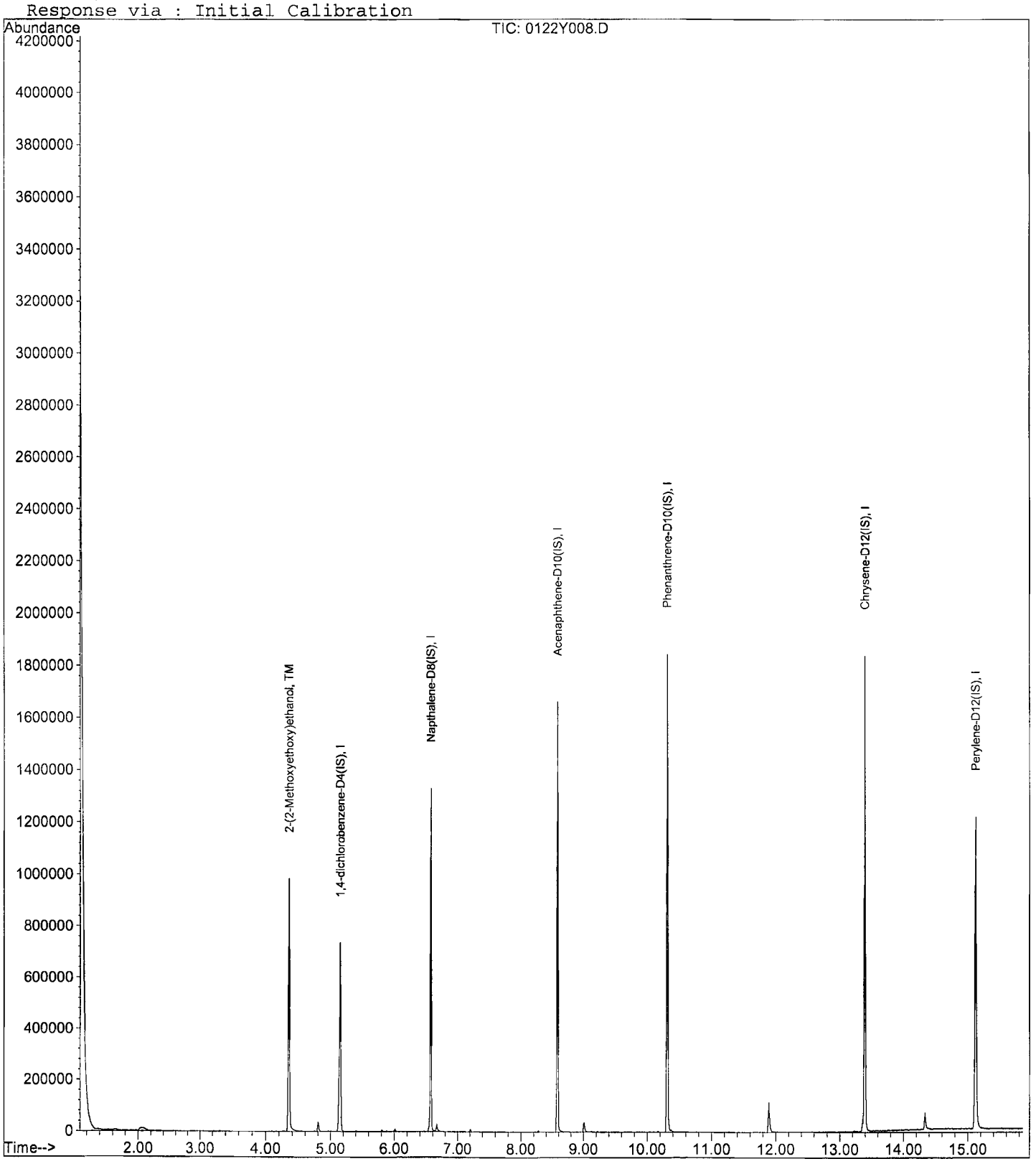
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y008.D Vial: 8
Acq On : 22 Jan 20 17:45 Operator: MA,SS
Sample : 600ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y009.D Vial: 9
Acq On : 22 Jan 20 18:08 Operator: MA,SS
Sample : 800ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.15	152	125205	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.57	136	550099	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.58	164	372511	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.31	188	750924	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.39	240	643830	40.00000	ppb	0.00
7) Perylene-D12(IS)	15.12	264	637032	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.36	45	715213	972.58871	ppb	98

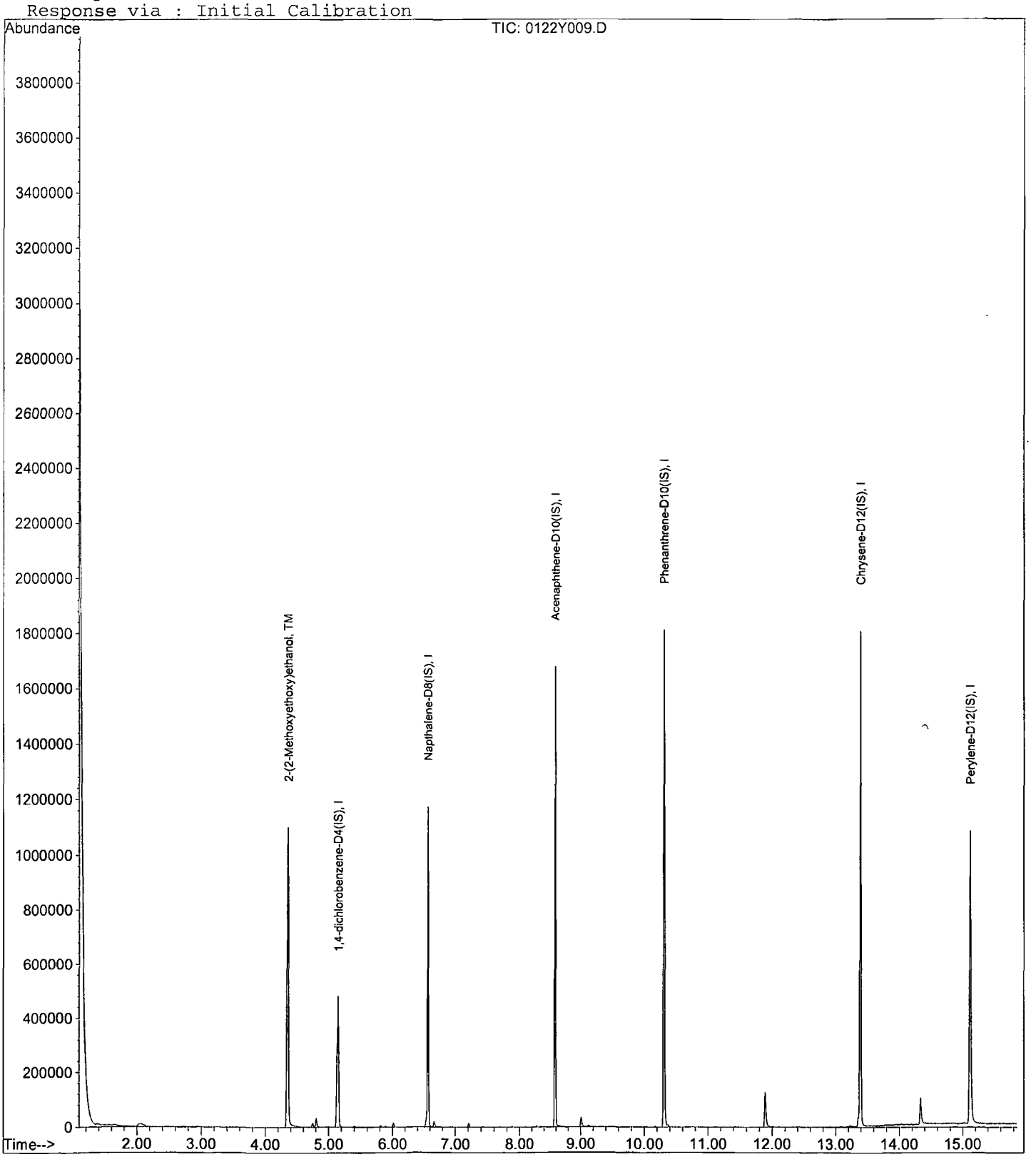
(#) = qualifier out of range (m) = manual integration
0122Y009.D YMEE0122.M Thu Jan 23 10:04:00 2020

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y009.D Vial: 9
Acq On : 22 Jan 20 18:08 Operator: MA,SS
Sample : 800ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y010.D Vial: 10
Acq On : 22 Jan 20 18:32 Operator: MA,SS
Sample : 1000ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.15	152	145736	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.57	136	643934	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.58	164	429609	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.31	188	848518	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.39	240	708250	40.00000	ppb	0.00
7) Perylene-D12(IS)	15.12	264	727830	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.36	45	948330	1107.91933	ppb	99

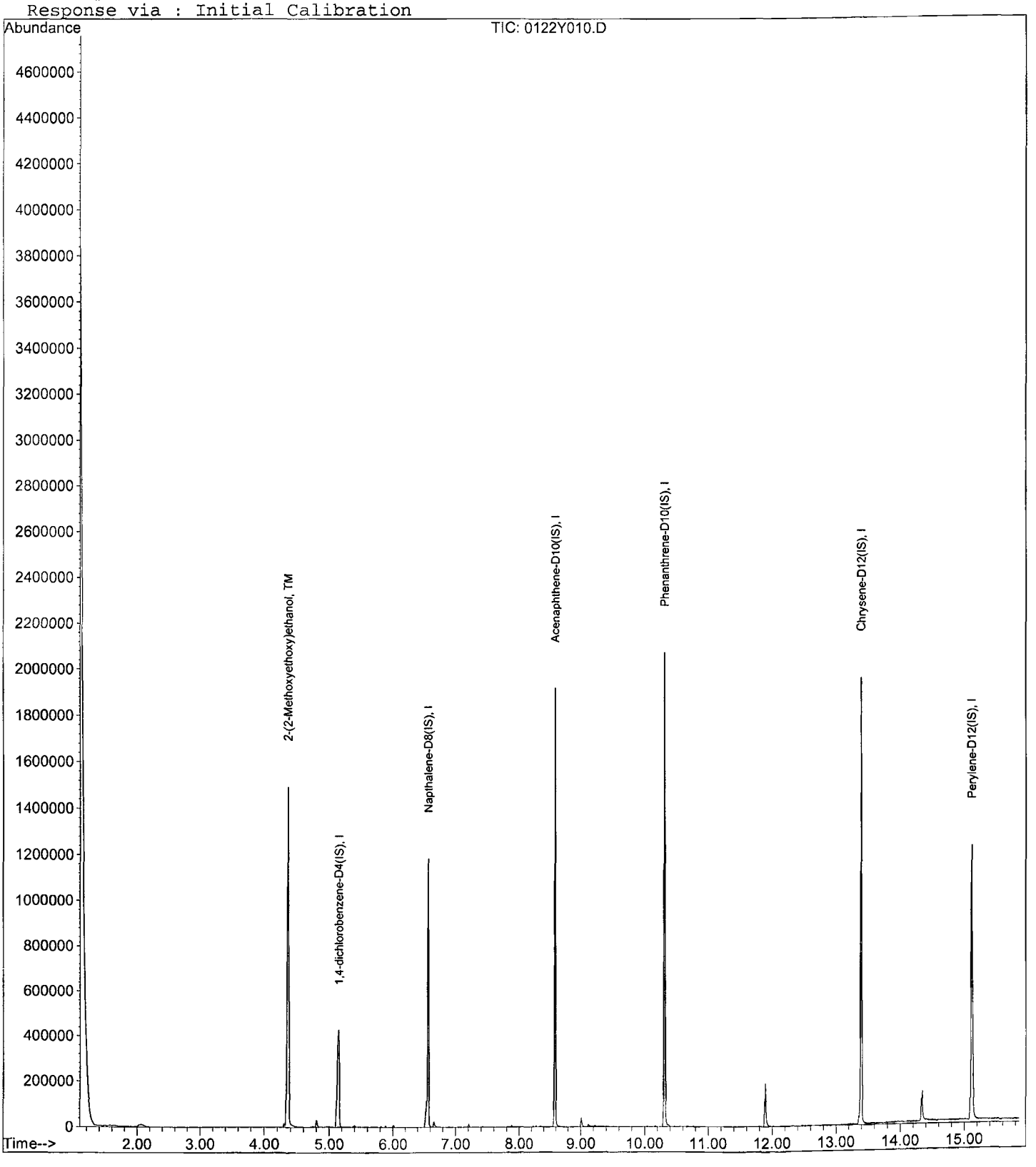
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y010.D Vial: 10
Acq On : 22 Jan 20 18:32 Operator: MA,SS
Sample : 1000ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration



2MEE
EPA 8270

Form 7

Second Source Calibration

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

SDG No:
Date Analyzed: 01/22/20
Instrument: Yoda
Initial Cal. Date: 01/22/20
Data File: 0122Y011.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TM	2-(2-Methoxyethoxy)ethanol	0.2349	0.2425	3.2	TM	
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
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31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			3.2		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y011.D Vial: 11
Acq On : 22 Jan 20 18:55 Operator: MA,SS
Sample : SS MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 9:55 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 09:54:44 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.15	152	173956	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.57	136	686273	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.59	164	422630	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.31	188	806716	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.39	240	723146	40.00000	ppb	0.00
7) Perylene-D12(IS)	0.00	264	0	0.00000	ppb	-14.73

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.33	45	527290	516.09021	ppb	93

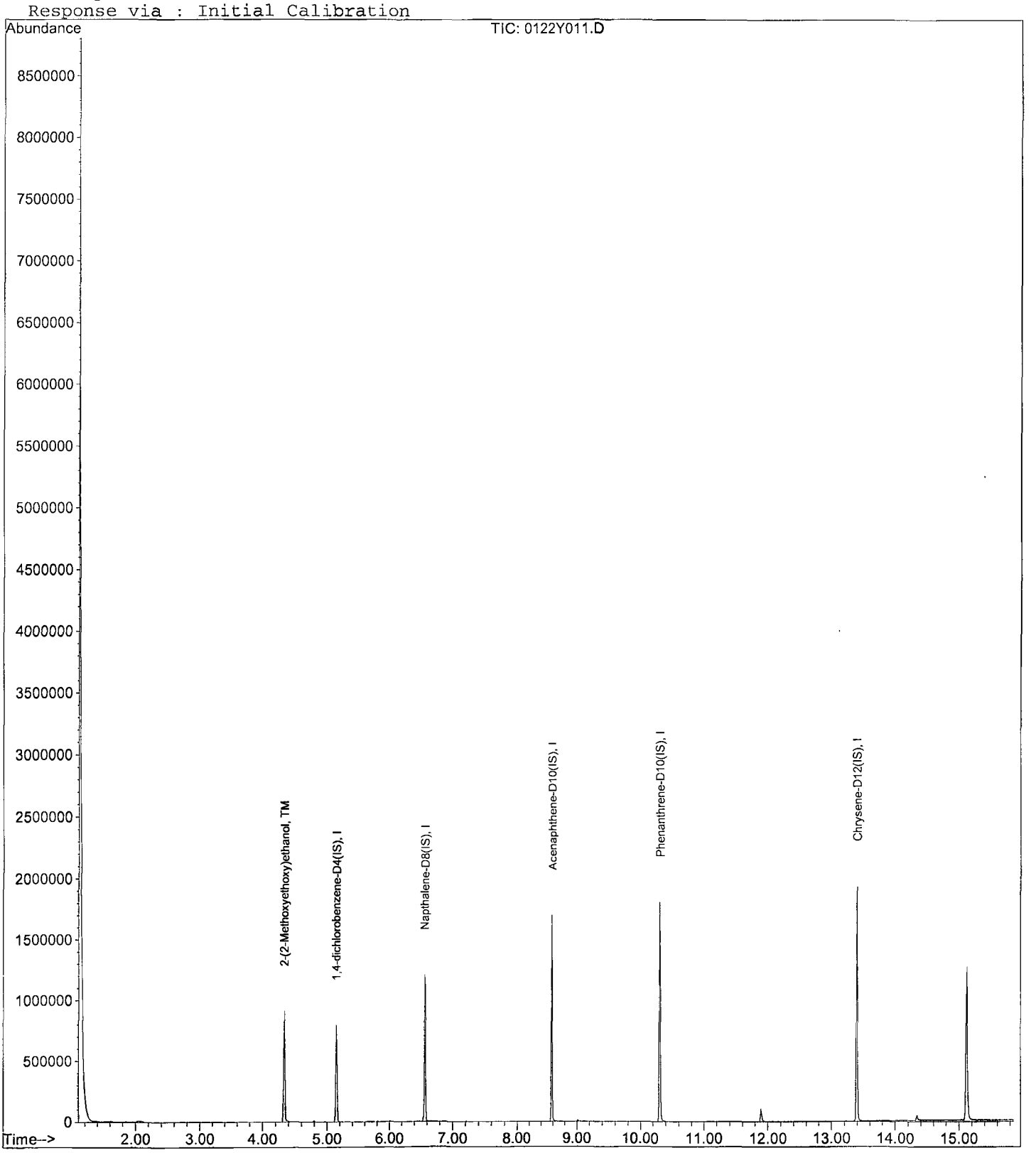
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y011.D Vial: 11
Acq On : 22 Jan 20 18:55 Operator: MA,SS
Sample : SS MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 9:55 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 09:54:44 2020
Response via : Initial Calibration



2MEE
EPA 8270

Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 03/11/20
Instrument: Yoda
Initial Cal. Date: 01/22/20
Data File: 0122Y061.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	2-(2-Methoxyethoxy)ethanol	0.2349	0.2053	13	TM	
3	I	Napthalene-D8(IS)	ISTD			I	
4	I	Acenaphthene-D10(IS)	ISTD			I	
5	I	Phenanthrene-D10(IS)	ISTD			I	
6	I	Chrysene-D12(IS)	ISTD			I	
7	I	Perylene-D12(IS)	ISTD			I	
8							
9							
10							
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12							
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31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			13.0		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y061.D Vial: 61
Acq On : 11 Mar 20 12:17 Operator: MA,SS
Sample : 500ug/ml MEE 01/29/20 (2) Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 11 13:19 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Feb 04 07:32:40 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.08	152	146062	40.00	ppb	-0.07
3) Napthalene-D8(IS)	6.53	136	656576	40.00	ppb	-0.04
4) Acenaphthene-D10(IS)	8.55	164	449239	40.00	ppb	-0.04
5) Phenanthrene-D10(IS)	10.27	188	933061	40.00	ppb	-0.04
6) Chrysene-D12(IS)	13.35	240	865781	40.00	ppb	-0.04
7) Perylene-D12(IS)	15.07	264	875278	40.00	ppb	-0.05

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.28	45	374921	437.04	ppb	97

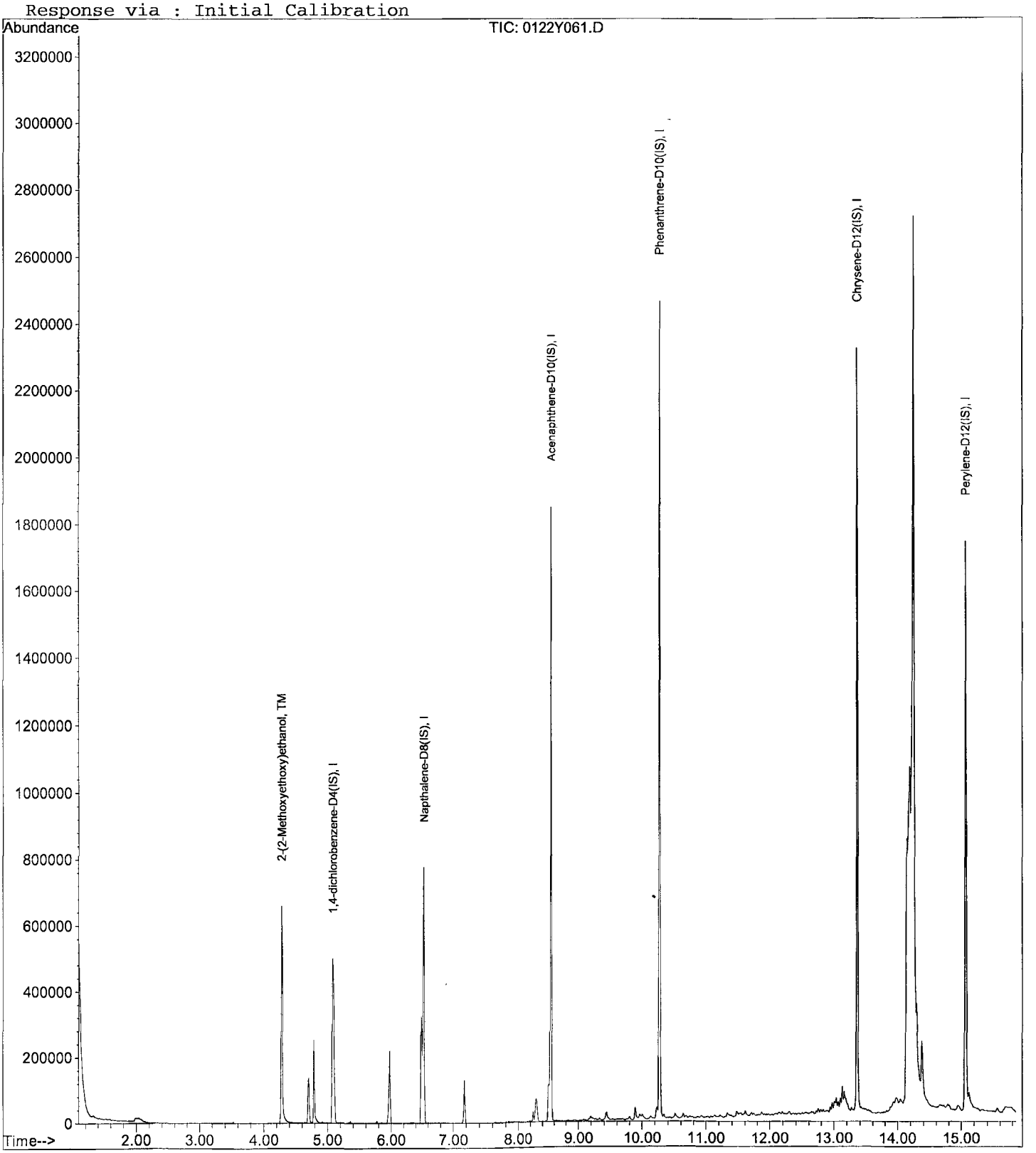
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y061.D Vial: 61
Acq On : 11 Mar 20 12:17 Operator: MA,SS
Sample : 500ug/ml MEE 01/29/20 (2) Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 11 13:19 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Mar 11 17:34:56 2020
Response via : Initial Calibration



2MEE
EPA 8270

Form 7

Ending Continuing Calibration

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

SDG No:
Date Analyzed: 03/11/20
Instrument: Yoda
Initial Cal. Date: 01/22/20
Data File: 0122Y070.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	2-(2-Methoxyethoxy)ethanol	0.2349	0.2621	12	TM	
3	I	Napthalene-D8(IS)	ISTD			I	
4	I	Acenaphthene-D10(IS)	ISTD			I	
5	I	Phenanthrene-D10(IS)	ISTD			I	
6	I	Chrysene-D12(IS)	ISTD			I	
7	I	Perylene-D12(IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
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30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			12.0		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y070.D Vial: 70
Acq On : 11 Mar 20 16:33 Operator: MA,SS
Sample : 500ug/ml MEE 01/29/20 (1) Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 11 17:35 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Mar 11 17:34:56 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.11	152	146912	40.00	ppb	0.00
3) Napthalene-D8(IS)	6.53	136	671591	40.00	ppb	-0.04
4) Acenaphthene-D10(IS)	8.55	164	455457	40.00	ppb	-0.04
5) Phenanthrene-D10(IS)	10.27	188	925579	40.00	ppb	-0.04
6) Chrysene-D12(IS)	13.35	240	795809	40.00	ppb	-0.04
7) Perylene-D12(IS)	15.07	264	755680	40.00	ppb	-0.05
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.31	45	481344	557.85	ppb	100

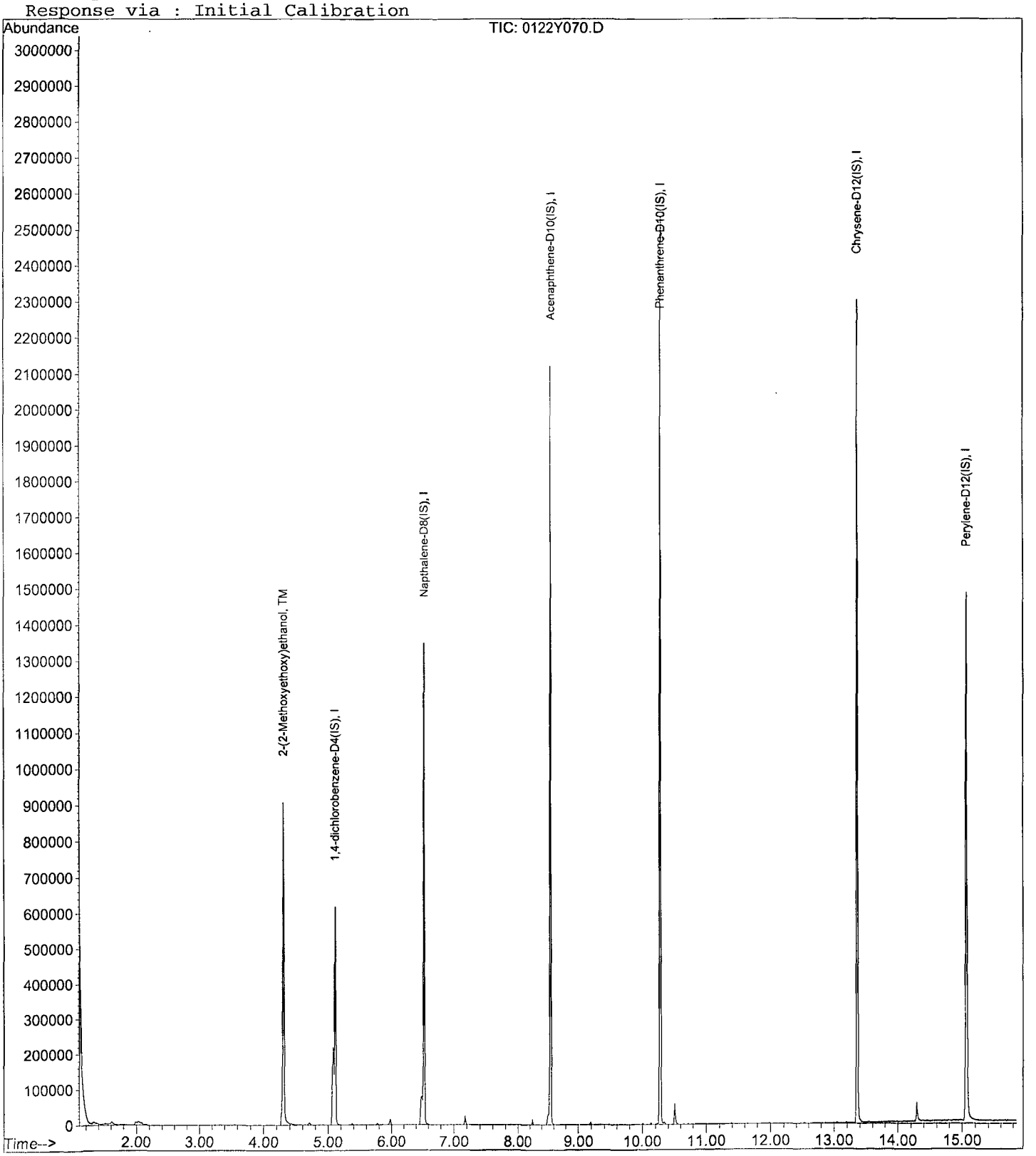
(#) = qualifier out of range (m) = manual integration
0122Y070.D YMEE0122.M Thu Mar 12 14:08:12 2020 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y070.D Vial: 70
Acq On : 11 Mar 20 16:33 Operator: MA,SS
Sample : 500ug/ml MEE 01/29/20 (1) Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 11 17:35 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Mar 11 17:34:56 2020
Response via : Initial Calibration



ORGANICS
Raw Data

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y069.D Vial: 69
Acq On : 11 Mar 20 16:10 Operator: MA,SS
Sample : BA08034W12 2/500 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 11 17:09 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Mar 11 14:46:52 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.09	152	85465	40.00	ppb	-0.06
3) Napthalene-D8(IS)	6.52	136	395465	40.00	ppb	-0.05
4) Acenaphthene-D10(IS)	8.55	164	274818	40.00	ppb	-0.04
5) Phenanthrene-D10(IS)	10.27	188	579193	40.00	ppb	-0.04
6) Chrysene-D12(IS)	13.35	240	312197	40.00	ppb	-0.04
7) Perylene-D12(IS)	15.07	264	265089	40.00	ppb	-0.05

System Monitoring Compounds

Target Compounds Qvalue

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

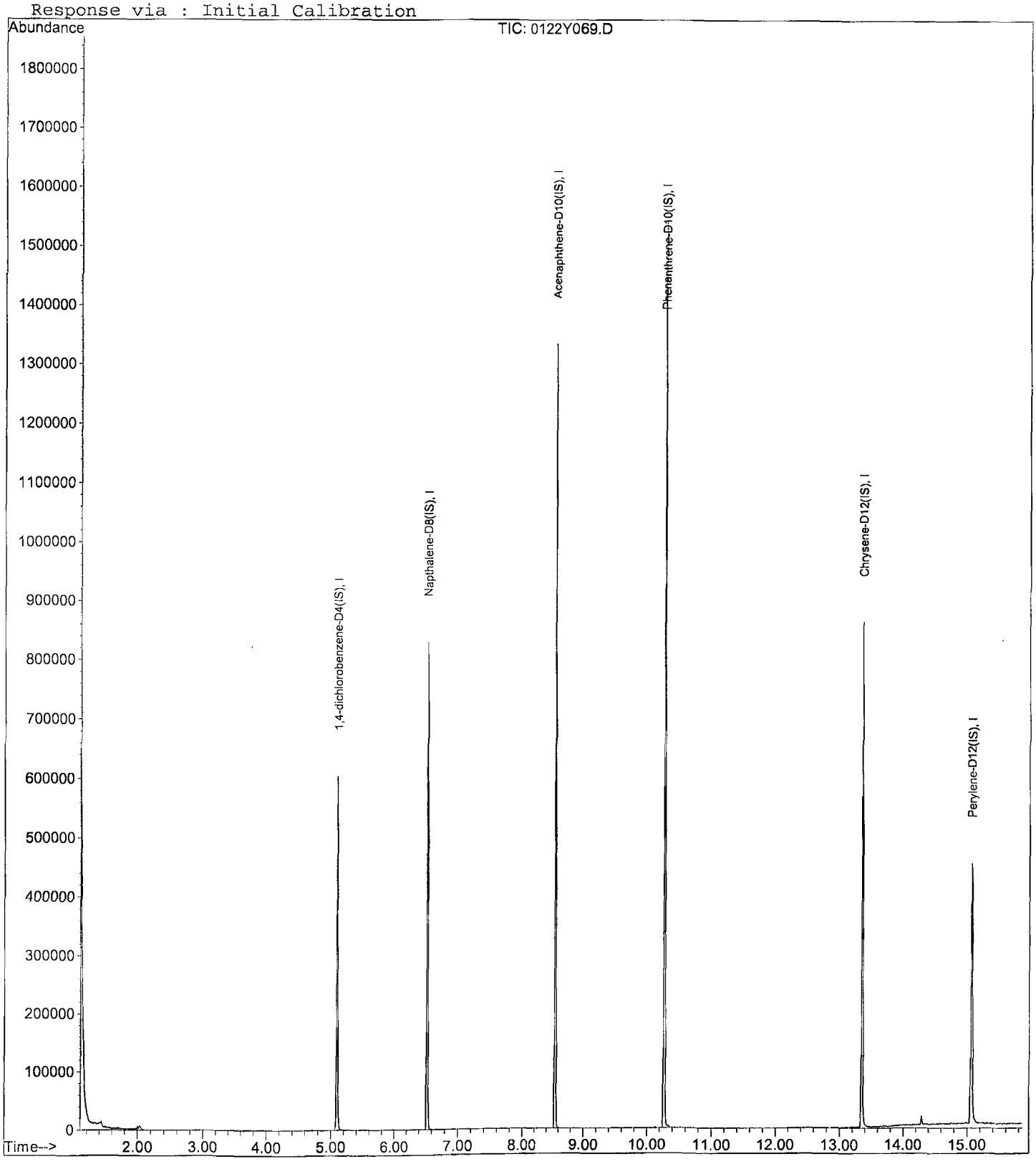
Data File : M:\YODA\DATA\Y200122M\0122Y069.D
Acq On : 11 Mar 20 16:10
Sample : BA08034W12 2/500
Misc : soil

Vial: 69
Operator: MA,SS
Inst : Yoda
Multiplr: 1.00

Quant Time: Mar 11 17:09 2020

Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Mar 11 17:34:56 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y062.D Vial: 62
Acq On : 11 Mar 20 13:21 Operator: MA,SS
Sample : 200310A BLK 2/500 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 11 14:46 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Feb 04 07:32:40 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.10	152	109201	40.00 ppb	-0.06
3) Napthalene-D8(IS)	6.53	136	471459	40.00 ppb	-0.04
4) Acenaphthene-D10(IS)	8.55	164	307405	40.00 ppb	-0.04
5) Phenanthrene-D10(IS)	10.28	188	608630	40.00 ppb	-0.04
6) Chrysene-D12(IS)	13.36	240	138279	40.00 ppb	-0.04
7) Perylene-D12(IS)	15.06	264	103305	40.00 ppb	-0.06

System Monitoring Compounds

Target Compounds Qvalue

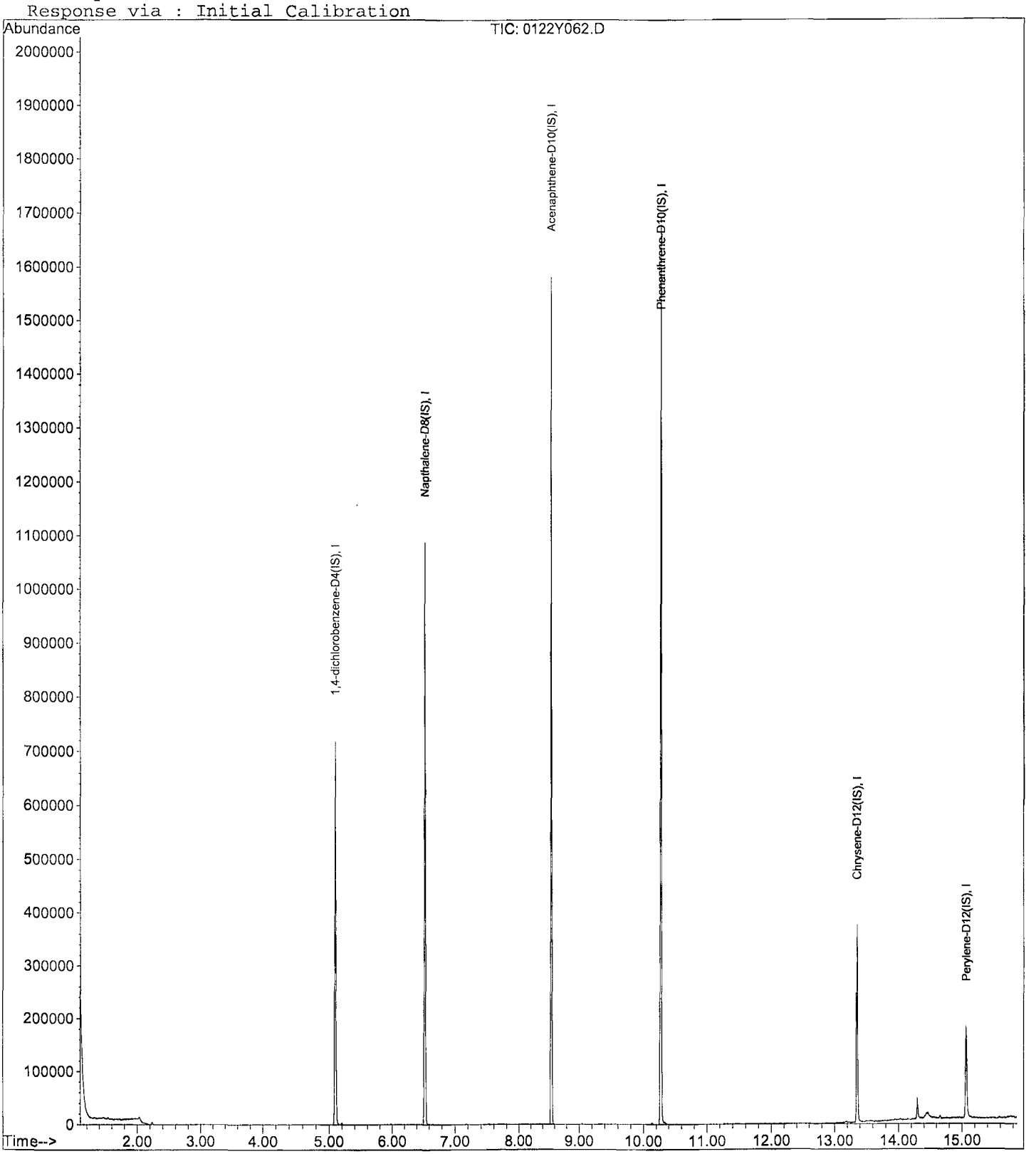
(#) = qualifier out of range (m) = manual integration
0122Y062.D YMEE0122.M Thu Mar 12 14:53:00 2020 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y062.D Vial: 62
Acq On : 11 Mar 20 13:21 Operator: MA,SS
Sample : 200310A BLK 2/500 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 11 14:46 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Mar 11 17:34:56 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y063.D Vial: 63
Acq On : 11 Mar 20 13:45 Operator: MA,SS
Sample : 200310A LCS-1 2/500 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 11 14:46 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Mar 11 14:46:52 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.10	152	108945	40.00 ppb	-0.05
3) Napthalene-D8(IS)	6.53	136	485876	40.00 ppb	-0.04
4) Acenaphthene-D10(IS)	8.55	164	313345	40.00 ppb	-0.04
5) Phenanthrene-D10(IS)	10.27	188	678411	40.00 ppb	-0.04
6) Chrysene-D12(IS)	13.35	240	517306	40.00 ppb	-0.04
7) Perylene-D12(IS)	15.07	264	583969	40.00 ppb	-0.05
System Monitoring Compounds					
Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.53	45	59322	92.71 ppb	100

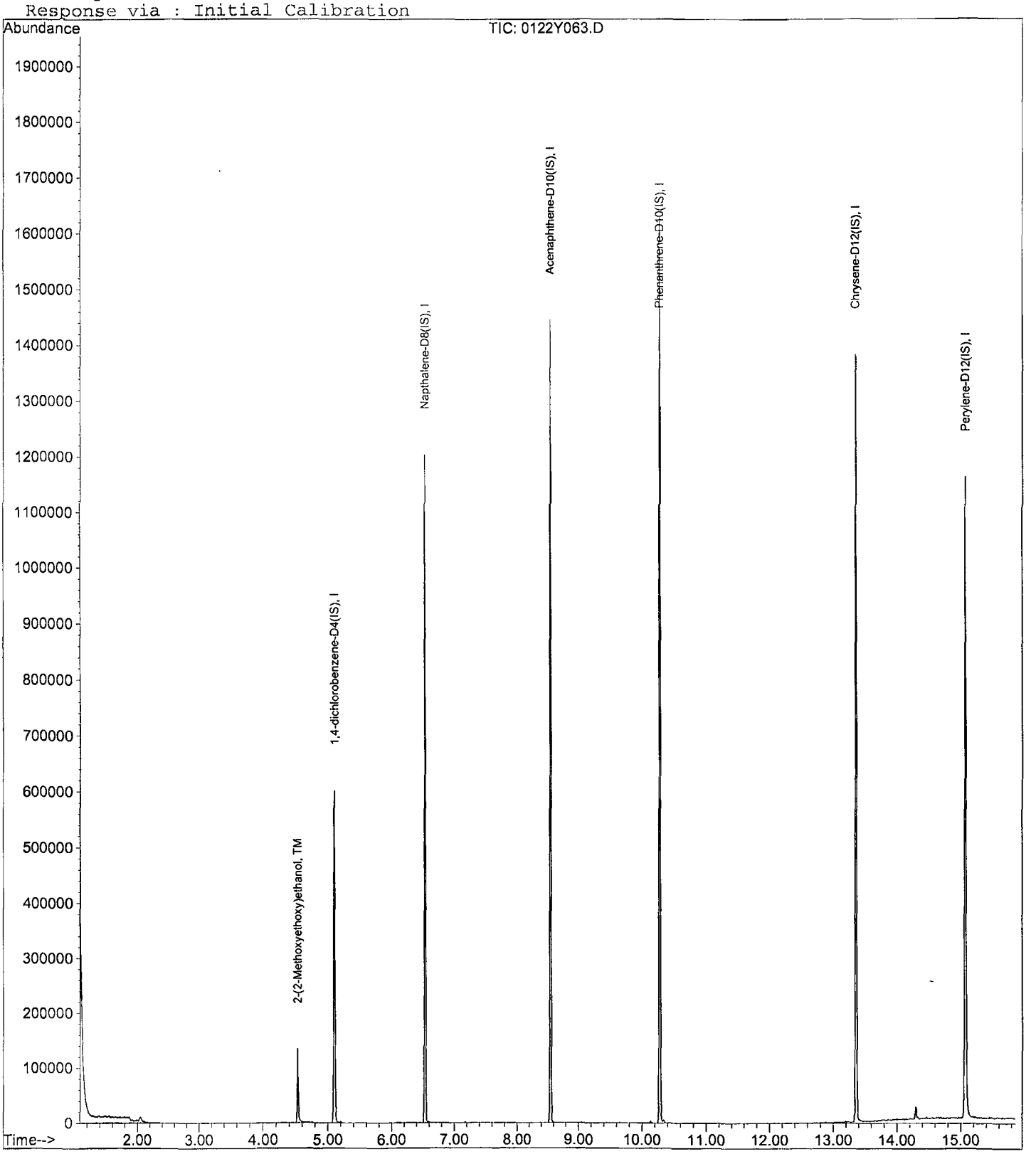
(#) = qualifier out of range (m) = manual integration
0122Y063.D YMEE0122.M Thu Mar 12 14:53:02 2020 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y063.D Vial: 63
Acq On : 11 Mar 20 13:45 Operator: MA,SS
Sample : 200310A LCS-1 2/500 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 11 14:46 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Mar 11 17:34:56 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y064.D Vial: 64
Acq On : 11 Mar 20 14:09 Operator: MA,SS
Sample : 200310A LCSD-1 2/500 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 11 15:22 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Mar 11 14:46:52 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.09	152	157033	40.00 ppb	-0.06
3) Napthalene-D8(IS)	6.53	136	703401	40.00 ppb	-0.04
4) Acenaphthene-D10(IS)	8.55	164	473090	40.00 ppb	-0.04
5) Phenanthrene-D10(IS)	10.28	188	989310	40.00 ppb	-0.03
6) Chrysene-D12(IS)	13.35	240	374227	40.00 ppb	-0.04
7) Perylene-D12(IS)	15.07	264	348266	40.00 ppb	-0.05

System Monitoring Compounds

Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.55	45	65950	71.51 ppb	95

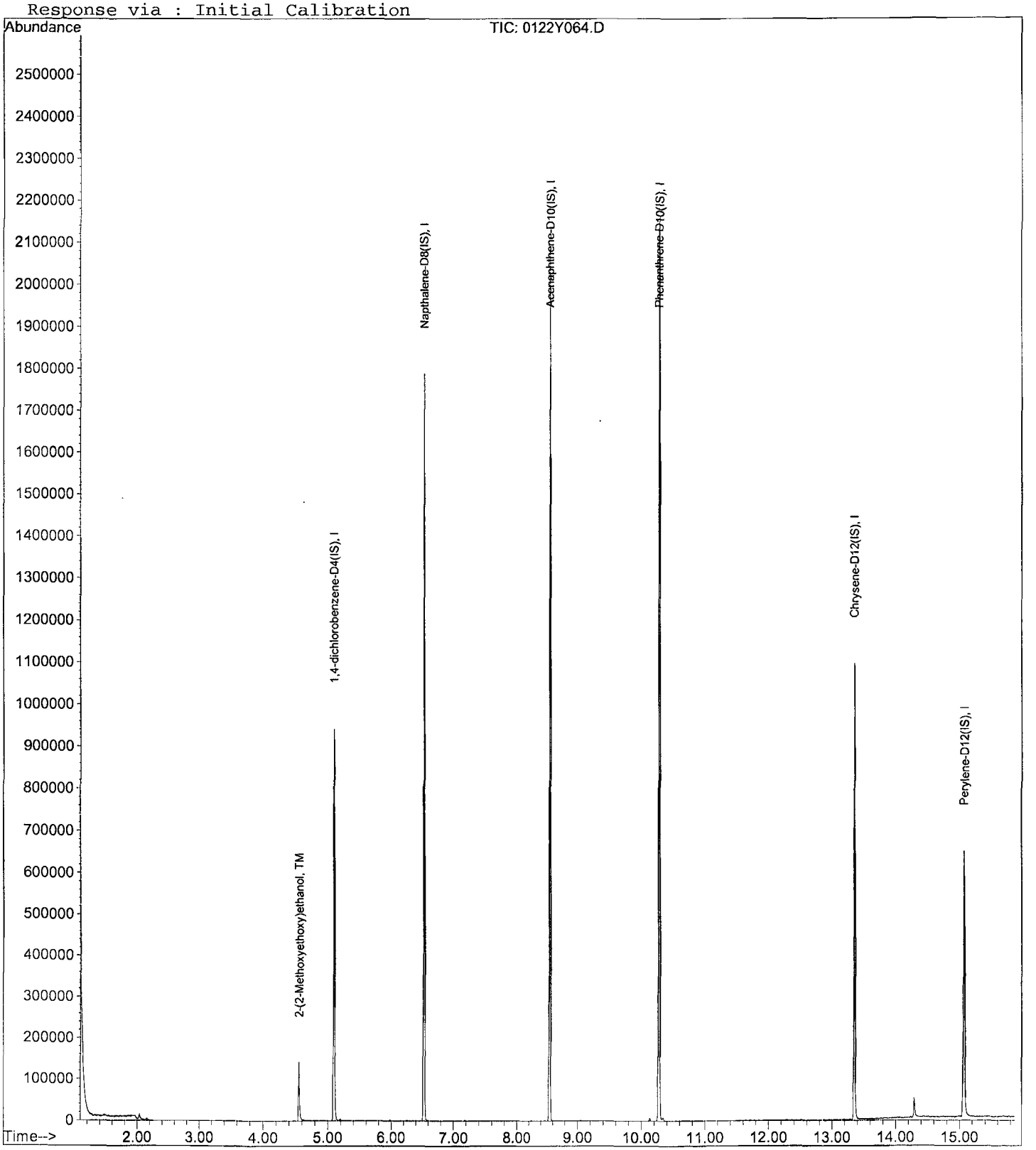
(#) = qualifier out of range (m) = manual integration
0122Y064.D YMEE0122.M Thu Mar 12 14:53:05 2020 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y064.D Vial: 64
Acq On : 11 Mar 20 14:09 Operator: MA,SS
Sample : 200310A LCSD-1 2/500 Inst : Yoda
Misc : soil Multiplr: 1.00

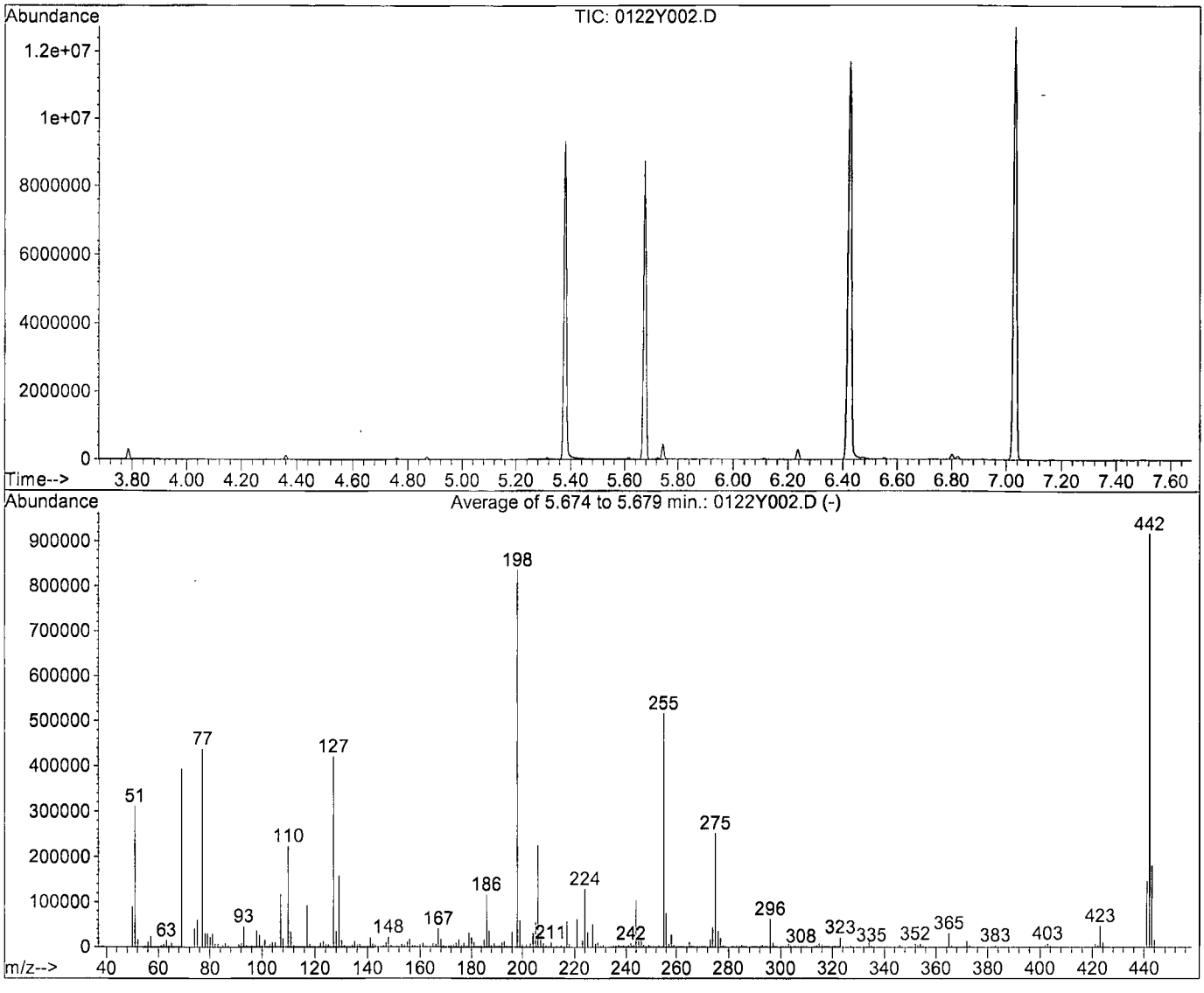
Quant Time: Mar 11 15:22 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Mar 11 17:34:56 2020
Response via : Initial Calibration



Data File : M:\YODA\DATA\Y200122M\0122Y002.D Vial: 2
Acq On : 22 Jan 20 15:31 Operator: MA,SS
Sample : SV Tune 10/11/18 Inst : Yoda
Misc : Multiplr: 1.00

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C

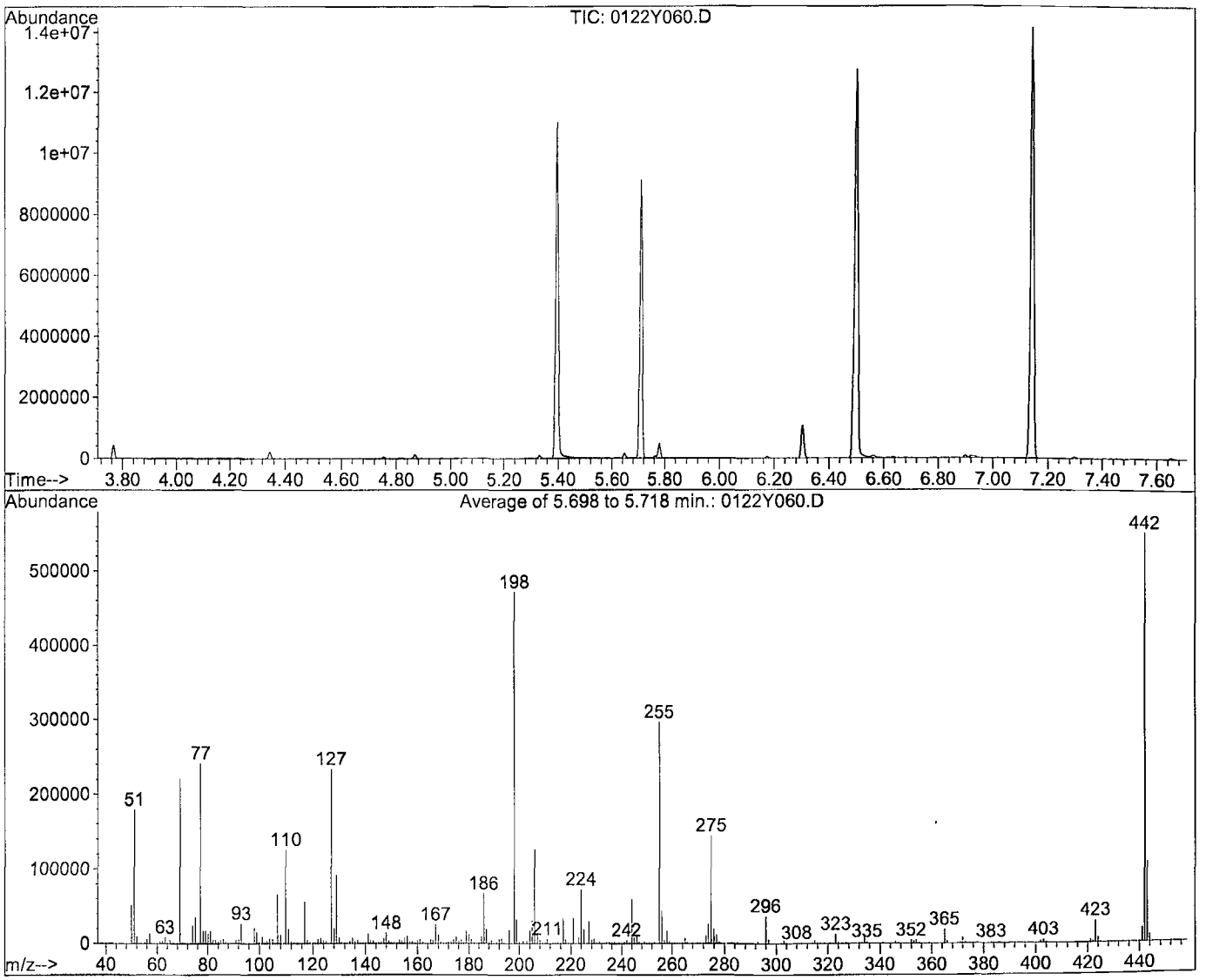


Spectrum Information: Average of 5.674 to 5.679 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	37.2	310756	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.2	963	PASS
127	198	10	80	50.4	420821	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	835008	PASS
199	198	5	9	7.1	58973	PASS
275	198	10	60	30.1	251435	PASS
365	198	1	100	3.7	30675	PASS
441	442	0.01	24	15.9	145797	PASS
442	198	50	500	109.9	917909	PASS
443	442	15	24	19.8	181739	PASS

Data File : M:\YODA\DATA\Y200122M\0122Y060.D Vial: 61
Acq On : 11 Mar 20 8:14 Operator: MA
Sample : SV TUNE 10/01/19 Inst : Yoda
Misc : Multiplr: 1.00

Method : M:\YODA\DATA\Y200122M\DFTPP2.M (Chemstation Integrator)
Title :



Spectrum Information: Average of 5.698 to 5.718 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	38.0	178932	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.6	1265	PASS
127	198	10	80	49.5	233180	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	470989	PASS
199	198	5	9	6.8	31997	PASS
275	198	10	60	30.6	144262	PASS
365	198	1	100	3.9	18380	PASS
441	442	0.01	24	3.5	19135	PASS
442	198	50	500	117.3	552239	PASS
443	442	15	24	19.5	107530	PASS

Data File Name:	**0122Y002.D**
Data File Path:	**M:\YODA\DATA\Y200122M**
Operator:	**MA,SS**
Date Acquired:	**22 Jan 2020 15:31**
Method File:	**DFTPP2.M**
Sample Name:	**SV Tune 10/11/18**
Vial Number:	**2**
Instrument Name:	**Yoda**

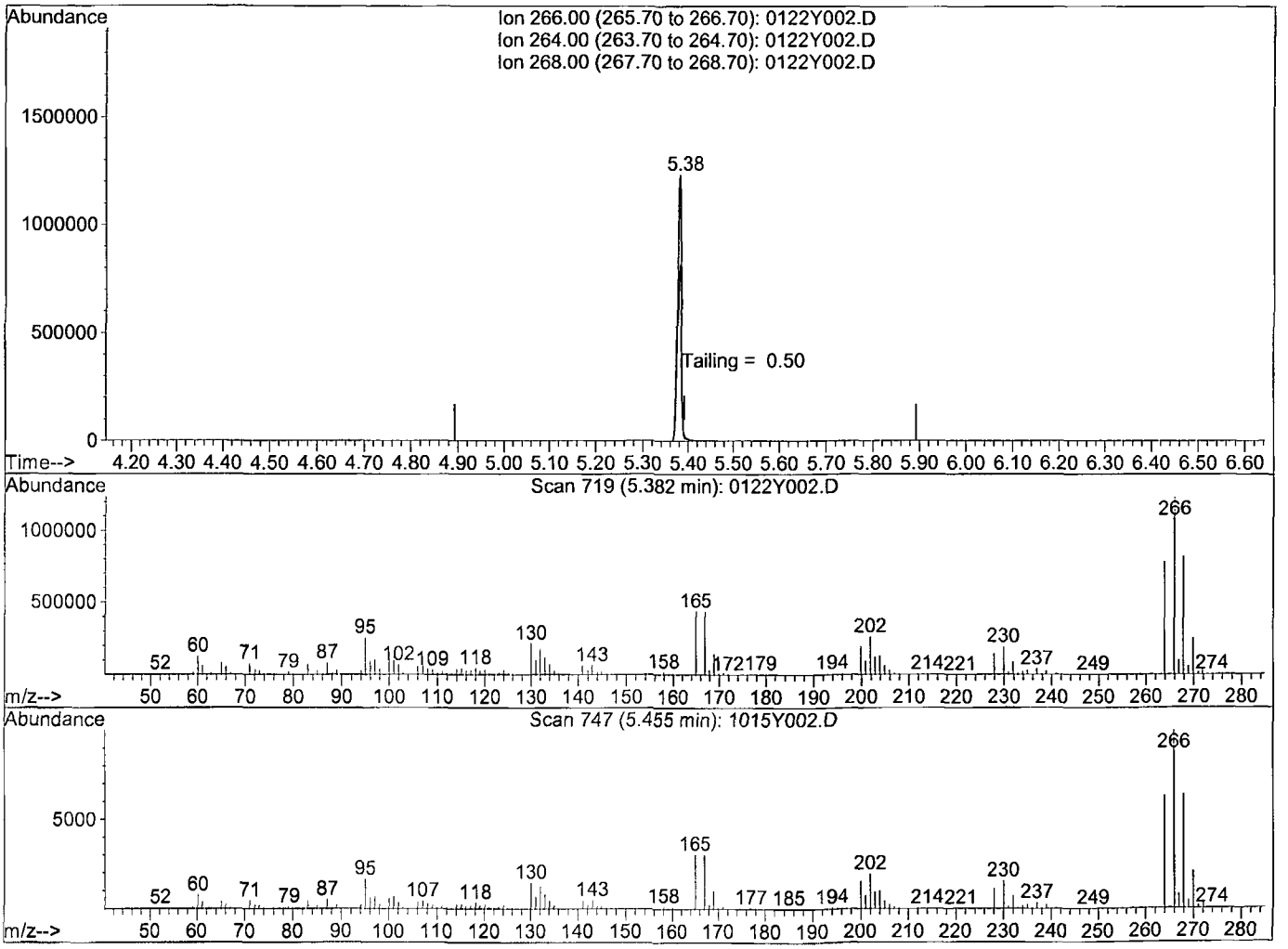
#	Name	Ret Time	Target Response
1)	DDT	7.02	96603900
2)	DDD	6.79	987534
3)	DDE	6.59	119819

Breakdown **1.13**

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y002.D Vial: 2
Acq On : 22 Jan 20 15:31 Operator: MA,SS
Sample : SV Tune 10/11/18 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Jan 23 9:58 2020 Quant Results File: temp.res

Method : M:\YODA\DATA\Y191219\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Tue Dec 10 08:34:10 2019
Response via : Single Level Calibration



TIC: 0122Y002.D

(5) Pentachlorophenol

5.38min 0.0000

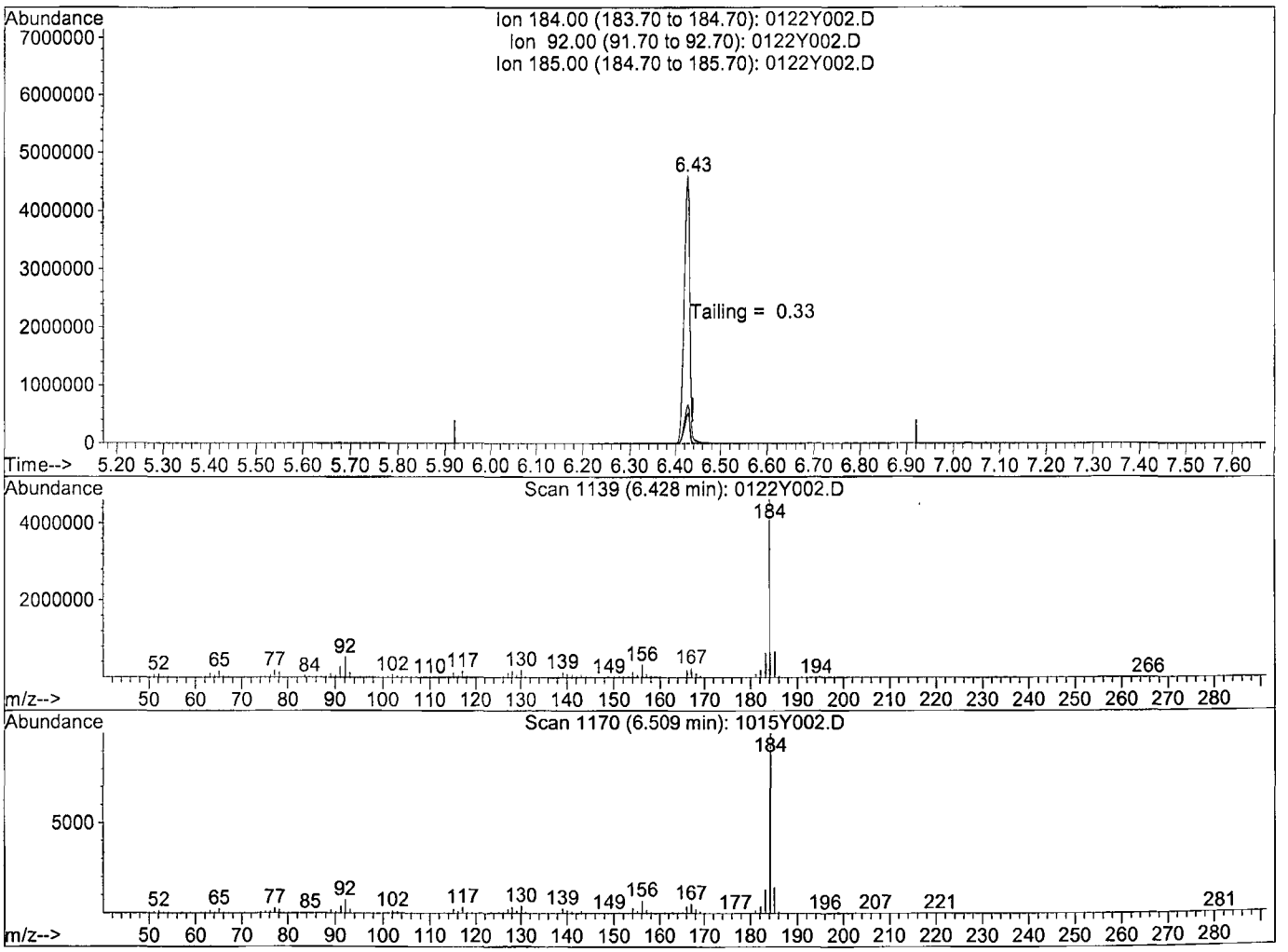
response 7823618

Ion	Exp%	Act%
266.00	100	100
264.00	65.60	63.49
268.00	64.10	65.10
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y002.D Vial: 2
Acq On : 22 Jan 20 15:31 Operator: MA,SS
Sample : SV Tune 10/11/18 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Jan 23 9:58 2020 Quant Results File: temp.res

Method : M:\YODA\DATA\Y191219\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Tue Dec 10 08:34:10 2019
Response via : Single Level Calibration



TIC: 0122Y002.D

(6) Benzidine

6.43min 0.0000

response 41313552

Ion	Exp%	Act%
184.00	100	100
92.00	10.30	10.42
185.00	14.50	14.34
0.00	0.00	0.00

Organic Extraction Worksheet

Method	Solid Phase Extraction of 2MEE in Water	Extraction Set	191106A	Extraction Method	MWE2MEE	Units	mL

Spiked ID 1	Diethylene Glycol 1-31-19 EXP 1-31-20		Surrogate ID 1		
Spiked ID 2	2MEE SS 10320ug/mL 10/28/19 exp 10/28/20		Surrogate ID 2		
Spiked ID 3	Diethylene Glycol 11-5-19 exp 11-5-20		Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	no	
Spiked ID 7			Ext. Start Time:	11/06/19 6:25	
Spiked ID 8			Ext. End Time:	11/06/19 13:30	
			GC Requires Extract By:		

M STD AND SS PREPARATION MA 1/21/20

pH1			Water Bath Temp 1 °C		
pH2			Water Bath Temp 2 °C		
pH3			Water Bath Temp 3 °C		

Spiked By: DL **Date** 11/06/19 **Witnessed By:** CFM **Date** 11/06/19

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	191106A Blk				NA	NA equip	500	2	7Y	11/06/19 6:25	
2	191106A LCS-1		0.040	1	NA	NA equip	500	2	7Y	11/06/19 6:25	
3	191106A LCSD-1		0.040	1	NA	NA equip	500	2	7Y	11/06/19 6:25	
4	BA02214	BA02214W18			NA	NA equip	500	2	7Y	11/06/19 6:25	90611
5	BA02216	BA02216W10			NA	NA equip	500	2	7Y	11/06/19 6:25	90611
6	BA02301	BA02301W22			NA	NA equip	500	2	7Y	11/06/19 6:25	90625
7	M STD		1	3	na	na equip	500	2	7Y	11/06/19 6:25	
8	SS		0.097	2	NA	NA equip	500	2	7Y	11/06/19 6:25	

Solvent and Lot#	
ENVI-Carb Plus 400MG/1ML	11694501
Reverible Tube Lot:	11694501
PH Strip	HC863463
Di Water	11/6/19
Dichloromethane	59130
Methanol	59129

Extraction COC Transfer	
Extraction lab employee Initials	SS
GC analyst's initials	MA
Date	
Time	
Refrigerator	Hobart

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL
Concentration	DL

Modified	11/06/19 6:07:34 AM

Reviewed By: **Date**

Name of Final Standard: MEE Curve
Prep'd By (Initials): JP
Prep Date: 01/22/20
Exp Date: 11/05/20

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
MEE M STD Stock	APPL		2000 ug/mL	11/05/19	11/05/20	5 uL	200uL	Methanol 195uL Lot# 235140	50 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	11/20/19	11/20/20	4 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/05/19	11/05/20	5 uL	100uL	Methanol 95uL Lot# 235140	100 ug/mL
SV Internal Standard	APPL	8271 Internal Standard	2000 ug/mL	11/20/19	11/20/20	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/05/19	11/05/20	10 uL	100uL	Methanol 90uL Lot# 235140	200 ug/mL
SV Internal Standard	APPL	8272 Internal Standard	2000 ug/mL	11/20/19	11/20/20	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/05/19	11/05/20	20 uL	100uL	Methanol 80 uL Lot# 235140	400 ug/mL
SV Internal Standard	APPL	8273 Internal Standard	2000 ug/mL	11/20/19	11/20/20	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/05/19	11/05/20	50 uL	200 uL	Methanol 150 uL Lot# 235140	500 ug/mL
SV Internal Standard	APPL	8274 Internal Standard	2000 ug/mL	11/20/19	11/20/20	4 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/05/19	11/05/20	30 uL	100uL	Methanol 70 uL Lot# 235140	600 ug/mL
SV Internal Standard	APPL	8275 Internal Standard	2000 ug/mL	11/20/19	11/20/20	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/05/19	11/05/20	40 uL	100uL	Methanol 60 uL Lot# 235140	800 ug/mL
SV Internal Standard	APPL	8276 Internal Standard	2000 ug/mL	11/20/19	11/20/20	2 uL	*	*	*
MEE M STD Stock	APPL		2000 ug/mL	11/05/19	11/05/20	50 uL	100uL	Methanol 50uL Lot# 235140	1000 ug/mL
SV Internal Standard	APPL	8277 Internal Standard	2000 ug/mL	11/20/19	11/20/20	2 uL	*	*	*

Name of Final Standard: MEE Second Source
Prep'd By (Initials): JP
Prep Date: 01/22/20
Exp Date: 10/28/20

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
MEE SS	APPL		2000 ug/mL	10/28/19	10/28/20	50 uL	200uL	Methanol 150uL Lot# 235140	500 ug/mL
SV Internal Standard	APPL	8277 Internal Standard	2000 ug/mL	11/20/19	11/20/20	4 uL	*	*	*

Name of Final Standard	Diethylene Glycol
Prep Date	**11/05/19**
Exp Date	**11/05/20**

Prep'd By (Initials) **MA**

Initial Standard Information						Final Standard Information			
Name of Initial **Standard** (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Diethylene glycol methyl ether	AccuStandard	S-72273	2000 ug/mL	**218101558-39890**	**12/01/20**	1.0 mL	2 mL	**Methanol #208858**	1000 ug/mL

Given to Extraction to do **MEE M STD Stock** (used for ICAL) Final concentration 2000ug/L

Name of Final Standard **2MEE Second Source Stock** **Prep'd By (Initials)** **JP**

Prep Date **10/28/19**
Exp Date **10/28/20**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Methoxyethanol-Neat	Chem Service	N-12404-1G	Neat 99.5%	**7079100 - 39417**	**07/31/22**	0.1022g	10 mL	**MC #56258**	10220 ug/mL

Given to Extraction to do **MEE SS** (used for ICAL SS)
0.097ml were spiked in 500ml of water and extracted on 04/29/19 . Final concentration is 2000ug/L

Name of Final Standard MEE Curve

Prep Date 01/29/20

Exp Date 11/05/20

Prep'd By (Initials) JP

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
MEE M STD Stock	APPL		2000 ug/mL	**11/05/19**	**11/05/20**	50 uL	200 uL	**Methanol 150 uL**	500 ug/mL
SV Internal Standard	APPL	Internal Standard	2000 ug/mL	**11/20/19**	**11/20/20**	4 uL	*	*	*

Injection Log

Directory: M:\YODA\DATA\Y200122M\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
2	0122Y002.D	1	SV Tune 10/11/18		22 Jan 20 15:31
3	0122Y003.D	1	50ug/ml MEE 01/22/20	soil	22 Jan 20 15:46
4	0122Y004.D	1	100ug/ml MEE 01/22/20	soil	22 Jan 20 16:10
5	0122Y005.D	1	200ug/ml MEE 01/22/20	soil	22 Jan 20 16:33
6	0122Y006.D	1	400ug/ml MEE 01/22/20	soil	22 Jan 20 16:57
7	0122Y007.D	1	500ug/ml MEE 01/22/20	soil	22 Jan 20 17:21
8	0122Y008.D	1	600ug/ml MEE 01/22/20	soil	22 Jan 20 17:45
9	0122Y009.D	1	800ug/ml MEE 01/22/20	soil	22 Jan 20 18:08
10	0122Y010.D	1	1000ug/ml MEE 01/22/20	soil	22 Jan 20 18:32
11	0122Y011.D	1	SS MEE 01/22/20	soil	22 Jan 20 18:55
61	0122Y060.D	1	SV TUNE 10/01/19		11 Mar 20 8:14
61	0122Y061.D	1	500ug/ml MEE 01/29/20 (2)	soil	11 Mar 20 12:17
62	0122Y062.D	1	200310A BLK 2/500	soil	11 Mar 20 13:21
63	0122Y063.D	1	200310A LCS-1 2/500	soil	11 Mar 20 13:45
64	0122Y064.D	1	200310A LCSD-1 2/500	soil	11 Mar 20 14:09
69	0122Y069.D	1	BA08034W12 2/500	soil	11 Mar 20 16:10
70	0122Y070.D	1	500ug/ml MEE 01/29/20 (1)	soil	11 Mar 20 16:33

ORGANICS
Calibration Data

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 03/09/20
Matrix: Instrument: Thor Initials: DP

			0309T02.D	0309T03.D	0309T04 D	0309T05.D	0309T06.D	0309T07 D	0309T08 D	0309T09.D	0309T10 D							
		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD	Type	r^2	Q	MRF
1	I	Fluorobenzene (IS)																
2	TM	Chlorotrifluoroethene													TM			
3	TM	Dichlorodifluoromethane		0.1045	0.1090	0.0951	0.0815	0.0850	0.0918	0.0869	0.0919		0.09	10	TM			
4	TM	Freon 114		0.0751	0.0957	0.0745	0.0595	0.0729	0.0789	0.0746	0.0803		0.08	13	TM			
5	TM**	Chloromethane		0.1215	0.1164	0.1034	0.0957	0.0994	0.0931	0.0893	0.0844		0.10	13	TM**			
6	TM*	Vinyl chloride		0.0946	0.0996	0.0913	0.0777	0.0826	0.0866	0.0851	0.0852		0.09	8.0	TM*			
7	TM	2-Chloro-1,1,1-trifluoroethane													TM			
8	TML	Bromomethane		0.0375	0.0852	0.0721	0.0523	0.0562	0.0550	0.0444	0.0409		0.06	29	TML	0.995		
9	TM	Chloroethane		0.0142	0.0126	0.0146	0.0114	0.0139	0.0118	0.0121	0.0123		0.01	9.3	TM			
10	TM	Dichlorofluoromethane		0.1666	0.1521	0.1409	0.1139	0.1364	0.1346	0.1343	0.1378		0.14	11	TM			
11	TM	Trichlorofluoromethane		0.1259	0.1246	0.1226	0.1060	0.1178	0.1171	0.1150	0.1194		0.12	5.4	TM			
12	TM	Diethyl ether													TM			
13	TM	1,2 Dichlorotrifluoroethane													TM			
14	TM	Acrolein		0.0038	0.0051	0.0054	0.0046	0.0058	0.0057				0.01	15	TM			
15	TML	Acetone		0.0558	0.0340	0.0227	0.0158	0.0155	0.0158	0.0151	0.0143		0.02	62	TML	1.000		
16	TM	Freon-113		0.0595	0.0886	0.0670	0.0568	0.0671	0.0707	0.0667	0.0708		0.07	14	TM			
17	TM*	1,1-DCE		0.1093	0.1181	0.1115	0.0954	0.1139	0.1134	0.1095	0.1132		0.11	6.1	TM*			
18	TM	2-Propanol													TM			
19	TM	Acetonitrile		0.0026	0.0028	0.0026	0.0027	0.0026	0.0029	0.0028	0.0027		0.00	5.0	TM			
20	TM	t-Butanol	0.0043	0.0034	0.0032	0.0031	0.0030	0.0029	0.0034	0.0033	0.0030		0.00	13	TM			
21	TM	Methyl Acetate		0.0735	0.0783	0.0616	0.0550	0.0641	0.0623	0.0647	0.0711		0.07	11	TM			
22	TMQ	Iodomethane		0.0206	0.0123	0.0145	0.0124	0.0200	0.0431	0.0789	0.1101		0.04	94	TMQ	0.998		
23	TML	Acrylonitrile		0.0145	0.0237	0.0254	0.0206	0.0267	0.0263	0.0273	0.0283		0.02	19	TML	1.000		
24	TM	Methylene chloride		0.1416	0.1083	0.1112	0.0909	0.1065	0.1085	0.1079	0.1076		0.11	13	TM			
25	TM	Carbon disulfide		0.2386	0.2167	0.2166	0.1776	0.2083	0.2125	0.2144	0.2176		0.21	7.9	TM			
26	TM	Methyl t-butyl ether (MtBE)		0.2557	0.2372	0.2362	0.2164	0.2486	0.2535	0.2590	0.2624		0.25	6.2	TM			
27	TM	Trans-1,2-DCE		0.1096	0.1178	0.1113	0.0982	0.1104	0.1119	0.1102	0.1156		0.11	5.2	TM			
28	TML	Hexane		0.0461	0.0413	0.0390	0.0268	0.0262	0.0301	0.0309	0.0365		0.03	21	TML	0.995		
29	TM	Diisopropyl Ether		0.2715	0.2713	0.2589	0.2232	0.2532	0.2644	0.2701	0.2728		0.26	6.4	TM			
30	TM**	2,2-Dichloro-1,1,1-trifluoroethane													TM**			
31	TM**	1,1-DCA		0.1755	0.1652	0.1525	0.1322	0.1552	0.1535	0.1584	0.1615		0.16	7.9	TM**			
32	TM	Vinyl Acetate		0.1820	0.1522	0.1540	0.1300	0.1579	0.1515	0.1452	0.1483		0.15	9.5	TM			
33	TM	Ethyl tert Butyl Ether		0.2787	0.2532	0.2578	0.2251	0.2641	0.2722	0.2735	0.2823		0.26	7.0	TM			
34	TML	MEK (2-Butanone)		0.0738	0.0511	0.0498	0.0424	0.0433	0.0410	0.0425	0.0432		0.05	23	TML	1.000		
35	TM	Cis-1,2-DCE		0.1462	0.1323	0.1416	0.1192	0.1355	0.1379	0.1393	0.1428		0.14	6.1	TM			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 03/09/20
Matrix: Instrument: Thor Initials: DP

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD	Type		Q	MRF
36	TM	2,2-Dichloropropane		0.1520	0.1340	0.1186	0.1067	0.1251	0.1236	0.1217	0.1258		0.13	10	TM			
37	TM	2-Methylpentane													TM			
38	TM	3-Methylpentane													TM			
39	TM*	Chloroform		0.1726	0.1665	0.1636	0.1411	0.1635	0.1670	0.1686	0.1742		0.16	6.2	TM*			
40	TM	Bromochloromethane		0.0850	0.0645	0.0787	0.0679	0.0761	0.0776	0.0762	0.0753		0.08	8.5	TM			
41	SL	Dibromofluoromethane(S)	0.7766	0.7014	0.4290	0.4372	0.3560	0.3352	0.3004	0.3041	0.2748		0.43	42	SL	0.999		
42	TM	1,1,1-TCA		0.1317	0.1414	0.1375	0.1231	0.1378	0.1402	0.1413	0.1451		0.14	5.0	TM			
43	TM	Cyclohexane		0.1242	0.1429	0.1190	0.0979	0.1143	0.1244	0.1185	0.1254		0.12	10	TM			
44	TM	1,1-Dichloropropene		0.1142	0.1199	0.1141	0.0948	0.1119	0.1153	0.1137	0.1180		0.11	6.8	TM			
45	TM	2,2,4-Trimethylpentane		0.2349	0.2507	0.2095	0.1630	0.1998	0.2126	0.2048	0.2248		0.21	12	TM			
46	SL	1,2-DCA-D4(S)	0.7927	0.7129	0.4422	0.4573	0.3560	0.3443	0.3055	0.3138	0.2786		0.44	42	SL	0.999		
47	TM	Carbon Tetrachloride		0.1121	0.1295	0.1147	0.1051	0.1169	0.1247	0.1219	0.1294		0.12	7.2	TM			
48	TM	Tert Amyl Methyl Ether		0.2548	0.2547	0.2556	0.2171	0.2607	0.2730	0.2800	0.2808		0.26	7.9	TM			
49	TM	Methylcyclopentane													TM			
50	TM	1,2-DCA		0.1540	0.1227	0.1396	0.1124	0.1325	0.1289	0.1325	0.1323		0.13	9.2	TM			
51	TM	Benzene		0.3826	0.3742	0.3730	0.3109	0.3729	0.3802	0.3775	0.3823		0.37	6.5	TM			
52	TM	TCE		0.1343	0.1188	0.1298	0.0980	0.1131	0.1180	0.1198	0.1194		0.12	9.2	TM			
53	TM	2-Pentanone		0.0635	0.0633	0.0631	0.0646	0.0660	0.0686	0.0706	0.0671		0.07	4.1	TM			
54	TM*	1,2-Dichloropropane		0.1111	0.1009	0.0984	0.0868	0.0993	0.0994	0.1004	0.1026		0.10	6.6	TM*			
55	TM	Bromodichloromethane		0.1319	0.1335	0.1153	0.1122	0.1300	0.1321	0.1352	0.1405		0.13	7.6	TM			
56	TM	Methyl Cyclohexane		0.1472	0.1409	0.1236	0.1018	0.1203	0.1275	0.1227	0.1323		0.13	11	TM			
57	TM	Dibromomethane		0.0737	0.0907	0.0787	0.0747	0.0875	0.0863	0.0906	0.0909		0.08	8.7	TM			
58	TM	MIBK (methyl isobutyl ketone)		0.0988	0.0883	0.0879	0.1096	0.0920	0.0946	0.0981	0.1058		0.10	8.1	TM			
59	TM	1-Bromo-2-chloroethane		0.0603	0.0708	0.0618	0.0641	0.0711	0.0709	0.0744	0.0770		0.07	8.8	TM			
60	TM	2-Chloroethyl vinyl ether													TM			
61	TM	Cis-1,3-Dichloropropene		0.1659	0.1454	0.1412	0.1329	0.1526	0.1595	0.1608	0.1680		0.15	8.2	TM			
62	TM*	Toluene		0.4623	0.4374	0.4271	0.3735	0.4325	0.4398	0.4327	0.4403		0.43	5.9	TM*			
63	TM	Trans-1,3-Dichloropropene		0.1434	0.1366	0.1264	0.1137	0.1377	0.1413	0.1462	0.1504		0.14	8.6	TM			
64	TM	1,1,2-TCA		0.1031	0.0863	0.0918	0.0870	0.0918	0.0969	0.0994	0.1000		0.09	6.6	TM			
65	TML	2-Hexanone		0.0635	0.0700	0.0302	0.0556	0.0595	0.0669	0.0672	0.0730		0.06	22	TML	0.999		
66	I	Chlorobenzene-D5 (IS)																
67	SL	Toluene-D8(S)	3.882	3.504	2.144	2.134	1.656	1.600	1.412	1.439	1.249		2.1	45	SL	0.998		
68	TM	1,2-EDB		0.1122	0.1122	0.1050	0.1044	0.1215	0.1271	0.1288	0.1291		0.12	8.8	TM			
69	TM	Tetrachloroethene		0.1737	0.1609	0.1579	0.1465	0.1613	0.1582	0.1537	0.1525		0.16	5.0	TM			
70	TM	1-Chlorohexane		0.1550	0.1252	0.1304	0.1246	0.1411	0.1468	0.1444	0.1528		0.14	8.5	TM			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 03/09/20
Matrix: Instrument: Thor Initials: DP

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD	Type		Q	MRF
71	TM	1,1,1,2-Tetrachloroethane		0.1316	0.1262	0.1212	0.1147	0.1361	0.1398	0.1435	0.1456		0.13	8.3	TM			
72	TM	m&p-Xylene		0.3921	0.4378	0.4247	0.3799	0.4485	0.4634	0.4545	0.4681		0.43	7.5	TM			
73	TM	o-Xylene		0.4553	0.4607	0.4404	0.4067	0.4743	0.4854	0.4925	0.5066		0.47	6.8	TM			
74	TM	Styrene		0.3429	0.3333	0.3215	0.3035	0.3831	0.3899	0.3998	0.4254		0.36	12	TM			
75	SL	4-Bromofluorobenzene(S)	1.474	1.324	0.8132	0.8064	0.6415	0.6338	0.5650	0.5722	0.5229		0.82	42	SL	0.999		
76	TM	1,3-Dichloropropane		0.1946	0.1960	0.1860	0.1661	0.2022	0.1986	0.2034	0.1997		0.19	6.3	TM			
77	TM	Dibromochloromethane		0.1229	0.1282	0.1300	0.1192	0.1380	0.1435	0.1525	0.1531		0.14	9.5	TM			
78	TM**	Chlorobenzene		0.3957	0.3977	0.3576	0.3193	0.3655	0.3706	0.3660	0.3665		0.37	6.6	TM**			
79	TM*	Ethylbenzene		0.5981	0.5610	0.5405	0.4853	0.5817	0.5942	0.5932	0.6031		0.57	7.0	TM*			
80	TM**L	Bromoform		0.0474	0.1101	0.0967	0.0918	0.1098	0.1113	0.1162	0.1275		0.10	24	TM**L	0.999		
81	I	1,4-Dichlorobenzene-D (IS)																
82	TM	Isopropylbenzene		1.093	0.9862	0.9854	0.8768	1.018	1.023	1.018	0.9809		1.00	6.1	TM			
83	TM**	1,1,2,2-Tetrachloroethane		0.2110	0.2435	0.2479	0.2201	0.2359	0.2312	0.2437	0.2503		0.24	5.9	TM**			
84	TM	1,2,3-Trichloropropane		0.0777	0.0854	0.0784	0.0772	0.0905	0.0858	0.0907	0.0897		0.08	6.9	TM			
85	TM	t-1,4-Dichloro-2-Butene		0.0526	0.0428	0.0448	0.0436	0.0468	0.0475	0.0495	0.0526		0.05	8.0	TM			
86	TM	Bromobenzene		0.5384	0.5228	0.4861	0.4528	0.5124	0.4982	0.5105	0.4921		0.50	5.2	TM			
87	TM	n-Propylbenzene		1.117	1.100	1.095	0.9693	1.121	1.129	1.145	1.120		1.1	5.0	TM			
88	TM	4-Ethyltoluene		0.9204	0.9736	0.9079	0.8551	0.9771	0.9938	1.017	0.9920		0.95	5.7	TM			
89	TM	2-Chlorotoluene		0.8798	0.8435	0.7641	0.7018	0.8014	0.8140	0.8130	0.7900		0.80	6.6	TM			
90	TM	1,3,5-Trimethylbenzene		0.9090	0.8281	0.8050	0.7550	0.8716	0.8800	0.8933	0.8626		0.85	6.0	TM			
91	TM	4-Chlorotoluene		0.7959	0.8161	0.7940	0.7217	0.8419	0.8358	0.8333	0.8169		0.81	4.8	TM			
92	TM	Tert-Butylbenzene		0.8943	0.7252	0.8376	0.7439	0.8808	0.8720	0.8717	0.8648		0.84	7.8	TM			
93	TM	1,2,4-Trimethylbenzene		0.9812	0.8615	0.7872	0.7519	0.8916	0.8876	0.9155	0.8957		0.87	8.3	TM			
94	TM	Sec-Butylbenzene		0.9757	1.019	0.9805	0.9018	1.043	1.030	1.035	1.044		1.0	4.9	TM			
95	TM	p-Isopropyltoluene		0.8985	0.8935	0.8454	0.7633	0.9006	0.9163	0.9353	0.9381		0.89	6.5	TM			
96	TM	Benzyl Chloride		0.3001	0.3273	0.3072	0.2661	0.2864	0.2929	0.3416	0.3672		0.31	10	TM			
97	TM	1,3-DCB		0.5493	0.5728	0.5231	0.4834	0.5607	0.5529	0.5550	0.5546		0.54	5.2	TM			
98	TM	1,4-DCB		0.5685	0.5711	0.5713	0.4972	0.5592	0.5598	0.5672	0.5670		0.56	4.5	TM			
99	TM	n-Butylbenzene		0.6783	0.7175	0.6732	0.5952	0.7021	0.7100	0.7295	0.7411		0.69	6.6	TM			
100	TM	1,2-DCB		0.5663	0.5169	0.5289	0.4703	0.5664	0.5445	0.5604	0.5679		0.54	6.3	TM			
101	TM	Hexachloroethane		0.1441	0.1773	0.1510	0.1424	0.1602	0.1630	0.1766	0.1766		0.16	9.0	TM			
102	TM	1,2-Dibromo-3-chloropropane		0.0519	0.0684	0.0539	0.0543	0.0584	0.0622	0.0670	0.0708		0.06	12	TM			
103	TM	1,2,4-Trichlorobenzene		0.2953	0.3266	0.3327	0.2910	0.3546	0.3699	0.3910	0.4111		0.35	12	TM			
104	TM	Hexachlorobutadiene		0.1940	0.2045	0.1971	0.1648	0.1932	0.1950	0.1938	0.2030		0.19	6.3	TM			
105	TM	Naphthalene		0.0836	0.0843	0.0843	0.0727	0.0870	0.0954	0.1075	0.1116		0.09	14	TM			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 03/09/20
Matrix: Instrument: Thor Initials: DP

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD	Type		Q	MRF
106	TM	1,2,3-Trichlorobenzene		0.3356	0.3387	0.2932	0.2682	0.3399	0.3564	0.3787	0.3861		0.34	12	TM			
107																		
108																		
109																		
110																		
111																		
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Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0309T02.D Vial: 2
Acq On : 9 Mar 20 7:22 Operator:
Sample : 0.3ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 10 7:50 2020 Quant Results File: T0309W.RES

Quant Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.46	96	897893	25.00	ppb		0.00
66) Chlorobenzene-D5 (IS)	9.92	117	719814	25.00	ppb		0.00
81) 1,4-Dichlorobenzene-D (IS)	12.47	152	382559	25.00	ppb		0.00
System Monitoring Compounds							
41) Dibromofluoromethane(S)	5.60	111	139419	6.62	ppb		0.00
Spiked Amount 25.000			Recovery = 26.488%				
46) 1,2-DCA-D4(S)	6.01	65	142222	6.49	ppb		0.00
Spiked Amount 25.000			Recovery = 25.944%				
67) Toluene-D8(S)	8.32	98	559018	6.52	ppb		0.00
Spiked Amount 25.000			Recovery = 26.064%				
75) 4-Bromofluorobenzene(S)	11.21	95	212258	7.06	ppb		0.00
Spiked Amount 25.000			Recovery = 28.256%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.14	85	806	0.24	ppb	#	82
4) Freon 114	1.24	85	889	0.32	ppb		92
5) Chloromethane	1.28	50	1629	0.45	ppb		93
6) Vinyl chloride	1.37	62	1139	0.36	ppb	#	82
8) Bromomethane	1.65	94	1296	-1.60	ppb		96
9) Chloroethane	1.75	66	249	0.54	ppb		76
10) Dichlorofluoromethane	1.93	67	1988	0.40	ppb		97
11) Trichlorofluoromethane	1.98	101	1481	0.35	ppb	#	79
14) Acrolein	2.38	55	2297	12.64	ppb	#	75
15) Acetone	2.56	43	1263	1.06	ppb		99
16) Freon-113	2.53	101	842	0.34	ppb	#	81
17) 1,1-DCE	2.49	61	1700	0.43	ppb		88
19) Acetonitrile	2.85	40	1059	10.94	ppb		96
20) t-Butanol	3.27	59	1553	13.16	ppb	#	77
21) Methyl Acetate	2.96	43	1217	0.51	ppb	#	89
22) Iodomethane	2.62	142	48	2.86	ppb	#	1
23) Acrylonitrile	3.38	52	176	0.90	ppb	#	35
24) Methylene chloride	3.06	49	2284	0.58	ppb		94
25) Carbon disulfide	2.71	76	2875	0.38	ppb		94
26) Methyl t-butyl ether (MtBE	3.47	73	3829	0.43	ppb	#	76
27) Trans-1,2-DCE	3.43	61	1619	0.41	ppb		97
28) Hexane	3.89	56	311	1.78	ppb	#	35
29) Diisopropyl Ether	4.28	45	4254	0.45	ppb	#	56
31) 1,1-DCA	4.05	63	2679	0.48	ppb		99
32) Vinyl Acetate	4.21	43	2248	0.41	ppb	#	71
33) Ethyl tert Butyl Ether	4.82	59	4352	0.46	ppb		98
34) MEK (2-Butanone)	5.01	43	964	0.67	ppb	#	48
35) Cis-1,2-DCE	4.92	61	2021	0.41	ppb	#	66
36) 2,2-Dichloropropane	4.92	77	1748	0.39	ppb		95
39) Chloroform	5.40	83	2619	0.44	ppb		94
40) Bromochloromethane	5.25	49	963	0.36	ppb	#	81
42) 1,1,1-TCA	5.61	97	1651	0.33	ppb		96
43) Cyclohexane	5.68	56	1176	0.27	ppb		88
44) 1,1-Dichloropropene	5.84	75	1835	0.45	ppb	#	78
45) 2,2,4-Trimethylpentane	6.27	57	2912	0.38	ppb	#	76
47) Carbon Tetrachloride	5.83	117	1617	0.38	ppb	#	78
48) Tert Amyl Methyl Ether	6.30	73	4251	0.46	ppb		93
50) 1,2-DCA	6.11	62	2663	0.56	ppb		96
51) Benzene	6.09	78	5584	0.42	ppb		94

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0309T02.D Vial: 2
Acq On : 9 Mar 20 7:22 Operator:
Sample : 0.3ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 10 7:50 2020 Quant Results File: T0309W.RES

Quant Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
52)	TCE	6.91	130	2016	0.47	ppb	#	82
53)	2-Pentanone	7.15	43	24681	10.44	ppb		94
54)	1,2-Dichloropropane	7.15	63	1648	0.46	ppb	#	87
55)	Bromodichloromethane	7.49	83	2005	0.43	ppb		98
56)	Methyl Cyclohexane	7.15	83	1911	0.42	ppb		97
57)	Dibromomethane	7.28	174	1029	0.34	ppb		92
58)	MIBK (methyl isobutyl ket	8.22	43	1471	0.42	ppb	#	76
59)	1-Bromo-2-chloroethane	7.83	63	1102	0.45	ppb	#	74
61)	Cis-1,3-Dichloropropene	8.02	75	2227	0.40	ppb	#	94
62)	Toluene	8.40	91	7135	0.46	ppb		88
63)	Trans-1,3-Dichloropropene	8.65	75	2159	0.44	ppb	#	64
64)	1,1,2-TCA	8.84	97	1659	0.49	ppb	#	82
65)	2-Hexanone	9.15	43	1069	1.79	ppb	#	66
68)	1,2-EDB	9.38	107	1364	0.40	ppb	#	81
69)	Tetrachloroethene	9.02	166	1754	0.39	ppb		95
70)	1-Chlorohexane	9.92	91	2886	0.72	ppb	#	1
71)	1,1,1,2-Tetrachloroethane	10.04	131	1948	0.51	ppb	#	83
72)	m&p-Xylene	10.22	91	11294	0.90	ppb		97
73)	o-Xylene	10.65	91	5768	0.43	ppb		99
74)	Styrene	10.66	104	4870	0.47	ppb		86
76)	1,3-Dichloropropane	9.03	76	2277	0.41	ppb	#	88
77)	Dibromochloromethane	9.27	129	1562	0.40	ppb	#	81
78)	Chlorobenzene	9.95	112	5057	0.48	ppb		93
79)	Ethylbenzene	10.09	91	7302	0.45	ppb		94
80)	Bromoform	10.83	173	1352	1.61	ppb	#	85
82)	Isopropylbenzene	11.06	105	6155	0.40	ppb		93
83)	1,1,2,2-Tetrachloroethane	11.36	83	1585	0.44	ppb	#	87
84)	1,2,3-Trichloropropane	11.40	110	439	0.34	ppb	#	76
85)	t-1,4-Dichloro-2-Butene	11.43	53	168	0.23	ppb	#	78
86)	Bromobenzene	11.37	77	4086	0.53	ppb		87
87)	n-Propylbenzene	11.51	91	8401	0.50	ppb		98
88)	4-Ethyltoluene	11.64	105	6344	0.43	ppb		97
89)	2-Chlorotoluene	11.59	91	6454	0.53	ppb	#	76
90)	1,3,5-Trimethylbenzene	11.70	105	6589	0.51	ppb	#	81
91)	4-Chlorotoluene	11.71	91	5743	0.47	ppb		96
92)	Tert-Butylbenzene	12.06	119	5088	0.40	ppb		94
93)	1,2,4-Trimethylbenzene	12.11	105	6916	0.52	ppb		91
94)	Sec-Butylbenzene	12.30	105	6402	0.42	ppb		96
95)	p-Isopropyltoluene	12.46	119	6039	0.45	ppb	#	89
96)	Benzyl Chloride	12.65	91	1881	0.40	ppb	#	85
97)	1,3-DCB	12.40	146	3946	0.47	ppb		95
98)	1,4-DCB	12.50	146	4370	0.51	ppb	#	87
99)	n-Butylbenzene	12.90	91	4225	0.40	ppb		90
100)	1,2-DCB	12.91	146	4336	0.52	ppb	#	83
101)	Hexachloroethane	13.20	201	918	0.37	ppb		89
102)	1,2-Dibromo-3-chloropropan	13.75	157	230	0.25	ppb		92
103)	1,2,4-Trichlorobenzene	14.67	180	2697	0.51	ppb	#	79
104)	Hexachlorobutadiene	14.88	225	1229	0.42	ppb	#	75
105)	Naphthalene	14.94	127	1022	0.74	ppb	#	1
106)	1,2,3-Trichlorobenzene	15.20	180	2480	0.48	ppb		94

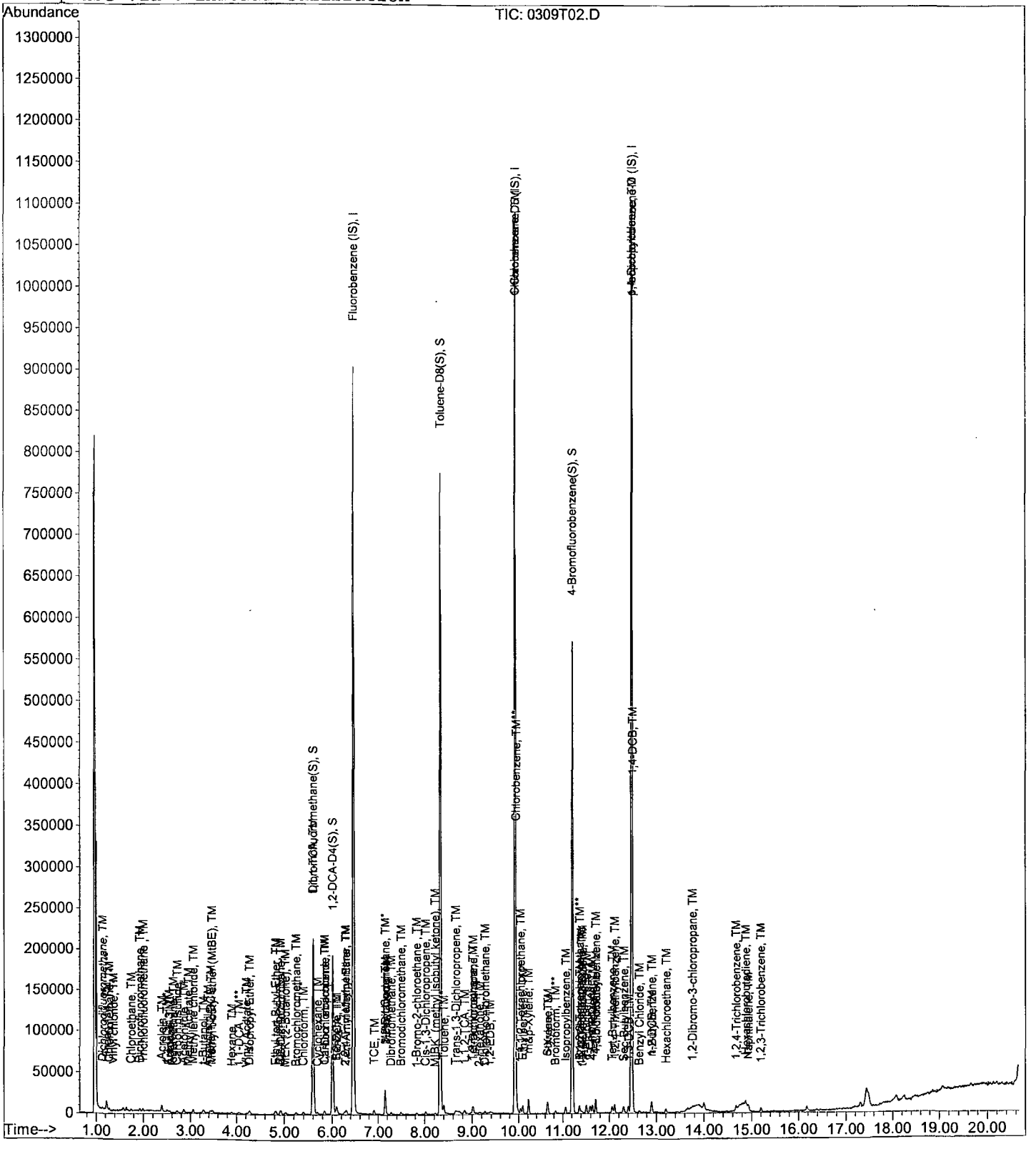
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200309\0309T02.D Vial: 2
Acq On : 9 Mar 20 7:22 Operator:
Sample : 0.3ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 10 7:50 2020 Quant Results File: T0309W.RES

Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0309T03.D Vial: 3
Acq On : 9 Mar 20 7:51 Operator:
Sample : 0.5ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 10 7:50 2020 Quant Results File: T0309W.RES

Quant Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.46	96	888561	25.00	ppb		0.00
66) Chlorobenzene-D5 (IS)	9.92	117	717507	25.00	ppb		0.00
81) 1,4-Dichlorobenzene-D (IS)	12.47	152	386915	25.00	ppb		0.00
System Monitoring Compounds							
41) Dibromofluoromethane(S)	5.60	111	124562	5.14	ppb		0.00
Spiked Amount 25.000			Recovery = 20.560%				
46) 1,2-DCA-D4(S)	6.01	65	126637	4.95	ppb		0.00
Spiked Amount 25.000			Recovery = 19.796%				
67) Toluene-D8(S)	8.33	98	502860	4.86	ppb		0.00
Spiked Amount 25.000			Recovery = 19.456%				
75) 4-Bromofluorobenzene(S)	11.21	95	190016	5.51	ppb		0.00
Spiked Amount 25.000			Recovery = 22.056%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.14	85	1857	0.56	ppb		95
4) Freon 114	1.24	85	1334	0.49	ppb		87
5) Chloromethane	1.28	50	2160	0.61	ppb	#	88
6) Vinyl chloride	1.37	62	1682	0.54	ppb	#	80
8) Bromomethane	1.65	94	1666	-1.33	ppb		86
9) Chloroethane	1.74	66	252	0.55	ppb	#	65
10) Dichlorofluoromethane	1.93	67	2960	0.60	ppb		91
11) Trichlorofluoromethane	1.98	101	2238	0.53	ppb		93
14) Acrolein	2.38	55	3390	18.85	ppb		85
15) Acetone	2.55	43	992	0.54	ppb	#	75
16) Freon-113	2.52	101	1058	0.44	ppb	#	67
17) 1,1-DCE	2.50	61	1942	0.49	ppb	#	71
19) Acetonitrile	2.86	40	2340	24.42	ppb		90
20) t-Butanol	3.28	59	3010	25.77	ppb	#	86
21) Methyl Acetate	2.96	43	1306	0.55	ppb	#	85
22) Iodomethane	2.63	142	366	3.02	ppb	#	42
23) Acrylonitrile	3.39	52	257	0.98	ppb	#	62
24) Methylene chloride	3.06	49	2517	0.64	ppb	#	89
25) Carbon disulfide	2.71	76	4241	0.56	ppb	#	90
26) Methyl t-butyl ether (MtBE	3.47	73	4544	0.52	ppb	#	89
27) Trans-1,2-DCE	3.43	61	1948	0.50	ppb		92
28) Hexane	3.90	56	841	2.20	ppb	#	100
29) Diisopropyl Ether	4.28	45	4824	0.52	ppb		88
31) 1,1-DCA	4.05	63	3118	0.56	ppb	#	84
32) Vinyl Acetate	4.22	43	3135	0.58	ppb		94
33) Ethyl tert Butyl Ether	4.82	59	4953	0.53	ppb		98
34) MEK (2-Butanone)	5.00	43	1312	0.90	ppb	#	48
35) Cis-1,2-DCE	4.93	61	2599	0.53	ppb		92
36) 2,2-Dichloropropane	4.92	77	2701	0.60	ppb		97
39) Chloroform	5.40	83	3067	0.52	ppb	#	77
40) Bromochloromethane	5.25	49	1510	0.57	ppb	#	63
42) 1,1,1-TCA	5.61	97	2340	0.48	ppb	#	88
43) Cyclohexane	5.69	56	2208	0.51	ppb	#	85
44) 1,1-Dichloropropene	5.84	75	2030	0.51	ppb	#	85
45) 2,2,4-Trimethylpentane	6.27	57	4175	0.55	ppb		98
47) Carbon Tetrachloride	5.83	117	1993	0.47	ppb		99
48) Tert Amyl Methyl Ether	6.31	73	4528	0.49	ppb	#	72
50) 1,2-DCA	6.11	62	2737	0.58	ppb		95
51) Benzene	6.09	78	6800	0.52	ppb		94

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0309T03.D Vial: 3
Acq On : 9 Mar 20 7:51 Operator:
Sample : 0.5ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 10 7:50 2020 Quant Results File: T0309W.RES

Quant Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
52)	TCE	6.91	130	2386	0.56	ppb	#	78
53)	2-Pentanone	7.15	43	56361	24.09	ppb		95
54)	1,2-Dichloropropane	7.16	63	1974	0.56	ppb	#	87
55)	Bromodichloromethane	7.50	83	2344	0.51	ppb	#	67
56)	Methyl Cyclohexane	7.15	83	2616	0.58	ppb	#	79
57)	Dibromomethane	7.28	174	1310	0.44	ppb		92
58)	MIBK (methyl isobutyl ket	8.22	43	1755	0.51	ppb	#	88
59)	1-Bromo-2-chloroethane	7.84	63	1071	0.44	ppb	#	72
61)	Cis-1,3-Dichloropropene	8.02	75	2948	0.54	ppb		91
62)	Toluene	8.40	91	8216	0.54	ppb		92
63)	Trans-1,3-Dichloropropene	8.65	75	2549	0.52	ppb	#	56
64)	1,1,2-TCA	8.85	97	1833	0.55	ppb	#	79
65)	2-Hexanone	9.15	43	1129	1.82	ppb	#	83
68)	1,2-EDB	9.39	107	1611	0.48	ppb	#	92
69)	Tetrachloroethene	9.02	166	2493	0.55	ppb		89
70)	1-Chlorohexane	9.95	91	2224	0.55	ppb	#	76
71)	1,1,1,2-Tetrachloroethane	10.05	131	1889	0.50	ppb	#	77
72)	m&p-Xylene	10.22	91	11254	0.90	ppb		94
73)	o-Xylene	10.65	91	6535	0.49	ppb	#	84
74)	Styrene	10.66	104	4922	0.47	ppb		94
76)	1,3-Dichloropropane	9.03	76	2793	0.50	ppb		94
77)	Dibromochloromethane	9.27	129	1764	0.45	ppb		98
78)	Chlorobenzene	9.95	112	5680	0.54	ppb		93
79)	Ethylbenzene	10.09	91	8584	0.53	ppb		100
80)	Bromoform	10.84	173	680	1.42	ppb		99
82)	Isopropylbenzene	11.06	105	8459	0.55	ppb		94
83)	1,1,2,2-Tetrachloroethane	11.36	83	1633	0.45	ppb	#	88
84)	1,2,3-Trichloropropane	11.40	110	601	0.46	ppb	#	58
85)	t-1,4-Dichloro-2-Butene	11.42	53	407	0.55	ppb		85
86)	Bromobenzene	11.37	77	4166	0.54	ppb		97
87)	n-Propylbenzene	11.51	91	8645	0.51	ppb		99
88)	4-Ethyltoluene	11.64	105	7122	0.48	ppb		94
89)	2-Chlorotoluene	11.59	91	6808	0.55	ppb		94
90)	1,3,5-Trimethylbenzene	11.70	105	7034	0.53	ppb		92
91)	4-Chlorotoluene	11.71	91	6159	0.49	ppb		93
92)	Tert-Butylbenzene	12.06	119	6920	0.53	ppb		89
93)	1,2,4-Trimethylbenzene	12.11	105	7593	0.56	ppb	#	84
94)	Sec-Butylbenzene	12.30	105	7550	0.49	ppb		94
95)	p-Isopropyltoluene	12.47	119	6953	0.51	ppb	#	89
96)	Benzyl Chloride	12.64	91	2322	0.48	ppb	#	93
97)	1,3-DCB	12.40	146	4251	0.50	ppb	#	78
98)	1,4-DCB	12.50	146	4399	0.51	ppb	#	85
99)	n-Butylbenzene	12.91	91	5249	0.49	ppb		98
100)	1,2-DCB	12.90	146	4382	0.52	ppb		92
101)	Hexachloroethane	13.20	201	1115	0.45	ppb	#	87
102)	1,2-Dibromo-3-chloropropan	13.74	157	402	0.43	ppb	#	32
103)	1,2,4-Trichlorobenzene	14.67	180	2285	0.43	ppb		91
104)	Hexachlorobutadiene	14.87	225	1501	0.50	ppb	#	80
105)	Naphthalene	14.93	127	647	0.46	ppb	#	16
106)	1,2,3-Trichlorobenzene	15.20	180	2597	0.50	ppb		96

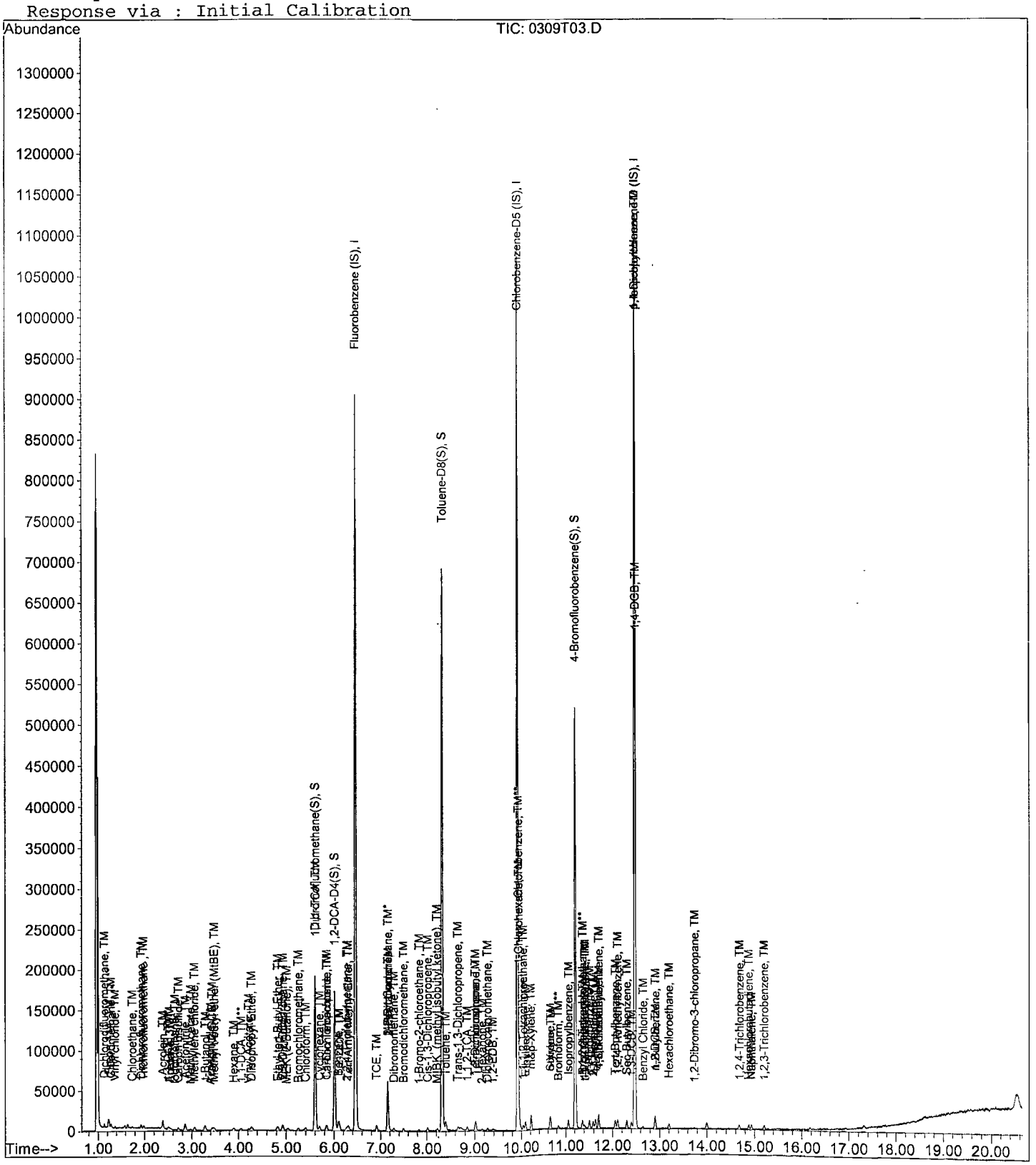
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200309\0309T03.D Vial: 3
Acq On : 9 Mar 20 7:51 Operator:
Sample : 0.5ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 10 7:50 2020 Quant Results File: T0309W.RES

Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0309T04.D Vial: 4
Acq On : 9 Mar 20 8:19 Operator:
Sample : 1ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 10 7:50 2020 Quant Results File: T0309W.RES

Quant Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.46	96	902016	25.00	ppb		0.00
66) Chlorobenzene-D5 (IS)	9.92	117	713607	25.00	ppb		0.00
81) 1,4-Dichlorobenzene-D (IS)	12.47	152	390501	25.00	ppb		0.00
System Monitoring Compounds							
41) Dibromofluoromethane(S)	5.60	111	154738	8.22	ppb		0.00
Spiked Amount 25.000			Recovery = 32.880%				
46) 1,2-DCA-D4(S)	6.01	65	159497	8.27	ppb		0.00
Spiked Amount 25.000			Recovery = 33.080%				
67) Toluene-D8(S)	8.33	98	612058	8.28	ppb		0.00
Spiked Amount 25.000			Recovery = 33.136%				
75) 4-Bromofluorobenzene(S)	11.21	95	232171	8.64	ppb		0.00
Spiked Amount 25.000			Recovery = 34.544%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.14	85	3931	1.17	ppb		99
4) Freon 114	1.24	85	3454	1.25	ppb		86
5) Chloromethane	1.28	50	4200	1.16	ppb		97
6) Vinyl chloride	1.37	62	3592	1.13	ppb		98
8) Bromomethane	1.64	94	3074	-0.38	ppb		84
9) Chloroethane	1.73	66	454	0.98	ppb	#	68
10) Dichlorofluoromethane	1.93	67	5489	1.09	ppb		96
11) Trichlorofluoromethane	1.98	101	4497	1.05	ppb		92
14) Acrolein	2.38	55	9189	50.32	ppb		97
15) Acetone	2.55	43	1228	0.98	ppb		95
16) Freon-113	2.52	101	3197	1.30	ppb	#	84
17) 1,1-DCE	2.49	61	4260	1.07	ppb		91
19) Acetonitrile	2.86	40	4961	51.00	ppb		88
20) t-Butanol	3.28	59	5785	48.80	ppb		93
21) Methyl Acetate	2.96	43	2824	1.18	ppb	#	85
22) Iodomethane	2.64	142	443	3.05	ppb	#	42
23) Acrylonitrile	3.37	52	856	1.56	ppb	#	51
24) Methylene chloride	3.05	49	3908	0.98	ppb		96
25) Carbon disulfide	2.71	76	7820	1.02	ppb		96
26) Methyl t-butyl ether (MtBE	3.47	73	8558	0.96	ppb		96
27) Trans-1,2-DCE	3.42	61	4250	1.06	ppb	#	94
28) Hexane	3.91	56	1490	2.68	ppb	#	100
29) Diisopropyl Ether	4.28	45	9790	1.04	ppb		90
31) 1,1-DCA	4.05	63	5961	1.05	ppb		96
32) Vinyl Acetate	4.21	43	5334	0.97	ppb	#	86
33) Ethyl tert Butyl Ether	4.82	59	9134	0.96	ppb		95
34) MEK (2-Butanone)	5.00	43	1845	1.23	ppb		93
35) Cis-1,2-DCE	4.93	61	4774	0.97	ppb		90
36) 2,2-Dichloropropane	4.92	77	4834	1.06	ppb		99
39) Chloroform	5.40	83	6007	1.01	ppb		91
40) Bromochloromethane	5.25	49	2326	0.86	ppb		94
42) 1,1,1-TCA	5.61	97	5101	1.03	ppb		98
43) Cyclohexane	5.69	56	5155	1.18	ppb	#	74
44) 1,1-Dichloropropene	5.85	75	4327	1.06	ppb	#	94
45) 2,2,4-Trimethylpentane	6.27	57	9046	1.18	ppb		94
47) Carbon Tetrachloride	5.84	117	4673	1.09	ppb		84
48) Tert Amyl Methyl Ether	6.31	73	9188	0.98	ppb		98
50) 1,2-DCA	6.11	62	4426	0.93	ppb	#	83
51) Benzene	6.09	78	13501	1.01	ppb		95

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0309T04.D Vial: 4
Acq On : 9 Mar 20 8:19 Operator:
Sample : 1ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 10 7:50 2020 Quant Results File: T0309W.RES

Quant Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
52)	TCE	6.91	130	4287	1.00	ppb		91
53)	2-Pentanone	7.15	43	114242	48.09	ppb		93
54)	1,2-Dichloropropane	7.16	63	3639	1.01	ppb	#	87
55)	Bromodichloromethane	7.50	83	4818	1.04	ppb	#	78
56)	Methyl Cyclohexane	7.14	83	5082	1.11	ppb		88
57)	Dibromomethane	7.28	174	3272	1.08	ppb	#	88
58)	MIBK (methyl isobutyl ket	8.22	43	3187	0.91	ppb	#	95
59)	1-Bromo-2-chloroethane	7.83	63	2555	1.03	ppb		91
61)	Cis-1,3-Dichloropropene	8.03	75	5246	0.95	ppb		99
62)	Toluene	8.40	91	15781	1.02	ppb		94
63)	Trans-1,3-Dichloropropene	8.65	75	4930	1.00	ppb	#	86
64)	1,1,2-TCA	8.85	97	3113	0.91	ppb	#	83
65)	2-Hexanone	9.15	43	2527	2.34	ppb		97
68)	1,2-EDB	9.38	107	3202	0.95	ppb	#	77
69)	Tetrachloroethene	9.02	166	4595	1.02	ppb		95
70)	1-Chlorohexane	9.95	91	3575	0.89	ppb		89
71)	1,1,1,2-Tetrachloroethane	10.04	131	3602	0.95	ppb		97
72)	m&p-Xylene	10.22	91	24998	2.02	ppb		97
73)	o-Xylene	10.65	91	13153	0.99	ppb		95
74)	Styrene	10.66	104	9516	0.92	ppb		92
76)	1,3-Dichloropropane	9.02	76	5595	1.01	ppb		89
77)	Dibromochloromethane	9.28	129	3659	0.94	ppb		91
78)	Chlorobenzene	9.95	112	11355	1.08	ppb		97
79)	Ethylbenzene	10.09	91	16017	0.99	ppb		98
80)	Bromoform	10.84	173	3142	2.10	ppb		95
82)	Isopropylbenzene	11.06	105	15404	0.99	ppb		98
83)	1,1,2,2-Tetrachloroethane	11.36	83	3803	1.03	ppb	#	89
84)	1,2,3-Trichloropropane	11.40	110	1334	1.01	ppb	#	75
85)	t-1,4-Dichloro-2-Butene	11.42	53	669	0.90	ppb	#	72
86)	Bromobenzene	11.37	77	8166	1.04	ppb		91
87)	n-Propylbenzene	11.51	91	17180	1.00	ppb	#	87
88)	4-Ethyltoluene	11.64	105	15207	1.02	ppb	#	89
89)	2-Chlorotoluene	11.59	91	13176	1.05	ppb		93
90)	1,3,5-Trimethylbenzene	11.71	105	12935	0.97	ppb		95
91)	4-Chlorotoluene	11.71	91	12747	1.01	ppb	#	88
92)	Tert-Butylbenzene	12.06	119	11327	0.87	ppb		99
93)	1,2,4-Trimethylbenzene	12.11	105	13456	0.99	ppb		93
94)	Sec-Butylbenzene	12.30	105	15912	1.01	ppb		95
95)	p-Isopropyltoluene	12.46	119	13957	1.01	ppb		99
96)	Benzyl Chloride	12.64	91	5113	1.05	ppb	#	96
97)	1,3-DCB	12.40	146	8947	1.05	ppb		99
98)	1,4-DCB	12.50	146	8920	1.02	ppb		98
99)	n-Butylbenzene	12.91	91	11207	1.03	ppb		92
100)	1,2-DCB	12.90	146	8074	0.96	ppb	#	88
101)	Hexachloroethane	13.20	201	2769	1.10	ppb		92
102)	1,2-Dibromo-3-chloropropan	13.74	157	1069	1.12	ppb	#	61
103)	1,2,4-Trichlorobenzene	14.67	180	5101	0.94	ppb		89
104)	Hexachlorobutadiene	14.87	225	3194	1.06	ppb		99
105)	Naphthalene	14.93	127	1316	0.93	ppb	#	1
106)	1,2,3-Trichlorobenzene	15.20	180	5291	1.00	ppb		85

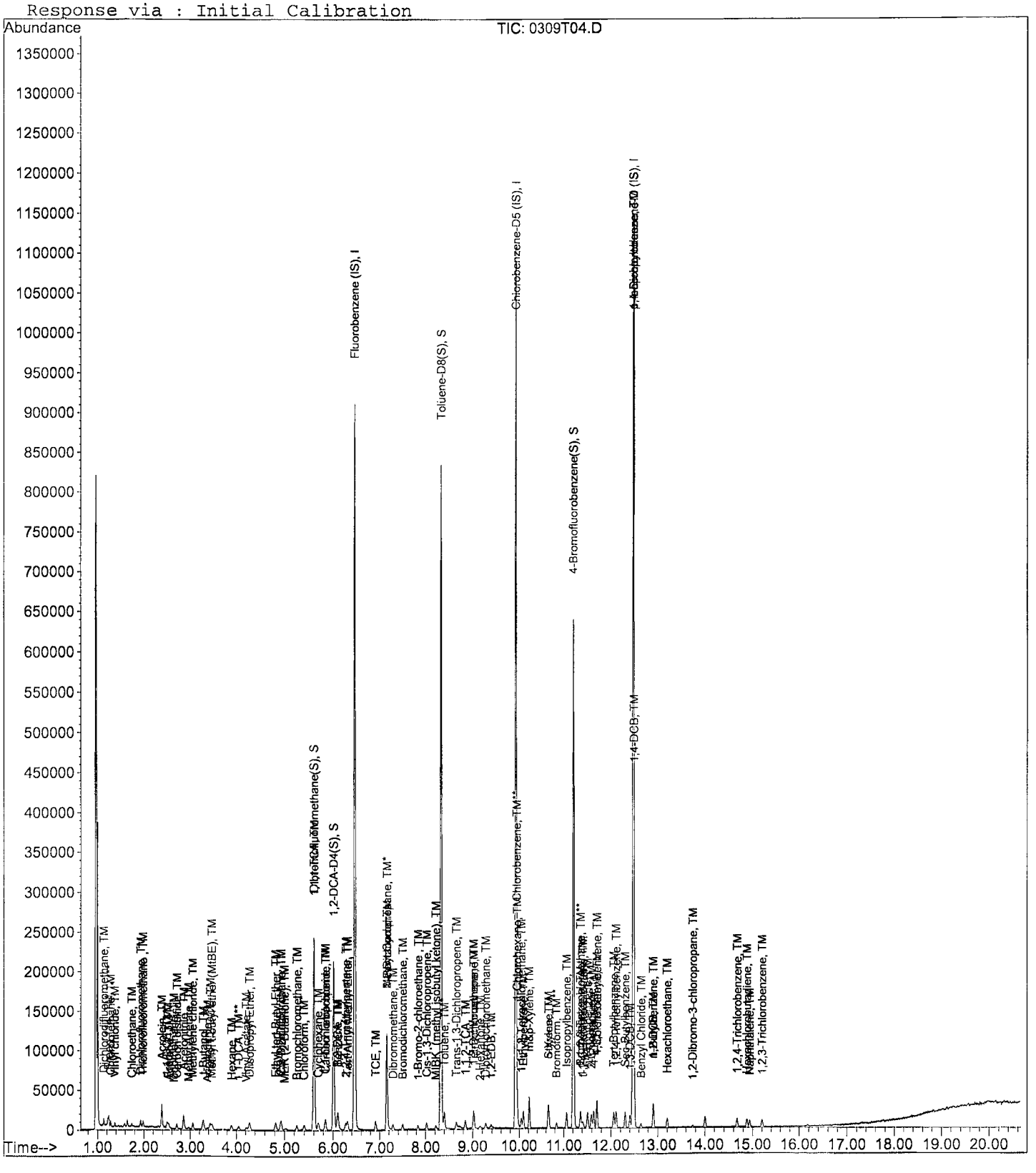
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200309\0309T04.D Vial: 4
Acq On : 9 Mar 20 8:19 Operator:
Sample : 1ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 10 7:50 2020 Quant Results File: T0309W.RES

Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0309T05.D Vial: 5
Acq On : 9 Mar 20 8:47 Operator:
Sample : 2ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 10 7:50 2020 Quant Results File: T0309W.RES

Quant Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.46	96	916868	25.00	ppb		0.00
66) Chlorobenzene-D5 (IS)	9.92	117	746303	25.00	ppb		0.00
81) 1,4-Dichlorobenzene-D (IS)	12.48	152	405222	25.00	ppb		0.00
System Monitoring Compounds							
41) Dibromofluoromethane(S)	5.60	111	160283	8.54	ppb		0.00
Spiked Amount 25.000			Recovery = 34.164%				
46) 1,2-DCA-D4(S)	6.01	65	167421	8.83	ppb		0.00
Spiked Amount 25.000			Recovery = 35.320%				
67) Toluene-D8(S)	8.33	98	637240	8.20	ppb		0.00
Spiked Amount 25.000			Recovery = 32.800%				
75) 4-Bromofluorobenzene(S)	11.21	95	240779	8.50	ppb		0.00
Spiked Amount 25.000			Recovery = 33.984%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.14	85	6976	2.04	ppb		98
4) Freon 114	1.24	85	5461	1.95	ppb		89
5) Chloromethane	1.28	50	7585	2.06	ppb		93
6) Vinyl chloride	1.37	62	6698	2.08	ppb		91
8) Bromomethane	1.64	94	5286	1.07	ppb		96
9) Chloroethane	1.74	66	1068	2.26	ppb		83
10) Dichlorofluoromethane	1.93	67	10336	2.02	ppb		97
11) Trichlorofluoromethane	1.98	101	8996	2.07	ppb		97
14) Acrolein	2.38	55	14858	80.05	ppb		98
15) Acetone	2.55	43	1662	1.77	ppb	#	86
16) Freon-113	2.53	101	4916	1.96	ppb		89
17) 1,1-DCE	2.50	61	8180	2.02	ppb		94
19) Acetonitrile	2.85	40	7045	71.25	ppb		99
20) t-Butanol	3.28	59	8575	71.16	ppb		94
21) Methyl Acetate	2.96	43	4519	1.86	ppb		96
22) Iodomethane	2.64	142	1067	3.35	ppb	#	76
23) Acrylonitrile	3.37	52	1860	2.51	ppb		88
24) Methylene chloride	3.06	49	8154	2.02	ppb		95
25) Carbon disulfide	2.70	76	15891	2.04	ppb	#	93
26) Methyl t-butyl ether (MtBE	3.47	73	17327	1.92	ppb		100
27) Trans-1,2-DCE	3.43	61	8161	2.01	ppb		87
28) Hexane	3.90	56	3282	4.01	ppb	#	100
29) Diisopropyl Ether	4.28	45	18989	1.99	ppb		96
31) 1,1-DCA	4.05	63	11186	1.95	ppb	#	89
32) Vinyl Acetate	4.22	43	10331	1.85	ppb		97
33) Ethyl tert Butyl Ether	4.82	59	18908	1.96	ppb		97
34) MEK (2-Butanone)	4.99	43	3650	2.36	ppb	#	89
35) Cis-1,2-DCE	4.93	61	10389	2.07	ppb		93
36) 2,2-Dichloropropane	4.93	77	8700	1.88	ppb		94
39) Chloroform	5.40	83	12003	1.99	ppb		95
40) Bromochloromethane	5.25	49	5772	2.09	ppb		89
42) 1,1,1-TCA	5.61	97	10086	2.00	ppb		97
43) Cyclohexane	5.69	56	8731	1.97	ppb		98
44) 1,1-Dichloropropene	5.84	75	8372	2.02	ppb	#	84
45) 2,2,4-Trimethylpentane	6.27	57	15368	1.97	ppb		92
47) Carbon Tetrachloride	5.84	117	8410	1.92	ppb		90
48) Tert Amyl Methyl Ether	6.31	73	18751	1.97	ppb		96
50) 1,2-DCA	6.11	62	10242	2.12	ppb		98
51) Benzene	6.09	78	27359	2.02	ppb		95

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0309T05.D Vial: 5
Acq On : 9 Mar 20 8:47 Operator:
Sample : 2ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 10 7:50 2020 Quant Results File: T0309W.RES

Quant Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
52)	TCE	6.91	130	9520	2.18	ppb		87
53)	2-Pentanone	7.15	43	173384	71.81	ppb		97
54)	1,2-Dichloropropane	7.16	63	7216	1.97	ppb	#	84
55)	Bromodichloromethane	7.50	83	8458	1.79	ppb		95
56)	Methyl Cyclohexane	7.15	83	9064	1.95	ppb		97
57)	Dibromomethane	7.29	174	5772	1.87	ppb		91
58)	MIBK (methyl isobutyl ket	8.22	43	6448	1.81	ppb		98
59)	1-Bromo-2-chloroethane	7.83	63	4530	1.80	ppb		88
61)	Cis-1,3-Dichloropropene	8.02	75	10357	1.84	ppb		99
62)	Toluene	8.40	91	31331	1.98	ppb		95
63)	Trans-1,3-Dichloropropene	8.65	75	9271	1.85	ppb	#	91
64)	1,1,2-TCA	8.84	97	6731	1.94	ppb		89
65)	2-Hexanone	9.15	43	4431	3.04	ppb	#	89
68)	1,2-EDB	9.39	107	6269	1.79	ppb		87
69)	Tetrachloroethene	9.02	166	9432	2.00	ppb	#	84
70)	1-Chlorohexane	9.96	91	7787	1.86	ppb		89
71)	1,1,1,2-Tetrachloroethane	10.04	131	7237	1.83	ppb		91
72)	m&p-Xylene	10.22	91	50725	3.92	ppb		96
73)	o-Xylene	10.65	91	26302	1.89	ppb		99
74)	Styrene	10.66	104	19200	1.77	ppb		96
76)	1,3-Dichloropropane	9.03	76	11110	1.92	ppb		95
77)	Dibromochloromethane	9.27	129	7763	1.91	ppb		100
78)	Chlorobenzene	9.95	112	21356	1.95	ppb		96
79)	Ethylbenzene	10.09	91	32278	1.90	ppb		98
80)	Bromoform	10.83	173	5777	2.76	ppb		95
82)	Isopropylbenzene	11.06	105	31946	1.98	ppb		100
83)	1,1,2,2-Tetrachloroethane	11.36	83	8035	2.11	ppb	#	94
84)	1,2,3-Trichloropropane	11.40	110	2543	1.86	ppb	#	80
85)	t-1,4-Dichloro-2-Butene	11.42	53	1453	1.89	ppb		96
86)	Bromobenzene	11.37	77	15757	1.94	ppb		97
87)	n-Propylbenzene	11.51	91	35488	1.99	ppb		99
88)	4-Ethyltoluene	11.64	105	29432	1.90	ppb		99
89)	2-Chlorotoluene	11.59	91	24772	1.91	ppb		90
90)	1,3,5-Trimethylbenzene	11.71	105	26096	1.89	ppb		96
91)	4-Chlorotoluene	11.71	91	25741	1.97	ppb		98
92)	Tert-Butylbenzene	12.07	119	27153	2.00	ppb		96
93)	1,2,4-Trimethylbenzene	12.11	105	25519	1.81	ppb		98
94)	Sec-Butylbenzene	12.30	105	31784	1.95	ppb		96
95)	p-Isopropyltoluene	12.46	119	27405	1.91	ppb		96
96)	Benzyl Chloride	12.64	91	9959	1.97	ppb	#	89
97)	1,3-DCB	12.40	146	16959	1.92	ppb		98
98)	1,4-DCB	12.50	146	18520	2.05	ppb		94
99)	n-Butylbenzene	12.91	91	21823	1.94	ppb		98
100)	1,2-DCB	12.90	146	17147	1.96	ppb		96
101)	Hexachloroethane	13.21	201	4895	1.87	ppb		96
102)	1,2-Dibromo-3-chloropropan	13.74	157	1746	1.77	ppb		92
103)	1,2,4-Trichlorobenzene	14.67	180	10786	1.92	ppb		90
104)	Hexachlorobutadiene	14.88	225	6389	2.04	ppb		94
105)	Naphthalene	14.94	127	2733	1.86	ppb		74
106)	1,2,3-Trichlorobenzene	15.21	180	9505	1.74	ppb		85

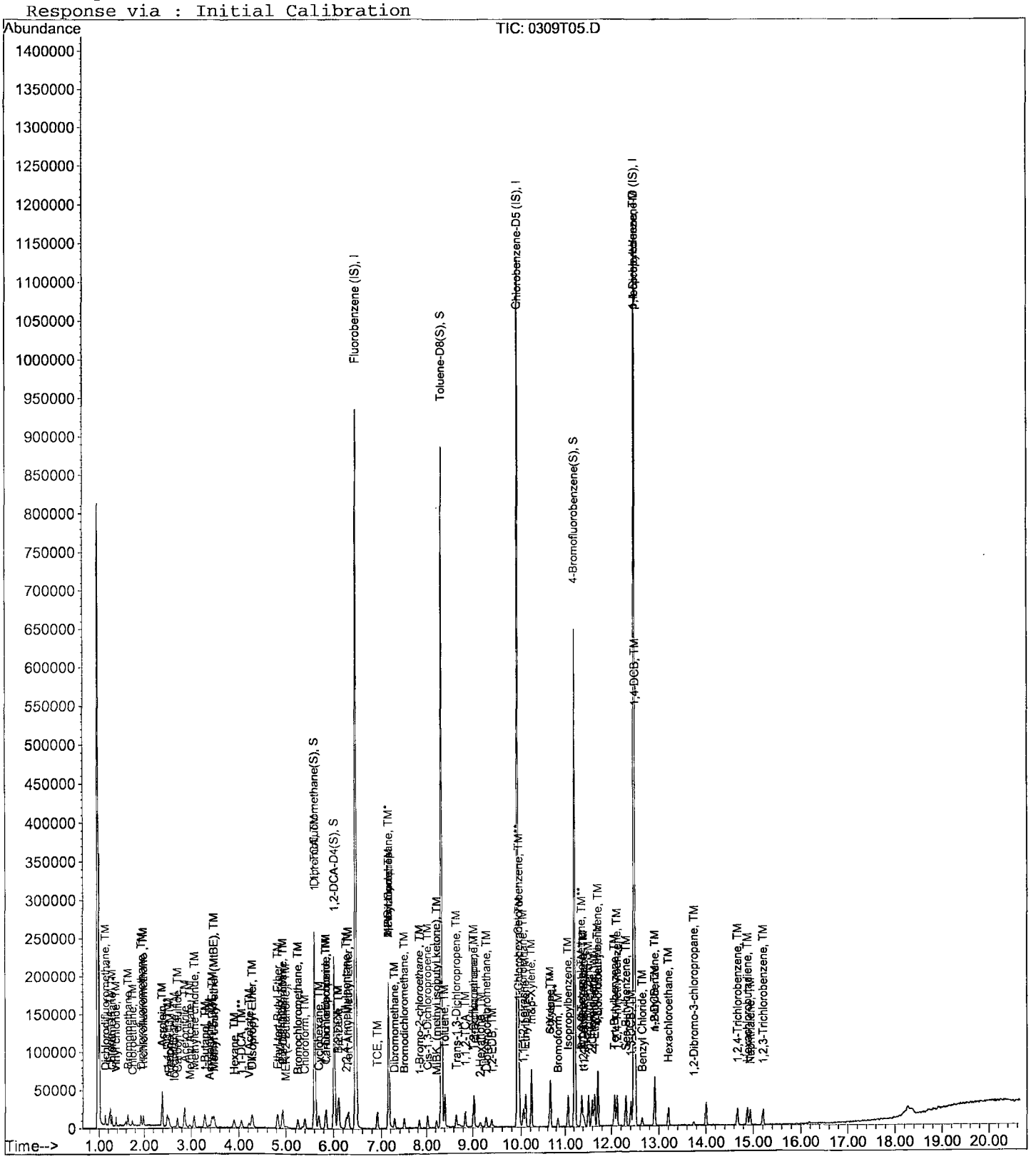
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200309\0309T05.D Vial: 5
Acq On : 9 Mar 20 8:47 Operator:
Sample : 2ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 10 7:50 2020 Quant Results File: T0309W.RES

Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0309T06.D Vial: 6
Acq On : 9 Mar 20 9:16 Operator:
Sample : 5ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 10 7:50 2020 Quant Results File: T0309W.RES

Quant Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.46	96	909930	25.00	ppb		0.00
66) Chlorobenzene-D5 (IS)	9.92	117	738996	25.00	ppb		0.00
81) 1,4-Dichlorobenzene-D (IS)	12.48	152	407916	25.00	ppb		0.00
System Monitoring Compounds							
41) Dibromofluoromethane(S)	5.60	111	323897	26.33	ppb		0.00
Spiked Amount 25.000			Recovery =	105.328%			
46) 1,2-DCA-D4(S)	6.01	65	323327	25.56	ppb		0.00
Spiked Amount 25.000			Recovery =	102.224%			
67) Toluene-D8(S)	8.33	98	1224034	25.70	ppb		0.00
Spiked Amount 25.000			Recovery =	102.784%			
75) 4-Bromofluorobenzene(S)	11.21	95	474105	24.95	ppb		0.00
Spiked Amount 25.000			Recovery =	99.800%			
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.14	85	14840	4.37	ppb		97
4) Freon 114	1.24	85	10826	3.89	ppb		100
5) Chloromethane	1.28	50	17416	4.77	ppb		99
6) Vinyl chloride	1.37	62	14132	4.42	ppb		100
8) Bromomethane	1.64	94	9513	3.97	ppb		95
9) Chloroethane	1.74	66	2072	4.43	ppb		87
10) Dichlorofluoromethane	1.93	67	20736	4.08	ppb		100
11) Trichlorofluoromethane	1.98	101	19288	4.47	ppb		91
14) Acrolein	2.38	55	16712	90.72	ppb		92
15) Acetone	2.56	43	2867	4.13	ppb		97
16) Freon-113	2.52	101	10328	4.15	ppb		86
17) 1,1-DCE	2.49	61	17368	4.32	ppb		90
19) Acetonitrile	2.86	40	9740	99.26	ppb		94
20) t-Butanol	3.29	59	10789	90.21	ppb		96
21) Methyl Acetate	2.97	43	10017	4.15	ppb		95
22) Iodomethane	2.65	142	2264	3.94	ppb		94
23) Acrylonitrile	3.37	52	3747	4.35	ppb		86
24) Methylene chloride	3.06	49	16547	4.12	ppb		99
25) Carbon disulfide	2.70	76	32317	4.17	ppb		97
26) Methyl t-butyl ether (MtBE	3.47	73	39381	4.40	ppb		96
27) Trans-1,2-DCE	3.43	61	17867	4.44	ppb		92
28) Hexane	3.90	56	5329	5.58	ppb	#	92
29) Diisopropyl Ether	4.28	45	40701	4.29	ppb		95
31) 1,1-DCA	4.06	63	24056	4.22	ppb		96
32) Vinyl Acetate	4.21	43	23059	4.15	ppb	#	90
33) Ethyl tert Butyl Ether	4.82	59	40967	4.27	ppb		98
34) MEK (2-Butanone)	4.99	43	7718	4.97	ppb	#	83
35) Cis-1,2-DCE	4.93	61	21688	4.35	ppb		93
36) 2,2-Dichloropropane	4.93	77	19410	4.24	ppb		95
39) Chloroform	5.40	83	25676	4.28	ppb		97
40) Bromochloromethane	5.25	49	12349	4.51	ppb		96
42) 1,1,1-TCA	5.62	97	22399	4.48	ppb		98
43) Cyclohexane	5.69	56	17811	4.05	ppb		98
44) 1,1-Dichloropropene	5.85	75	17250	4.20	ppb		95
45) 2,2,4-Trimethylpentane	6.27	57	29663	3.83	ppb		92
47) Carbon Tetrachloride	5.84	117	19128	4.41	ppb		98
48) Tert Amyl Methyl Ether	6.31	73	39509	4.18	ppb		98
50) 1,2-DCA	6.11	62	20464	4.26	ppb		97
51) Benzene	6.09	78	56574	4.21	ppb		97

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0309T06.D Vial: 6
Acq On : 9 Mar 20 9:16 Operator:
Sample : 5ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 10 7:50 2020 Quant Results File: T0309W.RES

Quant Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

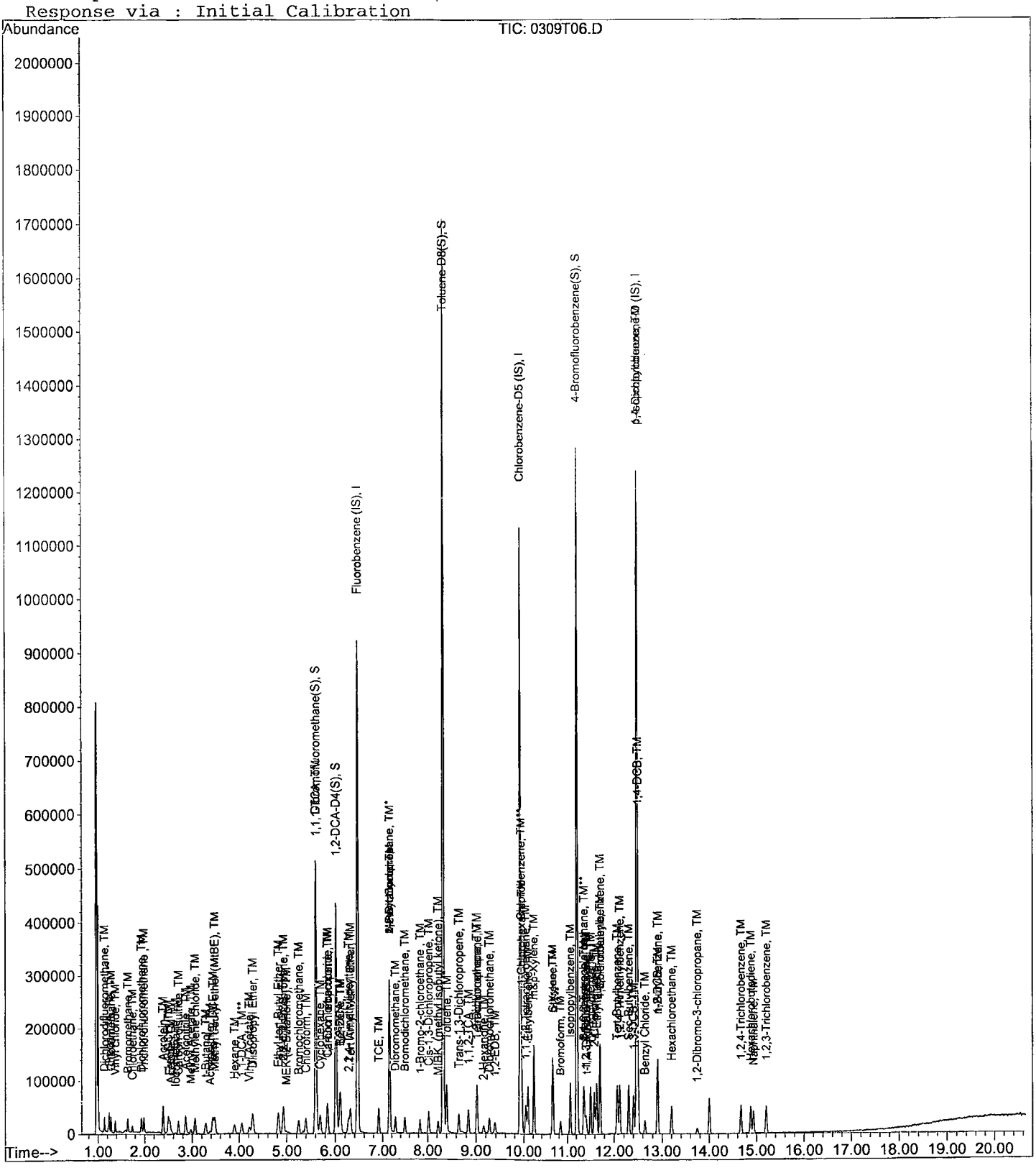
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
52)	TCE	6.91	130	17826	4.12	ppb		95
53)	2-Pentanone	7.15	43	235116	98.12	ppb		99
54)	1,2-Dichloropropane	7.16	63	15796	4.35	ppb	#	96
55)	Bromodichloromethane	7.50	83	20420	4.35	ppb		98
56)	Methyl Cyclohexane	7.15	83	18533	4.01	ppb		87
57)	Dibromomethane	7.29	174	13594	4.44	ppb		91
58)	MIBK (methyl isobutyl ket	8.22	43	15950	4.52	ppb	#	95
59)	1-Bromo-2-chloroethane	7.83	63	11658	4.66	ppb		93
61)	Cis-1,3-Dichloropropene	8.02	75	24183	4.33	ppb		97
62)	Toluene	8.40	91	67966	4.34	ppb		100
63)	Trans-1,3-Dichloropropene	8.65	75	20690	4.15	ppb		96
64)	1,1,2-TCA	8.85	97	15839	4.60	ppb		92
65)	2-Hexanone	9.15	43	10126	5.18	ppb		93
68)	1,2-EDB	9.38	107	15439	4.44	ppb	#	96
69)	Tetrachloroethene	9.02	166	21655	4.63	ppb		98
70)	1-Chlorohexane	9.95	91	18425	4.45	ppb		94
71)	1,1,1,2-Tetrachloroethane	10.04	131	16951	4.33	ppb		91
72)	m&p-Xylene	10.22	91	112300	8.76	ppb		95
73)	o-Xylene	10.65	91	60115	4.37	ppb		98
74)	Styrene	10.66	104	44866	4.19	ppb		98
76)	1,3-Dichloropropane	9.03	76	24554	4.30	ppb		96
77)	Dibromochloromethane	9.27	129	17613	4.38	ppb		91
78)	Chlorobenzene	9.95	112	47204	4.35	ppb		97
79)	Ethylbenzene	10.09	91	71738	4.26	ppb		96
80)	Bromoform	10.84	173	13565	4.84	ppb		96
82)	Isopropylbenzene	11.06	105	71535	4.39	ppb		94
83)	1,1,2,2-Tetrachloroethane	11.36	83	17958	4.67	ppb	#	96
84)	1,2,3-Trichloropropane	11.41	110	6297	4.57	ppb		97
85)	t-1,4-Dichloro-2-Butene	11.43	53	3556	4.59	ppb		100
86)	Bromobenzene	11.36	77	36941	4.51	ppb		94
87)	n-Propylbenzene	11.51	91	79082	4.41	ppb		98
88)	4-Ethyltoluene	11.64	105	69758	4.48	ppb		95
89)	2-Chlorotoluene	11.59	91	57254	4.38	ppb		99
90)	1,3,5-Trimethylbenzene	11.71	105	61592	4.44	ppb		98
91)	4-Chlorotoluene	11.71	91	58878	4.47	ppb		93
92)	Tert-Butylbenzene	12.06	119	60689	4.45	ppb		93
93)	1,2,4-Trimethylbenzene	12.11	105	61339	4.31	ppb		95
94)	Sec-Butylbenzene	12.30	105	73570	4.49	ppb		98
95)	p-Isopropyltoluene	12.47	119	62274	4.31	ppb		96
96)	Benzyl Chloride	12.64	91	21708	4.28	ppb	#	97
97)	1,3-DCB	12.40	146	39436	4.44	ppb		95
98)	1,4-DCB	12.50	146	40566	4.46	ppb		99
99)	n-Butylbenzene	12.91	91	48558	4.29	ppb		99
100)	1,2-DCB	12.91	146	38371	4.35	ppb		98
101)	Hexachloroethane	13.20	201	11614	4.41	ppb		95
102)	1,2-Dibromo-3-chloropropan	13.74	157	4427	4.46	ppb		84
103)	1,2,4-Trichlorobenzene	14.67	180	23741	4.20	ppb		90
104)	Hexachlorobutadiene	14.88	225	13441	4.26	ppb		96
105)	Naphthalene	14.94	127	5935	4.01	ppb		69
106)	1,2,3-Trichlorobenzene	15.20	180	21880	3.98	ppb		91

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

Data File : M:\THOR\DATA\T200309\0309T06.D Vial: 6
Acq On : 9 Mar 20 9:16 Operator:
Sample : 5ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 10 7:50 2020 Quant Results File: T0309W.RES

Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0309T07.D Vial: 7
Acq On : 9 Mar 20 9:44 Operator:
Sample : 10ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 10 7:50 2020 Quant Results File: T0309W.RES

Quant Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.46	96	900488	25.00	ppb		0.00
66) Chlorobenzene-D5 (IS)	9.92	117	732303	25.00	ppb		0.00
81) 1,4-Dichlorobenzene-D (IS)	12.48	152	418026	25.00	ppb		0.00
System Monitoring Compounds							
41) Dibromofluoromethane(S)	5.60	111	301752	24.28	ppb		0.00
Spiked Amount 25.000			Recovery = 97.136%				
46) 1,2-DCA-D4(S)	6.01	65	309769	24.46	ppb		0.00
Spiked Amount 25.000			Recovery = 97.836%				
67) Toluene-D8(S)	8.33	98	1171610	24.47	ppb		0.00
Spiked Amount 25.000			Recovery = 97.864%				
75) 4-Bromofluorobenzene(S)	11.21	95	464204	24.56	ppb		0.00
Spiked Amount 25.000			Recovery = 98.220%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.14	85	30608	9.12	ppb		100
4) Freon 114	1.24	85	26247	9.54	ppb		100
5) Chloromethane	1.28	50	35816	9.90	ppb		100
6) Vinyl chloride	1.37	62	29762	9.41	ppb		100
8) Bromomethane	1.64	94	20232	11.39	ppb		100
9) Chloroethane	1.74	66	5022	10.84	ppb		100
10) Dichlorofluoromethane	1.93	67	49146	9.77	ppb		100
11) Trichlorofluoromethane	1.98	101	42429	9.94	ppb		100
14) Acrolein	2.38	55	26112	143.24	ppb		100
15) Acetone	2.55	43	5597	9.54	ppb		100
16) Freon-113	2.52	101	24171	9.81	ppb		100
17) 1,1-DCE	2.49	61	41017	10.30	ppb		100
19) Acetonitrile	2.86	40	11680	120.28	ppb		100
20) t-Butanol	3.29	59	13054	110.30	ppb		100
21) Methyl Acetate	2.96	43	22973	9.62	ppb		100
22) Iodomethane	2.64	142	7214	6.31	ppb		100
23) Acrylonitrile	3.38	52	9611	10.13	ppb		100
24) Methylene chloride	3.05	49	38356	9.65	ppb		100
25) Carbon disulfide	2.70	76	74911	9.77	ppb		100
26) Methyl t-butyl ether (MtBE	3.48	73	89549	10.10	ppb		100
27) Trans-1,2-DCE	3.43	61	39766	9.98	ppb		100
28) Hexane	3.90	56	10616	9.67	ppb	#	100
29) Diisopropyl Ether	4.28	45	91184	9.71	ppb		100
31) 1,1-DCA	4.05	63	55905	9.90	ppb		100
32) Vinyl Acetate	4.21	43	54310	9.88	ppb		100
33) Ethyl tert Butyl Ether	4.82	59	95121	10.03	ppb		100
34) MEK (2-Butanone)	4.99	43	15585	10.09	ppb		100
35) Cis-1,2-DCE	4.93	61	48798	9.90	ppb		100
36) 2,2-Dichloropropane	4.93	77	45056	9.93	ppb		100
39) Chloroform	5.40	83	58901	9.93	ppb		100
40) Bromochloromethane	5.25	49	27420	10.13	ppb		100
42) 1,1,1-TCA	5.61	97	49648	10.04	ppb		100
43) Cyclohexane	5.69	56	41185	9.46	ppb		100
44) 1,1-Dichloropropene	5.84	75	40300	9.92	ppb		100
45) 2,2,4-Trimethylpentane	6.27	57	71984	9.40	ppb		100
47) Carbon Tetrachloride	5.84	117	42111	9.80	ppb		100
48) Tert Amyl Methyl Ether	6.31	73	93912	10.04	ppb		100
50) 1,2-DCA	6.11	62	47736	10.05	ppb		100
51) Benzene	6.09	78	134333	10.10	ppb		100

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0309T07.D Vial: 7
Acq On : 9 Mar 20 9:44 Operator:
Sample : 10ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 10 7:50 2020 Quant Results File: T0309W.RES

Quant Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
52)	TCE	6.91	130	40742	9.51	ppb	100
53)	2-Pentanone	7.15	43	296900	125.20	ppb	100
54)	1,2-Dichloropropane	7.16	63	35754	9.94	ppb	100
55)	Bromodichloromethane	7.49	83	46831	10.09	ppb	100
56)	Methyl Cyclohexane	7.15	83	43320	9.47	ppb	100
57)	Dibromomethane	7.29	174	31503	10.40	ppb	100
58)	MIBK (methyl isobutyl ket	8.22	43	33141	9.50	ppb	100
59)	1-Bromo-2-chloroethane	7.83	63	25624	10.34	ppb	100
61)	Cis-1,3-Dichloropropene	8.02	75	54953	9.95	ppb	100
62)	Toluene	8.40	91	155730	10.04	ppb	100
63)	Trans-1,3-Dichloropropene	8.65	75	49570	10.05	ppb	100
64)	1,1,2-TCA	8.85	97	33070	9.71	ppb	100
65)	2-Hexanone	9.15	43	21365	9.48	ppb	100
68)	1,2-EDB	9.38	107	35605	10.34	ppb	100
69)	Tetrachloroethene	9.02	166	47242	10.20	ppb	100
70)	1-Chlorohexane	9.95	91	41332	10.08	ppb	100
71)	1,1,1,2-Tetrachloroethane	10.04	131	39865	10.28	ppb	100
72)	m&p-Xylene	10.22	91	262774	20.69	ppb	100
73)	o-Xylene	10.65	91	138942	10.20	ppb	100
74)	Styrene	10.66	104	112242	10.57	ppb	100
76)	1,3-Dichloropropane	9.03	76	59249	10.46	ppb	100
77)	Dibromochloromethane	9.27	129	40433	10.16	ppb	100
78)	Chlorobenzene	9.95	112	107081	9.95	ppb	100
79)	Ethylbenzene	10.09	91	170416	10.21	ppb	100
80)	Bromoform	10.84	173	32157	9.85	ppb	100
82)	Isopropylbenzene	11.06	105	170203	10.20	ppb	100
83)	1,1,2,2-Tetrachloroethane	11.36	83	39438	10.02	ppb	100
84)	1,2,3-Trichloropropane	11.40	110	15138	10.72	ppb	100
85)	t-1,4-Dichloro-2-Butene	11.43	53	7825	9.85	ppb	100
86)	Bromobenzene	11.37	77	85674	10.21	ppb	100
87)	n-Propylbenzene	11.51	91	187370	10.19	ppb	100
88)	4-Ethyltoluene	11.64	105	163387	10.24	ppb	100
89)	2-Chlorotoluene	11.59	91	134008	10.01	ppb	100
90)	1,3,5-Trimethylbenzene	11.71	105	145744	10.25	ppb	100
91)	4-Chlorotoluene	11.71	91	140777	10.43	ppb	100
92)	Tert-Butylbenzene	12.06	119	147271	10.53	ppb	100
93)	1,2,4-Trimethylbenzene	12.11	105	149080	10.23	ppb	100
94)	Sec-Butylbenzene	12.30	105	174380	10.39	ppb	100
95)	p-Isopropyltoluene	12.46	119	150587	10.16	ppb	100
96)	Benzyl Chloride	12.64	91	47897	9.21	ppb	100
97)	1,3-DCB	12.40	146	93758	10.31	ppb	100
98)	1,4-DCB	12.50	146	93502	10.03	ppb	100
99)	n-Butylbenzene	12.91	91	117398	10.13	ppb	100
100)	1,2-DCB	12.90	146	94713	10.49	ppb	100
101)	Hexachloroethane	13.20	201	26785	9.93	ppb	100
102)	1,2-Dibromo-3-chloropropan	13.74	157	9765	9.60	ppb	100
103)	1,2,4-Trichlorobenzene	14.67	180	59288	10.23	ppb	100
104)	Hexachlorobutadiene	14.88	225	32311	10.00	ppb	100
105)	Naphthalene	14.94	127	14548	9.58	ppb	100
106)	1,2,3-Trichlorobenzene	15.20	180	56841	10.08	ppb	100

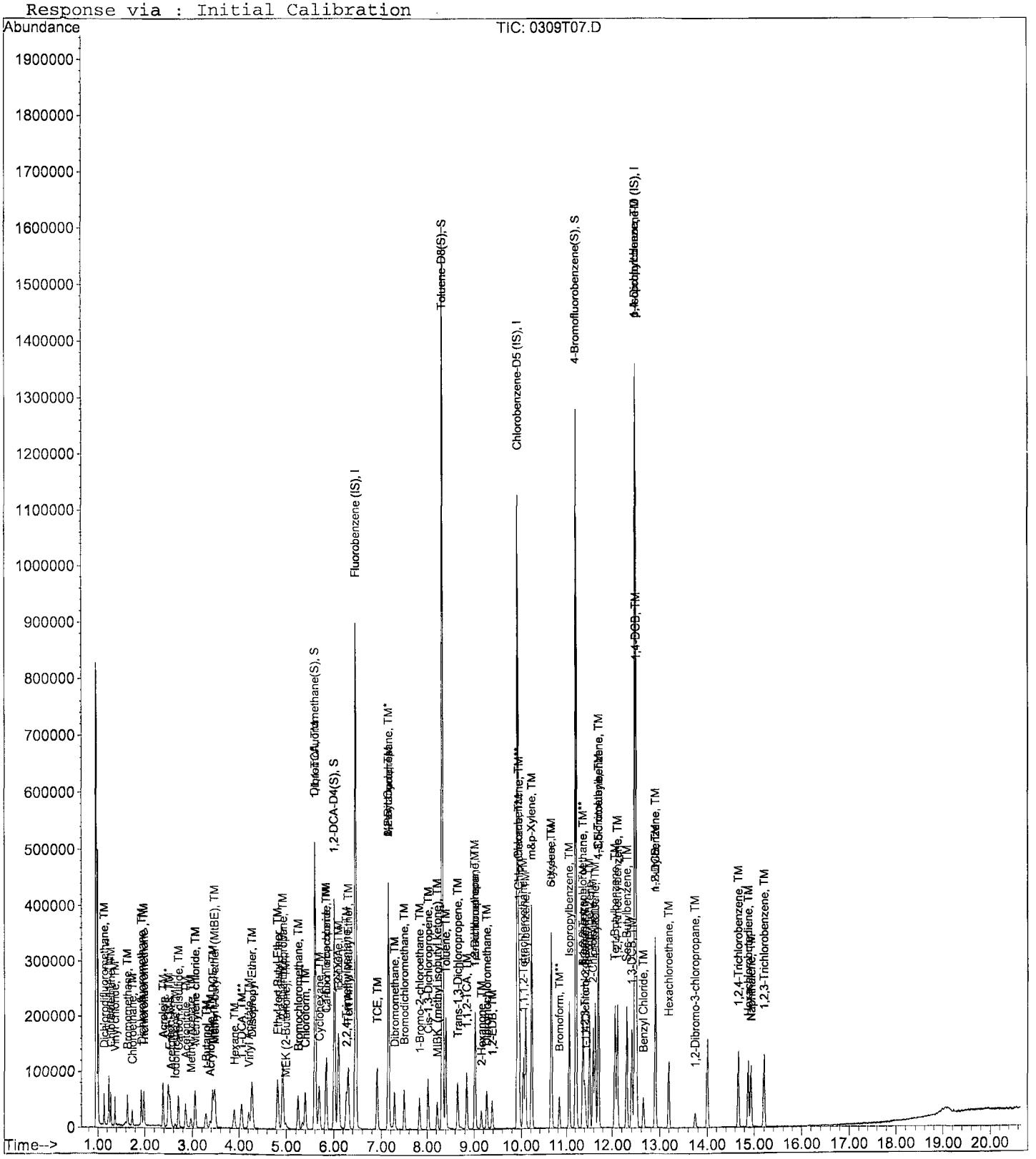
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200309\0309T07.D Vial: 7
Acq On : 9 Mar 20 9:44 Operator:
Sample : 10ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 10 7:50 2020 Quant Results File: T0309W.RES

Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0309T08.D Vial: 8
Acq On : 9 Mar 20 10:12 Operator:
Sample : 20ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 10 7:50 2020 Quant Results File: T0309W.RES

Quant Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.46	96	905871	25.00	ppb		0.00
66) Chlorobenzene-D5 (IS)	9.92	117	744228	25.00	ppb		0.00
81) 1,4-Dichlorobenzene-D (IS)	12.47	152	435985	25.00	ppb		0.00
System Monitoring Compounds							
41) Dibromofluoromethane(S)	5.60	111	544116	50.37	ppb		0.00
Spiked Amount 25.000			Recovery = 201.460%				
46) 1,2-DCA-D4(S)	6.01	65	552096	50.16	ppb		0.00
Spiked Amount 25.000			Recovery = 200.656%				
67) Toluene-D8(S)	8.33	98	2102328	51.17	ppb		0.00
Spiked Amount 25.000			Recovery = 204.692%				
75) 4-Bromofluorobenzene(S)	11.21	95	841049	50.16	ppb		0.00
Spiked Amount 25.000			Recovery = 200.620%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.13	85	66560	19.71	ppb		98
4) Freon 114	1.24	85	57162	20.64	ppb		98
5) Chloromethane	1.28	50	67438	18.54	ppb		100
6) Vinyl chloride	1.37	62	62744	19.71	ppb		96
8) Bromomethane	1.63	94	39824	24.66	ppb		97
9) Chloroethane	1.74	66	8563	18.38	ppb		81
10) Dichlorofluoromethane	1.93	67	97567	19.29	ppb		97
11) Trichlorofluoromethane	1.98	101	84844	19.75	ppb		99
14) Acrolein	2.38	55	30792	167.90	ppb		98
15) Acetone	2.56	43	11471	20.91	ppb		93
16) Freon-113	2.52	101	51258	20.68	ppb		98
17) 1,1-DCE	2.49	61	82151	20.51	ppb		97
19) Acetonitrile	2.85	40	16028	164.07	ppb		85
20) t-Butanol	3.29	59	18360	154.21	ppb		99
21) Methyl Acetate	2.96	43	44873	18.67	ppb		95
22) Iodomethane	2.64	142	31163	16.34	ppb		97
23) Acrylonitrile	3.37	52	19022	19.23	ppb		89
24) Methylene chloride	3.05	49	78547	19.65	ppb		99
25) Carbon disulfide	2.70	76	153840	19.95	ppb		95
26) Methyl t-butyl ether (MtBE	3.48	73	183747	20.60	ppb		99
27) Trans-1,2-DCE	3.43	61	81102	20.23	ppb		96
28) Hexane	3.90	56	23599	19.49	ppb	#	96
29) Diisopropyl Ether	4.28	45	190894	20.21	ppb		96
31) 1,1-DCA	4.05	63	111158	19.57	ppb		97
32) Vinyl Acetate	4.21	43	107665	19.47	ppb		95
33) Ethyl tert Butyl Ether	4.82	59	197241	20.67	ppb		99
34) MEK (2-Butanone)	4.99	43	29670	19.05	ppb		98
35) Cis-1,2-DCE	4.93	61	99927	20.15	ppb		99
36) 2,2-Dichloropropane	4.92	77	89547	19.63	ppb		95
39) Chloroform	5.40	83	121023	20.29	ppb		99
40) Bromochloromethane	5.25	49	56261	20.66	ppb		97
42) 1,1,1-TCA	5.61	97	101582	20.42	ppb		98
43) Cyclohexane	5.69	56	90154	20.59	ppb		94
44) 1,1-Dichloropropene	5.84	75	83499	20.44	ppb		93
45) 2,2,4-Trimethylpentane	6.27	57	154018	20.00	ppb		99
47) Carbon Tetrachloride	5.84	117	90371	20.91	ppb		97
48) Tert Amyl Methyl Ether	6.31	73	197830	21.03	ppb		97
50) 1,2-DCA	6.11	62	93429	19.55	ppb		97
51) Benzene	6.09	78	275462	20.59	ppb		97

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0309T08.D Vial: 8
Acq On : 9 Mar 20 10:12 Operator:
Sample : 20ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 10 7:50 2020 Quant Results File: T0309W.RES

Quant Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
52)	TCE	6.91	130	85550	19.86	ppb	97
53)	2-Pentanone	7.15	43	372478	156.14	ppb	96
54)	1,2-Dichloropropane	7.16	63	72045	19.91	ppb	100
55)	Bromodichloromethane	7.50	83	95697	20.50	ppb	99
56)	Methyl Cyclohexane	7.15	83	92366	20.07	ppb	96
57)	Dibromomethane	7.28	174	62571	20.53	ppb	97
58)	MIBK (methyl isobutyl ket	8.22	43	68531	19.52	ppb	94
59)	1-Bromo-2-chloroethane	7.83	63	51408	20.62	ppb	99
61)	Cis-1,3-Dichloropropene	8.02	75	115567	20.81	ppb	97
62)	Toluene	8.40	91	318716	20.42	ppb	93
63)	Trans-1,3-Dichloropropene	8.65	75	102343	20.62	ppb	95
64)	1,1,2-TCA	8.85	97	70214	20.50	ppb	98
65)	2-Hexanone	9.15	43	48298	19.57	ppb	95
68)	1,2-EDB	9.38	107	75713	21.64	ppb	99
69)	Tetrachloroethene	9.02	166	94184	20.01	ppb	97
70)	1-Chlorohexane	9.95	91	87442	20.97	ppb	94
71)	1,1,1,2-Tetrachloroethane	10.04	131	83269	21.14	ppb	98
72)	m&p-Xylene	10.22	91	551855	42.75	ppb	98
73)	o-Xylene	10.65	91	289050	20.87	ppb	99
74)	Styrene	10.66	104	232180	21.52	ppb	95
76)	1,3-Dichloropropane	9.03	76	118252	20.55	ppb	100
77)	Dibromochloromethane	9.27	129	85450	21.12	ppb	98
78)	Chlorobenzene	9.95	112	220674	20.18	ppb	98
79)	Ethylbenzene	10.09	91	353818	20.86	ppb	100
80)	Bromoform	10.84	173	66253	18.69	ppb	89
82)	Isopropylbenzene	11.06	105	356706	20.50	ppb	98
83)	1,1,2,2-Tetrachloroethane	11.36	83	80630	19.64	ppb	99
84)	1,2,3-Trichloropropane	11.40	110	29929	20.33	ppb	95
85)	t-1,4-Dichloro-2-Butene	11.42	53	16570	19.99	ppb	97
86)	Bromobenzene	11.37	77	173750	19.86	ppb	98
87)	n-Propylbenzene	11.51	91	393699	20.53	ppb	97
88)	4-Ethyltoluene	11.64	105	346639	20.82	ppb	98
89)	2-Chlorotoluene	11.59	91	283900	20.32	ppb	91
90)	1,3,5-Trimethylbenzene	11.70	105	306918	20.69	ppb	98
91)	4-Chlorotoluene	11.71	91	291522	20.72	ppb	98
92)	Tert-Butylbenzene	12.06	119	304152	20.86	ppb	98
93)	1,2,4-Trimethylbenzene	12.11	105	309579	20.37	ppb	99
94)	Sec-Butylbenzene	12.30	105	359398	20.53	ppb	98
95)	p-Isopropyltoluene	12.46	119	319591	20.67	ppb	98
96)	Benzyl Chloride	12.64	91	102162	18.83	ppb	96
97)	1,3-DCB	12.40	146	192840	20.33	ppb	98
98)	1,4-DCB	12.50	146	195264	20.08	ppb	98
99)	n-Butylbenzene	12.91	91	247645	20.48	ppb	100
100)	1,2-DCB	12.90	146	189907	20.16	ppb	99
101)	Hexachloroethane	13.20	201	56854	20.20	ppb	98
102)	1,2-Dibromo-3-chloropropan	13.75	157	21692	20.44	ppb	95
103)	1,2,4-Trichlorobenzene	14.67	180	129019	21.35	ppb	96
104)	Hexachlorobutadiene	14.87	225	68005	20.19	ppb	95
105)	Naphthalene	14.94	127	33258	21.01	ppb	78
106)	1,2,3-Trichlorobenzene	15.20	180	124318	21.15	ppb	96

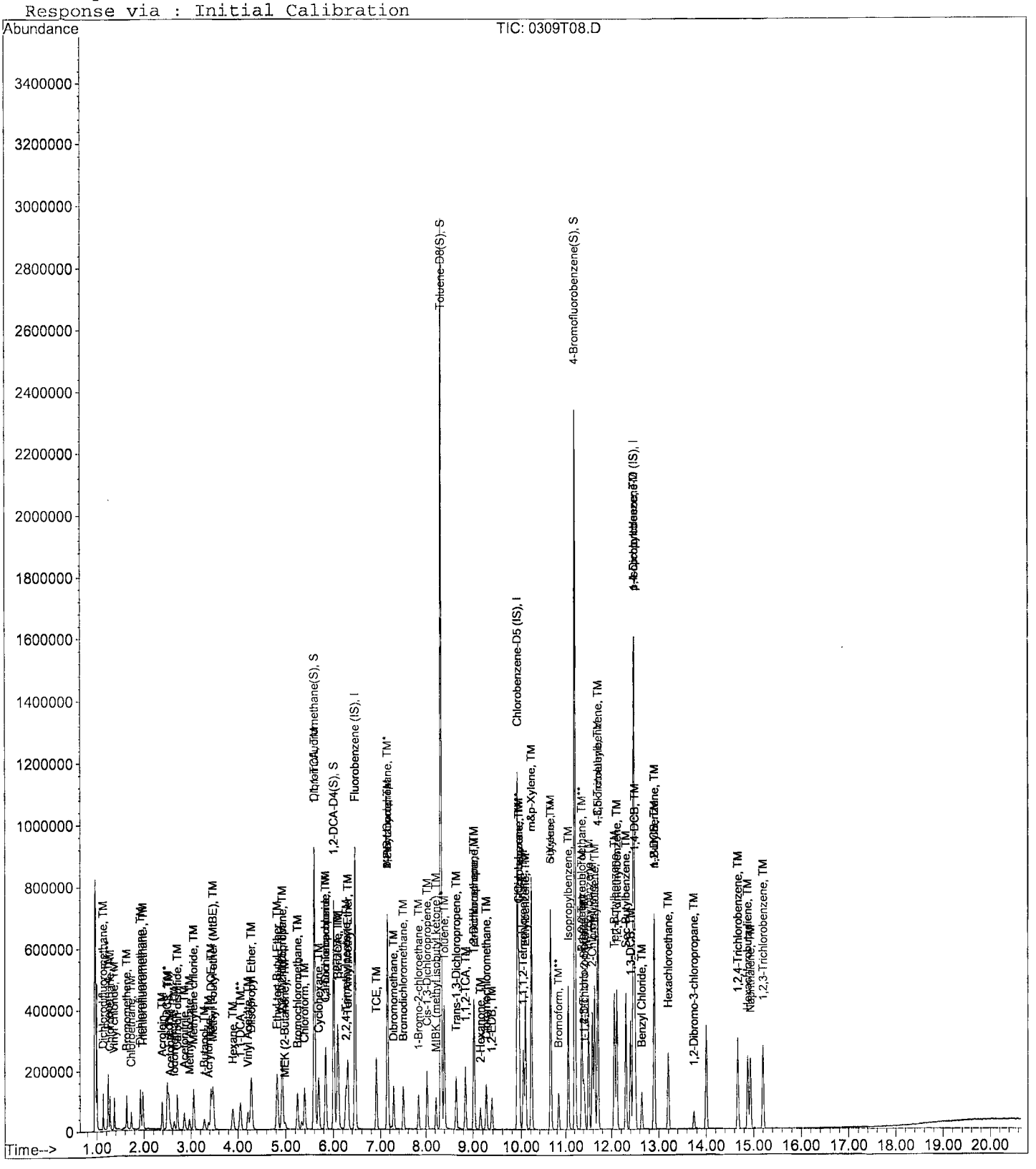
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200309\0309T08.D Vial: 8
Acq On : 9 Mar 20 10:12 Operator:
Sample : 20ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 10 7:50 2020 Quant Results File: T0309W.RES

Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0309T09.D Vial: 9
Acq On : 9 Mar 20 10:41 Operator:
Sample : 40ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 10 7:50 2020 Quant Results File: T0309W.RES

Quant Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.46	96	917837	25.00	ppb		0.00
66) Chlorobenzene-D5 (IS)	9.92	117	748911	25.00	ppb		0.00
81) 1,4-Dichlorobenzene-D (IS)	12.48	152	432167	25.00	ppb		0.00
System Monitoring Compounds							
41) Dibromofluoromethane(S)	5.60	111	557930	51.07	ppb		0.00
Spiked Amount 25.000			Recovery = 204.296%				
46) 1,2-DCA-D4(S)	6.01	65	574881	51.80	ppb		0.00
Spiked Amount 25.000			Recovery = 207.192%				
67) Toluene-D8(S)	8.33	98	2156630	52.37	ppb		0.00
Spiked Amount 25.000			Recovery = 209.476%				
75) 4-Bromofluorobenzene(S)	11.21	95	857467	50.92	ppb		0.00
Spiked Amount 25.000			Recovery = 203.688%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.13	85	127616	37.29	ppb		96
4) Freon 114	1.24	85	109530	39.04	ppb		98
5) Chloromethane	1.28	50	131107	35.57	ppb		100
6) Vinyl chloride	1.37	62	124984	38.76	ppb		97
8) Bromomethane	1.63	94	65136	41.33	ppb		99
9) Chloroethane	1.73	66	17728	37.55	ppb		77
10) Dichlorofluoromethane	1.93	67	197122	38.46	ppb		95
11) Trichlorofluoromethane	1.98	101	168629	38.74	ppb		100
14) Acrolein	2.38	55	1966	10.58	ppb	#	1
15) Acetone	2.56	43	22176	41.19	ppb		93
16) Freon-113	2.52	101	97878	38.98	ppb		98
17) 1,1-DCE	2.49	61	160793	39.63	ppb		95
19) Acetonitrile	2.86	40	18064	182.51	ppb		99
20) t-Butanol	3.29	59	21280	176.40	ppb		98
21) Methyl Acetate	2.96	43	94710	38.90	ppb		98
22) Iodomethane	2.64	142	115062	42.39	ppb		97
23) Acrylonitrile	3.37	52	39954	39.09	ppb	#	79
24) Methylene chloride	3.05	49	158301	39.09	ppb		96
25) Carbon disulfide	2.70	76	314690	40.28	ppb		95
26) Methyl t-butyl ether (MtBE	3.48	73	380423	42.10	ppb		99
27) Trans-1,2-DCE	3.43	61	161740	39.82	ppb		96
28) Hexane	3.90	56	48896	38.25	ppb	#	95
29) Diisopropyl Ether	4.28	45	395826	41.36	ppb		96
31) 1,1-DCA	4.05	63	232341	40.37	ppb		97
32) Vinyl Acetate	4.21	43	209410	37.37	ppb		100
33) Ethyl tert Butyl Ether	4.82	59	401652	41.54	ppb		100
34) MEK (2-Butanone)	4.98	43	62384	39.48	ppb		95
35) Cis-1,2-DCE	4.93	61	204495	40.70	ppb		97
36) 2,2-Dichloropropane	4.92	77	178668	38.65	ppb		90
39) Chloroform	5.40	83	247517	40.95	ppb		98
40) Bromochloromethane	5.25	49	111898	40.55	ppb		98
42) 1,1,1-TCA	5.61	97	207501	41.18	ppb		100
43) Cyclohexane	5.69	56	174010	39.23	ppb		98
44) 1,1-Dichloropropene	5.85	75	166912	40.32	ppb	#	93
45) 2,2,4-Trimethylpentane	6.27	57	300695	38.54	ppb		99
47) Carbon Tetrachloride	5.84	117	179031	40.88	ppb		97
48) Tert Amyl Methyl Ether	6.31	73	411114	43.14	ppb		96
50) 1,2-DCA	6.11	62	194651	40.20	ppb		100
51) Benzene	6.09	78	554199	40.89	ppb		100

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

Data File : M:\THOR\DATA\T200309\0309T09.D Vial: 9
Acq On : 9 Mar 20 10:41 Operator:
Sample : 40ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 10 7:50 2020 Quant Results File: T0309W.RES

Quant Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

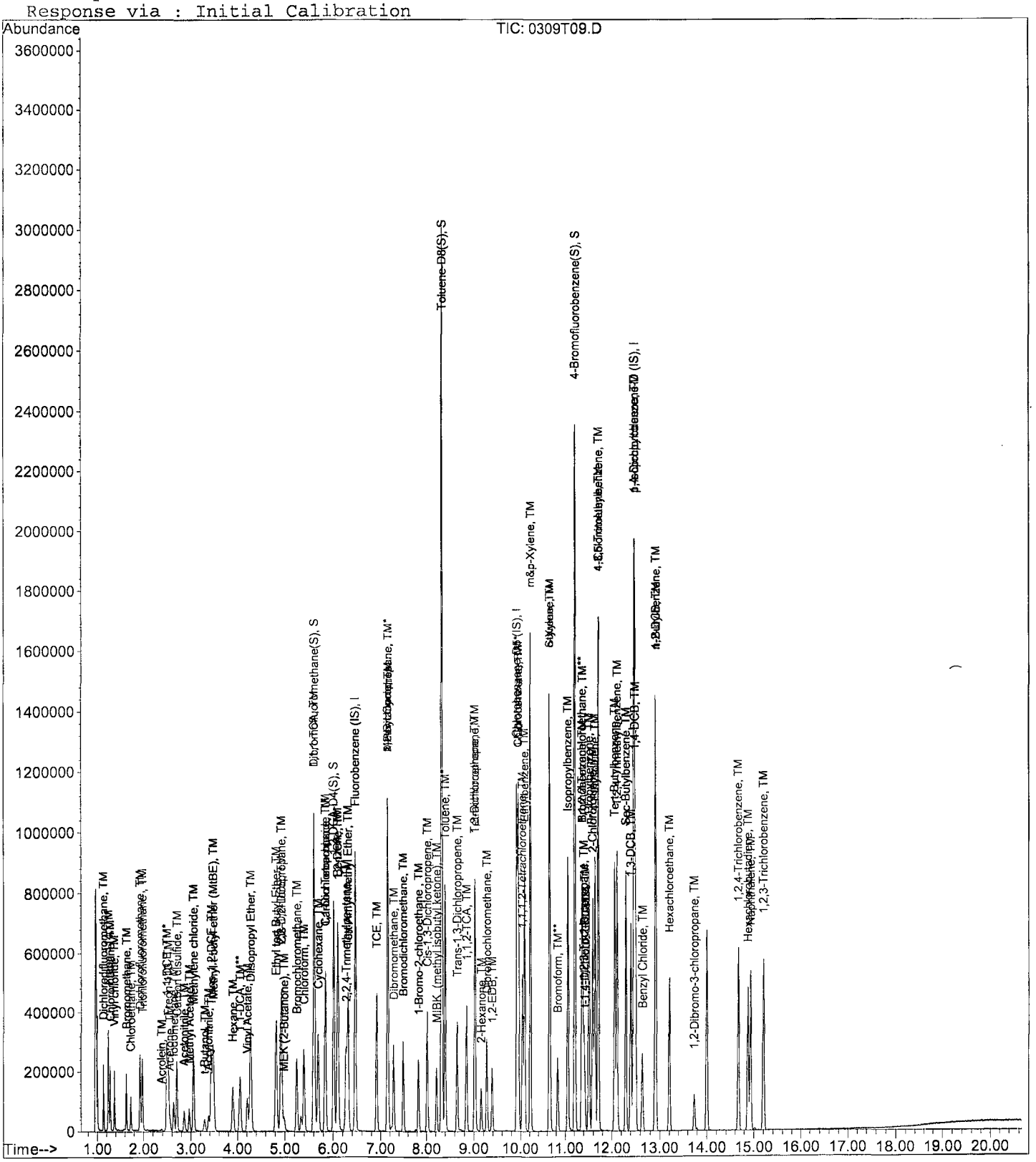
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
52)	TCE	6.91	130	175893	40.29	ppb		96
53)	2-Pentanone	7.15	43	453306	187.54	ppb		96
54)	1,2-Dichloropropane	7.16	63	147419	40.22	ppb		100
55)	Bromodichloromethane	7.50	83	198566	41.98	ppb		97
56)	Methyl Cyclohexane	7.15	83	180123	38.62	ppb		97
57)	Dibromomethane	7.29	174	133052	43.08	ppb		98
58)	MIBK (methyl isobutyl ket	8.22	43	144037	40.50	ppb		98
59)	1-Bromo-2-chloroethane	7.83	63	109264	43.26	ppb		99
61)	Cis-1,3-Dichloropropene	8.02	75	236138	41.96	ppb		98
62)	Toluene	8.40	91	635303	40.18	ppb		95
63)	Trans-1,3-Dichloropropene	8.65	75	214576	42.67	ppb		96
64)	1,1,2-TCA	8.85	97	146039	42.07	ppb		96
65)	2-Hexanone	9.15	43	98683	38.05	ppb	#	97
68)	1,2-EDB	9.38	107	154355	43.83	ppb		93
69)	Tetrachloroethene	9.02	166	184302	38.92	ppb		96
70)	1-Chlorohexane	9.95	91	173071	41.25	ppb		97
71)	1,1,1,2-Tetrachloroethane	10.04	131	171965	43.38	ppb		96
72)	m&p-Xylene	10.22	91	1089795	83.90	ppb		100
73)	o-Xylene	10.65	91	590472	42.37	ppb		100
74)	Styrene	10.66	104	479305	44.14	ppb		98
76)	1,3-Dichloropropane	9.03	76	243866	42.11	ppb		100
77)	Dibromochloromethane	9.27	129	182775	44.89	ppb		96
78)	Chlorobenzene	9.95	112	438790	39.87	ppb		99
79)	Ethylbenzene	10.09	91	711143	41.67	ppb		99
80)	Bromoform	10.84	173	139252	37.68	ppb		93
82)	Isopropylbenzene	11.06	105	704082	40.83	ppb		97
83)	1,1,2,2-Tetrachloroethane	11.36	83	168530	41.41	ppb		98
84)	1,2,3-Trichloropropane	11.40	110	62683	42.95	ppb		94
85)	t-1,4-Dichloro-2-Butene	11.43	53	34206	41.64	ppb		88
86)	Bromobenzene	11.37	77	353012	40.71	ppb		99
87)	n-Propylbenzene	11.51	91	791972	41.67	ppb		96
88)	4-Ethyltoluene	11.64	105	703018	42.60	ppb		99
89)	2-Chlorotoluene	11.59	91	562158	40.60	ppb		95
90)	1,3,5-Trimethylbenzene	11.71	105	617718	42.01	ppb		96
91)	4-Chlorotoluene	11.71	91	576171	41.30	ppb		97
92)	Tert-Butylbenzene	12.06	119	602742	41.69	ppb		97
93)	1,2,4-Trimethylbenzene	12.11	105	633037	42.02	ppb		100
94)	Sec-Butylbenzene	12.30	105	715932	41.26	ppb		99
95)	p-Isopropyltoluene	12.46	119	646704	42.21	ppb		99
96)	Benzyl Chloride	12.65	91	236195	43.92	ppb		99
97)	1,3-DCB	12.40	146	383750	40.81	ppb		99
98)	1,4-DCB	12.50	146	392178	40.68	ppb		99
99)	n-Butylbenzene	12.91	91	504408	42.08	ppb		99
100)	1,2-DCB	12.91	146	387467	41.49	ppb		98
101)	Hexachloroethane	13.20	201	122109	43.77	ppb		97
102)	1,2-Dibromo-3-chloropropan	13.74	157	46303	44.01	ppb		99
103)	1,2,4-Trichlorobenzene	14.67	180	270333	45.13	ppb		94
104)	Hexachlorobutadiene	14.88	225	134016	40.13	ppb		93
105)	Naphthalene	14.94	127	74305	47.34	ppb		87
106)	1,2,3-Trichlorobenzene	15.20	180	261830	44.93	ppb		99

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

Data File : M:\THOR\DATA\T200309\0309T09.D Vial: 9
Acq On : 9 Mar 20 10:41 Operator:
Sample : 40ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 10 7:50 2020 Quant Results File: T0309W.RES

Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0309T10.D Vial: 10
Acq On : 9 Mar 20 11:09 Operator:
Sample : 100ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 10 7:50 2020 Quant Results File: T0309W.RES

Quant Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.46	96	846795	25.00	ppb		0.00
66) Chlorobenzene-D5 (IS)	9.92	117	702597	25.00	ppb		0.00
81) 1,4-Dichlorobenzene-D (IS)	12.48	152	440486	25.00	ppb		0.00
System Monitoring Compounds							
41) Dibromofluoromethane(S)	5.60	111	930460	99.29	ppb		0.00
Spiked Amount 25.000			Recovery =	397.164%			
46) 1,2-DCA-D4(S)	6.01	65	943792	99.07	ppb		0.00
Spiked Amount 25.000			Recovery =	396.288%			
67) Toluene-D8(S)	8.33	98	3509611	98.49	ppb		0.00
Spiked Amount 25.000			Recovery =	393.972%			
75) 4-Bromofluorobenzene(S)	11.21	95	1469573	99.76	ppb		0.00
Spiked Amount 25.000			Recovery =	399.056%			
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.13	85	311232	98.58	ppb		96
4) Freon 114	1.24	85	271831	105.02	ppb		98
5) Chloromethane	1.28	50	285799	84.04	ppb		100
6) Vinyl chloride	1.37	62	288515	96.97	ppb		96
8) Bromomethane	1.63	94	138496	98.49	ppb		98
9) Chloroethane	1.72	66	41752	95.86	ppb		84
10) Dichlorofluoromethane	1.92	67	466652	98.69	ppb		97
11) Trichlorofluoromethane	1.97	101	404224	100.66	ppb		99
14) Acrolein	2.39	55	35912	209.49	ppb		91
15) Acetone	2.56	43	48372	99.32	ppb		91
16) Freon-113	2.52	101	239525	103.39	ppb		94
17) 1,1-DCE	2.49	61	383249	102.37	ppb		99
19) Acetonitrile	2.86	40	20211	221.33	ppb		89
20) t-Butanol	3.31	59	22736	204.28	ppb		99
21) Methyl Acetate	2.96	43	240526	107.07	ppb		99
22) Iodomethane	2.63	142	371134	99.51	ppb		98
23) Acrylonitrile	3.38	52	95610	100.24	ppb		88
24) Methylene chloride	3.05	49	364269	97.49	ppb		99
25) Carbon disulfide	2.70	76	736692	102.21	ppb		97
26) Methyl t-butyl ether (MtBE	3.48	73	888700	106.60	ppb		99
27) Trans-1,2-DCE	3.43	61	391441	104.46	ppb		98
28) Hexane	3.89	56	137037	113.03	ppb	#	98
29) Diisopropyl Ether	4.28	45	921276	104.34	ppb		98
31) 1,1-DCA	4.05	63	546671	102.96	ppb		98
32) Vinyl Acetate	4.21	43	488139	94.41	ppb		100
33) Ethyl tert Butyl Ether	4.82	59	956318	107.21	ppb		98
34) MEK (2-Butanone)	4.98	43	146403	100.35	ppb		100
35) Cis-1,2-DCE	4.93	61	483476	104.30	ppb		96
36) 2,2-Dichloropropane	4.92	77	425902	99.86	ppb		99
39) Chloroform	5.40	83	589914	105.78	ppb		100
40) Bromochloromethane	5.24	49	254990	100.17	ppb		99
42) 1,1,1-TCA	5.61	97	491368	105.69	ppb		99
43) Cyclohexane	5.69	56	424654	103.76	ppb		96
44) 1,1-Dichloropropene	5.84	75	399526	104.62	ppb		93
45) 2,2,4-Trimethylpentane	6.27	57	761270	105.76	ppb		100
47) Carbon Tetrachloride	5.84	117	438352	108.48	ppb		99
48) Tert Amyl Methyl Ether	6.31	73	950877	108.14	ppb		96
50) 1,2-DCA	6.11	62	448283	100.35	ppb		98
51) Benzene	6.09	78	1295046	103.56	ppb		100

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0309T10.D Vial: 10
Acq On : 9 Mar 20 11:09 Operator:
Sample : 100ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 10 7:50 2020 Quant Results File: T0309W.RES

Quant Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

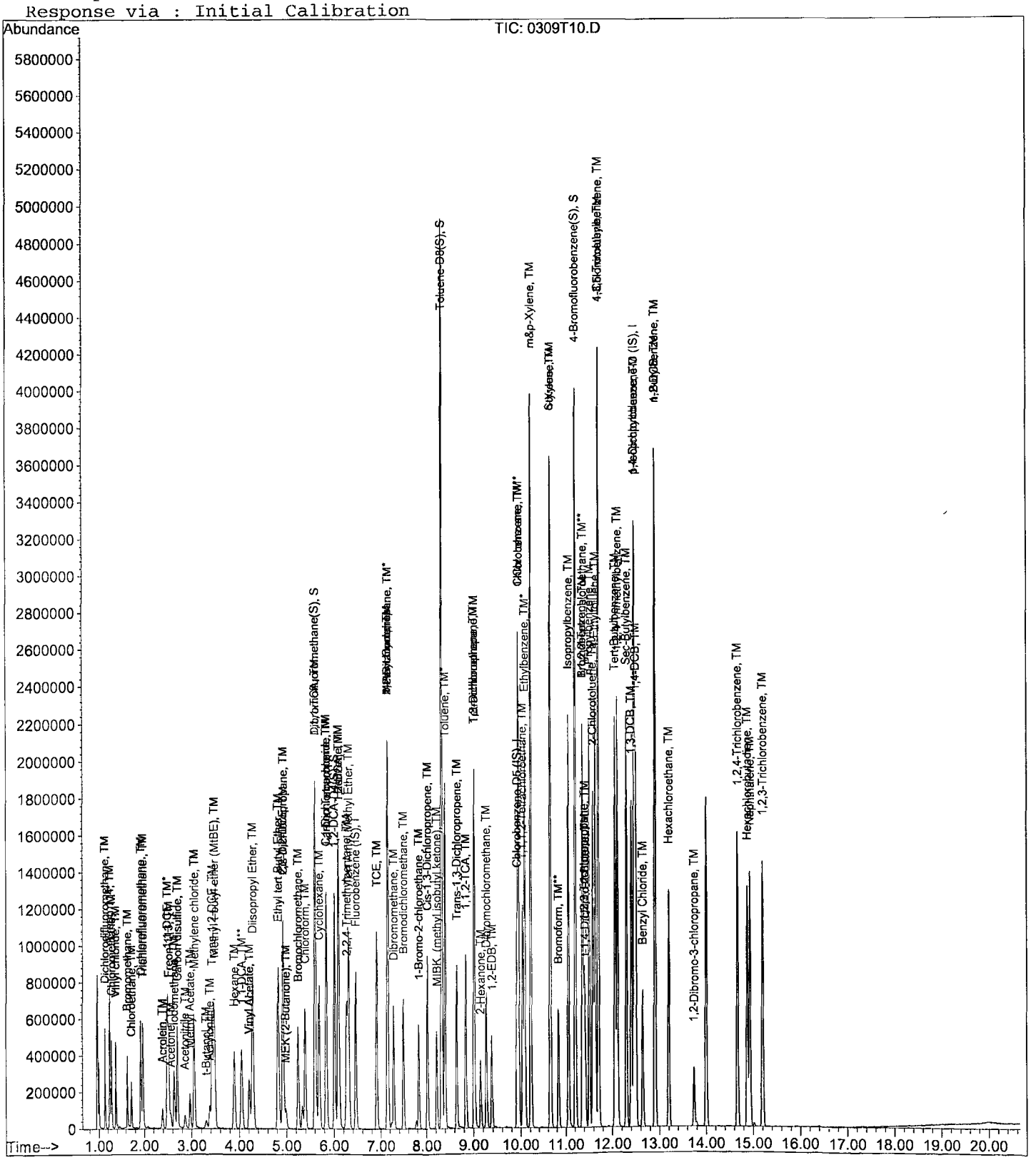
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
52)	TCE	6.91	130	404304	100.39 ppb	97
53)	2-Pentanone	7.15	43	510917	229.11 ppb	95
54)	1,2-Dichloropropane	7.16	63	347426	102.73 ppb	100
55)	Bromodichloromethane	7.50	83	475751	109.02 ppb	98
56)	Methyl Cyclohexane	7.15	83	448161	104.16 ppb	98
57)	Dibromomethane	7.28	174	307732	107.99 ppb	99
58)	MIBK (methyl isobutyl ket	8.22	43	358283	109.19 ppb	93
59)	1-Bromo-2-chloroethane	7.83	63	260800	111.92 ppb	99
61)	Cis-1,3-Dichloropropene	8.02	75	569038	109.61 ppb	97
62)	Toluene	8.40	91	1491375	102.23 ppb	95
63)	Trans-1,3-Dichloropropene	8.65	75	509009	109.72 ppb	95
64)	1,1,2-TCA	8.85	97	338564	105.72 ppb	99
65)	2-Hexanone	9.15	43	246921	100.82 ppb	96
68)	1,2-EDB	9.38	107	362919	109.86 ppb	92
69)	Tetrachloroethene	9.02	166	428638	96.47 ppb	96
70)	1-Chlorohexane	9.95	91	429555	109.14 ppb	91
71)	1,1,1,2-Tetrachloroethane	10.04	131	409324	110.06 ppb	97
72)	m&p-Xylene	10.22	91	2630884	215.89 ppb	100
73)	o-Xylene	10.65	91	1423724	108.89 ppb	99
74)	Styrene	10.66	104	1195666	117.38 ppb	99
76)	1,3-Dichloropropane	9.03	76	561264	103.30 ppb	100
77)	Dibromochloromethane	9.27	129	430225	112.64 ppb	99
78)	Chlorobenzene	9.95	112	1029980	99.76 ppb	98
79)	Ethylbenzene	10.09	91	1694918	105.87 ppb	100
80)	Bromoform	10.84	173	358337	101.19 ppb	93
82)	Isopropylbenzene	11.06	105	1728211	98.32 ppb	97
83)	1,1,2,2-Tetrachloroethane	11.36	83	440986	106.30 ppb	97
84)	1,2,3-Trichloropropane	11.40	110	158081	106.27 ppb	94
85)	t-1,4-Dichloro-2-Butene	11.43	53	92663	110.66 ppb	88
86)	Bromobenzene	11.37	77	867073	98.10 ppb	100
87)	n-Propylbenzene	11.51	91	1973536	101.87 ppb	97
88)	4-Ethyltoluene	11.64	105	1747848	103.92 ppb	99
89)	2-Chlorotoluene	11.59	91	1391855	98.63 ppb	95
90)	1,3,5-Trimethylbenzene	11.71	105	1519819	101.41 ppb	98
91)	4-Chlorotoluene	11.71	91	1439327	101.23 ppb	99
92)	Tert-Butylbenzene	12.06	119	1523772	103.41 ppb	98
93)	1,2,4-Trimethylbenzene	12.11	105	1578088	102.77 ppb	100
94)	Sec-Butylbenzene	12.30	105	1839314	104.01 ppb	98
95)	p-Isopropyltoluene	12.46	119	1652955	105.84 ppb	99
96)	Benzyl Chloride	12.64	91	647005	118.03 ppb	98
97)	1,3-DCB	12.40	146	977186	101.95 ppb	99
98)	1,4-DCB	12.50	146	999053	101.68 ppb	99
99)	n-Butylbenzene	12.91	91	1305708	106.88 ppb	99
100)	1,2-DCB	12.90	146	1000610	105.13 ppb	98
101)	Hexachloroethane	13.20	201	311243	109.45 ppb	95
102)	1,2-Dibromo-3-chloropropan	13.74	157	124829	116.40 ppb	95
103)	1,2,4-Trichlorobenzene	14.67	180	724369	118.64 ppb	95
104)	Hexachlorobutadiene	14.88	225	357735	105.11 ppb	94
105)	Naphthalene	14.94	127	196608	122.91 ppb	85
106)	1,2,3-Trichlorobenzene	15.20	180	680245	114.53 ppb	99

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

Data File : M:\THOR\DATA\T200309\0309T10.D Vial: 10
Acq On : 9 Mar 20 11:09 Operator:
Sample : 100ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 10 7:50 2020 Quant Results File: T0309W.RES

Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 9 Mar 20 12:06
Matrix: Instrument: Thor
Initial Cal. Date: 02/26/20
Data File: 0309T12.D

		Compound	MEAN	CCRF	%D		%Drift	
1	TM	Dichlorodifluoromethane	0.0932	0.0762	18	TM		
2	TM	Freon 114	0.0764	0.0693	9.3	TM		
3	TM**	Chloromethane	0.1004	0.1021	1.7	TM**		
4	TM*	Vinyl chloride	0.0878	0.0835	5.0	TM*		
5	TML	Bromomethane	0.0554	0.0578	4.2	TML	18	
6	TM	Chloroethane	0.0129	0.0108	16	TM		
7	TM	Dichlorofluoromethane	0.1396	0.1481	6.1	TM		
8	TM	Trichlorofluoromethane	0.1186	0.1048	12	TM		
9	TM	Diethyl ether	0.0000	0.0001	0.00	TM		
10	TM	Acrolein	0.0051	0.0047	6.9	TM		
11	TML	Acetone	0.0236	0.0172	27	TML	7.2	
12	TM	Freon-113	0.0684	0.0709	3.6	TM		
13	TM*	1,1-DCE	0.1105	0.0959	13	TM*		
14	TM	2-Propanol	0.0000	0.0001	0.00	TM		
15	TM	Acetonitrile	0.0027	0.0028	3.8	TM		
16	TM	t-Butanol	0.0033	0.0029	11	TM		
17	TM	Methyl Acetate	0.0663	0.0667	0.50	TM		
18	TMQ	Iodomethane	0.0390	0.0397	1.8	TMQ	5.0	
19	TML	Acrylonitrile	0.0241	0.0276	14	TML	4.4	
20	TM	Methylene chloride	0.1103	0.1067	3.3	TM		
21	TM	Carbon disulfide	0.2128	0.2288	7.5	TM		
22	TM	Methyl t-butyl ether (MtBE)	0.2461	0.2609	6.0	TM		
23	TM	Trans-1,2-DCE	0.1106	0.1008	8.8	TM		
24	TML	Hexane	0.0346	0.0369	6.6	TML	17	
25	TM	Diisopropyl Ether	0.2607	0.2681	2.8	TM		
26	TM**	2,2-Dichloro-1,1,1-trifluoroethane	0.0000	0.0001	0.00	TM**		
27	TM**	1,1-DCA	0.1567	0.1355	14	TM**		
28	TM	Vinyl Acetate	0.1526	0.0994	35	TM		* NT
29	TM	Ethyl tert Butyl Ether	0.2634	0.2747	4.3	TM		
30	TML	MEK (2-Butanone)	0.0484	0.0418	14	TML	2.6	
31	TM	Cis-1,2-DCE	0.1369	0.1247	8.9	TM		
32	TM	2,2-Dichloropropane	0.1259	0.1057	16	TM		
33	TM*	Chloroform	0.1646	0.1533	6.9	TM*		
34	TM	Bromochloromethane	0.0752	0.0687	8.5	TM		
35	TM	1,1,1-TCA	0.1373	0.1280	6.7	TM		
36	TM	Cyclohexane	0.1208	0.1238	2.4	TM		
37	TM	1,1-Dichloropropene	0.1127	0.1021	9.4	TM		
38	TM	2,2,4-Trimethylpentane	0.2125	0.2054	3.3	TM		
39	TM	Carbon Tetrachloride	0.1193	0.1090	8.7	TM		
40	TM	Tert Amyl Methyl Ether	0.2596	0.2742	5.6	TM		
		Average			8.3			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 9 Mar 20 12:06
Instrument: Thor
Cal. Date: 02/26/20
Data File: 0309T12.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	1,2-DCA	0.1319	0.1201	8.9	TM	
42	TM	Benzene	0.3692	0.3437	6.9	TM	
43	TM	TCE	0.1189	0.1110	6.6	TM	
44	TM	2-Pentanone	0.0658	0.0664	0.83	TM	
45	TM*	1,2-Dichloropropane	0.0998	0.0904	9.5	TM*	
46	TM	Bromodichloromethane	0.1288	0.1198	7.0	TM	
47	TM	Methyl Cyclohexane	0.1270	0.1259	0.92	TM	
48	TM	Dibromomethane	0.0841	0.0827	1.7	TM	
49	TM	MIBK (methyl isobutyl ketone)	0.0969	0.0887	8.5	TM	
50	TM	1-Bromo-2-chloroethane	0.0688	0.0766	11	TM	
51	TM	Cis-1,3-Dichloropropene	0.1533	0.1380	10.0	TM	
52	TM*	Toluene	0.4307	0.4044	6.1	TM*	
53	TM	Trans-1,3-Dichloropropene	0.1370	0.1249	8.8	TM	
54	TM	1,1,2-TCA	0.0945	0.0907	4.1	TM	
55	TML	2-Hexanone	0.0607	0.0616	1.4	TML	2.1
56	TM	1,2-EDB	0.1176	0.1135	3.5	TM	
57	TM	Tetrachloroethene	0.1581	0.1425	9.8	TM	
58	TM	1-Chlorohexane	0.1400	0.1427	1.9	TM	
59	TM	1,1,1,2-Tetrachloroethane	0.1323	0.1235	6.7	TM	
60	TM	m&p-Xylene	0.4336	0.4122	4.9	TM	
61	TM	o-Xylene	0.4652	0.4530	2.6	TM	
62	TM	Styrene	0.3624	0.3522	2.8	TM	
63	TM	1,3-Dichloropropane	0.1933	0.1834	5.2	TM	
64	TM	Dibromochloromethane	0.1359	0.1299	4.4	TM	
65	TM**	Chlorobenzene	0.3674	0.3370	8.3	TM**	
66	TM*	Ethylbenzene	0.5696	0.5359	5.9	TM*	
67	TM**L	Bromoform	0.1013	0.1019	0.61	TM**L	7.7
68	TM	Isopropylbenzene	0.9977	0.9130	8.5	TM	
69	TM**	1,1,2,2-Tetrachloroethane	0.2354	0.2174	7.7	TM**	
70	TM	1,2,3-Trichloropropane	0.0844	0.0841	0.33	TM	
71	TM	t-1,4-Dichloro-2-Butene	0.0475	0.0489	2.9	TM	
72	TM	Bromobenzene	0.5016	0.4690	6.5	TM	
73	TM	n-Propylbenzene	1.099	1.035	5.8	TM	
74	TM	4-Ethyltoluene	0.9546	1.007	5.5	TM	
75	TM	2-Chlorotoluene	0.8009	0.7695	3.9	TM	
76	TM	1,3,5-Trimethylbenzene	0.8506	0.8042	5.5	TM	
77	TM	4-Chlorotoluene	0.8069	0.7834	2.9	TM	
78	TM	Tert-Butylbenzene	0.8363	0.7912	5.4	TM	
79	TM	1,2,4-Trimethylbenzene	0.8715	0.8323	4.5	TM	
80	TM	Sec-Butylbenzene	1.004	0.9485	5.5	TM	
		Average			5.3		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 9 Mar 20 12:06
Instrument: Thor
Cal. Date: 02/26/20
Data File: 0309T12.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	p-Isopropyltoluene	0.8864	0.8255	6.9	TM	
82	TM	Benzyl Chloride	0.3111	0.2539	18	TM	
83	TM	1,3-DCB	0.5440	0.5216	4.1	TM	
84	TM	1,4-DCB	0.5577	0.5458	2.1	TM	
85	TM	n-Butylbenzene	0.6934	0.6635	4.3	TM	
86	TM	1,2-DCB	0.5402	0.5263	2.6	TM	
87	TM	Hexachloroethane	0.1614	0.1455	9.8	TM	
88	TM	1,2-Dibromo-3-chloropropane	0.0609	0.0602	1.0	TM	
89	TM	1,2,4-Trichlorobenzene	0.3465	0.3595	3.7	TM	
90	TM	Hexachlorobutadiene	0.1932	0.1776	8.1	TM	
91	TM	Naphthalene	0.0908	0.1033	14	TM	
92	TM	1,2,3-Trichlorobenzene	0.3371	0.3446	2.2	TM	
93							
94							
95							
96							
97							
98							
99							
100							
101							
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103							
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117							
118							
119							
120							
		Average			6.4		

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0309T12.D Vial: 12
Acq On : 9 Mar 20 12:06 Operator:
Sample : (SS) 10ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 10 7:50 2020 Quant Results File: T0309W.RES

Quant Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.46	96	878521	25.00	ppb		0.00
66) Chlorobenzene-D5 (IS)	9.92	117	718525	25.00	ppb		0.00
81) 1,4-Dichlorobenzene-D (IS)	12.47	152	413046	25.00	ppb		0.00
System Monitoring Compounds							
41) Dibromofluoromethane(S)	5.60	111	279558	22.63	ppb		0.00
Spiked Amount 25.000			Recovery =	90.500%			
46) 1,2-DCA-D4(S)	6.02	65	285479	22.61	ppb		0.00
Spiked Amount 25.000			Recovery =	90.456%			
67) Toluene-D8(S)	8.33	98	1071892	22.11	ppb		0.00
Spiked Amount 25.000			Recovery =	88.436%			
75) 4-Bromofluorobenzene(S)	11.21	95	422263	22.17	ppb		0.00
Spiked Amount 25.000			Recovery =	88.684%			
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.14	85	26784	8.18	ppb		99
4) Freon 114	1.24	85	24346	9.07	ppb		97
5) Chloromethane	1.28	50	35888	10.17	ppb		98
6) Vinyl chloride	1.37	62	29330	9.50	ppb		97
8) Bromomethane	1.64	94	20296	11.78	ppb		97
9) Chloroethane	1.74	66	3789	8.39	ppb		75
10) Dichlorofluoromethane	1.93	67	52042	10.61	ppb		100
11) Trichlorofluoromethane	1.98	101	36832	8.84	ppb		98
14) Acrolein	2.38	55	20688	116.32	ppb		94
15) Acetone	2.56	43	6050	10.72	ppb	#	87
16) Freon-113	2.52	101	24901	10.36	ppb		98
17) 1,1-DCE	2.49	61	33685	8.67	ppb		99
19) Acetonitrile	2.86	40	12291	129.74	ppb		91
20) t-Butanol	3.28	59	12914	111.84	ppb		100
21) Methyl Acetate	2.97	43	23422	10.05	ppb		93
22) Iodomethane	2.64	142	13957	9.50	ppb		90
23) Acrylonitrile	3.38	52	9682	10.44	ppb		89
24) Methylene chloride	3.05	49	37482	9.67	ppb		97
25) Carbon disulfide	2.70	76	80409	10.75	ppb		95
26) Methyl t-butyl ether (MtBE	3.48	73	91688	10.60	ppb		99
27) Trans-1,2-DCE	3.43	61	35436	9.12	ppb		97
28) Hexane	3.90	56	12972	11.72	ppb	#	99
29) Diisopropyl Ether	4.28	45	94196	10.28	ppb		97
31) 1,1-DCA	4.05	63	47630	8.65	ppb		96
32) Vinyl Acetate	4.21	43	34914	6.51	ppb		97
33) Ethyl tert Butyl Ether	4.82	59	96529	10.43	ppb		95
34) MEK (2-Butanone)	4.99	43	14675	9.74	ppb		96
35) Cis-1,2-DCE	4.93	61	43803	9.11	ppb		98
36) 2,2-Dichloropropane	4.92	77	37128	8.39	ppb		96
39) Chloroform	5.40	83	53882	9.31	ppb		97
40) Bromochloromethane	5.25	49	24156	9.15	ppb		97
42) 1,1,1-TCA	5.62	97	44986	9.33	ppb		99
43) Cyclohexane	5.69	56	43494	10.24	ppb		96
44) 1,1-Dichloropropene	5.84	75	35888	9.06	ppb		94
45) 2,2,4-Trimethylpentane	6.27	57	72193	9.67	ppb		96
47) Carbon Tetrachloride	5.84	117	38289	9.13	ppb		97
48) Tert Amyl Methyl Ether	6.31	73	96367	10.56	ppb		99
50) 1,2-DCA	6.12	62	42201	9.11	ppb		99
51) Benzene	6.09	78	120785	9.31	ppb		99

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0309T12.D Vial: 12
Acq On : 9 Mar 20 12:06 Operator:
Sample : (SS) 10ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 10 7:50 2020 Quant Results File: T0309W.RES

Quant Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

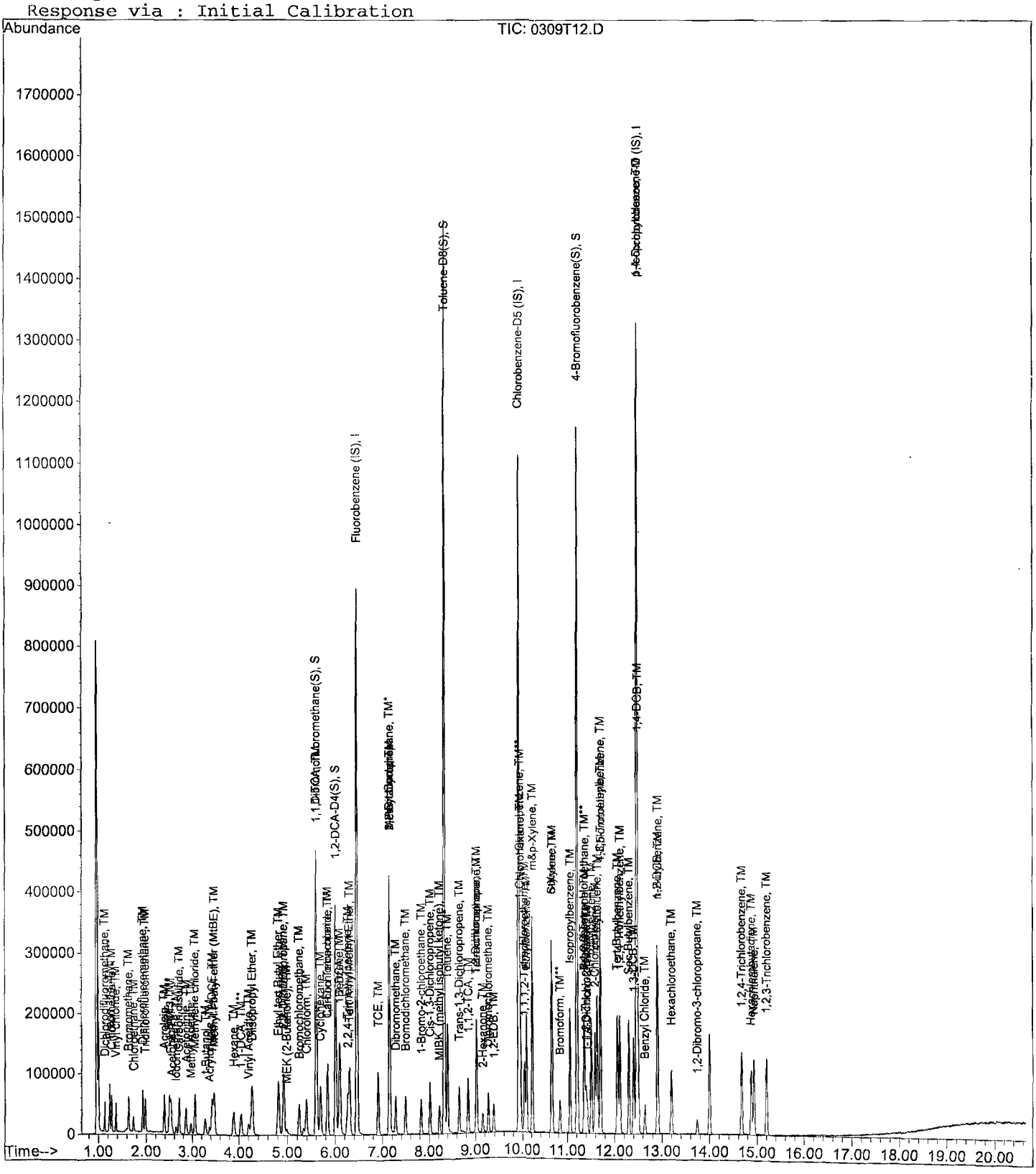
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
52)	TCE	6.91	130	39008	9.34	ppb		96
53)	2-Pentanone	7.15	43	291594	126.04	ppb		95
54)	1,2-Dichloropropane	7.16	63	31754	9.05	ppb		99
55)	Bromodichloromethane	7.50	83	42092	9.30	ppb		96
56)	Methyl Cyclohexane	7.15	83	44226	9.91	ppb		93
57)	Dibromomethane	7.29	174	29052	9.83	ppb		97
58)	MIBK (methyl isobutyl ket	8.22	43	31159	9.15	ppb		97
59)	1-Bromo-2-chloroethane	7.83	63	26912	11.13	ppb		96
61)	Cis-1,3-Dichloropropene	8.02	75	48489	9.00	ppb		96
62)	Toluene	8.40	91	142096	9.39	ppb		97
63)	Trans-1,3-Dichloropropene	8.65	75	43887	9.12	ppb		93
64)	1,1,2-TCA	8.85	97	31866	9.59	ppb		96
65)	2-Hexanone	9.15	43	21651	9.79	ppb	#	90
68)	1,2-EDB	9.38	107	32610	9.65	ppb	#	95
69)	Tetrachloroethene	9.02	166	40969	9.02	ppb		96
70)	1-Chlorohexane	9.95	91	41018	10.19	ppb		97
71)	1,1,1,2-Tetrachloroethane	10.04	131	35490	9.33	ppb		98
72)	m&p-Xylene	10.22	91	236964	19.01	ppb		99
73)	o-Xylene	10.65	91	130194	9.74	ppb		98
74)	Styrene	10.66	104	101239	9.72	ppb		100
76)	1,3-Dichloropropane	9.03	76	52705	9.48	ppb		96
77)	Dibromochloromethane	9.27	129	37336	9.56	ppb		98
78)	Chlorobenzene	9.95	112	96857	9.17	ppb		98
79)	Ethylbenzene	10.09	91	154027	9.41	ppb		100
80)	Bromoform	10.84	173	29300	9.23	ppb		97
82)	Isopropylbenzene	11.06	105	150839	9.15	ppb		95
83)	1,1,2,2-Tetrachloroethane	11.36	83	35912	9.23	ppb		99
84)	1,2,3-Trichloropropane	11.40	110	13903	9.97	ppb		90
85)	t-1,4-Dichloro-2-Butene	11.42	53	8081	10.29	ppb		96
86)	Bromobenzene	11.37	77	77482	9.35	ppb		99
87)	n-Propylbenzene	11.51	91	171073	9.42	ppb		97
88)	4-Ethyltoluene	11.64	105	166411	10.55	ppb		99
89)	2-Chlorotoluene	11.59	91	127137	9.61	ppb		94
90)	1,3,5-Trimethylbenzene	11.71	105	132869	9.45	ppb		99
91)	4-Chlorotoluene	11.71	91	129431	9.71	ppb		98
92)	Tert-Butylbenzene	12.06	119	130728	9.46	ppb		97
93)	1,2,4-Trimethylbenzene	12.11	105	137503	9.55	ppb		96
94)	Sec-Butylbenzene	12.30	105	156705	9.45	ppb		98
95)	p-Isopropyltoluene	12.46	119	136386	9.31	ppb		96
96)	Benzyl Chloride	12.64	91	41957	8.16	ppb		95
97)	1,3-DCB	12.40	146	86186	9.59	ppb		99
98)	1,4-DCB	12.50	146	90180	9.79	ppb		99
99)	n-Butylbenzene	12.91	91	109619	9.57	ppb		96
100)	1,2-DCB	12.90	146	86947	9.74	ppb		99
101)	Hexachloroethane	13.20	201	24040	9.02	ppb		98
102)	1,2-Dibromo-3-chloropropan	13.75	157	9954	9.90	ppb		92
103)	1,2,4-Trichlorobenzene	14.67	180	59388	10.37	ppb		90
104)	Hexachlorobutadiene	14.88	225	29343	9.19	ppb		96
105)	Naphthalene	14.94	127	17066	11.38	ppb		76
106)	1,2,3-Trichlorobenzene	15.20	180	56928	10.22	ppb		98

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

Data File : M:\THOR\DATA\T200309\0309T12.D Vial: 12
Acq On : 9 Mar 20 12:06 Operator:
Sample : (SS) 10ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 10 7:50 2020 Quant Results File: T0309W.RES

Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 03/11/20
Instrument: Thor
Initial Cal. Date: 03/09/20
Data File: 0311t09.D

		Compound	MEAN	CCRF	%D		%Drift	
1	I	Fluorobenzene (IS)	ISTD			I		
2	TM	Dichlorodifluoromethane	0.0932	0.1058	14	TM		
3	TM	Freon 114	0.0764	0.0766	0.24	TM		
4	TM**	Chloromethane	0.1004	0.1085	8.1	TM**		
5	TM*	Vinyl chloride	0.0878	0.0868	1.1	TM*		
6	TML	Bromomethane	0.0554	0.0506	8.8	TML	0.01	
7	TM	Chloroethane	0.0129	0.0125	2.9	TM		
8	TM	Dichlorofluoromethane	0.1396	0.1565	12	TM		
9	TM	Trichlorofluoromethane	0.1186	0.1524	29	TM		* NT
10	TM	Acrolein	0.0051	0.0003	94	TM		* NT
11	TML	Acetone	0.0236	0.0177	25	TML	10	
12	TM	Freon-113	0.0684	0.0682	0.32	TM		
13	TM*	1,1-DCE	0.1105	0.1190	7.7	TM*		
14	TM	2-Propanol	0.0000	0.0000	0.00	TM		
15	TM	Acetonitrile	0.0027	0.0027	1.1	TM		
16	TM	t-Butanol	0.0033	0.0033	0.48	TM		
17	TM	Methyl Acetate	0.0663	0.0616	7.1	TM		
18	TMQ	Iodomethane	0.0390	0.0269	31	TMQ	26	* NT
19	TML	Acrylonitrile	0.0241	0.0277	15	TML	4.9	
20	TM	Methylene chloride	0.1103	0.1148	4.0	TM		
21	TM	Carbon disulfide	0.2128	0.2060	3.2	TM		
22	TM	Methyl t-butyl ether (MtBE)	0.2461	0.2650	7.7	TM		
23	TM	Trans-1,2-DCE	0.1106	0.1136	2.7	TM		
24	TM	Diisopropyl Ether	0.2607	0.2560	1.8	TM		
25	TM**	1,1-DCA	0.1567	0.1728	10	TM**		
26	TM	Vinyl Acetate	0.1526	0.1156	24	TM		* NT
27	TM	Ethyl tert Butyl Ether	0.2634	0.2672	1.5	TM		
28	TML	MEK (2-Butanone)	0.0484	0.0459	5.1	TML	7.0	
29	TM	Cis-1,2-DCE	0.1369	0.1528	12	TM		
30	TM	2,2-Dichloropropane	0.1259	0.1430	14	TM		
31	TM*	Chloroform	0.1646	0.1928	17	TM*		
32	TM	Bromochloromethane	0.0752	0.0776	3.3	TM		
33	SL	Dibromofluoromethane(S)	0.4350	0.3239	26	SL	7.3	
34	TM	1,1,1-TCA	0.1373	0.1635	19	TM		
35	TM	Cyclohexane	0.1208	0.1100	9.0	TM		
36	TM	1,1-Dichloropropene	0.1127	0.1163	3.2	TM		
37	TM	2,2,4-Trimethylpentane	0.2125	0.2043	3.9	TM		
38	SL	1,2-DCA-D4(S)	0.4448	0.3810	14	SL	12	
39	TM	Carbon Tetrachloride	0.1193	0.1444	21	TM		* NT
40	TM	Tert Amyl Methyl Ether	0.2596	0.2653	2.2	TM		
		Average			11.9			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 03/11/20
Instrument: Thor
Cal. Date: 03/09/20
Data File: 0311t09.D

		Compound	MEAN	CCRF	%D	%Drift		
41	TM	1,2-DCA	0.1319	0.1644	25	TM		* NT
42	TM	Benzene	0.3692	0.3932	6.5	TM		
43	TM	TCE	0.1189	0.1281	7.7	TM		
44	TM	2-Pentanone	0.0658	0.0703	6.8	TM		
45	TM*	1,2-Dichloropropane	0.0998	0.1004	0.58	TM*		
46	TM	Bromodichloromethane	0.1288	0.1577	22	TM		* NT
47	TM	Methyl Cyclohexane	0.1270	0.1179	7.1	TM		
48	TM	Dibromomethane	0.0841	0.0970	15	TM		
49	TM	MIBK (methyl isobutyl ketone)	0.0969	0.0999	3.2	TM		
50	TM	1-Bromo-2-chloroethane	0.0688	0.0738	7.2	TM		
51	TM	Cis-1,3-Dichloropropene	0.1533	0.1665	8.6	TM		
52	TM*	Toluene	0.4307	0.4665	8.3	TM*		
53	TM	Trans-1,3-Dichloropropene	0.1370	0.1486	8.5	TM		
54	TM	1,1,2-TCA	0.0945	0.1051	11	TM		
55	TML	2-Hexanone	0.0607	0.0704	16	TML	9.9	
56	I	Chlorobenzene-D5 (IS)	ISTD			I		
57	SL	Toluene-D8(S)	2.113	1.422	33	SL	18	
58	TM	1,2-EDB	0.1176	0.1282	9.0	TM		
59	TM	Tetrachloroethene	0.1581	0.2277	44	TM		* NT
60	TM	1-Chlorohexane	0.1400	0.1418	1.2	TM		
61	TM	1,1,1,2-Tetrachloroethane	0.1323	0.1565	18	TM		
62	TM	m&p-Xylene	0.4336	0.4666	7.6	TM		
63	TM	o-Xylene	0.4652	0.5071	9.0	TM		
64	TM	Styrene	0.3624	0.3834	5.8	TM		
65	SL	4-Bromofluorobenzene(S)	0.8170	0.5852	28	SL	12	
66	TM	1,3-Dichloropropane	0.1933	0.2016	4.3	TM		
67	TM	Dibromochloromethane	0.1359	0.1575	16	TM		
68	TM**	Chlorobenzene	0.3674	0.3835	4.4	TM**		
69	TM*	Ethylbenzene	0.5696	0.5995	5.2	TM*		
70	TM**L	Bromoform	0.1013	0.1214	20	TM**L	7.5	
71	I	1,4-Dichlorobenzene-D (IS)	ISTD			I		
72	TM	Isopropylbenzene	0.9977	0.9844	1.3	TM		
73	TM**	1,1,2,2-Tetrachloroethane	0.2354	0.2500	6.2	TM**		
74	TM	1,2,3-Trichloropropane	0.0844	0.0909	7.6	TM		
75	TM	t-1,4-Dichloro-2-Butene	0.0475	0.0504	6.1	TM		
76	TM	Bromobenzene	0.5016	0.5357	6.8	TM		
77	TM	n-Propylbenzene	1.099	1.150	4.6	TM		
78	TM	4-Ethyltoluene	0.9546	0.9898	3.7	TM		
79	TM	2-Chlorotoluene	0.8009	0.8713	8.8	TM		
80	TM	1,3,5-Trimethylbenzene	0.8506	0.9116	7.2	TM		
		Average			10.8			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 03/11/20
Instrument: Thor
Cal. Date: 03/09/20
Data File: 0311t09.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	4-Chlorotoluene	0.8069	0.8944	11	TM	
82	TM	Tert-Butylbenzene	0.8363	0.8921	6.7	TM	
83	TM	1,2,4-Trimethylbenzene	0.8715	0.9075	4.1	TM	
84	TM	Sec-Butylbenzene	1.004	1.027	2.3	TM	
85	TM	p-Isopropyltoluene	0.8864	0.9117	2.9	TM	
86	TM	Benzyl Chloride	0.3111	0.2926	5.9	TM	
87	TM	1,3-DCB	0.5440	0.5887	8.2	TM	
88	TM	1,4-DCB	0.5577	0.5916	6.1	TM	
89	TM	n-Butylbenzene	0.6934	0.7342	5.9	TM	
90	TM	1,2-DCB	0.5402	0.5860	8.5	TM	
91	TM	Hexachloroethane	0.1614	0.1836	14	TM	
92	TM	1,2-Dibromo-3-chloropropane	0.0609	0.0654	7.5	TM	
93	TM	1,2,4-Trichlorobenzene	0.3465	0.3783	9.2	TM	
94	TM	Hexachlorobutadiene	0.1932	0.2068	7.1	TM	
95	TM	Naphthalene	0.0908	0.0865	4.7	TM	
96	TM	1,2,3-Trichlorobenzene	0.3371	0.3593	6.6	TM	
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			6.9		

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0311t09.D Vial: 3
Acq On : 11 Mar 20 12:18 Operator:
Sample : 200311A CCV/LCS 10ug/L Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 12 9:43 2020 Quant Results File: T0309W.RES

Quant Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.46	96	511672	25.00	ppb		0.00
66) Chlorobenzene-D5 (IS)	9.92	117	435046	25.00	ppb		0.00
81) 1,4-Dichlorobenzene-D (IS)	12.48	152	253740	25.00	ppb		0.00
System Monitoring Compounds							
41) Dibromofluoromethane(S)	5.60	111	165726	23.18	ppb		0.00
Spiked Amount 25.000			Recovery = 92.732%				
46) 1,2-DCA-D4(S)	6.02	65	194946	28.04	ppb		0.00
Spiked Amount 25.000			Recovery = 112.164%				
67) Toluene-D8(S)	8.33	98	618695	20.59	ppb		0.00
Spiked Amount 25.000			Recovery = 82.360%				
75) 4-Bromofluorobenzene(S)	11.21	95	254586	22.04	ppb		0.00
Spiked Amount 25.000			Recovery = 88.168%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.14	85	21656	11.35	ppb		96
4) Freon 114	1.24	85	15677	10.02	ppb		94
5) Chloromethane	1.28	50	22208	10.81	ppb		94
6) Vinyl chloride	1.37	62	17772	9.89	ppb		90
8) Bromomethane	1.64	94	10347	10.00	ppb		97
9) Chloroethane	1.74	66	2555	9.71	ppb	#	70
10) Dichlorofluoromethane	1.93	67	32027	11.21	ppb		93
11) Trichlorofluoromethane	1.98	101	31186	12.85	ppb		98
14) Acrolein	2.38	55	814	7.86	ppb	#	17
15) Acetone	2.56	43	3614	11.03	ppb		92
16) Freon-113	2.52	101	13954	9.97	ppb		88
17) 1,1-DCE	2.49	61	24359	10.77	ppb		97
19) Acetonitrile	2.85	40	6975	126.41	ppb		86
20) t-Butanol	3.28	59	8447	125.60	ppb		95
21) Methyl Acetate	2.97	43	12616	9.29	ppb		93
22) Iodomethane	2.64	142	5503	7.44	ppb	#	92
23) Acrylonitrile	3.37	52	5670	10.49	ppb	#	80
24) Methylene chloride	3.05	49	23488	10.40	ppb		95
25) Carbon disulfide	2.70	76	42170	9.68	ppb		98
26) Methyl t-butyl ether (MtBE	3.47	73	54241	10.77	ppb		97
27) Trans-1,2-DCE	3.43	61	23256	10.27	ppb		93
29) Diisopropyl Ether	4.28	45	52400	9.82	ppb	#	82
31) 1,1-DCA	4.05	63	35359	11.02	ppb		98
32) Vinyl Acetate	4.21	43	23661	7.57	ppb		100
33) Ethyl tert Butyl Ether	4.82	59	54686	10.15	ppb		96
34) MEK (2-Butanone)	4.98	43	9398	10.70	ppb		93
35) Cis-1,2-DCE	4.93	61	31264	11.16	ppb		94
36) 2,2-Dichloropropane	4.92	77	29262	11.35	ppb		91
39) Chloroform	5.40	83	39452	11.71	ppb		99
40) Bromochloromethane	5.25	49	15889	10.33	ppb		92
42) 1,1,1-TCA	5.61	97	33455	11.91	ppb		94
43) Cyclohexane	5.69	56	22509	9.10	ppb		98
44) 1,1-Dichloropropene	5.84	75	23810	10.32	ppb	#	92
45) 2,2,4-Trimethylpentane	6.27	57	41812	9.61	ppb		100
47) Carbon Tetrachloride	5.84	117	29558	12.11	ppb		97
48) Tert Amyl Methyl Ether	6.31	73	54290	10.22	ppb		93
50) 1,2-DCA	6.11	62	33650	12.47	ppb		96
51) Benzene	6.10	78	80481	10.65	ppb		95
52) TCE	6.91	130	26219	10.77	ppb		98

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0311t09.D Vial: 3
Acq On : 11 Mar 20 12:18 Operator:
Sample : 200311A CCV/LCS 10ug/L Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 12 9:43 2020 Quant Results File: T0309W.RES

Quant Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
53)	2-Pentanone	7.15	43	179942	133.54	ppb		98
54)	1,2-Dichloropropane	7.15	63	20554	10.06	ppb		99
55)	Bromodichloromethane	7.50	83	32272	12.24	ppb		96
56)	Methyl Cyclohexane	7.15	83	24139	9.29	ppb		98
57)	Dibromomethane	7.28	174	19861	11.53	ppb		98
58)	MIBK (methyl isobutyl ket	8.22	43	20456	10.32	ppb		96
59)	1-Bromo-2-chloroethane	7.83	63	15097	10.72	ppb		99
61)	Cis-1,3-Dichloropropene	8.02	75	34072	10.86	ppb		96
62)	Toluene	8.40	91	95479	10.83	ppb		91
63)	Trans-1,3-Dichloropropene	8.65	75	30411	10.85	ppb	#	89
64)	1,1,2-TCA	8.84	97	21504	11.11	ppb		100
65)	2-Hexanone	9.15	43	14410	10.99	ppb	#	94
68)	1,2-EDB	9.38	107	22302	10.90	ppb		95
69)	Tetrachloroethene	9.02	166	39620	14.40	ppb		91
70)	1-Chlorohexane	9.95	91	24671	10.12	ppb		94
71)	1,1,1,2-Tetrachloroethane	10.04	131	27232	11.83	ppb		96
72)	m&p-Xylene	10.22	91	162398	21.52	ppb		99
73)	o-Xylene	10.65	91	88250	10.90	ppb		100
74)	Styrene	10.66	104	66720	10.58	ppb		95
76)	1,3-Dichloropropane	9.03	76	35077	10.43	ppb		99
77)	Dibromochloromethane	9.27	129	27407	11.59	ppb		100
78)	Chlorobenzene	9.95	112	66732	10.44	ppb		99
79)	Ethylbenzene	10.09	91	104318	10.52	ppb		98
80)	Bromoform	10.83	173	21120	10.75	ppb		91
82)	Isopropylbenzene	11.06	105	99909	9.87	ppb		97
83)	1,1,2,2-Tetrachloroethane	11.36	83	25377	10.62	ppb		98
84)	1,2,3-Trichloropropane	11.40	110	9223	10.76	ppb		93
85)	t-1,4-Dichloro-2-Butene	11.42	53	5119	10.61	ppb		87
86)	Bromobenzene	11.36	77	54373	10.68	ppb		93
87)	n-Propylbenzene	11.51	91	116761	10.46	ppb		99
88)	4-Ethyltoluene	11.64	105	100459	10.37	ppb		99
89)	2-Chlorotoluene	11.59	91	88437	10.88	ppb		91
90)	1,3,5-Trimethylbenzene	11.70	105	92523	10.72	ppb		97
91)	4-Chlorotoluene	11.71	91	90777	11.08	ppb		99
92)	Tert-Butylbenzene	12.06	119	90544	10.67	ppb		90
93)	1,2,4-Trimethylbenzene	12.11	105	92109	10.41	ppb		99
94)	Sec-Butylbenzene	12.30	105	104240	10.23	ppb		96
95)	p-Isopropyltoluene	12.46	119	92534	10.29	ppb		97
96)	Benzyl Chloride	12.65	91	29698	9.41	ppb		98
97)	1,3-DCB	12.40	146	59747	10.82	ppb		98
98)	1,4-DCB	12.50	146	60043	10.61	ppb		98
99)	n-Butylbenzene	12.91	91	74517	10.59	ppb		96
100)	1,2-DCB	12.90	146	59474	10.85	ppb		98
101)	Hexachloroethane	13.20	201	18637	11.38	ppb		95
102)	1,2-Dibromo-3-chloropropan	13.75	157	6639	10.75	ppb		97
103)	1,2,4-Trichlorobenzene	14.67	180	38394	10.92	ppb		89
104)	Hexachlorobutadiene	14.88	225	20993	10.71	ppb		93
105)	Naphthalene	14.94	127	8779	9.53	ppb		84
106)	1,2,3-Trichlorobenzene	15.20	180	36472	10.66	ppb		94

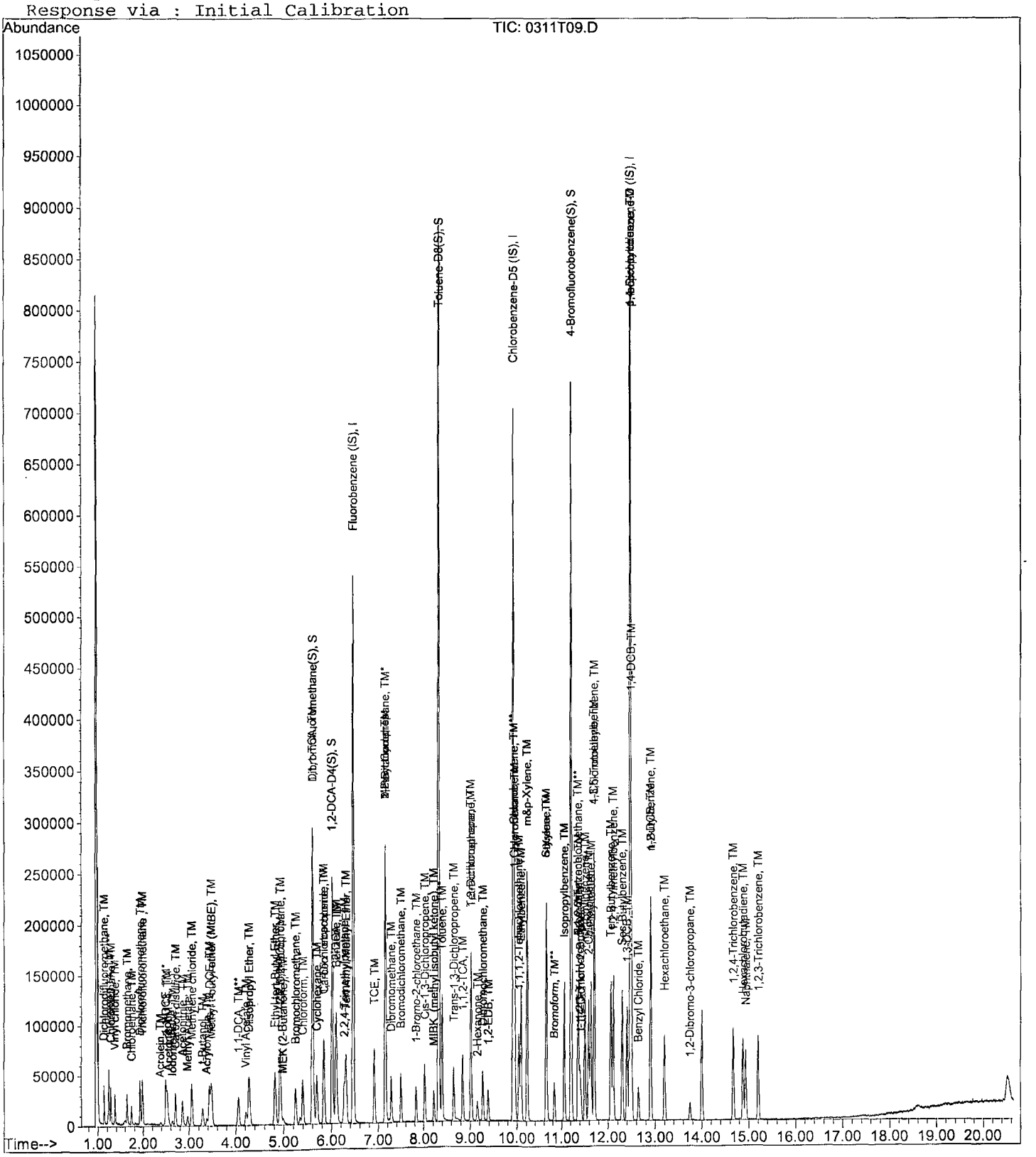
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200309\0311t09.D Vial: 3
Acq On : 11 Mar 20 12:18 Operator:
Sample : 200311A CCV/LCS 10ug/L Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 12 9:43 2020 Quant Results File: T0309W.RES

Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 03/11/20
Matrix: Instrument: Thor
Initial Cal. Date: 03/09/20
Data File: 0311t24.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TM	Dichlorodifluoromethane	0.0932	0.0919	1.4	TM	
3	TM	Freon 114	0.0764	0.0752	1.6	TM	
4	TM**	Chloromethane	0.1004	0.0913	9.1	TM**	
5	TM*	Vinyl chloride	0.0878	0.0786	10	TM*	
6	TML	Bromomethane	0.0554	0.0469	15	TML	9.1
7	TM	Chloroethane	0.0129	0.0131	2.0	TM	
8	TM	Dichlorofluoromethane	0.1396	0.1580	13	TM	
9	TM	Trichlorofluoromethane	0.1186	0.1478	25	TM	
10	TM	Acrolein	0.0051	0.0049	4.1	TM	
11	TML	Acetone	0.0236	0.0186	21	TML	17
12	TM	Freon-113	0.0684	0.0700	2.3	TM	
13	TM*	1,1-DCE	0.1105	0.1135	2.7	TM*	
14	TM	2-Propanol	0.0000	0.0102	0.00	TM	
15	TM	Acetonitrile	0.0027	0.0028	2.1	TM	
16	TM	t-Butanol	0.0033	0.0032	2.3	TM	
17	TM	Methyl Acetate	0.0663	0.0618	6.8	TM	
18	TMQ	Iodomethane	0.0390	0.0208	47	TMQ	36
19	TML	Acrylonitrile	0.0241	0.0267	11	TML	1.5
20	TM	Methylene chloride	0.1103	0.1143	3.6	TM	
21	TM	Carbon disulfide	0.2128	0.2002	5.9	TM	
22	TM	Methyl t-butyl ether (MtBE)	0.2461	0.2650	7.7	TM	
23	TM	Trans-1,2-DCE	0.1106	0.1136	2.7	TM	
24	TM	Diisopropyl Ether	0.2607	0.2507	3.8	TM	
25	TM**	1,1-DCA	0.1567	0.1633	4.2	TM**	
26	TM	Vinyl Acetate	0.1526	0.1246	18	TM	
27	TM	Ethyl tert Butyl Ether	0.2634	0.2624	0.36	TM	
28	TML	MEK (2-Butanone)	0.0484	0.0452	6.6	TML	5.4
29	TM	Cis-1,2-DCE	0.1369	0.1487	8.7	TM	
30	TM	2,2-Dichloropropane	0.1259	0.1328	5.5	TM	
31	TM*	Chloroform	0.1646	0.1946	18	TM*	
32	TM	Bromochloromethane	0.0752	0.0789	4.9	TM	
33	SL	Dibromofluoromethane(S)	0.4350	0.3347	23	SL	3.0
34	TM	1,1,1-TCA	0.1373	0.1728	26	TM	
35	TM	Cyclohexane	0.1208	0.1087	10.0	TM	
36	TM	1,1-Dichloropropene	0.1127	0.1247	11	TM	
37	TM	2,2,4-Trimethylpentane	0.2125	0.1941	8.7	TM	
38	SL	1,2-DCA-D4(S)	0.4448	0.3894	12	SL	15
39	TM	Carbon Tetrachloride	0.1193	0.1515	27	TM	
40	TM	Tert Amyl Methyl Ether	0.2596	0.2535	2.3	TM	
		Average			9.9		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 03/11/20
Matrix: 0 Instrument: Thor
Cal. Date: 03/09/20
Data File: 0311t24.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	1,2-DCA	0.1319	0.1648	25	TM	
42	TM	Benzene	0.3692	0.3846	4.2	TM	
43	TM	TCE	0.1189	0.1298	9.2	TM	
44	TM	2-Pentanone	0.0658	0.0684	3.8	TM	
45	TM*	1,2-Dichloropropane	0.0998	0.0996	0.28	TM*	
46	TM	Bromodichloromethane	0.1288	0.1566	22	TM	
47	TM	Methyl Cyclohexane	0.1270	0.1194	6.0	TM	
48	TM	Dibromomethane	0.0841	0.0983	17	TM	
49	TM	MIBK (methyl isobutyl ketone)	0.0969	0.1002	3.5	TM	
50	TM	1-Bromo-2-chloroethane	0.0688	0.0709	3.0	TM	
51	TM	Cis-1,3-Dichloropropene	0.1533	0.1606	4.8	TM	
52	TM*	Toluene	0.4307	0.4613	7.1	TM*	
53	TM	Trans-1,3-Dichloropropene	0.1370	0.1501	9.6	TM	
54	TM	1,1,2-TCA	0.0945	0.1073	14	TM	
55	TML	2-Hexanone	0.0607	0.0682	12	TML	6.9
56	I	Chlorobenzene-D5 (IS)	ISTD			I	
57	SL	Toluene-D8(S)	2.113	1.424	33	SL	17
58	TM	1,2-EDB	0.1176	0.1246	6.0	TM	
59	TM	Tetrachloroethene	0.1581	0.1783	13	TM	
60	TM	1-Chlorohexane	0.1400	0.1389	0.83	TM	
61	TM	1,1,1,2-Tetrachloroethane	0.1323	0.1526	15	TM	
62	TM	m&p-Xylene	0.4336	0.4498	3.7	TM	
63	TM	o-Xylene	0.4652	0.4768	2.5	TM	
64	TM	Styrene	0.3624	0.3770	4.0	TM	
65	SL	4-Bromofluorobenzene(S)	0.8170	0.5819	29	SL	13
66	TM	1,3-Dichloropropane	0.1933	0.1979	2.4	TM	
67	TM	Dibromochloromethane	0.1359	0.1621	19	TM	
68	TM**	Chlorobenzene	0.3674	0.3721	1.3	TM**	
69	TM*	Ethylbenzene	0.5696	0.5819	2.2	TM*	
70	TM**L	Bromoform	0.1013	0.1179	16	TM**L	4.8
71	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
72	TM	Isopropylbenzene	0.9977	0.9936	0.41	TM	
73	TM**	1,1,2,2-Tetrachloroethane	0.2354	0.2422	2.9	TM**	
74	TM	1,2,3-Trichloropropane	0.0844	0.0967	15	TM	
75	TM	t-1,4-Dichloro-2-Butene	0.0475	0.0454	4.5	TM	
76	TM	Bromobenzene	0.5016	0.5169	3.0	TM	
77	TM	n-Propylbenzene	1.099	1.079	1.9	TM	
78	TM	4-Ethyltoluene	0.9546	0.9529	0.17	TM	
79	TM	2-Chlorotoluene	0.8009	0.8126	1.5	TM	
80	TM	1,3,5-Trimethylbenzene	0.8506	0.8847	4.0	TM	
		Average			8.5		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 03/11/20
Instrument: Thor
Cal. Date: 03/09/20
Data File: 0311t24.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	4-Chlorotoluene	0.8069	0.8276	2.6	TM	
82	TM	Tert-Butylbenzene	0.8363	0.8620	3.1	TM	
83	TM	1,2,4-Trimethylbenzene	0.8715	0.8630	0.98	TM	
84	TM	Sec-Butylbenzene	1.004	0.9975	0.61	TM	
85	TM	p-Isopropyltoluene	0.8864	0.9058	2.2	TM	
86	TM	Benzyl Chloride	0.3111	0.2577	17	TM	
87	TM	1,3-DCB	0.5440	0.5813	6.9	TM	
88	TM	1,4-DCB	0.5577	0.5621	0.80	TM	
89	TM	n-Butylbenzene	0.6934	0.6613	4.6	TM	
90	TM	1,2-DCB	0.5402	0.5604	3.7	TM	
91	TM	Hexachloroethane	0.1614	0.1701	5.4	TM	
92	TM	1,2-Dibromo-3-chloropropane	0.0609	0.0663	8.8	TM	
93	TM	1,2,4-Trichlorobenzene	0.3465	0.3495	0.86	TM	
94	TM	Hexachlorobutadiene	0.1932	0.2095	8.5	TM	
95	TM	Naphthalene	0.0908	0.0816	10	TM	
96	TM	1,2,3-Trichlorobenzene	0.3371	0.3437	2.0	TM	
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			4.9		

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0311t24.D Vial: 18
Acq On : 11 Mar 20 19:44 Operator:
Sample : Ending CCV 10ug/L 3/11/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 12 9:43 2020 Quant Results File: T0309W.RES

Quant Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.46	96	509850	25.00	ppb		0.00
66) Chlorobenzene-D5 (IS)	9.92	117	439795	25.00	ppb		0.00
81) 1,4-Dichlorobenzene-D (IS)	12.48	152	259394	25.00	ppb		0.00
System Monitoring Compounds							
41) Dibromofluoromethane(S)	5.60	111	170654	24.25	ppb		0.00
Spiked Amount 25.000			Recovery = 96.984%				
46) 1,2-DCA-D4(S)	6.02	65	198530	28.85	ppb		0.00
Spiked Amount 25.000			Recovery = 115.416%				
67) Toluene-D8(S)	8.33	98	626342	20.63	ppb		0.00
Spiked Amount 25.000			Recovery = 82.536%				
75) 4-Bromofluorobenzene(S)	11.21	95	255899	21.87	ppb		0.00
Spiked Amount 25.000			Recovery = 87.480%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.13	85	18744	9.86	ppb		99
4) Freon 114	1.24	85	15341	9.84	ppb		95
5) Chloromethane	1.28	50	18616	9.09	ppb		99
6) Vinyl chloride	1.37	62	16034	8.95	ppb		95
8) Bromomethane	1.64	94	9560	9.09	ppb		87
9) Chloroethane	1.74	66	2674	10.20	ppb		89
10) Dichlorofluoromethane	1.93	67	32221	11.32	ppb		98
11) Trichlorofluoromethane	1.98	101	30150	12.47	ppb		99
14) Acrolein	2.38	55	12376	119.90	ppb		95
15) Acetone	2.56	43	3801	11.72	ppb		91
16) Freon-113	2.52	101	14275	10.23	ppb		92
17) 1,1-DCE	2.49	61	23151	10.27	ppb		98
19) Acetonitrile	2.85	40	7016	127.61	ppb		79
20) t-Butanol	3.28	59	8181	122.08	ppb		93
21) Methyl Acetate	2.96	43	12607	9.32	ppb		99
22) Iodomethane	2.64	142	4250	6.44	ppb		93
23) Acrylonitrile	3.37	52	5451	10.15	ppb	#	79
24) Methylene chloride	3.06	49	23317	10.36	ppb		98
25) Carbon disulfide	2.71	76	40822	9.41	ppb		99
26) Methyl t-butyl ether (MtBE	3.48	73	54052	10.77	ppb		100
27) Trans-1,2-DCE	3.43	61	23174	10.27	ppb		99
29) Diisopropyl Ether	4.28	45	51121	9.62	ppb		93
31) 1,1-DCA	4.05	63	33304	10.42	ppb		94
32) Vinyl Acetate	4.22	43	25414	8.16	ppb		95
33) Ethyl tert Butyl Ether	4.82	59	53514	9.96	ppb		100
34) MEK (2-Butanone)	4.99	43	9219	10.54	ppb		92
35) Cis-1,2-DCE	4.93	61	30331	10.87	ppb		98
36) 2,2-Dichloropropane	4.93	77	27080	10.55	ppb		91
39) Chloroform	5.40	83	39688	11.82	ppb		97
40) Bromochloromethane	5.25	49	16083	10.49	ppb		96
42) 1,1,1-TCA	5.62	97	35238	12.59	ppb		92
43) Cyclohexane	5.69	56	22178	9.00	ppb		93
44) 1,1-Dichloropropene	5.85	75	25428	11.06	ppb		95
45) 2,2,4-Trimethylpentane	6.27	57	39583	9.13	ppb		98
47) Carbon Tetrachloride	5.84	117	30900	12.70	ppb		90
48) Tert Amyl Methyl Ether	6.31	73	51708	9.77	ppb		97
50) 1,2-DCA	6.11	62	33612	12.50	ppb	#	93
51) Benzene	6.09	78	78426	10.42	ppb		95
52) TCE	6.91	130	26479	10.92	ppb		92

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0311t24.D Vial: 18
Acq On : 11 Mar 20 19:44 Operator:
Sample : Ending CCV 10ug/L 3/11/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 12 9:43 2020 Quant Results File: T0309W.RES

Quant Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

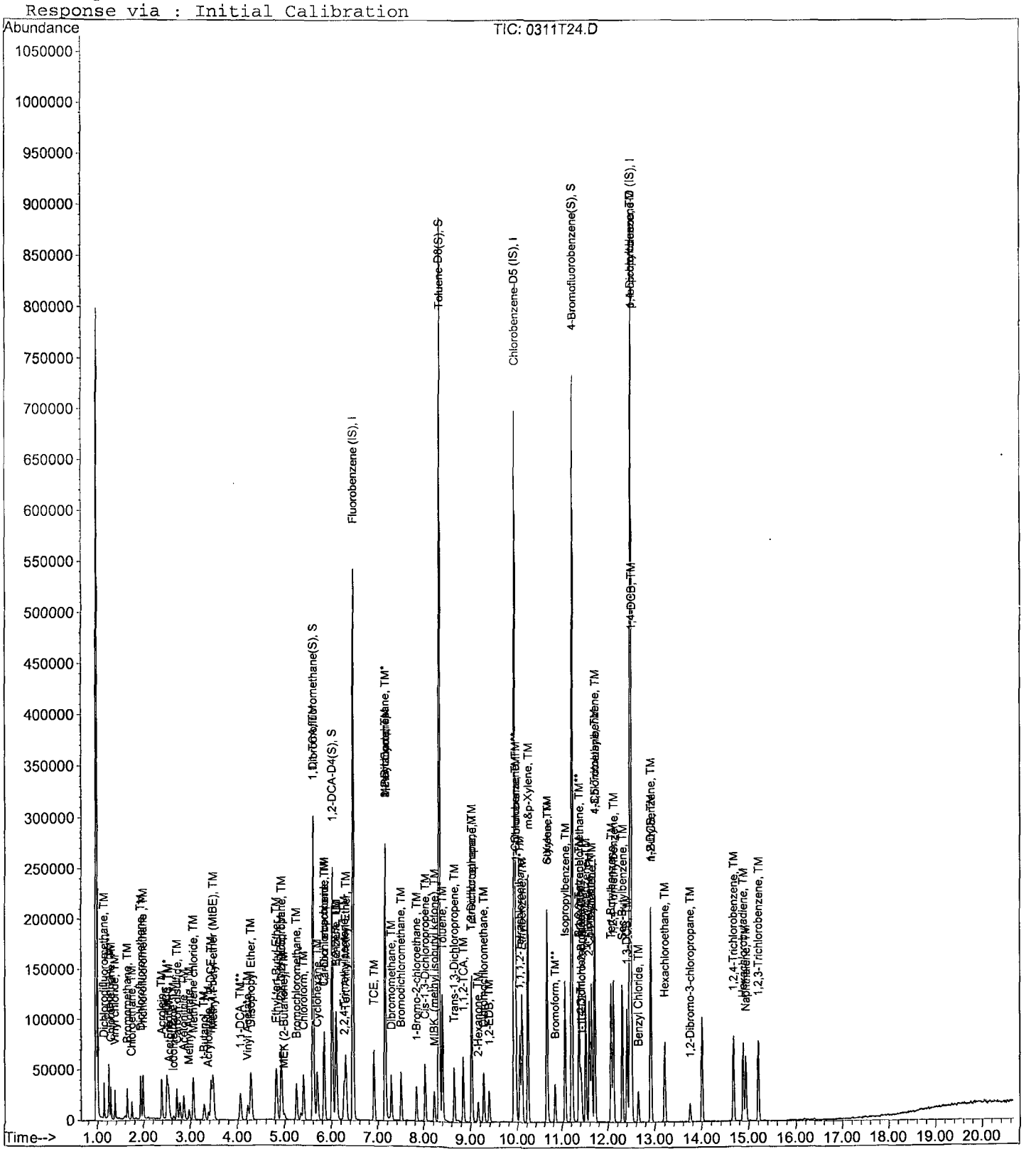
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
53)	2-Pentanone	7.15	43	174289	129.81	ppb		94
54)	1,2-Dichloropropane	7.16	63	20306	9.97	ppb	#	97
55)	Bromodichloromethane	7.50	83	31946	12.16	ppb		93
56)	Methyl Cyclohexane	7.15	83	24354	9.40	ppb		95
57)	Dibromomethane	7.29	174	20057	11.69	ppb		95
58)	MIBK (methyl isobutyl ket	8.22	43	20441	10.35	ppb		98
59)	1-Bromo-2-chloroethane	7.83	63	14450	10.30	ppb		97
61)	Cis-1,3-Dichloropropene	8.02	75	32753	10.48	ppb		93
62)	Toluene	8.40	91	94071	10.71	ppb		96
63)	Trans-1,3-Dichloropropene	8.65	75	30607	10.96	ppb		95
64)	1,1,2-TCA	8.85	97	21884	11.35	ppb		94
65)	2-Hexanone	9.15	43	13906	10.69	ppb		98
68)	1,2-EDB	9.38	107	21925	10.60	ppb	#	91
69)	Tetrachloroethene	9.02	166	31358	11.28	ppb		95
70)	1-Chlorohexane	9.95	91	24432	9.92	ppb		97
71)	1,1,1,2-Tetrachloroethane	10.04	131	26837	11.53	ppb		97
72)	m&p-Xylene	10.22	91	158241	20.74	ppb		98
73)	o-Xylene	10.65	91	83884	10.25	ppb		99
74)	Styrene	10.66	104	66318	10.40	ppb		97
76)	1,3-Dichloropropane	9.03	76	34816	10.24	ppb		95
77)	Dibromochloromethane	9.27	129	28513	11.93	ppb		95
78)	Chlorobenzene	9.95	112	65463	10.13	ppb		98
79)	Ethylbenzene	10.09	91	102375	10.22	ppb		99
80)	Bromoform	10.84	173	20742	10.48	ppb		90
82)	Isopropylbenzene	11.06	105	103095	9.96	ppb		100
83)	1,1,2,2-Tetrachloroethane	11.36	83	25130	10.29	ppb		98
84)	1,2,3-Trichloropropane	11.41	110	10035	11.46	ppb		88
85)	t-1,4-Dichloro-2-Butene	11.43	53	4709	9.55	ppb		94
86)	Bromobenzene	11.37	77	53631	10.30	ppb		98
87)	n-Propylbenzene	11.51	91	111914	9.81	ppb		97
88)	4-Ethyltoluene	11.64	105	98872	9.98	ppb		97
89)	2-Chlorotoluene	11.59	91	84316	10.15	ppb		97
90)	1,3,5-Trimethylbenzene	11.71	105	91790	10.40	ppb		97
91)	4-Chlorotoluene	11.71	91	85871	10.26	ppb		99
92)	Tert-Butylbenzene	12.06	119	89441	10.31	ppb		98
93)	1,2,4-Trimethylbenzene	12.11	105	89538	9.90	ppb		98
94)	Sec-Butylbenzene	12.31	105	103499	9.94	ppb		99
95)	p-Isopropyltoluene	12.47	119	93981	10.22	ppb		100
96)	Benzyl Chloride	12.65	91	26737	8.28	ppb		96
97)	1,3-DCB	12.40	146	60311	10.69	ppb		95
98)	1,4-DCB	12.50	146	58324	10.08	ppb		100
99)	n-Butylbenzene	12.91	91	68616	9.54	ppb		97
100)	1,2-DCB	12.91	146	58150	10.37	ppb		95
101)	Hexachloroethane	13.20	201	17644	10.54	ppb		95
102)	1,2-Dibromo-3-chloropropan	13.75	157	6874	10.88	ppb		99
103)	1,2,4-Trichlorobenzene	14.67	180	36262	10.09	ppb		97
104)	Hexachlorobutadiene	14.88	225	21741	10.85	ppb	#	89
105)	Naphthalene	14.94	127	8468	8.99	ppb		76
106)	1,2,3-Trichlorobenzene	15.21	180	35663	10.20	ppb		96

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

Data File : M:\THOR\DATA\T200309\0311t24.D Vial: 18
Acq On : 11 Mar 20 19:44 Operator:
Sample : Ending CCV 10ug/L 3/11/20 Inst : Thor
Misc : *IS&S 2/6/20, 2/19/20* *Multiplr: 1.00*

Quant Time: Mar 12 9:43 2020 Quant Results File: T0309W.RES

Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration



ORGANICS
Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200309\0311T19.D Vial: 13
Acq On : 11 Mar 20 17:22 Operator:
Sample : BA08033W02 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 12 10:19 2020 Quant Results File: T0309W.RES

Quant Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	497886	25.00	ppb	0.00
66) Chlorobenzene-D5 (IS)	9.92	117	423033	25.00	ppb	0.00
81) 1,4-Dichlorobenzene-D (IS)	12.48	152	230076	25.00	ppb	0.00
System Monitoring Compounds						
41) Dibromofluoromethane(S)	5.60	111	174395	25.77	ppb	0.00
Spiked Amount 25.000			Recovery =	103.096%		
46) 1,2-DCA-D4(S)	6.02	65	203546	30.74	ppb	0.00
Spiked Amount 25.000			Recovery =	122.940%		
67) Toluene-D8(S)	8.33	98	630842	22.10	ppb	0.00
Spiked Amount 25.000			Recovery =	88.388%		
75) 4-Bromofluorobenzene(S)	11.21	95	246178	21.87	ppb	0.00
Spiked Amount 25.000			Recovery =	87.496%		

Target Compounds Qvalue

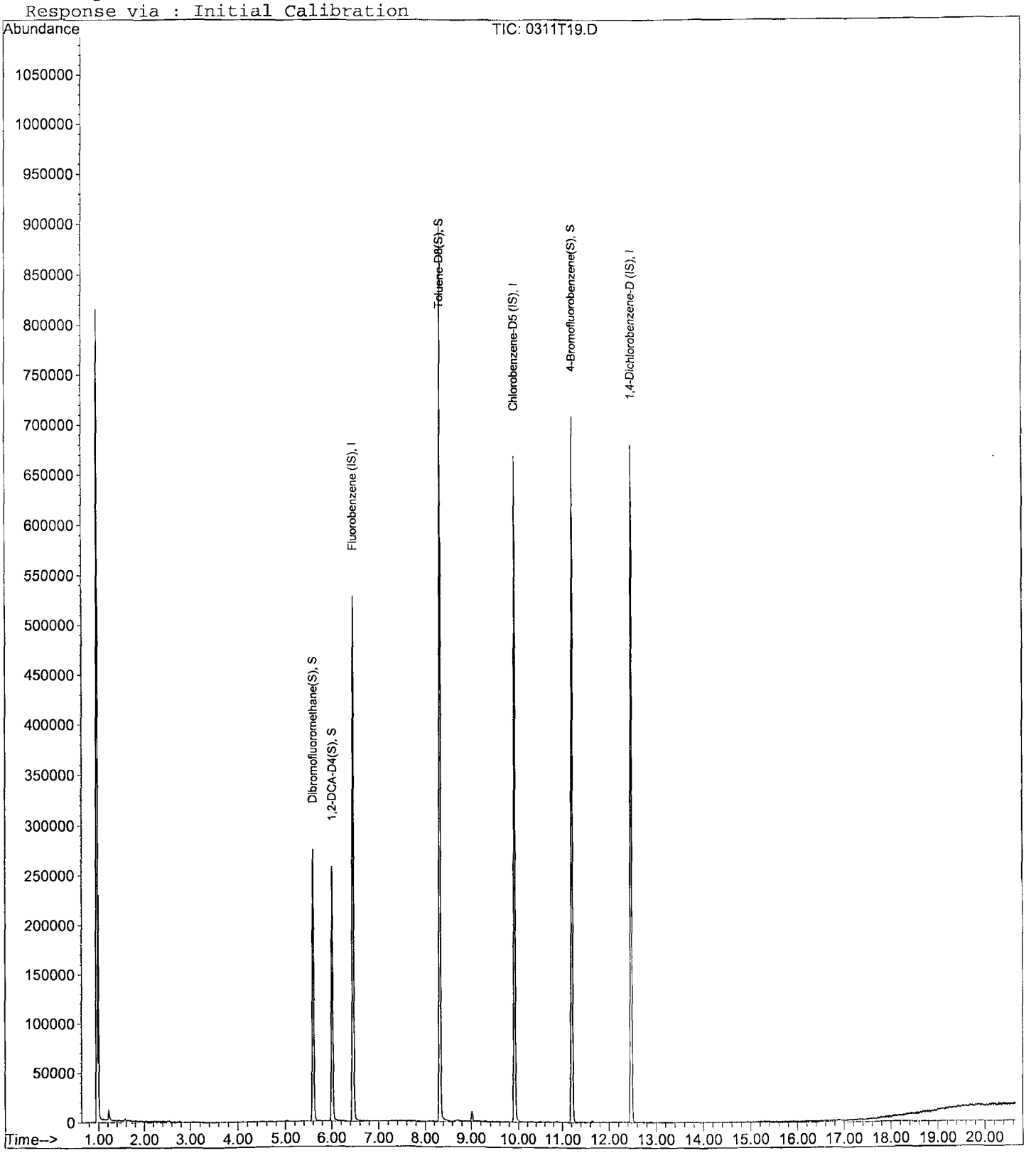
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200309\0311T19.D Vial: 13
Acq On : 11 Mar 20 17:22 Operator:
Sample : BA08033W02 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 12 10:19 2020 Quant Results File: T0309W.RES

Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200309\0311T20.D Vial: 14
Acq On : 11 Mar 20 17:50 Operator:
Sample : BA08034W02 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 12 10:21 2020 Quant Results File: T0309W.RES

Quant Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	500750	25.00	ppb	0.00
66) Chlorobenzene-D5 (IS)	9.92	117	427853	25.00	ppb	0.00
81) 1,4-Dichlorobenzene-D (IS)	12.48	152	236893	25.00	ppb	0.00
System Monitoring Compounds						
41) Dibromofluoromethane(S)	5.60	111	179046	26.49	ppb	0.00
Spiked Amount 25.000			Recovery =	105.956%		
46) 1,2-DCA-D4(S)	6.02	65	209611	31.68	ppb	0.00
Spiked Amount 25.000			Recovery =	126.728%		
67) Toluene-D8(S)	8.33	98	641634	22.28	ppb	0.00
Spiked Amount 25.000			Recovery =	89.120%		
75) 4-Bromofluorobenzene(S)	11.21	95	252248	22.27	ppb	0.00
Spiked Amount 25.000			Recovery =	89.072%		

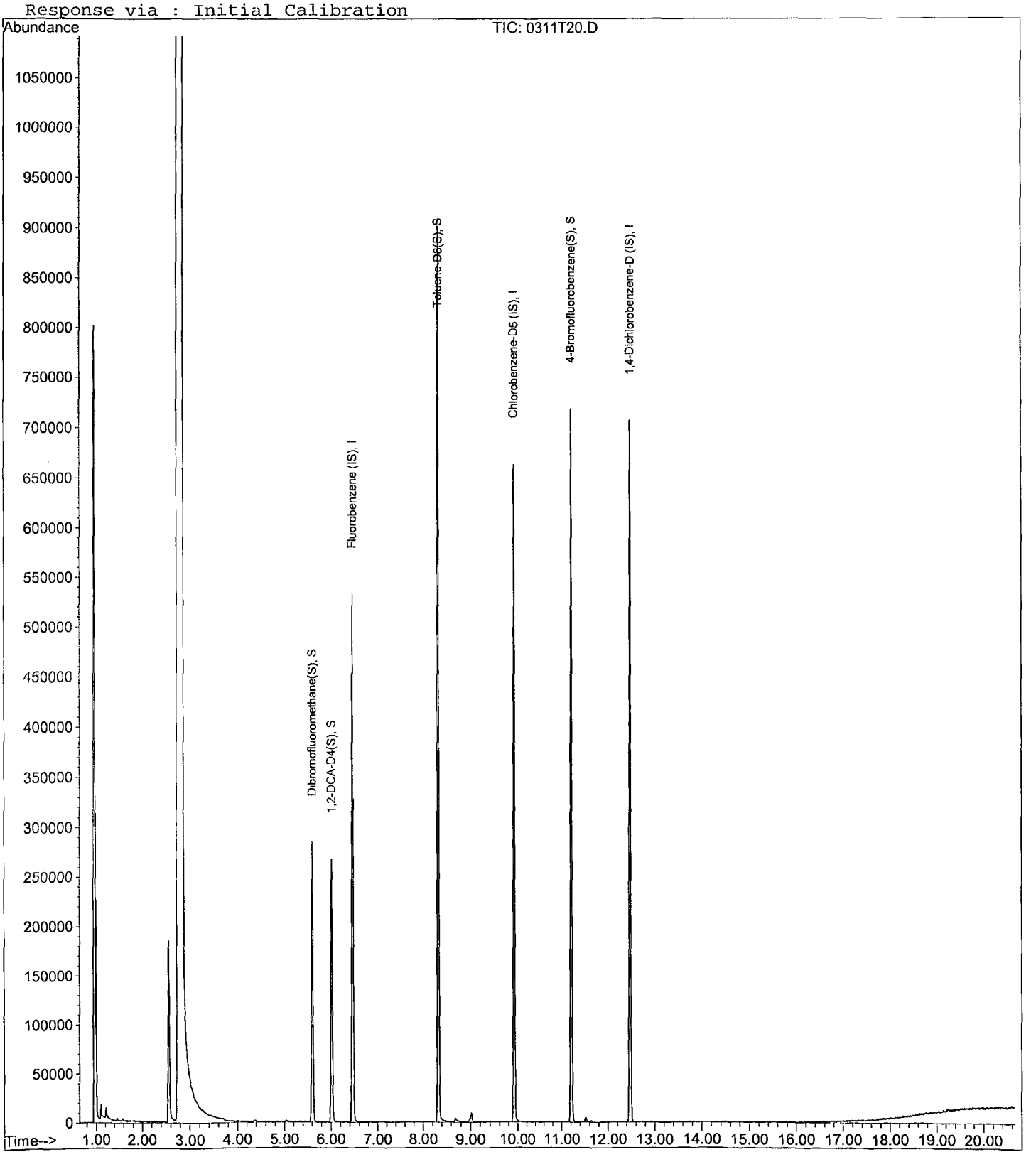
Target Compounds Qvalue

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

Data File : M:\THOR\DATA\T200309\0311T20.D Vial: 14
Acq On : 11 Mar 20 17:50 Operator:
Sample : BA08034W02 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 12 10:21 2020 Quant Results File: T0309W.RES

Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200309\0311t18.D Vial: 12
Acq On : 11 Mar 20 16:53 Operator:
Sample : 200311A BLK Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 12 10:16 2020 Quant Results File: T0309W.RES

Quant Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	499468	25.00	ppb	0.00
66) Chlorobenzene-D5 (IS)	9.92	117	427620	25.00	ppb	0.00
81) 1,4-Dichlorobenzene-D (IS)	12.48	152	231567	25.00	ppb	0.00
System Monitoring Compounds						
41) Dibromofluoromethane(S)	5.60	111	176084	26.00	ppb	0.00
Spiked Amount 25.000			Recovery =	103.988%		
46) 1,2-DCA-D4(S)	6.02	65	206208	31.13	ppb	0.00
Spiked Amount 25.000			Recovery =	124.504%		
67) Toluene-D8(S)	8.33	98	633382	21.88	ppb	0.00
Spiked Amount 25.000			Recovery =	87.508%		
75) 4-Bromofluorobenzene(S)	11.21	95	249587	21.96	ppb	0.00
Spiked Amount 25.000			Recovery =	87.852%		

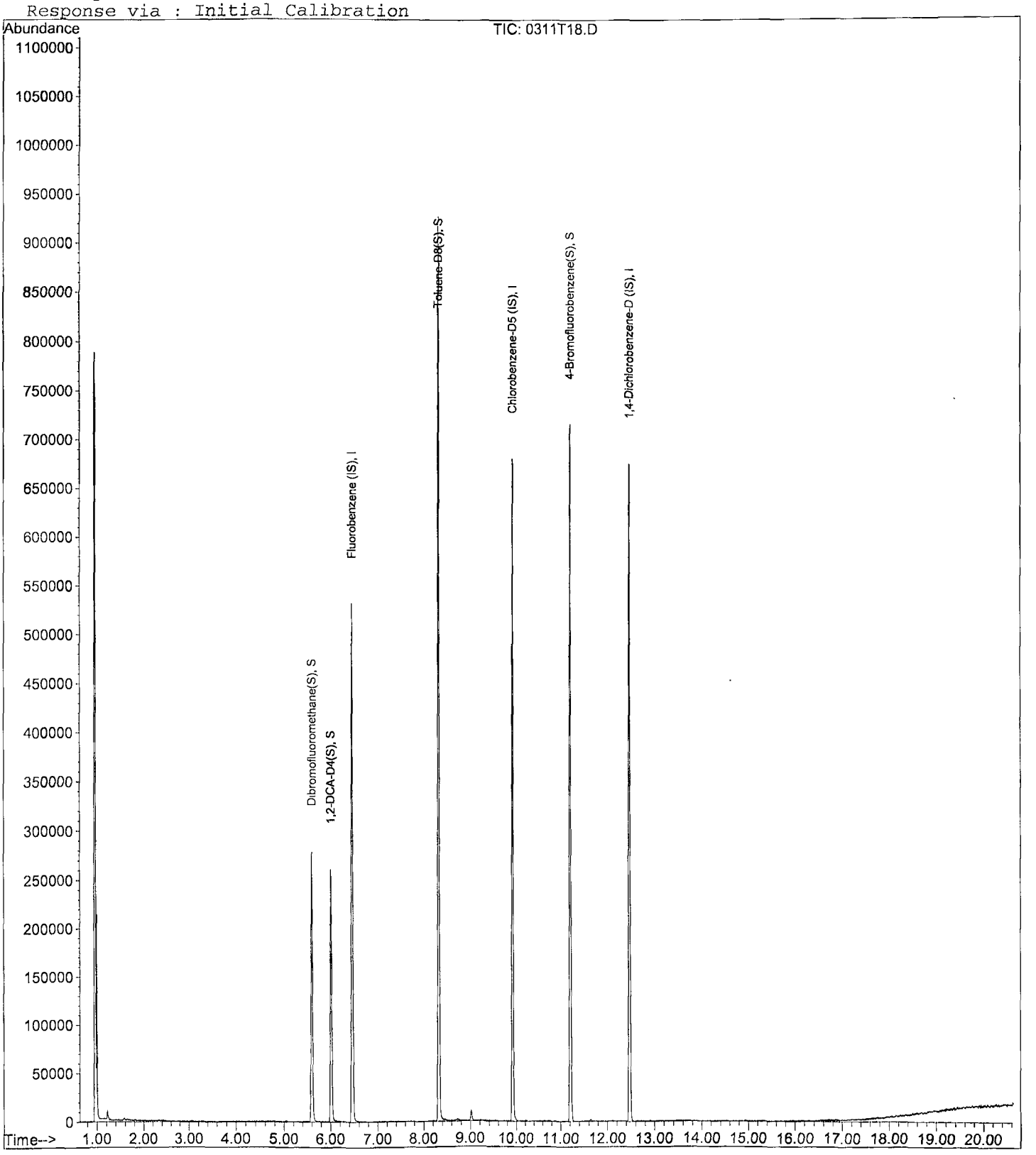
Target Compounds Qvalue

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

Data File : M:\THOR\DATA\T200309\0311t18.D Vial: 12
Acq On : 11 Mar 20 16:53 Operator:
Sample : 200311A BLK Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 12 10:16 2020 Quant Results File: T0309W.RES

Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0311t09.D Vial: 3
Acq On : 11 Mar 20 12:18 Operator:
Sample : 200311A CCV/LCS 10ug/L Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 12 9:43 2020 Quant Results File: T0309W.RES

Quant Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.46	96	511672	25.00	ppb		0.00
66) Chlorobenzene-D5 (IS)	9.92	117	435046	25.00	ppb		0.00
81) 1,4-Dichlorobenzene-D (IS)	12.48	152	253740	25.00	ppb		0.00
System Monitoring Compounds							
41) Dibromofluoromethane(S)	5.60	111	165726	23.18	ppb		0.00
Spiked Amount 25.000			Recovery = 92.732%				
46) 1,2-DCA-D4(S)	6.02	65	194946	28.04	ppb		0.00
Spiked Amount 25.000			Recovery = 112.164%				
67) Toluene-D8(S)	8.33	98	618695	20.59	ppb		0.00
Spiked Amount 25.000			Recovery = 82.360%				
75) 4-Bromofluorobenzene(S)	11.21	95	254586	22.04	ppb		0.00
Spiked Amount 25.000			Recovery = 88.168%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.14	85	21656	11.35	ppb		96
4) Freon 114	1.24	85	15677	10.02	ppb		94
5) Chloromethane	1.28	50	22208	10.81	ppb		94
6) Vinyl chloride	1.37	62	17772	9.89	ppb		90
8) Bromomethane	1.64	94	10347	10.00	ppb		97
9) Chloroethane	1.74	66	2555	9.71	ppb	#	70
10) Dichlorofluoromethane	1.93	67	32027	11.21	ppb		93
11) Trichlorofluoromethane	1.98	101	31186	12.85	ppb		98
14) Acrolein	2.38	55	814	7.86	ppb	#	17
15) Acetone	2.56	43	3614	11.03	ppb		92
16) Freon-113	2.52	101	13954	9.97	ppb		88
17) 1,1-DCE	2.49	61	24359	10.77	ppb		97
19) Acetonitrile	2.85	40	6975	126.41	ppb		86
20) t-Butanol	3.28	59	8447	125.60	ppb		95
21) Methyl Acetate	2.97	43	12616	9.29	ppb		93
22) Iodomethane	2.64	142	5503	7.44	ppb	#	92
23) Acrylonitrile	3.37	52	5670	10.49	ppb	#	80
24) Methylene chloride	3.05	49	23488	10.40	ppb		95
25) Carbon disulfide	2.70	76	42170	9.68	ppb		98
26) Methyl t-butyl ether (MtBE	3.47	73	54241	10.77	ppb		97
27) Trans-1,2-DCE	3.43	61	23256	10.27	ppb		93
29) Diisopropyl Ether	4.28	45	52400	9.82	ppb	#	82
31) 1,1-DCA	4.05	63	35359	11.02	ppb		98
32) Vinyl Acetate	4.21	43	23661	7.57	ppb		100
33) Ethyl tert Butyl Ether	4.82	59	54686	10.15	ppb		96
34) MEK (2-Butanone)	4.98	43	9398	10.70	ppb		93
35) Cis-1,2-DCE	4.93	61	31264	11.16	ppb		94
36) 2,2-Dichloropropane	4.92	77	29262	11.35	ppb		91
39) Chloroform	5.40	83	39452	11.71	ppb		99
40) Bromochloromethane	5.25	49	15889	10.33	ppb		92
42) 1,1,1-TCA	5.61	97	33455	11.91	ppb		94
43) Cyclohexane	5.69	56	22509	9.10	ppb		98
44) 1,1-Dichloropropene	5.84	75	23810	10.32	ppb	#	92
45) 2,2,4-Trimethylpentane	6.27	57	41812	9.61	ppb		100
47) Carbon Tetrachloride	5.84	117	29558	12.11	ppb		97
48) Tert Amyl Methyl Ether	6.31	73	54290	10.22	ppb		93
50) 1,2-DCA	6.11	62	33650	12.47	ppb		96
51) Benzene	6.10	78	80481	10.65	ppb		95
52) TCE	6.91	130	26219	10.77	ppb		98

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0311t09.D Vial: 3
Acq On : 11 Mar 20 12:18 Operator:
Sample : 200311A CCV/LCS 10ug/L Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 12 9:43 2020 Quant Results File: T0309W.RES

Quant Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

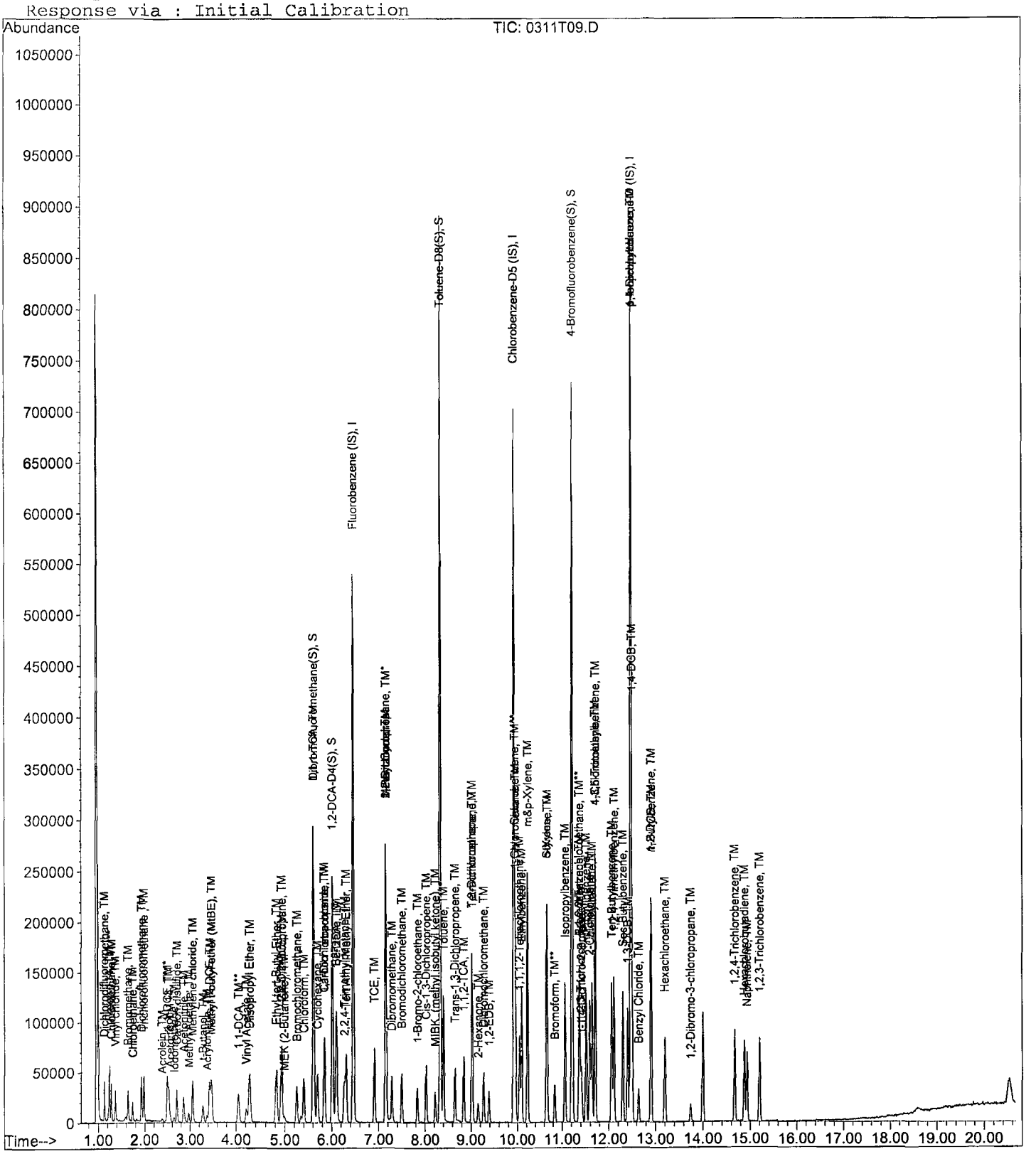
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
53)	2-Pentanone	7.15	43	179942	133.54	ppb		98
54)	1,2-Dichloropropane	7.15	63	20554	10.06	ppb		99
55)	Bromodichloromethane	7.50	83	32272	12.24	ppb		96
56)	Methyl Cyclohexane	7.15	83	24139	9.29	ppb		98
57)	Dibromomethane	7.28	174	19861	11.53	ppb		98
58)	MIBK (methyl isobutyl ket	8.22	43	20456	10.32	ppb		96
59)	1-Bromo-2-chloroethane	7.83	63	15097	10.72	ppb		99
61)	Cis-1,3-Dichloropropene	8.02	75	34072	10.86	ppb		96
62)	Toluene	8.40	91	95479	10.83	ppb		91
63)	Trans-1,3-Dichloropropene	8.65	75	30411	10.85	ppb	#	89
64)	1,1,2-TCA	8.84	97	21504	11.11	ppb		100
65)	2-Hexanone	9.15	43	14410	10.99	ppb	#	94
68)	1,2-EDB	9.38	107	22302	10.90	ppb		95
69)	Tetrachloroethene	9.02	166	39620	14.40	ppb		91
70)	1-Chlorohexane	9.95	91	24671	10.12	ppb		94
71)	1,1,1,2-Tetrachloroethane	10.04	131	27232	11.83	ppb		96
72)	m&p-Xylene	10.22	91	162398	21.52	ppb		99
73)	o-Xylene	10.65	91	88250	10.90	ppb		100
74)	Styrene	10.66	104	66720	10.58	ppb		95
76)	1,3-Dichloropropane	9.03	76	35077	10.43	ppb		99
77)	Dibromochloromethane	9.27	129	27407	11.59	ppb		100
78)	Chlorobenzene	9.95	112	66732	10.44	ppb		99
79)	Ethylbenzene	10.09	91	104318	10.52	ppb		98
80)	Bromoform	10.83	173	21120	10.75	ppb		91
82)	Isopropylbenzene	11.06	105	99909	9.87	ppb		97
83)	1,1,2,2-Tetrachloroethane	11.36	83	25377	10.62	ppb		98
84)	1,2,3-Trichloropropane	11.40	110	9223	10.76	ppb		93
85)	t-1,4-Dichloro-2-Butene	11.42	53	5119	10.61	ppb		87
86)	Bromobenzene	11.36	77	54373	10.68	ppb		93
87)	n-Propylbenzene	11.51	91	116761	10.46	ppb		99
88)	4-Ethyltoluene	11.64	105	100459	10.37	ppb		99
89)	2-Chlorotoluene	11.59	91	88437	10.88	ppb		91
90)	1,3,5-Trimethylbenzene	11.70	105	92523	10.72	ppb		97
91)	4-Chlorotoluene	11.71	91	90777	11.08	ppb		99
92)	Tert-Butylbenzene	12.06	119	90544	10.67	ppb		90
93)	1,2,4-Trimethylbenzene	12.11	105	92109	10.41	ppb		99
94)	Sec-Butylbenzene	12.30	105	104240	10.23	ppb		96
95)	p-Isopropyltoluene	12.46	119	92534	10.29	ppb		97
96)	Benzyl Chloride	12.65	91	29698	9.41	ppb		98
97)	1,3-DCB	12.40	146	59747	10.82	ppb		98
98)	1,4-DCB	12.50	146	60043	10.61	ppb		98
99)	n-Butylbenzene	12.91	91	74517	10.59	ppb		96
100)	1,2-DCB	12.90	146	59474	10.85	ppb		98
101)	Hexachloroethane	13.20	201	18637	11.38	ppb		95
102)	1,2-Dibromo-3-chloropropan	13.75	157	6639	10.75	ppb		97
103)	1,2,4-Trichlorobenzene	14.67	180	38394	10.92	ppb		89
104)	Hexachlorobutadiene	14.88	225	20993	10.71	ppb		93
105)	Naphthalene	14.94	127	8779	9.53	ppb		84
106)	1,2,3-Trichlorobenzene	15.20	180	36472	10.66	ppb		94

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

Data File : M:\THOR\DATA\T200309\0311t09.D Vial: 3
Acq On : 11 Mar 20 12:18 Operator:
Sample : 200311A CCV/LCS 10ug/L Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 12 9:43 2020 Quant Results File: T0309W.RES

Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0311T12.D Vial: 6
Acq On : 11 Mar 20 14:03 Operator:
Sample : 200311A LCSD 10ug/L Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 12 9:43 2020 Quant Results File: T0309W.RES

Quant Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	6.46	96	517077	25.00	ppb		0.00
66) Chlorobenzene-D5 (IS)	9.92	117	432165	25.00	ppb		0.00
81) 1,4-Dichlorobenzene-D (IS)	12.48	152	249888	25.00	ppb		0.00
System Monitoring Compounds							
41) Dibromofluoromethane(S)	5.60	111	174520	24.52	ppb		0.00
Spiked Amount 25.000			Recovery =	98.084%			
46) 1,2-DCA-D4(S)	6.02	65	204171	29.38	ppb		0.00
Spiked Amount 25.000			Recovery =	117.532%			
67) Toluene-D8(S)	8.33	98	646567	22.20	ppb		0.00
Spiked Amount 25.000			Recovery =	88.812%			
75) 4-Bromofluorobenzene(S)	11.21	95	258936	22.76	ppb		0.00
Spiked Amount 25.000			Recovery =	91.052%			
Target Compounds							Qvalue
3) Dichlorodifluoromethane	1.14	85	20584	10.68	ppb		94
4) Freon 114	1.24	85	17428	11.03	ppb		98
5) Chloromethane	1.28	50	20616	9.93	ppb		97
6) Vinyl chloride	1.37	62	18143	9.99	ppb		100
8) Bromomethane	1.64	94	10360	9.88	ppb		100
9) Chloroethane	1.74	66	2631	9.89	ppb	#	64
10) Dichlorofluoromethane	1.93	67	34589	11.98	ppb		97
11) Trichlorofluoromethane	1.98	101	30712	12.53	ppb		97
14) Acrolein	2.38	55	12719	121.50	ppb		98
15) Acetone	2.55	43	3545	10.67	ppb		95
16) Freon-113	2.53	101	16015	11.32	ppb		97
17) 1,1-DCE	2.49	61	25016	10.94	ppb		97
19) Acetonitrile	2.85	40	7075	126.88	ppb		86
20) t-Butanol	3.29	59	8234	121.16	ppb		97
21) Methyl Acetate	2.97	43	13603	9.92	ppb		94
22) Iodomethane	2.64	142	7514	8.96	ppb	#	96
23) Acrylonitrile	3.38	52	5538	10.17	ppb	#	80
24) Methylene chloride	3.05	49	24784	10.86	ppb		99
25) Carbon disulfide	2.71	76	44243	10.05	ppb		95
26) Methyl t-butyl ether (MtBE	3.48	73	54771	10.76	ppb		98
27) Trans-1,2-DCE	3.43	61	25471	11.13	ppb		92
29) Diisopropyl Ether	4.28	45	55930	10.37	ppb		97
31) 1,1-DCA	4.05	63	35085	10.82	ppb		95
32) Vinyl Acetate	4.21	43	33711	10.68	ppb		97
33) Ethyl tert Butyl Ether	4.82	59	53490	9.82	ppb		95
34) MEK (2-Butanone)	4.99	43	9684	10.91	ppb		96
35) Cis-1,2-DCE	4.93	61	32055	11.32	ppb		94
36) 2,2-Dichloropropane	4.93	77	33783	12.97	ppb	#	89
39) Chloroform	5.40	83	41714	12.25	ppb		100
40) Bromochloromethane	5.25	49	15720	10.11	ppb		95
42) 1,1,1-TCA	5.61	97	38072	13.41	ppb		90
43) Cyclohexane	5.69	56	25124	10.05	ppb		94
44) 1,1-Dichloropropene	5.85	75	27040	11.60	ppb		98
45) 2,2,4-Trimethylpentane	6.27	57	46686	10.62	ppb		96
47) Carbon Tetrachloride	5.84	117	32575	13.20	ppb		99
48) Tert Amyl Methyl Ether	6.31	73	56508	10.52	ppb		100
50) 1,2-DCA	6.11	62	34791	12.75	ppb		98
51) Benzene	6.09	78	83872	10.98	ppb		95
52) TCE	6.91	130	26270	10.68	ppb		96

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0311T12.D Vial: 6
Acq On : 11 Mar 20 14:03 Operator:
Sample : 200311A LCSD 10ug/L Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 12 9:43 2020 Quant Results File: T0309W.RES

Quant Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

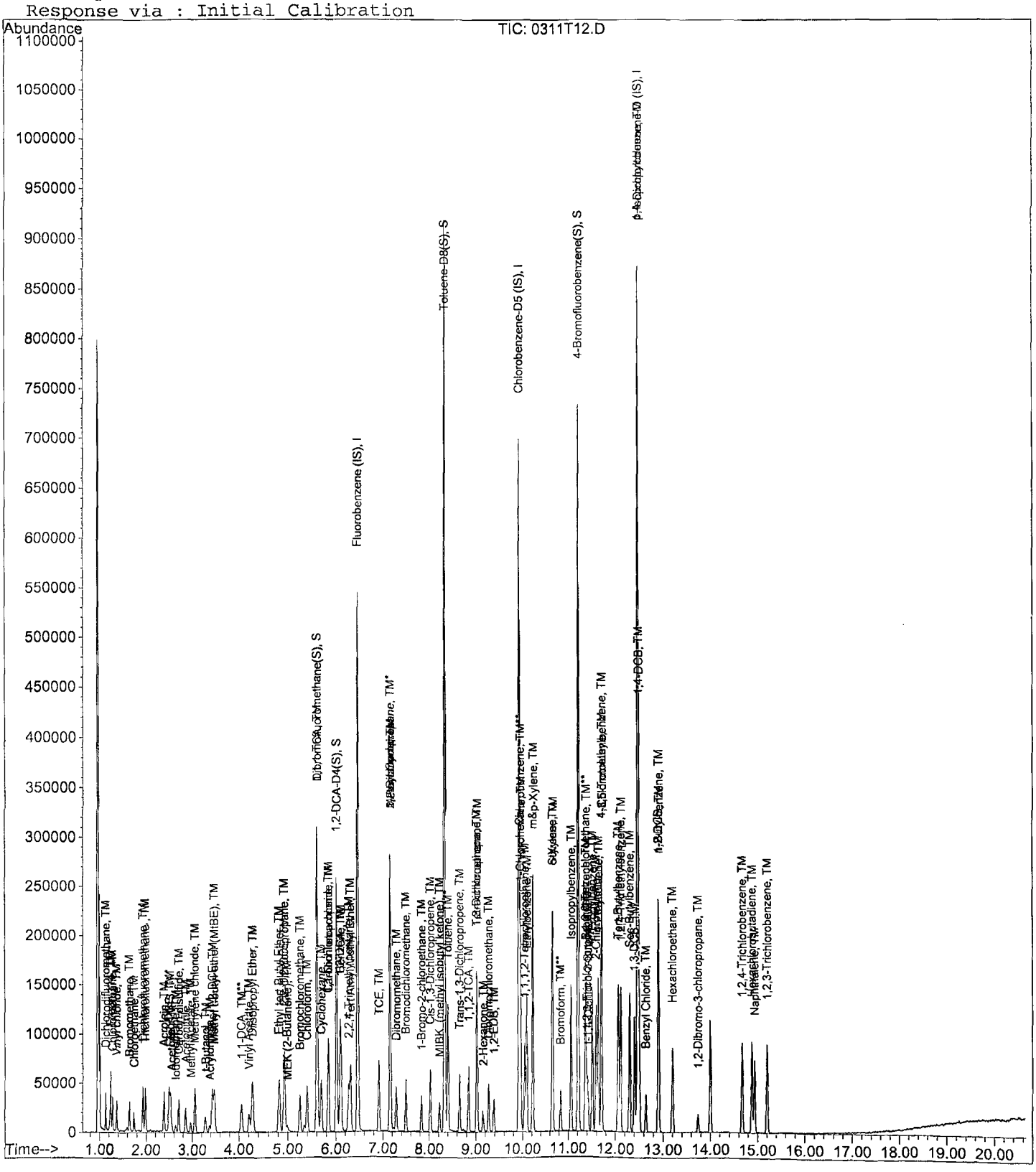
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
53)	2-Pentanone	7.15	43	180230	132.35	ppb		92
54)	1,2-Dichloropropane	7.15	63	22247	10.77	ppb		98
55)	Bromodichloromethane	7.50	83	33855	12.70	ppb		98
56)	Methyl Cyclohexane	7.15	83	28074	10.69	ppb		95
57)	Dibromomethane	7.28	174	21107	12.13	ppb		90
58)	MIBK (methyl isobutyl ket	8.22	43	20494	10.23	ppb	#	94
59)	1-Bromo-2-chloroethane	7.83	63	15910	11.18	ppb		100
61)	Cis-1,3-Dichloropropene	8.02	75	35063	11.06	ppb		95
62)	Toluene	8.40	91	98237	11.03	ppb		93
63)	Trans-1,3-Dichloropropene	8.65	75	31929	11.27	ppb		99
64)	1,1,2-TCA	8.85	97	22973	11.75	ppb		94
65)	2-Hexanone	9.15	43	14837	11.17	ppb		90
68)	1,2-EDB	9.39	107	22526	11.09	ppb	#	90
69)	Tetrachloroethene	9.02	166	36889	13.50	ppb		96
70)	1-Chlorohexane	9.96	91	26343	10.88	ppb		97
71)	1,1,1,2-Tetrachloroethane	10.04	131	28172	12.32	ppb		95
72)	m&p-Xylene	10.22	91	168486	22.48	ppb		98
73)	o-Xylene	10.65	91	88828	11.04	ppb		98
74)	Styrene	10.66	104	70938	11.32	ppb		98
76)	1,3-Dichloropropane	9.03	76	36865	11.03	ppb		98
77)	Dibromochloromethane	9.27	129	29359	12.50	ppb		98
78)	Chlorobenzene	9.95	112	69457	10.94	ppb		97
79)	Ethylbenzene	10.09	91	110249	11.20	ppb		98
80)	Bromoform	10.84	173	22388	11.39	ppb		97
82)	Isopropylbenzene	11.06	105	107856	10.82	ppb		95
83)	1,1,2,2-Tetrachloroethane	11.36	83	27495	11.68	ppb	#	94
84)	1,2,3-Trichloropropane	11.40	110	10119	11.99	ppb		96
85)	t-1,4-Dichloro-2-Butene	11.43	53	5071	10.68	ppb	#	81
86)	Bromobenzene	11.37	77	57594	11.49	ppb		99
87)	n-Propylbenzene	11.51	91	124339	11.31	ppb		94
88)	4-Ethyltoluene	11.64	105	108497	11.37	ppb		97
89)	2-Chlorotoluene	11.59	91	94520	11.81	ppb		92
90)	1,3,5-Trimethylbenzene	11.71	105	96449	11.34	ppb		99
91)	4-Chlorotoluene	11.71	91	93410	11.58	ppb		100
92)	Tert-Butylbenzene	12.06	119	95298	11.40	ppb		95
93)	1,2,4-Trimethylbenzene	12.11	105	97801	11.23	ppb		100
94)	Sec-Butylbenzene	12.30	105	112684	11.23	ppb		97
95)	p-Isopropyltoluene	12.46	119	100488	11.34	ppb		97
96)	Benzyl Chloride	12.64	91	32237	10.37	ppb		97
97)	1,3-DCB	12.40	146	62065	11.41	ppb		97
98)	1,4-DCB	12.50	146	63675	11.42	ppb		97
99)	n-Butylbenzene	12.91	91	81262	11.73	ppb		98
100)	1,2-DCB	12.90	146	62024	11.49	ppb		98
101)	Hexachloroethane	13.20	201	19097	11.84	ppb		99
102)	1,2-Dibromo-3-chloropropan	13.74	157	6784	11.15	ppb		94
103)	1,2,4-Trichlorobenzene	14.67	180	40359	11.65	ppb		91
104)	Hexachlorobutadiene	14.88	225	23693	12.27	ppb		94
105)	Naphthalene	14.94	127	10336	11.39	ppb		72
106)	1,2,3-Trichlorobenzene	15.20	180	39844	11.82	ppb		99

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

Data File : M:\THOR\DATA\T200309\0311T12.D Vial: 6
Acq On : 11 Mar 20 14:03 Operator:
Sample : 200311A LCSD 10ug/L Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 12 9:43 2020 Quant Results File: T0309W.RES

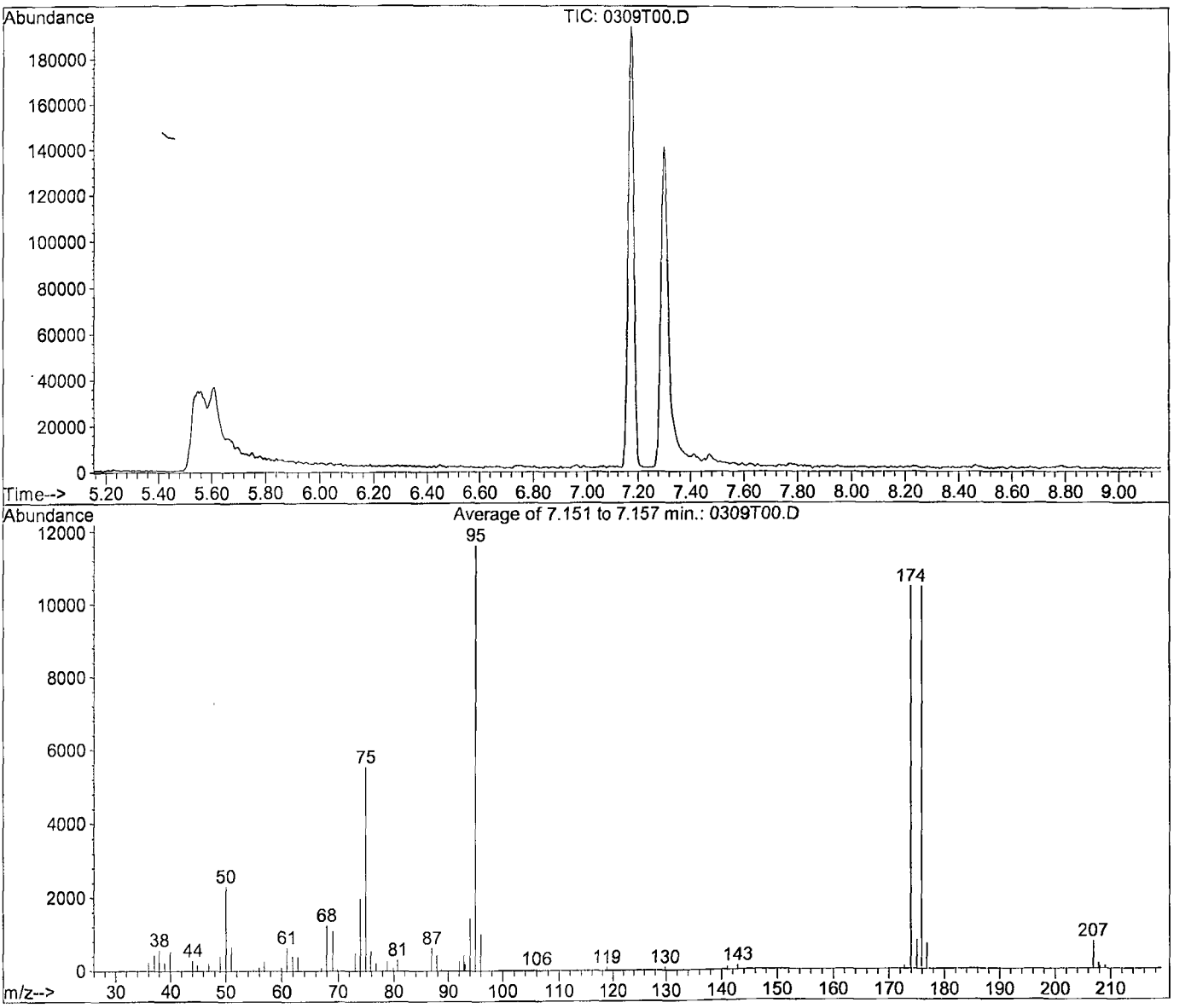
Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration



Data File : M:\THOR\DATA\T200309\0309t00.D
Acq On : 9 Mar 20 6:17
Sample : 25ug/L BFB 2/13/20
Misc : 2uL

Vial: 1
Operator:
Inst : Thor
Multiplr: 1.00

Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B



Spectrum Information: Average of 7.151 to 7.157 min.

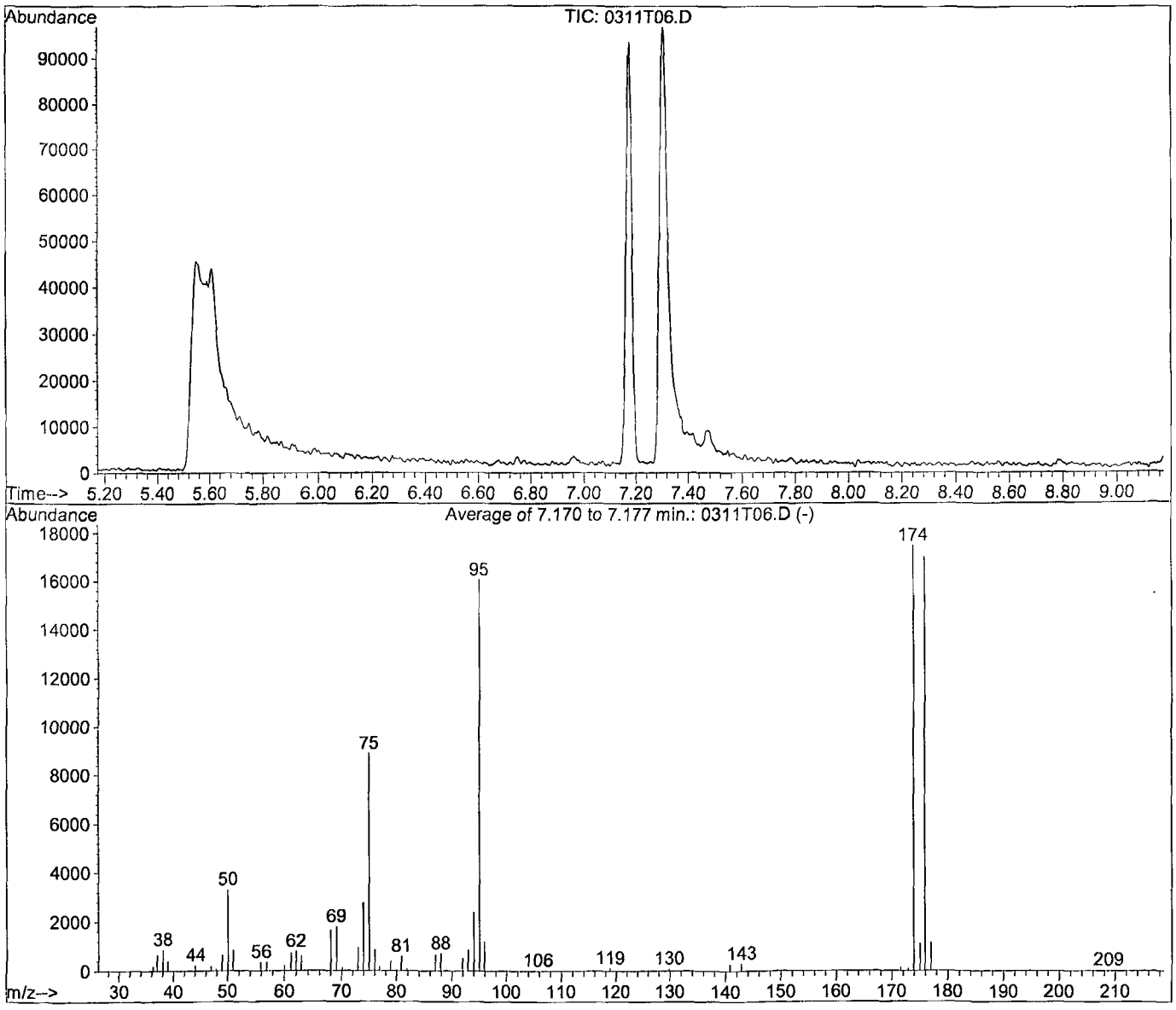
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.7	2288	PASS
75	95	30	60	47.5	5517	PASS
95	95	100	100	100.0	11610	PASS
96	95	5	9	8.5	991	PASS
173	174	0.00	2	0.8	87	PASS
174	95	50	200	90.1	10455	PASS
175	174	5	9	7.6	794	PASS
176	174	95	101	100.0	10452	PASS
177	176	5	9	6.6	691	PASS

0309t00.D T0309W.M Fri Mar 13 10:48:27 2020

Data File : M:\THOR\DATA\T200309\0311t06.D
Acq On : 11 Mar 20 10:55
Sample : 25ug/L BFB 2/13/20
Misc : 2uL

Vial: 1
Operator:
Inst : Thor
Multiplr: 1.00

Method : M:\THOR\DATA\T200309\T0309W.M (RTE Integrator)
Title : METHOD 8260B



Spectrum Information: Average of 7.170 to 7.177 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.6	3310	PASS
75	95	30	60	55.4	8888	PASS
95	95	100	100	100.0	16052	PASS
96	95	5	9	7.6	1227	PASS
173	174	0.00	2	0.5	86	PASS
174	95	50	200	108.8	17469	PASS
175	174	5	9	6.2	1090	PASS
176	174	95	101	97.3	16995	PASS
177	176	5	9	6.7	1135	PASS

Thor 8260 Standard Prep

Thor 8260 Water Calibration Curve

Prepared By (Initials): CH

0.3ug/L

Prepared: 03/09/20

Expires: 04/08/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	O2SI	0.3ug/L	5	Prepared 03/05/20	05/04/20	N/A	3uL	50mL	P&T Water	0.3
VOA STD. 12	O2SI		5	Prepared 03/05/20	05/04/20	N/A	3uL			0.3
VOA STD. 15	O2SI		5	Prepared 03/02/20	05/01/20	N/A	3uL			0.3
VOA STD. TBA	Various		5	Prepared 12/12/19	04/01/20	N/A	2uL			10

0.5ug/L

Prepared: 03/09/20

Expires: 04/08/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	O2SI	0.5ug/L	5	Prepared 03/05/20	05/04/20	N/A	5uL	50mL	P&T Water	0.5
VOA STD. 12	O2SI		5	Prepared 03/05/20	05/04/20	N/A	5uL			0.5
VOA STD. 15	O2SI		5	Prepared 03/02/20	05/01/20	N/A	5uL			0.5
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	5uL			25

1.0ug/L

Prepared: 03/09/20

Expires: 04/08/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	O2SI	1.0ug/L	5	Prepared 03/05/20	05/04/20	N/A	10uL	50mL	P&T Water	1
VOA STD. 12	O2SI		5	Prepared 03/05/20	05/04/20	N/A	10uL			1
VOA STD. 15	O2SI		5	Prepared 03/02/20	05/01/20	N/A	10uL			1
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	10uL			50

2.0ug/L

Prepared: 03/09/20

Expires: 04/08/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	O2SI	2.0ug/L	5	Prepared 03/05/20	05/04/20	N/A	20uL	50mL	P&T Water	2
VOA STD. 12	O2SI		5	Prepared 03/05/20	05/04/20	N/A	20uL			2
VOA STD. 15	O2SI		5	Prepared 03/02/20	05/01/20	N/A	20uL			2
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	15uL			75

5ug/L

Prepared: 03/09/20

Expires: 04/08/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	5ug/L	50	Prepared 03/05/20	05/04/20	N/A	5uL	50mL	P&T Water	5
VOA STD. 8	Phenova		50	Prepared 03/05/20	04/01/20	N/A	5uL			5
VOA STD. 2	O2SI		50	Prepared 03/05/20	05/04/20	N/A	5uL			5
VOA STD. 5	O2SI		50	Prepared 03/02/20	05/01/20	N/A	5uL			5
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	20uL			100

10ug/L

Prepared: 03/09/20

Expires: 04/08/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	10ug/L	50	Prepared 03/05/20	05/04/20	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova		50	Prepared 03/05/20	04/01/20	N/A	10uL			10
VOA STD. 2	O2SI		50	Prepared 03/05/20	05/04/20	N/A	10uL			10
VOA STD. 5	O2SI		50	Prepared 03/02/20	05/01/20	N/A	10uL			10
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	25uL			125

20ug/L

Prepared: 03/09/20

Expires: 04/08/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	20ug/L	50	Prepared 03/05/20	05/04/20	N/A	20uL	50mL	P&T Water	20
VOA STD. 8	Phenova		50	Prepared 03/05/20	04/01/20	N/A	20uL			20
VOA STD. 2	O2SI		50	Prepared 03/05/20	05/04/20	N/A	20uL			20
VOA STD. 5	O2SI		50	Prepared 03/02/20	05/01/20	N/A	20uL			20
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	30uL			150

40ug/L

Prepared: 03/09/20

Expires: 04/08/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	40ug/L	50	Prepared 03/05/20	05/04/20	N/A	40uL	50mL	P&T Water	40
VOA STD. 8	Phenova		50	Prepared 03/05/20	04/01/20	N/A	40uL			40
VOA STD. 2	O2SI		50	Prepared 03/05/20	05/04/20	N/A	40uL			40
VOA STD. 5	O2SI		50	Prepared 03/02/20	05/01/20	N/A	40uL			40
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	35uL			175

100ug/L

Prepared: 03/09/20

Expires: 04/08/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	100ug/L	50	Prepared 03/05/20	05/04/20	N/A	100uL	50mL	P&T Water	100
VOA STD. 8	Phenova		50	Prepared 03/05/20	04/01/20	N/A	100uL			100
VOA STD. 2	O2SI		50	Prepared 03/05/20	05/04/20	N/A	100uL			100
VOA STD. 5	O2SI		50	Prepared 03/02/20	05/01/20	N/A	100uL			100
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	40uL			200

Thor 8260 Water Second Source (SS)

Prepared: 03/09/20

Prepared By (Initials): CH

Expires: 04/08/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 3	Phenova	8260 Water SS	50	Prepared 03/05/20	05/04/20	N/A	10uL	50mL	P&T Water	10
VOA STD. Gases	O2SI	8260 Water SS	50	Prepared 03/05/20	05/04/20	N/A	10uL			10
VOA STD. 6	Various	8260 Water SS	50	Prepared 03/05/20	03/11/20	N/A	10uL			10
VOA STD. 25	Absolute	8260 Water SS	50	Prepared 03/02/20	05/01/20	N/A	10uL			10
VOA STD. 0	Absolute	8260 Water SS	50	Prepared 03/05/20	05/04/20	N/A	100uL			100
Voa STD. TBA	Various	8260 Water SS	250	Prepared 03/05/20	03/11/20	N/A	25uL			250

8260 Water Continuing Calibrations (CCV)/ Lab Control Spikes (LCS)

Prepared: 03/09/20

Prepared By (Initials): CH

Expires: 03/10/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	CCV/ LCS	50	Prepared 03/05/20	05/04/20	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova	CCV/ LCS	50	Prepared 03/05/20	04/01/20	N/A	10uL			10
VOA STD. 2	O2SI	CCV/ LCS	50	Prepared 03/05/20	05/04/20	N/A	10uL			10
VOA STD. 5	O2SI	CCV/ LCS	50	Prepared 03/02/20	05/01/20	N/A	10uL			10
VOA STD. TBA	Various	CCV/ LCS	250	Prepared 03/05/20	04/01/20	N/A	25uL			125

LCS (X4 Ketones)

Prepared: 03/09/20

Prepared By (Initials): CH

Expires: 03/10/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	LCS X4 Ketones	50	Prepared 03/05/20	05/04/20	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova	LCS X4 Ketones	50	Prepared 03/05/20	04/01/20	N/A	10uL			10
VOA STD. 2	O2SI	LCS X4 Ketones	50	Prepared 03/05/20	05/04/20	N/A	40uL			40
VOA STD. 5	O2SI	LCS X4 Ketones	50	Prepared 03/02/20	05/01/20	N/A	10uL			10
VOA STD. TBA	Various	LCS X4 Ketones	250	Prepared 03/05/20	04/01/20	N/A	25uL			125

Injection Log

Directory: M:\THOR\DATA\T200309\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	0309T00.D	1	25ug/L BFB 2/13/20	2uL	9 Mar 20 6:17
2	0309T02.D	1	0.3ug/L VOC STD 3/9/20	IS&S 2/6/20, 2/19/20	9 Mar 20 7:22
3	0309T03.D	1	0.5ug/L VOC STD 3/9/20	IS&S 2/6/20, 2/19/20	9 Mar 20 7:51
4	0309T04.D	1	1ug/L VOC STD 3/9/20	IS&S 2/6/20, 2/19/20	9 Mar 20 8:19
5	0309T05.D	1	2ug/L VOC STD 3/9/20	IS&S 2/6/20, 2/19/20	9 Mar 20 8:47
6	0309T06.D	1	5ug/L VOC STD 3/9/20	IS&S 2/6/20, 2/19/20	9 Mar 20 9:16
7	0309T07.D	1	10ug/L VOC STD 3/9/20	IS&S 2/6/20, 2/19/20	9 Mar 20 9:44
8	0309T08.D	1	20ug/L VOC STD 3/9/20	IS&S 2/6/20, 2/19/20	9 Mar 20 10:12
9	0309T09.D	1	40ug/L VOC STD 3/9/20	IS&S 2/6/20, 2/19/20	9 Mar 20 10:41
10	0309T10.D	1	100ug/L VOC STD 3/9/20	IS&S 2/6/20, 2/19/20	9 Mar 20 11:09
12	0309T12.D	1	(SS) 10ug/L VOC STD 3/9/20	IS&S 2/6/20, 2/19/20	9 Mar 20 12:06
1	0311T06.D	1	25ug/L BFB 2/13/20	2uL	11 Mar 20 10:55
3	0311T09.D	1	200311A CCV/LCS 10ug/L	IS&S 2/6/20, 2/19/20	11 Mar 20 12:18
6	0311T12.D	1	200311A LCSD 10ug/L	IS&S 2/6/20, 2/19/20	11 Mar 20 14:03
12	0311T18.D	1	200311A BLK	IS&S 2/6/20, 2/19/20	11 Mar 20 16:53
13	0311T19.D	1	BA08033W02	IS&S 2/6/20, 2/19/20	11 Mar 20 17:22
14	0311T20.D	1	BA08034W02	IS&S 2/6/20, 2/19/20	11 Mar 20 17:50
18	0311T24.D	1	Ending CCV 10ug/L 3/11/20	IS&S 2/6/20, 2/19/20	11 Mar 20 19:44

ORGANICS
Calibration Data

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 02/20/20
Matrix: Instrument: Thor
Initials: DP

			0220T32.D	0220T33.D	0220T34.D	0220T35.D	0220T36.D	0220T37.D	0220T38.D									
		Compound	1	2	3	4	5	6	7				Avg	%RSD	Type	r^2	Q	MRF
1	I	Fluorobenzene (IS)																
2	TMHBL	Gasoline C6-C10	15.2	6.312	3.332	1.357	0.8700	0.7292	0.6656				4.1	131	TMHBL	0.999		
3	I	Chlorobenzene-D5 (IS)																
4	I	1,4-Dichlorobenzene-D (IS)																
5																		
6																		
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Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200219B\0220T32.D Vial: 32
Acq On : 20 Feb 20 22:37 Operator:
Sample : 20ug/L Gas Std 2/20/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 21 11:25 2020 Quant Results File: TGAS0219.RES

Quant Method : M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 07 14:54:37 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.47	TIC	1023451	25.00	ppb	-0.04
3) Chlorobenzene-D5 (IS)	9.92	TIC	1237312	25.00	ppb	-0.03
4) 1,4-Dichlorobenzene-D (IS)	12.48	TIC	1264237	25.00	ppb	-0.04
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.33	TIC	12451968m	72.48	ppb	100

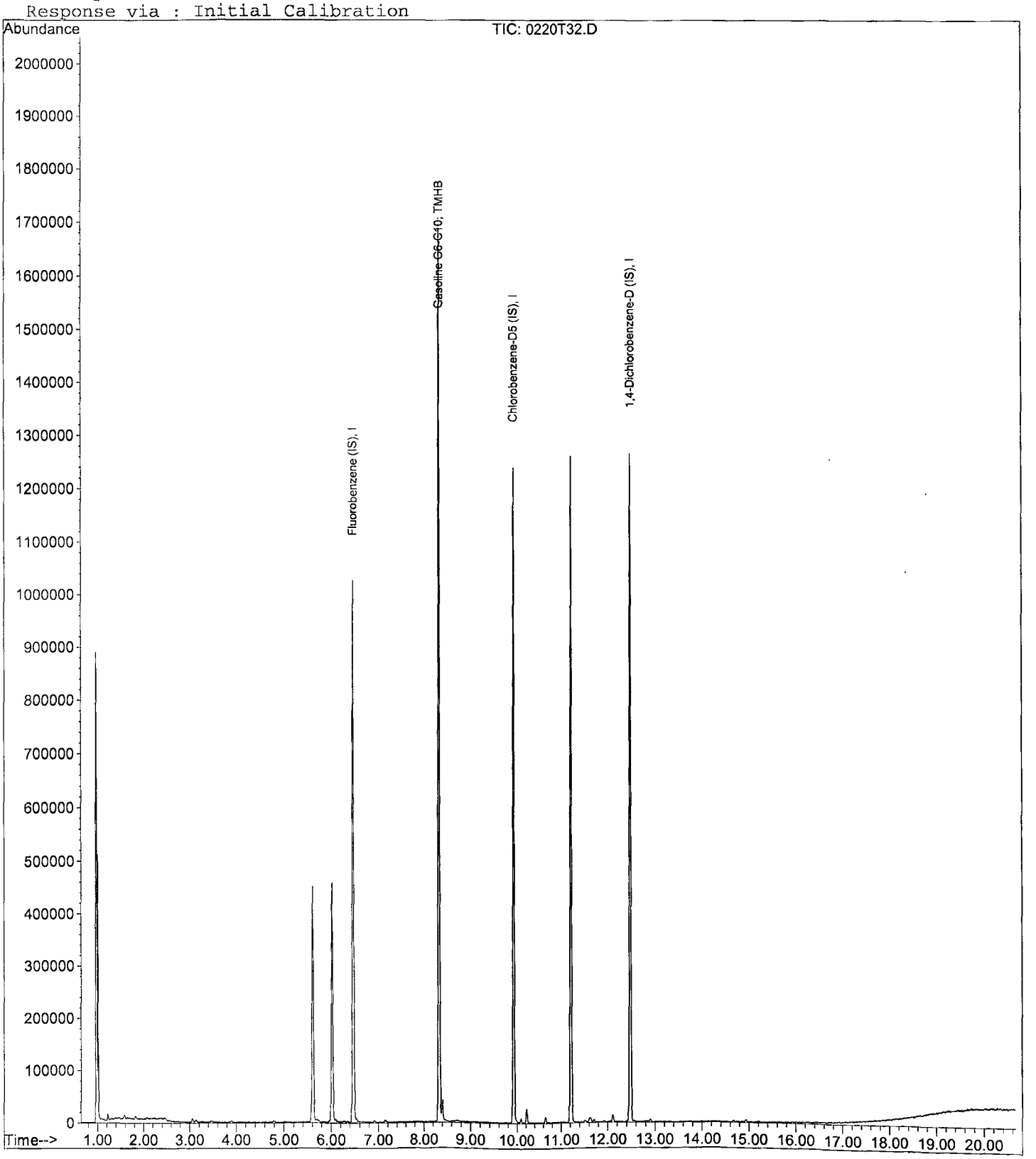
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200219B\0220T32.D Vial: 32
Acq On : 20 Feb 20 22:37 Operator:
Sample : 20ug/L Gas Std 2/20/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 21 11:25 2020 Quant Results File: TGAS0219.RES

Method : M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200219B\0220T33.D Vial: 33
Acq On : 20 Feb 20 23:05 Operator:
Sample : 50ug/L Gas Std 2/20/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 4 15:53 2020 Quant Results File: TGAS0219.RES

Quant Method : M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	TIC	1030269	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.92	TIC	1249707	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.48	TIC	1262425	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	8.33	TIC	12998272m	49.70	ppb	100

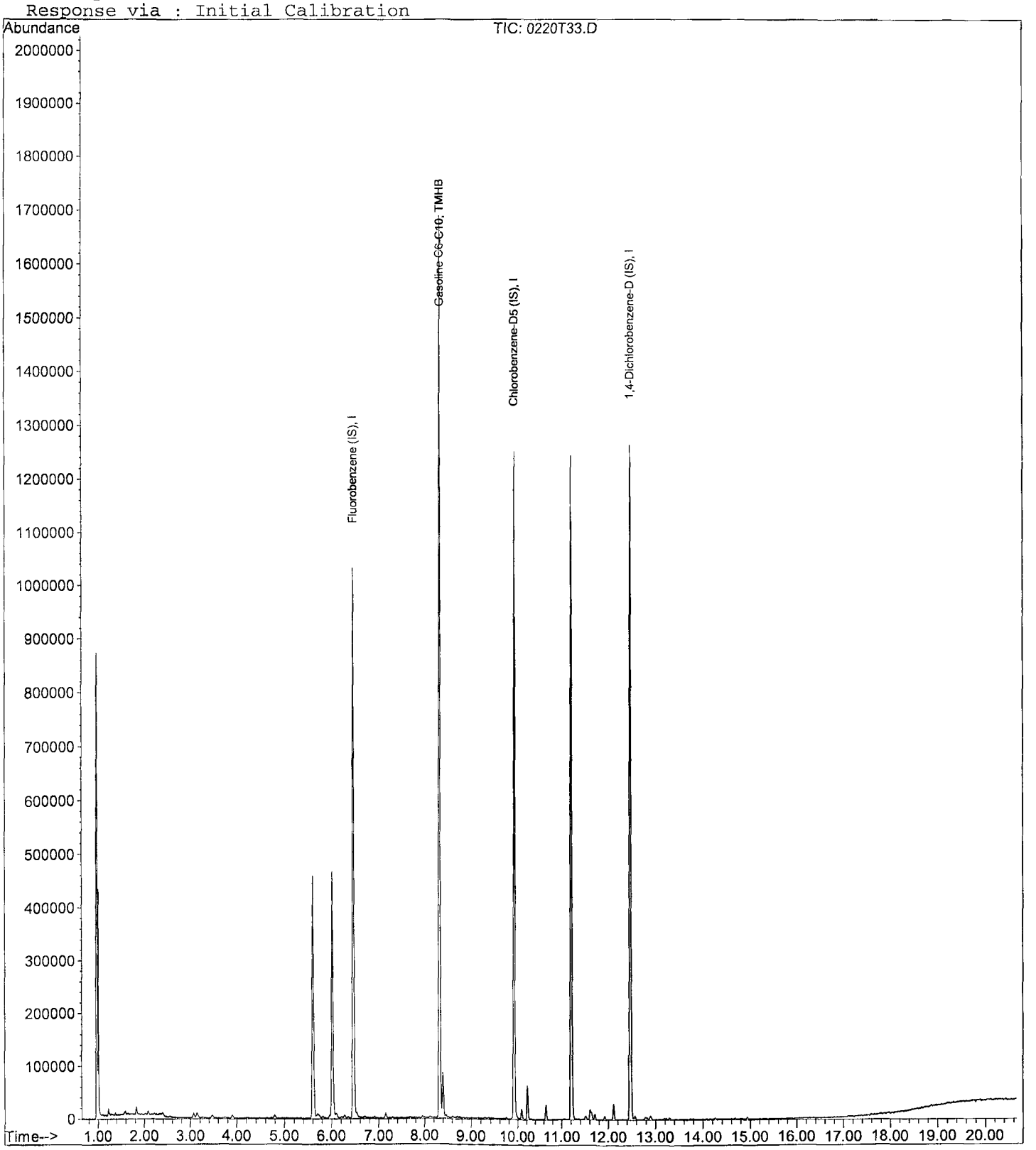
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200219B\0220T33.D Vial: 33
Acq On : 20 Feb 20 23:05 Operator:
Sample : 50ug/L Gas Std 2/20/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 4 15:53 2020 Quant Results File: TGAS0219.RES

Method : M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200219B\0220T34.D Vial: 34
Acq On : 20 Feb 20 23:34 Operator:
Sample : 100ug/L Gas Std 2/20/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 21 11:29 2020 Quant Results File: TGAS0219.RES

Quant Method : M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 07 14:54:37 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	TIC	1028975	25.00	ppb	-0.04
3) Chlorobenzene-D5 (IS)	9.92	TIC	1199926	25.00	ppb	-0.03
4) 1,4-Dichlorobenzene-D (IS)	12.48	TIC	1271198	25.00	ppb	-0.04
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.33	TIC	13712736m	161.09	ppb	100

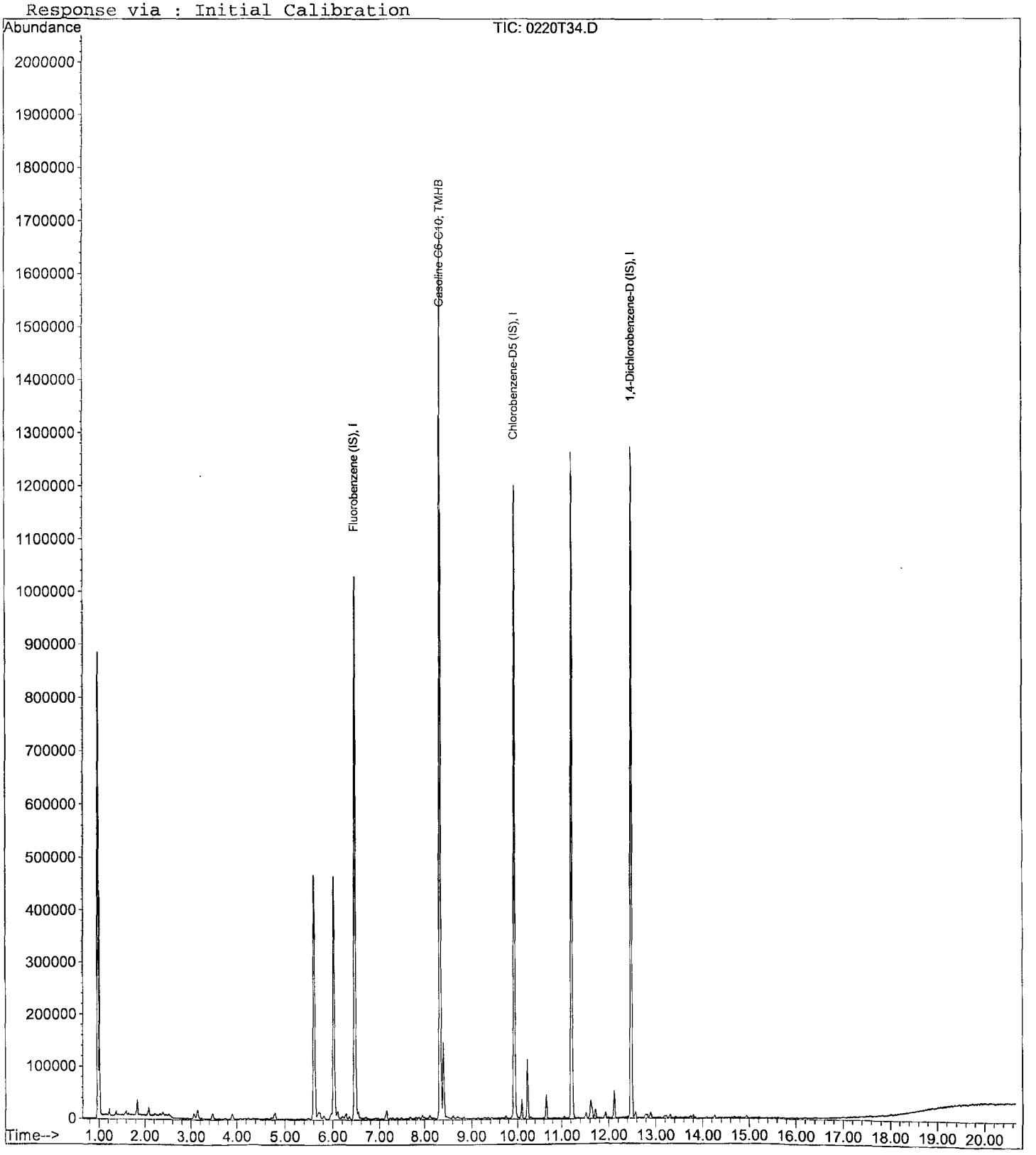
(#) = qualifier out of range (m) = manual integration
0220T34.D TGAS0219.M Fri Mar 13 11:04:46 2020 Page 1

Quantitation Report

Data File : M:\THOR\DATA\T200219B\0220T34.D Vial: 34
Acq On : 20 Feb 20 23:34 Operator:
Sample : 100ug/L Gas Std 2/20/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 21 11:29 2020 Quant Results File: TGAS0219.RES

Method : M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200219B\0220T35.D Vial: 35
Acq On : 21 Feb 20 00:02 Operator:
Sample : 300ug/L Gas Std 2/20/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 21 11:29 2020 Quant Results File: TGAS0219.RES

Quant Method : M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 07 14:54:37 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	TIC	1004678	25.00	ppb	-0.04
3) Chlorobenzene-D5 (IS)	9.92	TIC	1216520	25.00	ppb	-0.03
4) 1,4-Dichlorobenzene-D (IS)	12.48	TIC	1272423	25.00	ppb	-0.04

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	8.33	TIC	16365972m	387.47	ppb	100

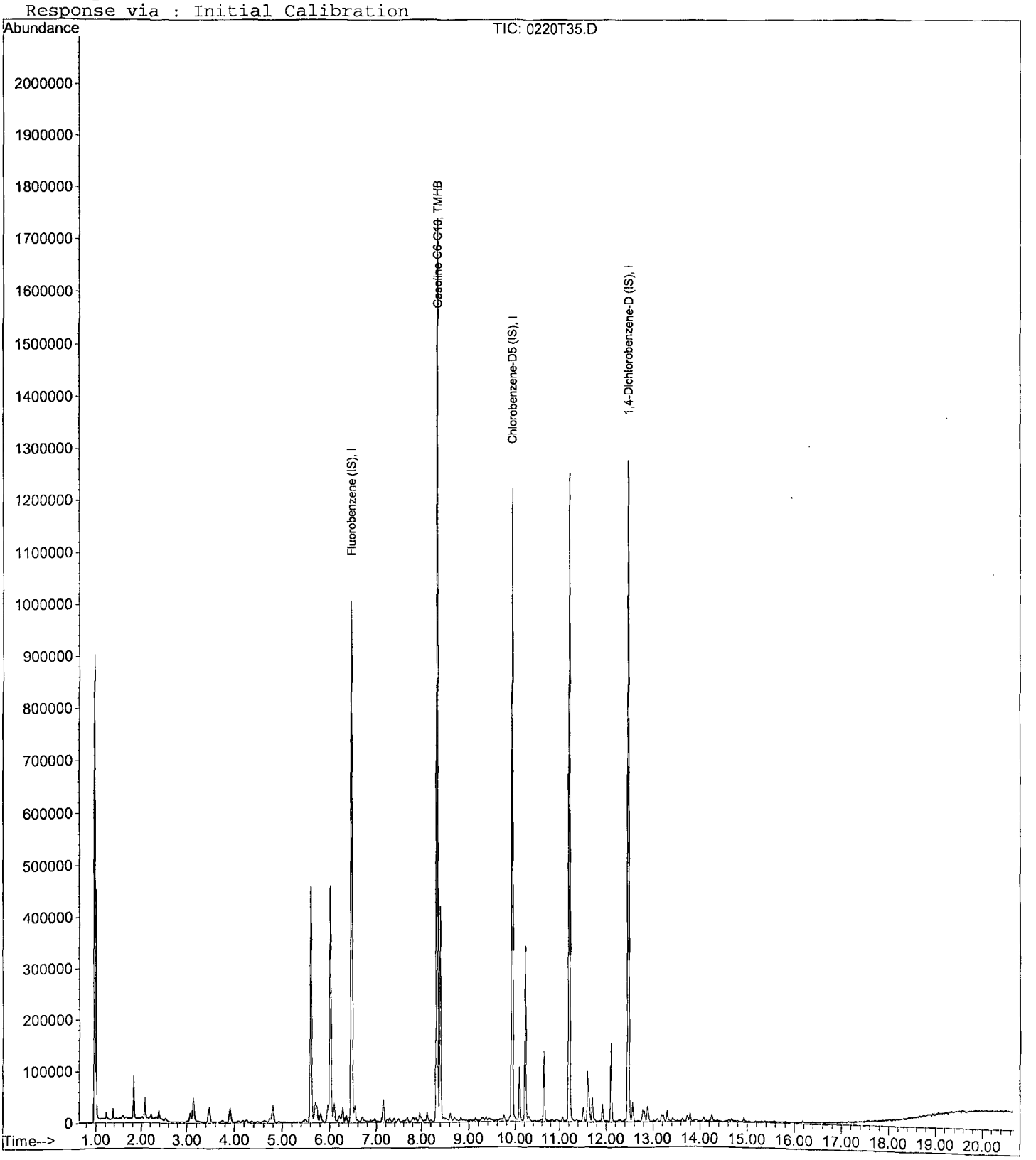
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200219B\0220T35.D Vial: 35
Acq On : 21 Feb 20 00:02 Operator:
Sample : 300ug/L Gas Std 2/20/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 21 11:29 2020 Quant Results File: TGAS0219.RES

Method : M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200219B\0220T36.D Vial: 36
Acq On : 21 Feb 20 00:30 Operator:
Sample : 600ug/L Gas Std 2/20/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 21 11:29 2020 Quant Results File: TGAS0219.RES

Quant Method : M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 07 14:54:37 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.47	TIC	1014311	25.00	ppb	-0.04
3) Chlorobenzene-D5 (IS)	9.92	TIC	1246842	25.00	ppb	-0.03
4) 1,4-Dichlorobenzene-D (IS)	12.48	TIC	1305150	25.00	ppb	-0.04

System Monitoring Compounds

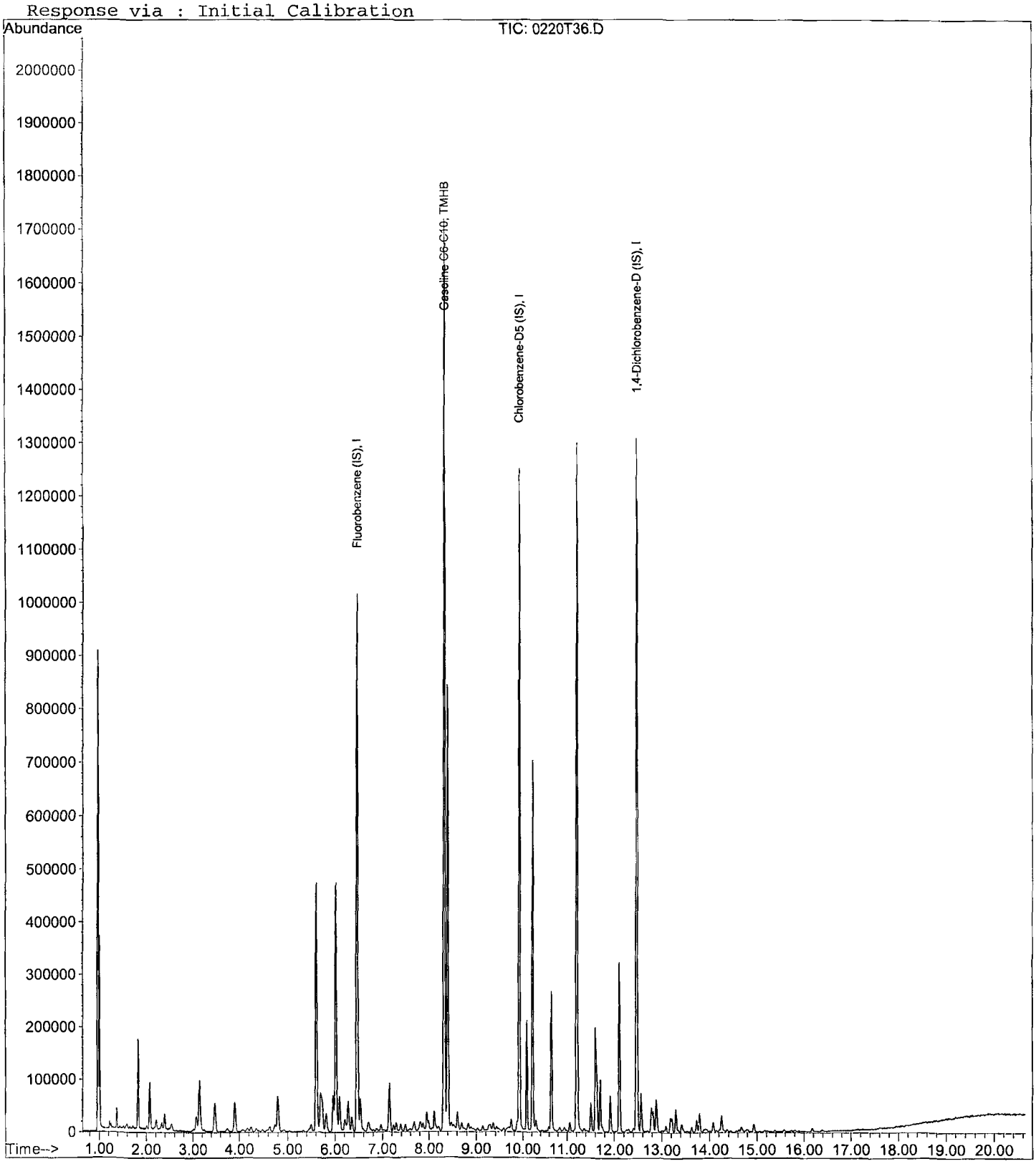
Target Compounds						Qvalue
2) Gasoline C6-C10	8.33	TIC	21178091m	738.10	ppb	100

(#) = qualifier out of range (m) = manual integration
0220T36.D TGAS0219.M Fri Mar 13 11:04:51 2020 Page 1

Data File : M:\THOR\DATA\T200219B\0220T36.D Vial: 36
Acq On : 21 Feb 20 00:30 Operator:
Sample : 600ug/L Gas Std 2/20/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 21 11:29 2020 Quant Results File: TGAS0219.RES

Method : M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200219B\0220T37.D Vial: 37
Acq On : 21 Feb 20 00:58 Operator:
Sample : 800ug/L Gas Std 2/20/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 21 11:30 2020 Quant Results File: TGAS0219.RES

Quant Method : M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 07 14:54:37 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	TIC	1015677	25.00	ppb	-0.04
3) Chlorobenzene-D5 (IS)	9.92	TIC	1252450	25.00	ppb	-0.03
4) 1,4-Dichlorobenzene-D (IS)	12.48	TIC	1276985	25.00	ppb	-0.04
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.33	TIC	23699026m	925.57	ppb	100

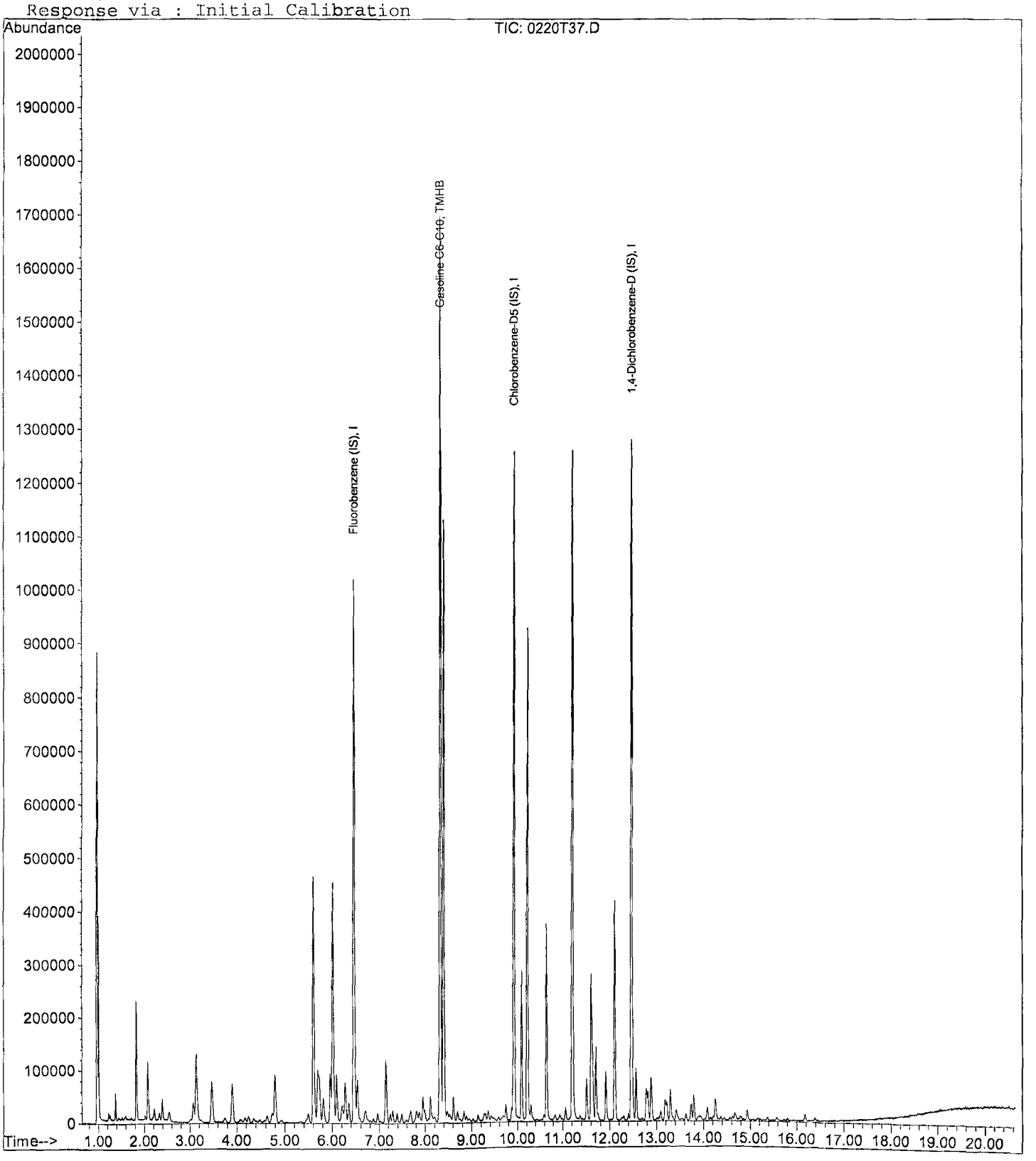
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200219B\0220T37.D Vial: 37
Acq On : 21 Feb 20 00:58 Operator:
Sample : 800ug/L Gas Std 2/20/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 21 11:30 2020 Quant Results File: TGAS0219.RES

Method : M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200219B\0220T38.D Vial: 38
Acq On : 21 Feb 20 1:27 Operator:
Sample : 1000ug/L Gas Std 2/20/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 21 11:30 2020 Quant Results File: TGAS0219.RES

Quant Method : M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 07 14:54:37 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	TIC	1010092	25.00	ppb	-0.04
3) Chlorobenzene-D5 (IS)	9.92	TIC	1251246	25.00	ppb	-0.03
4) 1,4-Dichlorobenzene-D (IS)	12.48	TIC	1290547	25.00	ppb	-0.04

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	8.33	TIC	26891820m	1176.91	ppb	100

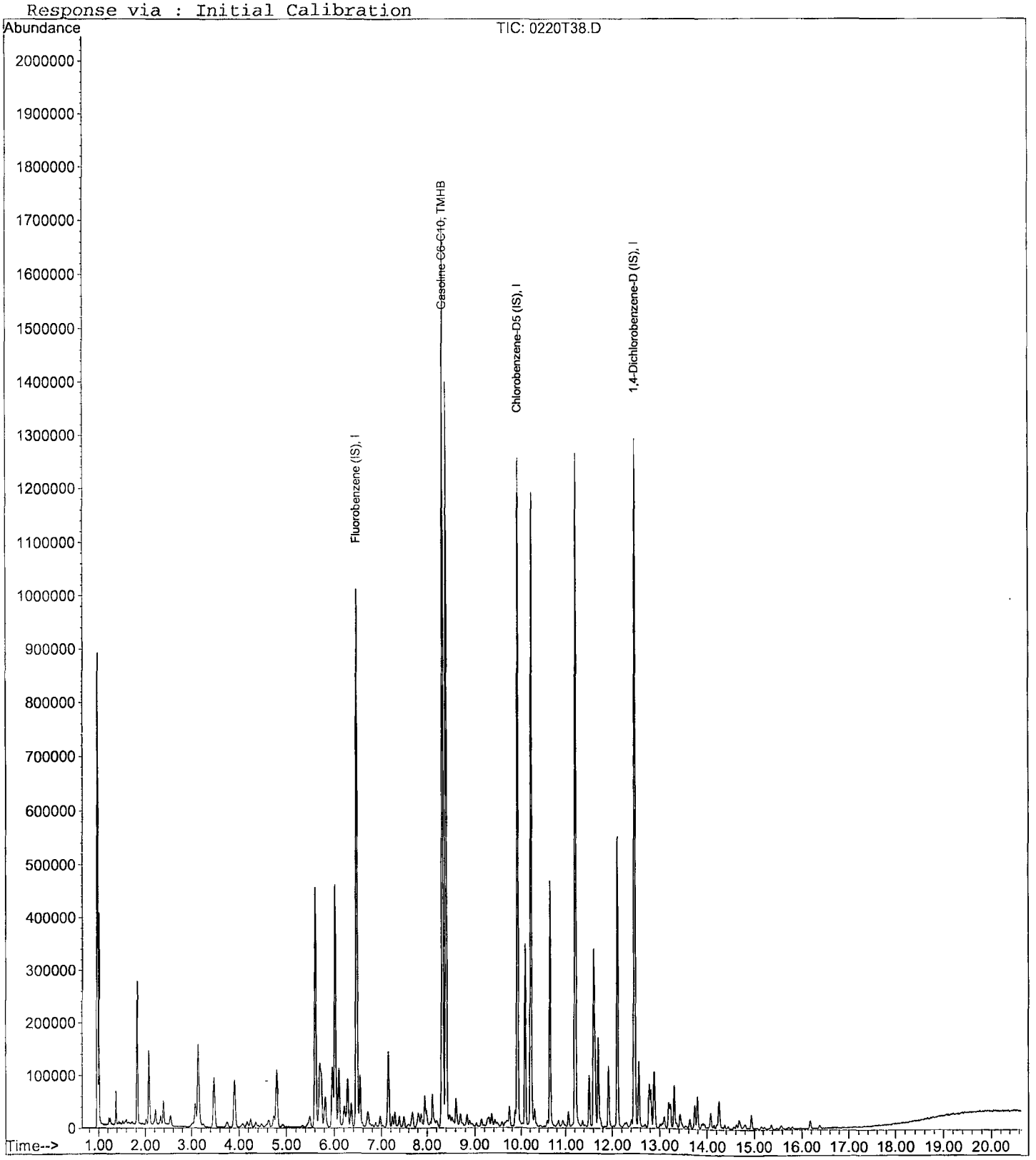
(#) = qualifier out of range (m) = manual integration
0220T38.D TGAS0219.M Fri Mar 13 11:04:56 2020 Page 1

Quantitation Report

Data File : M:\THOR\DATA\T200219B\0220T38.D Vial: 38
Acq On : 21 Feb 20 1:27 Operator:
Sample : 1000ug/L Gas Std 2/20/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 21 11:30 2020 Quant Results File: TGAS0219.RES

Method : M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

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

SDG No:
Date Analyzed: 02/21/20
Instrument: Thor
Initial Cal. Date: 02/20/20
Data File: 0220T40.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TMHB	Gasoline C6-C10	4.068	1.338	67	TMHBL	5.3
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
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26							
27							
28							
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31							
32							
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34							
35							
36							
37							
38							
39							
40							
		Average			67.0		

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200219B\0220T40.D Vial: 40
Acq On : 21 Feb 20 2:23 Operator:
Sample : (SS) 300ug/L Gas Std 2/20/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 21 11:37 2020 Quant Results File: TGAS0219.RES

Quant Method : M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	TIC	1011881	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.92	TIC	1237804	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.48	TIC	1271376	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	8.33	TIC	16240804m	284.21	ppb	100

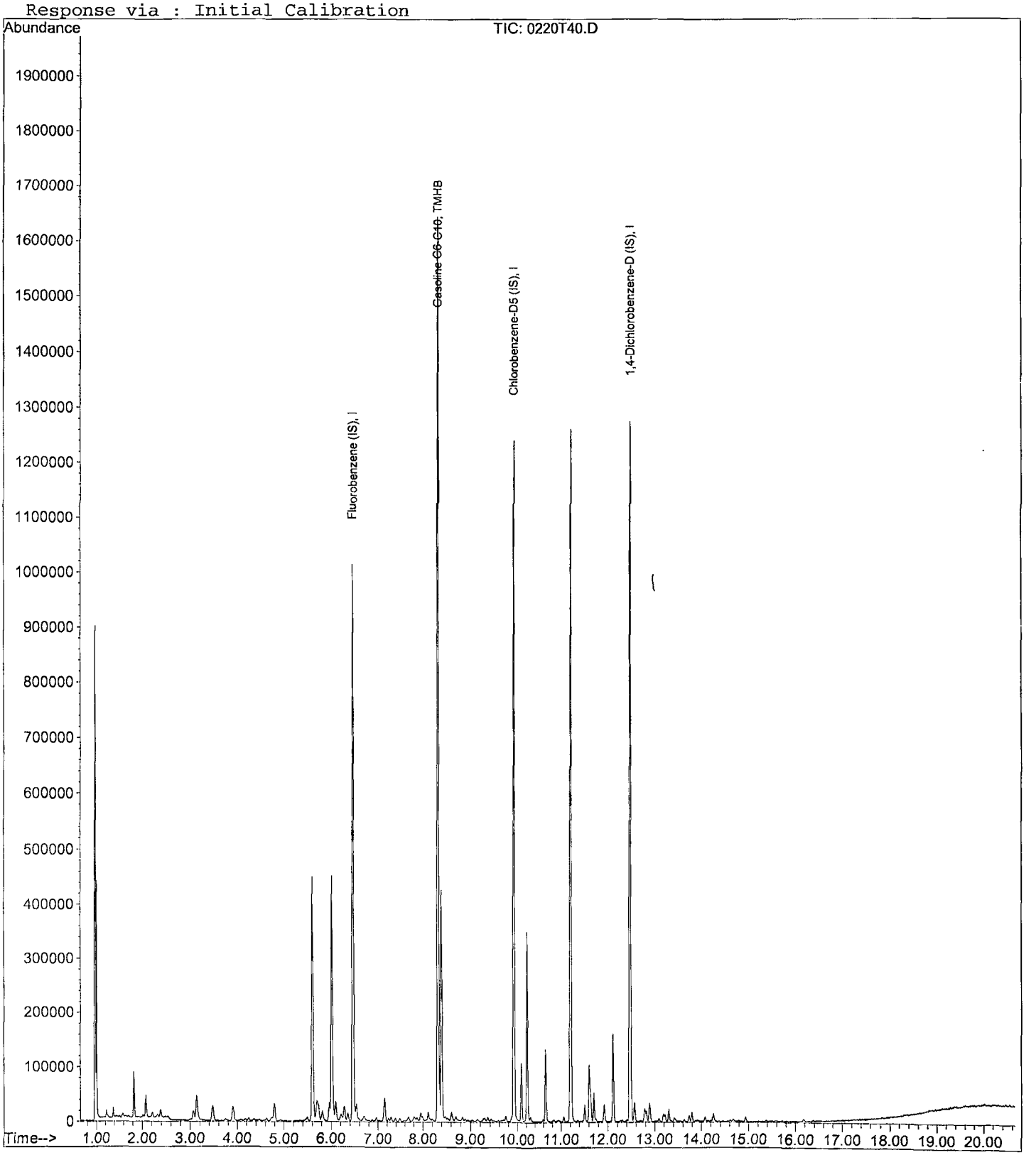
(#) = qualifier out of range (m) = manual integration
0220T40.D TGAS0219.M Fri Mar 13 11:05:13 2020 Page 1

Quantitation Report

Data File : M:\THOR\DATA\T200219B\0220T40.D Vial: 40
Acq On : 21 Feb 20 2:23 Operator:
Sample : (SS) 300ug/L Gas Std 2/20/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Feb 21 11:37 2020 Quant Results File: TGAS0219.RES

Method : M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 03/09/20
Matrix: Instrument: Thor Initials: DP

		Compound	0309T02.D 1	0309T03 D 2	0309T04.D 3	0309T05.D 4	0309T06 D 5	0309T07.D 6	0309T08 D 7	0309T09.D 8	0309T10.D 9		Avg	%RSD	Type	r^2	Q	MRF
1	I	Fluorobenzene (IS)																
2	SL	Dibromofluoromethane(S)	0.7766	0.7014	0.4290	0.4372	0.3560	0.3352	0.3004	0.3041	0.2748		0.43	42	SL	0.999		
3	SL	1,2-DCA-D4(S)	0.7927	0.7129	0.4422	0.4573	0.3560	0.3443	0.3055	0.3138	0.2786		0.44	42	SL	0.999		
4	I	Chlorobenzene-D5 (IS)																
5	SL	Toluene-D8(S)	3.882	3.504	2.144	2.134	1.656	1.600	1.412	1.439	1.249		2.1	45	SL	0.998		
6	SL	4-Bromofluorobenzene(S)	1.474	1.324	0.8132	0.8064	0.6415	0.6338	0.5650	0.5722	0.5229		0.82	42	SL	0.999		
7	I	1,4-Dichlorobenzene-D (IS)																
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		
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35																		

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0309T02.D Vial: 2
Acq On : 9 Mar 20 7:22 Operator:
Sample : 0.3ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 9 17:03 2020 Quant Results File: TSUR0309.RES

Quant Method : M:\THOR\DATA\T200309\TSUR0309.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	897893	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.92	117	719814	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.47	152	382559	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.60	111	139419	6.62	ppb	0.00
Spiked Amount 25.000			Recovery =	26.488%		
3) 1,2-DCA-D4(S)	6.01	65	142222	6.49	ppb	0.00
Spiked Amount 25.000			Recovery =	25.944%		
5) Toluene-D8(S)	8.32	98	559018	6.52	ppb	0.00
Spiked Amount 25.000			Recovery =	26.064%		
6) 4-Bromofluorobenzene(S)	11.21	95	212258	7.06	ppb	0.00
Spiked Amount 25.000			Recovery =	28.256%		

Target Compounds Qvalue

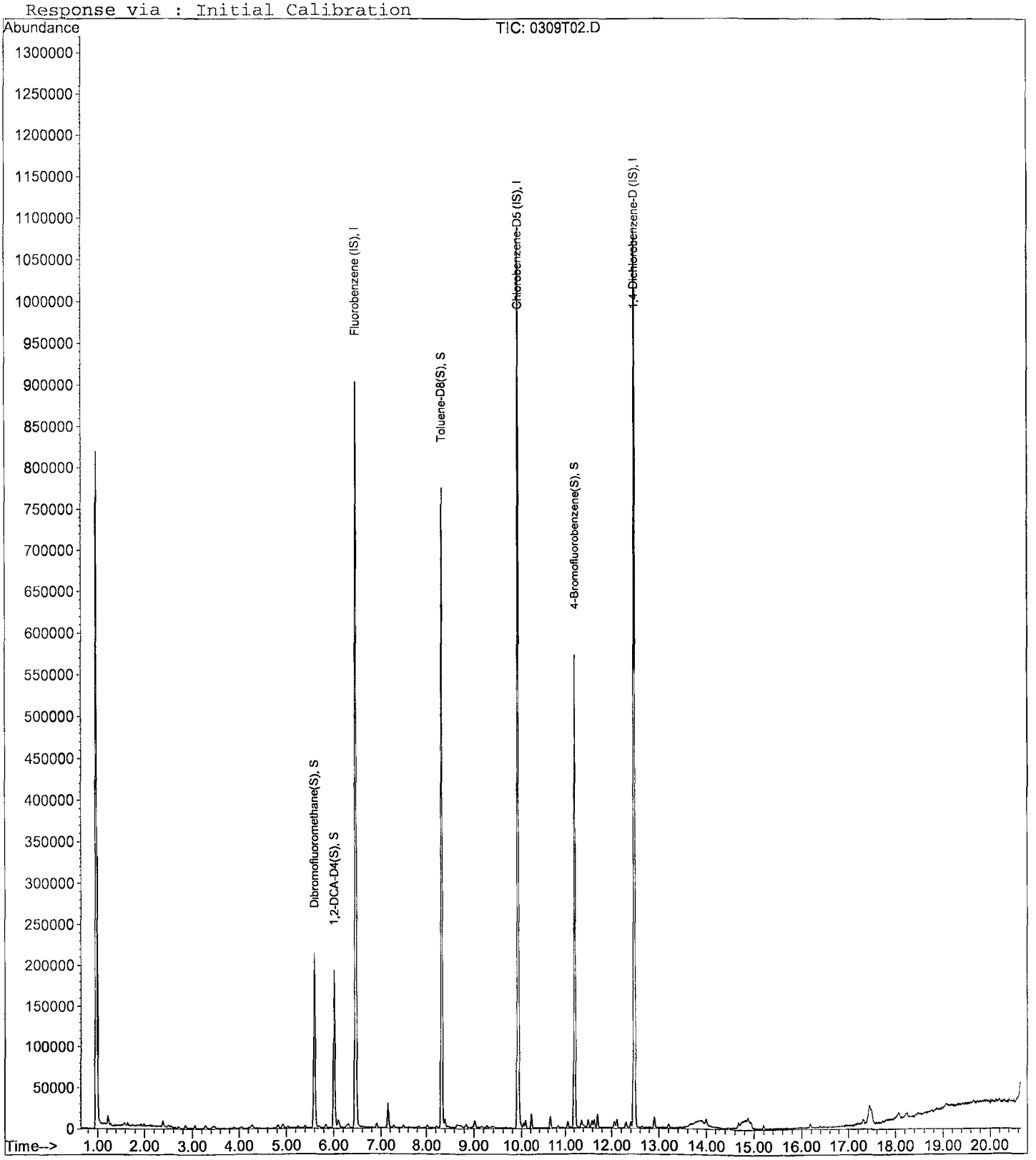
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200309\0309T02.D Vial: 2
Acq On : 9 Mar 20 7:22 Operator:
Sample : 0.3ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 9 17:03 2020 Quant Results File: TSUR0309.RES

Method : M:\THOR\DATA\T200309\TSUR0309.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0309T03.D Vial: 3
Acq On : 9 Mar 20 7:51 Operator:
Sample : 0.5ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 9 17:03 2020 Quant Results File: TSUR0309.RES

Quant Method : M:\THOR\DATA\T200309\TSUR0309.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	888561	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.92	117	717507	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.47	152	386915	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.60	111	124562	5.14	ppb	0.00
Spiked Amount 25.000			Recovery =	20.560%		
3) 1,2-DCA-D4(S)	6.01	65	126637	4.95	ppb	0.00
Spiked Amount 25.000			Recovery =	19.796%		
5) Toluene-D8(S)	8.33	98	502860	4.86	ppb	0.00
Spiked Amount 25.000			Recovery =	19.456%		
6) 4-Bromofluorobenzene(S)	11.21	95	190016	5.51	ppb	0.00
Spiked Amount 25.000			Recovery =	22.056%		

Target Compounds Qvalue

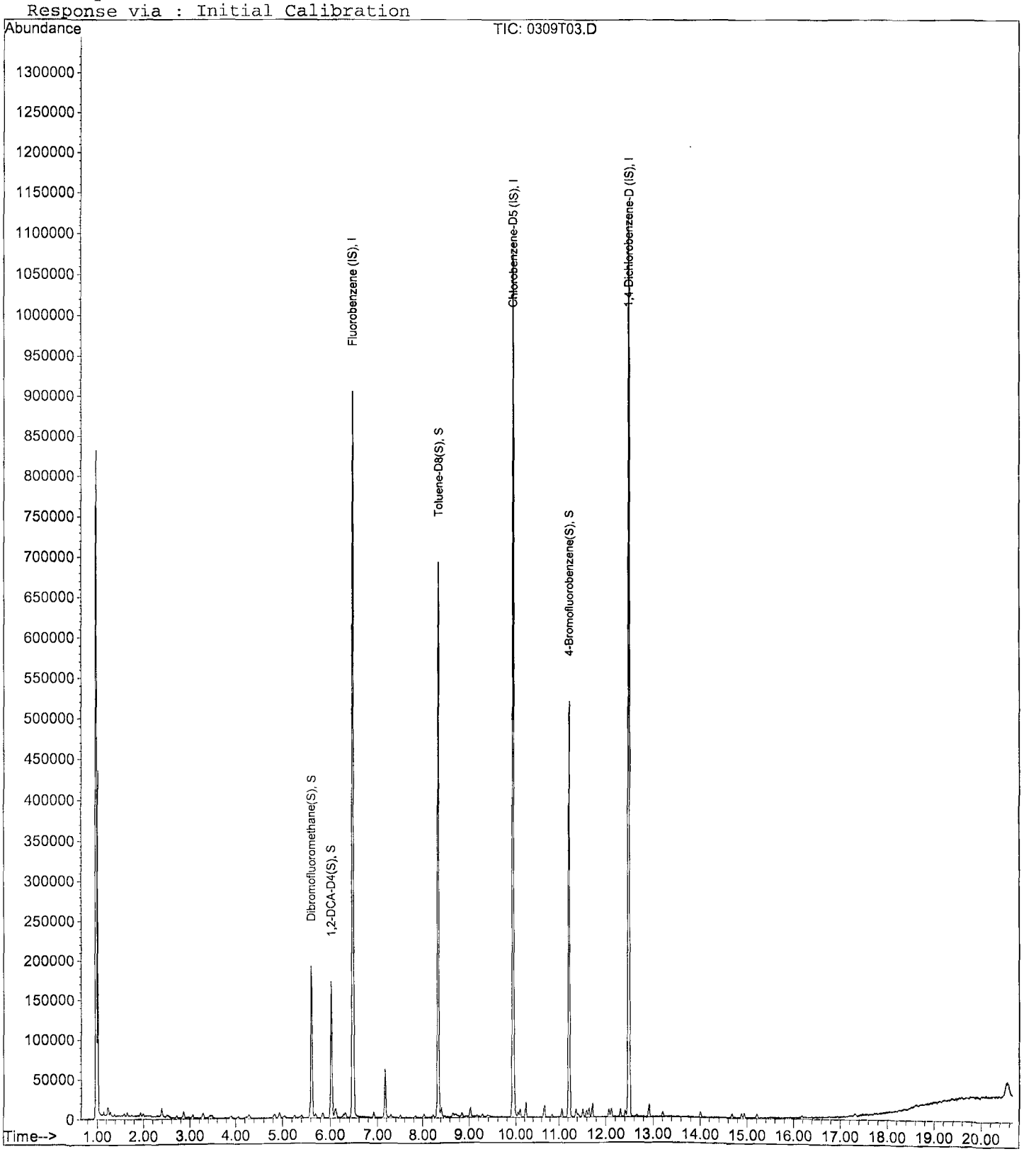
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200309\0309T03.D Vial: 3
Acq On : 9 Mar 20 7:51 Operator:
Sample : 0.5ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 9 17:03 2020 Quant Results File: TSUR0309.RES

Method : M:\THOR\DATA\T200309\TSUR0309.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0309T04.D Vial: 4
Acq On : 9 Mar 20 8:19 Operator:
Sample : 1ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 9 17:03 2020 Quant Results File: TSUR0309.RES

Quant Method : M:\THOR\DATA\T200309\TSUR0309.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	902016	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.92	117	713607	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.47	152	390501	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.60	111	154738	8.22	ppb	0.00
Spiked Amount 25.000			Recovery =	32.880%		
3) 1,2-DCA-D4(S)	6.01	65	159497	8.27	ppb	0.00
Spiked Amount 25.000			Recovery =	33.080%		
5) Toluene-D8(S)	8.33	98	612058	8.28	ppb	0.00
Spiked Amount 25.000			Recovery =	33.136%		
6) 4-Bromofluorobenzene(S)	11.21	95	232171	8.64	ppb	0.00
Spiked Amount 25.000			Recovery =	34.544%		

Target Compounds Qvalue

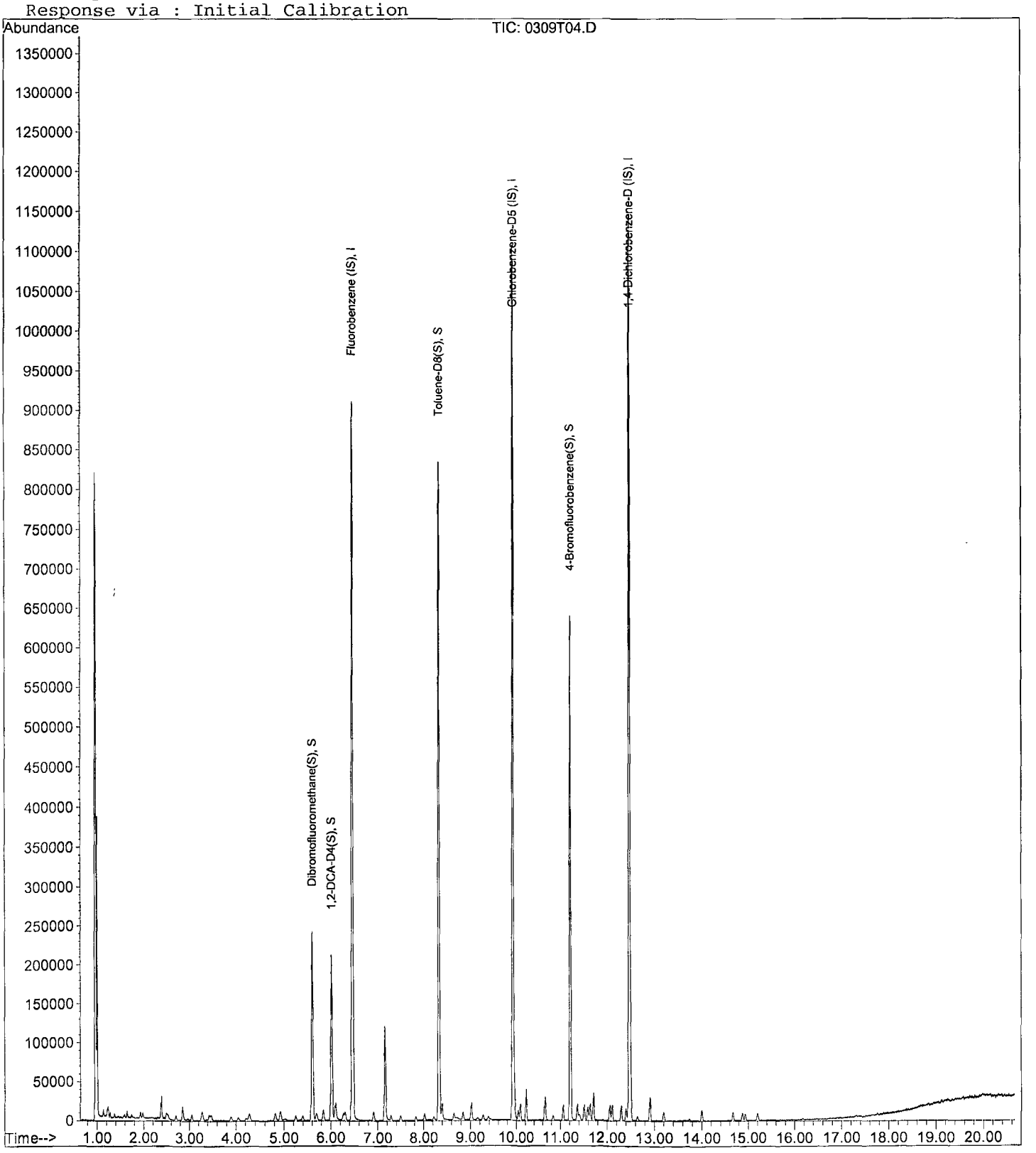
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200309\0309T04.D Vial: 4
Acq On : 9 Mar 20 8:19 Operator:
Sample : 1ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 9 17:03 2020 Quant Results File: TSUR0309.RES

Method : M:\THOR\DATA\T200309\TSUR0309.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0309T05.D Vial: 5
Acq On : 9 Mar 20 8:47 Operator:
Sample : 2ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 9 17:03 2020 Quant Results File: TSUR0309.RES

Quant Method : M:\THOR\DATA\T200309\TSUR0309.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	916868	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.92	117	746303	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.48	152	405222	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.60	111	160283	8.54	ppb	0.00
Spiked Amount 25.000			Recovery = 34.164%			
3) 1,2-DCA-D4(S)	6.01	65	167421	8.83	ppb	0.00
Spiked Amount 25.000			Recovery = 35.320%			
5) Toluene-D8(S)	8.33	98	637240	8.20	ppb	0.00
Spiked Amount 25.000			Recovery = 32.800%			
6) 4-Bromofluorobenzene(S)	11.21	95	240779	8.50	ppb	0.00
Spiked Amount 25.000			Recovery = 33.984%			

Target Compounds Qvalue

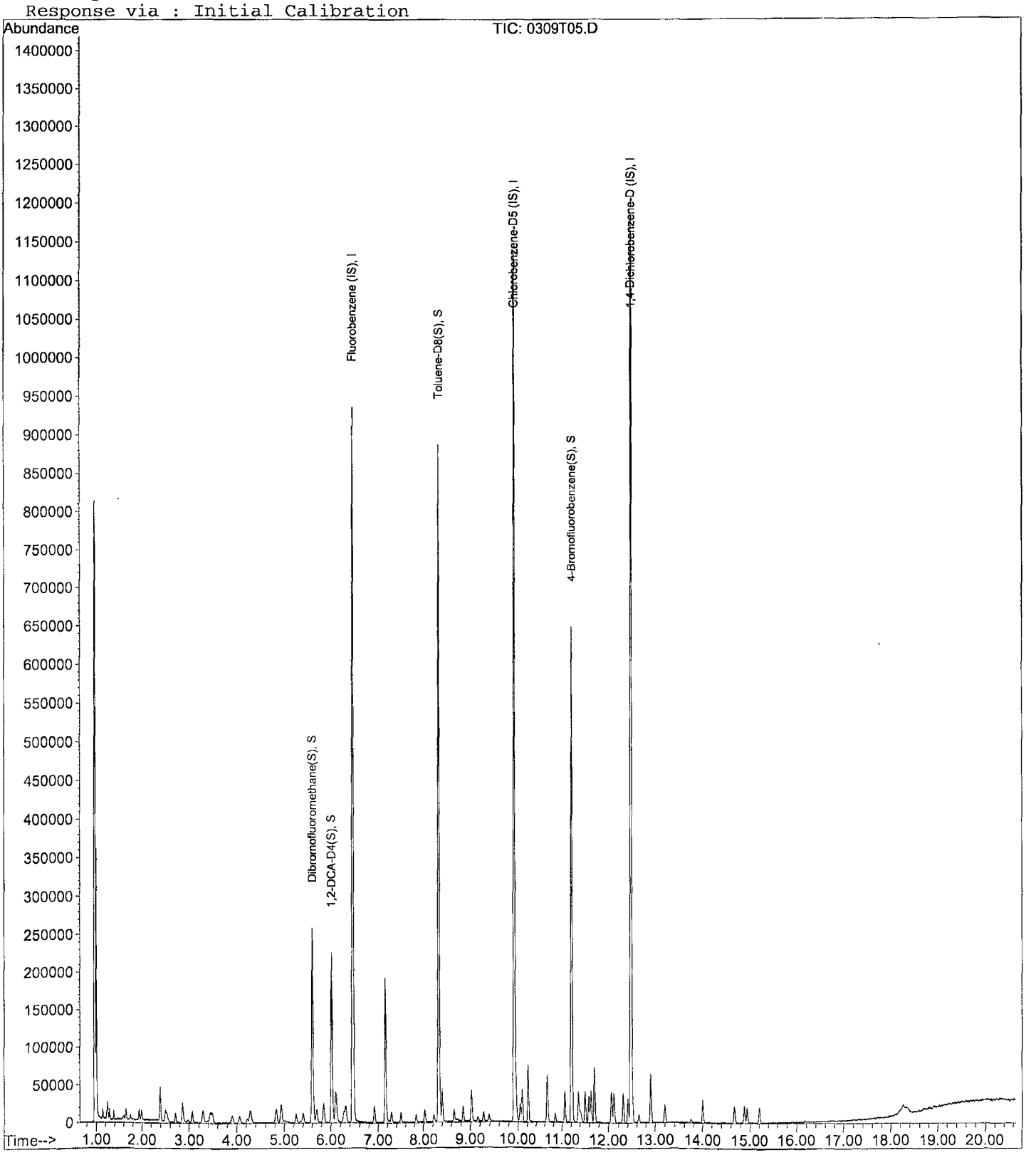
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200309\0309T05.D Vial: 5
Acq On : 9 Mar 20 8:47 Operator:
Sample : 2ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 9 17:03 2020 Quant Results File: TSUR0309.RES

Method : M:\THOR\DATA\T200309\TSUR0309.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0309T06.D Vial: 6
Acq On : 9 Mar 20 9:16 Operator:
Sample : 5ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 9 17:03 2020 Quant Results File: TSUR0309.RES

Quant Method : M:\THOR\DATA\T200309\TSUR0309.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	909930	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.92	117	738996	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.48	152	407916	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.60	111	323897	26.33	ppb	0.00
Spiked Amount 25.000			Recovery = 105.328%			
3) 1,2-DCA-D4(S)	6.01	65	323327	25.56	ppb	0.00
Spiked Amount 25.000			Recovery = 102.224%			
5) Toluene-D8(S)	8.33	98	1224034	25.70	ppb	0.00
Spiked Amount 25.000			Recovery = 102.784%			
6) 4-Bromofluorobenzene(S)	11.21	95	474105	24.95	ppb	0.00
Spiked Amount 25.000			Recovery = 99.800%			

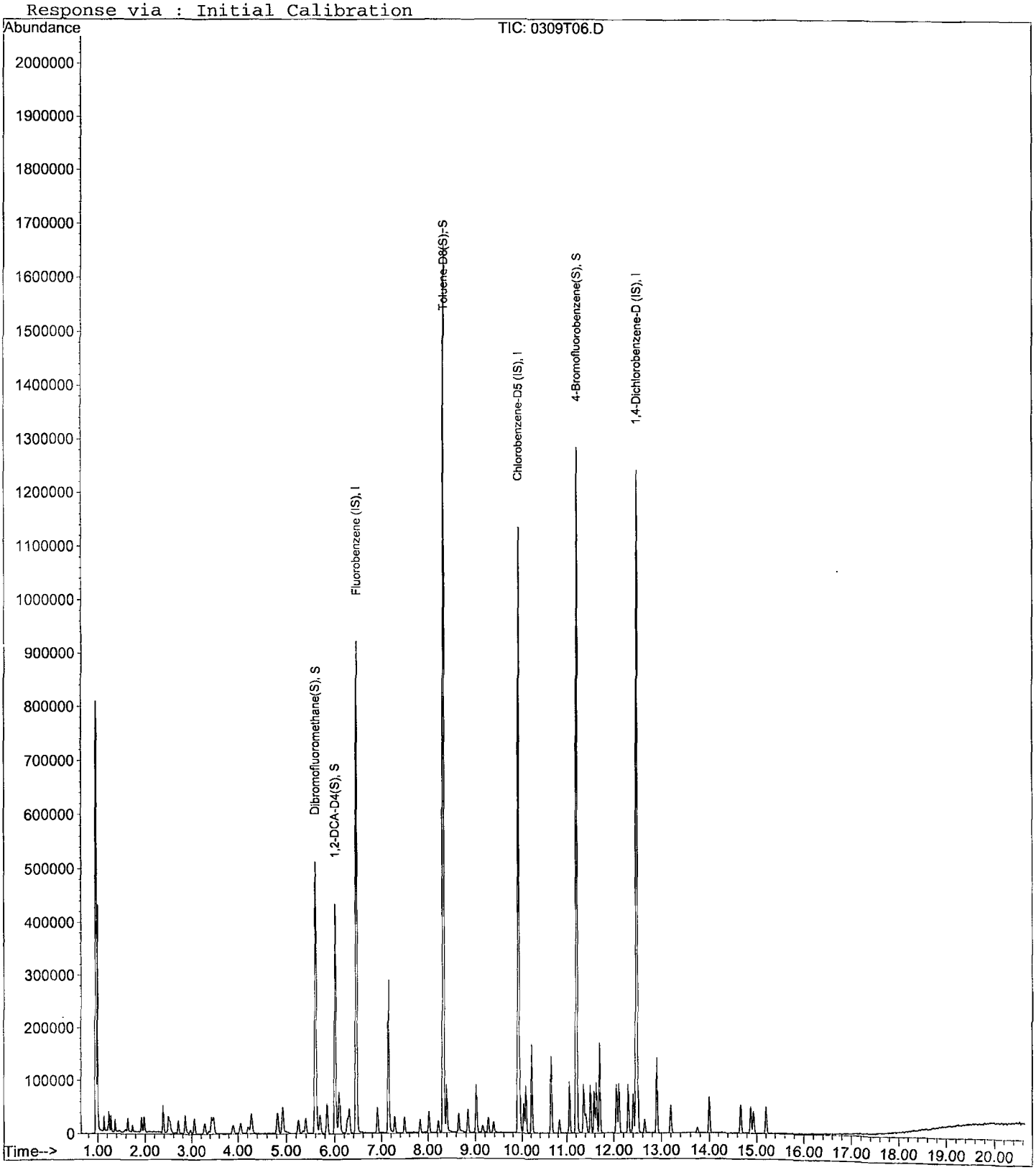
Target Compounds Qvalue

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

Data File : M:\THOR\DATA\T200309\0309T06.D Vial: 6
Acq On : 9 Mar 20 9:16 Operator:
Sample : 5ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 9 17:03 2020 Quant Results File: TSUR0309.RES

Method : M:\THOR\DATA\T200309\TSUR0309.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0309T07.D Vial: 7
Acq On : 9 Mar 20 9:44 Operator:
Sample : 10ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 9 17:03 2020 Quant Results File: TSUR0309.RES

Quant Method : M:\THOR\DATA\T200309\TSUR0309.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	900488	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.92	117	732303	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.48	152	418026	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.60	111	301752	24.28	ppb	0.00
Spiked Amount 25.000			Recovery =	97.136%		
3) 1,2-DCA-D4(S)	6.01	65	309769	24.46	ppb	0.00
Spiked Amount 25.000			Recovery =	97.836%		
5) Toluene-D8(S)	8.33	98	1171610	24.47	ppb	0.00
Spiked Amount 25.000			Recovery =	97.864%		
6) 4-Bromofluorobenzene(S)	11.21	95	464204	24.56	ppb	0.00
Spiked Amount 25.000			Recovery =	98.220%		

Target Compounds Qvalue

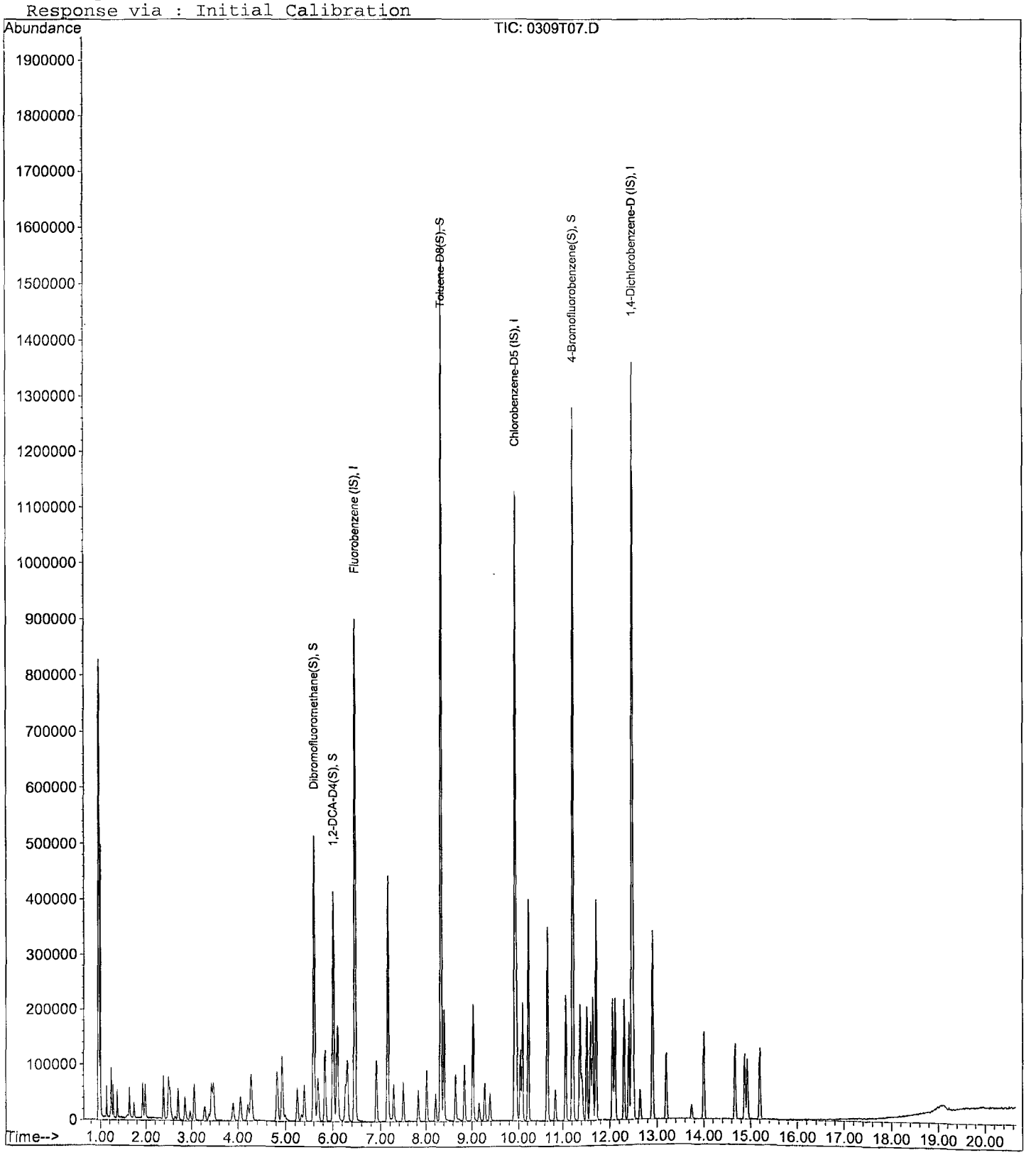
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200309\0309T07.D Vial: 7
Acq On : 9 Mar 20 9:44 Operator:
Sample : 10ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 9 17:03 2020 Quant Results File: TSUR0309.RES

Method : M:\THOR\DATA\T200309\TSUR0309.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0309T08.D Vial: 8
Acq On : 9 Mar 20 10:12 Operator:
Sample : 20ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 9 17:03 2020 Quant Results File: TSUR0309.RES

Quant Method : M:\THOR\DATA\T200309\TSUR0309.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	905871	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.92	117	744228	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.47	152	435985	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.60	111	544116	50.37	ppb	0.00
Spiked Amount 25.000			Recovery =	201.460%		
3) 1,2-DCA-D4(S)	6.01	65	552096	50.16	ppb	0.00
Spiked Amount 25.000			Recovery =	200.656%		
5) Toluene-D8(S)	8.33	98	2102328	51.17	ppb	0.00
Spiked Amount 25.000			Recovery =	204.692%		
6) 4-Bromofluorobenzene(S)	11.21	95	841049	50.16	ppb	0.00
Spiked Amount 25.000			Recovery =	200.620%		

Target Compounds Qvalue

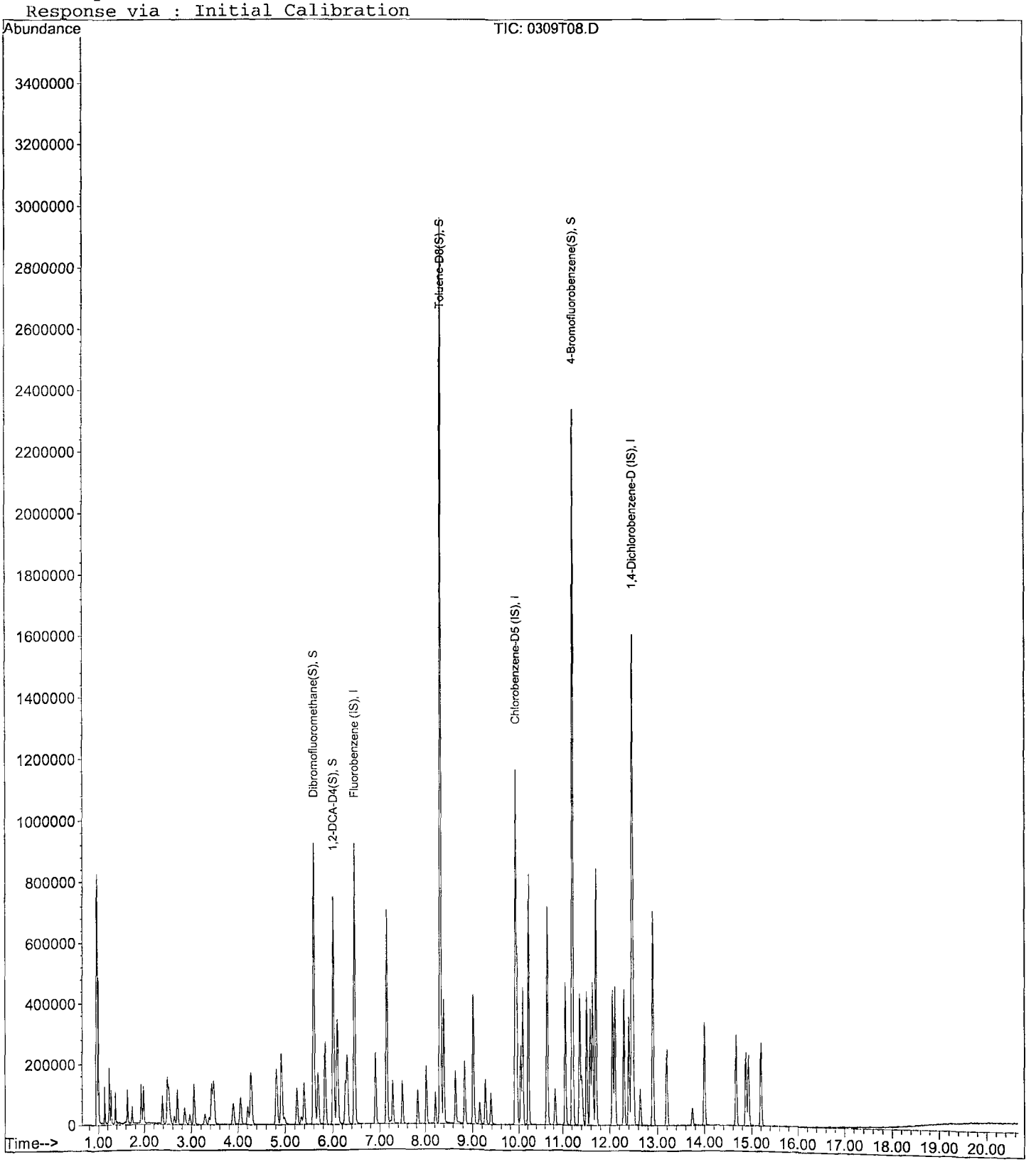
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200309\0309T08.D Vial: 8
Acq On : 9 Mar 20 10:12 Operator:
Sample : 20ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 9 17:03 2020 Quant Results File: TSUR0309.RES

Method : M:\THOR\DATA\T200309\TSUR0309.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0309T09.D Vial: 9
Acq On : 9 Mar 20 10:41 Operator:
Sample : 40ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 9 17:03 2020 Quant Results File: TSUR0309.RES

Quant Method : M:\THOR\DATA\T200309\TSUR0309.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	917837	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.92	117	748911	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.48	152	432167	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.60	111	557930	51.07	ppb	0.00
Spiked Amount 25.000			Recovery =	204.296%		
3) 1,2-DCA-D4(S)	6.01	65	574881	51.80	ppb	0.00
Spiked Amount 25.000			Recovery =	207.192%		
5) Toluene-D8(S)	8.33	98	2156630	52.37	ppb	0.00
Spiked Amount 25.000			Recovery =	209.476%		
6) 4-Bromofluorobenzene(S)	11.21	95	857467	50.92	ppb	0.00
Spiked Amount 25.000			Recovery =	203.688%		

Target Compounds Qvalue

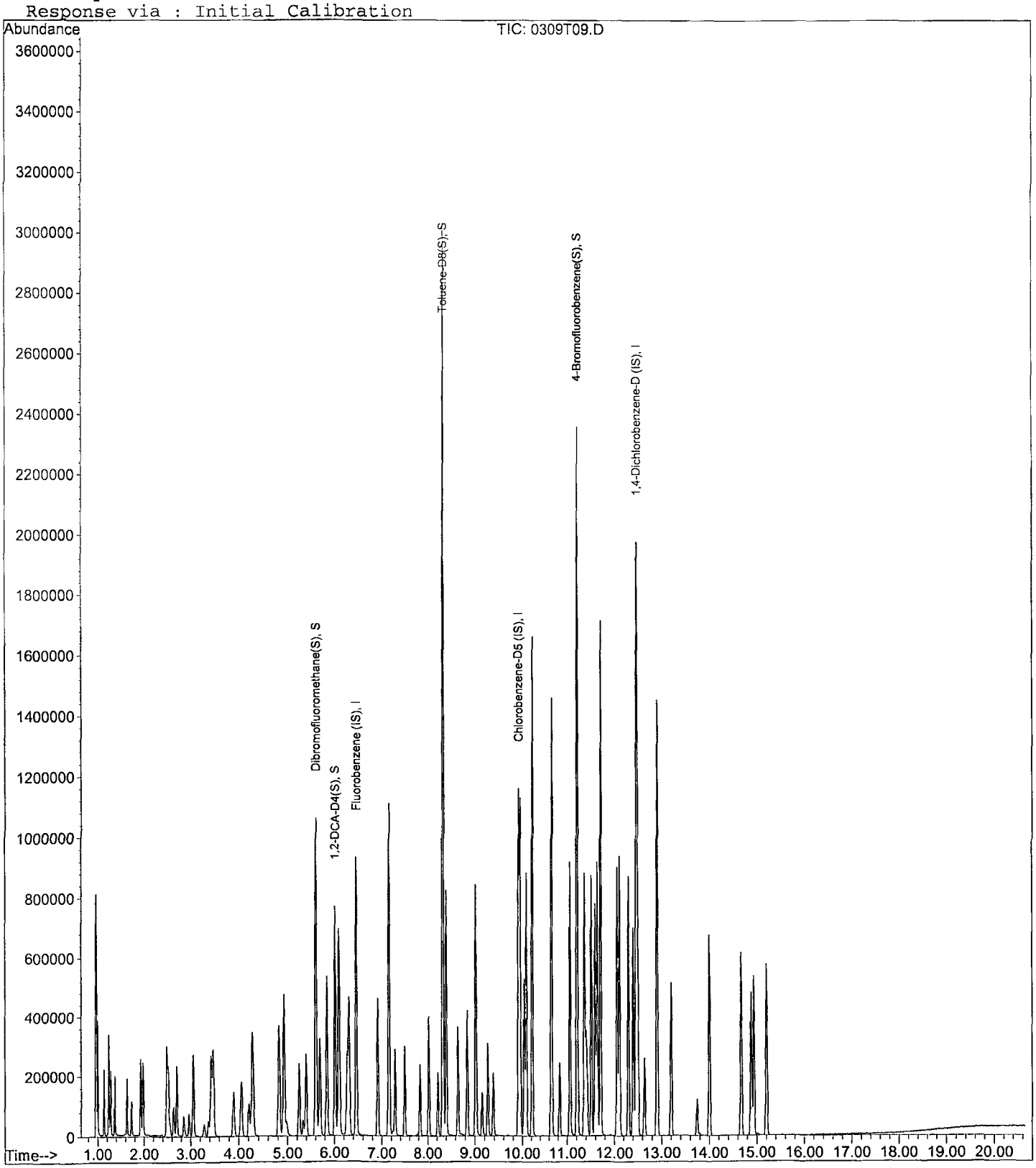
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200309\0309T09.D Vial: 9
Acq On : 9 Mar 20 10:41 Operator:
Sample : 40ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 9 17:03 2020 Quant Results File: TSUR0309.RES

Method : M:\THOR\DATA\T200309\TSUR0309.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0309T10.D Vial: 10
Acq On : 9 Mar 20 11:09 Operator:
Sample : 100ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 9 17:03 2020 Quant Results File: TSUR0309.RES

Quant Method : M:\THOR\DATA\T200309\TSUR0309.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	846795	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.92	117	702597	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.48	152	440486	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.60	111	930460	99.29	ppb	0.00
Spiked Amount 25.000			Recovery =	397.164%		
3) 1,2-DCA-D4(S)	6.01	65	943792	99.07	ppb	0.00
Spiked Amount 25.000			Recovery =	396.288%		
5) Toluene-D8(S)	8.33	98	3509611	98.49	ppb	0.00
Spiked Amount 25.000			Recovery =	393.972%		
6) 4-Bromofluorobenzene(S)	11.21	95	1469573	99.76	ppb	0.00
Spiked Amount 25.000			Recovery =	399.056%		

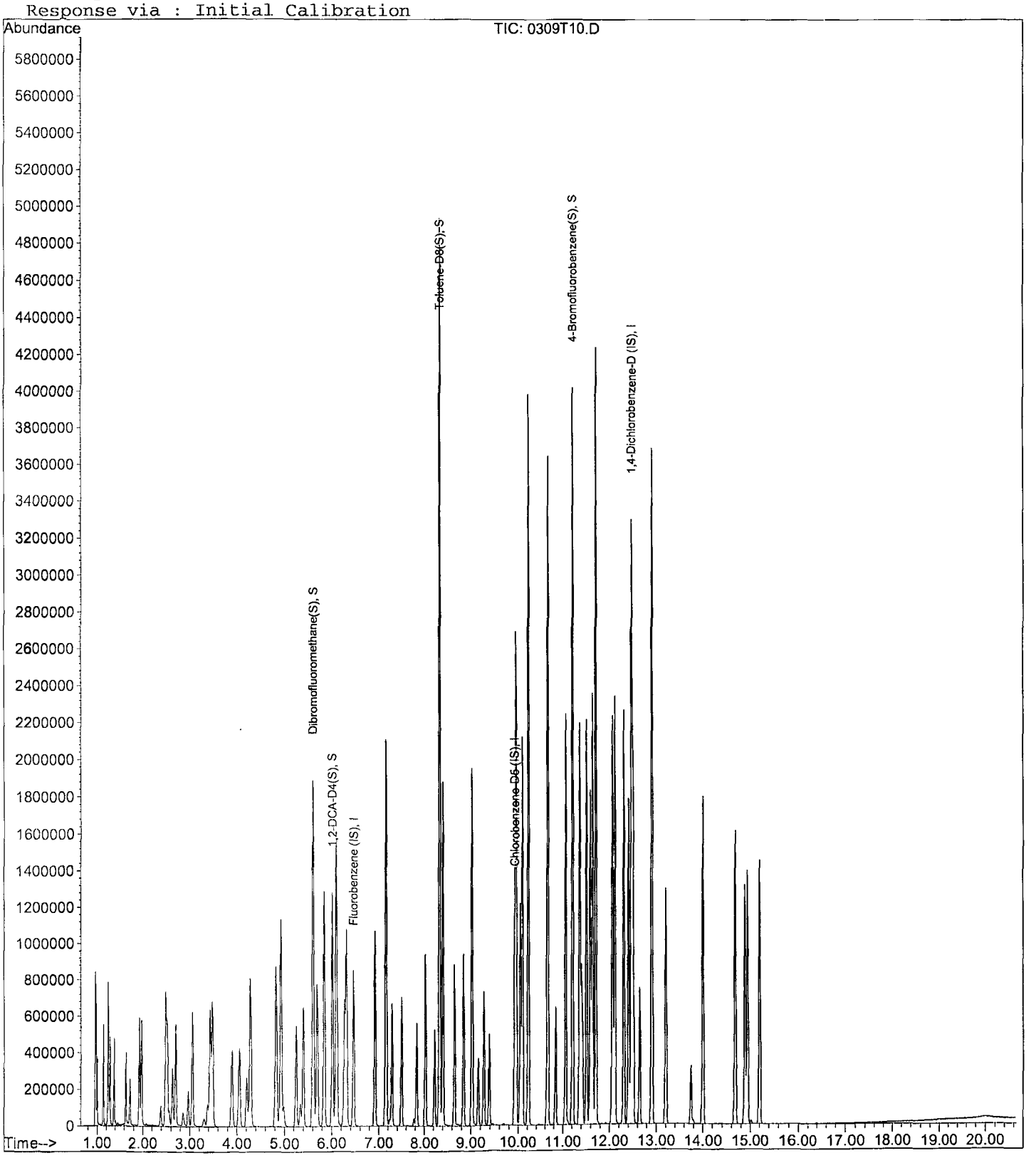
Target Compounds Qvalue

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

Data File : M:\THOR\DATA\T200309\0309T10.D Vial: 10
Acq On : 9 Mar 20 11:09 Operator:
Sample : 100ug/L VOC STD 3/9/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 9 17:03 2020 Quant Results File: TSUR0309.RES

Method : M:\THOR\DATA\T200309\TSUR0309.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 03/11/20
Instrument: Thor
Initial Cal. Date: 03/09/20
Data File: 0311t13.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	4.068	1.373	66	TMHBL	4.4
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
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39							
40							
		Average			66.0		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 03/11/20
Instrument: Thor
Initial Cal. Date: 03/09/20
Data File: 0311t13.D

		Compound	MEAN	CCRF	%D		%Drift	
1	I	Fluorobenzene (IS)	ISTD			I		
2	SL	Dibromofluoromethane(S)	0.4350	0.3660	16	SL	9.3	
3	SL	1,2-DCA-D4(S)	0.4448	0.4178	6.1	SL	26	* NT
4	I	Chlorobenzene-D5 (IS)	ISTD			I		
5	SL	Toluene-D8(S)	2.113	1.533	27	SL	7.9	
6	SL	4-Bromofluorobenzene(S)	0.8170	0.6092	25	SL	6.9	
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I		
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		Average			18.5			

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200309\0311t13.D Vial: 7
Acq On : 11 Mar 20 14:31 Operator:
Sample : 200311A CCV/LCS 300ug/L Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 11 15:05 2020 Quant Results File: TGAS0219.RES

Quant Method : M:\THOR\DATA\T200309\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	TIC	530712	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.92	TIC	680138	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.47	TIC	713879	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.33	TIC	8743392m	313.22	ppb	100

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0311t13.D Vial: 7
Acq On : 11 Mar 20 14:31 Operator:
Sample : 200311A CCV/LCS 300ug/L Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 12 10:52 2020 Quant Results File: TSUR0309.RES

Quant Method : M:\THOR\DATA\T200309\TSUR0309.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	498189	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.92	117	426677	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.47	152	237159	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.60	111	182325	27.32	ppb	0.00
Spiked Amount 25.000			Recovery = 109.264%			
3) 1,2-DCA-D4(S)	6.02	65	208124	31.60	ppb	0.00
Spiked Amount 25.000			Recovery = 126.404%			
5) Toluene-D8(S)	8.33	98	654223	23.01	ppb	0.00
Spiked Amount 25.000			Recovery = 92.056%			
6) 4-Bromofluorobenzene(S)	11.21	95	259924	23.28	ppb	0.00
Spiked Amount 25.000			Recovery = 93.120%			

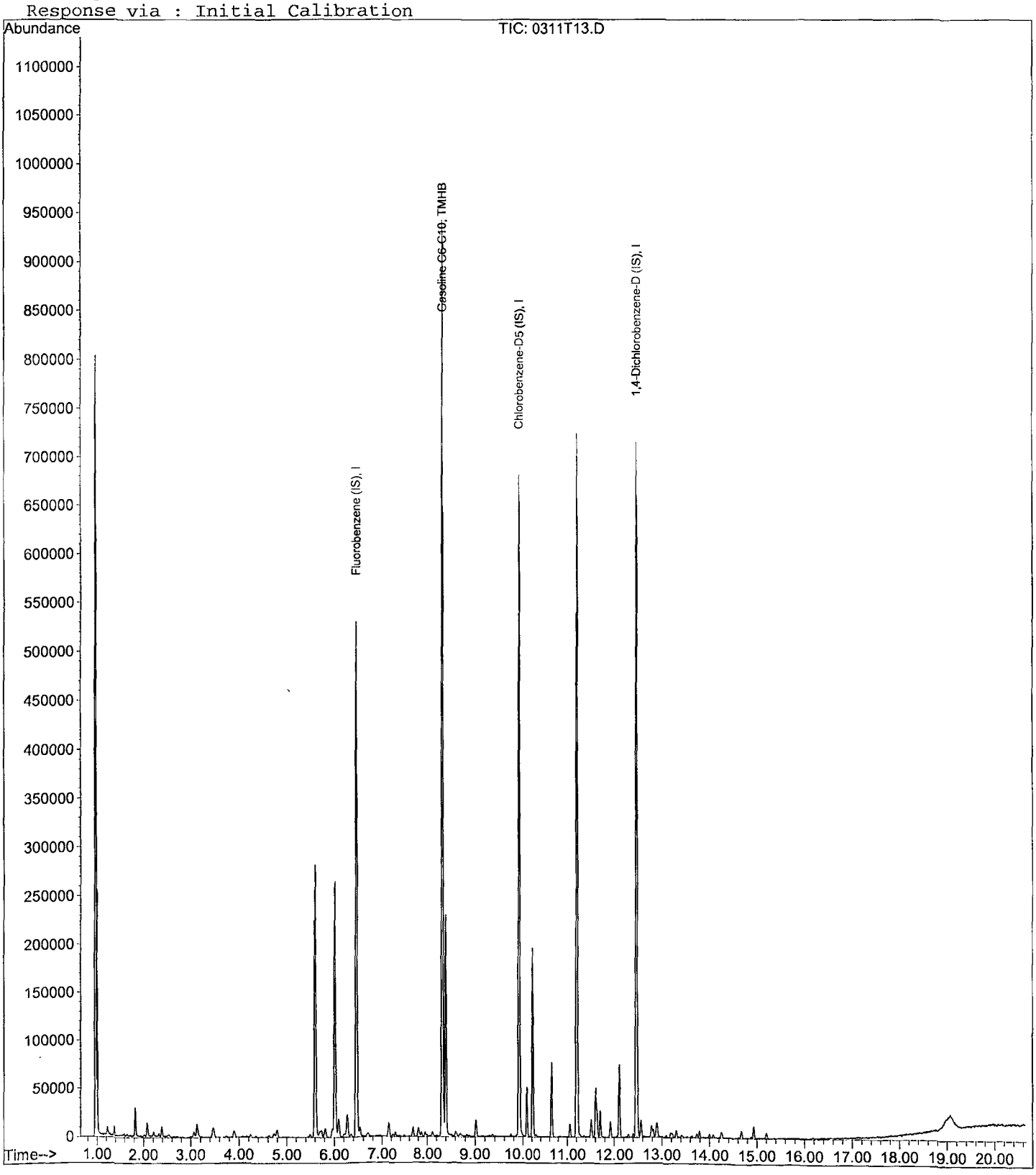
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0311t13.D TSUR0309.M Fri Mar 13 11:07:58 2020 Page 1

Data File : M:\THOR\DATA\T200309\0311t13.D Vial: 7
Acq On : 11 Mar 20 14:31 Operator:
Sample : 200311A CCV/LCS 300ug/L Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 11 15:05 2020 Quant Results File: TGAS0219.RES

Method : M:\THOR\DATA\T200219B\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

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

SDG No:
Date Analyzed: 03/11/20
Instrument: Thor
Initial Cal. Date: 02/20/20
Data File: 0311t25.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	4.068	1.320	68	TMHBL	10
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
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39							
40							
		Average			68.0		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

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

SDG No:
Date Analyzed: 03/11/20
Instrument: Thor
Initial Cal. Date: 02/20/20
Data File: 0311t25.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	SL	Dibromofluoromethane(S)	0.4350	0.3478	20	SL	2.1
3	SL	1,2-DCA-D4(S)	0.4448	0.4090	8.1	SL	23
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	SL	Toluene-D8(S)	2.113	1.512	28	SL	9.8
6	SL	4-Bromofluorobenzene(S)	0.8170	0.6017	26	SL	8.4
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
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		Average			20.5		

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200309\0311t25.D Vial: 19
Acq On : 11 Mar 20 20:12 Operator:
Sample : Ending CCV 300ug/L 3/11/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 12 10:53 2020 Quant Results File: TGAS0219.RES

Quant Method : M:\THOR\DATA\T200309\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	TIC	528740	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.92	TIC	662798	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.48	TIC	715556	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.33	TIC	8376197m	269.98	ppb	100

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0311t25.D Vial: 19
Acq On : 11 Mar 20 20:12 Operator:
Sample : Ending CCV 300ug/L 3/11/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 12 10:53 2020 Quant Results File: TSUR0309.RES

Quant Method : M:\THOR\DATA\T200309\TSUR0309.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	496554	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.92	117	420978	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.48	152	239401	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.60	111	172682	25.53	ppb	0.00
Spiked Amount 25.000			Recovery =	102.108%		
3) 1,2-DCA-D4(S)	6.02	65	203069	30.75	ppb	0.00
Spiked Amount 25.000			Recovery =	122.992%		
5) Toluene-D8(S)	8.33	98	636491	22.55	ppb	0.00
Spiked Amount 25.000			Recovery =	90.192%		
6) 4-Bromofluorobenzene(S)	11.21	95	253301	22.89	ppb	0.00
Spiked Amount 25.000			Recovery =	91.576%		

Target Compounds Qvalue

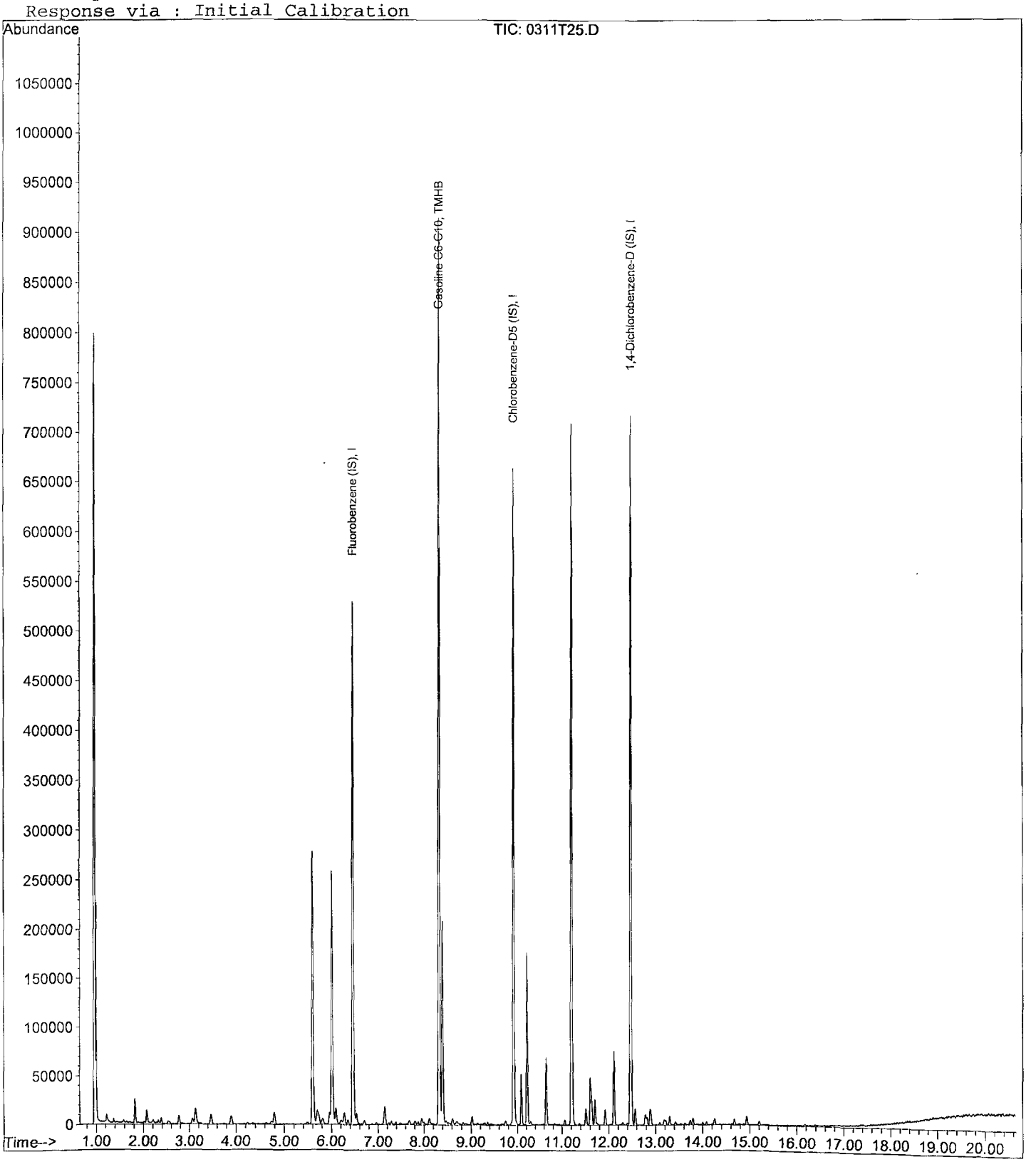
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200309\0311t25.D Vial: 19
Acq On : 11 Mar 20 20:12 Operator:
Sample : Ending CCV 300ug/L 3/11/20 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 12 10:53 2020 Quant Results File: TGAS0219.RES

Method : M:\THOR\DATA\T200309\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration



ORGANICS
Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200309\0311T19.D Vial: 13
Acq On : 11 Mar 20 17:22 Operator:
Sample : BA08033W02 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 12 10:29 2020 Quant Results File: TGAS0219.RES

Quant Method : M:\THOR\DATA\T200309\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	TIC	528556	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.92	TIC	668004	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.48	TIC	679622	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0311T19.D Vial: 13
Acq On : 11 Mar 20 17:22 Operator:
Sample : BA08033W02 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 12 10:52 2020 Quant Results File: TSUR0309.RES

Quant Method : M:\THOR\DATA\T200309\TSUR0309.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	497886	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.92	117	423033	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.48	152	230076	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.60	111	174395	25.77	ppb	0.00
Spiked Amount 25.000			Recovery =	103.096%		
3) 1,2-DCA-D4(S)	6.02	65	203546	30.74	ppb	0.00
Spiked Amount 25.000			Recovery =	122.940%		
5) Toluene-D8(S)	8.33	98	630842	22.10	ppb	0.00
Spiked Amount 25.000			Recovery =	88.388%		
6) 4-Bromofluorobenzene(S)	11.21	95	246178	21.87	ppb	0.00
Spiked Amount 25.000			Recovery =	87.496%		

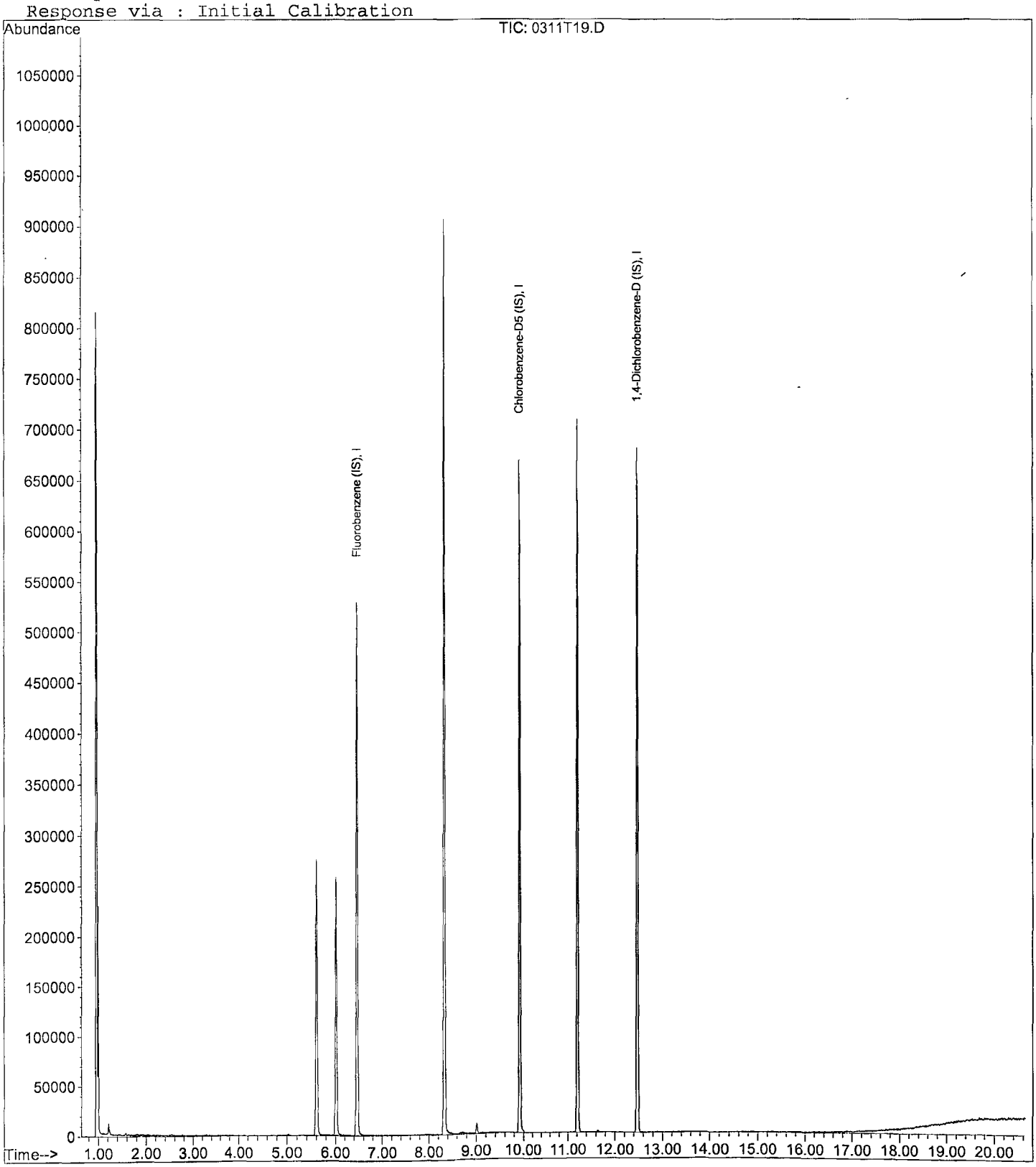
Target Compounds Qvalue

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

Data File : M:\THOR\DATA\T200309\0311T19.D Vial: 13
Acq On : 11 Mar 20 17:22 Operator:
Sample : BA08033W02 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 12 10:29 2020 Quant Results File: TGAS0219.RES

Method : M:\THOR\DATA\T200309\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200309\0311T20.D Vial: 14
Acq On : 11 Mar 20 17:50 Operator:
Sample : BA08034W02 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 12 10:28 2020 Quant Results File: TGAS0219.RES

Quant Method : M:\THOR\DATA\T200309\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	TIC	532662	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.92	TIC	662414	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.48	TIC	706338	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0311T20.D Vial: 14
Acq On : 11 Mar 20 17:50 Operator:
Sample : BA08034W02 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 12 10:52 2020 Quant Results File: TSUR0309.RES

Quant Method : M:\THOR\DATA\T200309\TSUR0309.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) *Fluorobenzene (IS)*	*6.46*	*96*	500750	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.92	117	427853	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.48	152	236893	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.60	111	179046	26.49	ppb	0.00
Spiked Amount 25.000			Recovery = 105.956%			
3) 1,2-DCA-D4(S)	6.02	65	209611	31.68	ppb	0.00
Spiked Amount 25.000			Recovery = 126.728%			
5) Toluene-D8(S)	8.33	98	641634	22.28	ppb	0.00
Spiked Amount 25.000			Recovery = 89.120%			
6) 4-Bromofluorobenzene(S)	11.21	95	252248	22.27	ppb	0.00
Spiked Amount 25.000			Recovery = 89.072%			

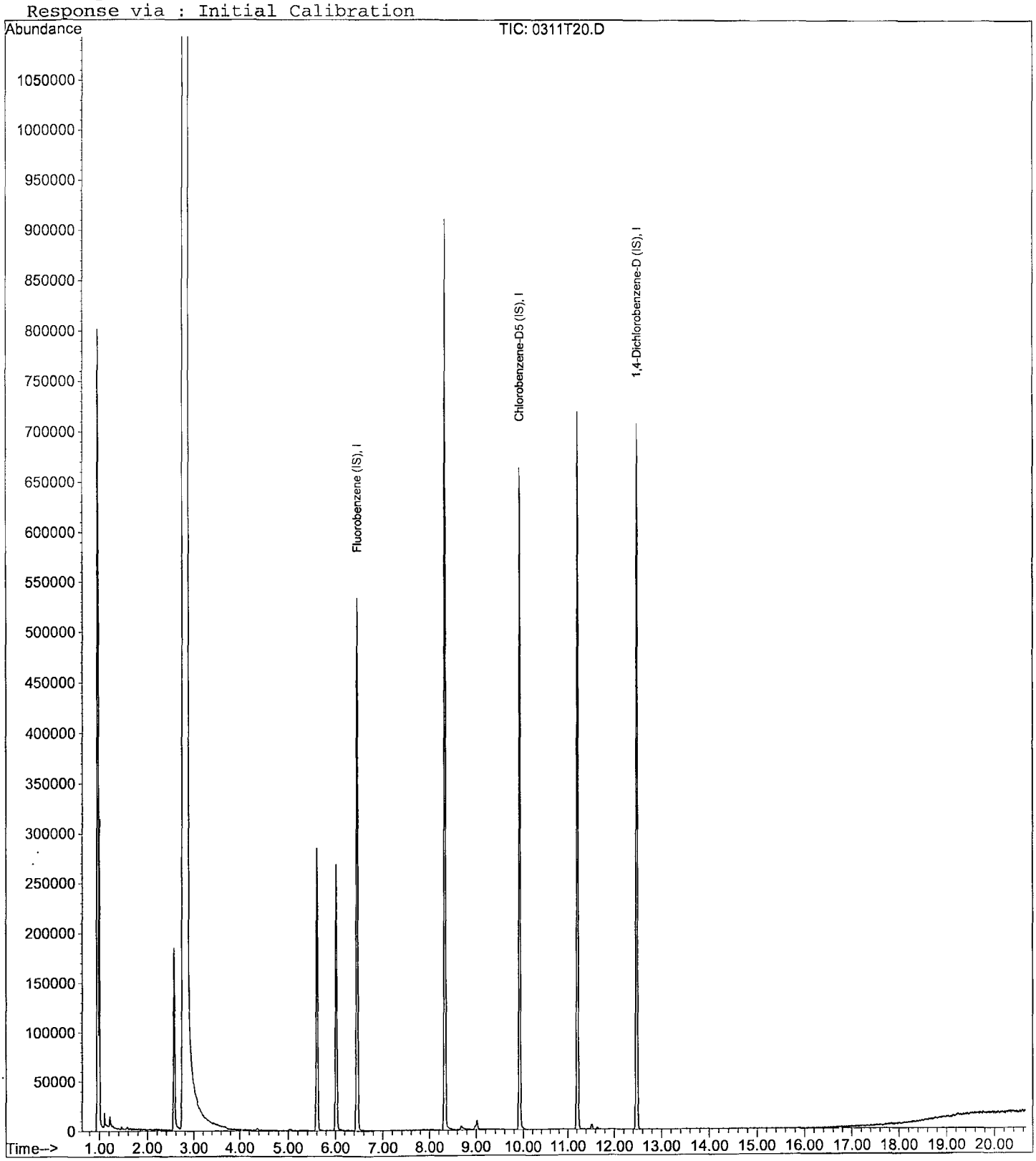
Target Compounds Qvalue

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

Data File : M:\THOR\DATA\T200309\0311T20.D Vial: 14
Acq On : 11 Mar 20 17:50 Operator:
Sample : BA08034W02 Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 12 10:28 2020 Quant Results File: TGAS0219.RES

Method : M:\THOR\DATA\T200309\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0311T18.D Vial: 12
Acq On : 11 Mar 20 16:53 Operator:
Sample : 200311A BLK Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 12 10:51 2020 Quant Results File: TGAS0219.RES

Quant Method : M:\THOR\DATA\T200309\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	TIC	531019	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.92	TIC	679754	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.48	TIC	674630	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.33	TIC	5183029m	-145.34	ppb	100

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0311T18.D Vial: 12
Acq On : 11 Mar 20 16:53 Operator:
Sample : 200311A BLK Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 12 10:52 2020 Quant Results File: TSUR0309.RES

Quant Method : M:\THOR\DATA\T200309\TSUR0309.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	499468	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.92	117	427620	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.48	152	231567	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.60	111	176084	26.00	ppb	0.00
Spiked Amount 25.000			Recovery = 103.988%			
3) 1,2-DCA-D4(S)	6.02	65	206208	31.13	ppb	0.00
Spiked Amount 25.000			Recovery = 124.504%			
5) Toluene-D8(S)	8.33	98	633382	21.88	ppb	0.00
Spiked Amount 25.000			Recovery = 87.508%			
6) 4-Bromofluorobenzene(S)	11.21	95	249587	21.96	ppb	0.00
Spiked Amount 25.000			Recovery = 87.852%			

Target Compounds Qvalue

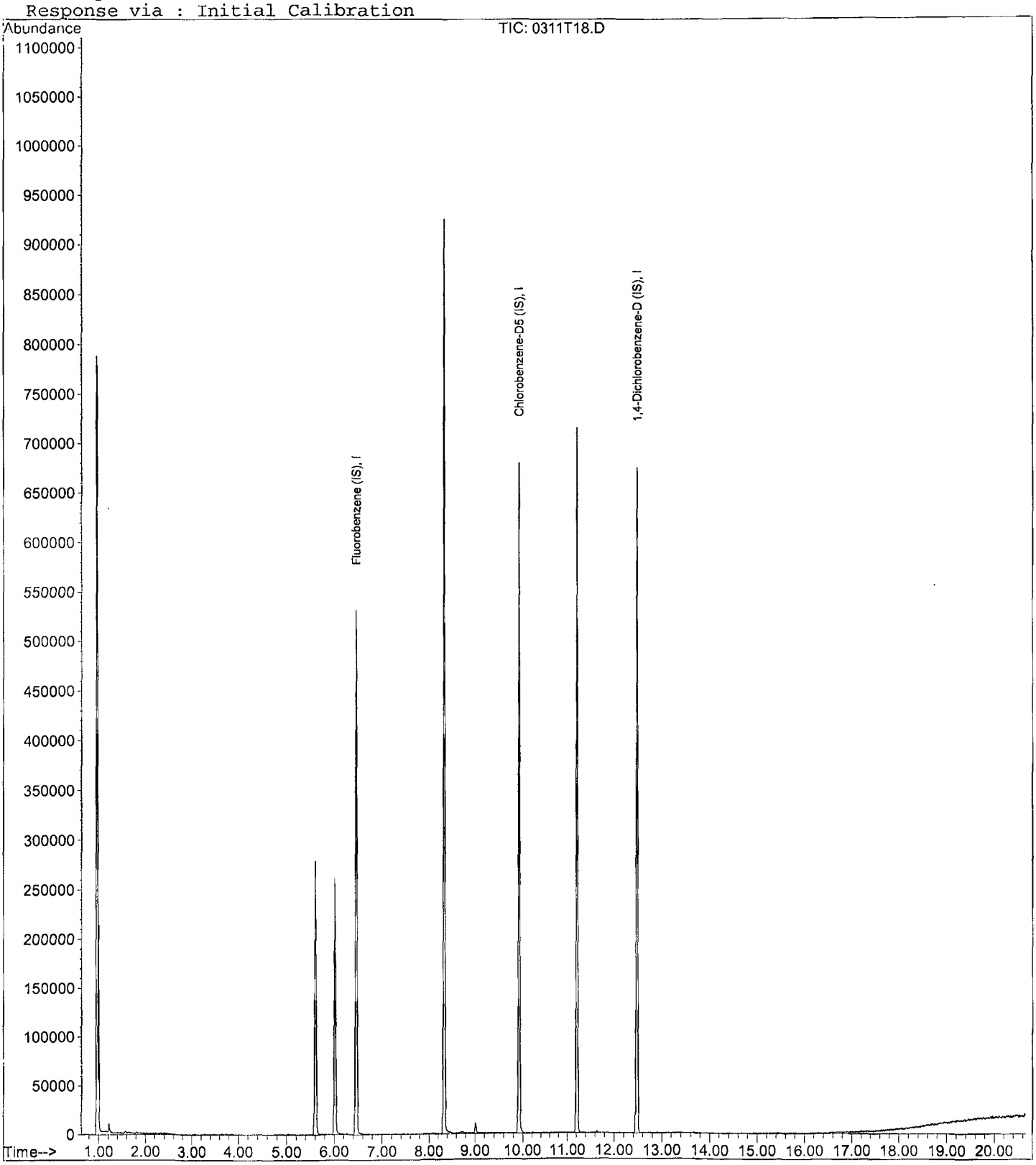
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200309\0311T18.D Vial: 12
Acq On : 11 Mar 20 16:53 Operator:
Sample : 200311A BLK Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 12 10:51 2020 Quant Results File: TGAS0219.RES

Method : M:\THOR\DATA\T200309\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200309\0311T13.D Vial: 7
Acq On : 11 Mar 20 14:31 Operator:
Sample : 200311A CCV/LCS 300ug/L Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 11 15:05 2020 Quant Results File: TGAS0219.RES

Quant Method : M:\THOR\DATA\T200309\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	TIC	530712	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.92	TIC	680138	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.47	TIC	713879	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.33	TIC	8743392m	313.22	ppb	100

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0311T13.D Vial: 7
Acq On : 11 Mar 20 14:31 Operator:
Sample : 200311A CCV/LCS 300ug/L Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 12 10:52 2020 Quant Results File: TSUR0309.RES

Quant Method : M:\THOR\DATA\T200309\TSUR0309.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	498189	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.92	117	426677	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.47	152	237159	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.60	111	182325	27.32	ppb	0.00
Spiked Amount 25.000			Recovery =	109.264%		
3) 1,2-DCA-D4(S)	6.02	65	208124	31.60	ppb	0.00
Spiked Amount 25.000			Recovery =	126.404%		
5) Toluene-D8(S)	8.33	98	654223	23.01	ppb	0.00
Spiked Amount 25.000			Recovery =	92.056%		
6) 4-Bromofluorobenzene(S)	11.21	95	259924	23.28	ppb	0.00
Spiked Amount 25.000			Recovery =	93.120%		

Target Compounds Qvalue

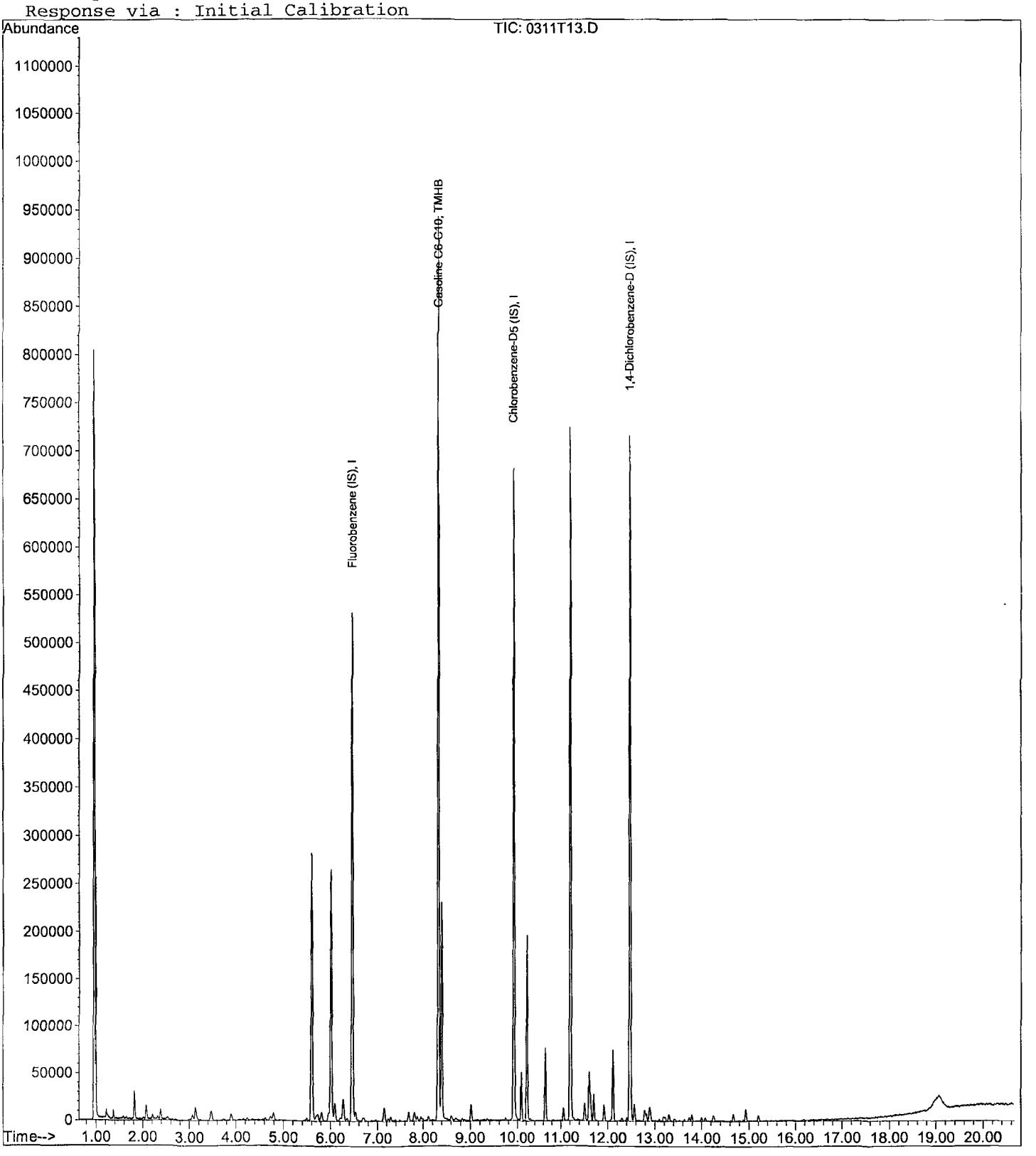
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200309\0311T13.D Vial: 7
Acq On : 11 Mar 20 14:31 Operator:
Sample : 200311A CCV/LCS 300ug/L Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 11 15:05 2020 Quant Results File: TGAS0219.RES

Method : M:\THOR\DATA\T200309\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T200309\0311T14.D Vial: 8
Acq On : 11 Mar 20 14:59 Operator:
Sample : 200311A LCSD 300ug/L Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 11 15:55 2020 Quant Results File: TGAS0219.RES

Quant Method : M:\THOR\DATA\T200309\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	TIC	529985	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.92	TIC	671624	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.48	TIC	708649	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	8.33	TIC	8659969m	304.01	ppb	100

(#) = qualifier out of range (m) = manual integration
0311T14.D TGAS0219.M Fri Mar 13 11:11:20 2020 Page 1

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T200309\0311T14.D Vial: 8
Acq On : 11 Mar 20 14:59 Operator:
Sample : 200311A LCSD 300ug/L Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 12 10:52 2020 Quant Results File: TSUR0309.RES

Quant Method : M:\THOR\DATA\T200309\TSUR0309.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 09 13:22:16 2020
Response via : Initial Calibration
DataAcq Meth : T8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.46	96	500768	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	9.92	117	426690	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	12.48	152	241687	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	5.60	111	177392	26.16	ppb	0.00
Spiked Amount 25.000			Recovery =	104.656%		
3) 1,2-DCA-D4(S)	6.02	65	204838	30.76	ppb	0.00
Spiked Amount 25.000			Recovery =	123.028%		
5) Toluene-D8(S)	8.33	98	638680	22.22	ppb	0.00
Spiked Amount 25.000			Recovery =	88.872%		
6) 4-Bromofluorobenzene(S)	11.21	95	251966	22.32	ppb	0.00
Spiked Amount 25.000			Recovery =	89.268%		

Target Compounds Qvalue

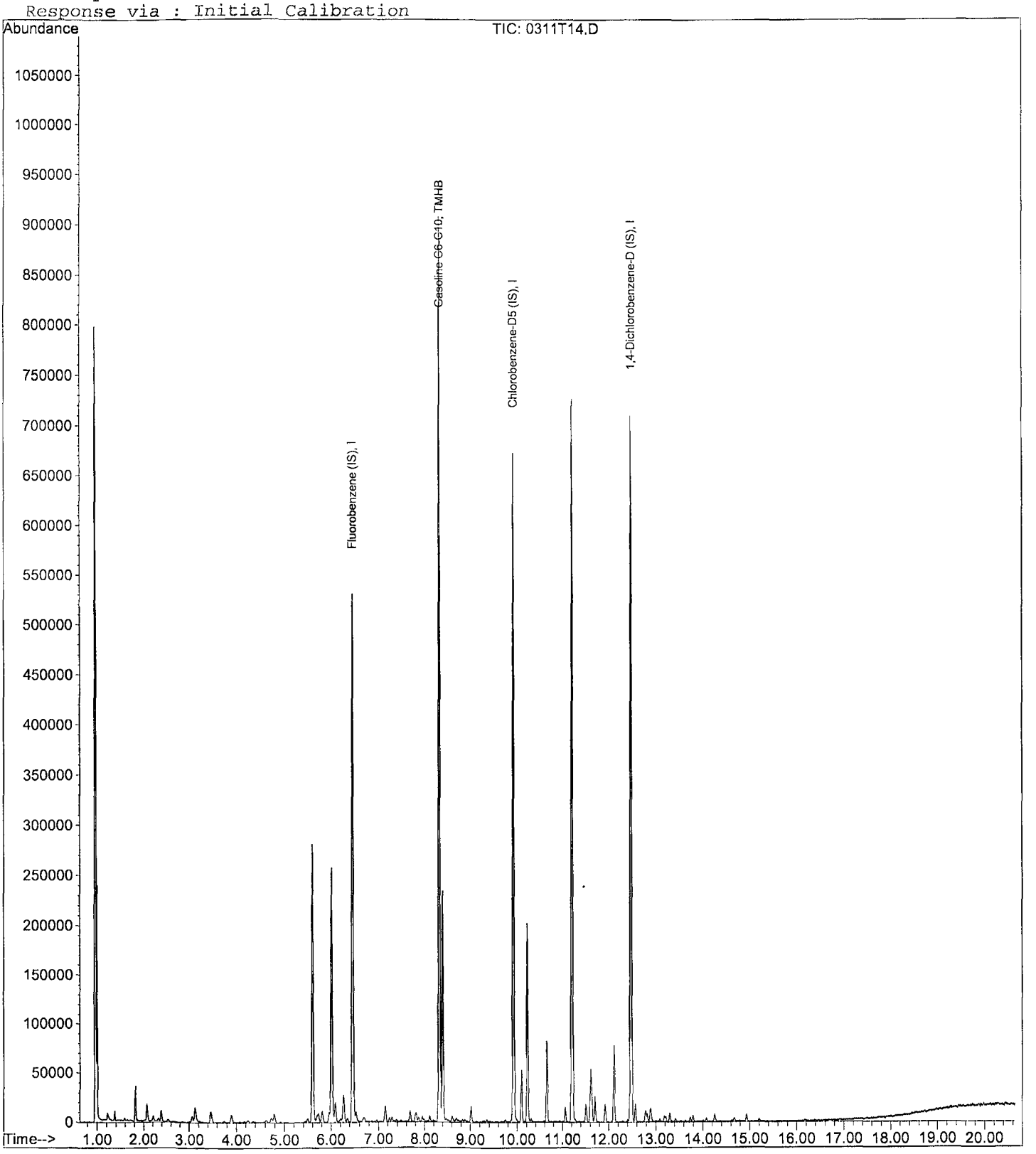
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T200309\0311T14.D Vial: 8
Acq On : 11 Mar 20 14:59 Operator:
Sample : 200311A LCSD 300ug/L Inst : Thor
Misc : IS&S 2/6/20, 2/19/20 Multiplr: 1.00

Quant Time: Mar 11 15:55 2020 Quant Results File: TGAS0219.RES

Method : M:\THOR\DATA\T200309\TGAS0219.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Feb 21 10:30:56 2020
Response via : Initial Calibration



Thor Gas Standard Prep

Gas Primary Working Standard

Prepared: 01/06/20
Expires: 01/05/21
Methanol Lot No. 58019-00962

Prepared By (Initials): DG

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
50,000ug/mL Gas STD	Restek	30205	50,000	A0132443-39859	01/06/21	12/31/24	80uL	2mL	Methanol	2,000

Gas Second Source (SS) Working Standard

Prepared: 01/06/20
Expires: 01/05/21
Methanol Lot No. 58019-00962

Prepared By (Initials): DG

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Gasoline (50,000ppm)	Phenova	ALO-101543	50,000	CL11750-40999	01/06/21	02/28/27	80uL	2mL	Methanol	2,000

Thor Gas Calibration Curve

Prepared: 02/20/20
Expires: 04/20/20

Prepared By (Initials): DG

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA Gasses Standards	Phenova	20ug/L	2,000	Prepared 01/06/20	01/05/21	N/A	1uL	100mL	P&T Water	20
VOA Gasses Standards	Phenova	50ug/L	2,000	Prepared 01/06/20	01/05/21	N/A	2.5uL	100mL	P&T Water	50
VOA Gasses Standards	Phenova	100ug/L	2,000	Prepared 01/06/20	01/05/21	N/A	5uL	100mL	P&T Water	100
VOA Gasses Standards	Phenova	300ug/L	2,000	Prepared 01/06/20	01/05/21	N/A	15uL	100mL	P&T Water	300
VOA Gasses Standards	Phenova	600ug/L	2,000	Prepared 01/06/20	01/05/21	N/A	30uL	100mL	P&T Water	600
VOA Gasses Standards	Phenova	800ug/L	2,000	Prepared 01/06/20	01/05/21	N/A	40uL	100mL	P&T Water	800
VOA Gasses Standards	Phenova	1,000ug/L	2,000	Prepared 01/06/20	01/05/21	N/A	50uL	100mL	P&T Water	1,000

Thor Gas Second Source

Prepared: 02/20/20
Expires: 04/20/20

Prepared By (Initials): DG

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
50,000ug/mL Gas STD	Phenova	SS 300ug/L	2,000	Prepared 01/06/20	01/05/21	N/A	15uL	100mL	P&T Water	300

Thor Gas Continuing Calibrations/Lab Control Spikes

Prepared: 02/20/20
Expires: 02/21/20

Prepared By (Initials): DG

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Gasses Standards	Phenova	300ug/L	2,000	Prepared 01/06/20	01/05/21	N/A	15uL	100mL	P&T Water	300

Thor 8260 Standard Prep

Thor 8260 Water Calibration Curve

Prepared By (Initials): CH

0.3ug/L

Prepared: 03/09/20

Expires: 04/08/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	O2SI	0.3ug/L	5	Prepared 03/05/20	05/04/20	N/A	3uL	50mL	P&T Water	0.3
VOA STD. 12	O2SI		5	Prepared 03/05/20	05/04/20	N/A	3uL			0.3
VOA STD. 15	O2SI		5	Prepared 03/02/20	05/01/20	N/A	3uL			0.3
VOA STD. TBA	Various		5	Prepared 12/12/19	04/01/20	N/A	2uL			10

0.5ug/L

Prepared: 03/09/20

Expires: 04/08/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	O2SI	0.5ug/L	5	Prepared 03/05/20	05/04/20	N/A	5uL	50mL	P&T Water	0.5
VOA STD. 12	O2SI		5	Prepared 03/05/20	05/04/20	N/A	5uL			0.5
VOA STD. 15	O2SI		5	Prepared 03/02/20	05/01/20	N/A	5uL			0.5
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	5uL			25

1.0ug/L

Prepared: 03/09/20

Expires: 04/08/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	O2SI	1.0ug/L	5	Prepared 03/05/20	05/04/20	N/A	10uL	50mL	P&T Water	1
VOA STD. 12	O2SI		5	Prepared 03/05/20	05/04/20	N/A	10uL			1
VOA STD. 15	O2SI		5	Prepared 03/02/20	05/01/20	N/A	10uL			1
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	10uL			50

2.0ug/L

Prepared: 03/09/20

Expires: 04/08/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	O2SI	2.0ug/L	5	Prepared 03/05/20	05/04/20	N/A	20uL	50mL	P&T Water	2
VOA STD. 12	O2SI		5	Prepared 03/05/20	05/04/20	N/A	20uL			2
VOA STD. 15	O2SI		5	Prepared 03/02/20	05/01/20	N/A	20uL			2
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	15uL			75

5ug/L

Prepared: 03/09/20

Expires: 04/08/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	5ug/L	50	Prepared 03/05/20	05/04/20	N/A	5uL	50mL	P&T Water	5
VOA STD. 8	Phenova		50	Prepared 03/05/20	04/01/20	N/A	5uL			5
VOA STD. 2	O2SI		50	Prepared 03/05/20	05/04/20	N/A	5uL			5
VOA STD. 5	O2SI		50	Prepared 03/02/20	05/01/20	N/A	5uL			5
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	20uL			100

10ug/L

Prepared: 03/09/20

Expires: 04/08/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	10ug/L	50	Prepared 03/05/20	05/04/20	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova		50	Prepared 03/05/20	04/01/20	N/A	10uL			10
VOA STD. 2	O2SI		50	Prepared 03/05/20	05/04/20	N/A	10uL			10
VOA STD. 5	O2SI		50	Prepared 03/02/20	05/01/20	N/A	10uL			10
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	25uL			125

20ug/L

Prepared: 03/09/20

Expires: 04/08/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	20ug/L	50	Prepared 03/05/20	05/04/20	N/A	20uL	50mL	P&T Water	20
VOA STD. 8	Phenova		50	Prepared 03/05/20	04/01/20	N/A	20uL			20
VOA STD. 2	O2SI		50	Prepared 03/05/20	05/04/20	N/A	20uL			20
VOA STD. 5	O2SI		50	Prepared 03/02/20	05/01/20	N/A	20uL			20
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	30uL			150

40ug/L

Prepared: 03/09/20

Expires: 04/08/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	40ug/L	50	Prepared 03/05/20	05/04/20	N/A	40uL	50mL	P&T Water	40
VOA STD. 8	Phenova		50	Prepared 03/05/20	04/01/20	N/A	40uL			40
VOA STD. 2	O2SI		50	Prepared 03/05/20	05/04/20	N/A	40uL			40
VOA STD. 5	O2SI		50	Prepared 03/02/20	05/01/20	N/A	40uL			40
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	35uL			175

100ug/L

Prepared: 03/09/20

Expires: 04/08/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	100ug/L	50	Prepared 03/05/20	05/04/20	N/A	100uL	50mL	P&T Water	100
VOA STD. 8	Phenova		50	Prepared 03/05/20	04/01/20	N/A	100uL			100
VOA STD. 2	O2SI		50	Prepared 03/05/20	05/04/20	N/A	100uL			100
VOA STD. 5	O2SI		50	Prepared 03/02/20	05/01/20	N/A	100uL			100
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	40uL			200

Thor 8260 Water Second Source (SS)

Prepared: 03/09/20

Prepared By (Initials): CH

Expires: 04/08/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 3	Phenova	8260 Water SS	50	Prepared 03/05/20	05/04/20	N/A	10uL	50mL	P&T Water	10
VOA STD. Gases	O2SI	8260 Water SS	50	Prepared 03/05/20	05/04/20	N/A	10uL			10
VOA STD. 6	Various	8260 Water SS	50	Prepared 03/05/20	03/11/20	N/A	10uL			10
VOA STD. 25	Absolute	8260 Water SS	50	Prepared 03/02/20	05/01/20	N/A	10uL			10
VOA STD. 0	Absolute	8260 Water SS	50	Prepared 03/05/20	05/04/20	N/A	100uL			100
Voa STD. TBA	Various	8260 Water SS	250	Prepared 03/05/20	03/11/20	N/A	25uL			250

8260 Water Continuing Calibrations (CCV)/ Lab Control Spikes (LCS)

Prepared: 03/09/20

Prepared By (Initials): CH

Expires: 03/10/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	CCV/ LCS	50	Prepared 03/05/20	05/04/20	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova	CCV/ LCS	50	Prepared 03/05/20	04/01/20	N/A	10uL			10
VOA STD. 2	O2SI	CCV/ LCS	50	Prepared 03/05/20	05/04/20	N/A	10uL			10
VOA STD. 5	O2SI	CCV/ LCS	50	Prepared 03/02/20	05/01/20	N/A	10uL			10
VOA STD. TBA	Various	CCV/ LCS	250	Prepared 03/05/20	04/01/20	N/A	25uL			125

LCS (X4 Ketones)

Prepared: 03/09/20

Prepared By (Initials): CH

Expires: 03/10/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	LCS X4 Ketones	50	Prepared 03/05/20	05/04/20	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova	LCS X4 Ketones	50	Prepared 03/05/20	04/01/20	N/A	10uL			10
VOA STD. 2	O2SI	LCS X4 Ketones	50	Prepared 03/05/20	05/04/20	N/A	40uL			40
VOA STD. 5	O2SI	LCS X4 Ketones	50	Prepared 03/02/20	05/01/20	N/A	10uL			10
VOA STD. TBA	Various	LCS X4 Ketones	250	Prepared 03/05/20	04/01/20	N/A	25uL			125

Injection Log

Directory: M:\THOR\DATA\T200219B\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
32	0220T32.D	1	20ug/L Gas Std 2/20/20	IS&S 2/6/20, 2/19/20	20 Feb 20 22:37
33	0220T33.D	1	50ug/L Gas Std 2/20/20	IS&S 2/6/20, 2/19/20	20 Feb 20 23:05
34	0220T34.D	1	100ug/L Gas Std 2/20/20	IS&S 2/6/20, 2/19/20	20 Feb 20 23:34
35	0220T35.D	1	300ug/L Gas Std 2/20/20	IS&S 2/6/20, 2/19/20	21 Feb 20 00:02
36	0220T36.D	1	600ug/L Gas Std 2/20/20	IS&S 2/6/20, 2/19/20	21 Feb 20 00:30
37	0220T37.D	1	800ug/L Gas Std 2/20/20	IS&S 2/6/20, 2/19/20	21 Feb 20 00:58
38	0220T38.D	1	1000ug/L Gas Std 2/20/20	IS&S 2/6/20, 2/19/20	21 Feb 20 1:27
40	0220T40.D	1	(SS) 300ug/L Gas Std 2/20/20	IS&S 2/6/20, 2/19/20	21 Feb 20 2:23
2	0309T02.D	1	0.3ug/L VOC STD 3/9/20	IS&S 2/6/20, 2/19/20	9 Mar 20 7:22
3	0309T03.D	1	0.5ug/L VOC STD 3/9/20	IS&S 2/6/20, 2/19/20	9 Mar 20 7:51
4	0309T04.D	1	1ug/L VOC STD 3/9/20	IS&S 2/6/20, 2/19/20	9 Mar 20 8:19
5	0309T05.D	1	2ug/L VOC STD 3/9/20	IS&S 2/6/20, 2/19/20	9 Mar 20 8:47
6	0309T06.D	1	5ug/L VOC STD 3/9/20	IS&S 2/6/20, 2/19/20	9 Mar 20 9:16
7	0309T07.D	1	10ug/L VOC STD 3/9/20	IS&S 2/6/20, 2/19/20	9 Mar 20 9:44
8	0309T08.D	1	20ug/L VOC STD 3/9/20	IS&S 2/6/20, 2/19/20	9 Mar 20 10:12
9	0309T09.D	1	40ug/L VOC STD 3/9/20	IS&S 2/6/20, 2/19/20	9 Mar 20 10:41
10	0309T10.D	1	100ug/L VOC STD 3/9/20	IS&S 2/6/20, 2/19/20	9 Mar 20 11:09
7	0311T13.D	1	200311A CCV/LCS 300ug/L	IS&S 2/6/20, 2/19/20	11 Mar 20 14:31
8	0311T14.D	1	200311A LCSD 300ug/L	IS&S 2/6/20, 2/19/20	11 Mar 20 14:59
12	0311T18.D	1	200311A BLK	IS&S 2/6/20, 2/19/20	11 Mar 20 16:53
13	0311T19.D	1	BA08033W02	IS&S 2/6/20, 2/19/20	11 Mar 20 17:22
14	0311T20.D	1	BA08034W02	IS&S 2/6/20, 2/19/20	11 Mar 20 17:50
19	0311T25.D	1	Ending CCV 300ug/L 3/11/20	IS&S 2/6/20, 2/19/20	11 Mar 20 20:12

ORGANICS
Calibration Data

RSK 175
RSK 175

Form 6
Initial Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:
SDG No:
Initial Cal. Date: 10/02/19
Instrument: 7890
Initials:

			1002R02.D	1002R03.D	1002R04.D	1002R05.D	1002R06.D	1002R07.D	1002R08.D								
		Compound	1	2	3	4	5	6	7				Avg	%RSD	Type	r^2	Q
1	ATM	Methane	63820	40452	36215	45202	48427	44031	45774				46274	19	ATM		
2	ATM	Ethane	42546	31037	26553	34655	37738	32771	32974				34039	15	ATM		
3	ATM	Ethene	32900	24299	20841	27689	29847	25551	26297				26775	15	ATM		
4																	
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1.377886

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\191002RS\1002R02.D Vial: 2
Acq On : 2 Oct 19 17:45 Operator: GA
Sample : RSK STD 1 10/2/19 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 2 18:11 2019 Quant Results File: RSK1002.RES

Method : G:\ROCKY\DATA\190929RS\RSK1002.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Oct 02 18:14:49 2019
Response via : Multiple Level Calibration

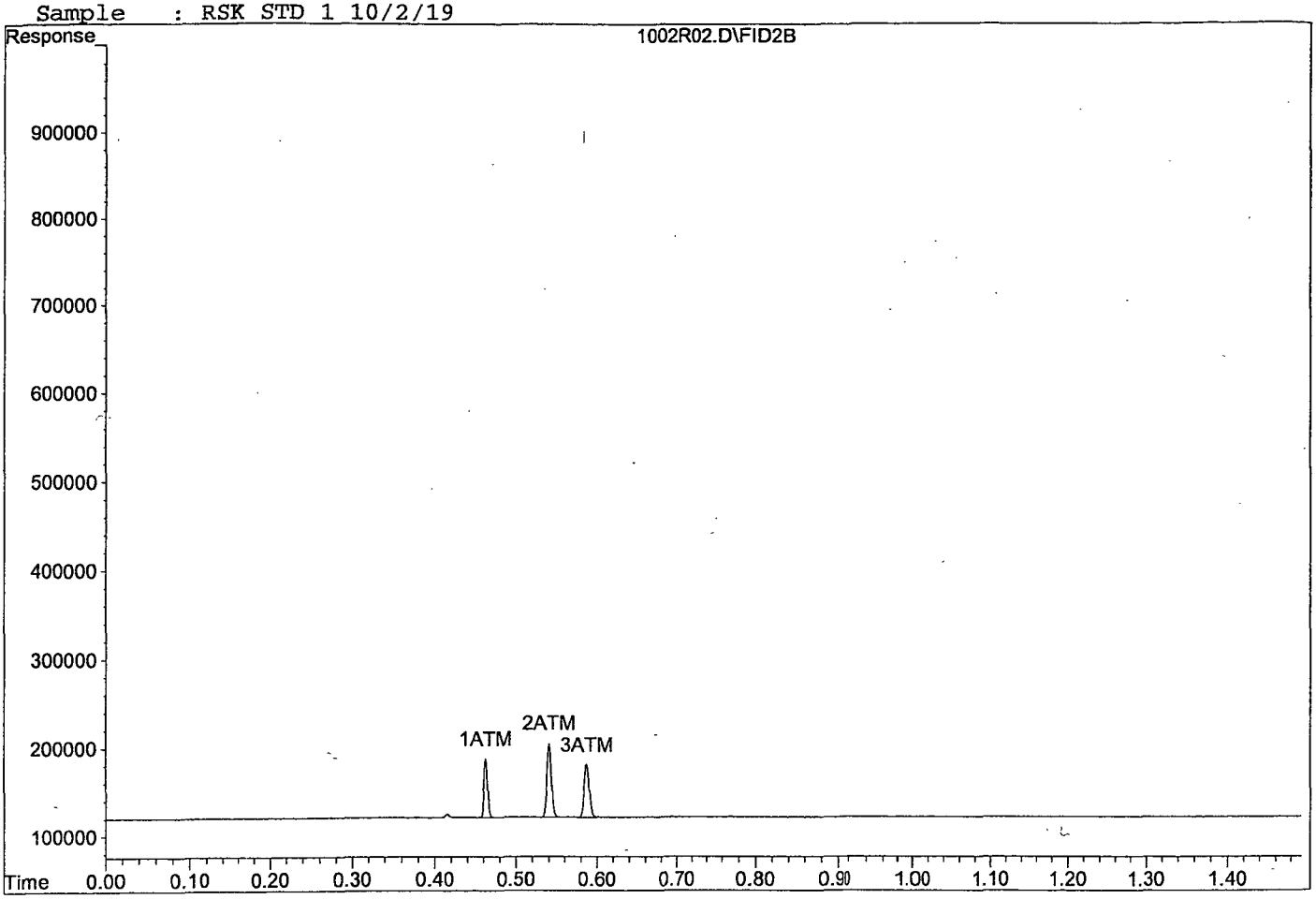
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.46	66373	8.306 ppb
2) ATM Ethane	0.54	83177	6.216 ppb
3) ATM Ethene	0.59	60042	5.640 ppb

Target Compounds

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

Data File: G:\ROCKY\DATA\191002RS\1002R02.D
Sample : RSK STD 1 10/2/19



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\191002RS\1002R03.D Vial: 3
Acq On : 2 Oct 19 17:50 Operator: GA
Sample : RSK STD 2 10/2/19 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 2 18:11 2019 Quant Results File: RSK1002.RES

Method : G:\ROCKY\DATA\190929RS\RSK1002.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Oct 02 18:14:49 2019
Response via : Multiple Level Calibration

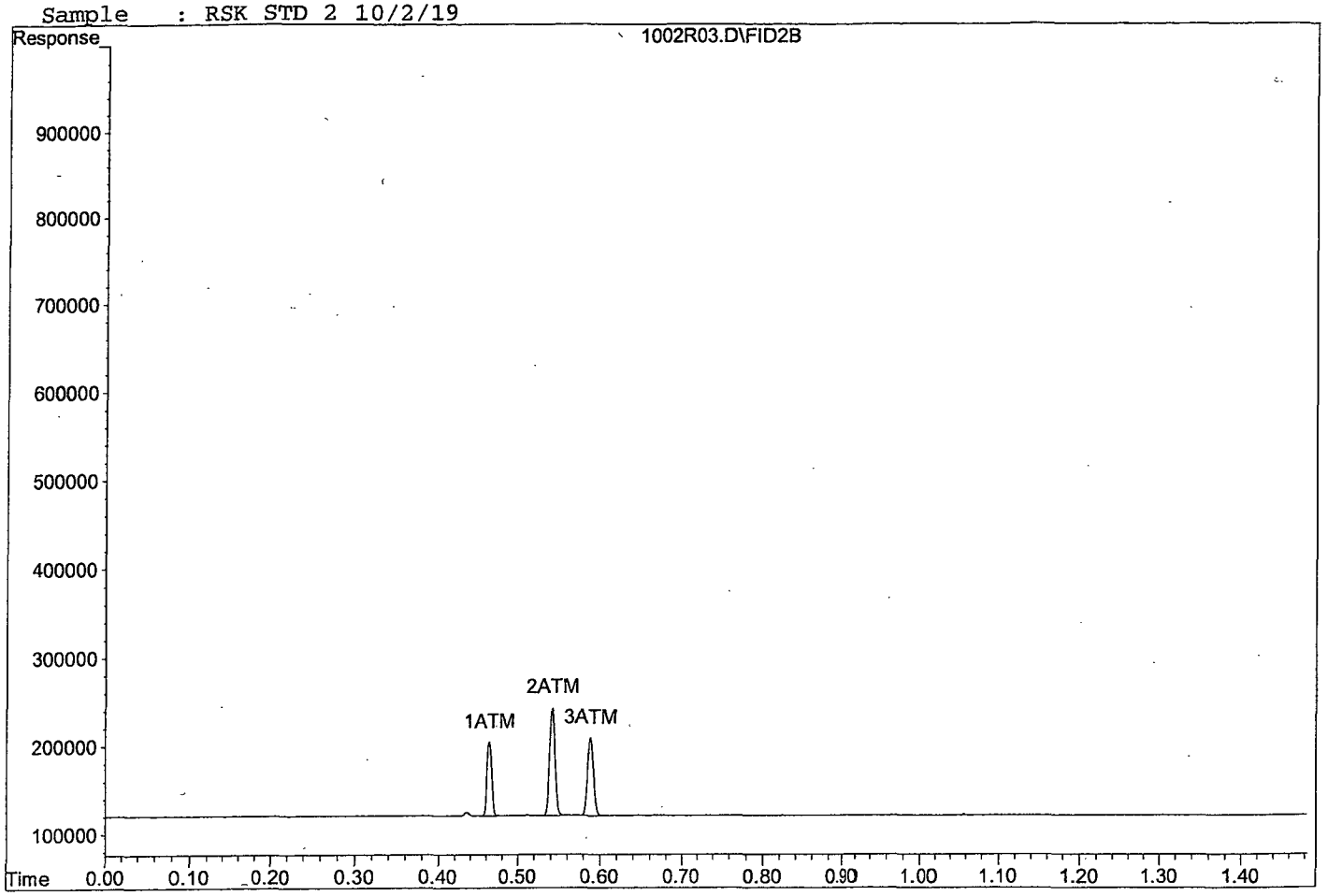
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.46	84140	9.332 ppb
2) ATM Ethane	0.54	121200	9.058 ppb
3) ATM Ethene	0.59	88693	8.332 ppb

Target Compounds

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

Data File: G:\ROCKY\DATA\191002RS\1002R03.D
Sample : RSK STD 2 10/2/19



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\191002RS\1002R04.D Vial: 4
Acq On : 2 Oct 19 17:52 Operator: GA
Sample : RSK STD 3 10/2/19 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 2 18:11 2019 Quant Results File: RSK1002.RES

Method : G:\ROCKY\DATA\190929RS\RSK1002.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Oct 02 18:14:49 2019
Response via : Multiple Level Calibration

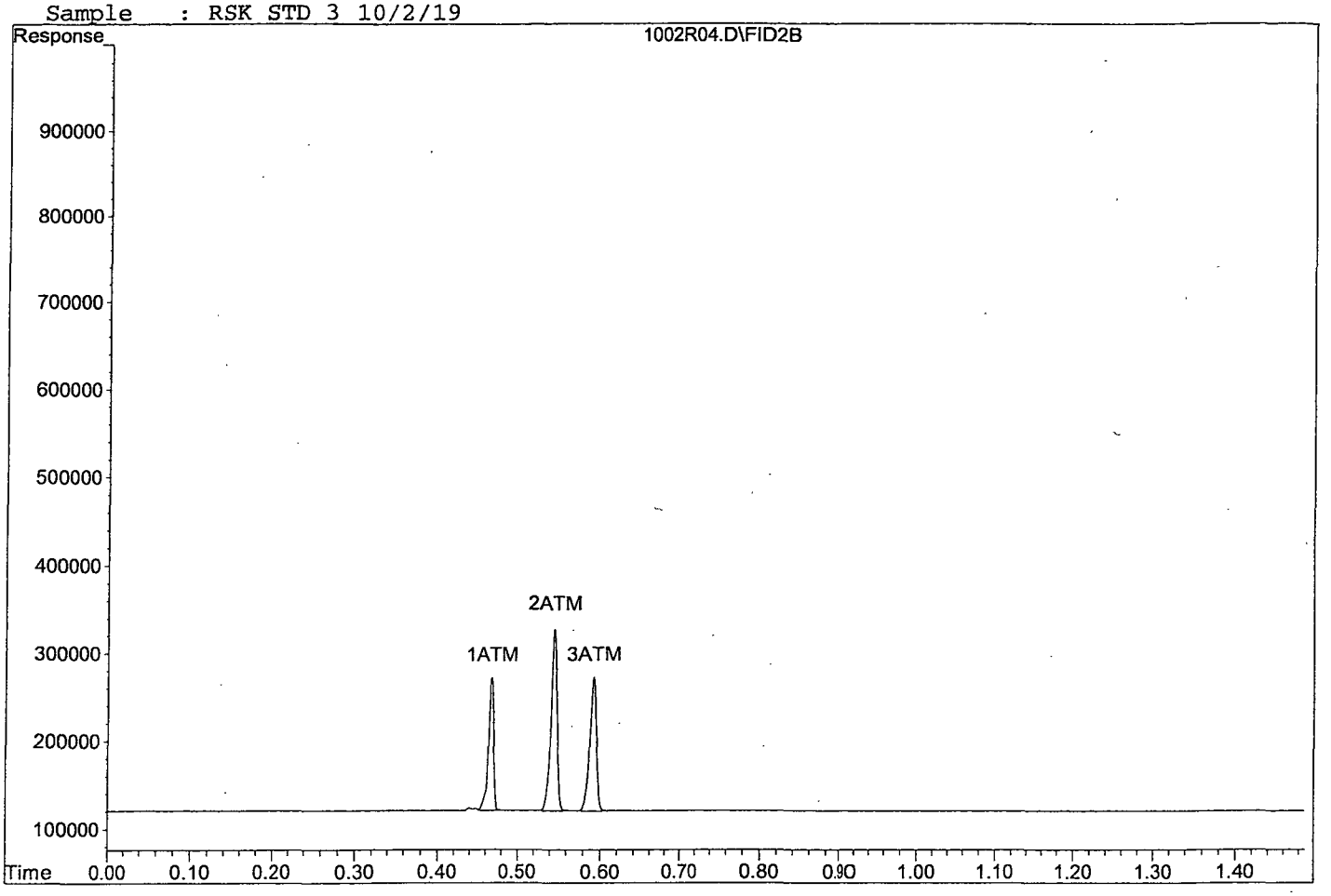
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.47	151018	13.195 ppb
2) ATM Ethane	0.55	207113	15.479 ppb
3) ATM Ethene	0.59	152138	14.292 ppb

Target Compounds

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

Data File: G:\ROCKY\DATA\191002RS\1002R04.D
Sample : RSK STD 3 10/2/19



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\191002RS\1002R05.D Vial: 5
Acq On : 2 Oct 19 17:57 Operator: GA
Sample : RSK STD 4 10/2/19 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 2 18:11 2019 Quant Results File: RSK1002.RES

Method : G:\ROCKY\DATA\190929RS\RSK1002.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Oct 02 18:14:49 2019
Response via : Multiple Level Calibration

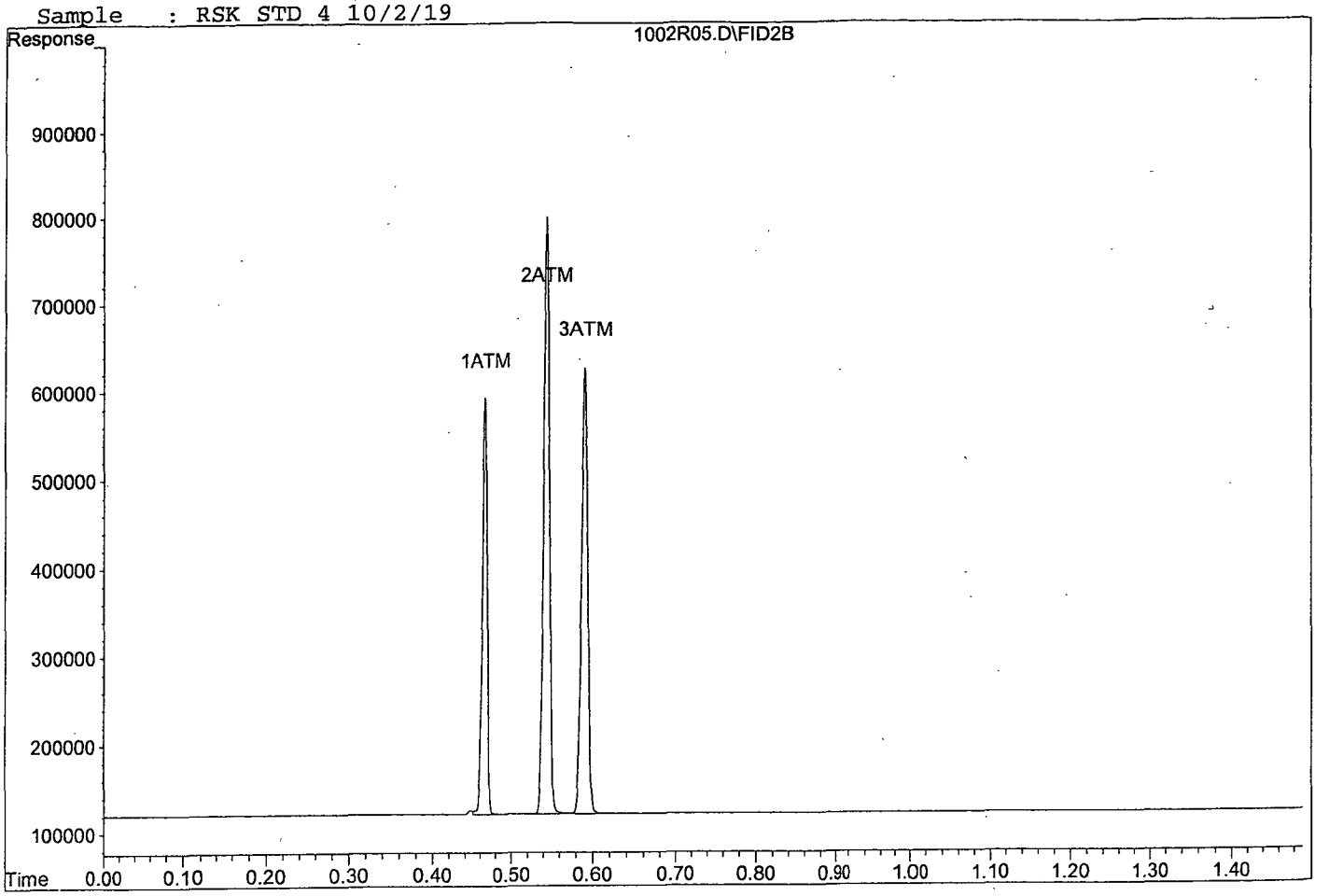
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.47	471234	31.689 ppb
2) ATM Ethane	0.54	677330	50.623 ppb
3) ATM Ethene	0.59	504779	47.419 ppb

Target Compounds

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

Data File: G:\ROCKY\DATA\191002RS\1002R05.D
Sample : RSK STD 4 10/2/19



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\191002RS\1002R06.D Vial: 6
Acq On : 2 Oct 19 17:59 Operator: GA
Sample : RSK STD 5 10/2/19 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 2 18:11 2019 Quant Results File: RSK1002.RES

Method : G:\ROCKY\DATA\190929RS\RSK1002.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Oct 02 18:14:49 2019
Response via : Multiple Level Calibration

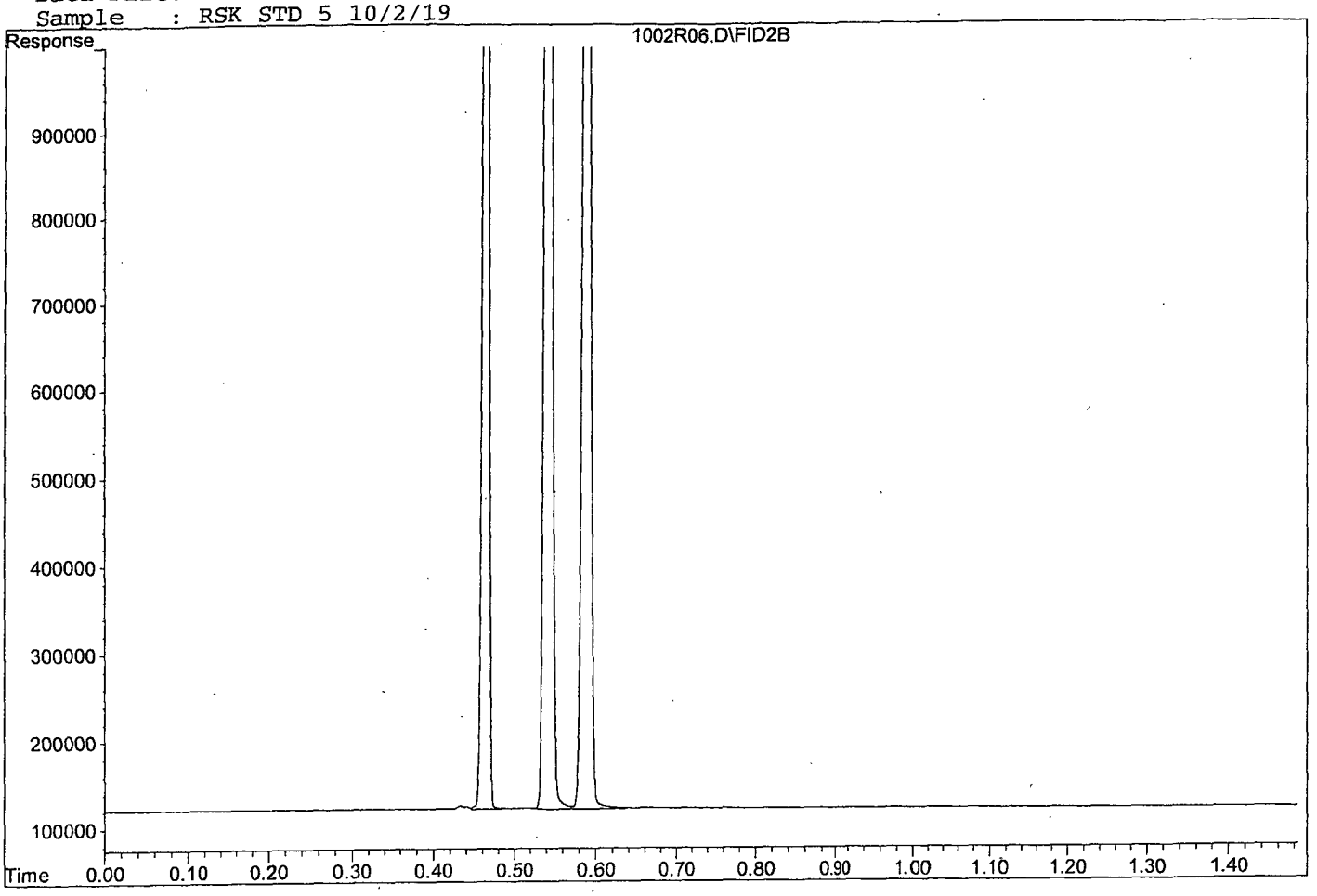
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.46	2019402	121.105 ppb
2) ATM Ethane	0.54	2950189	220.492 ppb
3) ATM Ethene	0.59	2176445	204.454 ppb

Target Compounds

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

Data File: G:\ROCKY\DATA\191002RS\1002R06.D
Sample : RSK STD 5 10/2/19



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\191002RS\1002R07.D Vial: 7
Acq On : 2 Oct 19 18:05 Operator: GA
Sample : RSK STD 6 10/2/19 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 2 18:11 2019 Quant Results File: RSK1002.RES

Method : G:\ROCKY\DATA\190929RS\RSK1002.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Oct 02 18:14:49 2019
Response via : Multiple Level Calibration

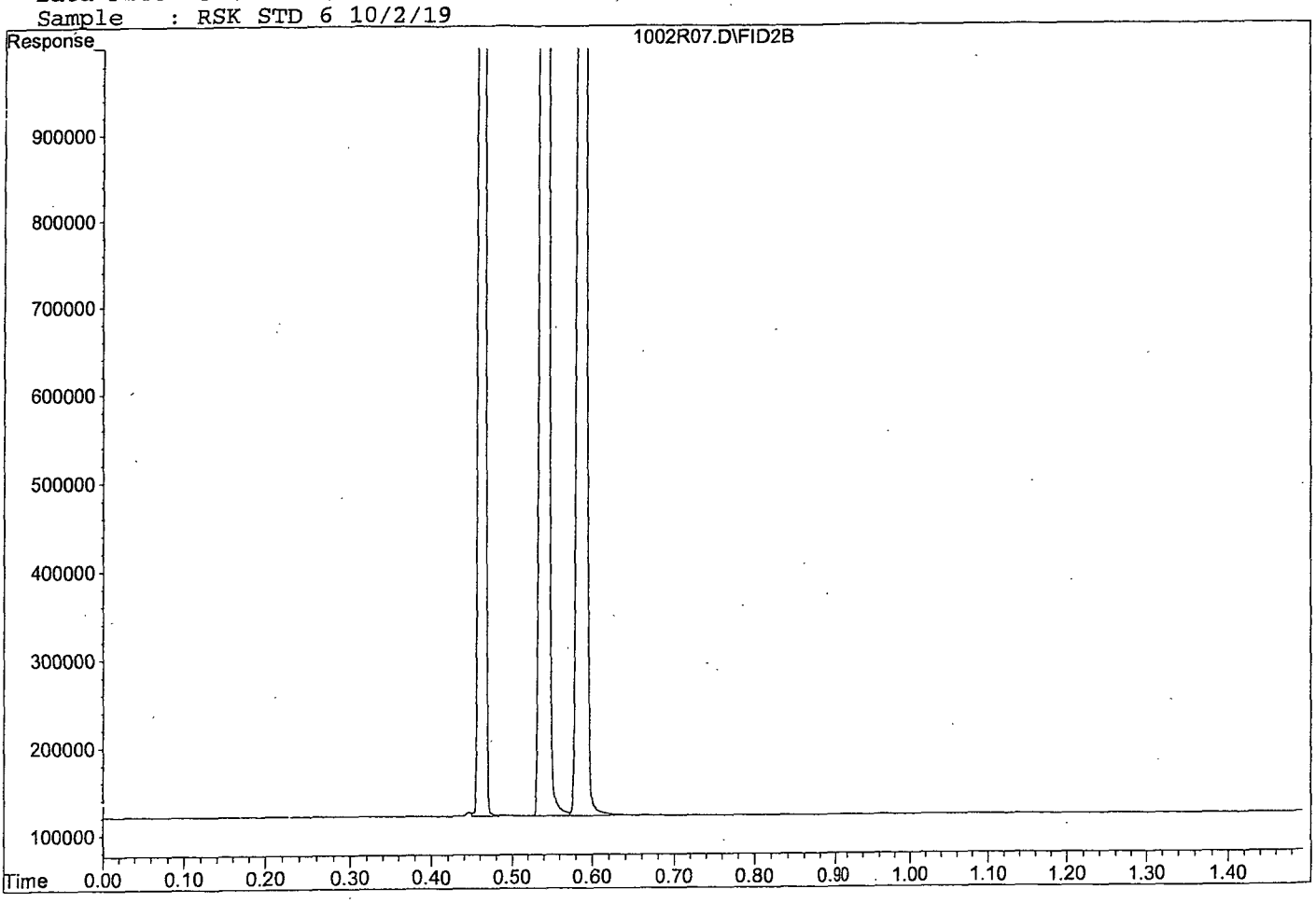
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.46	4590194	269.583 ppb
2) ATM Ethane	0.54	6405030	478.702 ppb
3) ATM Ethene	0.59	4657966	437.567 ppb

Target Compounds

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

Data File: G:\ROCKY\DATA\191002RS\1002R07.D
Sample : RSK STD 6 10/2/19



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\191002RS\1002R08.D Vial: 8
Acq On : 2 Oct 19 18:07 Operator: GA
Sample : RSK STD 7 10/2/19 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 2 18:11 2019 Quant Results File: RSK1002.RES

Method : G:\ROCKY\DATA\190929RS\RSK1002.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Oct 02 18:14:49 2019
Response via : Multiple Level Calibration

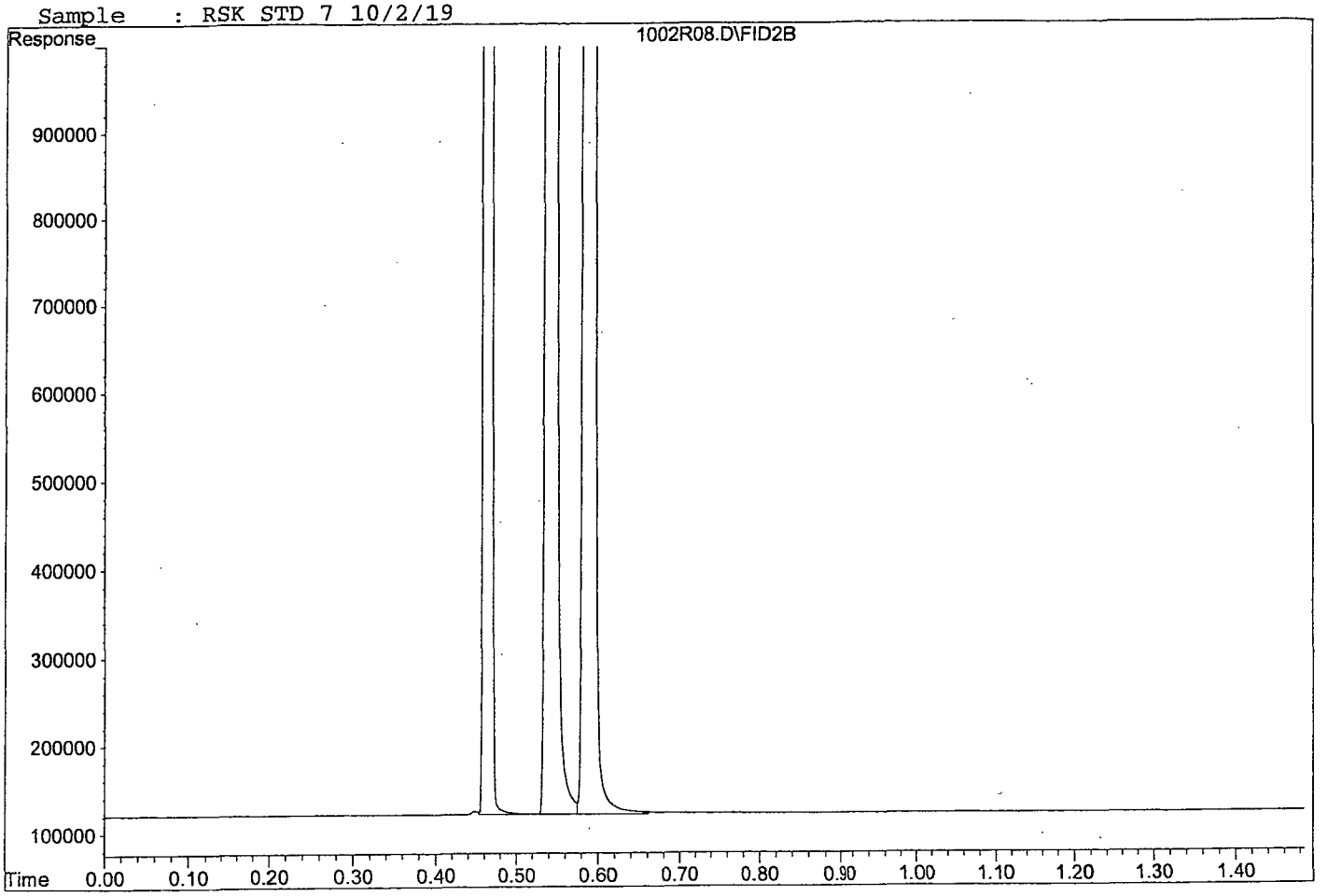
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.46	19087907	1106.909	ppb
2) ATM Ethane	0.54	25777712	1926.584	ppb
3) ATM Ethene	0.59	19176068	1801.389	ppb

Target Compounds

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

Data File: G:\ROCKY\DATA\191002RS\1002R08.D
Sample : RSK STD 7 10/2/19



RSK 175

Form 7

Second Source Calibration

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

SDG No:
Date Analyzed: 2 Oct 19 18:24
Instrument: 7890
Initial Cal. Date: 10/02/19
Data File: 1002R10.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATM	Methane	46275	50203	8.5	ATM	
2	ATM	Ethane	34039	37011	8.7	ATM	
3	ATM	Ethene	26775	28699	7.2	ATM	
4							
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		Average			8.1		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\191002RS\1002R10.D Vial: 10
Acq On : 2 Oct 19 18:24 Operator: GA
Sample : SS RSK STD 5 10/2/19 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 2 18:27 2019 Quant Results File: RSK1002.RES

Method : G:\ROCKY\DATA\190929RS\RSK1002.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Oct 02 18:14:49 2019
Response via : Multiple Level Calibration

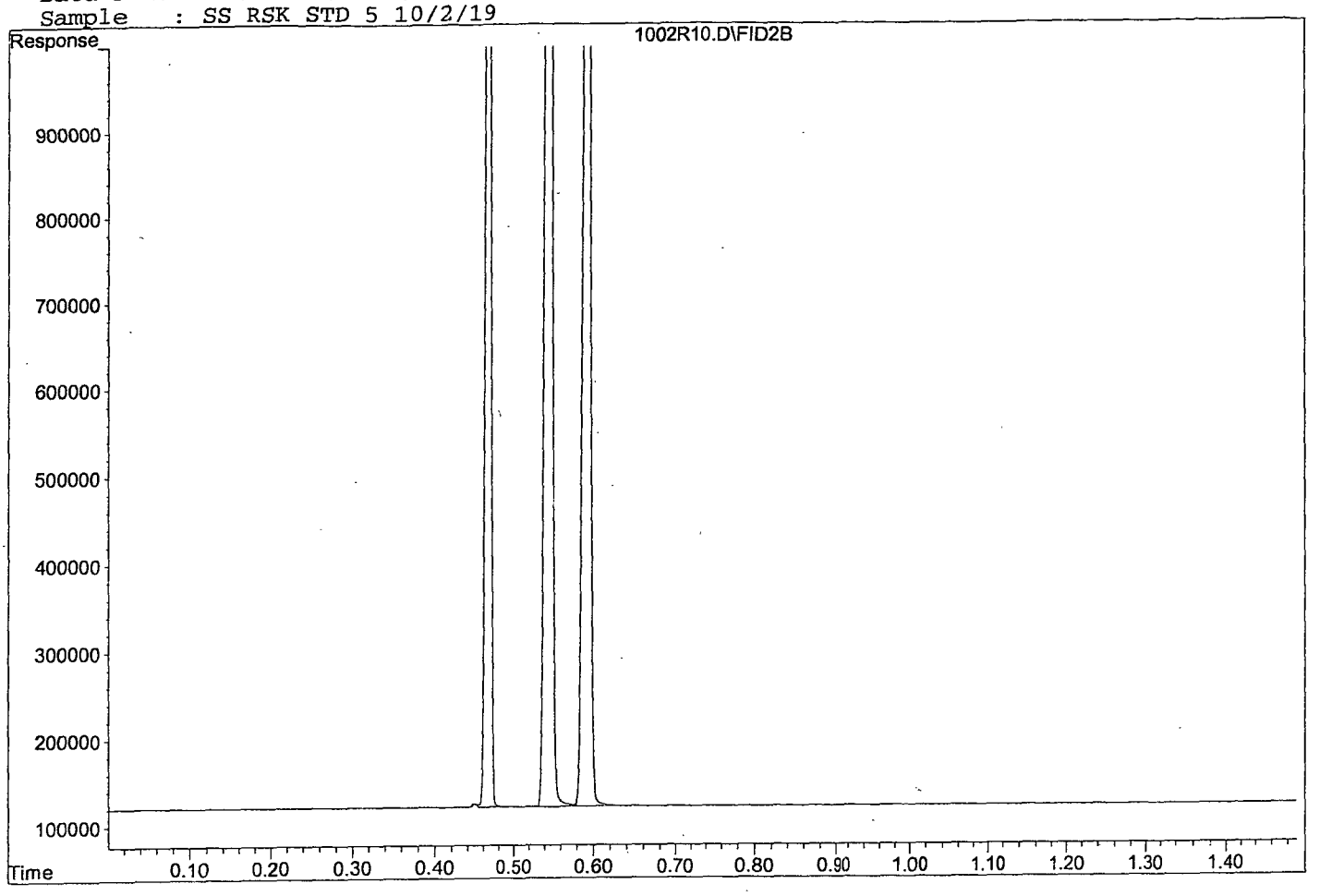
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.47	2093456	90.480	ppb
2) ATM Ethane	0.54	2893356	170.002	ppb
3) ATM Ethene	0.59	2092707	156.318	ppb

Target Compounds

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

Data File: G:\ROCKY\DATA\191002RS\1002R10.D
Sample : SS RSK STD 5 10/2/19



Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 03/10/20
Instrument: 7890
Initial Cal. Date: 10/02/19
Data File: 0310R03.D

		Compound	MEAN	CCRF	%D		%Drift	
1	ATM	Methane	46275	38603	17	ATM		
2	ATM	Ethane	34039	27156	20	ATM		
3	ATM	Ethene	26775	19727	26	ATM		*NT
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								
40								
		Average			21.0			

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\191002RS\0310R03.D Vial: 3
Acq On : 10 Mar 20 12:27 Operator: GA
Sample : 200310A LCS/CCV RSK STD 5 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 10 12:32 2020 Quant Results File: RSK1002.RES

Method : G:\ROCKY\DATA\190929RS\RSK1002.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Feb 26 12:29:53 2020
Response via : Multiple Level Calibration

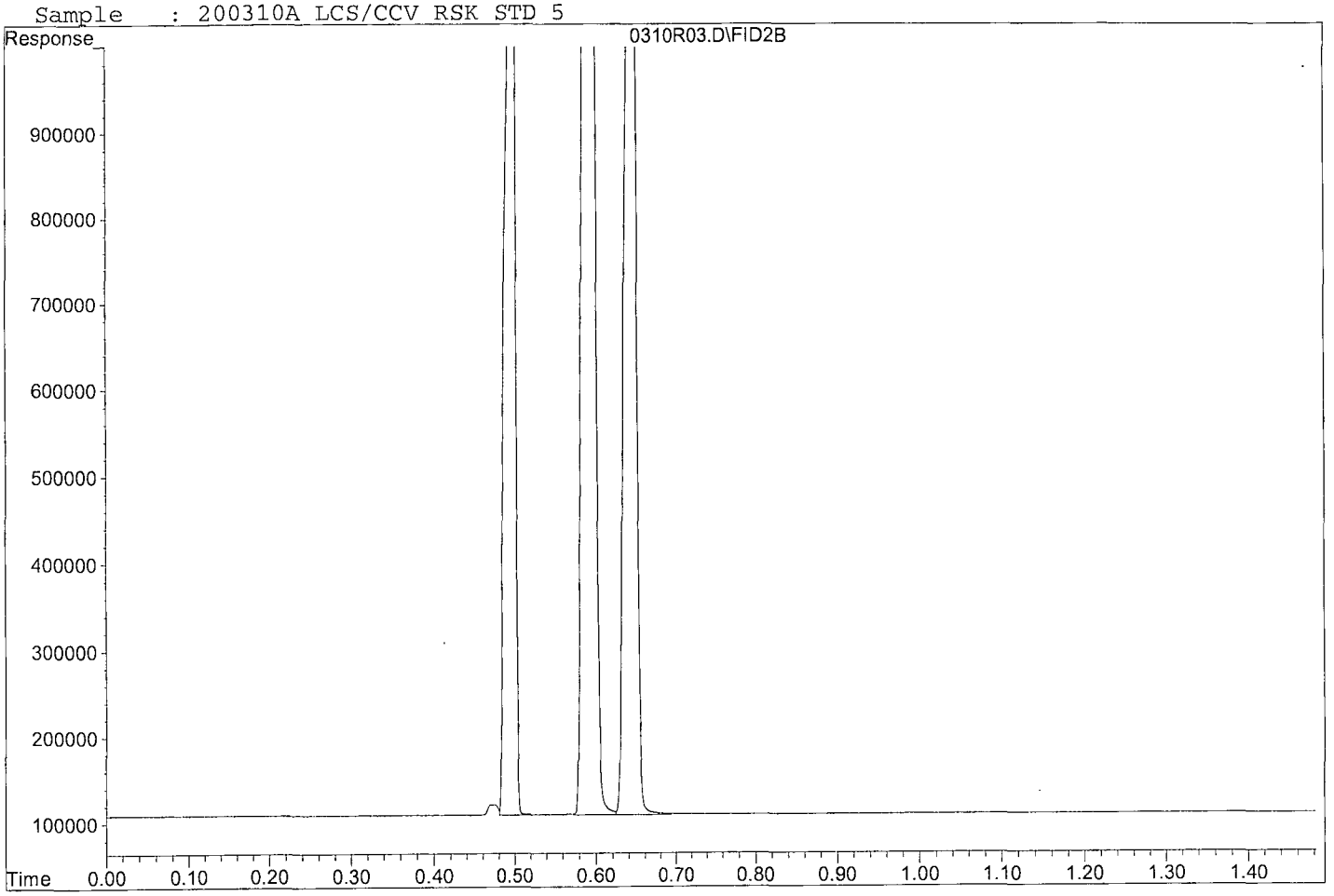
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.50	1609727	69.573 ppb
2) ATM Ethane	0.60	2122881	124.732 ppb
3) ATM Ethene	0.65	1438523	107.453 ppb

Target Compounds

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

Data File: G:\ROCKY\DATA\191002RS\0310R03.D
Sample : 200310A LCS/CCV RSK STD 5



Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 03/10/20
Instrument: 7890
Initial Cal. Date: 10/02/19
Data File: 0310R09.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATM	Methane	46275	55409	20	ATM	
2	ATM	Ethane	34039	39157	15	ATM	
3	ATM	Ethene	26775	28795	7.5	ATM	
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			14.2		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\191002RS\0310R09.D Vial: 9
Acq On : 10 Mar 20 13:00 Operator: GA
Sample : ENDING CCV RSK STD 5 3/10/20 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 10 13:03 2020 Quant Results File: RSK1002.RES

Method : G:\ROCKY\DATA\190929RS\RSK1002.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Feb 26 12:29:53 2020
Response via : Multiple Level Calibration

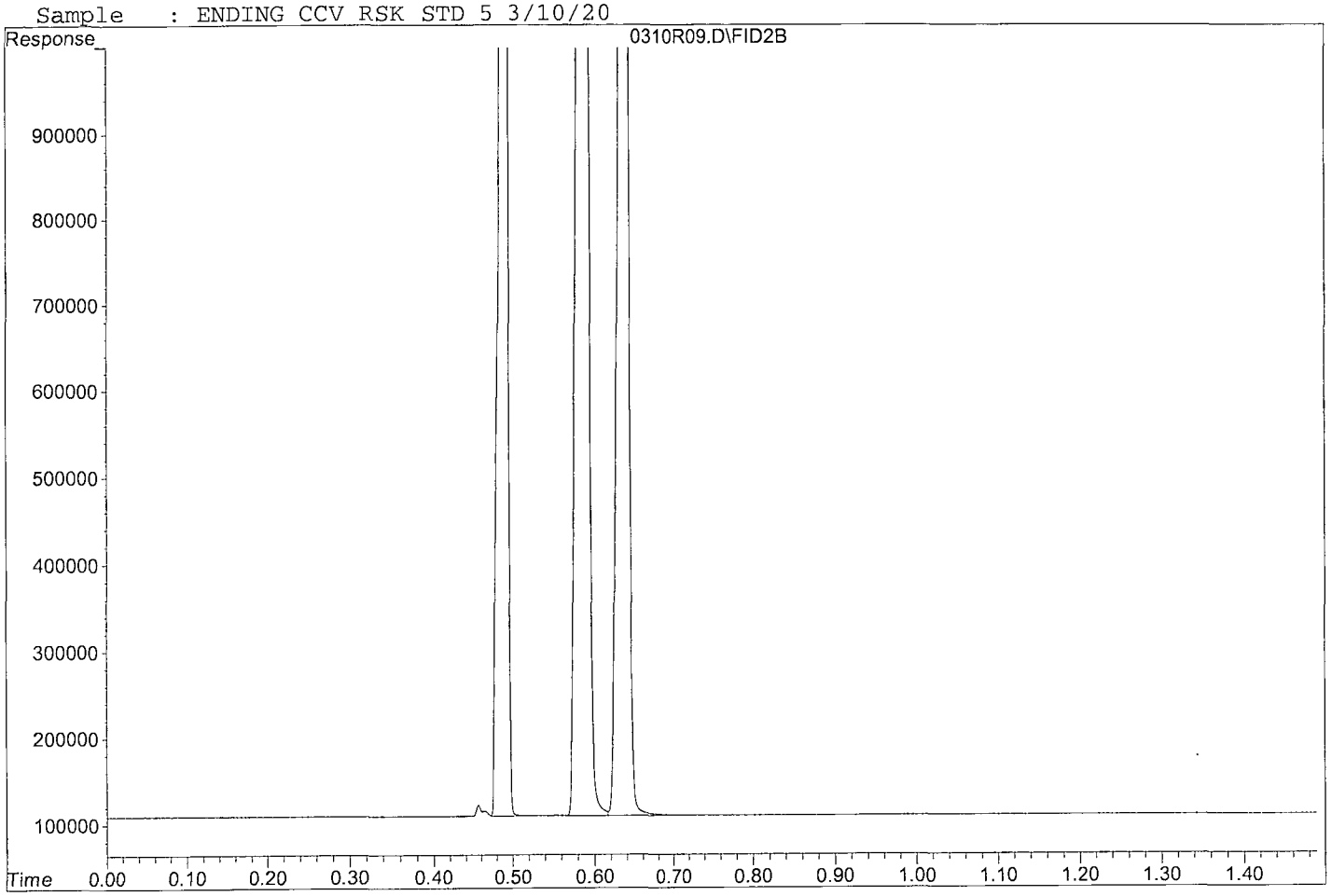
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.49	2310549	99.863	ppb
2) ATM Ethane	0.59	3061121	179.859	ppb
3) ATM Ethene	0.64	2099727	156.842	ppb

Target Compounds

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

Data File: G:\ROCKY\DATA\191002RS\0310R09.D
Sample : ENDING CCV RSK STD 5 3/10/20



ORGANICS
Raw Data

Quantitation Report (QT Reviewed)

Data File : G:\ROCKY\DATA\191002RS\0310R07.D Vial: 7
Acq On : 10 Mar 20 12:51 Operator: GA
Sample : BA08033W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 10 12:54 2020 Quant Results File: RSK1002.RES

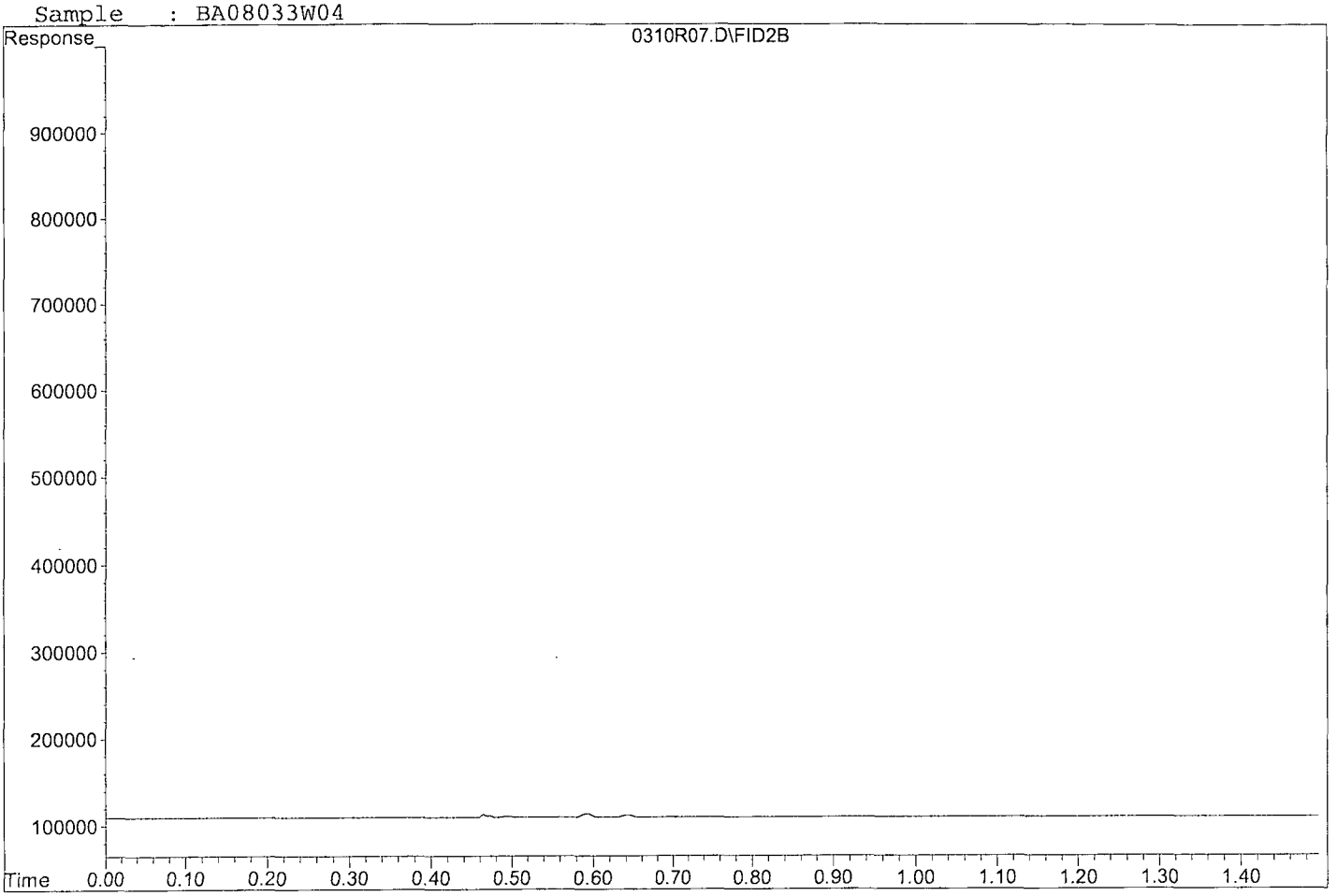
Method : G:\ROCKY\DATA\190929RS\RSK1002.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Feb 26 12:29:53 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units	
Target Compounds					
Target Compounds					
1) ATM Methane	0.00	0	N.D.	ppb	d
2) ATM Ethane	0.00	0	N.D.	ppb	d
3) ATM Ethene	0.00	0	N.D.	ppb	d

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

Data File: G:\ROCKY\DATA\191002RS\0310R07.D
Sample : BA08033W04



Quantitation Report (QT Reviewed)

Data File : G:\ROCKY\DATA\191002RS\0310R08.D Vial: 8
Acq On : 10 Mar 20 12:55 Operator: GA
Sample : BA08034W04 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 10 13:00 2020 Quant Results File: RSK1002.RES

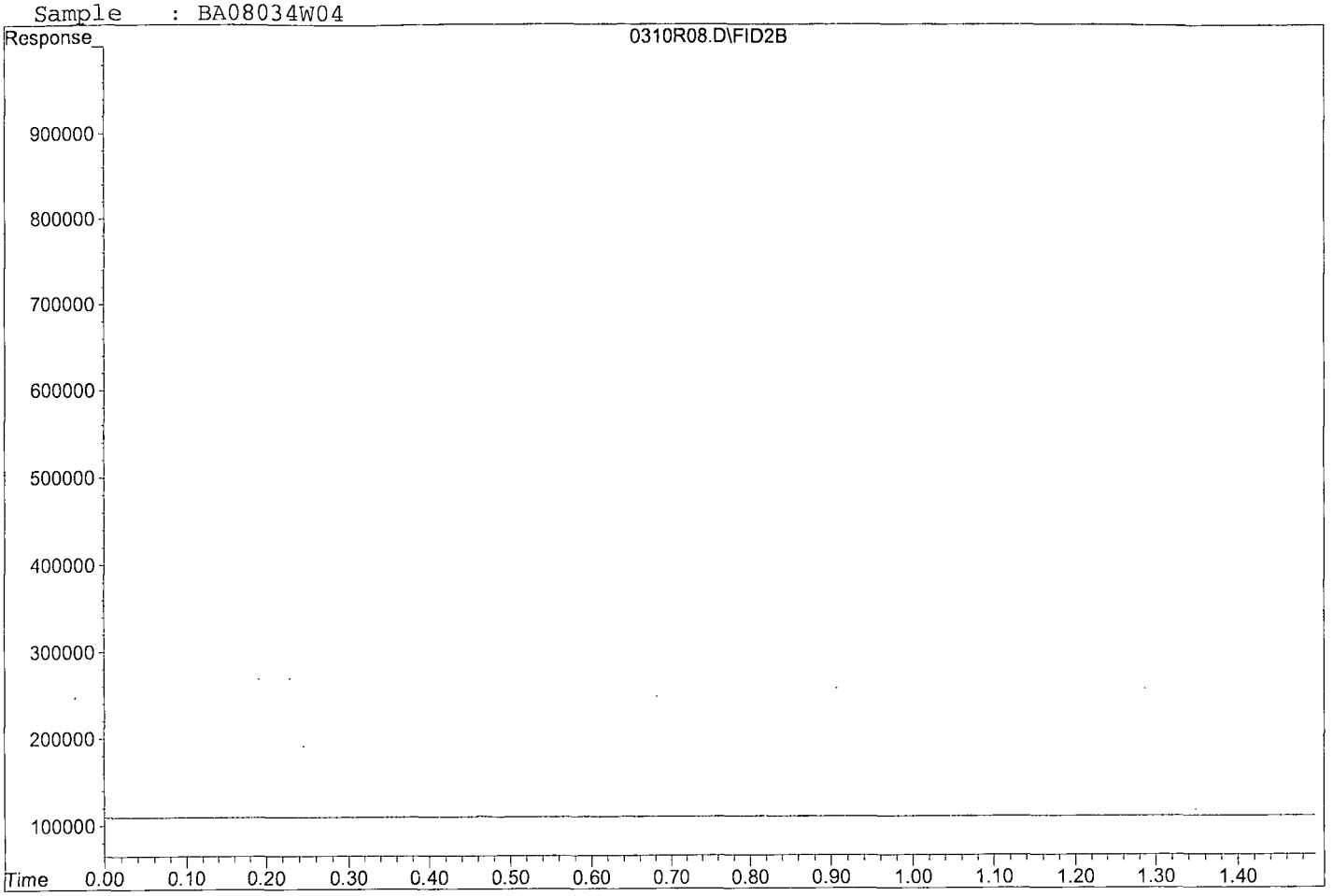
Method : G:\ROCKY\DATA\190929RS\RSK1002.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Feb 26 12:29:53 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units	
Target Compounds					
Target Compounds					
1) ATM Methane	0.00	0	N.D.	ppb	d
2) ATM Ethane	0.00	0	N.D.	ppb	d
3) ATM Ethene	0.00	0	N.D.	ppb	d

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

Data File: G:\ROCKY\DATA\191002RS\0310R08.D
Sample : BA08034W04



Quantitation Report (QT Reviewed)

Data File : G:\ROCKY\DATA\191002RS\0310R06.D Vial: 6
Acq On : 10 Mar 20 12:47 Operator: GA
Sample : 200310A BLK Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 10 12:50 2020 Quant Results File: RSK1002.RES

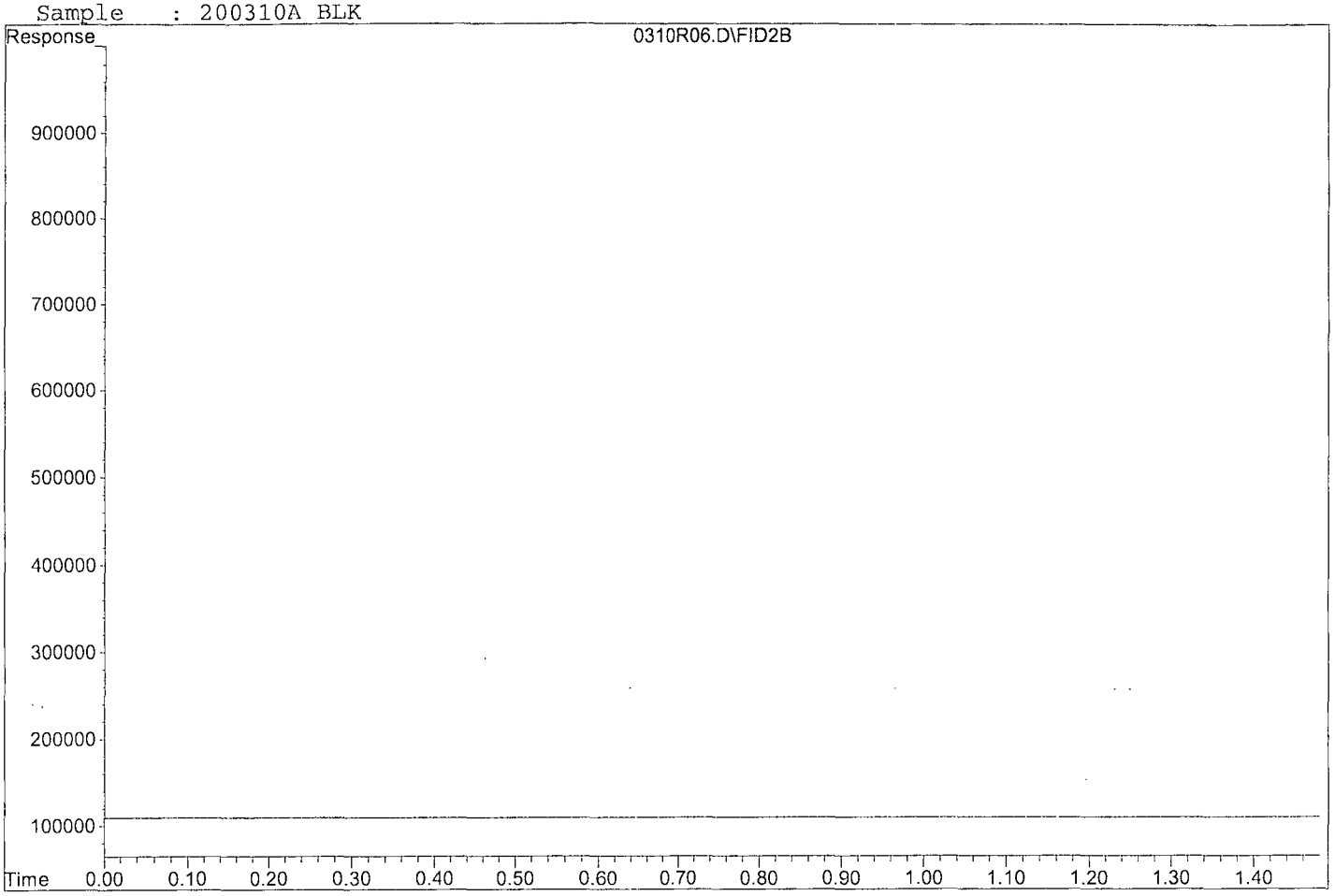
Method : G:\ROCKY\DATA\190929RS\RSK1002.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Feb 26 12:29:53 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units	
Target Compounds					
Target Compounds					
1) ATM Methane	0.00	0	N.D.	ppb	d
2) ATM Ethane	0.00	0	N.D.	ppb	d
3) ATM Ethene	0.00	0	N.D.	ppb	d

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

Data File: G:\ROCKY\DATA\191002RS\0310R06.D
Sample : 200310A BLK



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\191002RS\0310R03.D Vial: 3
Acq On : 10 Mar 20 12:27 Operator: GA
Sample : 200310A LCS/CCV RSK STD 5 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 10 12:32 2020 Quant Results File: RSK1002.RES

Method : G:\ROCKY\DATA\190929RS\RSK1002.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Feb 26 12:29:53 2020
Response via : Multiple Level Calibration

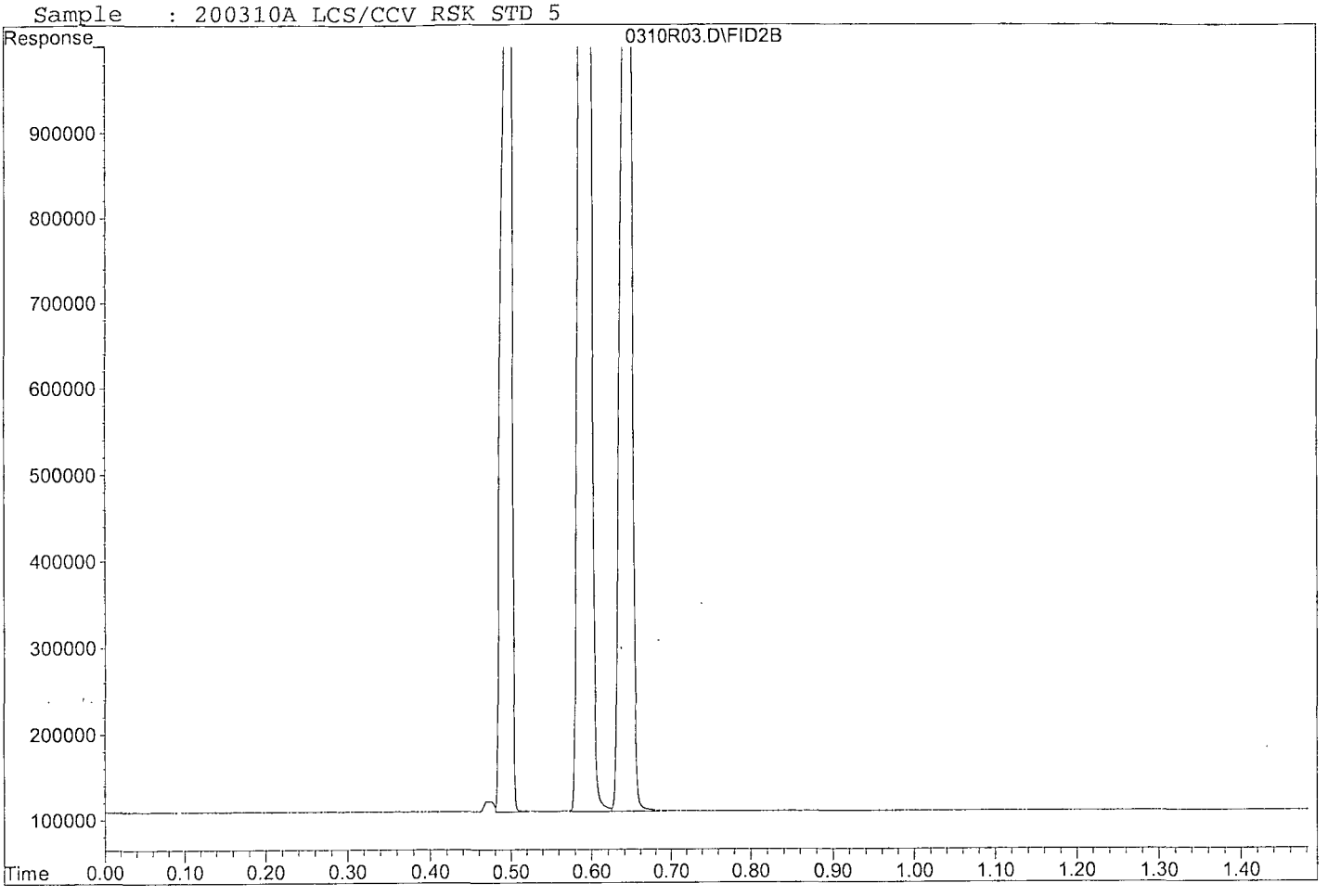
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.50	1609727	69.573 ppb
2) ATM Ethane	0.60	2122881	124.732 ppb
3) ATM Ethene	0.65	1438523	107.453 ppb

Target Compounds

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

Data File: G:\ROCKY\DATA\191002RS\0310R03.D
Sample : 200310A LCS/CCV RSK STD 5



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\191002RS\0310R05.D Vial: 5
Acq On : 10 Mar 20 12:41 Operator: GA
Sample : 200310A LCSD Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 10 12:44 2020 Quant Results File: RSK1002.RES

Method : G:\ROCKY\DATA\190929RS\RSK1002.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Feb 26 12:29:53 2020
Response via : Multiple Level Calibration

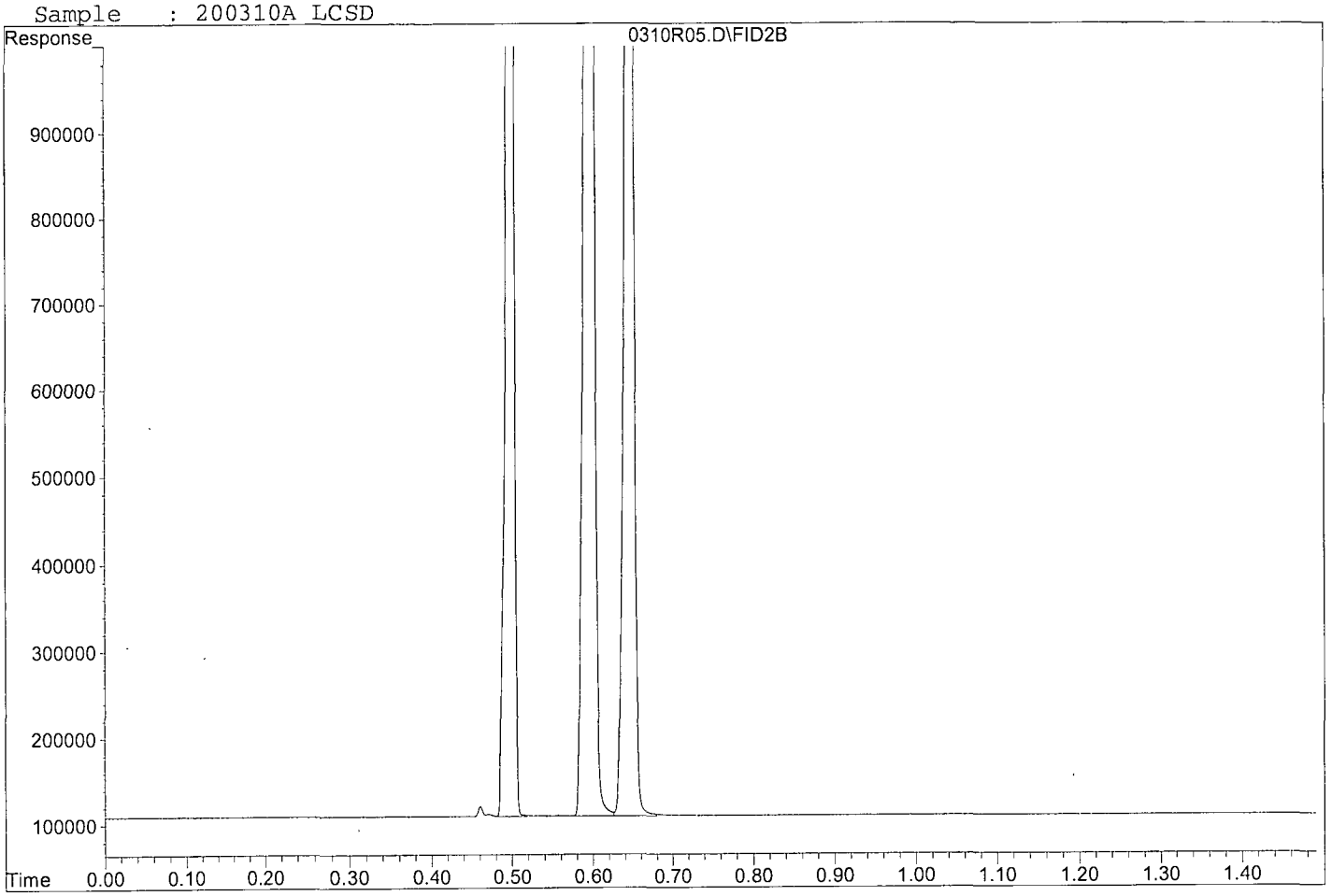
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.50	2145722	92.739 ppb
2) ATM Ethane	0.60	2772259	162.887 ppb
3) ATM Ethene	0.65	1885344	140.829 ppb

Target Compounds

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

Data File: G:\ROCKY\DATA\191002RS\0310R05.D
Sample : 200310A LCSD



Primary Stock Source

10,000ppmV **Manufacture Expiration:** 09/21/21

RSK Gas Mix (Scott Specialty Gas) CAT#X04NI97CP140001 LOT#160-401558175-1

1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

RSK Calibration Curve (prepared in 1.0 L Tedlar Bags at room temp) **01/02/19** **10/02/19**

Analyte	Conc Std 1 (1/2 = LOD) (ug/L)	Conc Std 2 (LOQ Chk) (ug/L)	Conc Std 3 (ug/L)	Conc Std 4 (ug/L)	Conc Std 5 (ug/L)	Conc Std 6 (ug/L)	Conc Std 7 (ug/L)
Methane (MW 16.04)	2.08	4.16	8.34	20.85	83.40	208.5	834.0
Ethane (MW 30.07)	3.91	7.81	15.6	39.09	156.35	390.9	1563.5
Ethene (MW 28.05)	3.65	7.30	14.6	36.46	145.84	364.6	1458.4
Stock Source	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1
Stock Conc (ppmv)	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV
Stock Aliquot (mL)	0.010	0.020	0.040	0.100	0.400	1.00	4.00
Final Volume P&T Water	32 mL	32 mL	32 mL	32 mL	32 mL	32 mL	32 mL

Second Source Stock Standard 10,000ppmV **Manufacturer Exp date 9-21-2021**

RSK Gas Mix (Scott Specialty Gas) Cat.# 23452, Lot # 160-401303032-1-39774

1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

Second Source **Expires 10/03/19** **GA 10/02/19**

2.0mL of SS from tank into 980 mL Nitrogen

final conc: 13.3ug/L Methane, 25.0 ug/L Ethane, and 23.3 ug/L Ethene

CCV/LCS/LCSD **GA 03/10/20**

Spike 0.400mL of 10,000ppmV into 32mL DI water, with 8mL Nitrogen headspace

final conc: 83.40ug/L Methane, 156.35ug/L Ethane, and 145.84ug/L Ethene

Injection Log

Directory: G:\ROCKY\DATA\191002RS\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
9	2	1002R02.D	1	RSK STD 1 10/2/19		2 Oct 19 17:45
10	3	1002R03.D	1	RSK STD 2 10/2/19		2 Oct 19 17:50
11	4	1002R04.D	1	RSK STD 3 10/2/19		2 Oct 19 17:52
12	5	1002R05.D	1	RSK STD 4 10/2/19		2 Oct 19 17:57
13	6	1002R06.D	1	RSK STD 5 10/2/19		2 Oct 19 17:59
14	7	1002R07.D	1	RSK STD 6 10/2/19		2 Oct 19 18:05
15	8	1002R08.D	1	RSK STD 7 10/2/19		2 Oct 19 18:07
16	10	1002R10.D	1	SS RSK STD 5 10/2/19		2 Oct 19 18:24
1	3	0310R03.D	1	200310A LCS/CCV RSK STD 5		10 Mar 20 12:27
2	5	0310R05.D	1	200310A LCSD		10 Mar 20 12:41
3	6	0310R06.D	1	200310A BLK		10 Mar 20 12:47
4	7	0310R07.D	1	BA08033W04		10 Mar 20 12:51
5	8	0310R08.D	1	BA08034W04		10 Mar 20 12:55
6	9	0310R09.D	1	ENDING CCV RSK STD 5 3/10/20		10 Mar 20 13:00

METALS

Calibration Data

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM
ARF No: 91607 SDG: 91607

Analysis Date: 03/13/20 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 10:11	%R(1)	True CCV1	Found 13:39	%R(1)	True	Found	%R(1)	
Calcium (Ca)	12500	12789.7	102	25000	24000.7	96.0				P
Potassium (K)	12500	12711.2	102	10000	10146.1	101				P
Magnesium (Mg)	12500	12778.3	102	25000	25366.2	101				P
Manganese (Mn)	500	506.77	101	500	509.52	102				P
Sodium (Na)	12500	12745.2	102	12500	12935.3	103				P

(1) Control Limits: Metals 90-110 ILM02.0

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 91607 SDG: 91607

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analysis Date: 03/13/20

Analyte	Initial Calibration Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
	10:16		13:44						09:40		
Calcium (Ca)	1000.00	U	1000.00	U					1000.00	U	P
Potassium (K)	3000.00	U	3000.00	U					3000.00	U	P
Magnesium (Mg)	500.00	U	500.00	U					500.00	U	P
Manganese (Mn)	10.00	U	10.00	U					10.00	U	P
Sodium (Na)	5000.00	U	5000.00	U					5000.00	U	P

A.P.P.L. INC.
4
ICP INTERFERENCE CHECK SAMPLE

Lab Name:	A.P.P.L. INC.	Contract:	AECOM
ARF No.:	91607	SDG:	91607
ICP ID Number:	Cyrus	ICS Source:	Environmental Express

Analysis Date: 03/13/20 Concentration Units: ug/L

Analyte	True		Initial Found		
	Sol A	Sol AB	Sol A 10:38	Sol AB 10:42	%R(1)
Calcium (Ca)	100000	100000	102871.11	101695.67	102
Potassium (K)			11.71	3.77	
Magnesium (Mg)	100000	100000	106680.91	105772.83	106
Manganese (Mn)		250	1.32	250.3	100
Sodium (Na)			5.9	-9.48	

(1) Control Limits: Metals 80-120

Low Level ICV

Sample Name	Acq Date Time	Run Sequence	Analyte	Actual Conc (ug/L)	Spiked Conc (ug/L)	Control Limits	% Recovery	QC Flag
LLICV	3/13/20 10:20 AM	200313A	Calcium	49.28	50	80-120%	99	
LLICV	3/13/20 10:20 AM	200313A	Potassium	515.5	500	80-120%	103	
LLICV	3/13/20 10:20 AM	200313A	Magnesium	26.06	25	80-120%	104	
LLICV	3/13/20 10:20 AM	200313A	Manganese	0.95	1	80-120%	95	
LLICV	3/13/20 10:20 AM	200313A	Sodium	505.3	500	80-120%	101	

Solution Name: Blank

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
Blank	03/13/20 9:40:45 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	0.00	ug/L	57.72	0.00
Ag C (338.289 nm)	0.00	ug/L	19.39	0.00
Al (237.312 nm)	0.00	ug/L	14.78	0.00
Al C (308.215 nm)	0.00	ug/L	4154.31	0.00
Al C (396.152 nm)	0.00	ug/L	218.99	0.00
Al RAD (396.152 nm)	0.00	ug/L	22.86	0.00
As (188.980 nm)	0.00	ug/L	9.27	0.00
As C (193.696 nm)	0.00	ug/L	13.80	0.00
B (249.678 nm)	0.00	ug/L	40.13	0.00
Ba (233.527 nm)	0.00	ug/L	15.12	0.00
Ba (455.403 nm)	0.00	ug/L	398.89	0.00
Ba RAD (233.527 nm)	0.00	ug/L	1.10	0.00
Be (313.107 nm)	0.00	ug/L	87.23	0.00
Be C (234.861 nm)	0.00	ug/L	-1.25	0.00
Ca (315.887 nm)	0.00	ug/L	68.55	0.00
Ca RAD (315.887 nm)	0.00	ug/L	22.85	0.00
Cd (214.439 nm)	0.00	ug/L	13.22	0.00
Cd C (226.502 nm)	0.00	ug/L	15.40	0.00
Cd C (228.802 nm)	0.00	ug/L	6.83	0.00
Co (228.615 nm)	0.00	ug/L	35.04	0.00
Co C (230.786 nm)	0.00	ug/L	27.86	0.00
Cr (267.716 nm)	0.00	ug/L	22.96	0.00
Cr C (205.560 nm)	0.00	ug/L	17.30	0.00
Cu (327.395 nm)	0.00	ug/L	41.83	0.00
Cu C (324.754 nm)	0.00	ug/L	658.09	0.00
Fe (259.940 nm)	0.00	ug/L	69.40	0.00
Fe (261.187 nm)	0.00	ug/L	39.71	0.00
Fe C (238.204 nm)	0.00	ug/L	117.56	0.00
Fe RAD (259.940 nm)	0.00	ug/L	4.79	0.00
Fe RAD (261.187 nm)	0.00	ug/L	10.05	0.00
K RAD (766.491 nm)	0.00	ug/L	91.32	0.00
Mg (279.078 nm)	0.00	ug/L	34.46	0.00
Mg RAD (279.078 nm)	0.00	ug/L	8.61	0.00
Mn (257.610 nm)	0.00	ug/L	91.82	0.00
Mn C (260.568 nm)	0.00	ug/L	21.18	0.00
Mo (203.846 nm)	0.00	ug/L	2.75	0.00
Mo C (202.032 nm)	0.00	ug/L	13.37	0.00
Mo C (204.598 nm)	0.00	ug/L	7.21	0.00
Na RAD (588.995 nm)	0.00	ug/L	2515.33	0.00
Na RAD (589.592 nm)	0.00	ug/L	6.01	0.00
Ni (231.604 nm)	0.00	ug/L	15.63	0.00
Ni C (221.648 nm)	0.00	ug/L	4.39	0.00
P (213.618 nm)	0.00	ug/L	12.91	0.00
P C (214.914 nm)	0.00	ug/L	8.26	0.00

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	0.00	ug/L	33.73	0.00
Sb (206.834 nm)	0.00	ug/L	19.07	0.00
Sb (217.582 nm)	0.00	ug/L	8.63	0.00
Sb C (231.146 nm)	0.00	ug/L	15.29	0.00
Se (196.026 nm)	0.00	ug/L	6.89	0.00
Sn (189.925 nm)	0.00	ug/L	12.07	0.00
Sr RAD (421.552 nm)	0.00	ug/L	18.82	0.00
Ti (334.941 nm)	0.00	ug/L	6.64	0.00
Tl (190.794 nm)	0.00	ug/L	2.90	0.00
V (292.401 nm)	0.00	ug/L	-0.62	0.00
V C (311.837 nm)	0.00	ug/L	18.36	0.00
Zn (206.200 nm)	0.00	ug/L	23.56	0.00
Zn C (202.548 nm)	0.00	ug/L	61.80	0.00
Zn RAD (206.200 nm)	0.00	ug/L	4.97	0.00

Solution Name: Standard 1

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
Standard 1	03/13/20 9:45:11 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)		ug/L	79.04	
Ag C (338.289 nm)		ug/L	12.29	
Al (237.312 nm)	50.00	ug/L	132.66	50.00
Al C (308.215 nm)	50.00	ug/L	4670.83	50.00
Al C (396.152 nm)	50.00	ug/L	1996.01	50.00
Al RAD (396.152 nm)	50.00	ug/L	289.69	50.00
As (188.980 nm)		ug/L	15.96	
As C (193.696 nm)		ug/L	17.14	
B (249.678 nm)	25.00	ug/L	457.30	25.00
Ba (233.527 nm)	1.50	ug/L	145.38	1.50
Ba (455.403 nm)	1.50	ug/L	3165.54	1.50
Ba RAD (233.527 nm)	1.50	ug/L	15.92	1.50
Be (313.107 nm)	1.00	ug/L	1775.87	1.00
Be C (234.861 nm)	1.00	ug/L	600.48	1.00
Ca (315.887 nm)	50.00	ug/L	978.84	50.00
Ca RAD (315.887 nm)	50.00	ug/L	105.59	50.00
Cd (214.439 nm)		ug/L	37.71	
Cd C (226.502 nm)		ug/L	40.02	
Cd C (228.802 nm)		ug/L	5.26	
Co (228.615 nm)		ug/L	73.60	
Co C (230.786 nm)		ug/L	72.57	
Cr (267.716 nm)		ug/L	50.85	
Cr C (205.560 nm)		ug/L	42.15	
Cu (327.395 nm)		ug/L	152.77	
Cu C (324.754 nm)		ug/L	733.27	
Fe (259.940 nm)	25.00	ug/L	1277.32	25.00
Fe (261.187 nm)	25.00	ug/L	269.27	25.00
Fe C (238.204 nm)	25.00	ug/L	2168.47	25.00
Fe RAD (259.940 nm)	25.00	ug/L	145.05	25.00
Fe RAD (261.187 nm)	25.00	ug/L	42.02	25.00
K RAD (766.491 nm)	500.00	ug/L	804.62	500.00
Mg (279.078 nm)	25.00	ug/L	259.33	25.00
Mg RAD (279.078 nm)	25.00	ug/L	28.26	25.00
Mn (257.610 nm)	1.00	ug/L	426.52	1.00
Mn C (260.568 nm)	1.00	ug/L	95.19	1.00
Mo (203.846 nm)		ug/L	13.20	
Mo C (202.032 nm)		ug/L	30.94	
Mo C (204.598 nm)		ug/L	17.38	
Na RAD (588.995 nm)	500.00	ug/L	13523.34	500.00
Na RAD (589.592 nm)	500.00	ug/L	6903.04	500.00
Ni (231.604 nm)		ug/L	35.94	
Ni C (221.648 nm)		ug/L	25.01	
P (213.618 nm)	12.50	ug/L	57.07	12.50
P C (214.914 nm)	12.50	ug/L	20.80	12.50

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)		ug/L	44.54	
Sb (206.834 nm)		ug/L	28.14	
Sb (217.582 nm)		ug/L	17.48	
Sb C (231.146 nm)		ug/L	9.17	
Se (196.026 nm)		ug/L	5.47	
Sn (189.925 nm)		ug/L	31.22	
Sr RAD (421.552 nm)	1.00	ug/L	486.69	1.00
Ti (334.941 nm)		ug/L	784.98	
Tl (190.794 nm)		ug/L	3.53	
V (292.401 nm)		ug/L	15.02	
V C (311.837 nm)		ug/L	29.45	
Zn (206.200 nm)	25.00	ug/L	969.82	25.00
Zn C (202.548 nm)	25.00	ug/L	2447.68	25.00
Zn RAD (206.200 nm)	25.00	ug/L	59.85	25.00

Solution Name: Standard 2

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
Standard 2	03/13/20 9:49:38 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	1.00	ug/L	118.77	1.00
Ag C (338.289 nm)	1.00	ug/L	14.27	1.00
Al (237.312 nm)	100.00	ug/L	260.40	100.00
Al C (308.215 nm)	100.00	ug/L	5232.44	100.00
Al C (396.152 nm)	100.00	ug/L	3692.24	100.00
Al RAD (396.152 nm)	100.00	ug/L	527.87	100.00
As (188.980 nm)		ug/L	18.84	
As C (193.696 nm)		ug/L	31.11	
B (249.678 nm)	50.00	ug/L	902.44	50.00
Ba (233.527 nm)	3.00	ug/L	272.73	3.00
Ba (455.403 nm)	3.00	ug/L	6001.78	3.00
Ba RAD (233.527 nm)	3.00	ug/L	25.91	3.00
Be (313.107 nm)	2.00	ug/L	3419.42	2.00
Be C (234.861 nm)	2.00	ug/L	1206.51	2.00
Ca (315.887 nm)	100.00	ug/L	1827.16	100.00
Ca RAD (315.887 nm)	100.00	ug/L	168.00	100.00
Cd (214.439 nm)	0.50	ug/L	64.59	0.50
Cd C (226.502 nm)	0.50	ug/L	70.00	0.50
Cd C (228.802 nm)	0.50	ug/L	15.45	0.50
Co (228.615 nm)	5.00	ug/L	109.76	5.00
Co C (230.786 nm)	5.00	ug/L	140.45	5.00
Cr (267.716 nm)	1.00	ug/L	80.74	1.00
Cr C (205.560 nm)	1.00	ug/L	71.46	1.00
Cu (327.395 nm)	5.00	ug/L	273.04	5.00
Cu C (324.754 nm)	5.00	ug/L	852.11	5.00
Fe (259.940 nm)	50.00	ug/L	2386.89	50.00
Fe (261.187 nm)	50.00	ug/L	482.35	50.00
Fe C (238.204 nm)	50.00	ug/L	4039.52	50.00
Fe RAD (259.940 nm)	50.00	ug/L	272.35	50.00
Fe RAD (261.187 nm)	50.00	ug/L	69.78	50.00
K RAD (766.491 nm)	1000.00	ug/L	1496.96	1000.00
Mg (279.078 nm)	50.00	ug/L	471.34	50.00
Mg RAD (279.078 nm)	50.00	ug/L	46.70	50.00
Mn (257.610 nm)	2.00	ug/L	749.33	2.00
Mn C (260.568 nm)	2.00	ug/L	165.80	2.00
Mo (203.846 nm)	2.00	ug/L	17.35	2.00
Mo C (202.032 nm)	2.00	ug/L	48.45	2.00
Mo C (204.598 nm)	2.00	ug/L	25.75	2.00
Na RAD (588.995 nm)	1000.00	ug/L	23993.12	1000.00
Na RAD (589.592 nm)	1000.00	ug/L	13519.06	1000.00
Ni (231.604 nm)	2.00	ug/L	47.71	2.00
Ni C (221.648 nm)	2.00	ug/L	39.28	2.00
P (213.618 nm)	25.00	ug/L	104.64	25.00
P C (214.914 nm)	25.00	ug/L	38.55	25.00

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	3.00	ug/L	55.85	3.00
Sb (206.834 nm)		ug/L	31.67	
Sb (217.582 nm)		ug/L	30.03	
Sb C (231.146 nm)		ug/L	17.53	
Se (196.026 nm)	4.00	ug/L	13.17	4.00
Sn (189.925 nm)	6.00	ug/L	49.21	6.00
Sr RAD (421.552 nm)	2.00	ug/L	954.66	2.00
Ti (334.941 nm)	5.00	ug/L	1561.17	5.00
Tl (190.794 nm)	4.00	ug/L	9.40	4.00
V (292.401 nm)	1.00	ug/L	46.73	1.00
V C (311.837 nm)	1.00	ug/L	72.21	1.00
Zn (206.200 nm)	50.00	ug/L	1894.76	50.00
Zn C (202.548 nm)	50.00	ug/L	4860.47	50.00
Zn RAD (206.200 nm)	50.00	ug/L	113.02	50.00

Solution Name: Standard 3

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
Standard 3	03/13/20 9:54:03 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	3.00	ug/L	287.19	3.00
Ag C (338.289 nm)	3.00	ug/L	21.78	3.00
Al (237.312 nm)		ug/L	741.10	
Al C (308.215 nm)		ug/L	7094.74	
Al C (396.152 nm)		ug/L	10840.12	
Al RAD (396.152 nm)		ug/L	1613.46	
As (188.980 nm)		ug/L	50.42	
As C (193.696 nm)		ug/L	43.47	
B (249.678 nm)	150.00	ug/L	2636.18	150.00
Ba (233.527 nm)		ug/L	814.28	
Ba (455.403 nm)		ug/L	17322.59	
Ba RAD (233.527 nm)		ug/L	82.10	
Be (313.107 nm)	6.00	ug/L	10187.46	6.00
Be C (234.861 nm)	6.00	ug/L	3646.27	6.00
Ca (315.887 nm)	300.00	ug/L	5711.48	300.00
Ca RAD (315.887 nm)	300.00	ug/L	519.86	300.00
Cd (214.439 nm)	1.50	ug/L	172.67	1.50
Cd C (226.502 nm)	1.50	ug/L	184.37	1.50
Cd C (228.802 nm)	1.50	ug/L	42.58	1.50
Co (228.615 nm)		ug/L	240.70	
Co C (230.786 nm)		ug/L	383.46	
Cr (267.716 nm)	3.00	ug/L	212.63	3.00
Cr C (205.560 nm)	3.00	ug/L	154.16	3.00
Cu (327.395 nm)		ug/L	753.35	
Cu C (324.754 nm)		ug/L	1259.19	
Fe (259.940 nm)	150.00	ug/L	7253.73	150.00
Fe (261.187 nm)	150.00	ug/L	1407.92	150.00
Fe C (238.204 nm)	150.00	ug/L	12272.41	150.00
Fe RAD (259.940 nm)	150.00	ug/L	846.43	150.00
Fe RAD (261.187 nm)	150.00	ug/L	189.82	150.00
K RAD (766.491 nm)	3000.00	ug/L	4336.49	3000.00
Mg (279.078 nm)	150.00	ug/L	1370.56	150.00
Mg RAD (279.078 nm)	150.00	ug/L	136.26	150.00
Mn (257.610 nm)	6.00	ug/L	2227.72	6.00
Mn C (260.568 nm)	6.00	ug/L	487.94	6.00
Mo (203.846 nm)	6.00	ug/L	44.02	6.00
Mo C (202.032 nm)	6.00	ug/L	122.77	6.00
Mo C (204.598 nm)	6.00	ug/L	74.04	6.00
Na RAD (588.995 nm)	3000.00	ug/L	68533.58	3000.00
Na RAD (589.592 nm)	3000.00	ug/L	41232.39	3000.00
Ni (231.604 nm)	6.00	ug/L	143.20	6.00
Ni C (221.648 nm)	6.00	ug/L	107.94	6.00
P (213.618 nm)		ug/L	291.08	
P C (214.914 nm)		ug/L	100.23	

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)		ug/L	104.65	
Sb (206.834 nm)		ug/L	50.78	
Sb (217.582 nm)		ug/L	40.89	
Sb C (231.146 nm)		ug/L	33.18	
Se (196.026 nm)		ug/L	22.71	
Sn (189.925 nm)		ug/L	134.31	
Sr RAD (421.552 nm)	6.00	ug/L	2890.54	6.00
Ti (334.941 nm)		ug/L	4692.35	
Tl (190.794 nm)		ug/L	23.09	
V (292.401 nm)	3.00	ug/L	118.40	3.00
V C (311.837 nm)	3.00	ug/L	116.52	3.00
Zn (206.200 nm)	150.00	ug/L	5790.20	150.00
Zn C (202.548 nm)	150.00	ug/L	14820.48	150.00
Zn RAD (206.200 nm)	150.00	ug/L	341.48	150.00

Solution Name: Standard 4

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
Standard 4	03/13/20 9:58:28 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	5.00	ug/L	442.77	5.00
Ag C (338.289 nm)	5.00	ug/L	39.95	5.00
Al (237.312 nm)	200.00	ug/L	492.13	200.00
Al C (308.215 nm)	200.00	ug/L	6177.12	200.00
Al C (396.152 nm)	200.00	ug/L	7117.65	200.00
Al RAD (396.152 nm)	200.00	ug/L	1069.04	200.00
As (188.980 nm)	10.00	ug/L	41.20	10.00
As C (193.696 nm)	10.00	ug/L	38.73	10.00
B (249.678 nm)		ug/L	215.60	
Ba (233.527 nm)	10.00	ug/L	881.66	10.00
Ba (455.403 nm)	10.00	ug/L	18771.55	10.00
Ba RAD (233.527 nm)	10.00	ug/L	87.77	10.00
Be (313.107 nm)	10.00	ug/L	16861.90	10.00
Be C (234.861 nm)	10.00	ug/L	6060.77	10.00
Ca (315.887 nm)	500.00	ug/L	9014.55	500.00
Ca RAD (315.887 nm)	500.00	ug/L	811.43	500.00
Cd (214.439 nm)	10.00	ug/L	1076.10	10.00
Cd C (226.502 nm)	10.00	ug/L	1070.13	10.00
Cd C (228.802 nm)	10.00	ug/L	259.66	10.00
Co (228.615 nm)	10.00	ug/L	170.42	10.00
Co C (230.786 nm)	10.00	ug/L	252.37	10.00
Cr (267.716 nm)	10.00	ug/L	644.62	10.00
Cr C (205.560 nm)	10.00	ug/L	481.08	10.00
Cu (327.395 nm)	10.00	ug/L	490.82	10.00
Cu C (324.754 nm)	10.00	ug/L	1038.69	10.00
Fe (259.940 nm)	200.00	ug/L	9307.04	200.00
Fe (261.187 nm)	200.00	ug/L	1799.02	200.00
Fe C (238.204 nm)	200.00	ug/L	15776.66	200.00
Fe RAD (259.940 nm)	200.00	ug/L	1082.68	200.00
Fe RAD (261.187 nm)	200.00	ug/L	239.52	200.00
K RAD (766.491 nm)		ug/L	400.11	
Mg (279.078 nm)	500.00	ug/L	4447.66	500.00
Mg RAD (279.078 nm)	500.00	ug/L	443.22	500.00
Mn (257.610 nm)	10.00	ug/L	3488.59	10.00
Mn C (260.568 nm)	10.00	ug/L	759.67	10.00
Mo (203.846 nm)	10.00	ug/L	64.47	10.00
Mo C (202.032 nm)	10.00	ug/L	199.71	10.00
Mo C (204.598 nm)	10.00	ug/L	124.20	10.00
Na RAD (588.995 nm)		ug/L	8094.49	
Na RAD (589.592 nm)		ug/L	3515.40	
Ni (231.604 nm)	10.00	ug/L	216.67	10.00
Ni C (221.648 nm)	10.00	ug/L	171.37	10.00
P (213.618 nm)	50.00	ug/L	198.23	50.00
P C (214.914 nm)	50.00	ug/L	68.57	50.00

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	10.00	ug/L	116.06	10.00
Sb (206.834 nm)	10.00	ug/L	46.94	10.00
Sb (217.582 nm)	10.00	ug/L	34.84	10.00
Sb C (231.146 nm)	10.00	ug/L	35.38	10.00
Se (196.026 nm)	10.00	ug/L	20.84	10.00
Sn (189.925 nm)	10.00	ug/L	78.04	10.00
Sr RAD (421.552 nm)	10.00	ug/L	4690.24	10.00
Ti (334.941 nm)	10.00	ug/L	3118.85	10.00
Tl (190.794 nm)	10.00	ug/L	18.03	10.00
V (292.401 nm)	10.00	ug/L	364.33	10.00
V C (311.837 nm)	10.00	ug/L	530.18	10.00
Zn (206.200 nm)		ug/L	402.96	
Zn C (202.548 nm)		ug/L	1052.33	
Zn RAD (206.200 nm)		ug/L	26.94	

Solution Name: Standard 5

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
Standard 5	03/13/20 10:02:54 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	250.00	ug/L	20173.85	250.00
Ag C (338.289 nm)	250.00	ug/L	1432.65	250.00
Al (237.312 nm)	10000.00	ug/L	24364.53	10000.00
Al C (308.215 nm)	10000.00	ug/L	100219.30	10000.00
Al C (396.152 nm)	10000.00	ug/L	369961.93	10000.00
Al RAD (396.152 nm)	10000.00	ug/L	51473.11	10000.00
As (188.980 nm)	500.00	ug/L	1840.82	500.00
As C (193.696 nm)	500.00	ug/L	1383.00	500.00
B (249.678 nm)	500.00	ug/L	8901.74	500.00
Ba (233.527 nm)	500.00	ug/L	43611.17	500.00
Ba (455.403 nm)	500.00	ug/L	922530.90	500.00
Ba RAD (233.527 nm)	500.00	ug/L	4167.45	500.00
Be (313.107 nm)	500.00	ug/L	869635.51	500.00
Be C (234.861 nm)	500.00	ug/L	312855.88	500.00
Ca (315.887 nm)	25000.00	ug/L	452823.63	25000.00
Ca RAD (315.887 nm)	25000.00	ug/L	39110.06	25000.00
Cd (214.439 nm)	500.00	ug/L	52364.68	500.00
Cd C (226.502 nm)	500.00	ug/L	52253.70	500.00
Cd C (228.802 nm)	500.00	ug/L	12911.39	500.00
Co (228.615 nm)	500.00	ug/L	6191.52	500.00
Co C (230.786 nm)	500.00	ug/L	11104.92	500.00
Cr (267.716 nm)	500.00	ug/L	31198.07	500.00
Cr C (205.560 nm)	500.00	ug/L	22972.63	500.00
Cu (327.395 nm)	500.00	ug/L	23236.40	500.00
Cu C (324.754 nm)	500.00	ug/L	20487.99	500.00
Fe (259.940 nm)	10000.00	ug/L	458259.86	10000.00
Fe (261.187 nm)	10000.00	ug/L	87014.56	10000.00
Fe C (238.204 nm)	10000.00	ug/L	775033.52	10000.00
Fe RAD (259.940 nm)	10000.00	ug/L	52194.37	10000.00
Fe RAD (261.187 nm)	10000.00	ug/L	11106.96	10000.00
K RAD (766.491 nm)	10000.00	ug/L	14311.83	10000.00
Mg (279.078 nm)	25000.00	ug/L	221716.58	25000.00
Mg RAD (279.078 nm)	25000.00	ug/L	21668.68	25000.00
Mn (257.610 nm)	500.00	ug/L	168482.28	500.00
Mn C (260.568 nm)	500.00	ug/L	36583.07	500.00
Mo (203.846 nm)	500.00	ug/L	2884.34	500.00
Mo C (202.032 nm)	500.00	ug/L	9397.44	500.00
Mo C (204.598 nm)	500.00	ug/L	6141.15	500.00
Na RAD (588.995 nm)	12500.00	ug/L	268646.45	12500.00
Na RAD (589.592 nm)	12500.00	ug/L	168129.75	12500.00
Ni (231.604 nm)	500.00	ug/L	9988.04	500.00
Ni C (221.648 nm)	500.00	ug/L	7962.09	500.00
P (213.618 nm)	2500.00	ug/L	9522.36	2500.00
P C (214.914 nm)	2500.00	ug/L	3130.50	2500.00

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	500.00	ug/L	3912.11	500.00
Sb (206.834 nm)	500.00	ug/L	1249.30	500.00
Sb (217.582 nm)	500.00	ug/L	1736.07	500.00
Sb C (231.146 nm)	500.00	ug/L	1081.45	500.00
Se (196.026 nm)	500.00	ug/L	697.50	500.00
Sn (189.925 nm)	500.00	ug/L	3395.28	500.00
Sr RAD (421.552 nm)	500.00	ug/L	231396.14	500.00
Ti (334.941 nm)	500.00	ug/L	157607.27	500.00
Tl (190.794 nm)	500.00	ug/L	951.73	500.00
V (292.401 nm)	500.00	ug/L	17920.50	500.00
V C (311.837 nm)	500.00	ug/L	30113.68	500.00
Zn (206.200 nm)	500.00	ug/L	17738.72	500.00
Zn C (202.548 nm)	500.00	ug/L	46506.71	500.00
Zn RAD (206.200 nm)	500.00	ug/L	1044.30	500.00

Solution Name: Standard 6

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
Standard 6	03/13/20 10:07:20 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	500.00	ug/L	40465.73	500.00
Ag C (338.289 nm)	500.00	ug/L	2880.48	500.00
Al (237.312 nm)	20000.00	ug/L	48467.79	20000.00
Al C (308.215 nm)	20000.00	ug/L	200046.12	20000.00
Al C (396.152 nm)	20000.00	ug/L	753295.92	20000.00
Al RAD (396.152 nm)	20000.00	ug/L	102672.77	20000.00
As (188.980 nm)	1000.00	ug/L	3688.94	1000.00
As C (193.696 nm)	1000.00	ug/L	2746.97	1000.00
B (249.678 nm)	1000.00	ug/L	18016.66	1000.00
Ba (233.527 nm)	1000.00	ug/L	86485.57	1000.00
Ba (455.403 nm)	1000.00	ug/L	1840512.94	1000.00
Ba RAD (233.527 nm)	1000.00	ug/L	8186.51	1000.00
Be (313.107 nm)	1000.00	ug/L	1741640.96	1000.00
Be C (234.861 nm)	1000.00	ug/L	624472.40	1000.00
Ca (315.887 nm)	50000.00	ug/L	895677.79	50000.00
Ca RAD (315.887 nm)	50000.00	ug/L	77118.83	50000.00
Cd (214.439 nm)	1000.00	ug/L	103385.52	1000.00
Cd C (226.502 nm)	1000.00	ug/L	103112.90	1000.00
Cd C (228.802 nm)	1000.00	ug/L	25817.63	1000.00
Co (228.615 nm)	1000.00	ug/L	12202.24	1000.00
Co C (230.786 nm)	1000.00	ug/L	21983.30	1000.00
Cr (267.716 nm)	1000.00	ug/L	61973.58	1000.00
Cr C (205.560 nm)	1000.00	ug/L	45271.42	1000.00
Cu (327.395 nm)	1000.00	ug/L	47159.66	1000.00
Cu C (324.754 nm)	1000.00	ug/L	40461.80	1000.00
Fe (259.940 nm)	20000.00	ug/L	901274.99	20000.00
Fe (261.187 nm)	20000.00	ug/L	172209.82	20000.00
Fe C (238.204 nm)	20000.00	ug/L	1520170.50	20000.00
Fe RAD (259.940 nm)	20000.00	ug/L	102505.02	20000.00
Fe RAD (261.187 nm)	20000.00	ug/L	21861.21	20000.00
K RAD (766.491 nm)	20000.00	ug/L	28362.96	20000.00
Mg (279.078 nm)	50000.00	ug/L	443213.56	50000.00
Mg RAD (279.078 nm)	50000.00	ug/L	42903.62	50000.00
Mn (257.610 nm)	1000.00	ug/L	333689.93	1000.00
Mn C (260.568 nm)	1000.00	ug/L	72289.25	1000.00
Mo (203.846 nm)	1000.00	ug/L	5754.76	1000.00
Mo C (202.032 nm)	1000.00	ug/L	18751.79	1000.00
Mo C (204.598 nm)	1000.00	ug/L	12275.90	1000.00
Na RAD (588.995 nm)	25000.00	ug/L	532757.72	25000.00
Na RAD (589.592 nm)	25000.00	ug/L	334569.55	25000.00
Ni (231.604 nm)	1000.00	ug/L	19670.10	1000.00
Ni C (221.648 nm)	1000.00	ug/L	15674.01	1000.00
P (213.618 nm)	5000.00	ug/L	19121.16	5000.00
P C (214.914 nm)	5000.00	ug/L	6274.54	5000.00

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	1000.00	ug/L	7744.00	1000.00
Sb (206.834 nm)	1000.00	ug/L	2465.79	1000.00
Sb (217.582 nm)	1000.00	ug/L	3475.63	1000.00
Sb C (231.146 nm)	1000.00	ug/L	2138.39	1000.00
Se (196.026 nm)	1000.00	ug/L	1378.68	1000.00
Sn (189.925 nm)	1000.00	ug/L	6627.53	1000.00
Sr RAD (421.552 nm)	1000.00	ug/L	458402.50	1000.00
Ti (334.941 nm)	1000.00	ug/L	315228.72	1000.00
Tl (190.794 nm)	1000.00	ug/L	1919.05	1000.00
V (292.401 nm)	1000.00	ug/L	35717.61	1000.00
V C (311.837 nm)	1000.00	ug/L	60551.41	1000.00
Zn (206.200 nm)	1000.00	ug/L	34230.63	1000.00
Zn C (202.548 nm)	1000.00	ug/L	91522.60	1000.00
Zn RAD (206.200 nm)	1000.00	ug/L	2036.70	1000.00

Solution Name: ICV

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
ICV	03/13/20 10:11:46 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	252.17	ug/L	20426.31	252.17
Ag C (338.289 nm)	252.56	ug/L	1453.92	252.56
Al (237.312 nm)	12753.26	ug/L	30949.42	12753.26
Al C (308.215 nm)	12503.57	ug/L	126146.31	12503.57
Al C (396.152 nm)	12612.01	ug/L	466793.65	12612.01
Al RAD (396.152 nm)	12729.26	ug/L	65451.59	12729.26
As (188.980 nm)	507.08 Q	ug/L	1866.74 Q	507.08 Q
As C (193.696 nm)	505.56 Q	ug/L	1395.38 Q	505.56 Q
B (249.678 nm)	506.63	ug/L	8997.49	506.63
Ba (233.527 nm)	515.82	ug/L	44784.76	515.82
Ba (455.403 nm)	511.68	ug/L	943723.70	511.68
Ba RAD (233.527 nm)	517.68	ug/L	4255.48	517.68
Be (313.107 nm)	506.59	ug/L	877466.89	506.59
Be C (234.861 nm)	506.04	ug/L	314804.46	506.04
Ca (315.887 nm)	12719.13	ug/L	231104.44	12719.13
Ca RAD (315.887 nm)	12789.71	ug/L	19887.63	12789.71
Cd (214.439 nm)	509.86	ug/L	53461.56	509.86
Cd C (226.502 nm)	510.24	ug/L	53113.41	510.24
Cd C (228.802 nm)	506.45	ug/L	13075.95	506.45
Co (228.615 nm)	516.21	ug/L	6418.47	516.21
Co C (230.786 nm)	520.29	ug/L	11515.99	520.29
Cr (267.716 nm)	510.41	ug/L	31728.41	510.41
Cr C (205.560 nm)	513.13	ug/L	23347.14	513.13
Cu (327.395 nm)	507.68	ug/L	23915.00	507.68
Cu C (324.754 nm)	510.06	ug/L	20894.62	510.06
Fe (259.940 nm)	12430.24	ug/L	580228.51	12430.24
Fe (261.187 nm)	12574.97	ug/L	111098.31	12574.97
Fe C (238.204 nm)	12530.81	ug/L	983385.63	12530.81
Fe RAD (259.940 nm)	12739.05	ug/L	66458.22	12739.05
Fe RAD (261.187 nm)	Uncal	ug/L	14116.12 Q	Uncal
K RAD (766.491 nm)	12711.25	ug/L	18088.81	12711.25
Mg (279.078 nm)	12778.39	ug/L	113312.14	12778.39
Mg RAD (279.078 nm)	12736.84	ug/L	10968.65	12736.84
Mn (257.610 nm)	506.77	ug/L	170939.05	506.77
Mn C (260.568 nm)	511.02	ug/L	37072.73	511.02
Mo (203.846 nm)	494.22	ug/L	2848.35	494.22
Mo C (202.032 nm)	494.64	ug/L	9288.38	494.64
Mo C (204.598 nm)	494.85	ug/L	6076.38	494.85
Na RAD (588.995 nm)	12745.26	ug/L	276406.26	12745.26
Na RAD (589.592 nm)	12606.99	ug/L	171187.03	12606.99
Ni (231.604 nm)	514.23	ug/L	10279.03	514.23
Ni C (221.648 nm)	520.33	ug/L	8218.87	520.33
P (213.618 nm)	2519.79	ug/L	9599.94	2519.79
P C (214.914 nm)	2518.37	ug/L	3160.08	2518.37

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	509.91	ug/L	3993.68	509.91
Sb (206.834 nm)	475.44	ug/L	1182.98	475.44
Sb (217.582 nm)	472.40 Q	ug/L	1648.02 Q	472.40 Q
Sb C (231.146 nm)	468.46 Q	ug/L	1011.61 Q	468.46 Q
Se (196.026 nm)	499.81	ug/L	694.99	499.81
Sn (189.925 nm)	254.48	ug/L	1729.25	254.48
Sr RAD (421.552 nm)	505.98	ug/L	234390.82	505.98
Ti (334.941 nm)	502.48	ug/L	157848.02	502.48
Tl (190.794 nm)	512.96	ug/L	981.79	512.96
V (292.401 nm)	502.14	ug/L	18017.39	502.14
V C (311.837 nm)	Uncal	ug/L	30196.88 Q	Uncal
Zn (206.200 nm)	518.30	ug/L	18265.18	518.30
Zn C (202.548 nm)	498.90	ug/L	47947.09	498.90
Zn RAD (206.200 nm)	498.29	ug/L	1058.68	498.29

Solution Name: ICB

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
ICB	03/13/20 10:16:10 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	0.24	ug/L	61.57	0.24
Ag C (338.289 nm)	1.13 Z	ug/L	14.72 Z	1.13 Z
Al (237.312 nm)	-0.77	ug/L	11.76	-0.77
Al C (308.215 nm)	30.93	ug/L	4492.18	30.93
Al C (396.152 nm)	2.24	ug/L	206.12	2.24
Al RAD (396.152 nm)	1.33	ug/L	27.62	1.33
As (188.980 nm)	-1.38 Z	ug/L	4.07 Z	-1.38 Z
As C (193.696 nm)	1.80 Z	ug/L	16.57 Z	1.80 Z
B (249.678 nm)	1.47	ug/L	41.94	1.47
Ba (233.527 nm)	0.04	ug/L	17.25	0.04
Ba (455.403 nm)	0.01	ug/L	466.67	0.01
Ba RAD (233.527 nm)	0.56	ug/L	6.12	0.56
Be (313.107 nm)	0.09	ug/L	132.94	0.09
Be C (234.861 nm)	0.06	ug/L	24.34	0.06
Ca (315.887 nm)	0.95	ug/L	83.16	0.95
Ca RAD (315.887 nm)	-11.85	ug/L	7.35	-11.85
Cd (214.439 nm)	0.04	ug/L	17.22	0.04
Cd C (226.502 nm)	-0.03	ug/L	18.47	-0.03
Cd C (228.802 nm)	-0.09	ug/L	3.43	-0.09
Co (228.615 nm)	0.56	ug/L	47.03	0.56
Co C (230.786 nm)	-0.39	ug/L	22.01	-0.39
Cr (267.716 nm)	0.16	ug/L	34.00	0.16
Cr C (205.560 nm)	-0.03	ug/L	19.97	-0.03
Cu (327.395 nm)	-0.05	ug/L	31.90	-0.05
Cu C (324.754 nm)	0.89	ug/L	683.04	0.89
Fe (259.940 nm)	-1.20	ug/L	71.99	-1.20
Fe (261.187 nm)	-1.76	ug/L	35.64	-1.76
Fe C (238.204 nm)	-1.18	ug/L	114.75	-1.18
Fe RAD (259.940 nm)	-0.29	ug/L	11.10	-0.29
Fe RAD (261.187 nm)	Uncal	ug/L	9.95 Z	Uncal
K RAD (766.491 nm)	24.58	ug/L	122.21	24.58
Mg (279.078 nm)	0.98	ug/L	43.11	0.98
Mg RAD (279.078 nm)	2.68	ug/L	9.97	2.68
Mn (257.610 nm)	-0.05	ug/L	80.32	-0.05
Mn C (260.568 nm)	-0.14	ug/L	17.69	-0.14
Mo (203.846 nm)	0.15	ug/L	7.56	0.15
Mo C (202.032 nm)	0.20	ug/L	15.85	0.20
Mo C (204.598 nm)	0.55	ug/L	9.59	0.55
Na RAD (588.995 nm)	-8.36	ug/L	2449.93	-8.36
Na RAD (589.592 nm)	1.21	ug/L	43.38	1.21
Ni (231.604 nm)	-0.02	ug/L	14.16	-0.02
Ni C (221.648 nm)	0.03	ug/L	8.75	0.03
P (213.618 nm)	1.55	ug/L	16.77	1.55
P C (214.914 nm)	-1.27	ug/L	5.77	-1.27

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	-0.37	ug/L	33.11	-0.37
Sb (206.834 nm)	2.33 Z	ug/L	25.04 Z	2.33 Z
Sb (217.582 nm)	1.52 Z	ug/L	12.50 Z	1.52 Z
Sb C (231.146 nm)	-3.42 Z	ug/L	7.92 Z	-3.42 Z
Se (196.026 nm)	0.08	ug/L	7.36	0.08
Sn (189.925 nm)	0.24	ug/L	11.14	0.24
Sr RAD (421.552 nm)	0.01	ug/L	39.56	0.01
Ti (334.941 nm)	0.00	ug/L	-3.01	0.00
Tl (190.794 nm)	0.08	ug/L	1.11	0.08
V (292.401 nm)	-0.01	ug/L	5.55	-0.01
V C (311.837 nm)	Uncal	ug/L	35.10 Z	Uncal
Zn (206.200 nm)	-1.65	ug/L	27.70	-1.65
Zn C (202.548 nm)	0.06	ug/L	67.46	0.06
Zn RAD (206.200 nm)	-8.08	ug/L	2.65	-8.08

Solution Name: LLICV

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
LLICV	03/13/20 10:20:34 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	0.56	ug/L	87.57	0.56
Ag C (338.289 nm)	1.16 R	ug/L	14.90 R	1.16 R
Al (237.312 nm)	50.40	ug/L	135.88	50.40
Al C (308.215 nm)	70.90 R	ug/L	4882.11 R	70.90 R
Al C (396.152 nm)	51.36	ug/L	2023.71	51.36
Al RAD (396.152 nm)	53.43	ug/L	295.40	53.43
As (188.980 nm)	1.82 R	ug/L	15.71 R	1.82 R
As C (193.696 nm)	5.31 R	ug/L	26.18 R	5.31 R
B (249.678 nm)	26.29	ug/L	481.23	26.29
Ba (233.527 nm)	1.56	ug/L	149.43	1.56
Ba (455.403 nm)	1.52	ug/L	3252.37	1.52
Ba RAD (233.527 nm)	2.04 R	ug/L	18.32 R	2.04 R
Be (313.107 nm)	1.04	ug/L	1787.44	1.04
Be C (234.861 nm)	1.04	ug/L	633.10	1.04
Ca (315.887 nm)	50.66	ug/L	986.06	50.66
Ca RAD (315.887 nm)	49.28	ug/L	102.26	49.28
Cd (214.439 nm)	0.26	ug/L	40.45	0.26
Cd C (226.502 nm)	0.28	ug/L	51.60	0.28
Cd C (228.802 nm)	0.08 R	ug/L	7.76 R	0.08 R
Co (228.615 nm)	2.96	ug/L	76.96	2.96
Co C (230.786 nm)	2.38	ug/L	83.00	2.38
Cr (267.716 nm)	0.38 R	ug/L	47.60 R	0.38 R
Cr C (205.560 nm)	0.40	ug/L	39.65	0.40
Cu (327.395 nm)	2.30	ug/L	142.49	2.30
Cu C (324.754 nm)	2.93	ug/L	763.77	2.93
Fe (259.940 nm)	24.81	ug/L	1285.71	24.81
Fe (261.187 nm)	24.71	ug/L	269.40	24.71
Fe C (238.204 nm)	25.22	ug/L	2185.94	25.22
Fe RAD (259.940 nm)	26.33	ug/L	149.95	26.33
Fe RAD (261.187 nm)	Uncal	ug/L	44.15 R	Uncal
K RAD (766.491 nm)	515.51	ug/L	817.46	515.51
Mg (279.078 nm)	26.06	ug/L	265.43	26.06
Mg RAD (279.078 nm)	26.22	ug/L	30.23	26.22
Mn (257.610 nm)	0.95	ug/L	419.69	0.95
Mn C (260.568 nm)	0.91	ug/L	93.65	0.91
Mo (203.846 nm)	0.32 R	ug/L	8.54 R	0.32 R
Mo C (202.032 nm)	1.01	ug/L	30.96	1.01
Mo C (204.598 nm)	1.10	ug/L	16.43	1.10
Na RAD (588.995 nm)	505.28	ug/L	13483.17	505.28
Na RAD (589.592 nm)	510.78	ug/L	6961.50	510.78
Ni (231.604 nm)	0.96	ug/L	34.13	0.96
Ni C (221.648 nm)	1.02	ug/L	24.28	1.02
P (213.618 nm)	11.67	ug/L	55.07	11.67
P C (214.914 nm)	7.35 R	ug/L	16.57 R	7.35 R

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	1.34	ug/L	46.48	1.34
Sb (206.834 nm)	2.36	ug/L	25.13	2.36
Sb (217.582 nm)	2.86 R	ug/L	17.16 R	2.86 R
Sb C (231.146 nm)	-0.94 R	ug/L	13.19 R	-0.94 R
Se (196.026 nm)	1.75	ug/L	9.65	1.75
Sn (189.925 nm)	3.21	ug/L	31.25	3.21
Sr RAD (421.552 nm)	1.02	ug/L	507.85	1.02
Ti (334.941 nm)	2.58	ug/L	809.73	2.58
Tl (190.794 nm)	2.57 R	ug/L	5.82 R	2.57 R
V (292.401 nm)	0.40 R	ug/L	20.23 R	0.40 R
V C (311.837 nm)	Uncal	ug/L	78.97 R	Uncal
Zn (206.200 nm)	24.94	ug/L	960.49	24.94
Zn C (202.548 nm)	25.17	ug/L	2477.99	25.17
Zn RAD (206.200 nm)	18.40 R	ug/L	57.87 R	18.40 R

Solution Name: ICSA

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
ICSA	03/13/20 10:38:11 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	-0.26	ug/L	23.16	-0.26
Ag C (338.289 nm)	1.52 K	ug/L	16.97 K	1.52 K
Al (237.312 nm)	108211.50 o	ug/L	262482.03	108211.50 o
Al C (308.215 nm)	107514.85 o	ug/L	1052855.77	107514.85 o
Al C (396.152 nm)	109130.47 o	ug/L	4038176.97	109130.47 o
Al RAD (396.152 nm)	105546.12 o	ug/L	542548.13	105546.12 o
As (188.980 nm)	0.09	ug/L	13.43	0.09
As C (193.696 nm)	1.81	ug/L	20.38	1.81
B (249.678 nm)	2.89	ug/L	62.22	2.89
Ba (233.527 nm)	0.06	ug/L	86.18	0.06
Ba (455.403 nm)	0.07	ug/L	582.17	0.07
Ba RAD (233.527 nm)	2.08 K	ug/L	18.60 K	2.08 K
Be (313.107 nm)	0.11	ug/L	170.70	0.11
Be C (234.861 nm)	0.11	ug/L	56.64	0.11
Ca (315.887 nm)	103987.79 o	ug/L	1888648.83	103987.79 o
Ca RAD (315.887 nm)	102871.11 o	ug/L	159729.21	102871.11 o
Cd (214.439 nm)	-0.28 K	ug/L	73.23 K	-0.28 K
Cd C (226.502 nm)	5.59 K	ug/L	604.13 K	5.59 K
Cd C (228.802 nm)	-0.13	ug/L	5.06	-0.13
Co (228.615 nm)	-3.73 K	ug/L	100.35 K	-3.73 K
Co C (230.786 nm)	-2.99 K	ug/L	171.24 K	-2.99 K
Cr (267.716 nm)	-0.75 K	ug/L	28.74 K	-0.75 K
Cr C (205.560 nm)	0.15	ug/L	28.26	0.15
Cu (327.395 nm)	-0.08	ug/L	41.15	-0.08
Cu C (324.754 nm)	0.98	ug/L	686.62	0.98
Fe (259.940 nm)	95280.51 o	ug/L	4446724.57	95280.51 o
Fe (261.187 nm)	99125.90 o	ug/L	875412.53	99125.90 o
Fe C (238.204 nm)	94010.17 o	ug/L	7376328.02	94010.17 o
Fe RAD (259.940 nm)	98915.73 o	ug/L	515947.21	98915.73 o
Fe RAD (261.187 nm)	Uncal	ug/L	110556.68	Uncal
K RAD (766.491 nm)	11.71	ug/L	103.98	11.71
Mg (279.078 nm)	106680.91 o	ug/L	945737.84	106680.91 o
Mg RAD (279.078 nm)	105417.33 o	ug/L	90727.10	105417.33 o
Mn (257.610 nm)	1.32 K	ug/L	541.45 K	1.32 K
Mn C (260.568 nm)	6.29 K	ug/L	483.38 K	6.29 K
Mo (203.846 nm)	0.94	ug/L	12.09	0.94
Mo C (202.032 nm)	0.03	ug/L	12.73	0.03
Mo C (204.598 nm)	1.97 K	ug/L	27.13 K	1.97 K
Na RAD (588.995 nm)	5.90	ug/L	2756.21	5.90
Na RAD (589.592 nm)	18.90	ug/L	283.54	18.90
Ni (231.604 nm)	4.01 K	ug/L	96.12 K	4.01 K
Ni C (221.648 nm)	4.20 K	ug/L	74.47 K	4.20 K
P (213.618 nm)	0.56	ug/L	13.03	0.56
P C (214.914 nm)	34.25 K	ug/L	50.24 K	34.25 K

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	-3.85 K	ug/L	20.26 K	-3.85 K
Sb (206.834 nm)	7.59 K	ug/L	41.59 K	7.59 K
Sb (217.582 nm)	7.33 K	ug/L	34.68 K	7.33 K
Sb C (231.146 nm)	-2.95 K	ug/L	8.92 K	-2.95 K
Se (196.026 nm)	-2.26 K	ug/L	4.14 K	-2.26 K
Sn (189.925 nm)	-0.26	ug/L	7.78	-0.26
Sr RAD (421.552 nm)	0.93	ug/L	464.23	0.93
Ti (334.941 nm)	0.00	ug/L	-0.92	0.00
Tl (190.794 nm)	2.13 K	ug/L	5.02 K	2.13 K
V (292.401 nm)	1.67 K	ug/L	77.07 K	1.67 K
V C (311.837 nm)	Uncal	ug/L	31.71 K	Uncal
Zn (206.200 nm)	1.47	ug/L	137.19	1.47
Zn C (202.548 nm)	3.03	ug/L	352.39	3.03
Zn RAD (206.200 nm)	-4.39	ug/L	10.33	-4.39

Solution Name: ICSAB

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
ICSAB	03/13/20 10:42:35 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	529.68	ug/L	42856.62	529.68
Ag C (338.289 nm)	525.09	ug/L	3014.52	525.09
Al (237.312 nm)	107113.12 o	ug/L	259819.11	107113.12 o
Al C (308.215 nm)	106655.62 o	ug/L	1044475.20	106655.62 o
Al C (396.152 nm)	108033.04 o	ug/L	3997569.84	108033.04 o
Al RAD (396.152 nm)	104569.82 o	ug/L	537529.73	104569.82 o
As (188.980 nm)	254.22	ug/L	941.91	254.22
As C (193.696 nm)	253.16	ug/L	708.07	253.16
B (249.678 nm)	2.32	ug/L	60.37	2.32
Ba (233.527 nm)	257.47	ug/L	22423.64	257.47
Ba (455.403 nm)	257.98	ug/L	476028.73	257.98
Ba RAD (233.527 nm)	249.93	ug/L	2055.30	249.93
Be (313.107 nm)	257.27	ug/L	445601.58	257.27
Be C (234.861 nm)	253.43	ug/L	157648.37	253.43
Ca (315.887 nm)	103014.48 o	ug/L	1870991.88	103014.48 o
Ca RAD (315.887 nm)	101695.67 o	ug/L	157907.72	101695.67 o
Cd (214.439 nm)	498.40	ug/L	52354.55	498.40
Cd C (226.502 nm)	504.21	ug/L	52485.53	504.21
Cd C (228.802 nm)	511.16	ug/L	13199.98	511.16
Co (228.615 nm)	244.68	ug/L	3177.55	244.68
Co C (230.786 nm)	250.94	ug/L	5768.06	250.94
Cr (267.716 nm)	255.47	ug/L	15940.57	255.47
Cr C (205.560 nm)	255.67	ug/L	11643.53	255.67
Cu (327.395 nm)	267.18	ug/L	12611.80	267.18
Cu C (324.754 nm)	264.96	ug/L	11165.31	264.96
Fe (259.940 nm)	93671.37 o	ug/L	4371628.43	93671.37 o
Fe (261.187 nm)	98187.75 o	ug/L	867127.92	98187.75 o
Fe C (238.204 nm)	93329.67 o	ug/L	7322935.37	93329.67 o
Fe RAD (259.940 nm)	97977.28 o	ug/L	511052.33	97977.28 o
Fe RAD (261.187 nm)	Uncal	ug/L	109443.98 G	Uncal
K RAD (766.491 nm)	3.77	ug/L	92.75	3.77
Mg (279.078 nm)	105772.83 o	ug/L	937687.92	105772.83 o
Mg RAD (279.078 nm)	104401.21 o	ug/L	89852.64	104401.21 o
Mn (257.610 nm)	250.30	ug/L	84478.83	250.30
Mn C (260.568 nm)	256.15	ug/L	18597.05	256.15
Mo (203.846 nm)	249.53	ug/L	1441.44	249.53
Mo C (202.032 nm)	247.65	ug/L	4656.37	247.65
Mo C (204.598 nm)	250.05	ug/L	3071.81	250.05
Na RAD (588.995 nm)	-9.48	ug/L	2425.88	-9.48
Na RAD (589.592 nm)	-10.99	ug/L	-122.30	-10.99
Ni (231.604 nm)	498.88	ug/L	9977.49	498.88
Ni C (221.648 nm)	502.88	ug/L	7943.42	502.88
P (213.618 nm)	2.38	ug/L	23.93	2.38
P C (214.914 nm)	14.66	ug/L	25.71	14.66

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	501.13	ug/L	3938.68	501.13
Sb (206.834 nm)	244.86	ug/L	622.05	244.86
Sb (217.582 nm)	230.52	ug/L	810.18	230.52
Sb C (231.146 nm)	231.73	ug/L	507.94	231.73
Se (196.026 nm)	245.53	ug/L	345.11	245.53
Sn (189.925 nm)	0.01	ug/L	9.59	0.01
Sr RAD (421.552 nm)	0.85	ug/L	427.02	0.85
Ti (334.941 nm)	-0.05	ug/L	-4.05	-0.05
Tl (190.794 nm)	259.62	ug/L	495.13	259.62
V (292.401 nm)	256.07	ug/L	9207.09	256.07
V C (311.837 nm)	Uncal	ug/L	15289.58	Uncal
Zn (206.200 nm)	489.93	ug/L	17270.04	489.93
Zn C (202.548 nm)	483.92	ug/L	46509.57	483.92
Zn RAD (206.200 nm)	470.02	ug/L	999.72	470.02

Solution Name: CCV

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
CCV	03/13/20 1:39:38 PM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	254.55	ug/L	20618.83	254.55
Ag C (338.289 nm)	251.18	ug/L	1446.03	251.18
Al (237.312 nm)	10377.43	ug/L	25186.76	10377.43
Al C (308.215 nm)	10074.49	ug/L	102453.86	10074.49
Al C (396.152 nm)	10154.77	ug/L	375870.66	10154.77
Al RAD (396.152 nm)	10201.47	ug/L	52458.30	10201.47
As (188.980 nm)	513.13	ug/L	1888.94	513.13
As C (193.696 nm)	519.37	ug/L	1433.09	519.37
B (249.678 nm)	522.53	ug/L	9278.68	522.53
Ba (233.527 nm)	510.45	ug/L	44317.78	510.45
Ba (455.403 nm)	504.75	ug/L	930950.21	504.75
Ba RAD (233.527 nm)	495.05	ug/L	4069.54	495.05
Be (313.107 nm)	513.45	ug/L	889351.90	513.45
Be C (234.861 nm)	516.28	ug/L	321174.65	516.28
Ca (315.887 nm)	25103.01	ug/L	456000.20	25103.01
Ca RAD (315.887 nm)	24000.74	ug/L	37289.46	24000.74
Cd (214.439 nm)	507.83	ug/L	53249.48	507.83
Cd C (226.502 nm)	508.90	ug/L	52973.48	508.90
Cd C (228.802 nm)	509.56	ug/L	13156.12	509.56
Co (228.615 nm)	507.49	ug/L	6310.32	507.49
Co C (230.786 nm)	514.30	ug/L	11379.15	514.30
Cr (267.716 nm)	511.84	ug/L	31816.61	511.84
Cr C (205.560 nm)	511.64	ug/L	23279.57	511.64
Cu (327.395 nm)	509.44	ug/L	23997.32	509.44
Cu C (324.754 nm)	512.99	ug/L	21010.93	512.99
Fe (259.940 nm)	9936.40	ug/L	463844.77	9936.40
Fe (261.187 nm)	10012.06	ug/L	88465.76	10012.06
Fe C (238.204 nm)	9990.82	ug/L	784095.49	9990.82
Fe RAD (259.940 nm)	9913.80	ug/L	51722.03	9913.80
Fe RAD (261.187 nm)	Uncal	ug/L	10998.57 Q	Uncal
K RAD (766.491 nm)	10146.12	ug/L	14456.12	10146.12
Mg (279.078 nm)	25366.23	ug/L	224900.69	25366.23
Mg RAD (279.078 nm)	25023.17	ug/L	21541.96	25023.17
Mn (257.610 nm)	509.52	ug/L	171863.97	509.52
Mn C (260.568 nm)	508.99	ug/L	36926.11	508.99
Mo (203.846 nm)	505.74	ug/L	2914.55	505.74
Mo C (202.032 nm)	505.70	ug/L	9495.83	505.70
Mo C (204.598 nm)	506.48	ug/L	6219.11	506.48
Na RAD (588.995 nm)	12935.32	ug/L	280489.01	12935.32
Na RAD (589.592 nm)	12862.66	ug/L	174658.10	12862.66
Ni (231.604 nm)	505.65	ug/L	10110.56	505.65
Ni C (221.648 nm)	509.41	ug/L	8046.60	509.41
P (213.618 nm)	2573.00	ug/L	9803.45	2573.00
P C (214.914 nm)	2557.42	ug/L	3208.97	2557.42

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	508.73	ug/L	3984.28	508.73
Sb (206.834 nm)	514.44	ug/L	1278.30	514.44
Sb (217.582 nm)	512.37	ug/L	1786.34	512.37
Sb C (231.146 nm)	510.37	ug/L	1100.78	510.37
Se (196.026 nm)	516.62	ug/L	718.11	516.62
Sn (189.925 nm)	503.01	ug/L	3408.75	503.01
Sr RAD (421.552 nm)	511.85	ug/L	237111.18	511.85
Ti (334.941 nm)	507.56	ug/L	159443.94	507.56
Tl (190.794 nm)	508.90	ug/L	973.97	508.90
V (292.401 nm)	507.66	ug/L	18214.69	507.66
V C (311.837 nm)	Uncal	ug/L	30679.39 Q	Uncal
Zn (206.200 nm)	507.35	ug/L	17880.98	507.35
Zn C (202.548 nm)	491.60	ug/L	47247.04	491.60
Zn RAD (206.200 nm)	464.18	ug/L	987.54	464.18

Solution Name: CCB

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
CCB	03/13/20 1:44:01 PM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	0.00	ug/L	42.68	0.00
Ag C (338.289 nm)	0.69 Z	ug/L	12.21 Z	0.69 Z
Al (237.312 nm)	-2.43	ug/L	7.73	-2.43
Al C (308.215 nm)	53.18 Z	ug/L	4709.26 Z	53.18 Z
Al C (396.152 nm)	3.80	ug/L	263.85	3.80
Al RAD (396.152 nm)	2.13	ug/L	31.72	2.13
As (188.980 nm)	-0.22	ug/L	8.28	-0.22
As C (193.696 nm)	1.32	ug/L	15.25	1.32
B (249.678 nm)	1.60	ug/L	44.17	1.60
Ba (233.527 nm)	0.07	ug/L	20.20	0.07
Ba (455.403 nm)	0.00	ug/L	442.94	0.00
Ba RAD (233.527 nm)	0.35	ug/L	4.38	0.35
Be (313.107 nm)	0.10	ug/L	161.52	0.10
Be C (234.861 nm)	0.09	ug/L	41.04	0.09
Ca (315.887 nm)	2.94	ug/L	119.45	2.94
Ca RAD (315.887 nm)	-1.64	ug/L	23.21	-1.64
Cd (214.439 nm)	0.06	ug/L	18.88	0.06
Cd C (226.502 nm)	-0.01	ug/L	21.15	-0.01
Cd C (228.802 nm)	-0.13	ug/L	2.45	-0.13
Co (228.615 nm)	-0.50	ug/L	33.70	-0.50
Co C (230.786 nm)	0.11	ug/L	33.00	0.11
Cr (267.716 nm)	0.10	ug/L	30.31	0.10
Cr C (205.560 nm)	-0.10	ug/L	16.79	-0.10
Cu (327.395 nm)	0.15	ug/L	41.38	0.15
Cu C (324.754 nm)	2.42	ug/L	743.62	2.42
Fe (259.940 nm)	-0.63	ug/L	98.36	-0.63
Fe (261.187 nm)	-0.29	ug/L	48.64	-0.29
Fe C (238.204 nm)	-0.59	ug/L	160.73	-0.59
Fe RAD (259.940 nm)	-0.16	ug/L	11.77	-0.16
Fe RAD (261.187 nm)	Uncal	ug/L	11.79 Z	Uncal
K RAD (766.491 nm)	18.87	ug/L	114.12	18.87
Mg (279.078 nm)	2.14	ug/L	53.43	2.14
Mg RAD (279.078 nm)	2.14	ug/L	9.50	2.14
Mn (257.610 nm)	-0.06	ug/L	77.68	-0.06
Mn C (260.568 nm)	-0.07	ug/L	22.95	-0.07
Mo (203.846 nm)	-0.30	ug/L	5.00	-0.30
Mo C (202.032 nm)	0.29	ug/L	17.61	0.29
Mo C (204.598 nm)	0.31	ug/L	6.72	0.31
Na RAD (588.995 nm)	-25.11	ug/L	2090.22	-25.11
Na RAD (589.592 nm)	-1.96	ug/L	0.32	-1.96
Ni (231.604 nm)	-0.11	ug/L	12.37	-0.11
Ni C (221.648 nm)	0.07	ug/L	9.36	0.07
P (213.618 nm)	1.19	ug/L	15.41	1.19
P C (214.914 nm)	0.47	ug/L	7.94	0.47

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	-0.75	ug/L	30.13	-0.75
Sb (206.834 nm)	0.96	ug/L	21.70	0.96
Sb (217.582 nm)	3.23 Z	ug/L	18.43 Z	3.23 Z
Sb C (231.146 nm)	3.21 Z	ug/L	22.02 Z	3.21 Z
Se (196.026 nm)	-1.30	ug/L	5.45	-1.30
Sn (189.925 nm)	-0.28	ug/L	7.64	-0.28
Sr RAD (421.552 nm)	0.00	ug/L	34.86	0.00
Ti (334.941 nm)	0.02	ug/L	4.12	0.02
Tl (190.794 nm)	1.28	ug/L	3.38	1.28
V (292.401 nm)	0.14	ug/L	10.96	0.14
V C (311.837 nm)	Uncal	ug/L	30.24 Z	Uncal
Zn (206.200 nm)	-1.70	ug/L	25.91	-1.70
Zn C (202.548 nm)	0.08	ug/L	69.92	0.08
Zn RAD (206.200 nm)	-6.99	ug/L	4.91	-6.99

METALS

Raw Data

Solution Name: BA08034W23 DF2

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
BA08034W23 DF2	03/13/20 12:51:05 PM	1	1	2

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	-0.02	ug/L	40.83	-0.04
Ag C (338.289 nm)	0.19	ug/L	9.34	0.38
Al (237.312 nm)	5.99	ug/L	28.16	11.97
Al C (308.215 nm)	49.99	ug/L	4678.13	99.98
Al C (396.152 nm)	9.80	ug/L	486.01	19.61
Al RAD (396.152 nm)	8.82	ug/L	66.13	17.65
As (188.980 nm)	-0.31	ug/L	7.96	-0.62
As C (193.696 nm)	2.08	ug/L	17.32	4.15
B (249.678 nm)	24.26	ug/L	445.15	48.52
Ba (233.527 nm)	1.59	ug/L	151.89	3.17
Ba (455.403 nm)	1.50	ug/L	3208.86	2.99
Ba RAD (233.527 nm)	1.51	ug/L	13.97	3.03
Be (313.107 nm)	0.04	ug/L	53.53	0.08
Be C (234.861 nm)	0.04	ug/L	12.24	0.08
Ca (315.887 nm)	5956.63	ug/L	108242.28	11913.25
Ca RAD (315.887 nm)	5696.88	ug/L	8868.83	11393.76
Cd (214.439 nm)	-0.06	ug/L	6.46	-0.11
Cd C (226.502 nm)	-0.06	ug/L	15.93	-0.12
Cd C (228.802 nm)	0.12	ug/L	8.74	0.24
Co (228.615 nm)	-0.41	ug/L	34.97	-0.81
Co C (230.786 nm)	-0.06	ug/L	29.38	-0.13
Cr (267.716 nm)	6.01	ug/L	397.04	12.02
Cr C (205.560 nm)	5.95	ug/L	291.76	11.90
Cu (327.395 nm)	0.12	ug/L	39.90	0.25
Cu C (324.754 nm)	2.18	ug/L	734.27	4.37
Fe (259.940 nm)	29.35	ug/L	1497.60	58.70
Fe (261.187 nm)	30.89	ug/L	324.01	61.78
Fe C (238.204 nm)	30.11	ug/L	2569.39	60.22
Fe RAD (259.940 nm)	29.93	ug/L	168.74	59.86
Fe RAD (261.187 nm)	Uncal	ug/L	45.62	Uncal
K RAD (766.491 nm)	978.01	ug/L	1472.45	1956.03
Mg (279.078 nm)	6056.80	ug/L	53726.68	12113.60
Mg RAD (279.078 nm)	5862.60	ug/L	5052.87	11725.21
Mn (257.610 nm)	0.68	ug/L	326.96	1.36
Mn C (260.568 nm)	0.64	ug/L	74.50	1.29
Mo (203.846 nm)	0.92	ug/L	12.00	1.84
Mo C (202.032 nm)	0.68	ug/L	24.79	1.36
Mo C (204.598 nm)	1.04	ug/L	15.70	2.09
Na RAD (588.995 nm)	16937.27	ug/L	366453.59	33874.54
Na RAD (589.592 nm)	17116.14	ug/L	232405.99	34232.29
Ni (231.604 nm)	2.94	ug/L	74.23	5.87
Ni C (221.648 nm)	4.05	ug/L	72.11	8.09
P (213.618 nm)	51.86	ug/L	207.02	103.73
P C (214.914 nm)	51.66	ug/L	72.03	103.32

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	0.32	ug/L	38.53	0.65
Sb (206.834 nm)	2.03	ug/L	24.31	4.06
Sb (217.582 nm)	2.48	ug/L	15.92	4.96
Sb C (231.146 nm)	-2.88	ug/L	9.07	-5.75
Se (196.026 nm)	-0.24	ug/L	6.92	-0.48
Sn (189.925 nm)	-0.05	ug/L	9.23	-0.09
Sr RAD (421.552 nm)	40.26	ug/L	18679.10	80.51
Ti (334.941 nm)	0.14	ug/L	43.70	0.29
Tl (190.794 nm)	-0.06	ug/L	0.87	-0.12
V (292.401 nm)	10.11	ug/L	369.38	20.22
V C (311.837 nm)	Uncal	ug/L	512.95	Uncal
Zn (206.200 nm)	0.24	ug/L	94.07	0.48
Zn C (202.548 nm)	1.75	ug/L	229.56	3.49
Zn RAD (206.200 nm)	-6.27	ug/L	6.42	-12.54

Solution Name: 200310A BLK

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
200310A BLK	03/13/20 12:33:29 PM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	0.16	ug/L	55.41	0.16
Ag C (338.289 nm)	-0.12	ug/L	7.60	-0.12
Al (237.312 nm)	-0.09	ug/L	13.41	-0.09
Al C (308.215 nm)	29.71	ug/L	4480.28	29.71
Al C (396.152 nm)	7.41	ug/L	397.44	7.41
Al RAD (396.152 nm)	5.32	ug/L	48.09	5.32
As (188.980 nm)	-0.51	ug/L	7.22	-0.51
As C (193.696 nm)	3.85	ug/L	22.17	3.85
B (249.678 nm)	1.05	ug/L	34.51	1.05
Ba (233.527 nm)	0.11	ug/L	23.68	0.11
Ba (455.403 nm)	-0.01	ug/L	425.19	-0.01
Ba RAD (233.527 nm)	0.32	ug/L	4.13	0.32
Be (313.107 nm)	0.06	ug/L	92.95	0.06
Be C (234.861 nm)	0.01	ug/L	-8.00	0.01
Ca (315.887 nm)	13.03	ug/L	302.65	13.03
Ca RAD (315.887 nm)	11.09	ug/L	42.96	11.09
Cd (214.439 nm)	0.00	ug/L	12.71	0.00
Cd C (226.502 nm)	0.02	ug/L	23.90	0.02
Cd C (228.802 nm)	0.21	ug/L	11.14	0.21
Co (228.615 nm)	-0.58	ug/L	32.80	-0.58
Co C (230.786 nm)	-0.20	ug/L	26.30	-0.20
Cr (267.716 nm)	0.02	ug/L	25.04	0.02
Cr C (205.560 nm)	0.05	ug/L	23.54	0.05
Cu (327.395 nm)	0.08	ug/L	37.72	0.08
Cu C (324.754 nm)	1.47	ug/L	705.82	1.47
Fe (259.940 nm)	2.26	ug/L	233.37	2.26
Fe (261.187 nm)	2.13	ug/L	70.01	2.13
Fe C (238.204 nm)	2.36	ug/L	392.28	2.36
Fe RAD (259.940 nm)	2.81	ug/L	27.27	2.81
Fe RAD (261.187 nm)	Uncal	ug/L	15.33	Uncal
K RAD (766.491 nm)	23.62	ug/L	120.86	23.62
Mg (279.078 nm)	5.12	ug/L	79.81	5.12
Mg RAD (279.078 nm)	1.26	ug/L	8.74	1.26
Mn (257.610 nm)	-0.05	ug/L	82.17	-0.05
Mn C (260.568 nm)	-0.17	ug/L	15.36	-0.17
Mo (203.846 nm)	-0.26	ug/L	5.18	-0.26
Mo C (202.032 nm)	0.33	ug/L	18.18	0.33
Mo C (204.598 nm)	0.69	ug/L	11.35	0.69
Na RAD (588.995 nm)	3.99	ug/L	2715.17	3.99
Na RAD (589.592 nm)	25.93	ug/L	378.96	25.93
Ni (231.604 nm)	-0.03	ug/L	14.07	-0.03
Ni C (221.648 nm)	0.29	ug/L	12.79	0.29
P (213.618 nm)	2.81	ug/L	21.52	2.81
P C (214.914 nm)	-1.79	ug/L	5.12	-1.79

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	0.48	ug/L	39.79	0.48
Sb (206.834 nm)	4.28	ug/L	29.82	4.28
Sb (217.582 nm)	2.64	ug/L	16.40	2.64
Sb C (231.146 nm)	-0.36	ug/L	14.42	-0.36
Se (196.026 nm)	0.26	ug/L	7.60	0.26
Sn (189.925 nm)	0.06	ug/L	9.96	0.06
Sr RAD (421.552 nm)	-0.02	ug/L	22.16	-0.02
Ti (334.941 nm)	0.06	ug/L	17.45	0.06
Tl (190.794 nm)	0.06	ug/L	1.07	0.06
V (292.401 nm)	-0.17	ug/L	-0.24	-0.17
V C (311.837 nm)	Uncal	ug/L	18.93	Uncal
Zn (206.200 nm)	-0.93	ug/L	53.01	-0.93
Zn C (202.548 nm)	0.89	ug/L	147.01	0.89
Zn RAD (206.200 nm)	-7.37	ug/L	4.12	-7.37

Solution Name: 200310A LCS

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
200310A LCS	03/13/20 12:37:53 PM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	100.27	ug/L	8147.91	100.27
Ag C (338.289 nm)	98.41	ug/L	571.55	98.41
Al (237.312 nm)	2060.31	ug/L	5012.05	2060.31
Al C (308.215 nm)	2069.29	ug/L	24373.73	2069.29
Al C (396.152 nm)	2047.14	ug/L	75871.83	2047.14
Al RAD (396.152 nm)	2022.54	ug/L	10416.99	2022.54
As (188.980 nm)	244.91	ug/L	903.85	244.91
As C (193.696 nm)	250.92	ug/L	698.28	250.92
B (249.678 nm)	248.10	ug/L	4414.58	248.10
Ba (233.527 nm)	255.60	ug/L	22195.71	255.60
Ba (455.403 nm)	252.25	ug/L	465462.09	252.25
Ba RAD (233.527 nm)	245.16	ug/L	2016.14	245.16
Be (313.107 nm)	50.20	ug/L	86930.49	50.20
Be C (234.861 nm)	49.76	ug/L	30944.73	49.76
Ca (315.887 nm)	25046.37	ug/L	454943.61	25046.37
Ca RAD (315.887 nm)	23844.34	ug/L	37041.71	23844.34
Cd (214.439 nm)	49.26	ug/L	5244.93	49.26
Cd C (226.502 nm)	49.85	ug/L	5208.57	49.85
Cd C (228.802 nm)	50.06	ug/L	1297.66	50.06
Co (228.615 nm)	251.20	ug/L	3160.71	251.20
Co C (230.786 nm)	256.89	ug/L	5691.45	256.89
Cr (267.716 nm)	258.76	ug/L	16094.94	258.76
Cr C (205.560 nm)	257.17	ug/L	11711.95	257.17
Cu (327.395 nm)	257.26	ug/L	12134.62	257.26
Cu C (324.754 nm)	257.56	ug/L	10871.50	257.56
Fe (259.940 nm)	999.60	ug/L	46778.00	999.60
Fe (261.187 nm)	1007.28	ug/L	8946.34	1007.28
Fe C (238.204 nm)	1012.31	ug/L	79633.50	1012.31
Fe RAD (259.940 nm)	982.63	ug/L	5137.89	982.63
Fe RAD (261.187 nm)	Uncal	ug/L	1098.87	Uncal
K RAD (766.491 nm)	5005.78	ug/L	7176.48	5005.78
Mg (279.078 nm)	25112.91	ug/L	222654.98	25112.91
Mg RAD (279.078 nm)	24302.63	ug/L	20921.88	24302.63
Mn (257.610 nm)	252.82	ug/L	85326.38	252.82
Mn C (260.568 nm)	253.61	ug/L	18412.50	253.61
Mo (203.846 nm)	253.03	ug/L	1461.58	253.03
Mo C (202.032 nm)	252.86	ug/L	4754.23	252.86
Mo C (204.598 nm)	252.92	ug/L	3107.12	252.92
Na RAD (588.995 nm)	24884.15	ug/L	537157.89	24884.15
Na RAD (589.592 nm)	25274.72	ug/L	343171.67	25274.72
Ni (231.604 nm)	249.62	ug/L	5040.86	249.62
Ni C (221.648 nm)	253.74	ug/L	4012.23	253.74
P (213.618 nm)	1987.49	ug/L	7563.01	1987.49
P C (214.914 nm)	1993.72	ug/L	2503.28	1993.72

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	252.27	ug/L	2000.29	252.27
Sb (206.834 nm)	234.82	ug/L	593.90	234.82
Sb (217.582 nm)	232.91	ug/L	816.19	232.91
Sb C (231.146 nm)	240.07	ug/L	525.82	240.07
Se (196.026 nm)	229.98	ug/L	323.72	229.98
Sn (189.925 nm)	250.17	ug/L	1700.12	250.17
Sr RAD (421.552 nm)	249.71	ug/L	115695.10	249.71
Ti (334.941 nm)	252.44	ug/L	79300.71	252.44
Tl (190.794 nm)	250.60	ug/L	477.92	250.60
V (292.401 nm)	255.45	ug/L	9183.28	255.45
V C (311.837 nm)	Uncal	ug/L	15340.93	Uncal
Zn (206.200 nm)	489.63	ug/L	17259.38	489.63
Zn C (202.548 nm)	479.23	ug/L	46058.82	479.23
Zn RAD (206.200 nm)	448.09	ug/L	953.99	448.09

Solution Name: 200310A LCSD

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
200310A LCSD	03/13/20 12:42:17 PM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	100.78	ug/L	8189.07	100.78
Ag C (338.289 nm)	98.37	ug/L	571.31	98.37
Al (237.312 nm)	2051.73	ug/L	4991.23	2051.73
Al C (308.215 nm)	2052.38	ug/L	24208.76	2052.38
Al C (396.152 nm)	2029.96	ug/L	75235.98	2029.96
Al RAD (396.152 nm)	2005.43	ug/L	10329.07	2005.43
As (188.980 nm)	242.14	ug/L	893.69	242.14
As C (193.696 nm)	248.25	ug/L	690.97	248.25
B (249.678 nm)	246.81	ug/L	4391.68	246.81
Ba (233.527 nm)	253.04	ug/L	21973.52	253.04
Ba (455.403 nm)	249.77	ug/L	460893.76	249.77
Ba RAD (233.527 nm)	242.53	ug/L	1994.52	242.53
Be (313.107 nm)	49.71	ug/L	86093.48	49.71
Be C (234.861 nm)	49.27	ug/L	30641.72	49.27
Ca (315.887 nm)	24815.33	ug/L	450747.45	24815.33
Ca RAD (315.887 nm)	23563.95	ug/L	36606.43	23563.95
Cd (214.439 nm)	48.82	ug/L	5198.41	48.82
Cd C (226.502 nm)	49.35	ug/L	5156.94	49.35
Cd C (228.802 nm)	49.13	ug/L	1273.48	49.13
Co (228.615 nm)	249.53	ug/L	3140.06	249.53
Co C (230.786 nm)	254.69	ug/L	5642.90	254.69
Cr (267.716 nm)	256.04	ug/L	15926.18	256.04
Cr C (205.560 nm)	254.85	ug/L	11606.36	254.85
Cu (327.395 nm)	255.15	ug/L	12035.74	255.15
Cu C (324.754 nm)	255.55	ug/L	10791.99	255.55
Fe (259.940 nm)	998.99	ug/L	46749.18	998.99
Fe (261.187 nm)	1009.61	ug/L	8966.87	1009.61
Fe C (238.204 nm)	1010.89	ug/L	79522.04	1010.89
Fe RAD (259.940 nm)	981.80	ug/L	5133.59	981.80
Fe RAD (261.187 nm)	Uncal	ug/L	1103.00	Uncal
K RAD (766.491 nm)	4944.20	ug/L	7089.28	4944.20
Mg (279.078 nm)	24911.18	ug/L	220866.70	24911.18
Mg RAD (279.078 nm)	24124.34	ug/L	20768.45	24124.34
Mn (257.610 nm)	249.61	ug/L	84244.46	249.61
Mn C (260.568 nm)	251.67	ug/L	18272.31	251.67
Mo (203.846 nm)	253.89	ug/L	1466.49	253.89
Mo C (202.032 nm)	253.76	ug/L	4771.08	253.76
Mo C (204.598 nm)	254.30	ug/L	3124.03	254.30
Na RAD (588.995 nm)	24774.20	ug/L	534796.18	24774.20
Na RAD (589.592 nm)	25057.60	ug/L	340223.96	25057.60
Ni (231.604 nm)	246.97	ug/L	4988.08	246.97
Ni C (221.648 nm)	251.15	ug/L	3971.26	251.15
P (213.618 nm)	1970.71	ug/L	7498.95	1970.71
P C (214.914 nm)	1972.72	ug/L	2476.99	1972.72

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	249.56	ug/L	1979.28	249.56
Sb (206.834 nm)	237.62	ug/L	600.77	237.62
Sb (217.582 nm)	236.48	ug/L	828.52	236.48
Sb C (231.146 nm)	237.81	ug/L	521.01	237.81
Se (196.026 nm)	229.12	ug/L	322.54	229.12
Sn (189.925 nm)	251.84	ug/L	1711.38	251.84
Sr RAD (421.552 nm)	247.92	ug/L	114864.35	247.92
Ti (334.941 nm)	252.98	ug/L	79468.63	252.98
Tl (190.794 nm)	251.05	ug/L	478.76	251.05
V (292.401 nm)	252.79	ug/L	9087.95	252.79
V C (311.837 nm)	Uncal	ug/L	15197.52	Uncal
Zn (206.200 nm)	488.07	ug/L	17204.58	488.07
Zn C (202.548 nm)	472.98	ug/L	45459.07	472.98
Zn RAD (206.200 nm)	441.67	ug/L	940.60	441.67

ICP-OES Calibration Standard Prep

Prepared: 03/12/20
Expires: 03/19/20
1% HNO3 / 5% HCl Prep: 03/12/20
Prepared By (Initials): PW

Calibration Standard 3

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. Range (ug/mL)	Lot Number - QA Number/ APPL Prep Date	Exp Date	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. Range (ug/L)
Solution A	Texas Scientific	HP1810-250	200 - 5,000	m2meb662248-38391	10/11/20	500uL	100mL	1% HNO3 / 5% HCl	1000 - 25,000
Solution B	Texas Scientific	HP1810-250	4000 - 10,000	m2meb662249-38389	10/11/20	500uL			2000 - 50,000
Solution C	Texas Scientific	HP1810-250	100 - 200	m2meb662250-38394	10/11/20	500uL			500 - 1000
Calibration Standard 2									
ICP-OES Calib Standard 3	Texas Scientific	Standard 2/CCV1	0.5 - 50	Prepared 03/12/20	03/19/20	25mL	50mL	1% HNO3 / 5% HCl	250 - 25,000
Calibration Standard 1									
200.7 LDL	O2SI	160634-01-01	0.05 - 100	10080366-3-41267	02/07/21	250uL	50mL	1% HNO3 / 5% HCl	0.25 - 200

ICP-OES ICV (SS)

Prepared: 03/12/20
Expires: 08/09/19
1% HNO3 / 5% HCl Prep: 03/12/20
Prepared By (Initials): PW

ICP-OES ICV 1

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. Range (ug/mL)	Lot Number - QA Number	Exp Date	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. Range (ug/mL)
QCS ICV Soln A	CPI	4400-070615RH01	50 - 500	10062445-11-49481	05/14/21	250uL	50mL	1% HNO3 / 5% HCl	0.25 - 2.5
QCS ICV Soln B	CPI	4400-070615RH01	2,500	10062445-12-49482	05/14/21	250uL			12.5

ICP-OES ICV Ba

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. Range (ug/mL)	Lot Number - QA Number	Exp Date	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. Range (ug/mL)
Custom 23 Element Mix #314	O2SI	161314-01-03	5 - 25,00	1064561-8-38870	08/09/19	1mL	50mL	1% HNO3 / 5% HCl	0.1 - 50
Custom 23 Element Mix #315	O2SI	161314-01-03	10 - 25	1064561-7-38869	08/09/19	1mL			0.2 - 0.5

ICP-OES CCV2

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. Range (ug/mL)	APPL Prep Date	Exp Date	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. Range (ug/mL)
ICP-OES Calib Standard 3	Texas Scientific	CCV2	0.5 - 50	Prepared 03/12/20	03/19/20	15mL	40mL	1% HNO3 / 5% HCl	0.15 - 15

ICP-OES Low Levels (LLICV)

Prepared: 03/12/20
Expires: 03/26/20
1% HNO3 / 5% HCl Prep: 03/12/20
Prepared By (Initials): PW

LLICV

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. Range ug/mL	Lot Number - QA Number	Exp Date	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. Range (ug/L)
200.7 LDL	O2SI	160634-01-01	0.05 - 100	10080366-3-41267	02/07/21	250uL	50mL	1% HNO3 / 5% HCl	0.25 - 200
LLICVX2									
200.7 LDL	O2SI	160634-01-01	0.05 - 100	10080366-3-41267	02/07/21	500uL	50mL	1% HNO3 / 5% HCl	0.50 - 400
LLICVX6									
200.7 LDL	O2SI	160634-01-01	0.05 - 100	10080366-3-41267	02/07/21	1.5mL	50mL	1% HNO3 / 5% HCl	1.5 - 1,200
LLICVX10									
200.7 LDL	O2SI	160634-01-01	0.05 - 100	10080366-3-41267	02/07/21	2.5mL	50mL	1% HNO3 / 5% HCl	2.5 - 2,000
LLICV 10									
ICP-OES Calib Standard 3	Texas Scientific	HP1810-250	0.5 - 50	10080366-3-41267	03/19/20	500uL	50mL	1% HNO3 / 5% HCl	5 - 500
LLICV 50									
ICP-OES Calib Standard 3	Texas Scientific	HP1810-250	0.5 - 50	10080366-3-41267	03/19/20	2.5mL	50mL	1% HNO3 / 5% HCl	25 - 2,500

ICP-OES Interference Check Solution A

Prepared: 03/12/20
Expires: 03/26/20
1% HNO3 / 5% HCl Prep: 03/12/20
Prepared By (Initials): PW

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp Date	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Aluminum	Inorganic Ventures	35-APPLTSP-6010ICSA	10,000	N2-MEB670092-39414	07/25/22	500uL	50mL	1% HNO3 / 5% HCl	100
Calcium			10,000						100
Magnesium			10,000						100
Iron			10,000						100
ICP-OES Interference Check Solution AB									
Aluminum	Inorganic Ventures	35-APPLTSP-6010ICSA	10,000	N2-MEB670092-39414	07/25/22	500uL	50mL	1% HNO3 / 5% HCl	100
Calcium			10,000						100
Magnesium			10,000						100
Iron			10,000						100
Special Mix (Interference)	O2SI	160495-01-01	100	10081266-2-49725	07/13/21	250uL			0.5

ICP-OES Internal Standards

Prepared: 03/12/20
Expires: 04/12/20
1% HNO3 / 5% HCl Prep: 03/12/20
Prepared By (Initials): PW

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (mg/L)	Lot Number - QA Number	Exp Date	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (mg/L)
Yttrium	O2SI	060039-04-03	1,000	10083563-2-49726	07/13/21	4mL	2L	1% HNO3 / 5% HCl	2

Metals Digestion Worksheet

Method Name 3010A Digestion **Prep Method** M3010 **Set** 200310A **Units** mL

Spikes			
Spiked ID 1	LCSW LOT# 10064561-13-49551 Pipette AP-21		
Spiked ID 2	LCSW LOT# 10064561-14-49600		
Spiked ID 3	Li HDL Lot# AU-01003		
Spiked ID 4			
Spiked By	NM	Date:	03/10/20 9:00:00 AM
Witnessed By	PW	Date:	03/10/20 9:00:00 AM

Starting Temp:	SLOT 29 THERM:MT1 90.2C
Ending Temp:	SLOT 29 93.2C
Temperature Type:	Mod Block
Sufficient Vol for Matrix QC:	YES
End Date/Time	03/10/20 13:27

	Sample	Sample Container	Spike Amount	Spike ID	Digested Amount	Final Volume	Start Date/Time	Comments
1	200310A Blk				50mL	50mL	03/10/20 9:00	equip: Modblock2
2	200310A LCS		500uL,20uL	1+2,3	50mL	50mL	03/10/20 9:00	equip: Modblock2
3	200310A LCSD		500uL,20uL	1+2,3	50mL	50mL	03/10/20 9:00	equip: Modblock2
4	BA07785	BA07785W05			50mL	50mL	03/10/20 9:00	equip: Modblock2
5	BA07972	BA07972W09			50mL	50mL	03/10/20 9:00	equip: Modblock2 91582
6	BA07976	BA07976W17			50mL	50mL	03/10/20 9:00	equip: Modblock2 91582
7	BA07976 DUP	BA07976W17			50mL	50mL	03/10/20 9:00	equip: Modblock2
8	BA07976 MS	BA07976W17	500uL,20uL	1+2,3	50mL	50mL	03/10/20 9:00	equip: Modblock2
9	BA07978	BA07978W09			50mL	50mL	03/10/20 9:00	equip: Modblock2 91582
10	BA07981	BA07981W09			50mL	50mL	03/10/20 9:00	equip: Modblock2 91582
11	BA07982	BA07982W09			50mL	50mL	03/10/20 9:00	equip: Modblock2 91582
12	BA07994	BA07994W09			50mL	50mL	03/10/20 9:00	equip: Modblock2 91589
13	BA08034	BA08034W23			50mL	50mL	03/10/20 9:00	equip: Modblock2 91607

Solvent and Lot#
HNO3 BDH 1119020 15579
1:1 HCL 1-28-20
50mL vessel 191115

Sample COC Transfer	
Sample prep employee Initials	nm
Analyst's initials	
Date	
Time	
Moved to	

Technician's Initials	
Scanned By	nm
Sample Preparation	nm
Digestion	nm
Bring up to volume	
Modified	03/10/20 8:47:27 AM

Reviewed By: **Date:**

6010C/3010A Injection Log

Directory: K:\ICP-OES Cyrus\Backup Excel\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	13 Mar 2020	09:40	Blank		200313A200	1.
2	13 Mar 2020	09:45	Standard 1		200313A200	1.
3	13 Mar 2020	09:49	Standard 2		200313A200	1.
4	13 Mar 2020	09:54	Standard 3		200313A200	1.
5	13 Mar 2020	09:58	Standard 4		200313A200	1.
6	13 Mar 2020	10:02	Standard 5		200313A200	1.
7	13 Mar 2020	10:07	Standard 6		200313A200	1.
8	13 Mar 2020	10:11	ICV		200313A200	1.
9	13 Mar 2020	10:16	ICB		200313A200	1.
10	13 Mar 2020	10:20	LLICV		200313A200	1.
14	13 Mar 2020	10:38	ICSA		200313A200	1.
15	13 Mar 2020	10:42	ICSAB		200313A200	1.
16	13 Mar 2020	12:33	200310A BLK		200313A200	1.
17	13 Mar 2020	12:37	200310A LCS		200313A200	1.
18	13 Mar 2020	12:42	200310A LCSD		200313A200	1.
20	13 Mar 2020	12:51	BA08034W23 DF2		200313A200	2.
31	13 Mar 2020	13:39	CCV		200313A200	1.
32	13 Mar 2020	13:44	CCB		200313A200	1.

INORGANIC ANALYSIS
Calibration Data

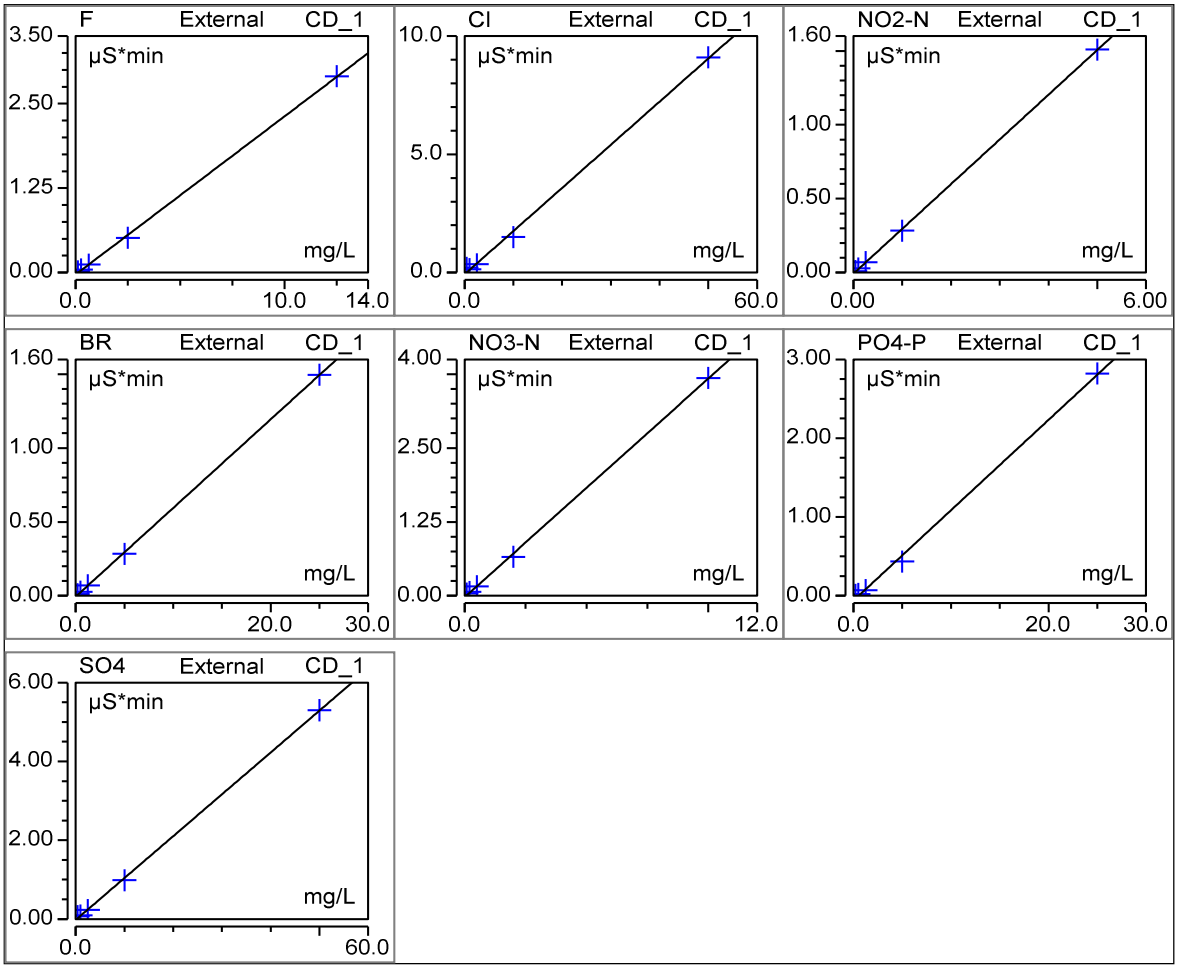
Calibration Batch Report

Sequence:	**200228 2 eceltric booglao**	*Injection Volume:*	**25.00**
Instrument Method:	**Anions IM**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**28-Feb-2020 / 09:36**	*Run Time:*	**22**

Calibration Summary

Peak Name	Eval.Type	Cal.Type	Points	Offset (C0)	Slope (C1)	Curve (C2)	Coeff.Det. %
F	Area	Lin, WithOffset	5.000	-0.028	0.234	0.000	99.9562
Cl	Area	Lin, WithOffset	5.000	-0.073	0.183	0.000	99.8196
NO2-N	Area	Lin, WithOffset	5.000	-0.007	0.303	0.000	99.9875
BR	Area	Lin, WithOffset	5.000	-0.006	0.060	0.000	99.9911
NO3-N	Area	Lin, WithOffset	5.000	-0.024	0.370	0.000	99.9532
PO4-P	Area	Lin, WithOffset	5.000	-0.060	0.115	0.000	99.8379
SO4	Area	Lin, WithOffset	5.000	-0.022	0.106	0.000	99.9715

Injection Name	Amount mg/L CD_1 F	Amount mg/L CD_1 Cl	Amount mg/L CD_1 NO2-N	Amount mg/L CD_1 BR	Amount mg/L CD_1 NO3-N	Amount mg/L CD_1 PO4-P	Amount mg/L CD_1 SO4
Cal 1 2020.02.27	0.194	1.5079	0.0558	0.2735	0.1689	0.6294	0.8646
Cal 2	0.309	1.1706	0.1152	0.5521	0.2402	0.7271	1.0692
Cal 3	0.624	2.3202	0.2524	1.2661	0.4937	1.1388	2.3754
Cal 5	2.312	8.6307	0.9589	4.8260	1.8480	4.3213	9.4871
Cal 8	12.536	50.2706	5.0077	25.0324	10.0292	25.1333	50.1037

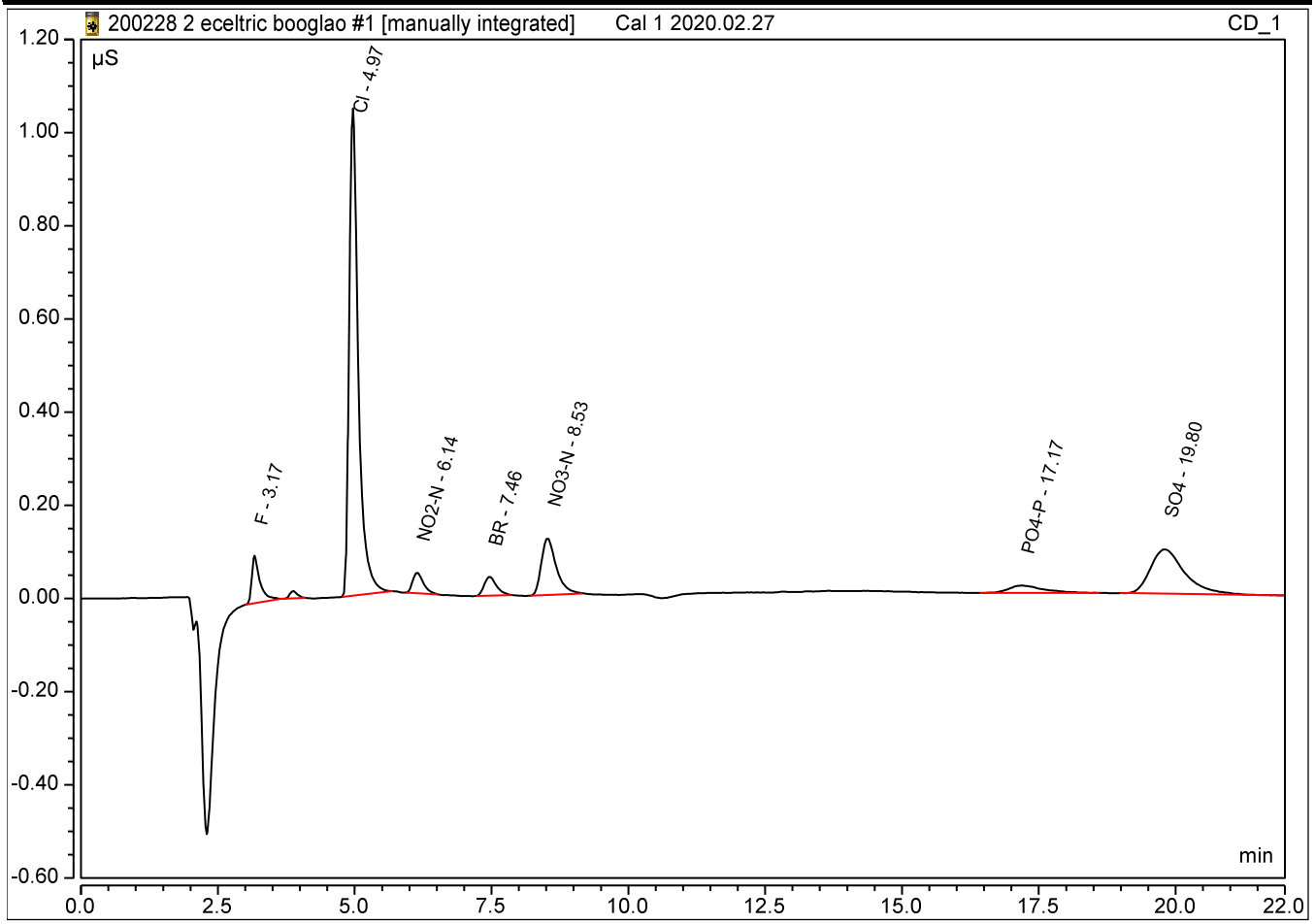


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200228 2 eceltric booglao

Peak Integration Report

Sample Name:	**Cal 1 2020.02.27**	*Inj. Vol.:*	**25uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.02.28**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**28-Feb-2020 / 07:59**	*Run Time:*	**22.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.17	**F**	BMB	0.018	0.102	0.19	0.1	194.3%
3	4.97	**Cl**	BMB	0.203	1.046	1.51	0.4	377.0%
4	6.14	**NO2-N**	BMB	0.010	0.044	0.06	0.04	139.6%
5	7.46	**BR**	BMB	0.011	0.041	0.27	0.2	136.8%
6	8.53	**NO3-N**	BMB	0.038	0.122	0.17	0.08	211.1%
7	17.17	**PO4-P**	BMB*	0.012	0.016	0.63	0.2	314.7%
8	19.80	**SO4**	BMB*	0.069	0.095	0.86	0.4	216.1%

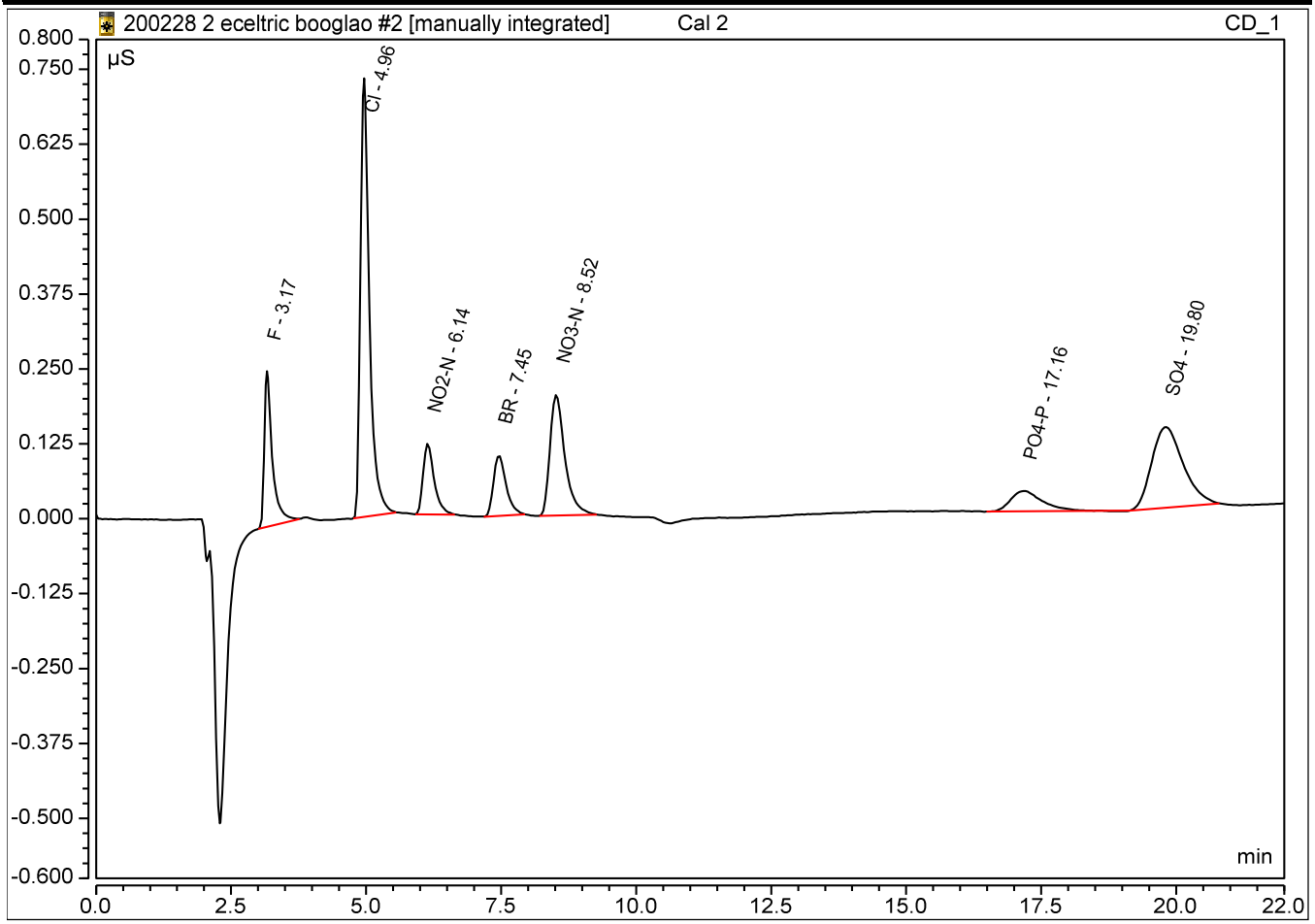


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200228 2 eceltric booglao

Peak Integration Report

Sample Name:	**Cal 2**	*Inj. Vol.:*	**25uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.02.28**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**28-Feb-2020 / 08:23**	*Run Time:*	**22.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.17	**F**	BMB	0.045	0.260	0.31	0.25	123.6%
2	4.96	**Cl**	BMB	0.141	0.732	1.17	1	117.1%
3	6.14	**NO2-N**	BMB	0.028	0.118	0.12	0.1	115.2%
4	7.45	**BR**	BMB	0.027	0.101	0.55	0.5	110.4%
5	8.52	**NO3-N**	BMB	0.065	0.202	0.24	0.2	120.1%
6	17.16	**PO4-P**	BMB*	0.023	0.034	0.73	0.5	145.4%
7	19.80	**SO4**	BMB	0.091	0.135	1.07	1	106.9%

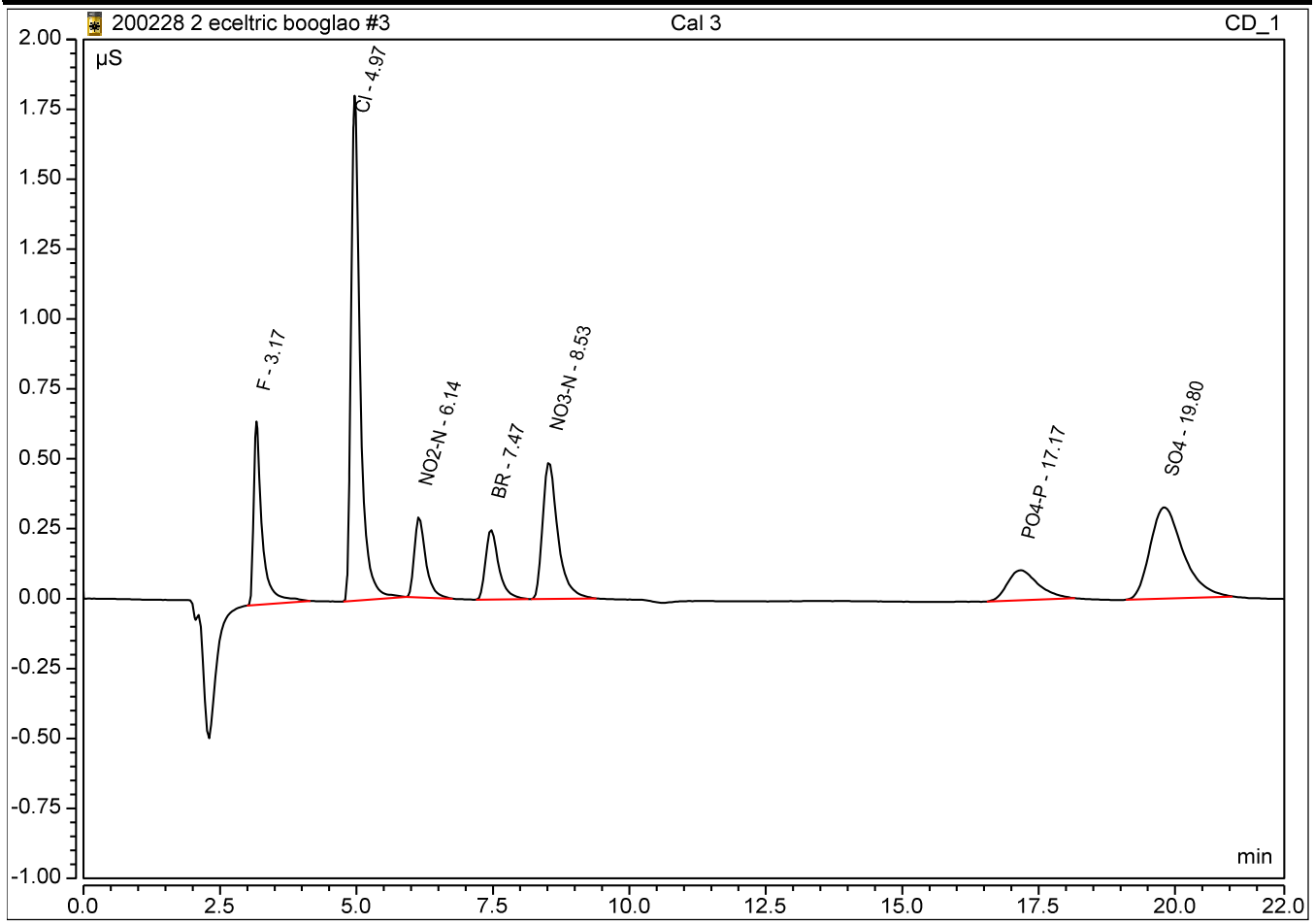


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200228 2 eceltric booglao

Peak Integration Report

Sample Name:	**Cal 3**	*Inj. Vol.:*	**25uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.02.28**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**28-Feb-2020 / 08:48**	*Run Time:*	**22.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.17	**F**	BMB	0.118	0.656	0.62	0.625	99.9%
2	4.97	**Cl**	BMB	0.351	1.805	2.32	2.5	92.8%
3	6.14	**NO2-N**	BMB	0.070	0.288	0.25	0.25	101.0%
4	7.47	**BR**	BMB	0.070	0.249	1.27	1.25	101.3%
5	8.53	**NO3-N**	BMB	0.159	0.490	0.49	0.5	98.7%
6	17.17	**PO4-P**	BMB	0.070	0.108	1.14	1.25	91.1%
7	19.80	**SO4**	BMB	0.230	0.327	2.38	2.5	95.0%

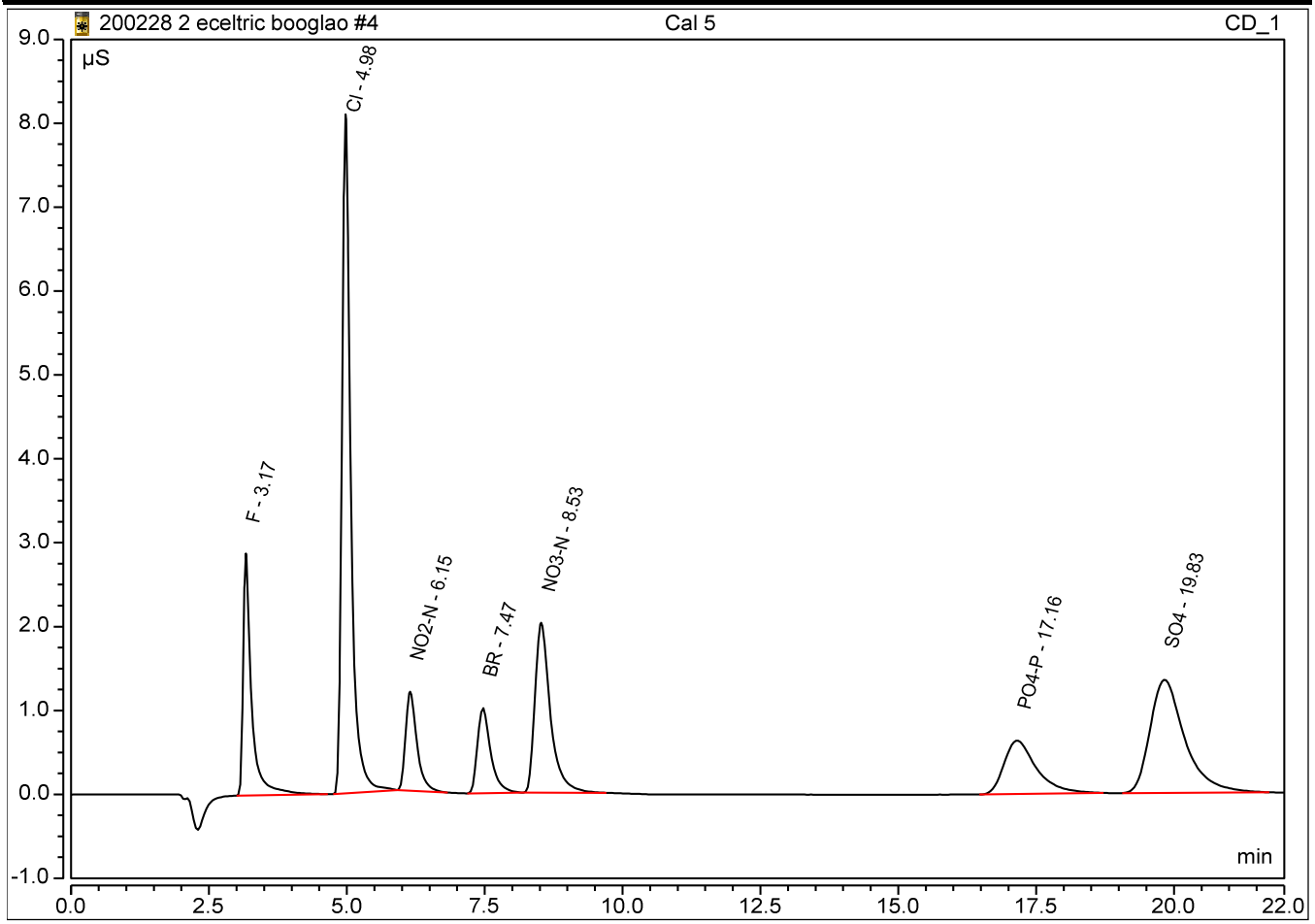


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200228 2 eceltric booglao

Peak Integration Report

Sample Name:	**Cal 5**	*Inj. Vol.:*	**25uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.02.28**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**28-Feb-2020 / 09:12**	*Run Time:*	**22.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.17	**F**	BMB	0.513	2.884	2.31	2.5	92.5%
2	4.98	**Cl**	BMB	1.503	8.096	8.63	10	86.3%
3	6.15	**NO2-N**	BMB	0.283	1.182	0.96	1	95.9%
4	7.47	**BR**	BMB	0.284	1.017	4.83	5	96.5%
5	8.53	**NO3-N**	BMB	0.660	2.026	1.85	2	92.4%
6	17.16	**PO4-P**	BMB	0.435	0.636	4.32	5	86.4%
7	19.83	**SO4**	BMB	0.985	1.349	9.49	10	94.9%

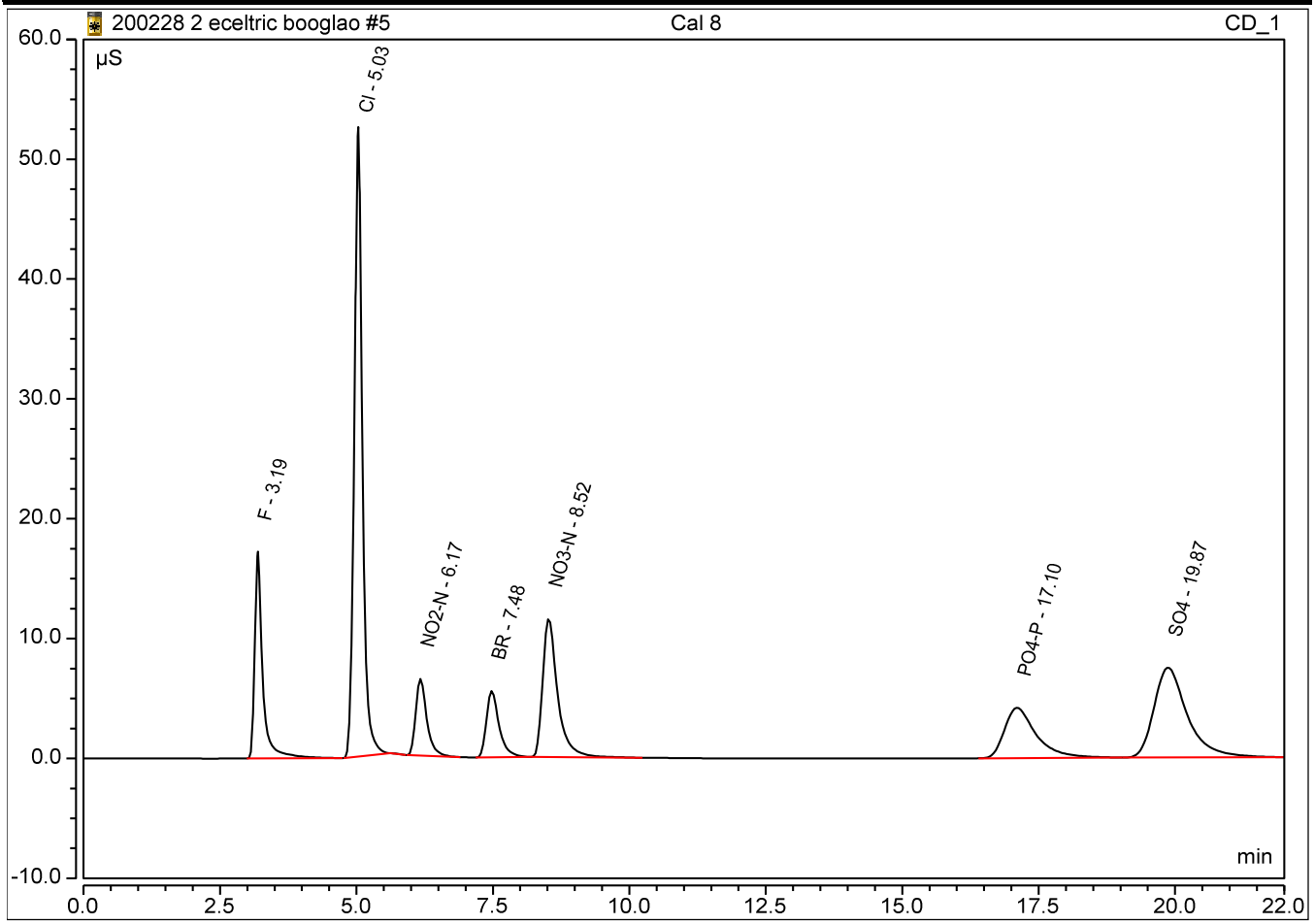


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200228 2 eceltric booglao

Peak Integration Report

Sample Name:	**Cal 8**	*Inj. Vol.:*	**25uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.02.28**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**28-Feb-2020 / 09:36**	*Run Time:*	**22.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.19	**F**	BMB	2.907	17.263	12.54	12.5	100.3%
2	5.03	**Cl**	BMB	9.105	52.531	50.27	50	100.5%
4	6.17	**NO2-N**	BMB	1.509	6.407	5.01	5	100.2%
5	7.48	**BR**	BMB	1.496	5.532	25.03	25	100.1%
6	8.52	**NO3-N**	BMB	3.686	11.563	10.03	10	100.3%
7	17.10	**PO4-P**	BMB	2.821	4.199	25.13	25	100.5%
8	19.87	**SO4**	BMB	5.300	7.485	50.10	50	100.2%

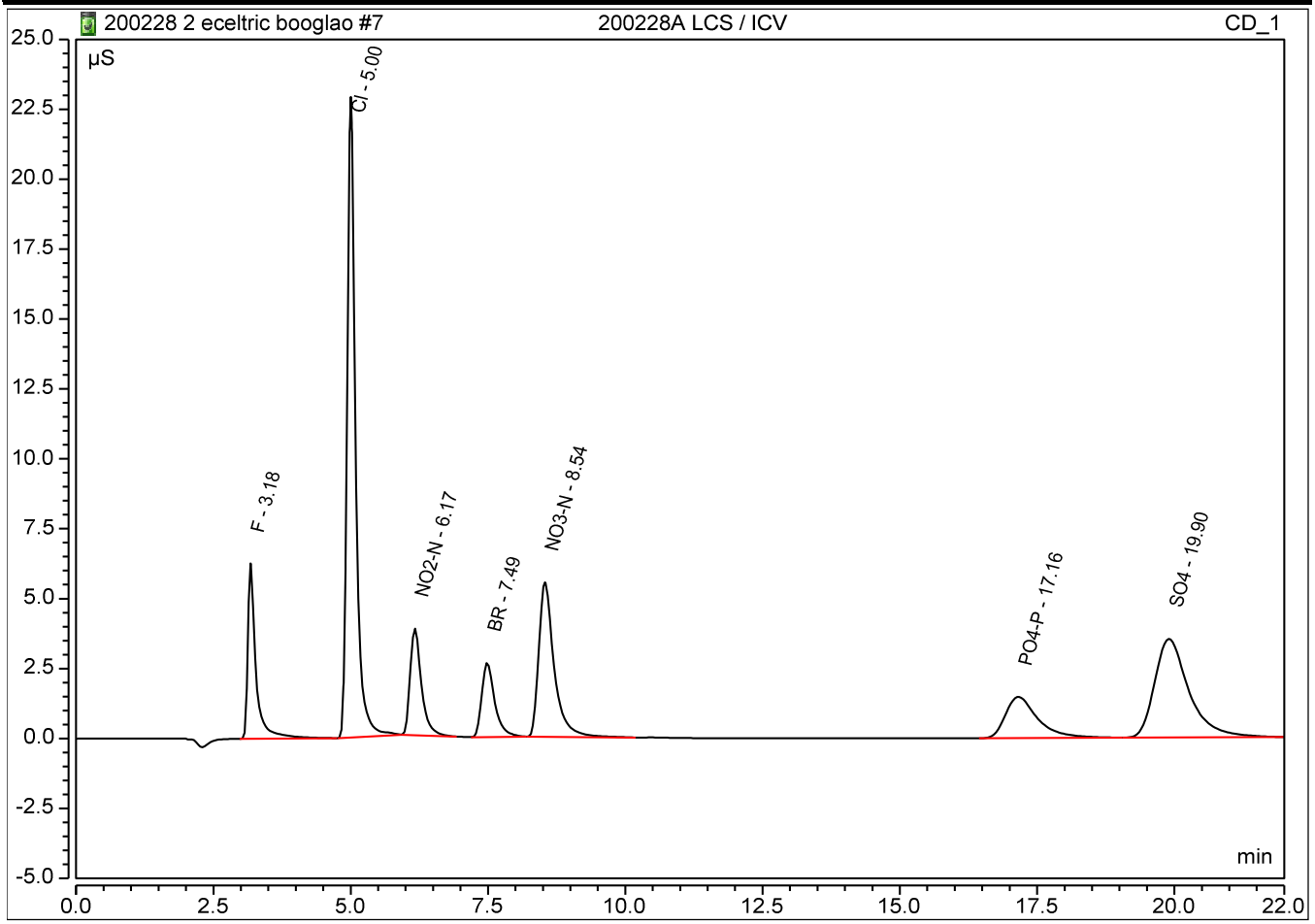


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200228 2 eceltric booglao

Peak Integration Report

Sample Name:	**200228A LCS / ICV**	*Inj. Vol.:*	**25uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.02.28**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**28-Feb-2020 / 10:25**	*Run Time:*	**22.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.18	**F**	BMB	1.079	6.264	4.73	5	94.5%
2	5.00	**Cl**	BMB	4.046	22.906	22.56	25	90.3%
3	6.17	**NO2-N**	BMB	0.911	3.816	3.03	3.04	99.8%
4	7.49	**BR**	BMB	0.731	2.655	12.28	12.5	98.2%
5	8.54	**NO3-N**	BMB	1.797	5.529	4.92	5	98.4%
6	17.16	**PO4-P**	BMB	1.010	1.478	9.34	10	93.4%
7	19.90	**SO4**	BMB	2.549	3.524	24.20	25	96.8%



Algorithm Check
y = Peak Area
x = mg/L S04

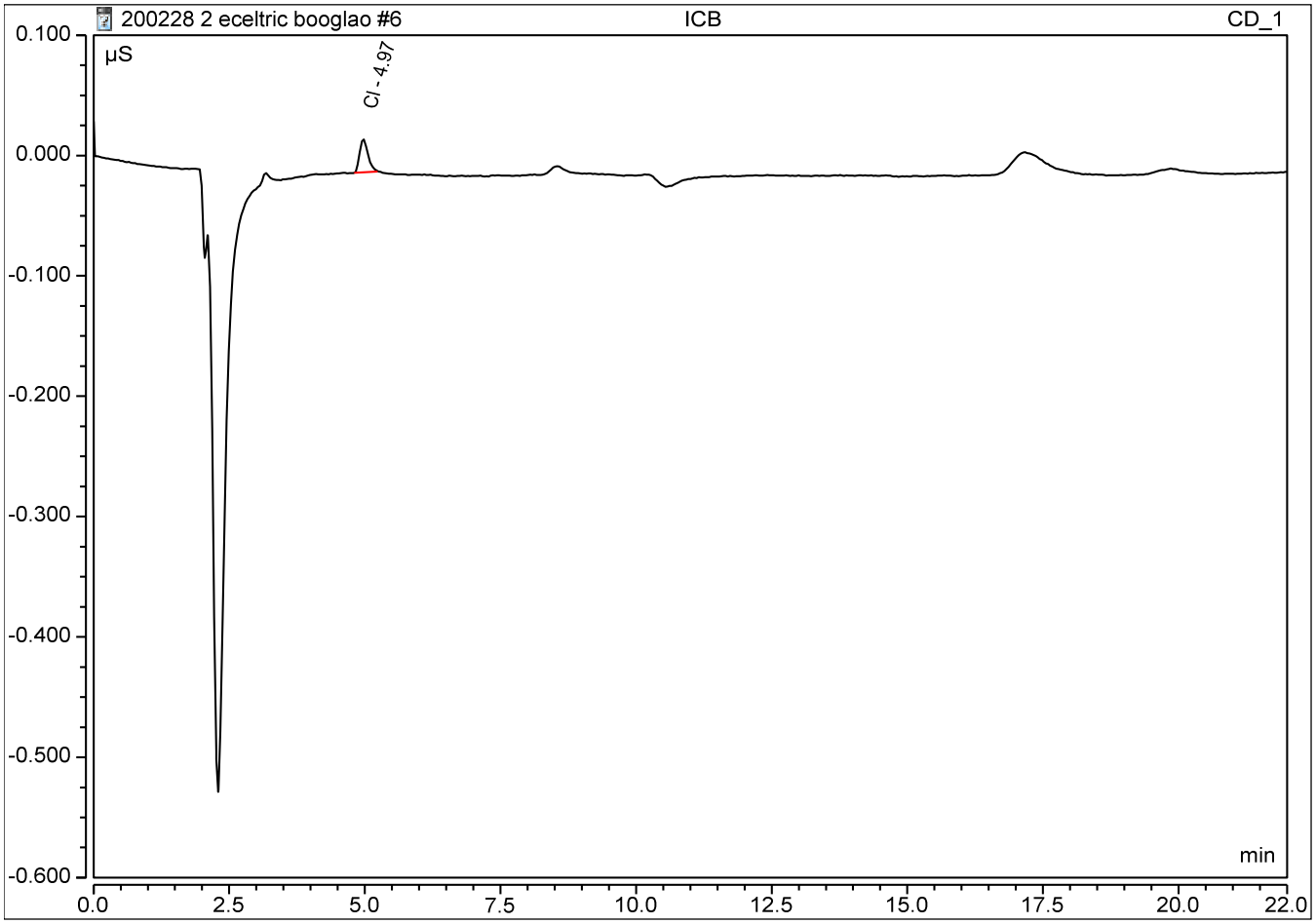
y = 0.1062 x + -0.0224
y = 2.5487 therefor x =

Logged on User: BW
Instrument: Charlie System_1
Sequence: 200228 2 eceltric booglao

Peak Integration Report

Sample Name:	**ICB**	*Inj. Vol.:*	**25uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.02.28**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**28-Feb-2020 / 10:01**	*Run Time:*	**22.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	4.97	**Cl**	BMB	0.005	0.028	0.43		

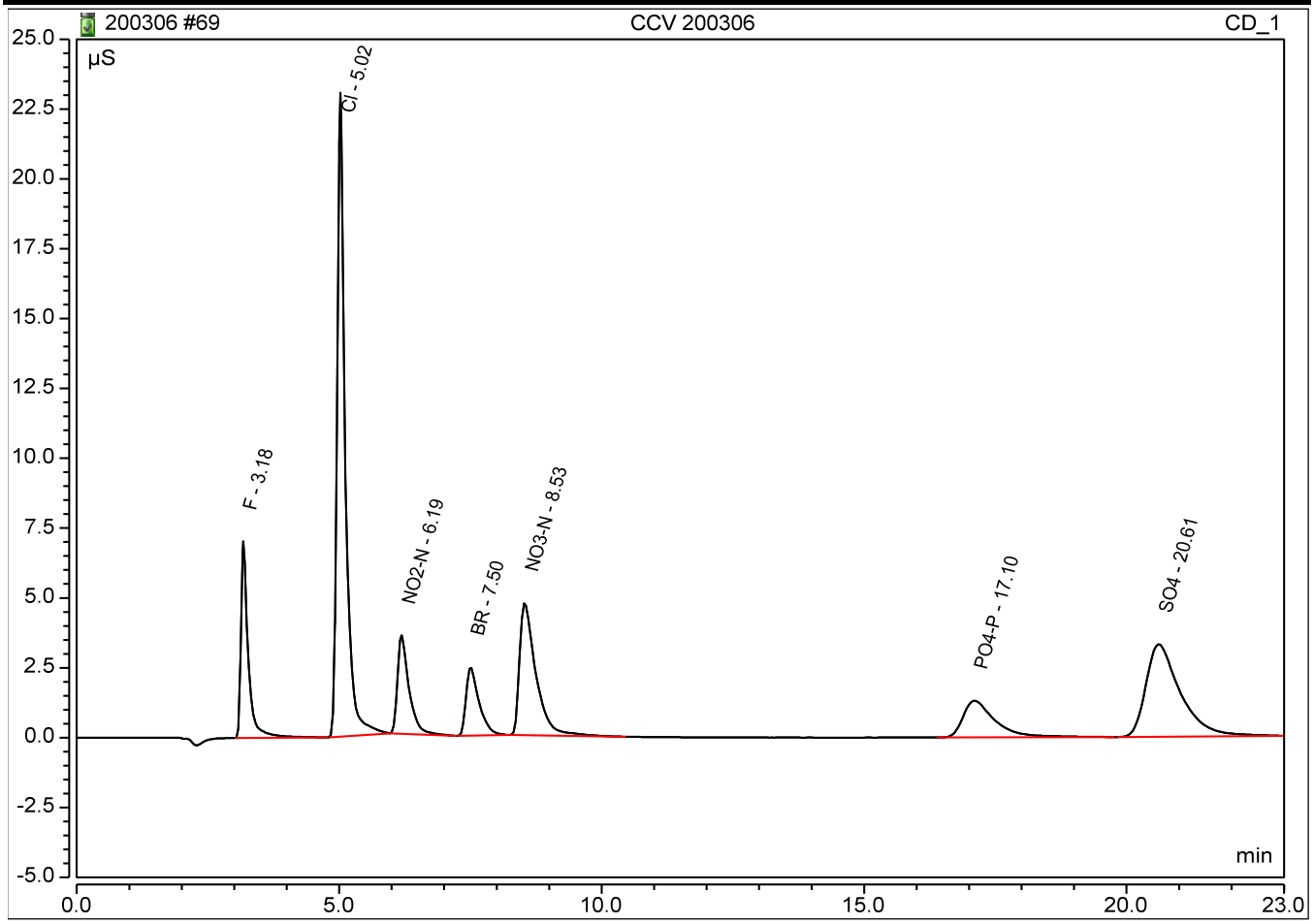


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200306

Peak Integration Report

Sample Name:	**CCV 200306**	*Inj. Vol.:*	**25uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.02.28**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**06-Mar-2020 / 15:18**	*Run Time:*	**23.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.18	**F**	BMB	1.131	7.042	4.95	5	99.0%
2	5.02	**Cl**	BMB	4.104	23.048	22.88	25	91.5%
3	6.19	**NO2-N**	BMB	0.897	3.520	2.99	3.04	98.2%
4	7.50	**BR**	BMB	0.702	2.465	11.80	12.5	94.4%
5	8.53	**NO3-N**	BMB	1.717	4.743	4.71	5	94.1%
6	17.10	**PO4-P**	BMB	0.931	1.317	8.65	10	86.5%
7	20.61	**SO4**	BMB	2.520	3.310	23.93	25	95.7%

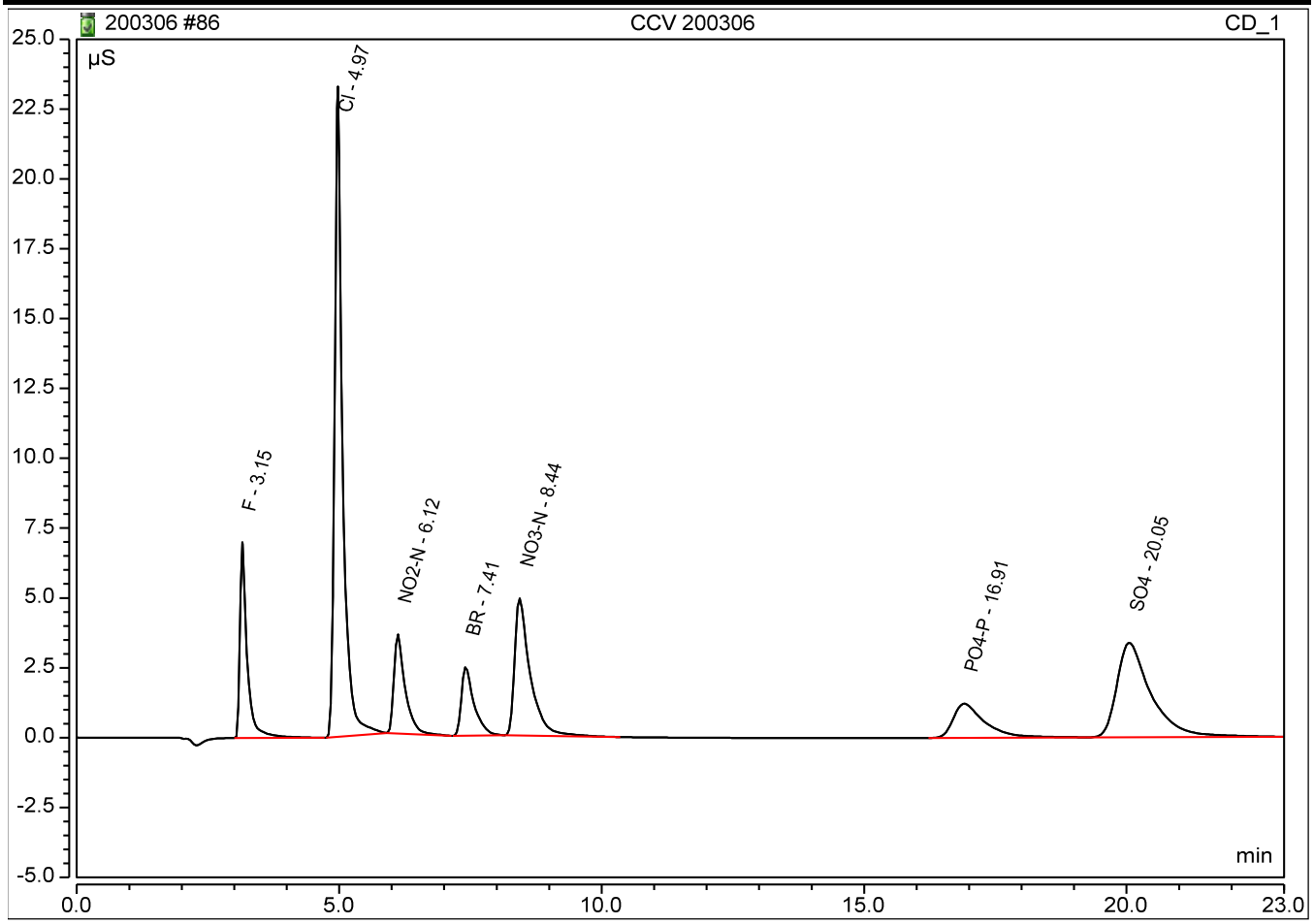


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200306

Peak Integration Report

Sample Name:	**CCV 200306**	*Inj. Vol.:*	**25uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.02.28**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**06-Mar-2020 / 23:45**	*Run Time:*	**23.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.15	**F**	BMB	1.109	7.012	4.85	5	97.1%
2	4.97	**Cl**	BMB	4.073	23.279	22.71	25	90.8%
3	6.12	**NO2-N**	BMB	0.884	3.553	2.94	3.04	96.8%
4	7.41	**BR**	BMB	0.685	2.465	11.52	12.5	92.1%
5	8.44	**NO3-N**	BMB	1.687	4.905	4.62	5	92.5%
6	16.91	**PO4-P**	BMB	0.851	1.223	7.95	10	79.5%
7	20.05	**SO4**	BMB	2.551	3.381	24.22	25	96.9%

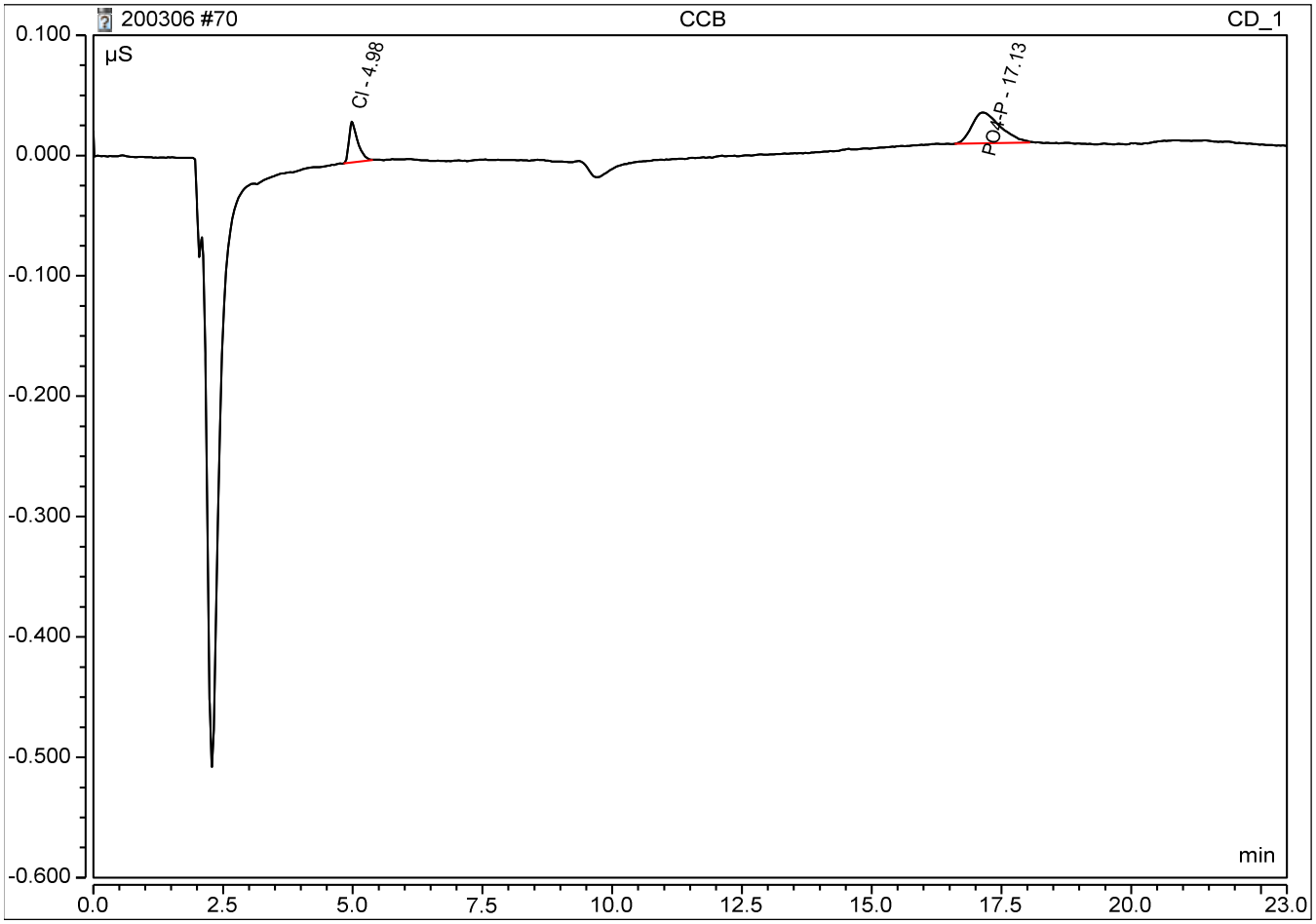


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200306

Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.02.28**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**06-Mar-2020 / 15:43**	*Run Time:*	**23.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	4.98	**Cl**	BMB	0.007	0.034	0.43		
2	17.13	**PO4-P**	BMB	0.016	0.026	0.67		

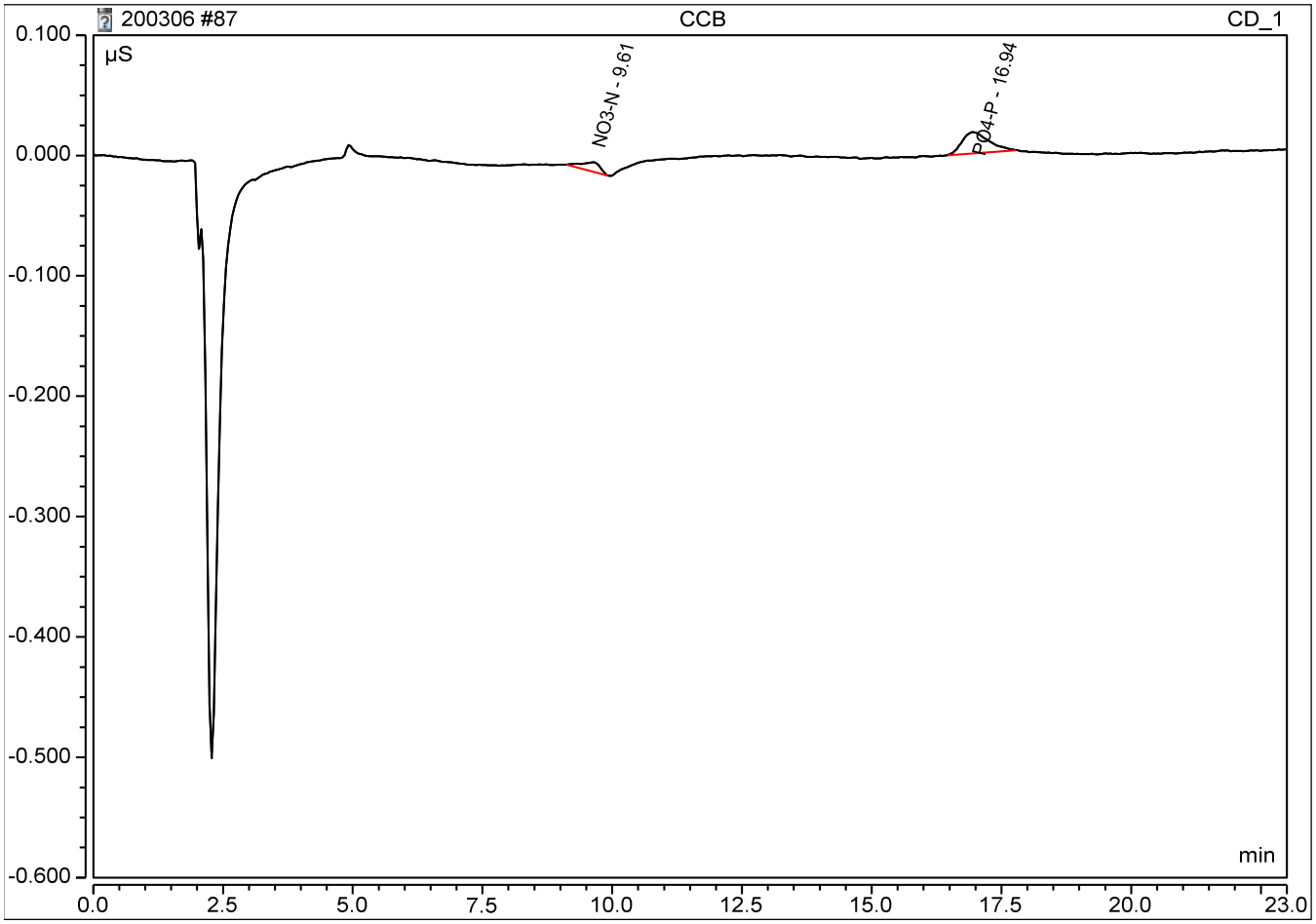


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200306

Peak Integration Report

Sample Name:	**CCB**	*Inj. Vol.:*	**25uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.02.28**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**07-Mar-2020 / 00:10**	*Run Time:*	**23.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	9.61	**NO3-N**	BMB	0.003	0.008	0.07		
2	16.94	**PO4-P**	BMB	0.011	0.018	0.62		



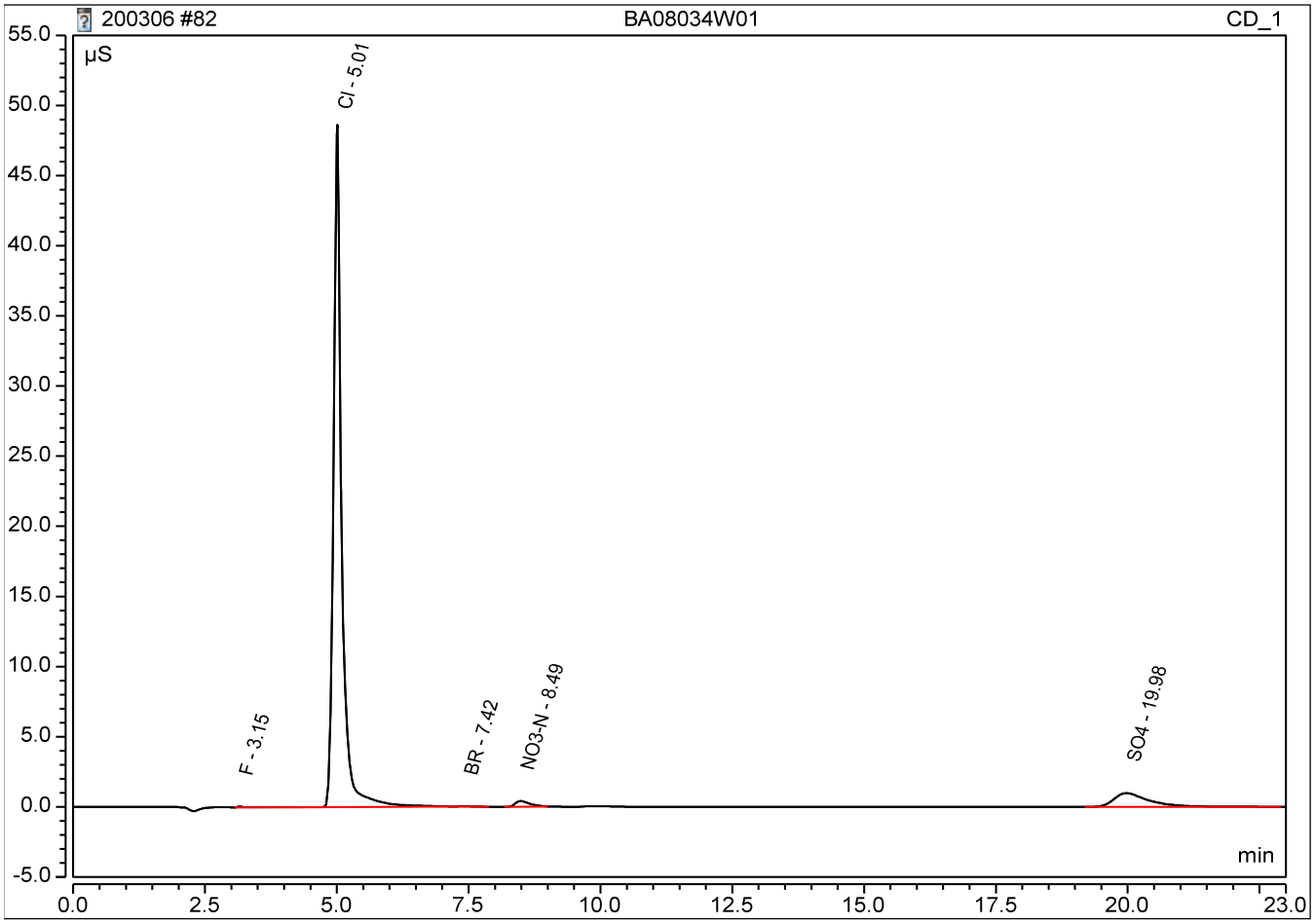
INORGANIC ANALYSIS
Raw Data

Logged on User: BW
Instrument: Charlie System_1
Sequence: 200306

Peak Integration Report

Sample Name:	**BA08034W01**	*Inj. Vol.:*	**25uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.02.28**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**06-Mar-2020 / 22:03**	*Run Time:*	**23.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.15	**F**	BMB	0.031	0.069	0.25		
2	5.01	**Cl**	BMB	8.606	48.629	47.54		
3	7.42	**BR**	BMB	0.007	0.030	0.22		
4	8.49	**NO3-N**	BMB	0.128	0.411	0.41		
5	19.98	**SO4**	BMB	0.769	0.984	7.45		



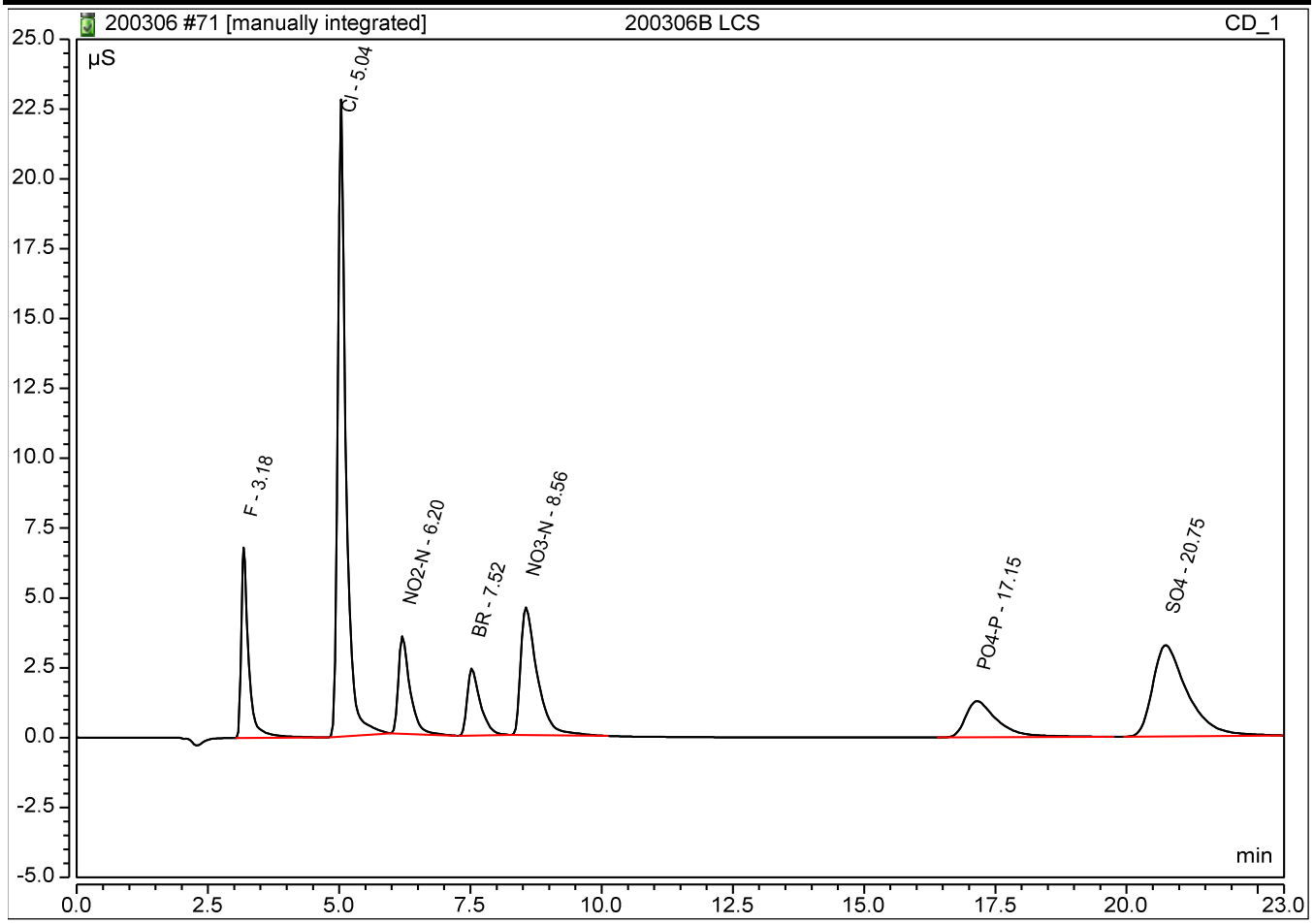
24.5160 CD 200306

Logged on User: BW
Instrument: Charlie System_1
Sequence: 200306

Peak Integration Report

Sample Name:	**200306B LCS**	*Inj. Vol.:*	**25uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.02.28**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**06-Mar-2020 / 17:24**	*Run Time:*	**23.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.18	**F**	BMB	1.103	6.818	4.83	5	96.6%
2	5.04	**Cl**	BMB	4.094	22.804	22.83	25	91.3%
3	6.20	**NO2-N**	BMB	0.895	3.488	2.98	3.04	98.1%
4	7.52	**BR**	BMB	0.689	2.405	11.59	12.5	92.7%
5	8.56	**NO3-N**	BMB*	1.677	4.577	4.60	5	92.0%
6	17.15	**PO4-P**	BMB	0.922	1.301	8.57	10	85.7%
7	20.75	**SO4**	BMB	2.508	3.269	23.82	25	95.3%



Algorithm Check
y = Peak Area
x = mg/L S04

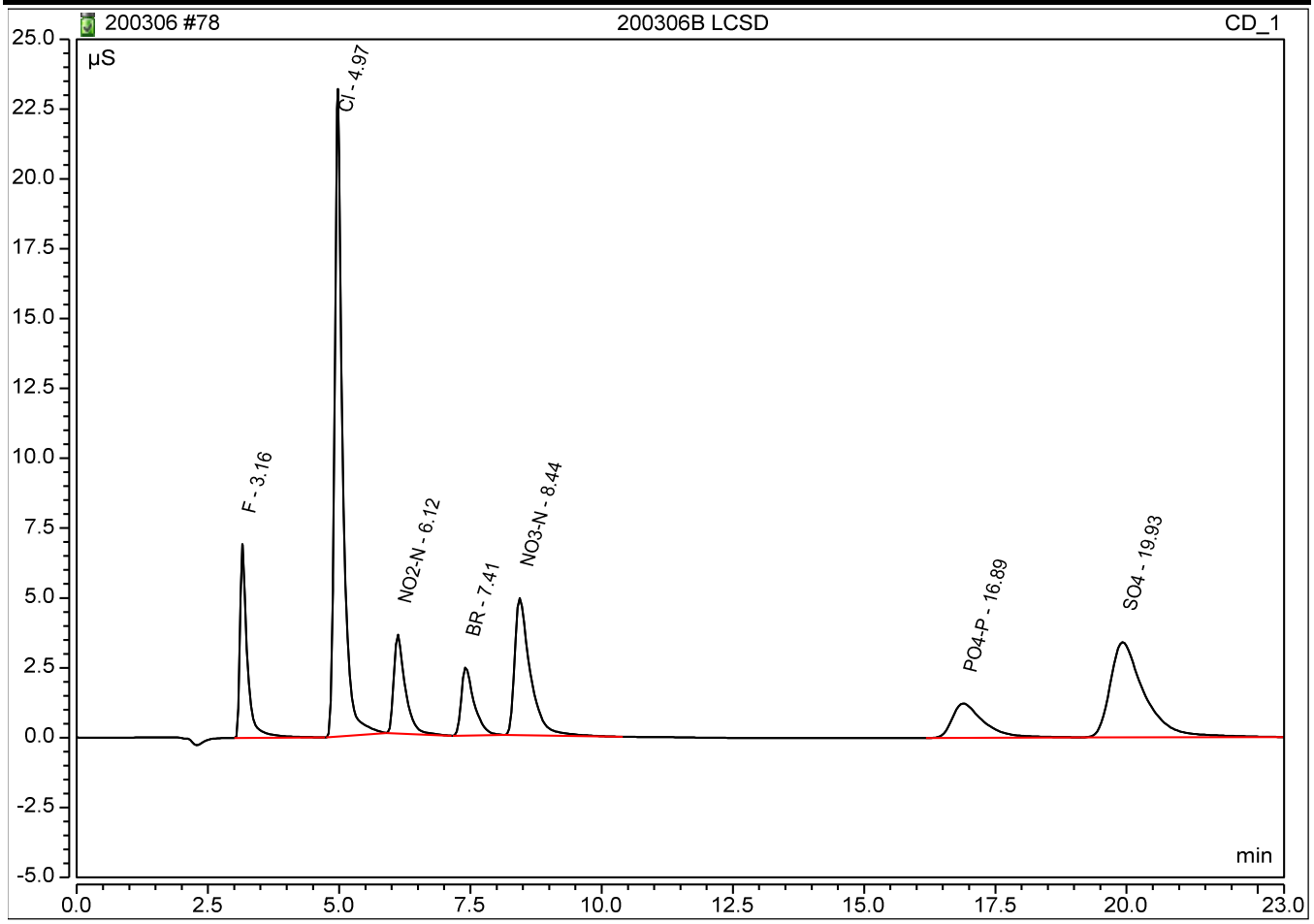
y = 0.1062 x + -0.0224
y = 2.5085 therefor x =

Logged on User: BW
Instrument: Charlie System_1
Sequence: 200306

Peak Integration Report

Sample Name:	**200306B LCSD**	*Inj. Vol.:*	**25uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.02.28**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**06-Mar-2020 / 20:22**	*Run Time:*	**23.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	3.16	**F**	BMB	1.109	6.938	4.86	5	97.2%
2	4.97	**Cl**	BMB	4.097	23.179	22.84	25	91.4%
3	6.12	**NO2-N**	BMB	0.891	3.540	2.97	3.04	97.6%
4	7.41	**BR**	BMB	0.689	2.449	11.58	12.5	92.6%
5	8.44	**NO3-N**	BMB	1.694	4.902	4.64	5	92.9%
6	16.89	**PO4-P**	BMB	0.856	1.232	8.00	10	80.0%
7	19.93	**SO4**	BMB	2.566	3.409	24.36	25	97.5%



Algorithm Check
y = Peak Area
x = mg/L S04

y = 0.1062 x + -0.0224
y = 2.5659 therefor x = 24.5160 CD 200306

Anion Chromatography Working Standard

Prep Date: 01/24/20

Exp Date: 01/25/20

Prep'd By (Initials): CD

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Ion Chromatography Standard Fluoride 1000 µg/mL in H2O	o2si	O2SI-062002-01-01	1000	687393-38-40744	10/30/20	312.5 µL	25 mL	Millipore Water	12.5
Ion Chromatography Standard Nitrite 1000 µg/mL in H2O	Inorganic Ventures	ICN021	1000	N2-NOX672889-40759	05/01/20	411 µL	25 mL	Millipore Water	5 as NO2-N
Ion Chromatography Standard Chloride 5000 µg/mL in H2O	o2si	062001-08-03	5000	10084781-1-39578	02/21/20	250 µL	25 mL	Millipore Water	50
Ortho-Phosphate as P Standard	Ultra Scientific	ICC-005A	1000	G34-CP-3323-39057	08/31/23	625 µL	25 mL	Millipore Water	25
Ion Chromatography Standard Nitrate as N 1000 µg/mL in H2O	o2si	062003-01-03	1000	880117-4-39577	02/21/20	250 µL	25 mL	Millipore Water	10
Bromide Standard	Ultra Scientific	ICC-001	1000	CR-5372-39521	12/31/21	625 µL	25 mL	Millipore Water	25
Sulfate Standard	Agilent	ICC-006	1000	CS-0688-41050	03/31/22	1250 µL	25 mL	Millipore Water	50

Anion Chromatography Calibration Curve

Prep Date: 01/24/20

Exp Date: 01/25/20

Prep'd By (Initials): CD

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. Range (ug/mL)	Reference To APPL Prep Date	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc. Range (µg/mL)
Anion Chromatography Working Standard	Varies	ICal1	5.0-50.0	Prepared 01/24/20	01/25/20	200 µL	25000 µL	Millipore Water	0.04-0.40
Anion Chromatography Working Standard	Varies	ICal2	5.0-50.0	Prepared 01/24/20	01/25/20	20 µL	1000 µL	Millipore Water	0.1-1.0
Anion Chromatography Working Standard	Varies	ICal3	5.0-50.0	Prepared 01/24/20	01/25/20	50 µL	1000 µL	Millipore Water	0.25-2.5
Anion Chromatography Working Standard	Varies	ICal4	5.0-50.0	Prepared 01/24/20	01/25/20	100 µL	1000 µL	Millipore Water	0.5-5.0
Anion Chromatography Working Standard	Varies	ICal5	5.0-50.0	Prepared 01/24/20	01/25/20	200 µL	1000 µL	Millipore Water	1.0-10.0
Anion Chromatography Working Standard	Varies	ICal6	5.0-50.0	Prepared 01/24/20	01/25/20	500 µL	1000 µL	Millipore Water	2.5-25.0
Anion Chromatography Working Standard	Varies	ICal7	5.0-50.0	Prepared 01/24/20	01/25/20	700 µL	1000 µL	Millipore Water	3.5-35.0
Anion Chromatography Working Standard	Varies	ICal8	5.0-50.0	Prepared 01/24/20	01/25/20	1000 µL	1000 µL	Millipore Water	5.0-50.0

Anion Chromatography LCS/ICV

Prep Date: See injection Log

Exp Date: 24 hours after prep

Prep'd By (Initials): CD

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. Range (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Flouride	Inorganic Ventures	ICF1	993-999	K-F652018-39801**	04/23/20	125 µL	25 mL	Millipore Water	5
Nitrite	Inorganic Ventures	ICNO21	993-1001	M2-NOX660562-40468	08/25/21	250 µL	25 mL	Millipore Water	10
Chloride	Inorganic Ventures	ICCL1	995-1001	N2CL664868-39905	03/07/22	625 µL	25 mL	Millipore Water	25
O-Phosphate as P	Inorganic Ventures	ICPPO41	1001-1009	M2-POX655826-39803**	04/23/20	250 µL	25 mL	Millipore Water	10
Nitrate as N	Inorganic Ventures	ICNNO31	997-1005	P2-NOX675324-49391	02/14/23	125 µL	25 mL	Millipore Water	5
Ion Chromatography Standard Bromide, 1000 µg/mL in H2O	CPI International	4400-IC8M	995-1005	1011817-12-49602	06/05/21	312.5 µL	25 mL	Millipore Water	12.5
Sulfate	Inorganic Ventures	ICSO41	998-1006	N2-SOX664928-39507**	05/27/20	625 µL	25 mL	Millipore Water	25

Anion Chromatography CCV

Prep Date: See injection Log

Exp Date: 24 hours after prep

**Recertified with CCV Standards listed below on 191021; extended exp. date by 6 mo.

Prep'd By (Initials): CD

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Ion Chromatography Standard Fluoride 1000 µg/mL in H2O	o2si	O2SI-062002-01-01	1000	687393-38-40744	10/30/20	125 µL	25 mL	Millipore Water	5
Ion Chromatography Standard Nitrite 1000 µg/mL in H2O	Inorganic Ventures	ICN021	1000	N2-NOX672889-40759	05/01/20	250 µL	25 mL	Millipore Water	10
Ion Chromatography Standard Chloride 5000 µg/mL in H2O	o2si	062001-08-03	5000	10084781-1-39578	02/21/20	125 µL	25 mL	Millipore Water	25
Ortho-Phosphate as P Standard	Ultra Scientific	ICC-005A	1000	G34-CP-3323-39057	08/31/23	250 µL	25 mL	Millipore Water	10
Ion Chromatography Standard Nitrate as N 1000 µg/mL in H2O	o2si	062003-01-03	1000	880117-4-39577	02/21/20	125 µL	25 mL	Millipore Water	5
Bromide Standard	Ultra Scientific	ICC-001	1000	CR-5372-39521	12/31/21	312.5 µL	25 mL	Millipore Water	12.5
Sulfate Standard	Agilent	ICC-006	1000	CS-0688-41050	03/31/22	625 µL	25 mL	Millipore Water	25

Method 300 and 9056 Injection Log

No.	Position	Injection Description	Inject Time		Type	Comment
1	GB6	Cal 1 2020.02.27	28/Feb/2020	07:59	Calibration Standard	
2	GB7	Cal 2	28/Feb/2020	08:23	Calibration Standard	
3	GB8	Cal 3	28/Feb/2020	08:48	Calibration Standard	
4	GC1	Cal 5	28/Feb/2020	09:12	Calibration Standard	
5	GC2	Cal 8	28/Feb/2020	09:36	Calibration Standard	
6	R1	ICB	28/Feb/2020	10:01	Unknown	
7	R3	200228A LCS / ICV	28/Feb/2020	10:25	Check Standard	
8	R3	200228A LCSD	28/Feb/2020	10:50	Check Standard	
9	RA1	BA07633W07	28/Feb/2020	12:31	Unknown	
10	RA2	BA07634W07	28/Feb/2020	12:56	Unknown	
11	RA3	BA07231W08 df20	28/Feb/2020	13:20	Unknown	
12	RA4	BA07231W08 MS df20	28/Feb/2020	13:45	Unknown	
13	RA5	BA07231W08 MSD df20	28/Feb/2020	14:09	Unknown	
14	R2	CCV 200228	28/Feb/2020	14:33	Check Standard	
15	R1	CCB	28/Feb/2020	14:59	Unknown	
16	BA1	ICV	28/Feb/2020	18:31	Check Standard	
17	BA2	BA07742W01 df5	28/Feb/2020	18:56	Unknown	
18	BA3	BA07743W05	28/Feb/2020	19:22	Unknown	
19	BA4	BA07743W05 MS	28/Feb/2020	19:47	Unknown	
20	BA5	BA07743W05 MSD	28/Feb/2020	20:12	Unknown	
21	BA6	BA07744W05	28/Feb/2020	20:38	Unknown	
22	BA7	BA07745W05	28/Feb/2020	21:03	Unknown	
23	BA8	BA07746W05	28/Feb/2020	21:28	Unknown	
24	BB1	BA07747W05	28/Feb/2020	21:54	Unknown	
25	BB2	BA07755W04	28/Feb/2020	22:19	Unknown	
26	BB3	BA07756W04 df5	28/Feb/2020	22:45	Unknown	
27	BB4	BA07759W04	28/Feb/2020	23:10	Unknown	
28	BB5	BA07760W04 df10	28/Feb/2020	23:35	Unknown	
29	R2	CCV 200228	29/Feb/2020	00:01	Check Standard	
30	R1	CCB	29/Feb/2020	00:26	Unknown	
31	BB6	BA07761W04 df5	29/Feb/2020	00:52	Unknown	
32	BB7	BA07762W04 df20	29/Feb/2020	01:17	Unknown	
33	BB8	BA07765W04 df20	29/Feb/2020	01:42	Unknown	
34	BC1	BA07766W04 df10	29/Feb/2020	02:08	Unknown	
35	BC2	BA07767W04 df10	29/Feb/2020	02:33	Unknown	
36	BC3	BA07768W05 df10	29/Feb/2020	02:58	Unknown	
37	BC4	BA07769W05 df10	29/Feb/2020	03:24	Unknown	
38	BC5	BA07770W05 df10	29/Feb/2020	03:49	Unknown	
39	BC6	BA07785W01	29/Feb/2020	04:15	Unknown	
40	BC7	BA07748W01	29/Feb/2020	04:40	Unknown	
41	R2	CCV 200228	29/Feb/2020	05:05	Check Standard	
42	R1	CCB	29/Feb/2020	05:31	Unknown	
43	BC8	BA07749W01	29/Feb/2020	05:56	Unknown	
44	BD1	BA07749W01 MS	29/Feb/2020	06:22	Unknown	
45	BD2	BA07749W01 MSD	29/Feb/2020	06:47	Unknown	
46	BD3	BA07750W01	29/Feb/2020	07:12	Unknown	
47	BD4	BA07751W01	29/Feb/2020	07:38	Unknown	
48	R2	CCV 200228	29/Feb/2020	08:03	Check Standard	
49	R1	CCB	29/Feb/2020	08:29	Unknown	
50	BA2	BA07742W01 df20	29/Feb/2020	08:54	Unknown	
51	BB2	BA07755W04 df2	29/Feb/2020	09:19	Unknown	
52	BB3	BA07756W04 df20	29/Feb/2020	09:45	Unknown	
53	BB4	BA07759W04 df5	29/Feb/2020	10:10	Unknown	
54	BB5	BA07760W04 df50	29/Feb/2020	10:35	Unknown	
55	BB7	BA07762W04 df100	29/Feb/2020	11:01	Unknown	
56	BC7	BA07748W01 df5	29/Feb/2020	11:26	Unknown	
57	BC8	BA07749W01 df5	29/Feb/2020	11:52	Unknown	
58	BB7	BA07762W04	29/Feb/2020	12:17	Unknown	
59	BB8	BA07762W04 df100	29/Feb/2020	12:43	Unknown	
60	BD3	BA07750W01 df5	29/Feb/2020	13:08	Unknown	
61	BD4	BA07751W01 df5	29/Feb/2020	13:33	Unknown	
62	R2	CCV 200228	29/Feb/2020	13:59	Check Standard	
63	R1	CCB	29/Feb/2020	14:24	Unknown	

Method 300 and 9056 Injection Log

No.	Position	Injection Description	Inject Time		Type	Comment
1	R2	CCV 200306	05/Mar/2020	09:29	Check Standard	
2	R1	CCB	05/Mar/2020	09:55	Unknown	
3	R2	200306A LCS	05/Mar/2020	10:20	Check Standard	
4	R2	200306A LCSD	05/Mar/2020	10:46	Check Standard	
5	BA1	BA07882W04	05/Mar/2020	11:11	Unknown	
6	BA2	BA07916W04	05/Mar/2020	11:36	Unknown	
7	BA3	BA07917W04	05/Mar/2020	12:02	Unknown	
8	BA4	BA07918W11	05/Mar/2020	12:27	Unknown	
9	BA5	BA07918W11 MS	05/Mar/2020	12:53	Unknown	
10	BA6	BA07918W11 MSD	05/Mar/2020	13:18	Unknown	
11	BA7	BA07919W04	05/Mar/2020	13:43	Unknown	
12	BA8	BA07920W04	05/Mar/2020	14:09	Unknown	
13	BB1	BA07883W04	05/Mar/2020	14:34	Unknown	
14	BB2	BA07922W01 df5	05/Mar/2020	15:00	Unknown	
15	R2	CCV 200306	05/Mar/2020	15:25	Check Standard	
16	R1	CCB	05/Mar/2020	15:50	Unknown	
17	GA1	BA07942W12	05/Mar/2020	17:17	Unknown	
18	GA2	BA07944W12	05/Mar/2020	17:43	Unknown	
19	GA3	BA07971W07	05/Mar/2020	18:08	Unknown	
20	GA4	BA07968W02	05/Mar/2020	18:34	Unknown	
21	GA5	BA07968W02 df5	05/Mar/2020	18:59	Unknown	
22	GA6	BA07969W02	05/Mar/2020	19:24	Unknown	
23	GA7	BA07969W02 MS	05/Mar/2020	19:50	Unknown	
24	GA8	BA07969W02 MSD	05/Mar/2020	20:15	Unknown	
25	R2	CCV 200306	05/Mar/2020	20:41	Check Standard	
26	R1	CCB	05/Mar/2020	21:06	Unknown	
27	BB3	BA07346W16 df10	05/Mar/2020	21:31	Unknown	
28	BB4	BA07346W16 MS df10	05/Mar/2020	21:57	Unknown	
29	BB5	BA07346W16 MSD df10	05/Mar/2020	22:22	Unknown	
30	BB6	BA07417W01	05/Mar/2020	22:48	Unknown	
31	BB7	BA07417W01 df5	05/Mar/2020	23:13	Unknown	
32	BB8	BA07418W01	05/Mar/2020	23:38	Unknown	
33	BC1	BA07418W01 df5	06/Mar/2020	00:04	Unknown	
34	BC2	BA07419W04	06/Mar/2020	00:29	Unknown	
35	BC3	BA07419W04 df5	06/Mar/2020	00:54	Unknown	
36	BC4	BA07420W07	06/Mar/2020	01:20	Unknown	
37	BC5	BA07420W07 df10	06/Mar/2020	01:45	Unknown	
38	BC6	BA07421W01	06/Mar/2020	02:11	Unknown	
39	BC7	BA07421W01 df5	06/Mar/2020	02:36	Unknown	
40	BC8	BA07422W01	06/Mar/2020	03:01	Unknown	
41	BD1	BA07422W01 df5	06/Mar/2020	03:27	Unknown	
42	BD2	BA07423W04	06/Mar/2020	03:52	Unknown	
43	BD3	BA07423W04 df5	06/Mar/2020	04:18	Unknown	
44	BD4	BA07424W07	06/Mar/2020	04:43	Unknown	NDF 50 NO3
45	BD5	BA07424W07 df10	06/Mar/2020	05:08	Unknown	
46	BD6	BA07481W01	06/Mar/2020	05:34	Unknown	
47	BD7	BA07481W01 df5	06/Mar/2020	05:59	Unknown	
48	R2	CCV 200306	06/Mar/2020	06:24	Check Standard	
49	R1	CCB	06/Mar/2020	06:50	Unknown	
50	BD8	BA07482W01	06/Mar/2020	07:15	Unknown	
51	BE1	BA07482W01 df5	06/Mar/2020	07:41	Unknown	
52	BE2	BA07483W01	06/Mar/2020	08:06	Unknown	
53	BE3	BA07483W01 df5	06/Mar/2020	08:31	Unknown	
54	BE4	BA07484W01	06/Mar/2020	08:57	Unknown	
55	BE5	BA07484W01 df5	06/Mar/2020	09:22	Unknown	
56	RA8	BA07424W07 df50	06/Mar/2020	09:48	Unknown	NO3
57	BE6	BA07488W01	06/Mar/2020	10:13	Unknown	
58	BE7	BA07488W01 df5	06/Mar/2020	10:38	Unknown	
59	BE8	BA07489W01	06/Mar/2020	11:04	Unknown	
60	RA1	BA07489W01 df5	06/Mar/2020	11:29	Unknown	
61	RA2	BA07451W06	06/Mar/2020	11:55	Unknown	
62	RA3	BA07451W06 df5	06/Mar/2020	12:20	Unknown	
63	RA4	BA07455W06	06/Mar/2020	12:45	Unknown	
64	RA5	BA07460W06	06/Mar/2020	13:11	Unknown	
65	RA6	BA07461W06	06/Mar/2020	13:36	Unknown	
66	RA7	BA07461W06 df5	06/Mar/2020	14:01	Unknown	
67	R2	200306B LCS	06/Mar/2020	14:27	Check Standard	
68	R2	200306B LCSD	06/Mar/2020	14:52	Check Standard	
69	R2	CCV 200306	06/Mar/2020	15:18	Check Standard	
70	R1	CCB	06/Mar/2020	15:43	Unknown	
71	R2	200306B LCS	06/Mar/2020	17:24	Check Standard	
72	BA1	BA07527W06 DF2	06/Mar/2020	17:49	Unknown	
73	BA2	BA07527W06 DF50	06/Mar/2020	18:15	Unknown	
74	BA3	BA07530W06 DF20	06/Mar/2020	18:40	Unknown	
75	BA4	BA07526W06 DF2	06/Mar/2020	19:06	Unknown	
76	BA5	BA07529W06 DF50	06/Mar/2020	19:31	Unknown	
77	BA6	BA07528W06 DF10	06/Mar/2020	19:56	Unknown	
78	R2	200306B LCSD	06/Mar/2020	20:22	Check Standard	
79	BA7	BA08031W04	06/Mar/2020	20:47	Unknown	
80	BA8	BA08031W04 MS	06/Mar/2020	21:13	Unknown	
81	BB1	BA08031W04 MSD	06/Mar/2020	21:38	Unknown	
82	BB2	BA08034W01	06/Mar/2020	22:03	Unknown	
83	BB3	BA07377W03	06/Mar/2020	22:29	Unknown	
84	BB4	BA07377W03 df5	06/Mar/2020	22:54	Unknown	
85	BB5	BA07377W03 df10	06/Mar/2020	23:19	Unknown	
86	R2	CCV 200306	06/Mar/2020	23:45	Check Standard	
87	R1	CCB	07/Mar/2020	00:10	Unknown	
88	R2	stop	n.a.		Unknown	

INORGANIC ANALYSIS
Calibration and Raw Data

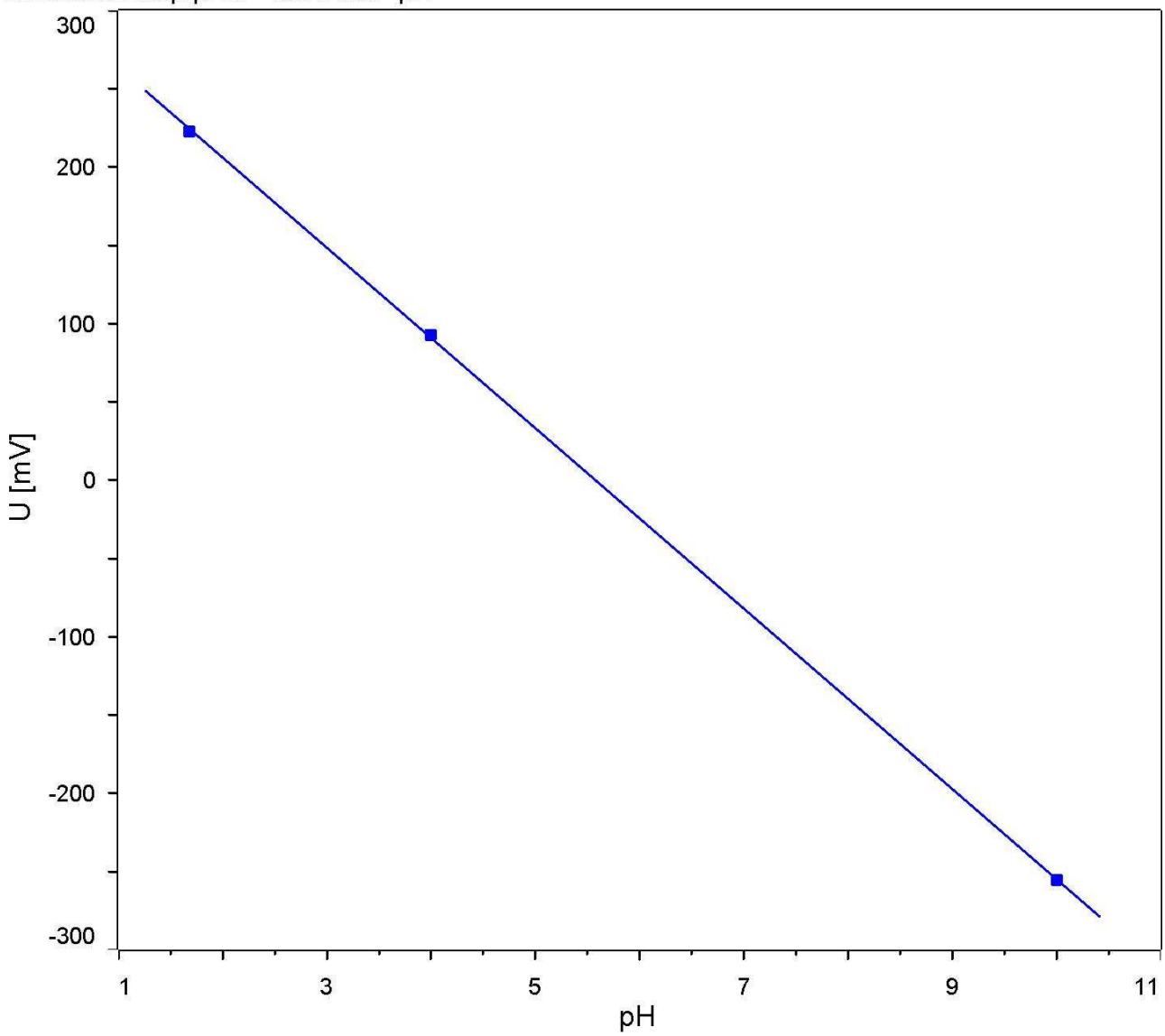
Timao Calibration Curve

2020-03-09 12:42:52

Calculations

Buffer 7	7.06	
Formula	'MEAS pH.EME'	
MEAS pH.EME	7.0642	
Slope	98.60	
Formula	'Calibration loop pH.SLO'	
Calibration loop pH.SLO	98.6	
pH(as)	5.58	
Formula	'Calibration loop pH.ENP'	
Calibration loop pH.ENP	5.575	
Res19	21.5	°C
Formula	'CAL MEAS pH.ETE'	
CAL MEAS pH.ETE	21.5027	

Calibration loop pH.1 - CAL LOOP pH



Metrohm 814/809 Titrando Data

Sample ID	Analysis Date/Time	Method	Titration Volume (to 8.3)	Titration Volume (total)	OH	CO3	HCO3	Total Alk	Unit	Sample Vol	N	Batch	Initials
BA08034W18	2020-03-09 18:00:05 UTC-8	Alkalinity	0.000	2.026	0.00	0.00	81.45	81.45	mg/L	25 mL	0.0201	200203A	AR
200309A LCSD	2020-03-09 16:47:54 UTC-8	Alkalinity	0.144	6.586	0.00	11.58	253.18	264.76	mg/L	25 mL	0.0201	200309A	AR
200309A LCS	2020-03-09 16:36:27 UTC-8	Alkalinity	0.148	6.576	0.00	11.90	252.46	264.36	mg/L	25 mL	0.0201	200309A	AR
200309A BLK	2020-03-09 16:33:05 UTC-8	Alkalinity	0.000	0.046	0.00	0.00	1.85	1.85	mg/L	25 mL	0.0201	200309A	AR

Tiamo Alkalinity Standard Prep

Prep Date:

Exp Date:

Prep'd By (Initials): AR

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Unit	Conc	Lot Number - QA Number	Prep/Opened	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc
Sulfuric Acid (H2SO4)	J.T.Baker	NA	NA	167828	NA	NA	PURCHASED	NA	NA	NA
0.10N Sulfuric Acid (H2SO4)	J.T.Baker	Normality	0.1N	167828	05/24/19	05/24/20	3ml	1L	DI	0.10N
0.02N Sulfuric Acid (H2SO4)	J.T.Baker	Normality	0.02N	167828	05/24/19	05/24/20	200mL	1L	DI	0.02N
Inorganic Spike(NaHCO3)	BDH	NA	NA	1575C510	10/18/18	08/14/20	PURCHASED	NA	NA	NA
Inorganic Spike Solution	BDH	Milligrams/Liters	250mg/L	1575C510	09/17/19	03/17/20	3.5g	500mL	DI	250mg/L
Standarizing Solution(NaCO3)	J.T.Baker	Normality	1N	178494	07/25/17	07/25/19	PURCHASED	NA	NA	NA

Tiamo pH Buffer Reference Standards

Prep Date: Daily

Exp Date: Daily

Prep'd By (Initials): AR

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Units	pH	Lot Number - QA Number	Opened	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
pH 1.68 Buffer	ORION	pH Units	1.68	WX1-40709	04/22/19	01/01/21	NA	NA	NA	NA
pH 4.00 Buffer	RICCA	pH Units	4	1807191-39782	04/22/19	01/01/21	NA	NA	NA	NA
pH 10.01 Buffer	VWR	pH Units	10.01	0903980-40707	04/22/19	08/27/20	NA	NA	NA	NA
pH 7.00 Buffer	Ricca	pH Units	7	1805M17 - 39765	10/11/18	05/01/20	NA	NA	NA	NA

Ferrous Iron — Rev 2, 04-05-19

Method SM3500Fe | Units mg/L | Instrument: Genisis Spectrometer
Analyte Fe2+ | QCG: 200309A | Wavelength: 510 nm
Analyist fjr | Final Volume: 50mL | Units: mg/L

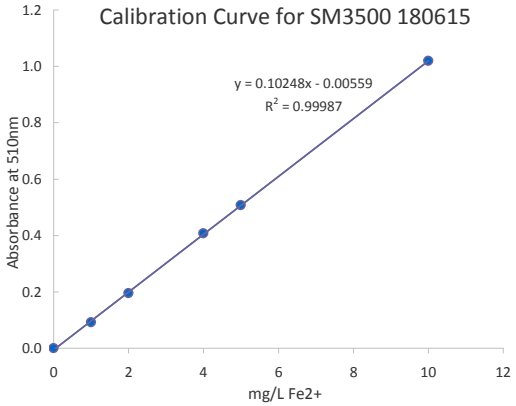
Date	Time	Appl ID	[Fe2+]	Absorbance	% Recovery
06/28/19	12:48	ICB	0.00	0.000	
06/28/19	12:49	Ical 1	1.00	0.092	95.2%
06/28/19	12:50	Ical 2	2.00	0.195	97.9%
06/28/19	12:51	Ical 3	4.00	0.408	100.9%
06/28/19	12:51	Ical 4	5.00	0.507	100.0%
06/28/19	12:52	Ical 5	10.00	1.019	100.0%
06/28/19	13:08	ICV	3.00	0.326	107.9%
06/28/19	12:53	ICB	0.00	0.002	

Slope	0.102479592
Intercept	-0.005591837
Coefficient of Determination	0.999872044

Algortithm Check:	Appl ID	Absorbance	Result
	LCS 200309A	0.295	2.93

Result = (Absorbance-Raw Blk-Intercept)/ Slope

Test:	FJR	03/09/20	2.93



Date	Time	Appl ID	DF	Raw Result	SubSample Amount	Raw BLK	Calc Conc	Result	QC True	% Recovery
03/09/20	16:56	CCV 4.0 200309A	1	0.389	25mL		3.85	3.85	4.00	96.3%
03/09/20	16:56	CCB 200309A	1	0.000	25mL		0.05	0.05		
03/09/20	16:57	LCS 200309A	1	0.295	25mL		2.93	2.93	3.00	97.8%
03/09/20	16:57	LCSD 200309A	1	0.294	25mL		2.92	2.92	3.00	97.4%
03/09/20	16:58	BA08034W16	1	0.002	25mL		0.07	0.07		
03/09/20	16:59	BA08034W16 MS	1	0.299	25mL		2.97	2.97		
03/09/20	16:59	BA08034W16 MSD	1	0.305	25mL		3.03	3.03		
03/09/20	16:59	CCV 4.0 200309A	1	0.399	25mL		3.95	3.95	4.00	98.7%
03/09/20	17:00	CCB 200309A	1	-0.001	25mL		0.04	0.04		

Standard Prep

	Ferrous Iron Standards		Prep'd By (Initials)		FJR		
Prep Date	06/28/18						
Exp Date	06/28/19						
Stock Label	Supplier	Batch Number	Exp Date	Aliquot from Stock	Final Volume	Solvent	Ferrous Iron Concentration
Ferrous Ammonium Sulfate	J.T.Baker	0000184592	08/21/20	0.351	250mL	5ml H2SO4 (0000167828) Diluted with water	200ug/L
Ferrous Sulfate	Mallinckrodt	Lot 5056 KDRX	NA	0.250	250mL	5ml H2SO4 (0000167828) Diluted with water	200ug/L
Ferrous Iron CCV/LCS/MS/ICV			Prep'd By (Initials)		FJR		
Prep Date	See Injection Log						
Exp Date	24 Hours						
Initial Standard Information	Supplier	Batch Number	Exp Date	Final Standard Information			
Ferrous Iron CCV	J.T.Baker	0000184592	06/14/19	500uL	25mL	Deionized water	4mg/L
Ferrous Iron ICV/LCS	Mallinckrodt	Lot 5056 KDRX	06/14/19	375uL	25mL	Deionized water	3mg/L
	Ferrous Iron Calibration Curve		Prep'd By (Initials)		FJR		
Prep Date	06/28/18						
Exp Date	06/28/19						
Final Standard Information							
Point Label	Supplier	Batch Number	Exp Date	Aliquot from Stock (mL)	Final Volume	Solvent	Ferrous Iron Concentration
CCB	J.T.Baker	0000184592	06/14/19	0	25mL	Deionized water	0mg/L
Ical 1	J.T.Baker	0000184592	06/14/19	0.125	25mL	Deionized water	1mg/L
Ical 2	J.T.Baker	0000184592	06/14/19	0.25	25mL	Deionized water	2mg/L
Ical 3	J.T.Baker	0000184592	06/14/19	0.5	25mL	Deionized water	4mg/L
Ical 4	J.T.Baker	0000184592	06/14/19	0.625	25mL	Deionized water	5mg/L
Ical 5	J.T.Baker	0000184592	06/14/19	1.25	25mL	Deionized water	10mg/L
ICV	Mallinckrodt	Lot 5056 KDRX	06/14/19	0.375	25mL	Deionized water	3mg/L

Reagent Prep

Reagent	Chemical Lot #	Chemical	Chemical Expiration Date	Amount	Date Prep
Colorizer	0747C107	1,10-phenanthroline	na	1.001	01/03/20
		10% HCL conc	na	enough to dissolve	01/03/20
Buffer	Z28B018	Ammonia Acetate	na	248	01/03/20
	2018071399	Glacial Acetic Acid	06/27/20	700mL	

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM
ARF No: 91607 SDG: 91607
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 03/10/20

Analyte	Calibration Verification									M
	True CCV1	Found 11:16	%R(1)	True ICV	Found 11:20	%R(1)	True CCV1	Found 11:43	%R(1)	
TOXN	3	3.0267	101	3	2.8526	95.1	3	2.9245	97.5	

(1) Control Limits: 90-110

ILM02.0

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM
ARF No: 91607 SDG: 91607
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 03/10/20

Analyte	Calibration Verification									M
	True CCV1	Found 12:17	%R(1)	True	Found	%R(1)	True	Found	%R(1)	
TOXN	3	2.8958	96.5							

(1) Control Limits: 90-110

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 91607 SDG: 91607

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	CCB 03/10/20 11:18	C	ICB 03/10/20 11:23	C	CCB 03/10/20 11:46	C	CCB 03/10/20 12:11	C	CCB 03/10/20 12:18	C	
TOXN	.100	U	.100	U	.100	U	.100	U	.1000	U	

AQ2 Report

Serial Number:	190170
Software Version:	2.1.0
Report Requested By:	Kyle S
Date & Time:	2020-03-10 12:42:58
Tray Number:	1
Tray Name:	200310A TOXN

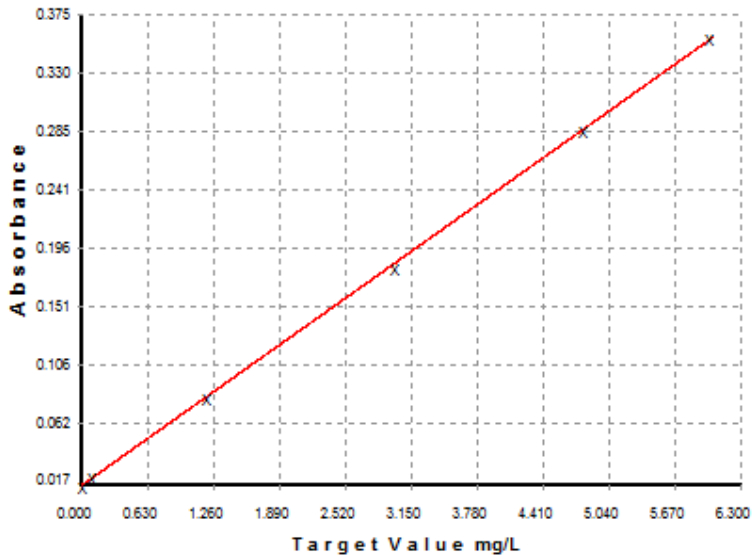
TOXN

Calibration Chart

Type	Absorbance	Calc mg/L	Target mg/L	% Error
S1	0.0171	0.0119	0.0000	
S90	0.0233	0.1231	0.1000	23.13
S91	0.0836	1.1919	1.2000	-0.67
S92	0.1827	2.9498	3.0000	-1.67
S93	0.2862	4.7846	4.8000	-0.32
S94	0.3569	6.0386	6.0000	0.64
S0	0.0173	0.0168	0.0000	

Polynomial Order:	1
Correlation Coefficient:	0.9999
Carryover(%):	0.1
Calibration equation:	y = bx + a
y =:	Concentration mg/L
x =:	Measured absorbance
a =:	-2.905866E-001
b =:	1.773458E+001
Date & Time:	2020-03-10 11:13:57

Calibration Graph



Cup	Type	ID	Result	Units	QC Pro	Raw Data	Auto Dil.	Man Dil.	User	Time/Date
	S1	Standard 1	0.0171			0.017055			KS	2020-03-10 11:00:11
	S90	Standard 90	0.0233			0.023328			KS	2020-03-10 11:02:28
	S91	Standard 91	0.0836			0.083595			KS	2020-03-10 11:04:46
	S92	Standard 92	0.1827			0.182716			KS	2020-03-10 11:07:04
	S93	Standard 93	0.2862			0.286176			KS	2020-03-10 11:09:22
	S94	Standard 94	0.3569			0.356885			KS	2020-03-10 11:11:39
	S0	Standard 0	0.0173			0.017332			KS	2020-03-10 11:13:57
	CCV	CCV	3.0267	mg/L		0.187051			KS	2020-03-10 11:16:15
	CCB	CCB	0.0198	mg/L		0.017502			KS	2020-03-10 11:18:33
3	U1	ICV TOXN	2.8526	mg/L		0.177236			KS	2020-03-10 11:20:51
4	U2	ICB TOXN	-0.0063	mg/L		0.016030			KS	2020-03-10 11:23:09
5	U3	200310A Blk TOXN	-0.0067	mg/L		0.016006			KS	2020-03-10 11:25:29
6	U4	200310A LCS TOXN	3.0023	mg/L		0.185678			KS	2020-03-10 11:27:47
7	U5	200310A LCSD TOXN	2.9089	mg/L		0.180407			KS	2020-03-10 11:30:05
8	U6	1 ppm NO3	0.9476	mg/L		0.069817			KS	2020-03-10 11:32:23
9	U7	BA08008W02 MS pH6.26 Thing 1	3.4889	mg/L		0.213117			KS	2020-03-10 11:34:42
10	U8	BA08008W02 MSD pH6.26	3.6651	mg/L		0.223050			KS	2020-03-10 11:37:00
11	U9	BA08008W02 pH6.26	0.1171	mg/L		0.022986			KS	2020-03-10 11:39:19
12	U10	BA08009W02 pH7.38	0.0779	mg/L		0.020776			KS	2020-03-10 11:41:37
	CCV	CCV	2.9245	mg/L		0.181287			KS	2020-03-10 11:43:56
	CCB	CCB	0.0228	mg/L		0.017671			KS	2020-03-10 11:46:14
13	U11	BA08010W02 pH8.22	0.1079	mg/L		0.022472			KS	2020-03-10 11:48:33
14	U12	BA08011W02 pH7.53	0.0690	mg/L		0.020277			KS	2020-03-10 11:50:52
15	U13	BA08012W02 pH7.72	0.1914	mg/L		0.027178			KS	2020-03-10 11:53:11
16	U14	BA08013W03 pH6.42	0.0643	mg/L		0.020010			KS	2020-03-10 11:55:30
17	U15	BA08014W02 pH7.72	0.0939	mg/L		0.021678			KS	2020-03-10 11:57:49
18	U16	BA08015W02 pH7.50	0.0880	mg/L		0.021349			KS	2020-03-10 12:00:07

19	U17	BA08016W02 pH7.80	3.6569	mg/L	0.222584	KS	2020-03-10 12:02:26
20	U18	BA08017W02 pH8.35	0.3207	mg/L	0.034467	KS	2020-03-10 12:04:44
21	U19	BA08018W02 pH7.35	2.2457	mg/L	0.143013	KS	2020-03-10 12:07:02
22	U20	BA08019W02 pH8.48	0.3770	mg/L	0.037645	KS	2020-03-10 12:09:22
	CCV	CCV	2.9057	mg/L	0.180231	KS	2020-03-10 12:10:30
	CCB	CCB	0.0069	mg/L	0.016777	KS	2020-03-10 12:11:26
23	U21	BA08020W02 pH7.60	1.2037	mg/L	0.084257	KS	2020-03-10 12:12:22
24	U22	BA08021W02 pH7.49	0.4157	mg/L	0.039828	KS	2020-03-10 12:13:19
25	U23	BA08022W03 pH7.24	0.8391	mg/L	0.063700	KS	2020-03-10 12:14:15
26	U24	BA08023W03 pH7.92	0.0787	mg/L	0.020825	KS	2020-03-10 12:15:11
27	U25	BA08034W15 pH7.46	0.4227	mg/L	0.040222	KS	2020-03-10 12:16:08
	CCV	CCV	2.8958	mg/L	0.179669	KS	2020-03-10 12:17:04
	CCB	CCB	0.0022	mg/L	0.016512	KS	2020-03-10 12:18:00

TOXN

High Point @ 6 mg/L

0.150 mL NO3 O2Si lot 880117-39577 exp: 2/21/20
25 mL DI Water

CCV @ 3.0 mg/L

0.075 mL NO3 O2Si lot 880117-39577 exp: 2/21/20
25 mL DI Water

ICV/LCS @ 3.0 mg/L

0.075 mL NO3 Inorganic Ventures lot N2-NOX667147-39510 exp: 10/23/19
25 mL DI Water

1 mg/L NO3

100 uL of High point and 500 uL of DI made directly into a sample cup

MS @ 0.73 mg/L NO2 and 2.5 mg/L NO3

0.060 mL NO2 Inorganic Ventures lot M2-NOX660562-39802 exp: 10/23/19 and
0.0625 mL NO3 Inorganic Ventures lot N2-NOX667147-39510 exp: 10/23/19
Final volume 25 mL of sample

Prep: 03/10/20
Exp: 03/17/20

KS

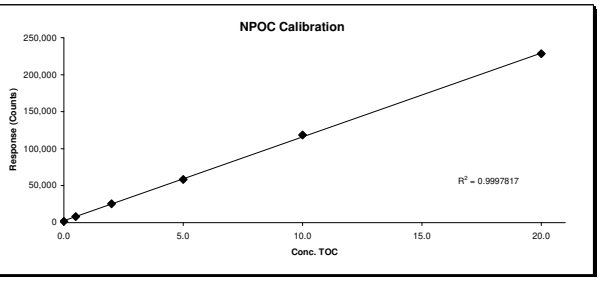
TOTAL ORGANIC CARBON

Method: WetChem | Units mg/L | Instrument: Tic Toc

Analyte: DOC | QCG: 200311A

Analyist: AR | Final Volume: 40mL

Date	Time	Appl ID	[TOC]	Raw	% Recovery
01/15/20	13:42	QC blank	0.00	1639	
01/15/20	14:25	Ical 1	0.50	8021	
01/15/20	15:01	Ical 2	2.00	25461	
01/15/20	15:37	Ical 3	5.00	58252	
01/15/20	16:13	Ical 4	10.00	118315	
01/15/20	16:49	Ical 5	20.00	228427	
01/16/20	15:11	ICB	0.08	906	
01/16/20	14:33	ICV	5.20	59018	104.0%



Date	Time	Appl ID	DF	Raw Result	SubSample Amount	Filter Blank Subtract	Calc Conc	Result	Range (mg/L)	QC True	% Recovery
2020-03-11	06:23 PM	55#1	1	3403	40mL	0.000	0	0.00	0.00		
2020-03-11	07:01 PM	CCV	1	57333	40mL	0.000	4.751	4.75	0.03	5.00	95.0%
2020-03-11	07:41 PM	CCB	1	785	40mL	0.000	0	0.00	0.00		
2020-03-11	08:19 PM	200311A LCS	1	58240	40mL	0.000	4.831	4.83	0.03	5.00	96.6%
2020-03-11	08:59 PM	200311A LCSD	1	53765	40mL	0.000	4.437	4.44	1.43	5.00	88.7%
2020-03-11	09:40 PM	BA07942W11	1	226646	40mL	0.000	19.937	19.94	1.17		
2020-03-11	10:17 PM	BA07944W09	1	3939	40mL	0.000	0.317	0.32	0.04		
2020-03-11	10:52 PM	BA08034W09	1	4839	40mL	0.000	0.397	0.40	0.01		
2020-03-11	11:28 PM	CCV	1	57788	40mL	0.000	4.791	4.79	0.04	5.00	95.8%
2020-03-12	12:08 AM	CCB	1	2094	40mL	0.000	0	0.00	0.00		

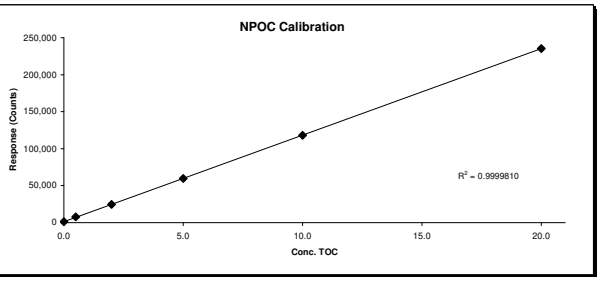
TOTAL ORGANIC CARBON

Method: WetChem | Units mg/L | Instrument: Tic Toc

Analyte: | QCG:

Analyist: | Final Volume: 40mL

Date	Time	Appl ID	[TOC]	Raw	% Recovery
10/31/19	19:20	QC blank	0.00	1130	
10/31/19	19:56	Ical 1	0.50	7935	
10/31/19	20:28	Ical 2	2.00	24866	
10/31/19	21:02	Ical 3	5.00	59510	
10/31/19	21:35	Ical 4	10.00	118117	
10/31/19	22:08	Ical 5	20.00	235471	
11/01/19	10:03	ICB	0.08	883	
11/01/19	10:39	ICV	10.40	121613	104.0%



Date	Time	Appl ID	DF	Raw Result	SubSample Amount	Filter Blank Subtract	Calc Conc	Result	Range (mg/L)	QC True	% Recovery
2020-02-12	08:59 PM	#1	1	1880	40mL	0.000	0	0.00	0.00		
2020-02-12	09:38 PM	CCV	1	59227	40mL	0.000	5.052	5.05	0.06	5.00	101.0%
2020-02-12	10:17 PM	CCB	1	2187	40mL	0.000	0.027	0.03	0.01		
2020-02-12	10:56 PM	200312A LCS	1	58856	40mL	0.000	5.019	5.02	0.03	5.00	100.4%
2020-02-12	11:36 PM	200312A LCSD	1	51847	40mL	0.000	4.402	4.40	2.38	5.00	88.0%
2020-02-13	12:17 AM	BA08034W10	1	210737	40mL	0.000	18.535	18.54	1.49		
2020-02-13	12:55 AM	BA08341W19	1	61225	40mL	0.000	5.364	5.36	0.51		
2020-02-13	01:33 AM	BA08301W02	1	125773	40mL	0.000	11.05	11.05	0.01		
2020-02-13	02:11 AM	BA08351W02	1	135522	40mL	0.000	11.909	11.91	0.10		
2020-02-13	02:49 AM	BA08370W10	1	332196	40mL	0.000	29.236	29.24	1.02		
2020-02-13	03:27 AM	CCV	1	54354	40mL	0.000	4.623	4.62	0.10	5.00	92.5%
2020-02-13	04:07 AM	CCB	1	800	40mL	0.000	0	0.00	0.00		

Name of Final Standard **TOC Calibration Curve** **Prep'd By (Initials)** **HH**

Prep Date **01/15/20**

Exp Date **02/12/20**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	20 uL	40 mL	**DI Water**	0.5 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	100 uL	40 mL	**DI Water**	2 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	250 uL	40 mL	**DI Water**	5 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	500 uL	40 mL	**DI Water**	10 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	1000 uL	40 mL	**DI Water**	20 ppm

Name of Final Standard **ICV (TOC)** **Prep'd By (Initials)** **AR**

Prep Date **01/16/20**

Exp Date **02/13/20**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
1000 PPM ICV TOC Intermediate	APPL Inc.	Prep: 2/11/19	1000 mg/L	**Prep: 2/11/19**	**02/13/20**	500 uL	40mL	**DI Water**	10 ppm

Name of Final Standard **CCV (TOC)** **Prep'd By (Initials)** **AR**

Prep Date **See Data**

Exp Date **1 year**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	200 uL	40 mL	**DI Water**	5 ppm

Name of Final Standard **TOC LCS/LCSD** **Prep'd By (Initials)** **AR**

Prep Date **See Data**

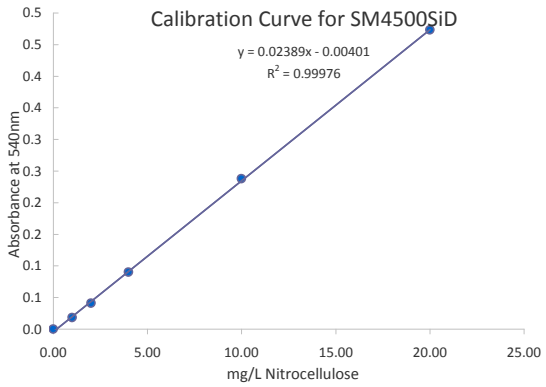
Exp Date **1 year**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	ULTRA Scientific	IQC-106-5	1000 mg/L	**CR-0328-37639**	**02/28/19**	200 uL	40 mL	**DI Water**	5 ppm

Silica | Rev 2, 04/05/19 controlled copy

Method SM4500SiD | Units mg/L | Instrument: Genisis Spectrometer
Analyte Silica | QCG: 200309A | Wavelength: 410 nm
Analyist FJR | Final Volume: 25mL | Units: mg/L

Date	Time	Appl ID	[SiO2]	Absorbance	% Recovery
03/09/20	14:59	ICB	0.00	0.000	
03/09/20	15:00	Ical 1	1.00	0.018	92.1%
03/09/20	15:01	Ical 2	2.00	0.041	94.2%
03/09/20	15:01	Ical 3	4.00	0.090	102.5%
03/09/20	15:02	Ical 4	10.00	0.238	101.3%
03/09/20	15:03	Ical 5	20.00	0.473	99.8%
03/09/20	15:04	ICV	4.00	0.099	107.8%
03/09/20	15:04	ICB	0.00	-0.001	



Slope	0.023892999
Intercept	-0.00400683
Coefficient of Determination	0.999760897

Algortithm Check:	Appl ID	Absorbance	Result
	200309A 4 LCS	0.091	3.98

Result = (Absorbance-Raw Blk-Intercept)/ Slope

Test:	03/09/20	FJR	3.980

	Date	Time	Appl ID	DF	Raw Result	Sample Amount	Raw BLK	Calc Conc	Result	QC True	% Recovery
id	03/09/20	14:59	ICB	1	0.000	25.0mL		0.17	0.17		
id	03/09/20	15:00	Ical 1	1	0.018	25.0mL		0.92	0.92	1.00	92.1%
id	03/09/20	15:01	Ical 2	1	0.041	25.0mL		1.88	1.88	2.00	94.2%
id	03/09/20	15:01	Ical 3	1	0.094	25.0mL		4.10	4.10	4.00	102.5%
id	03/09/20	15:02	Ical 4	1	0.238	25.0mL		10.13	10.13	10.00	101.3%
id	03/09/20	15:03	Ical 5	1	0.473	25.0mL		19.96	19.96	20.00	99.8%
id	03/09/20	15:04	ICV	1	0.099	25.0mL		4.31	4.31	4.00	107.8%
id	03/09/20	15:04	ICB	1	-0.001	25.0mL		0.13	0.13		
	03/09/20	15:05	200309A CCV1 4	1	0.235	25mL		10.00	10.00	10.00	100.0%
	03/09/20	15:06	200309A CCB	1	-0.001	25mL		0.13	0.13		
	03/09/20	15:07	200309A BLK	1	-0.002	25mL		0.08	0.08		
	03/09/20	15:07	200309A 4 LCS	1	0.091	25mL		3.98	3.98	4.00	99.4%
	03/09/20	15:08	200309A 4 LCSD	1	0.092	25mL		4.02	4.02	4.00	100.5%
	03/09/20	15:09	BA07942W14 T	5	0.189	25mL		8.08	40.39		
	03/09/20	15:09	BA07944W13 T	5	0.225	25mL		9.58	47.92		
	03/09/20	15:10	BA08034W18 T	5	0.240	25mL		10.21	51.06		
	03/09/20	15:10	BA08034W18 T MS	5	0.332	25mL		14.06	70.31		
	03/09/20	15:11	BA08034W18 T MSD	5	0.333	25mL		14.10	70.52		
	03/09/20	15:11	BA07942W14 D	5	0.195	25mL		8.33	41.65		
	03/09/20	15:12	BA07944W13 D	5	0.201	25mL		8.58	42.90		
	03/09/20	15:12	BA08034W17 D	5	0.218	25mL		9.29	46.46		
	03/09/20	15:13	BA08034W17 D MS	5	0.309	25mL		13.10	65.50		
	03/09/20	15:13	BA08034W17 D MSD	5	0.311	25mL		13.18	65.92		
	03/09/20	15:13	200309ACCV1 3	1	0.092	25mL		4.02	4.02	4.00	100.5%
	03/09/20	15:14	200309A CCB	1	-0.001	25mL		0.13	0.13		

Silica Standard Prep

Spike Amount (uL)*	Final Volume (mL)	Final Concentration (ppm)
25	25	1
50	25	2
100 (CCV2)	25	4
250 (CCV1)	25	10
500	25	20

*Curve Spiked with 1000 ppm SiO_2 o2si lot 1098096-37186 (exp: 4/29/18)

ICV/LCS = 4ppm SiO_2
100 uL of 1000 ppm SiO_2 Ultra Scientific Lot P01064-32895 (exp: 11/30/19) brought up to 25mL with DI

MS = 4ppm SiO_2
100 uL of 1000 ppm SiO_2 Ultra Scientific Lot P01064-32895 (exp: 11/30/19) brought up to 25mL with sample

Prep: 10/25/19
Exp: 10/25/19

Initials: FJR

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

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

Data Validatable Report

April 24, 2020

AECOM
1001 Bishop Street, Suite 1600
Honolulu, Hawaii 96813

Attn: Margie Pascua

Title: Report of Data: Case 91638 Revision

Project: 60571032 CV18F0126 Red Hill Fuel Storage, HI

Contract #: Prime contract # for DoD: NAVY CLEAN N62742-17-F-1800, CV18F0126
Subcontract: 18S-22209-HI27

Dear Ms. Pascua:

Two water samples were received March 11, 2020. Revised written results for the requested analyses are being provided on this April 24, 2020. **Revision:** For the EPA 8015C, the extraction method was corrected to reflect the extraction bench sheet. For the EPA 8270D analysis, the raw data was replaced to match the extraction bench sheet and the chain of custody. For the anions, the form one was revised to include DL/LOD/LOQs. For the DOC analysis, the form one was replaced to report only the primary result. **Revision 2:** The EPA 9060A DOC results were switched between the sample and the sample duplicate in the original report. In addition the EPA 9060A raw data was missing from the original report. For EPA 8260-GRO the linear regression and ICV summary pages were missing from the original report.

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

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

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. These test results meet Paula McCartney .C and DoD QSM. Release of the hard copy has been authorized by the :r designee, as verified by the following signature.

for PM

Paula McCartney, Laboratory Director
APPL, Inc.

PM/lac
Enclosure
cc: File

Data Validation Package
for
60571032 CV18F0126 Red Hill Fuel Storage
APPL SDG 91638
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CASE NARRATIVE

Case Narrative

ARF: 91638

Project: 60571032 CV18F0126 Red Hill Fuel Storage. HI

Sample Receipt Information:

Two water samples were received March 6, 2020, at 5.8°C. The sample group was assigned Analytical Request Form (ARF) number 91638.

Sample Preparation and Analysis Information:

For the EPA 8011 analysis, the samples were extracted according to APPL SOP method MWE012.

For the EPA 8015B analysis, the sample was extracted according to EPA method 3520C. The sample extracts were silica gel cleaned according to APPL's SOP CLN004.

For the EPA 8270D Phenol analysis, the samples were extracted according to EPA method 3520C.

For the EPA 8270D SIM analysis, the samples were extracted according to EPA method 3520C.

For the APPL SOP ANA2MEE analysis, the samples were extracted according to EPA method 3535.

For the EPA 8260B analysis, the samples were purged according to EPA method 5030B.

For the RSK-175 analysis, the samples were allowed to equilibrate for 10 minutes at 40°C and a portion of the headspace was analyzed.

For the EPA 6010C analysis, the sample was digested according to EPA method 3010A.

For the EPA 9060A, 300.0, 353.2, SM 2320B, SM 4500-SiD and SM 3500FeB analyses, the sample was prepared according to the methods.

Only the portion of the injection log relative to these samples is included. A full sequence log is available upon request. Measurement uncertainty can be reported upon request.

Analytical Exceptions, Deviations and Abnormalities.

APPL SOP ANA2MEE: In the MS/MSD performed on sample ERH1029, The RPD exceeded the 20% limit.

EPA 8260B: In the MS/MSD performed on sample ERH1029, Gasoline recovered above the upper control limit. The client was notified.

EPA 300: Samples arrived out of HT for nitrate, they were first analyzed on 03/14/20.

SDG	Received	Client ID	APPL ID	Collected DateTime	Matrix	Method	Method Description
91638	03/11/20	ERH1028	BA08340	03/09/20 7:55:00 AM	WATER	8011	EPA 8011
91638	03/11/20	ERH1028	BA08340	03/09/20 7:55:00 AM	WATER	EPA 8260B	EPA 8260B BTEX & 1,2-DCA WATER
91638	03/11/20	ERH1028	BA08340	03/09/20 7:55:00 AM	WATER	EPA 8260-GAS	EPA 8260 with GAS
91638	03/11/20	ERH1028	BA08340	03/09/20 7:55:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
91638	03/11/20	ERH1028	BA08340	03/09/20 7:55:00 AM	WATER	RSK 175	METHANE BY RSK 175
91638	03/11/20	ERH1029	BA08341	03/09/20 8:45:00 AM	WATER	SM 2320B	Wetlab 2320B - Water
91638	03/11/20	ERH1029	BA08341	03/09/20 8:45:00 AM	WATER	EPA 300.0	Wetlab 300.0 - Water
91638	03/11/20	ERH1029	BA08341	03/09/20 8:45:00 AM	WATER	EPA 300.0	Wetlab 300.0 - Water
91638	03/11/20	ERH1029	BA08341	03/09/20 8:45:00 AM	WATER	SM3500FeB	Ferrous Iron
91638	03/11/20	ERH1029	BA08341	03/09/20 8:45:00 AM	WATER	EPA 353.2	EPA 353.2 - WATER
91638	03/11/20	ERH1029	BA08341	03/09/20 8:45:00 AM	WATER	6010C/3010A	EPA 6010C TOTAL
91638	03/11/20	ERH1029	BA08341	03/09/20 8:45:00 AM	WATER	8011	EPA 8011
91638	03/11/20	ERH1029	BA08341	03/09/20 8:45:00 AM	WATER	EPA 8260B	EPA 8260B BTEX & 1,2-DCA WATER
91638	03/11/20	ERH1029	BA08341	03/09/20 8:45:00 AM	WATER	EPA 8270D	EPA 8270D WATER
91638	03/11/20	ERH1029	BA08341	03/09/20 8:45:00 AM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
91638	03/11/20	ERH1029	BA08341	03/09/20 8:45:00 AM	WATER	EPA 8015B-eHL	EPA 8015B TPH WATER L-L SGC
91638	03/11/20	ERH1029	BA08341	03/09/20 8:45:00 AM	WATER	EPA 8015B-eHL	EPA 8015B TPH LIQ-LIQ
91638	03/11/20	ERH1029	BA08341	03/09/20 8:45:00 AM	WATER	SW846 9060A	9060A DOC
91638	03/11/20	ERH1029	BA08341	03/09/20 8:45:00 AM	WATER	EPA 8260-GAS	EPA 8260 with GAS
91638	03/11/20	ERH1029	BA08341	03/09/20 8:45:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
91638	03/11/20	ERH1029	BA08341	03/09/20 8:45:00 AM	WATER	RSK 175	METHANE BY RSK 175
91638	03/11/20	ERH1029	BA08341	03/09/20 8:45:00 AM	WATER	8270D-SIM	EPA 8270D SIM LIQ-LIQ
91638	03/11/20	ERH1029	BA08341	03/09/20 8:45:00 AM	WATER	SM 4500-Si D	Silica W
91638	03/11/20	ERH1029	BA08341	03/09/20 8:45:00 AM	WATER	SM 4500-Si D	SILICA W - DISSOLVED
91638	03/11/20	ERH1029	BA08341	03/09/20 8:45:00 AM	WATER	SW846 9060A	9060A TOC

Abbreviations and Flags

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

SAMPLE RECORDS MANAGEMENT

CHAIN OF CUSTODY,

ARF, CRF, AND

CLIENT COMMUNICATION

APPL - Analysis Request Form 91638

Client: **AECOM**
Address: **1001 Bishop Street, Suite 1600**
Honolulu, HI 96813
Attn: **Margie Pascua**
Phone: **808-356-5373** Fax: **808-523-8950**
Job: **60571032 CV18F0126 Red Hill Fuel Storage**
PO #: **18S-22209-HI27 PO# 102604**
Chain of Custody (Y/N): **Y** # **172,173,174**
RAD Screen (Y/N): **Y** pH (Y/N): **Y**
Turn Around Type: **1 WEEK**

Received by: **RBR**
Date Received: **03/11/20** Time: **10:15**
Delivered by: **FEDEX**
Shuttle Custody Seals (Y/N): **Y** Time Zone: **-10**
Chest Temp(s): **5.4,3.4,2.4°C**
Color: **VFRG/F-Pi/SF-BIRe**
Samples Chilled until Placed in Refrig/Freezer: **Y**
Project Manager: **Libby Cheesebor**
QC Report Type: **DVP4DOD/EQUIS/HI**
Due Date: **03/18/20**

Comments:
PM: login and F1s to Margie.Pascua@aecom.com
AN: 7 day TAT for Form 1s; 21 day TAT for PKG STYLE 1; DOD v5.1; DOD Forms: LOD database
Wetlab: NO3, CL, SO4, BR, & F by EPA 300 and NO3-N & NO2-N by 353.2
report MS/MSD/DUPs when AECOM sample used
TPH D & O both with and w/o SGC, reverse surrogate for the SGC; analyze SGC if detections
RSK: Methane only; 8011: EDB only; $87DC53W5: report phenol; PAH: short list
MS/MSD on Sample BA08341 is for 8260, BTEX, GRO, 8011, 8015, SIM, 8270, & 2-MEE only
FR: email ftp info to Margie, Stella, trommelfanger@lab-data.com
EDD: AECOM EQUIS EDD 2.5.3 Red Hill 87DMEE->3535A to Margie.Pascua@aecom.com & jecklund@lab-data.com

Sample Distribution:
GC: 2-$8011, 1-$87DC53W5, 1-$87DMEEW5, 1-$DOC53W5LIQ, 1-$SIM53LIQ51
Extractions: 2-_MWE012, 1-_LIQ003, 1-_LIQ005, 1-_MWE2MEE
VOA: 2-$86BTOTXDCAW, 2-$GASBL, 2-$GRO86BW, 2-$RSKMETH
Metals: 1-$61CDOD5W(Ca,Mg,Mn,K,Na)
Wetlab: 1-$232W(HCO3,CO3,ALK), 1-$300W, 1-$35FE, 1-$35OF, 1-$DOCW53, 1-$SIO2, 1-$SIO2D, 1-$TOCW53
Other: 1-_M3010

Charges:

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

	Client ID		APPL ID	Sampled	Analyses Requested
1.	ERH1028	LCSD	BA08340W	03/09/20 07:55	$8011, $86BTOTXDCAW, $GASBL, $GRO86BW, $RSKMETH -- See Comments
2.	ERH1029	MS/MSD	BA08341W	03/09/20 08:45	$232W(HCO3,CO3,ALK), $300W, $35FE, $35OF, $61CDOD5W(Ca,Mg,Mn,K,Na), $8011, $86BTOTXDCAW, $87DC53W5, $87DMEEW5, $DOC53W5LIQ, $DOCW53, $GASBL, $GRO86BW, $RSKMETH, $SIM53LIQ51, $SIO2, $SIO2D, $TOCW53 -- See Comments

APPL Sample Receipt Form

ARF# **91638**

Sample	Container Type	Count	p
BA08340	[13] VOAs - HCL	4	NA
	[15] VOAs - NP	3	NA
BA08341	[3] PL 250mL	1	NA
	[4] PL 125mL	2	NA
	[6] PL 500mL - HNO3	1	1.3
	[10] PL 250mL - H2SO4	1	1.6
	[13] VOAs - HCL	8	NA
	[15] VOAs - NP	9	NA
	[17] Amber Liter	12	NA
	[32] Clear VOA - H2SO4	4	NA
	[38] 250mL brn poly, HCl prsvd	1	1.3
	[40] 500mL Amber, unprsrvd	9	NA

Sample	Container Type	Count	p

9163 8

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com
Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

CHAIN OF CUSTODY RECORD

C.O.C. 172

Report to: PLEASE PRINT

Company Name: AECOM Phone: 808-356-5373

Address: 1001 Bishop St, Suite 1600
Honolulu, HI 96813 Fax: 808-523-8950

Attn: Margie Pascua

Email: margie.pascua@aecom.com

Invoice to: PLEASE PRINT

Company Name: AECOM Phone: 808-529-7249

Address: 1001 Bishop St, Suite 1600
Honolulu, HI 96813 Fax: 808-523-8950

Attn: Mary Basano

Email: mary.basano@aecom.com; usapimaging@aecom.com

Project Name/Number: CV18F0126 / 60571032

Purchase Order Number: 102604

Sampler (Print): BM, CE, DH

Sampler (Signature): EB for BM, CE, DH

Date Shipped: MM/DD/YY

Carrier: FedEx

Waybill No.:

Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil	8260C BTEX,TPH-g	8260C DCA 8011 EDB	8015C TPH-d/o	3630/8015C TPH-d/o w/ SGT	8270DSIM PAHs short list	8270D Phenol, [illegible]	8270D 2-(2-methoxy ethoxy)-ethanol	RSK175M Methane	SM3500-Fe Ferrous Iron	353.2 Nitrate-Nitrite N	SM2320B Alkalinity 300.0 Nitrate,Sulfate,Chloride	300.0 Bromide/Fluoride 8010 Total Ca,Mg,Mn,K,Na SM4500 Total & Dissolved Silica	9060A TOC	
ERH1028	Trip Blank	03/09/20	0755	HST	7	X			X	X						X					
ERH1029	RHMW13-04	03/09/20	0845	HST	26	X			X①	X①	X①	X*	X①	X①	X①	X	X	X	X	X	X	① MS/MSD: see other coolers

*Analyze TPH w/SGT only if TPH-d/o detected.

TPH-d/o & PAHs need liquid-liquid extraction.

EB 03/10/20

Shuttle Temperature: 5.0/5.1 11.1 @ 10.1 3.0/3.1 3.0/2.1

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

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

Relinquished by sampler: AECOM Estelle BONNY	Date: 03/10/20	Time: 1230	Received by:	Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date: 3.11.20	Time: 1015	Received at lab by:

See page 2 for Container Preservative and Sampling Information

91635

CHAIN OF CUSTODY RECORD

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com
Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

C.O.C. 174

Report to: PLEASE PRINT	Invoice to: PLEASE PRINT
Company Name: AECOM Phone: 808-356-5373	Company Name: AECOM Phone: 808-529-7249
Address: 1001 Bishop St, Suite 1600 Honolulu, HI 96813 Fax: 808-523-8950	Address: 1001 Bishop St, Suite 1600 Honolulu, HI 96813 Fax: 808-523-8950
Attn: Margie Pascua	Attn: Mary Basano
Email: margie.pascua@aecom.com	Email: mary.basano@aecom.com; usapimaging@aecom.com

Project Name/Number	Sampler (Print)
CV18F0126 / 60571032	BM, CE, DH
Purchase Order Number	**Sampler (Signature)**
102604	EB for BM, CE, DH

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	8260C BTEX,TPH-g	8260C DCA 8011 EDB	8015C TPH-d/o	3630/8015C TPH-d/o w/ SGT	8270DSIM PAHs short list	8270D Phenol, TICs	8270D 2-(2-methoxyethoxy)-ethanol	RSK175M Methane	SM3500-Fe Ferrous Iron	353.2 Nitrate-Nitrite N	SM2320B Alkalinity 300.0 Nitrate,Sulfate,Chlbride	300.0 Bromide/Fluoride 6010 Total Ca,Mg,Mn,K,Na SM4500 Total & Dissolved Silica	9060A TOC	
ERH1029	RHMW13-04	03/09/20	~~0845~~ 0845	HST	11	X			X ⑥	X ⑥	X ⑥	X ⑥	X ⑥	X ⑥	X ⑥	X	X	X	X	X	X	See other containers
																						① MS/MSD

EB 03/10/20

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*Analyze TPH w/SGT only if TPH-d/o detected.

TPH-d/o & PAHs need liquid-liquid extraction.

Date Shipped: MM/DD/YY
Carrier: FedEx
Waybill No.:
Comments:

Shuttle Temperature:

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

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

Relinquished by sampler: AECOM Estelle Banuy	Date 03/10/20	Time 1230	Received by:	Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date 3/11/20	Time 1015	Received at lab by:

See page 2 for Container Preservative and Sampling Information

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com

Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

CHAIN OF CUSTODY RECORD

C.O.C. 173

Report to: PLEASE PRINT

Company Name: AECOM Phone: 808-356-5373

Address: 1001 Bishop St, Suite 1600
Honolulu, HI 96813
Fax: 808-523-8950

Attn: Margie Pascua

Email: margie.pascua@aecom.com

Invoice to: PLEASE PRINT

Company Name: AECOM Phone: 808-529-7249

Address: 1001 Bishop St, Suite 1600
Honolulu, HI 96813
Fax: 808-523-8950

Attn: Mary Basano

Email: mary.basano@aecom.com; usapimaging@aecom.com

Project Name/Number: CV18F0126 / 60571032

Purchase Order Number: 102604

Sampler (Print): BM, CE, DH

Sampler (Signature): EB for BM, CE, DH

Date Shipped: MM/DD/YY

Carrier: FedEx

Waybill No.:

Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil	8260C BTEX,TPH-g	8260C DCA 8011 EDB	8015C TPH-d/o	3630/8015C TPH-d/o w/ SGT	8270DSIM PAHs short list	8270D Phenol, [illegible]	8270D 2-(2-methoxy ethoxy)-ethanol	RSK175M Methane	SM3500-Fe Ferrous Iron	353.2 Nitrate-Nitrite N	SM2320B Alkalinity 300.0 Nitrate,Sulfate,Chloride	300.0 Bromide/Fluoride 6010 Total Ca,Mg,Mn,K,Na SM4500 Total & Dissolved Silica	9060A TOC	BTEX
EPH1029	RHMW13-04	03/09/20	0845	HST	11	X			X (6)	X (6)	X (6)	X*	X (6)	X (6)	X (6)	X	X	X	X	X	X	X

See other coolers

(6) MS/MSD

*Analyze TPH w/SGT only if TPH-d/o detected.

TPH-d/o & PAHs need liquid-liquid extraction.

EB 03/10/20

Page 13 of 740

Shuttle Temperature:

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

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

Relinquished by sampler: AECOM	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Estela BONNY	03/10/20	1230					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					3-11-20	1015	

See page 2 for Container Preservative and Sampling Information

COOLER RECEIPT FORM **ARF: 91638**

1) Project: 60571032 CV18F0126 Red Hill Fuel Storage Date Received: 03/11/20

2) Coolers: Number of Coolers: 3

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

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

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

6) YES Were cooler temperatures acceptable?

7) Serial number of certified NIST thermometer use R1 CF: +0.4°C

8) Cooler temp(s): In °C. Thermometer Temp / Corrected Temp

1: 5.0/5.4	2: 3.0/3.4	3: 2.0/2.4	4:	5:	6:
7:	8:	9:	10:	11:	12:

Chain of custody:

9) YES Was a chain of custody received?

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

Sample Labels:

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

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

Sample Containers:

13) YES Were all containers sealed in separate bags?

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

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

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

17) ~~YES~~ NA Were bubbles present in volatile samples?
If yes, the following were received with air bubbles:
Larger than a pea: BA08340 W03-W04
Smaller than a pea:

Preservation Hold time:

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

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

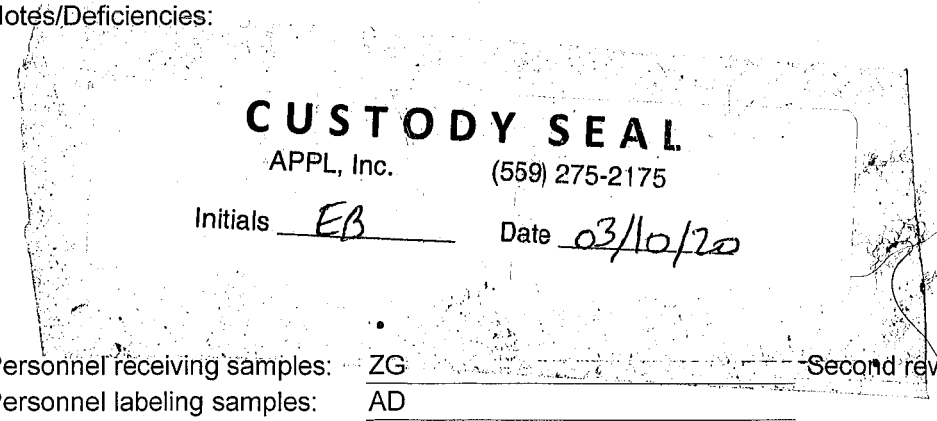
20) Yes Was the pH of acid preserved non-VOA samples < 2?

21) NA Was the pH of the "basic" preserved samples for Cyanide > 12, Sulfide >9, Hexchrom >9?

22) NO Were unpreserved VOA Vials received?

23) NA Are unpreserved VOA vials noted in the ADD TEST FIELD on the ARF?
pH strip lot number: HC982588
Lab notified if pH was not adequate:

Notes/Deficiencies:



Personnel receiving samples: ZG Second reviewer: AA
Personnel labeling samples: AD
Project manager notified: ZG Date/Time of notification 03/11/20
Name of client notified: Date/Time of notification

SAMPLE RESULTS

EPA 8011

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Pascua

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91638

Sample ID: ERH1028

APPL ID: BA08340

Sample Collection Date: 03/09/20

QCG: #8011-200316A-250828

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8011	EDB	0.019 U	0.02	0.019	0.010	ug/L	03/16/20	03/16/20
8011	SURROGATE: 1,3-DIBROMOPROPANE	89.2	70-132			%	03/16/20	03/16/20

Quant Method:	8010317A.M
Run #:	0228168
Instrument:	Herbie
Sequence:	200228
Dilution Factor:	1
Initials:	SSE

Printed: 03/17/20 11:46:51 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8011

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91638

Sample ID: ERH1029

APPL ID: BA08341

Sample Collection Date: 03/09/20

QCG: #8011-200316A-250828

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8011	EDB	0.019 U	0.02	0.019	0.010	ug/L	03/16/20	03/16/20
8011	SURROGATE: 1,3-DIBROMOPROPANE	89.2	70-132			%	03/16/20	03/16/20

Quant Method:	8010317A.M
Run #:	0228169
Instrument:	Herbie
Sequence:	200228
Dilution Factor:	1
Initials:	SSE

Printed: 03/17/20 11:46:51 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPH WATER L-L SGC

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91638

Sample ID: ERH1029

APPL ID: BA08341

Sample Collection Date: 03/09/20

QCG: #DOC53-200312A1-250875

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	03/12/20	03/17/20
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	03/12/20	03/17/20
EPA 8015B-e	SURROGATE: (R) DECANOIC ACID (S)	0.0	0-1			%	03/12/20	03/17/20
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	107	60-142			%	03/12/20	03/17/20
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	90.5	56-125			%	03/12/20	03/17/20

Quant Method:	DOC0310.M
Run #:	317013
Instrument:	Apollo
Sequence:	200317
Dilution Factor:	1
Initials:	SSE

Printed: 04/02/20 1:05:43 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPH LIQ-LIQ

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91638

Sample ID: ERH1029

APPL ID: BA08341

Sample Collection Date: 03/09/20

QCG: #DOC53-200312A-250873

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	220 J	320	300.0	150.0	ug/L	03/12/20	03/16/20
EPA 8015B-e	OIL (C24-C40)	240 ++J	320	300.0	150.0	ug/L	03/12/20	03/16/20
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	109	60-142			%	03/12/20	03/16/20
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	89.9	56-125			%	03/12/20	03/16/20

J = Estimated value.
++(T4I) The analyst has noted that the chromatogram of this sample includes a dominant peak(s) which is not indicative of petroleum hydrocarbons.

Quant Method:	DOC0310.M
Run #:	312161
Instrument:	Apollo
Sequence:	200312
Dilution Factor:	1
Initials:	SSE

Printed: 04/02/20 1:05:43 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91638

Sample ID: ERH1029

APPL ID: BA08341

Sample Collection Date: 03/09/20

QCG: #87DC5-200312A-250860

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	03/12/20	03/17/20
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHENO	82.6	43-140			%	03/12/20	03/17/20
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	69.1	44-119			%	03/12/20	03/17/20
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	58.4	19-119			%	03/12/20	03/17/20
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	68.4	44-120			%	03/12/20	03/17/20
EPA 8270D	SURROGATE: PHENOL-D6 (S)	63.7	10-115			%	03/12/20	03/17/20
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	91.8	50-134			%	03/12/20	03/17/20

Quant Method: Y1219.M
Run #: 0207Y231
Instrument: Yoda
Sequence: Y200207
Dilution Factor: 1
Initials: MA

Printed: 03/18/20 9:26:35 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D SIM LIQ-LIQ

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91638

Sample ID: ERH1029

APPL ID: BA08341

Sample Collection Date: 03/09/20

QCG: #SIM53-200312A-250838

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	03/12/20	03/16/20
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	03/12/20	03/16/20
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	03/12/20	03/16/20
8270D-SIM	SURROGATE: 2-METHYLNAPHTHALEN	93.9	39-114			%	03/12/20	03/16/20
8270D-SIM	SURROGATE: FLUORANTHENE-D10 (S	101	58-120			%	03/12/20	03/16/20

Quant Method: L0204.M
Run #: 0204L287
Instrument: Linus
Sequence: L200204
Dilution Factor: 1
Initials: MA

Printed: 03/17/20 1:04:33 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91638

Sample ID: ERH1029

APPL ID: BA08341

Sample Collection Date: 03/09/20

QCG: #87DME-200313A-250841

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	03/13/20	03/16/20

Quant Method:	YMEE0122.M
Run #:	0122Y082
Instrument:	Yoda
Sequence:	Y200122M
Dilution Factor:	1
Initials:	LPO

Printed: 03/17/20 1:09:47 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX & 1,2-DCA WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91638

Sample ID: ERH1028

APPL ID: BA08340

Sample Collection Date: 03/09/20

QCG: #86BTO-200313BL-250789

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	03/14/20	03/14/20
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	03/14/20	03/14/20
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	03/14/20	03/14/20
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	03/14/20	03/14/20
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	03/14/20	03/14/20
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	95.3	81-118			%	03/14/20	03/14/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	91.0	85-114			%	03/14/20	03/14/20
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	101	80-119			%	03/14/20	03/14/20
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	99.6	89-112			%	03/14/20	03/14/20

Quant Method: L0312W.M
Run #: 0313L46
Instrument: Loki
Sequence: 200312
Dilution Factor: 1
Initials: DPO

Printed: 03/16/20 11:54:42 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX & 1,2-DCA WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91638

Sample ID: ERH1029

APPL ID: BA08341

Sample Collection Date: 03/09/20

QCG: #86BTO-200313BL-250789

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	03/14/20	03/14/20
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	03/14/20	03/14/20
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	03/14/20	03/14/20
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	03/14/20	03/14/20
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	03/14/20	03/14/20
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	100	81-118			%	03/14/20	03/14/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	96.5	85-114			%	03/14/20	03/14/20
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	105	80-119			%	03/14/20	03/14/20
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	103	89-112			%	03/14/20	03/14/20

Quant Method: L0312W.M
Run #: 0313L47
Instrument: Loki
Sequence: 200312
Dilution Factor: 1
Initials: DPO

Printed: 03/16/20 11:54:42 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91638

Sample ID: ERH1028

APPL ID: BA08340

Sample Collection Date: 03/09/20

QCG: #GRO86-200313BL-250790

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	03/14/20	03/14/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	91.0	85-114			%	03/14/20	03/14/20

Quant Method: LGAS0312.M
Run #: 0313L46
Instrument: Loki
Sequence: 200312
Dilution Factor: 1
Initials: DPO

Printed: 03/16/20 12:25:20 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91638

Sample ID: ERH1029

APPL ID: BA08341

Sample Collection Date: 03/09/20

QCG: #GRO86-200313BL-250790

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	03/14/20	03/14/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	96.5	85-114			%	03/14/20	03/14/20

Quant Method: LGAS0312.M
Run #: 0313L47
Instrument: Loki
Sequence: 200312
Dilution Factor: 1
Initials: DPO

Printed: 03/16/20 12:25:20 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91638

Sample ID: ERH1028

APPL ID: BA08340

Sample Collection Date: 03/09/20

QCG: #RSKME-200317A-250834

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	03/17/20	03/17/20

Quant Method:	RSK0311.M
Run #:	0317R05
Instrument:	Rocky
Sequence:	200311
Dilution Factor:	1
Initials:	CMO

Printed: 03/17/20 10:46:23 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91638

Sample ID: ERH1029

APPL ID: BA08341

Sample Collection Date: 03/09/20

QCG: #RSKME-200317A-250834

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	03/17/20	03/17/20

Quant Method:	RSK0311.M
Run #:	0317R06
Instrument:	Rocky
Sequence:	200311
Dilution Factor:	1
Initials:	CMO

Printed: 03/17/20 10:46:23 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

Metals Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91638

Sample ID: ERH1029

APPL ID: BA08341

Sample Collection Date: 03/09/20

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	CALCIUM (CA)	10600	1000	75.0	27.5	ug/L	1	03/13/20	03/18/20
6010C/3010A	MAGNESIUM (MG)	11800	500	30.0	12.9	ug/L	1	03/13/20	03/18/20
6010C/3010A	MANGANESE (MN)	4.8 J	10.0	4.00	1.23	ug/L	1	03/13/20	03/18/20
6010C/3010A	POTASSIUM (K)	2000 J	3000	500.0	220.0	ug/L	1	03/13/20	03/18/20
6010C/3010A	SODIUM (NA)	40700	5000	500.0	111.1	ug/L	1	03/13/20	03/18/20

J = Estimated value.

Printed: 03/26/20 6:51:27 PM

APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Loc ID: RHMW13-04

Sample ID: ERH1029

APPL ID: BA08341

Sample Collection Date: 03/09/20

ARF: 91638

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	CHLORIDE	46.6	10.0	2.00	0.80	mg/L	10	03/14/20	03/14/20
EPA 300.0	SULFATE	11.3	10.0	2.00	0.90	mg/L	10	03/14/20	03/14/20
EPA 300.0	BROMIDE	0.33 J	0.5	0.16	0.05	mg/L	1	03/14/20	03/14/20
EPA 300.0	FLUORIDE	0.19	0.1	0.09	0.08	mg/L	1	03/14/20	03/14/20
EPA 300.0	NITRATE	1.8	0.5	0.18	0.04	mg/L	1	03/14/20	03/14/20

J = Estimated value.

Printed: 04/06/20 9:08:22 AM

APPL-F1-SC-NoMC-REG MDLs

Wetlab Results

ARF: 91638

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Pascua

APPL ID: BA08341 -Client Sample ID: ERH1029 -Sample Collection Date: 03/09/20 Project: 60571032 CV18F0126 R

Method	Analyte	Result	RL	MDL	Units	Prep Date	Analysis Date
EPA 353.2	NITRATE-NITRITE-N	0.43	0.10	0.028	mg/L	03/13/20	03/13/20
SM 2320B	BICARBONATE AS CACO	73.3	2.0	0.85	mg/L	03/18/20	03/18/20
SM 2320B	CARBONATE AS CACO3	0.85 U	2.0	0.85	mg/L	03/18/20	03/18/20
SM 2320B	TOTAL ALKALINITY AS C	73.3	2.0	0.85	mg/L	03/18/20	03/18/20
SM 4500-Si D	DISSOLVED SILICA	50.2	1.0	0.53	mg/L	03/18/20	03/18/20
SM 4500-Si D	SILICA W	49.3	1.0	0.53	mg/L	03/18/20	03/18/20
SM3500FeB	FERROUS IRON	0.16 U	1.0	0.16	mg/L	03/12/20	03/12/20
SW846 9060A	DISSOLVED ORGANIC CA	0.74 J	0.93	0.130	mg/L	03/18/20	03/19/20
SW846 9060A	TOTAL ORGANIC CARBO	5.4	0.93	0.130	mg/L	03/13/20	03/13/20

J = Estimated value.

Amended Results.

Printed: 04/20/20 4:07:14 PM

QC FORMS

8011

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91638

Case No: 91638 Date Analyzed: 03/16/20

Matrix: WATER Instrument: Herbie

APPL ID.	Client Sample No.	SURROGATE: 1,3-DIBROMOPROPANE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
200316A-BLK	Blank	70-132	98.8				
200316A-LCS	Lab Control Spike	70-132	92.0				
200316A-LCSD	Lab Control SpikeD	70-132	92.8				
BA08340	ERH1028	70-132	89.2				
BA08341	ERH1029	70-132	89.2				
BA08341-MS	Matrix Spike	70-132	94.4				
BA08341-MSD	Matrix SpikeD	70-132	95.2				

Comments: Batch: #8011-200316A

8011

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91638

Case No: 91638 Date Analyzed: 03/16/20

Matrix: WATER Instrument: Herbie

Blank ID: 200316A-BLK Time Analyzed: 1603

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200316A-BLK	Blank	0228165	03/16/20 1603
200316A-LCS	Lab Control Spike	0228166	03/16/20 1623
200316A-LCSD	Lab Control SpikeD	0228167	03/16/20 1643
BA08340	ERH1028	0228168	03/16/20 1703
BA08341	ERH1029	0228169	03/16/20 1724
200316A-MS	Matrix Spike	0228170	03/16/20 1744
200316A-MSD	Matrix SpikeD	0228171	03/16/20 1804

Comments: Batch: #8011-200316A

Method Blank
EPA 8011

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **200316W-08341 - 250828**
Batch ID: #8011-200316A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	EDB	0.019 U	0.02	0.019	0.010	ug/L	03/16/20	03/16/20
BLANK	SURROGATE: 1,3-DIBROMOPRO	98.8	70-132			%	03/16/20	03/16/20

Quant Method:8010317A.M
Run #:0228165
Instrument:Herbie
Sequence:200228
Initials:SSE

GC SC-Blank-REG MDLs-DOD
Printed: 03/17/20 11:46:51 AM

8011

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91638
Case No:	91638	Date Analyzed:	03/16/20
Matrix:	WATER	Instrument:	Herbie
LCS ID:	200316A-LCS	Time Analyzed:	1623

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200316A-BLK	Blank	0228165	03/16/20 1603
200316A-LCS	Lab Control Spike	0228166	03/16/20 1623
200316A-LCSD	Lab Control SpikeD	0228167	03/16/20 1643
BA08340	ERH1028	0228168	03/16/20 1703
BA08341	ERH1029	0228169	03/16/20 1724
200316A-MS	Matrix Spike	0228170	03/16/20 1744
200316A-MSD	Matrix SpikeD	0228171	03/16/20 1804

Comments: Batch: #8011-200316A

Laboratory Control Spike Recoveries
EPA 8011

APPL ID: **200316W-08341 LCS - 250828**
Batch ID: #8011-200316A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
EDB	0.250	0.238	0.237	95.2	94.8	60-140	0.42	25
SURROGATE: 1,3-DIBROMOPROPANE (	0.250	0.230	0.232	92.0	92.8	70-132		

Comments:

Primary	SPK	DUP
Quant Method :	8010317A.M	8010317A.M
Extraction Date :	03/16/20	03/16/20
Analysis Date :	03/16/20	03/16/20
Instrument :	Herbie	Herbie
Run :	0228166	0228167
Initials :	SSE	

Matrix Spike Recoveries

EPA 8011

APPL ID: **200316W-08341 MS - 250828**
Batch ID: #8011-200316A
Sample ID: BA08341
Client ID: ERH1029

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
EDB	0.250	ND	0.234	0.237	93.6	94.8	60-140	1.3	25
SURROGATE: 1,3-DIBROMOPROPANE (	0.250	NA	0.236	0.238	94.4	95.2	70-132		

Comments:

Primary	SPK	DUP
Quant Method :	8010317A.M	8010317A.M
Extraction Date :	03/16/20	03/16/20
Analysis Date :	03/16/20	03/16/20
Instrument :	Herbie	Herbie
Run :	0228170	0228171
Initials :	SSE	

Printed: 03/17/20 11:47:08 AM
APPL MSD SCII

EPA 8015B-eHL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91638

Case No: 91638 Date Analyzed: 03/16/20

Matrix: WATER Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: OCTACOSANE (S)			SURROGATE: ORTHO-TERPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
200312A-BLK	Blank	60-142	117		56-125	89.3	
200312A-LCS	Lab Control Spike	60-142	113		56-125	99.6	
BA08341-MS	Matrix Spike	60-142	115		56-125	101	
BA08341-MSD	Matrix SpikeD	60-142	118		56-125	104	
BA08341	ERH1029	60-142	109		56-125	89.9	

Comments: Batch: #DOC53-200312A

EPA 8015B-eHL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91638

Case No: 91638 Date Analyzed: 03/17/20

Matrix: WATER Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: (R) DECANOIC ACID (S)			SURROGATE: OCTACOSANE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
BA08341	ERH1029	0-1	0.0		60-142	107	
200312A1-BLK	Blank	0-1	0.0		60-142	123	
200312A1-LCS	Lab Control Spike	0-1	0.0		60-142	117	
BA08341-MS	Matrix Spike	0-1	0.0		60-142	121	
BA08341-MSD	Matrix SpikeD	0-1	0.0		60-142	117	

Comments: Batch: #DOC53-200312A1

EPA 8015B-eHL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91638

Case No: 91638 Date Analyzed: 03/17/20

Matrix: WATER Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: ORTHO-TERPHENYL (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
BA08341	ERH1029	56-125	90.5				
200312A1-BLK	Blank	56-125	93.5				
200312A1-LCS	Lab Control Spike	56-125	104				
BA08341-MS	Matrix Spike	56-125	108				
BA08341-MSD	Matrix SpikeD	56-125	105				

Comments: Batch: #DOC53-200312A1

EPA 8015B-eH

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91638

Case No: 91638 Date Analyzed: 03/16/20

Matrix: WATER Instrument: Apollo

Blank ID: 200312A-BLK Time Analyzed: 1516

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200312A-BLK	Blank	312157	03/16/20 1516
200312A-LCS	Lab Control Spike	312158	03/16/20 1539
200312A-MS	Matrix Spike	312159	03/16/20 1601
200312A-MSD	Matrix SpikeD	312160	03/16/20 1624
BA08341	ERH1029	312161	03/16/20 1646

Comments: Batch: #DOC53-200312A

EPA 8015B-eH

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	91638
Case No:	91638	Date Analyzed:	03/17/20
Matrix:	WATER	Instrument:	Apollo
Blank ID:	200312A1-BLK	Time Analyzed:	1215

APPL ID.	Client Sample No.	File ID.	Date Analyzed
BA08341	ERH1029	317013	03/17/20 1152
200312A1-BLK	Blank	317014	03/17/20 1215
200312A1-LCS	Lab Control Spike	317015	03/17/20 1237
200312A1-MS	Matrix Spike	317016	03/17/20 1300
200312A1-MSD	Matrix SpikeD	317017	03/17/20 1322

Comments: Batch: #DOC53-200312A1

Method Blank
EPA 8015B TPH LIQ-LIQ

Blank Name/QCG: **200312W-08341 - 250873**
Batch ID: #DOC53-200312A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	03/12/20	03/16/20
BLANK	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	03/12/20	03/16/20
BLANK	SURROGATE: OCTACOSANE (S)	117	60-142			%	03/12/20	03/16/20
BLANK	SURROGATE: ORTHO-TERPHEN	89.3	56-125			%	03/12/20	03/16/20

Quant Method: DOC0310.M
Run #: 312157
Instrument: Apollo
Sequence: 200312
Initials: SSE

GC SC-Blank-REG MDLs-DOD
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Method Blank
EPA 8015B TPH WATER L-L SGC

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **200312W-08341 - 250875**
Batch ID: #DOC53-200312A1

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	03/12/20	03/17/20
BLANK	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	03/12/20	03/17/20
BLANK	SURROGATE: (R) DECANOIC AC	0.0	0-1			%	03/12/20	03/17/20
BLANK	SURROGATE: OCTACOSANE (S)	123	60-142			%	03/12/20	03/17/20
BLANK	SURROGATE: ORTHO-TERPHEN	93.5	56-125			%	03/12/20	03/17/20

Quant Method: DOC0310.M
Run #: 317014
Instrument: Apollo
Sequence: 200317
Initials: SSE

GC SC-Blank-REG MDLs-DOD
Printed: 04/02/20 1:22:54 PM

EPA 8015B-eH

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91638
Case No:	91638	Date Analyzed:	03/16/20
Matrix:	WATER	Instrument:	Apollo
LCS ID:	200312A-LCS	Time Analyzed:	1539

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200312A-BLK	Blank	312157	03/16/20 1516
200312A-LCS	Lab Control Spike	312158	03/16/20 1539
200312A-MS	Matrix Spike	312159	03/16/20 1601
200312A-MSD	Matrix SpikeD	312160	03/16/20 1624
BA08341	ERH1029	312161	03/16/20 1646

Comments: Batch: #DOC53-200312A

EPA 8015B-eH

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91638
Case No:	91638	Date Analyzed:	03/17/20
Matrix:	WATER	Instrument:	Apollo
LCS ID:	200312A1-LCS	Time Analyzed:	1237

APPL ID.	Client Sample No.	File ID.	Date Analyzed
BA08341	ERH1029	317013	03/17/20 1152
200312A1-BLK	Blank	317014	03/17/20 1215
200312A1-LCS	Lab Control Spike	317015	03/17/20 1237
200312A1-MS	Matrix Spike	317016	03/17/20 1300
200312A1-MSD	Matrix SpikeD	317017	03/17/20 1322

Comments: Batch: #DOC53-200312A1

Laboratory Control Spike Recovery
EPA 8015B TPH LIQ-LIQ

APPL ID: **200312W-08341 LCS - 250873**
Batch ID: #DOC53-200312A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
DIESEL (C10-C24)	1250	1320	106	36-132
OIL (C24-C40)	1250	1280	102	41-113
SURROGATE: OCTACOSANE (S)	75.0	84.5	113	60-142
SURROGATE: ORTHO-TERPHENYL (S)	75.0	74.7	99.6	56-125

Comments:

Primary	SPK
Quant Method :	DOC0310.M
Extraction Date :	03/12/20
Analysis Date :	03/16/20
Instrument :	Apollo
Run :	312158
Initials :	SSE

Printed: 04/02/20 1:22:56 PM
APPL Standard LCS

Laboratory Control Spike Recovery
EPA 8015B TPH WATER L-L SGC

APPL ID: **200312W-08341 LCS - 250875**
Batch ID: #DOC53-200312A1

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
DIESEL (C10-C24)	1250	1210	96.8	36-132
OIL (C24-C40)	1250	1280	102	41-113
SURROGATE: (R) DECANOIC ACID (S)	10.00	0	0.0	0-1
SURROGATE: OCTACOSANE (S)	75.0	88.0	117	60-142
SURROGATE: ORTHO-TERPHENYL (S)	75.0	78.1	104	56-125

Comments:

Primary	SPK
Quant Method :	DOC0310.M
Extraction Date :	03/12/20
Analysis Date :	03/17/20
Instrument :	Apollo
Run :	317015
Initials :	SSE

Printed: 04/02/20 1:22:56 PM
APPL Standard LCS

Matrix Spike Recoveries
EPA 8015B TPH LIQ-LIQ

APPL ID: **200312W-08341 MS - 250873**
Batch ID: #DOC53-200312A
Sample ID: BA08341
Client ID: ERH1029

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
DIESEL (C10-C24)	1250	220	1460	1540	99.2	106	36-132	5.3	30
OIL (C24-C40)	1250	240	1410	1350	93.6	88.8	41-113	4.3	30
SURROGATE: OCTACOSANE (S)	75.0	NA	85.9	88.2	115	118	60-142		
SURROGATE: ORTHO-TERPHENYL (S)	75.0	NA	76.0	78.1	101	104	56-125		

Comments:

Primary	SPK	DUP
Quant Method :	DOC0310.M	DOC0310.M
Extraction Date :	03/12/20	03/12/20
Analysis Date :	03/16/20	03/16/20
Instrument :	Apollo	Apollo
Run :	312159	312160
Initials :	SSE	

Printed: 04/02/20 1:23:11 PM
APPL MSD SCII

Matrix Spike Recoveries

EPA 8015B TPH WATER L-L SGC

APPL ID: **200312W-08341 MS - 250875**
Batch ID: #DOC53-200312A1
Sample ID: BA08341
Client ID: ERH1029

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
DIESEL (C10-C24)	1250	ND	1250	1200	100	96.0	36-132	4.1	30
OIL (C24-C40)	1250	ND	1310	1280	105	102	41-113	2.3	30
SURROGATE: (R) DECANOIC ACID (S)	10.00	NA	0	0	0.0	0.0	0-1		
SURROGATE: OCTACOSANE (S)	75.0	NA	90.5	88.1	121	117	60-142		
SURROGATE: ORTHO-TERPHENYL (S)	75.0	NA	81.0	78.7	108	105	56-125		

Comments:

Primary	SPK	DUP
Quant Method :	DOC0310.M	DOC0310.M
Extraction Date :	03/12/20	03/12/20
Analysis Date :	03/17/20	03/17/20
Instrument :	Apollo	Apollo
Run :	317016	317017
Initials :	SSE	

Printed: 04/02/20 1:23:11 PM
APPL MSD SCII

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91638

Case No: 91638 Date Analyzed: 03/17/20

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2,4,6-TRIBROMOPHENOL (S)			SURROGATE: 2-FLUORBIPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
200312A-BLK	Blank	43-140	79.0		44-119	70.8	
200312A-LCS	Lab Control Spike	43-140	79.6		44-119	70.3	
BA08341-MS	Matrix Spike	43-140	80.0		44-119	69.1	
BA08341-MSD	Matrix SpikeD	43-140	81.6		44-119	71.4	
BA08341	ERH1029	43-140	82.6		44-119	69.1	

Comments: Batch: #87DC5-200312A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91638

Case No: 91638 Date Analyzed: 03/17/20

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2-FLUOROPHENOL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
200312A-BLK	Blank	19-119	64.5		44-120	72.3	
200312A-LCS	Lab Control Spike	19-119	59.2		44-120	69.7	
BA08341-MS	Matrix Spike	19-119	53.6		44-120	67.8	
BA08341-MSD	Matrix SpikeD	19-119	56.0		44-120	70.3	
BA08341	ERH1029	19-119	58.4		44-120	68.4	

Comments: Batch: #87DC5-200312A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91638

Case No: 91638 Date Analyzed: 03/17/20

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: PHENOL-D6 (S)			SURROGATE: TERPHENYL-D14 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
200312A-BLK	Blank	10-115	67.5		50-134	91.4	
200312A-LCS	Lab Control Spike	10-115	68.4		50-134	72.0	
BA08341-MS	Matrix Spike	10-115	61.6		50-134	71.2	
BA08341-MSD	Matrix SpikeD	10-115	62.4		50-134	71.5	
BA08341	ERH1029	10-115	63.7		50-134	91.8	

Comments: Batch: #87DC5-200312A

EPA 8270D

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	91638
Case No:	91638	Date Analyzed:	03/17/20
Matrix:	WATER	Instrument:	Yoda
Blank ID:	200312A-BLK	Time Analyzed:	0908

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200312A-BLK	Blank	0207Y227	03/17/20 0908
200312A-LCS	Lab Control Spike	0207Y228	03/17/20 0935
200312A-MS	Matrix Spike	0207Y229	03/17/20 1003
200312A-MSD	Matrix SpikeD	0207Y230	03/17/20 1030
BA08341	ERH1029	0207Y231	03/17/20 1058

Comments: Batch: #87DC5-200312A

Method Blank
EPA 8270D WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **200312W-08341 - 250860**
Batch ID: #87DC5-200312A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	03/12/20	03/17/20
BLANK	SURROGATE: 2,4,6-TRIBROMOP	79.0	43-140			%	03/12/20	03/17/20
BLANK	SURROGATE: 2-FLUORBIPHENY	70.8	44-119			%	03/12/20	03/17/20
BLANK	SURROGATE: 2-FLUOROPHENO	64.5	19-119			%	03/12/20	03/17/20
BLANK	SURROGATE: NITROBENZENE-	72.3	44-120			%	03/12/20	03/17/20
BLANK	SURROGATE: PHENOL-D6 (S)	67.5	10-115			%	03/12/20	03/17/20
BLANK	SURROGATE: TERPHENYL-D14 (	91.4	50-134			%	03/12/20	03/17/20

Quant Method: Y1219.M
Run #: 0207Y227
Instrument: Yoda
Sequence: Y200207
Initials: MA

GC SC-Blank-REG MDLs-DOD
Printed: 03/18/20 9:31:14 AM

EPA 8270D

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91638
Case No:	91638	Date Analyzed:	03/17/20
Matrix:	WATER	Instrument:	Yoda
LCS ID:	200312A-LCS	Time Analyzed:	0935

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200312A-BLK	Blank	0207Y227	03/17/20 0908
200312A-LCS	Lab Control Spike	0207Y228	03/17/20 0935
200312A-MS	Matrix Spike	0207Y229	03/17/20 1003
200312A-MSD	Matrix SpikeD	0207Y230	03/17/20 1030
BA08341	ERH1029	0207Y231	03/17/20 1058

Comments: Batch: #87DC5-200312A

Laboratory Control Spike Recovery
EPA 8270D WATER

APPL ID: **200312W-08341 LCS - 250860**
Batch ID: #87DC5-200312A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
PHENOL	62.5	43.7	69.9	10-115
SURROGATE: 2,4,6-TRIBROMOPHENOL	250	199	79.6	43-140
SURROGATE: 2-FLUORBIPHENYL (S)	125	87.9	70.3	44-119
SURROGATE: 2-FLUOROPHENOL (S)	250	148	59.2	19-119
SURROGATE: NITROBENZENE-D5 (S)	125	87.1	69.7	44-120
SURROGATE: PHENOL-D6 (S)	250	171	68.4	10-115
SURROGATE: TERPHENYL-D14 (S)	125	90.0	72.0	50-134

Comments:

Primary	SPK
Quant Method :	Y1219.M
Extraction Date :	03/12/20
Analysis Date :	03/17/20
Instrument :	Yoda
Run :	0207Y228
Initials :	MA

Printed: 03/18/20 9:30:50 AM
APPL Standard LCS

Matrix Spike Recoveries
EPA 8270D WATER

APPL ID: **200312W-08341 MS - 250860**
Batch ID: #87DC5-200312A
Sample ID: BA08341
Client ID: ERH1029

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
PHENOL	62.5	ND	39.8	40.6	63.7	65.0	10-115	2.0	20
SURROGATE: 2,4,6-TRIBROMOPHENOL	250	NA	200	204	80.0	81.6	43-140		
SURROGATE: 2-FLUORBIPHENYL (S)	125	NA	86.4	89.3	69.1	71.4	44-119		
SURROGATE: 2-FLUOROPHENOL (S)	250	NA	134	140	53.6	56.0	19-119		
SURROGATE: NITROBENZENE-D5 (S)	125	NA	84.8	87.9	67.8	70.3	44-120		
SURROGATE: PHENOL-D6 (S)	250	NA	154	156	61.6	62.4	10-115		
SURROGATE: TERPHENYL-D14 (S)	125	NA	89.0	89.4	71.2	71.5	50-134		

Comments:

Primary	SPK	DUP
Quant Method :	Y1219.M	Y1219.M
Extraction Date :	03/12/20	03/12/20
Analysis Date :	03/17/20	03/17/20
Instrument :	Yoda	Yoda
Run :	0207Y229	0207Y230
Initials :	MA	

Printed: 03/18/20 9:30:26 AM
APPL MSD SCII

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Soil
ID: 1219Y002.D

SDG No:
Date Analyzed: 12/19/19
Instrument: Yoda
Time Analyzed: 8:50

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/ml 8270 11/21/1	1219Y003.D	12/19/19 9:06
2		4ug/ml 8270 11/21/19	1219Y004.D	12/19/19 9:33
3		5ug/ml 8270 11/21/19	1219Y005.D	12/19/19 10:01
4		10ug/ml 8270 11/21/1	1219Y006.D	12/19/19 10:28
5		20ug/ml 8270 11/21/1	1219Y007.D	12/19/19 10:56
6		40ug/ml 8270 11/21/1	1219Y008.D	12/19/19 11:24
7		60ug/ml 8270 11/21/1	1219Y009.D	12/19/19 11:51
8		80ug/ml 8270 11/21/1	1219Y010.D	12/19/19 12:19
9		100ug/ml 8270 11/21/	1219Y011.D	12/19/19 12:46
10		SS 8270 11/22/19	1219Y012.D	12/19/19 13:14
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.04% of mass 198	39.5
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	1.0
127	10 - 80% of mass 198	51.3
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.7
275	10 - 60% of mass 198	29.4
365	1 - 100% of mass 198	3.5
441	0.01 - 24% of mass 442	4.6
442	50 - 500% of mass 198	102.9
443	15 - 24% of mass 442	20.0

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No: 91638
Case No: 91638 Date Analyzed: 03/17/20
Matrix: Water Instrument: Yoda
ID: 0207Y225.D Time Analyzed: 7:46

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/ml 8270 03/04/2	0207Y226.D	03/17/20 8:01
2	Blank	200312A BLK 1/800	0207Y227.D	03/17/20 9:08
3	Lab Control Spike	200312A LCS-1 1/800	0207Y228.D	03/17/20 9:35
4		BA08341W36 MS-1 1/80	0207Y229.D	03/17/20 10:03
5		BA08341W42 MSD-1 1/8	0207Y230.D	03/17/20 10:30
6	ERH1029	BA08341W41 1/800	0207Y231.D	03/17/20 10:58
7		50ug/ml 8270 03/04/2	0207Y241.D	03/17/20 16:40
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.04% of mass 198	36.7
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.7
127	10 - 80% of mass 198	49.1
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.7
275	10 - 60% of mass 198	30.9
365	1 - 100% of mass 198	3.8
441	0.01 - 24% of mass 442	16.7
442	50 - 500% of mass 198	116.6
443	15 - 24% of mass 442	19.7

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0207Y226.D Date Analyzed: 03/17/20

Instrument ID: Yoda Time Analyzed: 8:01

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

		1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	178325	5.34	747165	6.78	470368	8.80
	UPPER LIMIT	356650	5.51	1494330	6.95	940736	8.97
	LOWER LIMIT	89163	5.17	373583	6.61	235184	8.63
	SAMPLE NO.						
01	200312A BLK 1/800	199103	5.33	806285	6.77	504373	8.79
02	200312A LCS-1 1/800	208647	5.33	824113	6.77	515323	8.80
03	BA08341W36 MS-1 1/8	206854	5.34	823093	6.78	509536	8.79
04	BA08341W42 MSD-1 1/	206186	5.33	813059	6.78	509632	8.79
05	BA08341W41 1/800	204866	5.33	826906	6.77	512981	8.79
06	50ug/ml 8270 03/04/20 (	200510	5.34	813395	6.78	508839	8.80
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

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

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0207Y226.D Date Analyzed: 03/17/20

Instrument ID: Yoda Time Analyzed: 8:01

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

		Phenanthrene-D10(IS)		Chrysene-D12(IS)		Perylene-D12(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	915881	10.53	1237700	13.62	972882	15.44
	UPPER LIMIT	1831762	10.70	2475400	13.79	1945764	15.61
	LOWER LIMIT	457941	10.36	618850	13.45	486441	15.27
	SAMPLE NO.						
01	200312A BLK 1/800	990753	10.53	972916	13.62	1040570	15.44
02	200312A LCS-1 1/800	991766	10.53	1198020	13.62	1079810	15.44
03	BA08341W36 MS-1 1/8	986259	10.53	1165480	13.62	1061150	15.44
04	BA08341W42 MSD-1 1/	972261	10.53	1215330	13.62	1067770	15.44
05	BA08341W41 1/800	1001350	10.53	959462	13.61	1060060	15.43
06	50ug/ml 8270 03/04/20 (	984530	10.53	1174350	13.62	999613	15.44
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

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

8270D-SIM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91638

Case No: 91638 Date Analyzed: 03/16/20

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: 2-METHYLNAPHTHALENE-D10 (S)			SURROGATE: FLUORANTHENE-D10 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
200312A-BLK	Blank	39-114	92.3		58-120	94.3	
200312A-LCS	Lab Control Spike	39-114	94.4		58-120	92.5	
BA08341-MS	Matrix Spike	39-114	98.2		58-120	96.3	
BA08341-MSD	Matrix SpikeD	39-114	102		58-120	98.4	
BA08341	ERH1029	39-114	93.9		58-120	101	

Comments: Batch: #SIM53-200312A

8270D-SIM

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	91638
Case No:	91638	Date Analyzed:	03/16/20
Matrix:	WATER	Instrument:	Linus
Blank ID:	200312A-BLK	Time Analyzed:	1524

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200312A-BLK	Blank	0204L283	03/16/20 1524
200312A-LCS	Lab Control Spike	0204L284	03/16/20 1546
200312A-MS	Matrix Spike	0204L285	03/16/20 1608
200312A-MSD	Matrix SpikeD	0204L286	03/16/20 1630
BA08341	ERH1029	0204L287	03/16/20 1652

Comments: Batch: #SIM53-200312A

Method Blank
EPA 8270D SIM LIQ-LIQ

Blank Name/QCG: **200312W-08341 - 250838**
Batch ID: #SIM53-200312A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	03/12/20	03/16/20
BLANK	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	03/12/20	03/16/20
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	03/12/20	03/16/20
BLANK	SURROGATE: 2-METHYLNAPHT	92.3	39-114			%	03/12/20	03/16/20
BLANK	SURROGATE: FLUORANTHENE-	94.3	58-120			%	03/12/20	03/16/20

Quant Method:L0204.M
Run #:0204L283
Instrument:Linus
Sequence:L200204
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 03/17/20 1:10:46 PM

8270D-SIM

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91638
Case No:	91638	Date Analyzed:	03/16/20
Matrix:	WATER	Instrument:	Linus
LCS ID:	200312A-LCS	Time Analyzed:	1546

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200312A-BLK	Blank	0204L283	03/16/20 1524
200312A-LCS	Lab Control Spike	0204L284	03/16/20 1546
200312A-MS	Matrix Spike	0204L285	03/16/20 1608
200312A-MSD	Matrix SpikeD	0204L286	03/16/20 1630
BA08341	ERH1029	0204L287	03/16/20 1652

Comments: Batch: #SIM53-200312A

Laboratory Control Spike Recovery
EPA 8270D SIM LIQ-LIQ

APPL ID: **200312W-08341 LCS - 250838**
Batch ID: #SIM53-200312A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1-METHYLNAPHTHALENE	6.25	5.36	85.8	41-115
2-METHYLNAPHTHALENE	6.25	5.46	87.4	39-114
NAPHTHALENE	6.25	5.26	84.2	43-114
SURROGATE: 2-METHYLNAPHTHALEN	6.25	5.90	94.4	39-114
SURROGATE: FLUORANTHENE-D10 (S)	6.25	5.78	92.5	58-120

Comments:

Primary	SPK
Quant Method :	L0204.M
Extraction Date :	03/12/20
Analysis Date :	03/16/20
Instrument :	Linus
Run :	0204L284
Initials :	MA

Printed: 03/17/20 1:10:19 PM
APPL Standard LCS

Matrix Spike Recoveries
EPA 8270D SIM LIQ-LIQ

APPL ID: **200312W-08341 MS - 250838**
Batch ID: #SIM53-200312A
Sample ID: BA08341
Client ID: ERH1029

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
1-METHYLNAPHTHALENE	6.25	ND	5.22	5.60	83.5	89.6	41-115	7.0	20
2-METHYLNAPHTHALENE	6.25	ND	5.40	5.77	86.4	92.3	39-114	6.6	20
NAPHTHALENE	6.25	ND	5.12	5.46	81.9	87.4	43-114	6.4	20
SURROGATE: 2-METHYLNAPHTHALEN	6.25	NA	6.14	6.40	98.2	102	39-114		
SURROGATE: FLUORANTHENE-D10 (S)	6.25	NA	6.02	6.15	96.3	98.4	58-120		

Comments:

Primary	SPK	DUP
Quant Method :	L0204.M	L0204.M
Extraction Date :	03/12/20	03/12/20
Analysis Date :	03/16/20	03/16/20
Instrument :	Linus	Linus
Run :	0204L285	0204L286
Initials :	MA	

Printed: 03/17/20 1:10:01 PM
APPL MSD SCII

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Water
ID: 0204L002.D

SDG No:
Date Analyzed: 02/04/20
Instrument: Linus
Time Analyzed: 9:32

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.1 SIM 02/03/20	0204L003.D	02/04/20 9:48
2		0.2 SIM 02/03/20	0204L004.D	02/04/20 10:09
3		0.5 SIM 02/03/20	0204L005.D	02/04/20 10:31
4		1 SIM 02/03/20	0204L006.D	02/04/20 10:53
5		5 SIM 02/03/20	0204L007.D	02/04/20 11:15
6		10 SIM 02/03/20	0204L008.D	02/04/20 11:37
7		50 SIM 02/03/20	0204L009.D	02/04/20 11:59
8		100 SIM 02/03/20	0204L010.D	02/04/20 12:21
9		SS SIM 02/03/20	0204L011.D	02/04/20 13:21
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.1% of mass 198	18.6
68	0 - 2.05% of mass 69	0.0
70	0 - 2% of mass 69	0.4
127	10 - 80% of mass 198	40.9
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.3
275	10 - 60% of mass 198	30.0
365	1 - 100% of mass 198	4.7
441	0.01 - 24% of mass 442	15.8
442	50 - 500% of mass 198	200.3
443	15 - 24% of mass 442	19.3

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 91638
Matrix: Water
ID: 0204L281.D

SDG No: 91638
Date Analyzed: 03/16/20
Instrument: Linus
Time Analyzed: 14:15

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		5 SIM 02/03/20 (1)	0204L282.D	03/16/20 14:34
2	Blank	200312A BLK 1/800	0204L283.D	03/16/20 15:24
3	Lab Control Spike	200312A LCS-2 1/800	0204L284.D	03/16/20 15:46
4		BA08341W47 MS-2 1/80	0204L285.D	03/16/20 16:08
5		BA08341W39 MSD-2 1/8	0204L286.D	03/16/20 16:30
6	ERH1029	BA08341W41 1/800	0204L287.D	03/16/20 16:52
7		5 SIM 02/03/20 (2)	0204L308.D	03/17/20 0:33
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.1% of mass 198	13.5
68	0 - 2.05% of mass 69	0.0
70	0 - 2% of mass 69	0.6
127	10 - 80% of mass 198	34.8
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.4
275	10 - 60% of mass 198	32.2
365	1 - 100% of mass 198	4.6
441	0.01 - 24% of mass 442	15.6
442	50 - 500% of mass 198	231.7
443	15 - 24% of mass 442	19.1

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0204L282.D Date Analyzed: 03/16/20

Instrument ID: Linus Time Analyzed: 14:34

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

		Napthalene-D8(IS)		Acenaphthene-D10(IS)		Phenanthrene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	109106	4.14	61700	6.14	121780	7.87
	UPPER LIMIT	218212	4.31	123400	6.31	243560	8.04
	LOWER LIMIT	54553	3.97	30850	5.97	60890	7.70
	SAMPLE NO.						
01	200312A BLK 1/800	93874	4.15	53274	6.14	104028	7.87
02	200312A LCS-2 1/800	90182	4.14	51325	6.14	101366	7.87
03	BA08341W47 MS-2 1/8	94337	4.14	52868	6.14	106327	7.87
04	BA08341W39 MSD-2 1/	91881	4.14	51694	6.14	102770	7.87
05	BA08341W41 1/800	91960	4.14	52636	6.14	102284	7.87
06	5 SIM 02/03/20 (2)	105231	4.15	61442	6.14	125563	7.87
07							
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09							
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11							
12							
13							
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15							
16							
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21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

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

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0204L282.D Date Analyzed: 03/16/20

Instrument ID: Linus Time Analyzed: 14:34

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

		Chrysene-D12(IS)		Perylene-D12(IS)			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	162122	10.98	197605	13.40		
	UPPER LIMIT	324244	11.15	395210	13.57		
	LOWER LIMIT	81061	10.81	98803	13.23		
	SAMPLE NO.						
01	200312A BLK 1/800	138970	10.99	160818	13.40		
02	200312A LCS-2 1/800	133947	10.98	158987	13.40		
03	BA08341W47 MS-2 1/8	139110	10.98	167298	13.40		
04	BA08341W39 MSD-2 1/	135599	10.98	161870	13.39		
05	BA08341W41 1/800	140454	10.98	171347	13.40		
06	5 SIM 02/03/20 (2)	164789	10.98	198107	13.39		
07							
08							
09							
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21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

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

EPA 8270D

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91638

Case No: 91638 Date Analyzed: 03/16/20

Matrix: WATER Instrument: Yoda

Blank ID: 200313A-BLK Time Analyzed: 0945

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200313A-BLK	Blank	0122Y077	03/16/20 0945
200313A-LCSD	Lab Control SpikeD	0122Y079	03/16/20 1032
200313A-MS	Matrix Spike	0122Y080	03/16/20 1056
200313A-MSD	Matrix SpikeD	0122Y081	03/16/20 1119
BA08341	ERH1029	0122Y082	03/16/20 1143
200313A-LCS	Lab Control Spike	0122Y085	03/16/20 1254

Comments: Batch: #87DME-200313A

Method Blank
EPA 8270D MODIFIED WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **200313W-08341 - 250841**
Batch ID: #87DME-200313A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2-(2-METHOXYETHOXY)-ETHAN	80.0 U	100	80.0	40.0	ug/L	03/13/20	03/16/20

Quant Method: YMEE0122.M
Run #: 0122Y077
Instrument: Yoda
Sequence: Y200122M
Initials: LPO

GC SC-Blank-REG MDLs-DOD
Printed: 03/17/20 1:11:54 PM

EPA 8270D

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91638
Case No:	91638	Date Analyzed:	03/16/20
Matrix:	WATER	Instrument:	Yoda
LCS ID:	200313A-LCS	Time Analyzed:	1254

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200313A-BLK	Blank	0122Y077	03/16/20 0945
200313A-LCSD	Lab Control SpikeD	0122Y079	03/16/20 1032
200313A-MS	Matrix Spike	0122Y080	03/16/20 1056
200313A-MSD	Matrix SpikeD	0122Y081	03/16/20 1119
BA08341	ERH1029	0122Y082	03/16/20 1143
200313A-LCS	Lab Control Spike	0122Y085	03/16/20 1254

Comments: Batch: #87DME-200313A

Laboratory Control Spike Recoveries
EPA 8270D MODIFIED WATER

APPL ID: **200313W-08341 LCS - 250841**
Batch ID: #87DME-200313A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
2-(2-METHOXYETHOXY)-ETHANOL	80.0	60.6	54.5	75.8	68.1	30-130	10.6	20

Comments:

Primary	SPK	DUP
Quant Method :	YMEE0122.M	YMEE0122.M
Extraction Date :	03/13/20	03/13/20
Analysis Date :	03/16/20	03/16/20
Instrument :	Yoda	Yoda
Run :	0122Y085	0122Y079
Initials :	LPO	

Printed: 03/17/20 1:12:01 PM
APPL Standard LCSD

Matrix Spike Recoveries
EPA 8270D MODIFIED WATER

APPL ID: **200313W-08341 MS - 250841**
Batch ID: #87DME-200313A
Sample ID: BA08341
Client ID: ERH1029

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
2-(2-METHOXYETHOXY)-ETHANOL	80.0	ND	44.6	57.4	55.8	71.8	30-130	25.1 #	20

= Recovery is outside QC limits.

Comments:

Primary	SPK	DUP
Quant Method :	YMEE0122.M	YMEE0122.M
Extraction Date :	03/13/20	03/13/20
Analysis Date :	03/16/20	03/16/20
Instrument :	Yoda	Yoda
Run :	0122Y080	0122Y081
Initials :	LPO	

Printed: 03/17/20 1:12:11 PM
APPL MSD SCII

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Soil
ID: 0122Y002.D

SDG No:
Date Analyzed: 01/22/20
Instrument: Yoda
Time Analyzed: 15:31

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/ml MEE 01/22/20	0122Y003.D	01/22/20 15:46
2		100ug/ml MEE 01/22/2	0122Y004.D	01/22/20 16:10
3		200ug/ml MEE 01/22/2	0122Y005.D	01/22/20 16:33
4		400ug/ml MEE 01/22/2	0122Y006.D	01/22/20 16:57
5		500ug/ml MEE 01/22/2	0122Y007.D	01/22/20 17:21
6		600ug/ml MEE 01/22/2	0122Y008.D	01/22/20 17:45
7		800ug/ml MEE 01/22/2	0122Y009.D	01/22/20 18:08
8		1000ug/ml MEE 01/22/	0122Y010.D	01/22/20 18:32
9		SS MEE 01/22/20	0122Y011.D	01/22/20 18:55
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.04% of mass 198	37.2
68	0 - 2.04% of mass 69	0.0
70	0 - 2.04% of mass 69	0.2
127	10 - 80% of mass 198	50.4
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	7.1
275	10 - 60% of mass 198	30.1
365	1 - 100% of mass 198	3.7
441	0.01 - 24% of mass 442	15.9
442	50 - 500% of mass 198	109.9
443	15 - 24% of mass 442	19.8

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 91638
Matrix: Water
ID: 0122Y075.D

SDG No: 91638
Date Analyzed: 03/16/20
Instrument: Yoda
Time Analyzed: 8:46

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		500ug/ml MEE 01/29/2	0122Y076.D	03/16/20 9:14
2	Blank	200313A BLK 2/500	0122Y077.D	03/16/20 9:45
3	Lab Control SpikeD	200313A LCSD-1 2/500	0122Y079.D	03/16/20 10:32
4		BA08341W31 MS-1 2/50	0122Y080.D	03/16/20 10:56
5		BA08341W27 MSD-1 2/5	0122Y081.D	03/16/20 11:19
6	ERH1029	BA08341W35 2/500	0122Y082.D	03/16/20 11:43
7	Lab Control Spike	200313A LCS-1 2/500	0122Y085.D	03/16/20 12:54
8		500ug/ml MEE 01/29/2	0122Y086.D	03/16/20 13:17
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	10 - 80% of mass 198	39.5
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	1.2
127	10 - 80% of mass 198	50.2
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	7.0
275	10 - 60% of mass 198	29.7
365	1 - 100% of mass 198	4.0
441	0.01 - 24% of mass 442	2.6
442	50 - 500% of mass 198	112.3
443	15 - 24% of mass 442	19.6

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0122Y076.D Date Analyzed: 03/16/20

Instrument ID: Yoda Time Analyzed: 9:14

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

		1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	152753	5.11	683508	6.53	448088	8.55
	UPPER LIMIT	305506	5.28	1367016	6.70	896176	8.72
	LOWER LIMIT	76377	4.94	341754	6.36	224044	8.38
	SAMPLE NO.						
01	200313A BLK 2/500	172335	5.10	799714	6.53	514030	8.55
02	200313A LCSD-1 2/500	169989	5.11	752820	6.53	477944	8.55
03	BA08341W31 MS-1 2/5(	188794	5.10	859179	6.53	552771	8.55
04	BA08341W27 MSD-1 2/	144164	5.10	645282	6.53	420606	8.55
05	BA08341W35 2/500	154586	5.10	686283	6.53	432837	8.55
06	200313A LCS-1 2/500	145789	5.10	657193	6.53	425934	8.55
07	500ug/ml MEE 01/29/20	136792	5.12	624287	6.53	406906	8.55
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits. Not associated with target analyte.

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91638

Case No: 91638 Date Analyzed: 03/14/20

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
200313BL-LCS	Lab Control Spike	81-118	99.6		85-114	100	
200313BL-LCSD	Lab Control SpikeD	81-118	98.4		85-114	102	
200313BL-BLK	Blank	81-118	96.9		85-114	95.2	
BA08340	ERH1028	81-118	95.3		85-114	91.0	
BA08341	ERH1029	81-118	100		85-114	96.5	
BA08341-MS	Matrix Spike	81-118	100		85-114	106	
BA08341-MSD	Matrix SpikeD	81-118	98.0		85-114	99.6	

Comments: Batch: #86BTO-200313BL

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91638

Case No: 91638 Date Analyzed: 03/14/20

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: DIBROMOFLUOROMETHANE (S)			SURROGATE: TOLUENE-D8 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
200313BL-LCS	Lab Control Spike	80-119	100		89-112	100	
200313BL-LCSD	Lab Control SpikeD	80-119	102		89-112	102	
200313BL-BLK	Blank	80-119	99.2		89-112	101	
BA08340	ERH1028	80-119	101		89-112	99.6	
BA08341	ERH1029	80-119	105		89-112	103	
BA08341-MS	Matrix Spike	80-119	102		89-112	106	
BA08341-MSD	Matrix SpikeD	80-119	99.6		89-112	101	

Comments: Batch: #86BTO-200313BL

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91638

Case No: 91638 Date Analyzed: 03/14/20

Matrix: WATER Instrument: Loki

Blank ID: 200313BL-BLK Time Analyzed: 0626

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200313BL-LCS	Lab Control Spike	0313L40	03/14/20 0403
200313BL-LCSD	Lab Control SpikeD	0313L41	03/14/20 0431
200313BL-BLK	Blank	0313l45	03/14/20 0626
BA08340	ERH1028	0313L46	03/14/20 0654
BA08341	ERH1029	0313L47	03/14/20 0723
200313BL-MS	Matrix Spike	0313L51	03/14/20 0917
200313BL-MSD	Matrix SpikeD	0313L52	03/14/20 0946

Comments: Batch: #86BTO-200313BL

Method Blank
EPA 8260B BTEX & 1,2-DCA WATER

Blank Name/QCG: **200313W-08341 - 250789**
Batch ID: #86BTO-200313BL

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	03/14/20	03/14/20
BLANK	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	03/14/20	03/14/20
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	03/14/20	03/14/20
BLANK	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	03/14/20	03/14/20
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	03/14/20	03/14/20
BLANK	SURROGATE: 1,2-DICHLOROET	96.9	81-118			%	03/14/20	03/14/20
BLANK	SURROGATE: 4-BROMOFLUORO	95.2	85-114			%	03/14/20	03/14/20
BLANK	SURROGATE: DIBROMOFLUOR	99.2	80-119			%	03/14/20	03/14/20
BLANK	SURROGATE: TOLUENE-D8 (S)	101	89-112			%	03/14/20	03/14/20

Quant Method:L0312W.M
Run #:0313l45
Instrument:Loki
Sequence: 200312
Initials:DPO

GC SC-Blank-REG MDLs-DOD
Printed: 03/16/20 11:50:04 AM

EPA 8260B

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91638
Case No:	91638	Date Analyzed:	03/14/20
Matrix:	WATER	Instrument:	Loki
LCS ID:	200313BL-LCS	Time Analyzed:	0403

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200313BL-LCS	Lab Control Spike	0313L40	03/14/20 0403
200313BL-LCSD	Lab Control SpikeD	0313L41	03/14/20 0431
200313BL-BLK	Blank	0313l45	03/14/20 0626
BA08340	ERH1028	0313L46	03/14/20 0654
BA08341	ERH1029	0313L47	03/14/20 0723
200313BL-MS	Matrix Spike	0313L51	03/14/20 0917
200313BL-MSD	Matrix SpikeD	0313L52	03/14/20 0946

Comments: Batch: #86BTO-200313BL

Laboratory Control Spike Recoveries
EPA 8260B BTEX & 1,2-DCA WATER

APPL ID: **200314W-08341 LCS - 250789**
Batch ID: #86BTO-200313BL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
1,2-DICHLOROETHANE	10.00	10.6	10.0	106	100	73-128	5.8	20
BENZENE	10.00	9.83	9.31	98.3	93.1	79-120	5.4	20
ETHYLBENZENE	10.00	9.53	9.15	95.3	91.5	79-121	4.1	20
TOLUENE	10.00	10.1	9.56	101	95.6	80-121	5.5	20
XYLENES (TOTAL)	30.0	28.6	27.5	95.3	91.7	79-121	3.9	20
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	24.9	24.6	99.6	98.4	81-118		
SURROGATE: 4-BROMOFLUOROBENZE	25.0	25.1	25.5	100	102	85-114		
SURROGATE: DIBROMOFLUOROMETH	25.0	25.1	25.4	100	102	80-119		
SURROGATE: TOLUENE-D8 (S)	25.0	25.0	25.5	100	102	89-112		

Comments:

Primary	SPK	DUP
Quant Method :	L0312W.M	L0312W.M
Extraction Date :	03/14/20	03/14/20
Analysis Date :	03/14/20	03/14/20
Instrument :	Loki	Loki
Run :	0313L40	0313L41
Initials :	DPO	

Printed: 03/16/20 11:49:45 AM
APPL Standard LCSD

Matrix Spike Recoveries

EPA 8260B BTEX & 1,2-DCA WATER

APPL ID: **200314W-08341 MS - 250789**
Batch ID: #86BTO-200313BL
Sample ID: BA08341
Client ID: ERH1029

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
1,2-DICHLOROETHANE	10.00	ND	10.6	9.65	106	96.5	73-128	9.4	20
BENZENE	10.00	ND	9.81	8.98	98.1	89.8	79-120	8.8	20
ETHYLBENZENE	10.00	ND	9.83	8.79	98.3	87.9	79-121	11.2	20
TOLUENE	10.00	ND	10.0	9.42	100	94.2	80-121	6.0	20
XYLENES (TOTAL)	30.0	ND	29.7	26.8	99.0	89.3	79-121	10.3	20
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	NA	25.1	24.5	100	98.0	81-118		
SURROGATE: 4-BROMOFLUOROBENZE	25.0	NA	26.5	24.9	106	99.6	85-114		
SURROGATE: DIBROMOFLUOROMETH	25.0	NA	25.4	24.9	102	99.6	80-119		
SURROGATE: TOLUENE-D8 (S)	25.0	NA	26.4	25.2	106	101	89-112		

Comments:

Primary	SPK	DUP
Quant Method :	L0312W.M	L0312W.M
Extraction Date :	03/14/20	03/14/20
Analysis Date :	03/14/20	03/14/20
Instrument :	Loki	Loki
Run :	0313L51	0313L52
Initials :	DPO	

Printed: 03/16/20 11:49:37 AM
APPL MSD SCII

Lab Name: APPL Inc. SDG No:
Case No: Date Analyzed: 03/12/20
Matrix: Water Instrument: Loki
ID: 0312l06.D Time Analyzed: 10:21

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.3ug/L VOC STD 3/12	0312L10.D	03/12/20 12:10
2		0.5ug/L VOC STD 3/12	0312L11.D	03/12/20 12:39
3		1.0ug/L VOC STD 3/12	0312L12.D	03/12/20 13:07
4		2.0ug/L VOC STD 3/12	0312L13.D	03/12/20 13:36
5		5.0ug/L VOC STD 3/12	0312L14.D	03/12/20 14:05
6		10ug/L VOC STD 3/12/	0312L15.D	03/12/20 14:33
7		20ug/L VOC STD 3/12/	0312L16.D	03/12/20 15:02
8		40ug/L VOC STD 3/12/	0312L17.D	03/12/20 15:30
9		100ug/L VOC STD 3/12	0312L18.D	03/12/20 15:59
10		(SS)10ug/L VOC STD 3	0312L21.D	03/12/20 17:25
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	15.2
75	30 - 60% of mass 95	45.2
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	6.4
173	0 - 2% of mass 174	0.0
174	50 - 200% of mass 95	88.7
175	5 - 9% of mass 174	7.2
176	94.95 - 101% of mass 174	96.4
177	5 - 9% of mass 176	6.6

Lab Name: APPL Inc. SDG No: 91638
Case No: 91638 Date Analyzed: 03/14/20
Matrix: Water Instrument: Loki
ID: 0313L38.D Time Analyzed: 3:06

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		200313B CCV 10ug/L	0313L39.D	03/14/20 3:34
2	Lab Control Spike	200313B LCS 10ug/L	0313L40.D	03/14/20 4:03
3	Lab Control SpikeD	200313B LCSD 10ug/L	0313L41.D	03/14/20 4:31
4	Blank	200313B Blk	0313L45.D	03/14/20 6:26
5	ERH1028	BA08340W01	0313L46.D	03/14/20 6:54
6	ERH1029	BA08341W01	0313L47.D	03/14/20 7:23
7		BA08341W02,3,4 MS 10	0313L51.D	03/14/20 9:17
8		BA08341W02,3,4 MSD 1	0313L52.D	03/14/20 9:46
9		Ending CCV 10ug/L 3/	0313L57.D	03/14/20 12:09
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	15.2
75	30 - 60% of mass 95	46.8
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	6.9
173	0 - 2% of mass 174	0.8
174	50 - 200% of mass 95	82.8
175	5 - 9% of mass 174	7.7
176	94.95 - 101% of mass 174	96.5
177	5 - 9% of mass 176	6.9

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0312L15.D Date Analyzed: 03/12/20

Instrument ID: Loki Time Analyzed: 14:33

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

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	397184	4.64	425536	8.36	251200	10.90
	UPPER LIMIT	794368	4.81	851072	8.53	502400	11.07
	LOWER LIMIT	198592	4.47	212768	8.19	125600	10.73
	SAMPLE NO.						
01	200313B CCV 10ug/L	354432	4.65	385600	8.36	223168	10.90
02	200313B LCS 10ug/L	349376	4.64	388608	8.36	209600	10.90
03	200313B LCSD 10ug/L	357120	4.65	389376	8.35	215872	10.90
04	200313B Blk	339840	4.65	360704	8.36	186688	10.90
05	BA08340W01	347136	4.65	369984	8.36	180992	10.90
06	BA08341W01	344640	4.65	369792	8.36	187136	10.90
07	BA08341W02,3,4 MS 1(	356288	4.64	379840	8.36	216512	10.90
08	BA08341W02,3,4 MSD	371776	4.65	408896	8.35	234816	10.90
09	Ending CCV 10ug/L 3/1:	355712	4.64	387008	8.36	222848	10.90
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

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

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91638

Case No: 91638 Date Analyzed: 03/14/20

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: 4-BROMOFLUOROBENZENE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
200313BL-LCS	Lab Control Spike	85-114	97.2				
200313BL-LCSD	Lab Control SpikeD	85-114	97.2				
200313BL-BLK	Blank	85-114	95.2				
BA08340	ERH1028	85-114	91.0				
BA08341	ERH1029	85-114	96.5				
BA08341-MS	Matrix Spike	85-114	97.6				
BA08341-MSD	Matrix SpikeD	85-114	94.4				

Comments: Batch: #GRO86-200313BL

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91638

Case No: 91638 Date Analyzed: 03/14/20

Matrix: WATER Instrument: Loki

Blank ID: 200313BL-BLK Time Analyzed: 0626

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200313BL-LCS	Lab Control Spike	0313L43	03/14/20 0528
200313BL-LCSD	Lab Control SpikeD	0313L44	03/14/20 0557
200313BL-BLK	Blank	0313L45	03/14/20 0626
BA08340	ERH1028	0313L46	03/14/20 0654
BA08341	ERH1029	0313L47	03/14/20 0723
200313BL-MS	Matrix Spike	0313L53	03/14/20 1014
200313BL-MSD	Matrix SpikeD	0313L54	03/14/20 1043

Comments: Batch: #GRO86-200313BL

Method Blank
EPA 8260B GRO WATER

Blank Name/QCG: **200313W-08341 - 250790**
Batch ID: #GRO86-200313BL

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	03/14/20	03/14/20
BLANK	SURROGATE: 4-BROMOFLUORO	95.2	85-114			%	03/14/20	03/14/20

Quant Method:LGAS0312.M
Run #:0313L45
Instrument:Loki
Sequence: 200312
Initials:DPO

GC SC-Blank-REG MDLs-DOD
Printed: 03/16/20 12:26:51 PM

EPA 8260B

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91638
Case No:	91638	Date Analyzed:	03/14/20
Matrix:	WATER	Instrument:	Loki
LCS ID:	200313BL-LCS	Time Analyzed:	0528

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200313BL-LCS	Lab Control Spike	0313L43	03/14/20 0528
200313BL-LCSD	Lab Control SpikeD	0313L44	03/14/20 0557
200313BL-BLK	Blank	0313L45	03/14/20 0626
BA08340	ERH1028	0313L46	03/14/20 0654
BA08341	ERH1029	0313L47	03/14/20 0723
200313BL-MS	Matrix Spike	0313L53	03/14/20 1014
200313BL-MSD	Matrix SpikeD	0313L54	03/14/20 1043

Comments: Batch: #GRO86-200313BL

Laboratory Control Spike Recoveries
EPA 8260B GRO WATER

APPL ID: **200314W-08341 LCS - 250790**
Batch ID: #GRO86-200313BL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
GASOLINE RANGE ORGANICS	300	315	306	105	102	78-122	2.9	20
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.3	24.3	97.2	97.2	85-114		

Comments:

Primary	SPK	DUP
Quant Method :	LGAS0312.M	LGAS0312.M
Extraction Date :	03/14/20	03/14/20
Analysis Date :	03/14/20	03/14/20
Instrument :	Loki	Loki
Run :	0313L43	0313L44
Initials :	DPO	

Printed: 03/16/20 12:26:33 PM
APPL Standard LCSD

Matrix Spike Recoveries
EPA 8260B GRO WATER

APPL ID: **200314W-08341 MS - 250790**
Batch ID: #GRO86-200313BL
Sample ID: BA08341
Client ID: ERH1029

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
GASOLINE RANGE ORGANICS	300	ND	389	388	130 #	129 #	78-122	0.26	20
SURROGATE: 4-BROMOFLUOROBENZE	25.0	NA	24.4	23.6	97.6	94.4	85-114		

= Recovery is outside QC limits.

Comments:

Primary	SPK	DUP
Quant Method :	LGAS0312.M	LGAS0312.M
Extraction Date :	03/14/20	03/14/20
Analysis Date :	03/14/20	03/14/20
Instrument :	Loki	Loki
Run :	0313L53	0313L54
Initials :	DPO	

Printed: 03/16/20 12:26:24 PM
APPL MSD SCII

RSK 175

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91638

Case No: 91638 Date Analyzed: 03/17/20

Matrix: WATER Instrument: Rocky

Blank ID: 200317A-BLK Time Analyzed: 1022

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200317A-LCS	Lab Control Spike	0317R01	03/17/20 1013
200317A-LCSD	Lab Control SpikeD	0317R03	03/17/20 1019
200317A-BLK	Blank	0317R04	03/17/20 1022
BA08340	ERH1028	0317R05	03/17/20 1025
BA08341	ERH1029	0317R06	03/17/20 1027

Comments: Batch: #RSKME-200317A

Method Blank
METHANE

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **200317W-08340 - 250834**
Batch ID: #RSKME-200317A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	METHANE	1.00 U	5.0	1.00	0.25	ug/L	03/17/20	03/17/20

Quant Method: RSK0311.M
Run #: 0317R04
Instrument: Rocky
Sequence: 200311
Initials: CMO

GC SC-Blank-REG MDLs-DOD
Printed: 03/17/20 10:46:23 AM

RSK 175

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91638
Case No:	91638	Date Analyzed:	03/17/20
Matrix:	WATER	Instrument:	Rocky
LCS ID:	200317A-LCS	Time Analyzed:	1013

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200317A-LCS	Lab Control Spike	0317R01	03/17/20 1013
200317A-LCSD	Lab Control SpikeD	0317R03	03/17/20 1019
200317A-BLK	Blank	0317R04	03/17/20 1022
BA08340	ERH1028	0317R05	03/17/20 1025
BA08341	ERH1029	0317R06	03/17/20 1027

Comments: Batch: #RSKME-200317A

Laboratory Control Spike Recoveries
METHANE

APPL ID: **200317W-08340 LCS - 250834**
Batch ID: #RSKME-200317A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
METHANE	83.4	88.2	87.1	106	104	72-125	1.3	30

Comments:

Primary	SPK	DUP
Quant Method :	RSK0311.M	RSK0311.M
Extraction Date :	03/17/20	03/17/20
Analysis Date :	03/17/20	03/17/20
Instrument :	Rocky	Rocky
Run :	0317R01	0317R03
Initials :	CMO	

6010C/3010A

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91638

Case No: 91638 Date Analyzed: 03/18/20

Matrix: WATER Instrument: Cyrus

Blank ID: 200313B-BLK Time Analyzed: 1119

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200313B-MSD	Matrix SpikeD	200318A	03/18/20 1150
200313B-MS	Matrix Spike	200318A	03/18/20 1146
200313B-LCSD	Lab Control SpikeD	200318A	03/18/20 1128
200313B-LCS	Lab Control Spike	200318A	03/18/20 1123
200313B-BLK	Blank	200318A	03/18/20 1119
BA08341	ERH1029	200318A	03/18/20 1132

Comments: Batch: #61CDO-200313B

METALS BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
6010C	CALCIUM (CA)	75.0 U	1000	75.0	27.5	ug/L	03/13/20	03/18/20	#61CDO-200313B-BA08341
6010C	MAGNESIUM (MG)	30.0 U	500	30.0	12.9	ug/L	03/13/20	03/18/20	#61CDO-200313B-BA08341
6010C	MANGANESE (MN)	4.00 U	10.0	4.00	1.23	ug/L	03/13/20	03/18/20	#61CDO-200313B-BA08341
6010C	POTASSIUM (K)	500.0 U	3000	500.0	220.0	ug/L	03/13/20	03/18/20	#61CDO-200313B-BA08341
6010C	SODIUM (NA)	500.0 U	5000	500.0	111.1	ug/L	03/13/20	03/18/20	#61CDO-200313B-BA08341

6010C/3010A

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91638
Case No:	91638	Date Analyzed:	03/18/20
Matrix:	WATER	Instrument:	Cyrus
LCS ID:	200313B-LCS	Time Analyzed:	1123

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200313B-MSD	Matrix SpikeD	200318A	03/18/20 1150
200313B-MS	Matrix Spike	200318A	03/18/20 1146
200313B-LCSD	Lab Control SpikeD	200318A	03/18/20 1128
200313B-LCS	Lab Control Spike	200318A	03/18/20 1123
200313B-BLK	Blank	200318A	03/18/20 1119
BA08341	ERH1029	200318A	03/18/20 1132

Comments: Batch: #61CDO-200313B

Laboratory Control Spike Recoveries
METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl ug/L	SPK Res ug/L	DUP Res ug/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
EPA 6010C	CALCIUM (CA)	25000	24400	24100	97.6	96.4	1.2	20	87-113	03/13/20	03/18/20	03/13/20	03/18/20	#61CDO-200313B-BA0834
EPA 6010C	MAGNESIUM (MG)	25000	24600	24300	98.4	97.2	1.2	20	85-113	03/13/20	03/18/20	03/13/20	03/18/20	#61CDO-200313B-BA0834
EPA 6010C	MANGANESE (MN)	250	251	246	100	98.4	2.0	20	90-114	03/13/20	03/18/20	03/13/20	03/18/20	#61CDO-200313B-BA0834
EPA 6010C	POTASSIUM (K)	5000	5010	4940	100	98.8	1.4	20	86-114	03/13/20	03/18/20	03/13/20	03/18/20	#61CDO-200313B-BA0834
EPA 6010C	SODIUM (NA)	25000	25000	24700	100	98.8	1.2	20	87-115	03/13/20	03/18/20	03/13/20	03/18/20	#61CDO-200313B-BA0834

Comments:

Matrix Spike Recoveries

METALS

APPL ID: **200313W-08341 MS - 250886**

Sample ID: BA08341

Client ID: ERH1029

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl ug/L	Matrix Res ug/L	SPK Res ug/L	DUP Res ug/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
EPA 6010C	CALCIUM (CA)	25000	10600	38000	35900	110	101	5.7	20	87-113	03/13/20	03/18/20	03/13/20	03/18/20	250886	BA08341
EPA 6010C	MAGNESIUM (MG)	25000	11800	39300	37200	110	102	5.5	20	85-113	03/13/20	03/18/20	03/13/20	03/18/20	250886	BA08341
EPA 6010C	MANGANESE (MN)	250	4.8	270	266	106	104	1.5	20	90-114	03/13/20	03/18/20	03/13/20	03/18/20	250886	BA08341
EPA 6010C	POTASSIUM (K)	5000	2000	7540	7150	111	103	5.3	20	86-114	03/13/20	03/18/20	03/13/20	03/18/20	250886	BA08341
EPA 6010C	SODIUM (NA)	25000	40700	69500	65700	115	100	5.6	20	87-115	03/13/20	03/18/20	03/13/20	03/18/20	250886	BA08341

Comments:

EPA 300.0

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	91638
Case No:	91638	Date Analyzed:	03/14/20
Matrix:	WATER	Instrument:	Charlie
Blank ID:	200313A6-BLK	Time Analyzed:	1454

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200313A6-LCS	Lab Control Spike	19	03/14/20 1444
200313A6-BLK	Blank	20	03/14/20 1454
BA08341	ERH1029	31	03/14/20 1646
200313A6-MS	Matrix Spike	32	03/14/20 1656
200313A6-MSD	Matrix SpikeD	33	03/14/20 1706
200313A6-LCSD	Lab Control SpikeD	37	03/14/20 1745

Comments: Batch: #300W-200313A6

EPA 300.0

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	91638
Case No:	91638	Date Analyzed:	03/14/20
Matrix:	WATER	Instrument:	Charlie
Blank ID:	200313A2-BLK	Time Analyzed:	1454

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200313A2-LCS	Lab Control Spike	19	03/14/20 1444
200313A2-BLK	Blank	20	03/14/20 1454
BA08341	ERH1029	34	03/14/20 1716
200313A2-MS	Matrix Spike	35	03/14/20 1725
200313A2-MSD	Matrix SpikeD	36	03/14/20 1735
200313A2-LCSD	Lab Control SpikeD	37	03/14/20 1745

Comments: Batch: #300WD-200313A2

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
EPA 300.0	BROMIDE	0.16 U	0.5	0.16	0.05	mg/L	03/14/20	03/14/20	#300W-200313A6-BA08341
EPA 300.0	FLUORIDE	0.09 U	0.1	0.09	0.08	mg/L	03/14/20	03/14/20	#300W-200313A6-BA08341
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	03/14/20	03/14/20	#300W-200313A6-BA08341
EPA 300.0	CHLORIDE	0.16 J	1.0	0.20	0.08	mg/L	03/14/20	03/14/20	#300WD-200313A2-BA08341
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	03/14/20	03/14/20	#300WD-200313A2-BA08341

J = Estimated value.

Wetlab SC-Blank-REG MDLs
Printed: 03/31/20 10:37:46 AM

EPA 300.0

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91638
Case No:	91638	Date Analyzed:	03/14/20
Matrix:	WATER	Instrument:	Charlie
LCS ID:	200313A6-LCS	Time Analyzed:	1444

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200313A6-LCS	Lab Control Spike	19	03/14/20 1444
200313A6-BLK	Blank	20	03/14/20 1454
BA08341	ERH1029	31	03/14/20 1646
200313A6-MS	Matrix Spike	32	03/14/20 1656
200313A6-MSD	Matrix SpikeD	33	03/14/20 1706
200313A6-LCSD	Lab Control SpikeD	37	03/14/20 1745

Comments: Batch: #300W-200313A6

EPA 300.0

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91638
Case No:	91638	Date Analyzed:	03/14/20
Matrix:	WATER	Instrument:	Charlie
LCS ID:	200313A2-LCS	Time Analyzed:	1444

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200313A2-LCS	Lab Control Spike	19	03/14/20 1444
200313A2-BLK	Blank	20	03/14/20 1454
BA08341	ERH1029	34	03/14/20 1716
200313A2-MS	Matrix Spike	35	03/14/20 1725
200313A2-MSD	Matrix SpikeD	36	03/14/20 1735
200313A2-LCSD	Lab Control SpikeD	37	03/14/20 1745

Comments: Batch: #300WD-200313A2

Laboratory Control Spike Recoveries

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
EPA 300.0	CHLORIDE	25.0	24.6	24.2	98.4	96.8	1.6	20	90-110	03/14/20	03/14/20	03/14/20	03/14/20	#300WD-200313A2-BA083
EPA 300.0	SULFATE	25.0	25.2	25.1	101	100	0.40	20	90-110	03/14/20	03/14/20	03/14/20	03/14/20	#300WD-200313A2-BA083
EPA 300.0	BROMIDE	12.5	12.1	12.0	96.8	96.0	0.83	20	90-110	03/14/20	03/14/20	03/14/20	03/14/20	#300W-200313A6-BA0834
EPA 300.0	FLUORIDE	5.0	4.87	4.86	97.4	97.2	0.21	20	90-110	03/14/20	03/14/20	03/14/20	03/14/20	#300W-200313A6-BA0834
EPA 300.0	NITRATE	22.1	20.4	20.1	92.3	91.0	1.5	20	90-110	03/14/20	03/14/20	03/14/20	03/14/20	#300W-200313A6-BA0834

Comments:

Matrix Spike Recoveries

WETLAB

APPL ID: **200314W-08341 MS - 250786**

Sample ID: BA08341

Client ID: ERH1029

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	Matrix Res mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
EPA 300.0	CHLORIDE	250	46.6	306	306	104	104	0.0	20	90-110	03/14/20	03/14/20	03/14/20	03/14/20	250786	BA08341
EPA 300.0	SULFATE	250	11.3	259	259	99.1	99.1	0.0	20	90-110	03/14/20	03/14/20	03/14/20	03/14/20	250786	BA08341
EPA 300.0	BROMIDE	12.5	0.33	12.6	12.6	98.2	98.2	0.0	20	90-110	03/14/20	03/14/20	03/14/20	03/14/20	250785	BA08341
EPA 300.0	FLUORIDE	5.0	0.19	5.20	5.19	100	100	0.19	20	90-110	03/14/20	03/14/20	03/14/20	03/14/20	250785	BA08341
EPA 300.0	NITRATE	22.1	1.8	23.0	23.0	95.9	95.9	0.0	20	90-110	03/14/20	03/14/20	03/14/20	03/14/20	250785	BA08341

Comments:

EPA 353.2

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91638

Case No: 91638 Date Analyzed: 03/13/20

Matrix: WATER Instrument: EVE

Blank ID: 200313A-BLK Time Analyzed: 1257

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200313A-BLK	Blank	12	03/13/20 1257
200313A-LCS	Lab Control Spike	15	03/13/20 1304
200313A-LCSD	Lab Control SpikeD	16	03/13/20 1306
200313A-MS	Matrix Spike	19	03/13/20 1310
200313A-MSD	Matrix SpikeD	22	03/13/20 1313
BA08341	ERH1029	23	03/13/20 1314

Comments: Batch: #35OF-200313A

SM 2320B

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	91638
Case No:	91638	Date Analyzed:	03/18/20
Matrix:	WATER	Instrument:	Tiamo
Blank ID:	200318A-BLK	Time Analyzed:	1544

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200318A-BLK	Blank	1	03/18/20 1544
BA08341	ERH1029	2	03/18/20 1604
200318A-LCS	Lab Control Spike	3	03/18/20 1840
200318A-LCSD	Lab Control SpikeD	4	03/18/20 1849

Comments: Batch: #232W-200318A

SM 4500-Si D

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	91638
Case No:	91638	Date Analyzed:	03/18/20
Matrix:	WATER	Instrument:	Manual Spec
Blank ID:	200318A-BLK	Time Analyzed:	1448

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200318A-BLK	Blank	67	03/18/20 1448
200318A-LCS	Lab Control Spike	68	03/18/20 1448
200318A-LCSD	Lab Control SpikeD	69	03/18/20 1449
BA08341	ERH1029	70	03/18/20 1451

Comments: Batch: #SIO2-200318A

SM 4500-Si D

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	91638
Case No:	91638	Date Analyzed:	03/18/20
Matrix:	WATER	Instrument:	Manual Spec
Blank ID:	200318A-BLK	Time Analyzed:	1448

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200318A-BLK	Blank	67	03/18/20 1448
200318A-LCS	Lab Control Spike	68	03/18/20 1448
200318A-LCSD	Lab Control SpikeD	69	03/18/20 1449
BA08341	ERH1029	71	03/18/20 1451

Comments: Batch: #SIO2D-200318A

SM3500FeB

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91638

Case No: 91638 Date Analyzed: 03/12/20

Matrix: WATER Instrument: Manual Spec

Blank ID: A200312-BLK Time Analyzed: 1527

APPL ID.	Client Sample No.	File ID.	Date Analyzed
A200312-BLK	Blank	24	03/12/20 1527
A200312-LCS	Lab Control Spike	26	03/12/20 1528
BA08341	ERH1029	27	03/12/20 1530
A200312-LCSD	Lab Control SpikeD	28	03/12/20 1530
A200312-MS	Matrix Spike	29	03/12/20 1531
A200312-MSD	Matrix SpikeD	30	03/12/20 1531

Comments: Batch: #35FE-A200312

SW846 9060A

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91638

Case No: 91638 Date Analyzed: 03/19/20

Matrix: WATER Instrument: TICTOC

Blank ID: 200318A-BLK Time Analyzed: 1919

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200318A-BLK	Blank	31	03/19/20 1919
200318A-LCS	Lab Control Spike	32	03/19/20 2015
200318A-LCSD	Lab Control SpikeD	33	03/19/20 2055
BA08341	ERH1029	34	03/19/20 2135
BA08341	ERH1029	35	03/19/20 2212
200318A-DUP	Duplicate	35	03/19/20 2015
200318A-MS	Matrix Spike	36	03/19/20 2249
200318A-MSD	Matrix SpikeD	37	03/19/20 2327

Comments: Batch: #DOCW5-200318A

SW846 9060A

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	91638
Case No:	91638	Date Analyzed:	03/12/20
Matrix:	WATER	Instrument:	TICTOC
Blank ID:	200312A-BLK	Time Analyzed:	2256

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200312A-BLK	Blank	31	03/12/20 2256
200312A-LCS	Lab Control Spike	32	03/12/20 2336
200312A-LCSD	Lab Control SpikeD	33	03/13/20 0017
BA08341	ERH1029	35	03/13/20 0133

Comments: Batch: #TOCW5-200312A

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
SM 2320B	BICARBONATE AS	1.9 J	2.0	1.70	0.85	mg/L	03/18/20	03/18/20	#232W-200318A-BA08341
SM 2320B	CARBONATE AS C	1.70 U	2.0	1.70	0.85	mg/L	03/18/20	03/18/20	#232W-200318A-BA08341
SM 2320B	TOTAL ALKALINITY	1.9 J	2.0	1.70	0.85	mg/L	03/18/20	03/18/20	#232W-200318A-BA08341
SM3500Fe	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	03/12/20	03/12/20	#35FE-A200312-BA08341
EPA 353.2	NITRATE-NITRITE-	0.090 U	0.10	0.090	0.028	mg/L	03/13/20	03/13/20	#35OF-200313A-BA08341
SW846 90	DISSOLVED ORGA	0.350 U	0.93	0.350	0.130	mg/L	03/18/20	03/19/20	#DOCW5-200318A-BA08341
SM 4500-S	SILICA W	0.80 U	1.0	0.80	0.53	mg/L	03/18/20	03/18/20	#SIO2-200318A-BA08341
SM 4500-S	DISSOLVED SILICA	0.80 U	1.0	0.80	0.53	mg/L	03/18/20	03/18/20	#SIO2D-200318A-BA08341
SW846 90	TOTAL ORGANIC C	0.350 U	0.93	0.350	0.130	mg/L	03/12/20	03/12/20	#TOCW5-200312A-BA08034

EPA 353.2

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 91638

Case No: 91638 Date Analyzed: 03/13/20

Matrix: WATER Instrument: EVE

LCS ID: 200313A-LCS Time Analyzed: 1304

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200313A-BLK	Blank	12	03/13/20 1257
200313A-LCS	Lab Control Spike	15	03/13/20 1304
200313A-LCSD	Lab Control SpikeD	16	03/13/20 1306
200313A-MS	Matrix Spike	19	03/13/20 1310
200313A-MSD	Matrix SpikeD	22	03/13/20 1313
BA08341	ERH1029	23	03/13/20 1314

Comments: Batch: #35OF-200313A

SM 2320B

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91638
Case No:	91638	Date Analyzed:	03/18/20
Matrix:	WATER	Instrument:	Tiamo
LCS ID:	200318A-LCS	Time Analyzed:	1840

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200318A-BLK	Blank	1	03/18/20 1544
BA08341	ERH1029	2	03/18/20 1604
200318A-LCS	Lab Control Spike	3	03/18/20 1840
200318A-LCSD	Lab Control SpikeD	4	03/18/20 1849

Comments: Batch: #232W-200318A

SM 4500-Si D

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91638
Case No:	91638	Date Analyzed:	03/18/20
Matrix:	WATER	Instrument:	Manual Spec
LCS ID:	200318A-LCS	Time Analyzed:	1448

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200318A-BLK	Blank	67	03/18/20 1448
200318A-LCS	Lab Control Spike	68	03/18/20 1448
200318A-LCSD	Lab Control SpikeD	69	03/18/20 1449
BA08341	ERH1029	70	03/18/20 1451

Comments: Batch: #SIO2-200318A

SM 4500-Si D

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91638
Case No:	91638	Date Analyzed:	03/18/20
Matrix:	WATER	Instrument:	Manual Spec
LCS ID:	200318A-LCS	Time Analyzed:	1448

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200318A-BLK	Blank	67	03/18/20 1448
200318A-LCS	Lab Control Spike	68	03/18/20 1448
200318A-LCSD	Lab Control SpikeD	69	03/18/20 1449
BA08341	ERH1029	71	03/18/20 1451

Comments: Batch: #SIO2D-200318A

SM3500FeB

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 91638

Case No: 91638 Date Analyzed: 03/12/20

Matrix: WATER Instrument: Manual Spec

LCS ID: A200312-LCS Time Analyzed: 1528

APPL ID.	Client Sample No.	File ID.	Date Analyzed
A200312-BLK	Blank	24	03/12/20 1527
A200312-LCS	Lab Control Spike	26	03/12/20 1528
BA08341	ERH1029	27	03/12/20 1530
A200312-LCSD	Lab Control SpikeD	28	03/12/20 1530
A200312-MS	Matrix Spike	29	03/12/20 1531
A200312-MSD	Matrix SpikeD	30	03/12/20 1531

Comments: Batch: #35FE-A200312

SW846 9060A

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 91638

Case No: 91638 Date Analyzed: 03/19/20

Matrix: WATER Instrument: TICTOC

LCS ID: 200318A-LCS Time Analyzed: 2015

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200318A-BLK	Blank	31	03/19/20 1919
200318A-LCS	Lab Control Spike	32	03/19/20 2015
200318A-LCSD	Lab Control SpikeD	33	03/19/20 2055
BA08341	ERH1029	34	03/19/20 2135
BA08341	ERH1029	35	03/19/20 2212
200318A-DUP	Duplicate	35	03/19/20 2015
200318A-MS	Matrix Spike	36	03/19/20 2249
200318A-MSD	Matrix SpikeD	37	03/19/20 2327

Comments: Batch: #DOCW5-200318A

SW846 9060A

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91638
Case No:	91638	Date Analyzed:	03/12/20
Matrix:	WATER	Instrument:	TICTOC
LCS ID:	200312A-LCS	Time Analyzed:	2336

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200312A-BLK	Blank	31	03/12/20 2256
200312A-LCS	Lab Control Spike	32	03/12/20 2336
200312A-LCSD	Lab Control SpikeD	33	03/13/20 0017
BA08341	ERH1029	35	03/13/20 0133

Comments: Batch: #TOCW5-200312A

Laboratory Control Spike Recoveries

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
EPA 353.2	NITRATE-NITRITE-N	3.00	3.08	3.17	103	106	2.9	20	90-110	03/13/20	03/13/20	03/13/20	03/13/20	#35OF-200313A-BA08341
SM 2320B	BICARBONATE AS CACO3	250	233	237	93.2	94.8	1.7	20	90-110	03/18/20	03/18/20	03/18/20	03/18/20	#232W-200318A-BA08341
SM 2320B	TOTAL ALKALINITY AS CA	239	245	245	103	103	0.0	20	90-110	03/18/20	03/18/20	03/18/20	03/18/20	#232W-200318A-BA08341
SM 4500-Si	SILICA W	4.00	4.02	4.02	100	100	0.0	20	80-120	03/18/20	03/18/20	03/18/20	03/18/20	#SIO2-200318A-BA08341
SM 4500-Si	DISSOLVED SILICA	4.00	4.02	4.02	100	100	0.0	20	80-120	03/18/20	03/18/20	03/18/20	03/18/20	#SIO2D-200318A-BA08341
SM3500Fe	FERROUS IRON	3.00	2.95	2.97	98.3	99.0	0.68	20	80-120	03/12/20	03/12/20	03/12/20	03/12/20	#35FE-A200312-BA08341
SW846 90	DISSOLVED ORGANIC CA	5.00	5.07	5.02	101	100	0.99	20	90-110	03/18/20	03/19/20	03/18/20	03/19/20	#DOCW5-200318A-BA083
SW846 90	TOTAL ORGANIC CARBO	5.00	5.02	4.40	100	88.0	13.2	20	80-120	03/12/20	03/12/20	03/12/20	03/13/20	#TOCW5-200312A-BA080

Comments:

Matrix Spike Recoveries

WETLAB

APPL ID: **200313W-08341 MS - 250797**

Sample ID: BA08341

Client ID: ERH1029

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	Matrix Res mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
EPA 353.2	NITRATE-NITRITE-N	3.23	0.43	3.80	3.81	104	105	0.26	20	90-110	03/13/20	03/13/20	03/13/20	03/13/20	250797	BA08341
SM3500Fe	FERROUS IRON	3.00	0.064	3.02	3.02	98.5	98.5	0.0	20	80-120	03/12/20	03/12/20	03/12/20	03/12/20	250703	BA08341
SW846 90	DISSOLVED ORGANIC	5.0	0.72	5.61	5.37	97.8	93.0	4.4	20	90-110	03/19/20	03/19/20	03/19/20	03/19/20	250980	BA08341

Comments:

WETLAB

Sample/Sample Duplicate Results

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Pascua

Sample ID: BA08341
Client ID: ERH1029

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91638

Method	Analyte	Sample ID	Sample Result	Sample Dup Result	RPD	RPD Max	MDL	PQL	Units	Sample Extract Date	Sample Analysis Date	Sample Dup Extract Date	Sample Dup Analysis Date
SW846 9060A	DISSOLVED ORG	BA08341	0.74	0.72	2.7	20	0.130	0.93	mg/L	03/18/20	03/19/20	03/18/20	03/19/20

Amended Results.

ORGANICS
Calibration Data

DBCP/EDB/1,2,3-TCP Analysis by
504 8011

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 03/16/20
Matrix: Water Instrument: Herbie

Initials: SS/M

		Compound	1	2	3	4	5	6					Avg	%RSD	Type	r^2	Q
			0228158.D	0228159 D	0228160.D	0228161.D	0228162.D	0228163.D									
1	TM	EDB	939925	895355	816946	788610	830661	756107					837934	8.2	TM		
2	TM	1,2,3-TCP	252700	240040	235122	216989	224417	202412					228613	7.8	TM		
3	S	1,3-DIBROMOPROPANE(S)	1243700	1076015	1011970	919227	943383	864303					1009766	13	S		
4	TM	DBCP	3498700	2910425	2966008	2808464	2985015	2687670					2976047	9.4	TM		
5		Signal #2											0	0			
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1.109298

DBCP/EDB/1,2,3-TCP Analysis by
504 8011

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 03/16/20
Matrix: Water Instrument: Herbie Initials:

			0228158.D	0228159.D	0228160 D	0228161.D	0228162 D	0228163 D									
		Compound	1	2	3	4	5	6					Avg	%RSD	Type	r^2	Q
36	TM	EDB #2	4345350	3991480	3888534	3577259	3758474	3391227					3825387	8.7	TM		
37	TM	1,2,3-TCP #2	713325	690715	698232	569285	651527	592860					652657	9.1	TM		
38	S	1,3-DIBROMOPROPANE(S) #2	3158675	2958775	2857804	2158244	2683944	2440548					2709665	13	S		
39	TM	DBCP #2	10677350	10105360	10612332	10462467	10865330	10568407					10548541	2.4	TM		
40																	
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0.962856

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228158.D\ECD1A.CH Vial: 58
Signal #2 : G:\HERBIE\DATA\200228\0228158.D\ECD2B.CH
Acq On : 03-16-20 13:43:09 Operator: MA,SS
Sample : 8011-1 3/16/20 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 17 8:21 2020 Quant Results File: 8010317A.RES

Quant Method : G:\HERBIE\DATA\200228\8010317A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 17 08:16:43 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

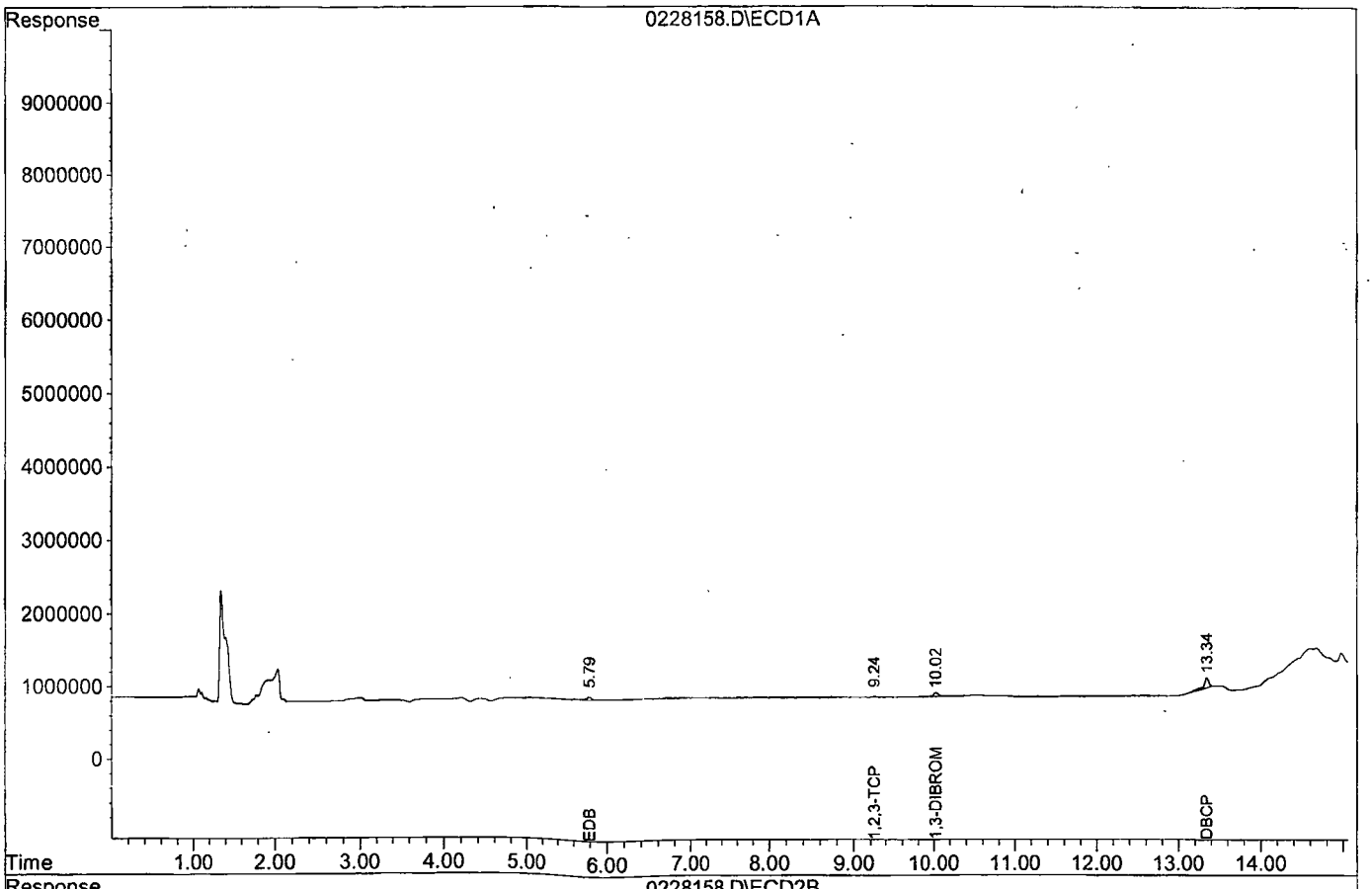
Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
3) S 1,3-DIBROMOPROPA	10.02	11.04	49748	126347	0.025	0.023
Spiked Amount 0.350			Recovery =		7.14%	6.57%
Target Compounds						
1) TM EDB	5.79	7.22	37597	173814	0.022	0.023
2) TM 1,2,3-TCP	9.24	10.44	10108	28533	0.022	0.022
4) TM DBCP	13.34	14.08	139948	427094	0.024	0.020
Target Compounds						

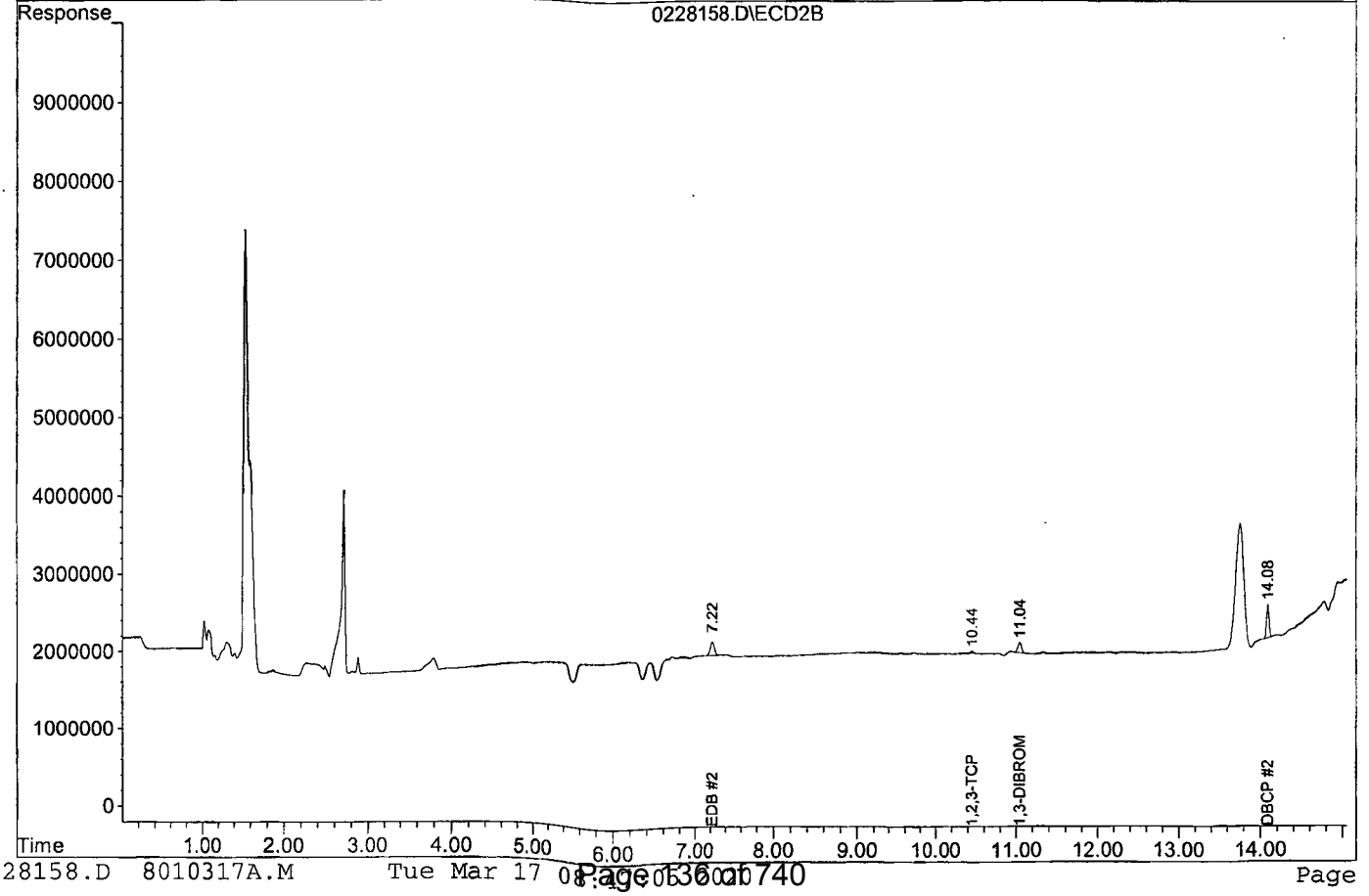
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
0228158.D 8010317A.M Tue Mar 17 08:47:04 2020 Page 1

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\200228\0228158.D
Acq On : 03-16-20 13:43:09
Sample : 8011-1 3/16/20
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010317A.M

Vial: 58
Operator: MA,SS
Inst : Herbie
Multiplr: 1.00





Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228159.D\ECD1A.CH Vial: 59
Signal #2 : G:\HERBIE\DATA\200228\0228159.D\ECD2B.CH
Acq On : 03-16-20 14:03:11 Operator: MA,SS
Sample : 8011-2 3/16/20 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 17 8:21 2020 Quant Results File: 8010317A.RES

Quant Method : G:\HERBIE\DATA\200228\8010317A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 17 08:16:43 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

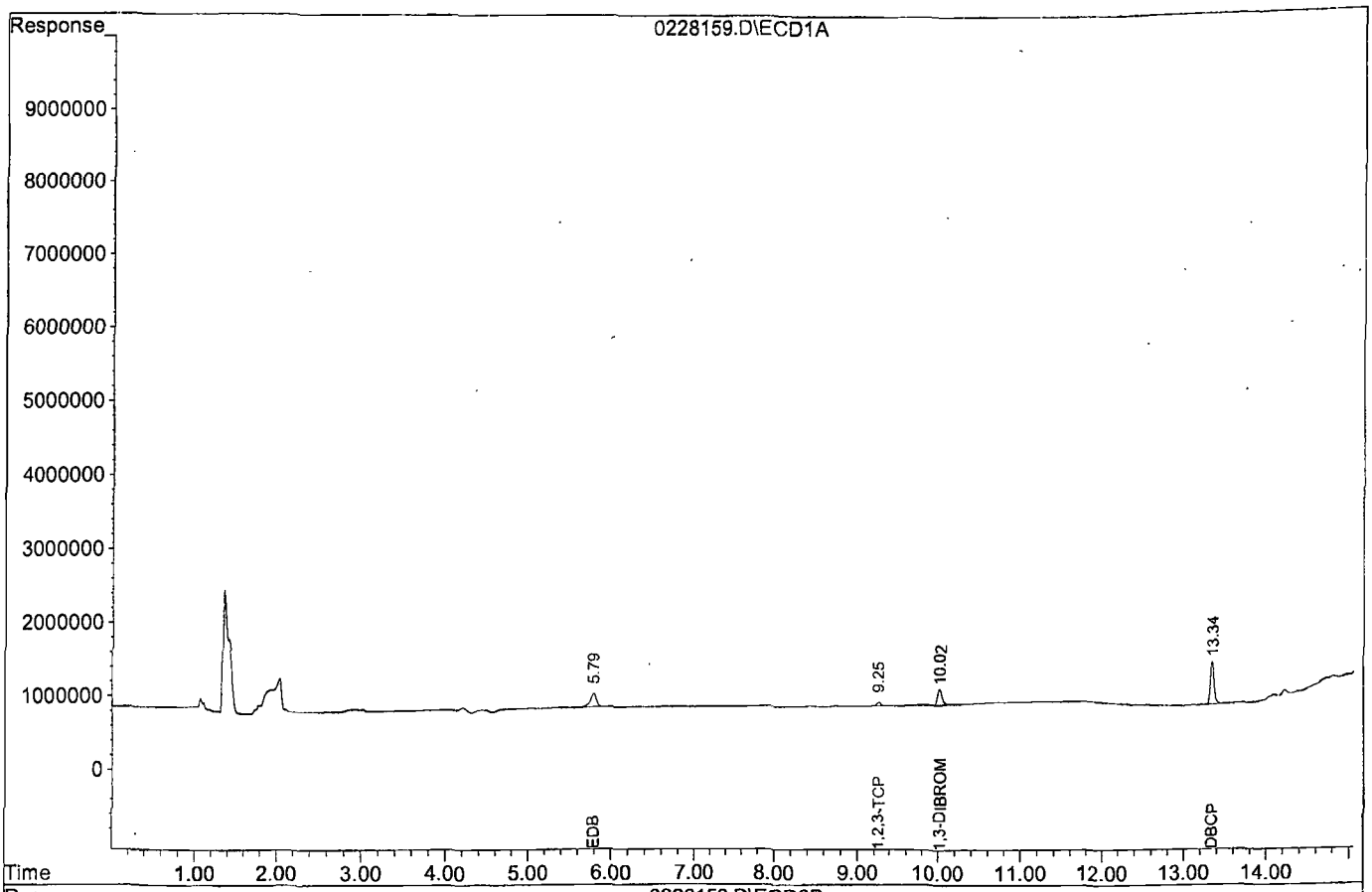
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.02	11.04	215203	591755	0.107	0.109
Spiked Amount	0.350			Recovery	=	30.57%	31.14%
	Target Compounds						
1) TM	EDB	5.79	7.22	179071	798296	0.107	0.104
2) TM	1,2,3-TCP	9.25	10.45	48008	138143	0.105	0.106
4) TM	DBCP	13.34	14.09	582085	2021072	0.098	0.096
	Target Compounds						

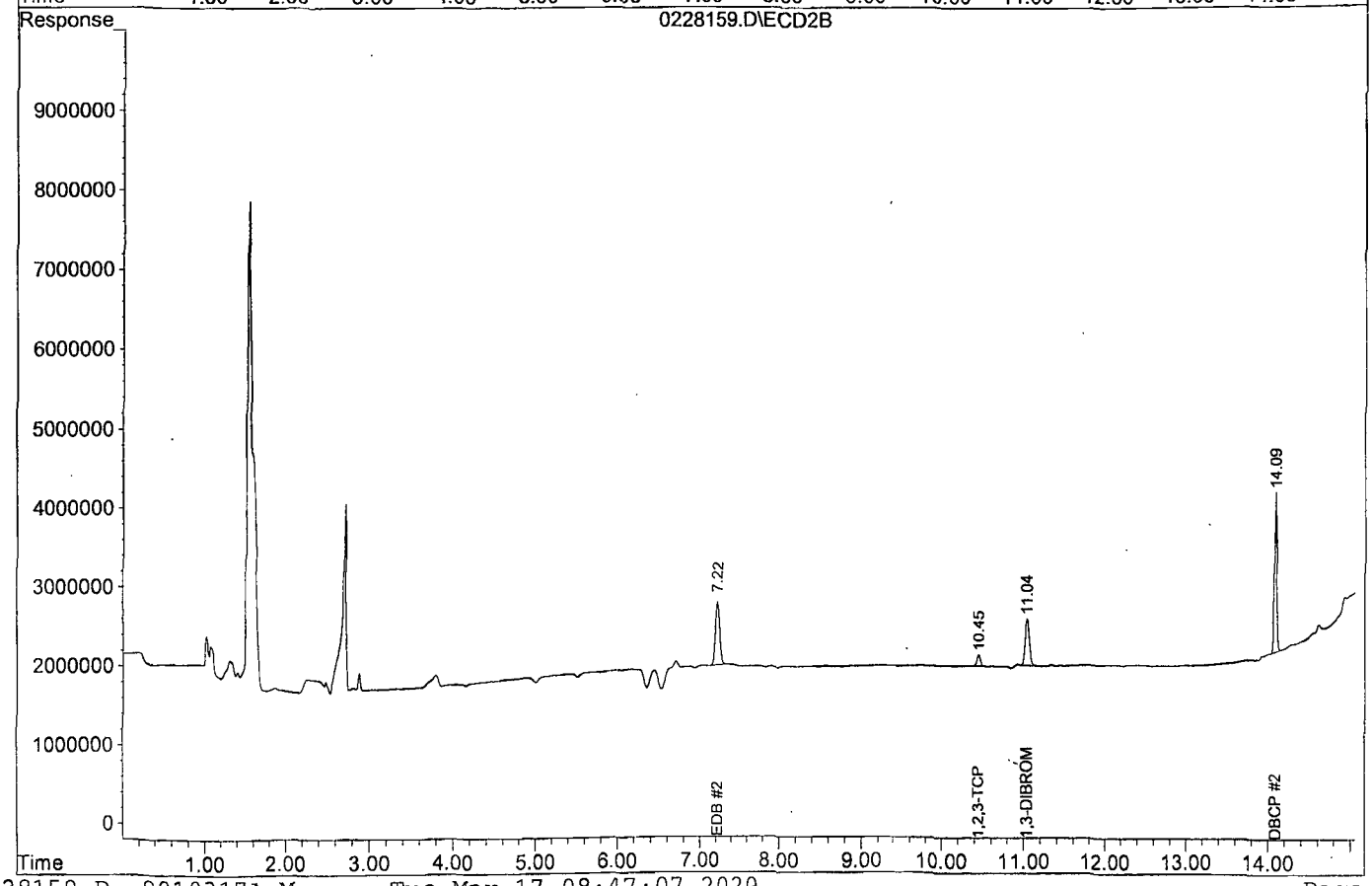
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\200228\0228159.D
Acq On : 03-16-20 14:03:11
Sample : 8011-2 3/16/20
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010317A.M

Vial: 59
Operator: MA,SS
Inst : Herbie
Multiplr: 1.00





Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228160.D\ECD1A.CH Vial: 60
Signal #2 : G:\HERBIE\DATA\200228\0228160.D\ECD2B.CH
Acq On : 03-16-20 14:23:19 Operator: MA,SS
Sample : 8011-3 3/16/20 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 17 8:21 2020 Quant Results File: 8010317A.RES

Quant Method : G:\HERBIE\DATA\200228\8010317A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 17 08:16:43 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

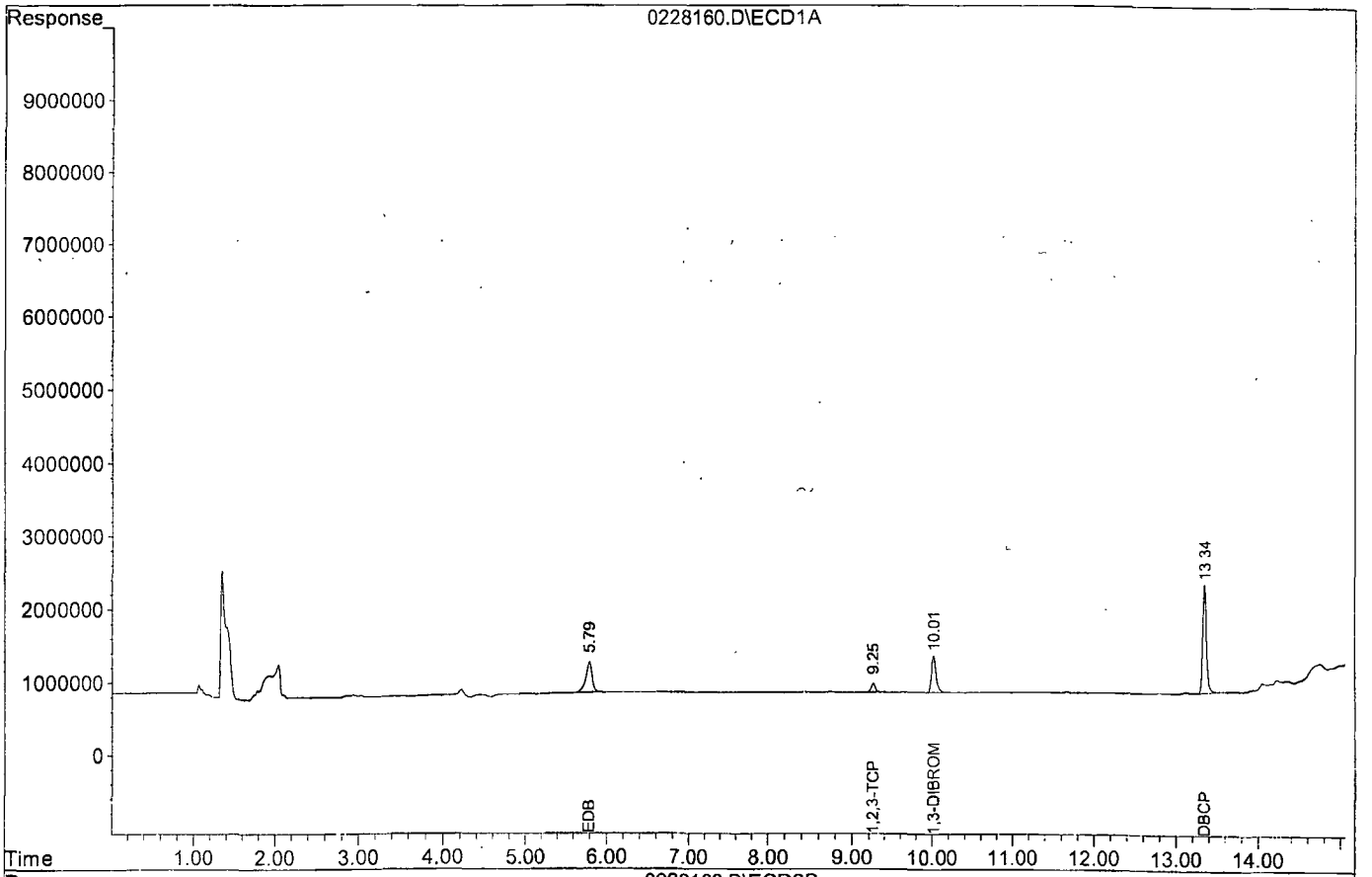
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.01	11.04	505985	1428902	0.251	0.264
Spiked Amount	0.350			Recovery	=	71.71%	75.43%
	Target Compounds						
1) TM	EDB	5.79	7.22	408473	1944267	0.244	0.254
2) TM	1,2,3-TCP	9.25	10.45	117561	349116	0.257	0.267
4) TM	DBCP	13.34	14.09	1483004	5306166	0.249	0.252
	Target Compounds						

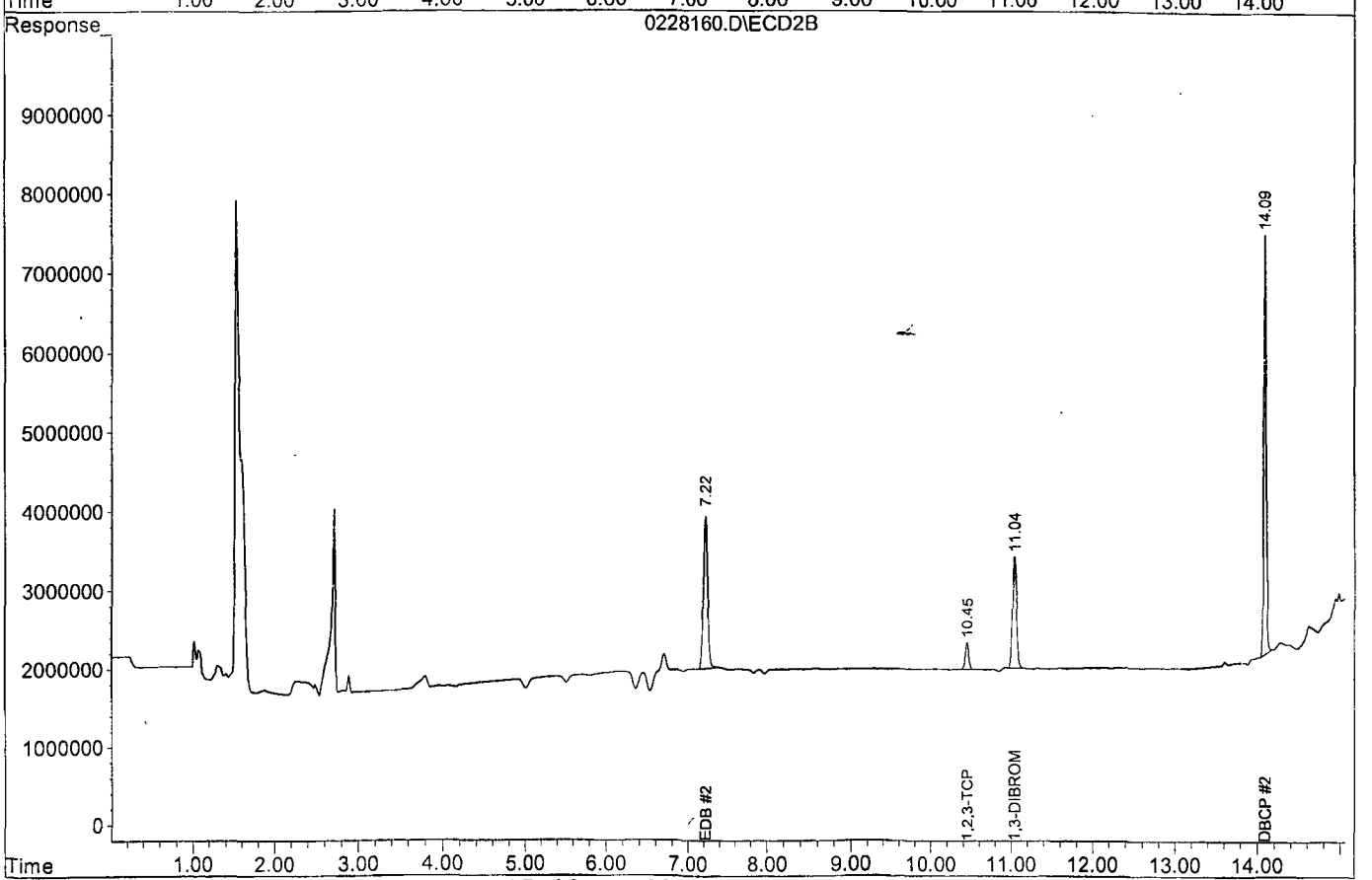
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\200228\0228160.D
Acq On : 03-16-20 14:23:19
Sample : 8011-3 3/16/20
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010317A.M

Vial: 60
Operator: MA,SS
Inst : Herbie
Multiplr: 1.00





Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228161.D\ECD1A.CH Vial: 61
Signal #2 : G:\HERBIE\DATA\200228\0228161.D\ECD2B.CH
Acq On : 03-16-20 14:43:23 Operator: MA,SS
Sample : 8011-4 3/16/20 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 17 8:21 2020 Quant Results File: 8010317A.RES

Quant Method : G:\HERBIE\DATA\200228\8010317A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 17 08:16:43 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

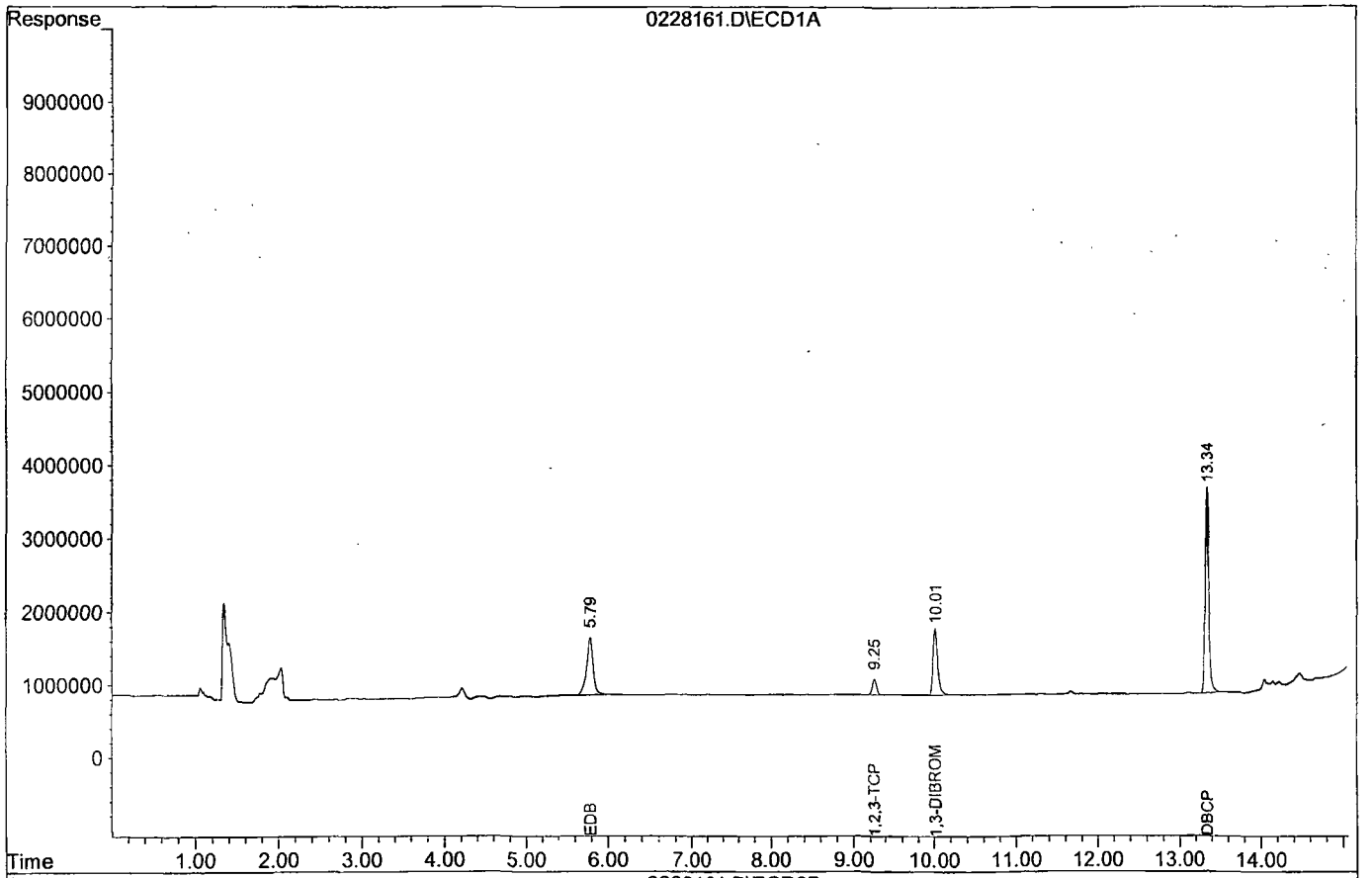
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.01	11.04	919227	2158244	0.455	0.398
Spiked Amount	0.350			Recovery	=	130.00%	113.71%
	Target Compounds						
1) TM	EDB	5.79	7.22	788610	3577259	0.471	0.468
2) TM	1,2,3-TCP	9.25	10.45	216989	569285	0.475	0.436
4) TM	DBCP	13.34	14.09	2808464	10462467	0.472	0.496
	Target Compounds						

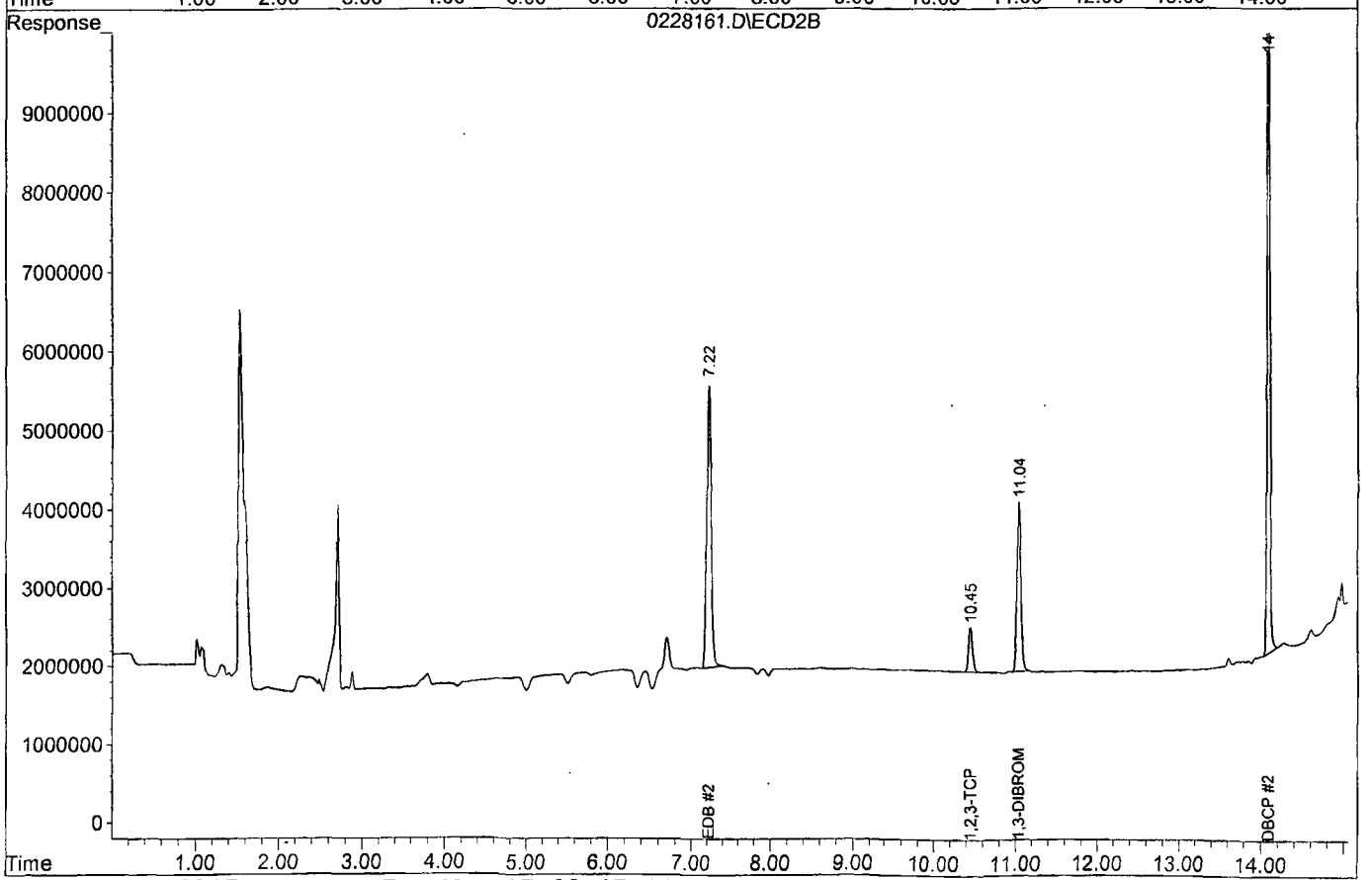
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\200228\0228161.D
Acq On : 03-16-20 14:43:23
Sample : 8011-4 3/16/20
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010317A.M

Vial: 61
Operator: MA,SS
Inst : Herbie
Multiplr: 1.00





Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228162.D\ECD1A.CH Vial: 62
Signal #2 : G:\HERBIE\DATA\200228\0228162.D\ECD2B.CH
Acq On : 03-16-20 15:03:24 Operator: MA,SS
Sample : 8011-5 3/16/20 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 17 8:21 2020 Quant Results File: 8010317A.RES

Quant Method : G:\HERBIE\DATA\200228\8010317A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 17 08:16:43 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.01	11.04	1415075	4025916	0.701	0.743
Spiked Amount	0.350			Recovery	=	200.29%	212.29%
	Target Compounds						
1) TM	EDB	5.79	7.22	1245991	5637711	0.743	0.737
2) TM	1,2,3-TCP	9.25	10.45	336625	977290	0.736	0.749
4) TM	DBCP	13.34	14.09	4477522	16297995	0.752	0.773

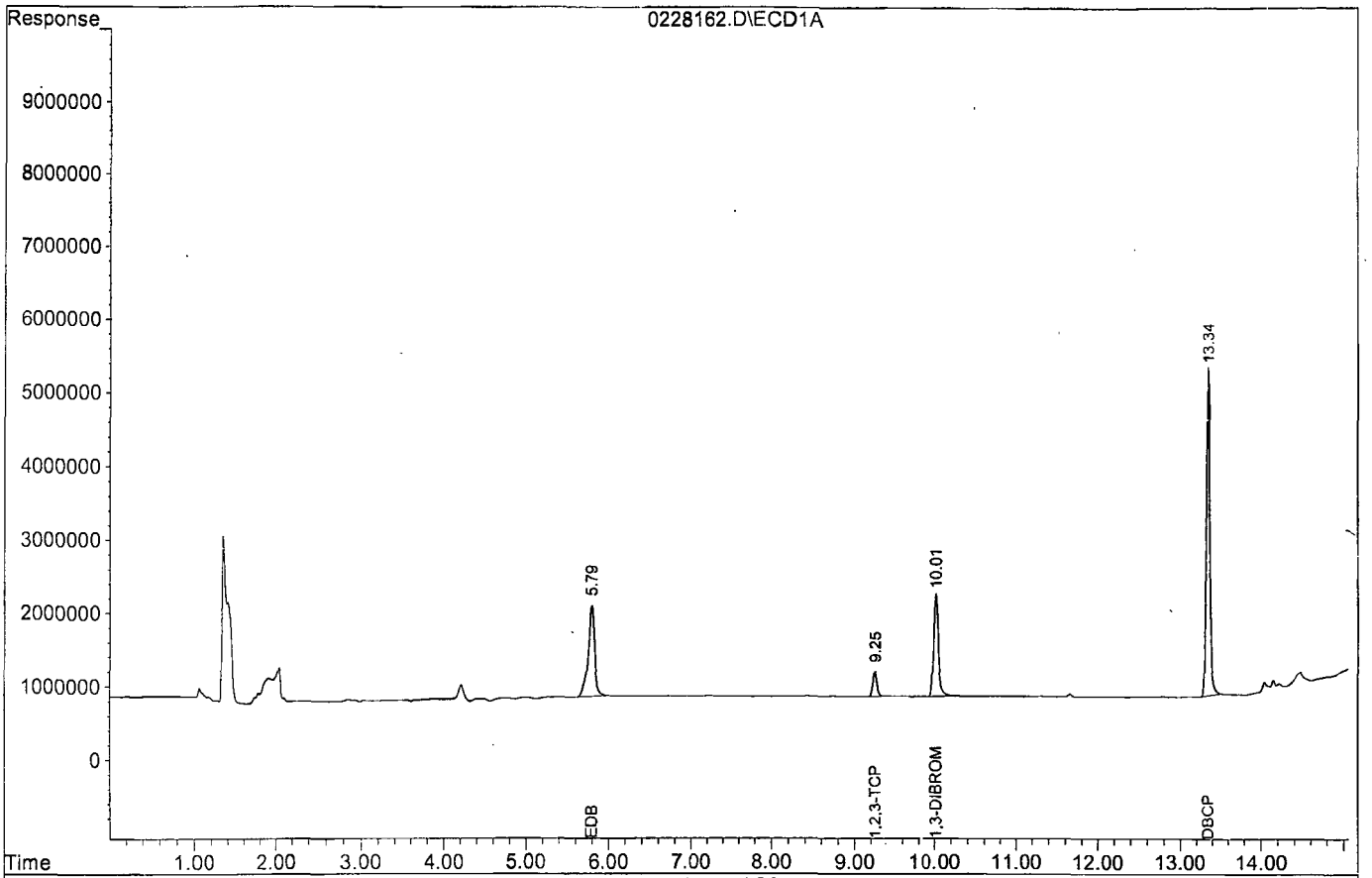
Target Compounds

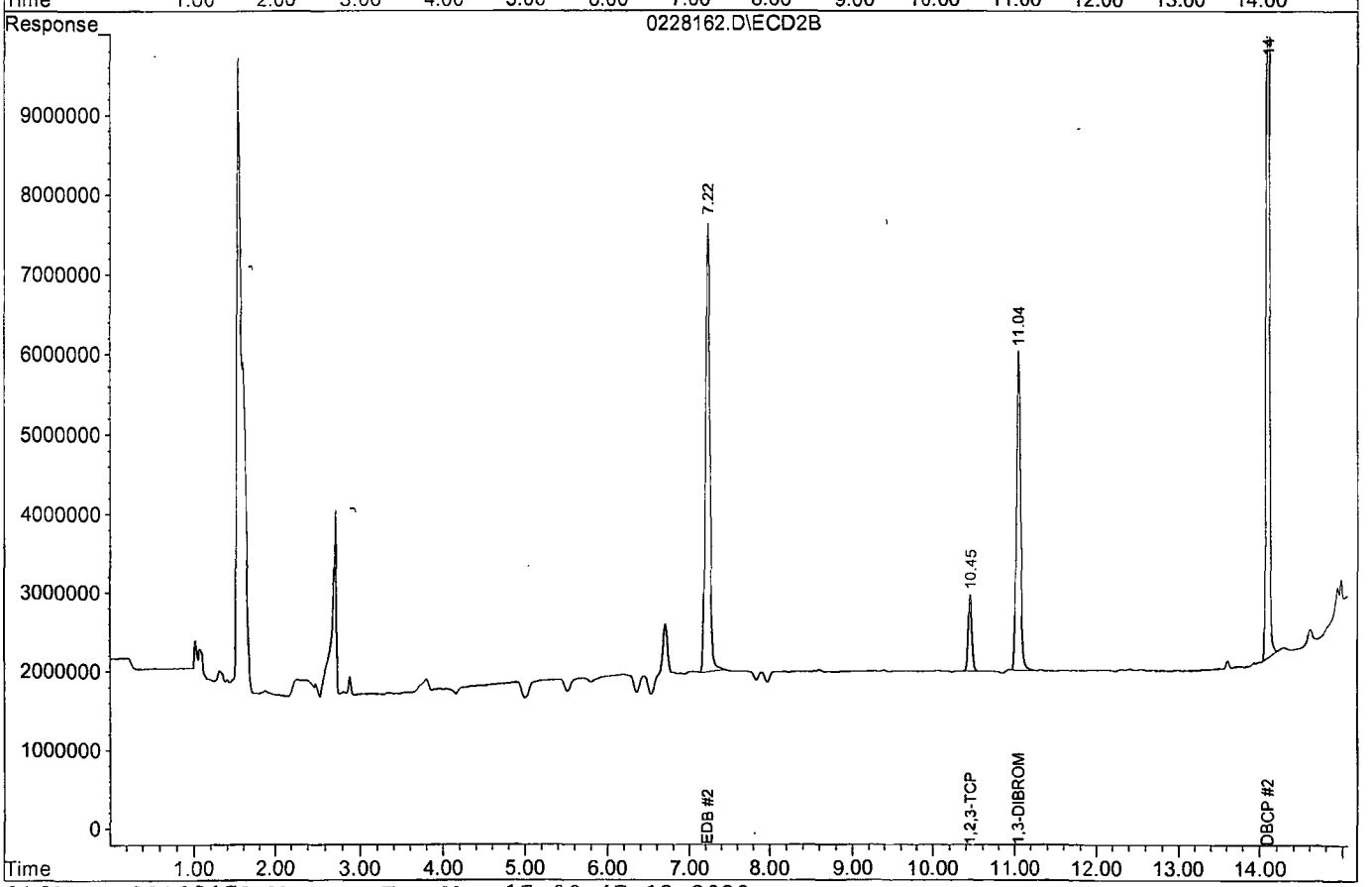
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\200228\0228162.D
Acq On : 03-16-20 15:03:24
Sample : 8011-5 3/16/20
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010317A.M

Vial: 62
Operator: MA,SS
Inst : Herbie
Multiplr: 1.00





Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228163.D\ECD1A.CH Vial: 63
Signal #2 : G:\HERBIE\DATA\200228\0228163.D\ECD2B.CH
Acq On : 03-16-20 15:23:35 Operator: MA,SS
Sample : 8011-6 3/16/20 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 17 8:21 2020 Quant Results File: 8010317A.RES

Quant Method : G:\HERBIE\DATA\200228\8010317A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 17 08:16:43 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

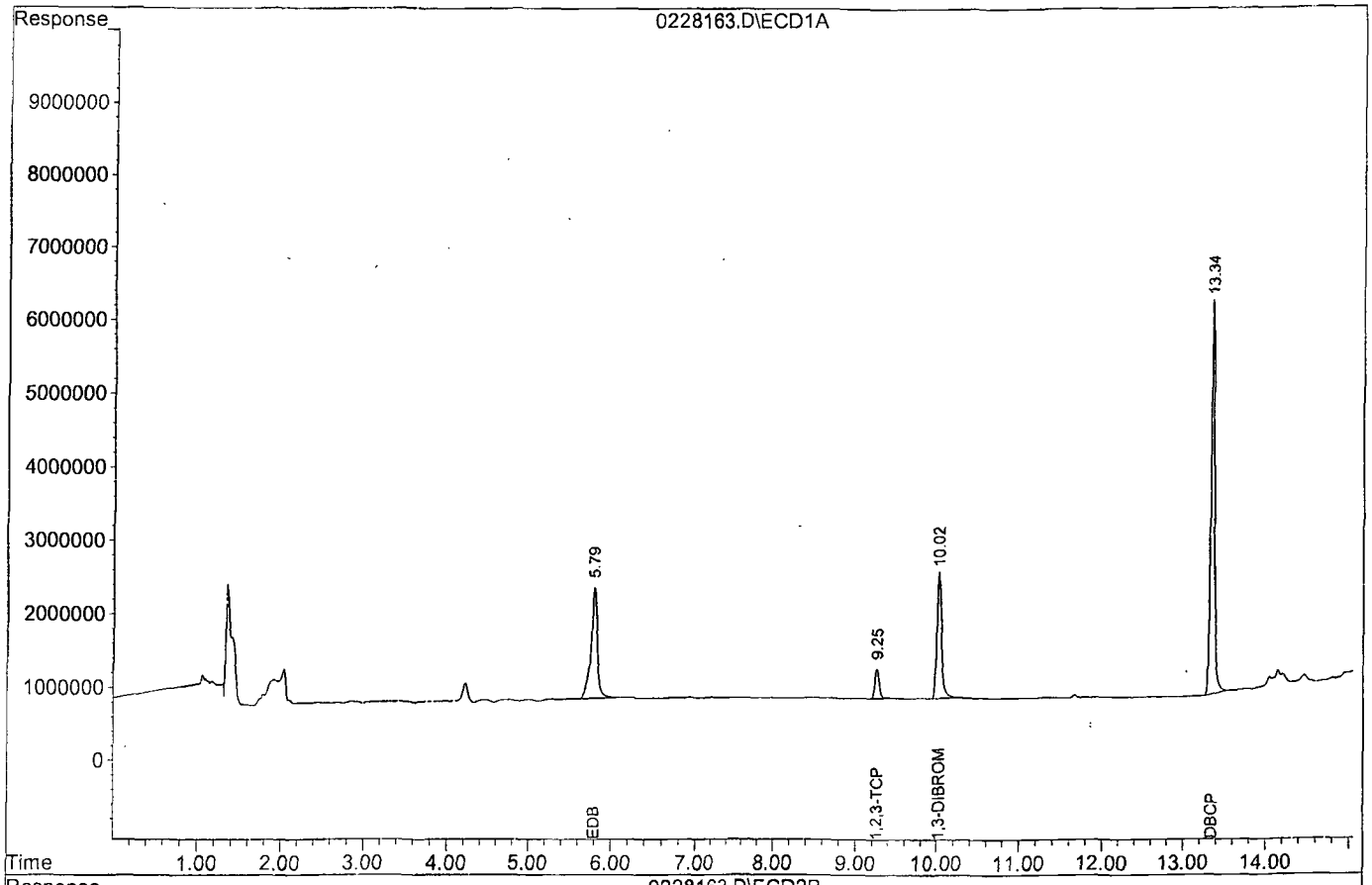
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.02	11.04	1728606	4881096	0.856	0.901
Spiked Amount	0.350			Recovery	=	244.57%	257.43%
	Target Compounds						
1) TM	EDB	5.79	7.22	1512213	6782454	0.902	0.887
2) TM	1,2,3-TCP	9.25	10.45	404824	1185720	0.885	0.908
4) TM	DBCP	13.34	14.09	5375339	21136813	0.903	1.002
	Target Compounds						

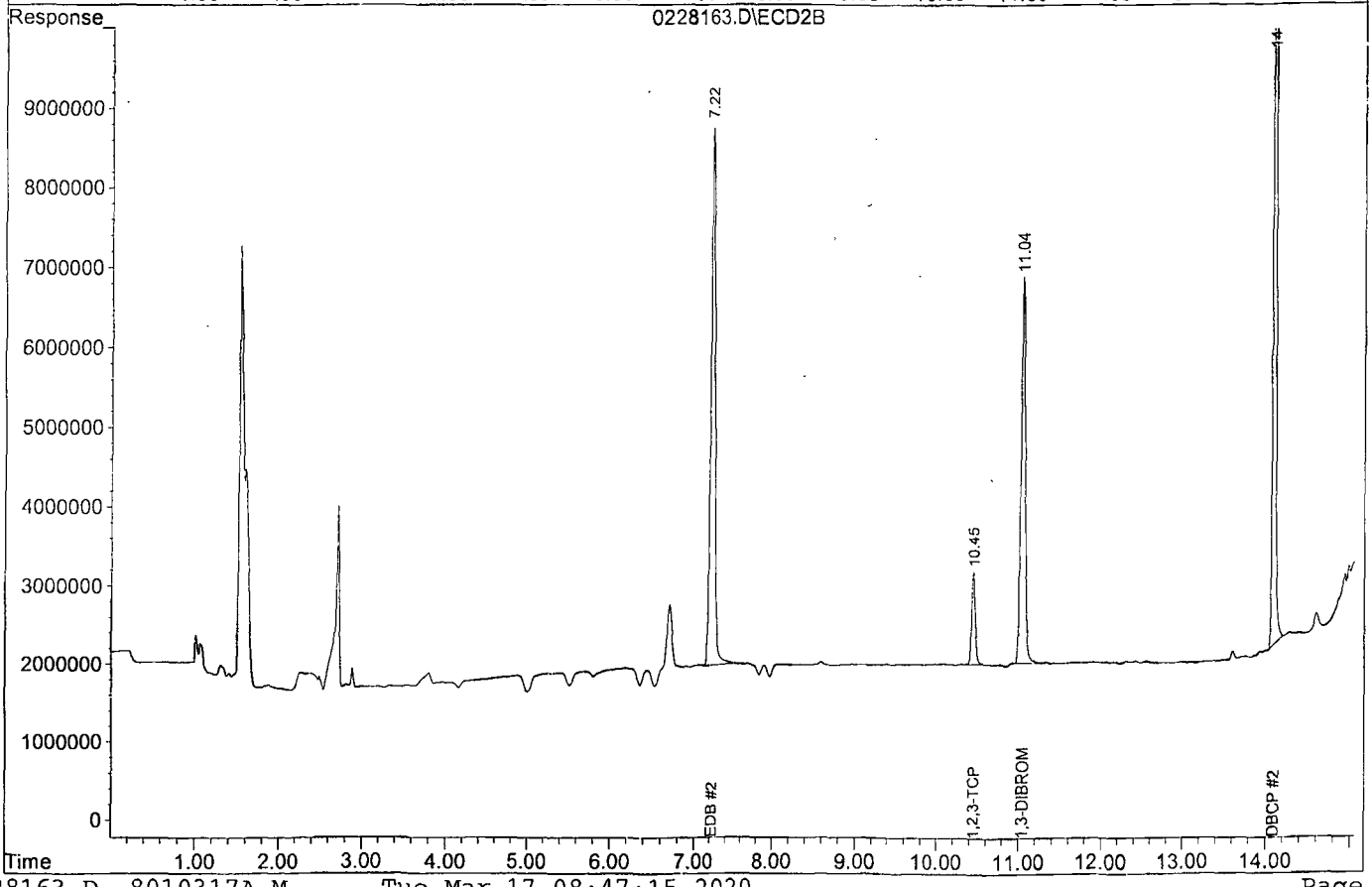
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\200228\0228163.D
Acq On : 03-16-20 15:23:35
Sample : 8011-6 3/16/20
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010317A.M

Vial: 63
Operator: MA,SS
Inst : Herbie
Multiplr: 1.00





DBCP/EDB/1,2,3-TCP Analysis by
504 8011

Form 7

Second Source Calibration

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

SDG No:
Date Analyzed: 03/16/20
Instrument: Herbie
Initial Cal. Date: 03/16/20
Data File: 0228164.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	EDB	837934	843785	0.70	TM	
2	TM	1,2,3-TCP	228613	249010	8.9	TM	
3	TM	DBCP	2976050	3158670	6.1	TM	
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
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33							
34							
35							
36							
37							
38							
39							
40							
		Average			5.2		

DBCP/EDB/1,2,3-TCP Analysis by
504 8011

Form 7

Second Source Calibration

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

SDG No:
Date Analyzed: 03/16/20
Instrument: Herbie
Cal. Date: 03/16/20
Data File: 0228164.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	EDB	3825390	3656580	4.4	TM	
42	TM	1,2,3-TCP	652657	703930	7.9	TM	
43	TM	DBCP	10548500	9737320	7.7	TM	
44							
45							
46							
47							
48							
49							
50							
51							
52							
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79							
80							
		Average			6.7		

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228164.D\ECD1A.CH Vial: 64
Signal #2 : G:\HERBIE\DATA\200228\0228164.D\ECD2B.CH
Acq On : 03-16-20 15:43:36 Operator: MA,SS
Sample : 8011-SS 3/16/20 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 17 8:21 2020 Quant Results File: 8010317A.RES

Quant Method : G:\HERBIE\DATA\200228\8010317A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 17 08:16:43 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.02	11.04	689610	1950153	0.341	0.360
Spiked Amount	0.350			Recovery	=	97.43%	102.86%
	Target Compounds						
1) TM	EDB	5.79	7.22	168757	731316	0.101	0.096
2) TM	1,2,3-TCP	9.25	10.45	49802	140786	0.109	0.108
4) TM	DBCP	13.34	14.08	631733	1947464	0.106	0.092

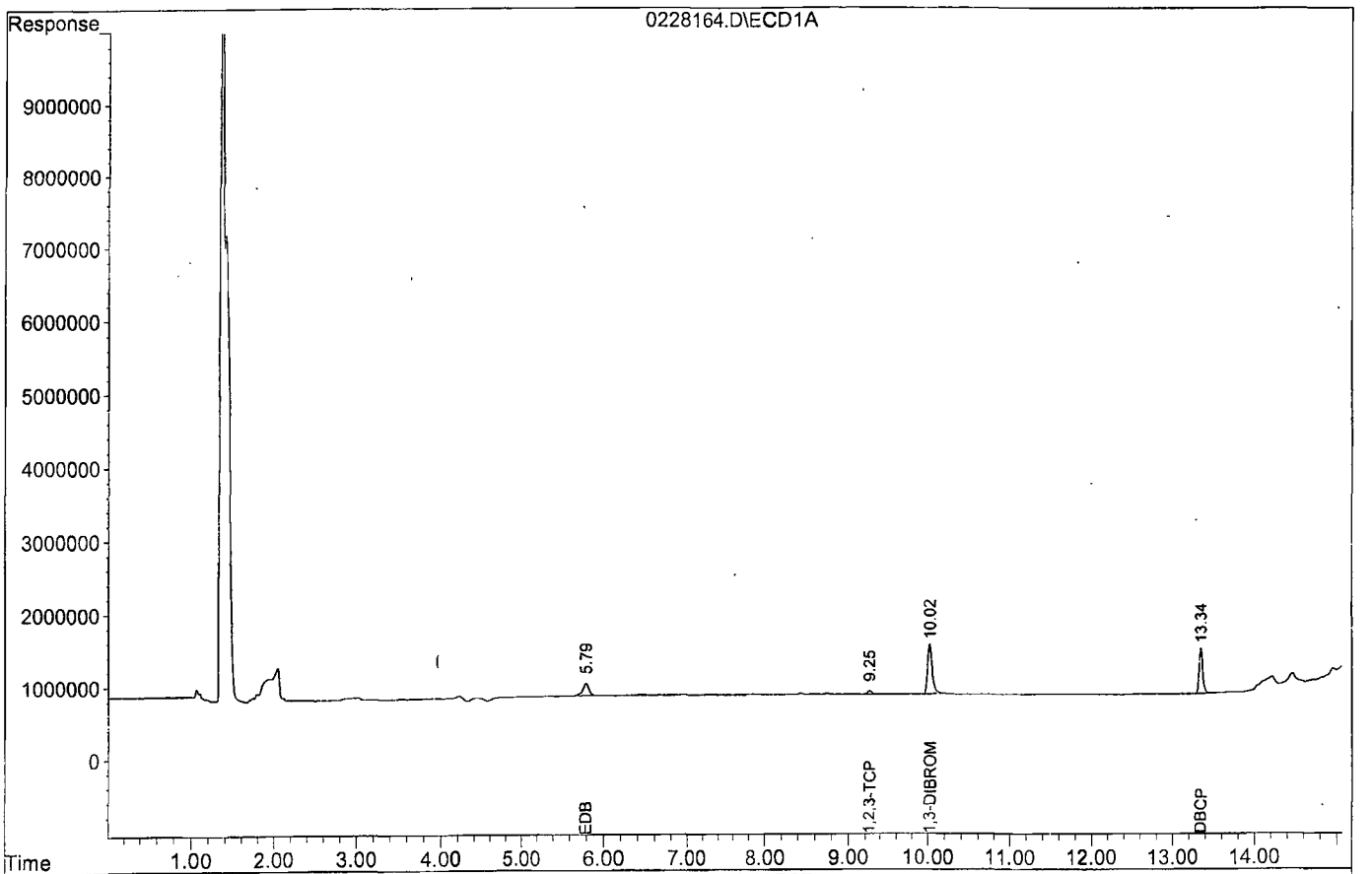
Target Compounds

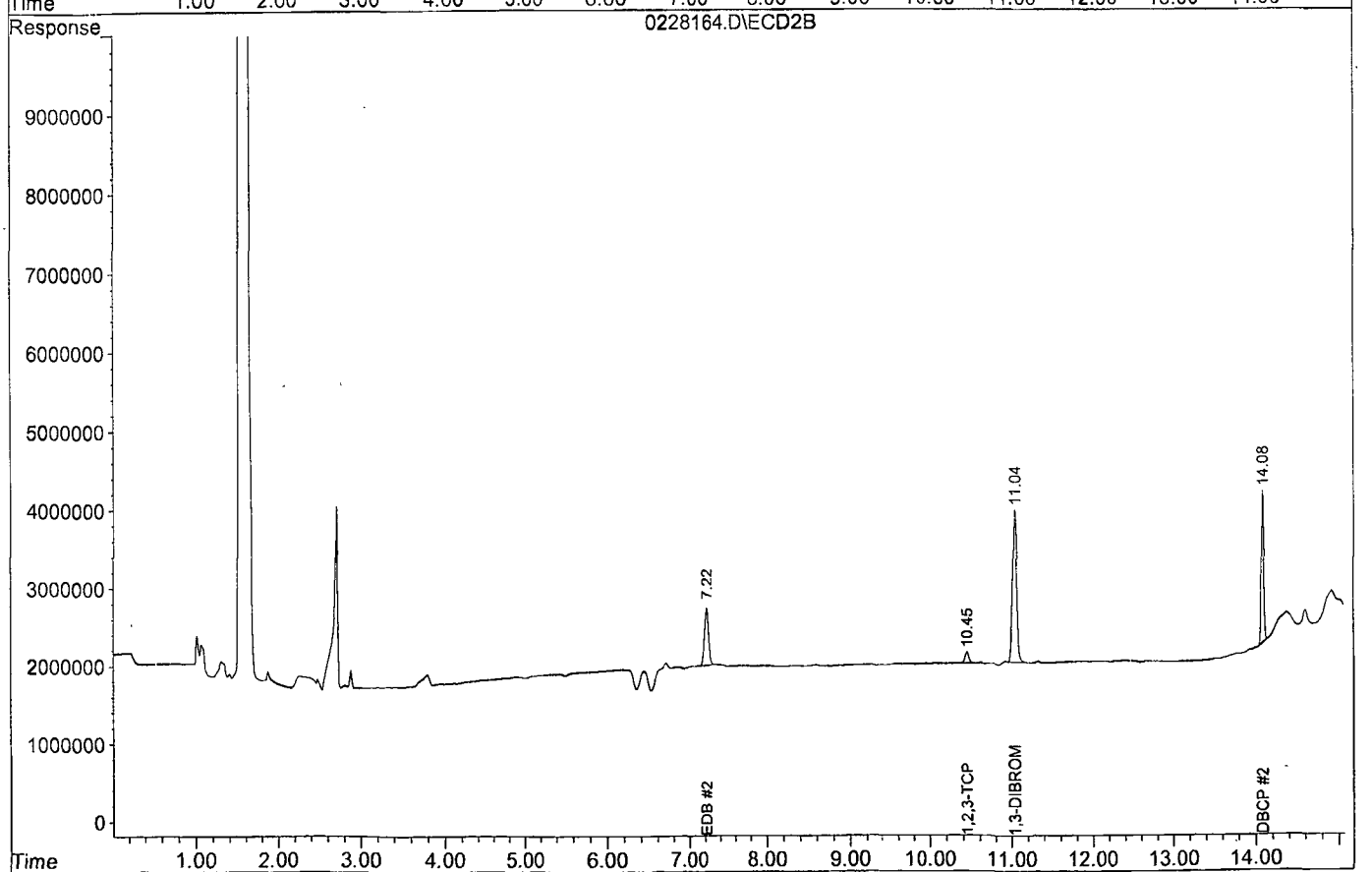
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\200228\0228164.D
Acq On : 03-16-20 15:43:36
Sample : 8011-SS 3/16/20
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010317A.M

Vial: 64
Operator: MA,SS
Inst : Herbie
Multiplr: 1.00





DBCP/EDB/1,2,3-TCP Analysis by
504 8011

Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 03/16/20
Instrument: Herbie
Initial Cal. Date: 03/16/20
Data File: 0228175.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TM	EDB	837934	799971	4.5	TM	
2	TM	1,2,3-TCP	228613	222458	2.7	TM	
3	S	1,3-DIBROMOPROPANE(S)	1009770	934965	7.4	S	
4	TM	DBCP	2976050	2841950	4.5	TM	
5							
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37							
38							
39							
40							
		Average			4.8		

DBCP/EDB/1,2,3-TCP Analysis by
504 8011

Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 03/16/20
Instrument: Herbie
Cal. Date: 03/16/20
Data File: 0228175.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	EDB	3825390	3548880	7.2	TM	
42	TM	1,2,3-TCP	652657	647200	0.84	TM	
43	S	1,3-DIBROMOPROPANE(S)	2709670	2595540	4.2	S	
44	TM	DBCP	10548500	10644000	0.90	TM	
45							
46							
47							
48							
49							
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79							
80							
		Average			3.3		

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228175.D\ECD1A.CH Vial: 75
Signal #2 : G:\HERBIE\DATA\200228\0228175.D\ECD2B.CH
Acq On : 03-16-20 19:24:42 Operator: MA,SS
Sample : 8011-4 3/16/20 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 17 8:21 2020 Quant Results File: 8010317A.RES

Quant Method : G:\HERBIE\DATA\200228\8010317A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 17 08:16:43 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

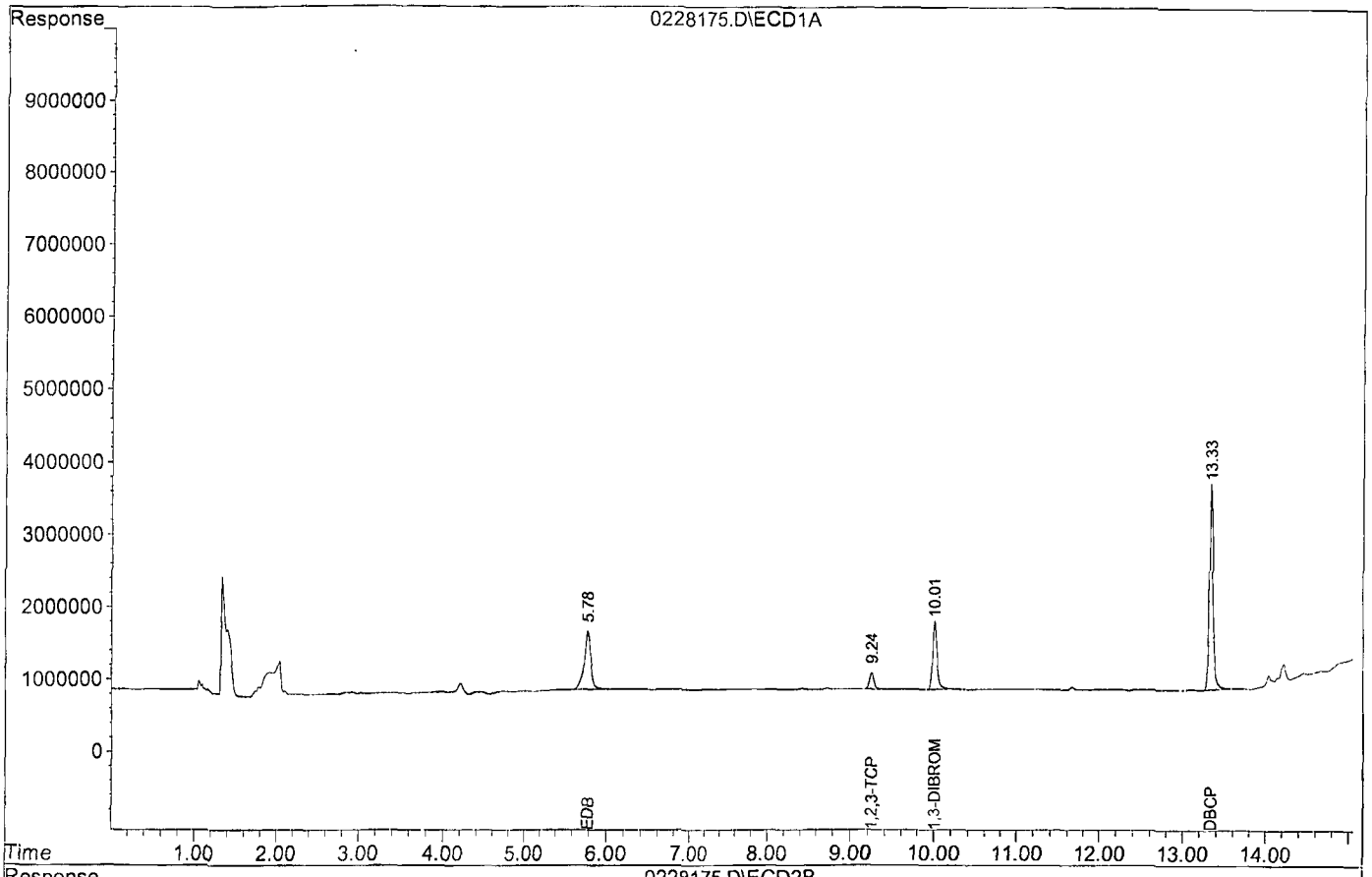
Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

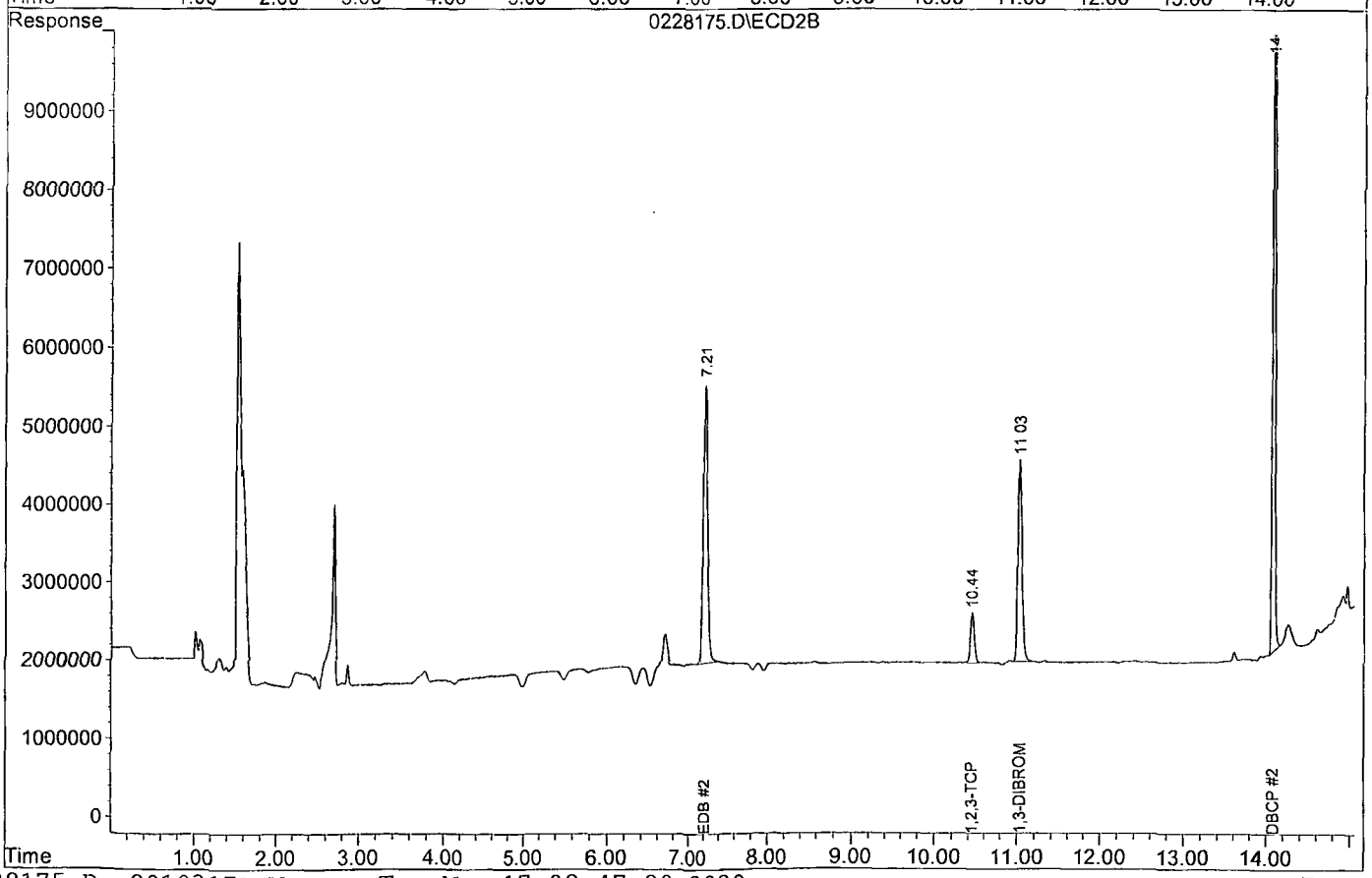
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3)	S 1,3-DIBROMOPROPA	10.01	11.03	934965	2595540	0.463	0.479
	Spiked Amount 0.350			Recovery	=	132.29%	136.86%
	Target Compounds						
1)	TM EDB	5.78	7.21	799971	3548880	0.477	0.464
2)	TM 1,2,3-TCP	9.24	10.44	222458	647200	0.487	0.496
4)	TM DBCP	13.33	14.08	2841945	10643954	0.477	0.505
	Target Compounds						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : G:\HERBIE\DATA\200228\0228175.D
Acq On : 03-16-20 19:24:42
Sample : 8011-4 3/16/20
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010317A.M

Vial: 75
Operator: MA,SS
Inst : Herbie
Multiplr: 1.00





ORGANICS
Raw Data

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228168.D\ECD1A.CH Vial: 68
Signal #2 : G:\HERBIE\DATA\200228\0228168.D\ECD2B.CH
Acq On : 03-16-20 17:03:54 Operator: MA,SS
Sample : BA08340W07 2/35.60 Inst : Herbie
Misc : water Multiplr: 0.98
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 17 9:05 2020 Quant Results File: 8010317A.RES

Quant Method : G:\HERBIE\DATA\200228\8010317A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 17 08:16:43 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

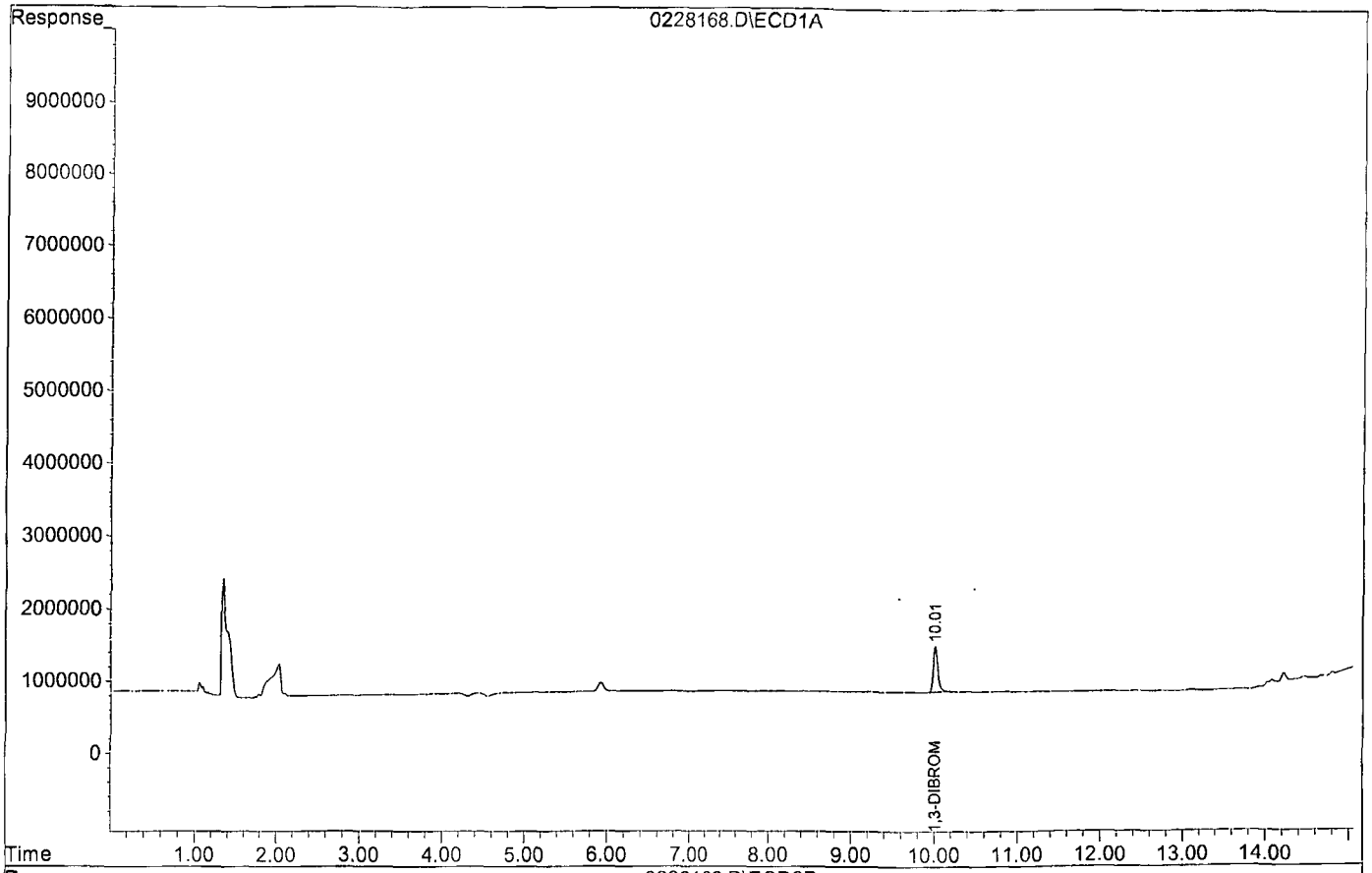
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.01	11.03	630853	1808983	0.307	0.328
Spiked Amount	0.344			Recovery	=	89.22%	95.32%
	Target Compounds						
	Target Compounds						
1) TM	EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM	DBCP	0.00	0.00	0	0	N.D. d	N.D. d

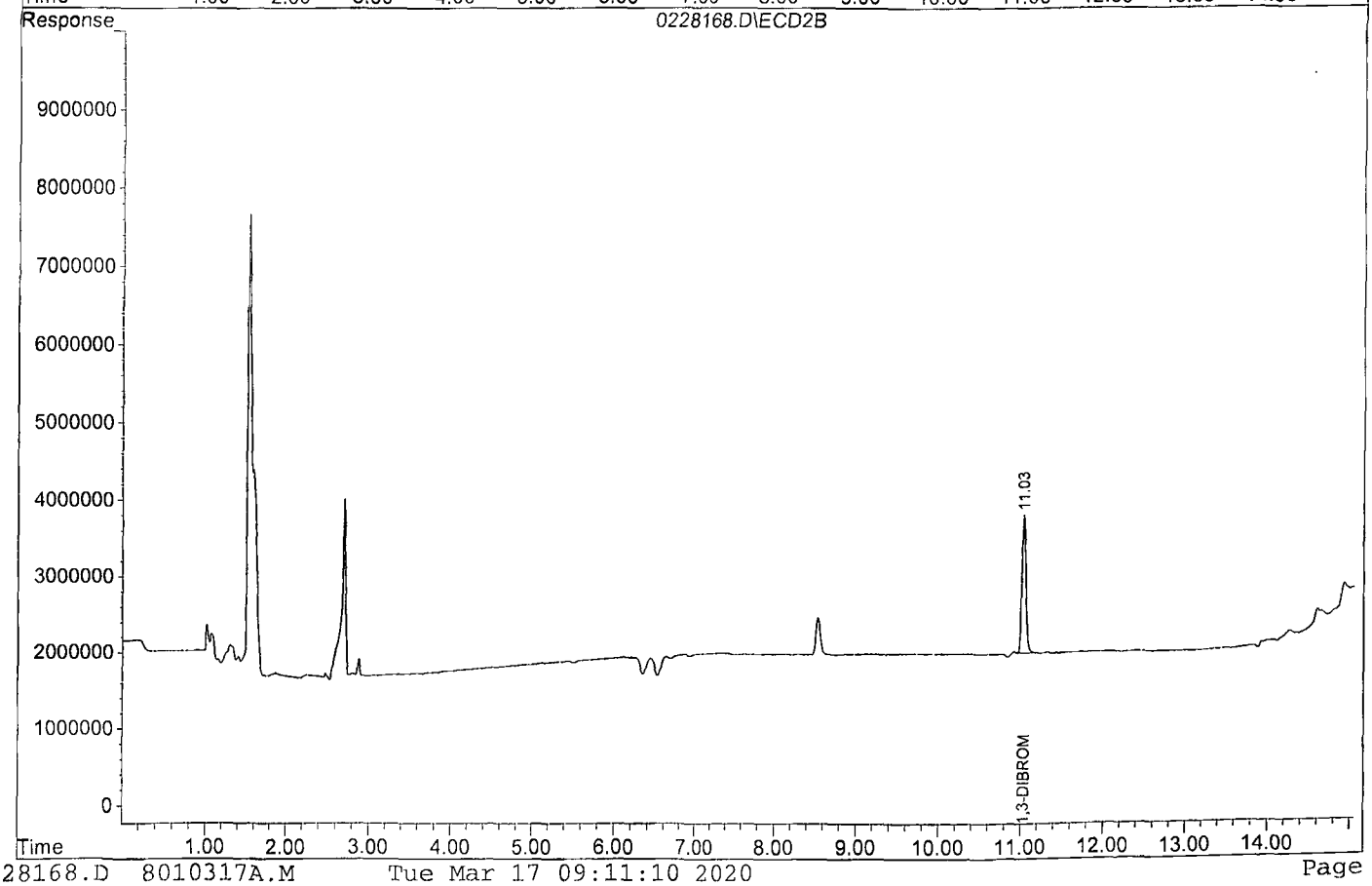
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\200228\0228168.D
Acq On : 03-16-20 17:03:54
Sample : BA08340W07 2/35.60
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010317A.M

Vial: 68
Operator: MA,SS
Inst : Herbie
Multiplr: 0.98





Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228169.D\ECD1A.CH Vial: 69
Signal #2 : G:\HERBIE\DATA\200228\0228169.D\ECD2B.CH
Acq On : 03-16-20 17:24:02 Operator: MA,SS
Sample : BA08341W12 2/35.15 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 17 9:04 2020 Quant Results File: 8010317A.RES

Quant Method : G:\HERBIE\DATA\200228\8010317A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 17 08:16:43 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

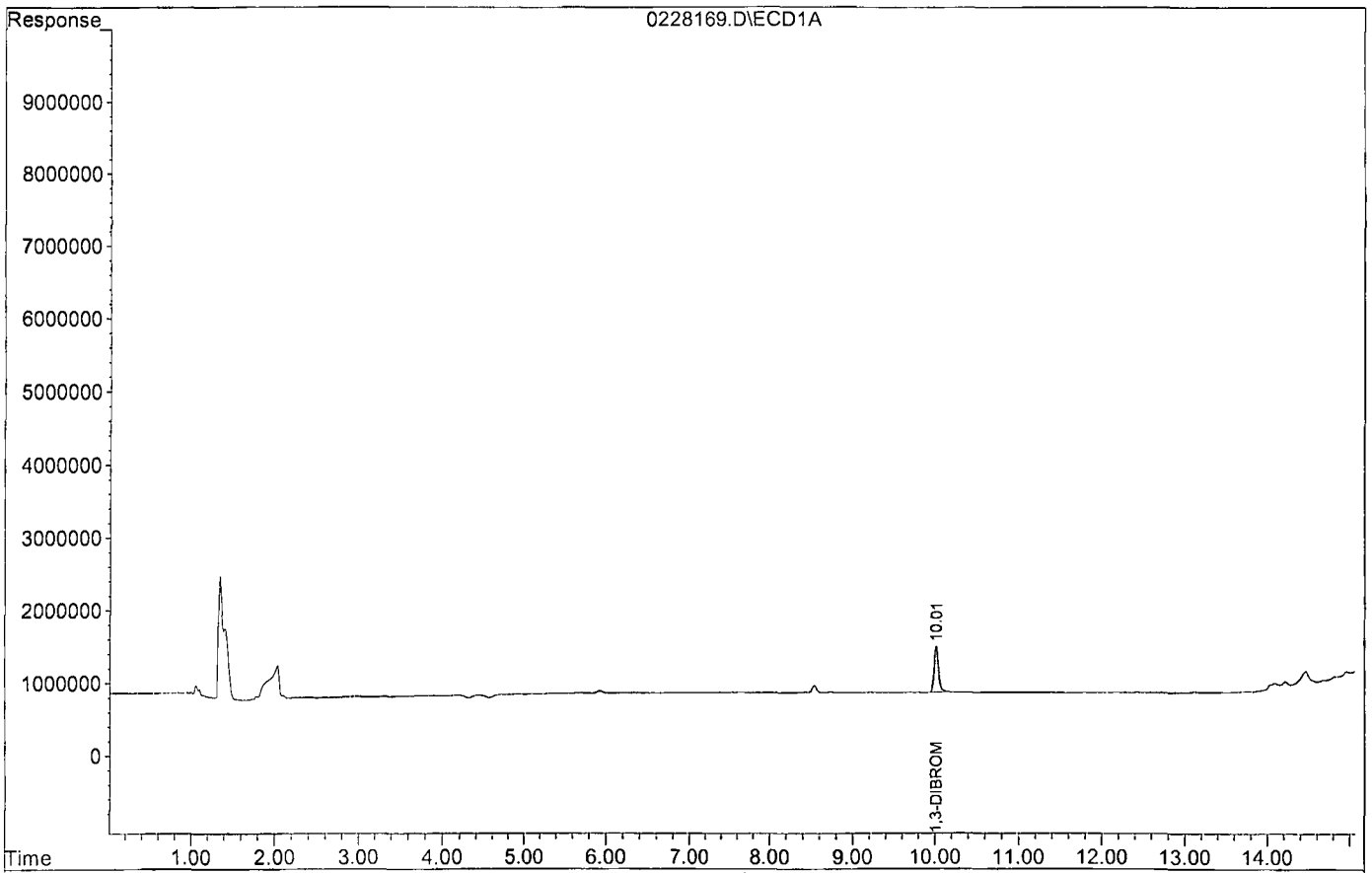
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.01	11.03	631135	1830888	0.311	0.336
Spiked Amount	0.349			Recovery	=	89.24%	96.41%
	Target Compounds						
	Target Compounds						
1) TM	EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM	DBCP	0.00	0.00	0	0	N.D. d	N.D. d

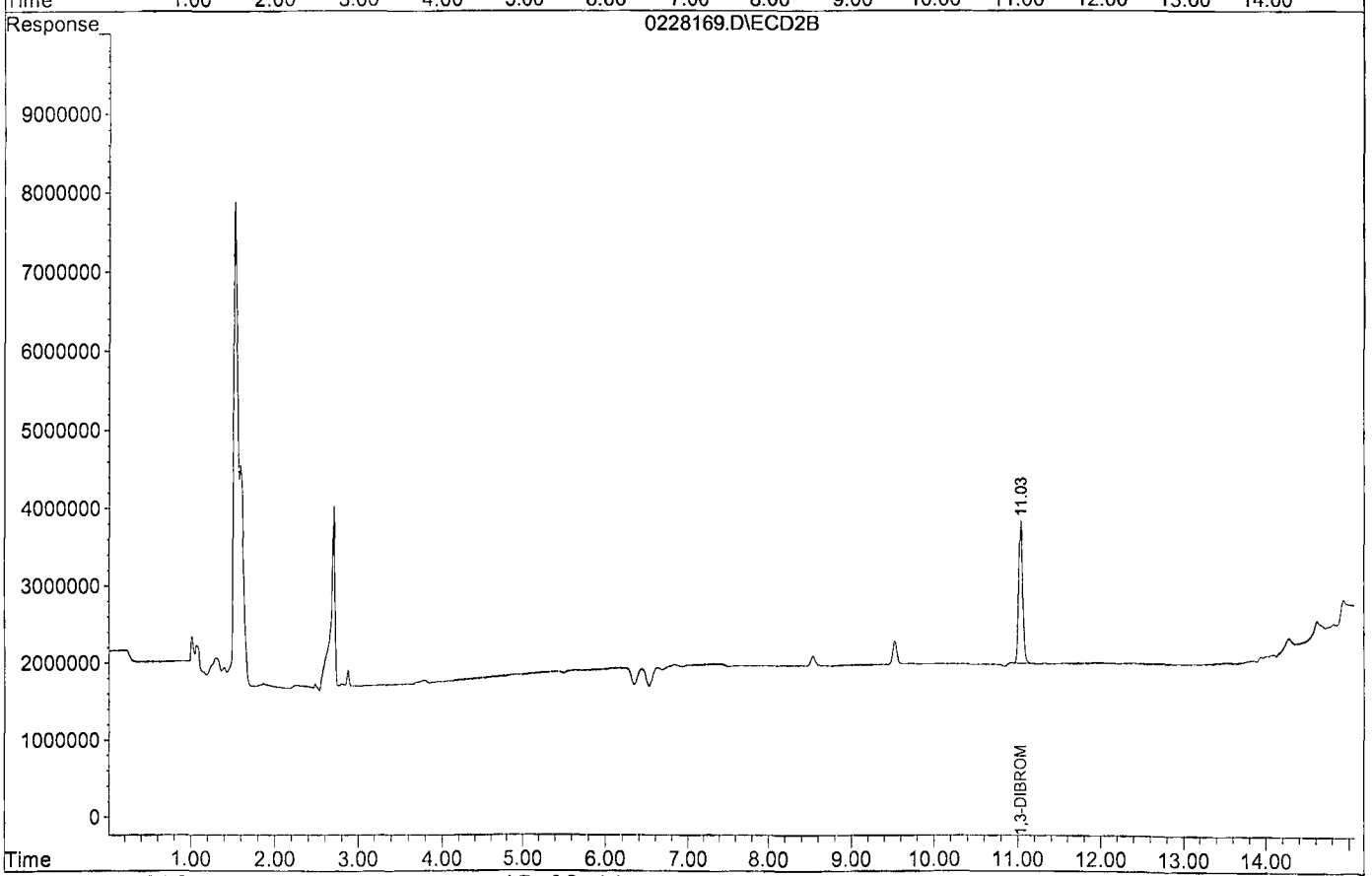
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\200228\0228169.D
Acq On : 03-16-20 17:24:02
Sample : BA08341W12 2/35.15
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010317A.M

Vial: 69
Operator: MA,SS
Inst : Herbie
Multiplr: 1.00





Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228165.D\ECD1A.CH Vial: 65
Signal #2 : G:\HERBIE\DATA\200228\0228165.D\ECD2B.CH
Acq On : 03-16-20 16:03:43 Operator: MA,SS
Sample : 200316A BLK 2/35.58 Inst : Herbie
Misc : water Multiplr: 0.98
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 17 9:06 2020 Quant Results File: 8010317A.RES

Quant Method : G:\HERBIE\DATA\200228\8010317A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 17 08:16:43 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

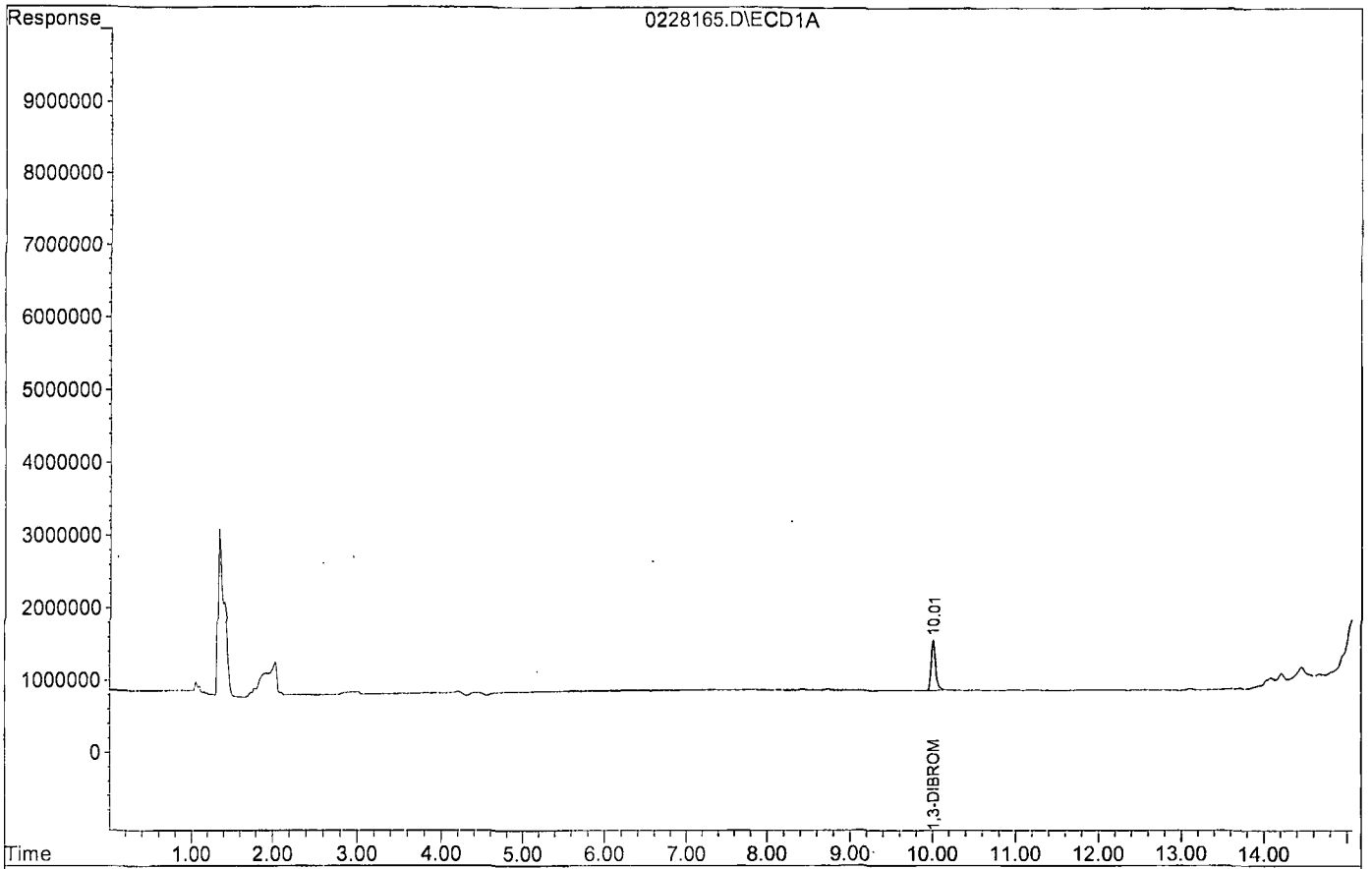
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.01	11.03	697120	1798067	0.340	0.326
Spiked Amount	0.344			Recovery	=	98.75%	94.69%
	Target Compounds						
	Target Compounds						
1) TM	EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM	DBCP	0.00	0.00	0	0	N.D. d	N.D. d

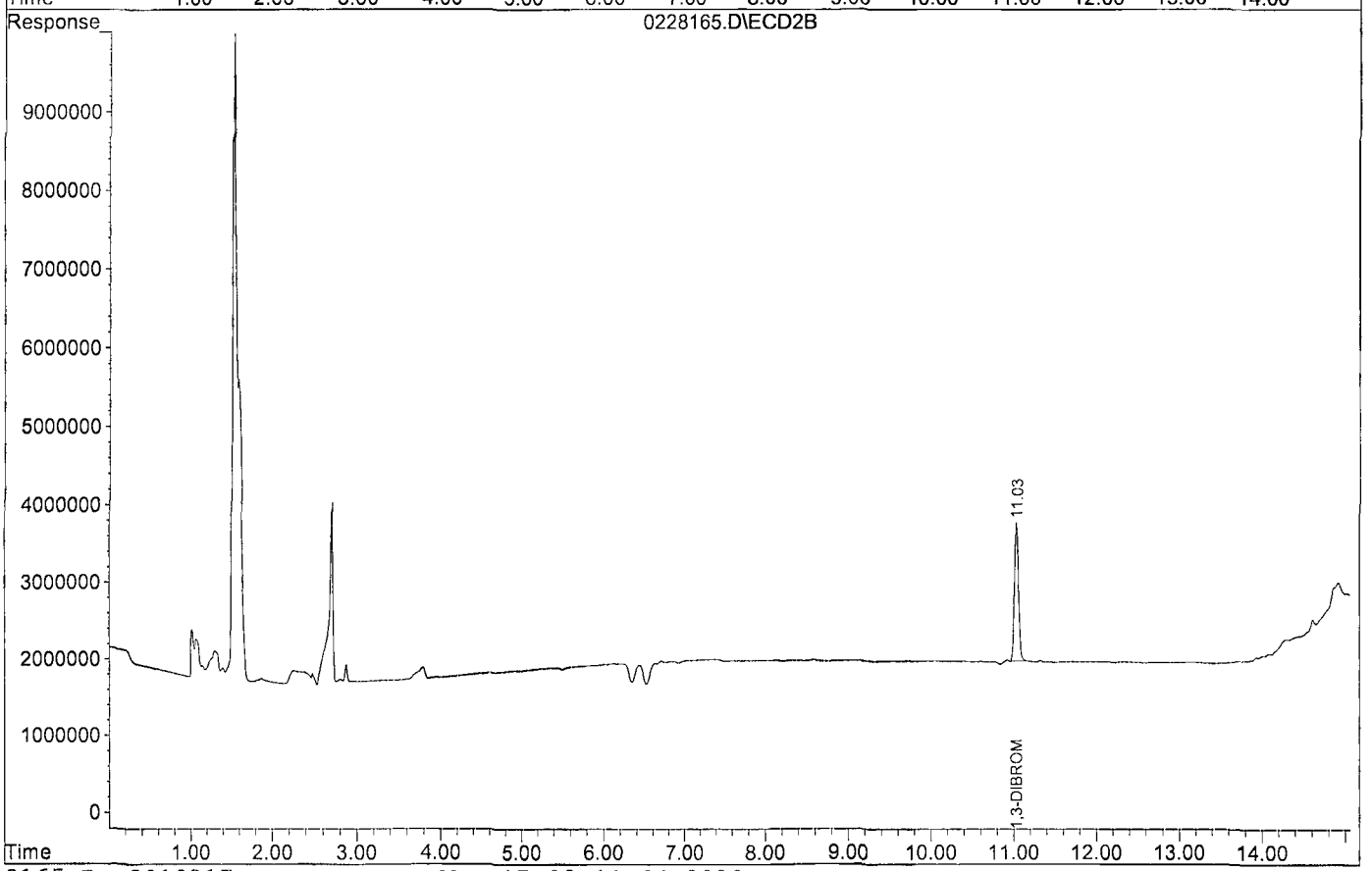
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\200228\0228165.D
Acq On : 03-16-20 16:03:43
Sample : 200316A BLK 2/35.58
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010317A.M

Vial: 65
Operator: MA,SS
Inst : Herbie
Multiplr: 0.98





Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228166.D\ECD1A.CH Vial: 66
Signal #2 : G:\HERBIE\DATA\200228\0228166.D\ECD2B.CH
Acq On : 03-16-20 16:23:50 Operator: MA,SS
Sample : 200316A LCS-1 2/35.11 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 17 9:01 2020 Quant Results File: 8010317A.RES

Quant Method : G:\HERBIE\DATA\200228\8010317A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 17 08:16:43 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.01	11.03	466699	1315594	0.230	0.242
Spiked Amount	0.349			Recovery	=	65.92%	69.36%
	Target Compounds						
1) TM	EDB	5.79	7.21	399960	1840429	0.238	0.240
2) TM	1,2,3-TCP	9.25	10.44	112937	331683	0.246	0.253
4) TM	DBCP	13.34	14.08	1395353	5055999	0.234	0.239

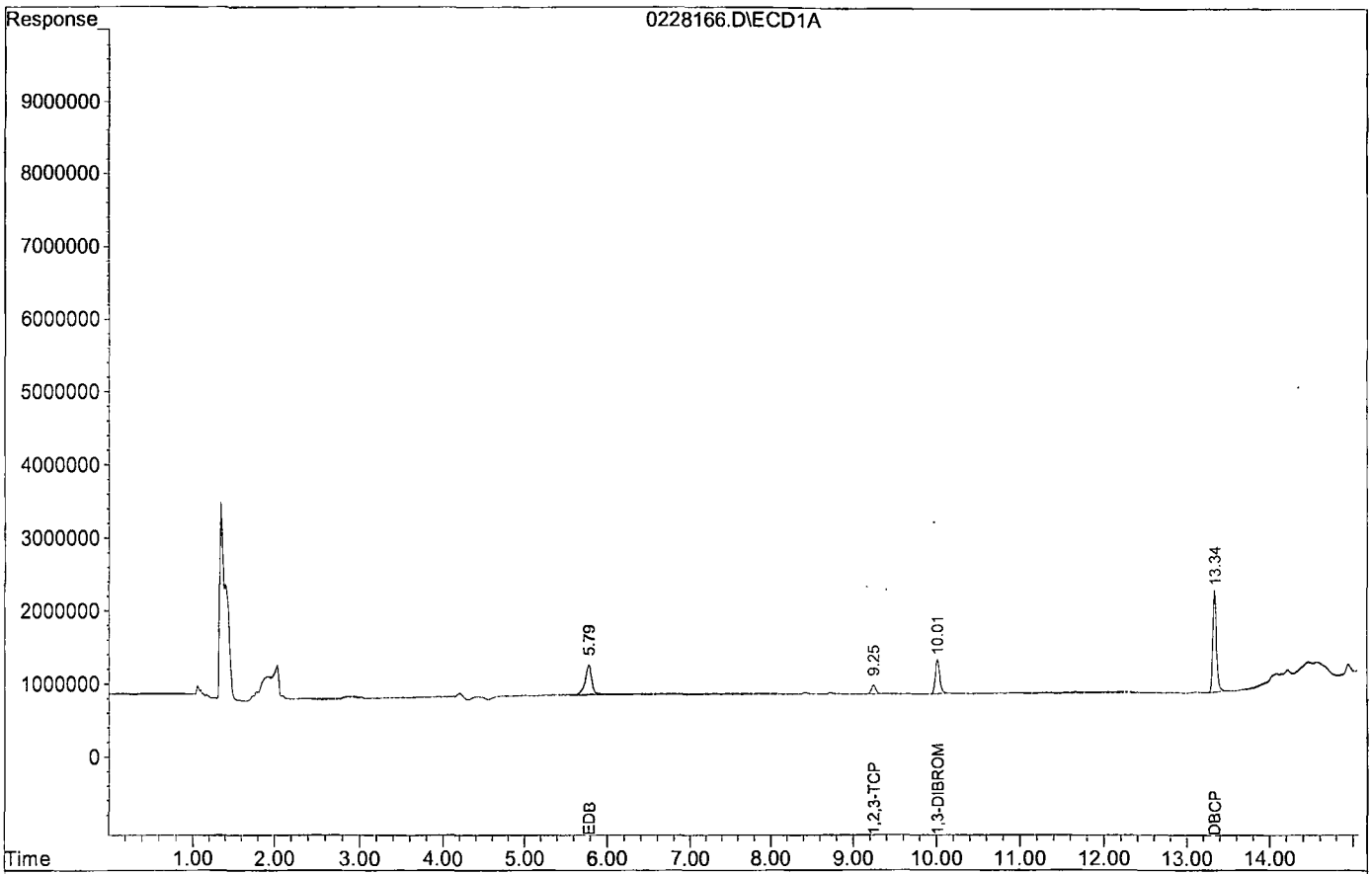
Target Compounds

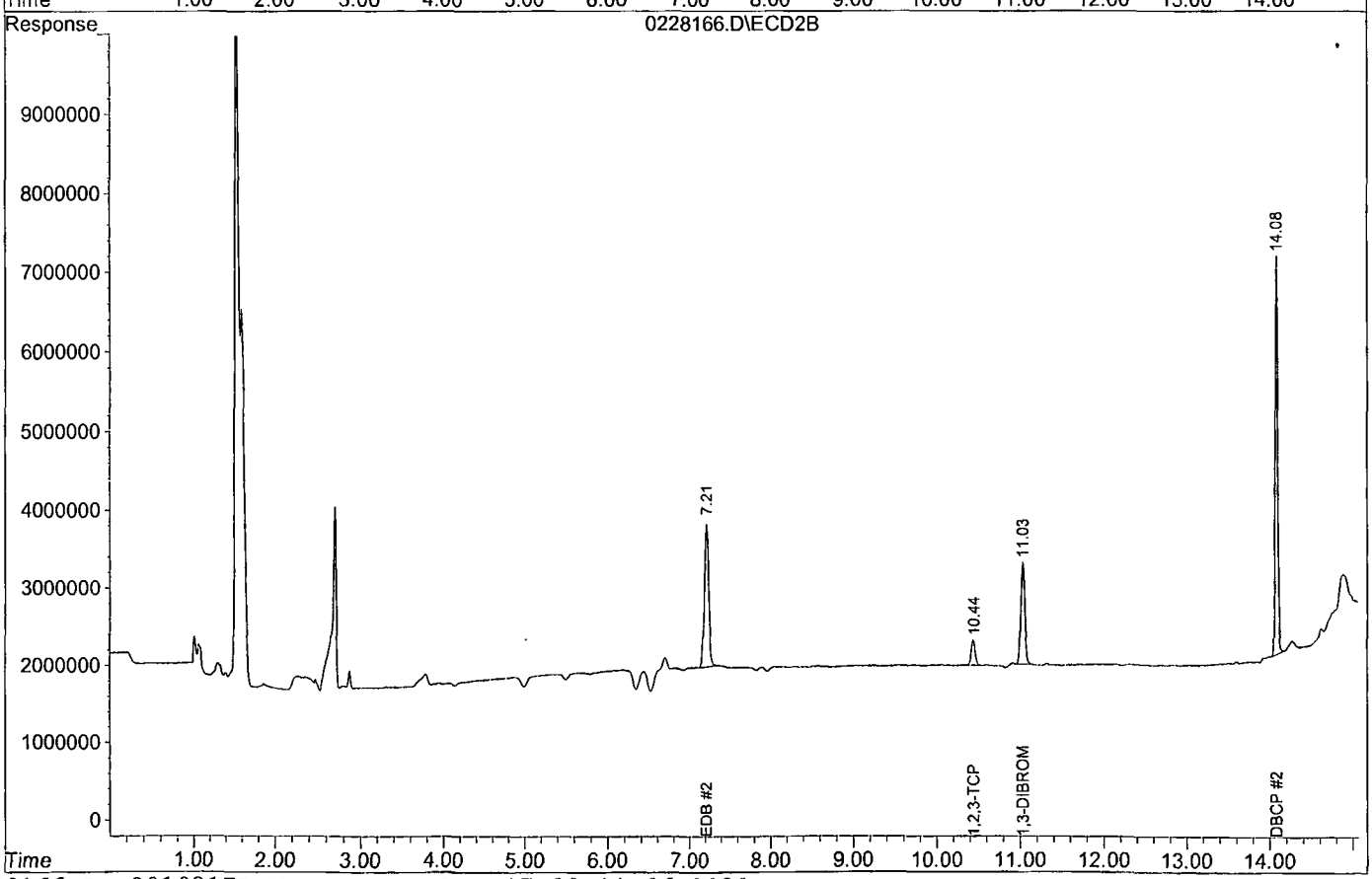
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\200228\0228166.D
Acq On : 03-16-20 16:23:50
Sample : 200316A LCS-1 2/35.11
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010317A.M

Vial: 66
Operator: MA,SS
Inst : Herbie
Multiplr: 1.00





Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228167.D\ECD1A.CH Vial: 67
Signal #2 : G:\HERBIE\DATA\200228\0228167.D\ECD2B.CH
Acq On : 03-16-20 16:43:55 Operator: MA,SS
Sample : 200316A LCSD-1 2/35.99 Inst : Herbie
Misc : water Multiplr: 0.97
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 17 9:01 2020 Quant Results File: 8010317A.RES

Quant Method : G:\HERBIE\DATA\200228\8010317A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 17 08:16:43 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

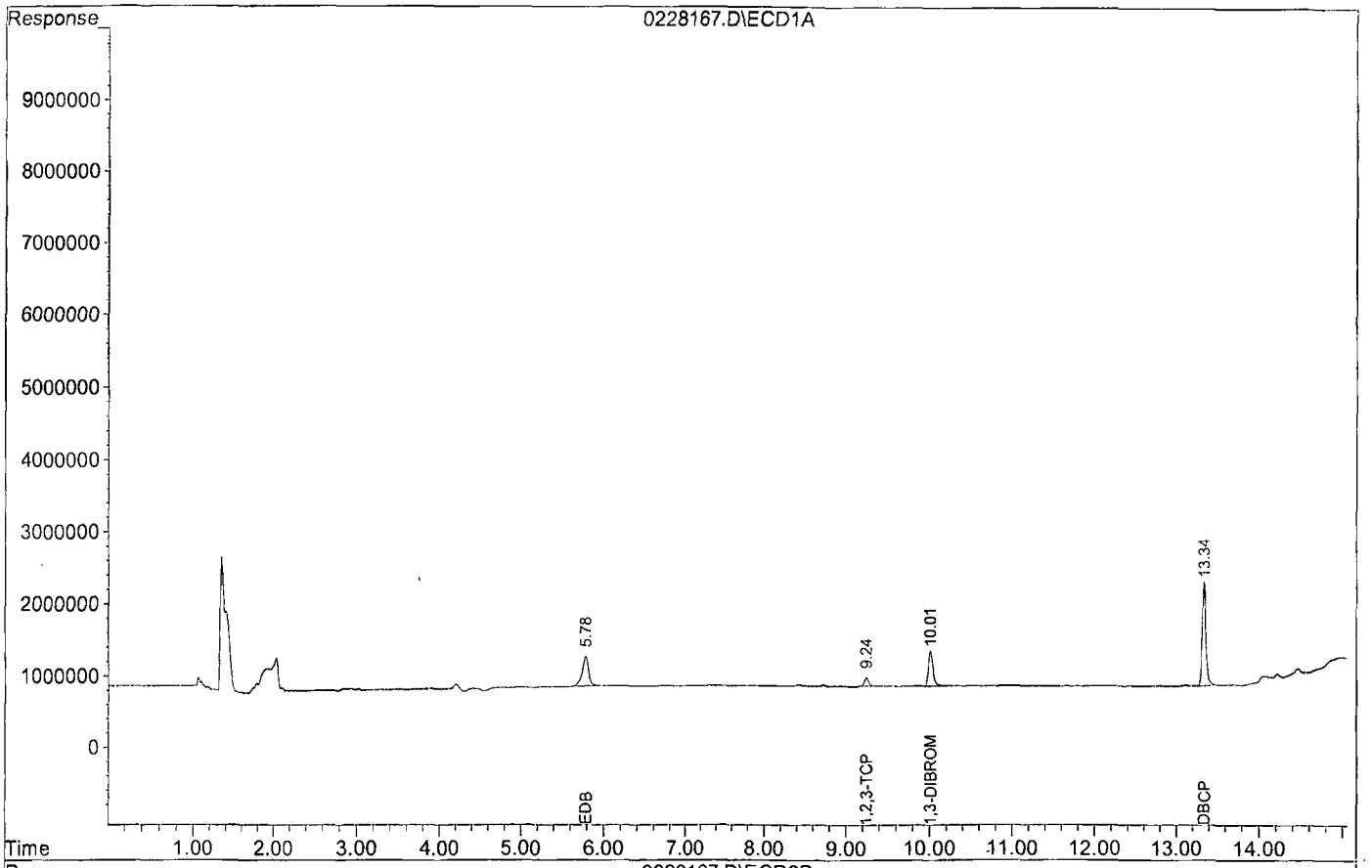
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3)	S 1,3-DIBROMOPROPA	10.01	11.03	482030	1367318	0.232	0.245
	Spiked Amount 0.340			Recovery =		68.16%	71.98%
	Target Compounds						
1)	TM EDB	5.78	7.21	408743	1875836	0.237	0.238
2)	TM 1,2,3-TCP	9.24	10.44	115025	342665	0.245	0.255
4)	TM DBCP	13.34	14.08	1437335	5276980	0.235	0.243
	Target Compounds						

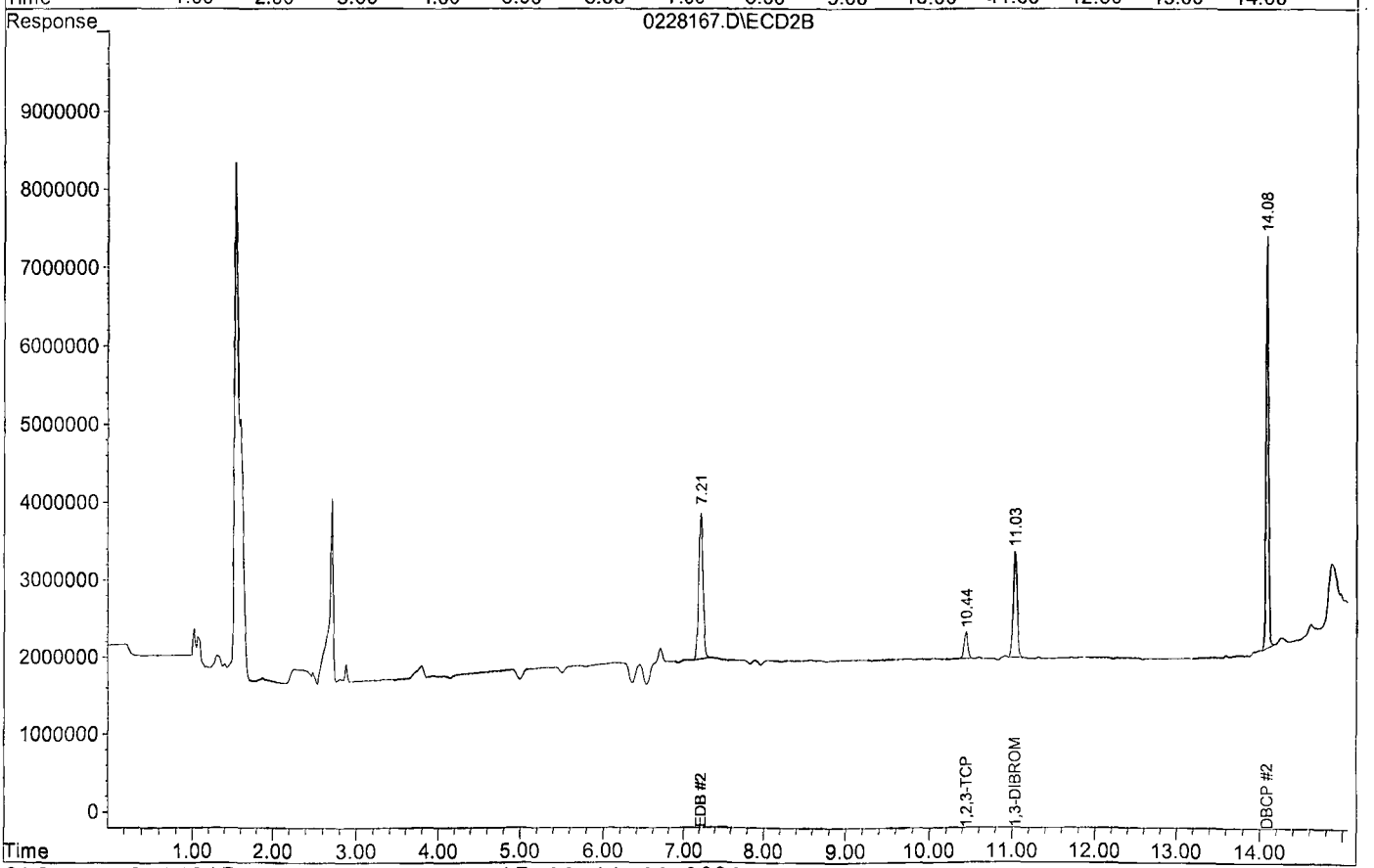
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\200228\0228167.D
Acq On : 03-16-20 16:43:55
Sample : 200316A LCSD-1 2/35.99
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010317A.M

Vial: 67
Operator: MA,SS
Inst : Herbie
Multiplr: 0.97





Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228170.D\ECD1A.CH Vial: 70
Signal #2 : G:\HERBIE\DATA\200228\0228170.D\ECD2B.CH
Acq On : 03-16-20 17:44:04 Operator: MA,SS
Sample : BA08341W13 MS-1 2/35.50 Inst : Herbie
Misc : water Multiplr: 0.99
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 17 9:01 2020 Quant Results File: 8010317A.RES

Quant Method : G:\HERBIE\DATA\200228\8010317A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 17 08:16:43 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.01	11.03	483654	1338022	0.236	0.243
Spiked Amount	0.345			Recovery	=	68.39%	70.42%
	Target Compounds						
1) TM	EDB	5.78	7.21	397723	1827526	0.234	0.236
2) TM	1,2,3-TCP	9.24	10.44	113203	327921	0.244	0.248
4) TM	DBCP	13.34	14.08	1424765	5016466	0.236	0.234

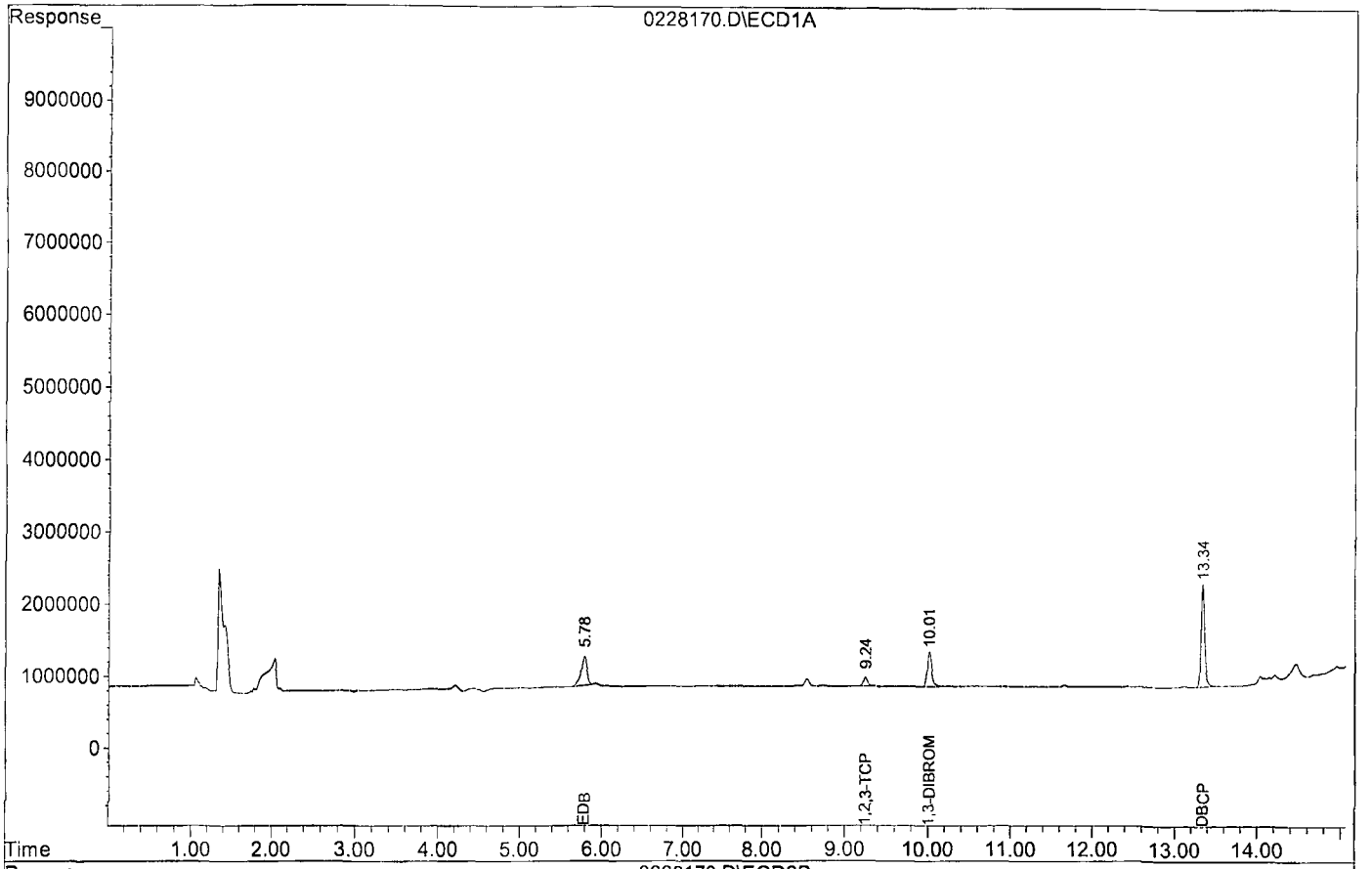
Target Compounds

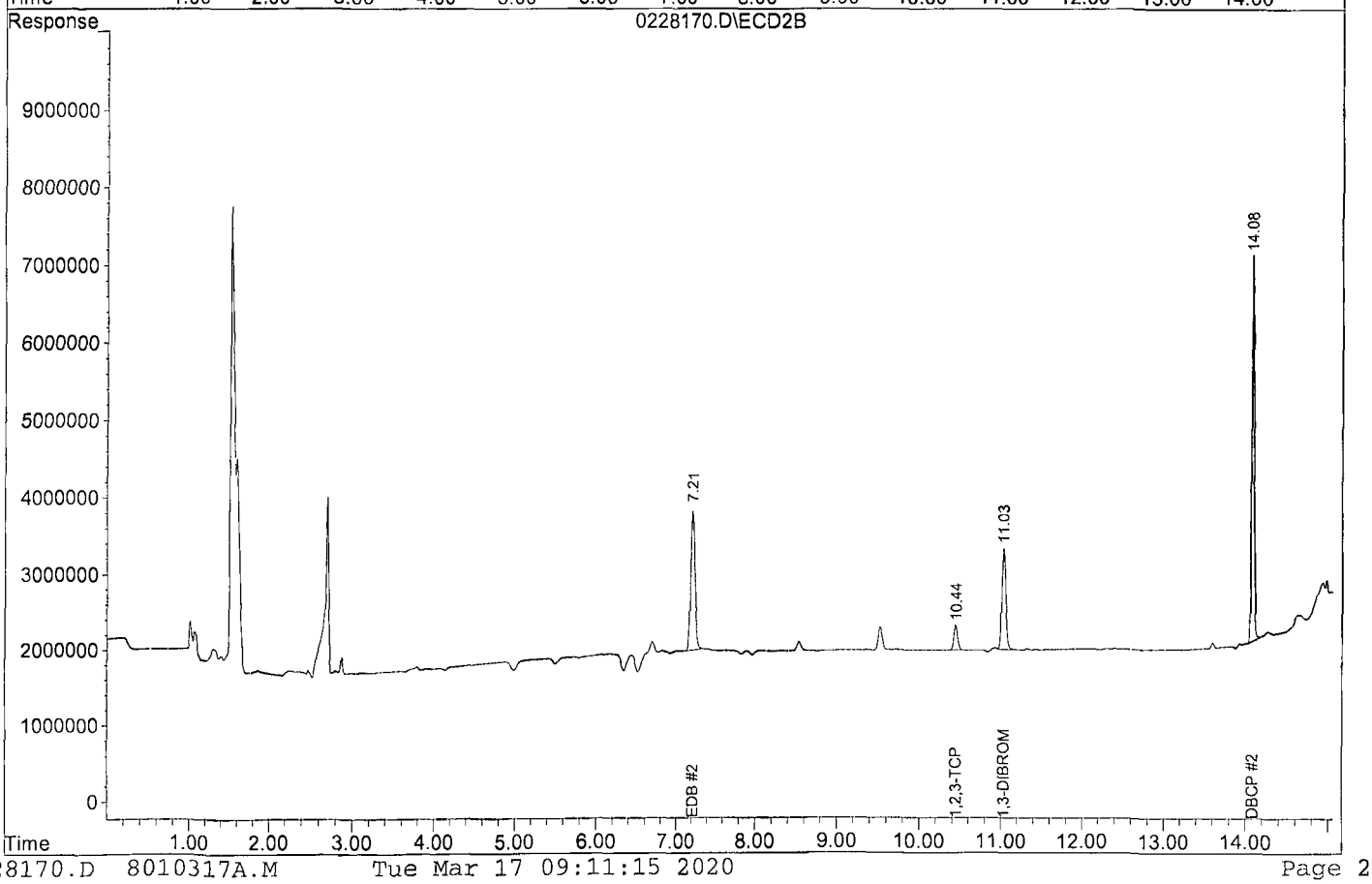
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\200228\0228170.D
Acq On : 03-16-20 17:44:04
Sample : BA08341W13 MS-1 2/35.50
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010317A.M

Vial: 70
Operator: MA,SS
Inst : Herbie
Multiplr: 0.99





Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228171.D\ECD1A.CH Vial: 71
Signal #2 : G:\HERBIE\DATA\200228\0228171.D\ECD2B.CH
Acq On : 03-16-20 18:04:08 Operator: MA,SS
Sample : BA08341W14 MSD-1 2/35.87 Inst : Herbie
Misc : water Multiplr: 0.98
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 17 9:01 2020 Quant Results File: 8010317A.RES

Quant Method : G:\HERBIE\DATA\200228\8010317A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 17 08:16:43 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

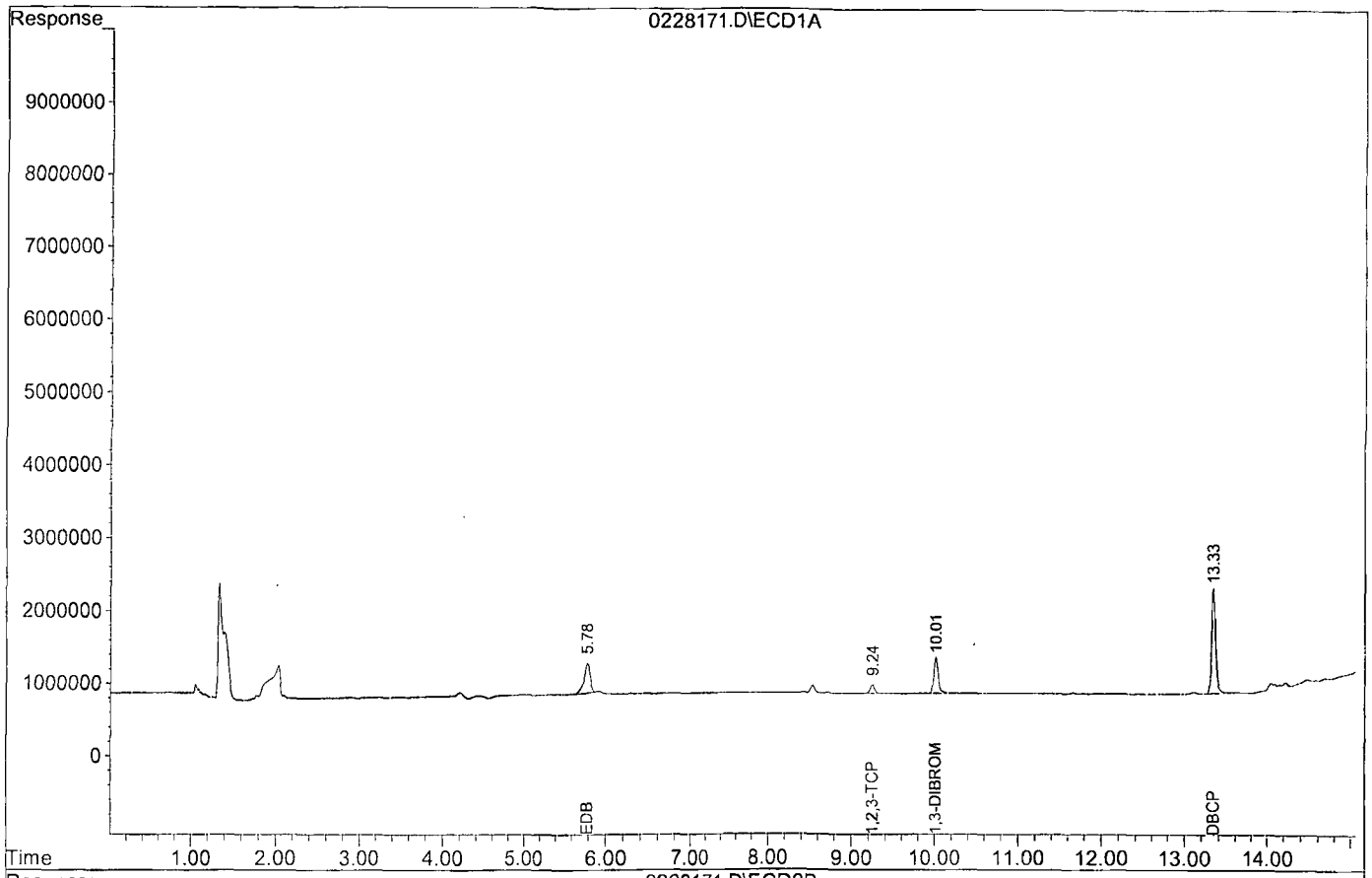
Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

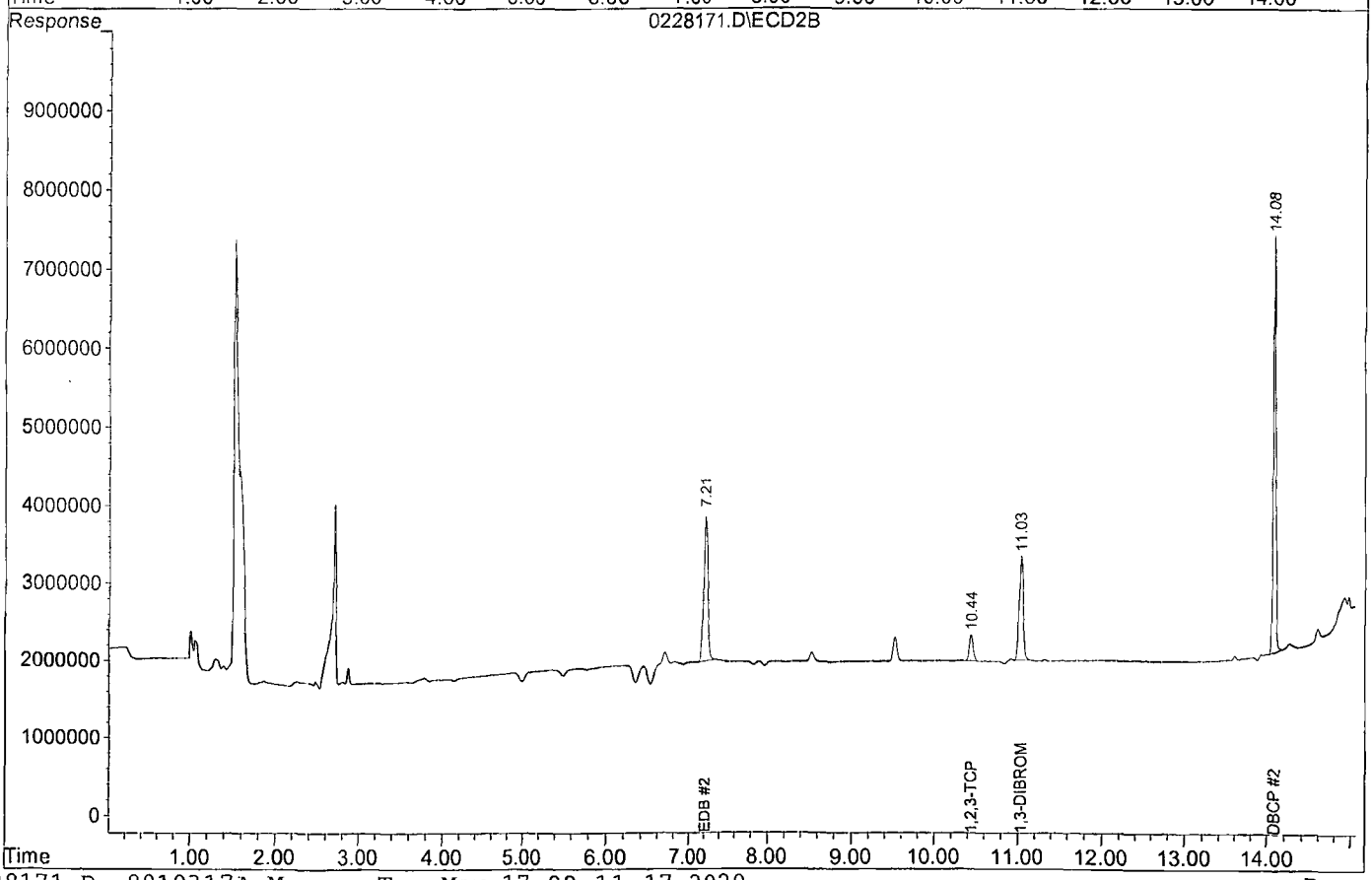
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.01	11.03	493114	1346347	0.238	0.242
Spiked Amount	0.342			Recovery	=	69.69%	70.86%
	Target Compounds						
1) TM	EDB	5.78	7.21	407321	1863263	0.237	0.238
2) TM	1,2,3-TCP	9.24	10.44	116999	337594	0.250	0.252
4) TM	DBCP	13.33	14.08	1453545	5302317	0.238	0.245
	Target Compounds						

(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Data File : G:\HERBIE\DATA\200228\0228171.D
Acq On : 03-16-20 18:04:08
Sample : BA08341W14 MSD-1 2/35.87
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010317A.M

Vial: 71
Operator: MA,SS
Inst : Herbie
Multiplr: 0.98





Name of Final Standard: 504/8011 Spike

Prep Date: 03/16/20

Exp Date: 05/08/20

Prep'd By (Initials): SS

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc (range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
504/8011 Stock	APPL	504/8011 Stock	0.35 ug/mL	**01/08/20**	**05/08/20**	2.5 mL	25 mL	**Methanol #208858**	0.035 ug/mL

Name of Final Standard: 504/8011 Surrogate
Prep'd By (Initials): GA
Prep Date: 01/08/20
Exp Date: 05/08/20

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
1,3 DBP Stock	APPL	1,3 DBP Stock	100 ug/mL	01/07/20	01/07/21	35 uL	10 mL	Methanol #208858	0.35ug/ml

Name of Final Standard: 504/8011 Stock
Prep'd By (Initials): GA
Prep Date: 01/08/20
Exp Date: 05/08/20

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
504/DOHS Stock	APPL	*504/DOHS Stock*	*20 ug/mL*	01/07/20	01/07/21	438 uL	25 mL	Methanol #208858	0.35 ug/mL
1,3 DBP Stock	APPL	1,3 DBP Stock	100 ug/mL	01/07/20	01/07/21	88 uL	"	"	"

Name of Final Standard	**504/8011 SS SPK**	**Prep'd By (Initials)**	**GA**
Prep Date	**08/07/19**		
Exp Date	**04/16/20**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
504/8011 SS Stock	APPL	504/8011 SS Stock	0 35 ug/mL	**01/22/19**	**01/06/20**	1 mL	10 mL	**Methanol #042317C**	0.035 ug/mL

Re-certified on 01/16/20 against 504/8011 Spike (prep. 01.08.20). Extended expiration by 3 months. Injection #1126237 on Herbie 191126 sequence. GA

Organic Extraction Worksheet

Method	EPA Method 8011 DBCP/EDB	Extraction Set	200316A	Extraction Method	MWE012	Units	mL

Spiked ID 1	504.1 Spike 3-16-20 5-8-20		Surrogate ID 1	504.1 Surrogate 1-8-20 5-8-20	
Spiked ID 2	504.1 SS Spike 8-7-19 4-16-20		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	03/16/20 9:55	
Spiked ID 8			Ext. End Time:	03/16/20 11:10	
			GC Requires Extract By:		

pH1			Water Bath Temp 1 °C	
pH2			Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: KY **Date** 03/16/20 **Witnessed By:** CFM **Date** 03/16/20

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	200316A Blk				0.035	1 equip	35.58	2	7	03/16/20 9:55	
2	200316A LCS-1		0.250	1	NA	NA equip	35.11	2	7	03/16/20 9:55	
3	200316A LCSD-1		0.250	1	NA	NA equip	35.99	2	7	03/16/20 9:55	
4	BA08340	BA08340W07			0.035	1 equip	35.60	2	7	03/16/20 9:55	91638
5	BA08341 MS-1	BA08341W13	0.250	1	NA	NA equip	35.50	2	7	03/16/20 9:55	91638
6	BA08341 MSD-1	BA08341W14	0.250	1	NA	NA equip	35.87	2	7	03/16/20 9:55	91638
7	BA08341	BA08341W12			0.035	1 equip	35.15	2	7	03/16/20 9:55	91638
8	BA08369	BA08369W06			0.035	1 equip	35.38	2	7	03/16/20 9:55	91653
9	BA08370	BA08370W05			0.035	1 equip	35.55	2	7	03/16/20 9:55	91653
10	BA08371	BA08371W05			0.035	1 equip	35.31	2	7	03/16/20 9:55	91653
11	M STD 1		0.020	1	NA	NA equip	35.83	2	7	03/16/20 9:55	
12	M STD 2		0.100	1	NA	NA equip	35.09	2	7	03/16/20 9:55	
13	M STD 3		0.250	1	NA	NA equip	35.15	2	7	03/16/20 9:55	
14	M STD 4		0.500	1	NA	NA equip	35.03	2	7	03/16/20 9:55	
15	M STD 5		0.750	1	NA	NA equip	35.01	2	7	03/16/20 9:55	
16	M STD 6		1	1	NA	NA equip	35.64	2	7	03/16/20 9:55	

Solvent and Lot#	
Scale Blance ID	EB1
pH strip	HC998032
NaCL	19A035211
GC2 Hexane (2mLs)	DV910

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	SS
Date	3/16/20
Time	12:30
Refrigerator	HOBART

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

Modified	03/16/20 12:32:21 PM

Reviewed By: KY **Date** 03/16/20

Organic Extraction Worksheet

Method	EPA Method 8011 DBCP/EDB	Extraction Set	200316A	Extraction Method	MWE012	Units	mL

Spiked ID 1	504.1 Spike 3-16-20 5-8-20		Surrogate ID 1	504.1 Surrogate 1-8-20 5-8-20	
Spiked ID 2	504.1 SS Spike 8-7-19 4-16-20		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	03/16/20 9:55	
Spiked ID 8			Ext. End Time:	03/16/20 11:10	
			GC Requires Extract By:		

pH1			Water Bath Temp 1 °C	
pH2			Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: KY **Date** 03/16/20 **Witnessed By:** CFM **Date** 03/16/20

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
17	SS		0.100	2	0.035	1	35.29	2	7	03/16/20 9:55	
						equip					

Solvent and Lot#	
Scale Blance ID	EB1
pH strip	HC998032
NaCL	19A035211
GC2 Hexane (2mLs)	DV910

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

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

Modified	03/16/20 12:32:21 PM

Reviewed By: KY **Date** 03/16/20

Injection Log

Directory: G:\HERBIE\DATA\200228\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	58	0228158.D	1	8011-1 3/16/20	water	03-16-20 13:43:09
2	59	0228159.D	1	8011-2 3/16/20	water	03-16-20 14:03:11
3	60	0228160.D	1	8011-3 3/16/20	water	03-16-20 14:23:19
4	61	0228161.D	1	8011-4 3/16/20	water	03-16-20 14:43:23
5	62	0228162.D	1	8011-5 3/16/20	water	03-16-20 15:03:24
6	63	0228163.D	1	8011-6 3/16/20	water	03-16-20 15:23:35
7	64	0228164.D	1	8011-SS 3/16/20	water	03-16-20 15:43:36
8	65	0228165.D	0.9837	200316A BLK 2/35.58	water	03-16-20 16:03:43
9	66	0228166.D	0.996867	200316A LCS-1 2/35.11	water	03-16-20 16:23:50
10	67	0228167.D	0.97249	200316A LCSD-1 2/35.99	water	03-16-20 16:43:55
11	68	0228168.D	0.98315	BA08340W07 2/35.60	water	03-16-20 17:03:54
12	69	0228169.D	0.99573	BA08341W12 2/35.15	water	03-16-20 17:24:02
13	70	0228170.D	0.98592	BA08341W13 MS-1 2/35.50	water	03-16-20 17:44:04
14	71	0228171.D	0.97575	BA08341W14 MSD-1 2/35.87	water	03-16-20 18:04:08
15	75	0228175.D	1	8011-4 3/16/20	water	03-16-20 19:24:42

ORGANICS
Calibration Data

TPH Extractables
DOC0310

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 03/10/20
Matrix: Water Instrument: Apollo
Initials: SS/M

			310003.D	310004.D	310005.D	310006.D	310007 D	310008.D										
		Compound	1	2	3	4	5	6					Avg	%RSD	Type	r^2	Q
1	HATM	Diesel (C10-C24)	1402793	2048774	1956346	1950680	1978298	2168778					1917612	14	HATM		
2	HBTM	Motor Oil (C24-C40)	1787356	1629558	1383257	1334462	1324161	1387579					1474395	13	HBTM		
3	SA	Ortho-Terphenyl(S)	2782070	2786055	2347676	2294556	2308475	2544283					2510519	9.2	SA		
4	SA	Octacosane(S)	1771075	1912436	1683790	1654254	1670744	1785274					1746262	5.6	SA		
5																	
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1.184705

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310003.D Vial: 3
Acq On : 3-10-20 9:37:22 Operator: SS
Sample : Diesel Motor Oil-1 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 10 11:58 2020 Quant Results File: DOC0310.RES

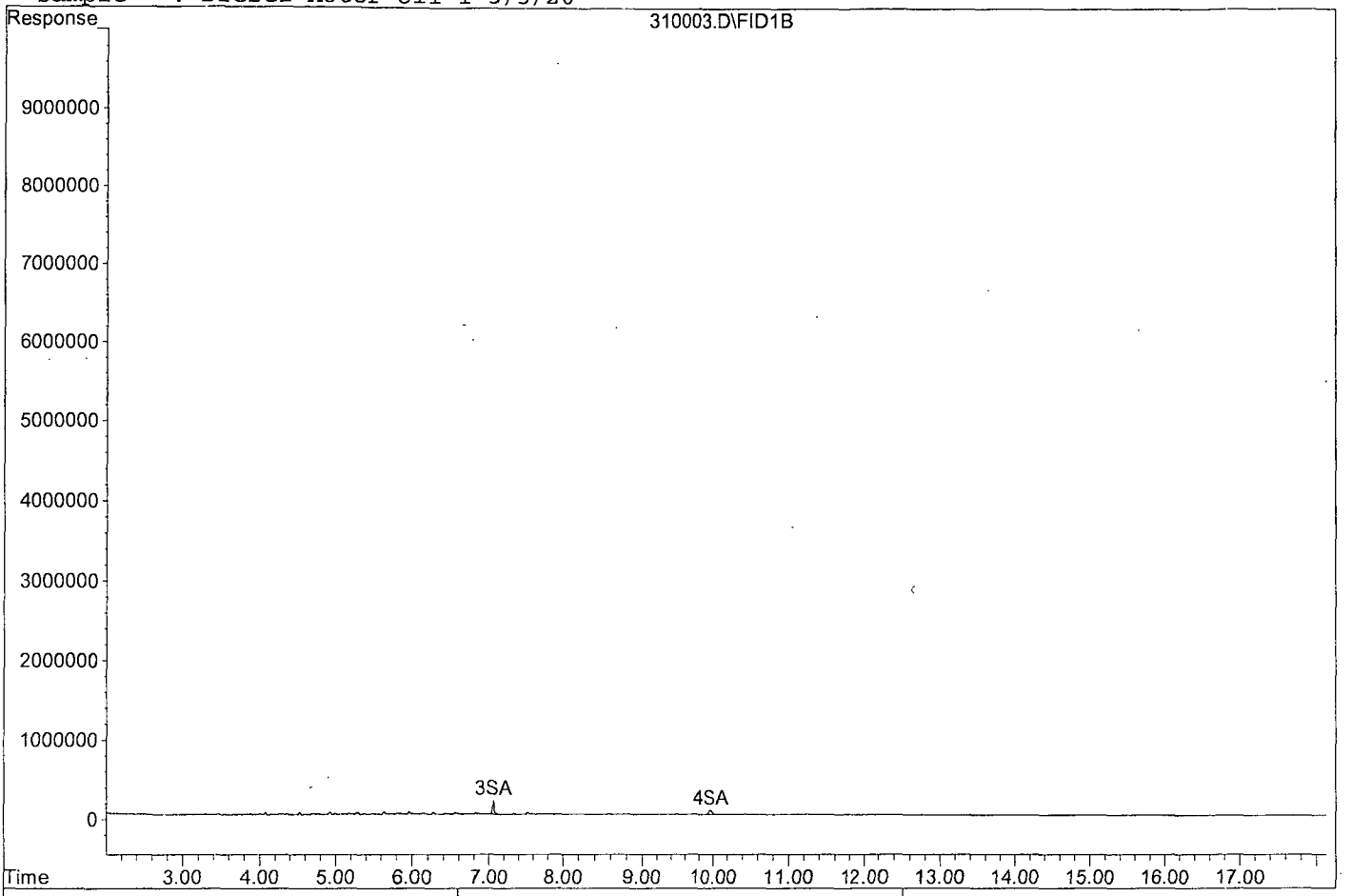
Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

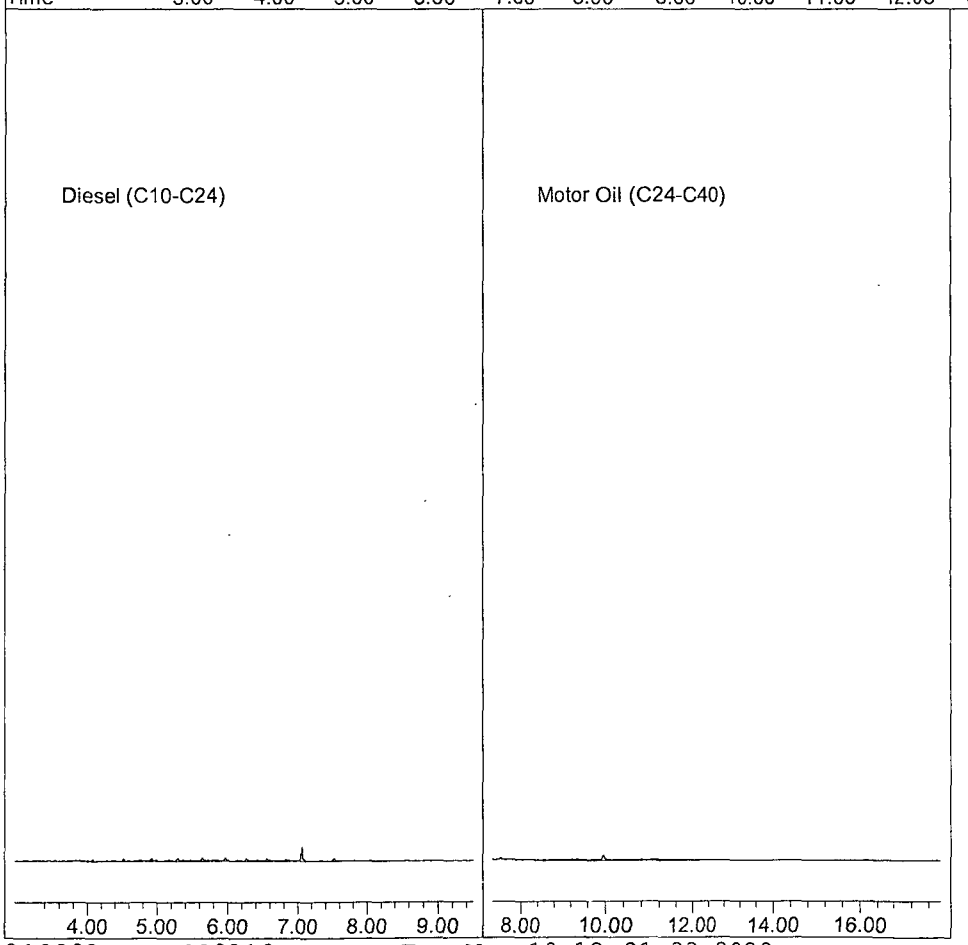
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.06	2782070	0.554 ppb
Surrogate Spike 30.000		Recovery =	1.85%
4) SA Octacosane(S)	9.97	1771075	0.507 ppb
Surrogate Spike 30.000		Recovery =	1.69%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	28055866	7.315 ppb
2) HBTM Motor Oil (C24-C40)	12.60	35747115	12.123 ppb
Target Compounds			

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

Data File: G:\APOLLO\DATA\200310\310003.D
Sample : Diesel Motor Oil-1 3/5/20





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310004.D Vial: 4
Acq On : 3-10-20 9:59:49 Operator: SS
Sample : Diesel Motor Oil-2 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 10 11:58 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

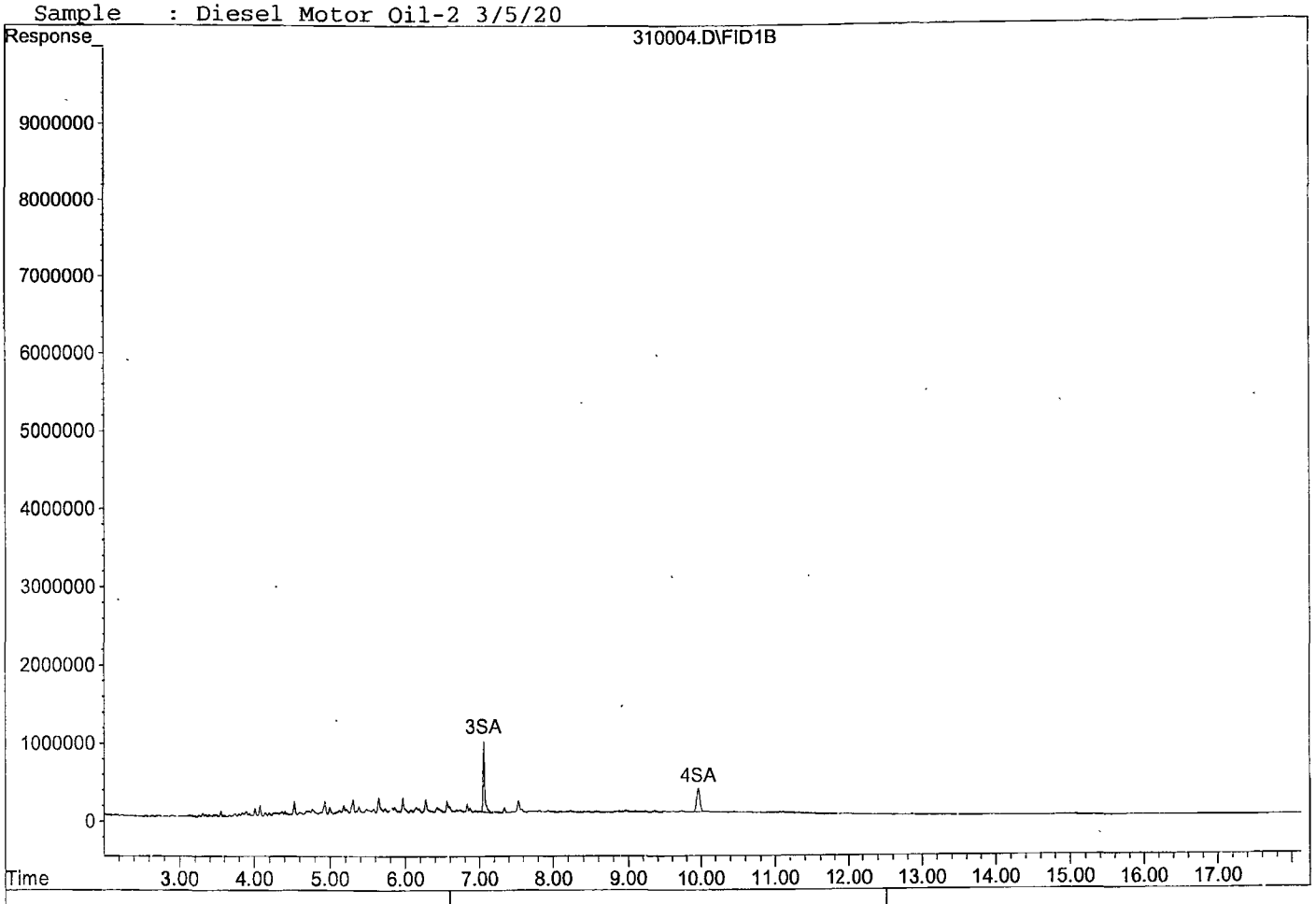
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

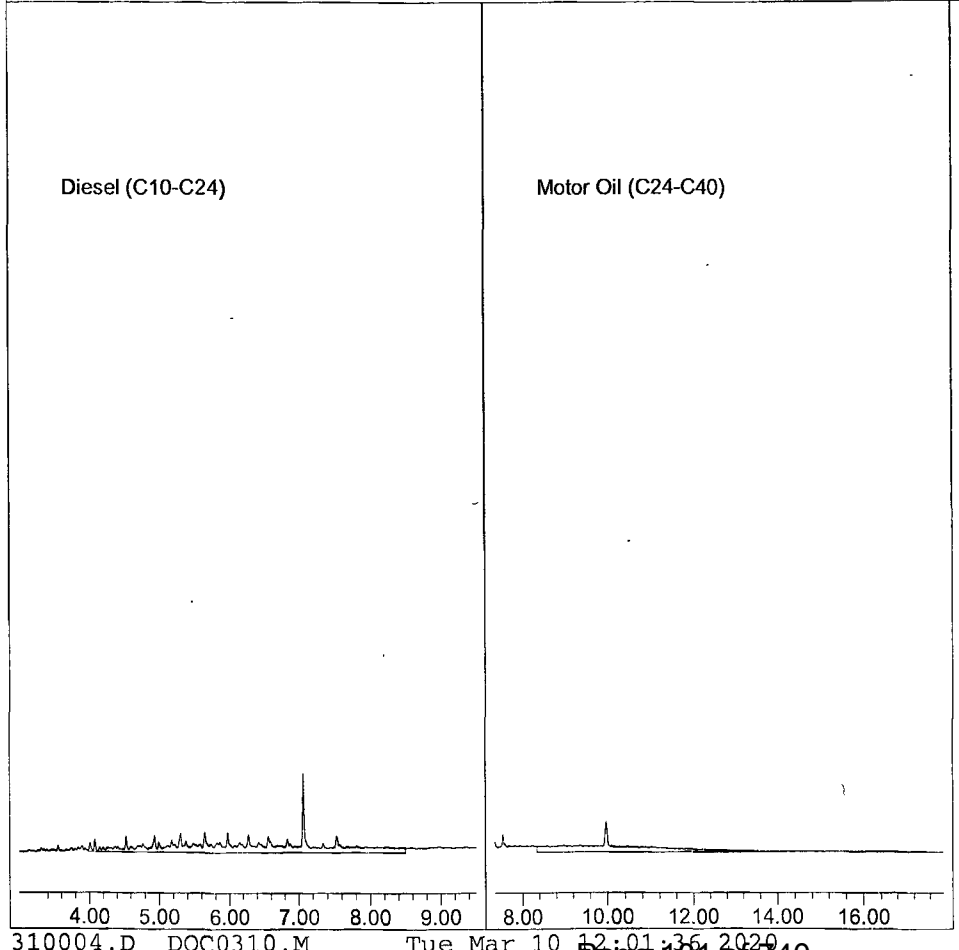
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.06	13930276	2.774 ppb
Surrogate Spike 30.000	Recovery =		9.25%
4) SA Octacosane(S)	9.97	9562178	2.738 ppb
Surrogate Spike 30.000	Recovery =		9.13%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	204877430	53.420 ppb
2) HBTM Motor Oil (C24-C40)	12.60	162955782	55.262 ppb

Target Compounds

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

Data File: G:\APOLLO\DATA\200310\310004.D
Sample : Diesel Motor Oil-2 3/5/20





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310005.D Vial: 5
Acq On : 3-10-20 10:22:19 Operator: SS
Sample : Diesel Motor Oil-3 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 10 11:58 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

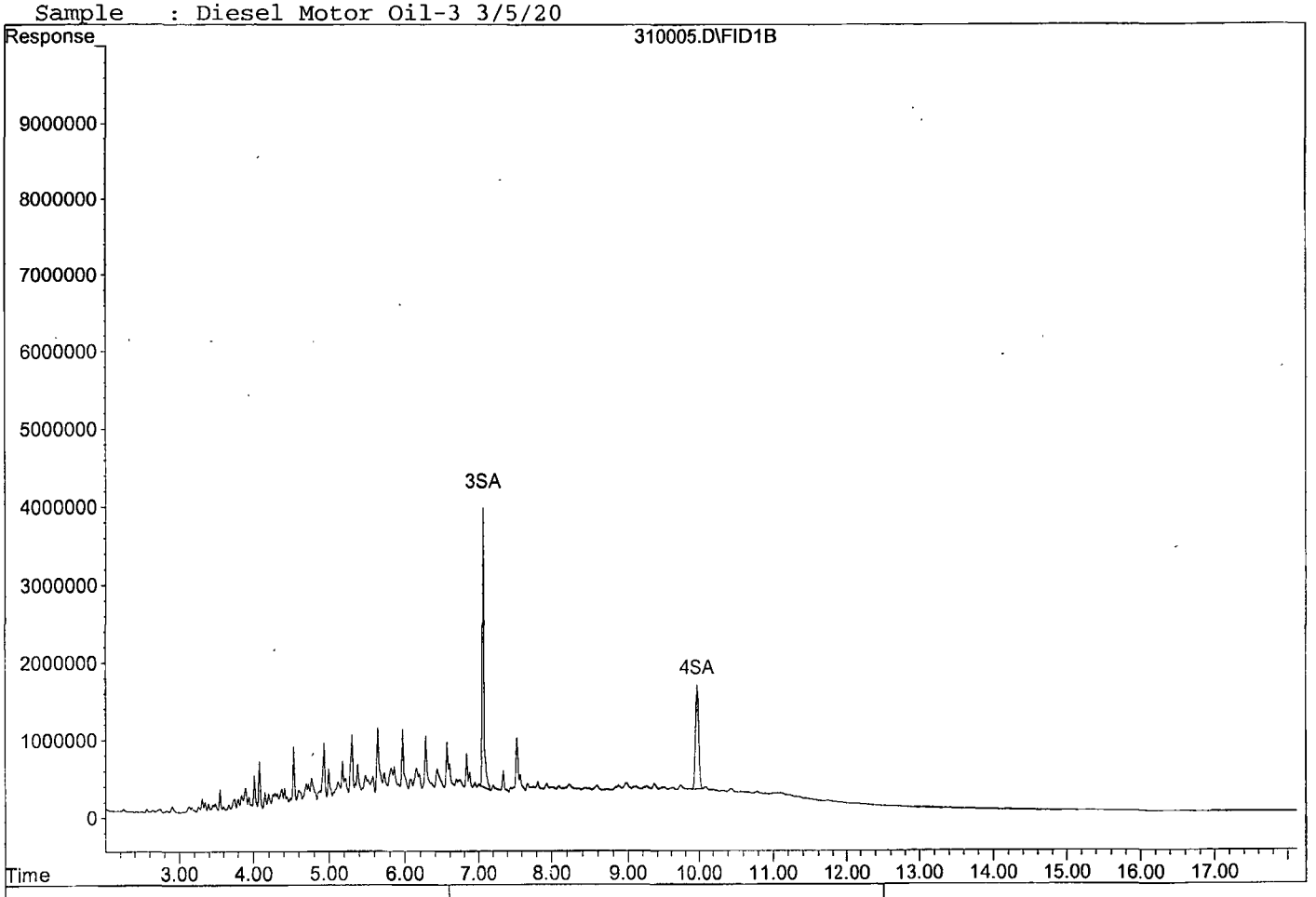
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

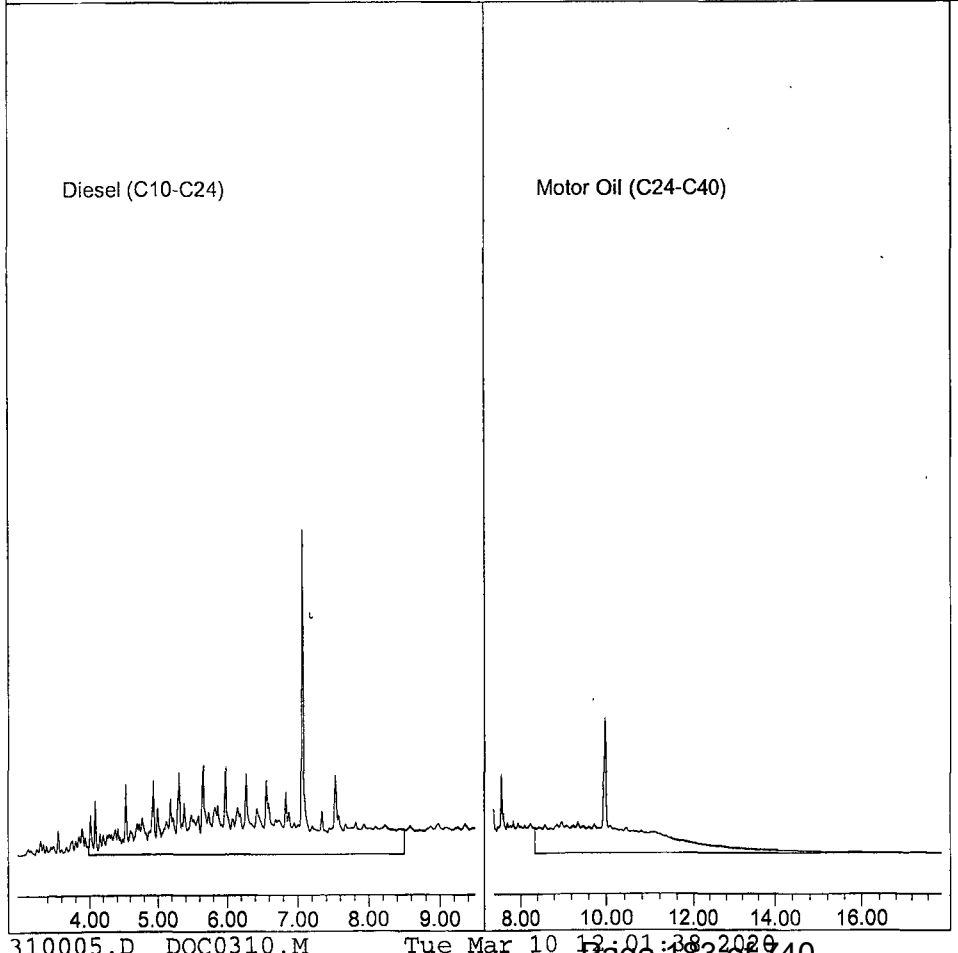
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.06	58691912	11.689 ppb
Surrogate Spike 30.000	Recovery =		38.96%
4) SA Octacosane(S)	9.97	42094760	12.053 ppb
Surrogate Spike 30.000	Recovery =		40.18%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	978173133	255.050 ppb
2) HBTM Motor Oil (C24-C40)	12.60	691628331	234.546 ppb

Target Compounds

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

Data File: G:\APOLLO\DATA\200310\310005.D
Sample : Diesel Motor Oil-3 3/5/20





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310006.D Vial: 6
Acq On : 3-10-20 10:44:50 Operator: SS
Sample : Diesel Motor Oil-4 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 10 11:58 2020 Quant Results File: DOC0310.RES

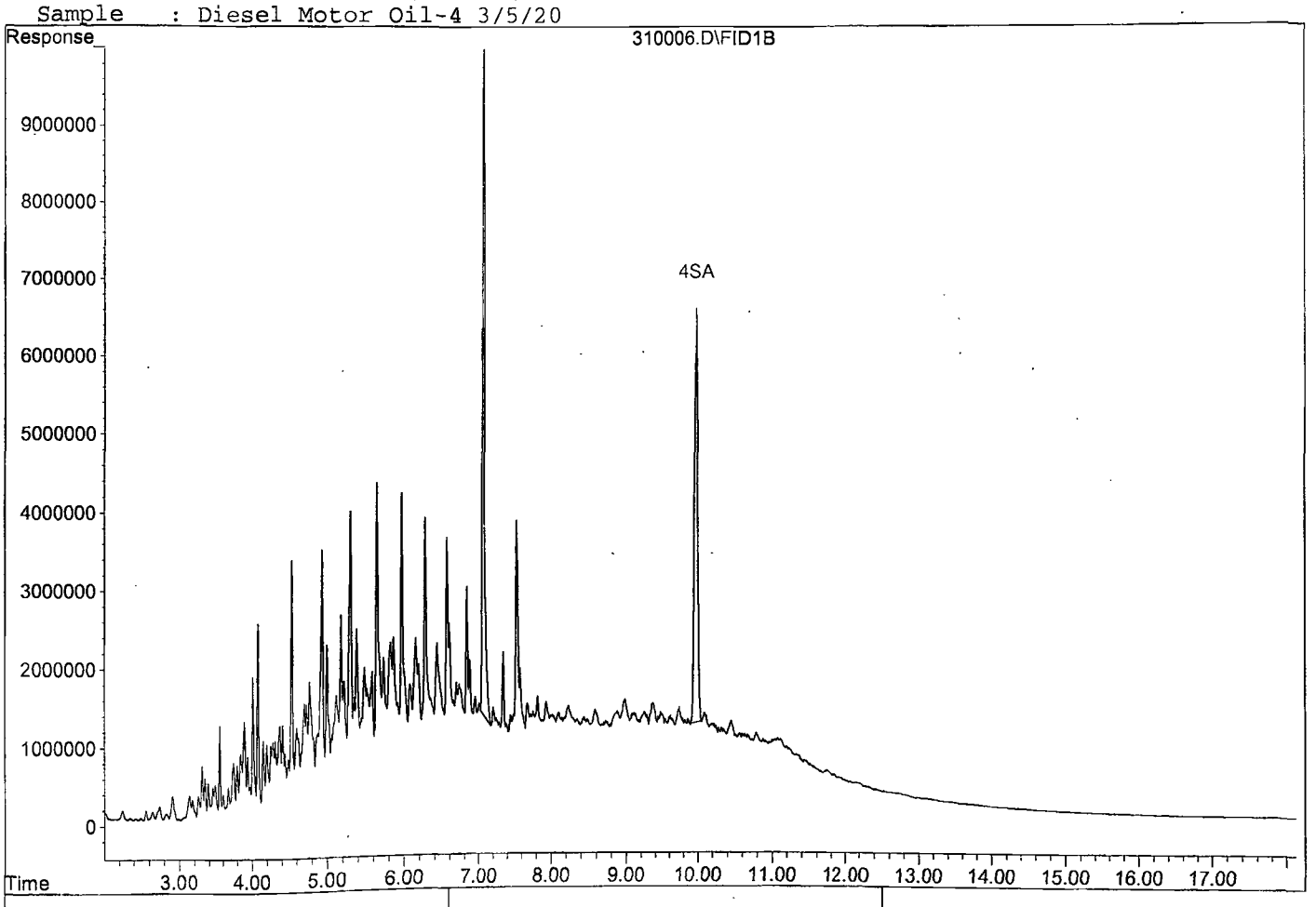
Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

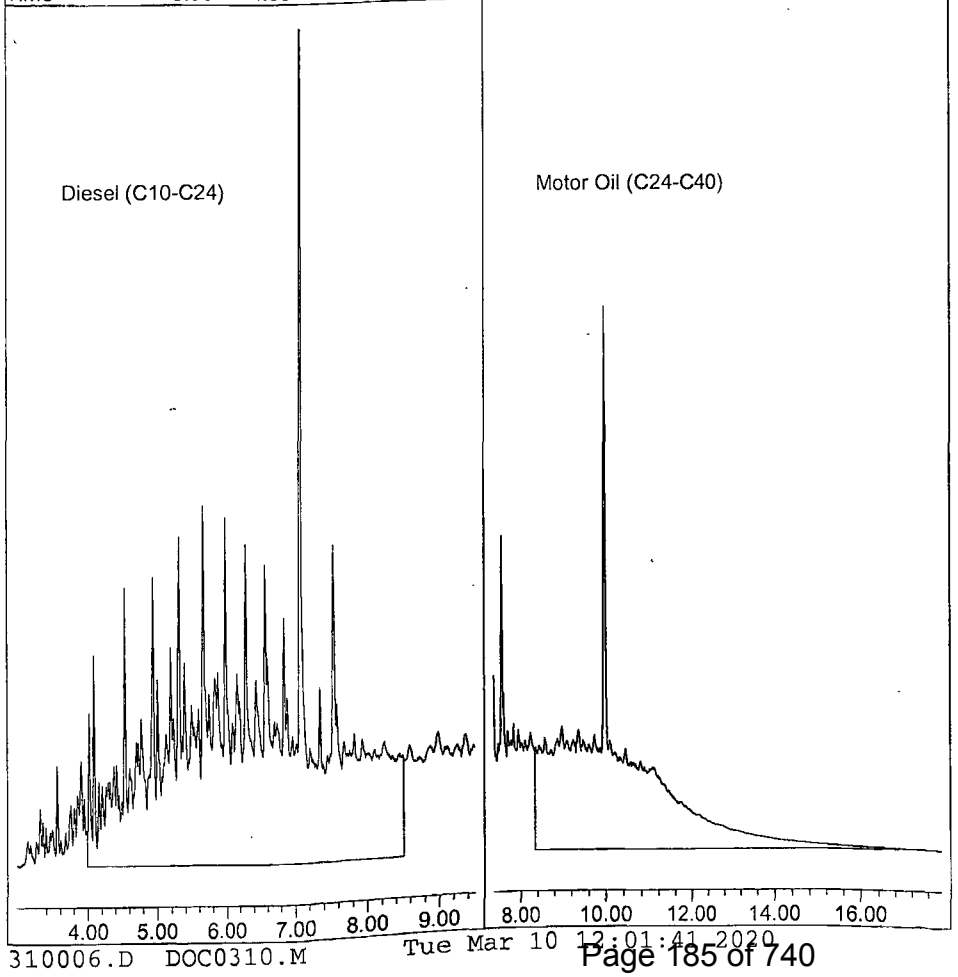
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.07	229455620	45.699	ppb
Surrogate Spike 30.000	Recovery =		152.33%	
4) SA Octacosane(S)	9.98	165425400	47.366	ppb
Surrogate Spike 30.000	Recovery =		157.89%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.24	3901360613	1017.245	ppb
2) HBTM Motor Oil (C24-C40)	12.60	2668923786	905.091	ppb
Target Compounds				

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

Data File: G:\APOLLO\DATA\200310\310006.D
Sample : Diesel Motor Oil-4 3/5/20





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310007.D Vial: 7
Acq On : 3-10-20 11:07:20 Operator: SS
Sample : Diesel Motor Oil-5 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 10 11:58 2020 Quant Results File: DOC0310.RES

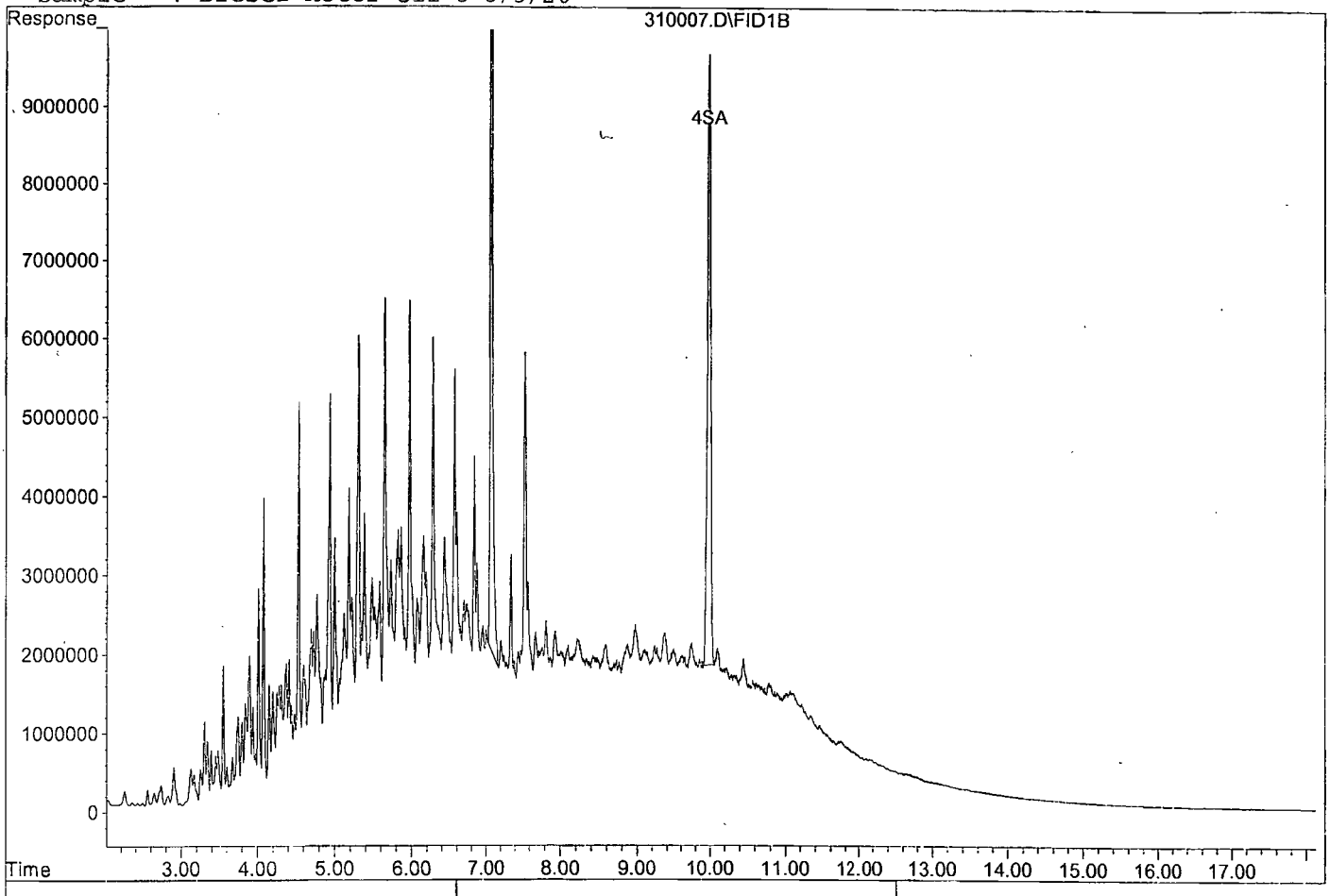
Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

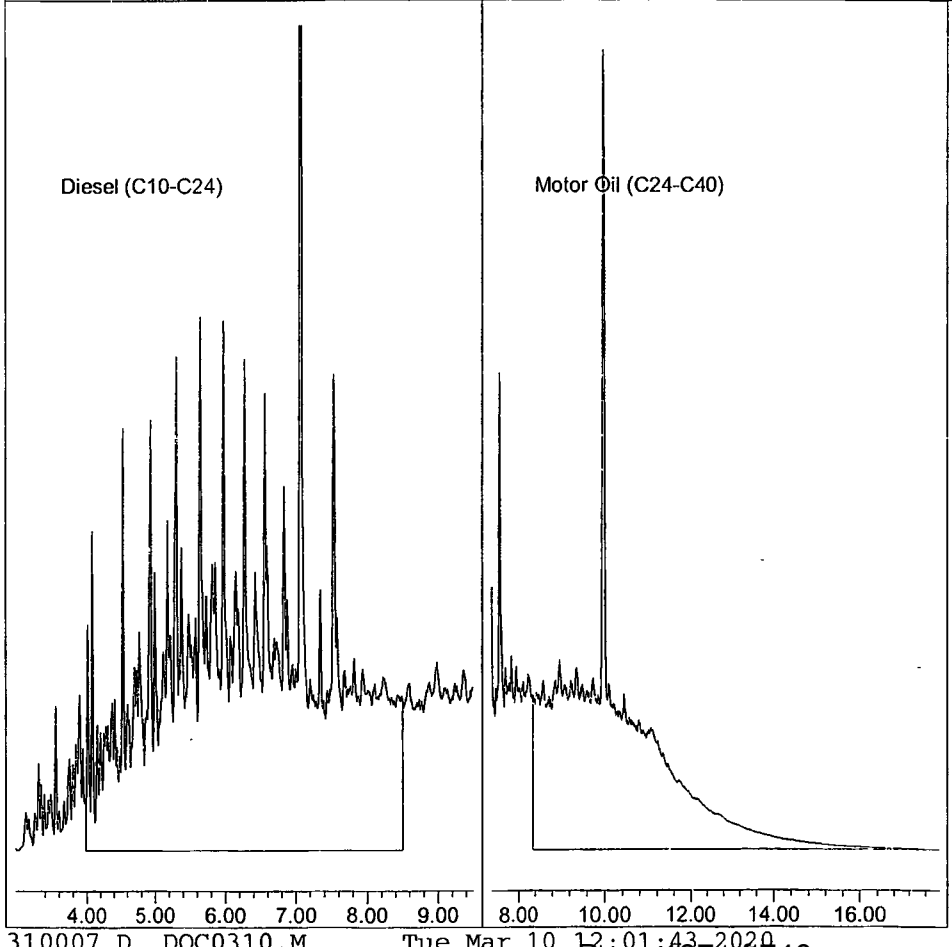
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.07	346271320	68.964 ppb
Surrogate Spike 30.000	Recovery =		229.88%
4) SA Octacosane(S)	9.98	250611670	71.757 ppb
Surrogate Spike 30.000	Recovery =		239.19%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	5934893648	1547.470 ppb
2) HBTM Motor Oil (C24-C40)	12.60	3972483300	1347.157 ppb
Target Compounds			

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

Data File: G:\APOLLO\DATA\200310\310007.D
Sample : Diesel Motor Oil-5 3/5/20





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310008.D Vial: 8
Acq On : 3-10-20 11:29:51 Operator: SS
Sample : Diesel Motor Oil-6 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 10 11:58 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

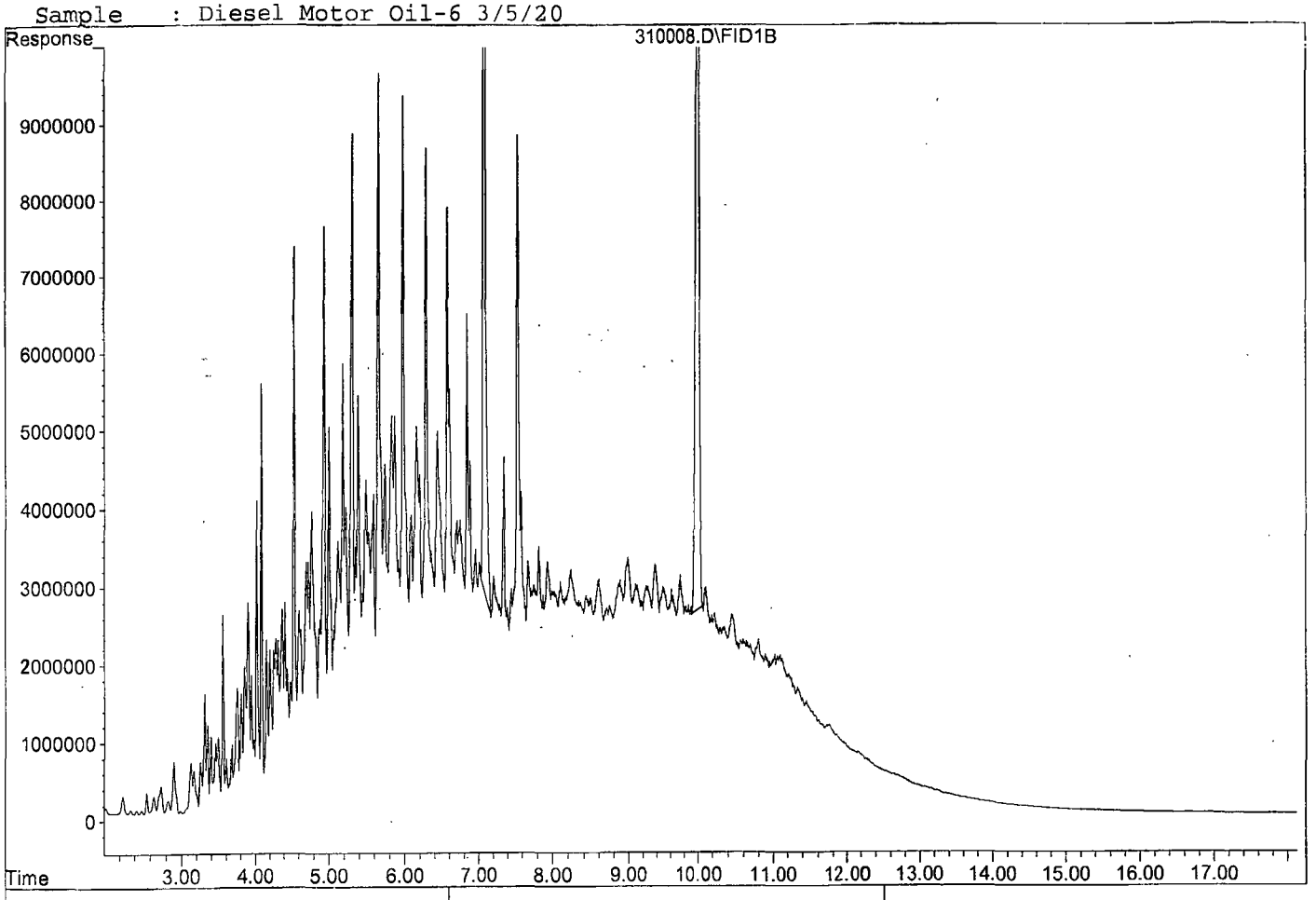
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

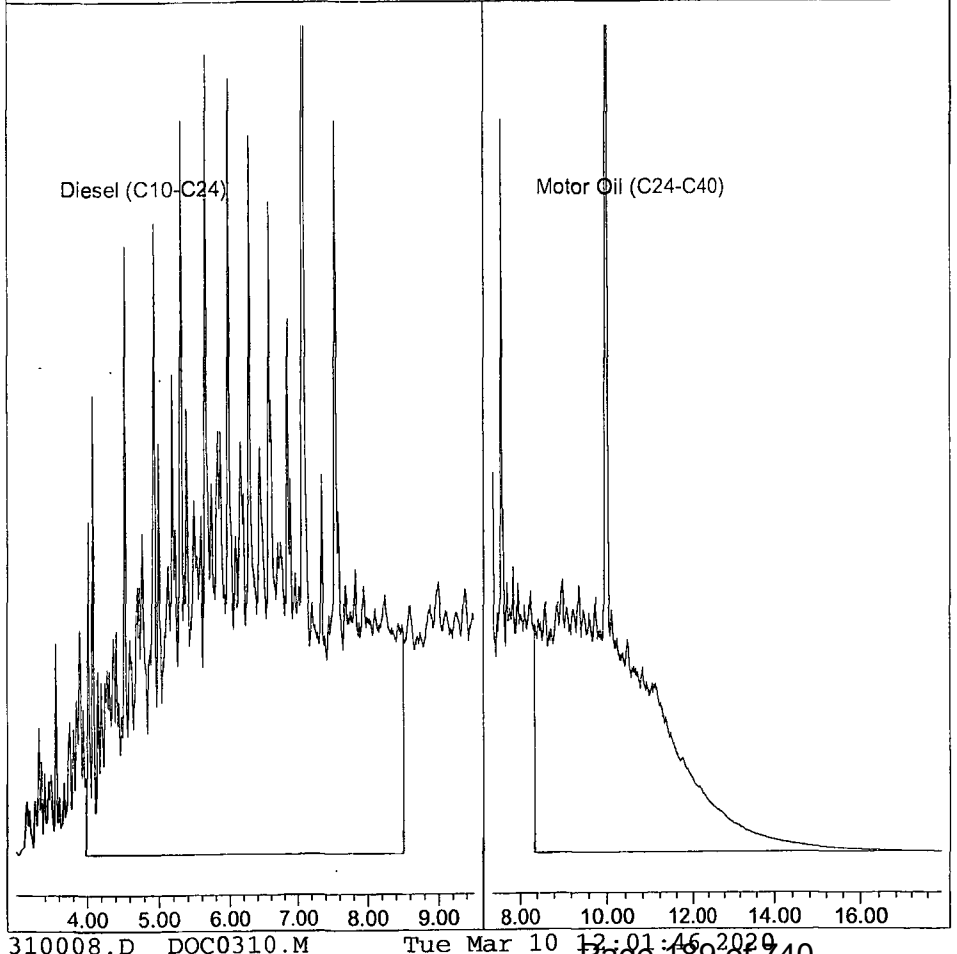
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.07	508856564	101.345 ppb
Surrogate Spike 30.000		Recovery =	337.82%
4) SA Octacosane(S)	9.99	357054728	102.234 ppb
Surrogate Spike 30.000		Recovery =	340.78%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	8675111292	2261.957 ppb
2) HBTM Motor Oil (C24-C40)	12.60	5550316563	1882.235 ppb

Target Compounds

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

Data File: G:\APOLLO\DATA\200310\310008.D
Sample : Diesel Motor Oil-6 3/5/20





TPH Extractables
DOC0310

Form 7

Second Source Calibration

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

SDG No:
Date Analyzed: 03/10/20
Instrument: Apollo
Initial Cal. Date: 03/10/20
Data File: 310009.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1917610	2127840	11	HATM	
2	HBTM	Motor Oil (C24-C40)	1474400	1535490	4.1	HBTM	
3							
4							
5							
6							
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37							
38							
39							
40							
		Average			7.6		

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310009.D Vial: 9
Acq On : 3-10-20 11:52:24 Operator: SS
Sample : Diesel Motor Oil-SS 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 10 12:11 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

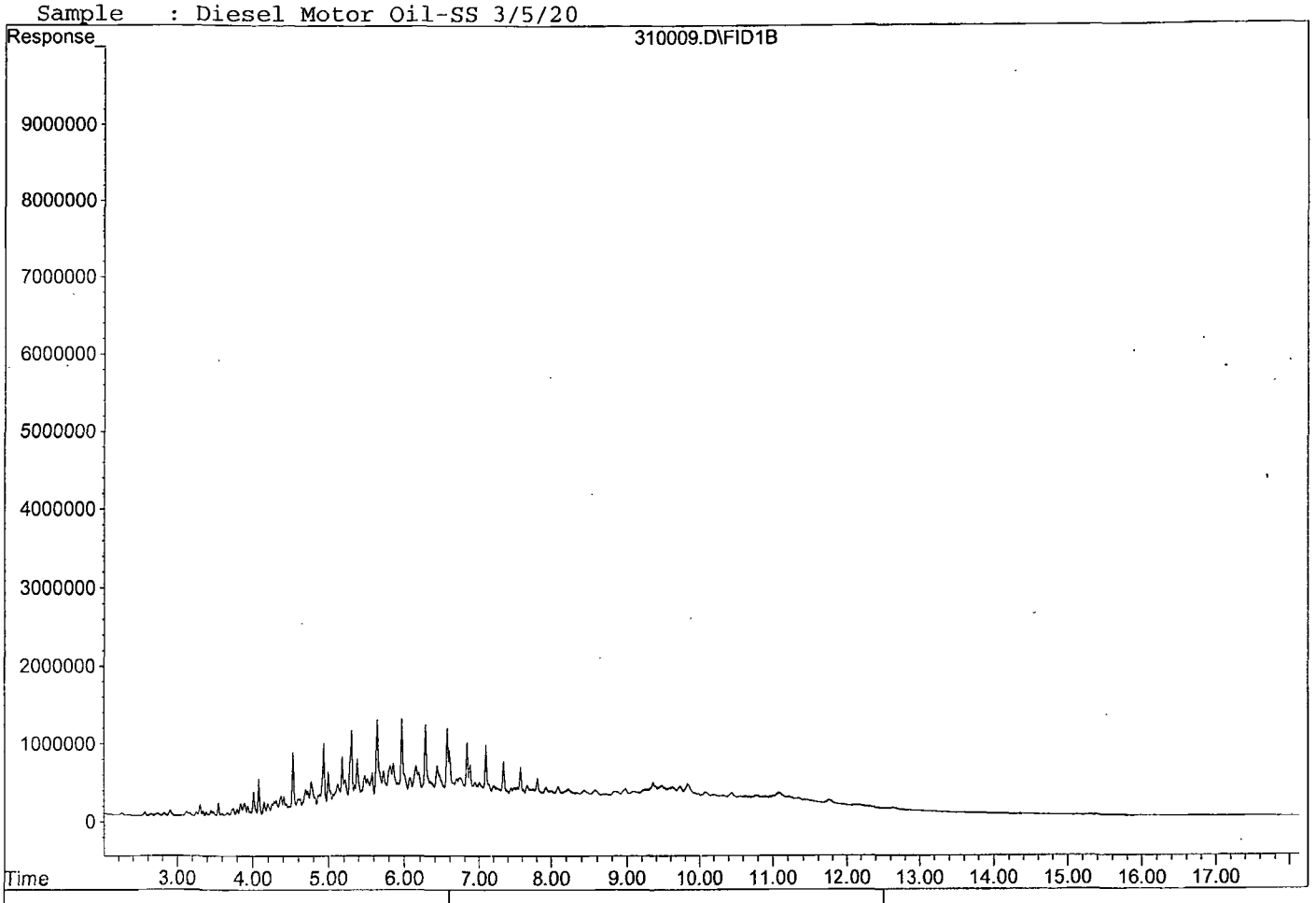
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

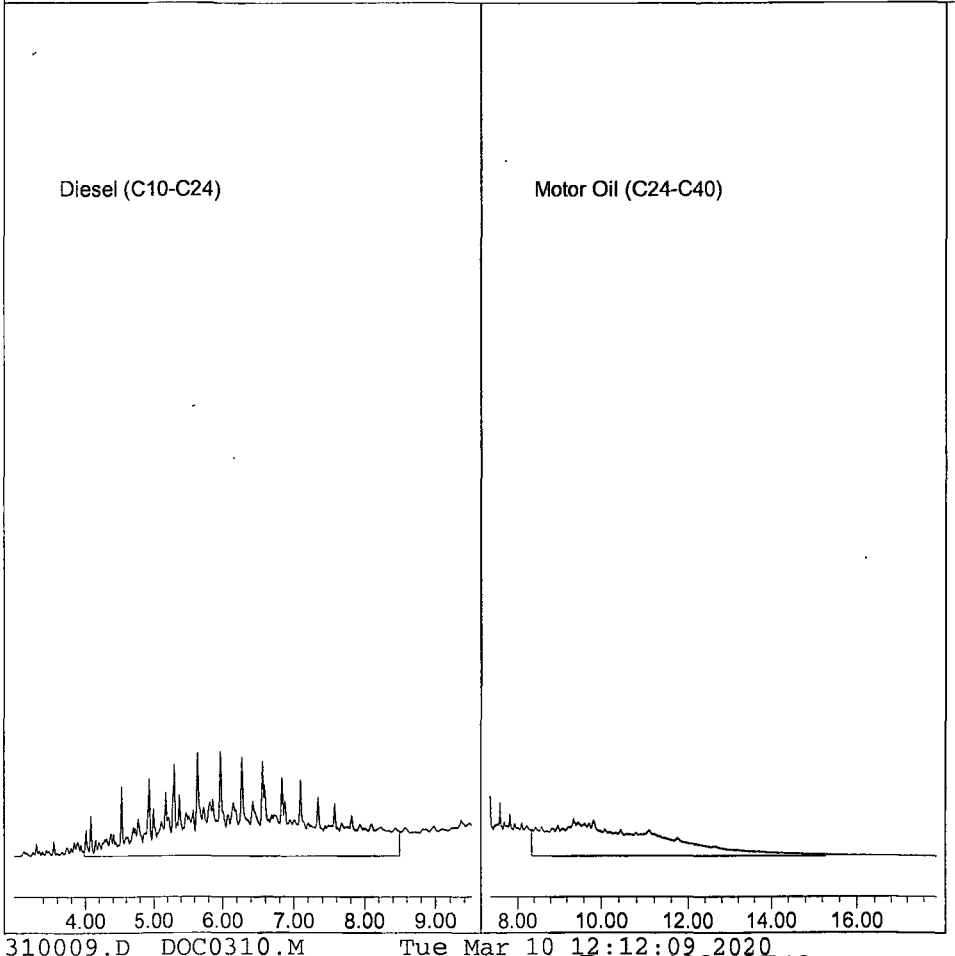
Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
3) SA Ortho-Terphenyl(S)	0.00	0	N.D.	ppb	d
Surrogate Spike 30.000	Recovery	=	0.00%		
4) SA Octacosane(S)	0.00	0	N.D.	ppb	d
Surrogate Spike 30.000	Recovery	=	0.00%		
Target Compounds					
1) HATM Diesel (C10-C24)	6.24	1063920828	277.408	ppb	
2) HBTM Motor Oil (C24-C40)	12.60	767745055	260.359	ppb	

Target Compounds

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

Data File: G:\APOLLO\DATA\200310\310009.D
Sample : Diesel Motor Oil-SS 3/5/20





TPH Extractables
DEC0317

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 03/17/20
Matrix: Water Instrument: Apollo

Initials: SS/AV

		Compound	1	2	3	4	5	6					Avg	%RSD	Type	r^2	Q
			317002.D	317003.D	317004.D	317005.D	317006 D	317007.D									
1	SC	Decanoic Acid(S)	1325318	1449828	1357030	1682528	1897028	1689607					1566890	14	SC		
2																	
3																	
4																	
5																	
6																	
7																	
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0.4106

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317002.D Vial: 2
Acq On : 3-17-20 8:14:08 Operator: SS
Sample : Decanoic Acid-1 3/10/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 17 10:51 2020 Quant Results File: DEC0317.RES

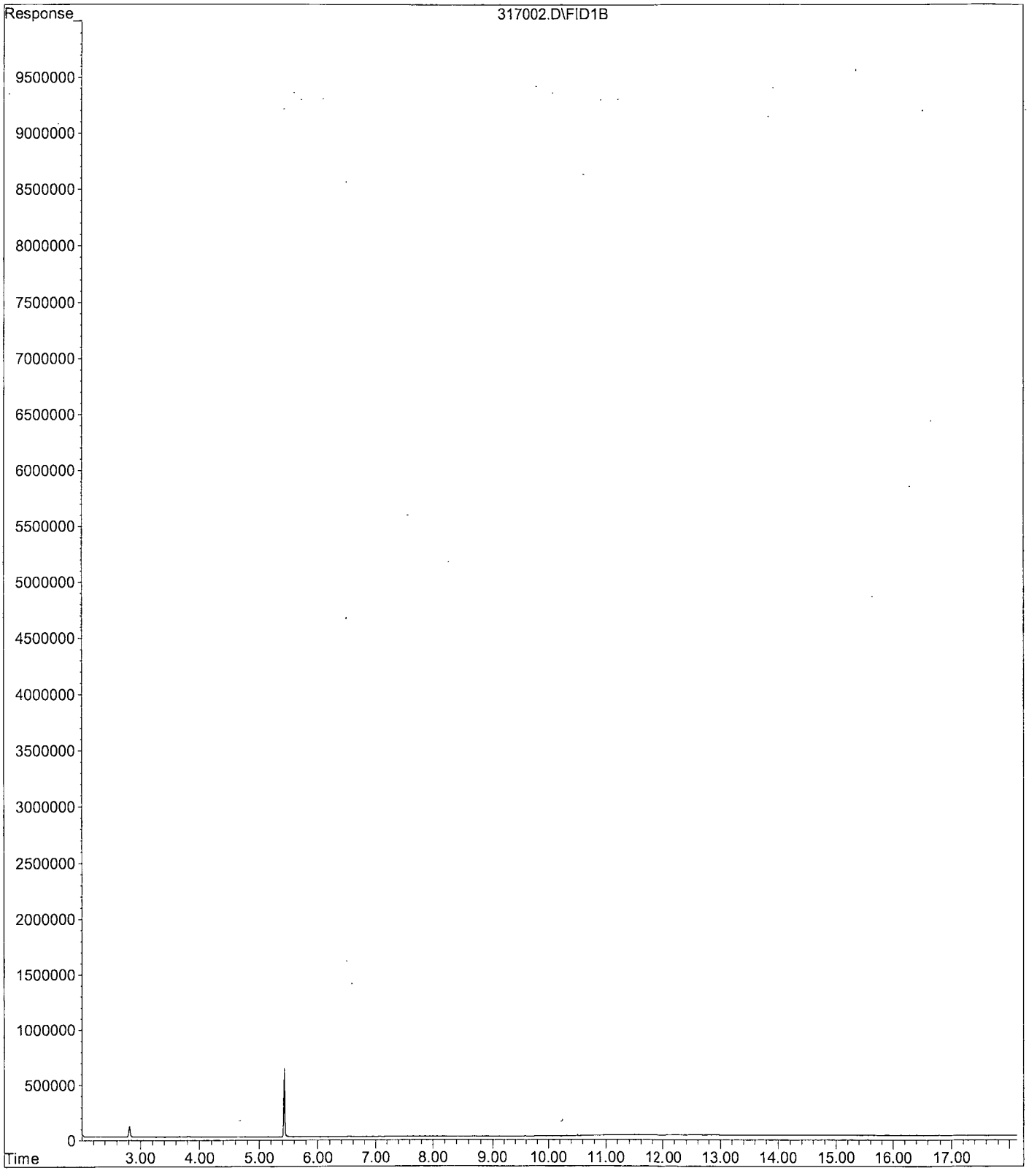
Method : G:\APOLLO\DATA\2019\191115\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	5.43	7951908	2.537 ppb
Surrogate Spike 24.000	Recovery =		10.57%
Target Compounds			
Target Compounds			

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

File : G:\APOLLO\DATA\200317\317002.D
Operator : SS
Acquired : 3-17-20 8:14:08 using AcqMethod TPHSN.M
Instrument : Apollo
Sample Name: Decanoic Acid-1 3/10/20
Misc Info : water
Vial Number: 2



Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317003.D Vial: 3
Acq On : 3-17-20 8:36:27 Operator: SS
Sample : Decanoic Acid-2 3/10/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 17 10:51 2020 Quant Results File: DEC0317.RES

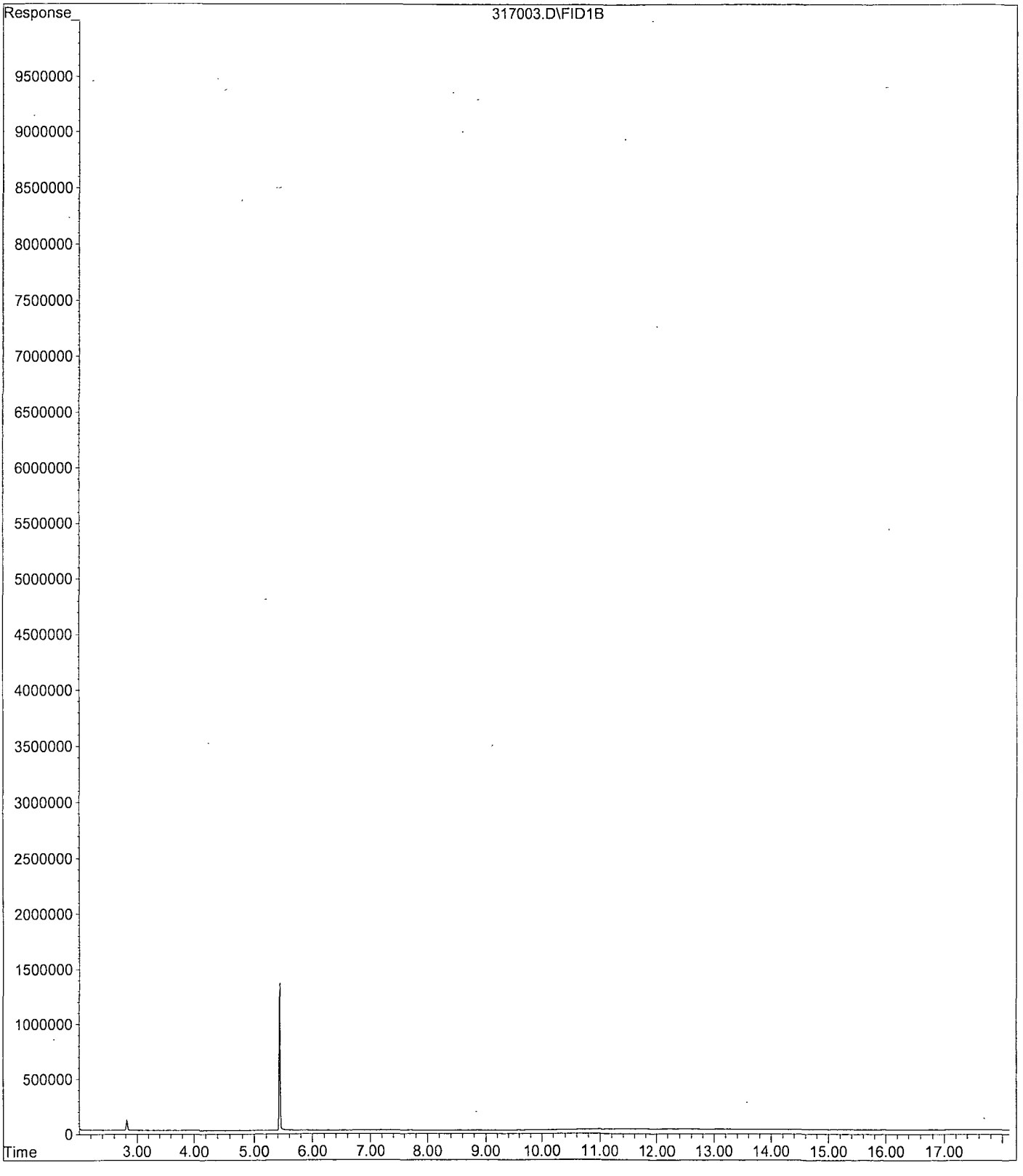
Method : G:\APOLLO\DATA\2019\191115\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	5.44	17397937	5.552 ppb
Surrogate Spike 24.000	Recovery =		23.13%
Target Compounds			
Target Compounds			

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

File : G:\APOLLO\DATA\200317\317003.D
Operator : SS
Acquired : 3-17-20 8:36:27 using AcqMethod TPHSN.M
Instrument : Apollo
Sample Name: Decanoic Acid-2 3/10/20
Misc Info : water
Vial Number: 3



Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317004.D Vial: 4
Acq On : 3-17-20 8:58:53 Operator: SS
Sample : Decanoic Acid-3 3/10/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 17 10:51 2020 Quant Results File: DEC0317.RES

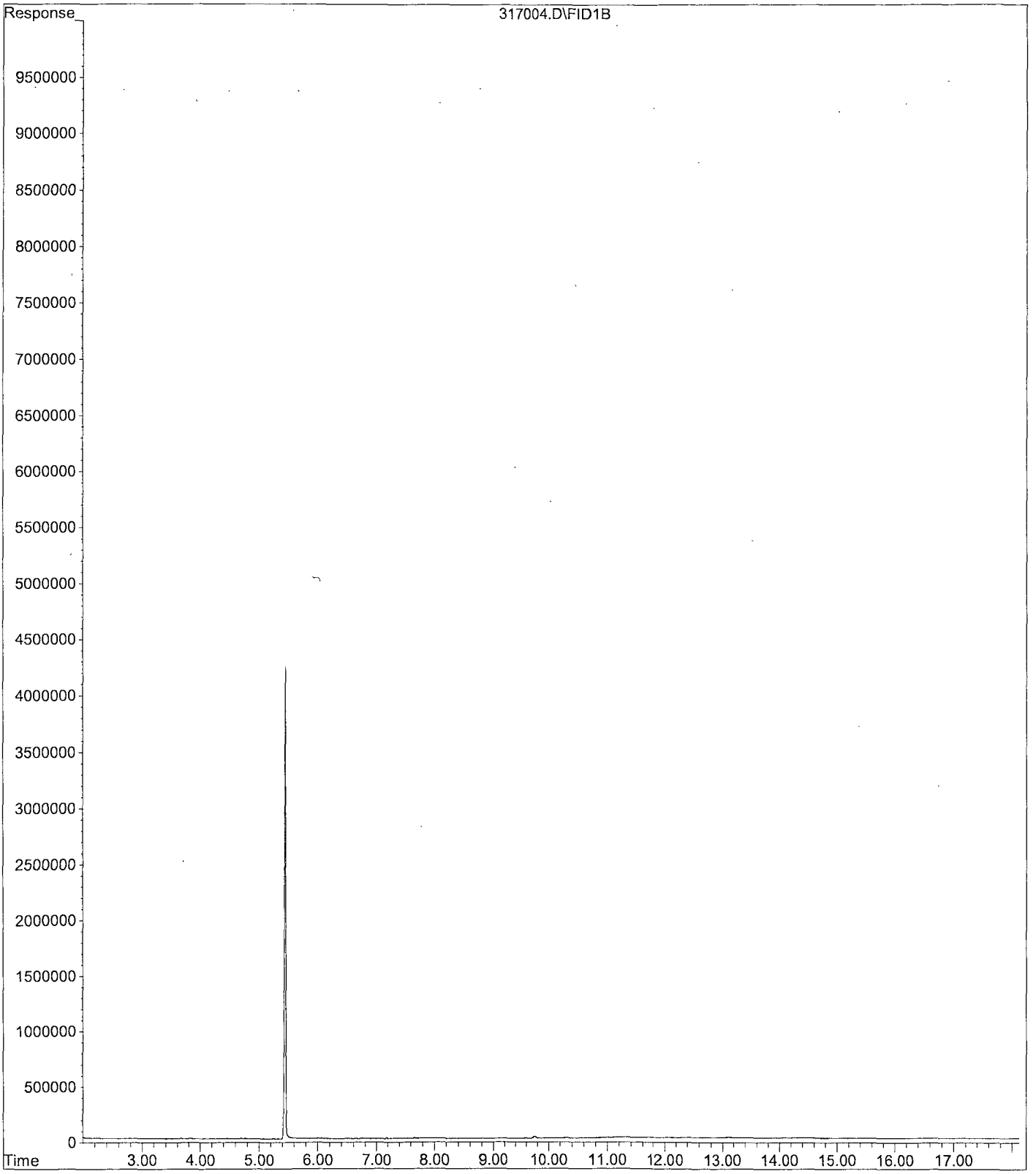
Method : G:\APOLLO\DATA\2019\191115\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	5.45	65137449	20.786 ppb
Surrogate Spike 24.000	Recovery =		86.61%
Target Compounds			
Target Compounds			

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

File : G:\APOLLO\DATA\200317\317004.D
Operator : SS
Acquired : 3-17-20 8:58:53 using AcqMethod TPHSN.M
Instrument : Apollo
Sample Name: Decanoic Acid-3 3/10/20
Misc Info : water
Vial Number: 4



Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317005.D Vial: 5
Acq On : 3-17-20 9:21:15 Operator: SS
Sample : Decanoic Acid-4 3/10/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 17 10:51 2020 Quant Results File: DEC0317.RES

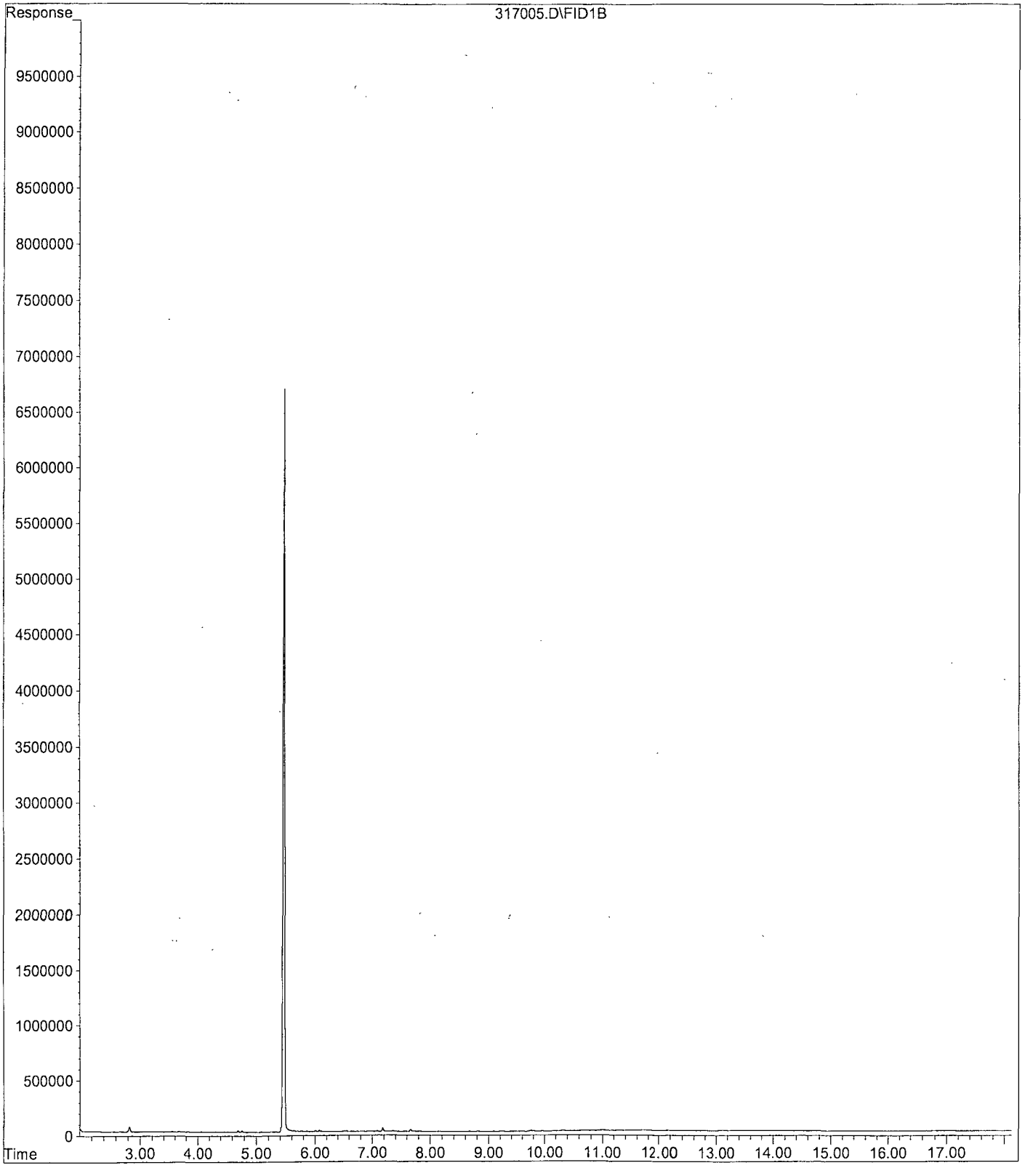
Method : G:\APOLLO\DATA\2019\191115\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	5.46	121142045	38.657 ppb
Surrogate Spike 24.000		Recovery =	161.07%
Target Compounds			
Target Compounds			

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

File : G:\APOLLO\DATA\200317\317005.D
Operator : SS
Acquired : 3-17-20 9:21:15 using AcqMethod TPHSN.M
Instrument : Apollo
Sample Name: Decanoic Acid-4 3/10/20
Misc Info : water
Vial Number: 5



Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317006.D Vial: 6
Acq On : 3-17-20 9:43:41 Operator: SS
Sample : Decanoic Acid-5 3/10/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 17 10:51 2020 Quant Results File: DEC0317.RES

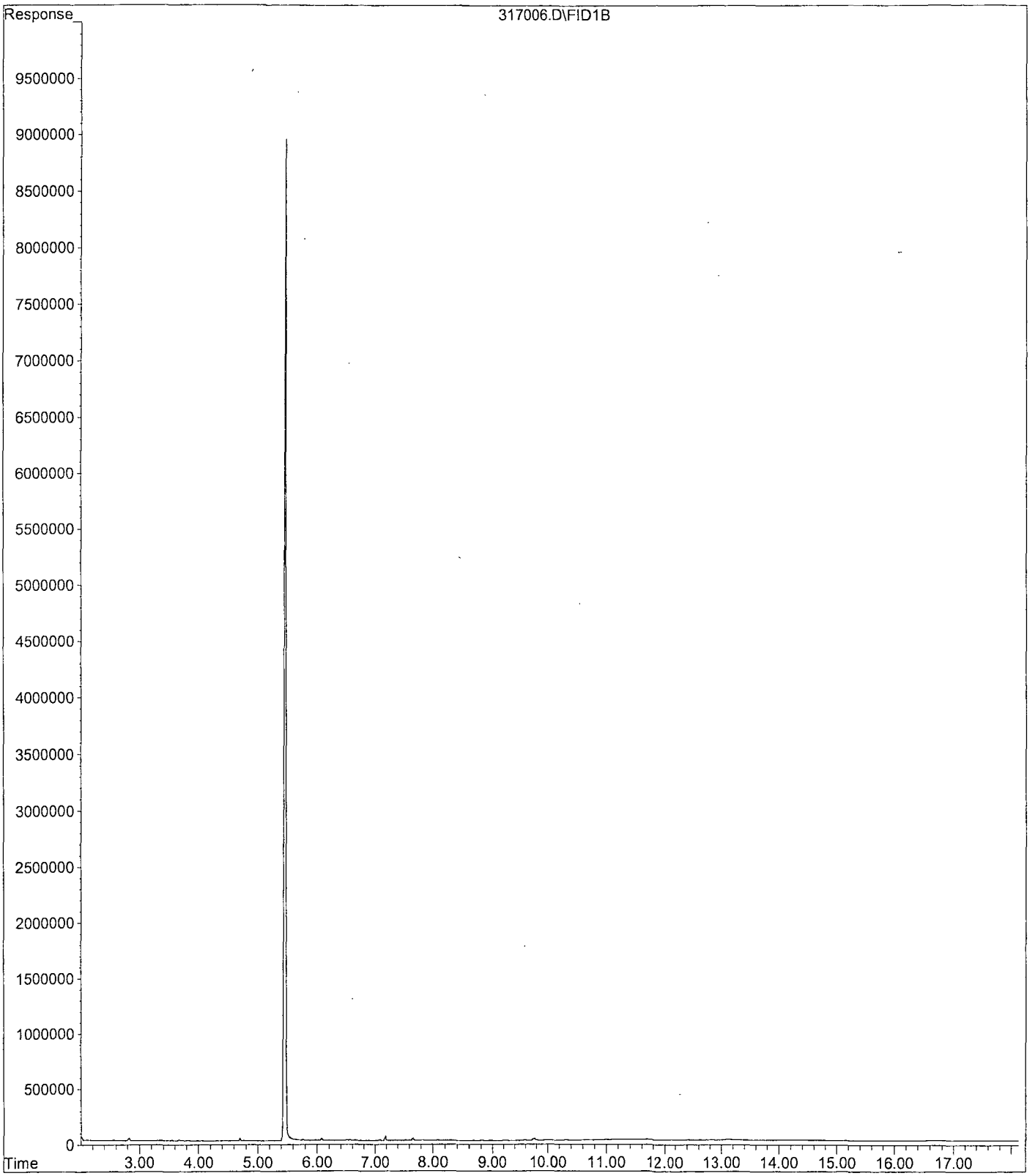
Method : G:\APOLLO\DATA\2019\191115\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	5.47	182114736	58.113 ppb
Surrogate Spike 24.000		Recovery =	242.14%
Target Compounds			
Target Compounds			

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

File : G:\APOLLO\DATA\200317\317006.D
Operator : SS
Acquired : 3-17-20 9:43:41 using AcqMethod TPHSN.M
Instrument : Apollo
Sample Name: Decanoic Acid-5 3/10/20
Misc Info : water
Vial Number: 6



Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317007.D Vial: 7
Acq On : 3-17-20 10:06:06 Operator: SS
Sample : Decanoic Acid-6 3/10/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 17 10:51 2020 Quant Results File: DEC0317.RES

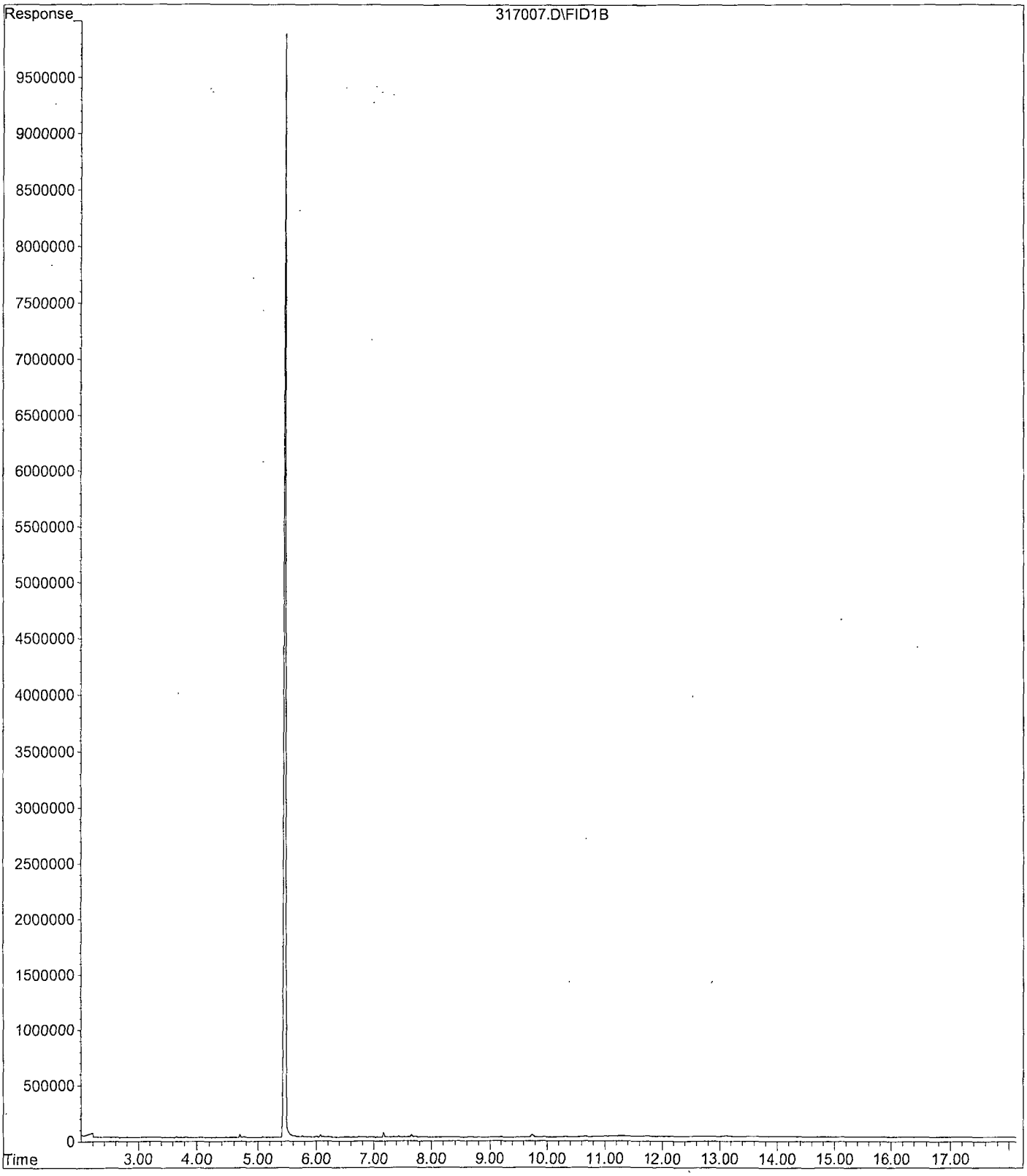
Method : G:\APOLLO\DATA\2019\191115\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	5.47	202752841	64.699 ppb
Surrogate Spike 24.000		Recovery =	269.58%
Target Compounds			
Target Compounds			

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

File : G:\APOLLO\DATA\200317\317007.D
Operator : SS
Acquired : 3-17-20 10:06:06 using AcqMethod TPHSN.M
Instrument : Apollo
Sample Name: Decanoic Acid-6 3/10/20
Misc Info : water
Vial Number: 7



TPH Extractables
DOC0310

Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 03/16/20
Instrument: Apollo
Initial Cal. Date: 03/10/20
Data File: 312156.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1917610	2261300	18	HATM	
2	HBTM	Motor Oil (C24-C40)	1474400	1542530	4.6	HBTM	
3	SA	Ortho-Terphenyl(S)	2510520	2626810	4.6	SA	
4	SA	Octacosane(S)	1746260	1981190	13	SA	
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40							
		Average			10.1		

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200312\312156.D Vial: 56
Acq On : 3-16-20 14:54:17 Operator: SS
Sample : Diesel Motor Oil-CCV 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 17 7:19 2020 Quant Results File: DOC0310.RES

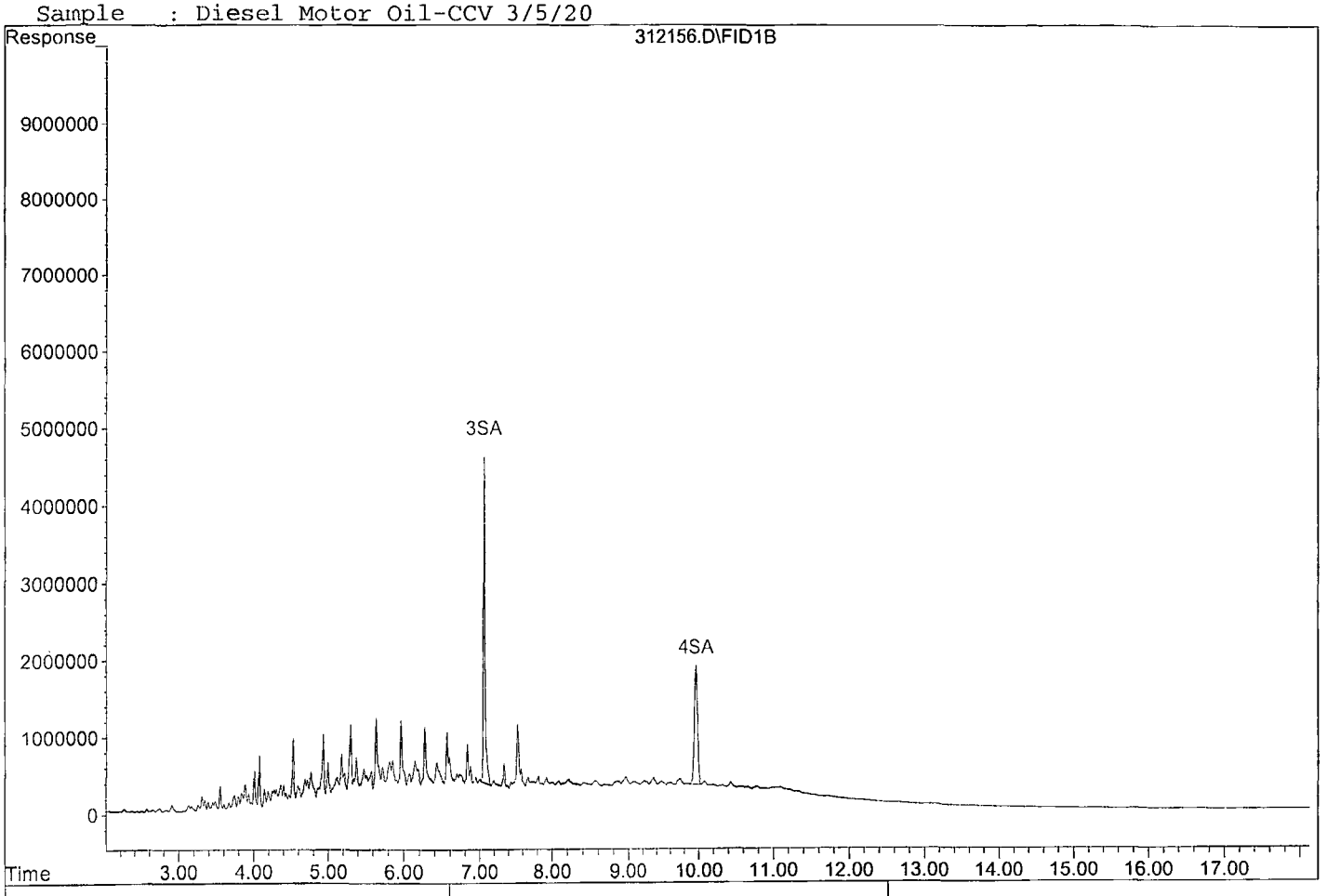
Method : G:\APOLLO\DATA\200312\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

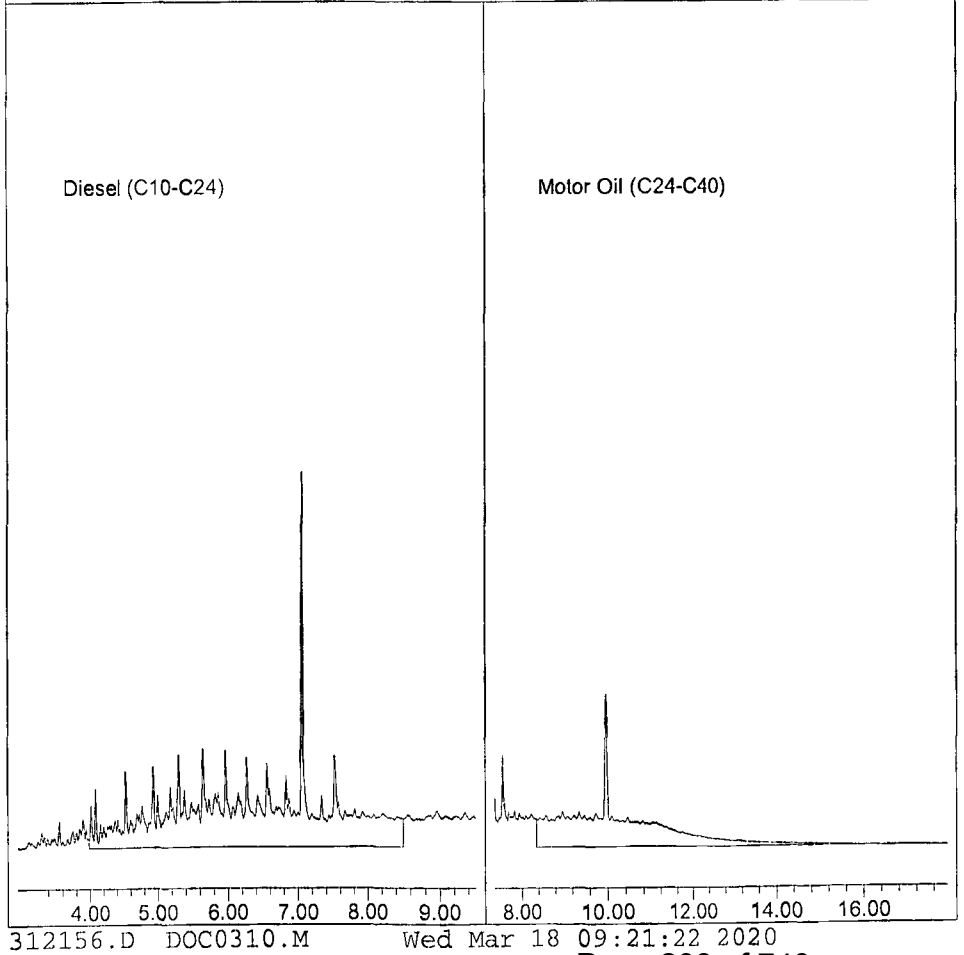
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.06	65670160	13.079 ppb
Surrogate Spike 30.000	Recovery =		43.60%
4) SA Octacosane(S)	9.96	49529868	14.182 ppb
Surrogate Spike 30.000	Recovery =		47.27%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	1130651561	294.807 ppb
2) HBTM Motor Oil (C24-C40)	12.60	771265719	261.553 ppb
Target Compounds			

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

Data File: G:\APOLLO\DATA\200312\312156.D
Sample : Diesel Motor Oil-CCV 3/5/20





312156.D DOC0310.M Wed Mar 18 09:21:22 2020

TPH Extractables
DOC0310

Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 03/16/20
Instrument: Apollo
Initial Cal. Date: 03/10/20
Data File: 312164.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1917610	2283970	19	HATM	
2	HBTM	Motor Oil (C24-C40)	1474400	1554520	5.4	HBTM	
3	SA	Ortho-Terphenyl(S)	2510520	2647070	5.4	SA	
4	SA	Octacosane(S)	1746260	1982110	14	SA	
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40							
		Average			11.0		

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200312\312164.D Vial: 64
Acq On : 3-16-20 17:53:53 Operator: SS
Sample : Diesel Motor Oil-CCV 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 17 7:17 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200312\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

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

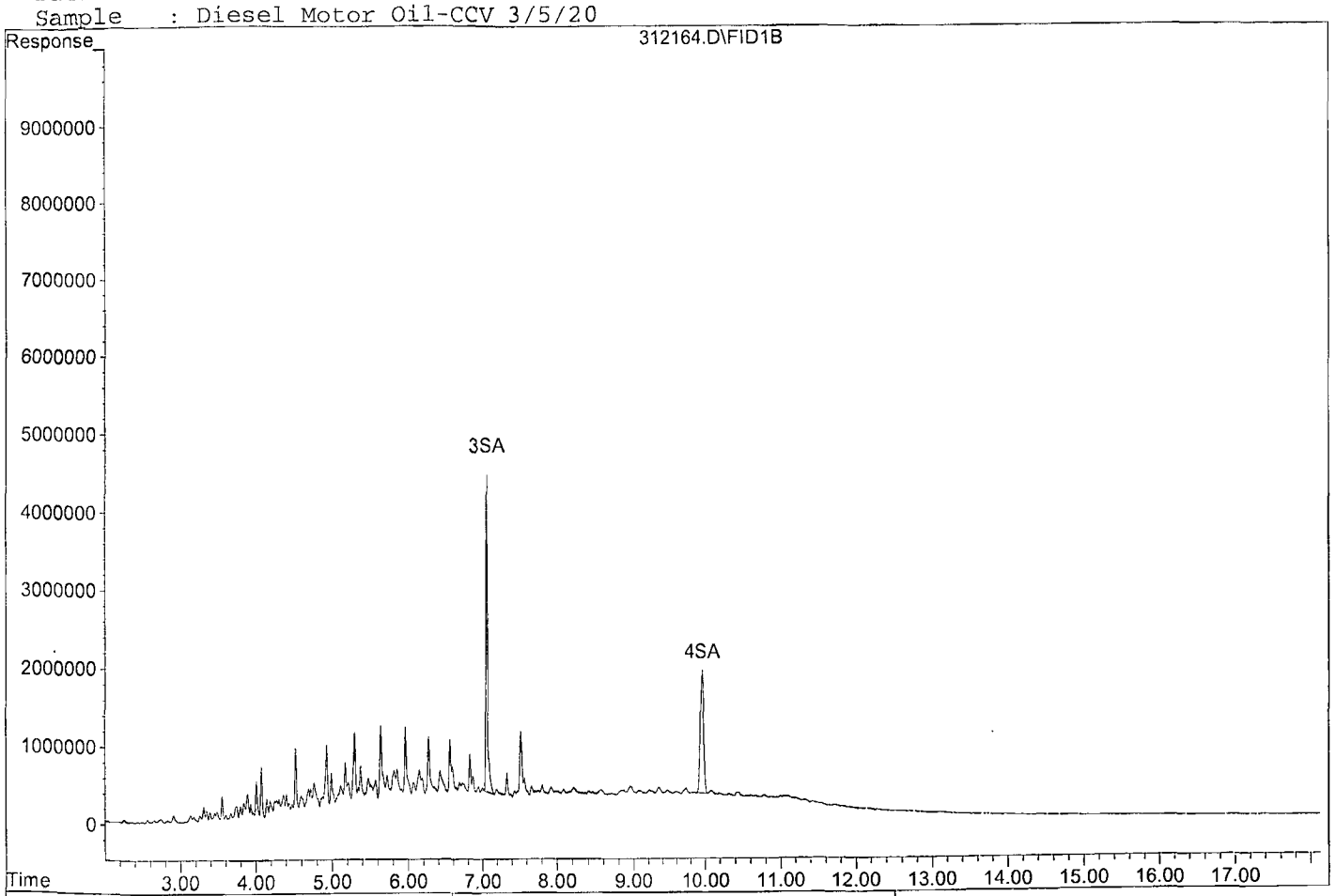
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.06	66176815	13.180 ppb
Surrogate Spike 30.000	Recovery =		43.93%
4) SA Octacosane(S)	9.96	49552696	14.188 ppb
Surrogate Spike 30.000	Recovery =		47.29%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	1141984490	297.762 ppb
2) HBTM Motor Oil (C24-C40)	12.60	777259608	263.586 ppb

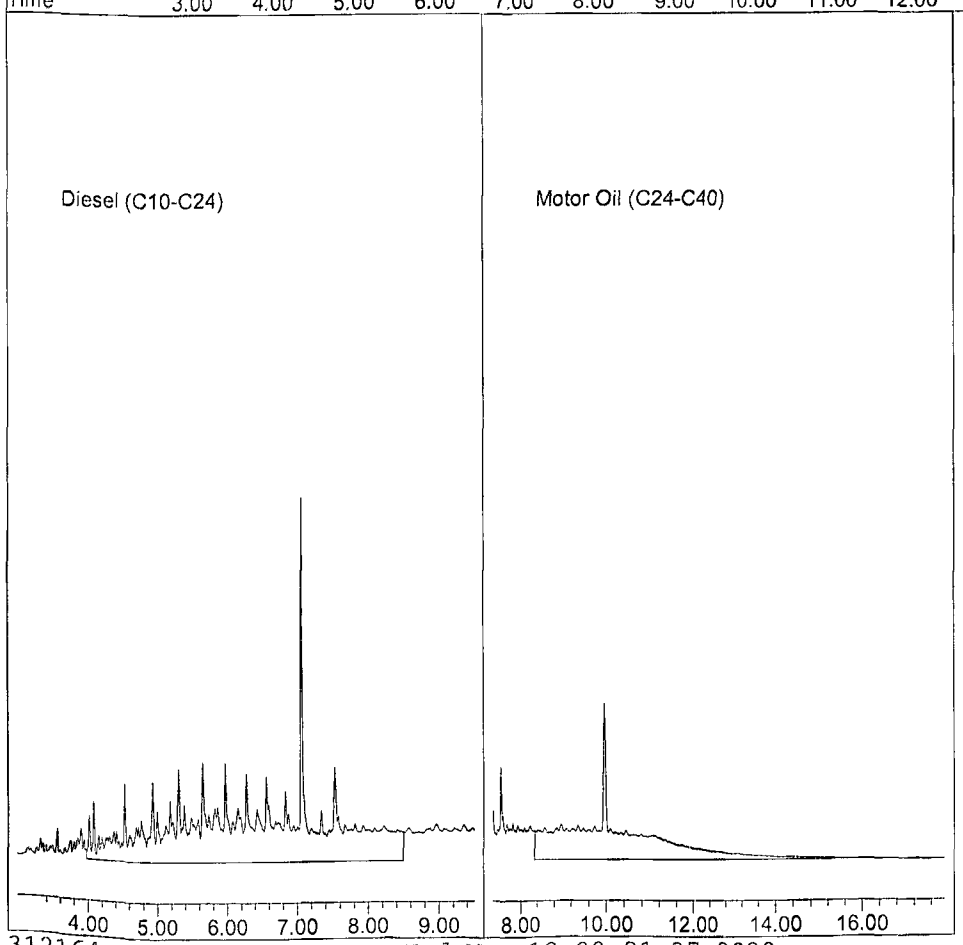
Target Compounds

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

Quantitation Report

Data File: G:\APOLLO\DATA\200312\312164.D
Sample : Diesel Motor Oil-CCV 3/5/20





312164.D DOC0310.M Wed Mar 18 09:21:37 2020

TPH Extractables
DOC0310

Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 03/17/20
Instrument: Apollo
Initial Cal. Date: 03/10/20
Data File: 317008.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1917610	2167310	13	HATM	
2	HBTM	Motor Oil (C24-C40)	1474400	1465680	0.59	HBTM	
3	SA	Ortho-Terphenyl(S)	2510520	2524840	0.57	SA	
4	SA	Octacosane(S)	1746260	1874150	7.3	SA	
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		Average			5.4		

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317008.D Vial: 8
Acq On : 3-17-20 10:43:41 Operator: SS
Sample : Diesel Motor Oil-CCV 3/17/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 17 11:17 2020 Quant Results File: DOC0310.RES

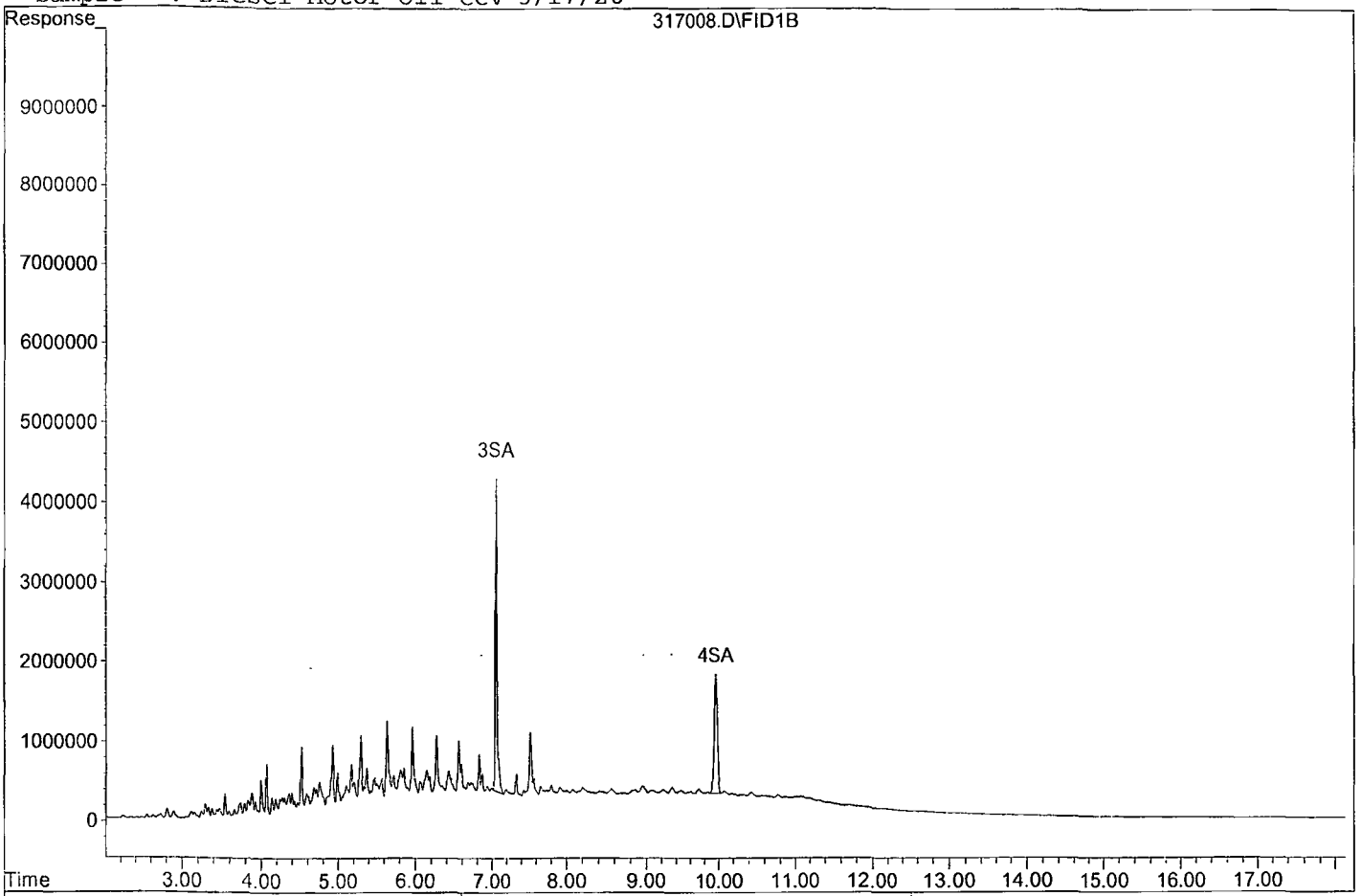
Method : G:\APOLLO\DATA\200317\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

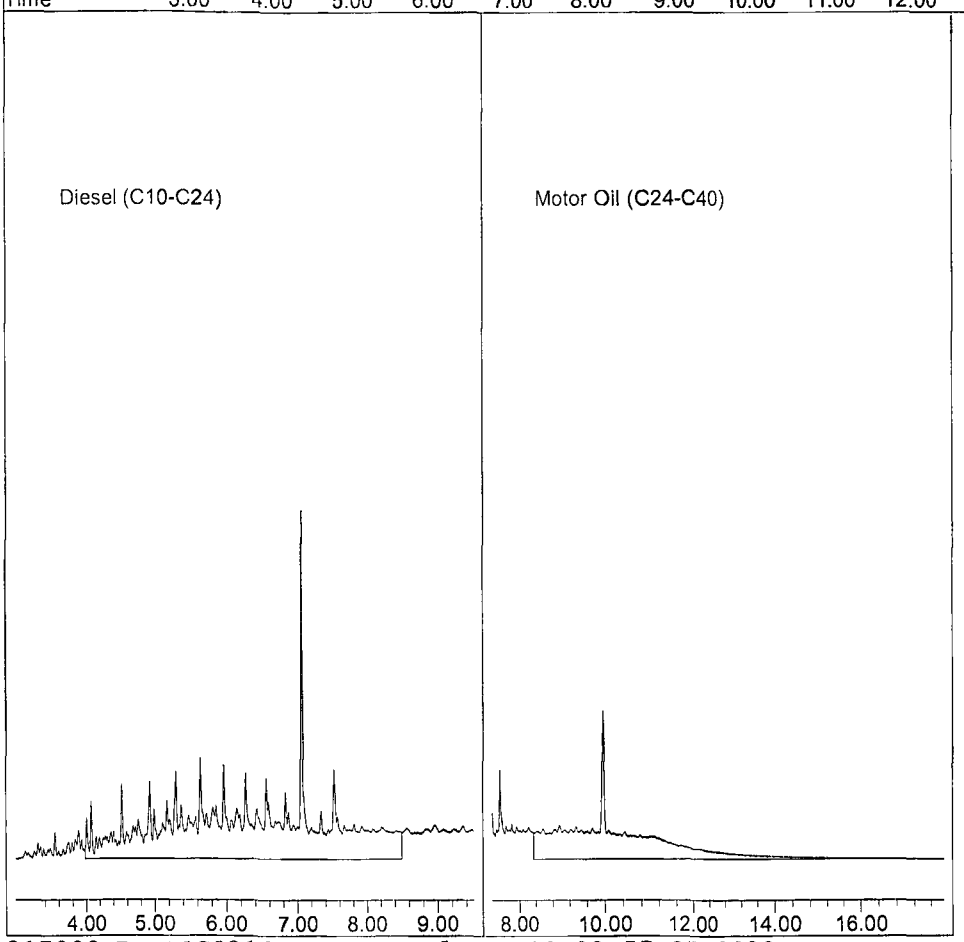
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.06	63120902	12.571 ppb
Surrogate Spike 30.000		Recovery =	41.90%
4) SA Octacosane(S)	9.96	46853861	13.415 ppb
Surrogate Spike 30.000		Recovery =	44.72%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	1083656613	282.554 ppb
2) HBTM Motor Oil (C24-C40)	12.60	732838223	248.522 ppb
Target Compounds			

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

Data File: G:\APOLLO\DATA\200317\317008.D
Sample : Diesel Motor Oil-CCV 3/17/20





317008.D DOC0310.M Wed Mar 18 09:57:37 2020 Page 2

TPH Extractables
DEC0317

Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 03/17/20
Instrument: Apollo
Initial Cal. Date: 03/17/20
Data File: 317010.D

		Compound	MEAN	CCRF	%D	%Drift	
1	SC	Decanoic Acid(S)	1566890	1403430	10	SC	
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		Average			10.0		

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317020.D Vial: 20
Acq On : 3-17-20 14:30:28 Operator: SS
Sample : Decanoic Acid-CCV 3/10/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 17 15:38 2020 Quant Results File: DEC0317.RES

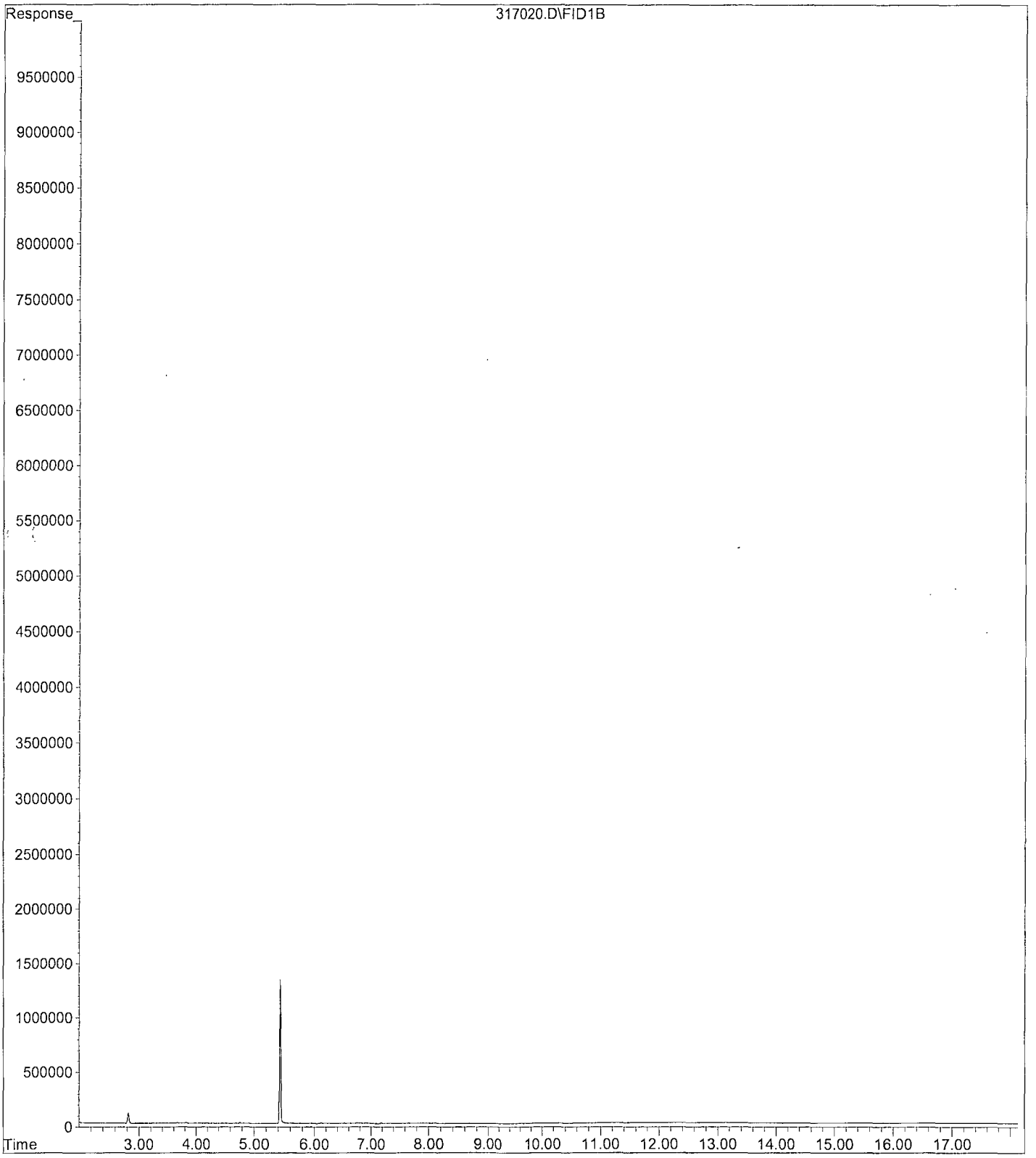
Method : G:\APOLLO\DATA\200317\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	5.44	17224202	5.496 ppb
Surrogate Spike 24.000		Recovery =	22.90%
Target Compounds			
Target Compounds			

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

File : G:\APOLLO\DATA\200317\317020.D
Operator : SS
Acquired : 3-17-20 14:30:28 using AcqMethod TPHSN.M
Instrument : Apollo
Sample Name: Decanoic Acid-CCV 3/10/20
Misc Info : water
Vial Number: 20



TPH Extractables
DEC0317

Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 03/17/20
Instrument: Apollo
Initial Cal. Date: 03/17/20
Data File: 317020.D

		Compound	MEAN	CCRF	%D		%Drift
1	SC	Decanoic Acid(S)	1566890	1435350	8.4	SC	
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40							
		Average			8.4		

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317010.D Vial: 10
Acq On : 3-17-20 11:29:56 Operator: SS
Sample : Decanoic Acid-CCV 3/10/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 17 11:58 2020 Quant Results File: DEC0317.RES

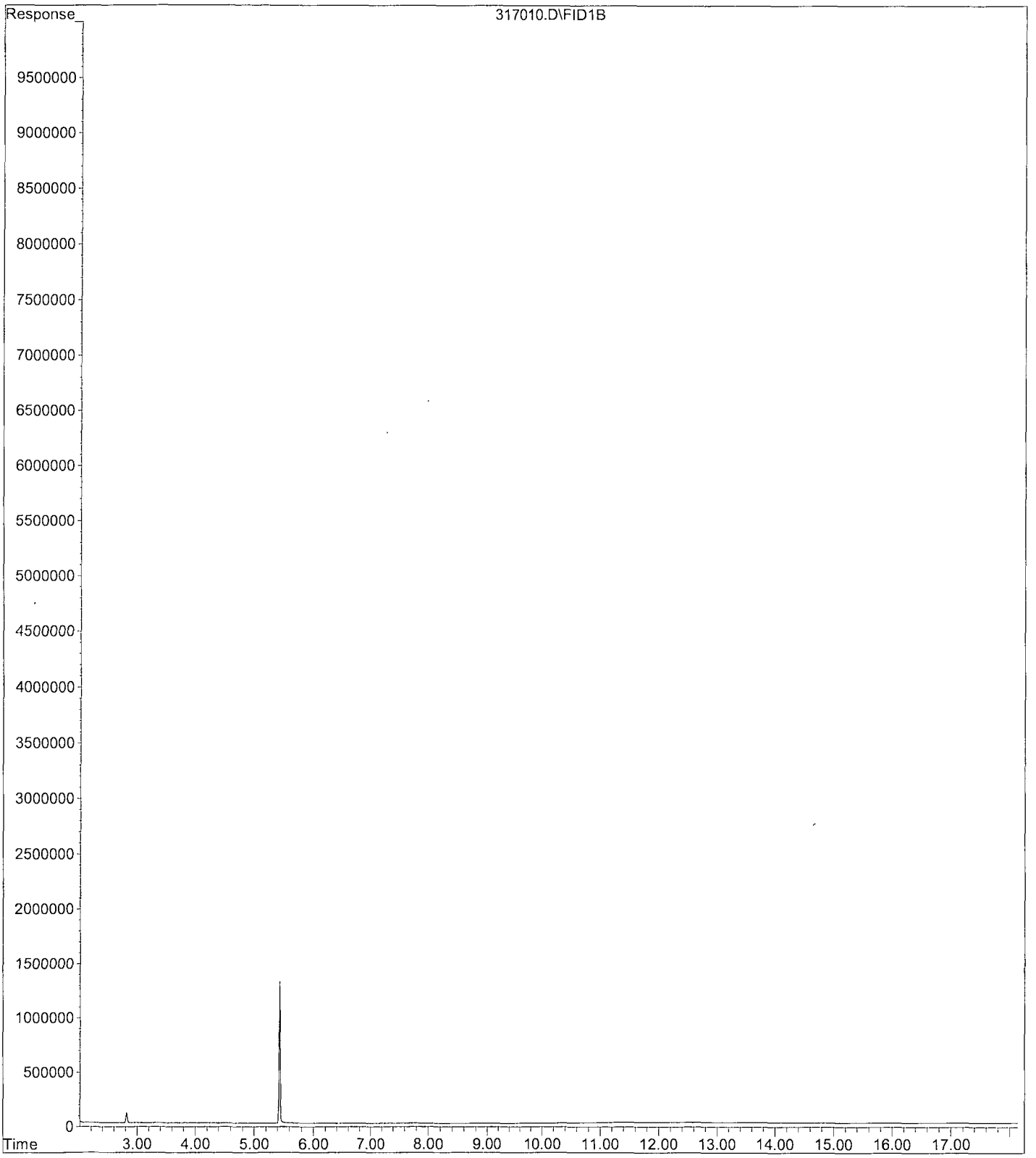
Method : G:\APOLLO\DATA\200317\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	5.44	16841115	5.374 ppb
Surrogate Spike 24.000		Recovery =	22.39%
Target Compounds			
Target Compounds			

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

File : G:\APOLLO\DATA\200317\317010.D
Operator : SS
Acquired : 3-17-20 11:29:56 using AcqMethod TPHSN.M
Instrument : Apollo
Sample Name: Decanoic Acid-CCV 3/10/20
Misc Info : water
Vial Number: 10



TPH Extractables
DOC0310

Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 03/17/20
Instrument: Apollo
Initial Cal. Date: 03/10/20
Data File: 317021.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1917610	2154210	12	HATM	
2	HBTM	Motor Oil (C24-C40)	1474400	1459630	1.0	HBTM	
3	SA	Ortho-Terphenyl(S)	2510520	2532240	0.87	SA	
4	SA	Octacosane(S)	1746260	1877960	7.5	SA	
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		Average			5.3		

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317021.D Vial: 21
Acq On : 3-17-20 14:53:00 Operator: SS
Sample : Diesel Motor Oil-CCV 3/17/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 17 15:38 2020 Quant Results File: DOC0310.RES

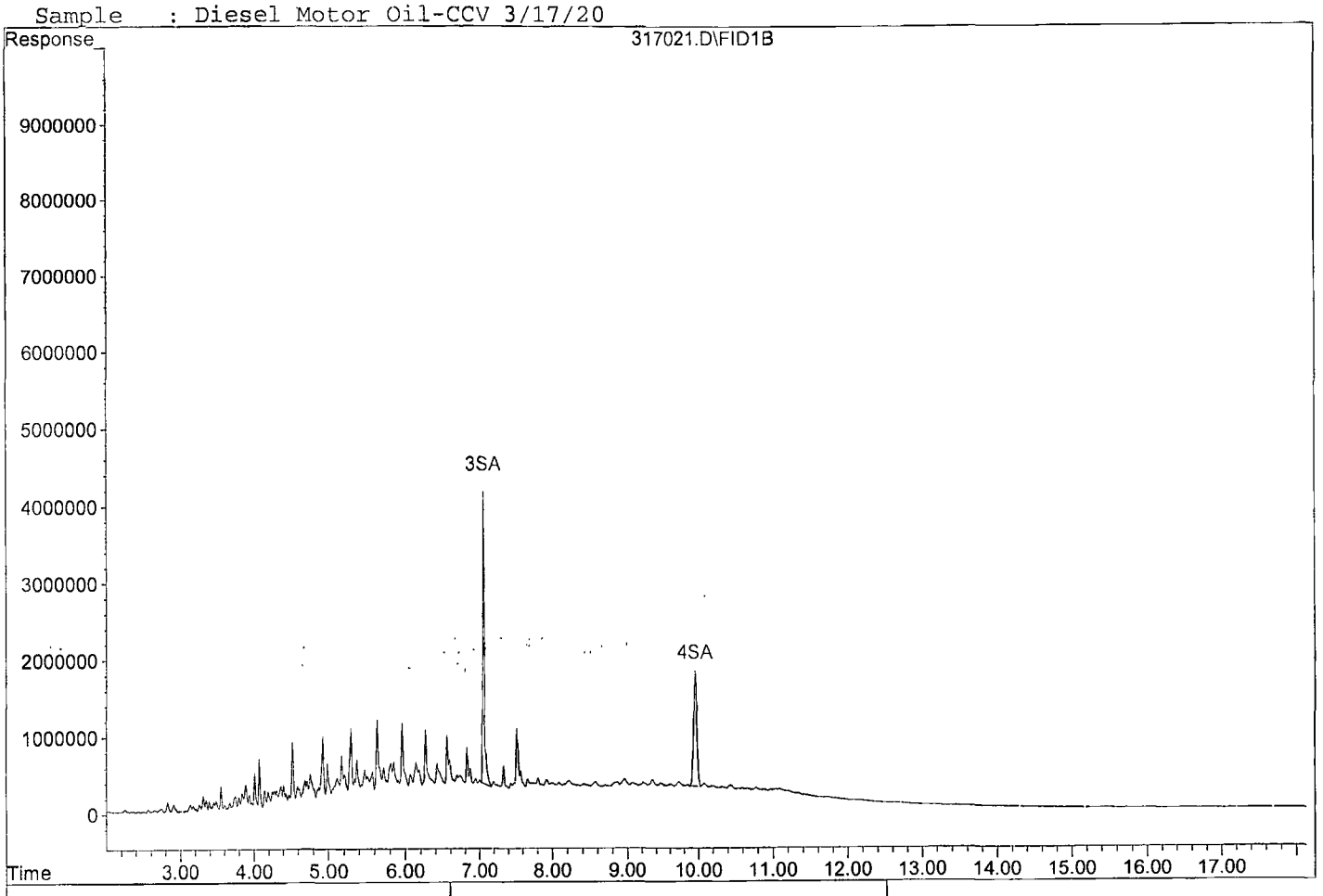
Method : G:\APOLLO\DATA\200317\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

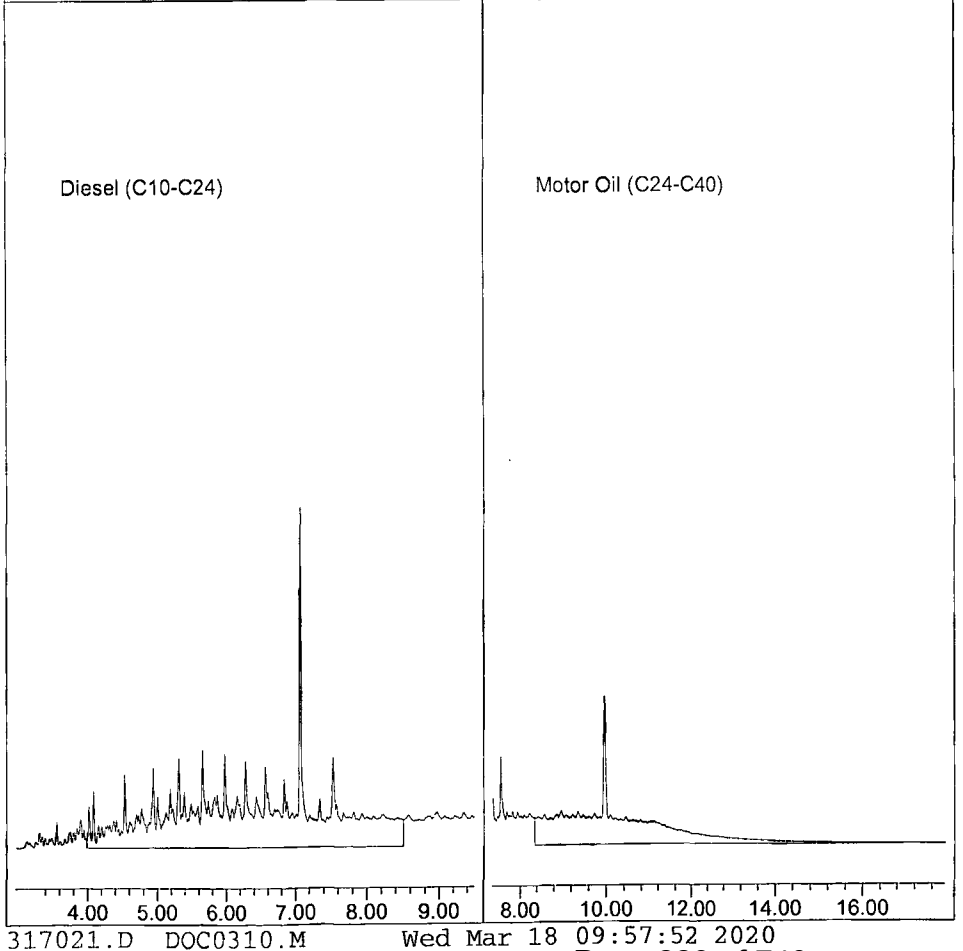
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.06	63306124	12.608 ppb
Surrogate Spike 30.000	Recovery =		42.03%
4) SA Octacosane(S)	9.96	46949012	13.443 ppb
Surrogate Spike 30.000	Recovery =		44.81%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	1077106358	280.846 ppb
2) HBTM Motor Oil (C24-C40)	12.60	729816916	247.497 ppb
Target Compounds			

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

Data File: G:\APOLLO\DATA\200317\317021.D
Sample : Diesel Motor Oil-CCV 3/17/20





317021.D DOC0310.M Wed Mar 18 09:57:52 2020

ORGANICS
Raw Data

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200312\312161.D Vial: 61
Acq On : 3-16-20 16:46:31 Operator: SS
Sample : BA08341W44 2/800 Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Mar 18 9:07 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200312\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

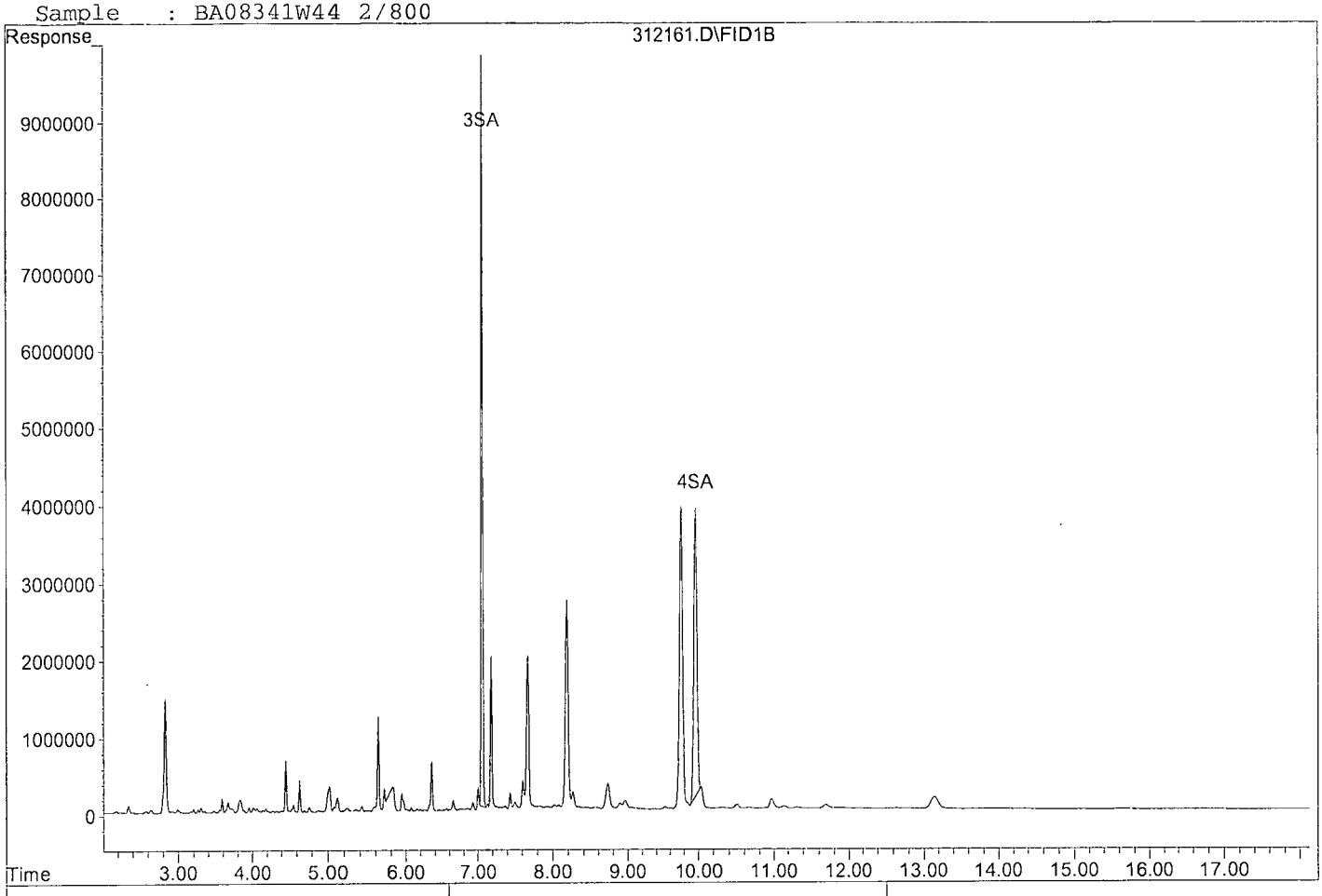
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

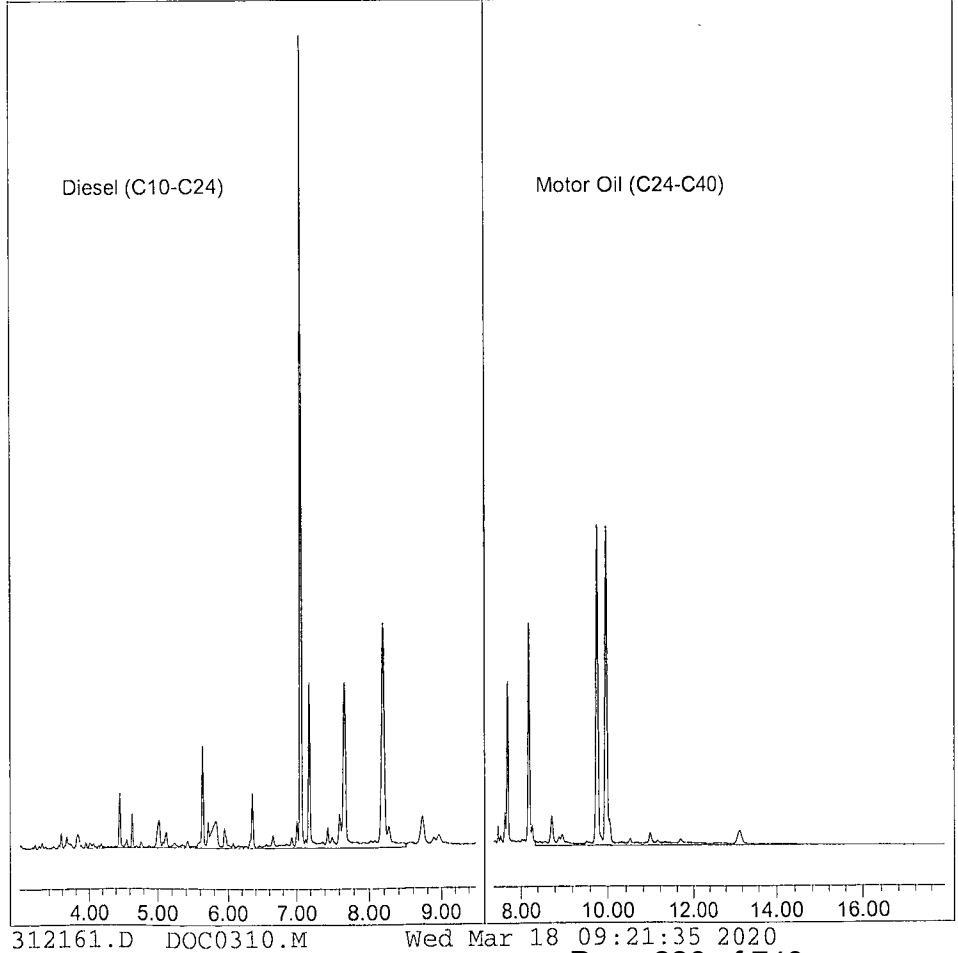
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.06	135378430	67.406 ppb
Surrogate Spike 75.000	Recovery =		89.87%
4) SA Octacosane(S)	9.96	114265321	81.793 ppb
Surrogate Spike 75.000	Recovery =		109.06%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	343215986	223.726 ppb
2) HBTM Motor Oil (C24-C40)	12.60	286072310	242.534 ppb

Target Compounds

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

Data File: G:\APOLLO\DATA\200312\312161.D
Sample : BA08341W44 2/800





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317013.D Vial: 13
Acq On : 3-17-20 11:52:49 Operator: SS
Sample : BA08341W44 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Mar 18 9:52 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200317\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.06	136368933	67.899	ppb
Surrogate Spike 75.000	Recovery =		90.53%	
4) SA Octacosane(S)	9.96	112243169	80.345	ppb
Surrogate Spike 75.000	Recovery =		107.13%	
Target Compounds				
Target Compounds				
1) HATM Diesel (C10-C24)	0.00	0	N.D.	ppb
2) HBTM Motor Oil (C24-C40)	0.00	0	N.D.	ppb

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

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317013.D Vial: 13
Acq On : 3-17-20 11:52:49 Operator: SS
Sample : BA08341W44 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Mar 18 9:53 2020 Quant Results File: DEC0317.RES

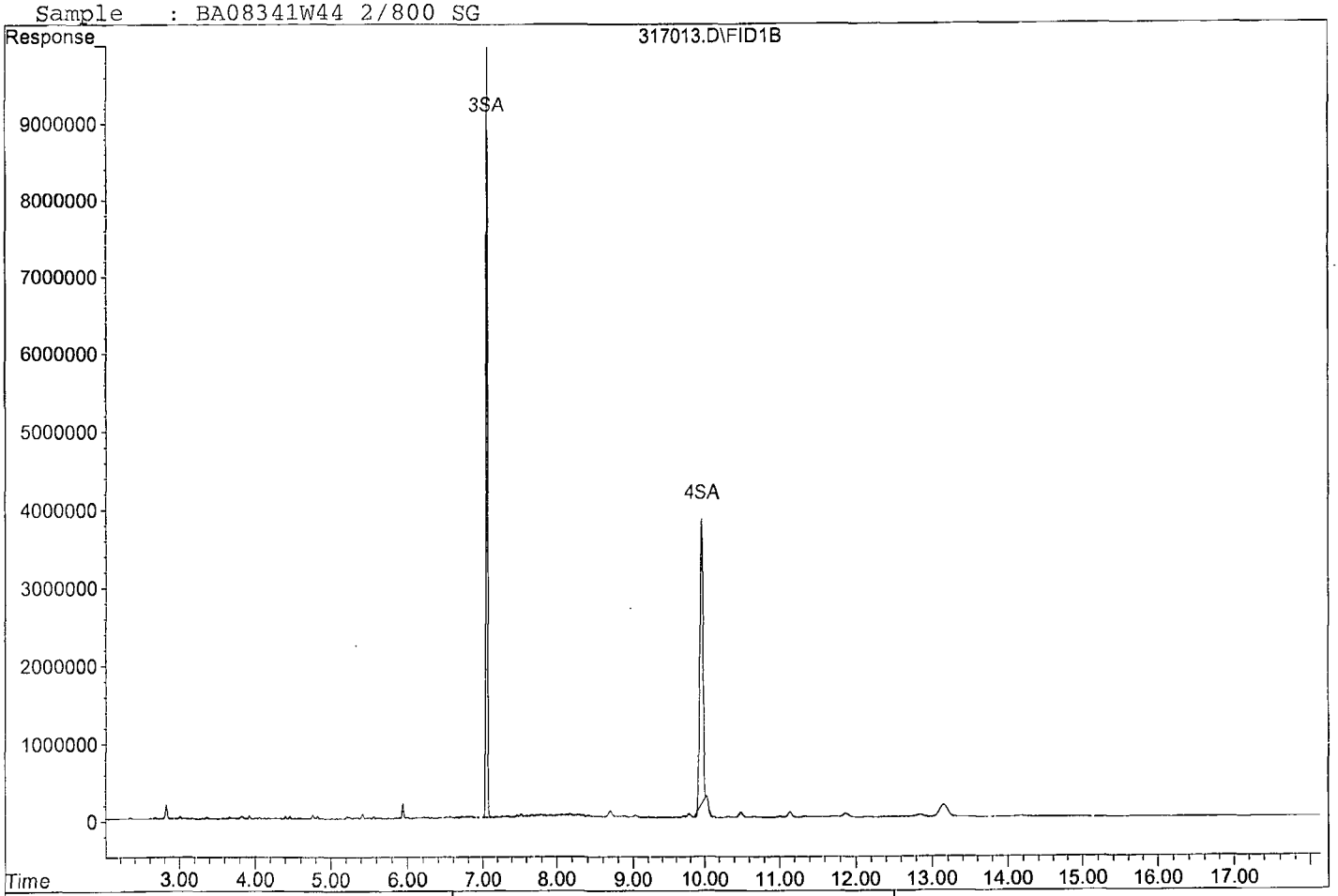
Method : G:\APOLLO\DATA\200317\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

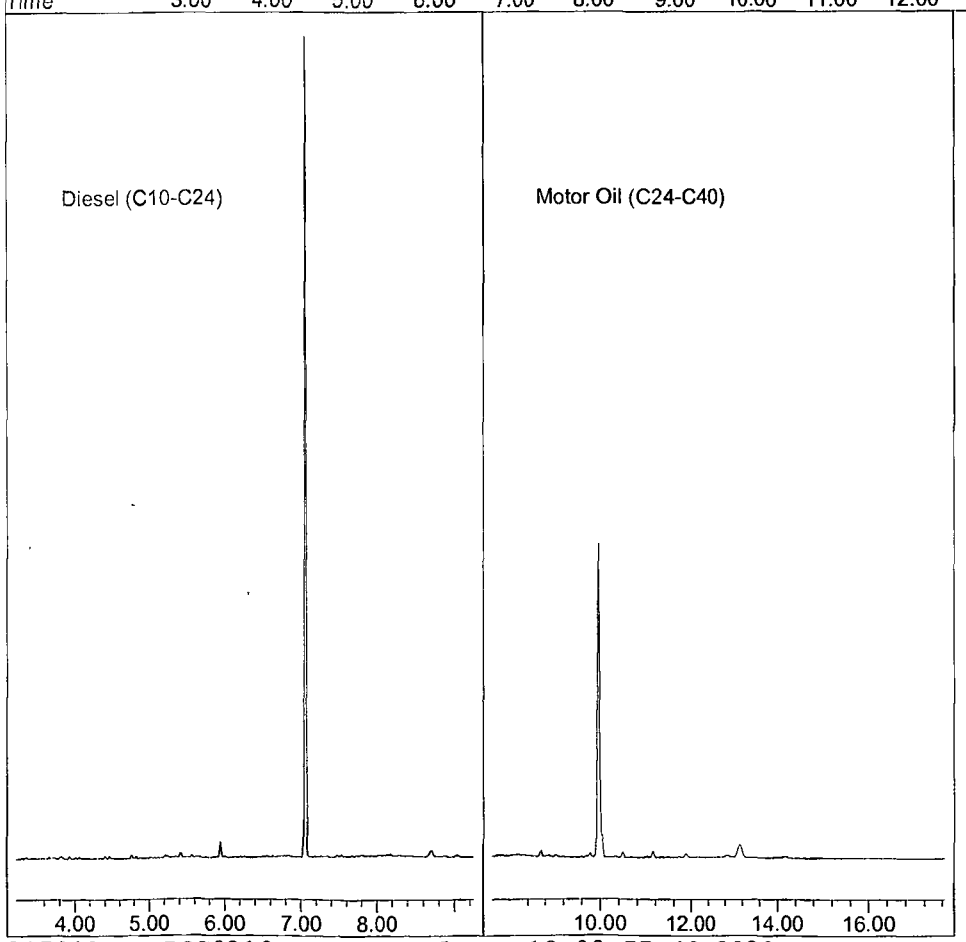
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) SC Decanoic Acid(S)	0.00	0	N.D.	ppb
Surrogate Spike 60.000	Recovery	=	0.00%	
Target Compounds				
Target Compounds				

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

Data File: G:\APOLLO\DATA\200317\317013.D
Sample : BA08341W44 2/800 SG





317013.D DOC0310.M Wed Mar 18 09:57:40 2020 Page 2

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200312\312157.D
Acq On : 3-16-20 15:16:46
Sample : 200312A BLK 2/800
Misc : water
IntFile : events.e
Quant Time: Mar 18 9:07 2020 Quant Results File: DOC0310.RES

Vial: 57
Operator: SS
Inst : Apollo
Multiplr: 2.50

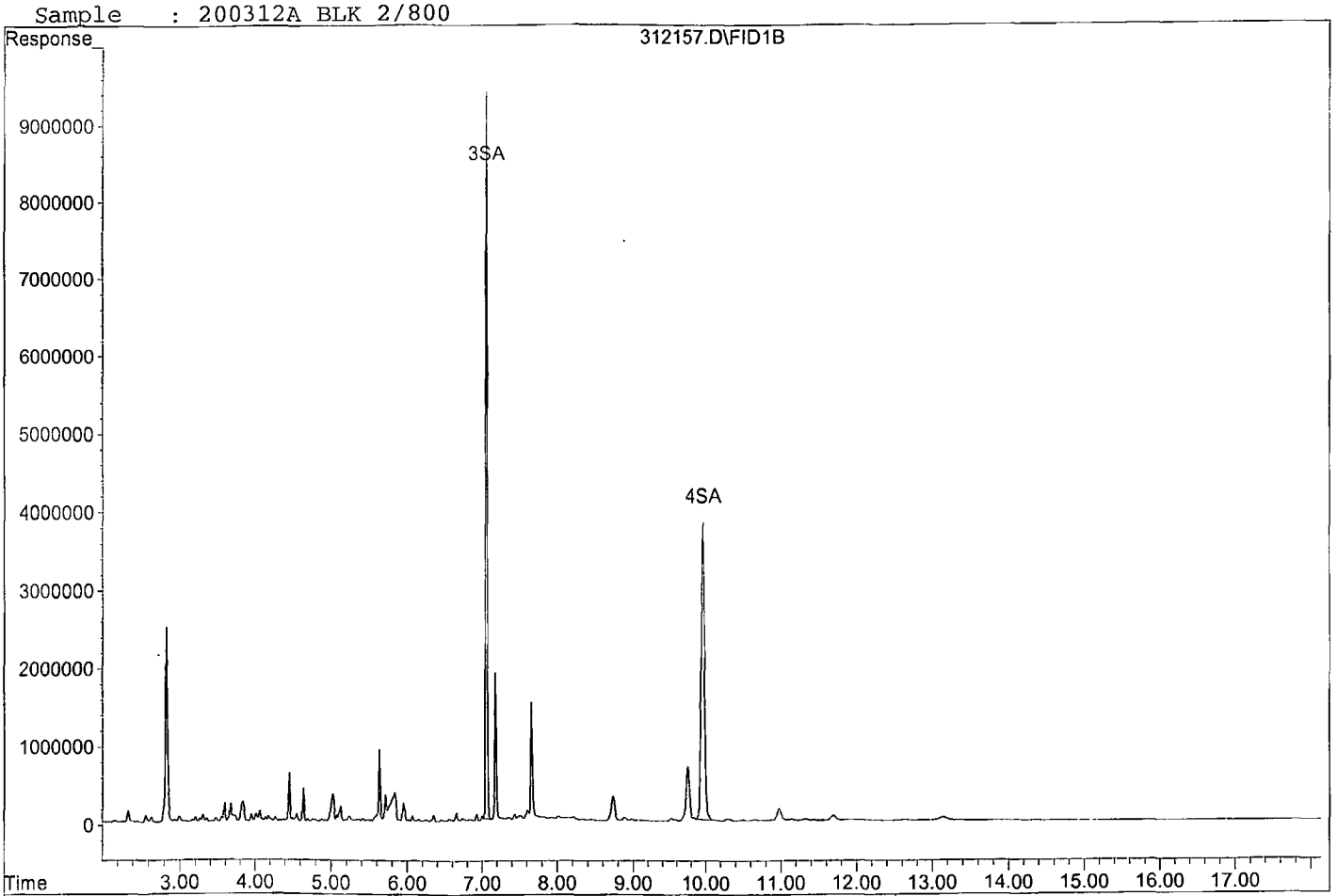
Method : G:\APOLLO\DATA\200312\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

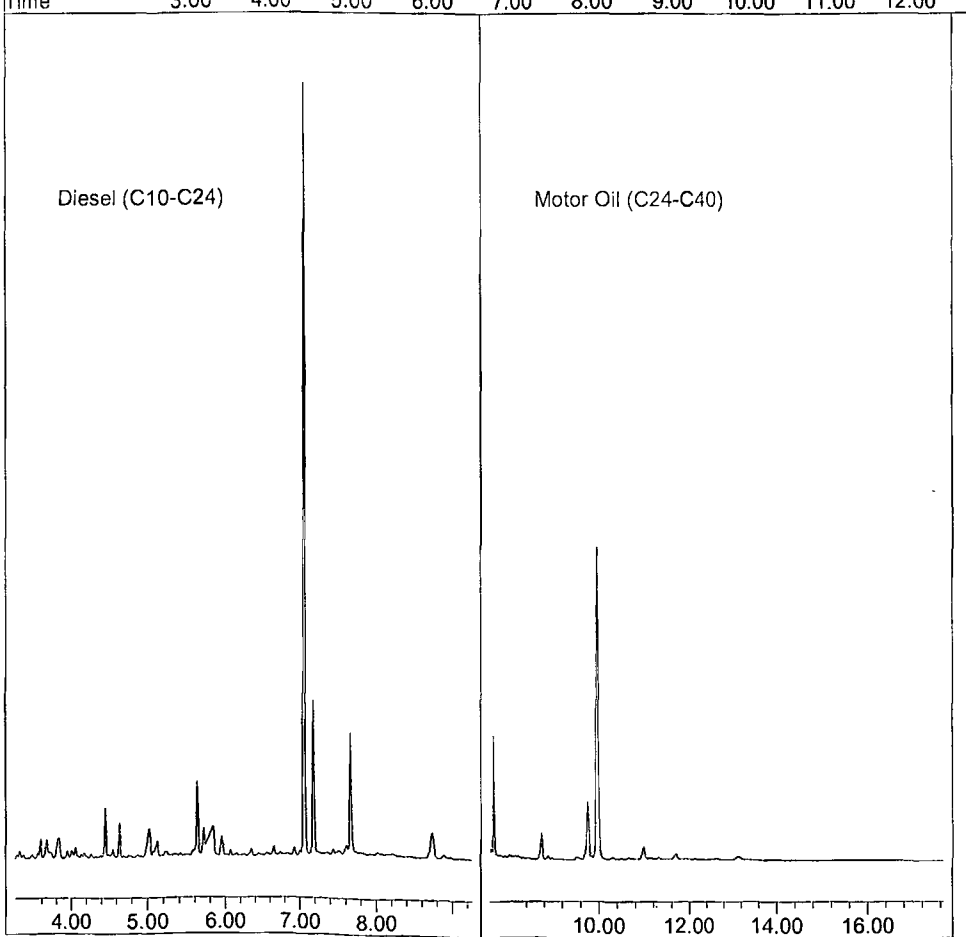
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.06	134572680	67.004	ppb
Surrogate Spike 75.000		Recovery =	89.34%	
4) SA Octacosane(S)	9.96	123085531	88.106	ppb
Surrogate Spike 75.000		Recovery =	117.47%	
Target Compounds				
Target Compounds				
1) HATM Diesel (C10-C24)	0.00	0	N.D.	ppb
2) HBTM Motor Oil (C24-C40)	0.00	0	N.D.	ppb

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

Data File: G:\APOLLO\DATA\200312\312157.D
Sample : 200312A BLK 2/800





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317014.D Vial: 14
Acq On : 3-17-20 12:15:23 Operator: SS
Sample : 200312A BLK 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Mar 18 9:51 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200317\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.06	140869355	70.140	ppb
Surrogate Spike 75.000		Recovery =	93.52%	
4) SA Octacosane(S)	9.96	129330106	92.576	ppb
Surrogate Spike 75.000		Recovery =	123.43%	
Target Compounds				
Target Compounds				
1) HATM Diesel (C10-C24)	0.00	0	N.D.	ppb
2) HBTM Motor Oil (C24-C40)	0.00	0	N.D.	ppb

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

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317014.D Vial: 14
Acq On : 3-17-20 12:15:23 Operator: SS
Sample : 200312A BLK 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Mar 18 9:53 2020 Quant Results File: DEC0317.RES

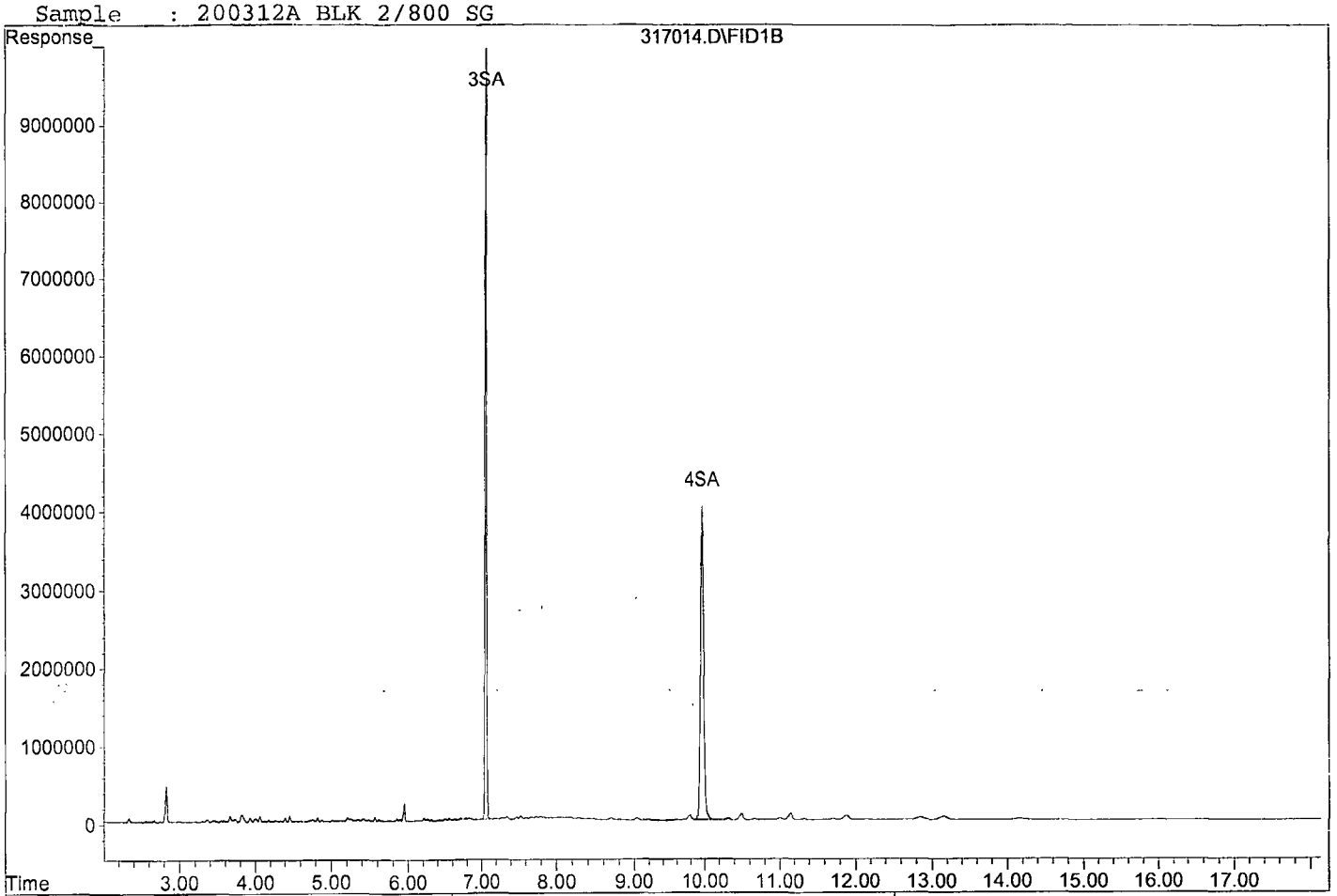
Method : G:\APOLLO\DATA\200317\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

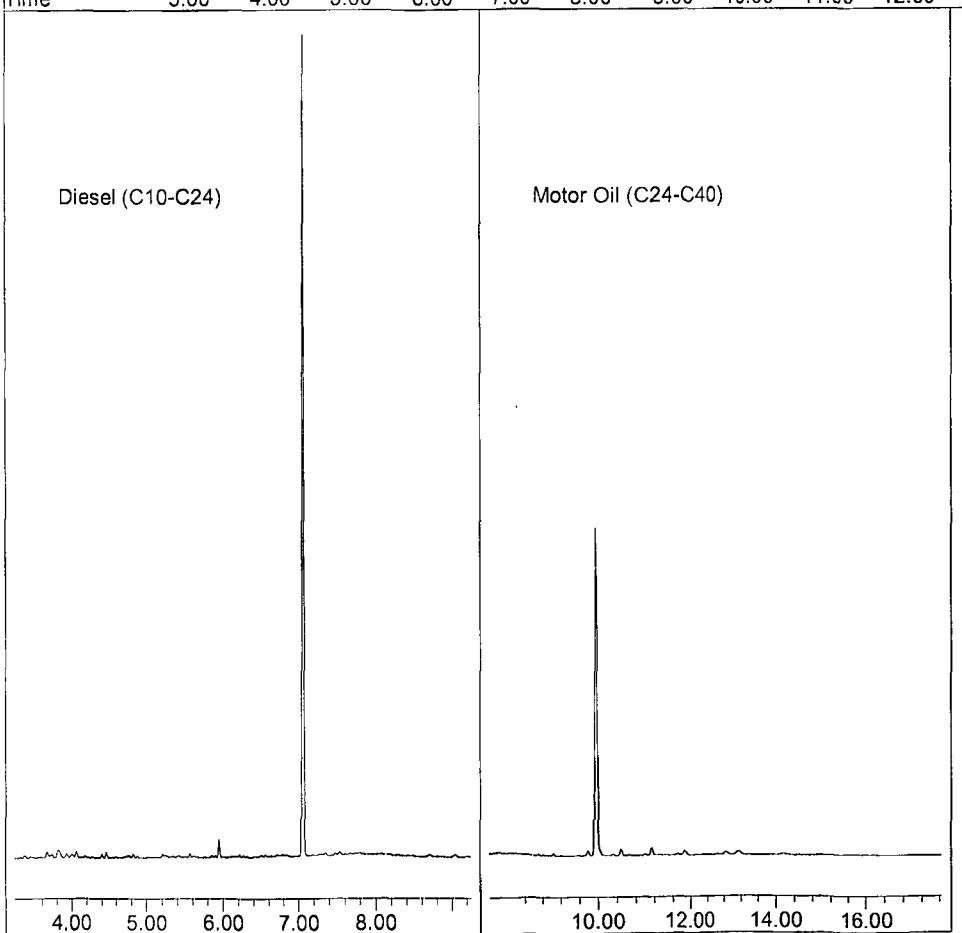
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) SC Decanoic Acid(S)	0.00	0	N.D.	ppb
Surrogate Spike 60.000	Recovery	=	0.00%	
Target Compounds				
Target Compounds				

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

Data File: G:\APOLLO\DATA\200317\317014.D
Sample : 200312A BLK 2/800 SG





317014.D DOC0310.M Wed Mar 18 09:57:42 2020

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200312\312158.D Vial: 58
Acq On : 3-16-20 15:39:10 Operator: SS
Sample : 200312A LCS-1 2/800 Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Mar 18 9:07 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200312\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

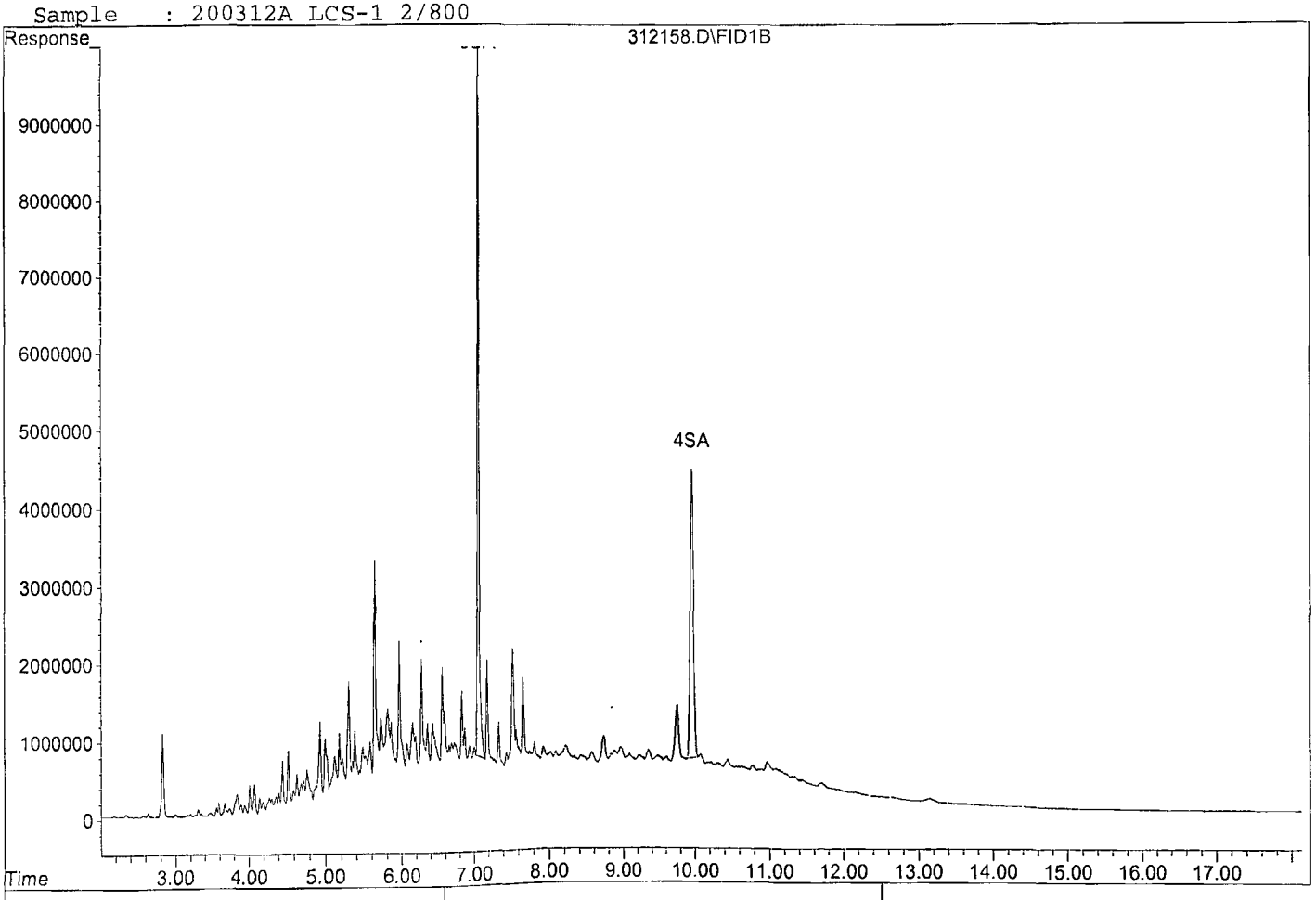
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

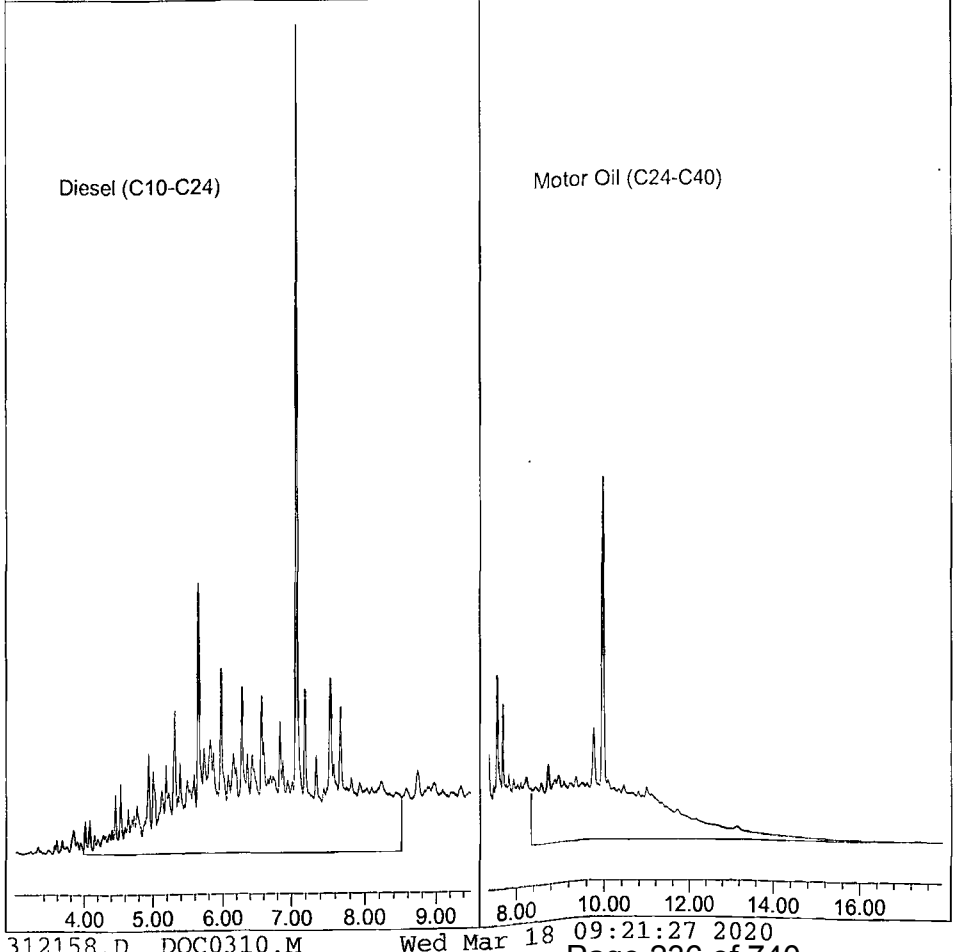
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.06	150020162	74.696	ppb
Surrogate Spike 75.000		Recovery =	99.59%	
4) SA Octacosane(S)	9.97	118079057	84.523	ppb
Surrogate Spike 75.000		Recovery =	112.70%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.24	2029486975	1322.926	ppb
2) HBTM Motor Oil (C24-C40)	12.60	1508198601	1278.659	ppb

Target Compounds

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

Data File: G:\APOLLO\DATA\200312\312158.D
Sample : 200312A LCS-1 2/800





312158.D DOC0310.M Wed Mar 18 09:21:27 2020

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317015.D Vial: 15
Acq On : 3-17-20 12:37:52 Operator: SS
Sample : 200312A LCS-1 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Mar 18 9:50 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200317\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.06	156852496	78.098	ppb
Surrogate Spike 75.000	Recovery =		104.13%	
4) SA Octacosane(S)	9.96	122904746	87.977	ppb
Surrogate Spike 75.000	Recovery =		117.30%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.24	1851044442	1206.608	ppb
2) HBTM Motor Oil (C24-C40)	12.60	1506286629	1277.038	ppb
Target Compounds				

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

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317015.D Vial: 15
Acq On : 3-17-20 12:37:52 Operator: SS
Sample : 200312A LCS-1 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Mar 18 9:54 2020 Quant Results File: DEC0317.RES

Method : G:\APOLLO\DATA\200317\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

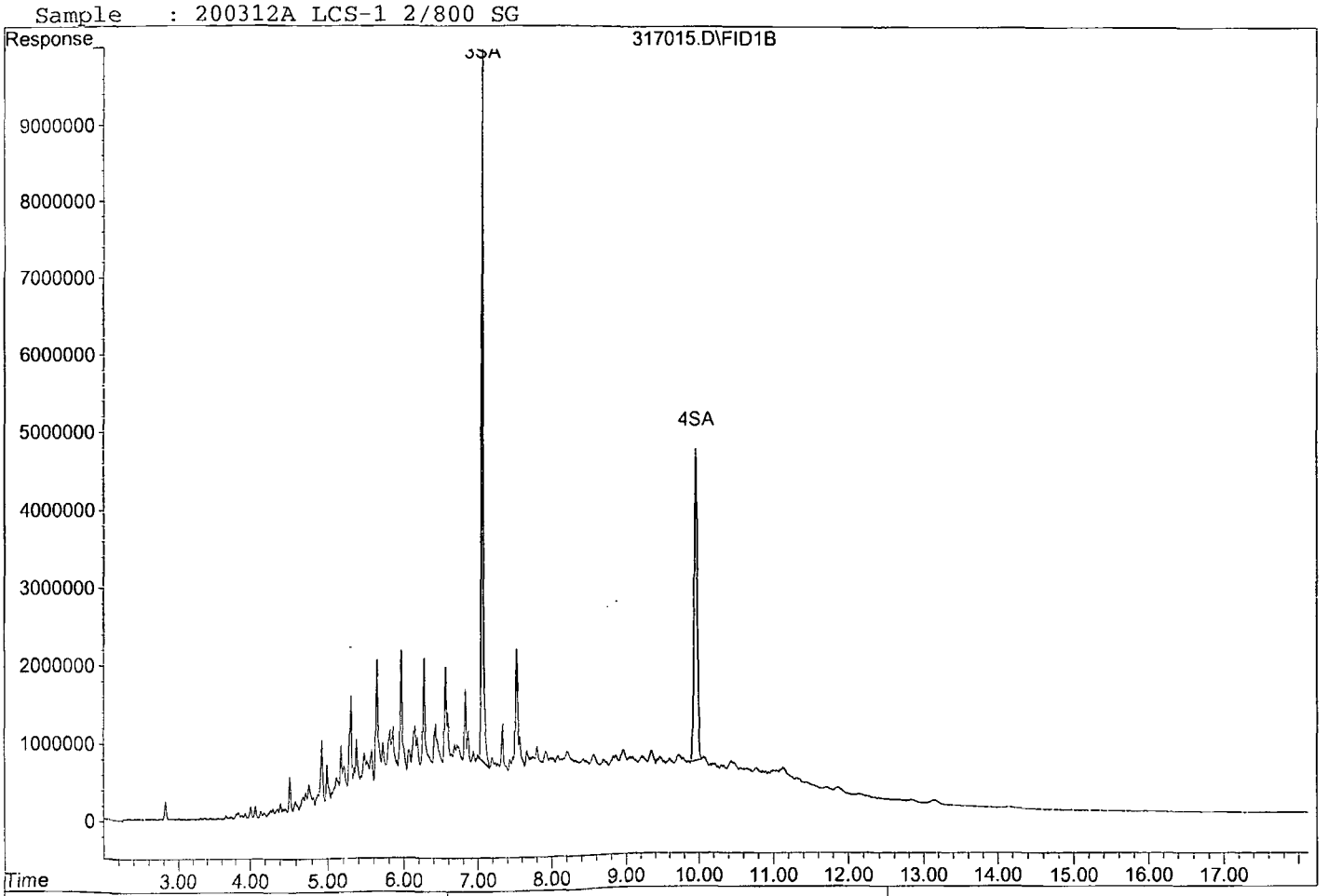
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

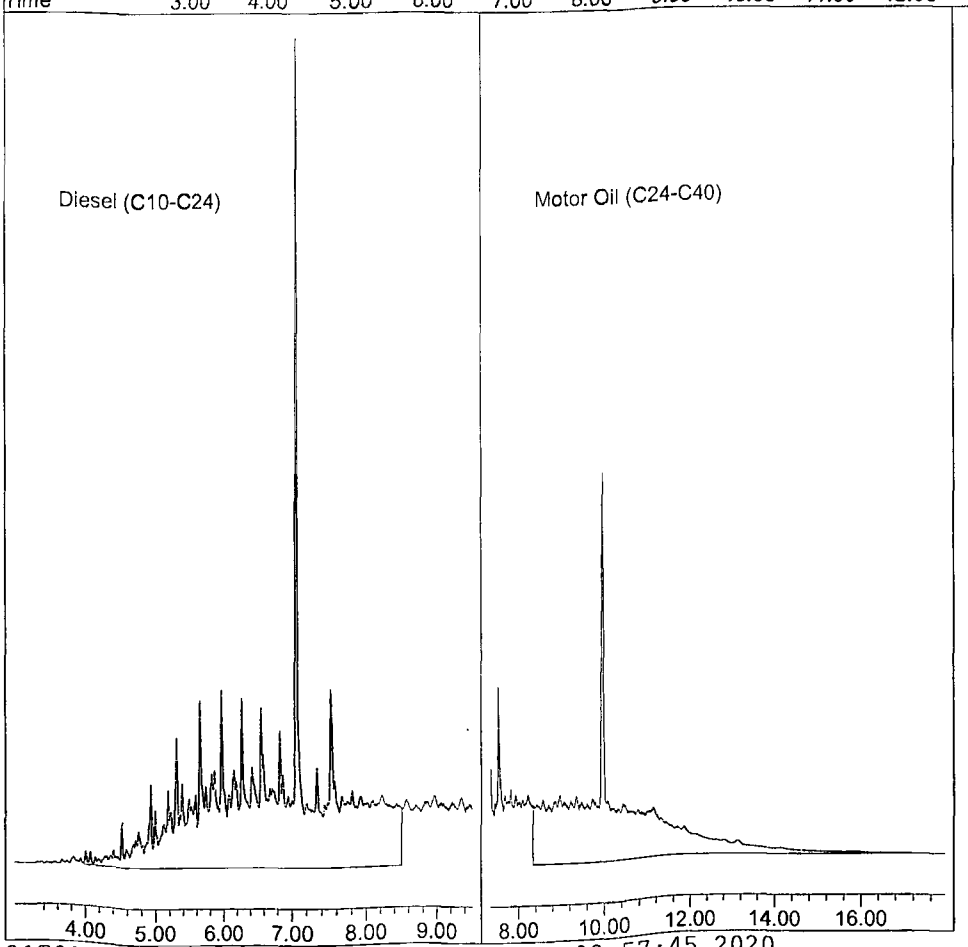
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) SC Decanoic Acid(S)	0.00	0	N.D.	ppb d
Surrogate Spike 60.000	Recovery	=	0.00%	
Target Compounds				
Target Compounds				

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

Quantitation Report

Data File: G:\APOLLO\DATA\200317\317015.D
Sample : 200312A LCS-1 2/800 SG





317015.D DOC0310.M Wed Mar 18 09:57:45 2020

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200312\312159.D Vial: 59
Acq On : 3-16-20 16:01:38 Operator: SS
Sample : BA08341W45 MS-1 2/800 Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Mar 18 9:07 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200312\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

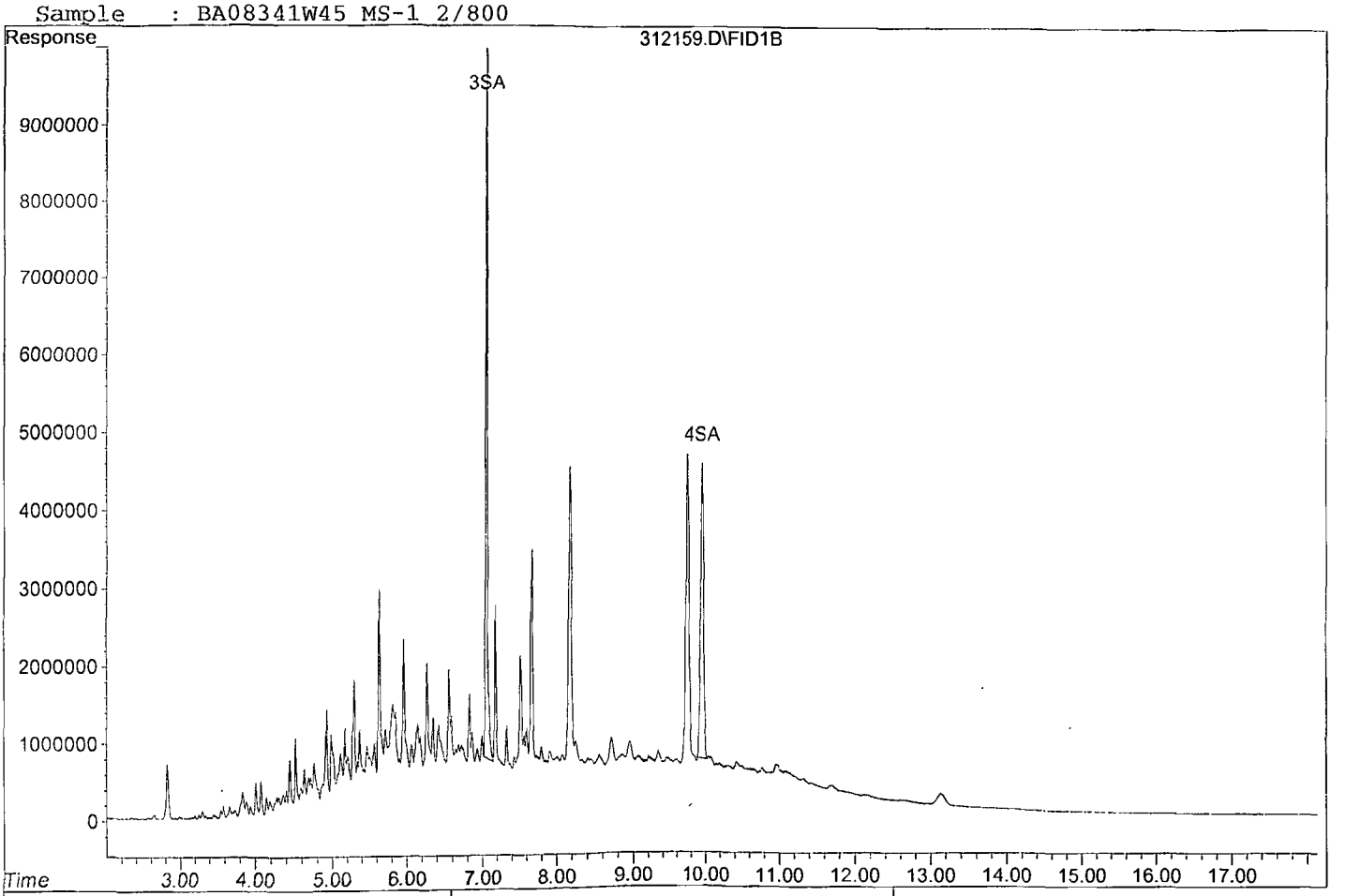
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

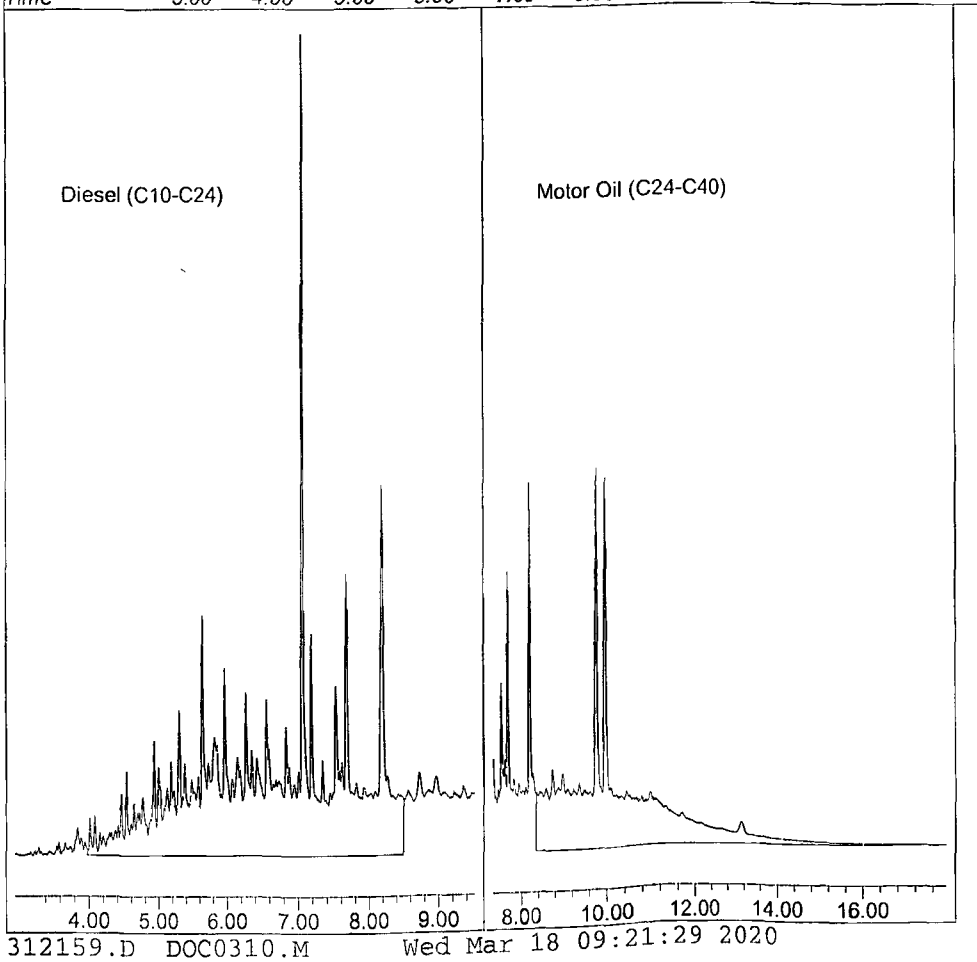
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.06	152643335	76.002	ppb
Surrogate Spike 75.000		Recovery =	101.34%	
4) SA Octacosane(S)	9.97	119938175	85.854	ppb
Surrogate Spike 75.000		Recovery =	114.47%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.24	2245215417	1463.549	ppb
2) HBTM Motor Oil (C24-C40)	12.60	1660353778	1407.656	ppb

Target Compounds

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

Data File: G:\APOLLO\DATA\200312\312159.D
Sample : BA08341W45 MS-1 2/800





312159.D DOC0310.M Wed Mar 18 09:21:29 2020

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317016.D Vial: 16
Acq On : 3-17-20 13:00:22 Operator: SS
Sample : BA08341W45 MS-1 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Mar 18 9:50 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200317\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.06	162705174	81.012 ppb
Surrogate Spike 75.000		Recovery =	108.02%
4) SA Octacosane(S)	9.96	126409276	90.486 ppb
Surrogate Spike 75.000		Recovery =	120.65%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	1910211062	1245.176 ppb
2) HBTM Motor Oil (C24-C40)	12.60	1550280223	1314.336 ppb

Target Compounds

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

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317016.D Vial: 16
Acq On : 3-17-20 13:00:22 Operator: SS
Sample : BA08341W45 MS-1 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Mar 18 9:54 2020 Quant Results File: DEC0317.RES

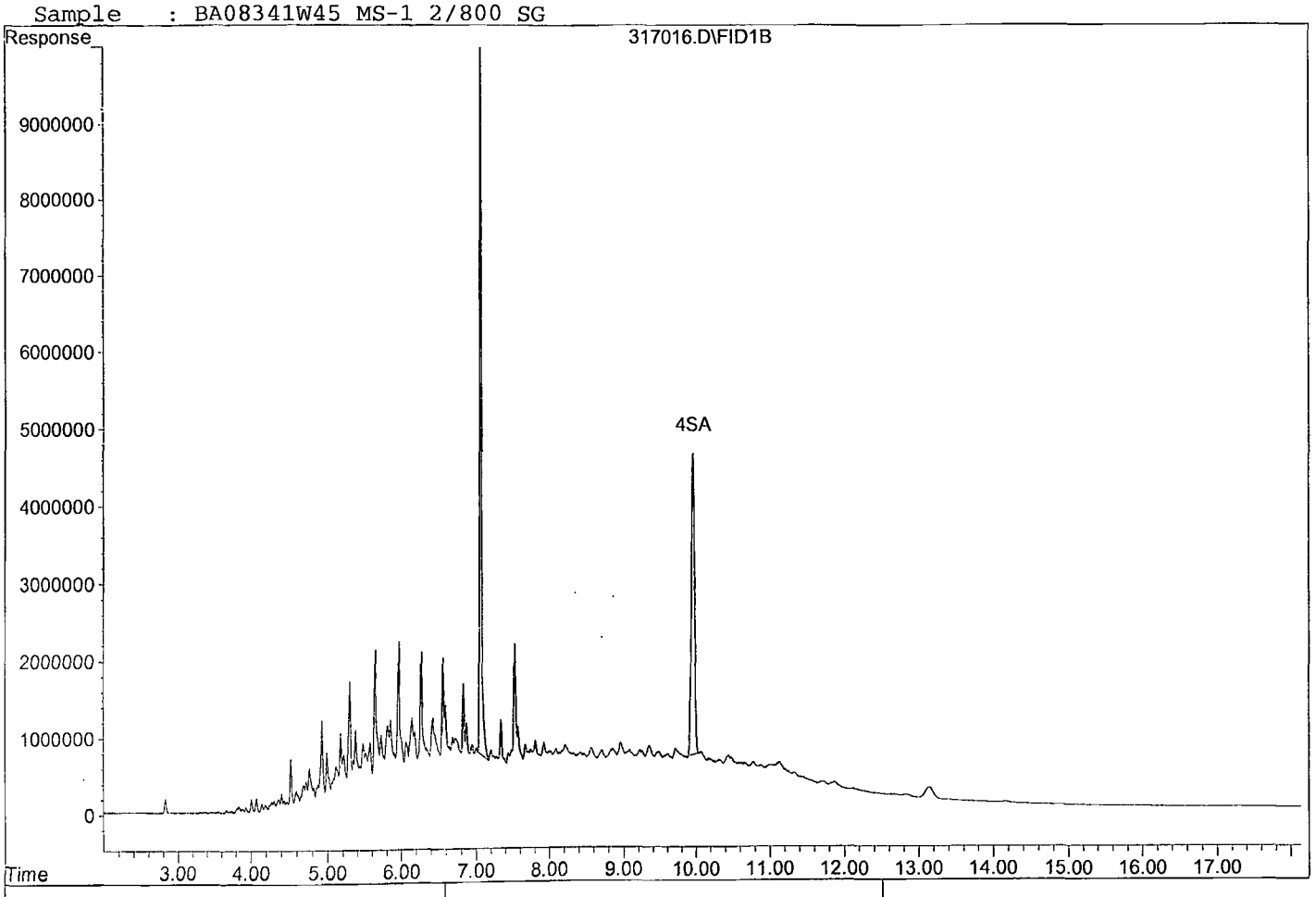
Method : G:\APOLLO\DATA\200317\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

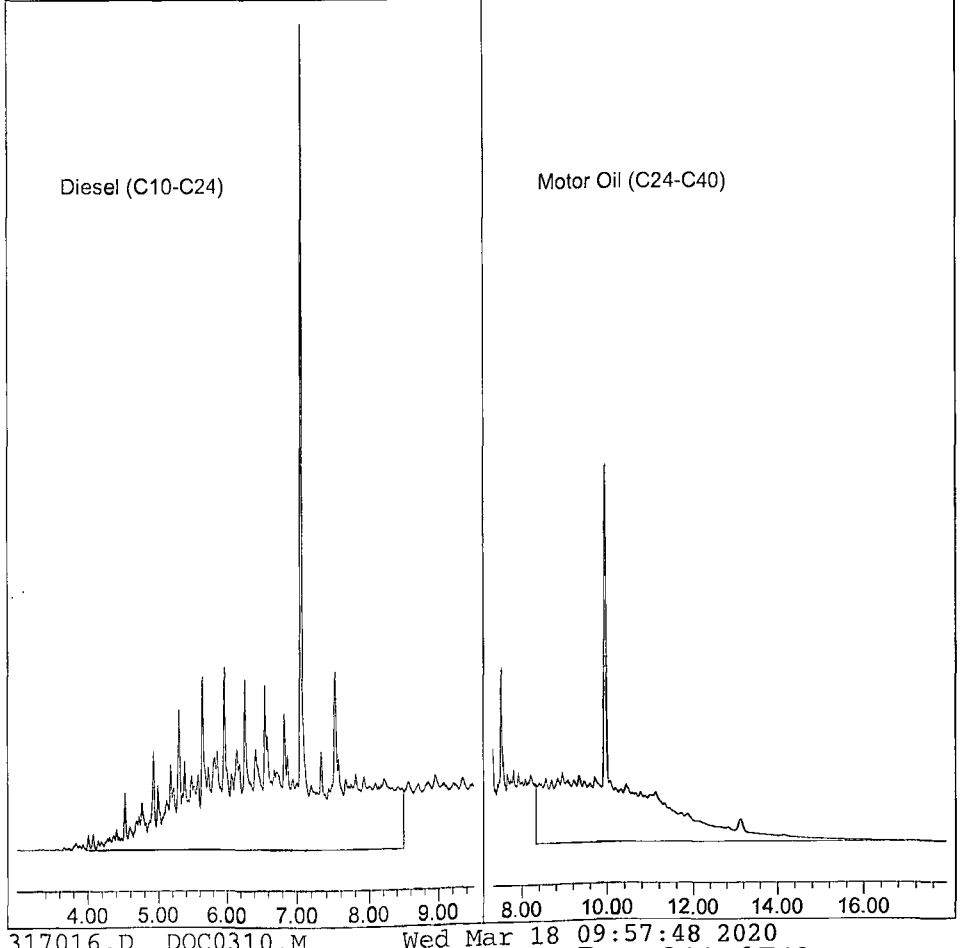
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) SC Decanoic Acid(S)	0.00	0	N.D.	ppb d
Surrogate Spike 60.000	Recovery	=	0.00%	
Target Compounds				
Target Compounds				

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

Data File: G:\APOLLO\DATA\200317\317016.D
Sample : BA08341W45 MS-1 2/800 SG





317016.D DOC0310.M Wed Mar 18 09:57:48 2020

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200312\312160.D Vial: 60
Acq On : 3-16-20 16:24:02 Operator: SS
Sample : BA08341W46 MSD-1 2/800 Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Mar 18 9:07 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200312\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

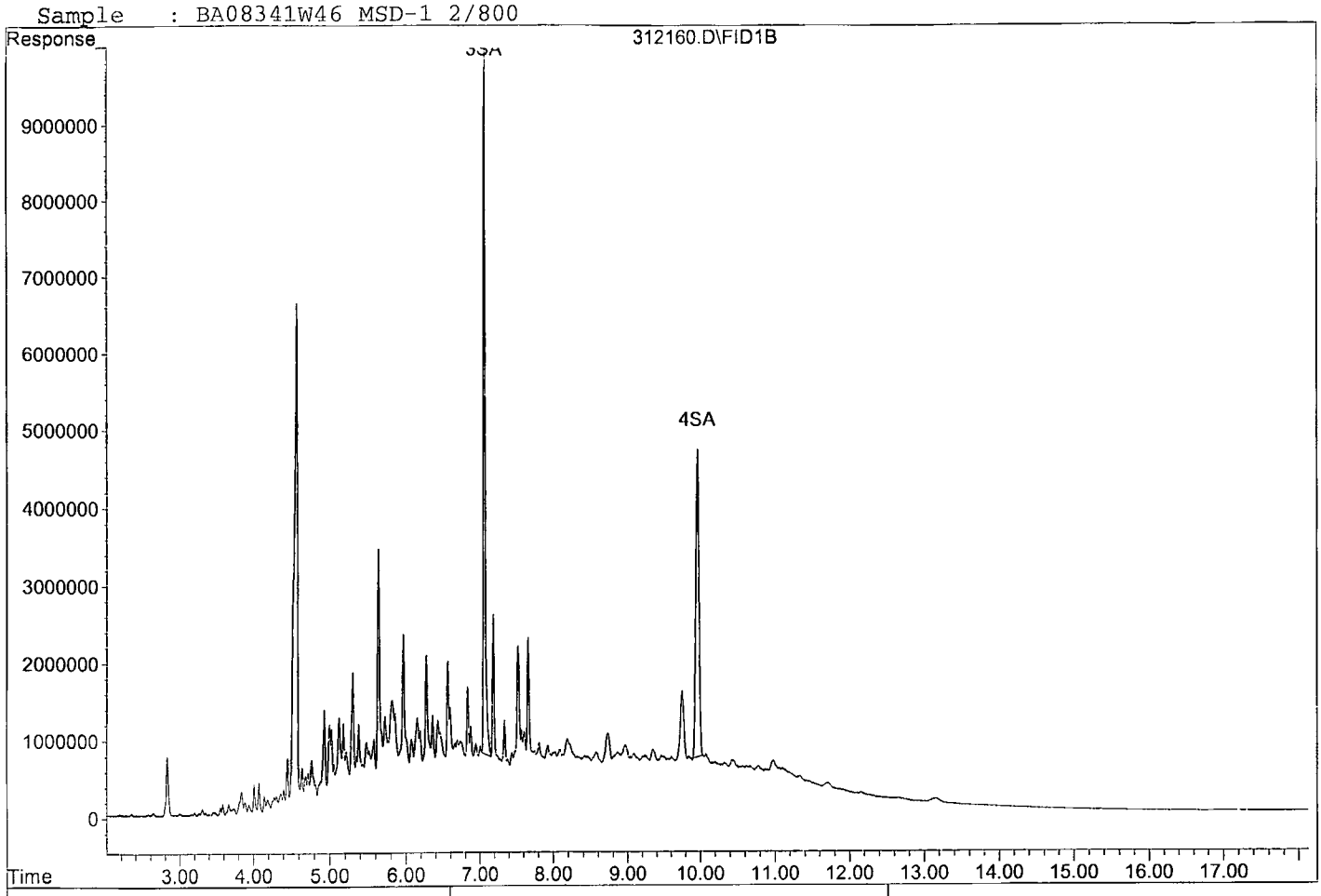
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

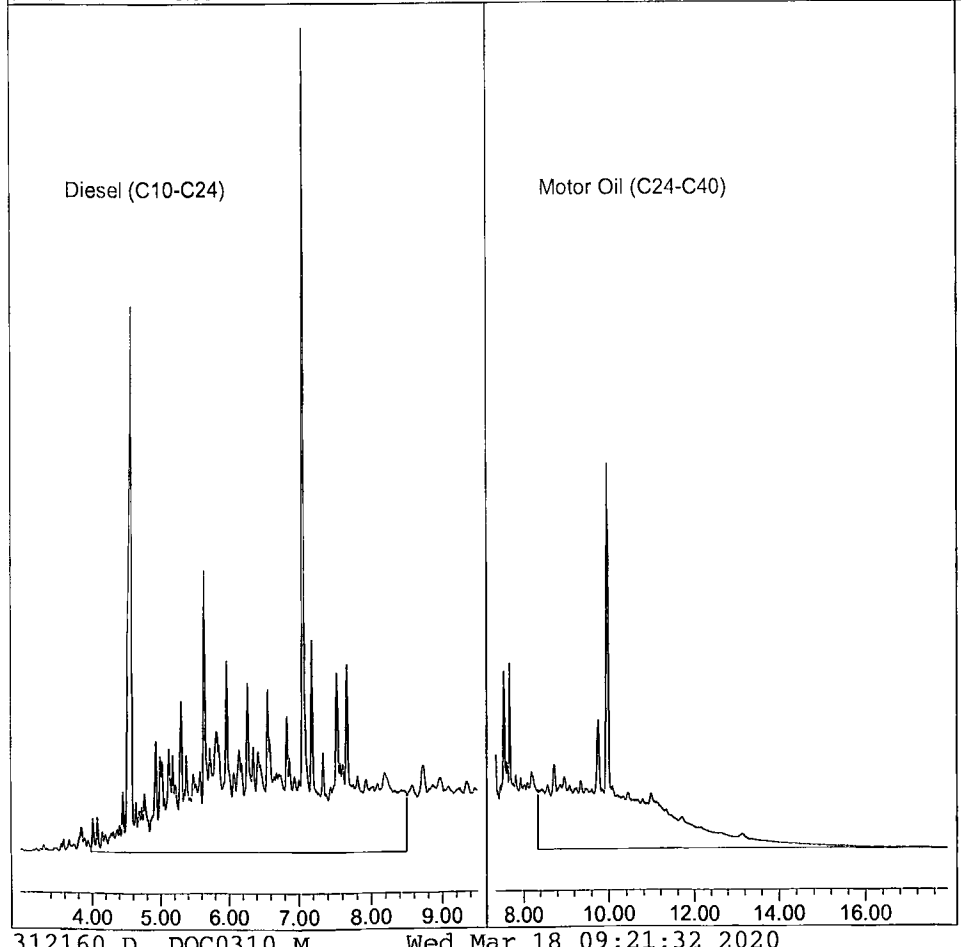
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.06	156788863	78.066	ppb
Surrogate Spike 75.000	Recovery = 104.09%			
4) SA Octacosane(S)	9.97	123231770	88.211	ppb
Surrogate Spike 75.000	Recovery = 117.61%			
Target Compounds				
1) HATM Diesel (C10-C24)	6.24	2366116582	1542.359	ppb
2) HBTM Motor Oil (C24-C40)	12.60	1592186093	1349.864	ppb

Target Compounds

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

Data File: G:\APOLLO\DATA\200312\312160.D
Sample : BA08341W46 MSD-1 2/800





312160.D DOC0310.M Wed Mar 18 09:21:32 2020

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317017.D Vial: 17
Acq On : 3-17-20 13:22:51 Operator: SS
Sample : BA08341W46 MSD-1 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Mar 18 9:50 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200317\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.06	158030904	78.684	ppb
Surrogate Spike 75.000	Recovery =		104.91%	
4) SA Octacosane(S)	9.96	123074832	88.099	ppb
Surrogate Spike 75.000	Recovery =		117.47%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.24	1841791203	1200.576	ppb
2) HBTM Motor Oil (C24-C40)	12.60	1509364393	1279.647	ppb
Target Compounds				

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

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317017.D Vial: 17
Acq On : 3-17-20 13:22:51 Operator: SS
Sample : BA08341W46 MSD-1 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Mar 18 9:54 2020 Quant Results File: DEC0317.RES

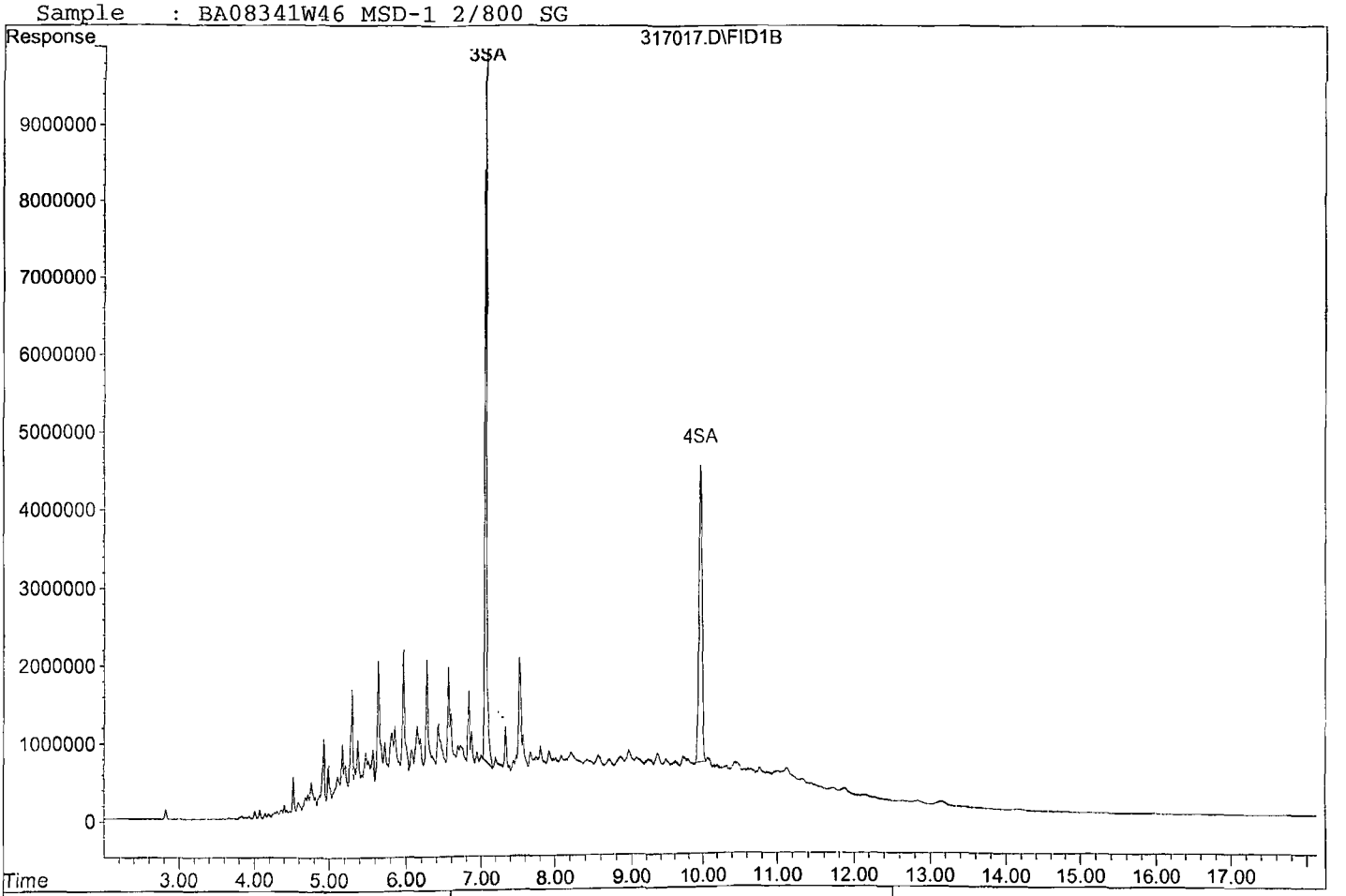
Method : G:\APOLLO\DATA\200317\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

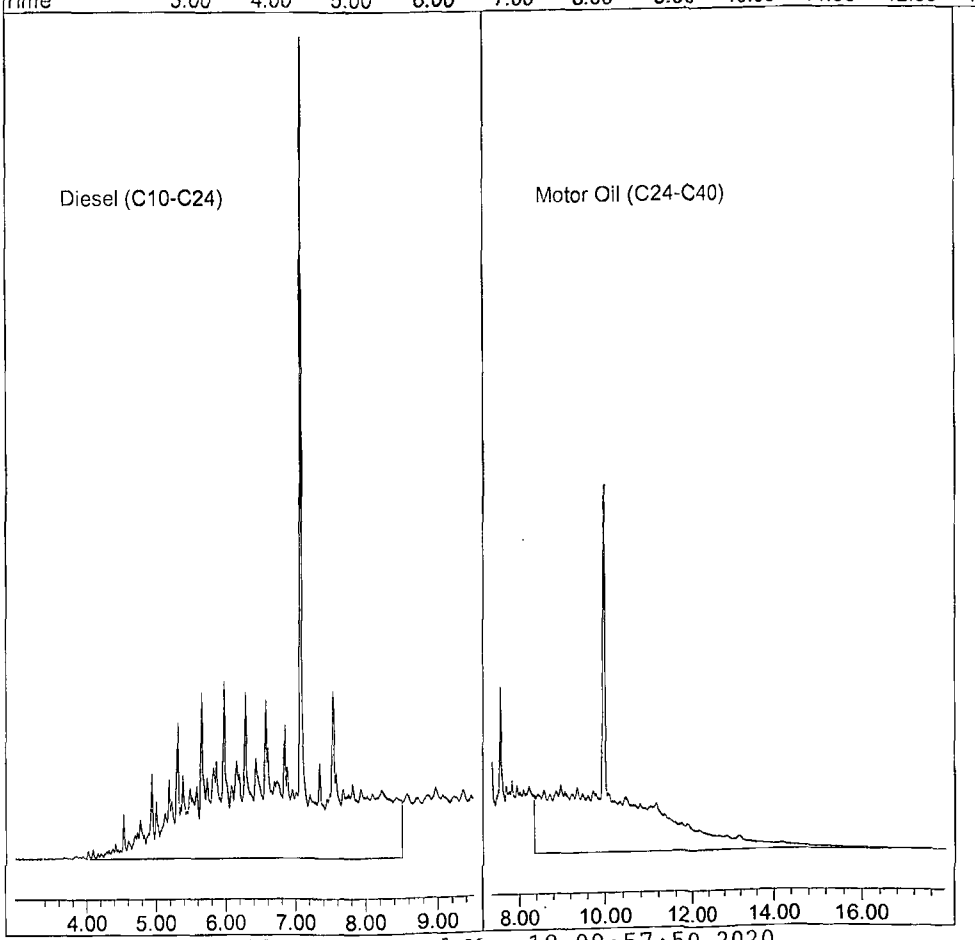
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
1) SC Decanoic Acid(S)	0.00	0	N.D.	ppb	d
Surrogate Spike 60.000	Recovery	=	0.00%		
Target Compounds					
Target Compounds					

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

Data File: G:\APOLLO\DATA\200317\317017.D
Sample : BA08341W46 MSD-1 2/800 SG





317017.D DOC0310.M Wed Mar 18 09:57:50 2020

Diesel / Motor Oil Calibration Curve

Prepared: 03/05/20

Expires: 02/13/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference to APPL Prep Date	Exp. Date	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel / Motor Oil Calibration STD	Restek	Diesel / Motor Oil - 1	2,000	Prepared 03/05/20	02/13/21	N/A	5uL	1mL	MC	10
Diesel / Motor Oil Calibration STD	Restek	Diesel / Motor Oil -2	2,000	Prepared 03/05/20	02/13/21	N/A	25uL	1mL	MC	50
Diesel / Motor Oil Calibration STD	Restek	Diesel / Motor Oil - 3	2,000	Prepared 03/05/20	02/13/21	N/A	125uL	1mL	MC	250
Diesel / Motor Oil Calibration STD	Restek	Diesel / Motor Oil - 4	2,000	Prepared 03/05/20	02/13/21	N/A	500uL	1mL	MC	1000
Diesel / Motor Oil Calibration STD	Restek	Diesel / Motor Oil - 5	2,000	Prepared 03/05/20	02/13/21	N/A	750uL	1mL	MC	1500
Diesel / Motor Oil Calibration STD	Restek	Diesel / Motor Oil - 6	2,000	Prepared 03/05/20	02/13/21	N/A	100uL	100uL	N/A	2,000

Decanoic Acid Calibration Curve

Prepared: 03/10/20 **Prepared By (Initials): SS**

Expires: 01/24/21

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Decanoic Acid STD	O2SI	Decanoic Acid-1	60	Prepared 01/24/20	01/24/21	N/A	50uL	1mL	MC	3
Decanoic Acid STD	O2SI	Decanoic Acid-2	60	Prepared 01/24/20	01/24/21	N/A	100uL	1mL	MC	6
Decanoic Acid STD	O2SI	Decanoic Acid-3	60	Prepared 01/24/20	01/24/21	N/A	400uL	1mL	MC	24
Decanoic Acid STD	O2SI	Decanoic Acid-4	60	Prepared 01/24/20	01/24/21	N/A	600uL	1mL	MC	36
Decanoic Acid STD	O2SI	Decanoic Acid-5	60	Prepared 01/24/20	01/24/21	N/A	800uL	1mL	MC	48
Decanoic Acid STD	O2SI	Decanoic Acid-6	60	Prepared 01/24/20	01/24/21	N/A	100uL	100uL	N/A	60

THC Surrogate

Prepared: 02/24/20

Expires: 02/24/21

Prepared By (Initials): SS

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
O-terphenyl / Octacosane Mix	Phenova	ALO-130161	600	**CL14921-4984**	**02/24/21**	**02/28/24**	N/A	N/A	N/A	600

Diesel Motor Oil Mix

Prepared: 02/10/20

Expires: 02/10/21

Prepared By (Initials): SS

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel Fuel #2	Restek	31258	50,000	**A0149169-49607**	**01/15/21**	**06/30/26**	3.6 mL	7.2 mL	NA	25,000
Motor Oil Composite	Restek	31464	50,000	**A0153577-49614**	**01/15/21**	**11/30/26**	3.6 mL			25,000

Decanoic Acid Spike

Prepared: 03/17/20

Expires: 03/17/21

Prepared By (Initials): SS

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Decanoic Acid Spike	O2SI	011729-01-05-5PAK	1,000	**371298-40661**	**12/11/20**	**03/31/21**	N/A	N/A	N/A	1,000

Decanoic Acid Spike

Prepared: 01/24/20

Expires: 01/24/21

Prepared By (Initials): SS

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Decanoic Acid Spike	O2SI	011729-01-05-5PAK	1,000	**371298-40661**	**12/11/20**	**03/31/21**	N/A	N/A	N/A	1,000

Organic Extraction Worksheet

Method	Continuous Liq/Liq TPH-Diesel/MO 3520C	Extraction Set	200312A	Extraction Method	LIQ005	Units	mL

Spiked ID 1	Diesel Motor Oil Mix 2-10-20 2-10-21		Surrogate ID 1	THC Surrogate 2-24-20 2-24-21	
Spiked ID 2	Decanoic 1000ug/mL Acid Solution 1-24-20 1-24-21		Surrogate ID 2		
Spiked ID 3	Decanoic 1000ug/mL Acid Solution 3-17-20 3-17-20		Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	03/12/20 15:00	
Spiked ID 8			Ext. End Time:	03/13/20 9:00	

GC Requires Extract By:				
pH1	2	03/12/20 12:45	Water Bath Temp 1 °C	39/38.5 °C
pH2	2	03/12/20 14:10	Water Bath Temp 2 °C	35/38.5
pH3			Water Bath Temp 3 °C	35/38.4 °C

Spiked By: DL **Date** 03/12/20 **Witnessed By:** CFM **Date** 03/12/20

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	200312A Blk		0.050	2	0.100	1	800	2	2	03/12/20 12:55	*
						equip	E-HP30 E-WB1				
2	200312A LCS-1		0.040,0.050	1,2	0.100	1	800	2	2	03/12/20 12:55	*
						equip	E-HP17 E-WB2				
3	BA08341 MS-1	BA08341W45	0.040,0.050	1,2	0.100	1	800	2	2	03/12/20 14:18	91638 *
						equip	E-HP12 E-WB2				
4	BA08341 MSD-1	BA08341W46	0.040,0.050	1,2	0.100	1	800	2	2	03/12/20 14:18	91638 *
						equip	E-HP14 E-WB2				
5	BA08341	BA08341W44	0.050	2	0.100	1	800	2	2	03/12/20 14:18	91638 *
						equip	E-HP13 E-WB3				
6	BA08370	BA08370W20	0.050	3	0.100	1	800	2	2	03/12/20 12:55	91653 *
						equip	E-HP16 E-WB1				
7	BA08371	BA08371W13	0.050	3	0.100	1	800	2	2	03/12/20 12:55	91653 *
						equip	E-HP15 E-WB2				

Solvent and Lot#	
1+1 HCL	2-15-20
PH Strips	HC998032
Dicholormethane (DCM)	59239
Filter Paper	400171
Sodium Sulfate (Na2SO4)	2019020631
Silica Gel (*)	050627t

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	SS
Date	3/14/20
Time	8:45
Refrigerator	HOBART

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL
Concentration	DL

Modified	03/17/20 10:54:55 AM

Reviewed By: KY **Date** 03/16/20

Injection Log

Directory: G:\APOLLO\DATA\200310\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	3	310003.D	1	Diesel Motor Oil-1 3/5/20	water	3-10-20 9:37:22
2	4	310004.D	1	Diesel Motor Oil-2 3/5/20	water	3-10-20 9:59:49
3	5	310005.D	1	Diesel Motor Oil-3 3/5/20	water	3-10-20 10:22:19
4	6	310006.D	1	Diesel Motor Oil-4 3/5/20	water	3-10-20 10:44:50
5	7	310007.D	1	Diesel Motor Oil-5 3/5/20	water	3-10-20 11:07:20
6	8	310008.D	1	Diesel Motor Oil-6 3/5/20	water	3-10-20 11:29:51
7	9	310009.D	1	Diesel Motor Oil-SS 3/5/20	water	3-10-20 11:52:24
8	56	312156.D	1	Diesel Motor Oil-CCV 3/5/20	water	3-16-20 14:54:17
9	57	312157.D	2.5	200312A BLK 2/800	water	3-16-20 15:16:46
10	58	312158.D	2.5	200312A LCS-1 2/800	water	3-16-20 15:39:10
11	59	312159.D	2.5	BA08341W45 MS-1 2/800	water	3-16-20 16:01:38
12	60	312160.D	2.5	BA08341W46 MSD-1 2/800	water	3-16-20 16:24:02
13	61	312161.D	2.5	BA08341W44 2/800	water	3-16-20 16:46:31
14	64	312164.D	1	Diesel Motor Oil-CCV 3/5/20	water	3-16-20 17:53:53
15	2	317002.D	1	Decanoic Acid-1 3/10/20	water	3-17-20 8:14:08
16	3	317003.D	1	Decanoic Acid-2 3/10/20	water	3-17-20 8:36:27
17	4	317004.D	1	Decanoic Acid-3 3/10/20	water	3-17-20 8:58:53
18	5	317005.D	1	Decanoic Acid-4 3/10/20	water	3-17-20 9:21:15
19	6	317006.D	1	Decanoic Acid-5 3/10/20	water	3-17-20 9:43:41
20	7	317007.D	1	Decanoic Acid-6 3/10/20	water	3-17-20 10:06:06
21	8	317008.D	1	Diesel Motor Oil-CCV 3/17/20	water	3-17-20 10:43:41
22	10	317010.D	1	Decanoic Acid-CCV 3/10/20	water	3-17-20 11:29:56
23	13	317013.D	0.4	BA08341W44 2/800 SG	water	3-17-20 11:52:49
24	14	317014.D	0.4	200312A BLK 2/800 SG	water	3-17-20 12:15:23
25	15	317015.D	0.4	200312A LCS-1 2/800 SG	water	3-17-20 12:37:52
26	16	317016.D	0.4	BA08341W45 MS-1 2/800 SG	water	3-17-20 13:00:22
27	17	317017.D	0.4	BA08341W46 MSD-1 2/800 SG	water	3-17-20 13:22:51
28	20	317020.D	1	Decanoic Acid-CCV 3/10/20	water	3-17-20 14:30:28
29	21	317021.D	1	Diesel Motor Oil-CCV 3/17/20	water	3-17-20 14:53:00

ORGANICS
Calibration Data

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/19/19
Matrix: Instrument: Yoda
Initials:

		Compound	1219Y004.D 4	1219Y005.D 5	1219Y006.D 10	1219Y007.D 20	1219Y008.D 40	1219Y003.D 50	1219Y009.D 60	1219Y010.D 80	1219Y011.D 91		Avg	%RSD	Type	r^2	Q	MRF
1	I	1,4-dichlorobenzene-D4(IS)	ISTD															
2		1,4-Dioxane	0.5052	0.5856	0.6410	0.5627	0.5805	0.5963	0.6744	0.6671	0.6074		0.60	8.8				
3	TM	n-Nitrosodimethylamine	1.092	1.156	1.069	0.9475	1.038	1.123	1.210	1.250	1.165		1.1	8.3	TM			
4	TM	Pyridine	2.280	2.408	2.771	2.400	2.420	2.500	2.834	2.907	2.763		2.6	8.9	TM			
5	S	2-Fluorophenol (S)	1.525	1.320	1.432	1.300	1.319	1.484	1.561	1.672	1.583		1.5	9.1	S			
6	S	Phenol-D6 (S)	1.895	1.660	1.756	1.615	1.647	1.920	2.000	2.210	2.108		1.9	11	S			
7	*TM	Phenol	1.874	1.910	2.112	1.928	2.040	2.339	2.470	2.610	2.555		2.2	13	*TM			0.800
8	TM	Aniline	1.334	1.308	1.389	1.427	1.419	1.463	1.661	1.551	1.396		1.4	7.6	TM			
9	TM	Bis (2-chloroethyl) ether	0.9219	0.9198	1.036	0.9251	0.9557	1.056	1.119	1.151	1.107		1.0	9.1	TM			0.700
10	TM	2-Chlorophenol	1.386	1.438	1.555	1.396	1.440	1.608	1.703	1.757	1.686		1.6	9.2	TM			0.800
11	TM	1,3-DCB	1.540	1.631	1.750	1.502	1.582	1.715	1.840	1.921	1.849		1.7	8.7	TM			
12	*TM	1,4-DCB	1.544	1.652	1.762	1.558	1.630	1.757	1.903	1.978	1.905		1.7	9.1	*TM			
13	TM	Benzyl alcohol	0.7777	0.8093	0.9119	0.8082	0.8456	0.9912	1.002	1.065	1.018		0.91	12	TM			
14	TM	1,2-DCB	1.448	1.499	1.651	1.429	1.487	1.659	1.774	1.842	1.807		1.6	10.0	TM			
15	TM	2-Methylphenol	1.219	1.234	1.309	1.185	1.252	1.417	1.495	1.568	1.511		1.4	11	TM			0.700
16	TM	Bis (2-chloroisopropyl) ether	1.212	1.245	1.332	1.184	1.244	1.395	1.475	1.549	1.485		1.3	10.0	TM			
17	TM	Acetophenone	2.010	2.013	2.231	2.067	2.158	2.442	2.558	2.698	2.600		2.3	12	TM			0.010
18	TM	3&4-Methylphenol	1.542	1.554	1.716	1.541	1.629	1.904	1.973	2.123	2.050		1.8	13	TM			0.600
19	**TM	n-Nitrosodi-n-propylamine	1.263	1.297	1.414	1.295	1.361	1.591	1.666	1.776	1.701		1.5	13	**TM			0.500
20	TM	Hexachloroethane	0.6270	0.6828	0.7293	0.6605	0.6729	0.7406	0.7887	0.8348	0.8027		0.73	9.8	TM			0.300
21	I	Napthalene-D8(IS)	ISTD															
22	S	Nitrobenzene-D5(S)	0.5318	0.4774	0.4864	0.4745	0.4719	0.4933	0.5032	0.5240	0.5147		0.50	4.5	S			
23	TM	Nitrobenzene	0.4642	0.5003	0.5125	0.4754	0.5054	0.5308	0.5427	0.5516	0.5571		0.52	6.4	TM			0.200
24	TM	Isophorone	0.7546	0.7674	0.8060	0.7539	0.7961	0.8472	0.8485	0.8787	0.8684		0.81	6.0	TM			0.400
25	*TM	2-Nitrophenol	0.1803	0.1912	0.2042	0.1970	0.2076	0.2181	0.2244	0.2306	0.2309		0.21	8.6	*TM			0.100
26	TM	2,4-Dimethylphenol	0.3048	0.3153	0.3305	0.3095	0.3230	0.3472	0.3501	0.3640	0.3704		0.33	7.1	TM			0.200
27	TML	Benzoic acid	0.0946	0.1138	0.1879	0.2336	0.2825	0.2721	0.2855	0.3030	0.3030		0.23	35	TML	0.998		
28	TM	Bis (2-chloroethoxy) methane	0.3781	0.3943	0.4143	0.3907	0.4119	0.4361	0.4454	0.4624	0.4662		0.42	7.6	TM			0.300
29	*TM	2,4-Dichlorophenol	0.2693	0.2989	0.3168	0.3008	0.3208	0.3413	0.3480	0.3629	0.3610		0.33	8.5	*TM			0.200
30	TM	1,2,4-Trichlorobenzene	0.3149	0.3503	0.3569	0.3288	0.3583	0.3733	0.3895	0.4028	0.4041		0.36	8.6	TM			
31	TM	3,4-Dimethylphenol	0.5088	0.4953	0.5614	0.5223	0.5395	0.5890	0.5844	0.6060	0.6089		0.56	7.6	TM			
32	TM	Naphthalene	0.9866	1.025	1.068	1.000	1.055	1.118	1.145	1.187	1.210		1.1	7.4	TM			0.700
33	TM	4-Chloroaniline	0.4130	0.4102	0.4466	0.4160	0.4341	0.4535	0.4589	0.4596	0.4467		0.44	4.6	TM			0.010
34	TM	2,6-Dichlorophenol	0.2696	0.2967	0.3074	0.2937	0.3088	0.3382	0.3396	0.3625	0.3634		0.32	10	TM			
35	TM	Hexachloropropene	0.2671	0.2881	0.2978	0.2893	0.3112	0.3320	0.3401	0.3527	0.3589		0.32	10	TM			

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/19/19
Matrix: Instrument: Yoda Initials:

		Compound	4	5	10	20	40	50	60	80	91		Avg	%RSD	Type		Q	
36	*TM	Hexachlorobutadiene	0.2198	0.2305	0.2457	0.2253	0.2401	0.2518	0.2615	0.2734	0.2764		0.25	8.3	*TM			0.010
37	TM	Caprolactum	0.1360	0.1418	0.1459	0.1372	0.1421	0.1515	0.1509	0.1569	0.1569		0.15	5.4	TM			0.010
38	*TM	4-Chloro-3-methylphenol	0.3433	0.3492	0.3767	0.3527	0.3826	0.4117	0.4148	0.4325	0.4262		0.39	8.9	*TM			0.200
39	TM	2-Methylnaphthalene	0.6528	0.6825	0.7189	0.6672	0.7074	0.7659	0.7721	0.8038	0.8214		0.73	8.3	TM			0.400
40	TM	1-Methylnaphthalene	0.6774	0.7258	0.7430	0.6772	0.7340	0.7929	0.8094	0.8459	0.8492		0.76	8.6	TM			
41	I	Acenaphthene-D10(IS)	ISTD															
42	**TML	Hexachlorocyclopentadiene	0.1728	0.2331	0.2484	0.3602	0.4060	0.4718	0.4812	0.5045	0.4482		0.37	33	**TML	0.991		0.050
43	TM	1,2,4,5-Tetrachlorobenzene	0.5593	0.5899	0.5937	0.5643	0.6173	0.6743	0.6677	0.7241	0.7440		0.64	11	TM			0.010
44	*TM	2,4,6-Trichlorophenol	0.3671	0.3707	0.4007	0.3830	0.4055	0.4458	0.4421	0.4627	0.4769		0.42	9.8	*TM			0.200
45	TM	2,4,5-Trichlorophenol	0.4207	0.4236	0.4252	0.4143	0.4421	0.4723	0.4724	0.4964	0.5050		0.45	7.7	TM			0.200
46	S	2-Fluorobiphenyl(S)	1.577	1.423	1.350	1.366	1.373	1.489	1.494	1.591	1.634		1.5	7.2	S			
47	TM	1,1'-Biphenyl	1.395	1.444	1.455	1.418	1.494	1.625	1.612	1.736	1.784		1.6	9.2	TM			0.010
48	TM	2-Chloronaphthalene	1.127	1.156	1.195	1.149	1.201	1.307	1.296	1.382	1.417		1.2	8.5	TM			0.800
49	TM	2-Nitroaniline	0.4167	0.4376	0.4565	0.4486	0.4606	0.5021	0.4976	0.5202	0.5237		0.47	8.1	TM			0.010
50	TM	Dimethyl phthalate	1.422	1.455	1.461	1.410	1.474	1.591	1.590	1.671	1.690		1.5	7.0	TM			0.010
51	TM	2,6-DNT	0.2885	0.2872	0.3086	0.3140	0.3290	0.3597	0.3549	0.3784	0.3815		0.33	11	TM			0.200
52	TM	Acenaphthylene	1.710	1.793	1.808	1.775	1.875	2.023	2.023	2.114	2.167		1.9	8.5	TM			0.900
53	TM	3-Nitroaniline	0.3591	0.3544	0.3786	0.3695	0.3887	0.4218	0.4188	0.4298	0.4424		0.40	8.3	TM			0.010
54	*TM	Acenaphthene	1.085	1.127	1.137	1.078	1.162	1.275	1.255	1.332	1.363		1.2	8.9	*TM			0.900
55	**TML	2,4-Dinitrophenol	0.0287	0.0331	0.0777	0.1240	0.1723	0.1832	0.1984	0.2141	0.2201		0.14	55	**TML	0.993		0.010
56	**TM	4-Nitrophenol	0.0290	0.0284	0.0307	0.0282	0.0302	0.0332	0.0320	0.0336	0.0352		0.03	7.9	**TM			0.010
57	TM	Dibenzofuran	1.623	1.671	1.677	1.629	1.734	1.930	1.924	2.084	2.153		1.8	11	TM			0.800
58	TM	2,4-DNT	0.3958	0.4169	0.4457	0.4462	0.4784	0.5343	0.5256	0.5800	0.5904		0.49	14	TM			0.200
59	TM	2,3,4,6-Tetrachlorophenol	0.2835	0.3006	0.3178	0.3136	0.3386	0.3682	0.3763	0.3904	0.3993		0.34	12	TM			0.010
60	TM	Diethyl phthalate	1.467	1.516	1.534	1.474	1.545	1.655	1.632	1.704	1.733		1.6	6.3	TM			0.010
61	TM	4-Chlorophenyl phenyl ether		0.7633	0.7429	0.7444	0.8104	0.9246	0.9212	1.040	1.072		0.88	15	TM			0.400
62	TM	Fluorene	1.306	1.349	1.363	1.361	1.475	1.673	1.668	1.846	1.932		1.6	15	TM			0.900
63	TM	4-Nitroaniline	0.3151	0.3031	0.3294	0.3142	0.3263	0.3501	0.3462	0.3402	0.3445		0.33	5.0	TM			0.010
64	S	2,4,6-Tribromophenol(S)	0.2342	0.2311	0.2068	0.2116	0.2324	0.2576	0.2590	0.2918	0.3127		0.25	14	S			
65	I	Phenanthrene-D10(IS)	ISTD															
66	TM	4,6-Dinitro-2-methylphenol			0.1237	0.1331	0.1507	0.1615	0.1663	0.1780	0.1783		0.16	14	TM			0.010
67	TM	Diphenyl amine		0.5674	0.5878	0.5670	0.6272	0.6767	0.6917	0.7384	0.7531		0.65	11	TM			
68	*TM	n-Nitrosodiphenylamine		0.5674	0.5878	0.5670	0.6272	0.6767	0.6917	0.7384	0.7531		0.65	11	*TM			0.010
69	TM	1,2-Diphenylhydrazine	0.8725	0.8825	0.9231	0.8661	0.9237	0.9667	0.9904	1.038	1.013		0.94	6.7	TM			
70	TM	4-Bromophenyl phenyl ether	0.2168	0.2117	0.2303	0.2234	0.2447	0.2591	0.2603	0.2775	0.2827		0.25	11	TM			0.100

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/19/19
Matrix: Instrument: Yoda Initials:

		Compound	4	5	10	20	40	50	60	80	91		Avg	%RSD	Type		Q	
71	TM	Hexachlorobenzene	0.2189	0.2230	0.2350	0.2209	0.2419	0.2639	0.2678	0.2781	0.2827		0.25	10	TM			0.100
72	TM	Atrazine		0.2202	0.2285	0.2039	0.2199	0.2039	0.2312	0.2400	0.2413		0.22	6.5	TM			0.010
73	*TM	Pentachlorophenol				0.1167	0.1380	0.1587	0.1560	0.1693	0.1761		0.15	14	*TM			0.050
74	TM	Phenanthrene	1.008	1.029	1.058	1.008	1.079	1.131	1.159	1.215	1.247		1.1	8.0	TM			0.700
75	TM	Anthracene	1.024	1.060	1.108	1.058	1.130	1.203	1.210	1.282	1.310		1.2	8.9	TM			0.700
76	TM	Carbazol	0.9547	0.9719	1.001	0.9555	1.020	1.099	1.107	1.168	1.177		1.1	8.5	TM			0.010
77	TM	Di-n-butylphthalate	1.254	1.280	1.325	1.308	1.422	1.524	1.557	1.600	1.659		1.4	11	TM			0.010
78		2-Nitrodiphenylamine	0.2581	0.2591	0.2987	0.3023	0.3376	0.3611	0.3621	0.3733	0.3885		0.33	15				
79	*TM	Fluoranthene	1.136	1.164	1.219	1.161	1.277	1.377	1.374	1.473	1.455		1.3	10	*TM			0.600
80	I	Chrysene-D12(IS)	ISTD															
81	TM	Benzidine	0.4294	0.4321	0.4090	0.3966	0.3741						0.41	5.9	TM			
82	TM	Pyrene	1.234	1.320	1.294	1.198	1.211	1.149	1.140	1.104	1.141		1.2	6.1	TM			0.600
83	S	Terphenyl-D14(S)	1.144	1.050	0.9741	0.9361	0.9110	0.8552	0.8740	0.8455	0.9945		0.95	10	S			
84	TM	Butyl benzylphthalate	0.6241	0.6476	0.6440	0.6034	0.6057	0.5784	0.5714	0.5550	0.5770		0.60	5.5	TM			0.010
85	TM	3,3'-Dichlorobenzidine	0.4406	0.4474	0.4653	0.4210	0.4166	0.4318	0.3803	0.3533	0.3523		0.41	9.9	TM			0.010
86	TM	Benz (a) anthracene	1.378	1.384	1.377	1.254	1.272	1.281	1.262	1.262	1.284		1.3	4.3	TM			0.800
87	TM	Bis (2-ethylhexyl) phthalate	0.9872	1.026	1.020	0.9806	0.9843	1.006	0.9951	1.003	1.032		1.0	1.9	TM			0.010
88	TM	Chrysene	1.126	1.256	1.202	1.146	1.157	1.110	1.070	1.065	1.090		1.1	5.5	TM			0.700
89	*TM	Di-n-octylphthalate	1.492	1.569	1.601	1.470	1.479	1.480	1.436	1.394	1.414		1.5	4.6	*TM			0.010
90	I	Perylene-D12(IS)	ISTD															
91	TM	Benzo (b) fluoranthene	1.200	1.183	1.189	1.231	1.306	1.417	1.414	1.408	1.411		1.3	8.2	TM			0.700
92	TM	Benzo (k) fluoranthene	1.036	1.129	1.146	1.047	1.126	1.214	1.174	1.322	1.406		1.2	10	TM			0.700
93	*TM	Benzo (a) pyrene	1.048	1.092	1.101	1.069	1.126	1.226	1.213	1.267	1.293		1.2	7.8	*TM			0.700
94	TM	Indeno (1,2,3-cd) pyrene	1.218	1.270	1.279	1.250	1.330	1.445	1.416	1.464	1.494		1.4	7.7	TM			0.500
95	TM	Dibenz (a,h) anthracene	1.044	1.127	1.135	1.106	1.175	1.293	1.267	1.331	1.359		1.2	9.2	TM			0.400
96	TM	Benzo (g,h,i) perylene	0.9656	1.022	1.029	1.003	1.043	1.124	1.098	1.126	1.148		1.1	6.0	TM			0.500
97																		
98																		
99																		
100																		
101																		
102																		
103																		
104																		
105																		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y003.D Vial: 3
Acq On : 19 Dec 19 9:06 Operator: MA,SS
Sample : 50ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.38	152	196599	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.83	136	821661	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.84	164	498864	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.57	188	965840	40.00000 ppb	0.00
80) Chrysene-D12(IS)	13.67	240	1196016	40.00000 ppb	0.00
90) Perylene-D12(IS)	15.49	264	1033039	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.82	112	729337	101.21407 ppb	0.00
Spiked Amount 200.000			Recovery	= 50.607%	
6) Phenol-D6 (S)	5.00	99	943605	102.78046 ppb	0.00
Spiked Amount 200.000			Recovery	= 51.390%	
22) Nitrobenzene-D5(S)	6.01	82	506628	49.57999 ppb	0.00
Spiked Amount 100.000			Recovery	= 49.580%	
46) 2-Fluorobiphenyl(S)	8.06	172	928304	50.38731 ppb	0.00
Spiked Amount 100.000			Recovery	= 50.387%	
64) 2,4,6-Tribromophenol(S)	9.77	330	321251	103.61865 ppb	0.00
Spiked Amount 200.000			Recovery	= 51.810%	
83) Terphenyl-D14(S)	12.43	244	1278597	44.83129 ppb	0.00
Spiked Amount 100.000			Recovery	= 44.831%	
Target Compounds					Qvalue
3) n-Nitrosodimethylamine	1.91	42	275394	50.17040 ppb	100
4) Pyridine	1.92	79	614275	48.30945 ppb	100
7) Phenol	5.02	94	574851	53.05712 ppb	100
8) Aniline	5.01	93	359488	50.84319 ppb	100
9) Bis (2-chloroethyl) ether	5.08	63	259464	51.69417 ppb	100
10) 2-Chlorophenol	5.15	128	395131	51.79401 ppb	100
11) 1,3-DCB	5.31	146	421373	50.33398 ppb	100
12) 1,4-DCB	5.40	146	431772	50.39583 ppb	100
13) Benzyl alcohol	5.54	108	243593	54.20799 ppb	100
14) 1,2-DCB	5.57	146	407782	51.15484 ppb	100
15) 2-Methylphenol	5.68	107	348274	52.31608 ppb	100
16) Bis (2-chloroisopropyl) et	5.69	45	342864	51.79894 ppb	100
17) Acetophenone	5.84	105	600018	52.87990 ppb	100
18) 3&4-Methylphenol	5.86	107	935580	106.86276 ppb	100
19) n-Nitrosodi-n-propylamine	5.85	70	391093	53.58916 ppb	100
20) Hexachloroethane	5.95	117	182011	50.96658 ppb	100
23) Nitrobenzene	6.04	77	545143	51.47563 ppb	100
24) Isophorone	6.31	82	870177	52.07890 ppb	100
25) 2-Nitrophenol	6.39	139	223955	52.07765 ppb	100
26) 2,4-Dimethylphenol	6.44	122	356638	51.82729 ppb	100
27) Benzoic acid	6.60	105	279476	47.48334 ppb	100
28) Bis (2-chloroethoxy) metha	6.54	93	447865	51.64725 ppb	100
29) 2,4-Dichlorophenol	6.68	162	350537	52.24411 ppb	100
30) 1,2,4-Trichlorobenzene	6.76	180	383401	51.23105 ppb	100
31) 3,4-Dimethylphenol	6.79	107	604918	52.84249 ppb	100
32) Naphthalene	6.84	128	1148204	51.36025 ppb	100
33) 4-Chloroaniline	6.91	127	465735	51.81136 ppb	100
34) 2,6-Dichlorophenol	6.92	162	347372	52.84673 ppb	100
35) Hexachloropropene	6.95	213	340941	52.64986 ppb	100
36) Hexachlorobutadiene	6.98	225	258626	50.94087 ppb	100
37) Caprolactum	7.34	55	155640	51.68587 ppb	100
38) 4-Chloro-3-methylphenol	7.48	107	422799	53.08472 ppb	100

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

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y003.D Vial: 3
Acq On : 19 Dec 19 9:06 Operator: MA,SS
Sample : 50ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
39)	2-Methylnaphthalene	7.63	142	786668	52.28541 ppb	100
40)	1-Methylnaphthalene	7.75	142	814338	52.04963 ppb	100
42)	Hexachlorocyclopentadiene	7.82	237	294208	51.41653 ppb	100
43)	1,2,4,5-Tetrachlorobenzene	7.84	216	420454	52.91044 ppb	100
44)	2,4,6-Trichlorophenol	7.97	196	277989	53.43197 ppb	100
45)	2,4,5-Trichlorophenol	8.02	196	294494	52.19170 ppb	100
47)	1,1'-Biphenyl	8.17	154	1013613	52.38680 ppb	100
48)	2-Chloronaphthalene	8.20	162	814737	52.35985 ppb	100
49)	2-Nitroaniline	8.32	65	313105	52.99430 ppb	100
50)	Dimethyl phthalate	8.53	163	992101	52.01547 ppb	100
51)	2,6-DNT	8.61	165	224309	53.92342 ppb	100
52)	Acenaphthylene	8.68	152	1261631	52.66138 ppb	100
53)	3-Nitroaniline	8.32	138	263026	53.26882 ppb	100
54)	Acenaphthene	8.89	154	794988	53.04993 ppb	100
55)	2,4-Dinitrophenol	8.92	184	114232	46.68381 ppb	100
56)	4-Nitrophenol	8.60	65	20732	53.32779 ppb	100
57)	Dibenzofuran	9.08	168	1203351	52.86739 ppb	100
58)	2,4-DNT	9.07	165	333192	54.48047 ppb	100
59)	2,3,4,6-Tetrachlorophenol	9.24	232	229610	53.65092 ppb	100
60)	Diethyl phthalate	9.35	149	1031999	52.22569 ppb	100
61)	4-Chlorophenyl phenyl ethe	9.48	204	576562	52.69605 ppb	100
62)	Fluorene	9.48	166	1043084	53.86740 ppb	100
63)	4-Nitroaniline	8.80	138	218292	53.05517 ppb	100
66)	4,6-Dinitro-2-methylphenol	9.56	198	195000	51.78616 ppb	100
67)	Diphenyl amine	9.63	169	1633943	103.92069 ppb	100
68)	n-Nitrosodiphenylamine	9.63	169	1633943	103.92069 ppb	100
69)	1,2-Diphenylhydrazine	9.67	77	1167037	51.32296 ppb	100
70)	4-Bromophenyl phenyl ether	10.05	248	312755	52.83109 ppb	100
71)	Hexachlorobenzene	10.13	284	318617	53.20114 ppb	100
72)	Atrazine	10.25	200	123091	22.79679 ppb	100
73)	Pentachlorophenol	10.36	266	191605	52.04610 ppb	100
74)	Phenanthrene	10.60	178	1365637	51.23790 ppb	100
75)	Anthracene	10.67	178	1452175	52.12221 ppb	100
76)	Carbazol	10.85	167	1327202	52.32019 ppb	100
77)	Di-n-butylphthalate	11.25	149	1840279	53.05379 ppb	100
78)	2-Nitrodiphenylamine	11.43	167	218003	27.62865 ppb	100
79)	Fluoranthene	11.99	202	1662853	53.26539 ppb	100
81)	Benzidine	12.14	184	328745	26.93277 ppb	100
82)	Pyrene	12.25	202	1717114	47.89582 ppb	100
84)	Butyl benzylphthalate	13.00	149	864776	48.14287 ppb	100
85)	3,3'-Dichlorobenzidine	13.62	252	645596	52.39866 ppb	100
86)	Benz (a) anthracene	13.66	228	1915683	49.05514 ppb	100
87)	Bis (2-ethylhexyl) phthala	13.67	149	1504164	50.11549 ppb	100
88)	Chrysene	13.69	228	1660091	48.87974 ppb	100
89)	Di-n-octylphthalate	14.42	149	2213014	49.95022 ppb	100
91)	Benzo (b) fluoranthene	14.96	252	1830066	54.23818 ppb	100
92)	Benzo (k) fluoranthene	14.99	252	1567732	51.53429 ppb	100
93)	Benzo (a) pyrene	15.42	252	1583146	52.86784 ppb	100
94)	Indeno (1,2,3-cd) pyrene	17.36	276	1864158	53.40274 ppb	100
95)	Dibenz (a,h) anthracene	17.40	278	1668227	53.64701 ppb	100
96)	Benzo (g,h,i) perylene	17.93	276	1451452	52.91619 ppb	100

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

Quantitation Report

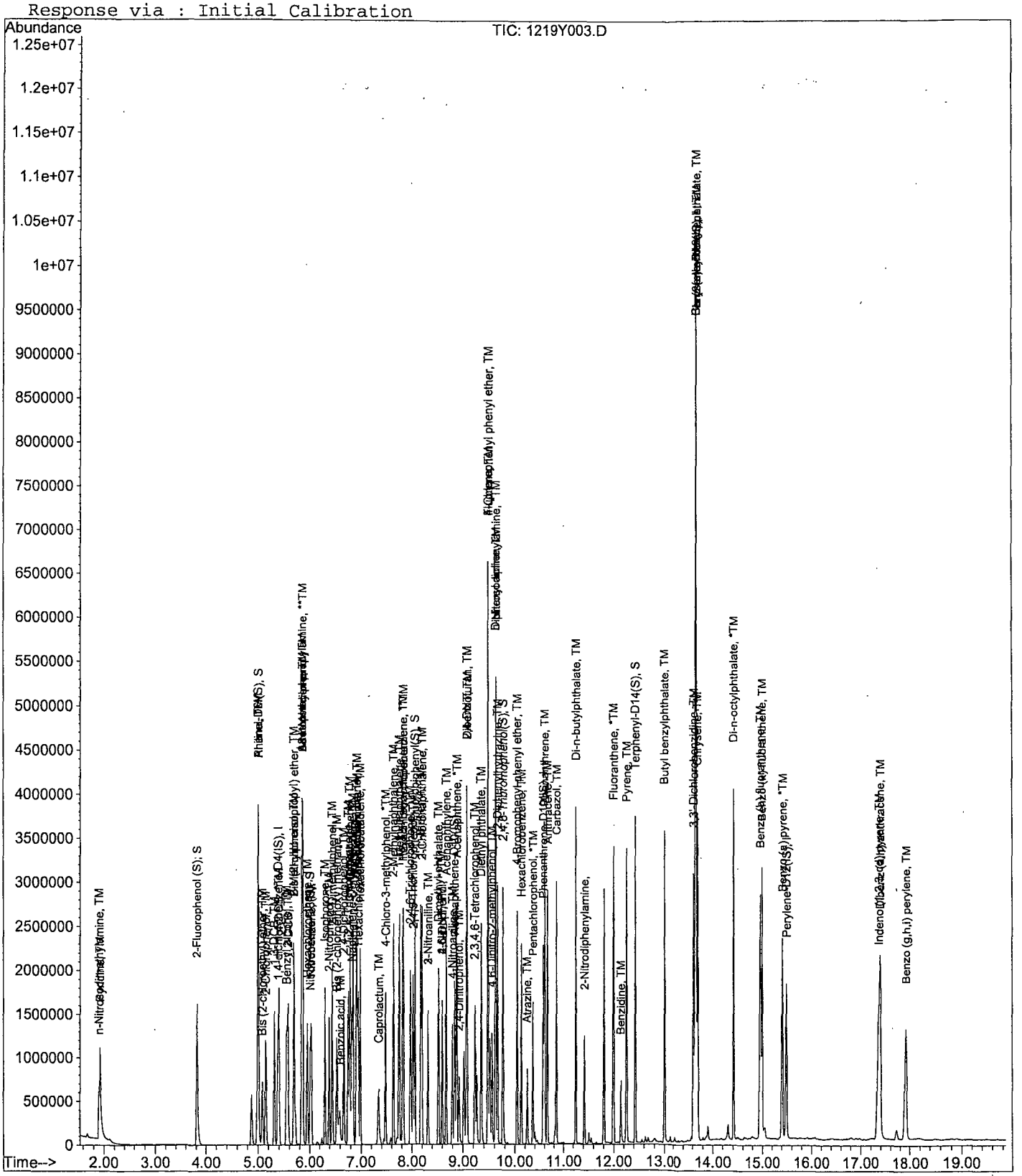
Data File : M:\YODA\DATA\Y191219\1219Y003.D
Acq On : 19 Dec 19 9:06
Sample : 50ug/ml 8270 11/21/19
Misc :

Vial: 3
Operator: MA,SS
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 20 12:40 2019

Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y004.D Vial: 4
Acq On : 19 Dec 19 9:33 Operator: MA,SS
Sample : 4ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.38	152	172988	40.00000	ppb	0.00
21) Napthalene-D8(IS)	6.82	136	714555	40.00000	ppb	0.00
41) Acenaphthene-D10(IS)	8.84	164	436036	40.00000	ppb	0.00
65) Phenanthrene-D10(IS)	10.57	188	836785	40.00000	ppb	0.00
80) Chrysene-D12(IS)	13.66	240	796002	40.00000	ppb	0.00
90) Perylene-D12(IS)	15.49	264	872764	40.00000	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.81	112	52772	8.32303	ppb	0.00
Spiked Amount 200.000			Recovery	=	4.162%	
6) Phenol-D6 (S)	4.99	99	65554	8.11493	ppb	0.00
Spiked Amount 200.000			Recovery	=	4.058%	
22) Nitrobenzene-D5(S)	6.00	82	37998	4.27597	ppb	0.00
Spiked Amount 100.000			Recovery	=	4.276%	
46) 2-Fluorobiphenyl(S)	8.05	172	68746	4.26912	ppb	0.00
Spiked Amount 100.000			Recovery	=	4.269%	
64) 2,4,6-Tribromophenol(S)	9.76	330	20427	7.53803	ppb	0.00
Spiked Amount 200.000			Recovery	=	3.769%	
83) Terphenyl-D14(S)	12.42	244	91079	4.79831	ppb	0.00
Spiked Amount 100.000			Recovery	=	4.798%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.69	58	874	0.33558	#	1
3) n-Nitrosodimethylamine	1.91	42	18895	3.91206	ppb	92
4) Pyridine	1.94	79	39443	3.52537	ppb	97
7) Phenol	5.00	94	32421	3.40079	ppb #	53
8) Aniline	5.00	93	23080	3.70979	ppb	98
9) Bis (2-chloroethyl) ether	5.07	63	15947	3.61084	ppb	98
10) 2-Chlorophenol	5.15	128	23984	3.57294	ppb	97
11) 1,3-DCB	5.31	146	26641	3.61668	ppb	96
12) 1,4-DCB	5.40	146	26701	3.54187	ppb	97
13) Benzyl alcohol	5.54	108	13453	3.40238	ppb	91
14) 1,2-DCB	5.56	146	25057	3.57234	ppb	95
15) 2-Methylphenol	5.68	107	21086	3.59976	ppb	96
16) Bis (2-chloroisopropyl) et	5.69	45	20972	3.60084	ppb	88
17) Acetophenone	5.83	105	34769	3.48244	ppb	99
18) 3&4-Methylphenol	5.85	107	53356	6.92618	ppb	99
19) n-Nitrosodi-n-propylamine	5.83	70	21845	3.40184	ppb	96
20) Hexachloroethane	5.95	117	10847	3.45194	ppb	89
23) Nitrobenzene	6.02	77	33923	3.68335	ppb	96
24) Isophorone	6.29	82	53920	3.71074	ppb	99
25) 2-Nitrophenol	6.38	139	12884	3.44507	ppb	94
26) 2,4-Dimethylphenol	6.44	122	21783	3.64004	ppb	96
27) Benzoic acid	6.62	105	383	4.14033	ppb	88
28) Bis (2-chloroethoxy) metha	6.53	93	27014	3.58217	ppb	100
29) 2,4-Dichlorophenol	6.67	162	20671	3.54260	ppb	94
30) 1,2,4-Trichlorobenzene	6.75	180	22503	3.45762	ppb	97
31) 3,4-Dimethylphenol	6.78	107	36358	3.65211	ppb	95
32) Naphthalene	6.84	128	70495	3.62596	ppb	99
33) 4-Chloroaniline	6.90	127	29511	3.77509	ppb	98
34) 2,6-Dichlorophenol	6.91	162	19262	3.36963	ppb	97
35) Hexachloropropene	6.94	213	19085	3.38897	ppb	98
36) Hexachlorobutadiene	6.98	225	15703	3.55659	ppb	98
37) Caprolactum	7.27	55	9715	3.70980	ppb	95

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

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y004.D Vial: 4
Acq On : 19 Dec 19 9:33 Operator: MA,SS
Sample : 4ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.47	107	24530	3.54152	ppb		91
39)	2-Methylnaphthalene	7.63	142	46644	3.56485	ppb		99
40)	1-Methylnaphthalene	7.75	142	48402	3.55740	ppb		100
42)	Hexachlorocyclopentadiene	7.81	237	7536	5.21250	ppb	#	93
43)	1,2,4,5-Tetrachlorobenzene	7.83	216	24386	3.51094	ppb		93
44)	2,4,6-Trichlorophenol	7.97	196	16008	3.52023	ppb		99
45)	2,4,5-Trichlorophenol	8.02	196	18343	3.71925	ppb		96
47)	1,1'-Biphenyl	8.17	154	60838	3.59736	ppb	#	96
48)	2-Chloronaphthalene	8.19	162	49132	3.61248	ppb		100
49)	2-Nitroaniline	8.31	65	18170	3.51847	ppb		94
50)	Dimethyl phthalate	8.52	163	62019	3.72016	ppb		98
51)	2,6-DNT	8.59	165	12579	3.45969	ppb	#	77
52)	Acenaphthylene	8.67	152	74543	3.55981	ppb		99
53)	3-Nitroaniline	8.31	138	15660	3.62849	ppb		93
54)	Acenaphthene	8.88	154	47294	3.61069	ppb		99
55)	2,4-Dinitrophenol	8.92	184	1251	7.22384	ppb		91
56)	4-Nitrophenol	8.59	65	1264	3.71980	ppb	#	77
57)	Dibenzofuran	9.07	168	70771	3.55722	ppb		96
58)	2,4-DNT	9.06	165	17259	3.22866	ppb		90
59)	2,3,4,6-Tetrachlorophenol	9.23	232	12362	3.30472	ppb		98
60)	Diethyl phthalate	9.34	149	63987	3.70473	ppb		97
61)	4-Chlorophenyl phenyl ethe	9.47	204	30630	3.20287	ppb		93
62)	Fluorene	9.47	166	56939	3.36416	ppb		97
63)	4-Nitroaniline	8.79	138	13740	3.82064	ppb		87
66)	4,6-Dinitro-2-methylphenol	9.54	198	6235	1.91120	ppb	#	71
67)	Diphenyl amine	9.61	169	91072	6.68561	ppb		97
68)	n-Nitrosodiphenylamine	9.61	169	91072	6.68561	ppb		97
69)	1,2-Diphenylhydrazine	9.66	77	73012	3.70606	ppb		97
70)	4-Bromophenyl phenyl ether	10.05	248	18141	3.53702	ppb		88
71)	Hexachlorobenzene	10.12	284	18320	3.53076	ppb		95
72)	Atrazine	10.23	200	8587	1.83561	ppb		94
73)	Pentachlorophenol	10.35	266	6168	1.93382	ppb		87
74)	Phenanthrene	10.60	178	84389	3.65454	ppb		99
75)	Anthracene	10.65	178	85709	3.55076	ppb		99
76)	Carbazol	10.85	167	79889	3.63505	ppb		100
77)	Di-n-butylphthalate	11.25	149	104948	3.49219	ppb		99
78)	2-Nitrodiphenylamine	11.42	167	10800	1.57984	ppb		97
79)	Fluoranthene	11.99	202	95072	3.51508	ppb		99
81)	Benzidine	12.14	184	34176	4.20694	ppb		97
82)	Pyrene	12.25	202	98209	4.11597	ppb		99
84)	Butyl benzylphthalate	12.99	149	49680	4.15559	ppb		98
85)	3,3'-Dichlorobenzidine	13.61	252	35070	4.27679	ppb		98
86)	Benz (a) anthracene	13.64	228	109656	4.21906	ppb		98
87)	Bis (2-ethylhexyl) phthala	13.66	149	78577	3.93364	ppb		98
88)	Chrysene	13.69	228	89653	3.96629	ppb		97
89)	Di-n-octylphthalate	14.41	149	118795	4.02879	ppb		100
91)	Benzo (b) fluoranthene	14.94	252	104695	3.67269	ppb		97
92)	Benzo (k) fluoranthene	14.98	252	90442	3.51896	ppb		97
93)	Benzo (a) pyrene	15.39	252	91485	3.61610	ppb		99
94)	Indeno (1,2,3-cd) pyrene	17.32	276	106261	3.60309	ppb		99
95)	Dibenz (a,h) anthracene	17.35	278	91091	3.46725	ppb		99
96)	Benzo (g,h,i) perylene	17.88	276	84272	3.63655	ppb		98

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

Quantitation Report

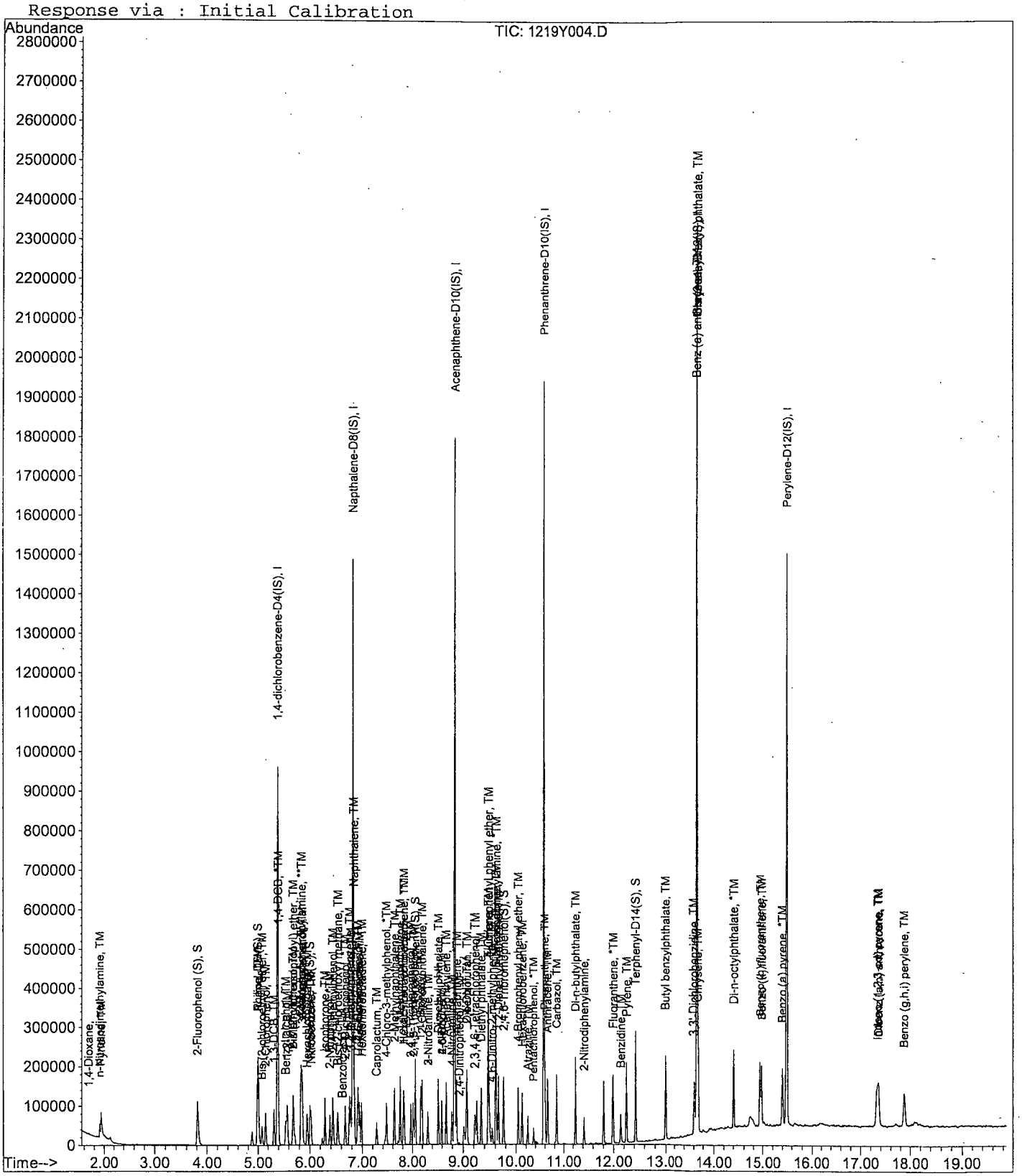
Data File : M:\YODA\DATA\Y191219\1219Y004.D
Acq On : 19 Dec 19 9:33
Sample : 4ug/ml 8270 11/21/19
Misc :

Vial: 4
Operator: MA,SS
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 20 12:40 2019

Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y005.D Vial: 5
Acq On : 19 Dec 19 10:01 Operator: MA,SS
Sample : 5ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.38	152	171722	40.00000	ppb		0.00
21) Napthalene-D8(IS)	6.82	136	688709	40.00000	ppb		0.00
41) Acenaphthene-D10(IS)	8.84	164	415788	40.00000	ppb		0.00
65) Phenanthrene-D10(IS)	10.57	188	806286	40.00000	ppb		0.00
80) Chrysene-D12(IS)	13.66	240	749085	40.00000	ppb		0.00
90) Perylene-D12(IS)	15.48	264	827486	40.00000	ppb		0.00
System Monitoring Compounds							
5) 2-Fluorophenol (S)	3.82	112	56647	9.00005	ppb		0.00
Spiked Amount 200.000			Recovery	= 4.500%			
6) Phenol-D6 (S)	4.99	99	71276	8.88831	ppb		0.00
Spiked Amount 200.000			Recovery	= 4.444%			
22) Nitrobenzene-D5(S)	6.00	82	41101	4.79873	ppb		0.00
Spiked Amount 100.000			Recovery	= 4.799%			
46) 2-Fluorobiphenyl(S)	8.05	172	73943	4.81547	ppb		0.00
Spiked Amount 100.000			Recovery	= 4.815%			
64) 2,4,6-Tribromophenol(S)	9.76	330	24023	9.29674	ppb		0.00
Spiked Amount 200.000			Recovery	= 4.649%			
83) Terphenyl-D14(S)	12.43	244	98299	5.50304	ppb		0.00
Spiked Amount 100.000			Recovery	= 5.503%			
Target Compounds							Qvalue
2) 1,4-Dioxane	1.69	58	1257	0.48619			57
3) n-Nitrosodimethylamine	1.91	42	24805	5.17354	ppb		91
4) Pyridine	1.93	79	51683	4.65342	ppb		99
7) Phenol	5.01	94	41003	4.33271	ppb	#	74
8) Aniline	5.01	93	28072	4.54545	ppb	#	95
9) Bis (2-chloroethyl) ether	5.08	63	19744	4.50355	ppb		96
10) 2-Chlorophenol	5.14	128	30870	4.63266	ppb		93
11) 1,3-DCB	5.31	146	35002	4.78677	ppb		98
12) 1,4-DCB	5.40	146	35465	4.73910	ppb		100
13) Benzyl alcohol	5.54	108	17372	4.42592	ppb		98
14) 1,2-DCB	5.57	146	32182	4.62197	ppb		99
15) 2-Methylphenol	5.67	107	26493	4.55618	ppb		95
16) Bis (2-chloroisopropyl) et	5.69	45	26718	4.62124	ppb	#	67
17) Acetophenone	5.83	105	43206	4.35939	ppb		99
18) 3&4-Methylphenol	5.85	107	66732	8.72640	ppb		94
19) n-Nitrosodi-n-propylamine	5.83	70	27839	4.36723	ppb		93
20) Hexachloroethane	5.95	117	14656	4.69849	ppb		96
23) Nitrobenzene	6.03	77	43068	4.85180	ppb		97
24) Isophorone	6.30	82	66063	4.71704	ppb		97
25) 2-Nitrophenol	6.39	139	16456	4.56533	ppb		95
26) 2,4-Dimethylphenol	6.44	122	27145	4.70628	ppb		97
27) Benzoic acid	6.54	105	9801	5.88822	ppb		100
28) Bis (2-chloroethoxy) metha	6.54	93	33945	4.67017	ppb		97
29) 2,4-Dichlorophenol	6.67	162	25735	4.57598	ppb		95
30) 1,2,4-Trichlorobenzene	6.75	180	30156	4.80740	ppb		94
31) 3,4-Dimethylphenol	6.78	107	42637	4.44355	ppb		94
32) Naphthalene	6.84	128	88283	4.71131	ppb		98
33) 4-Chloroaniline	6.90	127	35310	4.68641	ppb		95
34) 2,6-Dichlorophenol	6.92	162	25539	4.63537	ppb		98
35) Hexachloropropene	6.95	213	24798	4.56869	ppb		99
36) Hexachlorobutadiene	6.98	225	19841	4.66245	ppb		95
37) Caprolactum	7.28	55	12209	4.83713	ppb		92

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

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y005.D Vial: 5
Acq On : 19 Dec 19 10:01 Operator: MA,SS
Sample : 5ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.47	107	30060	4.50279 ppb		96
39)	2-Methylnaphthalene	7.63	142	58756	4.65906 ppb		98
40)	1-Methylnaphthalene	7.74	142	62484	4.76473 ppb		98
42)	Hexachlorocyclopentadiene	7.82	237	12113	6.16888 ppb		98
43)	1,2,4,5-Tetrachlorobenzene	7.83	216	30658	4.62889 ppb		96
44)	2,4,6-Trichlorophenol	7.97	196	19264	4.44253 ppb		97
45)	2,4,5-Trichlorophenol	8.01	196	22015	4.68116 ppb		91
47)	1,1'-Biphenyl	8.17	154	75024	4.65222 ppb		96
48)	2-Chloronaphthalene	8.20	162	60077	4.63233 ppb		98
49)	2-Nitroaniline	8.31	65	22742	4.61826 ppb		95
50)	Dimethyl phthalate	8.52	163	75613	4.75645 ppb		98
51)	2,6-DNT	8.60	165	14927	4.30540 ppb		93
52)	Acenaphthylene	8.67	152	93201	4.66757 ppb		99
53)	3-Nitroaniline	8.31	138	18418	4.47535 ppb		98
54)	Acenaphthene	8.88	154	58572	4.68948 ppb		98
55)	2,4-Dinitrophenol	8.92	184	1722	7.44591 ppb		91
56)	4-Nitrophenol	8.59	65	1476	4.55522 ppb	#	77
57)	Dibenzofuran	9.08	168	86867	4.57889 ppb		98
58)	2,4-DNT	9.06	165	21667	4.25065 ppb		92
59)	2,3,4,6-Tetrachlorophenol	9.23	232	15625	4.38043 ppb		96
60)	Diethyl phthalate	9.34	149	78770	4.78273 ppb		98
61)	4-Chlorophenyl phenyl ethe	9.47	204	39671	4.35026 ppb		91
62)	Fluorene	9.48	166	70132	4.34543 ppb		99
63)	4-Nitroaniline	8.79	138	15753	4.59371 ppb		95
66)	4,6-Dinitro-2-methylphenol	9.54	198	8632	2.74604 ppb		91
67)	Diphenyl amine	9.61	169	114377	8.71405 ppb		99
68)	n-Nitrosodiphenylamine	9.61	169	114377	8.71405 ppb		99
69)	1,2-Diphenylhydrazine	9.66	77	88947	4.68570 ppb		98
70)	4-Bromophenyl phenyl ether	10.05	248	21340	4.31813 ppb		90
71)	Hexachlorobenzene	10.12	284	22472	4.49479 ppb		86
72)	Atrazine	10.23	200	11098	2.46211 ppb		96
73)	Pentachlorophenol	10.36	266	7741	2.51880 ppb		98
74)	Phenanthrene	10.59	178	103714	4.66133 ppb		100
75)	Anthracene	10.66	178	106832	4.59326 ppb		100
76)	Carbazol	10.84	167	97952	4.62553 ppb		96
77)	Di-n-butylphthalate	11.25	149	129031	4.45598 ppb		99
78)	2-Nitrodiphenylamine	11.42	167	13059	1.98255 ppb		90
79)	Fluoranthene	11.98	202	117296	4.50081 ppb		99
81)	Benzidine	12.14	184	40456	5.29189 ppb		98
82)	Pyrene	12.24	202	123613	5.50514 ppb		99
84)	Butyl benzylphthalate	13.00	149	60635	5.38961 ppb		84
85)	3,3'-Dichlorobenzidine	13.61	252	41891	5.42858 ppb		97
86)	Benz (a) anthracene	13.65	228	129610	5.29914 ppb		99
87)	Bis (2-ethylhexyl) phthala	13.66	149	96081	5.11117 ppb		97
88)	Chrysene	13.68	228	117620	5.52948 ppb		98
89)	Di-n-octylphthalate	14.41	149	146932	5.29512 ppb		94
91)	Benzo (b) fluoranthene	14.94	252	122331	4.52617 ppb		99
92)	Benzo (k) fluoranthene	14.97	252	116734	4.79047 ppb		99
93)	Benzo (a) pyrene	15.40	252	112984	4.71025 ppb		99
94)	Indeno (1,2,3-cd) pyrene	17.32	276	131399	4.69925 ppb		100
95)	Dibenz (a,h) anthracene	17.36	278	116553	4.67918 ppb		98
96)	Benzo (g,h,i) perylene	17.88	276	105710	4.81125 ppb		98

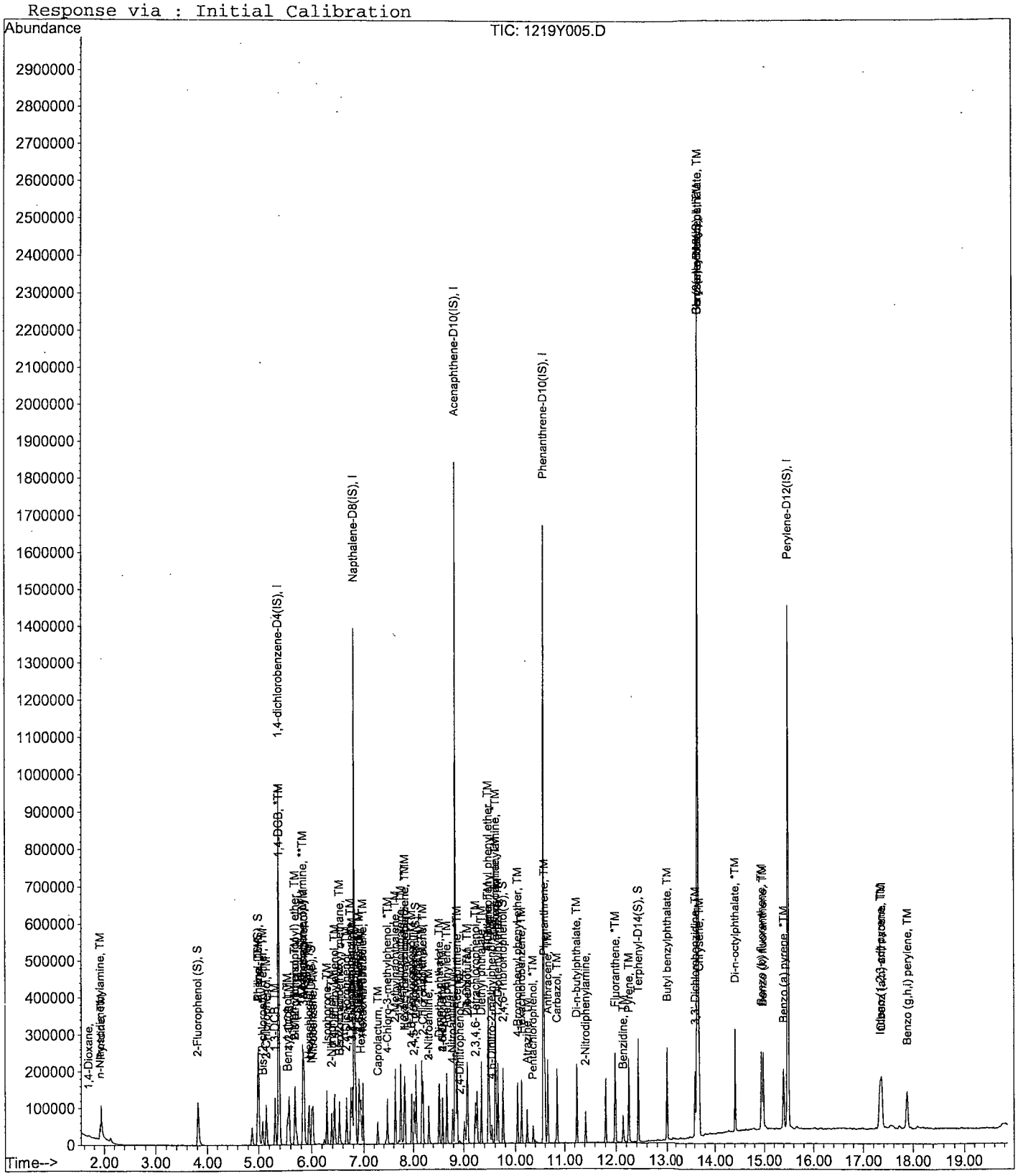
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y005.D Vial: 5
Acq On : 19 Dec 19 10:01 Operator: MA,SS
Sample : 5ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y006.D Vial: 6
Acq On : 19 Dec 19 10:28 Operator: MA,SS
Sample : 10ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.38	152	160128	40.00000	ppb		0.00
21) Napthalene-D8(IS)	6.82	136	678749	40.00000	ppb		0.00
41) Acenaphthene-D10(IS)	8.84	164	424690	40.00000	ppb		0.00
65) Phenanthrene-D10(IS)	10.57	188	801834	40.00000	ppb		0.00
80) Chrysene-D12(IS)	13.66	240	780754	40.00000	ppb		0.00
90) Perylene-D12(IS)	15.49	264	843433	40.00000	ppb		0.00
System Monitoring Compounds							
5) 2-Fluorophenol (S)	3.81	112	114683	19.54005	ppb		0.00
Spiked Amount 200.000			Recovery =	9.770%			
6) Phenol-D6 (S)	4.99	99	140612	18.80428	ppb		0.00
Spiked Amount 200.000			Recovery =	9.402%			
22) Nitrobenzene-D5(S)	6.00	82	82528	9.77692	ppb		0.00
Spiked Amount 100.000			Recovery =	9.777%			
46) 2-Fluorobiphenyl(S)	8.05	172	143294	9.13627	ppb		0.00
Spiked Amount 100.000			Recovery =	9.136%			
64) 2,4,6-Tribromophenol(S)	9.76	330	43913	16.63783	ppb		0.00
Spiked Amount 200.000			Recovery =	8.319%			
83) Terphenyl-D14(S)	12.42	244	190140	10.21278	ppb		0.00
Spiked Amount 100.000			Recovery =	10.213%			
Target Compounds							Qvalue
2) 1,4-Dioxane	1.68	58	2566	1.06435			52
3) n-Nitrosodimethylamine	1.91	42	42801	9.57329	ppb		97
4) Pyridine	1.93	79	110941	10.71212	ppb		94
7) Phenol	5.00	94	84538	9.57975	ppb	#	63
8) Aniline	5.00	93	55616	9.65744	ppb		99
9) Bis (2-chloroethyl) ether	5.08	63	41459	10.14139	ppb		88
10) 2-Chlorophenol	5.15	128	62253	10.01873	ppb		95
11) 1,3-DCB	5.31	146	70075	10.27713	ppb		100
12) 1,4-DCB	5.40	146	70537	10.10814	ppb		96
13) Benzyl alcohol	5.54	108	36507	9.97444	ppb		96
14) 1,2-DCB	5.57	146	66098	10.18031	ppb		98
15) 2-Methylphenol	5.68	107	52416	9.66701	ppb		97
16) Bis (2-chloroisopropyl) et	5.68	45	53318	9.88979	ppb		97
17) Acetophenone	5.83	105	89316	9.66428	ppb		99
18) 3&4-Methylphenol	5.85	107	137362	19.26310	ppb		99
19) n-Nitrosodi-n-propylamine	5.83	70	56624	9.52602	ppb		91
20) Hexachloroethane	5.95	117	29197	10.03784	ppb		91
23) Nitrobenzene	6.03	77	87342	9.98385	ppb		97
24) Isophorone	6.30	82	136764	9.90854	ppb		95
25) 2-Nitrophenol	6.38	139	34642	9.75163	ppb		93
26) 2,4-Dimethylphenol	6.44	122	56086	9.86663	ppb		99
27) Benzoic acid	6.56	105	31884	10.06729	ppb		97
28) Bis (2-chloroethoxy) metha	6.54	93	70309	9.81509	ppb		96
29) 2,4-Dichlorophenol	6.67	162	53758	9.69907	ppb		96
30) 1,2,4-Trichlorobenzene	6.75	180	60558	9.79569	ppb		98
31) 3,4-Dimethylphenol	6.78	107	95265	10.07404	ppb		96
32) Naphthalene	6.85	128	181256	9.81486	ppb		99
33) 4-Chloroaniline	6.90	127	75779	10.20513	ppb		99
34) 2,6-Dichlorophenol	6.92	162	52155	9.60512	ppb		94
35) Hexachloropropene	6.94	213	50541	9.44812	ppb		98
36) Hexachlorobutadiene	6.98	225	41688	9.94005	ppb		97
37) Caprolactum	7.29	55	24764	9.95531	ppb		100

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

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y006.D Vial: 6
Acq On : 19 Dec 19 10:28 Operator: MA,SS
Sample : 10ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.47	107	63915	9.71453	ppb		93
39)	2-Methylnaphthalene	7.63	142	121988	9.81498	ppb		99
40)	1-Methylnaphthalene	7.75	142	126080	9.75534	ppb		99
42)	Hexachlorocyclopentadiene	7.82	237	26368	8.82866	ppb		96
43)	1,2,4,5-Tetrachlorobenzene	7.83	216	63033	9.31753	ppb		97
44)	2,4,6-Trichlorophenol	7.97	196	42547	9.60622	ppb		98
45)	2,4,5-Trichlorophenol	8.01	196	45140	9.39716	ppb		97
47)	1,1'-Biphenyl	8.17	154	154500	9.37969	ppb		96
48)	2-Chloronaphthalene	8.19	162	126872	9.57760	ppb		97
49)	2-Nitroaniline	8.31	65	48463	9.63517	ppb		99
50)	Dimethyl phthalate	8.52	163	155090	9.55148	ppb		98
51)	2,6-DNT	8.59	165	32770	9.25374	ppb	#	70
52)	Acenaphthylene	8.67	152	192011	9.41448	ppb		99
53)	3-Nitroaniline	8.31	138	40201	9.56360	ppb		97
54)	Acenaphthene	8.88	154	120735	9.46384	ppb		97
55)	2,4-Dinitrophenol	8.92	184	8250	10.11323	ppb		88
56)	4-Nitrophenol	8.59	65	3263	9.85915	ppb	#	77
57)	Dibenzofuran	9.07	168	178082	9.19022	ppb		96
58)	2,4-DNT	9.06	165	47326	9.08984	ppb		90
59)	2,3,4,6-Tetrachlorophenol	9.23	232	33746	9.26230	ppb		98
60)	Diethyl phthalate	9.34	149	162823	9.67901	ppb		98
61)	4-Chlorophenyl phenyl ethe	9.47	204	78878	8.46834	ppb		92
62)	Fluorene	9.47	166	144714	8.77864	ppb		99
63)	4-Nitroaniline	8.78	138	34976	9.98551	ppb		86
66)	4,6-Dinitro-2-methylphenol	9.54	198	24792	7.93070	ppb	#	66
67)	Diphenyl amine	9.61	169	235673	18.05492	ppb		99
68)	n-Nitrosodiphenylamine	9.61	169	235673	18.05492	ppb		99
69)	1,2-Diphenylhydrazine	9.66	77	185037	9.80181	ppb		98
70)	4-Bromophenyl phenyl ether	10.05	248	46172	9.39474	ppb		84
71)	Hexachlorobenzene	10.12	284	47111	9.47534	ppb		96
72)	Atrazine	10.23	200	22903	5.10929	ppb		98
73)	Pentachlorophenol	10.35	266	20850	6.82194	ppb		98
74)	Phenanthrene	10.59	178	212082	9.58474	ppb		99
75)	Anthracene	10.66	178	222026	9.59905	ppb		100
76)	Carbazol	10.85	167	200728	9.53149	ppb		99
77)	Di-n-butylphthalate	11.24	149	265654	9.22507	ppb		99
78)	2-Nitrodiphenylamine	11.42	167	29937	4.57011	ppb		96
79)	Fluoranthene	11.99	202	244432	9.43127	ppb		99
81)	Benzidine	12.14	184	79841	10.02007	ppb		98
82)	Pyrene	12.25	202	252604	10.79348	ppb		100
84)	Butyl benzylphthalate	13.00	149	125700	10.71979	ppb		83
85)	3,3'-Dichlorobenzidine	13.61	252	90819	11.29169	ppb		98
86)	Benz (a) anthracene	13.65	228	268781	10.54344	ppb		99
87)	Bis (2-ethylhexyl) phthala	13.66	149	199052	10.15935	ppb		96
88)	Chrysene	13.69	228	234598	10.58142	ppb		100
89)	Di-n-octylphthalate	14.41	149	312547	10.80666	ppb		97
91)	Benzo (b) fluoranthene	14.94	252	250643	9.09830	ppb		99
92)	Benzo (k) fluoranthene	14.98	252	241683	9.73053	ppb		98
93)	Benzo (a) pyrene	15.40	252	232116	9.49384	ppb		98
94)	Indeno (1,2,3-cd) pyrene	17.32	276	269635	9.46070	ppb		99
95)	Dibenz (a,h) anthracene	17.36	278	239335	9.42677	ppb		98
96)	Benzo (g,h,i) perylene	17.88	276	217021	9.69067	ppb		98

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

Quantitation Report

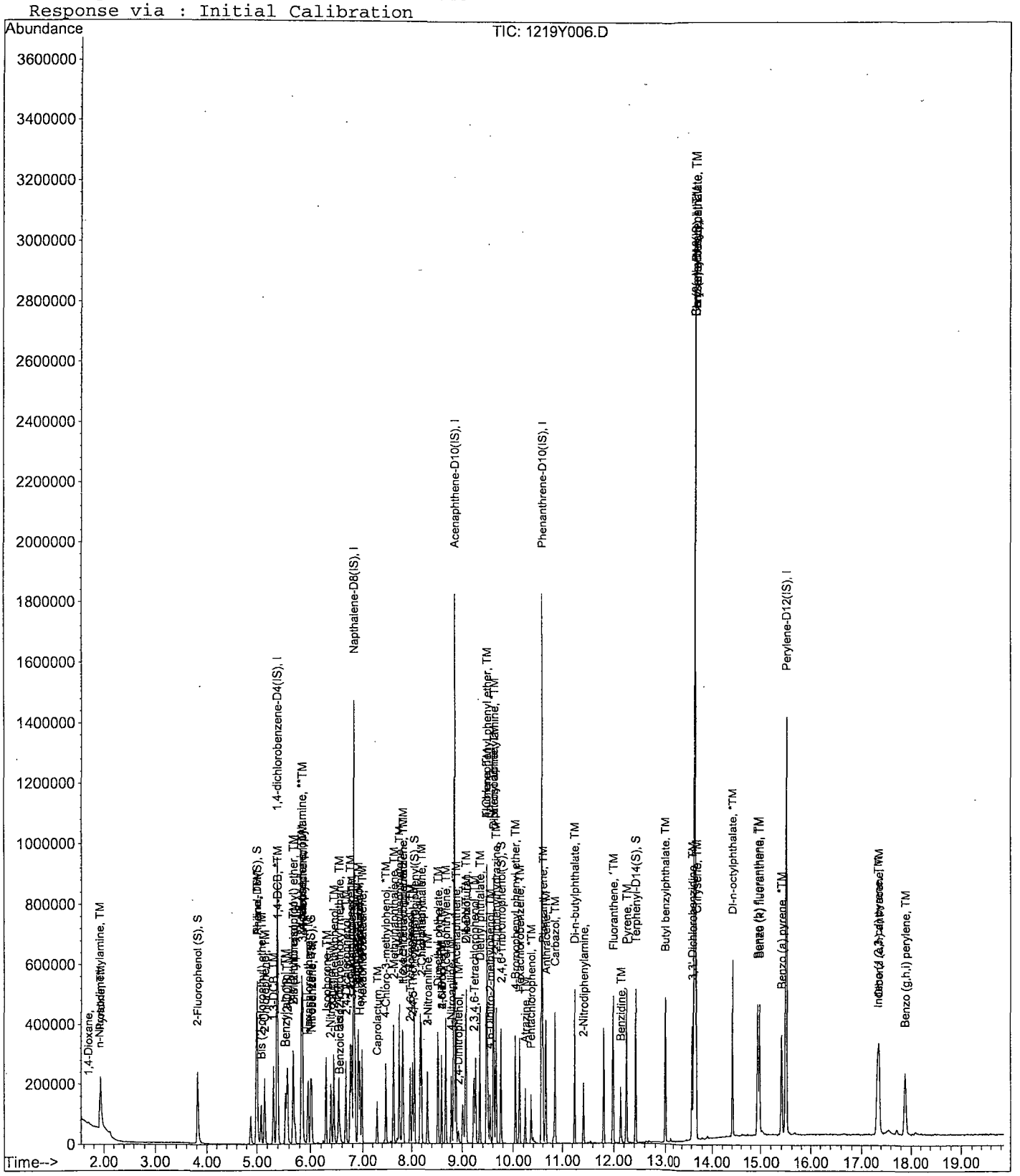
Data File : M:\YODA\DATA\Y191219\1219Y006.D
Acq On : 19 Dec 19 10:28
Sample : 10ug/ml 8270 11/21/19
Misc :

Vial: 6
Operator: MA,SS
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 20 12:40 2019

Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y007.D Vial: 7
Acq On : 19 Dec 19 10:56 Operator: MA,SS
Sample : 20ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.38	152	194747	40.00000	ppb		0.00
21) Napthalene-D8(IS)	6.82	136	781182	40.00000	ppb		0.00
41) Acenaphthene-D10(IS)	8.84	164	473595	40.00000	ppb		0.00
65) Phenanthrene-D10(IS)	10.57	188	902012	40.00000	ppb		0.00
80) Chrysene-D12(IS)	13.66	240	912227	40.00000	ppb		0.00
90) Perylene-D12(IS)	15.49	264	942777	40.00000	ppb		0.00
System Monitoring Compounds							
5) 2-Fluorophenol (S)	3.82	112	253075	35.45459	ppb		0.00
Spiked Amount 200.000			Recovery = 17.728%				
6) Phenol-D6 (S)	4.99	99	314450	34.57661	ppb		-0.01
Spiked Amount 200.000			Recovery = 17.289%				
22) Nitrobenzene-D5(S)	6.01	82	185338	19.07753	ppb		0.00
Spiked Amount 100.000			Recovery = 19.078%				
46) 2-Fluorobiphenyl(S)	8.06	172	323480	18.49496	ppb		0.00
Spiked Amount 100.000			Recovery = 18.495%				
64) 2,4,6-Tribromophenol(S)	9.77	330	100215	34.04876	ppb		0.00
Spiked Amount 200.000			Recovery = 17.025%				
83) Terphenyl-D14(S)	12.43	244	426966	19.62795	ppb		0.00
Spiked Amount 100.000			Recovery = 19.628%				
Target Compounds							Qvalue
2) 1,4-Dioxane	1.68	58	5479	1.86864			96
3) n-Nitrosodimethylamine	1.90	42	92263	16.96802	ppb		95
4) Pyridine	1.92	79	233730	18.55642	ppb		98
7) Phenol	5.00	94	187775	17.49592	ppb	#	74
8) Aniline	5.00	93	138944	19.83804	ppb	#	95
9) Bis (2-chloroethyl) ether	5.08	63	90085	18.11872	ppb		96
10) 2-Chlorophenol	5.14	128	135911	17.98472	ppb		92
11) 1,3-DCB	5.31	146	146244	17.63531	ppb		97
12) 1,4-DCB	5.39	146	151686	17.87295	ppb		97
13) Benzyl alcohol	5.54	108	78697	17.67939	ppb		99
14) 1,2-DCB	5.57	146	139110	17.61682	ppb		99
15) 2-Methylphenol	5.68	107	115359	17.49348	ppb		97
16) Bis (2-chloroisopropyl) et	5.69	45	115311	17.58653	ppb	#	78
17) Acetophenone	5.83	105	201308	17.91010	ppb		98
18) 3&4-Methylphenol	5.85	107	300091	34.60262	ppb		97
19) n-Nitrosodi-n-propylamine	5.84	70	126055	17.43683	ppb		98
20) Hexachloroethane	5.95	117	64312	18.17985	ppb		94
23) Nitrobenzene	6.03	77	185983	18.47162	ppb		95
24) Isophorone	6.29	82	294453	18.53577	ppb		99
25) 2-Nitrophenol	6.39	139	76958	18.82282	ppb		95
26) 2,4-Dimethylphenol	6.44	122	120904	18.48043	ppb		97
27) Benzoic acid	6.55	105	91223	18.97597	ppb		98
28) Bis (2-chloroethoxy) metha	6.54	93	152615	18.51133	ppb		98
29) 2,4-Dichlorophenol	6.67	162	117474	18.41559	ppb		95
30) 1,2,4-Trichlorobenzene	6.76	180	128436	18.05125	ppb		99
31) 3,4-Dimethylphenol	6.78	107	204008	18.74452	ppb		98
32) Naphthalene	6.84	128	390776	18.38554	ppb		99
33) 4-Chloroaniline	6.91	127	162474	19.01124	ppb		96
34) 2,6-Dichlorophenol	6.92	162	114733	18.35913	ppb		98
35) Hexachloropropene	6.94	213	112998	18.35394	ppb		99
36) Hexachlorobutadiene	6.98	225	87981	18.22735	ppb		99
37) Caprolactum	7.31	55	53587	18.71761	ppb		97

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

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y007.D
Acq On : 19 Dec 19 10:56
Sample : 20ug/ml 8270 11/21/19
Misc :

Vial: 7
Operator: MA,SS
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.47	107	137771	18.19424 ppb		96
39)	2-Methylnaphthalene	7.63	142	260607	18.21862 ppb		100
40)	1-Methylnaphthalene	7.74	142	264522	17.78341 ppb		98
42)	Hexachlorocyclopentadiene	7.82	237	85296	18.35365 ppb		100
43)	1,2,4,5-Tetrachlorobenzene	7.83	216	133618	17.71181 ppb		96
44)	2,4,6-Trichlorophenol	7.97	196	90696	18.36271 ppb		100
45)	2,4,5-Trichlorophenol	8.02	196	98112	18.31564 ppb		96
47)	1,1'-Biphenyl	8.17	154	335661	18.27366 ppb		98
48)	2-Chloronaphthalene	8.20	162	272066	18.41748 ppb		97
49)	2-Nitroaniline	8.31	65	106234	18.93990 ppb		92
50)	Dimethyl phthalate	8.52	163	333975	18.44445 ppb		99
51)	2,6-DNT	8.60	165	74351	18.82750 ppb		86
52)	Acenaphthylene	8.68	152	420370	18.48275 ppb		100
53)	3-Nitroaniline	8.32	138	87497	18.66563 ppb		95
54)	Acenaphthene	8.87	154	255265	17.94281 ppb		98
55)	2,4-Dinitrophenol	8.92	184	29356	17.54041 ppb		89
56)	4-Nitrophenol	8.60	65	6688	18.12107 ppb		98
57)	Dibenzofuran	9.08	168	385855	17.85643 ppb		100
58)	2,4-DNT	9.07	165	105670	18.20007 ppb		87
59)	2,3,4,6-Tetrachlorophenol	9.23	232	74261	18.27773 ppb	#	91
60)	Diethyl phthalate	9.35	149	348940	18.60076 ppb		97
61)	4-Chlorophenyl phenyl ethe	9.48	204	176280	16.97111 ppb		98
62)	Fluorene	9.48	166	322306	17.53276 ppb		98
63)	4-Nitroaniline	8.79	138	74412	19.05057 ppb		97
66)	4,6-Dinitro-2-methylphenol	9.54	198	60050	17.07595 ppb		84
67)	Diphenyl amine	9.62	169	511426	34.82898 ppb		100
68)	n-Nitrosodiphenylamine	9.62	169	511426	34.82898 ppb		100
69)	1,2-Diphenylhydrazine	9.66	77	390616	18.39374 ppb		94
70)	4-Bromophenyl phenyl ether	10.04	248	100768	18.22640 ppb		94
71)	Hexachlorobenzene	10.13	284	99643	17.81524 ppb		93
72)	Atrazine	10.24	200	45987	9.11959 ppb		96
73)	Pentachlorophenol	10.36	266	52653	15.31431 ppb		98
74)	Phenanthrene	10.60	178	454835	18.27270 ppb		99
75)	Anthracene	10.66	178	477063	18.33464 ppb		99
76)	Carbazol	10.85	167	430950	18.19081 ppb		98
77)	Di-n-butylphthalate	11.25	149	590040	18.21407 ppb		99
78)	2-Nitrodiphenylamine	11.42	167	68173	9.25129 ppb		92
79)	Fluoranthene	11.98	202	523700	17.96250 ppb		98
81)	Benzidine	12.14	184	180875	19.42829 ppb		98
82)	Pyrene	12.25	202	546244	19.97649 ppb		99
84)	Butyl benzylphthalate	13.00	149	275238	20.08958 ppb		92
85)	3,3'-Dichlorobenzidine	13.61	252	192045	20.43603 ppb		98
86)	Benz (a) anthracene	13.65	228	571831	19.19829 ppb		99
87)	Bis (2-ethylhexyl) phthala	13.66	149	447267	19.53789 ppb		98
88)	Chrysene	13.69	228	522873	20.18493 ppb		100
89)	Di-n-octylphthalate	14.41	149	670387	19.83868 ppb	#	92
91)	Benzo (b) fluoranthene	14.94	252	580450	18.84998 ppb		99
92)	Benzo (k) fluoranthene	14.98	252	493722	17.78340 ppb		99
93)	Benzo (a) pyrene	15.40	252	504143	18.44727 ppb		98
94)	Indeno (1,2,3-cd) pyrene	17.33	276	588328	18.46750 ppb		99
95)	Dibenz (a,h) anthracene	17.37	278	521335	18.37025 ppb		99
96)	Benzo (g,h,i) perylene	17.90	276	472757	18.88564 ppb		99

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

Quantitation Report

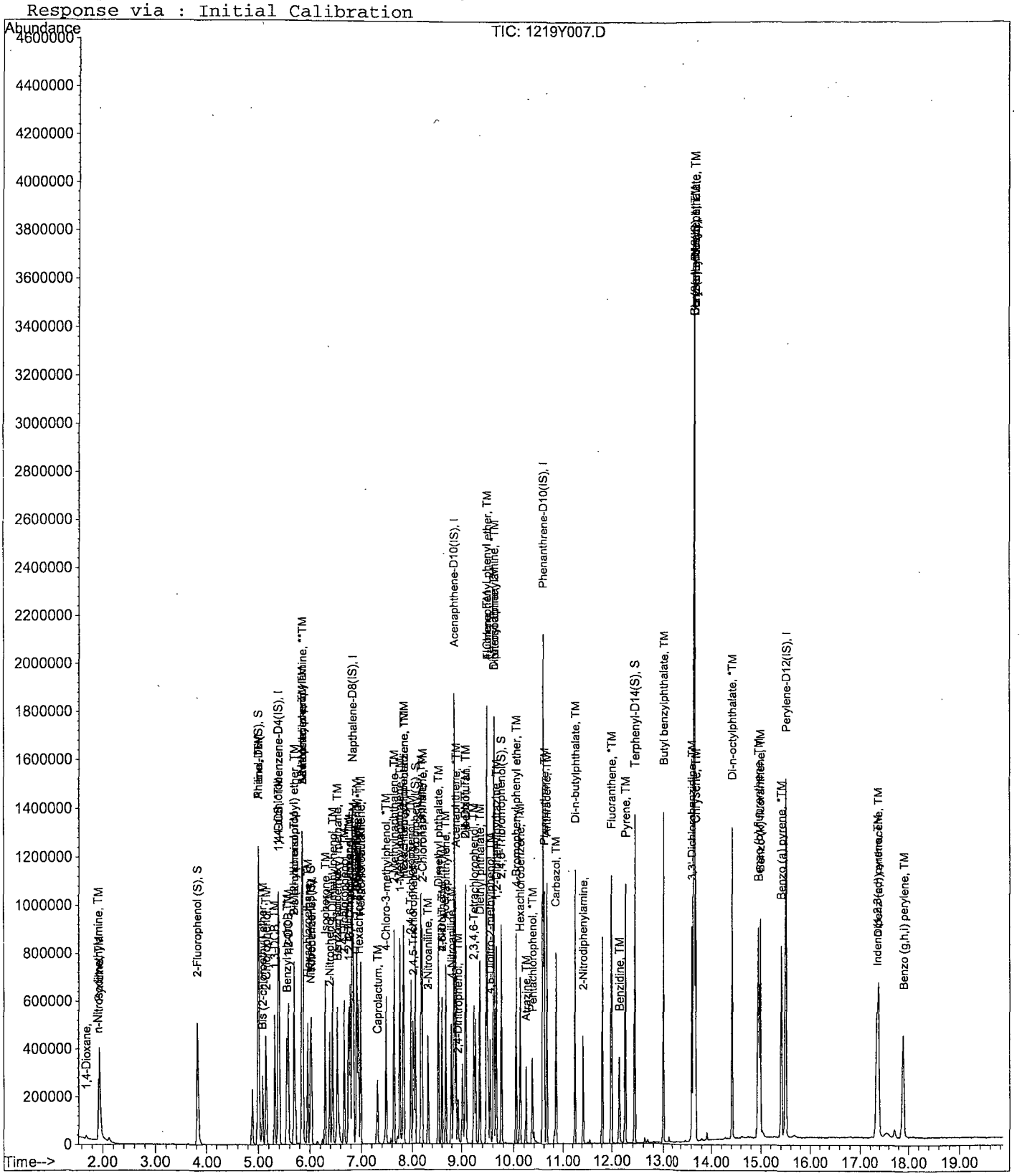
Data File : M:\YODA\DATA\Y191219\1219Y007.D
Acq On : 19 Dec 19 10:56
Sample : 20ug/ml 8270 11/21/19
Misc :

Vial: 7
Operator: MA,SS
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 20 12:40 2019

Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y008.D Vial: 8
Acq On : 19 Dec 19 11:24 Operator: MA,SS
Sample : 40ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.38	152	182216	40.00000 ppb		0.00
21) Napthalene-D8(IS)	6.82	136	710542	40.00000 ppb		0.00
41) Acenaphthene-D10(IS)	8.84	164	434485	40.00000 ppb		0.00
65) Phenanthrene-D10(IS)	10.58	188	813606	40.00000 ppb		0.00
80) Chrysene-D12(IS)	13.66	240	894163	40.00000 ppb		0.00
90) Perylene-D12(IS)	15.49	264	870632	40.00000 ppb		0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.82	112	480507	71.94609 ppb		0.00
Spiked Amount 200.000			Recovery = 35.973%			
6) Phenol-D6 (S)	5.00	99	600312	70.54921 ppb		0.00
Spiked Amount 200.000			Recovery = 35.275%			
22) Nitrobenzene-D5(S)	6.01	82	335277	37.94232 ppb		0.00
Spiked Amount 100.000			Recovery = 37.942%			
46) 2-Fluorobiphenyl(S)	8.06	172	596646	37.18391 ppb		0.00
Spiked Amount 100.000			Recovery = 37.184%			
64) 2,4,6-Tribromophenol(S)	9.77	330	201973	74.79872 ppb		0.00
Spiked Amount 200.000			Recovery = 37.400%			
83) Terphenyl-D14(S)	12.43	244	814625	38.20548 ppb		0.00
Spiked Amount 100.000			Recovery = 38.205%			
Target Compounds						Qvalue
3) n-Nitrosodimethylamine	1.91	42	188163	36.98470 ppb		96
4) Pyridine	1.93	79	440907	37.41201 ppb		99
7) Phenol	5.01	94	371632	37.00806 ppb		79
8) Aniline	5.01	93	258560	39.45523 ppb	#	91
9) Bis (2-chloroethyl) ether	5.08	63	174139	37.43306 ppb		97
10) 2-Chlorophenol	5.15	128	262410	37.11194 ppb		94
11) 1,3-DCB	5.31	146	288290	37.15515 ppb		99
12) 1,4-DCB	5.40	146	297071	37.41064 ppb		98
13) Benzyl alcohol	5.55	108	154077	36.99399 ppb		97
14) 1,2-DCB	5.57	146	270886	36.66402 ppb		100
15) 2-Methylphenol	5.69	107	228108	36.97000 ppb		98
16) Bis (2-chloroisopropyl) et	5.69	45	226589	36.93453 ppb	#	78
17) Acetophenone	5.83	105	393243	37.39230 ppb		98
18) 3&4-Methylphenol	5.85	107	593695	73.16504 ppb		97
19) n-Nitrosodi-n-propylamine	5.84	70	248031	36.66888 ppb		97
20) Hexachloroethane	5.95	117	122615	37.04471 ppb		94
23) Nitrobenzene	6.03	77	359196	39.22163 ppb		95
24) Isophorone	6.30	82	565650	39.14758 ppb		98
25) 2-Nitrophenol	6.39	139	147502	39.66353 ppb		93
26) 2,4-Dimethylphenol	6.45	122	229476	38.56303 ppb		98
27) Benzoic acid	6.58	105	202255	40.40161 ppb		99
28) Bis (2-chloroethoxy) metha	6.54	93	292655	39.02644 ppb		98
29) 2,4-Dichlorophenol	6.67	162	227943	39.28553 ppb		96
30) 1,2,4-Trichlorobenzene	6.75	180	254586	39.33847 ppb		96
31) 3,4-Dimethylphenol	6.78	107	383358	38.72525 ppb		98
32) Naphthalene	6.85	128	749802	38.78445 ppb		100
33) 4-Chloroaniline	6.91	127	308474	39.68328 ppb		97
34) 2,6-Dichlorophenol	6.92	162	219445	38.60574 ppb		97
35) Hexachloropropene	6.95	213	221138	39.48974 ppb		99
36) Hexachlorobutadiene	6.99	225	170617	38.86148 ppb		100
37) Caprolactum	7.32	55	100984	38.77985 ppb		95
38) 4-Chloro-3-methylphenol	7.48	107	271819	39.46556 ppb		95

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

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y008.D Vial: 8
Acq On : 19 Dec 19 11:24 Operator: MA,SS
Sample : 40ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
39)	2-Methylnaphthalene	7.63	142	502608	38.62970 ppb		99
40)	1-Methylnaphthalene	7.75	142	521546	38.54859 ppb		98
42)	Hexachlorocyclopentadiene	7.82	237	176384	36.58253 ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.83	216	268214	38.75357 ppb		97
44)	2,4,6-Trichlorophenol	7.97	196	176195	38.88432 ppb		99
45)	2,4,5-Trichlorophenol	8.02	196	192075	39.08438 ppb		94
47)	1,1'-Biphenyl	8.17	154	649127	38.52004 ppb		98
48)	2-Chloronaphthalene	8.20	162	521946	38.51358 ppb		97
49)	2-Nitroaniline	8.31	65	200138	38.89341 ppb		95
50)	Dimethyl phthalate	8.53	163	640502	38.55712 ppb		99
51)	2,6-DNT	8.60	165	142948	39.45629 ppb		86
52)	Acenaphthylene	8.67	152	814666	39.04333 ppb		99
53)	3-Nitroaniline	8.32	138	168892	39.27271 ppb		93
54)	Acenaphthene	8.88	154	504832	38.67929 ppb		99
55)	2,4-Dinitrophenol	8.92	184	74846	36.78536 ppb		86
56)	4-Nitrophenol	8.60	65	13109	38.71590 ppb		95
57)	Dibenzofuran	9.08	168	753264	37.99707 ppb		98
58)	2,4-DNT	9.07	165	207839	39.01941 ppb		89
59)	2,3,4,6-Tetrachlorophenol	9.23	232	147125	39.47119 ppb		94
60)	Diethyl phthalate	9.35	149	671228	39.00159 ppb		98
61)	4-Chlorophenyl phenyl ethe	9.47	204	352091	36.94829 ppb		88
62)	Fluorene	9.48	166	641030	38.00953 ppb		98
63)	4-Nitroaniline	8.79	138	141770	39.56230 ppb		88
66)	4,6-Dinitro-2-methylphenol	9.56	198	122593	38.64878 ppb		99
67)	Diphenyl amine	9.62	169	1020591	77.05626 ppb		100
68)	n-Nitrosodiphenylamine	9.62	169	1020591	77.05626 ppb		100
69)	1,2-Diphenylhydrazine	9.66	77	751770	39.24670 ppb		94
70)	4-Bromophenyl phenyl ether	10.05	248	199129	39.93106 ppb		88
71)	Hexachlorobenzene	10.12	284	196806	39.01049 ppb	#	84
72)	Atrazine	10.24	200	89439	19.66371 ppb		99
73)	Pentachlorophenol	10.35	266	112272	36.20294 ppb		96
74)	Phenanthrene	10.60	178	877664	39.09087 ppb		99
75)	Anthracene	10.66	178	919645	39.18457 ppb		99
76)	Carbazol	10.85	167	830000	38.84199 ppb		98
77)	Di-n-butylphthalate	11.25	149	1156611	39.58322 ppb		98
78)	2-Nitrodiphenylamine	11.42	167	137354	20.66472 ppb		92
79)	Fluoranthene	11.99	202	1038608	39.49426 ppb		98
81)	Benzidine	12.14	184	334522	36.65784 ppb		99
82)	Pyrene	12.26	202	1083004	40.40627 ppb		100
84)	Butyl benzylphthalate	13.00	149	541594	40.32946 ppb		87
85)	3,3'-Dichlorobenzidine	13.61	252	372475	40.43680 ppb		100
86)	Benz (a) anthracene	13.65	228	1137597	38.96454 ppb		99
87)	Bis (2-ethylhexyl) phthala	13.66	149	880088	39.22141 ppb		97
88)	Chrysene	13.69	228	1034971	40.76106 ppb		99
89)	Di-n-octylphthalate	14.41	149	1322580	39.92965 ppb		97
91)	Benzo (b) fluoranthene	14.95	252	1137431	39.99867 ppb		98
92)	Benzo (k) fluoranthene	14.99	252	981428	38.27939 ppb		98
93)	Benzo (a) pyrene	15.40	252	980057	38.83327 ppb		98
94)	Indeno (1,2,3-cd) pyrene	17.34	276	1157206	39.33449 ppb		99
95)	Dibenz (a,h) anthracene	17.37	278	1022289	39.00732 ppb		98
96)	Benzo (g,h,i) perylene	17.91	276	908299	39.29134 ppb		98

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

Quantitation Report

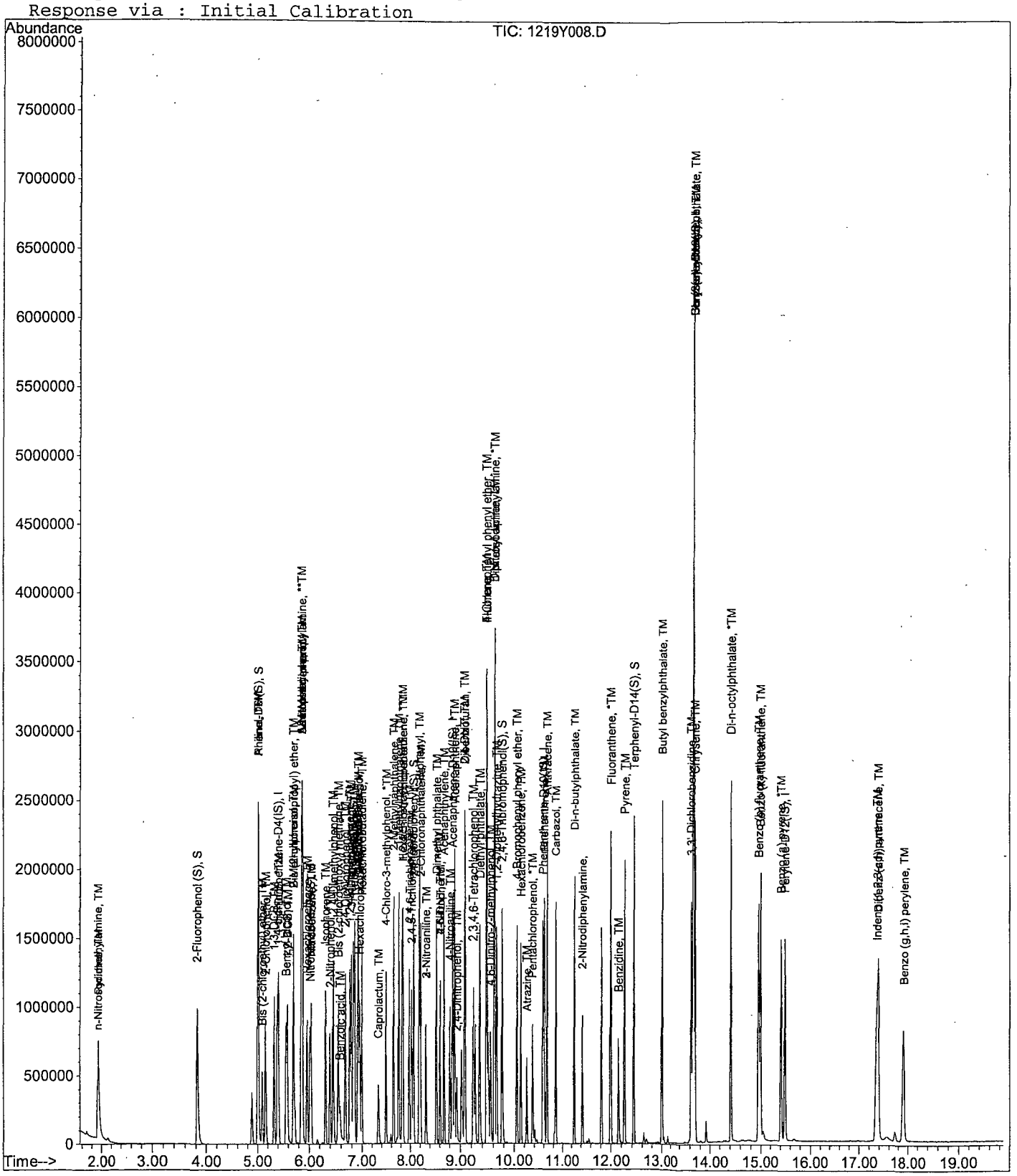
Data File : M:\YODA\DATA\Y191219\1219Y008.D
Acq On : 19 Dec 19 11:24
Sample : 40ug/ml 8270 11/21/19
Misc :

Vial: 8
Operator: MA,SS
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 20 12:40 2019

Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y009.D Vial: 9
Acq On : 19 Dec 19 11:51 Operator: MA,SS
Sample : 60ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.38	152	160953	40.00000	ppb	0.00
21) Napthalene-D8(IS)	6.82	136	685348	40.00000	ppb	0.00
41) Acenaphthene-D10(IS)	8.84	164	424996	40.00000	ppb	0.00
65) Phenanthrene-D10(IS)	10.57	188	796514	40.00000	ppb	0.00
80) Chrysene-D12(IS)	13.67	240	1005038	40.00000	ppb	0.00
90) Perylene-D12(IS)	15.49	264	865168	40.00000	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.82	112	753971	127.80550	ppb	0.00
Spiked Amount 200.000			Recovery = 63.903%			
6) Phenol-D6 (S)	5.00	99	965746	128.48885	ppb	0.00
Spiked Amount 200.000			Recovery = 64.245%			
22) Nitrobenzene-D5(S)	6.01	82	517338	60.69782	ppb	0.00
Spiked Amount 100.000			Recovery = 60.698%			
46) 2-Fluorobiphenyl(S)	8.06	172	952099	60.66112	ppb	0.00
Spiked Amount 100.000			Recovery = 60.661%			
64) 2,4,6-Tribromophenol(S)	9.77	330	330216	125.02270	ppb	0.00
Spiked Amount 200.000			Recovery = 62.512%			
83) Terphenyl-D14(S)	12.43	244	1317552	54.97558	ppb	0.00
Spiked Amount 100.000			Recovery = 54.976%			
Target Compounds						Qvalue
3) n-Nitrosodimethylamine	1.91	42	292234	65.02884	ppb	100
4) Pyridine	1.92	79	684285	65.73377	ppb	98
7) Phenol	5.02	94	596449	67.24251	ppb	95
8) Aniline	5.01	93	400896	69.25679	ppb	95
9) Bis (2-chloroethyl) ether	5.09	63	270061	65.72167	ppb	94
10) 2-Chlorophenol	5.15	128	411267	65.84829	ppb	99
11) 1,3-DCB	5.31	146	444136	64.80266	ppb	98
12) 1,4-DCB	5.40	146	459470	65.50576	ppb	96
13) Benzyl alcohol	5.54	108	241965	65.77083	ppb	97
14) 1,2-DCB	5.57	146	428400	65.64329	ppb	99
15) 2-Methylphenol	5.68	107	361008	66.23892	ppb	99
16) Bis (2-chloroisopropyl) et	5.69	45	356163	65.72491	ppb	99
17) Acetophenone	5.84	105	617676	66.49198	ppb	99
18) 3&4-Methylphenol	5.86	107	952694	132.91717	ppb	99
19) n-Nitrosodi-n-propylamine	5.85	70	402101	67.29988	ppb	98
20) Hexachloroethane	5.95	117	190409	65.12647	ppb	97
23) Nitrobenzene	6.04	77	557986	63.16784	ppb	99
24) Isophorone	6.31	82	872286	62.58851	ppb	99
25) 2-Nitrophenol	6.39	139	230690	64.31331	ppb	99
26) 2,4-Dimethylphenol	6.44	122	359953	62.71309	ppb	100
27) Benzoic acid	6.60	105	293487	58.72692	ppb	99
28) Bis (2-chloroethoxy) metha	6.55	93	457869	63.30278	ppb	97
29) 2,4-Dichlorophenol	6.68	162	357701	63.91535	ppb	100
30) 1,2,4-Trichlorobenzene	6.76	180	400374	64.13977	ppb	98
31) 3,4-Dimethylphenol	6.79	107	600730	62.91404	ppb	100
32) Naphthalene	6.84	128	1176746	63.10625	ppb	99
33) 4-Chloroaniline	6.91	127	471729	62.91587	ppb	98
34) 2,6-Dichlorophenol	6.92	162	349158	63.68349	ppb	98
35) Hexachloropropene	6.95	213	349669	64.73761	ppb	100
36) Hexachlorobutadiene	6.98	225	268805	63.47650	ppb	100
37) Caprolactum	7.34	55	155158	61.77408	ppb	97
38) 4-Chloro-3-methylphenol	7.48	107	426464	64.19474	ppb	100

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

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y009.D Vial: 9
Acq On : 19 Dec 19 11:51 Operator: MA,SS
Sample : 60ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
39) 2-Methylnaphthalene	7.63	142	793770	63.25069 ppb		99
40) 1-Methylnaphthalene	7.75	142	832076	63.76134 ppb		100
42) Hexachlorocyclopentadiene	7.82	237	306752	62.07183 ppb		99
43) 1,2,4,5-Tetrachlorobenzene	7.84	216	425660	62.87574 ppb		99
44) 2,4,6-Trichlorophenol	7.97	196	281816	63.58234 ppb		98
45) 2,4,5-Trichlorophenol	8.02	196	301154	62.64854 ppb		97
47) 1,1'-Biphenyl	8.18	154	1027471	62.33279 ppb		97
48) 2-Chloronaphthalene	8.20	162	825988	62.30917 ppb		99
49) 2-Nitroaniline	8.32	65	317213	63.02131 ppb		100
50) Dimethyl phthalate	8.53	163	1013833	62.39365 ppb		99
51) 2,6-DNT	8.61	165	226254	63.84462 ppb		99
52) Acenaphthylene	8.68	152	1289574	63.18347 ppb		100
53) 3-Nitroaniline	8.32	138	266968	63.46450 ppb		100
54) Acenaphthene	8.89	154	800171	62.67644 ppb		100
55) 2,4-Dinitrophenol	8.93	184	126506	58.66929 ppb	#	78
56) 4-Nitrophenol	8.60	65	20413	61.63346 ppb		97
57) Dibenzofuran	9.08	168	1226638	63.25710 ppb		99
58) 2,4-DNT	9.07	165	335087	64.31335 ppb		96
59) 2,3,4,6-Tetrachlorophenol	9.24	232	239911	65.80120 ppb		99
60) Diethyl phthalate	9.35	149	1040635	61.81596 ppb		99
61) 4-Chlorophenyl phenyl ethe	9.48	204	587260	63.00279 ppb		99
62) Fluorene	9.48	166	1063405	64.46185 ppb		99
63) 4-Nitroaniline	8.80	138	220693	62.96160 ppb		95
66) 4,6-Dinitro-2-methylphenol	9.56	198	198681	63.98043 ppb		99
67) Diphenyl amine	9.63	169	1652863	127.47170 ppb		100
68) n-Nitrosodiphenylamine	9.63	169	1652863	127.47170 ppb		100
69) 1,2-Diphenylhydrazine	9.67	77	1183313	63.10133 ppb		99
70) 4-Bromophenyl phenyl ether	10.05	248	310984	63.69937 ppb		97
71) Hexachlorobenzene	10.13	284	320014	64.79369 ppb		100
72) Atrazine	10.24	200	138142	31.02308 ppb		96
73) Pentachlorophenol	10.36	266	186384	61.39058 ppb		99
74) Phenanthrene	10.60	178	1384259	62.97746 ppb		99
75) Anthracene	10.66	178	1445744	62.92265 ppb		99
76) Carbazol	10.85	167	1323037	63.24352 ppb		99
77) Di-n-butylphthalate	11.25	149	1860030	65.02262 ppb		99
78) 2-Nitrodiphenylamine	11.42	167	216308	33.24157 ppb		91
79) Fluoranthene	11.99	202	1641246	63.74949 ppb		99
81) Benzidine	12.14	184	513732	50.08562 ppb		99
82) Pyrene	12.25	202	1718860	57.05497 ppb		100
84) Butyl benzylphthalate	13.00	149	861484	57.07291 ppb		96
85) 3,3'-Dichlorobenzidine	13.62	252	573326	55.37523 ppb		98
86) Benz (a) anthracene	13.65	228	1901953	57.95823 ppb		100
87) Bis (2-ethylhexyl) phthala	13.67	149	1500100	59.47733 ppb		99
88) Chrysene	13.69	228	1612879	56.51364 ppb		100
89) Di-n-octylphthalate	14.41	149	2164466	58.13779 ppb	#	89
91) Benzo (b) fluoranthene	14.96	252	1834489	64.91869 ppb		99
92) Benzo (k) fluoranthene	14.99	252	1524121	59.82190 ppb		99
93) Benzo (a) pyrene	15.41	252	1574220	62.77002 ppb		98
94) Indeno (1,2,3-cd) pyrene	17.36	276	1835591	62.78747 ppb		99
95) Dibenz (a,h) anthracene	17.39	278	1644729	63.15402 ppb		99
96) Benzo (g,h,i) perylene	17.92	276	1423801	61.97998 ppb		98

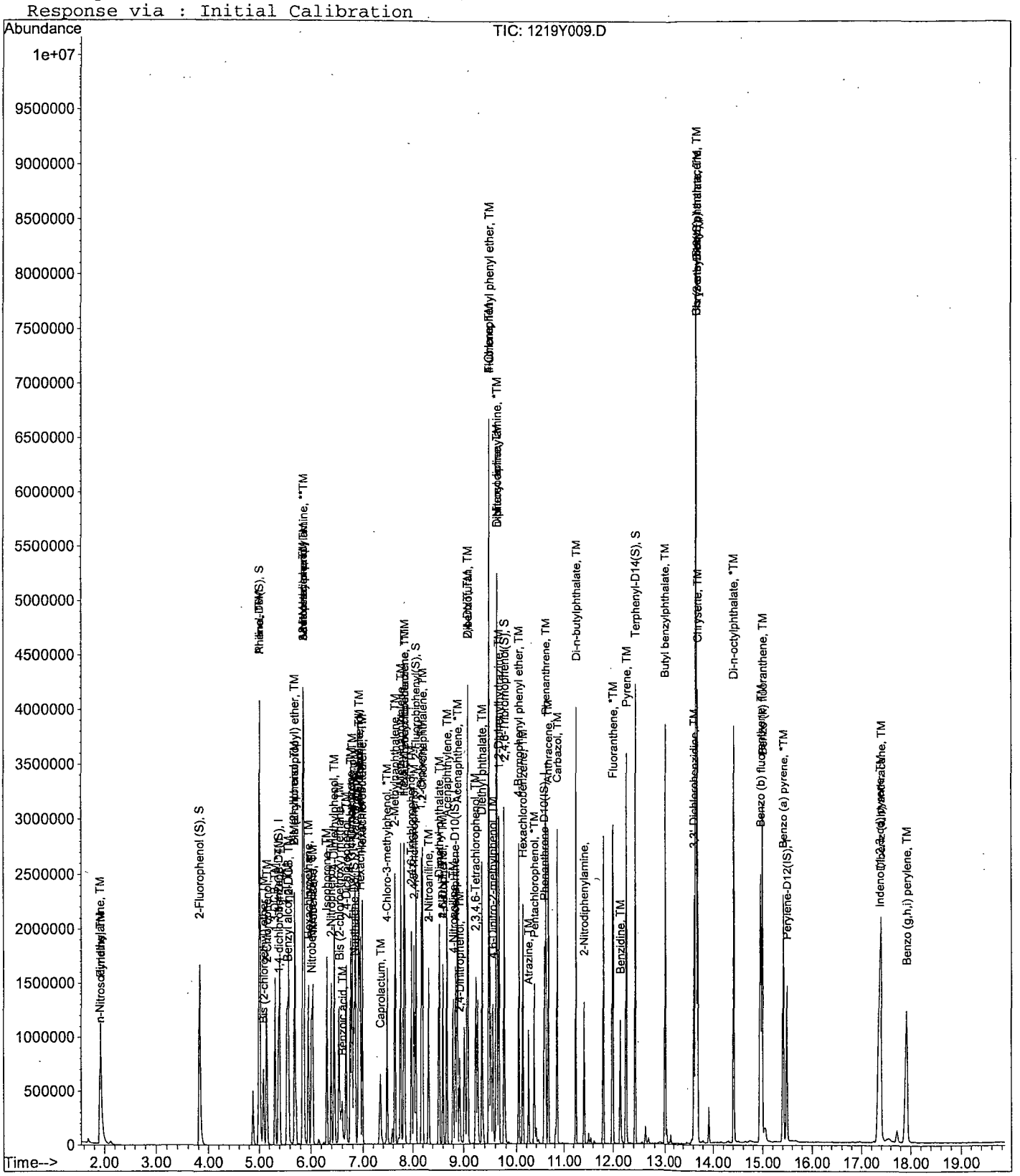
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y009.D Vial: 9
Acq On : 19 Dec 19 11:51 Operator: MA,SS
Sample : 60ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y010.D Vial: 10
Acq On : 19 Dec 19 12:19 Operator: MA,SS
Sample : 80ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.38	152	160754	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.83	136	692959	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.84	164	424996	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.58	188	805372	40.00000 ppb	0.00
80) Chrysene-D12(IS)	13.67	240	1113628	40.00000 ppb	0.00
90) Perylene-D12(IS)	15.49	264	871956	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.82	112	1075001	182.44881 ppb	0.00
Spiked Amount 200.000			Recovery =	91.225%	
6) Phenol-D6 (S)	5.01	99	1420883	189.27713 ppb	0.01
Spiked Amount 200.000			Recovery =	94.638%	
22) Nitrobenzene-D5(S)	6.02	82	726169	84.26361 ppb	0.01
Spiked Amount 100.000			Recovery =	84.264%	
46) 2-Fluorobiphenyl(S)	8.06	172	1352303	86.15933 ppb	0.00
Spiked Amount 100.000			Recovery =	86.159%	
64) 2,4,6-Tribromophenol(S)	9.78	330	496073	187.81763 ppb	0.01
Spiked Amount 200.000			Recovery =	93.909%	
83) Terphenyl-D14(S)	12.43	244	1883191	70.91511 ppb	0.00
Spiked Amount 100.000			Recovery =	70.915%	
Target Compounds					Qvalue
3) n-Nitrosodimethylamine	1.91	42	401885	89.53944 ppb	99
4) Pyridine	1.93	79	934760	89.90605 ppb	98
7) Phenol	5.02	94	839274	94.73526 ppb	88
8) Aniline	5.01	93	498688	86.25749 ppb	85
9) Bis (2-chloroethyl) ether	5.09	63	369777	90.09981 ppb	97
10) 2-Chlorophenol	5.16	128	564852	90.55087 ppb	97
11) 1,3-DCB	5.31	146	617727	90.24242 ppb	99
12) 1,4-DCB	5.41	146	635798	90.75672 ppb	96
13) Benzyl alcohol	5.55	108	342328	93.16664 ppb	96
14) 1,2-DCB	5.57	146	592153	90.84732 ppb	100
15) 2-Methylphenol	5.69	107	504104	92.60913 ppb	99
16) Bis (2-chloroisopropyl) et	5.69	45	497984	92.00976 ppb	91
17) Acetophenone	5.85	105	867366	93.48636 ppb	88
18) 3&4-Methylphenol	5.87	107	1364847	190.65532 ppb	96
19) n-Nitrosodi-n-propylamine	5.85	70	570874	95.66579 ppb	96
20) Hexachloroethane	5.95	117	268399	91.91539 ppb	98
23) Nitrobenzene	6.04	77	764484	85.59428 ppb	97
24) Isophorone	6.32	82	1217808	86.42078 ppb	99
25) 2-Nitrophenol	6.39	139	319613	88.12521 ppb	99
26) 2,4-Dimethylphenol	6.45	122	504451	86.92306 ppb	97
27) Benzoic acid	6.62	105	419869	81.40378 ppb	98
28) Bis (2-chloroethoxy) metha	6.55	93	640818	87.62335 ppb	98
29) 2,4-Dichlorophenol	6.68	162	502883	88.87008 ppb	99
30) 1,2,4-Trichlorobenzene	6.76	180	558246	88.44856 ppb	99
31) 3,4-Dimethylphenol	6.79	107	839926	86.99873 ppb	99
32) Naphthalene	6.84	128	1644894	87.24311 ppb	100
33) 4-Chloroaniline	6.92	127	636919	84.01473 ppb	94
34) 2,6-Dichlorophenol	6.93	162	502385	90.62439 ppb	94
35) Hexachloropropene	6.95	213	488764	89.49574 ppb	100
36) Hexachlorobutadiene	6.98	225	378957	88.50528 ppb	99
37) Caprolactum	7.36	55	217497	85.64244 ppb	97
38) 4-Chloro-3-methylphenol	7.49	107	599365	89.23025 ppb	95

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

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y010.D Vial: 10
Acq On : 19 Dec 19 12:19 Operator: MA,SS
Sample : 80ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	2-Methylnaphthalene	7.63	142	1113998	87.79274	ppb		100
40)	1-Methylnaphthalene	7.75	142	1172330	88.84806	ppb		99
42)	Hexachlorocyclopentadiene	7.82	237	428800	85.24955	ppb		98
43)	1,2,4,5-Tetrachlorobenzene	7.84	216	615504	90.91826	ppb		100
44)	2,4,6-Trichlorophenol	7.97	196	393255	88.72482	ppb		100
45)	2,4,5-Trichlorophenol	8.02	196	421934	87.77419	ppb		97
47)	1,1'-Biphenyl	8.18	154	1475278	89.49955	ppb		97
48)	2-Chloronaphthalene	8.20	162	1174670	88.61232	ppb		99
49)	2-Nitroaniline	8.32	65	442197	87.85212	ppb		97
50)	Dimethyl phthalate	8.53	163	1419958	87.38754	ppb		100
51)	2,6-DNT	8.61	165	321665	90.76781	ppb		90
52)	Acenaphthylene	8.68	152	1796603	88.02567	ppb		100
53)	3-Nitroaniline	8.32	138	365367	86.85624	ppb		96
54)	Acenaphthene	8.89	154	1132422	88.70127	ppb		100
55)	2,4-Dinitrophenol	8.93	184	181951	81.43622	ppb		87
56)	4-Nitrophenol	8.61	65	28530	86.14131	ppb		100
57)	Dibenzofuran	9.08	168	1771319	91.34602	ppb		99
58)	2,4-DNT	9.08	165	492992	94.62011	ppb		89
59)	2,3,4,6-Tetrachlorophenol	9.24	232	331804	91.00501	ppb		99
60)	Diethyl phthalate	9.36	149	1448375	86.03660	ppb		97
61)	4-Chlorophenyl phenyl ethe	9.48	204	883654	94.80072	ppb		99
62)	Fluorene	9.48	166	1569501	95.14055	ppb		100
63)	4-Nitroaniline	8.80	138	289183	82.50114	ppb		92
66)	4,6-Dinitro-2-methylphenol	9.56	198	286670	91.29983	ppb	#	77
67)	Diphenyl amine	9.63	169	2378602	181.42435	ppb		100
68)	n-Nitrosodiphenylamine	9.63	169	2378602	181.42435	ppb		100
69)	1,2-Diphenylhydrazine	9.67	77	1671934	88.17691	ppb		99
70)	4-Bromophenyl phenyl ether	10.05	248	446909	90.53429	ppb		96
71)	Hexachlorobenzene	10.13	284	447867	89.68291	ppb		96
72)	Atrazine	10.25	200	193291	42.93067	ppb		99
73)	Pentachlorophenol	10.36	266	272701	88.83349	ppb		100
74)	Phenanthrene	10.60	178	1957324	88.06988	ppb		100
75)	Anthracene	10.67	178	2064260	88.85398	ppb		100
76)	Carbazol	10.85	167	1880718	88.91287	ppb		99
77)	Di-n-butylphthalate	11.25	149	2576769	89.08752	ppb		99
78)	2-Nitrodiphenylamine	11.43	167	300682	45.69969	ppb		97
79)	Fluoranthene	12.00	202	2372919	91.15549	ppb		99
81)	Benzidine	12.14	184	645213	56.77039	ppb		100
82)	Pyrene	12.26	202	2459441	73.67696	ppb		100
84)	Butyl benzylphthalate	13.00	149	1236168	73.90991	ppb		99
85)	3,3'-Dichlorobenzidine	13.62	252	786783	68.58216	ppb		100
86)	Benz (a) anthracene	13.66	228	2811632	77.32433	ppb		100
87)	Bis (2-ethylhexyl) phthala	13.67	149	2233399	79.91714	ppb		98
88)	Chrysene	13.69	228	2371032	74.97755	ppb		100
89)	Di-n-octylphthalate	14.42	149	3105415	75.27828	ppb		100
91)	Benzo (b) fluoranthene	14.96	252	2455809	86.22935	ppb		99
92)	Benzo (k) fluoranthene	14.99	252	2306290	89.81741	ppb		99
93)	Benzo (a) pyrene	15.42	252	2209159	87.40166	ppb		99
94)	Indeno (1,2,3-cd) pyrene	17.37	276	2551188	86.58555	ppb		98
95)	Dibenz (a,h) anthracene	17.41	278	2321142	88.43297	ppb		99
96)	Benzo (g,h,i) perylene	17.94	276	1961989	84.74315	ppb		99

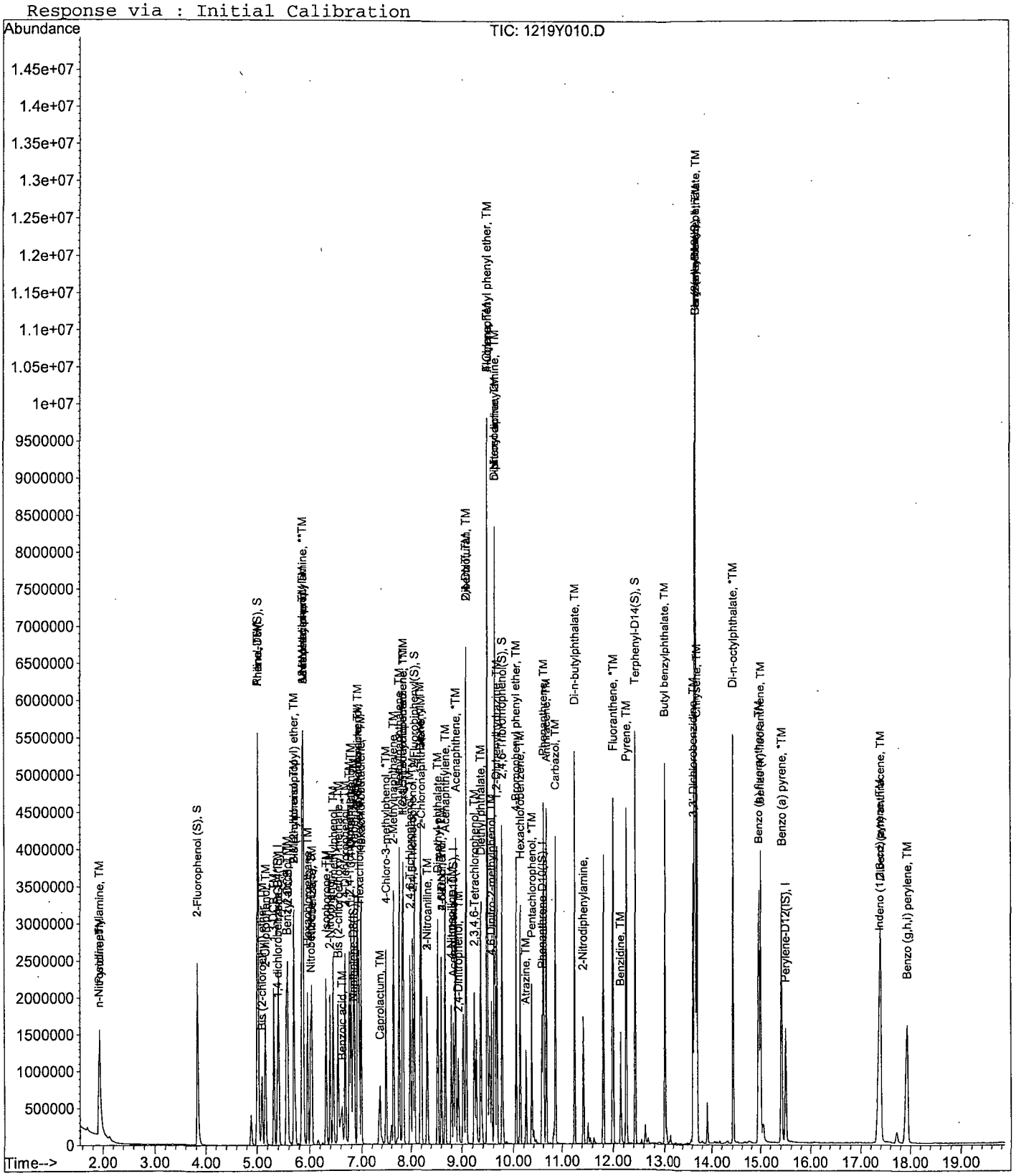
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y010.D Vial: 10
Acq On : 19 Dec 19 12:19 Operator: MA,SS
Sample : 80ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y011.D Vial: 11
Acq On : 19 Dec 19 12:46 Operator: MA,SS
Sample : 100ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.39	152	167721	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.82	136	690825	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.85	164	415501	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.57	188	801375	40.00000 ppb	0.00
80) Chrysene-D12(IS)	13.66	240	1091847	40.00000 ppb	0.00
90) Perylene-D12(IS)	15.49	264	847047	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.83	112	1327145	215.88621 ppb	0.00
Spiked Amount 200.000			Recovery = 107.943%		
6) Phenol-D6 (S)	5.00	99	1768177	225.75631 ppb	0.00
Spiked Amount 200.000			Recovery = 112.878%		
22) Nitrobenzene-D5(S)	6.02	82	888862	103.46088 ppb	0.00
Spiked Amount 100.000			Recovery = 103.461%		
46) 2-Fluorobiphenyl(S)	8.06	172	1696969	110.58977 ppb	0.00
Spiked Amount 100.000			Recovery = 110.590%		
64) 2,4,6-Tribromophenol(S)	9.78	330	649730	251.61496 ppb	0.00
Spiked Amount 200.000			Recovery = 125.808%		
83) Terphenyl-D14(S)	12.44	244	2470353	94.88156 ppb	0.00
Spiked Amount 100.000			Recovery = 94.882%		
Target Compounds					Qvalue
3) n-Nitrosodimethylamine	1.90	42	444670	94.95651 ppb	93
4) Pyridine	1.92	79	1054326	97.19369 ppb	99
7) Phenol	5.02	94	975068	105.49142 ppb	96
8) Aniline	5.01	93	532480	88.27659 ppb	97
9) Bis (2-chloroethyl) ether	5.09	63	422559	98.68376 ppb	98
10) 2-Chlorophenol	5.15	128	643242	98.83407 ppb	96
11) 1,3-DCB	5.32	146	705388	98.76806 ppb	98
12) 1,4-DCB	5.40	146	726887	99.44911 ppb	97
13) Benzyl alcohol	5.55	108	388291	101.28607 ppb	99
14) 1,2-DCB	5.57	146	689593	101.40173 ppb	99
15) 2-Methylphenol	5.69	107	576392	101.49063 ppb	99
16) Bis (2-chloroisopropyl) et	5.69	45	566462	100.31448 ppb	80
17) Acetophenone	5.85	105	992228	102.50184 ppb	98
18) 3&4-Methylphenol	5.87	107	1564530	209.47066 ppb	100
19) n-Nitrosodi-n-propylamine	5.86	70	649091	104.25487 ppb	100
20) Hexachloroethane	5.95	117	306272	100.52845 ppb	93
23) Nitrobenzene	6.04	77	875644	98.34300 ppb	93
24) Isophorone	6.31	82	1364800	97.15113 ppb	100
25) 2-Nitrophenol	6.40	139	362836	100.35190 ppb	90
26) 2,4-Dimethylphenol	6.45	122	582120	100.61623 ppb	97
27) Benzoic acid	6.63	105	476161	92.04260 ppb	97
28) Bis (2-chloroethoxy) metha	6.55	93	732731	100.50073 ppb	100
29) 2,4-Dichlorophenol	6.68	162	567413	100.58365 ppb	96
30) 1,2,4-Trichlorobenzene	6.76	180	635162	100.94600 ppb	98
31) 3,4-Dimethylphenol	6.80	107	956954	99.42657 ppb	97
32) Naphthalene	6.85	128	1900914	101.13354 ppb	100
33) 4-Chloroaniline	6.92	127	702041	92.89091 ppb	97
34) 2,6-Dichlorophenol	6.93	162	571198	103.35574 ppb	96
35) Hexachloropropene	6.94	213	564125	103.61389 ppb	100
36) Hexachlorobutadiene	6.99	225	434421	101.77230 ppb	99
37) Caprolactum	7.36	55	246611	97.40644 ppb	95
38) 4-Chloro-3-methylphenol	7.48	107	669864	100.03382 ppb	91

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

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y011.D Vial: 11
Acq On : 19 Dec 19 12:46 Operator: MA,SS
Sample : 100ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
39)	2-Methylnaphthalene	7.64	142	1291010	102.05711 ppb		99
40)	1-Methylnaphthalene	7.75	142	1334685	101.46501 ppb		100
42)	Hexachlorocyclopentadiene	7.82	237	423680	86.11588 ppb		100
43)	1,2,4,5-Tetrachlorobenzene	7.84	216	703291	106.25957 ppb		98
44)	2,4,6-Trichlorophenol	7.97	196	450783	104.02822 ppb		99
45)	2,4,5-Trichlorophenol	8.03	196	477360	101.57366 ppb		94
47)	1,1'-Biphenyl	8.18	154	1686770	104.66841 ppb		98
48)	2-Chloronaphthalene	8.21	162	1339298	103.33995 ppb		97
49)	2-Nitroaniline	8.33	65	495048	100.59966 ppb		91
50)	Dimethyl phthalate	8.53	163	1597157	100.53896 ppb		99
51)	2,6-DNT	8.61	165	360589	104.07665 ppb	#	75
52)	Acenaphthylene	8.68	152	2048709	102.67159 ppb		99
53)	3-Nitroaniline	8.33	138	418230	101.69501 ppb		96
54)	Acenaphthene	8.88	154	1288641	103.24434 ppb		99
55)	2,4-Dinitrophenol	8.93	184	208042	94.10192 ppb		96
56)	4-Nitrophenol	8.61	65	33255	102.70213 ppb		98
57)	Dibenzofuran	9.09	168	2035181	107.35164 ppb		93
58)	2,4-DNT	9.08	165	558092	109.56255 ppb		97
59)	2,3,4,6-Tetrachlorophenol	9.24	232	377431	105.88489 ppb		96
60)	Diethyl phthalate	9.36	149	1638573	99.55906 ppb		99
61)	4-Chlorophenyl phenyl ethe	9.48	204	1013272	111.19063 ppb		94
62)	Fluorene	9.49	166	1826006	113.21893 ppb		99
63)	4-Nitroaniline	8.80	138	325641	95.02525 ppb		82
66)	4,6-Dinitro-2-methylphenol	9.57	198	325138	104.06776 ppb		97
67)	Diphenyl amine	9.63	169	2746000	210.49174 ppb		100
68)	n-Nitrosodiphenylamine	9.63	169	2746000	210.49174 ppb		100
69)	1,2-Diphenylhydrazine	9.66	77	1846029	97.84419 ppb		96
70)	4-Bromophenyl phenyl ether	10.05	248	515407	104.93130 ppb		83
71)	Hexachlorobenzene	10.13	284	515422	103.72521 ppb		89
72)	Atrazine	10.25	200	217511	48.55098 ppb		96
73)	Pentachlorophenol	10.36	266	321253	105.17146 ppb		98
74)	Phenanthrene	10.60	178	2272938	102.78104 ppb		100
75)	Anthracene	10.67	178	2388824	103.33737 ppb		100
76)	Carbazol	10.86	167	2146142	101.96712 ppb		98
77)	Di-n-butylphthalate	11.26	149	3023885	105.06726 ppb		98
78)	2-Nitrodiphenylamine	11.43	167	350286	53.50438 ppb		97
79)	Fluoranthene	11.99	202	2652267	102.39480 ppb		98
81)	Benzidine	12.14	184	709638	63.68453 ppb		99
82)	Pyrene	12.26	202	2834840	86.61682 ppb		99
84)	Butyl benzylphthalate	13.01	149	1433320	87.40709 ppb	#	79
85)	3,3'-Dichlorobenzidine	13.62	252	875135	77.80538 ppb		99
86)	Benz (a) anthracene	13.66	228	3190283	89.48810 ppb		100
87)	Bis (2-ethylhexyl) phthala	13.66	149	2564215	93.58504 ppb		99
88)	Chrysene	13.70	228	2706844	87.30426 ppb		100
89)	Di-n-octylphthalate	14.42	149	3511144	86.81146 ppb		97
91)	Benzo (b) fluoranthene	14.95	252	2718531	98.26115 ppb		98
92)	Benzo (k) fluoranthene	15.00	252	2709650	108.62927 ppb		99
93)	Benzo (a) pyrene	15.42	252	2492274	101.50223 ppb		98
94)	Indeno (1,2,3-cd) pyrene	17.37	276	2878800	100.57766 ppb		100
95)	Dibenz (a,h) anthracene	17.40	278	2618904	102.71152 ppb		99
96)	Benzo (g,h,i) perylene	17.94	276	2213051	98.39806 ppb		100

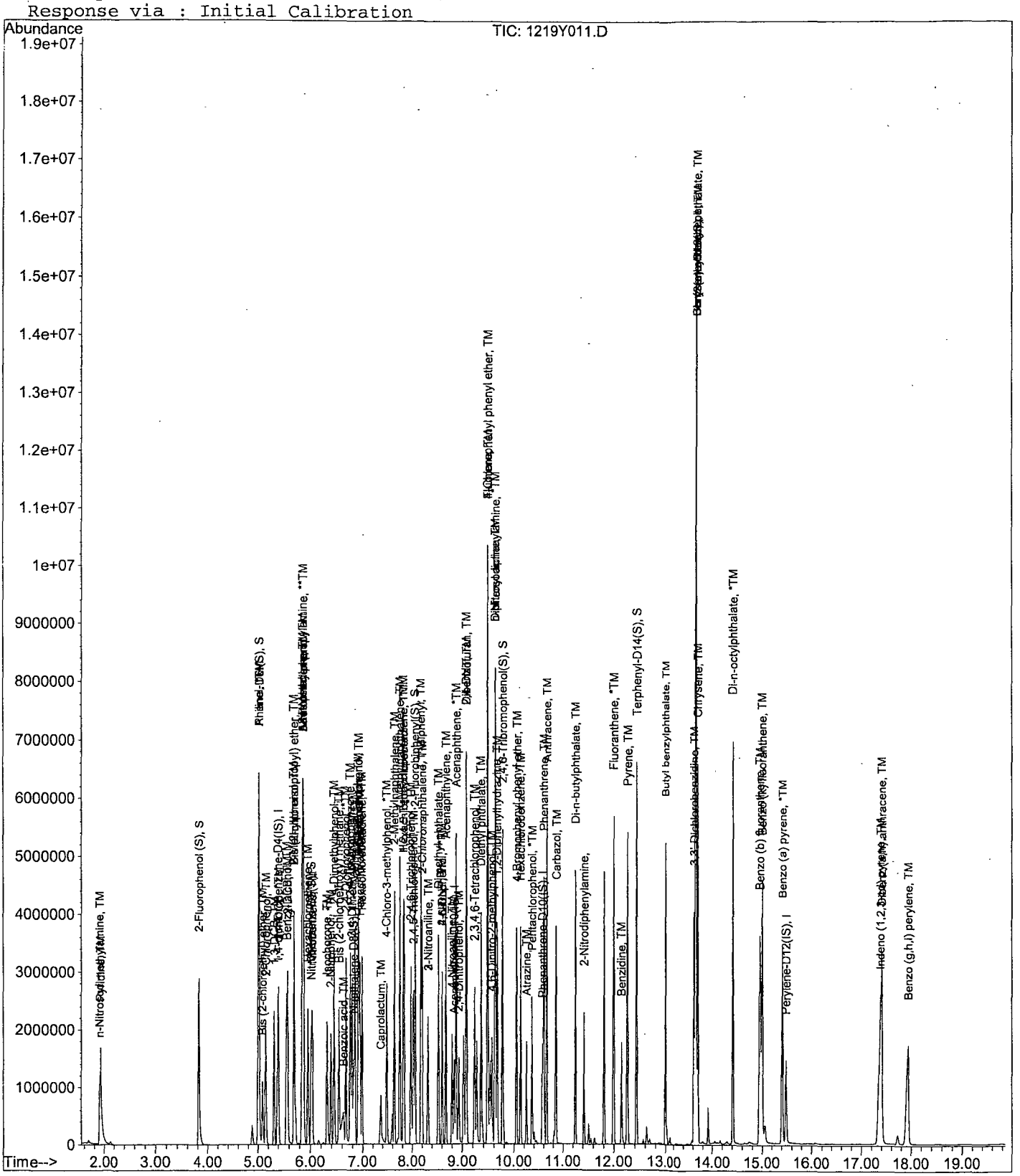
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y011.D Vial: 11
Acq On : 19 Dec 19 12:46 Operator: MA,SS
Sample : 100ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration



Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 12/19/19
Matrix: Instrument: Yoda
Initial Cal. Date: 12/19/19
Data File: 1219Y012.D

		Compound	MEAN	CCRF	%D		%Drift
1		1,4-Dioxane	0.6022	0.6376	5.9		
2	TM	n-Nitrosodimethylamine	1.117	1.180	5.6	TM	
3	TM	Pyridine	2.587	2.639	2.0	TM	
4	*TM	Phenol	2.204	2.243	1.7	*TM	
5	TM	Aniline	1.439	1.657	15	TM	
6	TM	Bis (2-chloroethyl) ether	1.021	1.080	5.7	TM	
7	TM	2-Chlorophenol	1.552	1.607	3.6	TM	
8	TM	1,3-DCB	1.703	1.753	2.9	TM	
9	*TM	1,4-DCB	1.743	1.793	2.8	*TM	
10	TM	Benzyl alcohol	0.9143	0.9743	6.6	TM	
11	TM	1,2-DCB	1.622	1.674	3.2	TM	
12	TM	2-Methylphenol	1.354	1.404	3.7	TM	
13	TM	Bis (2-chloroisopropyl) ether	1.347	1.393	3.4	TM	
14	TM	Acetophenone	2.309	2.421	4.9	TM	
15	TM	3&4-Methylphenol	1.781	1.810	1.6	TM	
16	**TM	n-Nitrosodi-n-propylamine	1.485	1.540	3.7	**TM	
17	TM	Hexachloroethane	0.7266	0.7587	4.4	TM	
18	TM	Nitrobenzene	0.5156	0.5309	3.0	TM	
19	TM	Isophorone	0.8134	0.8514	4.7	TM	
20	*TM	2-Nitrophenol	0.2094	0.2223	6.2	*TM	
21	TM	2,4-Dimethylphenol	0.3350	0.3505	4.6	TM	
22	TML	Benzoic acid	0.2307	0.3085	34	TML	6.6
23	TM	Bis (2-chloroethoxy) methane	0.4222	0.4476	6.0	TM	
24	*TM	2,4-Dichlorophenol	0.3266	0.3400	4.1	*TM	
25	TM	1,2,4-Trichlorobenzene	0.3643	0.3811	4.6	TM	
26	TM	3,4-Dimethylphenol	0.5573	0.5842	4.8	TM	
27	TM	Naphthalene	1.088	1.154	6.0	TM	
28	TM	4-Chloroaniline	0.4376	0.4640	6.0	TM	
29	TM	2,6-Dichlorophenol	0.3200	0.3394	6.1	TM	
30	TM	Hexachloropropene	0.3152	0.3339	5.9	TM	
31	*TM	Hexachlorobutadiene	0.2472	0.2560	3.6	*TM	
32	TM	Caprolactum	0.1466	0.1538	4.9	TM	
33	*TM	4-Chloro-3-methylphenol	0.3877	0.4161	7.3	*TM	
34	TM	2-Methylnaphthalene	0.7325	0.7990	9.1	TM	
35	TM	1-Methylnaphthalene	0.7616	0.7886	3.5	TM	
36	**TML	Hexachlorocyclopentadiene	0.3696	0.4521	22	**TML	1.1
37	TM	1,2,4,5-Tetrachlorobenzene	0.6372	0.6766	6.2	TM	
38	*TM	2,4,6-Trichlorophenol	0.4172	0.4464	7.0	*TM	
39	TM	2,4,5-Trichlorophenol	0.4524	0.4860	7.4	TM	
40	TM	1,1'-Biphenyl	1.551	1.646	6.1	TM	
		Average			6.2		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/19/19
Instrument: Yoda
Cal. Date: 12/19/19
Data File: 1219Y012.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	2-Chloronaphthalene	1.248	1.287	3.1	TM	
42	TM	2-Nitroaniline	0.4737	0.5330	13	TM	
43	TM	Dimethyl phthalate	1.529	1.612	5.4	TM	
44	TM	2,6-DNT	0.3335	0.3594	7.8	TM	
45	TM	Acenaphthylene	1.921	2.039	6.2	TM	
46	TM	3-Nitroaniline	0.3959	0.4440	12	TM	
47	*TM	Acenaphthene	1.202	1.272	5.8	*TM	
48	**TML	2,4-Dinitrophenol	0.1391	0.1930	39	**TML	2.4
49	**TM	4-Nitrophenol	0.0312	0.0331	6.3	**TM	
50	TM	Dibenzofuran	1.825	1.991	9.1	TM	
51	TM	2,4-DNT	0.4904	0.5209	6.2	TM	
52	TM	2,3,4,6-Tetrachlorophenol	0.3432	0.3772	9.9	TM	
53	TM	Diethyl phthalate	1.584	1.664	5.0	TM	
54	TM	4-Chlorophenyl phenyl ether	0.8773	0.8972	2.3	TM	
55	TM	Fluorene	1.553	1.642	5.8	TM	
56	TM	4-Nitroaniline	0.3299	0.3692	12	TM	
57	TM	4,6-Dinitro-2-methylphenol	0.1559	0.1668	7.0	TM	
58	TM	Diphenyl amine	0.6512	0.7094	8.9	TM	
59	*TM	n-Nitrosodiphenylamine	0.6512	0.7094	8.9	*TM	
60	TM	1,2-Diphenylhydrazine	0.9417	0.9917	5.3	TM	
61	TM	4-Bromophenyl phenyl ether	0.2452	0.2643	7.8	TM	
62	TM	Hexachlorobenzene	0.2480	0.2730	10	TM	
63	TM	Atrazine	0.2236	0.2354	5.3	TM	
64	*TM	Pentachlorophenol	0.1525	0.1514	0.68	*TM	
65	TM	Phenanthrene	1.104	1.206	9.2	TM	
66	TM	Anthracene	1.154	1.246	8.0	TM	
67	TM	Carbazol	1.051	1.136	8.1	TM	
68	TM	Di-n-butylphthalate	1.437	1.529	6.5	TM	
69		2-Nitrodiphenylamine	0.3268	0.3682	13		
70	*TM	Fluoranthene	1.293	1.392	7.7	*TM	
71	TM	Benzidine	0.4082	0.3716	9.0	TM	
72	TM	Pyrene	1.199	1.267	5.7	TM	
73	TM	Butyl benzylphthalate	0.6008	0.6332	5.4	TM	
74	TM	3,3'-Dichlorobenzidine	0.4121	0.4458	8.2	TM	
75	TM	Benz (a) anthracene	1.306	1.401	7.3	TM	
76	TM	Bis (2-ethylhexyl) phthalate	1.004	1.044	4.0	TM	
77	TM	Chrysene	1.136	1.200	5.6	TM	
78	*TM	Di-n-octylphthalate	1.482	1.554	4.8	*TM	
79	TM	Benzo (b) fluoranthene	1.306	1.367	4.6	TM	
80	TM	Benzo (k) fluoranthene	1.178	1.349	14	TM	
		Average			8.1		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/19/19
Instrument: Yoda
Cal. Date: 12/19/19
Data File: 1219Y012.D

		Compound	MEAN	CCRF	%D		%Drift
81	*TM	Benzo (a) pyrene	1.160	1.260	8.7	*TM	
82	TM	Indeno (1,2,3-cd) pyrene	1.352	1.394	3.1	TM	
83	TM	Dibenz (a,h) anthracene	1.204	1.302	8.1	TM	
84	TM	Benzo (g,h,i) perylene	1.062	1.208	14	TM	
85							
86							
87							
88							
89							
90							
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119							
120							
		Average			8.5		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y012.D Vial: 12
Acq On : 19 Dec 19 13:14 Operator: MA,SS
Sample : SS 8270 11/22/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.38	152	154648	40.00000 ppb		0.00
21) Napthalene-D8(IS)	6.82	136	627218	40.00000 ppb		0.00
41) Acenaphthene-D10(IS)	8.84	164	380731	40.00000 ppb		0.00
65) Phenanthrene-D10(IS)	10.57	188	716758	40.00000 ppb		0.00
80) Chrysene-D12(IS)	13.66	240	829696	40.00000 ppb		0.00
90) Perylene-D12(IS)	15.48	264	760670	40.00000 ppb		-0.01
System Monitoring Compounds						
5) 2-Fluorophenol (S)	0.00	112	0	0.00000 ppb		
Spiked Amount 200.000			Recovery =	0.000%		
6) Phenol-D6 (S)	0.00	99	0	0.00000 ppb		
Spiked Amount 200.000			Recovery =	0.000%		
22) Nitrobenzene-D5(S)	5.95	82	52711	6.75760 ppb		-0.06
Spiked Amount 100.000			Recovery =	6.758%		
46) 2-Fluorobiphenyl(S)	8.02	172	554	0.03940 ppb		-0.04
Spiked Amount 100.000			Recovery =	0.039%		
64) 2,4,6-Tribromophenol(S)	0.00	330	0	0.00000 ppb		
Spiked Amount 200.000			Recovery =	0.000%		
83) Terphenyl-D14(S)	12.43	244	297	0.01501 ppb		0.00
Spiked Amount 100.000			Recovery =	0.015%		
Target Compounds						Qvalue
3) n-Nitrosodimethylamine	1.90	42	228024	52.80932 ppb		98
4) Pyridine	1.92	79	510199	51.00889 ppb		99
7) Phenol	5.00	94	433587	50.87467 ppb		79
8) Aniline	5.00	93	320384	57.60447 ppb	#	92
9) Bis (2-chloroethyl) ether	5.08	63	208721	52.86493 ppb		99
10) 2-Chlorophenol	5.15	128	310728	51.77926 ppb		99
11) 1,3-DCB	5.31	146	338803	51.44923 ppb		98
12) 1,4-DCB	5.39	146	346514	51.41595 ppb		99
13) Benzyl alcohol	5.54	108	188349	53.28425 ppb		98
14) 1,2-DCB	5.57	146	323570	51.60169 ppb		98
15) 2-Methylphenol	5.68	107	271451	51.83733 ppb		99
16) Bis (2-chloroisopropyl) et	5.69	45	269286	51.71896 ppb		86
17) Acetophenone	5.84	105	467976	52.43085 ppb		97
18) 3&4-Methylphenol	5.86	107	699849	101.62178 ppb		99
19) n-Nitrosodi-n-propylamine	5.84	70	297756	51.86739 ppb		93
20) Hexachloroethane	5.95	117	146655	52.20615 ppb		96
23) Nitrobenzene	6.03	77	416218	51.48566 ppb		93
24) Isophorone	6.30	82	667515	52.33466 ppb		98
25) 2-Nitrophenol	6.39	139	174251	53.08111 ppb		98
26) 2,4-Dimethylphenol	6.44	122	274826	52.31942 ppb		99
27) Benzoic acid	6.58	105	241867	53.28837 ppb		98
28) Bis (2-chloroethoxy) metha	6.54	93	350898	53.00967 ppb		98
29) 2,4-Dichlorophenol	6.68	162	266533	52.03896 ppb		99
30) 1,2,4-Trichlorobenzene	6.76	180	298756	52.29628 ppb		100
31) 3,4-Dimethylphenol	6.79	107	458062	52.41857 ppb		99
32) Naphthalene	6.84	128	904563	53.00552 ppb		100
33) 4-Chloroaniline	6.91	127	363799	53.01781 ppb		98
34) 2,6-Dichlorophenol	6.92	162	266063	53.02515 ppb		98
35) Hexachloropropene	6.94	213	261770	52.95562 ppb		98
36) Hexachlorobutadiene	6.98	225	200685	51.78252 ppb		99
37) Caprolactum	7.32	55	120598	52.46442 ppb		93
38) 4-Chloro-3-methylphenol	7.47	107	326264	53.66349 ppb		90

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

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y012.D Vial: 12
Acq On : 19 Dec 19 13:14 Operator: MA,SS
Sample : SS 8270 11/22/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	2-Methylnaphthalene	7.63	142	626418	54.54154	ppb		99
40)	1-Methylnaphthalene	7.75	142	618310	51.77181	ppb		99
42)	Hexachlorocyclopentadiene	7.82	237	215168	49.43015	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.84	216	321980	53.09037	ppb		99
44)	2,4,6-Trichlorophenol	7.97	196	212425	53.49868	ppb		99
45)	2,4,5-Trichlorophenol	8.02	196	231296	53.71023	ppb		96
47)	1,1'-Biphenyl	8.17	154	783426	53.05320	ppb		99
48)	2-Chloronaphthalene	8.20	162	612398	51.56780	ppb		99
49)	2-Nitroaniline	8.32	65	253652	56.25244	ppb		98
50)	Dimethyl phthalate	8.52	163	767054	52.69465	ppb		98
51)	2,6-DNT	8.60	165	171054	53.88004	ppb	#	66
52)	Acenaphthylene	8.68	152	970447	53.07569	ppb		100
53)	3-Nitroaniline	8.32	138	211306	56.07253	ppb		99
54)	Acenaphthene	8.87	154	605219	52.91767	ppb		99
55)	2,4-Dinitrophenol	8.92	184	91847	48.82234	ppb		96
56)	4-Nitrophenol	8.60	65	15775	53.16743	ppb		98
57)	Dibenzofuran	9.08	168	947587	54.54797	ppb		100
58)	2,4-DNT	9.07	165	247899	53.11106	ppb		94
59)	2,3,4,6-Tetrachlorophenol	9.24	232	179532	54.96575	ppb		98
60)	Diethyl phthalate	9.35	149	791693	52.49593	ppb		99
61)	4-Chlorophenyl phenyl ethe	9.48	204	426980	51.13326	ppb		98
62)	Fluorene	9.48	166	781637	52.89027	ppb		99
63)	4-Nitroaniline	8.80	138	175684	55.94819	ppb		89
66)	4,6-Dinitro-2-methylphenol	9.55	198	149456	53.48414	ppb		90
67)	Diphenyl amine	9.62	169	1271157	108.94241	ppb		99
68)	n-Nitrosodiphenylamine	9.62	169	1271157	108.94241	ppb		99
69)	1,2-Diphenylhydrazine	9.66	77	888538	52.65453	ppb		98
70)	4-Bromophenyl phenyl ether	10.04	248	236821	53.90613	ppb		97
71)	Hexachlorobenzene	10.13	284	244573	55.02919	ppb		97
72)	Atrazine	10.24	200	105442	26.31441	ppb		97
73)	Pentachlorophenol	10.36	266	135671	49.65935	ppb		99
74)	Phenanthrene	10.60	178	1080229	54.61406	ppb		99
75)	Anthracene	10.66	178	1116406	53.99563	ppb		100
76)	Carbazol	10.85	167	1017680	54.06002	ppb		99
77)	Di-n-butylphthalate	11.25	149	1370271	53.23188	ppb		99
78)	2-Nitrodiphenylamine	11.42	167	164948	28.16935	ppb		89
79)	Fluoranthene	11.99	202	1247416	53.84374	ppb		99
81)	Benzidine	12.14	184	385367	45.51080	ppb		99
82)	Pyrene	12.25	202	1314061	52.83625	ppb		99
84)	Butyl benzylphthalate	13.00	149	656686	52.69920	ppb		91
85)	3,3'-Dichlorobenzidine	13.62	252	462307	54.08886	ppb	#	99
86)	Benz (a) anthracene	13.65	228	1453439	53.65073	ppb		99
87)	Bis (2-ethylhexyl) phthala	13.66	149	1082924	52.01071	ppb	#	98
88)	Chrysene	13.69	228	1244504	52.82157	ppb		100
89)	Di-n-octylphthalate	14.41	149	1611191	52.42256	ppb	#	91
91)	Benzo (b) fluoranthene	14.94	252	1300001	52.32418	ppb		99
92)	Benzo (k) fluoranthene	14.99	252	1282239	57.24188	ppb		98
93)	Benzo (a) pyrene	15.41	252	1198281	54.34376	ppb		99
94)	Indeno (1,2,3-cd) pyrene	17.35	276	1325649	51.57388	ppb		99
95)	Dibenz (a,h) anthracene	17.38	278	1237782	54.05738	ppb		100
96)	Benzo (g,h,i) perylene	17.91	276	1148610	56.86944	ppb		99

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

Quantitation Report

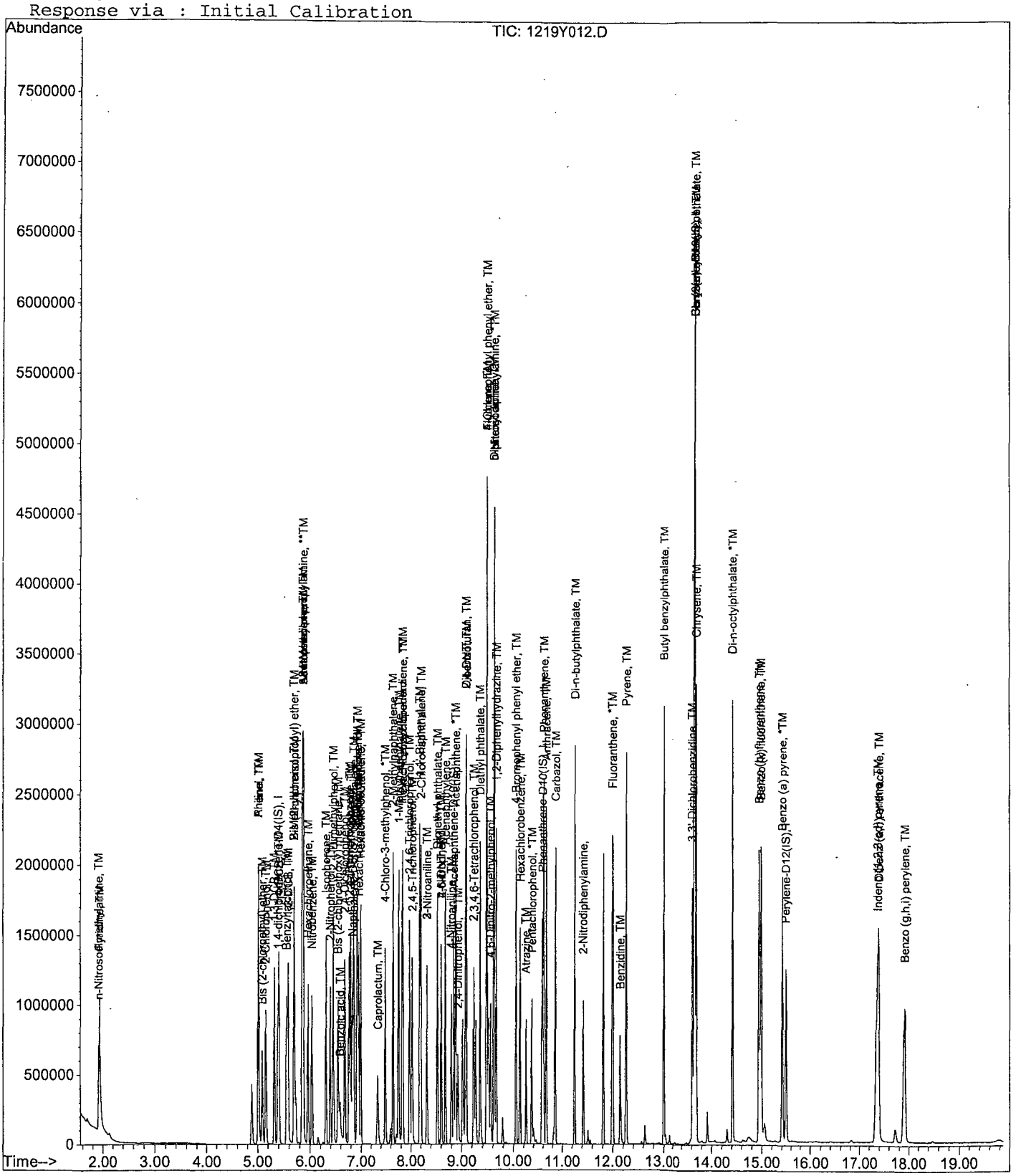
Data File : M:\YODA\DATA\Y191219\1219Y012.D
Acq On : 19 Dec 19 13:14
Sample : SS 8270 11/22/19
Misc :

Vial: 12
Operator: MA,SS
Inst : Yoda
Multiplr: 1.00

Quant Time: Dec 20 12:40 2019

Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration



Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 03/17/20
Matrix: Instrument: Yoda
Initial Cal. Date: 12/19/19
Data File: 0207Y226.D

		Compound	MEAN	CCRF	%D		%Drift	
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I		
2		1,4-Dioxane	0.6022	1.001	66			*NT
3	TM	n-Nitrosodimethylamine	1.117	1.338	20	TM		
4	TM	Pyridine	2.587	3.021	17	TM		
5	S	2-Fluorophenol (S)	1.466	1.399	4.6	S		
6	S	Phenol-D6 (S)	1.868	1.975	5.7	S		
7	*TM	Phenol	2.204	2.410	9.3	*TM		
8	TM	Aniline	1.439	1.600	11	TM		
9	TM	Bis (2-chloroethyl) ether	1.021	1.125	10	TM		
10	TM	2-Chlorophenol	1.552	1.643	5.9	TM		
11	TM	1,3-DCB	1.703	1.790	5.1	TM		
12	*TM	1,4-DCB	1.743	1.862	6.8	*TM		
13	TM	Benzyl alcohol	0.9143	1.006	10.0	TM		
14	TM	1,2-DCB	1.622	1.727	6.5	TM		
15	TM	2-Methylphenol	1.354	1.480	9.3	TM		
16	TM	Bis (2-chloroisopropyl) ether	1.347	1.538	14	TM		
17	TM	Acetophenone	2.309	2.463	6.7	TM		
18	TM	3&4-Methylphenol	1.781	1.949	9.4	TM		
19	**TM	n-Nitrosodi-n-propylamine	1.485	1.660	12	**TM		
20	TM	Hexachloroethane	0.7266	0.7950	9.4	TM		
21	I	Napthalene-D8(IS)	ISTD			I		
22	S	Nitrobenzene-D5(S)	0.4975	0.5136	3.2	S		
23	TM	Nitrobenzene	0.5156	0.5595	8.5	TM		
24	TM	Isophorone	0.8134	0.8808	8.3	TM		
25	*TM	2-Nitrophenol	0.2094	0.2202	5.2	*TM		
26	TM	2,4-Dimethylphenol	0.3350	0.3696	10	TM		
27	TML	Benzoic acid	0.2307	0.3359	46	TML	15	
28	TM	Bis (2-chloroethoxy) methane	0.4222	0.4449	5.4	TM		
29	*TM	2,4-Dichlorophenol	0.3266	0.3484	6.7	*TM		
30	TM	1,2,4-Trichlorobenzene	0.3643	0.3837	5.3	TM		
31	TM	3,4-Dimethylphenol	0.5573	0.5890	5.7	TM		
32	TM	Naphthalene	1.088	1.157	6.3	TM		
33	TM	4-Chloroaniline	0.4376	0.4715	7.8	TM		
34	TM	2,6-Dichlorophenol	0.3200	0.3478	8.7	TM		
35	TM	Hexachloropropene	0.3152	0.3435	8.9	TM		
36	*TM	Hexachlorobutadiene	0.2472	0.2645	7.0	*TM		
37	TM	Caprolactum	0.1466	0.1651	13	TM		
38	*TM	4-Chloro-3-methylphenol	0.3877	0.4182	7.9	*TM		
39	TM	2-Methylnaphthalene	0.7325	0.7968	8.8	TM		
40	TM	1-Methylnaphthalene	0.7616	0.8065	5.9	TM		
		Average			11.0			

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 03/17/20
Instrument: Yoda
Cal. Date: 12/19/19
Data File: 0207Y226.D

		Compound	MEAN	CCRF	%D		%Drift
41	I	Acenaphthene-D10(IS)	ISTD			I	
42	**TML	Hexachlorocyclopentadiene	0.3696	0.3566	3.5	**TML	20
43	TM	1,2,4,5-Tetrachlorobenzene	0.6372	0.6523	2.4	TM	
44	*TM	2,4,6-Trichlorophenol	0.4172	0.4355	4.4	*TM	
45	TM	2,4,5-Trichlorophenol	0.4524	0.4503	0.47	TM	
46	S	2-Fluorobiphenyl(S)	1.477	1.432	3.1	S	
47	TM	1,1'-Biphenyl	1.551	1.623	4.6	TM	
48	TM	2-Chloronaphthalene	1.248	1.280	2.6	TM	
49	TM	2-Nitroaniline	0.4737	0.5150	8.7	TM	
50	TM	Dimethyl phthalate	1.529	1.590	4.0	TM	
51	TM	2,6-DNT	0.3335	0.3489	4.6	TM	
52	TM	Acenaphthylene	1.921	2.015	4.9	TM	
53	TM	3-Nitroaniline	0.3959	0.4166	5.2	TM	
54	*TM	Acenaphthene	1.202	1.265	5.3	*TM	
55	**TML	2,4-Dinitrophenol	0.1391	0.2150	55	**TML	7.3
56	**TM	4-Nitrophenol	0.0312	0.0344	10	**TM	
57	TM	Dibenzofuran	1.825	1.985	8.8	TM	
58	TM	2,4-DNT	0.4904	0.5405	10	TM	
59	TM	2,3,4,6-Tetrachlorophenol	0.3432	0.3625	5.6	TM	
60	TM	Diethyl phthalate	1.584	1.688	6.6	TM	
61	TM	4-Chlorophenyl phenyl ether	0.8773	0.9322	6.3	TM	
62	TM	Fluorene	1.553	1.684	8.5	TM	
63	TM	4-Nitroaniline	0.3299	0.3400	3.1	TM	
64	S	2,4,6-Tribromophenol(S)	0.2486	0.2423	2.5	S	
65	I	Phenanthrene-D10(IS)	ISTD			I	
66	TM	4,6-Dinitro-2-methylphenol	0.1559	0.1637	5.0	TM	
67	TM	Diphenyl amine	0.6512	0.6526	0.23	TM	
68	*TM	n-Nitrosodiphenylamine	0.6512	0.6526	0.23	*TM	
69	TM	1,2-Diphenylhydrazine	0.9417	0.9955	5.7	TM	
70	TM	4-Bromophenyl phenyl ether	0.2452	0.2459	0.30	TM	
71	TM	Hexachlorobenzene	0.2480	0.2518	1.5	TM	
72	TM	Atrazine	0.2236	0.2197	1.7	TM	
73	*TM	Pentachlorophenol	0.1525	0.1500	1.6	*TM	
74	TM	Phenanthrene	1.104	1.128	2.2	TM	
75	TM	Anthracene	1.154	1.204	4.4	TM	
76	TM	Carbazol	1.051	1.101	4.8	TM	
77	TM	Di-n-butylphthalate	1.437	1.525	6.1	TM	
78		2-Nitrodiphenylamine	0.3268	0.3781	16		
79	*TM	Fluoranthene	1.293	1.372	6.1	*TM	
80	I	Chrysene-D12(IS)	ISTD			I	
		Average			6.1		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 03/17/20
Instrument: Yoda
Cal. Date: 12/19/19
Data File: 0207Y226.D

		Compound	MEAN	CCRF	%D	%Drift		
81	TM	Benzidine	0.4082	0.3112	24	TM		*NT
82	TM	Pyrene	1.199	1.065	11	TM		
83	S	Terphenyl-D14(S)	0.9538	0.7932	17	S		
84	TM	Butyl benzylphthalate	0.6008	0.5341	11	TM		
85	TM	3,3'-Dichlorobenzidine	0.4121	0.3971	3.6	TM		
86	TM	Benz (a) anthracene	1.306	1.228	6.0	TM		
87	TM	Bis (2-ethylhexyl) phthalate	1.004	0.9822	2.2	TM		
88	TM	Chrysene	1.136	1.037	8.7	TM		
89	*TM	Di-n-octylphthalate	1.482	1.326	10	*TM		
90	I	Perylene-D12(IS)	ISTD			I		
91	TM	Benzo (b) fluoranthene	1.306	1.288	1.4	TM		
92	TM	Benzo (k) fluoranthene	1.178	1.368	16	TM		
93	*TM	Benzo (a) pyrene	1.160	1.243	7.2	*TM		
94	TM	Indeno (1,2,3-cd) pyrene	1.352	1.439	6.5	TM		
95	TM	Dibenz (a,h) anthracene	1.204	1.289	7.1	TM		
96	TM	Benzo (g,h,i) perylene	1.062	1.109	4.4	TM		
97								
98								
99								
100								
101								
102								
103								
104								
105								
106								
107								
108								
109								
110								
111								
112								
113								
114								
115								
116								
117								
118								
119								
120								
		Average			9.1			

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200207\0207Y226.D Vial: 26
Acq On : 17 Mar 20 8:01 Operator: MA,SS
Sample : 50ug/ml 8270 03/04/20 (2) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Mar 17 9:25 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.34	152	178325	40.00000 ppb		-0.03
21) Napthalene-D8(IS)	6.78	136	747165	40.00000 ppb		-0.04
41) Acenaphthene-D10(IS)	8.80	164	470368	40.00000 ppb		-0.04
65) Phenanthrene-D10(IS)	10.53	188	915881	40.00000 ppb		-0.04
80) Chrysene-D12(IS)	13.62	240	1237702	40.00000 ppb		-0.04
90) Perylene-D12(IS)	15.44	264	972882	40.00000 ppb		-0.05
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.76	112	623727	95.42810 ppb		-0.05
Spiked Amount 200.000			Recovery = 47.714%			
6) Phenol-D6 (S)	4.96	99	880404	105.72346 ppb		-0.03
Spiked Amount 200.000			Recovery = 52.861%			
22) Nitrobenzene-D5(S)	5.97	82	479642	51.61912 ppb		-0.03
Spiked Amount 100.000			Recovery = 51.619%			
46) 2-Fluorobiphenyl(S)	8.01	172	841674	48.45284 ppb		-0.05
Spiked Amount 100.000			Recovery = 48.453%			
64) 2,4,6-Tribromophenol(S)	9.73	330	284973	97.48585 ppb		-0.04
Spiked Amount 200.000			Recovery = 48.743%			
83) Terphenyl-D14(S)	12.39	244	1227137	41.57780 ppb		-0.03
Spiked Amount 100.000			Recovery = 41.578%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.65	58	22305	8.30779	#	33
3) n-Nitrosodimethylamine	1.88	42	298349	59.92206 ppb		92
4) Pyridine	1.90	79	673289	58.37675 ppb		98
7) Phenol	4.97	94	537147	54.65760 ppb		81
8) Aniline	4.96	93	356544	55.59434 ppb		82
9) Bis (2-chloroethyl) ether	5.04	63	250766	55.08105 ppb		97
10) 2-Chlorophenol	5.11	128	366328	52.93923 ppb		96
11) 1,3-DCB	5.26	146	399043	52.55129 ppb		99
12) 1,4-DCB	5.36	146	415038	53.40686 ppb		96
13) Benzyl alcohol	5.51	108	224172	54.99826 ppb		97
14) 1,2-DCB	5.52	146	384850	53.22544 ppb		99
15) 2-Methylphenol	5.64	107	329921	54.63780 ppb		98
16) Bis (2-chloroisopropyl) et	5.64	45	342927	57.11757 ppb	#	78
17) Acetophenone	5.80	105	549055	53.34715 ppb		94
18) 3&4-Methylphenol	5.82	107	868879	109.41423 ppb		99
19) n-Nitrosodi-n-propylamine	5.80	70	369979	55.89115 ppb		91
20) Hexachloroethane	5.90	117	177219	54.71006 ppb		92
23) Nitrobenzene	5.99	77	522594	54.26650 ppb		93
24) Isophorone	6.27	82	822626	54.14181 ppb		99
25) 2-Nitrophenol	6.35	139	205633	52.58472 ppb		95
26) 2,4-Dimethylphenol	6.41	122	345164	55.16105 ppb		98
27) Benzoic acid	6.57	105	313752	57.66666 ppb		92
28) Bis (2-chloroethoxy) metha	6.50	93	415484	52.69028 ppb		99
29) 2,4-Dichlorophenol	6.63	162	325422	53.33675 ppb		93
30) 1,2,4-Trichlorobenzene	6.71	180	358344	52.65702 ppb		98
31) 3,4-Dimethylphenol	6.75	107	550076	52.84277 ppb		99
32) Naphthalene	6.81	128	1080196	53.13575 ppb		100
33) 4-Chloroaniline	6.87	127	440398	53.87752 ppb		99
34) 2,6-Dichlorophenol	6.88	162	324790	54.33781 ppb		97
35) Hexachloropropene	6.90	213	320774	54.47451 ppb		100
36) Hexachlorobutadiene	6.94	225	247045	53.51141 ppb		99
37) Caprolactum	7.31	55	154205	56.31515 ppb		96

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

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200207\0207Y226.D Vial: 26
Acq On : 17 Mar 20 8:01 Operator: MA,SS
Sample : 50ug/ml 8270 03/04/20 (2) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Mar 17 9:25 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38) 4-Chloro-3-methylphenol	7.44	107	390575	53.92823 ppb		88
39) 2-Methylnaphthalene	7.59	142	744160	54.39156 ppb		100
40) 1-Methylnaphthalene	7.71	142	753206	52.94230 ppb		99
42) Hexachlorocyclopentadiene	7.77	237	209664	39.79344 ppb		99
43) 1,2,4,5-Tetrachlorobenzene	7.79	216	383515	51.18582 ppb		99
44) 2,4,6-Trichlorophenol	7.93	196	256041	52.19483 ppb		98
45) 2,4,5-Trichlorophenol	7.98	196	264753	49.76342 ppb		100
47) 1,1'-Biphenyl	8.13	154	954342	52.31161 ppb		98
48) 2-Chloronaphthalene	8.16	162	752802	51.31048 ppb		96
49) 2-Nitroaniline	8.28	65	302781	54.35158 ppb		96
50) Dimethyl phthalate	8.48	163	934884	51.98509 ppb		99
51) 2,6-DNT	8.56	165	205135	52.30159 ppb	#	62
52) Acenaphthylene	8.63	152	1184875	52.45379 ppb		100
53) 3-Nitroaniline	8.28	138	244948	52.61295 ppb		97
54) Acenaphthene	8.84	154	743724	52.63570 ppb		99
55) 2,4-Dinitrophenol	8.89	184	126423	53.62774 ppb		92
56) 4-Nitrophenol	8.56	65	20250	55.24358 ppb		100
57) Dibenzofuran	9.03	168	1167043	54.37845 ppb		95
58) 2,4-DNT	9.03	165	317789	55.10988 ppb		85
59) 2,3,4,6-Tetrachlorophenol	9.19	232	213143	52.82042 ppb		93
60) Diethyl phthalate	9.31	149	992630	53.27662 ppb		97
61) 4-Chlorophenyl phenyl ethe	9.43	204	548079	53.12753 ppb		93
62) Fluorene	9.43	166	990105	54.22910 ppb		100
63) 4-Nitroaniline	8.76	138	199913	51.53180 ppb		96
66) 4,6-Dinitro-2-methylphenol	9.52	198	187393	52.48057 ppb		96
67) Diphenyl amine	9.58	169	1494371	100.22815 ppb		100
68) n-Nitrosodiphenylamine	9.58	169	1494371	100.22815 ppb		100
69) 1,2-Diphenylhydrazine	9.62	77	1139701	52.85477 ppb		96
70) 4-Bromophenyl phenyl ether	10.01	248	281514	50.14775 ppb	#	82
71) Hexachlorobenzene	10.08	284	288289	50.76287 ppb	#	85
72) Atrazine	10.20	200	125784	24.56625 ppb		97
73) Pentachlorophenol	10.32	266	171752	49.19821 ppb		99
74) Phenanthrene	10.55	178	1291853	51.11346 ppb		99
75) Anthracene	10.62	178	1378456	52.17505 ppb		99
76) Carbazol	10.81	167	1260813	52.41422 ppb		98
77) Di-n-butylphthalate	11.20	149	1745747	53.07380 ppb		98
78) 2-Nitrodiphenylamine	11.38	167	216408	28.92255 ppb		95
79) Fluoranthene	11.95	202	1570754	53.05979 ppb		98
81) Benzidine	12.10	184	481473	38.11665 ppb		99
82) Pyrene	12.22	202	1647439	44.40468 ppb		99
84) Butyl benzylphthalate	12.96	149	826364	44.45500 ppb		83
85) 3,3'-Dichlorobenzidine	13.57	252	614383	48.18584 ppb		98
86) Benz (a) anthracene	13.61	228	1899301	46.99759 ppb		100
87) Bis (2-ethylhexyl) phthala	13.62	149	1519520	48.92199 ppb		97
88) Chrysene	13.65	228	1604573	45.65385 ppb		99
89) Di-n-octylphthalate	14.36	149	2051796	44.75157 ppb	#	91
91) Benzo (b) fluoranthene	14.90	252	1566907	49.31035 ppb		99
92) Benzo (k) fluoranthene	14.94	252	1663407	58.06034 ppb		98
93) Benzo (a) pyrene	15.36	252	1511661	53.60207 ppb		99
94) Indeno (1,2,3-cd) pyrene	17.28	276	1750534	53.24856 ppb		98
95) Dibenz (a,h) anthracene	17.31	278	1568076	53.54440 ppb		100
96) Benzo (g,h,i) perylene	17.84	276	1348990	52.22172 ppb		100

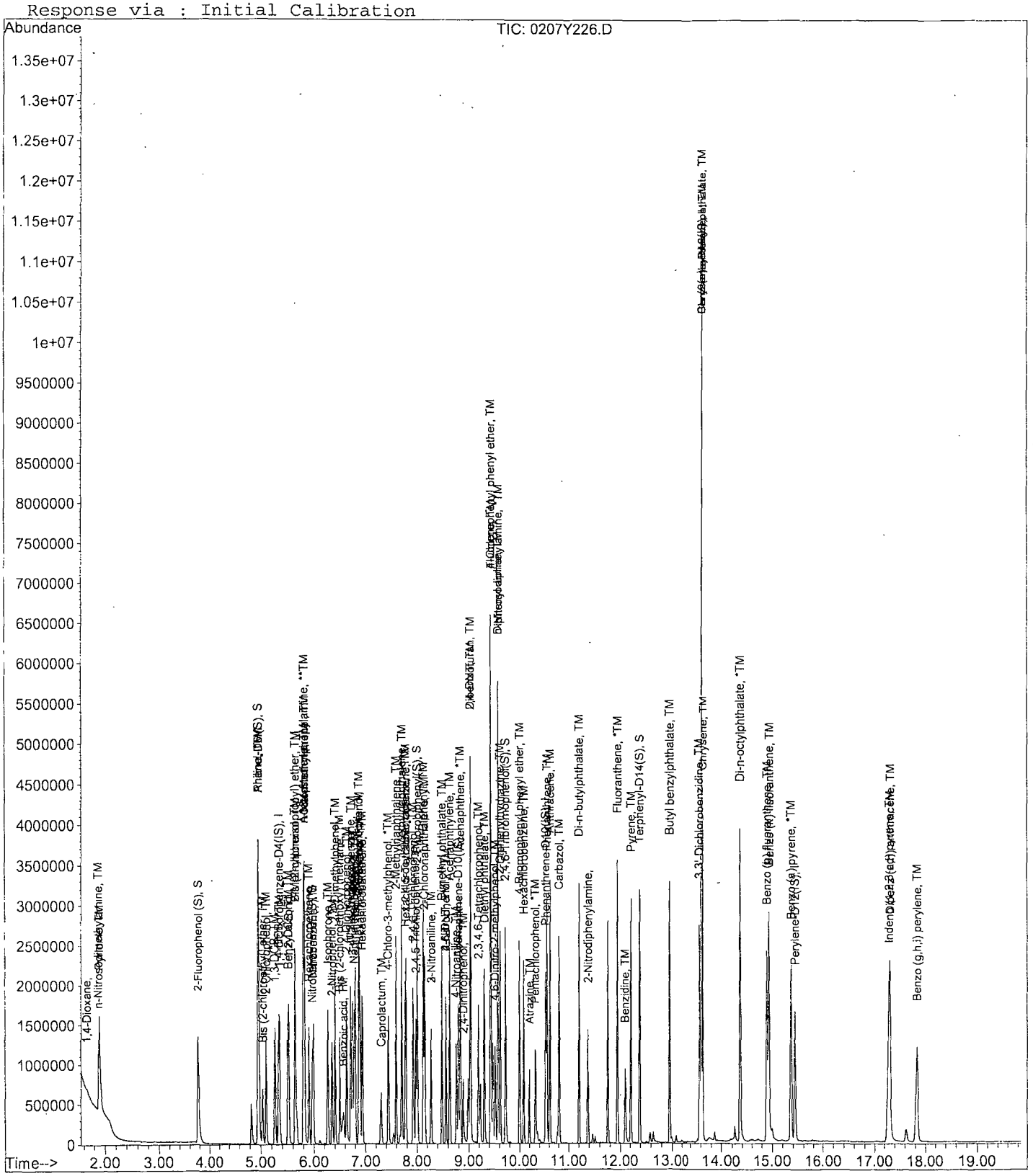
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200207\0207Y226.D Vial: 26
Acq On : 17 Mar 20 8:01 Operator: MA,SS
Sample : 50ug/ml 8270 03/04/20 (2) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Mar 17 9:25 2020 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 03/17/20
Matrix: Instrument: Yoda
Initial Cal. Date: 12/19/19
Data File: 0207Y241.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2		1,4-Dioxane	0.6022	0.4404	27		
3	TM	n-Nitrosodimethylamine	1.117	0.8524	24	TM	
4	TM	Pyridine	2.587	1.848	29	TM	
5	S	2-Fluorophenol (S)	1.466	1.283	12	S	
6	S	Phenol-D6 (S)	1.868	1.767	5.4	S	
7	*TM	Phenol	2.204	1.359	38	*TM	
8	TM	Aniline	1.439	0.9484	34	TM	
9	TM	Bis (2-chloroethyl) ether	1.021	0.6353	38	TM	
10	TM	2-Chlorophenol	1.552	0.9107	41	TM	
11	TM	1,3-DCB	1.703	0.9941	42	TM	
12	*TM	1,4-DCB	1.743	1.021	41	*TM	
13	TM	Benzyl alcohol	0.9143	0.5679	38	TM	
14	TM	1,2-DCB	1.622	0.9564	41	TM	
15	TM	2-Methylphenol	1.354	0.8134	40	TM	
16	TM	Bis (2-chloroisopropyl) ether	1.347	0.8520	37	TM	
17	TM	Acetophenone	2.309	1.365	41	TM	
18	TM	3&4-Methylphenol	1.781	1.057	41	TM	
19	**TM	n-Nitrosodi-n-propylamine	1.485	0.9059	39	**TM	
20	TM	Hexachloroethane	0.7266	0.4405	39	TM	
21	I	Napthalene-D8(IS)	ISTD			I	
22	S	Nitrobenzene-D5(S)	0.4975	0.4842	2.7	S	
23	TM	Nitrobenzene	0.5156	0.3277	36	TM	
24	TM	Isophorone	0.8134	0.5088	37	TM	
25	*TM	2-Nitrophenol	0.2094	0.1283	39	*TM	
26	TM	2,4-Dimethylphenol	0.3350	0.2074	38	TM	
27	TML	Benzoic acid	0.2307	0.1915	17	TML	31
28	TM	Bis (2-chloroethoxy) methane	0.4222	0.2576	39	TM	
29	*TM	2,4-Dichlorophenol	0.3266	0.2002	39	*TM	
30	TM	1,2,4-Trichlorobenzene	0.3643	0.2211	39	TM	
31	TM	3,4-Dimethylphenol	0.5573	0.3426	39	TM	
32	TM	Naphthalene	1.088	0.6572	40	TM	
33	TM	4-Chloroaniline	0.4376	0.2762	37	TM	
34	TM	2,6-Dichlorophenol	0.3200	0.1990	38	TM	
35	TM	Hexachloropropene	0.3152	0.1982	37	TM	
36	*TM	Hexachlorobutadiene	0.2472	0.1505	39	*TM	
37	TM	Caprolactum	0.1466	0.0961	34	TM	
38	*TM	4-Chloro-3-methylphenol	0.3877	0.2412	38	*TM	
39	TM	2-Methylnaphthalene	0.7325	0.4536	38	TM	
40	TM	1-Methylnaphthalene	0.7616	0.4622	39	TM	
		Average			34.6		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 03/17/20
Instrument: Yoda
Cal. Date: 12/19/19
Data File: 0207Y241.D

		Compound	MEAN	CCRF	%D		%Drift	
41	I	Acenaphthene-D10(IS)	ISTD			I		
42	**TML	Hexachlorocyclopentadiene	0.3696	0.1965	47	**TML	53	*NT
43	TM	1,2,4,5-Tetrachlorobenzene	0.6372	0.3673	42	TM		
44	*TM	2,4,6-Trichlorophenol	0.4172	0.2489	40	*TM		
45	TM	2,4,5-Trichlorophenol	0.4524	0.2604	42	TM		
46	S	2-Fluorobiphenyl(S)	1.477	1.384	6.3	S		
47	TM	1,1'-Biphenyl	1.551	0.9342	40	TM		
48	TM	2-Chloronaphthalene	1.248	0.7446	40	TM		
49	TM	2-Nitroaniline	0.4737	0.3043	36	TM		
50	TM	Dimethyl phthalate	1.529	0.9306	39	TM		
51	TM	2,6-DNT	0.3335	0.2058	38	TM		
52	TM	Acenaphthylene	1.921	1.177	39	TM		
53	TM	3-Nitroaniline	0.3959	0.2477	37	TM		
54	*TM	Acenaphthene	1.202	0.7305	39	*TM		
55	**TML	2,4-Dinitrophenol	0.1391	0.1110	20	**TML	38	
56	**TM	4-Nitrophenol	0.0312	0.0201	35	**TM		
57	TM	Dibenzofuran	1.825	1.133	38	TM		
58	TM	2,4-DNT	0.4904	0.3152	36	TM		
59	TM	2,3,4,6-Tetrachlorophenol	0.3432	0.2050	40	TM		
60	TM	Diethyl phthalate	1.584	0.9915	37	TM		
61	TM	4-Chlorophenyl phenyl ether	0.8773	0.5251	40	TM		
62	TM	Fluorene	1.553	0.9474	39	TM		
63	TM	4-Nitroaniline	0.3299	0.2014	39	TM		
64	S	2,4,6-Tribromophenol(S)	0.2486	0.2338	6.0	S		
65	I	Phenanthrene-D10(IS)	ISTD			I		
66	TM	4,6-Dinitro-2-methylphenol	0.1559	0.0914	41	TM		
67	TM	Diphenyl amine	0.6512	0.3730	43	TM		
68	*TM	n-Nitrosodiphenylamine	0.6512	0.3730	43	*TM		
69	TM	1,2-Diphenylhydrazine	0.9417	0.6007	36	TM		
70	TM	4-Bromophenyl phenyl ether	0.2452	0.1448	41	TM		
71	TM	Hexachlorobenzene	0.2480	0.1434	42	TM		
72	TM	Atrazine	0.2236	0.1271	43	TM		
73	*TM	Pentachlorophenol	0.1525	0.0779	49	*TM		
74	TM	Phenanthrene	1.104	0.6713	39	TM		
75	TM	Anthracene	1.154	0.7024	39	TM		
76	TM	Carbazol	1.051	0.6435	39	TM		
77	TM	Di-n-butylphthalate	1.437	0.8675	40	TM		
78		2-Nitrodiphenylamine	0.3268	0.2224	32			
79	*TM	Fluoranthene	1.293	0.7836	39	*TM		
80	I	Chrysene-D12(IS)	ISTD			I		
		Average			37.3			

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 03/17/20
Instrument: Yoda
Cal. Date: 12/19/19
Data File: 0207Y241.D

		Compound	MEAN	CCRF	%D		%Drift	
81	TM	Benzidine	0.4082	0.1921	53	TM		*NT
82	TM	Pyrene	1.199	0.6987	42	TM		
83	S	Terphenyl-D14(S)	0.9538	0.8662	9.2	S		
84	TM	Butyl benzylphthalate	0.6008	0.3496	42	TM		
85	TM	3,3'-Dichlorobenzidine	0.4121	0.2632	36	TM		
86	TM	Benz (a) anthracene	1.306	0.7651	41	TM		
87	TM	Bis (2-ethylhexyl) phthalate	1.004	0.6246	38	TM		
88	TM	Chrysene	1.136	0.6571	42	TM		
89	*TM	Di-n-octylphthalate	1.482	0.8457	43	*TM		
90	I	Perylene-D12(IS)	ISTD			I		
91	TM	Benzo (b) fluoranthene	1.306	0.8129	38	TM		
92	TM	Benzo (k) fluoranthene	1.178	0.7625	35	TM		
93	*TM	Benzo (a) pyrene	1.160	0.7171	38	*TM		
94	TM	Indeno (1,2,3-cd) pyrene	1.352	0.8330	38	TM		
95	TM	Dibenz (a,h) anthracene	1.204	0.7425	38	TM		
96	TM	Benzo (g,h,i) perylene	1.062	0.6485	39	TM		
97								
98								
99								
100								
101								
102								
103								
104								
105								
106								
107								
108								
109								
110								
111								
112								
113								
114								
115								
116								
117								
118								
119								
120								
		Average			38.1			

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200207\0207Y241.D Vial: 41
Acq On : 17 Mar 20 16:40 Operator: MA,SS
Sample : 50ug/ml 8270 03/04/20 (2) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Mar 17 17:44 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.34	152	200510	40.00000 ppb	-0.03
21) Napthalene-D8(IS)	6.78	136	813395	40.00000 ppb	-0.04
41) Acenaphthene-D10(IS)	8.80	164	508839	40.00000 ppb	-0.04
65) Phenanthrene-D10(IS)	10.53	188	984530	40.00000 ppb	-0.04
80) Chrysene-D12(IS)	13.62	240	1174348	40.00000 ppb	-0.04
90) Perylene-D12(IS)	15.44	264	999613	40.00000 ppb	-0.05
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.76	112	643217	87.52164 ppb	-0.05
Spiked Amount 200.000			Recovery =	43.761%	
6) Phenol-D6 (S)	4.96	99	885859	94.60850 ppb	-0.03
Spiked Amount 200.000			Recovery =	47.305%	
22) Nitrobenzene-D5(S)	5.97	82	492265	48.66395 ppb	-0.03
Spiked Amount 100.000			Recovery =	48.664%	
46) 2-Fluorobiphenyl(S)	8.01	172	880061	46.83230 ppb	-0.05
Spiked Amount 100.000			Recovery =	46.832%	
64) 2,4,6-Tribromophenol(S)	9.72	330	297360	94.03246 ppb	-0.05
Spiked Amount 200.000			Recovery =	47.016%	
83) Terphenyl-D14(S)	12.39	244	1271576	45.40776 ppb	-0.03
Spiked Amount 100.000			Recovery =	45.408%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.66	58	11039	3.65670 #	1
3) n-Nitrosodimethylamine	1.88	42	213632	38.15967 ppb	88
4) Pyridine	1.90	79	463209	35.71836 ppb	98
7) Phenol	4.97	94	340729	30.83491 ppb	87
8) Aniline	4.96	93	237696	32.96215 ppb #	87
9) Bis (2-chloroethyl) ether	5.04	63	159237	31.10669 ppb	99
10) 2-Chlorophenol	5.11	128	228254	29.33608 ppb	97
11) 1,3-DCB	5.27	146	249150	29.18104 ppb	97
12) 1,4-DCB	5.36	146	255801	29.27437 ppb	97
13) Benzyl alcohol	5.51	108	142332	31.05606 ppb	98
14) 1,2-DCB	5.52	146	239714	29.48474 ppb	98
15) 2-Methylphenol	5.65	107	203880	30.02853 ppb	99
16) Bis (2-chloroisopropyl) et	5.65	45	213554	31.63384 ppb	87
17) Acetophenone	5.79	105	342104	29.56172 ppb	98
18) 3&4-Methylphenol	5.81	107	530066	59.36366 ppb	97
19) n-Nitrosodi-n-propylamine	5.80	70	227043	30.50354 ppb	94
20) Hexachloroethane	5.90	117	110404	30.31223 ppb	96
23) Nitrobenzene	5.99	77	333165	31.77911 ppb	93
24) Isophorone	6.26	82	517286	31.27347 ppb	98
25) 2-Nitrophenol	6.35	139	130454	30.64356 ppb	95
26) 2,4-Dimethylphenol	6.41	122	210835	30.95029 ppb	99
27) Benzoic acid	6.55	105	194685	34.61995 ppb	96
28) Bis (2-chloroethoxy) metha	6.50	93	261880	30.50658 ppb	100
29) 2,4-Dichlorophenol	6.63	162	203529	30.64227 ppb	96
30) 1,2,4-Trichlorobenzene	6.71	180	224849	30.35024 ppb	97
31) 3,4-Dimethylphenol	6.74	107	348371	30.74114 ppb	99
32) Naphthalene	6.81	128	668216	30.19369 ppb	99
33) 4-Chloroaniline	6.87	127	280867	31.56298 ppb	97
34) 2,6-Dichlorophenol	6.88	162	202382	31.10186 ppb	97
35) Hexachloropropene	6.90	213	201534	31.43819 ppb	99
36) Hexachlorobutadiene	6.94	225	153012	30.44464 ppb	99
37) Caprolactum	7.29	55	97728	32.78391 ppb	95

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

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200207\0207Y241.D Vial: 41
Acq On : 17 Mar 20 16:40 Operator: MA,SS
Sample : 50ug/ml 8270 03/04/20 (2) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Mar 17 17:44 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.44	107	245198	31.09880 ppb		95
39)	2-Methylnaphthalene	7.59	142	461150	30.96153 ppb		99
40)	1-Methylnaphthalene	7.71	142	469909	30.34016 ppb		98
42)	Hexachlorocyclopentadiene	7.77	237	124968	23.63941 ppb		100
43)	1,2,4,5-Tetrachlorobenzene	7.79	216	233643	28.82554 ppb		97
44)	2;4,6-Trichlorophenol	7.93	196	158286	29.82757 ppb		99
45)	2,4,5-Trichlorophenol	7.98	196	165657	28.78303 ppb		98
47)	1,1'-Biphenyl	8.13	154	594220	30.10917 ppb		97
48)	2-Chloronaphthalene	8.15	162	473594	29.83932 ppb		99
49)	2-Nitroaniline	8.27	65	193573	32.12075 ppb		92
50)	Dimethyl phthalate	8.49	163	591913	30.42540 ppb		100
51)	2,6-DNT	8.56	165	130927	30.85757 ppb	#	77
52)	Acenaphthylene	8.63	152	748772	30.64159 ppb		100
53)	3-Nitroaniline	8.28	138	157575	31.28697 ppb		94
54)	Acenaphthene	8.84	154	464612	30.39600 ppb		99
55)	2,4-Dinitrophenol	8.89	184	70624	30.94454 ppb		89
56)	4-Nitrophenol	8.56	65	12810	32.30452 ppb		96
57)	Dibenzofuran	9.03	168	720943	31.05262 ppb		95
58)	2,4-DNT	9.03	165	200505	32.14202 ppb		97
59)	2,3,4,6-Tetrachlorophenol	9.19	232	130367	29.86454 ppb		92
60)	Diethyl phthalate	9.30	149	630618	31.28766 ppb		100
61)	4-Chlorophenyl phenyl ethe	9.43	204	333971	29.92558 ppb		97
62)	Fluorene	9.43	166	602570	30.50816 ppb		99
63)	4-Nitroaniline	8.75	138	128075	30.51800 ppb		85
66)	4,6-Dinitro-2-methylphenol	9.52	198	112432	29.29174 ppb	#	82
67)	Diphenyl amine	9.58	169	918174	57.28836 ppb		99
68)	n-Nitrosodiphenylamine	9.58	169	918174	57.28836 ppb		99
69)	1,2-Diphenylhydrazine	9.62	77	739241	31.89256 ppb		98
70)	4-Bromophenyl phenyl ether	10.00	248	178141	29.52062 ppb		94
71)	Hexachlorobenzene	10.08	284	176521	28.91509 ppb		88
72)	Atrazine	10.19	200	78209	14.20955 ppb		94
73)	Pentachlorophenol	10.32	266	95832	25.53690 ppb		97
74)	Phenanthrene	10.55	178	826176	30.40919 ppb		99
75)	Anthracene	10.62	178	864378	30.43573 ppb		99
76)	Carbazol	10.81	167	791951	30.62717 ppb		98
77)	Di-n-butylphthalate	11.20	149	1067563	30.19274 ppb		99
78)	2-Nitrodiphenylamine	11.38	167	136876	17.01769 ppb		97
79)	Fluoranthene	11.95	202	964324	30.30334 ppb		100
81)	Benzidine	12.10	184	281973	23.52717 ppb		99
82)	Pyrene	12.21	202	1025695	29.13781 ppb		99
84)	Butyl benzylphthalate	12.95	149	513187	29.09673 ppb		92
85)	3,3'-Dichlorobenzidine	13.57	252	386351	31.93608 ppb		99
86)	Benz (a) anthracene	13.61	228	1123167	29.29175 ppb		100
87)	Bis (2-ethylhexyl) phthala	13.62	149	916898	31.11272 ppb		98
88)	Chrysene	13.65	228	964518	28.92328 ppb		100
89)	Di-n-octylphthalate	14.36	149	1241376	28.53624 ppb	#	92
91)	Benzo (b) fluoranthene	14.90	252	1015709	31.10946 ppb		99
92)	Benzo (k) fluoranthene	14.94	252	952770	32.36662 ppb		99
93)	Benzo (a) pyrene	15.35	252	896017	30.92229 ppb		98
94)	Indeno (1,2,3-cd) pyrene	17.27	276	1040869	30.81497 ppb		98
95)	Dibenz (a,h) anthracene	17.30	278	927782	30.83338 ppb		99
96)	Benzo (g,h,i) perylene	17.83	276	810350	30.53116 ppb		99

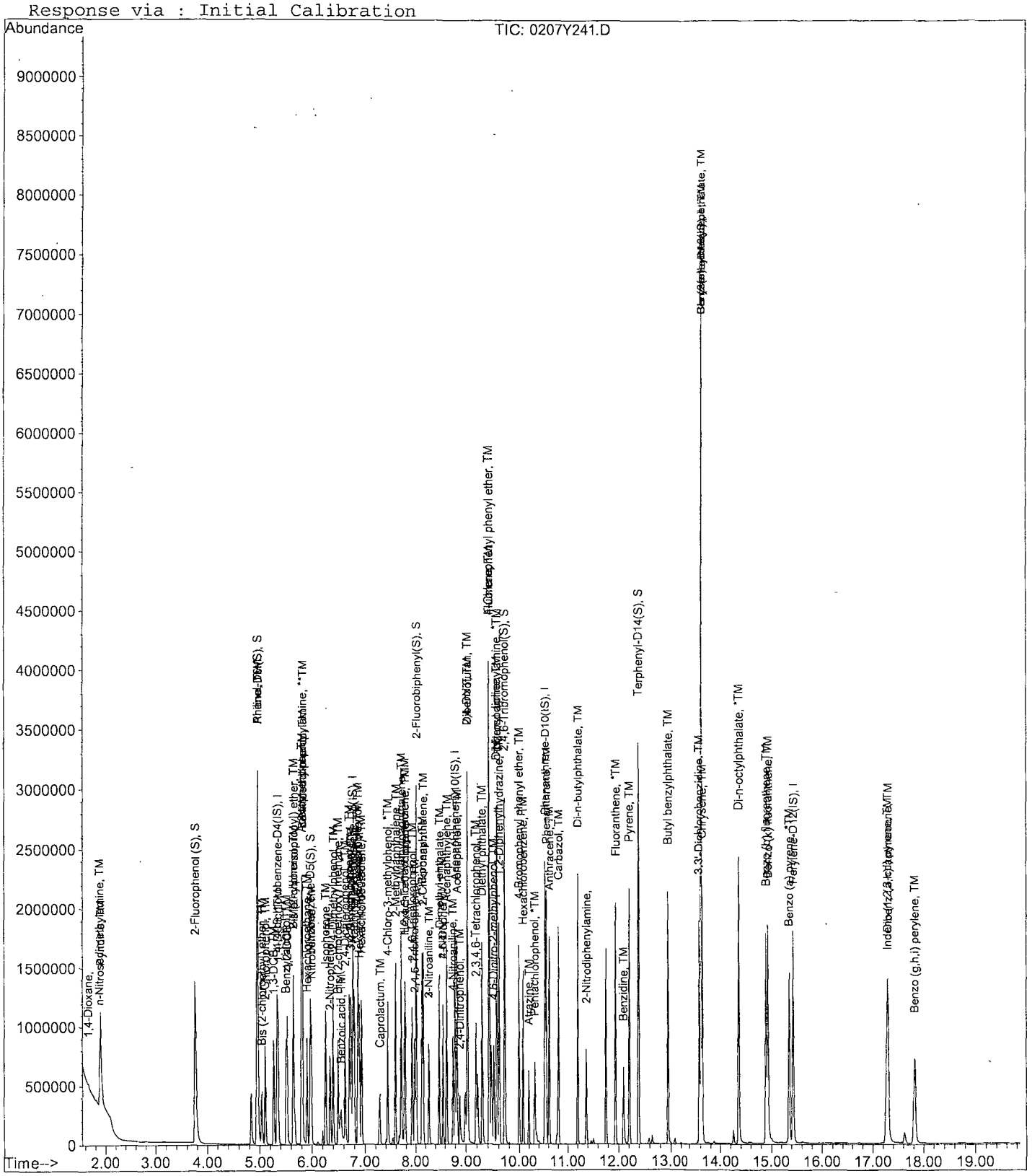
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200207\0207Y241.D Vial: 41
Acq On : 17 Mar 20 16:40 Operator: MA,SS
Sample : 50ug/ml 8270 03/04/20 (2) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Mar 17 17:44 2020 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



ORGANICS
Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y200207\0207Y231.D Vial: 31
Acq On : 17 Mar 20 10:58 Operator: MA,SS
Sample : BA08341W41 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 17 12:49 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	204866	40.00000	ppb	-0.04
21) Napthalene-D8(IS)	6.77	136	826906	40.00000	ppb	-0.04
41) Acenaphthene-D10(IS)	8.79	164	512981	40.00000	ppb	-0.04
65) Phenanthrene-D10(IS)	10.53	188	1001350	40.00000	ppb	-0.04
80) Chrysene-D12(IS)	13.61	240	959462	40.00000	ppb	-0.04
90) Perylene-D12(IS)	15.43	264	1060056	40.00000	ppb	-0.05
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.76	112	877095	146.00937	ppb	-0.05
Spiked Amount 250.000			Recovery =	58.404%		
6) Phenol-D6 (S)	4.95	99	1218242	159.17516	ppb	-0.04
Spiked Amount 250.000			Recovery =	63.670%		
22) Nitrobenzene-D5(S)	5.96	82	703682	85.53428	ppb	-0.04
Spiked Amount 125.000			Recovery =	68.427%		
46) 2-Fluorobiphenyl(S)	8.01	172	1309023	86.37124	ppb	-0.04
Spiked Amount 125.000			Recovery =	69.097%		
64) 2,4,6-Tribromophenol(S)	9.72	330	526677	206.50411	ppb	-0.04
Spiked Amount 250.000			Recovery =	82.602%		
83) Terphenyl-D14(S)	12.39	244	2100945	114.78404	ppb	-0.03
Spiked Amount 125.000			Recovery =	91.827%		

Target Compounds Qvalue

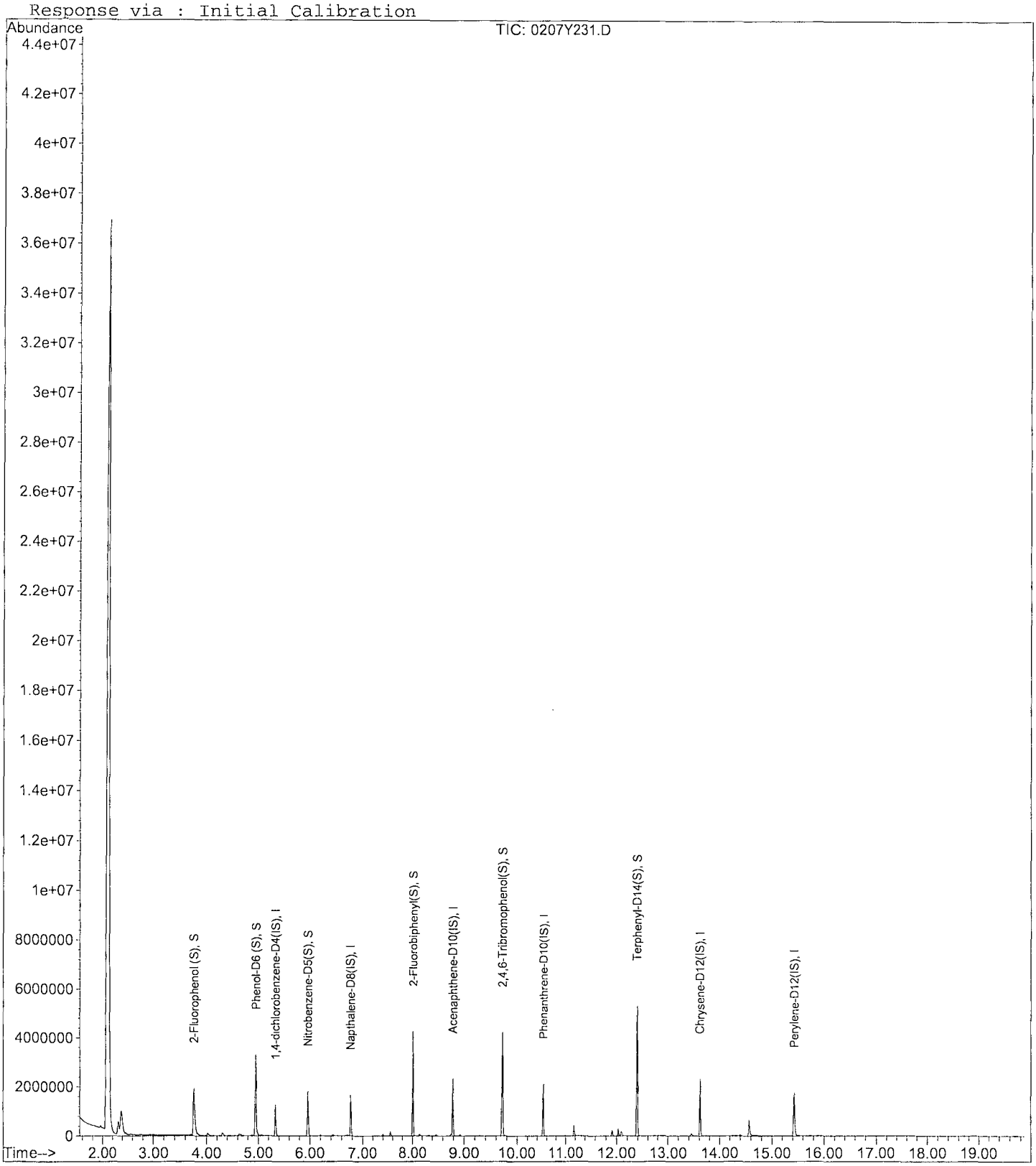
(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y200207\0207Y231.D
Acq On : 17 Mar 20 10:58
Sample : BA08341W41 1/800
Misc :

Vial: 31
Operator: MA,SS
Inst : Yoda
Multiplr: 1.25

Quant Time: Mar 17 12:49 2020 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



Library Search Compound Report

Data File : M:\YODA\DATA\Y200207\0207Y231.D Vial: 31
Acq On : 17 Mar 20 10:58 Operator: MA,SS
Sample : BA08341W41 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Library : M:\DATABASE\WILEY138.L

No Library Search Compounds Detected
****

Tentatively Identified Compound (LSC) summary

Operator ID: MA,SS Date Acquired: 17 Mar 20 10:58
Data File: M:\YODA\DATA\Y200207\0207Y231.D
Name: BA08341W41 1/800
Misc:
Method: M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title: EPA 8270C
Library Searched: M:\DATABASE\WILEY138.L

TIC Top Hit name	RT	EstConc	Units	Area	IntStd	ISRT	ISArea	ISConc

0207Y231.D Y1219.M Mon Mar 30 09:58:52 2020

LSC Area Percent Report

Data File : M:\YODA\DATA\Y200207\0207Y231.D Vial: 31
Acq On : 17 Mar 20 10:58 Operator: MA,SS
Sample : BA08341W41 1/800 Inst : Yoda
Misc : Multiplr: 1.25000
MS Integration Params: LSCINT.P

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.02 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

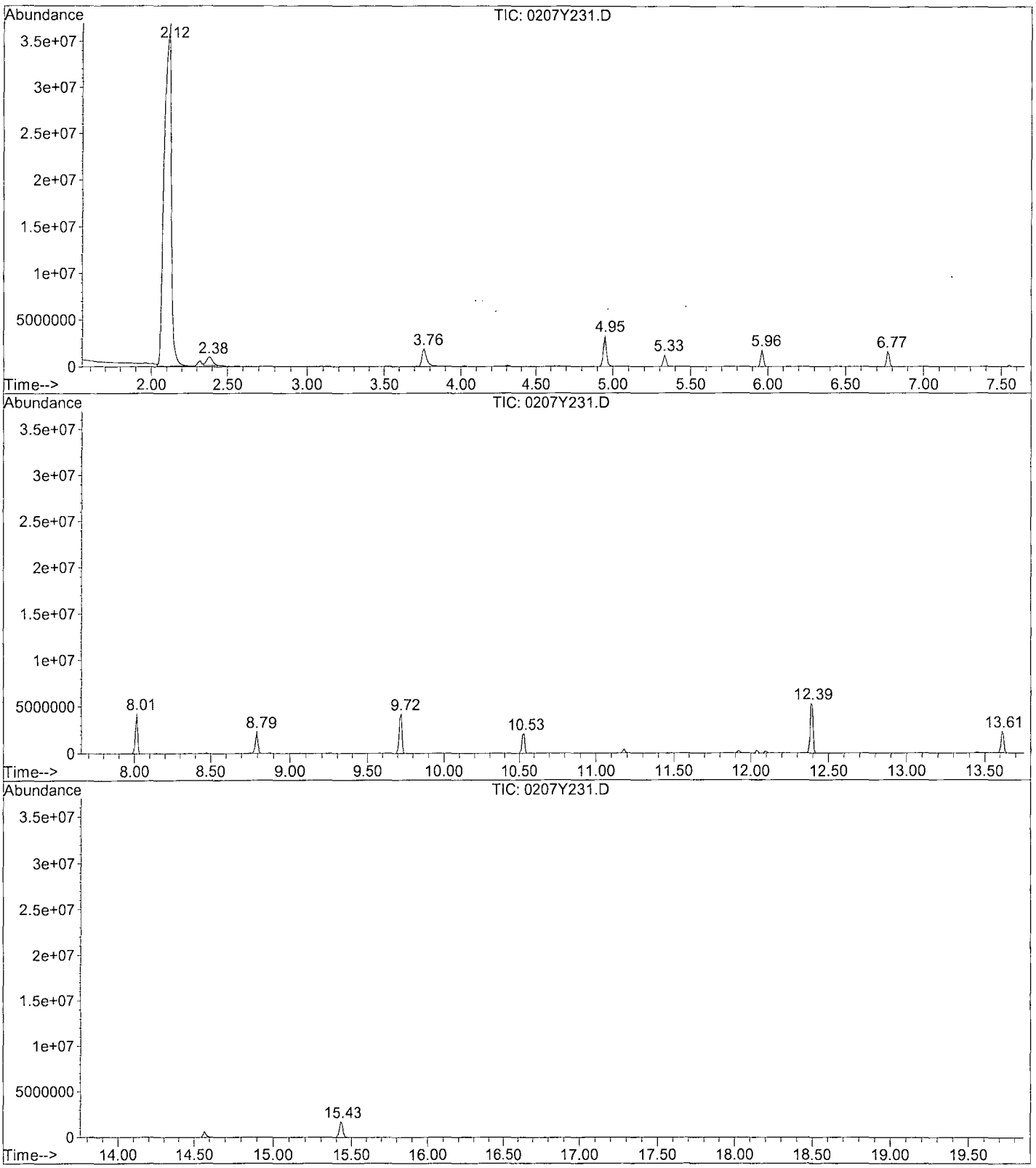
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	raw area	corr. area	corr. % max.	% of total
1	2.121	54	63	81	rVB2	36847418	126029585	117729776	100.00%	72.371%
2	2.380	87	91	99	rVB	915951	6521624	2580037	2.19%	1.586%
3	3.763	236	240	261	rVB	1899999	10192656	4115260	3.50%	2.530%
4	4.951	363	368	377	rBV	3292240	7748934	4606939	3.91%	2.832%
5	5.332	406	409	413	rBV	1252957	3238021	1570942	1.33%	0.966%
6	5.963	473	477	480	rBV	1799664	3731506	2184772	1.86%	1.343%
7	6.770	561	564	568	rBV	1640760	3576999	1991059	1.69%	1.224%
8	8.014	694	698	701	rBV	4248597	5952012	4404927	3.74%	2.708%
9	8.794	779	782	785	rVB	2319478	4095814	2505670	2.13%	1.540%
10	9.722	878	882	885	rBV	4212276	7112471	5420258	4.60%	3.332%
11	10.529	965	969	972	rBV	2106302	4314013	2746824	2.33%	1.689%
12	12.386	1166	1169	1172	rBV	5300605	8439408	6879595	5.84%	4.229%
13	13.611	1298	1301	1304	rBV	2311821	4402183	2972041	2.52%	1.827%
14	15.430	1492	1497	1505	rBV	1749770	5888454	2967622	2.52%	1.824%

Sum of corrected areas: 162675722

0207Y231.D Y1219.M Mon Mar 30 09:58:51 2020

LSC Report - Integrated Chromatogram

File : M:\YODA\DATA\Y200207\0207Y231.D
Operator : MA,SS
Acquired : 17 Mar 20 10:58 using AcqMethod SVOC1011
Instrument : Yoda
Sample Name: BA08341W41 1/800
Misc Info :
Vial Number: 31
Quant File :Y1219.RES (RTE Integrator)



0207Y231.D Y1219.M Mon Mar 30 09:58:52 2020

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y200207\0207Y227.D Vial: 27
Acq On : 17 Mar 20 9:08 Operator: MA,SS
Sample : 200312A BLK 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 17 10:37 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	199103	40.00000 ppb	-0.04
21) Napthalene-D8(IS)	6.77	136	806285	40.00000 ppb	-0.05
41) Acenaphthene-D10(IS)	8.79	164	504373	40.00000 ppb	-0.05
65) Phenanthrene-D10(IS)	10.53	188	990753	40.00000 ppb	-0.04
80) Chrysene-D12(IS)	13.62	240	972916	40.00000 ppb	-0.04
90) Perylene-D12(IS)	15.44	264	1040573	40.00000 ppb	-0.05
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.75	112	941062	161.19234 ppb	-0.06
Spiked Amount 250.000			Recovery =	64.477%	
6) Phenol-D6 (S)	4.95	99	1255861	168.84002 ppb	-0.04
Spiked Amount 250.000			Recovery =	67.536%	
22) Nitrobenzene-D5(S)	5.96	82	725060	90.38685 ppb	-0.04
Spiked Amount 125.000			Recovery =	72.310%	
46) 2-Fluorobiphenyl(S)	8.01	172	1319215	88.52927 ppb	-0.05
Spiked Amount 125.000			Recovery =	70.823%	
64) 2,4,6-Tribromophenol(S)	9.72	330	495402	197.55661 ppb	-0.05
Spiked Amount 250.000			Recovery =	79.023%	
83) Terphenyl-D14(S)	12.39	244	2120203	114.23434 ppb	-0.03
Spiked Amount 125.000			Recovery =	91.387%	

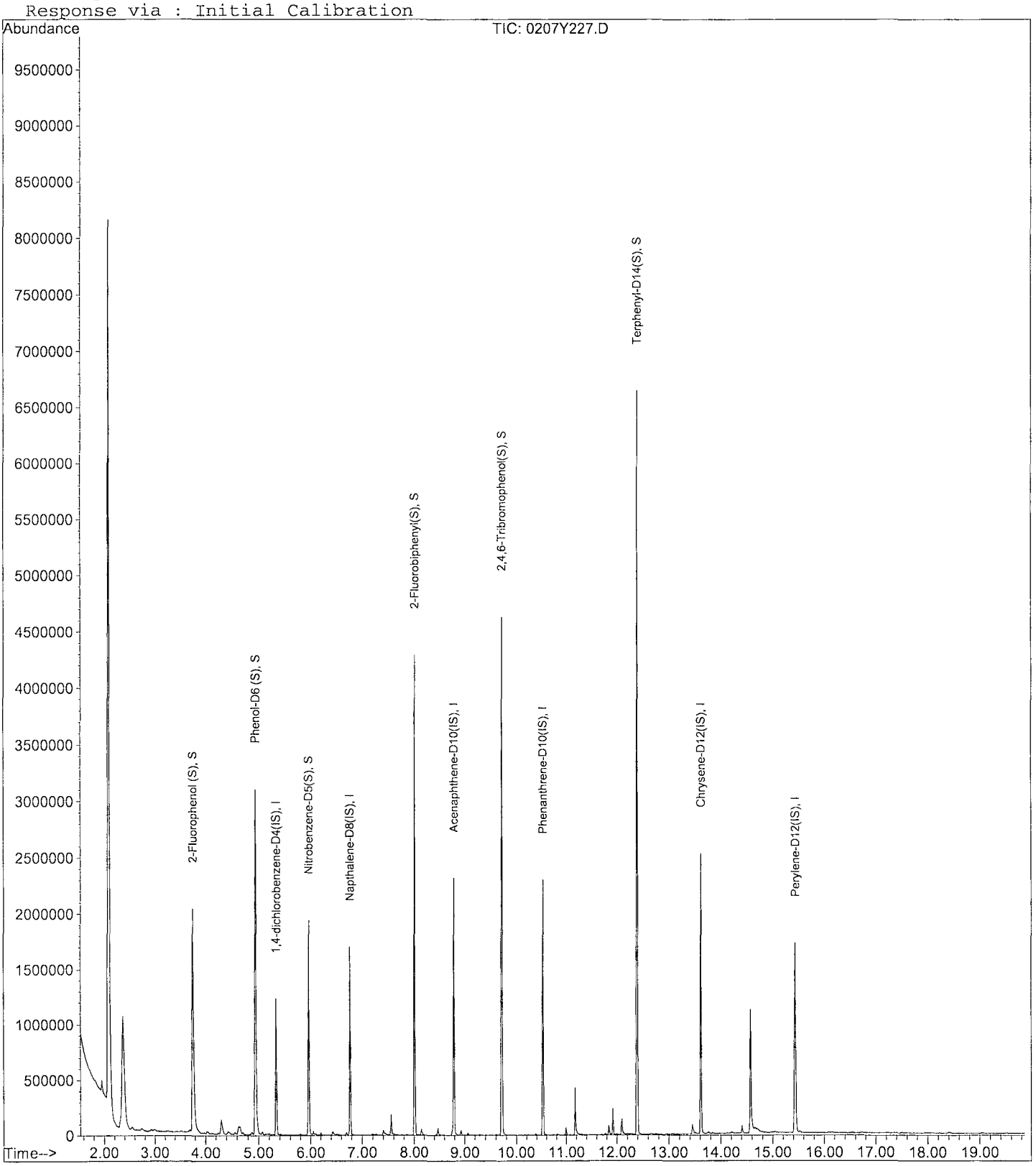
Target Compounds Qvalue

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

Data File : M:\YODA\DATA\Y200207\0207Y227.D Vial: 27
Acq On : 17 Mar 20 9:08 Operator: MA,SS
Sample : 200312A BLK 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 17 10:37 2020 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



Tentatively Identified Compound (LSC) summary

Operator ID: MA,SS Date Acquired: 17 Mar 20 9:08
Data File: M:\YODA\DATA\Y200207\0207Y227.D
Name: 200312A BLK 1/800
Misc:
Method: M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title: EPA 8270C
Library Searched: M:\DATABASE\WILEY138.L

TIC Top Hit name	RT	EstConc	Units	Area	IntStd	ISRT	ISArea	ISConc
Benzene, methyl-	2.08	520.5	ppb	16108600	ISTD01	5.33	1547410	40.0
Hexadecanoic acid	11.18	8.9	ppb	485445	ISTD04	10.53	2722920	40.0

0207Y227.D Y1219.M Mon Mar 30 09:43:40 2020

LSC Area Percent Report

Data File : M:\YODA\DATA\Y200207\0207Y227.D Vial: 27
Acq On : 17 Mar 20 9:08 Operator: MA,SS
Sample : 200312A BLK 1/800 Inst : Yoda
Misc : Multiplr: 1.25000
MS Integration Params: LSCINT.P

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.02 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

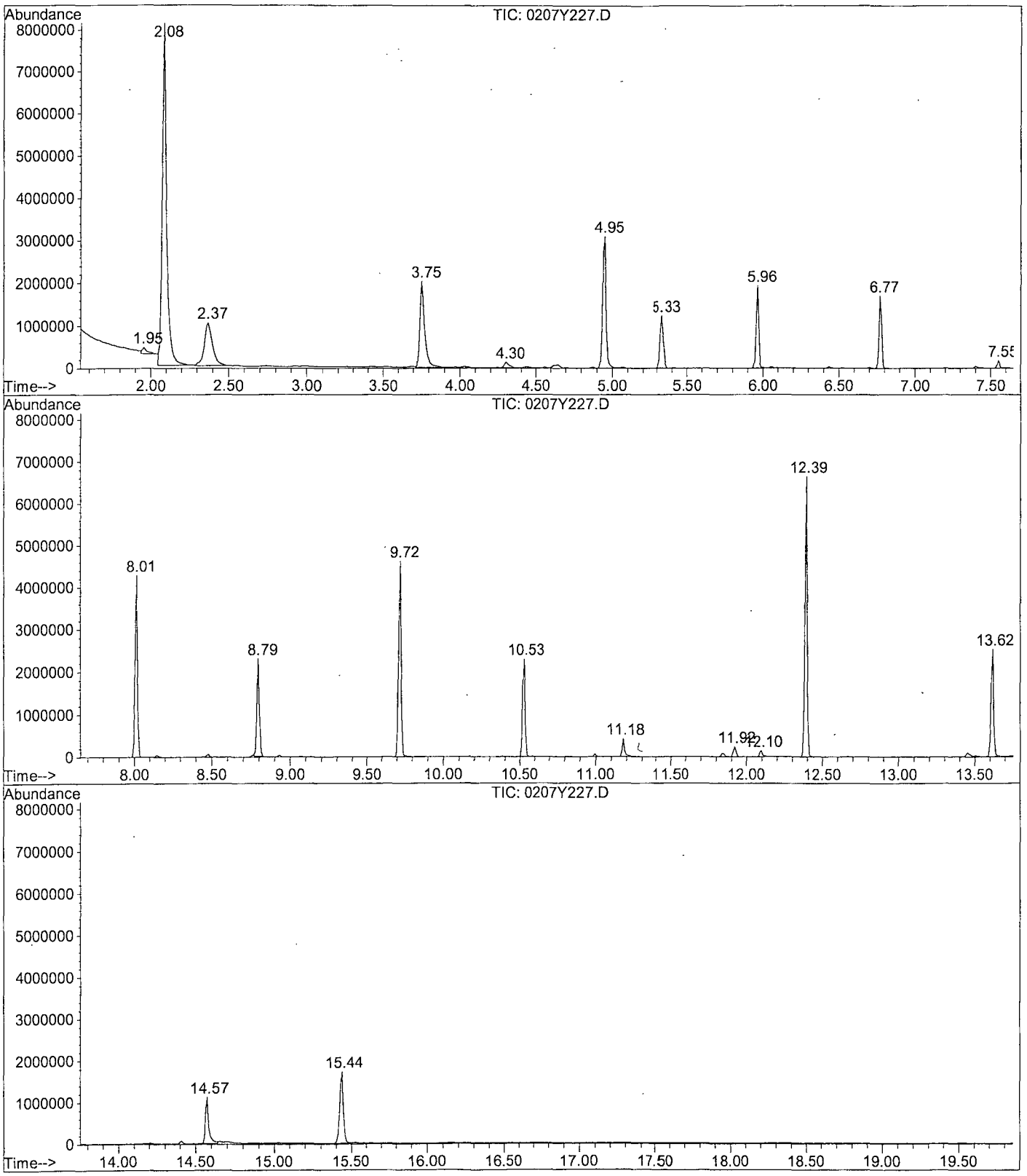
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	raw area	corr. area	corr. % max.	% of total
1	1.952	43	45	55	rVV	154472	4969720	325503	2.02%	0.495%
2	2.082	55	59	81	rVB	8086384	26845271	16108586	100.00%	24.485%
3	2.370	81	90	105	rVB	1018316	10556733	3683849	22.87%	5.599%
4	3.752	235	239	259	rVB	2023922	11137999	4369382	27.12%	6.641%
5	4.300	294	298	308	rVB3	133625	4076019	299270	1.86%	0.455%
6	4.950	363	368	378	rBV	3093048	8794949	4704055	29.20%	7.150%
7	5.330	405	409	414	rBV	1227918	3957129	1547410	9.61%	2.352%
8	5.961	473	477	480	rBV	1935932	4147674	2270169	14.09%	3.451%
9	6.769	561	564	568	rBV	1697276	3892425	1964049	12.19%	2.985%
10	7.548	645	648	651	rBV	181232	1806344	208394	1.29%	0.317%
11	8.013	694	698	701	rBV	4288336	6303547	4436070	27.54%	6.743%
12	8.792	779	782	785	rVB	2291672	4350307	2524116	15.67%	3.837%
13	9.720	878	882	885	rBV	4624415	7186471	5244797	32.56%	7.972%
14	10.528	965	969	972	rBV	2296784	4593397	2722922	16.90%	4.139%
15	11.177	1036	1039	1049	rBV2	425923	3958668	485445	3.01%	0.738%
16	11.920	1116	1119	1122	rVV	231245	1877017	258769	1.61%	0.393%
17	12.096	1135	1138	1147	rBV	141967	3405296	198348	1.23%	0.301%
18	12.393	1166	1170	1173	rBV	6642754	8887595	6899470	42.83%	10.487%
19	13.618	1298	1302	1305	rBV	2516459	4938635	3012949	18.70%	4.580%
20	14.574	1401	1405	1412	rBV	1116043	4654449	1646468	10.22%	2.503%
21	15.438	1492	1498	1505	rBV	1715170	6405138	2880521	17.88%	4.378%

Sum of corrected areas: 65790542

0207Y227.D Y1219.M Mon Mar 30 09:43:36 2020

LSC Report - Integrated Chromatogram

File : M:\YODA\DATA\Y200207\0207Y227.D
Operator : MA,SS
Acquired : 17 Mar 20 9:08 using AcqMethod SVOC1011
Instrument : Yoda
Sample Name: 200312A BLK 1/800
Misc Info :
Vial Number: 27
Quant File :Y1219.RES (RTE Integrator)



Library Search Compound Report

Data File : M:\YODA\DATA\Y200207\0207Y227.D Vial: 27
Acq On : 17 Mar 20 9:08 Operator: MA,SS
Sample : 200312A BLK 1/800 Inst : Yoda
Misc : Multiplr: 1.25

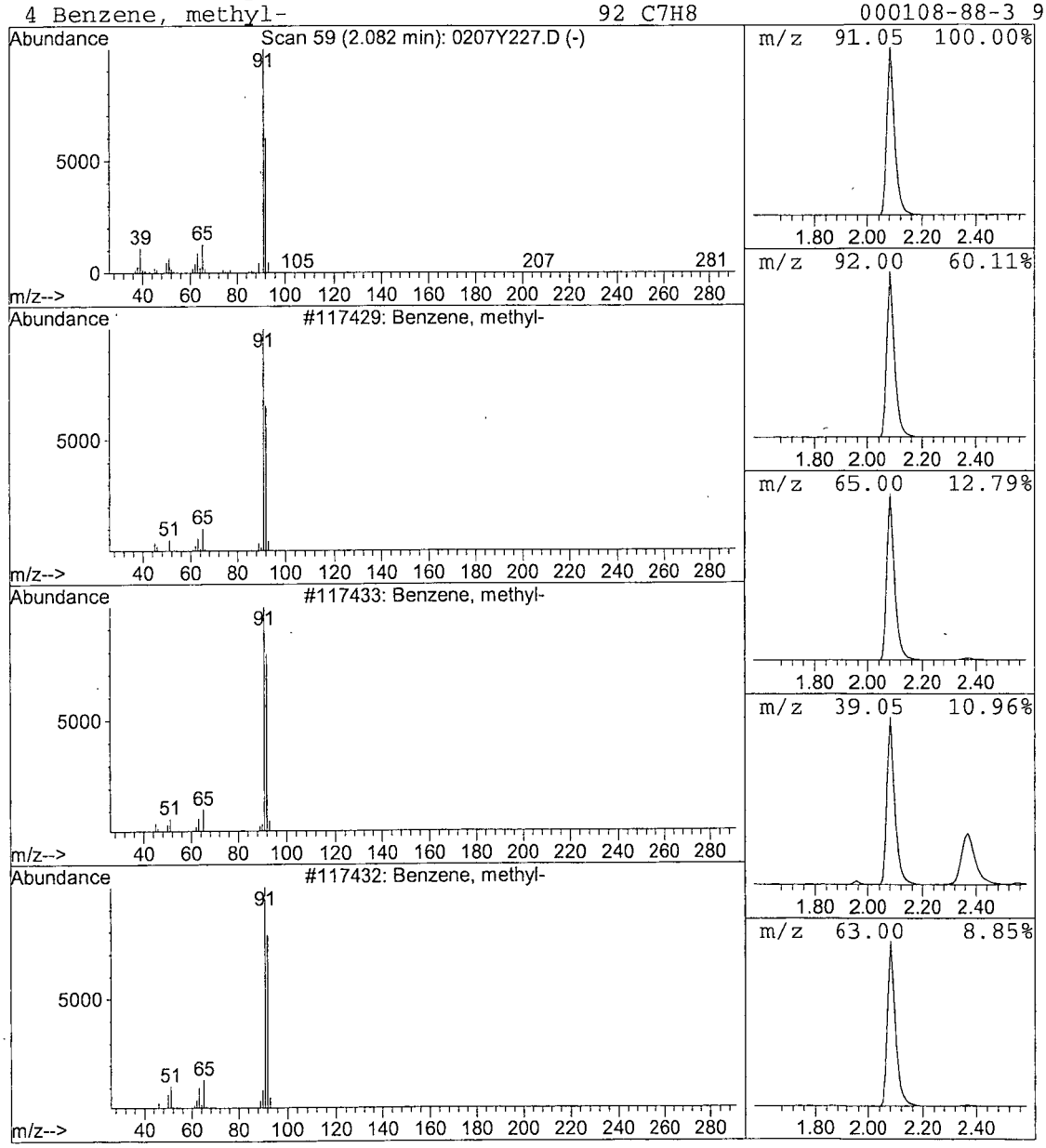
Quant Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Library : M:\DATABASE\WILEY138.L

****

Peak Number 1 Benzene, methyl- Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.08	520.50 ppb	16108600	1,4-dichlorobenzene-D4(IS)	5.33

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, methyl-	92	C7H8	000108-88-3	94
2	Benzene, methyl-	92	C7H8	000108-88-3	91
3	Benzene, methyl-	92	C7H8	000108-88-3	91
4	Benzene, methyl-	92	C7H8	000108-88-3	91



Library Search Compound Report

Data File : M:\YODA\DATA\Y200207\0207Y227.D Vial: 27
Acq On : 17 Mar 20 9:08 Operator: MA,SS
Sample : 200312A BLK 1/800 Inst : Yoda
Misc : Multiplr: 1.25

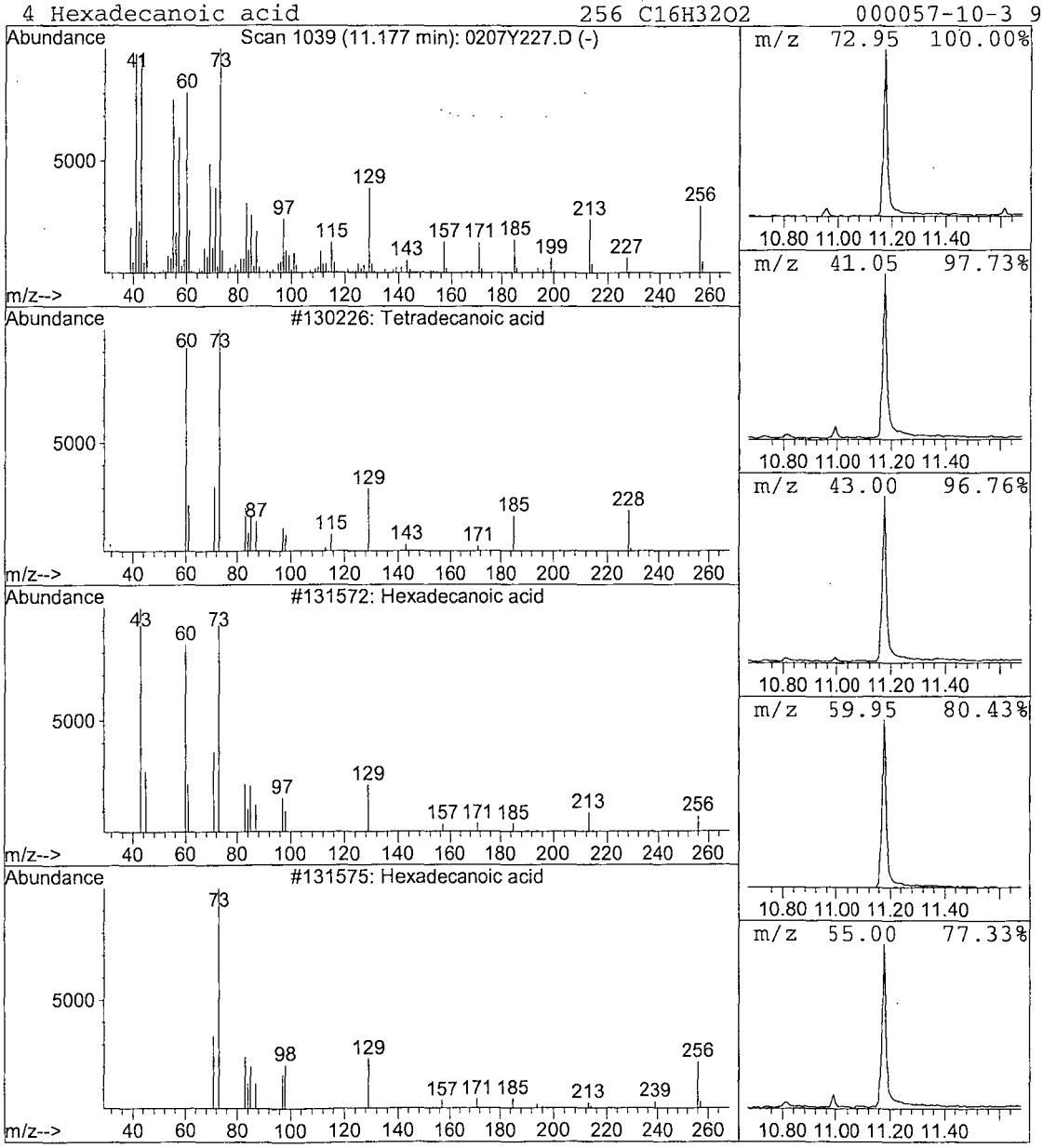
Quant Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Library : M:\DATABASE\WILEY138.L

****

Peak Number 2 Hexadecanoic acid Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.18	8.91 ppb	485445	Phenanthrene-D10(IS)	10.53

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Tetradecanoic acid	228	C14H28O2	000544-63-8	96
2	Hexadecanoic acid	256	C16H32O2	000057-10-3	94
3	Hexadecanoic acid	256	C16H32O2	000057-10-3	93
4	Hexadecanoic acid	256	C16H32O2	000057-10-3	91



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200207\0207Y228.D Vial: 28
Acq On : 17 Mar 20 9:35 Operator: MA,SS
Sample : 200312A LCS-1 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 17 10:38 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	208647	40.00000	ppb		-0.03
21) Napthalene-D8(IS)	6.77	136	824113	40.00000	ppb		-0.04
41) Acenaphthene-D10(IS)	8.80	164	515323	40.00000	ppb		-0.04
65) Phenanthrene-D10(IS)	10.53	188	991766	40.00000	ppb		-0.03
80) Chrysene-D12(IS)	13.62	240	1198017	40.00000	ppb		-0.03
90) Perylene-D12(IS)	15.44	264	1079810	40.00000	ppb		-0.04
System Monitoring Compounds							
5) 2-Fluorophenol (S)	3.76	112	908428	148.48492	ppb		-0.05
Spiked Amount 250.000			Recovery = 59.394%				
6) Phenol-D6 (S)	4.95	99	1332199	170.91044	ppb		-0.03
Spiked Amount 250.000			Recovery = 68.364%				
22) Nitrobenzene-D5(S)	5.96	82	714523	87.14638	ppb		-0.04
Spiked Amount 125.000			Recovery = 69.717%				
46) 2-Fluorobiphenyl(S)	8.02	172	1338661	87.92537	ppb		-0.04
Spiked Amount 125.000			Recovery = 70.340%				
64) 2,4,6-Tribromophenol(S)	9.72	330	509870	199.00572	ppb		-0.04
Spiked Amount 250.000			Recovery = 79.602%				
83) Terphenyl-D14(S)	12.39	244	2056274	89.97308	ppb		-0.03
Spiked Amount 125.000			Recovery = 71.978%				
Target Compounds							Qvalue
2) 1,4-Dioxane	1.66	58	12586	5.00819			72
3) n-Nitrosodimethylamine	1.88	42	192631	41.33314	ppb		98
4) Pyridine	1.90	79	296095	27.42708	ppb		96
7) Phenol	4.97	94	402338	43.73797	ppb		98
8) Aniline	4.96	93	263104	43.82834	ppb	#	91
9) Bis (2-chloroethyl) ether	5.04	63	180251	42.29815	ppb		99
10) 2-Chlorophenol	5.10	128	263138	40.62573	ppb		92
11) 1,3-DCB	5.27	146	246751	34.71624	ppb		99
12) 1,4-DCB	5.35	146	258510	35.53830	ppb		98
13) Benzyl alcohol	5.50	108	158305	41.49276	ppb		94
14) 1,2-DCB	5.53	146	249768	36.90410	ppb		99
15) 2-Methylphenol	5.64	107	236165	41.78389	ppb		100
16) Bis (2-chloroisopropyl) et	5.65	45	244707	43.54362	ppb		97
17) Acetophenone	5.80	105	397632	41.27498	ppb		96
18) 3&4-Methylphenol	5.82	107	616050	82.87825	ppb		99
19) n-Nitrosodi-n-propylamine	5.81	70	253418	40.89908	ppb		98
20) Hexachloroethane	5.90	117	100064	33.00235	ppb		81
23) Nitrobenzene	5.99	77	399148	46.97222	ppb		97
24) Isophorone	6.26	82	598295	44.62575	ppb		99
25) 2-Nitrophenol	6.34	139	154724	44.83985	ppb		99
26) 2,4-Dimethylphenol	6.40	122	248189	44.94997	ppb		98
27) Benzoic acid	6.56	105	185839	41.06585	ppb		96
28) Bis (2-chloroethoxy) metha	6.49	93	296803	42.65640	ppb		99
29) 2,4-Dichlorophenol	6.63	162	241504	44.85839	ppb		99
30) 1,2,4-Trichlorobenzene	6.72	180	228338	38.02543	ppb		99
31) 3,4-Dimethylphenol	6.74	107	405584	44.15537	ppb		100
32) Naphthalene	6.80	128	747967	41.69716	ppb		100
33) 4-Chloroaniline	6.86	127	274390	38.04261	ppb		98
34) 2,6-Dichlorophenol	6.87	162	237531	45.03597	ppb		98
35) Hexachloropropene	6.90	213	96292	18.53208	ppb		99
36) Hexachlorobutadiene	6.94	225	135312	33.21593	ppb		100
37) Caprolactum	7.28	55	96998	40.14480	ppb		95

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

Data File : M:\YODA\DATA\Y200207\0207Y228.D Vial: 28
Acq On : 17 Mar 20 9:35 Operator: MA,SS
Sample : 200312A LCS-1 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 17 10:38 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

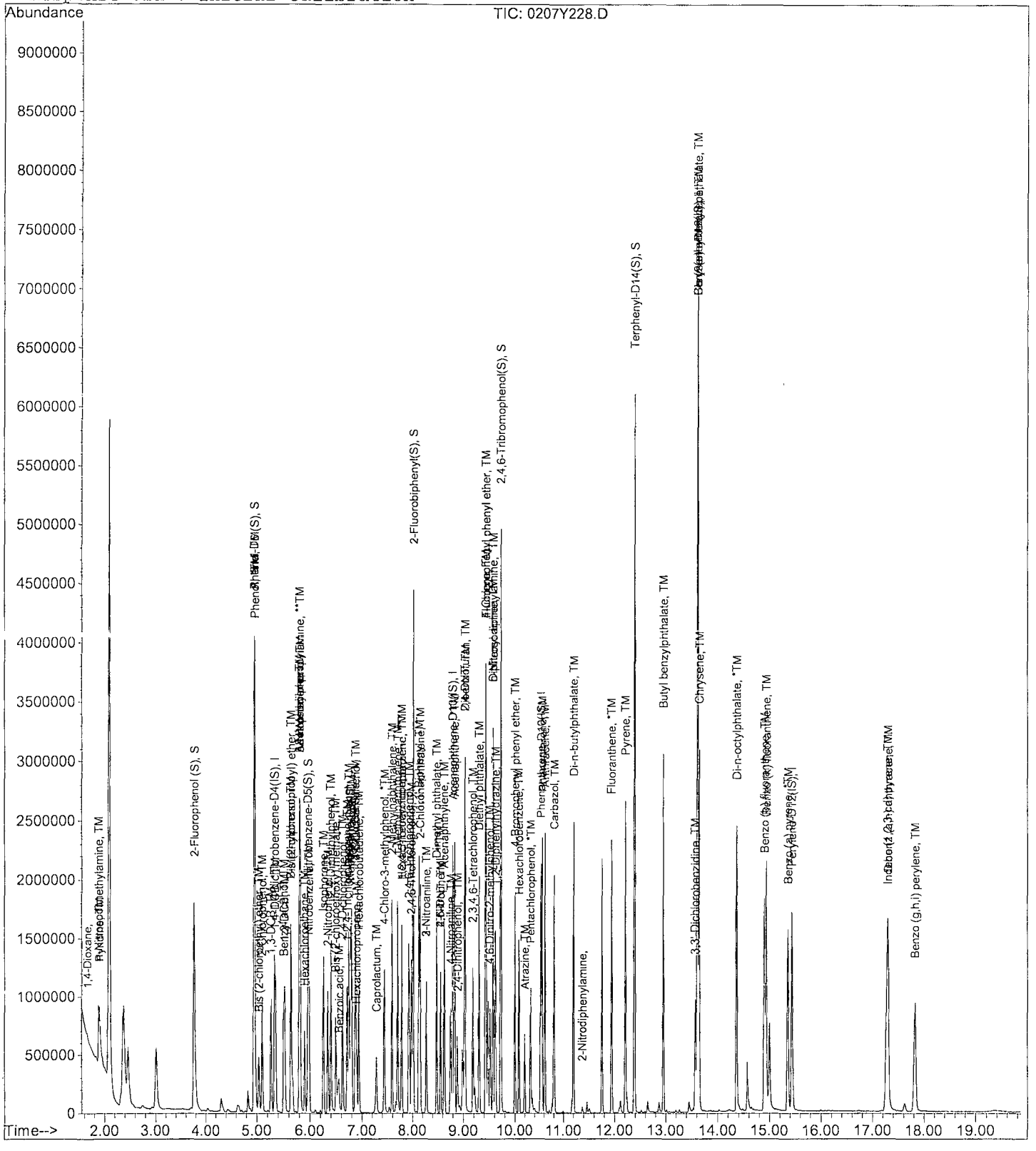
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.44	107	299860	46.92130	ppb		100
39)	2-Methylnaphthalene	7.59	142	499142	41.34558	ppb		98
40)	1-Methylnaphthalene	7.70	142	517260	41.20384	ppb		98
42)	Hexachlorocyclopentadiene	7.77	237	33832	11.39543	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.78	216	251157	38.24555	ppb		98
44)	2,4,6-Trichlorophenol	7.92	196	194915	45.33477	ppb		99
45)	2,4,5-Trichlorophenol	7.98	196	200341	42.96427	ppb		96
47)	1,1'-Biphenyl	8.13	154	654683	40.94429	ppb		99
48)	2-Chloronaphthalene	8.15	162	533970	41.52508	ppb		99
49)	2-Nitroaniline	8.28	65	217866	44.62120	ppb		98
50)	Dimethyl phthalate	8.48	163	721455	45.77186	ppb		99
51)	2,6-DNT	8.56	165	155781	45.31666	ppb		93
52)	Acenaphthylene	8.63	152	813976	41.11347	ppb		99
53)	3-Nitroaniline	8.28	138	177036	43.38590	ppb		95
54)	Acenaphthene	8.83	154	528569	42.68139	ppb		99
55)	2,4-Dinitrophenol	8.89	184	89794	46.41455	ppb		95
56)	4-Nitrophenol	8.55	65	14900	46.37793	ppb		95
57)	Dibenzofuran	9.04	168	821865	43.69268	ppb		100
58)	2,4-DNT	9.04	165	232935	46.08861	ppb		90
59)	2,3,4,6-Tetrachlorophenol	9.18	232	159880	45.20569	ppb	#	87
60)	Diethyl phthalate	9.31	149	748740	45.85098	ppb		99
61)	4-Chlorophenyl phenyl ethe	9.44	204	392807	43.44341	ppb		94
62)	Fluorene	9.44	166	705322	44.07647	ppb		99
63)	4-Nitroaniline	8.76	138	141561	41.63381	ppb		98
66)	4,6-Dinitro-2-methylphenol	9.52	198	139133	44.97956	ppb		90
67)	Diphenyl amine	9.57	169	832599	64.46248	ppb		99
68)	n-Nitrosodiphenylamine	9.57	169	832599	64.46248	ppb		99
69)	1,2-Diphenylhydrazine	9.61	77	790260	42.30611	ppb		93
70)	4-Bromophenyl phenyl ether	10.00	248	209698	43.12068	ppb		91
71)	Hexachlorobenzene	10.09	284	210187	42.72320	ppb		97
72)	Atrazine	10.20	200	84359	19.01887	ppb		96
73)	Pentachlorophenol	10.32	266	129967	42.97545	ppb		98
74)	Phenanthrene	10.56	178	967094	44.17033	ppb		99
75)	Anthracene	10.61	178	978380	42.74816	ppb		99
76)	Carbazol	10.81	167	936561	44.94427	ppb		100
77)	Di-n-butylphthalate	11.21	149	1304904	45.79492	ppb		99
78)	2-Nitrodiphenylamine	11.38	167	7568	1.16757	ppb		84
79)	Fluoranthene	11.94	202	1146381	44.70192	ppb	#	97
81)	Benzidine	12.11	184	7856	0.80317	ppb	#	81
82)	Pyrene	12.21	202	1207167	42.01940	ppb		99
84)	Butyl benzylphthalate	12.95	149	611996	42.51683	ppb		94
85)	3,3'-Dichlorobenzidine	13.58	252	259641	26.29763	ppb		97
86)	Benz (a) anthracene	13.61	228	1374862	43.93433	ppb		100
87)	Bis (2-ethylhexyl) phthala	13.61	149	1137699	47.30294	ppb	#	94
88)	Chrysene	13.65	228	1147042	42.14639	ppb		99
89)	Di-n-octylphthalate	14.36	149	1488729	41.93271	ppb		98
91)	Benzo (b) fluoranthene	14.90	252	1294999	45.89730	ppb		99
92)	Benzo (k) fluoranthene	14.94	252	1103981	43.39757	ppb		98
93)	Benzo (a) pyrene	15.36	252	1030895	41.16844	ppb		98
94)	Indeno (1,2,3-cd) pyrene	17.28	276	1279212	43.82306	ppb		98
95)	Dibenz (a,h) anthracene	17.31	278	1147529	44.12995	ppb		99
96)	Benzo (g,h,i) perylene	17.83	276	993515	43.31514	ppb		98

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

Data File : M:\YODA\DATA\Y200207\0207Y228.D Vial: 28
Acq On : 17 Mar 20 9:35 Operator: MA,SS
Sample : 200312A LCS-1 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 17 10:38 2020 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200207\0207Y229.D Vial: 29
Acq On : 17 Mar 20 10:03 Operator: MA,SS
Sample : BA08341W36 MS-1 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 17 11:25 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.34	152	206854	40.00000 ppb	-0.03
21) Napthalene-D8(IS)	6.78	136	823093	40.00000 ppb	-0.04
41) Acenaphthene-D10(IS)	8.79	164	509536	40.00000 ppb	-0.05
65) Phenanthrene-D10(IS)	10.53	188	986259	40.00000 ppb	-0.04
80) Chrysene-D12(IS)	13.62	240	1165483	40.00000 ppb	-0.04
90) Perylene-D12(IS)	15.44	264	1061145	40.00000 ppb	-0.05
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.76	112	811287	133.75640 ppb	-0.05
Spiked Amount 250.000			Recovery	= 53.502%	
6) Phenol-D6 (S)	4.96	99	1188507	153.79756 ppb	-0.03
Spiked Amount 250.000			Recovery	= 61.519%	
22) Nitrobenzene-D5(S)	5.97	82	694119	84.76273 ppb	-0.03
Spiked Amount 125.000			Recovery	= 67.810%	
46) 2-Fluorobiphenyl(S)	8.01	172	1300178	86.36764 ppb	-0.05
Spiked Amount 125.000			Recovery	= 69.094%	
64) 2,4,6-Tribromophenol(S)	9.73	330	505734	199.63326 ppb	-0.04
Spiked Amount 250.000			Recovery	= 79.853%	
83) Terphenyl-D14(S)	12.39	244	1979818	89.04590 ppb	-0.03
Spiked Amount 125.000			Recovery	= 71.237%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.66	58	10373	4.16338 #	1
3) n-Nitrosodimethylamine	1.88	42	203591	44.06350 ppb	86
4) Pyridine	1.90	79	422512	39.47624 ppb	99
7) Phenol	4.97	94	362733	39.77433 ppb	82
8) Aniline	4.96	93	287744	48.34840 ppb #	82
9) Bis (2-chloroethyl) ether	5.04	63	173414	41.04649 ppb	99
10) 2-Chlorophenol	5.11	128	252398	39.30536 ppb	97
11) 1,3-DCB	5.27	146	258340	36.66179 ppb	98
12) 1,4-DCB	5.36	146	268743	37.26530 ppb	97
13) Benzyl alcohol	5.51	108	153689	40.63205 ppb	99
14) 1,2-DCB	5.52	146	252260	37.59538 ppb	99
15) 2-Methylphenol	5.64	107	219863	39.23681 ppb	97
16) Bis (2-chloroisopropyl) et	5.64	45	234042	42.00686 ppb	87
17) Acetophenone	5.79	105	386920	40.51118 ppb	99
18) 3&4-Methylphenol	5.81	107	578271	78.47011 ppb	97
19) n-Nitrosodi-n-propylamine	5.80	70	245480	39.96137 ppb	94
20) Hexachloroethane	5.90	117	107271	35.68597 ppb	93
23) Nitrobenzene	5.99	77	378057	44.54534 ppb	94
24) Isophorone	6.26	82	587172	43.85038 ppb	98
25) 2-Nitrophenol	6.35	139	145542	42.23113 ppb	94
26) 2,4-Dimethylphenol	6.41	122	235735	42.74731 ppb	97
27) Benzoic acid	6.55	105	187259	41.38567 ppb	97
28) Bis (2-chloroethoxy) metha	6.50	93	274922	39.56064 ppb	100
29) 2,4-Dichlorophenol	6.63	162	232114	43.16767 ppb	97
30) 1,2,4-Trichlorobenzene	6.71	180	237363	39.57736 ppb	97
31) 3,4-Dimethylphenol	6.74	107	388025	42.29609 ppb	99
32) Naphthalene	6.81	128	747384	41.71629 ppb	99
33) 4-Chloroaniline	6.87	127	301381	41.83654 ppb	97
34) 2,6-Dichlorophenol	6.88	162	230407	43.73939 ppb	95
35) Hexachloropropene	6.90	213	104042	20.04844 ppb	99
36) Hexachlorobutadiene	6.93	225	146526	36.01327 ppb	98
37) Caprolactum	7.29	55	112739	46.71739 ppb	92

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

Data File : M:\YODA\DATA\Y200207\0207Y229.D Vial: 29
Acq On : 17 Mar 20 10:03 Operator: MA,SS
Sample : BA08341W36 MS-1 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 17 11:25 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.44	107	289073	45.28943	ppb		93
39)	2-Methylnaphthalene	7.59	142	508256	42.15269	ppb		100
40)	1-Methylnaphthalene	7.71	142	526587	41.99879	ppb		100
42)	Hexachlorocyclopentadiene	7.77	237	66440	17.92696	ppb		100
43)	1,2,4,5-Tetrachlorobenzene	7.79	216	256964	39.57423	ppb		99
44)	2,4,6-Trichlorophenol	7.93	196	186499	43.86997	ppb		99
45)	2,4,5-Trichlorophenol	7.98	196	193637	41.99819	ppb		97
47)	1,1'-Biphenyl	8.13	154	656963	41.55353	ppb		97
48)	2-Chloronaphthalene	8.15	162	531395	41.79417	ppb		98
49)	2-Nitroaniline	8.27	65	212393	43.99432	ppb		93
50)	Dimethyl phthalate	8.48	163	703074	45.11231	ppb		100
51)	2,6-DNT	8.56	165	152248	44.79192	ppb		84
52)	Acenaphthylene	8.63	152	806778	41.21272	ppb		99
53)	3-Nitroaniline	8.27	138	170434	42.24233	ppb		92
54)	Acenaphthene	8.84	154	517654	42.27475	ppb		99
55)	2,4-Dinitrophenol	8.88	184	89488	46.71525	ppb		94
56)	4-Nitrophenol	8.56	65	15284	48.11348	ppb		96
57)	Dibenzofuran	9.03	168	811977	43.65727	ppb		98
58)	2,4-DNT	9.03	165	232871	46.59925	ppb		97
59)	2,3,4,6-Tetrachlorophenol	9.19	232	152466	43.59901	ppb		96
60)	Diethyl phthalate	9.30	149	736192	45.59459	ppb		100
61)	4-Chlorophenyl phenyl ethe	9.43	204	378085	42.29011	ppb		98
62)	Fluorene	9.43	166	701815	44.35542	ppb		98
63)	4-Nitroaniline	8.75	138	144913	43.10370	ppb		85
66)	4,6-Dinitro-2-methylphenol	9.52	198	140582	45.70177	ppb	#	79
67)	Diphenyl amine	9.57	169	822332	64.02308	ppb		99
68)	n-Nitrosodiphenylamine	9.57	169	822332	64.02308	ppb		99
69)	1,2-Diphenylhydrazine	9.62	77	830506	44.70891	ppb		99
70)	4-Bromophenyl phenyl ether	10.00	248	202825	41.94025	ppb		95
71)	Hexachlorobenzene	10.08	284	201330	41.15141	ppb		90
72)	Atrazine	10.19	200	67664	15.34014	ppb		95
73)	Pentachlorophenol	10.32	266	126572	42.08654	ppb		99
74)	Phenanthrene	10.55	178	951238	43.68873	ppb		99
75)	Anthracene	10.62	178	966854	42.48044	ppb		100
76)	Carbazol	10.81	167	908101	43.82185	ppb		99
77)	Di-n-butylphthalate	11.20	149	1267612	44.73457	ppb		100
78)	2-Nitrodiphenylamine	11.38	167	19382	3.00691	ppb		99
79)	Fluoranthene	11.95	202	1132612	44.41162	ppb		100
81)	Benzidine	12.10	184	170878	17.95763	ppb		94
82)	Pyrene	12.21	202	1187475	42.48778	ppb		99
84)	Butyl benzylphthalate	12.95	149	590486	42.16761	ppb		96
85)	3,3'-Dichlorobenzidine	13.57	252	117898	12.27459	ppb		99
86)	Benz (a) anthracene	13.61	228	1291704	42.42921	ppb		99
87)	Bis (2-ethylhexyl) phthala	13.62	149	1034582	44.21634	ppb		99
88)	Chrysene	13.65	228	1106810	41.80335	ppb		100
89)	Di-n-octylphthalate	14.36	149	1396537	40.43400	ppb		94
91)	Benzo (b) fluoranthene	14.90	252	1173916	42.33771	ppb		99
92)	Benzo (k) fluoranthene	14.94	252	1085608	43.42597	ppb		99
93)	Benzo (a) pyrene	15.35	252	992145	40.31788	ppb		98
94)	Indeno (1,2,3-cd) pyrene	17.27	276	1202495	41.91950	ppb		99
95)	Dibenz (a,h) anthracene	17.30	278	1076639	42.13204	ppb		99
96)	Benzo (g,h,i) perylene	17.83	276	936718	41.55725	ppb		100

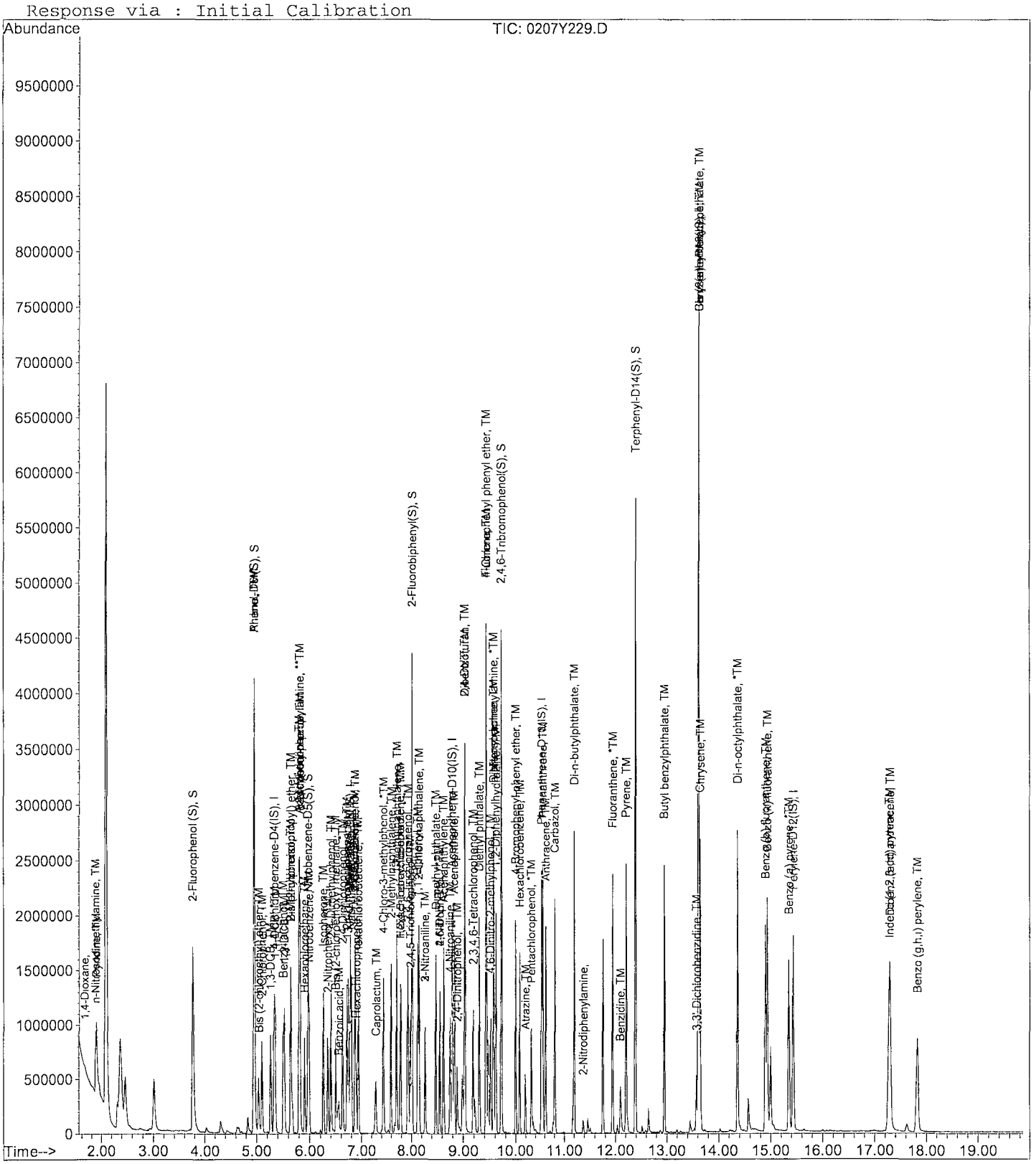
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200207\0207Y229.D Vial: 29
Acq On : 17 Mar 20 10:03 Operator: MA,SS
Sample : BA08341W36 MS-1 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 17 11:25 2020 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200207\0207Y230.D Vial: 30
Acq On : 17 Mar 20 10:30 Operator: MA,SS
Sample : BA08341W42 MSD-1 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 17 11:42 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	206186	40.00000	ppb		-0.03
21) Napthalene-D8(IS)	6.78	136	813059	40.00000	ppb		-0.03
41) Acenaphthene-D10(IS)	8.79	164	509632	40.00000	ppb		-0.04
65) Phenanthrene-D10(IS)	10.53	188	972261	40.00000	ppb		-0.03
80) Chrysene-D12(IS)	13.62	240	1215328	40.00000	ppb		-0.03
90) Perylene-D12(IS)	15.44	264	1067770	40.00000	ppb		-0.04
System Monitoring Compounds							
5) 2-Fluorophenol (S)	3.76	112	849123	140.44795	ppb		-0.05
Spiked Amount 250.000			Recovery = 56.179%				
6) Phenol-D6 (S)	4.95	99	1199325	155.70026	ppb		-0.04
Spiked Amount 250.000			Recovery = 62.280%				
22) Nitrobenzene-D5(S)	5.96	82	710657	87.85326	ppb		-0.04
Spiked Amount 125.000			Recovery = 70.282%				
46) 2-Fluorobiphenyl(S)	8.01	172	1344032	89.26394	ppb		-0.04
Spiked Amount 125.000			Recovery = 71.411%				
64) 2,4,6-Tribromophenol(S)	9.72	330	517538	204.25429	ppb		-0.04
Spiked Amount 250.000			Recovery = 81.702%				
83) Terphenyl-D14(S)	12.39	244	2072268	89.38137	ppb		-0.04
Spiked Amount 125.000			Recovery = 71.505%				
Target Compounds							Qvalue
2) 1,4-Dioxane	1.66	58	11640	4.68705			54
3) n-Nitrosodimethylamine	1.88	42	195204	42.38517	ppb		100
4) Pyridine	1.90	79	339398	31.81345	ppb		100
7) Phenol	4.97	94	368724	40.56224	ppb		92
8) Aniline	4.96	93	270272	45.55978	ppb	#	93
9) Bis (2-chloroethyl) ether	5.04	63	175274	41.62115	ppb		98
10) 2-Chlorophenol	5.10	128	257981	40.30494	ppb		92
11) 1,3-DCB	5.27	146	270230	38.47338	ppb		99
12) 1,4-DCB	5.35	146	281670	39.18437	ppb		99
13) Benzyl alcohol	5.51	108	159362	42.26836	ppb		93
14) 1,2-DCB	5.53	146	263607	39.41375	ppb		99
15) 2-Methylphenol	5.64	107	223406	39.99826	ppb		98
16) Bis (2-chloroisopropyl) et	5.65	45	239222	43.07569	ppb		97
17) Acetophenone	5.80	105	391858	41.16112	ppb		99
18) 3&4-Methylphenol	5.82	107	588087	80.06066	ppb		100
19) n-Nitrosodi-n-propylamine	5.81	70	255010	41.64724	ppb		98
20) Hexachloroethane	5.91	117	110522	36.88661	ppb		96
23) Nitrobenzene	5.99	77	382051	45.57149	ppb		96
24) Isophorone	6.26	82	604940	45.73484	ppb		97
25) 2-Nitrophenol	6.34	139	148440	43.60358	ppb		92
26) 2,4-Dimethylphenol	6.40	122	235400	43.21336	ppb		100
27) Benzoic acid	6.56	105	187268	41.83536	ppb		95
28) Bis (2-chloroethoxy) metha	6.50	93	300374	43.75654	ppb		99
29) 2,4-Dichlorophenol	6.63	162	232018	43.68233	ppb		99
30) 1,2,4-Trichlorobenzene	6.72	180	242641	40.95669	ppb		98
31) 3,4-Dimethylphenol	6.74	107	397954	43.91372	ppb		100
32) Naphthalene	6.80	128	768191	43.40682	ppb		99
33) 4-Chloroaniline	6.86	127	305010	42.86283	ppb		98
34) 2,6-Dichlorophenol	6.87	162	230476	44.29244	ppb		100
35) Hexachloropropene	6.90	213	103544	20.19871	ppb		99
36) Hexachlorobutadiene	6.94	225	151240	37.63062	ppb		99
37) Caprolactum	7.28	55	111210	46.65252	ppb		91

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

Data File : M:\YODA\DATA\Y200207\0207Y230.D Vial: 30
Acq On : 17 Mar 20 10:30 Operator: MA,SS
Sample : BA08341W42 MSD-1 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 17 11:42 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.44	107	293257	46.51195	ppb		99
39)	2-Methylnaphthalene	7.59	142	517516	43.45037	ppb		99
40)	1-Methylnaphthalene	7.70	142	529782	42.77507	ppb		99
42)	Hexachlorocyclopentadiene	7.77	237	59216	16.49442	ppb		97
43)	1,2,4,5-Tetrachlorobenzene	7.78	216	258467	39.79821	ppb		95
44)	2,4,6-Trichlorophenol	7.92	196	192496	45.27211	ppb		99
45)	2,4,5-Trichlorophenol	7.98	196	198518	43.04873	ppb		93
47)	1,1'-Biphenyl	8.13	154	674608	42.66155	ppb		99
48)	2-Chloronaphthalene	8.15	162	551453	43.36356	ppb		99
49)	2-Nitroaniline	8.27	65	217563	45.05673	ppb		99
50)	Dimethyl phthalate	8.48	163	724170	46.45716	ppb		99
51)	2,6-DNT	8.56	165	156945	46.16509	ppb		94
52)	Acenaphthylene	8.63	152	842533	43.03109	ppb		100
53)	3-Nitroaniline	8.27	138	177874	44.07804	ppb		97
54)	Acenaphthene	8.83	154	539707	44.06743	ppb		99
55)	2,4-Dinitrophenol	8.89	184	99967	51.19342	ppb		97
56)	4-Nitrophenol	8.55	65	15538	48.90384	ppb		99
57)	Dibenzofuran	9.04	168	853113	45.86037	ppb		100
58)	2,4-DNT	9.04	165	239059	47.82851	ppb		92
59)	2,3,4,6-Tetrachlorophenol	9.19	232	159791	45.68505	ppb		98
60)	Diethyl phthalate	9.30	149	758095	46.94226	ppb		99
61)	4-Chlorophenyl phenyl ethe	9.43	204	403163	45.08667	ppb		94
62)	Fluorene	9.43	166	727599	45.97633	ppb		99
63)	4-Nitroaniline	8.76	138	150565	44.77642	ppb		95
66)	4,6-Dinitro-2-methylphenol	9.52	198	140645	46.38053	ppb		92
67)	Diphenyl amine	9.57	169	953442	75.29944	ppb		100
68)	n-Nitrosodiphenylamine	9.57	169	953442	75.29944	ppb		100
69)	1,2-Diphenylhydrazine	9.62	77	859491	46.93543	ppb		96
70)	4-Bromophenyl phenyl ether	10.00	248	211780	44.42246	ppb		96
71)	Hexachlorobenzene	10.08	284	211664	43.88654	ppb		99
72)	Atrazine	10.20	200	86811	19.96432	ppb		96
73)	Pentachlorophenol	10.32	266	126315	42.60579	ppb		99
74)	Phenanthrene	10.56	178	1002800	46.71998	ppb		99
75)	Anthracene	10.61	178	1007640	44.90985	ppb		100
76)	Carbazol	10.81	167	964807	47.22860	ppb		99
77)	Di-n-butylphthalate	11.21	149	1325835	47.46293	ppb		99
78)	2-Nitrodiphenylamine	11.37	167	8675	1.36521	ppb		90
79)	Fluoranthene	11.94	202	1171880	46.61296	ppb	#	97
81)	Benzidine	12.10	184	153327	15.45233	ppb		100
82)	Pyrene	12.21	202	1228963	42.16875	ppb		99
84)	Butyl benzylphthalate	12.95	149	622623	42.63900	ppb		98
85)	3,3'-Dichlorobenzidine	13.57	252	103499	10.33354	ppb		99
86)	Benz (a) anthracene	13.60	228	1372340	43.22909	ppb		99
87)	Bis (2-ethylhexyl) phthala	13.62	149	1125912	46.14607	ppb	#	98
88)	Chrysene	13.65	228	1163785	42.15249	ppb		100
89)	Di-n-octylphthalate	14.36	149	1476259	40.98918	ppb		97
91)	Benzo (b) fluoranthene	14.90	252	1288961	46.19842	ppb		99
92)	Benzo (k) fluoranthene	14.94	252	1082419	43.02976	ppb		98
93)	Benzo (a) pyrene	15.36	252	1033638	41.74342	ppb		99
94)	Indeno (1,2,3-cd) pyrene	17.28	276	1268032	43.92988	ppb		98
95)	Dibenz (a,h) anthracene	17.31	278	1130067	43.94845	ppb		99
96)	Benzo (g,h,i) perylene	17.83	276	982305	43.30931	ppb		98

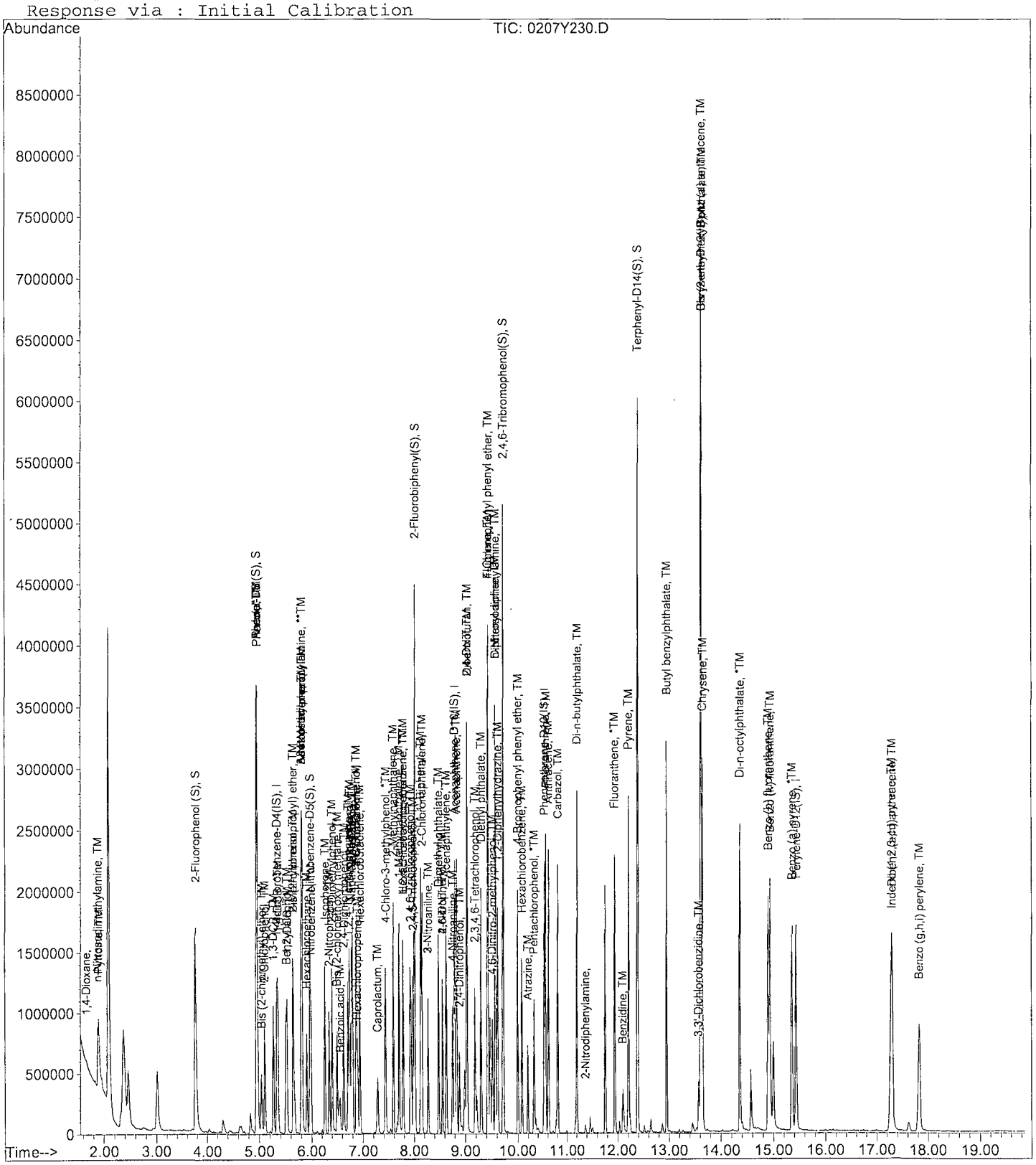
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200207\0207Y230.D Vial: 30
Acq On : 17 Mar 20 10:30 Operator: MA,SS
Sample : BA08341W42 MSD-1 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 17 11:42 2020 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration

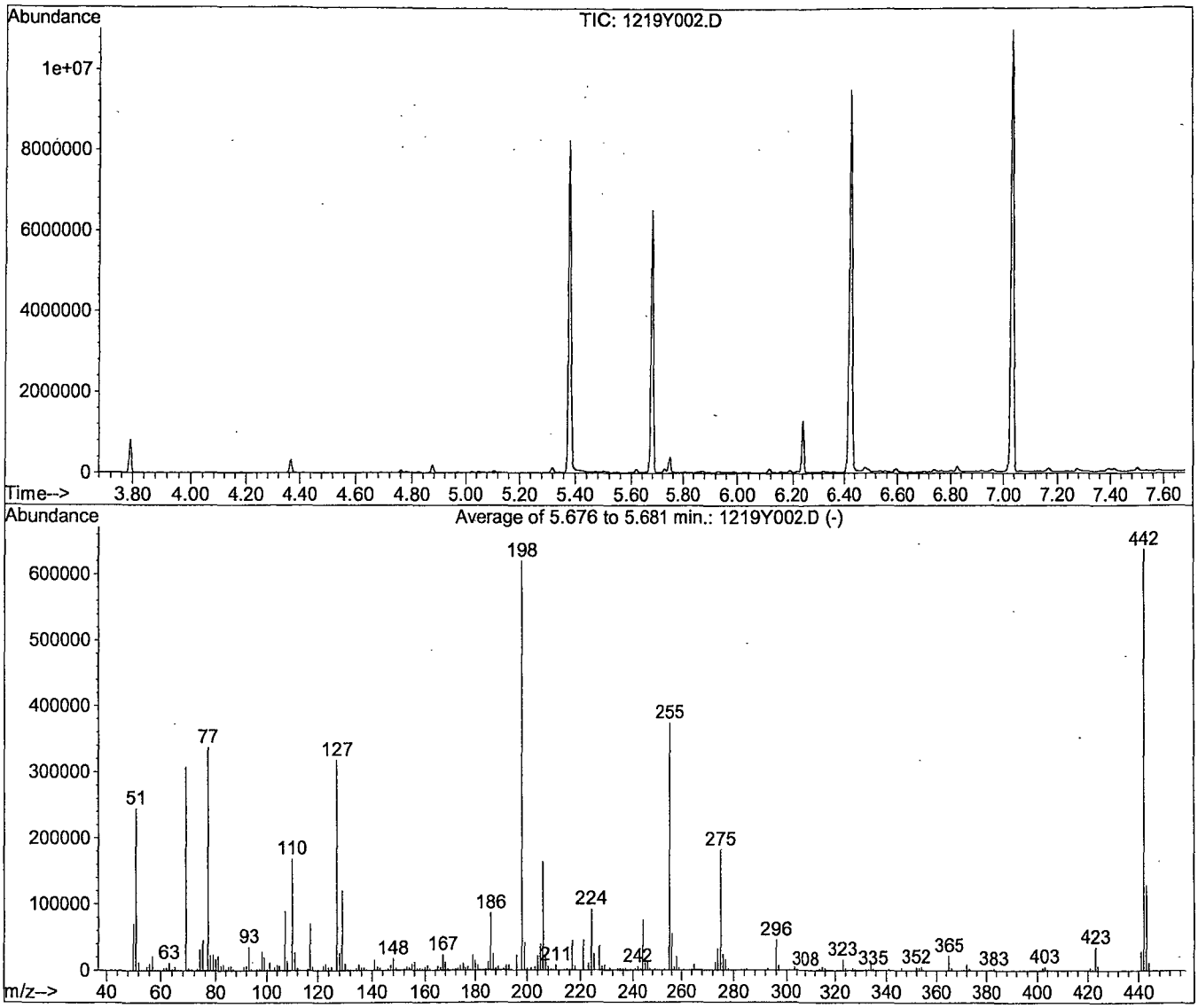


DFTPP

Data File : M:\YODA\DATA\Y191219\1219Y002.D
Acq On : 19 Dec 19 8:50
Sample : SV TUNE 10/01/19
Misc :

Vial: 2
Operator: MA,SS
Inst : Yoda
Multiplr: 1.00

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C



Spectrum Information: Average of 5.676 to 5.681 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	39.5	245061	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	1.0	3141	PASS
127	198	10	80	51.3	318211	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	620800	PASS
199	198	5	9	6.7	41381	PASS
275	198	10	60	29.4	182251	PASS
365	198	1	100	3.5	21877	PASS
441	442	0.01	24	4.6	29075	PASS
442	198	50	500	102.9	638805	PASS
443	442	15	24	20.0	127973	PASS

Data File Name:	**1219Y002.D**
Data File Path:	**M:\YODA\DATA\Y191219**
Operator:	**MA,SS**
Date Acquired:	**19 Dec 2019 08:50**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/01/19**
Vial Number:	**2**
Instrument Name:	**Yoda**

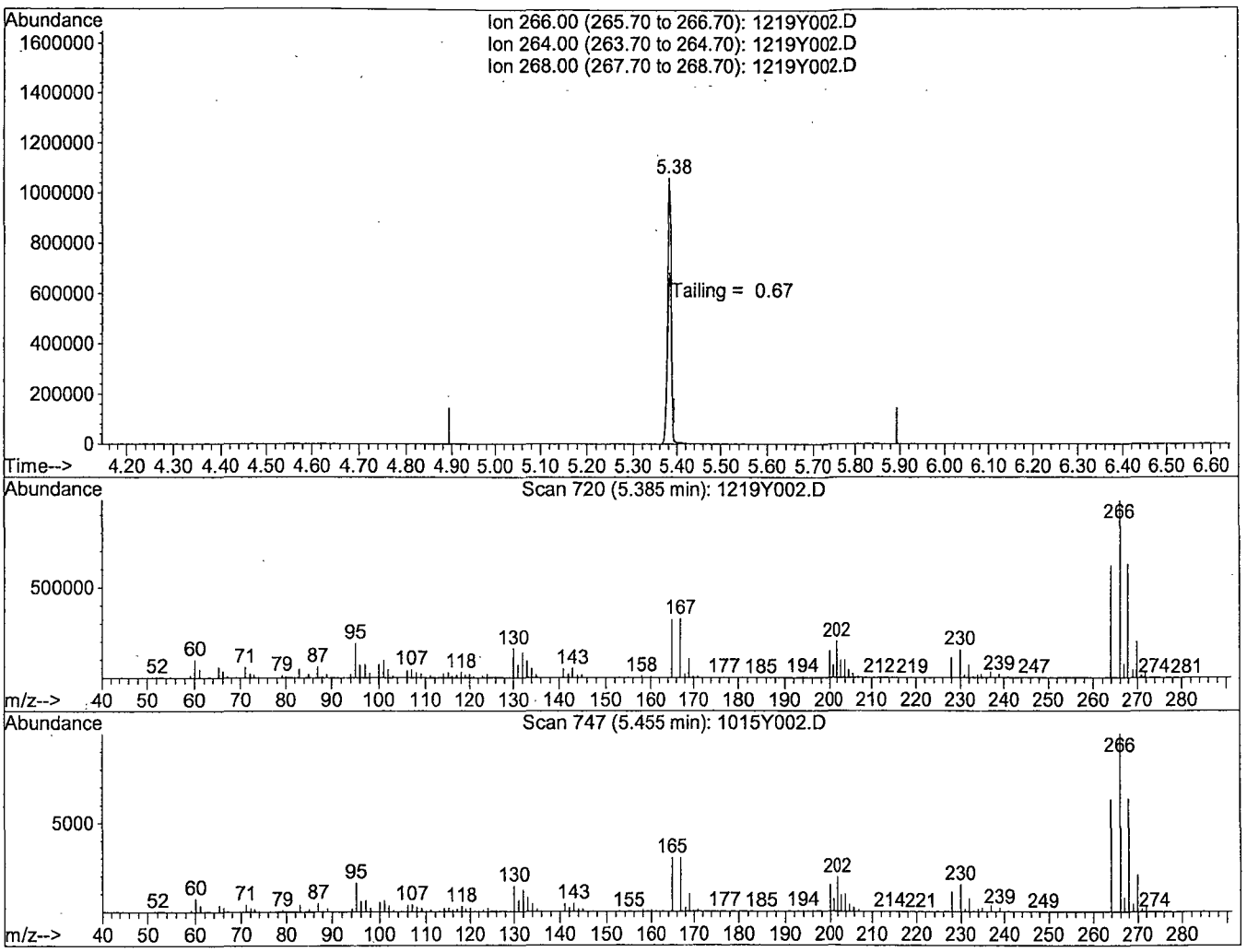
#	Name	Ret Time	Target Response
1)	DDT	7.02	83598600
2)	DDD	6.79	322054
3)	DDE	6.59	610218

Breakdown **1.10**

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y002.D Vial: 2
Acq On : 19 Dec 19 8:50 Operator: MA,SS
Sample : SV TUNE 10/01/19 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Dec 19 16:49 2019 Quant Results File: temp.res

Method : M:\YODA\DATA\Y191219\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Tue Dec 10 08:34:10 2019
Response via : Single Level Calibration



TIC: 1219Y002.D

(5) Pentachlorophenol

5.38min 0.0000

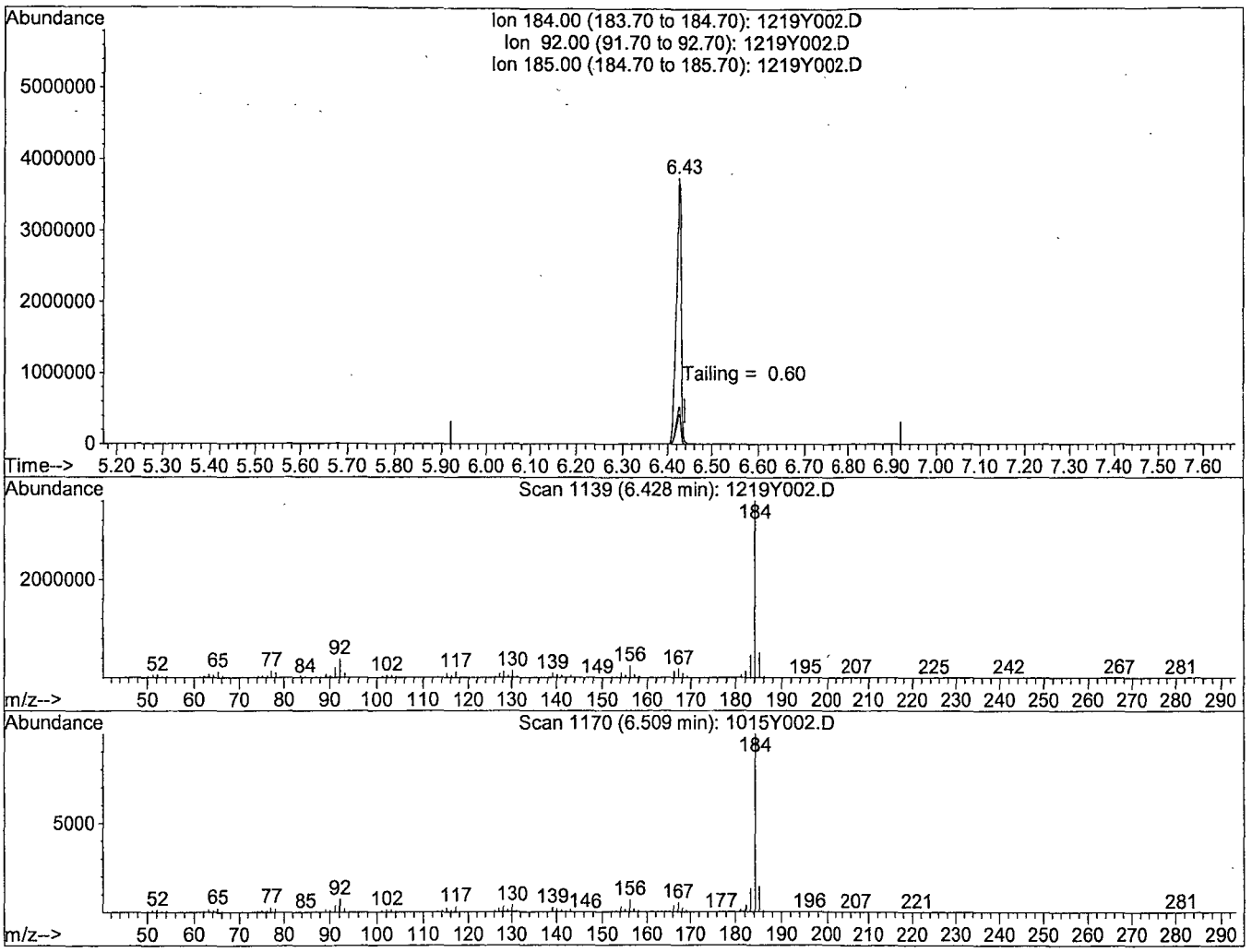
response 6507700

Ion	Exp%	Act%
266.00	100	100
264.00	65.60	64.20
268.00	64.10	63.98
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y002.D Vial: 2
Acq On : 19 Dec 19 8:50 Operator: MA,SS
Sample : SV TUNE 10/01/19 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Dec 19 16:49 2019 Quant Results File: temp.res

Method : M:\YODA\DATA\Y191219\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Tue Dec 10 08:34:10 2019
Response via : Single Level Calibration



TIC: 1219Y002.D

(6) Benzidine

6.43min 0.0000

response 29741628

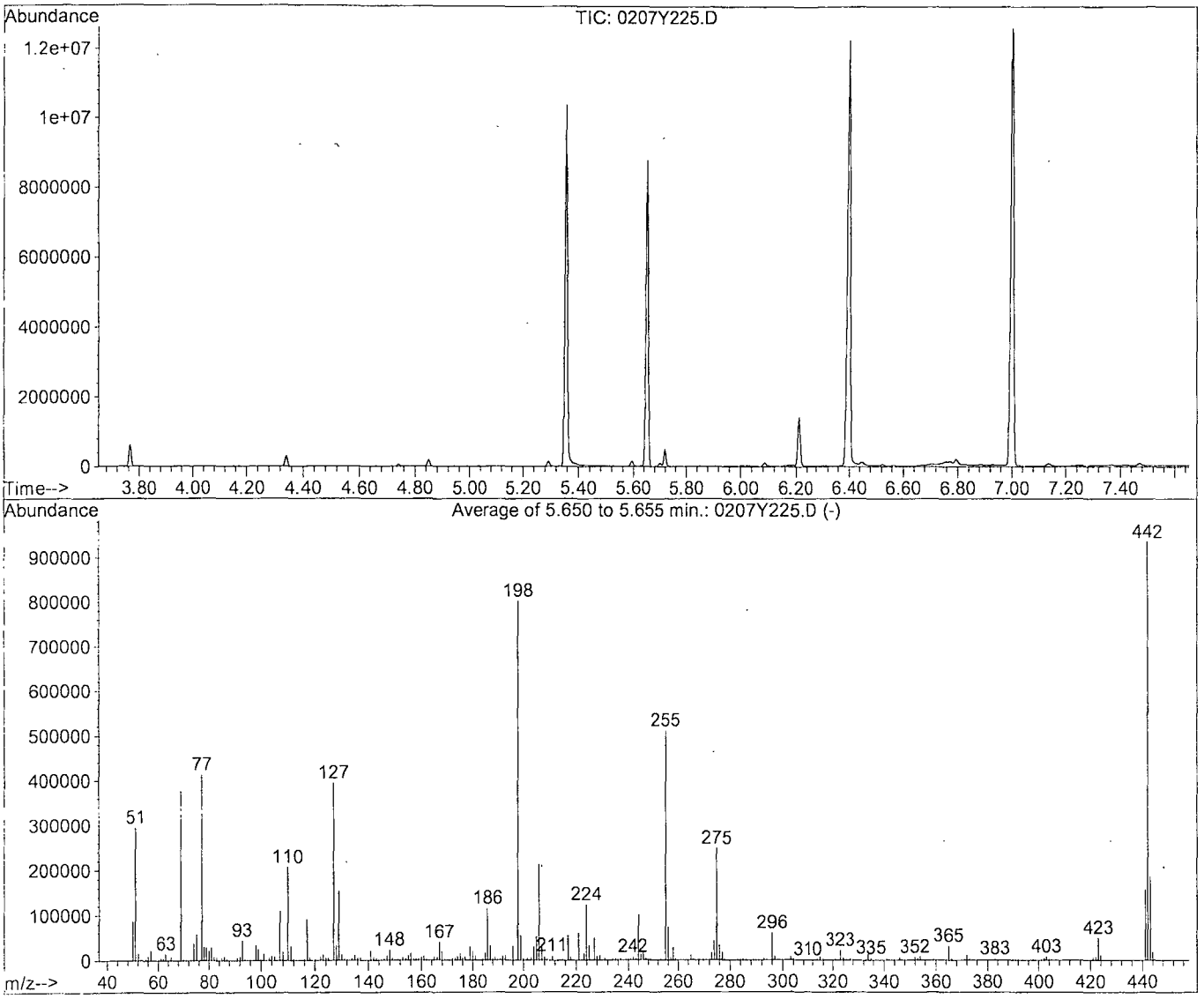
Ion	Exp%	Act%
184.00	100	100
92.00	10.30	10.56
185.00	14.50	14.29
0.00	0.00	0.00

DFTPP

Data File : M:\YODA\DATA\Y200207\0207Y225.D
Acq On : 17 Mar 20 7:46
Sample : SV TUNE 10/01/19
Misc :

Vial: 25
Operator: MA,SS
Inst : Yoda
Multiplr: 1.00

Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 827, 828, 829; Background Corrected with Scan 818

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	36.7	294727	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.7	2690	PASS
127	198	10	80	49.1	394453	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	803029	PASS
199	198	5	9	6.7	54203	PASS
275	198	10	60	30.9	247872	PASS
365	198	1	100	3.8	30869	PASS
441	442	0.01	24	16.7	156331	PASS
442	198	50	500	116.6	936171	PASS
443	442	15	24	19.7	184640	PASS

Data File Name:	**0207Y225.D**
Data File Path:	**M:\YODA\DATA\Y200207**
Operator:	**MA,SS**
Date Acquired:	**17 Mar 2020 07:46**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/01/19**
Vial Number:	**25**
Instrument Name:	**Yoda**

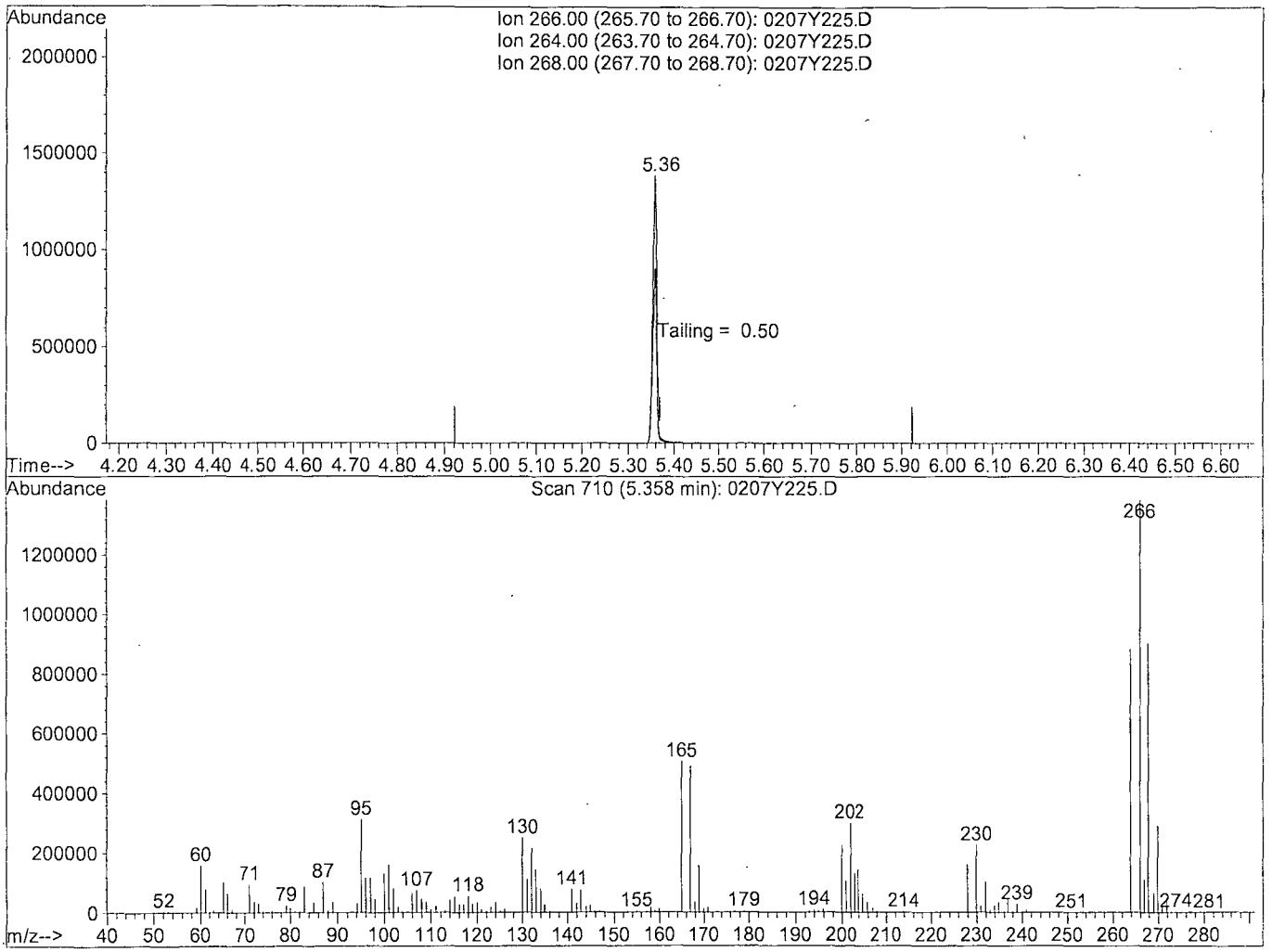
#	Name	Ret Time	Target Response
1)	DDT	6.97	103884000
2)	DDD	6.77	1197740
3)	DDE	6.65	0

Breakdown **1.14**

Quantitation Report

Data File : M:\YODA\DATA\Y200207\0207Y225.D Vial: 25
Acq On : 17 Mar 20 7:46 Operator: MA,SS
Sample : SV TUNE 10/01/19 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Mar 17 9:24 2020 Quant Results File: temp.res

Method : M:\YODA\DATA\Y200207\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Sun Feb 23 13:13:38 2020
Response via : Single Level Calibration



TIC: 0207Y225.D

(5) Pentachlorophenol

5.36min 0.0000

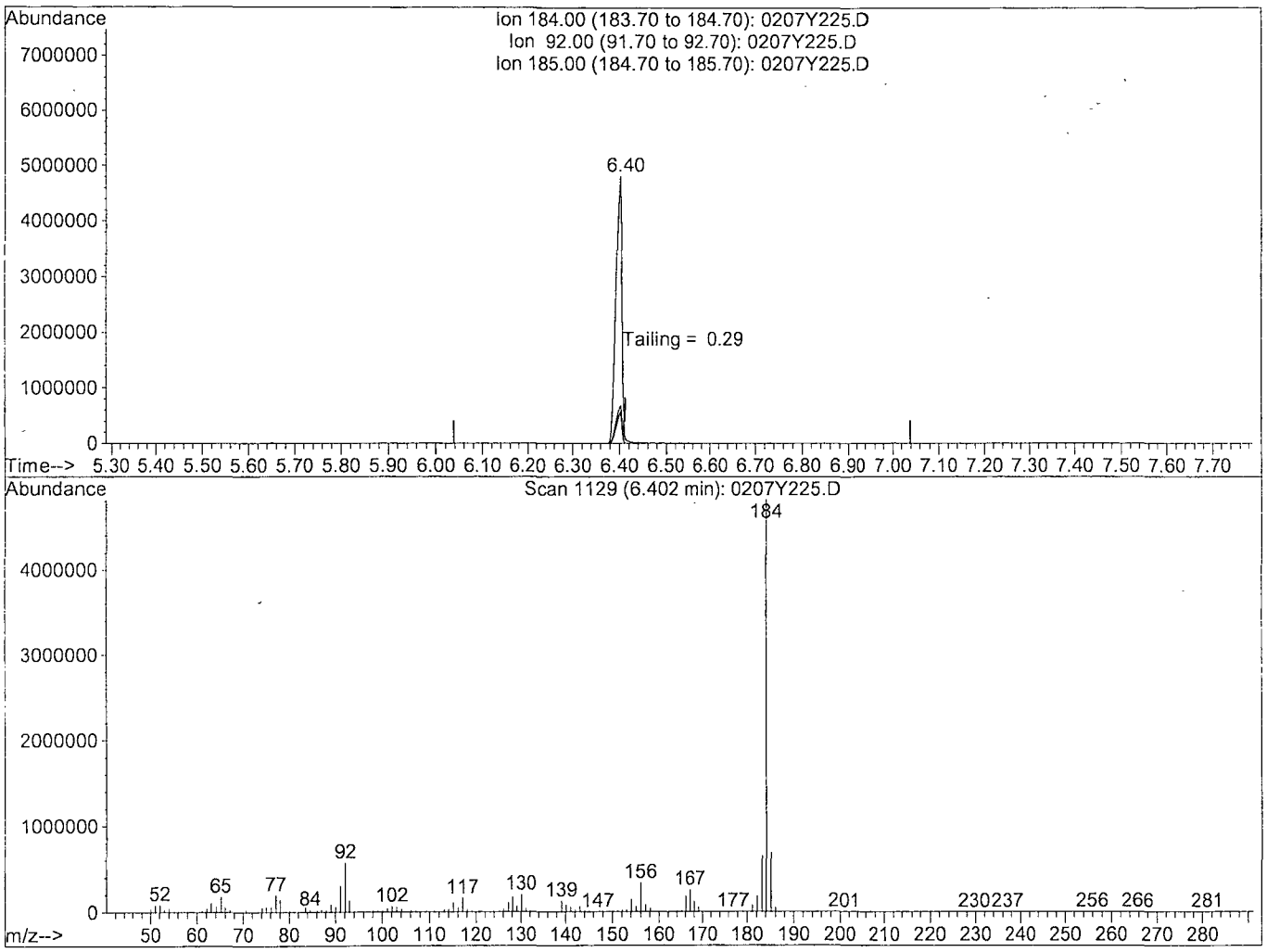
response 8542115

Ion	Exp%	Act%
266.00	100	100
264.00	62.40	64.05
268.00	62.40	63.88
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y200207\0207Y225.D Vial: 25
Acq On : 17 Mar 20 7:46 Operator: MA,SS
Sample : SV TUNE 10/01/19 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Mar 17 9:24 2020 Quant Results File: temp.res

Method : M:\YODA\DATA\Y200207\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Sun Feb 23 13:13:38 2020
Response via : Single Level Calibration



TIC: 0207Y225.D

(6) Benzidine

6.40min 0.0000

response 41937606

Ion	Exp%	Act%
184.00	100	100
92.00	11.90	10.75
185.00	14.20	14.27
0.00	0.00	0.00

Name of Final Standard	8270 Full Scan Stock Spike	Prep'd By (Initials)	JP
Prep Date	011/21/2019		
Exp Date	011/21/2020		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
10001	Absolute	10001	2000	081419 - 49302	08/14/22	1.0 mL	11 mL	NA	181.82 ug/mL
10002	Absolute	10002	2000	090919-49211	09/09/22	1.0 mL	*	*	181.82 ug/mL
10004	Absolute	10004	2000	071618-99221	07/16/23	1.0 mL	*	*	181.82 ug/mL
10005	Absolute	10005	2000	032018-40234	03/20/23	1.0 mL	*	*	181.82 ug/mL
10006	Absolute	10006	2000	030119-49242	03/01/22	1.0 mL	*	*	181.82 ug/mL
10007	Absolute	10007	2000	080116-40254	08/01/21	1.0 mL	*	*	181.82 ug/mL
10018	Absolute	10018	2000	051719-49262	05/17/24	1.0 mL	*	*	181.82 ug/mL
70023	Absolute	70023	1000	012819-49268	01/28/24	1.0 mL	*	*	90.91ug/mL
82705	Absolute	82705	2000	090919-49293	09/09/22	1.0 mL	*	*	181.82 ug/mL
94552	Absolute	94552	various	053119-49284	05/31/21	1.0 mL	*	*	various
72304	Absolute	70023	1000	090519-49455 - 41159	09/05/24	1.0 mL	*	*	90.91ug/mL

Name of Final Standard	8270 Internal Standard Ampules (2)	Prep'd By (Initials)	JP
Prep Date	11/20/19		
Exp Date	11/20/20		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Semivolatile Internal Standard	Restek	31206	2000 ug/mL	**A0151843-49411 A0151843-49412**	**07/31/25**	2 mL	2 mL	NA	2000ug/mL

Name of Final Standard	**8270 SS STOCK**	**Prep'd By (Initials)**	**JP**
Prep Date	**11/20/19**		
Exp Date	**11/20/20**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
10001	Absolute	10001	2000 ug/mL	051019-40534	05/10/21	1.0 mL	20 mL	**Methanol Lot 208858**	100 ug/mL
10002	Absolute	10002	2000 ug/mL	020217-39199	02/02/20	1.0 mL	*	*	100 ug/mL
10004	Absolute	10004	2000 ug/mL	051018-39196	05/10/21	1.0 mL	*	*	100 ug/mL
10005	Absolute	10005	2000 ug/mL	031618-39207	03/16/23	1.0 mL	*	*	100 ug/mL
10006	Absolute	10006	2000 ug/mL	011718-39208	01/17/21	1.0 mL	*	*	100 ug/mL
10007	Absolute	10007	2000 ug/mL	060118-39213	06/01/23	1.0 mL	*	*	100 ug/mL
10018	Absolute	10018	2000 ug/mL	062718-40535	06/27/23	1.0 mL	*	*	100 ug/mL
70023	Absolute	70023	1000 ug/mL	051618-39214	05/16/23	1.0 mL	*	*	50 ug/mL
82705	Absolute	82705	2000 ug/mL	090617-40540	09/06/20	1.0 mL	*	*	100 ug/mL
94552	Absolute	94552	various	013118-40542	01/31/20	1.0 mL	*	*	various
72304	Absolute	72304	1000 ug/mL	110719-49477	11/07/24	1.0 mL	*	*	50 ug/mL

Name of Final Standard	**8270 Full Scan Second Source**	**Prep'd By (Initials)**	**JP**
Prep Date	**11/22/19**		
Exp Date	**11/22/20**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 SS Stock	APPL	8270 SS Stock	100:50 ug/mL	**11/20/19**	**11/20/20**	100 uL	200uL	**MC DW717 150uL**	50:25 ug/mL
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	**11/20/19**	**11/20/19**	4 uL	*	*	*

Name of Final Standard	8270 Full Scan Standard Curve	Prep'd By (Initials)	JP
Prep Date	011/21/2019		
Exp Date	011/21/2020		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 Stock	APPL	8270 Stock	182:91 ug/mL	011/21/2019	011/21/2020	4.4 uL	200uL	MC DW717 150uL	4 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200:400 ug/mL	07/10/19	06/24/20	4 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	011/20/2019	07/31/25	4 uL	*	*	*
8270 Stock	APPL	8270 Stock	182:91 ug/mL	011/21/2019	011/21/2020	11 uL	400uL	MC DW717 150uL	5 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200:400 ug/mL	07/10/19	06/24/20	10 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	011/20/2019	07/31/25	8 uL	*	*	*
8270 Stock	APPL	8270 Stock	182:91 ug/mL	011/21/2019	011/21/2020	11 uL	200uL	MC DW717 150uL	10 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200:400 ug/mL	07/10/19	06/24/20	10 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	011/20/2019	07/31/25	4 uL	*	*	*
8270 Stock	APPL	8270 Stock	182:91 ug/mL	011/21/2019	011/21/2020	11 uL	100uL	MC DW717 150uL	20 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200:400 ug/mL	07/10/19	06/24/20	10 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	011/20/2019	07/31/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	182:91 ug/mL	011/21/2019	011/21/2020	22 uL	100uL	MC DW717 150uL	40 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200:400 ug/mL	07/10/19	06/24/20	20 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	011/20/2019	07/31/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	182:91 ug/mL	011/21/2019	011/21/2020	55 uL	200 uL	MC DW717 150uL	50 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200:400 ug/mL	07/10/19	06/24/20	50 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	011/20/2019	07/31/25	4 uL	*	*	*
8270 Stock	APPL	8270 Stock	182:91 ug/mL	011/21/2019	011/21/2020	33 uL	100uL	MC DW717 150uL	60 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200:400 ug/mL	07/10/19	06/24/20	30 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	011/20/2019	07/31/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	182:91 ug/mL	011/21/2019	011/21/2020	44 uL	100uL	MC DW717 150uL	80 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200:400 ug/mL	07/10/19	06/24/20	40 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	011/20/2019	07/31/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	182:91 ug/mL	011/21/2019	011/21/2020	50 uL	100uL	na	91 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200:400 ug/mL	07/10/19	06/24/20	50 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	011/20/2019	07/31/25	2 uL	*	*	*

Name of Final Standard	**Semivolatile (SV) Tuning Solution**	**Prep'd By (Initials)**	**JP**
Prep Date	**10/01/19**		
Exp Date	**11/30/20**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Semivolatile GC/MS Tuning Standard	Ultra Scientific	GCM-150-1	1,000 ug/mL	CR3789-38879	**11/30/20**	1,250 uL	25 mL	**MC #58240**	50 ug/mL

Name of Final Standard	8270 Full Scan Spike	Prep'd By (Initials)	JP
Prep Date	12/04/19		
Exp Date	12/04/20		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
10001	Absolute	10001	2000	081419 - 49299	08/14/22	1.0 mL	40 mL	**Methanol Lot# 208858**	50 ug/mL
10002	Absolute	10002	2000	090919-49208	09/09/22	1.0 mL	*	*	50 ug/mL
10004	Absolute	10004	2000	071618-49218	07/16/23	1.0 mL	*	*	50 ug/mL
10005	Absolute	10005	2000	032018-49228	03/20/23	1.0 mL	*	*	50 ug/mL
10006	Absolute	10006	2000	030119-49239	03/01/22	1.0 mL	*	*	50 ug/mL
10007	Absolute	10007	2000	080116-40249	08/01/21	1.0 mL	*	*	50 ug/mL
10018	Absolute	10018	2000	051719-49259	05/17/24	1.0 mL	*	*	50 ug/mL
70023	Absolute	70023	1000	012819-49275	01/28/24	1.0 mL	*	*	25 ug/mL
82705	Absolute	82705	2000	090919-49290	09/09/22	1.0 mL	*	*	50 ug/mL
94552	Absolute	94552	various	053119-49286	05/31/21	1.0 mL	*	*	various

Name of Final Standard	8270 Full Scan Standard Curve	Prep'd By (Initials)	JP
Prep Date	01/16/20		
Exp Date	06/24/20		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 Stock	APPL	8270 Stock	182.91 ug/mL	011/21/2019	011/21/2020	55 uL	200 uL	MC DW717 150uL	50 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200 400 ug/mL	07/10/19	06/24/20	50 uL	"	"	"
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	011/20/2019	07/31/25	4 uL	"	"	"

Organic Extraction Worksheet

Method	Continuous Liquid/Liquid SVOC 3520C	Extraction Set	200312A	Extraction Method	LIQ003	Units	mL

Spiked ID 1	8270T Spike 1-29-20 1-29-21		Surrogate ID 1	8270 Surrogate 11-19-19 11-19-20	
Spiked ID 2	Sim Spike 12-19-19 11-13-20		Surrogate ID 2	SIM Surrogate 12-17-19 12-17-20	
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	03/12/20 15:00	
Spiked ID 8			Ext. End Time:	03/13/20 9:00	
			GC Requires Extract By:		

pH1	2	03/12/20 13:05	Water Bath Temp 1 °C	77/76.9 E-WB6 °
pH2	2	03/12/20 14:15	Water Bath Temp 2 °C	
pH3	14	03/13/20 12:05	Water Bath Temp 3 °C	

Spiked By: DL **Date** 03/12/20 **Witnessed By:** CFM **Date** 03/12/20

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	200312A Blk				1,0.050	1,2	800	1	2/1	03/12/20 12:55	
						equip	E-HP51 E-WB6				
2	200312A LCS-1		1	1	1	1	800	1	2/1	03/12/20 12:55	
						equip	E-HP50 E-WB6				
3	200312A LCS-2		0.125	2	0.050	2	800	1	2/1	03/12/20 12:55	
						equip	E-HP49 E-WB6				
4	BA08341 MS-1	BA08341W36	1	1	1	1	800	1	2/1	03/12/20 14:08	91638
						equip	E-HP26 E-WB6				
5	BA08341 MSD-1	BA08341W42	1	1	1	1	800	1	2/1	03/12/20 14:08	91638
						equip	E-HP27 E-WB6				
6	BA08341 MS-2	BA08341W47	0.125	2	0.050	2	800	1	2/1	03/12/20 14:08	91638
						equip	E-HP28 E-WB6				
7	BA08341 MSD-2	BA08341W39	0.125	2	0.050	2	800	1	2/1	03/12/20 14:08	91638
						equip	E-HP29 E-WB6				
8	BA08341	BA08341W41			1,0.05	1,2	800	1	2/1	03/12/20 14:08	91638
						equip	E-HP25 E-WB6				
9	BA08370	BA08370W21			1,0.050	1,2	800	1	2/1	03/12/20 12:55	91653
						equip	E-HP48 E-WB6				
10	BA08371	BA08371W14			1,0.050	1,2	800	1	2/1	03/12/20 12:55	91653
						equip	E-HP47 E-WB6				

Solvent and Lot#	
PH Strips	HC998032
Dichloromethane (DCM)	59239
1+1 H2SO4	2-26-20
10N NaOH	3-2-20
Filter Paper	400171
Na2SO4	2019020631

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	MA
Date	3/16/20
Time	2:00 pm
Refrigerator	GC-C

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL
Concentration	ERR

Modified	03/16/20 2:45:49 PM

Reviewed By: KY **Date** 03/16/20

03/17/20 12:50:01 PM Ext_ID 66316 Page 1 of 1

Injection Log

Directory: M:\YODA\DATA\Y191219\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
2	1219Y002.D	1	SV TUNE 10/01/19		19 Dec 19 8:50
3	1219Y003.D	1	50ug/ml 8270 11/21/19		19 Dec 19 9:06
4	1219Y004.D	1	4ug/ml 8270 11/21/19		19 Dec 19 9:33
5	1219Y005.D	1	5ug/ml 8270 11/21/19		19 Dec 19 10:01
6	1219Y006.D	1	10ug/ml 8270 11/21/19		19 Dec 19 10:28
7	1219Y007.D	1	20ug/ml 8270 11/21/19		19 Dec 19 10:56
8	1219Y008.D	1	40ug/ml 8270 11/21/19		19 Dec 19 11:24
9	1219Y009.D	1	60ug/ml 8270 11/21/19		19 Dec 19 11:51
10	1219Y010.D	1	80ug/ml 8270 11/21/19		19 Dec 19 12:19
11	1219Y011.D	1	100ug/ml 8270 11/21/19		19 Dec 19 12:46
12	1219Y012.D	1	SS 8270 11/22/19		19 Dec 19 13:14
25	0207Y225.D	1	SV TUNE 10/01/19		17 Mar 20 7:46
26	0207Y226.D	1	50ug/ml 8270 03/04/20 (2)		17 Mar 20 8:01
27	0207Y227.D	1.25	200312A BLK 1/800		17 Mar 20 9:08
28	0207Y228.D	1.25	200312A LCS-1 1/800		17 Mar 20 9:35
32	0207Y232.D	1.25	BA08370W21 1/800		17 Mar 20 12:13
33	0207Y233.D	1.25	BA08371W14 1/800		17 Mar 20 12:40
41	0207Y241.D	1	50ug/ml 8270 03/04/20 (2)		17 Mar 20 16:40

ORGANICS
Calibration Data

PAH by GCMS SIM
EPA 8270 SIM

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 02/04/20
Matrix: Instrument: Linus Initials: MA

			0204L003.D	0204L004.D	0204L005.D	0204L006.D	0204L007.D	0204L008.D	0204L009.D	0204L010.D								
		Compound	0.1	0.2	0.5	1	5	10	50	100			Avg	%RSD	Type	r^2	Q	MRF
1	I	Napthalene-D8(IS)																
2	TM	Naphthalene	1.120	1.131	1.072	1.083	1.129	1.047	0.9772	0.9334			1.1	6.9	TM			0.700
3	S	2-Methylnaphthalene-D10 (2M	1.257	1.211	1.175	1.198	1.255	1.218	1.180	1.133			1.2	3.5	S			
4	TM	2-Methylnaphthalene	0.6849	0.6892	0.6742	0.6957	0.7468	0.6960	0.6554	0.6145			0.68	5.5	TM			0.400
5	TM	1-Methylnaphthalene	0.7412	0.7479	0.7192	0.7336	0.7676	0.7029	0.6628	0.6175			0.71	7.0	TM			
6	I	Acenaphthene-D10(IS)																
7	TM	Acenaphthylene	3.869	3.855	3.806	3.892	4.393	4.113	3.818	3.434			3.9	7.0	TM			0.900
8	*TM	Acenaphthene	1.372	1.277	1.234	1.238	1.309	1.218	1.155	1.036			1.2	8.3	*TM			0.900
9	TM	Fluorene	1.476	1.471	1.412	1.485	1.636	1.549	1.427	1.385			1.5	5.5	TM			0.900
10	I	Phenanthrene-D10(IS)																
11	TM	Phenanthrene	1.231	1.222	1.179	1.198	1.290	1.205	1.041	0.9371			1.2	9.9	TM			0.700
12	TM	Anthracene	1.002	1.028	0.9886	1.045	1.160	1.099	0.9848	0.8800			1.0	8.1	TM			0.700
13	S	Fluoranthene-D10 (FRT)	1.457	1.470	1.320	1.355	1.491	1.476	1.437	1.389			1.4	4.4	S			
14	*TM	Fluoranthene	1.604	1.635	1.531	1.601	1.817	1.668	1.480	1.357			1.6	8.6	*TM			0.600
15	I	Chrysene-D12(IS)																
16	TM	Pyrene	1.291	1.315	1.240	1.301	1.386	1.308	1.220	1.113			1.3	6.4	TM			0.600
17	TM	Benz (a) anthracene	1.177	1.123	1.047	1.077	1.191	1.159	1.141	1.081			1.1	4.6	TM			0.800
18	TM	Chrysene	1.461	1.411	1.370	1.360	1.367	1.267	1.174	1.065			1.3	10	TM			0.700
19	TM	Indeno (1,2,3-cd) pyrene	1.438	1.382	1.382	1.402	1.574	1.526	1.551	1.517			1.5	5.4	TM			0.500
20	I	Perylene-D12(IS)																
21	TM	Benzo (b) fluoranthene	0.8206	0.8277	0.8502	0.9180	1.141	1.084	1.118	1.129			0.99	15	TM			0.700
22	TM	Benzo (k) fluoranthene	1.252	1.341	1.294	1.323	1.396	1.330	1.094	1.089			1.3	9.1	TM			0.700
23	*TM	Benzo (a) pyrene	0.8229	0.8399	0.9301	0.9711	1.126	1.087	1.069	1.029			0.98	12	*TM			0.700
24	TM	Dibenz (a,h) anthracene	0.9746	0.9893	0.9980	1.034	1.209	1.157	1.169	1.136			1.1	8.7	TM			0.400
25	TM	Benzo (g,h,i) perylene	1.063	1.069	1.094	1.118	1.274	1.216	1.188	1.145			1.1	6.5	TM			0.500
26																		
27																		
28																		
29																		
30																		
31																		
32																		
33																		
34																		
35																		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L003.D Vial: 3
Acq On : 4 Feb 20 9:48 Operator: MA
Sample : 0.1 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:38:46 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.19	136	98990	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.18	164	52942	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.91	188	98572	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.01	240	123137	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.43	264	142515	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	4.96	152	2488	0.05046	ppb		0.00
Spiked Amount 5.000			Recovery	=	1.000%		
13) Fluoranthene-D10 (FRT)	9.28	212	2873	0.04174	ppb		0.00
Spiked Amount 5.000			Recovery	=	0.840%		
Target Compounds							Qvalue
2) Naphthalene	4.21	128	4434	0.09312	ppb		99
4) 2-Methylnaphthalene	5.00	142	2712	0.09372	ppb		100
5) 1-Methylnaphthalene	5.11	142	2935	0.09787	ppb		97
7) Acenaphthylene	6.02	152	8194	0.08489	ppb		100
8) Acenaphthene	6.22	154	2905	0.10261	ppb		96
9) Fluorene	6.82	166	3126	0.09002	ppb		94
11) Phenanthrene	7.93	178	4855	0.08909	ppb		99
12) Anthracene	7.99	178	3951	0.08269	ppb		98
14) Fluoranthene	9.30	202	6323	0.08364	ppb	#	92
16) Pyrene	9.57	202	6359	0.07717	ppb	#	94
17) Benz (a) anthracene	11.00	228	5798	0.08414	ppb		99
18) Chrysene	11.04	228	7198	0.09744	ppb		99
19) Indeno (1,2,3-cd) pyrene	14.93	276	7083	0.09610	ppb	#	99
21) Benzo (b) fluoranthene	12.79	252	4678	0.06579	ppb	#	99
22) Benzo (k) fluoranthene	12.85	252	7135	0.09052	ppb		98
23) Benzo (a) pyrene	13.35	252	4691	0.07030	ppb		98
24) Dibenz (a,h) anthracene	14.97	278	5556	0.08385	ppb		99
25) Benzo (g,h,i) perylene	15.29	276	6060	0.08386	ppb		97

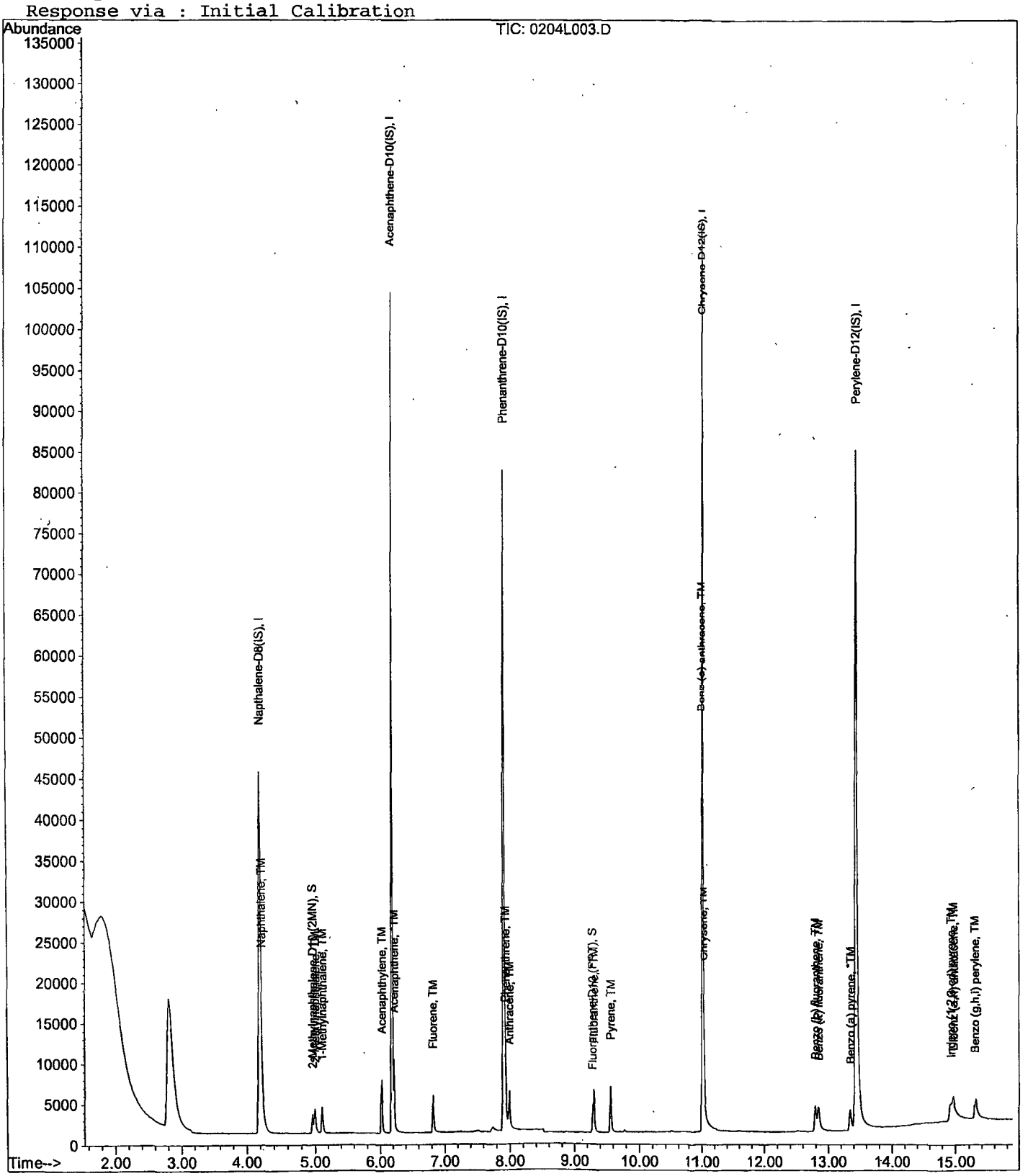
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L003.D Vial: 3
Acq On : 4 Feb 20 9:48 Operator: MA
Sample : 0.1 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L004.D Vial: 4
Acq On : 4 Feb 20 10:09 Operator: MA
Sample : 0.2 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:42:22 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.19	136	95871	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.18	164	51059	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.91	188	94452	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.01	240	119835	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.43	264	136582	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	4.96	152	4644	0.09724 ppb		0.00
Spiked Amount 5.000			Recovery	= 1.940%		
13) Fluoranthene-D10 (FRT)	9.28	212	5554	0.08422 ppb		0.00
Spiked Amount 5.000			Recovery	= 1.680%		
Target Compounds						Qvalue
2) Naphthalene	4.21	128	8673	0.18807 ppb		99
4) 2-Methylnaphthalene	5.00	142	5286	0.18862 ppb		99
5) 1-Methylnaphthalene	5.11	142	5736	0.19749 ppb		100
7) Acenaphthylene	6.02	152	15747	0.16915 ppb		99
8) Acenaphthene	6.22	154	5216	0.19104 ppb		99
9) Fluorene	6.82	166	6007	0.17936 ppb		96
11) Phenanthrene	7.93	178	9231	0.17678 ppb		99
12) Anthracene	7.99	178	7770	0.16971 ppb		99
14) Fluoranthene	9.30	202	12353	0.17053 ppb	#	93
16) Pyrene	9.57	202	12608	0.15723 ppb	#	91
17) Benz (a) anthracene	11.00	228	10767	0.16055 ppb		99
18) Chrysene	11.04	228	13529	0.18818 ppb		99
19) Indeno (1,2,3-cd) pyrene	14.92	276	13247	0.18469 ppb	#	100
21) Benzo (b) fluoranthene	12.79	252	9044	0.13271 ppb		99
22) Benzo (k) fluoranthene	12.85	252	14654	0.19398 ppb		98
23) Benzo (a) pyrene	13.35	252	9177	0.14350 ppb	#	97
24) Dibenz (a,h) anthracene	14.97	278	10810	0.17022 ppb		99
25) Benzo (g,h,i) perylene	15.29	276	11681	0.16867 ppb		98

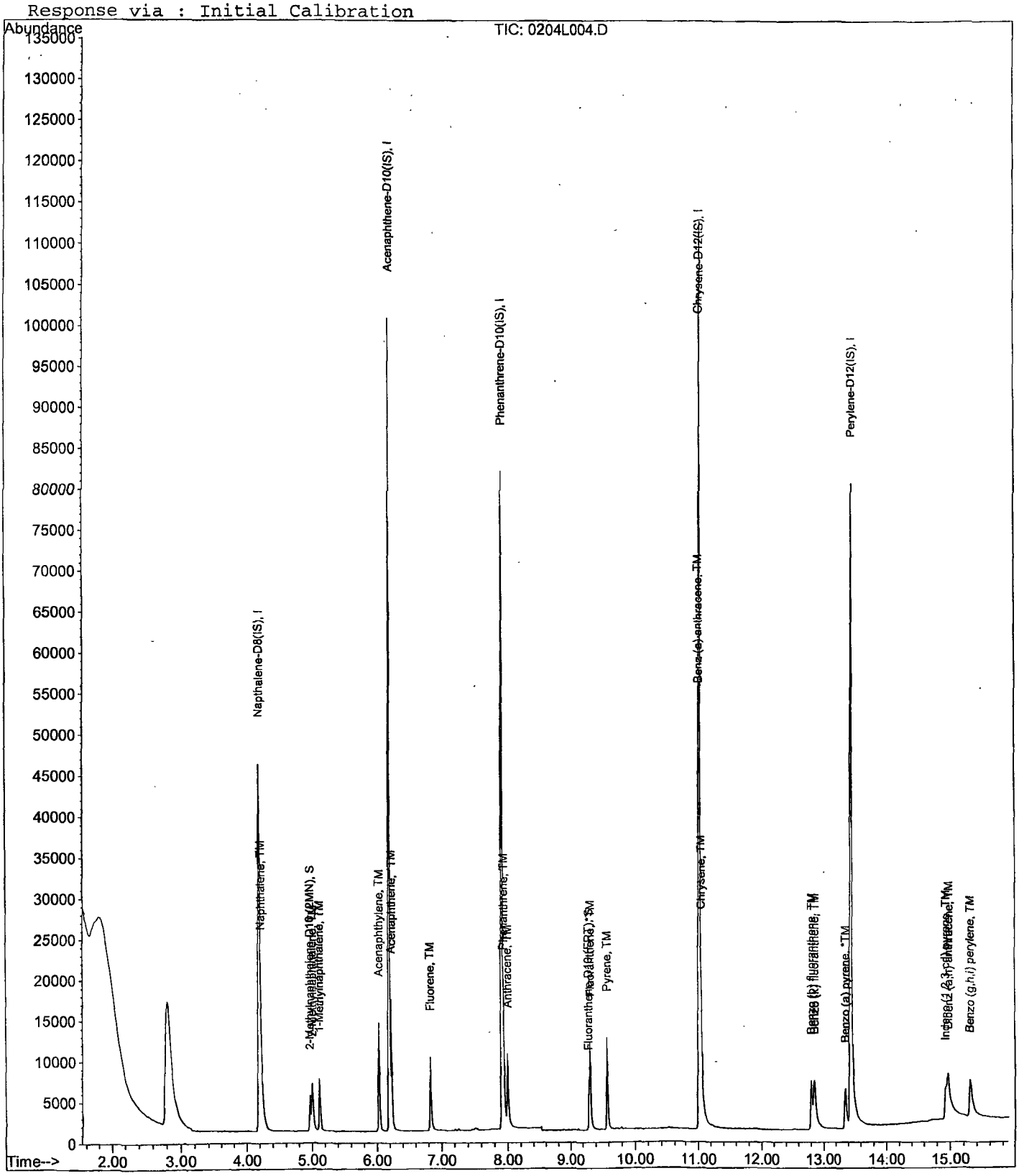
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L004.D Vial: 4
Acq On : 4 Feb 20 10:09 Operator: MA
Sample : 0.2 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L005.D Vial: 5
Acq On : 4 Feb 20 10:31 Operator: MA
Sample : 0.5 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:42:22 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.19	136	93485	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.18	164	49653	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.91	188	91991	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.01	240	112785	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.43	264	128599	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	4.96	152	10986	0.23591 ppb		0.00
Spiked Amount 5.000			Recovery	= 4.720%		
13) Fluoranthene-D10 (FRT)	9.28	212	12142	0.18904 ppb		0.00
Spiked Amount 5.000			Recovery	= 3.780%		
Target Compounds						Qvalue
2) Naphthalene	4.21	128	20052	0.44592 ppb		100
4) 2-Methylnaphthalene	5.00	142	12606	0.46129 ppb		100
5) 1-Methylnaphthalene	5.11	142	13447	0.47479 ppb		99
7) Acenaphthylene	6.02	152	37792	0.41744 ppb		100
8) Acenaphthene	6.22	154	12256	0.46158 ppb		99
9) Fluorene	6.82	166	14018	0.43041 ppb		96
11) Phenanthrene	7.93	178	21699	0.42667 ppb		98
12) Anthracene	7.99	178	18188	0.40788 ppb		98
14) Fluoranthene	9.30	202	28175	0.39935 ppb	#	93
16) Pyrene	9.57	202	27975	0.37067 ppb	#	93
17) Benz (a) anthracene	11.00	228	23610	0.37407 ppb		100
18) Chrysene	11.04	228	30897	0.45662 ppb		99
19) Indeno (1,2,3-cd) pyrene	14.92	276	31178	0.46186 ppb	#	100
21) Benzo (b) fluoranthene	12.79	252	21866	0.34077 ppb		98
22) Benzo (k) fluoranthene	12.85	252	33289	0.46801 ppb		98
23) Benzo (a) pyrene	13.35	252	23923	0.39730 ppb		98
24) Dibenz (a,h) anthracene	14.96	278	25669	0.42930 ppb	#	95
25) Benzo (g,h,i) perylene	15.29	276	28135	0.43148 ppb		99

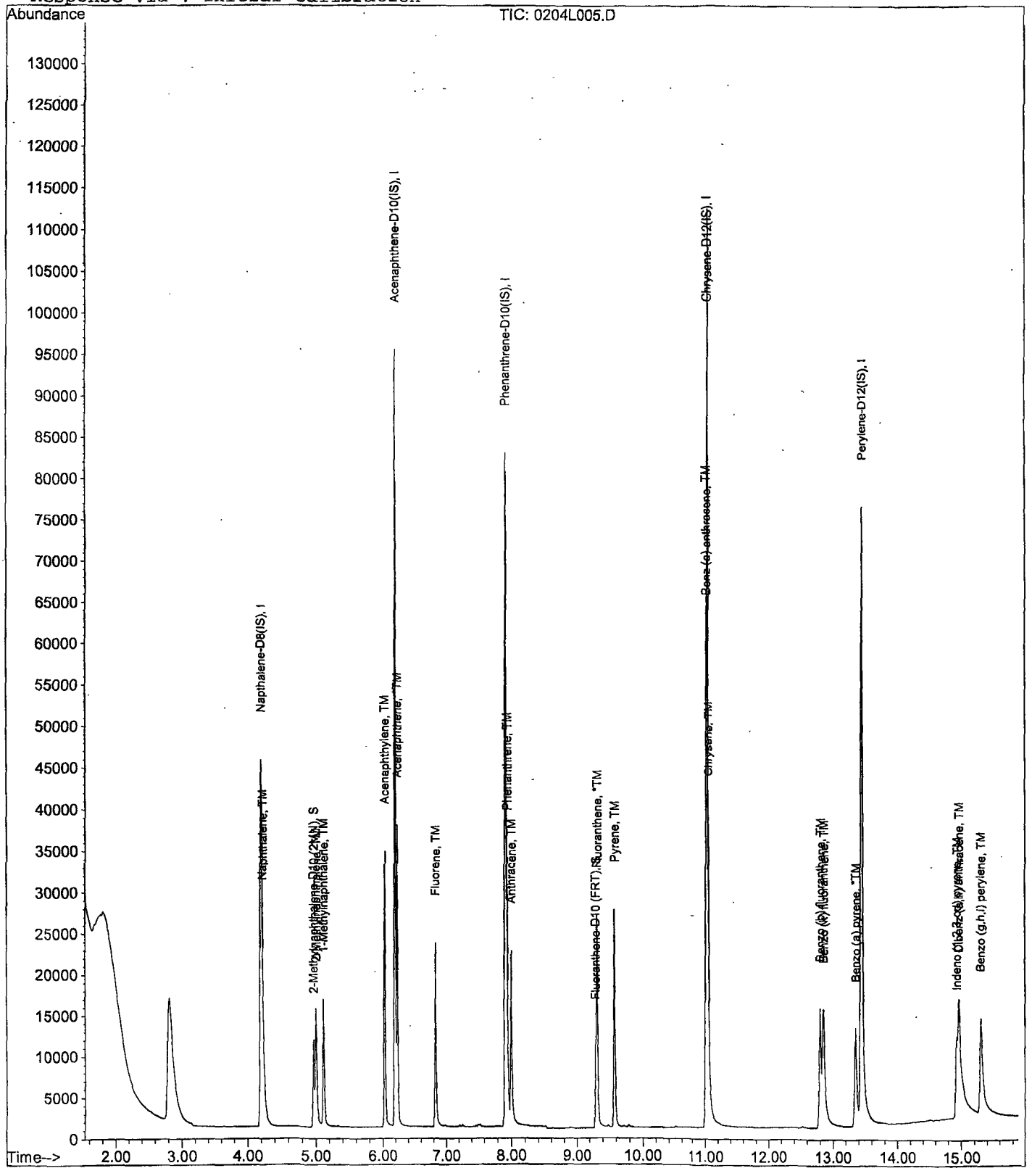
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L005.D Vial: 5
Acq On : 4 Feb 20 10:31 Operator: MA
Sample : 0.5 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L006.D Vial: 6
Acq On : 4 Feb 20 10:53 Operator: MA
Sample : 1 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:42:22 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	4.19	136	95074	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	6.18	164	50320	2.50000 ppb	0.00
10) Phenanthrene-D10(IS)	7.91	188	93982	2.50000 ppb	0.00
15) Chrysene-D12(IS)	11.01	240	115986	2.50000 ppb	0.00
20) Perylene-D12(IS)	13.43	264	130643	2.50000 ppb	0.00
System Monitoring Compounds					
3) 2-Methylnaphthalene-D10 (2	4.96	152	22777	0.48093 ppb	0.00
Spiked Amount 5.000			Recovery =	9.620%	
13) Fluoranthene-D10 (FRT)	9.28	212	25468	0.38812 ppb	0.00
Spiked Amount 5.000			Recovery =	7.760%	
Target Compounds					Qvalue
2) Naphthalene	4.21	128	41177	0.90039 ppb	100
4) 2-Methylnaphthalene	5.00	142	26456	0.95192 ppb	99
5) 1-Methylnaphthalene	5.11	142	27900	0.96864 ppb	98
7) Acenaphthylene	6.02	152	78337	0.85382 ppb	100
8) Acenaphthene	6.22	154	24913	0.92584 ppb	99
9) Fluorene	6.82	166	29892	0.90564 ppb	99
11) Phenanthrene	7.93	178	45036	0.86678 ppb	99
12) Anthracene	7.99	178	39270	0.86199 ppb	99
14) Fluoranthene	9.30	202	60200	0.83519 ppb	97
16) Pyrene	9.57	202	60381	0.77797 ppb	96
17) Benz (a) anthracene	11.00	228	49969	0.76984 ppb	99
18) Chrysene	11.04	228	63085	0.90659 ppb	99
19) Indeno (1,2,3-cd) pyrene	14.92	276	65048	0.93700 ppb	98
21) Benzo (b) fluoranthene	12.79	252	47971	0.73591 ppb	99
22) Benzo (k) fluoranthene	12.84	252	69126	0.95663 ppb	98
23) Benzo (a) pyrene	13.35	252	50746	0.82958 ppb	97
24) Dibenz (a,h) anthracene	14.96	278	54045	0.88973 ppb	97
25) Benzo (g,h,i) perylene	15.29	276	58422	0.88195 ppb	99

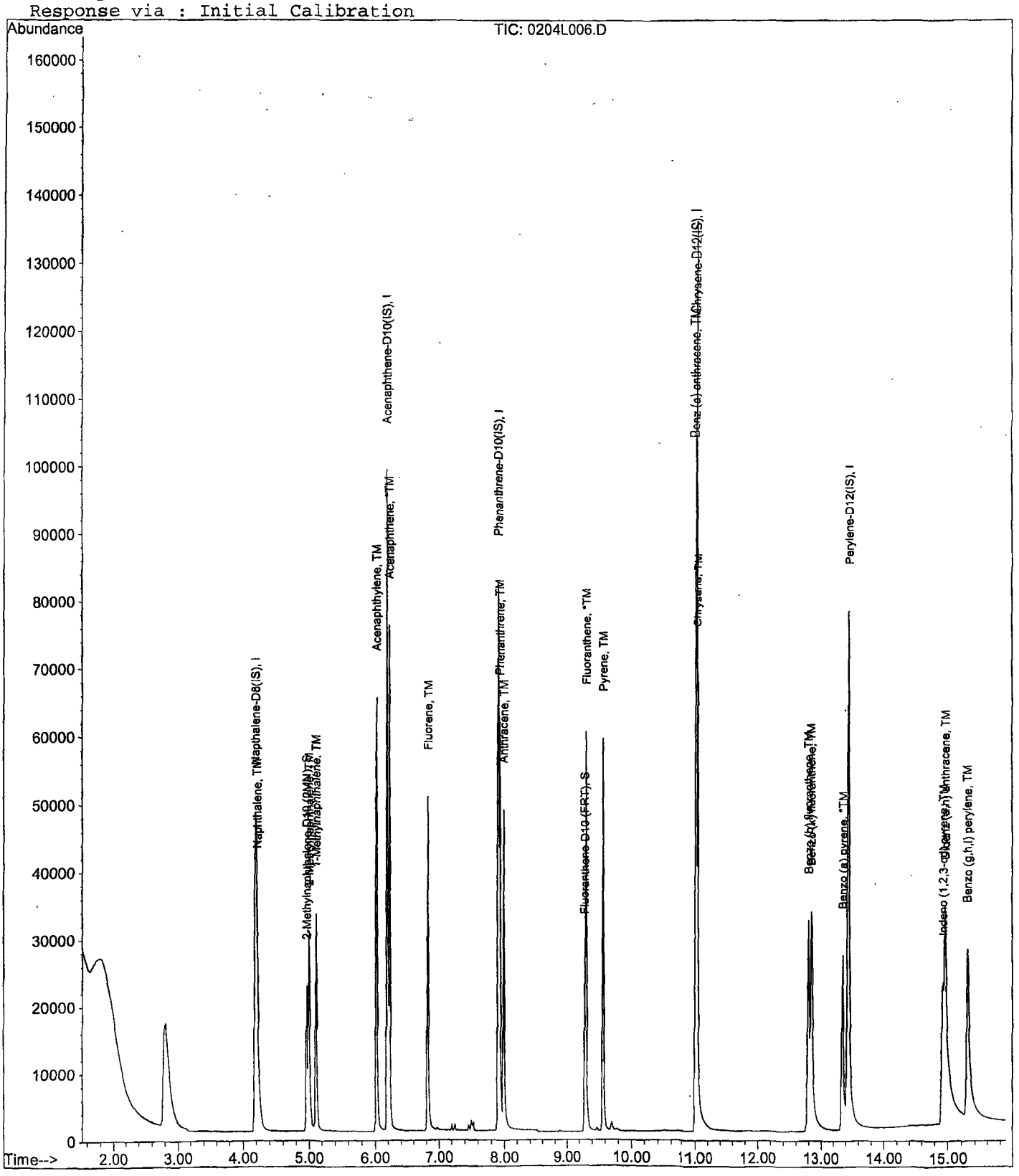
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L006.D Vial: 6
Acq On : 4 Feb 20 10:53 Operator: MA
Sample : 1 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L007.D Vial: 7
Acq On : 4 Feb 20 11:15 Operator: MA
Sample : 5 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:42:22 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.19	136	93559	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.18	164	49173	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.91	188	92273	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.01	240	120189	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.43	264	131131	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	4.96	152	117393	2.51887	ppb		0.00
Spiked Amount 5.000			Recovery	= 50.380%			
13) Fluoranthene-D10 (FRT)	9.28	212	137624	2.13617	ppb		0.00
Spiked Amount 5.000			Recovery	= 42.720%			
Target Compounds							Qvalue
2) Naphthalene	4.21	128	211249	4.69404	ppb		100
4) 2-Methylnaphthalene	5.00	142	139742	5.10952	ppb		100
5) 1-Methylnaphthalene	5.11	142	143640	5.06770	ppb		100
7) Acenaphthylene	6.02	152	431994	4.81826	ppb		100
8) Acenaphthene	6.22	154	128780	4.89745	ppb		100
9) Fluorene	6.82	166	160921	4.98915	ppb		100
11) Phenanthrene	7.93	178	238077	4.66698	ppb		100
12) Anthracene	7.99	178	213985	4.78406	ppb		100
14) Fluoranthene	9.30	202	335331	4.73840	ppb		100
16) Pyrene	9.57	202	333150	4.14232	ppb		100
17) Benz (a) anthracene	11.00	228	286178	4.25478	ppb		100
18) Chrysene	11.04	228	328507	4.55588	ppb		100
19) Indeno (1,2,3-cd) pyrene	14.91	276	378390	5.26003	ppb	#	100
21) Benzo (b) fluoranthene	12.79	252	299210	4.57302	ppb		100
22) Benzo (k) fluoranthene	12.84	252	366067	5.04713	ppb		100
23) Benzo (a) pyrene	13.34	252	295305	4.80957	ppb		100
24) Dibenz (a,h) anthracene	14.96	278	317098	5.20088	ppb		100
25) Benzo (g,h,i) perylene	15.28	276	334159	5.02577	ppb		100

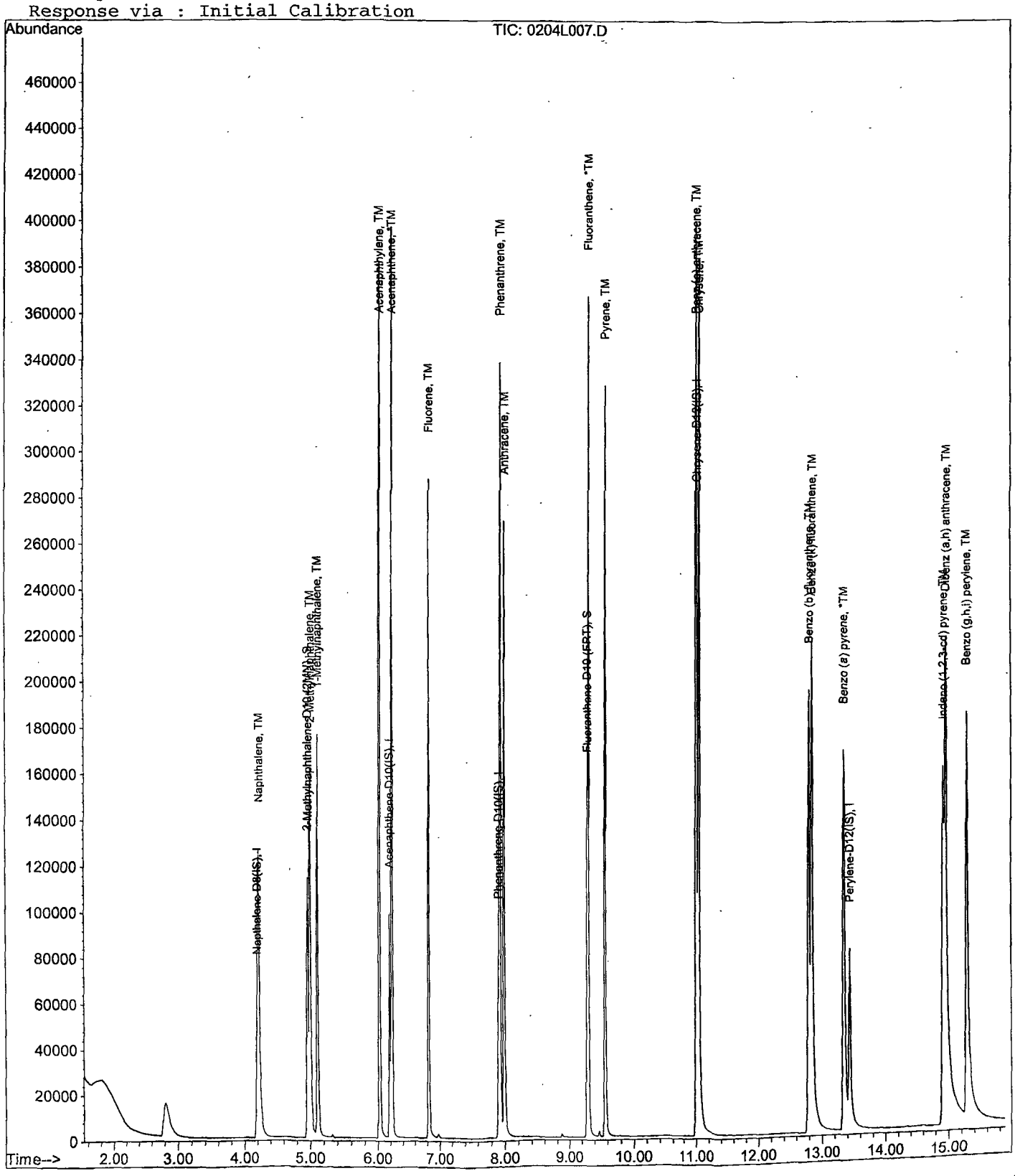
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L007.D Vial: 7
Acq On : 4 Feb 20 11:15 Operator: MA
Sample : 5 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L008.D Vial: 8
Acq On : 4 Feb 20 11:37 Operator: MA
Sample : 10 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:42:22 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.19	136	98020	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.18	164	51392	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.91	188	97154	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.01	240	126338	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.43	264	139162	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	4.96	152	238748	4.88961 ppb		0.00
Spiked Amount 5.000			Recovery	= 97.800%		
13) Fluoranthene-D10 (FRT)	9.28	212	286889	4.22932 ppb		0.00
Spiked Amount 5.000			Recovery	= 84.580%		
Target Compounds						Qvalue
2) Naphthalene	4.21	128	410435	8.70497 ppb		100
4) 2-Methylnaphthalene	5.00	142	272886	9.52368 ppb		99
5) 1-Methylnaphthalene	5.11	142	275593	9.28058 ppb		98
7) Acenaphthylene	6.02	152	845596	9.02415 ppb		99
8) Acenaphthene	6.22	154	250345	9.10944 ppb		98
9) Fluorene	6.82	166	318435	9.44639 ppb		99
11) Phenanthrene	7.93	178	468302	8.71883 ppb		100
12) Anthracene	7.99	178	427236	9.07184 ppb		100
14) Fluoranthene	9.30	202	648356	8.70132 ppb		99
16) Pyrene	9.57	202	660769	7.81599 ppb		100
17) Benz (a) anthracene	11.00	228	585928	8.28736 ppb		99
18) Chrysene	11.04	228	640149	8.44578 ppb		99
19) Indeno (1,2,3-cd) pyrene	14.92	276	770951	10.19544 ppb	#	94
21) Benzo (b) fluoranthene	12.79	252	603563	8.69229 ppb		99
22) Benzo (k) fluoranthene	12.84	252	740450	9.61977 ppb		99
23) Benzo (a) pyrene	13.35	252	605339	9.29007 ppb	#	96
24) Dibenz (a,h) anthracene	14.96	278	643860	9.95084 ppb		99
25) Benzo (g,h,i) perylene	15.28	276	676724	9.59060 ppb		97

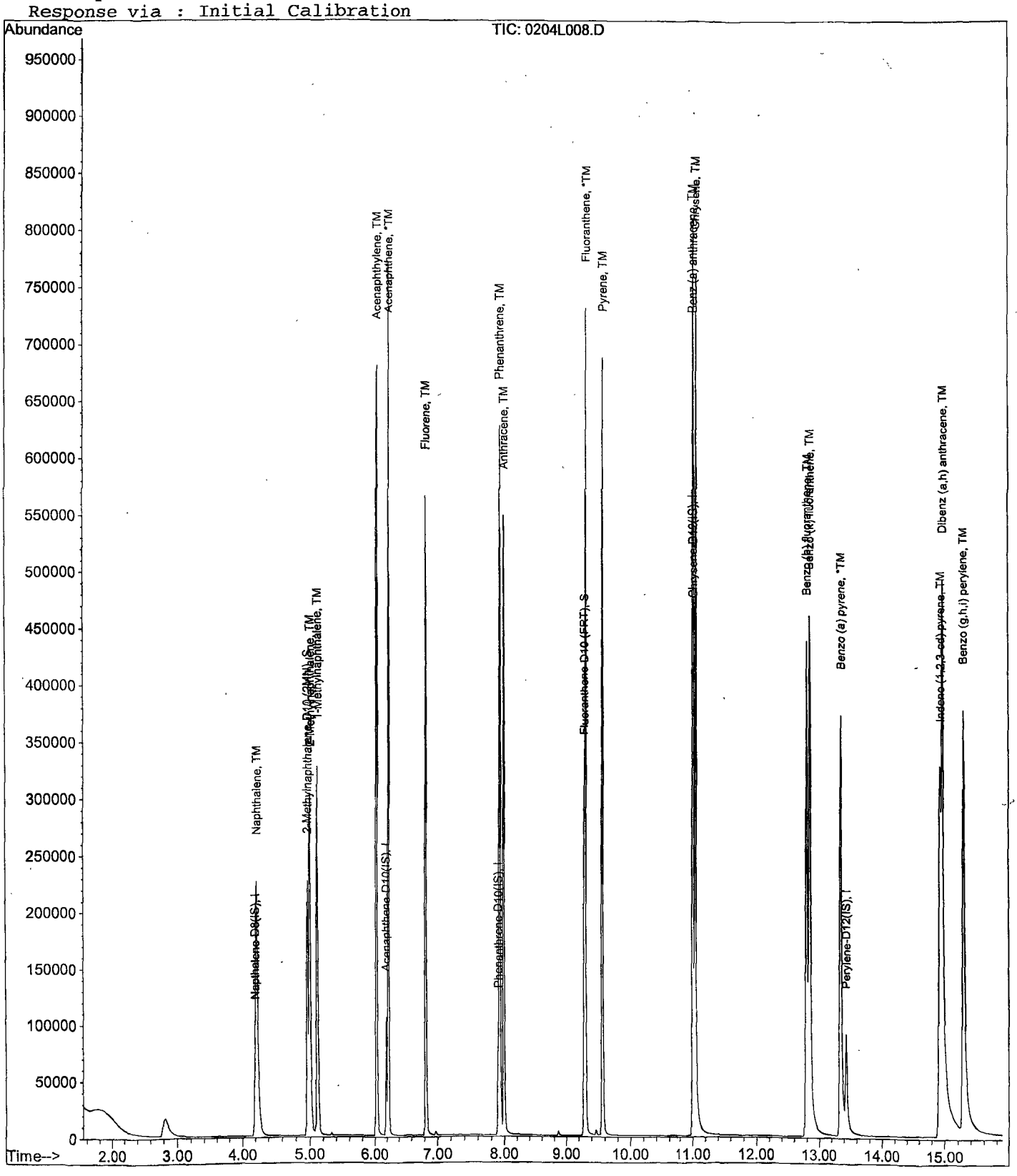
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L008.D Vial: 8
Acq On : 4 Feb 20 11:37 Operator: MA
Sample : 10 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L009.D Vial: 9
Acq On : 4 Feb 20 11:59 Operator: MA
Sample : 50 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 13:42 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:42:22 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	4.19	136	91741	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	6.18	164	48249	2.50000 ppb	0.00
10) Phenanthrene-D10(IS)	7.91	188	92859	2.50000 ppb	0.00
15) Chrysene-D12(IS)	11.02	240	119843	2.50000 ppb	0.01
20) Perylene-D12(IS)	13.43	264	135287	2.50000 ppb	0.00
System Monitoring Compounds					
3) 2-Methylnaphthalene-D10 (2	4.96	152	1082689	23.69132 ppb	0.00
Spiked Amount 5.000			Recovery	= 473.820%	
13) Fluoranthene-D10 (FRT)	9.28	212	1334204	20.57858 ppb	0.00
Spiked Amount 5.000			Recovery	= 411.580%	
Target Compounds					Qvalue
2) Naphthalene	4.21	128	1792980	40.63028 ppb	99
4) 2-Methylnaphthalene	5.00	142	1202511	44.83983 ppb	98
5) 1-Methylnaphthalene	5.11	142	1216206	43.75878 ppb	98
7) Acenaphthylene	6.02	152	3684033	41.87685 ppb	98
8) Acenaphthene	6.22	154	1114731	43.20461 ppb	98
9) Fluorene	6.82	166	1376652	43.49873 ppb	99
11) Phenanthrene	7.93	178	1932753	37.64827 ppb	97
12) Anthracene	7.99	178	1828963	40.63210 ppb	97
14) Fluoranthene	9.32	202	2749439	38.60579 ppb	97
16) Pyrene	9.58	202	2924684	36.46993 ppb	98
17) Benz (a) anthracene	11.01	228	2735399	40.78626 ppb	97
18) Chrysene	11.07	228	2813476	39.13121 ppb	97
19) Indeno (1,2,3-cd) pyrene	14.95	276	3717110	51.82101 ppb	98
21) Benzo (b) fluoranthene	12.82	252	3024809	44.80994 ppb	97
22) Benzo (k) fluoranthene	12.82	252	2960397	39.56247 ppb	97
23) Benzo (a) pyrene	13.36	252	2893742	45.68194 ppb	97
24) Dibenz (a,h) anthracene	14.99	278	3162117	50.27021 ppb #	95
25) Benzo (g,h,i) perylene	15.32	276	3213468	46.84602 ppb	94

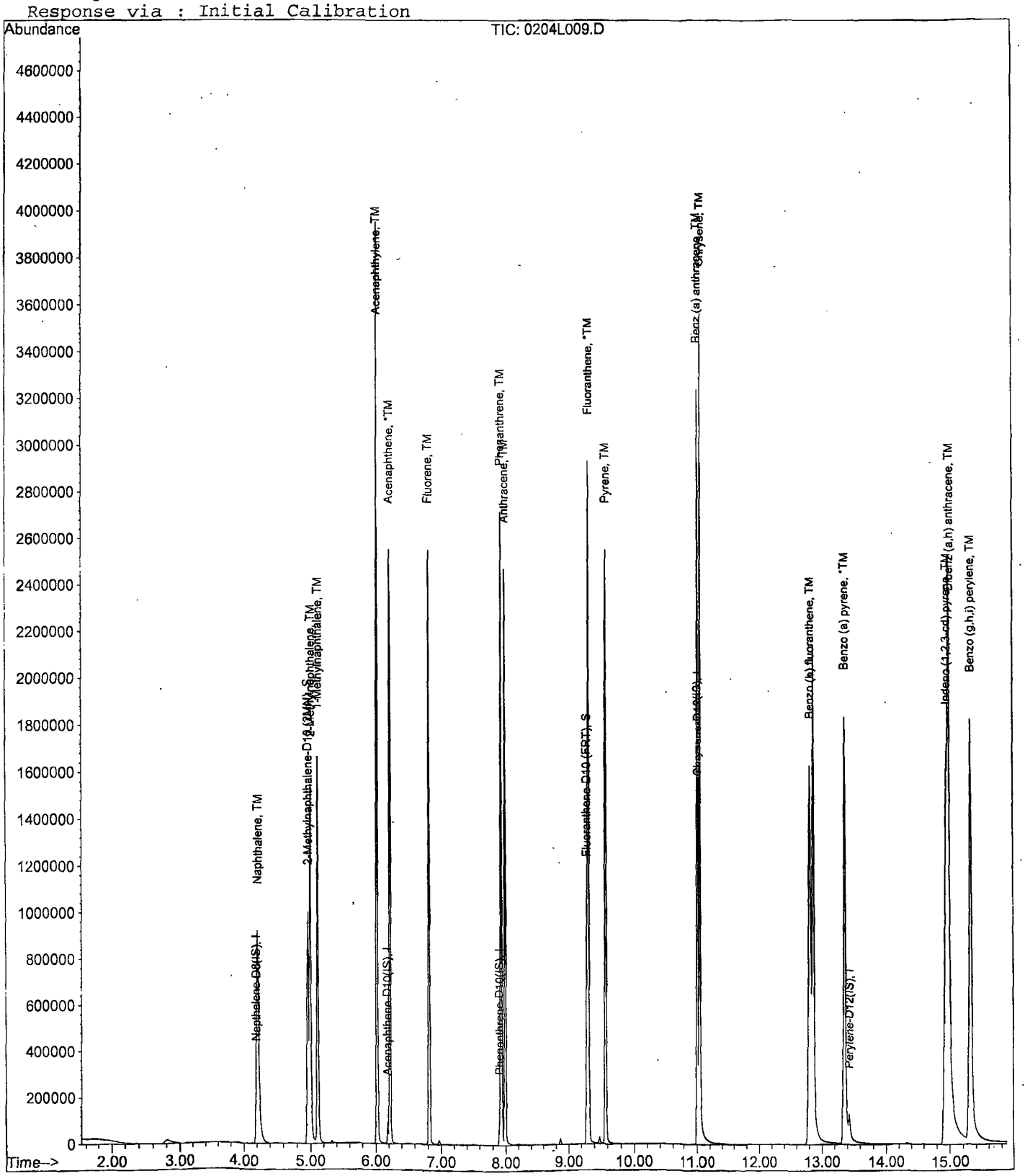
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L009.D Vial: 9
Acq On : 4 Feb 20 11:59 Operator: MA
Sample : 50 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 13:42 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L010.D Vial: 10
Acq On : 4 Feb 20 12:21 Operator: MA
Sample : 100 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:49 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:48:59 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.19	136	94154	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.18	164	49526	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.91	188	95687	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.03	240	125316	2.50000 ppb		0.02
20) Perylene-D12(IS)	13.45	264	141618	2.50000 ppb		0.01
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	4.96	152	2132841	47.06510 ppb		0.00
Spiked Amount 5.000			Recovery	= 941.300%		
13) Fluoranthene-D10 (FRT)	9.29	212	2657919	48.74975 ppb		0.01
Spiked Amount 5.000			Recovery	= 975.000%		
Target Compounds						Qvalue
2) Naphthalene	4.21	128	3515265	87.92823 ppb		98
4) 2-Methylnaphthalene	5.00	142	2314267	90.08958 ppb		99
5) 1-Methylnaphthalene	5.11	142	2325445	86.77018 ppb		99
7) Acenaphthylene	6.02	152	6802585	88.10489 ppb		97
8) Acenaphthene	6.23	154	2052134	84.22717 ppb		97
9) Fluorene	6.83	166	2744719	93.60760 ppb		100
11) Phenanthrene	7.94	178	3586911	80.58577 ppb		95
12) Anthracene	8.00	178	3368369	85.99155 ppb		95
14) Fluoranthene	9.33	202	5194710	85.53200 ppb		95
16) Pyrene	9.58	202	5580274	87.52935 ppb	#	84
17) Benz (a) anthracene	11.02	228	5418653	96.12929 ppb		94
18) Chrysene	11.08	228	5338591	81.34404 ppb		95
19) Indeno (1,2,3-cd) pyrene	14.99	276	7605000	103.10512 ppb	#	84
21) Benzo (b) fluoranthene	12.84	252	6397741	114.52991 ppb		95
22) Benzo (k) fluoranthene	12.90	252	6168270	86.51444 ppb		100
23) Benzo (a) pyrene	13.38	252	5827644	104.49972 ppb		95
24) Dibenz (a,h) anthracene	15.01	278	6436791	104.88555 ppb	#	94
25) Benzo (g,h,i) perylene	15.35	276	6483695	99.89693 ppb	#	93

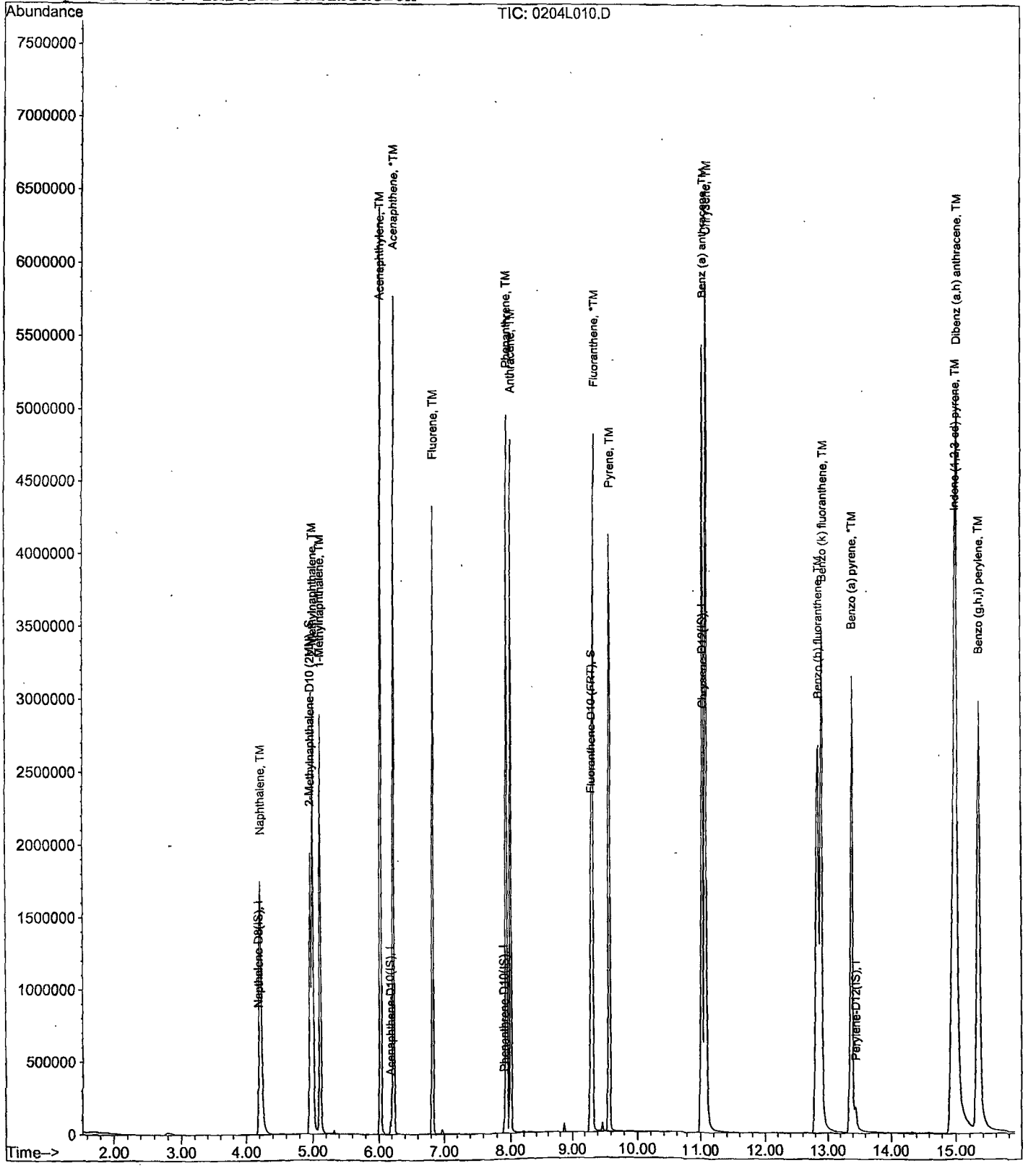
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L010.D Vial: 10
Acq On : 4 Feb 20 12:21 Operator: MA
Sample : 100 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:49 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration



PAH by GCMS SIM
EPA 8270 SIM

Form 7

Second Source Calibration

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

SDG No:
Date Analyzed: 4 Feb 20 13:21
Instrument: Linus
Initial Cal. Date: 02/04/20
Data File: 0204L011.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	Naphthalene	1.062	1.033	2.7	TM	
2	TM	2-Methylnaphthalene	0.6821	0.6822	0.02	TM	
3	TM	1-Methylnaphthalene	0.7116	0.6901	3.0	TM	
4	TM	Acenaphthylene	3.897	3.871	0.68	TM	
5	*TM	Acenaphthene	1.230	1.178	4.2	*TM	
6	TM	Fluorene	1.480	1.459	1.5	TM	
7	TM	Phenanthrene	1.163	1.148	1.3	TM	
8	TM	Anthracene	1.023	1.104	7.8	TM	
9	*TM	Fluoranthene	1.587	1.568	1.2	*TM	
10	TM	Pyrene	1.272	1.242	2.3	TM	
11	TM	Benz (a) anthracene	1.125	1.066	5.2	TM	
12	TM	Chrysene	1.309	1.222	6.7	TM	
13	TM	Indeno (1,2,3-cd) pyrene	1.471	1.421	3.4	TM	
14	TM	Benzo (b) fluoranthene	0.9861	0.9690	1.7	TM	
15	TM	Benzo (k) fluoranthene	1.265	1.329	5.1	TM	
16	*TM	Benzo (a) pyrene	0.9845	1.048	6.4	*TM	
17	TM	Dibenz (a,h) anthracene	1.083	1.080	0.29	TM	
18	TM	Benzo (g,h,i) perylene	1.146	1.138	0.70	TM	
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			3.0		

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L011.D Vial: 11
Acq On : 4 Feb 20 13:21 Operator: MA
Sample : SS SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 13:39 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	4.19	136	96451	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	6.18	164	52672	2.50000 ppb	0.00
10) Phenanthrene-D10(IS)	7.91	188	97686	2.50000 ppb	0.00
15) Chrysene-D12(IS)	11.01	240	126057	2.50000 ppb	0.00
20) Perylene-D12(IS)	13.43	264	136401	2.50000 ppb	0.00
System Monitoring Compounds					
3) 2-Methylnaphthalene-D10 (2	0.00	152	0d	0.00000 ppb	
Spiked Amount 5.000			Recovery	= 0.000%	
13) Fluoranthene-D10 (FRT)	0.00	212	0d	0.00000 ppb	
Spiked Amount 5.000			Recovery	= 0.000%	
Target Compounds					Qvalue
2) Naphthalene	4.21	128	199297	4.86635 ppb	100
4) 2-Methylnaphthalene	5.00	142	131606	5.00114 ppb	100
5) 1-Methylnaphthalene	5.11	142	133123	4.84897 ppb	100
7) Acenaphthylene	6.02	152	407798	4.96620 ppb	100
8) Acenaphthene	6.22	154	124072	4.78822 ppb	100
9) Fluorene	6.82	166	153651	4.92722 ppb	99
11) Phenanthrene	7.93	178	224305	4.93625 ppb	99
12) Anthracene	7.99	178	215622	5.39200 ppb	100
14) Fluoranthene	9.30	202	306319	4.94040 ppb	98
16) Pyrene	9.57	202	313161	4.88321 ppb	98
17) Benz (a) anthracene	11.00	228	268691	4.73868 ppb	100
18) Chrysene	11.05	228	308124	4.66728 ppb #	96
19) Indeno (1,2,3-cd) pyrene	14.92	276	358273	4.82875 ppb #	95
21) Benzo (b) fluoranthene	12.79	252	264332	4.91296 ppb	99
22) Benzo (k) fluoranthene	12.84	252	362562	5.25367 ppb	99
23) Benzo (a) pyrene	13.35	252	285781	5.32055 ppb	97
24) Dibenz (a,h) anthracene	14.96	278	294697	4.98566 ppb	98
25) Benzo (g,h,i) perylene	15.29	276	310388	4.96518 ppb	99

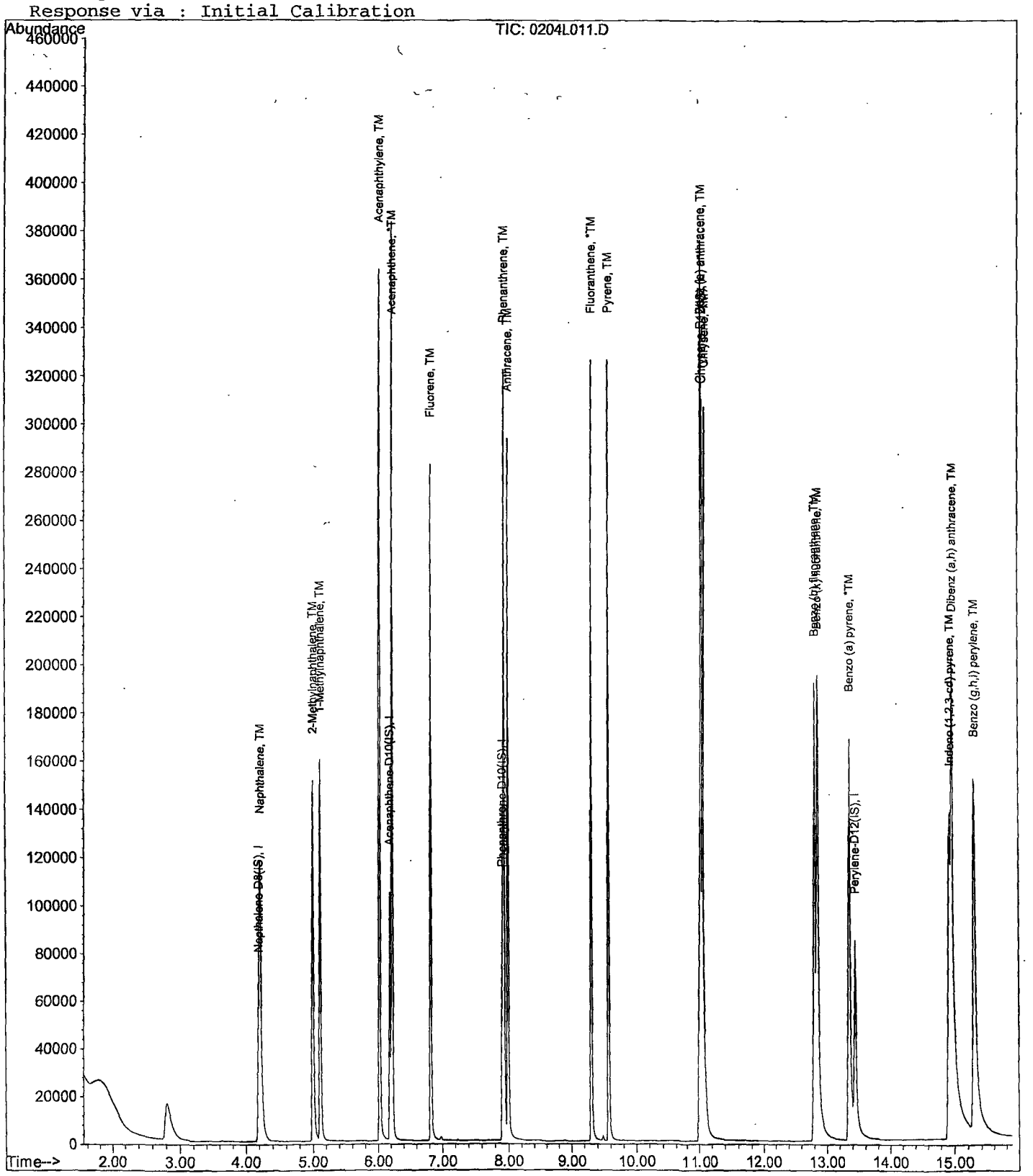
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L011.D Vial: 11
Acq On : 4 Feb 20 13:21 Operator: MA
Sample : SS SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 13:39 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration



PAH by GCMS SIM
EPA 8270 SIM

Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 03/16/20
Instrument: Linus
Initial Cal. Date: 02/04/20
Data File: 0204L282.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Napthalene-D8(IS)	ISTD			I	
2	TM	Naphthalene	1.062	1.008	5.0	TM	
3	S	2-Methylnaphthalene-D10 (2MN)	1.203	1.256	4.4	S	
4	TM	2-Methylnaphthalene	0.6821	0.6990	2.5	TM	
5	TM	1-Methylnaphthalene	0.7116	0.7006	1.6	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	TM	Acenaphthylene	3.897	3.832	1.7	TM	
8	*TM	Acenaphthene	1.230	1.147	6.8	*TM	
9	TM	Fluorene	1.480	1.456	1.7	TM	
10	I	Phenanthrene-D10(IS)	ISTD			I	
11	TM	Phenanthrene	1.163	1.081	7.0	TM	
12	TM	Anthracene	1.023	0.9898	3.3	TM	
13	S	Fluoranthene-D10 (FRT)	1.424	1.408	1.2	S	
14	*TM	Fluoranthene	1.587	1.530	3.6	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.272	1.171	7.9	TM	
17	TM	Benz (a) anthracene	1.125	1.155	2.7	TM	
18	TM	Chrysene	1.309	1.162	11	TM	
19	TM	Indeno (1,2,3-cd) pyrene	1.471	1.593	8.3	TM	
20	I	Perylene-D12(IS)	ISTD			I	
21	TM	Benzo (b) fluoranthene	0.9861	1.041	5.6	TM	
22	TM	Benzo (k) fluoranthene	1.265	1.121	11	TM	
23	*TM	Benzo (a) pyrene	0.9845	0.9970	1.3	*TM	
24	TM	Dibenz (a,h) anthracene	1.083	1.122	3.5	TM	
25	TM	Benzo (g,h,i) perylene	1.146	1.119	2.3	TM	
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			4.6		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L282.D Vial: 82
Acq On : 16 Mar 20 14:34 Operator: MA
Sample : 5 SIM 02/03/20 (1) Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Mar 16 15:02 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.14	136	109106	2.50000	ppb		-0.01
6) Acenaphthene-D10(IS)	6.14	164	61700	2.50000	ppb		-0.01
10) Phenanthrene-D10(IS)	7.87	188	121780	2.50000	ppb		-0.01
15) Chrysene-D12(IS)	10.98	240	162122	2.50000	ppb		-0.02
20) Perylene-D12(IS)	13.40	264	197605	2.50000	ppb		-0.01
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	4.91	152	137005	2.60896	ppb		0.00
Spiked Amount 5.000			Recovery	= 52.180%			
13) Fluoranthene-D10 (FRT)	9.25	212	171429	2.47054	ppb		0.00
Spiked Amount 5.000			Recovery	= 49.420%			
Target Compounds							Qvalue
2) Naphthalene	4.17	128	219991	4.74860	ppb		99
4) 2-Methylnaphthalene	4.95	142	152529	5.12394	ppb		99
5) 1-Methylnaphthalene	5.07	142	152870	4.92240	ppb		96
7) Acenaphthylene	5.99	152	472841	4.91574	ppb		100
8) Acenaphthene	6.18	154	141498	4.66171	ppb		98
9) Fluorene	6.78	166	179625	4.91732	ppb		99
11) Phenanthrene	7.89	178	263288	4.64778	ppb		99
12) Anthracene	7.95	178	241083	4.83593	ppb		98
14) Fluoranthene	9.27	202	372558	4.81990	ppb		96
16) Pyrene	9.53	202	379781	4.60464	ppb		96
17) Benz (a) anthracene	10.97	228	374432	5.13454	ppb		99
18) Chrysene	11.01	228	376658	4.43620	ppb	#	95
19) Indeno (1,2,3-cd) pyrene	14.89	276	516632	5.41411	ppb	#	88
21) Benzo (b) fluoranthene	12.75	252	411419	5.27834	ppb		100
22) Benzo (k) fluoranthene	12.79	252	443147	4.43249	ppb		99
23) Benzo (a) pyrene	13.30	252	394043	5.06391	ppb		98
24) Dibenz (a,h) anthracene	14.92	278	443294	5.17677	ppb		99
25) Benzo (g,h,i) perylene	15.25	276	442306	4.88397	ppb	#	96

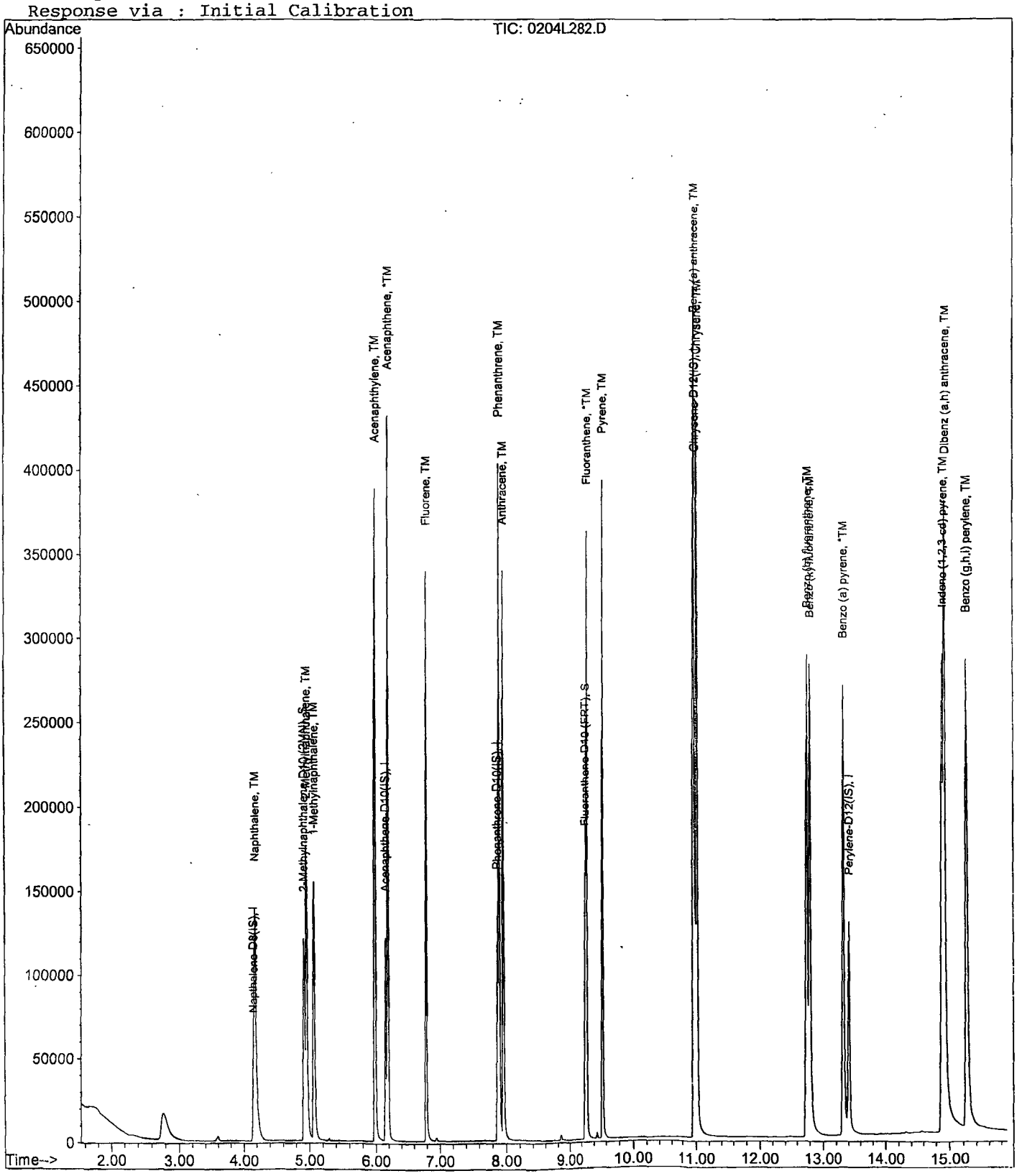
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L282.D Vial: 82
Acq On : 16 Mar 20 14:34 Operator: MA
Sample : 5 SIM 02/03/20 (1) Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Mar 16 15:02 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration



PAH by GCMS SIM
EPA 8270 SIM

Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 03/17/20
Instrument: Linus
Initial Cal. Date: 02/04/20
Data File: 0204L308.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	TM	Naphthalene	1.062	1.033	2.7	TM	
3	S	2-Methylnaphthalene-D10 (2MN)	1.203	1.305	8.4	S	
4	TM	2-Methylnaphthalene	0.6821	0.7154	4.9	TM	
5	TM	1-Methylnaphthalene	0.7116	0.7245	1.8	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	TM	Acenaphthylene	3.897	3.905	0.18	TM	
8	*TM	Acenaphthene	1.230	1.141	7.2	*TM	
9	TM	Fluorene	1.480	1.491	0.76	TM	
10	I	Phenanthrene-D10(IS)	ISTD			I	
11	TM	Phenanthrene	1.163	1.069	8.1	TM	
12	TM	Anthracene	1.023	0.9752	4.7	TM	
13	S	Fluoranthene-D10 (FRT)	1.424	1.405	1.4	S	
14	*TM	Fluoranthene	1.587	1.489	6.1	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.272	1.163	8.6	TM	
17	TM	Benz (a) anthracene	1.125	1.156	2.8	TM	
18	TM	Chrysene	1.309	1.138	13	TM	
19	TM	Indeno (1,2,3-cd) pyrene	1.471	1.477	0.38	TM	
20	I	Perylene-D12(IS)	ISTD			I	
21	TM	Benzo (b) fluoranthene	0.9861	1.086	10	TM	
22	TM	Benzo (k) fluoranthene	1.265	1.054	17	TM	
23	*TM	Benzo (a) pyrene	0.9845	0.9778	0.68	*TM	
24	TM	Dibenz (a,h) anthracene	1.083	1.055	2.6	TM	
25	TM	Benzo (g,h,i) perylene	1.146	1.030	10	TM	
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			5.6		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L308.D Vial: 8
Acq On : 17 Mar 20 00:33 Operator: MA
Sample : 5 SIM 02/03/20 (2) Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Mar 17 9:21 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.15	136	105231	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.14	164	61442	2.50000 ppb		-0.01
10) Phenanthrene-D10(IS)	7.87	188	125563	2.50000 ppb		-0.01
15) Chrysene-D12(IS)	10.98	240	164789	2.50000 ppb		-0.02
20) Perylene-D12(IS)	13.39	264	198107	2.50000 ppb		-0.02
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	4.93	152	137316	2.71117 ppb		0.00
Spiked Amount 5.000			Recovery	= 54.220%		
13) Fluoranthene-D10 (FRT)	9.25	212	176433	2.46605 ppb		0.00
Spiked Amount 5.000			Recovery	= 49.320%		
Target Compounds						Qvalue
2) Naphthalene	4.18	128	217423	4.86599 ppb		100
4) 2-Methylnaphthalene	4.96	142	150564	5.24418 ppb		96
5) 1-Methylnaphthalene	5.07	142	152470	5.09031 ppb		97
7) Acenaphthylene	5.99	152	479807	5.00911 ppb		100
8) Acenaphthene	6.18	154	140263	4.64042 ppb		98
9) Fluorene	6.78	166	183257	5.03781 ppb		99
11) Phenanthrene	7.89	178	268377	4.59488 ppb		99
12) Anthracene	7.95	178	244907	4.76462 ppb		99
14) Fluoranthene	9.27	202	374000	4.69278 ppb		98
16) Pyrene	9.53	202	383213	4.57106 ppb		98
17) Benz (a) anthracene	10.97	228	381001	5.14007 ppb		99
18) Chrysene	11.01	228	374965	4.34478 ppb	#	96
19) Indeno (1,2,3-cd) pyrene	14.88	276	486825	5.01917 ppb	#	99
21) Benzo (b) fluoranthene	12.74	252	430456	5.50858 ppb	#	98
22) Benzo (k) fluoranthene	12.79	252	417796	4.16833 ppb		100
23) Benzo (a) pyrene	13.30	252	387408	4.96603 ppb	#	96
24) Dibenz (a,h) anthracene	14.92	278	418007	4.86910 ppb		98
25) Benzo (g,h,i) perylene	15.25	276	408201	4.49596 ppb	#	97

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

Quantitation Report

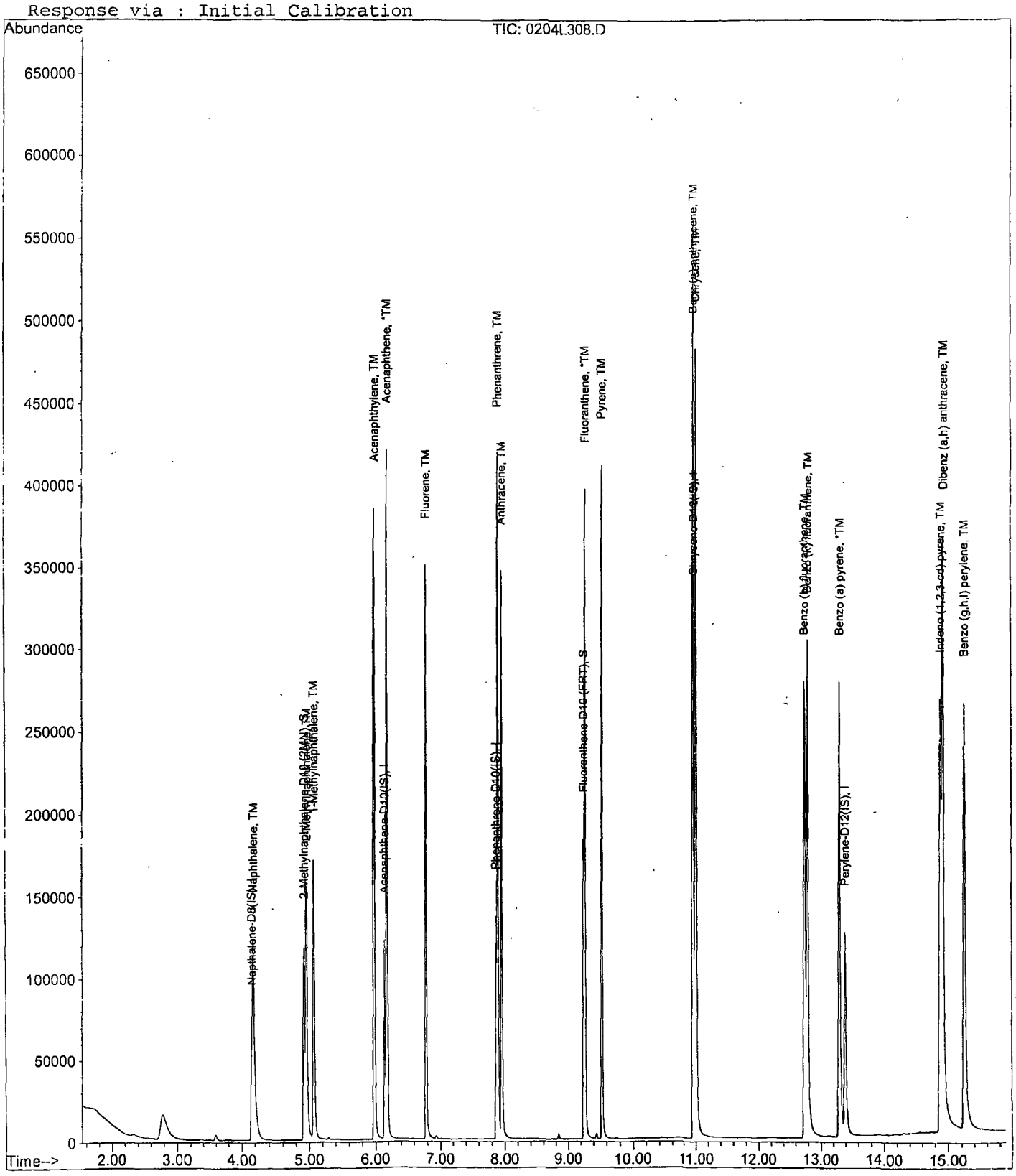
Data File : M:\LINUS\DATA\L200204\0204L308.D
Acq On : 17 Mar 20 00:33
Sample : 5 SIM 02/03/20 (2)
Misc :

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

Quant Time: Mar 17 9:21 2020

Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration



ORGANICS
Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L287.D Vial: 87
Acq On : 16 Mar 20 16:52 Operator: MA
Sample : BA08341W41 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Mar 16 17:24 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	4.14	136	91960	2.50000 ppb	-0.01
6) Acenaphthene-D10(IS)	6.14	164	52636	2.50000 ppb	-0.01
10) Phenanthrene-D10(IS)	7.87	188	102284	2.50000 ppb	-0.01
15) Chrysene-D12(IS)	10.98	240	140454	2.50000 ppb	-0.02
20) Perylene-D12(IS)	13.40	264	171347	2.50000 ppb	-0.01
System Monitoring Compounds					
3) 2-Methylnaphthalene-D10 (2	4.91	152	207812	5.86896 ppb	0.00
Spiked Amount 6.250			Recovery	= 93.904%	
13) Fluoranthene-D10 (FRT)	9.25	212	293880	6.30313 ppb	0.00
Spiked Amount 6.250			Recovery	= 100.848%	

Target Compounds Qvalue

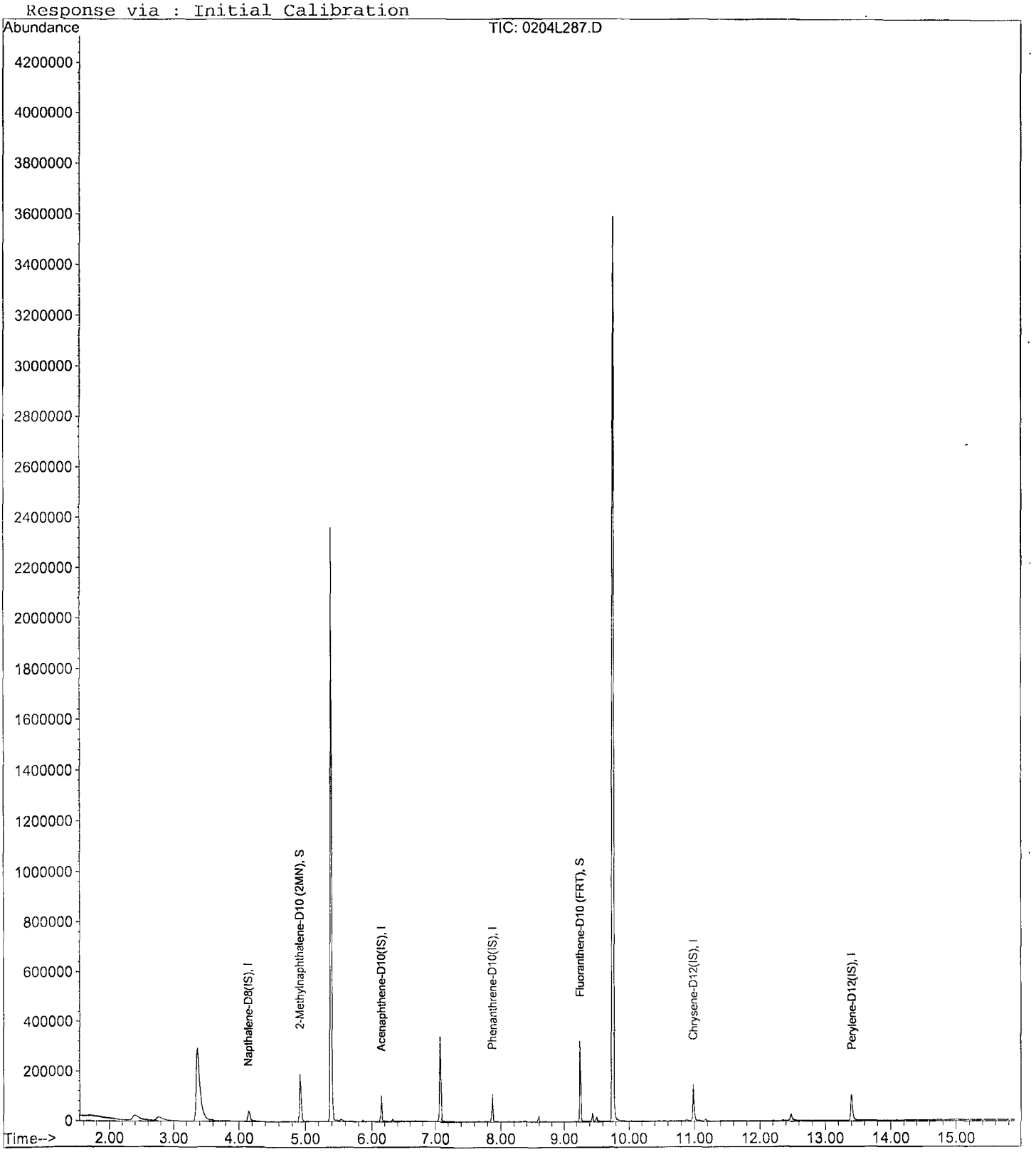
(#) = qualifier out of range (m) = manual integration
0204L287.D L0204.M Tue Mar 17 13:39:13 2020 Page 1

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L287.D Vial: 87
Acq On : 16 Mar 20 16:52 Operator: MA
Sample : BA08341W41 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Mar 16 17:24 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L283.D Vial: 83
Acq On : 16 Mar 20 15:24 Operator: MA
Sample : 200312A BLK 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Mar 16 17:24 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	4.15	136	93874	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	6.14	164	53274	2.50000	ppb	-0.01
10) Phenanthrene-D10(IS)	7.87	188	104028	2.50000	ppb	-0.01
15) Chrysene-D12(IS)	10.99	240	138970	2.50000	ppb	-0.01
20) Perylene-D12(IS)	13.40	264	160818	2.50000	ppb	-0.01
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	4.93	152	208487	5.76797	ppb	0.00
Spiked Amount 6.250			Recovery	= 92.288%		
13) Fluoranthene-D10 (FRT)	9.26	212	279568	5.89564	ppb	0.00
Spiked Amount 6.250			Recovery	= 94.336%		

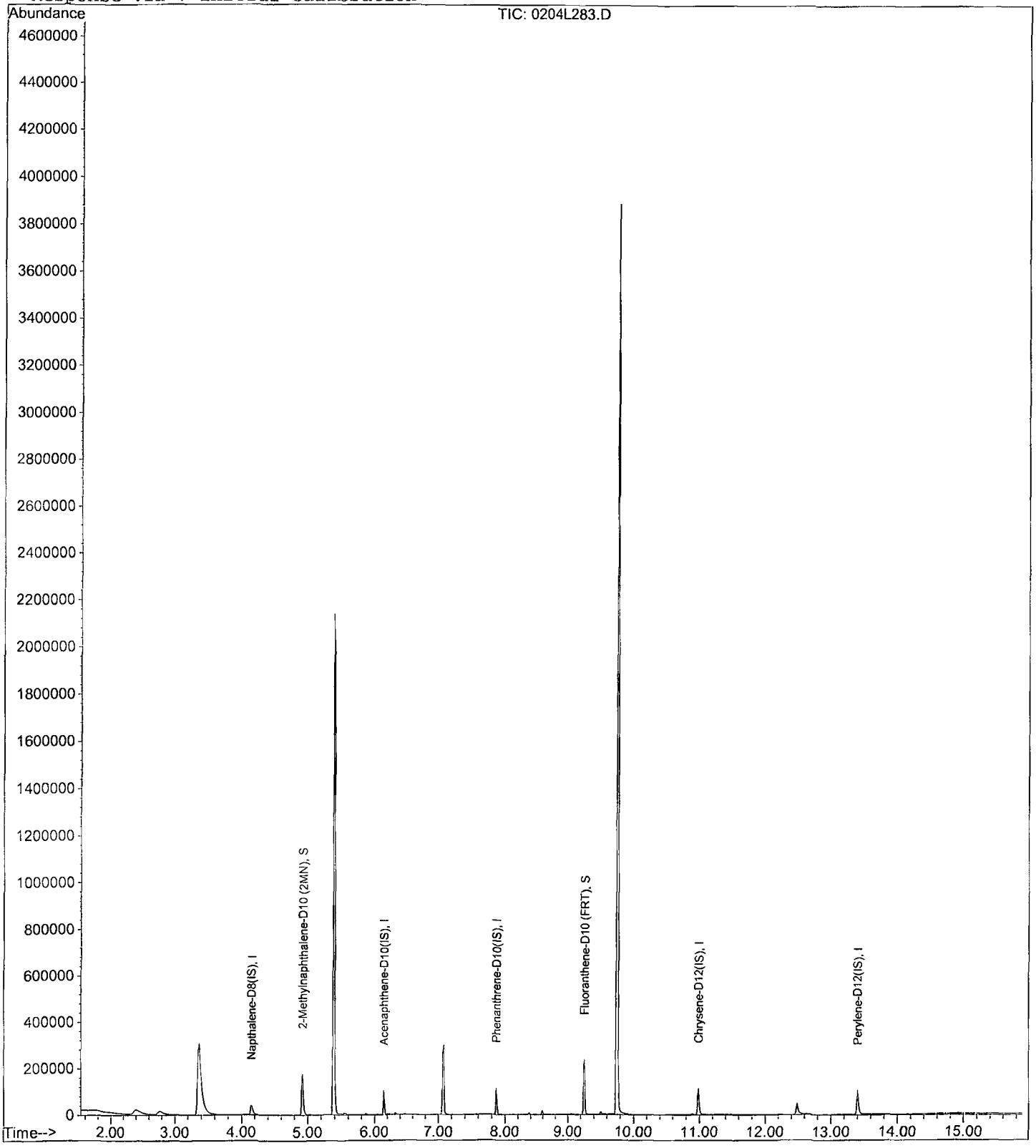
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0204L283.D L0204.M Tue Mar 17 13:38:54 2020 Page 1

Data File : M:\LINUS\DATA\L200204\0204L283.D Vial: 83
Acq On : 16 Mar 20 15:24 Operator: MA
Sample : 200312A BLK 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Mar 16 17:24 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L284.D Vial: 84
Acq On : 16 Mar 20 15:46 Operator: MA
Sample : 200312A LCS-2 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Mar 16 16:04 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.14	136	90182	2.50000	ppb		-0.01
6) Acenaphthene-D10(IS)	6.14	164	51325	2.50000	ppb		-0.01
10) Phenanthrene-D10(IS)	7.87	188	101366	2.50000	ppb		-0.01
15) Chrysene-D12(IS)	10.98	240	133947	2.50000	ppb		-0.02
20) Perylene-D12(IS)	13.40	264	158987	2.50000	ppb		-0.01
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	4.91	152	204851	5.89940	ppb		0.00
Spiked Amount 6.250			Recovery = 94.384%				
13) Fluoranthene-D10 (FRT)	9.25	212	267019	5.77888	ppb		0.00
Spiked Amount 6.250			Recovery = 92.464%				
Target Compounds							Qvalue
2) Naphthalene	4.17	128	161053	5.25736	ppb		100
4) 2-Methylnaphthalene	4.95	142	107474	5.46001	ppb		99
5) 1-Methylnaphthalene	5.06	142	110038	5.35841	ppb		99
7) Acenaphthylene	5.98	152	337331	5.26983	ppb		98
8) Acenaphthene	6.18	154	103103	5.10425	ppb		96
9) Fluorene	6.78	166	134641	5.53866	ppb		100
11) Phenanthrene	7.89	178	200825	5.32385	ppb		99
12) Anthracene	7.95	178	172244	5.18861	ppb		99
14) Fluoranthene	9.27	202	279837	5.43680	ppb		100
16) Pyrene	9.53	202	286557	5.25645	ppb		100
17) Benz (a) anthracene	10.97	228	280850	5.82670	ppb		98
18) Chrysene	11.01	228	282619	5.03598	ppb	#	97
19) Indeno (1,2,3-cd) pyrene	14.88	276	381869	6.05451	ppb		100
21) Benzo (b) fluoranthene	12.75	252	317469	6.32791	ppb		100
22) Benzo (k) fluoranthene	12.79	252	321427	4.99492	ppb		99
23) Benzo (a) pyrene	13.30	252	256674	5.12473	ppb	#	96
24) Dibenz (a,h) anthracene	14.92	278	330254	5.99185	ppb		98
25) Benzo (g,h,i) perylene	15.25	276	329709	5.65623	ppb		97

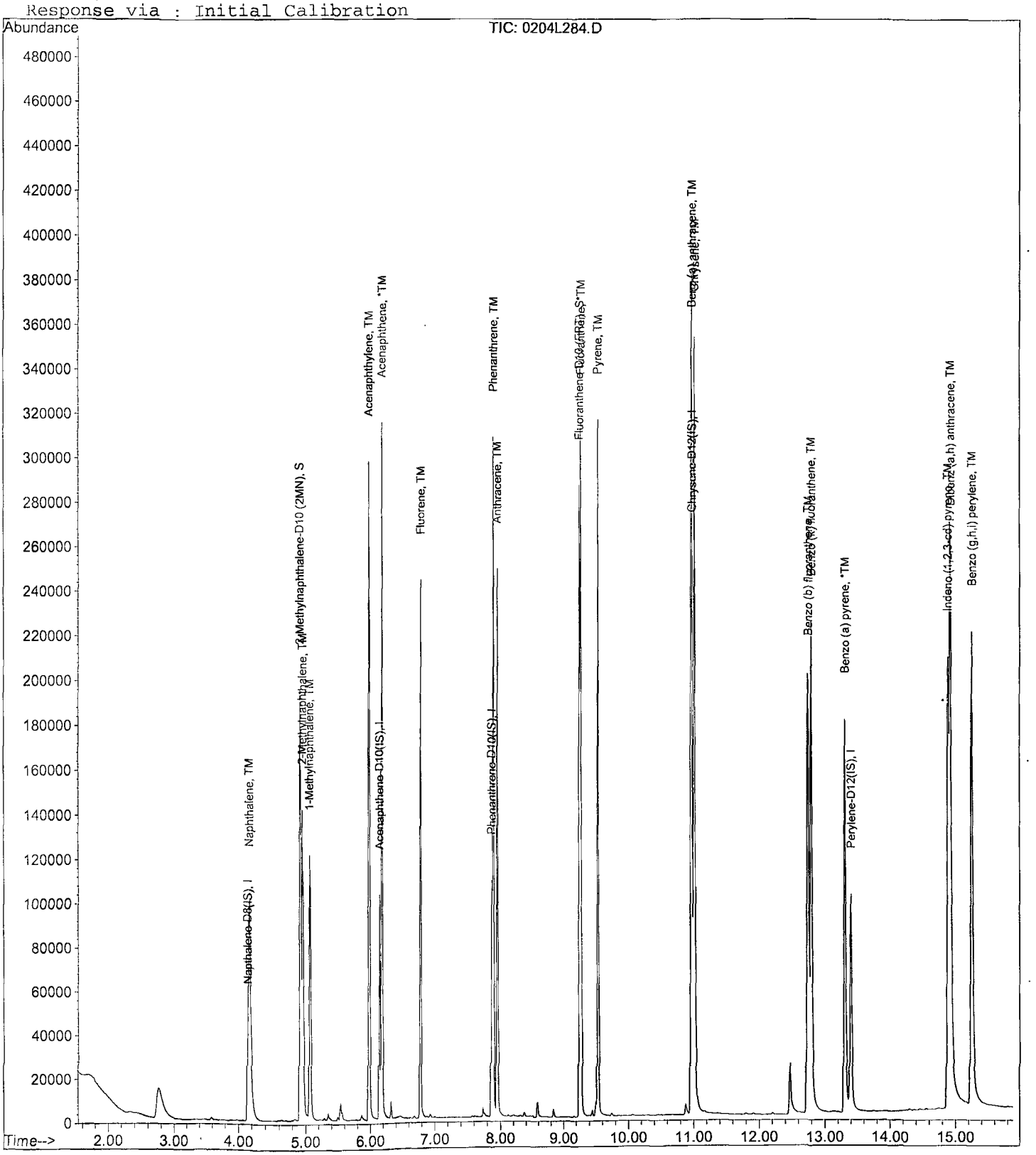
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L284.D Vial: 84
Acq On : 16 Mar 20 15:46 Operator: MA
Sample : 200312A LCS-2 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Mar 16 16:04 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L285.D Vial: 85
Acq On : 16 Mar 20 16:08 Operator: MA
Sample : BA08341W47 MS-2 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Mar 16 16:52 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.14	136	94337	2.50000 ppb		-0.01
6) Acenaphthene-D10(IS)	6.14	164	52868	2.50000 ppb		-0.01
10) Phenanthrene-D10(IS)	7.87	188	106327	2.50000 ppb		-0.01
15) Chrysene-D12(IS)	10.98	240	139110	2.50000 ppb		-0.02
20) Perylene-D12(IS)	13.40	264	167298	2.50000 ppb		-0.01
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	4.91	152	223161	6.14364 ppb		0.00
Spiked Amount 6.250			Recovery =	98.304%		
13) Fluoranthene-D10 (FRT)	9.25	212	291596	6.01633 ppb		0.00
Spiked Amount 6.250			Recovery =	96.256%		
Target Compounds						Qvalue
2) Naphthalene	4.17	128	163943	5.11599 ppb		100
4) 2-Methylnaphthalene	4.95	142	111196	5.40029 ppb		100
5) 1-Methylnaphthalene	5.06	142	112197	5.22291 ppb		100
7) Acenaphthylene	5.98	152	352529	5.34652 ppb		98
8) Acenaphthene	6.18	154	105206	5.05635 ppb		95
9) Fluorene	6.78	166	139563	5.57358 ppb		100
11) Phenanthrene	7.89	178	208983	5.28163 ppb		100
12) Anthracene	7.95	178	184912	5.31032 ppb		100
14) Fluoranthene	9.27	202	289156	5.35573 ppb		100
16) Pyrene	9.53	202	301405	5.32362 ppb		100
17) Benz (a) anthracene	10.97	228	295408	5.90126 ppb		98
18) Chrysene	11.01	228	296451	5.08640 ppb	#	96
19) Indeno (1,2,3-cd) pyrene	14.88	276	400327	6.11159 ppb	#	98
21) Benzo (b) fluoranthene	12.75	252	337927	6.40107 ppb		100
22) Benzo (k) fluoranthene	12.79	252	337064	4.97771 ppb		100
23) Benzo (a) pyrene	13.30	252	284320	5.39470 ppb	#	97
24) Dibenz (a,h) anthracene	14.92	278	346943	5.98194 ppb		97
25) Benzo (g,h,i) perylene	15.25	276	346338	5.64635 ppb		98

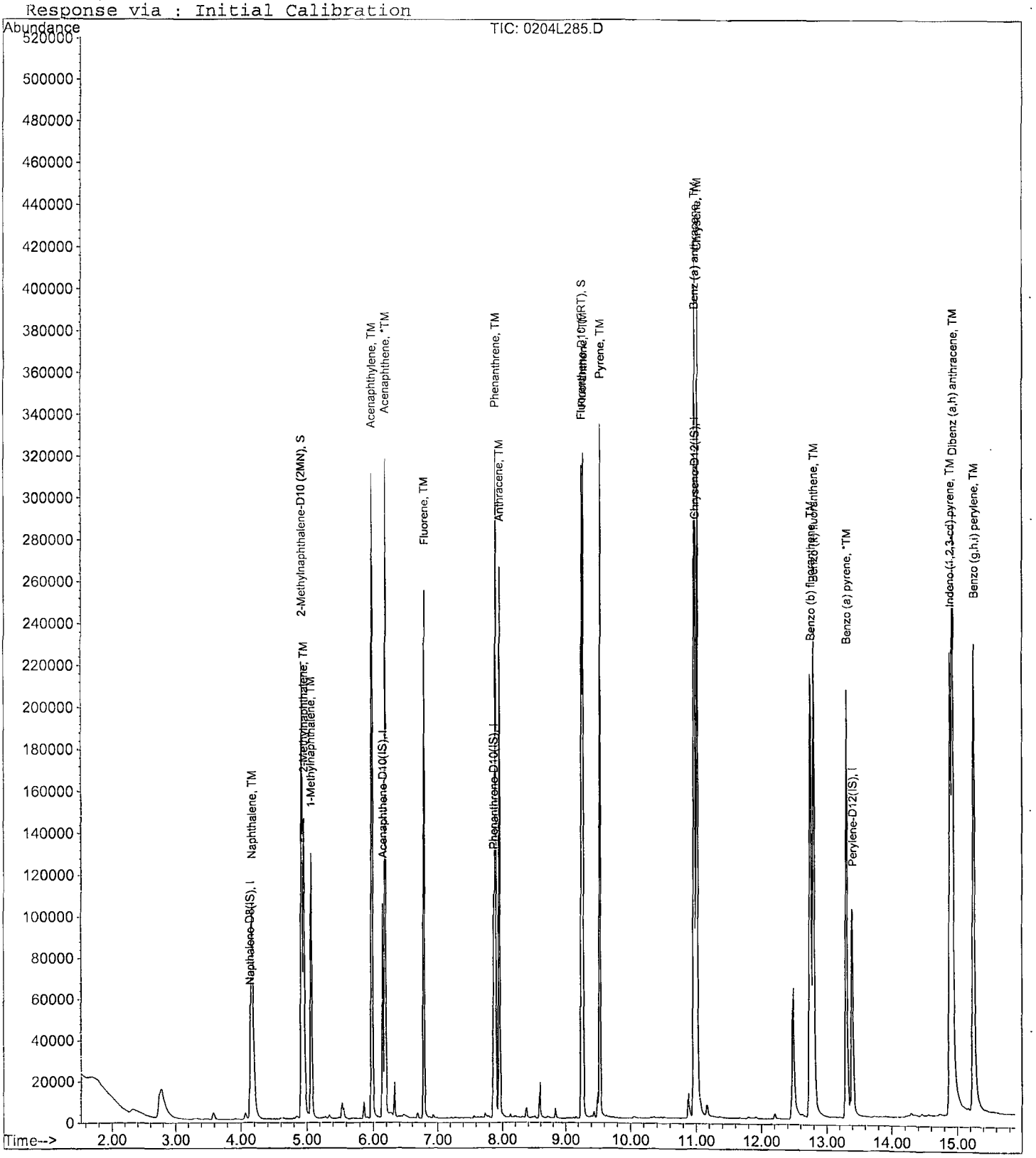
(#) = qualifier out of range (m) = manual integration
0204L285.D L0204.M Tue Mar 17 13:39:04 2020 Page 1

Data File : M:\LINUS\DATA\L200204\0204L285.D
Acq On : 16 Mar 20 16:08
Sample : BA08341W47 MS-2 1/800
Misc :

Vial: 85
Operator: MA
Inst : Linus
Multiplr: 1.25

Quant Time: Mar 16 16:52 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L286.D Vial: 86
Acq On : 16 Mar 20 16:30 Operator: MA
Sample : BA08341W39 MSD-2 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Mar 16 16:52 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.14	136	91881	2.50000	ppb		-0.01
6) Acenaphthene-D10(IS)	6.14	164	51694	2.50000	ppb		-0.01
10) Phenanthrene-D10(IS)	7.87	188	102770	2.50000	ppb		-0.01
15) Chrysene-D12(IS)	10.98	240	135599	2.50000	ppb		-0.02
20) Perylene-D12(IS)	13.39	264	161870	2.50000	ppb		-0.02
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	4.91	152	226553	6.40374	ppb		0.00
Spiked Amount 6.250			Recovery	= 102.464%			
13) Fluoranthene-D10 (FRT)	9.25	212	287875	6.14513	ppb		0.00
Spiked Amount 6.250			Recovery	= 98.320%			
Target Compounds							Qvalue
2) Naphthalene	4.17	128	170402	5.45969	ppb		100
4) 2-Methylnaphthalene	4.95	142	115797	5.77406	ppb		99
5) 1-Methylnaphthalene	5.06	142	117103	5.59700	ppb		99
7) Acenaphthylene	5.98	152	361197	5.60239	ppb		98
8) Acenaphthene	6.18	154	109182	5.36662	ppb		97
9) Fluorene	6.78	166	143879	5.87643	ppb		99
11) Phenanthrene	7.89	178	212145	5.54711	ppb		100
12) Anthracene	7.95	178	186305	5.53550	ppb		99
14) Fluoranthene	9.27	202	293142	5.61749	ppb		99
16) Pyrene	9.53	202	302198	5.47583	ppb		99
17) Benz (a) anthracene	10.97	228	298578	6.11903	ppb		99
18) Chrysene	11.01	228	296196	5.21361	ppb	#	96
19) Indeno (1,2,3-cd) pyrene	14.88	276	403159	6.31419	ppb	#	100
21) Benzo (b) fluoranthene	12.74	252	339005	6.63683	ppb	#	98
22) Benzo (k) fluoranthene	12.79	252	335495	5.12068	ppb		100
23) Benzo (a) pyrene	13.30	252	290601	5.69877	ppb	#	97
24) Dibenz (a,h) anthracene	14.92	278	349973	6.23653	ppb		98
25) Benzo (g,h,i) perylene	15.25	276	349659	5.89164	ppb	#	97

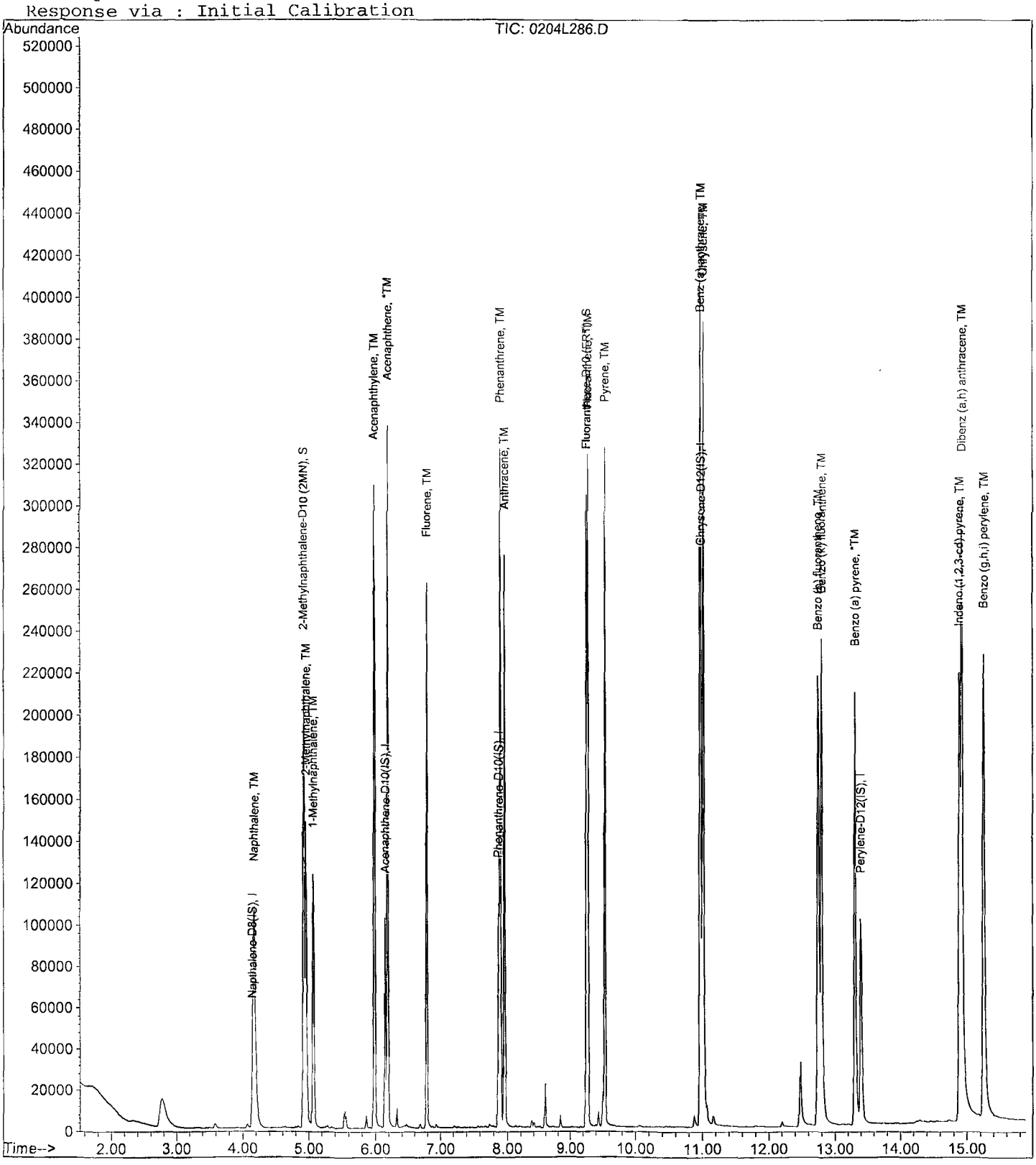
(#) = qualifier out of range (m) = manual integration
0204L286.D L0204.M Tue Mar 17 13:39:08 2020 Page 1

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L286.D Vial: 86
Acq On : 16 Mar 20 16:30 Operator: MA
Sample : BA08341W39 MSD-2 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Mar 16 16:52 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration

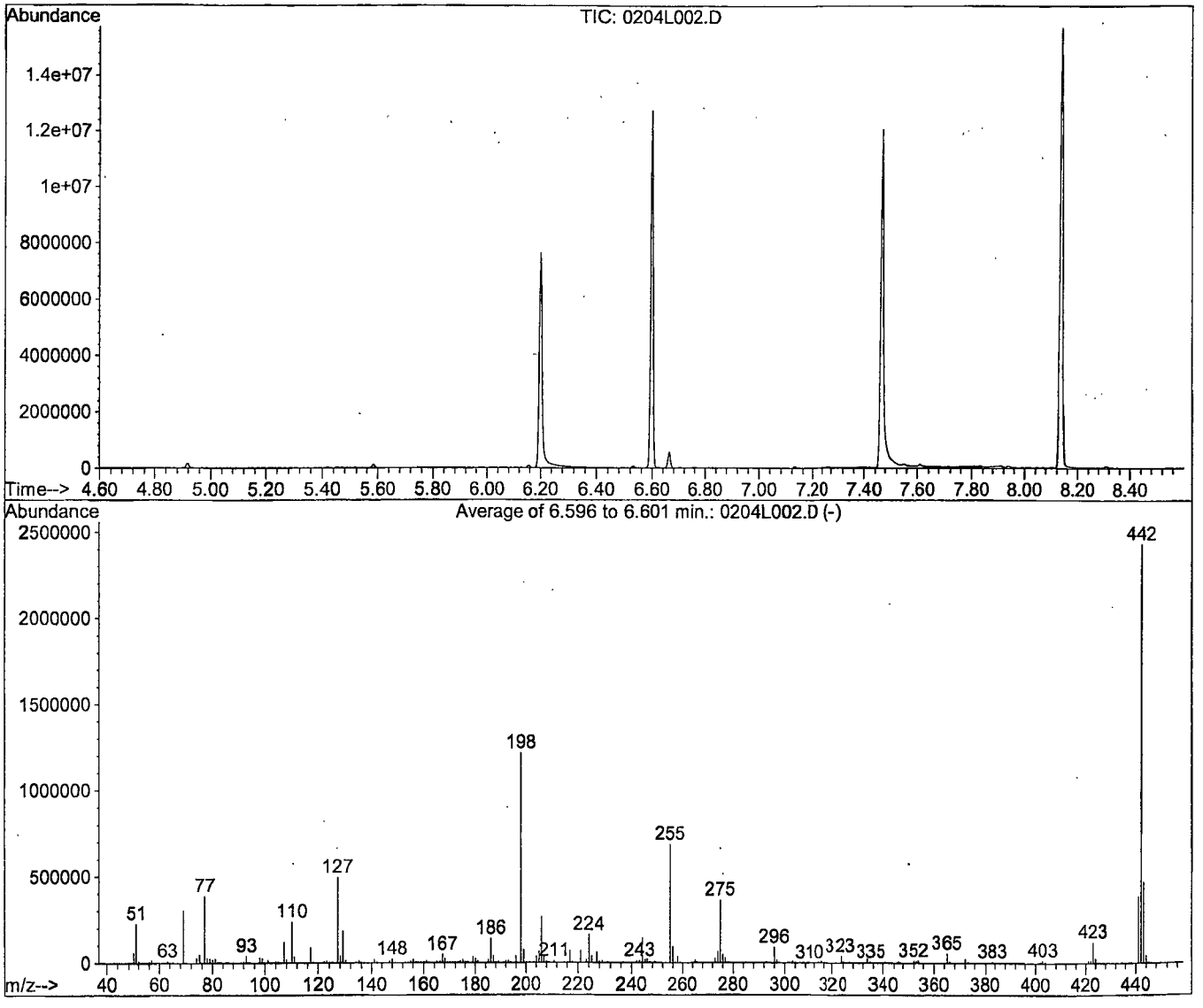


DFTPP

Data File : M:\LINUS\DATA\L200204\0204L002.D
Acq On : 4 Feb 20 9:32
Sample : SV Tune 10/01/19
Misc :

Vial: 2
Operator: MA
Inst : Linus
Multiplr: 1.00

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270



AutoFind: Scans 1611, 1612, 1613; Background Corrected with Scan 1602

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	18.6	226705	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.4	1215	PASS
127	198	10	80	40.9	497237	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	1216619	PASS
199	198	5	9	6.3	77030	PASS
275	198	10	60	30.0	364907	PASS
365	198	1	100	4.7	56864	PASS
441	442	0.01	24	15.8	386027	PASS
442	198	50	500	200.3	2437461	PASS
443	442	15	24	19.3	470891	PASS

Data File Name:	**0204L002.D**
Data File Path:	**M:\LINUS\DATA\L200204**
Operator:	**MA**
Date Acquired:	**4 Feb 20 9:32**
Method File:	**DFTPP2.M**
Sample Name:	**SV Tune 10/01/19**
Vial Number:	**2**
Instrument Name:	**Linus**

#	Name	Ret Time	Target Response
1)	DDT	8.16	112940000
2)	DDD	7.91	651825
3)	DDE	7.63	587422

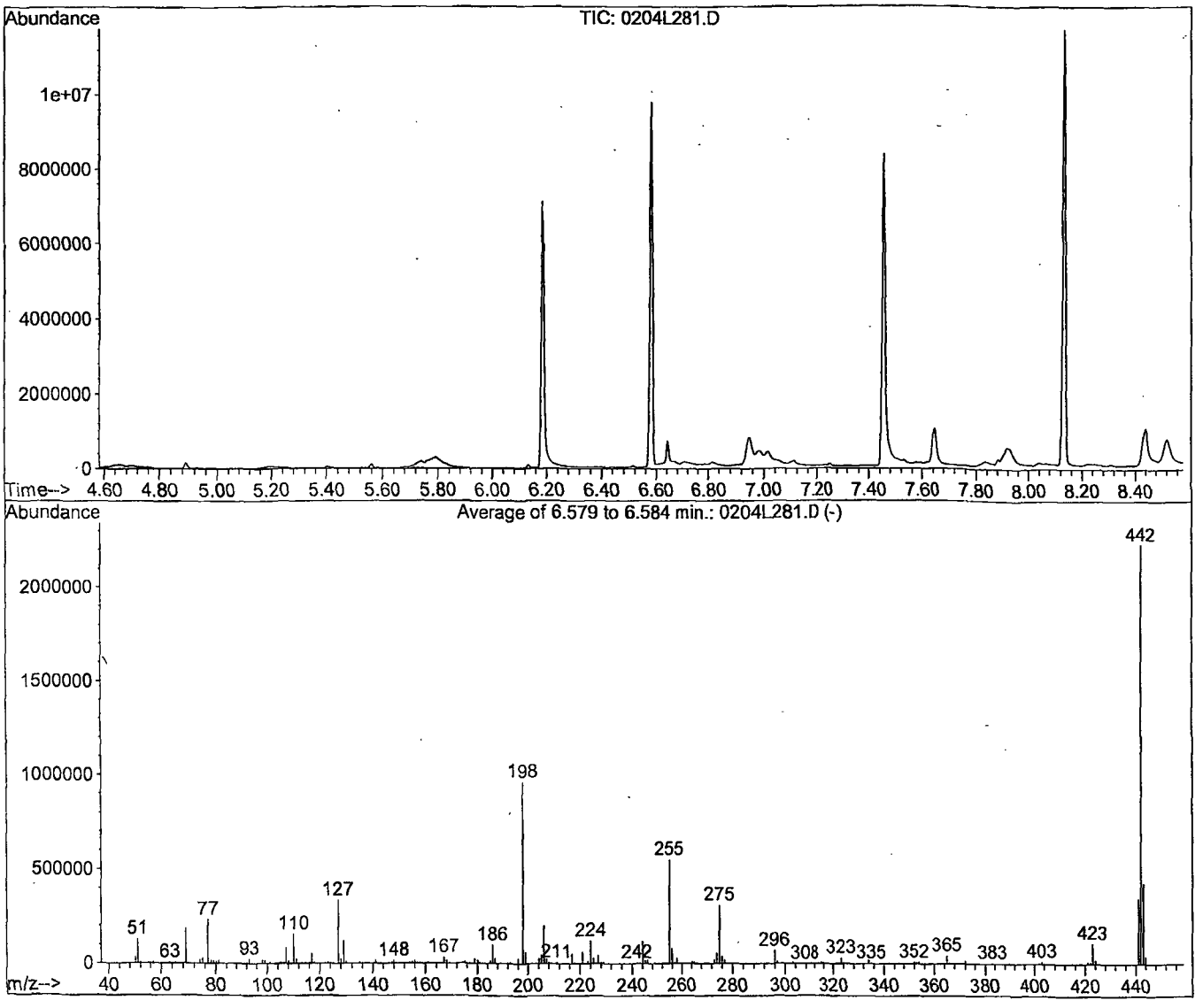
Breakdown **1.09**

DFTPP

Data File : M:\LINUS\DATA\L200204\0204L281.D
Acq On : 16 Mar 20 14:15
Sample : SV TUNE 10/01/19
Misc :

Vial: 81
Operator: MA
Inst : Linus
Multiplr: 1.00

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270



AutoFind: Scans 1604, 1605, 1606; Background Corrected with Scan 1593

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	13.5	130048	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.6	1046	PASS
127	198	10	80	34.8	335279	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	962880	PASS
199	198	5	9	6.4	62003	PASS
275	198	10	60	32.2	309739	PASS
365	198	1	100	4.6	44496	PASS
441	442	0.01	24	15.6	348501	PASS
442	198	50	500	231.7	2230955	PASS
443	442	15	24	19.1	426411	PASS

Data File Name:	**0204L281.D**
Data File Path:	**M:\LINUS\DATA\L200204**
Operator:	**MA**
Date Acquired:	**16 Mar 2020 14:15**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/01/19**
Vial Number:	**81**
Instrument Name:	**Linus**

#	Name	Ret Time	Target Response
1)	DDT	8.16	86686800
2)	DDD	7.88	1461450
3)	DDE	7.62	0

Breakdown **1.66**

Name of Final Standard: SIM Curve
Prep Date: 02/03/20
Exp Date: 08/10/20
Prep'd By (Initials): MA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
1.0 ug/mL SIM	APPL	1.0 ug/mL SIM	1.0 ug/mL	02/03/20	08/10/20	10 uL	100uL	MC 59130 90uL	0.1 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	10/28/19	10/28/20	2 uL	"	"	2.5ug/mL
1.0 ug/mL SIM	APPL	1.0 ug/mL SIM	1.0 ug/mL	02/03/20	08/10/20	20 uL	100uL	MC 59130 80uL	0.2 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	10/28/19	10/28/20	2 uL	"	"	2.5ug/mL
5.0 ug/mL SIM	APPL	5.0 ug/mL SIM	5.0 ug/mL	02/03/20	08/10/20	10 uL	100uL	MC 59130 90uL	0.5 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	10/28/19	10/28/20	2 uL	"	"	2.5ug/mL
5.0 ug/mL SIM	APPL	5.0 ug/mL SIM	5.0 ug/mL	02/03/20	08/10/20	20 uL	100uL	MC 59130 80 uL	1.0 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	10/28/19	10/28/20	2 uL	"	"	2.5ug/mL
SIM STOCK	APPL	PAH SIM STOCK	200 ug/mL	08/10/19	08/10/20	5 uL	200uL	MC 59130 190 uL	5.0 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	12/17/19	12/17/20	5 uL	"	"	2.5ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	10/28/19	10/28/20	4 uL	"	"	2.5ug/mL
SIM STOCK	APPL	PAH SIM STOCK	200 ug/mL	08/10/19	08/10/20	5 uL	100 uL	MC 59130 80 uL	10 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	12/17/19	12/17/20	5 uL	"	"	5 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	10/28/19	10/28/20	2 uL	"	"	2.5ug/mL
SIM STOCK	APPL	PAH SIM STOCK	200	08/10/19	08/10/20	25 uL	100uL	MC 59130 50 uL	50 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	12/17/19	12/17/20	25 uL	"	"	25 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	10/28/19	10/28/20	2 uL	"	"	2.5ug/mL
SIM STOCK	APPL	PAH SIM STOCK	200 ug/mL	08/10/19	08/10/20	50 uL	100uL	na	100 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	12/17/19	12/17/20	50 uL	"	"	50 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	10/28/19	10/28/20	2 uL	"	"	2.5ug/mL

Name of Final Standard: 8270 PAH SIM Second Source
Prep Date: 02/03/20
Exp Date: 10/28/20
Prep'd By (Initials): MA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
PAH SIM SS Stock	Phenova	AL0-130490	200 ug/mL	CL13117-40623. Open	12/31/22	5 uL	200uL	MC 59130 195uL	5 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	10/28/19	10/28/20	4 uL	"	"	2.5ug/mL

Name of Final Standard	**PAH SIM Stock (Ampule)**
Prep Date	**08/10/19**
Exp Date	**08/10/20**

Prep'd By (I **MA**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contlaner Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(rang e)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Custom PAH SIM Mix	Phenova	ALO-130490	200 ug/mL	**CL13121-41102**	**08/10/20**	1000 uL	1mL	**NA**	200ug/mL

Name of Final Standard	**SIM Surrogate**	**Prep'd By (Initials)**	**MA**
Prep Date	**12/17/19**		
Exp Date	**12/17/20**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Sim Surrogate Deuterated	Restek	33913	2000 ug/mL	**A0149554-41363,41364, 41365,41366**	**04/30/25**	2500 uL	50 mL	**Acetone #0231086**	100 ug/mL

Name of Final Standard	**8270 SIM PAH Internal Standard**
Prep Date	**10/28/19**
Exp Date	**10/28/20**

Prep'd By (Initials) **MA**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
SV Internal Standard	Restek	31206	2000 ug/mL	**A0151843-49414**	**07/35/25**	625uL	10mL	**MC 59130**	125 ug/mL

Name of Final Standard	SIM Spike
Prep Date	12/19/19
Exp Date	11/31/20

Prep'd By (Initials) GA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Custom PAH Sim Mix	Phenova	AL0-130490	200 ug/mL	CL13121- 41222 41223 41256 41257 41258 41259	11/13/20 12/31/22	5 mL	25 mL	Acetone 0231086	40 ug/mL

_LIQ003

Organic Extraction Worksheet

Method	Continuous Liquid/Liquid SVOC 3520C	Extraction Set	200312A	Extraction Method	LIQ003	Units	mL

Spiked ID 1	8270T Spike 1-29-20 1-29-21		Surrogate ID 1	8270 Surrogate 11-19-19 11-19-20	
Spiked ID 2	Sim Spike 12-19-19 11-13-20		Surrogate ID 2	SIM Surrogate 12-17-19 12-17-20	
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	03/12/20 15:00	
Spiked ID 8			Ext. End Time:	03/13/20 9:00	
			GC Requires Extract By:		

pH1	2	03/12/20 13:05	Water Bath Temp 1 °C	77/76.9 E-WB6 °
pH2	2	03/12/20 14:15	Water Bath Temp 2 °C	
pH3	14	03/13/20 12:05	Water Bath Temp 3 °C	

Spiked By: DL **Date** 03/12/20 **Witnessed By:** CFM **Date** 03/12/20

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	200312A Blk				1,0.050	1,2	800	1	2/1	03/12/20 12:55	
						equip	E-HP51 E-WB6				
2	200312A LCS-1		1	1	1	1	800	1	2/1	03/12/20 12:55	
						equip	E-HP50 E-WB6				
3	200312A LCS-2		0.125	2	0.050	2	800	1	2/1	03/12/20 12:55	
						equip	E-HP49 E-WB6				
4	BA08341 MS-1	BA08341W36	1	1	1	1	800	1	2/1	03/12/20 14:08	91638
						equip	E-HP26 E-WB6				
5	BA08341 MSD-1	BA08341W42	1	1	1	1	800	1	2/1	03/12/20 14:08	91638
						equip	E-HP27 E-WB6				
6	BA08341 MS-2	BA08341W47	0.125	2	0.050	2	800	1	2/1	03/12/20 14:08	91638
						equip	E-HP28 E-WB6				
7	BA08341 MSD-2	BA08341W39	0.125	2	0.050	2	800	1	2/1	03/12/20 14:08	91638
						equip	E-HP29 E-WB6				
8	BA08341	BA08341W41			1,0.05	1,2	800	1	2/1	03/12/20 14:08	91638
						equip	E-HP25 E-WB6				
9	BA08370	BA08370W21			1,0.050	1,2	800	1	2/1	03/12/20 12:55	91653
						equip	E-HP48 E-WB6				
10	BA08371	BA08371W14			1,0.050	1,2	800	1	2/1	03/12/20 12:55	91653
						equip	E-HP47 E-WB6				

Solvent and Lot#	
PH Strips	HC998032
Dichloromethane (DCM)	59239
1+1 H2SO4	2-26-20
10N NaOH	3-2-20
Filter Paper	400171
Na2SO4	2019020631

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	MA
Date	3/16/20
Time	2:00 pm
Refrigerator	GC-C

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL
Concentration	ERR

Modified	03/16/20 2:45:49 PM

Reviewed By: KY **Date** 03/16/20

Injection Log

Directory: M:\LINUS\DATA\L200204\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
2	0204L002.D	1	SV Tune 10/01/19		4 Feb 20 9:32
3	0204L003.D	1	0.1 SIM 02/03/20		4 Feb 20 9:48
4	0204L004.D	1	0.2 SIM 02/03/20		4 Feb 20 10:09
5	0204L005.D	1	0.5 SIM 02/03/20		4 Feb 20 10:31
6	0204L006.D	1	1 SIM 02/03/20		4 Feb 20 10:53
7	0204L007.D	1	5 SIM 02/03/20		4 Feb 20 11:15
8	0204L008.D	1	10 SIM 02/03/20		4 Feb 20 11:37
9	0204L009.D	1	50 SIM 02/03/20		4 Feb 20 11:59
10	0204L010.D	1	100 SIM 02/03/20		4 Feb 20 12:21
11	0204L011.D	1	SS SIM 02/03/20		4 Feb 20 13:21
81	0204L281.D	1	SV TUNE 10/01/19		16 Mar 20 14:15
82	0204L282.D	1	5 SIM 02/03/20 (1)		16 Mar 20 14:34
83	0204L283.D	1.25	200312A BLK 1/800		16 Mar 20 15:24
84	0204L284.D	1.25	200312A LCS-2 1/800		16 Mar 20 15:46
85	0204L285.D	1.25	BA08341W47 MS-2 1/800		16 Mar 20 16:08
86	0204L286.D	1.25	BA08341W39 MSD-2 1/800		16 Mar 20 16:30
87	0204L287.D	1.25	BA08341W41 1/800		16 Mar 20 16:52
8	0204L308.D	1	5 SIM 02/03/20 (2)		17 Mar 20 00:33

ORGANICS
Calibration Data

2MEE
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/22/20
Matrix: Instrument: Yoda
Initials:

		Compound	1	2	3	4	5	6	7	8			Avg	%RSD	Type	r^2	Q	MRF
			0122Y003.D	0122Y004.D	0122Y005.D	0122Y006.D	0122Y007.D	0122Y008.D	0122Y009.D	0122Y010.D								
1	I	1,4-dichlorobenzene-D4(IS)																
2	TM	2-(2-Methoxyethoxy)ethanol	0.1821	0.2585	0.2387	0.2203	0.2137	0.2203	0.2856	0.2603			0.23	14	TM			
3	I	Napthalene-D8(IS)																
4	I	Acenaphthene-D10(IS)																
5	I	Phenanthrene-D10(IS)																
6	I	Chrysene-D12(IS)																
7	I	Perylene-D12(IS)																
8																		
9																		
10																		
11																		
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35																		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y003.D Vial: 3
Acq On : 22 Jan 20 15:46 Operator: MA,SS
Sample : 50ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.15	152	171017	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.56	136	665562	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.59	164	409494	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.31	188	788135	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.39	240	679346	40.00000	ppb	0.00
7) Perylene-D12(IS)	15.12	264	699262	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.33	45	38926	38.75395	ppb	99

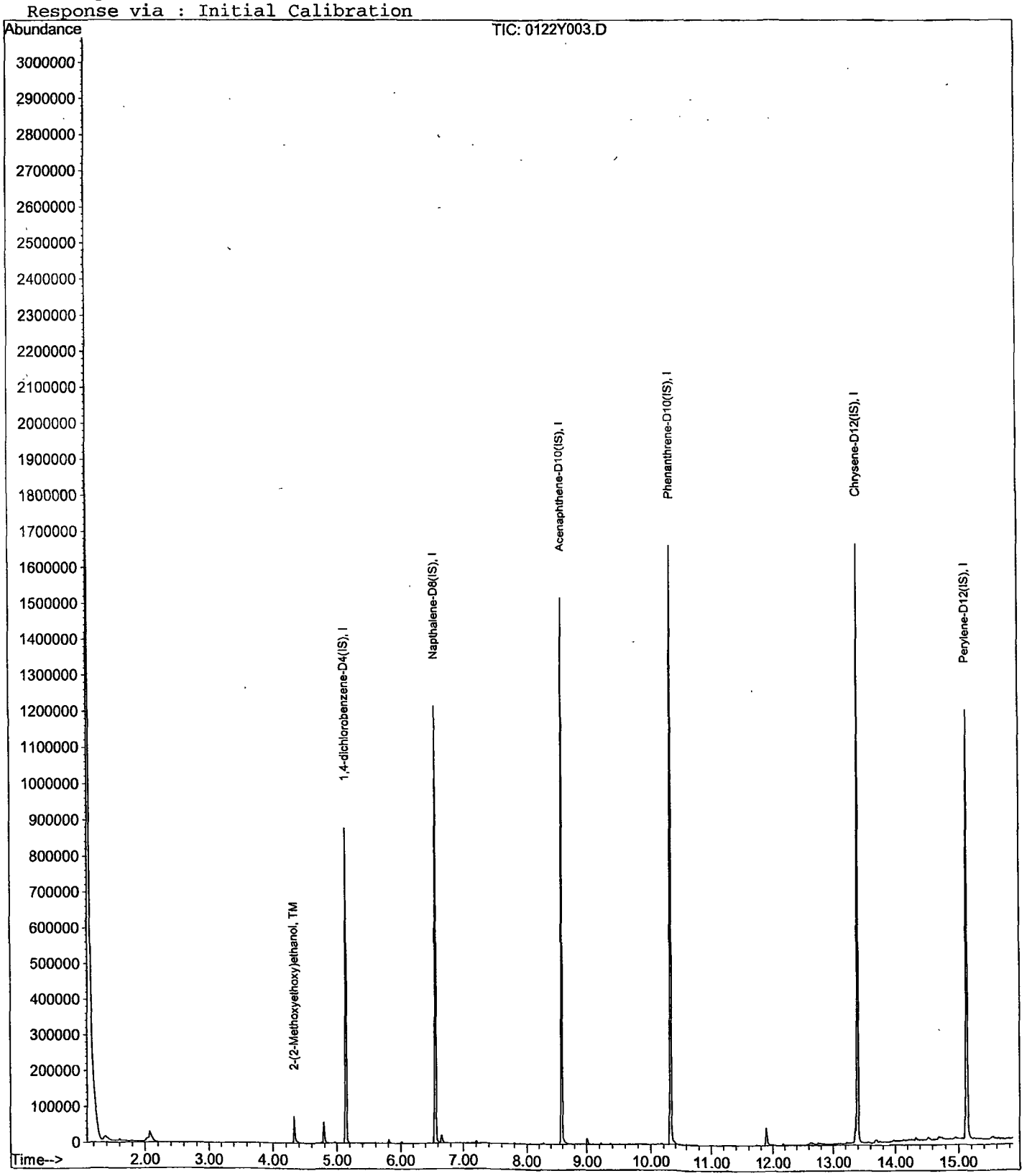
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y003.D Vial: 3
Acq On : 22 Jan 20 15:46 Operator: MA,SS
Sample : 50ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y004.D Vial: 4
Acq On : 22 Jan 20 16:10 Operator: MA,SS
Sample : 100ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.15	152	158778	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.57	136	642353	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.58	164	393654	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.31	188	759584	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.39	240	664524	40.00000	ppb	0.00
7) Perylene-D12(IS)	15.12	264	676233	40.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.32	45	102613	110.03417	ppb	98

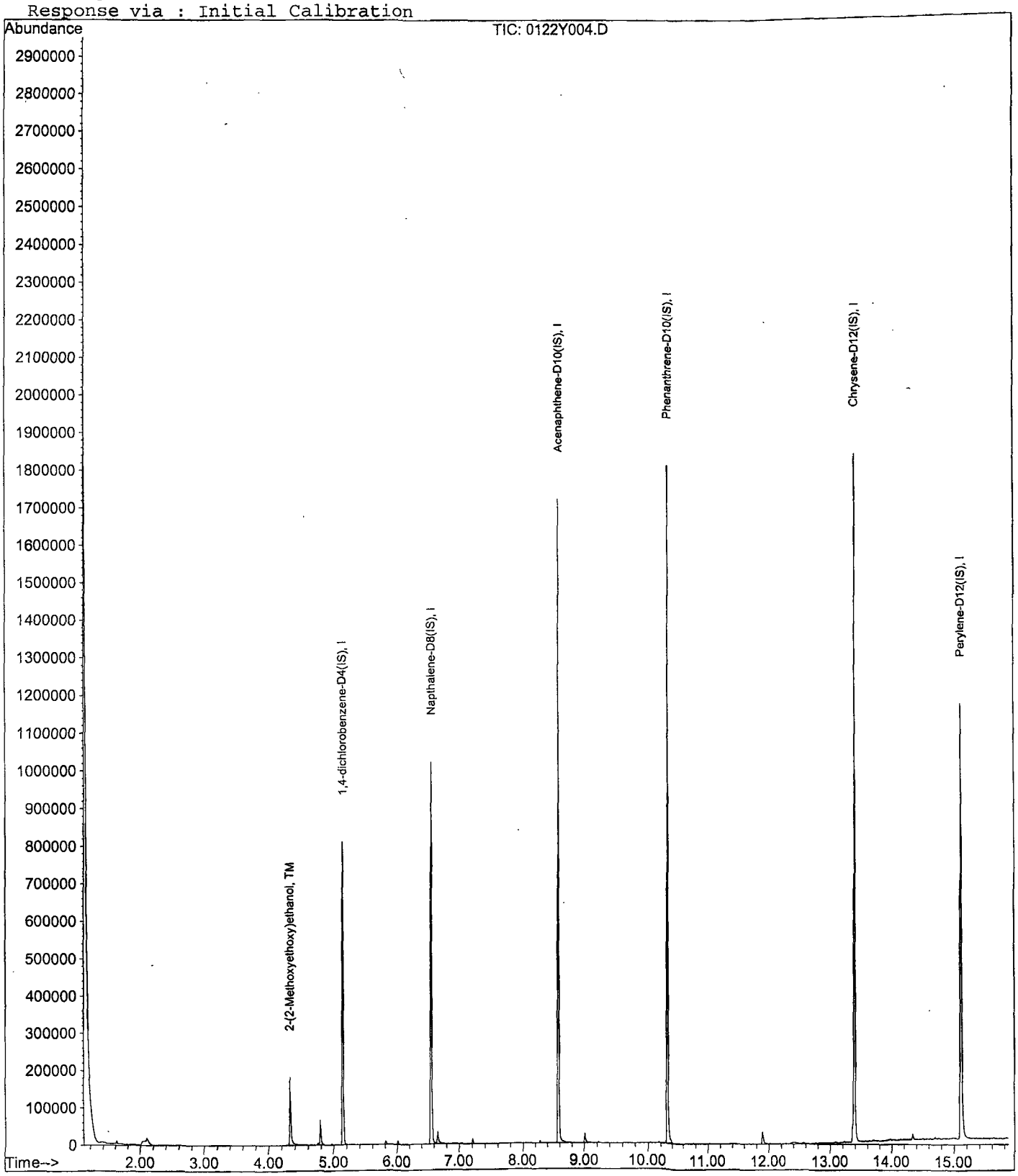
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y004.D Vial: 4
Acq On : 22 Jan 20 16:10 Operator: MA,SS
Sample : 100ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y005.D Vial: 5
Acq On : 22 Jan 20 16:33 Operator: MA,SS
Sample : 200ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.15	152	155385	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.57	136	636024	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.58	164	388934	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.31	188	754620	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.39	240	621602	40.00000	ppb	0.00
7) Perylene-D12(IS)	15.12	264	626915	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.33	45	185455	203.20994	ppb	100

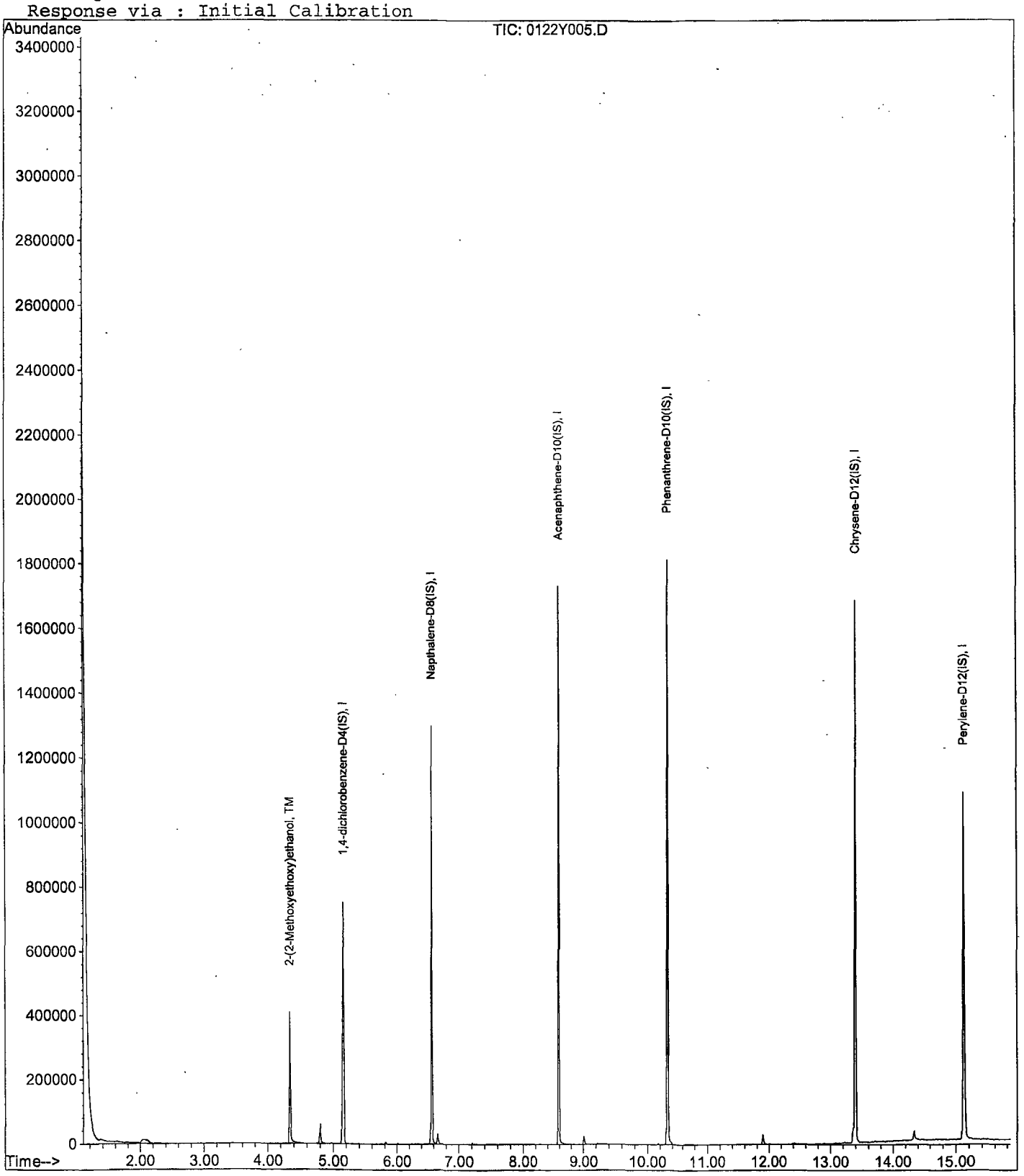
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y005.D Vial: 5
Acq On : 22 Jan 20 16:33 Operator: MA,SS
Sample : 200ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y006.D Vial: 6
Acq On : 22 Jan 20 16:57 Operator: MA,SS
Sample : 400ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.15	152	156027	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.57	136	648446	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.58	164	399790	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.31	188	767514	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.39	240	672840	40.00000	ppb	0.00
7) Perylene-D12(IS)	15.12	264	695421	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.34	45	343734	375.09237	ppb	98

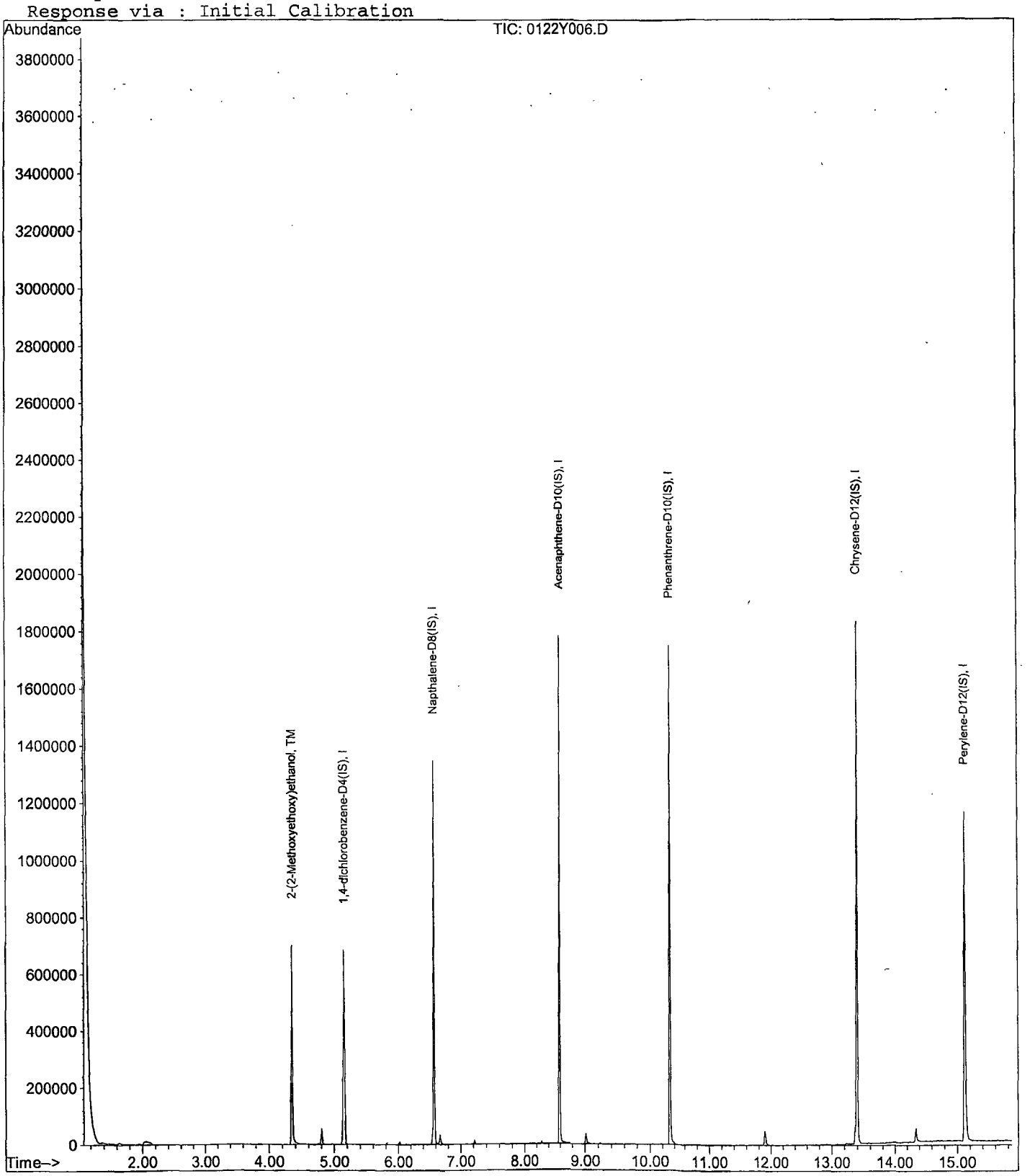
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y006.D Vial: 6
Acq On : 22 Jan 20 16:57 Operator: MA,SS
Sample : 400ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y007.D Vial: 7
Acq On : 22 Jan 20 17:21 Operator: MA,SS
Sample : 500ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.15	152	160036	40.00000 ppb	0.00
3) Napthalene-D8(IS)	6.57	136	657892	40.00000 ppb	0.00
4) Acenaphthene-D10(IS)	8.59	164	410790	40.00000 ppb	0.00
5) Phenanthrene-D10(IS)	10.31	188	788159	40.00000 ppb	0.00
6) Chrysene-D12(IS)	13.39	240	699023	40.00000 ppb	0.00
7) Perylene-D12(IS)	15.12	264	751183	40.00000 ppb	0.00

System Monitoring Compounds

Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.34	45	427461	454.77262 ppb	100

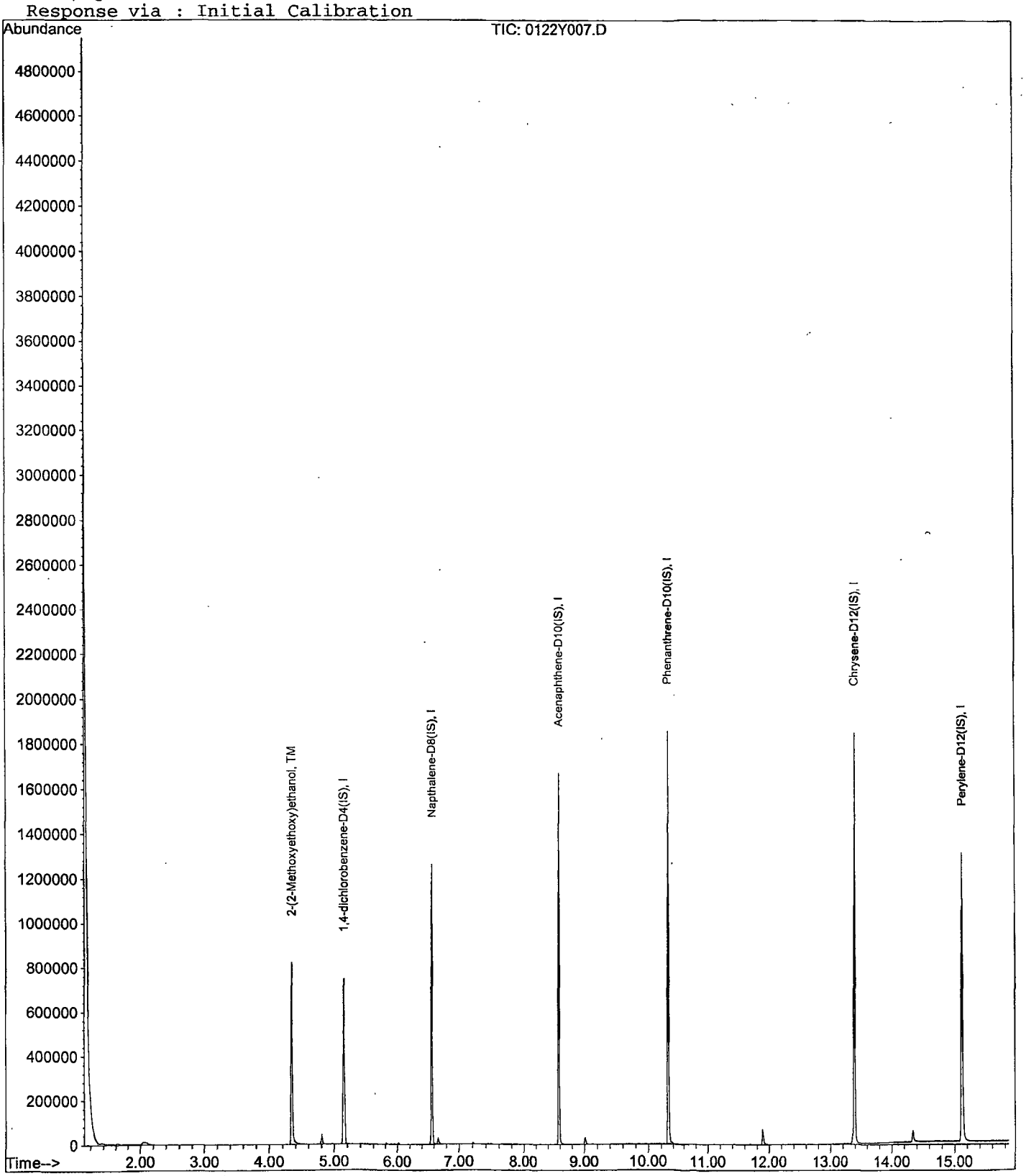
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y007.D Vial: 7
Acq On : 22 Jan 20 17:21 Operator: MA,SS
Sample : 500ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y008.D Vial: 8
Acq On : 22 Jan 20 17:45 Operator: MA,SS
Sample : 600ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.15	152	156507	40.00000 ppb	0.00
3) Napthalene-D8(IS)	6.57	136	664381	40.00000 ppb	0.00
4) Acenaphthene-D10(IS)	8.59	164	408801	40.00000 ppb	0.00
5) Phenanthrene-D10(IS)	10.31	188	788845	40.00000 ppb	0.00
6) Chrysene-D12(IS)	13.39	240	676569	40.00000 ppb	0.00
7) Perylene-D12(IS)	15.12	264	692003	40.00000 ppb	0.00

System Monitoring Compounds

Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.35	45	517114	562.55893 ppb	99

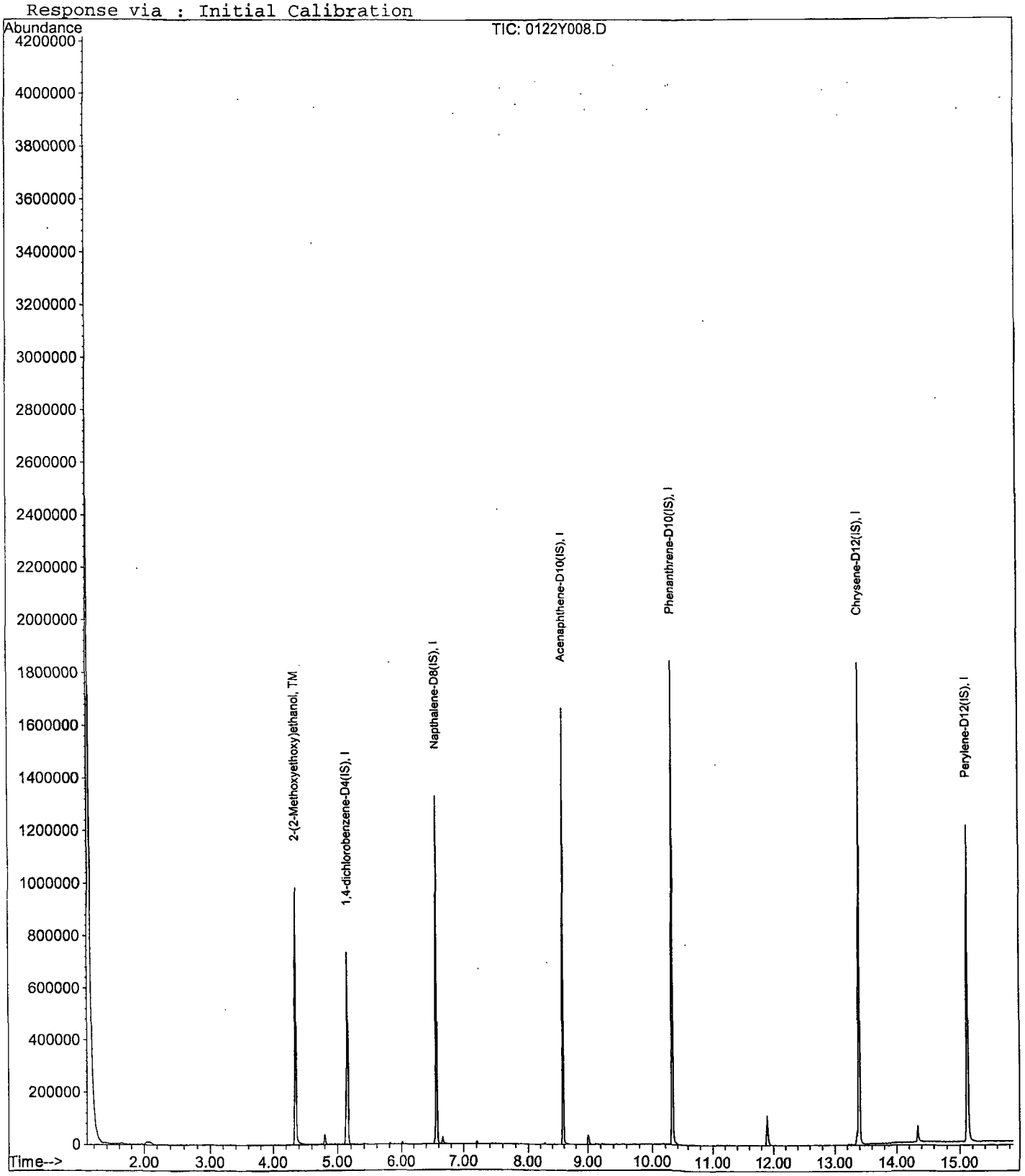
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y008.D Vial: 8
Acq On : 22 Jan 20 17:45 Operator: MA,SS
Sample : 600ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y009.D Vial: 9
Acq On : 22 Jan 20 18:08 Operator: MA,SS
Sample : 800ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.15	152	125205	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.57	136	550099	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.58	164	372511	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.31	188	750924	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.39	240	643830	40.00000	ppb	0.00
7) Perylene-D12(IS)	15.12	264	637032	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.36	45	715213	972.58871	ppb	98

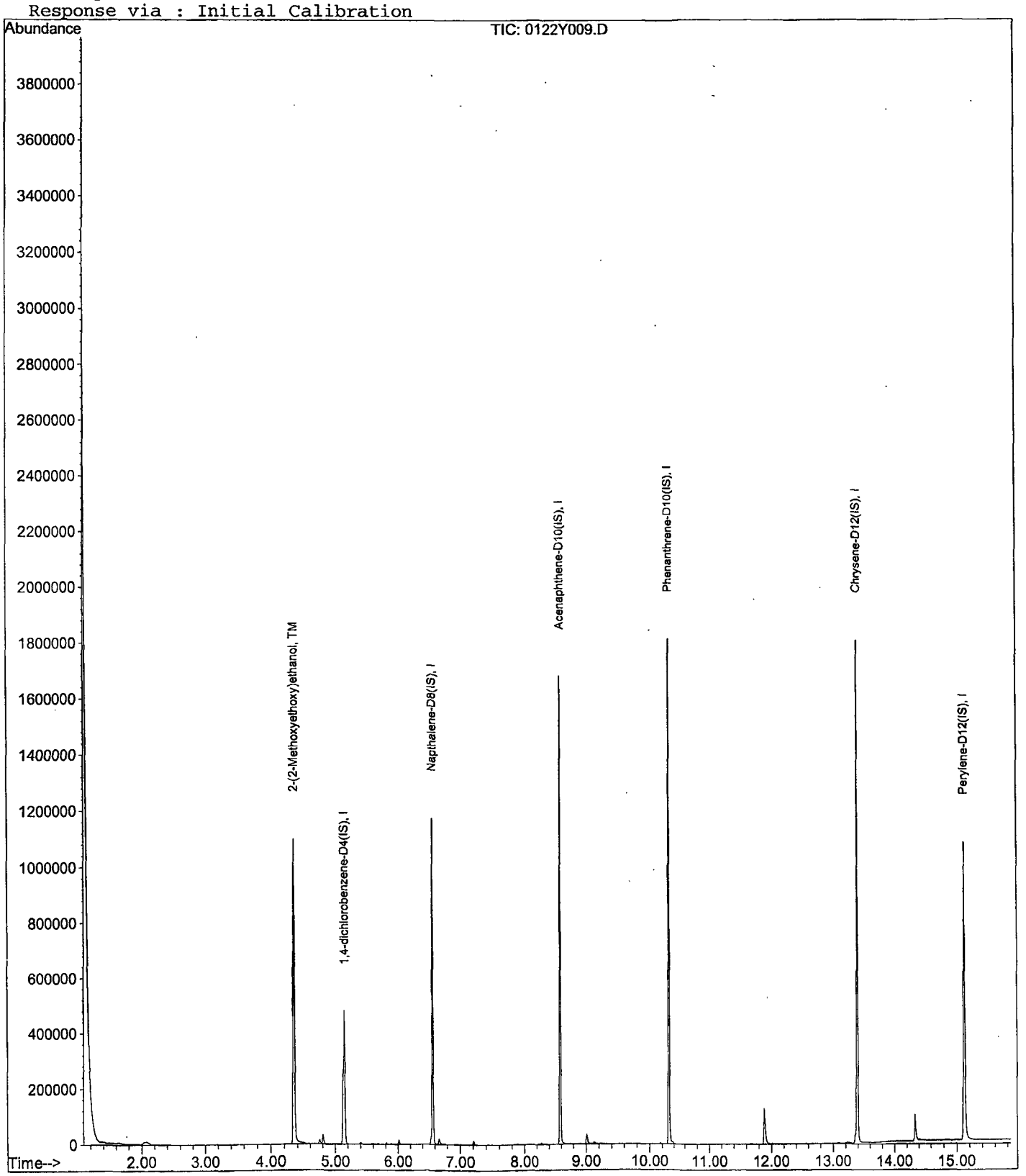
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y009.D Vial: 9
Acq On : 22 Jan 20 18:08 Operator: MA,SS
Sample : 800ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y010.D Vial: 10
Acq On : 22 Jan 20 18:32 Operator: MA,SS
Sample : 1000ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.15	152	145736	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.57	136	643934	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.58	164	429609	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.31	188	848518	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.39	240	708250	40.00000	ppb	0.00
7) Perylene-D12(IS)	15.12	264	727830	40.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.36	45	948330	1107.91933	ppb	99

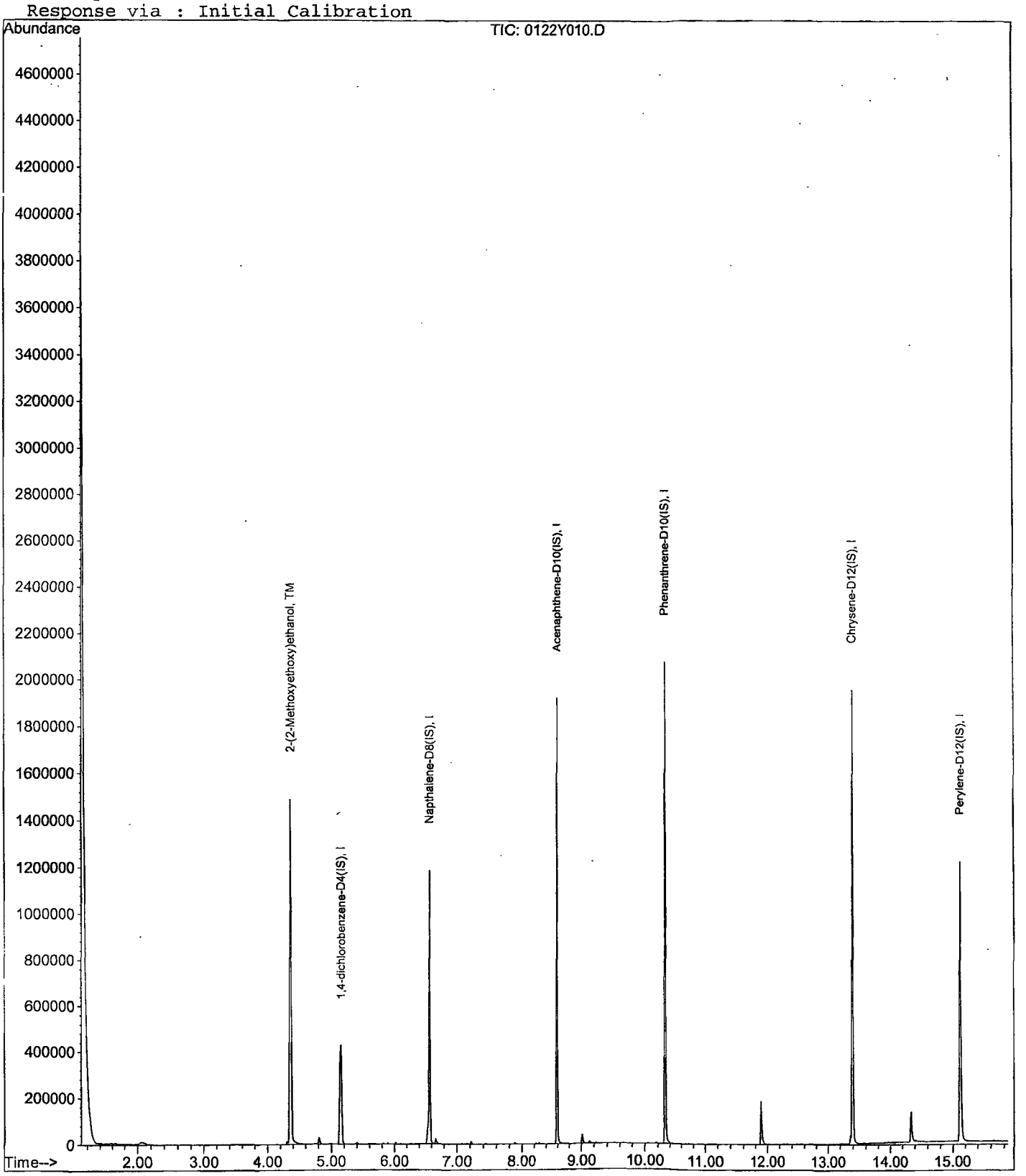
(#) = qualifier out of range (m) = manual integration
0122Y010.D YMEE0122.M Thu Jan 23 10:04:02 2020

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y010.D Vial: 10
Acq On : 22 Jan 20 18:32 Operator: MA,SS
Sample : 1000ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration



2MEE
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:
SDG No:
Date Analyzed: 01/22/20
Instrument: *Yoda*
Initial Cal. Date: 01/22/20
Data File: 0122Y011.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TM	2-(2-Methoxyethoxy)ethanol	0.2349	0.2425	3.2	TM	
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
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31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			3.2		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y011.D Vial: 11
Acq On : 22 Jan 20 18:55 Operator: MA,SS
Sample : SS MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 9:55 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 09:54:44 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.15	152	173956	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.57	136	686273	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.59	164	422630	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.31	188	806716	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.39	240	723146	40.00000	ppb	0.00
7) Perylene-D12(IS)	0.00	264	0	0.00000	ppb	-14.73
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.33	45	527290	516.09021	ppb	93

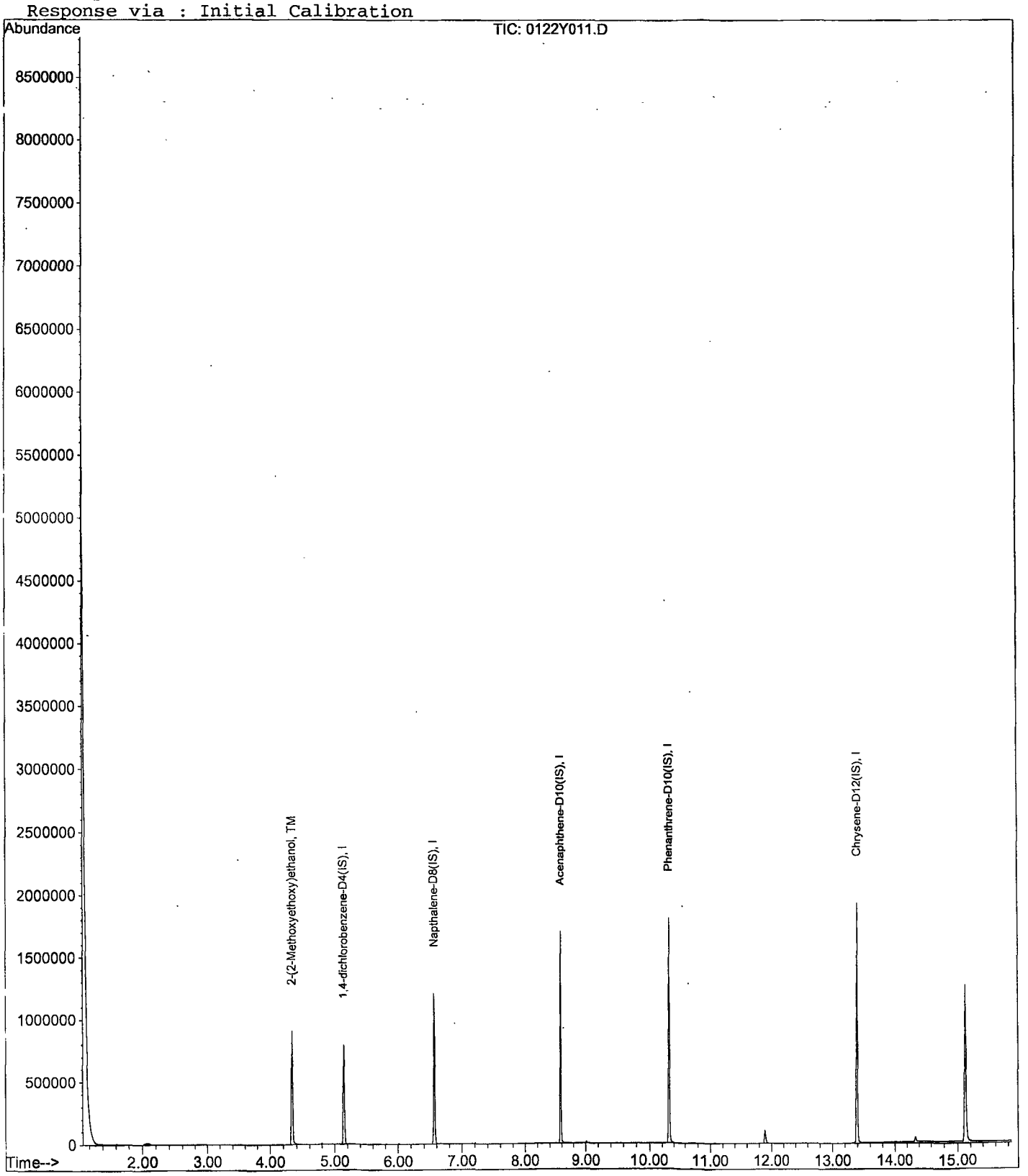
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y011.D Vial: 11
Acq On : 22 Jan 20 18:55 Operator: MA,SS
Sample : SS MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 9:55 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 09:54:44 2020
Response via : Initial Calibration



2MEE
EPA 8270

Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 03/16/20
Instrument: Yoda
Initial Cal. Date: 01/22/20
Data File: 0122Y076.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	2-(2-Methoxyethoxy)ethanol	0.2349	0.2429	3.4	TM	
3	I	Napthalene-D8(IS)	ISTD			I	
4	I	Acenaphthene-D10(IS)	ISTD			I	
5	I	Phenanthrene-D10(IS)	ISTD			I	
6	I	Chrysene-D12(IS)	ISTD			I	
7	I	Perylene-D12(IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
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31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			3.4		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y076.D Vial: 76
Acq On : 16 Mar 20 9:14 Operator: MA,SS
Sample : 500ug/ml MEE 01/29/20 (1) Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 16 10:12 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Mar 11 17:34:56 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.11	152	152753	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.53	136	683508	40.00000	ppb	-0.04
4) Acenaphthene-D10(IS)	8.55	164	448088	40.00000	ppb	-0.04
5) Phenanthrene-D10(IS)	10.27	188	868681	40.00000	ppb	-0.04
6) Chrysene-D12(IS)	13.36	240	766090	40.00000	ppb	-0.04
7) Perylene-D12(IS)	15.07	264	770281	40.00000	ppb	-0.05
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.31	45	463779	516.93606	ppb	99

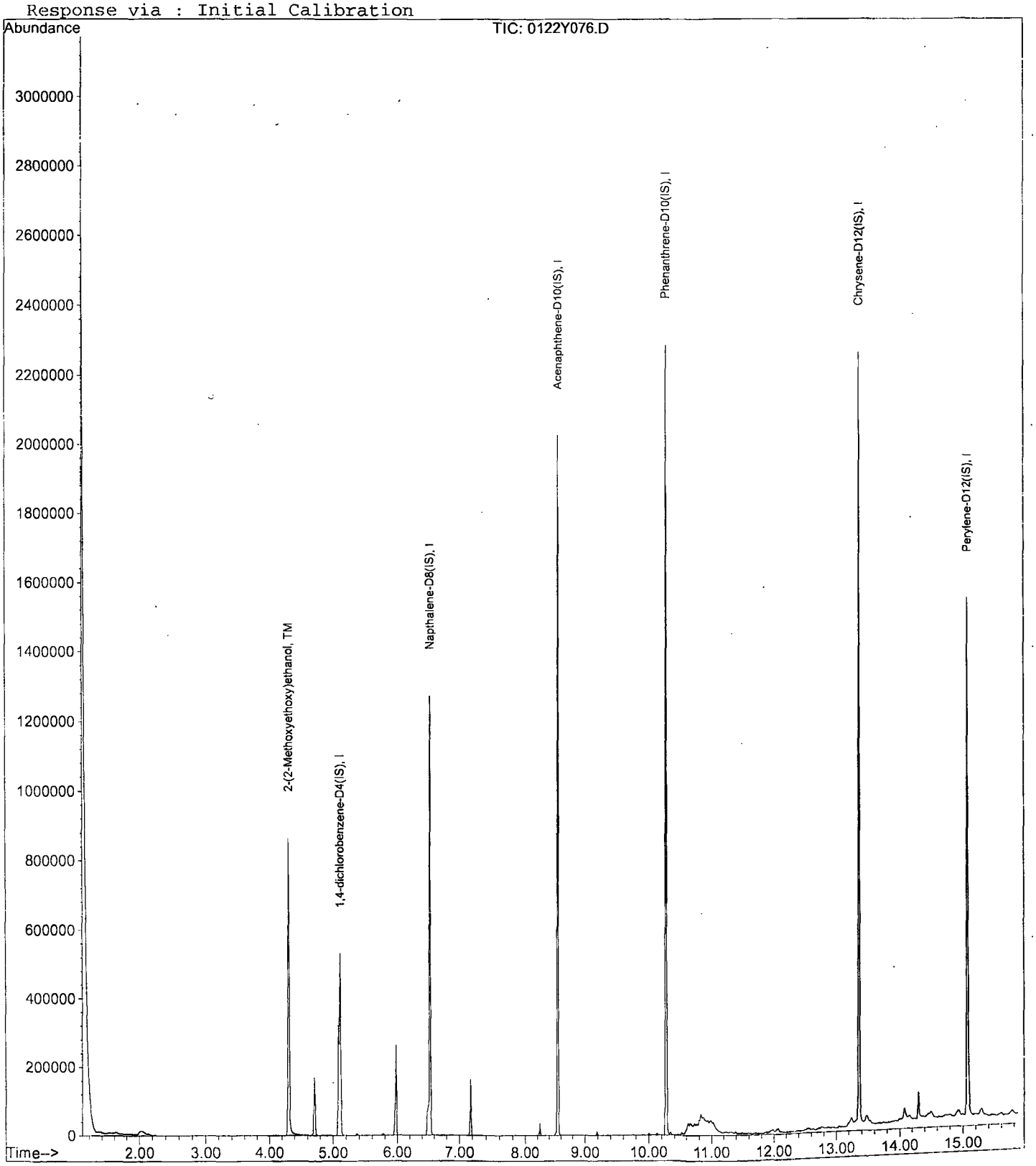
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y076.D Vial: 76
Acq On : 16 Mar 20 9:14 Operator: MA,SS
Sample : 500ug/ml MEE 01/29/20 (1) Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 16 10:12 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Mar 11 17:34:56 2020
Response via : Initial Calibration



2MEE
EPA 8270

Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 03/16/20
Instrument: Yoda
Initial Cal. Date: 01/22/20
Data File: 0122Y086.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	2-(2-Methoxyethoxy)ethanol	0.2349	0.2543	8.3	TM	
3	I	Napthalene-D8(IS)	ISTD			I	
4	I	Acenaphthene-D10(IS)	ISTD			I	
5	I	Phenanthrene-D10(IS)	ISTD			I	
6	I	Chrysene-D12(IS)	ISTD			I	
7	I	Perylene-D12(IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
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30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			8.3		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y086.D Vial: 86
Acq On : 16 Mar 20 13:17 Operator: MA,SS
Sample : 500ug/ml MEE 01/29/20 (1) Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 16 14:24 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Mar 16 14:24:46 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.12	152	136792	40.00000 ppb	0.00
3) Napthalene-D8(IS)	6.53	136	624287	40.00000 ppb	-0.04
4) Acenaphthene-D10(IS)	8.55	164	406906	40.00000 ppb	-0.04
5) Phenanthrene-D10(IS)	10.27	188	792921	40.00000 ppb	-0.04
6) Chrysene-D12(IS)	13.35	240	697448	40.00000 ppb	-0.04
7) Perylene-D12(IS)	15.07	264	673640	40.00000 ppb	-0.05
System Monitoring Compounds					
Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.31	45	434896	541.30272 ppb	100

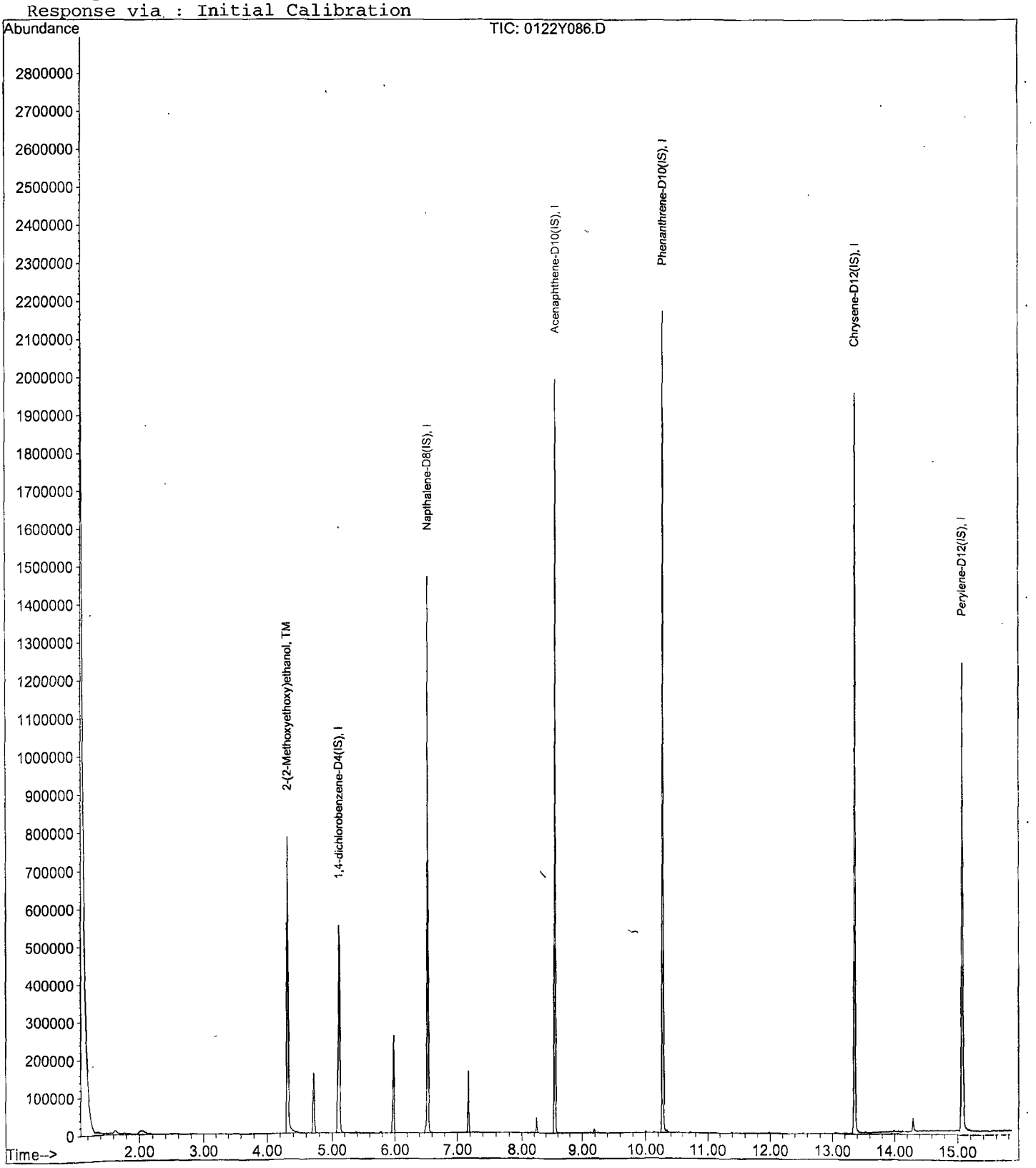
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y086.D Vial: 86
Acq On : 16 Mar 20 13:17 Operator: MA,SS
Sample : 500ug/ml MEE 01/29/20 (1) Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 16 14:24 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Mar 16 14:24:46 2020
Response via : Initial Calibration



ORGANICS
Raw Data

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y082.D Vial: 82
Acq On : 16 Mar 20 11:43 Operator: MA,SS
Sample : BA08341W35 2/500 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 16 12:58 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Mar 16 11:34:22 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.10	152	154586	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.53	136	686283	40.00000	ppb	-0.04
4) Acenaphthene-D10(IS)	8.55	164	432837	40.00000	ppb	-0.04
5) Phenanthrene-D10(IS)	10.27	188	818738	40.00000	ppb	-0.04
6) Chrysene-D12(IS)	13.35	240	676201	40.00000	ppb	-0.04
7) Perylene-D12(IS)	15.07	264	728151	40.00000	ppb	-0.05

System Monitoring Compounds

Target Compounds Qvalue

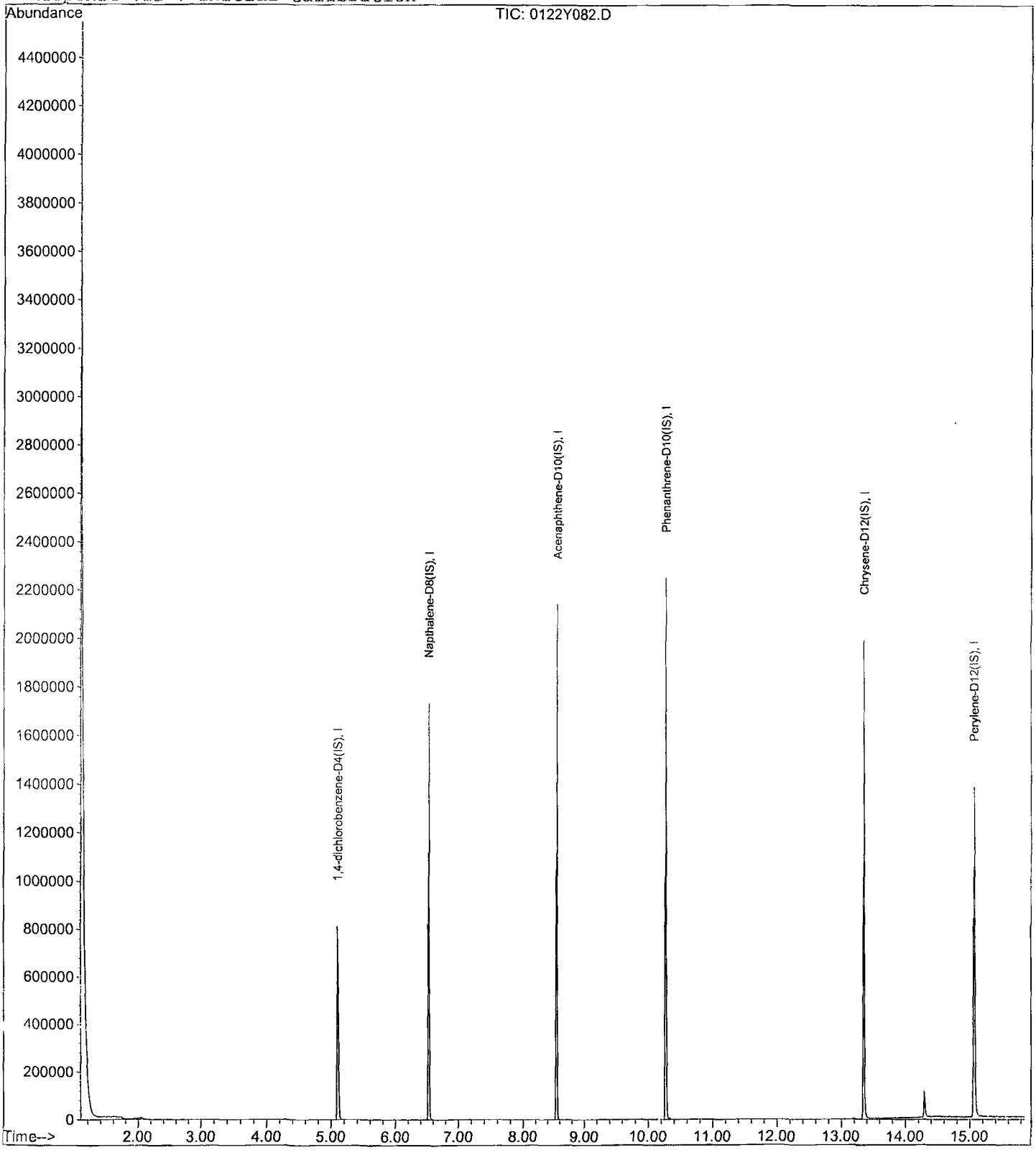
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y082.D Vial: 82
Acq On : 16 Mar 20 11:43 Operator: MA,SS
Sample : BA08341W35 2/500 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 16 12:58 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Mar 16 14:24:46 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y077.D Vial: 77
Acq On : 16 Mar 20 9:45 Operator: MA,SS
Sample : 200313A BLK 2/500 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 16 11:34 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Mar 11 17:34:56 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.10	152	172335	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.53	136	799714	40.00000	ppb	-0.04
4) Acenaphthene-D10(IS)	8.55	164	514030	40.00000	ppb	-0.04
5) Phenanthrene-D10(IS)	10.27	188	963906	40.00000	ppb	-0.04
6) Chrysene-D12(IS)	13.35	240	764874	40.00000	ppb	-0.04
7) Perylene-D12(IS)	15.07	264	761189	40.00000	ppb	-0.05

System Monitoring Compounds

Target Compounds Qvalue

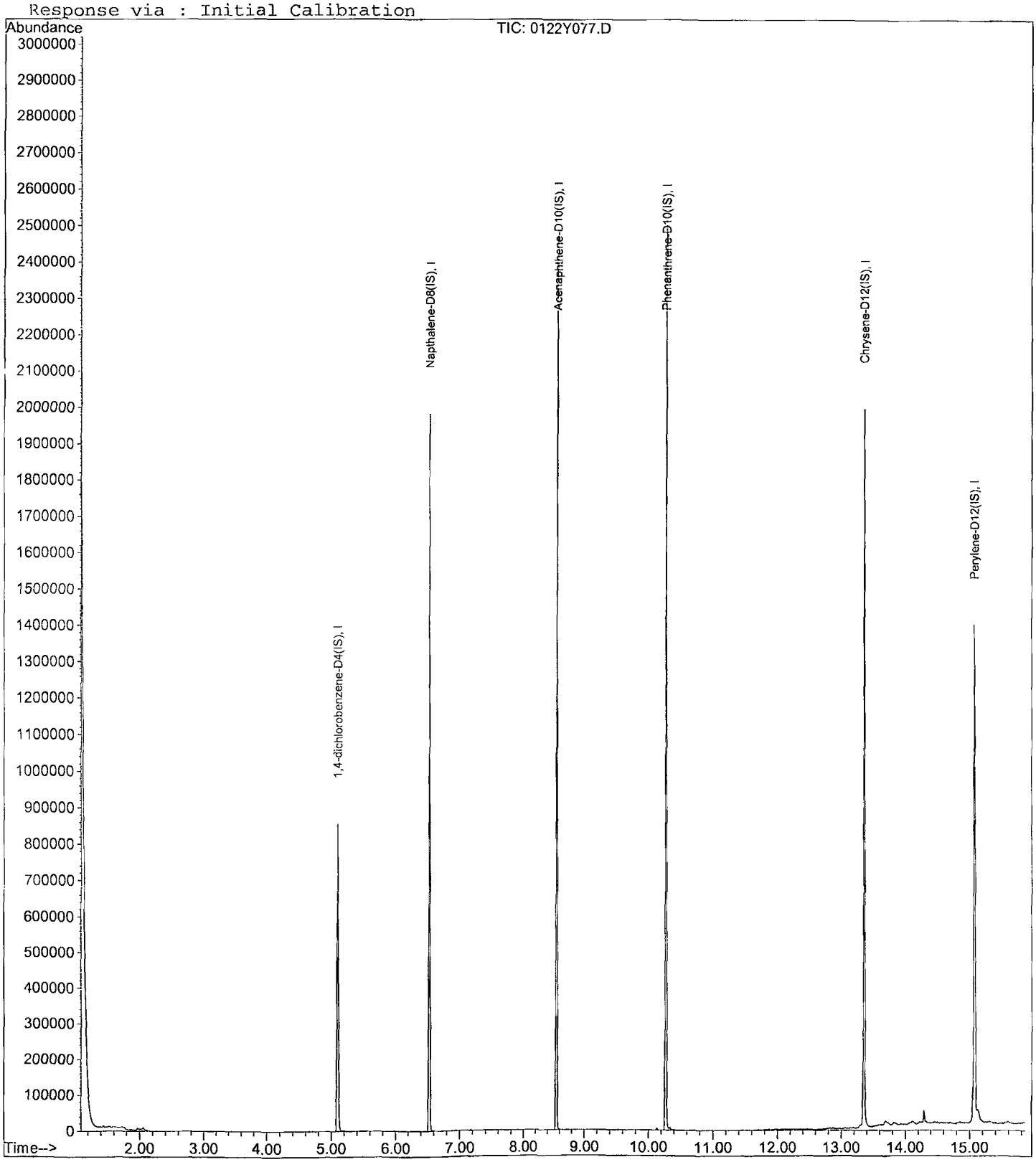
(#) = qualifier out of range (m) = manual integration
0122Y077.D YMEE0122.M Tue Mar 17 11:29:25 2020 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y077.D Vial: 77
Acq On : 16 Mar 20 9:45 Operator: MA,SS
Sample : 200313A BLK 2/500 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 16 11:34 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Mar 16 14:24:46 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y085.D Vial: 85
Acq On : 16 Mar 20 12:54 Operator: MA,SS
Sample : 200313A LCS-1 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Mar 16 14:03 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Mar 16 11:34:22 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.10	152	145789	40.00000	ppb	-0.01
3) Napthalene-D8(IS)	6.53	136	657193	40.00000	ppb	-0.04
4) Acenaphthene-D10(IS)	8.55	164	425934	40.00000	ppb	-0.04
5) Phenanthrene-D10(IS)	10.27	188	790405	40.00000	ppb	-0.04
6) Chrysene-D12(IS)	13.35	240	609320	40.00000	ppb	-0.04
7) Perylene-D12(IS)	15.07	264	294243	40.00000	ppb	-0.05

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.49	45	51887	60.59675	ppb	97

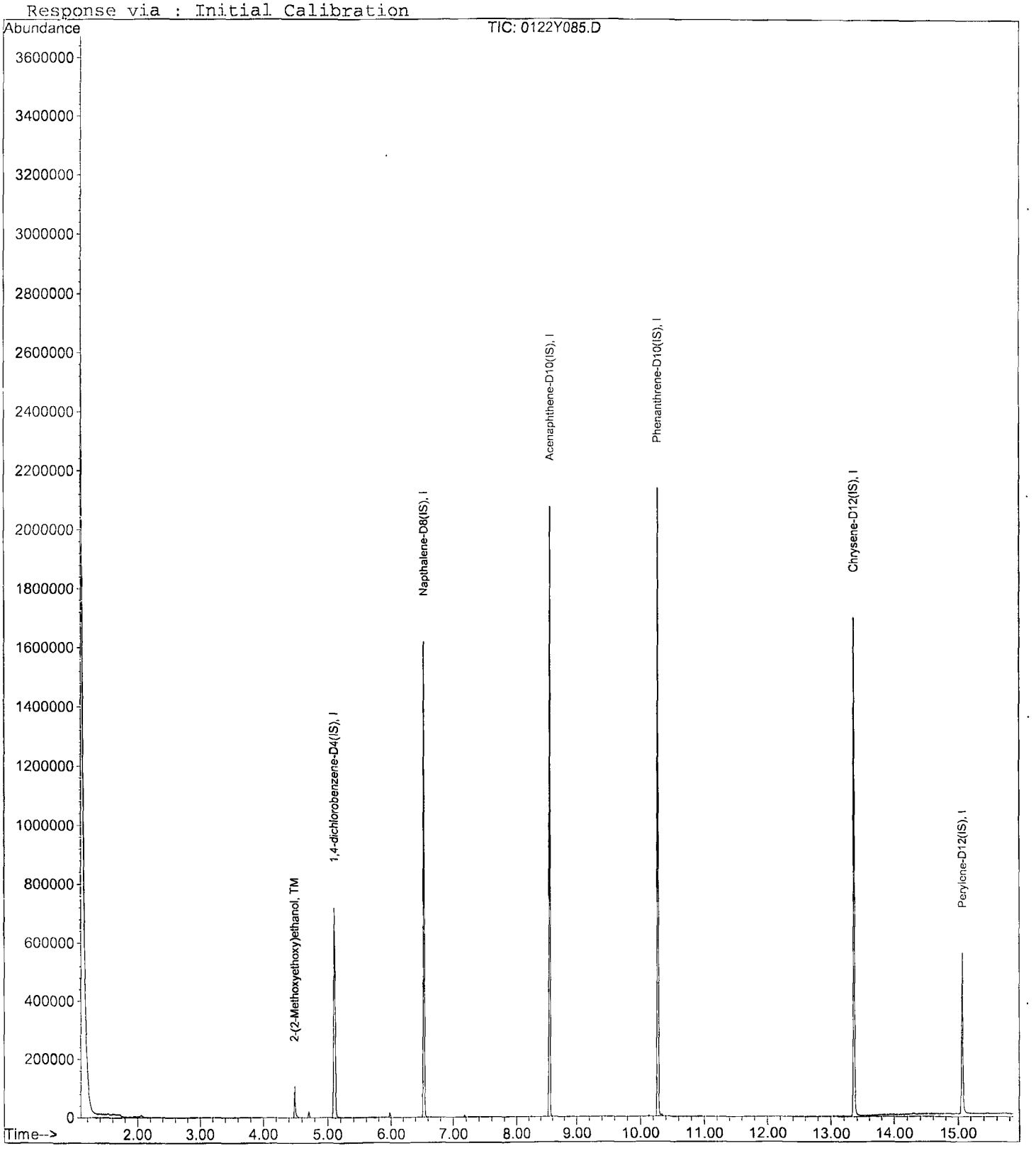
(#) = qualifier out of range (m) = manual integration
0122Y085.D YMEE0122.M Tue Mar 17 11:29:59 2020 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y085.D Vial: 85
Acq On : 16 Mar 20 12:54 Operator: MA,SS
Sample : 200313A LCS-1 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Mar 16 14:03 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Mar 16 14:24:46 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y079.D Vial: 79
Acq On : 16 Mar 20 10:32 Operator: MA,SS
Sample : 200313A LCSD-1 2/500 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 16 11:35 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Mar 16 11:34:22 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.11	152	169989	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.53	136	752820	40.00000	ppb	-0.04
4) Acenaphthene-D10(IS)	8.55	164	477944	40.00000	ppb	-0.04
5) Phenanthrene-D10(IS)	10.28	188	898307	40.00000	ppb	-0.04
6) Chrysene-D12(IS)	13.36	240	739003	40.00000	ppb	-0.04
7) Perylene-D12(IS)	15.07	264	567798	40.00000	ppb	-0.05
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.48	45	54368	54.45503	ppb	96

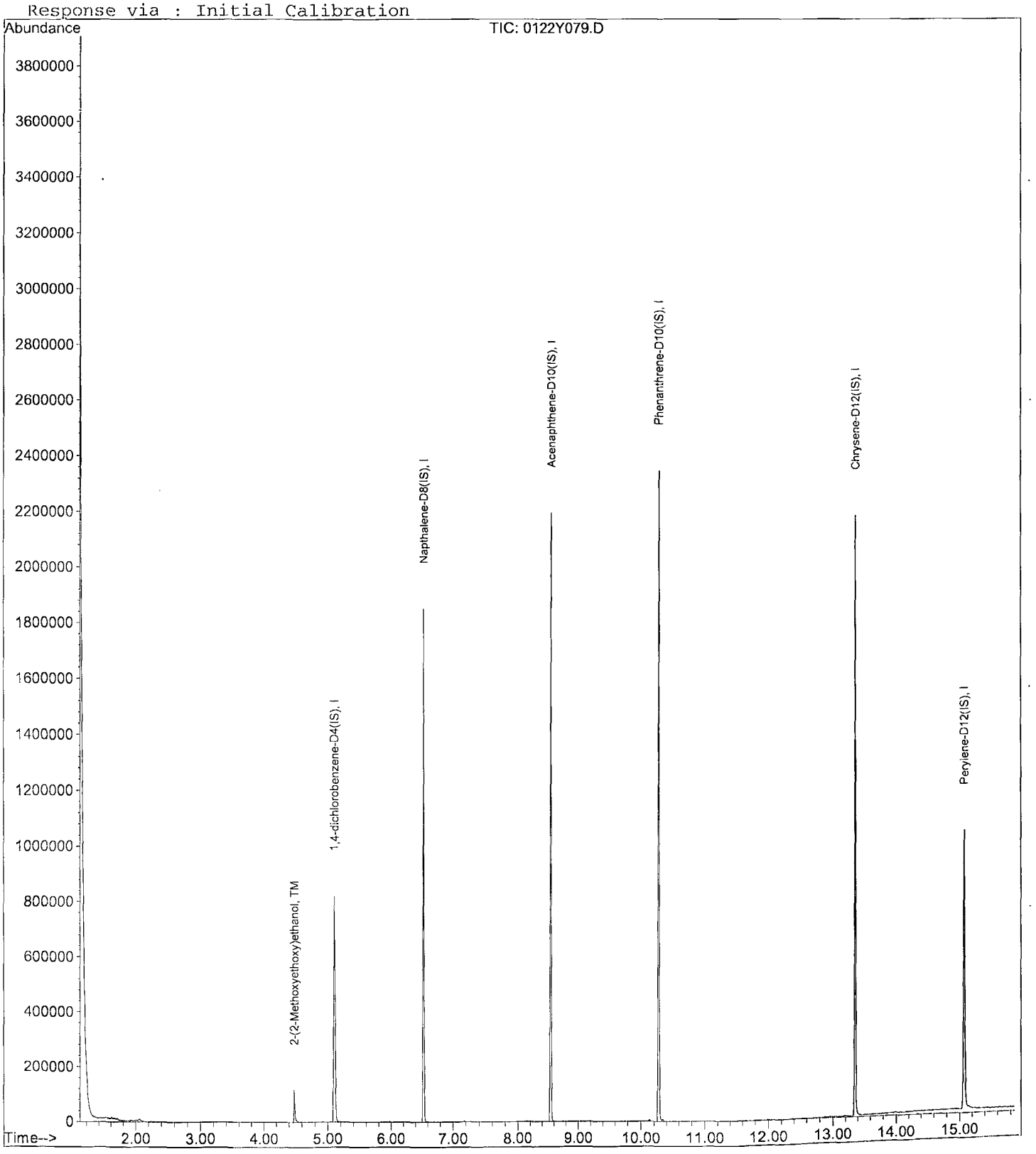
(#) = qualifier out of range (m) = manual integration
0122Y079.D YMEE0122.M Tue Mar 17 11:29:30 2020 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y079.D Vial: 79
Acq On : 16 Mar 20 10:32 Operator: MA,SS
Sample : 200313A LCSD-1 2/500 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 16 11:35 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Mar 16 14:24:46 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y080.D Vial: 80
Acq On : 16 Mar 20 10:56 Operator: MA,SS
Sample : BA08341W31 MS-1 2/500 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 16 12:57 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Mar 16 11:34:22 2020
Response via : Initial Calibration
DataAcq Meth : GED

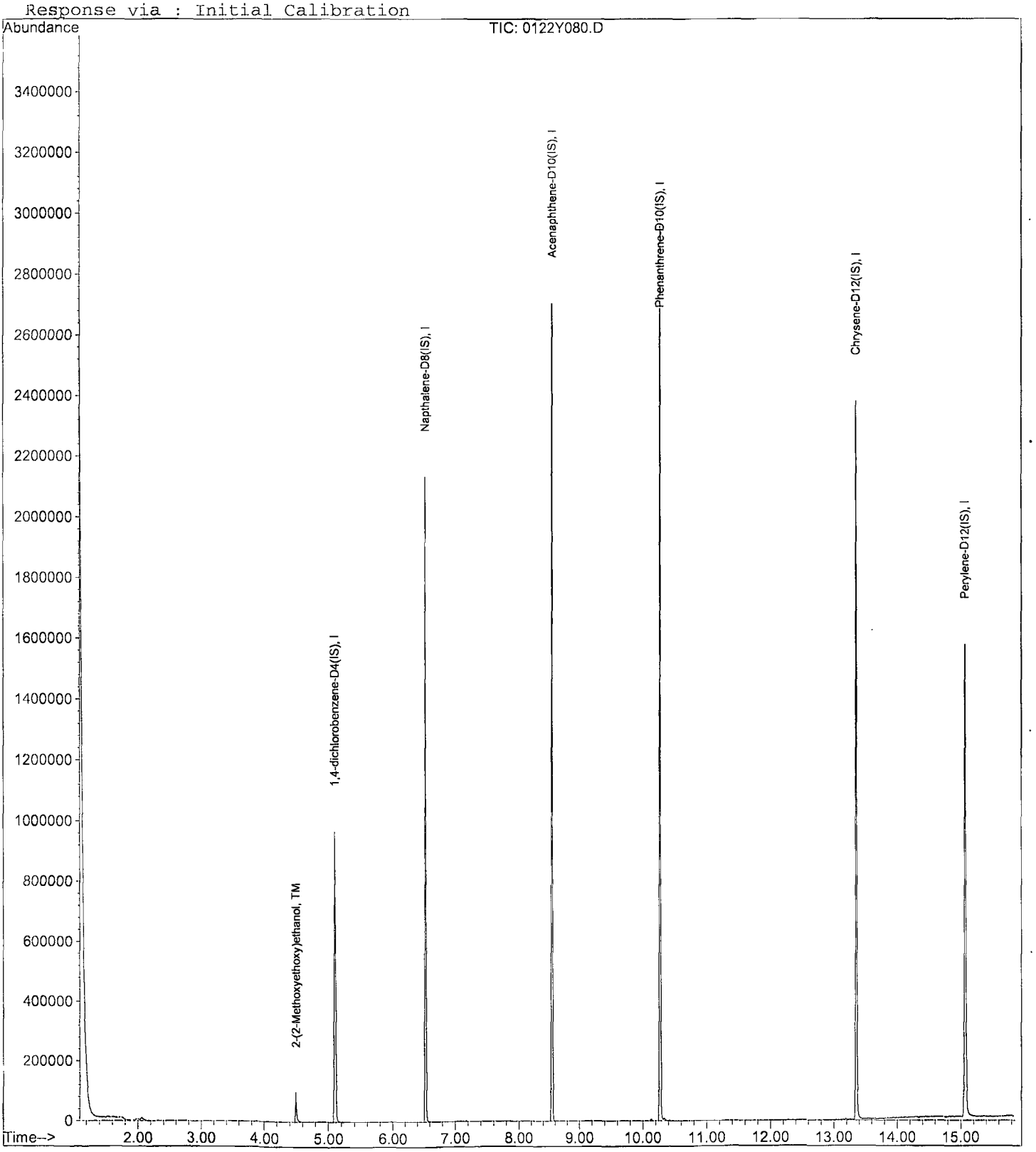
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.10	152	188794	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.53	136	859179	40.00000	ppb	-0.04
4) Acenaphthene-D10(IS)	8.55	164	552771	40.00000	ppb	-0.04
5) Phenanthrene-D10(IS)	10.27	188	1062855	40.00000	ppb	-0.04
6) Chrysene-D12(IS)	13.36	240	850135	40.00000	ppb	-0.04
7) Perylene-D12(IS)	15.07	264	851140	40.00000	ppb	-0.05
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.50	45	49458	44.60298	ppb	99

(#) = qualifier out of range (m) = manual integration
0122Y080.D YMEE0122.M Tue Mar 17 11:29:35 2020 Page 1

Data File : M:\YODA\DATA\Y200122M\0122Y080.D Vial: 80
Acq On : 16 Mar 20 10:56 Operator: MA,SS
Sample : BA08341W31 MS-1 2/500 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 16 12:57 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Mar 16 14:24:46 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y081.D Vial: 81
Acq On : 16 Mar 20 11:19 Operator: MA,SS
Sample : BA08341W27 MSD-1 2/500 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 16 12:58 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Mar 16 11:34:22 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.10	152	144164	40.00000	ppb	-0.01
3) Napthalene-D8(IS)	6.53	136	645282	40.00000	ppb	-0.04
4) Acenaphthene-D10(IS)	8.55	164	420606	40.00000	ppb	-0.04
5) Phenanthrene-D10(IS)	10.27	188	804753	40.00000	ppb	-0.04
6) Chrysene-D12(IS)	13.35	240	447749	40.00000	ppb	-0.04
7) Perylene-D12(IS)	15.07	264	416392	40.00000	ppb	-0.05

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.53	45	48562	57.35288	ppb	98

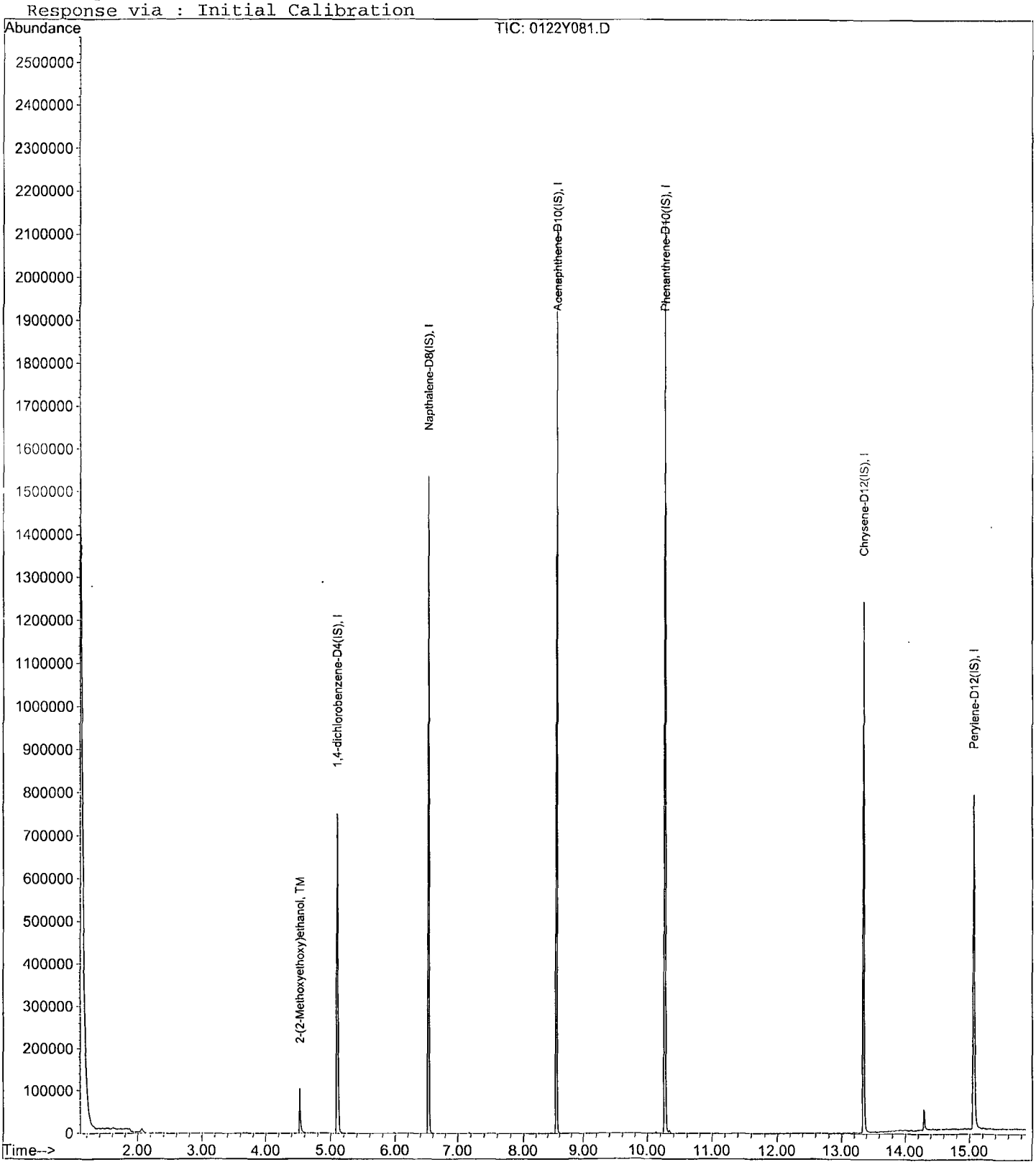
(#) = qualifier out of range (m) = manual integration
0122Y081.D YMEE0122.M Tue Mar 17 11:29:40 2020 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y081.D Vial: 81
Acq On : 16 Mar 20 11:19 Operator: MA,SS
Sample : BA08341W27 MSD-1 2/500 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 16 12:58 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Mar 16 14:24:46 2020
Response via : Initial Calibration

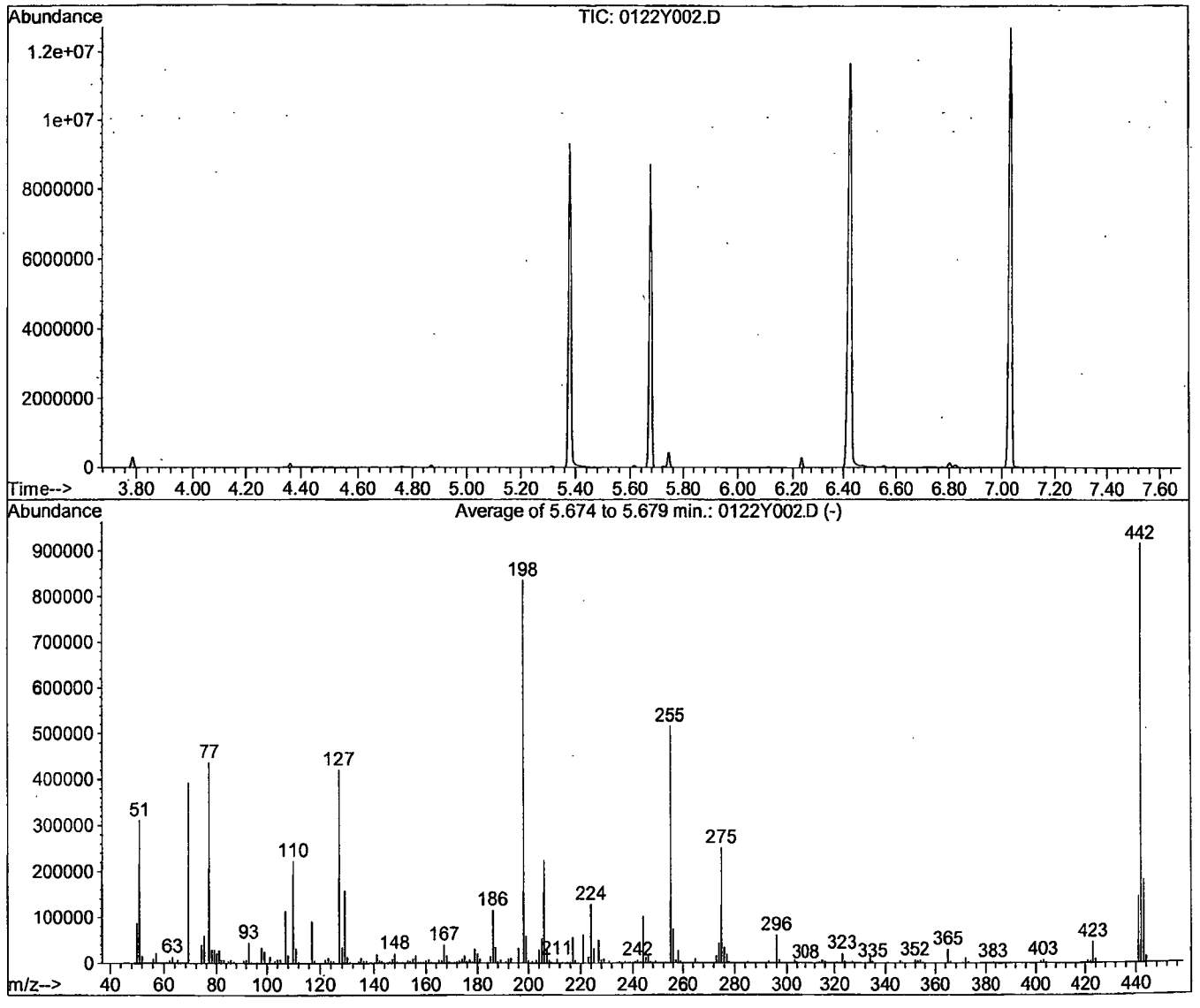


DFTPP

Data File : M:\YODA\DATA\Y200122M\0122Y002.D
Acq On : 22 Jan 20 15:31
Sample : SV Tune 10/11/18
Misc :

Vial: 2
Operator: MA,SS
Inst : Yoda
Multiplr: 1.00

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C



Spectrum Information: Average of 5.674 to 5.679 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	37.2	310756	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.2	963	PASS
127	198	10	80	50.4	420821	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	835008	PASS
199	198	5	9	7.1	58973	PASS
275	198	10	60	30.1	251435	PASS
365	198	1	100	3.7	30675	PASS
441	442	0.01	24	15.9	145797	PASS
442	198	50	500	109.9	917909	PASS
443	442	15	24	19.8	181739	PASS

Data File Name:	**0122Y002.D**
Data File Path:	**M:\YODA\DATA\Y200122M**
Operator:	**MA,SS**
Date Acquired:	**22 Jan 2020 15:31**
Method File:	**DFTPP2.M**
Sample Name:	**SV Tune 10/11/18**
Vial Number:	**2**
Instrument Name:	**Yoda**

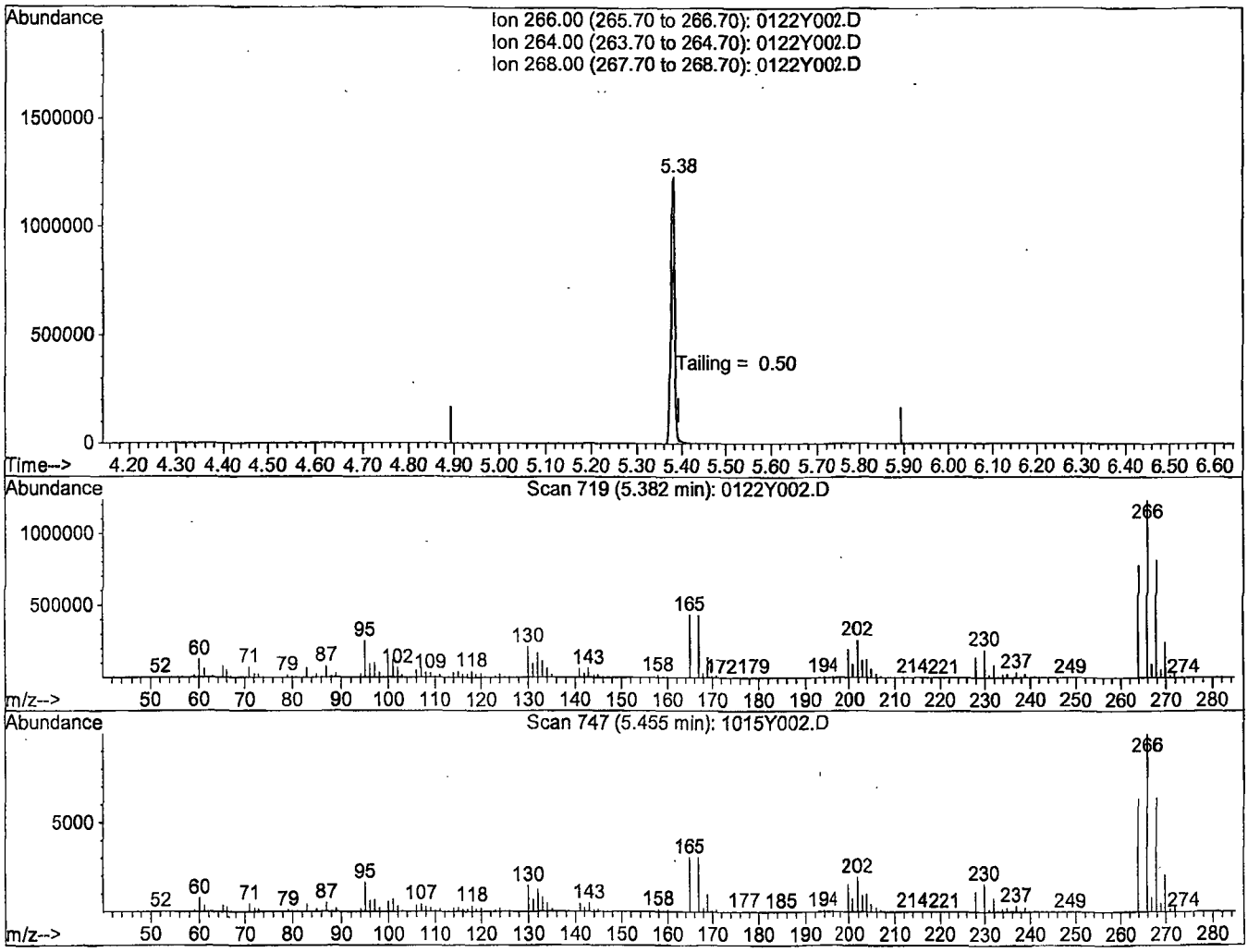
#	Name	Ret Time	Target Response
1)	DDT	7.02	96603900
2)	DDD	6.79	987534
3)	DDE	6.59	119819

Breakdown **1.13**

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y002.D Vial: 2
Acq On : 22 Jan 20 15:31 Operator: MA,SS
Sample : SV Tune 10/11/18 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Jan 23 9:58 2020 Quant Results File: temp.res

Method : M:\YODA\DATA\Y191219\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Tue Dec 10 08:34:10 2019
Response via : Single Level Calibration



TIC: 0122Y002.D

(5) Pentachlorophenol

5.38min 0.0000

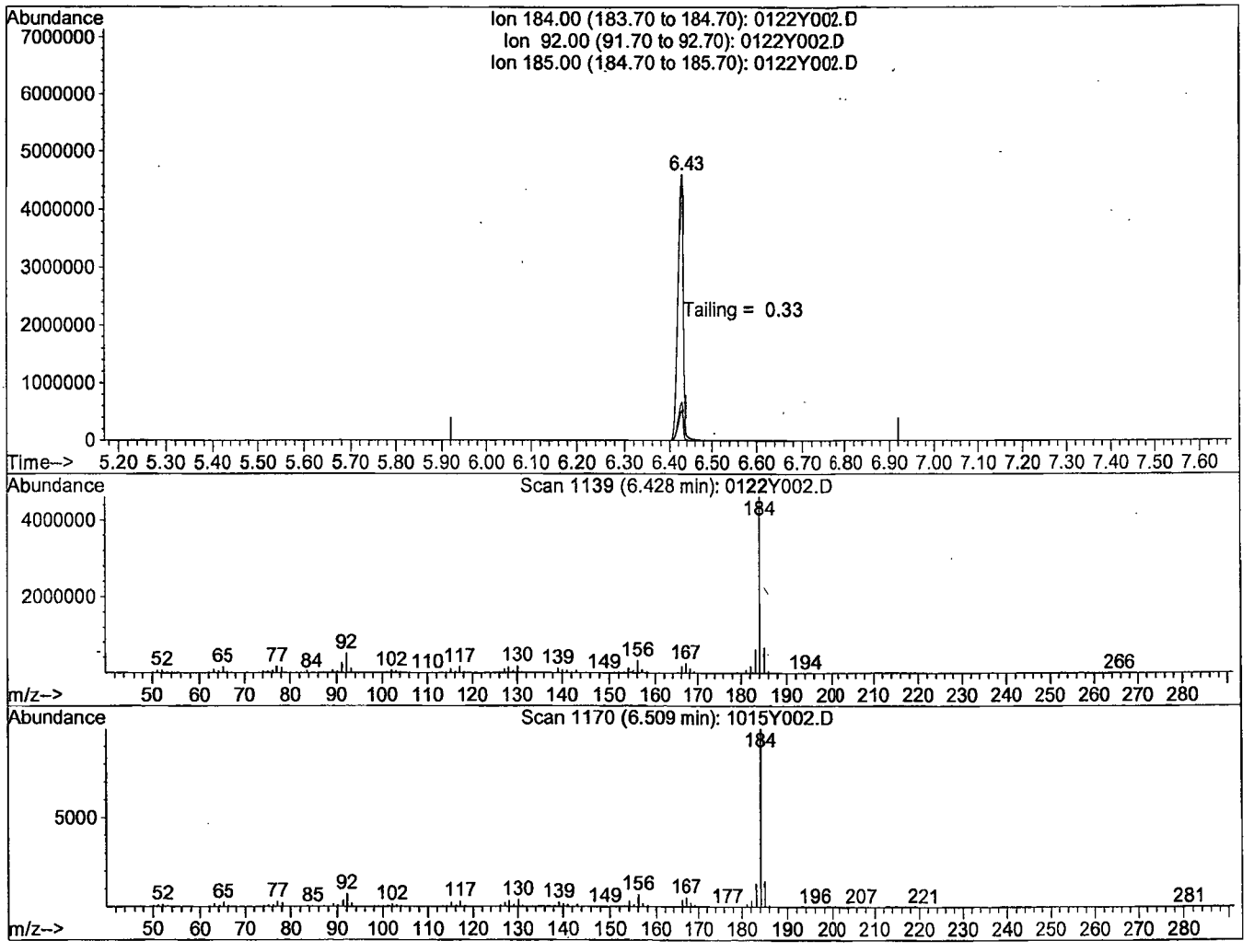
response 7823618

Ion	Exp%	Act%
266.00	100	100
264.00	65.60	63.49
268.00	64.10	65.10
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y002.D Vial: 2
Acq On : 22 Jan 20 15:31 Operator: MA,SS
Sample : SV Tune 10/11/18 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Jan 23 9:58 2020 Quant Results File: temp.res

Method : M:\YODA\DATA\Y191219\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Tue Dec 10 08:34:10 2019
Response via : Single Level Calibration



TIC: 0122Y002.D

(6) Benzidine

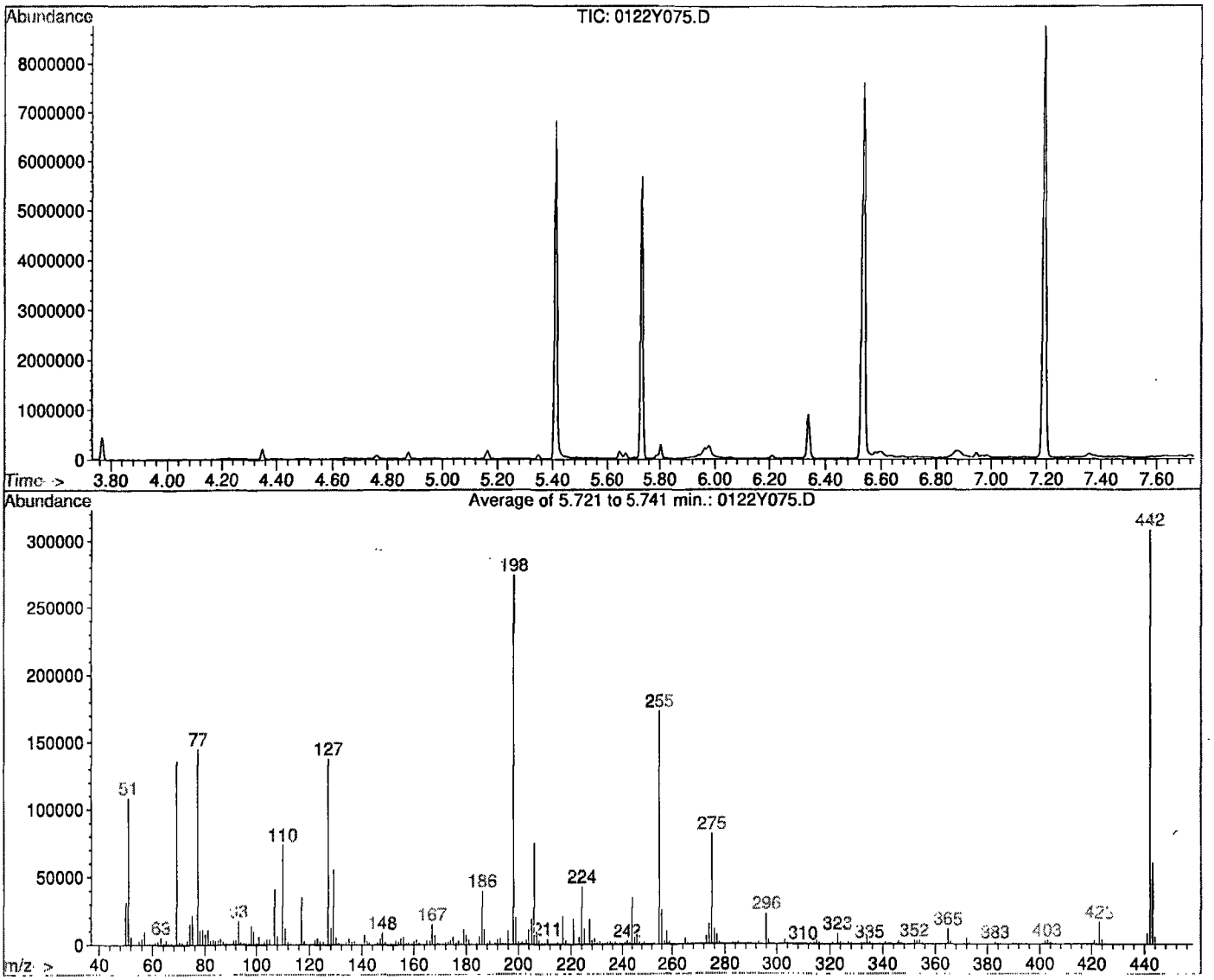
6.43min 0.0000

response 41313552

Ion	Exp%	Act%
184.00	100	100
92.00	10.30	10.42
185.00	14.50	14.34
0.00	0.00	0.00

Data File : M:\YODA\DATA\Y200122M\0122Y075.D Vial: 75
Acq On : 16 Mar 20 8:46 Operator: MA,SS
Sample : SV TUNE 10/01/19 Inst : Yoda
Misc : soil Multiplr: 1.00

Method : M:\YODA\DATA\Y200122M\DFTPP2.M (Chemstation Integrator)
Title :



Spectrum Information: Average of 5.721 to 5.741 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	39.5	108272	PASS
68	69	0.00	2	0.0	64	PASS
70	69	0.00	2	1.2	1642	PASS
127	198	10	80	50.2	137527	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	273849	PASS
199	198	5	9	7.0	19186	PASS
275	198	10	60	29.7	81437	PASS
365	198	1	100	4.0	10874	PASS
441	442	0.01	24	2.6	7905	PASS
442	198	50	500	112.3	307638	PASS
443	442	15	24	19.6	60230	PASS

Data File Name:	**0122Y075.D**
Data File Path:	**M:\YODA\DATA\Y200122M**
Operator:	**MA,SS**
Date Acquired:	**16 Mar 2020 08:46**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/01/19**
Vial Number:	**75**
Instrument Name:	**Yoda**

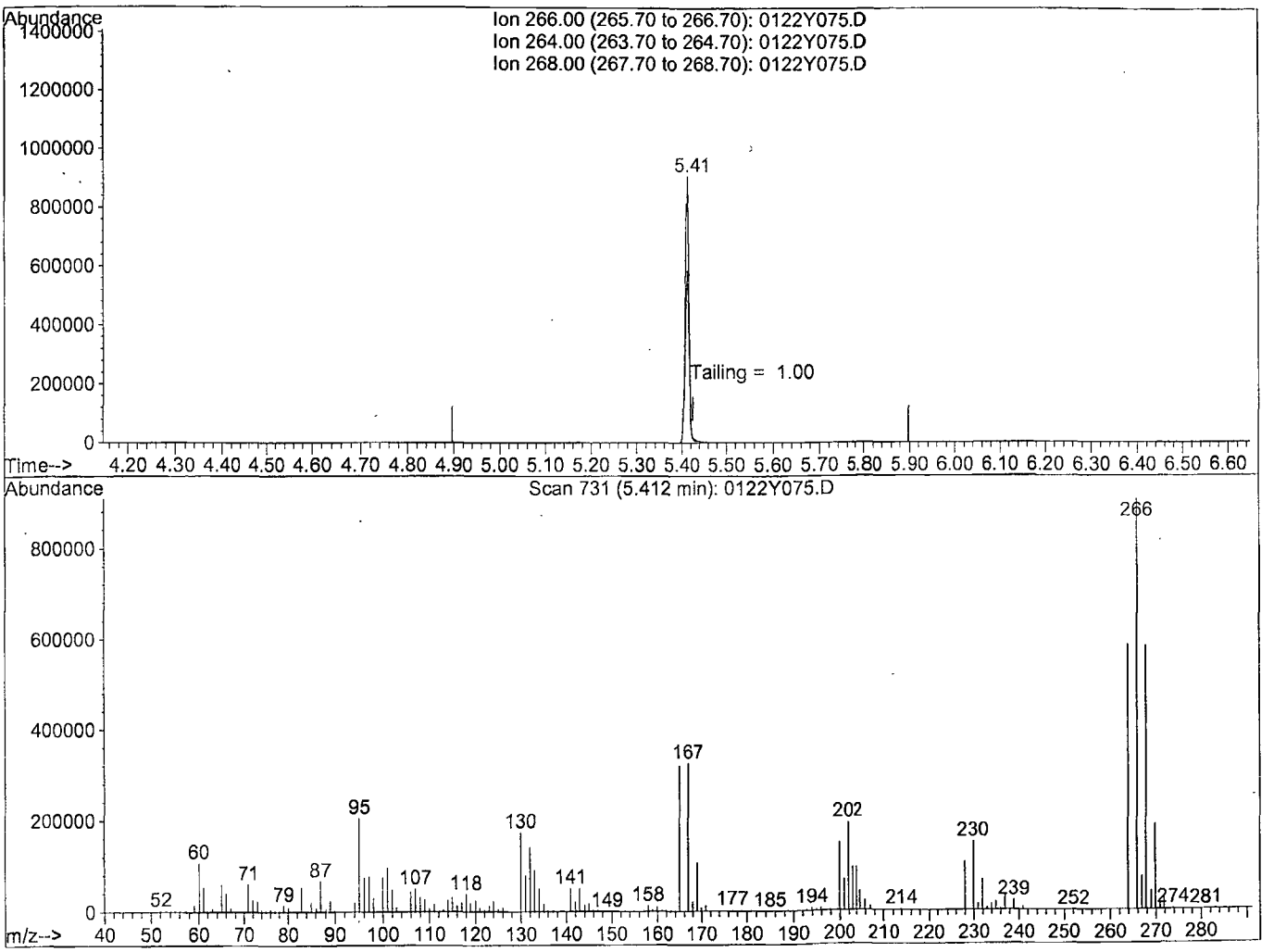
#	Name	Ret Time	Target Response
1)	DDT	7.14	67430100
2)	DDD	6.90	3763380
3)	DDE	6.63	137962

Breakdown **5.47**

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y075.D Vial: 75
Acq On : 16 Mar 20 8:46 Operator: MA,SS
Sample : SV TUNE 10/01/19 Inst : Yoda
Misc : soil Multiplr: 1.00
Quant Time: Mar 16 9:52 2020 Quant Results File: temp.res

Method : M:\YODA\DATA\Y200122M\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Wed Mar 11 15:20:33 2020
Response via : Single Level Calibration



TIC: 0122Y075.D

(5) Pentachlorophenol

5.41min 0.0000

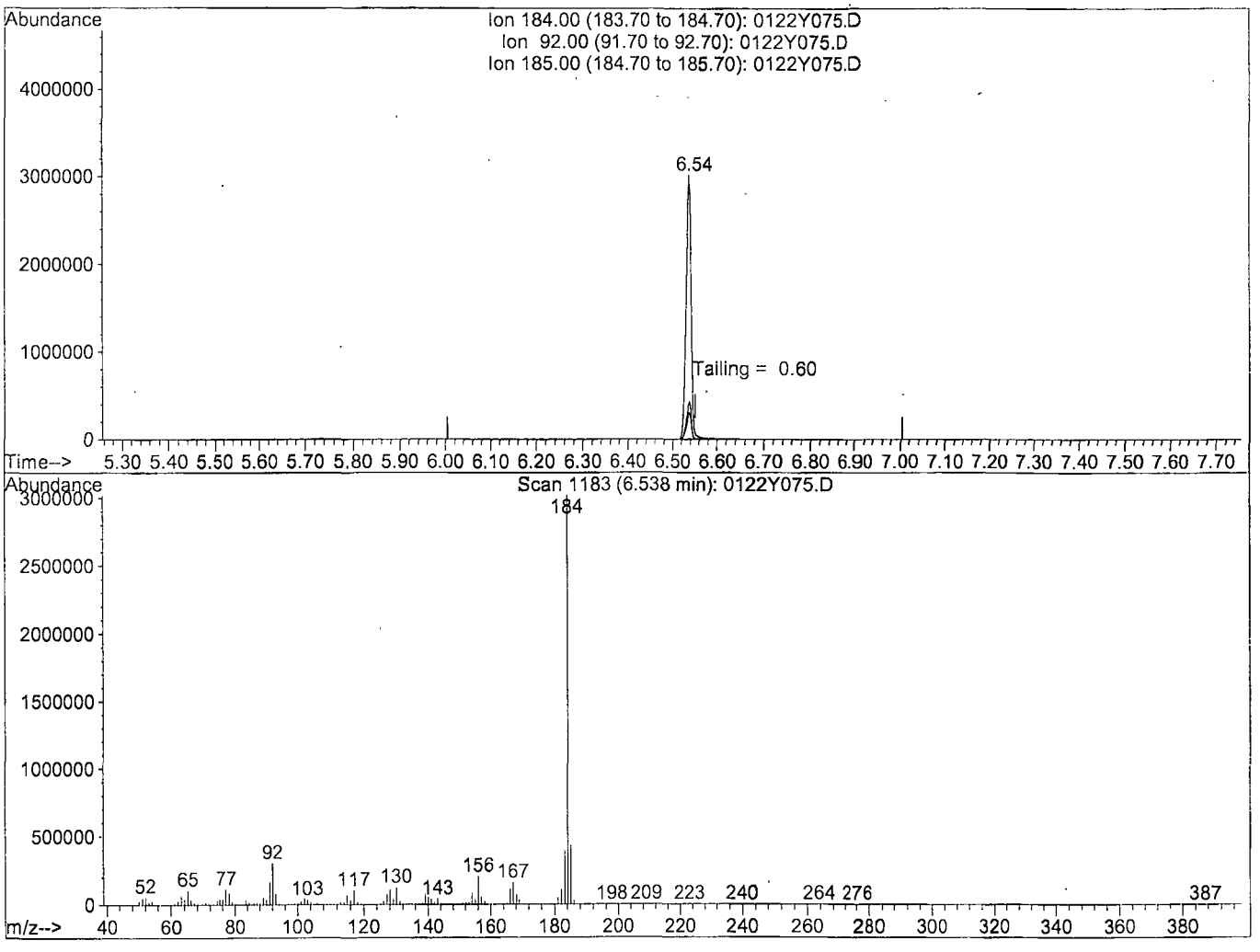
response 5506172

Ion	Exp%	Act%
266.00	100	100
264.00	63.80	64.14
268.00	63.80	63.84
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y075.D Vial: 75
Acq On : 16 Mar 20 8:46 Operator: MA,SS
Sample : SV TUNE 10/01/19 Inst : Yoda
Misc : soil Multiplr: 1.00
Quant Time: Mar 16 9:52 2020 Quant Results File: temp.res

Method : M:\YODA\DATA\Y200122M\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Wed Mar 11 15:20:33 2020
Response via : Single Level Calibration



TIC: 0122Y075.D

(6) Benzidine

6.54min 0.0000

response 24219745

Ion	Exp%	Act%
184.00	100	100
92.00	11.60	9.66
185.00	14.90	14.25
0.00	0.00	0.00

Name of Final Standard: MEE Curve
Prep'd By (Initials): JP
Prep Date: 01/22/20
Exp Date: 11/05/20

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
MEE M STD Stock	APPL		2000 ug/mL	11/05/19	11/05/20	5 uL	200uL	Methanol 195uL Lot# 235140	50 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	11/20/19	11/20/20	4 uL	"	"	"
MEE M STD Stock	APPL		2000 ug/mL	11/05/19	11/05/20	5 uL	100uL	Methanol 95uL Lot# 235140	100 ug/mL
SV Internal Standard	APPL	8271 Internal Standard	2000 ug/mL	11/20/19	11/20/20	2 uL	"	"	"
MEE M STD Stock	APPL		2000 ug/mL	11/05/19	11/05/20	10 uL	100uL	Methanol 90uL Lot# 235140	200 ug/mL
SV Internal Standard	APPL	8272 Internal Standard	2000 ug/mL	11/20/19	11/20/20	2 uL	"	"	"
MEE M STD Stock	APPL		2000 ug/mL	11/05/19	11/05/20	20 uL	100uL	Methanol 80 uL Lot# 235140	400 ug/mL
SV Internal Standard	APPL	8273 Internal Standard	2000 ug/mL	11/20/19	11/20/20	2 uL	"	"	"
MEE M STD Stock	APPL		2000 ug/mL	11/05/19	11/05/20	50 uL	200 uL	Methanol 150 uL Lot# 235140	500 ug/mL
SV Internal Standard	APPL	8274 Internal Standard	2000 ug/mL	11/20/19	11/20/20	4 uL	"	"	"
MEE M STD Stock	APPL		2000 ug/mL	11/05/19	11/05/20	30 uL	100uL	Methanol 70 uL Lot# 235140	600 ug/mL
SV Internal Standard	APPL	8275 Internal Standard	2000 ug/mL	11/20/19	11/20/20	2 uL	"	"	"
MEE M STD Stock	APPL		2000 ug/mL	11/05/19	11/05/20	40 uL	100uL	Methanol 60 uL Lot# 235140	800 ug/mL
SV Internal Standard	APPL	8276 Internal Standard	2000 ug/mL	11/20/19	11/20/20	2 uL	"	"	"
MEE M STD Stock	APPL		2000 ug/mL	11/05/19	11/05/20	50 uL	100uL	Methanol 50uL Lot# 235140	1000 ug/mL
SV Internal Standard	APPL	8277 Internal Standard	2000 ug/mL	11/20/19	11/20/20	2 uL	"	"	"

Name of Final Standard: MEE Second Source
Prep'd By (Initials): JP
Prep Date: 01/22/20
Exp Date: 10/28/20

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
MEE SS	APPL		2000 ug/mL	10/28/19	10/28/20	50 uL	200uL	Methanol 150uL Lot# 235140	500 ug/mL
SV Internal Standard	APPL	8277 Internal Standard	2000 ug/mL	11/20/19	11/20/20	4 uL	"	"	"

_MWE2MEE

Organic Extraction Worksheet

Method	Solid Phase Extraction of 2MEE in Water	Extraction Set	191106A	Extraction Method	MWE2MEE	Units	mL

Spiked ID 1	Diethylene Glycol I-31-19 EXP 1-31-20		Surrogate ID 1		
Spiked ID 2	2MEE SS 10320ug/mL 10/28/19 exp 10/28/20		Surrogate ID 2		
Spiked ID 3	Diethylene Glycol 11-5-19 exp 11-5-20		Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	no	
Spiked ID 7			Ext. Start Time:	11/06/19 6:25	
Spiked ID 8			Ext. End Time:	11/06/19 13:30	
			GC Requires Extract By:		

M STD AND SS PREPARATION MA 1/21/20

pH1			Water Bath Temp 1 °C	
pH2			Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: DL **Date** 11/06/19 **Witnessed By:** CFM **Date** 11/06/19

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	191106A Blk				NA	NA equip	500	2	7Y	11/06/19 6:25	
2	191106A LCS-1		0.040	1	NA	NA equip	500	2	7Y	11/06/19 6:25	
3	191106A LCSD-1		0.040	1	NA	NA equip	500	2	7Y	11/06/19 6:25	
4	BA02214	BA02214W18			NA	NA equip	500	2	7Y	11/06/19 6:25	90611
5	BA02216	BA02216W10			NA	NA equip	500	2	7Y	11/06/19 6:25	90611
6	BA02301	BA02301W22			NA	NA equip	500	2	7Y	11/06/19 6:25	90625
7	M STD		1	3	na	na equip	500	2	7Y	11/06/19 6:25	
8	SS		0.097	2	NA	NA equip	500	2	7Y	11/06/19 6:25	

Solvent and Lot#	
ENVI-Carb Plus 400MG/1ML	11694501
Reverible Tube Lot:	11694501
PH Strip	HC863463
Di Water	11/6/19
Dichloromethane	59130
Methanol	59129

Extraction COC Transfer	
Extraction lab employee Initials	SS
GC analyst's initials	MA
Date	
Time	
Refrigerator	Hobart

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL
Concentration	DL

Modified	11/06/19 6:07:34 AM

Reviewed By: Date

01/21/20 5:14:06 PM Ext_ID 64996 Page 1 of 1

Name of Final Standard	Diethylene Glycol
Prep Date	**11/05/19**
Exp Date	**11/05/20**

Prep'd By (Initials) **MA**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc.(range)
Diethylene glycol methyl ether	AccuStandard	S-72273	2000 ug/mL	**218101558-39890**	**12/01/20**	1.0 mL	2 mL	Methanol #208858	1000 ug/mL

Given to Extraction to do **MEE M STD Stock** (used for ICAL) Final concentration 2000ug/L

Name of Final Standard 2MEE Second Source Stock

Prep'd By (Initials) JP

Prep Date 10/28/19

Exp Date 10/28/20

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Methoxyethanol-Neat	Chem Service	N-12404-1G	Neat 99.5%	**7079100 - 39417**	**07/31/22**	0.1022g	10 mL	**MC #56258**	10220 ug/mL

Given to Extraction to do **MEE SS** (used for ICAL SS)

0.097ml were spiked in 500ml of water and extracted on 04/29/19 . Final concentration is 2000ug/L

Name of Final Standard	**MEE Curve**	**Prep'd By (Initials)**	**JP**
Prep Date	**01/29/20**		
Exp Date	**11/05/20**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
MEE M STD Stock	APPL		2000 ug/mL	**11/05/19**	**11/05/20**	50 uL	200 uL	**Methanol 150 uL**	500 ug/mL
SV Internal Standard	APPL	Internal Standard	2000 ug/mL	**11/20/19**	**11/20/20**	4 uL	*	*	*

Organic Extraction Worksheet

Method	Solid Phase Extraction of 2MEE in Water	Extraction Set	200313A	Extraction Method	MWE2MEE	Units	mL

Spiked ID 1	Diethylene Glycol 11-5-19 11-5-20		Surrogate ID 1		
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	03/13/20 7:30	
Spiked ID 8			Ext. End Time:	03/13/20 13:25	
			GC Requires Extract By:		

pH1			Water Bath Temp 1 °C	
pH2			Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: DL **Date** 03/13/20 **Witnessed By:** CFM **Date** 03/13/20

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	200313A Blk				NA	NA equip	500	2	7	03/13/20 7:30	
2	200313A LCS-1		0.040	1	NA	NA equip	500	2	7	03/13/20 7:30	
3	200313A LCSD-1		0.040	1	NA	NA equip	500	2	7	03/13/20 7:30	
4	BA08341 MS-1	BA08341W31	0.040	1	NA	NA equip	500	2	7	03/13/20 7:30	91638
5	BA08341 MSD-1	BA08341W27	0.040	1	NA	NA equip	500	2	7	03/13/20 7:30	91638
6	BA08341	BA08341W35			NA	NA equip	500	2	7	03/13/20 7:30	91638
7	BA08370	BA08370W17			NA	NA equip	500	2	7	03/13/20 7:30	91653
8	BA08371	BA08371W09			NA	NA equip	500	2	7	03/13/20 7:30	91653

Solvent and Lot#	
ENVIRO-CLEAN CARTRIDGES	47266-EY
PH Strip	HC863463
Di Water	3-13-20
Dichloromethane	59239
Methanol	59129

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	MA
Date	3/14/20
Time	9:30
Refrigerator	HOBART

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL
Concentration	DL

Modified	03/16/20 10:21:50 AM

Reviewed By: KY **Date** 03/16/20

Injection Log

Directory: M:\YODA\DATA\Y200122M\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	0122Y002.D	1	SV Tune 10/11/18		22 Jan 20 15:31
2	3	0122Y003.D	1	50ug/ml MEE 01/22/20	soil	22 Jan 20 15:46
3	4	0122Y004.D	1	100ug/ml MEE 01/22/20	soil	22 Jan 20 16:10
4	5	0122Y005.D	1	200ug/ml MEE 01/22/20	soil	22 Jan 20 16:33
5	6	0122Y006.D	1	400ug/ml MEE 01/22/20	soil	22 Jan 20 16:57
6	7	0122Y007.D	1	500ug/ml MEE 01/22/20	soil	22 Jan 20 17:21
7	8	0122Y008.D	1	600ug/ml MEE 01/22/20	soil	22 Jan 20 17:45
8	9	0122Y009.D	1	800ug/ml MEE 01/22/20	soil	22 Jan 20 18:08
9	10	0122Y010.D	1	1000ug/ml MEE 01/22/20	soil	22 Jan 20 18:32
10	11	0122Y011.D	1	SS MEE 01/22/20	soil	22 Jan 20 18:55
11	75	0122Y075.D	1	SV TUNE 10/01/19	soil	16 Mar 20 8:46
12	76	0122Y076.D	1	500ug/ml MEE 01/29/20 (1)	soil	16 Mar 20 9:14
13	77	0122Y077.D	1	200313A BLK 2/500	soil	16 Mar 20 9:45
14	79	0122Y079.D	1	200313A LCSD-1 2/500	soil	16 Mar 20 10:32
15	80	0122Y080.D	1	BA08341W31 MS-1 2/500	soil	16 Mar 20 10:56
16	81	0122Y081.D	1	BA08341W27 MSD-1 2/500	soil	16 Mar 20 11:19
17	82	0122Y082.D	1	BA08341W35 2/500	soil	16 Mar 20 11:43
18	85	0122Y085.D	1	200313A LCS-1 2/500	water	16 Mar 20 12:54
19	86	0122Y086.D	1	500ug/ml MEE 01/29/20 (1)	soil	16 Mar 20 13:17

ORGANICS
Calibration Data

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 03/12/20
Matrix: Instrument: Loki Initials: DP

			0312L10 D	0312L11 D	0312L12 D	0312L13 D	0312L14.D	0312L15.D	0312L16.D	0312L17.D	0312L18 D							
		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD	Type	r^2	Q	MRF
1	I	Fluorobenzene (IS)																
2	TM	Chlorotrifluoroethene													TM			
3	TM	Dichlorodifluoromethane		0.4073	0.3984	0.4521	0.3285	0.3356	0.3366	0.3445	0.3387		0.37	12	TM			
4	TM	Freon 114		0.4562	0.3872	0.4279	0.2903	0.3568	0.3518	0.3576	0.3668		0.37	14	TM			
5	TM**L	Chloromethane		0.7087	0.5965	0.5759	0.4992	0.4554					0.57	17	TM**L	0.995		
6	TM*	Vinyl chloride		0.6000	0.5221	0.5791	0.5231	0.5107	0.4962	0.5086	0.4795		0.53	7.8	TM*			
7	TM	2-Chloro-1,1,1-trifluoroethane													TM			
8	TM	Bromomethane		0.1750	0.2141	0.2059	0.1936	0.1832	0.1831	0.1680	0.1866		0.19	8.1	TM			
9	TM	Chloroethane		0.1154	0.0893	0.1060	0.0907	0.0851	0.0794	0.0834	0.0746		0.09	15	TM			
10	TM	Dichlorofluoromethane		0.6283	0.6908	0.6905	0.6131	0.6588	0.6429				0.65	4.9	TM			
11	TM	Trichlorofluoromethane		0.5854	0.6229	0.6318	0.5955	0.5938	0.5732	0.5771	0.5584		0.59	4.2	TM			
12	TM	Diethyl ether													TM			
13	TM	Acrolein			0.0368	0.0352	0.0381	0.0369	0.0377	0.0426	0.0448		0.04	9.0	TM			
14	TML	Acetone				0.3633	0.1824	0.1354	0.1133	0.1021	0.0880		0.16	63	TML	0.999		
15	TM	Freon-113		0.3628	0.3530	0.3469	0.3083	0.3497	0.3491	0.3493	0.3418		0.35	4.6	TM			
16	TM*	1,1-DCE		0.5286	0.5549	0.5242	0.4634	0.5234	0.5097	0.5160	0.5073		0.52	5.0	TM*			
17	TM	t-Butanol	0.0406	0.0317	0.0286	0.0297	0.0303	0.0298	0.0323	0.0372			0.03	13	TM			
18	TM	2-Propanol													TM			
19	TM	Acetonitrile		0.0685	0.0621	0.0602	0.0579	0.0576	0.0543	0.0580	0.0564		0.06	7.3	TM			
20	TML	Methyl Acetate		0.4951	0.3644	0.3780	0.2760	0.2907	0.2868	0.2963	0.2928		0.34	22	TML	1.000		
21	TML	Iodomethane		0.3397	0.3725	0.3930	0.3899	0.4406	0.4813	0.5273	0.5452		0.44	17	TML	0.999		
22	TML	Acrylonitrile		0.3108	0.2036	0.2073	0.1673	0.1767	0.1679	0.1684	0.1630		0.20	25	TML	1.000		
23	TML	Methylene chloride		0.8069	0.6160	0.5025	0.4403	0.4531	0.4284	0.4348	0.4118		0.51	27	TML	1.000		
24	TM	Carbon disulfide		0.9859	1.043	0.9712	0.8391	0.9140					0.95	8.2	TM			
25	TM	Methyl t-butyl ether (MtBE)		0.9094	0.8811	0.8374	0.7825	0.8390	0.8519	0.8787	0.8615		0.86	4.4	TM			
26	TM	Trans-1,2-DCE		0.5184	0.5145	0.5140	0.4742	0.5216	0.5040	0.5216	0.4990		0.51	3.2	TM			
27	TM	Diisopropyl Ether		1.335	1.214	1.261	1.122	1.184	1.161	1.192	1.153		1.2	5.6	TM			
28	TM**	2,2-Dichloro-1,1,1-trifluoroethane													TM**			
29	TM**	1,1-DCA		0.7554	0.7512	0.7367	0.6813	0.7543	0.7162	0.7324	0.6973		0.73	3.8	TM**			
30	TM	Vinyl Acetate		1.335	1.214	1.261	1.122	1.184	1.161	1.192	1.153		1.2	5.6	TM			
31	TM	Ethyl tert Butyl Ether													TM			
32	TM	MEK (2-Butanone)				0.1049	0.0812	0.0784	0.0748	0.0801	0.0763		0.08	14	TM			
33	TM	Cis-1,2-DCE		0.7073	0.6716	0.6647	0.6070	0.6300	0.6266	0.6363	0.6020		0.64	5.5	TM			
34	TM	2,2-Dichloropropane		0.6514	0.5960	0.5768	0.5025	0.5414	0.5196	0.5396	0.5133		0.56	9.0	TM			
35	TM	2-Methylpentane													TM			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 03/12/20
Matrix: Instrument: Loki Initials: DP

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD	Type		Q	MRF
36	TM	3-Methylpentane													TM			
37	TM*	Chloroform		0.7912	0.8059	0.8137	0.7137	0.7730	0.7588	0.7727	0.7308		0.77	4.5	TM*			
38	TM	Bromochloromethane		0.3302	0.3157	0.3211	0.3036	0.3247	0.3209	0.3255	0.3047		0.32	3.0	TM			
39	S	Dibromofluoromethane(S)	0.9655	0.7142	0.6902	0.7022	0.6963	0.7140	0.6569	0.6712	0.6088		0.71	14	S			
40	TM	1,1,1-TCA		0.5548	0.5823	0.6268	0.5807	0.6108	0.5930	0.6129	0.5912		0.59	3.8	TM			
41	TM	Cyclohexane		0.5507	0.5554	0.5098	0.4541	0.5037	0.5095	0.5282	0.5414		0.52	6.3	TM			
42	TM	1,1-Dichloropropene		0.5435	0.4920	0.5138	0.4485	0.4935	0.4881	0.5075	0.5030		0.50	5.4	TM			
43	TM	2,2,4-Trimethylpentane		1.047	1.134	1.091	0.9175	1.081	1.053	1.106	1.162		1.1	6.9	TM			
44	S	1,2-DCA-D4(S)	0.9637	0.7277	0.6937	0.7185	0.6936	0.7189	0.6549	0.6775	0.6210		0.72	14	S			
45	TM	Carbon Tetrachloride		0.5029	0.5128	0.5304	0.4877	0.5502	0.5265	0.5391	0.5333		0.52	3.9	TM			
46	TM	Tert Amyl Methyl Ether													TM			
47	TM	Methylcyclopentane													TM			
48	TM	1,2-DCA		0.5387	0.5830	0.5484	0.5231	0.5391	0.5469	0.5541	0.5229		0.54	3.5	TM			
49	TM	Benzene		1.961	1.746	1.615	1.468	1.591	1.550	1.608	1.564		1.6	9.3	TM			
50	TM	TCE		0.4404	0.4641	0.4530	0.4435	0.4762	0.4674	0.4799	0.4684		0.46	3.2	TM			
51	TM	2-Pentanone		0.1850	0.1846	0.1852	0.1935	0.1947	0.2052	0.2246	0.2292		0.20	8.9	TM			
52	TM*	1,2-Dichloropropane		0.4132	0.4136	0.4074	0.3808	0.4365	0.4195	0.4349	0.4163		0.42	4.2	TM*			
53	TM	Bromodichloromethane		0.5576	0.5714	0.5595	0.5340	0.5848	0.5738	0.5974	0.5806		0.57	3.4	TM			
54	TM	Methyl Cyclohexane		0.5366	0.5498	0.5084	0.4592	0.5164	0.5255	0.5523	0.5871		0.53	7.1	TM			
55	TM	Dibromomethane		0.3090	0.3330	0.3409	0.3268	0.3561	0.3513	0.3659	0.3436		0.34	5.3	TM			
56	TM	2-Chloroethyl vinyl ether													TM			
57	TML	MIBK (methyl isobutyl ketone)			0.4480	0.3861	0.3378	0.2818	0.2857	0.2888	0.2955		0.33	19	TML	1.000		
58	TM	1-Bromo-2-chloroethane		0.5650	0.5869	0.5807	0.5562	0.5987	0.5979	0.6160	0.5856		0.59	3.3	TM			
59	TM	Cis-1,3-Dichloropropene		0.5801	0.5777	0.6101	0.5535	0.6067	0.6253	0.6599	0.6685		0.61	6.6	TM			
60	TM*	Toluene		1.922	1.704	1.676	1.603	1.767	1.747	1.820	1.788		1.8	5.5	TM*			
61	TM	Trans-1,3-Dichloropropene		0.4904	0.4500	0.4779	0.4724	0.5050	0.5253	0.5524	0.5652		0.50	8.0	TM			
62	TM	1,1,2-TCA		0.4231	0.4053	0.4221	0.3823	0.4289	0.4048	0.4253	0.4100		0.41	3.7	TM			
63	TML	2-Hexanone				0.1834	0.1204	0.1067	0.1054	0.1118	0.1221		0.12	24	TML	0.998		
64	I	Chlorobenzene-D5 (IS)																
65	S	Toluene-D8(S)		2.260	2.037	2.196	2.206	2.320	2.105	2.133	1.988		2.2	5.2	S			
66	TM	1,2-EDB		0.3729	0.3623	0.3759	0.3701	0.3957	0.3833	0.3935	0.3796		0.38	3.0	TM			
67	TM	Tetrachloroethene		0.4833	0.4765	0.4920	0.4520	0.4820	0.4528	0.4663	0.4465		0.47	3.6	TM			
68	TM	1-Chlorohexane		0.4375	0.4022	0.4305	0.4074	0.4459	0.4367	0.4624	0.4856		0.44	6.2	TM			
69	TM	1,1,1,2-Tetrachloroethane		0.4462	0.4046	0.4200	0.4034	0.4349	0.4236	0.4283	0.4131		0.42	3.5	TM			
70	TM	m&p-Xylene		1.395	1.264	1.207	1.170	1.311	1.303	1.368	1.380		1.3	6.3	TM			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 03/12/20
Matrix: Instrument: Loki Initials: DP

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD	Type		Q	MRF
71	TM	o-Xylene		1.574	1.303	1.258	1.220	1.338	1.316	1.387	1.414		1.4	8.1	TM			
72	TM	Styrene		1.059	0.8814	0.9503	0.9344	1.061	1.088	1.144	1.170		1.0	10.0	TM			
73	S	4-Bromofluorobenzene(S)		0.8958	0.7818	0.8269	0.8022	0.8543	0.7947	0.8070	0.7560		0.81	5.4	S			
74	TM	1,3-Dichloropropane		0.6105	0.5912	0.5890	0.5731	0.6342	0.6012	0.6124	0.5979		0.60	3.0	TM			
75	TM	Dibromochloromethane		0.3972	0.4004	0.4099	0.4032	0.4442	0.4312	0.4449	0.4372		0.42	4.8	TM			
76	TM**	Chlorobenzene		1.176	1.096	1.092	1.057	1.110	1.077	1.081	1.059		1.1	3.5	TM**			
77	TM*	Ethylbenzene		2.014	1.683	1.607	1.542	1.704	1.702	1.779	1.775		1.7	8.2	TM*			
78	TM**	Bromoform		0.2678	0.2745	0.3048	0.2714	0.3161	0.3070	0.3180	0.3149		0.30	7.3	TM**			
79	I	1,4-Dichlorobenzene-D (IS)																
80	TM	Isopropylbenzene		2.187	1.966	1.747	1.603	1.669	1.737	1.822	1.886		1.8	10	TM			
81	TM**	1,1,2,2-Tetrachloroethane		0.8254	0.9289	0.8182	0.8534	0.8452	0.8091	0.8161	0.8040		0.84	4.9	TM**			
82	TM	1,2,3-Trichloropropane		0.3416	0.2843	0.2838	0.2539	0.2670	0.2567	0.2601	0.2509		0.27	11	TM			
83	TM	t-1,4-Dichloro-2-Butene		0.1450	0.1300	0.1427	0.1226	0.1195	0.1213	0.1324	0.1402		0.13	7.7	TM			
84	TM	Bromobenzene		1.111	0.9518	0.8689	0.8326	0.8667	0.8508	0.8574	0.8338		0.90	11	TM			
85	TML	n-Propylbenzene		6.071	4.439	3.589	3.267	3.269	3.299	3.505	3.590		3.9	25	TML	1.000		
86	TML	4-Ethyltoluene		2.630	2.060	1.704	1.622	1.682	1.746	1.860	1.905		1.9	17	TML	1.000		
87	TM	2-Chlorotoluene		1.443	1.310	1.270	1.128	1.248	1.252	1.294	1.248		1.3	6.9	TM			
88	TM	1,3,5-Trimethylbenzene		3.346	2.759	2.431	2.347	2.453	2.528	2.598	2.580		2.6	12	TM			
89	TM	4-Chlorotoluene		1.743	1.464	1.315	1.223	1.331	1.258	1.333	1.331		1.4	12	TM			
90	TML	Tert-Butylbenzene		4.270	2.863	2.292	2.012	2.075	2.058	2.150	2.189		2.5	31	TML	1.000		
91	TML	1,2,4-Trimethylbenzene		7.218	4.407	3.231	2.530	2.525	2.563	2.639	2.651		3.5	47	TML	1.000		
92	TML	Sec-Butylbenzene		6.708	4.450	3.348	2.969	3.004	3.013	3.154	3.232		3.7	35	TML	1.000		
93	TML	p-Isopropyltoluene		5.351	3.621	2.873	2.546	2.624	2.644	2.782	2.839		3.2	30	TML	1.000		
94	TM	Benzyl Chloride		0.6042	0.6253	0.5303	0.5613	0.5408	0.5643	0.6311	0.7710		0.60	13	TM			
95	TM	1,3-DCB		2.216	1.818	1.668	1.527	1.551	1.559	1.567	1.559		1.7	14	TM			
96	TML	1,4-DCB		2.642	2.061	1.734	1.567	1.573	1.570	1.598	1.598		1.8	21	TML	1.00		
97	TML	n-Butylbenzene		8.368	4.586	2.863	2.117	2.061	2.086	2.230	2.356		3.3	66	TML	0.999		
98	TML	1,2-DCB		2.339	1.984	1.558	1.438	1.501	1.477	1.490	1.537		1.7	19	TML	1.000		
99	TM	Hexachloroethane		0.5706	0.5227	0.5096	0.5238	0.4772	0.4849	0.4984	0.5014		0.51	5.7	TM			
100	TM	1,2-Dibromo-3-chloropropane		0.1511	0.1177	0.1463	0.1385	0.1407	0.1469	0.1473	0.1698		0.14	10.0	TM			
101	TML	1,2,4-Trichlorobenzene		3.861	2.081	1.373	0.9225	0.8414	0.8652	0.9154	1.016		1.5	71	TML	0.997		
102	TML	Hexachlorobutadiene		1.148	0.7101	0.4433	0.3486	0.3251	0.3265	0.3317	0.3527		0.50	59	TML	0.999		
103	TML	Naphthalene				3.786	1.883	1.504	1.435	1.543	1.717		2.0	46	TML	0.996		
104	TML	1,2,3-Trichlorobenzene		1.939	1.113	0.6783	0.4393	0.4194	0.4051	0.4623	0.4821		0.74	73	TML	0.998		
105																		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L10.D Vial: 4
Acq On : 12 Mar 20 12:10 Operator:
Sample : 0.3ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	4.65	96	380864	25.00	ppb		0.00
64) Chlorobenzene-D5 (IS)	8.36	117	407424	25.00	ppb		0.00
79) 1,4-Dichlorobenzene-D (IS)	10.90	152	230144	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	3.62	111	73542	6.77	ppb		0.00
Spiked Amount 25.000			Recovery = 27.072%				
44) 1,2-DCA-D4(S)	4.11	65	73406	6.70	ppb		0.00
Spiked Amount 25.000			Recovery = 26.812%				
65) Toluene-D8(S)	6.73	98	245880	7.00	ppb		0.00
Spiked Amount 25.000			Recovery = 27.992%				
73) 4-Bromofluorobenzene(S)	9.66	95	99612	7.50	ppb		0.00
Spiked Amount 25.000			Recovery = 30.004%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	0.67	85	2208	0.39	ppb		92
4) Freon 114	0.73	85	1880	0.33	ppb		93
5) Chloromethane	0.76	50	3972	0.29	ppb		99
6) Vinyl chloride	0.81	62	2228	0.28	ppb	#	43
8) Bromomethane	0.97	94	1140	0.40	ppb	#	79
9) Chloroethane	1.02	66	611	0.44	ppb		84
10) Dichlorofluoromethane	1.13	67	3060	0.31	ppb		91
11) Trichlorofluoromethane	1.16	101	2890	0.32	ppb		93
13) Acrolein	1.39	56	8661	14.62	ppb	#	76
14) Acetone	1.49	43	12468	2.92	ppb		94
15) Freon-113	1.46	101	1686	0.32	ppb	#	80
16) 1,1-DCE	1.45	61	2487	0.32	ppb	#	81
17) t-Butanol	1.90	59	6178	12.48	ppb	#	81
19) Acetonitrile	1.67	41	14576	16.11	ppb		94
20) Methyl Acetate	1.72	43	4426	0.86	ppb		96
21) Iodomethane	1.53	142	1818	1.36	ppb		94
22) Acrylonitrile	1.97	53	2146	0.30	ppb	#	72
24) Carbon disulfide	1.57	76	4963	0.34	ppb	#	76
25) Methyl t-butyl ether (MtBE	2.01	73	4868	0.37	ppb	#	85
26) Trans-1,2-DCE	1.99	61	2415	0.31	ppb		85
27) Diisopropyl Ether	2.48	45	7525	0.41	ppb	#	89
29) 1,1-DCA	2.35	63	3763	0.34	ppb		99
30) Vinyl Acetate	2.48	45	7525	0.41	ppb	#	89
32) MEK (2-Butanone)	3.03	43	1825	1.45	ppb		95
33) Cis-1,2-DCE	2.96	61	3226	0.33	ppb	#	88
34) 2,2-Dichloropropane	2.95	77	3355	0.40	ppb		97
37) Chloroform	3.40	83	4110	0.35	ppb		93
38) Bromochloromethane	3.24	130	1821	0.38	ppb		90
40) 1,1,1-TCA	3.59	97	3026	0.33	ppb	#	78
41) Cyclohexane	3.66	56	2794	0.35	ppb		80
42) 1,1-Dichloropropene	3.86	75	2741	0.36	ppb		94
43) 2,2,4-Trimethylpentane	4.41	57	5704	0.35	ppb		97
45) Carbon Tetrachloride	3.86	117	2269	0.28	ppb		83
48) 1,2-DCA	4.23	62	2962	0.36	ppb		99
49) Benzene	4.18	78	11064	0.44	ppb		93
50) TCE	5.18	130	2321	0.33	ppb		97
51) 2-Pentanone	5.52	43	36096	11.83	ppb		96
52) 1,2-Dichloropropane	5.45	63	2030	0.32	ppb		93
53) Bromodichloromethane	5.85	83	2518	0.29	ppb		94

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

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L10.D Vial: 4
Acq On : 12 Mar 20 12:10 Operator:
Sample : 0.3ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

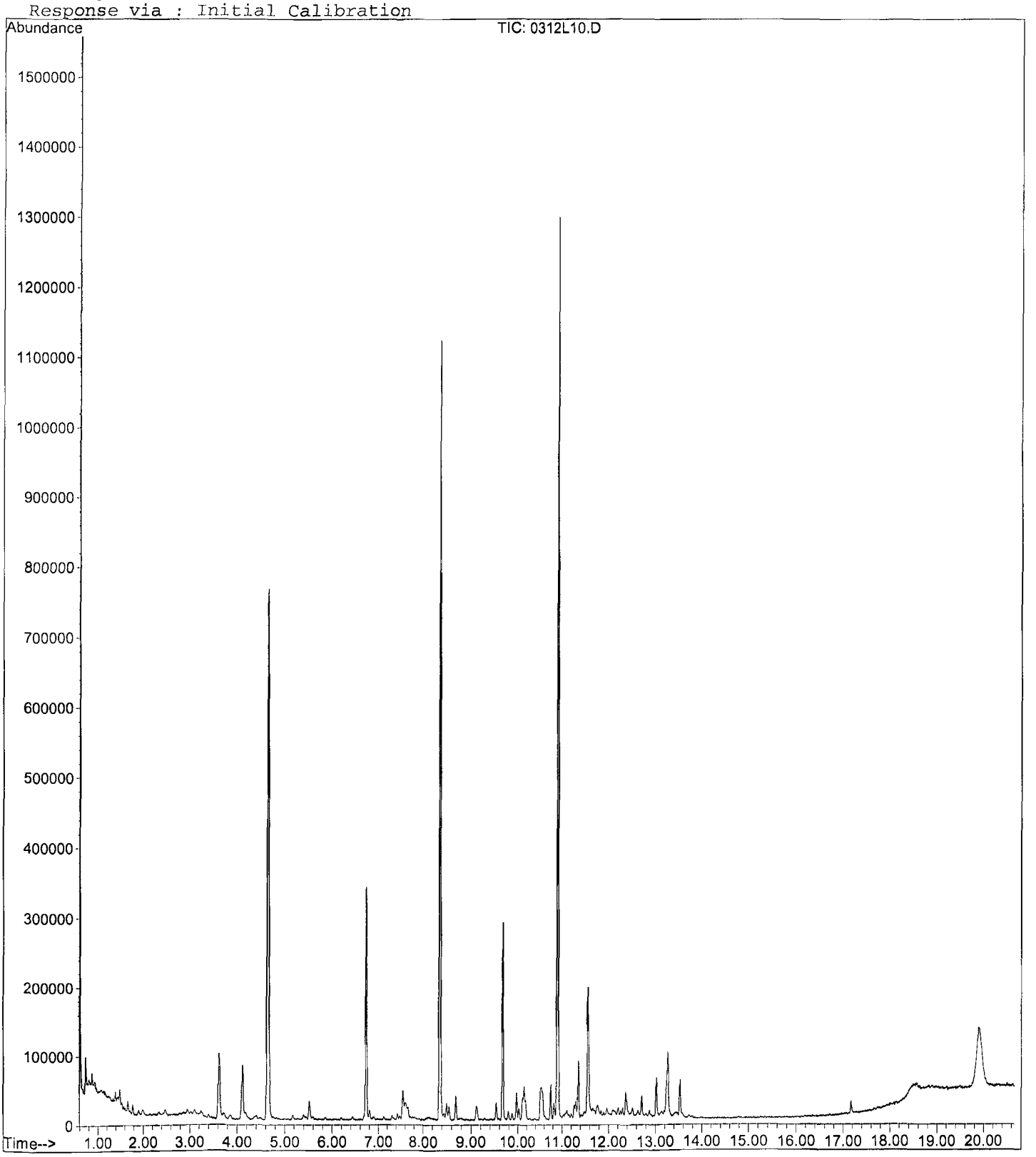
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
54)	Methyl Cyclohexane	5.40	83	2241	0.28	ppb		74
55)	Dibromomethane	5.59	174	1568	0.30	ppb	#	84
57)	MIBK (methyl isobutyl ket	6.68	43	4755	0.94	ppb		91
58)	1-Bromo-2-chloroethane	6.20	63	2760	0.31	ppb		93
59)	Cis-1,3-Dichloropropene	6.43	75	2884	0.31	ppb		96
60)	Toluene	6.80	91	10557	0.40	ppb		94
61)	Trans-1,3-Dichloropropene	7.12	75	1974	0.26	ppb	#	48
62)	1,1,2-TCA	7.31	97	1982	0.32	ppb	#	78
63)	2-Hexanone	7.67	43	3586	2.96	ppb	#	82
66)	1,2-EDB	7.80	107	1782	0.29	ppb		85
67)	Tetrachloroethene	7.43	166	2349	0.31	ppb		82
68)	1-Chlorohexane	8.45	91	2366	0.33	ppb		82
69)	1,1,1,2-Tetrachloroethane	8.50	131	2269	0.33	ppb		98
70)	m&p-Xylene	8.69	91	20284	0.96	ppb		95
71)	o-Xylene	9.11	91	10388	0.47	ppb		96
72)	Styrene	9.13	104	6627	0.39	ppb		88
74)	1,3-Dichloropropane	7.48	76	2803	0.29	ppb		88
75)	Dibromochloromethane	7.72	129	2073	0.30	ppb	#	70
76)	Chlorobenzene	8.38	112	7079	0.40	ppb		95
77)	Ethylbenzene	8.55	91	13796	0.49	ppb		99
78)	Bromoform	9.28	173	1481	0.31	ppb		99
80)	Isopropylbenzene	9.53	105	9691	0.58	ppb		98
81)	1,1,2,2-Tetrachloroethane	9.86	83	2464	0.32	ppb		100
82)	1,2,3-Trichloropropane	9.88	110	1099	0.43	ppb		83
83)	t-1,4-Dichloro-2-Butene	9.94	53	223	0.18	ppb		93
84)	Bromobenzene	9.80	156	3953	0.48	ppb		95
85)	n-Propylbenzene	9.98	91	28217	1.25	ppb		99
86)	4-Ethyltoluene	10.10	105	11705	1.26	ppb		94
87)	2-Chlorotoluene	10.03	91	5584	0.48	ppb		89
88)	1,3,5-Trimethylbenzene	10.18	105	14536	0.60	ppb		96
89)	4-Chlorotoluene	10.15	91	8065	0.64	ppb		91
90)	Tert-Butylbenzene	10.52	119	20123	1.20	ppb		94
91)	1,2,4-Trimethylbenzene	10.56	105	36324	1.35	ppb		90
92)	Sec-Butylbenzene	10.75	105	33890	1.40	ppb		92
93)	p-Isopropyltoluene	10.92	119	28348	1.40	ppb		96
94)	Benzyl Chloride	11.08	91	2169	0.39	ppb		87
95)	1,3-DCB	10.82	146	9979	0.64	ppb		97
96)	1,4-DCB	10.92	146	12308	0.78	ppb		93
97)	n-Butylbenzene	11.35	91	45763	2.39	ppb		100
98)	1,2-DCB	11.30	146	9721	0.87	ppb		95
99)	Hexachloroethane	11.57	117	1623	0.34	ppb	#	59
100)	1,2-Dibromo-3-chloropropan	12.14	157	402	0.30	ppb	#	86
101)	1,2,4-Trichlorobenzene	13.02	180	21607	2.81	ppb		86
102)	Hexachlorobutadiene	13.24	225	6427	2.02	ppb	#	86
103)	Naphthalene	13.26	128	80056	5.79	ppb		99
104)	1,2,3-Trichlorobenzene	13.53	182	10197	2.48	ppb		99

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

Data File : M:\LOKI\DATA\200312\0312L10.D Vial: 4
Acq On : 12 Mar 20 12:10 Operator:
Sample : 0.3ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L11.D Vial: 5
Acq On : 12 Mar 20 12:39 Operator:
Sample : 0.5ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	4.64	96	392064	25.00	ppb		0.00
64) Chlorobenzene-D5 (IS)	8.36	117	424896	25.00	ppb		0.00
79) 1,4-Dichlorobenzene-D (IS)	10.90	152	230976	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	3.62	111	56000	5.01	ppb		0.00
Spiked Amount 25.000			Recovery = 20.024%				
44) 1,2-DCA-D4(S)	4.11	65	57061	5.06	ppb		0.00
Spiked Amount 25.000			Recovery = 20.248%				
65) Toluene-D8(S)	6.73	98	192095	5.24	ppb		0.00
Spiked Amount 25.000			Recovery = 20.972%				
73) 4-Bromofluorobenzene(S)	9.66	95	76122	5.50	ppb		0.00
Spiked Amount 25.000			Recovery = 21.988%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	0.68	85	3194	0.55	ppb	#	87
4) Freon 114	0.73	85	3577	0.61	ppb		99
5) Chloromethane	0.76	50	5557	0.49	ppb		90
6) Vinyl chloride	0.81	62	4705	0.57	ppb	#	69
8) Bromomethane	0.97	94	1372	0.46	ppb	#	76
9) Chloroethane	1.02	66	905	0.64	ppb		90
10) Dichlorofluoromethane	1.13	67	4927	0.48	ppb		97
11) Trichlorofluoromethane	1.16	101	4590	0.49	ppb		96
13) Acrolein	1.39	56	2103	3.45	ppb		91
14) Acetone	1.49	43	11346	1.78	ppb		89
15) Freon-113	1.46	101	2845	0.53	ppb		95
16) 1,1-DCE	1.45	61	4145	0.51	ppb	#	94
17) t-Butanol	1.91	59	12444	24.41	ppb		94
19) Acetonitrile	1.67	41	26838	28.82	ppb	#	68
20) Methyl Acetate	1.72	43	3882	0.71	ppb	#	82
21) Iodomethane	1.54	142	2664	1.45	ppb	#	80
22) Acrylonitrile	1.97	53	2437	0.39	ppb		96
23) Methylene chloride	1.77	84	6327	0.23	ppb		97
24) Carbon disulfide	1.57	76	7731	0.52	ppb		98
25) Methyl t-butyl ether (MtBE	2.01	73	7131	0.53	ppb	#	90
26) Trans-1,2-DCE	1.99	61	4065	0.51	ppb		96
27) Diisopropyl Ether	2.47	45	10465	0.55	ppb		94
29) 1,1-DCA	2.34	63	5923	0.52	ppb		97
30) Vinyl Acetate	2.47	45	10465	0.55	ppb		94
32) MEK (2-Butanone)	3.03	43	1620	1.25	ppb		96
33) Cis-1,2-DCE	2.96	61	5546	0.55	ppb		96
34) 2,2-Dichloropropane	2.95	77	5108	0.59	ppb	#	88
37) Chloroform	3.40	83	6204	0.51	ppb		96
38) Bromochloromethane	3.25	130	2589	0.52	ppb		92
40) 1,1,1-TCA	3.60	97	4350	0.47	ppb		83
41) Cyclohexane	3.68	56	4318	0.53	ppb	#	81
42) 1,1-Dichloropropene	3.88	75	4262	0.54	ppb		95
43) 2,2,4-Trimethylpentane	4.39	57	8211	0.49	ppb		88
45) Carbon Tetrachloride	3.85	117	3943	0.48	ppb		97
48) 1,2-DCA	4.23	62	4224	0.49	ppb		95
49) Benzene	4.18	78	15377	0.60	ppb		99
50) TCE	5.17	130	3453	0.48	ppb		87
51) 2-Pentanone	5.52	43	72545	23.10	ppb		97
52) 1,2-Dichloropropane	5.45	63	3240	0.50	ppb	#	79

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

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L11.D Vial: 5
Acq On : 12 Mar 20 12:39 Operator:
Sample : 0.5ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
53)	Bromodichloromethane	5.86	83	4372	0.49	ppb		92
54)	Methyl Cyclohexane	5.40	83	4208	0.51	ppb		90
55)	Dibromomethane	5.59	174	2423	0.45	ppb		88
57)	MIBK (methyl isobutyl ket	6.68	43	6269	1.24	ppb	#	69
58)	1-Bromo-2-chloroethane	6.19	63	4430	0.48	ppb		94
59)	Cis-1,3-Dichloropropene	6.43	75	4549	0.48	ppb		97
60)	Toluene	6.80	91	15074	0.55	ppb		97
61)	Trans-1,3-Dichloropropene	7.12	75	3845	0.49	ppb		92
62)	1,1,2-TCA	7.31	97	3318	0.51	ppb		94
63)	2-Hexanone	7.67	43	4944	3.61	ppb		94
66)	1,2-EDB	7.81	107	3169	0.49	ppb		95
67)	Tetrachloroethene	7.43	166	4107	0.52	ppb		88
68)	1-Chlorohexane	8.44	91	3718	0.50	ppb		95
69)	1,1,1,2-Tetrachloroethane	8.51	131	3792	0.53	ppb		86
70)	m&p-Xylene	8.69	91	23709	1.07	ppb		96
71)	o-Xylene	9.11	91	13379	0.58	ppb		97
72)	Styrene	9.13	104	9000	0.51	ppb		95
74)	1,3-Dichloropropane	7.48	76	5188	0.51	ppb	#	71
75)	Dibromochloromethane	7.72	129	3375	0.47	ppb		88
76)	Chlorobenzene	8.39	112	9996	0.54	ppb		97
77)	Ethylbenzene	8.55	91	17113	0.58	ppb		96
78)	Bromoform	9.28	173	2276	0.45	ppb		97
80)	Isopropylbenzene	9.53	105	10101	0.60	ppb		94
81)	1,1,2,2-Tetrachloroethane	9.86	83	3813	0.49	ppb		93
82)	1,2,3-Trichloropropane	9.88	110	1578	0.62	ppb		97
83)	t-1,4-Dichloro-2-Butene	9.94	53	670	0.55	ppb	#	26
84)	Bromobenzene	9.79	156	5130	0.62	ppb		95
85)	n-Propylbenzene	9.97	91	28044	1.24	ppb		99
86)	4-Ethyltoluene	10.10	105	12151	1.28	ppb		96
87)	2-Chlorotoluene	10.02	91	6667	0.57	ppb		91
88)	1,3,5-Trimethylbenzene	10.18	105	15455	0.64	ppb		90
89)	4-Chlorotoluene	10.15	91	8051	0.63	ppb		94
90)	Tert-Butylbenzene	10.51	119	19725	1.18	ppb		99
91)	1,2,4-Trimethylbenzene	10.56	105	33344	1.22	ppb		88
92)	Sec-Butylbenzene	10.75	105	30990	1.29	ppb		98
93)	p-Isopropyltoluene	10.92	119	24719	1.26	ppb		97
94)	Benzyl Chloride	11.08	91	2791	0.50	ppb		98
95)	1,3-DCB	10.82	146	10236	0.66	ppb		97
96)	1,4-DCB	10.92	146	12203	0.77	ppb		97
97)	n-Butylbenzene	11.35	91	38655	2.05	ppb		97
98)	1,2-DCB	11.30	146	10804	0.94	ppb		92
99)	Hexachloroethane	11.57	117	2636	0.56	ppb	#	87
100)	1,2-Dibromo-3-chloropropan	12.13	157	698	0.52	ppb		88
101)	1,2,4-Trichlorobenzene	13.02	180	17838	2.40	ppb		99
102)	Hexachlorobutadiene	13.24	225	5303	1.67	ppb		94
103)	Naphthalene	13.26	128	67250	4.95	ppb		97
104)	1,2,3-Trichlorobenzene	13.53	182	8955	2.19	ppb		100

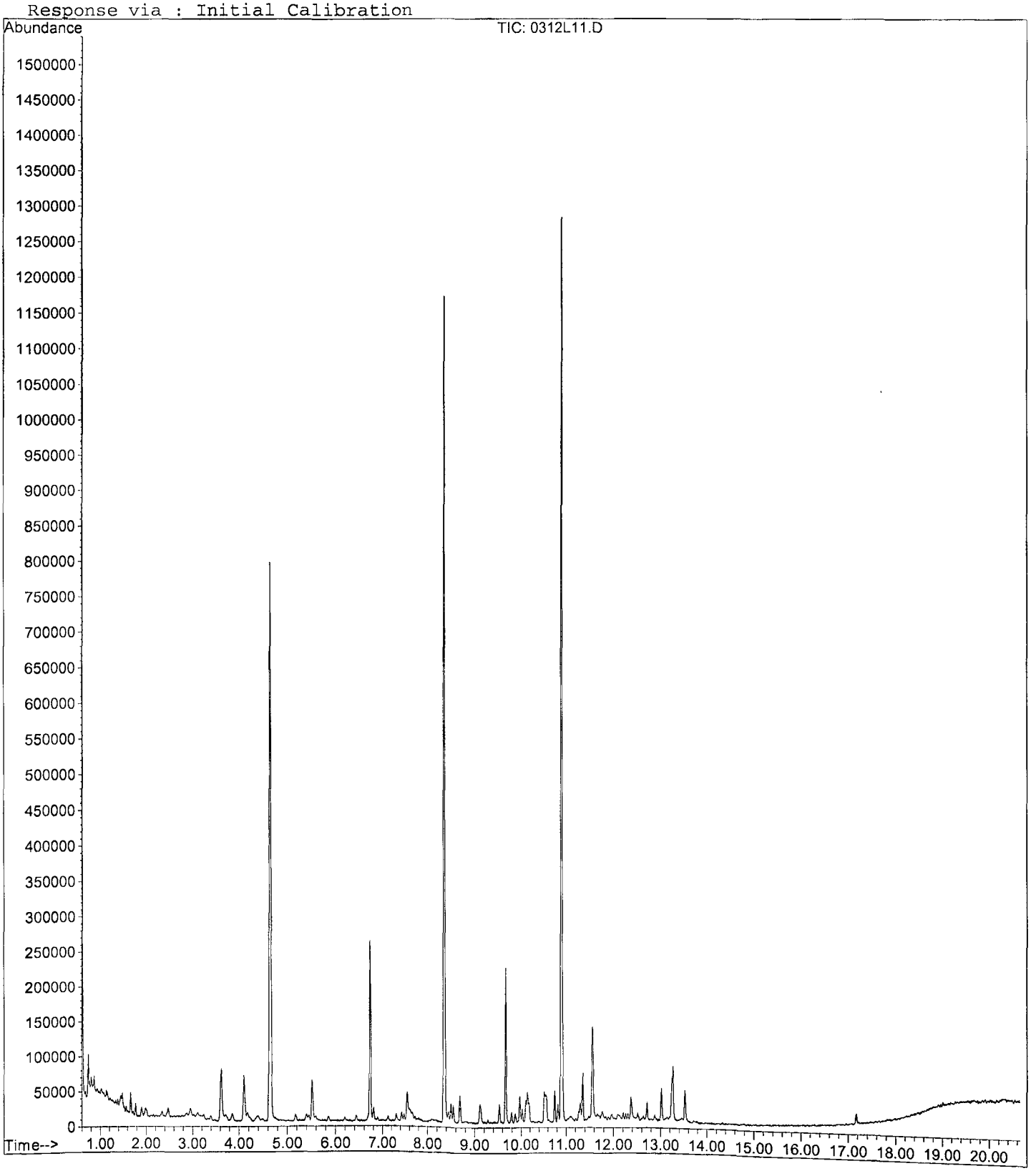
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0312L11.D Vial: 5
Acq On : 12 Mar 20 12:39 Operator:
Sample : 0.5ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L12.D Vial: 6
Acq On : 12 Mar 20 13:07 Operator:
Sample : 1.0ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	4.64	96	384960	25.00	ppb		0.00
64) Chlorobenzene-D5 (IS)	8.36	117	426432	25.00	ppb		0.00
79) 1,4-Dichlorobenzene-D (IS)	10.90	152	218688	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	3.62	111	106273	9.68	ppb		0.00
Spiked Amount 25.000			Recovery =	38.704%			
44) 1,2-DCA-D4(S)	4.11	65	106813	9.65	ppb		0.00
Spiked Amount 25.000			Recovery =	38.600%			
65) Toluene-D8(S)	6.73	98	347519	9.45	ppb		0.00
Spiked Amount 25.000			Recovery =	37.800%			
73) 4-Bromofluorobenzene(S)	9.66	95	133350	9.59	ppb		0.00
Spiked Amount 25.000			Recovery =	38.380%			
Target Compounds							Qvalue
3) Dichlorodifluoromethane	0.68	85	6135	1.08	ppb		99
4) Freon 114	0.73	85	5963	1.03	ppb		87
5) Chloromethane	0.76	50	9185	1.00	ppb	#	87
6) Vinyl chloride	0.81	62	8039	0.99	ppb		97
8) Bromomethane	0.97	94	3297	1.13	ppb		98
9) Chloroethane	1.02	66	1375	0.99	ppb		63
10) Dichlorofluoromethane	1.13	67	10637	1.06	ppb		95
11) Trichlorofluoromethane	1.16	101	9592	1.05	ppb		91
13) Acrolein	1.39	56	28355	47.37	ppb	#	74
14) Acetone	1.49	43	10783	1.50	ppb		89
15) Freon-113	1.46	101	5435	1.02	ppb		98
16) 1,1-DCE	1.45	61	8545	1.08	ppb		97
17) t-Butanol	1.91	59	21986	43.93	ppb		100
19) Acetonitrile	1.66	41	47779	52.26	ppb		90
20) Methyl Acetate	1.72	43	5611	1.11	ppb		99
21) Iodomethane	1.53	142	5736	1.82	ppb		96
22) Acrylonitrile	1.96	53	3135	0.69	ppb		97
23) Methylene chloride	1.77	84	9486	0.74	ppb		97
24) Carbon disulfide	1.57	76	16068	1.10	ppb		95
25) Methyl t-butyl ether (MtBE	2.00	73	13567	1.03	ppb		94
26) Trans-1,2-DCE	1.98	61	7922	1.01	ppb		96
27) Diisopropyl Ether	2.47	45	18689	1.01	ppb		99
29) 1,1-DCA	2.34	63	11567	1.03	ppb		99
30) Vinyl Acetate	2.47	45	18689	1.01	ppb		99
32) MEK (2-Butanone)	3.03	43	2161	1.70	ppb		92
33) Cis-1,2-DCE	2.96	61	10342	1.04	ppb		94
34) 2,2-Dichloropropane	2.95	77	9177	1.07	ppb	#	83
37) Chloroform	3.40	83	12409	1.05	ppb		89
38) Bromochloromethane	3.25	130	4862	0.99	ppb	#	72
40) 1,1,1-TCA	3.60	97	8966	0.98	ppb		91
41) Cyclohexane	3.67	56	8552	1.07	ppb		93
42) 1,1-Dichloropropene	3.87	75	7576	0.99	ppb		86
43) 2,2,4-Trimethylpentane	4.40	57	17455	1.06	ppb		94
45) Carbon Tetrachloride	3.85	117	7896	0.98	ppb		96
48) 1,2-DCA	4.23	62	8978	1.07	ppb	#	87
49) Benzene	4.18	78	26891	1.07	ppb		92
50) TCE	5.18	130	7146	1.01	ppb		87
51) 2-Pentanone	5.52	43	142144	46.10	ppb		97
52) 1,2-Dichloropropane	5.45	63	6369	1.00	ppb		99

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

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L12.D Vial: 6
Acq On : 12 Mar 20 13:07 Operator:
Sample : 1.0ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
53)	Bromodichloromethane	5.85	83	8799	1.00	ppb		95
54)	Methyl Cyclohexane	5.40	83	8466	1.04	ppb		86
55)	Dibromomethane	5.60	174	5128	0.98	ppb		92
57)	MIBK (methyl isobutyl ket	6.68	43	6899	1.40	ppb		97
58)	1-Bromo-2-chloroethane	6.18	63	9038	1.00	ppb		98
59)	Cis-1,3-Dichloropropene	6.43	75	8896	0.95	ppb		95
60)	Toluene	6.81	91	26244	0.97	ppb		99
61)	Trans-1,3-Dichloropropene	7.12	75	6929	0.89	ppb		94
62)	1,1,2-TCA	7.31	97	6241	0.98	ppb		91
63)	2-Hexanone	7.67	43	5300	3.85	ppb		93
66)	1,2-EDB	7.81	107	6180	0.96	ppb		89
67)	Tetrachloroethene	7.43	166	8128	1.02	ppb		93
68)	1-Chlorohexane	8.45	91	6860	0.92	ppb		95
69)	1,1,1,2-Tetrachloroethane	8.50	131	6902	0.96	ppb		76
70)	m&p-Xylene	8.69	91	43125	1.95	ppb		94
71)	o-Xylene	9.11	91	22222	0.96	ppb		94
72)	Styrene	9.13	104	15034	0.85	ppb		87
74)	1,3-Dichloropropane	7.48	76	10084	0.98	ppb		91
75)	Dibromochloromethane	7.72	129	6829	0.95	ppb		90
76)	Chlorobenzene	8.39	112	18689	1.00	ppb		92
77)	Ethylbenzene	8.55	91	28713	0.98	ppb		95
78)	Bromoform	9.28	173	4682	0.92	ppb		96
80)	Isopropylbenzene	9.53	105	17200	1.08	ppb		100
81)	1,1,2,2-Tetrachloroethane	9.87	83	8126	1.11	ppb		98
82)	1,2,3-Trichloropropane	9.88	110	2487	1.03	ppb		98
83)	t-1,4-Dichloro-2-Butene	9.93	53	1137	0.99	ppb	#	78
84)	Bromobenzene	9.79	156	8326	1.06	ppb		99
85)	n-Propylbenzene	9.98	91	38831	1.64	ppb		99
86)	4-Ethyltoluene	10.10	105	18016	1.67	ppb		100
87)	2-Chlorotoluene	10.02	91	11461	1.03	ppb		98
88)	1,3,5-Trimethylbenzene	10.18	105	24136	1.05	ppb		100
89)	4-Chlorotoluene	10.15	91	12802	1.06	ppb		96
90)	Tert-Butylbenzene	10.51	119	25043	1.51	ppb		100
91)	1,2,4-Trimethylbenzene	10.57	105	38550	1.53	ppb		96
92)	Sec-Butylbenzene	10.75	105	38928	1.63	ppb		100
93)	p-Isopropyltoluene	10.92	119	31679	1.59	ppb		100
94)	Benzyl Chloride	11.08	91	5470	1.04	ppb		100
95)	1,3-DCB	10.82	146	15904	1.08	ppb		93
96)	1,4-DCB	10.92	146	18032	1.24	ppb		97
97)	n-Butylbenzene	11.35	91	40117	2.23	ppb		97
98)	1,2-DCB	11.30	146	17355	1.48	ppb		94
99)	Hexachloroethane	11.57	117	4572	1.02	ppb	#	86
100)	1,2-Dibromo-3-chloropropan	12.13	157	1030	0.81	ppb	#	83
101)	1,2,4-Trichlorobenzene	13.02	180	18201	2.55	ppb		96
102)	Hexachlorobutadiene	13.24	225	6212	2.06	ppb	#	89
103)	Naphthalene	13.26	128	65608	5.08	ppb		99
104)	1,2,3-Trichlorobenzene	13.53	182	9733	2.49	ppb		95

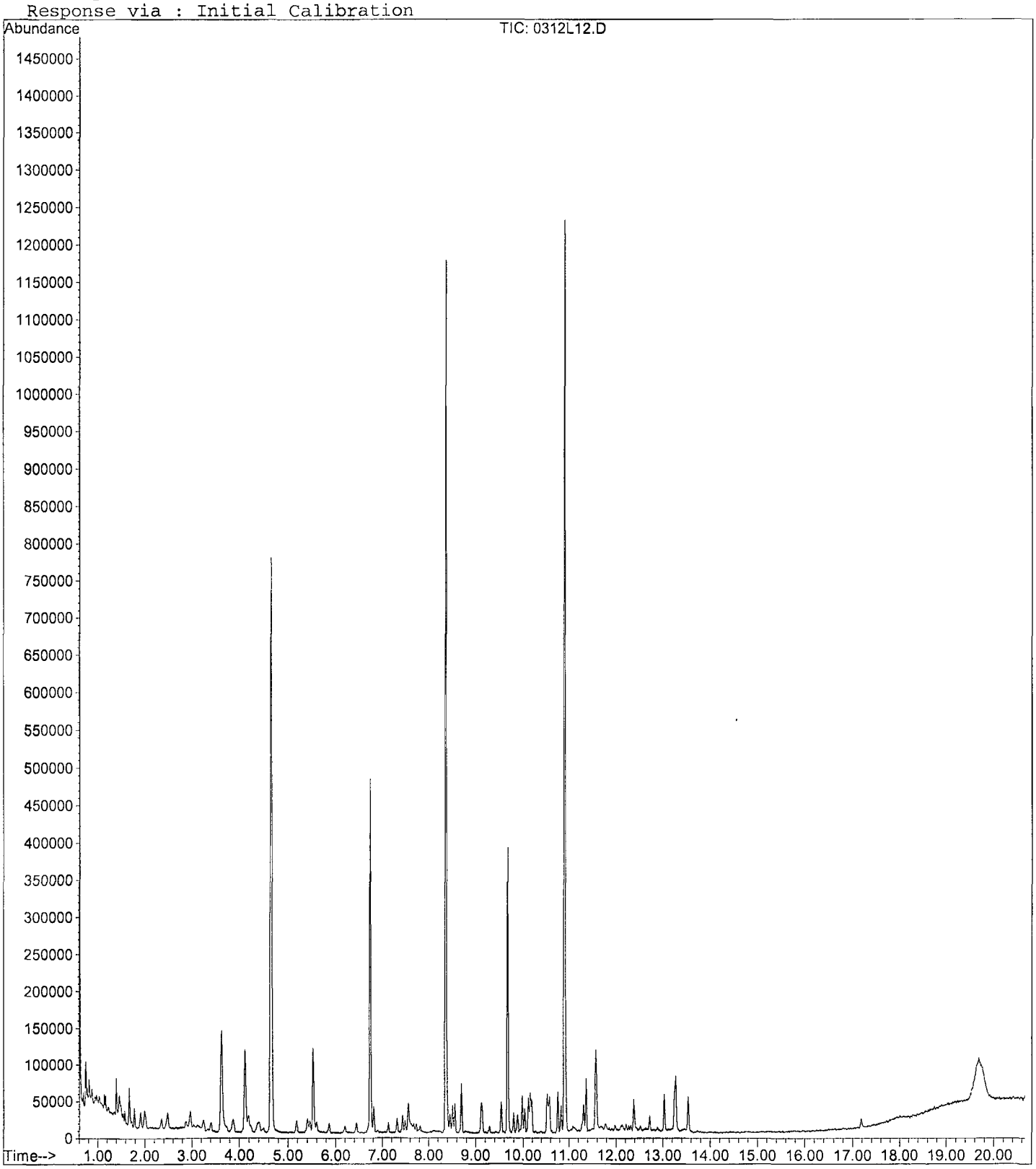
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0312L12.D Vial: 6
Acq On : 12 Mar 20 13:07 Operator:
Sample : 1.0ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L13.D Vial: 7
Acq On : 12 Mar 20 13:36 Operator:
Sample : 2.0ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	4.65	96	379008	25.00	ppb		0.00
64) Chlorobenzene-D5 (IS)	8.36	117	403200	25.00	ppb		0.00
79) 1,4-Dichlorobenzene-D (IS)	10.90	152	222720	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	3.62	111	106459	9.85	ppb		0.00
Spiked Amount 25.000			Recovery = 39.380%				
44) 1,2-DCA-D4(S)	4.11	65	108929	10.00	ppb		0.00
Spiked Amount 25.000			Recovery = 39.984%				
65) Toluene-D8(S)	6.73	98	354209	10.19	ppb		0.00
Spiked Amount 25.000			Recovery = 40.748%				
73) 4-Bromofluorobenzene(S)	9.66	95	133355	10.15	ppb		0.00
Spiked Amount 25.000			Recovery = 40.592%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	0.67	85	13708	2.46	ppb		96
4) Freon 114	0.73	85	12975	2.29	ppb		98
5) Chloromethane	0.76	50	17463	2.17	ppb		100
6) Vinyl chloride	0.81	62	17560	2.20	ppb		95
8) Bromomethane	0.97	94	6244	2.18	ppb		98
9) Chloroethane	1.02	66	3214	2.34	ppb		83
10) Dichlorofluoromethane	1.13	67	20936	2.11	ppb		99
11) Trichlorofluoromethane	1.16	101	19158	2.13	ppb		95
13) Acrolein	1.39	56	39981	67.84	ppb	#	76
14) Acetone	1.49	43	11014	1.81	ppb		98
15) Freon-113	1.46	101	10519	2.01	ppb		99
16) 1,1-DCE	1.45	61	15893	2.03	ppb		97
17) t-Butanol	1.91	59	33727	68.44	ppb		98
19) Acetonitrile	1.66	41	68504	76.10	ppb		97
20) Methyl Acetate	1.72	43	11462	2.45	ppb		94
21) Iodomethane	1.53	142	11915	2.58	ppb		96
22) Acrylonitrile	1.96	53	6285	1.98	ppb		85
23) Methylene chloride	1.77	84	15236	1.69	ppb		98
24) Carbon disulfide	1.57	76	29446	2.04	ppb		98
25) Methyl t-butyl ether (MtBE	2.01	73	25390	1.96	ppb		98
26) Trans-1,2-DCE	1.98	61	15586	2.02	ppb		95
27) Diisopropyl Ether	2.47	45	38235	2.10	ppb		94
29) 1,1-DCA	2.34	63	22336	2.02	ppb		100
30) Vinyl Acetate	2.47	45	38235	2.10	ppb		94
32) MEK (2-Butanone)	3.03	43	3181	2.54	ppb	#	76
33) Cis-1,2-DCE	2.96	61	20154	2.07	ppb		96
34) 2,2-Dichloropropane	2.94	77	17488	2.08	ppb		93
37) Chloroform	3.40	83	24671	2.11	ppb		94
38) Bromochloromethane	3.25	130	9737	2.02	ppb		90
40) 1,1,1-TCA	3.61	97	19006	2.11	ppb		94
41) Cyclohexane	3.67	56	15457	1.96	ppb		96
42) 1,1-Dichloropropene	3.87	75	15580	2.06	ppb		97
43) 2,2,4-Trimethylpentane	4.40	57	33075	2.03	ppb		94
45) Carbon Tetrachloride	3.85	117	16082	2.03	ppb		92
48) 1,2-DCA	4.23	62	16628	2.01	ppb		98
49) Benzene	4.18	78	48977	1.97	ppb		96
50) TCE	5.17	130	13736	1.96	ppb		86
51) 2-Pentanone	5.52	43	210699	69.41	ppb		98
52) 1,2-Dichloropropane	5.45	63	12353	1.96	ppb		98

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

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L13.D Vial: 7
Acq On : 12 Mar 20 13:36 Operator:
Sample : 2.0ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
53)	Bromodichloromethane	5.86	83	16965	1.96	ppb		93
54)	Methyl Cyclohexane	5.40	83	15416	1.92	ppb		91
55)	Dibromomethane	5.59	174	10336	2.00	ppb		99
57)	MIBK (methyl isobutyl ket	6.68	43	11708	2.51	ppb		96
58)	1-Bromo-2-chloroethane	6.19	63	17607	1.98	ppb		100
59)	Cis-1,3-Dichloropropene	6.43	75	18499	2.00	ppb		97
60)	Toluene	6.80	91	50815	1.91	ppb		99
61)	Trans-1,3-Dichloropropene	7.12	75	14489	1.89	ppb		92
62)	1,1,2-TCA	7.31	97	12799	2.05	ppb		90
63)	2-Hexanone	7.67	43	5560	4.03	ppb		94
66)	1,2-EDB	7.81	107	12126	1.98	ppb		100
67)	Tetrachloroethene	7.43	166	15871	2.10	ppb		94
68)	1-Chlorohexane	8.45	91	13885	1.96	ppb		97
69)	1,1,1,2-Tetrachloroethane	8.51	131	13549	1.99	ppb		90
70)	m&p-Xylene	8.69	91	77841	3.71	ppb		97
71)	o-Xylene	9.11	91	40565	1.86	ppb		97
72)	Styrene	9.13	104	30654	1.83	ppb		97
74)	1,3-Dichloropropane	7.48	76	18998	1.96	ppb		97
75)	Dibromochloromethane	7.72	129	13223	1.95	ppb		94
76)	Chlorobenzene	8.38	112	35237	2.00	ppb		95
77)	Ethylbenzene	8.55	91	51844	1.86	ppb		96
78)	Bromoform	9.28	173	9830	2.05	ppb		99
80)	Isopropylbenzene	9.53	105	31128	1.91	ppb		100
81)	1,1,2,2-Tetrachloroethane	9.87	83	14579	1.95	ppb		97
82)	1,2,3-Trichloropropane	9.88	110	5057	2.07	ppb		86
83)	t-1,4-Dichloro-2-Butene	9.93	53	2543	2.17	ppb	#	72
84)	Bromobenzene	9.79	156	15481	1.94	ppb		76
85)	n-Propylbenzene	9.98	91	63946	2.40	ppb		99
86)	4-Ethyltoluene	10.10	105	30368	2.38	ppb		98
87)	2-Chlorotoluene	10.02	91	22629	1.99	ppb		98
88)	1,3,5-Trimethylbenzene	10.18	105	43315	1.85	ppb		94
89)	4-Chlorotoluene	10.15	91	23432	1.91	ppb		99
90)	Tert-Butylbenzene	10.52	119	40830	2.30	ppb		97
91)	1,2,4-Trimethylbenzene	10.57	105	57565	2.30	ppb		97
92)	Sec-Butylbenzene	10.75	105	59662	2.33	ppb		99
93)	p-Isopropyltoluene	10.92	119	51193	2.34	ppb		98
94)	Benzyl Chloride	11.08	91	9449	1.76	ppb		92
95)	1,3-DCB	10.82	146	29712	1.98	ppb		94
96)	1,4-DCB	10.92	146	30887	2.12	ppb		99
97)	n-Butylbenzene	11.35	91	51005	2.71	ppb		92
98)	1,2-DCB	11.30	146	27766	2.22	ppb		97
99)	Hexachloroethane	11.57	117	9080	1.99	ppb		97
100)	1,2-Dibromo-3-chloropropan	12.13	157	2606	2.02	ppb		91
101)	1,2,4-Trichlorobenzene	13.02	180	24456	3.21	ppb		97
102)	Hexachlorobutadiene	13.24	225	7898	2.56	ppb		98
103)	Naphthalene	13.27	128	67457	5.13	ppb		96
104)	1,2,3-Trichlorobenzene	13.53	182	12085	3.00	ppb		95

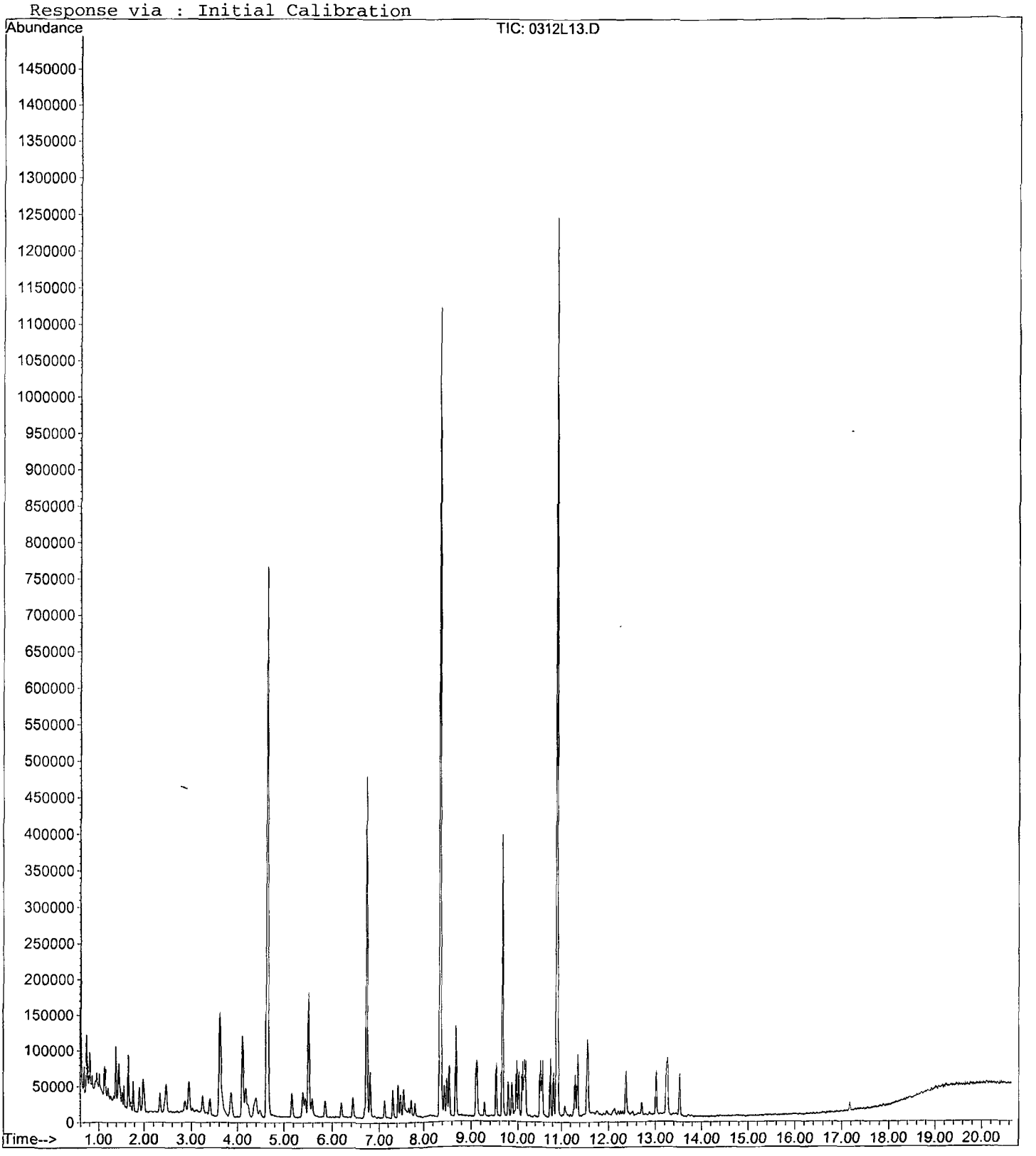
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0312L13.D Vial: 7
Acq On : 12 Mar 20 13:36 Operator:
Sample : 2.0ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L14.D Vial: 8
Acq On : 12 Mar 20 14:05 Operator:
Sample : 5.0ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	96	401984	25.00	ppb	0.00
64) Chlorobenzene-D5 (IS)	8.36	117	429376	25.00	ppb	0.00
79) 1,4-Dichlorobenzene-D (IS)	10.90	152	240192	25.00	ppb	0.00
System Monitoring Compounds						
39) Dibromofluoromethane(S)	3.62	111	279895	24.41	ppb	0.00
Spiked Amount 25.000			Recovery =	97.620%		
44) 1,2-DCA-D4(S)	4.11	65	278823	24.12	ppb	0.00
Spiked Amount 25.000			Recovery =	96.492%		
65) Toluene-D8(S)	6.73	98	947179	25.58	ppb	0.00
Spiked Amount 25.000			Recovery =	102.324%		
73) 4-Bromofluorobenzene(S)	9.66	95	344450	24.61	ppb	0.00
Spiked Amount 25.000			Recovery =	98.452%		
Target Compounds						Qvalue
3) Dichlorodifluoromethane	0.67	85	26413	4.47	ppb	97
4) Freon 114	0.73	85	23343	3.88	ppb	94
5) Chloromethane	0.76	50	40134	5.00	ppb	96
6) Vinyl chloride	0.81	62	42056	4.96	ppb	97
8) Bromomethane	0.97	94	15568	5.13	ppb	97
9) Chloroethane	1.02	66	7289	5.01	ppb	94
10) Dichlorofluoromethane	1.13	67	49288	4.69	ppb	98
11) Trichlorofluoromethane	1.16	101	47879	5.03	ppb	91
13) Acrolein	1.39	56	61237	97.97	ppb	82
14) Acetone	1.49	43	14662	4.05	ppb	99
15) Freon-113	1.47	101	24790	4.47	ppb	95
16) 1,1-DCE	1.45	61	37257	4.49	ppb	92
17) t-Butanol	1.91	59	48769	93.31	ppb	98
19) Acetonitrile	1.67	41	93134	97.55	ppb	96
20) Methyl Acetate	1.72	43	22193	4.58	ppb	93
21) Iodomethane	1.54	142	31350	4.70	ppb	98
22) Acrylonitrile	1.96	53	13447	4.58	ppb	89
23) Methylene chloride	1.78	84	35398	4.60	ppb	98
24) Carbon disulfide	1.57	76	67459	4.41	ppb	99
25) Methyl t-butyl ether (MtBE	2.01	73	62913	4.58	ppb	97
26) Trans-1,2-DCE	1.99	61	38124	4.66	ppb	98
27) Diisopropyl Ether	2.48	45	90197	4.66	ppb	97
29) 1,1-DCA	2.35	63	54774	4.68	ppb	97
30) Vinyl Acetate	2.48	45	90197	4.66	ppb	97
32) MEK (2-Butanone)	3.03	43	6525	4.91	ppb	98
33) Cis-1,2-DCE	2.96	61	48803	4.72	ppb	96
34) 2,2-Dichloropropane	2.95	77	40401	4.53	ppb	96
37) Chloroform	3.40	83	57376	4.63	ppb	98
38) Bromochloromethane	3.25	130	24408	4.77	ppb	99
40) 1,1,1-TCA	3.61	97	46684	4.89	ppb	90
41) Cyclohexane	3.67	56	36506	4.37	ppb	94
42) 1,1-Dichloropropene	3.87	75	36057	4.50	ppb	99
43) 2,2,4-Trimethylpentane	4.40	57	73762	4.27	ppb	97
45) Carbon Tetrachloride	3.85	117	39211	4.66	ppb	98
48) 1,2-DCA	4.24	62	42052	4.80	ppb	99
49) Benzene	4.18	78	118006	4.48	ppb	96
50) TCE	5.17	130	35652	4.80	ppb	95
51) 2-Pentanone	5.52	43	311230	96.66	ppb	99
52) 1,2-Dichloropropane	5.45	63	30613	4.58	ppb	97

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

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L14.D Vial: 8
Acq On : 12 Mar 20 14:05 Operator:
Sample : 5.0ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
53)	Bromodichloromethane	5.85	83	42930	4.68 ppb	94
54)	Methyl Cyclohexane	5.40	83	36922	4.34 ppb	92
55)	Dibromomethane	5.59	174	26277	4.79 ppb	98
57)	MIBK (methyl isobutyl ket	6.68	43	27154	5.63 ppb	89
58)	1-Bromo-2-chloroethane	6.19	63	44717	4.75 ppb	100
59)	Cis-1,3-Dichloropropene	6.43	75	44501	4.54 ppb	97
60)	Toluene	6.80	91	128866	4.57 ppb	98
61)	Trans-1,3-Dichloropropene	7.12	75	37983	4.68 ppb	97
62)	1,1,2-TCA	7.31	97	30734	4.63 ppb	98
63)	2-Hexanone	7.67	43	9678	5.96 ppb	94
66)	1,2-EDB	7.81	107	31785	4.88 ppb	96
67)	Tetrachloroethene	7.43	166	38816	4.82 ppb	98
68)	1-Chlorohexane	8.45	91	34988	4.65 ppb	98
69)	1,1,1,2-Tetrachloroethane	8.50	131	34645	4.78 ppb	98
70)	m&p-Xylene	8.69	91	200926	9.00 ppb	99
71)	o-Xylene	9.11	91	104734	4.51 ppb	99
72)	Styrene	9.13	104	80241	4.51 ppb	94
74)	1,3-Dichloropropane	7.48	76	49213	4.77 ppb	97
75)	Dibromochloromethane	7.72	129	34624	4.79 ppb	98
76)	Chlorobenzene	8.39	112	90782	4.83 ppb	98
77)	Ethylbenzene	8.55	91	132446	4.47 ppb	100
78)	Bromoform	9.28	173	23308	4.57 ppb	92
80)	Isopropylbenzene	9.53	105	77000	4.39 ppb	99
81)	1,1,2,2-Tetrachloroethane	9.87	83	40998	5.09 ppb	97
82)	1,2,3-Trichloropropane	9.88	110	12198	4.62 ppb	89
83)	t-1,4-Dichloro-2-Butene	9.93	53	5888	4.65 ppb	89
84)	Bromobenzene	9.79	156	39999	4.64 ppb	93
85)	n-Propylbenzene	9.98	91	156932	4.95 ppb	97
86)	4-Ethyltoluene	10.10	105	77920	4.84 ppb	99
87)	2-Chlorotoluene	10.03	91	54184	4.43 ppb	99
88)	1,3,5-Trimethylbenzene	10.18	105	112741	4.46 ppb	100
89)	4-Chlorotoluene	10.15	91	58744	4.45 ppb	99
90)	Tert-Butylbenzene	10.51	119	96672	4.81 ppb	98
91)	1,2,4-Trimethylbenzene	10.57	105	121526	4.65 ppb	99
92)	Sec-Butylbenzene	10.75	105	142606	4.86 ppb	98
93)	p-Isopropyltoluene	10.92	119	122296	4.80 ppb	96
94)	Benzyl Chloride	11.08	91	26966	4.65 ppb	96
95)	1,3-DCB	10.82	146	73339	4.54 ppb	98
96)	1,4-DCB	10.92	146	75278	4.85 ppb	98
97)	n-Butylbenzene	11.35	91	101695	4.79 ppb	100
98)	1,2-DCB	11.30	146	69093	4.87 ppb	98
99)	Hexachloroethane	11.57	117	25163	5.12 ppb	96
100)	1,2-Dibromo-3-chloropropan	12.13	157	6651	4.78 ppb	94
101)	1,2,4-Trichlorobenzene	13.02	180	44314	5.07 ppb	100
102)	Hexachlorobutadiene	13.24	225	16744	5.02 ppb	91
103)	Naphthalene	13.26	128	90443	6.21 ppb	98
104)	1,2,3-Trichlorobenzene	13.53	182	21104	4.76 ppb	95

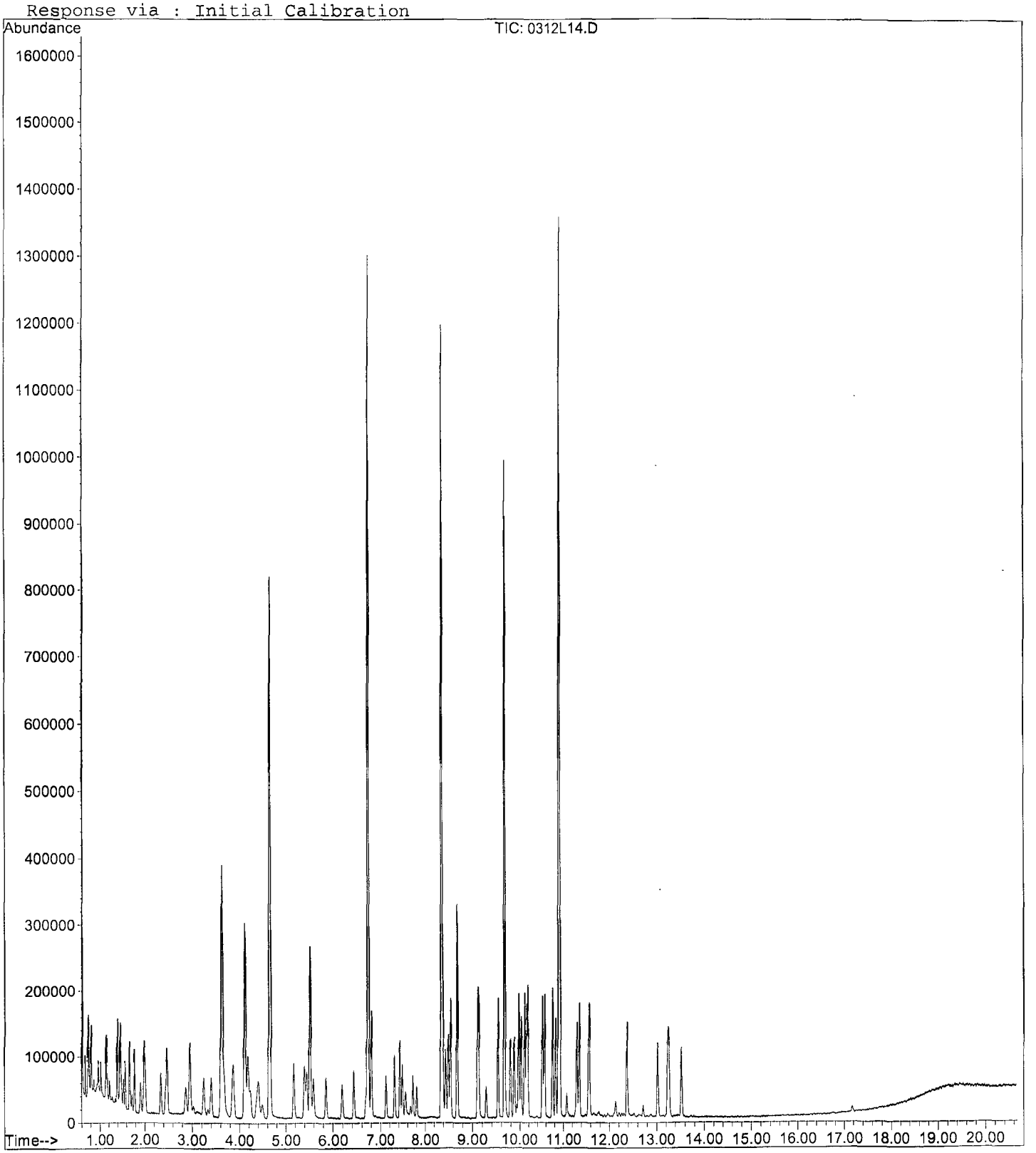
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0312L14.D Vial: 8
Acq On : 12 Mar 20 14:05 Operator:
Sample : 5.0ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L15.D Vial: 9
Acq On : 12 Mar 20 14:33 Operator:
Sample : 10ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.64	96	397184	25.00	ppb	0.00
64) Chlorobenzene-D5 (IS)	8.36	117	425536	25.00	ppb	0.00
79) 1,4-Dichlorobenzene-D (IS)	10.90	152	251200	25.00	ppb	0.00
System Monitoring Compounds						
39) Dibromofluoromethane(S)	3.62	111	283588	25.03	ppb	0.00
Spiked Amount 25.000			Recovery = 100.104%			
44) 1,2-DCA-D4(S)	4.11	65	285520	25.00	ppb	0.00
Spiked Amount 25.000			Recovery = 100.004%			
65) Toluene-D8(S)	6.72	98	987286	26.90	ppb	0.00
Spiked Amount 25.000			Recovery = 107.620%			
73) 4-Bromofluorobenzene(S)	9.66	95	363539	26.21	ppb	0.00
Spiked Amount 25.000			Recovery = 104.848%			
Target Compounds						Qvalue
3) Dichlorodifluoromethane	0.68	85	53299	9.12	ppb	100
4) Freon 114	0.73	85	56691	9.53	ppb	100
5) Chloromethane	0.76	50	72357	9.33	ppb	100
6) Vinyl chloride	0.81	62	81144	9.68	ppb	100
8) Bromomethane	0.97	94	29101	9.71	ppb	100
9) Chloroethane	1.02	66	13520	9.41	ppb	100
10) Dichlorofluoromethane	1.13	67	104669	10.07	ppb	100
11) Trichlorofluoromethane	1.16	101	94347	10.03	ppb	100
13) Acrolein	1.39	56	73293	118.67	ppb	100
14) Acetone	1.49	43	21505	9.37	ppb	100
15) Freon-113	1.46	101	55560	10.13	ppb	100
16) 1,1-DCE	1.45	61	83156	10.14	ppb	100
17) t-Butanol	1.91	59	59083	114.41	ppb	100
19) Acetonitrile	1.66	41	114362	121.23	ppb	100
20) Methyl Acetate	1.72	43	46184	9.80	ppb	100
21) Iodomethane	1.53	142	69998	9.17	ppb	100
22) Acrylonitrile	1.96	53	28075	10.30	ppb	100
23) Methylene chloride	1.77	84	71984	10.26	ppb	100
24) Carbon disulfide	1.57	76	145205	9.61	ppb	100
25) Methyl t-butyl ether (MtBE	2.00	73	133293	9.81	ppb	100
26) Trans-1,2-DCE	1.99	61	82873	10.26	ppb	100
27) Diisopropyl Ether	2.47	45	188067	9.84	ppb	100
29) 1,1-DCA	2.34	63	119835	10.36	ppb	100
30) Vinyl Acetate	2.47	45	188067	9.84	ppb	100
32) MEK (2-Butanone)	3.02	43	12453	9.49	ppb	100
33) Cis-1,2-DCE	2.96	61	100084	9.79	ppb	100
34) 2,2-Dichloropropane	2.95	77	86012	9.75	ppb	100
37) Chloroform	3.40	83	122809	10.04	ppb	100
38) Bromochloromethane	3.24	130	51594	10.20	ppb	100
40) 1,1,1-TCA	3.60	97	97045	10.28	ppb	100
41) Cyclohexane	3.67	56	80019	9.70	ppb	100
42) 1,1-Dichloropropene	3.87	75	78407	9.89	ppb	100
43) 2,2,4-Trimethylpentane	4.41	57	171791	10.07	ppb	100
45) Carbon Tetrachloride	3.85	117	87418	10.52	ppb	100
48) 1,2-DCA	4.23	62	85648	9.90	ppb	100
49) Benzene	4.18	78	252730	9.71	ppb	100
50) TCE	5.17	130	75648	10.32	ppb	100
51) 2-Pentanone	5.51	43	386579	121.51	ppb	100
52) 1,2-Dichloropropane	5.45	63	69353	10.51	ppb	100

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

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L15.D Vial: 9
Acq On : 12 Mar 20 14:33 Operator:
Sample : 10ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

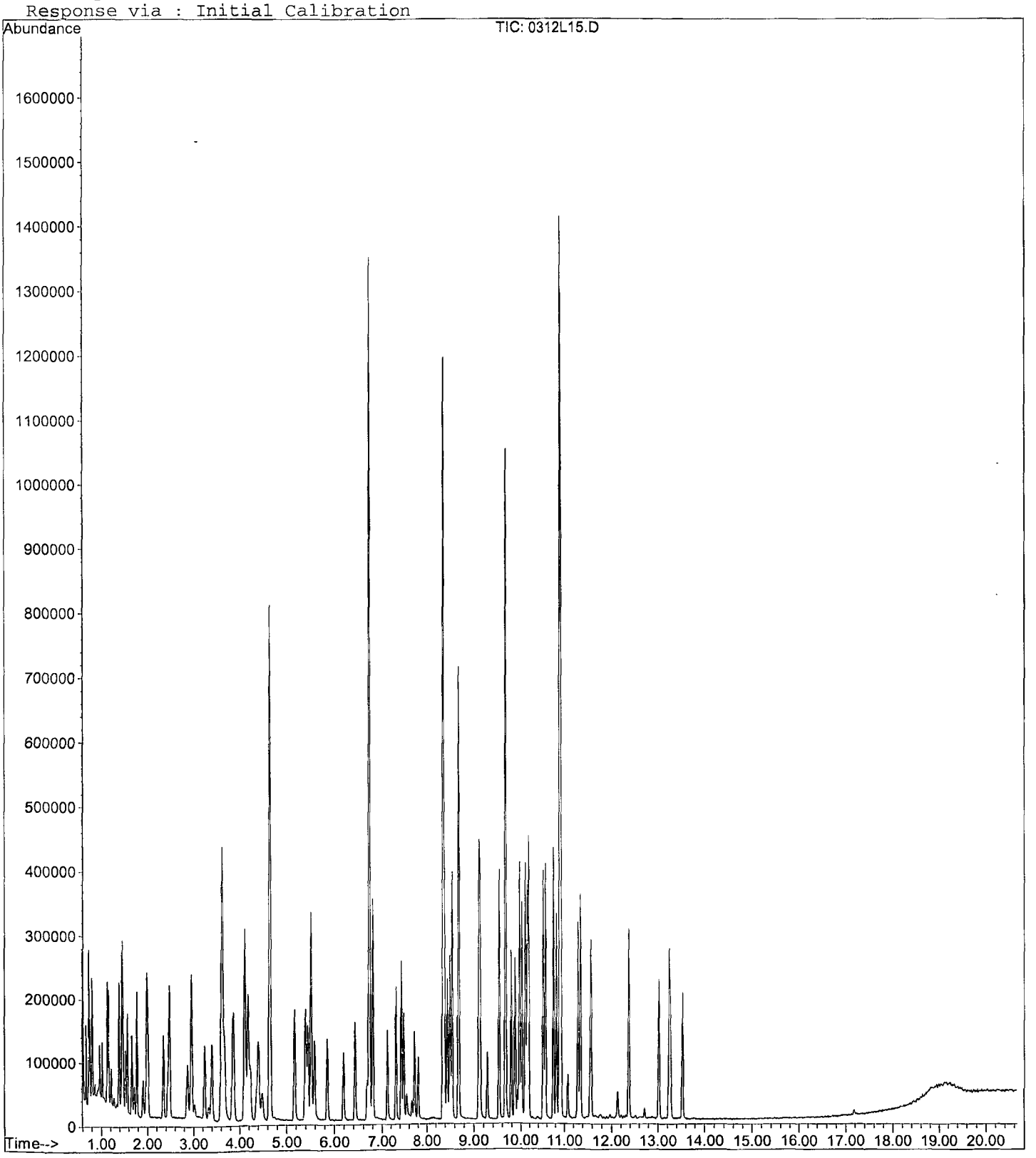
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
53)	Bromodichloromethane	5.85	83	92905	10.26 ppb	100
54)	Methyl Cyclohexane	5.40	83	82041	9.75 ppb	100
55)	Dibromomethane	5.59	174	56579	10.45 ppb	100
57)	MIBK (methyl isobutyl ket	6.68	43	44770	9.47 ppb	100
58)	1-Bromo-2-chloroethane	6.19	63	95117	10.22 ppb	100
59)	Cis-1,3-Dichloropropene	6.43	75	96387	9.94 ppb	100
60)	Toluene	6.80	91	280723	10.08 ppb	100
61)	Trans-1,3-Dichloropropene	7.12	75	80239	10.00 ppb	100
62)	1,1,2-TCA	7.31	97	68137	10.39 ppb	100
63)	2-Hexanone	7.66	43	16947	9.78 ppb	100
66)	1,2-EDB	7.81	107	67346	10.43 ppb	100
67)	Tetrachloroethene	7.43	166	82038	10.28 ppb	100
68)	1-Chlorohexane	8.45	91	75900	10.17 ppb	100
69)	1,1,1,2-Tetrachloroethane	8.50	131	74019	10.31 ppb	100
70)	m&p-Xylene	8.69	91	446135	20.17 ppb	100
71)	o-Xylene	9.11	91	227802	9.91 ppb	100
72)	Styrene	9.13	104	180518	10.24 ppb	100
74)	1,3-Dichloropropane	7.48	76	107946	10.55 ppb	100
75)	Dibromochloromethane	7.72	129	75612	10.55 ppb	100
76)	Chlorobenzene	8.39	112	188880	10.15 ppb	100
77)	Ethylbenzene	8.55	91	290063	9.87 ppb	100
78)	Bromoform	9.28	173	53804	10.65 ppb	100
80)	Isopropylbenzene	9.53	105	167680	9.13 ppb	100
81)	1,1,2,2-Tetrachloroethane	9.87	83	84923	10.09 ppb	100
82)	1,2,3-Trichloropropane	9.88	110	26824	9.71 ppb	100
83)	t-1,4-Dichloro-2-Butene	9.93	53	12011	9.08 ppb	100
84)	Bromobenzene	9.79	156	87088	9.67 ppb	100
85)	n-Propylbenzene	9.98	91	328439	9.51 ppb	100
86)	4-Ethyltoluene	10.10	105	168960	9.41 ppb	100
87)	2-Chlorotoluene	10.02	91	125449	9.80 ppb	100
88)	1,3,5-Trimethylbenzene	10.18	105	246511	9.33 ppb	100
89)	4-Chlorotoluene	10.15	91	133716	9.68 ppb	100
90)	Tert-Butylbenzene	10.51	119	208540	9.70 ppb	100
91)	1,2,4-Trimethylbenzene	10.57	105	253710	9.42 ppb	100
92)	Sec-Butylbenzene	10.75	105	301845	9.57 ppb	100
93)	p-Isopropyltoluene	10.92	119	263677	9.57 ppb	100
94)	Benzyl Chloride	11.08	91	54343	8.96 ppb	100
95)	1,3-DCB	10.82	146	155857	9.22 ppb	100
96)	1,4-DCB	10.92	146	158012	9.80 ppb	100
97)	n-Butylbenzene	11.36	91	207083	9.08 ppb	100
98)	1,2-DCB	11.30	146	150844	9.98 ppb	100
99)	Hexachloroethane	11.57	117	47944	9.34 ppb	100
100)	1,2-Dibromo-3-chloropropan	12.14	157	14136	9.72 ppb	100
101)	1,2,4-Trichlorobenzene	13.02	180	84548	8.86 ppb	100
102)	Hexachlorobutadiene	13.24	225	32664	9.34 ppb	100
103)	Naphthalene	13.27	128	151111	9.52 ppb	100
104)	1,2,3-Trichlorobenzene	13.53	182	42144	8.94 ppb	100

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

Data File : M:\LOKI\DATA\200312\0312L15.D Vial: 9
Acq On : 12 Mar 20 14:33 Operator:
Sample : 10ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L16.D Vial: 10
Acq On : 12 Mar 20 15:02 Operator:
Sample : 20ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.64	96	405144	25.00	ppb	0.00
64) Chlorobenzene-D5 (IS)	8.35	117	446656	25.00	ppb	0.00
79) 1,4-Dichlorobenzene-D (IS)	10.89	152	259136	25.00	ppb	0.00
System Monitoring Compounds						
39) Dibromofluoromethane(S)	3.62	111	532316	46.05	ppb	0.00
Spiked Amount 25.000			Recovery =	184.212%		
44) 1,2-DCA-D4(S)	4.11	65	530676	45.56	ppb	0.00
Spiked Amount 25.000			Recovery =	182.220%		
65) Toluene-D8(S)	6.72	98	1880369	48.82	ppb	0.00
Spiked Amount 25.000			Recovery =	195.276%		
73) 4-Bromofluorobenzene(S)	9.66	95	709894	48.76	ppb	0.00
Spiked Amount 25.000			Recovery =	195.056%		
Target Compounds						Qvalue
3) Dichlorodifluoromethane	0.67	85	109082	18.30	ppb	100
4) Freon 114	0.73	85	114036	18.80	ppb	95
5) Chloromethane	0.76	50	144152	18.47	ppb	98
6) Vinyl chloride	0.81	62	160832	18.82	ppb	98
8) Bromomethane	0.96	94	59352	19.41	ppb	98
9) Chloroethane	1.02	66	25720	17.54	ppb	100
10) Dichlorofluoromethane	1.13	67	208384	19.66	ppb	96
11) Trichlorofluoromethane	1.16	101	185779	19.36	ppb	94
13) Acrolein	1.39	56	91589	145.38	ppb	83
14) Acetone	1.49	43	36719	20.36	ppb	96
15) Freon-113	1.46	101	113148	20.23	ppb	93
16) 1,1-DCE	1.45	61	165209	19.76	ppb	99
17) t-Butanol	1.91	59	78462	148.96	ppb	100
19) Acetonitrile	1.66	41	132033	137.22	ppb	92
20) Methyl Acetate	1.72	43	92951	19.48	ppb	100
21) Iodomethane	1.53	142	156004	18.69	ppb	99
22) Acrylonitrile	1.96	53	54426	20.08	ppb	99
23) Methylene chloride	1.77	84	138857	20.08	ppb	90
24) Carbon disulfide	1.57	76	287981	18.69	ppb	98
25) Methyl t-butyl ether (MtBE	2.00	73	276099	19.92	ppb	98
26) Trans-1,2-DCE	1.98	61	163342	19.83	ppb	99
27) Diisopropyl Ether	2.47	45	376337	19.31	ppb	100
29) 1,1-DCA	2.34	63	232125	19.67	ppb	98
30) Vinyl Acetate	2.47	45	376337	19.31	ppb	100
32) MEK (2-Butanone)	3.02	43	24239	18.11	ppb	94
33) Cis-1,2-DCE	2.96	61	203089	19.48	ppb	98
34) 2,2-Dichloropropane	2.95	77	168410	18.72	ppb	96
37) Chloroform	3.40	83	245947	19.71	ppb	98
38) Bromochloromethane	3.24	130	104021	20.16	ppb	96
40) 1,1,1-TCA	3.60	97	192193	19.96	ppb	99
41) Cyclohexane	3.67	56	165136	19.63	ppb	95
42) 1,1-Dichloropropene	3.86	75	158211	19.57	ppb	100
43) 2,2,4-Trimethylpentane	4.40	57	341345	19.61	ppb	100
45) Carbon Tetrachloride	3.85	117	170641	20.14	ppb	95
48) 1,2-DCA	4.23	62	177263	20.09	ppb	99
49) Benzene	4.18	78	502350	18.93	ppb	99
50) TCE	5.17	130	151506	20.25	ppb	97
51) 2-Pentanone	5.52	43	498720	153.68	ppb	98
52) 1,2-Dichloropropane	5.45	63	135963	20.20	ppb	96

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

Data File : M:\LOKI\DATA\200312\0312L16.D Vial: 10
Acq On : 12 Mar 20 15:02 Operator:
Sample : 20ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

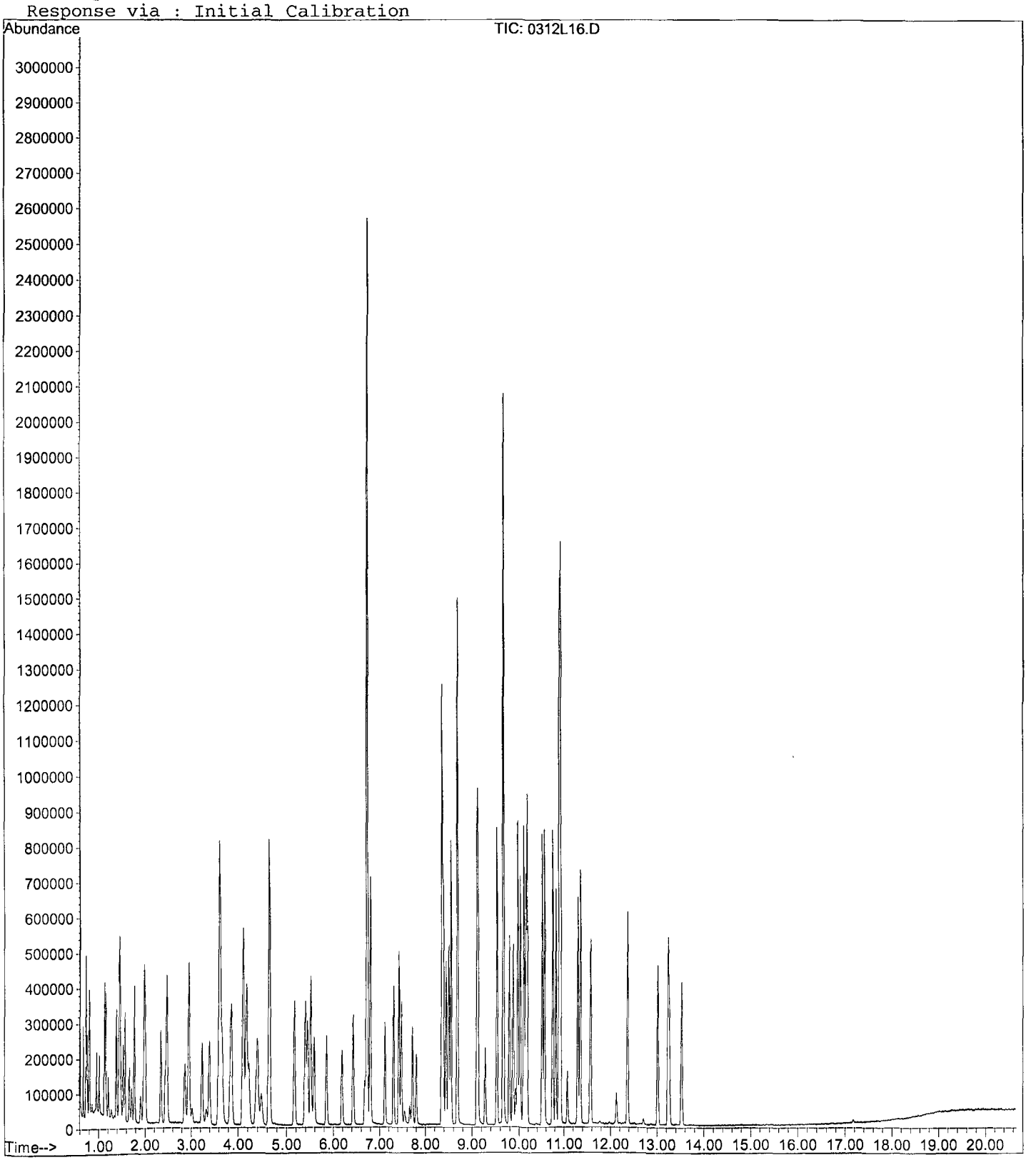
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
53)	Bromodichloromethane	5.85	83	185977	20.14	ppb	95
54)	Methyl Cyclohexane	5.40	83	170329	19.85	ppb	95
55)	Dibromomethane	5.59	174	113854	20.61	ppb	99
57)	MIBK (methyl isobutyl ket	6.68	43	92598	19.33	ppb	90
58)	1-Bromo-2-chloroethane	6.19	63	193790	20.41	ppb	100
59)	Cis-1,3-Dichloropropene	6.43	75	202663	20.49	ppb	99
60)	Toluene	6.80	91	566386	19.93	ppb	98
61)	Trans-1,3-Dichloropropene	7.12	75	170262	20.81	ppb	99
62)	1,1,2-TCA	7.31	97	131197	19.62	ppb	99
63)	2-Hexanone	7.66	43	34166	18.32	ppb	97
66)	1,2-EDB	7.80	107	136949	20.22	ppb	95
67)	Tetrachloroethene	7.43	166	161796	19.31	ppb	97
68)	1-Chlorohexane	8.44	91	156050	19.92	ppb	97
69)	1,1,1,2-Tetrachloroethane	8.50	131	151371	20.09	ppb	100
70)	m&p-Xylene	8.69	91	931092	40.10	ppb	99
71)	o-Xylene	9.11	91	470151	19.48	ppb	98
72)	Styrene	9.13	104	388741	21.00	ppb	96
74)	1,3-Dichloropropane	7.48	76	214817	20.00	ppb	97
75)	Dibromochloromethane	7.72	129	154082	20.48	ppb	100
76)	Chlorobenzene	8.39	112	384949	19.70	ppb	99
77)	Ethylbenzene	8.55	91	608001	19.72	ppb	99
78)	Bromoform	9.28	173	109714	20.69	ppb	98
80)	Isopropylbenzene	9.53	105	360000	19.01	ppb	99
81)	1,1,2,2-Tetrachloroethane	9.87	83	167740	19.32	ppb	98
82)	1,2,3-Trichloropropane	9.88	110	53219	18.68	ppb	92
83)	t-1,4-Dichloro-2-Butene	9.93	53	25140	18.41	ppb	99
84)	Bromobenzene	9.79	156	176368	18.98	ppb	91
85)	n-Propylbenzene	9.97	91	683981	18.79	ppb	98
86)	4-Ethyltoluene	10.10	105	362048	18.90	ppb	98
87)	2-Chlorotoluene	10.02	91	259479	19.65	ppb	97
88)	1,3,5-Trimethylbenzene	10.18	105	524054	19.22	ppb	100
89)	4-Chlorotoluene	10.15	91	260864	18.31	ppb	99
90)	Tert-Butylbenzene	10.51	119	426656	19.04	ppb	98
91)	1,2,4-Trimethylbenzene	10.57	105	531233	19.27	ppb	97
92)	Sec-Butylbenzene	10.75	105	624582	18.94	ppb	99
93)	p-Isopropyltoluene	10.92	119	548096	18.96	ppb	99
94)	Benzyl Chloride	11.08	91	116978	18.70	ppb	97
95)	1,3-DCB	10.82	146	323236	18.53	ppb	99
96)	1,4-DCB	10.92	146	325407	19.62	ppb	98
97)	n-Butylbenzene	11.35	91	432484	18.12	ppb	97
98)	1,2-DCB	11.30	146	306217	19.46	ppb	95
99)	Hexachloroethane	11.57	117	100521	18.98	ppb	96
100)	1,2-Dibromo-3-chloropropan	12.13	157	30461	20.30	ppb	97
101)	1,2,4-Trichlorobenzene	13.02	180	179371	17.72	ppb	95
102)	Hexachlorobutadiene	13.24	225	67696	18.74	ppb	93
103)	Naphthalene	13.26	128	297550	17.55	ppb	99
104)	1,2,3-Trichlorobenzene	13.53	182	83976	17.12	ppb	99

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

Data File : M:\LOKI\DATA\200312\0312L16.D Vial: 10
Acq On : 12 Mar 20 15:02 Operator:
Sample : 20ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L17.D Vial: 11
Acq On : 12 Mar 20 15:30 Operator:
Sample : 40ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	4.64	96	401408	25.00	ppb		0.00
64) Chlorobenzene-D5 (IS)	8.35	117	451392	25.00	ppb		0.00
79) 1,4-Dichlorobenzene-D (IS)	10.90	152	264320	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	3.62	111	538881	47.05	ppb		0.00
Spiked Amount 25.000			Recovery =	188.220%			
44) 1,2-DCA-D4(S)	4.11	65	543882	47.12	ppb		0.00
Spiked Amount 25.000			Recovery =	188.496%			
65) Toluene-D8(S)	6.72	98	1926049	49.48	ppb		0.00
Spiked Amount 25.000			Recovery =	197.924%			
73) 4-Bromofluorobenzene(S)	9.66	95	728514	49.52	ppb		0.00
Spiked Amount 25.000			Recovery =	198.072%			
Target Compounds							Qvalue
3) Dichlorodifluoromethane	0.67	85	221190	37.46	ppb		99
4) Freon 114	0.73	85	229671	38.21	ppb		97
5) Chloromethane	0.76	50	297697	38.77	ppb		99
6) Vinyl chloride	0.81	62	326656	38.57	ppb		99
8) Bromomethane	0.96	94	107882	35.61	ppb		96
9) Chloroethane	1.02	66	53568	36.87	ppb		89
10) Dichlorofluoromethane	1.13	67	426048	40.57	ppb		97
11) Trichlorofluoromethane	1.16	101	370639	38.97	ppb		94
13) Acrolein	1.39	56	119763	191.87	ppb	#	48
14) Acetone	1.49	43	65596	42.28	ppb		97
15) Freon-113	1.46	101	224317	40.48	ppb		96
16) 1,1-DCE	1.45	61	331390	40.00	ppb		97
17) t-Butanol	1.91	59	104411	200.06	ppb		98
19) Acetonitrile	1.67	41	162918	170.89	ppb		92
20) Methyl Acetate	1.72	43	190288	40.38	ppb		99
21) Iodomethane	1.53	142	338643	39.58	ppb		98
22) Acrylonitrile	1.96	53	108141	40.84	ppb		99
23) Methylene chloride	1.77	84	279236	41.53	ppb		95
24) Carbon disulfide	1.57	76	591741	38.76	ppb		99
25) Methyl t-butyl ether (MtBE	2.00	73	564344	41.10	ppb		97
26) Trans-1,2-DCE	1.98	61	335006	41.04	ppb		99
27) Diisopropyl Ether	2.47	45	765806	39.66	ppb		100
29) 1,1-DCA	2.34	63	470355	40.23	ppb		99
30) Vinyl Acetate	2.47	45	765806	39.66	ppb		100
32) MEK (2-Butanone)	3.02	43	51459	38.80	ppb		96
33) Cis-1,2-DCE	2.96	61	408687	39.57	ppb		98
34) 2,2-Dichloropropane	2.95	77	346544	38.88	ppb		99
37) Chloroform	3.40	83	496294	40.14	ppb		99
38) Bromochloromethane	3.24	130	209043	40.90	ppb		98
40) 1,1,1-TCA	3.60	97	393612	41.27	ppb		96
41) Cyclohexane	3.67	56	339250	40.70	ppb		98
42) 1,1-Dichloropropene	3.87	75	325963	40.70	ppb		96
43) 2,2,4-Trimethylpentane	4.40	57	710566	41.20	ppb		98
45) Carbon Tetrachloride	3.85	117	346260	41.25	ppb		94
48) 1,2-DCA	4.23	62	355882	40.70	ppb		99
49) Benzene	4.18	78	1033002	39.28	ppb		100
50) TCE	5.17	130	308210	41.58	ppb		97
51) 2-Pentanone	5.51	43	631065	196.27	ppb		97
52) 1,2-Dichloropropane	5.45	63	279340	41.89	ppb		96

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

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L17.D Vial: 11
Acq On : 12 Mar 20 15:30 Operator:
Sample : 40ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
53)	Bromodichloromethane	5.85	83	383704	41.93	ppb	99
54)	Methyl Cyclohexane	5.40	83	354721	41.73	ppb	94
55)	Dibromomethane	5.59	174	235006	42.94	ppb	99
57)	MIBK (methyl isobutyl ket	6.68	43	185497	39.21	ppb	94
58)	1-Bromo-2-chloroethane	6.19	63	395617	42.06	ppb	98
59)	Cis-1,3-Dichloropropene	6.43	75	423812	43.25	ppb	99
60)	Toluene	6.80	91	1169032	41.52	ppb	98
61)	Trans-1,3-Dichloropropene	7.12	75	354775	43.77	ppb	98
62)	1,1,2-TCA	7.31	97	273144	41.22	ppb	98
63)	2-Hexanone	7.66	43	71834	37.73	ppb	99
66)	1,2-EDB	7.80	107	284220	41.52	ppb	99
67)	Tetrachloroethene	7.43	166	336800	39.78	ppb	97
68)	1-Chlorohexane	8.44	91	333991	42.18	ppb	96
69)	1,1,1,2-Tetrachloroethane	8.50	131	309351	40.62	ppb	97
70)	m&p-Xylene	8.69	91	1976048	84.21	ppb	100
71)	o-Xylene	9.11	91	1001712	41.06	ppb	99
72)	Styrene	9.13	104	826398	44.18	ppb	97
74)	1,3-Dichloropropane	7.48	76	442298	40.75	ppb	99
75)	Dibromochloromethane	7.72	129	321343	42.27	ppb	98
76)	Chlorobenzene	8.39	112	780900	39.55	ppb	98
77)	Ethylbenzene	8.55	91	1284666	41.23	ppb	99
78)	Bromoform	9.28	173	229688	42.86	ppb	98
80)	Isopropylbenzene	9.53	105	770624	39.89	ppb	100
81)	1,1,2,2-Tetrachloroethane	9.87	83	345138	38.98	ppb	98
82)	1,2,3-Trichloropropane	9.88	110	110014	37.87	ppb	96
83)	t-1,4-Dichloro-2-Butene	9.93	53	56001	40.21	ppb	95
84)	Bromobenzene	9.79	156	362624	38.25	ppb	94
85)	n-Propylbenzene	9.97	91	1482190	39.48	ppb	99
86)	4-Ethyltoluene	10.10	105	786684	39.59	ppb	99
87)	2-Chlorotoluene	10.02	91	547279	40.63	ppb	97
88)	1,3,5-Trimethylbenzene	10.18	105	1098668	39.51	ppb	99
89)	4-Chlorotoluene	10.15	91	563724	38.79	ppb	99
90)	Tert-Butylbenzene	10.51	119	909325	39.56	ppb	100
91)	1,2,4-Trimethylbenzene	10.57	105	1116051	39.84	ppb	98
92)	Sec-Butylbenzene	10.75	105	1333802	39.38	ppb	100
93)	p-Isopropyltoluene	10.92	119	1176458	39.55	ppb	99
94)	Benzyl Chloride	11.08	91	266918	41.83	ppb	98
95)	1,3-DCB	10.82	146	662540	37.23	ppb	98
96)	1,4-DCB	10.92	146	675927	40.01	ppb	100
97)	n-Butylbenzene	11.35	91	943176	38.44	ppb	99
98)	1,2-DCB	11.30	146	630325	39.08	ppb	96
99)	Hexachloroethane	11.57	117	210793	39.01	ppb	98
100)	1,2-Dibromo-3-chloropropan	12.13	157	62280	40.69	ppb	98
101)	1,2,4-Trichlorobenzene	13.02	180	387146	36.96	ppb	99
102)	Hexachlorobutadiene	13.24	225	140288	38.04	ppb	93
103)	Naphthalene	13.26	128	652528	36.96	ppb	99
104)	1,2,3-Trichlorobenzene	13.53	182	195520	38.88	ppb	99

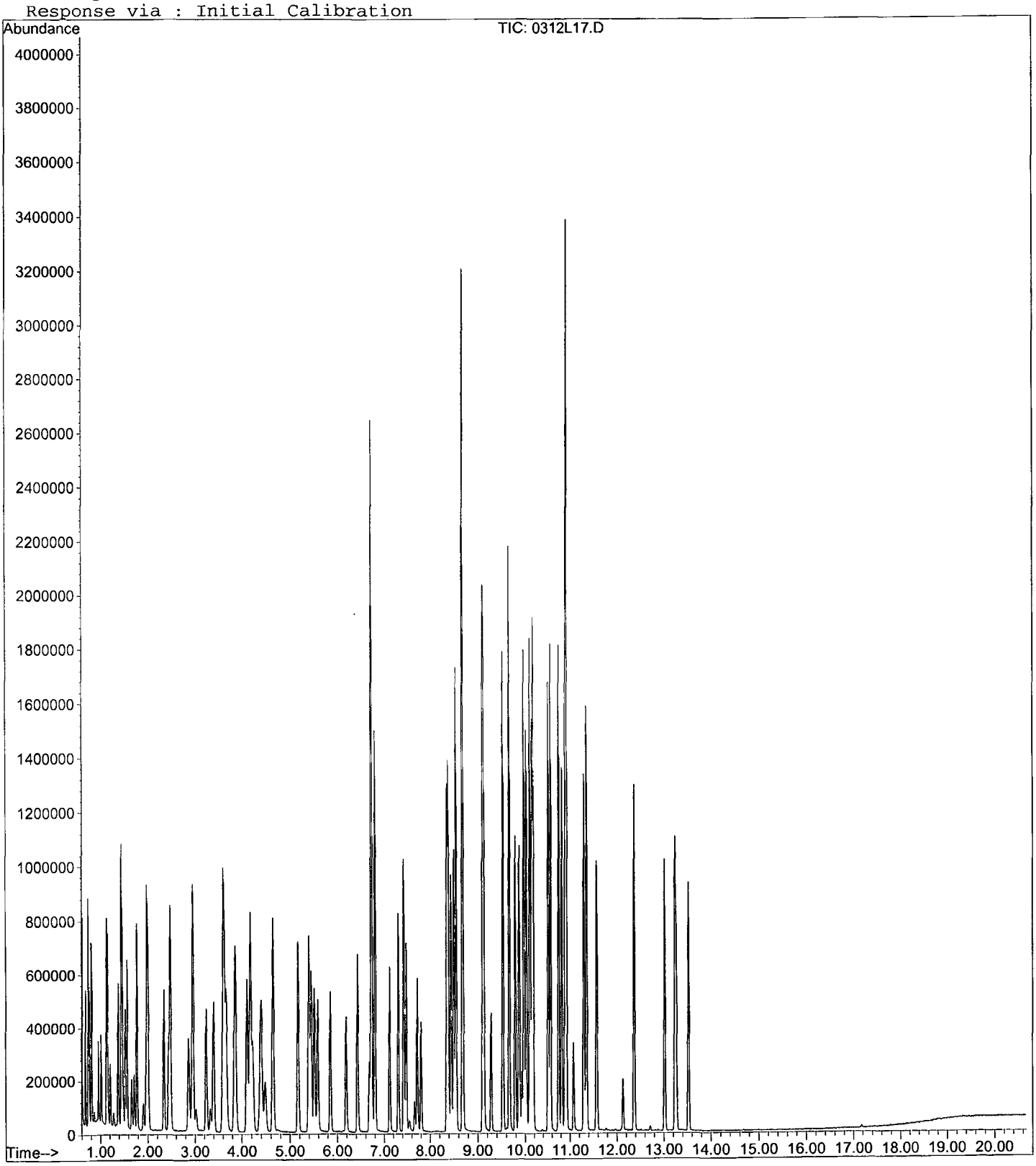
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0312L17.D Vial: 11
Acq On : 12 Mar 20 15:30 Operator:
Sample : 40ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L18.D Vial: 12
Acq On : 12 Mar 20 15:59 Operator:
Sample : 100ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	4.65	96	422016	25.00	ppb		0.00
64) Chlorobenzene-D5 (IS)	8.36	117	476800	25.00	ppb		0.00
79) 1,4-Dichlorobenzene-D (IS)	10.90	152	284544	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	3.62	111	1027658	85.35	ppb		0.00
Spiked Amount 25.000			Recovery = 341.412%				
44) 1,2-DCA-D4(S)	4.11	65	1048208	86.39	ppb		0.00
Spiked Amount 25.000			Recovery = 345.540%				
65) Toluene-D8(S)	6.73	98	3792024	92.23	ppb		0.00
Spiked Amount 25.000			Recovery = 368.908%				
73) 4-Bromofluorobenzene(S)	9.66	95	1441788	92.78	ppb		0.00
Spiked Amount 25.000			Recovery = 371.112%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	0.67	85	571686	92.09	ppb		99
4) Freon 114	0.73	85	619131	97.98	ppb		95
5) Chloromethane	0.76	50	719346	89.43	ppb		98
6) Vinyl chloride	0.81	62	809408	90.91	ppb		98
8) Bromomethane	0.96	94	315011	98.90	ppb		99
9) Chloroethane	1.01	66	125971	82.47	ppb		91
10) Dichlorofluoromethane	1.13	67	1011516	91.61	ppb		97
11) Trichlorofluoromethane	1.15	101	942542	94.27	ppb		93
13) Acrolein	1.39	56	151218	230.43	ppb	#	10
14) Acetone	1.49	43	148605	99.13	ppb		95
15) Freon-113	1.46	101	577048	99.05	ppb		98
16) 1,1-DCE	1.45	61	856325	98.32	ppb		99
17) t-Butanol	1.93	59	193683	353.00	ppb		98
19) Acetonitrile	1.67	41	190554	190.12	ppb		98
20) Methyl Acetate	1.72	43	494301	99.98	ppb		100
21) Iodomethane	1.53	142	920338	100.50	ppb		100
22) Acrylonitrile	1.96	53	275180	99.64	ppb		94
23) Methylene chloride	1.77	84	695198	99.38	ppb		96
24) Carbon disulfide	1.57	76	1568134	97.71	ppb		98
25) Methyl t-butyl ether (MtBE	2.01	73	1454288	100.74	ppb		97
26) Trans-1,2-DCE	1.98	61	842281	98.14	ppb		98
27) Diisopropyl Ether	2.48	45	1946953	95.90	ppb		99
29) 1,1-DCA	2.34	63	1177151	95.78	ppb		98
30) Vinyl Acetate	2.48	45	1946953	95.90	ppb		99
32) MEK (2-Butanone)	3.03	43	128748	92.33	ppb		98
33) Cis-1,2-DCE	2.96	61	1016150	93.59	ppb		97
34) 2,2-Dichloropropane	2.95	77	866493	92.48	ppb		97
37) Chloroform	3.40	83	1233679	94.92	ppb		97
38) Bromochloromethane	3.24	130	514405	95.73	ppb		100
40) 1,1,1-TCA	3.60	97	997903	99.51	ppb		100
41) Cyclohexane	3.67	56	913837	104.29	ppb		97
42) 1,1-Dichloropropene	3.87	75	849132	100.85	ppb		99
43) 2,2,4-Trimethylpentane	4.40	57	1962118	108.22	ppb		97
45) Carbon Tetrachloride	3.85	117	900199	101.99	ppb		94
48) 1,2-DCA	4.23	62	882737	96.03	ppb		99
49) Benzene	4.18	78	2639875	95.48	ppb		100
50) TCE	5.17	130	790673	101.47	ppb		97
51) 2-Pentanone	5.52	43	773686	228.88	ppb		98
52) 1,2-Dichloropropane	5.45	63	702773	100.25	ppb		96

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

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L18.D Vial: 12
Acq On : 12 Mar 20 15:59 Operator:
Sample : 100ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
53)	Bromodichloromethane	5.85	83	980117	101.88 ppb	97
54)	Methyl Cyclohexane	5.40	83	991045	110.89 ppb	95
55)	Dibromomethane	5.59	174	579975	100.80 ppb	98
57)	MIBK (methyl isobutyl ket	6.68	43	498777	100.46 ppb	92
58)	1-Bromo-2-chloroethane	6.19	63	988470	99.95 ppb	99
59)	Cis-1,3-Dichloropropene	6.43	75	1128430	109.55 ppb	99
60)	Toluene	6.80	91	3018303	101.97 ppb	98
61)	Trans-1,3-Dichloropropene	7.12	75	954152	111.97 ppb	98
62)	1,1,2-TCA	7.31	97	692170	99.35 ppb	97
63)	2-Hexanone	7.67	43	206104	101.18 ppb	97
66)	1,2-EDB	7.80	107	724045	100.12 ppb	98
67)	Tetrachloroethene	7.43	166	851621	95.22 ppb	98
68)	1-Chlorohexane	8.45	91	926182	110.74 ppb	93
69)	1,1,1,2-Tetrachloroethane	8.50	131	787867	97.94 ppb	100
70)	m&p-Xylene	8.69	91	5265593	212.43 ppb	99
71)	o-Xylene	9.11	91	2696196	104.63 ppb	100
72)	Styrene	9.13	104	2231607	112.94 ppb	98
74)	1,3-Dichloropropane	7.48	76	1140239	99.45 ppb	99
75)	Dibromochloromethane	7.72	129	833859	103.85 ppb	100
76)	Chlorobenzene	8.38	112	2020036	96.85 ppb	98
77)	Ethylbenzene	8.55	91	3385364	102.86 ppb	99
78)	Bromoform	9.28	173	600531	106.08 ppb	97
80)	Isopropylbenzene	9.53	105	2146816	103.24 ppb	98
81)	1,1,2,2-Tetrachloroethane	9.87	83	915116	96.00 ppb	98
82)	1,2,3-Trichloropropane	9.88	110	285581	91.31 ppb	96
83)	t-1,4-Dichloro-2-Butene	9.93	53	159586	106.45 ppb	96
84)	Bromobenzene	9.79	156	948997	93.00 ppb	94
85)	n-Propylbenzene	9.98	91	4085850	100.48 ppb	98
86)	4-Ethyltoluene	10.10	105	2167808	100.43 ppb	100
87)	2-Chlorotoluene	10.03	91	1419917	97.91 ppb	97
88)	1,3,5-Trimethylbenzene	10.18	105	2936350	98.09 ppb	100
89)	4-Chlorotoluene	10.15	91	1514847	96.82 ppb	98
90)	Tert-Butylbenzene	10.51	119	2491977	100.39 ppb	99
91)	1,2,4-Trimethylbenzene	10.57	105	3017413	100.27 ppb	96
92)	Sec-Butylbenzene	10.75	105	3679106	100.49 ppb	99
93)	p-Isopropyltoluene	10.92	119	3231688	100.43 ppb	99
94)	Benzyl Chloride	11.08	91	877590	127.75 ppb	97
95)	1,3-DCB	10.82	146	1774823	92.65 ppb	99
96)	1,4-DCB	10.92	146	1818874	100.09 ppb	99
97)	n-Butylbenzene	11.36	91	2681010	101.07 ppb	98
98)	1,2-DCB	11.30	146	1749486	100.47 ppb	95
99)	Hexachloroethane	11.57	117	570671	98.11 ppb	98
100)	1,2-Dibromo-3-chloropropan	12.13	157	193261	117.28 ppb	97
101)	1,2,4-Trichlorobenzene	13.02	180	1156735	101.73 ppb	99
102)	Hexachlorobutadiene	13.24	225	401408	101.07 ppb	93
103)	Naphthalene	13.26	128	1954199	101.63 ppb	100
104)	1,2,3-Trichlorobenzene	13.53	182	548736	101.10 ppb	100

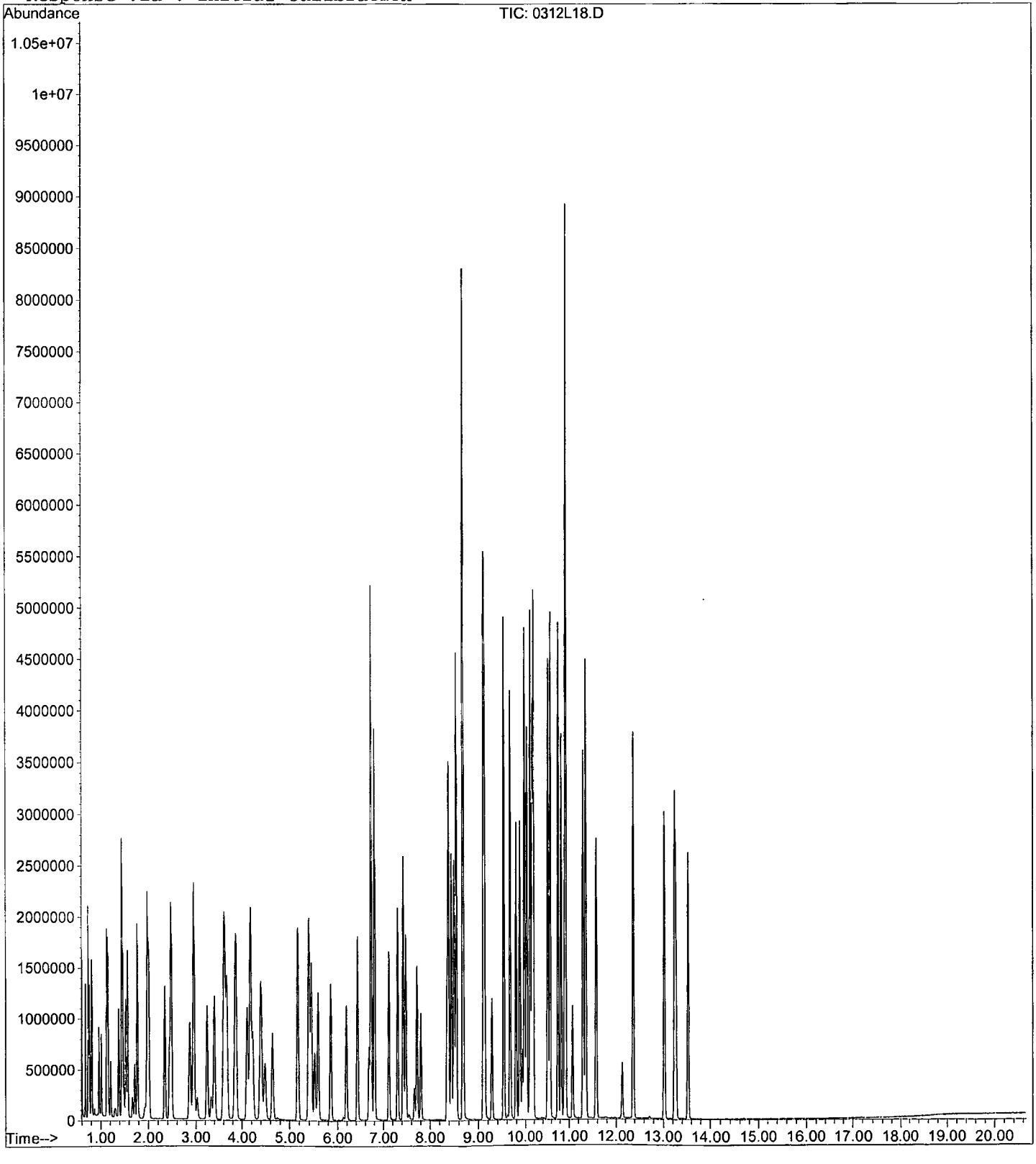
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0312L18.D Vial: 12
Acq On : 12 Mar 20 15:59 Operator:
Sample : 100ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 03/12/20
Matrix: Instrument: Loki
Initial Cal. Date: 03/12/20
Data File: 0312L21.D

		Compound	MEAN	CCRF	%D		%Drift	
1	TM	Dichlorodifluoromethane	0.3677	0.3864	5.1	TM		
2	TM	Freon 114	0.3743	0.3987	6.5	TM		
3	TM**L	Chloromethane	0.5672	0.5925	4.5	TM**L	22	* NT
4	TM*	Vinyl chloride	0.5274	0.5450	3.3	TM*		
5	TM	2-Chloro-1,1,1-trifluoroethane	0.0000	0.0000	0.00	TM		
6	TM	Bromomethane	0.1887	0.3135	66	TM		* NT
7	TM	Chloroethane	0.0905	0.0932	3.0	TM		
8	TM	Dichlorofluoromethane	0.6541	0.7963	22	TM		* NT
9	TM	Trichlorofluoromethane	0.5923	0.5983	1.0	TM		
10	TM	Diethyl ether	0.0000	0.0564	0.00	TM		
11	TM	Acrolein	0.0389	0.0321	17	TM		
12	TML	Acetone	0.1641	0.1246	24	TML	19	
13	TM	Freon-113	0.3451	0.3936	14	TM		
14	TM*	1,1-DCE	0.5159	0.5205	0.89	TM*		
15	TM	t-Butanol	0.0325	0.0282	13	TM		
16	TM	2-Propanol	0.0000	0.0009	0.00	TM		
17	TM	Acetonitrile	0.0594	0.0534	10	TM		
18	TML	Methyl Acetate	0.3350	0.3255	2.8	TML	9.9	
19	TML	Iodomethane	0.4362	0.4837	11	TML	0.41	
20	TML	Acrylonitrile	0.1956	0.1792	8.4	TML	4.5	
21	TML	Methylene chloride	0.5117	0.4616	9.8	TML	4.7	
22	TM	Carbon disulfide	0.9507	1.145	20	TM		
23	TM	Methyl t-butyl ether (MtBE)	0.8552	0.9245	8.1	TM		
24	TM	Trans-1,2-DCE	0.5084	0.5268	3.6	TM		
25	TM	Diisopropyl Ether	1.203	1.330	11	TM		
26	TM**	2,2-Dichloro-1,1,1-trifluoroethane	0.0000	0.0001	0.00	TM**		
27	TM**	1,1-DCA	0.7281	0.7180	1.4	TM**		
28	TM	Vinyl Acetate	1.203	1.330	11	TM		
29	TM	Ethyl tert Butyl Ether	0.0000	0.0129	0.00	TM		
30	TM	MEK (2-Butanone)	0.0826	0.0712	14	TM		
31	TM	Cis-1,2-DCE	0.6432	0.6433	0.02	TM		
32	TM	2,2-Dichloropropane	0.5551	0.5235	5.7	TM		
33	TM	2-Methylpentane	0.0000	0.0040	0.00	TM		
34	TM	3-Methylpentane	0.0000	0.0010	0.00	TM		
35	TM*	Chloroform	0.7700	0.7991	3.8	TM*		
36	TM	Bromochloromethane	0.3183	0.3393	6.6	TM		
37	TM	1,1,1-TCA	0.5940	0.6318	6.4	TM		
38	TM	Cyclohexane	0.5191	0.5884	13	TM		
39	TM	1,1-Dichloropropene	0.4988	0.5097	2.2	TM		
40	TM	2,2,4-Trimethylpentane	1.074	1.173	9.2	TM		
		Average			8.5			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 03/12/20
Matrix: 0 Instrument: Loki
Cal. Date: 03/12/20
Data File: 0312L21.D

		Compound	MEAN	CCRF	%D	%Drift		
41	TM	Carbon Tetrachloride	0.5229	0.5420	3.7	TM		
42	TM	Tert Amyl Methyl Ether	0.0000	0.0733	0.00	TM		
43	TM	1,2-DCA	0.5445	0.5679	4.3	TM		
44	TM	Benzene	1.638	1.636	0.09	TM		
45	TM	TCE	0.4616	0.5008	8.5	TM		
46	TM	2-Pentanone	0.2002	0.1650	18	TM		
47	TM*	1,2-Dichloropropane	0.4153	0.4356	4.9	TM*		
48	TM	Bromodichloromethane	0.5699	0.6036	5.9	TM		
49	TM	Methyl Cyclohexane	0.5294	0.5931	12	TM		
50	TM	Dibromomethane	0.3408	0.3666	7.6	TM		
51	TML	MIBK (methyl isobutyl ketone)	0.3320	0.3054	8.0	TML	2.8	
52	TM	1-Bromo-2-chloroethane	0.5859	0.6613	13	TM		
53	TM	Cis-1,3-Dichloropropene	0.6102	0.6516	6.8	TM		
54	TM*	Toluene	1.754	1.844	5.2	TM*		
55	TM	Trans-1,3-Dichloropropene	0.5048	0.5364	6.3	TM		
56	TM	1,1,2-TCA	0.4127	0.4294	4.0	TM		
57	TML	2-Hexanone	0.1250	0.1843	48	TML	61	* NT
58	TM	1,2-EDB	0.3792	0.4068	7.3	TM		
59	TM	Tetrachloroethene	0.4689	0.4832	3.0	TM		
60	TM	1-Chlorohexane	0.4385	0.4806	9.6	TM		
61	TM	1,1,1,2-Tetrachloroethane	0.4218	0.4416	4.7	TM		
62	TM	m&p-Xylene	1.300	1.359	4.6	TM		
63	TM	o-Xylene	1.351	1.405	4.0	TM		
64	TM	Styrene	1.036	1.106	6.8	TM		
65	TM	1,3-Dichloropropane	0.6012	0.6456	7.4	TM		
66	TM	Dibromochloromethane	0.4210	0.4485	6.5	TM		
67	TM**	Chlorobenzene	1.094	1.134	3.7	TM**		
68	TM*	Ethylbenzene	1.726	1.758	1.9	TM*		
69	TM**	Bromoform	0.2968	0.3222	8.6	TM**		
70	TM	Isopropylbenzene	1.827	1.765	3.4	TM		
71	TM**	1,1,2,2-Tetrachloroethane	0.8376	0.8959	7.0	TM**		
72	TM	1,2,3-Trichloropropane	0.2748	0.2793	1.6	TM		
73	TM	t-1,4-Dichloro-2-Butene	0.1317	0.1328	0.84	TM		
74	TM	Bromobenzene	0.8966	0.9464	5.6	TM		
75	TML	n-Propylbenzene	3.879	3.518	9.3	TML	2.1	
76	TML	4-Ethyltoluene	1.901	2.009	5.6	TML	11	
77	TM	2-Chlorotoluene	1.274	1.319	3.5	TM		
78	TM	1,3,5-Trimethylbenzene	2.630	2.659	1.1	TM		
79	TM	4-Chlorotoluene	1.375	1.404	2.1	TM		
80	TML	Tert-Butylbenzene	2.489	2.193	12	TML	2.4	
		Average			6.9			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 03/12/20
Instrument: Loki
Cal. Date: 03/12/20
Data File: 0312L21.D

		Compound	MEAN	CCRF	%D		%Drift	
81	TML	1,2,4-Trimethylbenzene	3.470	2.732	21	TML	2.0	
82	TML	Sec-Butylbenzene	3.735	3.227	14	TML	2.6	
83	TML	p-Isopropyltoluene	3.160	2.861	9.5	TML	4.0	
84	TM	Benzyl Chloride	0.6036	0.5265	13	TM		
85	TM	1,3-DCB	1.683	1.664	1.1	TM		
86	TML	1,4-DCB	1.793	1.719	4.1	TML	7.2	
87	TML	n-Butylbenzene	3.333	2.345	30	TML	3.0	
88	TML	1,2-DCB	1.666	1.626	2.4	TML	7.9	
89	TM	Hexachloroethane	0.5111	0.5247	2.7	TM		
90	TM	1,2-Dibromo-3-chloropropane	0.1448	0.1800	24	TM		* NT
91	TML	1,2,4-Trichlorobenzene	1.484	1.251	16	TML	29	* NT
92	TML	Hexachlorobutadiene	0.4982	0.3738	25	TML	7.3	
93	TML	Naphthalene	1.978	2.836	43	TML	73	* NT
94	TML	1,2,3-Trichlorobenzene	0.7422	0.6880	7.3	TML	46	* NT
95								
96								
97								
98								
99								
100								
101								
102								
103								
104								
105								
106								
107								
108								
109								
110								
111								
112								
113								
114								
115								
116								
117								
118								
119								
120								
		Average			15.2			

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L21.D Vial: 15
Acq On : 12 Mar 20 17:25 Operator:
Sample : (SS)10ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 17 11:50 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	4.64	96	402496	25.00 ppb	0.00
64) Chlorobenzene-D5 (IS)	8.36	117	436224	25.00 ppb	0.00
79) 1,4-Dichlorobenzene-D (IS)	10.90	152	248064	25.00 ppb	0.00
System Monitoring Compounds					
39) Dibromofluoromethane(S)	3.62	111	271894	23.68 ppb	0.00
Spiked Amount 25.000			Recovery =	94.712%	
44) 1,2-DCA-D4(S)	4.11	65	271707	23.48 ppb	0.00
Spiked Amount 25.000			Recovery =	93.912%	
65) Toluene-D8(S)	6.72	98	947437	25.19 ppb	0.00
Spiked Amount 25.000			Recovery =	100.744%	
73) 4-Bromofluorobenzene(S)	9.66	95	355668	25.02 ppb	0.00
Spiked Amount 25.000			Recovery =	100.064%	
Target Compounds					Qvalue
3) Dichlorodifluoromethane	0.68	85	62206	10.51 ppb	98
4) Freon 114	0.73	85	64182	10.65 ppb	94
5) Chloromethane	0.76	50	95395	12.22 ppb	99
6) Vinyl chloride	0.81	62	87744	10.33 ppb	100
8) Bromomethane	0.96	94	50480	16.62 ppb	99
9) Chloroethane	1.02	66	15004	10.30 ppb	82
10) Dichlorofluoromethane	1.13	67	128198	12.17 ppb	96
11) Trichlorofluoromethane	1.16	101	96332	10.10 ppb	97
13) Acrolein	1.39	56	64572	103.17 ppb	88
14) Acetone	1.49	43	20062	8.07 ppb	96
15) Freon-113	1.46	101	63361	11.40 ppb	95
16) 1,1-DCE	1.45	61	83805	10.09 ppb	99
17) t-Butanol	1.91	59	56720	108.39 ppb	98
19) Acetonitrile	1.67	41	107475	112.43 ppb	97
20) Methyl Acetate	1.72	43	52403	10.99 ppb	99
21) Iodomethane	1.53	142	77870	9.96 ppb	99
22) Acrylonitrile	1.96	53	28859	10.45 ppb	94
23) Methylene chloride	1.77	84	74315	10.47 ppb	95
24) Carbon disulfide	1.57	76	184320	12.04 ppb	97
25) Methyl t-butyl ether (MtBE	2.01	73	148842	10.81 ppb	99
26) Trans-1,2-DCE	1.99	61	84808	10.36 ppb	97
27) Diisopropyl Ether	2.47	45	214107	11.06 ppb	100
29) 1,1-DCA	2.34	63	115602	9.86 ppb	100
30) Vinyl Acetate	2.47	45	214107	11.06 ppb	100
32) MEK (2-Butanone)	3.02	43	11465	8.62 ppb	95
33) Cis-1,2-DCE	2.96	61	103572	10.00 ppb	97
34) 2,2-Dichloropropane	2.95	77	84280	9.43 ppb	97
37) Chloroform	3.40	83	128652	10.38 ppb	96
38) Bromochloromethane	3.24	130	54631	10.66 ppb	97
40) 1,1,1-TCA	3.60	97	101725	10.64 ppb	98
41) Cyclohexane	3.67	56	94733	11.34 ppb	97
42) 1,1-Dichloropropene	3.87	75	82067	10.22 ppb	99
43) 2,2,4-Trimethylpentane	4.40	57	188781	10.92 ppb	99
45) Carbon Tetrachloride	3.85	117	87265	10.37 ppb	96
48) 1,2-DCA	4.23	62	91433	10.43 ppb	98
49) Benzene	4.18	78	263471	9.99 ppb	99
50) TCE	5.17	130	80623	10.85 ppb	97
51) 2-Pentanone	5.52	43	332146	103.03 ppb	100
52) 1,2-Dichloropropane	5.45	63	70139	10.49 ppb	98

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

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L21.D Vial: 15
Acq On : 12 Mar 20 17:25 Operator:
Sample : (SS)10ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 17 11:50 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
53)	Bromodichloromethane	5.85	83	97176	10.59 ppb	98
54)	Methyl Cyclohexane	5.40	83	95483	11.20 ppb	96
55)	Dibromomethane	5.59	174	59030	10.76 ppb	97
57)	MIBK (methyl isobutyl ket	6.68	43	49174	10.28 ppb	89
58)	1-Bromo-2-chloroethane	6.19	63	106464	11.29 ppb	98
59)	Cis-1,3-Dichloropropene	6.43	75	104909	10.68 ppb	100
60)	Toluene	6.80	91	296897	10.52 ppb	99
61)	Trans-1,3-Dichloropropene	7.12	75	86361	10.63 ppb	100
62)	1,1,2-TCA	7.31	97	69137	10.40 ppb	100
63)	2-Hexanone	7.67	43	29679	16.15 ppb	93
66)	1,2-EDB	7.80	107	70982	10.73 ppb	96
67)	Tetrachloroethene	7.43	166	84313	10.30 ppb	98
68)	1-Chlorohexane	8.45	91	83858	10.96 ppb	99
69)	1,1,1,2-Tetrachloroethane	8.50	131	77058	10.47 ppb	98
70)	m&p-Xylene	8.69	91	474376	20.92 ppb	100
71)	o-Xylene	9.11	91	245201	10.40 ppb	100
72)	Styrene	9.13	104	193063	10.68 ppb	94
74)	1,3-Dichloropropane	7.48	76	112649	10.74 ppb	98
75)	Dibromochloromethane	7.72	129	78265	10.65 ppb	100
76)	Chlorobenzene	8.38	112	197915	10.37 ppb	98
77)	Ethylbenzene	8.55	91	306705	10.19 ppb	100
78)	Bromoform	9.28	173	56225	10.86 ppb	97
80)	Isopropylbenzene	9.53	105	175104	9.66 ppb	98
81)	1,1,2,2-Tetrachloroethane	9.87	83	88901	10.70 ppb	97
82)	1,2,3-Trichloropropane	9.88	110	27712	10.16 ppb	97
83)	t-1,4-Dichloro-2-Butene	9.93	53	13179	10.08 ppb	97
84)	Bromobenzene	9.79	156	93911	10.56 ppb	96
85)	n-Propylbenzene	9.97	91	349113	10.21 ppb	99
86)	4-Ethyltoluene	10.10	105	199296	11.12 ppb	98
87)	2-Chlorotoluene	10.02	91	130851	10.35 ppb	95
88)	1,3,5-Trimethylbenzene	10.18	105	263859	10.11 ppb	99
89)	4-Chlorotoluene	10.15	91	139264	10.21 ppb	98
90)	Tert-Butylbenzene	10.51	119	217574	10.24 ppb	98
91)	1,2,4-Trimethylbenzene	10.57	105	271066	10.20 ppb	96
92)	Sec-Butylbenzene	10.75	105	320225	10.26 ppb	100
93)	p-Isopropyltoluene	10.92	119	283871	10.40 ppb	97
94)	Benzyl Chloride	11.08	91	52245	8.72 ppb	95
95)	1,3-DCB	10.82	146	165099	9.89 ppb	99
96)	1,4-DCB	10.92	146	170602	10.72 ppb	96
97)	n-Butylbenzene	11.35	91	232717	10.30 ppb	97
98)	1,2-DCB	11.30	146	161356	10.79 ppb	97
99)	Hexachloroethane	11.57	117	52063	10.27 ppb	95
100)	1,2-Dibromo-3-chloropropan	12.14	157	17861	12.43 ppb	98
101)	1,2,4-Trichlorobenzene	13.02	180	124174	12.94 ppb	98
102)	Hexachlorobutadiene	13.24	225	37088	10.73 ppb	95
103)	Naphthalene	13.26	128	281372	17.35 ppb	99
104)	1,2,3-Trichlorobenzene	13.53	182	68272	14.57 ppb	95

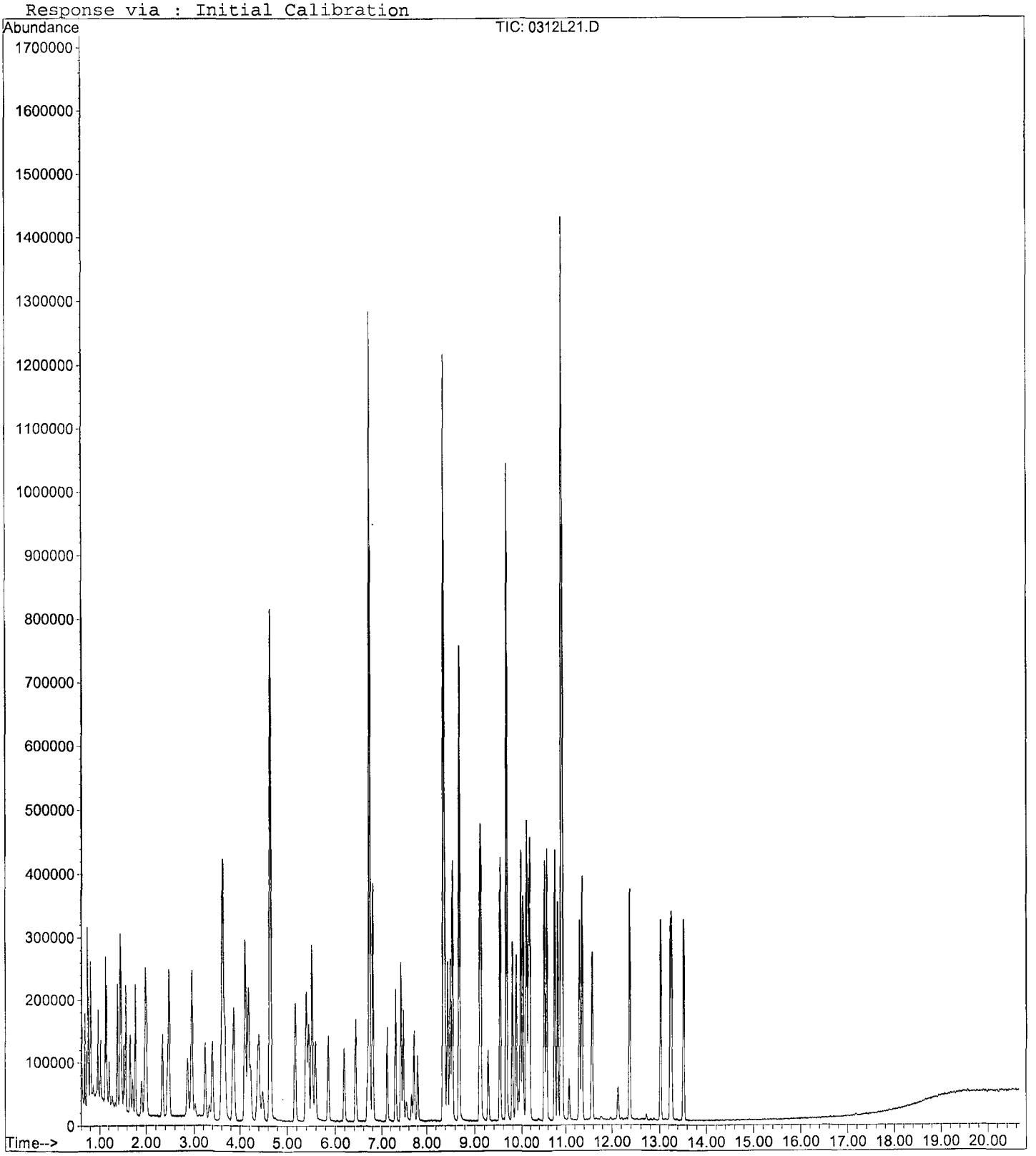
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0312L21.D Vial: 15
Acq On : 12 Mar 20 17:25 Operator:
Sample : (SS)10ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 17 11:50 2020 Quant Results File: L0312W.RES

Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 03/14/20
Matrix: Instrument: Loki
Initial Cal. Date: 03/12/20
Data File: 0313I39.D

		Compound	MEAN	CCRF	%D		%Drift	
1	I	Fluorobenzene (IS)	ISTD			I		
2	TM	Dichlorodifluoromethane	0.3677	0.3442	6.4	TM		
3	TM	Freon 114	0.3743	0.3496	6.6	TM		
4	TM**L	Chloromethane	0.5672	0.4640	18	TM**L	4.9	
5	TM*	Vinyl chloride	0.5274	0.4858	7.9	TM*		
6	TM	2-Chloro-1,1,1-trifluoroethane	0.0000	0.0001	0.00	TM		
7	TM	Bromomethane	0.1887	0.2422	28	TM		* NT
8	TM	Chloroethane	0.0905	0.0928	2.6	TM		
9	TM	Dichlorofluoromethane	0.6541	0.6542	0.02	TM		
10	TM	Trichlorofluoromethane	0.5923	0.6064	2.4	TM		
11	TM	Diethyl ether	0.0000	0.0459	0.00	TM		
12	TM	Acrolein	0.0389	0.0290	25	TM		* NT
13	TML	Acetone	0.1641	0.1062	35	TML	41	* NT
14	TM	Freon-113	0.3451	0.3500	1.4	TM		
15	TM*	1,1-DCE	0.5159	0.5142	0.33	TM*		
16	TM	t-Butanol	0.0325	0.0248	24	TM		* NT
17	TM	2-Propanol	0.0000	0.0015	0.00	TM		
18	TM	Acetonitrile	0.0594	0.0532	10	TM		
19	TML	Methyl Acetate	0.3350	0.2925	13	TML	1.3	
20	TML	Iodomethane	0.4362	0.1853	58	TML	55	* NT
21	TML	Acrylonitrile	0.1956	0.1652	16	TML	4.1	
22	TML	Methylene chloride	0.5117	0.4326	15	TML	2.4	
23	TM	Carbon disulfide	0.9507	0.9148	3.8	TM		
24	TM	Methyl t-butyl ether (MtBE)	0.8552	0.7226	16	TM		
25	TM	Trans-1,2-DCE	0.5084	0.5078	0.12	TM		
26	TM	Diisopropyl Ether	1.203	1.142	5.1	TM		
27	TM**	2,2-Dichloro-1,1,1-trifluoroethane	0.0000	0.0009	0.00	TM**		
28	TM**	1,1-DCA	0.7281	0.7632	4.8	TM**		
29	TM	Vinyl Acetate	1.203	1.142	5.1	TM		
30	TM	Ethyl tert Butyl Ether	0.0000	0.0127	0.00	TM		
31	TM	MEK (2-Butanone)	0.0826	0.0683	17	TM		
32	TM	Cis-1,2-DCE	0.6432	0.6064	5.7	TM		
33	TM	2,2-Dichloropropane	0.5551	0.4566	18	TM		
34	TM	2-Methylpentane	0.0000	0.0008	0.00	TM		
35	TM	3-Methylpentane	0.0000	0.0003	0.00	TM		
36	TM*	Chloroform	0.7700	0.7691	0.11	TM*		
37	TM	Bromochloromethane	0.3183	0.3285	3.2	TM		
38	S	Dibromofluoromethane(S)	0.7133	0.7306	2.4	S		
39	TM	1,1,1-TCA	0.5940	0.6273	5.6	TM		
40	TM	Cyclohexane	0.5191	0.4769	8.1	TM		
		Average			9.4			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 03/14/20
Matrix: 0 Instrument: Loki
Cal. Date: 03/12/20
Data File: 0313I39.D

		Compound	MEAN	CCRF	%D		%Drift	
41	TM	1,1-Dichloropropene	0.4988	0.4795	3.9	TM		
42	TM	2,2,4-Trimethylpentane	1.074	0.8752	19	TM		
43	S	1,2-DCA-D4(S)	0.7188	0.7129	0.82	S		
44	TM	Carbon Tetrachloride	0.5229	0.5481	4.8	TM		
45	TM	Tert Amyl Methyl Ether	0.0000	0.0714	0.00	TM		
46	TM	Methylcyclopentane	0.0000	0.0016	0.00	TM		
47	TM	1,2-DCA	0.5445	0.5510	1.2	TM		
48	TM	Benzene	1.638	1.565	4.5	TM		
49	TM	TCE	0.4616	0.4890	5.9	TM		
50	TM	2-Pentanone	0.2002	0.1504	25	TM		* NT
51	TM*	1,2-Dichloropropane	0.4153	0.4335	4.4	TM*		
52	TM	Bromodichloromethane	0.5699	0.5986	5.0	TM		
53	TM	Methyl Cyclohexane	0.5294	0.4635	12	TM		
54	TM	Dibromomethane	0.3408	0.3476	2.0	TM		
55	TML	MIBK (methyl isobutyl ketone)	0.3320	0.2474	25	TML	17	
56	TM	1-Bromo-2-chloroethane	0.5859	0.5960	1.7	TM		
57	TM	Cis-1,3-Dichloropropene	0.6102	0.5958	2.4	TM		
58	TM*	Toluene	1.754	1.765	0.67	TM*		
59	TM	Trans-1,3-Dichloropropene	0.5048	0.4854	3.8	TM		
60	TM	1,1,2-TCA	0.4127	0.4322	4.7	TM		
61	TML	2-Hexanone	0.1250	0.0785	37	TML	25	* NT
62	I	Chlorobenzene-D5 (IS)	ISTD			I		
63	S	Toluene-D8(S)	2.156	2.225	3.2	S		
64	TM	1,2-EDB	0.3792	0.3877	2.2	TM		
65	TM	Tetrachloroethene	0.4689	0.4533	3.3	TM		
66	TM	1-Chlorohexane	0.4385	0.4100	6.5	TM		
67	TM	1,1,1,2-Tetrachloroethane	0.4218	0.4314	2.3	TM		
68	TM	m&p-Xylene	1.300	1.241	4.5	TM		
69	TM	o-Xylene	1.351	1.268	6.1	TM		
70	TM	Styrene	1.036	0.9510	8.2	TM		
71	S	4-Bromofluorobenzene(S)	0.8148	0.8371	2.7	S		
72	TM	1,3-Dichloropropane	0.6012	0.6237	3.7	TM		
73	TM	Dibromochloromethane	0.4210	0.4540	7.8	TM		
74	TM**	Chlorobenzene	1.094	1.091	0.28	TM**		
75	TM*	Ethylbenzene	1.726	1.611	6.6	TM*		
76	TM**	Bromoform	0.2968	0.3191	7.5	TM**		
77	I	1,4-Dichlorobenzene-D (IS)	ISTD			I		
78	TM	Isopropylbenzene	1.827	1.600	12	TM		
79	TM**	1,1,2,2-Tetrachloroethane	0.8376	0.8168	2.5	TM**		
80	TM	1,2,3-Trichloropropane	0.2748	0.2565	6.6	TM		
		Average			6.6			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 03/14/20
Instrument: Loki
Cal. Date: 03/12/20
Data File: 0313l39.D

		Compound	MEAN	CCRF	%D		%Drift	
81	TM	t-1,4-Dichloro-2-Butene	0.1317	0.0935	29	TM		* NT
82	TM	Bromobenzene	0.8966	0.8460	5.6	TM		
83	TML	n-Propylbenzene	3.879	3.118	20	TML	9.1	
84	TML	4-Ethyltoluene	1.901	1.630	14	TML	8.7	
85	TM	2-Chlorotoluene	1.274	1.229	3.6	TM		
86	TM	1,3,5-Trimethylbenzene	2.630	2.408	8.4	TM		
87	TM	4-Chlorotoluene	1.375	1.193	13	TM		
88	TML	Tert-Butylbenzene	2.489	1.942	22	TML	9.1	
89	TML	1,2,4-Trimethylbenzene	3.470	2.295	34	TML	14	
90	TML	Sec-Butylbenzene	3.735	2.855	24	TML	8.9	
91	TML	p-Isopropyltoluene	3.160	2.456	22	TML	10	
92	TM	Benzyl Chloride	0.6036	0.3217	47	TM		* NT
93	TM	1,3-DCB	1.683	1.507	10	TM		
94	TML	1,4-DCB	1.793	1.519	15	TML	5.4	
95	TML	n-Butylbenzene	3.333	1.707	49	TML	24	* NT
96	TML	1,2-DCB	1.666	1.425	14	TML	5.2	
97	TM	Hexachloroethane	0.5111	0.5320	4.1	TM		
98	TM	1,2-Dibromo-3-chloropropane	0.1448	0.1339	7.5	TM		
99	TML	1,2,4-Trichlorobenzene	1.484	0.6151	59	TML	34	* NT
100	TML	Hexachlorobutadiene	0.4982	0.3028	39	TML	13	
101	TML	Naphthalene	1.978	0.7597	62	TML	49	* NT
102	TML	1,2,3-Trichlorobenzene	0.7422	0.2908	61	TML	37	* NT
103								
104								
105								
106								
107								
108								
109								
110								
111								
112								
113								
114								
115								
116								
117								
118								
119								
120								
		Average			25.6			

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0313139.D Vial: 38
Acq On : 14 Mar 20 3:34 Operator:
Sample : 200313B CCV 10ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 10:38 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	4.65	96	354432	25.00	ppb		0.00
64) Chlorobenzene-D5 (IS)	8.36	117	385600	25.00	ppb		0.00
79) 1,4-Dichlorobenzene-D (IS)	10.90	152	223168	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	3.62	111	258941	25.61	ppb		0.00
Spiked Amount 25.000			Recovery =	102.428%			
44) 1,2-DCA-D4(S)	4.11	65	252677	24.79	ppb		0.00
Spiked Amount 25.000			Recovery =	99.176%			
65) Toluene-D8(S)	6.73	98	857985	25.80	ppb		0.00
Spiked Amount 25.000			Recovery =	103.212%			
73) 4-Bromofluorobenzene(S)	9.66	95	322790	25.68	ppb		0.00
Spiked Amount 25.000			Recovery =	102.736%			
Target Compounds							Qvalue
3) Dichlorodifluoromethane	0.67	85	48793	9.36	ppb		96
4) Freon 114	0.73	85	49563	9.34	ppb		99
5) Chloromethane	0.76	50	65789	9.51	ppb		98
6) Vinyl chloride	0.81	62	68872	9.21	ppb		98
8) Bromomethane	0.96	94	34344	12.84	ppb		98
9) Chloroethane	1.02	66	13157	10.26	ppb		88
10) Dichlorofluoromethane	1.13	67	92752	10.00	ppb		98
11) Trichlorofluoromethane	1.16	101	85978	10.24	ppb		97
13) Acrolein	1.39	56	51466	93.38	ppb	#	73
14) Acetone	1.49	43	15056	5.85	ppb		94
15) Freon-113	1.46	101	49627	10.14	ppb		98
16) 1,1-DCE	1.45	61	72905	9.97	ppb		99
17) t-Butanol	1.91	59	43871	95.20	ppb		98
19) Acetonitrile	1.67	41	94325	112.05	ppb		86
20) Methyl Acetate	1.72	43	41469	9.87	ppb		98
21) Iodomethane	1.53	142	26275	4.52	ppb		95
22) Acrylonitrile	1.96	53	23415	9.59	ppb		93
23) Methylene chloride	1.77	84	61328	9.76	ppb		97
24) Carbon disulfide	1.57	76	129695	9.62	ppb		98
25) Methyl t-butyl ether (MtBE	2.00	73	102442	8.45	ppb		97
26) Trans-1,2-DCE	1.99	61	71991	9.99	ppb		97
27) Diisopropyl Ether	2.47	45	161842	9.49	ppb		96
29) 1,1-DCA	2.34	63	108198	10.48	ppb		97
30) Vinyl Acetate	2.47	45	161842	9.49	ppb		96
32) MEK (2-Butanone)	3.03	43	9684	8.27	ppb		96
33) Cis-1,2-DCE	2.96	61	85975	9.43	ppb		97
34) 2,2-Dichloropropane	2.95	77	64732	8.23	ppb		96
37) Chloroform	3.40	83	109039	9.99	ppb		98
38) Bromochloromethane	3.25	130	46579	10.32	ppb		98
40) 1,1,1-TCA	3.60	97	88939	10.56	ppb		99
41) Cyclohexane	3.67	56	67614	9.19	ppb		98
42) 1,1-Dichloropropene	3.87	75	67975	9.61	ppb		99
43) 2,2,4-Trimethylpentane	4.41	57	124085	8.15	ppb		98
45) Carbon Tetrachloride	3.85	117	77704	10.48	ppb		99
48) 1,2-DCA	4.23	62	78114	10.12	ppb		98
49) Benzene	4.18	78	221832	9.55	ppb		99
50) TCE	5.17	130	69322	10.59	ppb		95
51) 2-Pentanone	5.52	43	266604	93.91	ppb		97
52) 1,2-Dichloropropane	5.45	63	61457	10.44	ppb		95

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

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0313139.D Vial: 38
Acq On : 14 Mar 20 3:34 Operator:
Sample : 200313B CCV 10ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 10:38 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

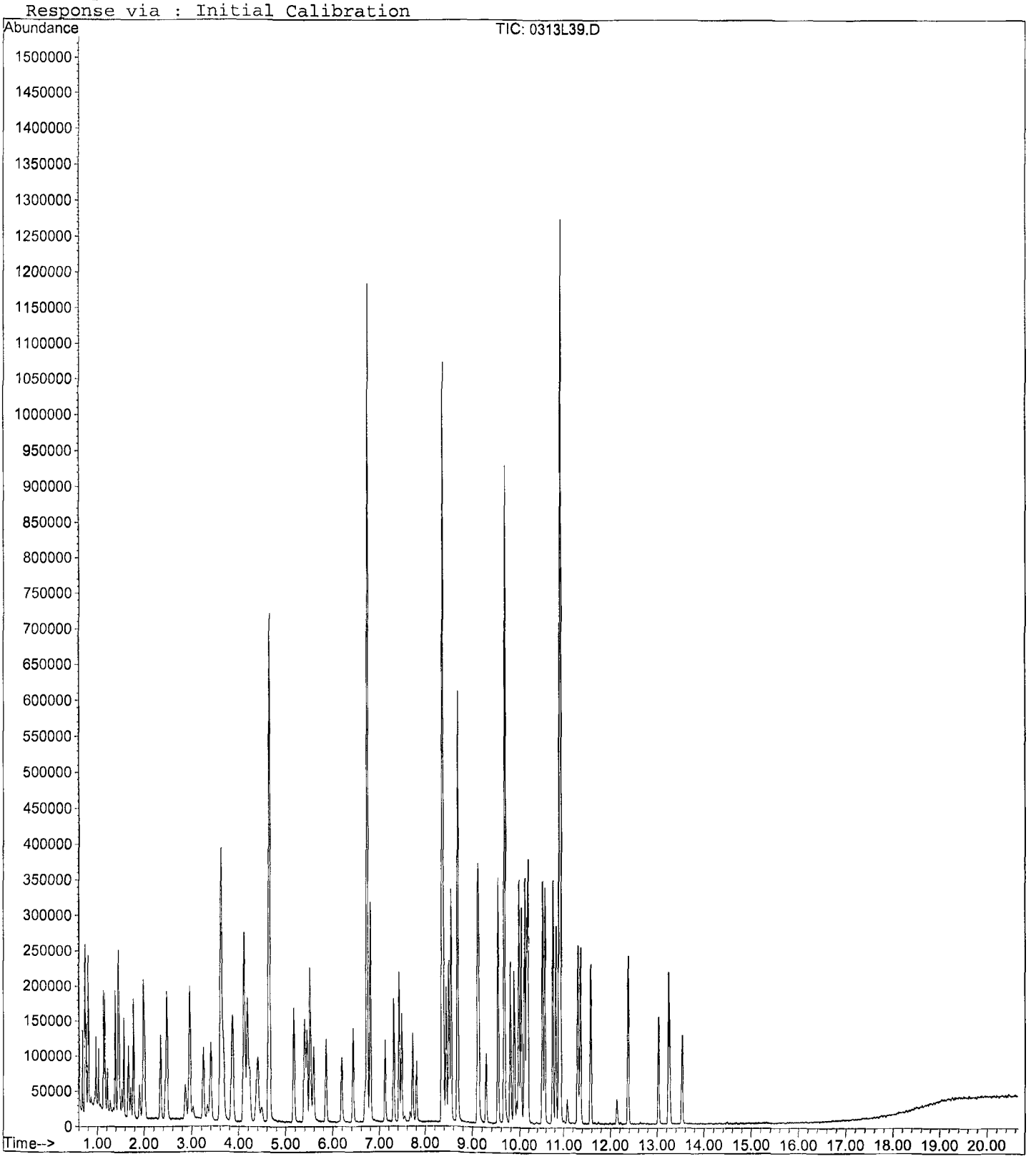
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
53)	Bromodichloromethane	5.86	83	84861	10.50	ppb	91
54)	Methyl Cyclohexane	5.40	83	65711	8.75	ppb	100
55)	Dibromomethane	5.59	174	49278	10.20	ppb	99
57)	MIBK (methyl isobutyl ket	6.68	43	35080	8.30	ppb	95
58)	1-Bromo-2-chloroethane	6.19	63	84494	10.17	ppb	98
59)	Cis-1,3-Dichloropropene	6.43	75	84465	9.76	ppb	97
60)	Toluene	6.81	91	250279	10.07	ppb	99
61)	Trans-1,3-Dichloropropene	7.12	75	68819	9.62	ppb	97
62)	1,1,2-TCA	7.31	97	61278	10.47	ppb	100
63)	2-Hexanone	7.67	43	11123	7.46	ppb	93
66)	1,2-EDB	7.81	107	59799	10.22	ppb	100
67)	Tetrachloroethene	7.43	166	69915	9.67	ppb	96
68)	1-Chlorohexane	8.44	91	63237	9.35	ppb	97
69)	1,1,1,2-Tetrachloroethane	8.50	131	66534	10.23	ppb	96
70)	m&p-Xylene	8.69	91	382804	19.10	ppb	99
71)	o-Xylene	9.11	91	195639	9.39	ppb	99
72)	Styrene	9.13	104	146690	9.18	ppb	98
74)	1,3-Dichloropropane	7.48	76	96195	10.37	ppb	100
75)	Dibromochloromethane	7.72	129	70022	10.78	ppb	99
76)	Chlorobenzene	8.39	112	168210	9.97	ppb	97
77)	Ethylbenzene	8.55	91	248513	9.34	ppb	100
78)	Bromoform	9.28	173	49223	10.75	ppb	100
80)	Isopropylbenzene	9.53	105	142848	8.76	ppb	100
81)	1,1,2,2-Tetrachloroethane	9.87	83	72913	9.75	ppb	99
82)	1,2,3-Trichloropropane	9.88	110	22899	9.34	ppb	97
83)	t-1,4-Dichloro-2-Butene	9.93	53	8345	7.10	ppb	99
84)	Bromobenzene	9.79	156	75520	9.44	ppb	95
85)	n-Propylbenzene	9.98	91	278350	9.09	ppb	98
86)	4-Ethyltoluene	10.11	105	145472	9.13	ppb	97
87)	2-Chlorotoluene	10.03	91	109667	9.64	ppb	94
88)	1,3,5-Trimethylbenzene	10.18	105	214978	9.16	ppb	99
89)	4-Chlorotoluene	10.15	91	106516	8.68	ppb	100
90)	Tert-Butylbenzene	10.52	119	173340	9.09	ppb	98
91)	1,2,4-Trimethylbenzene	10.57	105	204898	8.55	ppb	96
92)	Sec-Butylbenzene	10.75	105	254896	9.11	ppb	100
93)	p-Isopropyltoluene	10.92	119	219243	8.98	ppb	99
94)	Benzyl Chloride	11.08	91	28714	5.33	ppb	99
95)	1,3-DCB	10.82	146	134521	8.95	ppb	99
96)	1,4-DCB	10.92	146	135560	9.46	ppb	99
97)	n-Butylbenzene	11.36	91	152373	7.57	ppb	99
98)	1,2-DCB	11.30	146	127197	9.48	ppb	95
99)	Hexachloroethane	11.58	117	47492	10.41	ppb	97
100)	1,2-Dibromo-3-chloropropan	12.14	157	11950	9.25	ppb	97
101)	1,2,4-Trichlorobenzene	13.03	180	54907	6.60	ppb	99
102)	Hexachlorobutadiene	13.25	225	27032	8.70	ppb	95
103)	Naphthalene	13.27	128	67814	5.14	ppb	98
104)	1,2,3-Trichlorobenzene	13.53	182	25960	6.25	ppb	97

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

Data File : M:\LOKI\DATA\200312\0313139.D Vial: 38
Acq On : 14 Mar 20 3:34 Operator:
Sample : 200313B CCV 10ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 10:38 2020 Quant Results File: L0312W.RES

Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 03/14/20
Matrix: Instrument: Loki
Initial Cal. Date: 03/12/20
Data File: 0313I57.D

		Compound	MEAN	CCRF	%D		%Drift	
1	I	Fluorobenzene (IS)	ISTD			I		
2	TM	Dichlorodifluoromethane	0.3677	0.3553	3.4	TM		
3	TM	Freon 114	0.3743	0.3509	6.3	TM		
4	TM**L	Chloromethane	0.5672	0.4712	17	TM**L	3.4	
5	TM*	Vinyl chloride	0.5274	0.5206	1.3	TM*		
6	TM	2-Chloro-1,1,1-trifluoroethane	0.0000	0.0001	0.00	TM		
7	TM	Bromomethane	0.1887	0.2674	42	TM		
8	TM	Chloroethane	0.0905	0.0856	5.4	TM		
9	TM	Dichlorofluoromethane	0.6541	0.6721	2.8	TM		
10	TM	Trichlorofluoromethane	0.5923	0.6262	5.7	TM		
11	TM	Diethyl ether	0.0000	0.0544	0.00	TM		
12	TM	Acrolein	0.0389	0.0350	10	TM		
13	TML	Acetone	0.1641	1.276	678	TML	1368	* NT
14	TM	Freon-113	0.3451	0.3351	2.9	TM		
15	TM*	1,1-DCE	0.5159	0.5196	0.72	TM*		
16	TM	t-Butanol	0.0325	0.0330	1.6	TM		
17	TM	2-Propanol	0.0000	1.054	0.00	TM		
18	TM	Acetonitrile	0.0594	0.0645	8.6	TM		
19	TML	Methyl Acetate	0.3350	0.3476	3.7	TML	17	
20	TML	Iodomethane	0.4362	0.3324	24	TML	28	
21	TML	Acrylonitrile	0.1956	0.1806	7.7	TML	5.4	
22	TML	Methylene chloride	0.5117	0.4422	14	TML	0.04	
23	TM	Carbon disulfide	0.9507	0.9417	0.95	TM		
24	TM	Methyl t-butyl ether (MtBE)	0.8552	0.7980	6.7	TM		
25	TM	Trans-1,2-DCE	0.5084	0.5135	1.0	TM		
26	TM	Diisopropyl Ether	1.203	1.185	1.4	TM		
27	TM**	2,2-Dichloro-1,1,1-trifluoroethane	0.0000	0.0003	0.00	TM**		
28	TM**	1,1-DCA	0.7281	0.7413	1.8	TM**		
29	TM	Vinyl Acetate	1.203	1.185	1.4	TM		
30	TM	Ethyl tert Butyl Ether	0.0000	0.0126	0.00	TM		
31	TM	MEK (2-Butanone)	0.0826	0.0791	4.3	TM		
32	TM	Cis-1,2-DCE	0.6432	0.6223	3.2	TM		
33	TM	2,2-Dichloropropane	0.5551	0.4164	25	TM		
34	TM	2-Methylpentane	0.0000	0.0007	0.00	TM		
35	TM	3-Methylpentane	0.0000	0.0117	0.00	TM		
36	TM*	Chloroform	0.7700	0.8075	4.9	TM*		
37	TM	Bromochloromethane	0.3183	0.3240	1.8	TM		
38	S	Dibromofluoromethane(S)	0.7133	0.6984	2.1	S		
39	TM	1,1,1-TCA	0.5940	0.6341	6.7	TM		
40	TM	Cyclohexane	0.5191	0.4957	4.5	TM		
		Average			23.1			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 03/14/20
Matrix: 0 Instrument: Loki
Cal. Date: 03/12/20
Data File: 0313I57.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	1,1-Dichloropropene	0.4988	0.4757	4.6	TM	
42	TM	2,2,4-Trimethylpentane	1.074	0.8582	20	TM	
43	S	1,2-DCA-D4(S)	0.7188	0.7057	1.8	S	
44	TM	Carbon Tetrachloride	0.5229	0.5504	5.3	TM	
45	TM	Tert Amyl Methyl Ether	0.0000	0.0721	0.00	TM	
46	TM	Methylcyclopentane	0.0000	0.0011	0.00	TM	
47	TM	1,2-DCA	0.5445	0.5731	5.2	TM	
48	TM	Benzene	1.638	1.585	3.2	TM	
49	TM	TCE	0.4616	0.4976	7.8	TM	
50	TM	2-Pentanone	0.2002	0.2233	12	TM	
51	TM*	1,2-Dichloropropane	0.4153	0.4546	9.5	TM*	
52	TM	Bromodichloromethane	0.5699	0.6237	9.4	TM	
53	TM	Methyl Cyclohexane	0.5294	0.4795	9.4	TM	
54	TM	Dibromomethane	0.3408	0.3755	10	TM	
55	TML	MIBK (methyl isobutyl ketone)	0.3320	0.3267	1.6	TML	10.0
56	*TM*	*1-Bromo-2-chloroethane*	*0.5859*	*0.6353*	*8.4*	*TM*	
57	TM	Cis-1,3-Dichloropropene	0.6102	0.6078	0.40	TM	
58	TM*	Toluene	1.754	1.781	1.5	TM*	
59	TM	Trans-1,3-Dichloropropene	0.5048	0.4989	1.2	TM	
60	TM	1,1,2-TCA	0.4127	0.4360	5.6	TM	
61	TML	2-Hexanone	0.1250	0.1432	15	TML	28
62	I	Chlorobenzene-D5 (IS)	ISTD			I	
63	S	Toluene-D8(S)	2.156	2.175	0.87	S	
64	TM	1,2-EDB	0.3792	0.4051	6.8	TM	
65	TM	Tetrachloroethene	0.4689	0.4641	1.0	TM	
66	TM	1-Chlorohexane	0.4385	0.4122	6.0	TM	
67	TM	1,1,1,2-Tetrachloroethane	0.4218	0.4534	7.5	TM	
68	TM	m&p-Xylene	1.300	1.280	1.6	TM	
69	TM	o-Xylene	1.351	1.324	2.0	TM	
70	TM	Styrene	1.036	1.033	0.32	TM	
71	S	4-Bromofluorobenzene(S)	0.8148	0.8245	1.2	S	
72	TM	1,3-Dichloropropane	0.6012	0.6598	9.8	TM	
73	TM	Dibromochloromethane	0.4210	0.4718	12	TM	
74	TM**	Chlorobenzene	1.094	1.119	2.3	TM**	
75	TM*	Ethylbenzene	1.726	1.658	3.9	TM*	
76	TM**	Bromoform	0.2968	0.3518	19	TM**	
77	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
78	TM	Isopropylbenzene	1.827	1.651	9.7	TM	
79	TM**	1,1,2,2-Tetrachloroethane	0.8376	0.8960	7.0	TM**	
80	TM	1,2,3-Trichloropropane	0.2748	0.3031	10	TM	
		Average			6.1		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 03/14/20
Matrix: 0 Instrument: Loki
Cal. Date: 03/12/20
Data File: 0313I57.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	t-1,4-Dichloro-2-Butene	0.1317	0.1185	10	TM	
82	TM	Bromobenzene	0.8966	0.9002	0.41	TM	
83	TML	n-Propylbenzene	3.879	3.312	15	TML	3.7
84	TML	4-Ethyltoluene	1.901	1.704	10	TML	4.7
85	TM	2-Chlorotoluene	1.274	1.282	0.58	TM	
86	TM	1,3,5-Trimethylbenzene	2.630	2.549	3.1	TM	
87	TM	4-Chlorotoluene	1.375	1.288	6.3	TM	
88	TML	Tert-Butylbenzene	2.489	2.098	16	TML	2.0
89	TML	1,2,4-Trimethylbenzene	3.470	2.408	31	TML	10
90	TML	Sec-Butylbenzene	3.735	2.986	20	TML	4.9
91	TML	p-Isopropyltoluene	3.160	2.676	15	TML	2.5
92	TM	Benzyl Chloride	0.6036	0.3415	43	TM	
93	TM	1,3-DCB	1.683	1.622	3.6	TM	
94	TML	1,4-DCB	1.793	1.673	6.7	TML	4.3
95	TML	n-Butylbenzene	3.333	2.006	40	TML	11
96	TML	1,2-DCB	1.666	1.610	3.3	TML	6.9
97	TM	Hexachloroethane	0.5111	0.5581	9.2	TM	
98	TM	1,2-Dibromo-3-chloropropane	0.1448	0.1868	29	TM	
99	TML	1,2,4-Trichlorobenzene	1.484	0.9528	36	TML	0.32
100	TML	Hexachlorobutadiene	0.4982	0.3433	31	TML	1.4
101	TML	Naphthalene	1.978	1.584	20	TML	0.12
102	TML	1,2,3-Trichlorobenzene	0.7422	0.4866	34	TML	3.5
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			17.4		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0313157.D Vial: 56
Acq On : 14 Mar 20 12:09 Operator:
Sample : Ending CCV 10ug/L 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:16 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	4.64	96	355712	25.00	ppb		0.00
64) Chlorobenzene-D5 (IS)	8.36	117	387008	25.00	ppb		0.00
79) 1,4-Dichlorobenzene-D (IS)	10.90	152	222848	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	3.62	111	248434	24.48	ppb		0.00
Spiked Amount 25.000			Recovery = 97.920%				
44) 1,2-DCA-D4(S)	4.11	65	251013	24.54	ppb		0.00
Spiked Amount 25.000			Recovery = 98.168%				
65) Toluene-D8(S)	6.73	98	841587	25.22	ppb		0.00
Spiked Amount 25.000			Recovery = 100.868%				
73) 4-Bromofluorobenzene(S)	9.66	95	319090	25.30	ppb		0.00
Spiked Amount 25.000			Recovery = 101.188%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	0.67	85	50548	9.66	ppb		99
4) Freon 114	0.73	85	49923	9.37	ppb		97
5) Chloromethane	0.76	50	67040	9.66	ppb		99
6) Vinyl chloride	0.81	62	74072	9.87	ppb		97
8) Bromomethane	0.96	94	38040	14.17	ppb		98
9) Chloroethane	1.02	66	12181	9.46	ppb		94
10) Dichlorofluoromethane	1.13	67	95624	10.28	ppb		99
11) Trichlorofluoromethane	1.16	101	89094	10.57	ppb		95
13) Acrolein	1.39	56	62187	112.43	ppb		91
14) Acetone	1.61	43	181543	146.79	ppb	#	44
15) Freon-113	1.46	101	47677	9.71	ppb		98
16) 1,1-DCE	1.45	61	73938	10.07	ppb		99
17) t-Butanol	1.91	59	58759	127.05	ppb		97
19) Acetonitrile	1.61	41	114707	135.78	ppb	#	49
20) Methyl Acetate	1.72	43	49454	11.75	ppb		100
21) Iodomethane	1.53	142	47298	7.20	ppb		96
22) Acrylonitrile	1.96	53	25703	10.54	ppb		98
23) Methylene chloride	1.77	84	62915	10.00	ppb		95
24) Carbon disulfide	1.57	76	133985	9.90	ppb		99
25) Methyl t-butyl ether (MtBE	2.00	73	113540	9.33	ppb		97
26) Trans-1,2-DCE	1.98	61	73066	10.10	ppb		97
27) Diisopropyl Ether	2.47	45	168662	9.86	ppb		97
29) 1,1-DCA	2.34	63	105477	10.18	ppb		99
30) Vinyl Acetate	2.47	45	168662	9.86	ppb		97
32) MEK (2-Butanone)	3.02	43	11252	9.57	ppb		100
33) Cis-1,2-DCE	2.96	61	88545	9.68	ppb		97
34) 2,2-Dichloropropane	2.95	77	59244	7.50	ppb		97
37) Chloroform	3.40	83	114889	10.49	ppb		97
38) Bromochloromethane	3.24	130	46106	10.18	ppb		97
40) 1,1,1-TCA	3.60	97	90216	10.67	ppb		99
41) Cyclohexane	3.67	56	70526	9.55	ppb		97
42) 1,1-Dichloropropene	3.87	75	67679	9.54	ppb		95
43) 2,2,4-Trimethylpentane	4.40	57	122110	7.99	ppb		99
45) Carbon Tetrachloride	3.85	117	78320	10.53	ppb		91
48) 1,2-DCA	4.23	62	81541	10.52	ppb		99
49) Benzene	4.18	78	225507	9.68	ppb		100
50) TCE	5.17	130	70801	10.78	ppb		97
51) 2-Pentanone	5.52	43	397213	139.41	ppb		98
52) 1,2-Dichloropropane	5.45	63	64689	10.95	ppb		95

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

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0313157.D Vial: 56
Acq On : 14 Mar 20 12:09 Operator:
Sample : Ending CCV 10ug/L 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:16 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
53)	Bromodichloromethane	5.85	83	88746	10.94 ppb	92
54)	Methyl Cyclohexane	5.40	83	68223	9.06 ppb	96
55)	Dibromomethane	5.59	174	53427	11.02 ppb	96
57)	MIBK (methyl isobutyl ket	6.68	43	46479	11.00 ppb	90
58)	1-Bromo-2-chloroethane	6.19	63	90389	10.84 ppb	99
59)	Cis-1,3-Dichloropropene	6.43	75	86475	9.96 ppb	100
60)	Toluene	6.80	91	253351	10.15 ppb	99
61)	Trans-1,3-Dichloropropene	7.12	75	70988	9.88 ppb	98
62)	1,1,2-TCA	7.31	97	62043	10.56 ppb	98
63)	2-Hexanone	7.66	43	20371	12.77 ppb	94
66)	1,2-EDB	7.80	107	62712	10.68 ppb	99
67)	Tetrachloroethene	7.43	166	71839	9.90 ppb	98
68)	1-Chlorohexane	8.45	91	63809	9.40 ppb	98
69)	1,1,1,2-Tetrachloroethane	8.50	131	70190	10.75 ppb	94
70)	m&p-Xylene	8.69	91	396143	19.69 ppb	99
71)	o-Xylene	9.11	91	204988	9.80 ppb	100
72)	Styrene	9.13	104	159860	9.97 ppb	94
74)	1,3-Dichloropropane	7.48	76	102140	10.98 ppb	99
75)	Dibromochloromethane	7.72	129	73043	11.21 ppb	100
76)	Chlorobenzene	8.38	112	173195	10.23 ppb	96
77)	Ethylbenzene	8.55	91	256729	9.61 ppb	98
78)	Bromoform	9.28	173	54459	11.85 ppb	97
80)	Isopropylbenzene	9.53	105	147136	9.03 ppb	98
81)	1,1,2,2-Tetrachloroethane	9.87	83	79871	10.70 ppb	99
82)	1,2,3-Trichloropropane	9.88	110	27019	11.03 ppb	99
83)	t-1,4-Dichloro-2-Butene	9.93	53	10564	9.00 ppb	96
84)	Bromobenzene	9.79	156	80243	10.04 ppb	94
85)	n-Propylbenzene	9.98	91	295232	9.63 ppb	98
86)	4-Ethyltoluene	10.10	105	151936	9.53 ppb	99
87)	2-Chlorotoluene	10.02	91	114237	10.06 ppb	96
88)	1,3,5-Trimethylbenzene	10.18	105	227178	9.69 ppb	98
89)	4-Chlorotoluene	10.15	91	114844	9.37 ppb	96
90)	Tert-Butylbenzene	10.52	119	186983	9.80 ppb	100
91)	1,2,4-Trimethylbenzene	10.57	105	214622	8.98 ppb	95
92)	Sec-Butylbenzene	10.75	105	266166	9.51 ppb	99
93)	p-Isopropyltoluene	10.92	119	238564	9.75 ppb	97
94)	Benzyl Chloride	11.08	91	30445	5.66 ppb	91
95)	1,3-DCB	10.82	146	144606	9.64 ppb	97
96)	1,4-DCB	10.92	146	149158	10.43 ppb	98
97)	n-Butylbenzene	11.35	91	178843	8.85 ppb	99
98)	1,2-DCB	11.30	146	143530	10.69 ppb	98
99)	Hexachloroethane	11.58	117	49750	10.92 ppb	93
100)	1,2-Dibromo-3-chloropropan	12.14	157	16651	12.90 ppb	96
101)	1,2,4-Trichlorobenzene	13.02	180	84928	9.97 ppb	97
102)	Hexachlorobutadiene	13.24	225	30600	9.86 ppb	96
103)	Naphthalene	13.27	128	141196	9.99 ppb	98
104)	1,2,3-Trichlorobenzene	13.53	182	43376	10.35 ppb	97

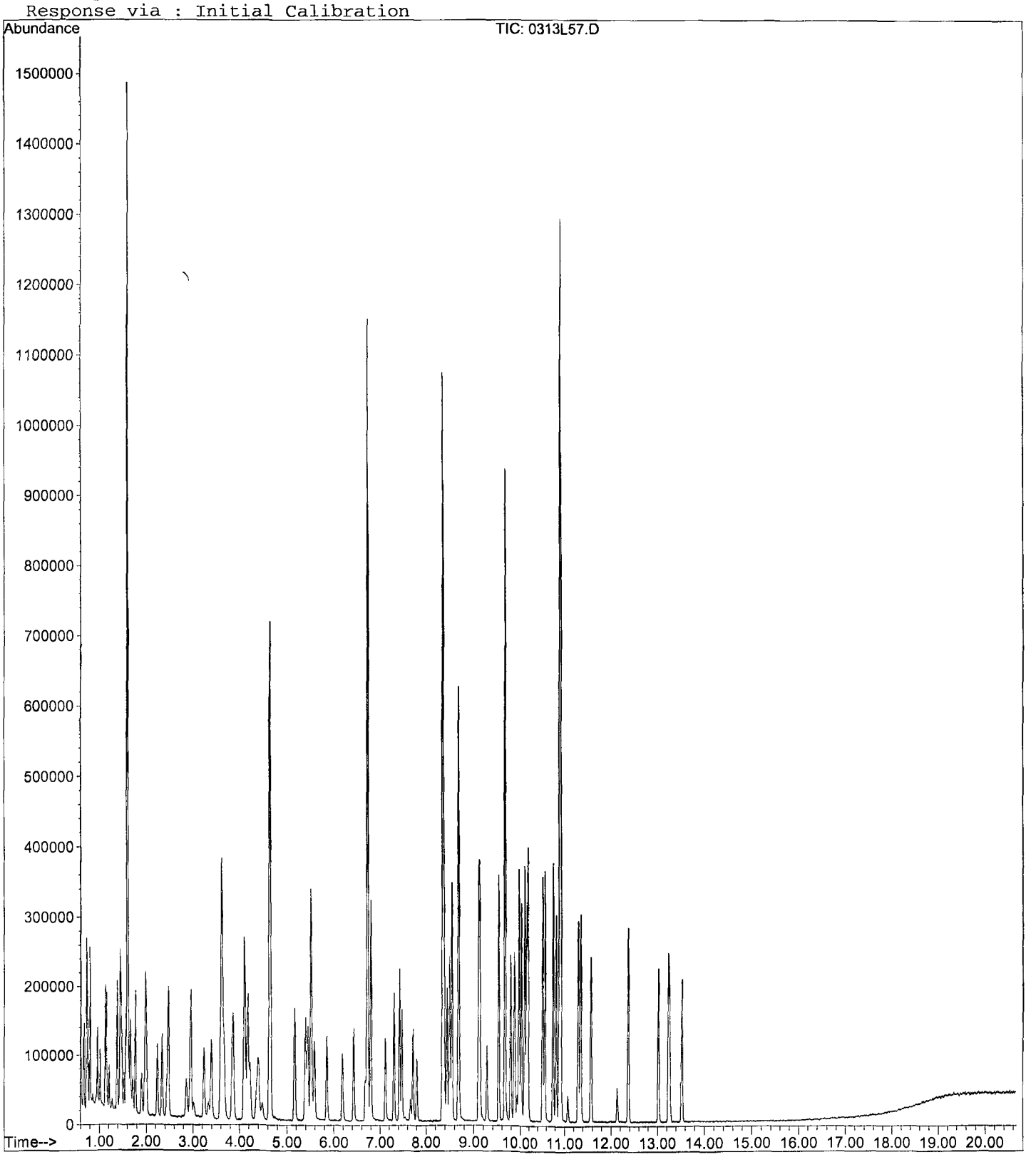
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0313157.D Vial: 56
Acq On : 14 Mar 20 12:09 Operator:
Sample : Ending CCV 10ug/L 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:16 2020 Quant Results File: L0312W.RES

Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



ORGANICS
Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\200312\0313146.D Vial: 45
Acq On : 14 Mar 20 6:54 Operator:
Sample : BA08340W01 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:52 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	96	347136	25.00	ppb	0.00
64) Chlorobenzene-D5 (IS)	8.36	117	369984	25.00	ppb	0.00
79) 1,4-Dichlorobenzene-D (IS)	10.90	152	180992	25.00	ppb	0.00
System Monitoring Compounds						
39) Dibromofluoromethane(S)	3.62	111	249672	25.21	ppb	0.00
Spiked Amount 25.000			Recovery = 100.840%			
44) 1,2-DCA-D4(S)	4.11	65	237693	23.81	ppb	0.00
Spiked Amount 25.000			Recovery = 95.256%			
65) Toluene-D8(S)	6.73	98	794836	24.91	ppb	0.00
Spiked Amount 25.000			Recovery = 99.648%			
73) 4-Bromofluorobenzene(S)	9.66	95	274274	22.74	ppb	0.00
Spiked Amount 25.000			Recovery = 90.980%			

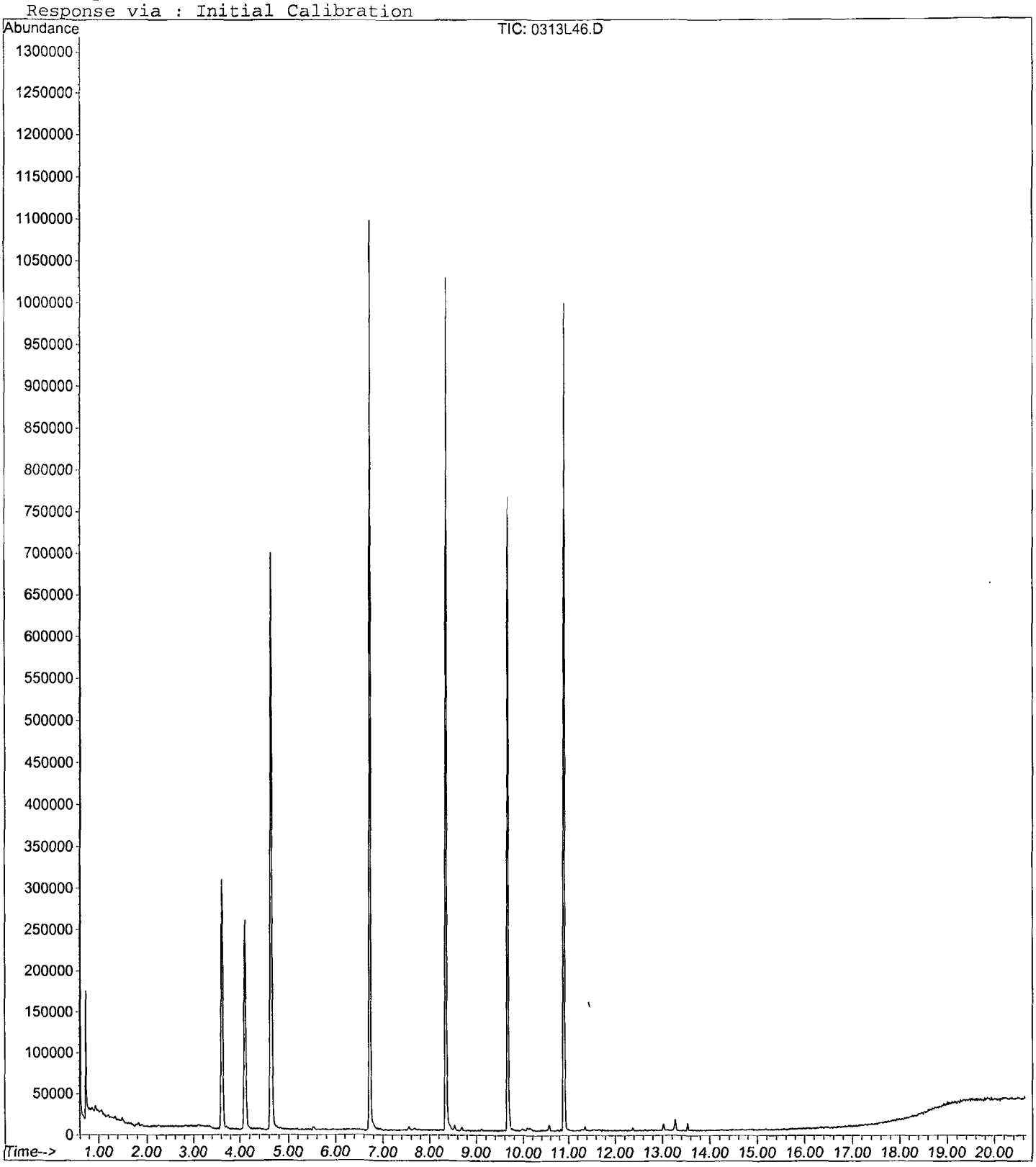
Target Compounds Qvalue

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

Data File : M:\LOKI\DATA\200312\0313146.D Vial: 45
Acq On : 14 Mar 20 6:54 Operator:
Sample : BA08340W01 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:52 2020 Quant Results File: L0312W.RES

Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\200312\0313L47.D Vial: 46
Acq On : 14 Mar 20 7:23 Operator:
Sample : BA08341W01 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:26 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	4.65	96	344640	25.00	ppb		0.00
64) Chlorobenzene-D5 (IS)	8.36	117	369792	25.00	ppb		0.00
79) 1,4-Dichlorobenzene-D (IS)	10.90	152	187136	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	3.62	111	257988	26.24	ppb		0.00
Spiked Amount 25.000			Recovery =	104.952%			
44) 1,2-DCA-D4(S)	4.11	65	248494	25.08	ppb		0.00
Spiked Amount 25.000			Recovery =	100.308%			
65) Toluene-D8(S)	6.73	98	822621	25.80	ppb		0.00
Spiked Amount 25.000			Recovery =	103.188%			
73) 4-Bromofluorobenzene(S)	9.66	95	290711	24.12	ppb		0.00
Spiked Amount 25.000			Recovery =	96.480%			
Target Compounds							Qvalue
14) Acetone	1.61	43	698694	603.73	ppb	#	42

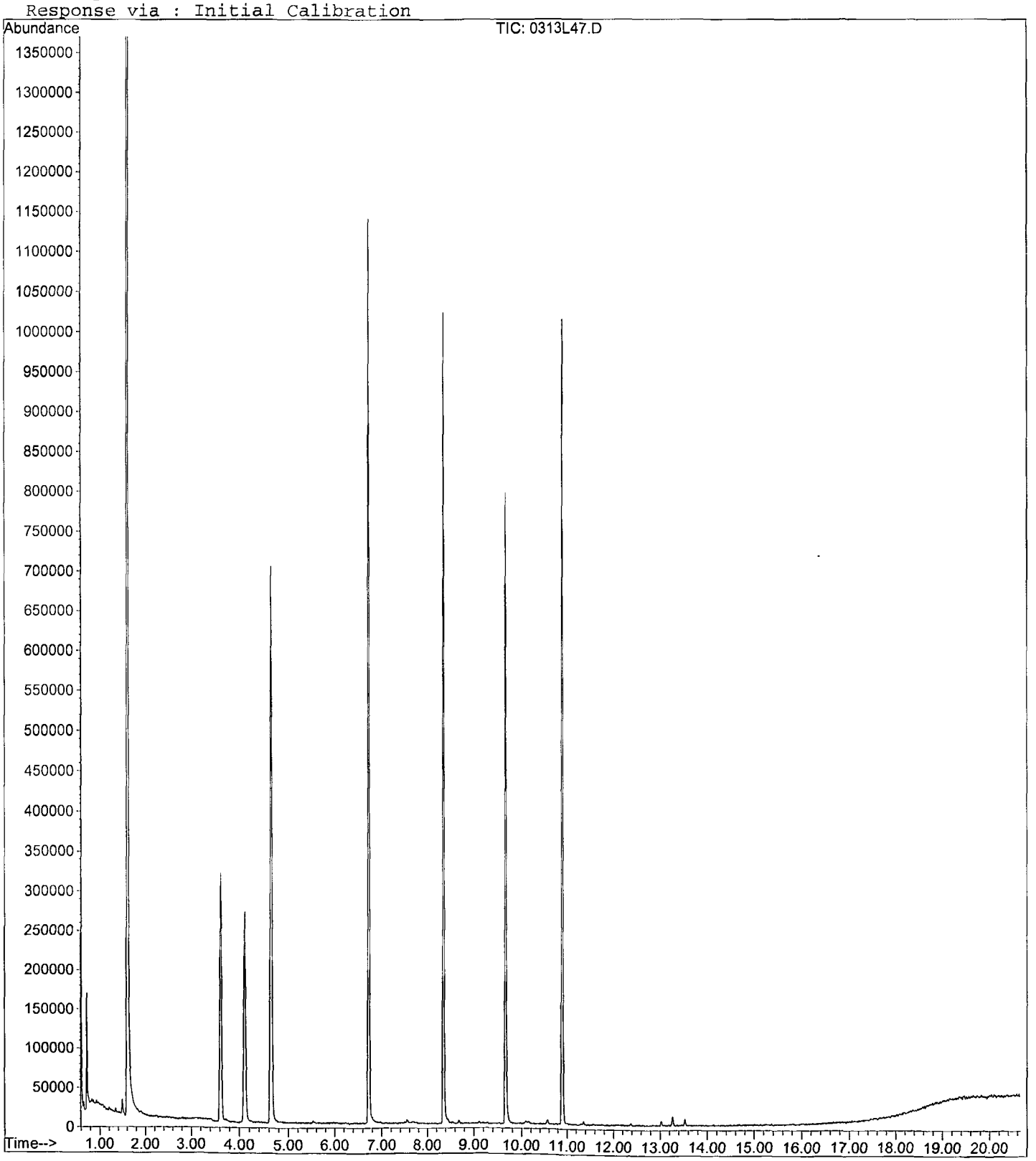
(#) = qualifier out of range (m) = manual integration
0313L47.D L0312W.M Tue Mar 17 15:59:59 2020

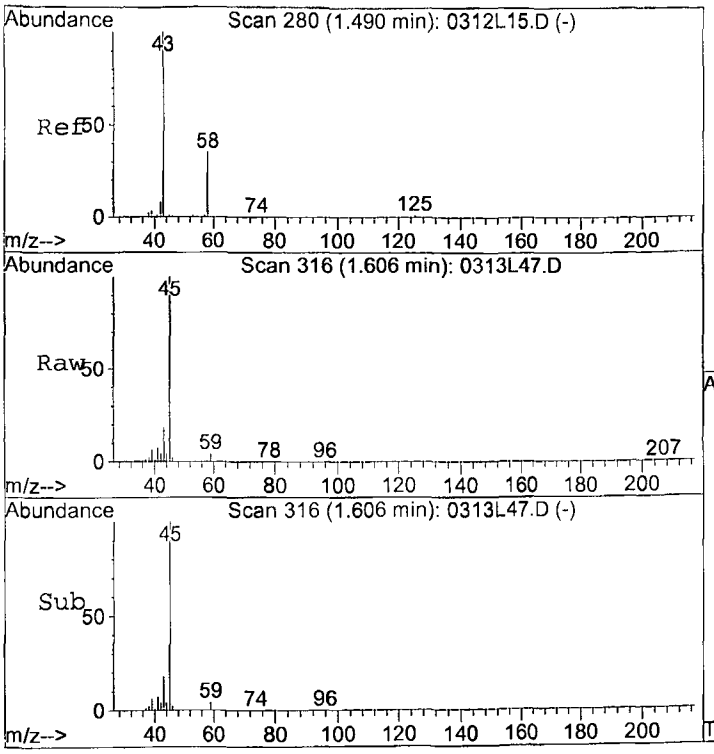
Quantitation Report

Data File : M:\LOKI\DATA\200312\0313L47.D Vial: 46
Acq On : 14 Mar 20 7:23 Operator:
Sample : BA08341W01 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:26 2020 Quant Results File: L0312W.RES

Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration

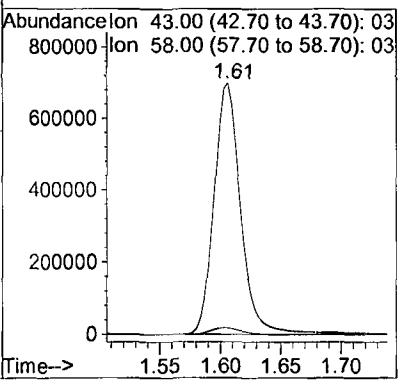




#14
Acetone
Concen: 603.73 ppb
RT: 1.61 min Scan# 316
Delta R.T. 0.12 min
Lab File: 0313L47.D
Acq: 14 Mar 20 7:23

Tgt Ion: 43 Resp: 698694

Ion	Ratio	Lower	Upper
43	100		
58	2.6	29.6	44.4#



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\200312\0313145.D Vial: 44
Acq On : 14 Mar 20 6:26 Operator:
Sample : 200313B Blk Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:23 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	96	339840	25.00	ppb	0.00
64) Chlorobenzene-D5 (IS)	8.36	117	360704	25.00	ppb	0.00
79) 1,4-Dichlorobenzene-D (IS)	10.90	152	186688	25.00	ppb	0.00
System Monitoring Compounds						
39) Dibromofluoromethane(S)	3.62	111	240419	24.80	ppb	0.00
Spiked Amount 25.000			Recovery =	99.188%		
44) 1,2-DCA-D4(S)	4.11	65	236652	24.22	ppb	0.00
Spiked Amount 25.000			Recovery =	96.876%		
65) Toluene-D8(S)	6.73	98	787479	25.32	ppb	0.00
Spiked Amount 25.000			Recovery =	101.268%		
73) 4-Bromofluorobenzene(S)	9.66	95	279691	23.79	ppb	0.00
Spiked Amount 25.000			Recovery =	95.164%		

Target Compounds Qvalue

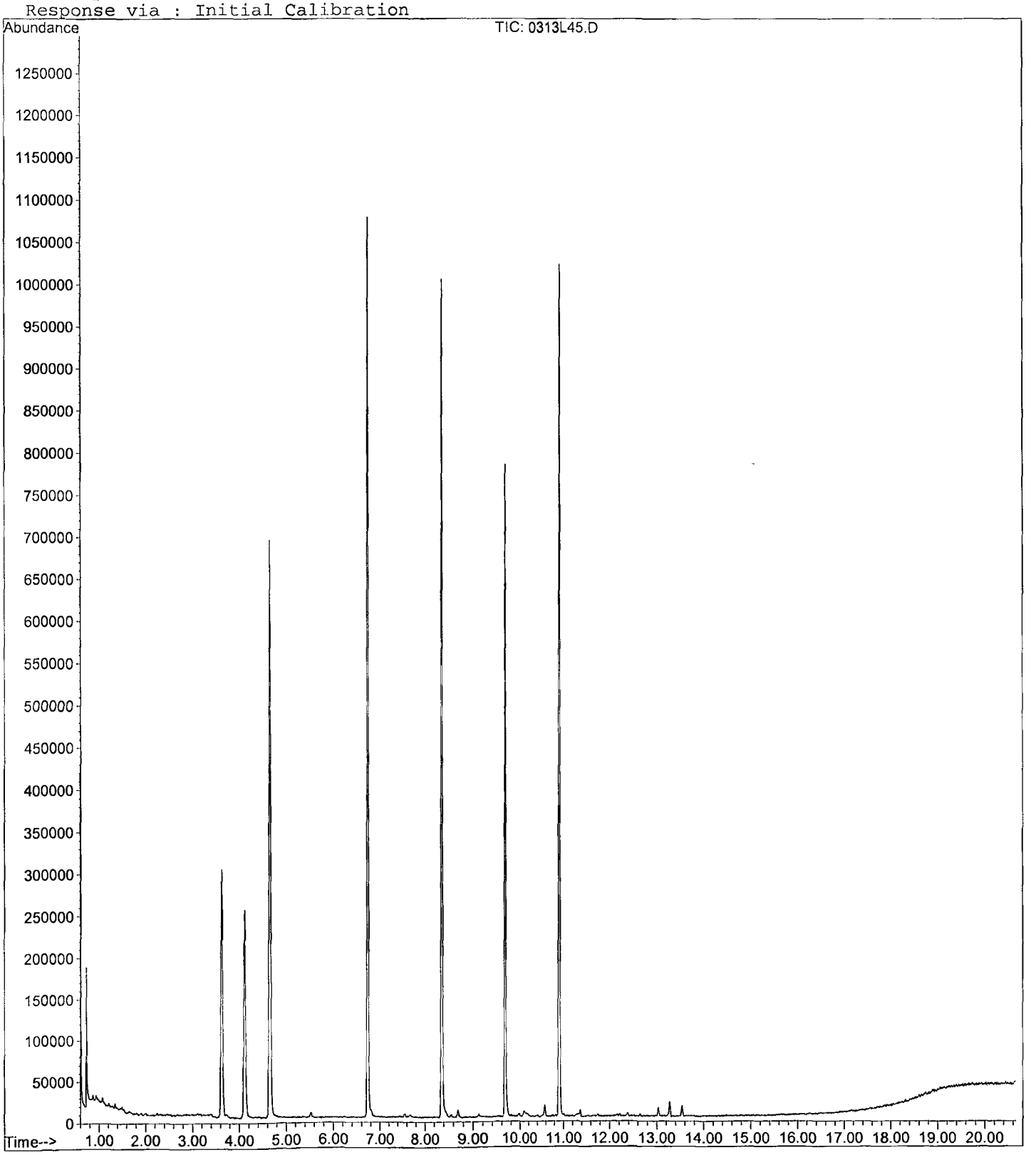
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0313145.D Vial: 44
Acq On : 14 Mar 20 6:26 Operator:
Sample : 200313B Blk Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:23 2020 Quant Results File: L0312W.RES

Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0313140.D Vial: 39
Acq On : 14 Mar 20 4:03 Operator:
Sample : 200313B LCS 10ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 10:38 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.64	96	349376	25.00	ppb	0.00
64) Chlorobenzene-D5 (IS)	8.36	117	388608	25.00	ppb	0.00
79) 1,4-Dichlorobenzene-D (IS)	10.90	152	209600	25.00	ppb	0.00
System Monitoring Compounds						
39) Dibromofluoromethane(S)	3.62	111	249963	25.08	ppb	0.00
Spiked Amount 25.000			Recovery = 100.308%			
44) 1,2-DCA-D4(S)	4.11	65	249759	24.86	ppb	0.00
Spiked Amount 25.000			Recovery = 99.452%			
65) Toluene-D8(S)	6.73	98	836433	24.96	ppb	0.00
Spiked Amount 25.000			Recovery = 99.840%			
73) 4-Bromofluorobenzene(S)	9.66	95	317962	25.10	ppb	0.00
Spiked Amount 25.000			Recovery = 100.416%			
Target Compounds						Qvalue
3) Dichlorodifluoromethane	0.67	85	50221	9.77	ppb	98
4) Freon 114	0.73	85	49320	9.43	ppb	99
5) Chloromethane	0.76	50	66708	9.79	ppb	94
6) Vinyl chloride	0.81	62	71568	9.71	ppb	98
8) Bromomethane	0.96	94	33616	12.75	ppb	93
9) Chloroethane	1.02	66	12530	9.91	ppb	88
10) Dichlorofluoromethane	1.13	67	94152	10.30	ppb	99
11) Trichlorofluoromethane	1.16	101	87035	10.52	ppb	95
13) Acrolein	1.39	56	56711	104.39	ppb	87
14) Acetone	1.49	43	14344	5.43	ppb	95
15) Freon-113	1.46	101	48094	9.97	ppb	97
16) 1,1-DCE	1.45	61	73440	10.19	ppb	97
17) t-Butanol	1.91	59	49555	109.09	ppb	99
19) Acetonitrile	1.66	41	104340	125.74	ppb	94
20) Methyl Acetate	1.72	43	40272	9.72	ppb	96
21) Iodomethane	1.53	142	35481	5.77	ppb	97
22) Acrylonitrile	1.96	53	25245	10.54	ppb	95
23) Methylene chloride	1.77	84	63102	10.22	ppb	97
24) Carbon disulfide	1.57	76	128319	9.66	ppb	97
25) Methyl t-butyl ether (MtBE	2.00	73	105941	8.86	ppb	98
26) Trans-1,2-DCE	1.98	61	73052	10.28	ppb	98
27) Diisopropyl Ether	2.47	45	165665	9.86	ppb	98
29) 1,1-DCA	2.34	63	105557	10.37	ppb	99
30) Vinyl Acetate	2.47	45	165665	9.86	ppb	98
32) MEK (2-Butanone)	3.02	43	9848	8.53	ppb	87
33) Cis-1,2-DCE	2.96	61	88044	9.80	ppb	98
34) 2,2-Dichloropropane	2.94	77	66526	8.58	ppb	99
37) Chloroform	3.40	83	115052	10.69	ppb	96
38) Bromochloromethane	3.25	130	47750	10.73	ppb	93
40) 1,1,1-TCA	3.60	97	90093	10.85	ppb	97
41) Cyclohexane	3.67	56	67558	9.31	ppb	97
42) 1,1-Dichloropropene	3.87	75	67187	9.64	ppb	98
43) 2,2,4-Trimethylpentane	4.40	57	124288	8.28	ppb	98
45) Carbon Tetrachloride	3.85	117	75853	10.38	ppb	90
48) 1,2-DCA	4.23	62	80945	10.64	ppb	100
49) Benzene	4.18	78	224951	9.83	ppb	100
50) TCE	5.17	130	70627	10.95	ppb	98
51) 2-Pentanone	5.52	43	323692	115.67	ppb	98
52) 1,2-Dichloropropane	5.45	63	62789	10.82	ppb	93

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

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0313140.D Vial: 39
Acq On : 14 Mar 20 4:03 Operator:
Sample : 200313B LCS 10ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 10:38 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

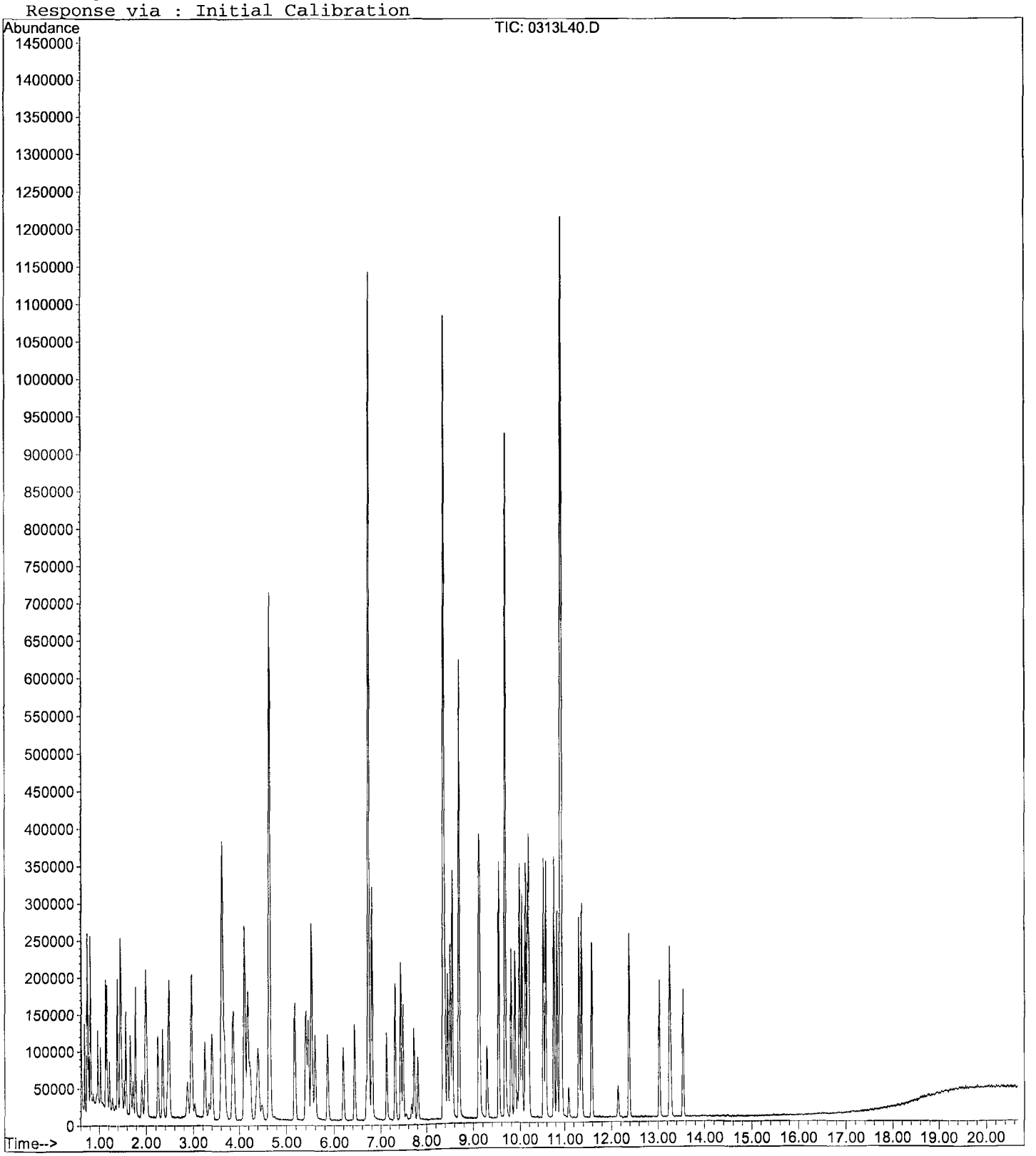
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
53)	Bromodichloromethane	5.85	83	85518	10.74 ppb	99
54)	Methyl Cyclohexane	5.40	83	66437	8.98 ppb	99
55)	Dibromomethane	5.59	174	49998	10.50 ppb	96
57)	MIBK (methyl isobutyl ket	6.68	43	40391	9.72 ppb	90
58)	1-Bromo-2-chloroethane	6.19	63	88701	10.83 ppb	100
59)	Cis-1,3-Dichloropropene	6.43	75	84411	9.90 ppb	98
60)	Toluene	6.80	91	247559	10.10 ppb	100
61)	Trans-1,3-Dichloropropene	7.12	75	70384	9.98 ppb	99
62)	1,1,2-TCA	7.31	97	61702	10.70 ppb	98
63)	2-Hexanone	7.67	43	15376	10.05 ppb	98
66)	1,2-EDB	7.80	107	60651	10.29 ppb	100
67)	Tetrachloroethene	7.43	166	73706	10.11 ppb	97
68)	1-Chlorohexane	8.45	91	62004	9.10 ppb	98
69)	1,1,1,2-Tetrachloroethane	8.50	131	68631	10.47 ppb	98
70)	m&p-Xylene	8.69	91	386244	19.12 ppb	98
71)	o-Xylene	9.11	91	198273	9.44 ppb	98
72)	Styrene	9.13	104	152774	9.49 ppb	99
74)	1,3-Dichloropropane	7.48	76	97499	10.43 ppb	97
75)	Dibromochloromethane	7.72	129	69798	10.67 ppb	98
76)	Chlorobenzene	8.39	112	169104	9.95 ppb	98
77)	Ethylbenzene	8.55	91	255595	9.53 ppb	99
78)	Bromoform	9.28	173	50332	10.91 ppb	91
80)	Isopropylbenzene	9.53	105	143488	9.37 ppb	98
81)	1,1,2,2-Tetrachloroethane	9.87	83	75339	10.73 ppb	97
82)	1,2,3-Trichloropropane	9.88	110	23642	10.26 ppb	100
83)	t-1,4-Dichloro-2-Butene	9.93	53	9302	8.42 ppb	93
84)	Bromobenzene	9.79	156	77462	10.31 ppb	94
85)	n-Propylbenzene	9.98	91	285587	9.89 ppb	99
86)	4-Ethyltoluene	10.11	105	143744	9.58 ppb	99
87)	2-Chlorotoluene	10.02	91	108788	10.18 ppb	95
88)	1,3,5-Trimethylbenzene	10.18	105	223537	10.14 ppb	98
89)	4-Chlorotoluene	10.15	91	118226	10.26 ppb	99
90)	Tert-Butylbenzene	10.52	119	179234	9.99 ppb	98
91)	1,2,4-Trimethylbenzene	10.57	105	207802	9.24 ppb	97
92)	Sec-Butylbenzene	10.75	105	257536	9.78 ppb	99
93)	p-Isopropyltoluene	10.92	119	228843	9.94 ppb	98
94)	Benzyl Chloride	11.08	91	34091	6.74 ppb	94
95)	1,3-DCB	10.82	146	136838	9.70 ppb	97
96)	1,4-DCB	10.92	146	139628	10.38 ppb	96
97)	n-Butylbenzene	11.36	91	167022	8.79 ppb	99
98)	1,2-DCB	11.31	146	133692	10.59 ppb	98
99)	Hexachloroethane	11.57	117	49307	11.51 ppb	98
100)	1,2-Dibromo-3-chloropropan	12.14	157	13886	11.44 ppb	88
101)	1,2,4-Trichlorobenzene	13.03	180	69956	8.79 ppb	98
102)	Hexachlorobutadiene	13.25	225	29976	10.27 ppb	96
103)	Naphthalene	13.27	128	100120	7.70 ppb	98
104)	1,2,3-Trichlorobenzene	13.53	182	35984	9.15 ppb	99

(#) = qualifier out of range (m) = manual integration
0313140.D L0312W.M Tue Mar 17 15:59:16 2020

Data File : M:\LOKI\DATA\200312\0313140.D Vial: 39
Acq On : 14 Mar 20 4:03 Operator:
Sample : 200313B LCS 10ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 10:38 2020 Quant Results File: L0312W.RES

Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0313L41.D Vial: 40
Acq On : 14 Mar 20 4:31 Operator:
Sample : 200313B LCSD 10ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 10:39 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	4.65	96	357120	25.00	ppb		0.00
64) Chlorobenzene-D5 (IS)	8.35	117	389376	25.00	ppb		0.00
79) 1,4-Dichlorobenzene-D (IS)	10.90	152	215872	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	3.62	111	259149	25.44	ppb		0.00
Spiked Amount 25.000			Recovery =	101.740%			
44) 1,2-DCA-D4(S)	4.11	65	252816	24.62	ppb		0.00
Spiked Amount 25.000			Recovery =	98.484%			
65) Toluene-D8(S)	6.73	98	855846	25.49	ppb		0.00
Spiked Amount 25.000			Recovery =	101.956%			
73) 4-Bromofluorobenzene(S)	9.66	95	323558	25.50	ppb		0.00
Spiked Amount 25.000			Recovery =	101.980%			
Target Compounds							Qvalue
3) Dichlorodifluoromethane	0.67	85	44721	8.51	ppb		100
4) Freon 114	0.73	85	44034	8.23	ppb		95
5) Chloromethane	0.76	50	63806	9.15	ppb		99
6) Vinyl chloride	0.81	62	66352	8.81	ppb		97
8) Bromomethane	0.97	94	32809	12.17	ppb		96
9) Chloroethane	1.02	66	12333	9.54	ppb		85
10) Dichlorofluoromethane	1.13	67	93464	10.00	ppb		96
11) Trichlorofluoromethane	1.16	101	78122	9.23	ppb		99
13) Acrolein	1.39	56	45481	81.90	ppb	#	67
14) Acetone	1.49	43	15515	6.15	ppb		97
15) Freon-113	1.46	101	44870	9.10	ppb		94
16) 1,1-DCE	1.45	61	68708	9.32	ppb		97
17) t-Butanol	1.91	59	47293	101.86	ppb		97
19) Acetonitrile	1.66	41	95599	112.71	ppb		90
20) Methyl Acetate	1.72	43	38667	9.12	ppb		98
21) Iodomethane	1.53	142	37335	5.91	ppb		95
22) Acrylonitrile	1.96	53	23776	9.67	ppb		85
23) Methylene chloride	1.77	84	60748	9.58	ppb		93
24) Carbon disulfide	1.57	76	123556	9.10	ppb		97
25) Methyl t-butyl ether (MtBE	2.00	73	104624	8.56	ppb		98
26) Trans-1,2-DCE	1.99	61	70984	9.77	ppb		99
27) Diisopropyl Ether	2.47	45	161674	9.41	ppb		97
29) 1,1-DCA	2.34	63	102391	9.84	ppb		99
30) Vinyl Acetate	2.47	45	161674	9.41	ppb		97
32) MEK (2-Butanone)	3.02	43	9945	8.43	ppb		96
33) Cis-1,2-DCE	2.96	61	85133	9.27	ppb		98
34) 2,2-Dichloropropane	2.94	77	60427	7.62	ppb		96
37) Chloroform	3.40	83	106504	9.68	ppb		96
38) Bromochloromethane	3.24	130	44747	9.84	ppb		94
40) 1,1,1-TCA	3.60	97	84582	9.97	ppb		93
41) Cyclohexane	3.67	56	62112	8.38	ppb		95
42) 1,1-Dichloropropene	3.87	75	64913	9.11	ppb		99
43) 2,2,4-Trimethylpentane	4.40	57	114352	7.45	ppb		98
45) Carbon Tetrachloride	3.85	117	73941	9.90	ppb		91
48) 1,2-DCA	4.23	62	78041	10.03	ppb		98
49) Benzene	4.18	78	217870	9.31	ppb		98
50) TCE	5.17	130	67725	10.27	ppb		95
51) 2-Pentanone	5.52	43	343757	120.18	ppb		97
52) 1,2-Dichloropropane	5.45	63	60267	10.16	ppb		100

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

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0313L41.D Vial: 40
Acq On : 14 Mar 20 4:31 Operator:
Sample : 200313B LCSD 10ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 10:39 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
53)	Bromodichloromethane	5.85	83	85460	10.50	ppb	97
54)	Methyl Cyclohexane	5.40	83	62533	8.27	ppb	99
55)	Dibromomethane	5.59	174	49185	10.10	ppb	96
57)	MIBK (methyl isobutyl ket	6.68	43	42974	10.12	ppb	96
58)	1-Bromo-2-chloroethane	6.19	63	84115	10.05	ppb	98
59)	Cis-1,3-Dichloropropene	6.43	75	83418	9.57	ppb	100
60)	Toluene	6.80	91	239401	9.56	ppb	98
61)	Trans-1,3-Dichloropropene	7.12	75	66699	9.25	ppb	94
62)	1,1,2-TCA	7.31	97	61938	10.51	ppb	96
63)	2-Hexanone	7.66	43	18095	11.42	ppb	88
66)	1,2-EDB	7.81	107	59909	10.14	ppb	96
67)	Tetrachloroethene	7.43	166	68025	9.31	ppb	97
68)	1-Chlorohexane	8.45	91	59436	8.70	ppb	99
69)	1,1,1,2-Tetrachloroethane	8.50	131	67487	10.27	ppb	95
70)	m&p-Xylene	8.69	91	372275	18.39	ppb	99
71)	o-Xylene	9.11	91	192572	9.15	ppb	97
72)	Styrene	9.13	104	151761	9.41	ppb	96
74)	1,3-Dichloropropane	7.48	76	93427	9.98	ppb	99
75)	Dibromochloromethane	7.72	129	70249	10.71	ppb	97
76)	Chlorobenzene	8.39	112	162093	9.52	ppb	97
77)	Ethylbenzene	8.55	91	245985	9.15	ppb	97
78)	Bromoform	9.28	173	50360	10.89	ppb	92
80)	Isopropylbenzene	9.53	105	136896	8.68	ppb	99
81)	1,1,2,2-Tetrachloroethane	9.87	83	71215	9.85	ppb	93
82)	1,2,3-Trichloropropane	9.88	110	24017	10.12	ppb	100
83)	t-1,4-Dichloro-2-Butene	9.93	53	9303	8.18	ppb	94
84)	Bromobenzene	9.79	156	73789	9.53	ppb	94
85)	n-Propylbenzene	9.98	91	277256	9.35	ppb	99
86)	4-Ethyltoluene	10.10	105	141568	9.18	ppb	99
87)	2-Chlorotoluene	10.02	91	108777	9.89	ppb	100
88)	1,3,5-Trimethylbenzene	10.18	105	213577	9.40	ppb	99
89)	4-Chlorotoluene	10.15	91	108929	9.18	ppb	98
90)	Tert-Butylbenzene	10.52	119	171174	9.28	ppb	99
91)	1,2,4-Trimethylbenzene	10.57	105	204008	8.81	ppb	97
92)	Sec-Butylbenzene	10.75	105	249328	9.21	ppb	100
93)	p-Isopropyltoluene	10.92	119	220225	9.31	ppb	100
94)	Benzyl Chloride	11.08	91	30059	5.77	ppb	98
95)	1,3-DCB	10.82	146	136426	9.39	ppb	98
96)	1,4-DCB	10.92	146	143079	10.33	ppb	99
97)	n-Butylbenzene	11.36	91	165033	8.44	ppb	98
98)	1,2-DCB	11.31	146	132603	10.20	ppb	97
99)	Hexachloroethane	11.57	117	45775	10.37	ppb	96
100)	1,2-Dibromo-3-chloropropan	12.14	157	14929	11.94	ppb	96
101)	1,2,4-Trichlorobenzene	13.02	180	75804	9.22	ppb	95
102)	Hexachlorobutadiene	13.24	225	29568	9.84	ppb	90
103)	Naphthalene	13.27	128	117964	8.71	ppb	100
104)	1,2,3-Trichlorobenzene	13.53	182	39256	9.68	ppb	98

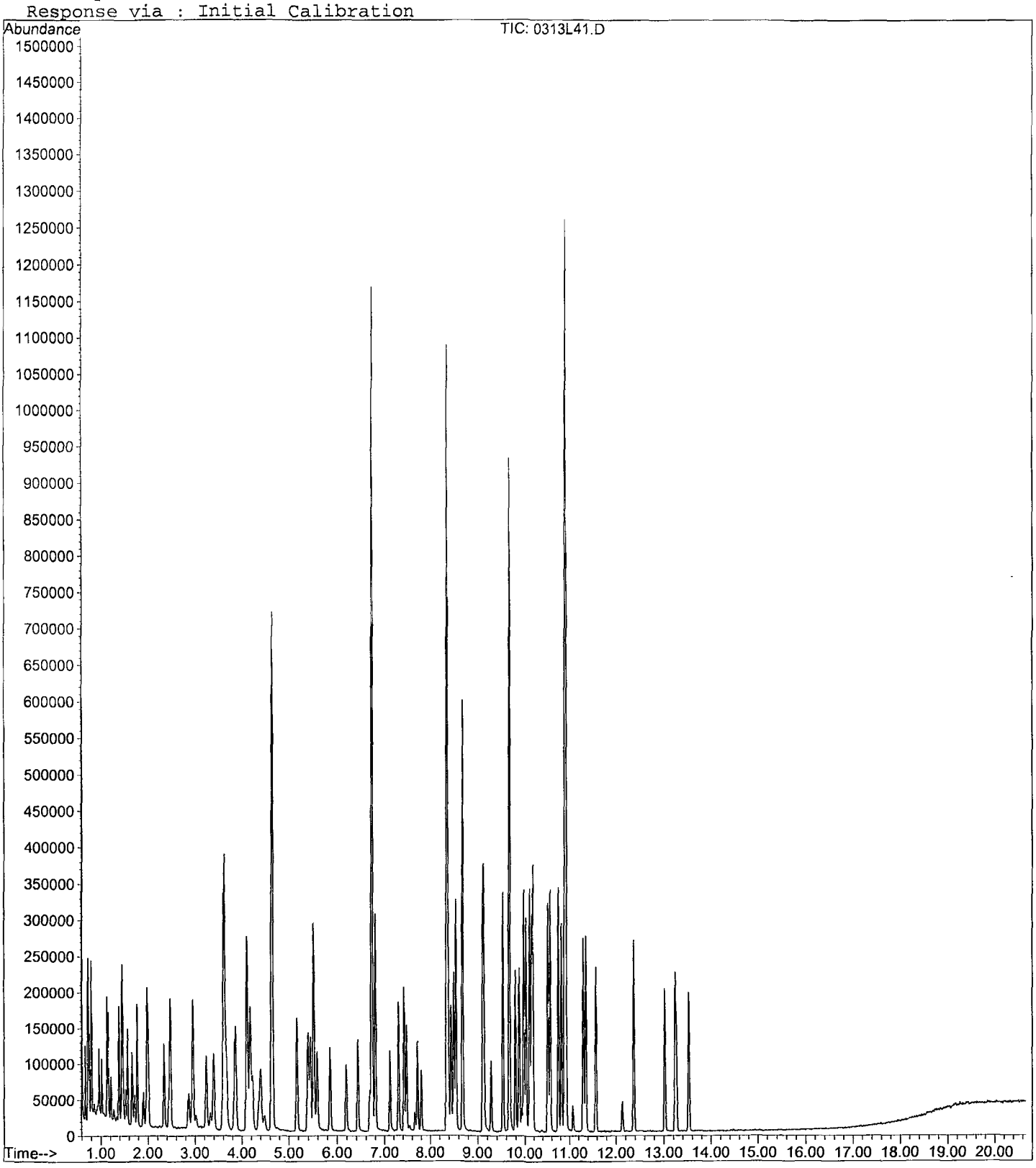
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0313L41.D Vial: 40
Acq On : 14 Mar 20 4:31 Operator:
Sample : 200313B LCSD 10ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 10:39 2020 Quant Results File: L0312W.RES

Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0313151.D Vial: 50
Acq On : 14 Mar 20 9:17 Operator:
Sample : BA08341W02,3,4 MS 10ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:17 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	4.64	96	356288	25.00	ppb		0.00
64) Chlorobenzene-D5 (IS)	8.36	117	379840	25.00	ppb		0.00
79) 1,4-Dichlorobenzene-D (IS)	10.89	152	216512	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	3.62	111	258297	25.41	ppb		0.00
Spiked Amount 25.000			Recovery = 101.644%				
44) 1,2-DCA-D4(S)	4.11	65	257365	25.12	ppb		0.00
Spiked Amount 25.000			Recovery = 100.492%				
65) Toluene-D8(S)	6.73	98	864895	26.40	ppb		0.00
Spiked Amount 25.000			Recovery = 105.620%				
73) 4-Bromofluorobenzene(S)	9.66	95	328518	26.54	ppb		0.00
Spiked Amount 25.000			Recovery = 106.144%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	0.67	85	46896	8.95	ppb		98
4) Freon 114	0.73	85	50790	9.52	ppb		95
5) Chloromethane	0.76	50	70412	10.14	ppb		99
6) Vinyl chloride	0.81	62	69136	9.20	ppb		98
8) Bromomethane	0.96	94	38975	14.49	ppb		100
9) Chloroethane	1.02	66	13273	10.29	ppb		86
10) Dichlorofluoromethane	1.13	67	99632	10.69	ppb		98
11) Trichlorofluoromethane	1.16	101	85555	10.14	ppb		96
13) Acrolein	1.39	56	59441	107.29	ppb		82
14) Acetone	1.61	43	2412414	2032.63	ppb	#	41
15) Freon-113	1.46	101	50956	10.36	ppb		97
16) 1,1-DCE	1.45	61	75920	10.33	ppb		99
17) t-Butanol	1.91	59	52089	112.45	ppb		100
19) Acetonitrile	1.61	41	1495056	1766.81	ppb	#	44
20) Methyl Acetate	1.72	43	43810	10.38	ppb		91
21) Iodomethane	1.54	142	30032	4.99	ppb		99
22) Acrylonitrile	1.96	53	23578	9.61	ppb		99
23) Methylene chloride	1.77	84	63109	10.01	ppb		96
24) Carbon disulfide	1.57	76	130456	9.63	ppb		98
25) Methyl t-butyl ether (MtBE	2.01	73	105559	8.66	ppb		99
26) Trans-1,2-DCE	1.98	61	73736	10.18	ppb		99
27) Diisopropyl Ether	2.47	45	183364	10.70	ppb		99
29) 1,1-DCA	2.35	63	108504	10.46	ppb		98
30) Vinyl Acetate	2.47	45	183364	10.70	ppb		99
32) MEK (2-Butanone)	3.03	43	9886	8.40	ppb		97
33) Cis-1,2-DCE	2.96	61	88799	9.69	ppb		97
34) 2,2-Dichloropropane	2.95	77	63566	8.04	ppb		97
37) Chloroform	3.40	83	114640	10.45	ppb		97
38) Bromochloromethane	3.24	130	48505	10.69	ppb		94
40) 1,1,1-TCA	3.60	97	91850	10.85	ppb		99
41) Cyclohexane	3.67	56	71506	9.67	ppb		97
42) 1,1-Dichloropropene	3.87	75	70133	9.87	ppb		100
43) 2,2,4-Trimethylpentane	4.40	57	129654	8.47	ppb		97
45) Carbon Tetrachloride	3.85	117	80688	10.83	ppb		95
48) 1,2-DCA	4.23	62	81921	10.56	ppb		98
49) Benzene	4.18	78	229046	9.81	ppb		99
50) TCE	5.17	130	67216	10.22	ppb		96
51) 2-Pentanone	5.52	43	285242	99.95	ppb		97
52) 1,2-Dichloropropane	5.45	63	62667	10.59	ppb		99

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

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0313151.D Vial: 50
Acq On : 14 Mar 20 9:17 Operator:
Sample : BA08341W02,3,4 MS 10ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:17 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

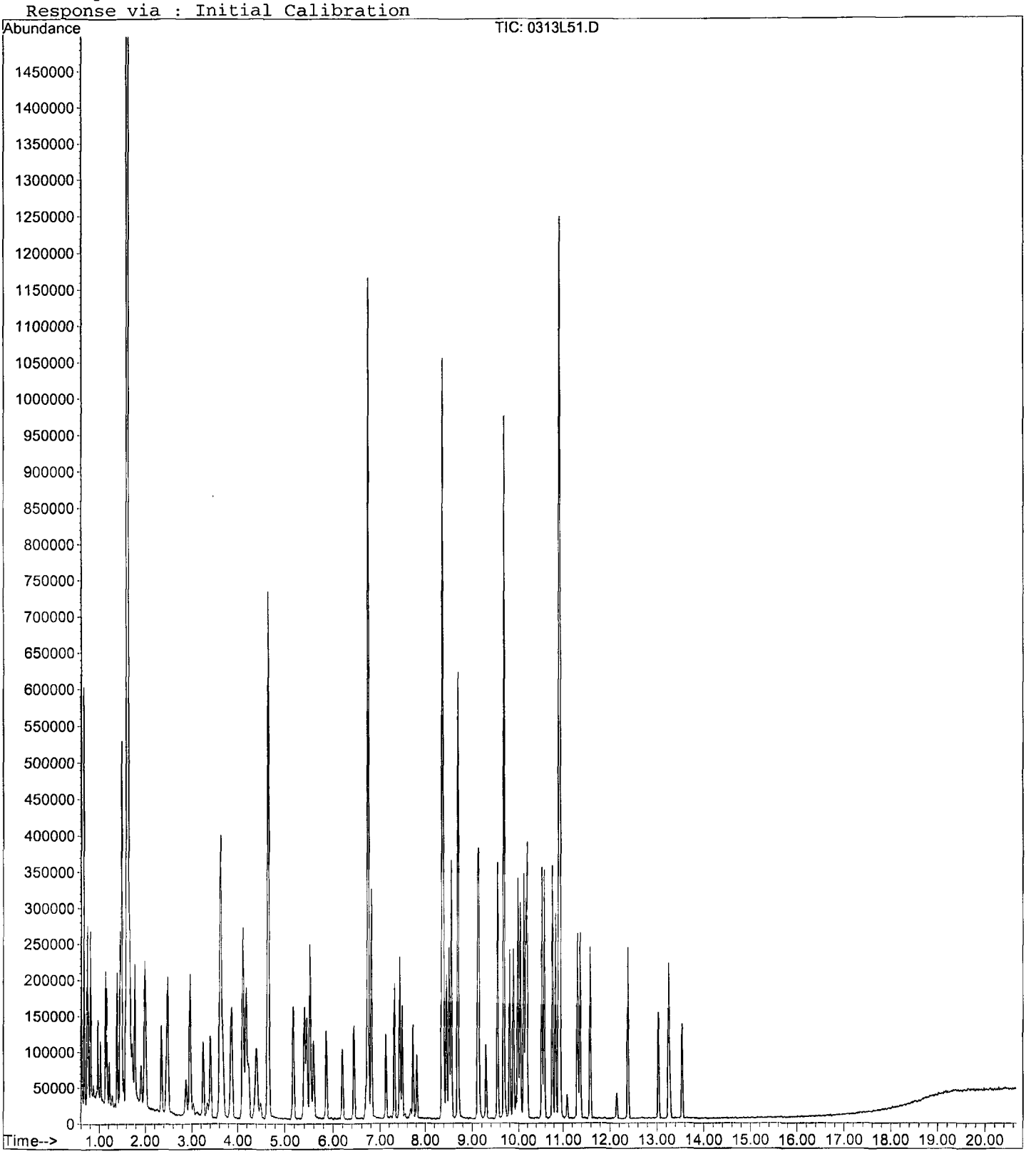
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
53)	Bromodichloromethane	5.86	83	86702	10.68	ppb	94
54)	Methyl Cyclohexane	5.40	83	69413	9.20	ppb	98
55)	Dibromomethane	5.59	174	52861	10.88	ppb	99
57)	MIBK (methyl isobutyl ket	6.68	43	35261	8.30	ppb	87
58)	1-Bromo-2-chloroethane	6.19	63	86756	10.39	ppb	98
59)	Cis-1,3-Dichloropropene	6.43	75	83256	9.57	ppb	98
60)	Toluene	6.80	91	250153	10.01	ppb	97
61)	Trans-1,3-Dichloropropene	7.12	75	68928	9.58	ppb	94
62)	1,1,2-TCA	7.31	97	62176	10.57	ppb	99
63)	2-Hexanone	7.67	43	11541	7.67	ppb	98
66)	1,2-EDB	7.81	107	59853	10.39	ppb	95
67)	Tetrachloroethene	7.43	166	73701	10.34	ppb	97
68)	1-Chlorohexane	8.44	91	63946	9.60	ppb	98
69)	1,1,1,2-Tetrachloroethane	8.50	131	70317	10.97	ppb	100
70)	m&p-Xylene	8.69	91	389788	19.74	ppb	99
71)	o-Xylene	9.11	91	203637	9.92	ppb	98
72)	Styrene	9.13	104	153381	9.74	ppb	98
74)	1,3-Dichloropropane	7.48	76	97130	10.63	ppb	99
75)	Dibromochloromethane	7.72	129	71703	11.21	ppb	100
76)	Chlorobenzene	8.39	112	170647	10.27	ppb	97
77)	Ethylbenzene	8.55	91	257723	9.83	ppb	99
78)	Bromoform	9.28	173	52167	11.57	ppb	99
80)	Isopropylbenzene	9.53	105	146432	9.25	ppb	98
81)	1,1,2,2-Tetrachloroethane	9.87	83	79958	11.02	ppb	97
82)	1,2,3-Trichloropropane	9.88	110	23017	9.67	ppb	94
83)	t-1,4-Dichloro-2-Butene	9.93	53	8307	7.28	ppb	83
84)	Bromobenzene	9.79	156	76038	9.79	ppb	95
85)	n-Propylbenzene	9.98	91	283479	9.52	ppb	99
86)	4-Ethyltoluene	10.10	105	142528	9.22	ppb	100
87)	2-Chlorotoluene	10.02	91	108996	9.88	ppb	96
88)	1,3,5-Trimethylbenzene	10.18	105	215974	9.48	ppb	100
89)	4-Chlorotoluene	10.15	91	108876	9.15	ppb	98
90)	Tert-Butylbenzene	10.52	119	181252	9.78	ppb	99
91)	1,2,4-Trimethylbenzene	10.57	105	204178	8.79	ppb	99
92)	Sec-Butylbenzene	10.75	105	259257	9.54	ppb	100
93)	p-Isopropyltoluene	10.92	119	223152	9.40	ppb	97
94)	Benzyl Chloride	11.08	91	27555	5.27	ppb	99
95)	1,3-DCB	10.82	146	138378	9.49	ppb	98
96)	1,4-DCB	10.92	146	136559	9.83	ppb	98
97)	n-Butylbenzene	11.36	91	151570	7.75	ppb	99
98)	1,2-DCB	11.30	146	128442	9.86	ppb	94
99)	Hexachloroethane	11.58	117	47071	10.63	ppb	92
100)	1,2-Dibromo-3-chloropropan	12.14	157	12034	9.60	ppb	94
101)	1,2,4-Trichlorobenzene	13.03	180	54581	6.75	ppb	95
102)	Hexachlorobutadiene	13.24	225	28456	9.44	ppb	95
103)	Naphthalene	13.27	128	68357	5.32	ppb	98
104)	1,2,3-Trichlorobenzene	13.53	182	27992	6.93	ppb	97

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

Data File : M:\LOKI\DATA\200312\0313151.D Vial: 50
Acq On : 14 Mar 20 9:17 Operator:
Sample : BA08341W02,3,4 MS 10ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:17 2020 Quant Results File: L0312W.RES

Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0313L52.D Vial: 51
Acq On : 14 Mar 20 9:46 Operator:
Sample : BA08341W02,3,4 MSD 10ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:17 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	4.65	96	371776	25.00	ppb		0.00
64) Chlorobenzene-D5 (IS)	8.35	117	408896	25.00	ppb		0.00
79) 1,4-Dichlorobenzene-D (IS)	10.90	152	234816	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	3.63	111	264251	24.91	ppb		0.00
Spiked Amount 25.000			Recovery =	99.652%			
44) 1,2-DCA-D4(S)	4.11	65	262037	24.51	ppb		0.00
Spiked Amount 25.000			Recovery =	98.052%			
65) Toluene-D8(S)	6.73	98	888780	25.21	ppb		0.00
Spiked Amount 25.000			Recovery =	100.824%			
73) 4-Bromofluorobenzene(S)	9.66	95	331939	24.91	ppb		0.00
Spiked Amount 25.000			Recovery =	99.628%			
Target Compounds							Qvalue
3) Dichlorodifluoromethane	0.67	85	45833	8.38	ppb		99
4) Freon 114	0.73	85	50032	8.99	ppb		93
5) Chloromethane	0.76	50	65852	9.07	ppb		99
6) Vinyl chloride	0.81	62	64560	8.23	ppb		99
8) Bromomethane	0.96	94	38311	13.65	ppb		99
9) Chloroethane	1.02	66	11861	8.81	ppb		92
10) Dichlorofluoromethane	1.13	67	95480	9.82	ppb		98
11) Trichlorofluoromethane	1.16	101	80967	9.19	ppb		98
13) Acrolein	1.39	56	62093	107.41	ppb		94
14) Acetone	1.61	43	1795168	1447.55	ppb	#	41
15) Freon-113	1.46	101	49946	9.73	ppb		96
16) 1,1-DCE	1.45	61	75043	9.78	ppb		98
17) t-Butanol	1.91	59	60678	125.53	ppb		99
19) Acetonitrile	1.61	41	1112655	1260.12	ppb	#	44
20) Methyl Acetate	1.61	43	2680271	616.09	ppb	#	50
21) Iodomethane	1.53	142	39053	5.93	ppb		96
22) Acrylonitrile	1.96	53	23908	9.32	ppb		98
23) Methylene chloride	1.77	84	60379	9.12	ppb		92
24) Carbon disulfide	1.57	76	128212	9.07	ppb		97
25) Methyl t-butyl ether (MtBE	2.01	73	103935	8.17	ppb		100
26) Trans-1,2-DCE	1.99	61	71953	9.52	ppb		96
27) Diisopropyl Ether	2.48	45	174838	9.78	ppb		98
29) 1,1-DCA	2.34	63	102130	9.43	ppb		99
30) Vinyl Acetate	2.48	45	174838	9.78	ppb		98
32) MEK (2-Butanone)	3.03	43	10871	8.85	ppb		94
33) Cis-1,2-DCE	2.96	61	86295	9.02	ppb		94
34) 2,2-Dichloropropane	2.95	77	59880	7.25	ppb		97
37) Chloroform	3.40	83	110521	9.65	ppb		99
38) Bromochloromethane	3.25	130	45074	9.52	ppb		94
40) 1,1,1-TCA	3.60	97	88200	9.98	ppb		98
41) Cyclohexane	3.67	56	67869	8.79	ppb		98
42) 1,1-Dichloropropene	3.87	75	67967	9.16	ppb		92
43) 2,2,4-Trimethylpentane	4.40	57	123446	7.73	ppb		97
45) Carbon Tetrachloride	3.85	117	79348	10.20	ppb		99
48) 1,2-DCA	4.23	62	78133	9.65	ppb		97
49) Benzene	4.18	78	218818	8.98	ppb		99
50) TCE	5.17	130	66364	9.67	ppb		94
51) 2-Pentanone	5.52	43	370110	124.29	ppb		97
52) 1,2-Dichloropropane	5.45	63	59849	9.69	ppb		97

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

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0313L52.D Vial: 51
Acq On : 14 Mar 20 9:46 Operator:
Sample : BA08341W02,3,4 MSD 10ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:17 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
53)	Bromodichloromethane	5.86	83	86387	10.19	ppb	98
54)	Methyl Cyclohexane	5.40	83	67378	8.56	ppb	98
55)	Dibromomethane	5.59	174	50642	9.99	ppb	96
57)	MIBK (methyl isobutyl ket	6.68	43	44838	10.14	ppb	92
58)	1-Bromo-2-chloroethane	6.19	63	86814	9.96	ppb	96
59)	Cis-1,3-Dichloropropene	6.43	75	82443	9.08	ppb	97
60)	Toluene	6.80	91	245611	9.42	ppb	99
61)	Trans-1,3-Dichloropropene	7.12	75	67899	9.04	ppb	97
62)	1,1,2-TCA	7.31	97	59640	9.72	ppb	96
63)	2-Hexanone	7.67	43	16711	10.24	ppb	93
66)	1,2-EDB	7.80	107	60582	9.77	ppb	96
67)	Tetrachloroethene	7.43	166	70724	9.22	ppb	97
68)	1-Chlorohexane	8.44	91	65065	9.07	ppb	97
69)	1,1,1,2-Tetrachloroethane	8.50	131	66899	9.70	ppb	98
70)	m&p-Xylene	8.69	91	383251	18.03	ppb	98
71)	o-Xylene	9.11	91	194576	8.80	ppb	99
72)	Styrene	9.13	104	147181	8.69	ppb	97
74)	1,3-Dichloropropane	7.48	76	96906	9.86	ppb	99
75)	Dibromochloromethane	7.72	129	68934	10.01	ppb	95
76)	Chlorobenzene	8.39	112	168387	9.41	ppb	100
77)	Ethylbenzene	8.55	91	248003	8.79	ppb	99
78)	Bromoform	9.28	173	51030	10.51	ppb	97
80)	Isopropylbenzene	9.53	105	143872	8.38	ppb	98
81)	1,1,2,2-Tetrachloroethane	9.87	83	79585	10.12	ppb	96
82)	1,2,3-Trichloropropane	9.88	110	24774	9.60	ppb	99
83)	t-1,4-Dichloro-2-Butene	9.93	53	9381	7.58	ppb	81
84)	Bromobenzene	9.79	156	77269	9.18	ppb	92
85)	n-Propylbenzene	9.98	91	280655	8.73	ppb	100
86)	4-Ethyltoluene	10.10	105	140288	8.42	ppb	99
87)	2-Chlorotoluene	10.03	91	111215	9.29	ppb	98
88)	1,3,5-Trimethylbenzene	10.18	105	213326	8.64	ppb	100
89)	4-Chlorotoluene	10.15	91	113552	8.79	ppb	100
90)	Tert-Butylbenzene	10.52	119	175272	8.74	ppb	97
91)	1,2,4-Trimethylbenzene	10.57	105	206748	8.19	ppb	96
92)	Sec-Butylbenzene	10.75	105	259883	8.83	ppb	100
93)	p-Isopropyltoluene	10.92	119	228695	8.90	ppb	100
94)	Benzyl Chloride	11.08	91	28902	5.10	ppb	99
95)	1,3-DCB	10.82	146	138552	8.76	ppb	98
96)	1,4-DCB	10.92	146	142617	9.46	ppb	99
97)	n-Butylbenzene	11.36	91	166997	7.87	ppb	99
98)	1,2-DCB	11.30	146	132829	9.41	ppb	96
99)	Hexachloroethane	11.57	117	46041	9.59	ppb	96
100)	1,2-Dibromo-3-chloropropan	12.14	157	14858	10.93	ppb	96
101)	1,2,4-Trichlorobenzene	13.02	180	72642	8.18	ppb	96
102)	Hexachlorobutadiene	13.24	225	30776	9.41	ppb	89
103)	Naphthalene	13.27	128	105304	7.27	ppb	99
104)	1,2,3-Trichlorobenzene	13.53	182	35472	8.07	ppb	96

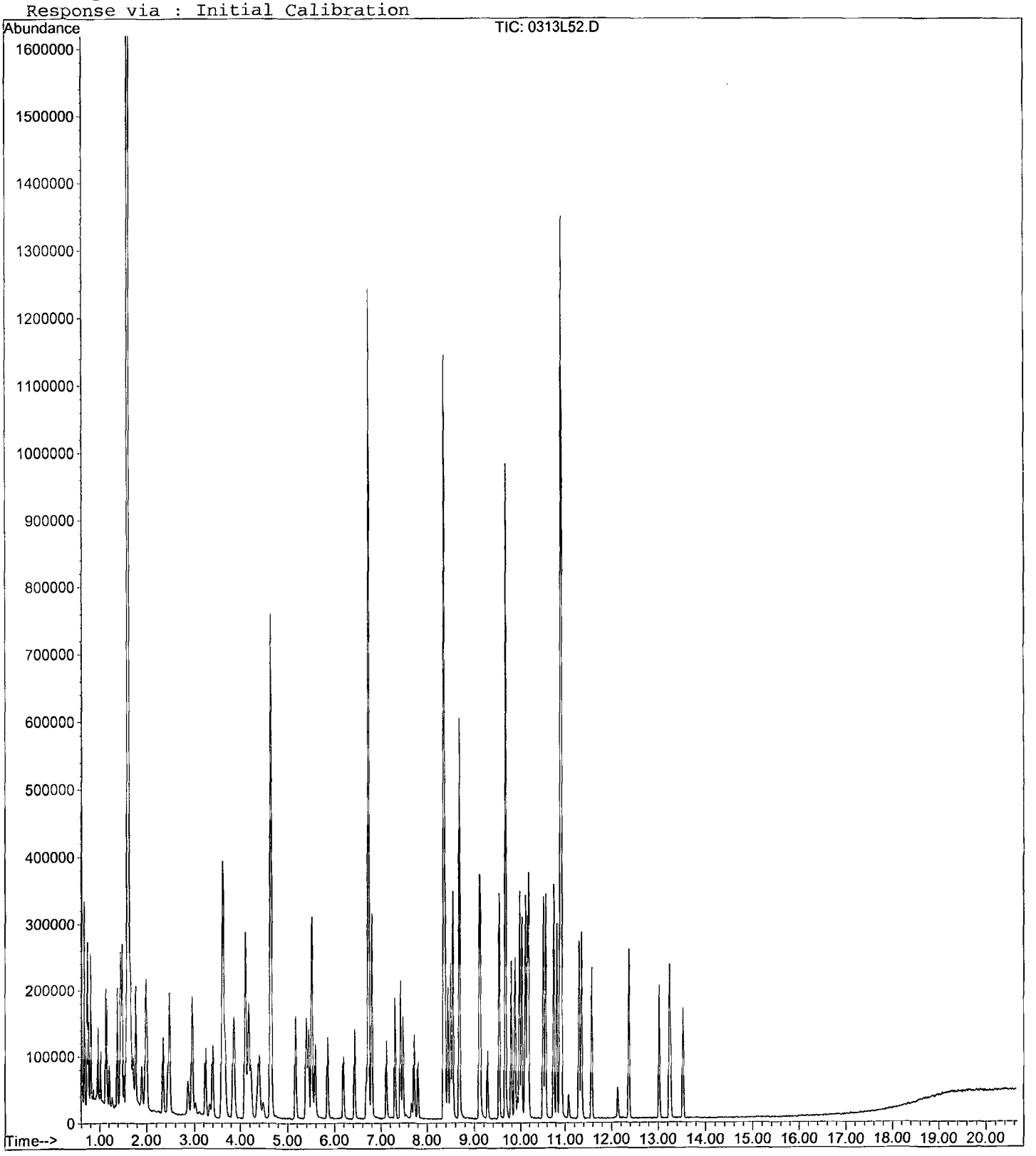
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0313L52.D Vial: 51
Acq On : 14 Mar 20 9:46 Operator:
Sample : BA08341W02,3,4 MSD 10ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:17 2020 Quant Results File: L0312W.RES

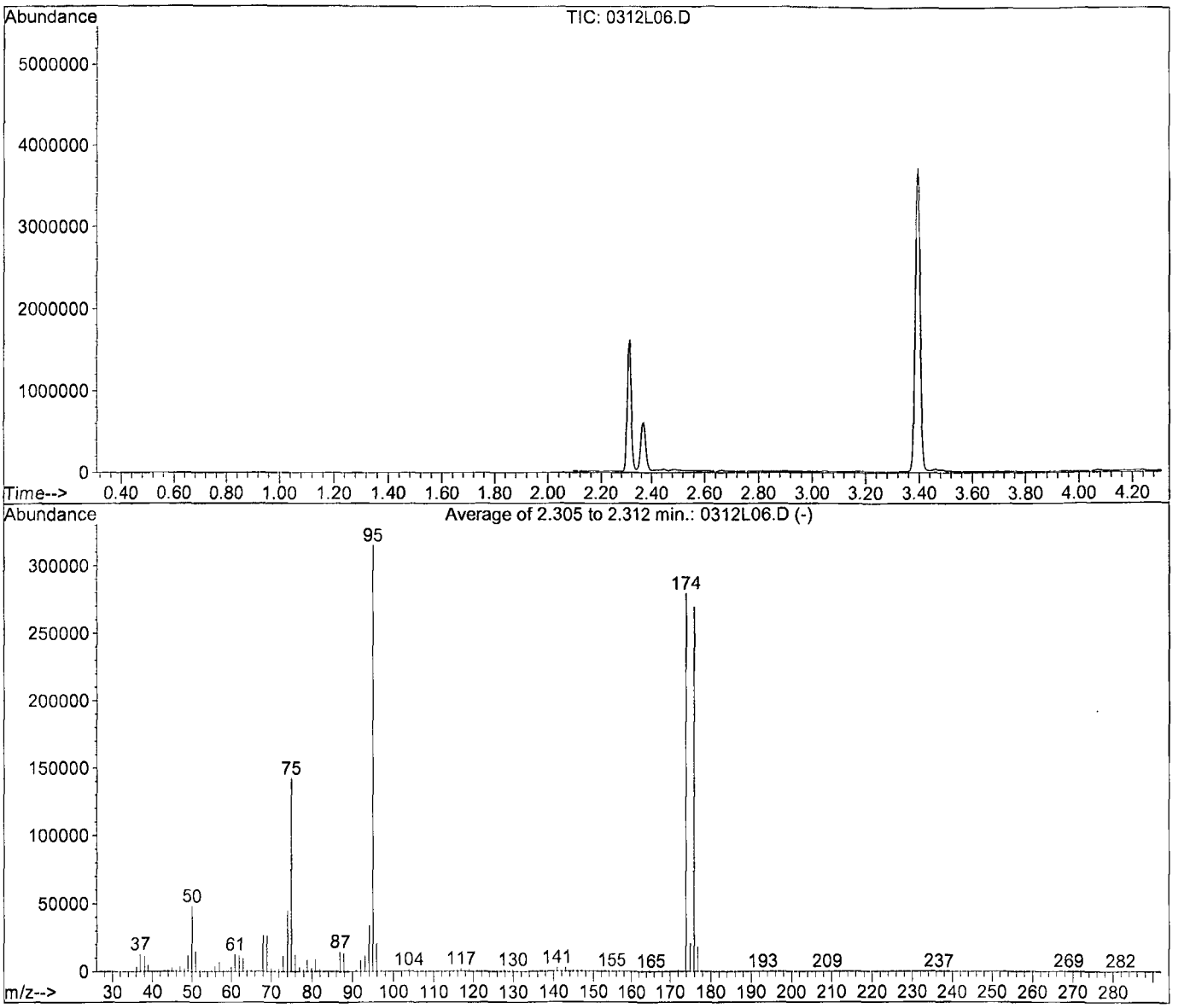
Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



Data File : M:\LOKI\DATA\200312\0312106.D
Acq On : 12 Mar 20 10:21
Sample : 25ug/L BFB STD 2/13/20
Misc : 2uL

Vial: 1
Operator:
Inst : Loki
Multiplr: 1.00

Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B

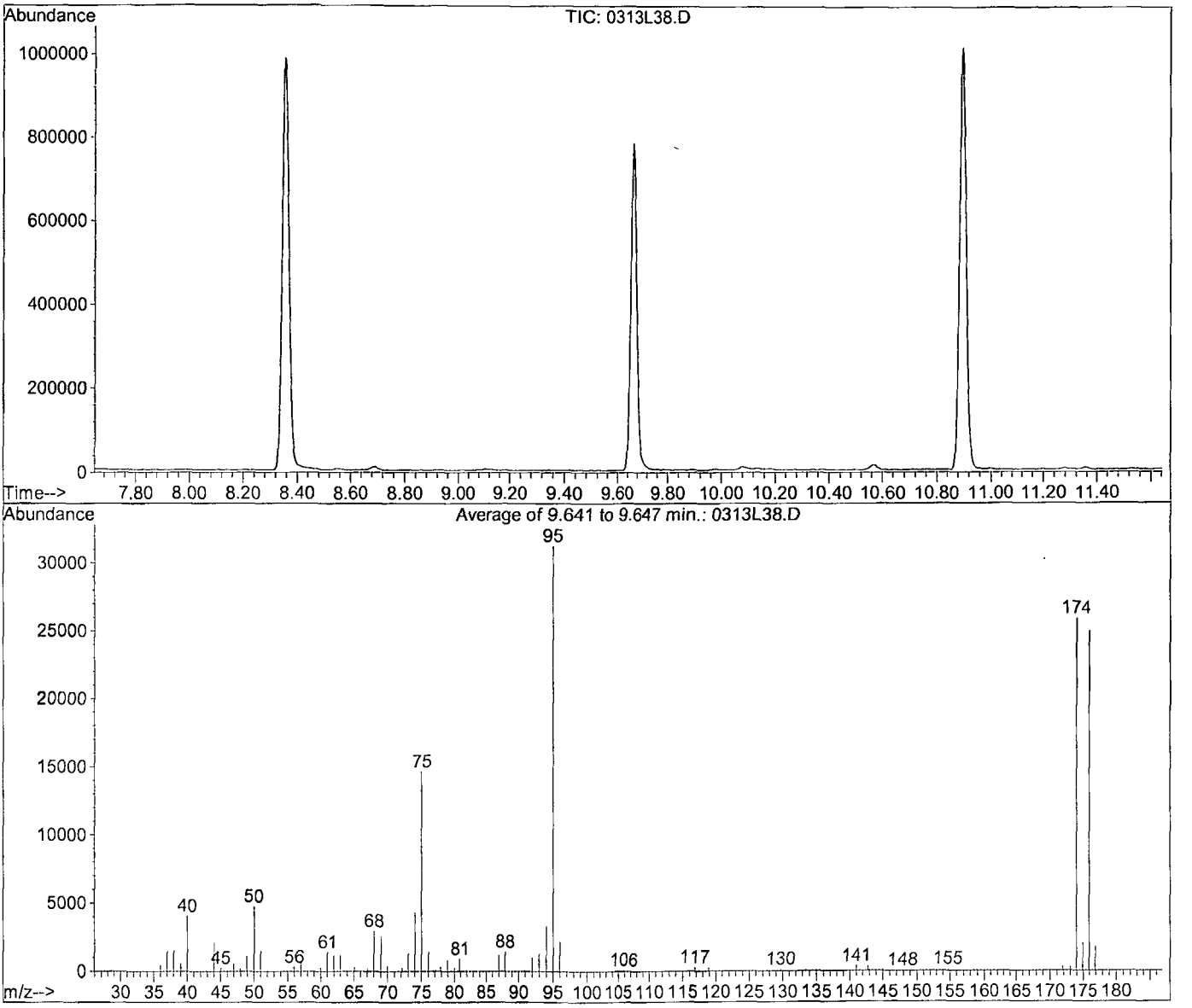


Spectrum Information: Average of 2.305 to 2.312 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.2	47768	PASS
75	95	30	60	45.2	142310	PASS
95	95	100	100	100.0	314965	PASS
96	95	5	9	6.4	20237	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	200	88.7	279339	PASS
175	174	5	9	7.2	20133	PASS
176	174	95	101	96.4	269419	PASS
177	176	5	9	6.6	17898	PASS

Data File : M:\LOKI\DATA\200312\0313138.D Vial: 37
Acq On : 14 Mar 20 3:06 Operator:
Sample : 25ug/L BFB STD 2/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B



Spectrum Information: Average of 9.641 to 9.647 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.2	4746	PASS
75	95	30	60	46.8	14644	PASS
95	95	100	100	100.0	31272	PASS
96	95	5	9	6.9	2157	PASS
173	174	0.00	2	0.8	215	PASS
174	95	50	200	82.8	25894	PASS
175	174	5	9	7.7	1992	PASS
176	174	95	101	96.5	24977	PASS
177	176	5	9	6.9	1727	PASS

Loki 8260 Standard Prep

Loki 8260 Water Calibration Curve

Prepared By (Initials): CH

0.3ug/L

Prepared: 03/12/20

Expires: 04/11/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	O2SI	0.3ug/L	5	Prepared 03/05/20	05/04/20	N/A	3uL	50mL	P&T Water	0.3
VOA STD. 12	O2SI		5	Prepared 03/05/20	05/04/20	N/A	3uL			0.3
VOA STD. 15	O2SI		5	Prepared 03/02/20	05/01/20	N/A	3uL			0.3
VOA STD. TBA	Various		5	Prepared 12/12/19	04/01/20	N/A	2uL			10

0.5ug/L

Prepared: 03/12/20

Expires: 04/11/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	O2SI	0.5ug/L	5	Prepared 03/05/20	05/04/20	N/A	5uL	50mL	P&T Water	0.5
VOA STD. 12	O2SI		5	Prepared 03/05/20	05/04/20	N/A	5uL			0.5
VOA STD. 15	O2SI		5	Prepared 03/02/20	05/01/20	N/A	5uL			0.5
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	5uL			25

1.0ug/L

Prepared: 03/12/20

Expires: 04/11/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	O2SI	1.0ug/L	5	Prepared 03/05/20	05/04/20	N/A	10uL	50mL	P&T Water	1
VOA STD. 12	O2SI		5	Prepared 03/05/20	05/04/20	N/A	10uL			1
VOA STD. 15	O2SI		5	Prepared 03/02/20	05/01/20	N/A	10uL			1
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	10uL			50

2.0ug/L

Prepared: 03/12/20

Expires: 04/11/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	O2SI	2.0ug/L	5	Prepared 03/05/20	05/04/20	N/A	20uL	50mL	P&T Water	2
VOA STD. 12	O2SI		5	Prepared 03/05/20	05/04/20	N/A	20uL			2
VOA STD. 15	O2SI		5	Prepared 03/02/20	05/01/20	N/A	20uL			2
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	15uL			75

5ug/L

Prepared: 03/12/20

Expires: 04/11/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	5ug/L	50	Prepared 03/05/20	05/04/20	N/A	5uL	50mL	P&T Water	5
VOA STD. 8	Phenova		50	Prepared 03/05/20	04/01/20	N/A	5uL			5
VOA STD. 2	O2SI		50	Prepared 03/05/20	05/04/20	N/A	5uL			5
VOA STD. 5	O2SI		50	Prepared 03/02/20	05/01/20	N/A	5uL			5
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	20uL			100

10ug/L

Prepared: 03/12/20

Expires: 04/11/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	10ug/L	50	Prepared 03/05/20	05/04/20	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova		50	Prepared 03/05/20	04/01/20	N/A	10uL			10
VOA STD. 2	O2SI		50	Prepared 03/05/20	05/04/20	N/A	10uL			10
VOA STD. 5	O2SI		50	Prepared 03/02/20	05/01/20	N/A	10uL			10
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	25uL			125

20ug/L

Prepared: 03/12/20

Expires: 04/11/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	20ug/L	50	Prepared 03/05/20	05/04/20	N/A	20uL	50mL	P&T Water	20
VOA STD. 8	Phenova		50	Prepared 03/05/20	04/01/20	N/A	20uL			20
VOA STD. 2	O2SI		50	Prepared 03/05/20	05/04/20	N/A	20uL			20
VOA STD. 5	O2SI		50	Prepared 03/02/20	05/01/20	N/A	20uL			20
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	30uL			150

40ug/L

Prepared: 03/12/20

Expires: 04/11/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	40ug/L	50	Prepared 03/05/20	05/04/20	N/A	40uL	50mL	P&T Water	40
VOA STD. 8	Phenova		50	Prepared 03/05/20	04/01/20	N/A	40uL			40
VOA STD. 2	O2SI		50	Prepared 03/05/20	05/04/20	N/A	40uL			40
VOA STD. 5	O2SI		50	Prepared 03/02/20	05/01/20	N/A	40uL			40
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	35uL			175

100ug/L

Prepared: 03/12/20

Expires: 04/11/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	100ug/L	50	Prepared 03/05/20	05/04/20	N/A	100uL	50mL	P&T Water	100
VOA STD. 8	Phenova		50	Prepared 03/05/20	04/01/20	N/A	100uL			100
VOA STD. 2	O2SI		50	Prepared 03/05/20	05/04/20	N/A	100uL			100
VOA STD. 5	O2SI		50	Prepared 03/02/20	05/01/20	N/A	100uL			100
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	40uL			200

Loki 8260 Water Second Source (SS)

Prepared: 03/12/20

Prepared By (Initials): CH

Expires: 04/11/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 3	Phenova	8260 Water SS	50	Prepared 03/05/20	05/04/20	N/A	10uL	50mL	P&T Water	10
VOA STD. Gases	O2SI	8260 Water SS	50	Prepared 03/05/20	05/04/20	N/A	10uL			10
VOA STD. 6	Various	8260 Water SS	50	Prepared 03/05/20	03/11/20	N/A	10uL			10
VOA STD. 25	Absolute	8260 Water SS	50	Prepared 03/02/20	05/01/20	N/A	10uL			10
VOA STD. 0	Absolute	8260 Water SS	50	Prepared 03/05/20	05/04/20	N/A	100uL			100
Voa STD. TBA	Various	8260 Water SS	250	Prepared 03/05/20	03/11/20	N/A	25uL			250

8260 Water Continuing Calibrations (CCV)/ Lab Control Spikes (LCS)

Prepared: 03/12/20

Prepared By (Initials): CH

Expires: 03/13/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	CCV/ LCS	50	Prepared 03/05/20	05/04/20	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova	CCV/ LCS	50	Prepared 03/05/20	04/01/20	N/A	10uL			10
VOA STD. 2	O2SI	CCV/ LCS	50	Prepared 03/05/20	05/04/20	N/A	10uL			10
VOA STD. 5	O2SI	CCV/ LCS	50	Prepared 03/02/20	05/01/20	N/A	10uL			10
VOA STD. TBA	Various	CCV/ LCS	250	Prepared 03/05/20	04/01/20	N/A	25uL			125

LCS (X4 Ketones)

Prepared: 03/12/20

Prepared By (Initials): CH

Expires: 03/13/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	LCS X4 Ketones	50	Prepared 03/05/20	05/04/20	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova	LCS X4 Ketones	50	Prepared 03/05/20	04/01/20	N/A	10uL			10
VOA STD. 2	O2SI	LCS X4 Ketones	50	Prepared 03/05/20	05/04/20	N/A	40uL			40
VOA STD. 5	O2SI	LCS X4 Ketones	50	Prepared 03/02/20	05/01/20	N/A	10uL			10
VOA STD. TBA	Various	LCS X4 Ketones	250	Prepared 03/05/20	04/01/20	N/A	25uL			125

Primary and Secondary Working Standards

Primary Standards

VOA STD 7

Prepared: 03/05/20 A
Expires: 05/04/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Gasses STD	Phenova	ALO-101206	2,000	CL14052-49491	03/05/21	08/31/24	100uL	4mL	Methanol	50
Hexachloroethane	Absolute	70199	1,000	091818-49868	03/05/21	09/18/23	200uL			50
Benzyl Chlonde	Accusta	M-8010-01	1,000	011320-49734	03/05/21	01/13/21	200uL			50

VOA STD 8

Prepared: 03/05/20 B
Expires: 04/01/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Additions STD	Phenova	ALO-130175	2,000	CL12744-49507	03/05/21	08/31/20	100uL	4mL	Methanol	50
502.2 Cal. Std.	Phenova	ALO-101200	2,000	CL14381-49690	03/05/21	10/31/24	100uL			50
Vinyl Acetate	Phenova	ALO-101228	2,000	CL15060-49887	03/05/21	04/01/20	100uL			50

VOA STD TBA

Prepared: 03/05/20 C
Expires: 04/01/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Custom VOC Mix	Phenova	ALO-130176	2,000	CL12929-49790	03/05/21	11/30/20	500uL	4mL	Methanol	250
Acrolein	Phenova	ALO-130549	10,000	CL15071-49888	03/05/21	04/01/20	100uL			250

VOA STD 1

Prepared: 03/05/20 D
Expires: 05/04/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
2-CEVE	Absolute	82408	2,000	011320-49737	03/05/21	01/13/23	50	2mL	Methanol	50

VOA STD 2

Prepared: 03/05/20 E
Expires: 05/04/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Ketones Std.	Phenova	ALO-109211	2,000	CL12730-49780	03/05/21	08/31/28	100	4mL	Methanol	50

VOA STD 9

Prepared: 03/05/20 F
Expires: 05/04/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information								Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA STD. 7		VOA STD. 9	50	Prepared 03/05/20	03/05/21	N/A	200uL	2mL	Methanol	5
VOA STD. 8			50	Prepared 03/05/20	03/05/21	N/A	200uL			5

VOA STD. 10

Prepared: 03/05/20 G
Expires: 05/04/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information								Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA STD. 1		VOA STD. 10	50	Prepared 03/05/20	03/05/21	N/A	200uL	2mL	Methanol	5

VOA STD. 12

Prepared: 03/05/20 H
Expires: 05/04/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information								Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA STD. 2		VOA STD. 12	50	Prepared 03/05/20	03/05/21	N/A	200uL	2mL	Methanol	5

Second Source (SS) Standards

VOA STD. 3

Prepared: 03/05/20 I
Expires: 05/04/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Ketones Standard	Phenova	ALO-101211	2,000	CL13994-49785	03/05/21	08/31/29	50uL	2mL	Methanol	50

VOA STD. Gases

Prepared: 03/05/20 J
Expires: 05/04/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
8260 Gases (SS)	Phenova	ALO-101206	2,000	CL14504-49901	03/05/21	10/31/24	50uL	2mL	Methanol	50

VOA STD. 6

Prepared: 03/05/20 K
Expires: 03/11/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
502.2 Calibration STD. (54-compounds)	Phenova	ALO-101200	2,000	CL14379-49508	02/18/21	10/31/24	50uL	2mL	Methanol	50
Vinyl Acetate	Phenova	ALO-101228	2,000	CL14964-49837	02/18/21	03/11/20	50uL			50
Hexachloroethane	Accustan	AS-E0011	1,000	219081767-49740	03/05/21	06/28/29	100uL			50
Benzyl Chloride	Accustan	M-8010-01	200	219041664-49375	03/05/21	05/22/21	500uL			50

VOA STD. TBA

Prepared: 03/05/20 L
Expires: 03/11/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Custom VOA Mix (4-3)	Phenova	ALO-130176	2,000	CL12929-49684	03/05/21	11/30/20	250uL	2mL	Methanol	250
Acrolein	Phenova	ALO-101224	10,000	CL14963-49838	02/18/21	03/11/20	50uL			250

VOA STD. 0

Prepared: 03/05/20 M
Expires: 05/04/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Addition STD.	Phenova	ALO-130175	2,000	CL14058-49851	03/05/21	08/31/21	50uL	2mL	Methanol	50

VOA STD. 2-CEVE

Prepared: 03/05/20 N
Expires: 05/04/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
2-CEVE (SS)	Absolute	82408	2,000	121119-49635	02/18/21	12/11/22	50uL	2mL	Methanol	50

Injection Log

Directory: M:\LOKI\DATA\200312\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	0312L06.D	1	25ug/L BFB STD 2/13/20	2uL	12 Mar 20 10:21
4	0312L10.D	1	0.3ug/L VOC STD 3/12/20	IS&S:03/10/20	12 Mar 20 12:10
5	0312L11.D	1	0.5ug/L VOC STD 3/12/20	IS&S:03/10/20	12 Mar 20 12:39
6	0312L12.D	1	1.0ug/L VOC STD 3/12/20	IS&S:03/10/20	12 Mar 20 13:07
7	0312L13.D	1	2.0ug/L VOC STD 3/12/20	IS&S:03/10/20	12 Mar 20 13:36
8	0312L14.D	1	5.0ug/L VOC STD 3/12/20	IS&S:03/10/20	12 Mar 20 14:05
9	0312L15.D	1	10ug/L VOC STD 3/12/20	IS&S:03/10/20	12 Mar 20 14:33
10	0312L16.D	1	20ug/L VOC STD 3/12/20	IS&S:03/10/20	12 Mar 20 15:02
11	0312L17.D	1	40ug/L VOC STD 3/12/20	IS&S:03/10/20	12 Mar 20 15:30
12	0312L18.D	1	100ug/L VOC STD 3/12/20	IS&S:03/10/20	12 Mar 20 15:59
15	0312L21.D	1	(SS)10ug/L VOC STD 3/12/20	IS&S:03/10/20	12 Mar 20 17:25
37	0313L38.D	1	25ug/L BFB STD 2/13/20	IS&S:03/10/20	14 Mar 20 3:06
38	0313L39.D	1	200313B CCV 10ug/L	IS&S:03/10/20	14 Mar 20 3:34
39	0313L40.D	1	200313B LCS 10ug/L	IS&S:03/10/20	14 Mar 20 4:03
40	0313L41.D	1	200313B LCSD 10ug/L	IS&S:03/10/20	14 Mar 20 4:31
44	0313L45.D	1	200313B Blk	IS&S:03/10/20	14 Mar 20 6:26
45	0313L46.D	1	BA08340W01	IS&S:03/10/20	14 Mar 20 6:54
46	0313L47.D	1	BA08341W01	IS&S:03/10/20	14 Mar 20 7:23
50	0313L51.D	1	BA08341W02,3,4 MS 10ug/L	IS&S:03/10/20	14 Mar 20 9:17
51	0313L52.D	1	BA08341W02,3,4 MSD 10ug/L	IS&S:03/10/20	14 Mar 20 9:46
56	0313L57.D	1	Ending CCV 10ug/L 3/13/20	IS&S:03/10/20	14 Mar 20 12:09

ORGANICS
Calibration Data

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 03/12/20
Matrix: Instrument: Loki Initials: DP

			0312L10 D	0312L11 D	0312L12 D	0312L13 D	0312L14 D	0312L15 D	0312L16 D	0312L17 D	0312L18 D							
		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD	Type	r^2	Q	MRF
1	I	Fluorobenzene (IS)																
2	S	Dibromofluoromethane(S)	0.9655	0.7142	0.6902	0.7022	0.6963	0.7140	0.6569	0.6712	0.6088		0.71	14	S			
3	S	1,2-DCA-D4(S)	0.9637	0.7277	0.6937	0.7185	0.6936	0.7189	0.6549	0.6775	0.6210		0.72	14	S			
4	I	Chlorobenzene-D5 (IS)																
5	S	Toluene-D8(S)		2.260	2.037	2.196	2.206	2.320	2.105	2.133	1.988		2.2	5.2	S			
6	S	4-Bromofluorobenzene(S)		0.8958	0.7818	0.8269	0.8022	0.8543	0.7947	0.8070	0.7560		0.81	5.4	S			
7	I	1,4-Dichlorobenzene-D (IS)																
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Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L10.D Vial: 4
Acq On : 12 Mar 20 12:10 Operator:
Sample : 0.3ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Quant Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	96	380864	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.36	117	407424	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	10.90	152	230144	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	3.62	111	73542	6.77	ppb	0.00
Spiked Amount 25.000			Recovery =	27.072%		
3) 1,2-DCA-D4(S)	4.11	65	73406	6.70	ppb	0.00
Spiked Amount 25.000			Recovery =	26.812%		
5) Toluene-D8(S)	6.73	98	245880	7.00	ppb	0.00
Spiked Amount 25.000			Recovery =	27.992%		
6) 4-Bromofluorobenzene(S)	9.66	95	99612	7.50	ppb	0.00
Spiked Amount 25.000			Recovery =	30.004%		

Target Compounds Qvalue

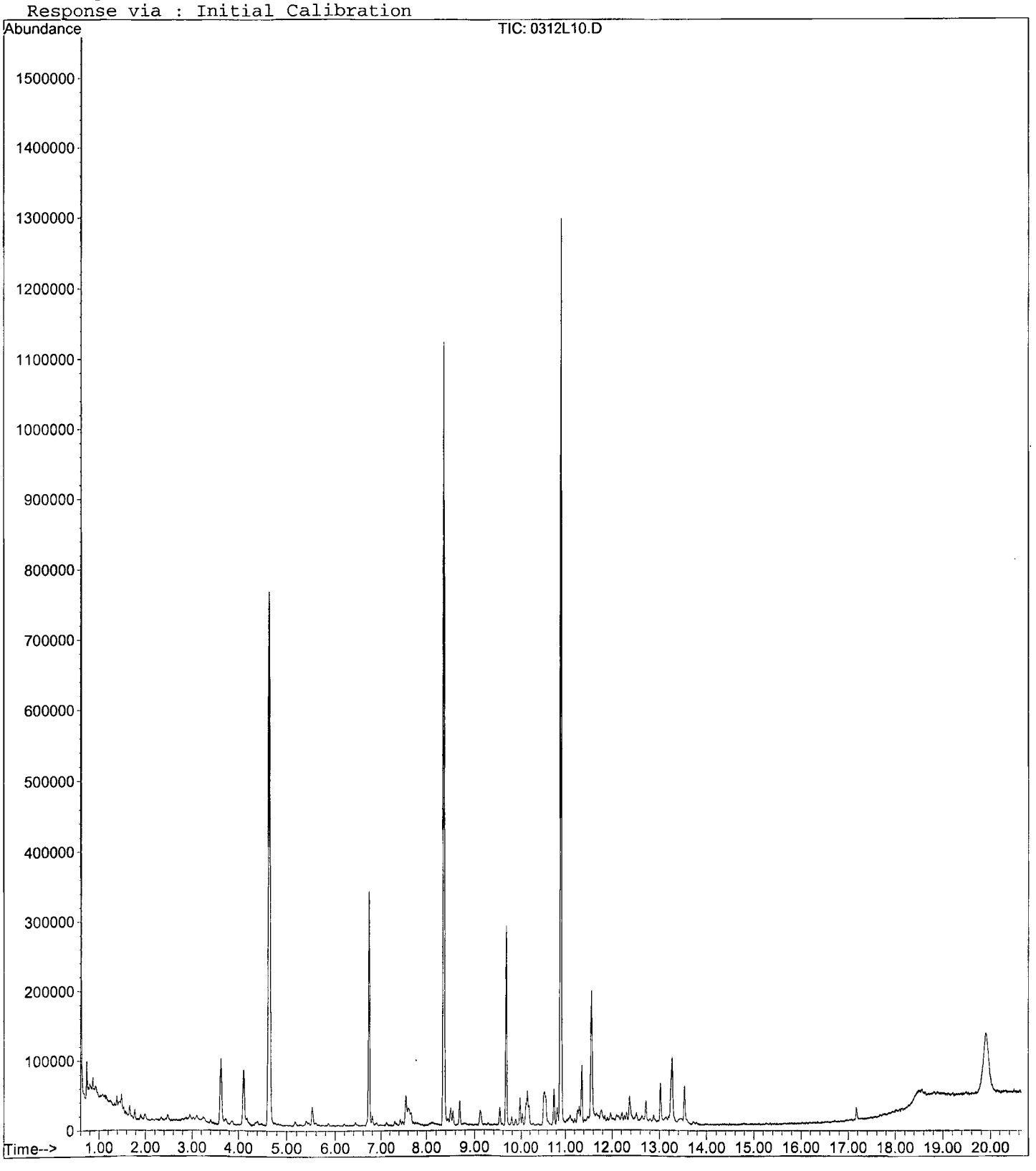
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0312L10.D Vial: 4
Acq On : 12 Mar 20 12:10 Operator:
Sample : 0.3ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L11.D Vial: 5
Acq On : 12 Mar 20 12:39 Operator:
Sample : 0.5ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Quant Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.64	96	392064	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.36	117	424896	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	10.90	152	230976	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	3.62	111	56000	5.01	ppb	0.00
Spiked Amount 25.000			Recovery =	20.024%		
3) 1,2-DCA-D4(S)	4.11	65	57061	5.06	ppb	0.00
Spiked Amount 25.000			Recovery =	20.248%		
5) Toluene-D8(S)	6.73	98	192095	5.24	ppb	0.00
Spiked Amount 25.000			Recovery =	20.972%		
6) 4-Bromofluorobenzene(S)	9.66	95	76122	5.50	ppb	0.00
Spiked Amount 25.000			Recovery =	21.988%		

Target Compounds Qvalue

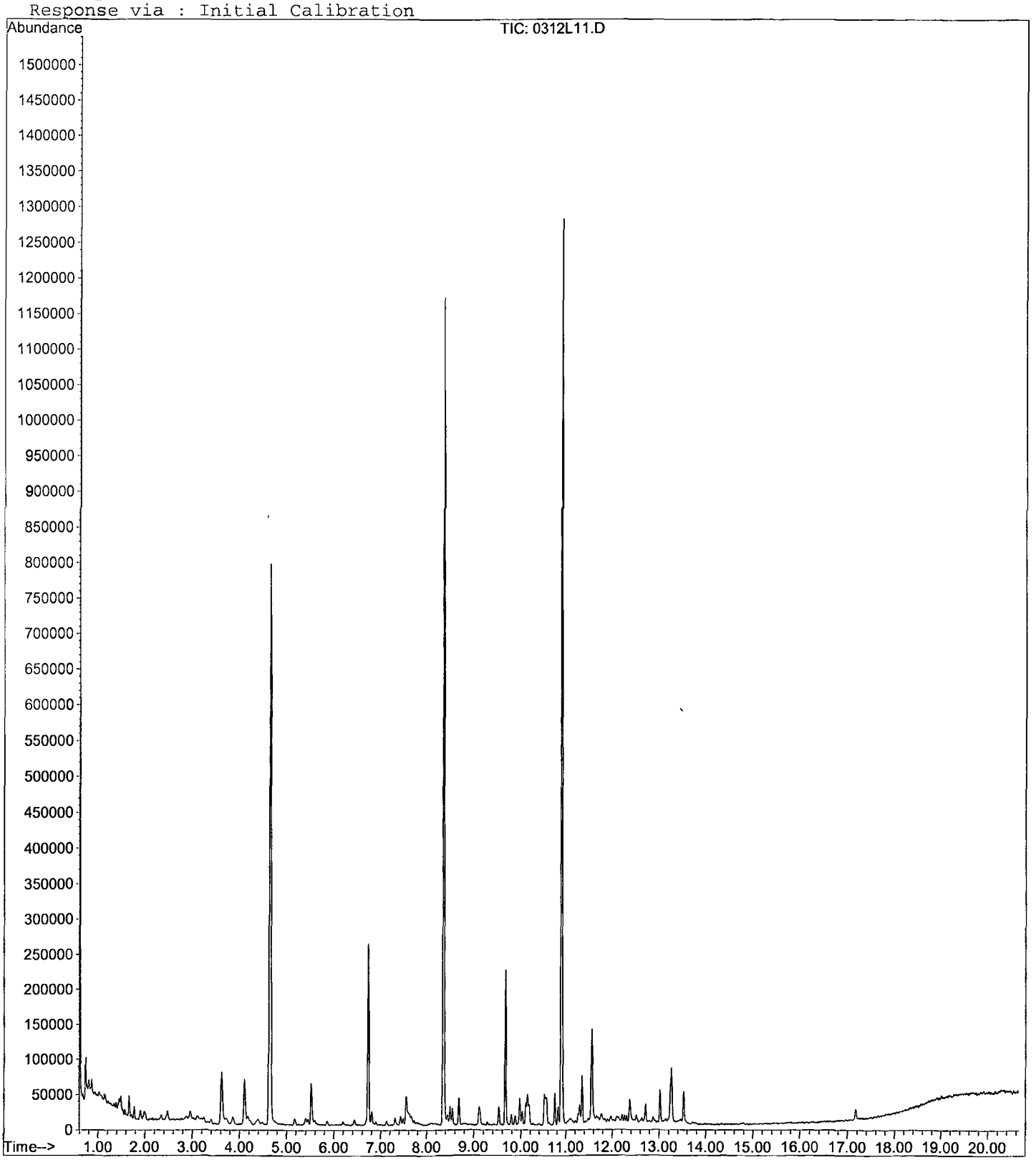
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0312L11.D Vial: 5
Acq On : 12 Mar 20 12:39 Operator:
Sample : 0.5ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L12.D Vial: 6
Acq On : 12 Mar 20 13:07 Operator:
Sample : 1.0ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Quant Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.64	96	384960	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.36	117	426432	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	10.90	152	218688	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	3.62	111	106273	9.68	ppb	0.00
Spiked Amount 25.000			Recovery = 38.704%			
3) 1,2-DCA-D4(S)	4.11	65	106813	9.65	ppb	0.00
Spiked Amount 25.000			Recovery = 38.600%			
5) Toluene-D8(S)	6.73	98	347519	9.45	ppb	0.00
Spiked Amount 25.000			Recovery = 37.800%			
6) 4-Bromofluorobenzene(S)	9.66	95	133350	9.59	ppb	0.00
Spiked Amount 25.000			Recovery = 38.380%			

Target Compounds Qvalue

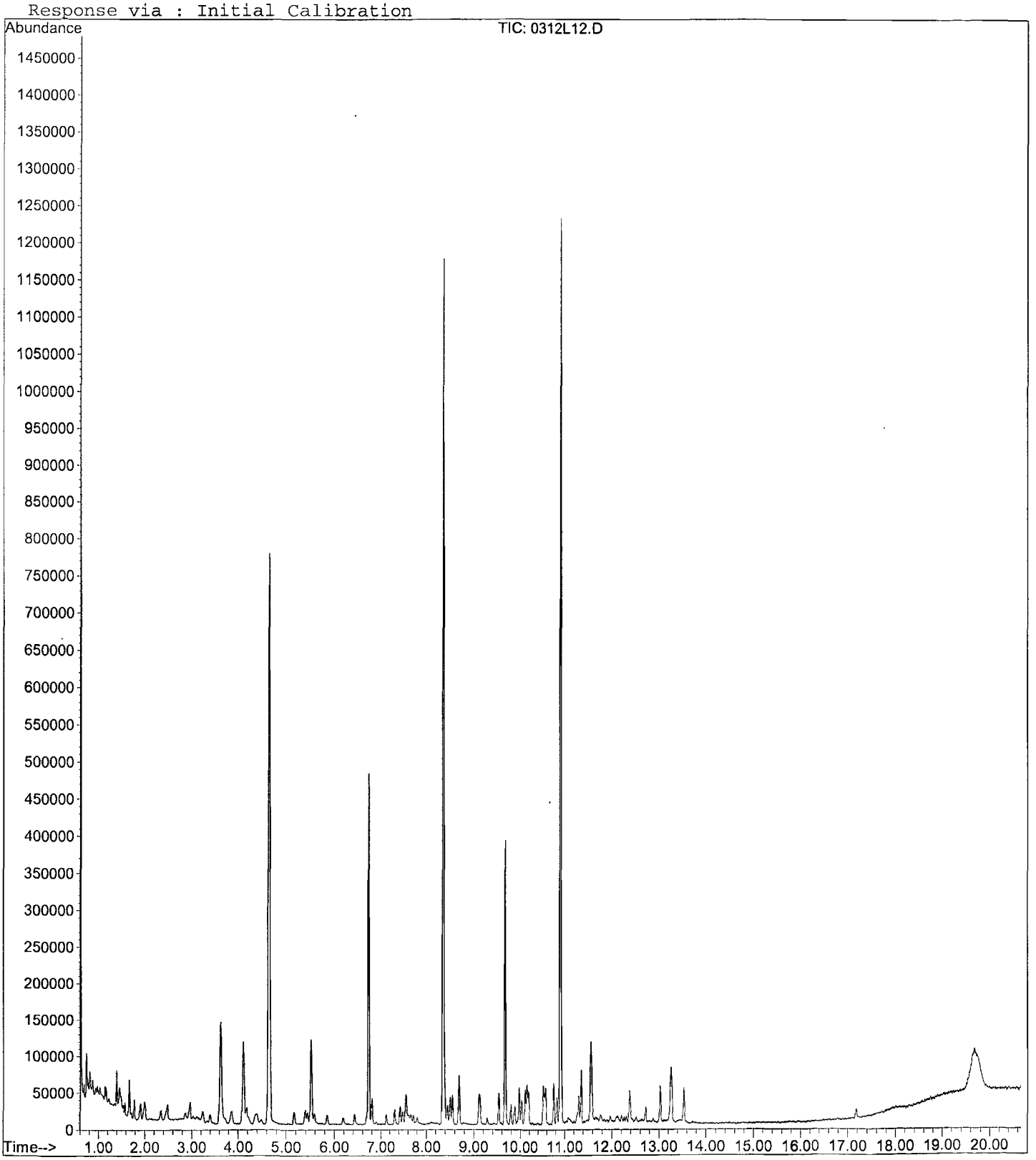
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0312L12.D Vial: 6
Acq On : 12 Mar 20 13:07 Operator:
Sample : 1.0ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L13.D Vial: 7
Acq On : 12 Mar 20 13:36 Operator:
Sample : 2.0ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Quant Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	96	379008	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.36	117	403200	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	10.90	152	222720	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	3.62	111	106459	9.85	ppb	0.00
Spiked Amount 25.000			Recovery = 39.380%			
3) 1,2-DCA-D4(S)	4.11	65	108929	10.00	ppb	0.00
Spiked Amount 25.000			Recovery = 39.984%			
5) Toluene-D8(S)	6.73	98	354209	10.19	ppb	0.00
Spiked Amount 25.000			Recovery = 40.748%			
6) 4-Bromofluorobenzene(S)	9.66	95	133355	10.15	ppb	0.00
Spiked Amount 25.000			Recovery = 40.592%			

Target Compounds Qvalue

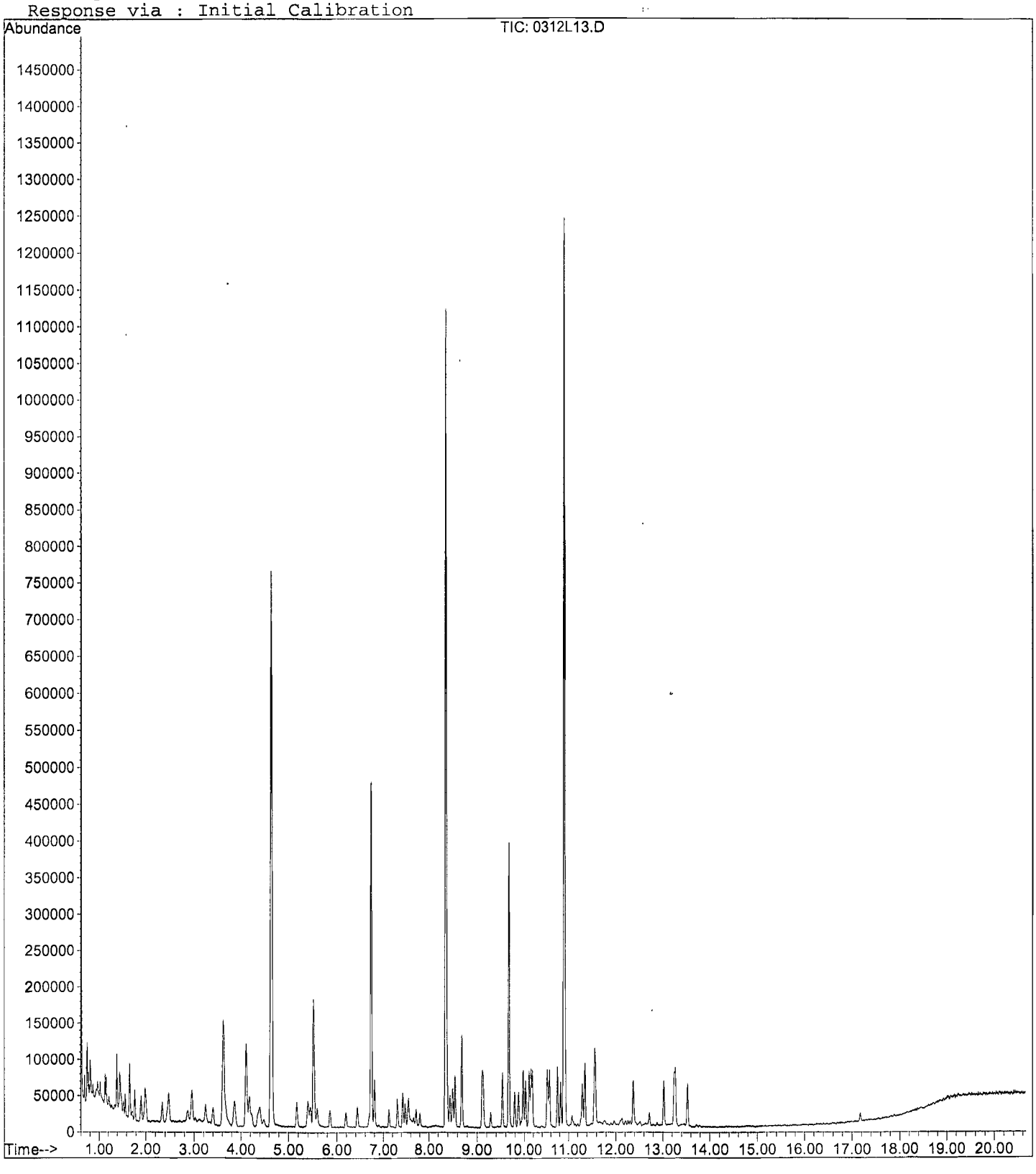
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0312L13.D Vial: 7
Acq On : 12 Mar 20 13:36 Operator:
Sample : 2.0ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L14.D Vial: 8
Acq On : 12 Mar 20 14:05 Operator:
Sample : 5.0ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Quant Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	96	401984	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.36	117	429376	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	10.90	152	240192	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	3.62	111	279895	24.41	ppb	0.00
Spiked Amount 25.000			Recovery = 97.620%			
3) 1,2-DCA-D4(S)	4.11	65	278823	24.12	ppb	0.00
Spiked Amount 25.000			Recovery = 96.492%			
5) Toluene-D8(S)	6.73	98	947179	25.58	ppb	0.00
Spiked Amount 25.000			Recovery = 102.324%			
6) 4-Bromofluorobenzene(S)	9.66	95	344450	24.61	ppb	0.00
Spiked Amount 25.000			Recovery = 98.452%			

Target Compounds Qvalue

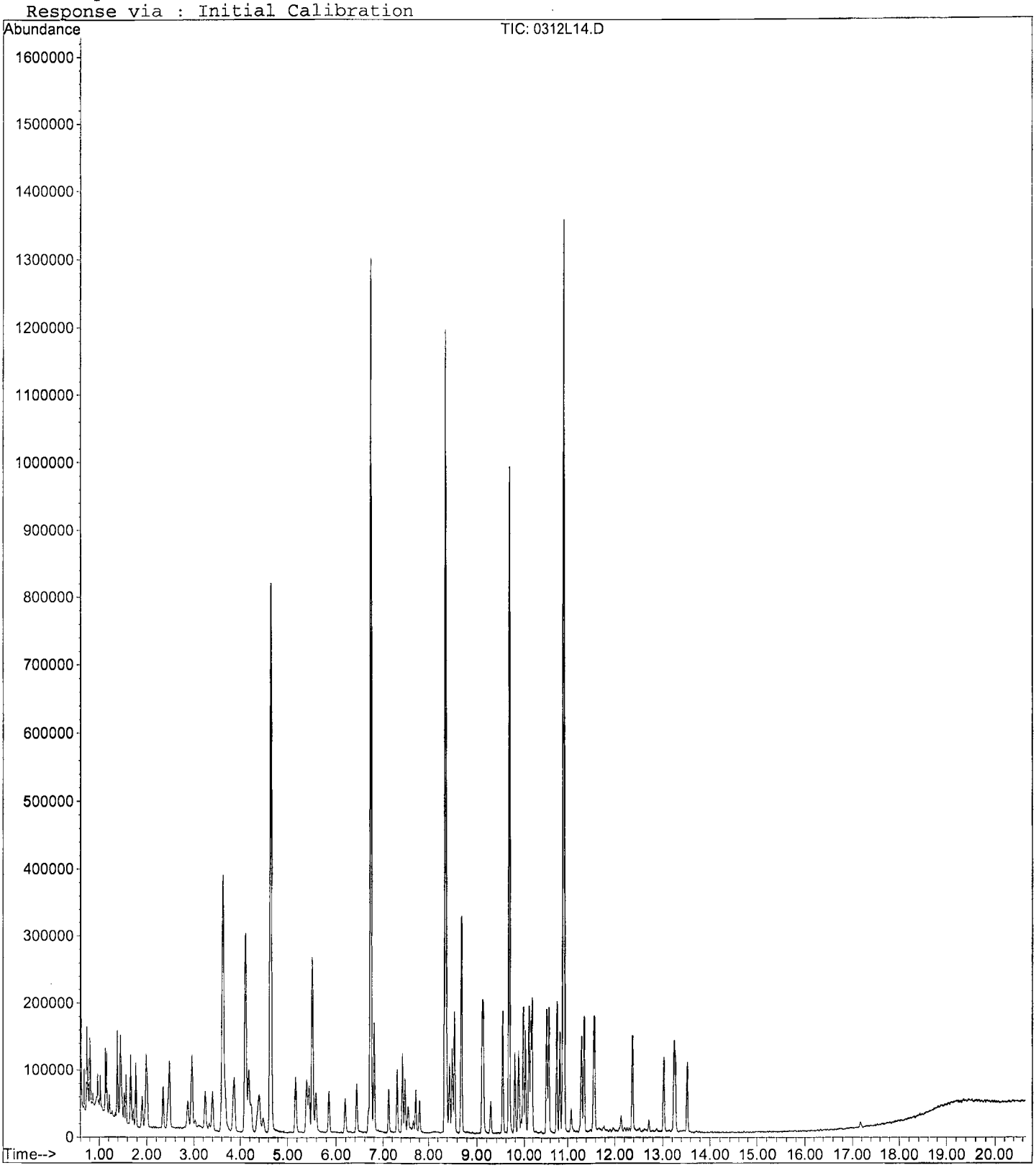
(#) = qualifier out of range (m) = manual integration
0312L14.D LSUR0312.M Tue Mar 17 15:31:58 2020 Page 1

Quantitation Report

Data File : M:\LOKI\DATA\200312\0312L14.D Vial: 8
Acq On : 12 Mar 20 14:05 Operator:
Sample : 5.0ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L15.D Vial: 9
Acq On : 12 Mar 20 14:33 Operator:
Sample : 10ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Quant Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.64	96	397184	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.36	117	425536	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	10.90	152	251200	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	3.62	111	283588	25.03	ppb	0.00
Spiked Amount 25.000			Recovery = 100.104%			
3) 1,2-DCA-D4(S)	4.11	65	285520	25.00	ppb	0.00
Spiked Amount 25.000			Recovery = 100.004%			
5) Toluene-D8(S)	6.72	98	987286	26.90	ppb	0.00
Spiked Amount 25.000			Recovery = 107.620%			
6) 4-Bromofluorobenzene(S)	9.66	95	363539	26.21	ppb	0.00
Spiked Amount 25.000			Recovery = 104.848%			

Target Compounds Qvalue

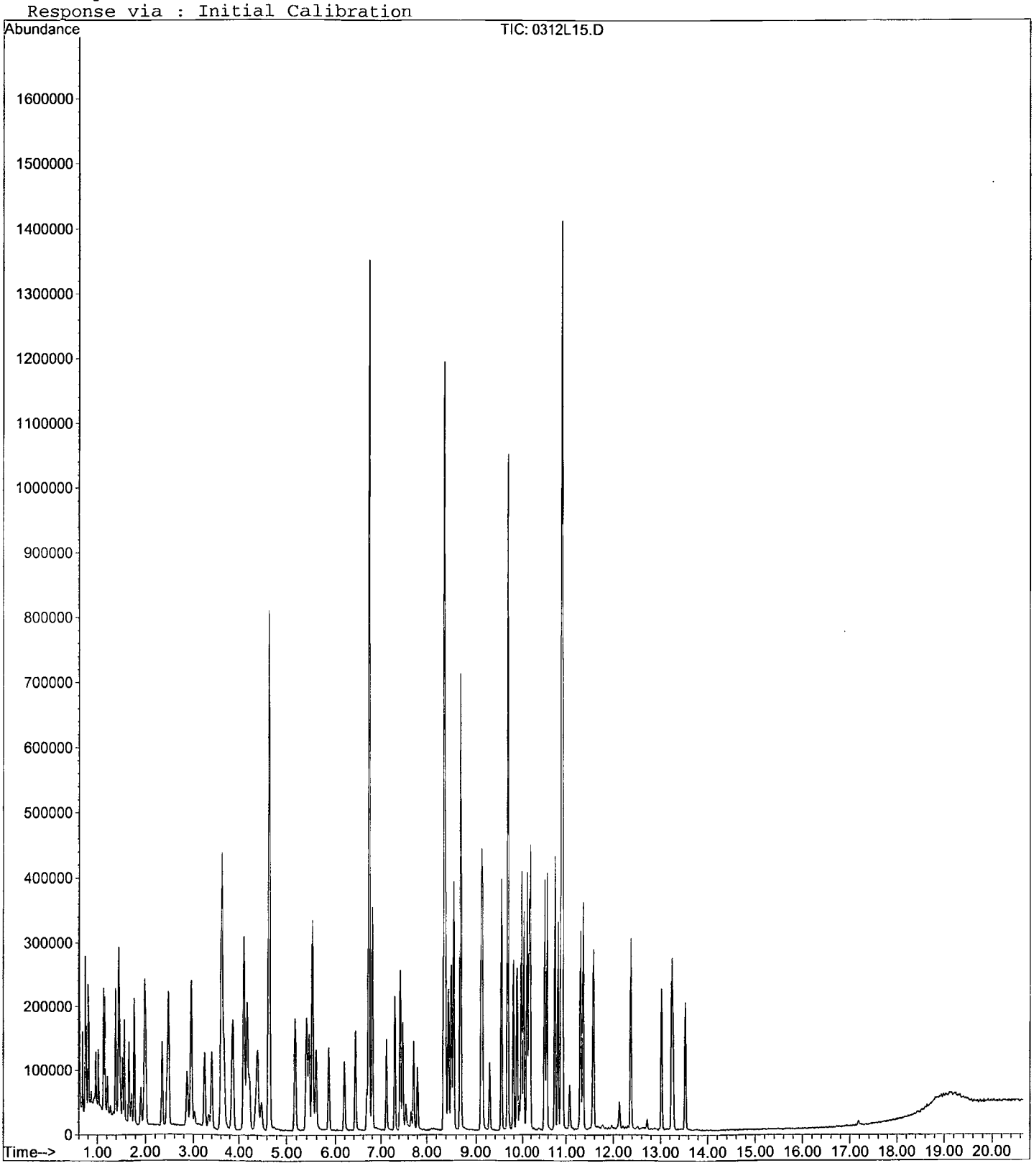
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0312L15.D Vial: 9
Acq On : 12 Mar 20 14:33 Operator:
Sample : 10ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L16.D Vial: 10
Acq On : 12 Mar 20 15:02 Operator:
Sample : 20ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Quant Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.64	96	405144	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.35	117	446656	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	10.89	152	259136	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	3.62	111	532316	46.05	ppb	0.00
Spiked Amount 25.000			Recovery = 184.212%			
3) 1,2-DCA-D4(S)	4.11	65	530676	45.56	ppb	0.00
Spiked Amount 25.000			Recovery = 182.220%			
5) Toluene-D8(S)	6.72	98	1880369	48.82	ppb	0.00
Spiked Amount 25.000			Recovery = 195.276%			
6) 4-Bromofluorobenzene(S)	9.66	95	709894	48.76	ppb	0.00
Spiked Amount 25.000			Recovery = 195.056%			

Target Compounds Qvalue

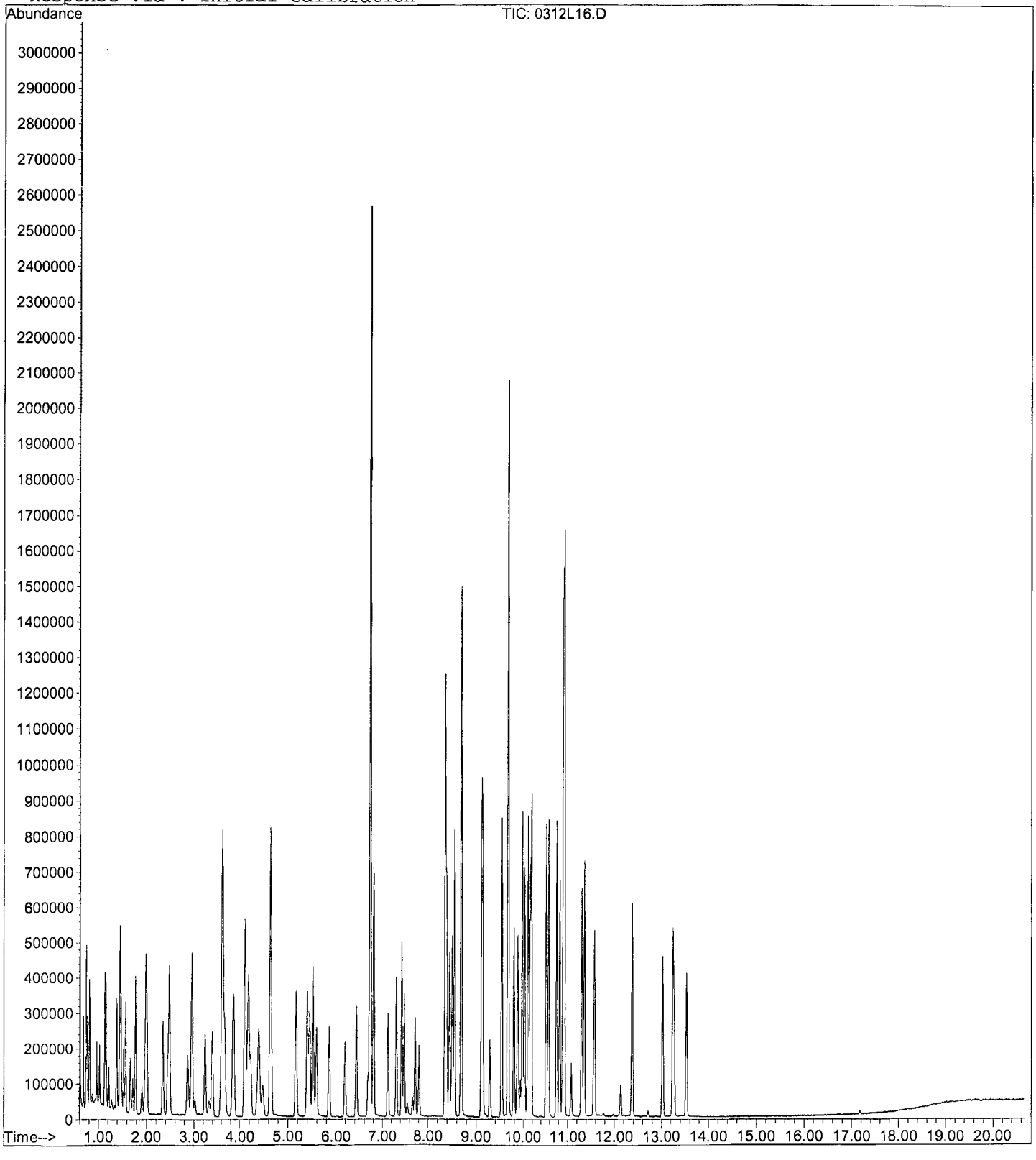
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0312L16.D Vial: 10
Acq On : 12 Mar 20 15:02 Operator:
Sample : 20ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L17.D Vial: 11
Acq On : 12 Mar 20 15:30 Operator:
Sample : 40ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Quant Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.64	96	401408	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.35	117	451392	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	10.90	152	264320	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	3.62	111	538881	47.05	ppb	0.00
Spiked Amount 25.000			Recovery = 188.220%			
3) 1,2-DCA-D4(S)	4.11	65	543882	47.12	ppb	0.00
Spiked Amount 25.000			Recovery = 188.496%			
5) Toluene-D8(S)	6.72	98	1926049	49.48	ppb	0.00
Spiked Amount 25.000			Recovery = 197.924%			
6) 4-Bromofluorobenzene(S)	9.66	95	728514	49.52	ppb	0.00
Spiked Amount 25.000			Recovery = 198.072%			

Target Compounds Qvalue

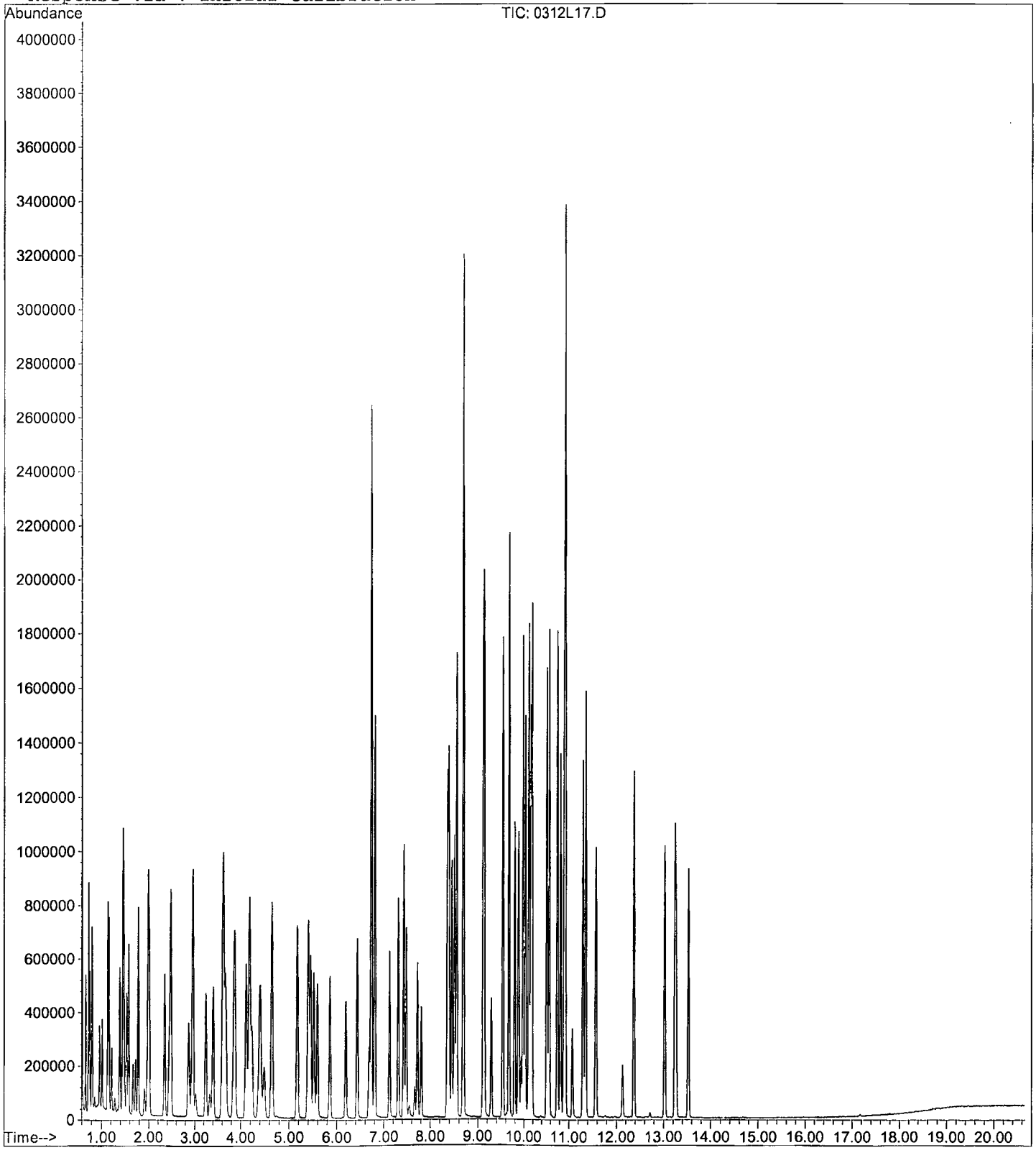
(#) = qualifier out of range (m) = manual integration
0312L17.D LSUR0312.M Tue Mar 17 15:32:06 2020 Page 1

Quantitation Report

Data File : M:\LOKI\DATA\200312\0312L17.D Vial: 11
Acq On : 12 Mar 20 15:30 Operator:
Sample : 40ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L18.D Vial: 12
Acq On : 12 Mar 20 15:59 Operator:
Sample : 100ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Quant Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	96	422016	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.36	117	476800	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	10.90	152	284544	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	3.62	111	1027658	85.35	ppb	0.00
Spiked Amount 25.000			Recovery =	341.412%		
3) 1,2-DCA-D4(S)	4.11	65	1048208	86.39	ppb	0.00
Spiked Amount 25.000			Recovery =	345.540%		
5) Toluene-D8(S)	6.73	98	3792024	92.23	ppb	0.00
Spiked Amount 25.000			Recovery =	368.908%		
6) 4-Bromofluorobenzene(S)	9.66	95	1441788	92.78	ppb	0.00
Spiked Amount 25.000			Recovery =	371.112%		

Target Compounds Qvalue

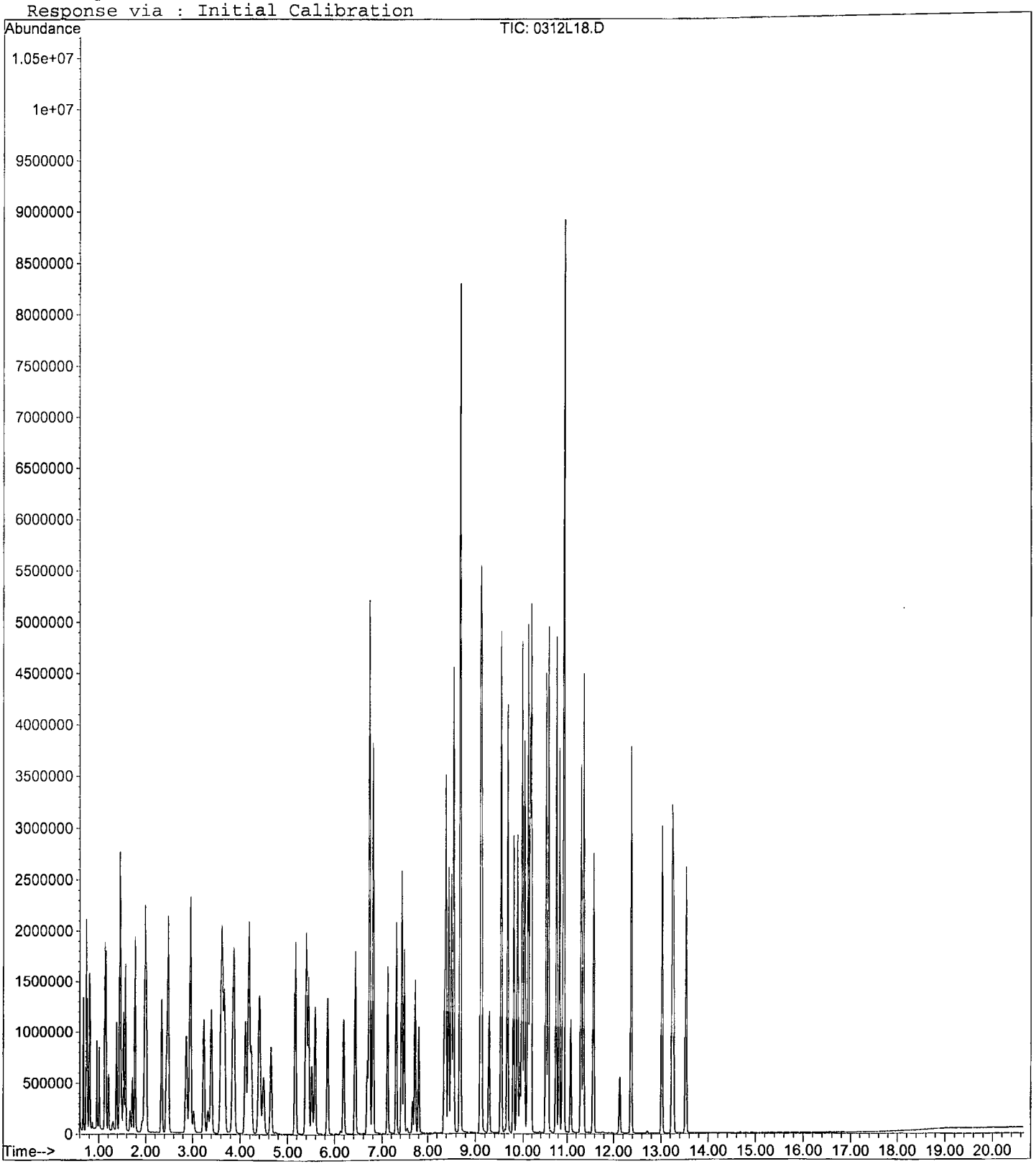
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0312L18.D Vial: 12
Acq On : 12 Mar 20 15:59 Operator:
Sample : 100ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 03/13/20
Matrix: Instrument: Loki Initials: DP

			0313L29.D	0313L30.D	0313L31.D	0313L32.D	0313L33 D	0313L34 D	0313L35 D									
		Compound	1	2	3	4	5	6	7				Avg	%RSD	Type	r^2	Q	MRF
1	I	Fluorobenzene (IS)																
2	TMHBL	Gasoline C6-C10	18.6	7.782	4.330	2.011	1.499	1.328	1.285				5.3	121	TMHBL	0.999		
3	I	Chlorobenzene-D5 (IS)																
4	I	1,4-Dichlorobenzene-D (IS)																
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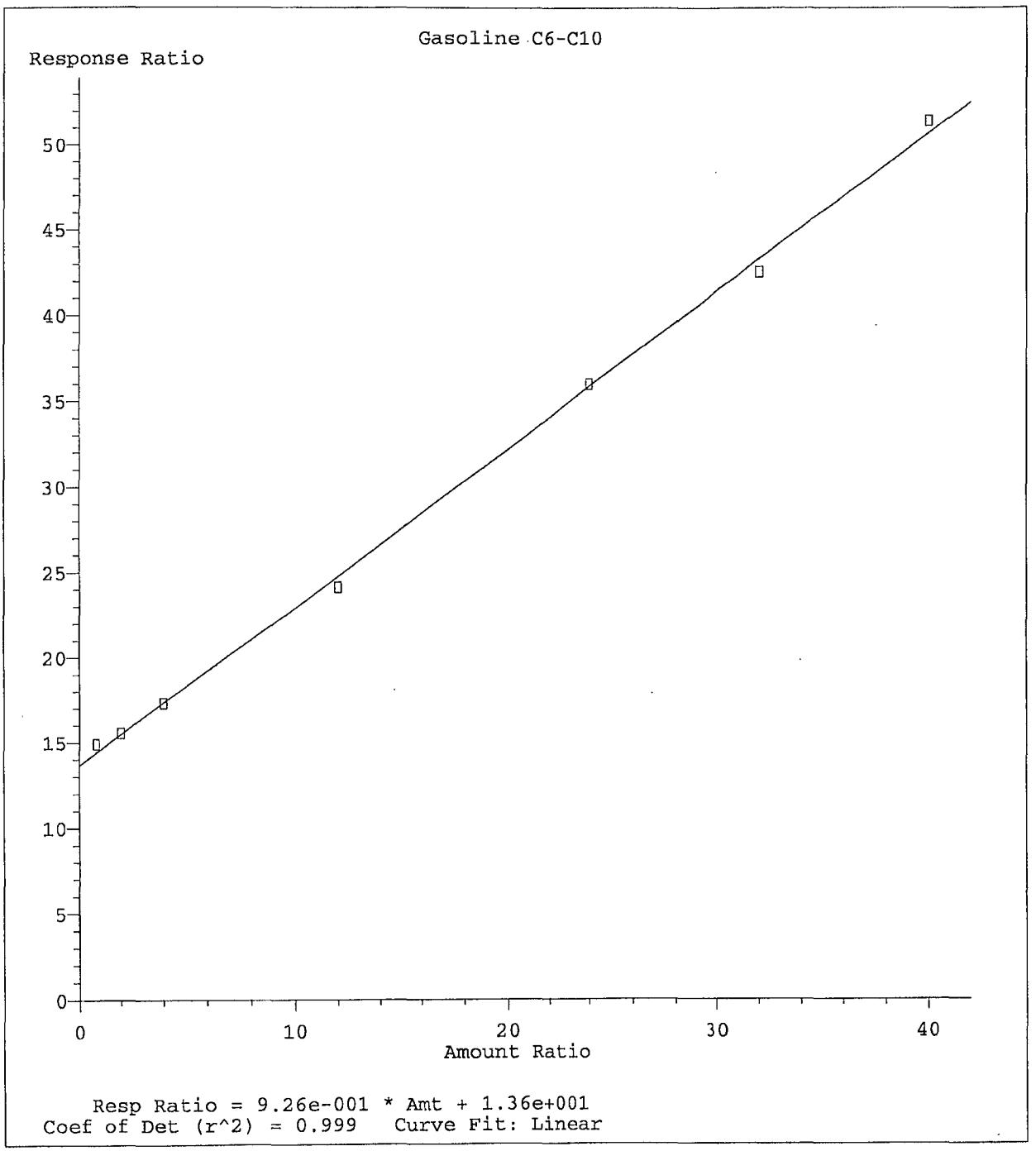


Method Name: M:\LOKI\DATA\200312\LGAS0312.M
Calibration Table Last Updated: Mon Mar 16 11:04:50 2020

ADDED PAGE

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\200312\0313L29.D Vial: 28
Acq On : 13 Mar 20 22:48 Operator:
Sample : 20ug/L GAS STD 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:05 2020 Quant Results File: LGAS0312.RES

Quant Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	TIC	669134	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.36	TIC	1011581	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	10.90	TIC	1008778	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	6.73	TIC	9977282m	40.96	ppb	100

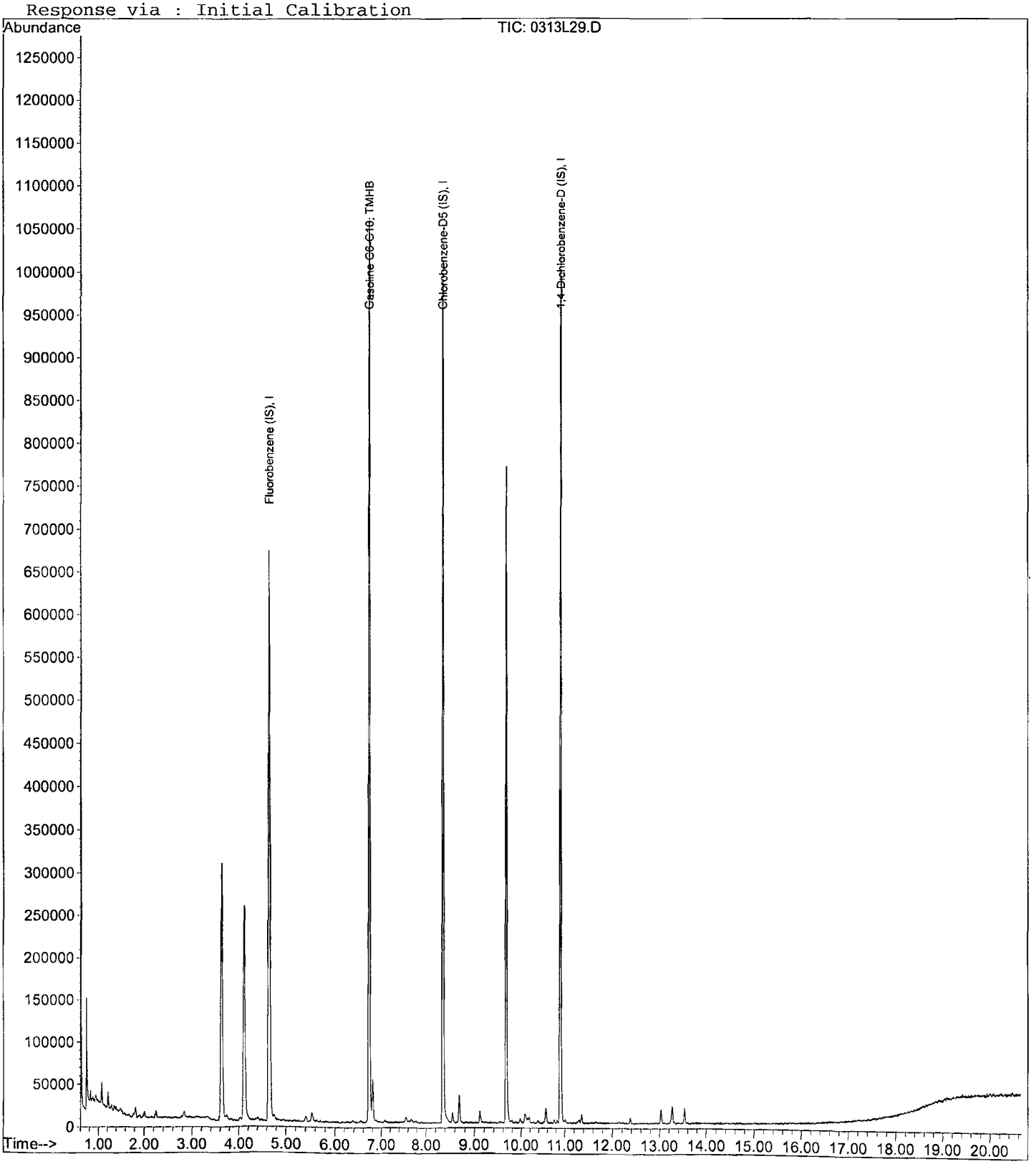
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0313L29.D Vial: 28
Acq On : 13 Mar 20 22:48 Operator:
Sample : 20ug/L GAS STD 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:05 2020 Quant Results File: LGAS0312.RES

Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\200312\0313L30.D Vial: 29
Acq On : 13 Mar 20 23:17 Operator:
Sample : 50ug/L GAS STD 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:03 2020 Quant Results File: LGAS0312.RES

Quant Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:01:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

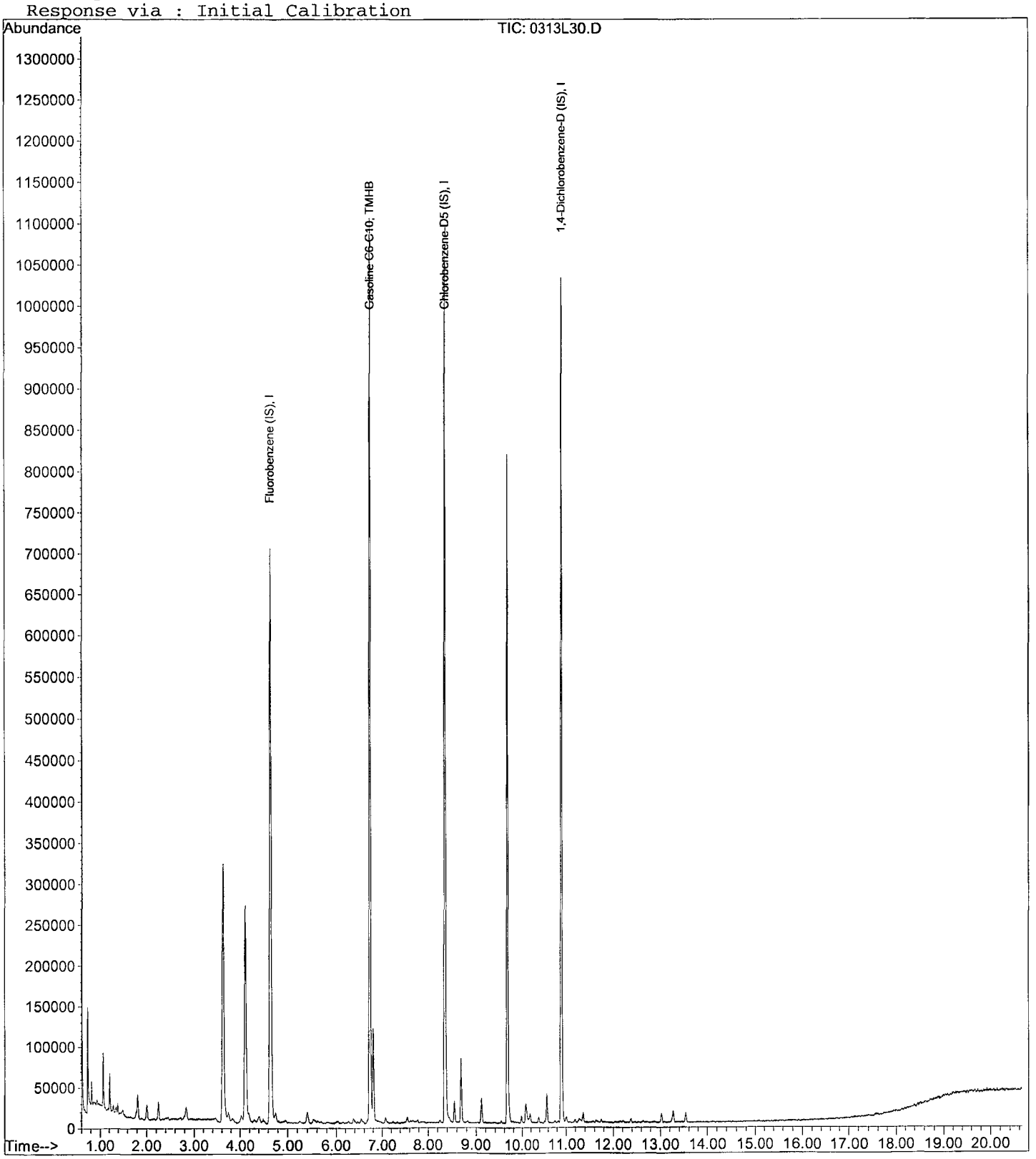
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	TIC	700081	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.36	TIC	1064621	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	10.90	TIC	1027059	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	6.73	TIC	10895767m	54.82	ppb	100

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

Data File : M:\LOKI\DATA\200312\0313L30.D Vial: 29
Acq On : 13 Mar 20 23:17 Operator:
Sample : 50ug/L GAS STD 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:03 2020 Quant Results File: LGAS0312.RES

Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\200312\0313L31.D Vial: 30
Acq On : 13 Mar 20 23:46 Operator:
Sample : 100ug/L GAS STD 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:03 2020 Quant Results File: LGAS0312.RES

Quant Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:01:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.64	TIC	685395	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.36	TIC	1035938	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	10.90	TIC	1073149	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	6.73	TIC	11870188m	104.05	ppb	100

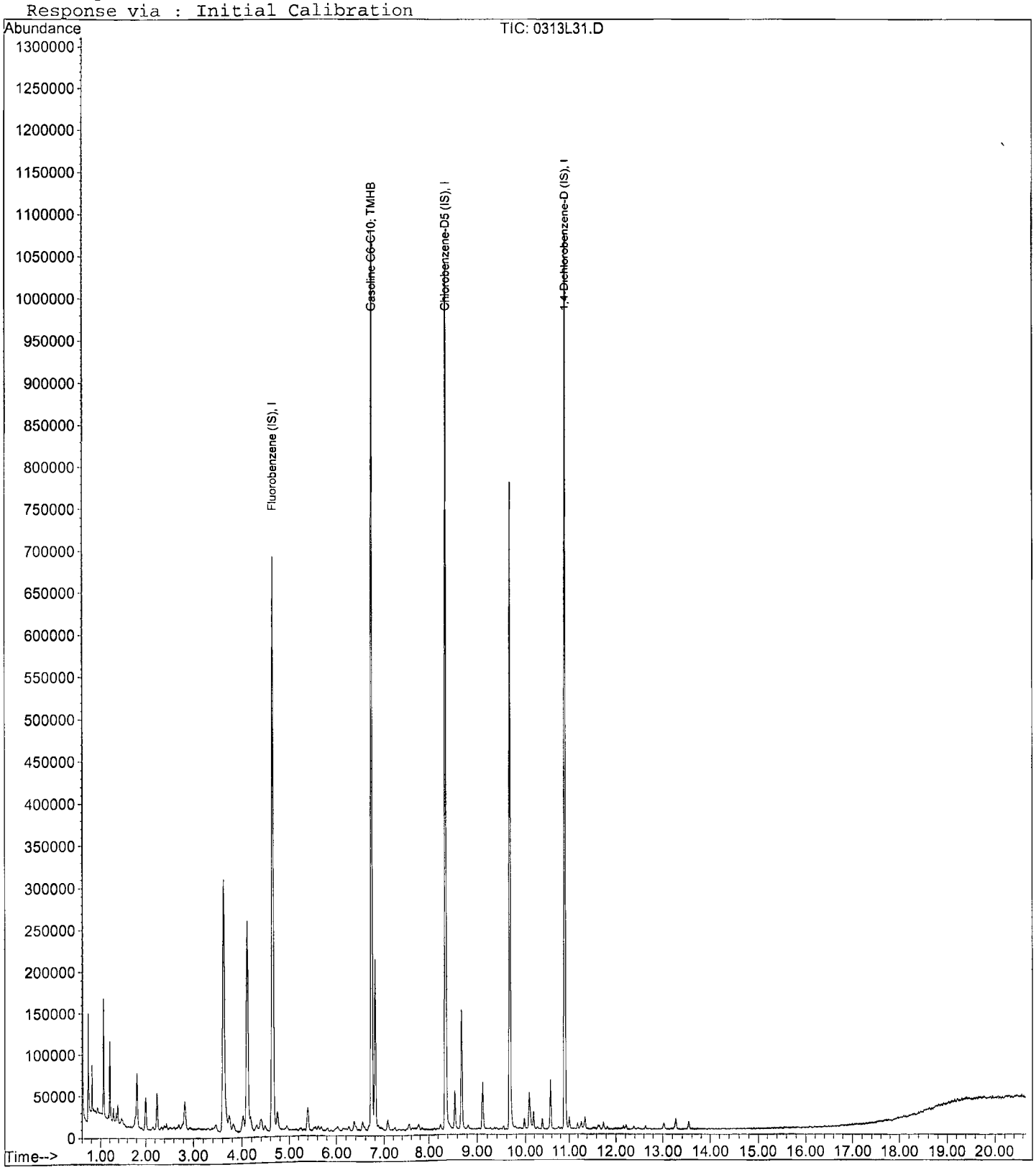
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0313L31.D Vial: 30
Acq On : 13 Mar 20 23:46 Operator:
Sample : 100ug/L GAS STD 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:03 2020 Quant Results File: LGAS0312.RES

Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\200312\0313L32.D Vial: 31
Acq On : 14 Mar 20 00:14 Operator:
Sample : 300ug/L GAS STD 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:03 2020 Quant Results File: LGAS0312.RES

Quant Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:01:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.64	TIC	691509	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.36	TIC	1047736	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	10.90	TIC	1074692	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	6.73	TIC	16685769m	288.45	ppb	100

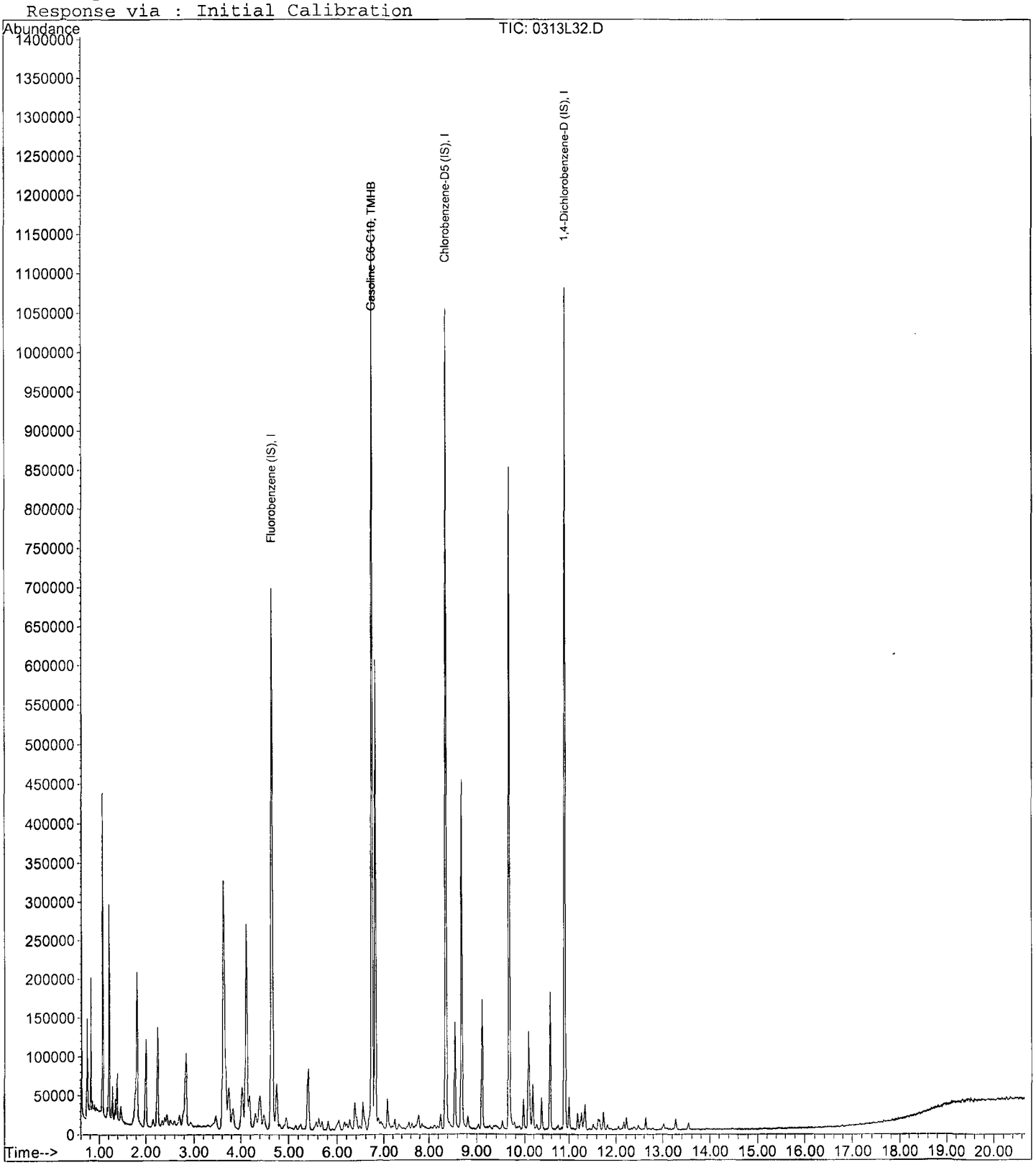
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0313L32.D Vial: 31
Acq On : 14 Mar 20 00:14 Operator:
Sample : 300ug/L GAS STD 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:03 2020 Quant Results File: LGAS0312.RES

Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\200312\0313L33.D Vial: 32
Acq On : 14 Mar 20 00:43 Operator:
Sample : 600ug/L GAS STD 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:03 2020 Quant Results File: LGAS0312.RES

Quant Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:01:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

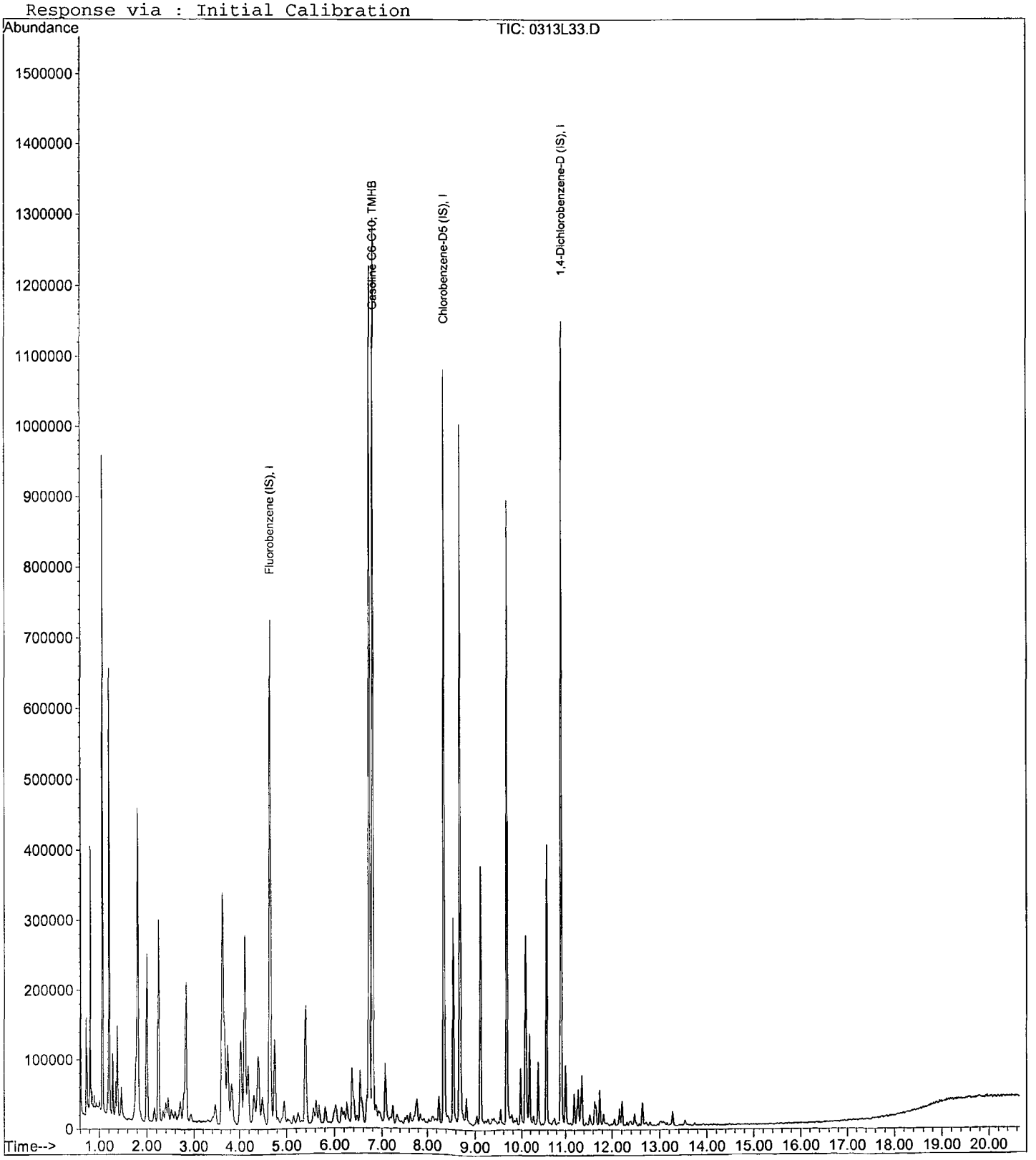
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	TIC	717623	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.36	TIC	1072076	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	10.90	TIC	1140664	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	6.80	TIC	25818193m	595.03	ppb	100

(#) = qualifier out of range (m) = manual integration
0313L33.D LGAS0312.M Tue Mar 17 15:36:31 2020 Page 1

Data File : M:\LOKI\DATA\200312\0313L33.D Vial: 32
Acq On : 14 Mar 20 00:43 Operator:
Sample : 600ug/L GAS STD 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:03 2020 Quant Results File: LGAS0312.RES

Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\200312\0313L34.D Vial: 33
Acq On : 14 Mar 20 1:11 Operator:
Sample : 800ug/L GAS STD 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:04 2020 Quant Results File: LGAS0312.RES

Quant Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:01:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.64	TIC	705163	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.36	TIC	1076681	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	10.90	TIC	1166567	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	6.80	TIC	29976930m	747.68	ppb	100

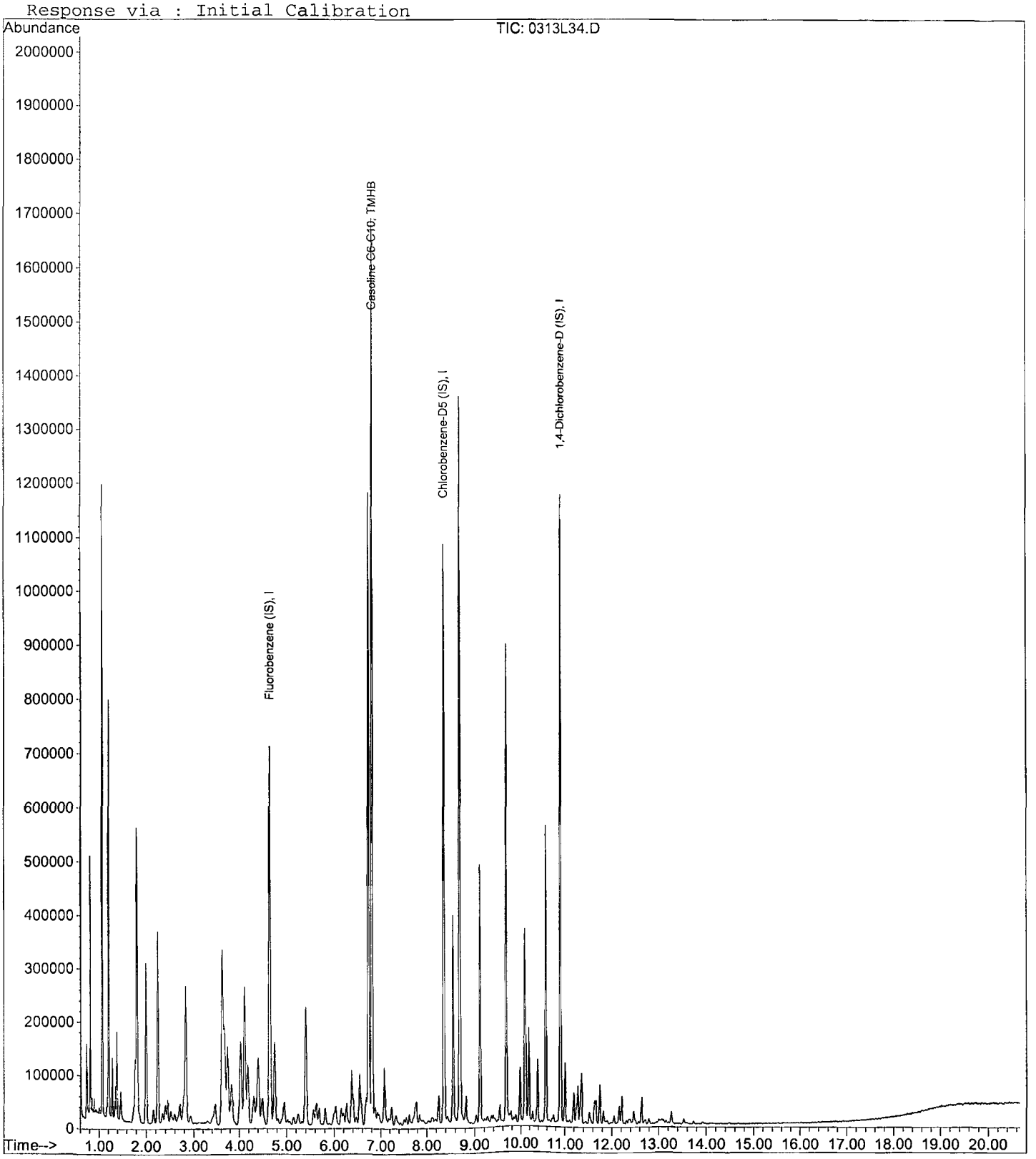
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0313L34.D Vial: 33
Acq On : 14 Mar 20 1:11 Operator:
Sample : 800ug/L GAS STD 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:04 2020 Quant Results File: LGAS0312.RES

Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\200312\0313L35.D Vial: 34
Acq On : 14 Mar 20 1:40 Operator:
Sample : 1000ug/L GAS STD 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:05 2020 Quant Results File: LGAS0312.RES

Quant Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.64	TIC	703330	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.36	TIC	1072432	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	10.90	TIC	1155789	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	6.80	TIC	36150298m	777.46	ppb	100

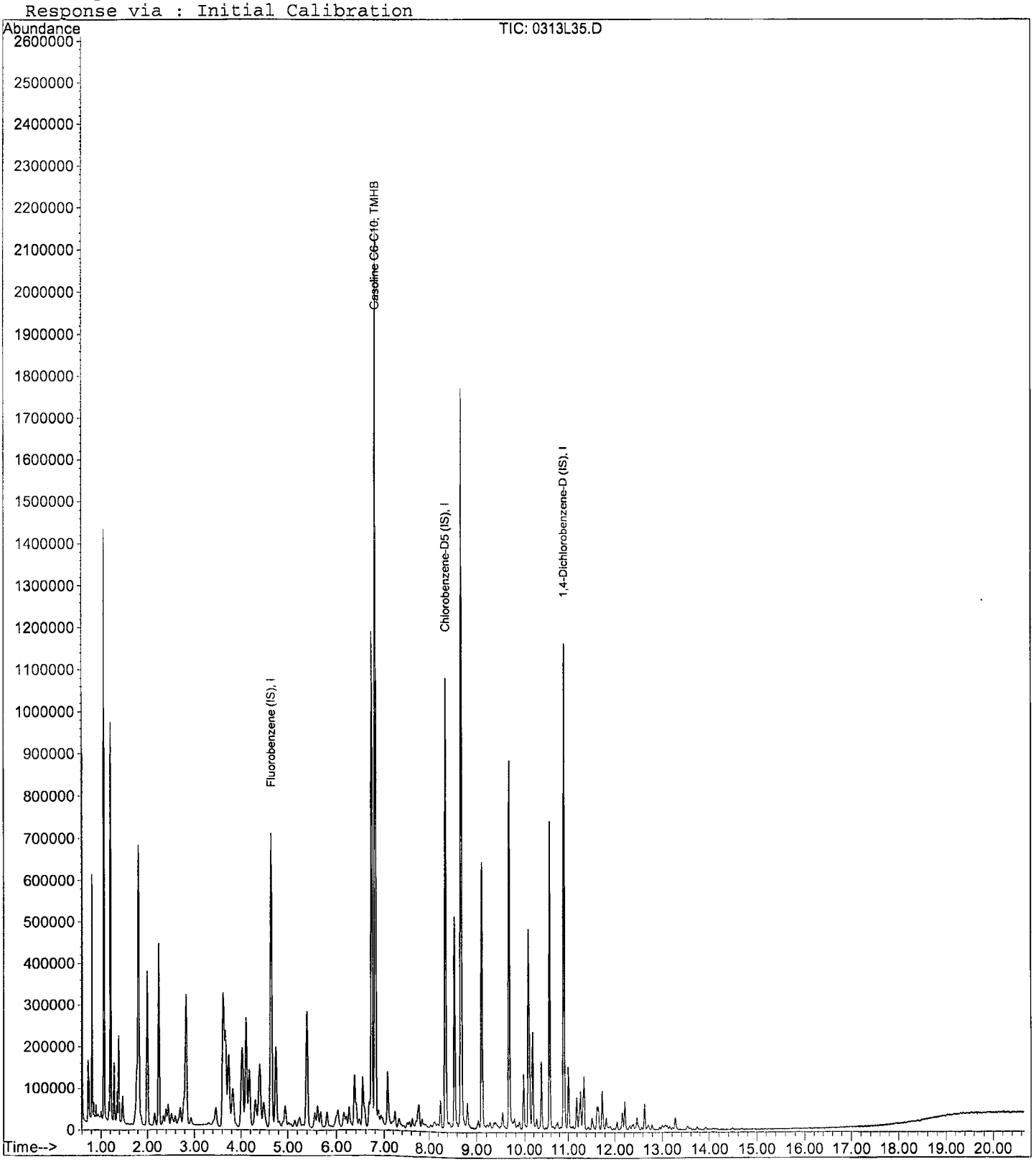
(#) = qualifier out of range (m) = manual integration
0313L35.D LGAS0312.M Tue Mar 17 15:36:36 2020 Page 1

Quantitation Report

Data File : M:\LOKI\DATA\200312\0313L35.D Vial: 34
Acq On : 14 Mar 20 1:40 Operator:
Sample : 1000ug/L GAS STD 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:05 2020 Quant Results File: LGAS0312.RES

Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

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

SDG No:
Date Analyzed: 03/14/20
Instrument: Loki
Initial Cal. Date: 03/13/20
Data File: 0313L37.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TMHB	Gasoline C6-C10	5.268	2.065	61	TMHBL	0.25
2							
3							
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39							
40							
		Average			61.0		

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\200312\0313L37.D Vial: 36
Acq On : 14 Mar 20 2:37 Operator:
Sample : (SS) 300ug/L GAS STD 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:14 2020 Quant Results File: LGAS0312.RES

Quant Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.64	TIC	700994	25.000	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.36	TIC	1055555	25.000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	10.90	TIC	1124217	25.000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	6.73	TIC	17373317m	300.741	ppb	100

(#) = qualifier out of range (m) = manual integration
0313L37.D LGAS0312.M Fri Apr 17 13:24:24 2020 Page 1

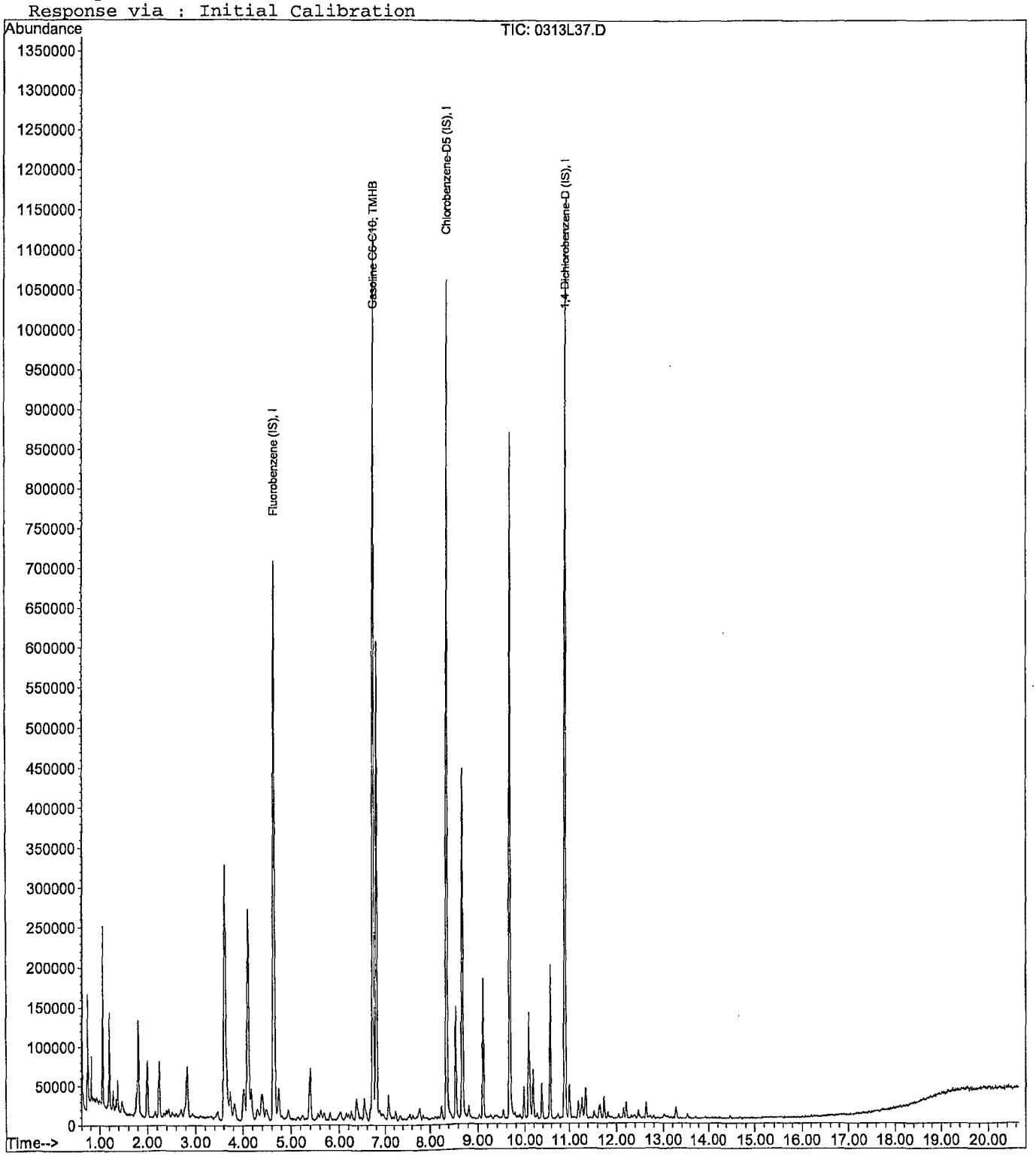
ADDED PAGE

Quantitation Report

Data File : M:\LOKI\DATA\200312\0313L37.D Vial: 36
Acq On : 14 Mar 20 2:37 Operator:
Sample : (SS) 300ug/L GAS STD 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:14 2020 Quant Results File: LGAS0312.RES

Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration



ADDED PAGE

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 03/14/20
Instrument: Loki
Initial Cal. Date: 03/12/20
Data File: 0313l42.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	5.268	2.030	61	TMHBL	3.6
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
5							
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36							
37							
38							
39							
40							
		Average			61.0		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 03/14/20
Instrument: Loki
Initial Cal. Date: 03/12/20
Data File: 0313l42.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	S	Dibromofluoromethane(S)	0.7133	0.7110	0.32	S	
3	S	1,2-DCA-D4(S)	0.7188	0.7008	2.5	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	2.156	2.265	5.0	S	
6	S	4-Bromofluorobenzene(S)	0.8148	0.8044	1.3	S	
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
8							
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39							
40							
		Average			2.3		

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\200312\0313142.D Vial: 41
Acq On : 14 Mar 20 5:00 Operator:
Sample : 200313B CCV 300ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:14 2020 Quant Results File: LGAS0312.RES

Quant Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.64	TIC	710756	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.36	TIC	1031032	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	10.90	TIC	1076761	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	6.73	TIC	17311793m	289.21	ppb	100

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

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0313142.D Vial: 41
Acq On : 14 Mar 20 5:00 Operator:
Sample : 200313B CCV 300ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Quant Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.64	96	353664	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.36	117	370048	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	10.90	152	197568	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	3.62	111	251447	24.92	ppb	0.00
Spiked Amount 25.000			Recovery =	99.680%		
3) 1,2-DCA-D4(S)	4.11	65	247838	24.37	ppb	0.00
Spiked Amount 25.000			Recovery =	97.488%		
5) Toluene-D8(S)	6.73	98	837990	26.26	ppb	0.00
Spiked Amount 25.000			Recovery =	105.040%		
6) 4-Bromofluorobenzene(S)	9.66	95	297665	24.68	ppb	0.00
Spiked Amount 25.000			Recovery =	98.720%		

Target Compounds Qvalue

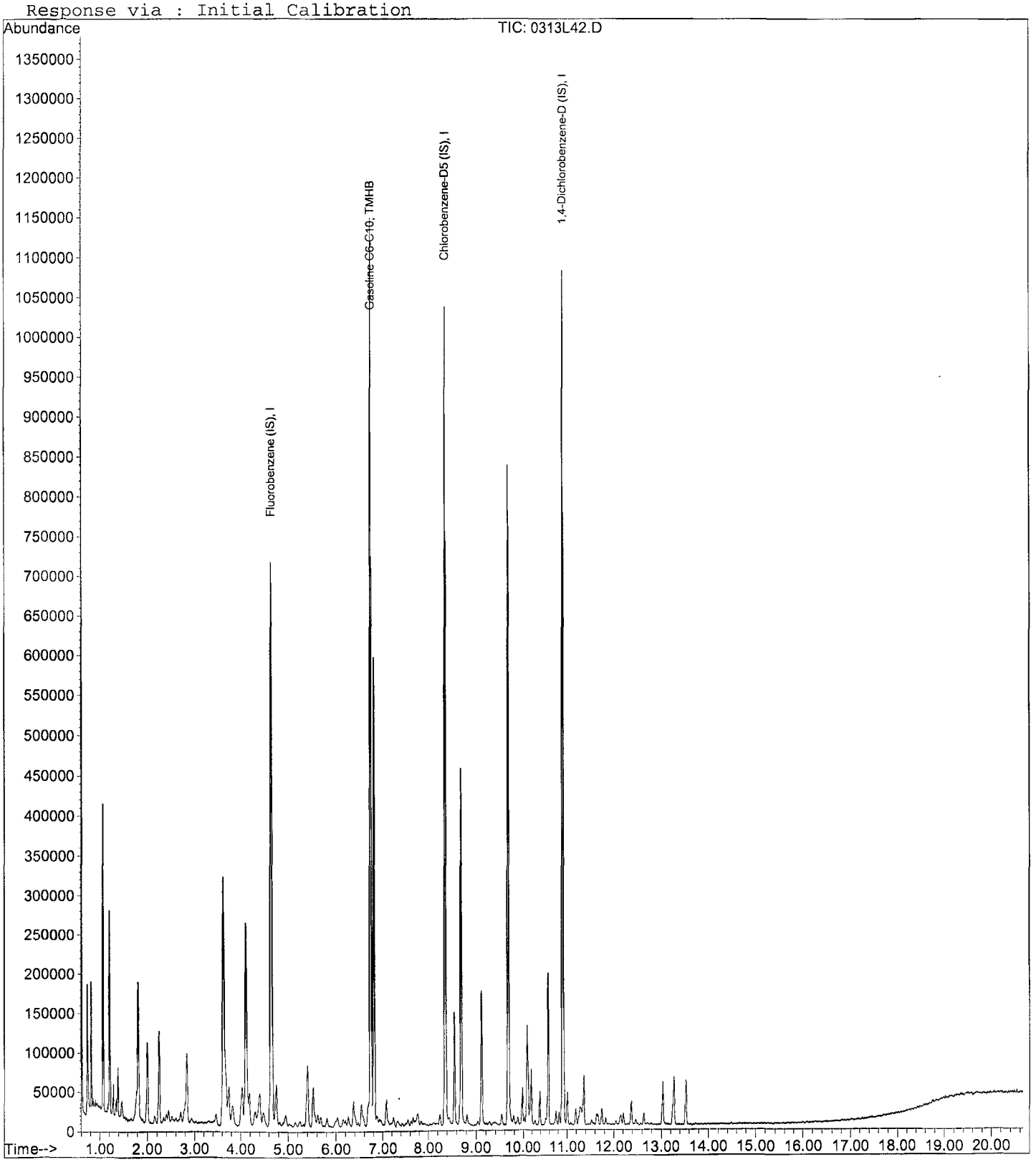
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0313142.D Vial: 41
Acq On : 14 Mar 20 5:00 Operator:
Sample : 200313B CCV 300ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:14 2020 Quant Results File: LGAS0312.RES

Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 03/14/20
Matrix: Instrument: Loki
Initial Cal. Date: 03/13/20
Data File: 0313I58.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	5.268	2.079	61	TMHBL	1.7
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
5							
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7							
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39							
40							
		Average			61.0		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

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

SDG No:
Date Analyzed: 03/14/20
Instrument: Loki
Initial Cal. Date: 03/13/20
Data File: 0313I58.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	I	Gasoline C6-C10	1.000	1.000	0.00	I	
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
5							
6							
7							
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40							
		Average			0.0		

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\200312\0313158.D Vial: 57
Acq On : 14 Mar 20 12:37 Operator:
Sample : Ending CCV 300ug/L 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:16 2020 Quant Results File: LGAS0312.RES

Quant Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	TIC	715432	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.36	TIC	1047235	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	10.90	TIC	1122615	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	6.73	TIC	17845613m	305.06	ppb	100

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

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0313158.D Vial: 57
Acq On : 14 Mar 20 12:37 Operator:
Sample : Ending CCV 300ug/L 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 17 15:37 2020 Quant Results File: LSUR0312.RES

Quant Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	96	354816	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.36	117	376320	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	10.90	152	203904	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	3.62	111	258436	25.53	ppb	0.00
Spiked Amount 25.000			Recovery = 102.120%			
3) 1,2-DCA-D4(S)	4.11	65	257716	25.26	ppb	0.00
Spiked Amount 25.000			Recovery = 101.044%			
5) Toluene-D8(S)	6.73	98	873080	26.90	ppb	0.00
Spiked Amount 25.000			Recovery = 107.616%			
6) 4-Bromofluorobenzene(S)	9.66	95	317573	25.89	ppb	0.00
Spiked Amount 25.000			Recovery = 103.568%			

Target Compounds Qvalue

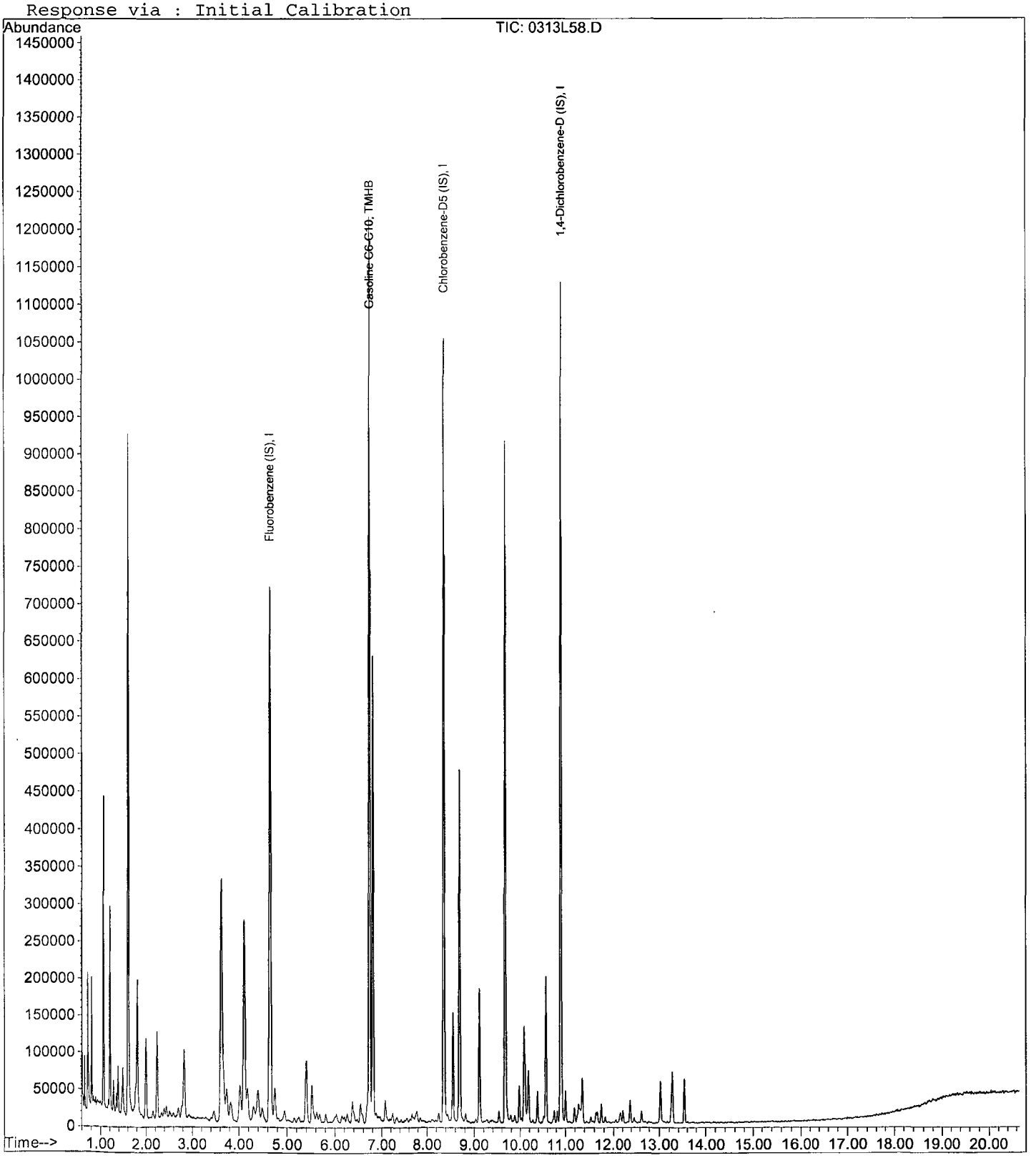
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0313158.D Vial: 57
Acq On : 14 Mar 20 12:37 Operator:
Sample : Ending CCV 300ug/L 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:16 2020 Quant Results File: LGAS0312.RES

Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration



ORGANICS
Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\200312\0313146.D Vial: 45
Acq On : 14 Mar 20 6:54 Operator:
Sample : BA08340W01 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:40 2020 Quant Results File: LGAS0312.RES

Quant Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	TIC	693721	25.00 ppb	0.00
3) Chlorobenzene-D5 (IS)	8.36	TIC	1024797	25.00 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	10.90	TIC	993653	25.00 ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

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

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0313146.D Vial: 45
Acq On : 14 Mar 20 6:54 Operator:
Sample : BA08340W01 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Quant Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	96	347136	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.36	117	369984	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	10.90	152	180992	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	3.62	111	249672	25.21	ppb	0.00
Spiked Amount 25.000			Recovery = 100.840%			
3) 1,2-DCA-D4(S)	4.11	65	237693	23.81	ppb	0.00
Spiked Amount 25.000			Recovery = 95.256%			
5) Toluene-D8(S)	6.73	98	794836	24.91	ppb	0.00
Spiked Amount 25.000			Recovery = 99.648%			
6) 4-Bromofluorobenzene(S)	9.66	95	274274	22.74	ppb	0.00
Spiked Amount 25.000			Recovery = 90.980%			

Target Compounds Qvalue

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

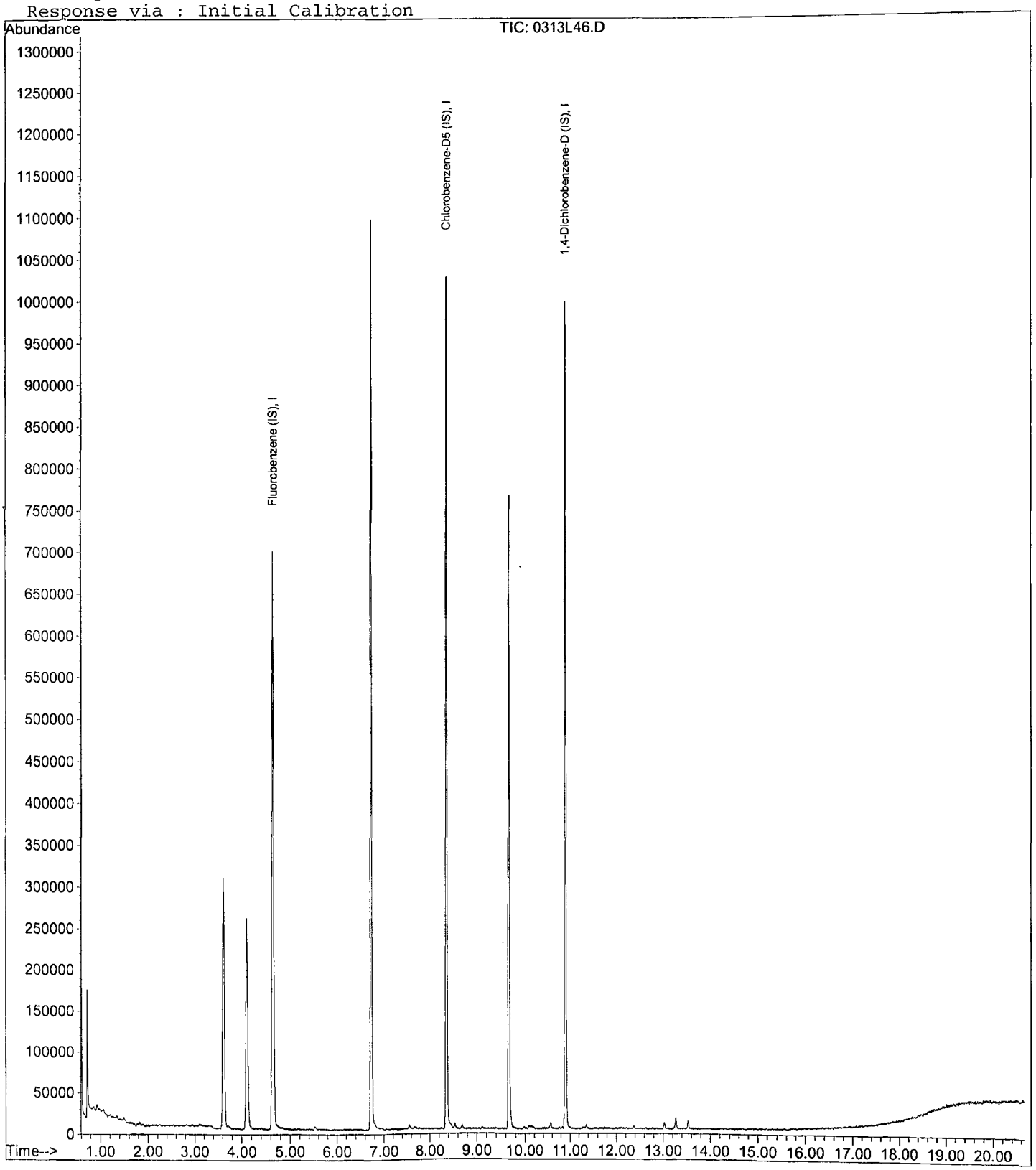
Quantitation Report

Data File : M:\LOKI\DATA\200312\0313146.D
Acq On : 14 Mar 20 6:54
Sample : BA08340W01
Misc : IS&S:03/10/20

Vial: 45
Operator:
Inst : Loki
Multiplr: 1.00

Quant Time: Mar 16 11:40 2020 Quant Results File: LGAS0312.RES

Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\200312\0313L47.D Vial: 46
Acq On : 14 Mar 20 7:23 Operator:
Sample : BA08341W01 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:40 2020 Quant Results File: LGAS0312.RES

Quant Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	TIC	699967	25.00 ppb	0.00
3) Chlorobenzene-D5 (IS)	8.36	TIC	1018094	25.00 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	10.90	TIC	1010047	25.00 ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

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

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0313L47.D Vial: 46
Acq On : 14 Mar 20 7:23 Operator:
Sample : BA08341W01 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Quant Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	96	344640	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.36	117	369792	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	10.90	152	187136	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	3.62	111	257988	26.24	ppb	0.00
Spiked Amount 25.000			Recovery = 104.952%			
3) 1,2-DCA-D4(S)	4.11	65	248494	25.08	ppb	0.00
Spiked Amount 25.000			Recovery = 100.308%			
5) Toluene-D8(S)	6.73	98	822621	25.80	ppb	0.00
Spiked Amount 25.000			Recovery = 103.188%			
6) 4-Bromofluorobenzene(S)	9.66	95	290711	24.12	ppb	0.00
Spiked Amount 25.000			Recovery = 96.480%			

Target Compounds Qvalue

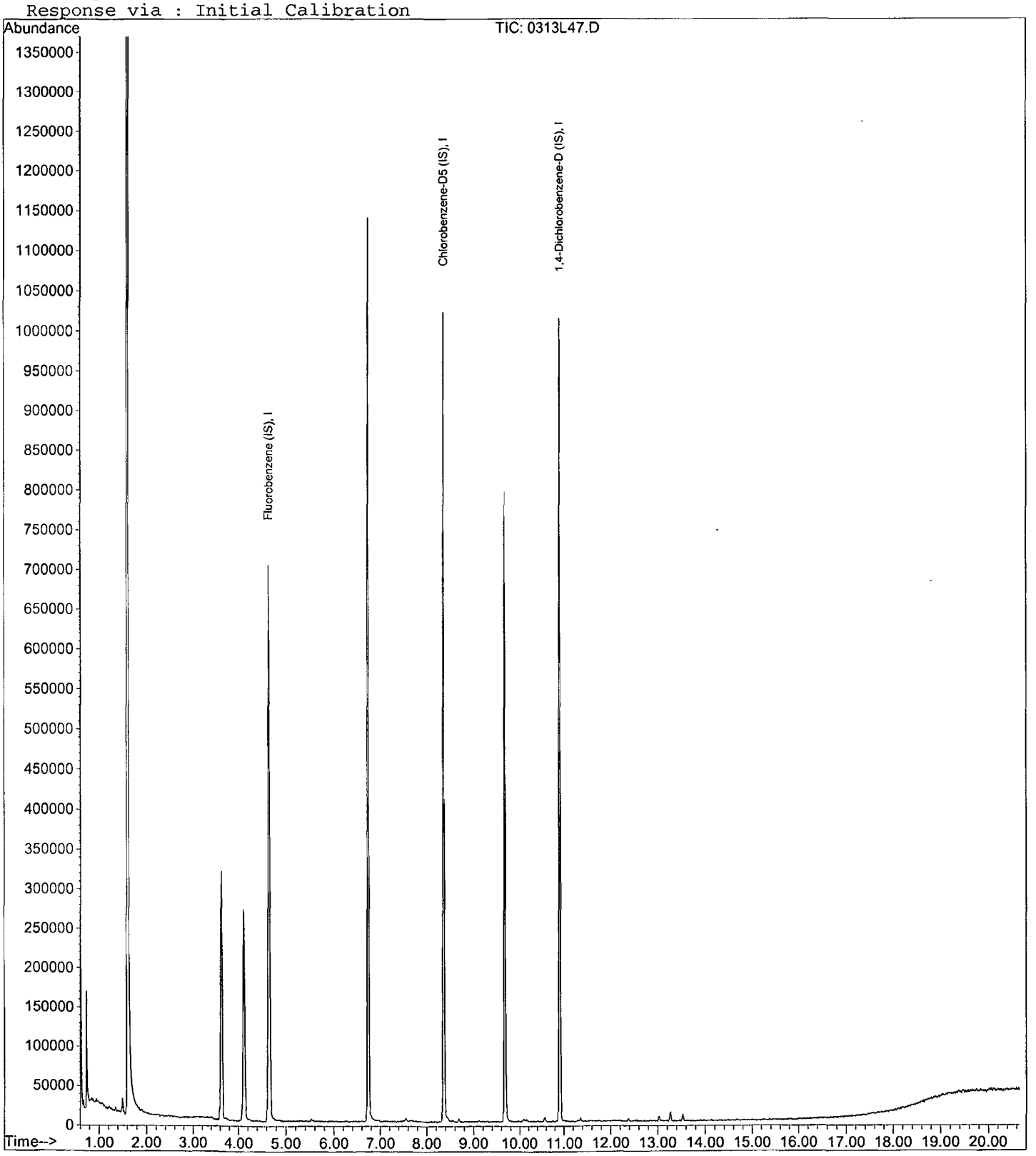
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0313L47.D Vial: 46
Acq On : 14 Mar 20 7:23 Operator:
Sample : BA08341W01 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:40 2020 Quant Results File: LGAS0312.RES

Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\200312\0313L45.D Vial: 44
Acq On : 14 Mar 20 6:26 Operator:
Sample : 200313B Blk Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:39 2020 Quant Results File: LGAS0312.RES

Quant Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	TIC	689738	25.00 ppb	0.00
3) Chlorobenzene-D5 (IS)	8.36	TIC	999971	25.00 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	10.90	TIC	1016977	25.00 ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0313L45.D LGAS0312.M Tue Mar 17 15:39:06 2020 Page 1

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0313L45.D Vial: 44
Acq On : 14 Mar 20 6:26 Operator:
Sample : 200313B Blk Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Quant Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	96	339840	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.36	117	360704	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	10.90	152	186688	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	3.62	111	240419	24.80	ppb	0.00
Spiked Amount 25.000			Recovery = 99.188%			
3) 1,2-DCA-D4(S)	4.11	65	236652	24.22	ppb	0.00
Spiked Amount 25.000			Recovery = 96.876%			
5) Toluene-D8(S)	6.73	98	787479	25.32	ppb	0.00
Spiked Amount 25.000			Recovery = 101.268%			
6) 4-Bromofluorobenzene(S)	9.66	95	279691	23.79	ppb	0.00
Spiked Amount 25.000			Recovery = 95.164%			

Target Compounds Qvalue

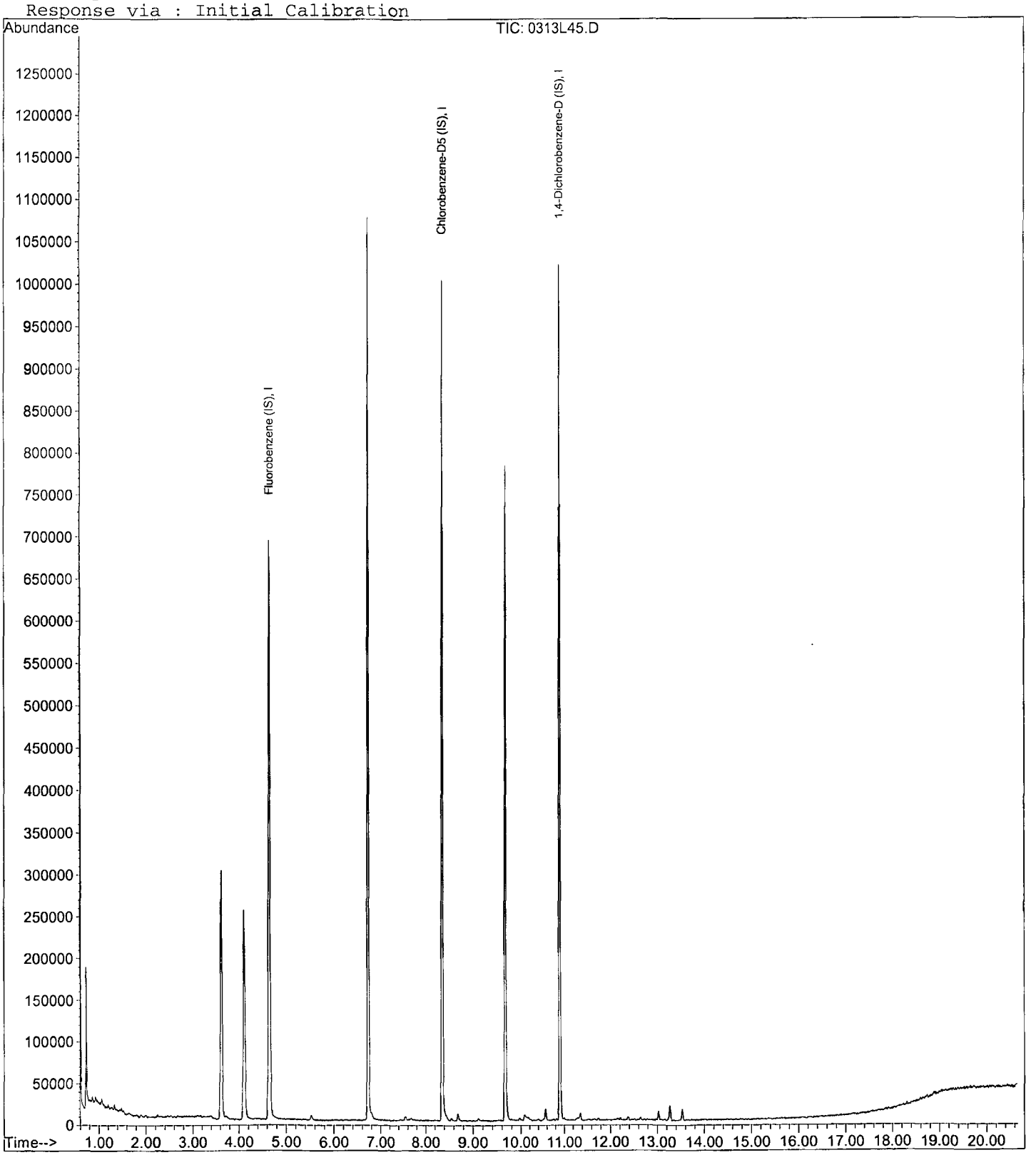
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0313L45.D Vial: 44
Acq On : 14 Mar 20 6:26 Operator:
Sample : 200313B Blk Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:39 2020 Quant Results File: LGAS0312.RES

Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\200312\0313143.D Vial: 42
Acq On : 14 Mar 20 5:28 Operator:
Sample : 200313B LCS 300ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:15 2020 Quant Results File: LGAS0312.RES

Quant Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	TIC	716342	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.36	TIC	1078156	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	10.90	TIC	1104264	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	6.73	TIC	18124394m	314.71	ppb	100

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

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0313143.D Vial: 42
Acq On : 14 Mar 20 5:28 Operator:
Sample : 200313B LCS 300ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Quant Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	96	355584	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.36	117	387264	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	10.90	152	196288	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	3.62	111	252266	24.87	ppb	0.00
Spiked Amount 25.000			Recovery =	99.464%		
3) 1,2-DCA-D4(S)	4.11	65	243123	23.78	ppb	0.00
Spiked Amount 25.000			Recovery =	95.120%		
5) Toluene-D8(S)	6.73	98	842373	25.22	ppb	0.00
Spiked Amount 25.000			Recovery =	100.896%		
6) 4-Bromofluorobenzene(S)	9.66	95	306172	24.26	ppb	0.00
Spiked Amount 25.000			Recovery =	97.028%		

Target Compounds Qvalue

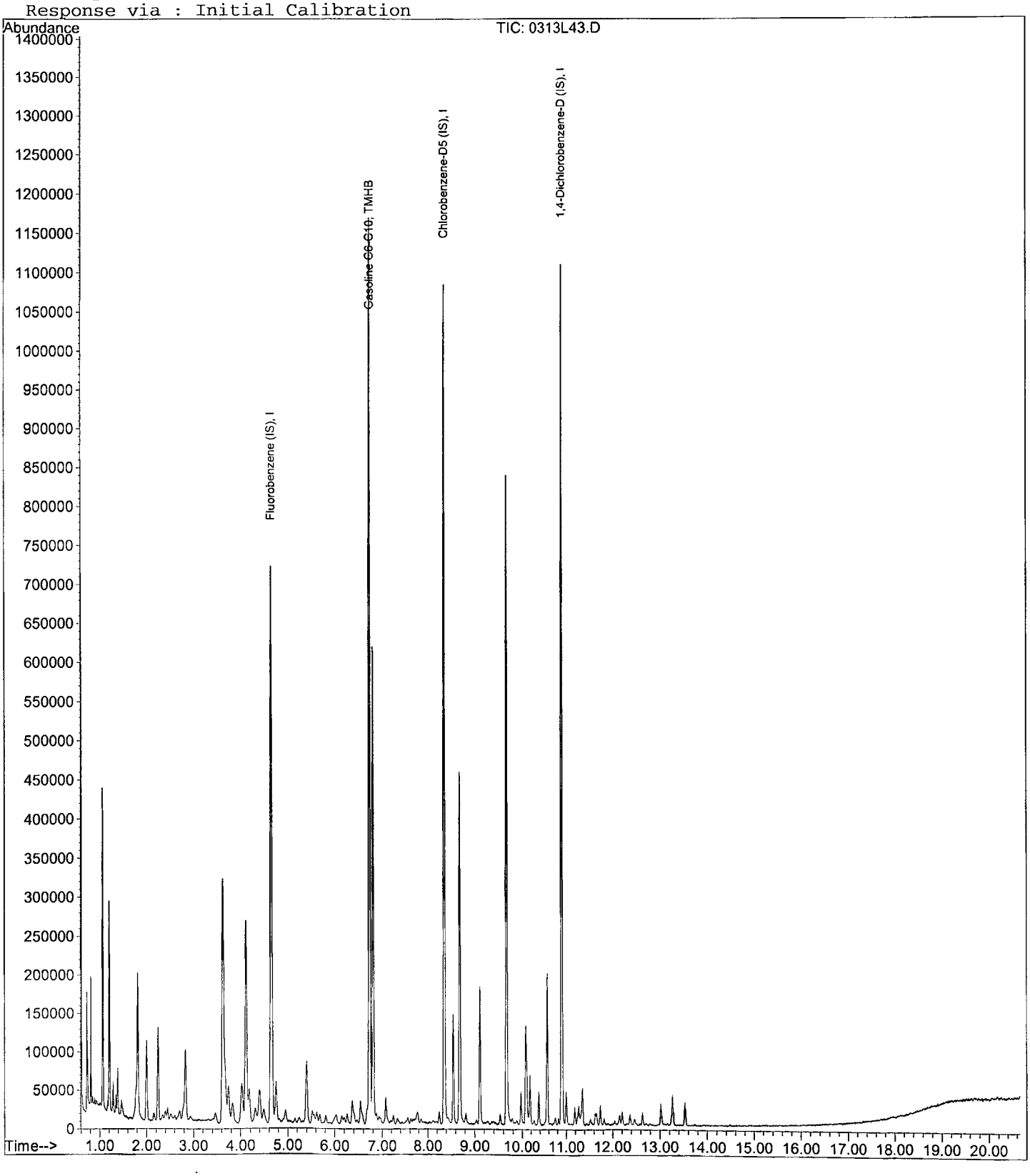
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0313143.D Vial: 42
Acq On : 14 Mar 20 5:28 Operator:
Sample : 200313B LCS 300ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:15 2020 Quant Results File: LGAS0312.RES

Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\200312\0313L44.D Vial: 43
Acq On : 14 Mar 20 5:57 Operator:
Sample : 200313B LCSD 300ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:15 2020 Quant Results File: LGAS0312.RES

Quant Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.64	TIC	703945	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.36	TIC	1043568	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	10.90	TIC	1092017	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	6.73	TIC	17583328m	305.99	ppb	100

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

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0313L44.D Vial: 43
Acq On : 14 Mar 20 5:57 Operator:
Sample : 200313B LCSD 300ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Quant Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.64	96	352320	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.36	117	376384	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	10.90	152	198208	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	3.62	111	244997	24.37	ppb	0.00
Spiked Amount 25.000			Recovery =	97.496%		
3) 1,2-DCA-D4(S)	4.11	65	240474	23.74	ppb	0.00
Spiked Amount 25.000			Recovery =	94.952%		
5) Toluene-D8(S)	6.73	98	810923	24.98	ppb	0.00
Spiked Amount 25.000			Recovery =	99.936%		
6) 4-Bromofluorobenzene(S)	9.66	95	298157	24.30	ppb	0.00
Spiked Amount 25.000			Recovery =	97.220%		

Target Compounds Qvalue

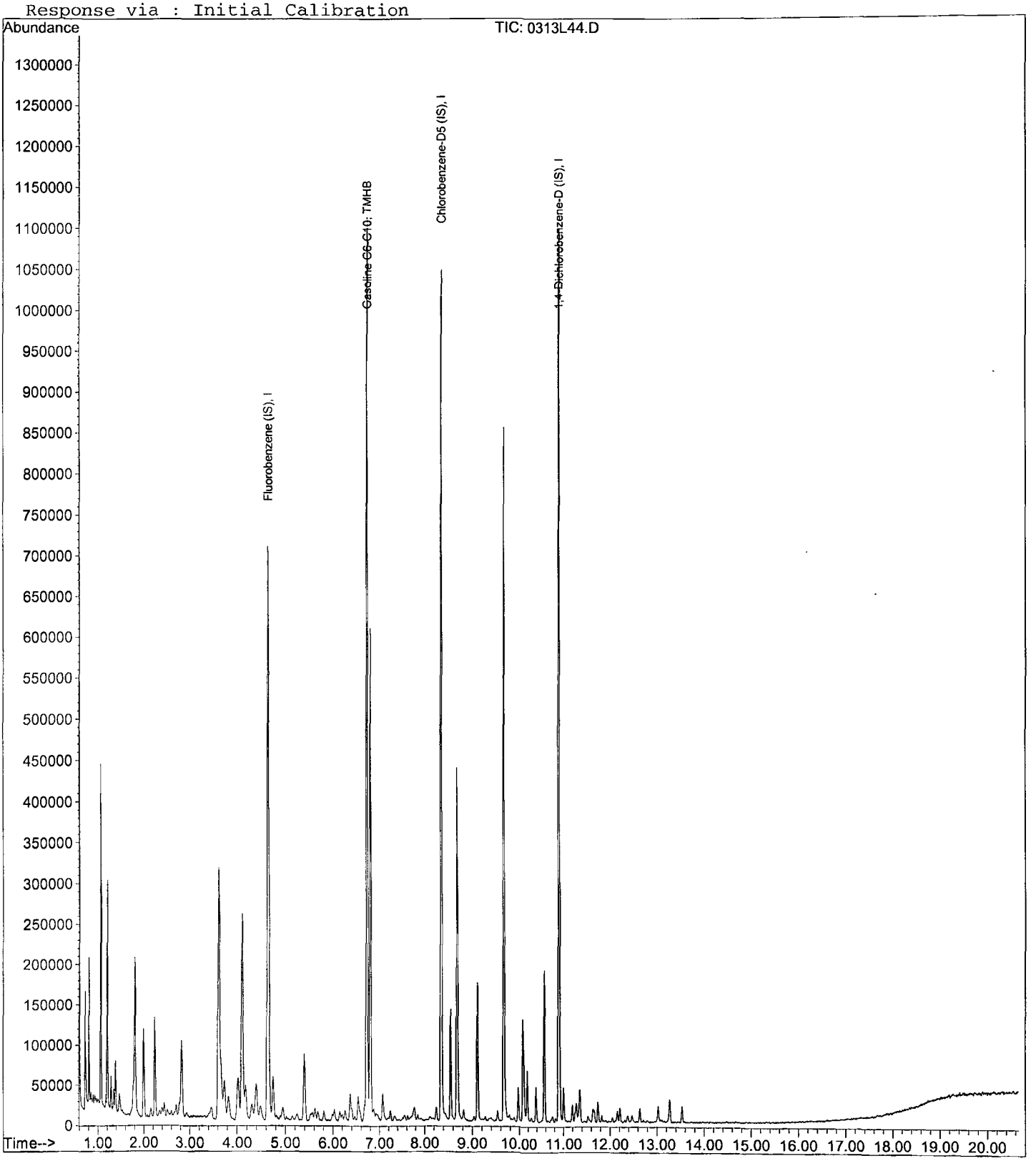
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0313L44.D Vial: 43
Acq On : 14 Mar 20 5:57 Operator:
Sample : 200313B LCSD 300ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:15 2020 Quant Results File: LGAS0312.RES

Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\200312\0313L53.D Vial: 52
Acq On : 14 Mar 20 10:14 Operator:
Sample : BA08341W04,5,6 MS 300ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:15 2020 Quant Results File: LGAS0312.RES

Quant Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.64	TIC	718372	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.36	TIC	1084379	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	10.90	TIC	1137811	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	6.73	TIC	20162455m	389.40	ppb	100

(#) = qualifier out of range (m) = manual integration
0313L53.D LGAS0312.M Tue Mar 17 15:39:30 2020 Page 1

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0313L53.D Vial: 52
Acq On : 14 Mar 20 10:14 Operator:
Sample : BA08341W04,5,6 MS 300ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Quant Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.64	96	358976	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.36	117	387072	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	10.90	152	211136	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	3.62	111	252528	24.66	ppb	0.00
Spiked Amount 25.000			Recovery = 98.628%			
3) 1,2-DCA-D4(S)	4.11	65	251898	24.41	ppb	0.00
Spiked Amount 25.000			Recovery = 97.620%			
5) Toluene-D8(S)	6.73	98	844236	25.29	ppb	0.00
Spiked Amount 25.000			Recovery = 101.172%			
6) 4-Bromofluorobenzene(S)	9.66	95	308440	24.45	ppb	0.00
Spiked Amount 25.000			Recovery = 97.796%			

Target Compounds Qvalue

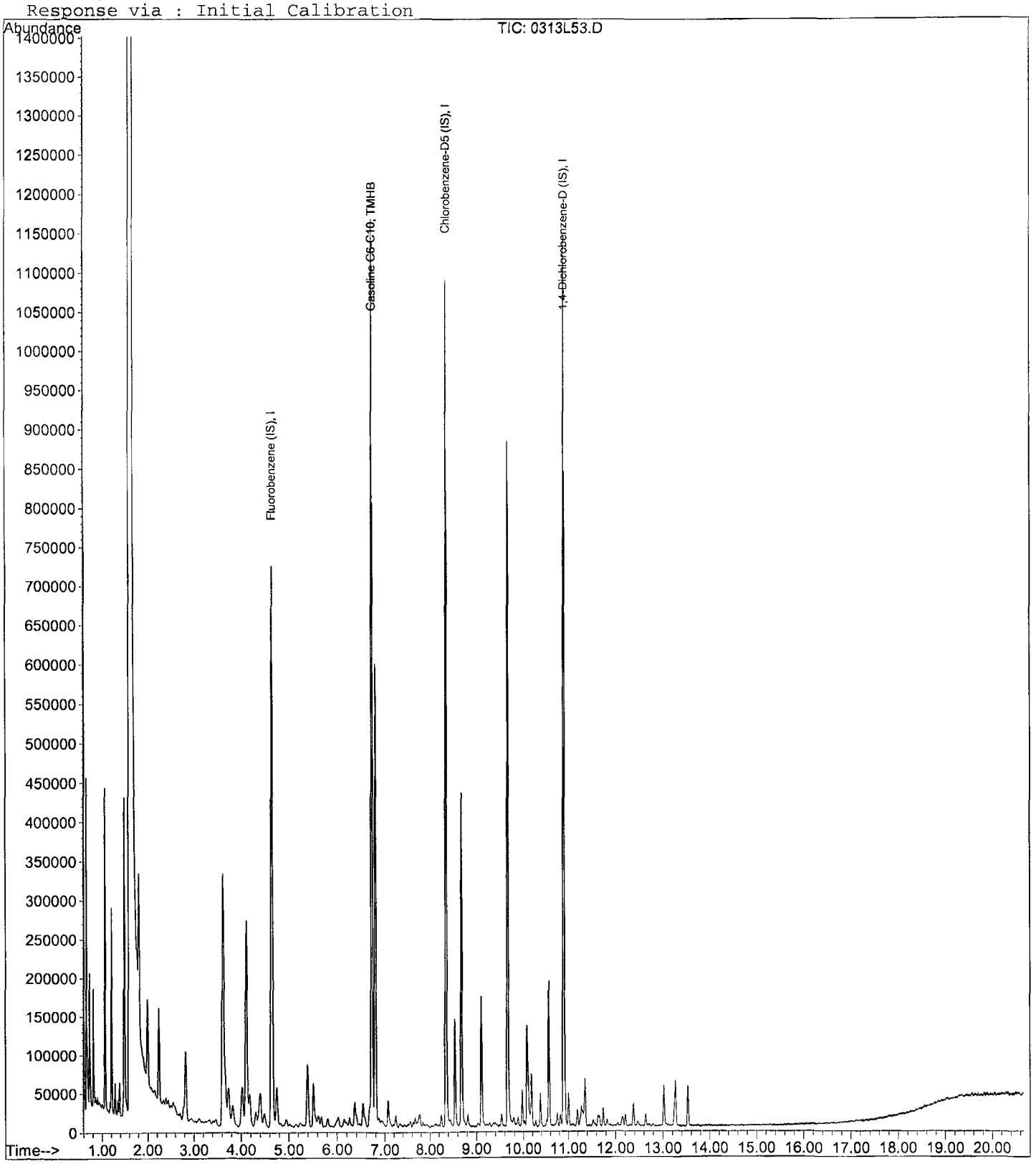
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0313L53.D Vial: 52
Acq On : 14 Mar 20 10:14 Operator:
Sample : BA08341W04,5,6 MS 300ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:15 2020 Quant Results File: LGAS0312.RES

Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\200312\0313154.D Vial: 53
Acq On : 14 Mar 20 10:43 Operator:
Sample : BA08341W04,5,6 MSD 300ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:16 2020 Quant Results File: LGAS0312.RES

Quant Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	TIC	762755	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.35	TIC	1185472	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	10.90	TIC	1207623	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	6.73	TIC	21374678m	388.21	ppb	100

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

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0313154.D Vial: 53
Acq On : 14 Mar 20 10:43 Operator:
Sample : BA08341W04,5,6 MSD 300ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Quant Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	96	382464	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.35	117	427392	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	10.90	152	217600	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	3.62	111	270994	24.84	ppb	0.00
Spiked Amount 25.000			Recovery = 99.340%			
3) 1,2-DCA-D4(S)	4.11	65	266226	24.21	ppb	0.00
Spiked Amount 25.000			Recovery = 96.836%			
5) Toluene-D8(S)	6.73	98	901555	24.46	ppb	0.00
Spiked Amount 25.000			Recovery = 97.848%			
6) 4-Bromofluorobenzene(S)	9.66	95	328720	23.60	ppb	0.00
Spiked Amount 25.000			Recovery = 94.392%			

Target Compounds Qvalue

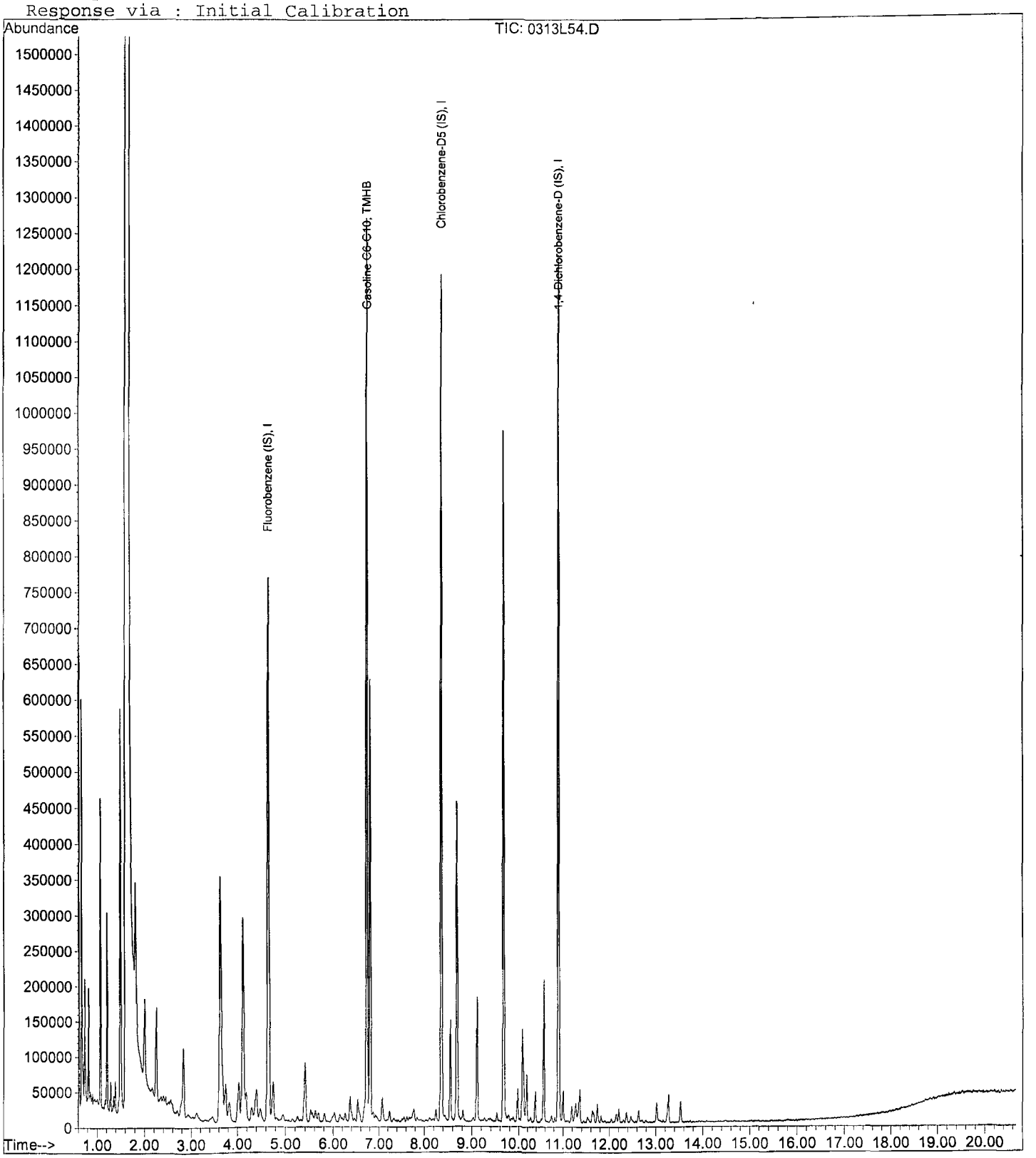
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0313154.D Vial: 53
Acq On : 14 Mar 20 10:43 Operator:
Sample : BA08341W04,5,6 MSD 300ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:16 2020 Quant Results File: LGAS0312.RES

Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration



Loki 8260 Standard Prep

Loki 8260 Water Calibration Curve

0.3ug/L

Prepared: 03/12/20

Expires: 04/11/20

Prepared By (Initials): CH

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	O2SI	0.3ug/L	5	Prepared 03/05/20	05/04/20	N/A	3uL	50mL	P&T Water	0.3
VOA STD. 12	O2SI		5	Prepared 03/05/20	05/04/20	N/A	3uL			0.3
VOA STD. 15	O2SI		5	Prepared 03/02/20	05/01/20	N/A	3uL			0.3
VOA STD. TBA	Various		5	Prepared 12/12/19	04/01/20	N/A	2uL			10

0.5ug/L

Prepared: 03/12/20

Expires: 04/11/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	O2SI	0.5ug/L	5	Prepared 03/05/20	05/04/20	N/A	5uL	50mL	P&T Water	0.5
VOA STD. 12	O2SI		5	Prepared 03/05/20	05/04/20	N/A	5uL			0.5
VOA STD. 15	O2SI		5	Prepared 03/02/20	05/01/20	N/A	5uL			0.5
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	5uL			25

1.0ug/L

Prepared: 03/12/20

Expires: 04/11/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	O2SI	1.0ug/L	5	Prepared 03/05/20	05/04/20	N/A	10uL	50mL	P&T Water	1
VOA STD. 12	O2SI		5	Prepared 03/05/20	05/04/20	N/A	10uL			1
VOA STD. 15	O2SI		5	Prepared 03/02/20	05/01/20	N/A	10uL			1
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	10uL			50

2.0ug/L

Prepared: 03/12/20

Expires: 04/11/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	O2SI	2.0ug/L	5	Prepared 03/05/20	05/04/20	N/A	20uL	50mL	P&T Water	2
VOA STD. 12	O2SI		5	Prepared 03/05/20	05/04/20	N/A	20uL			2
VOA STD. 15	O2SI		5	Prepared 03/02/20	05/01/20	N/A	20uL			2
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	15uL			75

5ug/L

Prepared: 03/12/20

Expires: 04/11/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	5ug/L	50	Prepared 03/05/20	05/04/20	N/A	5uL	50mL	P&T Water	5
VOA STD. 8	Phenova		50	Prepared 03/05/20	04/01/20	N/A	5uL			5
VOA STD. 2	O2SI		50	Prepared 03/05/20	05/04/20	N/A	5uL			5
VOA STD. 5	O2SI		50	Prepared 03/02/20	05/01/20	N/A	5uL			5
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	20uL			100

10ug/L

Prepared: 03/12/20

Expires: 04/11/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	10ug/L	50	Prepared 03/05/20	05/04/20	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova		50	Prepared 03/05/20	04/01/20	N/A	10uL			10
VOA STD. 2	O2SI		50	Prepared 03/05/20	05/04/20	N/A	10uL			10
VOA STD. 5	O2SI		50	Prepared 03/02/20	05/01/20	N/A	10uL			10
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	25uL			125

20ug/L

Prepared: 03/12/20

Expires: 04/11/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	20ug/L	50	Prepared 03/05/20	05/04/20	N/A	20uL	50mL	P&T Water	20
VOA STD. 8	Phenova		50	Prepared 03/05/20	04/01/20	N/A	20uL			20
VOA STD. 2	O2SI		50	Prepared 03/05/20	05/04/20	N/A	20uL			20
VOA STD. 5	O2SI		50	Prepared 03/02/20	05/01/20	N/A	20uL			20
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	30uL			150

40ug/L

Prepared: 03/12/20

Expires: 04/11/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	40ug/L	50	Prepared 03/05/20	05/04/20	N/A	40uL	50mL	P&T Water	40
VOA STD. 8	Phenova		50	Prepared 03/05/20	04/01/20	N/A	40uL			40
VOA STD. 2	O2SI		50	Prepared 03/05/20	05/04/20	N/A	40uL			40
VOA STD. 5	O2SI		50	Prepared 03/02/20	05/01/20	N/A	40uL			40
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	35uL			175

100ug/L

Prepared: 03/12/20

Expires: 04/11/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	100ug/L	50	Prepared 03/05/20	05/04/20	N/A	100uL	50mL	P&T Water	100
VOA STD. 8	Phenova		50	Prepared 03/05/20	04/01/20	N/A	100uL			100
VOA STD. 2	O2SI		50	Prepared 03/05/20	05/04/20	N/A	100uL			100
VOA STD. 5	O2SI		50	Prepared 03/02/20	05/01/20	N/A	100uL			100
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	40uL			200

Loki 8260 Water Second Source (SS)

Prepared: 03/12/20

Expires: 04/11/20

Prepared By (Initials): CH

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 3	Phenova	8260 Water SS	50	Prepared 03/05/20	05/04/20	N/A	10uL	50mL	P&T Water	10
VOA STD. Gases	O2SI	8260 Water SS	50	Prepared 03/05/20	05/04/20	N/A	10uL			10
VOA STD. 6	Various	8260 Water SS	50	Prepared 03/05/20	03/11/20	N/A	10uL			10
VOA STD. 25	Absolute	8260 Water SS	50	Prepared 03/02/20	05/01/20	N/A	10uL			10
VOA STD. 0	Absolute	8260 Water SS	50	Prepared 03/05/20	05/04/20	N/A	100uL			100
Voa STD. TBA	Various	8260 Water SS	250	Prepared 03/05/20	03/11/20	N/A	25uL			250

8260 Water Continuing Calibrations (CCV)/ Lab Control Spikes (LCS)

Prepared: 03/12/20

Expires: 03/13/20

Prepared By (Initials): CH

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	CCV/ LCS	50	Prepared 03/05/20	05/04/20	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova	CCV/ LCS	50	Prepared 03/05/20	04/01/20	N/A	10uL			10
VOA STD. 2	O2SI	CCV/ LCS	50	Prepared 03/05/20	05/04/20	N/A	10uL			10
VOA STD. 5	O2SI	CCV/ LCS	50	Prepared 03/02/20	05/01/20	N/A	10uL			10
VOA STD. TBA	Various	CCV/ LCS	250	Prepared 03/05/20	04/01/20	N/A	25uL			125

LCS (X4 Ketones)

Prepared: 03/12/20

Expires: 03/13/20

Prepared By (Initials): CH

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	LCS X4 Ketones	50	Prepared 03/05/20	05/04/20	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova	LCS X4 Ketones	50	Prepared 03/05/20	04/01/20	N/A	10uL			10
VOA STD. 2	O2SI	LCS X4 Ketones	50	Prepared 03/05/20	05/04/20	N/A	40uL			40
VOA STD. 5	O2SI	LCS X4 Ketones	50	Prepared 03/02/20	05/01/20	N/A	10uL			10
VOA STD. TBA	Various	LCS X4 Ketones	250	Prepared 03/05/20	04/01/20	N/A	25uL			125

Primary and Secondary Working Standards

Primary Standards

VOA STD 7

Prepared: 03/05/20 A
Expires: 05/04/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Gasses STD	Phenova	ALO-101206	2,000	CL14052-49491	03/05/21	08/31/24	100uL	4mL	Methanol	50
Hexachloroethane	Absolute	70199	1,000	091818-49858	03/05/21	09/18/23	200uL			50
Benzyl Chloride	Accusta	M-8010-01	1,000	011320-49734	03/05/21	01/13/21	200uL			50

VOA STD 8

Prepared: 03/05/20 B
Expires: 04/01/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Additions STD	Phenova	ALO-130175	2,000	CL12744-49507	03/05/21	08/31/20	100uL	4mL	Methanol	50
502.2 Cal. Std.	Phenova	ALO-101200	2,000	CL14381-49690	03/05/21	10/31/24	100uL			50
Vinyl Acetate	Phenova	ALO-101228	2,000	CL15060-49887	03/05/21	04/01/20	100uL			50

VOA STD TBA

Prepared: 03/05/20 C
Expires: 04/01/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Custom VOC Mix	Phenova	ALO-130176	2,000	CL12929-49790	03/05/21	11/30/20	500uL	4mL	Methanol	250
Acrolein	Phenova	ALO-130549	10,000	CL15071-49888	03/05/21	04/01/20	100uL			250

VOA STD 1

Prepared: 03/05/20 D
Expires: 05/04/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
2-CEVE	Absolute	82408	2,000	011320-49737	03/05/21	01/13/23	50	2mL	Methanol	50

VOA STD 2

Prepared: 03/05/20 E
Expires: 05/04/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Ketones Std.	Phenova	ALO-109211	2,000	CL12730-49780	03/05/21	08/31/28	100	4mL	Methanol	50

VOA STD 9

Prepared: 03/05/20 F
Expires: 05/04/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA STD. 7		VOA STD. 9	50	Prepared 03/05/20	03/05/21	N/A	200uL	2mL	Methanol	5
VOA STD. 8			50	Prepared 03/05/20	03/05/21	N/A	200uL			5

VOA STD. 10

Prepared: 03/05/20 G
Expires: 05/04/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA STD. 1		VOA STD. 10	50	Prepared 03/05/20	03/05/21	N/A	200uL	2mL	Methanol	5

VOA STD. 12

Prepared: 03/05/20 H
Expires: 05/04/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA STD. 2		VOA STD. 12	50	Prepared 03/05/20	03/05/21	N/A	200uL	2mL	Methanol	5

Second Source (SS) Standards

VOA STD. 3

Prepared: 03/05/20 I
Expires: 05/04/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Ketones Standard	Phenova	ALO-101211	2,000	CL13994-49785	03/05/21	08/31/29	50uL	2mL	Methanol	50

VOA STD. Gases

Prepared: 03/05/20 J
Expires: 05/04/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
8260 Gases (SS)	Phenova	ALO-101206	2,000	CL14504-49901	03/05/21	10/31/24	50uL	2mL	Methanol	50

VOA STD. 6

Prepared: 03/05/20 K
Expires: 03/11/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
502.2 Calibration STD. (54-compounds)	Phenova	ALO-101200	2,000	CL14379-49508	02/18/21	10/31/24	50uL	2mL	Methanol	50
Vinyl Acetate	Phenova	ALO-101228	2,000	CL14964-49837	02/18/21	03/11/20	50uL			50
Hexachloroethane	Accustan	AS-E0011	1,000	219061767-49740	03/05/21	06/28/29	100uL			50
Benzyl Chloride	Accustan	M-8010-01	200	219041664-49375	03/05/21	05/22/21	500uL			50

VOA STD. TBA

Prepared: 03/05/20 L
Expires: 03/11/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Custom VOA Mix (4-3)	Phenova	ALO-130176	2,000	CL12929-49684	03/05/21	11/30/20	250uL	2mL	Methanol	250
Acrolein	Phenova	ALO-101224	10,000	CL14963-49838	02/18/21	03/11/20	50uL			250

VOA STD. 0

Prepared: 03/05/20 M
Expires: 05/04/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Addition STD.	Phenova	ALO-130175	2,000	CL14058-49851	03/05/21	08/31/21	50uL	2mL	Methanol	50

VOA STD. 2-CEVE

Prepared: 03/05/20 N
Expires: 05/04/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
2-CEVE (SS)	Absolute	82408	2,000	121119-49635	02/18/21	12/11/22	50uL	2mL	Methanol	50

Loki Gas Standard Prep

Gas Primary Working Standard

Prepared: 01/06/20 — **Prepared By (Initials): CH**

Expires: 01/05/21

Methanol Lot No. 58019-00962

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
50,000ug/mL Gas STD	Restek	30205	50,000	A0132443-39859	01/06/21	12/31/24	80uL	2mL	Methanol	2,000

Gas Second Source (SS) Working Standard

Prepared: 01/06/20 — **Prepared By (Initials): CH**

Expires: 01/05/21

Methanol Lot No. 58019-00962

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Gasoline (50,000ppm)	Phenova	ALO-101543	50,000	CL11750-40999	01/06/21	02/28/27	80uL	2mL	Methanol	2,000

Loki Gas Calibration Curve

Prepared: 03/13/20 — **Prepared By (Initials): CH**

Expires: 05/12/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA Gasses Standards	Phenova	20ug/L	2,000	Prepared 01/06/20	01/05/21	N/A	1uL	100mL	P&T Water	20
VOA Gasses Standards	Phenova	50ug/L	2,000	Prepared 01/06/20	01/05/21	N/A	2.5uL	100mL	P&T Water	50
VOA Gasses Standards	Phenova	100ug/L	2,000	Prepared 01/06/20	01/05/21	N/A	5uL	100mL	P&T Water	100
VOA Gasses Standards	Phenova	300ug/L	2,000	Prepared 01/06/20	01/05/21	N/A	15uL	100mL	P&T Water	300
VOA Gasses Standards	Phenova	600ug/L	2,000	Prepared 01/06/20	01/05/21	N/A	30uL	100mL	P&T Water	600
VOA Gasses Standards	Phenova	800ug/L	2,000	Prepared 01/06/20	01/05/21	N/A	40uL	100mL	P&T Water	800
VOA Gasses Standards	Phenova	1,000ug/L	2,000	Prepared 01/06/20	01/05/21	N/A	50uL	100mL	P&T Water	1,000

Loki Gas Second Source

Prepared: 03/13/20 — **Prepared By (Initials): CH**

Expires: 05/12/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
50,000ug/mL Gas STD	Phenova	SS 300ug/L	2,000	Prepared 01/06/20	01/05/21	N/A	15uL	100mL	P&T Water	300

Loki Gas Continuing Calibrations/Lab Control Spikes

Prepared: 03/13/20 — **Prepared By (Initials): CH**

Expires: 03/14/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Gasses Standards	Phenova	300ug/L	2,000	Prepared 01/06/20	01/05/21	N/A	15uL	100mL	P&T Water	300

Injection Log

Directory: M:\LOKI\DATA\200312\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
4	0312L10.D	1	0.3ug/L VOC STD 3/12/20	IS&S:03/10/20	12 Mar 20 12:10
5	0312L11.D	1	0.5ug/L VOC STD 3/12/20	IS&S:03/10/20	12 Mar 20 12:39
6	0312L12.D	1	1.0ug/L VOC STD 3/12/20	IS&S:03/10/20	12 Mar 20 13:07
7	0312L13.D	1	2.0ug/L VOC STD 3/12/20	IS&S:03/10/20	12 Mar 20 13:36
8	0312L14.D	1	5.0ug/L VOC STD 3/12/20	IS&S:03/10/20	12 Mar 20 14:05
9	0312L15.D	1	10ug/L VOC STD 3/12/20	IS&S:03/10/20	12 Mar 20 14:33
10	0312L16.D	1	20ug/L VOC STD 3/12/20	IS&S:03/10/20	12 Mar 20 15:02
11	0312L17.D	1	40ug/L VOC STD 3/12/20	IS&S:03/10/20	12 Mar 20 15:30
12	0312L18.D	1	100ug/L VOC STD 3/12/20	IS&S:03/10/20	12 Mar 20 15:59
28	0313L29.D	1	20ug/L GAS STD 3/13/20	IS&S:03/10/20	13 Mar 20 22:48
29	0313L30.D	1	50ug/L GAS STD 3/13/20	IS&S:03/10/20	13 Mar 20 23:17
30	0313L31.D	1	100ug/L GAS STD 3/13/20	IS&S:03/10/20	13 Mar 20 23:46
31	0313L32.D	1	300ug/L GAS STD 3/13/20	IS&S:03/10/20	14 Mar 20 00:14
32	0313L33.D	1	600ug/L GAS STD 3/13/20	IS&S:03/10/20	14 Mar 20 00:43
33	0313L34.D	1	800ug/L GAS STD 3/13/20	IS&S:03/10/20	14 Mar 20 1:11
34	0313L35.D	1	1000ug/L GAS STD 3/13/20	IS&S:03/10/20	14 Mar 20 1:40
36	0313L37.D	1	(SS) 300ug/L GAS STD 3/13/20	IS&S:03/10/20	14 Mar 20 2:37
41	0313L42.D	1	200313B CCV 300ug/L	IS&S:03/10/20	14 Mar 20 5:00
42	0313L43.D	1	200313B LCS 300ug/L	IS&S:03/10/20	14 Mar 20 5:28
43	0313L44.D	1	200313B LCSD 300ug/L	IS&S:03/10/20	14 Mar 20 5:57
44	0313L45.D	1	200313B Blk	IS&S:03/10/20	14 Mar 20 6:26
45	0313L46.D	1	BA08340W01	IS&S:03/10/20	14 Mar 20 6:54
46	0313L47.D	1	BA08341W01	IS&S:03/10/20	14 Mar 20 7:23
52	0313L53.D	1	BA08341W04,5,6 MS 300ug/L	IS&S:03/10/20	14 Mar 20 10:14
53	0313L54.D	1	BA08341W04,5,6 MSD 300ug/L	IS&S:03/10/20	14 Mar 20 10:43
57	0313L58.D	1	Ending CCV 300ug/L 3/13/20	IS&S:03/10/20	14 Mar 20 12:37

ORGANICS
Calibration Data

RSK 175

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 03/11/20
Matrix: Instrument: 7890

Initials:

0311R03.D 0311R04.D 0311R07.D 0311R08.D 0311R09.D 0311R11.D 0311R13.D

		Compound	1	2	3	4	5	6	7				Avg	%RSD	Type	r^2	Q
1	ATML	Methane	29734	15773	13580	17096	20094	18490	14651				18488	29	ATM	0.995	
2	ATML	Ethane	23899	13476	11688	13961	16062	14509	11867				15066	28	ATM	0.996	
3	ATML	Ethene	18360	10463	8970	10401	12628	10583	9230				11519	28	ATM	0.998	
4																	
5																	
6																	
7																	
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35																	

2.435739

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200311RS\0311R03.D Vial: 3
Acq On : 11 Mar 20 13:00 Operator: GA
Sample : RSK Std 1 03/11/2020 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 11 13:42 2020 Quant Results File: RSK0311.RES

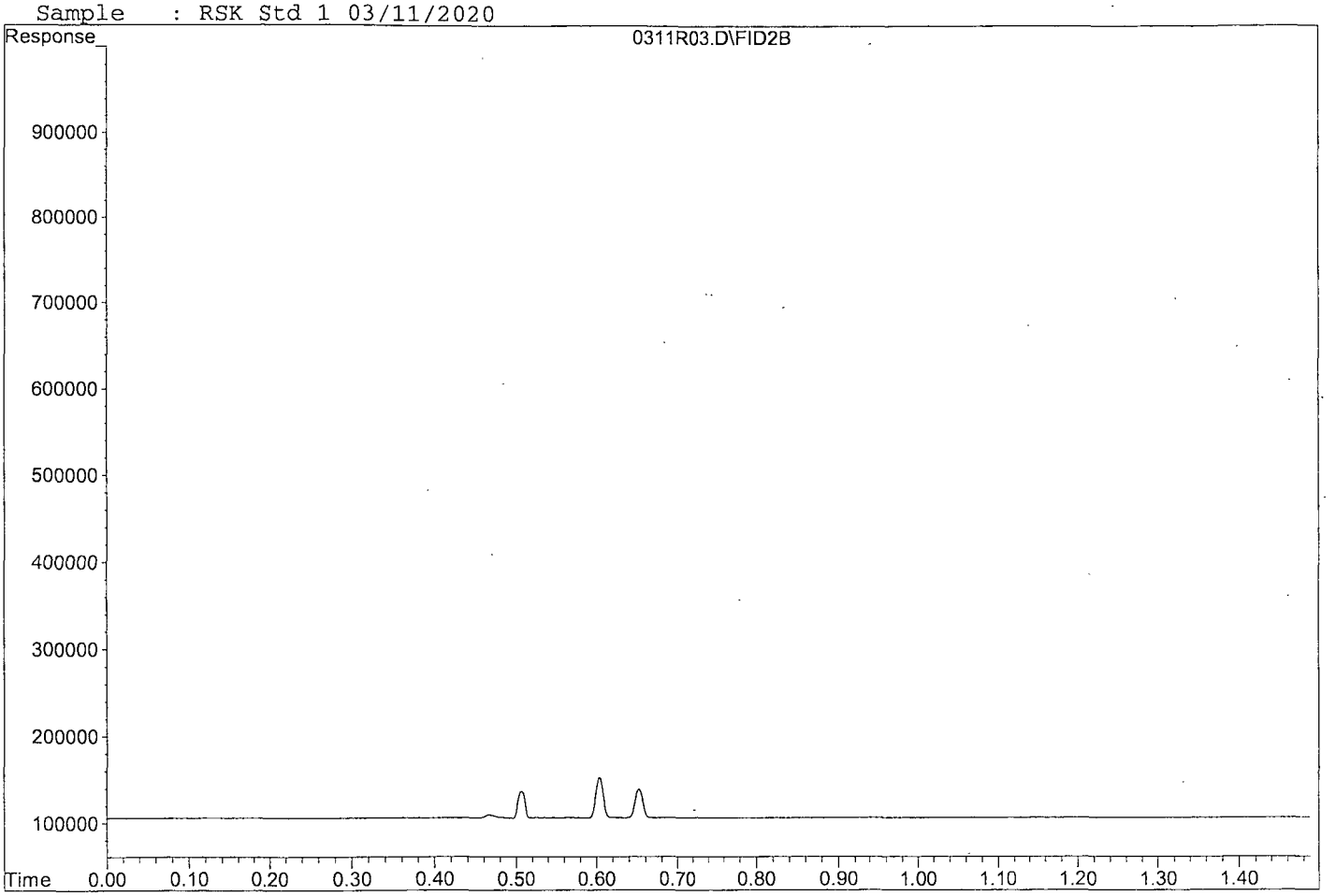
Method : G:\ROCKY\DATA\200311RS\RSK0311.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Mar 11 13:35:17 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.51	30923	N.D.	ppb
2) ATM Ethane	0.60	46722	N.D.	ppb
3) ATM Ethene	0.65	33507	N.D.	ppb

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

Data File: G:\ROCKY\DATA\200311RS\0311R03.D
Sample : RSK Std 1 03/11/2020



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200311RS\0311R04.D Vial: 4
Acq On : 11 Mar 20 13:03 Operator: GA
Sample : RSK Std 2 03/11/2020 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 11 13:42 2020 Quant Results File: RSK0311.RES

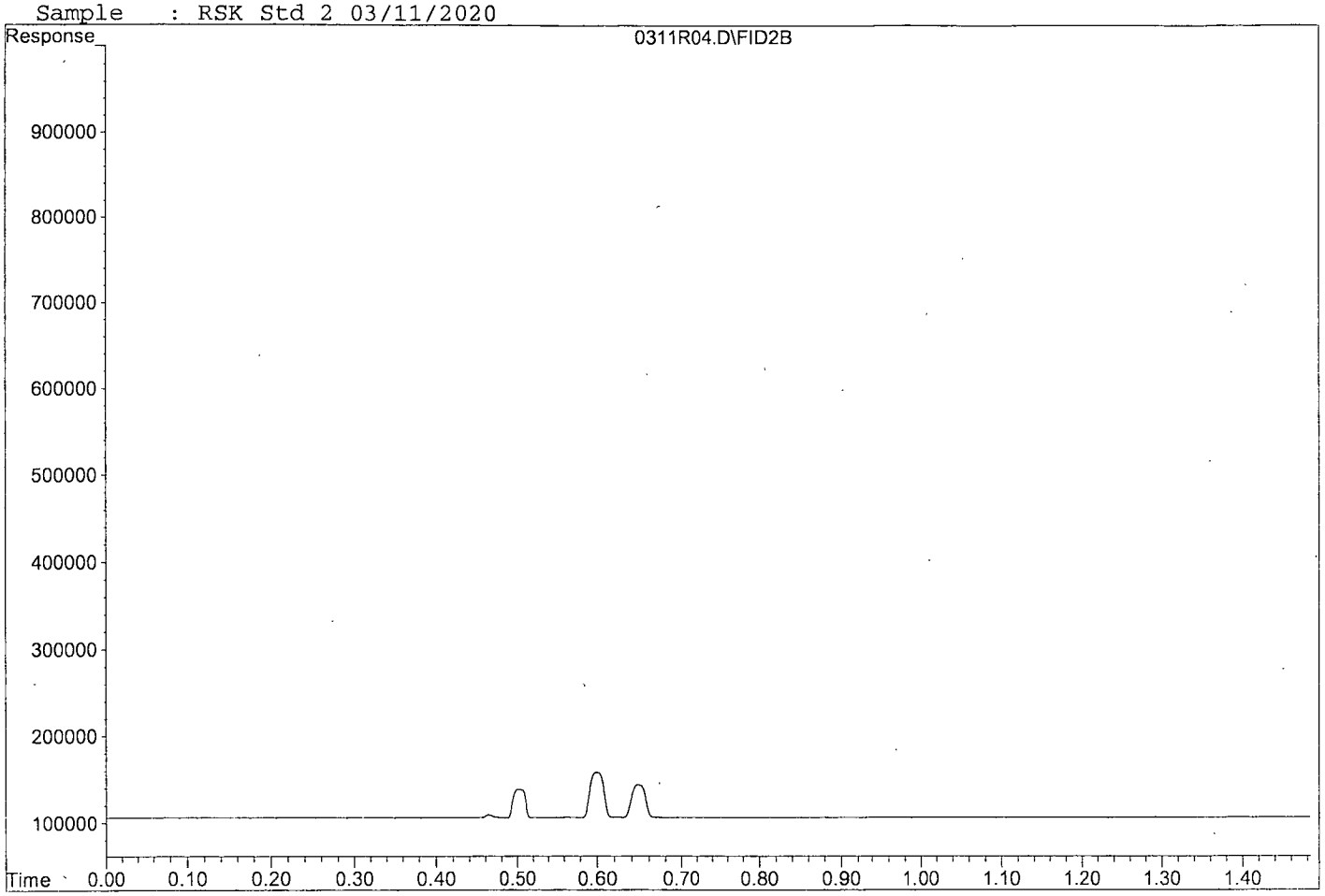
Method : G:\ROCKY\DATA\200311RS\RSK0311.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Mar 11 13:35:17 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.50	32807	N.D.	ppb
2) ATM Ethane	0.60	52625	N.D.	ppb
3) ATM Ethene	0.65	38189	N.D.	ppb

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

Data File: G:\ROCKY\DATA\200311RS\0311R04.D
Sample : RSK Std 2 03/11/2020



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200311RS\0311R07.D Vial: 7
Acq On : 11 Mar 20 13:12 Operator: GA
Sample : RSK Std 3 03/11/2020 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 11 13:42 2020 Quant Results File: RSK0311.RES

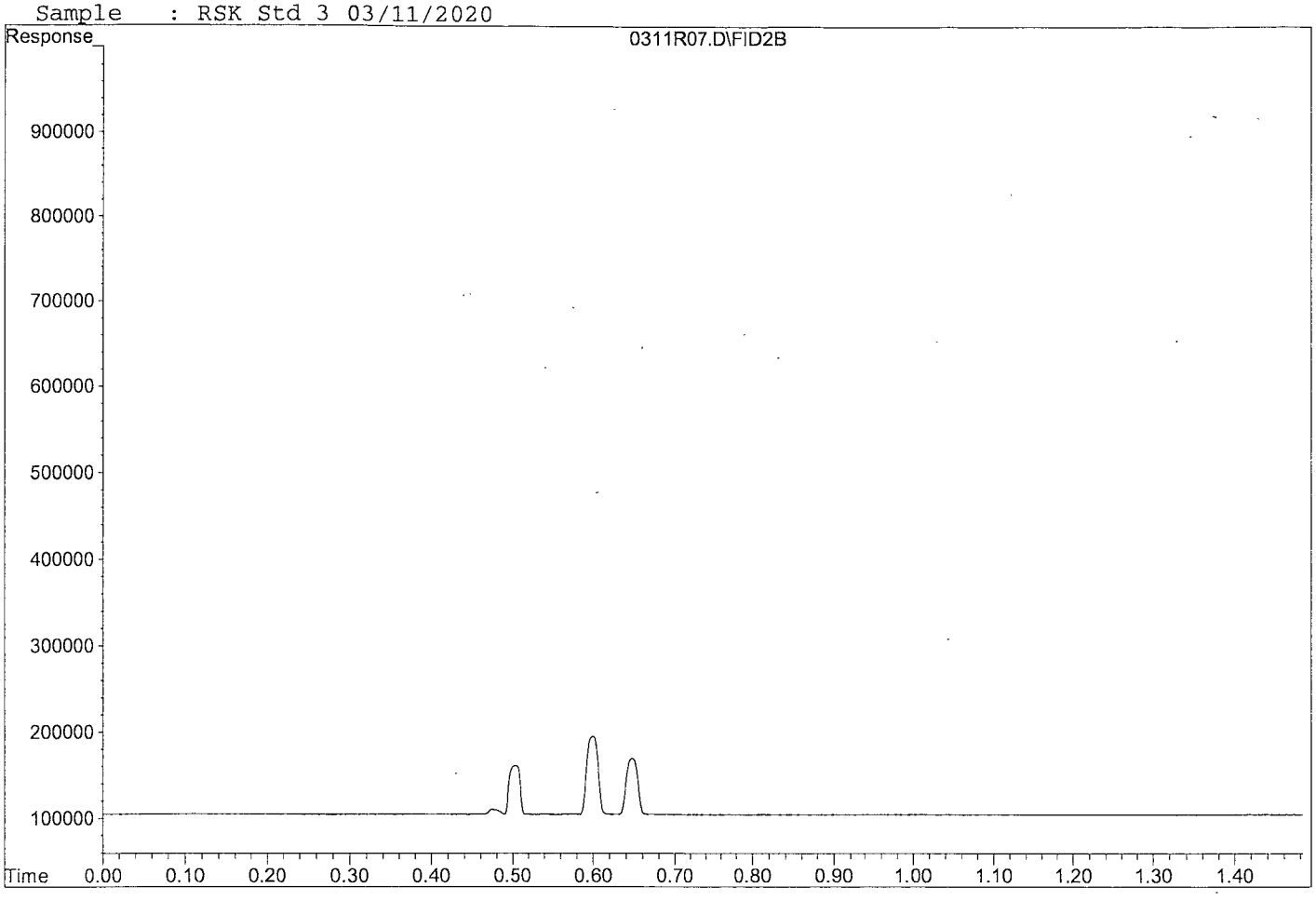
Method : G:\ROCKY\DATA\200311RS\RSK0311.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Mar 11 13:35:17 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.50	56629	N.D.	ppb
2) ATM Ethane	0.60	91168	N.D.	ppb
3) ATM Ethene	0.65	65481	N.D.	ppb

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

Data File: G:\ROCKY\DATA\200311RS\0311R07.D
Sample : RSK Std 3 03/11/2020



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200311RS\0311R08.D Vial: 8
Acq On : 11 Mar 20 13:15 Operator: GA
Sample : RSK Std 4 03/11/2020 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 17 11:28 2020 Quant Results File: RSK0311.RES

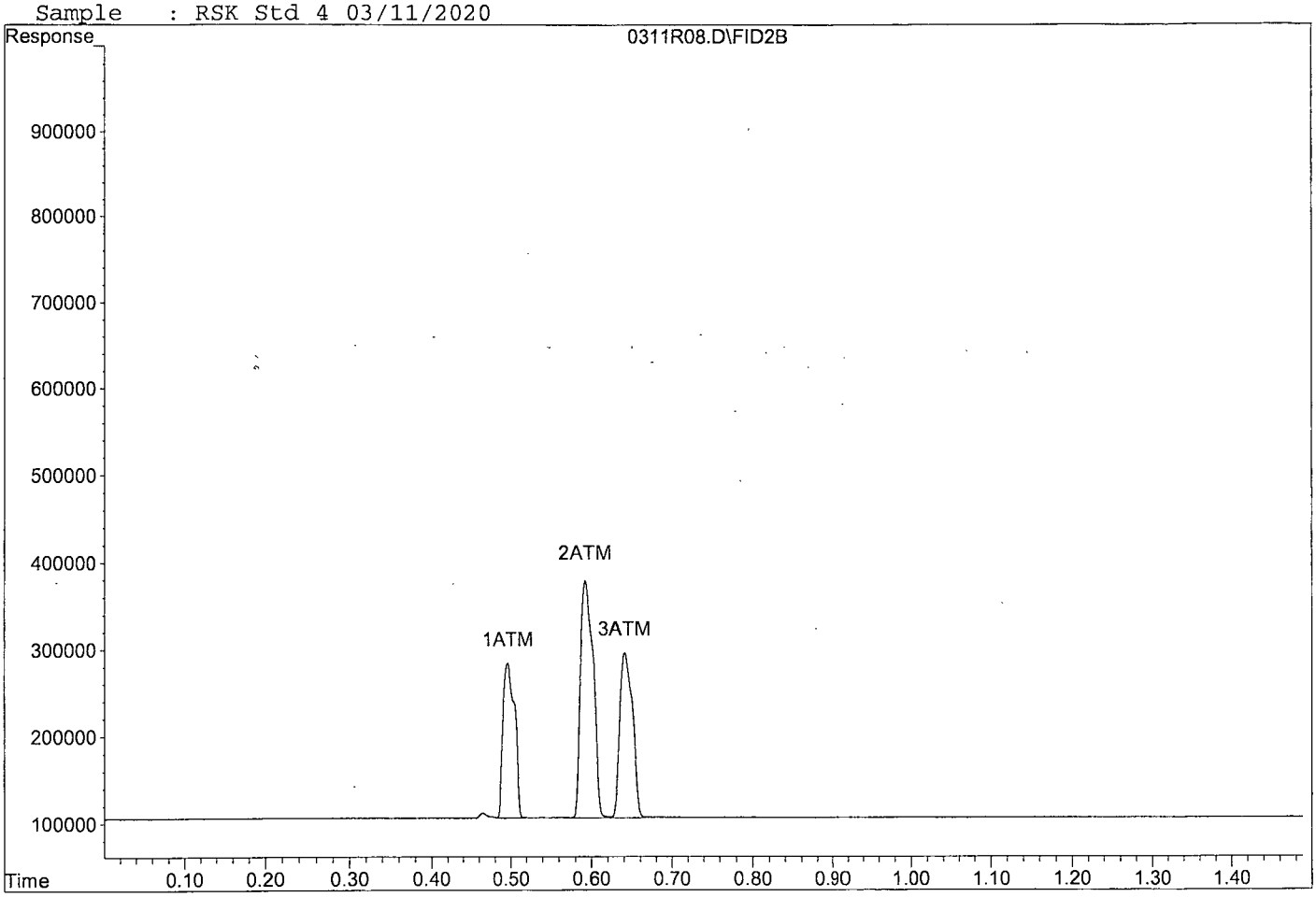
Method : G:\ROCKY\DATA\200311RS\RSK0311.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Mar 17 11:20:36 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.50	178225	11.047 ppb
2) ATM Ethane	0.59	272861	23.257 ppb
3) ATM Ethene	0.64	189615	23.557 ppb

Target Compounds

Data File: G:\ROCKY\DATA\200311RS\0311R08.D
Sample : RSK Std 4 03/11/2020



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200311RS\0311R09.D Vial: 9
Acq On : 11 Mar 20 13:17 Operator: GA
Sample : RSK Std 5 03/11/2020 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 11 13:42 2020 Quant Results File: RSK0311.RES

Method : G:\ROCKY\DATA\200311RS\RSK0311.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Mar 11 13:35:17 2020
Response via : Multiple Level Calibration

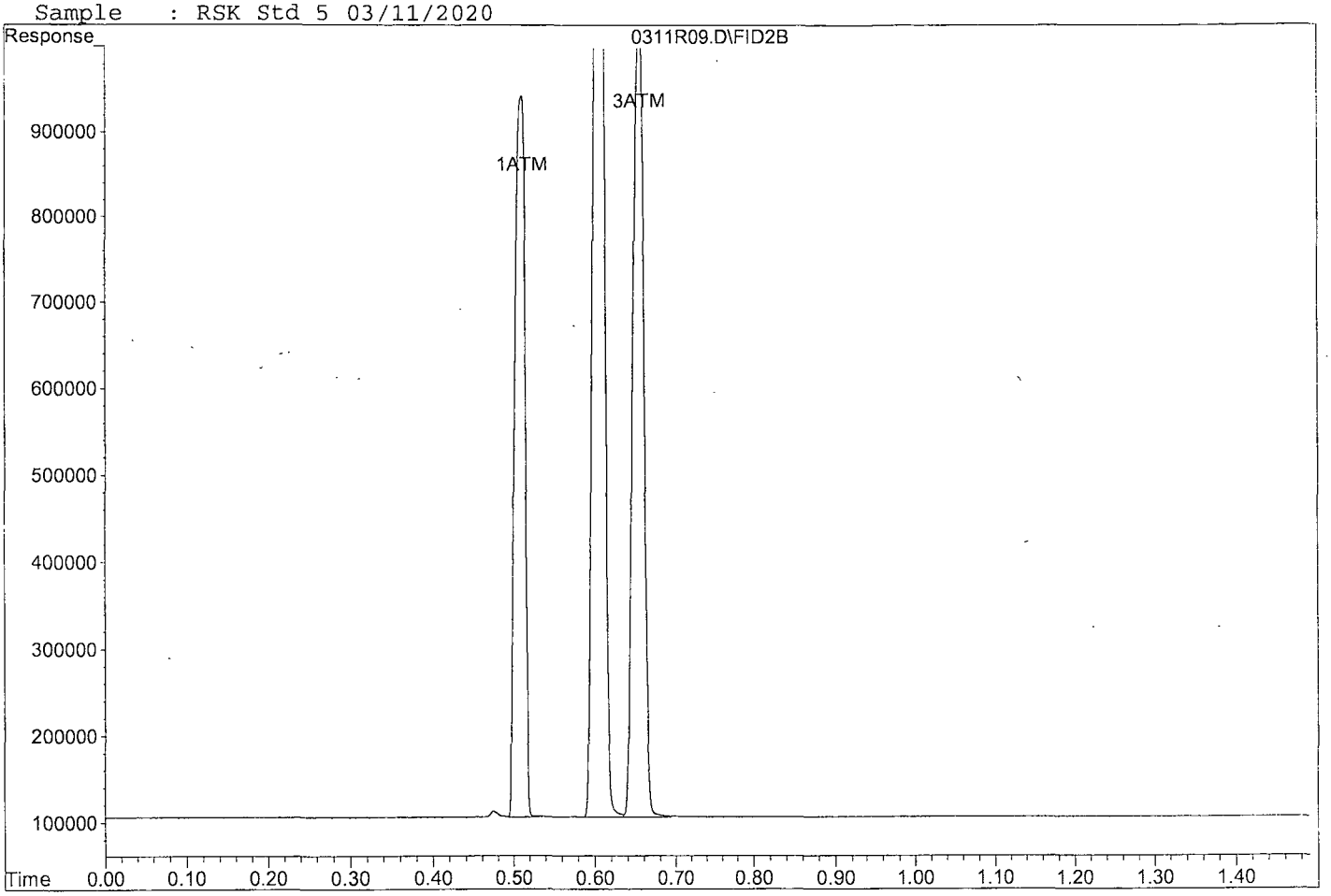
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.51	837925	101.270 ppb
2) ATM Ethane	0.61	1255676	189.317 ppb
3) ATM Ethene	0.66	920839	182.581 ppb

Target Compounds

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

Data File: G:\ROCKY\DATA\200311RS\0311R09.D
Sample : RSK Std 5 03/11/2020



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200311RS\0311R11.D Vial: 11
Acq On : 11 Mar 20 13:22 Operator: GA
Sample : RSK Std 6 03/11/2020 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 11 13:42 2020 Quant Results File: RSK0311.RES

Method : G:\ROCKY\DATA\200311RS\RSK0311.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Mar 11 13:35:17 2020
Response via : Multiple Level Calibration

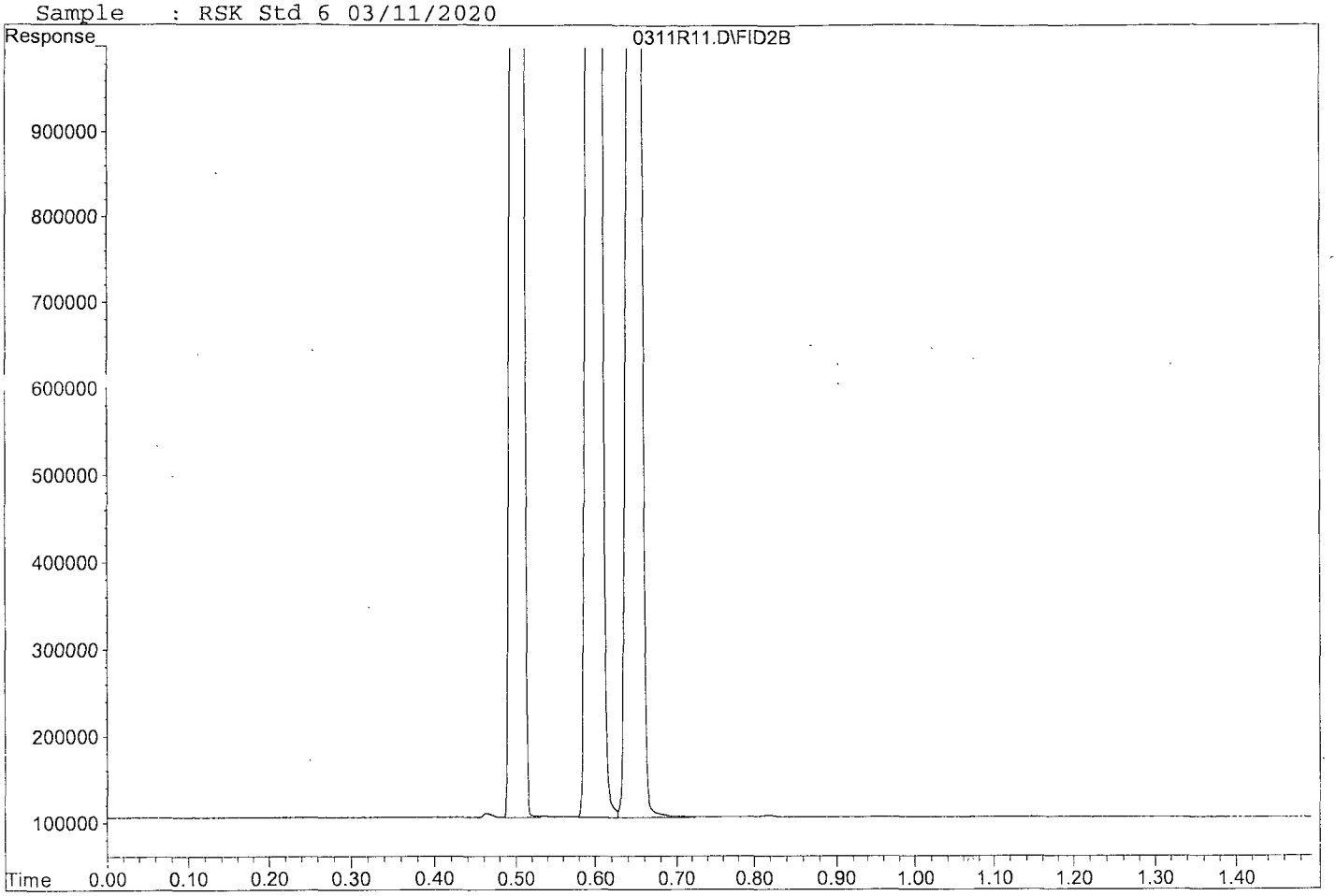
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.50	1927571	250.295 ppb
2) ATM Ethane	0.60	2835810	456.301 ppb
3) ATM Ethene	0.65	1929291	401.895 ppb

Target Compounds

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

Data File: G:\ROCKY\DATA\200311RS\0311R11.D
Sample : RSK Std 6 03/11/2020



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200311RS\0311R13.D Vial: 13
Acq On : 11 Mar 20 13:28 Operator: GA
Sample : RSK Std 7 03/11/2020 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 17 11:30 2020 Quant Results File: RSK0311.RES

Method : G:\ROCKY\DATA\200311RS\RSK0311.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Mar 17 11:20:36 2020
Response via : Multiple Level Calibration

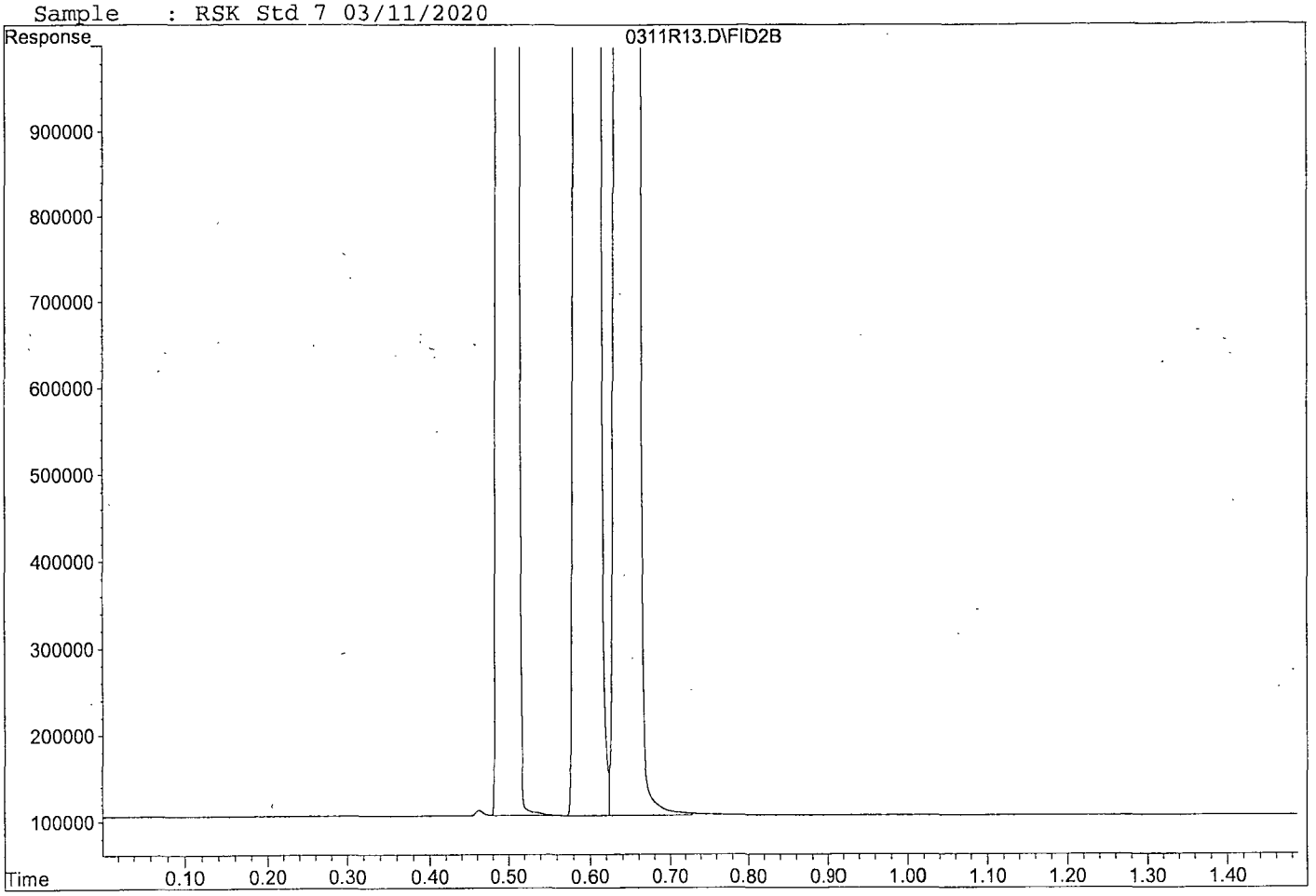
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

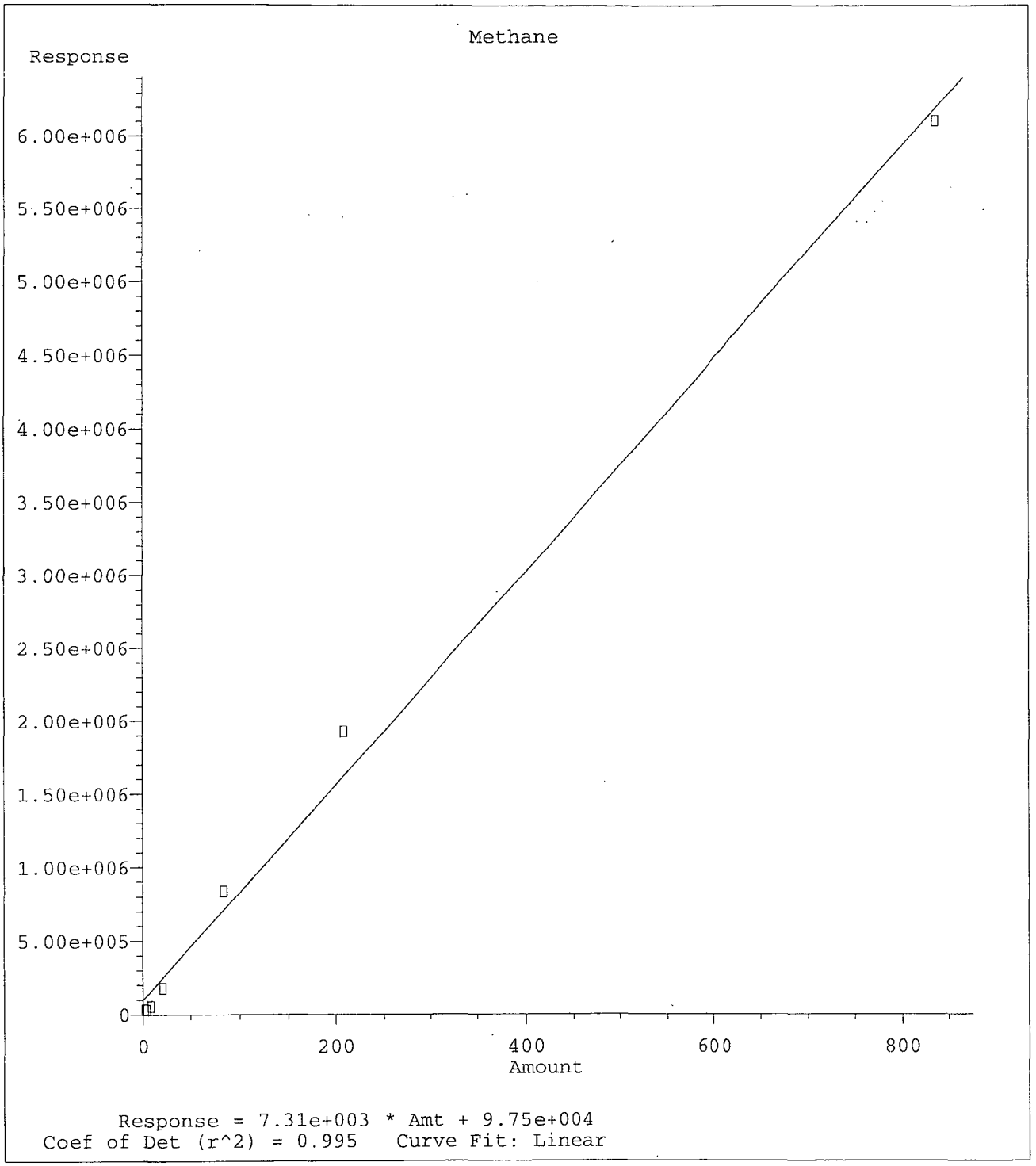
Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.50	6109561	822.241	ppb
2) ATM Ethane	0.60	9277052	1544.634	ppb
3) ATM Ethene	0.64	6730405	1446.024	ppb

Target Compounds

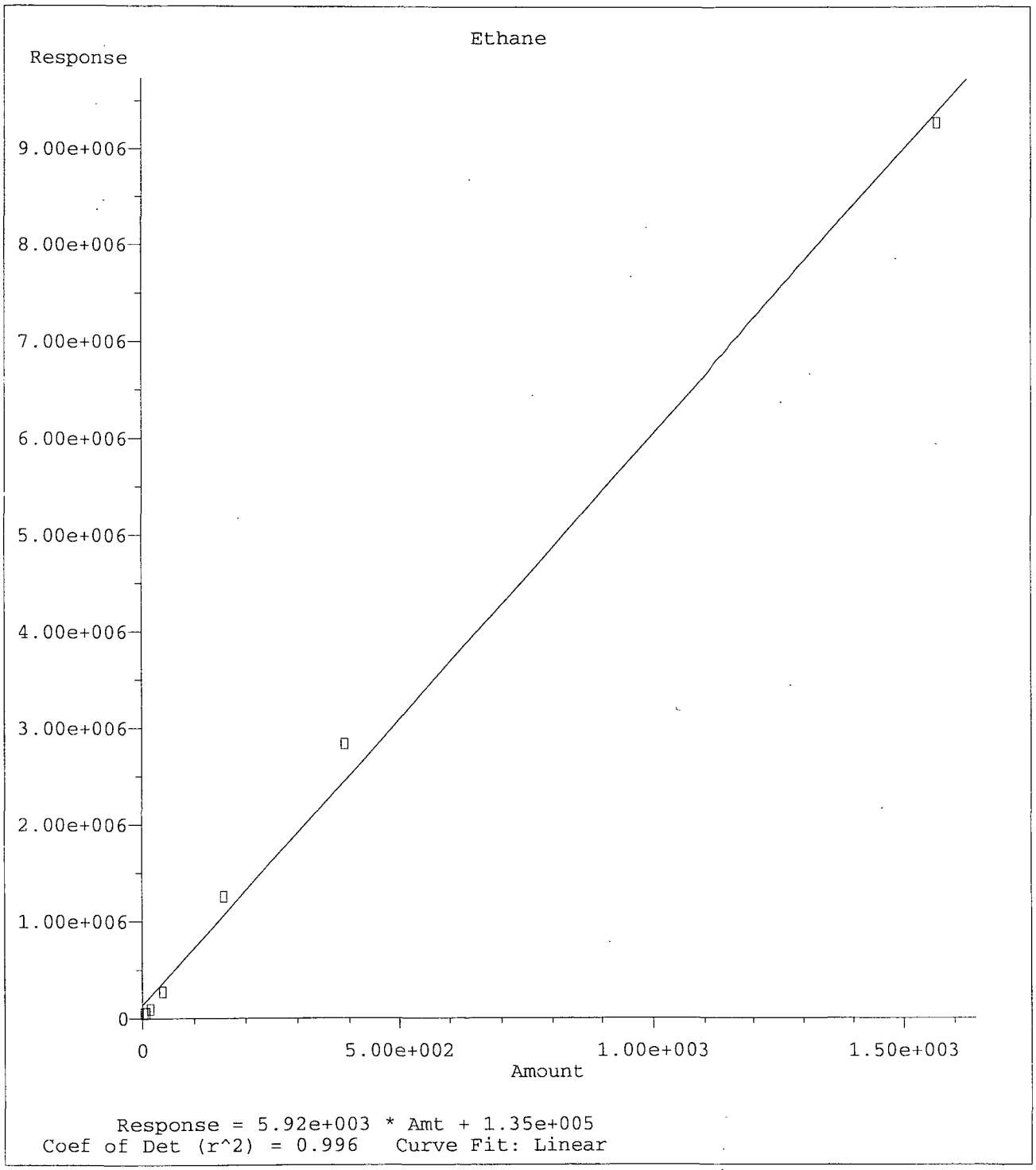
(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200311RS\0311R13.D
Sample : RSK Std 7 03/11/2020

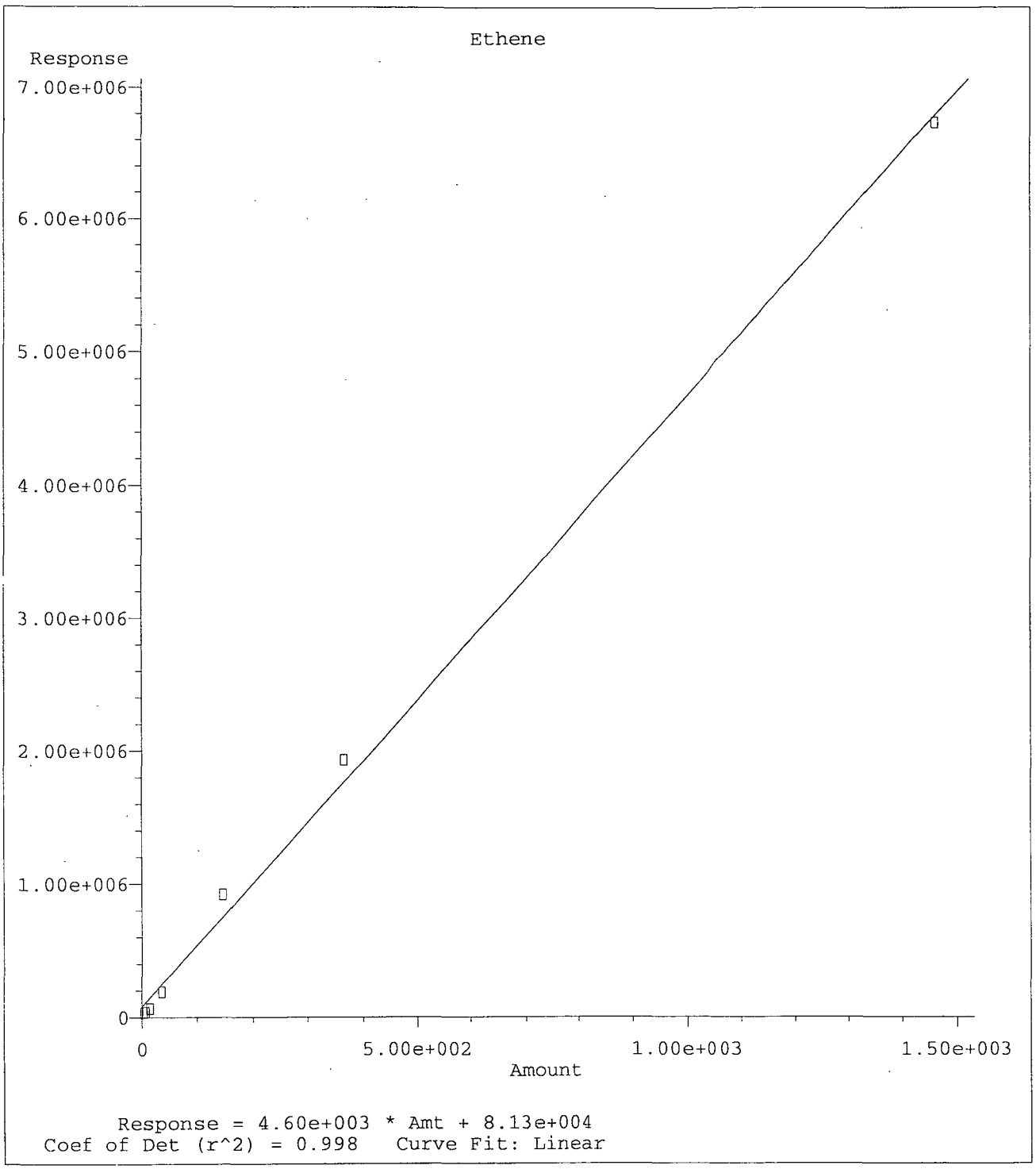




Method Name: G:\ROCKY\DATA\200311RS\RSK0311.M
Calibration Table Last Updated: Wed Mar 11 13:35:17 2020



Method Name: G:\ROCKY\DATA\200311RS\RSK0311.M
Calibration Table Last Updated: Wed Mar 11 13:35:17 2020



Method Name: G:\ROCKY\DATA\200311RS\RSK0311.M
Calibration Table Last Updated: Wed Mar 11 13:35:17 2020

Form 7

Second Source Calibration

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

SDG No:
Date Analyzed: 03/11/20
Instrument: 7890
Initial Cal. Date: 03/11/20
Data File: 0311R15.D

		Compound	MEAN	CCRF	%D	%Drift	
1	ATML	Methane	18488	16733	9.5	ATML	1.6
2	ATML	Ethane	15066	13396	11	ATML	1.4
3	ATML	Ethene	11519	10439	9.4	ATML	1.4
4							
5							
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40							
		Average			10.0		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200311RS\0311R15.D Vial: 15
Acq On : 11 Mar 20 13:38 Operator: GA
Sample : RSK SS Std 5 03/11/2020 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 11 13:40 2020 Quant Results File: RSK0311.RES

Method : G:\ROCKY\DATA\200311RS\RSK0311.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Mar 11 13:35:17 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

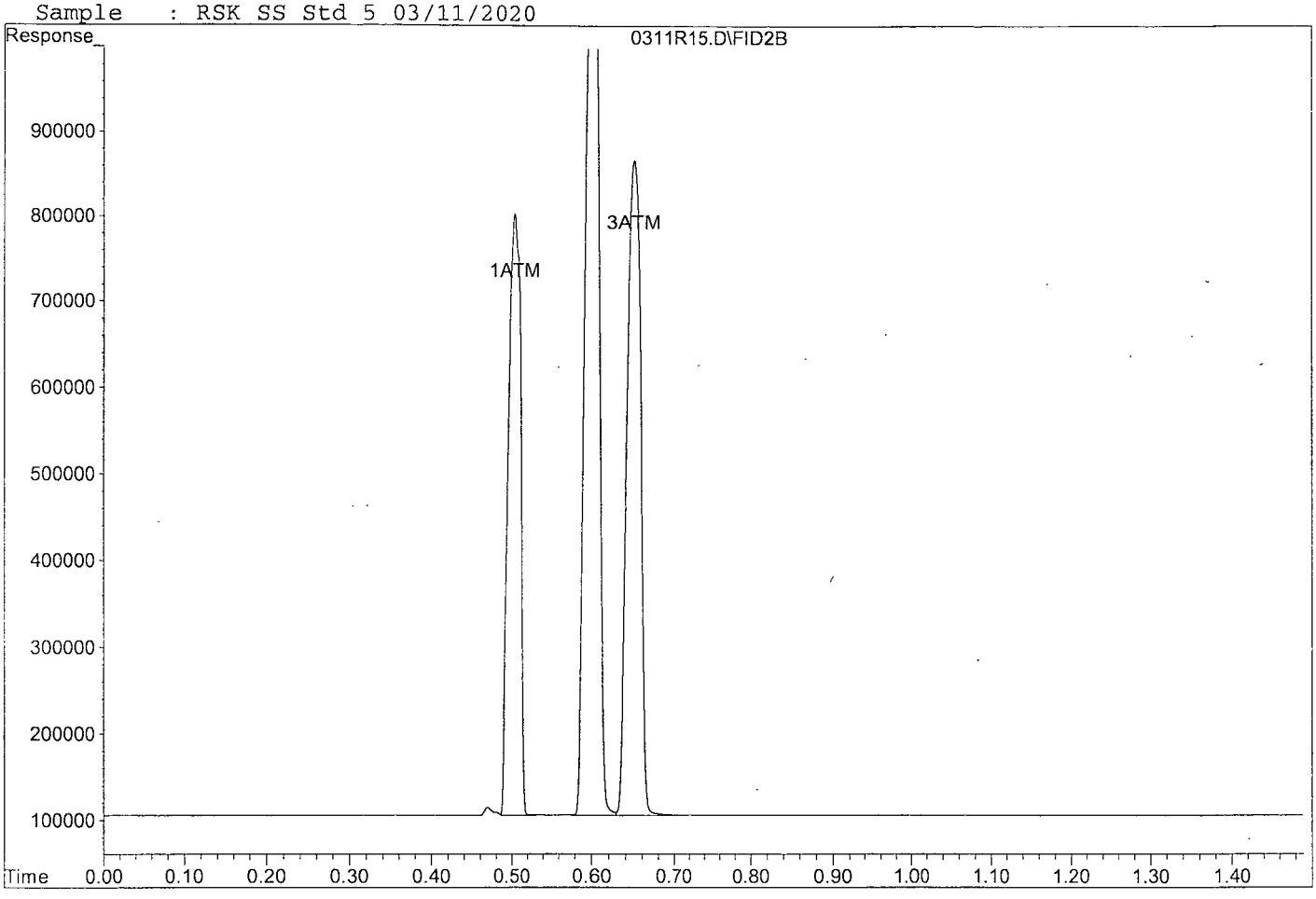
Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.50	697755	82.100 ppb
2) ATM Ethane	0.60	1047226	154.096 ppb
3) ATM Ethene	0.65	761233	147.870 ppb

Target Compounds

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

Quantitation Report

Data File: G:\ROCKY\DATA\200311RS\0311R15.D
Sample : RSK SS Std 5 03/11/2020



Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 03/17/20
Instrument: 7890
Initial Cal. Date: 03/11/20
Data File: 0317R01.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	18488	17799	3.7	ATML	5.7
2	ATML	Ethane	15066	15039	0.18	ATML	12
3	ATML	Ethene	11519	12382	7.5	ATML	23
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40							
		Average			3.8		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200311RS\0317R01.D Vial: 1
Acq On : 17 Mar 20 10:13 Operator: GA
Sample : 200317A CCV/LCS RSK Std 5 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 17 10:15 2020 Quant Results File: RSK0311.RES

Method : G:\ROCKY\DATA\200311RS\RSK0311.M (Chemstation Integrator)
Title : RSK 175
Last Update : Thu Mar 12 09:46:32 2020
Response via : Multiple Level Calibration

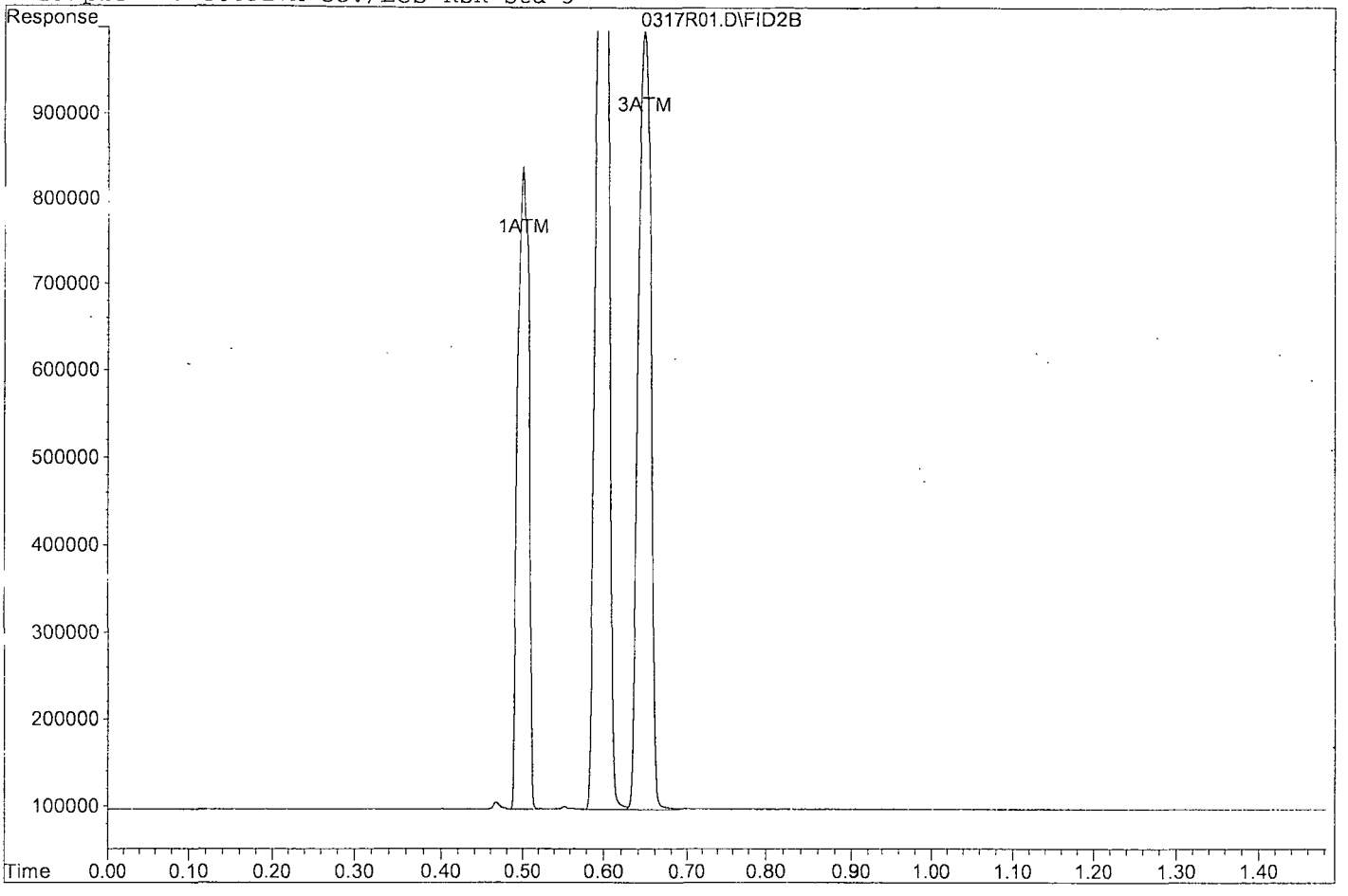
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.50	742212	88.180 ppb
2) ATM Ethane	0.60	1175676	175.800 ppb
3) ATM Ethene	0.65	902894	178.678 ppb

Target Compounds

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

Data File: G:\ROCKY\DATA\200311RS\0317R01.D
Sample : 200317A CCV/LCS RSK Std 5



Form 7

Ending Calibration

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

SDG No:
Date Analyzed: 03/17/20
Instrument: 7890
Initial Cal. Date: 03/11/20
Data File: 0317R09.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	18488	16973	8.2	ATML	0.08
2	ATML	Ethane	15066	13339	11	ATML	1.9
3	ATML	Ethene	11519	10764	6.6	ATML	4.9
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40							
		Average			8.6		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200311RS\0317R09.D Vial: 9
Acq On : 17 Mar 20 10:38 Operator: GA
Sample : Ending CCV RSK Std 5 03/17/2020 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 17 10:40 2020 Quant Results File: RSK0311.RES

Method : G:\ROCKY\DATA\200311RS\RSK0311.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Mar 17 10:18:58 2020
Response via : Multiple Level Calibration

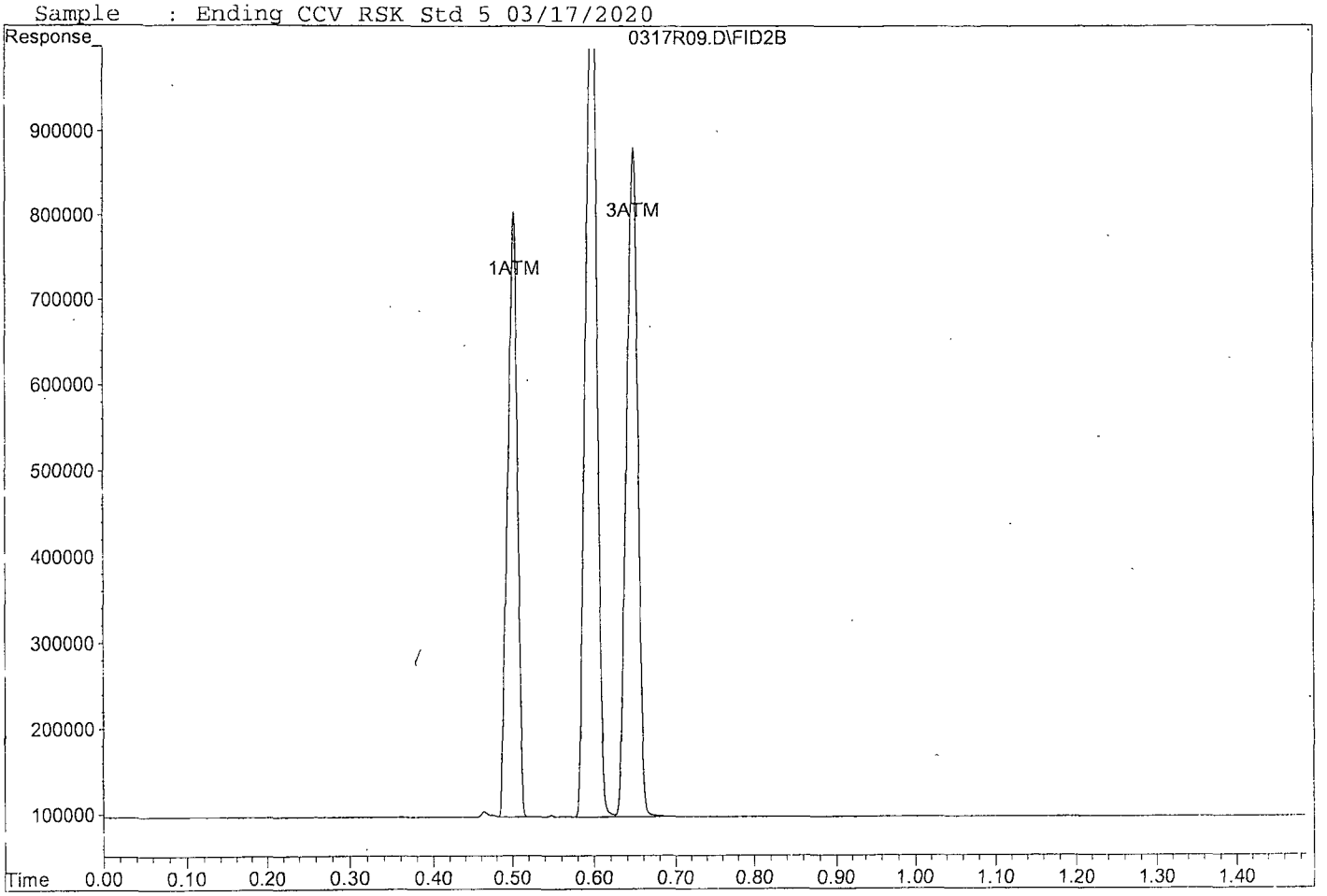
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.50	707770	83.470 ppb
2) ATM Ethane	0.60	1042734	153.337 ppb
3) ATM Ethene	0.65	784910	153.019 ppb

Target Compounds

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

Data File: G:\ROCKY\DATA\200311RS\0317R09.D
Sample : Ending CCV RSK Std 5 03/17/2020



ORGANICS
Raw Data

Quantitation Report (QT Reviewed)

Data File : G:\ROCKY\DATA\200311RS\0317R05.D Vial: 5
Acq On : 17 Mar 20 10:25 Operator: GA
Sample : BA08340W02 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 17 10:29 2020 Quant Results File: RSK0311.RES

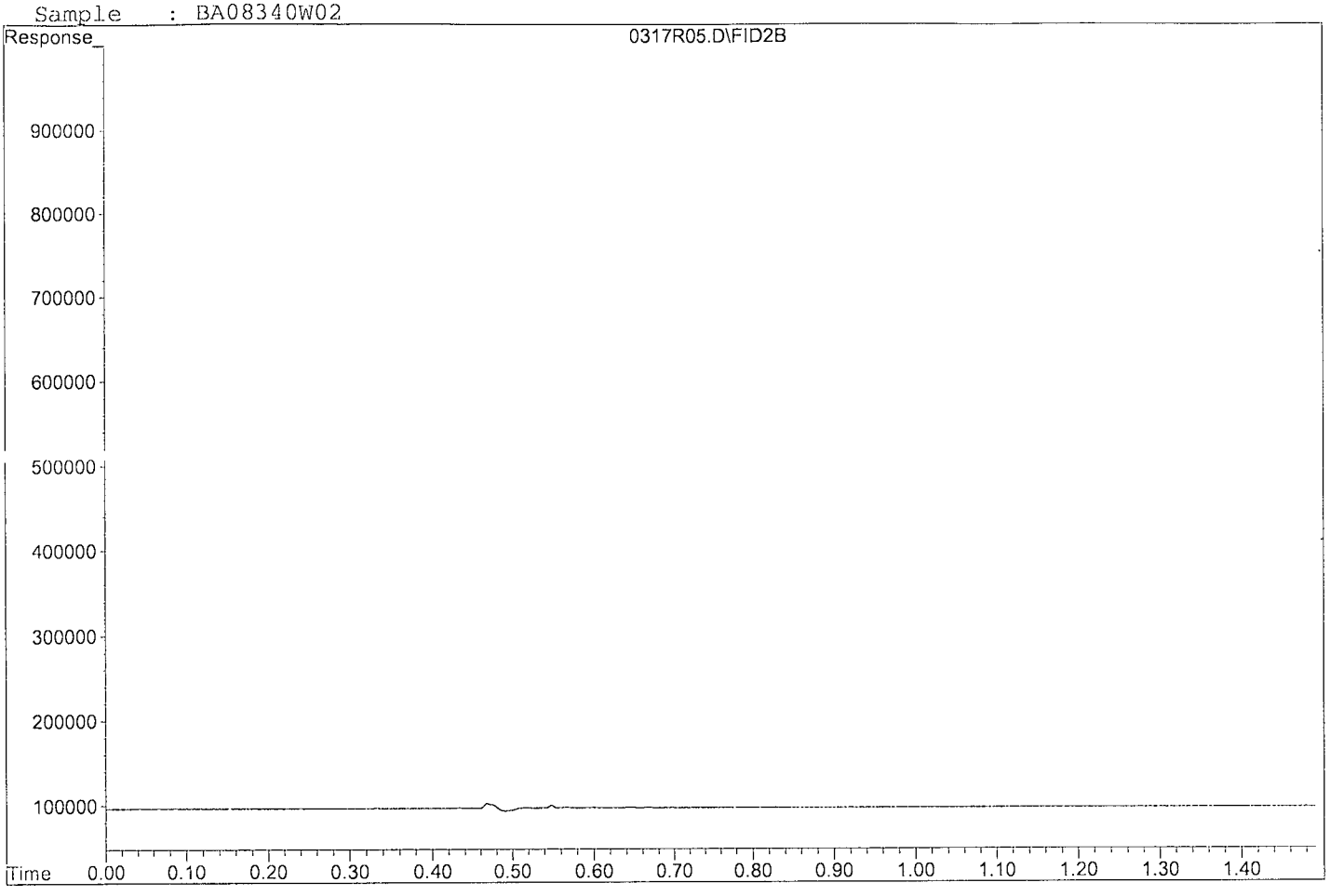
Method : G:\ROCKY\DATA\200311RS\RSK0311.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Mar 17 10:18:58 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units	
Target Compounds					
Target Compounds					
1) ATM Methane	0.00	0	N.D.	ppb	d
2) ATM Ethane	0.00	0	N.D.	ppb	d
3) ATM Ethene	0.00	0	N.D.	ppb	d

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

Data File: G:\ROCKY\DATA\200311RS\0317R05.D
Sample : BA08340W02



Quantitation Report (QT Reviewed)

Data File : G:\ROCKY\DATA\200311RS\0317R06.D Vial: 6
Acq On : 17 Mar 20 10:27 Operator: GA
Sample : BA08341W07 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 17 10:31 2020 Quant Results File: RSK0311.RES

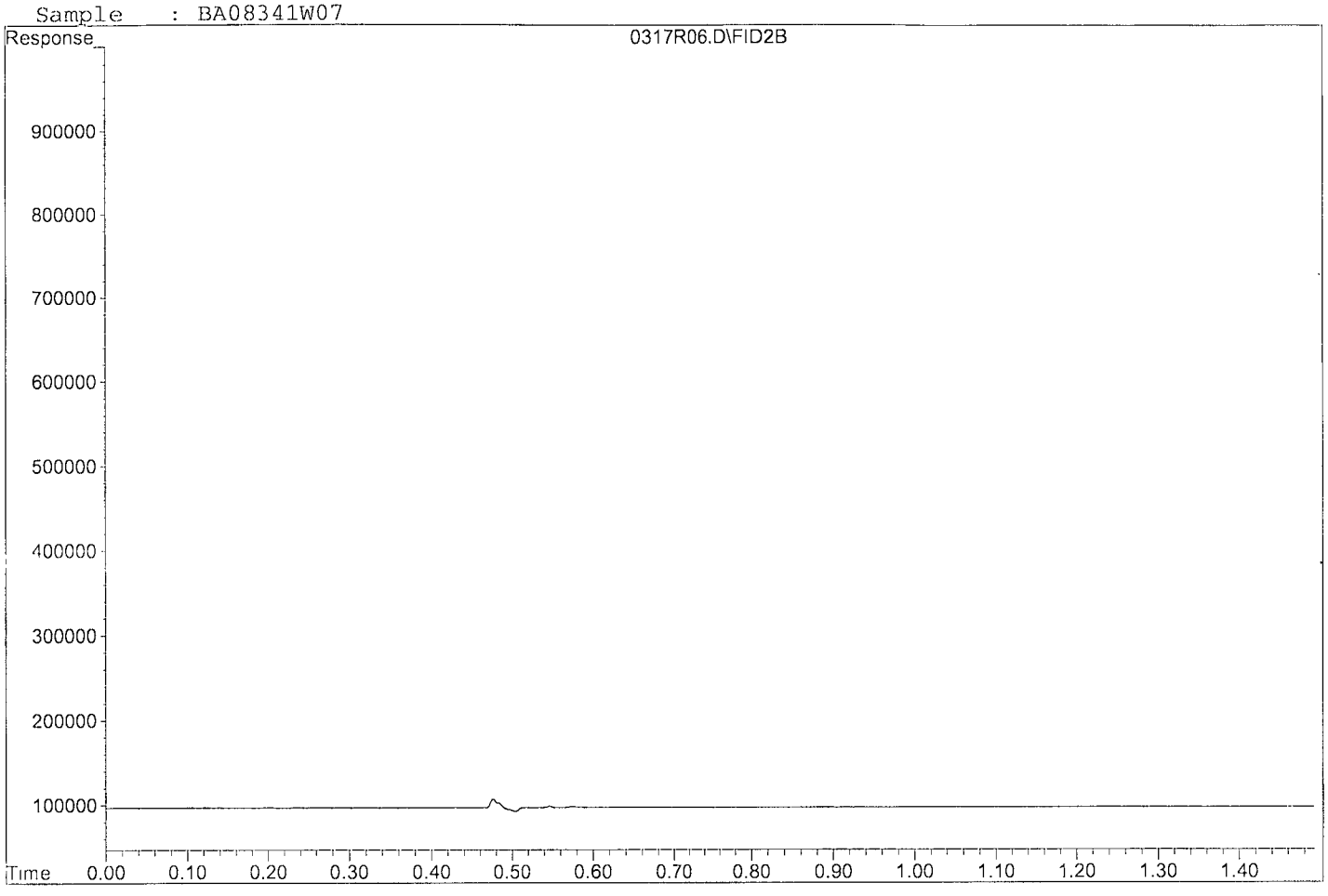
Method : G:\ROCKY\DATA\200311RS\RSK0311.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Mar 17 10:18:58 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units	
Target Compounds					
Target Compounds					
1) ATM Methane	0.00	0	N.D.	ppb	d
2) ATM Ethane	0.00	0	N.D.	ppb	d
3) ATM Ethene	0.00	0	N.D.	ppb	d

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

Data File: G:\ROCKY\DATA\200311RS\0317R06.D
Sample : BA08341W07



Quantitation Report (QT Reviewed)

Data File : G:\ROCKY\DATA\200311RS\0317R04.D Vial: 4
Acq On : 17 Mar 20 10:22 Operator: GA
Sample : 200317A Blk Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 17 10:24 2020 Quant Results File: RSK0311.RES

Method : G:\ROCKY\DATA\200311RS\RSK0311.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Mar 17 10:18:58 2020
Response via : Multiple Level Calibration

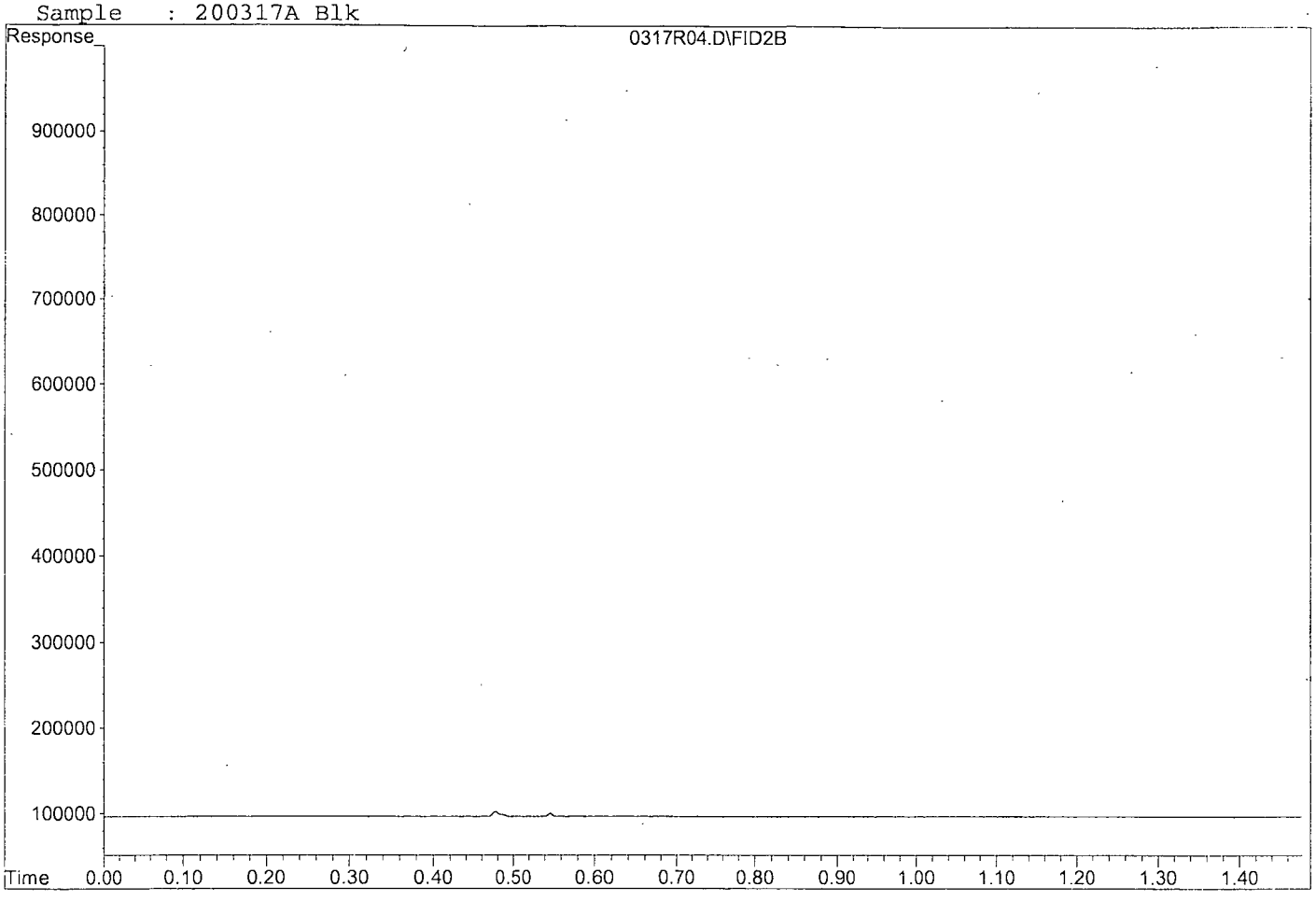
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units	
Target Compounds					
Target Compounds					
1) ATM Methane	0.00	0	N.D.	ppb	d
2) ATM Ethane	0.00	0	N.D.	ppb	d
3) ATM Ethene	0.00	0	N.D.	ppb	d

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

Quantitation Report

Data File: G:\ROCKY\DATA\200311RS\0317R04.D
Sample : 200317A Blk



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200311RS\0317R01.D Vial: 1
Acq On : 17 Mar 20 10:13 Operator: GA
Sample : 200317A CCV/LCS RSK Std 5 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 17 10:15 2020 Quant Results File: RSK0311.RES

Method : G:\ROCKY\DATA\200311RS\RSK0311.M (Chemstation Integrator)
Title : RSK 175
Last Update : Thu Mar 12 09:46:32 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

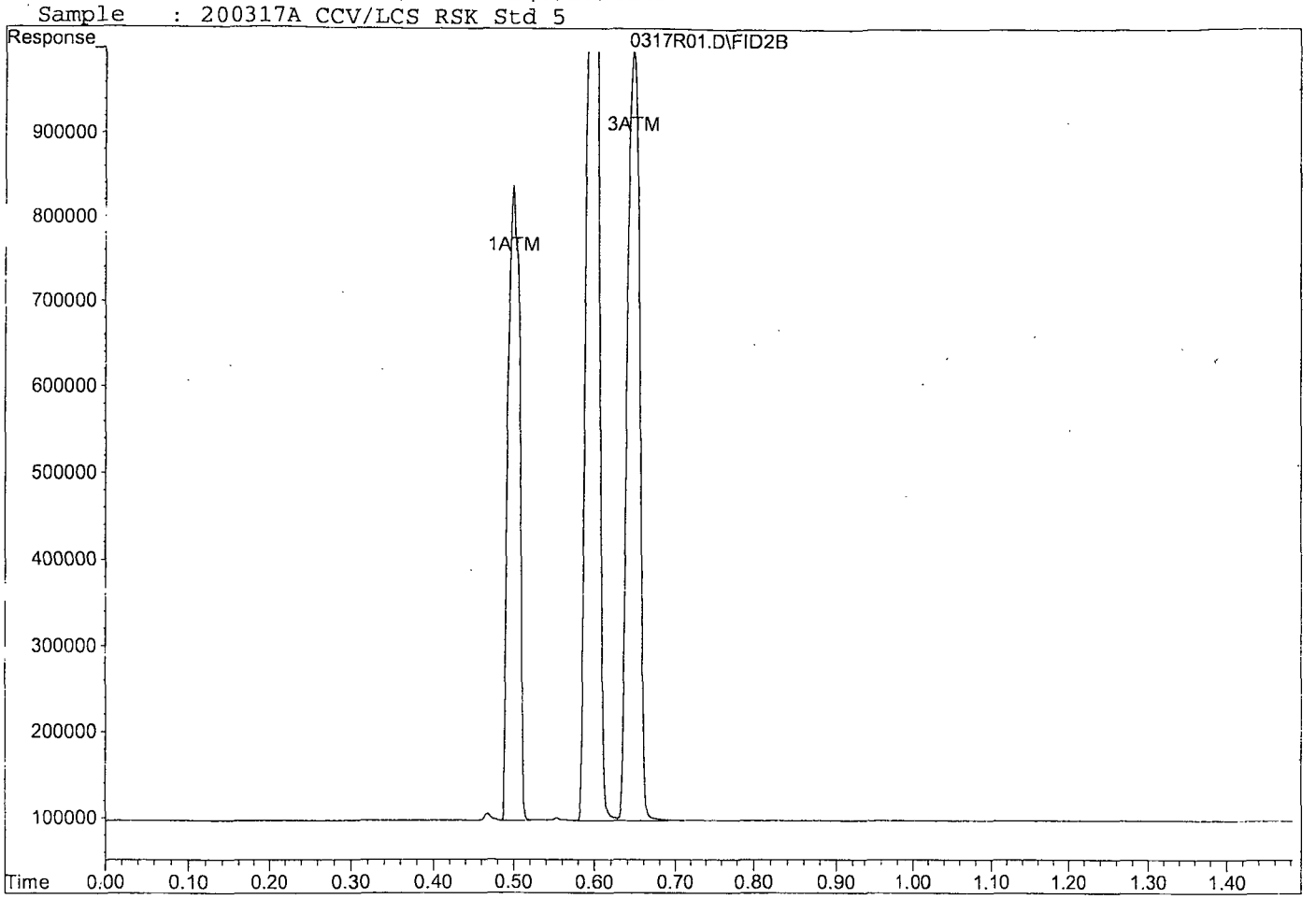
Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.50	742212	88.180 ppb
2) ATM Ethane	0.60	1175676	175.800 ppb
3) ATM Ethene	0.65	902894	178.678 ppb

Target Compounds

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

Quantitation Report

Data File: G:\ROCKY\DATA\200311RS\0317R01.D
Sample : 200317A CCV/LCS RSK Std 5



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200311RS\0317R03.D Vial: 3
Acq On : 17 Mar 20 10:19 Operator: GA
Sample : 200317A LCSD RSK Std 5 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 17 10:21 2020 Quant Results File: RSK0311.RES

Method : G:\ROCKY\DATA\200311RS\RSK0311.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Mar 17 10:18:58 2020
Response via : Multiple Level Calibration

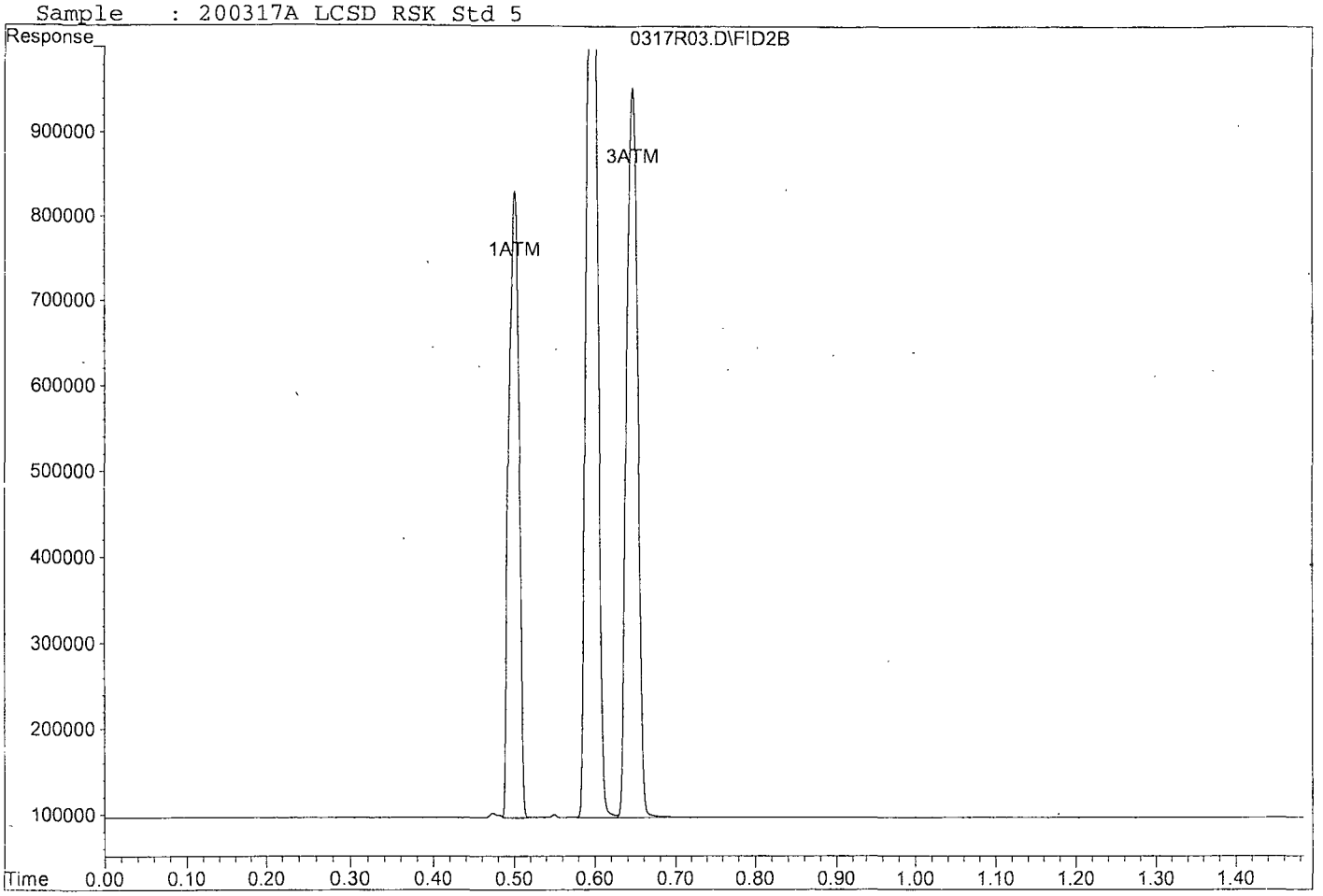
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.50	734180	87.082 ppb
2) ATM Ethane	0.60	1131198	168.284 ppb
3) ATM Ethene	0.65	857658	168.840 ppb

Target Compounds

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

Data File: G:\ROCKY\DATA\200311RS\0317R03.D
Sample : 200317A LCSD RSK Std 5



Primary Stock Source

10,000ppmV **Manufacture Expiration:** 09/21/21

RSK Gas Mix (Scott Specialty Gas) CAT#X04NI97CP140001 LOT#160-401558175-1

1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

RSK Calibration Curve (prepared in 1.0 L Tedlar Bags at room temp) **05/11/20** 03/11/20

Analyte	Conc Std 1 (1/2 = LOD) (ug/L)	Conc Std 2 (LOQ Chk) (ug/L)	Conc Std 3 (ug/L)	Conc Std 4 (ug/L)	Conc Std 5 (ug/L)	Conc Std 6 (ug/L)	Conc Std 7 (ug/L)
Methane (MW 16.04)	2.08	4.16	8.34	20.85	83.40	208.5	834.0
Ethane (MW 30.07)	3.91	7.81	15.6	39.09	156.35	390.9	1563.5
Ethene (MW 28.05)	3.65	7.30	14.6	36.46	145.84	364.6	1458.4
Stock Source	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1
Stock Conc (ppmv)	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV
Stock Aliquot (mL)	0.010	0.020	0.040	0.100	0.400	1.00	4.00
Final Volume P&T Water	32 mL	32 mL	32 mL	32 mL	32 mL	32 mL	32 mL

Second Source Stock Standard 10,000ppmV **Manufacturer Exp date 9-21-2021**

RSK Gas Mix (Scott Specialty Gas) Cat.# 23452, Lot # 160-401303032-1-39774

1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

Second Source **Expires 03/12/2020** **CMM 03/11/2020**

2.0mL of SS from tank into 980 mL Nitrogen

final conc: 13.3ug/L Methane, 25.0 ug/L Ethane, and 23.3 ug/L Ethene

CCV/LCS/LCSD **CMM 03/17/20**

Spike 0.400mL of 10,000ppmV into 32mL DI water, with 8mL Nitrogen headspace

final conc: 83.40ug/L Methane, 156.35ug/L Ethane, and 145.84ug/L Ethene

Injection Log

Directory: G:\ROCKY\DATA\200311RS\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	3	0311R03.D	1	RSK Std 1 03/11/2020		11 Mar 20 13:00
2	4	0311R04.D	1	RSK Std 2 03/11/2020		11 Mar 20 13:03
3	7	0311R07.D	1	RSK Std 3 03/11/2020		11 Mar 20 13:12
4	8	0311R08.D	1	RSK Std 4 03/11/2020		11 Mar 20 13:15
5	9	0311R09.D	1	RSK Std 5 03/11/2020		11 Mar 20 13:17
6	11	0311R11.D	1	RSK Std 6 03/11/2020		11 Mar 20 13:22
7	13	0311R13.D	1	RSK Std 7 03/11/2020		11 Mar 20 13:28
8	15	0311R15.D	1	RSK SS Std 5 03/11/2020		11 Mar 20 13:38
9	1	0317R01.D	1	200317A CCV/LCS RSK Std 5		17 Mar 20 10:13
10	3	0317R03.D	1	200317A LCSD RSK Std 5		17 Mar 20 10:19
11	4	0317R04.D	1	200317A Blk		17 Mar 20 10:22
12	5	0317R05.D	1	BA08340W02		17 Mar 20 10:25
13	6	0317R06.D	1	BA08341W07		17 Mar 20 10:27
14	9	0317R09.D	1	Ending CCV RSK Std 5 03/17/2020		17 Mar 20 10:38

METALS

Calibration Data

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM
ARF No: 91638 SDG: 91638

Analysis Date: 03/18/20 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 10:25	%R(1)	True CCV1	Found 12:25	%R(1)	True	Found	%R(1)	
Calcium (Ca)	12500	12448.1	99.6	25000	24437.9	97.8				P
Potassium (K)	12500	12475.5	99.8	10000	10344.8	103				P
Magnesium (Mg)	12500	12428.2	99.4	25000	25368.5	101				P
Manganese (Mn)	500	493.47	98.7	500	506.25	101				P
Sodium (Na)	12500	12428.1	99.4	12500	12947.6	104				P

(1) Control Limits: Metals 90-110 ILM02.0

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 91638 SDG: 91638

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analysis Date: 03/18/20

Analyte	Initial Calibration Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
	10:30		12:30						09:54		
Calcium (Ca)	1000.00	U	1000.00	U					1000.00	U	P
Potassium (K)	3000.00	U	3000.00	U					3000.00	U	P
Magnesium (Mg)	500.00	U	500.00	U					500.00	U	P
Manganese (Mn)	10.00	U	10.00	U					10.00	U	P
Sodium (Na)	5000.00	U	5000.00	U					5000.00	U	P

A.P.P.L. INC.
4
ICP INTERFERENCE CHECK SAMPLE

Lab Name:	A.P.P.L. INC.	Contract:	AECOM
ARF No.:	91638	SDG:	91638
ICP ID Number:	Cyrus	ICS Source:	Environmental Express

Analysis Date: 03/18/20 Concentration Units: ug/L

Analyte	True		Initial Found		
	Sol A	Sol AB	Sol A 10:52	Sol AB 11:10	%R(1)
Calcium (Ca)	100000	100000	100346.17	98709.35	98.7
Potassium (K)			-25.09	-26.59	
Magnesium (Mg)	100000	100000	102069.23	101705.49	102
Manganese (Mn)		250	-0.31	238.78	95.5
Sodium (Na)			-15.3	-7.77	

(1) Control Limits: Metals 80-120

Low Level ICV

Sample Name	Acq Date Time	Run Sequence	Analyte	Actual Conc (ug/L)	Spiked Conc (ug/L)	Control Limits	% Recovery	QC Flag
LLICV	3/18/20 10:34 AM	200318A	Calcium	51.29	50	80-120%	103	
LLICV	3/18/20 10:34 AM	200318A	Potassium	497.8	500	80-120%	100	
LLICV	3/18/20 10:34 AM	200318A	Magnesium	27.82	25	80-120%	111	
LLICV	3/18/20 10:34 AM	200318A	Manganese	0.95	1	80-120%	95	
LLICV	3/18/20 10:34 AM	200318A	Sodium	522.7	500	80-120%	105	

Solution Name: Blank

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
Blank	03/18/20 9:54:53 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	0.00	ug/L	45.00	0.00
Ag C (338.289 nm)	0.00	ug/L	10.44	0.00
Al (237.312 nm)	0.00	ug/L	20.56	0.00
Al C (308.215 nm)	0.00	ug/L	4198.51	0.00
Al C (396.152 nm)	0.00	ug/L	296.87	0.00
Al RAD (396.152 nm)	0.00	ug/L	32.55	0.00
As (188.980 nm)	0.00	ug/L	-5.07	0.00
As C (193.696 nm)	0.00	ug/L	16.56	0.00
B (249.678 nm)	0.00	ug/L	37.62	0.00
Ba (233.527 nm)	0.00	ug/L	12.50	0.00
Ba (455.403 nm)	0.00	ug/L	528.00	0.00
Ba RAD (233.527 nm)	0.00	ug/L	6.24	0.00
Be (313.107 nm)	0.00	ug/L	130.41	0.00
Be C (234.861 nm)	0.00	ug/L	30.95	0.00
Ca (315.887 nm)	0.00	ug/L	155.04	0.00
Ca RAD (315.887 nm)	0.00	ug/L	24.88	0.00
Cd (214.439 nm)	0.00	ug/L	17.26	0.00
Cd C (226.502 nm)	0.00	ug/L	31.77	0.00
Cd C (228.802 nm)	0.00	ug/L	4.76	0.00
Co (228.615 nm)	0.00	ug/L	31.14	0.00
Co C (230.786 nm)	0.00	ug/L	23.78	0.00
Cr (267.716 nm)	0.00	ug/L	11.87	0.00
Cr C (205.560 nm)	0.00	ug/L	18.21	0.00
Cu (327.395 nm)	0.00	ug/L	38.34	0.00
Cu C (324.754 nm)	0.00	ug/L	767.58	0.00
Fe (259.940 nm)	0.00	ug/L	197.69	0.00
Fe (261.187 nm)	0.00	ug/L	62.01	0.00
Fe C (238.204 nm)	0.00	ug/L	322.44	0.00
Fe RAD (259.940 nm)	0.00	ug/L	20.58	0.00
Fe RAD (261.187 nm)	0.00	ug/L	10.32	0.00
K RAD (766.491 nm)	0.00	ug/L	105.35	0.00
Mg C (279.078 nm)	0.00	ug/L	64.77	0.00
Mg RAD (279.078 nm)	0.00	ug/L	11.08	0.00
Mn (257.610 nm)	0.00	ug/L	80.17	0.00
Mn C (260.568 nm)	0.00	ug/L	19.29	0.00
Mo (202.032 nm)	0.00	ug/L	15.52	0.00
Mo C (203.846 nm)	0.00	ug/L	1.20	0.00
Mo C (204.598 nm)	0.00	ug/L	6.58	0.00
Na RAD (588.995 nm)	0.00	ug/L	2147.08	0.00
Na RAD (589.592 nm)	0.00	ug/L	116.21	0.00
Ni (231.604 nm)	0.00	ug/L	6.80	0.00
Ni C (221.648 nm)	0.00	ug/L	4.90	0.00
P (213.618 nm)	0.00	ug/L	13.85	0.00
P C (214.914 nm)	0.00	ug/L	6.94	0.00

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	0.00	ug/L	29.07	0.00
Sb (206.834 nm)	0.00	ug/L	16.88	0.00
Sb (217.582 nm)	0.00	ug/L	10.90	0.00
Sb C (231.146 nm)	0.00	ug/L	10.27	0.00
Se (196.026 nm)	0.00	ug/L	12.88	0.00
Sn (189.925 nm)	0.00	ug/L	9.76	0.00
Sr RAD (421.552 nm)	0.00	ug/L	50.29	0.00
Ti (334.941 nm)	0.00	ug/L	27.55	0.00
Tl (190.794 nm)	0.00	ug/L	1.23	0.00
V (292.401 nm)	0.00	ug/L	-0.10	0.00
V C (311.837 nm)	0.00	ug/L	50.51	0.00
Zn (206.200 nm)	0.00	ug/L	24.60	0.00
Zn C (202.548 nm)	0.00	ug/L	72.84	0.00
Zn RAD (206.200 nm)	0.00	ug/L	4.19	0.00

Solution Name: Standard 1

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
Standard 1	03/18/20 9:59:19 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)		ug/L	81.17	
Ag C (338.289 nm)		ug/L	16.35	
Al (237.312 nm)	50.00	ug/L	148.91	50.00
Al C (308.215 nm)	50.00	ug/L	4722.32	50.00
Al C (396.152 nm)	50.00	ug/L	2263.44	50.00
Al RAD (396.152 nm)	50.00	ug/L	317.13	50.00
As (188.980 nm)		ug/L	-1.04	
As C (193.696 nm)		ug/L	24.07	
B (249.678 nm)	25.00	ug/L	555.77	25.00
Ba (233.527 nm)	1.50	ug/L	162.33	1.50
Ba (455.403 nm)	1.50	ug/L	3565.19	1.50
Ba RAD (233.527 nm)	1.50	ug/L	18.77	1.50
Be (313.107 nm)	1.00	ug/L	1994.42	1.00
Be C (234.861 nm)	1.00	ug/L	681.18	1.00
Ca (315.887 nm)	50.00	ug/L	1142.35	50.00
Ca RAD (315.887 nm)	50.00	ug/L	101.14	50.00
Cd (214.439 nm)		ug/L	47.67	
Cd C (226.502 nm)		ug/L	48.84	
Cd C (228.802 nm)		ug/L	13.10	
Co (228.615 nm)		ug/L	70.23	
Co C (230.786 nm)		ug/L	86.06	
Cr (267.716 nm)		ug/L	57.98	
Cr C (205.560 nm)		ug/L	46.95	
Cu (327.395 nm)		ug/L	174.59	
Cu C (324.754 nm)		ug/L	876.51	
Fe (259.940 nm)	25.00	ug/L	1393.54	25.00
Fe (261.187 nm)	25.00	ug/L	285.53	25.00
Fe C (238.204 nm)	25.00	ug/L	2350.94	25.00
Fe RAD (259.940 nm)	25.00	ug/L	160.19	25.00
Fe RAD (261.187 nm)	25.00	ug/L	44.91	25.00
K RAD (766.491 nm)	500.00	ug/L	867.93	500.00
Mg C (279.078 nm)	25.00	ug/L	292.77	25.00
Mg RAD (279.078 nm)	25.00	ug/L	27.74	25.00
Mn (257.610 nm)	1.00	ug/L	437.67	1.00
Mn C (260.568 nm)	1.00	ug/L	96.43	1.00
Mo (202.032 nm)		ug/L	33.68	
Mo C (203.846 nm)		ug/L	10.59	
Mo C (204.598 nm)		ug/L	19.65	
Na RAD (588.995 nm)	500.00	ug/L	14686.68	500.00
Na RAD (589.592 nm)	500.00	ug/L	8280.54	500.00
Ni (231.604 nm)		ug/L	36.14	
Ni C (221.648 nm)		ug/L	28.67	
P (213.618 nm)	12.50	ug/L	61.17	12.50
P C (214.914 nm)	12.50	ug/L	18.66	12.50

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)		ug/L	40.12	
Sb (206.834 nm)		ug/L	24.71	
Sb (217.582 nm)		ug/L	17.99	
Sb C (231.146 nm)		ug/L	16.83	
Se (196.026 nm)		ug/L	11.06	
Sn (189.925 nm)		ug/L	31.09	
Sr RAD (421.552 nm)	1.00	ug/L	543.34	1.00
Ti (334.941 nm)		ug/L	886.01	
Tl (190.794 nm)		ug/L	4.11	
V (292.401 nm)		ug/L	13.73	
V C (311.837 nm)		ug/L	49.28	
Zn (206.200 nm)	25.00	ug/L	1093.35	25.00
Zn C (202.548 nm)	25.00	ug/L	2725.10	25.00
Zn RAD (206.200 nm)	25.00	ug/L	59.17	25.00

Solution Name: Standard 2

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
Standard 2	03/18/20 10:03:46 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	1.00	ug/L	128.07	1.00
Ag C (338.289 nm)	1.00	ug/L	16.12	1.00
Al (237.312 nm)	100.00	ug/L	296.38	100.00
Al C (308.215 nm)	100.00	ug/L	5298.98	100.00
Al C (396.152 nm)	100.00	ug/L	4307.62	100.00
Al RAD (396.152 nm)	100.00	ug/L	614.37	100.00
As (188.980 nm)	4.00	ug/L	8.36	4.00
As C (193.696 nm)	4.00	ug/L	26.09	4.00
B (249.678 nm)	50.00	ug/L	1061.98	50.00
Ba (233.527 nm)	3.00	ug/L	311.90	3.00
Ba (455.403 nm)	3.00	ug/L	6830.86	3.00
Ba RAD (233.527 nm)	3.00	ug/L	32.08	3.00
Be (313.107 nm)	2.00	ug/L	3933.88	2.00
Be C (234.861 nm)	2.00	ug/L	1361.62	2.00
Ca (315.887 nm)	100.00	ug/L	2027.75	100.00
Ca RAD (315.887 nm)	100.00	ug/L	189.74	100.00
Cd (214.439 nm)	0.50	ug/L	74.78	0.50
Cd C (226.502 nm)	0.50	ug/L	73.63	0.50
Cd C (228.802 nm)	0.50	ug/L	21.25	0.50
Co (228.615 nm)	5.00	ug/L	108.53	5.00
Co C (230.786 nm)	5.00	ug/L	158.92	5.00
Cr (267.716 nm)	1.00	ug/L	90.87	1.00
Cr C (205.560 nm)	1.00	ug/L	72.36	1.00
Cu (327.395 nm)	5.00	ug/L	300.33	5.00
Cu C (324.754 nm)	5.00	ug/L	1001.71	5.00
Fe (259.940 nm)	50.00	ug/L	2774.46	50.00
Fe (261.187 nm)	50.00	ug/L	559.92	50.00
Fe C (238.204 nm)	50.00	ug/L	4666.36	50.00
Fe RAD (259.940 nm)	50.00	ug/L	321.50	50.00
Fe RAD (261.187 nm)	50.00	ug/L	74.62	50.00
K RAD (766.491 nm)	1000.00	ug/L	1641.61	1000.00
Mg C (279.078 nm)	50.00	ug/L	539.11	50.00
Mg RAD (279.078 nm)	50.00	ug/L	54.78	50.00
Mn (257.610 nm)	2.00	ug/L	832.43	2.00
Mn C (260.568 nm)	2.00	ug/L	186.76	2.00
Mo (202.032 nm)	2.00	ug/L	51.47	2.00
Mo C (203.846 nm)	2.00	ug/L	18.17	2.00
Mo C (204.598 nm)	2.00	ug/L	34.55	2.00
Na RAD (588.995 nm)	1000.00	ug/L	26728.48	1000.00
Na RAD (589.592 nm)	1000.00	ug/L	16284.24	1000.00
Ni (231.604 nm)	2.00	ug/L	65.20	2.00
Ni C (221.648 nm)	2.00	ug/L	48.25	2.00
P (213.618 nm)	25.00	ug/L	111.12	25.00
P C (214.914 nm)	25.00	ug/L	39.89	25.00

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	3.00	ug/L	52.38	3.00
Sb (206.834 nm)	4.00	ug/L	31.80	4.00
Sb (217.582 nm)	4.00	ug/L	21.81	4.00
Sb C (231.146 nm)	4.00	ug/L	21.64	4.00
Se (196.026 nm)	4.00	ug/L	15.82	4.00
Sn (189.925 nm)	6.00	ug/L	54.26	6.00
Sr RAD (421.552 nm)	2.00	ug/L	1069.25	2.00
Ti (334.941 nm)	5.00	ug/L	1758.43	5.00
Tl (190.794 nm)		ug/L	7.40	
V (292.401 nm)	1.00	ug/L	25.70	1.00
V C (311.837 nm)	1.00	ug/L	55.29	1.00
Zn (206.200 nm)	50.00	ug/L	2176.12	50.00
Zn C (202.548 nm)	50.00	ug/L	5441.53	50.00
Zn RAD (206.200 nm)	50.00	ug/L	117.86	50.00

Solution Name: Standard 3

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
Standard 3	03/18/20 10:08:12 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	3.00	ug/L	321.77	3.00
Ag C (338.289 nm)	3.00	ug/L	36.44	3.00
Al (237.312 nm)		ug/L	837.94	
Al C (308.215 nm)		ug/L	7451.59	
Al C (396.152 nm)		ug/L	12203.03	
Al RAD (396.152 nm)		ug/L	1736.94	
As (188.980 nm)		ug/L	42.05	
As C (193.696 nm)		ug/L	50.91	
B (249.678 nm)	150.00	ug/L	2939.18	150.00
Ba (233.527 nm)		ug/L	895.95	
Ba (455.403 nm)		ug/L	19295.83	
Ba RAD (233.527 nm)		ug/L	86.09	
Be (313.107 nm)	6.00	ug/L	11487.50	6.00
Be C (234.861 nm)	6.00	ug/L	4047.08	6.00
Ca (315.887 nm)	300.00	ug/L	6216.67	300.00
Ca RAD (315.887 nm)	300.00	ug/L	517.20	300.00
Cd (214.439 nm)	1.50	ug/L	191.18	1.50
Cd C (226.502 nm)	1.50	ug/L	198.08	1.50
Cd C (228.802 nm)	1.50	ug/L	48.57	1.50
Co (228.615 nm)		ug/L	251.81	
Co C (230.786 nm)		ug/L	421.57	
Cr (267.716 nm)	3.00	ug/L	231.91	3.00
Cr C (205.560 nm)	3.00	ug/L	172.93	3.00
Cu (327.395 nm)		ug/L	857.64	
Cu C (324.754 nm)		ug/L	1461.59	
Fe (259.940 nm)	150.00	ug/L	7866.24	150.00
Fe (261.187 nm)	150.00	ug/L	1534.20	150.00
Fe C (238.204 nm)	150.00	ug/L	13235.21	150.00
Fe RAD (259.940 nm)	150.00	ug/L	901.98	150.00
Fe RAD (261.187 nm)	150.00	ug/L	193.47	150.00
K RAD (766.491 nm)	3000.00	ug/L	4669.94	3000.00
Mg C (279.078 nm)	150.00	ug/L	1520.65	150.00
Mg RAD (279.078 nm)	150.00	ug/L	145.54	150.00
Mn (257.610 nm)	6.00	ug/L	2363.27	6.00
Mn C (260.568 nm)	6.00	ug/L	526.87	6.00
Mo (202.032 nm)	6.00	ug/L	132.93	6.00
Mo C (203.846 nm)	6.00	ug/L	43.83	6.00
Mo C (204.598 nm)	6.00	ug/L	88.66	6.00
Na RAD (588.995 nm)	3000.00	ug/L	73833.41	3000.00
Na RAD (589.592 nm)	3000.00	ug/L	47033.32	3000.00
Ni (231.604 nm)	6.00	ug/L	147.96	6.00
Ni C (221.648 nm)	6.00	ug/L	118.76	6.00
P (213.618 nm)		ug/L	310.92	
P C (214.914 nm)		ug/L	110.37	

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)		ug/L	113.20	
Sb (206.834 nm)		ug/L	50.66	
Sb (217.582 nm)		ug/L	41.68	
Sb C (231.146 nm)		ug/L	40.09	
Se (196.026 nm)		ug/L	29.95	
Sn (189.925 nm)		ug/L	148.37	
Sr RAD (421.552 nm)	6.00	ug/L	3118.39	6.00
Ti (334.941 nm)		ug/L	5082.75	
Tl (190.794 nm)		ug/L	26.77	
V (292.401 nm)	3.00	ug/L	129.62	3.00
V C (311.837 nm)	3.00	ug/L	146.33	3.00
Zn (206.200 nm)	150.00	ug/L	6343.03	150.00
Zn C (202.548 nm)	150.00	ug/L	16007.79	150.00
Zn RAD (206.200 nm)	150.00	ug/L	337.15	150.00

Solution Name: Standard 4

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
Standard 4	03/18/20 10:12:39 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	5.00	ug/L	524.40	5.00
Ag C (338.289 nm)	5.00	ug/L	43.30	5.00
Al (237.312 nm)	200.00	ug/L	589.32	200.00
Al C (308.215 nm)	200.00	ug/L	6425.34	200.00
Al C (396.152 nm)	200.00	ug/L	8528.14	200.00
Al RAD (396.152 nm)	200.00	ug/L	1244.67	200.00
As (188.980 nm)	10.00	ug/L	37.71	10.00
As C (193.696 nm)	10.00	ug/L	46.96	10.00
B (249.678 nm)		ug/L	250.61	
Ba (233.527 nm)	10.00	ug/L	1034.42	10.00
Ba (455.403 nm)	10.00	ug/L	22252.52	10.00
Ba RAD (233.527 nm)	10.00	ug/L	101.14	10.00
Be (313.107 nm)	10.00	ug/L	20146.61	10.00
Be C (234.861 nm)	10.00	ug/L	7040.58	10.00
Ca (315.887 nm)	500.00	ug/L	11013.18	500.00
Ca RAD (315.887 nm)	500.00	ug/L	917.82	500.00
Cd (214.439 nm)	10.00	ug/L	1261.84	10.00
Cd C (226.502 nm)	10.00	ug/L	1209.10	10.00
Cd C (228.802 nm)	10.00	ug/L	301.42	10.00
Co (228.615 nm)	10.00	ug/L	185.44	10.00
Co C (230.786 nm)	10.00	ug/L	293.63	10.00
Cr (267.716 nm)	10.00	ug/L	773.19	10.00
Cr C (205.560 nm)	10.00	ug/L	555.39	10.00
Cu (327.395 nm)	10.00	ug/L	577.95	10.00
Cu C (324.754 nm)	10.00	ug/L	1226.36	10.00
Fe (259.940 nm)	200.00	ug/L	11043.16	200.00
Fe (261.187 nm)	200.00	ug/L	2145.35	200.00
Fe C (238.204 nm)	200.00	ug/L	18623.57	200.00
Fe RAD (259.940 nm)	200.00	ug/L	1282.45	200.00
Fe RAD (261.187 nm)	200.00	ug/L	271.66	200.00
K RAD (766.491 nm)		ug/L	446.15	
Mg C (279.078 nm)	500.00	ug/L	5200.31	500.00
Mg RAD (279.078 nm)	500.00	ug/L	502.61	500.00
Mn (257.610 nm)	10.00	ug/L	4085.05	10.00
Mn C (260.568 nm)	10.00	ug/L	910.20	10.00
Mo (202.032 nm)	10.00	ug/L	227.47	10.00
Mo C (203.846 nm)	10.00	ug/L	72.52	10.00
Mo C (204.598 nm)	10.00	ug/L	146.79	10.00
Na RAD (588.995 nm)		ug/L	8865.15	
Na RAD (589.592 nm)		ug/L	4587.71	
Ni (231.604 nm)	10.00	ug/L	248.52	10.00
Ni C (221.648 nm)	10.00	ug/L	193.89	10.00
P (213.618 nm)	50.00	ug/L	220.99	50.00
P C (214.914 nm)	50.00	ug/L	76.19	50.00

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	10.00	ug/L	126.57	10.00
Sb (206.834 nm)	10.00	ug/L	49.23	10.00
Sb (217.582 nm)	10.00	ug/L	47.89	10.00
Sb C (231.146 nm)	10.00	ug/L	35.65	10.00
Se (196.026 nm)	10.00	ug/L	33.45	10.00
Sn (189.925 nm)	10.00	ug/L	90.58	10.00
Sr RAD (421.552 nm)	10.00	ug/L	5407.87	10.00
Ti (334.941 nm)	10.00	ug/L	3590.35	10.00
Tl (190.794 nm)	10.00	ug/L	22.97	10.00
V (292.401 nm)	10.00	ug/L	423.11	10.00
V C (311.837 nm)	10.00	ug/L	637.49	10.00
Zn (206.200 nm)		ug/L	495.87	
Zn C (202.548 nm)		ug/L	1262.34	
Zn RAD (206.200 nm)		ug/L	29.62	

Solution Name: Standard 5

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
Standard 5	03/18/20 10:17:06 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	250.00	ug/L	23045.37	250.00
Ag C (338.289 nm)	250.00	ug/L	1680.99	250.00
Al (237.312 nm)	10000.00	ug/L	27142.46	10000.00
Al C (308.215 nm)	10000.00	ug/L	114238.82	10000.00
Al C (396.152 nm)	10000.00	ug/L	416199.91	10000.00
Al RAD (396.152 nm)	10000.00	ug/L	56765.85	10000.00
As (188.980 nm)	500.00	ug/L	2115.80	500.00
As C (193.696 nm)	500.00	ug/L	1529.60	500.00
B (249.678 nm)	500.00	ug/L	9910.22	500.00
Ba (233.527 nm)	500.00	ug/L	47759.10	500.00
Ba (455.403 nm)	500.00	ug/L	1020165.55	500.00
Ba RAD (233.527 nm)	500.00	ug/L	4445.49	500.00
Be (313.107 nm)	500.00	ug/L	970473.74	500.00
Be C (234.861 nm)	500.00	ug/L	340794.78	500.00
Ca (315.887 nm)	25000.00	ug/L	506315.18	25000.00
Ca RAD (315.887 nm)	25000.00	ug/L	41520.75	25000.00
Cd (214.439 nm)	500.00	ug/L	57490.38	500.00
Cd C (226.502 nm)	500.00	ug/L	55191.85	500.00
Cd C (228.802 nm)	500.00	ug/L	14130.47	500.00
Co (228.615 nm)	500.00	ug/L	6725.13	500.00
Co C (230.786 nm)	500.00	ug/L	12400.57	500.00
Cr (267.716 nm)	500.00	ug/L	35127.63	500.00
Cr C (205.560 nm)	500.00	ug/L	24909.38	500.00
Cu (327.395 nm)	500.00	ug/L	26613.09	500.00
Cu C (324.754 nm)	500.00	ug/L	22978.14	500.00
Fe (259.940 nm)	10000.00	ug/L	495607.07	10000.00
Fe (261.187 nm)	10000.00	ug/L	95903.81	10000.00
Fe C (238.204 nm)	10000.00	ug/L	836338.98	10000.00
Fe RAD (259.940 nm)	10000.00	ug/L	57494.26	10000.00
Fe RAD (261.187 nm)	10000.00	ug/L	11856.45	10000.00
K RAD (766.491 nm)	10000.00	ug/L	15405.10	10000.00
Mg C (279.078 nm)	25000.00	ug/L	243108.41	25000.00
Mg RAD (279.078 nm)	25000.00	ug/L	23343.52	25000.00
Mn (257.610 nm)	500.00	ug/L	185126.12	500.00
Mn C (260.568 nm)	500.00	ug/L	40987.33	500.00
Mo (202.032 nm)	500.00	ug/L	10015.74	500.00
Mo C (203.846 nm)	500.00	ug/L	3088.33	500.00
Mo C (204.598 nm)	500.00	ug/L	6565.18	500.00
Na RAD (588.995 nm)	12500.00	ug/L	296450.43	12500.00
Na RAD (589.592 nm)	12500.00	ug/L	194713.91	12500.00
Ni (231.604 nm)	500.00	ug/L	10814.34	500.00
Ni C (221.648 nm)	500.00	ug/L	8652.19	500.00
P (213.618 nm)	2500.00	ug/L	10188.35	2500.00
P C (214.914 nm)	2500.00	ug/L	3408.58	2500.00

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	500.00	ug/L	4233.63	500.00
Sb (206.834 nm)	500.00	ug/L	1341.75	500.00
Sb (217.582 nm)	500.00	ug/L	1889.94	500.00
Sb C (231.146 nm)	500.00	ug/L	1175.99	500.00
Se (196.026 nm)	500.00	ug/L	1035.62	500.00
Sn (189.925 nm)	500.00	ug/L	3771.08	500.00
Sr RAD (421.552 nm)	500.00	ug/L	251771.06	500.00
Ti (334.941 nm)	500.00	ug/L	168883.81	500.00
Tl (190.794 nm)	500.00	ug/L	1017.54	500.00
V (292.401 nm)	500.00	ug/L	19959.03	500.00
V C (311.837 nm)	500.00	ug/L	33450.29	500.00
Zn (206.200 nm)	500.00	ug/L	19583.66	500.00
Zn C (202.548 nm)	500.00	ug/L	50124.62	500.00
Zn RAD (206.200 nm)	500.00	ug/L	1069.87	500.00

Solution Name: Standard 6

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
Standard 6	03/18/20 10:21:33 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	500.00	ug/L	45778.61	500.00
Ag C (338.289 nm)	500.00	ug/L	3350.33	500.00
Al (237.312 nm)	20000.00	ug/L	53548.81	20000.00
Al C (308.215 nm)	20000.00	ug/L	226510.40	20000.00
Al C (396.152 nm)	20000.00	ug/L	837693.76	20000.00
Al RAD (396.152 nm)	20000.00	ug/L	111969.77	20000.00
As (188.980 nm)	1000.00	ug/L	4215.09	1000.00
As C (193.696 nm)	1000.00	ug/L	2999.63	1000.00
B (249.678 nm)	1000.00	ug/L	19744.75	1000.00
Ba (233.527 nm)	1000.00	ug/L	93860.98	1000.00
Ba (455.403 nm)	1000.00	ug/L	2015371.19	1000.00
Ba RAD (233.527 nm)	1000.00	ug/L	8649.28	1000.00
Be (313.107 nm)	1000.00	ug/L	1914492.71	1000.00
Be C (234.861 nm)	1000.00	ug/L	671152.12	1000.00
Ca (315.887 nm)	50000.00	ug/L	993628.78	50000.00
Ca RAD (315.887 nm)	50000.00	ug/L	81407.91	50000.00
Cd (214.439 nm)	1000.00	ug/L	111972.77	1000.00
Cd C (226.502 nm)	1000.00	ug/L	107673.12	1000.00
Cd C (228.802 nm)	1000.00	ug/L	27911.37	1000.00
Co (228.615 nm)	1000.00	ug/L	13117.66	1000.00
Co C (230.786 nm)	1000.00	ug/L	24281.68	1000.00
Cr (267.716 nm)	1000.00	ug/L	69014.18	1000.00
Cr C (205.560 nm)	1000.00	ug/L	48637.97	1000.00
Cu (327.395 nm)	1000.00	ug/L	53380.10	1000.00
Cu C (324.754 nm)	1000.00	ug/L	44842.87	1000.00
Fe (259.940 nm)	20000.00	ug/L	965940.92	20000.00
Fe (261.187 nm)	20000.00	ug/L	187546.41	20000.00
Fe C (238.204 nm)	20000.00	ug/L	1625561.77	20000.00
Fe RAD (259.940 nm)	20000.00	ug/L	111798.02	20000.00
Fe RAD (261.187 nm)	20000.00	ug/L	23095.28	20000.00
K RAD (766.491 nm)	20000.00	ug/L	30195.98	20000.00
Mg C (279.078 nm)	50000.00	ug/L	480814.24	50000.00
Mg RAD (279.078 nm)	50000.00	ug/L	45849.04	50000.00
Mn (257.610 nm)	1000.00	ug/L	362836.39	1000.00
Mn C (260.568 nm)	1000.00	ug/L	80179.80	1000.00
Mo (202.032 nm)	1000.00	ug/L	19764.89	1000.00
Mo C (203.846 nm)	1000.00	ug/L	6103.36	1000.00
Mo C (204.598 nm)	1000.00	ug/L	13010.09	1000.00
Na RAD (588.995 nm)	25000.00	ug/L	575272.79	25000.00
Na RAD (589.592 nm)	25000.00	ug/L	383889.87	25000.00
Ni (231.604 nm)	1000.00	ug/L	21086.00	1000.00
Ni C (221.648 nm)	1000.00	ug/L	16860.96	1000.00
P (213.618 nm)	5000.00	ug/L	20207.81	5000.00
P C (214.914 nm)	5000.00	ug/L	6775.48	5000.00

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	1000.00	ug/L	8261.86	1000.00
Sb (206.834 nm)	1000.00	ug/L	2614.65	1000.00
Sb (217.582 nm)	1000.00	ug/L	3721.70	1000.00
Sb C (231.146 nm)	1000.00	ug/L	2307.12	1000.00
Se (196.026 nm)	1000.00	ug/L	2034.95	1000.00
Sn (189.925 nm)	1000.00	ug/L	7342.58	1000.00
Sr RAD (421.552 nm)	1000.00	ug/L	490901.15	1000.00
Ti (334.941 nm)	1000.00	ug/L	334597.15	1000.00
Tl (190.794 nm)	1000.00	ug/L	2037.04	1000.00
V (292.401 nm)	1000.00	ug/L	39331.66	1000.00
V C (311.837 nm)	1000.00	ug/L	66488.27	1000.00
Zn (206.200 nm)	1000.00	ug/L	37560.35	1000.00
Zn C (202.548 nm)	1000.00	ug/L	97615.92	1000.00
Zn RAD (206.200 nm)	1000.00	ug/L	2055.01	1000.00

Solution Name: ICV

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
ICV	03/18/20 10:25:59 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	246.47	ug/L	22631.67	246.47
Ag C (338.289 nm)	245.63	ug/L	1650.88	245.63
Al (237.312 nm)	12458.54	ug/L	33530.27	12458.54
Al C (308.215 nm)	12279.51	ug/L	140193.80	12279.51
Al C (396.152 nm)	12332.58	ug/L	510424.69	12332.58
Al RAD (396.152 nm)	12389.82	ug/L	70281.32	12389.82
As (188.980 nm)	499.59	ug/L	2110.12	499.59
As C (193.696 nm)	492.77	ug/L	1503.76	492.77
B (249.678 nm)	494.36	ug/L	9830.13	494.36
Ba (233.527 nm)	499.42	ug/L	47797.53	499.42
Ba (455.403 nm)	491.49	ug/L	1017504.87	491.49
Ba RAD (233.527 nm)	504.15	ug/L	4439.87	504.15
Be (313.107 nm)	486.60	ug/L	953756.69	486.60
Be C (234.861 nm)	485.36	ug/L	333888.98	485.36
Ca (315.887 nm)	11764.11	ug/L	252975.30	11764.11
Ca RAD (315.887 nm)	12448.13	ug/L	20630.97	12448.13
Cd (214.439 nm)	484.84	ug/L	57212.64	484.84
Cd C (226.502 nm)	Uncal	ug/L	54888.56 Q	Uncal
Cd C (228.802 nm)	496.59	ug/L	13952.79	496.59
Co (228.615 nm)	497.54	ug/L	6788.10	497.54
Co C (230.786 nm)	506.08	ug/L	12505.61	506.08
Cr (267.716 nm)	496.53	ug/L	34746.03	496.53
Cr C (205.560 nm)	Uncal	ug/L	24635.98 Q	Uncal
Cu (327.395 nm)	493.82	ug/L	26379.03	493.82
Cu C (324.754 nm)	498.42	ug/L	22808.31	498.42
Fe (259.940 nm)	11410.41	ug/L	615447.06	11410.41
Fe (261.187 nm)	12221.72	ug/L	119182.83	12221.72
Fe C (238.204 nm)	11550.15	ug/L	1039026.87	11550.15
Fe RAD (259.940 nm)	12461.04	ug/L	71404.89	12461.04
Fe RAD (261.187 nm)	12469.37	ug/L	14714.25	12469.37
K RAD (766.491 nm)	12475.57	ug/L	19017.99	12475.57
Mg C (279.078 nm)	12108.68	ug/L	120954.39	12108.68
Mg RAD (279.078 nm)	12428.28	ug/L	11554.01	12428.28
Mn (257.610 nm)	493.47	ug/L	182845.62	493.47
Mn C (260.568 nm)	Uncal	ug/L	40383.45 Q	Uncal
Mo (202.032 nm)	483.84	ug/L	9648.73	483.84
Mo C (203.846 nm)	483.76	ug/L	2984.65	483.76
Mo C (204.598 nm)	485.46	ug/L	6345.75	485.46
Na RAD (588.995 nm)	12428.10	ug/L	293380.39	12428.10
Na RAD (589.592 nm)	12327.97	ug/L	192834.96	12327.97
Ni (231.604 nm)	498.86	ug/L	10879.34	498.86
Ni C (221.648 nm)	510.10	ug/L	8722.40	510.10
P (213.618 nm)	2449.44	ug/L	10005.05	2449.44
P C (214.914 nm)	2473.82	ug/L	3368.01	2473.82

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	494.79	ug/L	4212.45	494.79
Sb (206.834 nm)	466.63	ug/L	1251.47	466.63
Sb (217.582 nm)	470.15	ug/L	1762.07	470.15
Sb C (231.146 nm)	470.62	ug/L	1093.13	470.62
Se (196.026 nm)	Uncal	ug/L	1017.61 Q	Uncal
Sn (189.925 nm)	250.34	ug/L	1858.45	250.34
Sr RAD (421.552 nm)	495.47	ug/L	248787.80	495.47
Ti (334.941 nm)	489.29	ug/L	164564.64	489.29
Tl (190.794 nm)	501.61	ug/L	1027.10	501.61
V (292.401 nm)	Uncal	ug/L	19523.98 Q	Uncal
V C (311.837 nm)	489.13	ug/L	32626.23	489.13
Zn (206.200 nm)	500.44	ug/L	20178.31	500.44
Zn C (202.548 nm)	514.56	ug/L	51946.95	514.56
Zn RAD (206.200 nm)	514.55	ug/L	1091.14	514.55

Solution Name: ICB

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
ICB	03/18/20 10:30:23 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	-0.22	ug/L	39.92	-0.22
Ag C (338.289 nm)	1.14 Z	ug/L	18.16 Z	1.14 Z
Al (237.312 nm)	-8.82	ug/L	14.51	-8.82
Al C (308.215 nm)	10.85	ug/L	4309.60	10.85
Al C (396.152 nm)	0.56	ug/L	284.85	0.56
Al RAD (396.152 nm)	-1.53	ug/L	38.07	-1.53
As (188.980 nm)	-0.98	ug/L	-10.13	-0.98
As C (193.696 nm)	-0.25	ug/L	15.91	-0.25
B (249.678 nm)	-0.53	ug/L	49.05	-0.53
Ba (233.527 nm)	-0.18	ug/L	21.16	-0.18
Ba (455.403 nm)	-0.14	ug/L	523.04	-0.14
Ba RAD (233.527 nm)	-0.19	ug/L	4.67	-0.19
Be (313.107 nm)	0.06	ug/L	187.17	0.06
Be C (234.861 nm)	0.05	ug/L	57.08	0.05
Ca (315.887 nm)	3.80	ug/L	176.32	3.80
Ca RAD (315.887 nm)	0.57	ug/L	23.15	0.57
Cd (214.439 nm)	0.02	ug/L	19.00	0.02
Cd C (226.502 nm)	Uncal	ug/L	27.58 Z	Uncal
Cd C (228.802 nm)	-0.06	ug/L	5.12	-0.06
Co (228.615 nm)	-0.15	ug/L	36.31	-0.15
Co C (230.786 nm)	-0.52	ug/L	22.01	-0.52
Cr (267.716 nm)	0.08	ug/L	27.89	0.08
Cr C (205.560 nm)	Uncal	ug/L	20.38 Z	Uncal
Cu (327.395 nm)	-0.21	ug/L	29.25	-0.21
Cu C (324.754 nm)	0.20	ug/L	790.97	0.20
Fe (259.940 nm)	0.69	ug/L	202.88	0.69
Fe (261.187 nm)	-3.16	ug/L	53.52	-3.16
Fe C (238.204 nm)	1.17	ug/L	341.72	1.17
Fe RAD (259.940 nm)	-0.41	ug/L	24.09	-0.41
Fe RAD (261.187 nm)	-2.82	ug/L	12.25	-2.82
K RAD (766.491 nm)	-9.61	ug/L	98.41	-9.61
Mg C (279.078 nm)	2.70	ug/L	74.93	2.70
Mg RAD (279.078 nm)	5.83	ug/L	13.82	5.83
Mn (257.610 nm)	-0.02	ug/L	90.00	-0.02
Mn C (260.568 nm)	Uncal	ug/L	19.83 Z	Uncal
Mo (202.032 nm)	0.35	ug/L	24.32	0.35
Mo C (203.846 nm)	0.39	ug/L	4.84	0.39
Mo C (204.598 nm)	-0.06	ug/L	8.73	-0.06
Na RAD (588.995 nm)	-9.54	ug/L	2170.33	-9.54
Na RAD (589.592 nm)	7.37	ug/L	237.22	7.37
Ni (231.604 nm)	-0.14	ug/L	10.27	-0.14
Ni C (221.648 nm)	0.20	ug/L	13.45	0.20
P (213.618 nm)	0.94	ug/L	14.40	0.94
P C (214.914 nm)	1.93	ug/L	5.33	1.93

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	-0.13	ug/L	29.55	-0.13
Sb (206.834 nm)	-0.86	ug/L	20.68	-0.86
Sb (217.582 nm)	1.23	ug/L	13.88	1.23
Sb C (231.146 nm)	-1.94	ug/L	7.77	-1.94
Se (196.026 nm)	Uncal	ug/L	9.35 Z	Uncal
Sn (189.925 nm)	-0.49	ug/L	12.30	-0.49
Sr RAD (421.552 nm)	0.02	ug/L	62.39	0.02
Ti (334.941 nm)	-0.16	ug/L	35.97	-0.16
Tl (190.794 nm)	0.55	ug/L	2.48	0.55
V (292.401 nm)	Uncal	ug/L	10.65 Z	Uncal
V C (311.837 nm)	1.19 Z	ug/L	54.40 Z	1.19 Z
Zn (206.200 nm)	-1.72	ug/L	33.86	-1.72
Zn C (202.548 nm)	0.03	ug/L	81.93	0.03
Zn RAD (206.200 nm)	-1.05	ug/L	3.26	-1.05

Solution Name: LLICV

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
LLICV	03/18/20 10:34:47 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	0.36 R	ug/L	92.52 R	0.36 R
Ag C (338.289 nm)	-0.38 R	ug/L	8.02 R	-0.38 R
Al (237.312 nm)	41.48	ug/L	149.74	41.48
Al C (308.215 nm)	54.19	ug/L	4789.67	54.19
Al C (396.152 nm)	48.52	ug/L	2269.01	48.52
Al RAD (396.152 nm)	48.79	ug/L	323.27	48.79
As (188.980 nm)	1.04 R	ug/L	-1.57 R	1.04 R
As C (193.696 nm)	0.24 R	ug/L	17.38 R	0.24 R
B (249.678 nm)	26.07	ug/L	573.83	26.07
Ba (233.527 nm)	1.33	ug/L	165.69	1.33
Ba (455.403 nm)	1.35	ug/L	3608.41	1.35
Ba RAD (233.527 nm)	0.90 R	ug/L	14.25 R	0.90 R
Be (313.107 nm)	0.99	ug/L	2011.10	0.99
Be C (234.861 nm)	0.97	ug/L	694.79	0.97
Ca (315.887 nm)	48.56	ug/L	1138.42	48.56
Ca RAD (315.887 nm)	51.25	ug/L	107.03	51.25
Cd (214.439 nm)	0.21	ug/L	43.62	0.21
Cd C (226.502 nm)	Uncal	ug/L	51.36 R	Uncal
Cd C (228.802 nm)	0.16 R	ug/L	11.35 R	0.16 R
Co (228.615 nm)	2.51	ug/L	73.77	2.51
Co C (230.786 nm)	2.28	ug/L	90.73	2.28
Cr (267.716 nm)	0.58	ug/L	62.58	0.58
Cr C (205.560 nm)	Uncal	ug/L	48.70 R	Uncal
Cu (327.395 nm)	2.42	ug/L	169.24	2.42
Cu C (324.754 nm)	2.57	ug/L	895.86	2.57
Fe (259.940 nm)	22.87	ug/L	1398.86	22.87
Fe (261.187 nm)	21.38	ug/L	292.66	21.38
Fe C (238.204 nm)	23.64	ug/L	2363.00	23.64
Fe RAD (259.940 nm)	24.35	ug/L	165.90	24.35
Fe RAD (261.187 nm)	25.06	ug/L	45.12	25.06
K RAD (766.491 nm)	497.81	ug/L	867.34	497.81
Mg C (279.078 nm)	25.33	ug/L	300.92	25.33
Mg RAD (279.078 nm)	27.82	ug/L	34.25	27.82
Mn (257.610 nm)	0.95	ug/L	449.68	0.95
Mn C (260.568 nm)	Uncal	ug/L	103.39 R	Uncal
Mo (202.032 nm)	0.73 R	ug/L	31.80 R	0.73 R
Mo C (203.846 nm)	1.71 R	ug/L	13.01 R	1.71 R
Mo C (204.598 nm)	1.06	ug/L	23.35	1.06
Na RAD (588.995 nm)	522.66	ug/L	14631.06	522.66
Na RAD (589.592 nm)	523.86	ug/L	8311.08	523.86
Ni (231.604 nm)	1.08	ug/L	37.86	1.08
Ni C (221.648 nm)	0.80 R	ug/L	23.66 R	0.80 R
P (213.618 nm)	12.13	ug/L	60.48	12.13
P C (214.914 nm)	15.16 R	ug/L	23.32 R	15.16 R

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	1.48	ug/L	43.59	1.48
Sb (206.834 nm)	-0.20 R	ug/L	22.41 R	-0.20 R
Sb (217.582 nm)	2.41 R	ug/L	18.27 R	2.41 R
Sb C (231.146 nm)	1.07 R	ug/L	14.70 R	1.07 R
Se (196.026 nm)	Uncal	ug/L	13.96 R	Uncal
Sn (189.925 nm)	1.98 R	ug/L	30.50 R	1.98 R
Sr RAD (421.552 nm)	1.04	ug/L	573.86	1.04
Ti (334.941 nm)	2.42	ug/L	902.45	2.42
Tl (190.794 nm)	2.12	ug/L	5.68	2.12
V (292.401 nm)	Uncal	ug/L	26.00 R	Uncal
V C (311.837 nm)	1.16 R	ug/L	52.36 R	1.16 R
Zn (206.200 nm)	24.59	ug/L	1089.42	24.59
Zn C (202.548 nm)	26.47	ug/L	2747.59	26.47
Zn RAD (206.200 nm)	24.59	ug/L	57.36	24.59

Solution Name: ICSA

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
ICSA	03/18/20 10:52:24 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	-0.38	ug/L	27.62	-0.38
Ag C (338.289 nm)	3.21 K	ug/L	32.02 K	3.21 K
Al (237.312 nm)	103578.94	ug/L	278467.36	103578.94
Al C (308.215 nm)	103804.21 o	ug/L	1153895.80	103804.21 o
Al C (396.152 nm)	104861.56 o	ug/L	4338078.39	104861.56 o
Al RAD (396.152 nm)	101955.86 o	ug/L	578007.27	101955.86 o
As (188.980 nm)	-1.90	ug/L	-15.43	-1.90
As C (193.696 nm)	0.73	ug/L	23.35	0.73
B (249.678 nm)	-0.99	ug/L	34.12	-0.99
Ba (233.527 nm)	-0.44	ug/L	75.25	-0.44
Ba (455.403 nm)	-0.23	ug/L	330.85	-0.23
Ba RAD (233.527 nm)	1.65 K	ug/L	20.84 K	1.65 K
Be (313.107 nm)	0.01	ug/L	80.98	0.01
Be C (234.861 nm)	0.03	ug/L	46.33	0.03
Ca (315.887 nm)	94808.20	ug/L	2037683.18	94808.20
Ca RAD (315.887 nm)	100346.17	ug/L	166092.74	100346.17
Cd (214.439 nm)	-0.28 K	ug/L	78.20 K	-0.28 K
Cd C (226.502 nm)	Uncal	ug/L	656.69 K	Uncal
Cd C (228.802 nm)	-0.02	ug/L	9.15	-0.02
Co (228.615 nm)	-5.21 K	ug/L	93.39 K	-5.21 K
Co C (230.786 nm)	-3.77 K	ug/L	187.74 K	-3.77 K
Cr (267.716 nm)	-0.12	ug/L	31.64	-0.12
Cr C (205.560 nm)	Uncal	ug/L	26.50 K	Uncal
Cu (327.395 nm)	0.19	ug/L	63.63	0.19
Cu C (324.754 nm)	-0.46	ug/L	761.98	-0.46
Fe (259.940 nm)	84968.74	ug/L	4581920.56	84968.74
Fe (261.187 nm)	94662.94 o	ug/L	922557.63	94662.94 o
Fe C (238.204 nm)	84740.20 o	ug/L	7621551.42	84740.20 o
Fe RAD (259.940 nm)	95869.77 o	ug/L	549181.27	95869.77 o
Fe RAD (261.187 nm)	96911.06 o	ug/L	114252.70	96911.06 o
K RAD (766.491 nm)	-25.09	ug/L	74.95	-25.09
Mg C (279.078 nm)	99368.13 o	ug/L	992248.89	99368.13 o
Mg RAD (279.078 nm)	102069.23	ug/L	94828.50	102069.23
Mn (257.610 nm)	-0.31	ug/L	518.10	-0.31
Mn C (260.568 nm)	Uncal	ug/L	491.57 K	Uncal
Mo (202.032 nm)	-0.27	ug/L	12.00	-0.27
Mo C (203.846 nm)	1.89 K	ug/L	14.09 K	1.89 K
Mo C (204.598 nm)	1.59 K	ug/L	30.25 K	1.59 K
Na RAD (588.995 nm)	-15.30	ug/L	2035.68	-15.30
Na RAD (589.592 nm)	0.72	ug/L	133.20	0.72
Ni (231.604 nm)	4.56 K	ug/L	116.70 K	4.56 K
Ni C (221.648 nm)	4.77 K	ug/L	91.44 K	4.77 K
P (213.618 nm)	1.06	ug/L	14.92	1.06
P C (214.914 nm)	34.66 K	ug/L	49.81 K	34.66 K

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	-2.48 K	ug/L	26.11 K	-2.48 K
Sb (206.834 nm)	2.25 K	ug/L	33.08 K	2.25 K
Sb (217.582 nm)	2.14 K	ug/L	18.41 K	2.14 K
Sb C (231.146 nm)	-1.06	ug/L	9.80	-1.06
Se (196.026 nm)	Uncal	ug/L	5.11 K	Uncal
Sn (189.925 nm)	-0.81	ug/L	9.99	-0.81
Sr RAD (421.552 nm)	0.77	ug/L	442.13	0.77
Ti (334.941 nm)	-0.29	ug/L	-7.22	-0.29
Tl (190.794 nm)	0.25	ug/L	1.91	0.25
V (292.401 nm)	Uncal	ug/L	-8.89 K	Uncal
V C (311.837 nm)	0.80 K	ug/L	28.19 K	0.80 K
Zn (206.200 nm)	5.99	ug/L	343.48	5.99
Zn C (202.548 nm)	7.79	ug/L	864.84	7.79
Zn RAD (206.200 nm)	6.69	ug/L	19.59	6.69

Solution Name: ICSAB

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
ICSAB	03/18/20 11:10:32 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	507.85	ug/L	46564.84	507.85
Ag C (338.289 nm)	506.58	ug/L	3394.42	506.58
Al (237.312 nm)	103028.17	ug/L	276987.91	103028.17
Al C (308.215 nm)	102853.68 o	ug/L	1143367.92	102853.68 o
Al C (396.152 nm)	104251.17 o	ug/L	4312828.40	104251.17 o
Al RAD (396.152 nm)	101489.65 o	ug/L	575364.48	101489.65 o
As (188.980 nm)	248.09	ug/L	1043.57	248.09
As C (193.696 nm)	239.83	ug/L	744.61	239.83
B (249.678 nm)	-0.76	ug/L	48.47	-0.76
Ba (233.527 nm)	244.91	ug/L	23532.29	244.91
Ba (455.403 nm)	244.47	ug/L	506523.16	244.47
Ba RAD (233.527 nm)	243.06	ug/L	2143.83	243.06
Be (313.107 nm)	241.90	ug/L	474158.46	241.90
Be C (234.861 nm)	239.50	ug/L	164768.61	239.50
Ca (315.887 nm)	93478.52	ug/L	2009132.67	93478.52
Ca RAD (315.887 nm)	98709.35	ug/L	163387.91	98709.35
Cd (214.439 nm)	464.61	ug/L	55023.52	464.61
Cd C (226.502 nm)	Uncal	ug/L	53441.31	Uncal
Cd C (228.802 nm)	493.08	ug/L	13856.89	493.08
Co (228.615 nm)	228.13	ug/L	3304.38	228.13
Co C (230.786 nm)	238.46	ug/L	6146.85	238.46
Cr (267.716 nm)	245.12	ug/L	17181.01	245.12
Cr C (205.560 nm)	Uncal	ug/L	12076.12	Uncal
Cu (327.395 nm)	257.00	ug/L	13759.43	257.00
Cu C (324.754 nm)	253.82	ug/L	11998.93	253.82
Fe (259.940 nm)	83936.35	ug/L	4526251.27	83936.35
Fe (261.187 nm)	94009.25 o	ug/L	916187.50	94009.25 o
Fe C (238.204 nm)	84029.03 o	ug/L	7557591.17	84029.03 o
Fe RAD (259.940 nm)	95037.09 o	ug/L	544411.56	95037.09 o
Fe RAD (261.187 nm)	96232.90 o	ug/L	113453.29	96232.90 o
K RAD (766.491 nm)	-26.59	ug/L	72.69	-26.59
Mg C (279.078 nm)	98593.04 o	ug/L	984509.51	98593.04 o
Mg RAD (279.078 nm)	101705.49	ug/L	94490.60	101705.49
Mn (257.610 nm)	238.78	ug/L	89027.69	238.78
Mn C (260.568 nm)	Uncal	ug/L	19932.14	Uncal
Mo (202.032 nm)	238.47	ug/L	4764.24	238.47
Mo C (203.846 nm)	240.18	ug/L	1483.07	240.18
Mo C (204.598 nm)	241.59	ug/L	3162.74	241.59
Na RAD (588.995 nm)	-7.77	ug/L	2211.77	-7.77
Na RAD (589.592 nm)	-6.40	ug/L	21.91	-6.40
Ni (231.604 nm)	474.52	ug/L	10368.61	474.52
Ni C (221.648 nm)	484.11	ug/L	8278.54	484.11
P (213.618 nm)	-0.21	ug/L	15.56	-0.21
P C (214.914 nm)	29.33	ug/L	44.53	29.33

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	476.91	ug/L	4079.70	476.91
Sb (206.834 nm)	232.88	ug/L	640.01	232.88
Sb (217.582 nm)	228.34	ug/L	862.05	228.34
Sb C (231.146 nm)	229.81	ug/L	539.88	229.81
Se (196.026 nm)	Uncal	ug/L	504.28 G	Uncal
Sn (189.925 nm)	-0.38	ug/L	13.14	-0.38
Sr RAD (421.552 nm)	0.77	ug/L	438.71	0.77
Ti (334.941 nm)	-0.32	ug/L	-1.53	-0.32
Tl (190.794 nm)	244.18	ug/L	500.38	244.18
V (292.401 nm)	Uncal	ug/L	9775.73 G	Uncal
V C (311.837 nm)	244.03	ug/L	16265.12	244.03
Zn (206.200 nm)	447.41	ug/L	18051.29	447.41
Zn C (202.548 nm)	473.40	ug/L	47797.72	473.40
Zn RAD (206.200 nm)	469.77	ug/L	996.66	469.77

Solution Name: CCV

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
CCV	03/18/20 12:25:44 PM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	254.26	ug/L	23345.15	254.26
Ag C (338.289 nm)	250.61	ug/L	1684.18	250.61
Al (237.312 nm)	10270.94	ug/L	27649.82	10270.94
Al C (308.215 nm)	10045.35	ug/L	115448.93	10045.35
Al C (396.152 nm)	10241.52	ug/L	423923.46	10241.52
Al RAD (396.152 nm)	10174.39	ug/L	57722.60	10174.39
As (188.980 nm)	516.22	ug/L	2180.64	516.22
As C (193.696 nm)	514.28	ug/L	1568.58	514.28
B (249.678 nm)	513.25	ug/L	10202.89	513.25
Ba (233.527 nm)	504.93	ug/L	48322.66	504.93
Ba (455.403 nm)	500.64	ug/L	1036443.71	500.64
Ba RAD (233.527 nm)	501.35	ug/L	4415.22	501.35
Be (313.107 nm)	502.03	ug/L	983995.72	502.03
Be C (234.861 nm)	506.28	ug/L	348275.96	506.28
Ca (315.887 nm)	23525.67	ug/L	505732.65	23525.67
Ca RAD (315.887 nm)	24437.96	ug/L	40470.50	24437.96
Cd (214.439 nm)	493.01	ug/L	58122.90	493.01
Cd C (226.502 nm)	Uncal	ug/L	56188.31 Q	Uncal
Cd C (228.802 nm)	511.17	ug/L	14362.26	511.17
Co (228.615 nm)	500.86	ug/L	6829.35	500.86
Co C (230.786 nm)	508.45	ug/L	12558.67	508.45
Cr (267.716 nm)	506.37	ug/L	35433.73	506.37
Cr C (205.560 nm)	Uncal	ug/L	25242.74 Q	Uncal
Cu (327.395 nm)	507.56	ug/L	27111.16	507.56
Cu C (324.754 nm)	512.12	ug/L	23413.47	512.12
Fe (259.940 nm)	9293.21	ug/L	501281.67	9293.21
Fe (261.187 nm)	9948.21	ug/L	97027.82	9948.21
Fe C (238.204 nm)	9421.94	ug/L	847621.29	9421.94
Fe RAD (259.940 nm)	9962.34	ug/L	57092.04	9962.34
Fe RAD (261.187 nm)	10069.41	ug/L	11885.22	10069.41
K RAD (766.491 nm)	10344.86	ug/L	15789.20	10344.86
Mg C (279.078 nm)	24524.48	ug/L	244927.43	24524.48
Mg RAD (279.078 nm)	25368.56	ug/L	23575.24	25368.56
Mn (257.610 nm)	506.25	ug/L	187565.42	506.25
Mn C (260.568 nm)	Uncal	ug/L	41109.00 Q	Uncal
Mo (202.032 nm)	509.96	ug/L	10168.64	509.96
Mo C (203.846 nm)	510.37	ug/L	3148.67	510.37
Mo C (204.598 nm)	512.07	ug/L	6693.08	512.07
Na RAD (588.995 nm)	12947.68	ug/L	305545.79	12947.68
Na RAD (589.592 nm)	12684.20	ug/L	198403.61	12684.20
Ni (231.604 nm)	501.51	ug/L	10934.84	501.51
Ni C (221.648 nm)	510.93	ug/L	8736.63	510.93
P (213.618 nm)	2568.84	ug/L	10487.45	2568.84
P C (214.914 nm)	2569.86	ug/L	3498.63	2569.86

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	504.05	ug/L	4288.15	504.05
Sb (206.834 nm)	514.17	ug/L	1376.48	514.17
Sb (217.582 nm)	517.46	ug/L	1937.92	517.46
Sb C (231.146 nm)	515.33	ug/L	1195.84	515.33
Se (196.026 nm)	Uncal	ug/L	1064.03 Q	Uncal
Sn (189.925 nm)	500.32	ug/L	3698.35	500.32
Sr RAD (421.552 nm)	511.11	ug/L	256640.00	511.11
Ti (334.941 nm)	511.47	ug/L	172018.98	511.47
Tl (190.794 nm)	514.62	ug/L	1053.69	514.62
V (292.401 nm)	Uncal	ug/L	20155.87 Q	Uncal
V C (311.837 nm)	508.67	ug/L	33930.46	508.67
Zn (206.200 nm)	475.37	ug/L	19172.59	475.37
Zn C (202.548 nm)	503.53	ug/L	50835.04	503.53
Zn RAD (206.200 nm)	488.91	ug/L	1037.05	488.91

Solution Name: CCB

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
CCB	03/18/20 12:30:09 PM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	-0.19	ug/L	42.43	-0.19
Ag C (338.289 nm)	0.99 Z	ug/L	17.15 Z	0.99 Z
Al (237.312 nm)	-5.62	ug/L	23.13	-5.62
Al C (308.215 nm)	25.03	ug/L	4466.62	25.03
Al C (396.152 nm)	1.13	ug/L	308.67	1.13
Al RAD (396.152 nm)	-1.23	ug/L	39.75	-1.23
As (188.980 nm)	-1.36	ug/L	-11.73	-1.36
As C (193.696 nm)	0.23	ug/L	17.37	0.23
B (249.678 nm)	-0.91	ug/L	41.52	-0.91
Ba (233.527 nm)	-0.24	ug/L	15.08	-0.24
Ba (455.403 nm)	-0.14	ug/L	518.31	-0.14
Ba RAD (233.527 nm)	-0.51	ug/L	1.84	-0.51
Be (313.107 nm)	0.07	ug/L	196.75	0.07
Be C (234.861 nm)	0.04	ug/L	52.73	0.04
Ca (315.887 nm)	4.08	ug/L	182.25	4.08
Ca RAD (315.887 nm)	0.39	ug/L	22.84	0.39
Cd (214.439 nm)	0.03	ug/L	21.06	0.03
Cd C (226.502 nm)	Uncal	ug/L	30.70 Z	Uncal
Cd C (228.802 nm)	0.05	ug/L	8.18	0.05
Co (228.615 nm)	0.23	ug/L	41.66	0.23
Co C (230.786 nm)	-0.36	ug/L	25.97	-0.36
Cr (267.716 nm)	0.03	ug/L	24.23	0.03
Cr C (205.560 nm)	Uncal	ug/L	20.92 Z	Uncal
Cu (327.395 nm)	-0.25	ug/L	26.77	-0.25
Cu C (324.754 nm)	0.70	ug/L	812.97	0.70
Fe (259.940 nm)	0.67	ug/L	201.66	0.67
Fe (261.187 nm)	-2.43	ug/L	60.62	-2.43
Fe C (238.204 nm)	1.11	ug/L	336.70	1.11
Fe RAD (259.940 nm)	0.06	ug/L	26.76	0.06
Fe RAD (261.187 nm)	-4.51	ug/L	10.26	-4.51
K RAD (766.491 nm)	-18.02	ug/L	85.66	-18.02
Mg C (279.078 nm)	2.98	ug/L	77.71	2.98
Mg RAD (279.078 nm)	0.67	ug/L	9.03	0.67
Mn (257.610 nm)	-0.03	ug/L	86.30	-0.03
Mn C (260.568 nm)	Uncal	ug/L	20.59 Z	Uncal
Mo (202.032 nm)	0.09	ug/L	19.15	0.09
Mo C (203.846 nm)	0.91	ug/L	8.06	0.91
Mo C (204.598 nm)	0.09	ug/L	10.60	0.09
Na RAD (588.995 nm)	-17.36	ug/L	1987.40	-17.36
Na RAD (589.592 nm)	1.09	ug/L	138.94	1.09
Ni (231.604 nm)	0.01	ug/L	13.65	0.01
Ni C (221.648 nm)	-0.30	ug/L	4.82	-0.30
P (213.618 nm)	0.91	ug/L	14.28	0.91
P C (214.914 nm)	1.87	ug/L	5.25	1.87

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	0.58	ug/L	35.76	0.58
Sb (206.834 nm)	-0.91	ug/L	20.55	-0.91
Sb (217.582 nm)	1.82	ug/L	16.07	1.82
Sb C (231.146 nm)	-2.50 Z	ug/L	6.50 Z	-2.50 Z
Se (196.026 nm)	Uncal	ug/L	8.89 Z	Uncal
Sn (189.925 nm)	-1.15	ug/L	7.44	-1.15
Sr RAD (421.552 nm)	0.00	ug/L	51.64	0.00
Ti (334.941 nm)	-0.19	ug/L	26.48	-0.19
Tl (190.794 nm)	0.35	ug/L	2.08	0.35
V (292.401 nm)	Uncal	ug/L	-1.28 Z	Uncal
V C (311.837 nm)	0.76 Z	ug/L	25.96 Z	0.76 Z
Zn (206.200 nm)	-1.75	ug/L	32.86	-1.75
Zn C (202.548 nm)	0.06	ug/L	85.69	0.06
Zn RAD (206.200 nm)	-0.45	ug/L	4.52	-0.45

METALS

Raw Data

Solution Name: BA08341W48 DF5

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
BA08341W48 DF5	03/18/20 11:32:43 AM	1	1	5

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	-0.28	ug/L	34.59	-1.38
Ag C (338.289 nm)	-0.89	ug/L	4.61	-4.45
Al (237.312 nm)	-8.18	ug/L	16.24	-40.91
Al C (308.215 nm)	16.35	ug/L	4370.55	81.76
Al C (396.152 nm)	1.93	ug/L	341.42	9.63
Al RAD (396.152 nm)	0.11	ug/L	47.32	0.53
As (188.980 nm)	-0.84	ug/L	-9.55	-4.21
As C (193.696 nm)	-0.86	ug/L	14.07	-4.30
B (249.678 nm)	10.94	ug/L	275.34	54.70
Ba (233.527 nm)	0.19	ug/L	57.13	0.97
Ba (455.403 nm)	0.29	ug/L	1410.38	1.46
Ba RAD (233.527 nm)	0.27	ug/L	8.63	1.33
Be (313.107 nm)	-0.01	ug/L	54.28	-0.03
Be C (234.861 nm)	-0.01	ug/L	18.80	-0.05
Ca (315.887 nm)	1988.26	ug/L	42823.36	9941.32
Ca RAD (315.887 nm)	2118.76	ug/L	3528.23	10593.82
Cd (214.439 nm)	-0.03	ug/L	13.78	-0.13
Cd C (226.502 nm)	Uncal	ug/L	24.85	Uncal
Cd C (228.802 nm)	-0.07	ug/L	4.80	-0.35
Co (228.615 nm)	0.13	ug/L	40.33	0.65
Co C (230.786 nm)	-0.37	ug/L	25.93	-1.84
Cr (267.716 nm)	6.21	ug/L	456.46	31.06
Cr C (205.560 nm)	Uncal	ug/L	333.77	Uncal
Cu (327.395 nm)	0.01	ug/L	40.93	0.06
Cu C (324.754 nm)	0.37	ug/L	798.59	1.87
Fe (259.940 nm)	37.67	ug/L	2197.18	188.37
Fe (261.187 nm)	37.60	ug/L	450.73	187.99
Fe C (238.204 nm)	38.63	ug/L	3711.17	193.17
Fe RAD (259.940 nm)	40.24	ug/L	256.88	201.18
Fe RAD (261.187 nm)	39.24	ug/L	61.83	196.22
K RAD (766.491 nm)	399.77	ug/L	718.77	1998.84
Mg C (279.078 nm)	2267.69	ug/L	22691.03	11338.43
Mg RAD (279.078 nm)	2354.06	ug/L	2195.28	11770.31
Mn (257.610 nm)	0.96	ug/L	451.98	4.80
Mn C (260.568 nm)	Uncal	ug/L	101.02	Uncal
Mo (202.032 nm)	0.88	ug/L	34.78	4.39
Mo C (203.846 nm)	1.80	ug/L	13.55	9.00
Mo C (204.598 nm)	0.31	ug/L	13.55	1.57
Na RAD (588.995 nm)	8130.12	ug/L	192749.27	40650.61
Na RAD (589.592 nm)	8095.37	ug/L	126670.27	40476.87
Ni (231.604 nm)	3.71	ug/L	97.60	18.57
Ni C (221.648 nm)	4.11	ug/L	80.27	20.57
P (213.618 nm)	22.39	ug/L	102.62	111.96
P C (214.914 nm)	24.40	ug/L	35.85	121.98

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	0.53	ug/L	35.31	2.66
Sb (206.834 nm)	0.17	ug/L	23.38	0.85
Sb (217.582 nm)	1.03	ug/L	13.19	5.16
Sb C (231.146 nm)	1.97	ug/L	16.75	9.84
Se (196.026 nm)	Uncal	ug/L	11.99	Uncal
Sn (189.925 nm)	-0.85	ug/L	9.66	-4.25
Sr RAD (421.552 nm)	13.75	ug/L	6953.80	68.73
Ti (334.941 nm)	-0.09	ug/L	60.14	-0.45
Tl (190.794 nm)	0.20	ug/L	1.79	0.99
V (292.401 nm)	Uncal	ug/L	178.11	Uncal
V C (311.837 nm)	3.60	ug/L	215.26	17.99
Zn (206.200 nm)	-1.16	ug/L	56.70	-5.78
Zn C (202.548 nm)	0.63	ug/L	142.43	3.13
Zn RAD (206.200 nm)	-0.24	ug/L	4.97	-1.21

Solution Name: 200313B BLK

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
200313B BLK	03/18/20 11:19:24 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	-0.23	ug/L	38.66	-0.23
Ag C (338.289 nm)	0.10	ug/L	11.24	0.10
Al (237.312 nm)	-5.64	ug/L	23.07	-5.64
Al C (308.215 nm)	10.01	ug/L	4300.36	10.01
Al C (396.152 nm)	0.97	ug/L	302.06	0.97
Al RAD (396.152 nm)	-2.89	ug/L	30.32	-2.89
As (188.980 nm)	-0.50	ug/L	-8.09	-0.50
As C (193.696 nm)	-0.14	ug/L	16.23	-0.14
B (249.678 nm)	-1.05	ug/L	38.75	-1.05
Ba (233.527 nm)	-0.26	ug/L	14.03	-0.26
Ba (455.403 nm)	-0.20	ug/L	398.71	-0.20
Ba RAD (233.527 nm)	-0.31	ug/L	3.54	-0.31
Be (313.107 nm)	0.00	ug/L	70.28	0.00
Be C (234.861 nm)	-0.05	ug/L	-5.74	-0.05
Ca (315.887 nm)	9.55	ug/L	299.86	9.55
Ca RAD (315.887 nm)	6.84	ug/L	33.52	6.84
Cd (214.439 nm)	0.00	ug/L	16.67	0.00
Cd C (226.502 nm)	Uncal	ug/L	30.37	Uncal
Cd C (228.802 nm)	0.13	ug/L	10.46	0.13
Co (228.615 nm)	-0.34	ug/L	33.73	-0.34
Co C (230.786 nm)	-0.35	ug/L	26.06	-0.35
Cr (267.716 nm)	0.05	ug/L	25.47	0.05
Cr C (205.560 nm)	Uncal	ug/L	19.32	Uncal
Cu (327.395 nm)	-0.22	ug/L	28.42	-0.22
Cu C (324.754 nm)	-0.17	ug/L	774.74	-0.17
Fe (259.940 nm)	0.30	ug/L	181.73	0.30
Fe (261.187 nm)	-2.65	ug/L	58.53	-2.65
Fe C (238.204 nm)	0.64	ug/L	294.12	0.64
Fe RAD (259.940 nm)	-0.83	ug/L	21.65	-0.83
Fe RAD (261.187 nm)	-3.40	ug/L	11.57	-3.40
K RAD (766.491 nm)	-20.60	ug/L	81.77	-20.60
Mg C (279.078 nm)	3.95	ug/L	87.37	3.95
Mg RAD (279.078 nm)	3.78	ug/L	11.92	3.78
Mn (257.610 nm)	-0.11	ug/L	56.54	-0.11
Mn C (260.568 nm)	Uncal	ug/L	13.89	Uncal
Mo (202.032 nm)	0.26	ug/L	22.57	0.26
Mo C (203.846 nm)	0.93	ug/L	8.19	0.93
Mo C (204.598 nm)	-0.12	ug/L	7.87	-0.12
Na RAD (588.995 nm)	-13.11	ug/L	2086.77	-13.11
Na RAD (589.592 nm)	6.50	ug/L	223.59	6.50
Ni (231.604 nm)	-0.24	ug/L	8.13	-0.24
Ni C (221.648 nm)	0.19	ug/L	13.26	0.19
P (213.618 nm)	1.60	ug/L	17.11	1.60
P C (214.914 nm)	2.34	ug/L	5.88	2.34

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	1.00	ug/L	39.37	1.00
Sb (206.834 nm)	1.06	ug/L	25.73	1.06
Sb (217.582 nm)	2.00	ug/L	16.72	2.00
Sb C (231.146 nm)	-1.27	ug/L	9.32	-1.27
Se (196.026 nm)	Uncal	ug/L	9.95	Uncal
Sn (189.925 nm)	-0.70	ug/L	10.77	-0.70
Sr RAD (421.552 nm)	-0.08	ug/L	15.48	-0.08
Ti (334.941 nm)	-0.19	ug/L	25.99	-0.19
Tl (190.794 nm)	-0.11	ug/L	1.14	-0.11
V (292.401 nm)	Uncal	ug/L	0.23	Uncal
V C (311.837 nm)	0.96	ug/L	39.34	0.96
Zn (206.200 nm)	-1.38	ug/L	47.89	-1.38
Zn C (202.548 nm)	0.58	ug/L	138.00	0.58
Zn RAD (206.200 nm)	-0.98	ug/L	3.41	-0.98

Solution Name: 200313B LCS

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
200313B LCS	03/18/20 11:23:50 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	100.57	ug/L	9270.38	100.57
Ag C (338.289 nm)	98.37	ug/L	667.45	98.37
Al (237.312 nm)	2026.42	ug/L	5486.42	2026.42
Al C (308.215 nm)	2033.38	ug/L	26710.55	2033.38
Al C (396.152 nm)	2039.03	ug/L	84610.32	2039.03
Al RAD (396.152 nm)	2005.80	ug/L	11417.08	2005.80
As (188.980 nm)	245.84	ug/L	1035.42	245.84
As C (193.696 nm)	244.77	ug/L	755.15	244.77
B (249.678 nm)	244.38	ug/L	4889.81	244.38
Ba (233.527 nm)	252.37	ug/L	24168.57	252.37
Ba (455.403 nm)	248.14	ug/L	514120.72	248.14
Ba RAD (233.527 nm)	248.52	ug/L	2191.77	248.52
Be (313.107 nm)	48.83	ug/L	95771.80	48.83
Be C (234.861 nm)	48.44	ug/L	33344.64	48.44
Ca (315.887 nm)	23510.80	ug/L	505376.17	23510.80
Ca RAD (315.887 nm)	24424.08	ug/L	40441.63	24424.08
Cd (214.439 nm)	46.02	ug/L	5720.54	46.02
Cd C (226.502 nm)	Uncal	ug/L	5505.46	Uncal
Cd C (228.802 nm)	49.92	ug/L	1408.60	49.92
Co (228.615 nm)	244.54	ug/L	3412.40	244.54
Co C (230.786 nm)	252.64	ug/L	6247.98	252.64
Cr (267.716 nm)	255.35	ug/L	17878.65	255.35
Cr C (205.560 nm)	Uncal	ug/L	12628.86	Uncal
Cu (327.395 nm)	255.74	ug/L	13679.63	255.74
Cu C (324.754 nm)	255.09	ug/L	12054.80	255.09
Fe (259.940 nm)	937.39	ug/L	50712.26	937.39
Fe (261.187 nm)	993.57	ug/L	9766.50	993.57
Fe C (238.204 nm)	948.65	ug/L	85555.99	948.65
Fe RAD (259.940 nm)	990.31	ug/L	5699.06	990.31
Fe RAD (261.187 nm)	990.22	ug/L	1182.82	990.22
K RAD (766.491 nm)	5009.55	ug/L	7704.27	5009.55
Mg C (279.078 nm)	24255.14	ug/L	242237.97	24255.14
Mg RAD (279.078 nm)	24615.26	ug/L	22875.45	24615.26
Mn (257.610 nm)	251.05	ug/L	93043.76	251.05
Mn C (260.568 nm)	Uncal	ug/L	20536.87	Uncal
Mo (202.032 nm)	255.87	ug/L	5110.78	255.87
Mo C (203.846 nm)	255.57	ug/L	1577.92	255.57
Mo C (204.598 nm)	256.79	ug/L	3361.15	256.79
Na RAD (588.995 nm)	24971.83	ug/L	587074.47	24971.83
Na RAD (589.592 nm)	24961.39	ug/L	390322.85	24961.39
Ni (231.604 nm)	243.94	ug/L	5433.51	243.94
Ni C (221.648 nm)	252.88	ug/L	4329.13	252.88
P (213.618 nm)	1965.12	ug/L	8039.98	1965.12
P C (214.914 nm)	1982.98	ug/L	2699.21	1982.98

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	246.68	ug/L	2143.52	246.68
Sb (206.834 nm)	233.86	ug/L	638.46	233.86
Sb (217.582 nm)	240.13	ug/L	904.53	240.13
Sb C (231.146 nm)	240.28	ug/L	564.10	240.28
Se (196.026 nm)	Uncal	ug/L	470.69	Uncal
Sn (189.925 nm)	254.71	ug/L	1890.59	254.71
Sr RAD (421.552 nm)	249.63	ug/L	125369.08	249.63
Ti (334.941 nm)	255.74	ug/L	86055.32	255.74
Tl (190.794 nm)	252.43	ug/L	517.20	252.43
V (292.401 nm)	Uncal	ug/L	10121.47	Uncal
V C (311.837 nm)	253.25	ug/L	16880.30	253.25
Zn (206.200 nm)	467.09	ug/L	18840.60	467.09
Zn C (202.548 nm)	488.26	ug/L	49295.53	488.26
Zn RAD (206.200 nm)	475.56	ug/L	1008.89	475.56

Solution Name: 200313B LCSD

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
200313B LCSD	03/18/20 11:28:17 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	99.28	ug/L	9152.19	99.28
Ag C (338.289 nm)	97.22	ug/L	659.75	97.22
Al (237.312 nm)	1995.15	ug/L	5402.34	1995.15
Al C (308.215 nm)	2002.69	ug/L	26370.62	2002.69
Al C (396.152 nm)	2008.97	ug/L	83367.17	2008.97
Al RAD (396.152 nm)	1982.43	ug/L	11284.58	1982.43
As (188.980 nm)	242.44	ug/L	1021.02	242.44
As C (193.696 nm)	241.68	ug/L	745.83	241.68
B (249.678 nm)	239.90	ug/L	4801.32	239.90
Ba (233.527 nm)	248.36	ug/L	23785.43	248.36
Ba (455.403 nm)	244.43	ug/L	506432.59	244.43
Ba RAD (233.527 nm)	245.79	ug/L	2167.76	245.79
Be (313.107 nm)	48.08	ug/L	94291.56	48.08
Be C (234.861 nm)	47.67	ug/L	32815.69	47.67
Ca (315.887 nm)	23158.87	ug/L	497812.59	23158.87
Ca RAD (315.887 nm)	24130.15	ug/L	39955.19	24130.15
Cd (214.439 nm)	45.33	ug/L	5635.48	45.33
Cd C (226.502 nm)	Uncal	ug/L	5410.85	Uncal
Cd C (228.802 nm)	48.90	ug/L	1379.98	48.90
Co (228.615 nm)	240.89	ug/L	3362.95	240.89
Co C (230.786 nm)	249.51	ug/L	6171.15	249.51
Cr (267.716 nm)	251.86	ug/L	17634.08	251.86
Cr C (205.560 nm)	Uncal	ug/L	12446.32	Uncal
Cu (327.395 nm)	251.79	ug/L	13468.95	251.79
Cu C (324.754 nm)	251.09	ug/L	11878.11	251.09
Fe (259.940 nm)	919.52	ug/L	49748.74	919.52
Fe (261.187 nm)	979.91	ug/L	9633.41	979.91
Fe C (238.204 nm)	932.51	ug/L	84103.58	932.51
Fe RAD (259.940 nm)	978.64	ug/L	5632.18	978.64
Fe RAD (261.187 nm)	977.83	ug/L	1168.22	977.83
K RAD (766.491 nm)	4937.16	ug/L	7594.57	4937.16
Mg C (279.078 nm)	23865.24	ug/L	238344.80	23865.24
Mg RAD (279.078 nm)	24295.66	ug/L	22578.55	24295.66
Mn (257.610 nm)	246.16	ug/L	91231.98	246.16
Mn C (260.568 nm)	Uncal	ug/L	20229.96	Uncal
Mo (202.032 nm)	252.27	ug/L	5038.97	252.27
Mo C (203.846 nm)	252.49	ug/L	1558.97	252.49
Mo C (204.598 nm)	252.88	ug/L	3310.04	252.88
Na RAD (588.995 nm)	24683.99	ug/L	580334.89	24683.99
Na RAD (589.592 nm)	24623.85	ug/L	385046.36	24623.85
Ni (231.604 nm)	239.88	ug/L	5344.99	239.88
Ni C (221.648 nm)	249.64	ug/L	4273.74	249.64
P (213.618 nm)	1935.85	ug/L	7921.23	1935.85
P C (214.914 nm)	1950.60	ug/L	2655.18	1950.60

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	242.61	ug/L	2109.07	242.61
Sb (206.834 nm)	231.91	ug/L	633.33	231.91
Sb (217.582 nm)	235.31	ug/L	886.58	235.31
Sb C (231.146 nm)	244.42	ug/L	573.61	244.42
Se (196.026 nm)	Uncal	ug/L	467.46	Uncal
Sn (189.925 nm)	251.89	ug/L	1869.87	251.89
Sr RAD (421.552 nm)	246.29	ug/L	123693.01	246.29
Ti (334.941 nm)	250.86	ug/L	84418.32	250.86
Tl (190.794 nm)	249.44	ug/L	511.06	249.44
V (292.401 nm)	Uncal	ug/L	9971.92	Uncal
V C (311.837 nm)	249.49	ug/L	16629.24	249.49
Zn (206.200 nm)	461.40	ug/L	18612.35	461.40
Zn C (202.548 nm)	480.62	ug/L	48526.30	480.62
Zn RAD (206.200 nm)	470.09	ug/L	997.35	470.09

Solution Name: BA08341W48 MS

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
BA08341W48 MS	03/18/20 11:46:02 AM	1	1	5

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	21.06	ug/L	1988.24	105.28
Ag C (338.289 nm)	19.09	ug/L	138.04	95.46
Al (237.312 nm)	422.67	ug/L	1174.61	2113.33
Al C (308.215 nm)	434.98	ug/L	9007.11	2174.88
Al C (396.152 nm)	417.93	ug/L	17550.44	2089.66
Al RAD (396.152 nm)	435.98	ug/L	2518.16	2179.89
As (188.980 nm)	52.11	ug/L	214.77	260.56
As C (193.696 nm)	50.72	ug/L	169.70	253.61
B (249.678 nm)	65.07	ug/L	1345.20	325.36
Ba (233.527 nm)	54.00	ug/L	5201.24	269.98
Ba (455.403 nm)	53.45	ug/L	111381.68	267.27
Ba RAD (233.527 nm)	55.42	ug/L	493.64	277.09
Be (313.107 nm)	10.32	ug/L	20300.59	51.62
Be C (234.861 nm)	10.31	ug/L	7118.23	51.56
Ca (315.887 nm)	7034.91	ug/L	151282.94	35174.55
Ca RAD (315.887 nm)	7591.57	ug/L	12585.11	37957.85
Cd (214.439 nm)	9.84	ug/L	1242.19	49.22
Cd C (226.502 nm)	Uncal	ug/L	1193.94	Uncal
Cd C (228.802 nm)	10.55	ug/L	302.96	52.74
Co (228.615 nm)	51.33	ug/L	756.91	256.64
Co C (230.786 nm)	53.65	ug/L	1354.23	268.23
Cr (267.716 nm)	58.05	ug/L	4081.69	290.27
Cr C (205.560 nm)	Uncal	ug/L	2890.30	Uncal
Cu (327.395 nm)	53.12	ug/L	2873.25	265.59
Cu C (324.754 nm)	53.80	ug/L	3159.45	268.98
Fe (259.940 nm)	228.68	ug/L	12496.69	1143.40
Fe (261.187 nm)	241.25	ug/L	2435.25	1206.24
Fe C (238.204 nm)	232.94	ug/L	21186.05	1164.68
Fe RAD (259.940 nm)	251.73	ug/L	1468.33	1258.63
Fe RAD (261.187 nm)	248.19	ug/L	308.14	1240.96
K RAD (766.491 nm)	1508.05	ug/L	2398.23	7540.27
Mg C (279.078 nm)	7442.90	ug/L	74366.12	37214.52
Mg RAD (279.078 nm)	7862.68	ug/L	7312.67	39313.40
Mn (257.610 nm)	54.02	ug/L	20095.31	270.08
Mn C (260.568 nm)	Uncal	ug/L	4424.75	Uncal
Mo (202.032 nm)	53.48	ug/L	1081.91	267.40
Mo C (203.846 nm)	54.70	ug/L	339.65	273.50
Mo C (204.598 nm)	53.41	ug/L	706.55	267.04
Na RAD (588.995 nm)	13906.42	ug/L	327993.28	69532.11
Na RAD (589.592 nm)	13793.50	ug/L	215744.34	68967.48
Ni (231.604 nm)	52.97	ug/L	1208.35	264.85
Ni C (221.648 nm)	56.28	ug/L	971.19	281.38
P (213.618 nm)	436.36	ug/L	1803.48	2181.78
P C (214.914 nm)	440.56	ug/L	601.75	2202.78

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	51.55	ug/L	477.06	257.74
Sb (206.834 nm)	50.60	ug/L	156.12	253.02
Sb (217.582 nm)	49.47	ug/L	193.80	247.37
Sb C (231.146 nm)	53.48	ug/L	135.07	267.42
Se (196.026 nm)	Uncal	ug/L	114.36	Uncal
Sn (189.925 nm)	54.75	ug/L	418.89	273.75
Sr RAD (421.552 nm)	68.90	ug/L	34641.46	344.49
Ti (334.941 nm)	53.51	ug/L	18078.62	267.56
Tl (190.794 nm)	53.56	ug/L	110.77	267.82
V (292.401 nm)	Uncal	ug/L	2272.20	Uncal
V C (311.837 nm)	55.84	ug/L	3702.46	279.19
Zn (206.200 nm)	101.33	ug/L	4168.03	506.66
Zn C (202.548 nm)	106.50	ug/L	10814.28	532.49
Zn RAD (206.200 nm)	108.92	ug/L	235.30	544.61

Solution Name: BA08341W48 MSD

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
BA08341W48 MSD	03/18/20 11:50:28 AM	1	1	5

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	20.88	ug/L	1971.82	104.39
Ag C (338.289 nm)	19.47	ug/L	140.56	97.35
Al (237.312 nm)	413.96	ug/L	1151.22	2069.82
Al C (308.215 nm)	429.32	ug/L	8944.48	2146.60
Al C (396.152 nm)	411.93	ug/L	17302.03	2059.64
Al RAD (396.152 nm)	416.79	ug/L	2409.40	2083.96
As (188.980 nm)	51.93	ug/L	214.01	259.67
As C (193.696 nm)	51.83	ug/L	173.06	259.17
B (249.678 nm)	63.36	ug/L	1311.43	316.80
Ba (233.527 nm)	52.97	ug/L	5103.03	264.84
Ba (455.403 nm)	52.63	ug/L	109676.19	263.15
Ba RAD (233.527 nm)	52.88	ug/L	471.33	264.40
Be (313.107 nm)	10.14	ug/L	19942.49	50.71
Be C (234.861 nm)	10.12	ug/L	6984.77	50.59
Ca (315.887 nm)	6898.46	ug/L	148350.57	34492.31
Ca RAD (315.887 nm)	7180.02	ug/L	11904.09	35900.09
Cd (214.439 nm)	9.69	ug/L	1223.38	48.47
Cd C (226.502 nm)	Uncal	ug/L	1179.40	Uncal
Cd C (228.802 nm)	10.57	ug/L	303.66	52.86
Co (228.615 nm)	50.81	ug/L	749.75	254.07
Co C (230.786 nm)	52.70	ug/L	1330.95	263.49
Cr (267.716 nm)	56.60	ug/L	3979.87	282.99
Cr C (205.560 nm)	Uncal	ug/L	2823.92	Uncal
Cu (327.395 nm)	52.15	ug/L	2821.42	260.73
Cu C (324.754 nm)	52.98	ug/L	3123.50	264.91
Fe (259.940 nm)	223.89	ug/L	12238.65	1119.47
Fe (261.187 nm)	235.38	ug/L	2378.07	1176.90
Fe C (238.204 nm)	227.75	ug/L	20720.15	1138.77
Fe RAD (259.940 nm)	240.22	ug/L	1402.45	1201.12
Fe RAD (261.187 nm)	239.99	ug/L	298.46	1199.93
K RAD (766.491 nm)	1430.95	ug/L	2281.39	7154.77
Mg C (279.078 nm)	7312.08	ug/L	73059.82	36560.40
Mg RAD (279.078 nm)	7440.31	ug/L	6920.29	37201.56
Mn (257.610 nm)	53.10	ug/L	19756.63	265.51
Mn C (260.568 nm)	Uncal	ug/L	4343.01	Uncal
Mo (202.032 nm)	52.85	ug/L	1069.43	264.27
Mo C (203.846 nm)	53.23	ug/L	330.58	266.14
Mo C (204.598 nm)	52.98	ug/L	700.96	264.90
Na RAD (588.995 nm)	13138.73	ug/L	310018.80	65693.64
Na RAD (589.592 nm)	13034.42	ug/L	203878.33	65172.10
Ni (231.604 nm)	52.30	ug/L	1193.39	261.52
Ni C (221.648 nm)	55.33	ug/L	955.10	276.67
P (213.618 nm)	428.82	ug/L	1772.55	2144.08
P C (214.914 nm)	436.06	ug/L	595.64	2180.32

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	51.10	ug/L	473.17	255.49
Sb (206.834 nm)	49.26	ug/L	152.59	246.31
Sb (217.582 nm)	49.70	ug/L	194.61	248.48
Sb C (231.146 nm)	53.94	ug/L	136.11	269.68
Se (196.026 nm)	Uncal	ug/L	118.00	Uncal
Sn (189.925 nm)	53.49	ug/L	409.60	267.44
Sr RAD (421.552 nm)	65.39	ug/L	32879.99	326.95
Ti (334.941 nm)	52.85	ug/L	17857.09	264.27
Tl (190.794 nm)	51.57	ug/L	106.72	257.85
V (292.401 nm)	Uncal	ug/L	2236.82	Uncal
V C (311.837 nm)	54.85	ug/L	3636.63	274.26
Zn (206.200 nm)	99.48	ug/L	4093.82	497.41
Zn C (202.548 nm)	104.70	ug/L	10632.80	523.49
Zn RAD (206.200 nm)	101.86	ug/L	220.39	509.28

ICP-OES Calibration Standard Prep

Prepared: 03/18/20
Expires: 03/25/20
1% HNO3 / 5% HCl Prep: 03/18/20
Prepared By (Initials): PW

Calibration Standard 3

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. Range (ug/mL)	Lot Number - QA Number/ APPL Prep Date	Exp Date	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. Range (ug/L)
Solution A	Texas Scientific	HP1810-250	200 - 5,000	m2meb662248-38391	10/11/20	500uL	100mL	1% HNO3 / 5% HCl	1000 - 25,000
Solution B	Texas Scientific	HP1810-250	4000 - 10,000	m2meb662249-38389	10/11/20	500uL			2000 - 50,000
Solution C	Texas Scientific	HP1810-250	100 - 200	m2meb662250-38394	10/11/20	500uL			500 - 1000
Calibration Standard 2									
ICP-OES Calib Standard 3	Texas Scientific	Standard 2/CCV1	0.5 - 50	Prepared 03/18/20	03/25/20	25mL	50mL	1% HNO3 / 5% HCl	250 - 25,000
Calibration Standard 1									
200.7 LDL	O2SI	160634-01-01	0.05 - 100	10080366-3-41267	02/07/21	250uL	50mL	1% HNO3 / 5% HCl	0.25 - 200

ICP-OES ICV (SS)

Prepared: 03/18/20
Expires: 08/09/19
1% HNO3 / 5% HCl Prep: 03/18/20
Prepared By (Initials): PW

ICP-OES ICV 1

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. Range (ug/mL)	Lot Number - QA Number	Exp Date	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. Range (ug/mL)
QCS ICV Soln A	CPI	4400-070615RH01	50 - 500	10062445-11-49481	05/14/21	250uL	50mL	1% HNO3 / 5% HCl	0.25 - 2.5
QCS ICV Soln B	CPI	4400-070615RH01	2,500	10062445-12-49482	05/14/21	250uL			12.5

ICP-OES ICV Ba

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. Range (ug/mL)	Lot Number - QA Number	Exp Date	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. Range (ug/mL)
Custom 23 Element Mix #314	O2SI	161314-01-03	5 - 25,00	1064561-8-38870	08/09/19	1mL	50mL	1% HNO3 / 5% HCl	0.1 - 50
Custom 23 Element Mix #315	O2SI	161314-01-03	10 - 25	1064561-7-38869	08/09/19	1mL			0.2 - 0.5

ICP-OES CCV2

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. Range (ug/mL)	APPL Prep Date	Exp Date	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. Range (ug/mL)
ICP-OES Calib Standard 3	Texas Scientific	CCV2	0.5 - 50	Prepared 03/18/20	03/25/20	15mL	40mL	1% HNO3 / 5% HCl	0.15 - 15

ICP-OES Low Levels (LLICV)

Prepared: 03/18/20
Expires: 04/01/20
1% HNO3 / 5% HCl Prep: 03/18/20
Prepared By (Initials): PW

LLICV

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. Range ug/mL	Lot Number - QA Number	Exp Date	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. Range (ug/L)
200.7 LDL	O2SI	160634-01-01	0.05 - 100	10080366-3-41267	02/07/21	250uL	50mL	1% HNO3 / 5% HCl	0.25 - 200
LLICVX2									
200.7 LDL	O2SI	160634-01-01	0.05 - 100	10080366-3-41267	02/07/21	500uL	50mL	1% HNO3 / 5% HCl	0.50 - 400
LLICVX6									
200.7 LDL	O2SI	160634-01-01	0.05 - 100	10080366-3-41267	02/07/21	1.5mL	50mL	1% HNO3 / 5% HCl	1.5 - 1,200
LLICVX10									
200.7 LDL	O2SI	160634-01-01	0.05 - 100	10080366-3-41267	02/07/21	2.5mL	50mL	1% HNO3 / 5% HCl	2.5 - 2,000
LLICV 10									
ICP-OES Calib Standard 3	Texas Scientific	HP1810-250	0.5 - 50	10080366-3-41267	03/25/20	500uL	50mL	1% HNO3 / 5% HCl	5 - 500
LLICV 50									
ICP-OES Calib Standard 3	Texas Scientific	HP1810-250	0.5 - 50	10080366-3-41267	03/25/20	2.5mL	50mL	1% HNO3 / 5% HCl	25 - 2,500

ICP-OES Interference Check Solution A

Prepared: 03/18/20
Expires: 04/01/20
1% HNO3 / 5% HCl Prep: 03/18/20
Prepared By (Initials): PW

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp Date	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Aluminum	Inorganic Ventures	35-APPLTSP-6010ICSA	10,000	N2-MEB670092-39414	07/25/22	500uL	50mL	1% HNO3 / 5% HCl	100
Calcium			10,000						100
Magnesium			10,000						100
Iron			10,000						100
ICP-OES Interference Check Solution AB									
Aluminum	Inorganic Ventures	35-APPLTSP-6010ICSA	10,000	N2-MEB670092-39414	07/25/22	500uL	50mL	1% HNO3 / 5% HCl	100
Calcium			10,000						100
Magnesium			10,000						100
Iron			10,000						100
Special Mix (Interference)	O2SI	160495-01-01	100	10081266-2-49725	07/13/21	250uL			0.5

ICP-OES Internal Standards

Prepared: 03/18/20
Expires: 04/18/20
1% HNO3 / 5% HCl Prep: 03/18/20
Prepared By (Initials): PW

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (mg/L)	Lot Number - QA Number	Exp Date	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (mg/L)
Yttrium	O2SI	060039-04-03	1,000	10083563-2-49726	07/13/21	4mL	2L	1% HNO3 / 5% HCl	2

Metals Digestion Worksheet

Method Name 3010A Digestion **Prep Method** M3010 **Set** 200313B **Units** mL

Spikes			
Spiked ID 1	LCSW LOT# 10064561-13-49551 Pipette AP-21		
Spiked ID 2	LCSW LOT# 10064561-14-49600		
Spiked ID 3			
Spiked ID 4			
Spiked By	NM	Date:	03/13/20 8:06:00 AM
Witnessed By	SJ	Date:	03/13/20 8:06:00 AM

Starting Temp:	SLOT 32 THERM:MT1 93.2C
Ending Temp:	SLOT 32 95.2C
Temperature Type:	Mod Block
Sufficient Vol for Matrix QC:	YES
End Date/Time	03/13/20 12:15

	Sample	Sample Container	Spike Amount	Spike ID	Digested Amount	Final Volume	Start Date/Time	Comments
1	200313B Blk				50mL	50mL	03/13/20 8:06	equip: Modblock2
2	200313B LCS		500uL	1+2	50mL	50mL	03/13/20 8:06	equip: Modblock2
3	200313B LCSD		500uL	1+2	50mL	50mL	03/13/20 8:06	equip: Modblock2
4	BA08341	BA08341W48			50mL	50mL	03/13/20 8:06	equip: Modblock2 91638
5	BA08341 MS	BA08341W48	500uL	1+2	50mL	50mL	03/13/20 8:06	equip: Modblock2
6	BA08341 MSD	BA08341W48	500uL	1+2	50mL	50mL	03/13/20 8:06	equip: Modblock2
7	BA08343	BA08343W09			50mL	50mL	03/13/20 8:06	equip: Modblock2 91637
8	BA08344	BA08344W09			50mL	50mL	03/13/20 8:06	equip: Modblock2 91637
9	BA08345	BA08345W09			50mL	50mL	03/13/20 8:06	equip: Modblock2 91637
10	BA08346	BA08346W09			50mL	50mL	03/13/20 8:06	equip: Modblock2 91637
11	BA08347	BA08347W09			50mL	50mL	03/13/20 8:06	equip: Modblock2 91637
12	BA08348	BA08348W09			50mL	50mL	03/13/20 8:06	equip: Modblock2 91637
13	BA08349	BA08349W09			50mL	50mL	03/13/20 8:06	equip: Modblock2 91637
14	BA08350	BA08350W09			50mL	50mL	03/13/20 8:06	equip: Modblock2 91637
15	BA08370	BA08370W24			50mL	50mL	03/13/20 8:06	equip: Modblock2 91653

Solvent and Lot#
HNO3 BDH 1119020 15579
1:1 HCL 1-28-20
50mL vessel 1-28-20

Sample COC Transfer	
Sample prep employee Initials	nm
Analyst's initials	
Date	
Time	
Moved to	

Technician's Initials	
Scanned By	nm
Sample Preparation	nm
Digestion	nm
Bring up to volume	
Modified	03/13/20 7:38:17 AM

Reviewed By: **Date:**

6010C/3010A Injection Log

Directory: K:\ICP-OES Cyrus\Backup Excel\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	18 Mar 2020	09:54	Blank		200318A200	1.
2	18 Mar 2020	09:59	Standard 1		200318A200	1.
3	18 Mar 2020	10:03	Standard 2		200318A200	1.
4	18 Mar 2020	10:08	Standard 3		200318A200	1.
5	18 Mar 2020	10:12	Standard 4		200318A200	1.
6	18 Mar 2020	10:17	Standard 5		200318A200	1.
7	18 Mar 2020	10:21	Standard 6		200318A200	1.
8	18 Mar 2020	10:25	ICV		200318A200	1.
9	18 Mar 2020	10:30	ICB		200318A200	1.
10	18 Mar 2020	10:34	LLICV		200318A200	1.
14	18 Mar 2020	10:52	ICSA		200318A200	1.
16	18 Mar 2020	11:10	ICSAB		200318A200	1.
18	18 Mar 2020	11:19	200313B BLK		200318A200	1.
19	18 Mar 2020	11:23	200313B LCS		200318A200	1.
20	18 Mar 2020	11:28	200313B LCSD		200318A200	1.
21	18 Mar 2020	11:32	BA08341W48 DF5		200318A200	5.
24	18 Mar 2020	11:46	BA08341W48 MS		200318A200	1.
25	18 Mar 2020	11:50	BA08341W48 MSD		200318A200	1.
27	18 Mar 2020	12:25	CCV		200318A200	1.
28	18 Mar 2020	12:30	CCB		200318A200	1.

INORGANIC ANALYSIS
Calibration Data

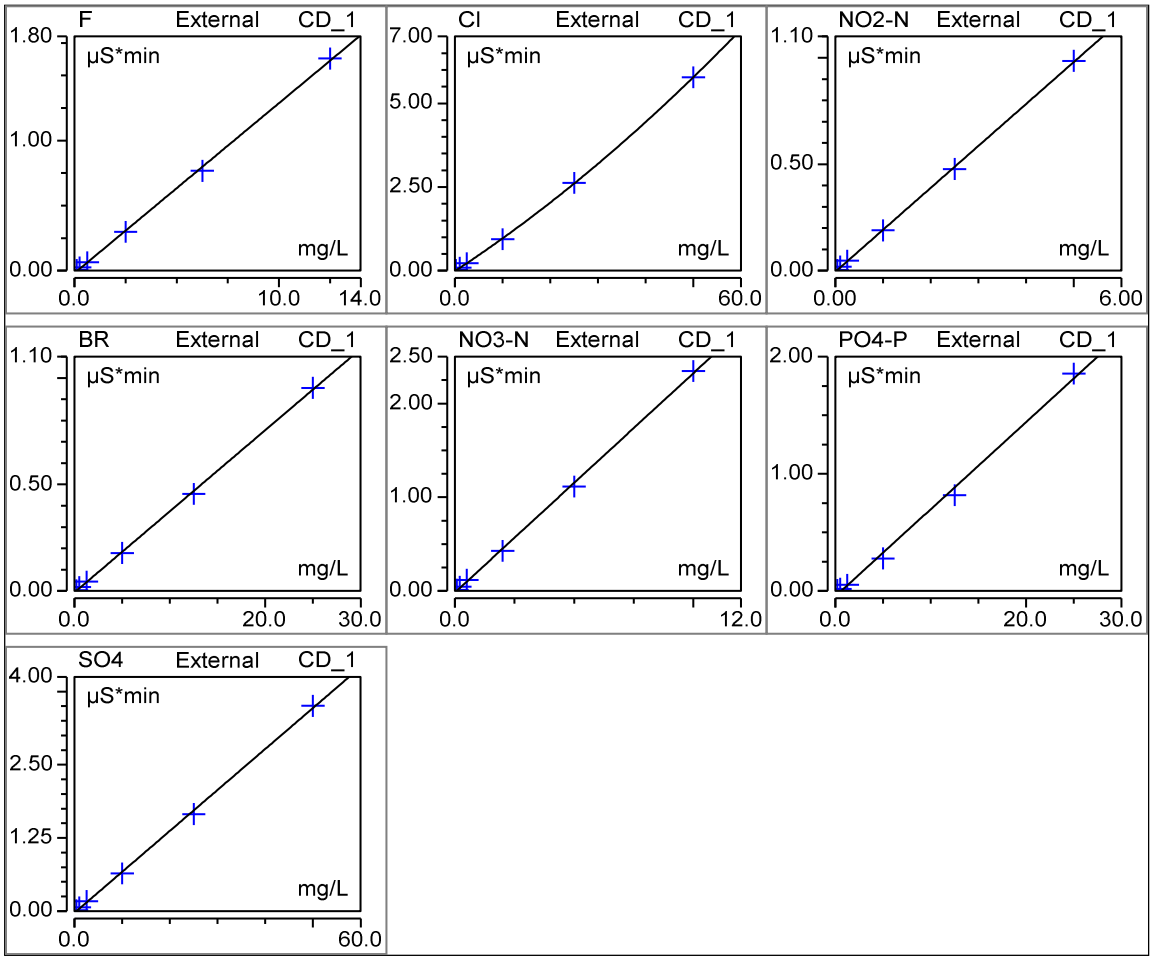
Calibration Batch Report

Sequence:	**200312**	*Injection Volume:*	**25.00**
Instrument Method:	**Anions IM**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Mar-2020 / 10:40**	*Run Time:*	**7.5**

Calibration Summary

Peak Name	Eval.Type	Cal.Type	Points	Offset (C0)	Slope (C1)	Curve (C2)	Coeff.Det. %
F	Area	Lin, WithOffset	6.000	-0.018	0.131	0.000	99.9240
Cl	Area	Quad, WithOffset	6.000	-0.012	0.093	0.000	99.9952
NO2-N	Area	Lin, WithOffset	6.000	-0.005	0.197	0.000	99.9779
BR	Area	Lin, WithOffset	6.000	-0.007	0.038	0.000	99.9522
NO3-N	Area	Lin, WithOffset	6.000	-0.017	0.234	0.000	99.9210
PO4-P	Area	Lin, WithOffset	6.000	-0.047	0.074	0.000	99.5900
SO4	Area	Lin, WithOffset	6.000	-0.027	0.070	0.000	99.9219

Injection Name	Amount mg/L CD_1 F	Amount mg/L CD_1 Cl	Amount mg/L CD_1 NO2-N	Amount mg/L CD_1 BR	Amount mg/L CD_1 NO3-N	Amount mg/L CD_1 PO4-P	Amount mg/L CD_1 SO4
Cal 1 2020.03.12	0.183	0.3234	0.0401	0.2592	0.1203	0.7374	0.5904
Cal 2	0.337	1.0494	0.1225	0.6623	0.2599	0.8678	1.2859
Cal 3	0.631	2.4664	0.2654	1.3323	0.5731	1.3300	2.8251
Cal 5	2.430	9.7342	0.9855	4.8563	1.8964	4.3465	9.6035
Cal 6	6.016	25.1506	2.4494	12.1381	4.8295	11.6066	24.0786
Cal 8	12.629	49.9763	5.0270	25.2019	10.1008	25.5618	50.5165

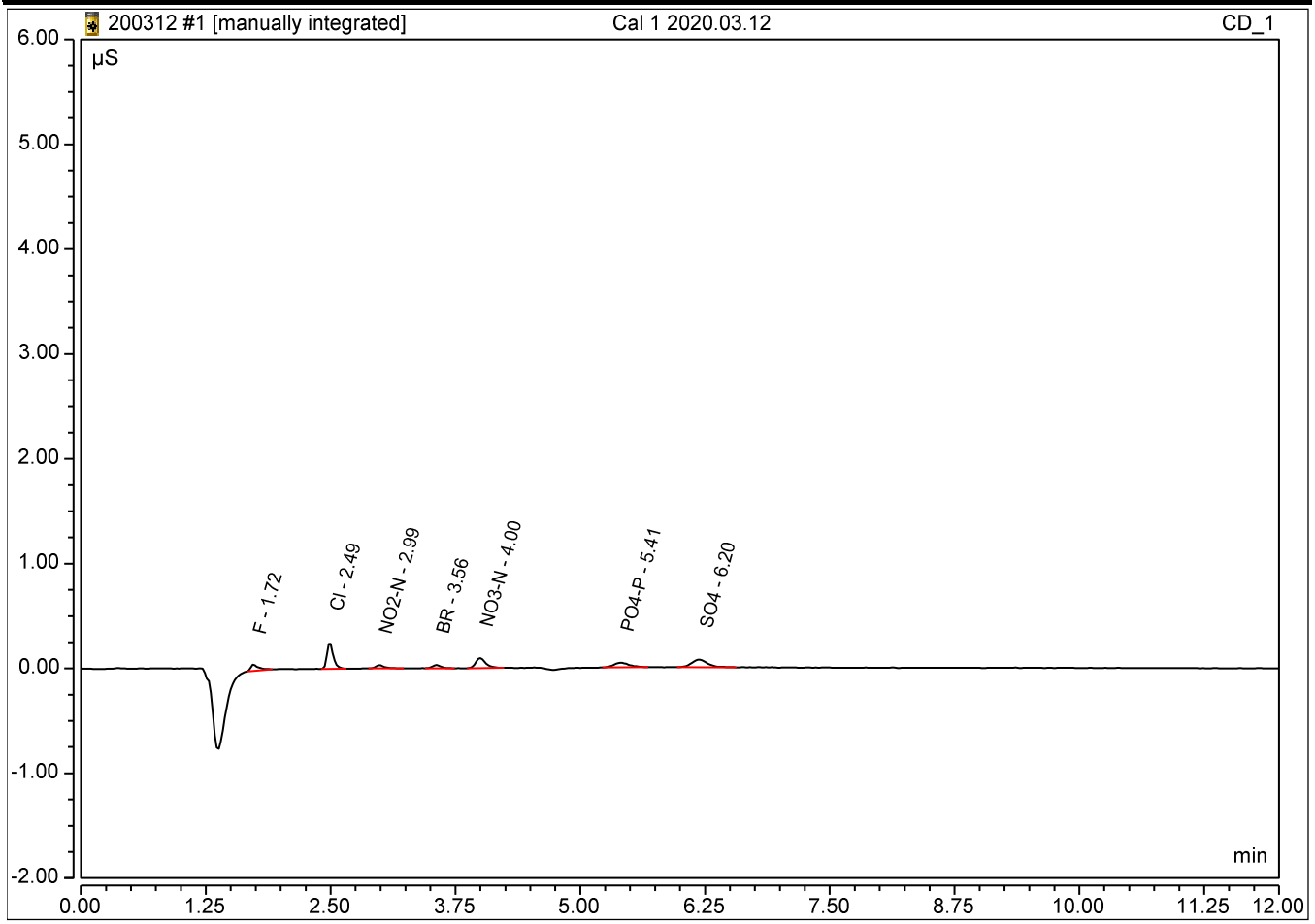


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200312

Peak Integration Report

Sample Name:	**Cal 1 2020.03.12**	*Inj. Vol.:*	**25uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.03.12**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Mar-2020 / 09:27**	*Run Time:*	**12.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	1.72	**F**	BMB*	0.006	0.060	0.18	0.1	183.2%
2	2.49	**Cl**	BMB	0.018	0.257	0.32	0.2	161.7%
3	2.99	**NO2-N**	BMB	0.003	0.031	0.04	0.04	100.3%
4	3.56	**BR**	BMB	0.003	0.030	0.26	0.2	129.6%
5	4.00	**NO3-N**	BMB	0.011	0.097	0.12	0.08	150.4%
6	5.41	**PO4-P**	BMB	0.008	0.045	0.74	0.2	368.7%
7	6.20	**SO4**	BMB	0.014	0.074	0.59	0.4	147.6%

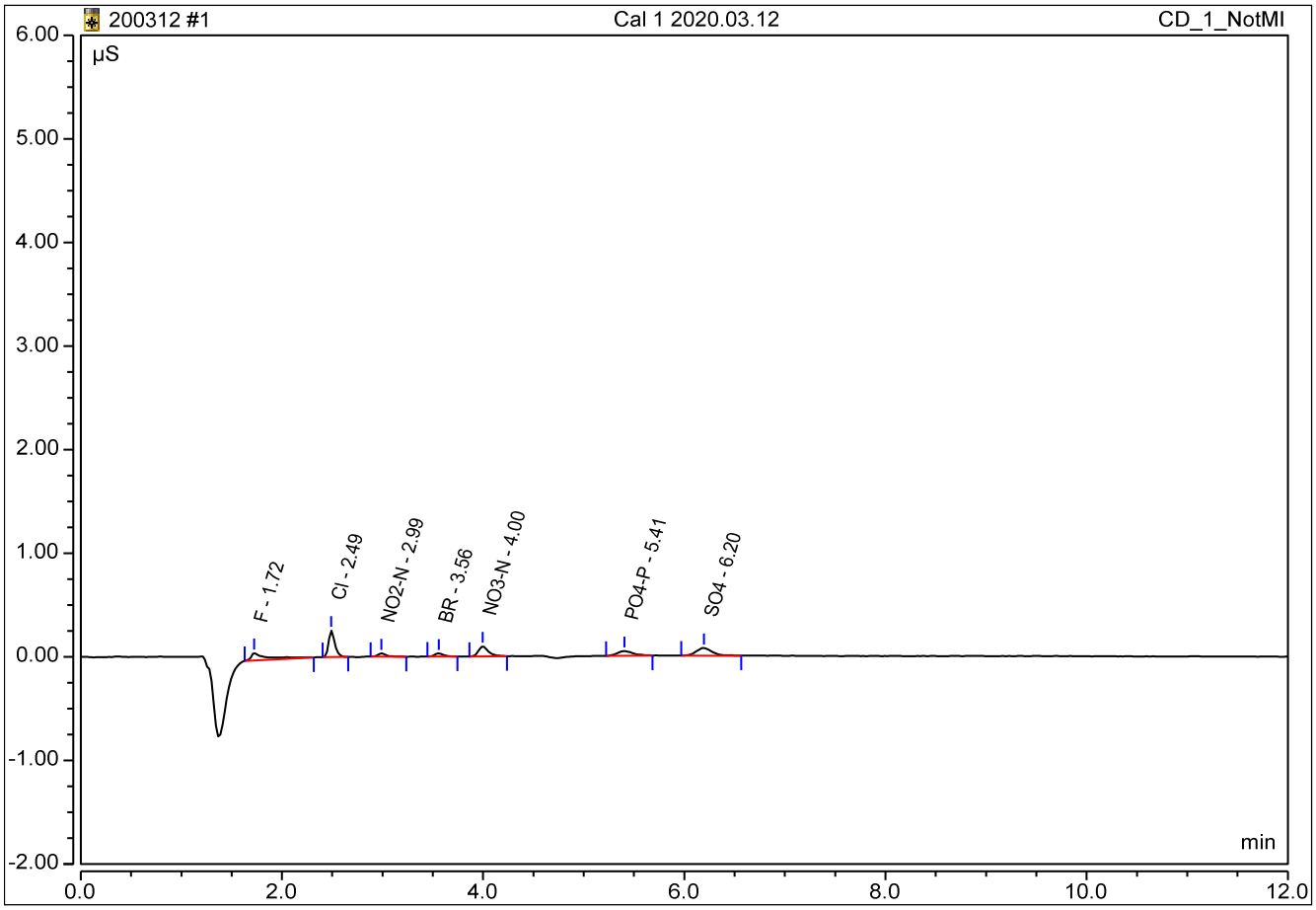


F GA mi1 2020.03.12, HH

Not Manipulated Peak Integration Report

Sample Name:	**Cal 1 2020.03.12**	*Inj. Vol.:*	**25uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.03.12**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Mar-2020 / 09:27**	*Run Time:*	**12.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	1.72	**F**	BMB*	0.013	0.070	0.1957
2	2.49	**Cl**	BMB	0.018	0.257	0.3239
3	2.99	**NO2-N**	BMB	0.003	0.031	0.0401
4	3.56	**BR**	BMB	0.003	0.030	0.2592
5	4.00	**NO3-N**	BMB	0.011	0.097	0.1203
6	5.41	**PO4-P**	BMB	0.008	0.045	0.7374
7	6.20	**SO4**	BMB	0.014	0.074	0.5904

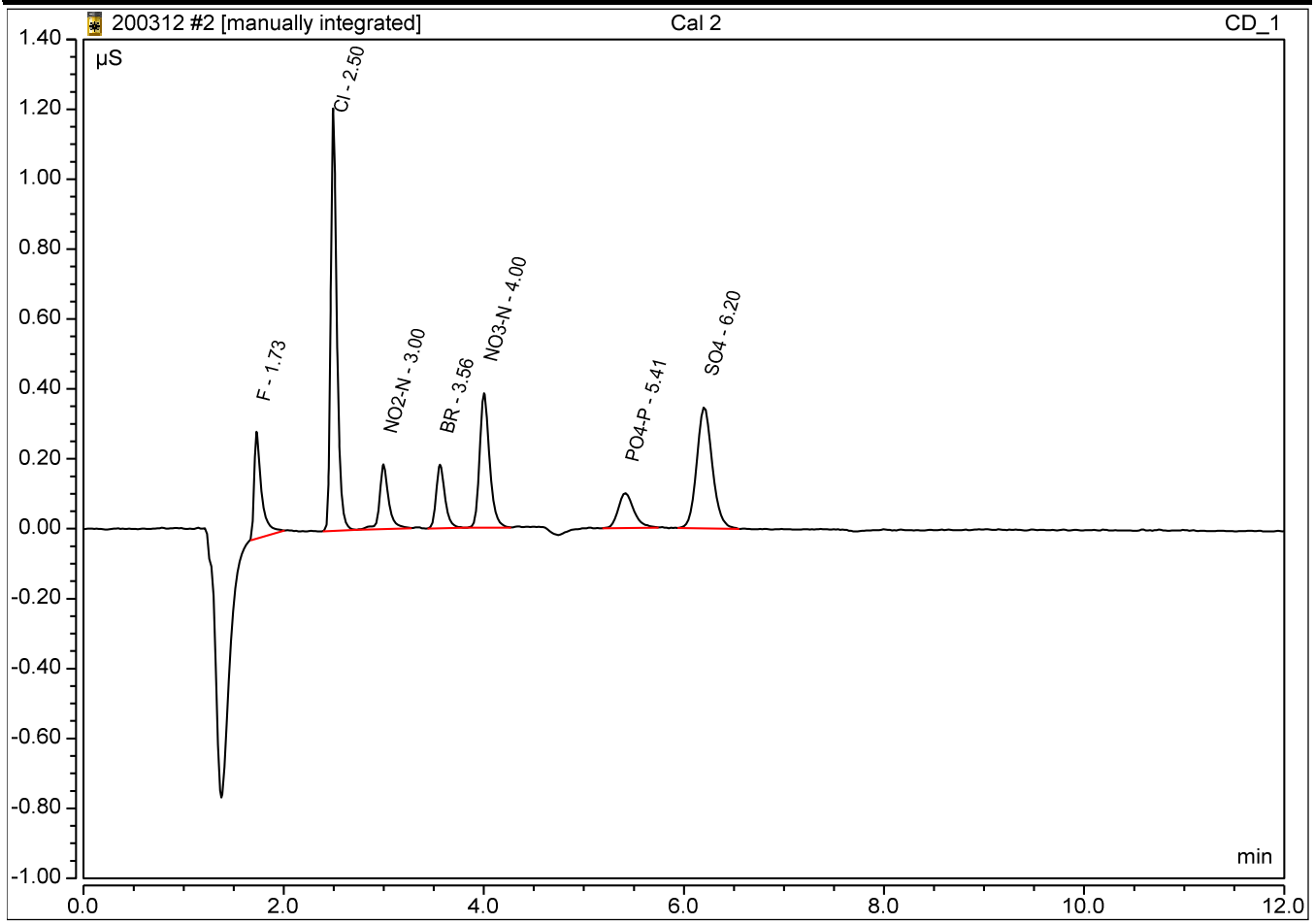


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200312

Peak Integration Report

Sample Name:	**Cal 2**	*Inj. Vol.:*	**25uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.03.12**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Mar-2020 / 09:42**	*Run Time:*	**12.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	1.73	**F**	MB*	0.026	0.305	0.34	0.25	134.9%
2	2.50	**Cl**	BMB	0.087	1.208	1.05	1	104.9%
3	3.00	**NO2-N**	BMB	0.019	0.185	0.12	0.1	122.5%
4	3.56	**BR**	BMB	0.018	0.182	0.66	0.5	132.5%
5	4.00	**NO3-N**	BMB	0.044	0.385	0.26	0.2	130.0%
6	5.41	**PO4-P**	BMB	0.018	0.100	0.87	0.5	173.6%
7	6.20	**SO4**	BMB	0.063	0.347	1.29	1	128.6%

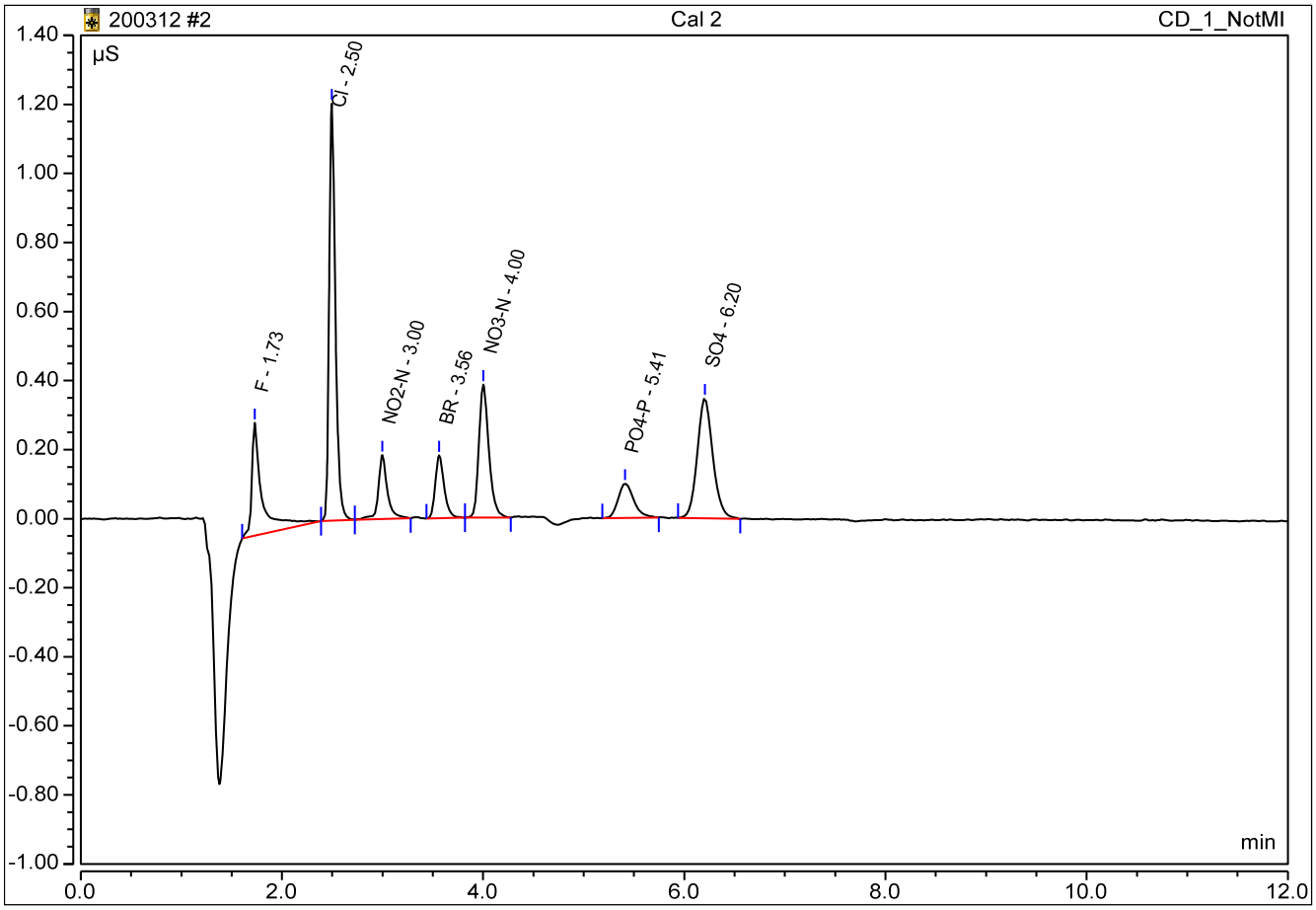


F GA mi1 2020.03.12, HH

Not Manipulated Peak Integration Report

Sample Name:	**Cal 2**	*Inj. Vol.:*	**25uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.03.12**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Mar-2020 / 09:42**	*Run Time:*	**12.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	1.73	**F**	MB*	0.039	0.326	0.3991
2	2.50	**Cl**	BMB	0.087	1.208	1.0546
3	3.00	**NO2-N**	BMB	0.019	0.185	0.1225
4	3.56	**BR**	BMB	0.018	0.182	0.6623
5	4.00	**NO3-N**	BMB	0.044	0.385	0.2599
6	5.41	**PO4-P**	BMB	0.018	0.100	0.8678
7	6.20	**SO4**	BMB	0.063	0.347	1.2859

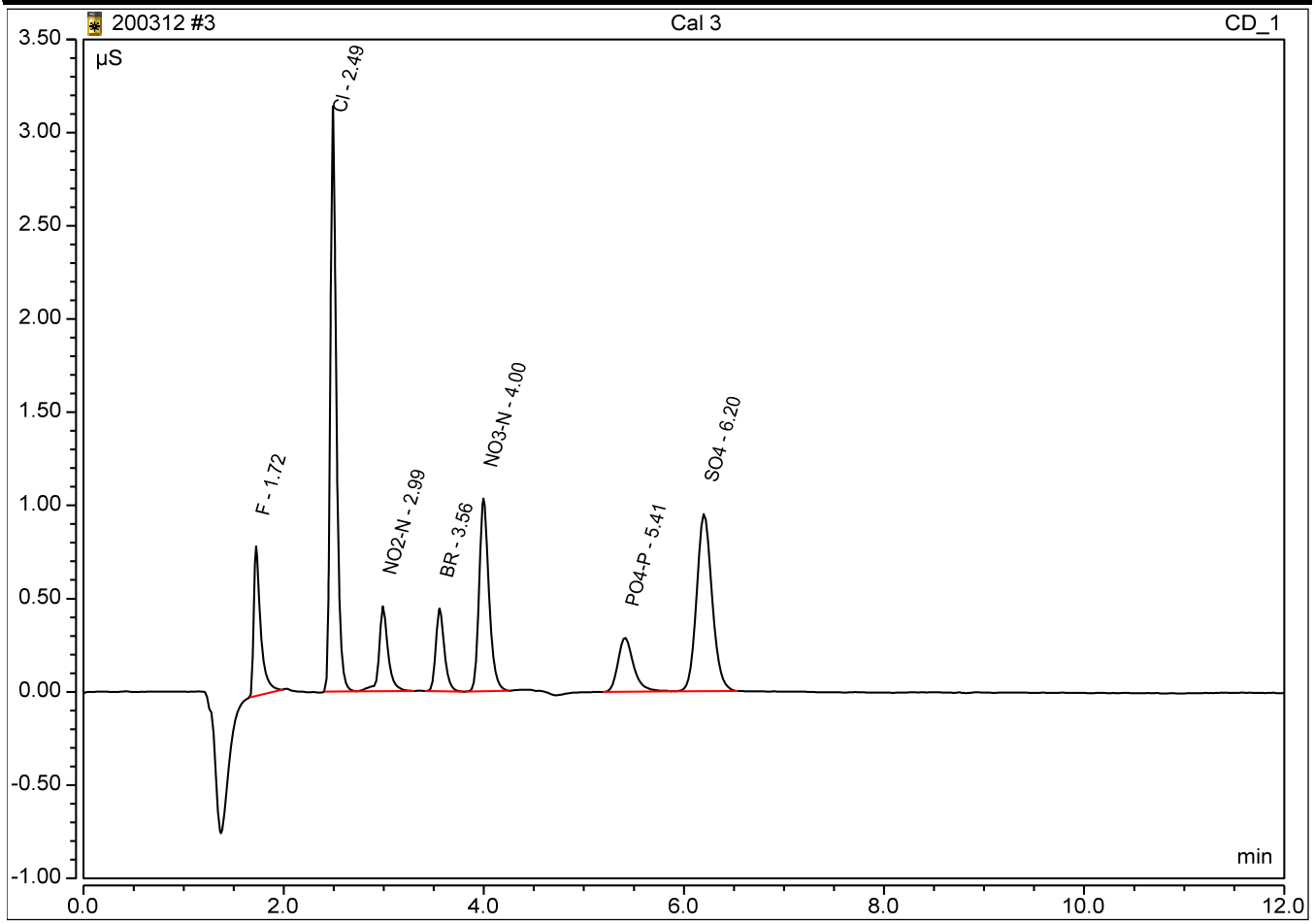


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200312

Peak Integration Report

Sample Name:	**Cal 3**	*Inj. Vol.:*	**25uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.03.12**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Mar-2020 / 09:56**	*Run Time:*	**12.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	1.72	**F**	BMB	0.064	0.802	0.63	0.625	100.9%
2	2.49	**Cl**	BMB	0.221	3.140	2.47	2.5	98.7%
3	2.99	**NO2-N**	BMB	0.047	0.457	0.27	0.25	106.2%
4	3.56	**BR**	BMB	0.044	0.444	1.33	1.25	106.6%
5	4.00	**NO3-N**	BMB	0.117	1.035	0.57	0.5	114.6%
6	5.41	**PO4-P**	BMB	0.052	0.291	1.33	1.25	106.4%
7	6.20	**SO4**	BMB	0.170	0.953	2.83	2.5	113.0%

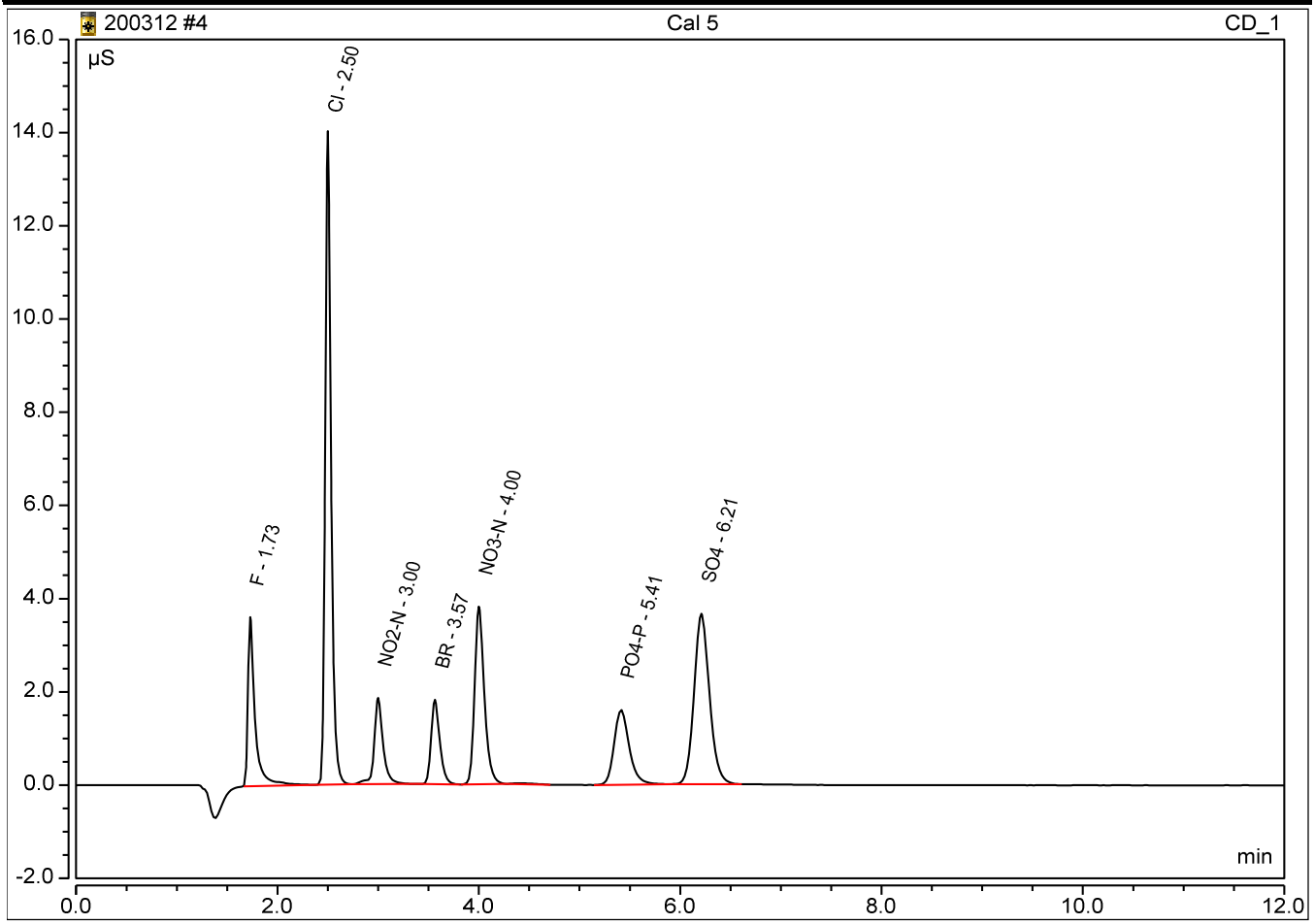


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200312

Peak Integration Report

Sample Name:	**Cal 5**	*Inj. Vol.:*	**25uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.03.12**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Mar-2020 / 10:11**	*Run Time:*	**12.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	1.73	**F**	BMB	0.299	3.629	2.43	2.5	97.2%
2	2.50	**Cl**	BMB	0.941	14.024	9.73	10	97.3%
3	3.00	**NO2-N**	BMB	0.189	1.849	0.99	1	98.6%
4	3.57	**BR**	BMB	0.178	1.808	4.86	5	97.1%
5	4.00	**NO3-N**	BMB	0.427	3.815	1.90	2	94.8%
7	5.41	**PO4-P**	BMB	0.277	1.605	4.35	5	86.9%
8	6.21	**SO4**	BMB	0.644	3.655	9.60	10	96.0%

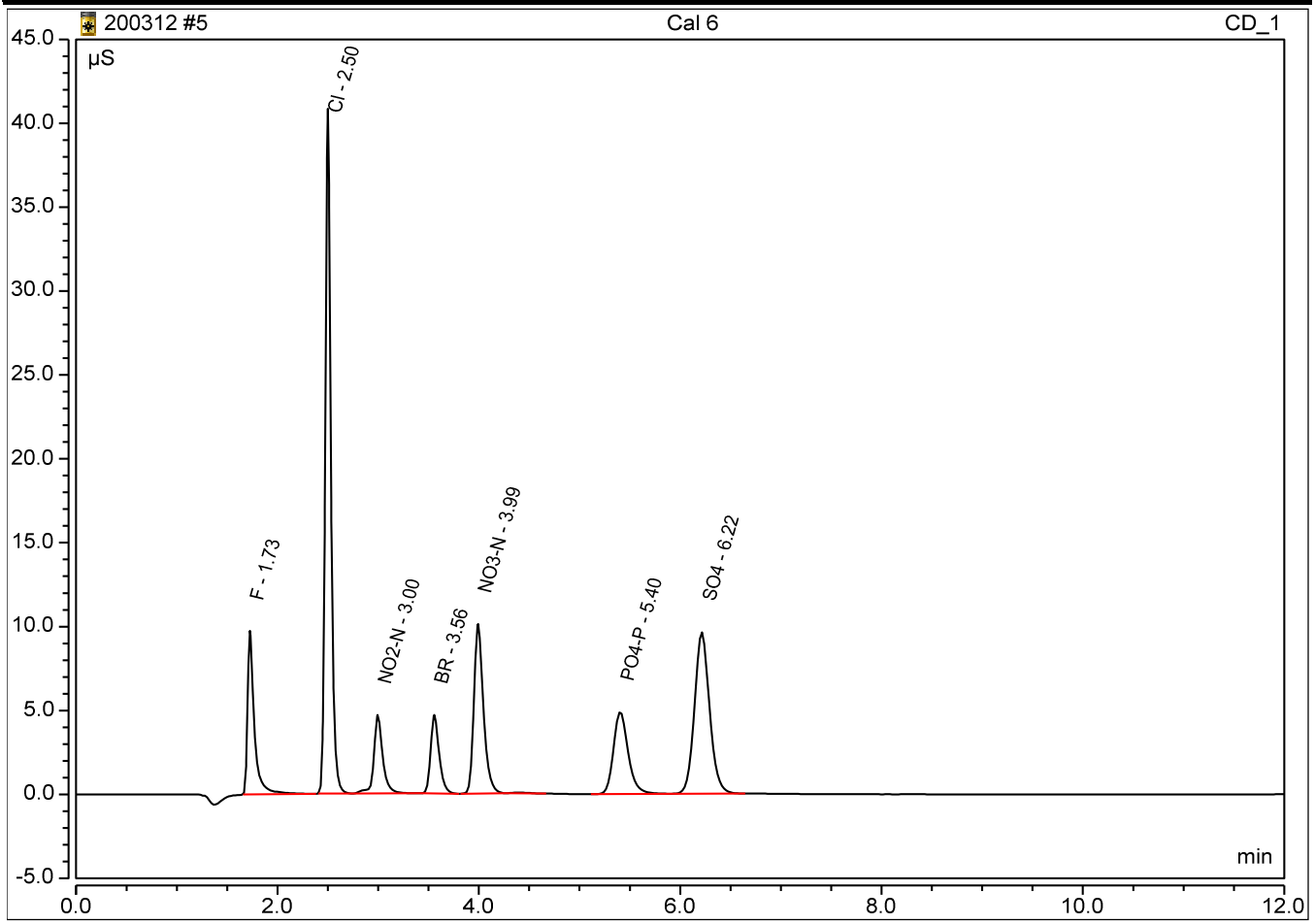


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200312

Peak Integration Report

Sample Name:	**Cal 6**	*Inj. Vol.:*	**25uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.03.12**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Mar-2020 / 10:26**	*Run Time:*	**12.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	1.73	**F**	BMB	0.767	9.755	6.02	6.25	96.2%
2	2.50	**Cl**	BMB	2.623	40.820	25.15	25	100.6%
3	3.00	**NO2-N**	BMB	0.478	4.682	2.45	2.5	98.0%
4	3.56	**BR**	BMB	0.456	4.688	12.14	12.5	97.1%
5	3.99	**NO3-N**	BMB	1.114	10.103	4.83	5	96.6%
7	5.40	**PO4-P**	BMB	0.817	4.894	11.61	12.5	92.9%
8	6.22	**SO4**	BMB	1.657	9.625	24.08	25	96.3%

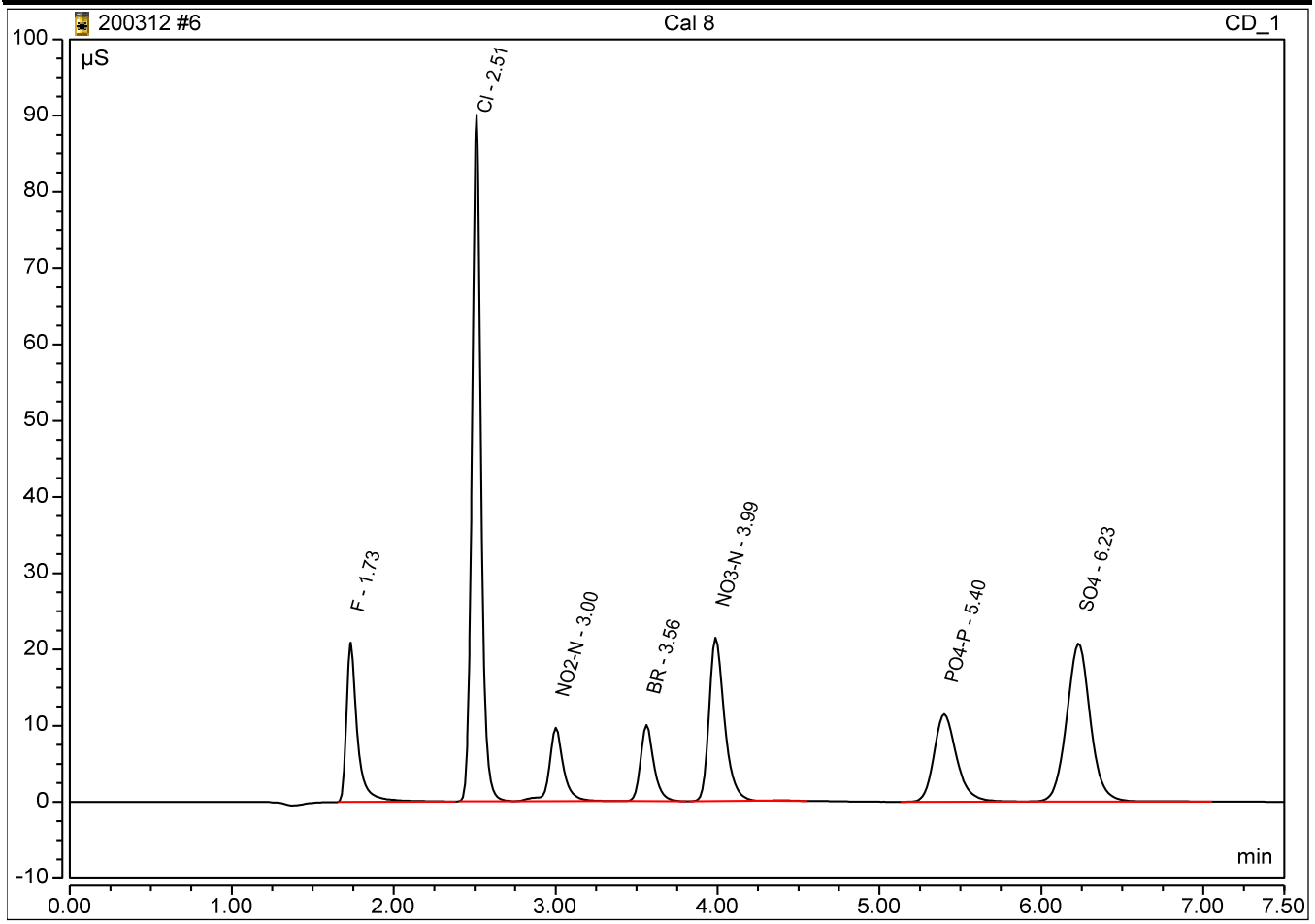


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200312

Peak Integration Report

Sample Name:	**Cal 8**	*Inj. Vol.:*	**25uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.03.12**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Mar-2020 / 10:40**	*Run Time:*	**7.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	1.73	**F**	BMB	1.631	20.895	12.63	12.5	101.0%
2	2.51	**Cl**	BMB	5.782	90.021	49.98	50	100.0%
3	3.00	**NO2-N**	BMB	0.986	9.627	5.03	5	100.5%
4	3.56	**BR**	BMB	0.954	10.009	25.20	25	100.8%
5	3.99	**NO3-N**	BMB	2.348	21.431	10.10	10	101.0%
7	5.40	**PO4-P**	BMB	1.856	11.477	25.56	25	102.2%
8	6.23	**SO4**	BMB	3.506	20.730	50.52	50	101.0%

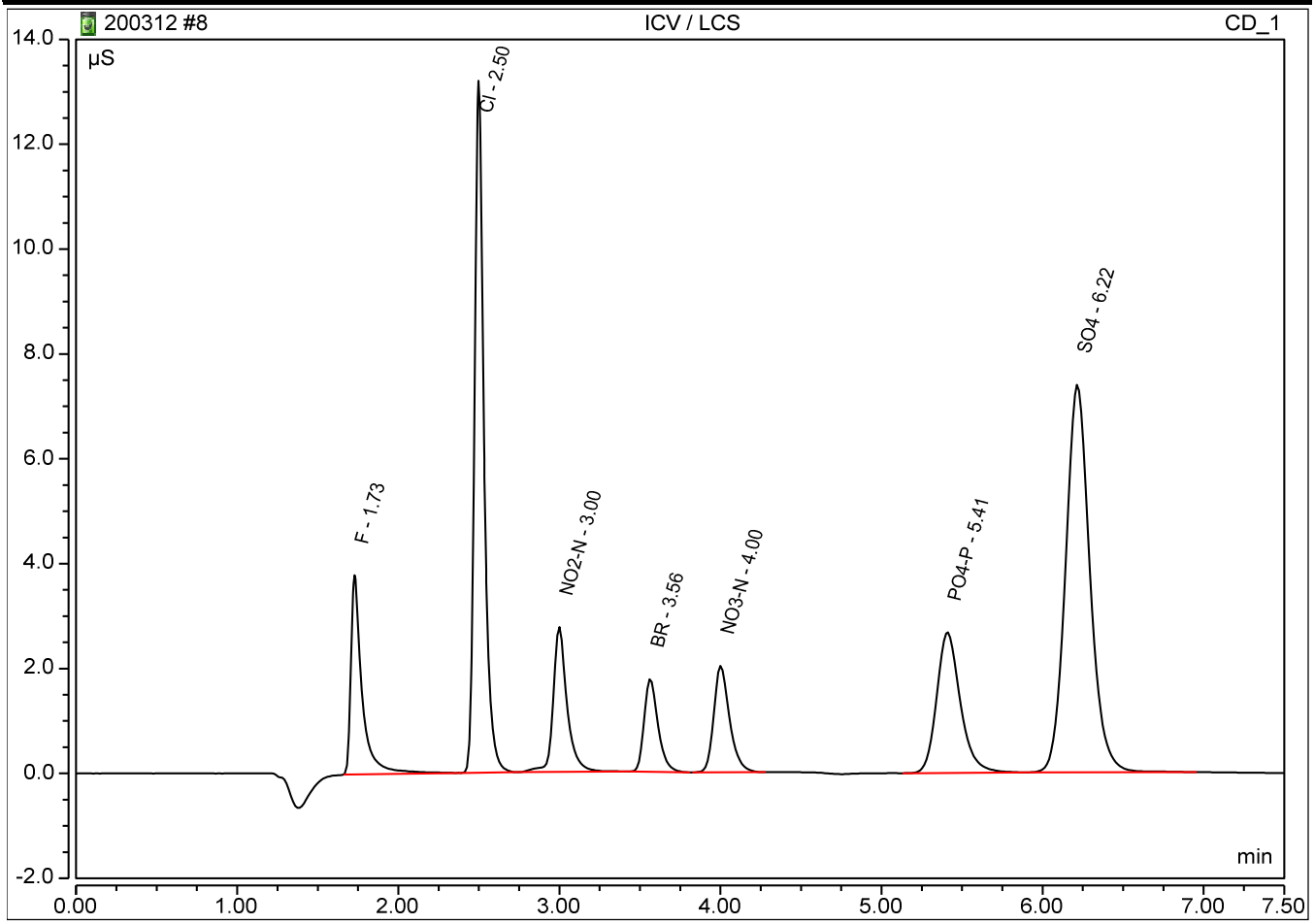


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200312

Peak Integration Report

Sample Name:	**ICV / LCS**	*Inj. Vol.:*	**25uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.03.12**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Mar-2020 / 11:01**	*Run Time:*	**7.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	1.73	**F**	BMB	0.310	3.804	2.52	2.5	100.6%
2	2.50	**Cl**	BMB	0.897	13.197	9.30	10	93.0%
3	3.00	**NO2-N**	BMB	0.277	2.767	1.43	1.522334	94.0%
4	3.56	**BR**	BMB	0.176	1.777	4.80	5	96.1%
5	4.00	**NO3-N**	BMB	0.231	2.031	1.06	1.129525	93.8%
6	5.41	**PO4-P**	BMB	0.456	2.686	6.75	6.522	103.5%
7	6.22	**SO4**	BMB	1.295	7.392	18.91	20	94.6%

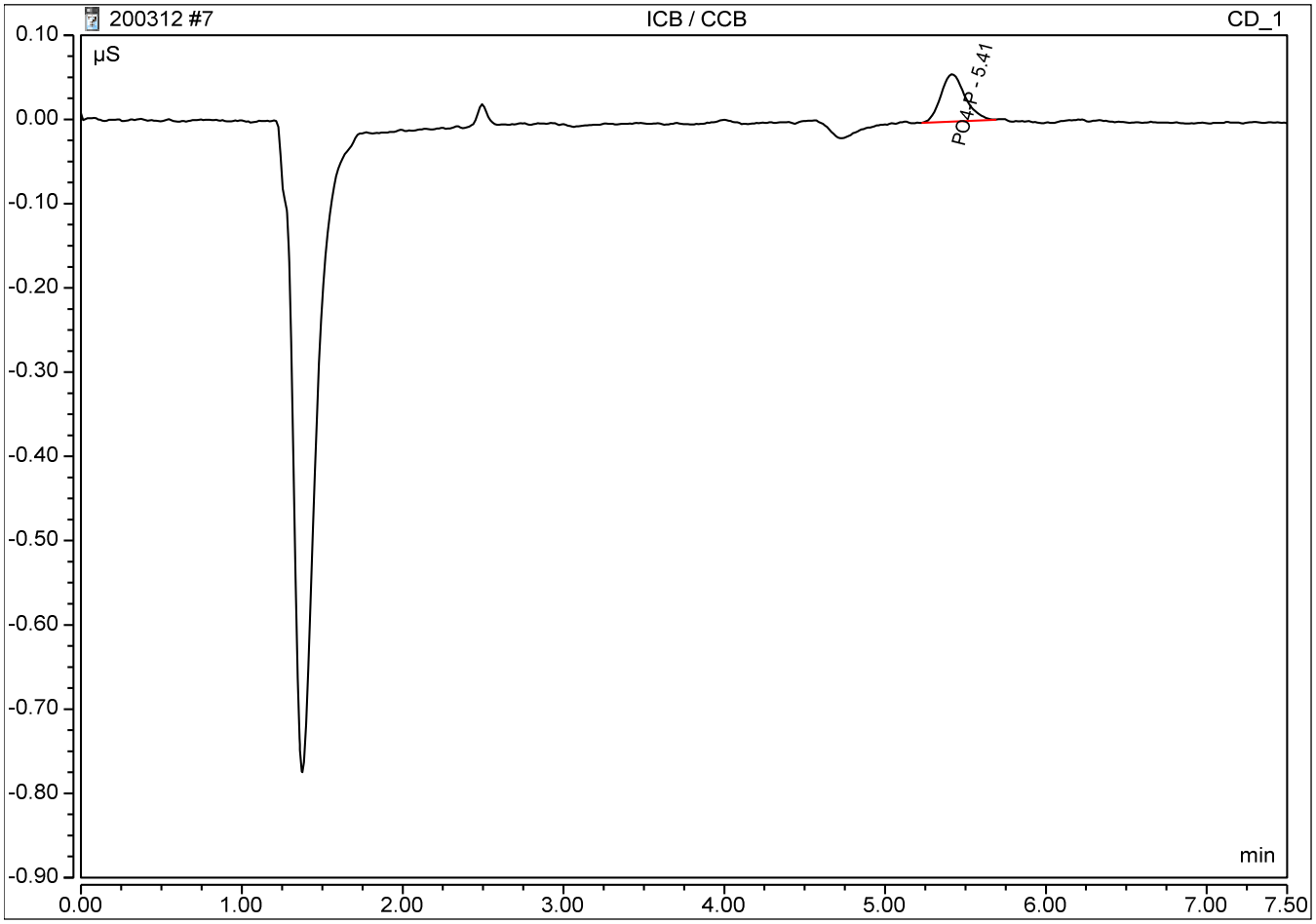


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200312

Peak Integration Report

Sample Name:	**ICB / CCB**	*Inj. Vol.:*	**25uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.03.12**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Mar-2020 / 10:50**	*Run Time:*	**7.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	5.41	**PO4-P**	BMB	0.010	0.056	0.76		

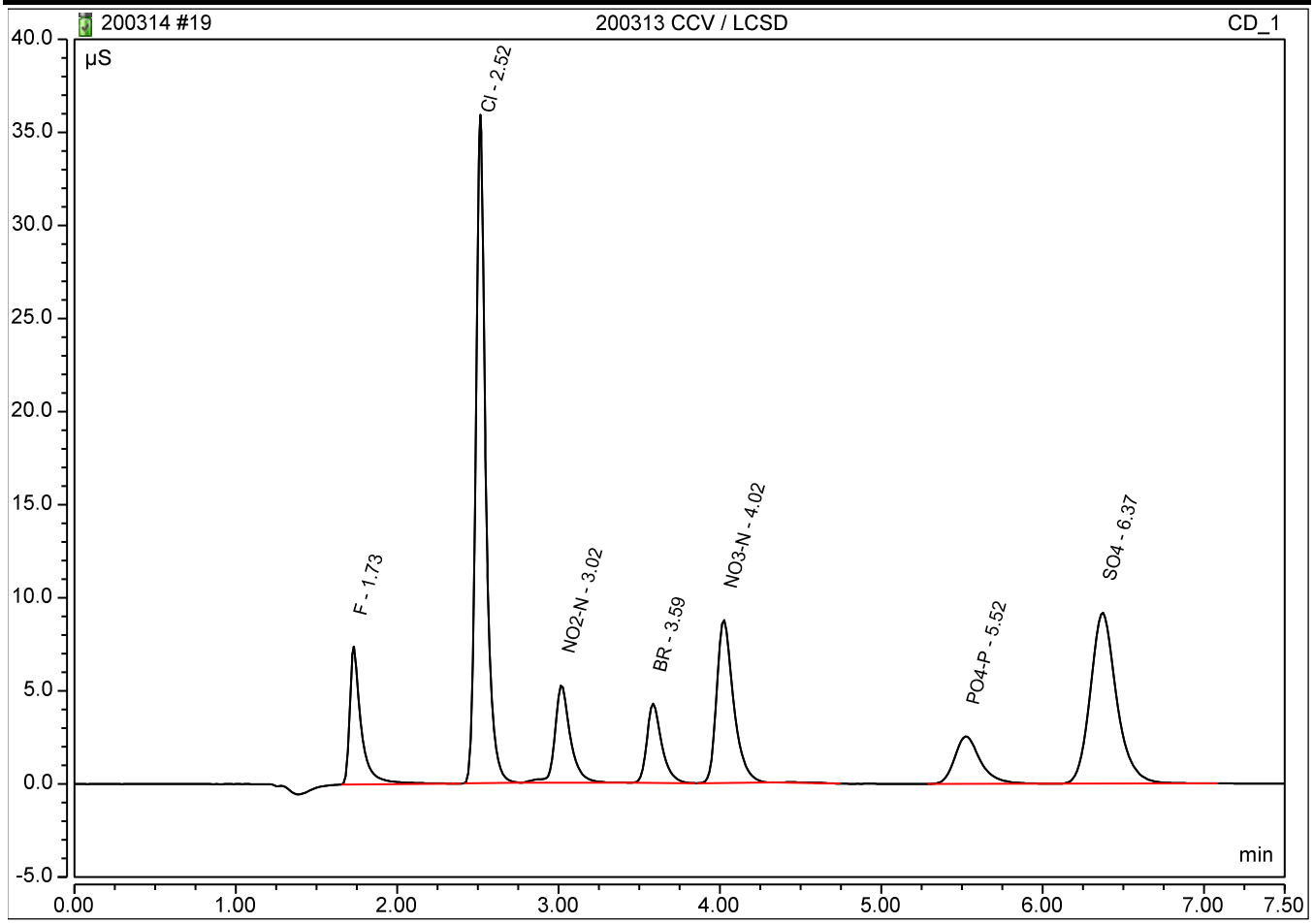


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200314

Peak Integration Report

Sample Name:	**200313 CCV / LCSD**	*Inj. Vol.:*	**25uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.03.12**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**14-Mar-2020 / 14:44**	*Run Time:*	**7.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	1.73	**F**	BMB	0.617	7.410	4.86	5	97.3%
2	2.52	**Cl**	BMB	2.554	35.898	24.55	25	98.2%
3	3.02	**NO2-N**	BMB	0.576	5.255	2.95	3.04	97.0%
4	3.59	**BR**	BMB	0.454	4.260	12.08	12.5	96.7%
5	4.02	**NO3-N**	BMB	1.060	8.785	4.60	5	92.0%
7	5.52	**PO4-P**	BMB	0.473	2.548	6.98	10	69.8%
8	6.37	**SO4**	BMB	1.736	9.185	25.21	25	100.8%

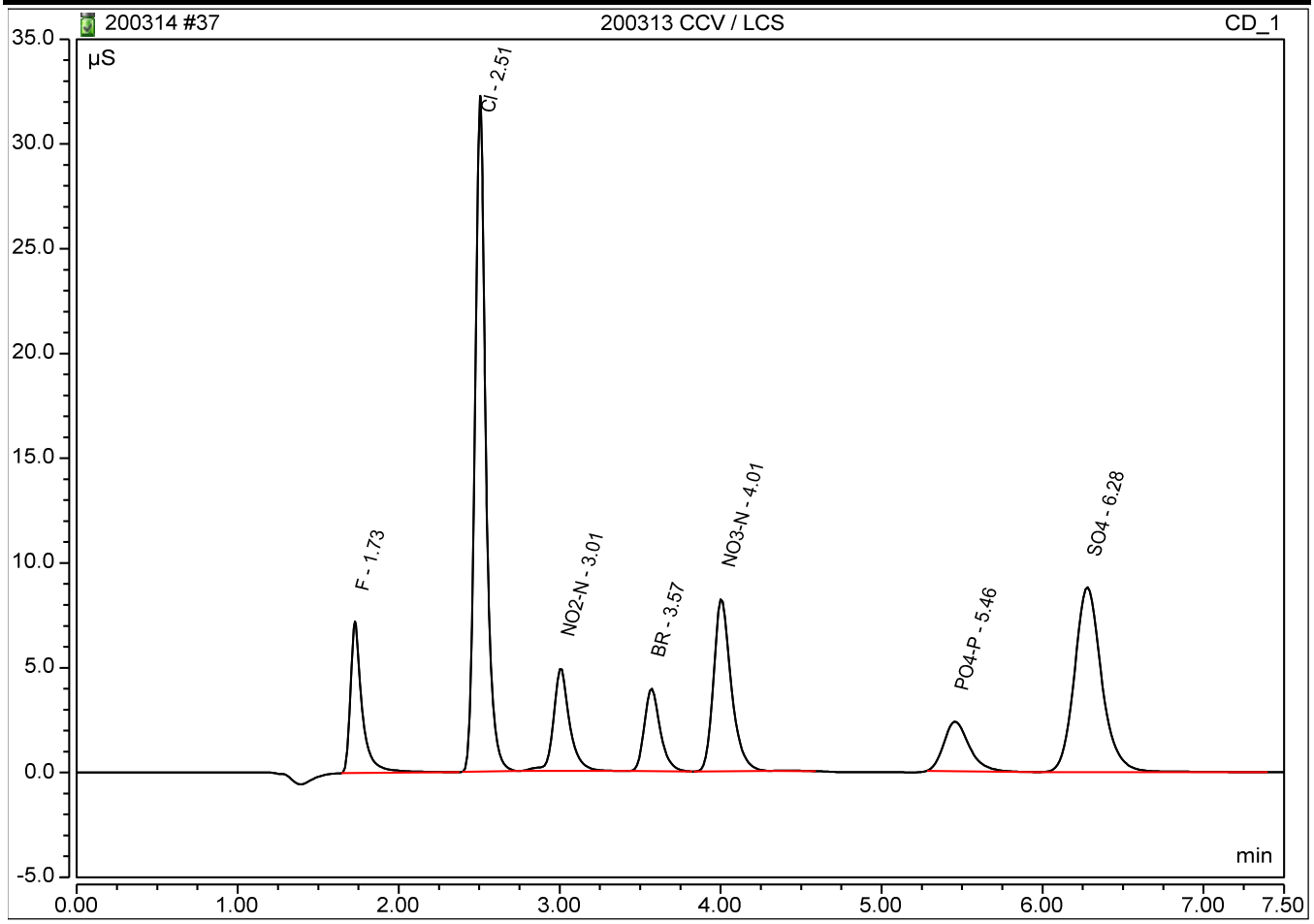


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200314

Peak Integration Report

Sample Name:	**200313 CCV / LCS**	*Inj. Vol.:*	**25uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.03.12**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**14-Mar-2020 / 17:45**	*Run Time:*	**7.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	1.73	**F**	BMB	0.616	7.237	4.86	5	97.1%
2	2.51	**Cl**	BMB	2.515	32.259	24.22	25	96.9%
3	3.01	**NO2-N**	BMB	0.567	4.924	2.90	3.04	95.5%
4	3.57	**BR**	BMB	0.449	3.953	11.95	12.5	95.6%
5	4.01	**NO3-N**	BMB	1.048	8.241	4.55	5	90.9%
7	5.46	**PO4-P**	BMB	0.434	2.361	6.46	10	64.6%
8	6.28	**SO4**	BMB	1.729	8.821	25.12	25	100.5%

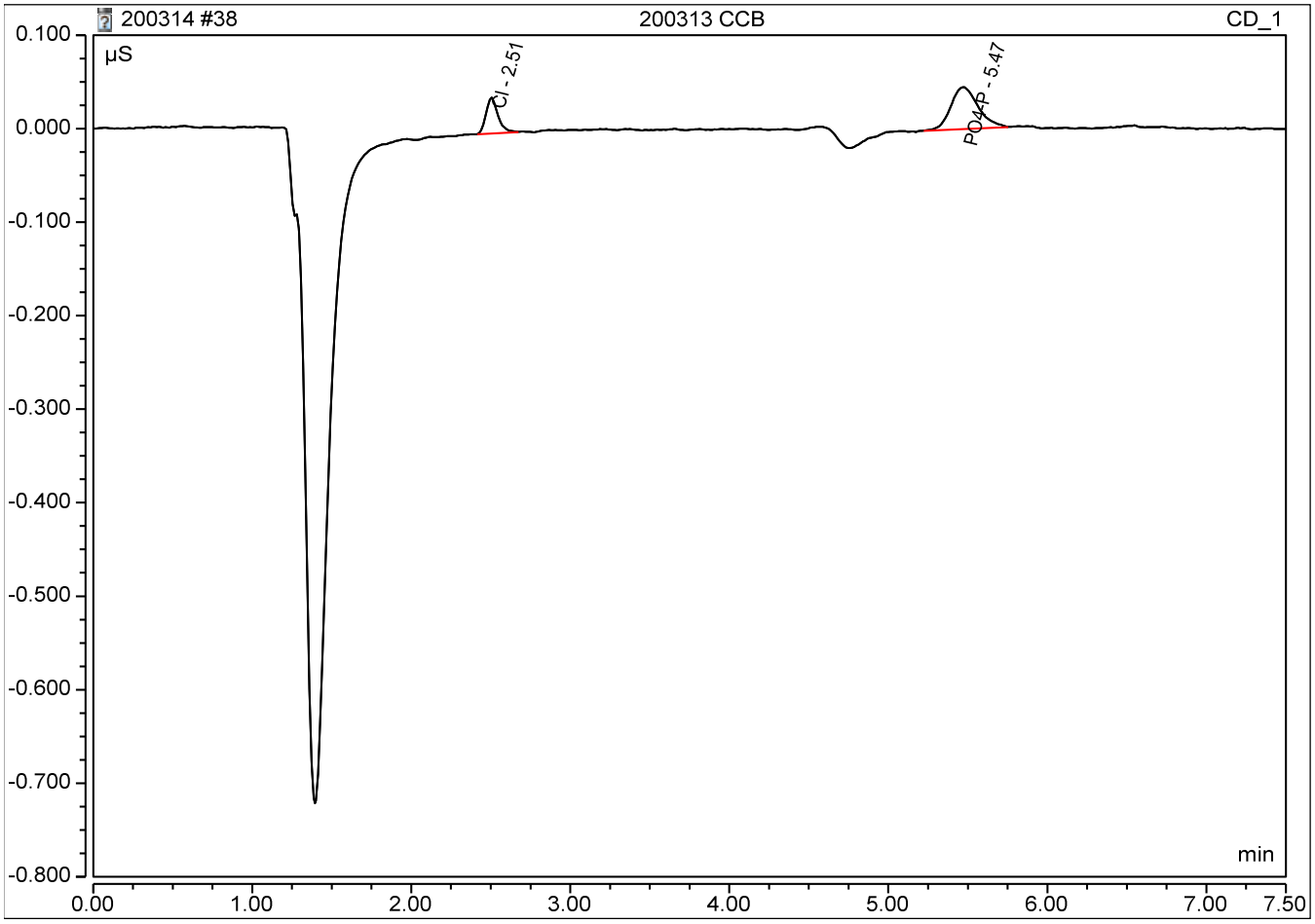


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200314

Peak Integration Report

Sample Name:	**200313 CCB**	*Inj. Vol.:*	**25uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.03.12**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**14-Mar-2020 / 17:55**	*Run Time:*	**7.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.51	**Cl**	BMB	0.003	0.039	0.16		
2	5.47	**PO4-P**	BMB	0.009	0.045	0.75		

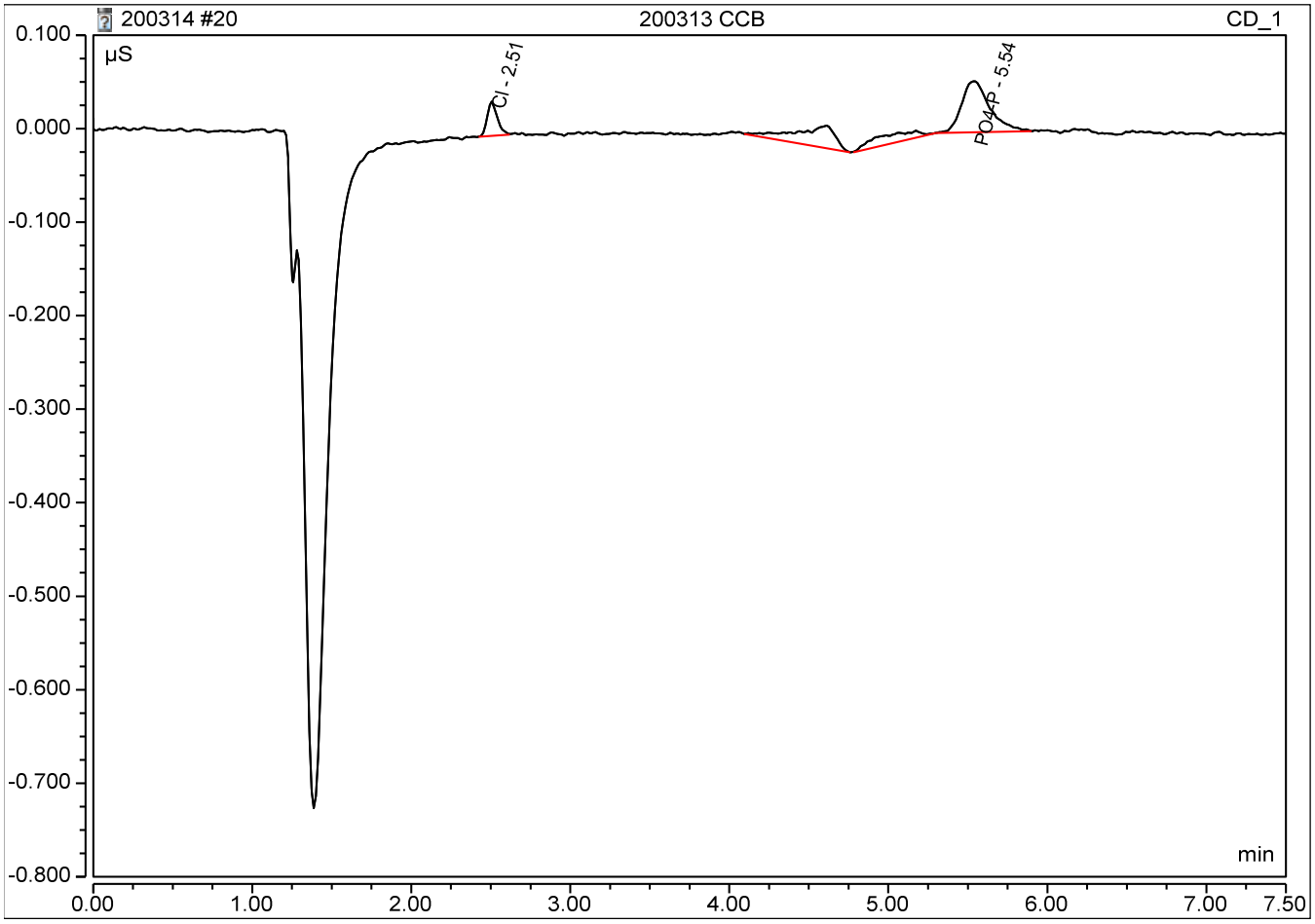


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200314

Peak Integration Report

Sample Name:	**200313 CCB**	*Inj. Vol.:*	**25uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.03.12**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**14-Mar-2020 / 14:54**	*Run Time:*	**7.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.51	**Cl**	BMB	0.003	0.037	0.16		
4	5.54	**PO4-P**	BMB	0.011	0.055	0.78		



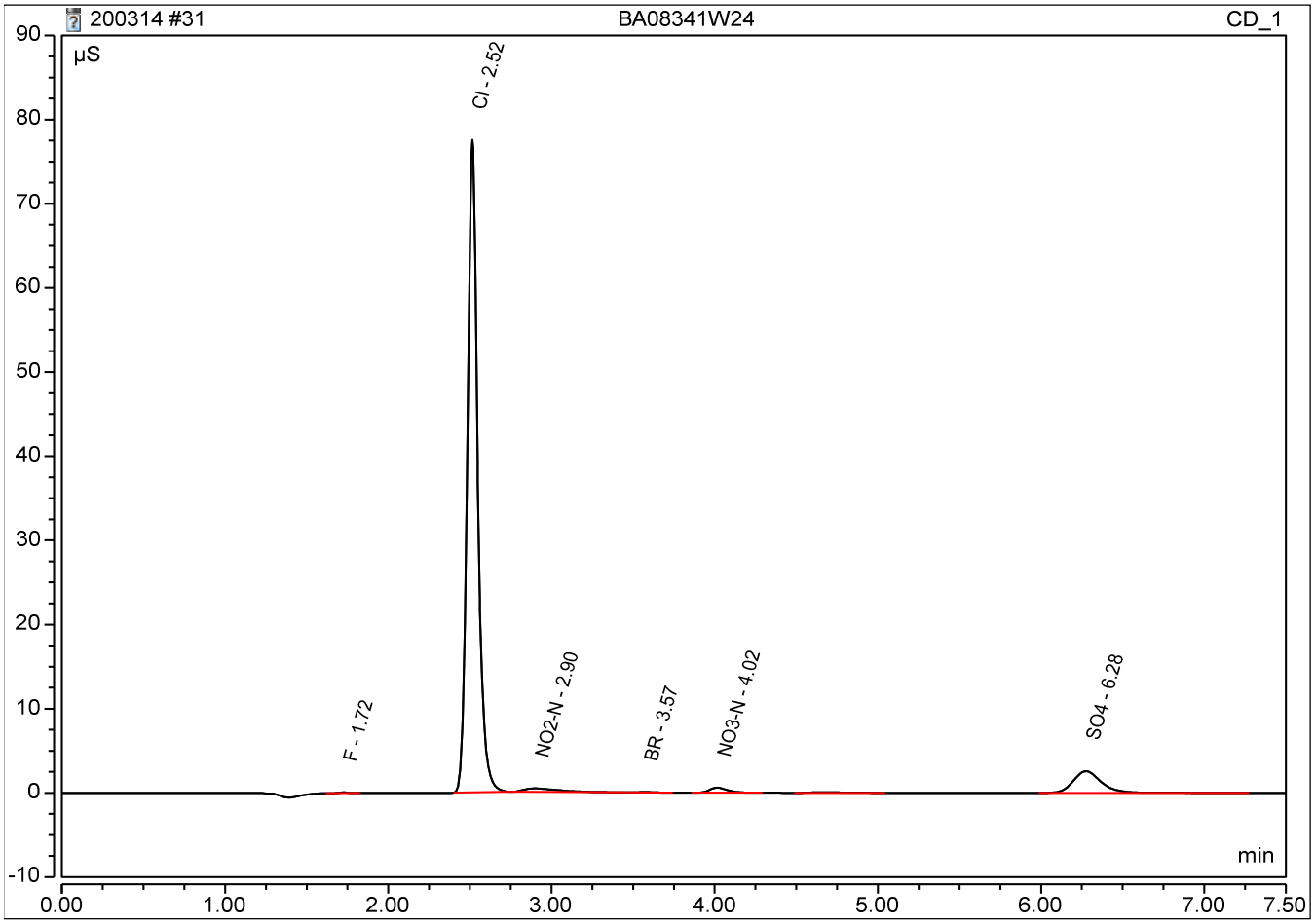
INORGANIC ANALYSIS
Raw Data

Logged on User: BW
Instrument: Charlie System_1
Sequence: 200314

Peak Integration Report

Sample Name:	**BA08341W24**	*Inj. Vol.:*	**25uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.03.12**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**14-Mar-2020 / 16:46**	*Run Time:*	**7.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	1.72	**F**	BMB	0.006	0.095	0.19		
2	2.52	**Cl**	BMB	5.744	77.542	49.70		
3	2.90	**NO2-N**	BMB	0.106	0.428	0.56		
4	3.57	**BR**	BMB	0.006	0.056	0.33		
5	4.02	**NO3-N**	BMB	0.079	0.610	0.41		
7	6.28	**SO4**	BMB	0.514	2.586	7.74		

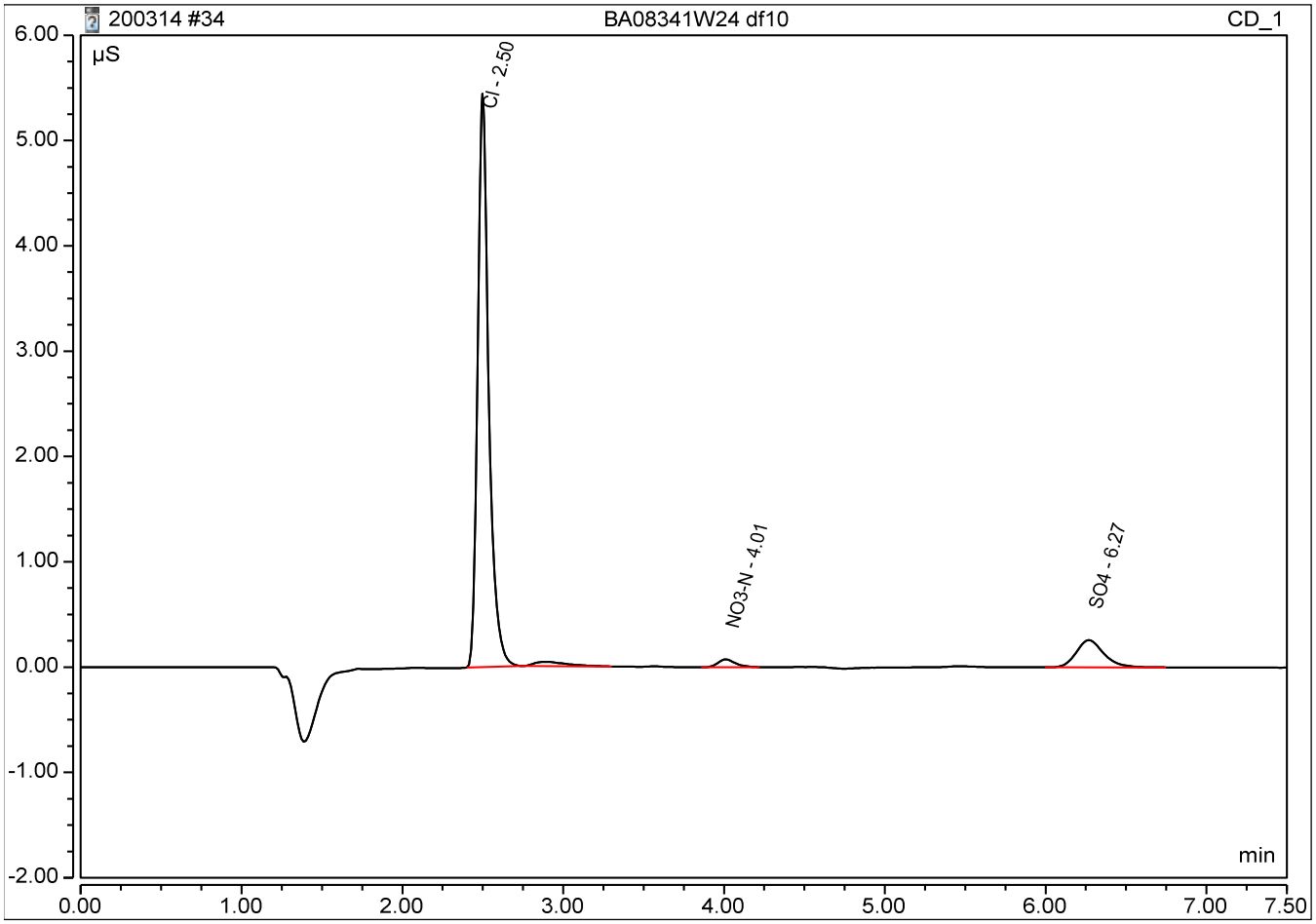


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200314

Peak Integration Report

Sample Name:	**BA08341W24 df10**	*Inj. Vol.:*	**25uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**10.00**
Program:	**Anion APM 2020.03.12**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**14-Mar-2020 / 17:16**	*Run Time:*	**7.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.50	**Cl**	BMB	0.434	5.445	46.64		
3	4.01	**NO3-N**	BMB	0.009	0.075	1.12		
4	6.27	**SO4**	BMB	0.052	0.258	11.30		

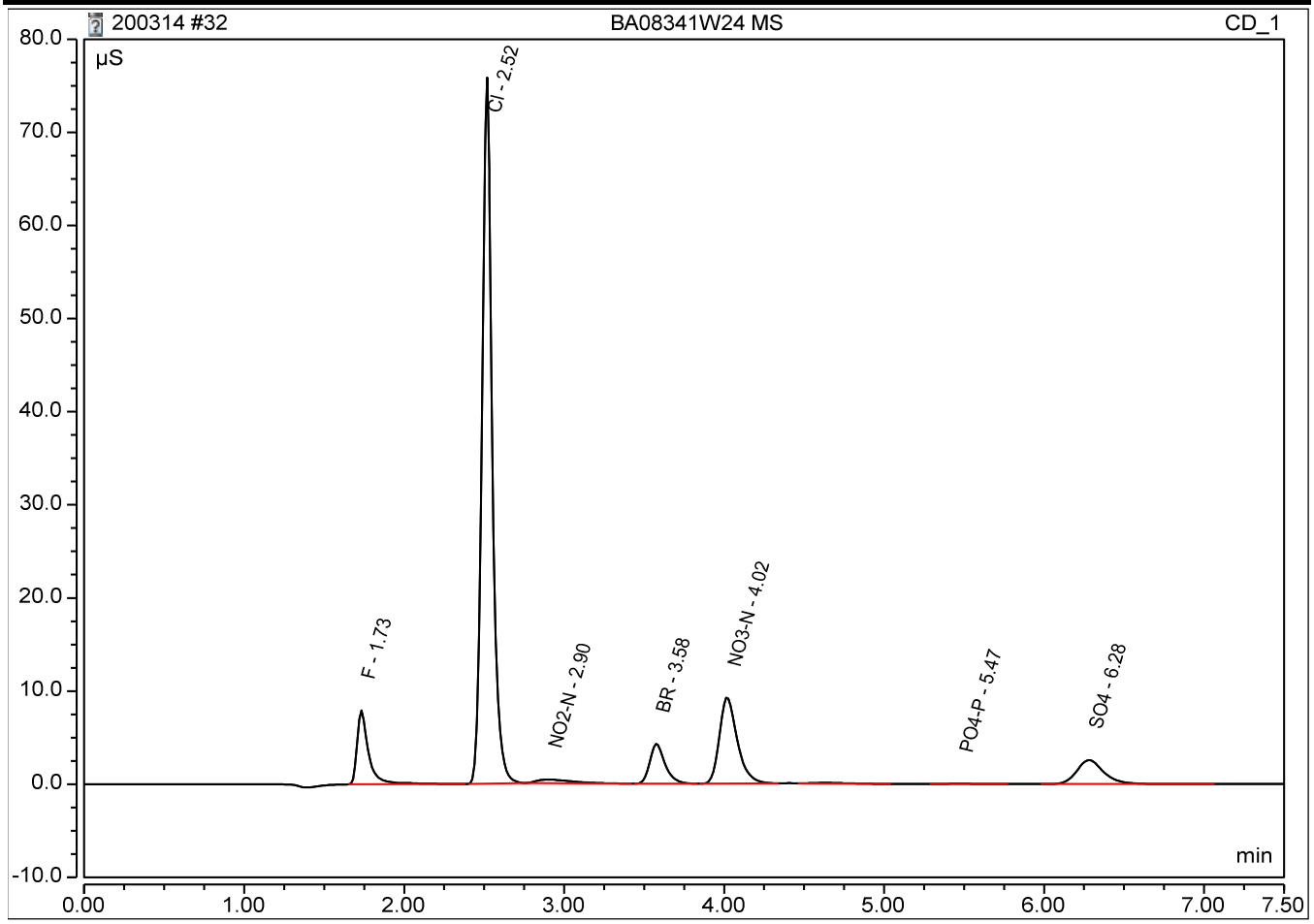


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200314

Peak Integration Report

Sample Name:	**BA08341W24 MS**	*Inj. Vol.:*	**25uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.03.12**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**14-Mar-2020 / 16:56**	*Run Time:*	**7.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	1.73	**F**	BMB	0.660	7.959	5.20		
2	2.52	**Cl**	BMB	5.590	75.837	48.58		
3	2.90	**NO2-N**	BMB	0.097	0.386	0.51		
4	3.58	**BR**	BMB	0.474	4.285	12.62		
5	4.02	**NO3-N**	BMB	1.197	9.258	5.18		
7	5.47	**PO4-P**	BMB	0.008	0.042	0.73		
8	6.28	**SO4**	BMB	0.505	2.566	7.61		

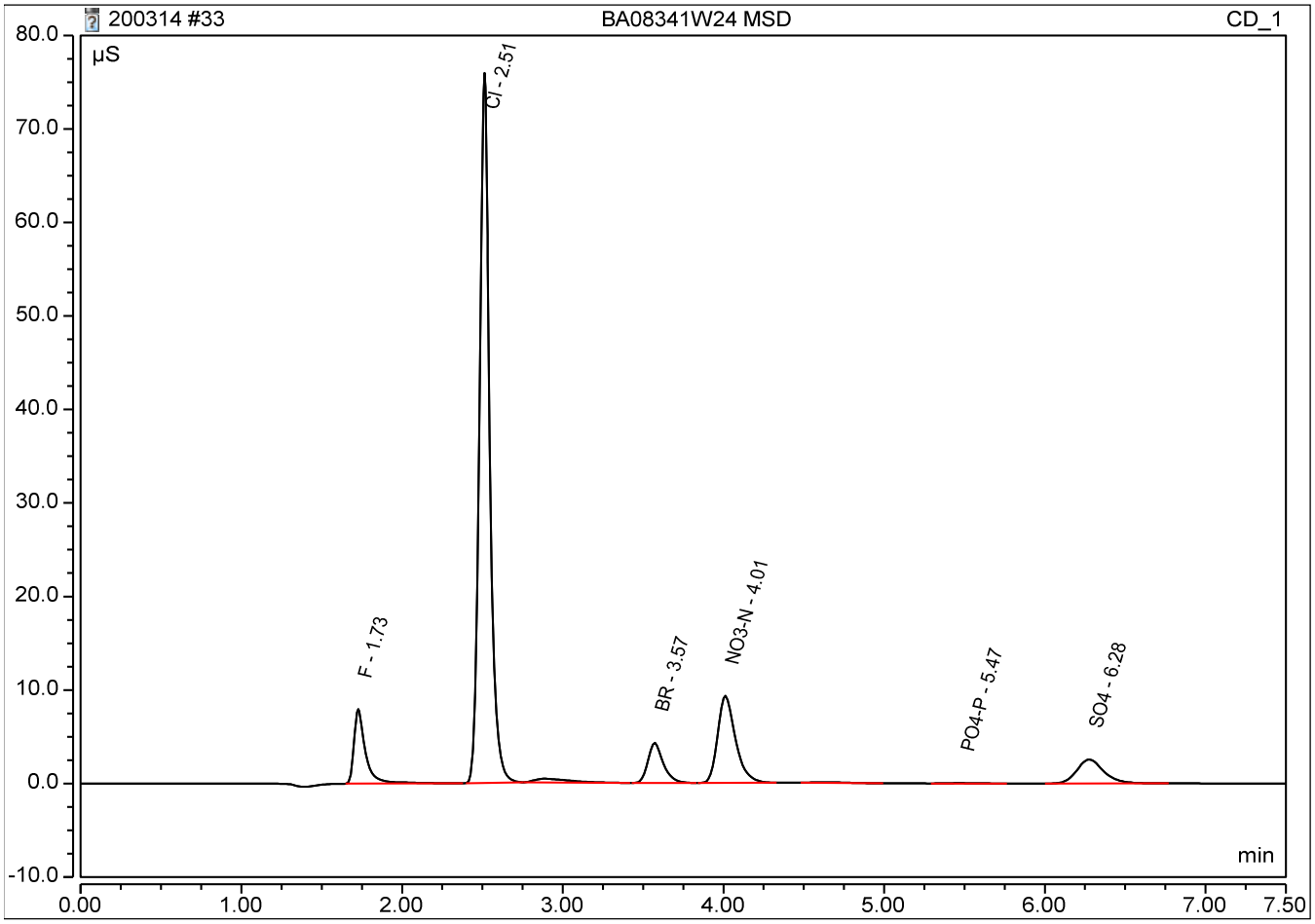


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200314

Peak Integration Report

Sample Name:	**BA08341W24 MSD**	*Inj. Vol.:*	**25uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.03.12**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**14-Mar-2020 / 17:06**	*Run Time:*	**7.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	1.73	**F**	BMB	0.660	7.973	5.19		
2	2.51	**Cl**	BMB	5.594	75.932	48.62		
4	3.57	**BR**	BMB	0.475	4.290	12.64		
5	4.01	**NO3-N**	BMB	1.200	9.335	5.20		
7	5.47	**PO4-P**	BMB	0.008	0.040	0.73		
8	6.28	**SO4**	BMB	0.500	2.559	7.53		

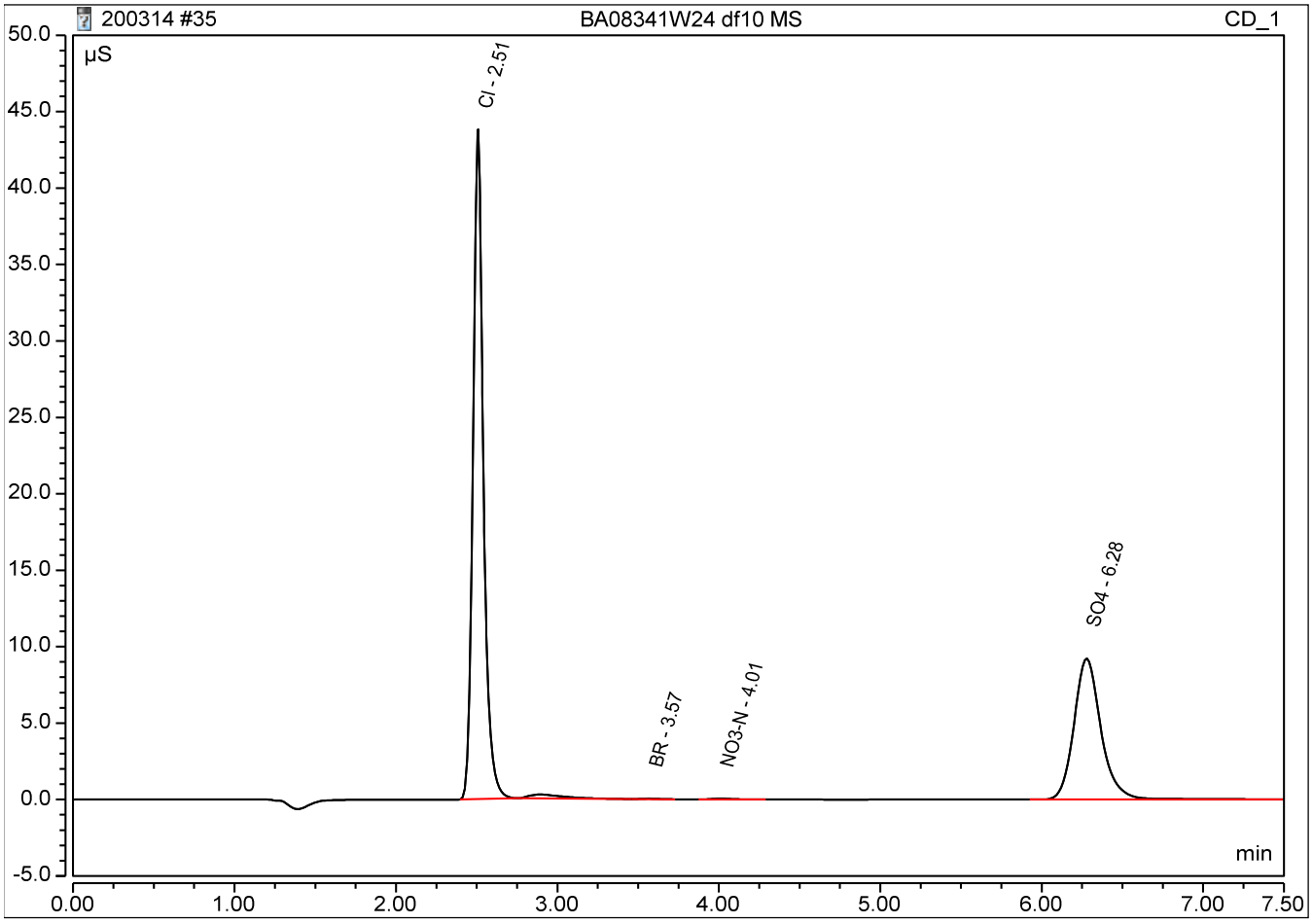


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200314

Peak Integration Report

Sample Name:	**BA08341W24 df10 MS**	*Inj. Vol.:*	**25uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**10.00**
Program:	**Anion APM 2020.03.12**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**14-Mar-2020 / 17:25**	*Run Time:*	**7.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.51	**Cl**	BMB	3.272	43.823	306.22		
3	3.57	**BR**	BMB	0.004	0.035	2.75		
4	4.01	**NO3-N**	BMB	0.008	0.063	1.07		
5	6.28	**SO4**	BMB	1.785	9.225	259.11		

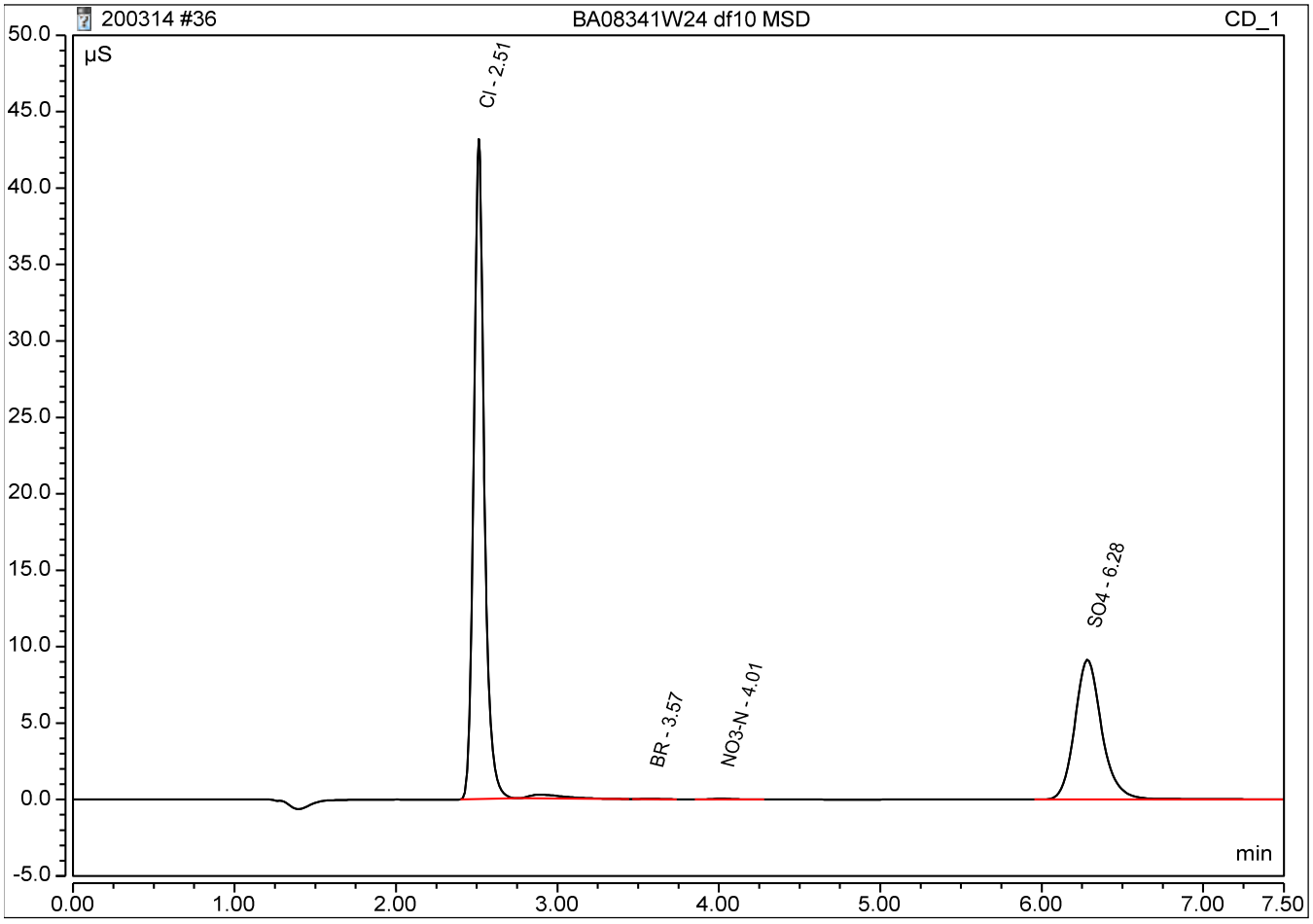


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200314

Peak Integration Report

Sample Name:	**BA08341W24 df10 MSD**	*Inj. Vol.:*	**25uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**10.00**
Program:	**Anion APM 2020.03.12**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**14-Mar-2020 / 17:35**	*Run Time:*	**7.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	2.51	**Cl**	BMB	3.269	43.194	306.00		
3	3.57	**BR**	BMB	0.004	0.033	2.72		
4	4.01	**NO3-N**	BMB	0.008	0.064	1.08		
5	6.28	**SO4**	BMB	1.785	9.153	259.09		



Method 300 and 9056 Injection Log

No.	Position	Injection Description	Inject Time		Type	Comment
1	GA2	Cal 1 2020.03.12	12/Mar/2020	09:27	Calibration Standard	
2	GA3	Cal 2	12/Mar/2020	09:42	Calibration Standard	
3	GA4	Cal 3	12/Mar/2020	09:56	Calibration Standard	
4	GA5	Cal 5	12/Mar/2020	10:11	Calibration Standard	
5	GA6	Cal 6	12/Mar/2020	10:26	Calibration Standard	
6	GA1	Cal 8	12/Mar/2020	10:40	Calibration Standard	
7	R1	ICB / CCB	12/Mar/2020	10:50	Unknown	
8	GA7	ICV / LCS	12/Mar/2020	11:01	Check Standard	
9	GA7	ICV / LCSD	12/Mar/2020	11:23	Check Standard	
10	GA8	BA08277W12	12/Mar/2020	11:34	Unknown	
11	GA9	BA08292W01	12/Mar/2020	11:44	Unknown	
12	GA10	BA08298W03	12/Mar/2020	11:54	Unknown	
13	GA11	BA08301W01	12/Mar/2020	12:04	Unknown	
14	GA12	BA08301W01 MS	12/Mar/2020	12:14	Unknown	
15	GB1	BA08301W01 MSD	12/Mar/2020	12:24	Unknown	
16	GB2	BA08315W01	12/Mar/2020	12:35	Unknown	
17	R2	CCV	12/Mar/2020	12:45	Check Standard	
18	R1	CCB	12/Mar/2020	12:54	Unknown	
19	GC1	BA08106W03	12/Mar/2020	13:32	Unknown	
20	GC2	BA08317W01	12/Mar/2020	13:42	Unknown	
21	GC3	BA08318W01	12/Mar/2020	13:53	Unknown	
22	GH1	xxx	12/Mar/2020	14:03	Unknown	
23	GC4	BA08319W01	12/Mar/2020	14:23	Unknown	
24	GH2	BA08106W03 df5	12/Mar/2020	14:33	Unknown	
25	GC5	BA08321W01	12/Mar/2020	14:43	Unknown	
26	GC6	BA08320W01	12/Mar/2020	14:54	Unknown	
27	R2	CCV	12/Mar/2020	15:03	Check Standard	
28	R1	CCB	12/Mar/2020	15:13	Unknown	
29	R2	stop	n.a.		Unknown	

Method 300 and 9056 Injection Log

No.	Position	Injection Description	Inject Time		Type	Comment
1	R2	200313 CCV / LCS	14/Mar/2020	11:19	Check Standard	
2	R1	200313 CCB	14/Mar/2020	11:29	Unknown	
3	R2	200313 CCV / LCS	14/Mar/2020	11:39	Check Standard	
4	R1	200313 CCB	14/Mar/2020	11:49	Unknown	
5	R2	200313 CCV / LCS	14/Mar/2020	12:14	Check Standard	
6	R1	200313 CCB	14/Mar/2020	12:24	Unknown	
7	GA1	BA08471W06	14/Mar/2020	12:34	Unknown	fb-2
8	GA2	BA08472W06	14/Mar/2020	12:44	Unknown	cpt-11-81-86
9	GA3	BA08473W06	14/Mar/2020	12:55	Unknown	eb-2
10	GA4	BA08474W06	14/Mar/2020	13:05	Unknown	cpt-11-50-55
11	GA5	BA08475W17	14/Mar/2020	13:15	Unknown	cpt-10-84-89
12	GA6	BA08476W06	14/Mar/2020	13:25	Unknown	dup-3
13	GA7	BA08596W06	14/Mar/2020	13:35	Unknown	cpt-10-55-60
14	GB2	BA08472W06 DF5	14/Mar/2020	13:54	Unknown	cpt-11-81-86 df5
15	GB4	BA08474W06 df5	14/Mar/2020	14:04	Unknown	cpt-11-50-55 df5
16	GB5	BA08475W17 df5	14/Mar/2020	14:14	Unknown	cpt-10-84-89 df5
17	GB6	BA08476W06 df5	14/Mar/2020	14:24	Unknown	dup-3 df5
18	GB7	BA08596W06 df5	14/Mar/2020	14:34	Unknown	cpt-10-55-60 df5
19	R2	200313 CCV / LCSD	14/Mar/2020	14:44	Check Standard	
20	R1	200313 CCB	14/Mar/2020	14:54	Unknown	
21	GC1	BA08456W01	14/Mar/2020	15:04	Unknown	
22	GC2	BA08457W01	14/Mar/2020	15:14	Unknown	
23	GC3	BA08322W03	14/Mar/2020	15:25	Unknown	
24	GC4	BA07918W11 df5	14/Mar/2020	15:35	Unknown	
25	GC5	BA07919W04 df5	14/Mar/2020	15:45	Unknown	
26	GC6	BA07503W03 df5	14/Mar/2020	15:55	Unknown	
27	GC7	BA07633W07 df10	14/Mar/2020	16:05	Unknown	
28	GC8	BA07634W07 df5	14/Mar/2020	16:16	Unknown	
29	GC9	BA07918W11 df5 MS	14/Mar/2020	16:26	Unknown	SO4
30	GC10	BA07918W11 df5 MSD	14/Mar/2020	16:36	Unknown	
31	RA1	BA08341W24	14/Mar/2020	16:46	Unknown	
32	RA2	BA08341W24 MS	14/Mar/2020	16:56	Unknown	
33	RA2	BA08341W24 MSD	14/Mar/2020	17:06	Unknown	
34	RA3	BA08341W24 df10	14/Mar/2020	17:16	Unknown	
35	RA4	BA08341W24 df10 MS	14/Mar/2020	17:25	Unknown	
36	RA4	BA08341W24 df10 MSD	14/Mar/2020	17:35	Unknown	
37	R2	200313 CCV / LCS	14/Mar/2020	17:45	Check Standard	
38	R1	200313 CCB	14/Mar/2020	17:55	Unknown	
39	GD1	BA08494W06 df10	14/Mar/2020	18:05	Unknown	91663 DUP 1 df10
40	GD2	BA08493W16 df10	14/Mar/2020	18:16	Unknown	91663 1540 -77 df10
41	GD3	BA08496W06 df5	14/Mar/2020	18:26	Unknown	91663 -102 df5
42	GD4	BA08497W17 df5	14/Mar/2020	18:36	Unknown	91663 1030 -74 df5
43	GD5	BA08498W06 df5	14/Mar/2020	18:46	Unknown	91663 1130 -98 df5
44	GD6	BA08499W06 df50	14/Mar/2020	18:56	Unknown	91663 1420 -55 df50
45	GD7	BA08500W06 df5	14/Mar/2020	19:06	Unknown	91663 DUP 2 df5
46	R2	200313 CCV / LCS	14/Mar/2020	19:16	Check Standard	
47	R1	200313 CCB	14/Mar/2020	19:26	Unknown	
48	GE1	BA07873W04	14/Mar/2020	19:36	Unknown	
49	GE2	BA07874W04	14/Mar/2020	19:47	Unknown	
50	GE3	BA07875W04	14/Mar/2020	19:57	Unknown	
51	GE4	BA07876W04	14/Mar/2020	20:07	Unknown	
52	GE5	BA07877W04	14/Mar/2020	20:17	Unknown	
53	GE6	BA07878W04	14/Mar/2020	20:27	Unknown	
54	GE7	BA07879W04	14/Mar/2020	20:37	Unknown	
55	GF1	BA07873W04 df10	14/Mar/2020	20:48	Unknown	
56	GF2	BA07874W04 df10	14/Mar/2020	20:58	Unknown	
57	GF3	BA07875W04 df10	14/Mar/2020	21:08	Unknown	
58	GF4	BA07876W04 df10	14/Mar/2020	21:18	Unknown	
59	GF5	BA07877W04 df10	14/Mar/2020	21:28	Unknown	
60	GF6	BA07878W04 df10	14/Mar/2020	21:38	Unknown	
61	GF7	BA07879W04 df10	14/Mar/2020	21:49	Unknown	
62	R2	200313 CCV / LCS	14/Mar/2020	21:58	Check Standard	
63	R1	200313 CCB	14/Mar/2020	22:08	Unknown	
64	R1	stop	14/Mar/2020	22:16	Unknown	

Anion Chromatography Working Standard

Prep Date: 03/12/20

Exp Date: 03/12/20

Prep'd By (Initials): CD

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Ion Chromatography Standard Fluoride 1000 µg/mL in H2O	o2si	O2SI-062002-01-01	1000	**687393-38-40744**	**10/30/20**	312.5 µL	25 mL	Millipore Water	12.5
Ion Chromatography Standard Nitrite 1000 µg/mL in H2O	Inorganic Ventures	ICCL1	1000	**P2-CL675597-41353**	**01/15/23**	411 µL	25 mL	Millipore Water	5 as NO2-N
Ion Chromatography Standard Chloride 5000 µg/mL in H2O	Inorganic Ventures	ICNO21	1000	**N2-NOX672889-49601**	**01/30/23**	1250 µL	25 mL	Millipore Water	50
Ortho-Phosphate as P Standard	Agilent	ICC-005A	1000	**G34-CP-3323-49590**	**05/31/25**	625 µL	25 mL	Millipore Water	25
Ion Chromatography Standard Nitrate as N 1000 µg/mL in H2O	Inorganic Ventures	P2-NOX675324	1000	**P2-NOX675324-49391**	**02/14/23**	250 µL	25 mL	Millipore Water	10
Bromide Standard	CPI international	4400-IC8M	1000	**1011817-12-49602**	**06/04/21**	625 µL	25 mL	Millipore Water	25
Sulfate Standard	Inorganic Ventures	ICS041	1000	**P2-SOX677315**	**04/03/23**	1250 µL	25 mL	Millipore Water	50

Anion Chromatography Calibration Curve

Prep Date: 03/12/20

Exp Date: 03/13/20

Prep'd By (Initials): CD

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. Range (ug/mL)	Reference To APPL Prep Date	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc. Range (µg/mL)
Anion Chromatography Working Standard	Varies	ICal1	5.0-50.0	Prepared 03/12/20	03/13/20	4 µL	1000 µL	Millipore Water	0.04-0.40
Anion Chromatography Working Standard	Varies	ICal2	5.0-50.0	Prepared 03/12/20	03/13/20	20 µL	1000 µL	Millipore Water	0.1-1.0
Anion Chromatography Working Standard	Varies	ICal3	5.0-50.0	Prepared 03/12/20	03/13/20	50 µL	1000 µL	Millipore Water	0.25-2.5
Anion Chromatography Working Standard	Varies	ICal4	5.0-50.0	Prepared 03/12/20	03/13/20	100 µL	1000 µL	Millipore Water	0.5-5.0
Anion Chromatography Working Standard	Varies	ICal5	5.0-50.0	Prepared 03/12/20	03/13/20	200 µL	1000 µL	Millipore Water	1.0-10.0
Anion Chromatography Working Standard	Varies	ICal6	5.0-50.0	Prepared 03/12/20	03/13/20	500 µL	1000 µL	Millipore Water	2.5-25.0
Anion Chromatography Working Standard	Varies	ICal7	5.0-50.0	Prepared 03/12/20	03/13/20	700 µL	1000 µL	Millipore Water	3.5-35.0
Anion Chromatography Working Standard	Varies	ICal8	5.0-50.0	Prepared 03/12/20	03/13/20	1000 µL	1000 µL	Millipore Water	5.0-50.0

Anion Chromatography ICV Absolute COA 49866

Prep Date: See injection Log

Exp Date: 24 hours after prep

Prep'd By (Initials): Absolute

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. Range (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Flouride	Absolute	50021	2.5	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	2.5
Nitrite	Absolute	50021	1.522334	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	1.522334
Chloride	Absolute	50021	1.522334	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	1.522334
O-Phosphate as P	Absolute	50021	6.522	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	6.522
Nitrate as N	Absolute	50021	1.129525	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	1.129525
Ion Chromatography Standard Bromide, 1000 µg/mL in H2O	Absolute	50021	5	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	5
Sulfate	Absolute	50021	20	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	20

Anion Chromatography CCV / LCS

Prep Date: See injection Log

Exp Date: 24 hours after prep

Prep'd By (Initials): GA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Ion Chromatography Standard Fluoride 1000 µg/mL in H2O	o2si	O2SI-062002-01-01	1000	**687393-38-40744**	**10/30/20**	125 µL	25 mL	Millipore Water	5
Ion Chromatography Standard Nitrite 1000 µg/mL in H2O	Inorganic Ventures	ICCL1	1000	**P2-CL675597-41353**	**01/15/23**	250 µL	25 mL	Millipore Water	10
Ion Chromatography Standard Chloride 5000 µg/mL in H2O	Inorganic Ventures	ICNO21	1000	**N2-NOX672889-49601**	**01/30/23**	125 µL	25 mL	Millipore Water	25
Ortho-Phosphate as P Standard	Agilent	ICC-005A	1000	**G34-CP-3323-49590**	**05/31/25**	250 µL	25 mL	Millipore Water	10
Ion Chromatography Standard Nitrate as N 1000 µg/mL in H2O	Inorganic Ventures	P2-NOX675324	1000	**P2-NOX675324-49391**	**02/14/23**	125 µL	25 mL	Millipore Water	5
Bromide Standard	CPI international	4400-IC8M	1000	**1011817-12-49602**	**06/04/21**	250 µL	25 mL	Millipore Water	10
Sulfate Standard	Inorganic Ventures	ICS041	1000	**P2-SOX677315**	**04/03/23**	625 µL	25 mL	Millipore Water	25

INORGANIC ANALYSIS
Calibration and Raw Data

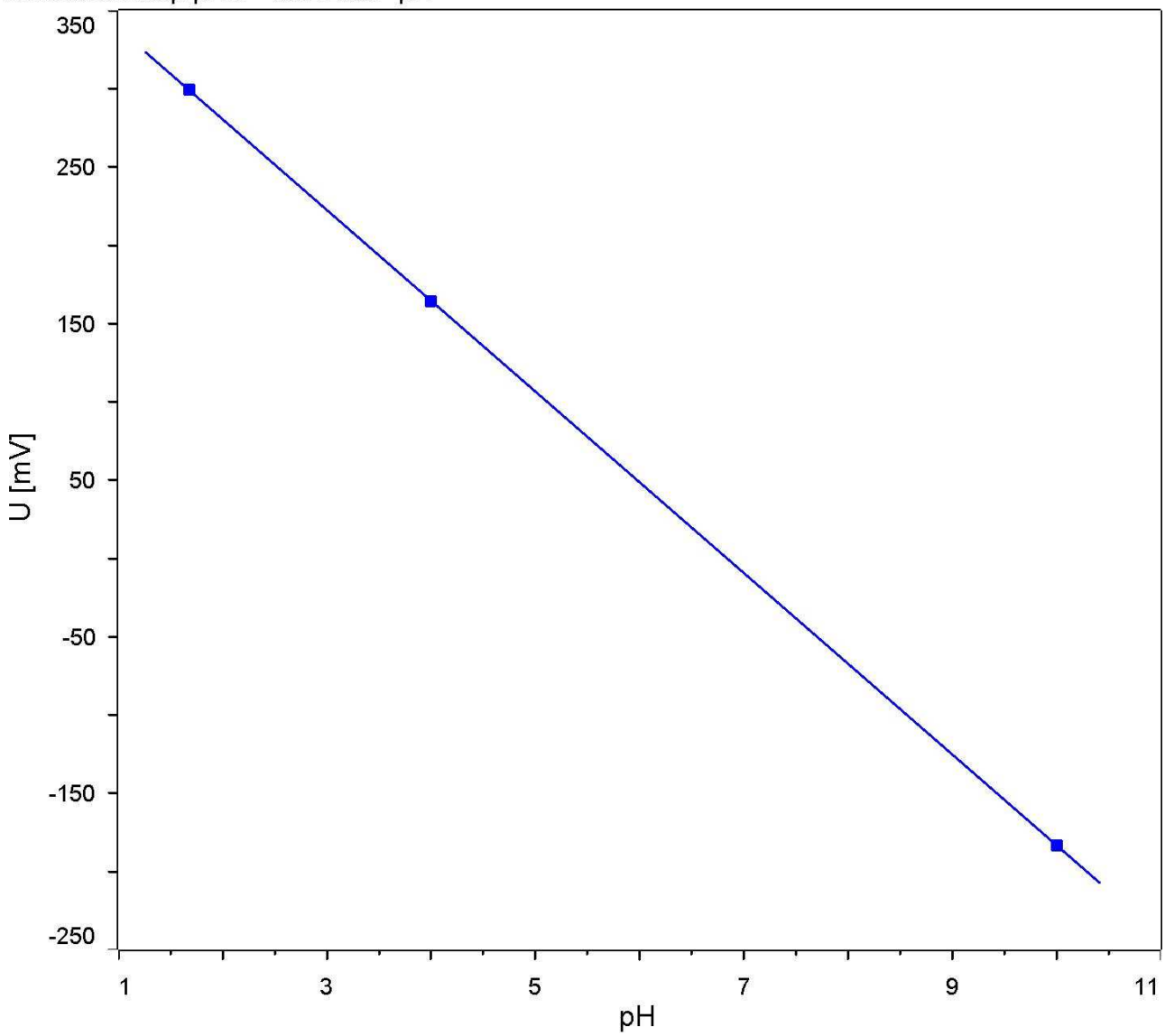
Timao Calibration Curve

2020-03-18 14:17:05

Calculations

Buffer 7	7.07	
Formula	'MEAS pH.EME'	
MEAS pH.EME	7.0698	
Slope	99.20	
Formula	'Calibration loop pH.SLO'	
Calibration loop pH.SLO	99.2	
pH(as)	6.84	
Formula	'Calibration loop pH.ENP'	
Calibration loop pH.ENP	6.838	
Res19	21.5	°C
Formula	'CAL MEAS pH.ETE'	
CAL MEAS pH.ETE	21.4501	

Calibration loop pH.1 - CAL LOOP pH



Metrohm 814/809 Titrando Data

Sample ID	Analysis Date/Time	Method	Titration Volume (to 8.3)	Titration Volume (total)	OH	CO3	HCO3	Total Alk	Unit	Sample Vol	N	Batch	Initials
200318A LCSD	2020-03-18 18:49:17 UTC-8	Alkalinity	0.108	6.220	0.00	8.51	236.56	245.07	mg/L	25 mL	0.0197	200318A	AR
200318A LCS	2020-03-18 18:40:09 UTC-8	Alkalinity	0.154	6.228	0.00	12.14	233.25	245.38	mg/L	25 mL	0.0197	200318A	AR
BA08341W23	2020-03-18 16:04:35 UTC-8	Alkalinity	0.000	1.860	0.00	0.00	73.28	73.28	mg/L	25 mL	0.0197	200203A	AR
200318A BLK	2020-03-18 15:44:30 UTC-8	Alkalinity	0.000	0.048	0.00	0.00	1.89	1.89	mg/L	25 mL	0.0197	200318A	AR

Tiamo Alkalinity Standard Prep

Prep Date:

Exp Date:

Prep'd By (Initials): AR

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Unit	Conc	Lot Number - QA Number	Prep/Opened	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc
Sulfuric Acid (H2SO4)	J.T.Baker	NA	NA	167828	NA	NA	PURCHASED	NA	NA	NA
0.10N Sulfuric Acid (H2SO4)	J.T.Baker	Normality	0.1N	167828	05/24/19	05/24/20	3ml	1L	DI	0.10N
0.02N Sulfuric Acid (H2SO4)	J.T.Baker	Normality	0.02N	167828	05/24/19	05/24/20	200mL	1L	DI	0.02N
Inorganic Spike(NaHCO3)	BDH	NA	NA	1575C510	10/18/18	08/14/20	PURCHASED	NA	NA	NA
Inorganic Spike Solution	BDH	Milligrams/Liters	250mg/L	1575C510	09/17/19	03/17/20	3.5g	500mL	DI	250mg/L
Standarizing Solution(NaCO3)	J.T.Baker	Normality	1N	178494	07/25/17	07/25/19	PURCHASED	NA	NA	NA

Tiamo pH Buffer Reference Standards

Prep Date: Daily

Exp Date: Daily

Prep'd By (Initials): AR

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Units	pH	Lot Number - QA Number	Opened	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
pH 1.68 Buffer	ORION	pH Units	1.68	WX1-40709	04/22/19	01/01/21	NA	NA	NA	NA
pH 4.00 Buffer	RICCA	pH Units	4	1807191-39782	04/22/19	01/01/21	NA	NA	NA	NA
pH 10.01 Buffer	VWR	pH Units	10.01	0903980-40707	04/22/19	08/27/20	NA	NA	NA	NA
pH 7.00 Buffer	Ricca	pH Units	7	1805M17 - 39765	10/11/18	05/01/20	NA	NA	NA	NA

Ferrous Iron — Rev 2, 04-05-19

Method SM3500Fe | Units mg/L | Instrument: Genisis Spectrometer
Analyte Fe2+ | QCG: 200312A | Wavelength: 510 nm
Analyist fjr | Final Volume: 50mL | Units: mg/L

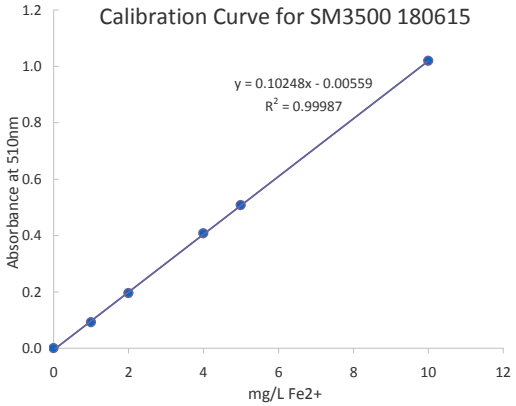
Date	Time	Appl ID	[Fe2+]	Absorbance	% Recovery
06/28/19	12:48	ICB	0.00	0.000	
06/28/19	12:49	Ical 1	1.00	0.092	95.2%
06/28/19	12:50	Ical 2	2.00	0.195	97.9%
06/28/19	12:51	Ical 3	4.00	0.408	100.9%
06/28/19	12:51	Ical 4	5.00	0.507	100.0%
06/28/19	12:52	Ical 5	10.00	1.019	100.0%
06/28/19	13:08	ICV	3.00	0.326	107.9%
06/28/19	12:53	ICB	0.00	0.002	

Slope	0.102479592
Intercept	-0.005591837
Coefficient of Determination	0.999872044

Algortithm Check:	Appl ID	Absorbance	Result
	LCS 200312A	0.297	2.95

Result = (Absorbance-Raw Blk-Intercept)/ Slope

Test:	FJR	03/12/20	2.93



Date	Time	Appl ID	DF	Raw Result	SubSample Amount	Raw BLK	Calc Conc	Result	QC True	% Recovery
03/12/20	15:27	CCV 4.0 200312A	1	0.397	25mL		3.93	3.93	4.00	98.2%
03/12/20	15:27	CCB 200312A	1	0.000	25mL		0.05	0.05		
03/12/20	15:28	LCS 200312A	1	0.297	25mL		2.95	2.95	3.00	98.4%
03/12/20	15:30	LCSD 200312A	1	0.299	25mL		2.97	2.97	3.00	99.1%
03/12/20	15:30	BA08341W26	1	0.001	25mL		0.06	0.06		
03/12/20	15:31	BA08341W26 MS	1	0.304	25mL		3.02	3.02		
03/12/20	15:31	BA08341W26 MSD	1	0.304	25mL		3.02	3.02		
03/12/20	15:32	CCV 4.0 200312A	1	0.395	25mL		3.91	3.91	4.00	97.7%
03/12/20	15:32	CCB 200312A	1	-0.001	25mL		0.04	0.04		

Standard Prep

	Ferrous Iron Standards		Prep'd By (Initials)		FJR		
Prep Date	06/28/18						
Exp Date	06/28/19						
Stock Label	Supplier	Batch Number	Exp Date	Aliquot from Stock	Final Volume	Solvent	Ferrous Iron Concentration
Ferrous Ammonium Sulfate	J.T.Baker	0000184592	08/21/20	0.351	250mL	5ml H2SO4 (0000167828) Diluted with water	200ug/L
Ferrous Sulfate	Mallinckrodt	Lot 5056 KDRX	NA	0.250	250mL	5ml H2SO4 (0000167828) Diluted with water	200ug/L
Ferrous Iron CCV/LCS/MS/ICV			Prep'd By (Initials)		FJR		
Prep Date	See Injection Log						
Exp Date	24 Hours						
Initial Standard Information	Supplier	Batch Number	Exp Date	Final Standard Information			
Ferrous Iron CCV	J.T.Baker	0000184592	06/14/19	500uL	25mL	Deionized water	4mg/L
Ferrous Iron ICV/LCS	Mallinckrodt	Lot 5056 KDRX	06/14/19	375uL	25mL	Deionized water	3mg/L
	Ferrous Iron Calibration Curve		Prep'd By (Initials)		FJR		
Prep Date	06/28/18						
Exp Date	06/28/19						
Final Standard Information							
Point Label	Supplier	Batch Number	Exp Date	Aliquot from Stock (mL)	Final Volume	Solvent	Ferrous Iron Concentration
CCB	J.T.Baker	0000184592	06/14/19	0	25mL	Deionized water	0mg/L
Ical 1	J.T.Baker	0000184592	06/14/19	0.125	25mL	Deionized water	1mg/L
Ical 2	J.T.Baker	0000184592	06/14/19	0.25	25mL	Deionized water	2mg/L
Ical 3	J.T.Baker	0000184592	06/14/19	0.5	25mL	Deionized water	4mg/L
Ical 4	J.T.Baker	0000184592	06/14/19	0.625	25mL	Deionized water	5mg/L
Ical 5	J.T.Baker	0000184592	06/14/19	1.25	25mL	Deionized water	10mg/L
ICV	Mallinckrodt	Lot 5056 KDRX	06/14/19	0.375	25mL	Deionized water	3mg/L

Reagent Prep

Reagent	Chemical Lot #	Chemical	Chemical Expiration Date	Amount	Date Prep
Colorizer	0747C107	1,10-phenanthroline	na	1.008	03/12/20
		10% HCL conc	na	enough to dissolve	03/12/20
Buffer	Z28B018	Ammonia Acetate	na	248	01/03/20
	2018071399	Glacial Acetic Acid	06/27/20	700mL	

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM
ARF No: 91638 SDG: 91638
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 03/13/20

Analyte	Calibration Verification									M
	True CCV1	Found 12:49	%R(1)	True ICV	Found 12:53	%R(1)	True CCV1	Found 13:11	%R(1)	
TOXN	3	3.1182	104	3	3.1447	105	3	3.0319	101	

(1) Control Limits: 90-110

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM
ARF No: 91638 SDG: 91638
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 03/13/20

Analyte	Calibration Verification									M
	True CCV1	Found 13:16	%R(1)	True	Found	%R(1)	True	Found	%R(1)	
TOXN	3	3.1066	104							

(1) Control Limits: 90-110

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 91638 SDG: 91638

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): mg/L

Analyte	Calibration Blanks										M
	CCB 03/13/20 12:51	C	ICB 03/13/20 12:55	C	CCB 03/13/20 13:12	C	CCB 03/13/20 13:17	C		C	
TOXN	.100	U	.100	U	.100	U	.100	U			

AQ2 Tray Report

Serial Number: 190170
Software Version: 2.1.0
Report Requested By: Kyle S
Date & Time: 2020-03-16 11:15:59
Tray Number: 1
Tray Name: 200313A NO2 NO3 TOXN Nitro

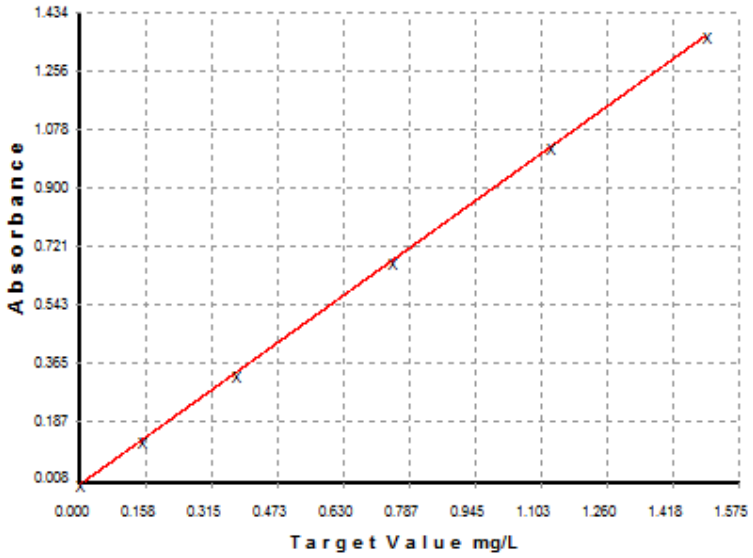
Nitrite-N

Calibration Chart

Type	Absorbance	Calc mg/L	Target mg/L	% Error
S1	0.0083	0.0043	0.0000	
S90	0.1398	0.1490	0.1500	-0.67
S91	0.3405	0.3699	0.3750	-1.36
S92	0.6843	0.7482	0.7500	-0.23
S93	1.0314	1.1302	1.1250	0.46
S94	1.3660	1.4984	1.5000	-0.11
S0	0.0179	0.0148	0.0000	

Polynomial Order:	1
Correlation Coefficient:	1.0000
Carryover(%):	0.7
Calibration equation:	y = bx + a
y =:	Concentration mg/L
x =:	Measured absorbance
a =:	-4.851092E-003
b =:	1.100487E+000
Date & Time:	2020-03-13 11:53:13

Calibration Graph



Test Results

Cup	Type	ID	Result	Units	QC Pro	Raw Data	Auto Dil.	Man Dil.	User	Time/Date
	S1	Standard 1	0.0083			0.008326			KS	2020-03-13 11:45:26
	S90	Standard 90	0.1398			0.139795			KS	2020-03-13 11:46:44
	S91	Standard 91	0.3405			0.340536			KS	2020-03-13 11:48:02
	S92	Standard 92	0.6843			0.684333			KS	2020-03-13 11:49:19
	S93	Standard 93	1.0314			1.031385			KS	2020-03-13 11:50:37
	S94	Standard 94	1.3660			1.365960			KS	2020-03-13 11:51:54
	S0	Standard 0	0.0179			0.017902			KS	2020-03-13 11:53:13
	CCV	CCV .75	0.7471	mg/L		0.683257			KS	2020-03-13 11:54:30
	CCB	CCB	0.0093	mg/L		0.012822			KS	2020-03-13 11:55:48
3	U1	ICV NO2	0.7108	mg/L		0.650260			KS	2020-03-13 11:57:07
4	U2	ICV NO3 TOXN	0.0106	mg/L		0.014020			KS	2020-03-13 11:58:25
5	U3	ICB NO2 NO3 TOXN	0.0047	mg/L		0.008721			KS	2020-03-13 11:59:42
6	U4	200313A Blk NO2 NO3 TOXN	0.0045	mg/L		0.008458			KS	2020-03-13 12:00:57
9	U7	200313A LCS NO2	0.7204	mg/L		0.659053			KS	2020-03-13 12:02:11
10	U8	200313A LCSD NO2	0.7149	mg/L		0.653999			KS	2020-03-13 12:03:26
11	U9	200313A LCS NO3 TOXN	0.0100	mg/L		0.013499			KS	2020-03-13 12:04:40
12	U10	200313A LCSD NO3 TOXN	0.0056	mg/L		0.009452			KS	2020-03-13 12:05:54
13	U11	1 ppm NO2	0.9398	mg/L		0.858415			KS	2020-03-13 12:07:07
14	U12	1 ppm NO3	0.0108	mg/L		0.014189			KS	2020-03-13 12:08:22
	CCV	CCV .75	0.7185	mg/L		0.657291			KS	2020-03-13 12:10:56
	CCB	CCB	0.0094	mg/L		0.012979			KS	2020-03-13 12:13:10
16	U14	BA08341W25 MS pH6.40 Thing 1	0.7112	mg/L		0.650628			KS	2020-03-13 12:15:28
17	U15	BA08341W25 MSD pH6.40 Thing 1	0.7204	mg/L		0.658999			KS	2020-03-13 12:17:45
18	U16	BA08341W25 pH6.40 Thing 1	0.0101	mg/L		0.013547			KS	2020-03-13 12:20:03

19	U17	BA08370W15 pH8.34 Thing 1	0.0064	mg/L	0.010256		KS	2020-03-13 12:22:20
	CCV	CCV .75	0.6854	mg/L	0.627185		KS	2020-03-13 12:24:32
	CCB	CCB	0.0089	mg/L	0.012471		KS	2020-03-13 12:26:47

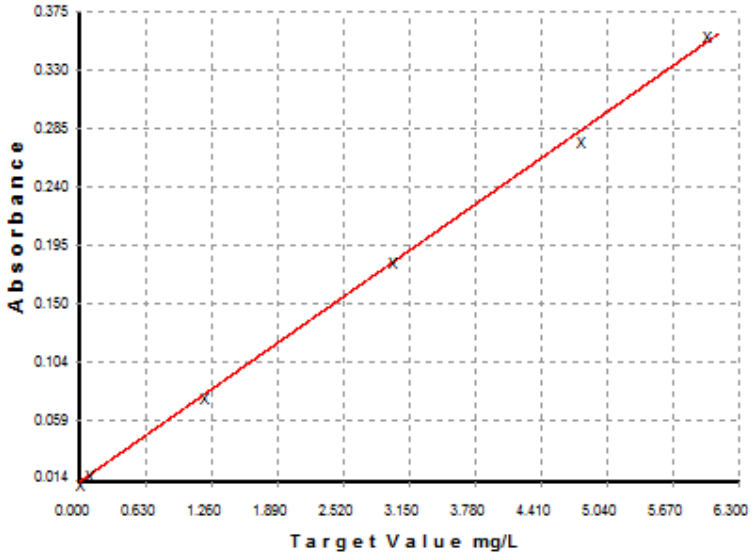
TOXN

Calibration Chart

Type	Absorbance	Calc mg/L	Target mg/L	% Error
S1	0.0142	0.0032	0.0000	
S90	0.0215	0.1328	0.1000	32.81
S91	0.0804	1.1808	1.2000	-1.60
S92	0.1835	3.0144	3.0000	0.48
S93	0.2762	4.6636	4.8000	-2.84
S94	0.3573	6.1052	6.0000	1.75
S0	0.0151	0.0187	0.0000	

Polynomial Order:	1
Correlation Coefficient:	0.9995
Carryover(%):	0.3
Calibration equation:	y = bx + a
y =:	Concentration mg/L
x =:	Measured absorbance
a =:	-2.502831E-001
b =:	1.778883E+001
Date & Time:	2020-03-13 12:44:54

Calibration Graph



Test Results

Cup	Type	ID	Result	Units	QC Pro	Raw Data	Auto Dil.	Man Dil.	User	Time/Date
	S1	Standard 1	0.0142			0.014250			KS	2020-03-13 12:31:45
	S90	Standard 90	0.0215			0.021536			KS	2020-03-13 12:33:56
	S91	Standard 91	0.0804			0.080448			KS	2020-03-13 12:36:08
	S92	Standard 92	0.1835			0.183522			KS	2020-03-13 12:38:20
	S93	Standard 93	0.2762			0.276236			KS	2020-03-13 12:40:31
	S94	Standard 94	0.3573			0.357274			KS	2020-03-13 12:42:43
	S0	Standard 0	0.0151			0.015124			KS	2020-03-13 12:44:54
	CCV	CCV	3.1182	mg/L		0.189360			KS	2020-03-13 12:49:06
	CCB	CCB	0.0203	mg/L		0.015209			KS	2020-03-13 12:51:18
4	U2	ICV NO3 TOXN	3.1447	mg/L		0.190851			KS	2020-03-13 12:53:30
5	U3	ICB NO2 NO3 TOXN	0.0242	mg/L		0.015427			KS	2020-03-13 12:55:43
6	U4	200313A Blk NO2 NO3 TOXN	0.0097	mg/L		0.014614			KS	2020-03-13 12:57:56
7	U5	200313A Blk Nitro pH5.23 Thing 1	0.7455	mg/L		0.055977			KS	2020-03-13 13:00:07
8	U6	DOC 1 Nitro pH7.01 Thing 1	0.2086	mg/L		0.025797			KS	2020-03-13 13:02:19
11	U9	200313A LCS NO3 TOXN	3.0805	mg/L		0.187243			KS	2020-03-13 13:04:31
12	U10	200313A LCSD NO3 TOXN	3.1710	mg/L		0.192328			KS	2020-03-13 13:06:44
14	U12	1 ppm NO3	1.0269	mg/L		0.071795			KS	2020-03-13 13:08:57
15	U13	AZ98990 Nitro pH 8.85 Thing 1	0.3067	mg/L		0.031309			KS	2020-03-13 13:09:35
16	U14	BA08341W25 MS pH6.40 Thing 1	3.7958	mg/L		0.227449			KS	2020-03-13 13:10:39
	CCV	CCV	3.0319	mg/L		0.184507			KS	2020-03-13 13:11:35
	CCB	CCB	0.0049	mg/L		0.014347			KS	2020-03-13 13:12:31
17	U15	BA08341W25 MSD pH6.40 Thing 1	3.8134	mg/L		0.228441			KS	2020-03-13 13:13:28
18	U16	BA08341W25 pH6.40 Thing 1	0.4319	mg/L		0.038351			KS	2020-03-13 13:14:24
19	U17	BA08370W15 pH8.34 Thing 1	0.0480	mg/L		0.016766			KS	2020-03-13 13:15:20
	CCV	CCV	3.1066	mg/L		0.188708			KS	2020-03-13 13:16:16
	CCB	CCB	-0.0005	mg/L		0.014044			KS	2020-03-13 13:17:13

Nitrate-N

Test Results

Cup	Type	ID	Result	Units	QC Pro	Raw Data	Auto Dil.	Man Dil.	User	Time/Date
4	U2	ICV NO3 TOXN	3.1341	mg/L		0.000000			KS	2020-03-13 12:53:30
4	U2	ICV NO3 TOXN				0.000000			KS	2020-03-13 12:53:30
5	U3	ICB NO2 NO3 TOXN	0.0194	mg/L		0.000000			KS	2020-03-13 12:55:43
5	U3	ICB NO2 NO3 TOXN				0.000000			KS	2020-03-13 12:55:43
6	U4	200313A Blk NO2 NO3 TOXN	0.0052	mg/L		0.000000			KS	2020-03-13 12:57:56
6	U4	200313A Blk NO2 NO3 TOXN				0.000000			KS	2020-03-13 12:57:56
11	U9	200313A LCS NO3 TOXN	3.0705	mg/L		0.000000			KS	2020-03-13 13:04:31
11	U9	200313A LCS NO3 TOXN				0.000000			KS	2020-03-13 13:04:31
12	U10	200313A LCSD NO3 TOXN	3.1655	mg/L		0.000000			KS	2020-03-13 13:06:44
12	U10	200313A LCSD NO3 TOXN				0.000000			KS	2020-03-13 13:06:44
14	U12	1 ppm NO3	1.0161	mg/L		0.000000			KS	2020-03-13 13:08:57
14	U12	1 ppm NO3				0.000000			KS	2020-03-13 13:08:57
16	U14	BA08341W25 MS pH6.40 Thing 1	3.0846	mg/L		0.000000			KS	2020-03-13 13:10:39
16	U14	BA08341W25 MS pH6.40 Thing 1				0.000000			KS	2020-03-13 13:10:39
17	U15	BA08341W25 MSD pH6.40 Thing 1	3.0930	mg/L		0.000000			KS	2020-03-13 13:13:28
17	U15	BA08341W25 MSD pH6.40 Thing 1				0.000000			KS	2020-03-13 13:13:28
18	U16	BA08341W25 pH6.40 Thing 1	0.4219	mg/L		0.000000			KS	2020-03-13 13:14:24
18	U16	BA08341W25 pH6.40 Thing 1				0.000000			KS	2020-03-13 13:14:24
19	U17	BA08370W15 pH8.34 Thing 1	0.0415	mg/L		0.000000			KS	2020-03-13 13:15:20
19	U17	BA08370W15 pH8.34 Thing 1				0.000000			KS	2020-03-13 13:15:20

Nitrite

High Point @ 1.5 mg/L
0.2463 mL NO2 Inorganic Ventures lot N2-NOX672889-40759 exp: 05/01/20
50 mL DI Water

CCV @ 0.75 mg/L
0.1232 mL NO2 Inorganic Ventures lot N2-NOX672889-40759 exp: 05/01/20
50 mL DI Water

ICV/LCS @ 0.73 mg/L
0.120 mL NO2 Inorganic Ventures lot M2-NOX660562-40468 exp: 08/25/21
50 mL DI Water

1 mg/L NO2
400 uL of High point and 200 uL of DI made directly into a sample cup

Prep 03/13/20
Exp 03/20/20
KS

Nitrate/TOXN

High Point @ 6 mg/L
0.300 mL NO3 O2Si lot 880117-4-39577 exp: 2/21/20
50 mL DI Water

CCV @ 3.0 mg/L
0.150 mL NO3 O2Si lot 880117-4-39577 exp: 2/21/20
50 mL DI Water

ICV/LCS @ 3.0 mg/L
0.150 mL NO3 Inorganic Ventures lot P2-NOX675324-49391 exp: 02/14/23
50 mL DI Water

1 mg/L NO3
100 uL of High point and 500 uLof DI made directly into a sample cup

MS @ 0.73 mg/L NO2 and 2.5 mg/L NO3
0.120 mL NO2 Inorganic Ventures lot M2-NOX660562-40468 exp: 08/25/21and
0.125 mL NO3 Inorganic Ventures lot P2-NOX675324-49391 exp: 02/14/23
Final volume 50 mL of sample

Prep 03/13/20
Exp 03/20/20
KS

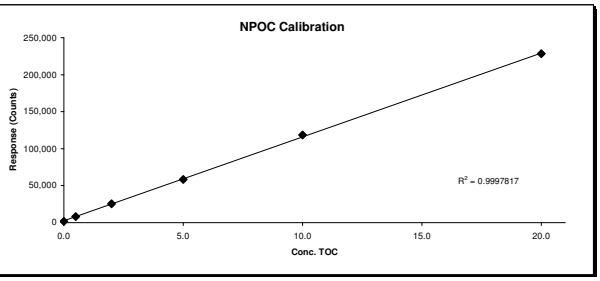
TOTAL ORGANIC CARBON

Method: WetChem | Units mg/L | Instrument: Tic Toc

Analyte: DOC | QCG: 200318A

Analyist: AR | Final Volume: 40mL

Date	Time	Appl ID	[TOC]	Raw	% Recovery
01/15/20	13:42	QC blank	0.00	1639	
01/15/20	14:25	Ical 1	0.50	8021	
01/15/20	15:01	Ical 2	2.00	25461	
01/15/20	15:37	Ical 3	5.00	58252	
01/15/20	16:13	Ical 4	10.00	118315	
01/15/20	16:49	Ical 5	20.00	228427	
01/16/20	15:11	ICB	0.08	906	
01/16/20	14:33	ICV	5.20	59018	104.0%



Date	Time	Appl ID	DF	Raw Result	SubSample Amount	Filter Blank Subtract	Calc Conc	Result	Range (mg/L)	QC True	% Recovery
2020-03-19	06:02 PM	QCB	1	1484	40mL	0.000	0	0.00	0.00		
2020-03-19	06:40 PM	CCV	1	55538	40mL	0.000	4.762	4.76	0.00	5.00	95.2%
2020-03-19	07:19 PM	CCB	1	1218	40mL	0.000	0	0.00	0.00		
2020-03-19	08:15 PM	200318A LCS	1	59038	40mL	0.000	5.071	5.07	0.11	5.00	101.4%
2020-03-19	08:55 PM	200318A LCSD	1	58440	40mL	0.000	5.018	5.02	0.08	5.00	100.4%
2020-03-19	09:35 PM	BA08341W21	1	8720	40mL	0.000	0.739	0.74	0.02		
2020-03-19	10:12 PM	BA08341W21 DUP	1	8464	40mL	0.000	0.715	0.72	0.42		
2020-03-19	10:49 PM	BA08341W21 MS	1	64016	40mL	0.000	5.61	5.61	0.03		
2020-03-19	11:27 PM	BA08341W21 MSD	1	61268	40mL	0.000	5.367	5.37	1.09		
2020-03-20	12:04 AM	BA08370W08 DF 4	1	4474	40mL	0.000	0.364	0.36	0.00		
2020-03-20	12:40 AM	CCV	1	55588	40mL	0.000	4.766	4.77	0.01	5.00	95.3%
2020-03-20	01:19 AM	CCB	1	1270	40mL	0.000	0.082	0.08	0.00		

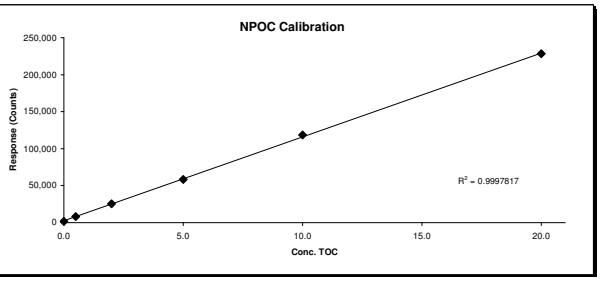
TOTAL ORGANIC CARBON

Method: WetChem | Units mg/L | Instrument: Tic Toc

Analyte: TOC | QCG: 200318A

Analyist: AR | Final Volume: 40mL

Date	Time	Appl ID	[TOC]	Raw	% Recovery
01/15/20	13:42	QC blank	0.00	1639	
01/15/20	14:25	Ical 1	0.50	8021	
01/15/20	15:01	Ical 2	2.00	25461	
01/15/20	15:37	Ical 3	5.00	58252	
01/15/20	16:13	Ical 4	10.00	118315	
01/15/20	16:49	Ical 5	20.00	228427	
01/16/20	15:11	ICB	0.08	906	
01/16/20	14:33	ICV	5.20	59018	104.0%



Date	Time	Appl ID	DF	Raw Result	SubSample Amount	Filter Blank Subtract	Calc Conc	Result	Range (mg/L)	QC True	% Recovery
2020-03-19	06:02 PM	QCB	1	1484	40mL	0.000	0	0.00	0.00		
2020-03-19	06:40 PM	CCV	1	55538	40mL	0.000	4.762	4.76	0.00	5.00	95.2%
2020-03-19	07:19 PM	CCB	1	1218	40mL	0.000	0	0.00	0.00		
2020-03-19	08:15 PM	200318A LCS	1	59038	40mL	0.000	5.071	5.07	0.11	5.00	101.4%
2020-03-19	08:55 PM	200318A LCSD	1	58440	40mL	0.000	5.018	5.02	0.08	5.00	100.4%
2020-03-19	09:35 PM	BA08341W21	1	8720	40mL	0.000	0.739	0.74	0.02		
2020-03-19	10:12 PM	BA08341W21 DUP	1	8464	40mL	0.000	0.715	0.72	0.42		
2020-03-19	10:49 PM	BA08341W21 MS	1	64016	40mL	0.000	5.61	5.61	0.03		
2020-03-19	11:27 PM	BA08341W21 MSD	1	61268	40mL	0.000	5.367	5.37	1.09		
2020-03-20	12:04 AM	BA08370W08 DF 4	4	4474	40mL	0.000	0.364	1.46	0.02		
2020-03-20	12:40 AM	CCV	1	55588	40mL	0.000	4.766	4.77	0.01	5.00	95.3%
2020-03-20	01:19 AM	CCB	1	1270	40mL	0.000	0.082	0.08	0.00		
2020-03-20	01:55 AM	200318A LCS	1	58006	40mL	0.000	4.98	4.98	0.02	5.00	99.6%
2020-03-20	02:35 AM	200318A LCSD	1	59171	40mL	0.000	5.082	5.08	0.04	5.00	101.6%
2020-03-20	03:16 AM	BA08370W11 DF4	4	84495	40mL	0.000	7.414	29.66	0.26		
2020-03-20	03:53 AM	BA08649W02	1	86173	40mL	0.000	7.562	7.56	0.30		
2020-03-20	04:31 AM	BA08650W02	1	126187	40mL	0.000	11.087	11.09	0.10		
2020-03-20	05:09 AM	BA08651W02	1	109891	40mL	0.000	9.651	9.65	0.22		
2020-03-20	05:47 AM	BA08825W14	1	114045	40mL	0.000	10.017	10.02	1.85		
2020-03-20	06:25 AM	BA08829W14	1	42711	40mL	0.000	3.733	3.73	0.45		
2020-03-20	07:03 AM	CCV	1	55484	40mL	0.000	4.757	4.76	0.07	5.00	95.1%
2020-03-20	07:42 AM	CCB	1	1392	40mL	0.000	0.093	0.09	0.02		

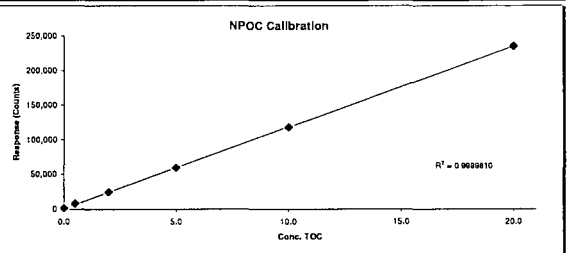
TOTAL ORGANIC CARBON

Method: WetChem | Units mg/L | Instrument: Tic Toc

Analyte: TOC | QCG: 200312A

Analyst: AR | Final Volume: 40mL

Date	Time	Appl ID	[TOC]	Raw	% Recovery
10/31/19	19:20	QC blank	0.00	1130	
10/31/19	19:56	Ical 1	0.50	7935	
10/31/19	20:28	Ical 2	2.00	24866	
10/31/19	21:02	Ical 3	5.00	59510	
10/31/19	21:35	Ical 4	10.00	118117	
10/31/19	22:08	Ical 5	20.00	235471	
11/01/19	10:03	ICB	0.08	883	
11/01/19	10:39	ICV	10.40	121613	104.0%



Date	Time	Appl ID	DF	Raw Result	SubSample Amount	Filter Blank Subtract	Calc Conc	Result	Range (mg/L)	QC True	% Recovery
2020-03-12	08:59 PM	#1	1	1880	40mL	0.000	0	0.00	0.00		
2020-03-12	09:38 PM	CCV	1	59227	40mL	0.000	5.052	5.05	0.06	5.00	101.0%
2020-03-12	10:17 PM	CCB	1	2187	40mL	0.000	0.027	0.03	0.01		
2020-03-12	10:56 PM	200312A LCS	1	58856	40mL	0.000	5.019	5.02	0.03	5.00	100.4%
2020-03-12	11:36 PM	200312A LCSD	1	51847	40mL	0.000	4.402	4.40	2.38	5.00	88.0%
2020-03-13	12:17 AM	BA08034W10	1	210737	40mL	0.000	18.535	18.54	1.49		
2020-03-13	12:55 AM	BA08341W19	1	61225	40mL	0.000	5.364	5.36	0.51		
2020-03-13	01:33 AM	BA08301W02	1	125773	40mL	0.000	11.05	11.05	0.01		
2020-03-13	02:11 AM	BA08351W02	1	135522	40mL	0.000	11.909	11.91	0.10		
2020-03-13	02:49 AM	BA08370W10	1	332196	40mL	0.000	29.236	29.24	1.02		
2020-03-13	03:27 AM	CCV	1	54354	40mL	0.000	4.623	4.62	0 10	5.00	92.5%
2020-03-13	04:07 AM	CCB	1	800	40mL	0.000	0	0.00	0.00		

Name of Final Standard TOC Calibration Curve — **Prep'd By (Initials)** AR

Prep Date 01/15/20

Exp Date 01/15/21

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	CS-5157-40233	11/30/20	20 uL	40 mL	DI Water	0.5 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	CS-5157-40233	11/30/20	100 uL	40 mL	DI Water	2 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	CS-5157-40233	11/30/20	250 uL	40 mL	DI Water	5 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	CS-5157-40233	11/30/20	500 uL	40 mL	DI Water	10 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	CS-5157-40233	11/30/20	1000 uL	40 mL	DI Water	20 ppm

Name of Final Standard ICV (TOC) — **Prep'd By (Initials)** HH

Prep Date 01/15/20

Exp Date 01/15/21

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
1000 PPM ICV TOC Intermediate	APPL Inc.	Prep: 2/11/19	1000 mg/L	Prep: 2/11/19	01/15/21	500 uL	40mL	DI Water	10 ppm

Name of Final Standard CCV (TOC) — **Prep'd By (Initials)** AR

Prep Date See Data

Exp Date 1 year

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	CS-5157-40233	11/30/20	200 uL	40 mL	DI Water	5 ppm

Name of Final Standard TOC_LCS/LCSD — **Prep'd By (Initials)** AR

Prep Date See Data

Exp Date 1 year

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	ULTRA Scientific	IQC-106-5	1000 mg/L	CR-0328-37639	02/28/19	200 uL	40 mL	DI Water	5 ppm

Name of Final Standard TOC_MS/MSD — **Prep'd By (Initials)** AR

Prep Date See Data

Exp Date 1 year

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	ULTRA Scientific	IQC-106-5	1000 mg/L	CR-0328-37639	02/28/19	200 uL	40 mL	sample	5 ppm

Silica | Rev 2, 04/05/19 controlled copy

Method SM4500SiD | Units mg/L | Instrument: Genisis Spectrometer
Analyte Silica | QCG: 200318A | Wavelength: 410 nm
Analyist HH | Final Volume: 25mL | Units: mg/L

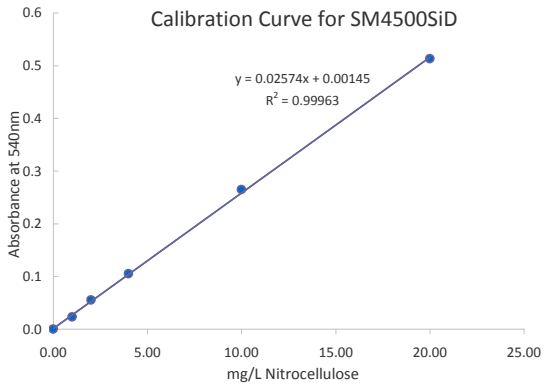
Date	Time	Appl ID	[SiO2]	Absorbance	% Recovery
03/18/20	14:20	ICB	0.00	0.000	
03/18/20	14:21	Ical 1	1.00	0.023	83.7%
03/18/20	14:22	Ical 2	2.00	0.055	104.0%
03/18/20	14:22	Ical 3	4.00	0.105	89.9%
03/18/20	14:23	Ical 4	10.00	0.265	102.4%
03/18/20	14:23	Ical 5	20.00	0.513	99.4%
03/18/20	14:25	ICV	4.00	0.099	94.8%
03/18/20	14:25	ICB	0.00	-0.001	

Slope	0.025737621
Intercept	0.001451338
Coefficient of Determination	0.999625494

Algortithm Check:	Appl ID	Absorbance	Result
	200318A 4 LCSD	0.105	4.02

Result = (Absorbance-Raw Blk-Intercept)/ Slope

Test:	03/18/20	HH	4.020



	Date	Time	Appl ID	DF	Raw Result	Sample Amount	Raw BLK	Calc Conc	Result	QC True	% Recovery
id	03/18/20	14:20	ICB	1	0.000	25.0mL		-0.06	-0.06		
id	03/18/20	14:21	Ical 1	1	0.023	25.0mL		0.84	0.84	1.00	83.7%
id	03/18/20	14:22	Ical 2	1	0.055	25.0mL		2.08	2.08	2.00	104.0%
id	03/18/20	14:22	Ical 3	1	0.094	25.0mL		3.60	3.60	4.00	89.9%
id	03/18/20	14:23	Ical 4	1	0.265	25.0mL		10.24	10.24	10.00	102.4%
id	03/18/20	14:23	Ical 5	1	0.513	25.0mL		19.88	19.88	20.00	99.4%
id	03/18/20	14:25	ICV	1	0.099	25.0mL		3.79	3.79	4.00	94.8%
id	03/18/20	14:25	ICB	1	-0.001	25.0mL		-0.10	-0.10		
	03/18/20	14:47	200318A CCV1 4	1	0.109	25.0mL		4.18	4.18	4.00	104.5%
	03/18/20	14:48	200318A CCB	1	-0.001	25.0mL		-0.10	-0.10		
	03/18/20	14:48	200318A 4 LCS	1	0.105	25.0mL		4.02	4.02	4.00	100.6%
	03/18/20	14:49	200318A 4 LCSD	1	0.105	25.0mL		4.02	4.02	4.00	100.6%
	03/18/20	14:51	BA08341W23 T	5	0.255	25.0mL		9.85	49.26		
	03/18/20	14:51	BA08341W22 D	5	0.260	25.0mL		10.05	50.23		
	03/18/20	14:52	BA08370W12 T	5	0.048	25.0mL		1.81	9.04		
	03/18/20	14:52	BA08370W13 D	5	0.048	25.0mL		1.81	9.04		
	03/18/20	14:53	200309ACCV1 3	1	0.102	25.0mL		3.91	3.91	4.00	97.7%
	03/18/20	14:54	200309A CCB	1	0.001	25.0mL		-0.02	-0.02		

Silica Standard Prep

Spike Amount (uL)*	Final Volume (mL)	Final Concentration (ppm)
25	25	1
50	25	2
100 (CCV2)	25	4
250 (CCV1)	25	10
500	25	20

*Curve Spiked with 1000 ppm SiO_2 o2si lot 1098096-37186 (exp: 4/29/18)

ICV/LCS = 4ppm SiO_2
100 uL of 1000 ppm SiO_2 Ultra Scientific Lot P01064-32895 (exp: 11/30/19) brought up to 25mL with DI

MS = 4ppm SiO_2
100 uL of 1000 ppm SiO_2 Ultra Scientific Lot P01064-32895 (exp: 11/30/19) brought up to 25mL with sample

Prep: 10/25/19
Exp: 10/25/19

Initials: FJR

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

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

Data Validatable Report

April 6, 2020

AECOM
1001 Bishop Street, Suite 1600
Honolulu, Hawaii 96813

Attn: Margie Pascua

Title: Report of Data: Case 91653

Project: 60571032 CV18F0126 Red Hill Fuel Storage, HI

Contract #: Prime contract # for DoD: NAVY CLEAN N62742-17-F-1800, CV18F0126
Subcontract: 18S-22209-HI27

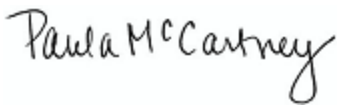
Dear Ms. Pascua:

Three water samples were received March 12, 2020. Written results for the requested analyses are being provided on this April 6, 2020.

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

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

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



Paula McCartney, Laboratory Director
APPL, Inc.

PM/lac
Enclosure
cc: File

Data Validation Package
for
60571032 CV18F0126 Red Hill Fuel Storage
APPL SDG 91653
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CASE NARRATIVE

Case Narrative

ARF: 91653

Project: 60571032 CV18F0126 Red Hill Fuel Storage. HI

Sample Receipt Information:

Three water samples were received March 12, 2020, at 2.4°C and 3.4°C. The sample group was assigned Analytical Request Form (ARF) number 91653.

Sample Preparation and Analysis Information:

For the EPA 8011 analysis, the samples were extracted according to APPL SOP method MWE012.

For the EPA 8015B analysis, the sample was extracted according to EPA method 3520C. The sample extracts were silica gel cleaned according to APPL's SOP CLN004 and placed on hold.

For the EPA 8270D Phenol analysis, the samples were extracted according to EPA method 3520C.

For the EPA 8270D SIM analysis, the samples were extracted according to EPA method 3520C.

For the APPL SOP ANA2MEE analysis, the samples were extracted according to EPA method 3535.

For the EPA 8260B analysis, the samples were purged according to EPA method 5030B.

For the RSK-175 analysis, the samples were allowed to equilibrate for 10 minutes at 40°C and a portion of the headspace was analyzed.

For the EPA 6010C analysis, the sample was digested according to EPA method 3010A.

For the EPA 9060A, 300.0, 353.2, SM 2320B, SM 4500-SiD and SM 3500FeB analyses, the sample was prepared according to the methods.

Only the portion of the injection log relative to these samples is included. A full sequence log is available upon request. Measurement uncertainty can be reported upon request.

Analytical Exceptions, Deviations and Abnormalities.

EPA 300: One **s**ample arrived out of holding time for nitrate and was analyzed within 72 hours of sampling.

SDG	Received	Client ID	APPL ID	Collected DateTime	Matrix	Method	Method Description
91653	03/12/20	ERH1030	BA08369	03/10/20 7:50:00 AM	WATER	8011	EPA 8011
91653	03/12/20	ERH1030	BA08369	03/10/20 7:50:00 AM	WATER	EPA 8260B	EPA 8260B BTEX & 1,2-DCA WATER
91653	03/12/20	ERH1030	BA08369	03/10/20 7:50:00 AM	WATER	EPA 8260-GAS	EPA 8260 with GAS
91653	03/12/20	ERH1030	BA08369	03/10/20 7:50:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
91653	03/12/20	ERH1030	BA08369	03/10/20 7:50:00 AM	WATER	RSK 175	METHANE BY RSK 175
91653	03/12/20	ERH1031	BA08370	03/10/20 8:30:00 AM	WATER	SM 2320B	Wetlab 2320B - Water
91653	03/12/20	ERH1031	BA08370	03/10/20 8:30:00 AM	WATER	EPA 300.0	Wetlab 300.0 - Water
91653	03/12/20	ERH1031	BA08370	03/10/20 8:30:00 AM	WATER	SM3500FeB	Ferrous Iron
91653	03/12/20	ERH1031	BA08370	03/10/20 8:30:00 AM	WATER	EPA 353.2	EPA 353.2 - WATER
91653	03/12/20	ERH1031	BA08370	03/10/20 8:30:00 AM	WATER	6010C/3010A	EPA 6010C TOTAL
91653	03/12/20	ERH1031	BA08370	03/10/20 8:30:00 AM	WATER	8011	EPA 8011
91653	03/12/20	ERH1031	BA08370	03/10/20 8:30:00 AM	WATER	EPA 8260B	EPA 8260B BTEX & 1,2-DCA WATER
91653	03/12/20	ERH1031	BA08370	03/10/20 8:30:00 AM	WATER	EPA 8270D	EPA 8270D WATER
91653	03/12/20	ERH1031	BA08370	03/10/20 8:30:00 AM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
91653	03/12/20	ERH1031	BA08370	03/10/20 8:30:00 AM	WATER	EPA 8015B-eHL	EPA 8015B TPH WATER L-L SGC
91653	03/12/20	ERH1031	BA08370	03/10/20 8:30:00 AM	WATER	EPA 8015B-eHL	EPA 8015B TPH LIQ-LIQ
91653	03/12/20	ERH1031	BA08370	03/10/20 8:30:00 AM	WATER	SW846 9060A	9060A DOC
91653	03/12/20	ERH1031	BA08370	03/10/20 8:30:00 AM	WATER	EPA 8260-GAS	EPA 8260 with GAS
91653	03/12/20	ERH1031	BA08370	03/10/20 8:30:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
91653	03/12/20	ERH1031	BA08370	03/10/20 8:30:00 AM	WATER	RSK 175	METHANE BY RSK 175
91653	03/12/20	ERH1031	BA08370	03/10/20 8:30:00 AM	WATER	8270D-SIM	EPA 8270D SIM LIQ-LIQ
91653	03/12/20	ERH1031	BA08370	03/10/20 8:30:00 AM	WATER	SM 4500-Si D	Silica W
91653	03/12/20	ERH1031	BA08370	03/10/20 8:30:00 AM	WATER	SM 4500-Si D	SILICA W - DISSOLVED
91653	03/12/20	ERH1031	BA08370	03/10/20 8:30:00 AM	WATER	SW846 9060A	9060A TOC
91653	03/12/20	ERH1032	BA08371	03/10/20 8:30:00 AM	WATER	8011	EPA 8011
91653	03/12/20	ERH1032	BA08371	03/10/20 8:30:00 AM	WATER	EPA 8260B	EPA 8260B BTEX & 1,2-DCA WATER
91653	03/12/20	ERH1032	BA08371	03/10/20 8:30:00 AM	WATER	EPA 8270D	EPA 8270D WATER
91653	03/12/20	ERH1032	BA08371	03/10/20 8:30:00 AM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
91653	03/12/20	ERH1032	BA08371	03/10/20 8:30:00 AM	WATER	EPA 8015B-eHL	EPA 8015B TPH WATER L-L SGC
91653	03/12/20	ERH1032	BA08371	03/10/20 8:30:00 AM	WATER	EPA 8015B-eHL	EPA 8015B TPH LIQ-LIQ
91653	03/12/20	ERH1032	BA08371	03/10/20 8:30:00 AM	WATER	EPA 8260-GAS	EPA 8260 with GAS
91653	03/12/20	ERH1032	BA08371	03/10/20 8:30:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
91653	03/12/20	ERH1032	BA08371	03/10/20 8:30:00 AM	WATER	8270D-SIM	EPA 8270D SIM LIQ-LIQ

Abbreviations and Flags

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

SAMPLE RECORDS MANAGEMENT

CHAIN OF CUSTODY,

ARF, CRF, AND

CLIENT COMMUNICATION

APPL - Analysis Request Form 91653

Client: **AECOM**
Address: **1001 Bishop Street, Suite 1600**
Honolulu, HI 96813
Attn: **Margie Pascua**
Phone: **808-356-5373** Fax: **808-523-8950**
Job: **60571032 CV18F0126 Red Hill Fuel Storage**
PO #: **18S-22209-HI27 PO# 102604**
Chain of Custody (Y/N): **Y** # **175,176**
RAD Screen (Y/N): **Y** pH (Y/N): **Y**
Turn Around Type: **1 WEEK**

Received by: **AAR**
Date Received: **03/12/20** Time: **09:45**
Delivered by: **FEDEX**
Shuttle Custody Seals (Y/N): **Y** Time Zone: **-10**
Chest Temp(s): **3.4,2.4°C**
Color: **VFRG/F-Pink/AA-BlkOr**
Samples Chilled until Placed in Refrig/Freezer: **Y**
Project Manager: **Libby Cheesebor**
QC Report Type: **DVP4DOD/EQUIS/HI**
Due Date: **03/19/20**

Comments:
PM: login and F1s to Margie.Pascua@aecom.com
AN: 7 day TAT for Form 1s; 21 day TAT for PKG STYLE 1; DOD v5.1; DOD Forms: LOD database
Wetlab: NO3, CL, SO4, BR, & F by EPA 300 and NO3-N & NO2-N by 353.2
report MS/MSD/DUPs when AECOM sample used
TPH D & O both with and w/o SGC, reverse surrogate for the SGC; analyze SGC if detections
RSK: Methane only; 8011: EDB only; $87DC53W5: report phenol; PAHs: short list
FR: email ftp info to Margie, Stella, trommelfanger@lab-data.com
EDD: AECOM EQUIS EDD 2.5.3 Red Hill 87DMEE->3535A to Margie.Pascua@aecom.com & jecklund@lab-data.com

Sample Distribution:
GC: 3-$8011, 2-$87DC53W5, 2-$87DMEEW5, 2-$DOC53W5LIQ, 2-$SIM53LIQ51
Extractions: 3-_MWE012, 2-_LIQ003, 2-_LIQ005, 2-_MWE2MEE
VOA: 3-$86BTOTXDCAW, 3-$GASBL, 3-$GRO86BW, 2-$RSKMETH
Metals: 1-$61CDOD5W(Ca,Mg,Mn,K,Na)
Wetlab: 1-$232W(HCO3,CO3,ALK), 1-$300W, 1-$35FE, 1-$35OF, 1-$DOCW53, 1-$SIO2, 1-$SIO2D, 1-$TOCW53
Other: 1-_M3010

Charges:

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

	Client ID	APPL ID	Sampled	Analyses Requested
1.	ERH1030	BA08369W LCSD	03/10/20 07:50	$8011, $86BTOTXDCAW, $GASBL, $GRO86BW, $RSKMETH -- see comments
2.	ERH1031	BA08370W LCSD	03/10/20 08:30	$232W(HCO3,CO3,ALK), $300W, $35FE, $35OF, $61CDOD5W(Ca,Mg,Mn,K,Na), $8011, $86BTOTXDCAW, $87DC53W5, $87DMEEW5, $DOC53W5LIQ, $DOCW53, $GASBL, $GRO86BW, $RSKMETH, $SIM53LIQ51, $SIO2, $SIO2D, $TOCW53 -- see comments

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

3.	ERH1032	LCSD BA08371W	03/10/20 08:30	$8011, $86BTOTXDCAW, $87DC53W5, $87DMEEW5, $DOC53W5LIQ, $GASBL, $GRO86BW, $SIM53LIQ51 -- see comments

APPL Sample Receipt Form

ARF# **91653**

Sample	Container Type	Count	p
BA08369	[13] VOAs - HCL	4	NA
	[15] VOAs - NP	3	NA
BA08370	[3] PL 250mL	1	NA
	[4] PL 125mL	2	NA
	[6] PL 500mL - HNO3	1	1.6
	[10] PL 250mL - H2SO4	1	1.6
	[13] VOAs - HCL	4	NA
	[15] VOAs - NP	3	NA
	[17] Amber Liter	4	NA
	[32] Clear VOA - H2SO4	4	NA
	[38] 250mL brn poly, HCl prsvd	1	1.6
	[40] 500mL Amber, unprsrvd	3	NA
BA08371	[13] VOAs - HCL	4	NA
	[15] VOAs - NP	3	NA
	[17] Amber Liter	4	NA
	[40] 500mL Amber, unprsrvd	3	NA

Sample	Container Type	Count	p

91653

CHAIN OF CUSTODY RECORD

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com
Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

C.O.C. 175

Report to: PLEASE PRINT

Company Name: AECOM Phone: 808-356-5373

Address: 1001 Bishop St, Suite 1600
Honolulu, HI 96813 Fax: 808-523-8950

Attn: Margie Pascua

Email: margie.pascua@aecom.com

Invoice to: PLEASE PRINT

Company Name: AECOM Phone: 808-529-7249

Address: 1001 Bishop St, Suite 1600
Honolulu, HI 96813 Fax: 808-523-8950

Attn: Mary Basano

Email: mary.basano@aecom.com; usapimaging@aecom.com

Project Name/Number: CV18F0126 / 60571032

Purchase Order Number: 102604

Sampler (Print): BM, DH, CE

Sampler (Signature): AM for BM, DH, CE

Date Shipped: MM/DD/YY

Carrier: FedEx

Waybill No.:

Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil	8260C BTEX,TPH-g	8260C DCA 8011 EDB	8015C TPH-d/o	3630/8015C TPH-d/o w/ SGT	8270DSIM PAHs short list	8270D Phenol, [illegible]	8270D 2-(2-methoxy ethoxy)-ethanol	RSK175M Methane	SM3500-Fe Ferrous Iron	353.2 Nitrate-Nitrite N	SM2320B Alkalinity 300.0 Nitrate,Sulfate,Chloride	300.0 Bromide/Fluoride 6010 Total Ca,Mg,Mn,K,Na SM4500 Total & Dissolved Silica	9060A TOC/ DOC	
ERH1030	Trip Blank	03/10/20	0750	HST	7	X			X	X						X						
ERH1031	RHMW13-05	03/10/20	0830	HST	18 BM	X			X	X	X	X*	X	X	X	X	X	X	X	X	X	see other coolers
ERH1032	RHMW13-05	03/10/20	0830	HST	7	X			X	X												see other coolers
					7																	

EB 03/11/20

*Analyze TPH w/SGT only if TPH-d/o detected.

TPH-d/o & PAHs need liquid-liquid extraction.

Shuttle Temperature: 3.0/3.1 RT @ 10.4 2.0/2.1

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

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

Relinquished by sampler: AECOM Alexandre Maman	Date 03/11/20	Time 13:05	Received by:	Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date 3.12.20	Time 0945	Received at lab by:

See page 2 for Container Preservative and Sampling Information

APPL LABS

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com

Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

CHAIN OF CUSTODY RECORD

C.O.C. 176

Report to: PLEASE PRINT

Company Name: AECOM Phone: 808-356-5373

Address: 1001 Bishop St, Suite 1600
Honolulu, HI 96813 Fax: 808-523-8950

Attn: Margie Pascua

Email: margie.pascua@aecom.com

Invoice to: PLEASE PRINT

Company Name: AECOM Phone: 808-529-7249

Address: 1001 Bishop St, Suite 1600
Honolulu, HI 96813 Fax: 808-523-8950

Attn: Mary Basano

Email: mary.basano@aecom.com; usapimaging@aecom.com

Project Name/Number: CV18F0126 / 60571032

Purchase Order Number: 102604

Sampler (Print): BM, DH, CE

Sampler (Signature): EB for BM, DH, CE

Date Shipped: MM/DD/YY

Carrier: FedEx

Waybill No.:

Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil	8260C BTEX,TPH-g	8260C DCA 8011 EDB	8015C TPH-d/o	3630/8015C TPH-d/o w/ SGT	8270DSIM PAHs short list	8270D Phenol, [illegible]	8270D 2-(2-methoxy ethoxy)-ethanol	RSK175M Methane	SM3500-Fe Ferrous Iron	353.2 Nitrate-Nitrite N	SM2320B Alkalinity 300.0 Nitrate,Sulfate,Chloride	300.0 Bromide/Fluoride 8010 Total Ca,Mg,Mn,K,Na SM4500 Total & Dissolved Silica	9060A TOC	
ERH1032	RHMW13-05	03/10/20	0830	HST	7	X			X	X	X	X*	X	X	X							see other coolers for VOAs
ERH1031	RHMW13-05	03/10/20	0830	HST	6	X			X	X	X	X*	X	X	X	X	X	X	X	X	X	see other cooler

EB 03/11/20

*Analyze TPH w/SGT only if TPH-d/o detected.

TPH-d/o & PAHs need liquid-liquid extraction.

Page 13 of 695

Shuttle Temperature:

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

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

Relinquished by sampler: AECOM Estelle BONNY	Date 03/11/20	Time 13:05	Received by:	Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date 3.12.20	Time 0945	Received at lab by:

See page 2 for Container Preservative and Sampling Information

COOLER RECEIPT FORM **ARF: 91653**

1) Project: 60571032 CV18F0126 Red Hill Fuel Storage Date Received: 03/12/20

2) Coolers: Number of Coolers: 2

3) YES Were custody seals present and intact?
How many? 2 Name/Date on seal? see below

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

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

6) YES Were cooler temperatures acceptable?

7) Serial number of certified NIST thermometer use R4 CF: +0.4°c

8) Cooler temp(s): In °C. Thermometer Temp / Corrected Temp

1: 3.0/3.4	2: 2.0/2.4	3:	4:	5:	6:
7:	8:	9:	10:	11:	12:

Chain of custody:

9) YES Was a chain of custody received?

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

Sample Labels:

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

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

Sample Containers:

13) YES Were all containers sealed in separate bags?

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

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

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

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

Preservation Hold time:

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

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

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

21) NA Was the pH of the "basic" preserved samples for Cyanide > 12, Sulfide >9, Hexchrom >9?

22) NO Were unpreserved VOA Vials received?

23) NA Are unpreserved VOA vials noted in the ADD TEST FIELD on the ARF?
pH strip lot number: HC982588
Lab notified if pH was not adequate:

Notes/Deficiencies:

CUSTODY SEAL
AECOM (808) 521-3051
Initials EB Date 03/11/20

Personnel receiving samples: ZG Second reviewer: AA
Personnel labeling samples: AD
Project manager notified: ZG Date/Time of notification 03/12/20
Name of client notified: Date/Time of notification

SAMPLE RESULTS

EPA 8011

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1030

Sample Collection Date: 03/10/20

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 91653

APPL ID: BA08369

QCG: #8011-200316A-250828

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8011	EDB	0.019 U	0.02	0.019	0.010	ug/L	03/16/20	03/16/20
8011	SURROGATE: 1,3-DIBROMOPROPANE	95.6	70-132			%	03/16/20	03/16/20

Quant Method:	8010317A.M
Run #:	0228172
Instrument:	Herbie
Sequence:	200228
Dilution Factor:	1
Initials:	SSE

Printed: 03/17/20 12:39:29 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8011

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91653

Sample ID: ERH1031

APPL ID: BA08370

Sample Collection Date: 03/10/20

QCG: #8011-200316A-250828

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8011	EDB	0.019 U	0.02	0.019	0.010	ug/L	03/16/20	03/16/20
8011	SURROGATE: 1,3-DIBROMOPROPANE	94.3	70-132			%	03/16/20	03/16/20

Quant Method:	8010317A.M
Run #:	0228173
Instrument:	Herbie
Sequence:	200228
Dilution Factor:	1
Initials:	SSE

Printed: 03/17/20 12:39:29 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8011

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91653

Sample ID: ERH1032

APPL ID: BA08371

Sample Collection Date: 03/10/20

QCG: #8011-200316A-250828

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8011	EDB	0.019 U	0.02	0.019	0.010	ug/L	03/16/20	03/16/20
8011	SURROGATE: 1,3-DIBROMOPROPANE	94.0	70-132			%	03/16/20	03/16/20

Quant Method:	8010317A.M
Run #:	0228174
Instrument:	Herbie
Sequence:	200228
Dilution Factor:	1
Initials:	SSE

Printed: 03/17/20 12:39:29 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPH WATER L-L SGC

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91653

Sample ID: ERH1031

APPL ID: BA08370

Sample Collection Date: 03/10/20

QCG: #DOC53-200312A1-250875

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	03/12/20	03/17/20
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	03/12/20	03/17/20
EPA 8015B-e	SURROGATE: (R) DECANOIC ACID (S)	0.0	0-1			%	03/12/20	03/17/20
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	118	60-142			%	03/12/20	03/17/20
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	90.6	56-125			%	03/12/20	03/17/20

Quant Method: DOC0310.M
Run #: 317018
Instrument: Apollo
Sequence: 200317
Dilution Factor: 1
Initials: SSE

Printed: 04/06/20 7:41:47 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPH LIQ-LIQ

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91653

Sample ID: ERH1031

APPL ID: BA08370

Sample Collection Date: 03/10/20

QCG: #DOC53-200312A-250873

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	240 ++J	320	300.0	150.0	ug/L	03/12/20	03/16/20
EPA 8015B-e	OIL (C24-C40)	240 J	320	300.0	150.0	ug/L	03/12/20	03/16/20
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	117	60-142			%	03/12/20	03/16/20
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	90.0	56-125			%	03/12/20	03/16/20

J = Estimated value.
++(T4I) The analyst has noted that the chromatogram of this sample includes a dominant peak(s) which is not indicative of petroleum hydrocarbons.

Quant Method:	DOC0310.M
Run #:	312162
Instrument:	Apollo
Sequence:	200312
Dilution Factor:	1
Initials:	SSE

Printed: 04/06/20 7:41:47 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPH WATER L-L SGC

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91653

Sample ID: ERH1032

APPL ID: BA08371

Sample Collection Date: 03/10/20

QCG: #DOC53-200312A1-250875

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	03/12/20	03/17/20
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	03/12/20	03/17/20
EPA 8015B-e	SURROGATE: (R) DECANOIC ACID (S)	0.0	0-1			%	03/12/20	03/17/20
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	118	60-142			%	03/12/20	03/17/20
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	90.7	56-125			%	03/12/20	03/17/20

Quant Method:	DOC0310.M
Run #:	317019
Instrument:	Apollo
Sequence:	200317
Dilution Factor:	1
Initials:	SSE

Printed: 04/06/20 7:41:47 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPH LIQ-LIQ

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908 North Temperance Avenue
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Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91653

Sample ID: ERH1032

APPL ID: BA08371

Sample Collection Date: 03/10/20

QCG: #DOC53-200312A-250873

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	200 ++J	320	300.0	150.0	ug/L	03/12/20	03/16/20
EPA 8015B-e	OIL (C24-C40)	170 J	320	300.0	150.0	ug/L	03/12/20	03/16/20
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	118	60-142			%	03/12/20	03/16/20
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	89.9	56-125			%	03/12/20	03/16/20

J = Estimated value.
++(T4I) The analyst has noted that the chromatogram of this sample includes a dominant peak(s) which is not indicative of petroleum hydrocarbons.

Quant Method:	DOC0310.M
Run #:	312163
Instrument:	Apollo
Sequence:	200312
Dilution Factor:	1
Initials:	SSE

Printed: 04/06/20 7:41:47 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91653

Sample ID: ERH1031

APPL ID: BA08370

Sample Collection Date: 03/10/20

QCG: #87DC5-200312A-250860

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	1-HEXANOL, 2-ETHYL-	6.5 T	TIC		TIC	ug/L	03/12/20	03/17/20
EPA 8270D	CIS-1-BUTYL-2-METHYLCYCLOPROPA	99 T	TIC		TIC	ug/L	03/12/20	03/17/20
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	03/12/20	03/17/20
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHENO	86.6	43-140			%	03/12/20	03/17/20
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	71.1	44-119			%	03/12/20	03/17/20
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	59.3	19-119			%	03/12/20	03/17/20
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	68.4	44-120			%	03/12/20	03/17/20
EPA 8270D	SURROGATE: PHENOL-D6 (S)	65.6	10-115			%	03/12/20	03/17/20
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	92.5	50-134			%	03/12/20	03/17/20

T = Tentatively identified compound.

Quant Method: Y1219.M
Run #: 0207Y232
Instrument: Yoda
Sequence: Y200207
Dilution Factor: 1
Initials: MA

Printed: 03/30/20 10:29:06 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D WATER

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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91653

Sample ID: ERH1032

APPL ID: BA08371

Sample Collection Date: 03/10/20

QCG: #87DC5-200312A-250860

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	1-HEXANOL, 2-ETHYL-	13 T	TIC		TIC	ug/L	03/12/20	03/17/20
EPA 8270D	CIS-1-BUTYL-2-METHYLCYCLOPROPA	100 T	TIC		TIC	ug/L	03/12/20	03/17/20
EPA 8270D	OCTADECANOIC ACID	6.0 T	TIC		TIC	ug/L	03/12/20	03/17/20
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	03/12/20	03/17/20
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHENO	82.4	43-140			%	03/12/20	03/17/20
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	70.5	44-119			%	03/12/20	03/17/20
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	59.5	19-119			%	03/12/20	03/17/20
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	67.6	44-120			%	03/12/20	03/17/20
EPA 8270D	SURROGATE: PHENOL-D6 (S)	65.2	10-115			%	03/12/20	03/17/20
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	86.4	50-134			%	03/12/20	03/17/20

T = Tentatively identified compound.

Quant Method: Y1219.M
Run #: 0207Y233
Instrument: Yoda
Sequence: Y200207
Dilution Factor: 1
Initials: MA

Printed: 03/30/20 10:29:06 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D SIM LIQ-LIQ

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APPL Inc.
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Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91653

Sample ID: ERH1031

APPL ID: BA08370

Sample Collection Date: 03/10/20

QCG: #SIM53-200312A-250838

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	03/12/20	03/16/20
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	03/12/20	03/16/20
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	03/12/20	03/16/20
8270D-SIM	SURROGATE: 2-METHYLNAPHTHALEN	93.9	39-114			%	03/12/20	03/16/20
8270D-SIM	SURROGATE: FLUORANTHENE-D10 (S	97.8	58-120			%	03/12/20	03/16/20

Quant Method: L0204.M
Run #: 0204L288
Instrument: Linus
Sequence: L200204
Dilution Factor: 1
Initials: MA

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D SIM LIQ-LIQ

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Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91653

Sample ID: ERH1032

APPL ID: BA08371

Sample Collection Date: 03/10/20

QCG: #SIM53-200312A-250838

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	03/12/20	03/16/20
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	03/12/20	03/16/20
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	03/12/20	03/16/20
8270D-SIM	SURROGATE: 2-METHYLNAPHTHALEN	92.4	39-114			%	03/12/20	03/16/20
8270D-SIM	SURROGATE: FLUORANTHENE-D10 (S	94.8	58-120			%	03/12/20	03/16/20

Quant Method: L0204.M
Run #: 0204L289
Instrument: Linus
Sequence: L200204
Dilution Factor: 1
Initials: MA

Printed: 03/17/20 2:04:32 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D MODIFIED WATER

AECOM
1001 Bishop Street, Suite 1600
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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91653

Sample ID: ERH1031

APPL ID: BA08370

Sample Collection Date: 03/10/20

QCG: #87DME-200313A-250841

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	03/13/20	03/16/20

Quant Method:	YMEE0122.M
Run #:	0122Y083
Instrument:	Yoda
Sequence:	Y200122M
Dilution Factor:	1
Initials:	LPO

Printed: 03/17/20 1:19:27 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D MODIFIED WATER

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APPL Inc.
908 North Temperance Avenue
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Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91653

Sample ID: ERH1032

APPL ID: BA08371

Sample Collection Date: 03/10/20

QCG: #87DME-200313A-250841

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	03/13/20	03/16/20

Quant Method:	YMEE0122.M
Run #:	0122Y084
Instrument:	Yoda
Sequence:	Y200122M
Dilution Factor:	1
Initials:	LPO

Printed: 03/17/20 1:19:27 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX & 1,2-DCA WATER

AECOM
1001 Bishop Street, Suite 1600
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APPL Inc.
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Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91653

Sample ID: ERH1030

APPL ID: BA08369

Sample Collection Date: 03/10/20

QCG: #86BTO-200313BL-250789

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	03/14/20	03/14/20
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	03/14/20	03/14/20
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	03/14/20	03/14/20
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	03/14/20	03/14/20
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	03/14/20	03/14/20
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	99.1	81-118			%	03/14/20	03/14/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	95.3	85-114			%	03/14/20	03/14/20
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	104	80-119			%	03/14/20	03/14/20
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	103	89-112			%	03/14/20	03/14/20

Quant Method: L0312W.M
Run #: 0313L48
Instrument: Loki
Sequence: 200312
Dilution Factor: 1
Initials: DPO

Printed: 03/19/20 8:13:56 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX & 1,2-DCA WATER

AECOM
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APPL Inc.
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Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91653

Sample ID: ERH1031

APPL ID: BA08370

Sample Collection Date: 03/10/20

QCG: #86BTO-200313BL-250789

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	03/14/20	03/14/20
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	03/14/20	03/14/20
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	03/14/20	03/14/20
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	03/14/20	03/14/20
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	03/14/20	03/14/20
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	97.7	81-118			%	03/14/20	03/14/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	98.0	85-114			%	03/14/20	03/14/20
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	85.2	80-119			%	03/14/20	03/14/20
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	97.5	89-112			%	03/14/20	03/14/20

Quant Method: L0312W.M
Run #: 0313L49
Instrument: Loki
Sequence: 200312
Dilution Factor: 1
Initials: DPO

Printed: 03/19/20 8:13:56 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX & 1,2-DCA WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91653

Sample ID: ERH1032

APPL ID: BA08371

Sample Collection Date: 03/10/20

QCG: #86BTO-200313BL-250789

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	03/14/20	03/14/20
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	03/14/20	03/14/20
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	03/14/20	03/14/20
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	03/14/20	03/14/20
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	03/14/20	03/14/20
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	101	81-118			%	03/14/20	03/14/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	89.9	85-114			%	03/14/20	03/14/20
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	101	80-119			%	03/14/20	03/14/20
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	96.7	89-112			%	03/14/20	03/14/20

Quant Method: L0312W.M
Run #: 0313L50
Instrument: Loki
Sequence: 200312
Dilution Factor: 1
Initials: DPO

Printed: 03/19/20 8:13:56 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91653

Sample ID: ERH1030

APPL ID: BA08369

Sample Collection Date: 03/10/20

QCG: #GRO86-200313BL-250790

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	03/14/20	03/14/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	95.3	85-114			%	03/14/20	03/14/20

Quant Method:	LGAS0312.M
Run #:	0313L48
Instrument:	Loki
Sequence:	200312
Dilution Factor:	1
Initials:	DPO

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
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Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91653

Sample ID: ERH1031

APPL ID: BA08370

Sample Collection Date: 03/10/20

QCG: #GRO86-200313BL-250790

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	03/14/20	03/14/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	98.0	85-114			%	03/14/20	03/14/20

Quant Method: LGAS0312.M
Run #: 0313L49
Instrument: Loki
Sequence: 200312
Dilution Factor: 1
Initials: DPO

Printed: 03/16/20 12:48:17 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91653

Sample ID: ERH1032

APPL ID: BA08371

Sample Collection Date: 03/10/20

QCG: #GRO86-200313BL-250790

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	03/14/20	03/14/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	89.9	85-114			%	03/14/20	03/14/20

Quant Method: LGAS0312.M
Run #: 0313L50
Instrument: Loki
Sequence: 200312
Dilution Factor: 1
Initials: DPO

Printed: 03/16/20 12:48:17 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91653

Sample ID: ERH1030

APPL ID: BA08369

Sample Collection Date: 03/10/20

QCG: #RSKME-200317A-250834

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	03/17/20	03/17/20

Quant Method:	RSK0311.M
Run #:	0317R07
Instrument:	Rocky
Sequence:	200311
Dilution Factor:	1
Initials:	CMO

Printed: 03/17/20 10:52:57 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
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908 North Temperance Avenue
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Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91653

Sample ID: ERH1031

APPL ID: BA08370

Sample Collection Date: 03/10/20

QCG: #RSKME-200317A-250834

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	20	5.0	1.00	0.25	ug/L	03/17/20	03/17/20

Quant Method: RSK0311.M
Run #: 0317R08
Instrument: Rocky
Sequence: 200311
Dilution Factor: 1
Initials: CMO

Printed: 03/17/20 10:52:57 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

Metals Analysis

AECOM
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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91653

Sample ID: ERH1031

APPL ID: BA08370

Sample Collection Date: 03/10/20

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6010C/3010A	CALCIUM (CA)	21900	1000	75.0	27.5	ug/L	1	03/13/20	03/18/20
6010C/3010A	MAGNESIUM (MG)	14900	500	30.0	12.9	ug/L	1	03/13/20	03/18/20
6010C/3010A	MANGANESE (MN)	117	10.0	4.00	1.23	ug/L	1	03/13/20	03/18/20
6010C/3010A	POTASSIUM (K)	3380	3000	500.0	220.0	ug/L	1	03/13/20	03/18/20
6010C/3010A	SODIUM (NA)	47500	5000	500.0	111.1	ug/L	1	03/13/20	03/18/20

Printed: 03/26/20 6:53:55 PM

APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1031

APPL ID: BA08370

Sample Collection Date: 03/10/20

ARF: 91653

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	BROMIDE	0.40 J	0.5	0.16	0.05	mg/L	1	03/13/20	03/13/20
EPA 300.0	FLUORIDE	0.26	0.1	0.09	0.08	mg/L	1	03/13/20	03/13/20
EPA 300.0	NITRATE	0.40 J	0.5	0.18	0.04	mg/L	1	03/13/20	03/13/20
EPA 300.0	SULFATE	11.7	1.0	0.20	0.09	mg/L	1	03/13/20	03/13/20
EPA 300.0	CHLORIDE	65.8	5.0	1.00	0.40	mg/L	5	03/13/20	03/13/20
EPA 300.0	FLUORIDE	0.87	0.5	0.45	0.40	mg/L	5	03/13/20	03/13/20

J = Estimated value.

Printed: 04/06/20 10:42:58 AM

APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1031

APPL ID: BA08370

Sample Collection Date: 03/10/20

ARF: 91653

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 353.2	NITRATE-NITRITE-N	0.048 J	0.10	0.090	0.028	mg/L	1	03/13/20	03/13/20
SM 2320B	BICARBONATE AS CACO3	84.8	2.0	1.70	0.85	mg/L	1	03/18/20	03/18/20
SM 2320B	CARBONATE AS CACO3	5.5	2.0	1.70	0.85	mg/L	1	03/18/20	03/18/20
SM 2320B	TOTAL ALKALINITY AS CACO3	90.3	2.0	1.70	0.85	mg/L	1	03/18/20	03/18/20
SM 4500-Si D	SILICA W	9.0	1.0	0.80	0.53	mg/L	1	03/18/20	03/18/20
SM 4500-Si D	DISSOLVED SILICA	9.0	1.0	0.80	0.53	mg/L	1	03/18/20	03/18/20
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	03/13/20	03/13/20
SW846 9060A	DISSOLVED ORGANIC CARBO	0.36 J	0.93	0.350	0.130	mg/L	1	03/18/20	03/20/20
SW846 9060A	TOTAL ORGANIC CARBON	29.7	3.72	1.400	0.520	mg/L	4	03/18/20	03/20/20

J = Estimated value.

Printed: 04/01/20 10:02:06 AM

APPL-F1-SC-NoMC-REG MDLs

QC FORMS

8011

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91653

Case No: 91653 Date Analyzed: 03/16/20

Matrix: WATER Instrument: Herbie

APPL ID.	Client Sample No.	SURROGATE: 1,3-DIBROMOPROPANE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
200316A-BLK	Blank	70-132	98.8				
200316A-LCS	Lab Control Spike	70-132	92.0				
200316A-LCSD	Lab Control SpikeD	70-132	92.8				
BA08369	ERH1030	70-132	95.6				
BA08370	ERH1031	70-132	94.3				
BA08371	ERH1032	70-132	94.0				

Comments: Batch: #8011-200316A

8011

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91653

Case No: 91653 Date Analyzed: 03/16/20

Matrix: WATER Instrument: Herbie

Blank ID: 200316A-BLK Time Analyzed: 1603

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200316A-BLK	Blank	0228165	03/16/20 1603
200316A-LCS	Lab Control Spike	0228166	03/16/20 1623
200316A-LCSD	Lab Control SpikeD	0228167	03/16/20 1643
BA08369	ERH1030	0228172	03/16/20 1824
BA08370	ERH1031	0228173	03/16/20 1844
BA08371	ERH1032	0228174	03/16/20 1904

Comments: Batch: #8011-200316A

Method Blank
EPA 8011

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **200316W-08341 - 250828**
Batch ID: #8011-200316A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	EDB	0.019 U	0.02	0.019	0.010	ug/L	03/16/20	03/16/20
BLANK	SURROGATE: 1,3-DIBROMOPRO	98.8	70-132			%	03/16/20	03/16/20

Quant Method:8010317A.M
Run #:0228165
Instrument:Herbie
Sequence:200228
Initials:SSE

GC SC-Blank-REG MDLs-DOD
Printed: 03/17/20 12:39:29 PM

8011

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 91653

Case No: 91653 Date Analyzed: 03/16/20

Matrix: WATER Instrument: Herbie

LCS ID: 200316A-LCS Time Analyzed: 1623

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200316A-BLK	Blank	0228165	03/16/20 1603
200316A-LCS	Lab Control Spike	0228166	03/16/20 1623
200316A-LCSD	Lab Control SpikeD	0228167	03/16/20 1643
BA08369	ERH1030	0228172	03/16/20 1824
BA08370	ERH1031	0228173	03/16/20 1844
BA08371	ERH1032	0228174	03/16/20 1904

Comments: Batch: #8011-200316A

Laboratory Control Spike Recoveries
EPA 8011

APPL ID: **200316W-08341 LCS - 250828**
Batch ID: #8011-200316A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
EDB	0.250	0.238	0.237	95.2	94.8	60-140	0.42	25
SURROGATE: 1,3-DIBROMOPROPANE (	0.250	0.230	0.232	92.0	92.8	70-132		

Comments:

Primary	SPK	DUP
Quant Method :	8010317A.M	8010317A.M
Extraction Date :	03/16/20	03/16/20
Analysis Date :	03/16/20	03/16/20
Instrument :	Herbie	Herbie
Run :	0228166	0228167
Initials :	SSE	

EPA 8015B-eHL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91653

Case No: 91653 Date Analyzed: 03/16/20

Matrix: WATER Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: OCTACOSANE (S)			SURROGATE: ORTHO-TERPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
200312A-BLK	Blank	60-142	117		56-125	89.3	
200312A-LCS	Lab Control Spike	60-142	113		56-125	99.6	
BA08370	ERH1031	60-142	117		56-125	90.0	
BA08371	ERH1032	60-142	118		56-125	89.9	

Comments: Batch: #DOC53-200312A

EPA 8015B-eHL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91653

Case No: 91653 Date Analyzed: 03/17/20

Matrix: WATER Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: (R) DECANOIC ACID (S)			SURROGATE: OCTACOSANE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
200312A1-BLK	Blank	0-1	0.0		60-142	123	
200312A1-LCS	Lab Control Spike	0-1	0.0		60-142	117	
BA08370	ERH1031	0-1	0.0		60-142	118	
BA08371	ERH1032	0-1	0.0		60-142	118	

Comments: Batch: #DOC53-200312A1

EPA 8015B-eHL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91653

Case No: 91653 Date Analyzed: 03/17/20

Matrix: WATER Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: ORTHO-TERPHENYL (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
200312A1-BLK	Blank	56-125	93.5				
200312A1-LCS	Lab Control Spike	56-125	104				
BA08370	ERH1031	56-125	90.6				
BA08371	ERH1032	56-125	90.7				

Comments: Batch: #DOC53-200312A1

EPA 8015B-eH

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	91653
Case No:	91653	Date Analyzed:	03/16/20
Matrix:	WATER	Instrument:	Apollo
Blank ID:	200312A-BLK	Time Analyzed:	1516

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200312A-BLK	Blank	312157	03/16/20 1516
200312A-LCS	Lab Control Spike	312158	03/16/20 1539
BA08370	ERH1031	312162	03/16/20 1708
BA08371	ERH1032	312163	03/16/20 1731

Comments: Batch: #DOC53-200312A

EPA 8015B-eH

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91653

Case No: 91653 Date Analyzed: 03/17/20

Matrix: WATER Instrument: Apollo

Blank ID: 200312A1-BLK Time Analyzed: 1215

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200312A1-BLK	Blank	317014	03/17/20 1215
200312A1-LCS	Lab Control Spike	317015	03/17/20 1237
BA08370	ERH1031	317018	03/17/20 1345
BA08371	ERH1032	317019	03/17/20 1407

Comments: Batch: #DOC53-200312A1

Method Blank
EPA 8015B TPH LIQ-LIQ

Blank Name/QCG: **200312W-08341 - 250873**
Batch ID: #DOC53-200312A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	03/12/20	03/16/20
BLANK	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	03/12/20	03/16/20
BLANK	SURROGATE: OCTACOSANE (S)	117	60-142			%	03/12/20	03/16/20
BLANK	SURROGATE: ORTHO-TERPHEN	89.3	56-125			%	03/12/20	03/16/20

Quant Method: DOC0310.M
Run #: 312157
Instrument: Apollo
Sequence: 200312
Initials: SSE

GC SC-Blank-REG MDLs-DOD
Printed: 04/06/20 7:59:13 AM

Method Blank
EPA 8015B TPH WATER L-L SGC

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **200312W-08341 - 250875**
Batch ID: #DOC53-200312A1

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	03/12/20	03/17/20
BLANK	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	03/12/20	03/17/20
BLANK	SURROGATE: (R) DECANOIC AC	0.0	0-1			%	03/12/20	03/17/20
BLANK	SURROGATE: OCTACOSANE (S)	123	60-142			%	03/12/20	03/17/20
BLANK	SURROGATE: ORTHO-TERPHEN	93.5	56-125			%	03/12/20	03/17/20

Quant Method: DOC0310.M
Run #: 317014
Instrument: Apollo
Sequence: 200317
Initials: SSE

GC SC-Blank-REG MDLs-DOD
Printed: 04/06/20 7:59:13 AM

EPA 8015B-eH

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91653
Case No:	91653	Date Analyzed:	03/16/20
Matrix:	WATER	Instrument:	Apollo
LCS ID:	200312A-LCS	Time Analyzed:	1539

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200312A-BLK	Blank	312157	03/16/20 1516
200312A-LCS	Lab Control Spike	312158	03/16/20 1539
BA08370	ERH1031	312162	03/16/20 1708
BA08371	ERH1032	312163	03/16/20 1731

Comments: Batch: #DOC53-200312A

EPA 8015B-eH

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91653
Case No:	91653	Date Analyzed:	03/17/20
Matrix:	WATER	Instrument:	Apollo
LCS ID:	200312A1-LCS	Time Analyzed:	1237

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200312A1-BLK	Blank	317014	03/17/20 1215
200312A1-LCS	Lab Control Spike	317015	03/17/20 1237
BA08370	ERH1031	317018	03/17/20 1345
BA08371	ERH1032	317019	03/17/20 1407

Comments: Batch: #DOC53-200312A1

Laboratory Control Spike Recovery
EPA 8015B TPH LIQ-LIQ

APPL ID: **200312W-08341 LCS - 250873**
Batch ID: #DOC53-200312A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
DIESEL (C10-C24)	1250	1320	106	36-132
OIL (C24-C40)	1250	1280	102	41-113
SURROGATE: OCTACOSANE (S)	75.0	84.5	113	60-142
SURROGATE: ORTHO-TERPHENYL (S)	75.0	74.7	99.6	56-125

Comments:

Primary	SPK
Quant Method :	DOC0310.M
Extraction Date :	03/12/20
Analysis Date :	03/16/20
Instrument :	Apollo
Run :	312158
Initials :	SSE

Printed: 04/06/20 7:59:14 AM
APPL Standard LCS

Laboratory Control Spike Recovery
EPA 8015B TPH WATER L-L SGC

APPL ID: **200312W-08341 LCS - 250875**
Batch ID: #DOC53-200312A1

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
DIESEL (C10-C24)	1250	1210	96.8	36-132
OIL (C24-C40)	1250	1280	102	41-113
SURROGATE: (R) DECANOIC ACID (S)	10.00	0	0.0	0-1
SURROGATE: OCTACOSANE (S)	75.0	88.0	117	60-142
SURROGATE: ORTHO-TERPHENYL (S)	75.0	78.1	104	56-125

Comments:

Primary	SPK
Quant Method :	DOC0310.M
Extraction Date :	03/12/20
Analysis Date :	03/17/20
Instrument :	Apollo
Run :	317015
Initials :	SSE

Printed: 04/06/20 7:59:14 AM
APPL Standard LCS

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91653

Case No: 91653 Date Analyzed: 03/17/20

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2,4,6-TRIBROMOPHENOL (S)			SURROGATE: 2-FLUORBIPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
200312A-BLK	Blank	43-140	79.0		44-119	70.8	
200312A-LCS	Lab Control Spike	43-140	79.6		44-119	70.3	
BA08370	ERH1031	43-140	86.6		44-119	71.1	
BA08371	ERH1032	43-140	82.4		44-119	70.5	

Comments: Batch: #87DC5-200312A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91653

Case No: 91653 Date Analyzed: 03/17/20

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2-FLUOROPHENOL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
200312A-BLK	Blank	19-119	64.5		44-120	72.3	
200312A-LCS	Lab Control Spike	19-119	59.2		44-120	69.7	
BA08370	ERH1031	19-119	59.3		44-120	68.4	
BA08371	ERH1032	19-119	59.5		44-120	67.6	

Comments: Batch: #87DC5-200312A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91653

Case No: 91653 Date Analyzed: 03/17/20

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: PHENOL-D6 (S)			SURROGATE: TERPHENYL-D14 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
200312A-BLK	Blank	10-115	67.5		50-134	91.4	
200312A-LCS	Lab Control Spike	10-115	68.4		50-134	72.0	
BA08370	ERH1031	10-115	65.6		50-134	92.5	
BA08371	ERH1032	10-115	65.2		50-134	86.4	

Comments: Batch: #87DC5-200312A

EPA 8270D

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	91653
Case No:	91653	Date Analyzed:	03/17/20
Matrix:	WATER	Instrument:	Yoda
Blank ID:	200312A-BLK	Time Analyzed:	0908

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200312A-BLK	Blank	0207Y227	03/17/20 0908
200312A-LCS	Lab Control Spike	0207Y228	03/17/20 0935
BA08370	ERH1031	0207Y232	03/17/20 1213
BA08371	ERH1032	0207Y233	03/17/20 1240

Comments: Batch: #87DC5-200312A

Method Blank
EPA 8270D WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **200312W-08341 - 250860**
Batch ID: #87DC5-200312A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	03/12/20	03/17/20
BLANK	SURROGATE: 2,4,6-TRIBROMOP	79.0	43-140			%	03/12/20	03/17/20
BLANK	SURROGATE: 2-FLUORBIPHENY	70.8	44-119			%	03/12/20	03/17/20
BLANK	SURROGATE: 2-FLUOROPHENO	64.5	19-119			%	03/12/20	03/17/20
BLANK	SURROGATE: NITROBENZENE-	72.3	44-120			%	03/12/20	03/17/20
BLANK	SURROGATE: PHENOL-D6 (S)	67.5	10-115			%	03/12/20	03/17/20
BLANK	SURROGATE: TERPHENYL-D14 (	91.4	50-134			%	03/12/20	03/17/20

Quant Method: Y1219.M
Run #: 0207Y227
Instrument: Yoda
Sequence: Y200207
Initials: MA

GC SC-Blank-REG MDLs-DOD
Printed: 03/18/20 10:02:18 AM

EPA 8270D

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91653
Case No:	91653	Date Analyzed:	03/17/20
Matrix:	WATER	Instrument:	Yoda
LCS ID:	200312A-LCS	Time Analyzed:	0935

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200312A-BLK	Blank	0207Y227	03/17/20 0908
200312A-LCS	Lab Control Spike	0207Y228	03/17/20 0935
BA08370	ERH1031	0207Y232	03/17/20 1213
BA08371	ERH1032	0207Y233	03/17/20 1240

Comments: Batch: #87DC5-200312A

Laboratory Control Spike Recovery
EPA 8270D WATER

APPL ID: **200312W-08341 LCS - 250860**
Batch ID: #87DC5-200312A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
PHENOL	62.5	43.7	69.9	10-115
SURROGATE: 2,4,6-TRIBROMOPHENOL	250	199	79.6	43-140
SURROGATE: 2-FLUORBIPHENYL (S)	125	87.9	70.3	44-119
SURROGATE: 2-FLUOROPHENOL (S)	250	148	59.2	19-119
SURROGATE: NITROBENZENE-D5 (S)	125	87.1	69.7	44-120
SURROGATE: PHENOL-D6 (S)	250	171	68.4	10-115
SURROGATE: TERPHENYL-D14 (S)	125	90.0	72.0	50-134

Comments:

Primary	SPK
Quant Method :	Y1219.M
Extraction Date :	03/12/20
Analysis Date :	03/17/20
Instrument :	Yoda
Run :	0207Y228
Initials :	MA

Printed: 03/18/20 10:01:57 AM
APPL Standard LCS

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Soil
ID: 1219Y002.D

SDG No:
Date Analyzed: 12/19/19
Instrument: Yoda
Time Analyzed: 8:50

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/ml 8270 11/21/1	1219Y003.D	12/19/19 9:06
2		4ug/ml 8270 11/21/19	1219Y004.D	12/19/19 9:33
3		5ug/ml 8270 11/21/19	1219Y005.D	12/19/19 10:01
4		10ug/ml 8270 11/21/1	1219Y006.D	12/19/19 10:28
5		20ug/ml 8270 11/21/1	1219Y007.D	12/19/19 10:56
6		40ug/ml 8270 11/21/1	1219Y008.D	12/19/19 11:24
7		60ug/ml 8270 11/21/1	1219Y009.D	12/19/19 11:51
8		80ug/ml 8270 11/21/1	1219Y010.D	12/19/19 12:19
9		100ug/ml 8270 11/21/	1219Y011.D	12/19/19 12:46
10		SS 8270 11/22/19	1219Y012.D	12/19/19 13:14
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.04% of mass 198	39.5
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	1.0
127	10 - 80% of mass 198	51.3
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.7
275	10 - 60% of mass 198	29.4
365	1 - 100% of mass 198	3.5
441	0.01 - 24% of mass 442	4.6
442	50 - 500% of mass 198	102.9
443	15 - 24% of mass 442	20.0

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No: 91653
Case No: 91653 Date Analyzed: 03/17/20
Matrix: Water Instrument: Yoda
ID: 0207Y225.D Time Analyzed: 7:46

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/ml 8270 03/04/2	0207Y226.D	03/17/20 8:01
2	Blank	200312A BLK 1/800	0207Y227.D	03/17/20 9:08
3	Lab Control Spike	200312A LCS-1 1/800	0207Y228.D	03/17/20 9:35
4	ERH1031	BA08370W21 1/800	0207Y232.D	03/17/20 12:13
5	ERH1032	BA08371W14 1/800	0207Y233.D	03/17/20 12:40
6		50ug/ml 8270 03/04/2	0207Y241.D	03/17/20 16:40
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.04% of mass 198	36.7
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.7
127	10 - 80% of mass 198	49.1
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.7
275	10 - 60% of mass 198	30.9
365	1 - 100% of mass 198	3.8
441	0.01 - 24% of mass 442	16.7
442	50 - 500% of mass 198	116.6
443	15 - 24% of mass 442	19.7

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0207Y226.D Date Analyzed: 03/17/20

Instrument ID: Yoda Time Analyzed: 8:01

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

		Phenanthrene-D10(IS)		Chrysene-D12(IS)		Perylene-D12(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	915881	10.53	1237700	13.62	972882	15.44
	UPPER LIMIT	1831762	10.70	2475400	13.79	1945764	15.61
	LOWER LIMIT	457941	10.36	618850	13.45	486441	15.27
	SAMPLE NO.						
01	200312A BLK 1/800	990753	10.53	972916	13.62	1040570	15.44
02	200312A LCS-1 1/800	991766	10.53	1198020	13.62	1079810	15.44
03	BA08370W21 1/800	1039200	10.53	1002160	13.62	1085110	15.44
04	BA08371W14 1/800	1031530	10.53	999359	13.62	1095120	15.44
05	50ug/ml 8270 03/04/20 (	984530	10.53	1174350	13.62	999613	15.44
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

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

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0207Y226.D Date Analyzed: 03/17/20

Instrument ID: Yoda Time Analyzed: 8:01

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

		1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	178325	5.34	747165	6.78	470368	8.80
	UPPER LIMIT	356650	5.51	1494330	6.95	940736	8.97
	LOWER LIMIT	89163	5.17	373583	6.61	235184	8.63
	SAMPLE NO.						
01	200312A BLK 1/800	199103	5.33	806285	6.77	504373	8.79
02	200312A LCS-1 1/800	208647	5.33	824113	6.77	515323	8.80
03	BA08370W21 1/800	207038	5.33	843852	6.77	523436	8.79
04	BA08371W14 1/800	208572	5.33	849328	6.78	522350	8.79
05	50ug/ml 8270 03/04/20 (	200510	5.34	813395	6.78	508839	8.80
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

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

8270D-SIM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91653

Case No: 91653 Date Analyzed: 03/16/20

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: 2-METHYLNAPHTHALENE-D10 (S)			SURROGATE: FLUORANTHENE-D10 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
200312A-BLK	Blank	39-114	92.3		58-120	94.3	
200312A-LCS	Lab Control Spike	39-114	94.4		58-120	92.5	
BA08370	ERH1031	39-114	93.9		58-120	97.8	
BA08371	ERH1032	39-114	92.4		58-120	94.8	

Comments: Batch: #SIM53-200312A

8270D-SIM

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91653

Case No: 91653 Date Analyzed: 03/16/20

Matrix: WATER Instrument: Linus

Blank ID: 200312A-BLK Time Analyzed: 1524

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200312A-BLK	Blank	0204L283	03/16/20 1524
200312A-LCS	Lab Control Spike	0204L284	03/16/20 1546
BA08370	ERH1031	0204L288	03/16/20 1714
BA08371	ERH1032	0204L289	03/16/20 1736

Comments: Batch: #SIM53-200312A

Method Blank
EPA 8270D SIM LIQ-LIQ

Blank Name/QCG: **200312W-08341 - 250838**
Batch ID: #SIM53-200312A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	03/12/20	03/16/20
BLANK	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	03/12/20	03/16/20
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	03/12/20	03/16/20
BLANK	SURROGATE: 2-METHYLNAPHT	92.3	39-114			%	03/12/20	03/16/20
BLANK	SURROGATE: FLUORANTHENE-	94.3	58-120			%	03/12/20	03/16/20

Quant Method:L0204.M
Run #:0204L283
Instrument:Linus
Sequence:L200204
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 03/17/20 2:09:14 PM

8270D-SIM

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91653
Case No:	91653	Date Analyzed:	03/16/20
Matrix:	WATER	Instrument:	Linus
LCS ID:	200312A-LCS	Time Analyzed:	1546

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200312A-BLK	Blank	0204L283	03/16/20 1524
200312A-LCS	Lab Control Spike	0204L284	03/16/20 1546
BA08370	ERH1031	0204L288	03/16/20 1714
BA08371	ERH1032	0204L289	03/16/20 1736

Comments: Batch: #SIM53-200312A

Laboratory Control Spike Recovery
EPA 8270D SIM LIQ-LIQ

APPL ID: **200312W-08341 LCS - 250838**
Batch ID: #SIM53-200312A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1-METHYLNAPHTHALENE	6.25	5.36	85.8	41-115
2-METHYLNAPHTHALENE	6.25	5.46	87.4	39-114
NAPHTHALENE	6.25	5.26	84.2	43-114
SURROGATE: 2-METHYLNAPHTHALEN	6.25	5.90	94.4	39-114
SURROGATE: FLUORANTHENE-D10 (S)	6.25	5.78	92.5	58-120

Comments:

Primary	SPK
Quant Method :	L0204.M
Extraction Date :	03/12/20
Analysis Date :	03/16/20
Instrument :	Linus
Run :	0204L284
Initials :	MA

Printed: 03/17/20 2:08:52 PM
APPL Standard LCS

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Water
ID: 0204L002.D

SDG No:
Date Analyzed: 02/04/20
Instrument: Linus
Time Analyzed: 9:32

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.1 SIM 02/03/20	0204L003.D	02/04/20 9:48
2		0.2 SIM 02/03/20	0204L004.D	02/04/20 10:09
3		0.5 SIM 02/03/20	0204L005.D	02/04/20 10:31
4		1 SIM 02/03/20	0204L006.D	02/04/20 10:53
5		5 SIM 02/03/20	0204L007.D	02/04/20 11:15
6		10 SIM 02/03/20	0204L008.D	02/04/20 11:37
7		50 SIM 02/03/20	0204L009.D	02/04/20 11:59
8		100 SIM 02/03/20	0204L010.D	02/04/20 12:21
9		SS SIM 02/03/20	0204L011.D	02/04/20 13:21
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.1% of mass 198	18.6
68	0 - 2.05% of mass 69	0.0
70	0 - 2% of mass 69	0.4
127	10 - 80% of mass 198	40.9
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.3
275	10 - 60% of mass 198	30.0
365	1 - 100% of mass 198	4.7
441	0.01 - 24% of mass 442	15.8
442	50 - 500% of mass 198	200.3
443	15 - 24% of mass 442	19.3

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No: 91653
Case No: 91653 Date Analyzed: 03/16/20
Matrix: Water Instrument: Linus
ID: 0204L281.D Time Analyzed: 14:15

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		5 SIM 02/03/20 (1)	0204L282.D	03/16/20 14:34
2	Blank	200312A BLK 1/800	0204L283.D	03/16/20 15:24
3	Lab Control Spike	200312A LCS-2 1/800	0204L284.D	03/16/20 15:46
4	ERH1031	BA08370W21 1/800	0204L288.D	03/16/20 17:14
5	ERH1032	BA08371W14 1/800	0204L289.D	03/16/20 17:36
6		5 SIM 02/03/20 (2)	0204L308.D	03/17/20 0:33
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.1% of mass 198	13.5
68	0 - 2.05% of mass 69	0.0
70	0 - 2% of mass 69	0.6
127	10 - 80% of mass 198	34.8
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.4
275	10 - 60% of mass 198	32.2
365	1 - 100% of mass 198	4.6
441	0.01 - 24% of mass 442	15.6
442	50 - 500% of mass 198	231.7
443	15 - 24% of mass 442	19.1

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0204L282.D Date Analyzed: 03/16/20

Instrument ID: Linus Time Analyzed: 14:34

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

		Napthalene-D8(IS)		Acenaphthene-D10(IS)		Phenanthrene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	109106	4.14	61700	6.14	121780	7.87
	UPPER LIMIT	218212	4.31	123400	6.31	243560	8.04
	LOWER LIMIT	54553	3.97	30850	5.97	60890	7.70
	SAMPLE NO.						
01	200312A BLK 1/800	93874	4.15	53274	6.14	104028	7.87
02	200312A LCS-2 1/800	90182	4.14	51325	6.14	101366	7.87
03	BA08370W21 1/800	88736	4.15	50828	6.14	99572	7.87
04	BA08371W14 1/800	90558	4.15	52149	6.14	100600	7.87
05	5 SIM 02/03/20 (2)	105231	4.15	61442	6.14	125563	7.87
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

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

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0204L282.D Date Analyzed: 03/16/20

Instrument ID: Linus Time Analyzed: 14:34

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

		Chrysene-D12(IS)		Perylene-D12(IS)			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	162122	10.98	197605	13.40		
	UPPER LIMIT	324244	11.15	395210	13.57		
	LOWER LIMIT	81061	10.81	98803	13.23		
	SAMPLE NO.						
01	200312A BLK 1/800	138970	10.99	160818	13.40		
02	200312A LCS-2 1/800	133947	10.98	158987	13.40		
03	BA08370W21 1/800	134150	10.98	163973	13.40		
04	BA08371W14 1/800	136261	10.98	163795	13.40		
05	5 SIM 02/03/20 (2)	164789	10.98	198107	13.39		
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

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

EPA 8270D

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91653

Case No: 91653 Date Analyzed: 03/16/20

Matrix: WATER Instrument: Yoda

Blank ID: 200313A-BLK Time Analyzed: 0945

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200313A-BLK	Blank	0122Y077	03/16/20 0945
200313A-LCSD	Lab Control SpikeD	0122Y079	03/16/20 1032
BA08370	ERH1031	0122Y083	03/16/20 1207
BA08371	ERH1032	0122Y084	03/16/20 1230
200313A-LCS	Lab Control Spike	0122Y085	03/16/20 1254

Comments: Batch: #87DME-200313A

Method Blank
EPA 8270D MODIFIED WATER

Blank Name/QCG: **200313W-08341 - 250841**
Batch ID: #87DME-200313A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2-(2-METHOXYETHOXY)-ETHAN	80.0 U	100	80.0	40.0	ug/L	03/13/20	03/16/20

Quant Method: YMEE0122.M
Run #: 0122Y077
Instrument: Yoda
Sequence: Y200122M
Initials: LPO

GC SC-Blank-REG MDLs-DOD
Printed: 03/17/20 1:21:06 PM

EPA 8270D

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91653
Case No:	91653	Date Analyzed:	03/16/20
Matrix:	WATER	Instrument:	Yoda
LCS ID:	200313A-LCS	Time Analyzed:	1254

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200313A-BLK	Blank	0122Y077	03/16/20 0945
200313A-LCSD	Lab Control SpikeD	0122Y079	03/16/20 1032
BA08370	ERH1031	0122Y083	03/16/20 1207
BA08371	ERH1032	0122Y084	03/16/20 1230
200313A-LCS	Lab Control Spike	0122Y085	03/16/20 1254

Comments: Batch: #87DME-200313A

Laboratory Control Spike Recoveries
EPA 8270D MODIFIED WATER

APPL ID: **200313W-08341 LCS - 250841**
Batch ID: #87DME-200313A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
2-(2-METHOXYETHOXY)-ETHANOL	80.0	60.6	54.5	75.8	68.1	30-130	10.6	20

Comments:

Primary	SPK	DUP
Quant Method :	YMEE0122.M	YMEE0122.M
Extraction Date :	03/13/20	03/13/20
Analysis Date :	03/16/20	03/16/20
Instrument :	Yoda	Yoda
Run :	0122Y085	0122Y079
Initials :	LPO	

Printed: 03/17/20 1:21:13 PM
APPL Standard LCSD

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Soil
ID: 0122Y002.D

SDG No:
Date Analyzed: 01/22/20
Instrument: Yoda
Time Analyzed: 15:31

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/ml MEE 01/22/20	0122Y003.D	01/22/20 15:46
2		100ug/ml MEE 01/22/2	0122Y004.D	01/22/20 16:10
3		200ug/ml MEE 01/22/2	0122Y005.D	01/22/20 16:33
4		400ug/ml MEE 01/22/2	0122Y006.D	01/22/20 16:57
5		500ug/ml MEE 01/22/2	0122Y007.D	01/22/20 17:21
6		600ug/ml MEE 01/22/2	0122Y008.D	01/22/20 17:45
7		800ug/ml MEE 01/22/2	0122Y009.D	01/22/20 18:08
8		1000ug/ml MEE 01/22/	0122Y010.D	01/22/20 18:32
9		SS MEE 01/22/20	0122Y011.D	01/22/20 18:55
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.04% of mass 198	37.2
68	0 - 2.04% of mass 69	0.0
70	0 - 2.04% of mass 69	0.2
127	10 - 80% of mass 198	50.4
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	7.1
275	10 - 60% of mass 198	30.1
365	1 - 100% of mass 198	3.7
441	0.01 - 24% of mass 442	15.9
442	50 - 500% of mass 198	109.9
443	15 - 24% of mass 442	19.8

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No: 91653
Case No: 91653 Date Analyzed: 03/16/20
Matrix: Water Instrument: Yoda
ID: 0122Y075.D Time Analyzed: 8:46

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		500ug/ml MEE 01/29/2	0122Y076.D	03/16/20 9:14
2	Blank	200313A BLK 2/500	0122Y077.D	03/16/20 9:45
3	Lab Control SpikeD	200313A LCSD-1 2/500	0122Y079.D	03/16/20 10:32
4	ERH1031	BA08370W17 2/500	0122Y083.D	03/16/20 12:07
5	ERH1032	BA08371W09 2/500	0122Y084.D	03/16/20 12:30
6	Lab Control Spike	200313A LCS-1 2/500	0122Y085.D	03/16/20 12:54
7		500ug/ml MEE 01/29/2	0122Y086.D	03/16/20 13:17
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.04% of mass 198	39.5
68	0 - 2.04% of mass 69	0.0
70	0 - 2.04% of mass 69	1.2
127	10 - 80% of mass 198	50.2
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	7.0
275	10 - 60% of mass 198	29.7
365	1 - 100% of mass 198	4.0
441	0.01 - 24% of mass 442	2.6
442	50 - 500% of mass 198	112.3
443	15 - 24% of mass 442	19.6

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0122Y076.D Date Analyzed: 03/16/20

Instrument ID: Yoda Time Analyzed: 9:14

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

		1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	152753	5.11	683508	6.53	448088	8.55
	UPPER LIMIT	305506	5.28	1367016	6.70	896176	8.72
	LOWER LIMIT	76377	4.94	341754	6.36	224044	8.38
	SAMPLE NO.						
01	200313A BLK 2/500	172335	5.10	799714	6.53	514030	8.55
02	200313A LCSD-1 2/500	169989	5.11	752820	6.53	477944	8.55
03	BA08370W17 2/500	151646	5.11	677225	6.54	433404	8.55
04	BA08371W09 2/500	145214	5.11	647298	6.54	417403	8.55
05	200313A LCS-1 2/500	145789	5.10	657193	6.53	425934	8.55
06	500ug/ml MEE 01/29/20	136792	5.12	624287	6.53	406906	8.55
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

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

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91653

Case No: 91653 Date Analyzed: 03/14/20

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
200313BL-LCS	Lab Control Spike	81-118	99.6		85-114	100	
200313BL-LCSD	Lab Control SpikeD	81-118	98.4		85-114	102	
200313BL-BLK	Blank	81-118	96.9		85-114	95.2	
BA08369	ERH1030	81-118	99.1		85-114	95.3	
BA08370	ERH1031	81-118	97.7		85-114	98.0	
BA08371	ERH1032	81-118	101		85-114	89.9	

Comments: Batch: #86BTO-200313BL

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91653

Case No: 91653 Date Analyzed: 03/14/20

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: DIBROMOFLUOROMETHANE (S)			SURROGATE: TOLUENE-D8 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
200313BL-LCS	Lab Control Spike	80-119	100		89-112	100	
200313BL-LCSD	Lab Control SpikeD	80-119	102		89-112	102	
200313BL-BLK	Blank	80-119	99.2		89-112	101	
BA08369	ERH1030	80-119	104		89-112	103	
BA08370	ERH1031	80-119	85.2		89-112	97.5	
BA08371	ERH1032	80-119	101		89-112	96.7	

Comments: Batch: #86BTO-200313BL

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91653

Case No: 91653 Date Analyzed: 03/14/20

Matrix: WATER Instrument: Loki

Blank ID: 200313BL-BLK Time Analyzed: 0626

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200313BL-LCS	Lab Control Spike	0313L40	03/14/20 0403
200313BL-LCSD	Lab Control SpikeD	0313L41	03/14/20 0431
200313BL-BLK	Blank	0313l45	03/14/20 0626
BA08369	ERH1030	0313L48	03/14/20 0751
BA08370	ERH1031	0313L49	03/14/20 0820
BA08371	ERH1032	0313L50	03/14/20 0848

Comments: Batch: #86BTO-200313BL

Method Blank
EPA 8260B BTEX & 1,2-DCA WATER

Blank Name/QCG: **200313W-08341 - 250789**
Batch ID: #86BTO-200313BL

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,2-DICHLOROETHANE	0.30 U	1.0	0.30	0.14	ug/L	03/14/20	03/14/20
BLANK	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	03/14/20	03/14/20
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	03/14/20	03/14/20
BLANK	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	03/14/20	03/14/20
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	03/14/20	03/14/20
BLANK	SURROGATE: 1,2-DICHLOROET	96.9	81-118			%	03/14/20	03/14/20
BLANK	SURROGATE: 4-BROMOFLUORO	95.2	85-114			%	03/14/20	03/14/20
BLANK	SURROGATE: DIBROMOFLUOR	99.2	80-119			%	03/14/20	03/14/20
BLANK	SURROGATE: TOLUENE-D8 (S)	101	89-112			%	03/14/20	03/14/20

Quant Method:L0312W.M
Run #:0313l45
Instrument:Loki
Sequence: 200312
Initials:DPO

GC SC-Blank-REG MDLs-DOD
Printed: 03/16/20 12:12:34 PM

EPA 8260B

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91653
Case No:	91653	Date Analyzed:	03/14/20
Matrix:	WATER	Instrument:	Loki
LCS ID:	200313BL-LCS	Time Analyzed:	0403

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200313BL-LCS	Lab Control Spike	0313L40	03/14/20 0403
200313BL-LCSD	Lab Control SpikeD	0313L41	03/14/20 0431
200313BL-BLK	Blank	0313l45	03/14/20 0626
BA08369	ERH1030	0313L48	03/14/20 0751
BA08370	ERH1031	0313L49	03/14/20 0820
BA08371	ERH1032	0313L50	03/14/20 0848

Comments: Batch: #86BTO-200313BL

Laboratory Control Spike Recoveries
EPA 8260B BTEX & 1,2-DCA WATER

APPL ID: **200314W-08341 LCS - 250789**
Batch ID: #86BTO-200313BL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
1,2-DICHLOROETHANE	10.00	10.6	10.0	106	100	73-128	5.8	20
BENZENE	10.00	9.83	9.31	98.3	93.1	79-120	5.4	20
ETHYLBENZENE	10.00	9.53	9.15	95.3	91.5	79-121	4.1	20
TOLUENE	10.00	10.1	9.56	101	95.6	80-121	5.5	20
XYLENES (TOTAL)	30.0	28.6	27.5	95.3	91.7	79-121	3.9	20
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	24.9	24.6	99.6	98.4	81-118		
SURROGATE: 4-BROMOFLUOROBENZE	25.0	25.1	25.5	100	102	85-114		
SURROGATE: DIBROMOFLUOROMETH	25.0	25.1	25.4	100	102	80-119		
SURROGATE: TOLUENE-D8 (S)	25.0	25.0	25.5	100	102	89-112		

Comments:

Primary	SPK	DUP
Quant Method :	L0312W.M	L0312W.M
Extraction Date :	03/14/20	03/14/20
Analysis Date :	03/14/20	03/14/20
Instrument :	Loki	Loki
Run :	0313L40	0313L41
Initials :	DPO	

Printed: 03/16/20 12:12:12 PM
APPL Standard LCSD

Lab Name: APPL Inc. SDG No:
Case No: Date Analyzed: 03/12/20
Matrix: Water Instrument: Loki
ID: 0312l06.D Time Analyzed: 10:21

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.3ug/L VOC STD 3/12	0312L10.D	03/12/20 12:10
2		0.5ug/L VOC STD 3/12	0312L11.D	03/12/20 12:39
3		1.0ug/L VOC STD 3/12	0312L12.D	03/12/20 13:07
4		2.0ug/L VOC STD 3/12	0312L13.D	03/12/20 13:36
5		5.0ug/L VOC STD 3/12	0312L14.D	03/12/20 14:05
6		10ug/L VOC STD 3/12/	0312L15.D	03/12/20 14:33
7		20ug/L VOC STD 3/12/	0312L16.D	03/12/20 15:02
8		40ug/L VOC STD 3/12/	0312L17.D	03/12/20 15:30
9		100ug/L VOC STD 3/12	0312L18.D	03/12/20 15:59
10		(SS)10ug/L VOC STD 3	0312L21.D	03/12/20 17:25
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	15.2
75	30 - 60% of mass 95	45.2
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	6.4
173	0 - 2% of mass 174	0.0
174	50 - 200% of mass 95	88.7
175	5 - 9% of mass 174	7.2
176	94.95 - 101% of mass 174	96.4
177	5 - 9% of mass 176	6.6

Lab Name: APPL Inc. SDG No: 91653
Case No: 91653 Date Analyzed: 03/14/20
Matrix: Water Instrument: Loki
ID: 0313L38.D Time Analyzed: 3:06

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		200313B CCV 10ug/L	0313L39.D	03/14/20 3:34
2	Lab Control Spike	200313B LCS 10ug/L	0313L40.D	03/14/20 4:03
3	Lab Control SpikeD	200313B LCSD 10ug/L	0313L41.D	03/14/20 4:31
4	Blank	200313B Blk	0313L45.D	03/14/20 6:26
5	ERH1030	BA08369W01	0313L48.D	03/14/20 7:51
6	ERH1031	BA08370W01	0313L49.D	03/14/20 8:20
7	ERH1032	BA08371W01	0313L50.D	03/14/20 8:48
8		Ending CCV 10ug/L 3/	0313L57.D	03/14/20 12:09
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	15.2
75	30 - 60% of mass 95	46.8
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	6.9
173	0 - 2% of mass 174	0.8
174	50 - 200% of mass 95	82.8
175	5 - 9% of mass 174	7.7
176	94.95 - 101% of mass 174	96.5
177	5 - 9% of mass 176	6.9

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0312L15.D Date Analyzed: 03/12/20

Instrument ID: Loki Time Analyzed: 14:33

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

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	397184	4.64	425536	8.36	251200	10.90
	UPPER LIMIT	794368	4.81	851072	8.53	502400	11.07
	LOWER LIMIT	198592	4.47	212768	8.19	125600	10.73
	SAMPLE NO.						
01	200313B CCV 10ug/L	354432	4.65	385600	8.36	223168	10.90
02	200313B LCS 10ug/L	349376	4.64	388608	8.36	209600	10.90
03	200313B LCSD 10ug/L	357120	4.65	389376	8.35	215872	10.90
04	200313B Blk	339840	4.65	360704	8.36	186688	10.90
05	BA08369W01	331840	4.65	348288	8.36	168448	10.90
06	BA08370W01	349248	4.65	401216	8.36	247872	10.90
07	BA08371W01	357504	4.65	404608	8.36	185216	10.90
08	Ending CCV 10ug/L 3/1	355712	4.64	387008	8.36	222848	10.90
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

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

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91653

Case No: 91653 Date Analyzed: 03/14/20

Matrix: WATER Instrument: Loki

APPL ID.	Client Sample No.	SURROGATE: 4-BROMOFLUOROBENZENE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
200313BL-LCS	Lab Control Spike	85-114	97.2				
200313BL-LCSD	Lab Control SpikeD	85-114	97.2				
200313BL-BLK	Blank	85-114	95.2				
BA08369	ERH1030	85-114	95.3				
BA08370	ERH1031	85-114	98.0				
BA08371	ERH1032	85-114	89.9				

Comments: Batch: #GRO86-200313BL

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91653

Case No: 91653 Date Analyzed: 03/14/20

Matrix: WATER Instrument: Loki

Blank ID: 200313BL-BLK Time Analyzed: 0626

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200313BL-LCS	Lab Control Spike	0313L43	03/14/20 0528
200313BL-LCSD	Lab Control SpikeD	0313L44	03/14/20 0557
200313BL-BLK	Blank	0313L45	03/14/20 0626
BA08369	ERH1030	0313L48	03/14/20 0751
BA08370	ERH1031	0313L49	03/14/20 0820
BA08371	ERH1032	0313L50	03/14/20 0848

Comments: Batch: #GRO86-200313BL

Method Blank
EPA 8260B GRO WATER

Blank Name/QCG: **200313W-08341 - 250790**
Batch ID: #GRO86-200313BL

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	03/14/20	03/14/20
BLANK	SURROGATE: 4-BROMOFLUORO	95.2	85-114			%	03/14/20	03/14/20

Quant Method:LGAS0312.M
Run #:0313L45
Instrument:Loki
Sequence: 200312
Initials:DPO

GC SC-Blank-REG MDLs-DOD
Printed: 03/16/20 12:50:12 PM

EPA 8260B

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91653
Case No:	91653	Date Analyzed:	03/14/20
Matrix:	WATER	Instrument:	Loki
LCS ID:	200313BL-LCS	Time Analyzed:	0528

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200313BL-LCS	Lab Control Spike	0313L43	03/14/20 0528
200313BL-LCSD	Lab Control SpikeD	0313L44	03/14/20 0557
200313BL-BLK	Blank	0313L45	03/14/20 0626
BA08369	ERH1030	0313L48	03/14/20 0751
BA08370	ERH1031	0313L49	03/14/20 0820
BA08371	ERH1032	0313L50	03/14/20 0848

Comments: Batch: #GRO86-200313BL

Laboratory Control Spike Recoveries
EPA 8260B GRO WATER

APPL ID: **200314W-08341 LCS - 250790**
Batch ID: #GRO86-200313BL

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
GASOLINE RANGE ORGANICS	300	315	306	105	102	78-122	2.9	20
SURROGATE: 4-BROMOFLUOROBENZE	25.0	24.3	24.3	97.2	97.2	85-114		

Comments:

Primary	SPK	DUP
Quant Method :	LGAS0312.M	LGAS0312.M
Extraction Date :	03/14/20	03/14/20
Analysis Date :	03/14/20	03/14/20
Instrument :	Loki	Loki
Run :	0313L43	0313L44
Initials :	DPO	

RSK 175

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	91653
Case No:	91653	Date Analyzed:	03/17/20
Matrix:	WATER	Instrument:	Rocky
Blank ID:	200317A-BLK	Time Analyzed:	1022

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200317A-LCS	Lab Control Spike	0317R01	03/17/20 1013
200317A-LCSD	Lab Control SpikeD	0317R03	03/17/20 1019
200317A-BLK	Blank	0317R04	03/17/20 1022
BA08369	ERH1030	0317R07	03/17/20 1030
BA08370	ERH1031	0317R08	03/17/20 1032

Comments: Batch: #RSKME-200317A

Method Blank
METHANE

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **200317W-08340 - 250834**
Batch ID: #RSKME-200317A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	METHANE	1.00 U	5.0	1.00	0.25	ug/L	03/17/20	03/17/20

Quant Method: RSK0311.M
Run #: 0317R04
Instrument: Rocky
Sequence: 200311
Initials: CMO

GC SC-Blank-REG MDLs-DOD
Printed: 03/17/20 10:52:57 AM

RSK 175

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91653
Case No:	91653	Date Analyzed:	03/17/20
Matrix:	WATER	Instrument:	Rocky
LCS ID:	200317A-LCS	Time Analyzed:	1013

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200317A-LCS	Lab Control Spike	0317R01	03/17/20 1013
200317A-LCSD	Lab Control SpikeD	0317R03	03/17/20 1019
200317A-BLK	Blank	0317R04	03/17/20 1022
BA08369	ERH1030	0317R07	03/17/20 1030
BA08370	ERH1031	0317R08	03/17/20 1032

Comments: Batch: #RSKME-200317A

Laboratory Control Spike Recoveries
METHANE

APPL ID: **200317W-08340 LCS - 250834**
Batch ID: #RSKME-200317A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
METHANE	83.4	88.2	87.1	106	104	72-125	1.3	30

Comments:

Primary	SPK	DUP
Quant Method :	RSK0311.M	RSK0311.M
Extraction Date :	03/17/20	03/17/20
Analysis Date :	03/17/20	03/17/20
Instrument :	Rocky	Rocky
Run :	0317R01	0317R03
Initials :	CMO	

6010C/3010A

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	91653
Case No:	91653	Date Analyzed:	03/18/20
Matrix:	WATER	Instrument:	Cyrus
Blank ID:	200313B1-BLK	Time Analyzed:	1119

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200313B1-LCSD	Lab Control SpikeD	200318A	03/18/20 1128
200313B1-LCS	Lab Control Spike	200318A	03/18/20 1123
200313B1-BLK	Blank	200318A	03/18/20 1119
BA08370	ERH1031	200318A	03/18/20 1154

Comments: Batch: #61CDO-200313B1

METALS BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
6010C	CALCIUM (CA)	75.0 U	1000	75.0	27.5	ug/L	03/13/20	03/18/20	#61CDO-200313B1-BA08370
6010C	MAGNESIUM (MG)	30.0 U	500	30.0	12.9	ug/L	03/13/20	03/18/20	#61CDO-200313B1-BA08370
6010C	MANGANESE (MN)	4.00 U	10.0	4.00	1.23	ug/L	03/13/20	03/18/20	#61CDO-200313B1-BA08370
6010C	POTASSIUM (K)	500.0 U	3000	500.0	220.0	ug/L	03/13/20	03/18/20	#61CDO-200313B1-BA08370
6010C	SODIUM (NA)	500.0 U	5000	500.0	111.1	ug/L	03/13/20	03/18/20	#61CDO-200313B1-BA08370

6010C/3010A

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91653
Case No:	91653	Date Analyzed:	03/18/20
Matrix:	WATER	Instrument:	Cyrus
LCS ID:	200313B1-LCS	Time Analyzed:	1123

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200313B1-LCSD	Lab Control SpikeD	200318A	03/18/20 1128
200313B1-LCS	Lab Control Spike	200318A	03/18/20 1123
200313B1-BLK	Blank	200318A	03/18/20 1119
BA08370	ERH1031	200318A	03/18/20 1154

Comments: Batch: #61CDO-200313B1

Laboratory Control Spike Recoveries
METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl ug/L	SPK Res ug/L	DUP Res ug/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
EPA 6010C	CALCIUM (CA)	25000	24400	24100	97.6	96.4	1.2	20	87-113	03/13/20	03/18/20	03/13/20	03/18/20	#61CDO-200313B1-BA083
EPA 6010C	MAGNESIUM (MG)	25000	24600	24300	98.4	97.2	1.2	20	85-113	03/13/20	03/18/20	03/13/20	03/18/20	#61CDO-200313B1-BA083
EPA 6010C	MANGANESE (MN)	250	251	246	100	98.4	2.0	20	90-114	03/13/20	03/18/20	03/13/20	03/18/20	#61CDO-200313B1-BA083
EPA 6010C	POTASSIUM (K)	5000	5010	4940	100	98.8	1.4	20	86-114	03/13/20	03/18/20	03/13/20	03/18/20	#61CDO-200313B1-BA083
EPA 6010C	SODIUM (NA)	25000	25000	24700	100	98.8	1.2	20	87-115	03/13/20	03/18/20	03/13/20	03/18/20	#61CDO-200313B1-BA083

Comments:

EPA 300.0

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	91653
Case No:	91653	Date Analyzed:	03/13/20
Matrix:	WATER	Instrument:	Charlie
Blank ID:	200313A4-BLK	Time Analyzed:	0958

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200313A4-BLK	Blank	2	03/13/20 0958
200313A4-LCS	Lab Control Spike	3	03/13/20 1008
BA08370	ERH1031	38	03/13/20 1724
200313A4-LCSD	Lab Control SpikeD	4	03/13/20 1018
BA08370	ERH1031	5	03/13/20 1028

Comments: Batch: #300W-200313A4

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
EPA 300.0	BROMIDE	0.16 U	0.5	0.16	0.05	mg/L	03/13/20	03/13/20	#300W-200313A4-BA08370
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	03/13/20	03/13/20	#300W-200313A4-BA08370
EPA 300.0	FLUORIDE	0.09 U	0.1	0.09	0.08	mg/L	03/13/20	03/13/20	#300W-200313A4-BA08370
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	03/13/20	03/13/20	#300W-200313A4-BA08370
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	03/13/20	03/13/20	#300W-200313A4-BA08370

EPA 300.0

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91653
Case No:	91653	Date Analyzed:	03/13/20
Matrix:	WATER	Instrument:	Charlie
LCS ID:	200313A4-LCS	Time Analyzed:	1008

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200313A4-BLK	Blank	2	03/13/20 0958
200313A4-LCS	Lab Control Spike	3	03/13/20 1008
BA08370	ERH1031	38	03/13/20 1724
200313A4-LCSD	Lab Control SpikeD	4	03/13/20 1018
BA08370	ERH1031	5	03/13/20 1028

Comments: Batch: #300W-200313A4

Laboratory Control Spike Recoveries

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
EPA 300.0	BROMIDE	5.0	4.87	4.87	97.4	97.4	0.0	20	90-110	03/13/20	03/13/20	03/13/20	03/13/20	#300W-200313A4-BA0837
EPA 300.0	CHLORIDE	10.0	9.42	9.43	94.2	94.3	0.11	20	90-110	03/13/20	03/13/20	03/13/20	03/13/20	#300W-200313A4-BA0837
EPA 300.0	FLUORIDE	2.5	2.54	2.54	102	102	0.0	20	90-110	03/13/20	03/13/20	03/13/20	03/13/20	#300W-200313A4-BA0837
EPA 300.0	NITRATE	5.00	4.56	4.56	91.2	91.2	0.0	20	90-110	03/13/20	03/13/20	03/13/20	03/13/20	#300W-200313A4-BA0837
EPA 300.0	SULFATE	20.0	19.3	19.3	96.5	96.5	0.0	20	90-110	03/13/20	03/13/20	03/13/20	03/13/20	#300W-200313A4-BA0837

Comments:

EPA 353.2

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	91653
Case No:	91653	Date Analyzed:	03/13/20
Matrix:	WATER	Instrument:	EVE
Blank ID:	200313A-BLK	Time Analyzed:	1257

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200313A-BLK	Blank	12	03/13/20 1257
200313A-LCS	Lab Control Spike	15	03/13/20 1304
200313A-LCSD	Lab Control SpikeD	16	03/13/20 1306
BA08370	ERH1031	24	03/13/20 1315

Comments: Batch: #35OF-200313A

SM 2320B

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	91653
Case No:	91653	Date Analyzed:	03/18/20
Matrix:	WATER	Instrument:	Tiamo
Blank ID:	200318A1-BLK	Time Analyzed:	1544

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200318A1-BLK	Blank	1	03/18/20 1544
200318A1-LCS	Lab Control Spike	2	03/18/20 1840
200318A1-LCSD	Lab Control SpikeD	3	03/18/20 1849
BA08370	ERH1031	4	03/18/20 2111

Comments: Batch: #232W-200318A1

SM 4500-Si D

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91653

Case No: 91653 Date Analyzed: 03/18/20

Matrix: WATER Instrument: Manual Spec

Blank ID: 200318A-BLK Time Analyzed: 1448

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200318A-BLK	Blank	67	03/18/20 1448
200318A-LCS	Lab Control Spike	68	03/18/20 1448
200318A-LCSD	Lab Control SpikeD	69	03/18/20 1449
BA08370	ERH1031	72	03/18/20 1452

Comments: Batch: #SIO2-200318A

SM 4500-Si D

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	91653
Case No:	91653	Date Analyzed:	03/18/20
Matrix:	WATER	Instrument:	Manual Spec
Blank ID:	200318A-BLK	Time Analyzed:	1448

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200318A-BLK	Blank	67	03/18/20 1448
200318A-LCS	Lab Control Spike	68	03/18/20 1448
200318A-LCSD	Lab Control SpikeD	69	03/18/20 1449
BA08370	ERH1031	73	03/18/20 1452

Comments: Batch: #SIO2D-200318A

SM3500FeB

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91653

Case No: 91653 Date Analyzed: 03/13/20

Matrix: WATER Instrument: Manual Spec

Blank ID: A200313-BLK Time Analyzed: 2010

APPL ID.	Client Sample No.	File ID.	Date Analyzed
A200313-BLK	Blank	24	03/13/20 2010
A200313-LCSD	Lab Control SpikeD	26	03/13/20 2012
A200313-LCS	Lab Control Spike	27	03/13/20 2012
BA08370	ERH1031	28	03/13/20 2013
A200313-MS	Matrix Spike	29	03/13/20 2013
A200313-MSD	Matrix SpikeD	31	03/13/20 2014

Comments: Batch: #35FE-A200313

SW846 9060A

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	91653
Case No:	91653	Date Analyzed:	03/19/20
Matrix:	WATER	Instrument:	TICTOC
Blank ID:	200318A-BLK	Time Analyzed:	1919

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200318A-BLK	Blank	31	03/19/20 1919
200318A-LCS	Lab Control Spike	32	03/19/20 2015
200318A-LCSD	Lab Control SpikeD	33	03/19/20 2055
BA08370	ERH1031	38	03/20/20 0004

Comments: Batch: #DOCW5-200318A

SW846 9060A

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	91653
Case No:	91653	Date Analyzed:	03/20/20
Matrix:	WATER	Instrument:	TICTOC
Blank ID:	200318A-BLK	Time Analyzed:	0119

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200318A-BLK	Blank	30	03/20/20 0119
200318A-LCS	Lab Control Spike	31	03/20/20 0155
200318A-LCSD	Lab Control SpikeD	32	03/20/20 0235
BA08370	ERH1031	33	03/20/20 0316

Comments: Batch: #TOCW5-200318A

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
SM 2320B	BICARBONATE AS	1.9 J	2.0	1.70	0.85	mg/L	03/18/20	03/18/20	#232W-200318A1-BA08370
SM 2320B	CARBONATE AS CA	1.70 U	2.0	1.70	0.85	mg/L	03/18/20	03/18/20	#232W-200318A1-BA08370
SM 2320B	TOTAL ALKALINITY	1.9 J	2.0	1.70	0.85	mg/L	03/18/20	03/18/20	#232W-200318A1-BA08370
SM3500Fe	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	03/13/20	03/13/20	#35FE-A200313-BA08370
EPA 353.2	NITRATE-NITRITE-N	0.090 U	0.10	0.090	0.028	mg/L	03/13/20	03/13/20	#35OF-200313A-BA08341
SW846 90	DISSOLVED ORGA	0.350 U	0.93	0.350	0.130	mg/L	03/18/20	03/19/20	#DOCW5-200318A-BA08341
SM 4500-S	SILICA W	0.80 U	1.0	0.80	0.53	mg/L	03/18/20	03/18/20	#SIO2-200318A-BA08341
SM 4500-S	DISSOLVED SILICA	0.80 U	1.0	0.80	0.53	mg/L	03/18/20	03/18/20	#SIO2D-200318A-BA08341
SW846 90	TOTAL ORGANIC C	0.350 U	0.93	0.350	0.130	mg/L	03/18/20	03/20/20	#TOCW5-200318A-BA08370

Wetlab SC-Blank-REG MDLs
Printed: 04/01/20 10:02:34 AM

EPA 353.2

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91653
Case No:	91653	Date Analyzed:	03/13/20
Matrix:	WATER	Instrument:	EVE
LCS ID:	200313A-LCS	Time Analyzed:	1304

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200313A-BLK	Blank	12	03/13/20 1257
200313A-LCS	Lab Control Spike	15	03/13/20 1304
200313A-LCSD	Lab Control SpikeD	16	03/13/20 1306
BA08370	ERH1031	24	03/13/20 1315

Comments: Batch: #35OF-200313A

SM 2320B

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91653
Case No:	91653	Date Analyzed:	03/18/20
Matrix:	WATER	Instrument:	Tiamo
LCS ID:	200318A1-LCS	Time Analyzed:	1840

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200318A1-BLK	Blank	1	03/18/20 1544
200318A1-LCS	Lab Control Spike	2	03/18/20 1840
200318A1-LCSD	Lab Control SpikeD	3	03/18/20 1849
BA08370	ERH1031	4	03/18/20 2111

Comments: Batch: #232W-200318A1

SM 4500-Si D

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 91653

Case No: 91653 Date Analyzed: 03/18/20

Matrix: WATER Instrument: Manual Spec

LCS ID: 200318A-LCS Time Analyzed: 1448

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200318A-BLK	Blank	67	03/18/20 1448
200318A-LCS	Lab Control Spike	68	03/18/20 1448
200318A-LCSD	Lab Control SpikeD	69	03/18/20 1449
BA08370	ERH1031	72	03/18/20 1452

Comments: Batch: #SIO2-200318A

SM 4500-Si D

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91653
Case No:	91653	Date Analyzed:	03/18/20
Matrix:	WATER	Instrument:	Manual Spec
LCS ID:	200318A-LCS	Time Analyzed:	1448

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200318A-BLK	Blank	67	03/18/20 1448
200318A-LCS	Lab Control Spike	68	03/18/20 1448
200318A-LCSD	Lab Control SpikeD	69	03/18/20 1449
BA08370	ERH1031	73	03/18/20 1452

Comments: Batch: #SIO2D-200318A

SM3500FeB

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 91653

Case No: 91653 Date Analyzed: 03/13/20

Matrix: WATER Instrument: Manual Spec

LCS ID: A200313-LCS Time Analyzed: 2012

APPL ID.	Client Sample No.	File ID.	Date Analyzed
A200313-BLK	Blank	24	03/13/20 2010
A200313-LCSD	Lab Control SpikeD	26	03/13/20 2012
A200313-LCS	Lab Control Spike	27	03/13/20 2012
BA08370	ERH1031	28	03/13/20 2013
A200313-MS	Matrix Spike	29	03/13/20 2013
A200313-MSD	Matrix SpikeD	31	03/13/20 2014

Comments: Batch: #35FE-A200313

SW846 9060A

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91653
Case No:	91653	Date Analyzed:	03/19/20
Matrix:	WATER	Instrument:	TICTOC
LCS ID:	200318A-LCS	Time Analyzed:	2015

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200318A-BLK	Blank	31	03/19/20 1919
200318A-LCS	Lab Control Spike	32	03/19/20 2015
200318A-LCSD	Lab Control SpikeD	33	03/19/20 2055
BA08370	ERH1031	38	03/20/20 0004

Comments: Batch: #DOCW5-200318A

SW846 9060A

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91653
Case No:	91653	Date Analyzed:	03/20/20
Matrix:	WATER	Instrument:	TICTOC
LCS ID:	200318A-LCS	Time Analyzed:	0155

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200318A-BLK	Blank	30	03/20/20 0119
200318A-LCS	Lab Control Spike	31	03/20/20 0155
200318A-LCSD	Lab Control SpikeD	32	03/20/20 0235
BA08370	ERH1031	33	03/20/20 0316

Comments: Batch: #TOCW5-200318A

Laboratory Control Spike Recoveries

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
EPA 353.2	NITRATE-NITRITE-N	3.00	3.08	3.17	103	106	2.9	20	90-110	03/13/20	03/13/20	03/13/20	03/13/20	#35OF-200313A-BA08341
SM 2320B	BICARBONATE AS CACO3	250	233	237	93.2	94.8	1.7	20	90-110	03/18/20	03/18/20	03/18/20	03/18/20	#232W-200318A1-BA0837
SM 2320B	TOTAL ALKALINITY AS CA	239	245	245	103	103	0.0	20	90-110	03/18/20	03/18/20	03/18/20	03/18/20	#232W-200318A1-BA0837
SM 4500-Si	SILICA W	4.00	4.02	4.02	100	100	0.0	20	80-120	03/18/20	03/18/20	03/18/20	03/18/20	#SIO2-200318A-BA08341
SM 4500-Si	DISSOLVED SILICA	4.00	4.02	4.02	100	100	0.0	20	80-120	03/18/20	03/18/20	03/18/20	03/18/20	#SIO2D-200318A-BA08341
SM3500Fe	FERROUS IRON	3.00	3.03	3.00	101	100	1.00	20	80-120	03/13/20	03/13/20	03/13/20	03/13/20	#35FE-A200313-BA08370
SW846 906	DISSOLVED ORGANIC CA	5.00	5.07	5.02	101	100	0.99	20	90-110	03/18/20	03/19/20	03/18/20	03/19/20	#DOCW5-200318A-BA083
SW846 906	TOTAL ORGANIC CARBON	5.00	4.98	5.08	99.6	102	2.0	20	80-120	03/18/20	03/20/20	03/18/20	03/20/20	#TOCW5-200318A-BA0837

Comments:

Matrix Spike Recoveries

WETLAB

APPL ID: **200313W-08370 MS - 250845**

Sample ID: BA08370

Client ID: ERH1031

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	Matrix Res mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
SM3500Fe	FERROUS IRON	3.00	0.15	3.20	3.23	102	103	0.93	20	80-120	03/13/20	03/13/20	03/13/20	03/13/20	250845	BA08370

Comments:

ORGANICS
Calibration Data

DBCP/EDB/1,2,3-TCP Analysis by
504 8011

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 03/16/20
Matrix: Water Instrument: Herbie
Initials: SS/M

0228158.D 0228159.D 0228160.D 0228161.D 0228162.D 0228163.D

		Compound	1	2	3	4	5	6					Avg	%RSD	Type	r^2	Q
1	TM	EDB	939925	895355	816946	788610	830661	756107					837934	8.2	TM		
2	TM	1,2,3-TCP	252700	240040	235122	216989	224417	202412					228613	7.8	TM		
3	S	1,3-DIBROMOPROPANE(S)	1243700	1076015	1011970	919227	943383	864303					1009766	13	S		
4	TM	DBCP	3498700	2910425	2966008	2808464	2985015	2687670					2976047	9.4	TM		
5		Signal #2											0	0			
6																	
7																	
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35																	

1.109298

DBCP/EDB/1,2,3-TCP Analysis by
504 8011

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 03/16/20
Matrix: Water Instrument: Herbie Initials:

0228158.D 0228159.D 0228160.D 0228161.D 0228162.D 0228163.D

		Compound	1	2	3	4	5	6					Avg	%RSD	Type	r^2	Q
36	TM	EDB #2	4345350	3991480	3888534	3577259	3758474	3391227					3825387	8.7	TM		
37	TM	1,2,3-TCP #2	713325	690715	698232	569285	651527	592860					652657	9.1	TM		
38	S	1,3-DIBROMOPROPANE(S) #2	3158675	2958775	2857804	2158244	2683944	2440548					2709665	13	S		
39	TM	DBCP #2	10677350	10105360	10612332	10462467	10865330	10568407					10548541	2.4	TM		
40																	
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0.962856

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228158.D\ECD1A.CH Vial: 58
Signal #2 : G:\HERBIE\DATA\200228\0228158.D\ECD2B.CH
Acq On : 03-16-20 13:43:09 Operator: MA,SS
Sample : 8011-1 3/16/20 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 17 8:21 2020 Quant Results File: 8010317A.RES

Quant Method : G:\HERBIE\DATA\200228\8010317A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 17 08:16:43 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

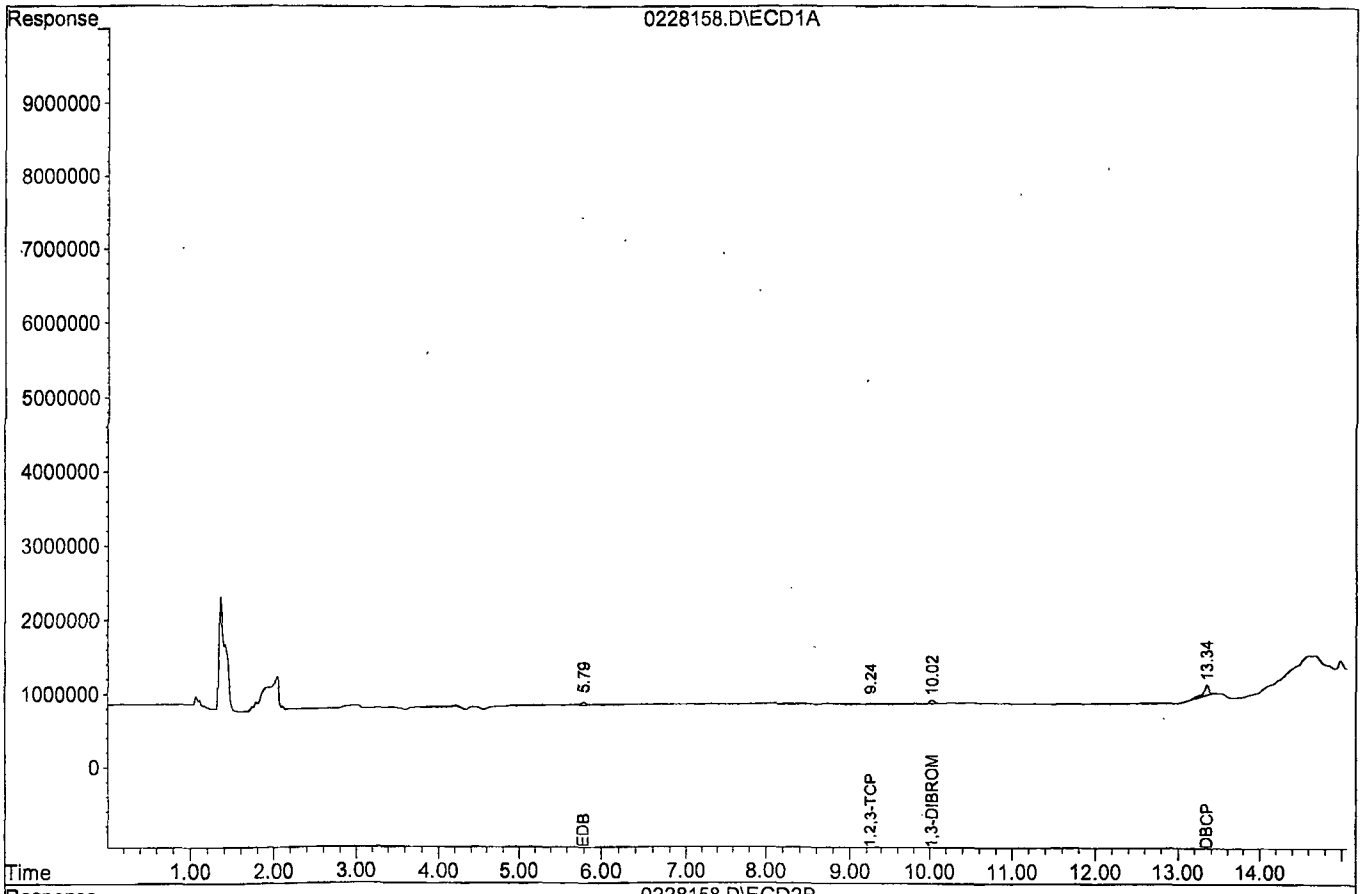
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.02	11.04	49748	126347	0.025	0.023
Spiked Amount	0.350			Recovery	=	7.14%	6.57%
	Target Compounds						
1) TM	EDB	5.79	7.22	37597	173814	0.022	0.023
2) TM	1,2,3-TCP	9.24	10.44	10108	28533	0.022	0.022
4) TM	DBCP	13.34	14.08	139948	427094	0.024	0.020
	Target Compounds						

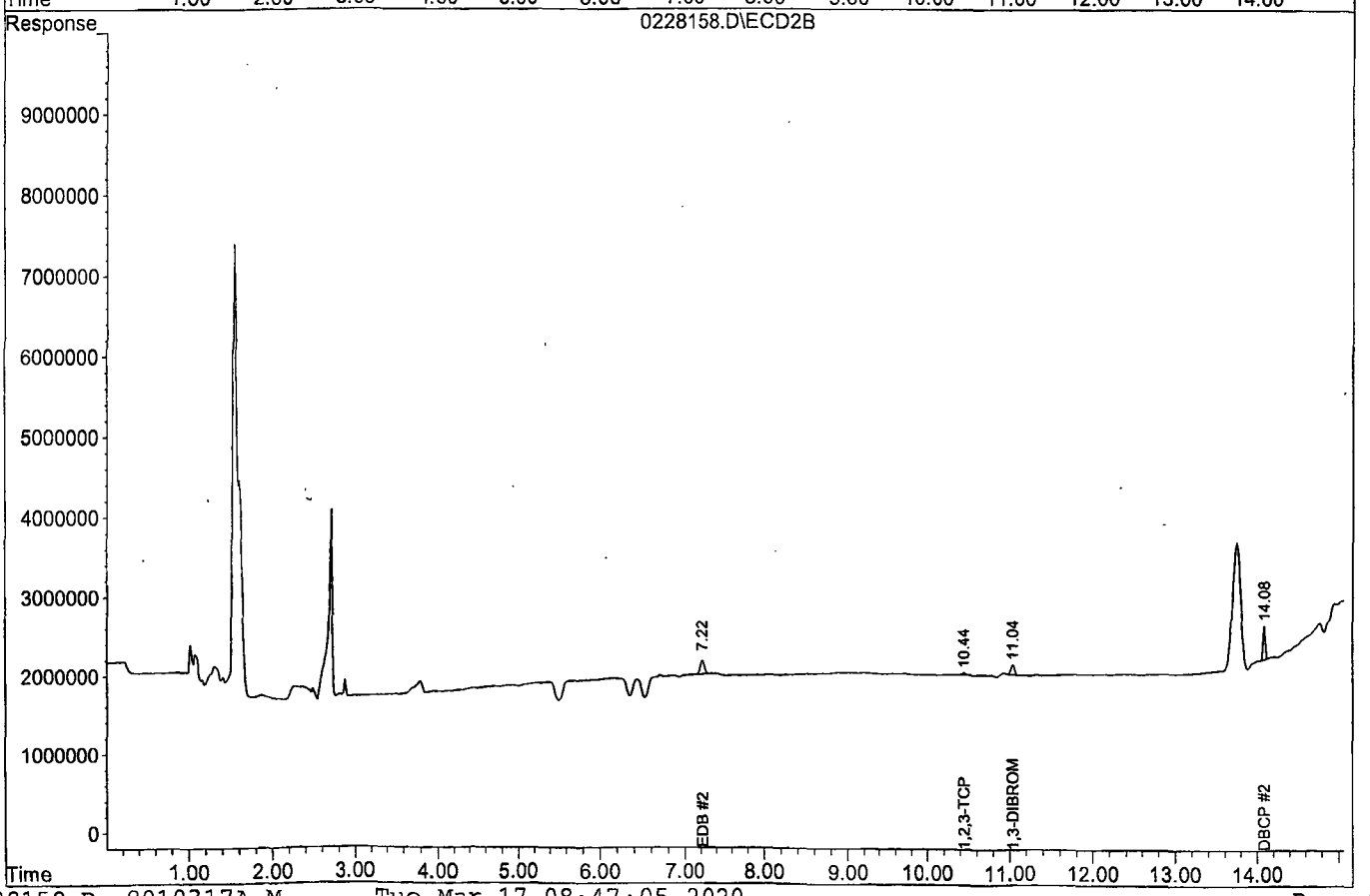
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\200228\0228158.D
Acq On : 03-16-20 13:43:09
Sample : 8011-1 3/16/20
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010317A.M

Vial: 58
Operator: MA,SS
Inst : Herbie
Multiplr: 1.00





Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228159.D\ECD1A.CH Vial: 59
Signal #2 : G:\HERBIE\DATA\200228\0228159.D\ECD2B.CH
Acq On : 03-16-20 14:03:11 Operator: MA,SS
Sample : 8011-2 3/16/20 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 17 8:21 2020 Quant Results File: 8010317A.RES

Quant Method : G:\HERBIE\DATA\200228\8010317A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 17 08:16:43 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.02	11.04	215203	591755	0.107	0.109
Spiked Amount	0.350			Recovery	=	30.57%	31.14%
	Target Compounds						
1) TM	EDB	5.79	7.22	179071	798296	0.107	0.104
2) TM	1,2,3-TCP	9.25	10.45	48008	138143	0.105	0.106
4) TM	DBCP	13.34	14.09	582085	2021072	0.098	0.096

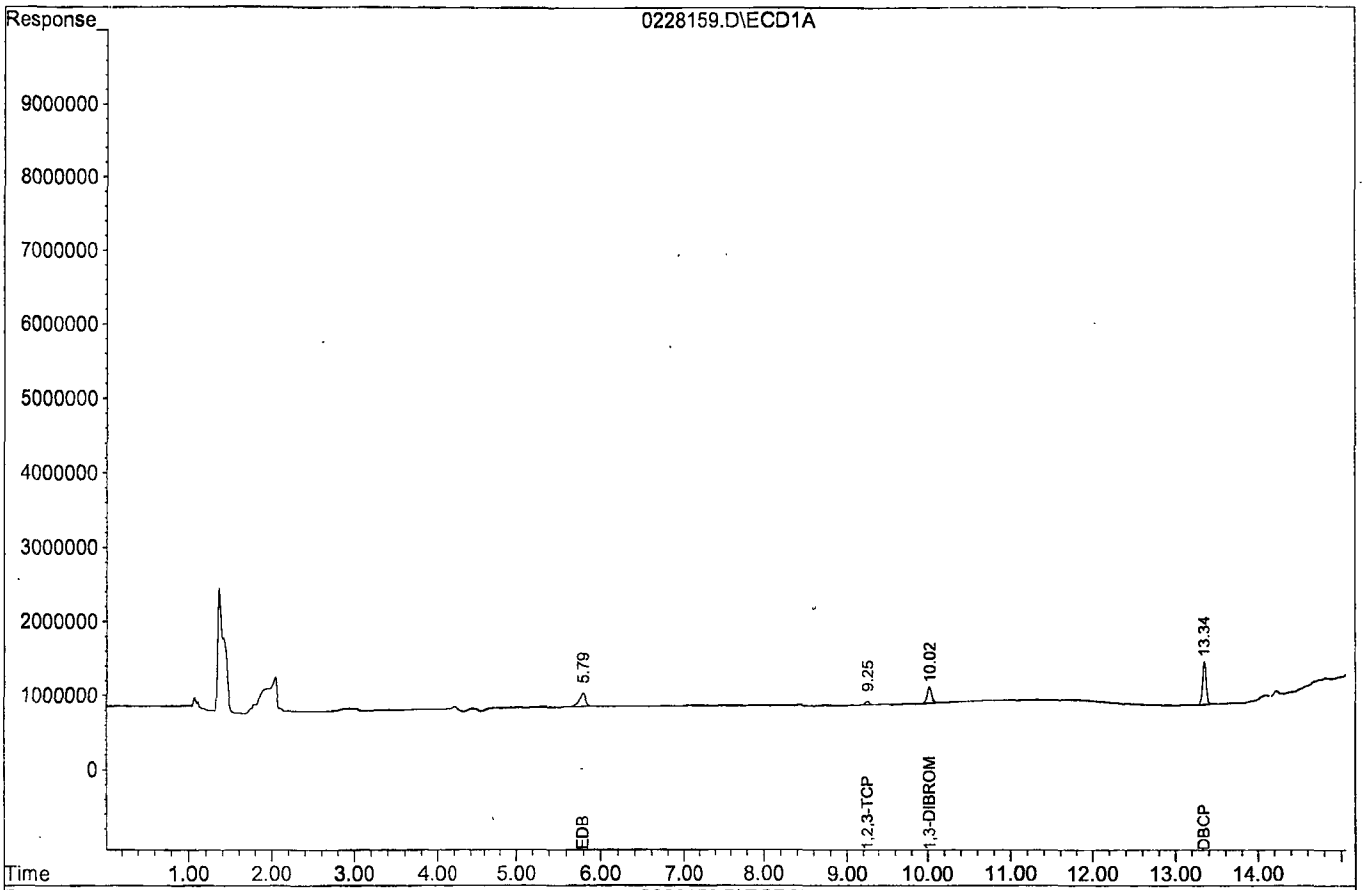
Target Compounds

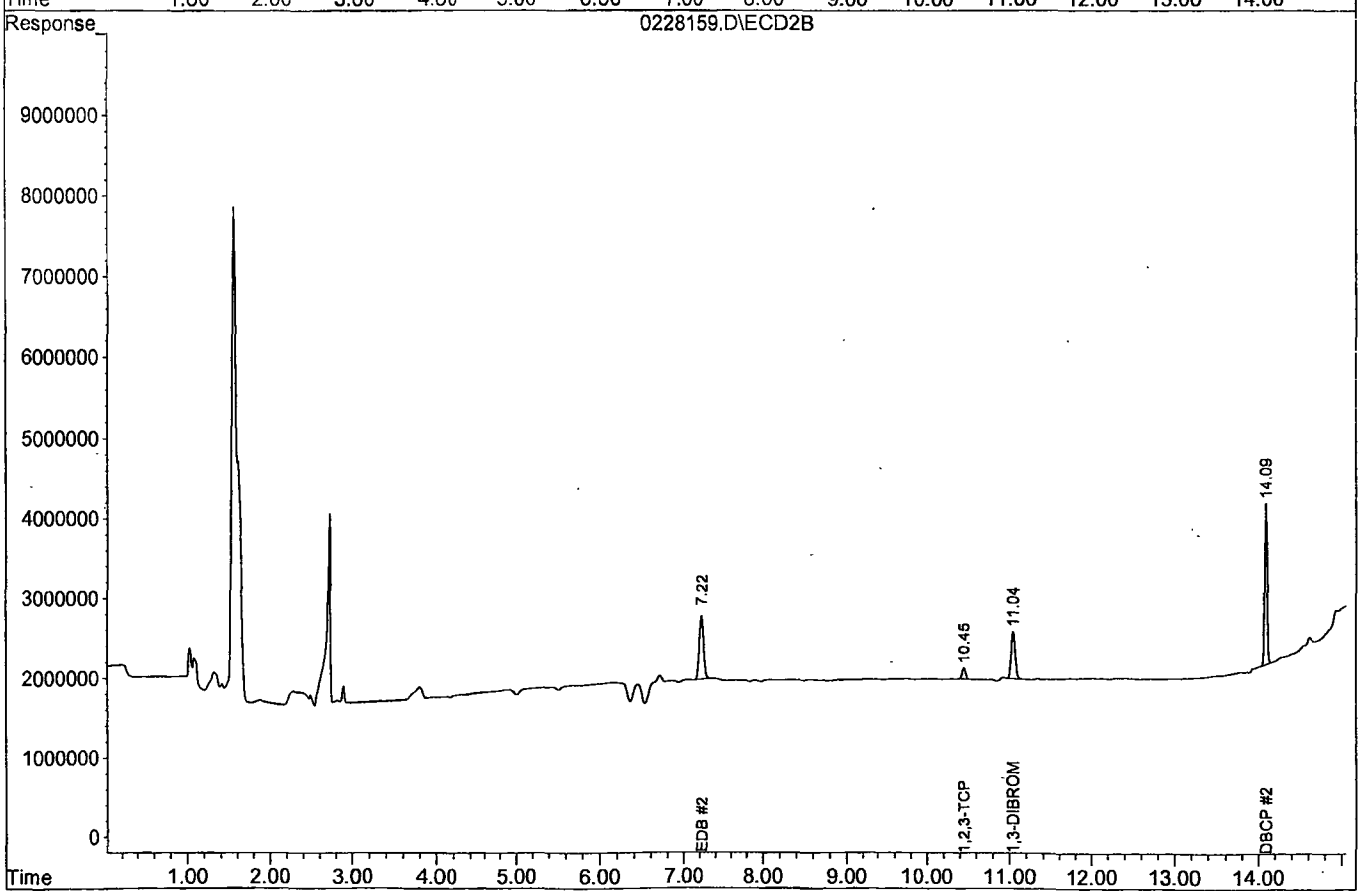
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\200228\0228159.D
Acq On : 03-16-20 14:03:11
Sample : 8011-2 3/16/20
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010317A.M

Vial: 59
Operator: MA,SS
Inst : Herbie
Multiplr: 1.00





Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228160.D\ECD1A.CH Vial: 60
Signal #2 : G:\HERBIE\DATA\200228\0228160.D\ECD2B.CH
Acq On : 03-16-20 14:23:19 Operator: MA,SS
Sample : 8011-3 3/16/20 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 17 8:21 2020 Quant Results File: 8010317A.RES

Quant Method : G:\HERBIE\DATA\200228\8010317A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 17 08:16:43 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
3) S 1,3-DIBROMOPROPA	10.01	11.04	505985	1428902	0.251	0.264
Spiked Amount 0.350			Recovery =		71.71%	75.43%
Target Compounds						
1) TM EDB	5.79	7.22	408473	1944267	0.244	0.254
2) TM 1,2,3-TCP	9.25	10.45	117561	349116	0.257	0.267
4) TM DBCP	13.34	14.09	1483004	5306166	0.249	0.252

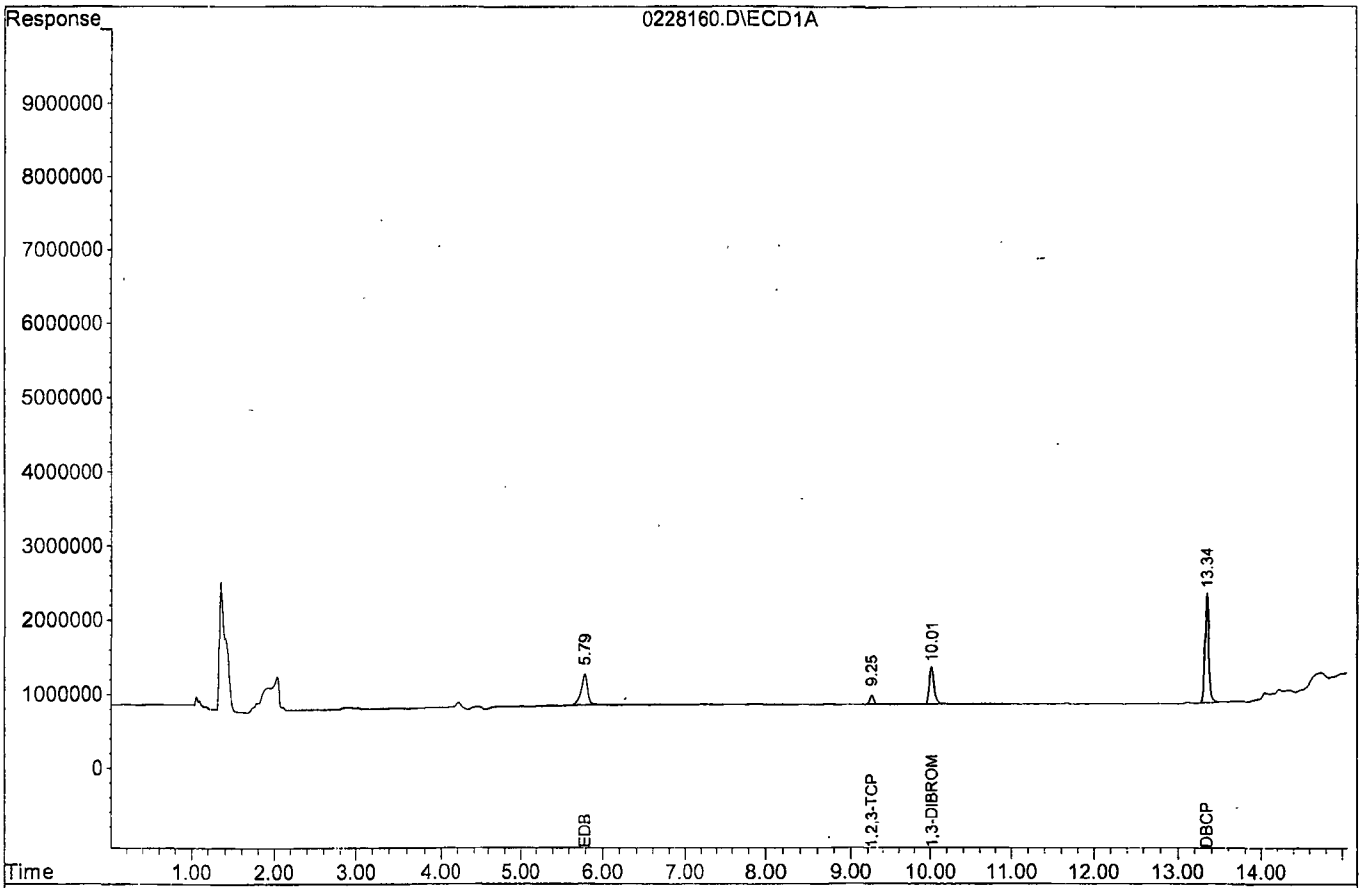
Target Compounds

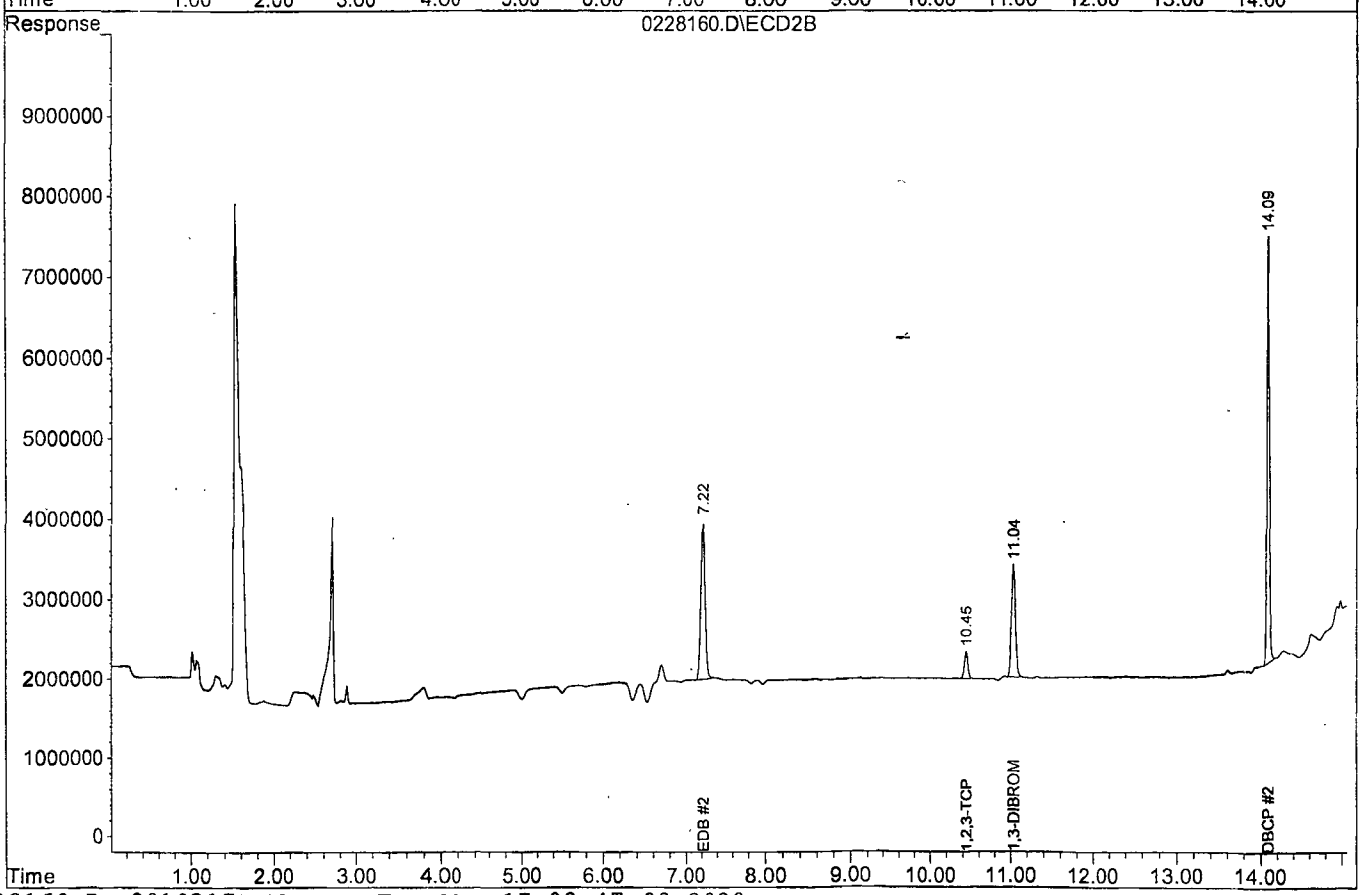
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\200228\0228160.D
Acq On : 03-16-20 14:23:19
Sample : 8011-3 3/16/20
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010317A.M

Vial: 60
Operator: MA,SS
Inst : Herbie
Multiplr: 1.00





Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228161.D\ECD1A.CH Vial: 61
Signal #2 : G:\HERBIE\DATA\200228\0228161.D\ECD2B.CH
Acq On : 03-16-20 14:43:23 Operator: MA,SS
Sample : 8011-4 3/16/20 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 17 8:21 2020 Quant Results File: 8010317A.RES

Quant Method : G:\HERBIE\DATA\200228\8010317A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 17 08:16:43 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

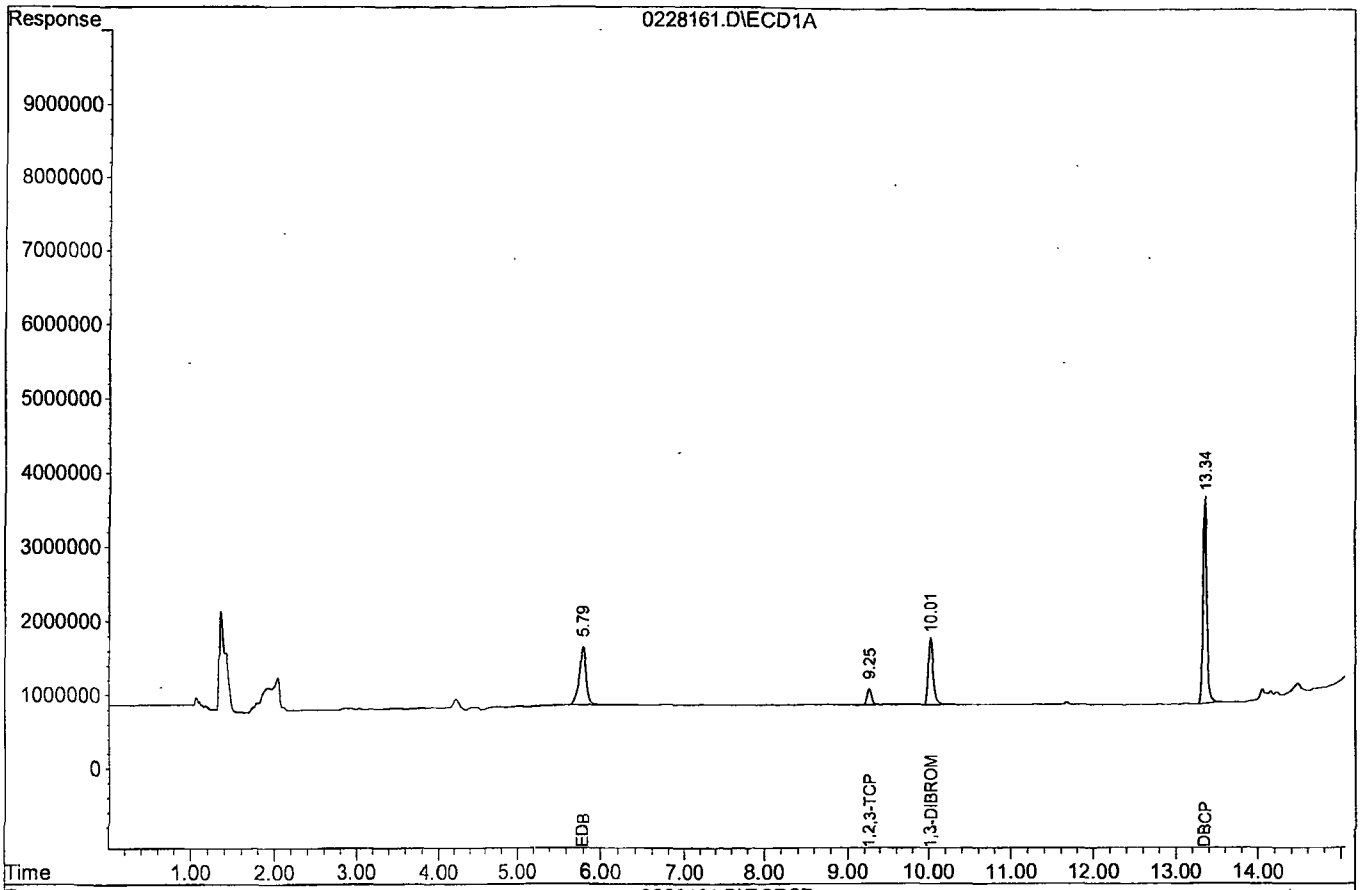
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.01	11.04	919227	2158244	0.455	0.398
Spiked Amount	0.350			Recovery	=	130.00%	113.71%
	Target Compounds						
1) TM	EDB	5.79	7.22	788610	3577259	0.471	0.468
2) TM	1,2,3-TCP	9.25	10.45	216989	569285	0.475	0.436
4) TM	DBCP	13.34	14.09	2808464	10462467	0.472	0.496
	Target Compounds						

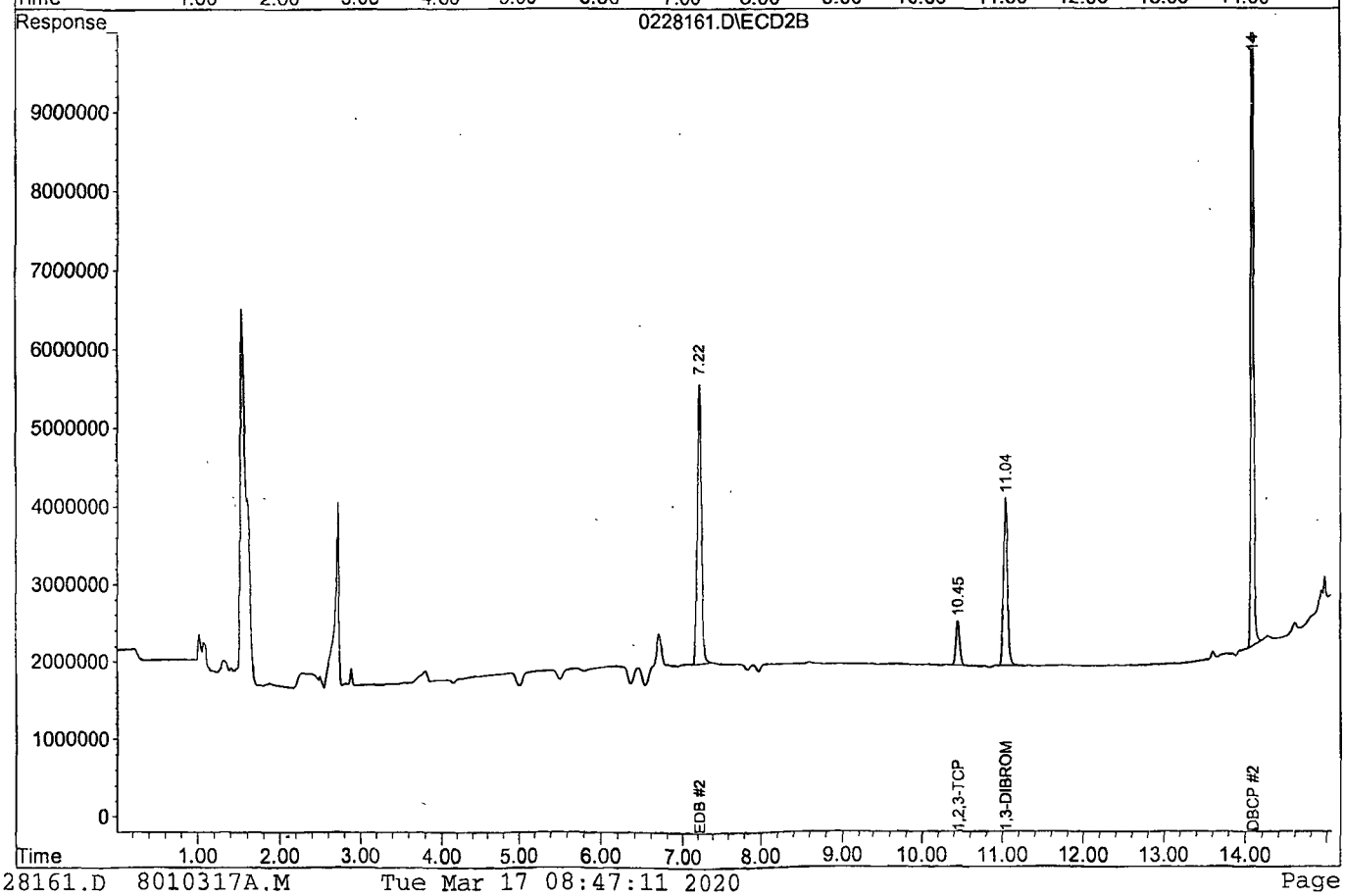
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\200228\0228161.D
Acq On : 03-16-20 14:43:23
Sample : 8011-4 3/16/20
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010317A.M

Vial: 61
Operator: MA,SS
Inst : Herbie
Multiplr: 1.00





Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228162.D\ECD1A.CH Vial: 62
Signal #2 : G:\HERBIE\DATA\200228\0228162.D\ECD2B.CH
Acq On : 03-16-20 15:03:24 Operator: MA,SS
Sample : 8011-5 3/16/20 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 17 8:21 2020 Quant Results File: 8010317A.RES

Quant Method : G:\HERBIE\DATA\200228\8010317A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 17 08:16:43 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.01	11.04	1415075	4025916	0.701	0.743
Spiked Amount	0.350			Recovery	=	200.29%	212.29%
	Target Compounds						
1) TM	EDB	5.79	7.22	1245991	5637711	0.743	0.737
2) TM	1,2,3-TCP	9.25	10.45	336625	977290	0.736	0.749
4) TM	DBCP	13.34	14.09	4477522	16297995	0.752	0.773

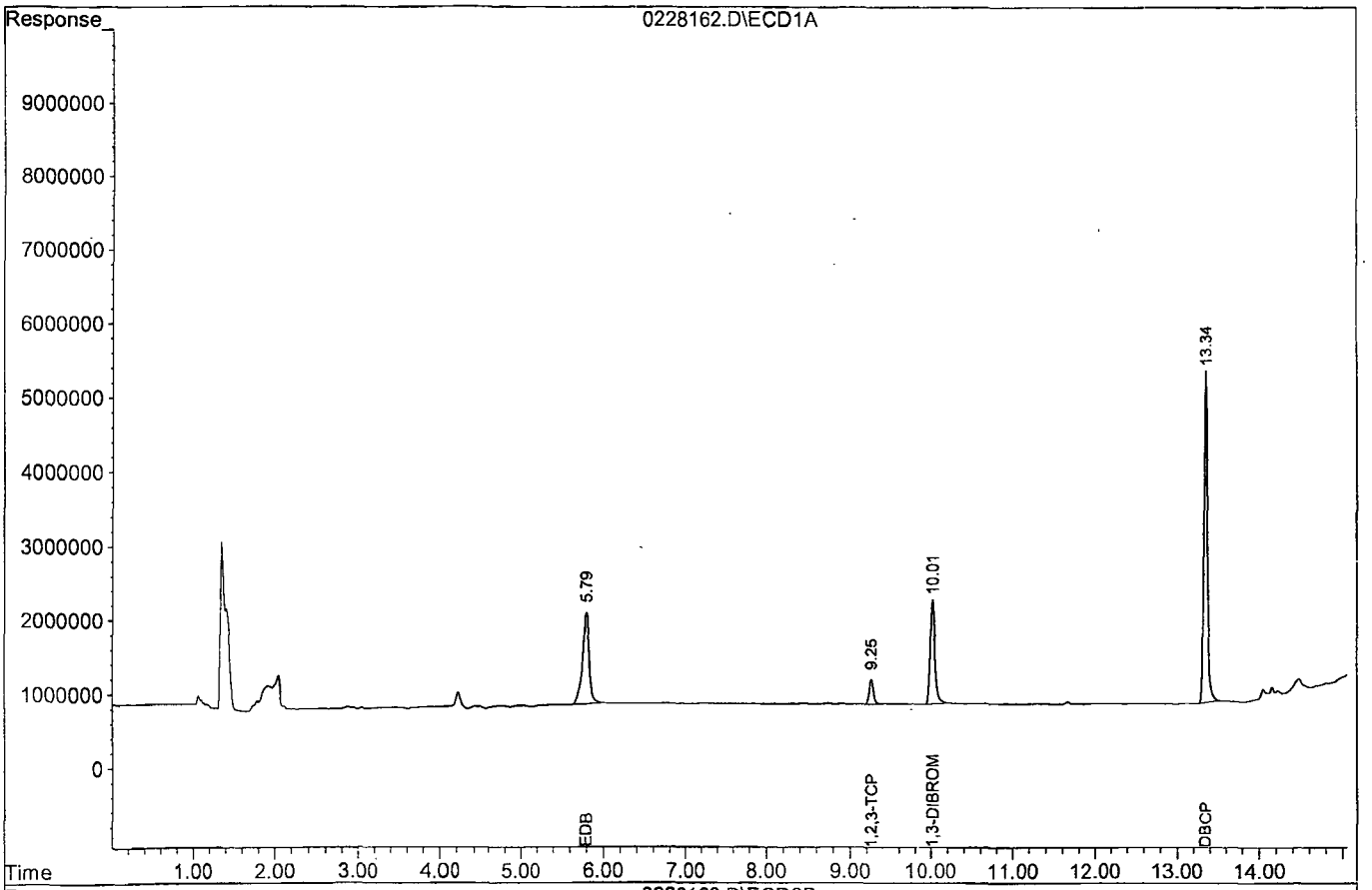
Target Compounds

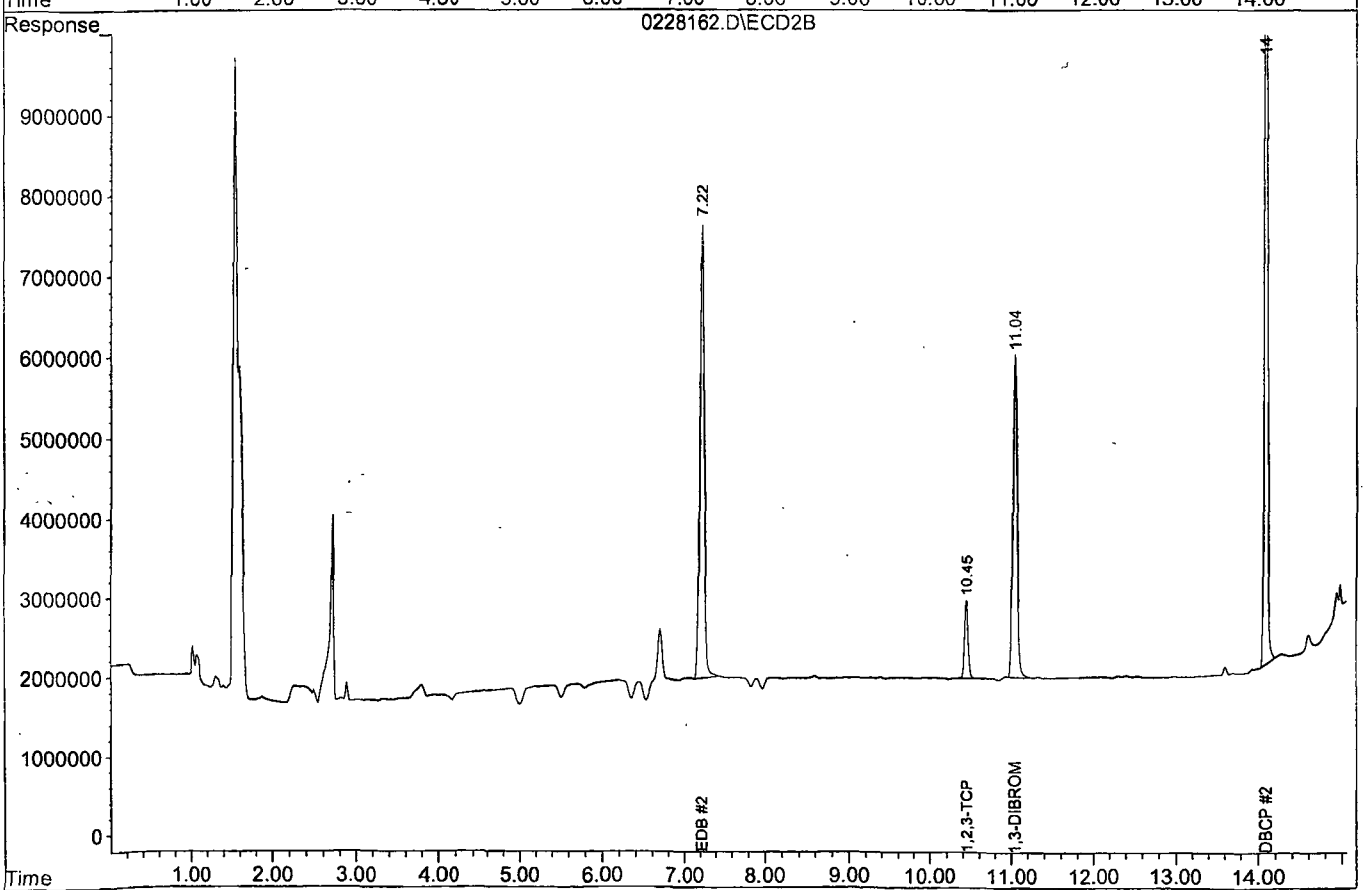
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\200228\0228162.D
Acq On : 03-16-20 15:03:24
Sample : 8011-5 3/16/20
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010317A.M

Vial: 62
Operator: MA,SS
Inst : Herbie
Multiplr: 1.00





Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228163.D\ECD1A.CH Vial: 63
Signal #2 : G:\HERBIE\DATA\200228\0228163.D\ECD2B.CH
Acq On : 03-16-20 15:23:35 Operator: MA,SS
Sample : 8011-6 3/16/20 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 17 8:21 2020 Quant Results File: 8010317A.RES

Quant Method : G:\HERBIE\DATA\200228\8010317A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 17 08:16:43 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

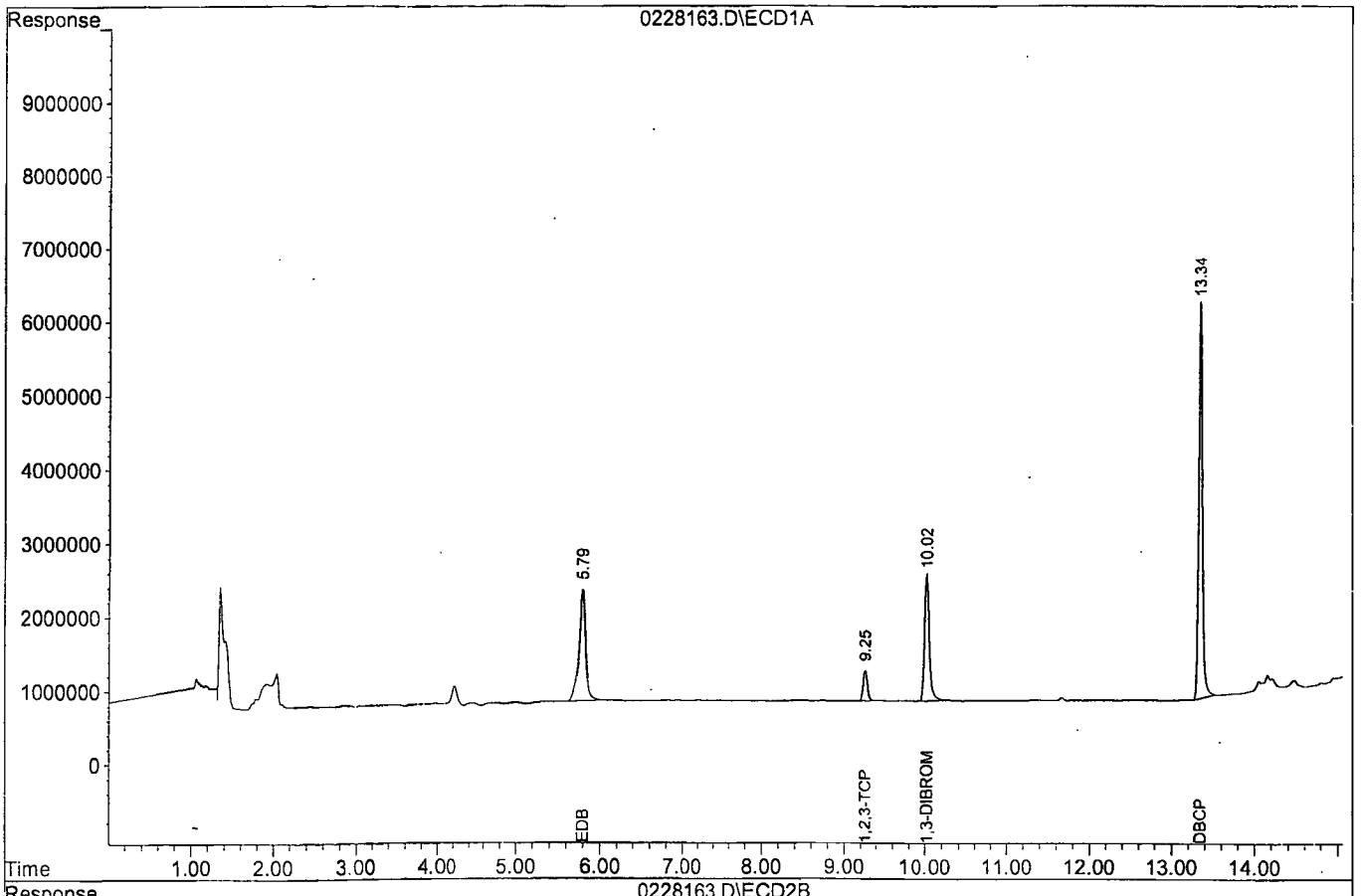
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.02	11.04	1728606	4881096	0.856	0.901
	Spiked Amount 0.350			Recovery	=	244.57%	257.43%
	Target Compounds						
1) TM	EDB	5.79	7.22	1512213	6782454	0.902	0.887
2) TM	1,2,3-TCP	9.25	10.45	404824	1185720	0.885	0.908
4) TM	DBCP	13.34	14.09	5375339	21136813	0.903	1.002
	Target Compounds						

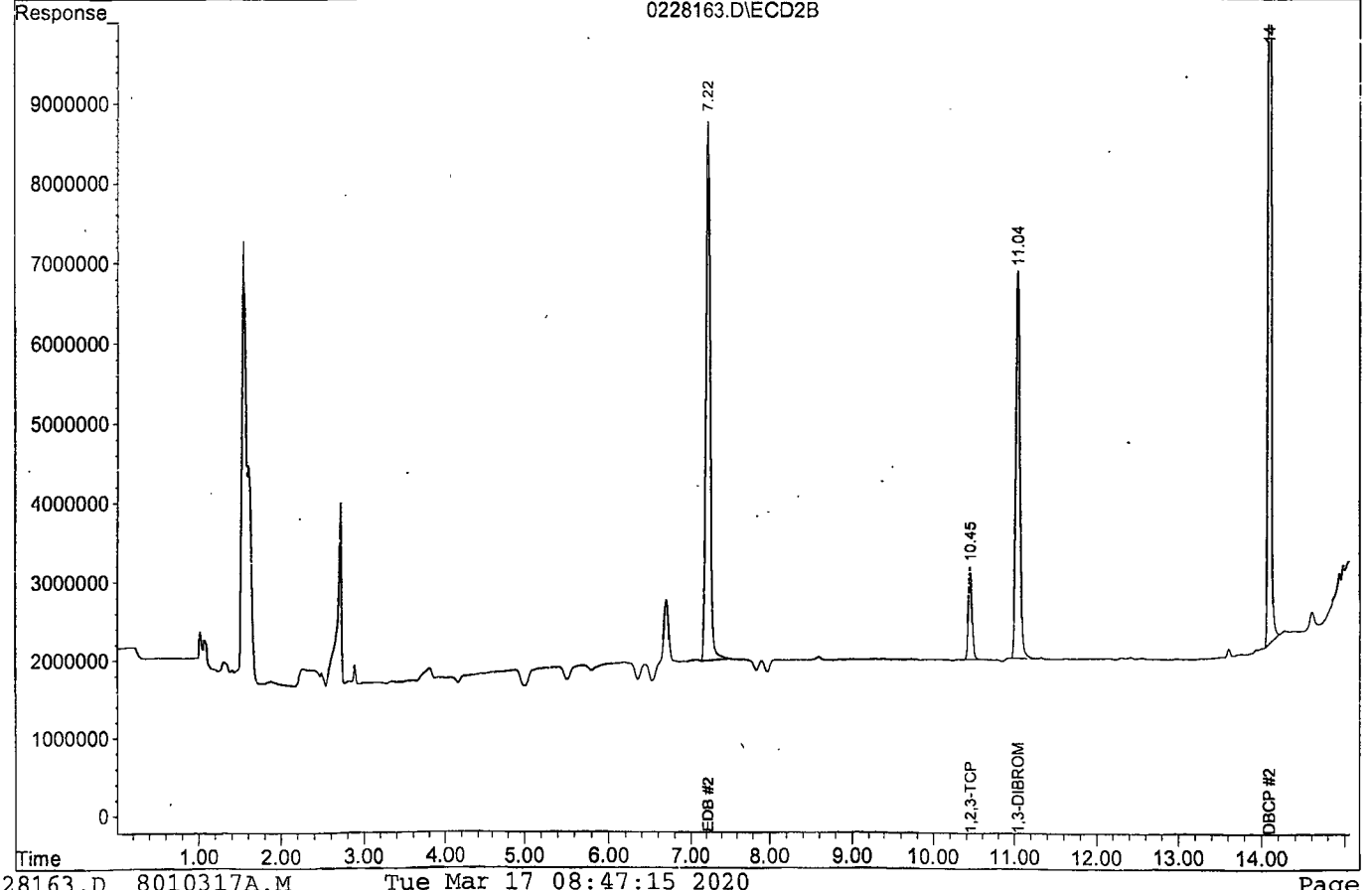
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\200228\0228163.D
Acq On : 03-16-20 15:23:35
Sample : 8011-6 3/16/20
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010317A.M

Vial: 63
Operator: MA,SS
Inst : Herbie
Multiplr: 1.00





DBCP/EDB/1,2,3-TCP Analysis by
504 8011

Form 7

Second Source Calibration

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

SDG No:
Date Analyzed: 03/16/20
Instrument: Herbie
Initial Cal. Date: 03/16/20
Data File: 0228164.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	EDB	837934	843785	0.70	TM	
2	TM	1,2,3-TCP	228613	249010	8.9	TM	
3	TM	DBCP	2976050	3158670	6.1	TM	
4							
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40							
		Average			5.2		

DBCP/EDB/1,2,3-TCP Analysis by
504 8011

Form 7

Second Source Calibration

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

SDG No:
Date Analyzed: 03/16/20
Instrument: Herbie
Cal. Date: 03/16/20
Data File: 0228164.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	EDB	3825390	3656580	4.4	TM	
42	TM	1,2,3-TCP	652657	703930	7.9	TM	
43	TM	DBCP	10548500	9737320	7.7	TM	
44							
45							
46							
47							
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		Average			6.7		

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228164.D\ECD1A.CH Vial: 64
Signal #2 : G:\HERBIE\DATA\200228\0228164.D\ECD2B.CH
Acq On : 03-16-20 15:43:36 Operator: MA,SS
Sample : 8011-SS 3/16/20 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 17 8:21 2020 Quant Results File: 8010317A.RES

Quant Method : G:\HERBIE\DATA\200228\8010317A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 17 08:16:43 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

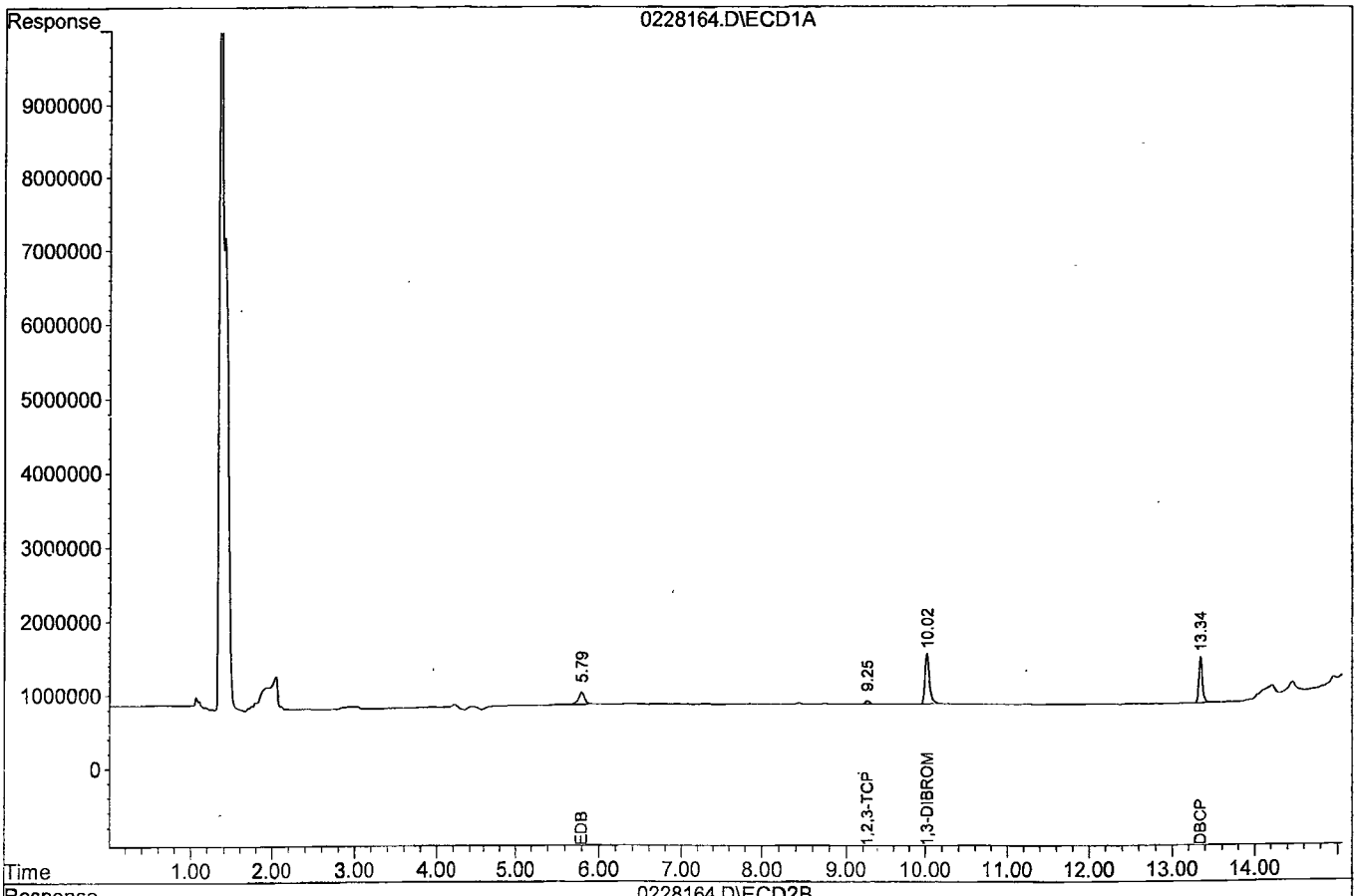
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3)	S 1,3-DIBROMOPROPA	10.02	11.04	689610	1950153	0.341	0.360
	Spiked Amount 0.350			Recovery =		97.43%	102.86%
	Target Compounds						
1)	TM EDB	5.79	7.22	168757	731316	0.101	0.096
2)	TM 1,2,3-TCP	9.25	10.45	49802	140786	0.109	0.108
4)	TM DBCP	13.34	14.08	631733	1947464	0.106	0.092
	Target Compounds						

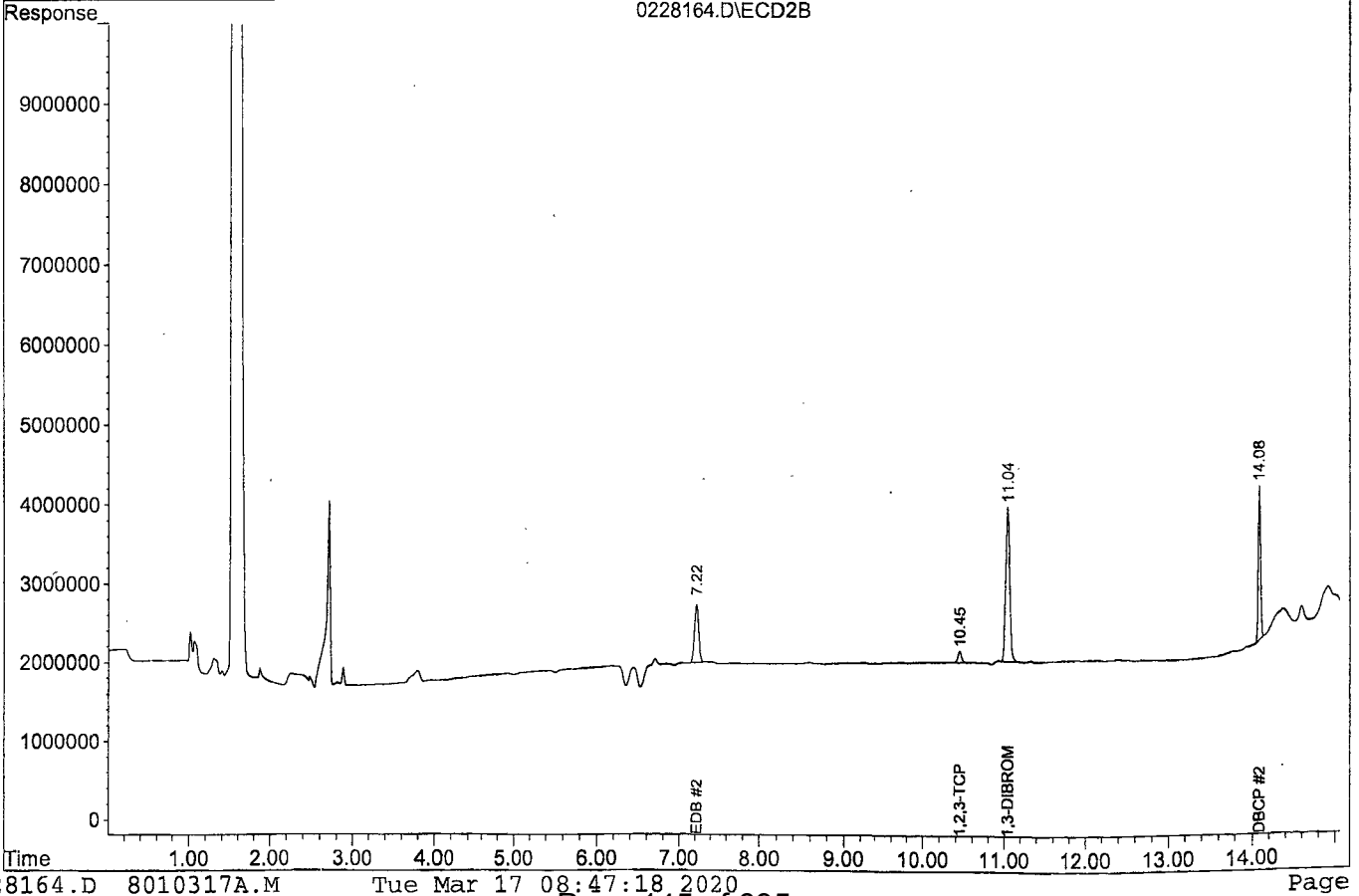
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\200228\0228164.D
Acq On : 03-16-20 15:43:36
Sample : 8011-SS 3/16/20
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010317A.M

Vial: 64
Operator: MA,SS
Inst : Herbie
Multiplr: 1.00





DBCP/EDB/1,2,3-TCP Analysis by
504 8011

Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 03/16/20
Instrument: Herbie
Initial Cal. Date: 03/16/20
Data File: 0228175.D

		Compound	MEAN	CCRF	%D	%Drift	
1	TM	EDB	837934	799971	4.5	TM	
2	TM	1,2,3-TCP	228613	222458	2.7	TM	
3	S	1,3-DIBROMOPROPANE(S)	1009770	934965	7.4	S	
4	TM	DBCP	2976050	2841950	4.5	TM	
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39							
40							
		Average			4.8		

DBCP/EDB/1,2,3-TCP Analysis by
504 8011

Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 03/16/20
Instrument: Herbie
Cal. Date: 03/16/20
Data File: 0228175.D

		Compound	MEAN	CCRF	%D	%Drift	
41	TM	EDB	3825390	3548880	7.2	TM	
42	TM	1,2,3-TCP	652657	647200	0.84	TM	
43	S	1,3-DIBROMOPROPANE(S)	2709670	2595540	4.2	S	
44	TM	DBCP	10548500	10644000	0.90	TM	
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		Average			3.3		

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228175.D\ECD1A.CH Vial: 75
Signal #2 : G:\HERBIE\DATA\200228\0228175.D\ECD2B.CH
Acq On : 03-16-20 19:24:42 Operator: MA,SS
Sample : 8011-4 3/16/20 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 17 8:21 2020 Quant Results File: 8010317A.RES

Quant Method : G:\HERBIE\DATA\200228\8010317A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 17 08:16:43 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.01	11.03	934965	2595540	0.463	0.479
Spiked Amount	0.350			Recovery	=	132.29%	136.86%
	Target Compounds						
1) TM	EDB	5.78	7.21	799971	3548880	0.477	0.464
2) TM	1,2,3-TCP	9.24	10.44	222458	647200	0.487	0.496
4) TM	DBCP	13.33	14.08	2841945	10643954	0.477	0.505

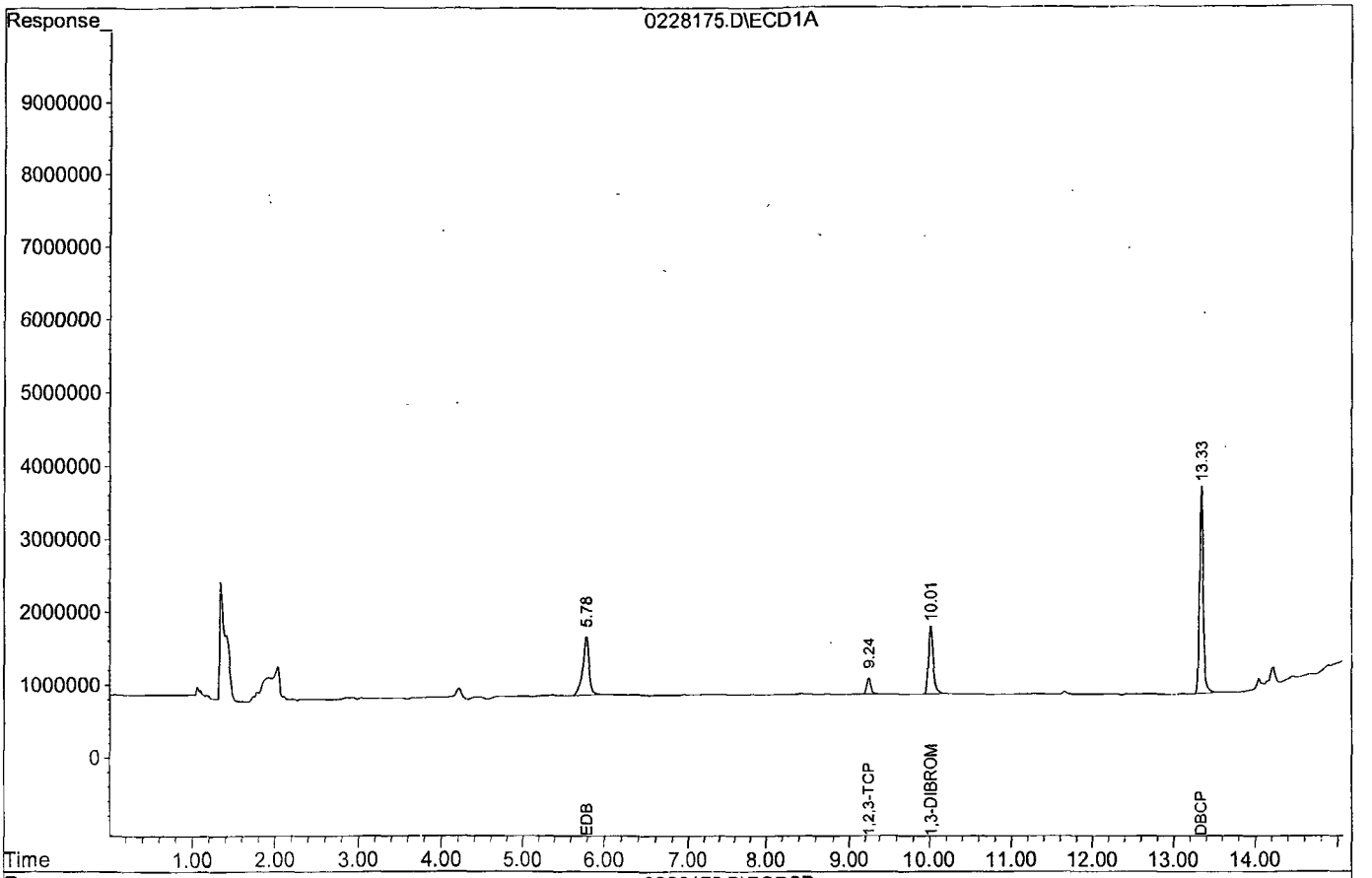
Target Compounds

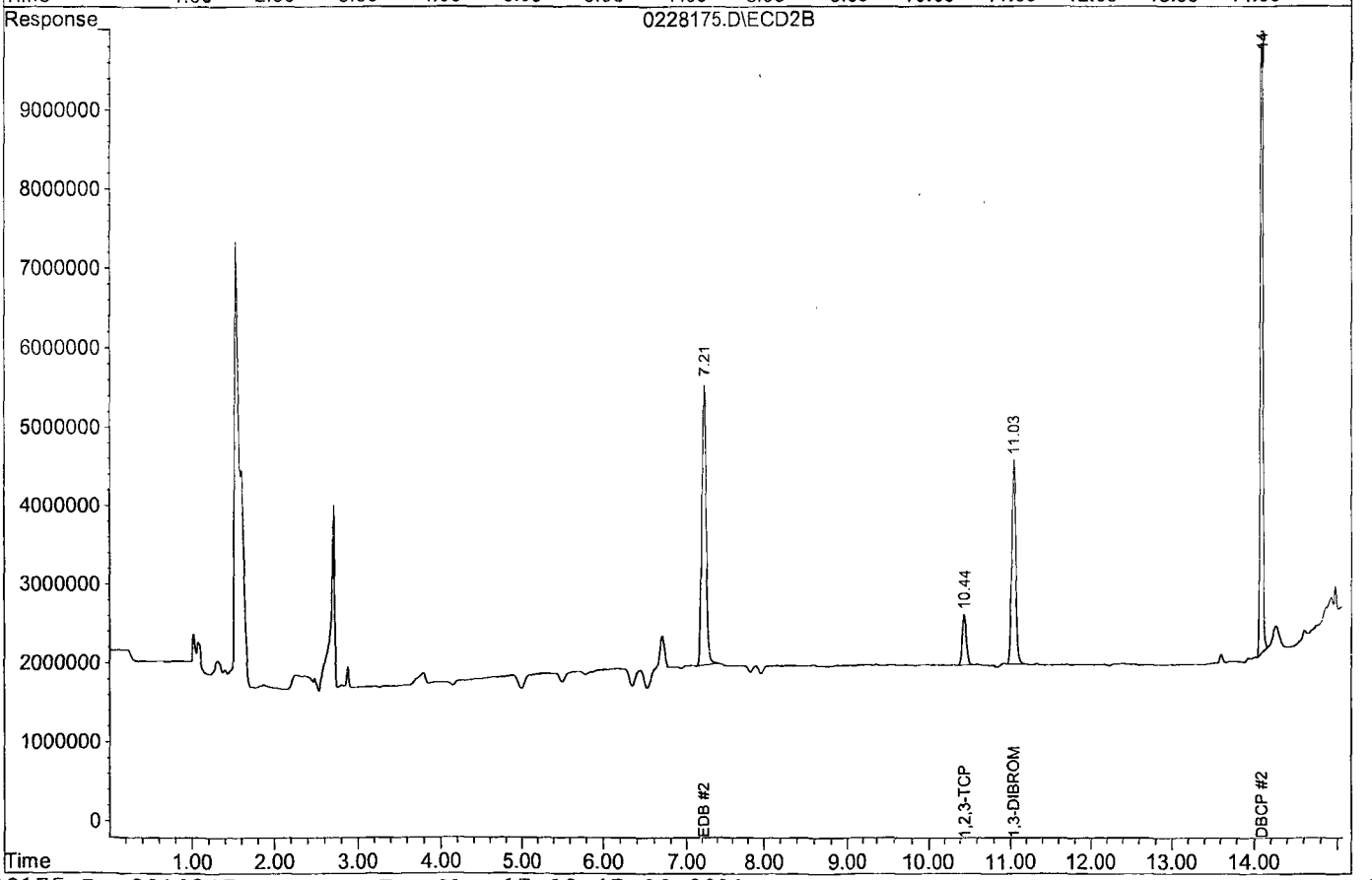
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\200228\0228175.D
Acq On : 03-16-20 19:24:42
Sample : 8011-4 3/16/20
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010317A.M

Vial: 75
Operator: MA,SS
Inst : Herbie
Multiplr: 1.00





ORGANICS
Raw Data

Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228172.D\ECD1A.CH Vial: 72
Signal #2 : G:\HERBIE\DATA\200228\0228172.D\ECD2B.CH
Acq On : 03-16-20 18:24:19 Operator: MA,SS
Sample : BA08369W06 2/35.38 Inst : Herbie
Misc : water Multiplr: 0.99
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 17 9:03 2020 Quant Results File: 8010317A.RES

Quant Method : G:\HERBIE\DATA\200228\8010317A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 17 08:16:43 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

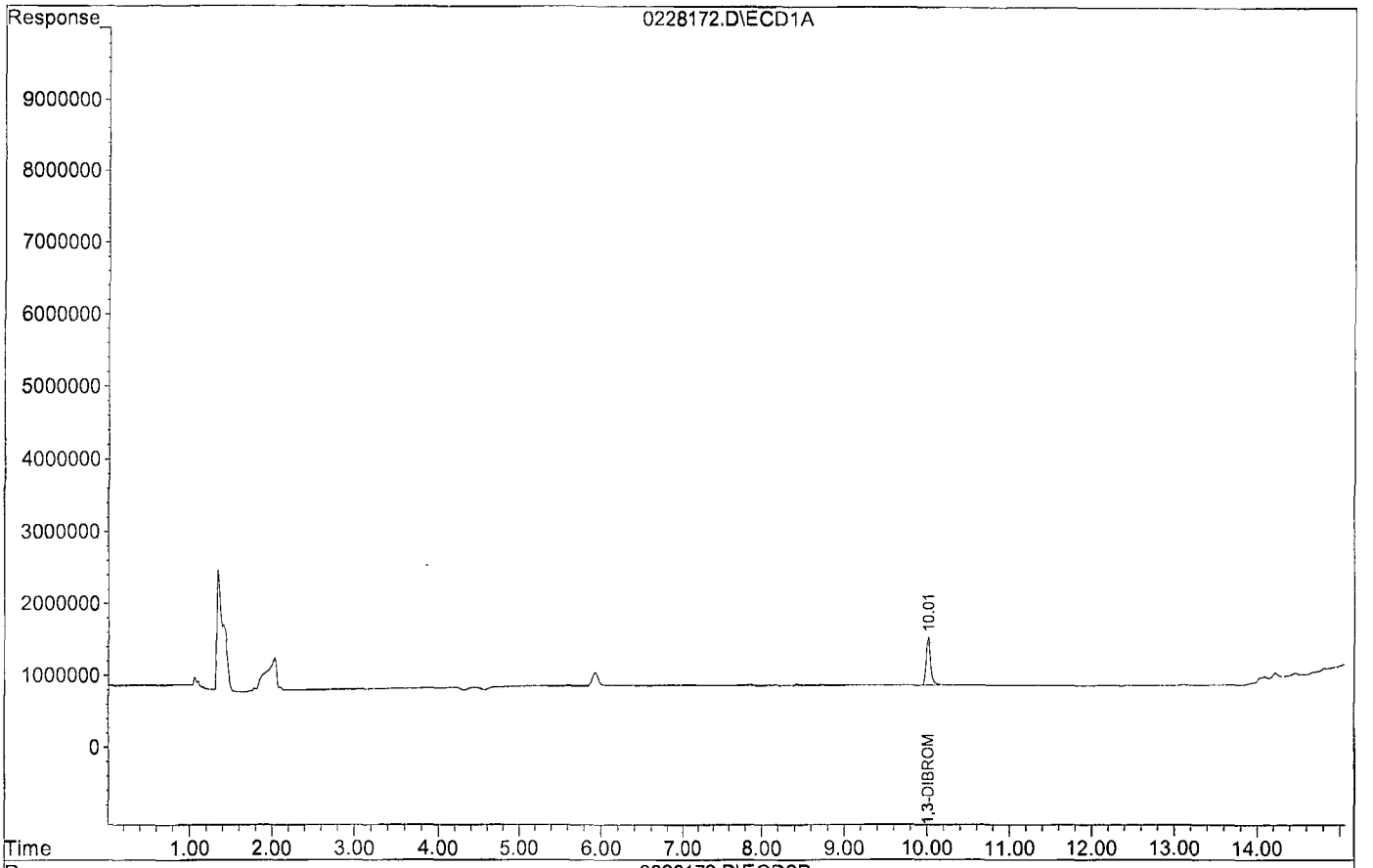
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.01	11.03	674801	1879372	0.331	0.343
	Spiked Amount 0.346			Recovery =		95.60%	99.06%
	Target Compounds						
	Target Compounds						
1) TM	EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM	DBCP	0.00	0.00	0	0	N.D. d	N.D. d

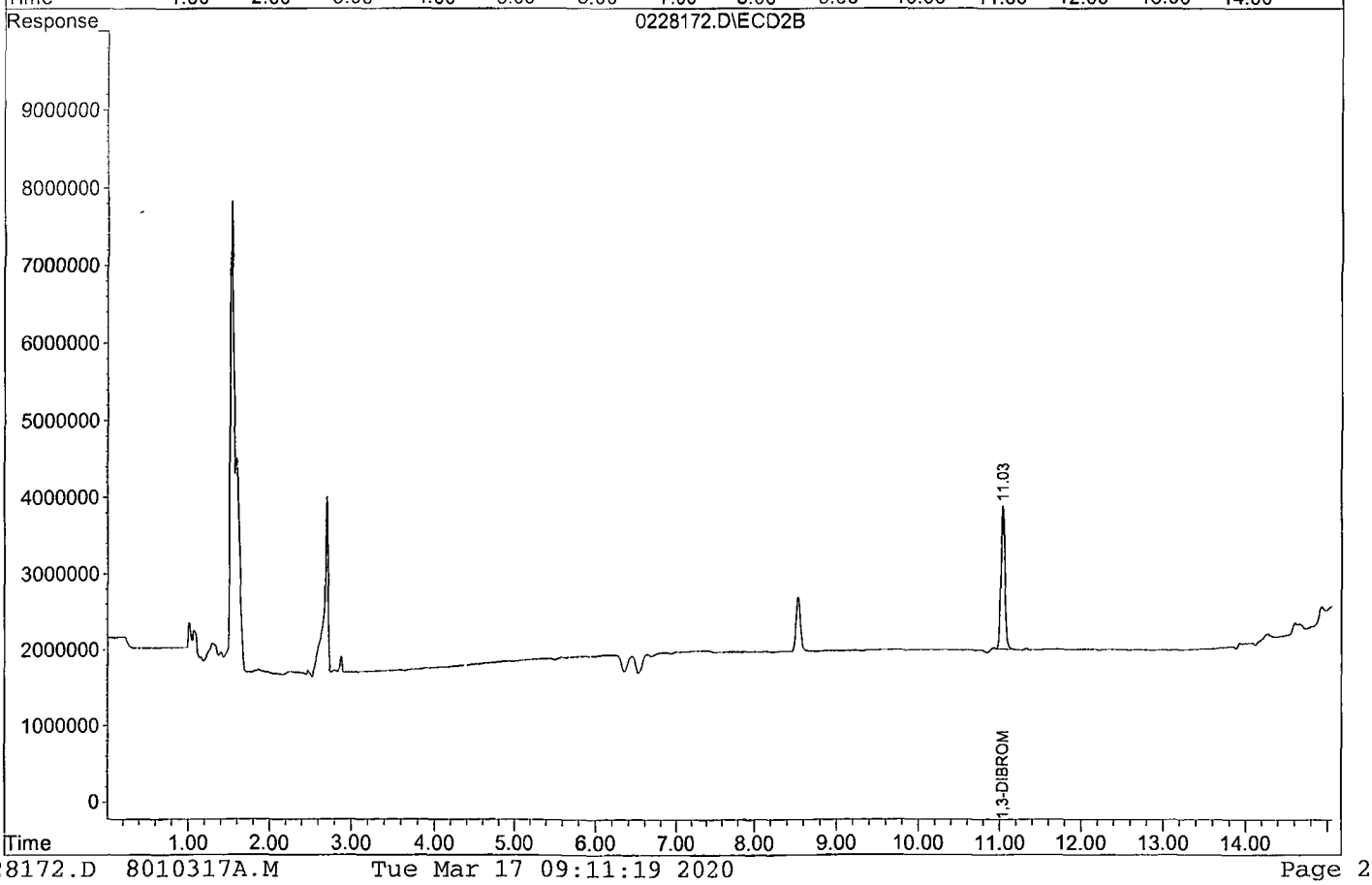
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\200228\0228172.D
Acq On : 03-16-20 18:24:19
Sample : BA08369W06 2/35.38
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010317A.M

Vial: 72
Operator: MA,SS
Inst : Herbie
Multiplr: 0.99





Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228173.D\ECD1A.CH Vial: 73
Signal #2 : G:\HERBIE\DATA\200228\0228173.D\ECD2B.CH
Acq On : 03-16-20 18:44:23 Operator: MA,SS
Sample : BA08370W05 2/35.55 Inst : Herbie
Misc : water Multiplr: 0.98
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 17 9:02 2020 Quant Results File: 8010317A.RES

Quant Method : G:\HERBIE\DATA\200228\8010317A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 17 08:16:43 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

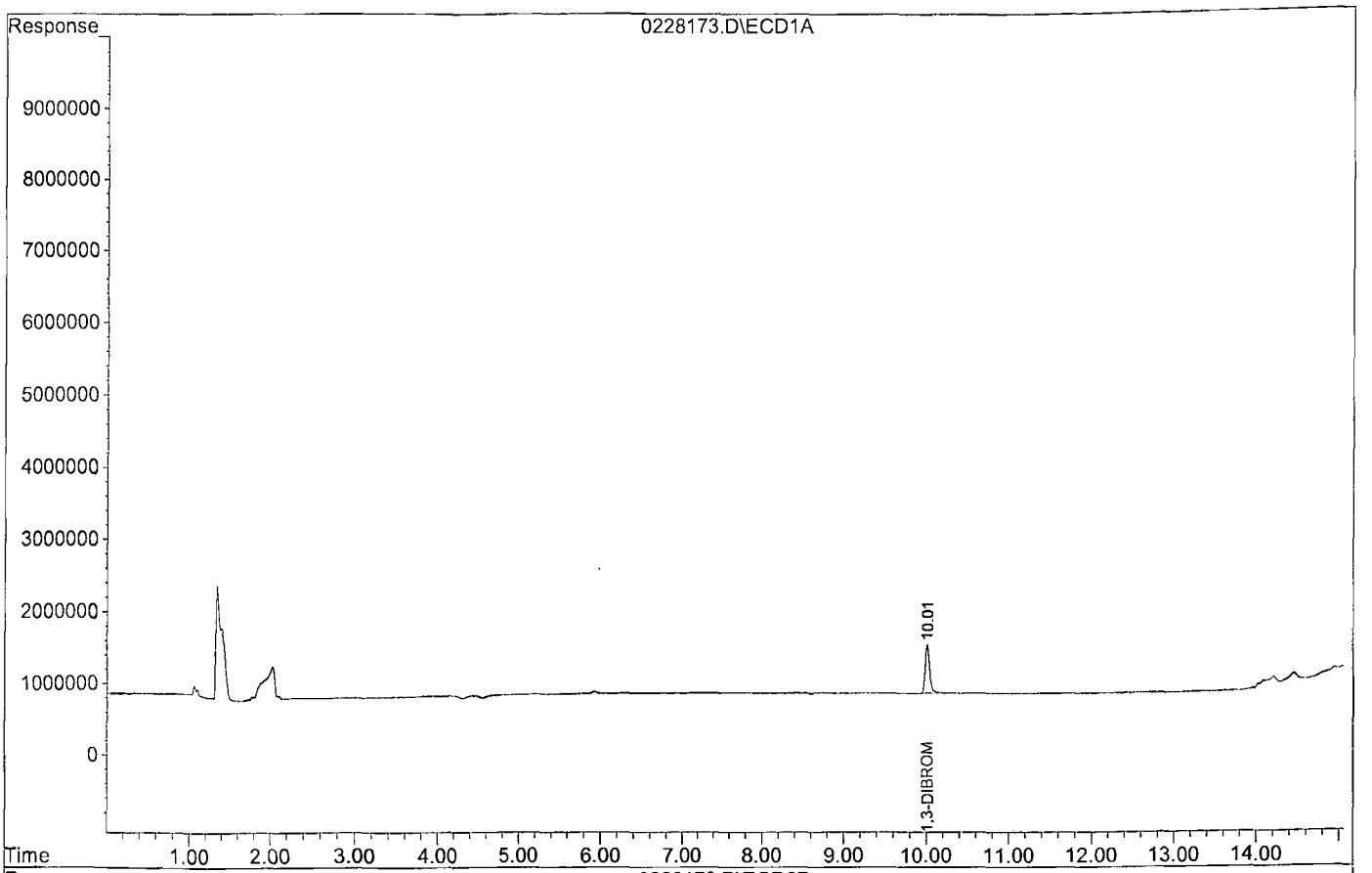
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.01	11.03	666787	1912675	0.325	0.347
Spiked Amount	0.345			Recovery	=	94.32%	100.70%
	Target Compounds						
	Target Compounds						
1) TM	EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM	DBCP	0.00	0.00	0	0	N.D. d	N.D. d

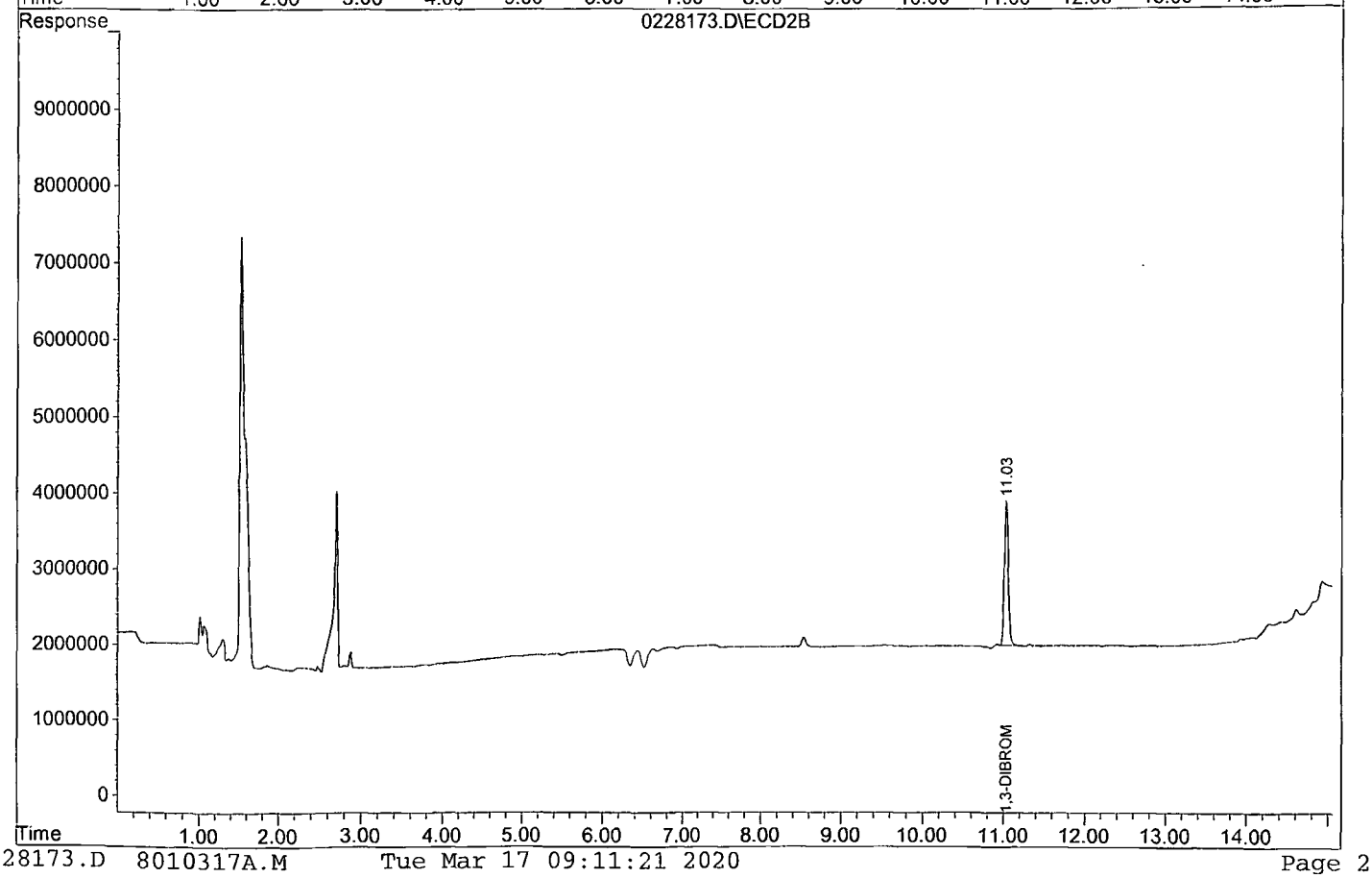
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\200228\0228173.D
Acq On : 03-16-20 18:44:23
Sample : BA08370W05 2/35.55
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010317A.M

Vial: 73
Operator: MA,SS
Inst : Herbie
Multiplr: 0.98





Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228174.D\ECD1A.CH Vial: 74
Signal #2 : G:\HERBIE\DATA\200228\0228174.D\ECD2B.CH
Acq On : 03-16-20 19:04:32 Operator: MA,SS
Sample : BA08371W05 2/35.31 Inst : Herbie
Misc : water Multiplr: 0.99
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 17 9:02 2020 Quant Results File: 8010317A.RES

Quant Method : G:\HERBIE\DATA\200228\8010317A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 17 08:16:43 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

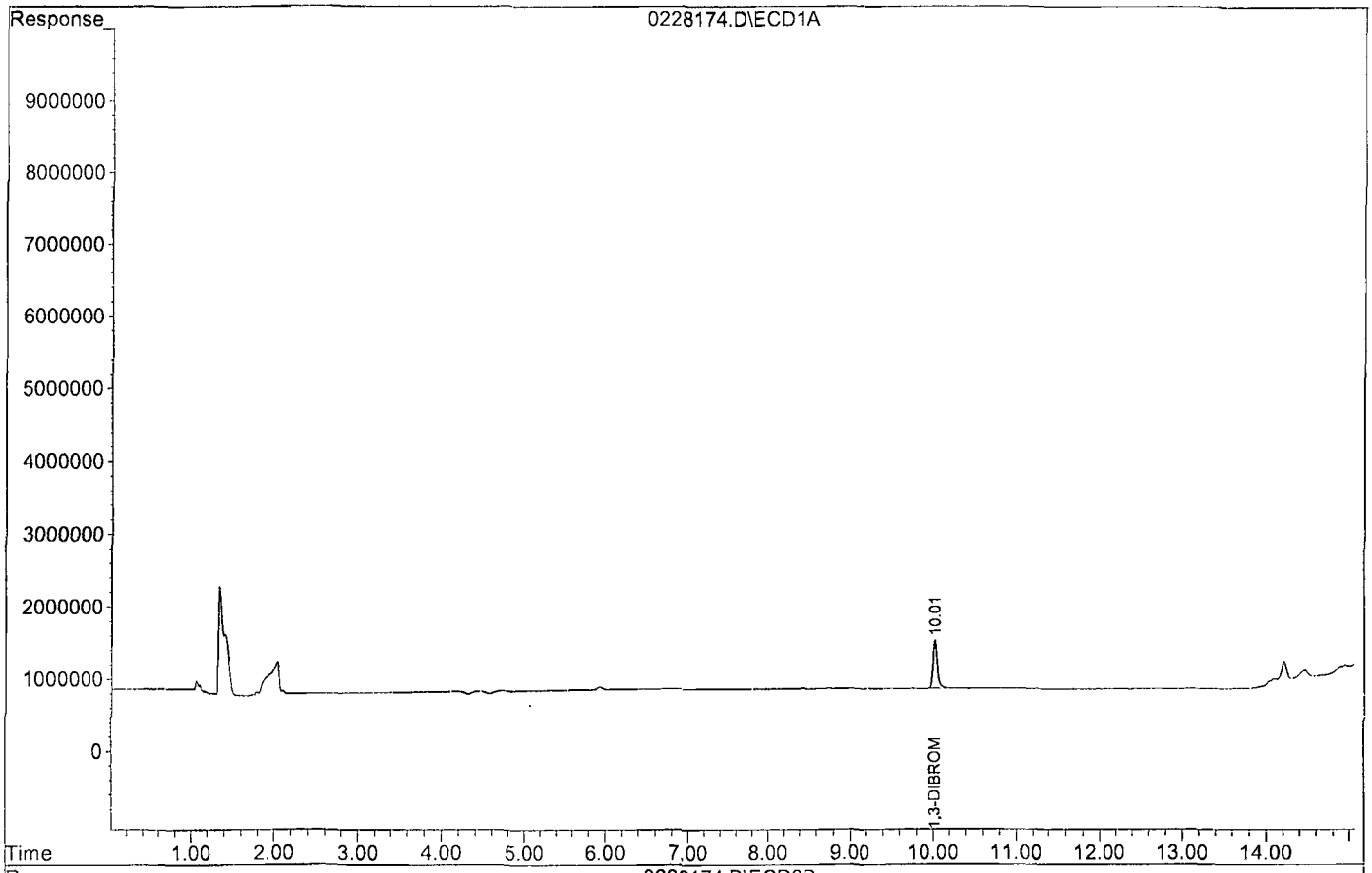
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3)	S 1,3-DIBROMOPROPA	10.01	11.03	663400	1900445	0.326	0.348
	Spiked Amount 0.347			Recovery =		93.97%	100.31%
	Target Compounds						
	Target Compounds						
1)	TM EDB	0.00	0.00	0	0	N.D. d	N.D. d
2)	TM 1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4)	TM DBCP	0.00	0.00	0	0	N.D. d	N.D. d

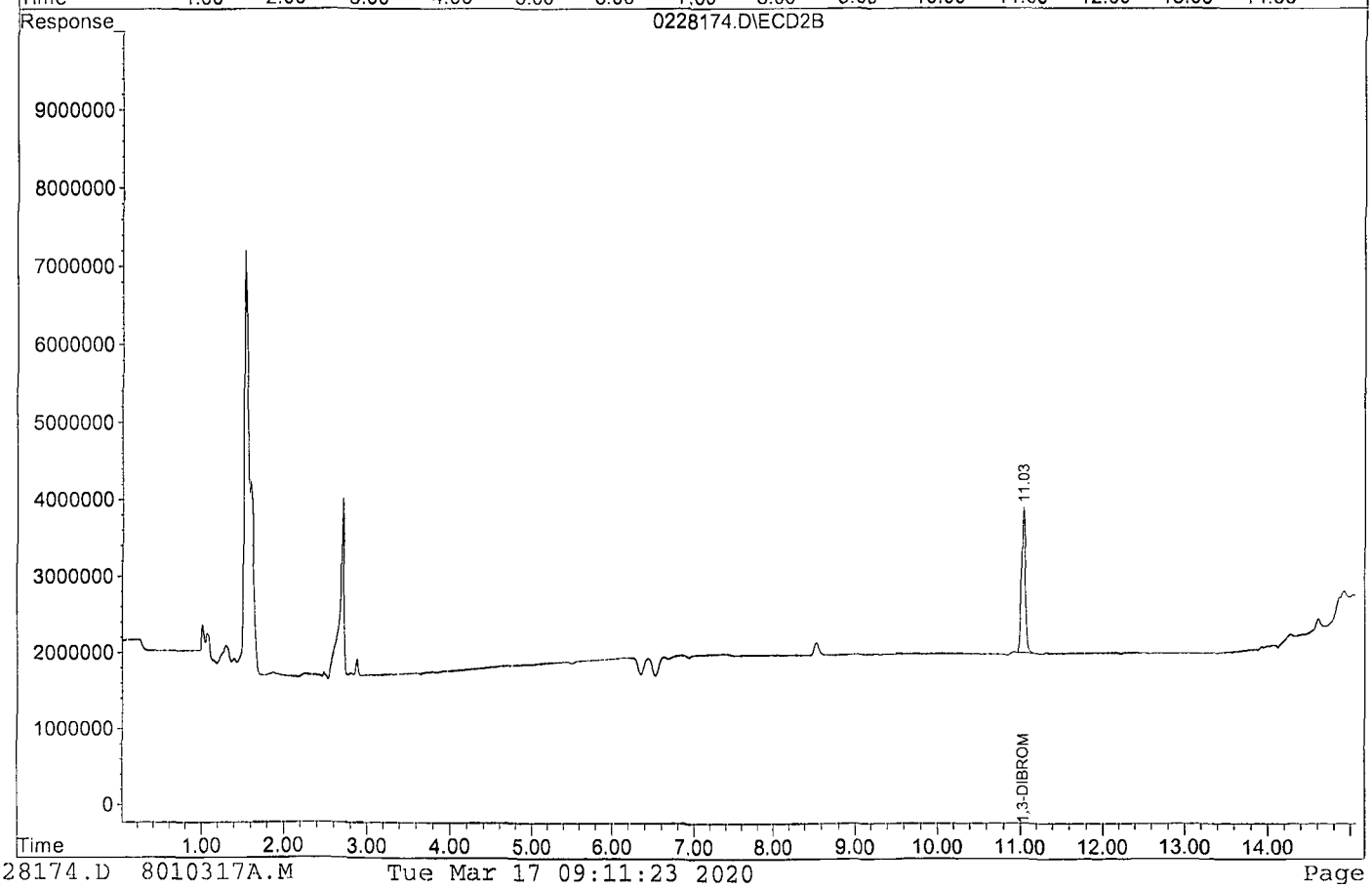
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\200228\0228174.D
Acq On : 03-16-20 19:04:32
Sample : BA08371W05 2/35.31
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010317A.M

Vial: 74
Operator: MA,SS
Inst : Herbie
Multiplr: 0.99





Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228165.D\ECD1A.CH Vial: 65
Signal #2 : G:\HERBIE\DATA\200228\0228165.D\ECD2B.CH
Acq On : 03-16-20 16:03:43 Operator: MA,SS
Sample : 200316A BLK 2/35.58 Inst : Herbie
Misc : water Multiplr: 0.98
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 17 9:06 2020 Quant Results File: 8010317A.RES

Quant Method : G:\HERBIE\DATA\200228\8010317A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 17 08:16:43 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

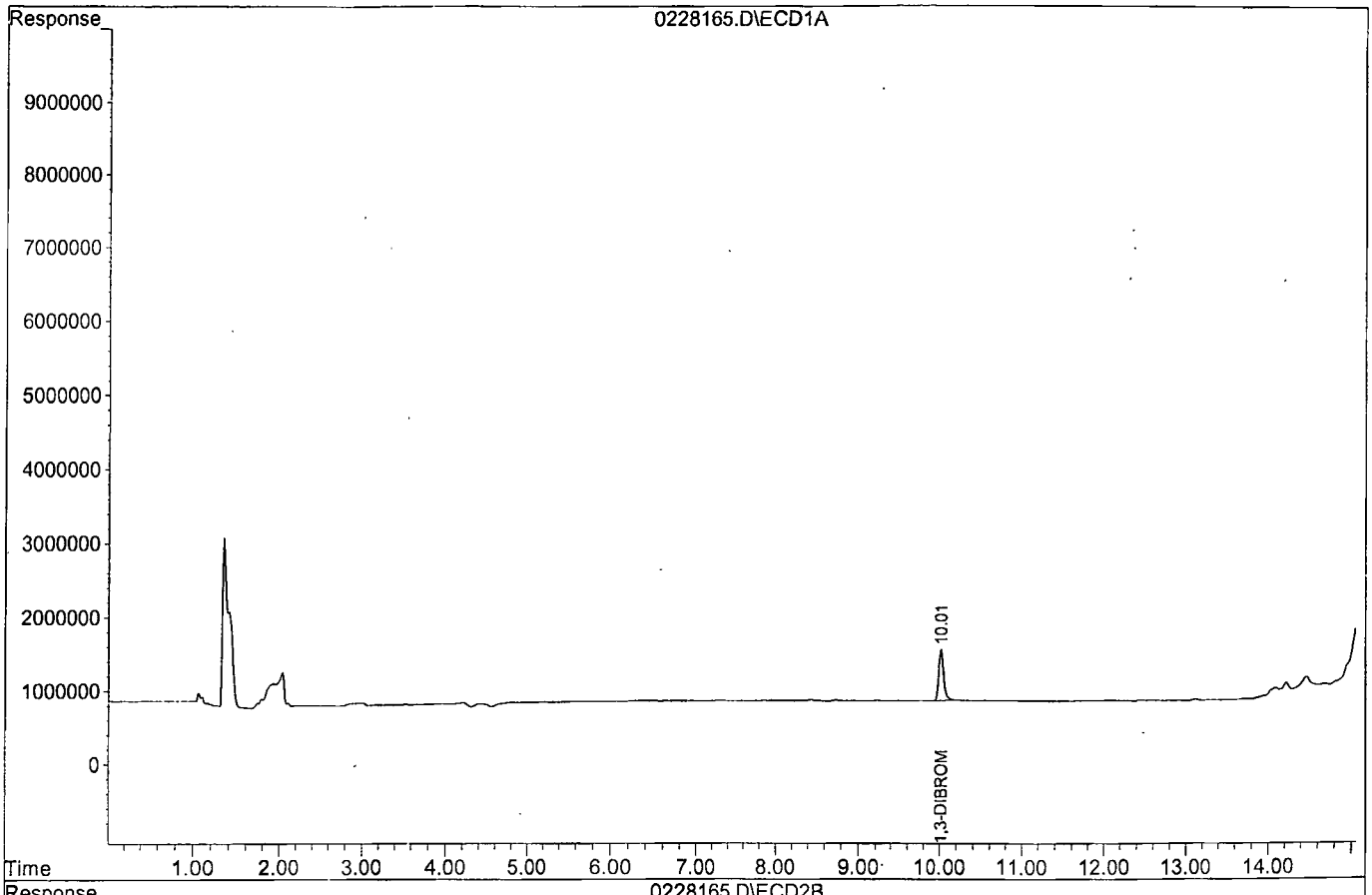
	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.01	11.03	697120	1798067	0.340	0.326
Spiked Amount	0.344			Recovery	=	98.75%	94.69%
	Target Compounds						
	Target Compounds						
1) TM	EDB	0.00	0.00	0	0	N.D. d	N.D. d
2) TM	1,2,3-TCP	0.00	0.00	0	0	N.D. d	N.D. d
4) TM	DBCP	0.00	0.00	0	0	N.D. d	N.D. d

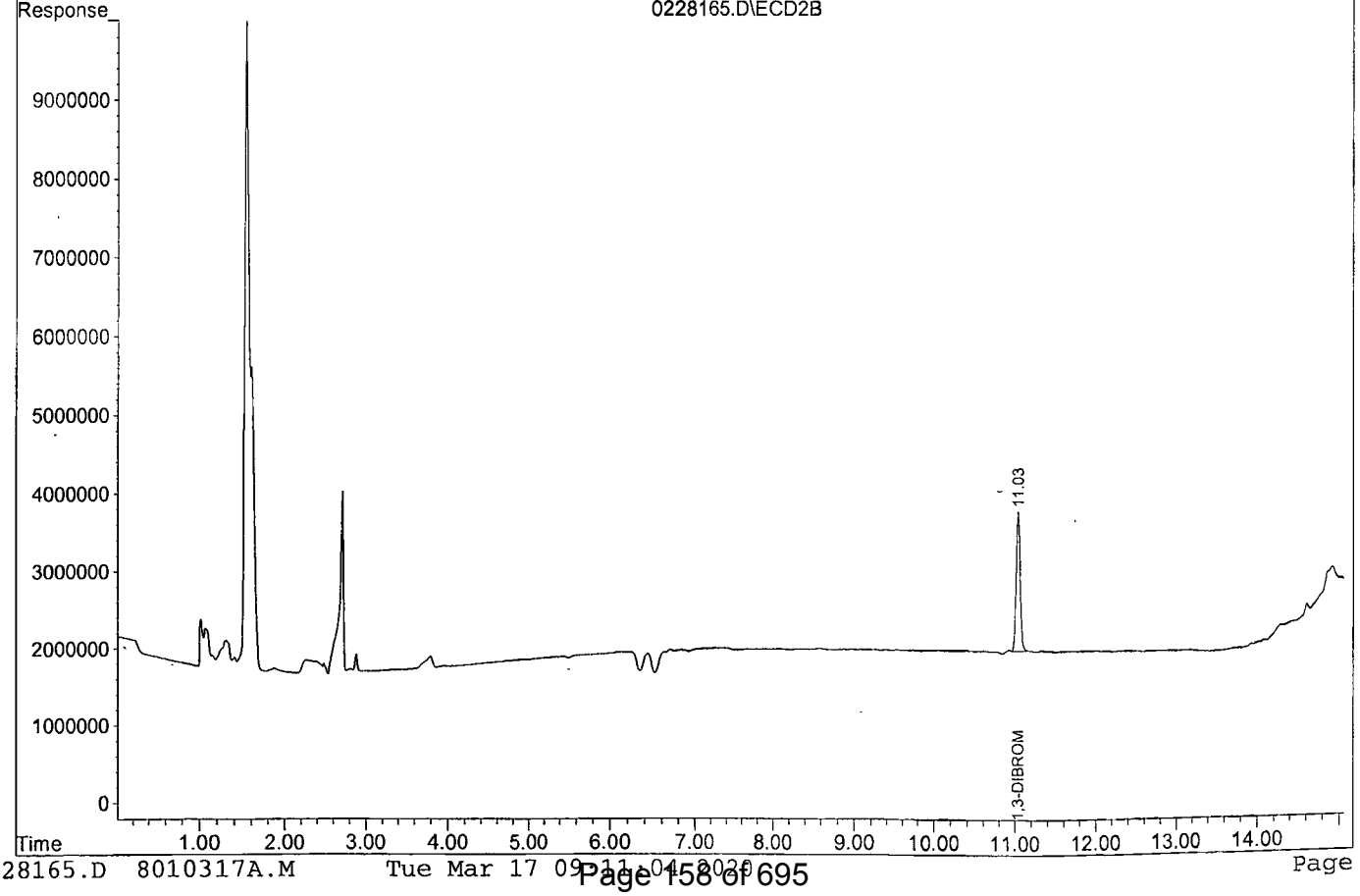
(f)=RT Delta > 1/2 Window (#)=Amounts differ by >25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\200228\0228165.D
Acq On : 03-16-20 16:03:43
Sample : 200316A BLK 2/35.58
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010317A.M

Vial: 65
Operator: MA,SS
Inst : Herbie
Multiplr: 0.98





Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228166.D\ECD1A.CH Vial: 66
Signal #2 : G:\HERBIE\DATA\200228\0228166.D\ECD2B.CH
Acq On : 03-16-20 16:23:50 Operator: MA,SS
Sample : 200316A LCS-1 2/35.11 Inst : Herbie
Misc : water Multiplr: 1.00
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 17 9:01 2020 Quant Results File: 8010317A.RES

Quant Method : G:\HERBIE\DATA\200228\8010317A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 17 08:16:43 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
System Monitoring Compounds						
3) S 1,3-DIBROMOPROPA	10.01	11.03	466699	1315594	0.230	0.242
Spiked Amount 0.349			Recovery =		65.92%	69.36%
Target Compounds						
1) TM EDB	5.79	7.21	399960	1840429	0.238	0.240
2) TM 1,2,3-TCP	9.25	10.44	112937	331683	0.246	0.253
4) TM DBCP	13.34	14.08	1395353	5055999	0.234	0.239

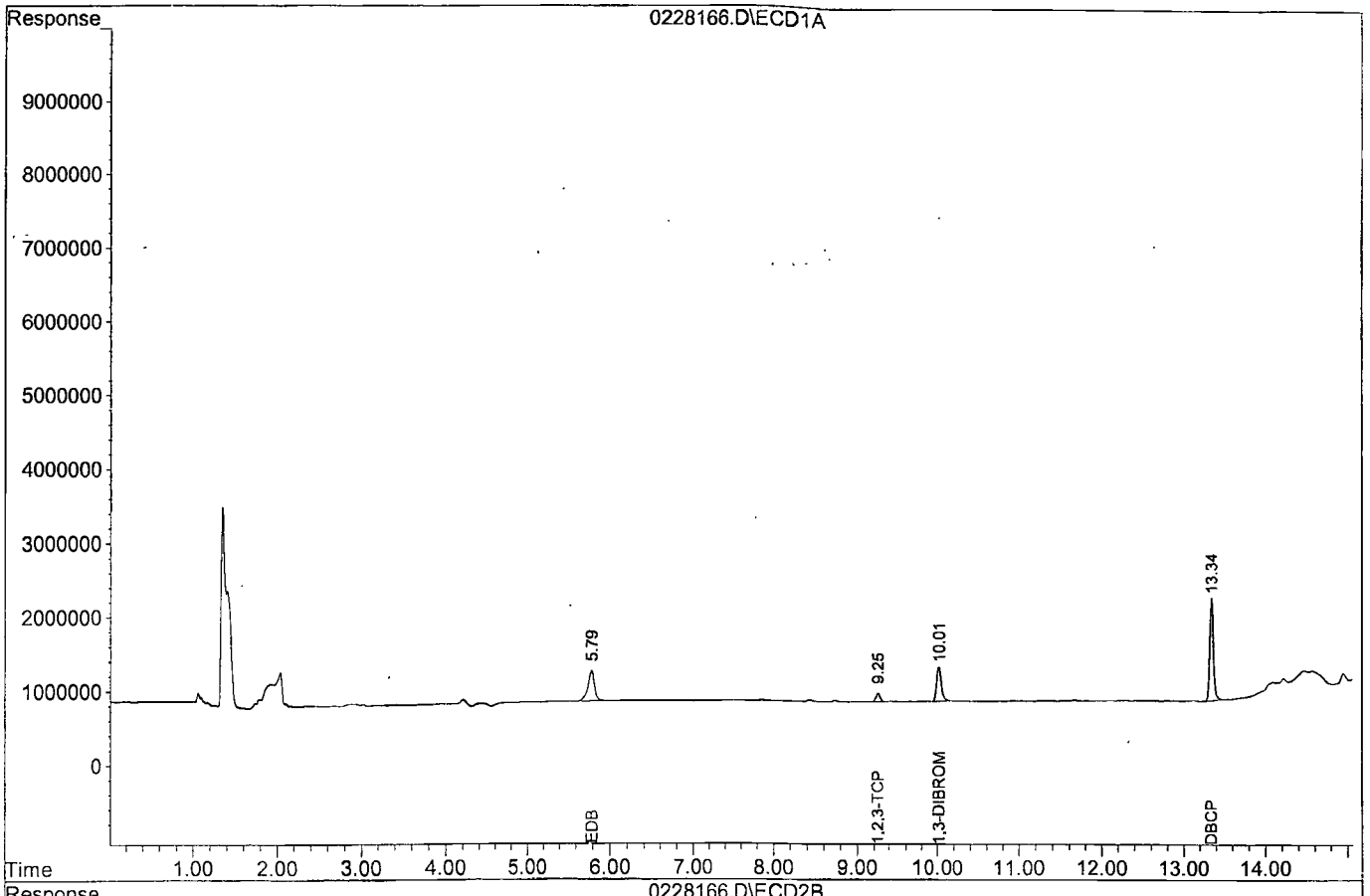
Target Compounds

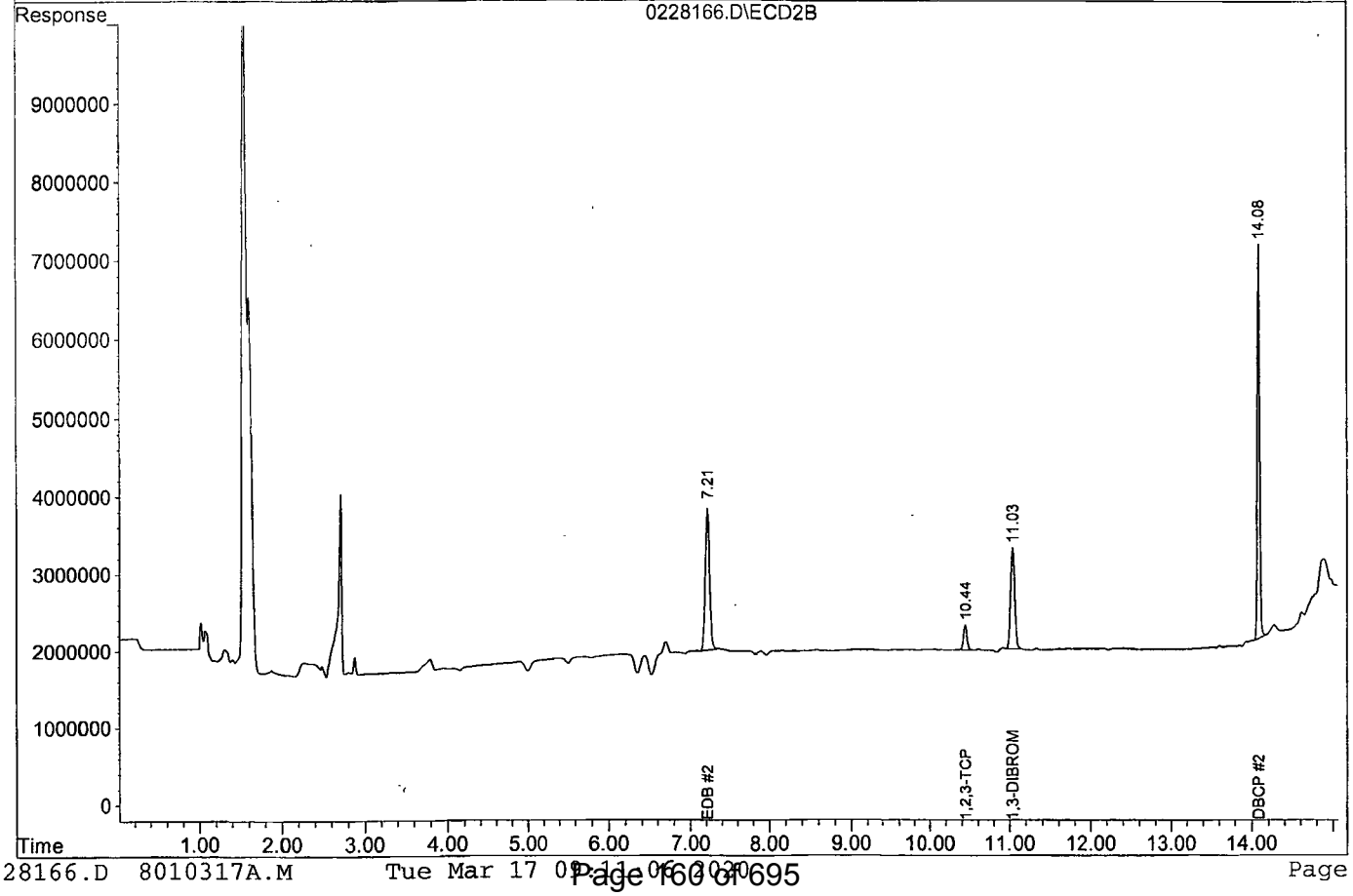
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\200228\0228166.D
Acq On : 03-16-20 16:23:50
Sample : 200316A LCS-1 2/35.11
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010317A.M

Vial: 66
Operator: MA,SS
Inst : Herbie
Multiplr: 1.00





Quantitation Report (QT Reviewed)

Signal #1 : G:\HERBIE\DATA\200228\0228167.D\ECD1A.CH Vial: 67
Signal #2 : G:\HERBIE\DATA\200228\0228167.D\ECD2B.CH
Acq On : 03-16-20 16:43:55 Operator: MA,SS
Sample : 200316A LCSD-1 2/35.99 Inst : Herbie
Misc : water Multiplr: 0.97
IntFile Signal #1: rteint.p IntFile Signal #2: rteint2.p
Quant Time: Mar 17 9:01 2020 Quant Results File: 8010317A.RES

Quant Method : G:\HERBIE\DATA\200228\8010317A.M (RTE Integrator)
Title : 504.1 OR 8011
Last Update : Tue Mar 17 08:16:43 2020
Response via : Initial Calibration
DataAcq Meth : DOHS504.M

Volume Inj. : 2µL
Signal #1 Phase : DB-35MS Signal #2 Phase: DB-XLB
Signal #1 Info : 0.25 Signal #2 Info : 0.50

	Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
	System Monitoring Compounds						
3) S	1,3-DIBROMOPROPA	10.01	11.03	482030	1367318	0.232	0.245
Spiked Amount	0.340			Recovery	=	68.16%	71.98%
	Target Compounds						
1) TM	EDB	5.78	7.21	408743	1875836	0.237	0.238
2) TM	1,2,3-TCP	9.24	10.44	115025	342665	0.245	0.255
4) TM	DBCP	13.34	14.08	1437335	5276980	0.235	0.243

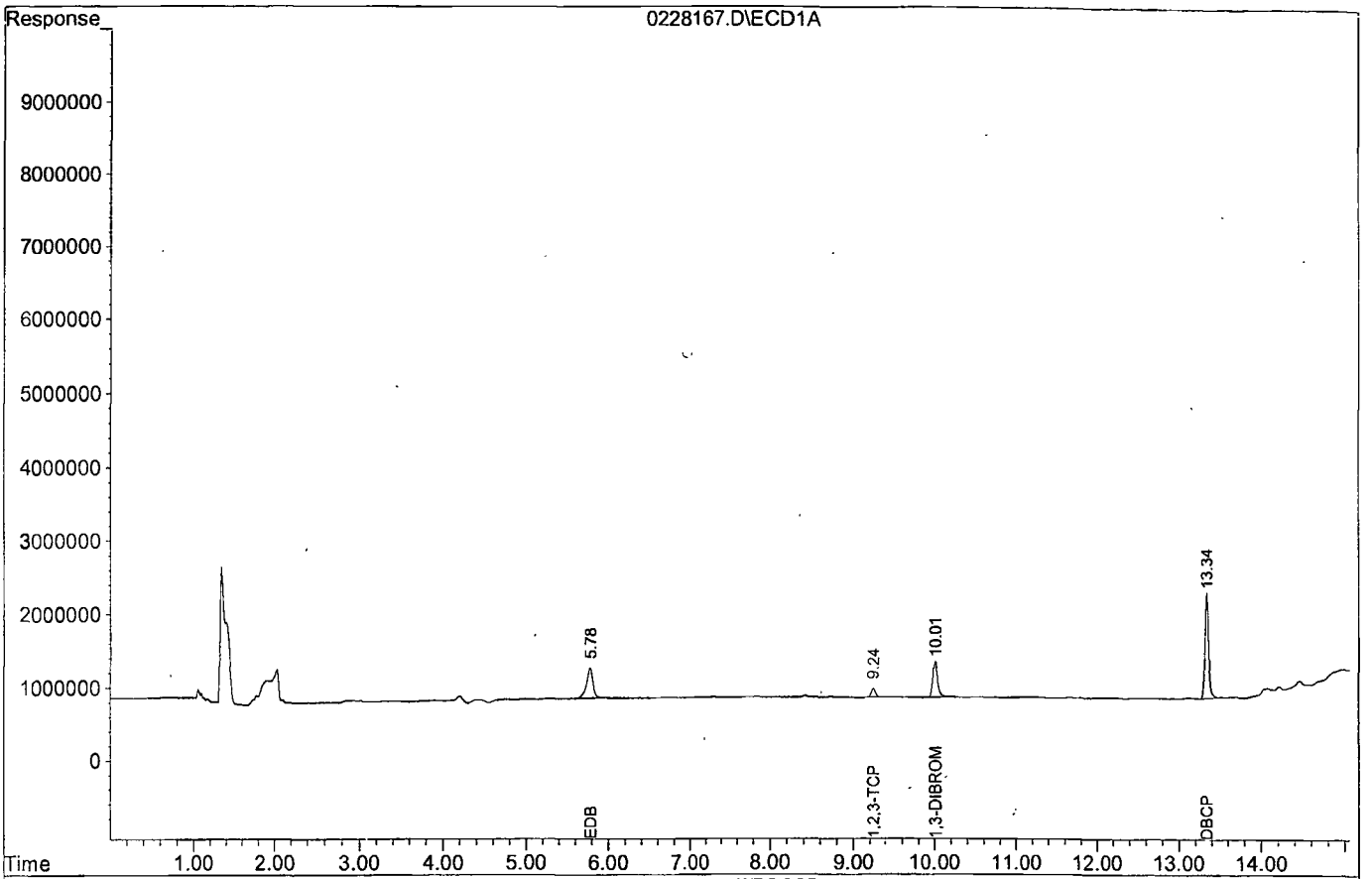
Target Compounds

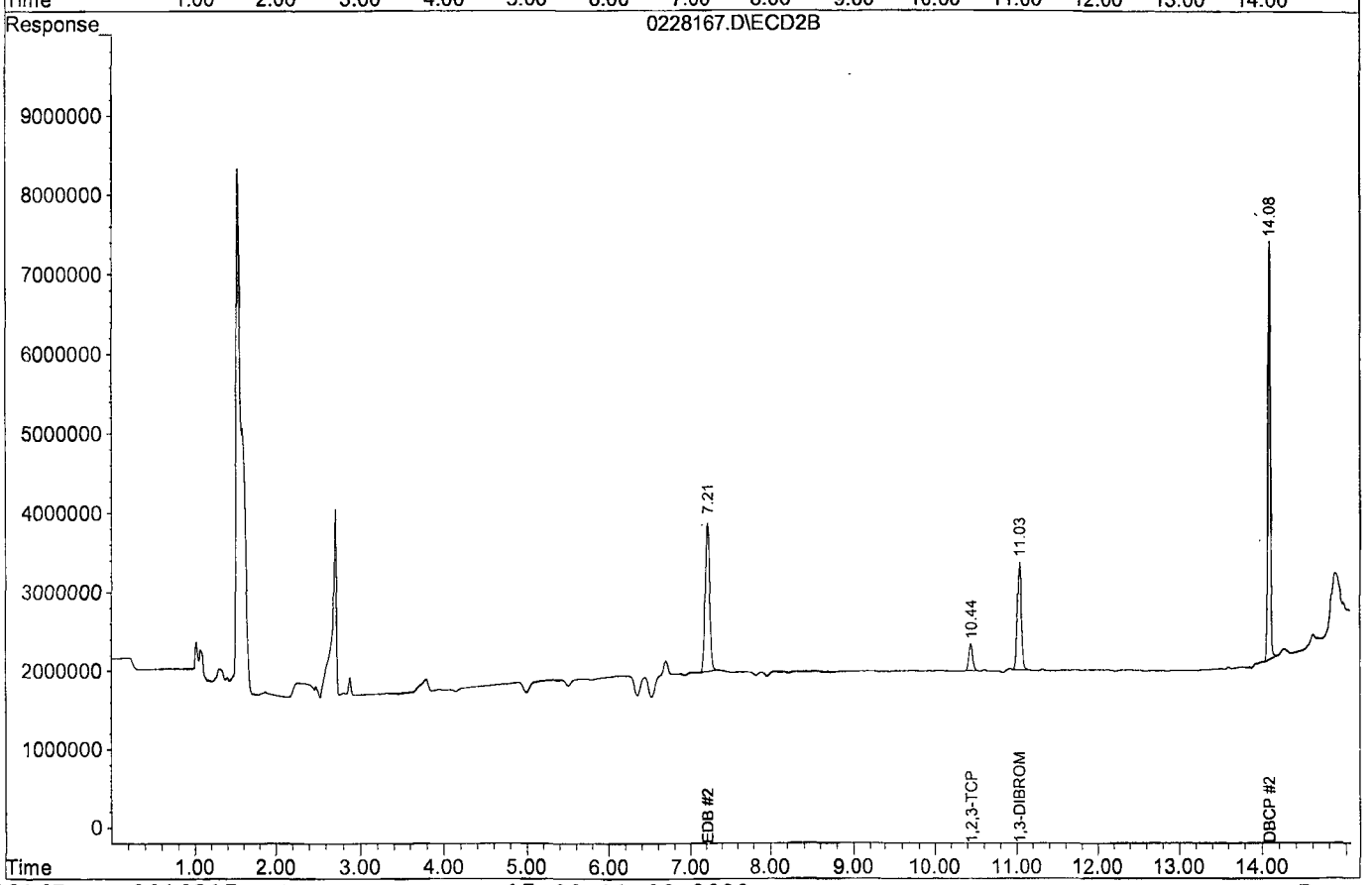
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 20% (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\HERBIE\DATA\200228\0228167.D
Acq On : 03-16-20 16:43:55
Sample : 200316A LCSD-1 2/35.99
Misc : water
Quant Method : G:\HERBIE\DATA\200228\8010317A.M

Vial: 67
Operator: MA,SS
Inst : Herbie
Multiplr: 0.97





Name of Final Standard: 504/8011 Spike
Prep'd By (Initials): SS
Prep Date: 03/16/20
Exp Date: 05/08/20

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
504/8011 Stock	APPL	504/8011 Stock	0.35 ug/mL	**01/08/20**	**05/08/20**	2.5 mL	25 mL	**Methanol #208858**	0.035 ug/mL

Name of Final Standard 504/8011 Surrogate **Prep'd By (Initials)** GA

Prep Date 01/08/20

Exp Date 05/08/20

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
1,3 DBP Stock	APPL	1,3 DBP Stock	100 ug/mL	01/07/20	01/07/21	35 uL	10 mL	Methanol #208858	0.35ug/ml

Name of Final Standard 504/8011 Stock **Prep'd By (Initials)** GA

Prep Date 01/08/20

Exp Date 05/08/20

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
504/DOHS Stock	APPL	504/DOHS Stock	20 ug/mL	01/07/20	01/07/21	438 uL	25 mL	Methanol #208858	0.35 ug/mL
1,3 DBP Stock	APPL	1,3 DBP Stock	100 ug/mL	01/07/20	01/07/21	88 uL	"	"	"

Name of Final Standard	**504/8011 SS SPK**	**Prep'd By (Initials)**	**GA**
Prep Date	**08/07/19**		
Exp Date	**04/16/20**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
504/8011 SS Stock	APPL	504/8011 SS Stock	0.35 ug/mL	**01/22/19**	**01/06/20**	1 mL	10 mL	**Methanol #042317C**	0.035 ug/mL

Re-certified on 01/16/20 against 504/8011 Spike (prep. 01.08.20). Extended expiration by 3 months. Injection #1126237 on Herbie 191126 sequence. GA

Organic Extraction Worksheet

Method	EPA Method 8011 DBCP/EDB	Extraction Set	200316A	Extraction Method	MWE012	Units	mL

Spiked ID 1	504.1 Spike 3-16-20 5-8-20		Surrogate ID 1	504.1 Surrogate 1-8-20 5-8-20	
Spiked ID 2	504.1 SS Spike 8-7-19 4-16-20		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	03/16/20 9:55	
Spiked ID 8			Ext. End Time:	03/16/20 11:10	
			GC Requires Extract By:		

pH1			Water Bath Temp 1 °C	
pH2			Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: KY **Date** 03/16/20 **Witnessed By:** CFM **Date** 03/16/20

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	200316A Blk				0.035	1 equip	35.58	2	7	03/16/20 9:55	
2	200316A LCS-1		0.250	1	NA	NA equip	35.11	2	7	03/16/20 9:55	
3	200316A LCSD-1		0.250	1	NA	NA equip	35.99	2	7	03/16/20 9:55	
4	BA08340	BA08340W07			0.035	1 equip	35.60	2	7	03/16/20 9:55	91638
5	BA08341 MS-1	BA08341W13	0.250	1	NA	NA equip	35.50	2	7	03/16/20 9:55	91638
6	BA08341 MSD-1	BA08341W14	0.250	1	NA	NA equip	35.87	2	7	03/16/20 9:55	91638
7	BA08341	BA08341W12			0.035	1 equip	35.15	2	7	03/16/20 9:55	91638
8	BA08369	BA08369W06			0.035	1 equip	35.38	2	7	03/16/20 9:55	91653
9	BA08370	BA08370W05			0.035	1 equip	35.55	2	7	03/16/20 9:55	91653
10	BA08371	BA08371W05			0.035	1 equip	35.31	2	7	03/16/20 9:55	91653
11	M STD 1		0.020	1	NA	NA equip	35.83	2	7	03/16/20 9:55	
12	M STD 2		0.100	1	NA	NA equip	35.09	2	7	03/16/20 9:55	
13	M STD 3		0.250	1	NA	NA equip	35.15	2	7	03/16/20 9:55	
14	M STD 4		0.500	1	NA	NA equip	35.03	2	7	03/16/20 9:55	
15	M STD 5		0.750	1	NA	NA equip	35.01	2	7	03/16/20 9:55	
16	M STD 6		1	1	NA	NA equip	35.64	2	7	03/16/20 9:55	

Solvent and Lot#	
Scale Blance ID	EB1
pH strip	HC998032
NaCL	19A035211
GC2 Hexane (2mLs)	DV910

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	SS
Date	3/16/20
Time	12:30
Refrigerator	HOBART

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

Modified	03/16/20 12:32:21 PM

Reviewed By: KY **Date** 03/16/20

03/17/20 9:20:13 AM Ext_ID 66321

Organic Extraction Worksheet

Method	EPA Method 8011 DBCP/EDB	Extraction Set	200316A	Extraction Method	MWE012	Units	mL

Spiked ID 1	504.1 Spike 3-16-20 5-8-20		Surrogate ID 1	504.1 Surrogate 1-8-20 5-8-20	
Spiked ID 2	504.1 SS Spike 8-7-19 4-16-20		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	03/16/20 9:55	
Spiked ID 8			Ext. End Time:	03/16/20 11:10	
			GC Requires Extract By:		

pH1			Water Bath Temp 1 °C	
pH2			Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: KY **Date** 03/16/20 **Witnessed By:** CFM **Date** 03/16/20

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
17	SS		0.100	2	0.035	1	35.29	2	7	03/16/20 9:55	
						equip					

Solvent and Lot#	
Scale Blance ID	EB1
pH strip	HC998032
NaCL	19A035211
GC2 Hexane (2mLs)	DV910

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

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

Modified	03/16/20 12:32:21 PM

Reviewed By: KY **Date** 03/16/20

03/17/20 9:20:13 AM Ext_ID 66321 Page 2 of 2

Injection Log

Directory: G:\HERBIE\DATA\200228\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	58	0228158.D	1	8011-1 3/16/20	water	03-16-20 13:43:09
2	59	0228159.D	1	8011-2 3/16/20	water	03-16-20 14:03:11
3	60	0228160.D	1	8011-3 3/16/20	water	03-16-20 14:23:19
4	61	0228161.D	1	8011-4 3/16/20	water	03-16-20 14:43:23
5	62	0228162.D	1	8011-5 3/16/20	water	03-16-20 15:03:24
6	63	0228163.D	1	8011-6 3/16/20	water	03-16-20 15:23:35
7	64	0228164.D	1	8011-SS 3/16/20	water	03-16-20 15:43:36
8	65	0228165.D	0.9837	200316A BLK 2/35.58	water	03-16-20 16:03:43
9	66	0228166.D	0.996867	200316A LCS-1 2/35.11	water	03-16-20 16:23:50
10	67	0228167.D	0.97249	200316A LCSD-1 2/35.99	water	03-16-20 16:43:55
11	72	0228172.D	0.98926	BA08369W06 2/35.38	water	03-16-20 18:24:19
12	73	0228173.D	0.98453	BA08370W05 2/35.55	water	03-16-20 18:44:23
13	74	0228174.D	0.99122	BA08371W05 2/35.31	water	03-16-20 19:04:32
14	75	0228175.D	1	8011-4 3/16/20	water	03-16-20 19:24:42

ORGANICS
Calibration Data

TPH Extractables
DOC0310

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 03/10/20
Matrix: Water Instrument: Apollo
Initials: SS/M

			310003.D	310004.D	310005.D	310006.D	310007.D	310008.D										
		Compound	1	2	3	4	5	6					Avg	%RSD	Type	r^2	Q
1	HATM	Diesel (C10-C24)	1402793	2048774	1956346	1950680	1978298	2168778					1917612	14	HATM		
2	HBTM	Motor Oil (C24-C40)	1787356	1629558	1383257	1334462	1324161	1387579					1474395	13	HBTM		
3	SA	Ortho-Terphenyl(S)	2782070	2786055	2347676	2294556	2308475	2544283					2510519	9.2	SA		
4	SA	Octacosane(S)	1771075	1912436	1683790	1654254	1670744	1785274					1746262	5.6	SA		
5																	
6																	
7																	
8																	
9																	
10																	
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1.184705

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310003.D Vial: 3
Acq On : 3-10-20 9:37:22 Operator: SS
Sample : Diesel Motor Oil-1 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 10 11:58 2020 Quant Results File: DOC0310.RES

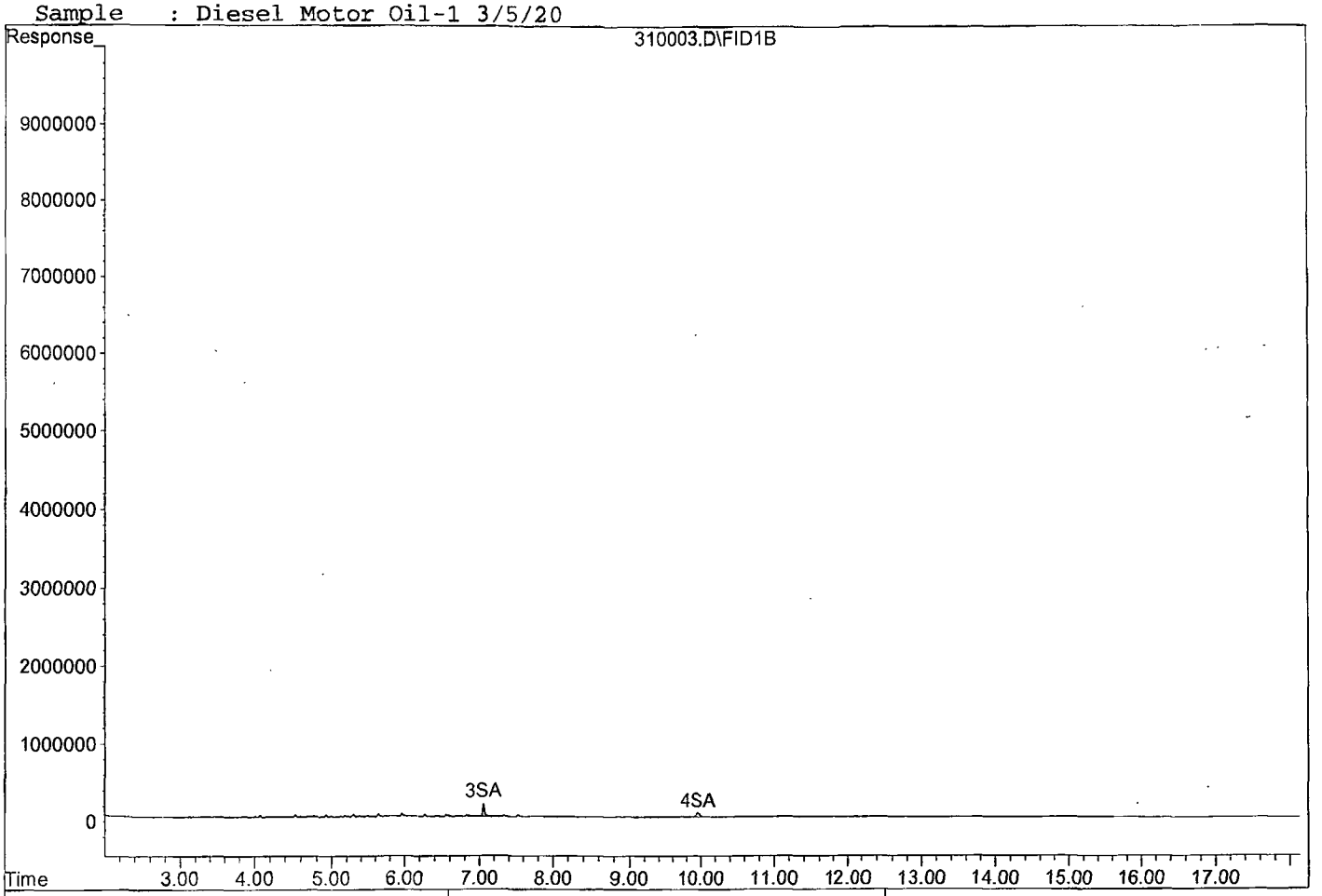
Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

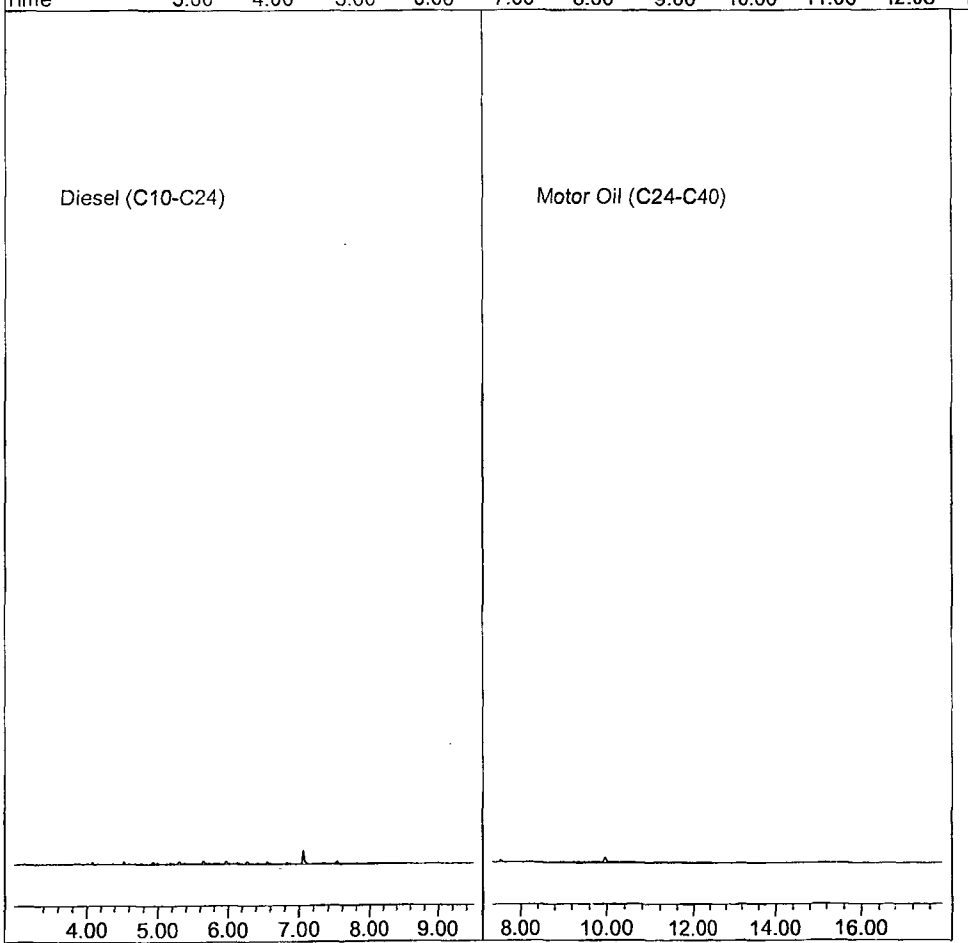
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.06	2782070	0.554 ppb
Surrogate Spike 30.000	Recovery =		1.85%
4) SA Octacosane(S)	9.97	1771075	0.507 ppb
Surrogate Spike 30.000	Recovery =		1.69%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	28055866	7.315 ppb
2) HBTM Motor Oil (C24-C40)	12.60	35747115	12.123 ppb
Target Compounds			

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

Data File: G:\APOLLO\DATA\200310\310003.D
Sample : Diesel Motor Oil-1 3/5/20





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310004.D Vial: 4
Acq On : 3-10-20 9:59:49 Operator: SS
Sample : Diesel Motor Oil-2 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 10 11:58 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

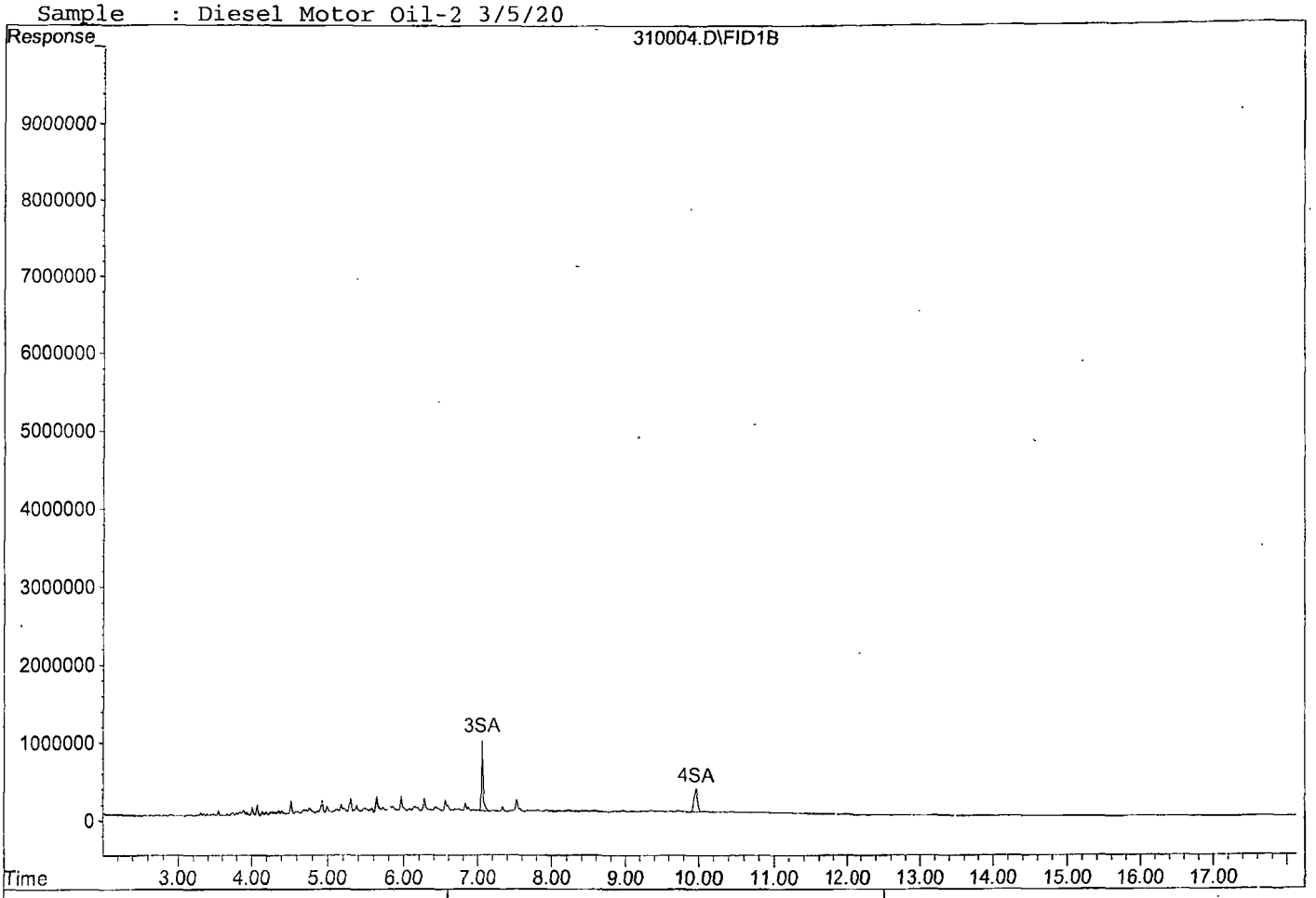
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

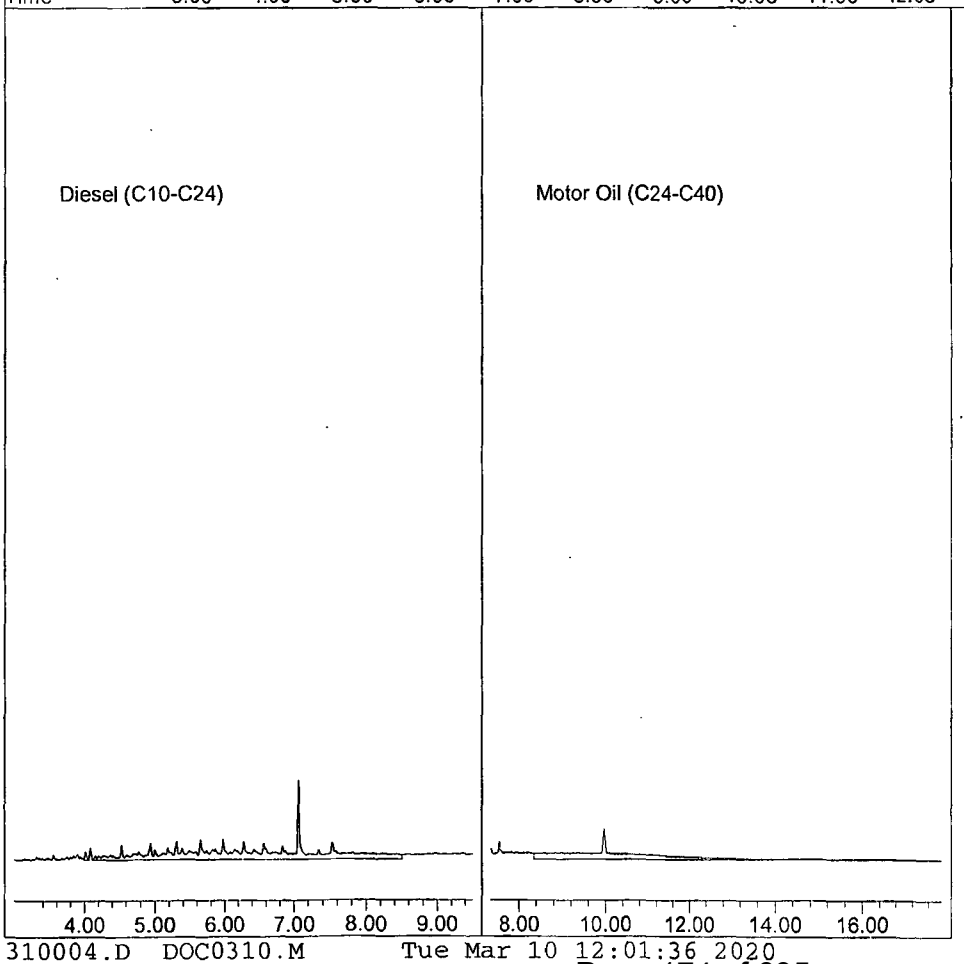
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.06	13930276	2.774 ppb
Surrogate Spike 30.000	Recovery =		9.25%
4) SA Octacosane(S)	9.97	9562178	2.738 ppb
Surrogate Spike 30.000	Recovery =		9.13%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	204877430	53.420 ppb
2) HBTM Motor Oil (C24-C40)	12.60	162955782	55.262 ppb

Target Compounds

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

Data File: G:\APOLLO\DATA\200310\310004.D
Sample : Diesel Motor Oil-2 3/5/20





310004.D DOC0310.M Tue Mar 10 12:01:36 2020

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310005.D Vial: 5
Acq On : 3-10-20 10:22:19 Operator: SS
Sample : Diesel Motor Oil-3 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 10 11:58 2020 Quant Results File: DOC0310.RES

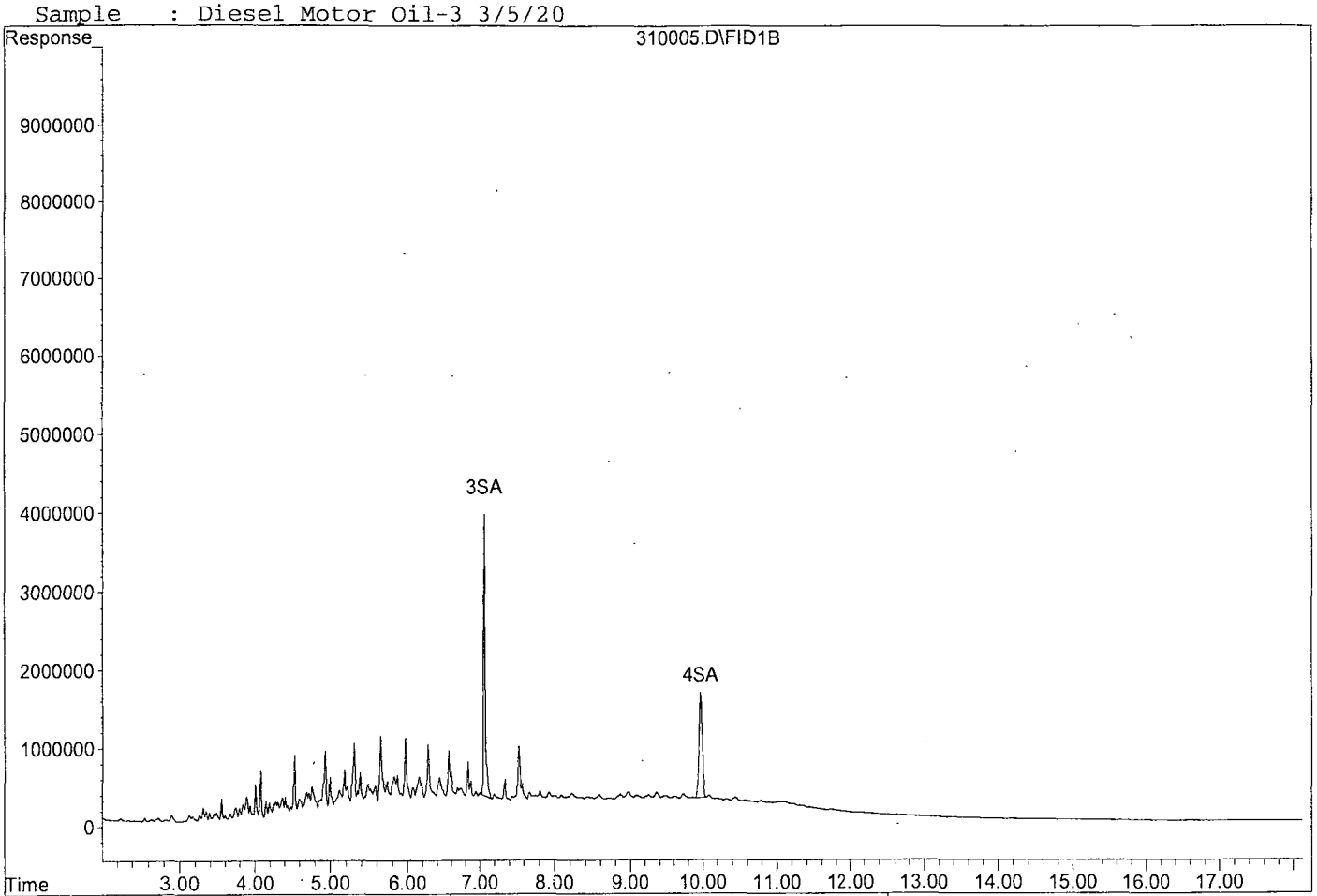
Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

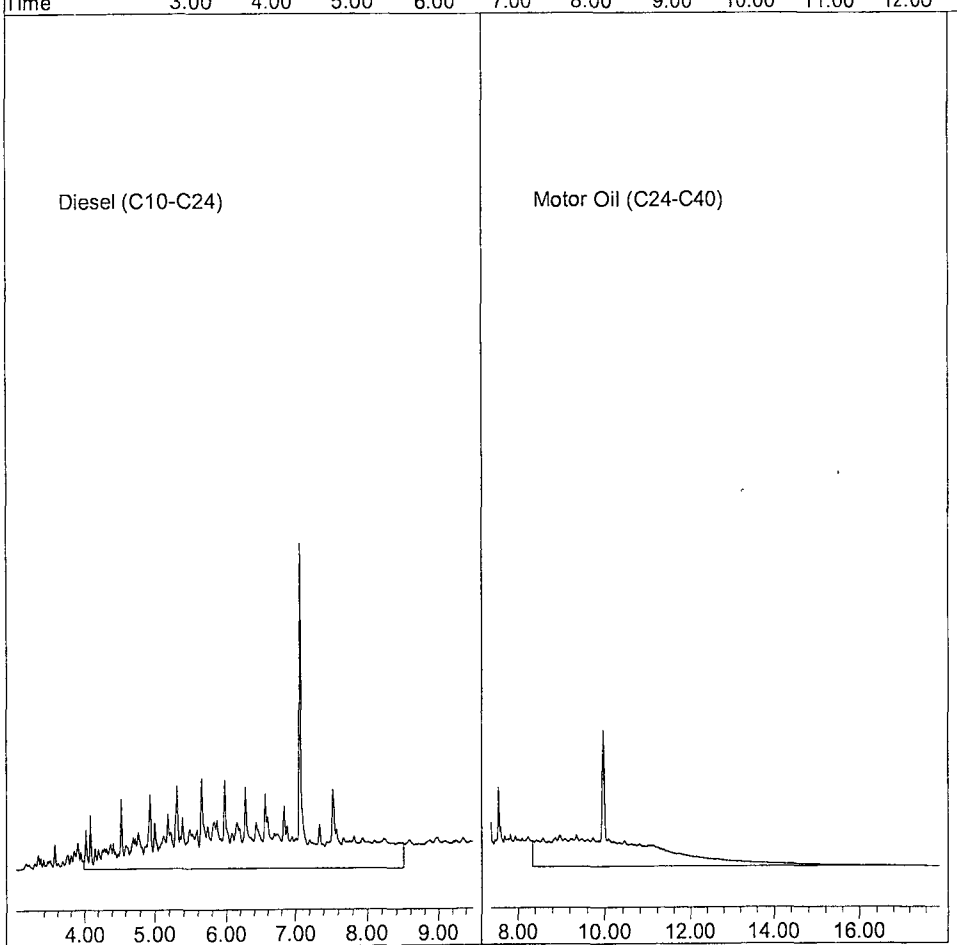
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.06	58691912	11.689 ppb
Surrogate Spike 30.000		Recovery =	38.96%
4) SA Octacosane(S)	9.97	42094760	12.053 ppb
Surrogate Spike 30.000		Recovery =	40.18%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	978173133	255.050 ppb
2) HBTM Motor Oil (C24-C40)	12.60	691628331	234.546 ppb
Target Compounds			

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

Data File: G:\APOLLO\DATA\200310\310005.D
Sample : Diesel Motor Oil-3 3/5/20





310005.D DOC0310.M Tue Mar 10 12:01:38 2020

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310006.D Vial: 6
Acq On : 3-10-20 10:44:50 Operator: SS
Sample : Diesel Motor Oil-4 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 10 11:58 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

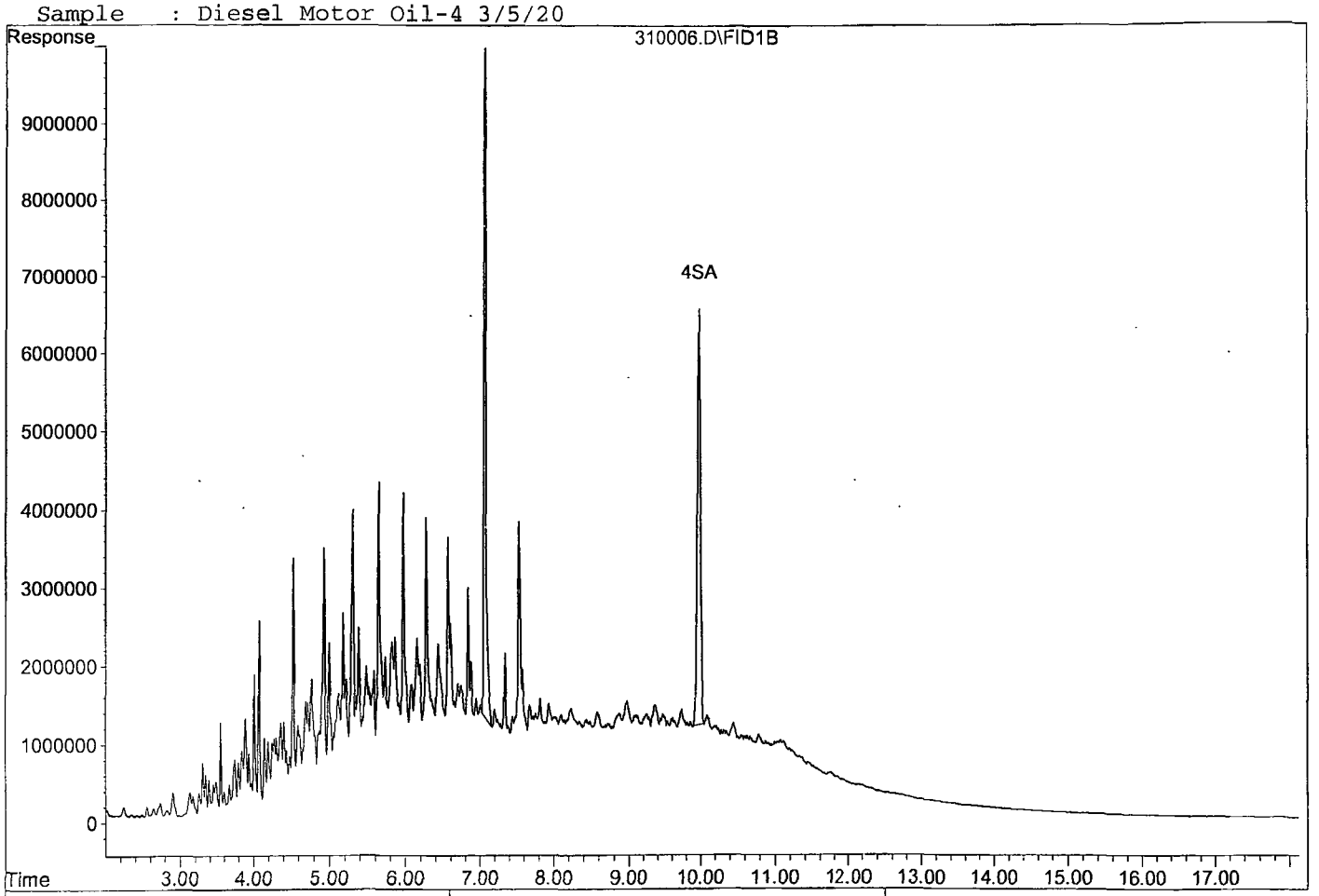
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

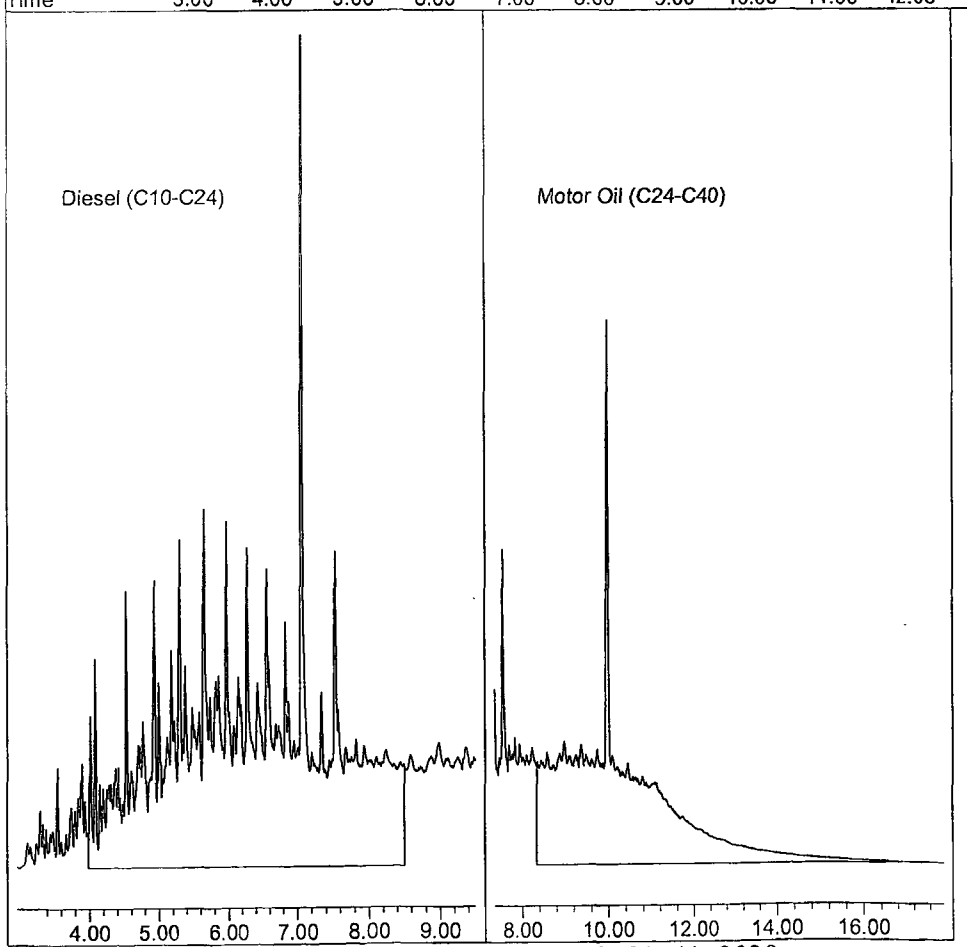
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.07	229455620	45.699	ppb
Surrogate Spike 30.000	Recovery =		152.33%	
4) SA Octacosane(S)	9.98	165425400	47.366	ppb
Surrogate Spike 30.000	Recovery =		157.89%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.24	3901360613	1017.245	ppb
2) HBTM Motor Oil (C24-C40)	12.60	2668923786	905.091	ppb

Target Compounds

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

Data File: G:\APOLLO\DATA\200310\310006.D
Sample : Diesel Motor Oil-4 3/5/20





310006.D DOC0310.M Tue Mar 10 12:01:41 2020

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310007.D Vial: 7
Acq On : 3-10-20 11:07:20 Operator: SS
Sample : Diesel Motor Oil-5 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 10 11:58 2020 Quant Results File: DOC0310.RES

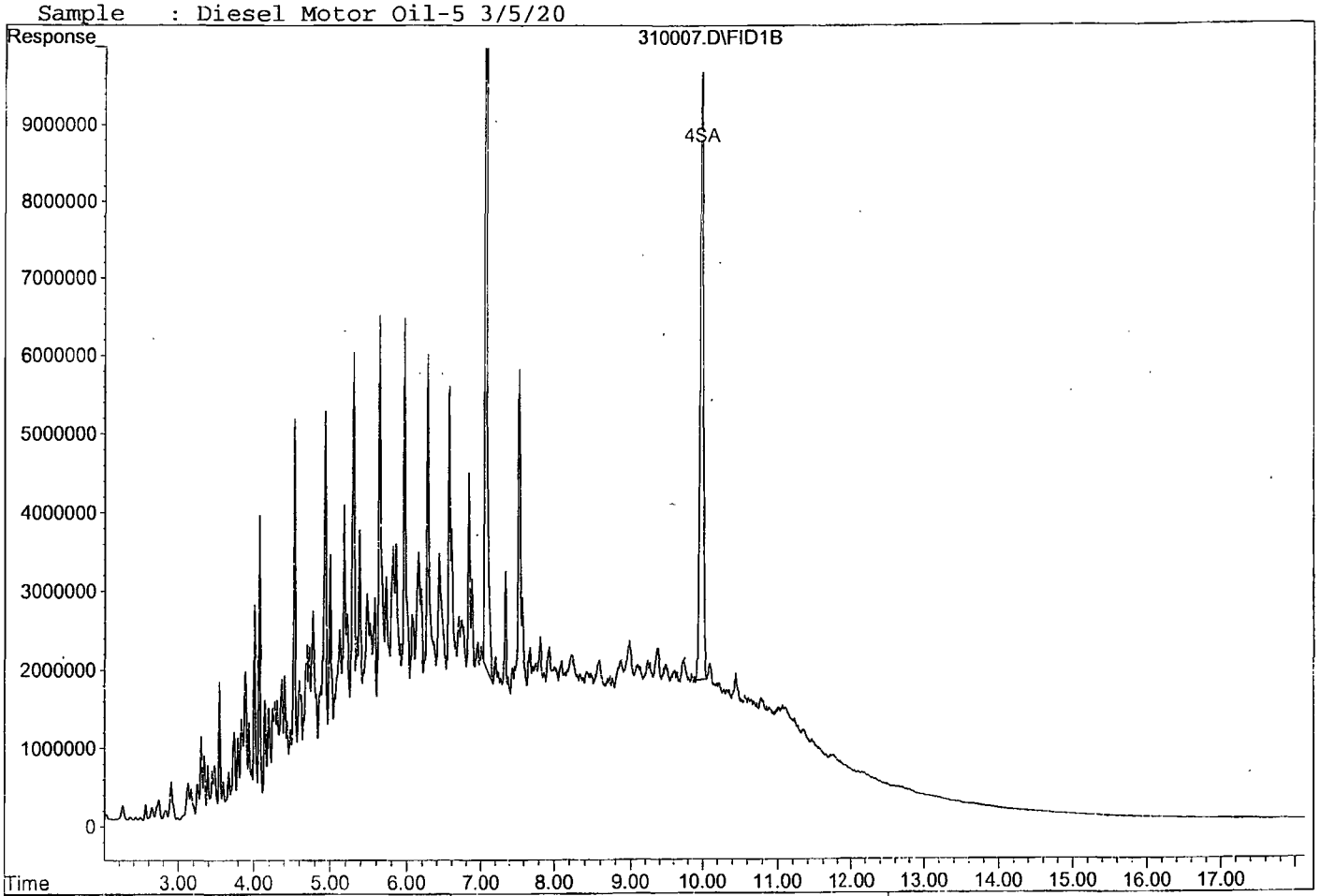
Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

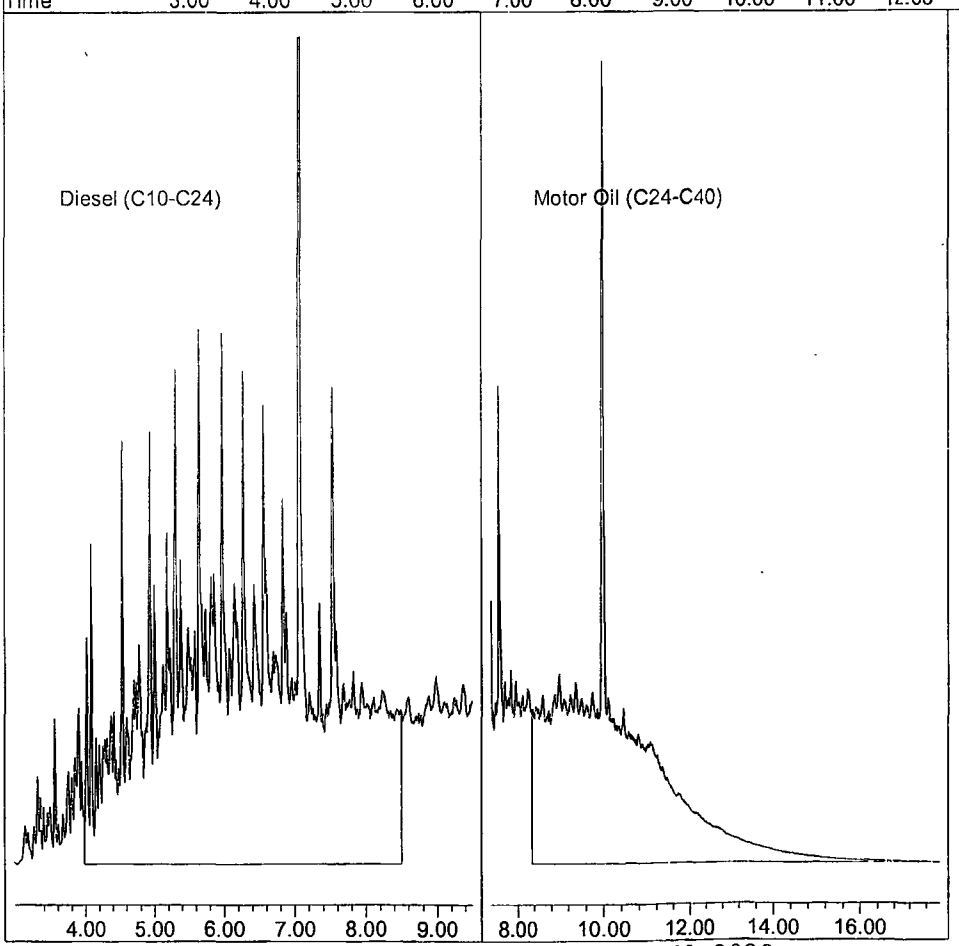
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.07	346271320	68.964 ppb
Surrogate Spike 30.000		Recovery =	229.88%
4) SA Octacosane(S)	9.98	250611670	71.757 ppb
Surrogate Spike 30.000		Recovery =	239.19%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	5934893648	1547.470 ppb
2) HBTM Motor Oil (C24-C40)	12.60	3972483300	1347.157 ppb
Target Compounds			

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

Data File: G:\APOLLO\DATA\200310\310007.D
Sample : Diesel Motor Oil-5 3/5/20





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310008.D Vial: 8
Acq On : 3-10-20 11:29:51 Operator: SS
Sample : Diesel Motor Oil-6 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 10 11:58 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

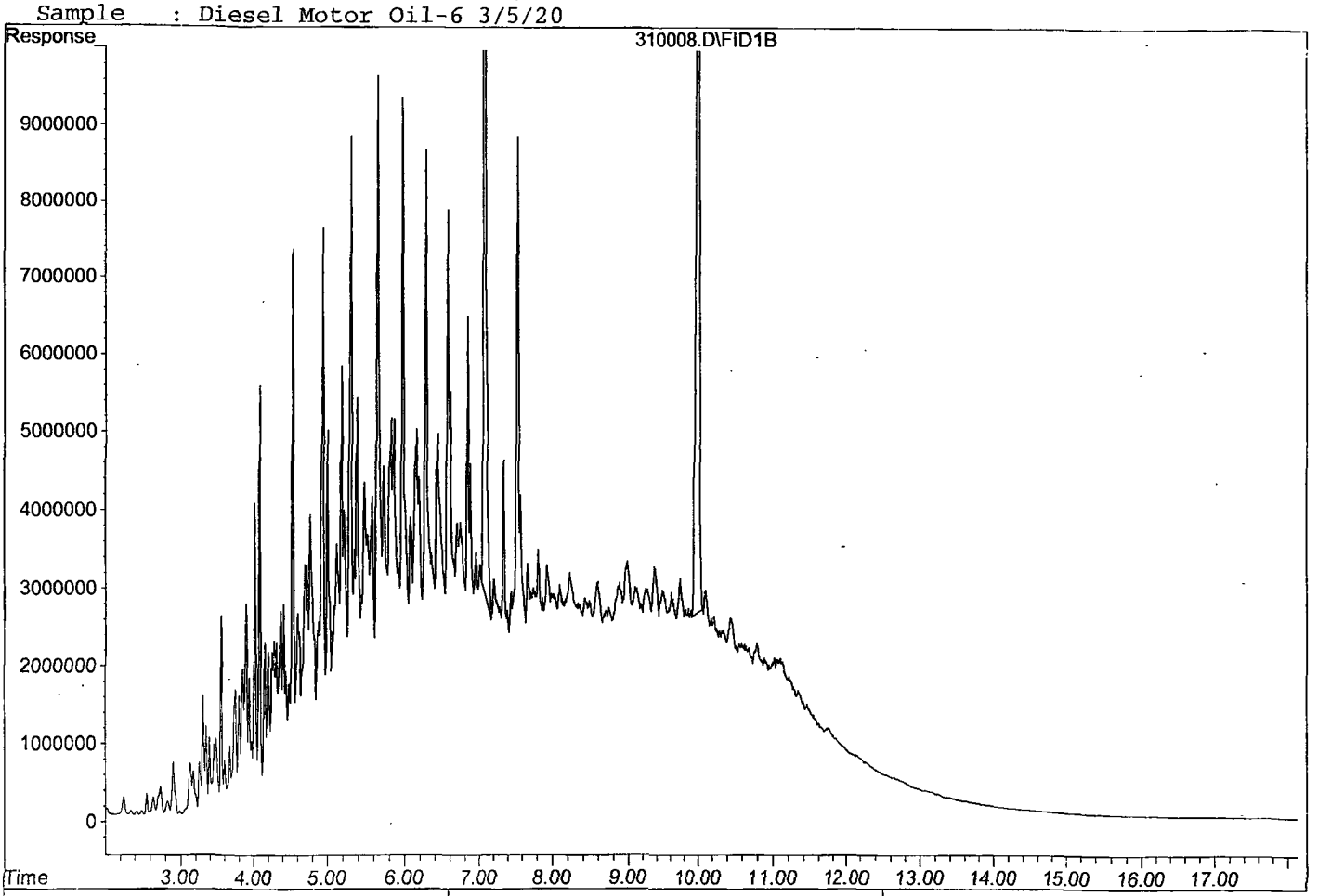
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

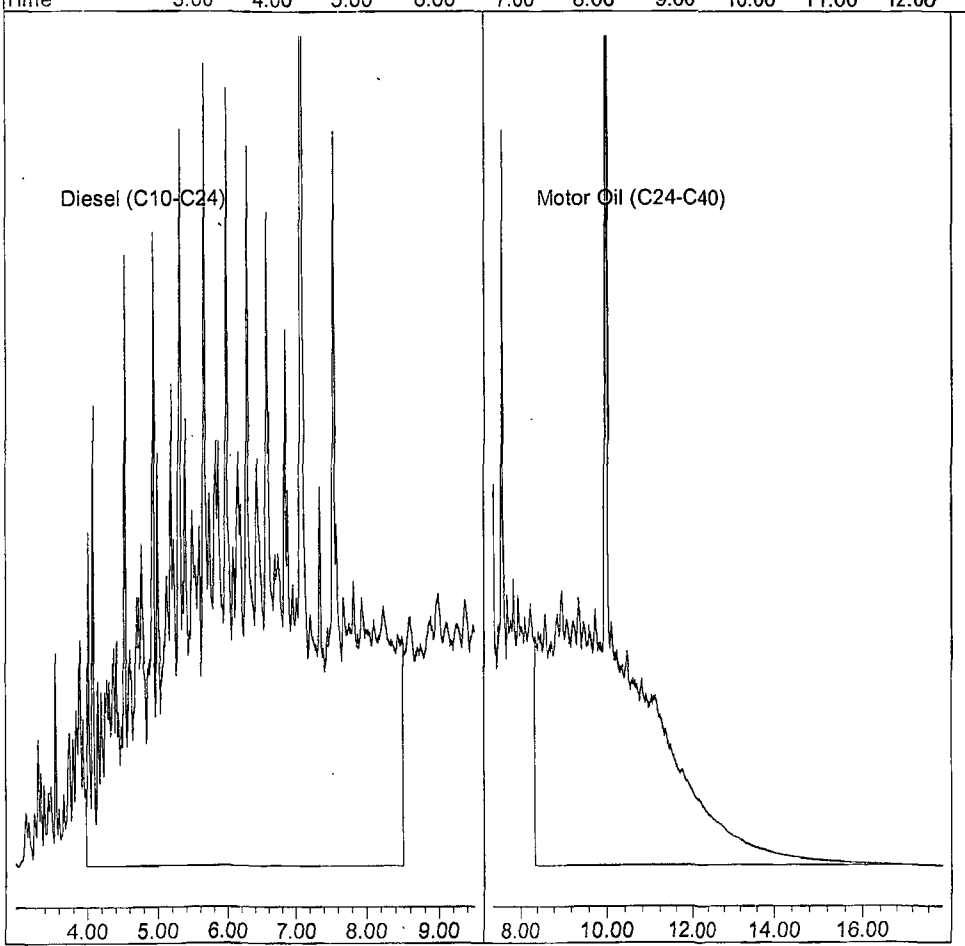
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.07	508856564	101.345	ppb
Surrogate Spike 30.000		Recovery =	337.82%	
4) SA Octacosane(S)	9.99	357054728	102.234	ppb
Surrogate Spike 30.000		Recovery =	340.78%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.24	8675111292	2261.957	ppb
2) HBTM Motor Oil (C24-C40)	12.60	5550316563	1882.235	ppb

Target Compounds

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

Data File: G:\APOLLO\DATA\200310\310008.D
Sample : Diesel Motor Oil-6 3/5/20





Form 7

Second Source Calibration

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

SDG No:
Date Analyzed: 03/10/20
Instrument: Apollo
Initial Cal. Date: 03/10/20
Data File: 310009.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1917610	2127840	11	HATM	
2	HBTM	Motor Oil (C24-C40)	1474400	1535490	4.1	HBTM	
3							
4							
5							
6							
7							
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38							
39							
40							
		Average			7.6		

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310009.D Vial: 9
Acq On : 3-10-20 11:52:24 Operator: SS
Sample : Diesel Motor Oil-SS 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 10 12:11 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

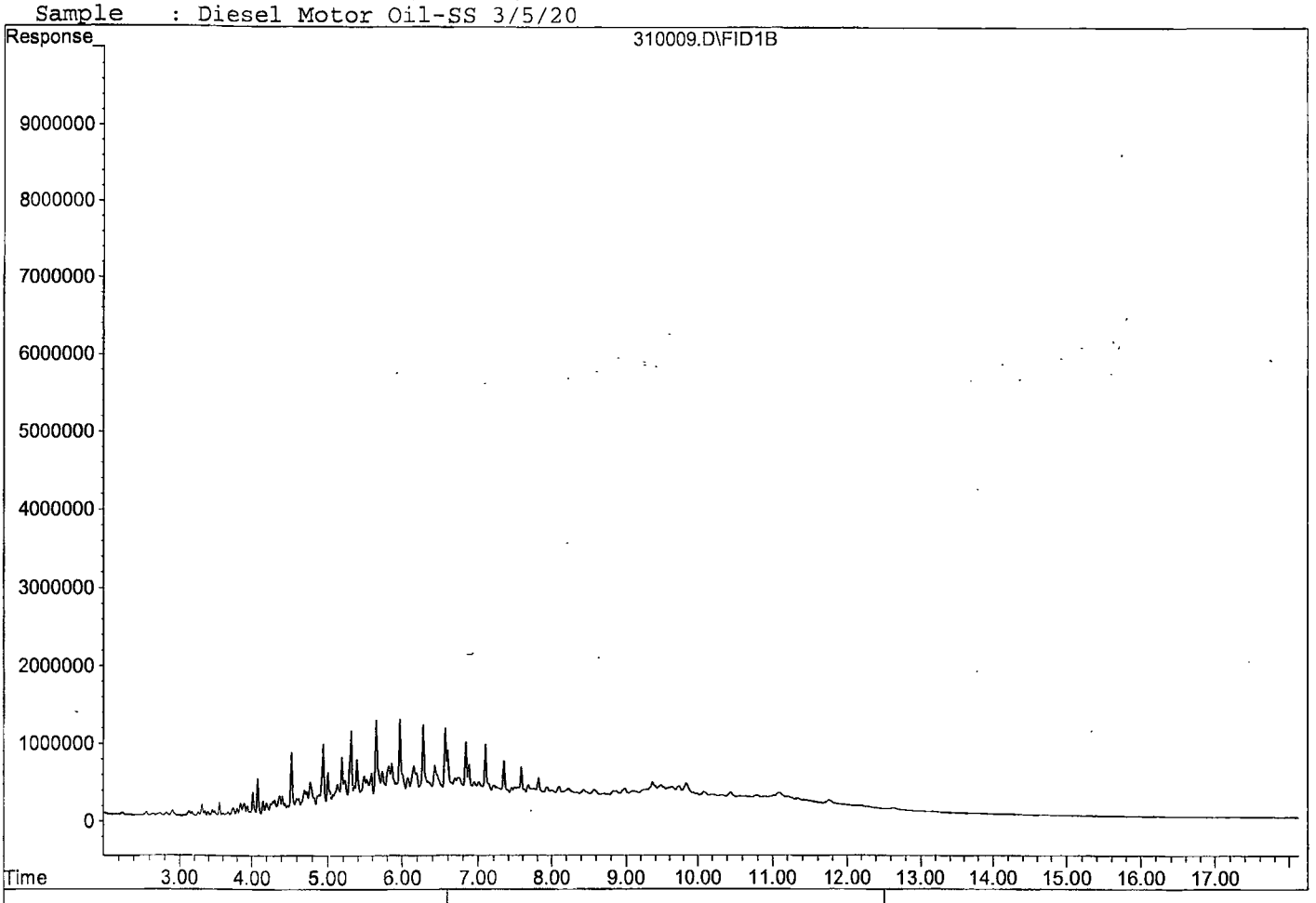
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

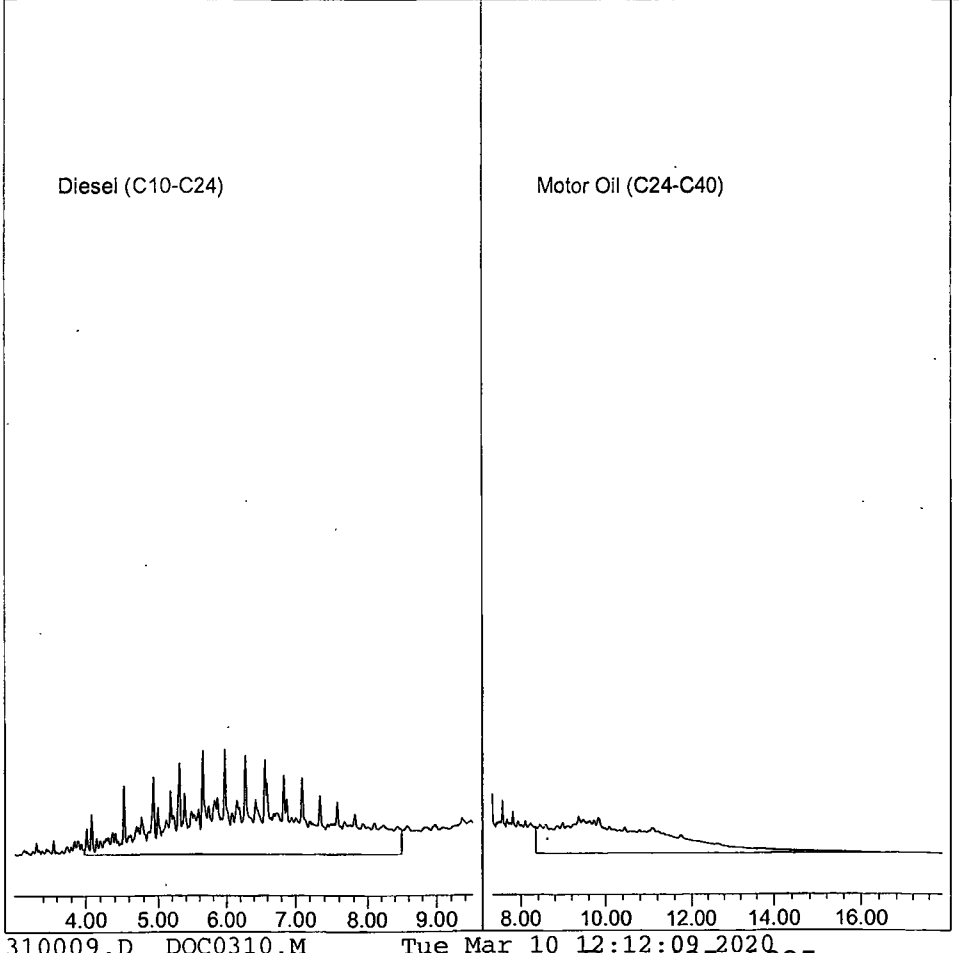
Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
3) SA Ortho-Terphenyl(S)	0.00	0	N.D.	ppb	d
Surrogate Spike 30.000	Recovery	=	0.00%		
4) SA Octacosane(S)	0.00	0	N.D.	ppb	d
Surrogate Spike 30.000	Recovery	=	0.00%		
Target Compounds					
1) HATM Diesel (C10-C24)	6.24	1063920828	277.408	ppb	
2) HBTM Motor Oil (C24-C40)	12.60	767745055	260.359	ppb	

Target Compounds

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

Data File: G:\APOLLO\DATA\200310\310009.D
Sample : Diesel Motor Oil-SS 3/5/20





TPH Extractables
DEC0317

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 03/17/20
Matrix: Water Instrument: Apollo

Initials: SS/AV

317002.D 317003 D 317004 D 317005.D 317006.D 317007.D

		Compound	1	2	3	4	5	6					Avg	%RSD	Type	r^2	Q
1	SC	Decanoic Acid(S)	1325318	1449828	1357030	1682528	1897028	1689607					1566890	14	SC		
2																	
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0.4106

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317002.D Vial: 2
Acq On : 3-17-20 8:14:08 Operator: SS
Sample : Decanoic Acid-1 3/10/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 17 10:51 2020 Quant Results File: DEC0317.RES

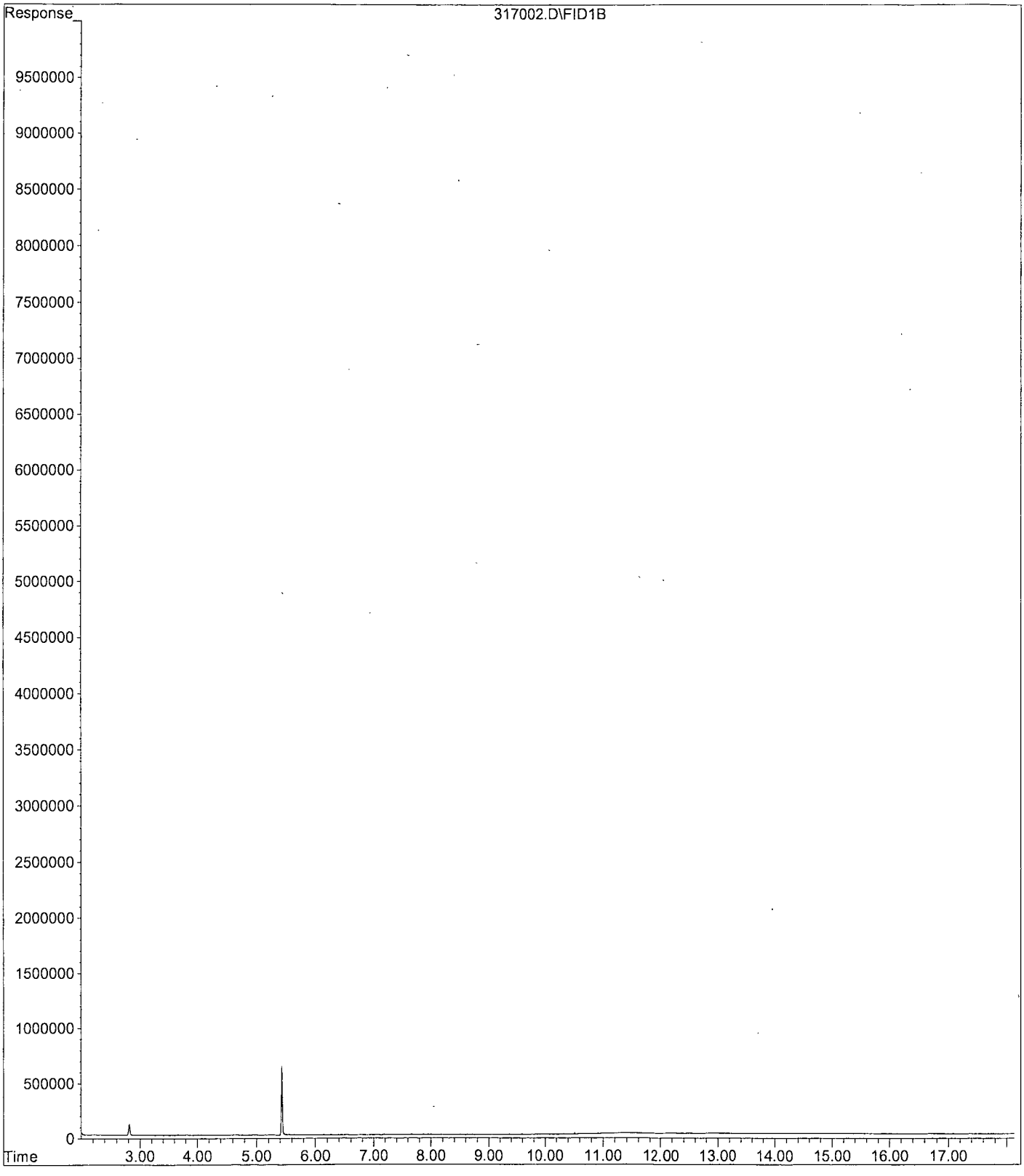
Method : G:\APOLLO\DATA\2019\191115\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	5.43	7951908	2.537 ppb
Surrogate Spike 24.000		Recovery =	10.57%
Target Compounds			
Target Compounds			

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

File : G:\APOLLO\DATA\200317\317002.D
Operator : SS
Acquired : 3-17-20 8:14:08 using AcqMethod TPHSN.M
Instrument : Apollo
Sample Name: Decanoic Acid-1 3/10/20
Misc Info : water
Vial Number: 2



Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317003.D Vial: 3
Acq On : 3-17-20 8:36:27 Operator: SS
Sample : Decanoic Acid-2 3/10/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 17 10:51 2020 Quant Results File: DEC0317.RES

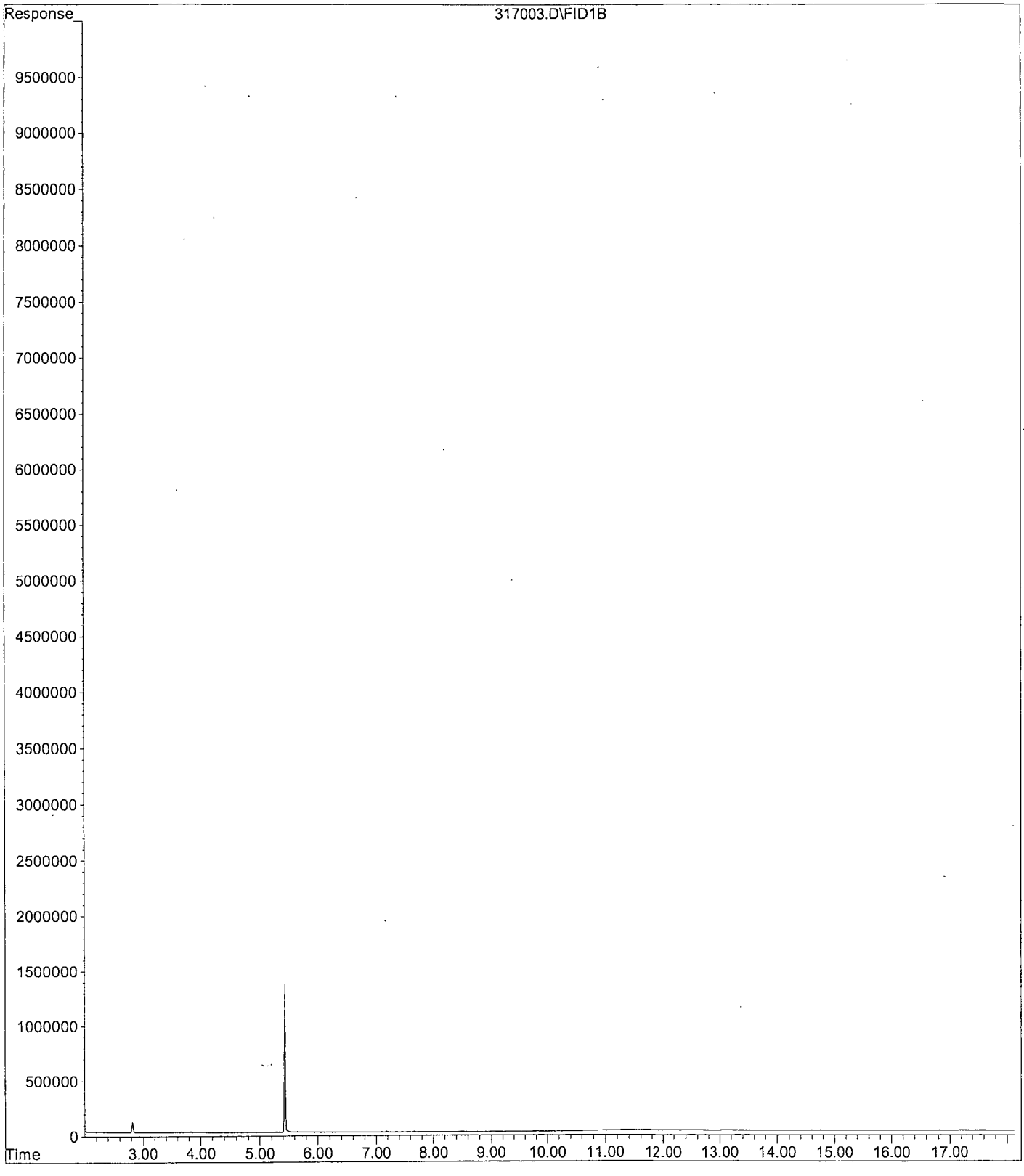
Method : G:\APOLLO\DATA\2019\191115\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	5.44	17397937	5.552 ppb
Surrogate Spike 24.000		Recovery =	23.13%
Target Compounds			
Target Compounds			

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

File : G:\APOLLO\DATA\200317\317003.D
Operator : SS
Acquired : 3-17-20 8:36:27 using AcqMethod TPHSN.M
Instrument : Apollo
Sample Name: Decanoic Acid-2 3/10/20
Misc Info : water
Vial Number: 3



Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317004.D Vial: 4
Acq On : 3-17-20 8:58:53 Operator: SS
Sample : Decanoic Acid-3 3/10/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 17 10:51 2020 Quant Results File: DEC0317.RES

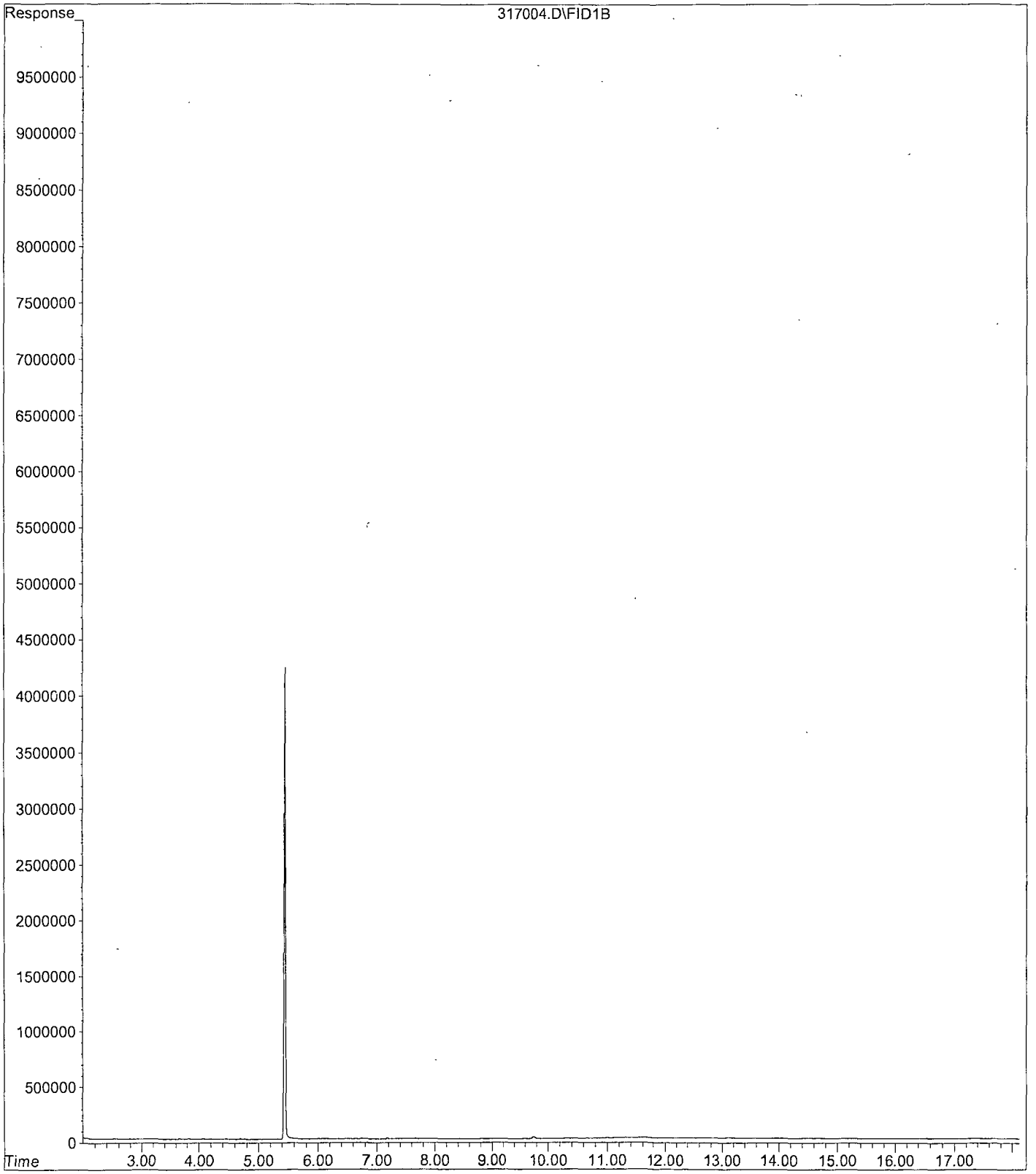
Method : G:\APOLLO\DATA\2019\191115\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	5.45	65137449	20.786 ppb
Surrogate Spike 24.000	Recovery =		86.61%
Target Compounds			
Target Compounds			

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

File : G:\APOLLO\DATA\200317\317004.D
Operator : SS
Acquired : 3-17-20 8:58:53 using AcqMethod TPHSN.M
Instrument : Apollo
Sample Name: Decanoic Acid-3 3/10/20
Misc Info : water
Vial Number: 4



Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317005.D Vial: 5
Acq On : 3-17-20 9:21:15 Operator: SS
Sample : Decanoic Acid-4 3/10/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 17 10:51 2020 Quant Results File: DEC0317.RES

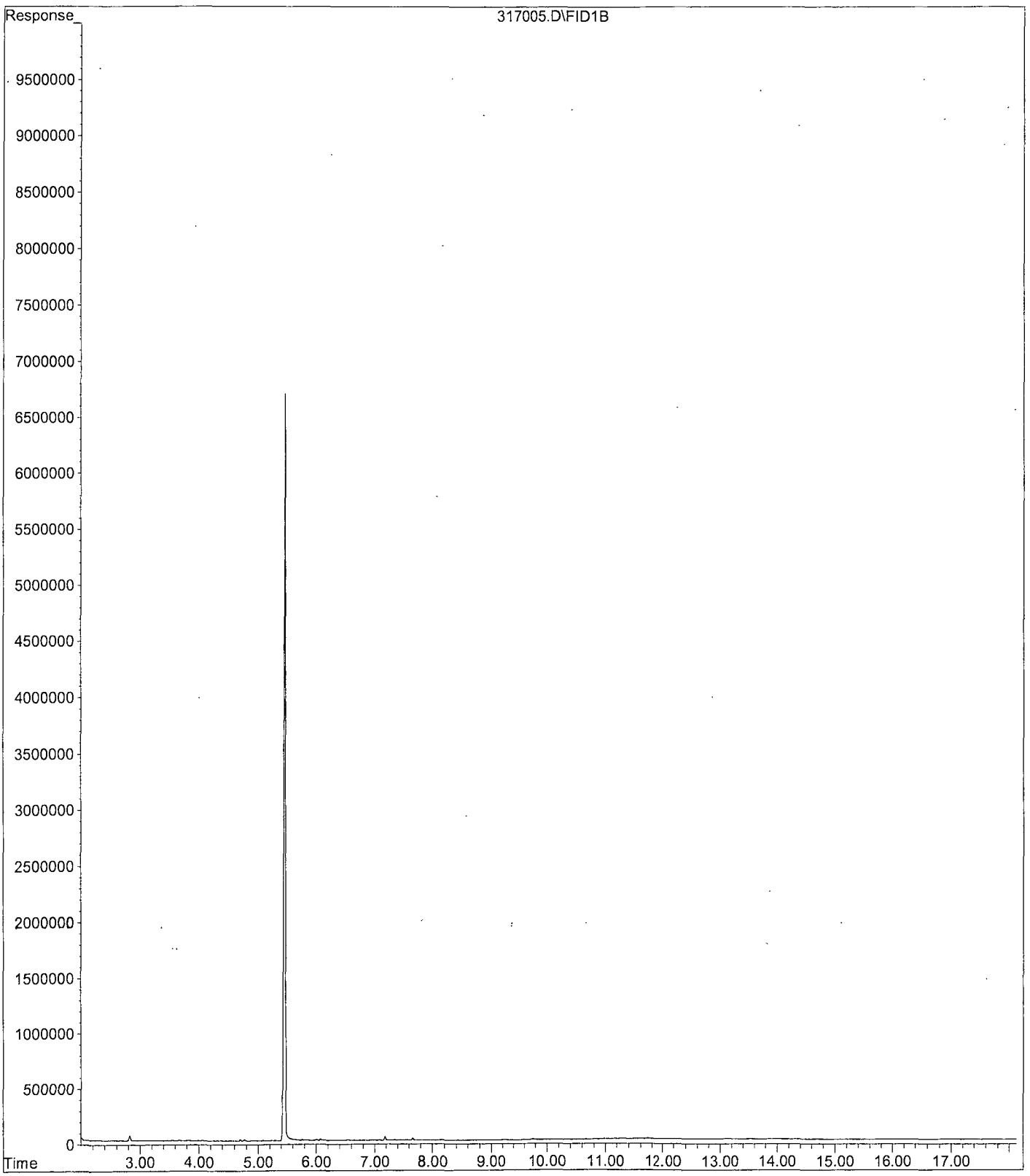
Method : G:\APOLLO\DATA\2019\191115\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	5.46	121142045	38.657 ppb
Surrogate Spike 24.000		Recovery =	161.07%
Target Compounds			
Target Compounds			

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

File : G:\APOLLO\DATA\200317\317005.D
Operator : SS
Acquired : 3-17-20 9:21:15 using AcqMethod TPHSN.M
Instrument : Apollo
Sample Name: Decanoic Acid-4 3/10/20
Misc Info : water
Vial Number: 5



Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317006.D Vial: 6
Acq On : 3-17-20 9:43:41 Operator: SS
Sample : Decanoic Acid-5 3/10/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 17 10:51 2020 Quant Results File: DEC0317.RES

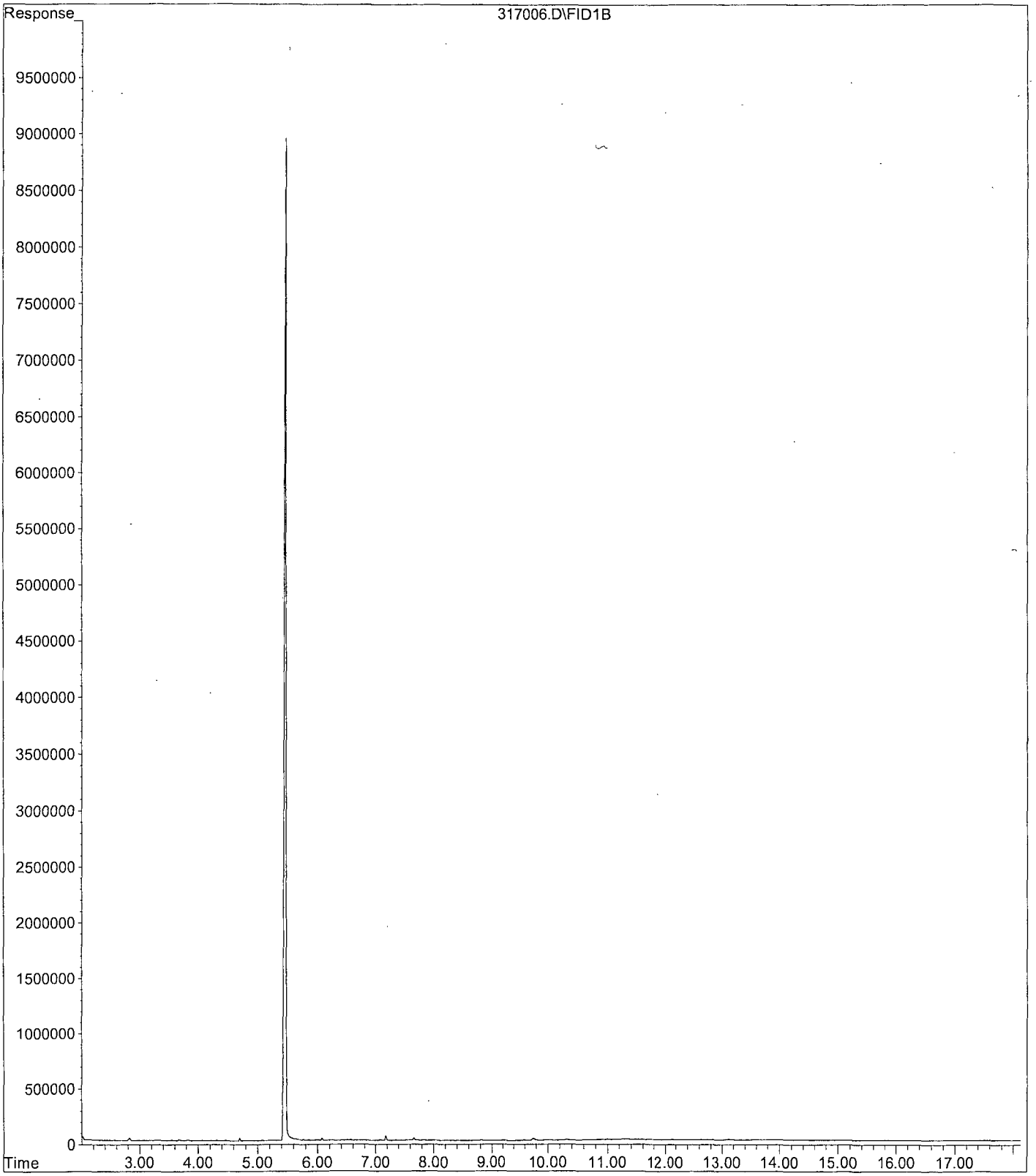
Method : G:\APOLLO\DATA\2019\191115\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	5.47	182114736	58.113 ppb
Surrogate Spike 24.000		Recovery =	242.14%
Target Compounds			
Target Compounds			

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

File : G:\APOLLO\DATA\200317\317006.D
Operator : SS
Acquired : 3-17-20 9:43:41 using AcqMethod TPHSN.M
Instrument : Apollo
Sample Name: Decanoic Acid-5 3/10/20
Misc Info : water
Vial Number: 6



Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317007.D Vial: 7
Acq On : 3-17-20 10:06:06 Operator: SS
Sample : Decanoic Acid-6 3/10/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 17 10:51 2020 Quant Results File: DEC0317.RES

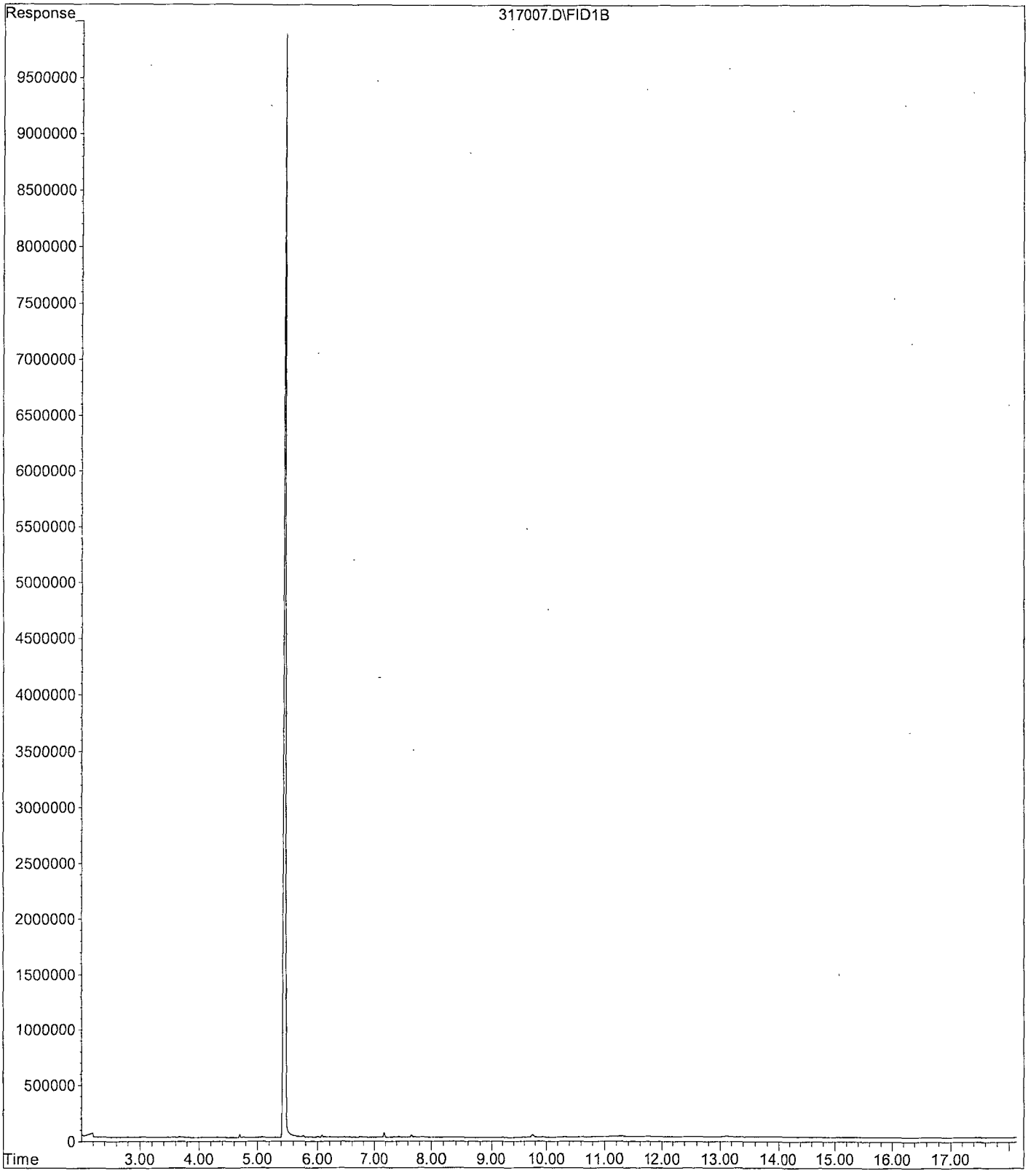
Method : G:\APOLLO\DATA\2019\191115\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	5.47	202752841	64.699 ppb
Surrogate Spike 24.000		Recovery =	269.58%
Target Compounds			
Target Compounds			

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

File : G:\APOLLO\DATA\200317\317007.D
Operator : SS
Acquired : 3-17-20 10:06:06 using AcqMethod TPHSN.M
Instrument : Apollo
Sample Name: Decanoic Acid-6 3/10/20
Misc Info : water
Vial Number: 7



TPH Extractables
DOC0310

Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 03/16/20
Instrument: Apollo
Initial Cal. Date: 03/10/20
Data File: 312156.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1917610	2261300	18	HATM	
2	HBTM	Motor Oil (C24-C40)	1474400	1542530	4.6	HBTM	
3	SA	Ortho-Terphenyl(S)	2510520	2626810	4.6	SA	
4	SA	Octacosane(S)	1746260	1981190	13	SA	
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		Average			10.1		

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200312\312156.D Vial: 56
Acq On : 3-16-20 14:54:17 Operator: SS
Sample : Diesel Motor Oil-CCV 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 17 7:19 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200312\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

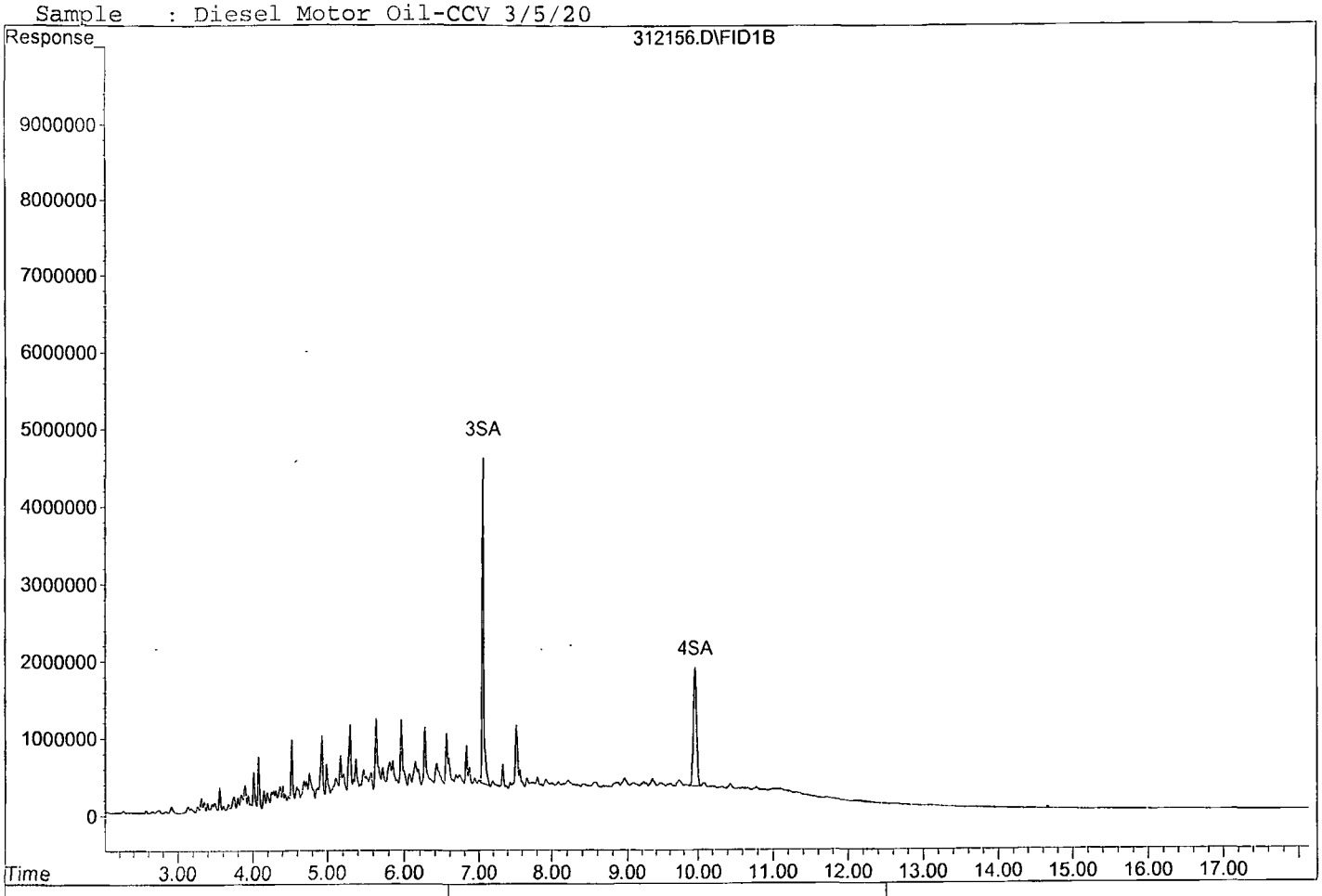
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

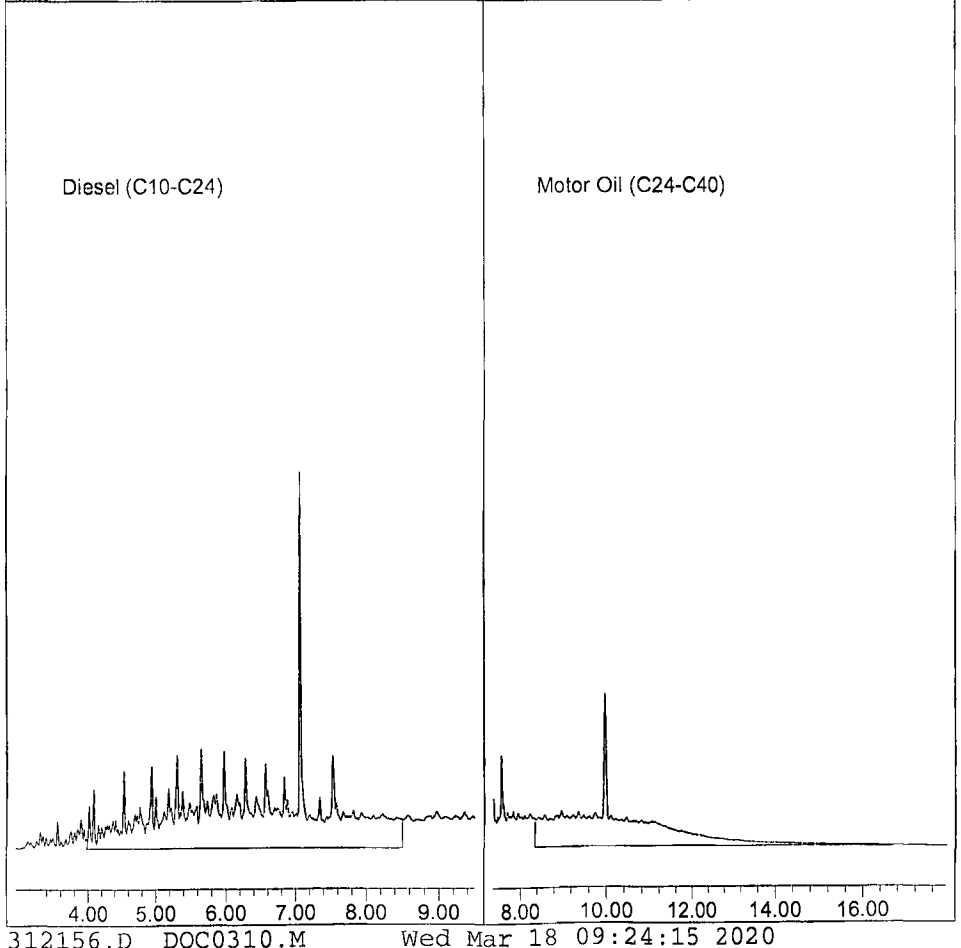
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.06	65670160	13.079 ppb
Surrogate Spike 30.000		Recovery =	43.60%
4) SA Octacosane(S)	9.96	49529868	14.182 ppb
Surrogate Spike 30.000		Recovery =	47.27%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	1130651561	294.807 ppb
2) HBTM Motor Oil (C24-C40)	12.60	771265719	261.553 ppb

Target Compounds

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

Data File: G:\APOLLO\DATA\200312\312156.D
Sample : Diesel Motor Oil-CCV 3/5/20





312156.D DOC0310.M Wed Mar 18 09:24:15 2020

TPH Extractables
DOC0310

Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 03/16/20
Instrument: Apollo
Initial Cal. Date: 03/10/20
Data File: 312164.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1917610	2283970	19	HATM	
2	HBTM	Motor Oil (C24-C40)	1474400	1554520	5.4	HBTM	
3	SA	Ortho-Terphenyl(S)	2510520	2647070	5.4	SA	
4	SA	Octacosane(S)	1746260	1982110	14	SA	
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39							
40							
		Average			11.0		

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200312\312164.D Vial: 64
Acq On : 3-16-20 17:53:53 Operator: SS
Sample : Diesel Motor Oil-CCV 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 17 7:17 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200312\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

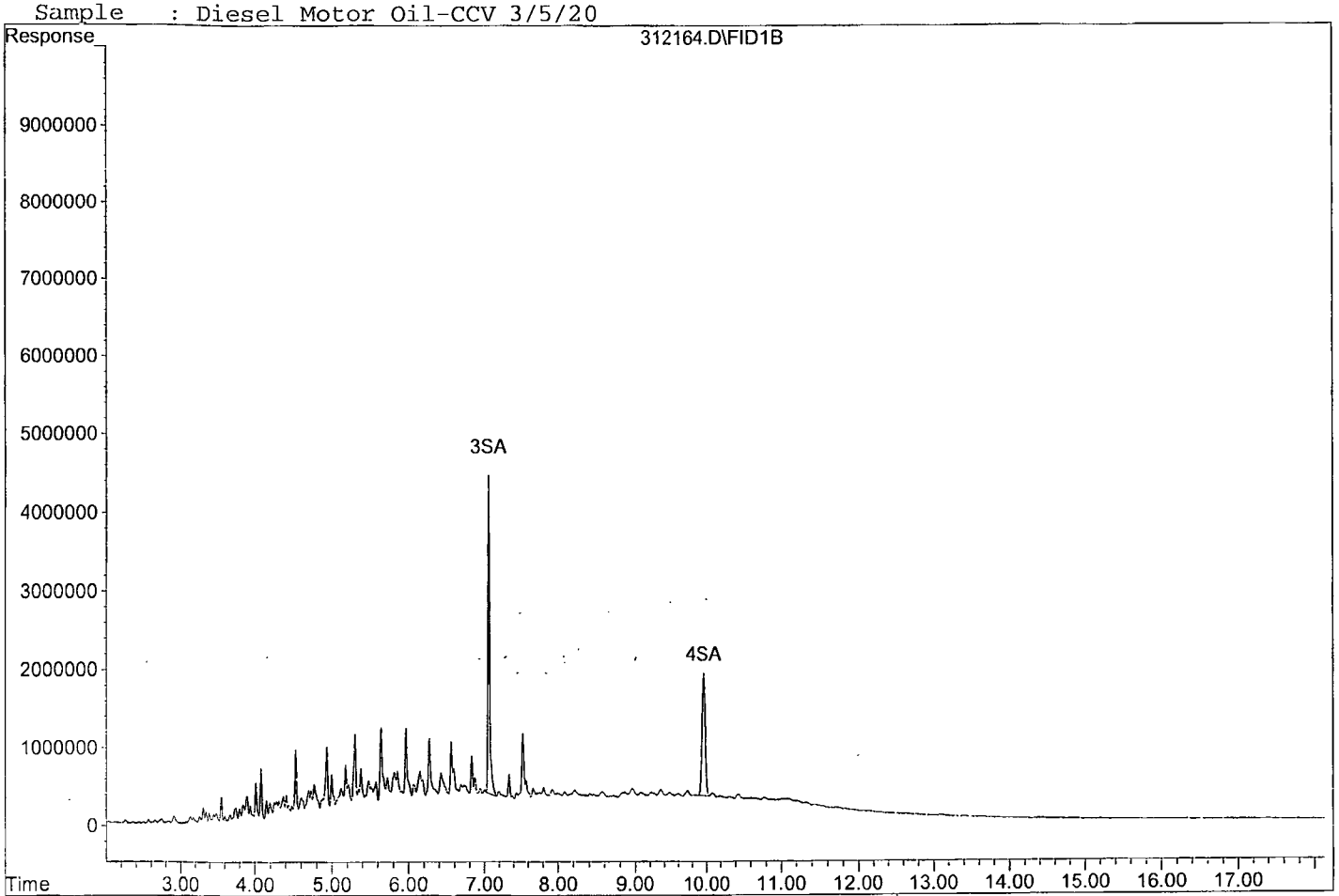
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

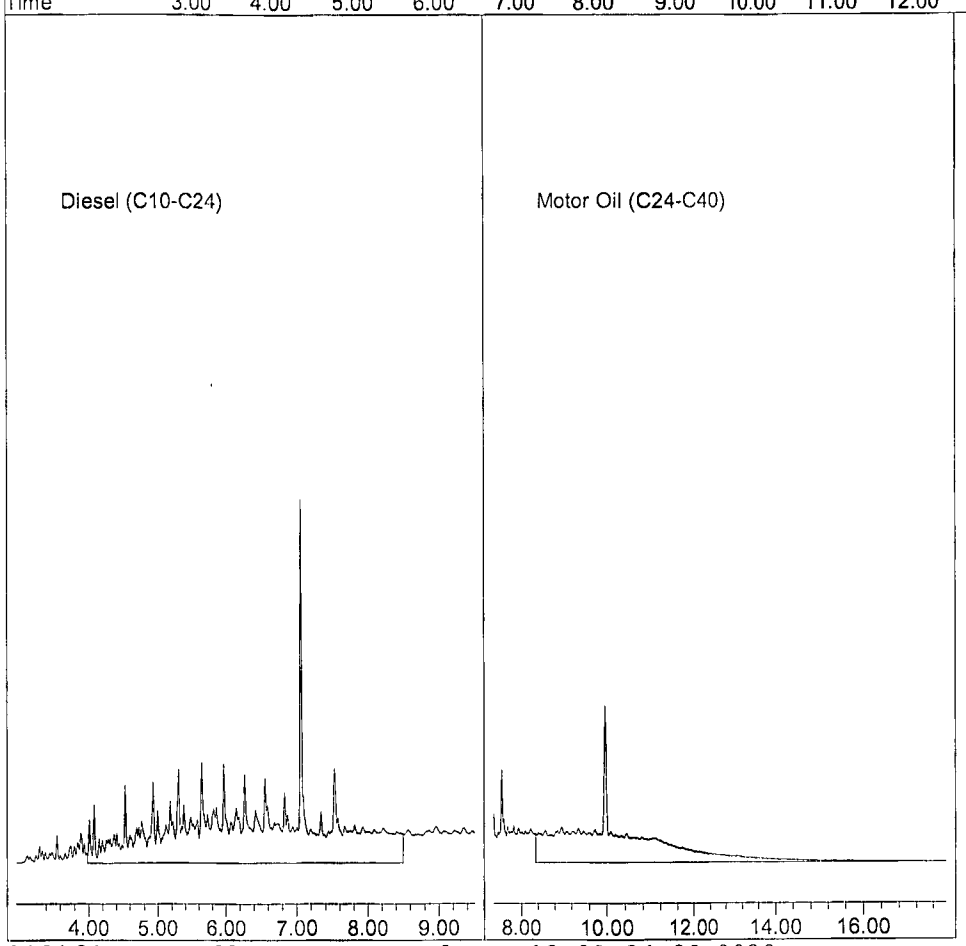
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.06	66176815	13.180 ppb
Surrogate Spike 30.000	Recovery =		43.93%
4) SA Octacosane(S)	9.96	49552696	14.188 ppb
Surrogate Spike 30.000	Recovery =		47.29%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	1141984490	297.762 ppb
2) HBTM Motor Oil (C24-C40)	12.60	777259608	263.586 ppb

Target Compounds

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

Data File: G:\APOLLO\DATA\200312\312164.D
Sample : Diesel Motor Oil-CCV 3/5/20





312164.D DOC0310.M Wed Mar 18 09:24:29 2020

TPH Extractables
DOC0310

Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 03/17/20
Instrument: Apollo
Initial Cal. Date: 03/10/20
Data File: 317008.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1917610	2167310	13	HATM	
2	HBTM	Motor Oil (C24-C40)	1474400	1465680	0.59	HBTM	
3	SA	Ortho-Terphenyl(S)	2510520	2524840	0.57	SA	
4	SA	Octacosane(S)	1746260	1874150	7.3	SA	
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		Average			5.4		

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317008.D Vial: 8
Acq On : 3-17-20 10:43:41 Operator: SS
Sample : Diesel Motor Oil-CCV 3/17/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 17 11:17 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200317\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

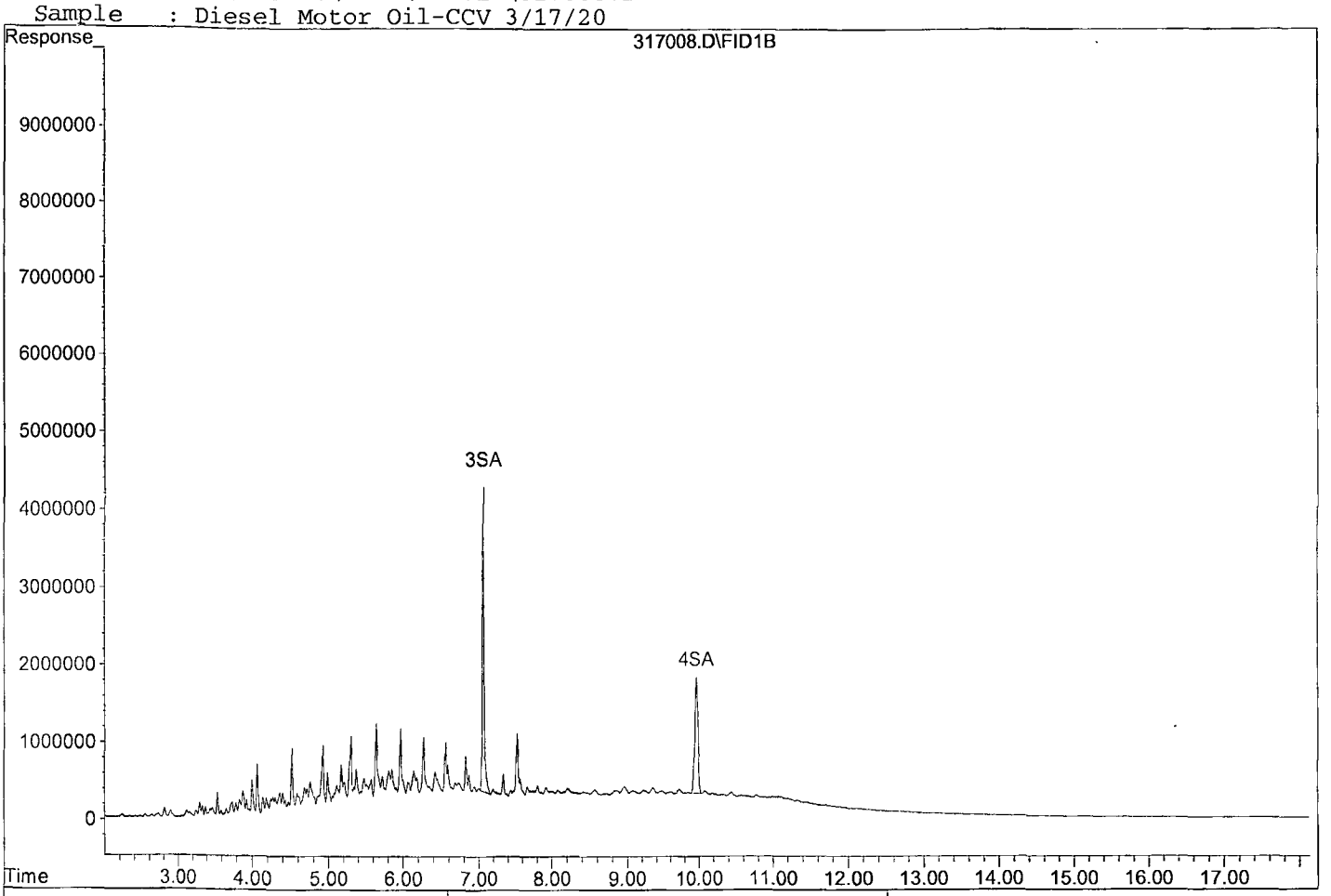
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

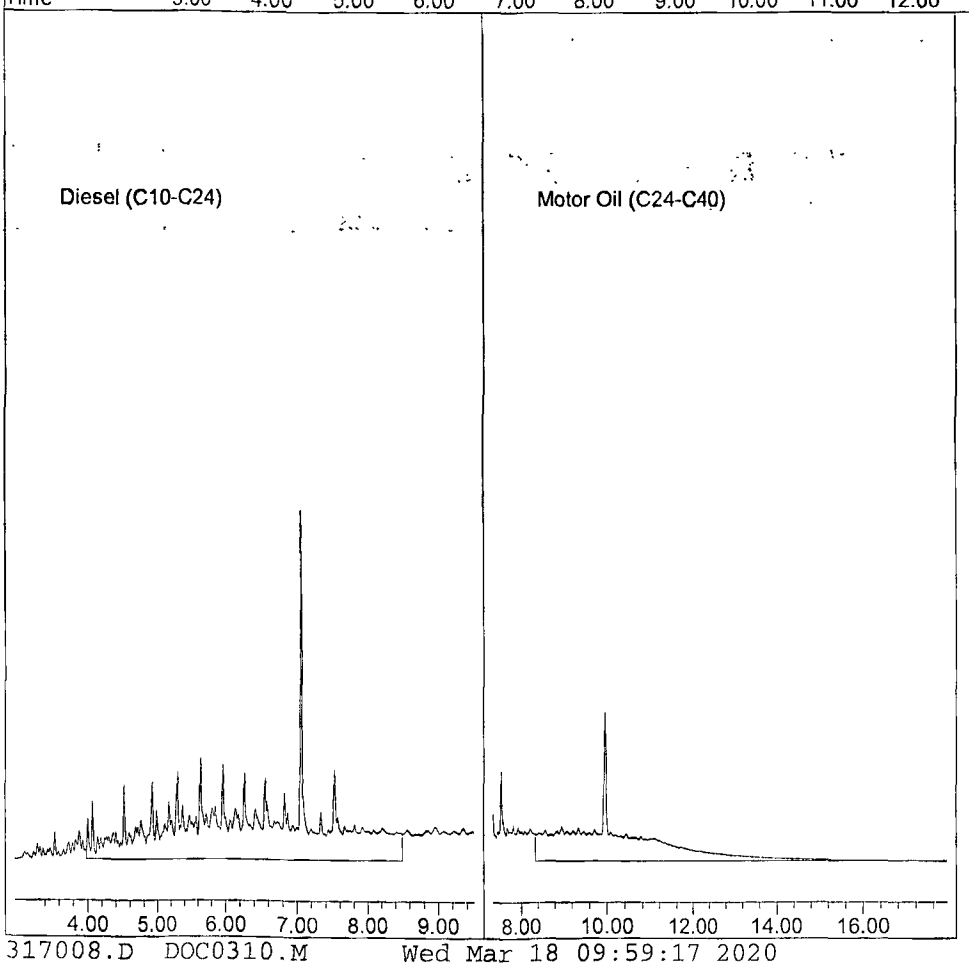
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.06	63120902	12.571 ppb
Surrogate Spike 30.000		Recovery =	41.90%
4) SA Octacosane(S)	9.96	46853861	13.415 ppb
Surrogate Spike 30.000		Recovery =	44.72%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	1083656613	282.554 ppb
2) HBTM Motor Oil (C24-C40)	12.60	732838223	248.522 ppb

Target Compounds

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

Data File: G:\APOLLO\DATA\200317\317008.D
Sample : Diesel Motor Oil-CCV 3/17/20





317008.D DOC0310.M Wed Mar 18 09:59:17 2020 Page 2

TPH Extractables
DEC0317

Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 03/17/20
Instrument: Apollo
Initial Cal. Date: 03/17/20
Data File: 317010.D

		Compound	MEAN	CCRF	%D	%Drift	
1	SC	Decanoic Acid(S)	1566890	1403430	10	SC	
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		Average			10.0		

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317010.D Vial: 10
Acq On : 3-17-20 11:29:56 Operator: SS
Sample : Decanoic Acid-CCV 3/10/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 17 11:58 2020 Quant Results File: DEC0317.RES

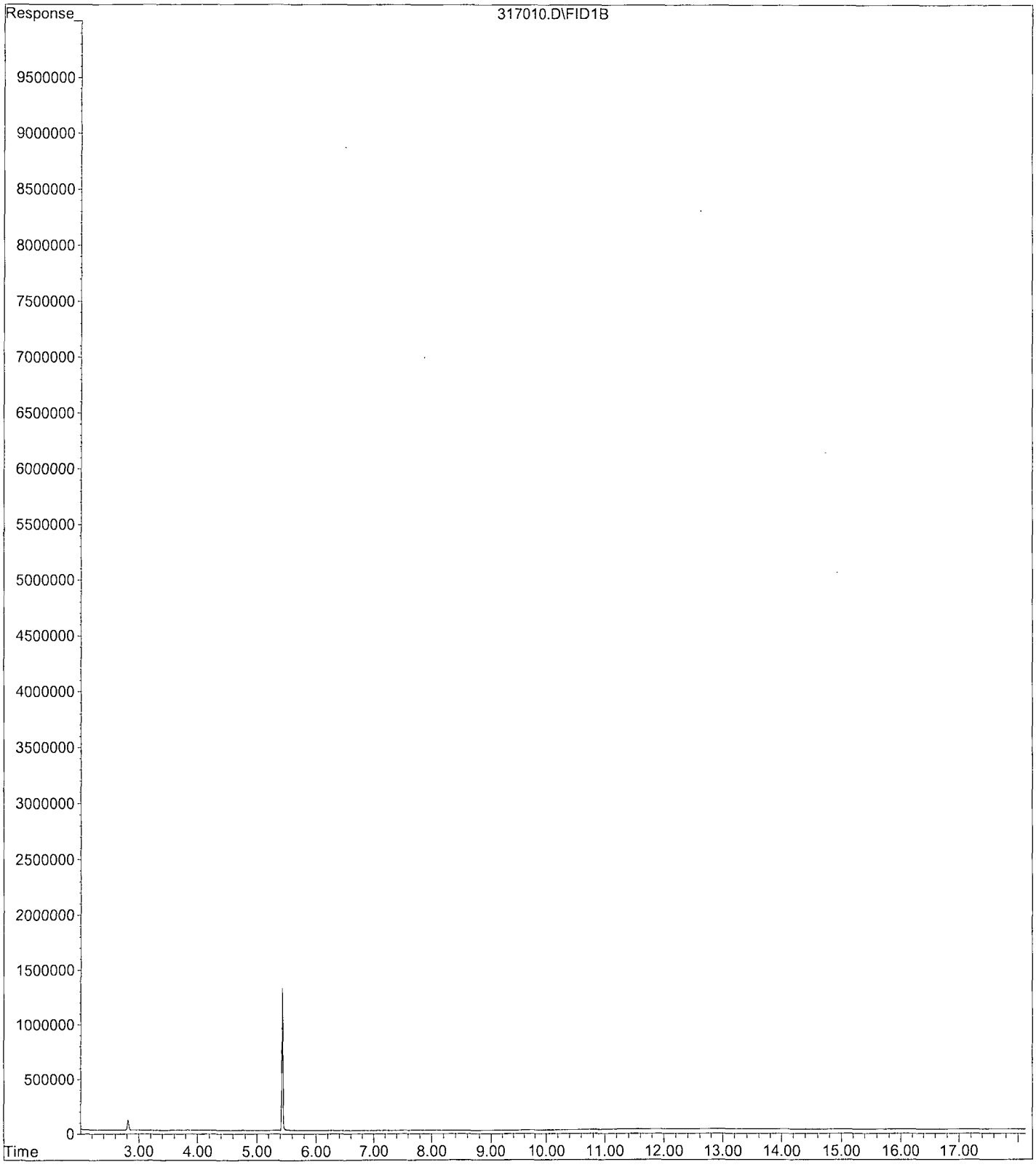
Method : G:\APOLLO\DATA\200317\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	5.44	16841115	5.374 ppb
Surrogate Spike 24.000		Recovery =	22.39%
Target Compounds			
Target Compounds			

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

File : G:\APOLLO\DATA\200317\317010.D
Operator : SS
Acquired : 3-17-20 11:29:56 using AcqMethod TPHSN.M
Instrument : Apollo
Sample Name: Decanoic Acid-CCV 3/10/20
Misc Info : water
Vial Number: 10



TPH Extractables
DEC0317

Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 03/17/20
Instrument: Apollo
Initial Cal. Date: 03/17/20
Data File: 317020.D

		Compound	MEAN	CCRF	%D	%Drift	
1	SC	Decanoic Acid(S)	1566890	1435350	8.4	SC	
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39							
40							
		Average			8.4		

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317020.D Vial: 20
Acq On : 3-17-20 14:30:28 Operator: SS
Sample : Decanoic Acid-CCV 3/10/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 17 15:38 2020 Quant Results File: DEC0317.RES

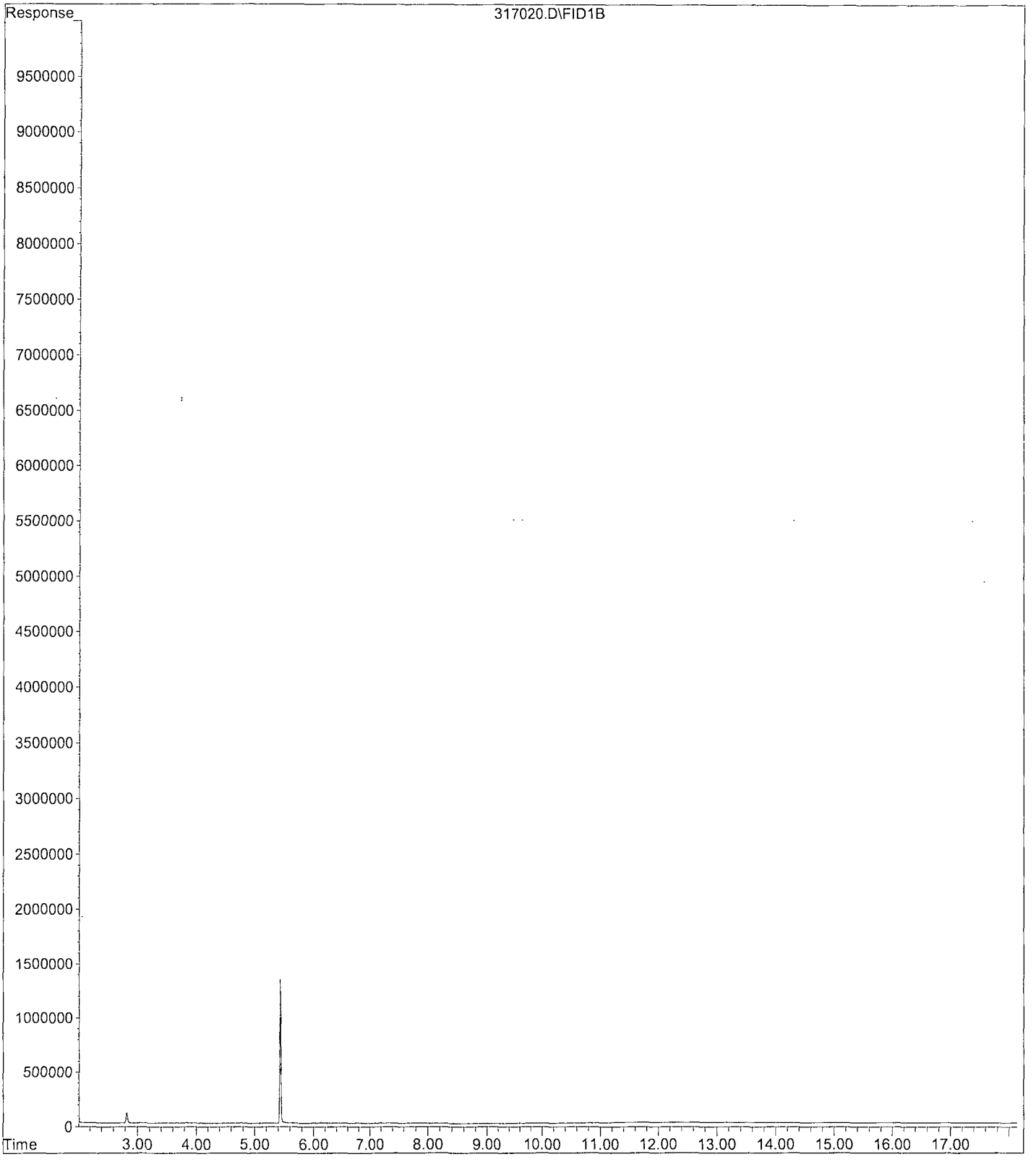
Method : G:\APOLLO\DATA\200317\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	5.44	17224202	5.496 ppb
Surrogate Spike 24.000	Recovery =		22.90%
Target Compounds			
Target Compounds			

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

File : G:\APOLLO\DATA\200317\317020.D
Operator : SS
Acquired : 3-17-20 14:30:28 using AcqMethod TPHSN.M
Instrument : Apollo
Sample Name: Decanoic Acid-CCV 3/10/20
Misc Info : water
Vial Number: 20



TPH Extractables
DOC0310

Form 7

Continuing Calibration

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

SDG No:
Date Analyzed: 03/17/20
Instrument: Apollo
Initial Cal. Date: 03/10/20
Data File: 317021.D

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C24)	1917610	2154210	12	HATM	
2	HBTM	Motor Oil (C24-C40)	1474400	1459630	1.0	HBTM	
3	SA	Ortho-Terphenyl(S)	2510520	2532240	0.87	SA	
4	SA	Octacosane(S)	1746260	1877960	7.5	SA	
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			5.3		

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317021.D Vial: 21
Acq On : 3-17-20 14:53:00 Operator: SS
Sample : Diesel Motor Oil-CCV 3/17/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 17 15:38 2020 Quant Results File: DOC0310.RES

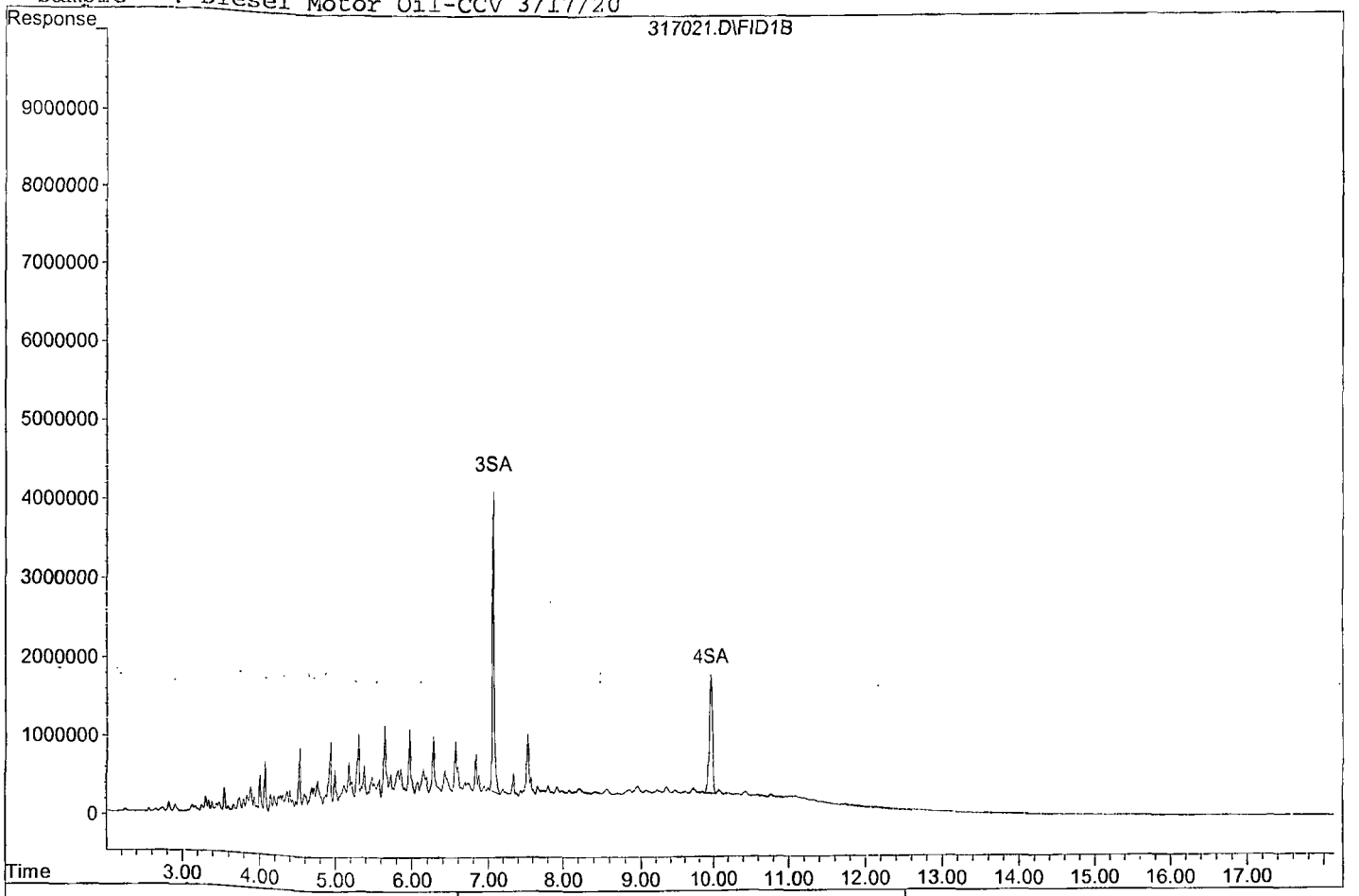
Method : G:\APOLLO\DATA\200317\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

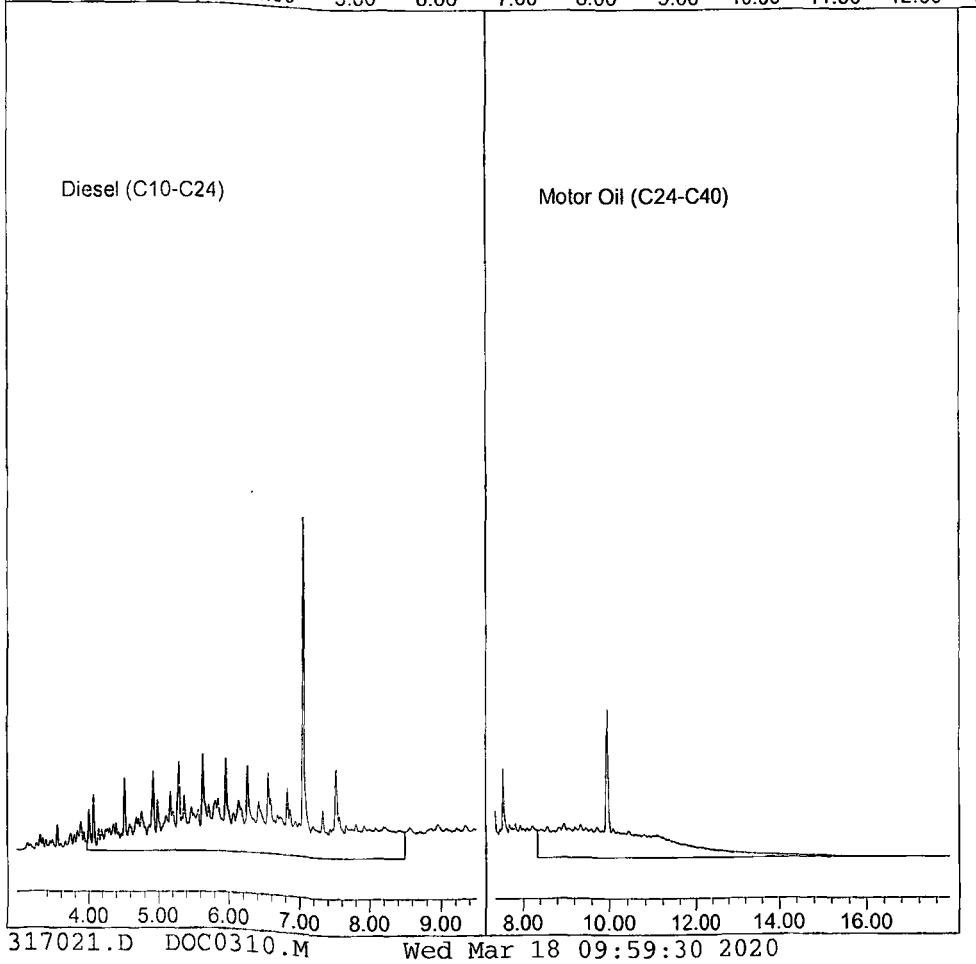
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.06	63306124	12.608 ppb
Surrogate Spike 30.000	Recovery =		42.03%
4) SA Octacosane(S)	9.96	46949012	13.443 ppb
Surrogate Spike 30.000	Recovery =		44.81%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	1077106358	280.846 ppb
2) HBTM Motor Oil (C24-C40)	12.60	729816916	247.497 ppb
Target Compounds			

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

Data File: G:\APOLLO\DATA\200317\317021.D
Sample : Diesel Motor Oil-CCV 3/17/20





317021.D DOC0310.M Wed Mar 18 09:59:30 2020 Page 2

ORGANICS
Raw Data

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200312\312162.D Vial: 62
Acq On : 3-16-20 17:08:56 Operator: SS
Sample : BA08370W20 2/800 Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Mar 18 9:07 2020 Quant Results File: DOC0310.RES

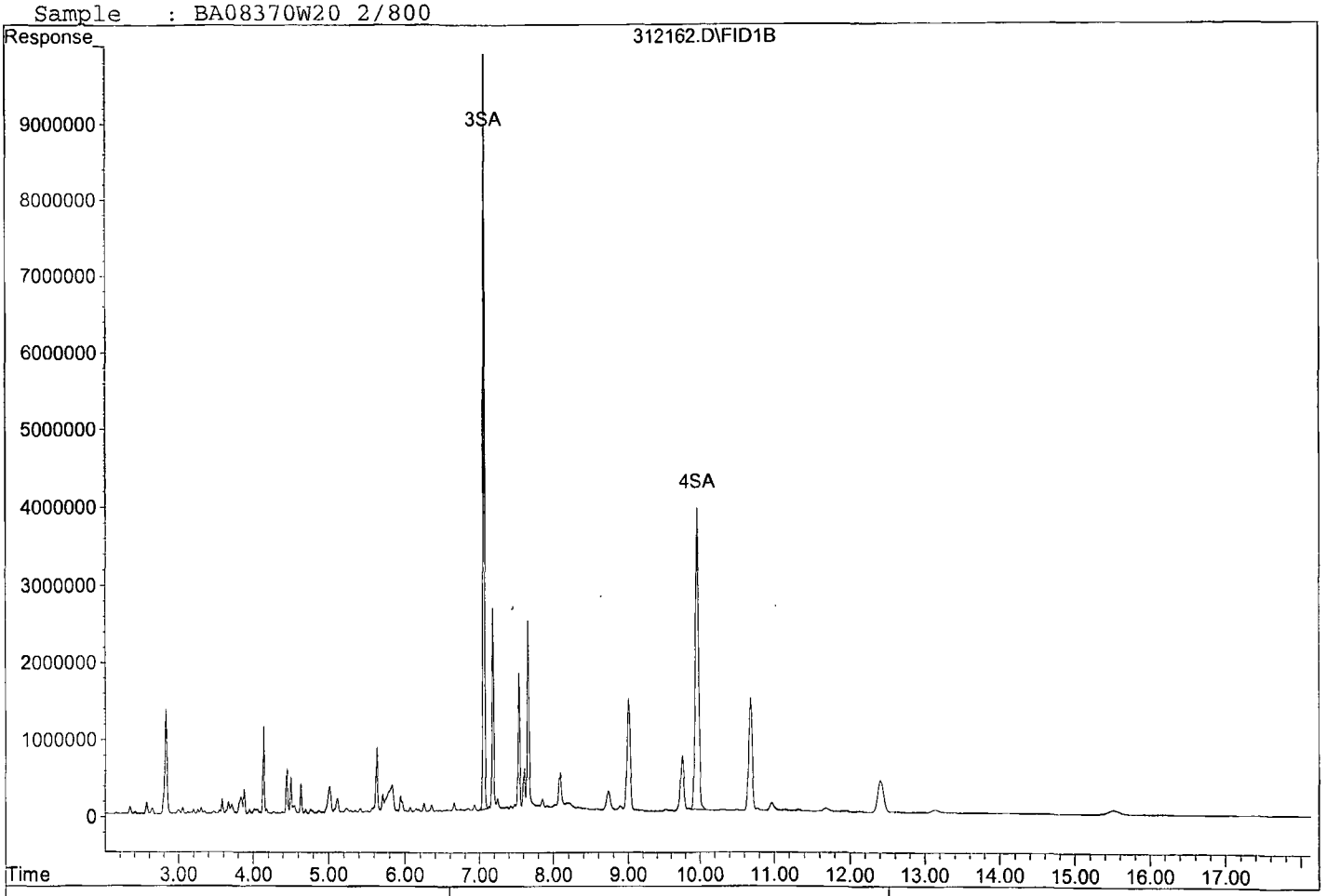
Method : G:\APOLLO\DATA\200312\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

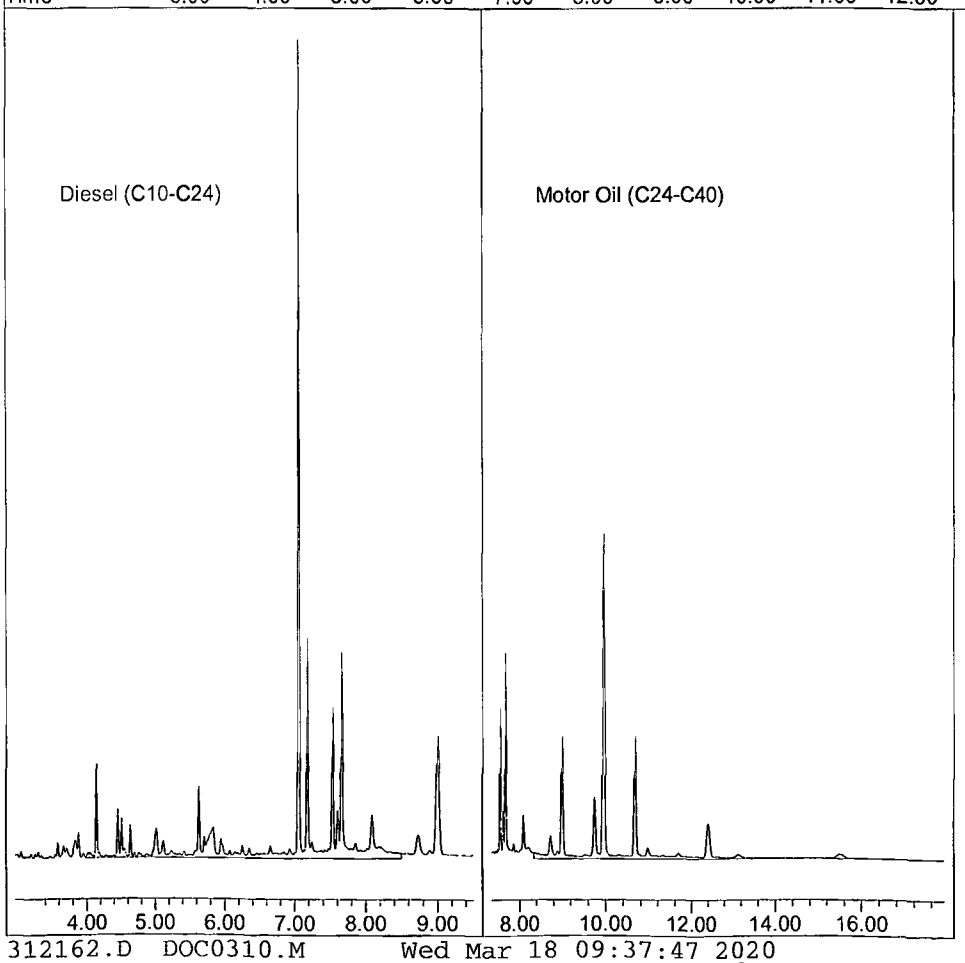
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.06	135548615	67.490 ppb
Surrogate Spike 75.000		Recovery =	89.99%
4) SA Octacosane(S)	9.96	122912630	87.983 ppb
Surrogate Spike 75.000		Recovery =	117.31%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	374825679	244.331 ppb
2) HBTM Motor Oil (C24-C40)	12.60	280685974	237.967 ppb
Target Compounds			

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

Data File: G:\APOLLO\DATA\200312\312162.D
Sample : BA08370W20 2/800





312162.D DOC0310.M Wed Mar 18 09:37:47 2020

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317018.D Vial: 18
Acq On : 3-17-20 13:45:23 Operator: SS
Sample : BA08370W20 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Mar 18 9:50 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200317\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.06	136493313	67.961	ppb
Surrogate Spike 75.000		Recovery =	90.61%	
4) SA Octacosane(S)	9.96	123208924	88.195	ppb
Surrogate Spike 75.000		Recovery =	117.59%	
Target Compounds				
Target Compounds				
1) HATM Diesel (C10-C24)	0.00	0	N.D.	ppb
2) HBTM Motor Oil (C24-C40)	0.00	0	N.D.	ppb

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

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317018.D Vial: 18
Acq On : 3-17-20 13:45:23 Operator: SS
Sample : BA08370W20 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Mar 18 9:50 2020 Quant Results File: DOC0310.RES

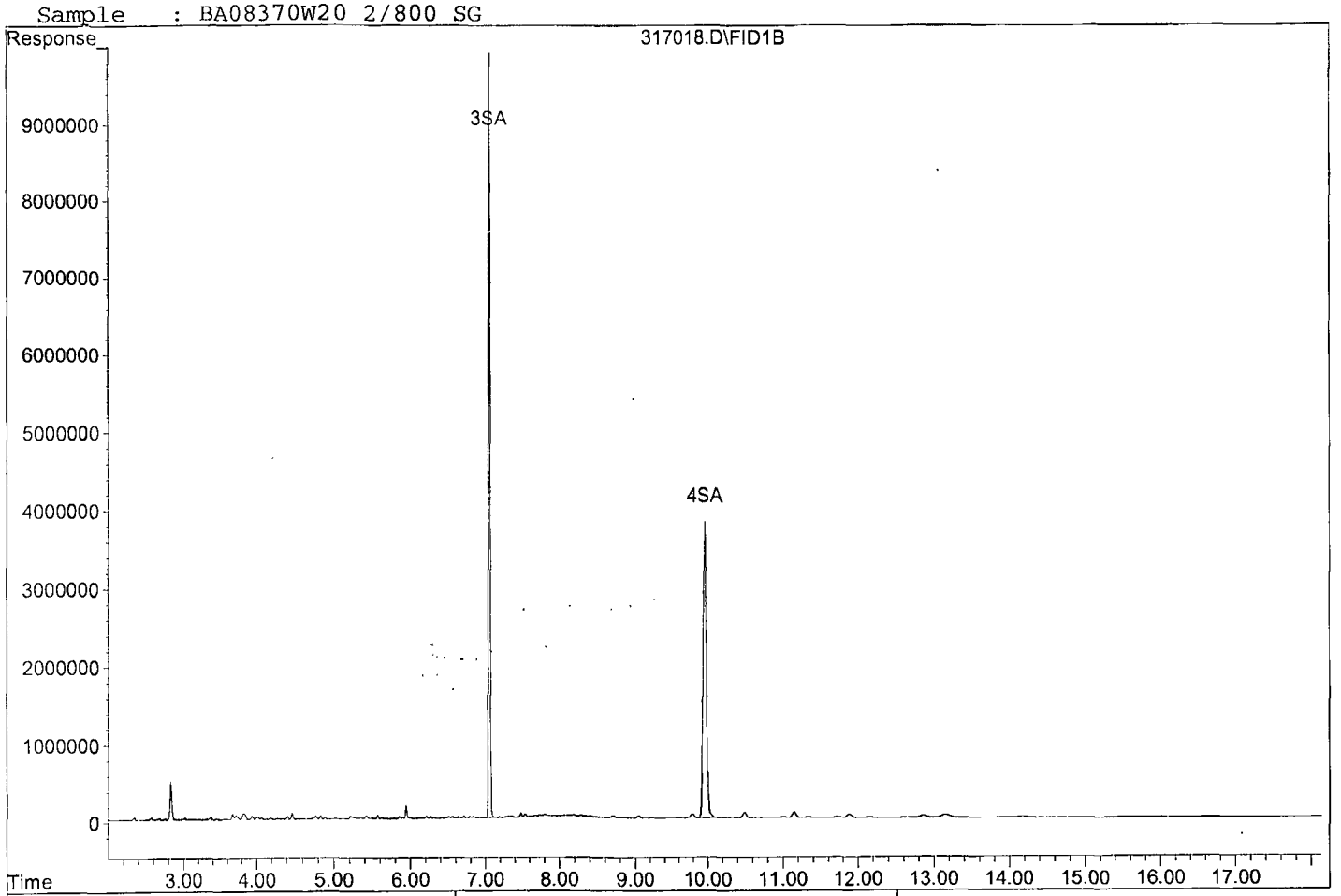
Method : G:\APOLLO\DATA\200317\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

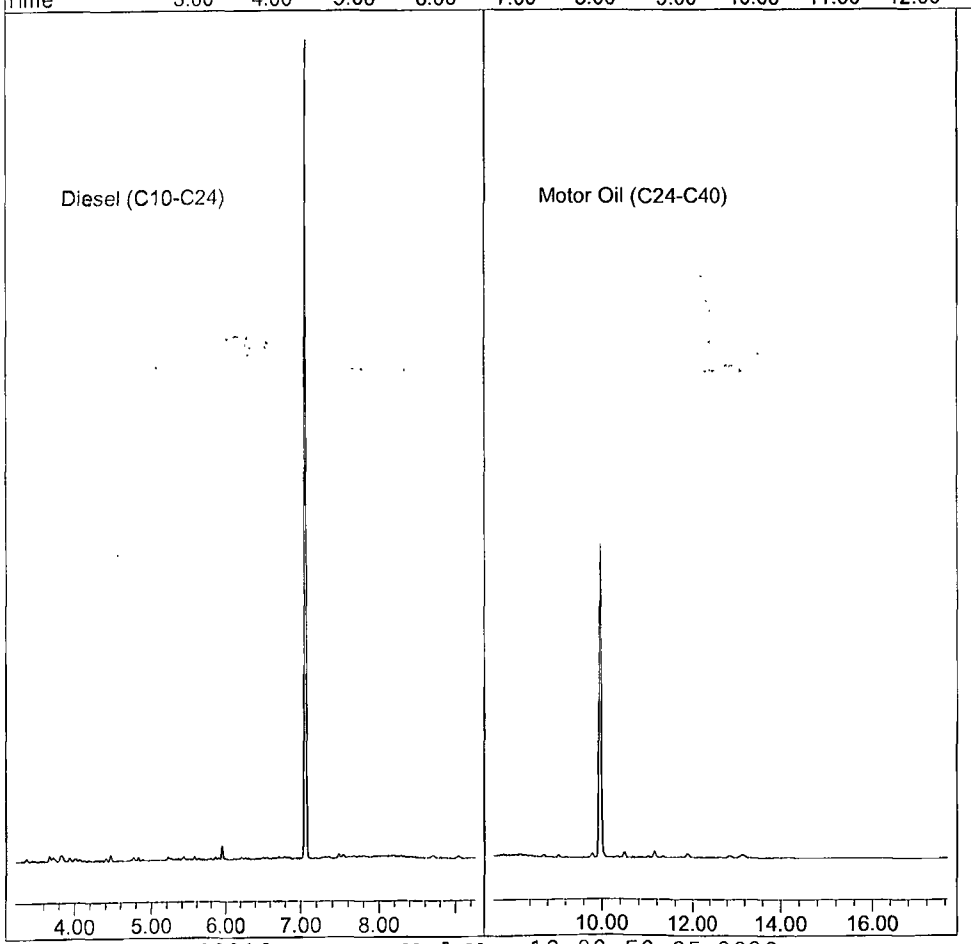
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.06	136493313	67.961	ppb
Surrogate Spike 75.000		Recovery =	90.61%	
4) SA Octacosane(S)	9.96	123208924	88.195	ppb
Surrogate Spike 75.000		Recovery =	117.59%	
Target Compounds				
Target Compounds				
1) HATM Diesel (C10-C24)	0.00	0	N.D.	ppb
2) HBTM Motor Oil (C24-C40)	0.00	0	N.D.	ppb

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

Data File: G:\APOLLO\DATA\200317\317018.D
Sample : BA08370W20 2/800 SG





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200312\312163.D Vial: 63
Acq On : 3-16-20 17:31:24 Operator: SS
Sample : BA08371W13 2/800 Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Mar 18 9:07 2020 Quant Results File: DOC0310.RES

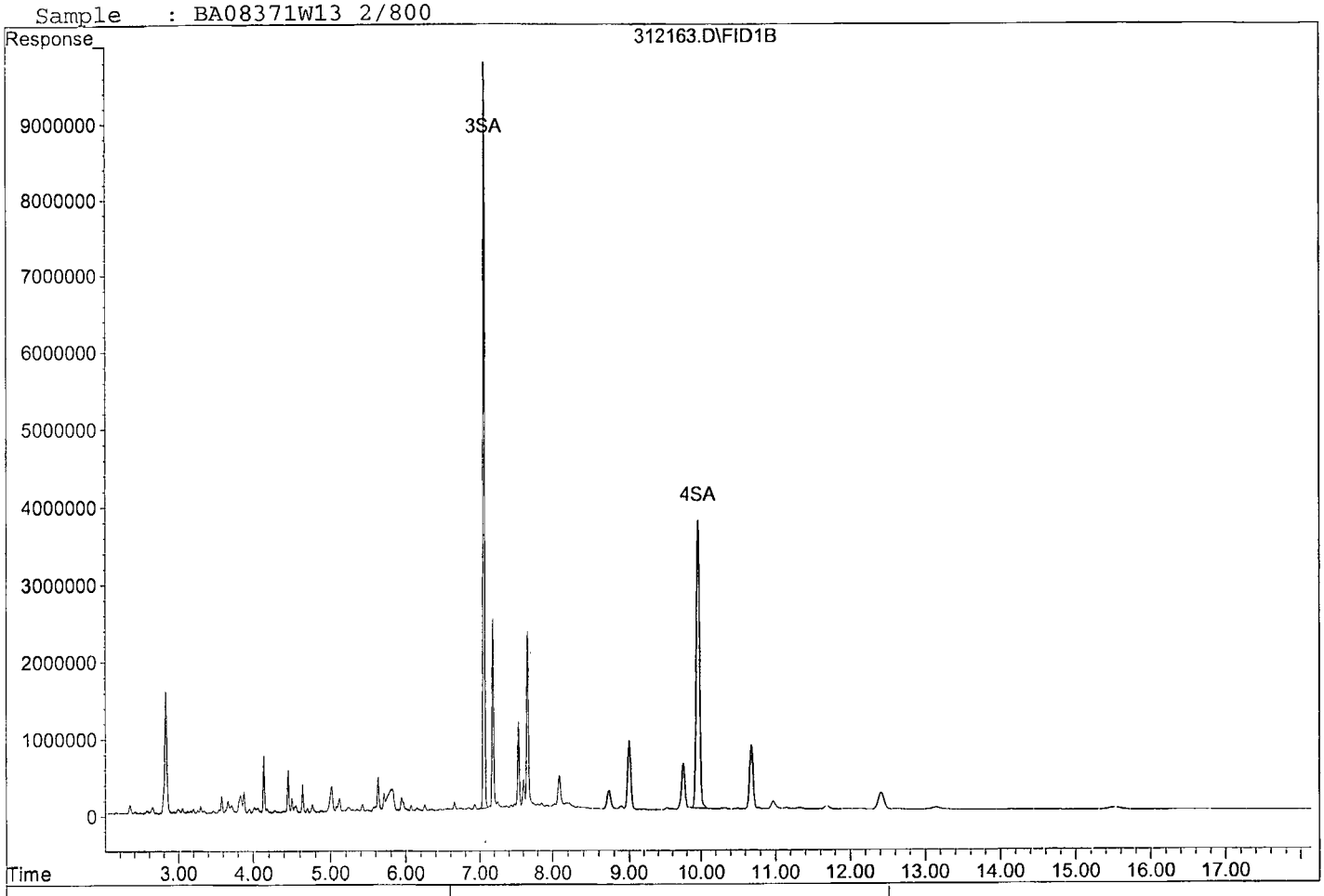
Method : G:\APOLLO\DATA\200312\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

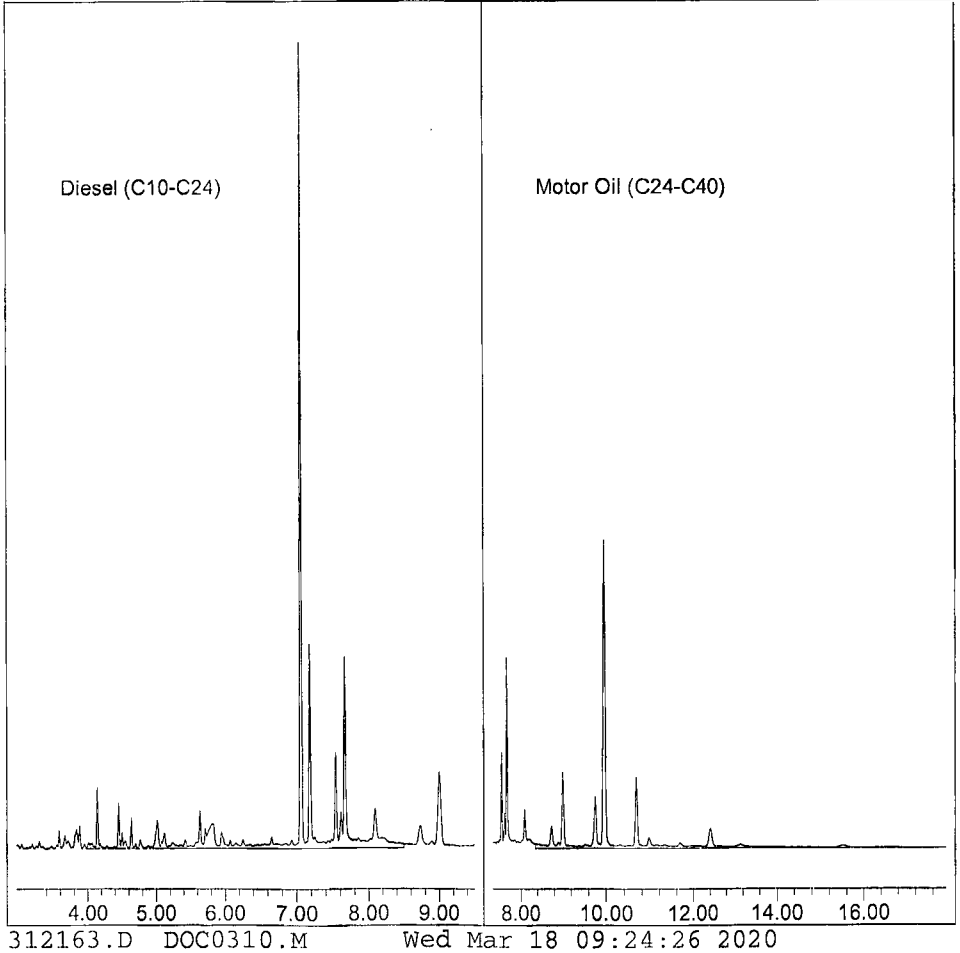
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.06	135413094	67.423 ppb
Surrogate Spike 75.000		Recovery =	89.90%
4) SA Octacosane(S)	9.96	123636790	88.501 ppb
Surrogate Spike 75.000		Recovery =	118.00%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	313396426	204.288 ppb
2) HBTM Motor Oil (C24-C40)	12.60	205212905	173.981 ppb
Target Compounds			

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

Data File: G:\APOLLO\DATA\200312\312163.D
Sample : BA08371W13 2/800





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317019.D Vial: 19
Acq On : 3-17-20 14:07:52 Operator: SS
Sample : BA08371W13 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Mar 18 9:50 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200317\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.06	136685391	68.056	ppb
Surrogate Spike 75.000		Recovery =	90.74%	
4) SA Octacosane(S)	9.96	124092968	88.828	ppb
Surrogate Spike 75.000		Recovery =	118.44%	
Target Compounds				
Target Compounds				
1) HATM Diesel (C10-C24)	0.00	0	N.D.	ppb
2) HBTM Motor Oil (C24-C40)	0.00	0	N.D.	ppb

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

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317019.D Vial: 19
Acq On : 3-17-20 14:07:52 Operator: SS
Sample : BA08371W13 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Mar 18 9:50 2020 Quant Results File: DOC0310.RES

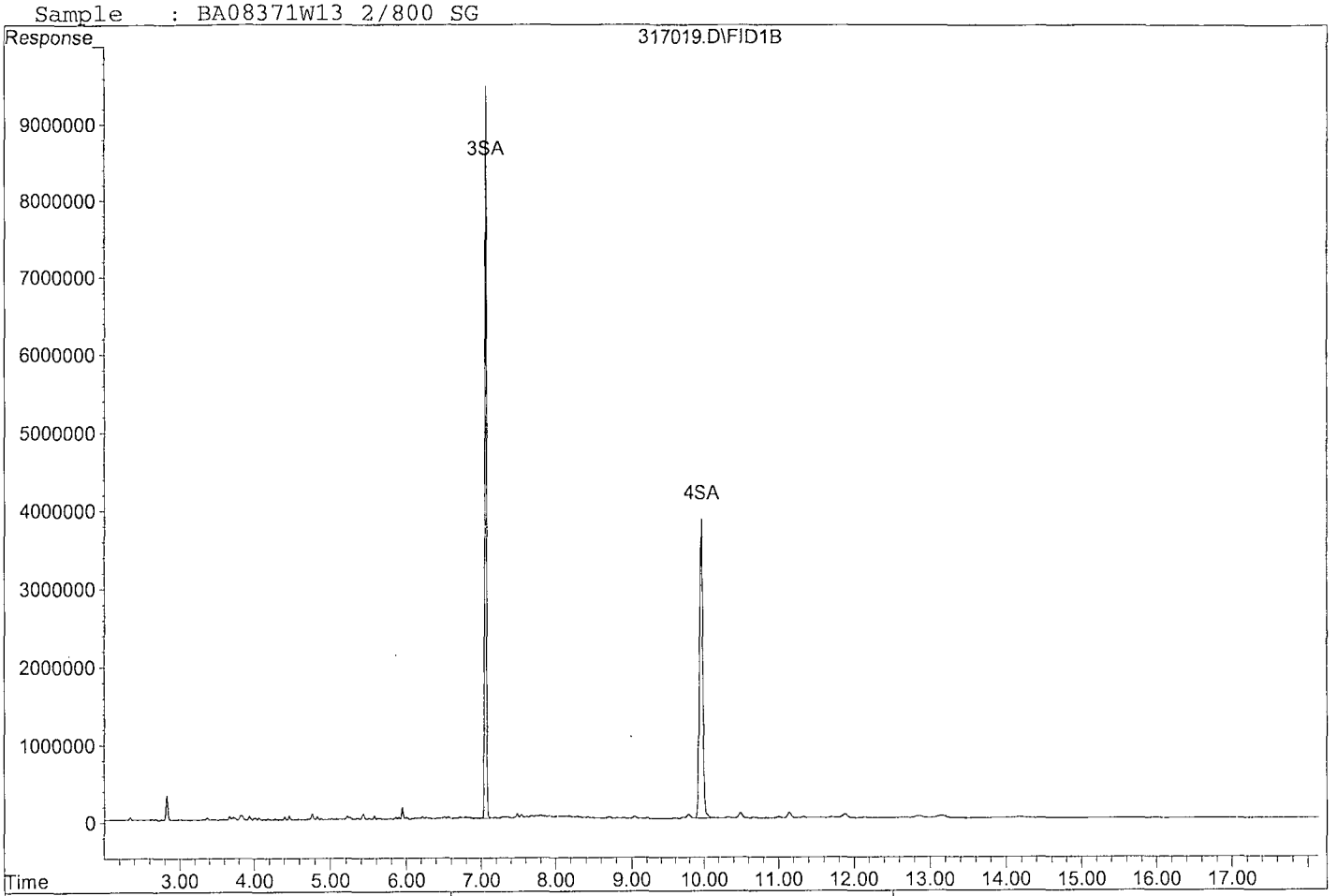
Method : G:\APOLLO\DATA\200317\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

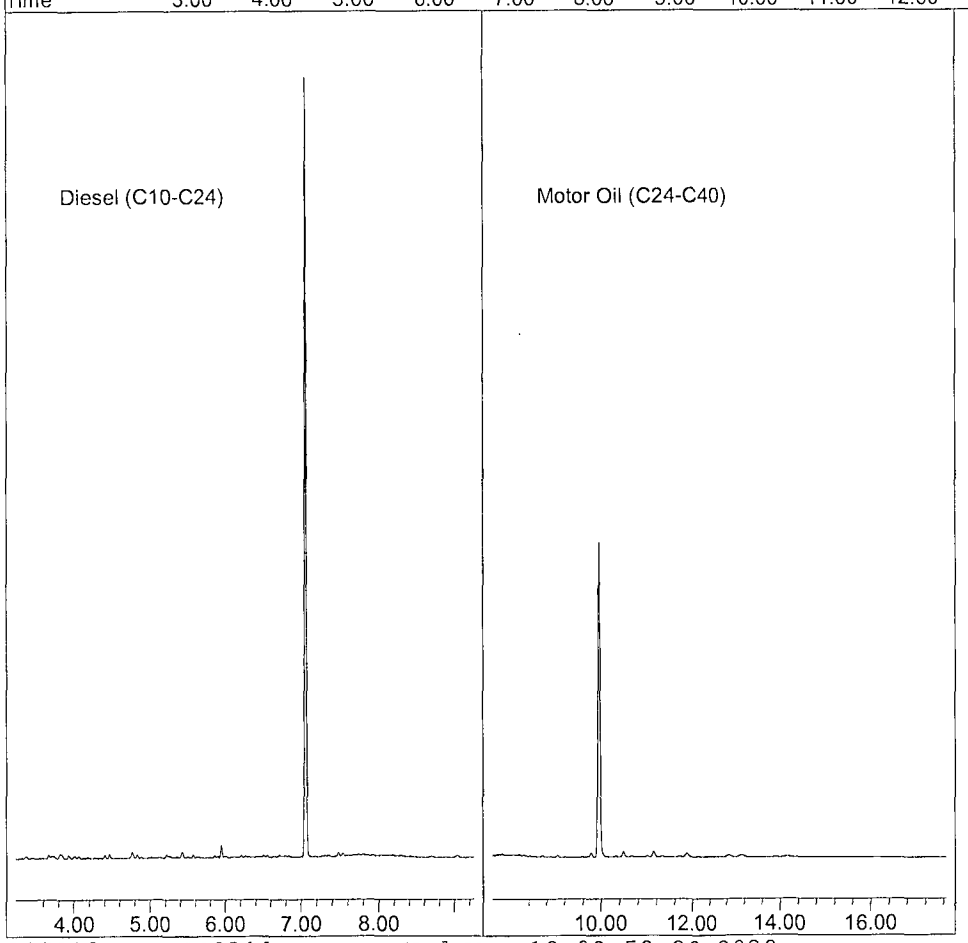
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.06	136685391	68.056	ppb
Surrogate Spike 75.000		Recovery =	90.74%	
4) SA Octacosane(S)	9.96	124092968	88.828	ppb
Surrogate Spike 75.000		Recovery =	118.44%	
Target Compounds				
Target Compounds				
1) HATM Diesel (C10-C24)	0.00	0	N.D.	ppb
2) HBTM Motor Oil (C24-C40)	0.00	0	N.D.	ppb

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

Data File: G:\APOLLO\DATA\200317\317019.D
Sample : BA08371W13 2/800 SG





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200312\312157.D Vial: 57
Acq On : 3-16-20 15:16:46 Operator: SS
Sample : 200312A BLK 2/800 Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Mar 18 9:07 2020 Quant Results File: DOC0310.RES

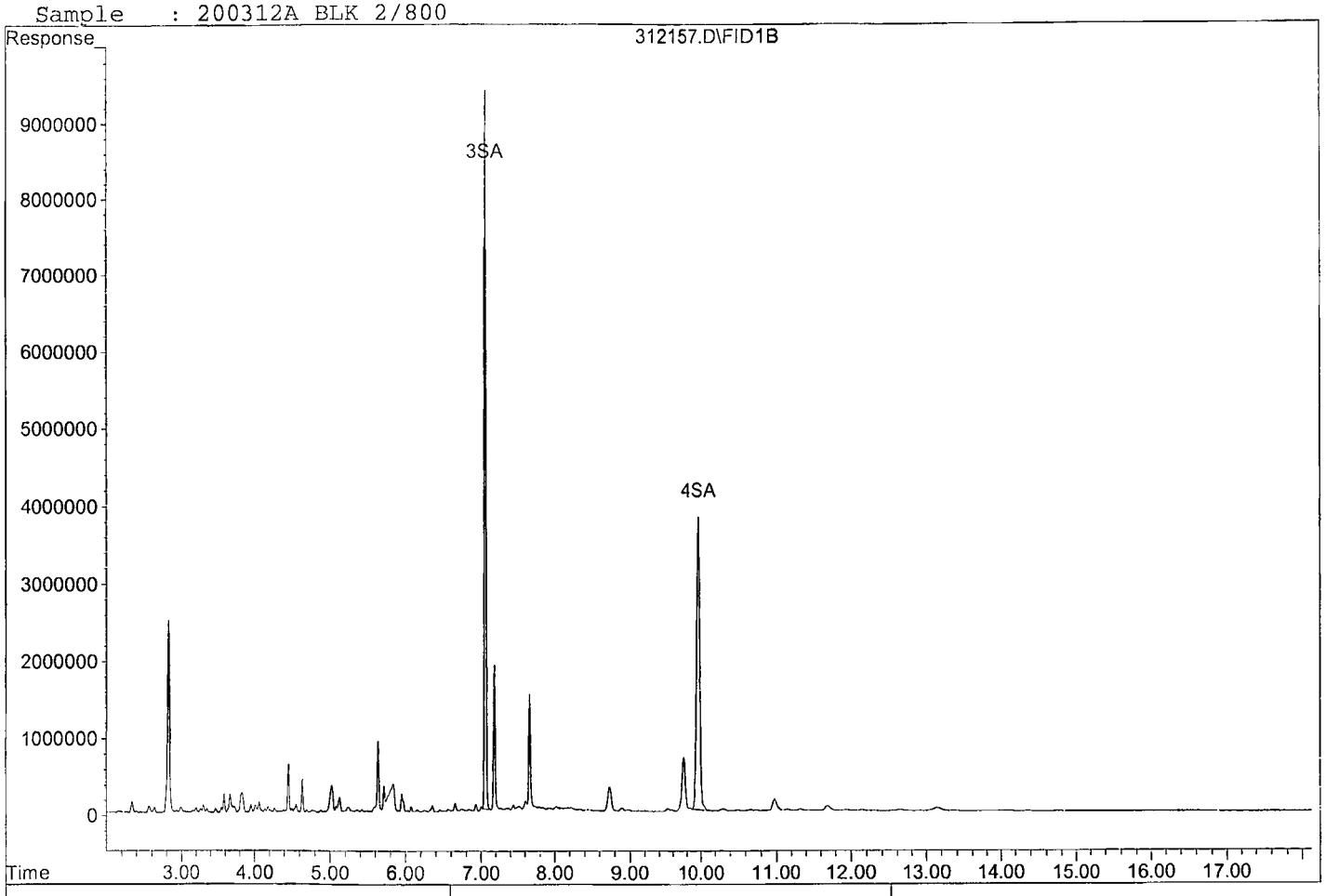
Method : G:\APOLLO\DATA\200312\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

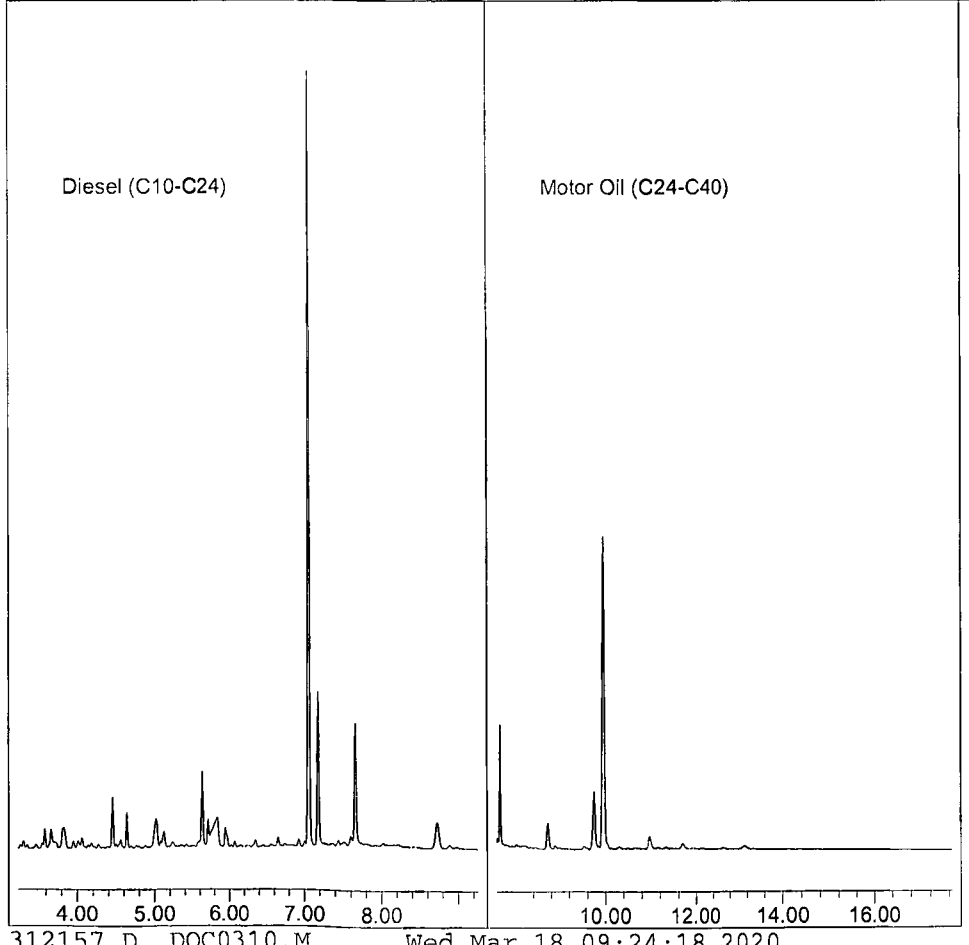
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.06	134572680	67.004	ppb
Surrogate Spike 75.000		Recovery =	89.34%	
4) SA Octacosane(S)	9.96	123085531	88.106	ppb
Surrogate Spike 75.000		Recovery =	117.47%	
Target Compounds				
Target Compounds				
1) HATM Diesel (C10-C24)	0.00	0	N.D.	ppb
2) HBTM Motor Oil (C24-C40)	0.00	0	N.D.	ppb

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

Data File: G:\APOLLO\DATA\200312\312157.D
Sample : 200312A BLK 2/800





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317014.D Vial: 14
Acq On : 3-17-20 12:15:23 Operator: SS
Sample : 200312A BLK 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Mar 18 9:51 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200317\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.06	140869355	70.140	ppb
Surrogate Spike 75.000		Recovery =	93.52%	
4) SA Octacosane(S)	9.96	129330106	92.576	ppb
Surrogate Spike 75.000		Recovery =	123.43%	
Target Compounds				
Target Compounds				
1) HATM Diesel (C10-C24)	0.00	0	N.D.	ppb
2) HBTM Motor Oil (C24-C40)	0.00	0	N.D.	ppb

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

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317014.D Vial: 14
Acq On : 3-17-20 12:15:23 Operator: SS
Sample : 200312A BLK 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Mar 18 9:51 2020 Quant Results File: DOC0310.RES

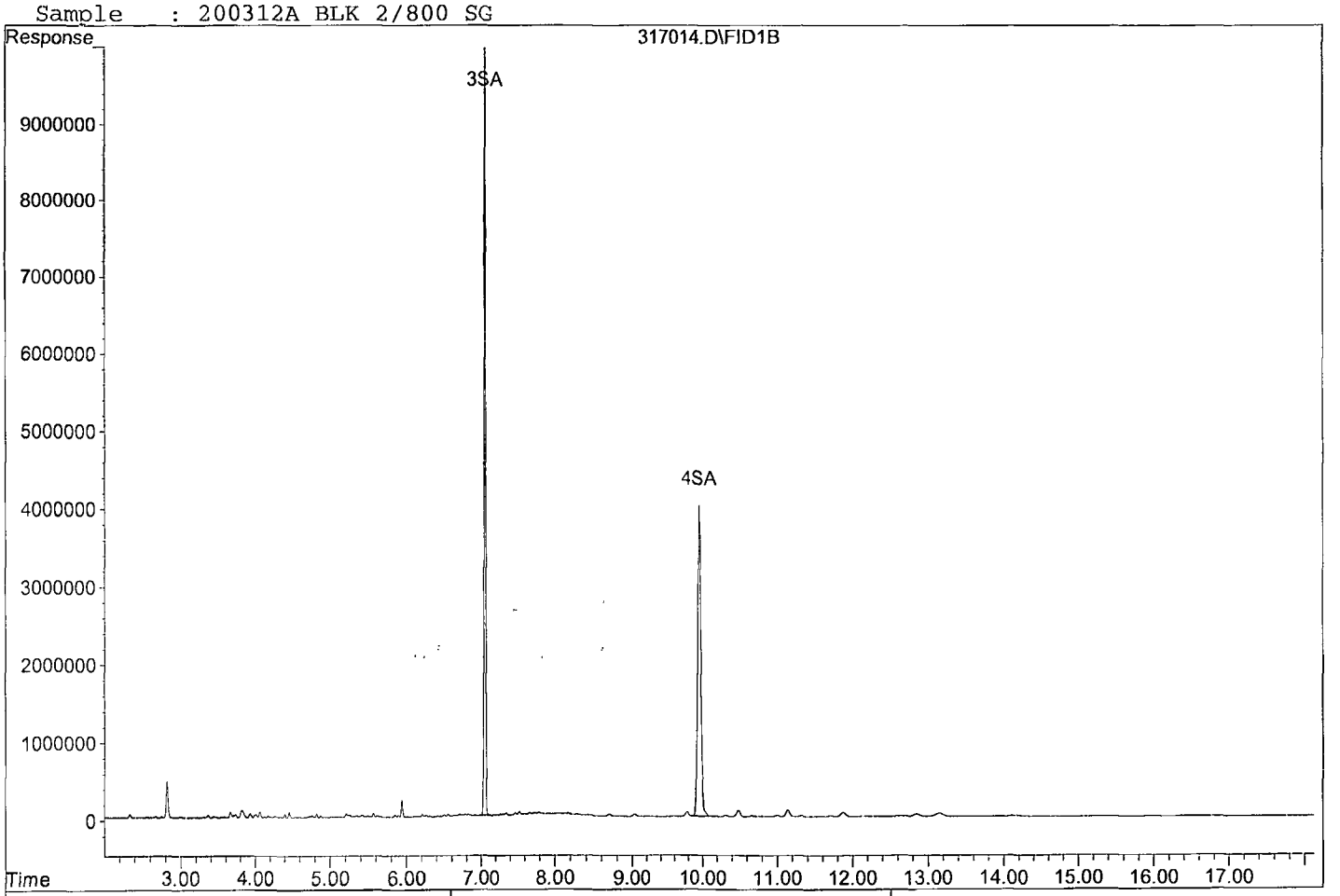
Method : G:\APOLLO\DATA\200317\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

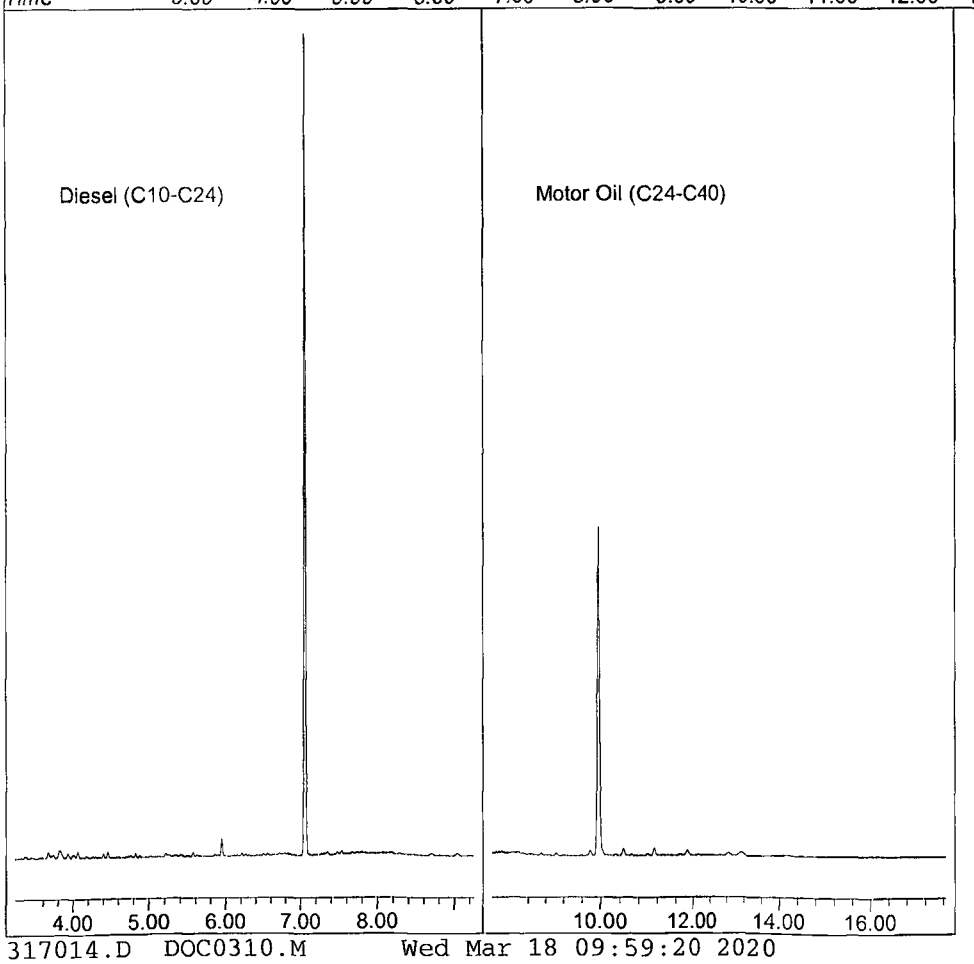
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.06	140869355	70.140	ppb
Surrogate Spike 75.000		Recovery =	93.52%	
4) SA Octacosane(S)	9.96	129330106	92.576	ppb
Surrogate Spike 75.000		Recovery =	123.43%	
Target Compounds				
Target Compounds				
1) HATM Diesel (C10-C24)	0.00	0	N.D.	ppb
2) HBTM Motor Oil (C24-C40)	0.00	0	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200317\317014.D
Sample : 200312A BLK 2/800 SG





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200312\312158.D Vial: 58
Acq On : 3-16-20 15:39:10 Operator: SS
Sample : 200312A LCS-1 2/800 Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Mar 18 9:07 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200312\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

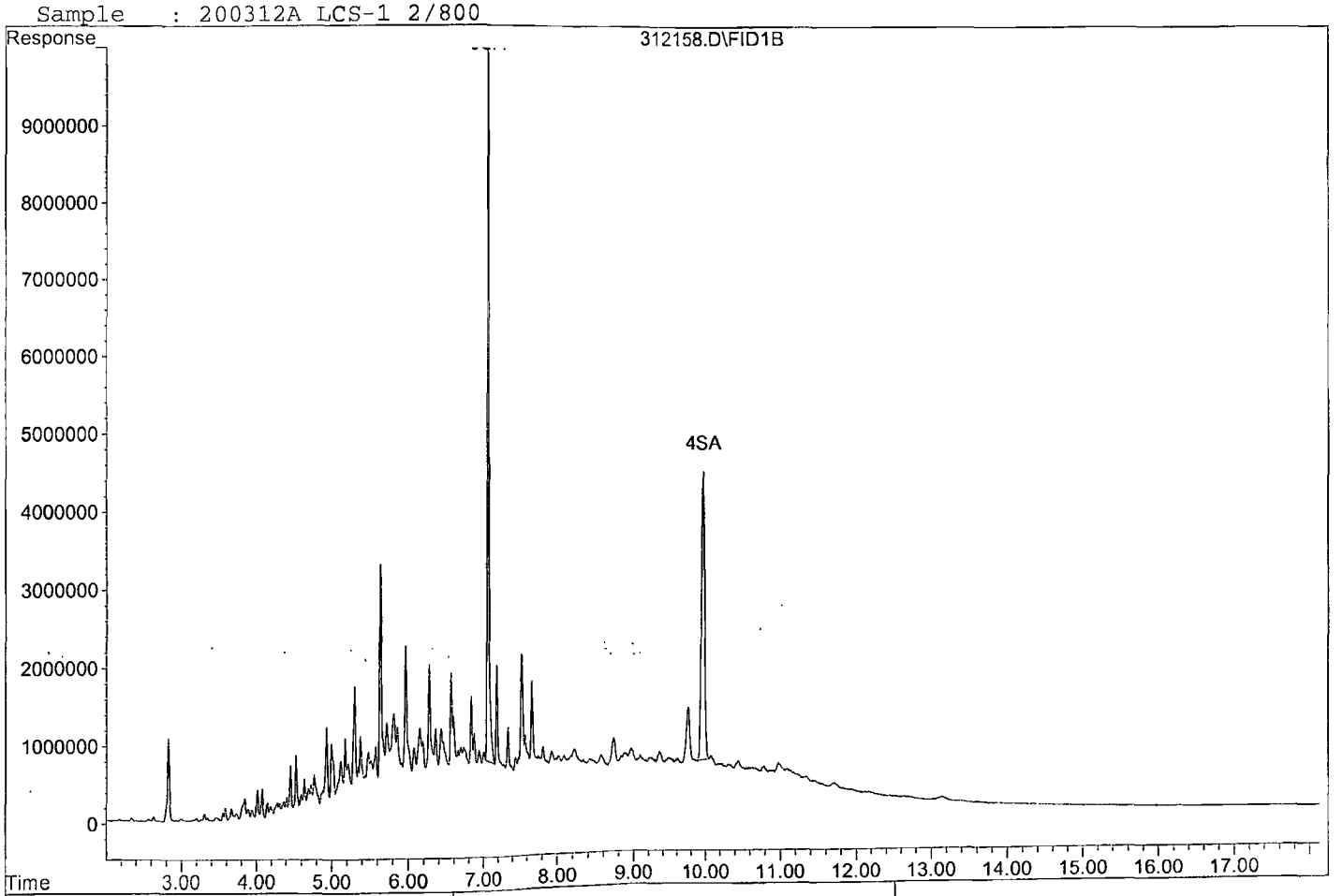
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

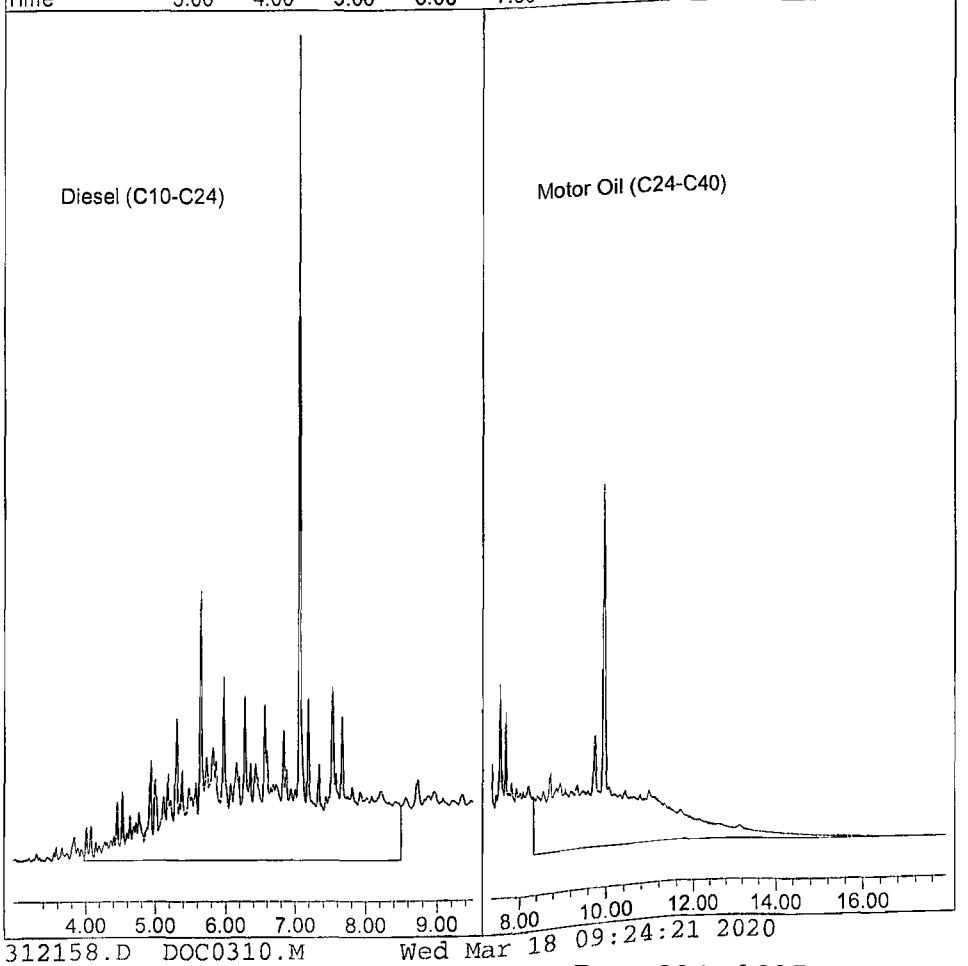
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.06	150020162	74.696	ppb
Surrogate Spike 75.000		Recovery =	99.59%	
4) SA Octacosane(S)	9.97	118079057	84.523	ppb
Surrogate Spike 75.000		Recovery =	112.70%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.24	2029486975	1322.926	ppb
2) HBTM Motor Oil (C24-C40)	12.60	1508198601	1278.659	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200312\312158.D
Sample : 200312A LCS-1 2/800





312158.D DOC0310.M Wed Mar 18 09:24:21 2020

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317015.D Vial: 15
Acq On : 3-17-20 12:37:52 Operator: SS
Sample : 200312A LCS-1 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Mar 18 9:50 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200317\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.06	156852496	78.098	ppb
Surrogate Spike 75.000	Recovery =	104.13%		
4) SA Octacosane(S)	9.96	122904746	87.977	ppb
Surrogate Spike 75.000	Recovery =	117.30%		
Target Compounds				
1) HATM Diesel (C10-C24)	6.24	1851044442	1206.608	ppb
2) HBTM Motor Oil (C24-C40)	12.60	1506286629	1277.038	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317015.D Vial: 15
Acq On : 3-17-20 12:37:52 Operator: SS
Sample : 200312A LCS-1 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Mar 18 9:50 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200317\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

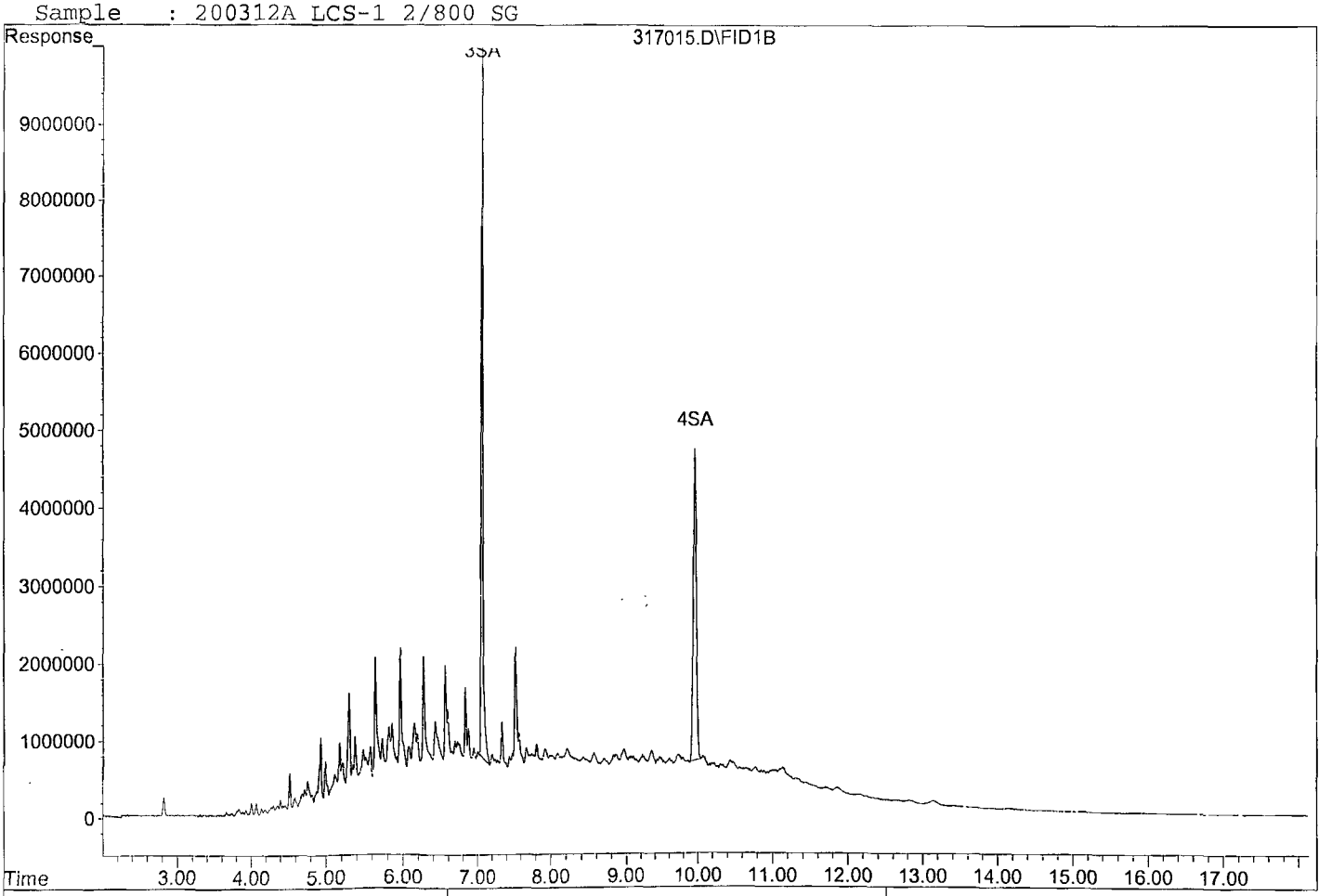
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

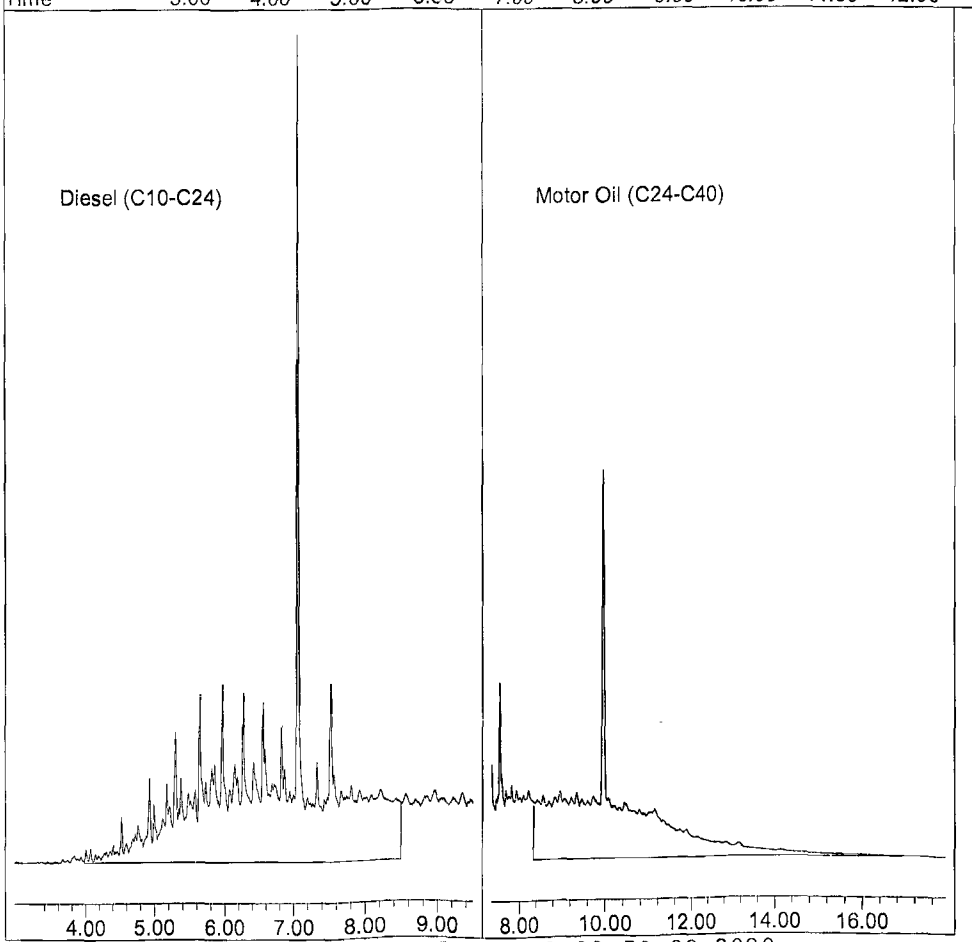
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.06	156852496	78.098	ppb
Surrogate Spike 75.000		Recovery =	104.13%	
4) SA Octacosane(S)	9.96	122904746	87.977	ppb
Surrogate Spike 75.000		Recovery =	117.30%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.24	1851044442	1206.608	ppb
2) HBTM Motor Oil (C24-C40)	12.60	1506286629	1277.038	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200317\317015.D
Sample : 200312A LCS-1 2/800 SG





317015.D DOC0310.M Wed Mar 18 09:59:22 2020

Diesel / Motor Oil Calibration Curve

Prepared: 03/05/20

Expires: 02/13/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference to APPL Prep Date	Exp. Date	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel / Motor Oil Calibration STD	Restek	Diesel / Motor Oil - 1	2,000	Prepared 03/05/20	02/13/21	N/A	5uL	1mL	MC	10
Diesel / Motor Oil Calibration STD	Restek	Diesel / Motor Oil -2	2,000	Prepared 03/05/20	02/13/21	N/A	25uL	1mL	MC	50
Diesel / Motor Oil Calibration STD	Restek	Diesel / Motor Oil - 3	2,000	Prepared 03/05/20	02/13/21	N/A	125uL	1mL	MC	250
Diesel / Motor Oil Calibration STD	Restek	Diesel / Motor Oil - 4	2,000	Prepared 03/05/20	02/13/21	N/A	500uL	1mL	MC	1000
Diesel / Motor Oil Calibration STD	Restek	Diesel / Motor Oil - 5	2,000	Prepared 03/05/20	02/13/21	N/A	750uL	1mL	MC	1500
Diesel / Motor Oil Calibration STD	Restek	Diesel / Motor Oil - 6	2,000	Prepared 03/05/20	02/13/21	N/A	100uL	100uL	N/A	2,000

Decanoic Acid Calibration Curve

Prepared: 03/10/20

Prepared By (Initials): SS

Expires: 01/24/21

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Decanoic Acid STD	O2SI	Decanoic Acid-1	60	Prepared 01/24/20	01/24/21	N/A	50uL	1mL	MC	3
Decanoic Acid STD	O2SI	Decanoic Acid-2	60	Prepared 01/24/20	01/24/21	N/A	100uL	1mL	MC	6
Decanoic Acid STD	O2SI	Decanoic Acid-3	60	Prepared 01/24/20	01/24/21	N/A	400uL	1mL	MC	24
Decanoic Acid STD	O2SI	Decanoic Acid-4	60	Prepared 01/24/20	01/24/21	N/A	600uL	1mL	MC	36
Decanoic Acid STD	O2SI	Decanoic Acid-5	60	Prepared 01/24/20	01/24/21	N/A	800uL	1mL	MC	48
Decanoic Acid STD	O2SI	Decanoic Acid-6	60	Prepared 01/24/20	01/24/21	N/A	100uL	100uL	N/A	60

THC Surrogate

Prepared: 02/24/20

Expires: 02/24/21

Prepared By (Initials): SS

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
O-terphenyl / Octacosane Mix	Phenova	ALO-130161	600	CL14921-4984	02/24/21	02/28/24	N/A	N/A	N/A	600

Diesel Motor Oil Mix

Prepared: 02/10/20

Expires: 02/10/21

Prepared By (Initials): SS

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel Fuel #2	Restek	31258	50,000	A0149169-49607	01/15/21	06/30/26	3.6 mL	7.2 mL	NA	25,000
Motor Oil Composite	Restek	31464	50,000	A0153577-49614	01/15/21	11/30/26	3.6 mL			25,000

Decanoic Acid Spike

Prepared: 03/17/20

Expires: 03/17/21

Prepared By (Initials): SS

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Decanoic Acid Spike	O2SI	011729-01-05-5PAK	1,000	**371298-40661**	**12/11/20**	**03/31/21**	N/A	N/A	N/A	1,000

Decanoic Acid Spike

Prepared: 01/24/20

Expires: 01/24/21

Prepared By (Initials): SS

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Decanoic Acid Spike	O2SI	011729-01-05-5PAK	1,000	**371298-40661**	**12/11/20**	**03/31/21**	N/A	N/A	N/A	1,000

Organic Extraction Worksheet

Method	Continuous Liq/Liq TPH-Diesel/MO 3520C	Extraction Set	200312A	Extraction Method	LIQ005	Units	mL

Spiked ID 1	Diesel Motor Oil Mix 2-10-20 2-10-21		Surrogate ID 1	THC Surrogate 2-24-20 2-24-21	
Spiked ID 2	Decanoic 1000ug/mL Acid Solution 1-24-20 1-24-21		Surrogate ID 2		
Spiked ID 3	Decanoic 1000ug/mL Acid Solution 3-17-20 3-17-20		Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	03/12/20 15:00	
Spiked ID 8			Ext. End Time:	03/13/20 9:00	
			GC Requires Extract By:		

pH1	2	03/12/20 12:45	Water Bath Temp 1 °C	39/38.5 °C
pH2	2	03/12/20 14:10	Water Bath Temp 2 °C	35/38.5
pH3			Water Bath Temp 3 °C	35/38.4 °C

Spiked By: DL **Date** 03/12/20 **Witnessed By:** CFM **Date** 03/12/20

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	200312A Blk		0.050	2	0.100	1	800	2	2	03/12/20 12:55	*
						equip	E-HP30 E-WB1				
2	200312A LCS-1		0.040,0.050	1,2	0.100	1	800	2	2	03/12/20 12:55	*
						equip	E-HP17 E-WB2				
3	BA08341 MS-1	BA08341W45	0.040,0.050	1,2	0.100	1	800	2	2	03/12/20 14:18	91638 *
						equip	E-HP12 E-WB2				
4	BA08341 MSD-1	BA08341W46	0.040,0.050	1,2	0.100	1	800	2	2	03/12/20 14:18	91638 *
						equip	E-HP14 E-WB2				
5	BA08341	BA08341W44	0.050	2	0.100	1	800	2	2	03/12/20 14:18	91638 *
						equip	E-HP13 E-WB3				
6	BA08370	BA08370W20	0.050	3	0.100	1	800	2	2	03/12/20 12:55	91653 *
						equip	E-HP16 E-WB1				
7	BA08371	BA08371W13	0.050	3	0.100	1	800	2	2	03/12/20 12:55	91653 *
						equip	E-HP15 E-WB2				

Solvent and Lot#	
1+1 HCL	2-15-20
PH Strips	HC998032
Dicholormethane (DCM)	59239
Filter Paper	400171
Sodium Sulfate (Na2SO4)	2019020631
Silica Gel (*)	050627t

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	SS
Date	3/14/20
Time	8:45
Refrigerator	HOBART

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL
Concentration	DL

Modified	03/17/20 10:54:55 AM

Reviewed By: KY **Date** 03/16/20

Injection Log

Directory: G:\APOLLO\DATA\200310\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	3	310003.D	1	Diesel Motor Oil-1 3/5/20	water	3-10-20 9:37:22
2	4	310004.D	1	Diesel Motor Oil-2 3/5/20	water	3-10-20 9:59:49
3	5	310005.D	1	Diesel Motor Oil-3 3/5/20	water	3-10-20 10:22:19
4	6	310006.D	1	Diesel Motor Oil-4 3/5/20	water	3-10-20 10:44:50
5	7	310007.D	1	Diesel Motor Oil-5 3/5/20	water	3-10-20 11:07:20
6	8	310008.D	1	Diesel Motor Oil-6 3/5/20	water	3-10-20 11:29:51
7	9	310009.D	1	Diesel Motor Oil-SS 3/5/20	water	3-10-20 11:52:24
8	56	312156.D	1	Diesel Motor Oil-CCV 3/5/20	water	3-16-20 14:54:17
9	57	312157.D	2.5	200312A BLK 2/800	water	3-16-20 15:16:46
10	58	312158.D	2.5	200312A LCS-1 2/800	water	3-16-20 15:39:10
11	62	312162.D	2.5	BA08370W20 2/800	water	3-16-20 17:08:56
12	63	312163.D	2.5	BA08371W13 2/800	water	3-16-20 17:31:24
13	64	312164.D	1	Diesel Motor Oil-CCV 3/5/20	water	3-16-20 17:53:53
14	2	317002.D	1	Decanoic Acid-1 3/10/20	water	3-17-20 8:14:08
15	3	317003.D	1	Decanoic Acid-2 3/10/20	water	3-17-20 8:36:27
16	4	317004.D	1	Decanoic Acid-3 3/10/20	water	3-17-20 8:58:53
17	5	317005.D	1	Decanoic Acid-4 3/10/20	water	3-17-20 9:21:15
18	6	317006.D	1	Decanoic Acid-5 3/10/20	water	3-17-20 9:43:41
19	7	317007.D	1	Decanoic Acid-6 3/10/20	water	3-17-20 10:06:06
20	8	317008.D	1	Diesel Motor Oil-CCV 3/17/20	water	3-17-20 10:43:41
21	10	317010.D	1	Decanoic Acid-CCV 3/10/20	water	3-17-20 11:29:56
22	14	317014.D	0.4	200312A BLK 2/800 SG	water	3-17-20 12:15:23
23	15	317015.D	0.4	200312A LCS-1 2/800 SG	water	3-17-20 12:37:52
24	18	317018.D	0.4	BA08370W20 2/800 SG	water	3-17-20 13:45:23
25	19	317019.D	0.4	BA08371W13 2/800 SG	water	3-17-20 14:07:52
26	20	317020.D	1	Decanoic Acid-CCV 3/10/20	water	3-17-20 14:30:28
27	21	317021.D	1	Diesel Motor Oil-CCV 3/17/20	water	3-17-20 14:53:00

ORGANICS
Calibration Data

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/19/19
Matrix: Instrument: Yoda
Initials:

		Compound	4	5	10	20	40	50	60	80	91		Avg	%RSD	Type	r^2	Q	MRF
			1219Y004.D	1219Y005.D	1219Y006.D	1219Y007.D	1219Y008.D	1219Y003.D	1219Y009.D	1219Y010.D	1219Y011.D							
1	I	1,4-dichlorobenzene-D4(IS)	ISTD															
2		1,4-Dioxane	0.5052	0.5856	0.6410	0.5627	0.5805	0.5963	0.6744	0.6671	0.6074		0.60	8.8				
3	TM	n-Nitrosodimethylamine	1.092	1.156	1.069	0.9475	1.038	1.123	1.210	1.250	1.165		1.1	8.3	TM			
4	TM	Pyridine	2.280	2.408	2.771	2.400	2.420	2.500	2.834	2.907	2.763		2.6	8.9	TM			
5	S	2-Fluorophenol (S)	1.525	1.320	1.432	1.300	1.319	1.484	1.561	1.672	1.583		1.5	9.1	S			
6	S	Phenol-D6 (S)	1.895	1.660	1.756	1.615	1.647	1.920	2.000	2.210	2.108		1.9	11	S			
7	*TM	Phenol	1.874	1.910	2.112	1.928	2.040	2.339	2.470	2.610	2.555		2.2	13	*TM			0.800
8	TM	Aniline	1.334	1.308	1.389	1.427	1.419	1.463	1.661	1.551	1.396		1.4	7.6	TM			
9	TM	Bis (2-chloroethyl) ether	0.9219	0.9198	1.036	0.9251	0.9557	1.056	1.119	1.151	1.107		1.0	9.1	TM			0.700
10	TM	2-Chlorophenol	1.386	1.438	1.555	1.396	1.440	1.608	1.703	1.757	1.686		1.6	9.2	TM			0.800
11	TM	1,3-DCB	1.540	1.631	1.750	1.502	1.582	1.715	1.840	1.921	1.849		1.7	8.7	TM			
12	*TM	1,4-DCB	1.544	1.652	1.762	1.558	1.630	1.757	1.903	1.978	1.905		1.7	9.1	*TM			
13	TM	Benzyl alcohol	0.7777	0.8093	0.9119	0.8082	0.8456	0.9912	1.002	1.065	1.018		0.91	12	TM			
14	TM	1,2-DCB	1.448	1.499	1.651	1.429	1.487	1.659	1.774	1.842	1.807		1.6	10.0	TM			
15	TM	2-Methylphenol	1.219	1.234	1.309	1.185	1.252	1.417	1.495	1.568	1.511		1.4	11	TM			0.700
16	TM	Bis (2-chloroisopropyl) ether	1.212	1.245	1.332	1.184	1.244	1.395	1.475	1.549	1.485		1.3	10.0	TM			
17	TM	Acetophenone	2.010	2.013	2.231	2.067	2.158	2.442	2.558	2.698	2.600		2.3	12	TM			0.010
18	TM	3&4-Methylphenol	1.542	1.554	1.716	1.541	1.629	1.904	1.973	2.123	2.050		1.8	13	TM			0.600
19	**TM	n-Nitrosodi-n-propylamine	1.263	1.297	1.414	1.295	1.361	1.591	1.666	1.776	1.701		1.5	13	**TM			0.500
20	TM	Hexachloroethane	0.6270	0.6828	0.7293	0.6605	0.6729	0.7406	0.7887	0.8348	0.8027		0.73	9.8	TM			0.300
21	I	Napthalene-D8(IS)	ISTD															
22	S	Nitrobenzene-D5(S)	0.5318	0.4774	0.4864	0.4745	0.4719	0.4933	0.5032	0.5240	0.5147		0.50	4.5	S			
23	TM	Nitrobenzene	0.4642	0.5003	0.5125	0.4754	0.5054	0.5308	0.5427	0.5516	0.5571		0.52	6.4	TM			0.200
24	TM	Isophorone	0.7546	0.7674	0.8060	0.7539	0.7961	0.8472	0.8485	0.8787	0.8684		0.81	6.0	TM			0.400
25	*TM	2-Nitrophenol	0.1803	0.1912	0.2042	0.1970	0.2076	0.2181	0.2244	0.2306	0.2309		0.21	8.6	*TM			0.100
26	TM	2,4-Dimethylphenol	0.3048	0.3153	0.3305	0.3095	0.3230	0.3472	0.3501	0.3640	0.3704		0.33	7.1	TM			0.200
27	TML	Benzoic acid	0.0946	0.1138	0.1879	0.2336	0.2825	0.2721	0.2855	0.3030	0.3030		0.23	35	TML	0.998		
28	TM	Bis (2-chloroethoxy) methane	0.3781	0.3943	0.4143	0.3907	0.4119	0.4361	0.4454	0.4624	0.4662		0.42	7.6	TM			0.300
29	*TM	2,4-Dichlorophenol	0.2693	0.2989	0.3168	0.3008	0.3208	0.3413	0.3480	0.3629	0.3610		0.33	8.5	*TM			0.200
30	TM	1,2,4-Trichlorobenzene	0.3149	0.3503	0.3569	0.3288	0.3583	0.3733	0.3895	0.4028	0.4041		0.36	8.6	TM			
31	TM	3,4-Dimethylphenol	0.5088	0.4953	0.5614	0.5223	0.5395	0.5890	0.5844	0.6060	0.6089		0.56	7.6	TM			
32	TM	Naphthalene	0.9866	1.025	1.068	1.000	1.055	1.118	1.145	1.187	1.210		1.1	7.4	TM			0.700
33	TM	4-Chloroaniline	0.4130	0.4102	0.4466	0.4160	0.4341	0.4535	0.4589	0.4596	0.4467		0.44	4.6	TM			0.010
34	TM	2,6-Dichlorophenol	0.2696	0.2967	0.3074	0.2937	0.3088	0.3382	0.3396	0.3625	0.3634		0.32	10	TM			
35	TM	Hexachloropropene	0.2671	0.2881	0.2978	0.2893	0.3112	0.3320	0.3401	0.3527	0.3589		0.32	10	TM			

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/19/19
Matrix: Instrument: Yoda Initials:

		Compound	4	5	10	20	40	50	60	80	91		Avg	%RSD	Type		Q	
36	*TM	Hexachlorobutadiene	0.2198	0.2305	0.2457	0.2253	0.2401	0.2518	0.2615	0.2734	0.2764		0.25	8.3	*TM			0.010
37	TM	Caprolactum	0.1360	0.1418	0.1459	0.1372	0.1421	0.1515	0.1509	0.1569	0.1569		0.15	5.4	TM			0.010
38	*TM	4-Chloro-3-methylphenol	0.3433	0.3492	0.3767	0.3527	0.3826	0.4117	0.4148	0.4325	0.4262		0.39	8.9	*TM			0.200
39	TM	2-Methylnaphthalene	0.6528	0.6825	0.7189	0.6672	0.7074	0.7659	0.7721	0.8038	0.8214		0.73	8.3	TM			0.400
40	TM	1-Methylnaphthalene	0.6774	0.7258	0.7430	0.6772	0.7340	0.7929	0.8094	0.8459	0.8492		0.76	8.6	TM			
41	I	Acenaphthene-D10(IS)	ISTD															
42	**TML	Hexachlorocyclopentadiene	0.1728	0.2331	0.2484	0.3602	0.4060	0.4718	0.4812	0.5045	0.4482		0.37	33	**TML	0.991		0.050
43	TM	1,2,4,5-Tetrachlorobenzene	0.5593	0.5899	0.5937	0.5643	0.6173	0.6743	0.6677	0.7241	0.7440		0.64	11	TM			0.010
44	*TM	2,4,6-Trichlorophenol	0.3671	0.3707	0.4007	0.3830	0.4055	0.4458	0.4421	0.4627	0.4769		0.42	9.8	*TM			0.200
45	TM	2,4,5-Trichlorophenol	0.4207	0.4236	0.4252	0.4143	0.4421	0.4723	0.4724	0.4964	0.5050		0.45	7.7	TM			0.200
46	S	2-Fluorobiphenyl(S)	1.577	1.423	1.350	1.366	1.373	1.489	1.494	1.591	1.634		1.5	7.2	S			
47	TM	1,1'-Biphenyl	1.395	1.444	1.455	1.418	1.494	1.625	1.612	1.736	1.784		1.6	9.2	TM			0.010
48	TM	2-Chloronaphthalene	1.127	1.156	1.195	1.149	1.201	1.307	1.296	1.382	1.417		1.2	8.5	TM			0.800
49	TM	2-Nitroaniline	0.4167	0.4376	0.4565	0.4486	0.4606	0.5021	0.4976	0.5202	0.5237		0.47	8.1	TM			0.010
50	TM	Dimethyl phthalate	1.422	1.455	1.461	1.410	1.474	1.591	1.590	1.671	1.690		1.5	7.0	TM			0.010
51	TM	2,6-DNT	0.2885	0.2872	0.3086	0.3140	0.3290	0.3597	0.3549	0.3784	0.3815		0.33	11	TM			0.200
52	TM	Acenaphthylene	1.710	1.793	1.808	1.775	1.875	2.023	2.023	2.114	2.167		1.9	8.5	TM			0.900
53	TM	3-Nitroaniline	0.3591	0.3544	0.3786	0.3695	0.3887	0.4218	0.4188	0.4298	0.4424		0.40	8.3	TM			0.010
54	*TM	Acenaphthene	1.085	1.127	1.137	1.078	1.162	1.275	1.255	1.332	1.363		1.2	8.9	*TM			0.900
55	**TML	2,4-Dinitrophenol	0.0287	0.0331	0.0777	0.1240	0.1723	0.1832	0.1984	0.2141	0.2201		0.14	55	**TML	0.993		0.010
56	**TM	4-Nitrophenol	0.0290	0.0284	0.0307	0.0282	0.0302	0.0332	0.0320	0.0336	0.0352		0.03	7.9	**TM			0.010
57	TM	Dibenzofuran	1.623	1.671	1.677	1.629	1.734	1.930	1.924	2.084	2.153		1.8	11	TM			0.800
58	TM	2,4-DNT	0.3958	0.4169	0.4457	0.4462	0.4784	0.5343	0.5256	0.5800	0.5904		0.49	14	TM			0.200
59	TM	2,3,4,6-Tetrachlorophenol	0.2835	0.3006	0.3178	0.3136	0.3386	0.3682	0.3763	0.3904	0.3993		0.34	12	TM			0.010
60	TM	Diethyl phthalate	1.467	1.516	1.534	1.474	1.545	1.655	1.632	1.704	1.733		1.6	6.3	TM			0.010
61	TM	4-Chlorophenyl phenyl ether		0.7633	0.7429	0.7444	0.8104	0.9246	0.9212	1.040	1.072		0.88	15	TM			0.400
62	TM	Fluorene	1.306	1.349	1.363	1.361	1.475	1.673	1.668	1.846	1.932		1.6	15	TM			0.900
63	TM	4-Nitroaniline	0.3151	0.3031	0.3294	0.3142	0.3263	0.3501	0.3462	0.3402	0.3445		0.33	5.0	TM			0.010
64	S	2,4,6-Tribromophenol(S)	0.2342	0.2311	0.2068	0.2116	0.2324	0.2576	0.2590	0.2918	0.3127		0.25	14	S			
65	I	Phenanthrene-D10(IS)	ISTD															
66	TM	4,6-Dinitro-2-methylphenol			0.1237	0.1331	0.1507	0.1615	0.1663	0.1780	0.1783		0.16	14	TM			0.010
67	TM	Diphenyl amine		0.5674	0.5878	0.5670	0.6272	0.6767	0.6917	0.7384	0.7531		0.65	11	TM			
68	*TM	n-Nitrosodiphenylamine		0.5674	0.5878	0.5670	0.6272	0.6767	0.6917	0.7384	0.7531		0.65	11	*TM			0.010
69	TM	1,2-Diphenylhydrazine	0.8725	0.8825	0.9231	0.8661	0.9237	0.9667	0.9904	1.038	1.013		0.94	6.7	TM			
70	TM	4-Bromophenyl phenyl ether	0.2168	0.2117	0.2303	0.2234	0.2447	0.2591	0.2603	0.2775	0.2827		0.25	11	TM			0.100

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 12/19/19
Matrix: Instrument: Yoda Initials:

		Compound	4	5	10	20	40	50	60	80	91		Avg	%RSD	Type		Q	
71	TM	Hexachlorobenzene	0.2189	0.2230	0.2350	0.2209	0.2419	0.2639	0.2678	0.2781	0.2827		0.25	10	TM			0.100
72	TM	Atrazine		0.2202	0.2285	0.2039	0.2199	0.2039	0.2312	0.2400	0.2413		0.22	6.5	TM			0.010
73	*TM	Pentachlorophenol				0.1167	0.1380	0.1587	0.1560	0.1693	0.1761		0.15	14	*TM			0.050
74	TM	Phenanthrene	1.008	1.029	1.058	1.008	1.079	1.131	1.159	1.215	1.247		1.1	8.0	TM			0.700
75	TM	Anthracene	1.024	1.060	1.108	1.058	1.130	1.203	1.210	1.282	1.310		1.2	8.9	TM			0.700
76	TM	Carbazol	0.9547	0.9719	1.001	0.9555	1.020	1.099	1.107	1.168	1.177		1.1	8.5	TM			0.010
77	TM	Di-n-butylphthalate	1.254	1.280	1.325	1.308	1.422	1.524	1.557	1.600	1.659		1.4	11	TM			0.010
78		2-Nitrodiphenylamine	0.2581	0.2591	0.2987	0.3023	0.3376	0.3611	0.3621	0.3733	0.3885		0.33	15				
79	*TM	Fluoranthene	1.136	1.164	1.219	1.161	1.277	1.377	1.374	1.473	1.455		1.3	10	*TM			0.600
80	I	Chrysene-D12(IS)	ISTD															
81	TM	Benzidine	0.4294	0.4321	0.4090	0.3966	0.3741						0.41	5.9	TM			
82	TM	Pyrene	1.234	1.320	1.294	1.198	1.211	1.149	1.140	1.104	1.141		1.2	6.1	TM			0.600
83	S	Terphenyl-D14(S)	1.144	1.050	0.9741	0.9361	0.9110	0.8552	0.8740	0.8455	0.9945		0.95	10	S			
84	TM	Butyl benzylphthalate	0.6241	0.6476	0.6440	0.6034	0.6057	0.5784	0.5714	0.5550	0.5770		0.60	5.5	TM			0.010
85	TM	3,3'-Dichlorobenzidine	0.4406	0.4474	0.4653	0.4210	0.4166	0.4318	0.3803	0.3533	0.3523		0.41	9.9	TM			0.010
86	TM	Benz (a) anthracene	1.378	1.384	1.377	1.254	1.272	1.281	1.262	1.262	1.284		1.3	4.3	TM			0.800
87	TM	Bis (2-ethylhexyl) phthalate	0.9872	1.026	1.020	0.9806	0.9843	1.006	0.9951	1.003	1.032		1.0	1.9	TM			0.010
88	TM	Chrysene	1.126	1.256	1.202	1.146	1.157	1.110	1.070	1.065	1.090		1.1	5.5	TM			0.700
89	*TM	Di-n-octylphthalate	1.492	1.569	1.601	1.470	1.479	1.480	1.436	1.394	1.414		1.5	4.6	*TM			0.010
90	I	Perylene-D12(IS)	ISTD															
91	TM	Benzo (b) fluoranthene	1.200	1.183	1.189	1.231	1.306	1.417	1.414	1.408	1.411		1.3	8.2	TM			0.700
92	TM	Benzo (k) fluoranthene	1.036	1.129	1.146	1.047	1.126	1.214	1.174	1.322	1.406		1.2	10	TM			0.700
93	*TM	Benzo (a) pyrene	1.048	1.092	1.101	1.069	1.126	1.226	1.213	1.267	1.293		1.2	7.8	*TM			0.700
94	TM	Indeno (1,2,3-cd) pyrene	1.218	1.270	1.279	1.250	1.330	1.445	1.416	1.464	1.494		1.4	7.7	TM			0.500
95	TM	Dibenz (a,h) anthracene	1.044	1.127	1.135	1.106	1.175	1.293	1.267	1.331	1.359		1.2	9.2	TM			0.400
96	TM	Benzo (g,h,i) perylene	0.9656	1.022	1.029	1.003	1.043	1.124	1.098	1.126	1.148		1.1	6.0	TM			0.500
97																		
98																		
99																		
100																		
101																		
102																		
103																		
104																		
105																		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y003.D Vial: 3
Acq On : 19 Dec 19 9:06 Operator: MA,SS
Sample : 50ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.38	152	196599	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.83	136	821661	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.84	164	498864	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.57	188	965840	40.00000 ppb	0.00
80) Chrysene-D12(IS)	13.67	240	1196016	40.00000 ppb	0.00
90) Perylene-D12(IS)	15.49	264	1033039	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.82	112	729337	101.21407 ppb	0.00
Spiked Amount 200.000			Recovery	= 50.607%	
6) Phenol-D6 (S)	5.00	99	943605	102.78046 ppb	0.00
Spiked Amount 200.000			Recovery	= 51.390%	
22) Nitrobenzene-D5(S)	6.01	82	506628	49.57999 ppb	0.00
Spiked Amount 100.000			Recovery	= 49.580%	
46) 2-Fluorobiphenyl(S)	8.06	172	928304	50.38731 ppb	0.00
Spiked Amount 100.000			Recovery	= 50.387%	
64) 2,4,6-Tribromophenol(S)	9.77	330	321251	103.61865 ppb	0.00
Spiked Amount 200.000			Recovery	= 51.810%	
83) Terphenyl-D14(S)	12.43	244	1278597	44.83129 ppb	0.00
Spiked Amount 100.000			Recovery	= 44.831%	
Target Compounds					Qvalue
3) n-Nitrosodimethylamine	1.91	42	275394	50.17040 ppb	100
4) Pyridine	1.92	79	614275	48.30945 ppb	100
7) Phenol	5.02	94	574851	53.05712 ppb	100
8) Aniline	5.01	93	359488	50.84319 ppb	100
9) Bis (2-chloroethyl) ether	5.08	63	259464	51.69417 ppb	100
10) 2-Chlorophenol	5.15	128	395131	51.79401 ppb	100
11) 1,3-DCB	5.31	146	421373	50.33398 ppb	100
12) 1,4-DCB	5.40	146	431772	50.39583 ppb	100
13) Benzyl alcohol	5.54	108	243593	54.20799 ppb	100
14) 1,2-DCB	5.57	146	407782	51.15484 ppb	100
15) 2-Methylphenol	5.68	107	348274	52.31608 ppb	100
16) Bis (2-chloroisopropyl) et	5.69	45	342864	51.79894 ppb	100
17) Acetophenone	5.84	105	600018	52.87990 ppb	100
18) 3&4-Methylphenol	5.86	107	935580	106.86276 ppb	100
19) n-Nitrosodi-n-propylamine	5.85	70	391093	53.58916 ppb	100
20) Hexachloroethane	5.95	117	182011	50.96658 ppb	100
23) Nitrobenzene	6.04	77	545143	51.47563 ppb	100
24) Isophorone	6.31	82	870177	52.07890 ppb	100
25) 2-Nitrophenol	6.39	139	223955	52.07765 ppb	100
26) 2,4-Dimethylphenol	6.44	122	356638	51.82729 ppb	100
27) Benzoic acid	6.60	105	279476	47.48334 ppb	100
28) Bis (2-chloroethoxy) metha	6.54	93	447865	51.64725 ppb	100
29) 2,4-Dichlorophenol	6.68	162	350537	52.24411 ppb	100
30) 1,2,4-Trichlorobenzene	6.76	180	383401	51.23105 ppb	100
31) 3,4-Dimethylphenol	6.79	107	604918	52.84249 ppb	100
32) Naphthalene	6.84	128	1148204	51.36025 ppb	100
33) 4-Chloroaniline	6.91	127	465735	51.81136 ppb	100
34) 2,6-Dichlorophenol	6.92	162	347372	52.84673 ppb	100
35) Hexachloropropene	6.95	213	340941	52.64986 ppb	100
36) Hexachlorobutadiene	6.98	225	258626	50.94087 ppb	100
37) Caprolactum	7.34	55	155640	51.68587 ppb	100
38) 4-Chloro-3-methylphenol	7.48	107	422799	53.08472 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y003.D Vial: 3
Acq On : 19 Dec 19 9:06 Operator: MA,SS
Sample : 50ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
39)	2-Methylnaphthalene	7.63	142	786668	52.28541	ppb	100
40)	1-Methylnaphthalene	7.75	142	814338	52.04963	ppb	100
42)	Hexachlorocyclopentadiene	7.82	237	294208	51.41653	ppb	100
43)	1,2,4,5-Tetrachlorobenzene	7.84	216	420454	52.91044	ppb	100
44)	2,4,6-Trichlorophenol	7.97	196	277989	53.43197	ppb	100
45)	2,4,5-Trichlorophenol	8.02	196	294494	52.19170	ppb	100
47)	1,1'-Biphenyl	8.17	154	1013613	52.38680	ppb	100
48)	2-Chloronaphthalene	8.20	162	814737	52.35985	ppb	100
49)	2-Nitroaniline	8.32	65	313105	52.99430	ppb	100
50)	Dimethyl phthalate	8.53	163	992101	52.01547	ppb	100
51)	2,6-DNT	8.61	165	224309	53.92342	ppb	100
52)	Acenaphthylene	8.68	152	1261631	52.66138	ppb	100
53)	3-Nitroaniline	8.32	138	263026	53.26882	ppb	100
54)	Acenaphthene	8.89	154	794988	53.04993	ppb	100
55)	2,4-Dinitrophenol	8.92	184	114232	46.68381	ppb	100
56)	4-Nitrophenol	8.60	65	20732	53.32779	ppb	100
57)	Dibenzofuran	9.08	168	1203351	52.86739	ppb	100
58)	2,4-DNT	9.07	165	333192	54.48047	ppb	100
59)	2,3,4,6-Tetrachlorophenol	9.24	232	229610	53.65092	ppb	100
60)	Diethyl phthalate	9.35	149	1031999	52.22569	ppb	100
61)	4-Chlorophenyl phenyl ethe	9.48	204	576562	52.69605	ppb	100
62)	Fluorene	9.48	166	1043084	53.86740	ppb	100
63)	4-Nitroaniline	8.80	138	218292	53.05517	ppb	100
66)	4,6-Dinitro-2-methylphenol	9.56	198	195000	51.78616	ppb	100
67)	Diphenyl amine	9.63	169	1633943	103.92069	ppb	100
68)	n-Nitrosodiphenylamine	9.63	169	1633943	103.92069	ppb	100
69)	1,2-Diphenylhydrazine	9.67	77	1167037	51.32296	ppb	100
70)	4-Bromophenyl phenyl ether	10.05	248	312755	52.83109	ppb	100
71)	Hexachlorobenzene	10.13	284	318617	53.20114	ppb	100
72)	Atrazine	10.25	200	123091	22.79679	ppb	100
73)	Pentachlorophenol	10.36	266	191605	52.04610	ppb	100
74)	Phenanthrene	10.60	178	1365637	51.23790	ppb	100
75)	Anthracene	10.67	178	1452175	52.12221	ppb	100
76)	Carbazol	10.85	167	1327202	52.32019	ppb	100
77)	Di-n-butylphthalate	11.25	149	1840279	53.05379	ppb	100
78)	2-Nitrodiphenylamine	11.43	167	218003	27.62865	ppb	100
79)	Fluoranthene	11.99	202	1662853	53.26539	ppb	100
81)	Benzidine	12.14	184	328745	26.93277	ppb	100
82)	Pyrene	12.25	202	1717114	47.89582	ppb	100
84)	Butyl benzylphthalate	13.00	149	864776	48.14287	ppb	100
85)	3,3'-Dichlorobenzidine	13.62	252	645596	52.39866	ppb	100
86)	Benz (a) anthracene	13.66	228	1915683	49.05514	ppb	100
87)	Bis (2-ethylhexyl) phthala	13.67	149	1504164	50.11549	ppb	100
88)	Chrysene	13.69	228	1660091	48.87974	ppb	100
89)	Di-n-octylphthalate	14.42	149	2213014	49.95022	ppb	100
91)	Benzo (b) fluoranthene	14.96	252	1830066	54.23818	ppb	100
92)	Benzo (k) fluoranthene	14.99	252	1567732	51.53429	ppb	100
93)	Benzo (a) pyrene	15.42	252	1583146	52.86784	ppb	100
94)	Indeno (1,2,3-cd) pyrene	17.36	276	1864158	53.40274	ppb	100
95)	Dibenz (a,h) anthracene	17.40	278	1668227	53.64701	ppb	100
96)	Benzo (g,h,i) perylene	17.93	276	1451452	52.91619	ppb	100

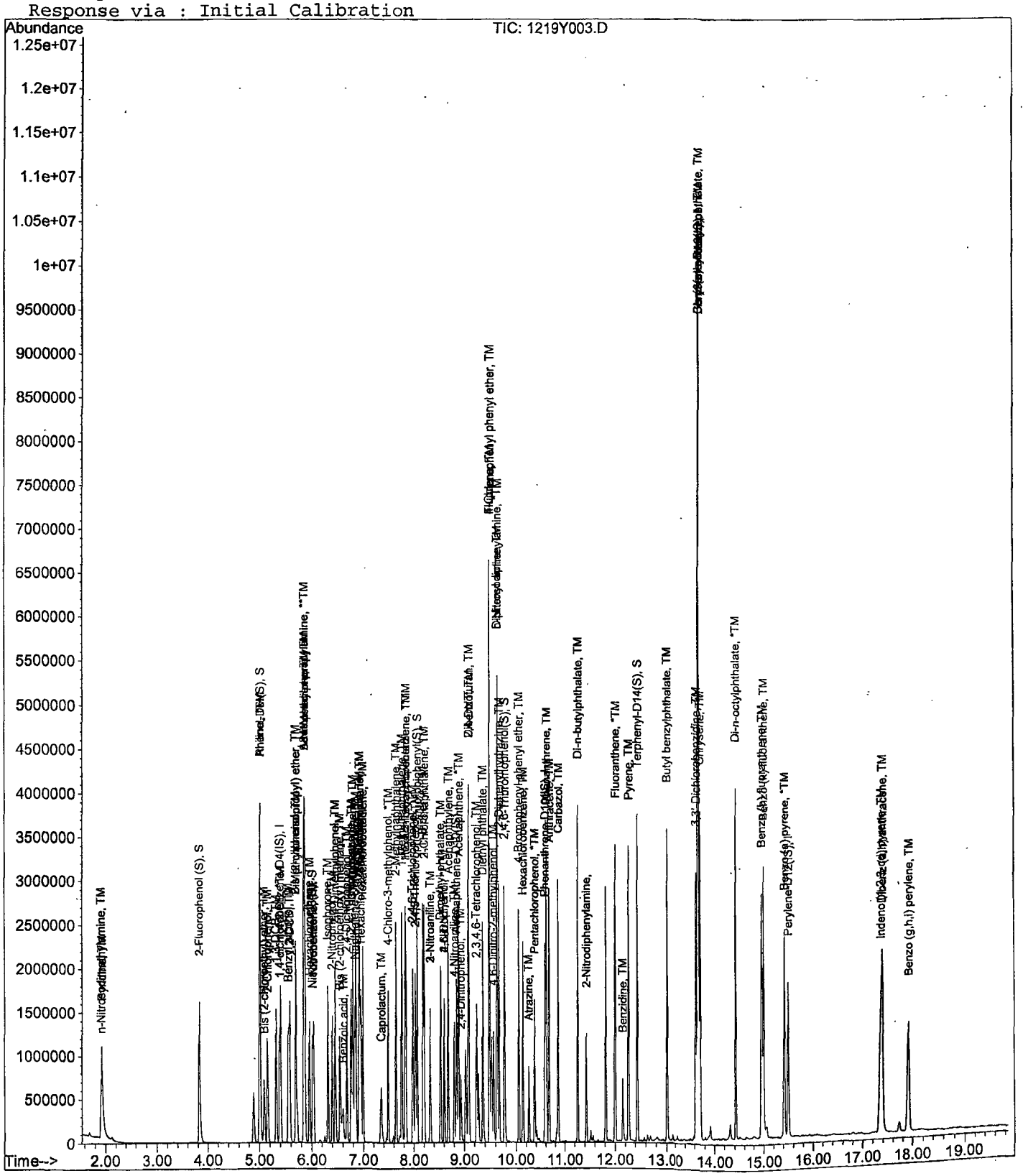
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y003.D Vial: 3
Acq On : 19 Dec 19 9:06 Operator: MA,SS
Sample : 50ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y004.D Vial: 4
Acq On : 19 Dec 19 9:33 Operator: MA,SS
Sample : 4ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.38	152	172988	40.00000	ppb	0.00
21) Napthalene-D8(IS)	6.82	136	714555	40.00000	ppb	0.00
41) Acenaphthene-D10(IS)	8.84	164	436036	40.00000	ppb	0.00
65) Phenanthrene-D10(IS)	10.57	188	836785	40.00000	ppb	0.00
80) Chrysene-D12(IS)	13.66	240	796002	40.00000	ppb	0.00
90) Perylene-D12(IS)	15.49	264	872764	40.00000	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.81	112	52772	8.32303	ppb	0.00
Spiked Amount 200.000			Recovery	= 4.162%		
6) Phenol-D6 (S)	4.99	99	65554	8.11493	ppb	0.00
Spiked Amount 200.000			Recovery	= 4.058%		
22) Nitrobenzene-D5(S)	6.00	82	37998	4.27597	ppb	0.00
Spiked Amount 100.000			Recovery	= 4.276%		
46) 2-Fluorobiphenyl(S)	8.05	172	68746	4.26912	ppb	0.00
Spiked Amount 100.000			Recovery	= 4.269%		
64) 2,4,6-Tribromophenol(S)	9.76	330	20427	7.53803	ppb	0.00
Spiked Amount 200.000			Recovery	= 3.769%		
83) Terphenyl-D14(S)	12.42	244	91079	4.79831	ppb	0.00
Spiked Amount 100.000			Recovery	= 4.798%		
Target Compounds						Qvalue
2) 1,4-Dioxane	1.69	58	874	0.33558	#	1
3) n-Nitrosodimethylamine	1.91	42	18895	3.91206	ppb	92
4) Pyridine	1.94	79	39443	3.52537	ppb	97
7) Phenol	5.00	94	32421	3.40079	ppb #	53
8) Aniline	5.00	93	23080	3.70979	ppb	98
9) Bis (2-chloroethyl) ether	5.07	63	15947	3.61084	ppb	98
10) 2-Chlorophenol	5.15	128	23984	3.57294	ppb	97
11) 1,3-DCB	5.31	146	26641	3.61668	ppb	96
12) 1,4-DCB	5.40	146	26701	3.54187	ppb	97
13) Benzyl alcohol	5.54	108	13453	3.40238	ppb	91
14) 1,2-DCB	5.56	146	25057	3.57234	ppb	95
15) 2-Methylphenol	5.68	107	21086	3.59976	ppb	96
16) Bis (2-chloroisopropyl) et	5.69	45	20972	3.60084	ppb	88
17) Acetophenone	5.83	105	34769	3.48244	ppb	99
18) 3&4-Methylphenol	5.85	107	53356	6.92618	ppb	99
19) n-Nitrosodi-n-propylamine	5.83	70	21845	3.40184	ppb	96
20) Hexachloroethane	5.95	117	10847	3.45194	ppb	89
23) Nitrobenzene	6.02	77	33923	3.68335	ppb	96
24) Isophorone	6.29	82	53920	3.71074	ppb	99
25) 2-Nitrophenol	6.38	139	12884	3.44507	ppb	94
26) 2,4-Dimethylphenol	6.44	122	21783	3.64004	ppb	96
27) Benzoic acid	6.62	105	383	4.14033	ppb	88
28) Bis (2-chloroethoxy) metha	6.53	93	27014	3.58217	ppb	100
29) 2,4-Dichlorophenol	6.67	162	20671	3.54260	ppb	94
30) 1,2,4-Trichlorobenzene	6.75	180	22503	3.45762	ppb	97
31) 3,4-Dimethylphenol	6.78	107	36358	3.65211	ppb	95
32) Naphthalene	6.84	128	70495	3.62596	ppb	99
33) 4-Chloroaniline	6.90	127	29511	3.77509	ppb	98
34) 2,6-Dichlorophenol	6.91	162	19262	3.36963	ppb	97
35) Hexachloropropene	6.94	213	19085	3.38897	ppb	98
36) Hexachlorobutadiene	6.98	225	15703	3.55659	ppb	98
37) Caprolactum	7.27	55	9715	3.70980	ppb	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y004.D Vial: 4
Acq On : 19 Dec 19 9:33 Operator: MA,SS
Sample : 4ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.47	107	24530	3.54152 ppb		91
39)	2-Methylnaphthalene	7.63	142	46644	3.56485 ppb		99
40)	1-Methylnaphthalene	7.75	142	48402	3.55740 ppb		100
42)	Hexachlorocyclopentadiene	7.81	237	7536	5.21250 ppb	#	93
43)	1,2,4,5-Tetrachlorobenzene	7.83	216	24386	3.51094 ppb		93
44)	2,4,6-Trichlorophenol	7.97	196	16008	3.52023 ppb		99
45)	2,4,5-Trichlorophenol	8.02	196	18343	3.71925 ppb		96
47)	1,1'-Biphenyl	8.17	154	60838	3.59736 ppb	#	96
48)	2-Chloronaphthalene	8.19	162	49132	3.61248 ppb		100
49)	2-Nitroaniline	8.31	65	18170	3.51847 ppb		94
50)	Dimethyl phthalate	8.52	163	62019	3.72016 ppb		98
51)	2,6-DNT	8.59	165	12579	3.45969 ppb	#	77
52)	Acenaphthylene	8.67	152	74543	3.55981 ppb		99
53)	3-Nitroaniline	8.31	138	15660	3.62849 ppb		93
54)	Acenaphthene	8.88	154	47294	3.61069 ppb		99
55)	2,4-Dinitrophenol	8.92	184	1251	7.22384 ppb		91
56)	4-Nitrophenol	8.59	65	1264	3.71980 ppb	#	77
57)	Dibenzofuran	9.07	168	70771	3.55722 ppb		96
58)	2,4-DNT	9.06	165	17259	3.22866 ppb		90
59)	2,3,4,6-Tetrachlorophenol	9.23	232	12362	3.30472 ppb		98
60)	Diethyl phthalate	9.34	149	63987	3.70473 ppb		97
61)	4-Chlorophenyl phenyl ethe	9.47	204	30630	3.20287 ppb		93
62)	Fluorene	9.47	166	56939	3.36416 ppb		97
63)	4-Nitroaniline	8.79	138	13740	3.82064 ppb		87
66)	4,6-Dinitro-2-methylphenol	9.54	198	6235	1.91120 ppb	#	71
67)	Diphenyl amine	9.61	169	91072	6.68561 ppb		97
68)	n-Nitrosodiphenylamine	9.61	169	91072	6.68561 ppb		97
69)	1,2-Diphenylhydrazine	9.66	77	73012	3.70606 ppb		97
70)	4-Bromophenyl phenyl ether	10.05	248	18141	3.53702 ppb		88
71)	Hexachlorobenzene	10.12	284	18320	3.53076 ppb		95
72)	Atrazine	10.23	200	8587	1.83561 ppb		94
73)	Pentachlorophenol	10.35	266	6168	1.93382 ppb		87
74)	Phenanthrene	10.60	178	84389	3.65454 ppb		99
75)	Anthracene	10.65	178	85709	3.55076 ppb		99
76)	Carbazol	10.85	167	79889	3.63505 ppb		100
77)	Di-n-butylphthalate	11.25	149	104948	3.49219 ppb		99
78)	2-Nitrodiphenylamine	11.42	167	10800	1.57984 ppb		97
79)	Fluoranthene	11.99	202	95072	3.51508 ppb		99
81)	Benzidine	12.14	184	34176	4.20694 ppb		97
82)	Pyrene	12.25	202	98209	4.11597 ppb		99
84)	Butyl benzylphthalate	12.99	149	49680	4.15559 ppb		98
85)	3,3'-Dichlorobenzidine	13.61	252	35070	4.27679 ppb		98
86)	Benz (a) anthracene	13.64	228	109656	4.21906 ppb		98
87)	Bis (2-ethylhexyl) phthala	13.66	149	78577	3.93364 ppb		98
88)	Chrysene	13.69	228	89653	3.96629 ppb		97
89)	Di-n-octylphthalate	14.41	149	118795	4.02879 ppb		100
91)	Benzo (b) fluoranthene	14.94	252	104695	3.67269 ppb		97
92)	Benzo (k) fluoranthene	14.98	252	90442	3.51896 ppb		97
93)	Benzo (a) pyrene	15.39	252	91485	3.61610 ppb		99
94)	Indeno (1,2,3-cd) pyrene	17.32	276	106261	3.60309 ppb		99
95)	Dibenz (a,h) anthracene	17.35	278	91091	3.46725 ppb		99
96)	Benzo (g,h,i) perylene	17.88	276	84272	3.63655 ppb		98

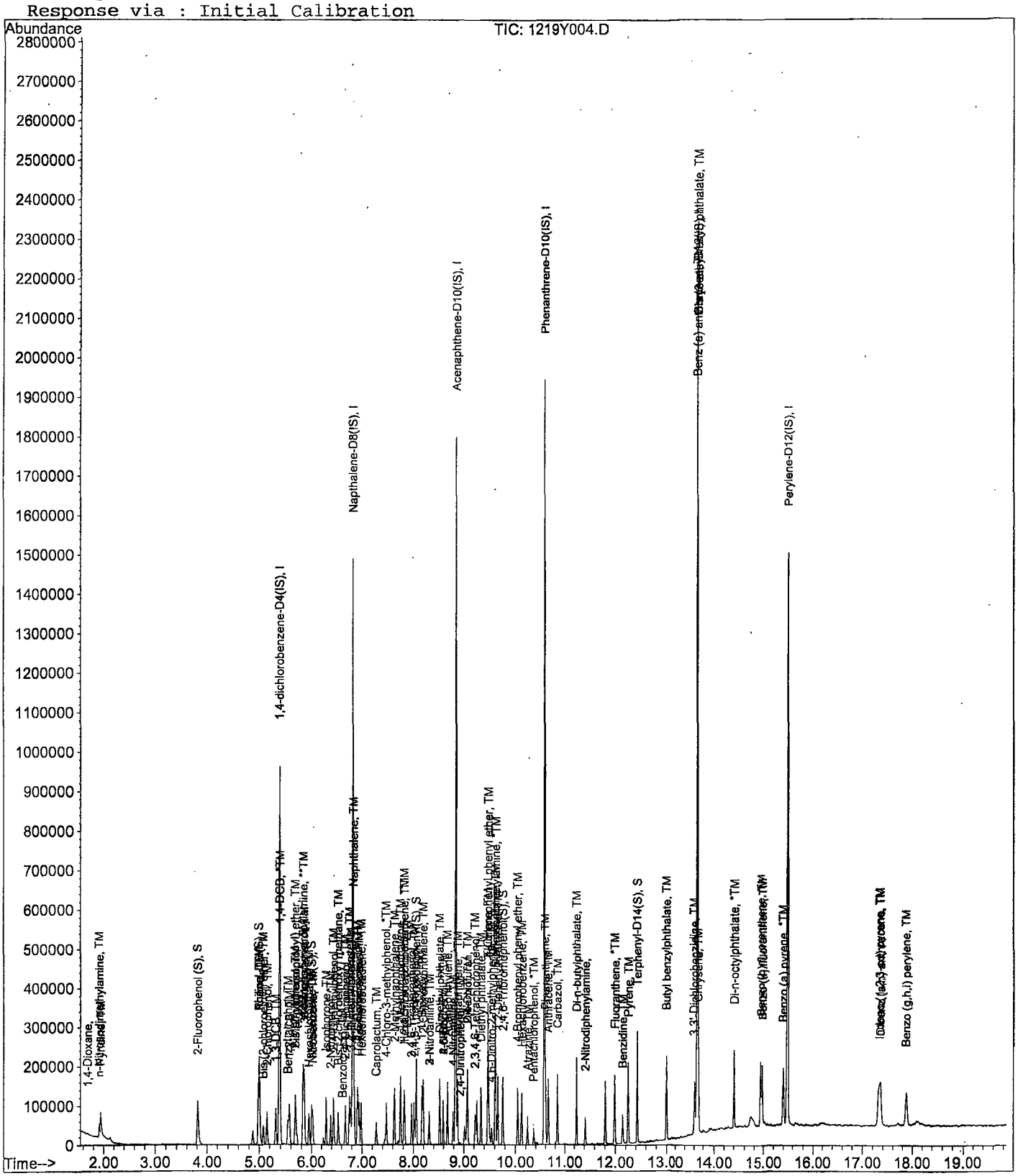
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y004.D Vial: 4
Acq On : 19 Dec 19 9:33 Operator: MA,SS
Sample : 4ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y005.D Vial: 5
Acq On : 19 Dec 19 10:01 Operator: MA,SS
Sample : 5ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.38	152	171722	40.00000 ppb		0.00
21) Napthalene-D8(IS)	6.82	136	688709	40.00000 ppb		0.00
41) Acenaphthene-D10(IS)	8.84	164	415788	40.00000 ppb		0.00
65) Phenanthrene-D10(IS)	10.57	188	806286	40.00000 ppb		0.00
80) Chrysene-D12(IS)	13.66	240	749085	40.00000 ppb		0.00
90) Perylene-D12(IS)	15.48	264	827486	40.00000 ppb		0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.82	112	56647	9.00005 ppb		0.00
Spiked Amount 200.000			Recovery =	4.500%		
6) Phenol-D6 (S)	4.99	99	71276	8.88831 ppb		0.00
Spiked Amount 200.000			Recovery =	4.444%		
22) Nitrobenzene-D5(S)	6.00	82	41101	4.79873 ppb		0.00
Spiked Amount 100.000			Recovery =	4.799%		
46) 2-Fluorobiphenyl(S)	8.05	172	73943	4.81547 ppb		0.00
Spiked Amount 100.000			Recovery =	4.815%		
64) 2,4,6-Tribromophenol(S)	9.76	330	24023	9.29674 ppb		0.00
Spiked Amount 200.000			Recovery =	4.649%		
83) Terphenyl-D14(S)	12.43	244	98299	5.50304 ppb		0.00
Spiked Amount 100.000			Recovery =	5.503%		
Target Compounds						Qvalue
2) 1,4-Dioxane	1.69	58	1257	0.48619		57
3) n-Nitrosodimethylamine	1.91	42	24805	5.17354 ppb		91
4) Pyridine	1.93	79	51683	4.65342 ppb		99
7) Phenol	5.01	94	41003	4.33271 ppb	#	74
8) Aniline	5.01	93	28072	4.54545 ppb	#	95
9) Bis (2-chloroethyl) ether	5.08	63	19744	4.50355 ppb		96
10) 2-Chlorophenol	5.14	128	30870	4.63266 ppb		93
11) 1,3-DCB	5.31	146	35002	4.78677 ppb		98
12) 1,4-DCB	5.40	146	35465	4.73910 ppb		100
13) Benzyl alcohol	5.54	108	17372	4.42592 ppb		98
14) 1,2-DCB	5.57	146	32182	4.62197 ppb		99
15) 2-Methylphenol	5.67	107	26493	4.55618 ppb		95
16) Bis (2-chloroisopropyl) et	5.69	45	26718	4.62124 ppb	#	67
17) Acetophenone	5.83	105	43206	4.35939 ppb		99
18) 3&4-Methylphenol	5.85	107	66732	8.72640 ppb		94
19) n-Nitrosodi-n-propylamine	5.83	70	27839	4.36723 ppb		93
20) Hexachloroethane	5.95	117	14656	4.69849 ppb		96
23) Nitrobenzene	6.03	77	43068	4.85180 ppb		97
24) Isophorone	6.30	82	66063	4.71704 ppb		97
25) 2-Nitrophenol	6.39	139	16456	4.56533 ppb		95
26) 2,4-Dimethylphenol	6.44	122	27145	4.70628 ppb		97
27) Benzoic acid	6.54	105	9801	5.88822 ppb		100
28) Bis (2-chloroethoxy) metha	6.54	93	33945	4.67017 ppb		97
29) 2,4-Dichlorophenol	6.67	162	25735	4.57598 ppb		95
30) 1,2,4-Trichlorobenzene	6.75	180	30156	4.80740 ppb		94
31) 3,4-Dimethylphenol	6.78	107	42637	4.44355 ppb		94
32) Naphthalene	6.84	128	88283	4.71131 ppb		98
33) 4-Chloroaniline	6.90	127	35310	4.68641 ppb		95
34) 2,6-Dichlorophenol	6.92	162	25539	4.63537 ppb		98
35) Hexachloropropene	6.95	213	24798	4.56869 ppb		99
36) Hexachlorobutadiene	6.98	225	19841	4.66245 ppb		95
37) Caprolactum	7.28	55	12209	4.83713 ppb		92

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y005.D Vial: 5
Acq On : 19 Dec 19 10:01 Operator: MA,SS
Sample : 5ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.47	107	30060	4.50279	ppb		96
39)	2-Methylnaphthalene	7.63	142	58756	4.65906	ppb		98
40)	1-Methylnaphthalene	7.74	142	62484	4.76473	ppb		98
42)	Hexachlorocyclopentadiene	7.82	237	12113	6.16888	ppb		98
43)	1,2,4,5-Tetrachlorobenzene	7.83	216	30658	4.62889	ppb		96
44)	2,4,6-Trichlorophenol	7.97	196	19264	4.44253	ppb		97
45)	2,4,5-Trichlorophenol	8.01	196	22015	4.68116	ppb		91
47)	1,1'-Biphenyl	8.17	154	75024	4.65222	ppb		96
48)	2-Chloronaphthalene	8.20	162	60077	4.63233	ppb		98
49)	2-Nitroaniline	8.31	65	22742	4.61826	ppb		95
50)	Dimethyl phthalate	8.52	163	75613	4.75645	ppb		98
51)	2,6-DNT	8.60	165	14927	4.30540	ppb		93
52)	Acenaphthylene	8.67	152	93201	4.66757	ppb		99
53)	3-Nitroaniline	8.31	138	18418	4.47535	ppb		98
54)	Acenaphthene	8.88	154	58572	4.68948	ppb		98
55)	2,4-Dinitrophenol	8.92	184	1722	7.44591	ppb		91
56)	4-Nitrophenol	8.59	65	1476	4.55522	ppb	#	77
57)	Dibenzofuran	9.08	168	86867	4.57889	ppb		98
58)	2,4-DNT	9.06	165	21667	4.25065	ppb		92
59)	2,3,4,6-Tetrachlorophenol	9.23	232	15625	4.38043	ppb		96
60)	Diethyl phthalate	9.34	149	78770	4.78273	ppb		98
61)	4-Chlorophenyl phenyl ethe	9.47	204	39671	4.35026	ppb		91
62)	Fluorene	9.48	166	70132	4.34543	ppb		99
63)	4-Nitroaniline	8.79	138	15753	4.59371	ppb		95
66)	4,6-Dinitro-2-methylphenol	9.54	198	8632	2.74604	ppb		91
67)	Diphenyl amine	9.61	169	114377	8.71405	ppb		99
68)	n-Nitrosodiphenylamine	9.61	169	114377	8.71405	ppb		99
69)	1,2-Diphenylhydrazine	9.66	77	88947	4.68570	ppb		98
70)	4-Bromophenyl phenyl ether	10.05	248	21340	4.31813	ppb		90
71)	Hexachlorobenzene	10.12	284	22472	4.49479	ppb		86
72)	Atrazine	10.23	200	11098	2.46211	ppb		96
73)	Pentachlorophenol	10.36	266	7741	2.51880	ppb		98
74)	Phenanthrene	10.59	178	103714	4.66133	ppb		100
75)	Anthracene	10.66	178	106832	4.59326	ppb		100
76)	Carbazol	10.84	167	97952	4.62553	ppb		96
77)	Di-n-butylphthalate	11.25	149	129031	4.45598	ppb		99
78)	2-Nitrodiphenylamine	11.42	167	13059	1.98255	ppb		90
79)	Fluoranthene	11.98	202	117296	4.50081	ppb		99
81)	Benzidine	12.14	184	40456	5.29189	ppb		98
82)	Pyrene	12.24	202	123613	5.50514	ppb		99
84)	Butyl benzylphthalate	13.00	149	60635	5.38961	ppb		84
85)	3,3'-Dichlorobenzidine	13.61	252	41891	5.42858	ppb		97
86)	Benz (a) anthracene	13.65	228	129610	5.29914	ppb		99
87)	Bis (2-ethylhexyl) phthala	13.66	149	96081	5.11117	ppb		97
88)	Chrysene	13.68	228	117620	5.52948	ppb		98
89)	Di-n-octylphthalate	14.41	149	146932	5.29512	ppb		94
91)	Benzo (b) fluoranthene	14.94	252	122331	4.52617	ppb		99
92)	Benzo (k) fluoranthene	14.97	252	116734	4.79047	ppb		99
93)	Benzo (a) pyrene	15.40	252	112984	4.71025	ppb		99
94)	Indeno (1,2,3-cd) pyrene	17.32	276	131399	4.69925	ppb		100
95)	Dibenz (a,h) anthracene	17.36	278	116553	4.67918	ppb		98
96)	Benzo (g,h,i) perylene	17.88	276	105710	4.81125	ppb		98

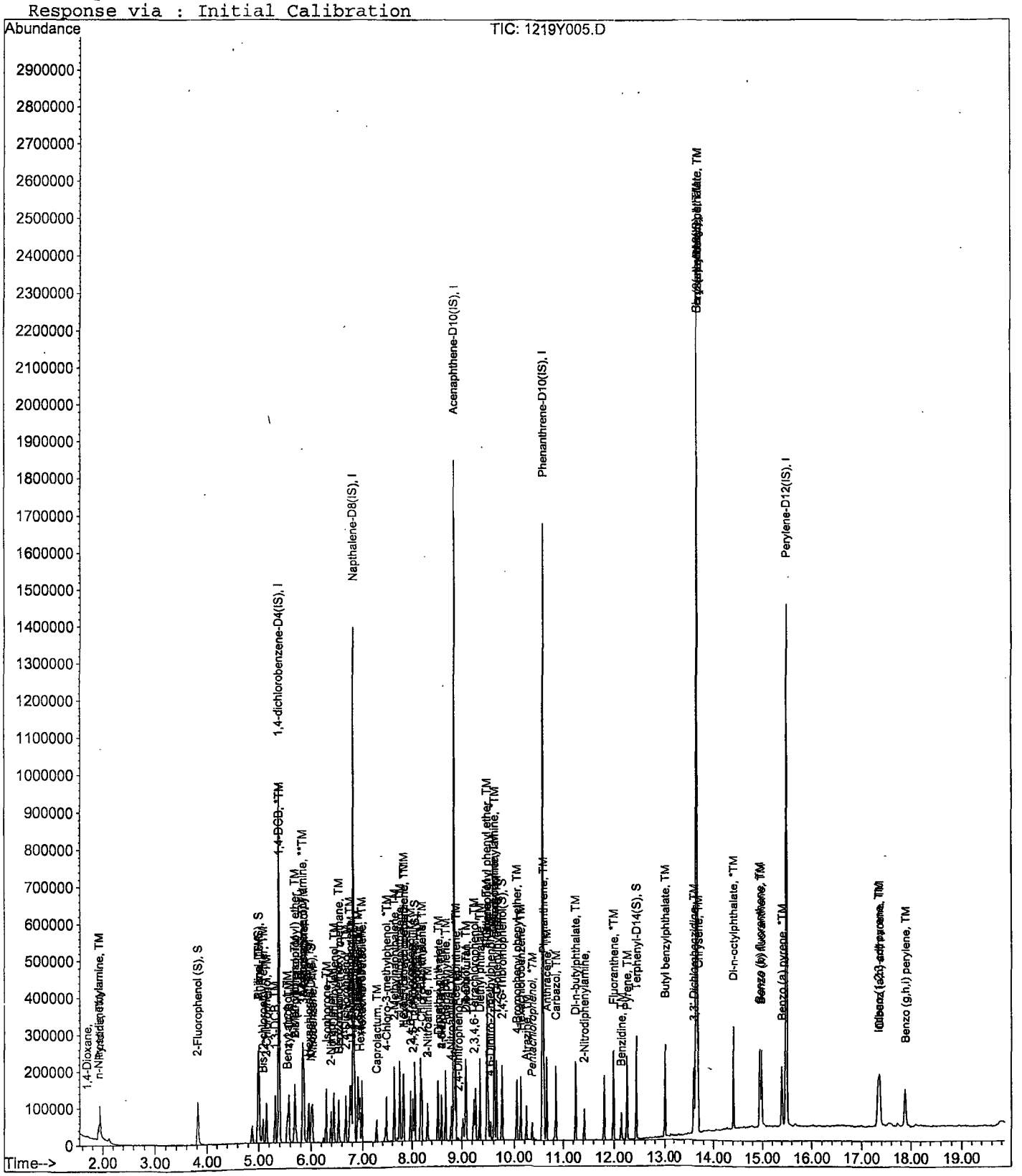
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y005.D Vial: 5
Acq On : 19 Dec 19 10:01 Operator: MA,SS
Sample : 5ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y006.D Vial: 6
Acq On : 19 Dec 19 10:28 Operator: MA,SS
Sample : 10ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.38	152	160128	40.00000	ppb		0.00
21) Napthalene-D8(IS)	6.82	136	678749	40.00000	ppb		0.00
41) Acenaphthene-D10(IS)	8.84	164	424690	40.00000	ppb		0.00
65) Phenanthrene-D10(IS)	10.57	188	801834	40.00000	ppb		0.00
80) Chrysene-D12(IS)	13.66	240	780754	40.00000	ppb		0.00
90) Perylene-D12(IS)	15.49	264	843433	40.00000	ppb		0.00
System Monitoring Compounds							
5) 2-Fluorophenol (S)	3.81	112	114683	19.54005	ppb		0.00
Spiked Amount 200.000			Recovery =	9.770%			
6) Phenol-D6 (S)	4.99	99	140612	18.80428	ppb		0.00
Spiked Amount 200.000			Recovery =	9.402%			
22) Nitrobenzene-D5(S)	6.00	82	82528	9.77692	ppb		0.00
Spiked Amount 100.000			Recovery =	9.777%			
46) 2-Fluorobiphenyl(S)	8.05	172	143294	9.13627	ppb		0.00
Spiked Amount 100.000			Recovery =	9.136%			
64) 2,4,6-Tribromophenol(S)	9.76	330	43913	16.63783	ppb		0.00
Spiked Amount 200.000			Recovery =	8.319%			
83) Terphenyl-D14(S)	12.42	244	190140	10.21278	ppb		0.00
Spiked Amount 100.000			Recovery =	10.213%			
Target Compounds							Qvalue
2) 1,4-Dioxane	1.68	58	2566	1.06435			52
3) n-Nitrosodimethylamine	1.91	42	42801	9.57329	ppb		97
4) Pyridine	1.93	79	110941	10.71212	ppb		94
7) Phenol	5.00	94	84538	9.57975	ppb	#	63
8) Aniline	5.00	93	55616	9.65744	ppb		99
9) Bis (2-chloroethyl) ether	5.08	63	41459	10.14139	ppb		88
10) 2-Chlorophenol	5.15	128	62253	10.01873	ppb		95
11) 1,3-DCB	5.31	146	70075	10.27713	ppb		100
12) 1,4-DCB	5.40	146	70537	10.10814	ppb		96
13) Benzyl alcohol	5.54	108	36507	9.97444	ppb		96
14) 1,2-DCB	5.57	146	66098	10.18031	ppb		98
15) 2-Methylphenol	5.68	107	52416	9.66701	ppb		97
16) Bis (2-chloroisopropyl) et	5.68	45	53318	9.88979	ppb		97
17) Acetophenone	5.83	105	89316	9.66428	ppb		99
18) 3&4-Methylphenol	5.85	107	137362	19.26310	ppb		99
19) n-Nitrosodi-n-propylamine	5.83	70	56624	9.52602	ppb		91
20) Hexachloroethane	5.95	117	29197	10.03784	ppb		91
23) Nitrobenzene	6.03	77	87342	9.98385	ppb		97
24) Isophorone	6.30	82	136764	9.90854	ppb		95
25) 2-Nitrophenol	6.38	139	34642	9.75163	ppb		93
26) 2,4-Dimethylphenol	6.44	122	56086	9.86663	ppb		99
27) Benzoic acid	6.56	105	31884	10.06729	ppb		97
28) Bis (2-chloroethoxy) metha	6.54	93	70309	9.81509	ppb		96
29) 2,4-Dichlorophenol	6.67	162	53758	9.69907	ppb		96
30) 1,2,4-Trichlorobenzene	6.75	180	60558	9.79569	ppb		98
31) 3,4-Dimethylphenol	6.78	107	95265	10.07404	ppb		96
32) Naphthalene	6.85	128	181256	9.81486	ppb		99
33) 4-Chloroaniline	6.90	127	75779	10.20513	ppb		99
34) 2,6-Dichlorophenol	6.92	162	52155	9.60512	ppb		94
35) Hexachloropropene	6.94	213	50541	9.44812	ppb		98
36) Hexachlorobutadiene	6.98	225	41688	9.94005	ppb		97
37) Caprolactum	7.29	55	24764	9.95531	ppb		100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y006.D Vial: 6
Acq On : 19 Dec 19 10:28 Operator: MA,SS
Sample : 10ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.47	107	63915	9.71453	ppb		93
39)	2-Methylnaphthalene	7.63	142	121988	9.81498	ppb		99
40)	1-Methylnaphthalene	7.75	142	126080	9.75534	ppb		99
42)	Hexachlorocyclopentadiene	7.82	237	26368	8.82866	ppb		96
43)	1,2,4,5-Tetrachlorobenzene	7.83	216	63033	9.31753	ppb		97
44)	2,4,6-Trichlorophenol	7.97	196	42547	9.60622	ppb		98
45)	2,4,5-Trichlorophenol	8.01	196	45140	9.39716	ppb		97
47)	1,1'-Biphenyl	8.17	154	154500	9.37969	ppb		96
48)	2-Chloronaphthalene	8.19	162	126872	9.57760	ppb		97
49)	2-Nitroaniline	8.31	65	48463	9.63517	ppb		99
50)	Dimethyl phthalate	8.52	163	155090	9.55148	ppb		98
51)	2,6-DNT	8.59	165	32770	9.25374	ppb	#	70
52)	Acenaphthylene	8.67	152	192011	9.41448	ppb		99
53)	3-Nitroaniline	8.31	138	40201	9.56360	ppb		97
54)	Acenaphthene	8.88	154	120735	9.46384	ppb		97
55)	2,4-Dinitrophenol	8.92	184	8250	10.11323	ppb		88
56)	4-Nitrophenol	8.59	65	3263	9.85915	ppb	#	77
57)	Dibenzofuran	9.07	168	178082	9.19022	ppb		96
58)	2,4-DNT	9.06	165	47326	9.08984	ppb		90
59)	2,3,4,6-Tetrachlorophenol	9.23	232	33746	9.26230	ppb		98
60)	Diethyl phthalate	9.34	149	162823	9.67901	ppb		98
61)	4-Chlorophenyl phenyl ethe	9.47	204	78878	8.46834	ppb		92
62)	Fluorene	9.47	166	144714	8.77864	ppb		99
63)	4-Nitroaniline	8.78	138	34976	9.98551	ppb		86
66)	4,6-Dinitro-2-methylphenol	9.54	198	24792	7.93070	ppb	#	66
67)	Diphenyl amine	9.61	169	235673	18.05492	ppb		99
68)	n-Nitrosodiphenylamine	9.61	169	235673	18.05492	ppb		99
69)	1,2-Diphenylhydrazine	9.66	77	185037	9.80181	ppb		98
70)	4-Bromophenyl phenyl ether	10.05	248	46172	9.39474	ppb		84
71)	Hexachlorobenzene	10.12	284	47111	9.47534	ppb		96
72)	Atrazine	10.23	200	22903	5.10929	ppb		98
73)	Pentachlorophenol	10.35	266	20850	6.82194	ppb		98
74)	Phenanthrene	10.59	178	212082	9.58474	ppb		99
75)	Anthracene	10.66	178	222026	9.59905	ppb		100
76)	Carbazol	10.85	167	200728	9.53149	ppb		99
77)	Di-n-butylphthalate	11.24	149	265654	9.22507	ppb		99
78)	2-Nitrodiphenylamine	11.42	167	29937	4.57011	ppb		96
79)	Fluoranthene	11.99	202	244432	9.43127	ppb		99
81)	Benzidine	12.14	184	79841	10.02007	ppb		98
82)	Pyrene	12.25	202	252604	10.79348	ppb		100
84)	Butyl benzylphthalate	13.00	149	125700	10.71979	ppb		83
85)	3,3'-Dichlorobenzidine	13.61	252	90819	11.29169	ppb		98
86)	Benz (a) anthracene	13.65	228	268781	10.54344	ppb		99
87)	Bis (2-ethylhexyl) phthala	13.66	149	199052	10.15935	ppb		96
88)	Chrysene	13.69	228	234598	10.58142	ppb		100
89)	Di-n-octylphthalate	14.41	149	312547	10.80666	ppb		97
91)	Benzo (b) fluoranthene	14.94	252	250643	9.09830	ppb		99
92)	Benzo (k) fluoranthene	14.98	252	241683	9.73053	ppb		98
93)	Benzo (a) pyrene	15.40	252	232116	9.49384	ppb		98
94)	Indeno (1,2,3-cd) pyrene	17.32	276	269635	9.46070	ppb		99
95)	Dibenz (a,h) anthracene	17.36	278	239335	9.42677	ppb		98
96)	Benzo (g,h,i) perylene	17.88	276	217021	9.69067	ppb		98

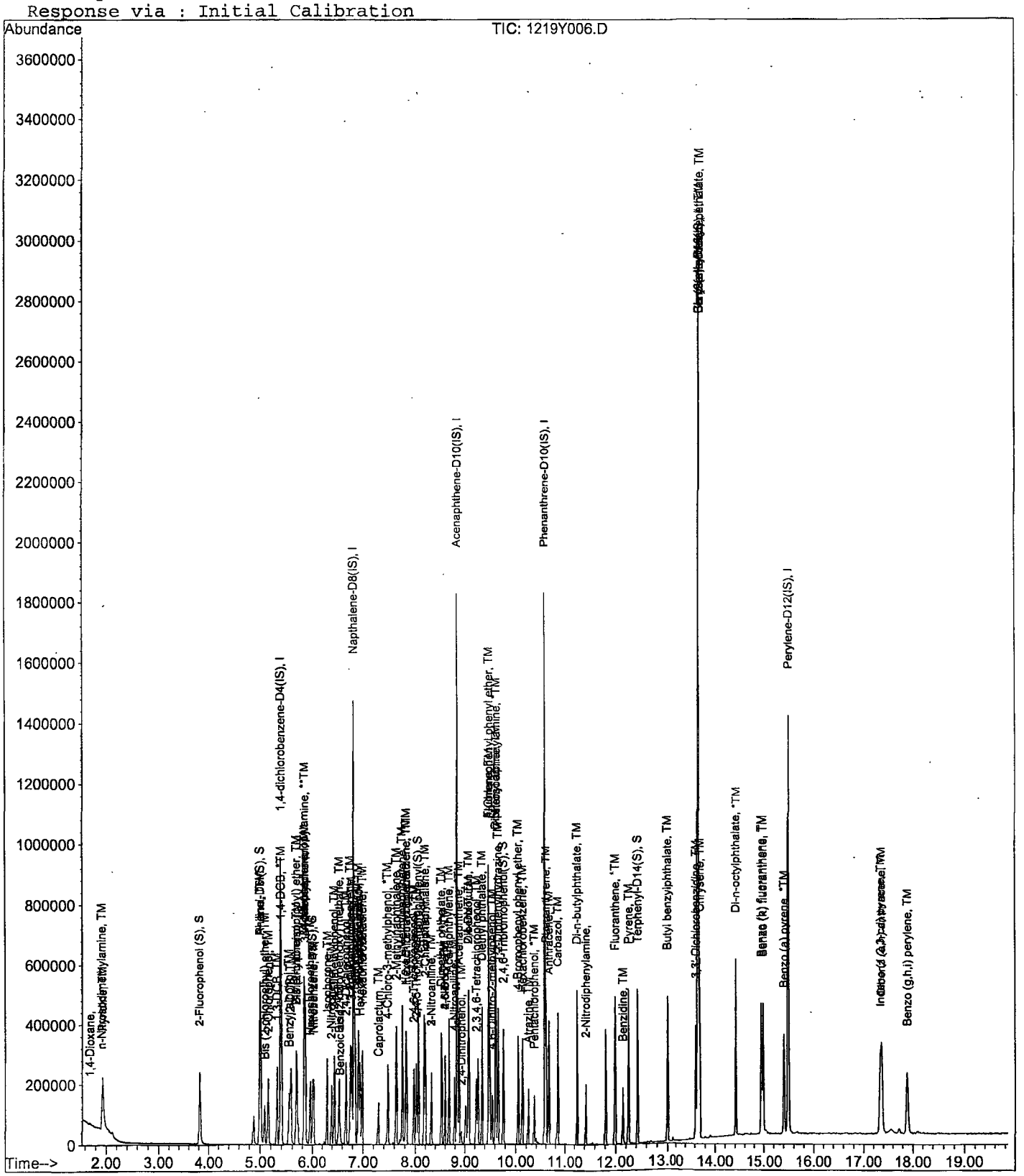
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y006.D Vial: 6
Acq On : 19 Dec 19 10:28 Operator: MA,SS
Sample : 10ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y007.D Vial: 7
Acq On : 19 Dec 19 10:56 Operator: MA,SS
Sample : 20ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.38	152	194747	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.82	136	781182	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.84	164	473595	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.57	188	902012	40.00000 ppb	0.00
80) Chrysene-D12(IS)	13.66	240	912227	40.00000 ppb	0.00
90) Perylene-D12(IS)	15.49	264	942777	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.82	112	253075	35.45459 ppb	0.00
Spiked Amount 200.000			Recovery =	17.728%	
6) Phenol-D6 (S)	4.99	99	314450	34.57661 ppb	-0.01
Spiked Amount 200.000			Recovery =	17.289%	
22) Nitrobenzene-D5(S)	6.01	82	185338	19.07753 ppb	0.00
Spiked Amount 100.000			Recovery =	19.078%	
46) 2-Fluorobiphenyl(S)	8.06	172	323480	18.49496 ppb	0.00
Spiked Amount 100.000			Recovery =	18.495%	
64) 2,4,6-Tribromophenol(S)	9.77	330	100215	34.04876 ppb	0.00
Spiked Amount 200.000			Recovery =	17.025%	
83) Terphenyl-D14(S)	12.43	244	426966	19.62795 ppb	0.00
Spiked Amount 100.000			Recovery =	19.628%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.68	58	5479	1.86864	96
3) n-Nitrosodimethylamine	1.90	42	92263	16.96802 ppb	95
4) Pyridine	1.92	79	233730	18.55642 ppb	98
7) Phenol	5.00	94	187775	17.49592 ppb #	74
8) Aniline	5.00	93	138944	19.83804 ppb #	95
9) Bis (2-chloroethyl) ether	5.08	63	90085	18.11872 ppb	96
10) 2-Chlorophenol	5.14	128	135911	17.98472 ppb	92
11) 1,3-DCB	5.31	146	146244	17.63531 ppb	97
12) 1,4-DCB	5.39	146	151686	17.87295 ppb	97
13) Benzyl alcohol	5.54	108	78697	17.67939 ppb	99
14) 1,2-DCB	5.57	146	139110	17.61682 ppb	99
15) 2-Methylphenol	5.68	107	115359	17.49348 ppb	97
16) Bis (2-chloroisopropyl) et	5.69	45	115311	17.58653 ppb #	78
17) Acetophenone	5.83	105	201308	17.91010 ppb	98
18) 3&4-Methylphenol	5.85	107	300091	34.60262 ppb	97
19) n-Nitrosodi-n-propylamine	5.84	70	126055	17.43683 ppb	98
20) Hexachloroethane	5.95	117	64312	18.17985 ppb	94
23) Nitrobenzene	6.03	77	185983	18.47162 ppb	95
24) Isophorone	6.29	82	294453	18.53577 ppb	99
25) 2-Nitrophenol	6.39	139	76958	18.82282 ppb	95
26) 2,4-Dimethylphenol	6.44	122	120904	18.48043 ppb	97
27) Benzoic acid	6.55	105	91223	18.97597 ppb	98
28) Bis (2-chloroethoxy) metha	6.54	93	152615	18.51133 ppb	98
29) 2,4-Dichlorophenol	6.67	162	117474	18.41559 ppb	95
30) 1,2,4-Trichlorobenzene	6.76	180	128436	18.05125 ppb	99
31) 3,4-Dimethylphenol	6.78	107	204008	18.74452 ppb	98
32) Naphthalene	6.84	128	390776	18.38554 ppb	99
33) 4-Chloroaniline	6.91	127	162474	19.01124 ppb	96
34) 2,6-Dichlorophenol	6.92	162	114733	18.35913 ppb	98
35) Hexachloropropene	6.94	213	112998	18.35394 ppb	99
36) Hexachlorobutadiene	6.98	225	87981	18.22735 ppb	99
37) Caprolactum	7.31	55	53587	18.71761 ppb	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y007.D Vial: 7
Acq On : 19 Dec 19 10:56 Operator: MA,SS
Sample : 20ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.47	107	137771	18.19424	ppb		96
39)	2-Methylnaphthalene	7.63	142	260607	18.21862	ppb		100
40)	1-Methylnaphthalene	7.74	142	264522	17.78341	ppb		98
42)	Hexachlorocyclopentadiene	7.82	237	85296	18.35365	ppb		100
43)	1,2,4,5-Tetrachlorobenzene	7.83	216	133618	17.71181	ppb		96
44)	2,4,6-Trichlorophenol	7.97	196	90696	18.36271	ppb		100
45)	2,4,5-Trichlorophenol	8.02	196	98112	18.31564	ppb		96
47)	1,1'-Biphenyl	8.17	154	335661	18.27366	ppb		98
48)	2-Chloronaphthalene	8.20	162	272066	18.41748	ppb		97
49)	2-Nitroaniline	8.31	65	106234	18.93990	ppb		92
50)	Dimethyl phthalate	8.52	163	333975	18.44445	ppb		99
51)	2,6-DNT	8.60	165	74351	18.82750	ppb		86
52)	Acenaphthylene	8.68	152	420370	18.48275	ppb		100
53)	3-Nitroaniline	8.32	138	87497	18.66563	ppb		95
54)	Acenaphthene	8.87	154	255265	17.94281	ppb		98
55)	2,4-Dinitrophenol	8.92	184	29356	17.54041	ppb		89
56)	4-Nitrophenol	8.60	65	6688	18.12107	ppb		98
57)	Dibenzofuran	9.08	168	385855	17.85643	ppb		100
58)	2,4-DNT	9.07	165	105670	18.20007	ppb		87
59)	2,3,4,6-Tetrachlorophenol	9.23	232	74261	18.27773	ppb	#	91
60)	Diethyl phthalate	9.35	149	348940	18.60076	ppb		97
61)	4-Chlorophenyl phenyl ethe	9.48	204	176280	16.97111	ppb		98
62)	Fluorene	9.48	166	322306	17.53276	ppb		98
63)	4-Nitroaniline	8.79	138	74412	19.05057	ppb		97
66)	4,6-Dinitro-2-methylphenol	9.54	198	60050	17.07595	ppb		84
67)	Diphenyl amine	9.62	169	511426	34.82898	ppb		100
68)	n-Nitrosodiphenylamine	9.62	169	511426	34.82898	ppb		100
69)	1,2-Diphenylhydrazine	9.66	77	390616	18.39374	ppb		94
70)	4-Bromophenyl phenyl ether	10.04	248	100768	18.22640	ppb		94
71)	Hexachlorobenzene	10.13	284	99643	17.81524	ppb		93
72)	Atrazine	10.24	200	45987	9.11959	ppb		96
73)	Pentachlorophenol	10.36	266	52653	15.31431	ppb		98
74)	Phenanthrene	10.60	178	454835	18.27270	ppb		99
75)	Anthracene	10.66	178	477063	18.33464	ppb		99
76)	Carbazol	10.85	167	430950	18.19081	ppb		98
77)	Di-n-butylphthalate	11.25	149	590040	18.21407	ppb		99
78)	2-Nitrodiphenylamine	11.42	167	68173	9.25129	ppb		92
79)	Fluoranthene	11.98	202	523700	17.96250	ppb		98
81)	Benzidine	12.14	184	180875	19.42829	ppb		98
82)	Pyrene	12.25	202	546244	19.97649	ppb		99
84)	Butyl benzylphthalate	13.00	149	275238	20.08958	ppb		92
85)	3,3'-Dichlorobenzidine	13.61	252	192045	20.43603	ppb		98
86)	Benz (a) anthracene	13.65	228	571831	19.19829	ppb		99
87)	Bis (2-ethylhexyl) phthala	13.66	149	447267	19.53789	ppb		98
88)	Chrysene	13.69	228	522873	20.18493	ppb		100
89)	Di-n-octylphthalate	14.41	149	670387	19.83868	ppb	#	92
91)	Benzo (b) fluoranthene	14.94	252	580450	18.84998	ppb		99
92)	Benzo (k) fluoranthene	14.98	252	493722	17.78340	ppb		99
93)	Benzo (a) pyrene	15.40	252	504143	18.44727	ppb		98
94)	Indeno (1,2,3-cd) pyrene	17.33	276	588328	18.46750	ppb		99
95)	Dibenz (a,h) anthracene	17.37	278	521335	18.37025	ppb		99
96)	Benzo (g,h,i) perylene	17.90	276	472757	18.88564	ppb		99

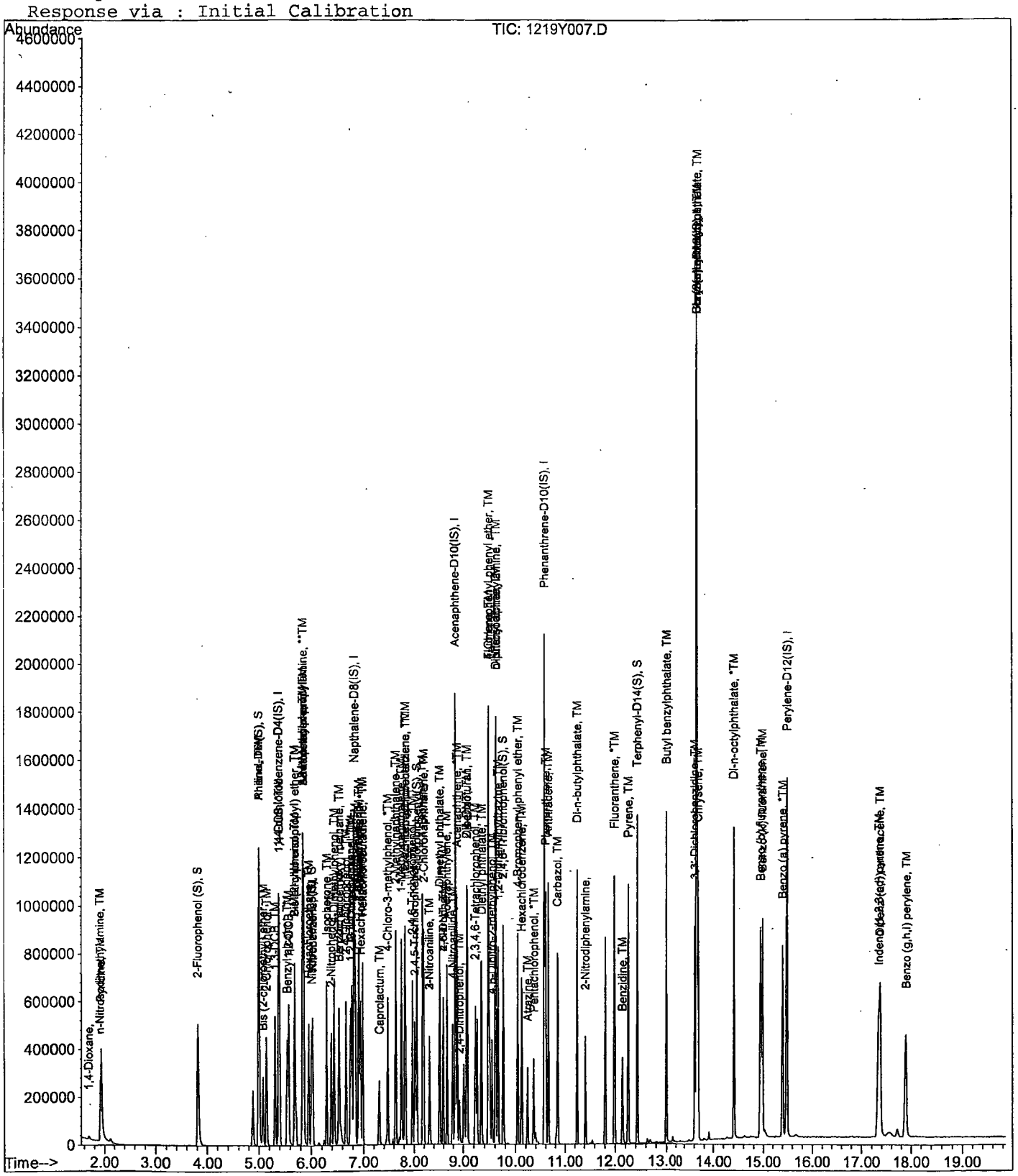
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y007.D Vial: 7
Acq On : 19 Dec 19 10:56 Operator: MA,SS
Sample : 20ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y008.D Vial: 8
Acq On : 19 Dec 19 11:24 Operator: MA,SS
Sample : 40ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.38	152	182216	40.00000 ppb		0.00
21) Napthalene-D8(IS)	6.82	136	710542	40.00000 ppb		0.00
41) Acenaphthene-D10(IS)	8.84	164	434485	40.00000 ppb		0.00
65) Phenanthrene-D10(IS)	10.58	188	813606	40.00000 ppb		0.00
80) Chrysene-D12(IS)	13.66	240	894163	40.00000 ppb		0.00
90) Perylene-D12(IS)	15.49	264	870632	40.00000 ppb		0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.82	112	480507	71.94609 ppb		0.00
Spiked Amount 200.000			Recovery = 35.973%			
6) Phenol-D6 (S)	5.00	99	600312	70.54921 ppb		0.00
Spiked Amount 200.000			Recovery = 35.275%			
22) Nitrobenzene-D5(S)	6.01	82	335277	37.94232 ppb		0.00
Spiked Amount 100.000			Recovery = 37.942%			
46) 2-Fluorobiphenyl(S)	8.06	172	596646	37.18391 ppb		0.00
Spiked Amount 100.000			Recovery = 37.184%			
64) 2,4,6-Tribromophenol(S)	9.77	330	201973	74.79872 ppb		0.00
Spiked Amount 200.000			Recovery = 37.400%			
83) Terphenyl-D14(S)	12.43	244	814625	38.20548 ppb		0.00
Spiked Amount 100.000			Recovery = 38.205%			
Target Compounds						Qvalue
3) n-Nitrosodimethylamine	1.91	42	188163	36.98470 ppb		96
4) Pyridine	1.93	79	440907	37.41201 ppb		99
7) Phenol	5.01	94	371632	37.00806 ppb		79
8) Aniline	5.01	93	258560	39.45523 ppb	#	91
9) Bis (2-chloroethyl) ether	5.08	63	174139	37.43306 ppb		97
10) 2-Chlorophenol	5.15	128	262410	37.11194 ppb		94
11) 1,3-DCB	5.31	146	288290	37.15515 ppb		99
12) 1,4-DCB	5.40	146	297071	37.41064 ppb		98
13) Benzyl alcohol	5.55	108	154077	36.99399 ppb		97
14) 1,2-DCB	5.57	146	270886	36.66402 ppb		100
15) 2-Methylphenol	5.69	107	228108	36.97000 ppb		98
16) Bis (2-chloroisopropyl) et	5.69	45	226589	36.93453 ppb	#	78
17) Acetophenone	5.83	105	393243	37.39230 ppb		98
18) 3&4-Methylphenol	5.85	107	593695	73.16504 ppb		97
19) n-Nitrosodi-n-propylamine	5.84	70	248031	36.66888 ppb		97
20) Hexachloroethane	5.95	117	122615	37.04471 ppb		94
23) Nitrobenzene	6.03	77	359196	39.22163 ppb		95
24) Isophorone	6.30	82	565650	39.14758 ppb		98
25) 2-Nitrophenol	6.39	139	147502	39.66353 ppb		93
26) 2,4-Dimethylphenol	6.45	122	229476	38.56303 ppb		98
27) Benzoic acid	6.58	105	202255	40.40161 ppb		99
28) Bis (2-chloroethoxy) metha	6.54	93	292655	39.02644 ppb		98
29) 2,4-Dichlorophenol	6.67	162	227943	39.28553 ppb		96
30) 1,2,4-Trichlorobenzene	6.75	180	254586	39.33847 ppb		96
31) 3,4-Dimethylphenol	6.78	107	383358	38.72525 ppb		98
32) Naphthalene	6.85	128	749802	38.78445 ppb		100
33) 4-Chloroaniline	6.91	127	308474	39.68328 ppb		97
34) 2,6-Dichlorophenol	6.92	162	219445	38.60574 ppb		97
35) Hexachloropropene	6.95	213	221138	39.48974 ppb		99
36) Hexachlorobutadiene	6.99	225	170617	38.86148 ppb		100
37) Caprolactum	7.32	55	100984	38.77985 ppb		95
38) 4-Chloro-3-methylphenol	7.48	107	271819	39.46556 ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y008.D Vial: 8
Acq On : 19 Dec 19 11:24 Operator: MA,SS
Sample : 40ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
39)	2-Methylnaphthalene	7.63	142	502608	38.62970 ppb		99
40)	1-Methylnaphthalene	7.75	142	521546	38.54859 ppb		98
42)	Hexachlorocyclopentadiene	7.82	237	176384	36.58253 ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.83	216	268214	38.75357 ppb		97
44)	2,4,6-Trichlorophenol	7.97	196	176195	38.88432 ppb		99
45)	2,4,5-Trichlorophenol	8.02	196	192075	39.08438 ppb		94
47)	1,1'-Biphenyl	8.17	154	649127	38.52004 ppb		98
48)	2-Chloronaphthalene	8.20	162	521946	38.51358 ppb		97
49)	2-Nitroaniline	8.31	65	200138	38.89341 ppb		95
50)	Dimethyl phthalate	8.53	163	640502	38.55712 ppb		99
51)	2,6-DNT	8.60	165	142948	39.45629 ppb		86
52)	Acenaphthylene	8.67	152	814666	39.04333 ppb		99
53)	3-Nitroaniline	8.32	138	168892	39.27271 ppb		93
54)	Acenaphthene	8.88	154	504832	38.67929 ppb		99
55)	2,4-Dinitrophenol	8.92	184	74846	36.78536 ppb		86
56)	4-Nitrophenol	8.60	65	13109	38.71590 ppb		95
57)	Dibenzofuran	9.08	168	753264	37.99707 ppb		98
58)	2,4-DNT	9.07	165	207839	39.01941 ppb		89
59)	2,3,4,6-Tetrachlorophenol	9.23	232	147125	39.47119 ppb		94
60)	Diethyl phthalate	9.35	149	671228	39.00159 ppb		98
61)	4-Chlorophenyl phenyl ethe	9.47	204	352091	36.94829 ppb		88
62)	Fluorene	9.48	166	641030	38.00953 ppb		98
63)	4-Nitroaniline	8.79	138	141770	39.56230 ppb		88
66)	4,6-Dinitro-2-methylphenol	9.56	198	122593	38.64878 ppb		99
67)	Diphenyl amine	9.62	169	1020591	77.05626 ppb		100
68)	n-Nitrosodiphenylamine	9.62	169	1020591	77.05626 ppb		100
69)	1,2-Diphenylhydrazine	9.66	77	751770	39.24670 ppb		94
70)	4-Bromophenyl phenyl ether	10.05	248	199129	39.93106 ppb		88
71)	Hexachlorobenzene	10.12	284	196806	39.01049 ppb	#	84
72)	Atrazine	10.24	200	89439	19.66371 ppb		99
73)	Pentachlorophenol	10.35	266	112272	36.20294 ppb		96
74)	Phenanthrene	10.60	178	877664	39.09087 ppb		99
75)	Anthracene	10.66	178	919645	39.18457 ppb		99
76)	Carbazol	10.85	167	830000	38.84199 ppb		98
77)	Di-n-butylphthalate	11.25	149	1156611	39.58322 ppb		98
78)	2-Nitrodiphenylamine	11.42	167	137354	20.66472 ppb		92
79)	Fluoranthene	11.99	202	1038608	39.49426 ppb		98
81)	Benzidine	12.14	184	334522	36.65784 ppb		99
82)	Pyrene	12.26	202	1083004	40.40627 ppb		100
84)	Butyl benzylphthalate	13.00	149	541594	40.32946 ppb		87
85)	3,3'-Dichlorobenzidine	13.61	252	372475	40.43680 ppb		100
86)	Benz (a) anthracene	13.65	228	1137597	38.96454 ppb		99
87)	Bis (2-ethylhexyl) phthala	13.66	149	880088	39.22141 ppb		97
88)	Chrysene	13.69	228	1034971	40.76106 ppb		99
89)	Di-n-octylphthalate	14.41	149	1322580	39.92965 ppb		97
91)	Benzo (b) fluoranthene	14.95	252	1137431	39.99867 ppb		98
92)	Benzo (k) fluoranthene	14.99	252	981428	38.27939 ppb		98
93)	Benzo (a) pyrene	15.40	252	980057	38.83327 ppb		98
94)	Indeno (1,2,3-cd) pyrene	17.34	276	1157206	39.33449 ppb		99
95)	Dibenz (a,h) anthracene	17.37	278	1022289	39.00732 ppb		98
96)	Benzo (g,h,i) perylene	17.91	276	908299	39.29134 ppb		98

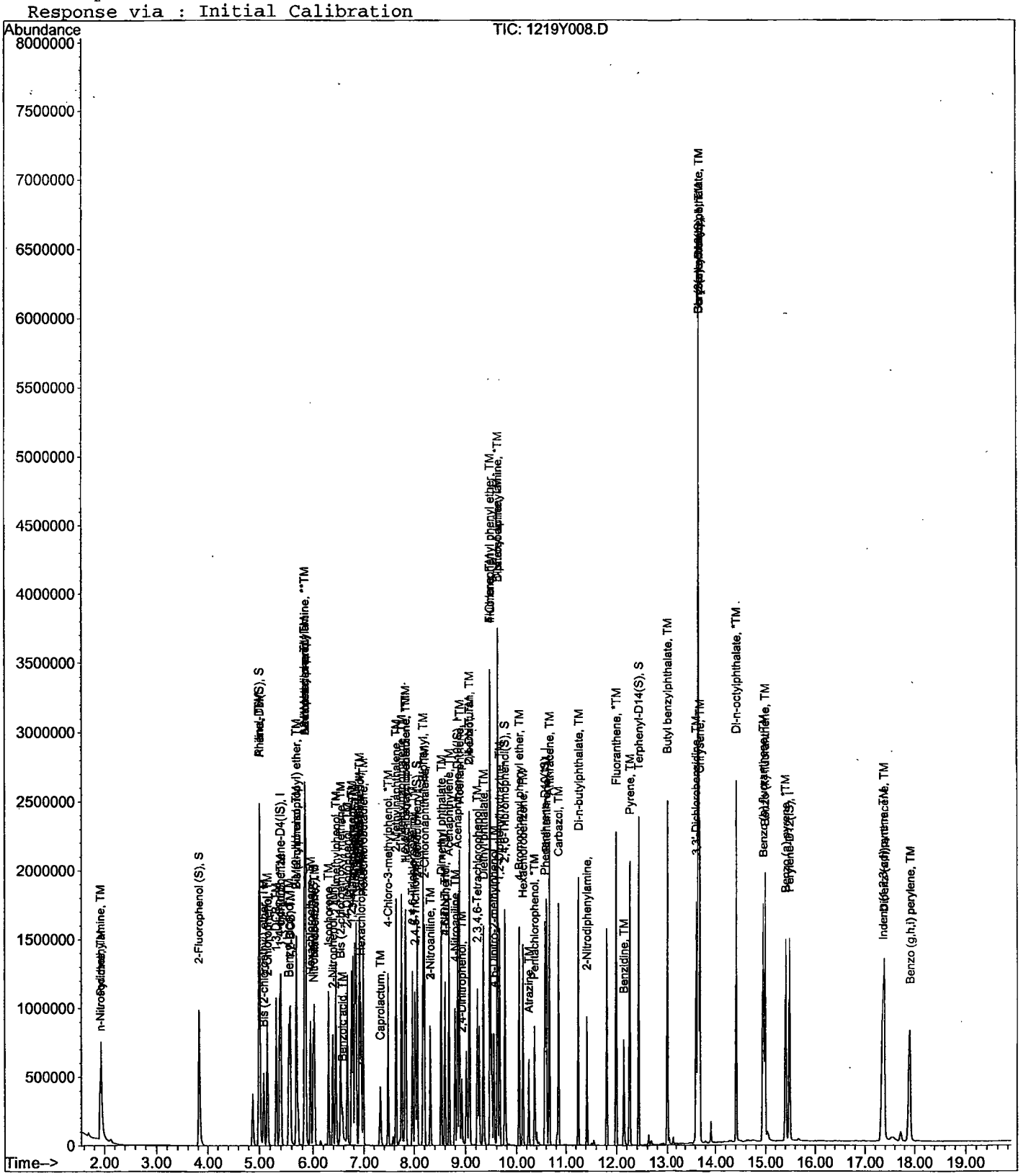
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y008.D Vial: 8
Acq On : 19 Dec 19 11:24 Operator: MA,SS
Sample : 40ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y009.D Vial: 9
Acq On : 19 Dec 19 11:51 Operator: MA,SS
Sample : 60ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.38	152	160953	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.82	136	685348	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.84	164	424996	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.57	188	796514	40.00000 ppb	0.00
80) Chrysene-D12(IS)	13.67	240	1005038	40.00000 ppb	0.00
90) Perylene-D12(IS)	15.49	264	865168	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.82	112	753971	127.80550 ppb	0.00
Spiked Amount 200.000			Recovery =	63.903%	
6) Phenol-D6 (S)	5.00	99	965746	128.48885 ppb	0.00
Spiked Amount 200.000			Recovery =	64.245%	
22) Nitrobenzene-D5(S)	6.01	82	517338	60.69782 ppb	0.00
Spiked Amount 100.000			Recovery =	60.698%	
46) 2-Fluorobiphenyl(S)	8.06	172	952099	60.66112 ppb	0.00
Spiked Amount 100.000			Recovery =	60.661%	
64) 2,4,6-Tribromophenol(S)	9.77	330	330216	125.02270 ppb	0.00
Spiked Amount 200.000			Recovery =	62.512%	
83) Terphenyl-D14(S)	12.43	244	1317552	54.97558 ppb	0.00
Spiked Amount 100.000			Recovery =	54.976%	
Target Compounds					Qvalue
3) n-Nitrosodimethylamine	1.91	42	292234	65.02884 ppb	100
4) Pyridine	1.92	79	684285	65.73377 ppb	98
7) Phenol	5.02	94	596449	67.24251 ppb	95
8) Aniline	5.01	93	400896	69.25679 ppb	95
9) Bis (2-chloroethyl) ether	5.09	63	270061	65.72167 ppb	94
10) 2-Chlorophenol	5.15	128	411267	65.84829 ppb	99
11) 1,3-DCB	5.31	146	444136	64.80266 ppb	98
12) 1,4-DCB	5.40	146	459470	65.50576 ppb	96
13) Benzyl alcohol	5.54	108	241965	65.77083 ppb	97
14) 1,2-DCB	5.57	146	428400	65.64329 ppb	99
15) 2-Methylphenol	5.68	107	361008	66.23892 ppb	99
16) Bis (2-chloroisopropyl) et	5.69	45	356163	65.72491 ppb	99
17) Acetophenone	5.84	105	617676	66.49198 ppb	99
18) 3&4-Methylphenol	5.86	107	952694	132.91717 ppb	99
19) n-Nitrosodi-n-propylamine	5.85	70	402101	67.29988 ppb	98
20) Hexachloroethane	5.95	117	190409	65.12647 ppb	97
23) Nitrobenzene	6.04	77	557986	63.16784 ppb	99
24) Isophorone	6.31	82	872286	62.58851 ppb	99
25) 2-Nitrophenol	6.39	139	230690	64.31331 ppb	99
26) 2,4-Dimethylphenol	6.44	122	359953	62.71309 ppb	100
27) Benzoic acid	6.60	105	293487	58.72692 ppb	99
28) Bis (2-chloroethoxy) metha	6.55	93	457869	63.30278 ppb	97
29) 2,4-Dichlorophenol	6.68	162	357701	63.91535 ppb	100
30) 1,2,4-Trichlorobenzene	6.76	180	400374	64.13977 ppb	98
31) 3,4-Dimethylphenol	6.79	107	600730	62.91404 ppb	100
32) Naphthalene	6.84	128	1176746	63.10625 ppb	99
33) 4-Chloroaniline	6.91	127	471729	62.91587 ppb	98
34) 2,6-Dichlorophenol	6.92	162	349158	63.68349 ppb	98
35) Hexachloropropene	6.95	213	349669	64.73761 ppb	100
36) Hexachlorobutadiene	6.98	225	268805	63.47650 ppb	100
37) Caprolactum	7.34	55	155158	61.77408 ppb	97
38) 4-Chloro-3-methylphenol	7.48	107	426464	64.19474 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y009.D Vial: 9
Acq On : 19 Dec 19 11:51 Operator: MA,SS
Sample : 60ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	2-Methylnaphthalene	7.63	142	793770	63.25069	ppb		99
40)	1-Methylnaphthalene	7.75	142	832076	63.76134	ppb		100
42)	Hexachlorocyclopentadiene	7.82	237	306752	62.07183	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.84	216	425660	62.87574	ppb		99
44)	2,4,6-Trichlorophenol	7.97	196	281816	63.58234	ppb		98
45)	2,4,5-Trichlorophenol	8.02	196	301154	62.64854	ppb		97
47)	1,1'-Biphenyl	8.18	154	1027471	62.33279	ppb		97
48)	2-Chloronaphthalene	8.20	162	825988	62.30917	ppb		99
49)	2-Nitroaniline	8.32	65	317213	63.02131	ppb		100
50)	Dimethyl phthalate	8.53	163	1013833	62.39365	ppb		99
51)	2,6-DNT	8.61	165	226254	63.84462	ppb		99
52)	Acenaphthylene	8.68	152	1289574	63.18347	ppb		100
53)	3-Nitroaniline	8.32	138	266968	63.46450	ppb		100
54)	Acenaphthene	8.89	154	800171	62.67644	ppb		100
55)	2,4-Dinitrophenol	8.93	184	126506	58.66929	ppb	#	78
56)	4-Nitrophenol	8.60	65	20413	61.63346	ppb		97
57)	Dibenzofuran	9.08	168	1226638	63.25710	ppb		99
58)	2,4-DNT	9.07	165	335087	64.31335	ppb		96
59)	2,3,4,6-Tetrachlorophenol	9.24	232	239911	65.80120	ppb		99
60)	Diethyl phthalate	9.35	149	1040635	61.81596	ppb		99
61)	4-Chlorophenyl phenyl ethe	9.48	204	587260	63.00279	ppb		99
62)	Fluorene	9.48	166	1063405	64.46185	ppb		99
63)	4-Nitroaniline	8.80	138	220693	62.96160	ppb		95
66)	4,6-Dinitro-2-methylphenol	9.56	198	198681	63.98043	ppb		99
67)	Diphenyl amine	9.63	169	1652863	127.47170	ppb		100
68)	n-Nitrosodiphenylamine	9.63	169	1652863	127.47170	ppb		100
69)	1,2-Diphenylhydrazine	9.67	77	1183313	63.10133	ppb		99
70)	4-Bromophenyl phenyl ether	10.05	248	310984	63.69937	ppb		97
71)	Hexachlorobenzene	10.13	284	320014	64.79369	ppb		100
72)	Atrazine	10.24	200	138142	31.02308	ppb		96
73)	Pentachlorophenol	10.36	266	186384	61.39058	ppb		99
74)	Phenanthrene	10.60	178	1384259	62.97746	ppb		99
75)	Anthracene	10.66	178	1445744	62.92265	ppb		99
76)	Carbazol	10.85	167	1323037	63.24352	ppb		99
77)	Di-n-butylphthalate	11.25	149	1860030	65.02262	ppb		99
78)	2-Nitrodiphenylamine	11.42	167	216308	33.24157	ppb		91
79)	Fluoranthene	11.99	202	1641246	63.74949	ppb		99
81)	Benzidine	12.14	184	513732	50.08562	ppb		99
82)	Pyrene	12.25	202	1718860	57.05497	ppb		100
84)	Butyl benzylphthalate	13.00	149	861484	57.07291	ppb		96
85)	3,3'-Dichlorobenzidine	13.62	252	573326	55.37523	ppb		98
86)	Benz (a) anthracene	13.65	228	1901953	57.95823	ppb		100
87)	Bis (2-ethylhexyl) phthala	13.67	149	1500100	59.47733	ppb		99
88)	Chrysene	13.69	228	1612879	56.51364	ppb		100
89)	Di-n-octylphthalate	14.41	149	2164466	58.13779	ppb	#	89
91)	Benzo (b) fluoranthene	14.96	252	1834489	64.91869	ppb		99
92)	Benzo (k) fluoranthene	14.99	252	1524121	59.82190	ppb		99
93)	Benzo (a) pyrene	15.41	252	1574220	62.77002	ppb		98
94)	Indeno (1,2,3-cd) pyrene	17.36	276	1835591	62.78747	ppb		99
95)	Dibenz (a,h) anthracene	17.39	278	1644729	63.15402	ppb		99
96)	Benzo (g,h,i) perylene	17.92	276	1423801	61.97998	ppb		98

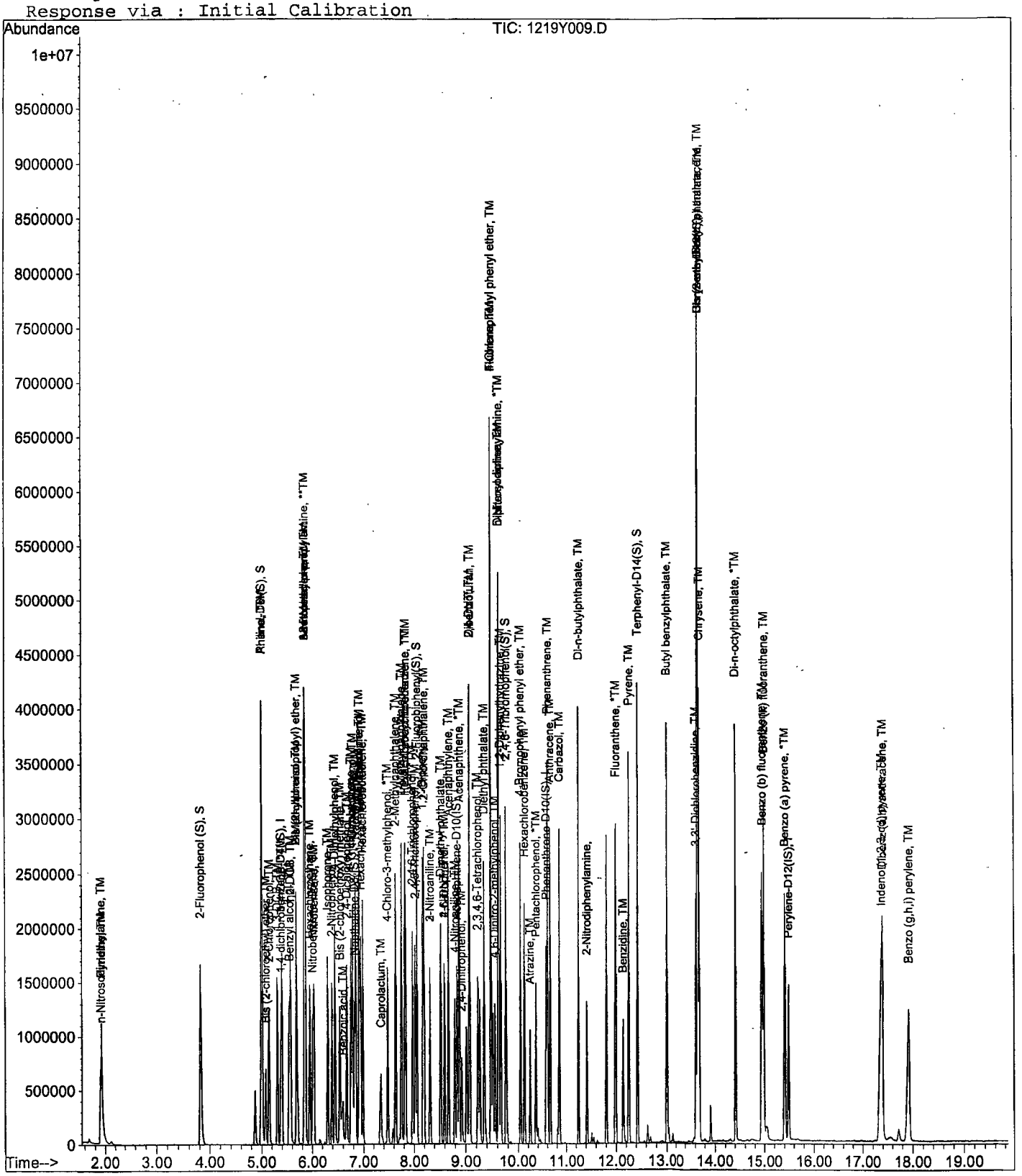
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y009.D Vial: 9
Acq On : 19 Dec 19 11:51 Operator: MA,SS
Sample : 60ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y010.D Vial: 10
Acq On : 19 Dec 19 12:19 Operator: MA,SS
Sample : 80ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.38	152	160754	40.00000	ppb	0.00
21) Napthalene-D8(IS)	6.83	136	692959	40.00000	ppb	0.00
41) Acenaphthene-D10(IS)	8.84	164	424996	40.00000	ppb	0.00
65) Phenanthrene-D10(IS)	10.58	188	805372	40.00000	ppb	0.00
80) Chrysene-D12(IS)	13.67	240	1113628	40.00000	ppb	0.00
90) Perylene-D12(IS)	15.49	264	871956	40.00000	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.82	112	1075001	182.44881	ppb	0.00
Spiked Amount 200.000			Recovery =	91.225%		
6) Phenol-D6 (S)	5.01	99	1420883	189.27713	ppb	0.01
Spiked Amount 200.000			Recovery =	94.638%		
22) Nitrobenzene-D5(S)	6.02	82	726169	84.26361	ppb	0.01
Spiked Amount 100.000			Recovery =	84.264%		
46) 2-Fluorobiphenyl(S)	8.06	172	1352303	86.15933	ppb	0.00
Spiked Amount 100.000			Recovery =	86.159%		
64) 2,4,6-Tribromophenol(S)	9.78	330	496073	187.81763	ppb	0.01
Spiked Amount 200.000			Recovery =	93.909%		
83) Terphenyl-D14(S)	12.43	244	1883191	70.91511	ppb	0.00
Spiked Amount 100.000			Recovery =	70.915%		
Target Compounds						Qvalue
3) n-Nitrosodimethylamine	1.91	42	401885	89.53944	ppb	99
4) Pyridine	1.93	79	934760	89.90605	ppb	98
7) Phenol	5.02	94	839274	94.73526	ppb	88
8) Aniline	5.01	93	498688	86.25749	ppb	85
9) Bis (2-chloroethyl) ether	5.09	63	369777	90.09981	ppb	97
10) 2-Chlorophenol	5.16	128	564852	90.55087	ppb	97
11) 1,3-DCB	5.31	146	617727	90.24242	ppb	99
12) 1,4-DCB	5.41	146	635798	90.75672	ppb	96
13) Benzyl alcohol	5.55	108	342328	93.16664	ppb	96
14) 1,2-DCB	5.57	146	592153	90.84732	ppb	100
15) 2-Methylphenol	5.69	107	504104	92.60913	ppb	99
16) Bis (2-chloroisopropyl) et	5.69	45	497984	92.00976	ppb	91
17) Acetophenone	5.85	105	867366	93.48636	ppb	88
18) 3&4-Methylphenol	5.87	107	1364847	190.65532	ppb	96
19) n-Nitrosodi-n-propylamine	5.85	70	570874	95.66579	ppb	96
20) Hexachloroethane	5.95	117	268399	91.91539	ppb	98
23) Nitrobenzene	6.04	77	764484	85.59428	ppb	97
24) Isophorone	6.32	82	1217808	86.42078	ppb	99
25) 2-Nitrophenol	6.39	139	319613	88.12521	ppb	99
26) 2,4-Dimethylphenol	6.45	122	504451	86.92306	ppb	97
27) Benzoic acid	6.62	105	419869	81.40378	ppb	98
28) Bis (2-chloroethoxy) metha	6.55	93	640818	87.62335	ppb	98
29) 2,4-Dichlorophenol	6.68	162	502883	88.87008	ppb	99
30) 1,2,4-Trichlorobenzene	6.76	180	558246	88.44856	ppb	99
31) 3,4-Dimethylphenol	6.79	107	839926	86.99873	ppb	99
32) Naphthalene	6.84	128	1644894	87.24311	ppb	100
33) 4-Chloroaniline	6.92	127	636919	84.01473	ppb	94
34) 2,6-Dichlorophenol	6.93	162	502385	90.62439	ppb	94
35) Hexachloropropene	6.95	213	488764	89.49574	ppb	100
36) Hexachlorobutadiene	6.98	225	378957	88.50528	ppb	99
37) Caprolactum	7.36	55	217497	85.64244	ppb	97
38) 4-Chloro-3-methylphenol	7.49	107	599365	89.23025	ppb	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y010.D Vial: 10
Acq On : 19 Dec 19 12:19 Operator: MA,SS
Sample : 80ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	2-Methylnaphthalene	7.63	142	1113998	87.79274	ppb		100
40)	1-Methylnaphthalene	7.75	142	1172330	88.84806	ppb		99
42)	Hexachlorocyclopentadiene	7.82	237	428800	85.24955	ppb		98
43)	1,2,4,5-Tetrachlorobenzene	7.84	216	615504	90.91826	ppb		100
44)	2,4,6-Trichlorophenol	7.97	196	393255	88.72482	ppb		100
45)	2,4,5-Trichlorophenol	8.02	196	421934	87.77419	ppb		97
47)	1,1'-Biphenyl	8.18	154	1475278	89.49955	ppb		97
48)	2-Chloronaphthalene	8.20	162	1174670	88.61232	ppb		99
49)	2-Nitroaniline	8.32	65	442197	87.85212	ppb		97
50)	Dimethyl phthalate	8.53	163	1419958	87.38754	ppb		100
51)	2,6-DNT	8.61	165	321665	90.76781	ppb		90
52)	Acenaphthylene	8.68	152	1796603	88.02567	ppb		100
53)	3-Nitroaniline	8.32	138	365367	86.85624	ppb		96
54)	Acenaphthene	8.89	154	1132422	88.70127	ppb		100
55)	2,4-Dinitrophenol	8.93	184	181951	81.43622	ppb		87
56)	4-Nitrophenol	8.61	65	28530	86.14131	ppb		100
57)	Dibenzofuran	9.08	168	1771319	91.34602	ppb		99
58)	2,4-DNT	9.08	165	492992	94.62011	ppb		89
59)	2,3,4,6-Tetrachlorophenol	9.24	232	331804	91.00501	ppb		99
60)	Diethyl phthalate	9.36	149	1448375	86.03660	ppb		97
61)	4-Chlorophenyl phenyl ethe	9.48	204	883654	94.80072	ppb		99
62)	Fluorene	9.48	166	1569501	95.14055	ppb		100
63)	4-Nitroaniline	8.80	138	289183	82.50114	ppb		92
66)	4,6-Dinitro-2-methylphenol	9.56	198	286670	91.29983	ppb	#	77
67)	Diphenyl amine	9.63	169	2378602	181.42435	ppb		100
68)	n-Nitrosodiphenylamine	9.63	169	2378602	181.42435	ppb		100
69)	1,2-Diphenylhydrazine	9.67	77	1671934	88.17691	ppb		99
70)	4-Bromophenyl phenyl ether	10.05	248	446909	90.53429	ppb		96
71)	Hexachlorobenzene	10.13	284	447867	89.68291	ppb		96
72)	Atrazine	10.25	200	193291	42.93067	ppb		99
73)	Pentachlorophenol	10.36	266	272701	88.83349	ppb		100
74)	Phenanthrene	10.60	178	1957324	88.06988	ppb		100
75)	Anthracene	10.67	178	2064260	88.85398	ppb		100
76)	Carbazol	10.85	167	1880718	88.91287	ppb		99
77)	Di-n-butylphthalate	11.25	149	2576769	89.08752	ppb		99
78)	2-Nitrodiphenylamine	11.43	167	300682	45.69969	ppb		97
79)	Fluoranthene	12.00	202	2372919	91.15549	ppb		99
81)	Benzidine	12.14	184	645213	56.77039	ppb		100
82)	Pyrene	12.26	202	2459441	73.67696	ppb		100
84)	Butyl benzylphthalate	13.00	149	1236168	73.90991	ppb		99
85)	3,3'-Dichlorobenzidine	13.62	252	786783	68.58216	ppb		100
86)	Benz (a) anthracene	13.66	228	2811632	77.32433	ppb		100
87)	Bis (2-ethylhexyl) phthala	13.67	149	2233399	79.91714	ppb		98
88)	Chrysene	13.69	228	2371032	74.97755	ppb		100
89)	Di-n-octylphthalate	14.42	149	3105415	75.27828	ppb		100
91)	Benzo (b) fluoranthene	14.96	252	2455809	86.22935	ppb		99
92)	Benzo (k) fluoranthene	14.99	252	2306290	89.81741	ppb		99
93)	Benzo (a) pyrene	15.42	252	2209159	87.40166	ppb		99
94)	Indeno (1,2,3-cd) pyrene	17.37	276	2551188	86.58555	ppb		98
95)	Dibenz (a,h) anthracene	17.41	278	2321142	88.43297	ppb		99
96)	Benzo (g,h,i) perylene	17.94	276	1961989	84.74315	ppb		99

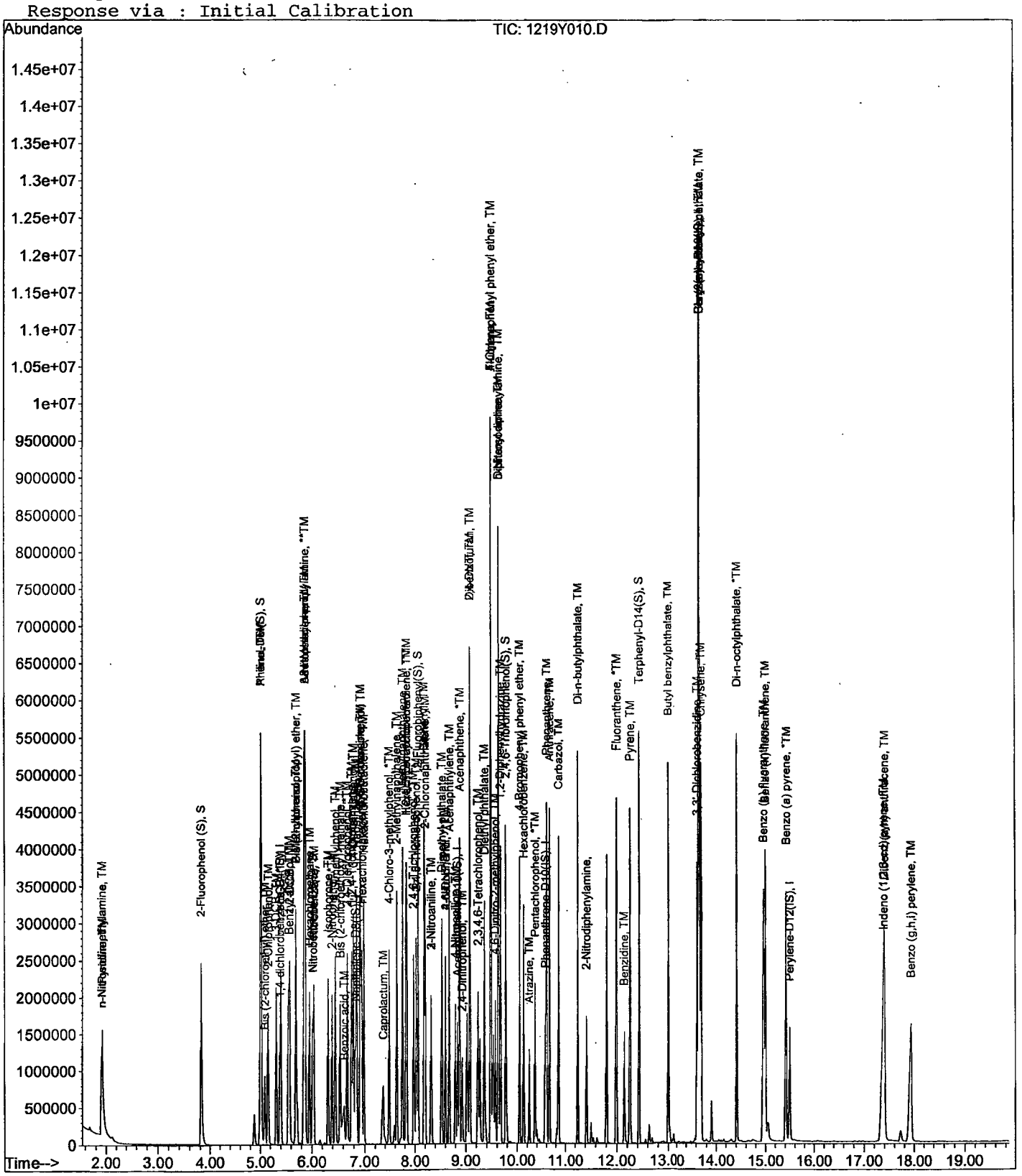
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y010.D Vial: 10
Acq On : 19 Dec 19 12:19 Operator: MA,SS
Sample : 80ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y011.D Vial: 11
Acq On : 19 Dec 19 12:46 Operator: MA,SS
Sample : 100ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.39	152	167721	40.00000	ppb	0.00
21) Napthalene-D8(IS)	6.82	136	690825	40.00000	ppb	0.00
41) Acenaphthene-D10(IS)	8.85	164	415501	40.00000	ppb	0.00
65) Phenanthrene-D10(IS)	10.57	188	801375	40.00000	ppb	0.00
80) Chrysene-D12(IS)	13.66	240	1091847	40.00000	ppb	0.00
90) Perylene-D12(IS)	15.49	264	847047	40.00000	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.83	112	1327145	215.88621	ppb	0.00
Spiked Amount 200.000			Recovery = 107.943%			
6) Phenol-D6 (S)	5.00	99	1768177	225.75631	ppb	0.00
Spiked Amount 200.000			Recovery = 112.878%			
22) Nitrobenzene-D5(S)	6.02	82	888862	103.46088	ppb	0.00
Spiked Amount 100.000			Recovery = 103.461%			
46) 2-Fluorobiphenyl(S)	8.06	172	1696969	110.58977	ppb	0.00
Spiked Amount 100.000			Recovery = 110.590%			
64) 2,4,6-Tribromophenol(S)	9.78	330	649730	251.61496	ppb	0.00
Spiked Amount 200.000			Recovery = 125.808%			
83) Terphenyl-D14(S)	12.44	244	2470353	94.88156	ppb	0.00
Spiked Amount 100.000			Recovery = 94.882%			
Target Compounds						Qvalue
3) n-Nitrosodimethylamine	1.90	42	444670	94.95651	ppb	93
4) Pyridine	1.92	79	1054326	97.19369	ppb	99
7) Phenol	5.02	94	975068	105.49142	ppb	96
8) Aniline	5.01	93	532480	88.27659	ppb	97
9) Bis (2-chloroethyl) ether	5.09	63	422559	98.68376	ppb	98
10) 2-Chlorophenol	5.15	128	643242	98.83407	ppb	96
11) 1,3-DCB	5.32	146	705388	98.76806	ppb	98
12) 1,4-DCB	5.40	146	726887	99.44911	ppb	97
13) Benzyl alcohol	5.55	108	388291	101.28607	ppb	99
14) 1,2-DCB	5.57	146	689593	101.40173	ppb	99
15) 2-Methylphenol	5.69	107	576392	101.49063	ppb	99
16) Bis (2-chloroisopropyl) et	5.69	45	566462	100.31448	ppb	80
17) Acetophenone	5.85	105	992228	102.50184	ppb	98
18) 3&4-Methylphenol	5.87	107	1564530	209.47066	ppb	100
19) n-Nitrosodi-n-propylamine	5.86	70	649091	104.25487	ppb	100
20) Hexachloroethane	5.95	117	306272	100.52845	ppb	93
23) Nitrobenzene	6.04	77	875644	98.34300	ppb	93
24) Isophorone	6.31	82	1364800	97.15113	ppb	100
25) 2-Nitrophenol	6.40	139	362836	100.35190	ppb	90
26) 2,4-Dimethylphenol	6.45	122	582120	100.61623	ppb	97
27) Benzoic acid	6.63	105	476161	92.04260	ppb	97
28) Bis (2-chloroethoxy) metha	6.55	93	732731	100.50073	ppb	100
29) 2,4-Dichlorophenol	6.68	162	567413	100.58365	ppb	96
30) 1,2,4-Trichlorobenzene	6.76	180	635162	100.94600	ppb	98
31) 3,4-Dimethylphenol	6.80	107	956954	99.42657	ppb	97
32) Naphthalene	6.85	128	1900914	101.13354	ppb	100
33) 4-Chloroaniline	6.92	127	702041	92.89091	ppb	97
34) 2,6-Dichlorophenol	6.93	162	571198	103.35574	ppb	96
35) Hexachloropropene	6.94	213	564125	103.61389	ppb	100
36) Hexachlorobutadiene	6.99	225	434421	101.77230	ppb	99
37) Caprolactum	7.36	55	246611	97.40644	ppb	95
38) 4-Chloro-3-methylphenol	7.48	107	669864	100.03382	ppb	91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y011.D Vial: 11
Acq On : 19 Dec 19 12:46 Operator: MA,SS
Sample : 100ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
39)	2-Methylnaphthalene	7.64	142	1291010	102.05711 ppb		99
40)	1-Methylnaphthalene	7.75	142	1334685	101.46501 ppb		100
42)	Hexachlorocyclopentadiene	7.82	237	423680	86.11588 ppb		100
43)	1,2,4,5-Tetrachlorobenzene	7.84	216	703291	106.25957 ppb		98
44)	2,4,6-Trichlorophenol	7.97	196	450783	104.02822 ppb		99
45)	2,4,5-Trichlorophenol	8.03	196	477360	101.57366 ppb		94
47)	1,1'-Biphenyl	8.18	154	1686770	104.66841 ppb		98
48)	2-Chloronaphthalene	8.21	162	1339298	103.33995 ppb		97
49)	2-Nitroaniline	8.33	65	495048	100.59966 ppb		91
50)	Dimethyl phthalate	8.53	163	1597157	100.53896 ppb		99
51)	2,6-DNT	8.61	165	360589	104.07665 ppb	#	75
52)	Acenaphthylene	8.68	152	2048709	102.67159 ppb		99
53)	3-Nitroaniline	8.33	138	418230	101.69501 ppb		96
54)	Acenaphthene	8.88	154	1288641	103.24434 ppb		99
55)	2,4-Dinitrophenol	8.93	184	208042	94.10192 ppb		96
56)	4-Nitrophenol	8.61	65	33255	102.70213 ppb		98
57)	Dibenzofuran	9.09	168	2035181	107.35164 ppb		93
58)	2,4-DNT	9.08	165	558092	109.56255 ppb		97
59)	2,3,4,6-Tetrachlorophenol	9.24	232	377431	105.88489 ppb		96
60)	Diethyl phthalate	9.36	149	1638573	99.55906 ppb		99
61)	4-Chlorophenyl phenyl ethe	9.48	204	1013272	111.19063 ppb		94
62)	Fluorene	9.49	166	1826006	113.21893 ppb		99
63)	4-Nitroaniline	8.80	138	325641	95.02525 ppb		82
66)	4,6-Dinitro-2-methylphenol	9.57	198	325138	104.06776 ppb		97
67)	Diphenyl amine	9.63	169	2746000	210.49174 ppb		100
68)	n-Nitrosodiphenylamine	9.63	169	2746000	210.49174 ppb		100
69)	1,2-Diphenylhydrazine	9.66	77	1846029	97.84419 ppb		96
70)	4-Bromophenyl phenyl ether	10.05	248	515407	104.93130 ppb		83
71)	Hexachlorobenzene	10.13	284	515422	103.72521 ppb		89
72)	Atrazine	10.25	200	217511	48.55098 ppb		96
73)	Pentachlorophenol	10.36	266	321253	105.17146 ppb		98
74)	Phenanthrene	10.60	178	2272938	102.78104 ppb		100
75)	Anthracene	10.67	178	2388824	103.33737 ppb		100
76)	Carbazol	10.86	167	2146142	101.96712 ppb		98
77)	Di-n-butylphthalate	11.26	149	3023885	105.06726 ppb		98
78)	2-Nitrodiphenylamine	11.43	167	350286	53.50438 ppb		97
79)	Fluoranthene	11.99	202	2652267	102.39480 ppb		98
81)	Benzidine	12.14	184	709638	63.68453 ppb		99
82)	Pyrene	12.26	202	2834840	86.61682 ppb		99
84)	Butyl benzylphthalate	13.01	149	1433320	87.40709 ppb	#	79
85)	3,3'-Dichlorobenzidine	13.62	252	875135	77.80538 ppb		99
86)	Benz (a) anthracene	13.66	228	3190283	89.48810 ppb		100
87)	Bis (2-ethylhexyl) phthala	13.66	149	2564215	93.58504 ppb		99
88)	Chrysene	13.70	228	2706844	87.30426 ppb		100
89)	Di-n-octylphthalate	14.42	149	3511144	86.81146 ppb		97
91)	Benzo (b) fluoranthene	14.95	252	2718531	98.26115 ppb		98
92)	Benzo (k) fluoranthene	15.00	252	2709650	108.62927 ppb		99
93)	Benzo (a) pyrene	15.42	252	2492274	101.50223 ppb		98
94)	Indeno (1,2,3-cd) pyrene	17.37	276	2878800	100.57766 ppb		100
95)	Dibenz (a,h) anthracene	17.40	278	2618904	102.71152 ppb		99
96)	Benzo (g,h,i) perylene	17.94	276	2213051	98.39806 ppb		100

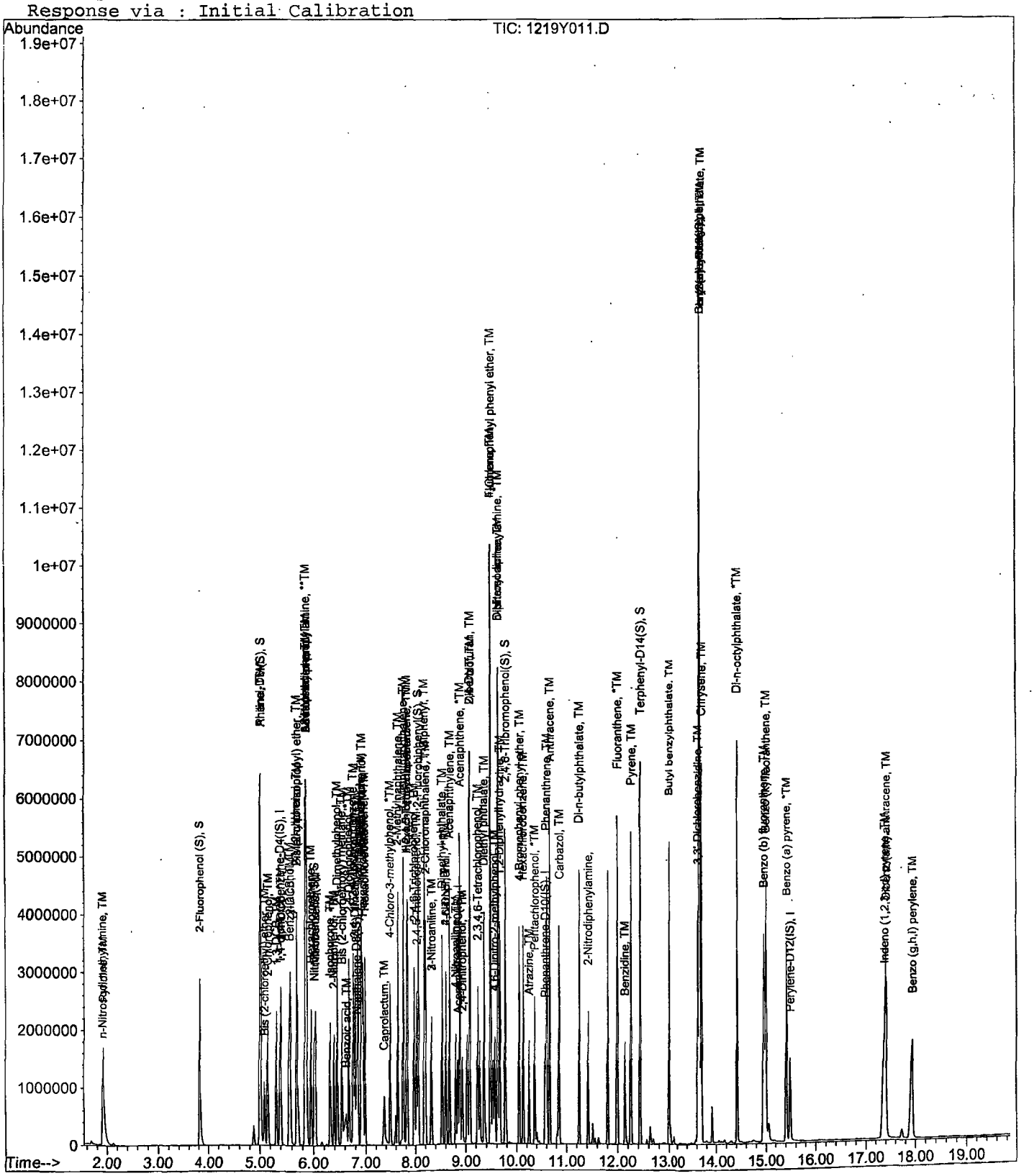
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y011.D Vial: 11
Acq On : 19 Dec 19 12:46 Operator: MA,SS
Sample : 100ug/ml 8270 11/21/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration



Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 12/19/19
Matrix: Instrument: Yoda
Initial Cal. Date: 12/19/19
Data File: 1219Y012.D

		Compound	MEAN	CCRF	%D		%Drift
1		1,4-Dioxane	0.6022	0.6376	5.9		
2	TM	n-Nitrosodimethylamine	1.117	1.180	5.6	TM	
3	TM	Pyridine	2.587	2.639	2.0	TM	
4	*TM	Phenol	2.204	2.243	1.7	*TM	
5	TM	Aniline	1.439	1.657	15	TM	
6	TM	Bis (2-chloroethyl) ether	1.021	1.080	5.7	TM	
7	TM	2-Chlorophenol	1.552	1.607	3.6	TM	
8	TM	1,3-DCB	1.703	1.753	2.9	TM	
9	*TM	1,4-DCB	1.743	1.793	2.8	*TM	
10	TM	Benzyl alcohol	0.9143	0.9743	6.6	TM	
11	TM	1,2-DCB	1.622	1.674	3.2	TM	
12	TM	2-Methylphenol	1.354	1.404	3.7	TM	
13	TM	Bis (2-chloroisopropyl) ether	1.347	1.393	3.4	TM	
14	TM	Acetophenone	2.309	2.421	4.9	TM	
15	TM	3&4-Methylphenol	1.781	1.810	1.6	TM	
16	**TM	n-Nitrosodi-n-propylamine	1.485	1.540	3.7	**TM	
17	TM	Hexachloroethane	0.7266	0.7587	4.4	TM	
18	TM	Nitrobenzene	0.5156	0.5309	3.0	TM	
19	TM	Isophorone	0.8134	0.8514	4.7	TM	
20	*TM	2-Nitrophenol	0.2094	0.2223	6.2	*TM	
21	TM	2,4-Dimethylphenol	0.3350	0.3505	4.6	TM	
22	TML	Benzoic acid	0.2307	0.3085	34	TML	6.6
23	TM	Bis (2-chloroethoxy) methane	0.4222	0.4476	6.0	TM	
24	*TM	2,4-Dichlorophenol	0.3266	0.3400	4.1	*TM	
25	TM	1,2,4-Trichlorobenzene	0.3643	0.3811	4.6	TM	
26	TM	3,4-Dimethylphenol	0.5573	0.5842	4.8	TM	
27	TM	Naphthalene	1.088	1.154	6.0	TM	
28	TM	4-Chloroaniline	0.4376	0.4640	6.0	TM	
29	TM	2,6-Dichlorophenol	0.3200	0.3394	6.1	TM	
30	TM	Hexachloropropene	0.3152	0.3339	5.9	TM	
31	*TM	Hexachlorobutadiene	0.2472	0.2560	3.6	*TM	
32	TM	Caprolactum	0.1466	0.1538	4.9	TM	
33	*TM	4-Chloro-3-methylphenol	0.3877	0.4161	7.3	*TM	
34	TM	2-Methylnaphthalene	0.7325	0.7990	9.1	TM	
35	TM	1-Methylnaphthalene	0.7616	0.7886	3.5	TM	
36	**TML	Hexachlorocyclopentadiene	0.3696	0.4521	22	**TML	1.1
37	TM	1,2,4,5-Tetrachlorobenzene	0.6372	0.6766	6.2	TM	
38	*TM	2,4,6-Trichlorophenol	0.4172	0.4464	7.0	*TM	
39	TM	2,4,5-Trichlorophenol	0.4524	0.4860	7.4	TM	
40	TM	1,1'-Biphenyl	1.551	1.646	6.1	TM	
		Average			6.2		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/19/19
Instrument: Yoda
Cal. Date: 12/19/19
Data File: 1219Y012.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	2-Chloronaphthalene	1.248	1.287	3.1	TM	
42	TM	2-Nitroaniline	0.4737	0.5330	13	TM	
43	TM	Dimethyl phthalate	1.529	1.612	5.4	TM	
44	TM	2,6-DNT	0.3335	0.3594	7.8	TM	
45	TM	Acenaphthylene	1.921	2.039	6.2	TM	
46	TM	3-Nitroaniline	0.3959	0.4440	12	TM	
47	*TM	Acenaphthene	1.202	1.272	5.8	*TM	
48	**TML	2,4-Dinitrophenol	0.1391	0.1930	39	**TML	2.4
49	**TM	4-Nitrophenol	0.0312	0.0331	6.3	**TM	
50	TM	Dibenzofuran	1.825	1.991	9.1	TM	
51	TM	2,4-DNT	0.4904	0.5209	6.2	TM	
52	TM	2,3,4,6-Tetrachlorophenol	0.3432	0.3772	9.9	TM	
53	TM	Diethyl phthalate	1.584	1.664	5.0	TM	
54	TM	4-Chlorophenyl phenyl ether	0.8773	0.8972	2.3	TM	
55	TM	Fluorene	1.553	1.642	5.8	TM	
56	TM	4-Nitroaniline	0.3299	0.3692	12	TM	
57	TM	4,6-Dinitro-2-methylphenol	0.1559	0.1668	7.0	TM	
58	TM	Diphenyl amine	0.6512	0.7094	8.9	TM	
59	*TM	n-Nitrosodiphenylamine	0.6512	0.7094	8.9	*TM	
60	TM	1,2-Diphenylhydrazine	0.9417	0.9917	5.3	TM	
61	TM	4-Bromophenyl phenyl ether	0.2452	0.2643	7.8	TM	
62	TM	Hexachlorobenzene	0.2480	0.2730	10	TM	
63	TM	Atrazine	0.2236	0.2354	5.3	TM	
64	*TM	Pentachlorophenol	0.1525	0.1514	0.68	*TM	
65	TM	Phenanthrene	1.104	1.206	9.2	TM	
66	TM	Anthracene	1.154	1.246	8.0	TM	
67	TM	Carbazol	1.051	1.136	8.1	TM	
68	TM	Di-n-butylphthalate	1.437	1.529	6.5	TM	
69		2-Nitrodiphenylamine	0.3268	0.3682	13		
70	*TM	Fluoranthene	1.293	1.392	7.7	*TM	
71	TM	Benzidine	0.4082	0.3716	9.0	TM	
72	TM	Pyrene	1.199	1.267	5.7	TM	
73	TM	Butyl benzylphthalate	0.6008	0.6332	5.4	TM	
74	TM	3,3'-Dichlorobenzidine	0.4121	0.4458	8.2	TM	
75	TM	Benz (a) anthracene	1.306	1.401	7.3	TM	
76	TM	Bis (2-ethylhexyl) phthalate	1.004	1.044	4.0	TM	
77	TM	Chrysene	1.136	1.200	5.6	TM	
78	*TM	Di-n-octylphthalate	1.482	1.554	4.8	*TM	
79	TM	Benzo (b) fluoranthene	1.306	1.367	4.6	TM	
80	TM	Benzo (k) fluoranthene	1.178	1.349	14	TM	
		Average			8.1		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 12/19/19
Instrument: Yoda
Cal. Date: 12/19/19
Data File: 1219Y012.D

		Compound	MEAN	CCRF	%D		%Drift
81	*TM	Benzo (a) pyrene	1.160	1.260	8.7	*TM	
82	TM	Indeno (1,2,3-cd) pyrene	1.352	1.394	3.1	TM	
83	TM	Dibenz (a,h) anthracene	1.204	1.302	8.1	TM	
84	TM	Benzo (g,h,i) perylene	1.062	1.208	14	TM	
85							
86							
87							
88							
89							
90							
91							
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112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			8.5		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y012.D Vial: 12
Acq On : 19 Dec 19 13:14 Operator: MA,SS
Sample : SS 8270 11/22/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.38	152	154648	40.00000	ppb		0.00
21) Napthalene-D8(IS)	6.82	136	627218	40.00000	ppb		0.00
41) Acenaphthene-D10(IS)	8.84	164	380731	40.00000	ppb		0.00
65) Phenanthrene-D10(IS)	10.57	188	716758	40.00000	ppb		0.00
80) Chrysene-D12(IS)	13.66	240	829696	40.00000	ppb		0.00
90) Perylene-D12(IS)	15.48	264	760670	40.00000	ppb		-0.01
System Monitoring Compounds							
5) 2-Fluorophenol (S)	0.00	112	0	0.00000	ppb		
Spiked Amount 200.000			Recovery =	0.000%			
6) Phenol-D6 (S)	0.00	99	0	0.00000	ppb		
Spiked Amount 200.000			Recovery =	0.000%			
22) Nitrobenzene-D5(S)	5.95	82	52711	6.75760	ppb		-0.06
Spiked Amount 100.000			Recovery =	6.758%			
46) 2-Fluorobiphenyl(S)	8.02	172	554	0.03940	ppb		-0.04
Spiked Amount 100.000			Recovery =	0.039%			
64) 2,4,6-Tribromophenol(S)	0.00	330	0	0.00000	ppb		
Spiked Amount 200.000			Recovery =	0.000%			
83) Terphenyl-D14(S)	12.43	244	297	0.01501	ppb		0.00
Spiked Amount 100.000			Recovery =	0.015%			
Target Compounds							Qvalue
3) n-Nitrosodimethylamine	1.90	42	228024	52.80932	ppb		98
4) Pyridine	1.92	79	510199	51.00889	ppb		99
7) Phenol	5.00	94	433587	50.87467	ppb		79
8) Aniline	5.00	93	320384	57.60447	ppb	#	92
9) Bis (2-chloroethyl) ether	5.08	63	208721	52.86493	ppb		99
10) 2-Chlorophenol	5.15	128	310728	51.77926	ppb		99
11) 1,3-DCB	5.31	146	338803	51.44923	ppb		98
12) 1,4-DCB	5.39	146	346514	51.41595	ppb		99
13) Benzyl alcohol	5.54	108	188349	53.28425	ppb		98
14) 1,2-DCB	5.57	146	323570	51.60169	ppb		98
15) 2-Methylphenol	5.68	107	271451	51.83733	ppb		99
16) Bis (2-chloroisopropyl) et	5.69	45	269286	51.71896	ppb		86
17) Acetophenone	5.84	105	467976	52.43085	ppb		97
18) 3&4-Methylphenol	5.86	107	699849	101.62178	ppb		99
19) n-Nitrosodi-n-propylamine	5.84	70	297756	51.86739	ppb		93
20) Hexachloroethane	5.95	117	146655	52.20615	ppb		96
23) Nitrobenzene	6.03	77	416218	51.48566	ppb		93
24) Isophorone	6.30	82	667515	52.33466	ppb		98
25) 2-Nitrophenol	6.39	139	174251	53.08111	ppb		98
26) 2,4-Dimethylphenol	6.44	122	274826	52.31942	ppb		99
27) Benzoic acid	6.58	105	241867	53.28837	ppb		98
28) Bis (2-chloroethoxy) metha	6.54	93	350898	53.00967	ppb		98
29) 2,4-Dichlorophenol	6.68	162	266533	52.03896	ppb		99
30) 1,2,4-Trichlorobenzene	6.76	180	298756	52.29628	ppb		100
31) 3,4-Dimethylphenol	6.79	107	458062	52.41857	ppb		99
32) Naphthalene	6.84	128	904563	53.00552	ppb		100
33) 4-Chloroaniline	6.91	127	363799	53.01781	ppb		98
34) 2,6-Dichlorophenol	6.92	162	266063	53.02515	ppb		98
35) Hexachloropropene	6.94	213	261770	52.95562	ppb		98
36) Hexachlorobutadiene	6.98	225	200685	51.78252	ppb		99
37) Caprolactum	7.32	55	120598	52.46442	ppb		93
38) 4-Chloro-3-methylphenol	7.47	107	326264	53.66349	ppb		90

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y191219\1219Y012.D Vial: 12
Acq On : 19 Dec 19 13:14 Operator: MA,SS
Sample : SS 8270 11/22/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
39)	2-Methylnaphthalene	7.63	142	626418	54.54154 ppb		99
40)	1-Methylnaphthalene	7.75	142	618310	51.77181 ppb		99
42)	Hexachlorocyclopentadiene	7.82	237	215168	49.43015 ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.84	216	321980	53.09037 ppb		99
44)	2,4,6-Trichlorophenol	7.97	196	212425	53.49868 ppb		99
45)	2,4,5-Trichlorophenol	8.02	196	231296	53.71023 ppb		96
47)	1,1'-Biphenyl	8.17	154	783426	53.05320 ppb		99
48)	2-Chloronaphthalene	8.20	162	612398	51.56780 ppb		99
49)	2-Nitroaniline	8.32	65	253652	56.25244 ppb		98
50)	Dimethyl phthalate	8.52	163	767054	52.69465 ppb		98
51)	2,6-DNT	8.60	165	171054	53.88004 ppb	#	66
52)	Acenaphthylene	8.68	152	970447	53.07569 ppb		100
53)	3-Nitroaniline	8.32	138	211306	56.07253 ppb		99
54)	Acenaphthene	8.87	154	605219	52.91767 ppb		99
55)	2,4-Dinitrophenol	8.92	184	91847	48.82234 ppb		96
56)	4-Nitrophenol	8.60	65	15775	53.16743 ppb		98
57)	Dibenzofuran	9.08	168	947587	54.54797 ppb		100
58)	2,4-DNT	9.07	165	247899	53.11106 ppb		94
59)	2,3,4,6-Tetrachlorophenol	9.24	232	179532	54.96575 ppb		98
60)	Diethyl phthalate	9.35	149	791693	52.49593 ppb		99
61)	4-Chlorophenyl phenyl ethe	9.48	204	426980	51.13326 ppb		98
62)	Fluorene	9.48	166	781637	52.89027 ppb		99
63)	4-Nitroaniline	8.80	138	175684	55.94819 ppb		89
66)	4,6-Dinitro-2-methylphenol	9.55	198	149456	53.48414 ppb		90
67)	Diphenyl amine	9.62	169	1271157	108.94241 ppb		99
68)	n-Nitrosodiphenylamine	9.62	169	1271157	108.94241 ppb		99
69)	1,2-Diphenylhydrazine	9.66	77	888538	52.65453 ppb		98
70)	4-Bromophenyl phenyl ether	10.04	248	236821	53.90613 ppb		97
71)	Hexachlorobenzene	10.13	284	244573	55.02919 ppb		97
72)	Atrazine	10.24	200	105442	26.31441 ppb		97
73)	Pentachlorophenol	10.36	266	135671	49.65935 ppb		99
74)	Phenanthrene	10.60	178	1080229	54.61406 ppb		99
75)	Anthracene	10.66	178	1116406	53.99563 ppb		100
76)	Carbazol	10.85	167	1017680	54.06002 ppb		99
77)	Di-n-butylphthalate	11.25	149	1370271	53.23188 ppb		99
78)	2-Nitrodiphenylamine	11.42	167	164948	28.16935 ppb		89
79)	Fluoranthene	11.99	202	1247416	53.84374 ppb		99
81)	Benzidine	12.14	184	385367	45.51080 ppb		99
82)	Pyrene	12.25	202	1314061	52.83625 ppb		99
84)	Butyl benzylphthalate	13.00	149	656686	52.69920 ppb		91
85)	3,3'-Dichlorobenzidine	13.62	252	462307	54.08886 ppb	#	99
86)	Benz (a) anthracene	13.65	228	1453439	53.65073 ppb		99
87)	Bis (2-ethylhexyl) phthala	13.66	149	1082924	52.01071 ppb	#	98
88)	Chrysene	13.69	228	1244504	52.82157 ppb		100
89)	Di-n-octylphthalate	14.41	149	1611191	52.42256 ppb	#	91
91)	Benzo (b) fluoranthene	14.94	252	1300001	52.32418 ppb		99
92)	Benzo (k) fluoranthene	14.99	252	1282239	57.24188 ppb		98
93)	Benzo (a) pyrene	15.41	252	1198281	54.34376 ppb		99
94)	Indeno (1,2,3-cd) pyrene	17.35	276	1325649	51.57388 ppb		99
95)	Dibenz (a,h) anthracene	17.38	278	1237782	54.05738 ppb		100
96)	Benzo (g,h,i) perylene	17.91	276	1148610	56.86944 ppb		99

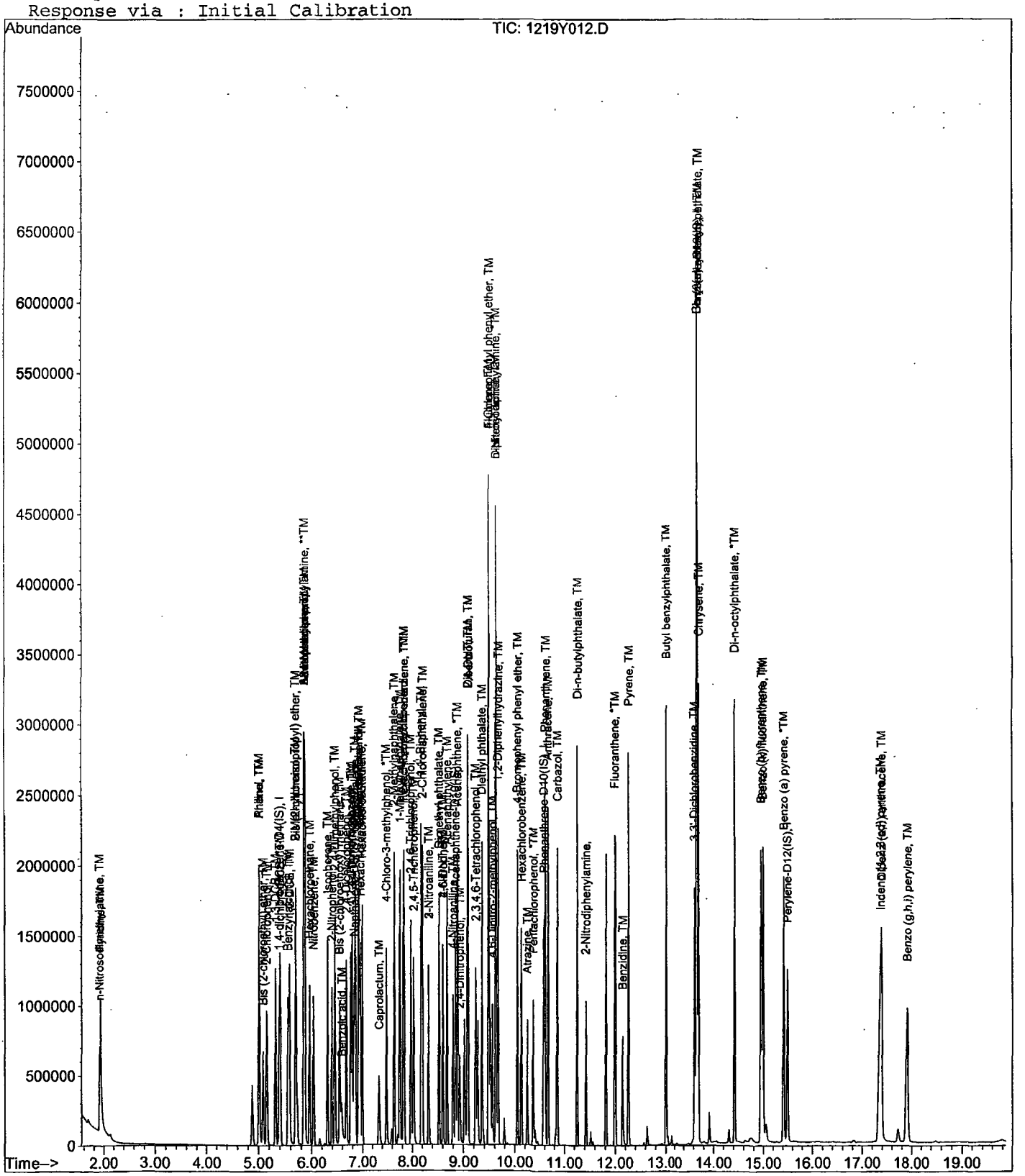
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y012.D Vial: 12
Acq On : 19 Dec 19 13:14 Operator: MA,SS
Sample : SS 8270 11/22/19 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Dec 20 12:40 2019 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Dec 19 16:07:36 2019
Response via : Initial Calibration



Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 03/17/20
Matrix: Instrument: Yoda
Initial Cal. Date: 12/19/19
Data File: 0207Y226.D

		Compound	MEAN	CCRF	%D		%Drift	
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I		
2		1,4-Dioxane	0.6022	1.001	66			*NT
3	TM	n-Nitrosodimethylamine	1.117	1.338	20	TM		
4	TM	Pyridine	2.587	3.021	17	TM		
5	S	2-Fluorophenol (S)	1.466	1.399	4.6	S		
6	S	Phenol-D6 (S)	1.868	1.975	5.7	S		
7	*TM	Phenol	2.204	2.410	9.3	*TM		
8	TM	Aniline	1.439	1.600	11	TM		
9	TM	Bis (2-chloroethyl) ether	1.021	1.125	10	TM		
10	TM	2-Chlorophenol	1.552	1.643	5.9	TM		
11	TM	1,3-DCB	1.703	1.790	5.1	TM		
12	*TM	1,4-DCB	1.743	1.862	6.8	*TM		
13	TM	Benzyl alcohol	0.9143	1.006	10.0	TM		
14	TM	1,2-DCB	1.622	1.727	6.5	TM		
15	TM	2-Methylphenol	1.354	1.480	9.3	TM		
16	TM	Bis (2-chloroisopropyl) ether	1.347	1.538	14	TM		
17	TM	Acetophenone	2.309	2.463	6.7	TM		
18	TM	3&4-Methylphenol	1.781	1.949	9.4	TM		
19	**TM	n-Nitrosodi-n-propylamine	1.485	1.660	12	**TM		
20	TM	Hexachloroethane	0.7266	0.7950	9.4	TM		
21	I	Napthalene-D8(IS)	ISTD			I		
22	S	Nitrobenzene-D5(S)	0.4975	0.5136	3.2	S		
23	TM	Nitrobenzene	0.5156	0.5595	8.5	TM		
24	TM	Isophorone	0.8134	0.8808	8.3	TM		
25	*TM	2-Nitrophenol	0.2094	0.2202	5.2	*TM		
26	TM	2,4-Dimethylphenol	0.3350	0.3696	10	TM		
27	TML	Benzoic acid	0.2307	0.3359	46	TML	15	
28	TM	Bis (2-chloroethoxy) methane	0.4222	0.4449	5.4	TM		
29	*TM	2,4-Dichlorophenol	0.3266	0.3484	6.7	*TM		
30	TM	1,2,4-Trichlorobenzene	0.3643	0.3837	5.3	TM		
31	TM	3,4-Dimethylphenol	0.5573	0.5890	5.7	TM		
32	TM	Naphthalene	1.088	1.157	6.3	TM		
33	TM	4-Chloroaniline	0.4376	0.4715	7.8	TM		
34	TM	2,6-Dichlorophenol	0.3200	0.3478	8.7	TM		
35	TM	Hexachloropropene	0.3152	0.3435	8.9	TM		
36	*TM	Hexachlorobutadiene	0.2472	0.2645	7.0	*TM		
37	TM	Caprolactum	0.1466	0.1651	13	TM		
38	*TM	4-Chloro-3-methylphenol	0.3877	0.4182	7.9	*TM		
39	TM	2-Methylnaphthalene	0.7325	0.7968	8.8	TM		
40	TM	1-Methylnaphthalene	0.7616	0.8065	5.9	TM		
		Average			11.0			

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 03/17/20
Instrument: Yoda
Cal. Date: 12/19/19
Data File: 0207Y226.D

		Compound	MEAN	CCRF	%D		%Drift
41	I	Acenaphthene-D10(IS)	ISTD			I	
42	**TML	Hexachlorocyclopentadiene	0.3696	0.3566	3.5	**TML	20
43	TM	1,2,4,5-Tetrachlorobenzene	0.6372	0.6523	2.4	TM	
44	*TM	2,4,6-Trichlorophenol	0.4172	0.4355	4.4	*TM	
45	TM	2,4,5-Trichlorophenol	0.4524	0.4503	0.47	TM	
46	S	2-Fluorobiphenyl(S)	1.477	1.432	3.1	S	
47	TM	1,1'-Biphenyl	1.551	1.623	4.6	TM	
48	TM	2-Chloronaphthalene	1.248	1.280	2.6	TM	
49	TM	2-Nitroaniline	0.4737	0.5150	8.7	TM	
50	TM	Dimethyl phthalate	1.529	1.590	4.0	TM	
51	TM	2,6-DNT	0.3335	0.3489	4.6	TM	
52	TM	Acenaphthylene	1.921	2.015	4.9	TM	
53	TM	3-Nitroaniline	0.3959	0.4166	5.2	TM	
54	*TM	Acenaphthene	1.202	1.265	5.3	*TM	
55	**TML	2,4-Dinitrophenol	0.1391	0.2150	55	**TML	7.3
56	**TM	4-Nitrophenol	0.0312	0.0344	10	**TM	
57	TM	Dibenzofuran	1.825	1.985	8.8	TM	
58	TM	2,4-DNT	0.4904	0.5405	10	TM	
59	TM	2,3,4,6-Tetrachlorophenol	0.3432	0.3625	5.6	TM	
60	TM	Diethyl phthalate	1.584	1.688	6.6	TM	
61	TM	4-Chlorophenyl phenyl ether	0.8773	0.9322	6.3	TM	
62	TM	Fluorene	1.553	1.684	8.5	TM	
63	TM	4-Nitroaniline	0.3299	0.3400	3.1	TM	
64	S	2,4,6-Tribromophenol(S)	0.2486	0.2423	2.5	S	
65	I	Phenanthrene-D10(IS)	ISTD			I	
66	TM	4,6-Dinitro-2-methylphenol	0.1559	0.1637	5.0	TM	
67	TM	Diphenyl amine	0.6512	0.6526	0.23	TM	
68	*TM	n-Nitrosodiphenylamine	0.6512	0.6526	0.23	*TM	
69	TM	1,2-Diphenylhydrazine	0.9417	0.9955	5.7	TM	
70	TM	4-Bromophenyl phenyl ether	0.2452	0.2459	0.30	TM	
71	TM	Hexachlorobenzene	0.2480	0.2518	1.5	TM	
72	TM	Atrazine	0.2236	0.2197	1.7	TM	
73	*TM	Pentachlorophenol	0.1525	0.1500	1.6	*TM	
74	TM	Phenanthrene	1.104	1.128	2.2	TM	
75	TM	Anthracene	1.154	1.204	4.4	TM	
76	TM	Carbazol	1.051	1.101	4.8	TM	
77	TM	Di-n-butylphthalate	1.437	1.525	6.1	TM	
78		2-Nitrodiphenylamine	0.3268	0.3781	16		
79	*TM	Fluoranthene	1.293	1.372	6.1	*TM	
80	I	Chrysene-D12(IS)	ISTD			I	
		Average			6.1		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 03/17/20
Instrument: Yoda
Cal. Date: 12/19/19
Data File: 0207Y226.D

		Compound	MEAN	CCRF	%D	%Drift		
81	TM	Benzidine	0.4082	0.3112	24	TM		*NT
82	TM	Pyrene	1.199	1.065	11	TM		
83	S	Terphenyl-D14(S)	0.9538	0.7932	17	S		
84	TM	Butyl benzylphthalate	0.6008	0.5341	11	TM		
85	TM	3,3'-Dichlorobenzidine	0.4121	0.3971	3.6	TM		
86	TM	Benz (a) anthracene	1.306	1.228	6.0	TM		
87	TM	Bis (2-ethylhexyl) phthalate	1.004	0.9822	2.2	TM		
88	TM	Chrysene	1.136	1.037	8.7	TM		
89	*TM	Di-n-octylphthalate	1.482	1.326	10	*TM		
90	I	Perylene-D12(IS)	ISTD			I		
91	TM	Benzo (b) fluoranthene	1.306	1.288	1.4	TM		
92	TM	Benzo (k) fluoranthene	1.178	1.368	16	TM		
93	*TM	Benzo (a) pyrene	1.160	1.243	7.2	*TM		
94	TM	Indeno (1,2,3-cd) pyrene	1.352	1.439	6.5	TM		
95	TM	Dibenz (a,h) anthracene	1.204	1.289	7.1	TM		
96	TM	Benzo (g,h,i) perylene	1.062	1.109	4.4	TM		
97								
98								
99								
100								
101								
102								
103								
104								
105								
106								
107								
108								
109								
110								
111								
112								
113								
114								
115								
116								
117								
118								
119								
120								
		Average			9.1			

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200207\0207Y226.D Vial: 26
Acq On : 17 Mar 20 8:01 Operator: MA,SS
Sample : 50ug/ml 8270 03/04/20 (2) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Mar 17 9:25 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.34	152	178325	40.00000 ppb	-0.03
21) Napthalene-D8(IS)	6.78	136	747165	40.00000 ppb	-0.04
41) Acenaphthene-D10(IS)	8.80	164	470368	40.00000 ppb	-0.04
65) Phenanthrene-D10(IS)	10.53	188	915881	40.00000 ppb	-0.04
80) Chrysene-D12(IS)	13.62	240	1237702	40.00000 ppb	-0.04
90) Perylene-D12(IS)	15.44	264	972882	40.00000 ppb	-0.05
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.76	112	623727	95.42810 ppb	-0.05
Spiked Amount 200.000			Recovery = 47.714%		
6) Phenol-D6 (S)	4.96	99	880404	105.72346 ppb	-0.03
Spiked Amount 200.000			Recovery = 52.861%		
22) Nitrobenzene-D5(S)	5.97	82	479642	51.61912 ppb	-0.03
Spiked Amount 100.000			Recovery = 51.619%		
46) 2-Fluorobiphenyl(S)	8.01	172	841674	48.45284 ppb	-0.05
Spiked Amount 100.000			Recovery = 48.453%		
64) 2,4,6-Tribromophenol(S)	9.73	330	284973	97.48585 ppb	-0.04
Spiked Amount 200.000			Recovery = 48.743%		
83) Terphenyl-D14(S)	12.39	244	1227137	41.57780 ppb	-0.03
Spiked Amount 100.000			Recovery = 41.578%		
Target Compounds					Qvalue
2) 1,4-Dioxane	1.65	58	22305	8.30779 #	33
3) n-Nitrosodimethylamine	1.88	42	298349	59.92206 ppb	92
4) Pyridine	1.90	79	673289	58.37675 ppb	98
7) Phenol	4.97	94	537147	54.65760 ppb	81
8) Aniline	4.96	93	356544	55.59434 ppb	82
9) Bis (2-chloroethyl) ether	5.04	63	250766	55.08105 ppb	97
10) 2-Chlorophenol	5.11	128	366328	52.93923 ppb	96
11) 1,3-DCB	5.26	146	399043	52.55129 ppb	99
12) 1,4-DCB	5.36	146	415038	53.40686 ppb	96
13) Benzyl alcohol	5.51	108	224172	54.99826 ppb	97
14) 1,2-DCB	5.52	146	384850	53.22544 ppb	99
15) 2-Methylphenol	5.64	107	329921	54.63780 ppb	98
16) Bis (2-chloroisopropyl) et	5.64	45	342927	57.11757 ppb #	78
17) Acetophenone	5.80	105	549055	53.34715 ppb	94
18) 3&4-Methylphenol	5.82	107	868879	109.41423 ppb	99
19) n-Nitrosodi-n-propylamine	5.80	70	369979	55.89115 ppb	91
20) Hexachloroethane	5.90	117	177219	54.71006 ppb	92
23) Nitrobenzene	5.99	77	522594	54.26650 ppb	93
24) Isophorone	6.27	82	822626	54.14181 ppb	99
25) 2-Nitrophenol	6.35	139	205633	52.58472 ppb	95
26) 2,4-Dimethylphenol	6.41	122	345164	55.16105 ppb	98
27) Benzoic acid	6.57	105	313752	57.66666 ppb	92
28) Bis (2-chloroethoxy) metha	6.50	93	415484	52.69028 ppb	99
29) 2,4-Dichlorophenol	6.63	162	325422	53.33675 ppb	93
30) 1,2,4-Trichlorobenzene	6.71	180	358344	52.65702 ppb	98
31) 3,4-Dimethylphenol	6.75	107	550076	52.84277 ppb	99
32) Naphthalene	6.81	128	1080196	53.13575 ppb	100
33) 4-Chloroaniline	6.87	127	440398	53.87752 ppb	99
34) 2,6-Dichlorophenol	6.88	162	324790	54.33781 ppb	97
35) Hexachloropropene	6.90	213	320774	54.47451 ppb	100
36) Hexachlorobutadiene	6.94	225	247045	53.51141 ppb	99
37) Caprolactum	7.31	55	154205	56.31515 ppb	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200207\0207Y226.D Vial: 26
Acq On : 17 Mar 20 8:01 Operator: MA,SS
Sample : 50ug/ml 8270 03/04/20 (2) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Mar 17 9:25 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.44	107	390575	53.92823 ppb		88
39)	2-Methylnaphthalene	7.59	142	744160	54.39156 ppb		100
40)	1-Methylnaphthalene	7.71	142	753206	52.94230 ppb		99
42)	Hexachlorocyclopentadiene	7.77	237	209664	39.79344 ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.79	216	383515	51.18582 ppb		99
44)	2,4,6-Trichlorophenol	7.93	196	256041	52.19483 ppb		98
45)	2,4,5-Trichlorophenol	7.98	196	264753	49.76342 ppb		100
47)	1,1'-Biphenyl	8.13	154	954342	52.31161 ppb		98
48)	2-Chloronaphthalene	8.16	162	752802	51.31048 ppb		96
49)	2-Nitroaniline	8.28	65	302781	54.35158 ppb		96
50)	Dimethyl phthalate	8.48	163	934884	51.98509 ppb		99
51)	2,6-DNT	8.56	165	205135	52.30159 ppb	#	62
52)	Acenaphthylene	8.63	152	1184875	52.45379 ppb		100
53)	3-Nitroaniline	8.28	138	244948	52.61295 ppb		97
54)	Acenaphthene	8.84	154	743724	52.63570 ppb		99
55)	2,4-Dinitrophenol	8.89	184	126423	53.62774 ppb		92
56)	4-Nitrophenol	8.56	65	20250	55.24358 ppb		100
57)	Dibenzofuran	9.03	168	1167043	54.37845 ppb		95
58)	2,4-DNT	9.03	165	317789	55.10988 ppb		85
59)	2,3,4,6-Tetrachlorophenol	9.19	232	213143	52.82042 ppb		93
60)	Diethyl phthalate	9.31	149	992630	53.27662 ppb		97
61)	4-Chlorophenyl phenyl ethe	9.43	204	548079	53.12753 ppb		93
62)	Fluorene	9.43	166	990105	54.22910 ppb		100
63)	4-Nitroaniline	8.76	138	199913	51.53180 ppb		96
66)	4,6-Dinitro-2-methylphenol	9.52	198	187393	52.48057 ppb		96
67)	Diphenyl amine	9.58	169	1494371	100.22815 ppb		100
68)	n-Nitrosodiphenylamine	9.58	169	1494371	100.22815 ppb		100
69)	1,2-Diphenylhydrazine	9.62	77	1139701	52.85477 ppb		96
70)	4-Bromophenyl phenyl ether	10.01	248	281514	50.14775 ppb	#	82
71)	Hexachlorobenzene	10.08	284	288289	50.76287 ppb	#	85
72)	Atrazine	10.20	200	125784	24.56625 ppb		97
73)	Pentachlorophenol	10.32	266	171752	49.19821 ppb		99
74)	Phenanthrene	10.55	178	1291853	51.11346 ppb		99
75)	Anthracene	10.62	178	1378456	52.17505 ppb		99
76)	Carbazol	10.81	167	1260813	52.41422 ppb		98
77)	Di-n-butylphthalate	11.20	149	1745747	53.07380 ppb		98
78)	2-Nitrodiphenylamine	11.38	167	216408	28.92255 ppb		95
79)	Fluoranthene	11.95	202	1570754	53.05979 ppb		98
81)	Benzidine	12.10	184	481473	38.11665 ppb		99
82)	Pyrene	12.22	202	1647439	44.40468 ppb		99
84)	Butyl benzylphthalate	12.96	149	826364	44.45500 ppb		83
85)	3,3'-Dichlorobenzidine	13.57	252	614383	48.18584 ppb		98
86)	Benz (a) anthracene	13.61	228	1899301	46.99759 ppb		100
87)	Bis (2-ethylhexyl) phthala	13.62	149	1519520	48.92199 ppb		97
88)	Chrysene	13.65	228	1604573	45.65385 ppb		99
89)	Di-n-octylphthalate	14.36	149	2051796	44.75157 ppb	#	91
91)	Benzo (b) fluoranthene	14.90	252	1566907	49.31035 ppb		99
92)	Benzo (k) fluoranthene	14.94	252	1663407	58.06034 ppb		98
93)	Benzo (a) pyrene	15.36	252	1511661	53.60207 ppb		99
94)	Indeno (1,2,3-cd) pyrene	17.28	276	1750534	53.24856 ppb		98
95)	Dibenz (a,h) anthracene	17.31	278	1568076	53.54440 ppb		100
96)	Benzo (g,h,i) perylene	17.84	276	1348990	52.22172 ppb		100

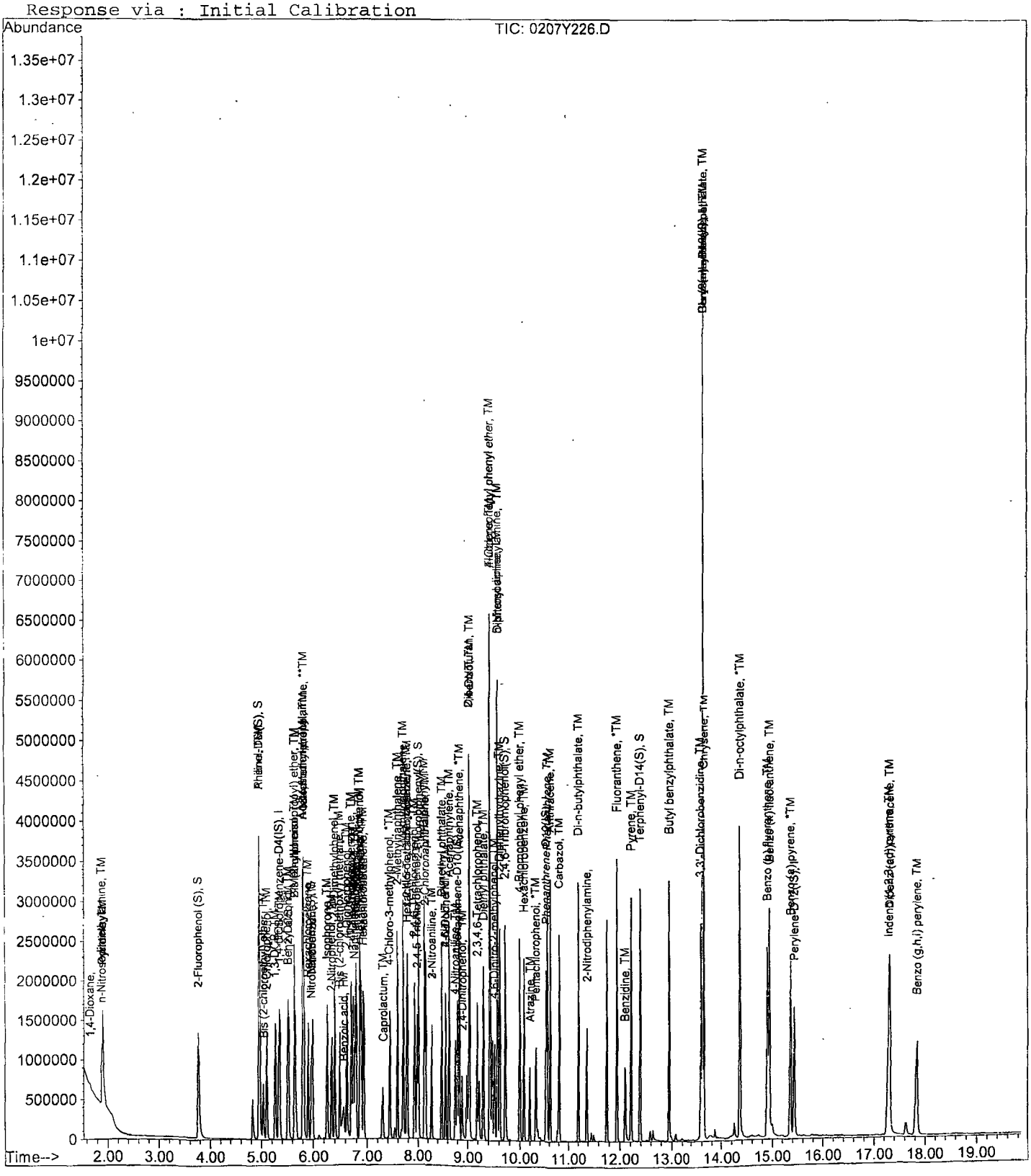
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200207\0207Y226.D Vial: 26
Acq On : 17 Mar 20 8:01 Operator: MA,SS
Sample : 50ug/ml 8270 03/04/20 (2) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Mar 17 9:25 2020 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 03/17/20
Matrix: Instrument: Yoda
Initial Cal. Date: 12/19/19
Data File: 0207Y241.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2		1,4-Dioxane	0.6022	0.4404	27		
3	TM	n-Nitrosodimethylamine	1.117	0.8524	24	TM	
4	TM	Pyridine	2.587	1.848	29	TM	
5	S	2-Fluorophenol (S)	1.466	1.283	12	S	
6	S	Phenol-D6 (S)	1.868	1.767	5.4	S	
7	*TM	Phenol	2.204	1.359	38	*TM	
8	TM	Aniline	1.439	0.9484	34	TM	
9	TM	Bis (2-chloroethyl) ether	1.021	0.6353	38	TM	
10	TM	2-Chlorophenol	1.552	0.9107	41	TM	
11	TM	1,3-DCB	1.703	0.9941	42	TM	
12	*TM	1,4-DCB	1.743	1.021	41	*TM	
13	TM	Benzyl alcohol	0.9143	0.5679	38	TM	
14	TM	1,2-DCB	1.622	0.9564	41	TM	
15	TM	2-Methylphenol	1.354	0.8134	40	TM	
16	TM	Bis (2-chloroisopropyl) ether	1.347	0.8520	37	TM	
17	TM	Acetophenone	2.309	1.365	41	TM	
18	TM	3&4-Methylphenol	1.781	1.057	41	TM	
19	**TM	n-Nitrosodi-n-propylamine	1.485	0.9059	39	**TM	
20	TM	Hexachloroethane	0.7266	0.4405	39	TM	
21	I	Napthalene-D8(IS)	ISTD			I	
22	S	Nitrobenzene-D5(S)	0.4975	0.4842	2.7	S	
23	TM	Nitrobenzene	0.5156	0.3277	36	TM	
24	TM	Isophorone	0.8134	0.5088	37	TM	
25	*TM	2-Nitrophenol	0.2094	0.1283	39	*TM	
26	TM	2,4-Dimethylphenol	0.3350	0.2074	38	TM	
27	TML	Benzoic acid	0.2307	0.1915	17	TML	31
28	TM	Bis (2-chloroethoxy) methane	0.4222	0.2576	39	TM	
29	*TM	2,4-Dichlorophenol	0.3266	0.2002	39	*TM	
30	TM	1,2,4-Trichlorobenzene	0.3643	0.2211	39	TM	
31	TM	3,4-Dimethylphenol	0.5573	0.3426	39	TM	
32	TM	Naphthalene	1.088	0.6572	40	TM	
33	TM	4-Chloroaniline	0.4376	0.2762	37	TM	
34	TM	2,6-Dichlorophenol	0.3200	0.1990	38	TM	
35	TM	Hexachloropropene	0.3152	0.1982	37	TM	
36	*TM	Hexachlorobutadiene	0.2472	0.1505	39	*TM	
37	TM	Caprolactum	0.1466	0.0961	34	TM	
38	*TM	4-Chloro-3-methylphenol	0.3877	0.2412	38	*TM	
39	TM	2-Methylnaphthalene	0.7325	0.4536	38	TM	
40	TM	1-Methylnaphthalene	0.7616	0.4622	39	TM	
		Average			34.6		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 03/17/20
Matrix: 0 Instrument: Yoda
Cal. Date: 12/19/19
Data File: 0207Y241.D

		Compound	MEAN	CCRF	%D		%Drift	
41	I	Acenaphthene-D10(IS)	ISTD			I		
42	**TML	Hexachlorocyclopentadiene	0.3696	0.1965	47	**TML	53	*NT
43	TM	1,2,4,5-Tetrachlorobenzene	0.6372	0.3673	42	TM		
44	*TM	2,4,6-Trichlorophenol	0.4172	0.2489	40	*TM		
45	TM	2,4,5-Trichlorophenol	0.4524	0.2604	42	TM		
46	S	2-Fluorobiphenyl(S)	1.477	1.384	6.3	S		
47	TM	1,1'-Biphenyl	1.551	0.9342	40	TM		
48	TM	2-Chloronaphthalene	1.248	0.7446	40	TM		
49	TM	2-Nitroaniline	0.4737	0.3043	36	TM		
50	TM	Dimethyl phthalate	1.529	0.9306	39	TM		
51	TM	2,6-DNT	0.3335	0.2058	38	TM		
52	TM	Acenaphthylene	1.921	1.177	39	TM		
53	TM	3-Nitroaniline	0.3959	0.2477	37	TM		
54	*TM	Acenaphthene	1.202	0.7305	39	*TM		
55	**TML	2,4-Dinitrophenol	0.1391	0.1110	20	**TML	38	
56	**TM	4-Nitrophenol	0.0312	0.0201	35	**TM		
57	TM	Dibenzofuran	1.825	1.133	38	TM		
58	TM	2,4-DNT	0.4904	0.3152	36	TM		
59	TM	2,3,4,6-Tetrachlorophenol	0.3432	0.2050	40	TM		
60	TM	Diethyl phthalate	1.584	0.9915	37	TM		
61	TM	4-Chlorophenyl phenyl ether	0.8773	0.5251	40	TM		
62	TM	Fluorene	1.553	0.9474	39	TM		
63	TM	4-Nitroaniline	0.3299	0.2014	39	TM		
64	S	2,4,6-Tribromophenol(S)	0.2486	0.2338	6.0	S		
65	I	Phenanthrene-D10(IS)	ISTD			I		
66	TM	4,6-Dinitro-2-methylphenol	0.1559	0.0914	41	TM		
67	TM	Diphenyl amine	0.6512	0.3730	43	TM		
68	*TM	n-Nitrosodiphenylamine	0.6512	0.3730	43	*TM		
69	TM	1,2-Diphenylhydrazine	0.9417	0.6007	36	TM		
70	TM	4-Bromophenyl phenyl ether	0.2452	0.1448	41	TM		
71	TM	Hexachlorobenzene	0.2480	0.1434	42	TM		
72	TM	Atrazine	0.2236	0.1271	43	TM		
73	*TM	Pentachlorophenol	0.1525	0.0779	49	*TM		
74	TM	Phenanthrene	1.104	0.6713	39	TM		
75	TM	Anthracene	1.154	0.7024	39	TM		
76	TM	Carbazol	1.051	0.6435	39	TM		
77	TM	Di-n-butylphthalate	1.437	0.8675	40	TM		
78		2-Nitrodiphenylamine	0.3268	0.2224	32			
79	*TM	Fluoranthene	1.293	0.7836	39	*TM		
80	I	Chrysene-D12(IS)	ISTD			I		
		Average			37.3			

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 03/17/20
Instrument: Yoda
Cal. Date: 12/19/19
Data File: 0207Y241.D

		Compound	MEAN	CCRF	%D	%Drift		
81	TM	Benzidine	0.4082	0.1921	53	TM		*NT
82	TM	Pyrene	1.199	0.6987	42	TM		
83	S	Terphenyl-D14(S)	0.9538	0.8662	9.2	S		
84	TM	Butyl benzylphthalate	0.6008	0.3496	42	TM		
85	TM	3,3'-Dichlorobenzidine	0.4121	0.2632	36	TM		
86	TM	Benz (a) anthracene	1.306	0.7651	41	TM		
87	TM	Bis (2-ethylhexyl) phthalate	1.004	0.6246	38	TM		
88	TM	Chrysene	1.136	0.6571	42	TM		
89	*TM	Di-n-octylphthalate	1.482	0.8457	43	*TM		
90	I	Perylene-D12(IS)	ISTD			I		
91	TM	Benzo (b) fluoranthene	1.306	0.8129	38	TM		
92	TM	Benzo (k) fluoranthene	1.178	0.7625	35	TM		
93	*TM	Benzo (a) pyrene	1.160	0.7171	38	*TM		
94	TM	Indeno (1,2,3-cd) pyrene	1.352	0.8330	38	TM		
95	TM	Dibenz (a,h) anthracene	1.204	0.7425	38	TM		
96	TM	Benzo (g,h,i) perylene	1.062	0.6485	39	TM		
97								
98								
99								
100								
101								
102								
103								
104								
105								
106								
107								
108								
109								
110								
111								
112								
113								
114								
115								
116								
117								
118								
119								
120								
		Average			38.1			

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200207\0207Y241.D Vial: 41
Acq On : 17 Mar 20 16:40 Operator: MA,SS
Sample : 50ug/ml 8270 03/04/20 (2) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Mar 17 17:44 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.34	152	200510	40.00000 ppb	-0.03
21) Napthalene-D8(IS)	6.78	136	813395	40.00000 ppb	-0.04
41) Acenaphthene-D10(IS)	8.80	164	508839	40.00000 ppb	-0.04
65) Phenanthrene-D10(IS)	10.53	188	984530	40.00000 ppb	-0.04
80) Chrysene-D12(IS)	13.62	240	1174348	40.00000 ppb	-0.04
90) Perylene-D12(IS)	15.44	264	999613	40.00000 ppb	-0.05
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.76	112	643217	87.52164 ppb	-0.05
Spiked Amount 200.000			Recovery =	43.761%	
6) Phenol-D6 (S)	4.96	99	885859	94.60850 ppb	-0.03
Spiked Amount 200.000			Recovery =	47.305%	
22) Nitrobenzene-D5(S)	5.97	82	492265	48.66395 ppb	-0.03
Spiked Amount 100.000			Recovery =	48.664%	
46) 2-Fluorobiphenyl(S)	8.01	172	880061	46.83230 ppb	-0.05
Spiked Amount 100.000			Recovery =	46.832%	
64) 2,4,6-Tribromophenol(S)	9.72	330	297360	94.03246 ppb	-0.05
Spiked Amount 200.000			Recovery =	47.016%	
83) Terphenyl-D14(S)	12.39	244	1271576	45.40776 ppb	-0.03
Spiked Amount 100.000			Recovery =	45.408%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.66	58	11039	3.65670 #	1
3) n-Nitrosodimethylamine	1.88	42	213632	38.15967 ppb	88
4) Pyridine	1.90	79	463209	35.71836 ppb	98
7) Phenol	4.97	94	340729	30.83491 ppb	87
8) Aniline	4.96	93	237696	32.96215 ppb #	87
9) Bis (2-chloroethyl) ether	5.04	63	159237	31.10669 ppb	99
10) 2-Chlorophenol	5.11	128	228254	29.33608 ppb	97
11) 1,3-DCB	5.27	146	249150	29.18104 ppb	97
12) 1,4-DCB	5.36	146	255801	29.27437 ppb	97
13) Benzyl alcohol	5.51	108	142332	31.05606 ppb	98
14) 1,2-DCB	5.52	146	239714	29.48474 ppb	98
15) 2-Methylphenol	5.65	107	203880	30.02853 ppb	99
16) Bis (2-chloroisopropyl) et	5.65	45	213554	31.63384 ppb	87
17) Acetophenone	5.79	105	342104	29.56172 ppb	98
18) 3&4-Methylphenol	5.81	107	530066	59.36366 ppb	97
19) n-Nitrosodi-n-propylamine	5.80	70	227043	30.50354 ppb	94
20) Hexachloroethane	5.90	117	110404	30.31223 ppb	96
23) Nitrobenzene	5.99	77	333165	31.77911 ppb	93
24) Isophorone	6.26	82	517286	31.27347 ppb	98
25) 2-Nitrophenol	6.35	139	130454	30.64356 ppb	95
26) 2,4-Dimethylphenol	6.41	122	210835	30.95029 ppb	99
27) Benzoic acid	6.55	105	194685	34.61995 ppb	96
28) Bis (2-chloroethoxy) metha	6.50	93	261880	30.50658 ppb	100
29) 2,4-Dichlorophenol	6.63	162	203529	30.64227 ppb	96
30) 1,2,4-Trichlorobenzene	6.71	180	224849	30.35024 ppb	97
31) 3,4-Dimethylphenol	6.74	107	348371	30.74114 ppb	99
32) Naphthalene	6.81	128	668216	30.19369 ppb	99
33) 4-Chloroaniline	6.87	127	280867	31.56298 ppb	97
34) 2,6-Dichlorophenol	6.88	162	202382	31.10186 ppb	97
35) Hexachloropropene	6.90	213	201534	31.43819 ppb	99
36) Hexachlorobutadiene	6.94	225	153012	30.44464 ppb	99
37) Caprolactum	7.29	55	97728	32.78391 ppb	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200207\0207Y241.D Vial: 41
Acq On : 17 Mar 20 16:40 Operator: MA,SS
Sample : 50ug/ml 8270 03/04/20 (2) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Mar 17 17:44 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.44	107	245198	31.09880	ppb		95
39)	2-Methylnaphthalene	7.59	142	461150	30.96153	ppb		99
40)	1-Methylnaphthalene	7.71	142	469909	30.34016	ppb		98
42)	Hexachlorocyclopentadiene	7.77	237	124968	23.63941	ppb		100
43)	1,2,4,5-Tetrachlorobenzene	7.79	216	233643	28.82554	ppb		97
44)	2,4,6-Trichlorophenol	7.93	196	158286	29.82757	ppb		99
45)	2,4,5-Trichlorophenol	7.98	196	165657	28.78303	ppb		98
47)	1,1'-Biphenyl	8.13	154	594220	30.10917	ppb		97
48)	2-Chloronaphthalene	8.15	162	473594	29.83932	ppb		99
49)	2-Nitroaniline	8.27	65	193573	32.12075	ppb		92
50)	Dimethyl phthalate	8.49	163	591913	30.42540	ppb		100
51)	2,6-DNT	8.56	165	130927	30.85757	ppb	#	77
52)	Acenaphthylene	8.63	152	748772	30.64159	ppb		100
53)	3-Nitroaniline	8.28	138	157575	31.28697	ppb		94
54)	Acenaphthene	8.84	154	464612	30.39600	ppb		99
55)	2,4-Dinitrophenol	8.89	184	70624	30.94454	ppb		89
56)	4-Nitrophenol	8.56	65	12810	32.30452	ppb		96
57)	Dibenzofuran	9.03	168	720943	31.05262	ppb		95
58)	2,4-DNT	9.03	165	200505	32.14202	ppb		97
59)	2,3,4,6-Tetrachlorophenol	9.19	232	130367	29.86454	ppb		92
60)	Diethyl phthalate	9.30	149	630618	31.28766	ppb		100
61)	4-Chlorophenyl phenyl ethe	9.43	204	333971	29.92558	ppb		97
62)	Fluorene	9.43	166	602570	30.50816	ppb		99
63)	4-Nitroaniline	8.75	138	128075	30.51800	ppb		85
66)	4,6-Dinitro-2-methylphenol	9.52	198	112432	29.29174	ppb	#	82
67)	Diphenyl amine	9.58	169	918174	57.28836	ppb		99
68)	n-Nitrosodiphenylamine	9.58	169	918174	57.28836	ppb		99
69)	1,2-Diphenylhydrazine	9.62	77	739241	31.89256	ppb		98
70)	4-Bromophenyl phenyl ether	10.00	248	178141	29.52062	ppb		94
71)	Hexachlorobenzene	10.08	284	176521	28.91509	ppb		88
72)	Atrazine	10.19	200	78209	14.20955	ppb		94
73)	Pentachlorophenol	10.32	266	95832	25.53690	ppb		97
74)	Phenanthrene	10.55	178	826176	30.40919	ppb		99
75)	Anthracene	10.62	178	864378	30.43573	ppb		99
76)	Carbazol	10.81	167	791951	30.62717	ppb		98
77)	Di-n-butylphthalate	11.20	149	1067563	30.19274	ppb		99
78)	2-Nitrodiphenylamine	11.38	167	136876	17.01769	ppb		97
79)	Fluoranthene	11.95	202	964324	30.30334	ppb		100
81)	Benzidine	12.10	184	281973	23.52717	ppb		99
82)	Pyrene	12.21	202	1025695	29.13781	ppb		99
84)	Butyl benzylphthalate	12.95	149	513187	29.09673	ppb		92
85)	3,3'-Dichlorobenzidine	13.57	252	386351	31.93608	ppb		99
86)	Benz (a) anthracene	13.61	228	1123167	29.29175	ppb		100
87)	Bis (2-ethylhexyl) phthala	13.62	149	916898	31.11272	ppb		98
88)	Chrysene	13.65	228	964518	28.92328	ppb		100
89)	Di-n-octylphthalate	14.36	149	1241376	28.53624	ppb	#	92
91)	Benzo (b) fluoranthene	14.90	252	1015709	31.10946	ppb		99
92)	Benzo (k) fluoranthene	14.94	252	952770	32.36662	ppb		99
93)	Benzo (a) pyrene	15.35	252	896017	30.92229	ppb		98
94)	Indeno (1,2,3-cd) pyrene	17.27	276	1040869	30.81497	ppb		98
95)	Dibenz (a,h) anthracene	17.30	278	927782	30.83338	ppb		99
96)	Benzo (g,h,i) perylene	17.83	276	810350	30.53116	ppb		99

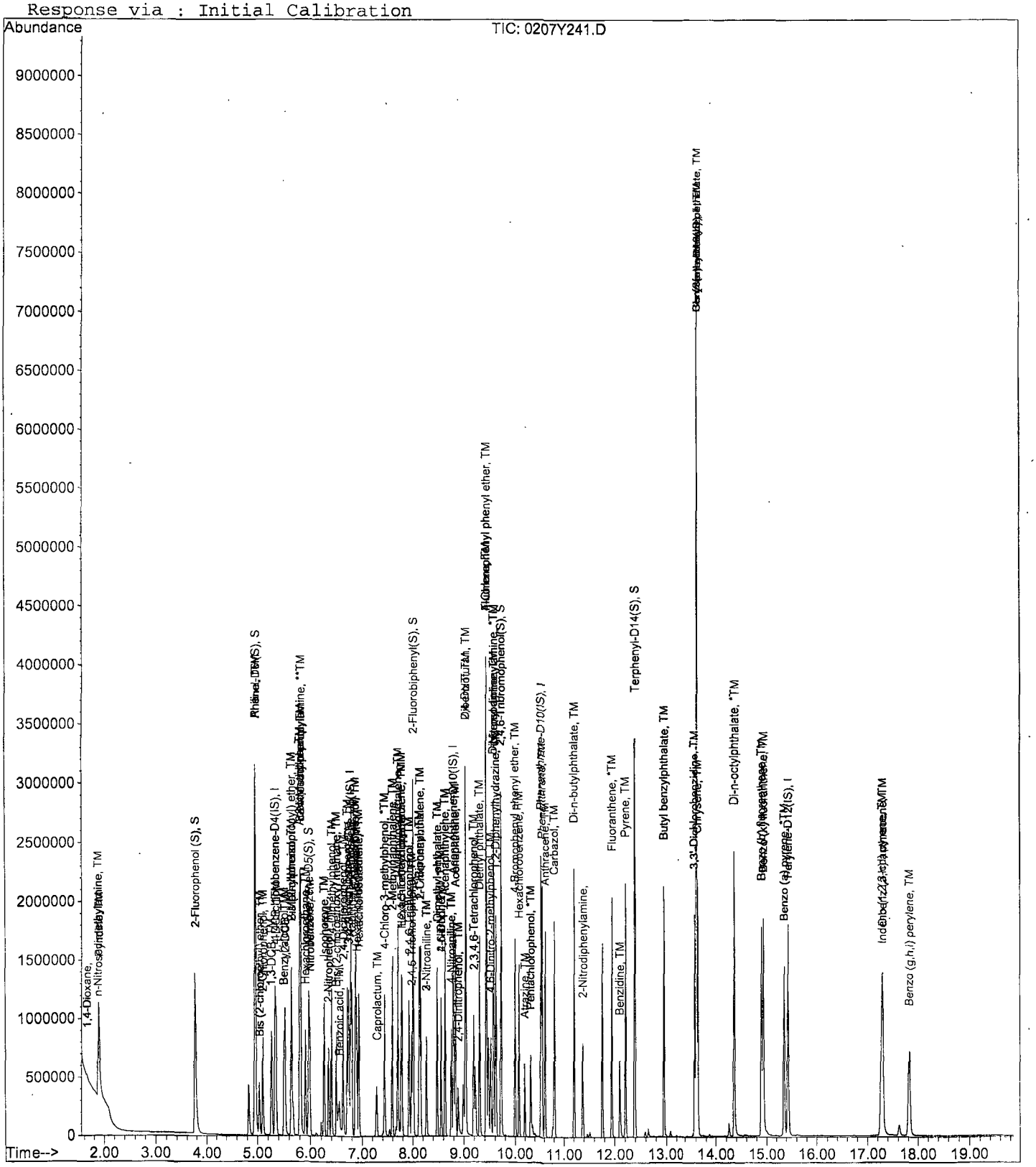
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200207\0207Y241.D Vial: 41
Acq On : 17 Mar 20 16:40 Operator: MA,SS
Sample : 50ug/ml 8270 03/04/20 (2) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Mar 17 17:44 2020 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



ORGANICS
Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y200207\0207Y232.D Vial: 32
Acq On : 17 Mar 20 12:13 Operator: MA,SS
Sample : BA08370W21 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 17 15:05 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	207038	40.00000 ppb	-0.04
21) Napthalene-D8(IS)	6.77	136	843852	40.00000 ppb	-0.05
41) Acenaphthene-D10(IS)	8.79	164	523436	40.00000 ppb	-0.05
65) Phenanthrene-D10(IS)	10.53	188	1039196	40.00000 ppb	-0.04
80) Chrysene-D12(IS)	13.62	240	1002162	40.00000 ppb	-0.04
90) Perylene-D12(IS)	15.44	264	1085107	40.00000 ppb	-0.05
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.75	112	899820	148.22094 ppb	-0.06
Spiked Amount 250.000			Recovery =	59.288%	
6) Phenol-D6 (S)	4.95	99	1269109	164.08183 ppb	-0.04
Spiked Amount 250.000			Recovery =	65.633%	
22) Nitrobenzene-D5(S)	5.96	82	717899	85.51001 ppb	-0.04
Spiked Amount 125.000			Recovery =	68.408%	
46) 2-Fluorobiphenyl(S)	8.01	172	1374779	88.89809 ppb	-0.05
Spiked Amount 125.000			Recovery =	71.118%	
64) 2,4,6-Tribromophenol(S)	9.72	330	563450	216.50973 ppb	-0.05
Spiked Amount 250.000			Recovery =	86.604%	
83) Terphenyl-D14(S)	12.39	244	2210969	115.64831 ppb	-0.03
Spiked Amount 125.000			Recovery =	92.518%	

Target Compounds Qvalue

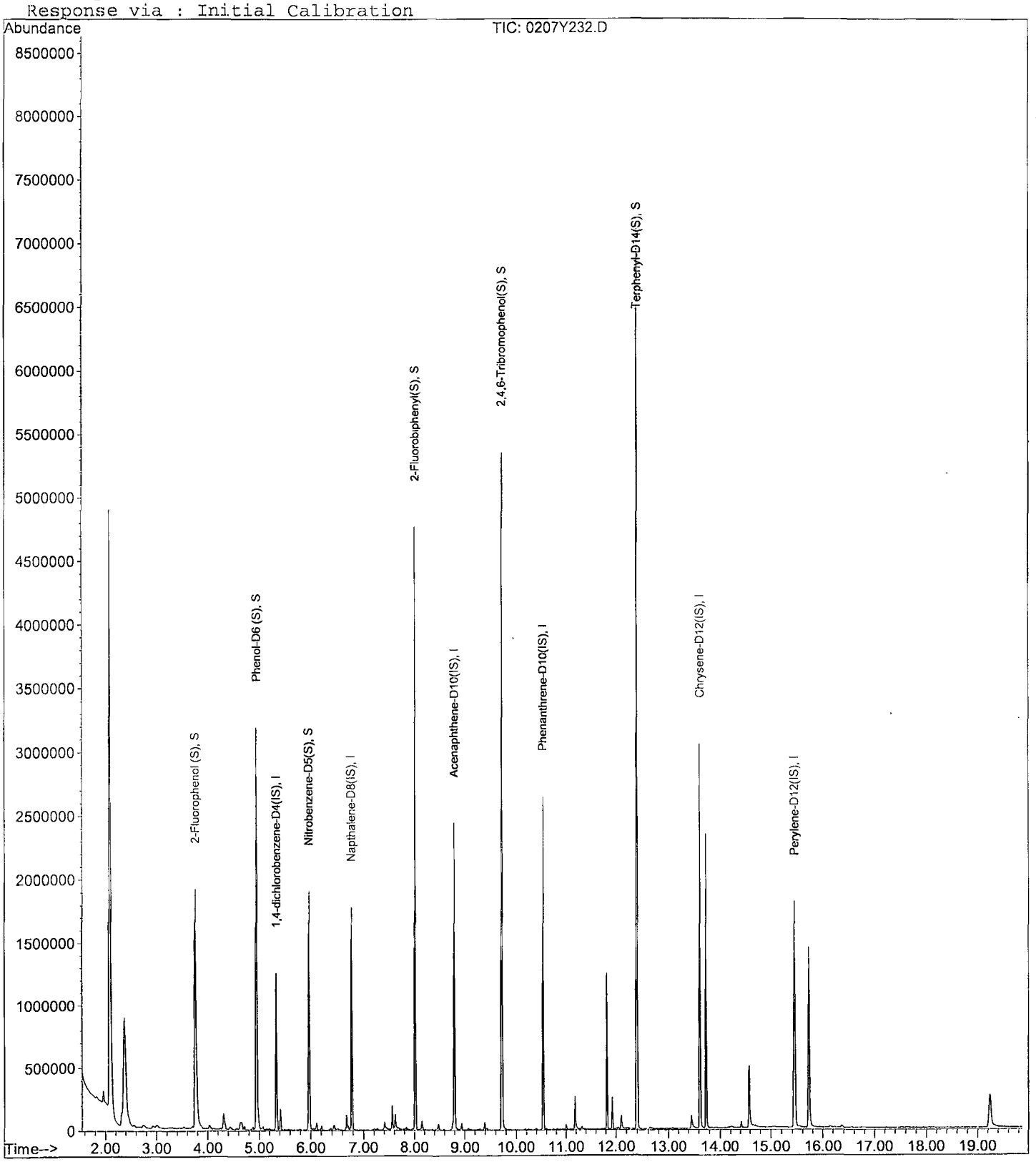
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200207\0207Y232.D Vial: 32
Acq On : 17 Mar 20 12:13 Operator: MA,SS
Sample : BA08370W21 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 17 15:05 2020 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



Tentatively Identified Compound (LSC) summary

Operator ID: MA,SS Date Acquired: 17 Mar 20 12:13
Data File: M:\YODA\DATA\Y200207\0207Y232.D
Name: BA08370W21 1/800
Misc:
Method: M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title: EPA 8270C
Library Searched: M:\DATABASE\WILEY138.L

TIC Top Hit name	RT	EstConc	Units	Area	IntStd	ISRT	ISArea	ISConc
CIS-1-BUTYL-2-METHYL	2.37	99.4	ppb	3218460	ISTD01	5.33	1619090	40.0
1-Hexanol, 2-ethyl-	5.40	6.5	ppb	209068	ISTD01	5.33	1619090	40.0

0207Y232.D Y1219.M Mon Mar 30 10:01:26 2020

LSC Area Percent Report

Data File : M:\YODA\DATA\Y200207\0207Y232.D Vial: 32
Acq On : 17 Mar 20 12:13 Operator: MA,SS
Sample : BA08370W21 1/800 Inst : Yoda
Misc : Multiplr: 1.25000
MS Integration Params: LSCINT.P

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.02 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

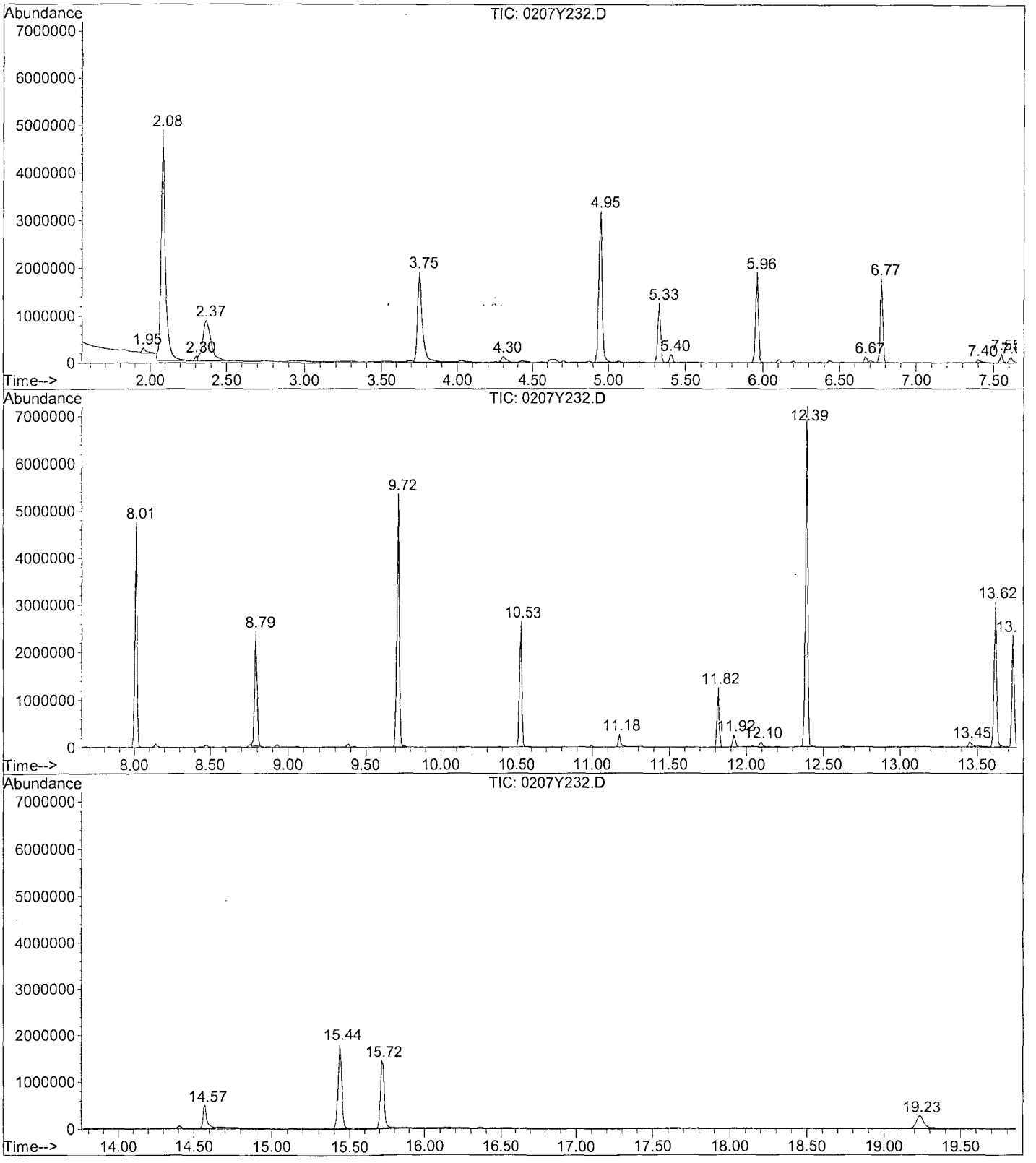
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	raw area	corr. area	corr. % max.	% of total
1	1.952	43	45	55	rVV2	108895	2685946	239811	2.51%	0.358%
2	2.082	55	59	80	rVB	4856568	14951208	9535592	100.00%	14.239%
3	2.304	80	83	84	rBV	102391	717155	142545	1.49%	0.213%
4	2.369	84	90	106	rVB	863321	7063039	3218455	33.75%	4.806%
5	3.752	235	239	261	rVB	1904588	7964863	4138237	43.40%	6.179%
6	4.300	294	298	305	rVB2	122620	1758159	272696	2.86%	0.407%
7	4.950	363	368	377	rBV	3180217	6658212	4744356	49.75%	7.085%
8	5.330	405	409	415	rBV	1251237	2950945	1619094	16.98%	2.418%
9	5.404	415	417	425	rVB	166978	1638318	209068	2.19%	0.312%
10	5.961	473	477	480	rBV	1900557	3186627	2247478	23.57%	3.356%
11	6.667	550	553	555	rBV	118507	796601	140339	1.47%	0.210%
12	6.769	561	564	568	rBV	1771765	3043072	2053878	21.54%	3.067%
13	7.400	629	632	639	rBV	64450	1430896	116347	1.22%	0.174%
14	7.548	645	648	651	rBV	189629	1004951	212416	2.23%	0.317%
15	7.613	652	655	659	rVB	107771	1100416	138125	1.45%	0.206%
16	8.012	695	698	701	rBV	4754394	5839362	4604827	48.29%	6.876%
17	8.792	779	782	785	rVB	2413832	3643390	2626620	27.55%	3.922%
18	9.720	878	882	885	rBV	5348171	6717415	5738436	60.18%	8.569%
19	10.528	965	969	972	rBV	2641242	3764941	2837318	29.76%	4.237%
20	11.177	1036	1039	1049	rBV2	263640	2048095	320323	3.36%	0.478%
21	11.818	1105	1108	1111	rVB	1242762	2006047	1171921	12.29%	1.750%
22	11.920	1116	1119	1123	rVB	252874	1213078	280428	2.94%	0.419%
23	12.096	1135	1138	1147	rBV	105615	1736184	144778	1.52%	0.216%
24	12.393	1166	1170	1173	rBV	7186450	8194925	7199501	75.50%	10.751%
25	13.451	1280	1284	1288	rBV	102627	1215028	152426	1.60%	0.228%
26	13.618	1298	1302	1305	rBV	3043197	4372282	3408424	35.74%	5.090%
27	13.730	1311	1314	1317	rBV	2332582	3100251	2259770	23.70%	3.374%
28	14.574	1401	1405	1412	rBV	488213	2314734	807107	8.46%	1.205%
29	15.437	1493	1498	1506	rBV	1800363	4823028	3007033	31.53%	4.490%
30	15.716	1524	1528	1540	rBV	1436754	4702571	2462004	25.82%	3.676%
31	19.234	1900	1907	1926	rBV	263825	4418669	918306	9.63%	1.371%

Sum of corrected areas: 66967659

0207Y232.D Y1219.M Mon Mar 30 10:01:22 2020

LSC Report - Integrated Chromatogram

File : M:\YODA\DATA\Y200207\0207Y232.D
Operator : MA,SS
Acquired : 17 Mar 20 12:13 using AcqMethod SVOC1011
Instrument : Yoda
Sample Name: BA08370W21 1/800
Misc Info :
Vial Number: 32
Quant File :Y1219.RES (RTE Integrator)



0207Y232.D Y1219.M Mon Mar 30 10:01:24 2020

Library Search Compound Report

Data File : M:\YODA\DATA\Y200207\0207Y232.D Vial: 32
Acq On : 17 Mar 20 12:13 Operator: MA,SS
Sample : BA08370W21 1/800 Inst : Yoda
Misc : Multiplr: 1.25

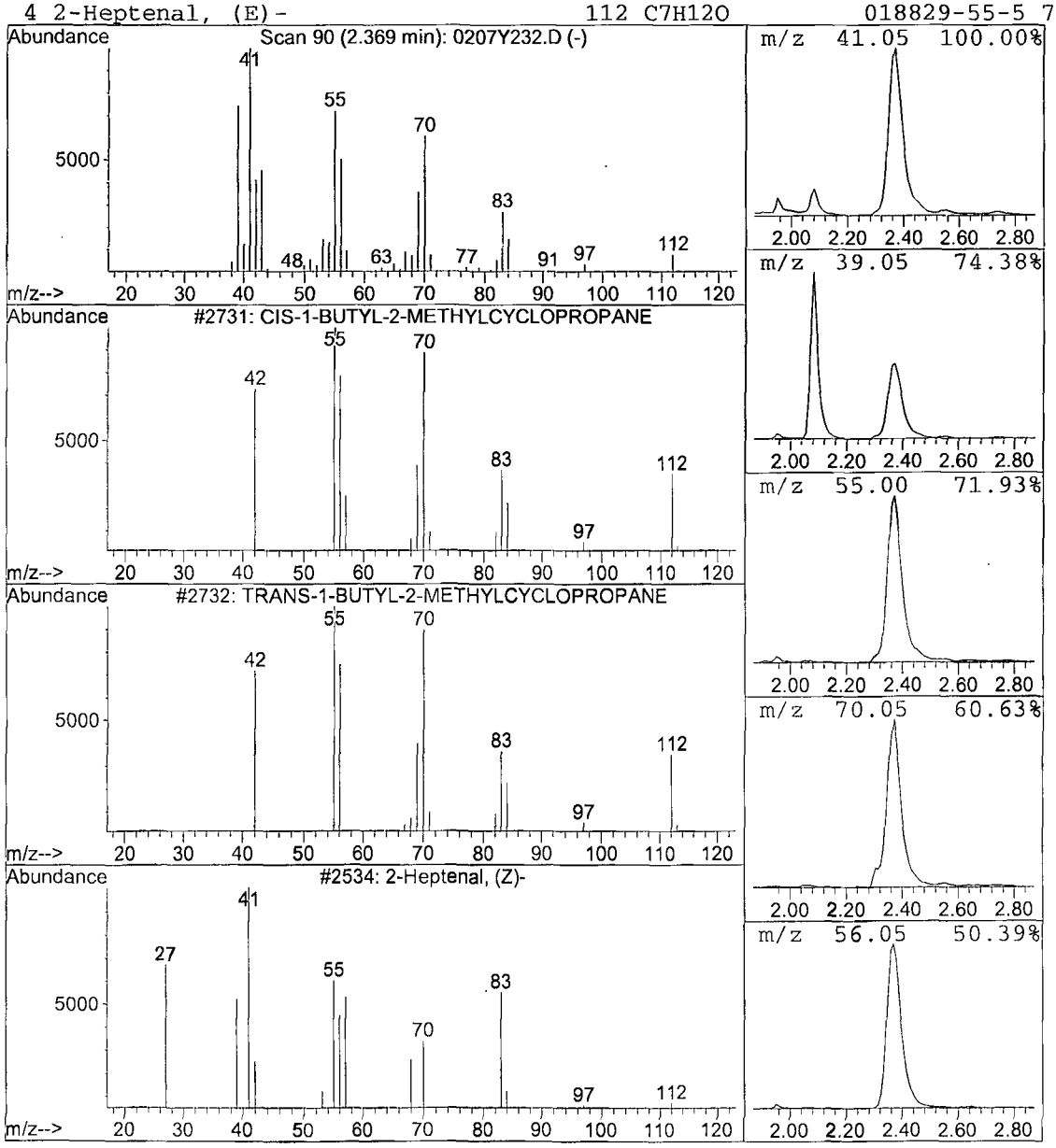
Quant Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : *EPA 8270C*
Library : M:\DATABASE\WILEY138.L

****

Peak Number 1 CIS-1-BUTYL-2-METHYLCYCLOPROPA Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.37	99.39 ppb	3218460	1,4-dichlorobenzene-D4(IS)	5.33

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	CIS-1-BUTYL-2-METHYLCYCLOPROPANE	112	C8H16	038851-69-3	94
2	TRANS-1-BUTYL-2-METHYLCYCLOPROPANE	112	C8H16	038851-70-6	93
3	2-Heptenal, (Z)-	112	C7H12O	057266-86-1	80
4	2-Heptenal, (E)-	112	C7H12O	018829-55-5	72



Library Search Compound Report

Data File : M:\YODA\DATA\Y200207\0207Y232.D Vial: 32
Acq On : 17 Mar 20 12:13 Operator: MA,SS
Sample : BA08370W21 1/800 Inst : Yoda
Misc : Multiplr: 1.25

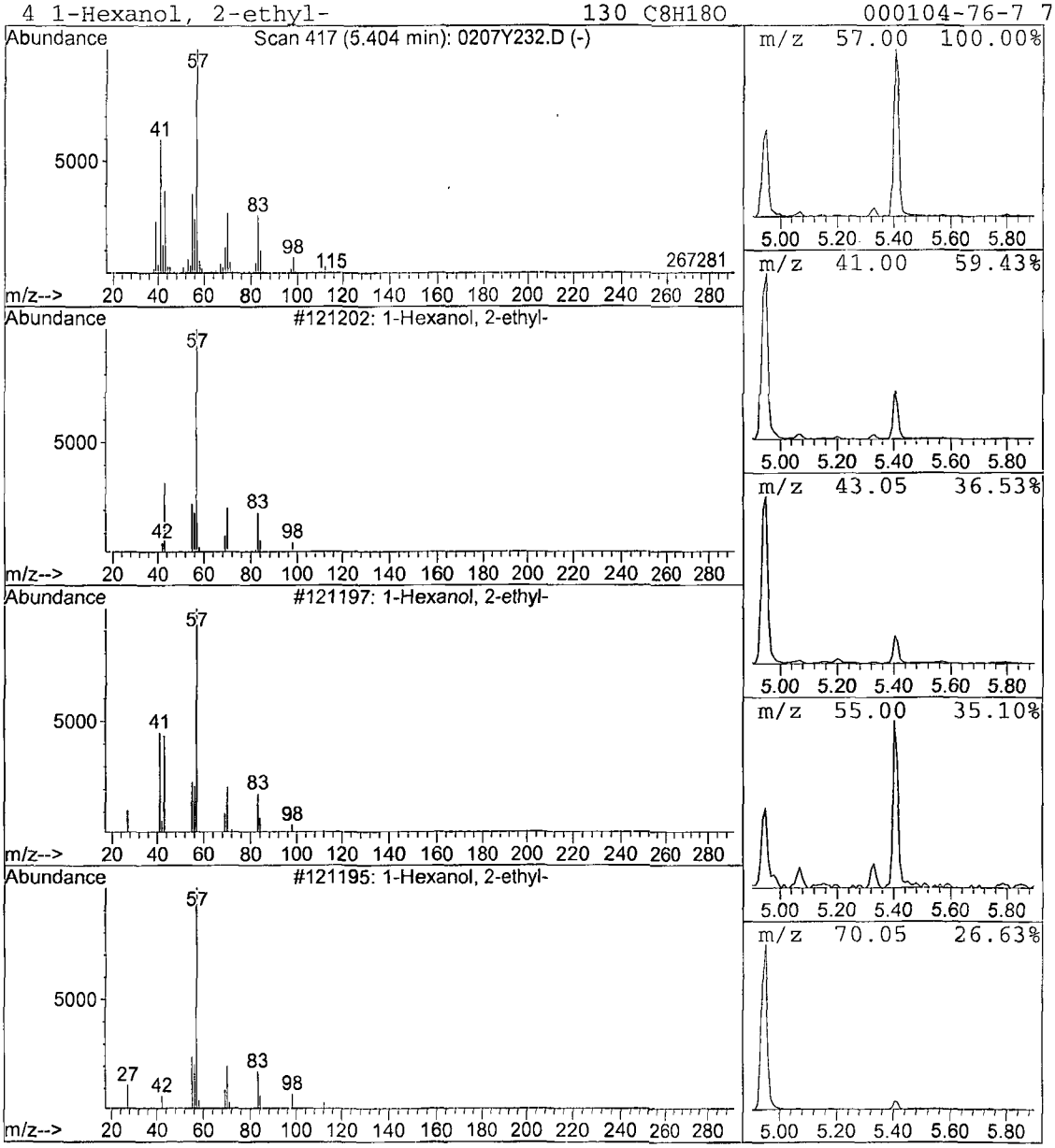
Quant Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Library : M:\DATABASE\WILEY138.L

****

Peak Number 2 1-Hexanol, 2-ethyl- Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.40	6.46 ppb	209068	1,4-dichlorobenzene-D4(IS)	5.33

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Hexanol, 2-ethyl-	130	C8H18O	000104-76-7	90
2	1-Hexanol, 2-ethyl-	130	C8H18O	000104-76-7	86
3	1-Hexanol, 2-ethyl-	130	C8H18O	000104-76-7	72
4	1-Hexanol, 2-ethyl-	130	C8H18O	000104-76-7	72



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y200207\0207Y233.D Vial: 33
Acq On : 17 Mar 20 12:40 Operator: MA,SS
Sample : BA08371W14 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 17 15:04 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	208572	40.00000 ppb	-0.04
21) Napthalene-D8(IS)	6.78	136	849328	40.00000 ppb	-0.04
41) Acenaphthene-D10(IS)	8.79	164	522350	40.00000 ppb	-0.05
65) Phenanthrene-D10(IS)	10.53	188	1031528	40.00000 ppb	-0.04
80) Chrysene-D12(IS)	13.62	240	999359	40.00000 ppb	-0.04
90) Perylene-D12(IS)	15.44	264	1095124	40.00000 ppb	-0.05
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.76	112	910412	148.86272 ppb	-0.05
Spiked Amount 250.000			Recovery =	59.545%	
6) Phenol-D6 (S)	4.95	99	1269983	162.98721 ppb	-0.04
Spiked Amount 250.000			Recovery =	65.195%	
22) Nitrobenzene-D5(S)	5.96	82	714441	84.54946 ppb	-0.04
Spiked Amount 125.000			Recovery =	67.639%	
46) 2-Fluorobiphenyl(S)	8.01	172	1359909	88.11937 ppb	-0.05
Spiked Amount 125.000			Recovery =	70.495%	
64) 2,4,6-Tribromophenol(S)	9.72	330	534721	205.89759 ppb	-0.05
Spiked Amount 250.000			Recovery =	82.359%	
83) Terphenyl-D14(S)	12.39	244	2059909	108.04908 ppb	-0.03
Spiked Amount 125.000			Recovery =	86.439%	

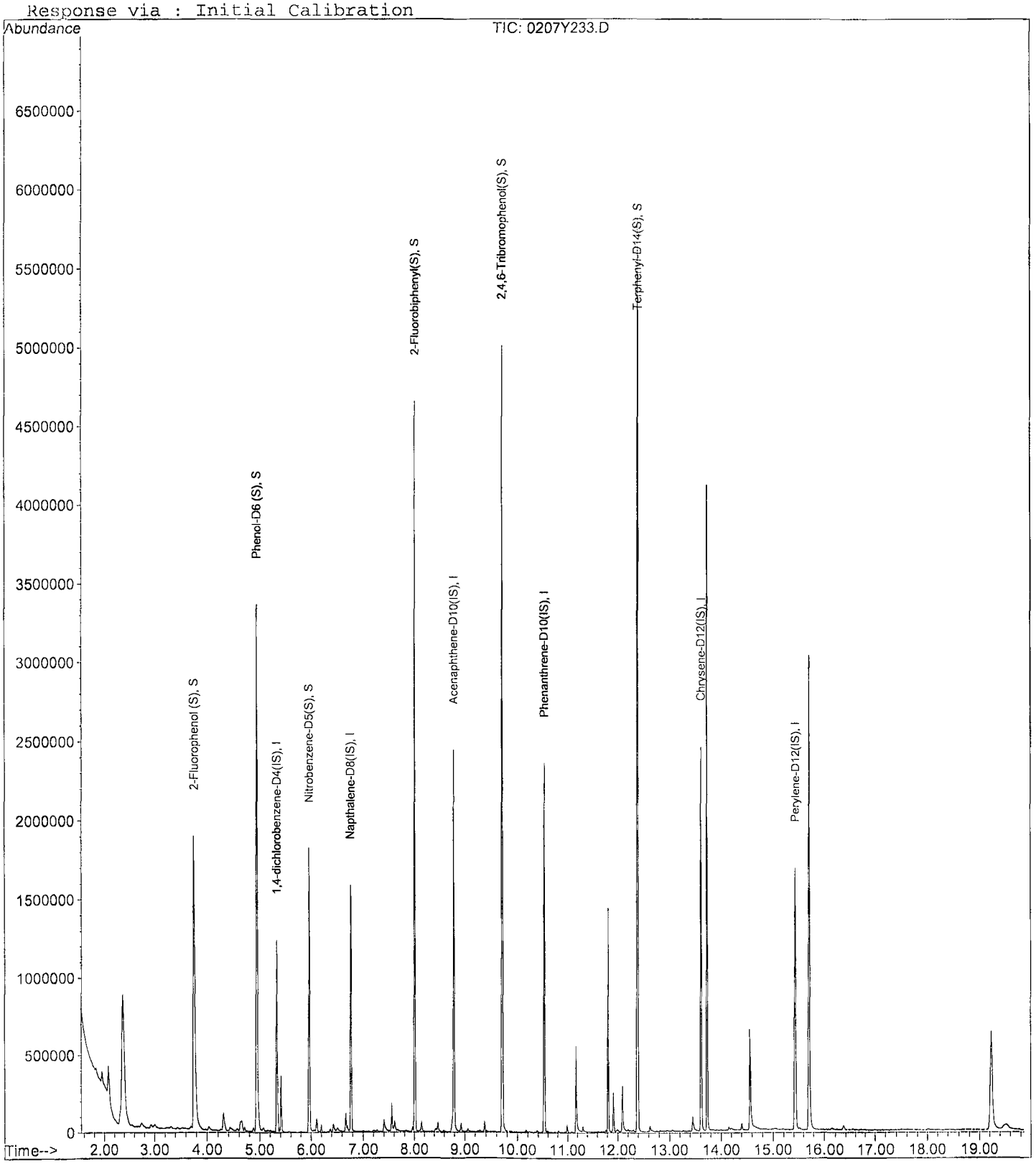
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y200207\0207Y233.D Vial: 33
Acq On : 17 Mar 20 12:40 Operator: MA,SS
Sample : BA08371W14 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 17 15:04 2020 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



Tentatively Identified Compound (LSC) summary

Operator ID: MA,SS Date Acquired: 17 Mar 20 12:40
Data File: M:\YODA\DATA\Y200207\0207Y233.D
Name: BA08371W14 1/800
Misc:
Method: M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title: EPA 8270C
Library Searched: M:\DATABASE\WILEY138.L

TIC Top Hit name	RT	EstConc	Units	Area	IntStd	ISRT	ISArea	ISConc
CIS-1-BUTYL-2-METHYL	2.38	101.0	ppb	3269790	ISTD01	5.33	1619440	40.0
1-Hexanol, 2-ethyl-	5.41	13.0	ppb	422600	ISTD01	5.33	1619440	40.0
Octadecanoic acid	12.10	6.0	ppb	374511	ISTD05	13.62	3118970	40.0

0207Y233.D Y1219.M Mon Mar 30 10:13:38 2020

LSC Area Percent Report

Data File : M:\YODA\DATA\Y200207\0207Y233.D Vial: 33
Acq On : 17 Mar 20 12:40 Operator: MA,SS
Sample : BA08371W14 1/800 Inst : Yoda
Misc : Multiplr: 1.25000
MS Integration Params: LSCINT.P

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.02 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Signal : TIC

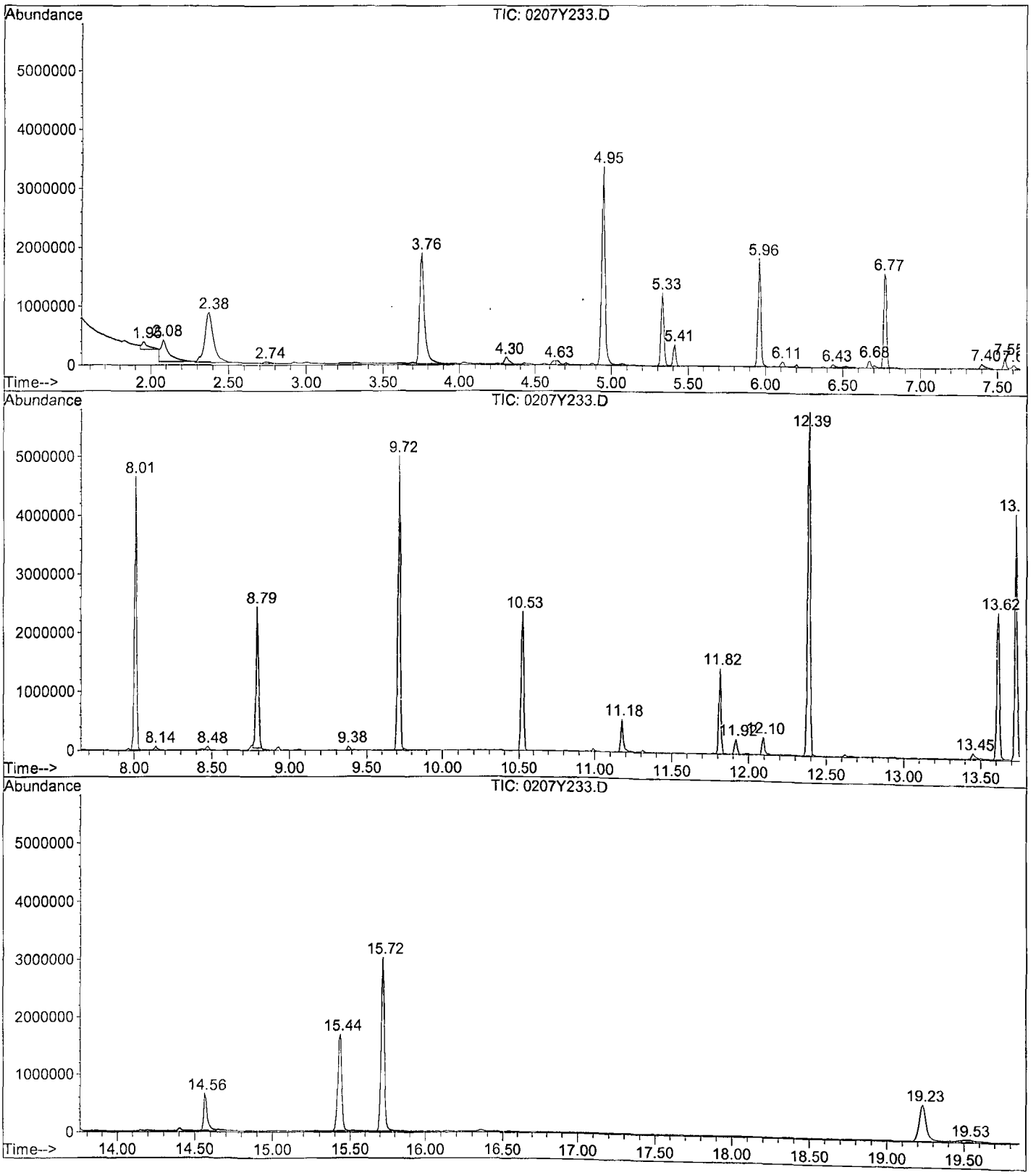
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	raw area	corr. area	corr. % max.	% of total
1	1.951	43	45	56	rVB2	131201	4553157	368700	5.47%	0.566%
2	2.081	56	59	81	rVB	372616	8915460	1323411	19.62%	2.033%
3	2.378	81	91	107	rVB	846350	9594281	3269789	48.48%	5.023%
4	2.740	126	130	142	rVB6	32032	3928583	126214	1.87%	0.194%
5	3.761	236	240	260	rVB	1882346	10568679	4222603	62.61%	6.487%
6	4.299	295	298	306	rVB2	113659	2827701	261240	3.87%	0.401%
7	4.634	330	334	335	rBV	59148	1271906	119532	1.77%	0.184%
8	4.949	363	368	378	rBV	3357039	8308104	4831061	71.63%	7.422%
9	5.330	406	409	414	rBV	1233816	3565705	1619438	24.01%	2.488%
10	5.413	414	418	421	rVB	354996	2028565	422600	6.27%	0.649%
11	5.961	473	477	481	rBV	1817642	4063365	2232743	33.10%	3.430%
12	6.109	490	493	496	rVB	84148	1519697	122462	1.82%	0.188%
13	6.434	526	528	533	rBV	50632	1714917	90769	1.35%	0.139%
14	6.675	551	554	556	rBV	115742	1312767	158447	2.35%	0.243%
15	6.768	561	564	568	rBV	1579587	3683975	2052171	30.43%	3.153%
16	7.399	629	632	639	rBV	76592	2436458	154722	2.29%	0.238%
17	7.548	645	648	651	rBV	179540	1590171	217997	3.23%	0.335%
18	7.604	652	654	659	rVB	60147	1734257	94349	1.40%	0.145%
19	8.012	695	698	701	rBV	4647612	6303394	4539177	67.30%	6.973%
20	8.142	706	712	716	rVB	65106	2369640	86011	1.28%	0.132%
21	8.476	745	748	755	rVB2	60359	2416330	95018	1.41%	0.146%
22	8.792	779	782	785	rVB	2399305	4394293	2722297	40.36%	4.182%
23	9.376	842	845	848	rBV	65840	1440773	76704	1.14%	0.118%
24	9.720	878	882	885	rBV	5008140	7261039	5578717	82.71%	8.570%
25	10.527	965	969	972	rBV	2354475	4446382	2825662	41.89%	4.341%
26	11.177	1036	1039	1051	rBV	555870	4127234	651743	9.66%	1.001%
27	11.817	1105	1108	1111	rBV	1437810	2893656	1425968	21.14%	2.191%
28	11.919	1116	1119	1122	rBV	249519	1680509	281006	4.17%	0.432%
29	12.096	1135	1138	1146	rBV	292129	2927136	374511	5.55%	0.575%
30	12.393	1166	1170	1172	rBV	5804932	8250571	6744789	100.00%	10.362%
31	13.451	1281	1284	1288	rBV	92612	1754808	137475	2.04%	0.211%
32	13.618	1298	1302	1305	rBV	2447415	4798848	3118966	46.24%	4.791%
33	13.729	1311	1314	1317	rBV	4109933	5389801	3868467	57.35%	5.943%
34	14.565	1401	1404	1412	rBV	646330	3608022	1010996	14.99%	1.553%
35	15.437	1492	1498	1505	rBV	1678384	6077032	3044714	45.14%	4.677%
36	15.715	1523	1528	1544	rBV	3021676	9500994	4610306	68.35%	7.083%
37	19.233	1899	1907	1924	rBV	630378	7801400	1993114	29.55%	3.062%
38	19.530	1928	1939	1952	rVB2	31916	5842476	219981	3.26%	0.338%

Sum of corrected areas: 65093870

0207Y233.D Y1219.M Mon Mar 30 10:13:33 2020

LSC Report - Integrated Chromatogram

File : M:\YODA\DATA\Y200207\0207Y233.D
Operator : MA,SS
Acquired : 17 Mar 20 12:40 using AcqMethod SVOC1011
Instrument : Yoda
Sample Name: BA08371W14 1/800
Misc Info :
Vial Number: 33
Quant File :Y1219.RES (RTE Integrator)



0207Y233.D Y1219.M Mon Mar 30 10:13:34 2020

Library Search Compound Report

Data File : M:\YODA\DATA\Y200207\0207Y233.D Vial: 33
Acq On : 17 Mar 20 12:40 Operator: MA,SS
Sample : BA08371W14 1/800 Inst : Yoda
Misc : Multiplr: 1.25

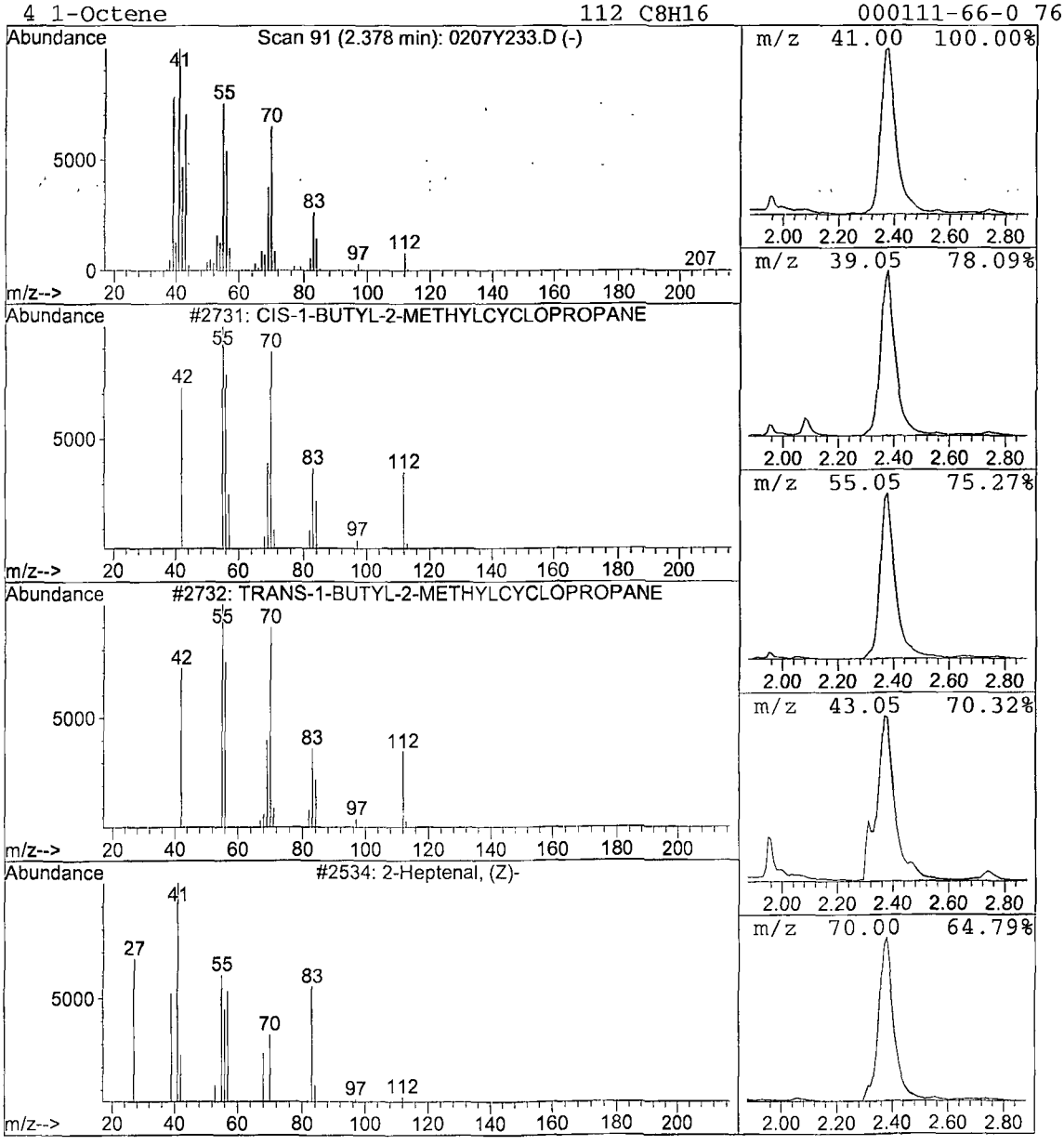
Quant Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Library : M:\DATABASE\WILEY138.L

****

Peak Number 1 CIS-1-BUTYL-2-METHYLCYCLOPROPA Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.38	100.95 ppb	3269790	1,4-dichlorobenzene-D4(IS)	5.33

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	CIS-1-BUTYL-2-METHYLCYCLOPROPANE	112	C8H16	038851-69-3	93
2	TRANS-1-BUTYL-2-METHYLCYCLOPROPANE	112	C8H16	038851-70-6	93
3	2-Heptenal, (Z)-	112	C7H12O	057266-86-1	80
4	1-Octene	112	C8H16	000111-66-0	76



Data File : M:\YODA\DATA\Y200207\0207Y233.D Vial: 33
Acq On : 17 Mar 20 12:40 Operator: MA,SS
Sample : BA08371W14 1/800 Inst : Yoda
Misc : Multiplr: 1.25

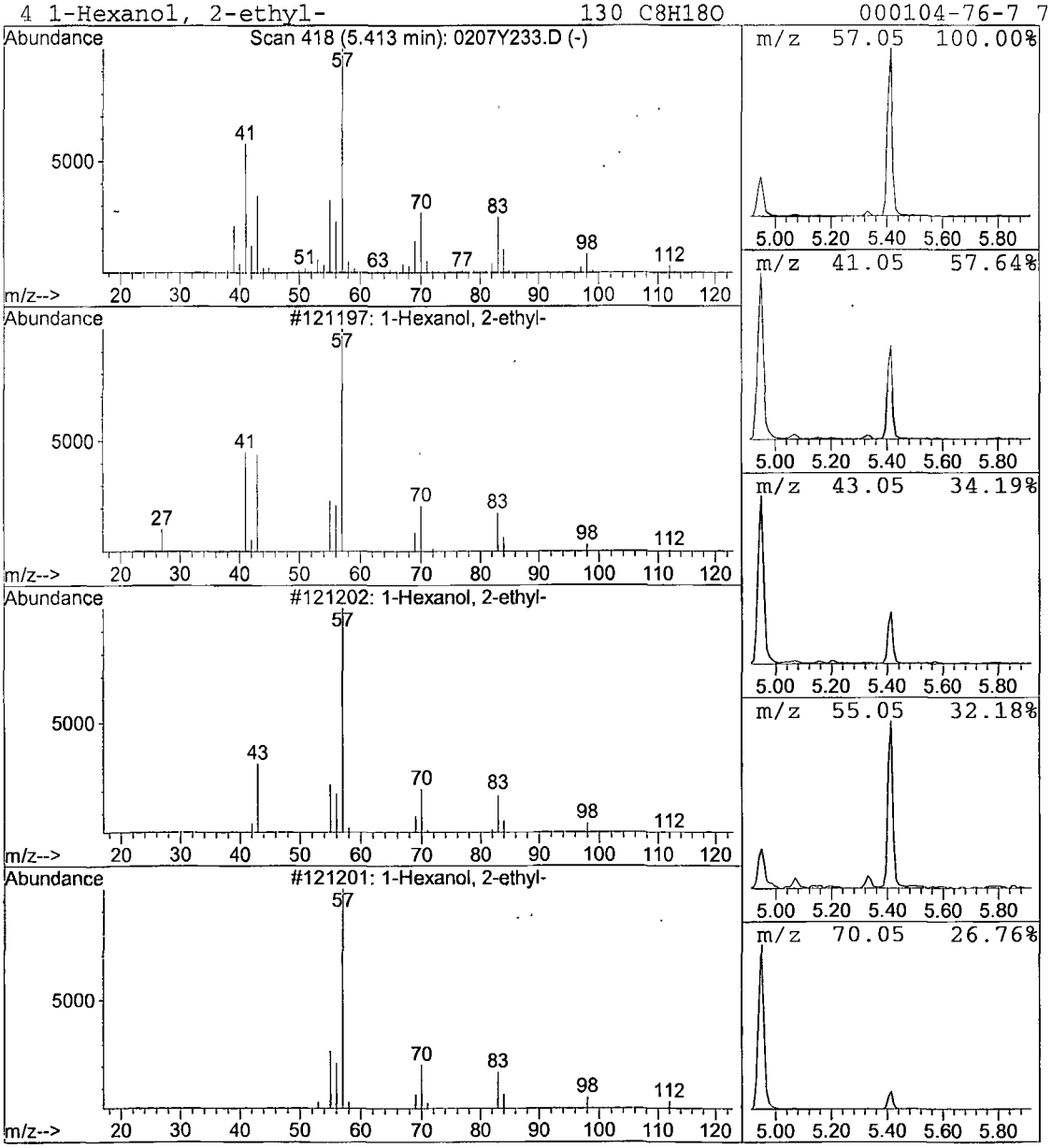
Quant Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Library : M:\DATABASE\WILEY138.L

****

Peak Number 2 1-Hexanol, 2-ethyl- Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.41	13.05 ppb	422600	1,4-dichlorobenzene-D4(IS)	5.33

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Hexanol, 2-ethyl-	130	C8H18O	000104-76-7	90
2	1-Hexanol, 2-ethyl-	130	C8H18O	000104-76-7	86
3	1-Hexanol, 2-ethyl-	130	C8H18O	000104-76-7	78
4	1-Hexanol, 2-ethyl-	130	C8H18O	000104-76-7	78



Data File : M:\YODA\DATA\Y200207\0207Y233.D Vial: 33
Acq On : 17 Mar 20 12:40 Operator: MA,SS
Sample : BA08371W14 1/800 Inst : Yoda
Misc : Multiplr: 1.25

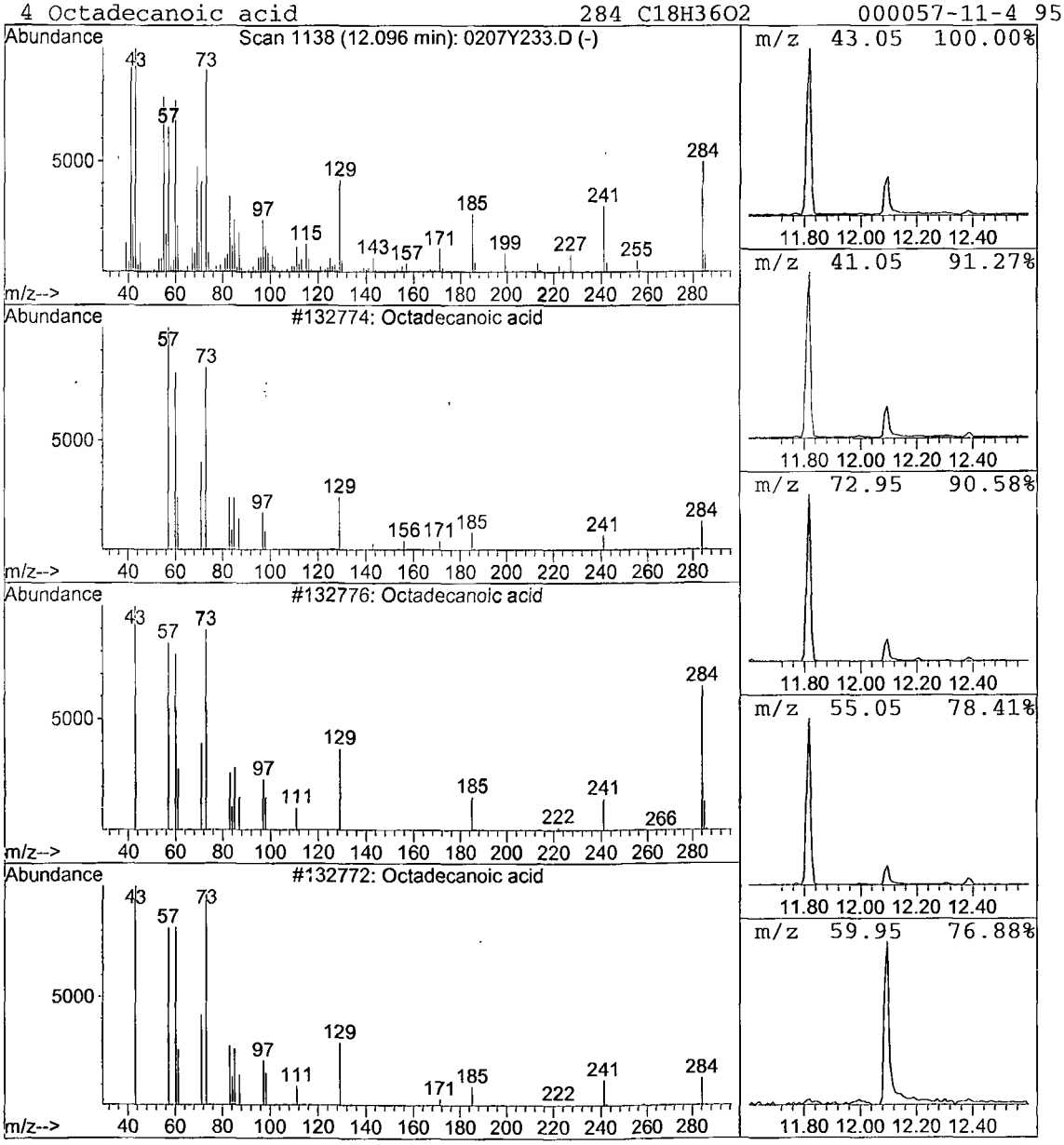
Quant Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Library : M:\DATABASE\WILEY138.L

****

Peak Number 3 Octadecanoic acid Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.10	6.00 ppb	374511	Chrysene-D12(IS)	13.62

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octadecanoic acid	284	C18H36O2	000057-11-4	99
2	Octadecanoic acid	284	C18H36O2	000057-11-4	98
3	Octadecanoic acid	284	C18H36O2	000057-11-4	98
4	Octadecanoic acid	284	C18H36O2	000057-11-4	95



Tentatively Identified Compound (LSC) summary

Operator ID: MA,SS Date Acquired: 17 Mar 20 9:08
Data File: M:\YODA\DATA\Y200207\0207Y227.D
Name: 200312A BLK 1/800
Misc:
Method: M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title: EPA 8270C
Library Searched: M:\DATABASE\WILEY138.L

TIC Top Hit name	RT	EstConc	Units	Area	IntStd	ISRT	ISArea	ISConc
Benzene, methyl-	2.08	520.5	ppb	16108600	ISTD01	5.33	1547410	40.0
Hexadecanoic acid	11.18	8.9	ppb	485445	ISTD04	10.53	2722920	40.0

0207Y227.D Y1219.M Mon Mar 30 09:43:40 2020

LSC Area Percent Report

Data File : M:\YODA\DATA\Y200207\0207Y227.D Vial: 27
Acq On : 17 Mar 20 9:08 Operator: MA,SS
Sample : 200312A BLK 1/800 Inst : Yoda
Misc : Multiplr: 1.25000
MS Integration Params: LSCINT.P

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C
Smoothing : ON Filtering: 5
Sampling : 1 Min Area: 3 % of largest Peak
Start Thrs: 0.02 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

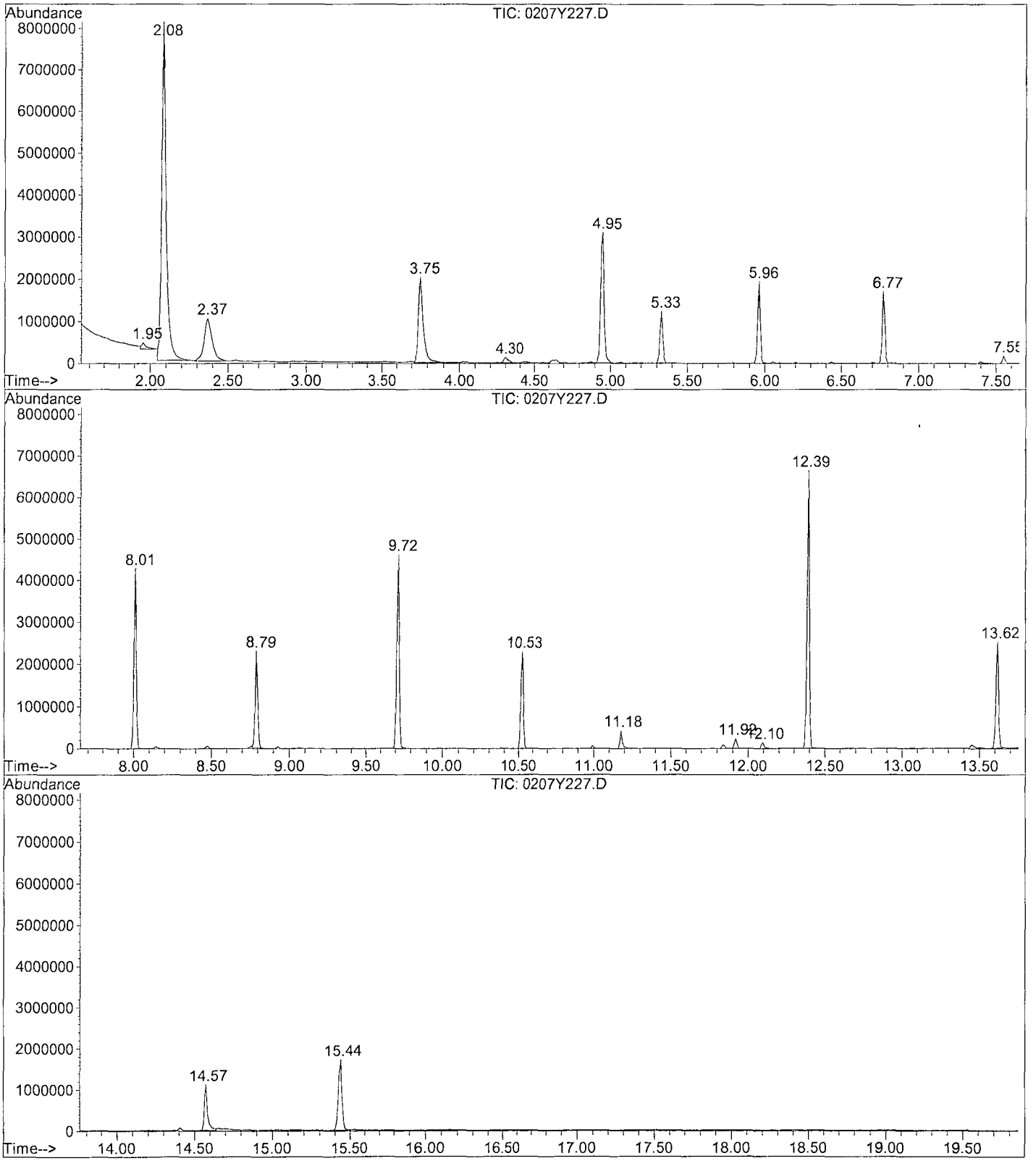
Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	raw area	corr. area	corr. % max.	% of total
1	1.952	43	45	55	rVV	154472	4969720	325503	2.02%	0.495%
2	2.082	55	59	81	rVB	8086384	26845271	16108586	100.00%	24.485%
3	2.370	81	90	105	rVB	1018316	10556733	3683849	22.87%	5.599%
4	3.752	235	239	259	rVB	2023922	11137999	4369382	27.12%	6.641%
5	4.300	294	298	308	rVB3	133625	4076019	299270	1.86%	0.455%
6	4.950	363	368	378	rBV	3093048	8794949	4704055	29.20%	7.150%
7	5.330	405	409	414	rBV	1227918	3957129	1547410	9.61%	2.352%
8	5.961	473	477	480	rBV	1935932	4147674	2270169	14.09%	3.451%
9	6.769	561	564	568	rBV	1697276	3892425	1964049	12.19%	2.985%
10	7.548	645	648	651	rBV	181232	1806344	208394	1.29%	0.317%
11	8.013	694	698	701	rBV	4288336	6303547	4436070	27.54%	6.743%
12	8.792	779	782	785	rVB	2291672	4350307	2524116	15.67%	3.837%
13	9.720	878	882	885	rBV	4624415	7186471	5244797	32.56%	7.972%
14	10.528	965	969	972	rBV	2296784	4593397	2722922	16.90%	4.139%
15	11.177	1036	1039	1049	rBV2	425923	3958668	485445	3.01%	0.738%
16	11.920	1116	1119	1122	rVV	231245	1877017	258769	1.61%	0.393%
17	12.096	1135	1138	1147	rBV	141967	3405296	198348	1.23%	0.301%
18	12.393	1166	1170	1173	rBV	6642754	8887595	6899470	42.83%	10.487%
19	13.618	1298	1302	1305	rBV	2516459	4938635	3012949	18.70%	4.580%
20	14.574	1401	1405	1412	rBV	1116043	4654449	1646468	10.22%	2.503%
21	15.438	1492	1498	1505	rBV	1715170	6405138	2880521	17.88%	4.378%

Sum of corrected areas: 65790542

0207Y227.D Y1219.M Mon Mar 30 09:43:36 2020

File : M:\YODA\DATA\Y200207\0207Y227.D
Operator : MA,SS
Acquired : 17 Mar 20 9:08 using AcqMethod SVOC1011
Instrument : Yoda
Sample Name: 200312A BLK 1/800
Misc Info :
Vial Number: 27
Quant File :Y1219.RES (RTE Integrator)



0207Y227.D Y1219.M Mon Mar 30 09:43:38 2020

Library Search Compound Report

Data File : M:\YODA\DATA\Y200207\0207Y227.D Vial: 27
Acq On : 17 Mar 20 9:08 Operator: MA,SS
Sample : 200312A BLK 1/800 Inst : Yoda
Misc : Multiplr: 1.25

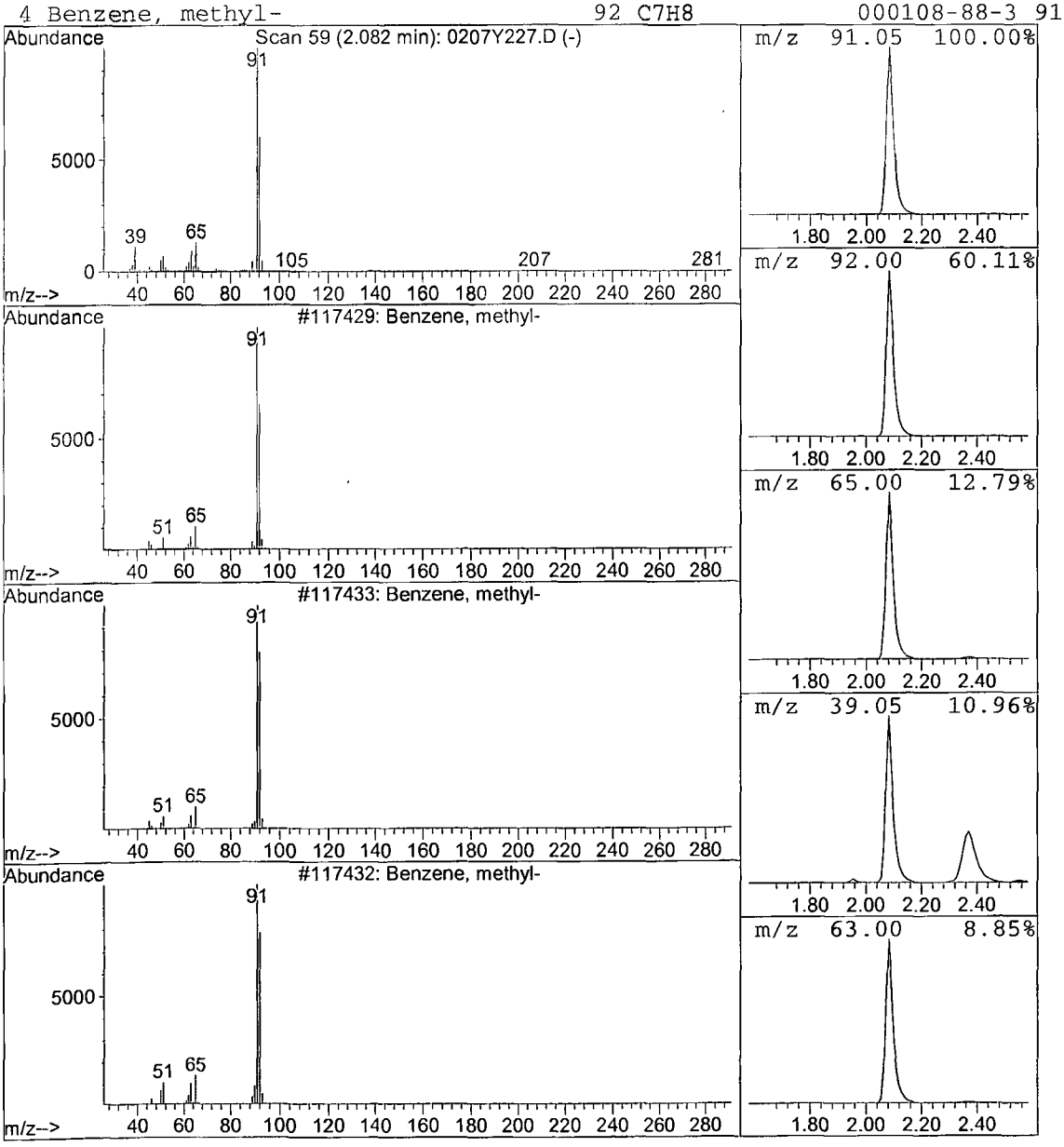
Quant Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Library : M:\DATABASE\WILEY138.L

****

Peak Number 1 Benzene, methyl- Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.08	520.50 ppb	16108600	1,4-dichlorobenzene-D4(IS)	5.33

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, methyl-	92	C7H8	000108-88-3	94
2	Benzene, methyl-	92	C7H8	000108-88-3	91
3	Benzene, methyl-	92	C7H8	000108-88-3	91
4	Benzene, methyl-	92	C7H8	000108-88-3	91



Library Search Compound Report

Data File : M:\YODA\DATA\Y200207\0207Y227.D
Acq On : 17 Mar 20 9:08
Sample : 200312A BLK 1/800
Misc :

Vial: 27
Operator: MA,SS
Inst : Yoda
Multiplr: 1.25

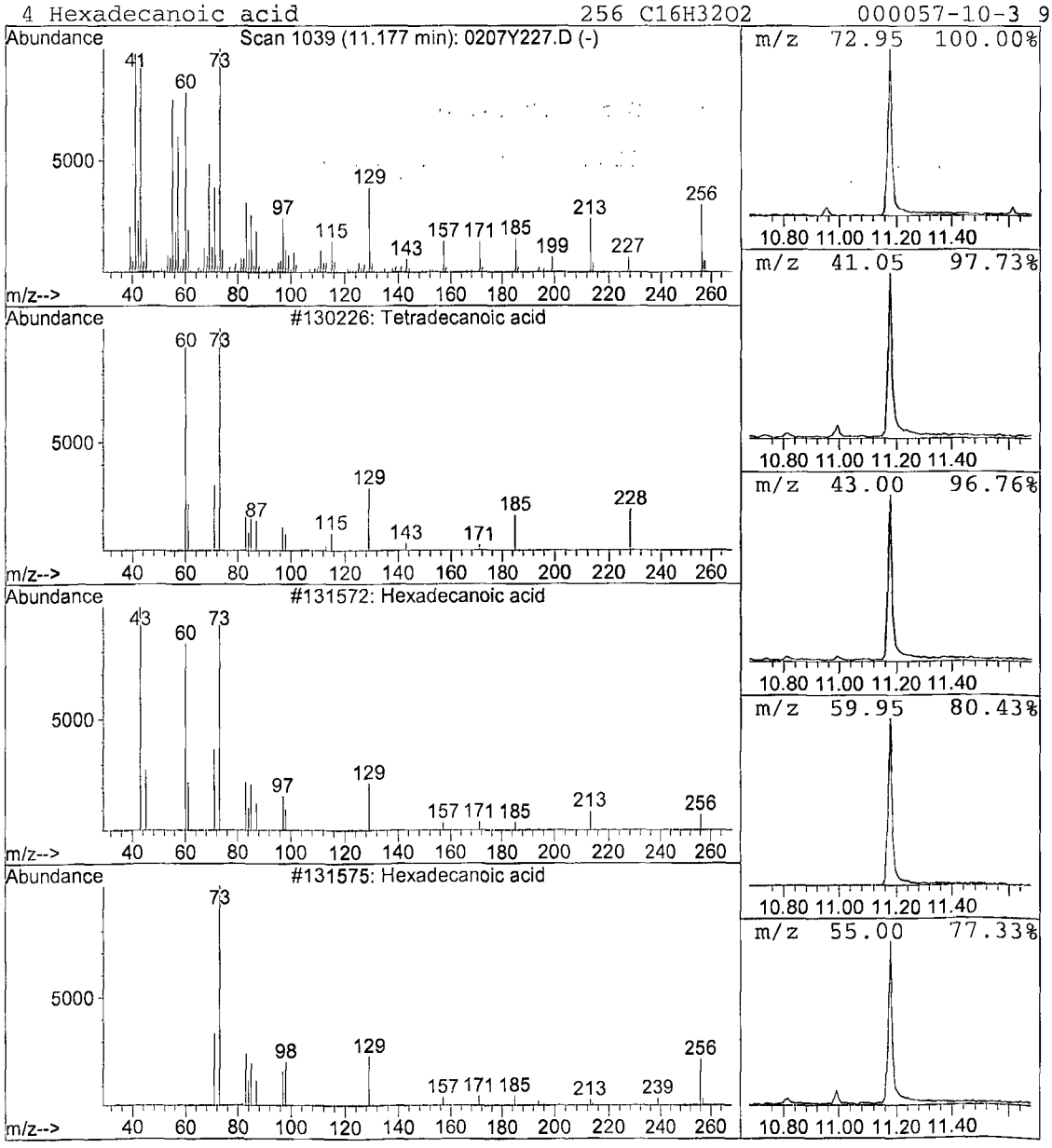
Quant Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Library : M:\DATABASE\WILEY138.L

****

Peak Number 2 Hexadecanoic acid Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.18	8.91 ppb	485445	Phenanthrene-D10(IS)	10.53

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Tetradecanoic acid	228	C14H28O2	000544-63-8	96
2	Hexadecanoic acid	256	C16H32O2	000057-10-3	94
3	Hexadecanoic acid	256	C16H32O2	000057-10-3	93
4	Hexadecanoic acid	256	C16H32O2	000057-10-3	91



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y200207\0207Y227.D Vial: 27
Acq On : 17 Mar 20 9:08 Operator: MA,SS
Sample : 200312A BLK 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 17 10:37 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	199103	40.00000 ppb	-0.04
21) Napthalene-D8(IS)	6.77	136	806285	40.00000 ppb	-0.05
41) Acenaphthene-D10(IS)	8.79	164	504373	40.00000 ppb	-0.05
65) Phenanthrene-D10(IS)	10.53	188	990753	40.00000 ppb	-0.04
80) Chrysene-D12(IS)	13.62	240	972916	40.00000 ppb	-0.04
90) Perylene-D12(IS)	15.44	264	1040573	40.00000 ppb	-0.05
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.75	112	941062	161.19234 ppb	-0.06
Spiked Amount 250.000			Recovery =	64.477%	
6) Phenol-D6 (S)	4.95	99	1255861	168.84002 ppb	-0.04
Spiked Amount 250.000			Recovery =	67.536%	
22) Nitrobenzene-D5(S)	5.96	82	725060	90.38685 ppb	-0.04
Spiked Amount 125.000			Recovery =	72.310%	
46) 2-Fluorobiphenyl(S)	8.01	172	1319215	88.52927 ppb	-0.05
Spiked Amount 125.000			Recovery =	70.823%	
64) 2,4,6-Tribromophenol(S)	9.72	330	495402	197.55661 ppb	-0.05
Spiked Amount 250.000			Recovery =	79.023%	
83) Terphenyl-D14(S)	12.39	244	2120203	114.23434 ppb	-0.03
Spiked Amount 125.000			Recovery =	91.387%	

Target Compounds Qvalue

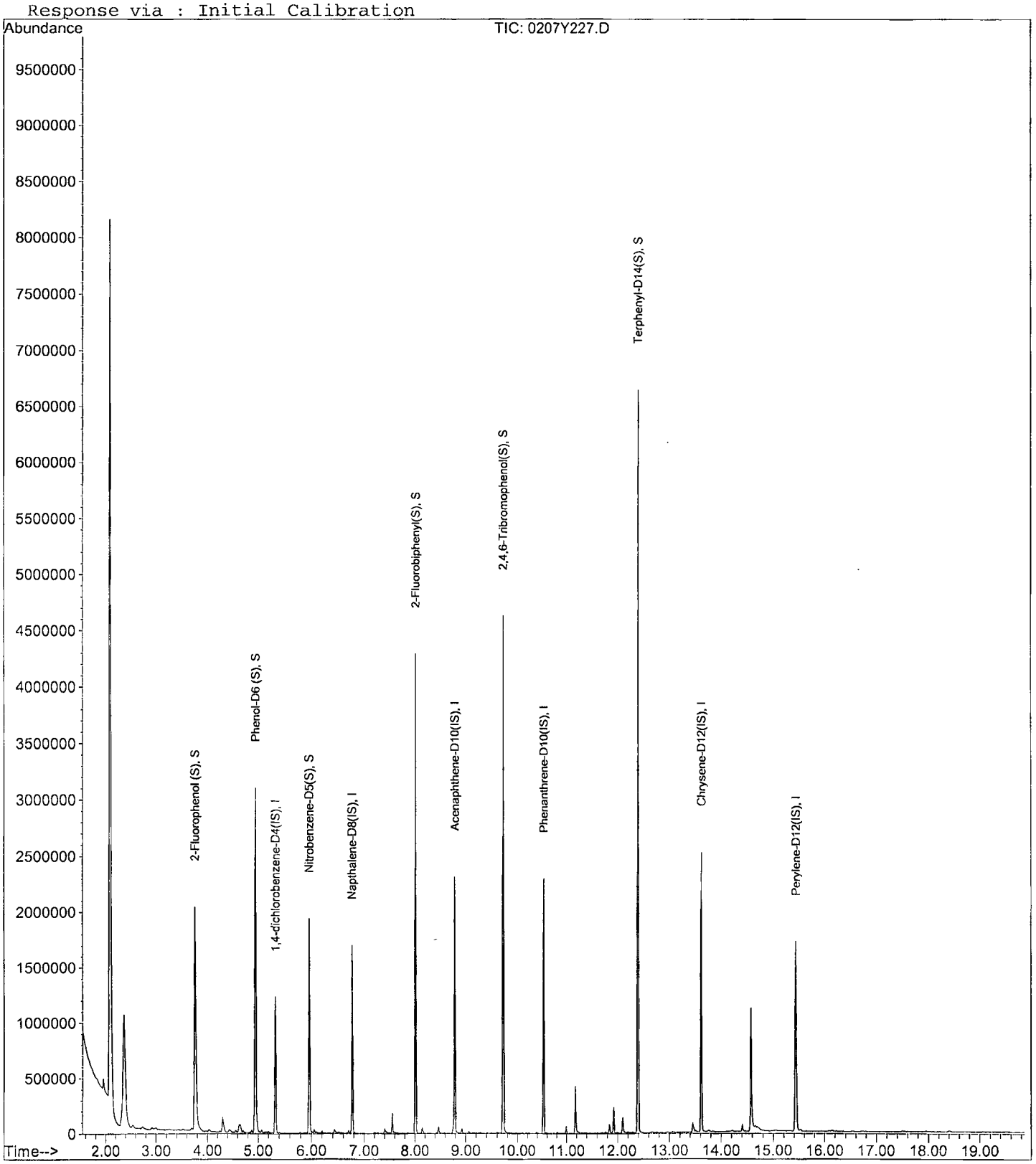
(#) = qualifier out of range (m) = manual integration
0207Y227.D Y1219.M Tue Mar 17 17:00:36 2020 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y200207\0207Y227.D Vial: 27
Acq On : 17 Mar 20 9:08 Operator: MA,SS
Sample : 200312A BLK 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 17 10:37 2020 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200207\0207Y228.D Vial: 28
Acq On : 17 Mar 20 9:35 Operator: MA,SS
Sample : 200312A LCS-1 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 17 10:38 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.33	152	208647	40.00000	ppb		-0.03
21) Napthalene-D8(IS)	6.77	136	824113	40.00000	ppb		-0.04
41) Acenaphthene-D10(IS)	8.80	164	515323	40.00000	ppb		-0.04
65) Phenanthrene-D10(IS)	10.53	188	991766	40.00000	ppb		-0.03
80) Chrysene-D12(IS)	13.62	240	1198017	40.00000	ppb		-0.03
90) Perylene-D12(IS)	15.44	264	1079810	40.00000	ppb		-0.04
System Monitoring Compounds							
5) 2-Fluorophenol (S)	3.76	112	908428	148.48492	ppb		-0.05
Spiked Amount 250.000			Recovery = 59.394%				
6) Phenol-D6 (S)	4.95	99	1332199	170.91044	ppb		-0.03
Spiked Amount 250.000			Recovery = 68.364%				
22) Nitrobenzene-D5(S)	5.96	82	714523	87.14638	ppb		-0.04
Spiked Amount 125.000			Recovery = 69.717%				
46) 2-Fluorobiphenyl(S)	8.02	172	1338661	87.92537	ppb		-0.04
Spiked Amount 125.000			Recovery = 70.340%				
64) 2,4,6-Tribromophenol(S)	9.72	330	509870	199.00572	ppb		-0.04
Spiked Amount 250.000			Recovery = 79.602%				
83) Terphenyl-D14(S)	12.39	244	2056274	89.97308	ppb		-0.03
Spiked Amount 125.000			Recovery = 71.978%				
Target Compounds							Qvalue
2) 1,4-Dioxane	1.66	58	12586	5.00819			72
3) n-Nitrosodimethylamine	1.88	42	192631	41.33314	ppb		98
4) Pyridine	1.90	79	296095	27.42708	ppb		96
7) Phenol	4.97	94	402338	43.73797	ppb		98
8) Aniline	4.96	93	263104	43.82834	ppb	#	91
9) Bis (2-chloroethyl) ether	5.04	63	180251	42.29815	ppb		99
10) 2-Chlorophenol	5.10	128	263138	40.62573	ppb		92
11) 1,3-DCB	5.27	146	246751	34.71624	ppb		99
12) 1,4-DCB	5.35	146	258510	35.53830	ppb		98
13) Benzyl alcohol	5.50	108	158305	41.49276	ppb		94
14) 1,2-DCB	5.53	146	249768	36.90410	ppb		99
15) 2-Methylphenol	5.64	107	236165	41.78389	ppb		100
16) Bis (2-chloroisopropyl) et	5.65	45	244707	43.54362	ppb		97
17) Acetophenone	5.80	105	397632	41.27498	ppb		96
18) 3&4-Methylphenol	5.82	107	616050	82.87825	ppb		99
19) n-Nitrosodi-n-propylamine	5.81	70	253418	40.89908	ppb		98
20) Hexachloroethane	5.90	117	100064	33.00235	ppb		81
23) Nitrobenzene	5.99	77	399148	46.97222	ppb		97
24) Isophorone	6.26	82	598295	44.62575	ppb		99
25) 2-Nitrophenol	6.34	139	154724	44.83985	ppb		99
26) 2,4-Dimethylphenol	6.40	122	248189	44.94997	ppb		98
27) Benzoic acid	6.56	105	185839	41.06585	ppb		96
28) Bis (2-chloroethoxy) metha	6.49	93	296803	42.65640	ppb		99
29) 2,4-Dichlorophenol	6.63	162	241504	44.85839	ppb		99
30) 1,2,4-Trichlorobenzene	6.72	180	228338	38.02543	ppb		99
31) 3,4-Dimethylphenol	6.74	107	405584	44.15537	ppb		100
32) Naphthalene	6.80	128	747967	41.69716	ppb		100
33) 4-Chloroaniline	6.86	127	274390	38.04261	ppb		98
34) 2,6-Dichlorophenol	6.87	162	237531	45.03597	ppb		98
35) Hexachloropropene	6.90	213	96292	18.53208	ppb		99
36) Hexachlorobutadiene	6.94	225	135312	33.21593	ppb		100
37) Caprolactum	7.28	55	96998	40.14480	ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200207\0207Y228.D Vial: 28
Acq On : 17 Mar 20 9:35 Operator: MA,SS
Sample : 200312A LCS-1 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 17 10:38 2020 Quant Results File: Y1219.RES

Quant Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.44	107	299860	46.92130	ppb		100
39)	2-Methylnaphthalene	7.59	142	499142	41.34558	ppb		98
40)	1-Methylnaphthalene	7.70	142	517260	41.20384	ppb		98
42)	Hexachlorocyclopentadiene	7.77	237	33832	11.39543	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.78	216	251157	38.24555	ppb		98
44)	2,4,6-Trichlorophenol	7.92	196	194915	45.33477	ppb		99
45)	2,4,5-Trichlorophenol	7.98	196	200341	42.96427	ppb		96
47)	1,1'-Biphenyl	8.13	154	654683	40.94429	ppb		99
48)	2-Chloronaphthalene	8.15	162	533970	41.52508	ppb		99
49)	2-Nitroaniline	8.28	65	217866	44.62120	ppb		98
50)	Dimethyl phthalate	8.48	163	721455	45.77186	ppb		99
51)	2,6-DNT	8.56	165	155781	45.31666	ppb		93
52)	Acenaphthylene	8.63	152	813976	41.11347	ppb		99
53)	3-Nitroaniline	8.28	138	177036	43.38590	ppb		95
54)	Acenaphthene	8.83	154	528569	42.68139	ppb		99
55)	2,4-Dinitrophenol	8.89	184	89794	46.41455	ppb		95
56)	4-Nitrophenol	8.55	65	14900	46.37793	ppb		95
57)	Dibenzofuran	9.04	168	821865	43.69268	ppb		100
58)	2,4-DNT	9.04	165	232935	46.08861	ppb		90
59)	2,3,4,6-Tetrachlorophenol	9.18	232	159880	45.20569	ppb	#	87
60)	Diethyl phthalate	9.31	149	748740	45.85098	ppb		99
61)	4-Chlorophenyl phenyl ethe	9.44	204	392807	43.44341	ppb		94
62)	Fluorene	9.44	166	705322	44.07647	ppb		99
63)	4-Nitroaniline	8.76	138	141561	41.63381	ppb		98
66)	4,6-Dinitro-2-methylphenol	9.52	198	139133	44.97956	ppb		90
67)	Diphenyl amine	9.57	169	832599	64.46248	ppb		99
68)	n-Nitrosodiphenylamine	9.57	169	832599	64.46248	ppb		99
69)	1,2-Diphenylhydrazine	9.61	77	790260	42.30611	ppb		93
70)	4-Bromophenyl phenyl ether	10.00	248	209698	43.12068	ppb		91
71)	Hexachlorobenzene	10.09	284	210187	42.72320	ppb		97
72)	Atrazine	10.20	200	84359	19.01887	ppb		96
73)	Pentachlorophenol	10.32	266	129967	42.97545	ppb		98
74)	Phenanthrene	10.56	178	967094	44.17033	ppb		99
75)	Anthracene	10.61	178	978380	42.74816	ppb		99
76)	Carbazol	10.81	167	936561	44.94427	ppb		100
77)	Di-n-butylphthalate	11.21	149	1304904	45.79492	ppb		99
78)	2-Nitrodiphenylamine	11.38	167	7568	1.16757	ppb		84
79)	Fluoranthene	11.94	202	1146381	44.70192	ppb	#	97
81)	Benzidine	12.11	184	7856	0.80317	ppb	#	81
82)	Pyrene	12.21	202	1207167	42.01940	ppb		99
84)	Butyl benzylphthalate	12.95	149	611996	42.51683	ppb		94
85)	3,3'-Dichlorobenzidine	13.58	252	259641	26.29763	ppb		97
86)	Benz (a) anthracene	13.61	228	1374862	43.93433	ppb		100
87)	Bis (2-ethylhexyl) phthala	13.61	149	1137699	47.30294	ppb	#	94
88)	Chrysene	13.65	228	1147042	42.14639	ppb		99
89)	Di-n-octylphthalate	14.36	149	1488729	41.93271	ppb		98
91)	Benzo (b) fluoranthene	14.90	252	1294999	45.89730	ppb		99
92)	Benzo (k) fluoranthene	14.94	252	1103981	43.39757	ppb		98
93)	Benzo (a) pyrene	15.36	252	1030895	41.16844	ppb		98
94)	Indeno (1,2,3-cd) pyrene	17.28	276	1279212	43.82306	ppb		98
95)	Dibenz (a,h) anthracene	17.31	278	1147529	44.12995	ppb		99
96)	Benzo (g,h,i) perylene	17.83	276	993515	43.31514	ppb		98

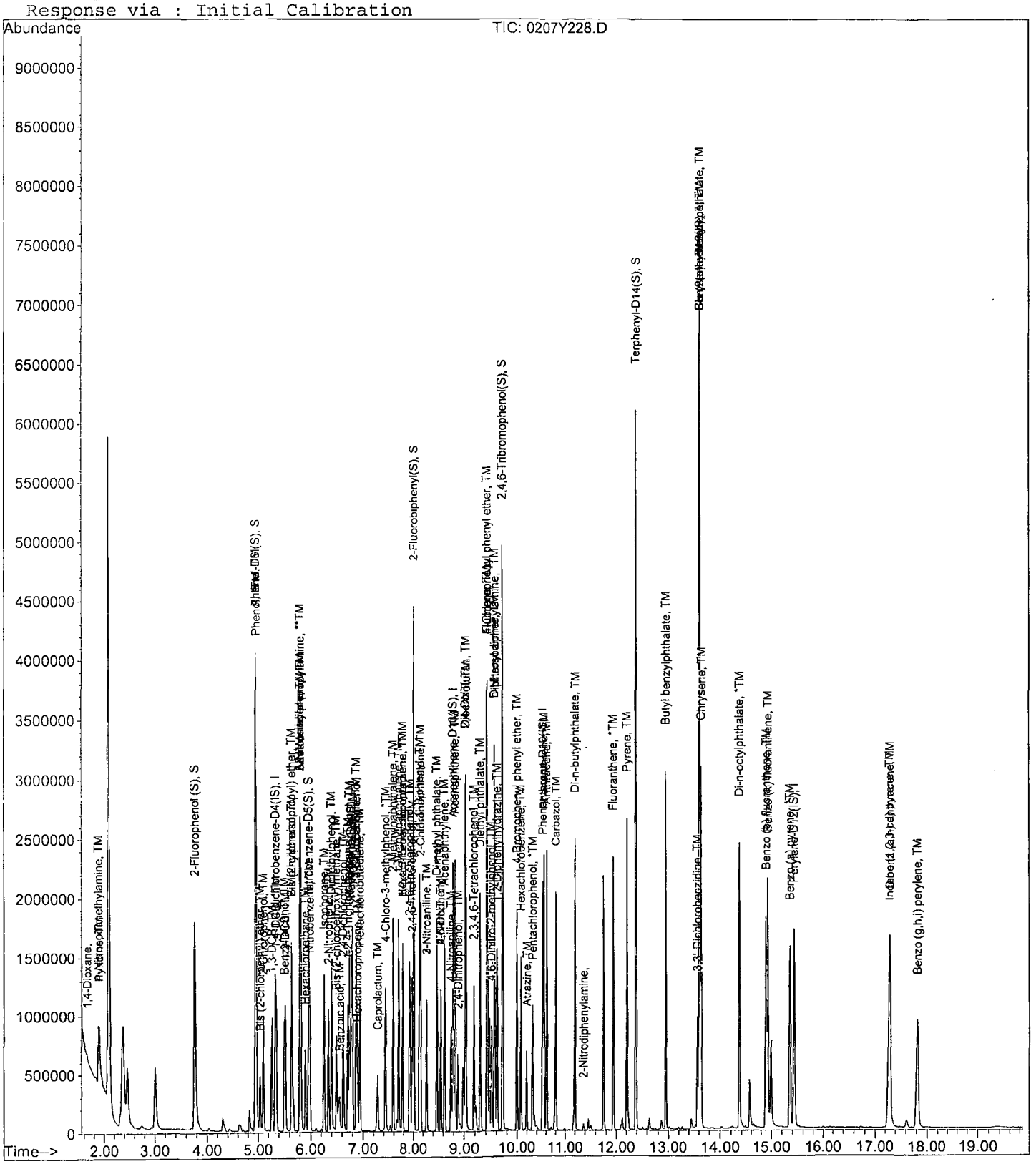
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200207\0207Y228.D Vial: 28
Acq On : 17 Mar 20 9:35 Operator: MA,SS
Sample : 200312A LCS-1 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Mar 17 10:38 2020 Quant Results File: Y1219.RES

Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Feb 07 16:07:44 2020
Response via : Initial Calibration

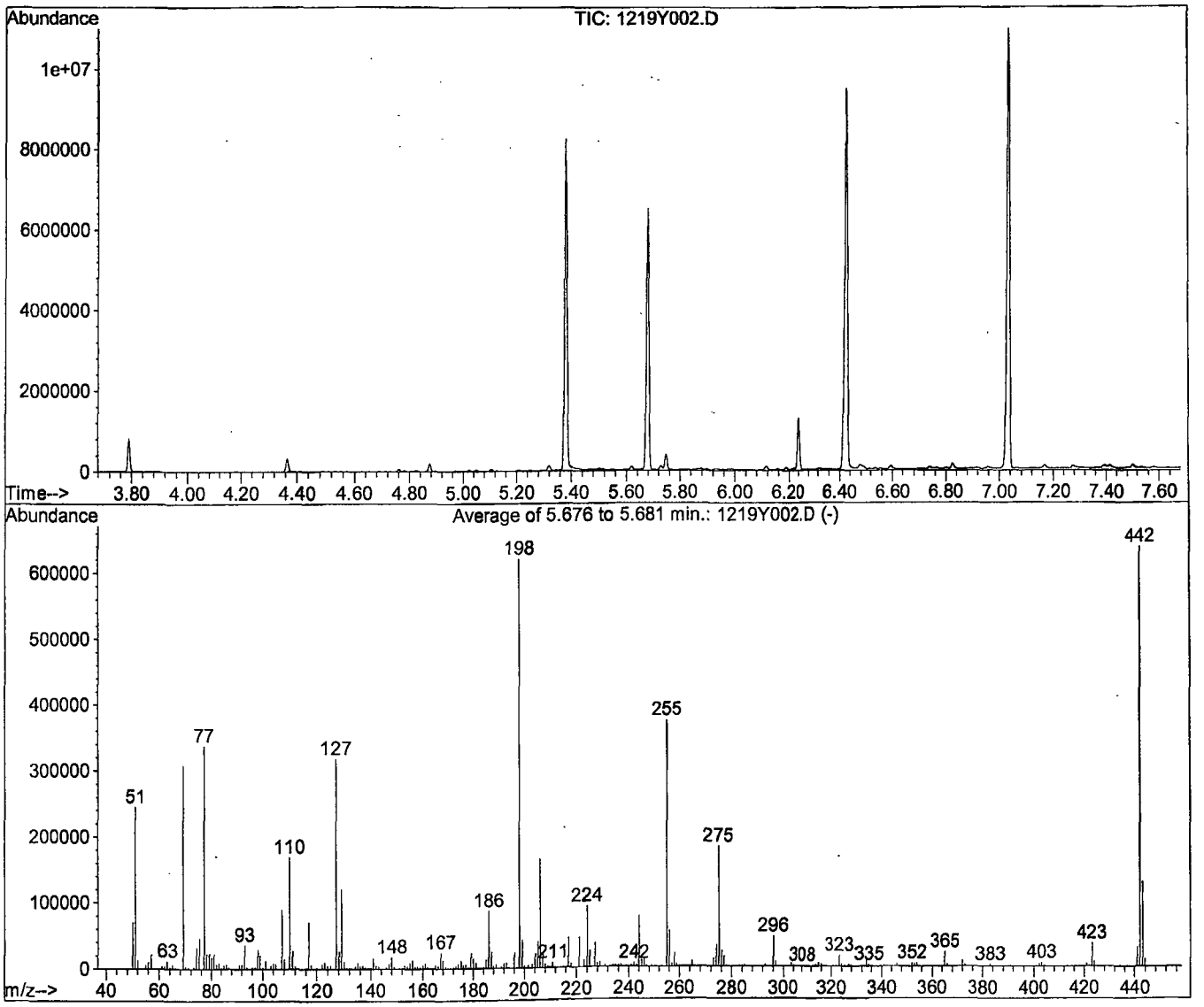


DFTPP

Data File : M:\YODA\DATA\Y191219\1219Y002.D
Acq On : 19 Dec 19 8:50
Sample : SV TUNE 10/01/19
Misc :

Vial: 2
Operator: MA,SS
Inst : Yoda
Multiplr: 1.00

Method : M:\YODA\DATA\Y191219\Y1219.M (RTE Integrator)
Title : EPA 8270C



Spectrum Information: Average of 5.676 to 5.681 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	39.5	245061	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	1.0	3141	PASS
127	198	10	80	51.3	318211	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	620800	PASS
199	198	5	9	6.7	41381	PASS
275	198	10	60	29.4	182251	PASS
365	198	1	100	3.5	21877	PASS
441	442	0.01	24	4.6	29075	PASS
442	198	50	500	102.9	638805	PASS
443	442	15	24	20.0	127973	PASS

Data File Name:	**1219Y002.D**
Data File Path:	**M:\YODA\DATA\Y191219**
Operator:	**MA,SS**
Date Acquired:	**19 Dec 2019 08:50**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/01/19**
Vial Number:	**2**
Instrument Name:	**Yoda**

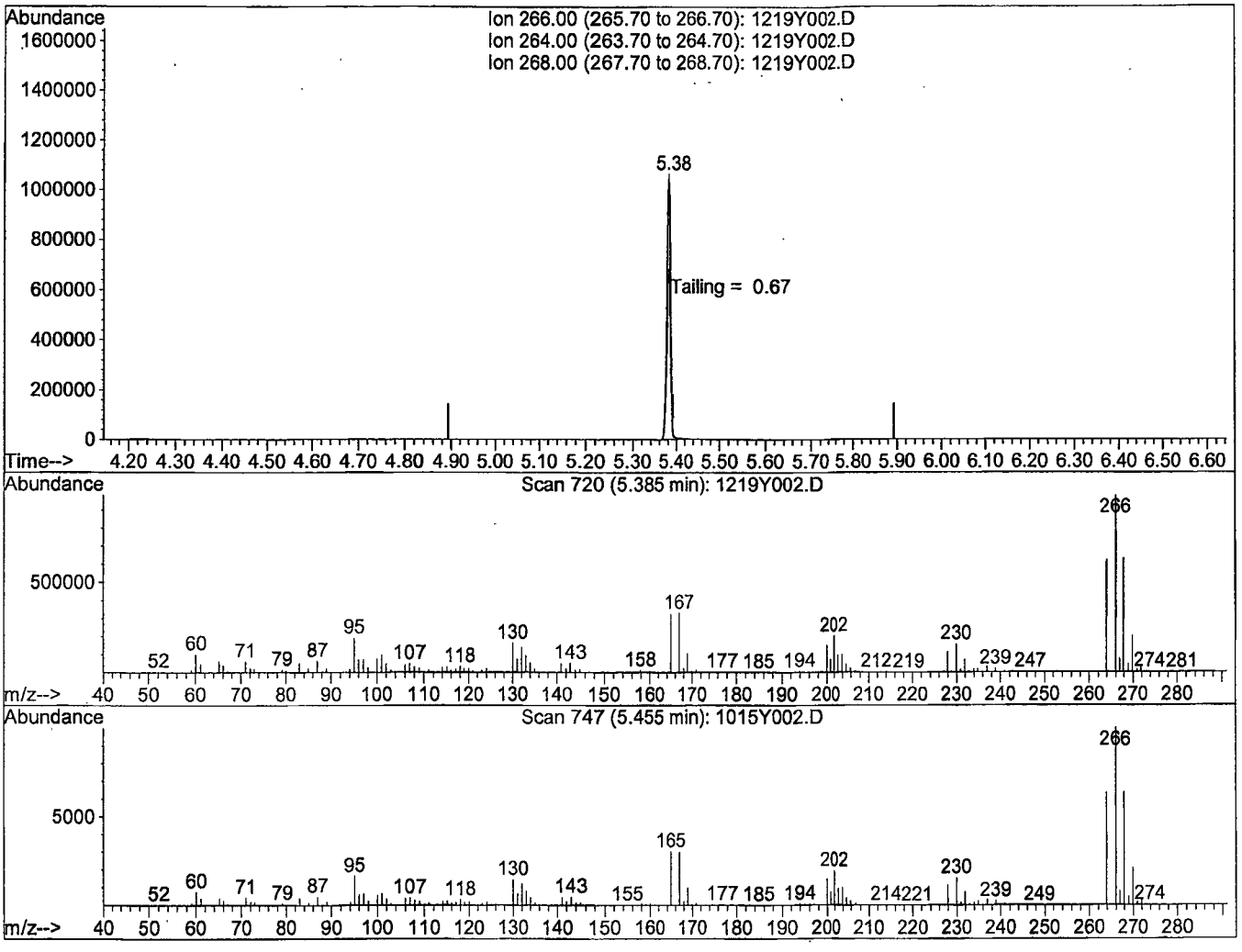
#	Name	Ret Time	Target Response
1)	DDT	7.02	83598600
2)	DDD	6.79	322054
3)	DDE	6.59	610218

Breakdown **1.10**

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y002.D Vial: 2
Acq On : 19 Dec 19 8:50 Operator: MA,SS
Sample : SV TUNE 10/01/19 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Dec 19 16:49 2019 Quant Results File: temp.res

Method : M:\YODA\DATA\Y191219\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Tue Dec 10 08:34:10 2019
Response via : Single Level Calibration



TIC: 1219Y002.D

(5) Pentachlorophenol

5.38min 0.0000

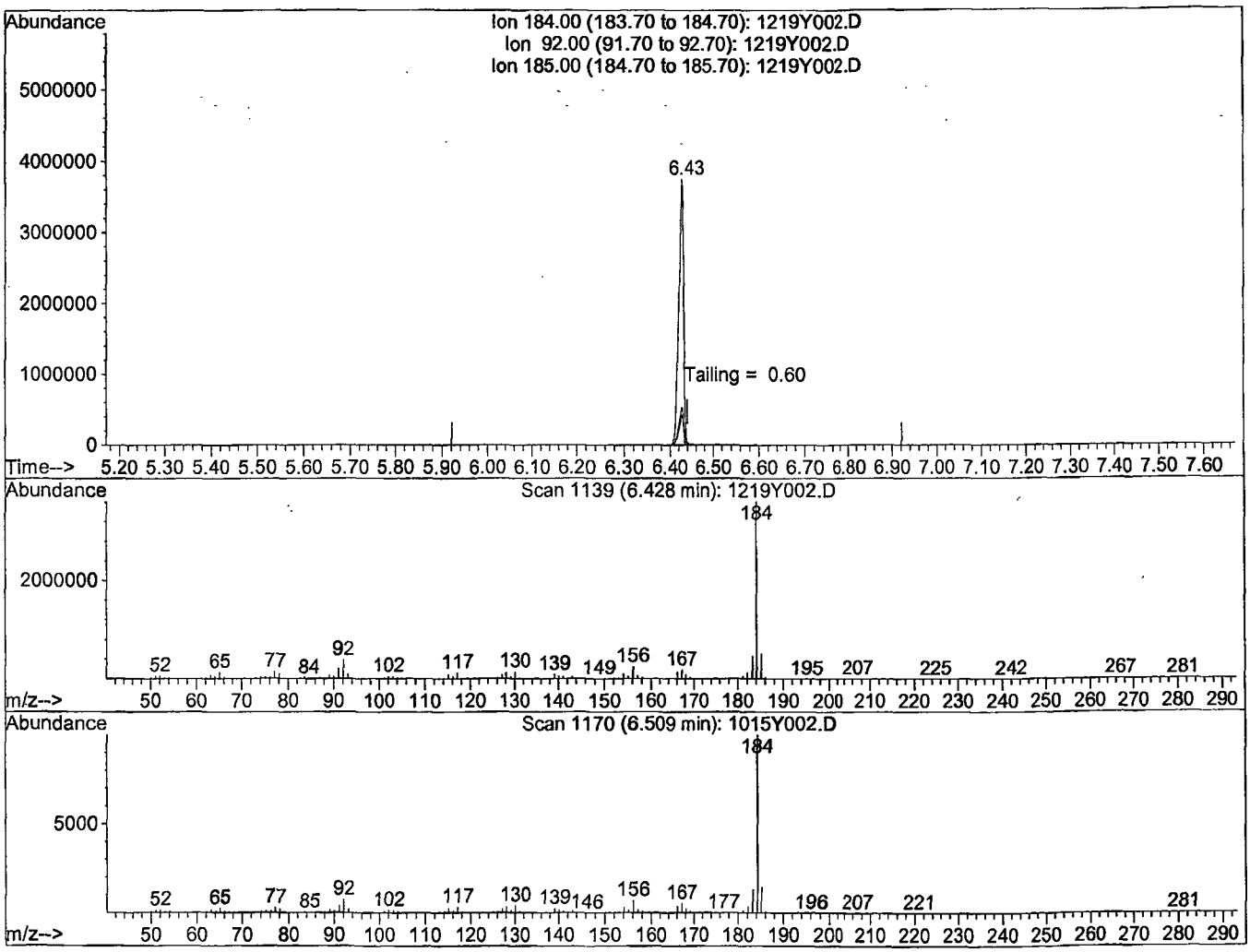
response 6507700

Ion	Exp%	Act%
266.00	100	100
264.00	65.60	64.20
268.00	64.10	63.98
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y191219\1219Y002.D Vial: 2
Acq On : 19 Dec 19 8:50 Operator: MA,SS
Sample : SV TUNE 10/01/19 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Dec 19 16:49 2019 Quant Results File: temp.res

Method : M:\YODA\DATA\Y191219\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Tue Dec 10 08:34:10 2019
Response via : Single Level Calibration



TIC: 1219Y002.D

(6) Benzidine

6.43min 0.0000

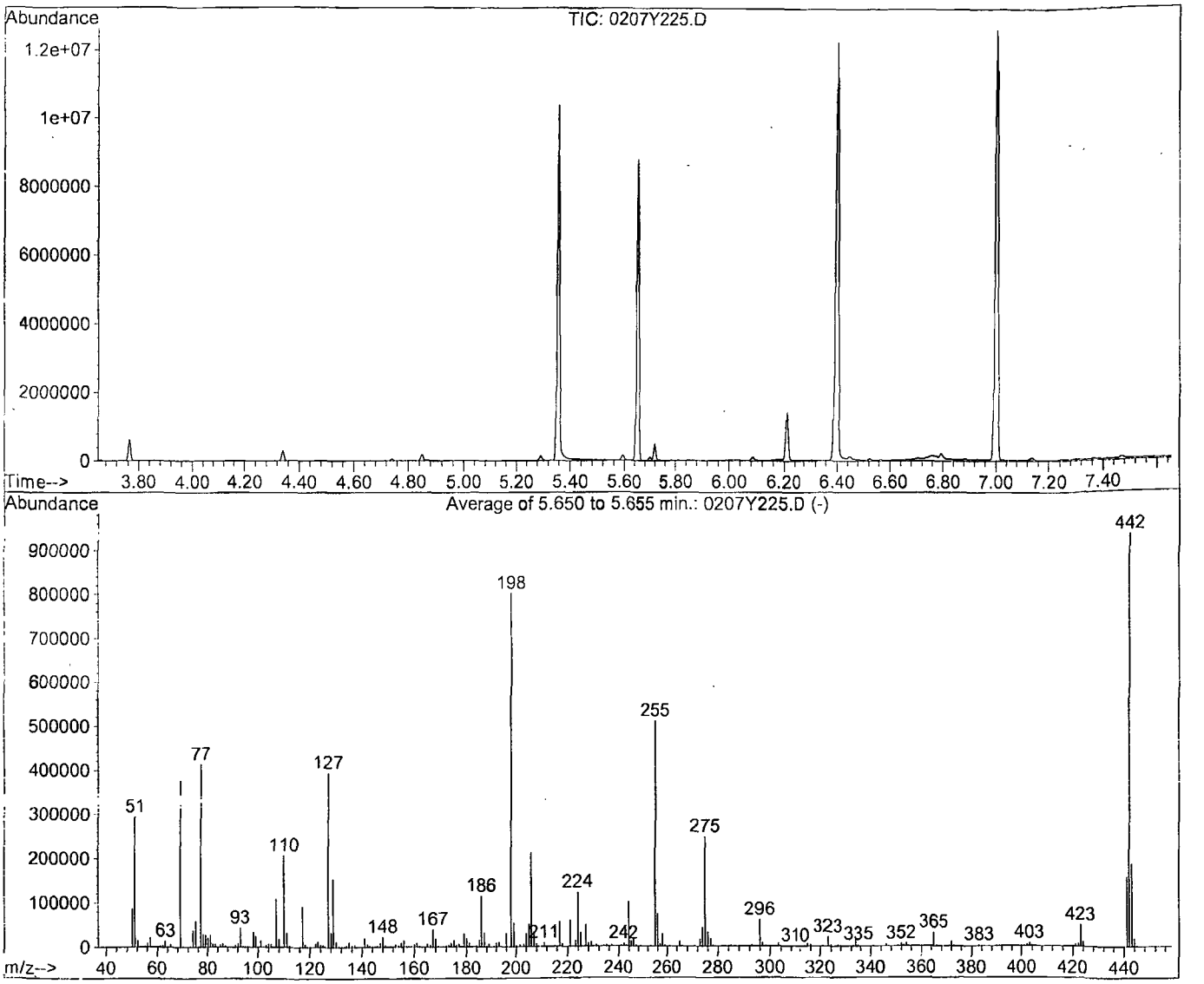
response 29741628

Ion	Exp%	Act%
184.00	100	100
92.00	10.30	10.56
185.00	14.50	14.29
0.00	0.00	0.00

Data File : M:\YODA\DATA\Y200207\0207Y225.D
Acq On : 17 Mar 20 7:46
Sample : SV TUNE 10/01/19
Misc :

Vial: 25
Operator: MA,SS
Inst : Yoda
Multiplr: 1.00

Method : M:\YODA\DATA\Y200207\Y1219.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 827, 828, 829; Background Corrected with Scan 818

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	36.7	294727	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.7	2690	PASS
127	198	10	80	49.1	394453	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	803029	PASS
199	198	5	9	6.7	54203	PASS
275	198	10	60	30.9	247872	PASS
365	198	1	100	3.8	30869	PASS
441	442	0.01	24	16.7	156331	PASS
442	198	50	500	116.6	936171	PASS
443	442	15	24	19.7	184640	PASS

Data File Name:	**0207Y225.D**
Data File Path:	**M:\YODA\DATA\Y200207**
Operator:	**MA,SS**
Date Acquired:	**17 Mar 2020 07:46**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/01/19**
Vial Number:	**25**
Instrument Name:	**Yoda**

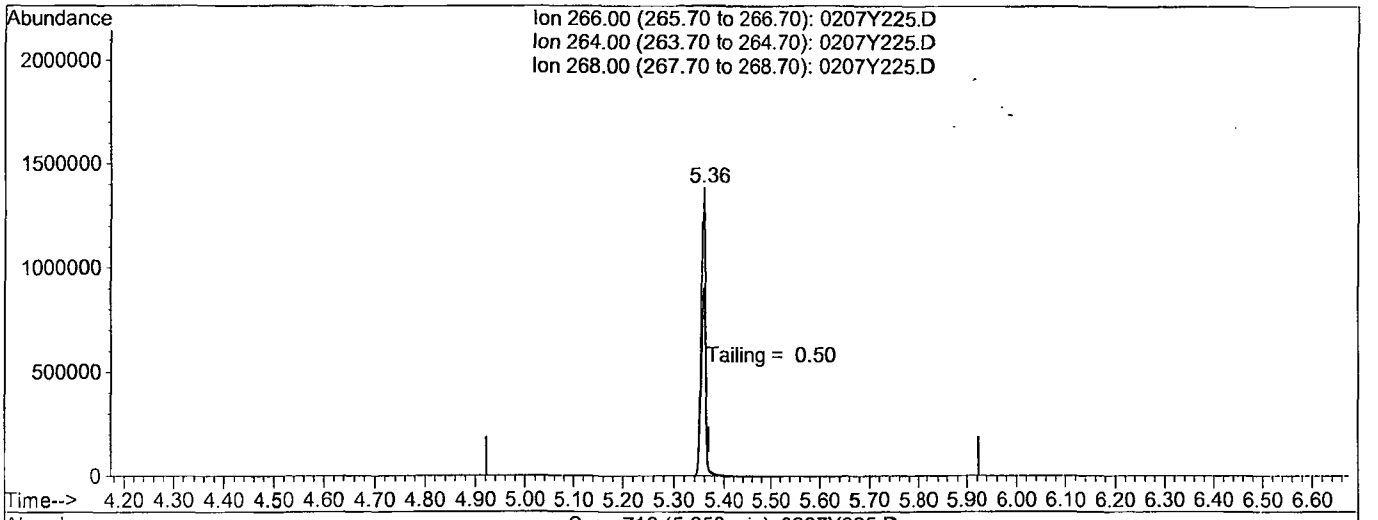
#	Name	Ret Time	Target Response
1)	DDT	6.97	103884000
2)	DDD	6.77	1197740
3)	DDE	6.65	0

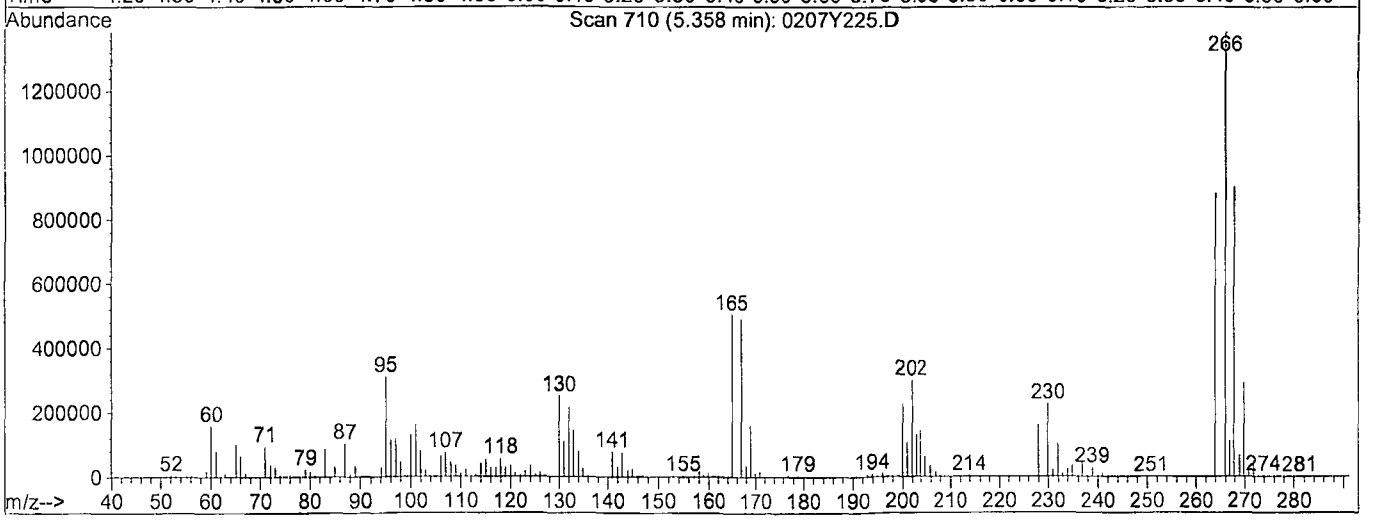
Breakdown **1.14**

Quantitation Report

Data File : M:\YODA\DATA\Y200207\0207Y225.D Vial: 25
Acq On : 17 Mar 20 7:46 Operator: MA,SS
Sample : SV TUNE 10/01/19 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Mar 17 9:24 2020 Quant Results File: temp.res

Method : M:\YODA\DATA\Y200207\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Sun Feb 23 13:13:38 2020
Response via : Single Level Calibration





TIC: 0207Y225.D

(5) Pentachlorophenol

5.36min 0.0000

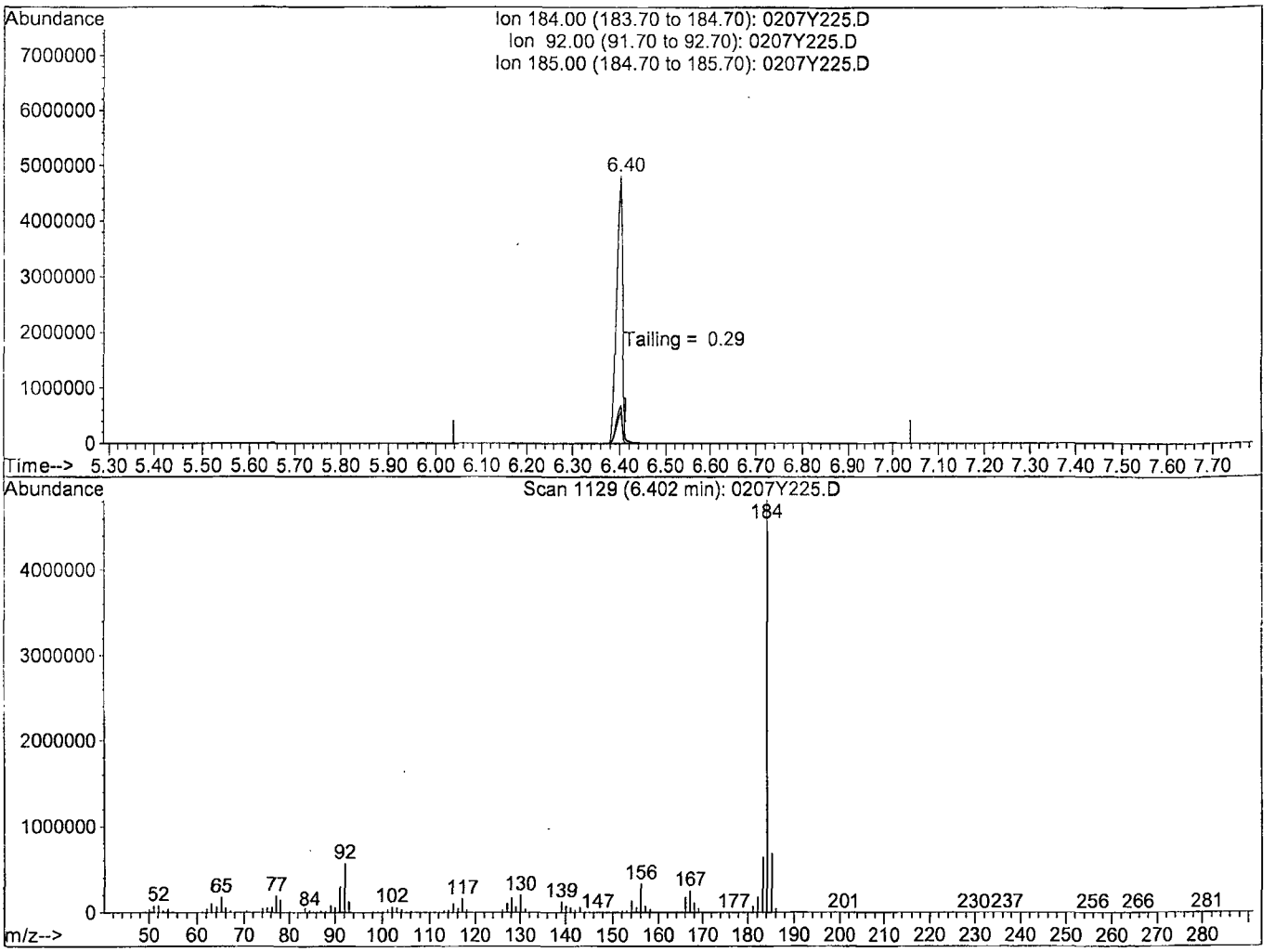
response 8542115

Ion	Exp%	Act%
266.00	100	100
264.00	62.40	64.05
268.00	62.40	63.88
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y200207\0207Y225.D Vial: 25
Acq On : 17 Mar 20 7:46 Operator: MA,SS
Sample : SV TUNE 10/01/19 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Mar 17 9:24 2020 Quant Results File: temp.res

Method : M:\YODA\DATA\Y200207\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Sun Feb 23 13:13:38 2020
Response via : Single Level Calibration



TIC: 0207Y225.D

(6) Benzidine

6.40min 0.0000

response 41937606

Ion	Exp%	Act%
184.00	100	100
92.00	11.90	10.75
185.00	14.20	14.27
0.00	0.00	0.00

Name of Final Standard	8270 Full Scan Stock Spike	Prep'd By (Initials)	JP
Prep Date	011/21/2019		
Exp Date	011/21/2020		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
10001	Absolute	10001	2000	081419 - 49302	08/14/22	1.0 mL	11 mL	NA	181.82 ug/mL
10002	Absolute	10002	2000	090919-49211	09/09/22	1.0 mL	*	*	181.82 ug/mL
10004	Absolute	10004	2000	071618-99221	07/16/23	1.0 mL	*	*	181.82 ug/mL
10005	Absolute	10005	2000	032018-40234	03/20/23	1.0 mL	*	*	181.82 ug/mL
10006	Absolute	10006	2000	030119-49242	03/01/22	1.0 mL	*	*	181.82 ug/mL
10007	Absolute	10007	2000	080116-40254	08/01/21	1.0 mL	*	*	181.82 ug/mL
10018	Absolute	10018	2000	051719-49262	05/17/24	1.0 mL	*	*	181.82 ug/mL
70023	Absolute	70023	1000	012819-49268	01/28/24	1.0 mL	*	*	90.91ug/mL
82705	Absolute	82705	2000	090919-49293	09/09/22	1.0 mL	*	*	181.82 ug/mL
94552	Absolute	94552	various	053119-49284	05/31/21	1.0 mL	*	*	various
72304	Absolute	70023	1000	090519-49455 - 41159	09/05/24	1.0 mL	*	*	90.91ug/mL

Name of Final Standard	8270 Internal Standard Ampules (2)	Prep'd By (Initials)	JP
Prep Date	11/20/19		
Exp Date	11/20/20		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Semivolatile Internal Standard	Restek	31206	2000 ug/mL	**A0151843-49411 A0151843-49412**	**07/31/25**	2 mL	2 mL	NA	2000ug/mL

Name of Final Standard	**8270 SS STOCK**	**Prep'd By (Initials)**	**JP**
Prep Date	**11/20/19**		
Exp Date	**11/20/20**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
10001	Absolute	10001	2000 ug/mL	051019-40534	05/10/21	1.0 mL	20 mL	**Methanol Lot 208858**	100 ug/mL
10002	Absolute	10002	2000 ug/mL	020217-39199	02/02/20	1.0 mL	*	*	100 ug/mL
10004	Absolute	10004	2000 ug/mL	051018-39196	05/10/21	1.0 mL	*	*	100 ug/mL
10005	Absolute	10005	2000 ug/mL	031618-39207	03/16/23	1.0 mL	*	*	100 ug/mL
10006	Absolute	10006	2000 ug/mL	011718-39208	01/17/21	1.0 mL	*	*	100 ug/mL
10007	Absolute	10007	2000 ug/mL	060118-39213	06/01/23	1.0 mL	*	*	100 ug/mL
10018	Absolute	10018	2000 ug/mL	062718-40535	06/27/23	1.0 mL	*	*	100 ug/mL
70023	Absolute	70023	1000 ug/mL	051618-39214	05/16/23	1.0 mL	*	*	50 ug/mL
82705	Absolute	82705	2000 ug/mL	090617-40540	09/06/20	1.0 mL	*	*	100 ug/mL
94552	Absolute	94552	various	013118-40542	01/31/20	1.0 mL	*	*	various
72304	Absolute	72304	1000 ug/mL	110719-49477	11/07/24	1.0 mL	*	*	50 ug/mL

Name of Final Standard	**8270 Full Scan Second Source**	**Prep'd By (Initials)**	**JP**
Prep Date	**11/22/19**		
Exp Date	**11/22/20**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 SS Stock	APPL	8270 SS Stock	100:50 ug/mL	**11/20/19**	**11/20/20**	100 uL	200uL	**MC DW717 150uL**	50:25 ug/mL
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	**11/20/19**	**11/20/19**	4 uL	*	*	*

Name of Final Standard	8270 Full Scan Standard Curve	Prep'd By (Initials)	JP
Prep Date	011/21/2019		
Exp Date	011/21/2020		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 Stock	APPL	8270 Stock	182:91 ug/mL	011/21/2019	011/21/2020	4.4 uL	200uL	MC DW717 150uL	4 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200:400 ug/mL	07/10/19	06/24/20	4 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	011/20/2019	07/31/25	4 uL	*	*	*
8270 Stock	APPL	8270 Stock	182:91 ug/mL	011/21/2019	011/21/2020	11 uL	400uL	MC DW717 150uL	5 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200:400 ug/mL	07/10/19	06/24/20	10 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	011/20/2019	07/31/25	8 uL	*	*	*
8270 Stock	APPL	8270 Stock	182:91 ug/mL	011/21/2019	011/21/2020	11 uL	200uL	MC DW717 150uL	10 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200:400 ug/mL	07/10/19	06/24/20	10 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	011/20/2019	07/31/25	4 uL	*	*	*
8270 Stock	APPL	8270 Stock	182:91 ug/mL	011/21/2019	011/21/2020	11 uL	100uL	MC DW717 150uL	20 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200:400 ug/mL	07/10/19	06/24/20	10 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	011/20/2019	07/31/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	182:91 ug/mL	011/21/2019	011/21/2020	22 uL	100uL	MC DW717 150uL	40 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200:400 ug/mL	07/10/19	06/24/20	20 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	011/20/2019	07/31/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	182:91 ug/mL	011/21/2019	011/21/2020	55 uL	200 uL	MC DW717 150uL	50 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200:400 ug/mL	07/10/19	06/24/20	50 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	011/20/2019	07/31/25	4 uL	*	*	*
8270 Stock	APPL	8270 Stock	182:91 ug/mL	011/21/2019	011/21/2020	33 uL	100uL	MC DW717 150uL	60 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200:400 ug/mL	07/10/19	06/24/20	30 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	011/20/2019	07/31/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	182:91 ug/mL	011/21/2019	011/21/2020	44 uL	100uL	MC DW717 150uL	80 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200:400 ug/mL	07/10/19	06/24/20	40 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	011/20/2019	07/31/25	2 uL	*	*	*
8270 Stock	APPL	8270 Stock	182:91 ug/mL	011/21/2019	011/21/2020	50 uL	100uL	na	91 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200:400 ug/mL	07/10/19	06/24/20	50 uL	*	*	*
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	011/20/2019	07/31/25	2 uL	*	*	*

Name of Final Standard	Semivolatile (SV) Tuning Solution
Prep Date	10/01/19
Exp Date	11/30/20

Prep'd By (Initials) JP

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Semivolatile GC/MS Tuning Standard	Ultra Scientific	GCM-150-1	1,000 ug/mL	CR3789-38879	11/30/20	1,250 uL	25 mL	MC #58240	50 ug/mL

Name of Final Standard	**8270 Full Scan Spike**	**Prep'd By (Initials)**	**JP**
Prep Date	**12/04/19**		
Exp Date	**12/04/20**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc. (range)
10001	Absolute	10001	2000	081419 - 49299	08/14/22	1.0 mL	40 mL	**Methanol Lot# 208858**	50 ug/mL
10002	Absolute	10002	2000	090919-49208	09/09/22	1.0 mL	*	*	50 ug/mL
10004	Absolute	10004	2000	071618-49218	07/16/23	1.0 mL	*	*	50 ug/mL
10005	Absolute	10005	2000	032018-49228	03/20/23	1.0 mL	*	*	50 ug/mL
10006	Absolute	10006	2000	030119-49239	03/01/22	1.0 mL	*	*	50 ug/mL
10007	Absolute	10007	2000	080116-40249	08/01/21	1.0 mL	*	*	50 ug/mL
10018	Absolute	10018	2000	051719-49259	05/17/24	1.0 mL	*	*	50 ug/mL
70023	Absolute	70023	1000	012819-49275	01/28/24	1.0 mL	*	*	25 ug/mL
82705	Absolute	82705	2000	090919-49290	09/09/22	1.0 mL	*	*	50 ug/mL
94552	Absolute	94552	various	053119-49286	05/31/21	1.0 mL	*	*	various

Name of Final Standard	8270 Full Scan Standard Curve	Prep'd By (Initials)	JP
Prep Date	01/16/20		
Exp Date	06/24/20		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 Stock	APPL	8270 Stock	182:91 ug/mL	011/21/2019	011/21/2020	55 uL	200 uL	MC DW717 150uL	50 ug/mL
8270 Surrogate	APPL	8270 Surrogate	200:400 ug/mL	07/10/19	06/24/20	50 uL	"	"	"
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	011/20/2019	07/31/25	4 uL	"	"	"

_LIQ003

Organic Extraction Worksheet

Method	Continuous Liquid/Liquid SVOC 3520C	Extraction Set	200312A	Extraction Method	LIQ003	Units	mL

Spiked ID 1	8270T Spike 1-29-20 1-29-21		Surrogate ID 1	8270 Surrogate 11-19-19 11-19-20	
Spiked ID 2	Sim Spike 12-19-19 11-13-20		Surrogate ID 2	SIM Surrogate 12-17-19 12-17-20	
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	03/12/20 15:00	
Spiked ID 8			Ext. End Time:	03/13/20 9:00	
			GC Requires Extract By:		

pH1	2	03/12/20 13:05	Water Bath Temp 1 °C	77/76.9 E-WB6 °
pH2	2	03/12/20 14:15	Water Bath Temp 2 °C	
pH3	14	03/13/20 12:05	Water Bath Temp 3 °C	

Spiked By: DL **Date** 03/12/20 **Witnessed By:** CFM **Date** 03/12/20

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	200312A Blk				1,0.050	1,2	800	1	2/1	03/12/20 12:55	
						equip	E-HP51 E-WB6				
2	200312A LCS-1		1	1	1	1	800	1	2/1	03/12/20 12:55	
						equip	E-HP50 E-WB6				
3	200312A LCS-2		0.125	2	0.050	2	800	1	2/1	03/12/20 12:55	
						equip	E-HP49 E-WB6				
4	BA08341 MS-1	BA08341W36	1	1	1	1	800	1	2/1	03/12/20 14:08	91638
						equip	E-HP26 E-WB6				
5	BA08341 MSD-1	BA08341W42	1	1	1	1	800	1	2/1	03/12/20 14:08	91638
						equip	E-HP27 E-WB6				
6	BA08341 MS-2	BA08341W47	0.125	2	0.050	2	800	1	2/1	03/12/20 14:08	91638
						equip	E-HP28 E-WB6				
7	BA08341 MSD-2	BA08341W39	0.125	2	0.050	2	800	1	2/1	03/12/20 14:08	91638
						equip	E-HP29 E-WB6				
8	BA08341	BA08341W41			1,0.05	1,2	800	1	2/1	03/12/20 14:08	91638
						equip	E-HP25 E-WB6				
9	BA08370	BA08370W21			1,0.050	1,2	800	1	2/1	03/12/20 12:55	91653
						equip	E-HP48 E-WB6				
10	BA08371	BA08371W14			1,0.050	1,2	800	1	2/1	03/12/20 12:55	91653
						equip	E-HP47 E-WB6				

Solvent and Lot#	
PH Strips	HC998032
Dichloromethane (DCM)	59239
1+1 H2SO4	2-26-20
10N NaOH	3-2-20
Filter Paper	400171
Na2SO4	2019020631

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	MA
Date	3/16/20
Time	2:00 pm
Refrigerator	GC-C

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL
Concentration	ERR

Modified	03/16/20 2:45:49 PM

Reviewed By: KY **Date** 03/16/20

Injection Log

Directory: M:\YODA\DATA\Y191219\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
2	1219Y002.D	1	SV TUNE 10/01/19		19 Dec 19 8:50
3	1219Y003.D	1	50ug/ml 8270 11/21/19		19 Dec 19 9:06
4	1219Y004.D	1	4ug/ml 8270 11/21/19		19 Dec 19 9:33
5	1219Y005.D	1	5ug/ml 8270 11/21/19		19 Dec 19 10:01
6	1219Y006.D	1	10ug/ml 8270 11/21/19		19 Dec 19 10:28
7	1219Y007.D	1	20ug/ml 8270 11/21/19		19 Dec 19 10:56
8	1219Y008.D	1	40ug/ml 8270 11/21/19		19 Dec 19 11:24
9	1219Y009.D	1	60ug/ml 8270 11/21/19		19 Dec 19 11:51
10	1219Y010.D	1	80ug/ml 8270 11/21/19		19 Dec 19 12:19
11	1219Y011.D	1	100ug/ml 8270 11/21/19		19 Dec 19 12:46
12	1219Y012.D	1	SS 8270 11/22/19		19 Dec 19 13:14
25	0207Y225.D	1	SV TUNE 10/01/19		17 Mar 20 7:46
26	0207Y226.D	1	50ug/ml 8270 03/04/20 (2)		17 Mar 20 8:01
27	0207Y227.D	1.25	200312A BLK 1/800		17 Mar 20 9:08
28	0207Y228.D	1.25	200312A LCS-1 1/800		17 Mar 20 9:35
29	0207Y229.D	1.25	BA08341W36 MS-1 1/800		17 Mar 20 10:03
30	0207Y230.D	1.25	BA08341W42 MSD-1 1/800		17 Mar 20 10:30
31	0207Y231.D	1.25	BA08341W41 1/800		17 Mar 20 10:58
41	0207Y241.D	1	50ug/ml 8270 03/04/20 (2)		17 Mar 20 16:40

ORGANICS
Calibration Data

PAH by GCMS SIM
EPA 8270 SIM

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 02/04/20
Matrix: Instrument: Linus Initials: MA

			0204L003.D	0204L004.D	0204L005.D	0204L006.D	0204L007.D	0204L008.D	0204L009.D	0204L010.D								
		Compound	0.1	0.2	0.5	1	5	10	50	100			Avg	%RSD	Type	r^2	Q	MRF
1	I	Napthalene-D8(IS)																
2	TM	Naphthalene	1.120	1.131	1.072	1.083	1.129	1.047	0.9772	0.9334			1.1	6.9	TM			0.700
3	S	2-Methylnaphthalene-D10 (2M	1.257	1.211	1.175	1.198	1.255	1.218	1.180	1.133			1.2	3.5	S			
4	TM	2-Methylnaphthalene	0.6849	0.6892	0.6742	0.6957	0.7468	0.6960	0.6554	0.6145			0.68	5.5	TM			0.400
5	TM	1-Methylnaphthalene	0.7412	0.7479	0.7192	0.7336	0.7676	0.7029	0.6628	0.6175			0.71	7.0	TM			
6	I	Acenaphthene-D10(IS)																
7	TM	Acenaphthylene	3.869	3.855	3.806	3.892	4.393	4.113	3.818	3.434			3.9	7.0	TM			0.900
8	*TM	Acenaphthene	1.372	1.277	1.234	1.238	1.309	1.218	1.155	1.036			1.2	8.3	*TM			0.900
9	TM	Fluorene	1.476	1.471	1.412	1.485	1.636	1.549	1.427	1.385			1.5	5.5	TM			0.900
10	I	Phenanthrene-D10(IS)																
11	TM	Phenanthrene	1.231	1.222	1.179	1.198	1.290	1.205	1.041	0.9371			1.2	9.9	TM			0.700
12	TM	Anthracene	1.002	1.028	0.9886	1.045	1.160	1.099	0.9848	0.8800			1.0	8.1	TM			0.700
13	S	Fluoranthene-D10 (FRT)	1.457	1.470	1.320	1.355	1.491	1.476	1.437	1.389			1.4	4.4	S			
14	*TM	Fluoranthene	1.604	1.635	1.531	1.601	1.817	1.668	1.480	1.357			1.6	8.6	*TM			0.600
15	I	Chrysene-D12(IS)																
16	TM	Pyrene	1.291	1.315	1.240	1.301	1.386	1.308	1.220	1.113			1.3	6.4	TM			0.600
17	TM	Benz (a) anthracene	1.177	1.123	1.047	1.077	1.191	1.159	1.141	1.081			1.1	4.6	TM			0.800
18	TM	Chrysene	1.461	1.411	1.370	1.360	1.367	1.267	1.174	1.065			1.3	10	TM			0.700
19	TM	Indeno (1,2,3-cd) pyrene	1.438	1.382	1.382	1.402	1.574	1.526	1.551	1.517			1.5	5.4	TM			0.500
20	I	Perylene-D12(IS)																
21	TM	Benzo (b) fluoranthene	0.8206	0.8277	0.8502	0.9180	1.141	1.084	1.118	1.129			0.99	15	TM			0.700
22	TM	Benzo (k) fluoranthene	1.252	1.341	1.294	1.323	1.396	1.330	1.094	1.089			1.3	9.1	TM			0.700
23	*TM	Benzo (a) pyrene	0.8229	0.8399	0.9301	0.9711	1.126	1.087	1.069	1.029			0.98	12	*TM			0.700
24	TM	Dibenz (a,h) anthracene	0.9746	0.9893	0.9980	1.034	1.209	1.157	1.169	1.136			1.1	8.7	TM			0.400
25	TM	Benzo (g,h,i) perylene	1.063	1.069	1.094	1.118	1.274	1.216	1.188	1.145			1.1	6.5	TM			0.500
26																		
27																		
28																		
29																		
30																		
31																		
32																		
33																		
34																		
35																		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L003.D Vial: 3
Acq On : 4 Feb 20 9:48 Operator: MA
Sample : 0.1 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:38:46 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.19	136	98990	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.18	164	52942	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.91	188	98572	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.01	240	123137	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.43	264	142515	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	4.96	152	2488	0.05046 ppb		0.00
Spiked Amount 5.000			Recovery =	1.000%		
13) Fluoranthene-D10 (FRT)	9.28	212	2873	0.04174 ppb		0.00
Spiked Amount 5.000			Recovery =	0.840%		
Target Compounds						Qvalue
2) Naphthalene	4.21	128	4434	0.09312 ppb		99
4) 2-Methylnaphthalene	5.00	142	2712	0.09372 ppb		100
5) 1-Methylnaphthalene	5.11	142	2935	0.09787 ppb		97
7) Acenaphthylene	6.02	152	8194	0.08489 ppb		100
8) Acenaphthene	6.22	154	2905	0.10261 ppb		96
9) Fluorene	6.82	166	3126	0.09002 ppb		94
11) Phenanthrene	7.93	178	4855	0.08909 ppb		99
12) Anthracene	7.99	178	3951	0.08269 ppb		98
14) Fluoranthene	9.30	202	6323	0.08364 ppb	#	92
16) Pyrene	9.57	202	6359	0.07717 ppb	#	94
17) Benz (a) anthracene	11.00	228	5798	0.08414 ppb		99
18) Chrysene	11.04	228	7198	0.09744 ppb		99
19) Indeno (1,2,3-cd) pyrene	14.93	276	7083	0.09610 ppb	#	99
21) Benzo (b) fluoranthene	12.79	252	4678	0.06579 ppb	#	99
22) Benzo (k) fluoranthene	12.85	252	7135	0.09052 ppb		98
23) Benzo (a) pyrene	13.35	252	4691	0.07030 ppb		98
24) Dibenz (a,h) anthracene	14.97	278	5556	0.08385 ppb		99
25) Benzo (g,h,i) perylene	15.29	276	6060	0.08386 ppb		97

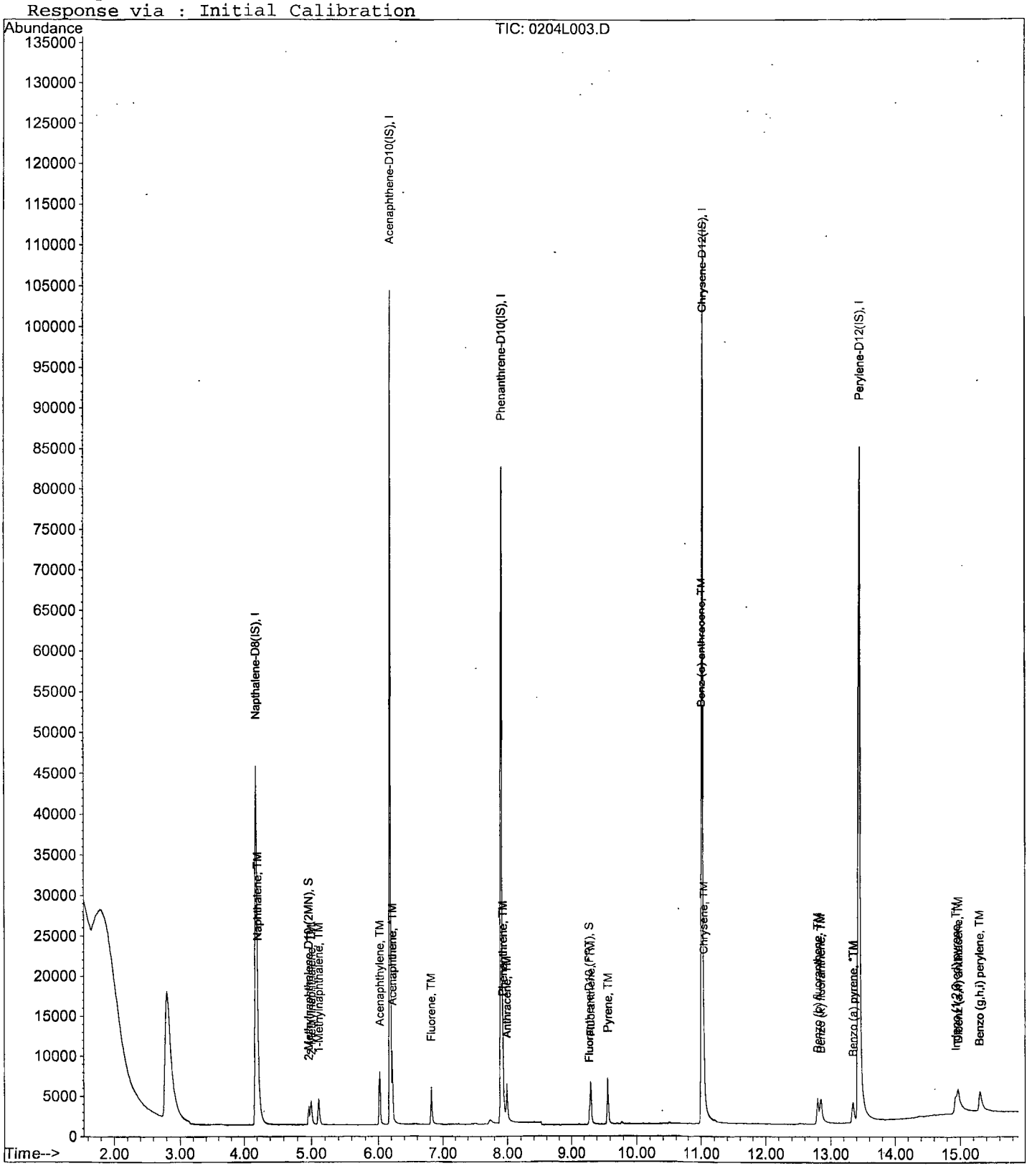
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L003.D Vial: 3
Acq On : 4 Feb 20 9:48 Operator: MA
Sample : 0.1 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L004.D Vial: 4
Acq On : 4 Feb 20 10:09 Operator: MA
Sample : 0.2 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:42:22 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.19	136	95871	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.18	164	51059	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.91	188	94452	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.01	240	119835	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.43	264	136582	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	4.96	152	4644	0.09724 ppb		0.00
Spiked Amount 5.000			Recovery	= 1.940%		
13) Fluoranthene-D10 (FRT)	9.28	212	5554	0.08422 ppb		0.00
Spiked Amount 5.000			Recovery	= 1.680%		
Target Compounds						Qvalue
2) Naphthalene	4.21	128	8673	0.18807 ppb		99
4) 2-Methylnaphthalene	5.00	142	5286	0.18862 ppb		99
5) 1-Methylnaphthalene	5.11	142	5736	0.19749 ppb		100
7) Acenaphthylene	6.02	152	15747	0.16915 ppb		99
8) Acenaphthene	6.22	154	5216	0.19104 ppb		99
9) Fluorene	6.82	166	6007	0.17936 ppb		96
11) Phenanthrene	7.93	178	9231	0.17678 ppb		99
12) Anthracene	7.99	178	7770	0.16971 ppb		99
14) Fluoranthene	9.30	202	12353	0.17053 ppb	#	93
16) Pyrene	9.57	202	12608	0.15723 ppb	#	91
17) Benz (a) anthracene	11.00	228	10767	0.16055 ppb		99
18) Chrysene	11.04	228	13529	0.18818 ppb		99
19) Indeno (1,2,3-cd) pyrene	14.92	276	13247	0.18469 ppb	#	100
21) Benzo (b) fluoranthene	12.79	252	9044	0.13271 ppb		99
22) Benzo (k) fluoranthene	12.85	252	14654	0.19398 ppb		98
23) Benzo (a) pyrene	13.35	252	9177	0.14350 ppb	#	97
24) Dibenz (a,h) anthracene	14.97	278	10810	0.17022 ppb		99
25) Benzo (g,h,i) perylene	15.29	276	11681	0.16867 ppb		98

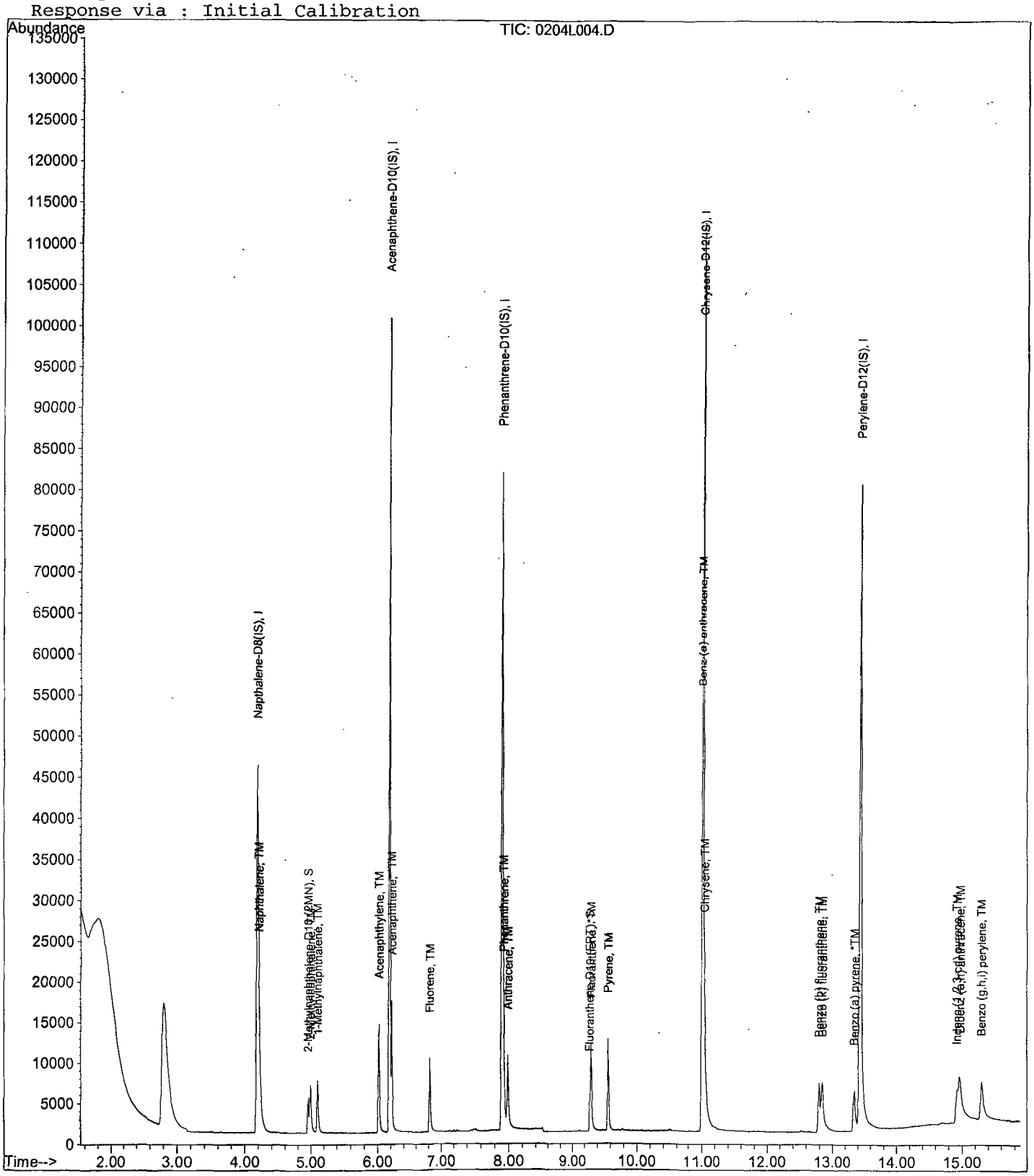
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L004.D Vial: 4
Acq On : 4 Feb 20 10:09 Operator: MA
Sample : 0.2 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L005.D Vial: 5
Acq On : 4 Feb 20 10:31 Operator: MA
Sample : 0.5 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:42:22 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.19	136	93485	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.18	164	49653	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.91	188	91991	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.01	240	112785	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.43	264	128599	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	4.96	152	10986	0.23591 ppb		0.00
Spiked Amount 5.000			Recovery	= 4.720%		
13) Fluoranthene-D10 (FRT)	9.28	212	12142	0.18904 ppb		0.00
Spiked Amount 5.000			Recovery	= 3.780%		
Target Compounds						Qvalue
2) Naphthalene	4.21	128	20052	0.44592 ppb		100
4) 2-Methylnaphthalene	5.00	142	12606	0.46129 ppb		100
5) 1-Methylnaphthalene	5.11	142	13447	0.47479 ppb		99
7) Acenaphthylene	6.02	152	37792	0.41744 ppb		100
8) Acenaphthene	6.22	154	12256	0.46158 ppb		99
9) Fluorene	6.82	166	14018	0.43041 ppb		96
11) Phenanthrene	7.93	178	21699	0.42667 ppb		98
12) Anthracene	7.99	178	18188	0.40788 ppb		98
14) Fluoranthene	9.30	202	28175	0.39935 ppb	#	93
16) Pyrene	9.57	202	27975	0.37067 ppb	#	93
17) Benz (a) anthracene	11.00	228	23610	0.37407 ppb		100
18) Chrysene	11.04	228	30897	0.45662 ppb		99
19) Indeno (1,2,3-cd) pyrene	14.92	276	31178	0.46186 ppb	#	100
21) Benzo (b) fluoranthene	12.79	252	21866	0.34077 ppb		98
22) Benzo (k) fluoranthene	12.85	252	33289	0.46801 ppb		98
23) Benzo (a) pyrene	13.35	252	23923	0.39730 ppb		98
24) Dibenz (a,h) anthracene	14.96	278	25669	0.42930 ppb	#	95
25) Benzo (g,h,i) perylene	15.29	276	28135	0.43148 ppb		99

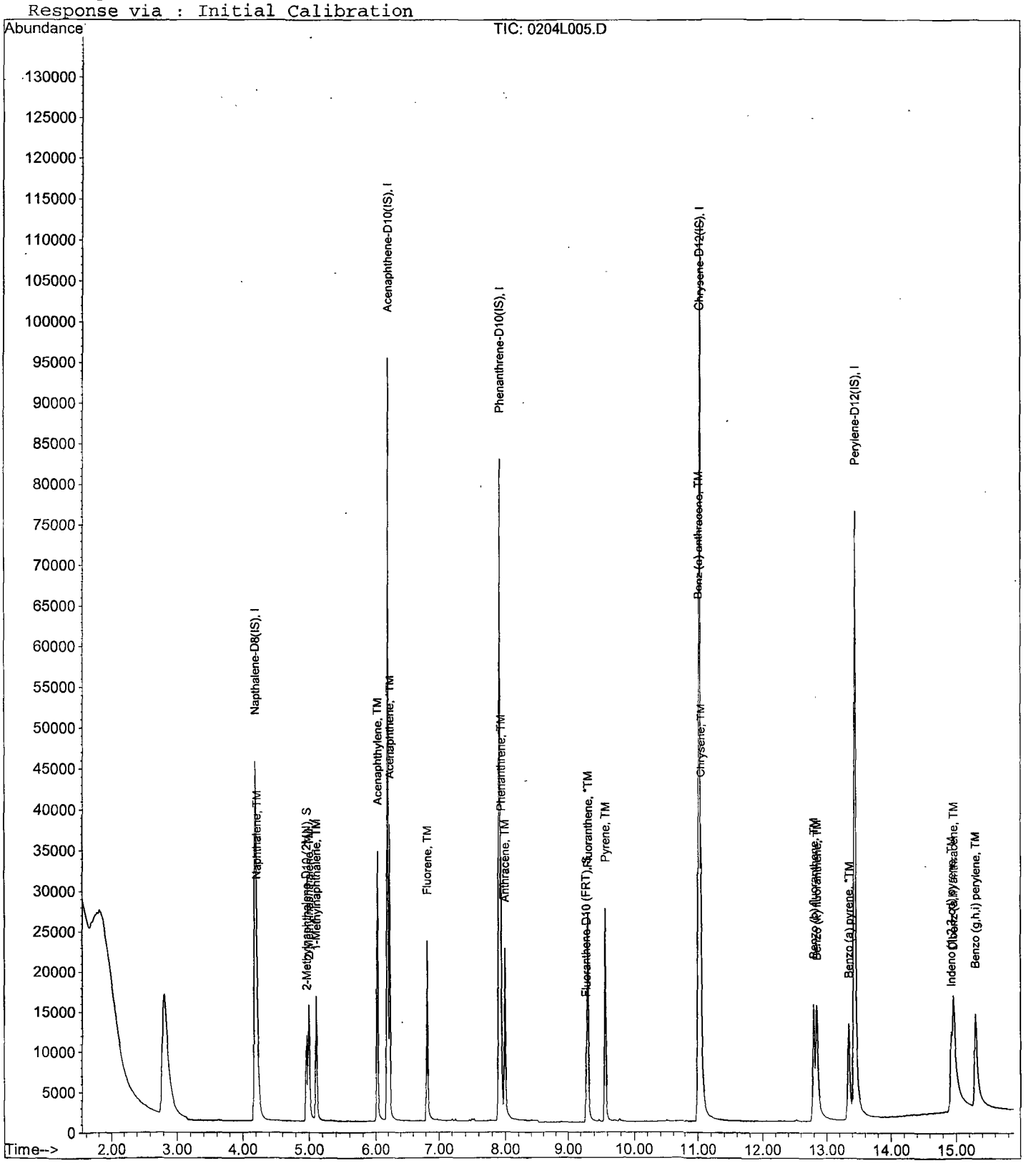
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L005.D Vial: 5
Acq On : 4 Feb 20 10:31 Operator: MA
Sample : 0.5 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L006.D Vial: 6
Acq On : 4 Feb 20 10:53 Operator: MA
Sample : 1 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:42:22 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	4.19	136	95074	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	6.18	164	50320	2.50000 ppb	0.00
10) Phenanthrene-D10(IS)	7.91	188	93982	2.50000 ppb	0.00
15) Chrysene-D12(IS)	11.01	240	115986	2.50000 ppb	0.00
20) Perylene-D12(IS)	13.43	264	130643	2.50000 ppb	0.00
System Monitoring Compounds					
3) 2-Methylnaphthalene-D10 (2	4.96	152	22777	0.48093 ppb	0.00
Spiked Amount 5.000			Recovery	= 9.620%	
13) Fluoranthene-D10 (FRT)	9.28	212	25468	0.38812 ppb	0.00
Spiked Amount 5.000			Recovery	= 7.760%	
Target Compounds					Qvalue
2) Naphthalene	4.21	128	41177	0.90039 ppb	100
4) 2-Methylnaphthalene	5.00	142	26456	0.95192 ppb	99
5) 1-Methylnaphthalene	5.11	142	27900	0.96864 ppb	98
7) Acenaphthylene	6.02	152	78337	0.85382 ppb	100
8) Acenaphthene	6.22	154	24913	0.92584 ppb	99
9) Fluorene	6.82	166	29892	0.90564 ppb	99
11) Phenanthrene	7.93	178	45036	0.86678 ppb	99
12) Anthracene	7.99	178	39270	0.86199 ppb	99
14) Fluoranthene	9.30	202	60200	0.83519 ppb	97
16) Pyrene	9.57	202	60381	0.77797 ppb	96
17) Benz (a) anthracene	11.00	228	49969	0.76984 ppb	99
18) Chrysene	11.04	228	63085	0.90659 ppb	99
19) Indeno (1,2,3-cd) pyrene	14.92	276	65048	0.93700 ppb	98
21) Benzo (b) fluoranthene	12.79	252	47971	0.73591 ppb	99
22) Benzo (k) fluoranthene	12.84	252	69126	0.95663 ppb	98
23) Benzo (a) pyrene	13.35	252	50746	0.82958 ppb	97
24) Dibenz (a,h) anthracene	14.96	278	54045	0.88973 ppb	97
25) Benzo (g,h,i) perylene	15.29	276	58422	0.88195 ppb	99

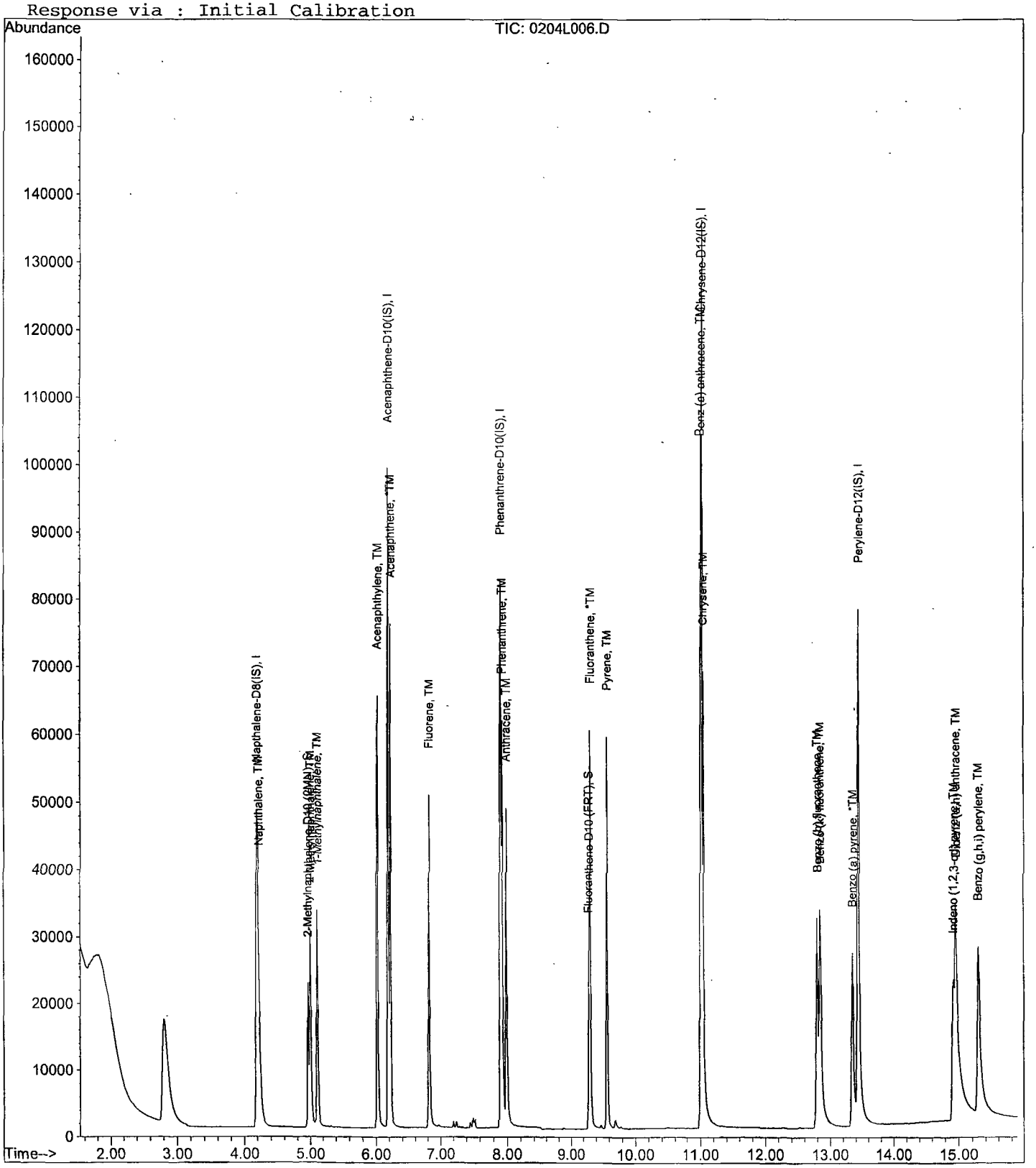
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L006.D Vial: 6
Acq On : 4 Feb 20 10:53 Operator: MA
Sample : 1 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L007.D Vial: 7
Acq On : 4 Feb 20 11:15 Operator: MA
Sample : 5 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:42:22 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.19	136	93559	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.18	164	49173	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.91	188	92273	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.01	240	120189	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.43	264	131131	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	4.96	152	117393	2.51887 ppb		0.00
Spiked Amount 5.000			Recovery	= 50.380%		
13) Fluoranthene-D10 (FRT)	9.28	212	137624	2.13617 ppb		0.00
Spiked Amount 5.000			Recovery	= 42.720%		
Target Compounds						Qvalue
2) Naphthalene	4.21	128	211249	4.69404 ppb		100
4) 2-Methylnaphthalene	5.00	142	139742	5.10952 ppb		100
5) 1-Methylnaphthalene	5.11	142	143640	5.06770 ppb		100
7) Acenaphthylene	6.02	152	431994	4.81826 ppb		100
8) Acenaphthene	6.22	154	128780	4.89745 ppb		100
9) Fluorene	6.82	166	160921	4.98915 ppb		100
11) Phenanthrene	7.93	178	238077	4.66698 ppb		100
12) Anthracene	7.99	178	213985	4.78406 ppb		100
14) Fluoranthene	9.30	202	335331	4.73840 ppb		100
16) Pyrene	9.57	202	333150	4.14232 ppb		100
17) Benz (a) anthracene	11.00	228	286178	4.25478 ppb		100
18) Chrysene	11.04	228	328507	4.55588 ppb		100
19) Indeno (1,2,3-cd) pyrene	14.91	276	378390	5.26003 ppb	#	100
21) Benzo (b) fluoranthene	12.79	252	299210	4.57302 ppb		100
22) Benzo (k) fluoranthene	12.84	252	366067	5.04713 ppb		100
23) Benzo (a) pyrene	13.34	252	295305	4.80957 ppb		100
24) Dibenz (a,h) anthracene	14.96	278	317098	5.20088 ppb		100
25) Benzo (g,h,i) perylene	15.28	276	334159	5.02577 ppb		100

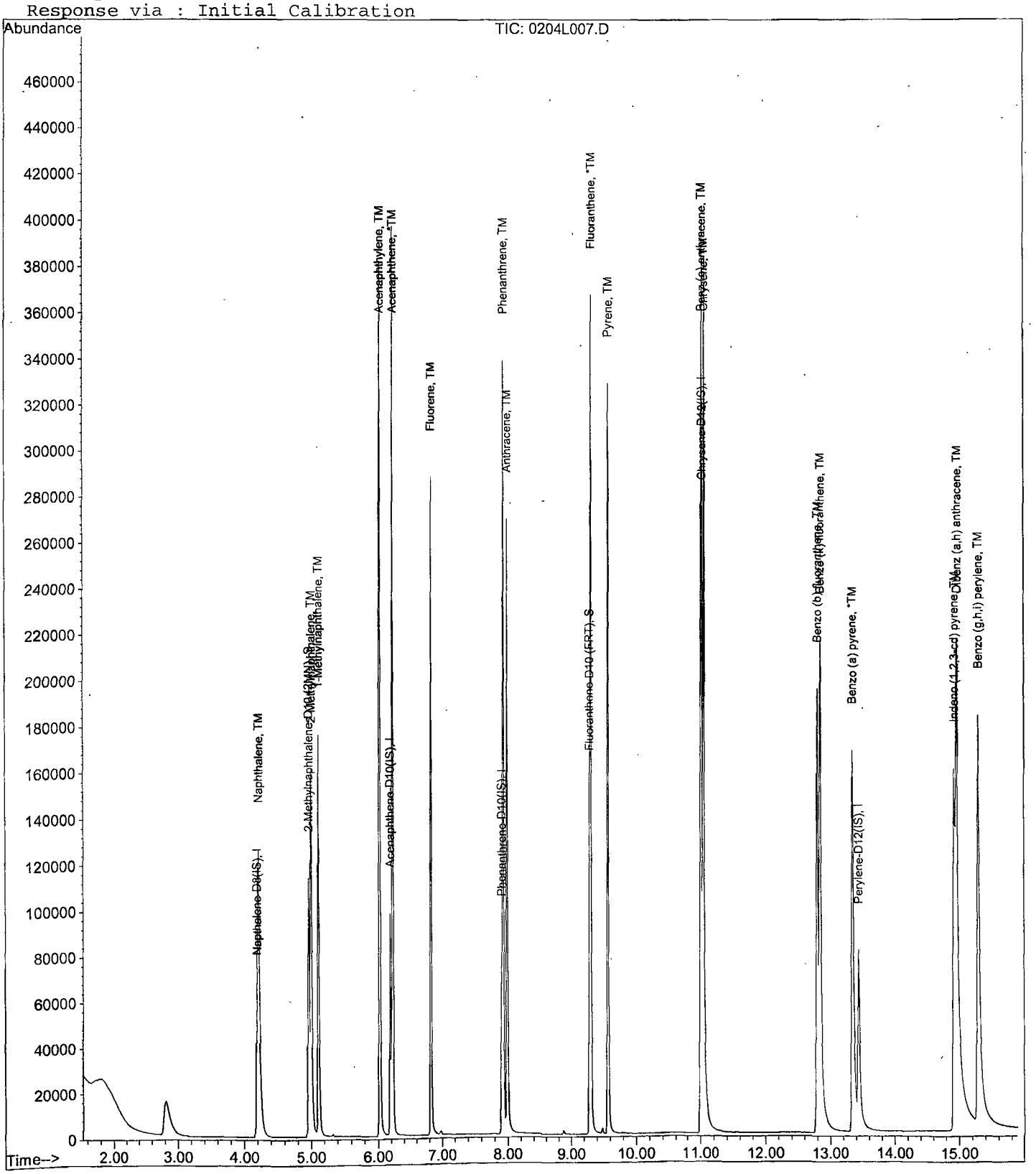
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L007.D Vial: 7
Acq On : 4 Feb 20 11:15 Operator: MA
Sample : 5 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L008.D Vial: 8
Acq On : 4 Feb 20 11:37 Operator: MA
Sample : 10 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:42:22 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.19	136	98020	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.18	164	51392	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.91	188	97154	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.01	240	126338	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.43	264	139162	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	4.96	152	238748	4.88961 ppb		0.00
Spiked Amount 5.000			Recovery	= 97.800%		
13) Fluoranthene-D10 (FRT)	9.28	212	286889	4.22932 ppb		0.00
Spiked Amount 5.000			Recovery	= 84.580%		
Target Compounds						Qvalue
2) Naphthalene	4.21	128	410435	8.70497 ppb		100
4) 2-Methylnaphthalene	5.00	142	272886	9.52368 ppb		99
5) 1-Methylnaphthalene	5.11	142	275593	9.28058 ppb		98
7) Acenaphthylene	6.02	152	845596	9.02415 ppb		99
8) Acenaphthene	6.22	154	250345	9.10944 ppb		98
9) Fluorene	6.82	166	318435	9.44639 ppb		99
11) Phenanthrene	7.93	178	468302	8.71883 ppb		100
12) Anthracene	7.99	178	427236	9.07184 ppb		100
14) Fluoranthene	9.30	202	648356	8.70132 ppb		99
16) Pyrene	9.57	202	660769	7.81599 ppb		100
17) Benz (a) anthracene	11.00	228	585928	8.28736 ppb		99
18) Chrysene	11.04	228	640149	8.44578 ppb		99
19) Indeno (1,2,3-cd) pyrene	14.92	276	770951	10.19544 ppb	#	94
21) Benzo (b) fluoranthene	12.79	252	603563	8.69229 ppb		99
22) Benzo (k) fluoranthene	12.84	252	740450	9.61977 ppb		99
23) Benzo (a) pyrene	13.35	252	605339	9.29007 ppb	#	96
24) Dibenz (a,h) anthracene	14.96	278	643860	9.95084 ppb		99
25) Benzo (g,h,i) perylene	15.28	276	676724	9.59060 ppb		97

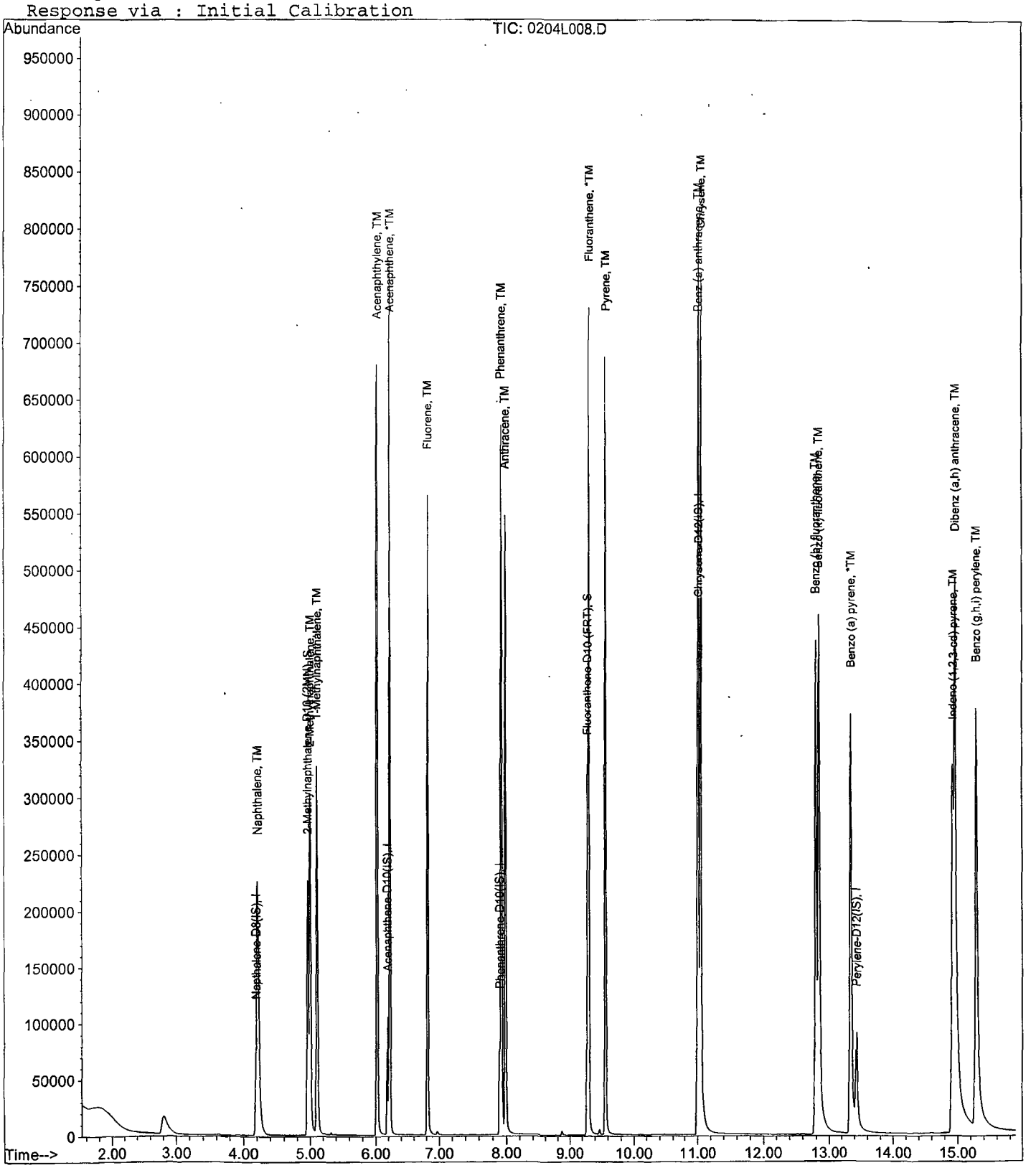
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L008.D Vial: 8
Acq On : 4 Feb 20 11:37 Operator: MA
Sample : 10 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L009.D Vial: 9
Acq On : 4 Feb 20 11:59 Operator: MA
Sample : 50 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 13:42 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:42:22 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.19	136	91741	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.18	164	48249	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.91	188	92859	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.02	240	119843	2.50000	ppb		0.01
20) Perylene-D12(IS)	13.43	264	135287	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	4.96	152	1082689	23.69132	ppb		0.00
Spiked Amount 5.000			Recovery = 473.820%				
13) Fluoranthene-D10 (FRT)	9.28	212	1334204	20.57858	ppb		0.00
Spiked Amount 5.000			Recovery = 411.580%				
Target Compounds							Qvalue
2) Naphthalene	4.21	128	1792980	40.63028	ppb		99
4) 2-Methylnaphthalene	5.00	142	1202511	44.83983	ppb		98
5) 1-Methylnaphthalene	5.11	142	1216206	43.75878	ppb		98
7) Acenaphthylene	6.02	152	3684033	41.87685	ppb		98
8) Acenaphthene	6.22	154	1114731	43.20461	ppb		98
9) Fluorene	6.82	166	1376652	43.49873	ppb		99
11) Phenanthrene	7.93	178	1932753	37.64827	ppb		97
12) Anthracene	7.99	178	1828963	40.63210	ppb		97
14) Fluoranthene	9.32	202	2749439	38.60579	ppb		97
16) Pyrene	9.58	202	2924684	36.46993	ppb		98
17) Benz (a) anthracene	11.01	228	2735399	40.78626	ppb		97
18) Chrysene	11.07	228	2813476	39.13121	ppb		97
19) Indeno (1,2,3-cd) pyrene	14.95	276	3717110	51.82101	ppb		98
21) Benzo (b) fluoranthene	12.82	252	3024809	44.80994	ppb		97
22) Benzo (k) fluoranthene	12.82	252	2960397	39.56247	ppb		97
23) Benzo (a) pyrene	13.36	252	2893742	45.68194	ppb		97
24) Dibenz (a,h) anthracene	14.99	278	3162117	50.27021	ppb	#	95
25) Benzo (g,h,i) perylene	15.32	276	3213468	46.84602	ppb		94

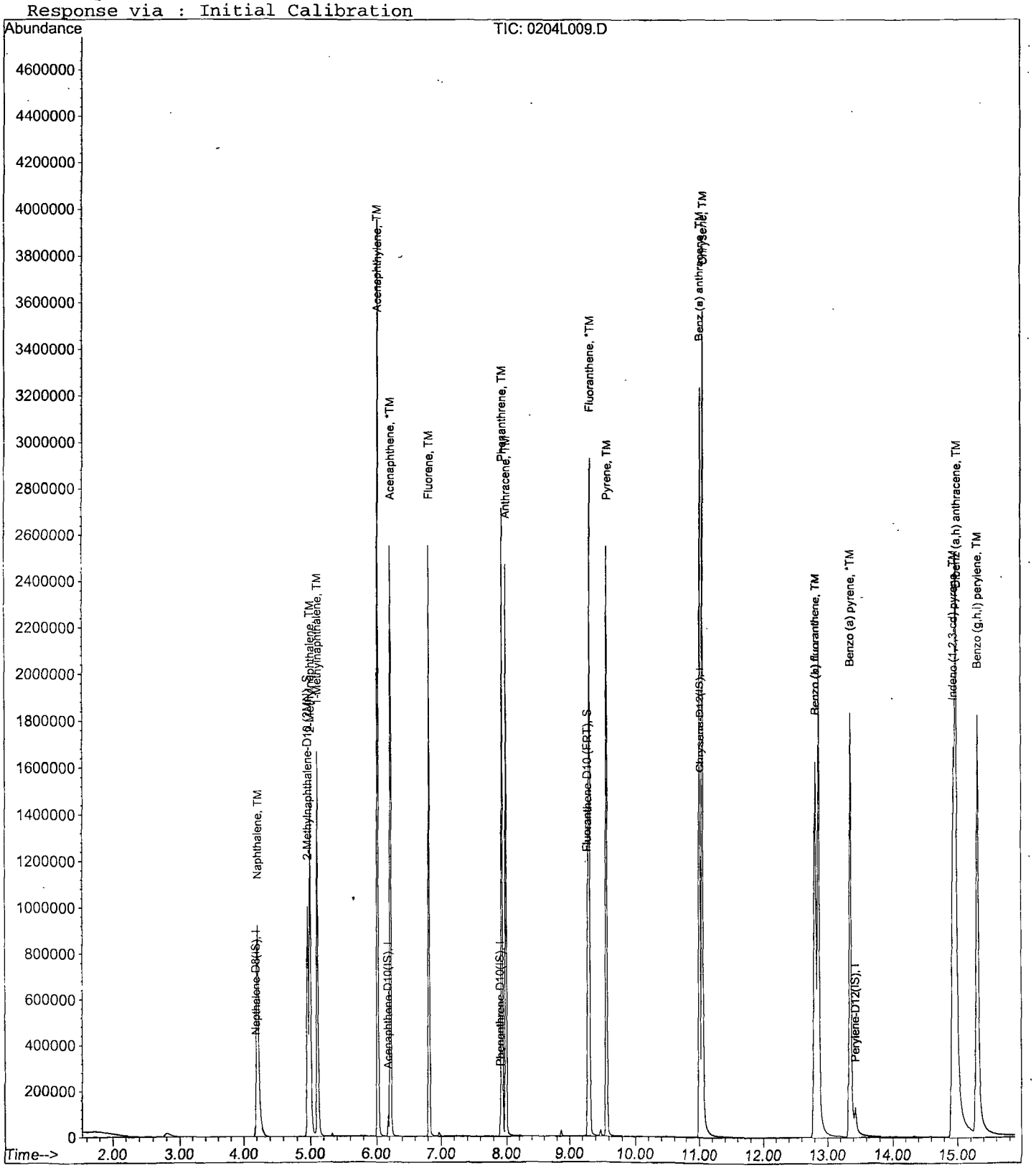
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L009.D Vial: 9
Acq On : 4 Feb 20 11:59 Operator: MA
Sample : 50 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 13:42 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L010.D Vial: 10
Acq On : 4 Feb 20 12:21 Operator: MA
Sample : 100 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:49 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:48:59 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.19	136	94154	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.18	164	49526	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.91	188	95687	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.03	240	125316	2.50000	ppb		0.02
20) Perylene-D12(IS)	13.45	264	141618	2.50000	ppb		0.01
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	4.96	152	2132841	47.06510	ppb		0.00
Spiked Amount 5.000			Recovery = 941.300%				
13) Fluoranthene-D10 (FRT)	9.29	212	2657919	48.74975	ppb		0.01
Spiked Amount 5.000			Recovery = 975.000%				
Target Compounds							Qvalue
2) Naphthalene	4.21	128	3515265	87.92823	ppb		98
4) 2-Methylnaphthalene	5.00	142	2314267	90.08958	ppb		99
5) 1-Methylnaphthalene	5.11	142	2325445	86.77018	ppb		99
7) Acenaphthylene	6.02	152	6802585	88.10489	ppb		97
8) Acenaphthene	6.23	154	2052134	84.22717	ppb		97
9) Fluorene	6.83	166	2744719	93.60760	ppb		100
11) Phenanthrene	7.94	178	3586911	80.58577	ppb		95
12) Anthracene	8.00	178	3368369	85.99155	ppb		95
14) Fluoranthene	9.33	202	5194710	85.53200	ppb		95
16) Pyrene	9.58	202	5580274	87.52935	ppb	#	84
17) Benz (a) anthracene	11.02	228	5418653	96.12929	ppb		94
18) Chrysene	11.08	228	5338591	81.34404	ppb		95
19) Indeno (1,2,3-cd) pyrene	14.99	276	7605000	103.10512	ppb	#	84
21) Benzo (b) fluoranthene	12.84	252	6397741	114.52991	ppb		95
22) Benzo (k) fluoranthene	12.90	252	6168270	86.51444	ppb		100
23) Benzo (a) pyrene	13.38	252	5827644	104.49972	ppb		95
24) Dibenz (a,h) anthracene	15.01	278	6436791	104.88555	ppb	#	94
25) Benzo (g,h,i) perylene	15.35	276	6483695	99.89693	ppb	#	93

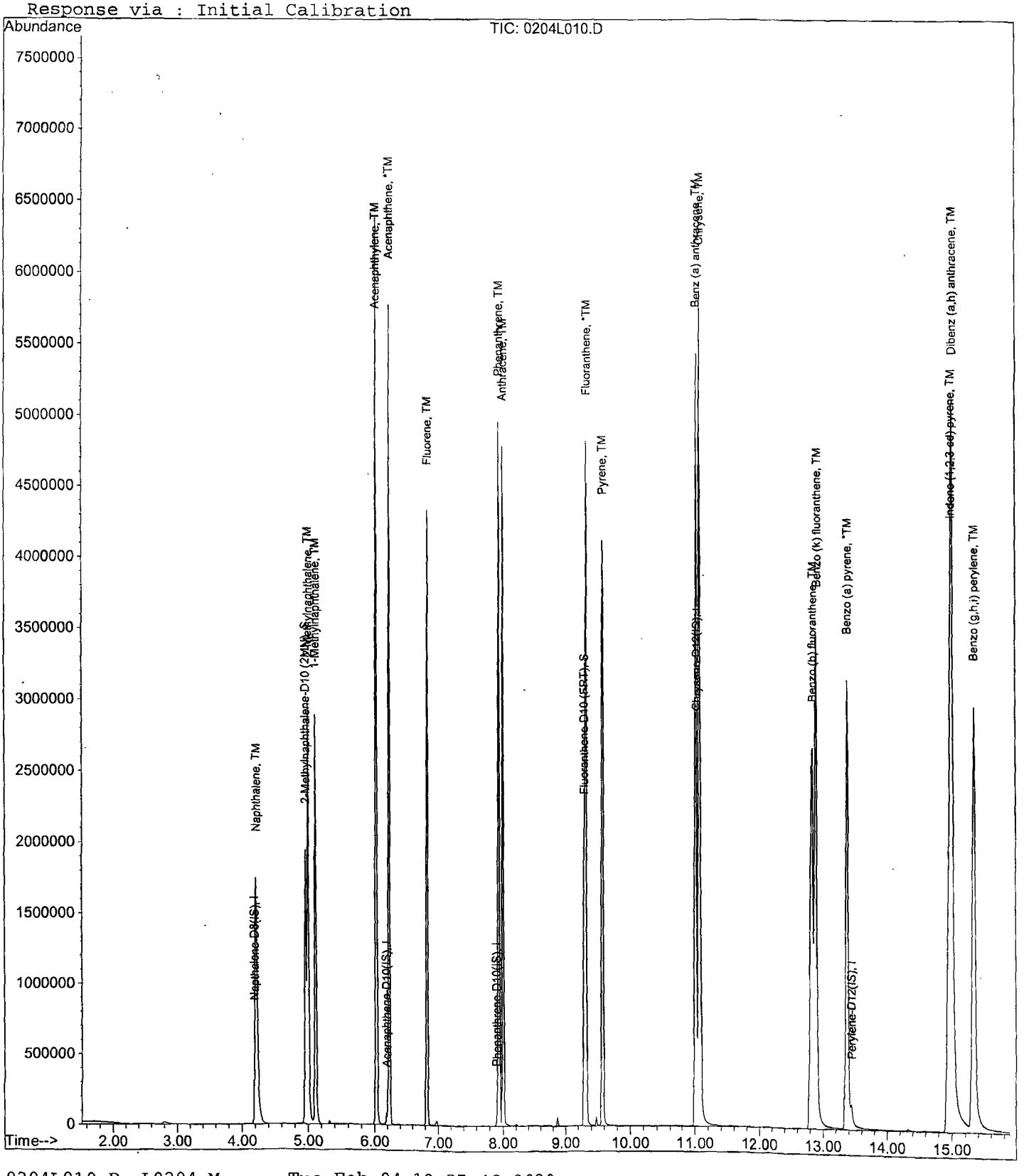
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L010.D Vial: 10
Acq On : 4 Feb 20 12:21 Operator: MA
Sample : 100 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:49 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration



PAH by GCMS SIM
EPA 8270 SIM

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 4 Feb 20 13:21
Instrument: Linus
Initial Cal. Date: 02/04/20
Data File: 0204L011.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	Naphthalene	1.062	1.033	2.7	TM	
2	TM	2-Methylnaphthalene	0.6821	0.6822	0.02	TM	
3	TM	1-Methylnaphthalene	0.7116	0.6901	3.0	TM	
4	TM	Acenaphthylene	3.897	3.871	0.68	TM	
5	*TM	Acenaphthene	1.230	1.178	4.2	*TM	
6	TM	Fluorene	1.480	1.459	1.5	TM	
7	TM	Phenanthrene	1.163	1.148	1.3	TM	
8	TM	Anthracene	1.023	1.104	7.8	TM	
9	*TM	Fluoranthene	1.587	1.568	1.2	*TM	
10	TM	Pyrene	1.272	1.242	2.3	TM	
11	TM	Benz (a) anthracene	1.125	1.066	5.2	TM	
12	TM	Chrysene	1.309	1.222	6.7	TM	
13	TM	Indeno (1,2,3-cd) pyrene	1.471	1.421	3.4	TM	
14	TM	Benzo (b) fluoranthene	0.9861	0.9690	1.7	TM	
15	TM	Benzo (k) fluoranthene	1.265	1.329	5.1	TM	
16	*TM	Benzo (a) pyrene	0.9845	1.048	6.4	*TM	
17	TM	Dibenz (a,h) anthracene	1.083	1.080	0.29	TM	
18	TM	Benzo (g,h,i) perylene	1.146	1.138	0.70	TM	
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
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31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			3.0		

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L011.D Vial: 11
Acq On : 4 Feb 20 13:21 Operator: MA
Sample : SS SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 13:39 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.19	136	96451	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.18	164	52672	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.91	188	97686	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.01	240	126057	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.43	264	136401	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	0.00	152	0d	0.00000 ppb		
Spiked Amount 5.000			Recovery	= 0.000%		
13) Fluoranthene-D10 (FRT)	0.00	212	0d	0.00000 ppb		
Spiked Amount 5.000			Recovery	= 0.000%		
Target Compounds						Qvalue
2) Naphthalene	4.21	128	199297	4.86635 ppb		100
4) 2-Methylnaphthalene	5.00	142	131606	5.00114 ppb		100
5) 1-Methylnaphthalene	5.11	142	133123	4.84897 ppb		100
7) Acenaphthylene	6.02	152	407798	4.96620 ppb		100
8) Acenaphthene	6.22	154	124072	4.78822 ppb		100
9) Fluorene	6.82	166	153651	4.92722 ppb		99
11) Phenanthrene	7.93	178	224305	4.93625 ppb		99
12) Anthracene	7.99	178	215622	5.39200 ppb		100
14) Fluoranthene	9.30	202	306319	4.94040 ppb		98
16) Pyrene	9.57	202	313161	4.88321 ppb		98
17) Benz (a) anthracene	11.00	228	268691	4.73868 ppb		100
18) Chrysene	11.05	228	308124	4.66728 ppb	#	96
19) Indeno (1,2,3-cd) pyrene	14.92	276	358273	4.82875 ppb	#	95
21) Benzo (b) fluoranthene	12.79	252	264332	4.91296 ppb		99
22) Benzo (k) fluoranthene	12.84	252	362562	5.25367 ppb		99
23) Benzo (a) pyrene	13.35	252	285781	5.32055 ppb		97
24) Dibenz (a,h) anthracene	14.96	278	294697	4.98566 ppb		98
25) Benzo (g,h,i) perylene	15.29	276	310388	4.96518 ppb		99

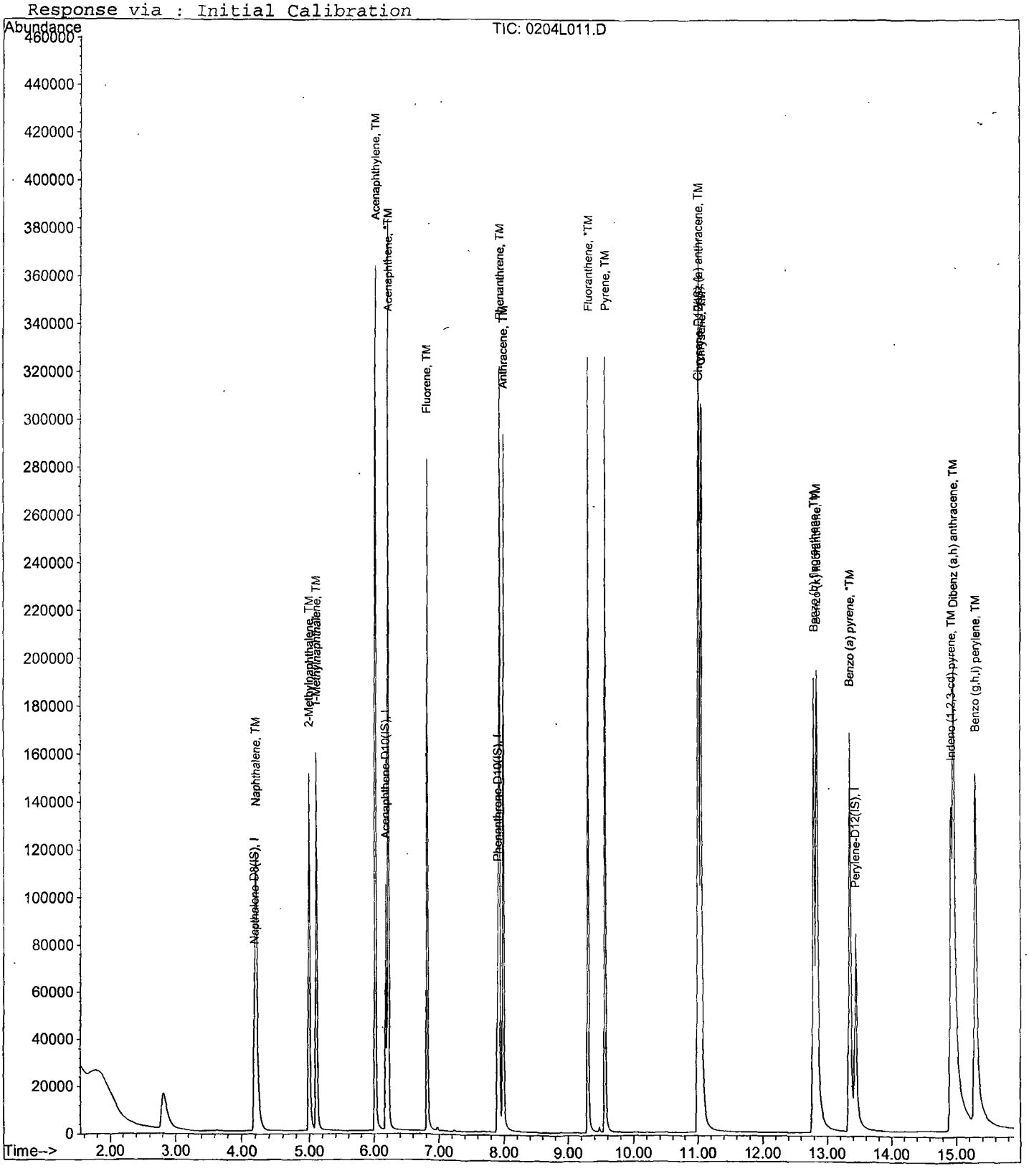
(#) = qualifier out of range (m) = manual integration
0204L011.D L0204.M Tue Feb 04 13:47:51 2020

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L011.D Vial: 11
Acq On : 4 Feb 20 13:21 Operator: MA
Sample : SS SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 13:39 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration



PAH by GCMS SIM
EPA 8270 SIM

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 03/16/20
Instrument: Linus
Initial Cal. Date: 02/04/20
Data File: 0204L282.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	TM	Naphthalene	1.062	1.008	5.0	TM	
3	S	2-Methylnaphthalene-D10 (2MN)	1.203	1.256	4.4	S	
4	TM	2-Methylnaphthalene	0.6821	0.6990	2.5	TM	
5	TM	1-Methylnaphthalene	0.7116	0.7006	1.6	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	TM	Acenaphthylene	3.897	3.832	1.7	TM	
8	*TM	Acenaphthene	1.230	1.147	6.8	*TM	
9	TM	Fluorene	1.480	1.456	1.7	TM	
10	I	Phenanthrene-D10(IS)	ISTD			I	
11	TM	Phenanthrene	1.163	1.081	7.0	TM	
12	TM	Anthracene	1.023	0.9898	3.3	TM	
13	S	Fluoranthene-D10 (FRT)	1.424	1.408	1.2	S	
14	*TM	Fluoranthene	1.587	1.530	3.6	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.272	1.171	7.9	TM	
17	TM	Benz (a) anthracene	1.125	1.155	2.7	TM	
18	TM	Chrysene	1.309	1.162	11	TM	
19	TM	Indeno (1,2,3-cd) pyrene	1.471	1.593	8.3	TM	
20	I	Perylene-D12(IS)	ISTD			I	
21	TM	Benzo (b) fluoranthene	0.9861	1.041	5.6	TM	
22	TM	Benzo (k) fluoranthene	1.265	1.121	11	TM	
23	*TM	Benzo (a) pyrene	0.9845	0.9970	1.3	*TM	
24	TM	Dibenz (a,h) anthracene	1.083	1.122	3.5	TM	
25	TM	Benzo (g,h,i) perylene	1.146	1.119	2.3	TM	
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			4.6		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L282.D Vial: 82
Acq On : 16 Mar 20 14:34 Operator: MA
Sample : 5 SIM 02/03/20 (1) Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Mar 16 15:02 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.14	136	109106	2.50000 ppb		-0.01
6) Acenaphthene-D10(IS)	6.14	164	61700	2.50000 ppb		-0.01
10) Phenanthrene-D10(IS)	7.87	188	121780	2.50000 ppb		-0.01
15) Chrysene-D12(IS)	10.98	240	162122	2.50000 ppb		-0.02
20) Perylene-D12(IS)	13.40	264	197605	2.50000 ppb		-0.01
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	4.91	152	137005	2.60896 ppb		0.00
Spiked Amount 5.000			Recovery	= 52.180%		
13) Fluoranthene-D10 (FRT)	9.25	212	171429	2.47054 ppb		0.00
Spiked Amount 5.000			Recovery	= 49.420%		
Target Compounds						Qvalue
2) Naphthalene	4.17	128	219991	4.74860 ppb		99
4) 2-Methylnaphthalene	4.95	142	152529	5.12394 ppb		99
5) 1-Methylnaphthalene	5.07	142	152870	4.92240 ppb		96
7) Acenaphthylene	5.99	152	472841	4.91574 ppb		100
8) Acenaphthene	6.18	154	141498	4.66171 ppb		98
9) Fluorene	6.78	166	179625	4.91732 ppb		99
11) Phenanthrene	7.89	178	263288	4.64778 ppb		99
12) Anthracene	7.95	178	241083	4.83593 ppb		98
14) Fluoranthene	9.27	202	372558	4.81990 ppb		96
16) Pyrene	9.53	202	379781	4.60464 ppb		96
17) Benz (a) anthracene	10.97	228	374432	5.13454 ppb		99
18) Chrysene	11.01	228	376658	4.43620 ppb	#	95
19) Indeno (1,2,3-cd) pyrene	14.89	276	516632	5.41411 ppb	#	88
21) Benzo (b) fluoranthene	12.75	252	411419	5.27834 ppb		100
22) Benzo (k) fluoranthene	12.79	252	443147	4.43249 ppb		99
23) Benzo (a) pyrene	13.30	252	394043	5.06391 ppb		98
24) Dibenz (a,h) anthracene	14.92	278	443294	5.17677 ppb		99
25) Benzo (g,h,i) perylene	15.25	276	442306	4.88397 ppb	#	96

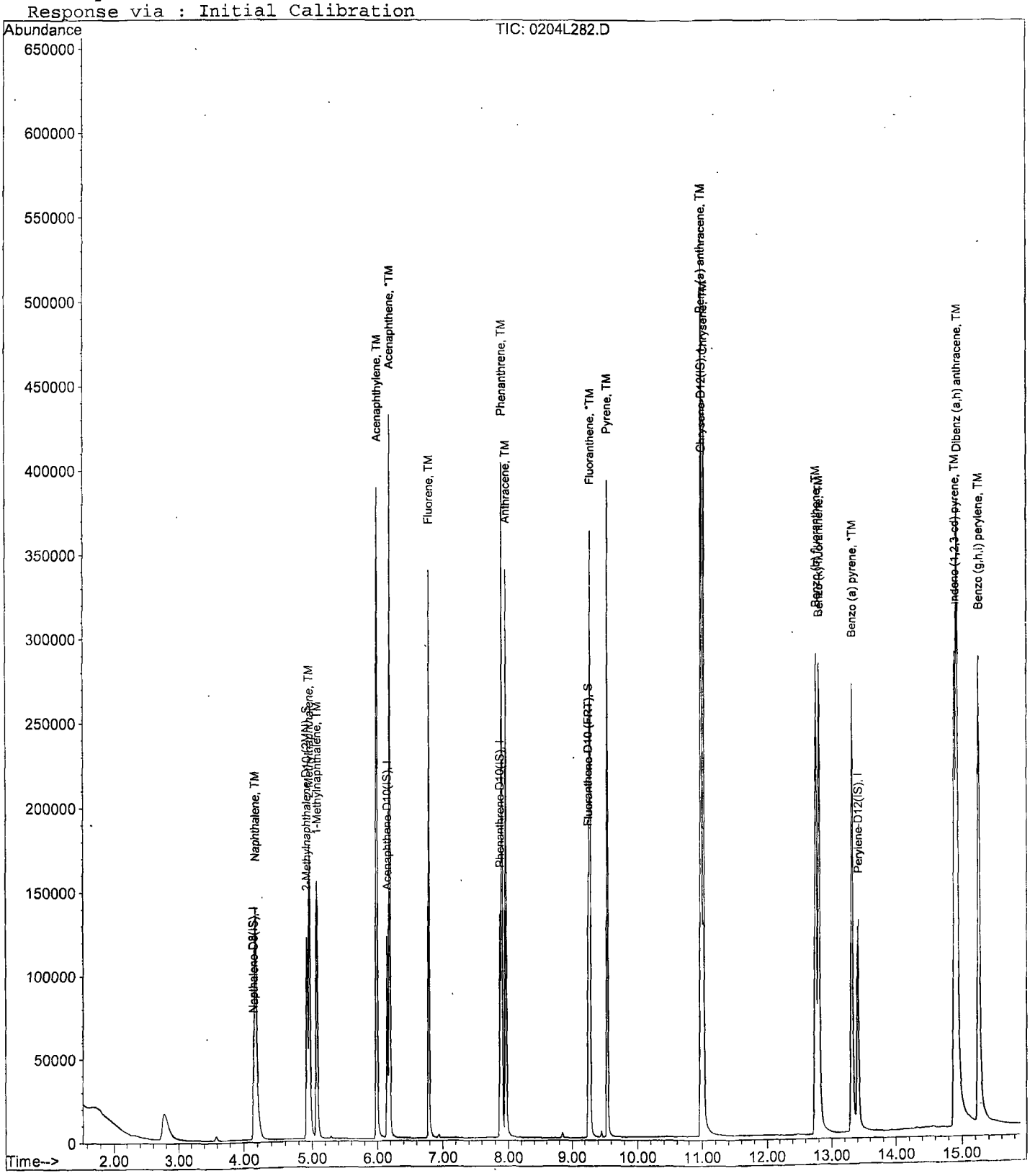
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L282.D Vial: 82
Acq On : 16 Mar 20 14:34 Operator: MA
Sample : 5 SIM 02/03/20 (1) Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Mar 16 15:02 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration



PAH by GCMS SIM
EPA 8270 SIM

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 03/17/20
Instrument: Linus
Initial Cal. Date: 02/04/20
Data File: 0204L308.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	TM	Naphthalene	1.062	1.033	2.7	TM	
3	S	2-Methylnaphthalene-D10 (2MN)	1.203	1.305	8.4	S	
4	TM	2-Methylnaphthalene	0.6821	0.7154	4.9	TM	
5	TM	1-Methylnaphthalene	0.7116	0.7245	1.8	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	TM	Acenaphthylene	3.897	3.905	0.18	TM	
8	*TM	Acenaphthene	1.230	1.141	7.2	*TM	
9	TM	Fluorene	1.480	1.491	0.76	TM	
10	I	Phenanthrene-D10(IS)	ISTD			I	
11	TM	Phenanthrene	1.163	1.069	8.1	TM	
12	TM	Anthracene	1.023	0.9752	4.7	TM	
13	S	Fluoranthene-D10 (FRT)	1.424	1.405	1.4	S	
14	*TM	Fluoranthene	1.587	1.489	6.1	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.272	1.163	8.6	TM	
17	TM	Benz (a) anthracene	1.125	1.156	2.8	TM	
18	TM	Chrysene	1.309	1.138	13	TM	
19	TM	Indeno (1,2,3-cd) pyrene	1.471	1.477	0.38	TM	
20	I	Perylene-D12(IS)	ISTD			I	
21	TM	Benzo (b) fluoranthene	0.9861	1.086	10	TM	
22	TM	Benzo (k) fluoranthene	1.265	1.054	17	TM	
23	*TM	Benzo (a) pyrene	0.9845	0.9778	0.68	*TM	
24	TM	Dibenz (a,h) anthracene	1.083	1.055	2.6	TM	
25	TM	Benzo (g,h,i) perylene	1.146	1.030	10	TM	
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			5.6		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L308.D Vial: 8
Acq On : 17 Mar 20 00:33 Operator: MA
Sample : 5 SIM 02/03/20 (2) Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Mar 17 9:21 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.15	136	105231	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.14	164	61442	2.50000	ppb		-0.01
10) Phenanthrene-D10(IS)	7.87	188	125563	2.50000	ppb		-0.01
15) Chrysene-D12(IS)	10.98	240	164789	2.50000	ppb		-0.02
20) Perylene-D12(IS)	13.39	264	198107	2.50000	ppb		-0.02
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	4.93	152	137316	2.71117	ppb		0.00
Spiked Amount 5.000			Recovery = 54.220%				
13) Fluoranthene-D10 (FRT)	9.25	212	176433	2.46605	ppb		0.00
Spiked Amount 5.000			Recovery = 49.320%				
Target Compounds							Qvalue
2) Naphthalene	4.18	128	217423	4.86599	ppb		100
4) 2-Methylnaphthalene	4.96	142	150564	5.24418	ppb		96
5) 1-Methylnaphthalene	5.07	142	152470	5.09031	ppb		97
7) Acenaphthylene	5.99	152	479807	5.00911	ppb		100
8) Acenaphthene	6.18	154	140263	4.64042	ppb		98
9) Fluorene	6.78	166	183257	5.03781	ppb		99
11) Phenanthrene	7.89	178	268377	4.59488	ppb		99
12) Anthracene	7.95	178	244907	4.76462	ppb		99
14) Fluoranthene	9.27	202	374000	4.69278	ppb		98
16) Pyrene	9.53	202	383213	4.57106	ppb		98
17) Benz (a) anthracene	10.97	228	381001	5.14007	ppb		99
18) Chrysene	11.01	228	374965	4.34478	ppb	#	96
19) Indeno (1,2,3-cd) pyrene	14.88	276	486825	5.01917	ppb	#	99
21) Benzo (b) fluoranthene	12.74	252	430456	5.50858	ppb	#	98
22) Benzo (k) fluoranthene	12.79	252	417796	4.16833	ppb		100
23) Benzo (a) pyrene	13.30	252	387408	4.96603	ppb	#	96
24) Dibenz (a,h) anthracene	14.92	278	418007	4.86910	ppb		98
25) Benzo (g,h,i) perylene	15.25	276	408201	4.49596	ppb	#	97

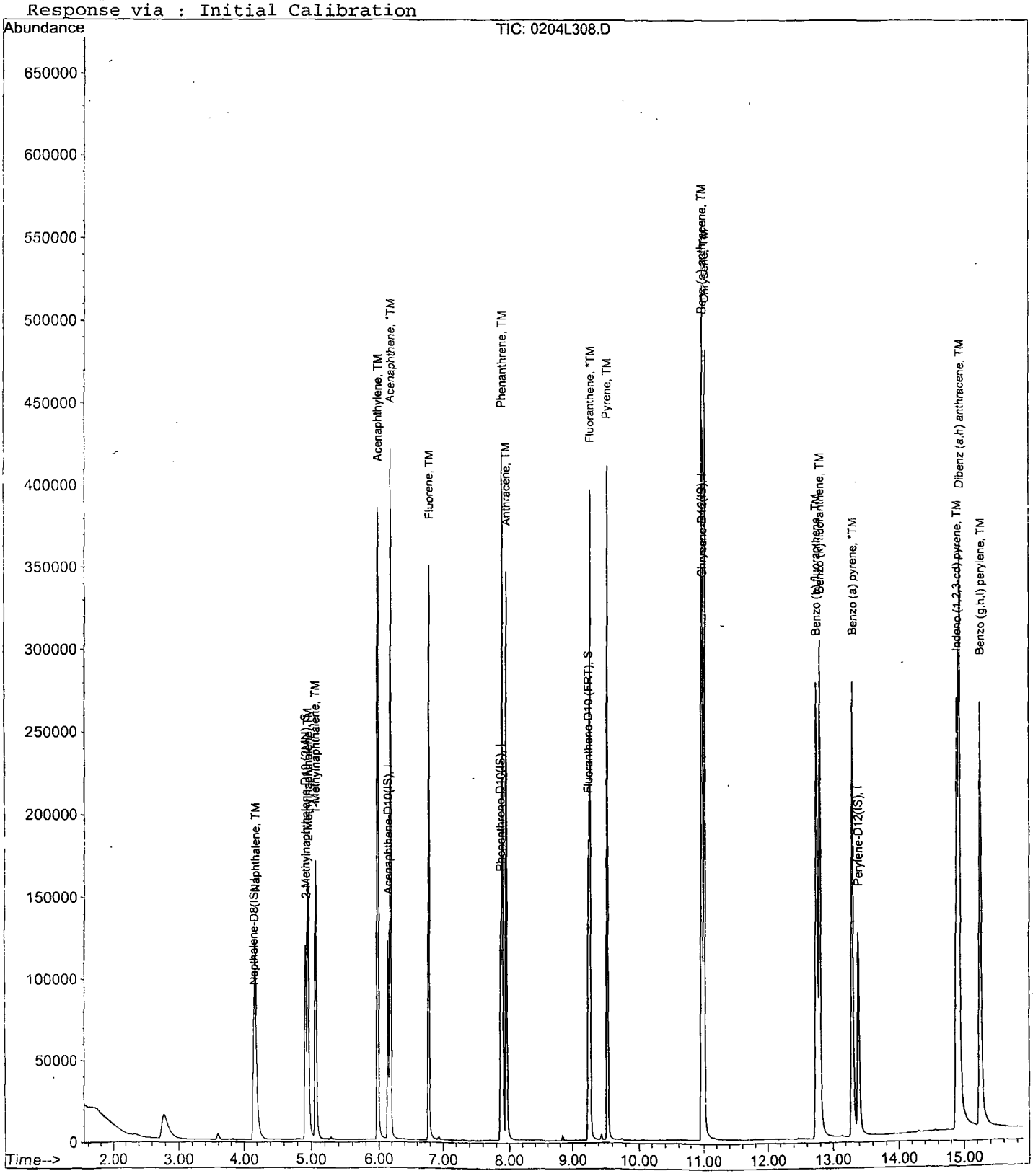
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L308.D Vial: 8
Acq On : 17 Mar 20 00:33 Operator: MA
Sample : 5 SIM 02/03/20 (2) Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Mar 17 9:21 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration



ORGANICS
Raw Data

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L288.D Vial: 88
Acq On : 16 Mar 20 17:14 Operator: MA
Sample : BA08370W21 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Mar 16 17:37 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	4.15	136	88736	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	6.14	164	50828	2.50000 ppb	-0.01
10) Phenanthrene-D10(IS)	7.87	188	99572	2.50000 ppb	-0.01
15) Chrysene-D12(IS)	10.98	240	134150	2.50000 ppb	-0.02
20) Perylene-D12(IS)	13.40	264	163973	2.50000 ppb	-0.01
System Monitoring Compounds					
3) 2-Methylnaphthalene-D10 (2	4.91	152	200596	5.87100 ppb	0.00
Spiked Amount 6.250			Recovery =	93.936%	
13) Fluoranthene-D10 (FRT)	9.25	212	277333	6.11024 ppb	0.00
Spiked Amount 6.250			Recovery =	97.760%	

Target Compounds Qvalue

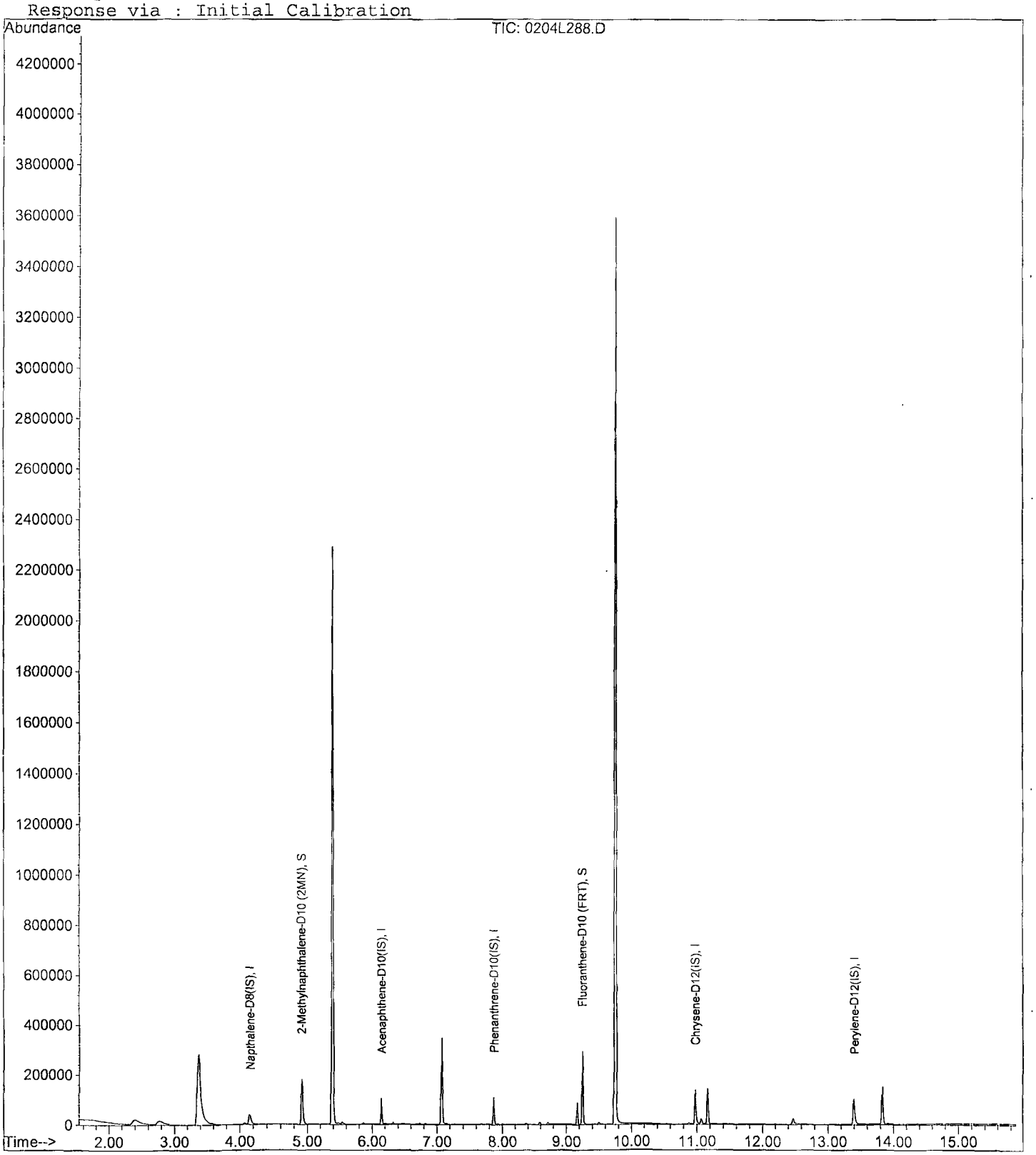
(#) = qualifier out of range (m) = manual integration
0204L288.D L0204.M Tue Mar 17 13:39:18 2020 Page 1

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L288.D Vial: 88
Acq On : 16 Mar 20 17:14 Operator: MA
Sample : BA08370W21 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Mar 16 17:37 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L289.D Vial: 89
Acq On : 16 Mar 20 17:36 Operator: MA
Sample : BA08371W14 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Mar 17 9:55 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	4.15	136	90558	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	6.14	164	52149	2.50000	ppb	-0.01
10) Phenanthrene-D10(IS)	7.87	188	100600	2.50000	ppb	-0.01
15) Chrysene-D12(IS)	10.98	240	136261	2.50000	ppb	-0.02
20) Perylene-D12(IS)	13.40	264	163795	2.50000	ppb	-0.01
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	4.91	152	201350	5.77450	ppb	0.00
Spiked Amount 6.250			Recovery = 92.384%			
13) Fluoranthene-D10 (FRT)	9.25	212	271813	5.92742	ppb	0.00
Spiked Amount 6.250			Recovery = 94.832%			

Target Compounds Qvalue

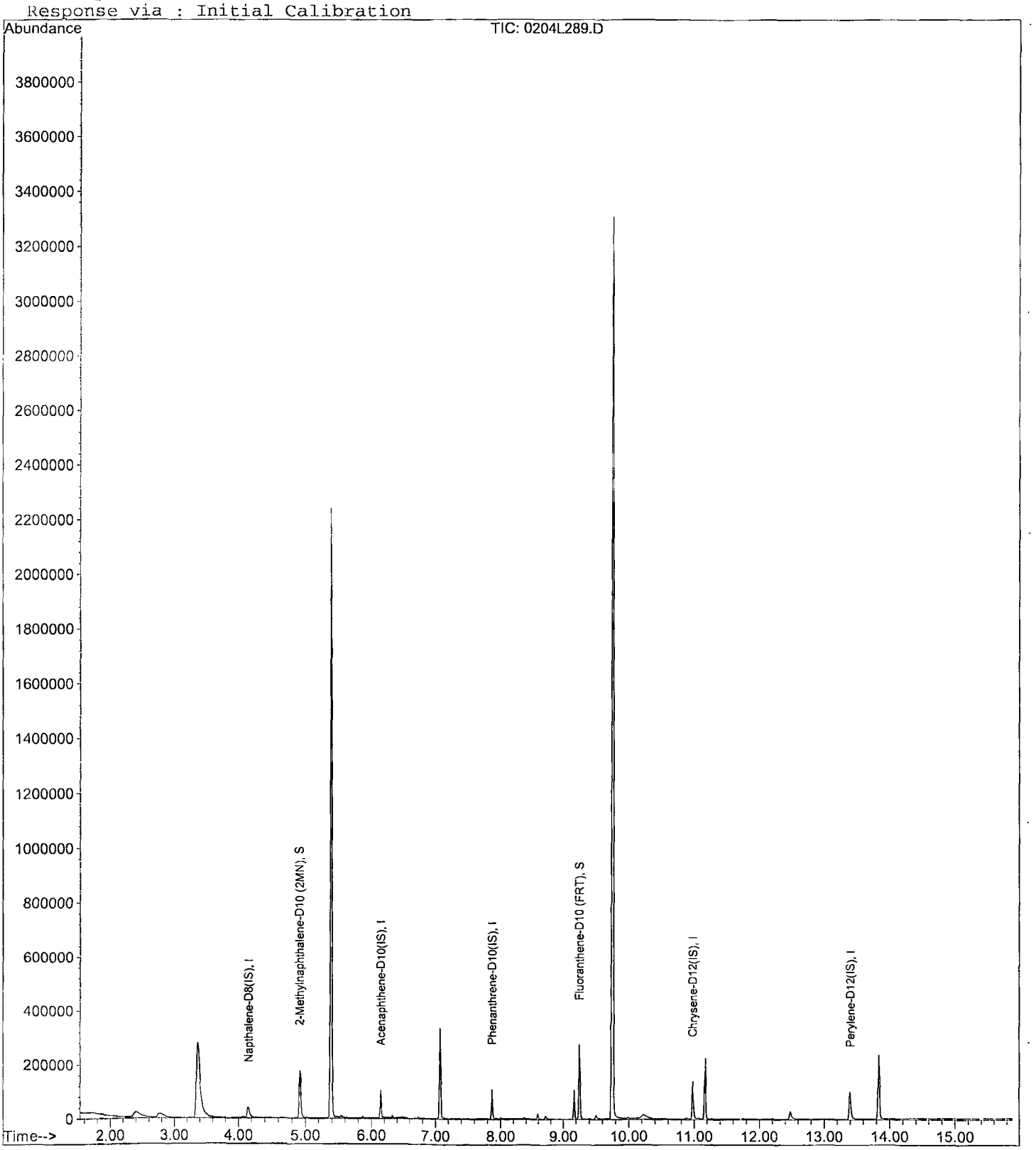
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L289.D Vial: 89
Acq On : 16 Mar 20 17:36 Operator: MA
Sample : BA08371W14 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Mar 17 9:55 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L283.D Vial: 83
Acq On : 16 Mar 20 15:24 Operator: MA
Sample : 200312A BLK 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Mar 16 17:24 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Napthalene-D8(IS)	4.15	136	93874	2.50000	ppb	0.00
6) Acenaphthene-D10(IS)	6.14	164	53274	2.50000	ppb	-0.01
10) Phenanthrene-D10(IS)	7.87	188	104028	2.50000	ppb	-0.01
15) Chrysene-D12(IS)	10.99	240	138970	2.50000	ppb	-0.01
20) Perylene-D12(IS)	13.40	264	160818	2.50000	ppb	-0.01
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	4.93	152	208487	5.76797	ppb	0.00
Spiked Amount 6.250			Recovery = 92.288%			
13) Fluoranthene-D10 (FRT)	9.26	212	279568	5.89564	ppb	0.00
Spiked Amount 6.250			Recovery = 94.336%			

Target Compounds Qvalue

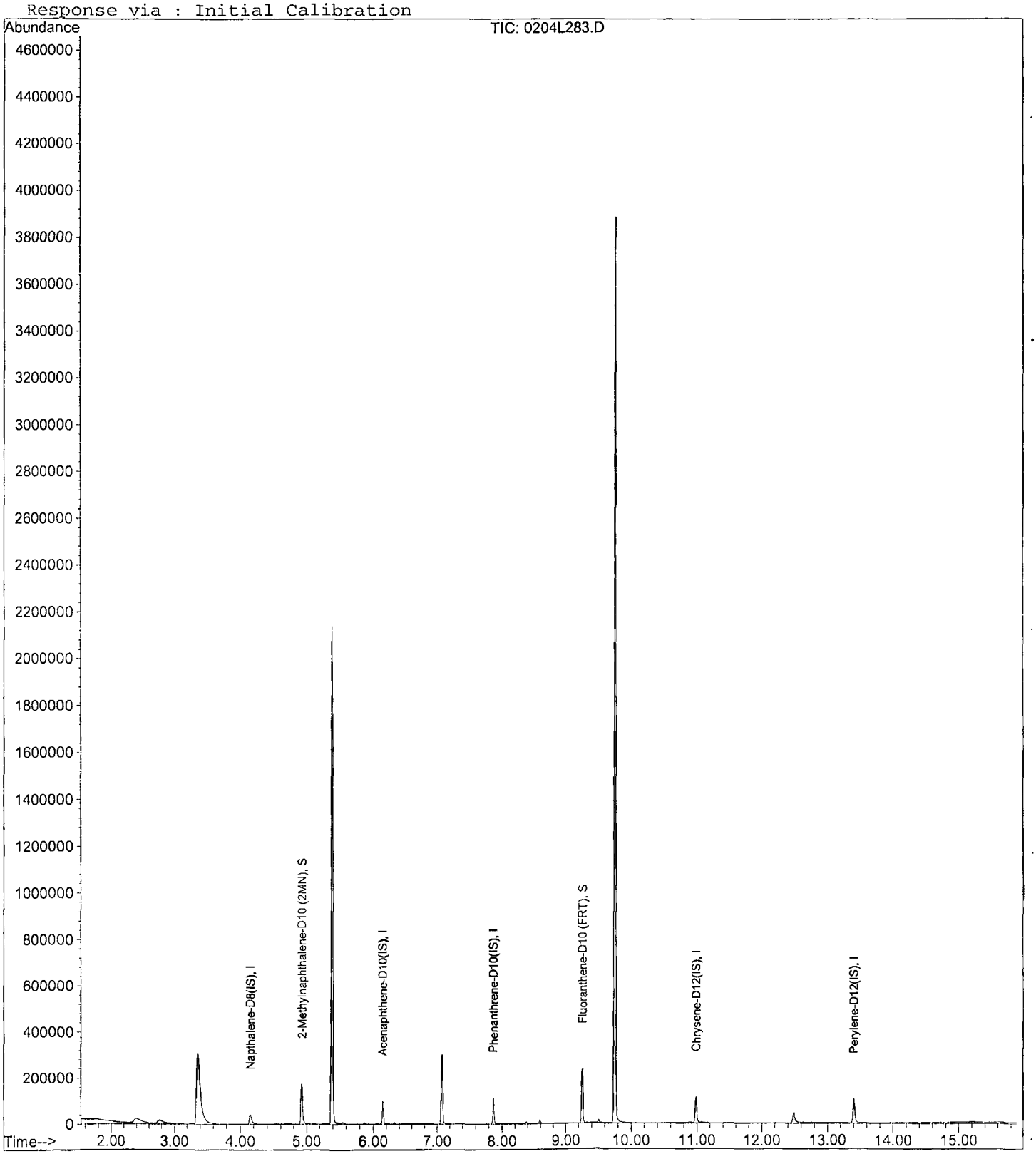
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L283.D Vial: 83
Acq On : 16 Mar 20 15:24 Operator: MA
Sample : 200312A BLK 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Mar 16 17:24 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L284.D Vial: 84
Acq On : 16 Mar 20 15:46 Operator: MA
Sample : 200312A LCS-2 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Mar 16 16:04 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.14	136	90182	2.50000	ppb		-0.01
6) Acenaphthene-D10(IS)	6.14	164	51325	2.50000	ppb		-0.01
10) Phenanthrene-D10(IS)	7.87	188	101366	2.50000	ppb		-0.01
15) Chrysene-D12(IS)	10.98	240	133947	2.50000	ppb		-0.02
20) Perylene-D12(IS)	13.40	264	158987	2.50000	ppb		-0.01
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	4.91	152	204851	5.89940	ppb		0.00
Spiked Amount 6.250			Recovery = 94.384%				
13) Fluoranthene-D10 (FRT)	9.25	212	267019	5.77888	ppb		0.00
Spiked Amount 6.250			Recovery = 92.464%				
Target Compounds							Qvalue
2) Naphthalene	4.17	128	161053	5.25736	ppb		100
4) 2-Methylnaphthalene	4.95	142	107474	5.46001	ppb		99
5) 1-Methylnaphthalene	5.06	142	110038	5.35841	ppb		99
7) Acenaphthylene	5.98	152	337331	5.26983	ppb		98
8) Acenaphthene	6.18	154	103103	5.10425	ppb		96
9) Fluorene	6.78	166	134641	5.53866	ppb		100
11) Phenanthrene	7.89	178	200825	5.32385	ppb		99
12) Anthracene	7.95	178	172244	5.18861	ppb		99
14) Fluoranthene	9.27	202	279837	5.43680	ppb		100
16) Pyrene	9.53	202	286557	5.25645	ppb		100
17) Benz (a) anthracene	10.97	228	280850	5.82670	ppb		98
18) Chrysene	11.01	228	282619	5.03598	ppb	#	97
19) Indeno (1,2,3-cd) pyrene	14.88	276	381869	6.05451	ppb		100
21) Benzo (b) fluoranthene	12.75	252	317469	6.32791	ppb		100
22) Benzo (k) fluoranthene	12.79	252	321427	4.99492	ppb		99
23) Benzo (a) pyrene	13.30	252	256674	5.12473	ppb	#	96
24) Dibenz (a,h) anthracene	14.92	278	330254	5.99185	ppb		98
25) Benzo (g,h,i) perylene	15.25	276	329709	5.65623	ppb		97

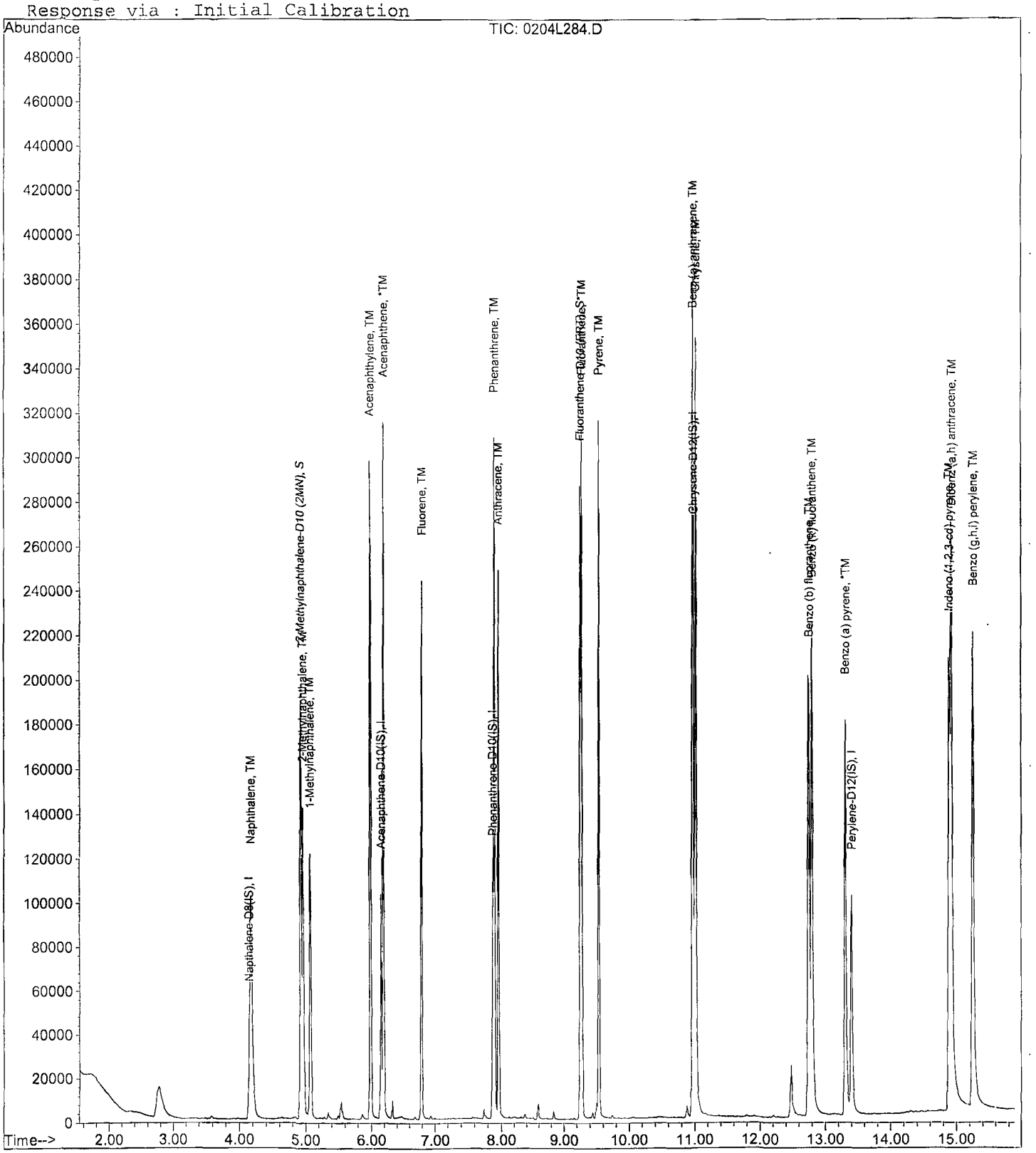
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L284.D Vial: 84
Acq On : 16 Mar 20 15:46 Operator: MA
Sample : 200312A LCS-2 1/800 Inst : Linus
Misc : Multiplr: 1.25

Quant Time: Mar 16 16:04 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration

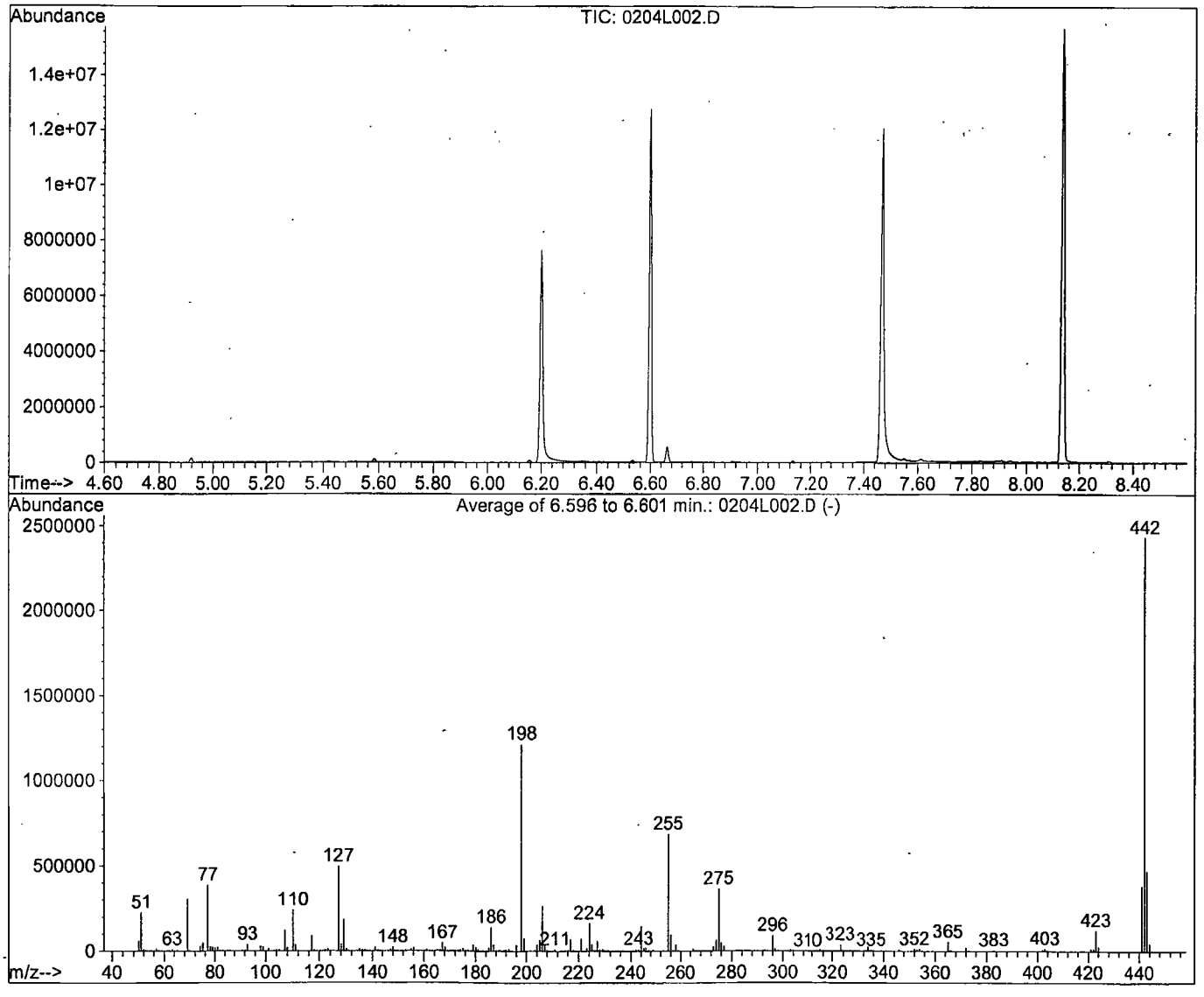


DFTPP

Data File : M:\LINUS\DATA\L200204\0204L002.D
Acq On : 4 Feb 20 9:32
Sample : SV Tune 10/01/19
Misc :

Vial: 2
Operator: MA
Inst : Linus
Multiplr: 1.00

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270



AutoFind: Scans 1611, 1612, 1613; Background Corrected with Scan 1602

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	18.6	226705	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.4	1215	PASS
127	198	10	80	40.9	497237	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	1216619	PASS
199	198	5	9	6.3	77030	PASS
275	198	10	60	30.0	364907	PASS
365	198	1	100	4.7	56864	PASS
441	442	0.01	24	15.8	386027	PASS
442	198	50	500	200.3	2437461	PASS
443	442	15	24	19.3	470891	PASS

Data File Name:	**0204L002.D**
Data File Path:	**M:\LINUS\DATA\L200204**
Operator:	**MA**
Date Acquired:	**4 Feb 20 9:32**
Method File:	**DFTPP2.M**
Sample Name:	**SV Tune 10/01/19**
Vial Number:	**2**
Instrument Name:	**Linus**

#	Name	Ret Time	Target Response
1)	DDT	8.16	112940000
2)	DDD	7.91	651825
3)	DDE	7.63	587422

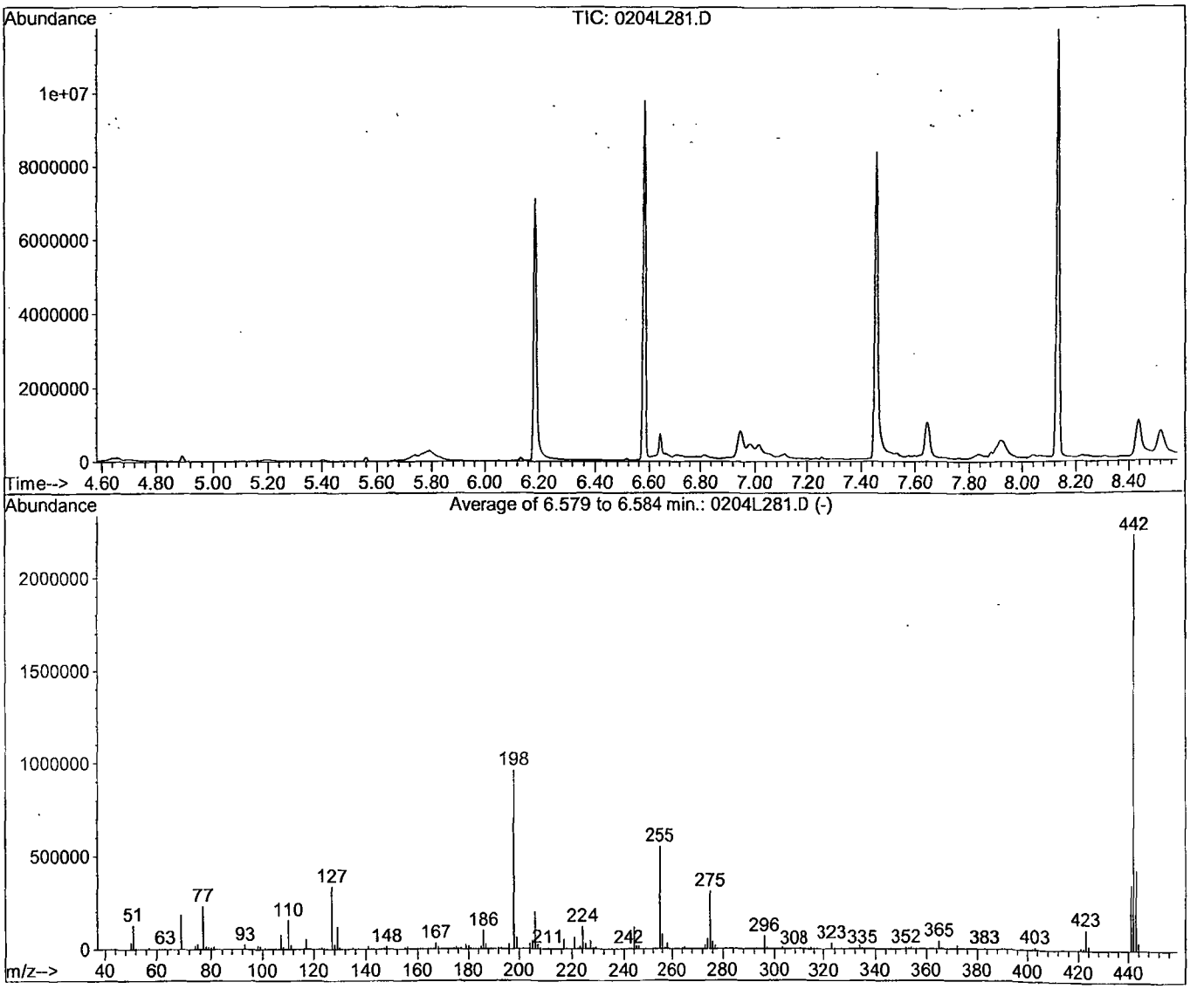
Breakdown **1.09**

DFTPP

Data File : M:\LINUS\DATA\L200204\0204L281.D
Acq On : 16 Mar 20 14:15
Sample : SV TUNE 10/01/19
Misc :

Vial: 81
Operator: MA
Inst : Linus
Multiplr: 1.00

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270



AutoFind: Scans 1604, 1605, 1606; Background Corrected with Scan 1593

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	13.5	130048	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.6	1046	PASS
127	198	10	80	34.8	335279	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	962880	PASS
199	198	5	9	6.4	62003	PASS
275	198	10	60	32.2	309739	PASS
365	198	1	100	4.6	44496	PASS
441	442	0.01	24	15.6	348501	PASS
442	198	50	500	231.7	2230955	PASS
443	442	15	24	19.1	426411	PASS

0204L281.D L0204.M Mon Mar 16 14:59:48 2020

Data File Name:	**0204L281.D**
Data File Path:	**M:\LINUS\DATA\L200204**
Operator:	**MA**
Date Acquired:	**16 Mar 2020 14:15**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/01/19**
Vial Number:	**81**
Instrument Name:	**Linus**

#	Name	Ret Time	Target Response
1)	DDT	8.16	86686800
2)	DDD	7.88	1461450
3)	DDE	7.62	0

Breakdown **1.66**

Name of Final Standard: SIM Curve
Prep'd By (Initials): MA
Prep Date: 02/03/20
Exp Date: 08/10/20

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
1.0 ug/mL SIM	APPL	1.0 ug/mL SIM	1.0 ug/mL	02/03/20	08/10/20	10 uL	100uL	MC 59130 90uL	0.1 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	10/28/19	10/28/20	2 uL	"	"	2.5ug/mL
1.0 ug/mL SIM	APPL	1.0 ug/mL SIM	1.0 ug/mL	02/03/20	08/10/20	20 uL	100uL	MC 59130 80uL	0.2 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	10/28/19	10/28/20	2 uL	"	"	2.5ug/mL
5.0 ug/mL SIM	APPL	5.0 ug/mL SIM	5.0 ug/mL	02/03/20	08/10/20	10 uL	100uL	MC 59130 90uL	0.5 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	10/28/19	10/28/20	2 uL	"	"	2.5ug/mL
5.0 ug/mL SIM	APPL	5.0 ug/mL SIM	5.0 ug/mL	02/03/20	08/10/20	20 uL	100uL	MC 59130 80 uL	1.0 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	10/28/19	10/28/20	2 uL	"	"	2.5ug/mL
SIM STOCK	APPL	PAH SIM STOCK	200 ug/mL	08/10/19	08/10/20	5 uL	200uL	MC 59130 190 uL	5.0 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	12/17/19	12/17/20	5 uL	"	"	2.5ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	10/28/19	10/28/20	4 uL	"	"	2.5ug/mL
SIM STOCK	APPL	PAH SIM STOCK	200 ug/mL	08/10/19	08/10/20	5 uL	100 uL	MC 59130 80 uL	10 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	12/17/19	12/17/20	5 uL	"	"	5 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	10/28/19	10/28/20	2 uL	"	"	2.5ug/mL
SIM STOCK	APPL	PAH SIM STOCK	200	08/10/19	08/10/20	25 uL	100uL	MC 59130 50 uL	50 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	12/17/19	12/17/20	25 uL	"	"	25 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	10/28/19	10/28/20	2 uL	"	"	2.5ug/mL
SIM STOCK	APPL	PAH SIM STOCK	200 ug/mL	08/10/19	08/10/20	50 uL	100uL	na	100 ug/mL
SIM SURROGATE	APPL	SIM SURR	100 ug/mL	12/17/19	12/17/20	50 uL	"	"	50 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	10/28/19	10/28/20	2 uL	"	"	2.5ug/mL

Name of Final Standard: 8270 PAH SIM Second Source
Prep'd By (Initials): MA
Prep Date: 02/03/20
Exp Date: 10/28/20

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
PAH SIM SS Stock	Phenova	AL0-130490	200 ug/mL	CL13117-40623. Open 7/24/19	12/31/22	5 uL	200uL	MC 59130 195uL	5 ug/mL
SIM Internal Standard	APPL	SIM Internal Standard	125 ug/mL	10/28/19	10/28/20	4 uL	"	"	2.5ug/mL

Name of Final Standard	**PAH SIM Stock (Ampule)**
Prep Date	**08/10/19**
Exp Date	**08/10/20**

Prep'd By (I **MA**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Custom PAH SIM Mix	Phenova	ALO-130490	200 ug/mL	**CL13121-41102**	**08/10/20**	1000 uL	1mL	**NA**	200ug/mL

Name of Final Standard	**SIM Surrogate**
Prep Date	**12/17/19**
Exp Date	**12/17/20**

Prep'd By (Initials) **MA**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Sim Surrogate Deuterated	Restek	33913	2000 ug/mL	**A0149554-41363,41364, 41365,41366**	**04/30/25**	2500 uL	50 mL	**Acetone #0231086**	100 ug/mL

Name of Final Standard	**8270 SIM PAH Internal Standard**
Prep Date	**10/28/19**
Exp Date	**10/28/20**

Prep'd By (Initials) **MA**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
SV Internal Standard	Restek	31206	2000 ug/mL	**A0151843-49414**	**07/35/25**	625uL	10mL	**MC 59130**	125 ug/mL

Name of Final Standard	**SIM Spike**
Prep Date	**12/19/19**
Exp Date	**11/31/20**

Prep'd By (Initials) **GA**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Custom PAH Sim Mix	Phenova	AL0-130490	200 ug/mL	CL13121- 41222 41223 41256 41257 41258 41259	11/13/20 12/31/22	5 mL	25 mL	Acetone 0231086	40 ug/mL

LIQ003

Organic Extraction Worksheet

Method	Continuous Liquid/Liquid SVOC 3520C	Extraction Set	200312A	Extraction Method	LIQ003	Units	mL

Spiked ID 1	8270T Spike 1-29-20 1-29-21		Surrogate ID 1	8270 Surrogate 11-19-19 11-19-20	
Spiked ID 2	Sim Spike 12-19-19 11-13-20		Surrogate ID 2	SIM Surrogate 12-17-19 12-17-20	
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	03/12/20 15:00	
Spiked ID 8			Ext. End Time:	03/13/20 9:00	
			GC Requires Extract By:		

pH1	2	03/12/20 13:05	Water Bath Temp 1 °C	77/76.9 E-WB6 °
pH2	2	03/12/20 14:15	Water Bath Temp 2 °C	
pH3	14	03/13/20 12:05	Water Bath Temp 3 °C	

Spiked By: DL **Date** 03/12/20 **Witnessed By:** CFM **Date** 03/12/20

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	200312A Blk				1,0.050	1,2	800	1	2/1	03/12/20 12:55	
						equip	E-HP51 E-WB6				
2	200312A LCS-1		1	1	1	1	800	1	2/1	03/12/20 12:55	
						equip	E-HP50 E-WB6				
3	200312A LCS-2		0.125	2	0.050	2	800	1	2/1	03/12/20 12:55	
						equip	E-HP49 E-WB6				
4	BA08341 MS-1	BA08341W36	1	1	1	1	800	1	2/1	03/12/20 14:08	91638
						equip	E-HP26 E-WB6				
5	BA08341 MSD-1	BA08341W42	1	1	1	1	800	1	2/1	03/12/20 14:08	91638
						equip	E-HP27 E-WB6				
6	BA08341 MS-2	BA08341W47	0.125	2	0.050	2	800	1	2/1	03/12/20 14:08	91638
						equip	E-HP28 E-WB6				
7	BA08341 MSD-2	BA08341W39	0.125	2	0.050	2	800	1	2/1	03/12/20 14:08	91638
						equip	E-HP29 E-WB6				
8	BA08341	BA08341W41			1,0.05	1,2	800	1	2/1	03/12/20 14:08	91638
						equip	E-HP25 E-WB6				
9	BA08370	BA08370W21			1,0.050	1,2	800	1	2/1	03/12/20 12:55	91653
						equip	E-HP48 E-WB6				
10	BA08371	BA08371W14			1,0.050	1,2	800	1	2/1	03/12/20 12:55	91653
						equip	E-HP47 E-WB6				

Solvent and Lot#	
PH Strips	HC998032
Dichloromethane (DCM)	59239
1+1 H2SO4	2-26-20
10N NaOH	3-2-20
Filter Paper	400171
Na2SO4	2019020631

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	MA
Date	3/16/20
Time	2:00 pm
Refrigerator	GC-C

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL
Concentration	ERR

Modified	03/16/20 2:45:49 PM

Reviewed By: KY **Date** 03/16/20

Injection Log

Directory: M:\LINUS\DATA\L200204\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
2	0204L002.D	1	SV Tune 10/01/19		4 Feb 20 9:32
3	0204L003.D	1	0.1 SIM 02/03/20		4 Feb 20 9:48
4	0204L004.D	1	0.2 SIM 02/03/20		4 Feb 20 10:09
5	0204L005.D	1	0.5 SIM 02/03/20		4 Feb 20 10:31
6	0204L006.D	1	1 SIM 02/03/20		4 Feb 20 10:53
7	0204L007.D	1	5 SIM 02/03/20		4 Feb 20 11:15
8	0204L008.D	1	10 SIM 02/03/20		4 Feb 20 11:37
9	0204L009.D	1	50 SIM 02/03/20		4 Feb 20 11:59
10	0204L010.D	1	100 SIM 02/03/20		4 Feb 20 12:21
11	0204L011.D	1	SS SIM 02/03/20		4 Feb 20 13:21
81	0204L281.D	1	SV TUNE 10/01/19		16 Mar 20 14:15
82	0204L282.D	1	5 SIM 02/03/20 (1)		16 Mar 20 14:34
83	0204L283.D	1.25	200312A BLK 1/800		16 Mar 20 15:24
84	0204L284.D	1.25	200312A LCS-2 1/800		16 Mar 20 15:46
88	0204L288.D	1.25	BA08370W21 1/800		16 Mar 20 17:14
89	0204L289.D	1.25	BA08371W14 1/800		16 Mar 20 17:36
8	0204L308.D	1	5 SIM 02/03/20 (2)		17 Mar 20 00:33

ORGANICS
Calibration Data

2MEE
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 01/22/20
Matrix: Instrument: Yoda
Initials:

		Compound	0122Y003.D	0122Y004.D	0122Y005.D	0122Y006.D	0122Y007.D	0122Y008.D	0122Y009.D	0122Y010.D			Avg	%RSD	Type	r^2	Q	MRF
1	I	1,4-dichlorobenzene-D4(IS)																
2	TM	2-(2-Methoxyethoxy)ethanol	0.1821	0.2585	0.2387	0.2203	0.2137	0.2203	0.2856	0.2603			0.23	14	TM			
3	I	Napthalene-D8(IS)																
4	I	Acenaphthene-D10(IS)																
5	I	Phenanthrene-D10(IS)																
6	I	Chrysene-D12(IS)																
7	I	Perylene-D12(IS)																
8																		
9																		
10																		
11																		
12																		
13																		
14																		
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34																		
35																		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y003.D Vial: 3
Acq On : 22 Jan 20 15:46 Operator: MA,SS
Sample : 50ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.15	152	171017	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.56	136	665562	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.59	164	409494	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.31	188	788135	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.39	240	679346	40.00000	ppb	0.00
7) Perylene-D12(IS)	15.12	264	699262	40.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.33	45	38926	38.75395	ppb	99

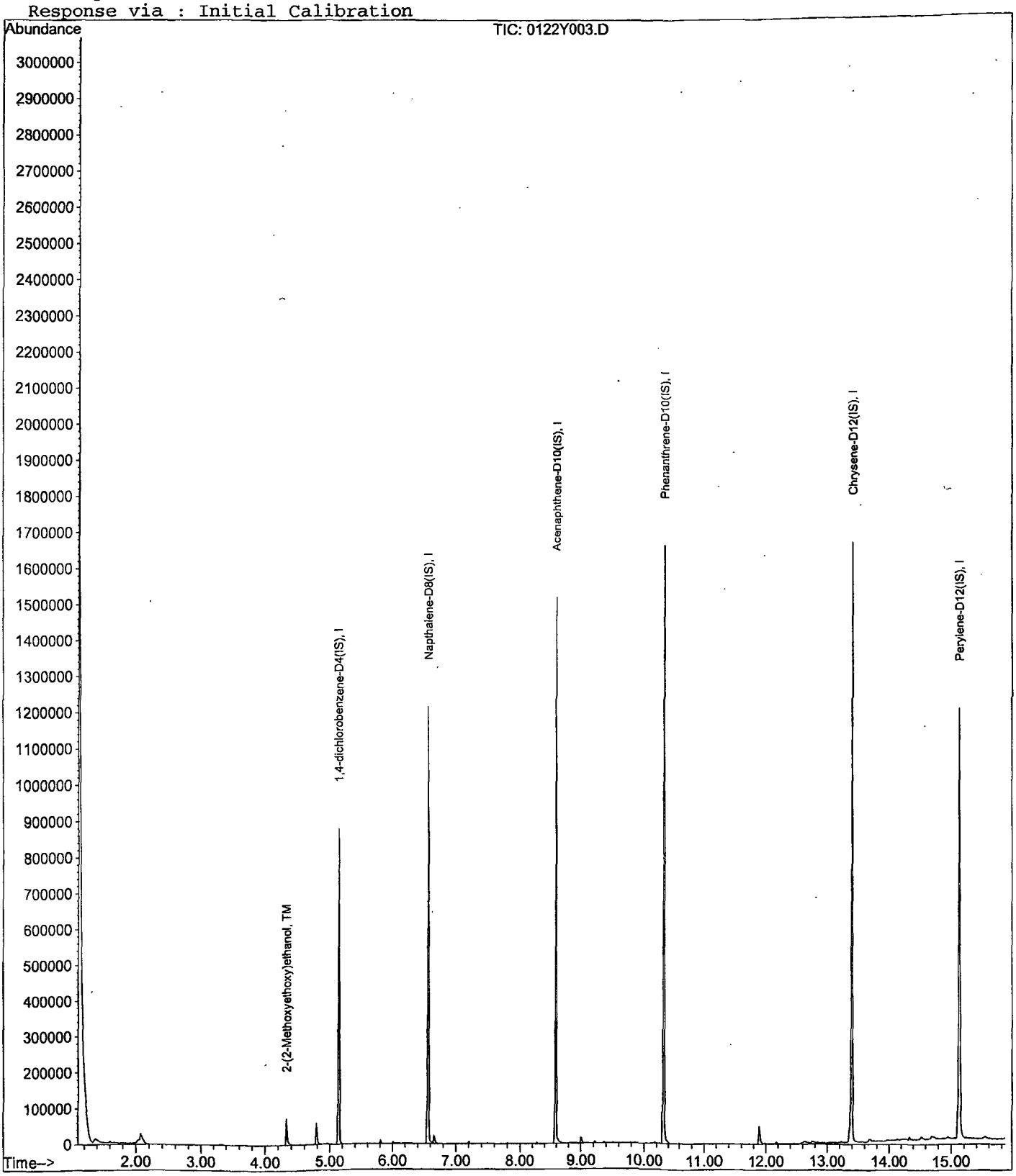
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y003.D Vial: 3
Acq On : 22 Jan 20 15:46 Operator: MA,SS
Sample : 50ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y004.D Vial: 4
Acq On : 22 Jan 20 16:10 Operator: MA,SS
Sample : 100ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.15	152	158778	40.00000 ppb	0.00
3) Napthalene-D8(IS)	6.57	136	642353	40.00000 ppb	0.00
4) Acenaphthene-D10(IS)	8.58	164	393654	40.00000 ppb	0.00
5) Phenanthrene-D10(IS)	10.31	188	759584	40.00000 ppb	0.00
6) Chrysene-D12(IS)	13.39	240	664524	40.00000 ppb	0.00
7) Perylene-D12(IS)	15.12	264	676233	40.00000 ppb	0.00

System Monitoring Compounds

Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.32	45	102613	110.03417 ppb	98

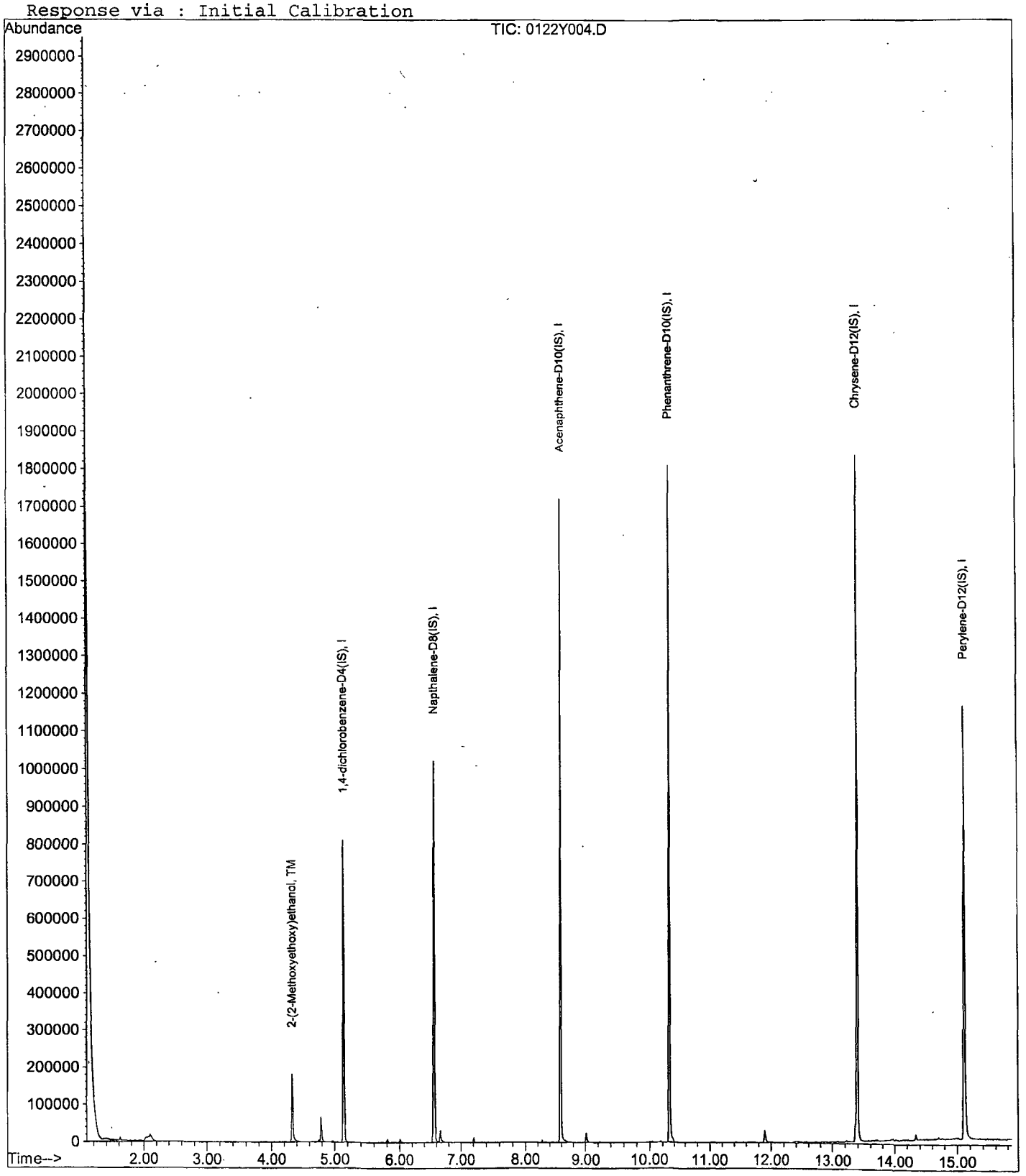
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y004.D Vial: 4
Acq On : 22 Jan 20 16:10 Operator: MA,SS
Sample : 100ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y005.D Vial: 5
Acq On : 22 Jan 20 16:33 Operator: MA,SS
Sample : 200ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.15	152	155385	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.57	136	636024	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.58	164	388934	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.31	188	754620	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.39	240	621602	40.00000	ppb	0.00
7) Perylene-D12(IS)	15.12	264	626915	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.33	45	185455	203.20994	ppb	100

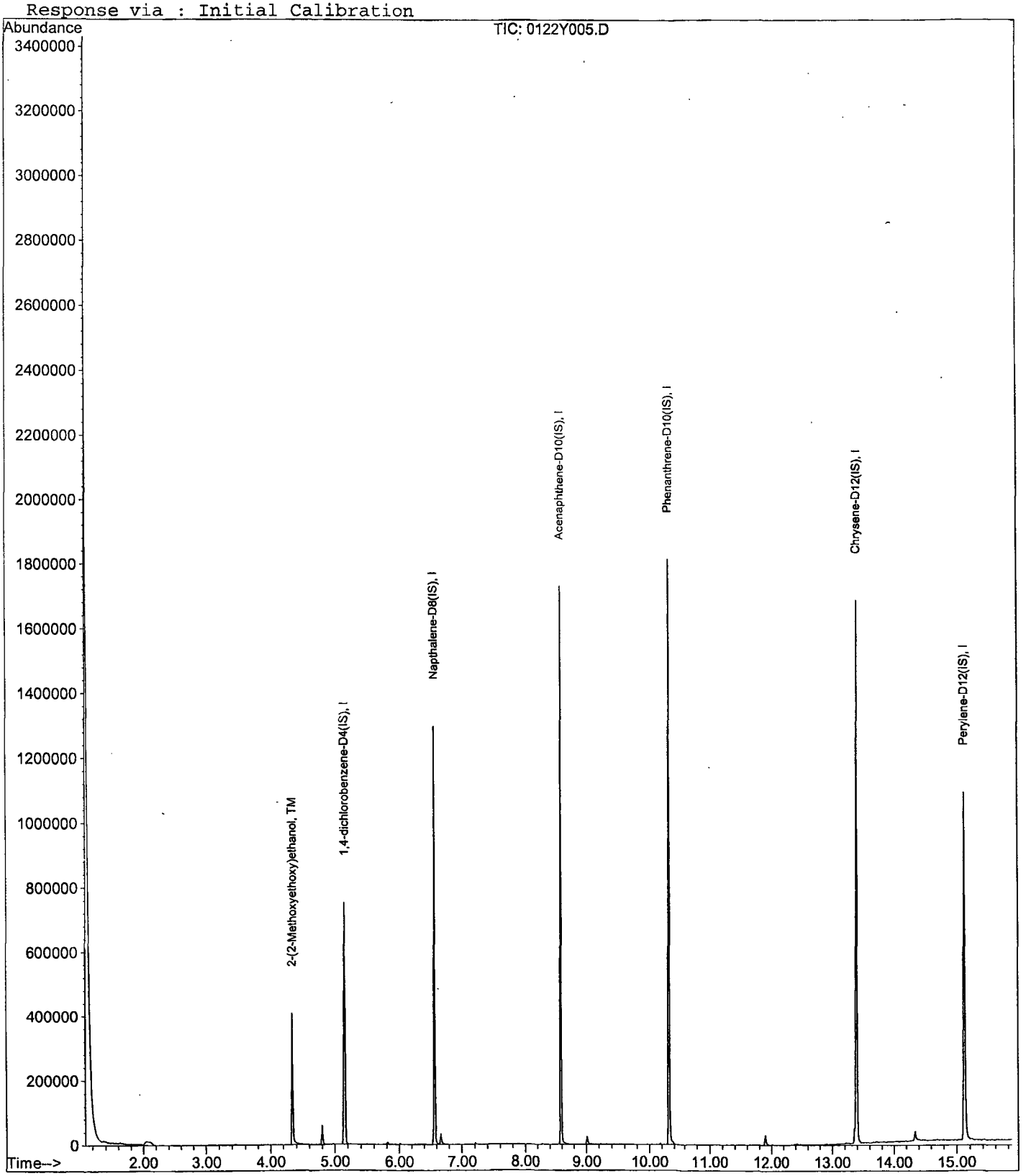
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y005.D Vial: 5
Acq On : 22 Jan 20 16:33 Operator: MA,SS
Sample : 200ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y006.D Vial: 6
Acq On : 22 Jan 20 16:57 Operator: MA,SS
Sample : 400ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.15	152	156027	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.57	136	648446	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.58	164	399790	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.31	188	767514	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.39	240	672840	40.00000	ppb	0.00
7) Perylene-D12(IS)	15.12	264	695421	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.34	45	343734	375.09237	ppb	98

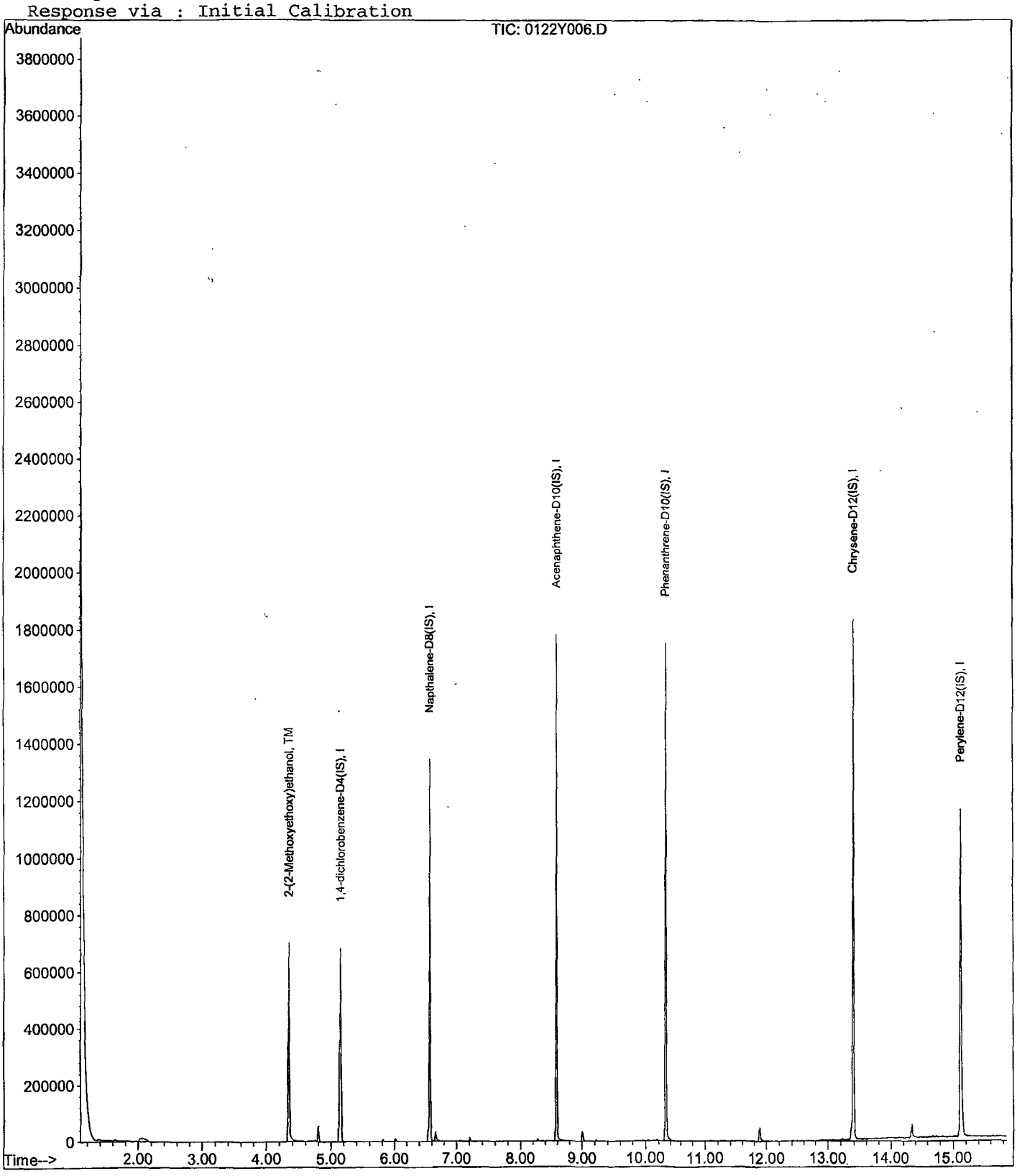
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y006.D Vial: 6
Acq On : 22 Jan 20 16:57 Operator: MA,SS
Sample : 400ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y007.D Vial: 7
Acq On : 22 Jan 20 17:21 Operator: MA,SS
Sample : 500ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.15	152	160036	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.57	136	657892	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.59	164	410790	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.31	188	788159	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.39	240	699023	40.00000	ppb	0.00
7) Perylene-D12(IS)	15.12	264	751183	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.34	45	427461	454.77262	ppb	100

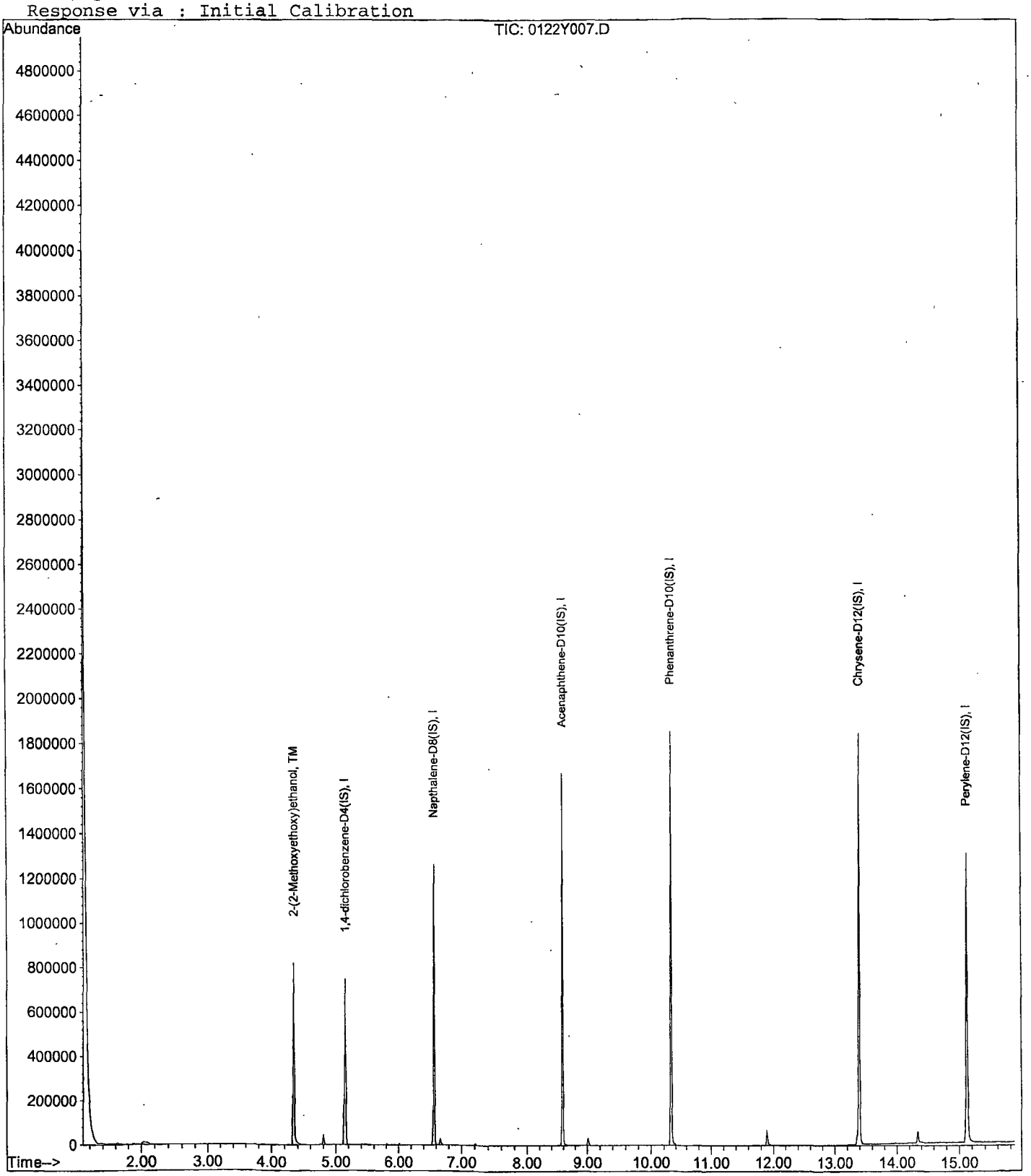
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y007.D Vial: 7
Acq On : 22 Jan 20 17:21 Operator: MA,SS
Sample : 500ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y008.D Vial: 8
Acq On : 22 Jan 20 17:45 Operator: MA,SS
Sample : 600ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.15	152	156507	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.57	136	664381	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.59	164	408801	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.31	188	788845	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.39	240	676569	40.00000	ppb	0.00
7) Perylene-D12(IS)	15.12	264	692003	40.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.35	45	517114	562.55893	ppb	99

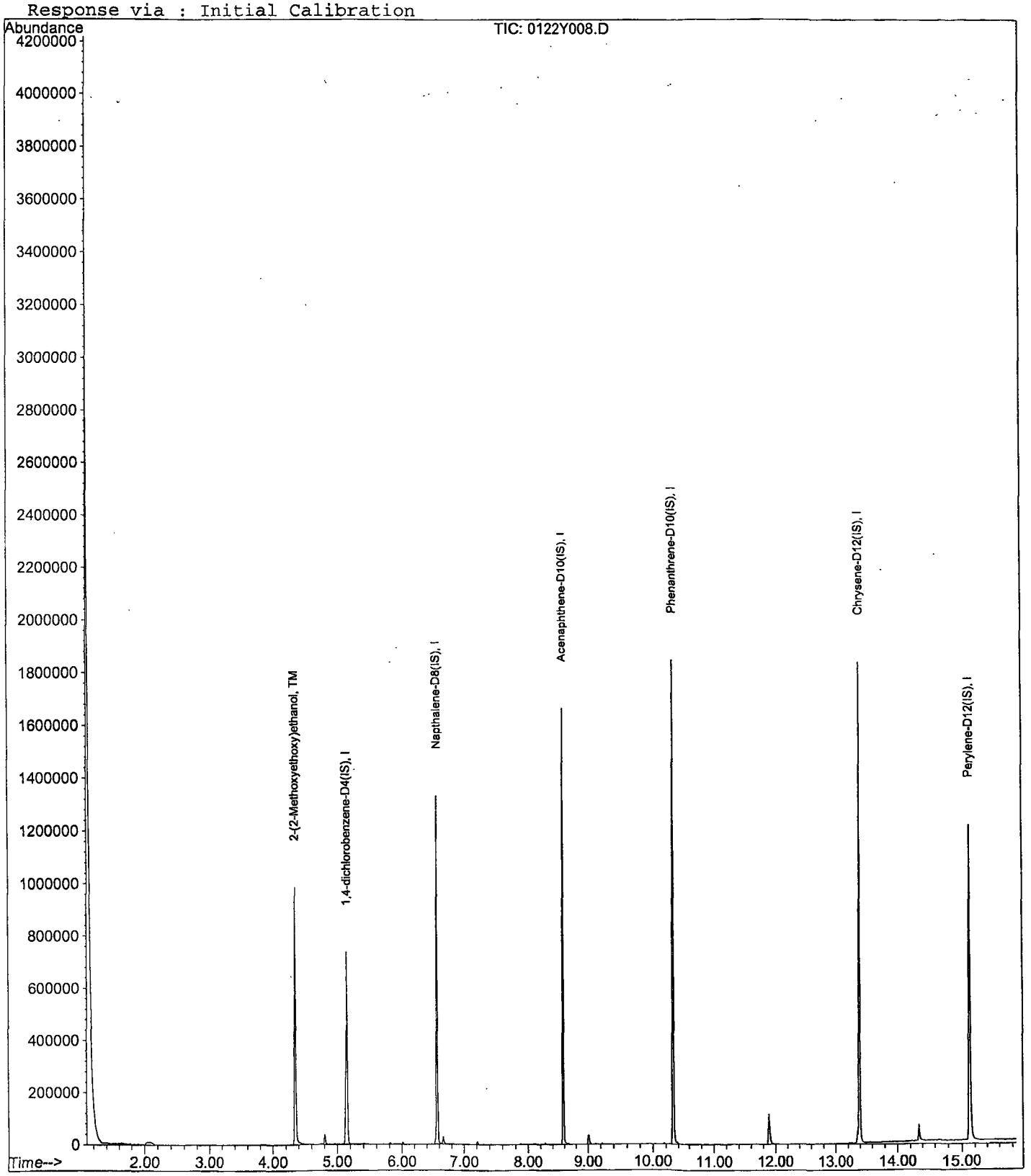
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y008.D Vial: 8
Acq On : 22 Jan 20 17:45 Operator: MA,SS
Sample : 600ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y009.D Vial: 9
Acq On : 22 Jan 20 18:08 Operator: MA,SS
Sample : 800ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.15	152	125205	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.57	136	550099	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.58	164	372511	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.31	188	750924	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.39	240	643830	40.00000	ppb	0.00
7) Perylene-D12(IS)	15.12	264	637032	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.36	45	715213	972.58871	ppb	98

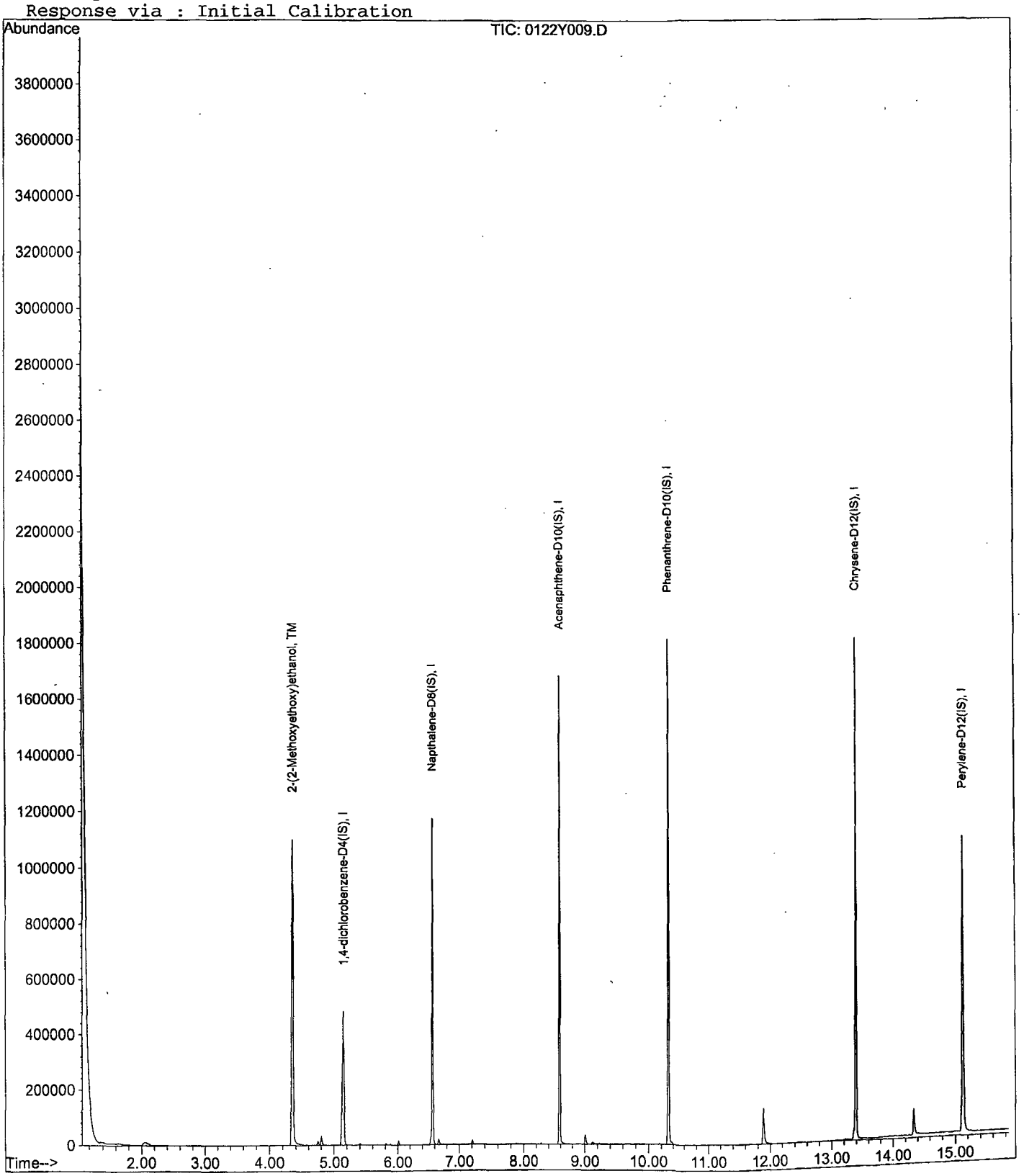
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y009.D Vial: 9
Acq On : 22 Jan 20 18:08 Operator: MA,SS
Sample : 800ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y010.D Vial: 10
Acq On : 22 Jan 20 18:32 Operator: MA,SS
Sample : 1000ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.15	152	145736	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.57	136	643934	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.58	164	429609	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.31	188	848518	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.39	240	708250	40.00000	ppb	0.00
7) Perylene-D12(IS)	15.12	264	727830	40.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.36	45	948330	1107.91933	ppb	99

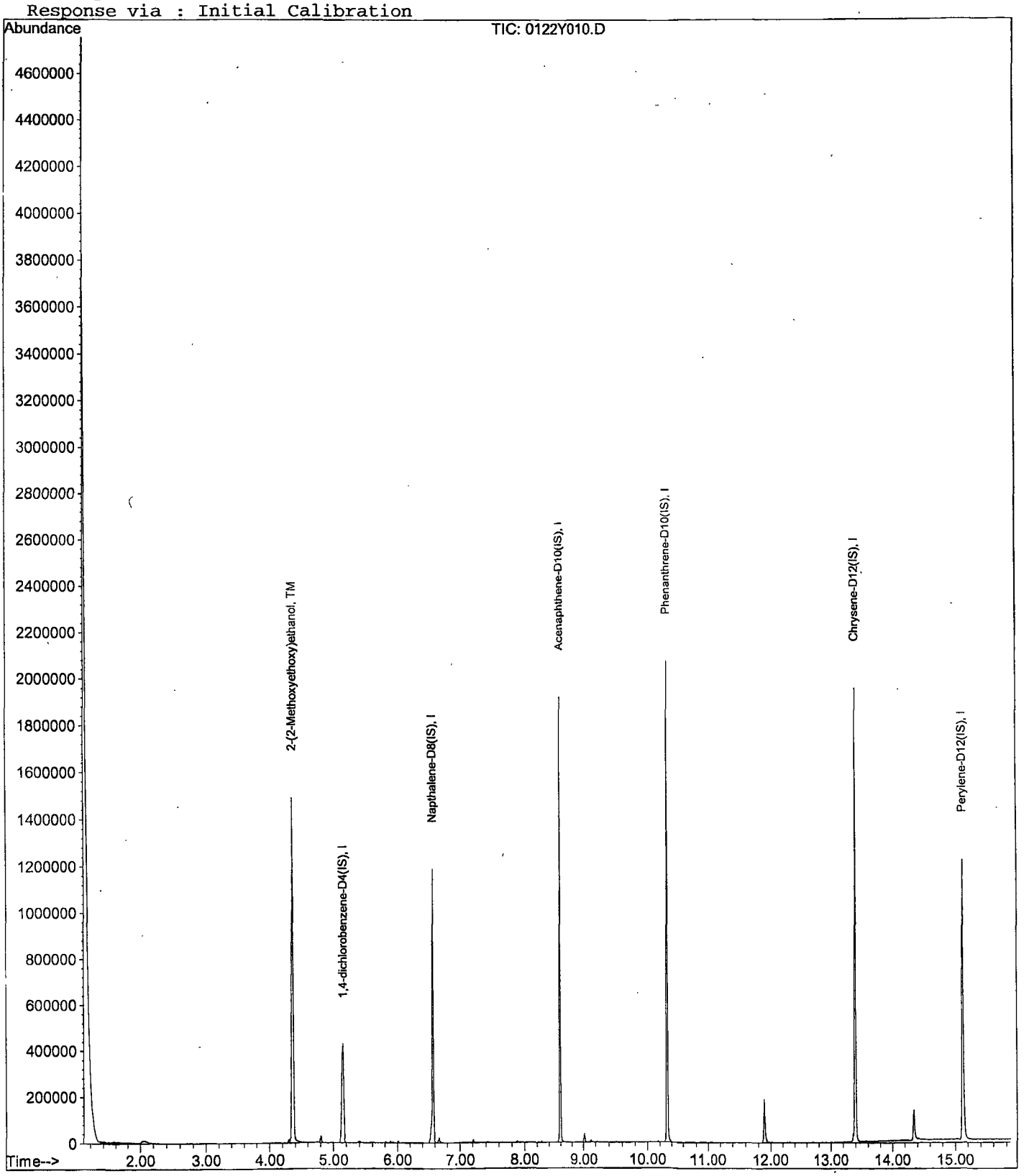
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y010.D Vial: 10
Acq On : 22 Jan 20 18:32 Operator: MA,SS
Sample : 1000ug/ml MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 10:02 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 10:01:29 2020
Response via : Initial Calibration



2MEE
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 01/22/20
Instrument: Yoda
Initial Cal. Date: 01/22/20
Data File: 0122Y011.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	2-(2-Methoxyethoxy)ethanol	0.2349	0.2425	3.2	TM	
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
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27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			3.2		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y011.D Vial: 11
Acq On : 22 Jan 20 18:55 Operator: MA,SS
Sample : SS MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 9:55 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 09:54:44 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.15	152	173956	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.57	136	686273	40.00000	ppb	0.00
4) Acenaphthene-D10(IS)	8.59	164	422630	40.00000	ppb	0.00
5) Phenanthrene-D10(IS)	10.31	188	806716	40.00000	ppb	0.00
6) Chrysene-D12(IS)	13.39	240	723146	40.00000	ppb	0.00
7) Perylene-D12(IS)	0.00	264	0	0.00000	ppb	-14.73

System Monitoring Compounds

Target Compounds						Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.33	45	527290	516.09021	ppb	93

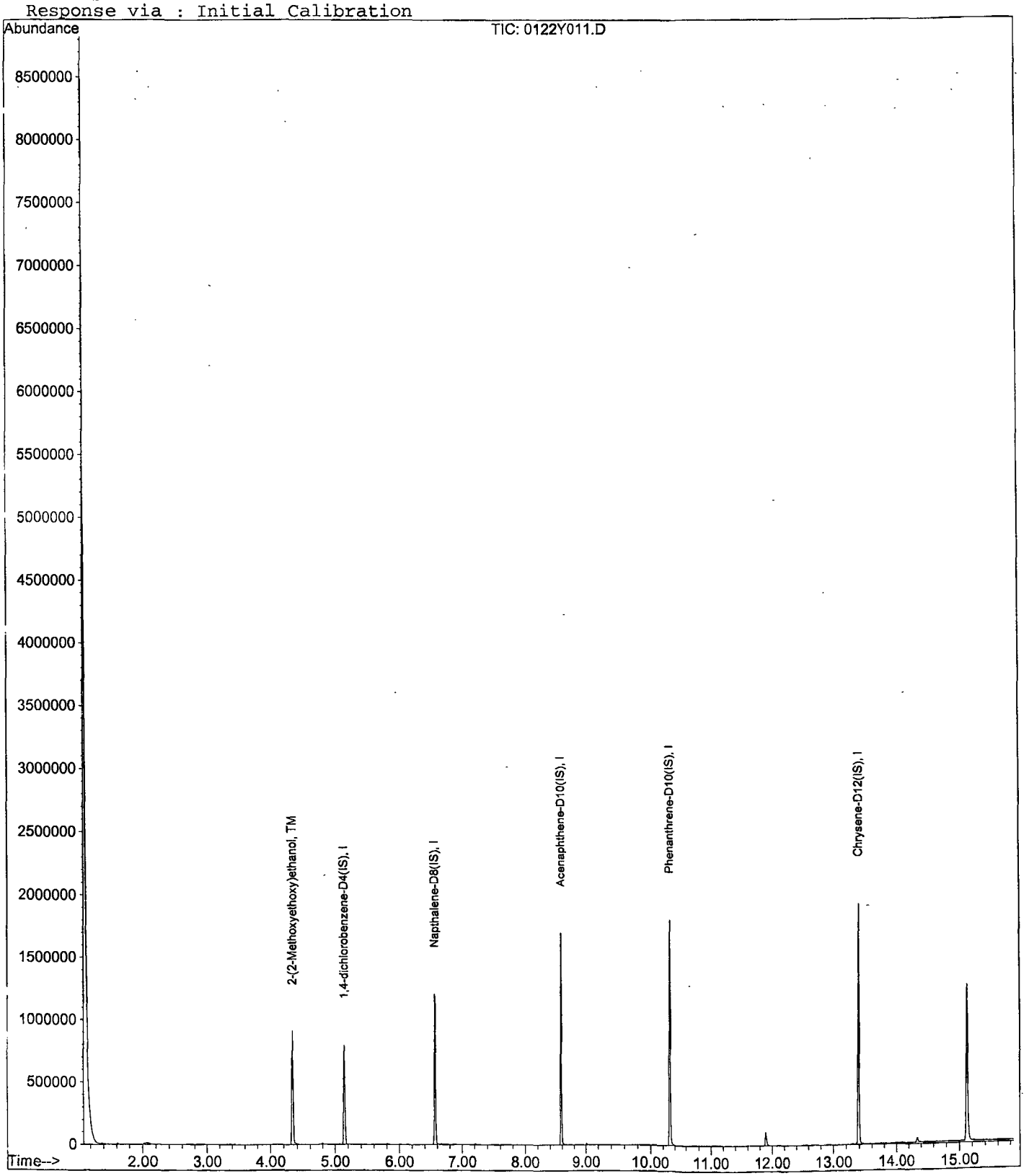
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y011.D Vial: 11
Acq On : 22 Jan 20 18:55 Operator: MA,SS
Sample : SS MEE 01/22/20 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Jan 23 9:55 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Thu Jan 23 09:54:44 2020
Response via : Initial Calibration



2MEE
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 03/16/20
Instrument: Yoda
Initial Cal. Date: 01/22/20
Data File: 0122Y076.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	2-(2-Methoxyethoxy)ethanol	0.2349	0.2429	3.4	TM	
3	I	Napthalene-D8(IS)	ISTD			I	
4	I	Acenaphthene-D10(IS)	ISTD			I	
5	I	Phenanthrene-D10(IS)	ISTD			I	
6	I	Chrysene-D12(IS)	ISTD			I	
7	I	Perylene-D12(IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
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28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			3.4		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y076.D Vial: 76
Acq On : 16 Mar 20 9:14 Operator: MA,SS
Sample : 500ug/ml MEE 01/29/20 (1) Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 16 10:12 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Mar 11 17:34:56 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.11	152	152753	40.00000 ppb	0.00
3) Napthalene-D8(IS)	6.53	136	683508	40.00000 ppb	-0.04
4) Acenaphthene-D10(IS)	8.55	164	448088	40.00000 ppb	-0.04
5) Phenanthrene-D10(IS)	10.27	188	868681	40.00000 ppb	-0.04
6) Chrysene-D12(IS)	13.36	240	766090	40.00000 ppb	-0.04
7) Perylene-D12(IS)	15.07	264	770281	40.00000 ppb	-0.05

System Monitoring Compounds

Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.31	45	463779	516.93606 ppb	99

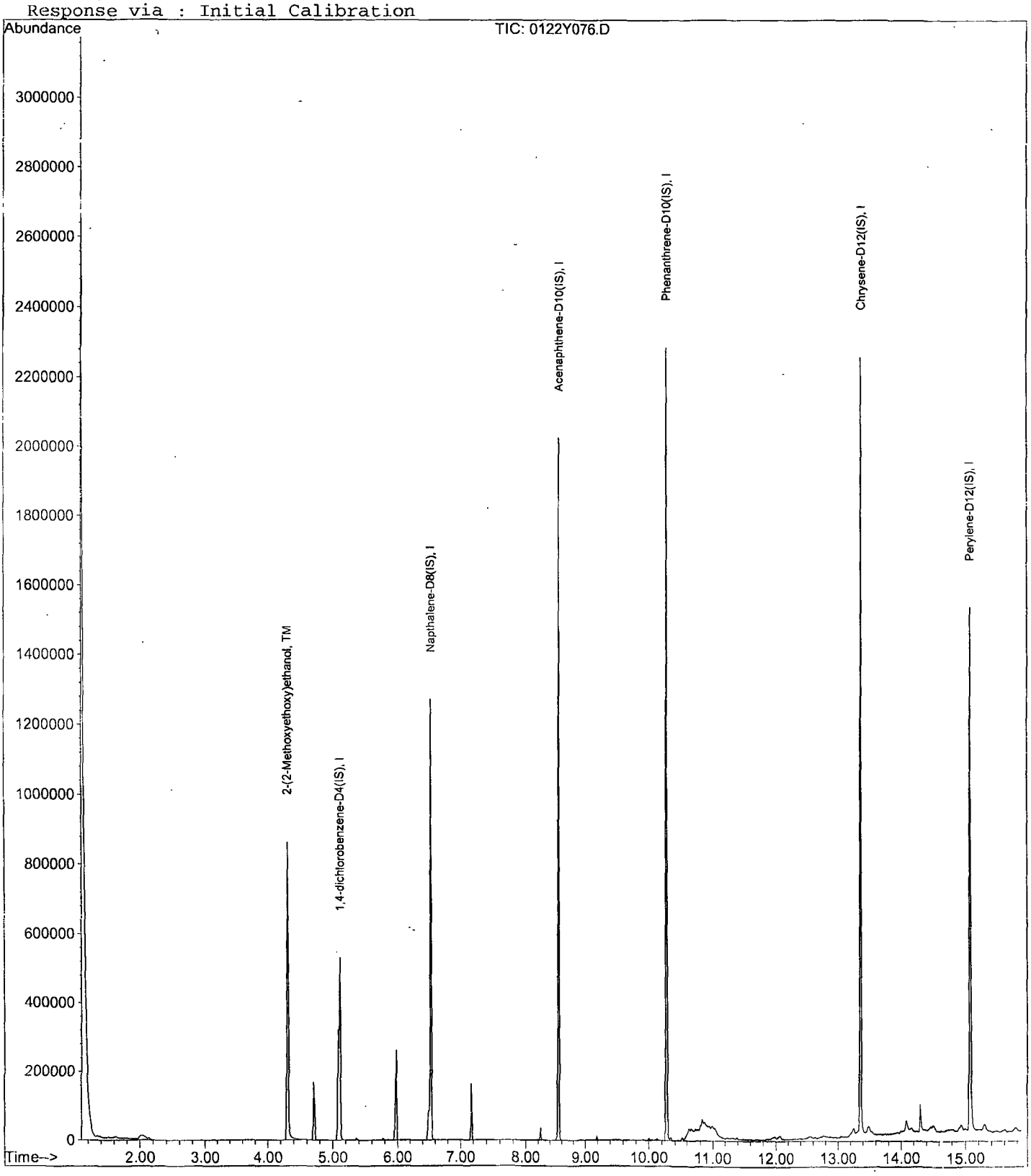
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y076.D Vial: 76
Acq On : 16 Mar 20 9:14 Operator: MA,SS
Sample : 500ug/ml MEE 01/29/20 (1) Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 16 10:12 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Mar 11 17:34:56 2020
Response via : Initial Calibration



2MEE
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 03/16/20
Instrument: Yoda
Initial Cal. Date: 01/22/20
Data File: 0122Y086.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2	TM	2-(2-Methoxyethoxy)ethanol	0.2349	0.2543	8.3	TM	
3	I	Napthalene-D8(IS)	ISTD			I	
4	I	Acenaphthene-D10(IS)	ISTD			I	
5	I	Phenanthrene-D10(IS)	ISTD			I	
6	I	Chrysene-D12(IS)	ISTD			I	
7	I	Perylene-D12(IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
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24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			8.3		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y086.D Vial: 86
Acq On : 16 Mar 20 13:17 Operator: MA,SS
Sample : 500ug/ml MEE 01/29/20 (1) Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 16 14:24 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Mar 16 14:24:46 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.12	152	136792	40.00000 ppb	0.00
3) Napthalene-D8(IS)	6.53	136	624287	40.00000 ppb	-0.04
4) Acenaphthene-D10(IS)	8.55	164	406906	40.00000 ppb	-0.04
5) Phenanthrene-D10(IS)	10.27	188	792921	40.00000 ppb	-0.04
6) Chrysene-D12(IS)	13.35	240	697448	40.00000 ppb	-0.04
7) Perylene-D12(IS)	15.07	264	673640	40.00000 ppb	-0.05

System Monitoring Compounds

Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.31	45	434896	541.30272 ppb	100

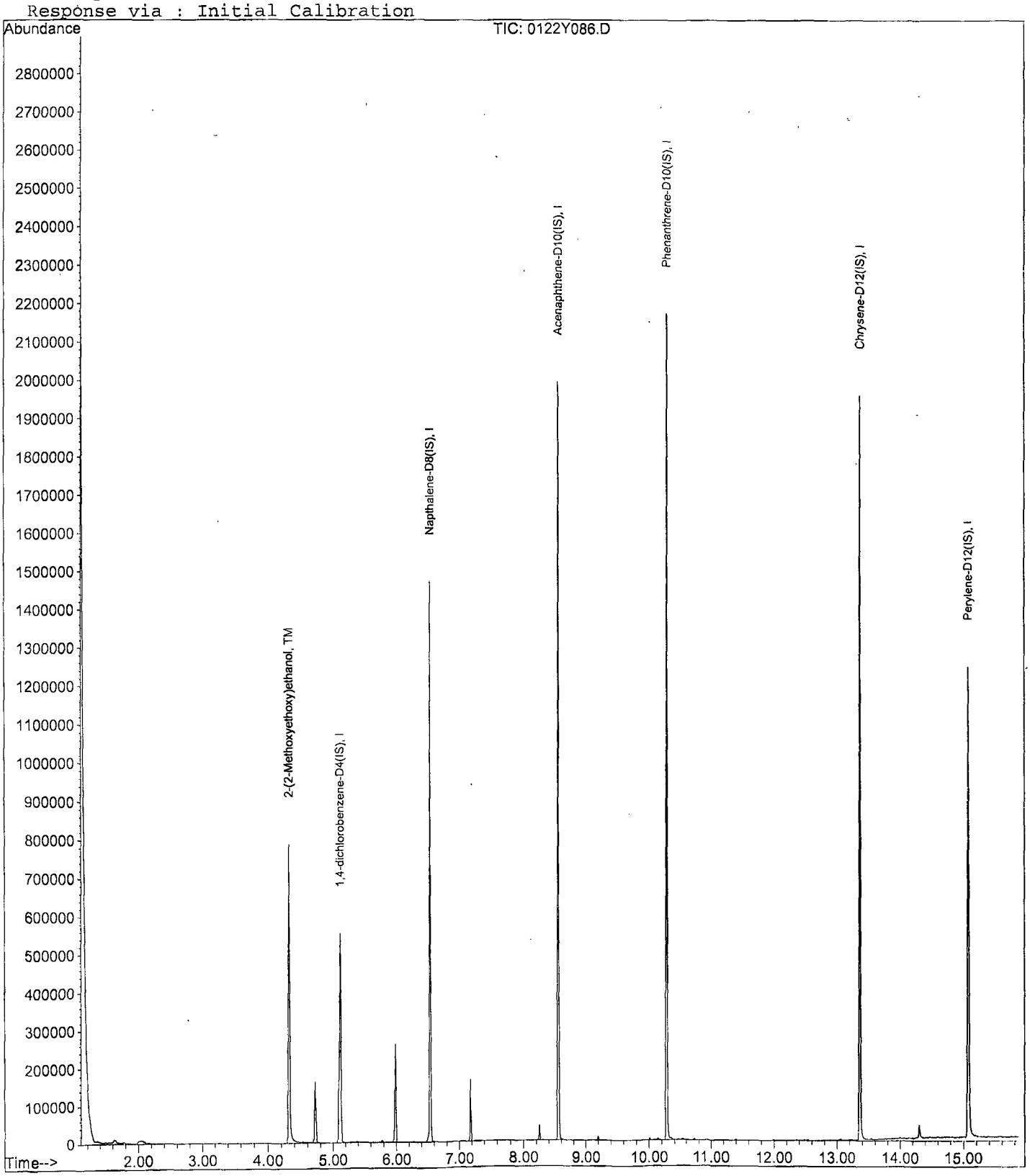
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y086.D Vial: 86
Acq On : 16 Mar 20 13:17 Operator: MA,SS
Sample : 500ug/ml MEE 01/29/20 (1) Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 16 14:24 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Mar 16 14:24:46 2020
Response via : Initial Calibration



ORGANICS
Raw Data

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y083.D Vial: 83
Acq On : 16 Mar 20 12:07 Operator: MA,SS
Sample : BA08370W17 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Mar 16 14:03 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Mar 16 11:34:22 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.11	152	151646	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.54	136	677225	40.00000	ppb	-0.04
4) Acenaphthene-D10(IS)	8.55	164	433404	40.00000	ppb	-0.04
5) Phenanthrene-D10(IS)	10.28	188	834806	40.00000	ppb	-0.04
6) Chrysene-D12(IS)	13.36	240	558435	40.00000	ppb	-0.04
7) Perylene-D12(IS)	15.07	264	502674	40.00000	ppb	-0.05

System Monitoring Compounds

Target Compounds Qvalue

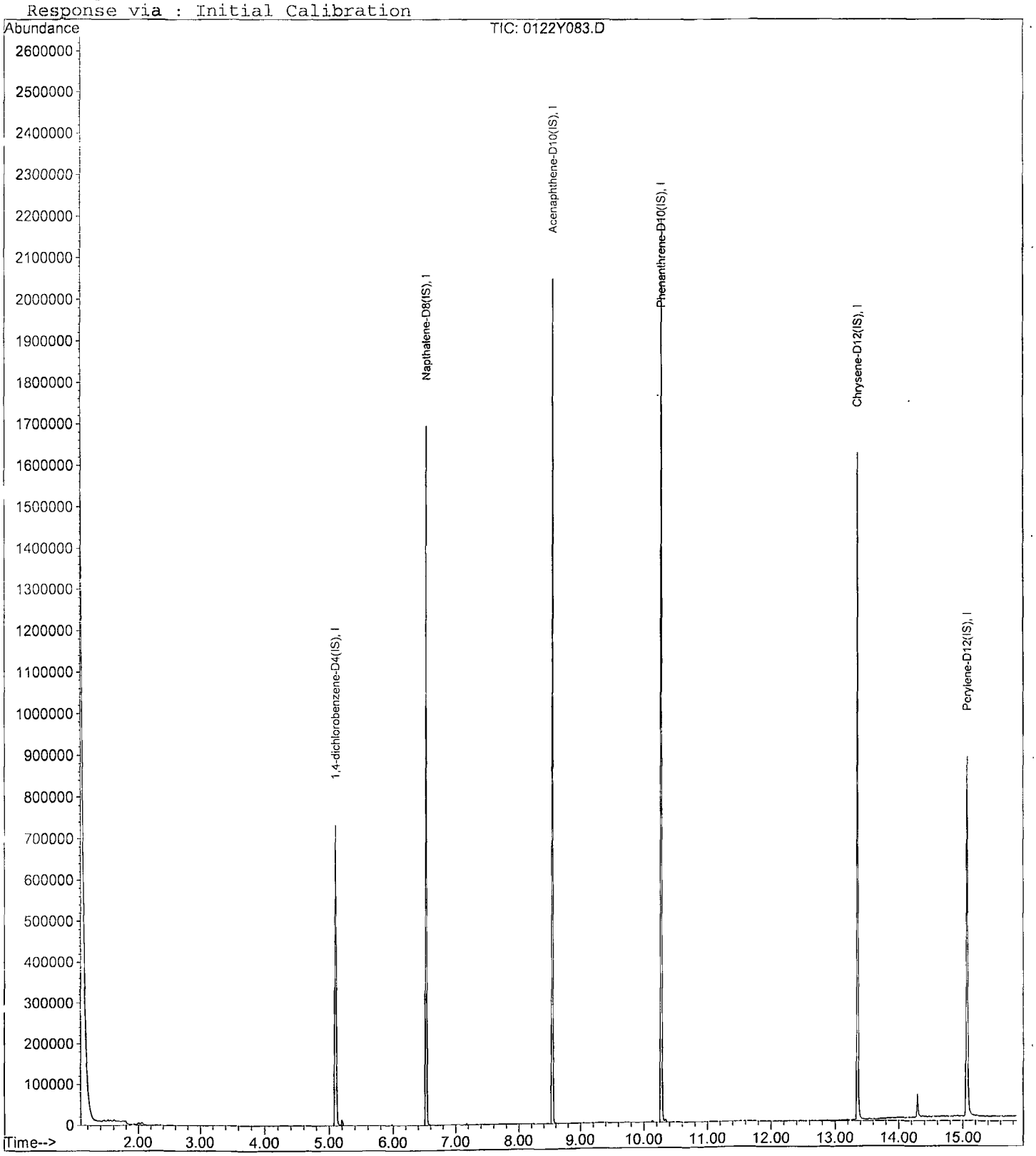
(#) = qualifier out of range (m) = manual integration
0122Y083.D YMEE0122.M Tue Mar 17 11:29:50 2020 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y083.D Vial: 83
Acq On : 16 Mar 20 12:07 Operator: MA,SS
Sample : BA08370W17 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Mar 16 14:03 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Mar 16 14:24:46 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y084.D Vial: 84
Acq On : 16 Mar 20 12:30 Operator: MA,SS
Sample : BA08371W09 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Mar 16 14:03 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Mar 16 11:34:22 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.11	152	145214	40.00000 ppb	0.00
3) Napthalene-D8(IS)	6.54	136	647298	40.00000 ppb	-0.04
4) Acenaphthene-D10(IS)	8.55	164	417403	40.00000 ppb	-0.04
5) Phenanthrene-D10(IS)	10.28	188	802224	40.00000 ppb	-0.04
6) Chrysene-D12(IS)	13.36	240	453061	40.00000 ppb	-0.04
7) Perylene-D12(IS)	15.07	264	349015	40.00000 ppb	-0.05

System Monitoring Compounds

Target Compounds Qvalue

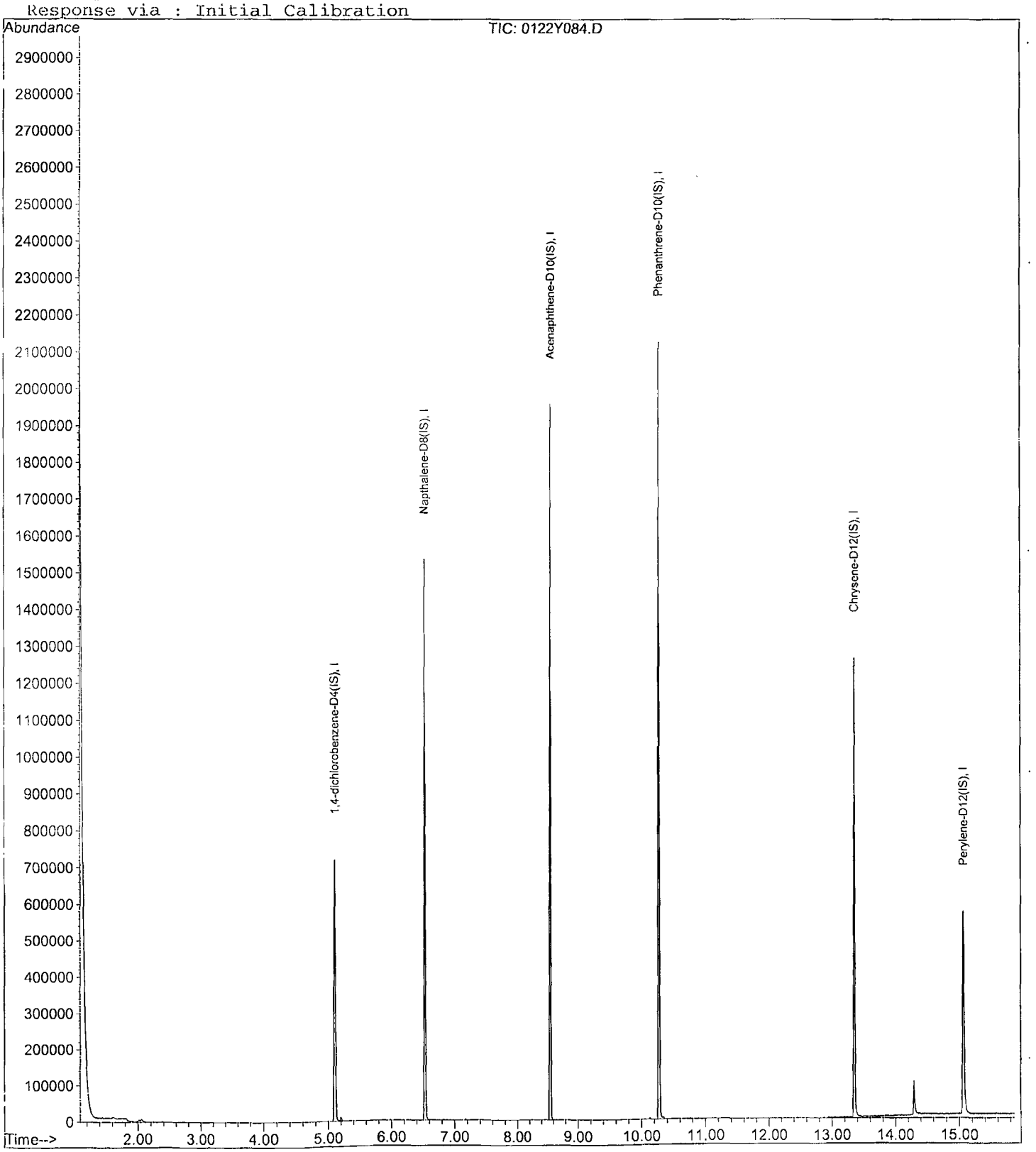
(#) = qualifier out of range (m) = manual integration
0122Y084.D YMEE0122.M Tue Mar 17 11:29:54 2020 Page 1

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y084.D Vial: 84
Acq On : 16 Mar 20 12:30 Operator: MA,SS
Sample : BA08371W09 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Mar 16 14:03 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Mar 16 14:24:46 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y077.D Vial: 77
Acq On : 16 Mar 20 9:45 Operator: MA,SS
Sample : 200313A BLK 2/500 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 16 11:34 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Mar 11 17:34:56 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.10	152	172335	40.00000	ppb	0.00
3) Napthalene-D8(IS)	6.53	136	799714	40.00000	ppb	-0.04
4) Acenaphthene-D10(IS)	8.55	164	514030	40.00000	ppb	-0.04
5) Phenanthrene-D10(IS)	10.27	188	963906	40.00000	ppb	-0.04
6) Chrysene-D12(IS)	13.35	240	764874	40.00000	ppb	-0.04
7) Perylene-D12(IS)	15.07	264	761189	40.00000	ppb	-0.05

System Monitoring Compounds

Target Compounds Qvalue

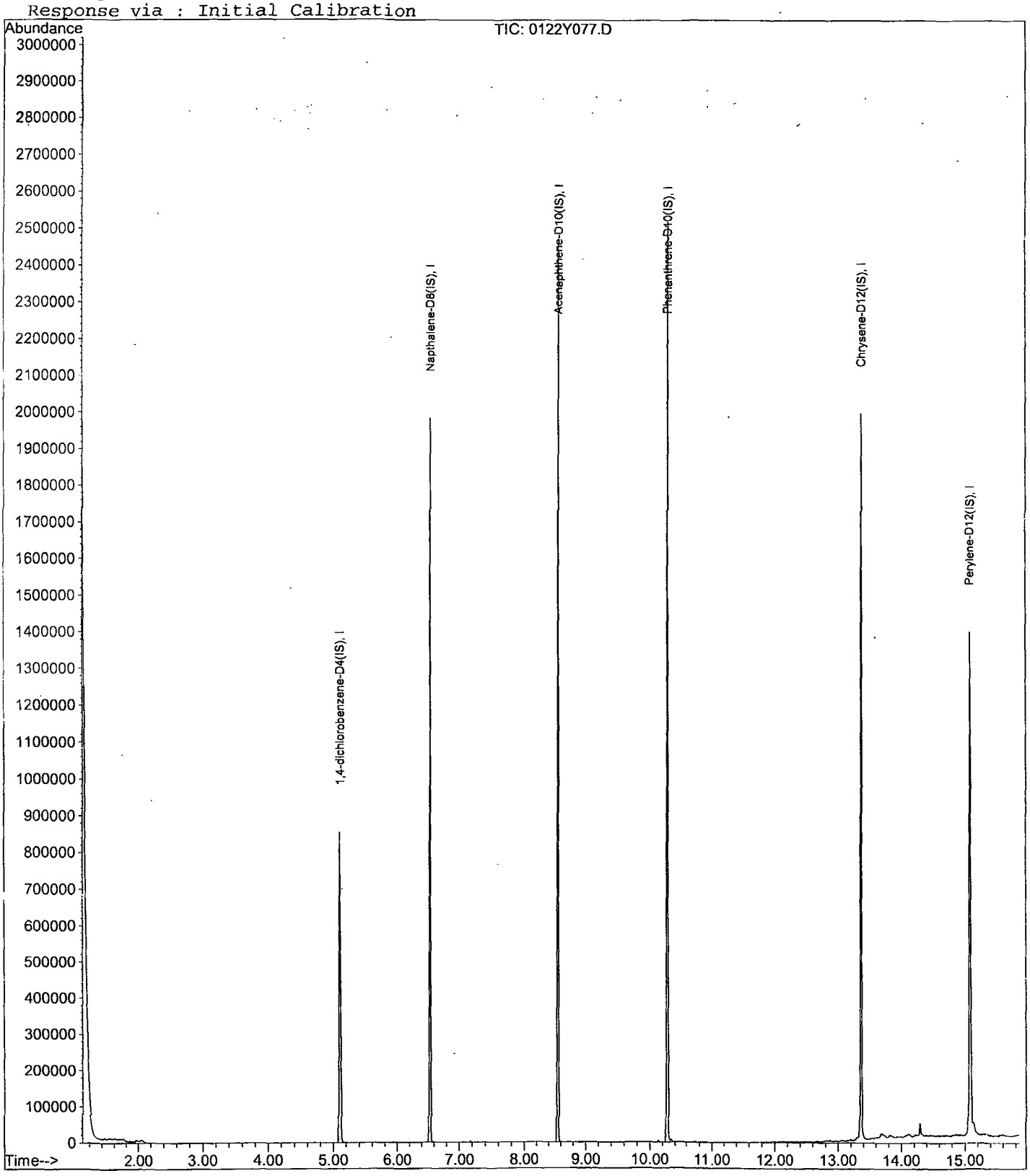
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y077.D Vial: 77
Acq On : 16 Mar 20 9:45 Operator: MA,SS
Sample : 200313A BLK 2/500 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 16 11:34 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Mar 16 14:24:46 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y085.D Vial: 85
Acq On : 16 Mar 20 12:54 Operator: MA,SS
Sample : 200313A LCS-1 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Mar 16 14:03 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Mar 16 11:34:22 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.10	152	145789	40.00000 ppb	-0.01
3) Napthalene-D8(IS)	6.53	136	657193	40.00000 ppb	-0.04
4) Acenaphthene-D10(IS)	8.55	164	425934	40.00000 ppb	-0.04
5) Phenanthrene-D10(IS)	10.27	188	790405	40.00000 ppb	-0.04
6) Chrysene-D12(IS)	13.35	240	609320	40.00000 ppb	-0.04
7) Perylene-D12(IS)	15.07	264	294243	40.00000 ppb	-0.05

System Monitoring Compounds

Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.49	45	51887	60.59675 ppb	97

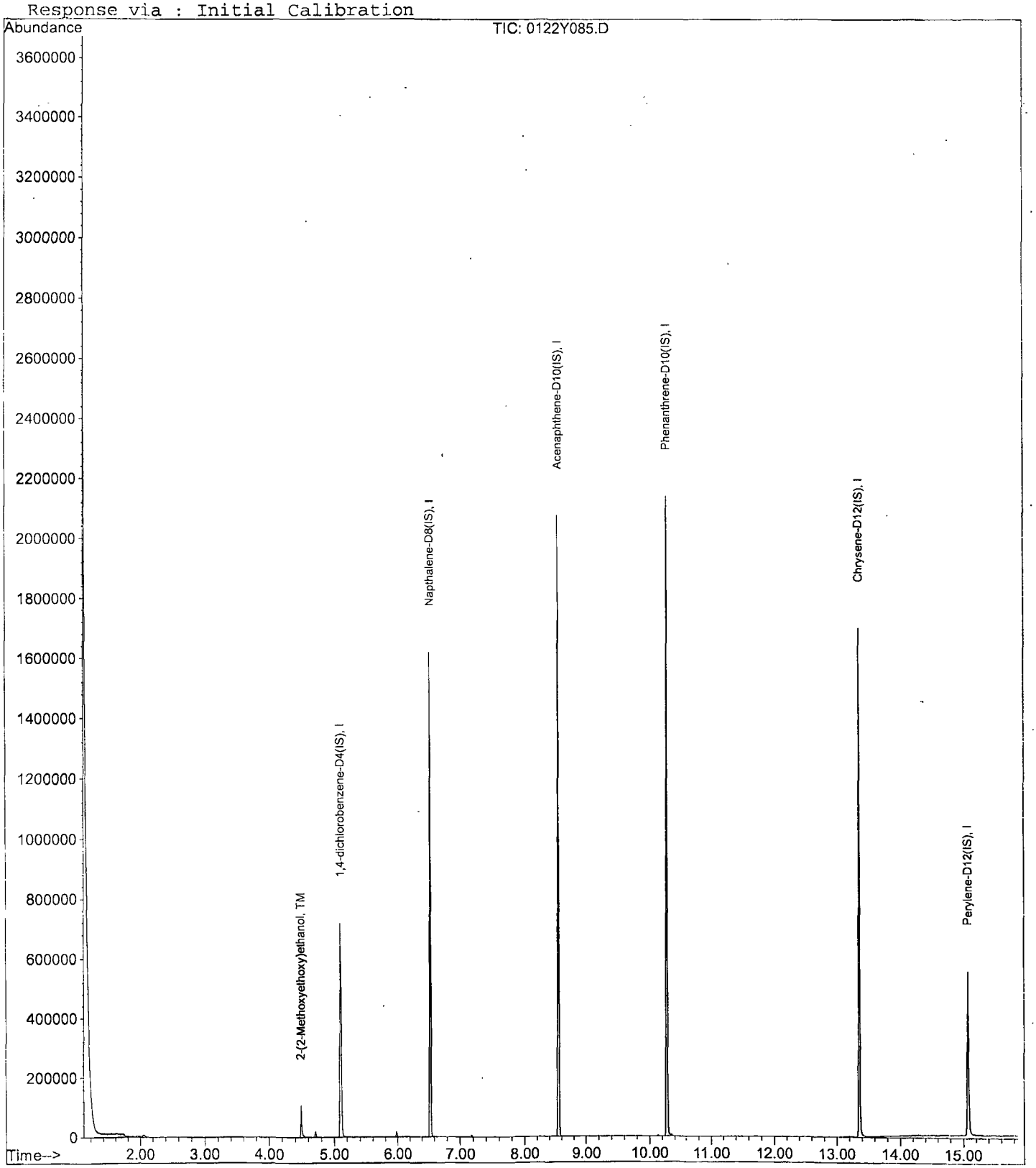
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y085.D Vial: 85
Acq On : 16 Mar 20 12:54 Operator: MA,SS
Sample : 200313A LCS-1 2/500 Inst : Yoda
Misc : water Multiplr: 1.00

Quant Time: Mar 16 14:03 2020 Quant Results File: YMEE0122.RES

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Mar 16 14:24:46 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200122M\0122Y079.D Vial: 79
Acq On : 16 Mar 20 10:32 Operator: MA,SS
Sample : 200313A LCSD-1 2/500 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 16 11:35 2020 Quant Results File: YMEE0122.RES

Quant Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Mar 16 11:34:22 2020
Response via : Initial Calibration
DataAcq Meth : GED

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.11	152	169989	40.00000 ppb	0.00
3) Napthalene-D8(IS)	6.53	136	752820	40.00000 ppb	-0.04
4) Acenaphthene-D10(IS)	8.55	164	477944	40.00000 ppb	-0.04
5) Phenanthrene-D10(IS)	10.28	188	898307	40.00000 ppb	-0.04
6) Chrysene-D12(IS)	13.36	240	739003	40.00000 ppb	-0.04
7) Perylene-D12(IS)	15.07	264	567798	40.00000 ppb	-0.05

System Monitoring Compounds

Target Compounds					Qvalue
2) 2-(2-Methoxyethoxy)ethanol	4.48	45	54368	54.45503 ppb	96

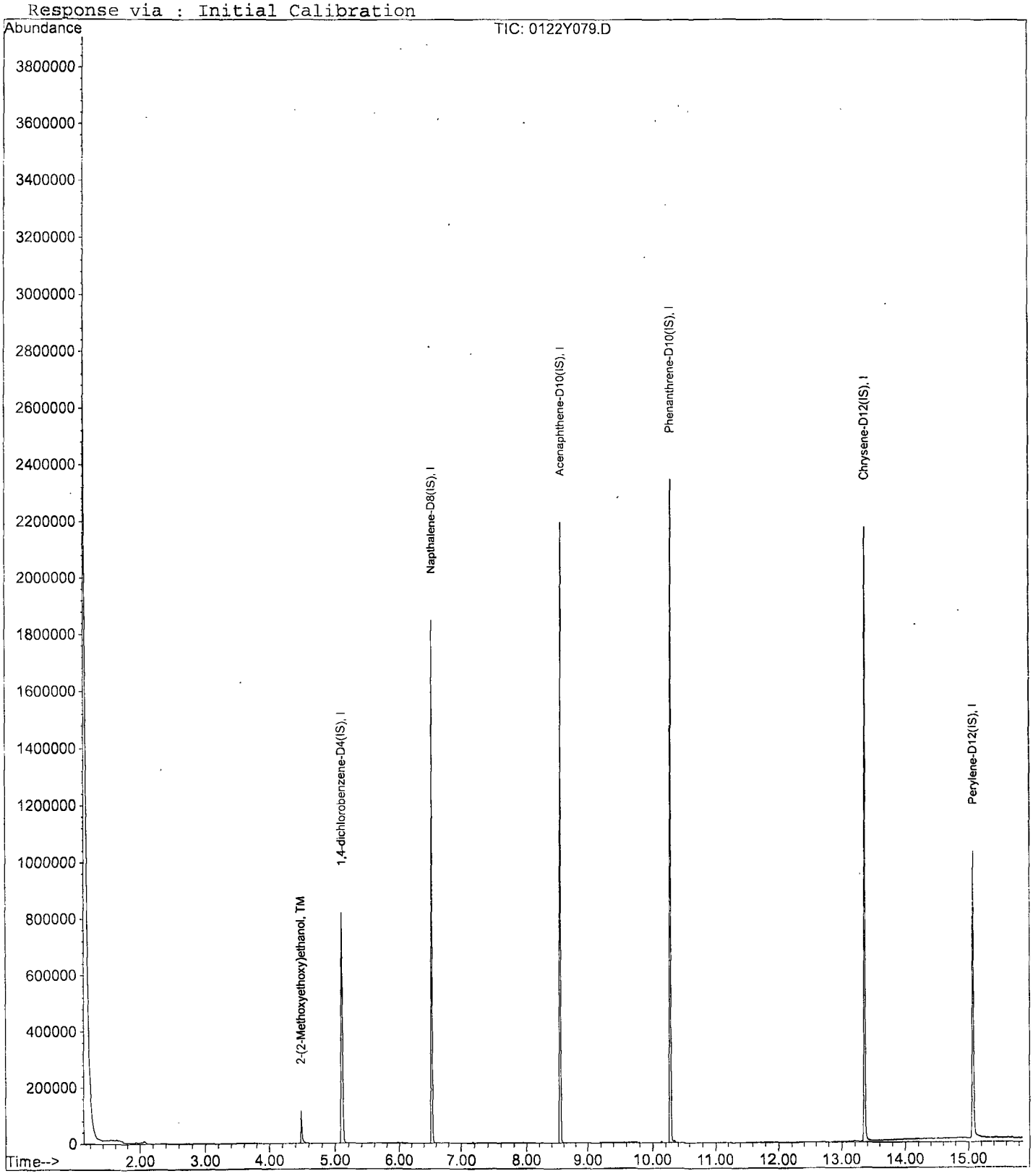
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y079.D Vial: 79
Acq On : 16 Mar 20 10:32 Operator: MA,SS
Sample : 200313A LCSD-1 2/500 Inst : Yoda
Misc : soil Multiplr: 1.00

Quant Time: Mar 16 11:35 2020 Quant Results File: YMEE0122.RES

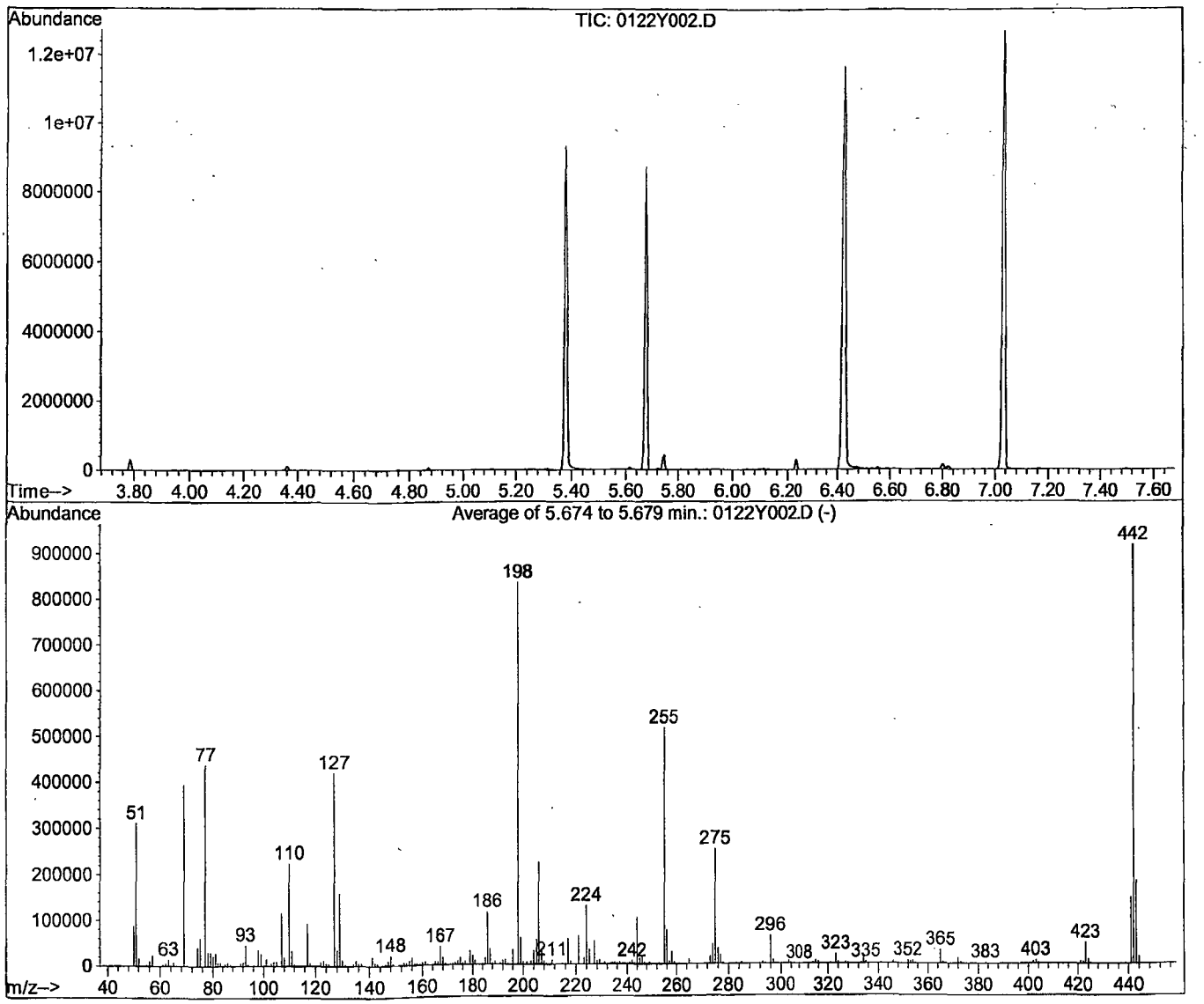
Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Mar 16 14:24:46 2020
Response via : Initial Calibration



DFTPP

Data File : M:\YODA\DATA\Y200122M\0122Y002.D Vial: 2
Acq On : 22 Jan 20 15:31 Operator: MA,SS
Sample : SV Tune 10/11/18 Inst : Yoda
Misc : Multiplr: 1.00

Method : M:\YODA\DATA\Y200122M\YMEE0122.M (RTE Integrator)
Title : EPA 8270C



Spectrum Information: Average of 5.674 to 5.679 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	37.2	310756	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.2	963	PASS
127	198	10	80	50.4	420821	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	835008	PASS
199	198	5	9	7.1	58973	PASS
275	198	10	60	30.1	251435	PASS
365	198	1	100	3.7	30675	PASS
441	442	0.01	24	15.9	145797	PASS
442	198	50	500	109.9	917909	PASS
443	442	15	24	19.8	181739	PASS

Data File Name:	**0122Y002.D**
Data File Path:	**M:\YODA\DATA\Y200122M**
Operator:	**MA,SS**
Date Acquired:	**22 Jan 2020 15:31**
Method File:	**DFTPP2.M**
Sample Name:	**SV Tune 10/11/18**
Vial Number:	**2**
Instrument Name:	**Yoda**

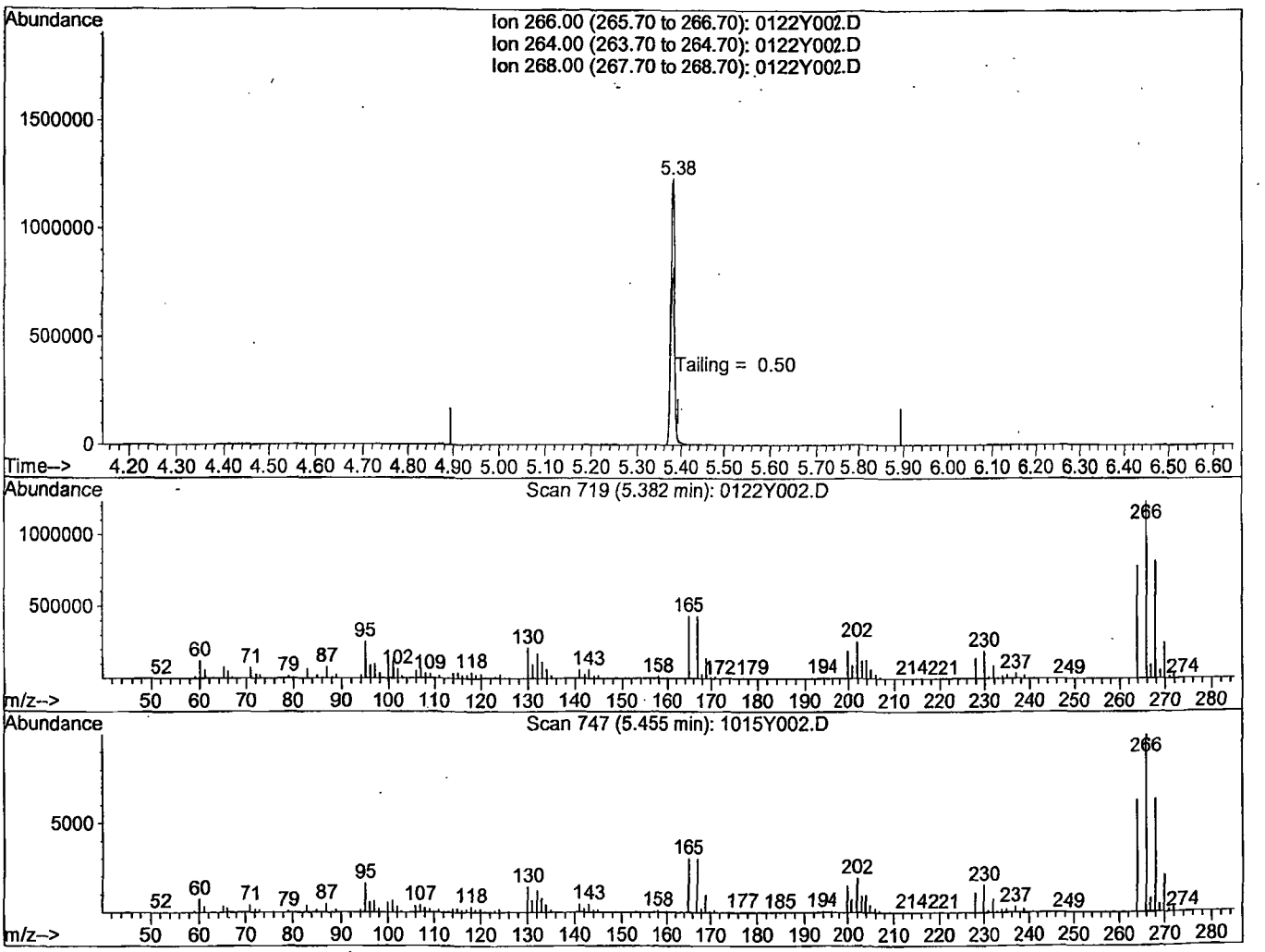
#	Name	Ret Time	Target Response
1)	DDT	7.02	96603900
2)	DDD	6.79	987534
3)	DDE	6.59	119819

Breakdown **1.13**

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y002.D Vial: 2
Acq On : 22 Jan 20 15:31 Operator: MA,SS
Sample : SV Tune 10/11/18 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Jan 23 9:58 2020 Quant Results File: temp.res

Method : M:\YODA\DATA\Y191219\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Tue Dec 10 08:34:10 2019
Response via : Single Level Calibration



TIC: 0122Y002.D

(5) Pentachlorophenol

5.38min 0.0000

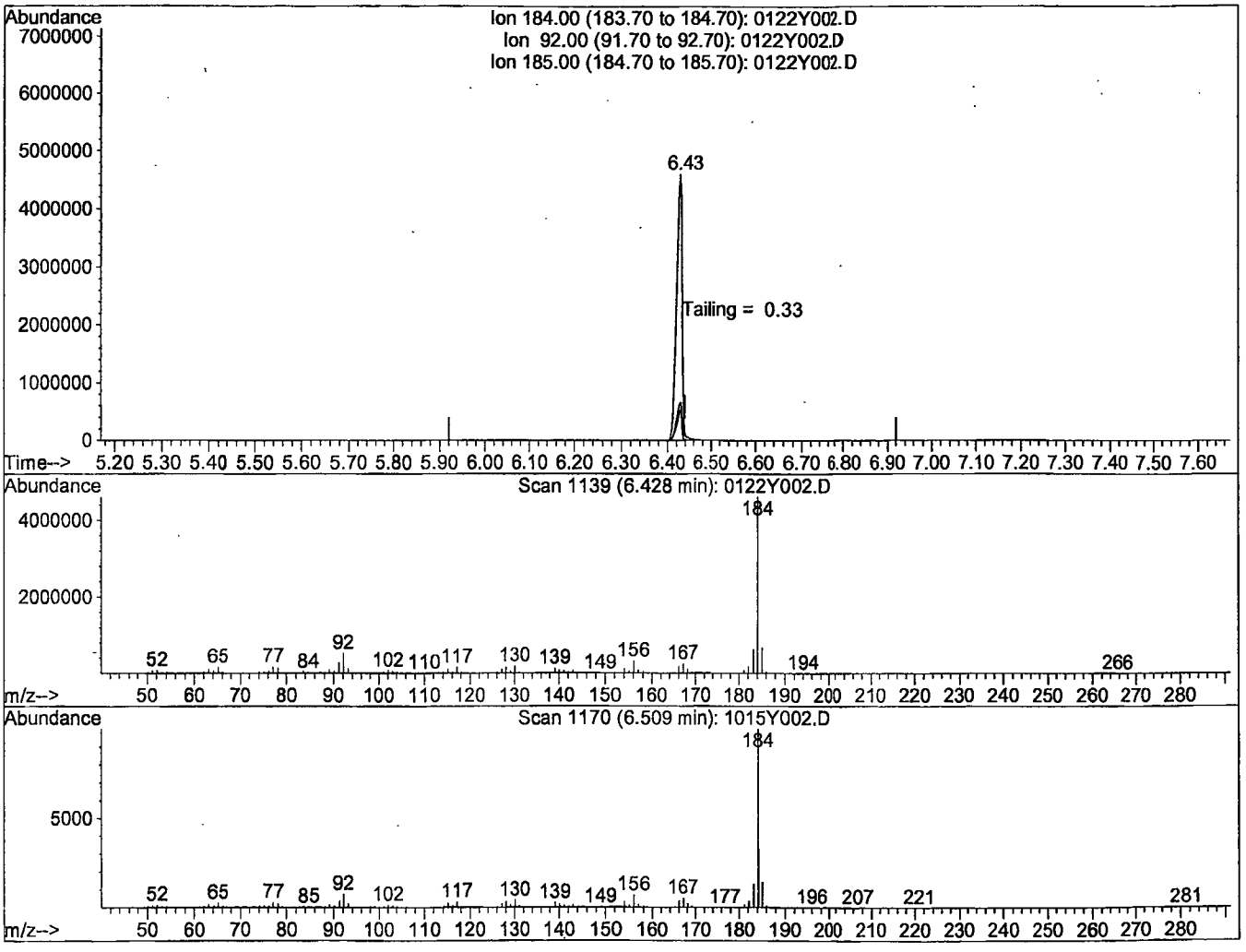
response 7823618

Ion	Exp%	Act%
266.00	100	100
264.00	65.60	63.49
268.00	64.10	65.10
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y002.D Vial: 2
Acq On : 22 Jan 20 15:31 Operator: MA,SS
Sample : SV Tune 10/11/18 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Jan 23 9:58 2020 Quant Results File: temp.res

Method : M:\YODA\DATA\Y191219\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Tue Dec 10 08:34:10 2019
Response via : Single Level Calibration



TIC: 0122Y002.D

(6) Benzidine

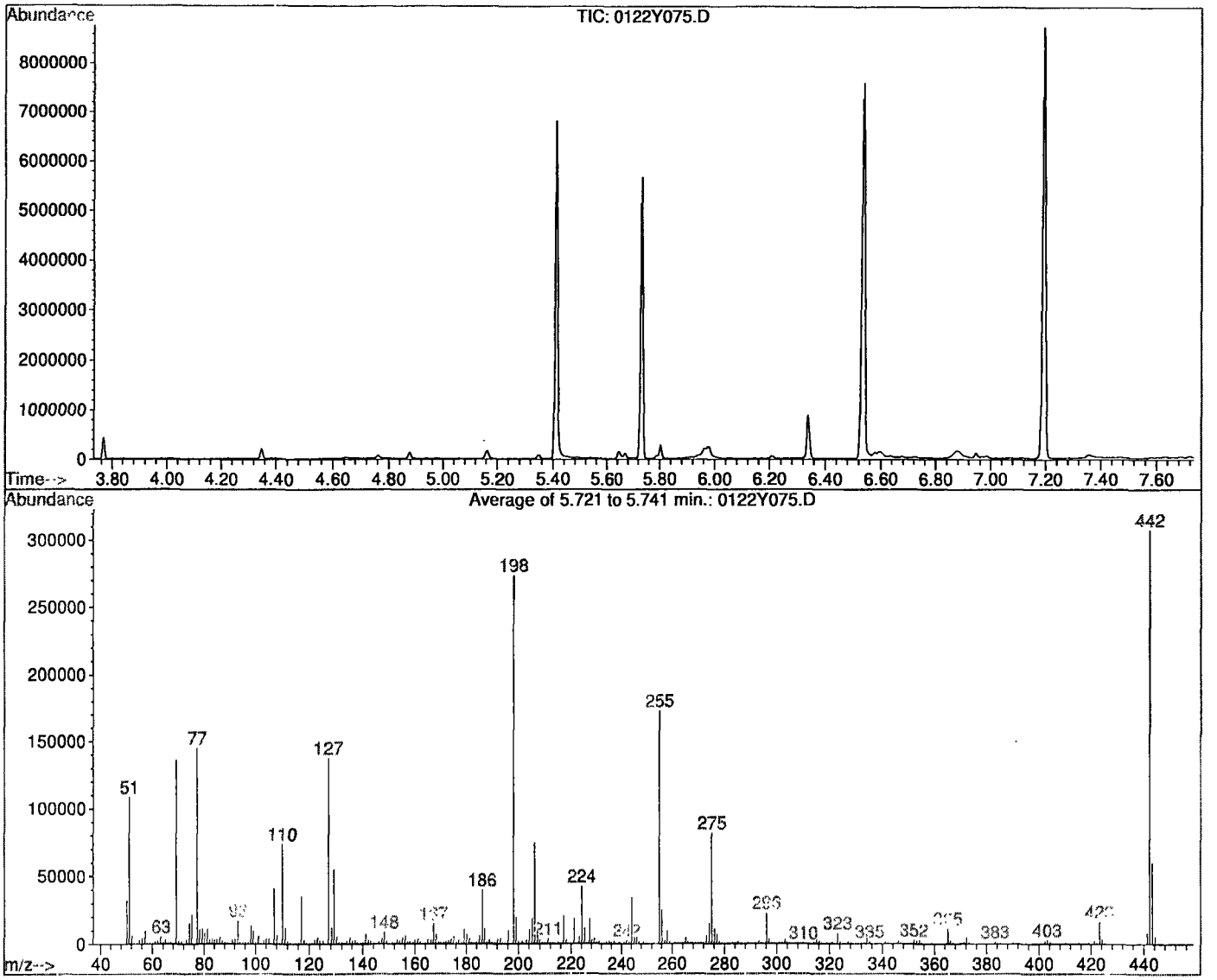
6.43min 0.0000

response 41313552

Ion	Exp%	Act%
184.00	100	100
92.00	10.30	10.42
185.00	14.50	14.34
0.00	0.00	0.00

Data File : M:\YODA\DATA\Y200122M\0122Y075.D Vial: 75
Acq On : 16 Mar 20 8:46 Operator: MA,SS
Sample : SV TUNE 10/01/19 Inst : Yoda
Misc : soil Multiplr: 1.00

Method : M:\YODA\DATA\Y200122M\DFTPP2.M (Chemstation Integrator)
Title :



Spectrum Information: Average of 5.721 to 5.741 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	39.5	108272	PASS
68	69	0.00	2	0.0	64	PASS
70	69	0.00	2	1.2	1642	PASS
127	198	10	80	50.2	137527	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	273849	PASS
199	198	5	9	7.0	19186	PASS
275	198	10	60	29.7	81437	PASS
365	198	1	100	4.0	10874	PASS
441	442	0.01	24	2.6	7905	PASS
442	198	50	500	112.3	307638	PASS
443	442	15	24	19.6	60230	PASS

Data File Name:	**0122Y075.D**
Data File Path:	**M:\YODA\DATA\Y200122M**
Operator:	**MA,SS**
Date Acquired:	**16 Mar 2020 08:46**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/01/19**
Vial Number:	**75**
Instrument Name:	**Yoda**

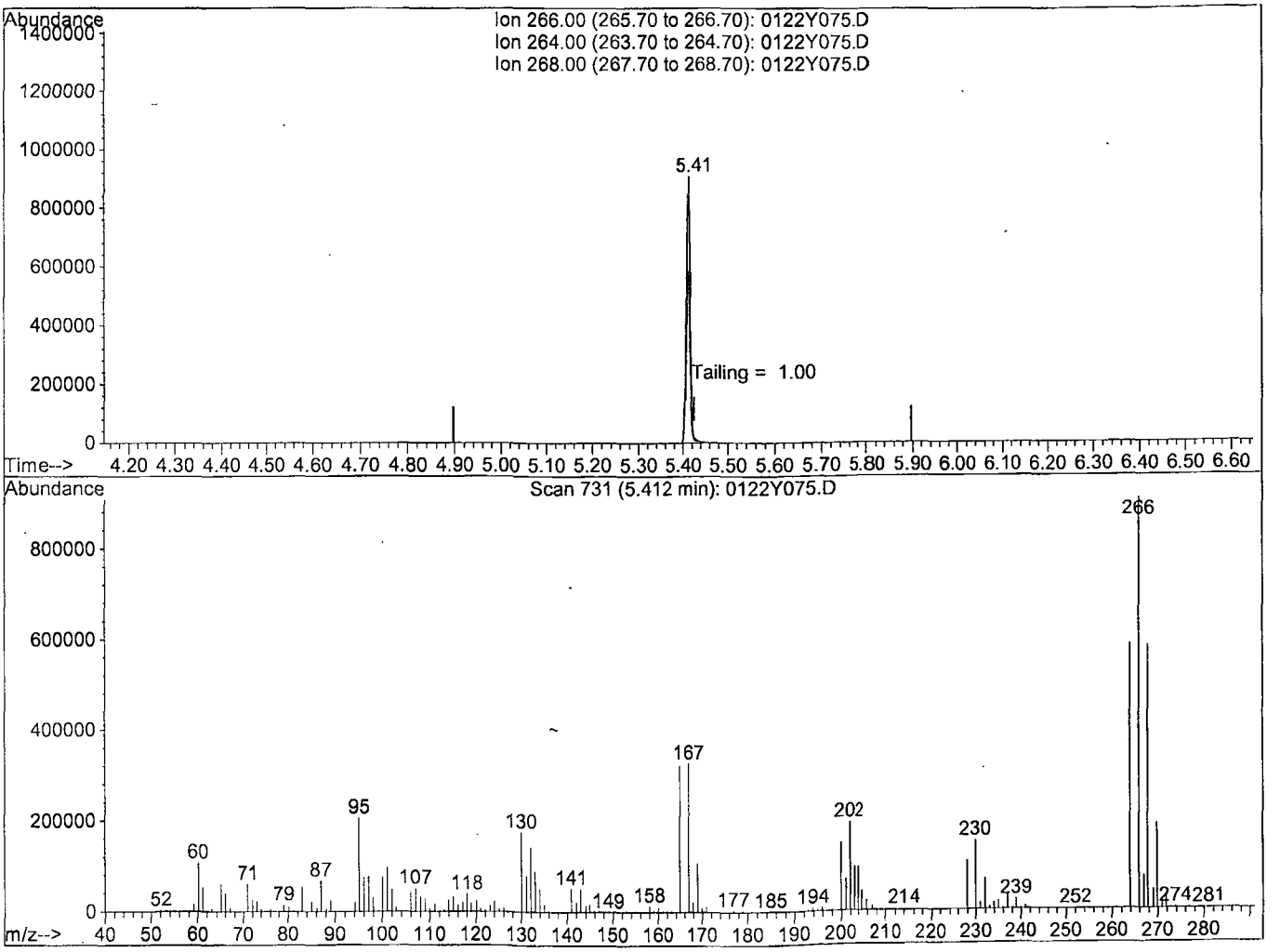
#	Name	Ret Time	Target Response
1)	DDT	7.14	67430100
2)	DDD	6.90	3763380
3)	DDE	6.63	137962

Breakdown **5.47**

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y075.D Vial: 75
Acq On : 16 Mar 20 8:46 Operator: MA,SS
Sample : SV TUNE 10/01/19 Inst : Yoda
Misc : soil Multiplr: 1.00
Quant Time: Mar 16 9:52 2020 Quant Results File: temp.res

Method : M:\YODA\DATA\Y200122M\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Wed Mar 11 15:20:33 2020
Response via : Single Level Calibration



TIC: 0122Y075.D

(5) Pentachlorophenol

5.41min 0.0000

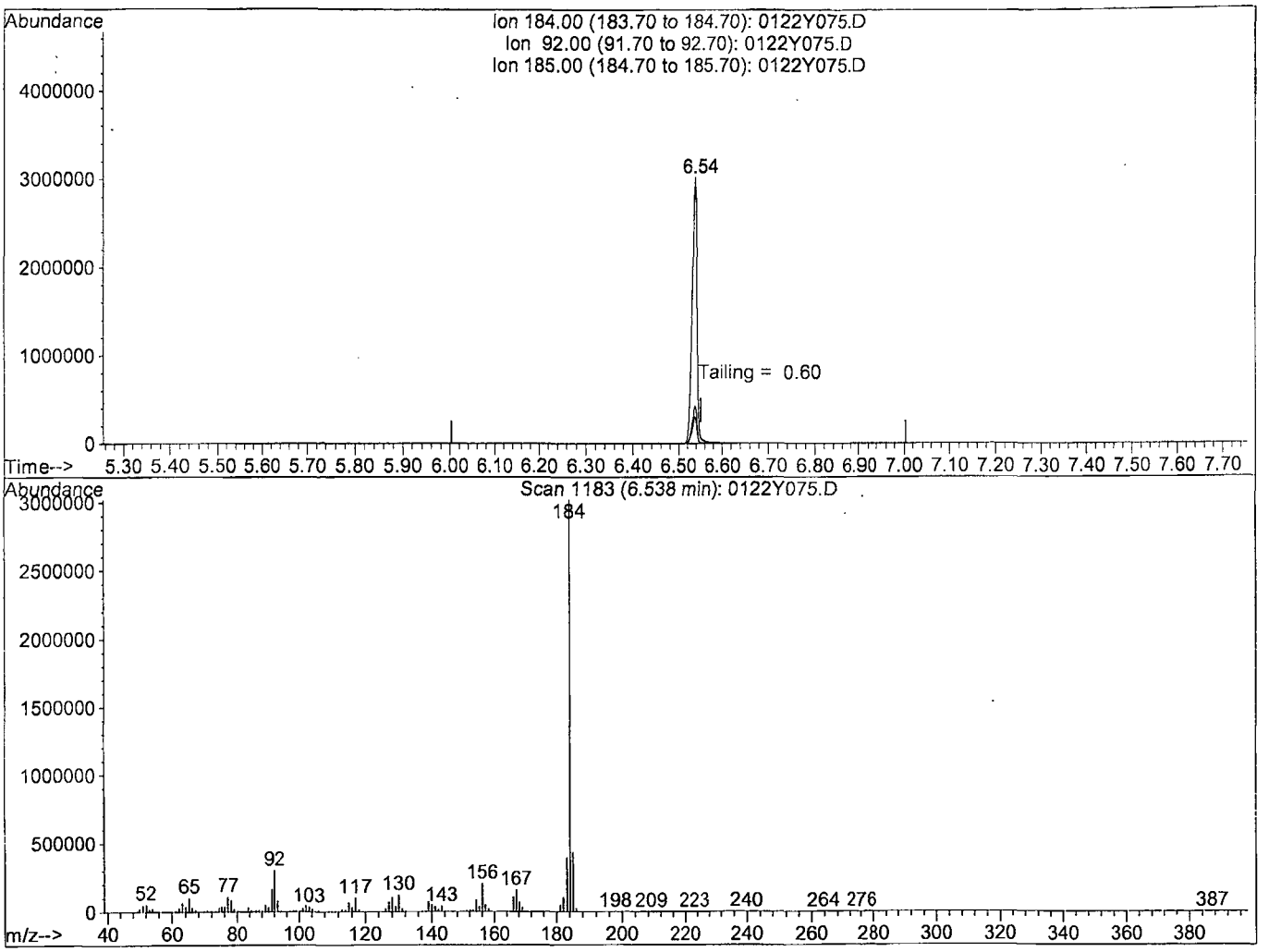
response 5506172

Ion	Exp%	Act%
266.00	100	100
264.00	63.80	64.14
268.00	63.80	63.84
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y200122M\0122Y075.D Vial: 75
Acq On : 16 Mar 20 8:46 Operator: MA,SS
Sample : SV TUNE 10/01/19 Inst : Yoda
Misc : soil Multiplr: 1.00
Quant Time: Mar 16 9:52 2020 Quant Results File: temp.res

Method : M:\YODA\DATA\Y200122M\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Wed Mar 11 15:20:33 2020
Response via : Single Level Calibration



TIC: 0122Y075.D

(6) Benzidine

6.54min 0.0000

response 24219745

Ion	Exp%	Act%
184.00	100	100
92.00	11.60	9.66
185.00	14.90	14.25
0.00	0.00	0.00

Name of Final Standard: MEE Curve
Prep Date: 01/22/20
Exp Date: 11/05/20
Prep'd By (Initials): JP

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
MEE M STD Stock	APPL		2000 ug/mL	11/05/19	11/05/20	5 uL	200uL	Methanol 195uL Lot# 235140	50 ug/mL
SV Internal Standard	APPL	8270 Internal Standard	2000 ug/mL	11/20/19	11/20/20	4 uL	"	"	"
MEE M STD Stock	APPL		2000 ug/mL	11/05/19	11/05/20	5 uL	100uL	Methanol 95uL Lot# 235140	100 ug/mL
SV Internal Standard	APPL	8271 Internal Standard	2000 ug/mL	11/20/19	11/20/20	2 uL	"	"	"
MEE M STD Stock	APPL		2000 ug/mL	11/05/19	11/05/20	10 uL	100uL	Methanol 90uL Lot# 235140	200 ug/mL
SV Internal Standard	APPL	8272 Internal Standard	2000 ug/mL	11/20/19	11/20/20	2 uL	"	"	"
MEE M STD Stock	APPL		2000 ug/mL	11/05/19	11/05/20	20 uL	100uL	Methanol 80 uL Lot# 235140	400 ug/mL
SV Internal Standard	APPL	8273 Internal Standard	2000 ug/mL	11/20/19	11/20/20	2 uL	"	"	"
MEE M STD Stock	APPL		2000 ug/mL	11/05/19	11/05/20	50 uL	200 uL	Methanol 150 uL Lot# 235140	500 ug/mL
SV Internal Standard	APPL	8274 Internal Standard	2000 ug/mL	11/20/19	11/20/20	4 uL	"	"	"
MEE M STD Stock	APPL		2000 ug/mL	11/05/19	11/05/20	30 uL	100uL	Methanol 70 uL Lot# 235140	600 ug/mL
SV Internal Standard	APPL	8275 Internal Standard	2000 ug/mL	11/20/19	11/20/20	2 uL	"	"	"
MEE M STD Stock	APPL		2000 ug/mL	11/05/19	11/05/20	40 uL	100uL	Methanol 60 uL Lot# 235140	800 ug/mL
SV Internal Standard	APPL	8276 Internal Standard	2000 ug/mL	11/20/19	11/20/20	2 uL	"	"	"
MEE M STD Stock	APPL		2000 ug/mL	11/05/19	11/05/20	50 uL	100uL	Methanol 50uL Lot# 235140	1000 ug/mL
SV Internal Standard	APPL	8277 Internal Standard	2000 ug/mL	11/20/19	11/20/20	2 uL	"	"	"

Name of Final Standard: MEE Second Source
Prep Date: 01/22/20
Exp Date: 10/28/20
Prep'd By (Initials): JP

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
MEE SS	APPL		2000 ug/mL	10/28/19	10/28/20	50 uL	200uL	Methanol 150uL Lot# 235140	500 ug/mL
SV Internal Standard	APPL	8277 Internal Standard	2000 ug/mL	11/20/19	11/20/20	4 uL	"	"	"

MWE2MEE

Organic Extraction Worksheet

Method	Solid Phase Extraction of 2MEE in Water	Extraction Set	191106A	Extraction Method	MWE2MEE	Units	mL

Spiked ID 1	Diethylene Glycol 1-31-19 EXP 1-31-20		Surrogate ID 1		
Spiked ID 2	2MEE SS 10320ug/mL 10/28/19 exp 10/28/20		Surrogate ID 2		
Spiked ID 3	Diethylene Glycol 11-5-19 exp 11-5-20		Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	no	
Spiked ID 7			Ext. Start Time:	11/06/19 6:25	
Spiked ID 8			Ext. End Time:	11/06/19 13:30	
			GC Requires Extract By:		

M STD AND SS PREPARATION MA 1/21/20

pH1			Water Bath Temp 1 °C	
pH2			Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: DL **Date** 11/06/19 **Witnessed By:** CFM **Date** 11/06/19

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	191106A Blk				NA	NA equip	500	2	7Y	11/06/19 6:25	
2	191106A LCS-1		0.040	1	NA	NA equip	500	2	7Y	11/06/19 6:25	
3	191106A LCSD-1		0.040	1	NA	NA equip	500	2	7Y	11/06/19 6:25	
4	BA02214	BA02214W18			NA	NA equip	500	2	7Y	11/06/19 6:25	90611
5	BA02216	BA02216W10			NA	NA equip	500	2	7Y	11/06/19 6:25	90611
6	BA02301	BA02301W22			NA	NA equip	500	2	7Y	11/06/19 6:25	90625
7	M STD		1	3	na	na equip	500	2	7Y	11/06/19 6:25	
8	SS		0.097	2	NA	NA equip	500	2	7Y	11/06/19 6:25	

Solvent and Lot#	
ENVI-Carb Plus 400MG/1ML	11694501
Reverible Tube Lot:	11694501
PH Strip	HC863463
Di Water	11/6/19
Dichloromethane	59130
Methanol	59129

Extraction COC Transfer	
Extraction lab employee Initials	SS
GC analyst's initials	MA
Date	
Time	
Refrigerator	Hobart

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL
Concentration	DL

Modified	11/06/19 6:07:34 AM

Reviewed By: **Date**

Name of Final Standard	Diethylene Glycol
Prep Date	**11/05/19**
Exp Date	**11/05/20**

Prep'd By (Initials) MA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc.(range)
Diethylene glycol methyl ether	AccuStandard	S-72273	2000 ug/mL	**218101558-39890**	**12/01/20**	1.0 mL	2 mL	**Methanol #208858**	1000 ug/mL

Given to Extraction to do **MEE M STD Stock** (used for ICAL) Final concentration 2000ug/L

Name of Final Standard **2MEE Second Source Stock** **Prep'd By (Initials)** **JP**

Prep Date **10/28/19**
Exp Date **10/28/20**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Methoxyethanol-Neat	Chem Service	N-12404-1G	Neat 99.5%	**7079100 - 39417**	**07/31/22**	0.1022g	10 mL	**MC #56258**	10220 ug/mL

Given to Extraction to do **MEE SS** (used for ICAL SS)
0.097ml were spiked in 500ml of water and extracted on 04/29/19 . Final concentration is 2000ug/L

Name of Final Standard MEE Curve

Prep Date 01/29/20

Exp Date 11/05/20

Prep'd By (Initials) JP

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
MEE M STD Stock	APPL		2000 ug/mL	**11/05/19**	**11/05/20**	50 uL	200 uL	**Methanol 150 uL**	500 ug/mL
SV Internal Standard	APPL	Internal Standard	2000 ug/mL	**11/20/19**	**11/20/20**	4 uL	*	*	*

Organic Extraction Worksheet

Method	Solid Phase Extraction of 2MEE in Water	Extraction Set	200313A	Extraction Method	MWE2MEE	Units	mL

Spiked ID 1	Diethylene Glycol 11-5-19 11-5-20		Surrogate ID 1		
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	03/13/20 7:30	
Spiked ID 8			Ext. End Time:	03/13/20 13:25	
			GC Requires Extract By:		

pH1			Water Bath Temp 1 °C	
pH2			Water Bath Temp 2 °C	
pH3			Water Bath Temp 3 °C	

Spiked By: DL **Date** 03/13/20 **Witnessed By:** CFM **Date** 03/13/20

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	200313A Blk				NA	NA equip	500	2	7	03/13/20 7:30	
2	200313A LCS-1		0.040	1	NA	NA equip	500	2	7	03/13/20 7:30	
3	200313A LCSD-1		0.040	1	NA	NA equip	500	2	7	03/13/20 7:30	
4	BA08341 MS-1	BA08341W31	0.040	1	NA	NA equip	500	2	7	03/13/20 7:30	91638
5	BA08341 MSD-1	BA08341W27	0.040	1	NA	NA equip	500	2	7	03/13/20 7:30	91638
6	BA08341	BA08341W35			NA	NA equip	500	2	7	03/13/20 7:30	91638
7	BA08370	BA08370W17			NA	NA equip	500	2	7	03/13/20 7:30	91653
8	BA08371	BA08371W09			NA	NA equip	500	2	7	03/13/20 7:30	91653

Solvent and Lot#	
ENVIRO-CLEAN CARTRIDGES	47266-EY
PH Strip	HC863463
Di Water	3-13-20
Dichloromethane	59239
Methanol	59129

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	MA
Date	3/16/20
Time	9:30
Refrigerator	HOBART

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL
Concentration	DL

Modified	03/16/20 10:21:50 AM

Reviewed By: KY **Date** 03/16/20

Injection Log

Directory: M:\YODA\DATA\Y200122M\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	0122Y002.D	1	SV Tune 10/11/18		22 Jan 20 15:31
2	3	0122Y003.D	1	50ug/ml MEE 01/22/20	soil	22 Jan 20 15:46
3	4	0122Y004.D	1	100ug/ml MEE 01/22/20	soil	22 Jan 20 16:10
4	5	0122Y005.D	1	200ug/ml MEE 01/22/20	soil	22 Jan 20 16:33
5	6	0122Y006.D	1	400ug/ml MEE 01/22/20	soil	22 Jan 20 16:57
6	7	0122Y007.D	1	500ug/ml MEE 01/22/20	soil	22 Jan 20 17:21
7	8	0122Y008.D	1	600ug/ml MEE 01/22/20	soil	22 Jan 20 17:45
8	9	0122Y009.D	1	800ug/ml MEE 01/22/20	soil	22 Jan 20 18:08
9	10	0122Y010.D	1	1000ug/ml MEE 01/22/20	soil	22 Jan 20 18:32
10	11	0122Y011.D	1	SS MEE 01/22/20	soil	22 Jan 20 18:55
11	75	0122Y075.D	1	SV TUNE 10/01/19	soil	16 Mar 20 8:46
12	76	0122Y076.D	1	500ug/ml MEE 01/29/20 (1)	soil	16 Mar 20 9:14
13	77	0122Y077.D	1	200313A BLK 2/500	soil	16 Mar 20 9:45
14	79	0122Y079.D	1	200313A LCSD-1 2/500	soil	16 Mar 20 10:32
15	83	0122Y083.D	1	BA08370W17 2/500	water	16 Mar 20 12:07
16	84	0122Y084.D	1	BA08371W09 2/500	water	16 Mar 20 12:30
17	85	0122Y085.D	1	200313A LCS-1 2/500	water	16 Mar 20 12:54
18	86	0122Y086.D	1	500ug/ml MEE 01/29/20 (1)	soil	16 Mar 20 13:17

ORGANICS
Calibration Data

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date. 03/12/20
Matrix: Instrument: Loki Initials: DP

		Compound	0312L10.D	0312L11.D	0312L12.D	0312L13 D	0312L14 D	0312L15 D	0312L16.D	0312L17.D	0312L18 D		Avg	%RSD	Type	r^2	Q	MRF
1	I	Fluorobenzene (IS)																
2	TM	Chlorotrifluoroethene													TM			
3	TM	Dichlorodifluoromethane		0.4073	0.3984	0.4521	0.3285	0.3356	0.3366	0.3445	0.3387		0.37	12	TM			
4	TM	Freon 114		0.4562	0.3872	0.4279	0.2903	0.3568	0.3518	0.3576	0.3668		0.37	14	TM			
5	TM**L	Chloromethane		0.7087	0.5965	0.5759	0.4992	0.4554					0.57	17	TM**L	0.995		
6	TM*	Vinyl chloride		0.6000	0.5221	0.5791	0.5231	0.5107	0.4962	0.5086	0.4795		0.53	7.8	TM*			
7	TM	2-Chloro-1,1,1-trifluoroethane													TM			
8	TM	Bromomethane		0.1750	0.2141	0.2059	0.1936	0.1832	0.1831	0.1680	0.1866		0.19	8.1	TM			
9	TM	Chloroethane		0.1154	0.0893	0.1060	0.0907	0.0851	0.0794	0.0834	0.0746		0.09	15	TM			
10	TM	Dichlorofluoromethane		0.6283	0.6908	0.6905	0.6131	0.6588	0.6429				0.65	4.9	TM			
11	TM	Trichlorofluoromethane		0.5854	0.6229	0.6318	0.5955	0.5938	0.5732	0.5771	0.5584		0.59	4.2	TM			
12	TM	Diethyl ether													TM			
13	TM	Acrolein			0.0368	0.0352	0.0381	0.0369	0.0377	0.0426	0.0448		0.04	9.0	TM			
14	TML	Acetone				0.3633	0.1824	0.1354	0.1133	0.1021	0.0880		0.16	63	TML	0.999		
15	TM	Freon-113		0.3628	0.3530	0.3469	0.3083	0.3497	0.3491	0.3493	0.3418		0.35	4.6	TM			
16	TM*	1,1-DCE		0.5286	0.5549	0.5242	0.4634	0.5234	0.5097	0.5160	0.5073		0.52	5.0	TM*			
17	TM	t-Butanol	0.0406	0.0317	0.0286	0.0297	0.0303	0.0298	0.0323	0.0372			0.03	13	TM			
18	TM	2-Propanol													TM			
19	TM	Acetonitrile		0.0685	0.0621	0.0602	0.0579	0.0576	0.0543	0.0580	0.0564		0.06	7.3	TM			
20	TML	Methyl Acetate		0.4951	0.3644	0.3780	0.2760	0.2907	0.2868	0.2963	0.2928		0.34	22	TML	1.000		
21	TML	Iodomethane		0.3397	0.3725	0.3930	0.3899	0.4406	0.4813	0.5273	0.5452		0.44	17	TML	0.999		
22	TML	Acrylonitrile		0.3108	0.2036	0.2073	0.1673	0.1767	0.1679	0.1684	0.1630		0.20	25	TML	1.000		
23	TML	Methylene chloride		0.8069	0.6160	0.5025	0.4403	0.4531	0.4284	0.4348	0.4118		0.51	27	TML	1.000		
24	TM	Carbon disulfide		0.9859	1.043	0.9712	0.8391	0.9140					0.95	8.2	TM			
25	TM	Methyl t-butyl ether (MtBE)		0.9094	0.8811	0.8374	0.7825	0.8390	0.8519	0.8787	0.8615		0.86	4.4	TM			
26	TM	Trans-1,2-DCE		0.5184	0.5145	0.5140	0.4742	0.5216	0.5040	0.5216	0.4990		0.51	3.2	TM			
27	TM	Diisopropyl Ether		1.335	1.214	1.261	1.122	1.184	1.161	1.192	1.153		1.2	5.6	TM			
28	TM**	2,2-Dichloro-1,1,1-trifluoroethane													TM**			
29	TM**	1,1-DCA		0.7554	0.7512	0.7367	0.6813	0.7543	0.7162	0.7324	0.6973		0.73	3.8	TM**			
30	TM	Vinyl Acetate		1.335	1.214	1.261	1.122	1.184	1.161	1.192	1.153		1.2	5.6	TM			
31	TM	Ethyl tert Butyl Ether													TM			
32	TM	MEK (2-Butanone)				0.1049	0.0812	0.0784	0.0748	0.0801	0.0763		0.08	14	TM			
33	TM	Cis-1,2-DCE		0.7073	0.6716	0.6647	0.6070	0.6300	0.6266	0.6363	0.6020		0.64	5.5	TM			
34	TM	2,2-Dichloropropane		0.6514	0.5960	0.5768	0.5025	0.5414	0.5196	0.5396	0.5133		0.56	9.0	TM			
35	TM	2-Methylpentane													TM			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 03/12/20
Matrix: Instrument: Loki Initials: DP

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD	Type		Q	MRF
36	TM	3-Methylpentane													TM			
37	TM*	Chloroform		0.7912	0.8059	0.8137	0.7137	0.7730	0.7588	0.7727	0.7308		0.77	4.5	TM*			
38	TM	Bromochloromethane		0.3302	0.3157	0.3211	0.3036	0.3247	0.3209	0.3255	0.3047		0.32	3.0	TM			
39	S	Dibromofluoromethane(S)	0.9655	0.7142	0.6902	0.7022	0.6963	0.7140	0.6569	0.6712	0.6088		0.71	14	S			
40	TM	1,1,1-TCA		0.5548	0.5823	0.6268	0.5807	0.6108	0.5930	0.6129	0.5912		0.59	3.8	TM			
41	TM	Cyclohexane		0.5507	0.5554	0.5098	0.4541	0.5037	0.5095	0.5282	0.5414		0.52	6.3	TM			
42	TM	1,1-Dichloropropene		0.5435	0.4920	0.5138	0.4485	0.4935	0.4881	0.5075	0.5030		0.50	5.4	TM			
43	TM	2,2,4-Trimethylpentane		1.047	1.134	1.091	0.9175	1.081	1.053	1.106	1.162		1.1	6.9	TM			
44	S	1,2-DCA-D4(S)	0.9637	0.7277	0.6937	0.7185	0.6936	0.7189	0.6549	0.6775	0.6210		0.72	14	S			
45	TM	Carbon Tetrachloride		0.5029	0.5128	0.5304	0.4877	0.5502	0.5265	0.5391	0.5333		0.52	3.9	TM			
46	TM	Tert Amyl Methyl Ether													TM			
47	TM	Methylcyclopentane													TM			
48	TM	1,2-DCA		0.5387	0.5830	0.5484	0.5231	0.5391	0.5469	0.5541	0.5229		0.54	3.5	TM			
49	TM	Benzene		1.961	1.746	1.615	1.468	1.591	1.550	1.608	1.564		1.6	9.3	TM			
50	TM	TCE		0.4404	0.4641	0.4530	0.4435	0.4762	0.4674	0.4799	0.4684		0.46	3.2	TM			
51	TM	2-Pentanone		0.1850	0.1846	0.1852	0.1935	0.1947	0.2052	0.2246	0.2292		0.20	8.9	TM			
52	TM*	1,2-Dichloropropane		0.4132	0.4136	0.4074	0.3808	0.4365	0.4195	0.4349	0.4163		0.42	4.2	TM*			
53	TM	Bromodichloromethane		0.5576	0.5714	0.5595	0.5340	0.5848	0.5738	0.5974	0.5806		0.57	3.4	TM			
54	TM	Methyl Cyclohexane		0.5366	0.5498	0.5084	0.4592	0.5164	0.5255	0.5523	0.5871		0.53	7.1	TM			
55	TM	Dibromomethane		0.3090	0.3330	0.3409	0.3268	0.3561	0.3513	0.3659	0.3436		0.34	5.3	TM			
56	TM	2-Chloroethyl vinyl ether													TM			
57	TML	MIBK (methyl isobutyl ketone)			0.4480	0.3861	0.3378	0.2818	0.2857	0.2888	0.2955		0.33	19	TML	1.000		
58	TM	1-Bromo-2-chloroethane		0.5650	0.5869	0.5807	0.5562	0.5987	0.5979	0.6160	0.5856		0.59	3.3	TM			
59	TM	Cis-1,3-Dichloropropene		0.5801	0.5777	0.6101	0.5535	0.6067	0.6253	0.6599	0.6685		0.61	6.6	TM			
60	TM*	Toluene		1.922	1.704	1.676	1.603	1.767	1.747	1.820	1.788		1.8	5.5	TM*			
61	TM	Trans-1,3-Dichloropropene		0.4904	0.4500	0.4779	0.4724	0.5050	0.5253	0.5524	0.5652		0.50	8.0	TM			
62	TM	1,1,2-TCA		0.4231	0.4053	0.4221	0.3823	0.4289	0.4048	0.4253	0.4100		0.41	3.7	TM			
63	TML	2-Hexanone				0.1834	0.1204	0.1067	0.1054	0.1118	0.1221		0.12	24	TML	0.998		
64	I	Chlorobenzene-D5 (IS)																
65	S	Toluene-D8(S)		2.260	2.037	2.196	2.206	2.320	2.105	2.133	1.988		2.2	5.2	S			
66	TM	1,2-EDB		0.3729	0.3623	0.3759	0.3701	0.3957	0.3833	0.3935	0.3796		0.38	3.0	TM			
67	TM	Tetrachloroethene		0.4833	0.4765	0.4920	0.4520	0.4820	0.4528	0.4663	0.4465		0.47	3.6	TM			
68	TM	1-Chlorohexane		0.4375	0.4022	0.4305	0.4074	0.4459	0.4367	0.4624	0.4856		0.44	6.2	TM			
69	TM	1,1,1,2-Tetrachloroethane		0.4462	0.4046	0.4200	0.4034	0.4349	0.4236	0.4283	0.4131		0.42	3.5	TM			
70	TM	m&p-Xylene		1.395	1.264	1.207	1.170	1.311	1.303	1.368	1.380		1.3	6.3	TM			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 03/12/20
Matrix: Instrument: Loki Initials: DP

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD	Type		Q	MRF
71	TM	o-Xylene		1.574	1.303	1.258	1.220	1.338	1.316	1.387	1.414		1.4	8.1	TM			
72	TM	Styrene		1.059	0.8814	0.9503	0.9344	1.061	1.088	1.144	1.170		1.0	10.0	TM			
73	S	4-Bromofluorobenzene(S)		0.8958	0.7818	0.8269	0.8022	0.8543	0.7947	0.8070	0.7560		0.81	5.4	S			
74	TM	1,3-Dichloropropane		0.6105	0.5912	0.5890	0.5731	0 6342	0.6012	0.6124	0.5979		0.60	3.0	TM			
75	TM	Dibromochloromethane		0 3972	0.4004	0.4099	0.4032	0.4442	0.4312	0.4449	0.4372		0.42	4.8	TM			
76	TM**	Chlorobenzene		1.176	1.096	1.092	1.057	1.110	1.077	1.081	1.059		1.1	3.5	TM**			
77	TM*	Ethylbenzene		2.014	1.683	1.607	1.542	1.704	1.702	1.779	1.775		1.7	8.2	TM*			
78	TM**	Bromoform		0.2678	0.2745	0.3048	0.2714	0.3161	0.3070	0.3180	0.3149		0.30	7.3	TM**			
79	I	1,4-Dichlorobenzene-D (IS)																
80	TM	Isopropylbenzene		2.187	1.966	1.747	1.603	1.669	1.737	1.822	1.886		1.8	10	TM			
81	TM**	1,1,2,2-Tetrachloroethane		0.8254	0.9289	0.8182	0.8534	0.8452	0.8091	0.8161	0.8040		0.84	4.9	TM**			
82	TM	1,2,3-Trichloropropane		0 3416	0.2843	0.2838	0.2539	0.2670	0.2567	0.2601	0.2509		0.27	11	TM			
83	TM	t-1,4-Dichloro-2-Butene		0.1450	0.1300	0.1427	0.1226	0.1195	0.1213	0.1324	0.1402		0.13	7.7	TM			
84	TM	Bromobenzene		1.111	0.9518	0.8689	0.8326	0.8667	0.8508	0.8574	0.8338		0.90	11	TM			
85	TML	n-Propylbenzene		6.071	4.439	3.589	3.267	3.269	3.299	3.505	3.590		3.9	25	TML	1.000		
86	TML	4-Ethyltoluene		2.630	2.060	1.704	1.622	1.682	1.746	1.860	1.905		1.9	17	TML	1.000		
87	TM	2-Chlorotoluene		1.443	1.310	1.270	1.128	1.248	1.252	1.294	1.248		1.3	6.9	TM			
88	TM	1,3,5-Trimethylbenzene		3.346	2.759	2.431	2.347	2.453	2.528	2.598	2.580		2.6	12	TM			
89	TM	4-Chlorotoluene		1.743	1.464	1.315	1.223	1.331	1.258	1.333	1.331		1.4	12	TM			
90	TML	Tert-Butylbenzene		4.270	2.863	2.292	2.012	2.075	2.058	2.150	2.189		2.5	31	TML	1.000		
91	TML	1,2,4-Trimethylbenzene		7.218	4.407	3.231	2.530	2.525	2.563	2.639	2.651		3.5	47	TML	1.000		
92	TML	Sec-Butylbenzene		6.708	4.450	3.348	2.969	3.004	3.013	3.154	3.232		3.7	35	TML	1.000		
93	TML	p-Isopropyltoluene		5.351	3.621	2.873	2.546	2.624	2.644	2.782	2.839		3.2	30	TML	1.000		
94	TM	Benzyl Chloride		0.6042	0.6253	0.5303	0.5613	0.5408	0.5643	0.6311	0.7710		0.60	13	TM			
95	TM	1,3-DCB		2.216	1.818	1.668	1.527	1.551	1.559	1.567	1.559		1.7	14	TM			
96	TML	1,4-DCB		2.642	2.061	1.734	1.567	1.573	1.570	1.598	1.598		1.8	21	TML	1.00		
97	TML	n-Butylbenzene		8.368	4.586	2.863	2.117	2.061	2.086	2.230	2.356		3.3	66	TML	0.999		
98	TML	1,2-DCB		2.339	1.984	1.558	1.438	1.501	1.477	1.490	1.537		1.7	19	TML	1.000		
99	TM	Hexachloroethane		0.5706	0.5227	0.5096	0.5238	0.4772	0.4849	0.4984	0.5014		0.51	5.7	TM			
100	TM	1,2-Dibromo-3-chloropropane		0.1511	0.1177	0.1463	0.1385	0.1407	0.1469	0.1473	0.1698		0.14	10.0	TM			
101	TML	1,2,4-Trichlorobenzene		3.861	2.081	1.373	0.9225	0.8414	0.8652	0.9154	1.016		1.5	71	TML	0.997		
102	TML	Hexachlorobutadiene		1.148	0.7101	0.4433	0.3486	0.3251	0.3265	0.3317	0.3527		0.50	59	TML	0.999		
103	TML	Naphthalene				3.786	1.883	1.504	1.435	1.543	1.717		2.0	46	TML	0.996		
104	TML	1,2,3-Trichlorobenzene		1.939	1.113	0.6783	0.4393	0.4194	0.4051	0.4623	0.4821		0.74	73	TML	0.998		
105																		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L10.D Vial: 4
Acq On : 12 Mar 20 12:10 Operator:
Sample : 0.3ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	4.65	96	380864	25.00	ppb		0.00
64) Chlorobenzene-D5 (IS)	8.36	117	407424	25.00	ppb		0.00
79) 1,4-Dichlorobenzene-D (IS)	10.90	152	230144	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	3.62	111	73542	6.77	ppb		0.00
Spiked Amount 25.000			Recovery = 27.072%				
44) 1,2-DCA-D4(S)	4.11	65	73406	6.70	ppb		0.00
Spiked Amount 25.000			Recovery = 26.812%				
65) Toluene-D8(S)	6.73	98	245880	7.00	ppb		0.00
Spiked Amount 25.000			Recovery = 27.992%				
73) 4-Bromofluorobenzene(S)	9.66	95	99612	7.50	ppb		0.00
Spiked Amount 25.000			Recovery = 30.004%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	0.67	85	2208	0.39	ppb		92
4) Freon 114	0.73	85	1880	0.33	ppb		93
5) Chloromethane	0.76	50	3972	0.29	ppb		99
6) Vinyl chloride	0.81	62	2228	0.28	ppb	#	43
8) Bromomethane	0.97	94	1140	0.40	ppb	#	79
9) Chloroethane	1.02	66	611	0.44	ppb		84
10) Dichlorofluoromethane	1.13	67	3060	0.31	ppb		91
11) Trichlorofluoromethane	1.16	101	2890	0.32	ppb		93
13) Acrolein	1.39	56	8661	14.62	ppb	#	76
14) Acetone	1.49	43	12468	2.92	ppb		94
15) Freon-113	1.46	101	1686	0.32	ppb	#	80
16) 1,1-DCE	1.45	61	2487	0.32	ppb	#	81
17) t-Butanol	1.90	59	6178	12.48	ppb	#	81
19) Acetonitrile	1.67	41	14576	16.11	ppb		94
20) Methyl Acetate	1.72	43	4426	0.86	ppb		96
21) Iodomethane	1.53	142	1818	1.36	ppb		94
22) Acrylonitrile	1.97	53	2146	0.30	ppb	#	72
24) Carbon disulfide	1.57	76	4963	0.34	ppb	#	76
25) Methyl t-butyl ether (MtBE	2.01	73	4868	0.37	ppb	#	85
26) Trans-1,2-DCE	1.99	61	2415	0.31	ppb		85
27) Diisopropyl Ether	2.48	45	7525	0.41	ppb	#	89
29) 1,1-DCA	2.35	63	3763	0.34	ppb		99
30) Vinyl Acetate	2.48	45	7525	0.41	ppb	#	89
32) MEK (2-Butanone)	3.03	43	1825	1.45	ppb		95
33) Cis-1,2-DCE	2.96	61	3226	0.33	ppb	#	88
34) 2,2-Dichloropropane	2.95	77	3355	0.40	ppb		97
37) Chloroform	3.40	83	4110	0.35	ppb		93
38) Bromochloromethane	3.24	130	1821	0.38	ppb		90
40) 1,1,1-TCA	3.59	97	3026	0.33	ppb	#	78
41) Cyclohexane	3.66	56	2794	0.35	ppb		80
42) 1,1-Dichloropropene	3.86	75	2741	0.36	ppb		94
43) 2,2,4-Trimethylpentane	4.41	57	5704	0.35	ppb		97
45) Carbon Tetrachloride	3.86	117	2269	0.28	ppb		83
48) 1,2-DCA	4.23	62	2962	0.36	ppb		99
49) Benzene	4.18	78	11064	0.44	ppb		93
50) TCE	5.18	130	2321	0.33	ppb		97
51) 2-Pentanone	5.52	43	36096	11.83	ppb		96
52) 1,2-Dichloropropane	5.45	63	2030	0.32	ppb		93
53) Bromodichloromethane	5.85	83	2518	0.29	ppb		94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L10.D Vial: 4
Acq On : 12 Mar 20 12:10 Operator:
Sample : 0.3ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
54)	Methyl Cyclohexane	5.40	83	2241	0.28	ppb		74
55)	Dibromomethane	5.59	174	1568	0.30	ppb	#	84
57)	MIBK (methyl isobutyl ket	6.68	43	4755	0.94	ppb		91
58)	1-Bromo-2-chloroethane	6.20	63	2760	0.31	ppb		93
59)	Cis-1,3-Dichloropropene	6.43	75	2884	0.31	ppb		96
60)	Toluene	6.80	91	10557	0.40	ppb		94
61)	Trans-1,3-Dichloropropene	7.12	75	1974	0.26	ppb	#	48
62)	1,1,2-TCA	7.31	97	1982	0.32	ppb	#	78
63)	2-Hexanone	7.67	43	3586	2.96	ppb	#	82
66)	1,2-EDB	7.80	107	1782	0.29	ppb		85
67)	Tetrachloroethene	7.43	166	2349	0.31	ppb		82
68)	1-Chlorohexane	8.45	91	2366	0.33	ppb		82
69)	1,1,1,2-Tetrachloroethane	8.50	131	2269	0.33	ppb		98
70)	m&p-Xylene	8.69	91	20284	0.96	ppb		95
71)	o-Xylene	9.11	91	10388	0.47	ppb		96
72)	Styrene	9.13	104	6627	0.39	ppb		88
74)	1,3-Dichloropropane	7.48	76	2803	0.29	ppb		88
75)	Dibromochloromethane	7.72	129	2073	0.30	ppb	#	70
76)	Chlorobenzene	8.38	112	7079	0.40	ppb		95
77)	Ethylbenzene	8.55	91	13796	0.49	ppb		99
78)	Bromoform	9.28	173	1481	0.31	ppb		99
80)	Isopropylbenzene	9.53	105	9691	0.58	ppb		98
81)	1,1,2,2-Tetrachloroethane	9.86	83	2464	0.32	ppb		100
82)	1,2,3-Trichloropropane	9.88	110	1099	0.43	ppb		83
83)	t-1,4-Dichloro-2-Butene	9.94	53	223	0.18	ppb		93
84)	Bromobenzene	9.80	156	3953	0.48	ppb		95
85)	n-Propylbenzene	9.98	91	28217	1.25	ppb		99
86)	4-Ethyltoluene	10.10	105	11705	1.26	ppb		94
87)	2-Chlorotoluene	10.03	91	5584	0.48	ppb		89
88)	1,3,5-Trimethylbenzene	10.18	105	14536	0.60	ppb		96
89)	4-Chlorotoluene	10.15	91	8065	0.64	ppb		91
90)	Tert-Butylbenzene	10.52	119	20123	1.20	ppb		94
91)	1,2,4-Trimethylbenzene	10.56	105	36324	1.35	ppb		90
92)	Sec-Butylbenzene	10.75	105	33890	1.40	ppb		92
93)	p-Isopropyltoluene	10.92	119	28348	1.40	ppb		96
94)	Benzyl Chloride	11.08	91	2169	0.39	ppb		87
95)	1,3-DCB	10.82	146	9979	0.64	ppb		97
96)	1,4-DCB	10.92	146	12308	0.78	ppb		93
97)	n-Butylbenzene	11.35	91	45763	2.39	ppb		100
98)	1,2-DCB	11.30	146	9721	0.87	ppb		95
99)	Hexachloroethane	11.57	117	1623	0.34	ppb	#	59
100)	1,2-Dibromo-3-chloropropan	12.14	157	402	0.30	ppb	#	86
101)	1,2,4-Trichlorobenzene	13.02	180	21607	2.81	ppb		86
102)	Hexachlorobutadiene	13.24	225	6427	2.02	ppb	#	86
103)	Naphthalene	13.26	128	80056	5.79	ppb		99
104)	1,2,3-Trichlorobenzene	13.53	182	10197	2.48	ppb		99

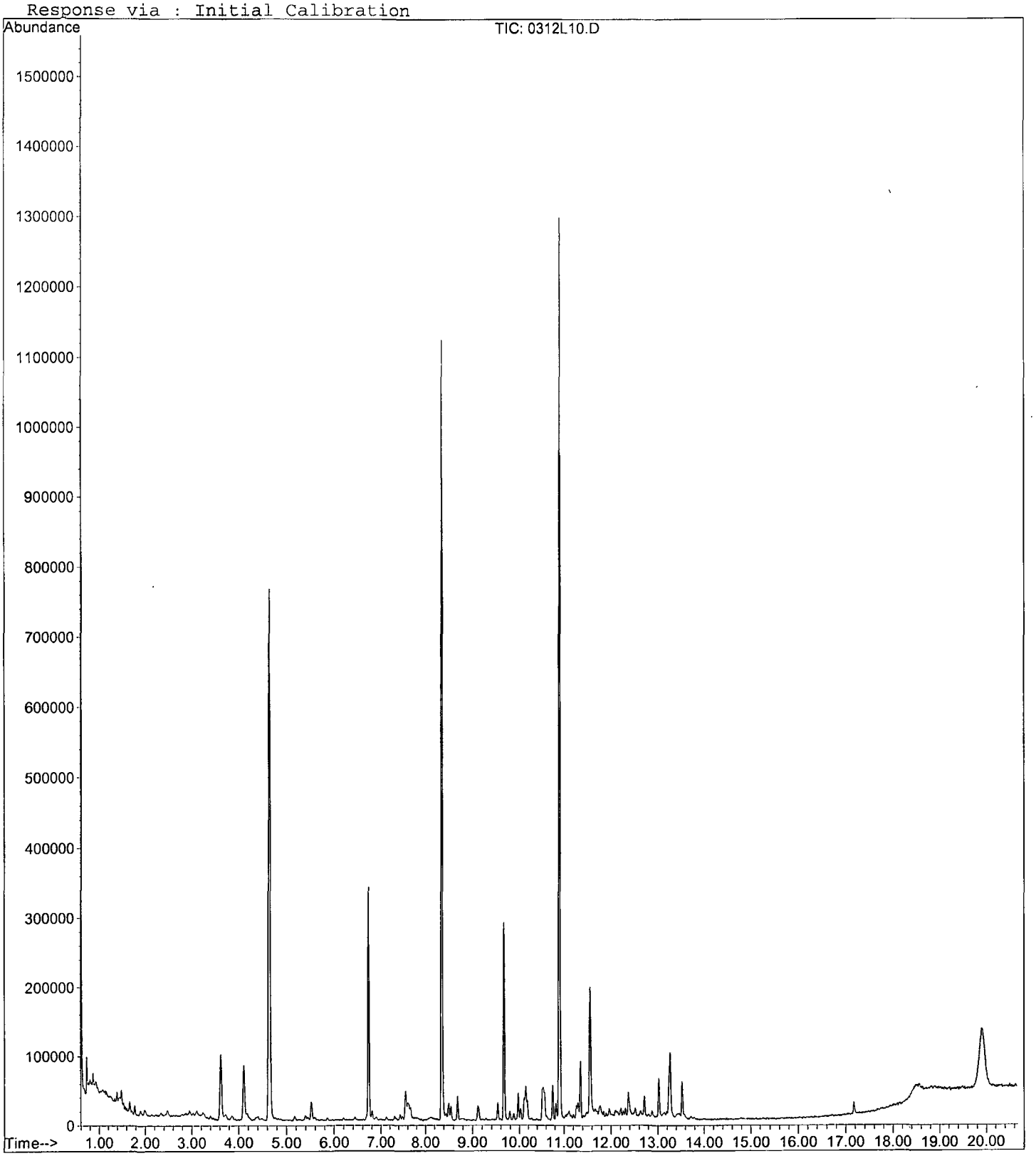
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0312L10.D Vial: 4
Acq On : 12 Mar 20 12:10 Operator:
Sample : 0.3ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L11.D Vial: 5
Acq On : 12 Mar 20 12:39 Operator:
Sample : 0.5ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	4.64	96	392064	25.00	ppb		0.00
64) Chlorobenzene-D5 (IS)	8.36	117	424896	25.00	ppb		0.00
79) 1,4-Dichlorobenzene-D (IS)	10.90	152	230976	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	3.62	111	56000	5.01	ppb		0.00
Spiked Amount 25.000			Recovery = 20.024%				
44) 1,2-DCA-D4(S)	4.11	65	57061	5.06	ppb		0.00
Spiked Amount 25.000			Recovery = 20.248%				
65) Toluene-D8(S)	6.73	98	192095	5.24	ppb		0.00
Spiked Amount 25.000			Recovery = 20.972%				
73) 4-Bromofluorobenzene(S)	9.66	95	76122	5.50	ppb		0.00
Spiked Amount 25.000			Recovery = 21.988%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	0.68	85	3194	0.55	ppb	#	87
4) Freon 114	0.73	85	3577	0.61	ppb		99
5) Chloromethane	0.76	50	5557	0.49	ppb		90
6) Vinyl chloride	0.81	62	4705	0.57	ppb	#	69
8) Bromomethane	0.97	94	1372	0.46	ppb	#	76
9) Chloroethane	1.02	66	905	0.64	ppb		90
10) Dichlorofluoromethane	1.13	67	4927	0.48	ppb		97
11) Trichlorofluoromethane	1.16	101	4590	0.49	ppb		96
13) Acrolein	1.39	56	2103	3.45	ppb		91
14) Acetone	1.49	43	11346	1.78	ppb		89
15) Freon-113	1.46	101	2845	0.53	ppb		95
16) 1,1-DCE	1.45	61	4145	0.51	ppb	#	94
17) t-Butanol	1.91	59	12444	24.41	ppb		94
19) Acetonitrile	1.67	41	26838	28.82	ppb	#	68
20) Methyl Acetate	1.72	43	3882	0.71	ppb	#	82
21) Iodomethane	1.54	142	2664	1.45	ppb	#	80
22) Acrylonitrile	1.97	53	2437	0.39	ppb		96
23) Methylene chloride	1.77	84	6327	0.23	ppb		97
24) Carbon disulfide	1.57	76	7731	0.52	ppb		98
25) Methyl t-butyl ether (MtBE	2.01	73	7131	0.53	ppb	#	90
26) Trans-1,2-DCE	1.99	61	4065	0.51	ppb		96
27) Diisopropyl Ether	2.47	45	10465	0.55	ppb		94
29) 1,1-DCA	2.34	63	5923	0.52	ppb		97
30) Vinyl Acetate	2.47	45	10465	0.55	ppb		94
32) MEK (2-Butanone)	3.03	43	1620	1.25	ppb		96
33) Cis-1,2-DCE	2.96	61	5546	0.55	ppb		96
34) 2,2-Dichloropropane	2.95	77	5108	0.59	ppb	#	88
37) Chloroform	3.40	83	6204	0.51	ppb		96
38) Bromochloromethane	3.25	130	2589	0.52	ppb		92
40) 1,1,1-TCA	3.60	97	4350	0.47	ppb		83
41) Cyclohexane	3.68	56	4318	0.53	ppb	#	81
42) 1,1-Dichloropropene	3.88	75	4262	0.54	ppb		95
43) 2,2,4-Trimethylpentane	4.39	57	8211	0.49	ppb		88
45) Carbon Tetrachloride	3.85	117	3943	0.48	ppb		97
48) 1,2-DCA	4.23	62	4224	0.49	ppb		95
49) Benzene	4.18	78	15377	0.60	ppb		99
50) TCE	5.17	130	3453	0.48	ppb		87
51) 2-Pentanone	5.52	43	72545	23.10	ppb		97
52) 1,2-Dichloropropane	5.45	63	3240	0.50	ppb	#	79

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L11.D Vial: 5
Acq On : 12 Mar 20 12:39 Operator:
Sample : 0.5ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
53)	Bromodichloromethane	5.86	83	4372	0.49	ppb		92
54)	Methyl Cyclohexane	5.40	83	4208	0.51	ppb		90
55)	Dibromomethane	5.59	174	2423	0.45	ppb		88
57)	MIBK (methyl isobutyl ket	6.68	43	6269	1.24	ppb	#	69
58)	1-Bromo-2-chloroethane	6.19	63	4430	0.48	ppb		94
59)	Cis-1,3-Dichloropropene	6.43	75	4549	0.48	ppb		97
60)	Toluene	6.80	91	15074	0.55	ppb		97
61)	Trans-1,3-Dichloropropene	7.12	75	3845	0.49	ppb		92
62)	1,1,2-TCA	7.31	97	3318	0.51	ppb		94
63)	2-Hexanone	7.67	43	4944	3.61	ppb		94
66)	1,2-EDB	7.81	107	3169	0.49	ppb		95
67)	Tetrachloroethene	7.43	166	4107	0.52	ppb		88
68)	1-Chlorohexane	8.44	91	3718	0.50	ppb		95
69)	1,1,1,2-Tetrachloroethane	8.51	131	3792	0.53	ppb		86
70)	m&p-Xylene	8.69	91	23709	1.07	ppb		96
71)	o-Xylene	9.11	91	13379	0.58	ppb		97
72)	Styrene	9.13	104	9000	0.51	ppb		95
74)	1,3-Dichloropropane	7.48	76	5188	0.51	ppb	#	71
75)	Dibromochloromethane	7.72	129	3375	0.47	ppb		88
76)	Chlorobenzene	8.39	112	9996	0.54	ppb		97
77)	Ethylbenzene	8.55	91	17113	0.58	ppb		96
78)	Bromoform	9.28	173	2276	0.45	ppb		97
80)	Isopropylbenzene	9.53	105	10101	0.60	ppb		94
81)	1,1,2,2-Tetrachloroethane	9.86	83	3813	0.49	ppb		93
82)	1,2,3-Trichloropropane	9.88	110	1578	0.62	ppb		97
83)	t-1,4-Dichloro-2-Butene	9.94	53	670	0.55	ppb	#	26
84)	Bromobenzene	9.79	156	5130	0.62	ppb		95
85)	n-Propylbenzene	9.97	91	28044	1.24	ppb		99
86)	4-Ethyltoluene	10.10	105	12151	1.28	ppb		96
87)	2-Chlorotoluene	10.02	91	6667	0.57	ppb		91
88)	1,3,5-Trimethylbenzene	10.18	105	15455	0.64	ppb		90
89)	4-Chlorotoluene	10.15	91	8051	0.63	ppb		94
90)	Tert-Butylbenzene	10.51	119	19725	1.18	ppb		99
91)	1,2,4-Trimethylbenzene	10.56	105	33344	1.22	ppb		88
92)	Sec-Butylbenzene	10.75	105	30990	1.29	ppb		98
93)	p-Isopropyltoluene	10.92	119	24719	1.26	ppb		97
94)	Benzyl Chloride	11.08	91	2791	0.50	ppb		98
95)	1,3-DCB	10.82	146	10236	0.66	ppb		97
96)	1,4-DCB	10.92	146	12203	0.77	ppb		97
97)	n-Butylbenzene	11.35	91	38655	2.05	ppb		97
98)	1,2-DCB	11.30	146	10804	0.94	ppb		92
99)	Hexachloroethane	11.57	117	2636	0.56	ppb	#	87
100)	1,2-Dibromo-3-chloropropan	12.13	157	698	0.52	ppb		88
101)	1,2,4-Trichlorobenzene	13.02	180	17838	2.40	ppb		99
102)	Hexachlorobutadiene	13.24	225	5303	1.67	ppb		94
103)	Naphthalene	13.26	128	67250	4.95	ppb		97
104)	1,2,3-Trichlorobenzene	13.53	182	8955	2.19	ppb		100

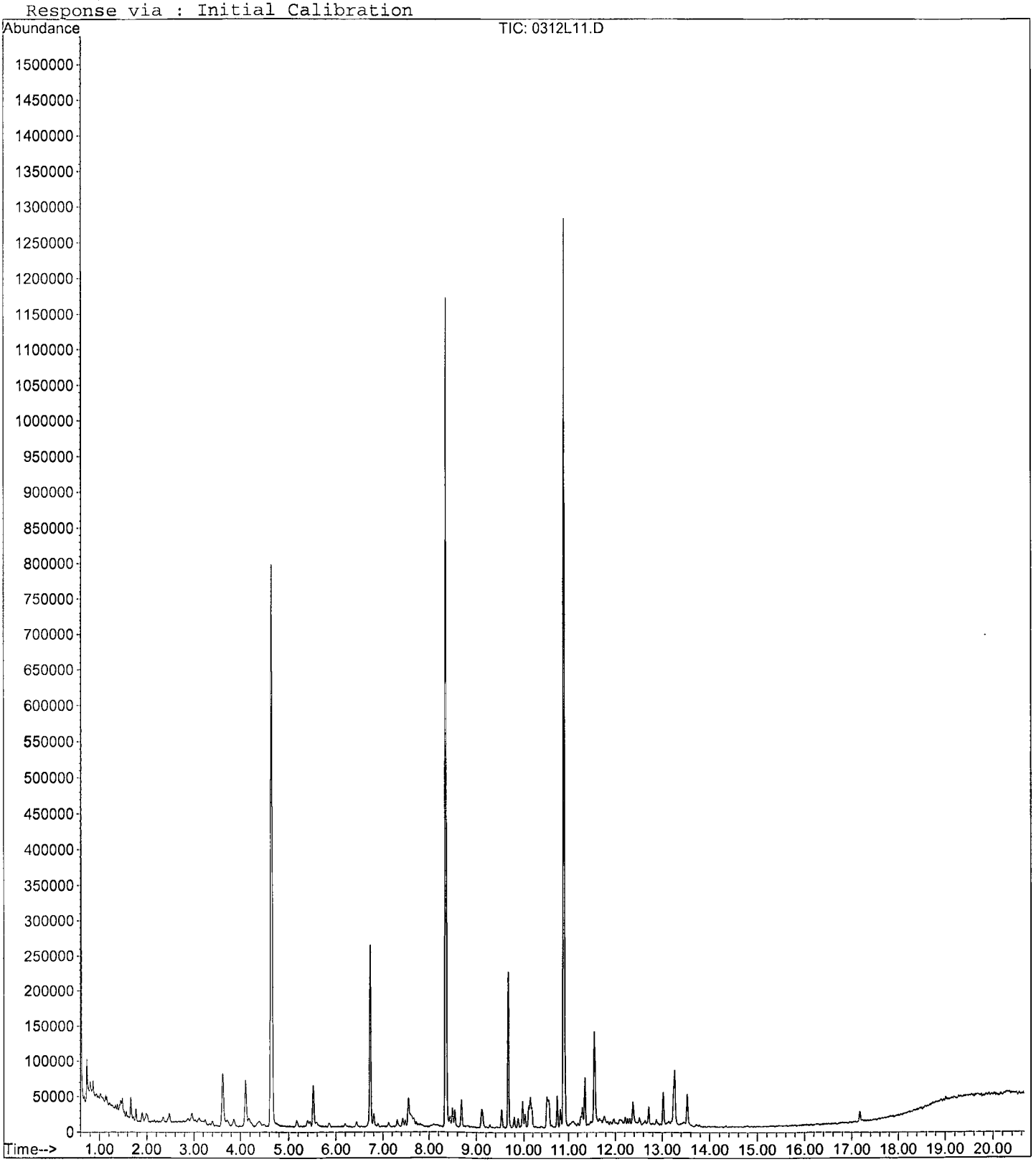
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0312L11.D Vial: 5
Acq On : 12 Mar 20 12:39 Operator:
Sample : 0.5ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L12.D Vial: 6
Acq On : 12 Mar 20 13:07 Operator:
Sample : 1.0ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	4.64	96	384960	25.00	ppb		0.00
64) Chlorobenzene-D5 (IS)	8.36	117	426432	25.00	ppb		0.00
79) 1,4-Dichlorobenzene-D (IS)	10.90	152	218688	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	3.62	111	106273	9.68	ppb		0.00
Spiked Amount 25.000			Recovery = 38.704%				
44) 1,2-DCA-D4(S)	4.11	65	106813	9.65	ppb		0.00
Spiked Amount 25.000			Recovery = 38.600%				
65) Toluene-D8(S)	6.73	98	347519	9.45	ppb		0.00
Spiked Amount 25.000			Recovery = 37.800%				
73) 4-Bromofluorobenzene(S)	9.66	95	133350	9.59	ppb		0.00
Spiked Amount 25.000			Recovery = 38.380%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	0.68	85	6135	1.08	ppb		99
4) Freon 114	0.73	85	5963	1.03	ppb		87
5) Chloromethane	0.76	50	9185	1.00	ppb	#	87
6) Vinyl chloride	0.81	62	8039	0.99	ppb		97
8) Bromomethane	0.97	94	3297	1.13	ppb		98
9) Chloroethane	1.02	66	1375	0.99	ppb		63
10) Dichlorofluoromethane	1.13	67	10637	1.06	ppb		95
11) Trichlorofluoromethane	1.16	101	9592	1.05	ppb		91
13) Acrolein	1.39	56	28355	47.37	ppb	#	74
14) Acetone	1.49	43	10783	1.50	ppb		89
15) Freon-113	1.46	101	5435	1.02	ppb		98
16) 1,1-DCE	1.45	61	8545	1.08	ppb		97
17) t-Butanol	1.91	59	21986	43.93	ppb		100
19) Acetonitrile	1.66	41	47779	52.26	ppb		90
20) Methyl Acetate	1.72	43	5611	1.11	ppb		99
21) Iodomethane	1.53	142	5736	1.82	ppb		96
22) Acrylonitrile	1.96	53	3135	0.69	ppb		97
23) Methylene chloride	1.77	84	9486	0.74	ppb		97
24) Carbon disulfide	1.57	76	16068	1.10	ppb		95
25) Methyl t-butyl ether (MtBE	2.00	73	13567	1.03	ppb		94
26) Trans-1,2-DCE	1.98	61	7922	1.01	ppb		96
27) Diisopropyl Ether	2.47	45	18689	1.01	ppb		99
29) 1,1-DCA	2.34	63	11567	1.03	ppb		99
30) Vinyl Acetate	2.47	45	18689	1.01	ppb		99
32) MEK (2-Butanone)	3.03	43	2161	1.70	ppb		92
33) Cis-1,2-DCE	2.96	61	10342	1.04	ppb		94
34) 2,2-Dichloropropane	2.95	77	9177	1.07	ppb	#	83
37) Chloroform	3.40	83	12409	1.05	ppb		89
38) Bromochloromethane	3.25	130	4862	0.99	ppb	#	72
40) 1,1,1-TCA	3.60	97	8966	0.98	ppb		91
41) Cyclohexane	3.67	56	8552	1.07	ppb		93
42) 1,1-Dichloropropene	3.87	75	7576	0.99	ppb		86
43) 2,2,4-Trimethylpentane	4.40	57	17455	1.06	ppb		94
45) Carbon Tetrachloride	3.85	117	7896	0.98	ppb		96
48) 1,2-DCA	4.23	62	8978	1.07	ppb	#	87
49) Benzene	4.18	78	26891	1.07	ppb		92
50) TCE	5.18	130	7146	1.01	ppb		87
51) 2-Pentanone	5.52	43	142144	46.10	ppb		97
52) 1,2-Dichloropropane	5.45	63	6369	1.00	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L12.D Vial: 6
Acq On : 12 Mar 20 13:07 Operator:
Sample : 1.0ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
53)	Bromodichloromethane	5.85	83	8799	1.00	ppb		95
54)	Methyl Cyclohexane	5.40	83	8466	1.04	ppb		86
55)	Dibromomethane	5.60	174	5128	0.98	ppb		92
57)	MIBK (methyl isobutyl ket	6.68	43	6899	1.40	ppb		97
58)	1-Bromo-2-chloroethane	6.18	63	9038	1.00	ppb		98
59)	Cis-1,3-Dichloropropene	6.43	75	8896	0.95	ppb		95
60)	Toluene	6.81	91	26244	0.97	ppb		99
61)	Trans-1,3-Dichloropropene	7.12	75	6929	0.89	ppb		94
62)	1,1,2-TCA	7.31	97	6241	0.98	ppb		91
63)	2-Hexanone	7.67	43	5300	3.85	ppb		93
66)	1,2-EDB	7.81	107	6180	0.96	ppb		89
67)	Tetrachloroethene	7.43	166	8128	1.02	ppb		93
68)	1-Chlorohexane	8.45	91	6860	0.92	ppb		95
69)	1,1,1,2-Tetrachloroethane	8.50	131	6902	0.96	ppb		76
70)	m&p-Xylene	8.69	91	43125	1.95	ppb		94
71)	o-Xylene	9.11	91	22222	0.96	ppb		94
72)	Styrene	9.13	104	15034	0.85	ppb		87
74)	1,3-Dichloropropane	7.48	76	10084	0.98	ppb		91
75)	Dibromochloromethane	7.72	129	6829	0.95	ppb		90
76)	Chlorobenzene	8.39	112	18689	1.00	ppb		92
77)	Ethylbenzene	8.55	91	28713	0.98	ppb		95
78)	Bromoform	9.28	173	4682	0.92	ppb		96
80)	Isopropylbenzene	9.53	105	17200	1.08	ppb		100
81)	1,1,2,2-Tetrachloroethane	9.87	83	8126	1.11	ppb		98
82)	1,2,3-Trichloropropane	9.88	110	2487	1.03	ppb		98
83)	t-1,4-Dichloro-2-Butene	9.93	53	1137	0.99	ppb	#	78
84)	Bromobenzene	9.79	156	8326	1.06	ppb		99
85)	n-Propylbenzene	9.98	91	38831	1.64	ppb		99
86)	4-Ethyltoluene	10.10	105	18016	1.67	ppb		100
87)	2-Chlorotoluene	10.02	91	11461	1.03	ppb		98
88)	1,3,5-Trimethylbenzene	10.18	105	24136	1.05	ppb		100
89)	4-Chlorotoluene	10.15	91	12802	1.06	ppb		96
90)	Tert-Butylbenzene	10.51	119	25043	1.51	ppb		100
91)	1,2,4-Trimethylbenzene	10.57	105	38550	1.53	ppb		96
92)	Sec-Butylbenzene	10.75	105	38928	1.63	ppb		100
93)	p-Isopropyltoluene	10.92	119	31679	1.59	ppb		100
94)	Benzyl Chloride	11.08	91	5470	1.04	ppb		100
95)	1,3-DCB	10.82	146	15904	1.08	ppb		93
96)	1,4-DCB	10.92	146	18032	1.24	ppb		97
97)	n-Butylbenzene	11.35	91	40117	2.23	ppb		97
98)	1,2-DCB	11.30	146	17355	1.48	ppb		94
99)	Hexachloroethane	11.57	117	4572	1.02	ppb	#	86
100)	1,2-Dibromo-3-chloropropan	12.13	157	1030	0.81	ppb	#	83
101)	1,2,4-Trichlorobenzene	13.02	180	18201	2.55	ppb		96
102)	Hexachlorobutadiene	13.24	225	6212	2.06	ppb	#	89
103)	Naphthalene	13.26	128	65608	5.08	ppb		99
104)	1,2,3-Trichlorobenzene	13.53	182	9733	2.49	ppb		95

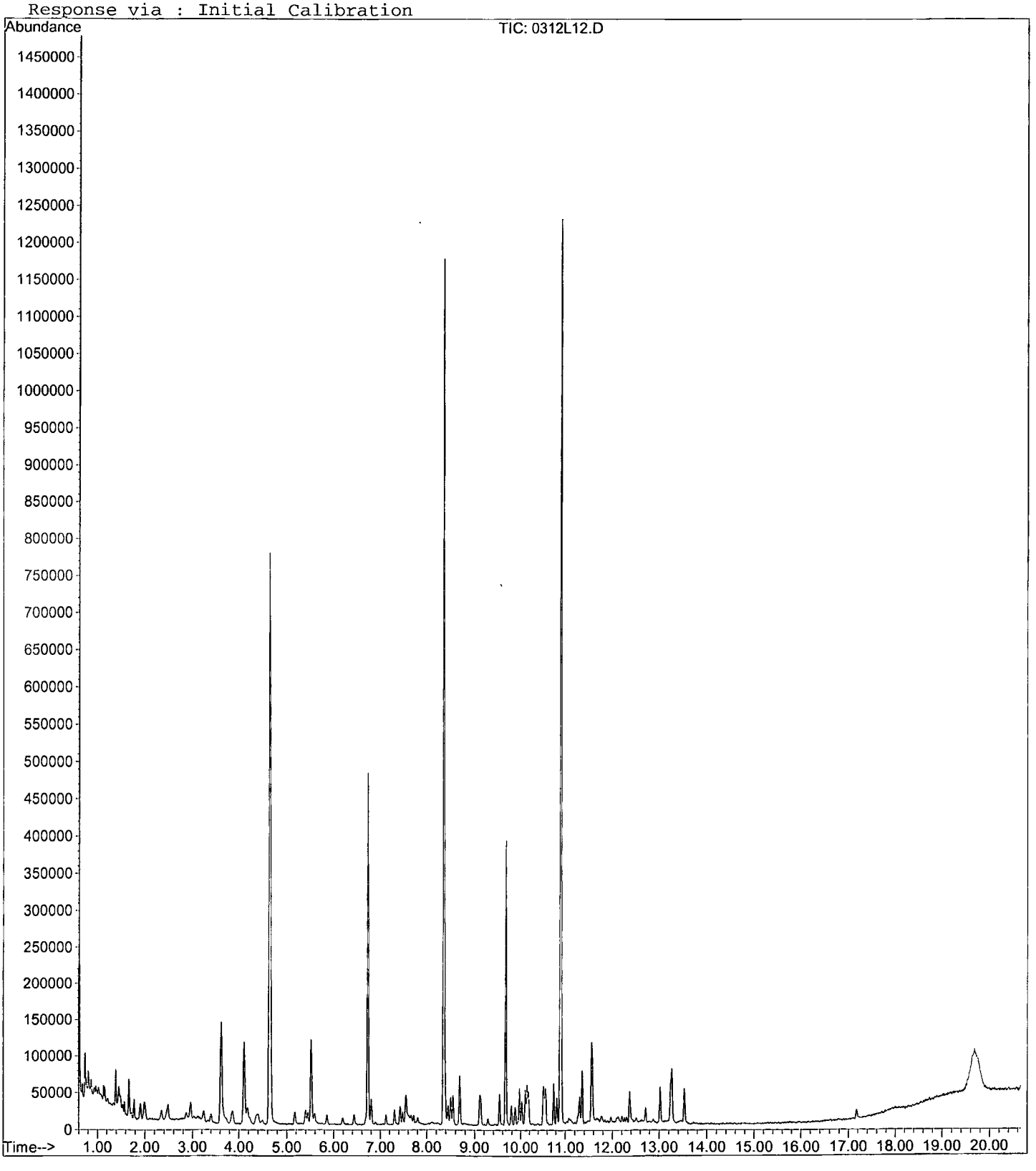
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0312L12.D Vial: 6
Acq On : 12 Mar 20 13:07 Operator:
Sample : 1.0ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L13.D Vial: 7
Acq On : 12 Mar 20 13:36 Operator:
Sample : 2.0ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	4.65	96	379008	25.00	ppb		0.00
64) Chlorobenzene-D5 (IS)	8.36	117	403200	25.00	ppb		0.00
79) 1,4-Dichlorobenzene-D (IS)	10.90	152	222720	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	3.62	111	106459	9.85	ppb		0.00
Spiked Amount 25.000			Recovery = 39.380%				
44) 1,2-DCA-D4(S)	4.11	65	108929	10.00	ppb		0.00
Spiked Amount 25.000			Recovery = 39.984%				
65) Toluene-D8(S)	6.73	98	354209	10.19	ppb		0.00
Spiked Amount 25.000			Recovery = 40.748%				
73) 4-Bromofluorobenzene(S)	9.66	95	133355	10.15	ppb		0.00
Spiked Amount 25.000			Recovery = 40.592%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	0.67	85	13708	2.46	ppb		96
4) Freon 114	0.73	85	12975	2.29	ppb		98
5) Chloromethane	0.76	50	17463	2.17	ppb		100
6) Vinyl chloride	0.81	62	17560	2.20	ppb		95
8) Bromomethane	0.97	94	6244	2.18	ppb		98
9) Chloroethane	1.02	66	3214	2.34	ppb		83
10) Dichlorofluoromethane	1.13	67	20936	2.11	ppb		99
11) Trichlorofluoromethane	1.16	101	19158	2.13	ppb		95
13) Acrolein	1.39	56	39981	67.84	ppb	#	76
14) Acetone	1.49	43	11014	1.81	ppb		98
15) Freon-113	1.46	101	10519	2.01	ppb		99
16) 1,1-DCE	1.45	61	15893	2.03	ppb		97
17) t-Butanol	1.91	59	33727	68.44	ppb		98
19) Acetonitrile	1.66	41	68504	76.10	ppb		97
20) Methyl Acetate	1.72	43	11462	2.45	ppb		94
21) Iodomethane	1.53	142	11915	2.58	ppb		96
22) Acrylonitrile	1.96	53	6285	1.98	ppb		85
23) Methylene chloride	1.77	84	15236	1.69	ppb		98
24) Carbon disulfide	1.57	76	29446	2.04	ppb		98
25) Methyl t-butyl ether (MtBE	2.01	73	25390	1.96	ppb		98
26) Trans-1,2-DCE	1.98	61	15586	2.02	ppb		95
27) Diisopropyl Ether	2.47	45	38235	2.10	ppb		94
29) 1,1-DCA	2.34	63	22336	2.02	ppb		100
30) Vinyl Acetate	2.47	45	38235	2.10	ppb		94
32) MEK (2-Butanone)	3.03	43	3181	2.54	ppb	#	76
33) Cis-1,2-DCE	2.96	61	20154	2.07	ppb		96
34) 2,2-Dichloropropane	2.94	77	17488	2.08	ppb		93
37) Chloroform	3.40	83	24671	2.11	ppb		94
38) Bromochloromethane	3.25	130	9737	2.02	ppb		90
40) 1,1,1-TCA	3.61	97	19006	2.11	ppb		94
41) Cyclohexane	3.67	56	15457	1.96	ppb		96
42) 1,1-Dichloropropene	3.87	75	15580	2.06	ppb		97
43) 2,2,4-Trimethylpentane	4.40	57	33075	2.03	ppb		94
45) Carbon Tetrachloride	3.85	117	16082	2.03	ppb		92
48) 1,2-DCA	4.23	62	16628	2.01	ppb		98
49) Benzene	4.18	78	48977	1.97	ppb		96
50) TCE	5.17	130	13736	1.96	ppb		86
51) 2-Pentanone	5.52	43	210699	69.41	ppb		98
52) 1,2-Dichloropropane	5.45	63	12353	1.96	ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L13.D Vial: 7
Acq On : 12 Mar 20 13:36 Operator:
Sample : 2.0ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
53)	Bromodichloromethane	5.86	83	16965	1.96 ppb		93
54)	Methyl Cyclohexane	5.40	83	15416	1.92 ppb		91
55)	Dibromomethane	5.59	174	10336	2.00 ppb		99
57)	MIBK (methyl isobutyl ket	6.68	43	11708	2.51 ppb		96
58)	1-Bromo-2-chloroethane	6.19	63	17607	1.98 ppb		100
59)	Cis-1,3-Dichloropropene	6.43	75	18499	2.00 ppb		97
60)	Toluene	6.80	91	50815	1.91 ppb		99
61)	Trans-1,3-Dichloropropene	7.12	75	14489	1.89 ppb		92
62)	1,1,2-TCA	7.31	97	12799	2.05 ppb		90
63)	2-Hexanone	7.67	43	5560	4.03 ppb		94
66)	1,2-EDB	7.81	107	12126	1.98 ppb		100
67)	Tetrachloroethene	7.43	166	15871	2.10 ppb		94
68)	1-Chlorohexane	8.45	91	13885	1.96 ppb		97
69)	1,1,1,2-Tetrachloroethane	8.51	131	13549	1.99 ppb		90
70)	m&p-Xylene	8.69	91	77841	3.71 ppb		97
71)	o-Xylene	9.11	91	40565	1.86 ppb		97
72)	Styrene	9.13	104	30654	1.83 ppb		97
74)	1,3-Dichloropropane	7.48	76	18998	1.96 ppb		97
75)	Dibromochloromethane	7.72	129	13223	1.95 ppb		94
76)	Chlorobenzene	8.38	112	35237	2.00 ppb		95
77)	Ethylbenzene	8.55	91	51844	1.86 ppb		96
78)	Bromoform	9.28	173	9830	2.05 ppb		99
80)	Isopropylbenzene	9.53	105	31128	1.91 ppb		100
81)	1,1,2,2-Tetrachloroethane	9.87	83	14579	1.95 ppb		97
82)	1,2,3-Trichloropropane	9.88	110	5057	2.07 ppb		86
83)	t-1,4-Dichloro-2-Butene	9.93	53	2543	2.17 ppb	#	72
84)	Bromobenzene	9.79	156	15481	1.94 ppb		76
85)	n-Propylbenzene	9.98	91	63946	2.40 ppb		99
86)	4-Ethyltoluene	10.10	105	30368	2.38 ppb		98
87)	2-Chlorotoluene	10.02	91	22629	1.99 ppb		98
88)	1,3,5-Trimethylbenzene	10.18	105	43315	1.85 ppb		94
89)	4-Chlorotoluene	10.15	91	23432	1.91 ppb		99
90)	Tert-Butylbenzene	10.52	119	40830	2.30 ppb		97
91)	1,2,4-Trimethylbenzene	10.57	105	57565	2.30 ppb		97
92)	Sec-Butylbenzene	10.75	105	59662	2.33 ppb		99
93)	p-Isopropyltoluene	10.92	119	51193	2.34 ppb		98
94)	Benzyl Chloride	11.08	91	9449	1.76 ppb		92
95)	1,3-DCB	10.82	146	29712	1.98 ppb		94
96)	1,4-DCB	10.92	146	30887	2.12 ppb		99
97)	n-Butylbenzene	11.35	91	51005	2.71 ppb		92
98)	1,2-DCB	11.30	146	27766	2.22 ppb		97
99)	Hexachloroethane	11.57	117	9080	1.99 ppb		97
100)	1,2-Dibromo-3-chloropropan	12.13	157	2606	2.02 ppb		91
101)	1,2,4-Trichlorobenzene	13.02	180	24456	3.21 ppb		97
102)	Hexachlorobutadiene	13.24	225	7898	2.56 ppb		98
103)	Naphthalene	13.27	128	67457	5.13 ppb		96
104)	1,2,3-Trichlorobenzene	13.53	182	12085	3.00 ppb		95

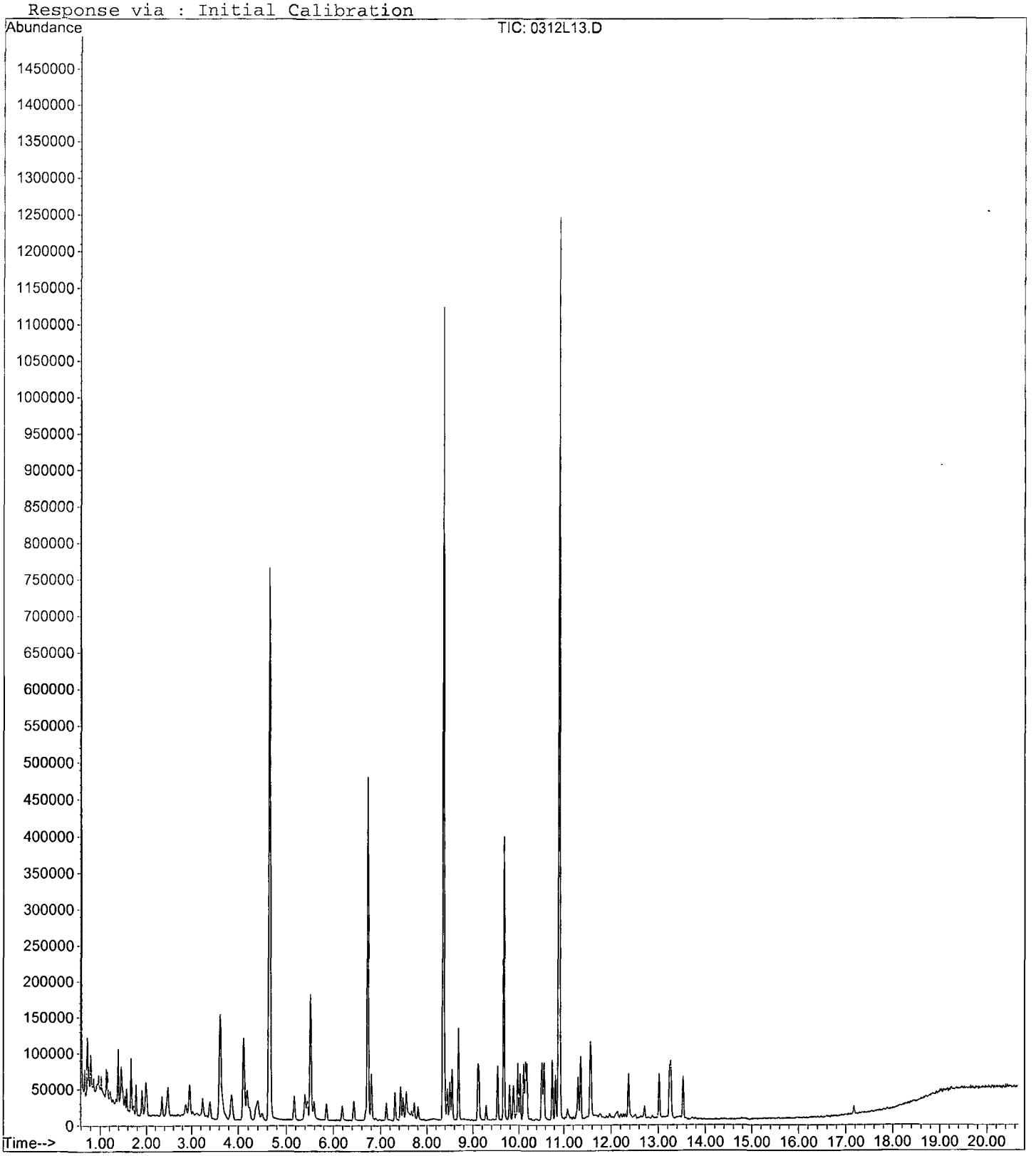
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0312L13.D Vial: 7
Acq On : 12 Mar 20 13:36 Operator:
Sample : 2.0ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L14.D Vial: 8
Acq On : 12 Mar 20 14:05 Operator:
Sample : 5.0ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	96	401984	25.00	ppb	0.00
64) Chlorobenzene-D5 (IS)	8.36	117	429376	25.00	ppb	0.00
79) 1,4-Dichlorobenzene-D (IS)	10.90	152	240192	25.00	ppb	0.00
System Monitoring Compounds						
39) Dibromofluoromethane(S)	3.62	111	279895	24.41	ppb	0.00
Spiked Amount 25.000			Recovery =	97.620%		
44) 1,2-DCA-D4(S)	4.11	65	278823	24.12	ppb	0.00
Spiked Amount 25.000			Recovery =	96.492%		
65) Toluene-D8(S)	6.73	98	947179	25.58	ppb	0.00
Spiked Amount 25.000			Recovery =	102.324%		
73) 4-Bromofluorobenzene(S)	9.66	95	344450	24.61	ppb	0.00
Spiked Amount 25.000			Recovery =	98.452%		
Target Compounds						Qvalue
3) Dichlorodifluoromethane	0.67	85	26413	4.47	ppb	97
4) Freon 114	0.73	85	23343	3.88	ppb	94
5) Chloromethane	0.76	50	40134	5.00	ppb	96
6) Vinyl chloride	0.81	62	42056	4.96	ppb	97
8) Bromomethane	0.97	94	15568	5.13	ppb	97
9) Chloroethane	1.02	66	7289	5.01	ppb	94
10) Dichlorofluoromethane	1.13	67	49288	4.69	ppb	98
11) Trichlorofluoromethane	1.16	101	47879	5.03	ppb	91
13) Acrolein	1.39	56	61237	97.97	ppb	82
14) Acetone	1.49	43	14662	4.05	ppb	99
15) Freon-113	1.47	101	24790	4.47	ppb	95
16) 1,1-DCE	1.45	61	37257	4.49	ppb	92
17) t-Butanol	1.91	59	48769	93.31	ppb	98
19) Acetonitrile	1.67	41	93134	97.55	ppb	96
20) Methyl Acetate	1.72	43	22193	4.58	ppb	93
21) Iodomethane	1.54	142	31350	4.70	ppb	98
22) Acrylonitrile	1.96	53	13447	4.58	ppb	89
23) Methylene chloride	1.78	84	35398	4.60	ppb	98
24) Carbon disulfide	1.57	76	67459	4.41	ppb	99
25) Methyl t-butyl ether (MtBE	2.01	73	62913	4.58	ppb	97
26) Trans-1,2-DCE	1.99	61	38124	4.66	ppb	98
27) Diisopropyl Ether	2.48	45	90197	4.66	ppb	97
29) 1,1-DCA	2.35	63	54774	4.68	ppb	97
30) Vinyl Acetate	2.48	45	90197	4.66	ppb	97
32) MEK (2-Butanone)	3.03	43	6525	4.91	ppb	98
33) Cis-1,2-DCE	2.96	61	48803	4.72	ppb	96
34) 2,2-Dichloropropane	2.95	77	40401	4.53	ppb	96
37) Chloroform	3.40	83	57376	4.63	ppb	98
38) Bromochloromethane	3.25	130	24408	4.77	ppb	99
40) 1,1,1-TCA	3.61	97	46684	4.89	ppb	90
41) Cyclohexane	3.67	56	36506	4.37	ppb	94
42) 1,1-Dichloropropene	3.87	75	36057	4.50	ppb	99
43) 2,2,4-Trimethylpentane	4.40	57	73762	4.27	ppb	97
45) Carbon Tetrachloride	3.85	117	39211	4.66	ppb	98
48) 1,2-DCA	4.24	62	42052	4.80	ppb	99
49) Benzene	4.18	78	118006	4.48	ppb	96
50) TCE	5.17	130	35652	4.80	ppb	95
51) 2-Pentanone	5.52	43	311230	96.66	ppb	99
52) 1,2-Dichloropropane	5.45	63	30613	4.58	ppb	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L14.D Vial: 8
Acq On : 12 Mar 20 14:05 Operator:
Sample : 5.0ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

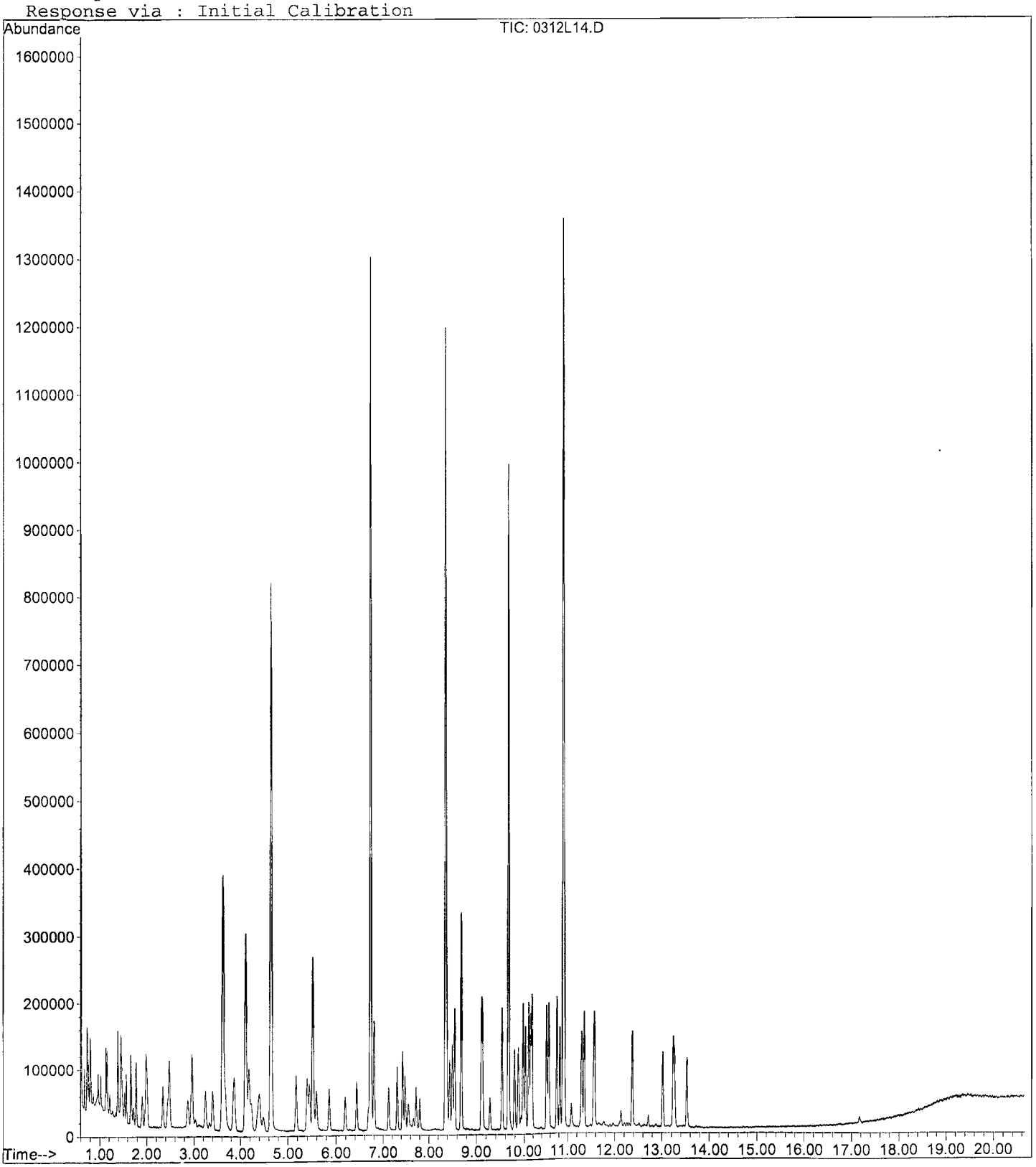
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
53)	Bromodichloromethane	5.85	83	42930	4.68	ppb	94
54)	Methyl Cyclohexane	5.40	83	36922	4.34	ppb	92
55)	Dibromomethane	5.59	174	26277	4.79	ppb	98
57)	MIBK (methyl isobutyl ket	6.68	43	27154	5.63	ppb	89
58)	1-Bromo-2-chloroethane	6.19	63	44717	4.75	ppb	100
59)	Cis-1,3-Dichloropropene	6.43	75	44501	4.54	ppb	97
60)	Toluene	6.80	91	128866	4.57	ppb	98
61)	Trans-1,3-Dichloropropene	7.12	75	37983	4.68	ppb	97
62)	1,1,2-TCA	7.31	97	30734	4.63	ppb	98
63)	2-Hexanone	7.67	43	9678	5.96	ppb	94
66)	1,2-EDB	7.81	107	31785	4.88	ppb	96
67)	Tetrachloroethene	7.43	166	38816	4.82	ppb	98
68)	1-Chlorohexane	8.45	91	34988	4.65	ppb	98
69)	1,1,1,2-Tetrachloroethane	8.50	131	34645	4.78	ppb	98
70)	m&p-Xylene	8.69	91	200926	9.00	ppb	99
71)	o-Xylene	9.11	91	104734	4.51	ppb	99
72)	Styrene	9.13	104	80241	4.51	ppb	94
74)	1,3-Dichloropropane	7.48	76	49213	4.77	ppb	97
75)	Dibromochloromethane	7.72	129	34624	4.79	ppb	98
76)	Chlorobenzene	8.39	112	90782	4.83	ppb	98
77)	Ethylbenzene	8.55	91	132446	4.47	ppb	100
78)	Bromoform	9.28	173	23308	4.57	ppb	92
80)	Isopropylbenzene	9.53	105	77000	4.39	ppb	99
81)	1,1,2,2-Tetrachloroethane	9.87	83	40998	5.09	ppb	97
82)	1,2,3-Trichloropropane	9.88	110	12198	4.62	ppb	89
83)	t-1,4-Dichloro-2-Butene	9.93	53	5888	4.65	ppb	89
84)	Bromobenzene	9.79	156	39999	4.64	ppb	93
85)	n-Propylbenzene	9.98	91	156932	4.95	ppb	97
86)	4-Ethyltoluene	10.10	105	77920	4.84	ppb	99
87)	2-Chlorotoluene	10.03	91	54184	4.43	ppb	99
88)	1,3,5-Trimethylbenzene	10.18	105	112741	4.46	ppb	100
89)	4-Chlorotoluene	10.15	91	58744	4.45	ppb	99
90)	Tert-Butylbenzene	10.51	119	96672	4.81	ppb	98
91)	1,2,4-Trimethylbenzene	10.57	105	121526	4.65	ppb	99
92)	Sec-Butylbenzene	10.75	105	142606	4.86	ppb	98
93)	p-Isopropyltoluene	10.92	119	122296	4.80	ppb	96
94)	Benzyl Chloride	11.08	91	26966	4.65	ppb	96
95)	1,3-DCB	10.82	146	73339	4.54	ppb	98
96)	1,4-DCB	10.92	146	75278	4.85	ppb	98
97)	n-Butylbenzene	11.35	91	101695	4.79	ppb	100
98)	1,2-DCB	11.30	146	69093	4.87	ppb	98
99)	Hexachloroethane	11.57	117	25163	5.12	ppb	96
100)	1,2-Dibromo-3-chloropropan	12.13	157	6651	4.78	ppb	94
101)	1,2,4-Trichlorobenzene	13.02	180	44314	5.07	ppb	100
102)	Hexachlorobutadiene	13.24	225	16744	5.02	ppb	91
103)	Naphthalene	13.26	128	90443	6.21	ppb	98
104)	1,2,3-Trichlorobenzene	13.53	182	21104	4.76	ppb	95

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\200312\0312L14.D Vial: 8
Acq On : 12 Mar 20 14:05 Operator:
Sample : 5.0ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L15.D Vial: 9
Acq On : 12 Mar 20 14:33 Operator:
Sample : 10ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.64	96	397184	25.00	ppb	0.00
64) Chlorobenzene-D5 (IS)	8.36	117	425536	25.00	ppb	0.00
79) 1,4-Dichlorobenzene-D (IS)	10.90	152	251200	25.00	ppb	0.00
System Monitoring Compounds						
39) Dibromofluoromethane(S)	3.62	111	283588	25.03	ppb	0.00
Spiked Amount 25.000			Recovery =	100.104%		
44) 1,2-DCA-D4(S)	4.11	65	285520	25.00	ppb	0.00
Spiked Amount 25.000			Recovery =	100.004%		
65) Toluene-D8(S)	6.72	98	987286	26.90	ppb	0.00
Spiked Amount 25.000			Recovery =	107.620%		
73) 4-Bromofluorobenzene(S)	9.66	95	363539	26.21	ppb	0.00
Spiked Amount 25.000			Recovery =	104.848%		
Target Compounds						Qvalue
3) Dichlorodifluoromethane	0.68	85	53299	9.12	ppb	100
4) Freon 114	0.73	85	56691	9.53	ppb	100
5) Chloromethane	0.76	50	72357	9.33	ppb	100
6) Vinyl chloride	0.81	62	81144	9.68	ppb	100
8) Bromomethane	0.97	94	29101	9.71	ppb	100
9) Chloroethane	1.02	66	13520	9.41	ppb	100
10) Dichlorofluoromethane	1.13	67	104669	10.07	ppb	100
11) Trichlorofluoromethane	1.16	101	94347	10.03	ppb	100
13) Acrolein	1.39	56	73293	118.67	ppb	100
14) Acetone	1.49	43	21505	9.37	ppb	100
15) Freon-113	1.46	101	55560	10.13	ppb	100
16) 1,1-DCE	1.45	61	83156	10.14	ppb	100
17) t-Butanol	1.91	59	59083	114.41	ppb	100
19) Acetonitrile	1.66	41	114362	121.23	ppb	100
20) Methyl Acetate	1.72	43	46184	9.80	ppb	100
21) Iodomethane	1.53	142	69998	9.17	ppb	100
22) Acrylonitrile	1.96	53	28075	10.30	ppb	100
23) Methylene chloride	1.77	84	71984	10.26	ppb	100
24) Carbon disulfide	1.57	76	145205	9.61	ppb	100
25) Methyl t-butyl ether (MtBE	2.00	73	133293	9.81	ppb	100
26) Trans-1,2-DCE	1.99	61	82873	10.26	ppb	100
27) Diisopropyl Ether	2.47	45	188067	9.84	ppb	100
29) 1,1-DCA	2.34	63	119835	10.36	ppb	100
30) Vinyl Acetate	2.47	45	188067	9.84	ppb	100
32) MEK (2-Butanone)	3.02	43	12453	9.49	ppb	100
33) Cis-1,2-DCE	2.96	61	100084	9.79	ppb	100
34) 2,2-Dichloropropane	2.95	77	86012	9.75	ppb	100
37) Chloroform	3.40	83	122809	10.04	ppb	100
38) Bromochloromethane	3.24	130	51594	10.20	ppb	100
40) 1,1,1-TCA	3.60	97	97045	10.28	ppb	100
41) Cyclohexane	3.67	56	80019	9.70	ppb	100
42) 1,1-Dichloropropene	3.87	75	78407	9.89	ppb	100
43) 2,2,4-Trimethylpentane	4.41	57	171791	10.07	ppb	100
45) Carbon Tetrachloride	3.85	117	87418	10.52	ppb	100
48) 1,2-DCA	4.23	62	85648	9.90	ppb	100
49) Benzene	4.18	78	252730	9.71	ppb	100
50) TCE	5.17	130	75648	10.32	ppb	100
51) 2-Pentanone	5.51	43	386579	121.51	ppb	100
52) 1,2-Dichloropropane	5.45	63	69353	10.51	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L15.D Vial: 9
Acq On : 12 Mar 20 14:33 Operator:
Sample : 10ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
53)	Bromodichloromethane	5.85	83	92905	10.26	ppb	100
54)	Methyl Cyclohexane	5.40	83	82041	9.75	ppb	100
55)	Dibromomethane	5.59	174	56579	10.45	ppb	100
57)	MIBK (methyl isobutyl ket	6.68	43	44770	9.47	ppb	100
58)	1-Bromo-2-chloroethane	6.19	63	95117	10.22	ppb	100
59)	Cis-1,3-Dichloropropene	6.43	75	96387	9.94	ppb	100
60)	Toluene	6.80	91	280723	10.08	ppb	100
61)	Trans-1,3-Dichloropropene	7.12	75	80239	10.00	ppb	100
62)	1,1,2-TCA	7.31	97	68137	10.39	ppb	100
63)	2-Hexanone	7.66	43	16947	9.78	ppb	100
66)	1,2-EDB	7.81	107	67346	10.43	ppb	100
67)	Tetrachloroethene	7.43	166	82038	10.28	ppb	100
68)	1-Chlorohexane	8.45	91	75900	10.17	ppb	100
69)	1,1,1,2-Tetrachloroethane	8.50	131	74019	10.31	ppb	100
70)	m&p-Xylene	8.69	91	446135	20.17	ppb	100
71)	o-Xylene	9.11	91	227802	9.91	ppb	100
72)	Styrene	9.13	104	180518	10.24	ppb	100
74)	1,3-Dichloropropane	7.48	76	107946	10.55	ppb	100
75)	Dibromochloromethane	7.72	129	75612	10.55	ppb	100
76)	Chlorobenzene	8.39	112	188880	10.15	ppb	100
77)	Ethylbenzene	8.55	91	290063	9.87	ppb	100
78)	Bromoform	9.28	173	53804	10.65	ppb	100
80)	Isopropylbenzene	9.53	105	167680	9.13	ppb	100
81)	1,1,2,2-Tetrachloroethane	9.87	83	84923	10.09	ppb	100
82)	1,2,3-Trichloropropane	9.88	110	26824	9.71	ppb	100
83)	t-1,4-Dichloro-2-Butene	9.93	53	12011	9.08	ppb	100
84)	Bromobenzene	9.79	156	87088	9.67	ppb	100
85)	n-Propylbenzene	9.98	91	328439	9.51	ppb	100
86)	4-Ethyltoluene	10.10	105	168960	9.41	ppb	100
87)	2-Chlorotoluene	10.02	91	125449	9.80	ppb	100
88)	1,3,5-Trimethylbenzene	10.18	105	246511	9.33	ppb	100
89)	4-Chlorotoluene	10.15	91	133716	9.68	ppb	100
90)	Tert-Butylbenzene	10.51	119	208540	9.70	ppb	100
91)	1,2,4-Trimethylbenzene	10.57	105	253710	9.42	ppb	100
92)	Sec-Butylbenzene	10.75	105	301845	9.57	ppb	100
93)	p-Isopropyltoluene	10.92	119	263677	9.57	ppb	100
94)	Benzyl Chloride	11.08	91	54343	8.96	ppb	100
95)	1,3-DCB	10.82	146	155857	9.22	ppb	100
96)	1,4-DCB	10.92	146	158012	9.80	ppb	100
97)	n-Butylbenzene	11.36	91	207083	9.08	ppb	100
98)	1,2-DCB	11.30	146	150844	9.98	ppb	100
99)	Hexachloroethane	11.57	117	47944	9.34	ppb	100
100)	1,2-Dibromo-3-chloropropan	12.14	157	14136	9.72	ppb	100
101)	1,2,4-Trichlorobenzene	13.02	180	84548	8.86	ppb	100
102)	Hexachlorobutadiene	13.24	225	32664	9.34	ppb	100
103)	Naphthalene	13.27	128	151111	9.52	ppb	100
104)	1,2,3-Trichlorobenzene	13.53	182	42144	8.94	ppb	100

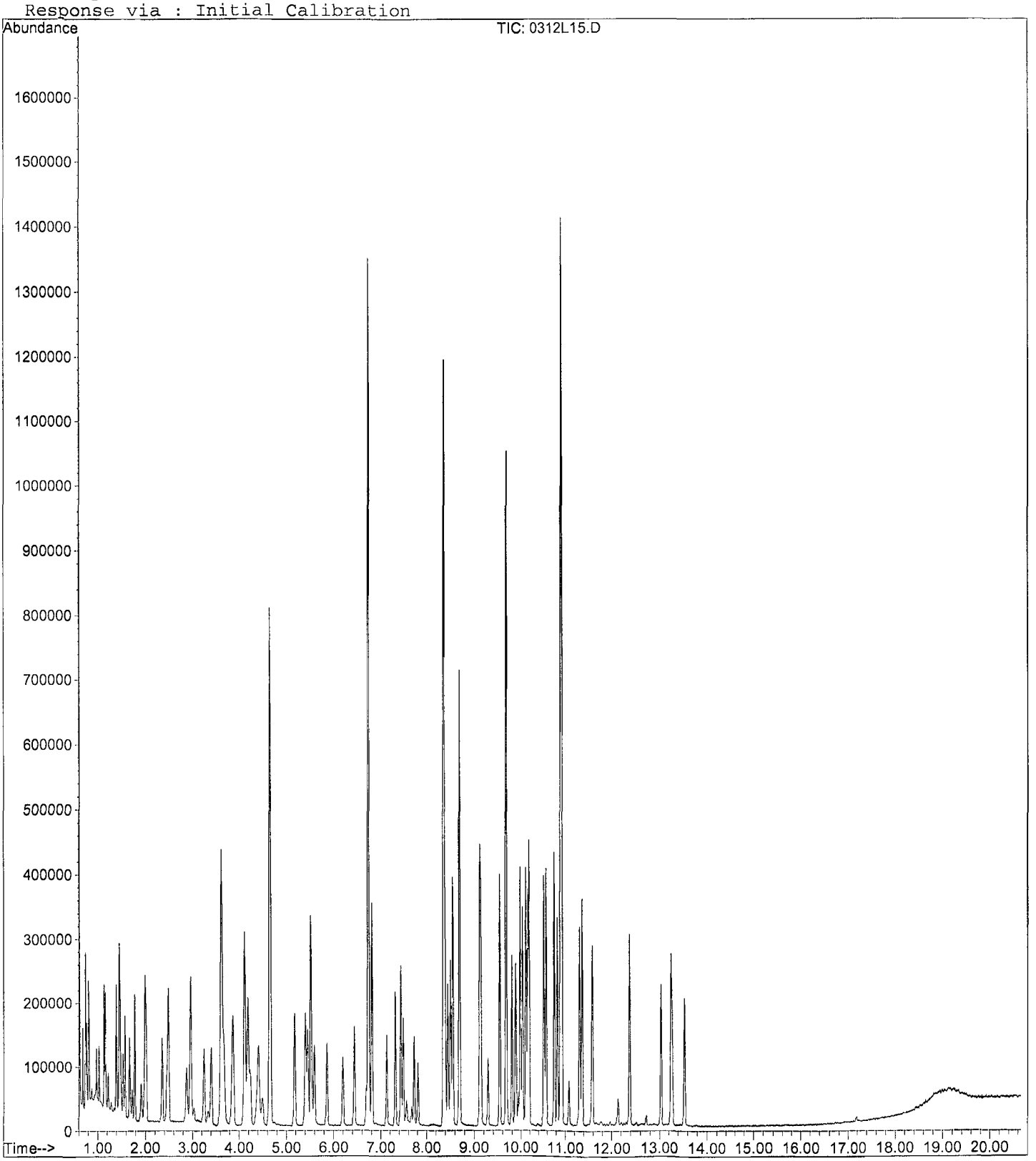
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0312L15.D Vial: 9
Acq On : 12 Mar 20 14:33 Operator:
Sample : 10ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L16.D Vial: 10
Acq On : 12 Mar 20 15:02 Operator:
Sample : 20ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.64	96	405144	25.00	ppb	0.00
64) Chlorobenzene-D5 (IS)	8.35	117	446656	25.00	ppb	0.00
79) 1,4-Dichlorobenzene-D (IS)	10.89	152	259136	25.00	ppb	0.00
System Monitoring Compounds						
39) Dibromofluoromethane(S)	3.62	111	532316	46.05	ppb	0.00
Spiked Amount 25.000			Recovery	=	184.212%	
44) 1,2-DCA-D4(S)	4.11	65	530676	45.56	ppb	0.00
Spiked Amount 25.000			Recovery	=	182.220%	
65) Toluene-D8(S)	6.72	98	1880369	48.82	ppb	0.00
Spiked Amount 25.000			Recovery	=	195.276%	
73) 4-Bromofluorobenzene(S)	9.66	95	709894	48.76	ppb	0.00
Spiked Amount 25.000			Recovery	=	195.056%	
Target Compounds						Qvalue
3) Dichlorodifluoromethane	0.67	85	109082	18.30	ppb	100
4) Freon 114	0.73	85	114036	18.80	ppb	95
5) Chloromethane	0.76	50	144152	18.47	ppb	98
6) Vinyl chloride	0.81	62	160832	18.82	ppb	98
8) Bromomethane	0.96	94	59352	19.41	ppb	98
9) Chloroethane	1.02	66	25720	17.54	ppb	100
10) Dichlorofluoromethane	1.13	67	208384	19.66	ppb	96
11) Trichlorofluoromethane	1.16	101	185779	19.36	ppb	94
13) Acrolein	1.39	56	91589	145.38	ppb	83
14) Acetone	1.49	43	36719	20.36	ppb	96
15) Freon-113	1.46	101	113148	20.23	ppb	93
16) 1,1-DCE	1.45	61	165209	19.76	ppb	99
17) t-Butanol	1.91	59	78462	148.96	ppb	100
19) Acetonitrile	1.66	41	132033	137.22	ppb	92
20) Methyl Acetate	1.72	43	92951	19.48	ppb	100
21) Iodomethane	1.53	142	156004	18.69	ppb	99
22) Acrylonitrile	1.96	53	54426	20.08	ppb	99
23) Methylene chloride	1.77	84	138857	20.08	ppb	90
24) Carbon disulfide	1.57	76	287981	18.69	ppb	98
25) Methyl t-butyl ether (MtBE	2.00	73	276099	19.92	ppb	98
26) Trans-1,2-DCE	1.98	61	163342	19.83	ppb	99
27) Diisopropyl Ether	2.47	45	376337	19.31	ppb	100
29) 1,1-DCA	2.34	63	232125	19.67	ppb	98
30) Vinyl Acetate	2.47	45	376337	19.31	ppb	100
32) MEK (2-Butanone)	3.02	43	24239	18.11	ppb	94
33) Cis-1,2-DCE	2.96	61	203089	19.48	ppb	98
34) 2,2-Dichloropropane	2.95	77	168410	18.72	ppb	96
37) Chloroform	3.40	83	245947	19.71	ppb	98
38) Bromochloromethane	3.24	130	104021	20.16	ppb	96
40) 1,1,1-TCA	3.60	97	192193	19.96	ppb	99
41) Cyclohexane	3.67	56	165136	19.63	ppb	95
42) 1,1-Dichloropropene	3.86	75	158211	19.57	ppb	100
43) 2,2,4-Trimethylpentane	4.40	57	341345	19.61	ppb	100
45) Carbon Tetrachloride	3.85	117	170641	20.14	ppb	95
48) 1,2-DCA	4.23	62	177263	20.09	ppb	99
49) Benzene	4.18	78	502350	18.93	ppb	99
50) TCE	5.17	130	151506	20.25	ppb	97
51) 2-Pentanone	5.52	43	498720	153.68	ppb	98
52) 1,2-Dichloropropane	5.45	63	135963	20.20	ppb	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L16.D Vial: 10
Acq On : 12 Mar 20 15:02 Operator:
Sample : 20ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
53)	Bromodichloromethane	5.85	83	185977	20.14	ppb	95
54)	Methyl Cyclohexane	5.40	83	170329	19.85	ppb	95
55)	Dibromomethane	5.59	174	113854	20.61	ppb	99
57)	MIBK (methyl isobutyl ket	6.68	43	92598	19.33	ppb	90
58)	1-Bromo-2-chloroethane	6.19	63	193790	20.41	ppb	100
59)	Cis-1,3-Dichloropropene	6.43	75	202663	20.49	ppb	99
60)	Toluene	6.80	91	566386	19.93	ppb	98
61)	Trans-1,3-Dichloropropene	7.12	75	170262	20.81	ppb	99
62)	1,1,2-TCA	7.31	97	131197	19.62	ppb	99
63)	2-Hexanone	7.66	43	34166	18.32	ppb	97
66)	1,2-EDB	7.80	107	136949	20.22	ppb	95
67)	Tetrachloroethene	7.43	166	161796	19.31	ppb	97
68)	1-Chlorohexane	8.44	91	156050	19.92	ppb	97
69)	1,1,1,2-Tetrachloroethane	8.50	131	151371	20.09	ppb	100
70)	m&p-Xylene	8.69	91	931092	40.10	ppb	99
71)	o-Xylene	9.11	91	470151	19.48	ppb	98
72)	Styrene	9.13	104	388741	21.00	ppb	96
74)	1,3-Dichloropropane	7.48	76	214817	20.00	ppb	97
75)	Dibromochloromethane	7.72	129	154082	20.48	ppb	100
76)	Chlorobenzene	8.39	112	384949	19.70	ppb	99
77)	Ethylbenzene	8.55	91	608001	19.72	ppb	99
78)	Bromoform	9.28	173	109714	20.69	ppb	98
80)	Isopropylbenzene	9.53	105	360000	19.01	ppb	99
81)	1,1,2,2-Tetrachloroethane	9.87	83	167740	19.32	ppb	98
82)	1,2,3-Trichloropropane	9.88	110	53219	18.68	ppb	92
83)	t-1,4-Dichloro-2-Butene	9.93	53	25140	18.41	ppb	99
84)	Bromobenzene	9.79	156	176368	18.98	ppb	91
85)	n-Propylbenzene	9.97	91	683981	18.79	ppb	98
86)	4-Ethyltoluene	10.10	105	362048	18.90	ppb	98
87)	2-Chlorotoluene	10.02	91	259479	19.65	ppb	97
88)	1,3,5-Trimethylbenzene	10.18	105	524054	19.22	ppb	100
89)	4-Chlorotoluene	10.15	91	260864	18.31	ppb	99
90)	Tert-Butylbenzene	10.51	119	426656	19.04	ppb	98
91)	1,2,4-Trimethylbenzene	10.57	105	531233	19.27	ppb	97
92)	Sec-Butylbenzene	10.75	105	624582	18.94	ppb	99
93)	p-Isopropyltoluene	10.92	119	548096	18.96	ppb	99
94)	Benzyl Chloride	11.08	91	116978	18.70	ppb	97
95)	1,3-DCB	10.82	146	323236	18.53	ppb	99
96)	1,4-DCB	10.92	146	325407	19.62	ppb	98
97)	n-Butylbenzene	11.35	91	432484	18.12	ppb	97
98)	1,2-DCB	11.30	146	306217	19.46	ppb	95
99)	Hexachloroethane	11.57	117	100521	18.98	ppb	96
100)	1,2-Dibromo-3-chloropropan	12.13	157	30461	20.30	ppb	97
101)	1,2,4-Trichlorobenzene	13.02	180	179371	17.72	ppb	95
102)	Hexachlorobutadiene	13.24	225	67696	18.74	ppb	93
103)	Naphthalene	13.26	128	297550	17.55	ppb	99
104)	1,2,3-Trichlorobenzene	13.53	182	83976	17.12	ppb	99

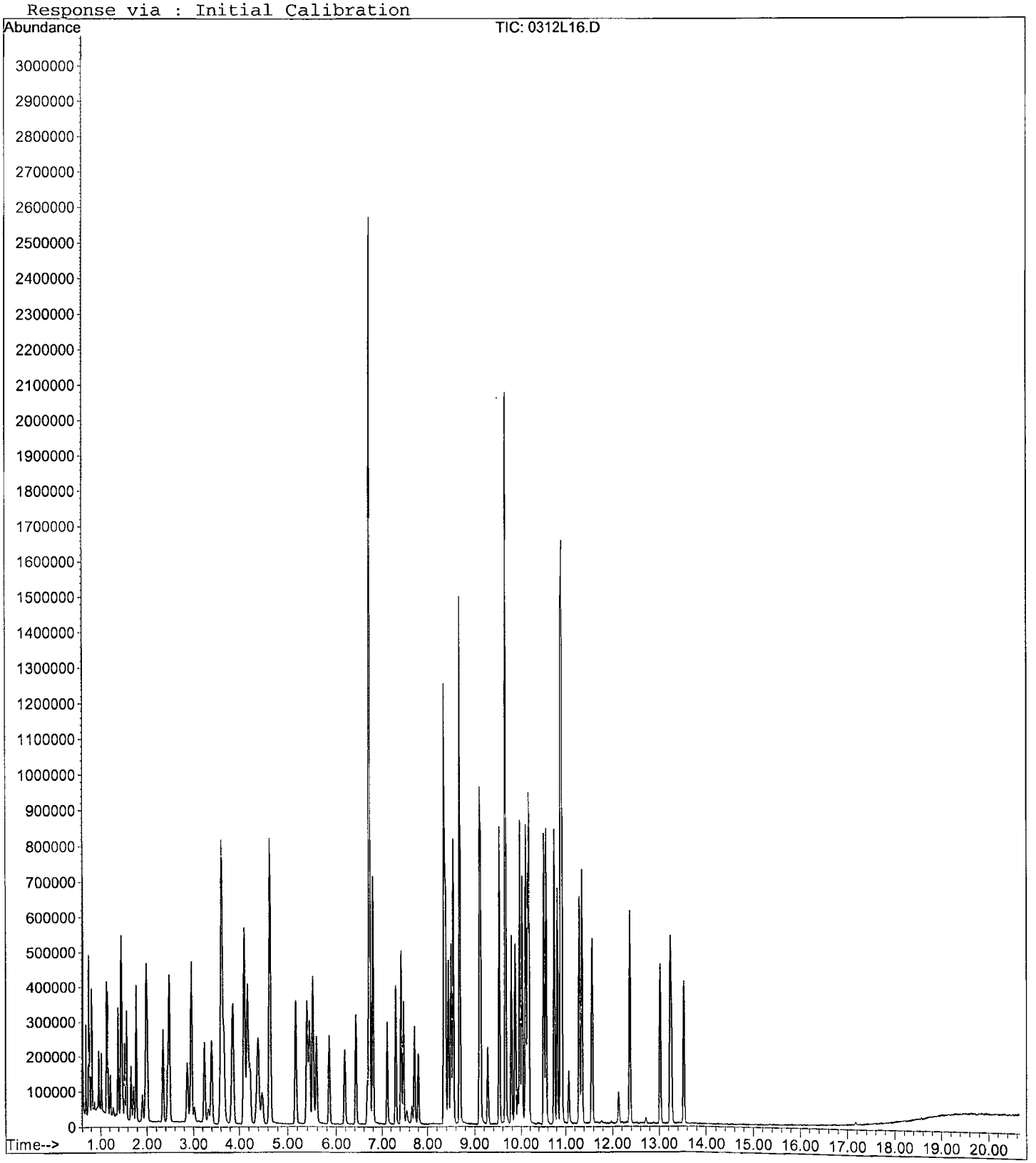
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0312L16.D Vial: 10
Acq On : 12 Mar 20 15:02 Operator:
Sample : 20ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L17.D Vial: 11
Acq On : 12 Mar 20 15:30 Operator:
Sample : 40ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	4.64	96	401408	25.00	ppb		0.00
64) Chlorobenzene-D5 (IS)	8.35	117	451392	25.00	ppb		0.00
79) 1,4-Dichlorobenzene-D (IS)	10.90	152	264320	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	3.62	111	538881	47.05	ppb		0.00
Spiked Amount 25.000			Recovery = 188.220%				
44) 1,2-DCA-D4(S)	4.11	65	543882	47.12	ppb		0.00
Spiked Amount 25.000			Recovery = 188.496%				
65) Toluene-D8(S)	6.72	98	1926049	49.48	ppb		0.00
Spiked Amount 25.000			Recovery = 197.924%				
73) 4-Bromofluorobenzene(S)	9.66	95	728514	49.52	ppb		0.00
Spiked Amount 25.000			Recovery = 198.072%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	0.67	85	221190	37.46	ppb		99
4) Freon 114	0.73	85	229671	38.21	ppb		97
5) Chloromethane	0.76	50	297697	38.77	ppb		99
6) Vinyl chloride	0.81	62	326656	38.57	ppb		99
8) Bromomethane	0.96	94	107882	35.61	ppb		96
9) Chloroethane	1.02	66	53568	36.87	ppb		89
10) Dichlorofluoromethane	1.13	67	426048	40.57	ppb		97
11) Trichlorofluoromethane	1.16	101	370639	38.97	ppb		94
13) Acrolein	1.39	56	119763	191.87	ppb	#	48
14) Acetone	1.49	43	65596	42.28	ppb		97
15) Freon-113	1.46	101	224317	40.48	ppb		96
16) 1,1-DCE	1.45	61	331390	40.00	ppb		97
17) t-Butanol	1.91	59	104411	200.06	ppb		98
19) Acetonitrile	1.67	41	162918	170.89	ppb		92
20) Methyl Acetate	1.72	43	190288	40.38	ppb		99
21) Iodomethane	1.53	142	338643	39.58	ppb		98
22) Acrylonitrile	1.96	53	108141	40.84	ppb		99
23) Methylene chloride	1.77	84	279236	41.53	ppb		95
24) Carbon disulfide	1.57	76	591741	38.76	ppb		99
25) Methyl t-butyl ether (MtBE	2.00	73	564344	41.10	ppb		97
26) Trans-1,2-DCE	1.98	61	335006	41.04	ppb		99
27) Diisopropyl Ether	2.47	45	765806	39.66	ppb		100
29) 1,1-DCA	2.34	63	470355	40.23	ppb		99
30) Vinyl Acetate	2.47	45	765806	39.66	ppb		100
32) MEK (2-Butanone)	3.02	43	51459	38.80	ppb		96
33) Cis-1,2-DCE	2.96	61	408687	39.57	ppb		98
34) 2,2-Dichloropropane	2.95	77	346544	38.88	ppb		99
37) Chloroform	3.40	83	496294	40.14	ppb		99
38) Bromochloromethane	3.24	130	209043	40.90	ppb		98
40) 1,1,1-TCA	3.60	97	393612	41.27	ppb		96
41) Cyclohexane	3.67	56	339250	40.70	ppb		98
42) 1,1-Dichloropropene	3.87	75	325963	40.70	ppb		96
43) 2,2,4-Trimethylpentane	4.40	57	710566	41.20	ppb		98
45) Carbon Tetrachloride	3.85	117	346260	41.25	ppb		94
48) 1,2-DCA	4.23	62	355882	40.70	ppb		99
49) Benzene	4.18	78	1033002	39.28	ppb		100
50) TCE	5.17	130	308210	41.58	ppb		97
51) 2-Pentanone	5.51	43	631065	196.27	ppb		97
52) 1,2-Dichloropropane	5.45	63	279340	41.89	ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L17.D Vial: 11
Acq On : 12 Mar 20 15:30 Operator:
Sample : 40ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
53)	Bromodichloromethane	5.85	83	383704	41.93	ppb	99
54)	Methyl Cyclohexane	5.40	83	354721	41.73	ppb	94
55)	Dibromomethane	5.59	174	235006	42.94	ppb	99
57)	MIBK (methyl isobutyl ket	6.68	43	185497	39.21	ppb	94
58)	1-Bromo-2-chloroethane	6.19	63	395617	42.06	ppb	98
59)	Cis-1,3-Dichloropropene	6.43	75	423812	43.25	ppb	99
60)	Toluene	6.80	91	1169032	41.52	ppb	98
61)	Trans-1,3-Dichloropropene	7.12	75	354775	43.77	ppb	98
62)	1,1,2-TCA	7.31	97	273144	41.22	ppb	98
63)	2-Hexanone	7.66	43	71834	37.73	ppb	99
66)	1,2-EDB	7.80	107	284220	41.52	ppb	99
67)	Tetrachloroethene	7.43	166	336800	39.78	ppb	97
68)	1-Chlorohexane	8.44	91	333991	42.18	ppb	96
69)	1,1,1,2-Tetrachloroethane	8.50	131	309351	40.62	ppb	97
70)	m&p-Xylene	8.69	91	1976048	84.21	ppb	100
71)	o-Xylene	9.11	91	1001712	41.06	ppb	99
72)	Styrene	9.13	104	826398	44.18	ppb	97
74)	1,3-Dichloropropane	7.48	76	442298	40.75	ppb	99
75)	Dibromochloromethane	7.72	129	321343	42.27	ppb	98
76)	Chlorobenzene	8.39	112	780900	39.55	ppb	98
77)	Ethylbenzene	8.55	91	1284666	41.23	ppb	99
78)	Bromoform	9.28	173	229688	42.86	ppb	98
80)	Isopropylbenzene	9.53	105	770624	39.89	ppb	100
81)	1,1,2,2-Tetrachloroethane	9.87	83	345138	38.98	ppb	98
82)	1,2,3-Trichloropropane	9.88	110	110014	37.87	ppb	96
83)	t-1,4-Dichloro-2-Butene	9.93	53	56001	40.21	ppb	95
84)	Bromobenzene	9.79	156	362624	38.25	ppb	94
85)	n-Propylbenzene	9.97	91	1482190	39.48	ppb	99
86)	4-Ethyltoluene	10.10	105	786684	39.59	ppb	99
87)	2-Chlorotoluene	10.02	91	547279	40.63	ppb	97
88)	1,3,5-Trimethylbenzene	10.18	105	1098668	39.51	ppb	99
89)	4-Chlorotoluene	10.15	91	563724	38.79	ppb	99
90)	Tert-Butylbenzene	10.51	119	909325	39.56	ppb	100
91)	1,2,4-Trimethylbenzene	10.57	105	1116051	39.84	ppb	98
92)	Sec-Butylbenzene	10.75	105	1333802	39.38	ppb	100
93)	p-Isopropyltoluene	10.92	119	1176458	39.55	ppb	99
94)	Benzyl Chloride	11.08	91	266918	41.83	ppb	98
95)	1,3-DCB	10.82	146	662540	37.23	ppb	98
96)	1,4-DCB	10.92	146	675927	40.01	ppb	100
97)	n-Butylbenzene	11.35	91	943176	38.44	ppb	99
98)	1,2-DCB	11.30	146	630325	39.08	ppb	96
99)	Hexachloroethane	11.57	117	210793	39.01	ppb	98
100)	1,2-Dibromo-3-chloropropan	12.13	157	62280	40.69	ppb	98
101)	1,2,4-Trichlorobenzene	13.02	180	387146	36.96	ppb	99
102)	Hexachlorobutadiene	13.24	225	140288	38.04	ppb	93
103)	Naphthalene	13.26	128	652528	36.96	ppb	99
104)	1,2,3-Trichlorobenzene	13.53	182	195520	38.88	ppb	99

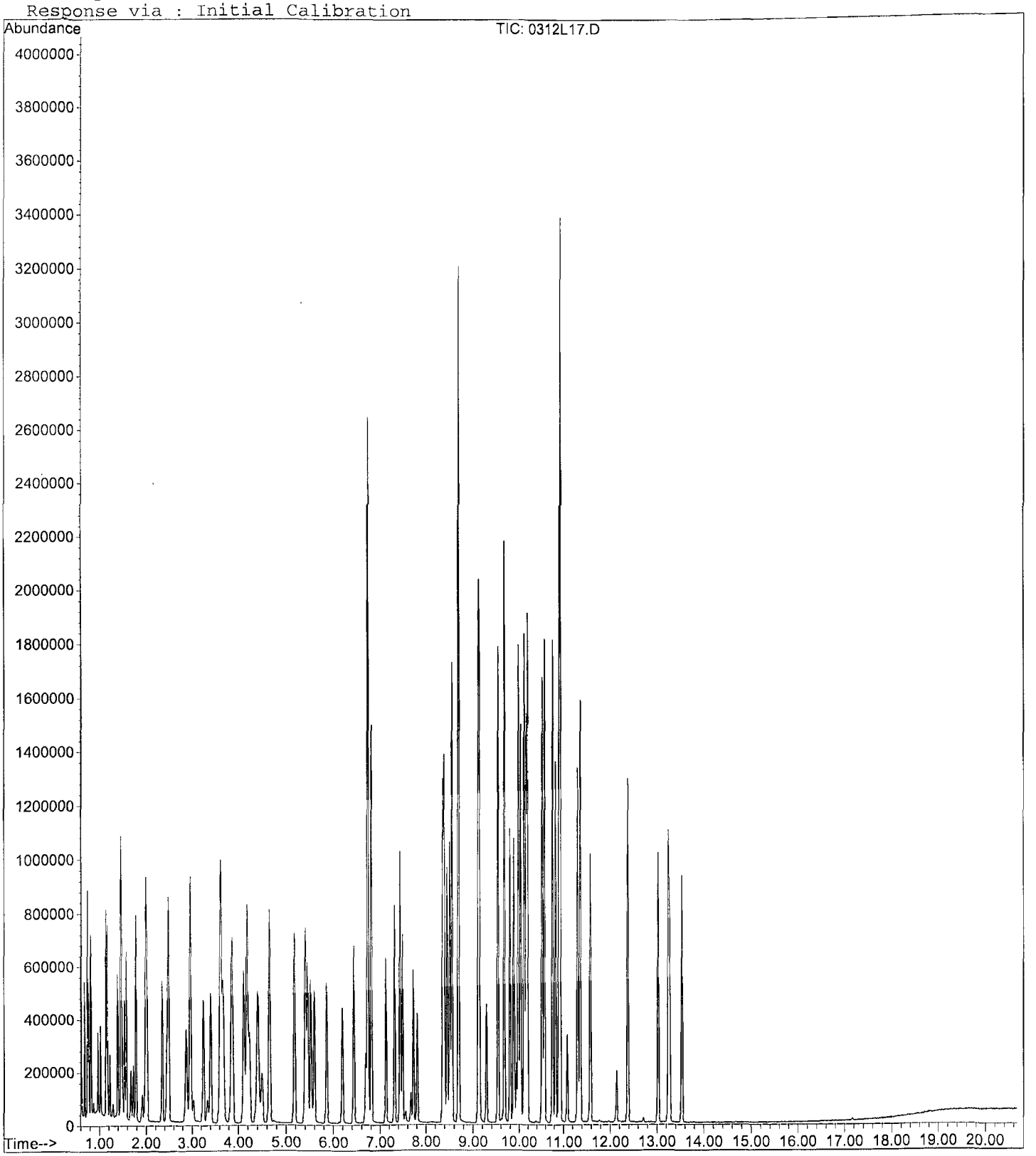
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0312L17.D Vial: 11
Acq On : 12 Mar 20 15:30 Operator:
Sample : 40ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L18.D Vial: 12
Acq On : 12 Mar 20 15:59 Operator:
Sample : 100ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	4.65	96	422016	25.00	ppb		0.00
64) Chlorobenzene-D5 (IS)	8.36	117	476800	25.00	ppb		0.00
79) 1,4-Dichlorobenzene-D (IS)	10.90	152	284544	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	3.62	111	1027658	85.35	ppb		0.00
Spiked Amount 25.000			Recovery = 341.412%				
44) 1,2-DCA-D4(S)	4.11	65	1048208	86.39	ppb		0.00
Spiked Amount 25.000			Recovery = 345.540%				
65) Toluene-D8(S)	6.73	98	3792024	92.23	ppb		0.00
Spiked Amount 25.000			Recovery = 368.908%				
73) 4-Bromofluorobenzene(S)	9.66	95	1441788	92.78	ppb		0.00
Spiked Amount 25.000			Recovery = 371.112%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	0.67	85	571686	92.09	ppb		99
4) Freon 114	0.73	85	619131	97.98	ppb		95
5) Chloromethane	0.76	50	719346	89.43	ppb		98
6) Vinyl chloride	0.81	62	809408	90.91	ppb		98
8) Bromomethane	0.96	94	315011	98.90	ppb		99
9) Chloroethane	1.01	66	125971	82.47	ppb		91
10) Dichlorofluoromethane	1.13	67	1011516	91.61	ppb		97
11) Trichlorofluoromethane	1.15	101	942542	94.27	ppb		93
13) Acrolein	1.39	56	151218	230.43	ppb	#	10
14) Acetone	1.49	43	148605	99.13	ppb		95
15) Freon-113	1.46	101	577048	99.05	ppb		98
16) 1,1-DCE	1.45	61	856325	98.32	ppb		99
17) t-Butanol	1.93	59	193683	353.00	ppb		98
19) Acetonitrile	1.67	41	190554	190.12	ppb		98
20) Methyl Acetate	1.72	43	494301	99.98	ppb		100
21) Iodomethane	1.53	142	920338	100.50	ppb		100
22) Acrylonitrile	1.96	53	275180	99.64	ppb		94
23) Methylene chloride	1.77	84	695198	99.38	ppb		96
24) Carbon disulfide	1.57	76	1568134	97.71	ppb		98
25) Methyl t-butyl ether (MtBE	2.01	73	1454288	100.74	ppb		97
26) Trans-1,2-DCE	1.98	61	842281	98.14	ppb		98
27) Diisopropyl Ether	2.48	45	1946953	95.90	ppb		99
29) 1,1-DCA	2.34	63	1177151	95.78	ppb		98
30) Vinyl Acetate	2.48	45	1946953	95.90	ppb		99
32) MEK (2-Butanone)	3.03	43	128748	92.33	ppb		98
33) Cis-1,2-DCE	2.96	61	1016150	93.59	ppb		97
34) 2,2-Dichloropropane	2.95	77	866493	92.48	ppb		97
37) Chloroform	3.40	83	1233679	94.92	ppb		97
38) Bromochloromethane	3.24	130	514405	95.73	ppb		100
40) 1,1,1-TCA	3.60	97	997903	99.51	ppb		100
41) Cyclohexane	3.67	56	913837	104.29	ppb		97
42) 1,1-Dichloropropene	3.87	75	849132	100.85	ppb		99
43) 2,2,4-Trimethylpentane	4.40	57	1962118	108.22	ppb		97
45) Carbon Tetrachloride	3.85	117	900199	101.99	ppb		94
48) 1,2-DCA	4.23	62	882737	96.03	ppb		99
49) Benzene	4.18	78	2639875	95.48	ppb		100
50) TCE	5.17	130	790673	101.47	ppb		97
51) 2-Pentanone	5.52	43	773686	228.88	ppb		98
52) 1,2-Dichloropropane	5.45	63	702773	100.25	ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L18.D Vial: 12
Acq On : 12 Mar 20 15:59 Operator:
Sample : 100ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
53)	Bromodichloromethane	5.85	83	980117	101.88 ppb	97
54)	Methyl Cyclohexane	5.40	83	991045	110.89 ppb	95
55)	Dibromomethane	5.59	174	579975	100.80 ppb	98
57)	MIBK (methyl isobutyl ket	6.68	43	498777	100.46 ppb	92
58)	1-Bromo-2-chloroethane	6.19	63	988470	99.95 ppb	99
59)	Cis-1,3-Dichloropropene	6.43	75	1128430	109.55 ppb	99
60)	Toluene	6.80	91	3018303	101.97 ppb	98
61)	Trans-1,3-Dichloropropene	7.12	75	954152	111.97 ppb	98
62)	1,1,2-TCA	7.31	97	692170	99.35 ppb	97
63)	2-Hexanone	7.67	43	206104	101.18 ppb	97
66)	1,2-EDB	7.80	107	724045	100.12 ppb	98
67)	Tetrachloroethene	7.43	166	851621	95.22 ppb	98
68)	1-Chlorohexane	8.45	91	926182	110.74 ppb	93
69)	1,1,1,2-Tetrachloroethane	8.50	131	787867	97.94 ppb	100
70)	m&p-Xylene	8.69	91	5265593	212.43 ppb	99
71)	o-Xylene	9.11	91	2696196	104.63 ppb	100
72)	Styrene	9.13	104	2231607	112.94 ppb	98
74)	1,3-Dichloropropane	7.48	76	1140239	99.45 ppb	99
75)	Dibromochloromethane	7.72	129	833859	103.85 ppb	100
76)	Chlorobenzene	8.38	112	2020036	96.85 ppb	98
77)	Ethylbenzene	8.55	91	3385364	102.86 ppb	99
78)	Bromoform	9.28	173	600531	106.08 ppb	97
80)	Isopropylbenzene	9.53	105	2146816	103.24 ppb	98
81)	1,1,2,2-Tetrachloroethane	9.87	83	915116	96.00 ppb	98
82)	1,2,3-Trichloropropane	9.88	110	285581	91.31 ppb	96
83)	t-1,4-Dichloro-2-Butene	9.93	53	159586	106.45 ppb	96
84)	Bromobenzene	9.79	156	948997	93.00 ppb	94
85)	n-Propylbenzene	9.98	91	4085850	100.48 ppb	98
86)	4-Ethyltoluene	10.10	105	2167808	100.43 ppb	100
87)	2-Chlorotoluene	10.03	91	1419917	97.91 ppb	97
88)	1,3,5-Trimethylbenzene	10.18	105	2936350	98.09 ppb	100
89)	4-Chlorotoluene	10.15	91	1514847	96.82 ppb	98
90)	Tert-Butylbenzene	10.51	119	2491977	100.39 ppb	99
91)	1,2,4-Trimethylbenzene	10.57	105	3017413	100.27 ppb	96
92)	Sec-Butylbenzene	10.75	105	3679106	100.49 ppb	99
93)	p-Isopropyltoluene	10.92	119	3231688	100.43 ppb	99
94)	Benzyl Chloride	11.08	91	877590	127.75 ppb	97
95)	1,3-DCB	10.82	146	1774823	92.65 ppb	99
96)	1,4-DCB	10.92	146	1818874	100.09 ppb	99
97)	n-Butylbenzene	11.36	91	2681010	101.07 ppb	98
98)	1,2-DCB	11.30	146	1749486	100.47 ppb	95
99)	Hexachloroethane	11.57	117	570671	98.11 ppb	98
100)	1,2-Dibromo-3-chloropropan	12.13	157	193261	117.28 ppb	97
101)	1,2,4-Trichlorobenzene	13.02	180	1156735	101.73 ppb	99
102)	Hexachlorobutadiene	13.24	225	401408	101.07 ppb	93
103)	Naphthalene	13.26	128	1954199	101.63 ppb	100
104)	1,2,3-Trichlorobenzene	13.53	182	548736	101.10 ppb	100

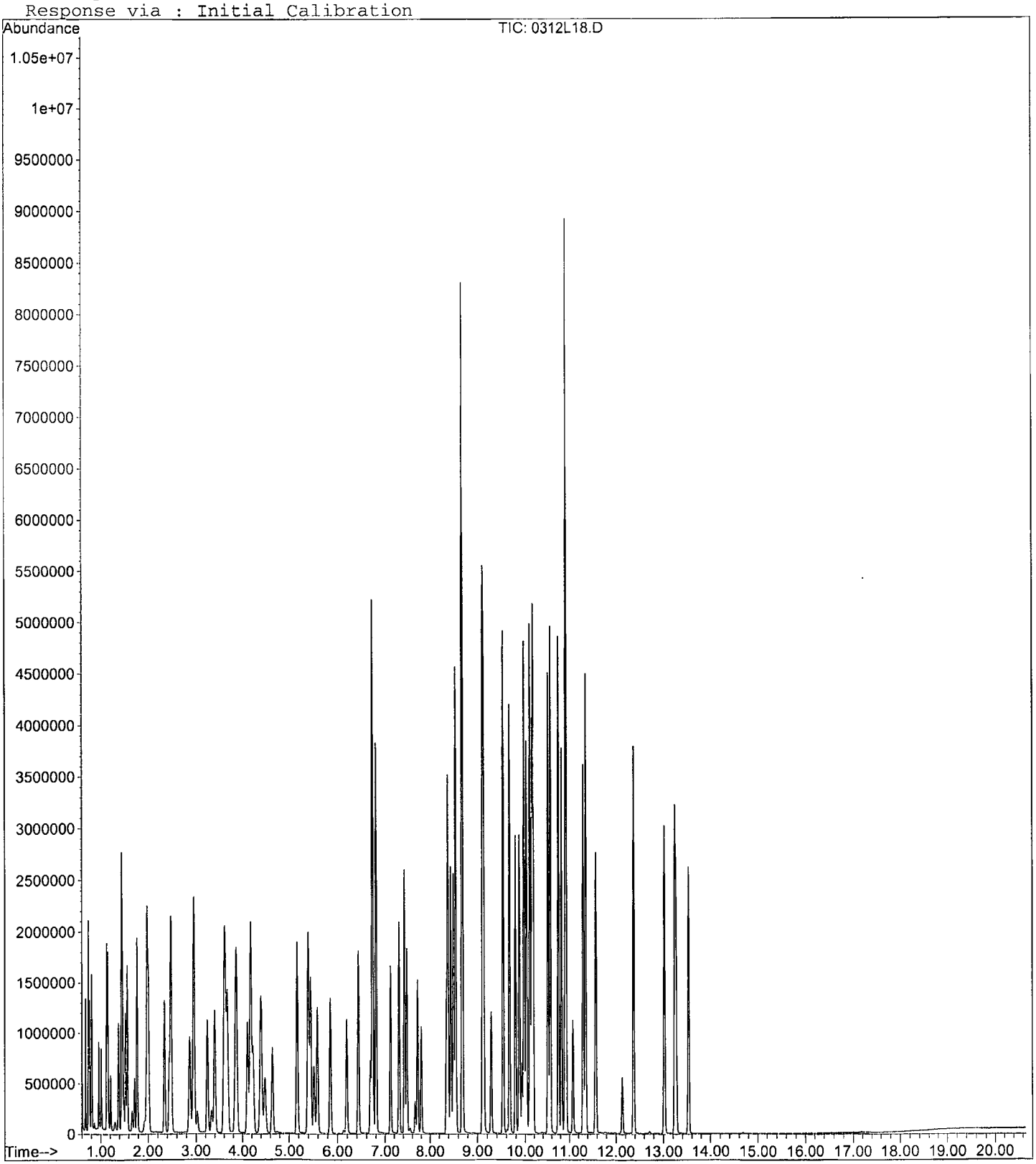
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0312L18.D Vial: 12
Acq On : 12 Mar 20 15:59 Operator:
Sample : 100ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 13 13:31 2020 Quant Results File: L0312W.RES

Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 03/12/20
Instrument: Loki
Initial Cal. Date: 03/12/20
Data File: 0312I21.D

		Compound	MEAN	CCRF	%D	%Drift		
1	TM	Dichlorodifluoromethane	0.3677	0.3864	5.1	TM		
2	TM	Freon 114	0.3743	0.3987	6.5	TM		
3	TM**L	Chloromethane	0.5672	0.5925	4.5	TM**L	22	* NT
4	TM*	Vinyl chloride	0.5274	0.5450	3.3	TM*		
5	TM	2-Chloro-1,1,1-trifluoroethane	0.0000	0.0000	0.00	TM		
6	TM	Bromomethane	0.1887	0.3135	66	TM		* NT
7	TM	Chloroethane	0.0905	0.0932	3.0	TM		
8	TM	Dichlorofluoromethane	0.6541	0.7963	22	TM		* NT
9	TM	Trichlorofluoromethane	0.5923	0.5983	1.0	TM		
10	TM	Diethyl ether	0.0000	0.0564	0.00	TM		
11	TM	Acrolein	0.0389	0.0321	17	TM		
12	TML	Acetone	0.1641	0.1246	24	TML	19	
13	TM	Freon-113	0.3451	0.3936	14	TM		
14	TM*	1,1-DCE	0.5159	0.5205	0.89	TM*		
15	TM	t-Butanol	0.0325	0.0282	13	TM		
16	TM	2-Propanol	0.0000	0.0009	0.00	TM		
17	TM	Acetonitrile	0.0594	0.0534	10	TM		
18	TML	Methyl Acetate	0.3350	0.3255	2.8	TML	9.9	
19	TML	Iodomethane	0.4362	0.4837	11	TML	0.41	
20	TML	Acrylonitrile	0.1956	0.1792	8.4	TML	4.5	
21	TML	Methylene chloride	0.5117	0.4616	9.8	TML	4.7	
22	TM	Carbon disulfide	0.9507	1.145	20	TM		
23	TM	Methyl t-butyl ether (MtBE)	0.8552	0.9245	8.1	TM		
24	TM	Trans-1,2-DCE	0.5084	0.5268	3.6	TM		
25	TM	Diisopropyl Ether	1.203	1.330	11	TM		
26	TM**	2,2-Dichloro-1,1,1-trifluoroethane	0.0000	0.0001	0.00	TM**		
27	TM**	1,1-DCA	0.7281	0.7180	1.4	TM**		
28	TM	Vinyl Acetate	1.203	1.330	11	TM		
29	TM	Ethyl tert Butyl Ether	0.0000	0.0129	0.00	TM		
30	TM	MEK (2-Butanone)	0.0826	0.0712	14	TM		
31	TM	Cis-1,2-DCE	0.6432	0.6433	0.02	TM		
32	TM	2,2-Dichloropropane	0.5551	0.5235	5.7	TM		
33	TM	2-Methylpentane	0.0000	0.0040	0.00	TM		
34	TM	3-Methylpentane	0.0000	0.0010	0.00	TM		
35	TM*	Chloroform	0.7700	0.7991	3.8	TM*		
36	TM	Bromochloromethane	0.3183	0.3393	6.6	TM		
37	TM	1,1,1-TCA	0.5940	0.6318	6.4	TM		
38	TM	Cyclohexane	0.5191	0.5884	13	TM		
39	TM	1,1-Dichloropropene	0.4988	0.5097	2.2	TM		
40	TM	2,2,4-Trimethylpentane	1.074	1.173	9.2	TM		
		Average			8.5			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 03/12/20
Instrument: Loki
Cal. Date: 03/12/20
Data File: 0312I21.D

		Compound	MEAN	CCRF	%D		%Drift	
41	TM	Carbon Tetrachloride	0.5229	0.5420	3.7	TM		
42	TM	Tert Amyl Methyl Ether	0.0000	0.0733	0.00	TM		
43	TM	1,2-DCA	0.5445	0.5679	4.3	TM		
44	TM	Benzene	1.638	1.636	0.09	TM		
45	TM	TCE	0.4616	0.5008	8.5	TM		
46	TM	2-Pentanone	0.2002	0.1650	18	TM		
47	TM*	1,2-Dichloropropane	0.4153	0.4356	4.9	TM*		
48	TM	Bromodichloromethane	0.5699	0.6036	5.9	TM		
49	TM	Methyl Cyclohexane	0.5294	0.5931	12	TM		
50	TM	Dibromomethane	0.3408	0.3666	7.6	TM		
51	TML	MIBK (methyl isobutyl ketone)	0.3320	0.3054	8.0	TML	2.8	
52	TM	1-Bromo-2-chloroethane	0.5859	0.6613	13	TM		
53	TM	Cis-1,3-Dichloropropene	0.6102	0.6516	6.8	TM		
54	TM*	Toluene	1.754	1.844	5.2	TM*		
55	TM	Trans-1,3-Dichloropropene	0.5048	0.5364	6.3	TM		
56	TM	1,1,2-TCA	0.4127	0.4294	4.0	TM		
57	TML	2-Hexanone	0.1250	0.1843	48	TML	61	* NT
58	TM	1,2-EDB	0.3792	0.4068	7.3	TM		
59	TM	Tetrachloroethene	0.4689	0.4832	3.0	TM		
60	TM	1-Chlorohexane	0.4385	0.4806	9.6	TM		
61	TM	1,1,1,2-Tetrachloroethane	0.4218	0.4416	4.7	TM		
62	TM	m&p-Xylene	1.300	1.359	4.6	TM		
63	TM	o-Xylene	1.351	1.405	4.0	TM		
64	TM	Styrene	1.036	1.106	6.8	TM		
65	TM	1,3-Dichloropropane	0.6012	0.6456	7.4	TM		
66	TM	Dibromochloromethane	0.4210	0.4485	6.5	TM		
67	TM**	Chlorobenzene	1.094	1.134	3.7	TM**		
68	TM*	Ethylbenzene	1.726	1.758	1.9	TM*		
69	TM**	Bromoform	0.2968	0.3222	8.6	TM**		
70	TM	Isopropylbenzene	1.827	1.765	3.4	TM		
71	TM**	1,1,2,2-Tetrachloroethane	0.8376	0.8959	7.0	TM**		
72	TM	1,2,3-Trichloropropane	0.2748	0.2793	1.6	TM		
73	TM	t-1,4-Dichloro-2-Butene	0.1317	0.1328	0.84	TM		
74	TM	Bromobenzene	0.8966	0.9464	5.6	TM		
75	TML	n-Propylbenzene	3.879	3.518	9.3	TML	2.1	
76	TML	4-Ethyltoluene	1.901	2.009	5.6	TML	11	
77	TM	2-Chlorotoluene	1.274	1.319	3.5	TM		
78	TM	1,3,5-Trimethylbenzene	2.630	2.659	1.1	TM		
79	TM	4-Chlorotoluene	1.375	1.404	2.1	TM		
80	TML	Tert-Butylbenzene	2.489	2.193	12	TML	2.4	
		Average			6.9			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Second Source Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 03/12/20
Matrix: 0 Instrument: Loki
Cal. Date: 03/12/20
Data File: 0312l21.D

		Compound	MEAN	CCRF	%D		%Drift	
81	TML	1,2,4-Trimethylbenzene	3.470	2.732	21	TML	2.0	
82	TML	Sec-Butylbenzene	3.735	3.227	14	TML	2.6	
83	TML	p-Isopropyltoluene	3.160	2.861	9.5	TML	4.0	
84	TM	Benzyl Chloride	0.6036	0.5265	13	TM		
85	TM	1,3-DCB	1.683	1.664	1.1	TM		
86	TML	1,4-DCB	1.793	1.719	4.1	TML	7.2	
87	TML	n-Butylbenzene	3.333	2.345	30	TML	3.0	
88	TML	1,2-DCB	1.666	1.626	2.4	TML	7.9	
89	TM	Hexachloroethane	0.5111	0.5247	2.7	TM		
90	TM	1,2-Dibromo-3-chloropropane	0.1448	0.1800	24	TM		* NT
91	TML	1,2,4-Trichlorobenzene	1.484	1.251	16	TML	29	* NT
92	TML	Hexachlorobutadiene	0.4982	0.3738	25	TML	7.3	
93	TML	Naphthalene	1.978	2.836	43	TML	73	* NT
94	TML	1,2,3-Trichlorobenzene	0.7422	0.6880	7.3	TML	46	* NT
95								
96								
97								
98								
99								
100								
101								
102								
103								
104								
105								
106								
107								
108								
109								
110								
111								
112								
113								
114								
115								
116								
117								
118								
119								
120								
		Average			15.2			

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312121.D Vial: 15
Acq On : 12 Mar 20 17:25 Operator:
Sample : (SS)10ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 17 11:50 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.64	96	402496	25.00	ppb	0.00
64) Chlorobenzene-D5 (IS)	8.36	117	436224	25.00	ppb	0.00
79) 1,4-Dichlorobenzene-D (IS)	10.90	152	248064	25.00	ppb	0.00
System Monitoring Compounds						
39) Dibromofluoromethane(S)	3.62	111	271894	23.68	ppb	0.00
Spiked Amount 25.000			Recovery =	94.712%		
44) 1,2-DCA-D4(S)	4.11	65	271707	23.48	ppb	0.00
Spiked Amount 25.000			Recovery =	93.912%		
65) Toluene-D8(S)	6.72	98	947437	25.19	ppb	0.00
Spiked Amount 25.000			Recovery =	100.744%		
73) 4-Bromofluorobenzene(S)	9.66	95	355668	25.02	ppb	0.00
Spiked Amount 25.000			Recovery =	100.064%		
Target Compounds						Qvalue
3) Dichlorodifluoromethane	0.68	85	62206	10.51	ppb	98
4) Freon 114	0.73	85	64182	10.65	ppb	94
5) Chloromethane	0.76	50	95395	12.22	ppb	99
6) Vinyl chloride	0.81	62	87744	10.33	ppb	100
8) Bromomethane	0.96	94	50480	16.62	ppb	99
9) Chloroethane	1.02	66	15004	10.30	ppb	82
10) Dichlorofluoromethane	1.13	67	128198	12.17	ppb	96
11) Trichlorofluoromethane	1.16	101	96332	10.10	ppb	97
13) Acrolein	1.39	56	64572	103.17	ppb	88
14) Acetone	1.49	43	20062	8.07	ppb	96
15) Freon-113	1.46	101	63361	11.40	ppb	95
16) 1,1-DCE	1.45	61	83805	10.09	ppb	99
17) t-Butanol	1.91	59	56720	108.39	ppb	98
19) Acetonitrile	1.67	41	107475	112.43	ppb	97
20) Methyl Acetate	1.72	43	52403	10.99	ppb	99
21) Iodomethane	1.53	142	77870	9.96	ppb	99
22) Acrylonitrile	1.96	53	28859	10.45	ppb	94
23) Methylene chloride	1.77	84	74315	10.47	ppb	95
24) Carbon disulfide	1.57	76	184320	12.04	ppb	97
25) Methyl t-butyl ether (MtBE	2.01	73	148842	10.81	ppb	99
26) Trans-1,2-DCE	1.99	61	84808	10.36	ppb	97
27) Diisopropyl Ether	2.47	45	214107	11.06	ppb	100
29) 1,1-DCA	2.34	63	115602	9.86	ppb	100
30) Vinyl Acetate	2.47	45	214107	11.06	ppb	100
32) MEK (2-Butanone)	3.02	43	11465	8.62	ppb	95
33) Cis-1,2-DCE	2.96	61	103572	10.00	ppb	97
34) 2,2-Dichloropropane	2.95	77	84280	9.43	ppb	97
37) Chloroform	3.40	83	128652	10.38	ppb	96
38) Bromochloromethane	3.24	130	54631	10.66	ppb	97
40) 1,1,1-TCA	3.60	97	101725	10.64	ppb	98
41) Cyclohexane	3.67	56	94733	11.34	ppb	97
42) 1,1-Dichloropropene	3.87	75	82067	10.22	ppb	99
43) 2,2,4-Trimethylpentane	4.40	57	188781	10.92	ppb	99
45) Carbon Tetrachloride	3.85	117	87265	10.37	ppb	96
48) 1,2-DCA	4.23	62	91433	10.43	ppb	98
49) Benzene	4.18	78	263471	9.99	ppb	99
50) TCE	5.17	130	80623	10.85	ppb	97
51) 2-Pentanone	5.52	43	332146	103.03	ppb	100
52) 1,2-Dichloropropane	5.45	63	70139	10.49	ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312121.D Vial: 15
Acq On : 12 Mar 20 17:25 Operator:
Sample : (SS)10ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 17 11:50 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
53)	Bromodichloromethane	5.85	83	97176	10.59 ppb	98
54)	Methyl Cyclohexane	5.40	83	95483	11.20 ppb	96
55)	Dibromomethane	5.59	174	59030	10.76 ppb	97
57)	MIBK (methyl isobutyl ket	6.68	43	49174	10.28 ppb	89
58)	1-Bromo-2-chloroethane	6.19	63	106464	11.29 ppb	98
59)	Cis-1,3-Dichloropropene	6.43	75	104909	10.68 ppb	100
60)	Toluene	6.80	91	296897	10.52 ppb	99
61)	Trans-1,3-Dichloropropene	7.12	75	86361	10.63 ppb	100
62)	1,1,2-TCA	7.31	97	69137	10.40 ppb	100
63)	2-Hexanone	7.67	43	29679	16.15 ppb	93
66)	1,2-EDB	7.80	107	70982	10.73 ppb	96
67)	Tetrachloroethene	7.43	166	84313	10.30 ppb	98
68)	1-Chlorohexane	8.45	91	83858	10.96 ppb	99
69)	1,1,1,2-Tetrachloroethane	8.50	131	77058	10.47 ppb	98
70)	m&p-Xylene	8.69	91	474376	20.92 ppb	100
71)	o-Xylene	9.11	91	245201	10.40 ppb	100
72)	Styrene	9.13	104	193063	10.68 ppb	94
74)	1,3-Dichloropropane	7.48	76	112649	10.74 ppb	98
75)	Dibromochloromethane	7.72	129	78265	10.65 ppb	100
76)	Chlorobenzene	8.38	112	197915	10.37 ppb	98
77)	Ethylbenzene	8.55	91	306705	10.19 ppb	100
78)	Bromoform	9.28	173	56225	10.86 ppb	97
80)	Isopropylbenzene	9.53	105	175104	9.66 ppb	98
81)	1,1,2,2-Tetrachloroethane	9.87	83	88901	10.70 ppb	97
82)	1,2,3-Trichloropropane	9.88	110	27712	10.16 ppb	97
83)	t-1,4-Dichloro-2-Butene	9.93	53	13179	10.08 ppb	97
84)	Bromobenzene	9.79	156	93911	10.56 ppb	96
85)	n-Propylbenzene	9.97	91	349113	10.21 ppb	99
86)	4-Ethyltoluene	10.10	105	199296	11.12 ppb	98
87)	2-Chlorotoluene	10.02	91	130851	10.35 ppb	95
88)	1,3,5-Trimethylbenzene	10.18	105	263859	10.11 ppb	99
89)	4-Chlorotoluene	10.15	91	139264	10.21 ppb	98
90)	Tert-Butylbenzene	10.51	119	217574	10.24 ppb	98
91)	1,2,4-Trimethylbenzene	10.57	105	271066	10.20 ppb	96
92)	Sec-Butylbenzene	10.75	105	320225	10.26 ppb	100
93)	p-Isopropyltoluene	10.92	119	283871	10.40 ppb	97
94)	Benzyl Chloride	11.08	91	52245	8.72 ppb	95
95)	1,3-DCB	10.82	146	165099	9.89 ppb	99
96)	1,4-DCB	10.92	146	170602	10.72 ppb	96
97)	n-Butylbenzene	11.35	91	232717	10.30 ppb	97
98)	1,2-DCB	11.30	146	161356	10.79 ppb	97
99)	Hexachloroethane	11.57	117	52063	10.27 ppb	95
100)	1,2-Dibromo-3-chloropropan	12.14	157	17861	12.43 ppb	98
101)	1,2,4-Trichlorobenzene	13.02	180	124174	12.94 ppb	98
102)	Hexachlorobutadiene	13.24	225	37088	10.73 ppb	95
103)	Naphthalene	13.26	128	281372	17.35 ppb	99
104)	1,2,3-Trichlorobenzene	13.53	182	68272	14.57 ppb	95

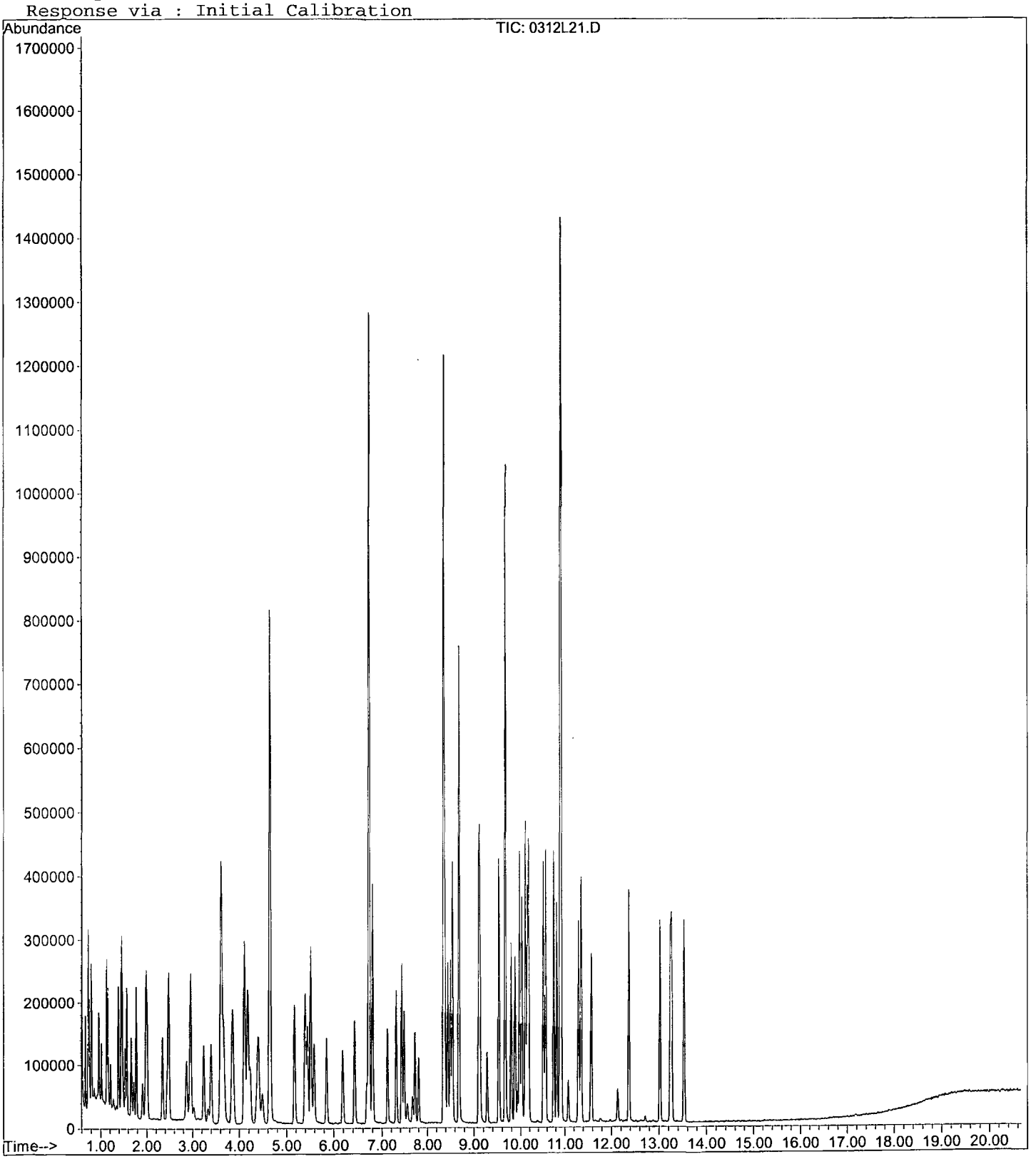
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0312l21.D Vial: 15
Acq On : 12 Mar 20 17:25 Operator:
Sample : (SS)10ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 17 11:50 2020 Quant Results File: L0312W.RES

Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 03/14/20
Matrix: Instrument: Loki
Initial Cal. Date: 03/12/20
Data File: 0313I39.D

		Compound	MEAN	CCRF	%D	%Drift		
1	I	Fluorobenzene (IS)	ISTD			I		
2	TM	Dichlorodifluoromethane	0.3677	0.3442	6.4	TM		
3	TM	Freon 114	0.3743	0.3496	6.6	TM		
4	TM**L	Chloromethane	0.5672	0.4640	18	TM**L	4.9	
5	TM*	Vinyl chloride	0.5274	0.4858	7.9	TM*		
6	TM	2-Chloro-1,1,1-trifluoroethane	0.0000	0.0001	0.00	TM		
7	TM	Bromomethane	0.1887	0.2422	28	TM		* NT
8	TM	Chloroethane	0.0905	0.0928	2.6	TM		
9	TM	Dichlorofluoromethane	0.6541	0.6542	0.02	TM		
10	TM	Trichlorofluoromethane	0.5923	0.6064	2.4	TM		
11	TM	Diethyl ether	0.0000	0.0459	0.00	TM		
12	TM	Acrolein	0.0389	0.0290	25	TM		* NT
13	TML	Acetone	0.1641	0.1062	35	TML	41	* NT
14	TM	Freon-113	0.3451	0.3500	1.4	TM		
15	TM*	1,1-DCE	0.5159	0.5142	0.33	TM*		
16	TM	t-Butanol	0.0325	0.0248	24	TM		* NT
17	TM	2-Propanol	0.0000	0.0015	0.00	TM		
18	TM	Acetonitrile	0.0594	0.0532	10	TM		
19	TML	Methyl Acetate	0.3350	0.2925	13	TML	1.3	
20	TML	Iodomethane	0.4362	0.1853	58	TML	55	* NT
21	TML	Acrylonitrile	0.1956	0.1652	16	TML	4.1	
22	TML	Methylene chloride	0.5117	0.4326	15	TML	2.4	
23	TM	Carbon disulfide	0.9507	0.9148	3.8	TM		
24	TM	Methyl t-butyl ether (MtBE)	0.8552	0.7226	16	TM		
25	TM	Trans-1,2-DCE	0.5084	0.5078	0.12	TM		
26	TM	Diisopropyl Ether	1.203	1.142	5.1	TM		
27	TM**	2,2-Dichloro-1,1,1-trifluoroethane	0.0000	0.0009	0.00	TM**		
28	TM**	1,1-DCA	0.7281	0.7632	4.8	TM**		
29	TM	Vinyl Acetate	1.203	1.142	5.1	TM		
30	TM	Ethyl tert Butyl Ether	0.0000	0.0127	0.00	TM		
31	TM	MEK (2-Butanone)	0.0826	0.0683	17	TM		
32	TM	Cis-1,2-DCE	0.6432	0.6064	5.7	TM		
33	TM	2,2-Dichloropropane	0.5551	0.4566	18	TM		
34	TM	2-Methylpentane	0.0000	0.0008	0.00	TM		
35	TM	3-Methylpentane	0.0000	0.0003	0.00	TM		
36	TM*	Chloroform	0.7700	0.7691	0.11	TM*		
37	TM	Bromochloromethane	0.3183	0.3285	3.2	TM		
38	S	Dibromofluoromethane(S)	0.7133	0.7306	2.4	S		
39	TM	1,1,1-TCA	0.5940	0.6273	5.6	TM		
40	TM	Cyclohexane	0.5191	0.4769	8.1	TM		
		Average			9.4			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 03/14/20
Instrument: Loki
Cal. Date: 03/12/20
Data File: 0313I39.D

		Compound	MEAN	CCRF	%D		%Drift	
41	TM	1,1-Dichloropropene	0.4988	0.4795	3.9	TM		
42	TM	2,2,4-Trimethylpentane	1.074	0.8752	19	TM		
43	S	1,2-DCA-D4(S)	0.7188	0.7129	0.82	S		
44	TM	Carbon Tetrachloride	0.5229	0.5481	4.8	TM		
45	TM	Tert Amyl Methyl Ether	0.0000	0.0714	0.00	TM		
46	TM	Methylcyclopentane	0.0000	0.0016	0.00	TM		
47	TM	1,2-DCA	0.5445	0.5510	1.2	TM		
48	TM	Benzene	1.638	1.565	4.5	TM		
49	TM	TCE	0.4616	0.4890	5.9	TM		
50	TM	2-Pentanone	0.2002	0.1504	25	TM		* NT
51	TM*	1,2-Dichloropropane	0.4153	0.4335	4.4	TM*		
52	TM	Bromodichloromethane	0.5699	0.5986	5.0	TM		
53	TM	Methyl Cyclohexane	0.5294	0.4635	12	TM		
54	TM	Dibromomethane	0.3408	0.3476	2.0	TM		
55	TML	MIBK (methyl isobutyl ketone)	0.3320	0.2474	25	TML	17	
56	TM	1-Bromo-2-chloroethane	0.5859	0.5960	1.7	TM		
57	TM	Cis-1,3-Dichloropropene	0.6102	0.5958	2.4	TM		
58	TM*	Toluene	1.754	1.765	0.67	TM*		
59	TM	Trans-1,3-Dichloropropene	0.5048	0.4854	3.8	TM		
60	TM	1,1,2-TCA	0.4127	0.4322	4.7	TM		
61	TML	2-Hexanone	0.1250	0.0785	37	TML	25	* NT
62	I	Chlorobenzene-D5 (IS)	ISTD			I		
63	S	Toluene-D8(S)	2.156	2.225	3.2	S		
64	TM	1,2-EDB	0.3792	0.3877	2.2	TM		
65	TM	Tetrachloroethene	0.4689	0.4533	3.3	TM		
66	TM	1-Chlorohexane	0.4385	0.4100	6.5	TM		
67	TM	1,1,1,2-Tetrachloroethane	0.4218	0.4314	2.3	TM		
68	TM	m&p-Xylene	1.300	1.241	4.5	TM		
69	TM	o-Xylene	1.351	1.268	6.1	TM		
70	TM	Styrene	1.036	0.9510	8.2	TM		
71	S	4-Bromofluorobenzene(S)	0.8148	0.8371	2.7	S		
72	TM	1,3-Dichloropropane	0.6012	0.6237	3.7	TM		
73	TM	Dibromochloromethane	0.4210	0.4540	7.8	TM		
74	TM**	Chlorobenzene	1.094	1.091	0.28	TM**		
75	TM*	Ethylbenzene	1.726	1.611	6.6	TM*		
76	TM**	Bromoform	0.2968	0.3191	7.5	TM**		
77	I	1,4-Dichlorobenzene-D (IS)	ISTD			I		
78	TM	Isopropylbenzene	1.827	1.600	12	TM		
79	TM**	1,1,2,2-Tetrachloroethane	0.8376	0.8168	2.5	TM**		
80	TM	1,2,3-Trichloropropane	0.2748	0.2565	6.6	TM		
		Average			6.6			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 03/14/20
Instrument: Loki
Cal. Date: 03/12/20
Data File: 0313l39.D

		Compound	MEAN	CCRF	%D		%Drift	
81	TM	t-1,4-Dichloro-2-Butene	0.1317	0.0935	29	TM		* NT
82	TM	Bromobenzene	0.8966	0.8460	5.6	TM		
83	TML	n-Propylbenzene	3.879	3.118	20	TML	9.1	
84	TML	4-Ethyltoluene	1.901	1.630	14	TML	8.7	
85	TM	2-Chlorotoluene	1.274	1.229	3.6	TM		
86	TM	1,3,5-Trimethylbenzene	2.630	2.408	8.4	TM		
87	TM	4-Chlorotoluene	1.375	1.193	13	TM		
88	TML	Tert-Butylbenzene	2.489	1.942	22	TML	9.1	
89	TML	1,2,4-Trimethylbenzene	3.470	2.295	34	TML	14	
90	TML	Sec-Butylbenzene	3.735	2.855	24	TML	8.9	
91	TML	p-Isopropyltoluene	3.160	2.456	22	TML	10	
92	TM	Benzyl Chloride	0.6036	0.3217	47	TM		* NT
93	TM	1,3-DCB	1.683	1.507	10	TM		
94	TML	1,4-DCB	1.793	1.519	15	TML	5.4	
95	TML	n-Butylbenzene	3.333	1.707	49	TML	24	* NT
96	TML	1,2-DCB	1.666	1.425	14	TML	5.2	
97	TM	Hexachloroethane	0.5111	0.5320	4.1	TM		
98	TM	1,2-Dibromo-3-chloropropane	0.1448	0.1339	7.5	TM		
99	TML	1,2,4-Trichlorobenzene	1.484	0.6151	59	TML	34	* NT
100	TML	Hexachlorobutadiene	0.4982	0.3028	39	TML	13	
101	TML	Naphthalene	1.978	0.7597	62	TML	49	* NT
102	TML	1,2,3-Trichlorobenzene	0.7422	0.2908	61	TML	37	* NT
103								
104								
105								
106								
107								
108								
109								
110								
111								
112								
113								
114								
115								
116								
117								
118								
119								
120								
		Average			25.6			

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0313139.D Vial: 38
Acq On : 14 Mar 20 3:34 Operator:
Sample : 200313B CCV 10ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 10:38 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	4.65	96	354432	25.00	ppb		0.00
64) Chlorobenzene-D5 (IS)	8.36	117	385600	25.00	ppb		0.00
79) 1,4-Dichlorobenzene-D (IS)	10.90	152	223168	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	3.62	111	258941	25.61	ppb		0.00
Spiked Amount 25.000			Recovery = 102.428%				
44) 1,2-DCA-D4(S)	4.11	65	252677	24.79	ppb		0.00
Spiked Amount 25.000			Recovery = 99.176%				
65) Toluene-D8(S)	6.73	98	857985	25.80	ppb		0.00
Spiked Amount 25.000			Recovery = 103.212%				
73) 4-Bromofluorobenzene(S)	9.66	95	322790	25.68	ppb		0.00
Spiked Amount 25.000			Recovery = 102.736%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	0.67	85	48793	9.36	ppb		96
4) Freon 114	0.73	85	49563	9.34	ppb		99
5) Chloromethane	0.76	50	65789	9.51	ppb		98
6) Vinyl chloride	0.81	62	68872	9.21	ppb		98
8) Bromomethane	0.96	94	34344	12.84	ppb		98
9) Chloroethane	1.02	66	13157	10.26	ppb		88
10) Dichlorofluoromethane	1.13	67	92752	10.00	ppb		98
11) Trichlorofluoromethane	1.16	101	85978	10.24	ppb		97
13) Acrolein	1.39	56	51466	93.38	ppb	#	73
14) Acetone	1.49	43	15056	5.85	ppb		94
15) Freon-113	1.46	101	49627	10.14	ppb		98
16) 1,1-DCE	1.45	61	72905	9.97	ppb		99
17) t-Butanol	1.91	59	43871	95.20	ppb		98
19) Acetonitrile	1.67	41	94325	112.05	ppb		86
20) Methyl Acetate	1.72	43	41469	9.87	ppb		98
21) Iodomethane	1.53	142	26275	4.52	ppb		95
22) Acrylonitrile	1.96	53	23415	9.59	ppb		93
23) Methylene chloride	1.77	84	61328	9.76	ppb		97
24) Carbon disulfide	1.57	76	129695	9.62	ppb		98
25) Methyl t-butyl ether (MtBE	2.00	73	102442	8.45	ppb		97
26) Trans-1,2-DCE	1.99	61	71991	9.99	ppb		97
27) Diisopropyl Ether	2.47	45	161842	9.49	ppb		96
29) 1,1-DCA	2.34	63	108198	10.48	ppb		97
30) Vinyl Acetate	2.47	45	161842	9.49	ppb		96
32) MEK (2-Butanone)	3.03	43	9684	8.27	ppb		96
33) Cis-1,2-DCE	2.96	61	85975	9.43	ppb		97
34) 2,2-Dichloropropane	2.95	77	64732	8.23	ppb		96
37) Chloroform	3.40	83	109039	9.99	ppb		98
38) Bromochloromethane	3.25	130	46579	10.32	ppb		98
40) 1,1,1-TCA	3.60	97	88939	10.56	ppb		99
41) Cyclohexane	3.67	56	67614	9.19	ppb		98
42) 1,1-Dichloropropene	3.87	75	67975	9.61	ppb		99
43) 2,2,4-Trimethylpentane	4.41	57	124085	8.15	ppb		98
45) Carbon Tetrachloride	3.85	117	77704	10.48	ppb		99
48) 1,2-DCA	4.23	62	78114	10.12	ppb		98
49) Benzene	4.18	78	221832	9.55	ppb		99
50) TCE	5.17	130	69322	10.59	ppb		95
51) 2-Pentanone	5.52	43	266604	93.91	ppb		97
52) 1,2-Dichloropropane	5.45	63	61457	10.44	ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0313139.D Vial: 38
Acq On : 14 Mar 20 3:34 Operator:
Sample : 200313B CCV 10ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 10:38 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
53)	Bromodichloromethane	5.86	83	84861	10.50	ppb	91
54)	Methyl Cyclohexane	5.40	83	65711	8.75	ppb	100
55)	Dibromomethane	5.59	174	49278	10.20	ppb	99
57)	MIBK (methyl isobutyl ket	6.68	43	35080	8.30	ppb	95
58)	1-Bromo-2-chloroethane	6.19	63	84494	10.17	ppb	98
59)	Cis-1,3-Dichloropropene	6.43	75	84465	9.76	ppb	97
60)	Toluene	6.81	91	250279	10.07	ppb	99
61)	Trans-1,3-Dichloropropene	7.12	75	68819	9.62	ppb	97
62)	1,1,2-TCA	7.31	97	61278	10.47	ppb	100
63)	2-Hexanone	7.67	43	11123	7.46	ppb	93
66)	1,2-EDB	7.81	107	59799	10.22	ppb	100
67)	Tetrachloroethene	7.43	166	69915	9.67	ppb	96
68)	1-Chlorohexane	8.44	91	63237	9.35	ppb	97
69)	1,1,1,2-Tetrachloroethane	8.50	131	66534	10.23	ppb	96
70)	m&p-Xylene	8.69	91	382804	19.10	ppb	99
71)	o-Xylene	9.11	91	195639	9.39	ppb	99
72)	Styrene	9.13	104	146690	9.18	ppb	98
74)	1,3-Dichloropropane	7.48	76	96195	10.37	ppb	100
75)	Dibromochloromethane	7.72	129	70022	10.78	ppb	99
76)	Chlorobenzene	8.39	112	168210	9.97	ppb	97
77)	Ethylbenzene	8.55	91	248513	9.34	ppb	100
78)	Bromoform	9.28	173	49223	10.75	ppb	100
80)	Isopropylbenzene	9.53	105	142848	8.76	ppb	100
81)	1,1,2,2-Tetrachloroethane	9.87	83	72913	9.75	ppb	99
82)	1,2,3-Trichloropropane	9.88	110	22899	9.34	ppb	97
83)	t-1,4-Dichloro-2-Butene	9.93	53	8345	7.10	ppb	99
84)	Bromobenzene	9.79	156	75520	9.44	ppb	95
85)	n-Propylbenzene	9.98	91	278350	9.09	ppb	98
86)	4-Ethyltoluene	10.11	105	145472	9.13	ppb	97
87)	2-Chlorotoluene	10.03	91	109667	9.64	ppb	94
88)	1,3,5-Trimethylbenzene	10.18	105	214978	9.16	ppb	99
89)	4-Chlorotoluene	10.15	91	106516	8.68	ppb	100
90)	Tert-Butylbenzene	10.52	119	173340	9.09	ppb	98
91)	1,2,4-Trimethylbenzene	10.57	105	204898	8.55	ppb	96
92)	Sec-Butylbenzene	10.75	105	254896	9.11	ppb	100
93)	p-Isopropyltoluene	10.92	119	219243	8.98	ppb	99
94)	Benzyl Chloride	11.08	91	28714	5.33	ppb	99
95)	1,3-DCB	10.82	146	134521	8.95	ppb	99
96)	1,4-DCB	10.92	146	135560	9.46	ppb	99
97)	n-Butylbenzene	11.36	91	152373	7.57	ppb	99
98)	1,2-DCB	11.30	146	127197	9.48	ppb	95
99)	Hexachloroethane	11.58	117	47492	10.41	ppb	97
100)	1,2-Dibromo-3-chloropropan	12.14	157	11950	9.25	ppb	97
101)	1,2,4-Trichlorobenzene	13.03	180	54907	6.60	ppb	99
102)	Hexachlorobutadiene	13.25	225	27032	8.70	ppb	95
103)	Naphthalene	13.27	128	67814	5.14	ppb	98
104)	1,2,3-Trichlorobenzene	13.53	182	25960	6.25	ppb	97

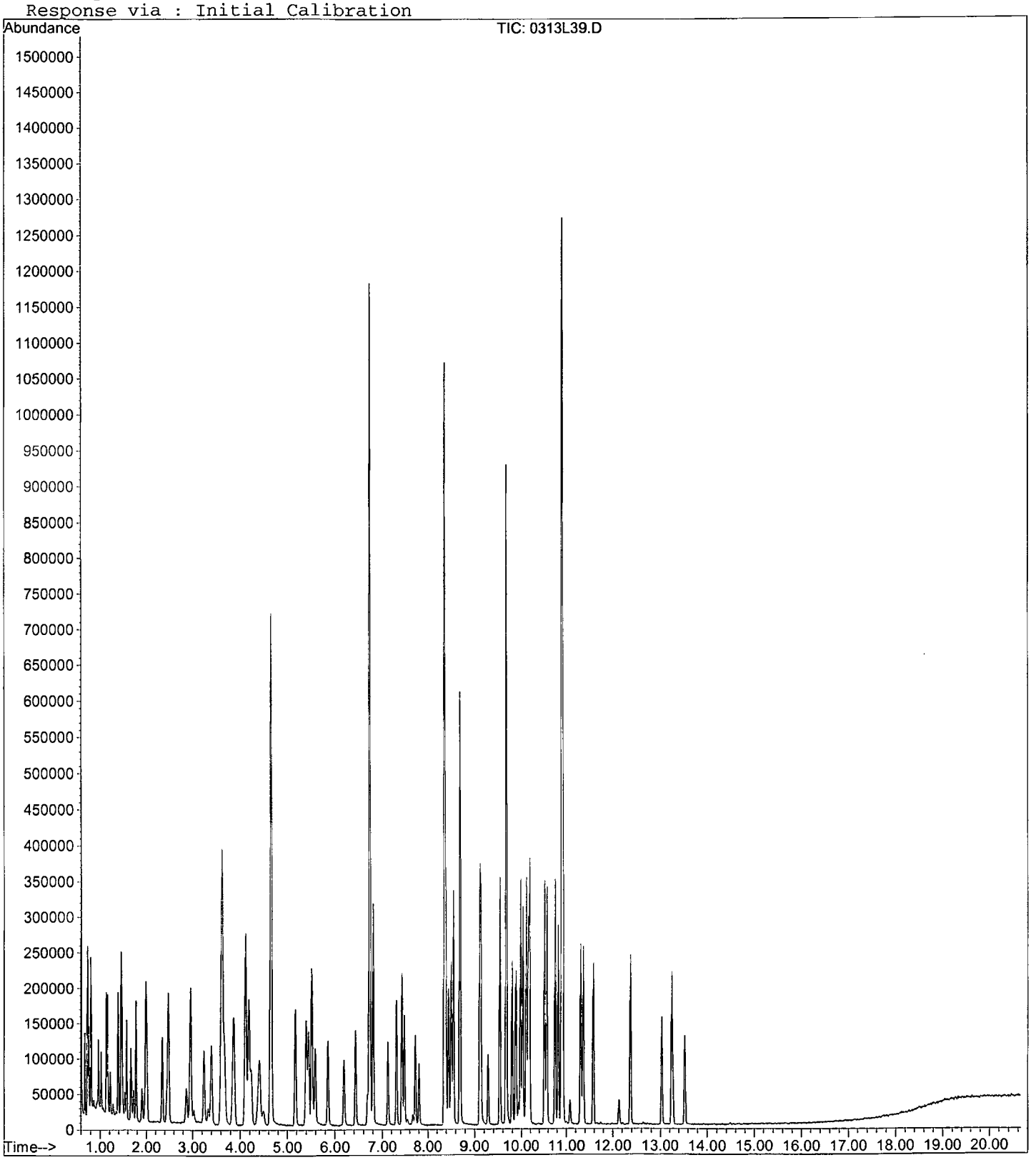
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0313l39.D Vial: 38
Acq On : 14 Mar 20 3:34 Operator:
Sample : 200313B CCV 10ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 10:38 2020 Quant Results File: L0312W.RES

Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 03/14/20
Instrument: Loki
Initial Cal. Date: 03/12/20
Data File: 0313I57.D

		Compound	MEAN	CCRF	%D	%Drift		
1	I	Fluorobenzene (IS)	ISTD			I		
2	TM	Dichlorodifluoromethane	0.3677	0.3553	3.4	TM		
3	TM	Freon 114	0.3743	0.3509	6.3	TM		
4	TM**L	Chloromethane	0.5672	0.4712	17	TM**L	3.4	
5	TM*	Vinyl chloride	0.5274	0.5206	1.3	TM*		
6	TM	2-Chloro-1,1,1-trifluoroethane	0.0000	0.0001	0.00	TM		
7	TM	Bromomethane	0.1887	0.2674	42	TM		
8	TM	Chloroethane	0.0905	0.0856	5.4	TM		
9	TM	Dichlorofluoromethane	0.6541	0.6721	2.8	TM		
10	TM	Trichlorofluoromethane	0.5923	0.6262	5.7	TM		
11	TM	Diethyl ether	0.0000	0.0544	0.00	TM		
12	TM	Acrolein	0.0389	0.0350	10	TM		
13	TML	Acetone	0.1641	1.276	678	TML	1368	* NT
14	TM	Freon-113	0.3451	0.3351	2.9	TM		
15	TM*	1,1-DCE	0.5159	0.5196	0.72	TM*		
16	TM	t-Butanol	0.0325	0.0330	1.6	TM		
17	TM	2-Propanol	0.0000	1.054	0.00	TM		
18	TM	Acetonitrile	0.0594	0.0645	8.6	TM		
19	TML	Methyl Acetate	0.3350	0.3476	3.7	TML	17	
20	TML	Iodomethane	0.4362	0.3324	24	TML	28	
21	TML	Acrylonitrile	0.1956	0.1806	7.7	TML	5.4	
22	TML	Methylene chloride	0.5117	0.4422	14	TML	0.04	
23	TM	Carbon disulfide	0.9507	0.9417	0.95	TM		
24	TM	Methyl t-butyl ether (MtBE)	0.8552	0.7980	6.7	TM		
25	TM	Trans-1,2-DCE	0.5084	0.5135	1.0	TM		
26	TM	Diisopropyl Ether	1.203	1.185	1.4	TM		
27	TM**	2,2-Dichloro-1,1,1-trifluoroethane	0.0000	0.0003	0.00	TM**		
28	TM**	1,1-DCA	0.7281	0.7413	1.8	TM**		
29	TM	Vinyl Acetate	1.203	1.185	1.4	TM		
30	TM	Ethyl tert Butyl Ether	0.0000	0.0126	0.00	TM		
31	TM	MEK (2-Butanone)	0.0826	0.0791	4.3	TM		
32	TM	Cis-1,2-DCE	0.6432	0.6223	3.2	TM		
33	TM	2,2-Dichloropropane	0.5551	0.4164	25	TM		
34	TM	2-Methylpentane	0.0000	0.0007	0.00	TM		
35	TM	3-Methylpentane	0.0000	0.0117	0.00	TM		
36	TM*	Chloroform	0.7700	0.8075	4.9	TM*		
37	TM	Bromochloromethane	0.3183	0.3240	1.8	TM		
38	S	Dibromofluoromethane(S)	0.7133	0.6984	2.1	S		
39	TM	1,1,1-TCA	0.5940	0.6341	6.7	TM		
40	TM	Cyclohexane	0.5191	0.4957	4.5	TM		
		Average			23.1			

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 03/14/20
Instrument: Loki
Cal. Date: 03/12/20
Data File: 0313l57.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	1,1-Dichloropropene	0.4988	0.4757	4.6	TM	
42	TM	2,2,4-Trimethylpentane	1.074	0.8582	20	TM	
43	S	1,2-DCA-D4(S)	0.7188	0.7057	1.8	S	
44	TM	Carbon Tetrachloride	0.5229	0.5504	5.3	TM	
45	TM	Tert Amyl Methyl Ether	0.0000	0.0721	0.00	TM	
46	TM	Methylcyclopentane	0.0000	0.0011	0.00	TM	
47	TM	1,2-DCA	0.5445	0.5731	5.2	TM	
48	TM	Benzene	1.638	1.585	3.2	TM	
49	TM	TCE	0.4616	0.4976	7.8	TM	
50	TM	2-Pentanone	0.2002	0.2233	12	TM	
51	TM*	1,2-Dichloropropane	0.4153	0.4546	9.5	TM*	
52	TM	Bromodichloromethane	0.5699	0.6237	9.4	TM	
53	TM	Methyl Cyclohexane	0.5294	0.4795	9.4	TM	
54	TM	Dibromomethane	0.3408	0.3755	10	TM	
55	TML	MIBK (methyl isobutyl ketone)	0.3320	0.3267	1.6	TML	10.0
56	TM	1-Bromo-2-chloroethane	0.5859	0.6353	8.4	TM	
57	TM	Cis-1,3-Dichloropropene	0.6102	0.6078	0.40	TM	
58	TM*	Toluene	1.754	1.781	1.5	TM*	
59	TM	Trans-1,3-Dichloropropene	0.5048	0.4989	1.2	TM	
60	TM	1,1,2-TCA	0.4127	0.4360	5.6	TM	
61	TML	2-Hexanone	0.1250	0.1432	15	TML	28
62	I	Chlorobenzene-D5 (IS)	ISTD			I	
63	S	Toluene-D8(S)	2.156	2.175	0.87	S	
64	TM	1,2-EDB	0.3792	0.4051	6.8	TM	
65	TM	Tetrachloroethene	0.4689	0.4641	1.0	TM	
66	TM	1-Chlorohexane	0.4385	0.4122	6.0	TM	
67	TM	1,1,1,2-Tetrachloroethane	0.4218	0.4534	7.5	TM	
68	TM	m&p-Xylene	1.300	1.280	1.6	TM	
69	TM	o-Xylene	1.351	1.324	2.0	TM	
70	TM	Styrene	1.036	1.033	0.32	TM	
71	S	4-Bromofluorobenzene(S)	0.8148	0.8245	1.2	S	
72	TM	1,3-Dichloropropane	0.6012	0.6598	9.8	TM	
73	TM	Dibromochloromethane	0.4210	0.4718	12	TM	
74	TM**	Chlorobenzene	1.094	1.119	2.3	TM**	
75	TM*	Ethylbenzene	1.726	1.658	3.9	TM*	
76	TM**	Bromoform	0.2968	0.3518	19	TM**	
77	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
78	TM	Isopropylbenzene	1.827	1.651	9.7	TM	
79	TM**	1,1,2,2-Tetrachloroethane	0.8376	0.8960	7.0	TM**	
80	TM	1,2,3-Trichloropropane	0.2748	0.3031	10	TM	
		Average			6.1		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 03/14/20
Matrix: 0 Instrument: Loki
Cal. Date: 03/12/20
Data File: 0313I57.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	t-1,4-Dichloro-2-Butene	0.1317	0.1185	10	TM	
82	TM	Bromobenzene	0.8966	0.9002	0.41	TM	
83	TML	n-Propylbenzene	3.879	3.312	15	TML	3.7
84	TML	4-Ethyltoluene	1.901	1.704	10	TML	4.7
85	TM	2-Chlorotoluene	1.274	1.282	0.58	TM	
86	TM	1,3,5-Trimethylbenzene	2.630	2.549	3.1	TM	
87	TM	4-Chlorotoluene	1.375	1.288	6.3	TM	
88	TML	Tert-Butylbenzene	2.489	2.098	16	TML	2.0
89	TML	1,2,4-Trimethylbenzene	3.470	2.408	31	TML	10
90	TML	Sec-Butylbenzene	3.735	2.986	20	TML	4.9
91	TML	p-Isopropyltoluene	3.160	2.676	15	TML	2.5
92	TM	Benzyl Chloride	0.6036	0.3415	43	TM	
93	TM	1,3-DCB	1.683	1.622	3.6	TM	
94	TML	1,4-DCB	1.793	1.673	6.7	TML	4.3
95	TML	n-Butylbenzene	3.333	2.006	40	TML	11
96	TML	1,2-DCB	1.666	1.610	3.3	TML	6.9
97	TM	Hexachloroethane	0.5111	0.5581	9.2	TM	
98	TM	1,2-Dibromo-3-chloropropane	0.1448	0.1868	29	TM	
99	TML	1,2,4-Trichlorobenzene	1.484	0.9528	36	TML	0.32
100	TML	Hexachlorobutadiene	0.4982	0.3433	31	TML	1.4
101	TML	Naphthalene	1.978	1.584	20	TML	0.12
102	TML	1,2,3-Trichlorobenzene	0.7422	0.4866	34	TML	3.5
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			17.4		

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0313157.D Vial: 56
Acq On : 14 Mar 20 12:09 Operator:
Sample : Ending CCV 10ug/L 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:16 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	4.64	96	355712	25.00	ppb		0.00
64) Chlorobenzene-D5 (IS)	8.36	117	387008	25.00	ppb		0.00
79) 1,4-Dichlorobenzene-D (IS)	10.90	152	222848	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	3.62	111	248434	24.48	ppb		0.00
Spiked Amount 25.000			Recovery =	97.920%			
44) 1,2-DCA-D4(S)	4.11	65	251013	24.54	ppb		0.00
Spiked Amount 25.000			Recovery =	98.168%			
65) Toluene-D8(S)	6.73	98	841587	25.22	ppb		0.00
Spiked Amount 25.000			Recovery =	100.868%			
73) 4-Bromofluorobenzene(S)	9.66	95	319090	25.30	ppb		0.00
Spiked Amount 25.000			Recovery =	101.188%			
Target Compounds							Qvalue
3) Dichlorodifluoromethane	0.67	85	50548	9.66	ppb		99
4) Freon 114	0.73	85	49923	9.37	ppb		97
5) Chloromethane	0.76	50	67040	9.66	ppb		99
6) Vinyl chloride	0.81	62	74072	9.87	ppb		97
8) Bromomethane	0.96	94	38040	14.17	ppb		98
9) Chloroethane	1.02	66	12181	9.46	ppb		94
10) Dichlorofluoromethane	1.13	67	95624	10.28	ppb		99
11) Trichlorofluoromethane	1.16	101	89094	10.57	ppb		95
13) Acrolein	1.39	56	62187	112.43	ppb		91
14) Acetone	1.61	43	181543	146.79	ppb	#	44
15) Freon-113	1.46	101	47677	9.71	ppb		98
16) 1,1-DCE	1.45	61	73938	10.07	ppb		99
17) t-Butanol	1.91	59	58759	127.05	ppb		97
19) Acetonitrile	1.61	41	114707	135.78	ppb	#	49
20) Methyl Acetate	1.72	43	49454	11.75	ppb		100
21) Iodomethane	1.53	142	47298	7.20	ppb		96
22) Acrylonitrile	1.96	53	25703	10.54	ppb		98
23) Methylene chloride	1.77	84	62915	10.00	ppb		95
24) Carbon disulfide	1.57	76	133985	9.90	ppb		99
25) Methyl t-butyl ether (MtBE	2.00	73	113540	9.33	ppb		97
26) Trans-1,2-DCE	1.98	61	73066	10.10	ppb		97
27) Diisopropyl Ether	2.47	45	168662	9.86	ppb		97
29) 1,1-DCA	2.34	63	105477	10.18	ppb		99
30) Vinyl Acetate	2.47	45	168662	9.86	ppb		97
32) MEK (2-Butanone)	3.02	43	11252	9.57	ppb		100
33) Cis-1,2-DCE	2.96	61	88545	9.68	ppb		97
34) 2,2-Dichloropropane	2.95	77	59244	7.50	ppb		97
37) Chloroform	3.40	83	114889	10.49	ppb		97
38) Bromochloromethane	3.24	130	46106	10.18	ppb		97
40) 1,1,1-TCA	3.60	97	90216	10.67	ppb		99
41) Cyclohexane	3.67	56	70526	9.55	ppb		97
42) 1,1-Dichloropropene	3.87	75	67679	9.54	ppb		95
43) 2,2,4-Trimethylpentane	4.40	57	122110	7.99	ppb		99
45) Carbon Tetrachloride	3.85	117	78320	10.53	ppb		91
48) 1,2-DCA	4.23	62	81541	10.52	ppb		99
49) Benzene	4.18	78	225507	9.68	ppb		100
50) TCE	5.17	130	70801	10.78	ppb		97
51) 2-Pentanone	5.52	43	397213	139.41	ppb		98
52) 1,2-Dichloropropane	5.45	63	64689	10.95	ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0313157.D Vial: 56
Acq On : 14 Mar 20 12:09 Operator:
Sample : Ending CCV 10ug/L 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:16 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
53)	Bromodichloromethane	5.85	83	88746	10.94 ppb	92
54)	Methyl Cyclohexane	5.40	83	68223	9.06 ppb	96
55)	Dibromomethane	5.59	174	53427	11.02 ppb	96
57)	MIBK (methyl isobutyl ket	6.68	43	46479	11.00 ppb	90
58)	1-Bromo-2-chloroethane	6.19	63	90389	10.84 ppb	99
59)	Cis-1,3-Dichloropropene	6.43	75	86475	9.96 ppb	100
60)	Toluene	6.80	91	253351	10.15 ppb	99
61)	Trans-1,3-Dichloropropene	7.12	75	70988	9.88 ppb	98
62)	1,1,2-TCA	7.31	97	62043	10.56 ppb	98
63)	2-Hexanone	7.66	43	20371	12.77 ppb	94
66)	1,2-EDB	7.80	107	62712	10.68 ppb	99
67)	Tetrachloroethene	7.43	166	71839	9.90 ppb	98
68)	1-Chlorohexane	8.45	91	63809	9.40 ppb	98
69)	1,1,1,2-Tetrachloroethane	8.50	131	70190	10.75 ppb	94
70)	m&p-Xylene	8.69	91	396143	19.69 ppb	99
71)	o-Xylene	9.11	91	204988	9.80 ppb	100
72)	Styrene	9.13	104	159860	9.97 ppb	94
74)	1,3-Dichloropropane	7.48	76	102140	10.98 ppb	99
75)	Dibromochloromethane	7.72	129	73043	11.21 ppb	100
76)	Chlorobenzene	8.38	112	173195	10.23 ppb	96
77)	Ethylbenzene	8.55	91	256729	9.61 ppb	98
78)	Bromoform	9.28	173	54459	11.85 ppb	97
80)	Isopropylbenzene	9.53	105	147136	9.03 ppb	98
81)	1,1,2,2-Tetrachloroethane	9.87	83	79871	10.70 ppb	99
82)	1,2,3-Trichloropropane	9.88	110	27019	11.03 ppb	99
83)	t-1,4-Dichloro-2-Butene	9.93	53	10564	9.00 ppb	96
84)	Bromobenzene	9.79	156	80243	10.04 ppb	94
85)	n-Propylbenzene	9.98	91	295232	9.63 ppb	98
86)	4-Ethyltoluene	10.10	105	151936	9.53 ppb	99
87)	2-Chlorotoluene	10.02	91	114237	10.06 ppb	96
88)	1,3,5-Trimethylbenzene	10.18	105	227178	9.69 ppb	98
89)	4-Chlorotoluene	10.15	91	114844	9.37 ppb	96
90)	Tert-Butylbenzene	10.52	119	186983	9.80 ppb	100
91)	1,2,4-Trimethylbenzene	10.57	105	214622	8.98 ppb	95
92)	Sec-Butylbenzene	10.75	105	266166	9.51 ppb	99
93)	p-Isopropyltoluene	10.92	119	238564	9.75 ppb	97
94)	Benzyl Chloride	11.08	91	30445	5.66 ppb	91
95)	1,3-DCB	10.82	146	144606	9.64 ppb	97
96)	1,4-DCB	10.92	146	149158	10.43 ppb	98
97)	n-Butylbenzene	11.35	91	178843	8.85 ppb	99
98)	1,2-DCB	11.30	146	143530	10.69 ppb	98
99)	Hexachloroethane	11.58	117	49750	10.92 ppb	93
100)	1,2-Dibromo-3-chloropropan	12.14	157	16651	12.90 ppb	96
101)	1,2,4-Trichlorobenzene	13.02	180	84928	9.97 ppb	97
102)	Hexachlorobutadiene	13.24	225	30600	9.86 ppb	96
103)	Naphthalene	13.27	128	141196	9.99 ppb	98
104)	1,2,3-Trichlorobenzene	13.53	182	43376	10.35 ppb	97

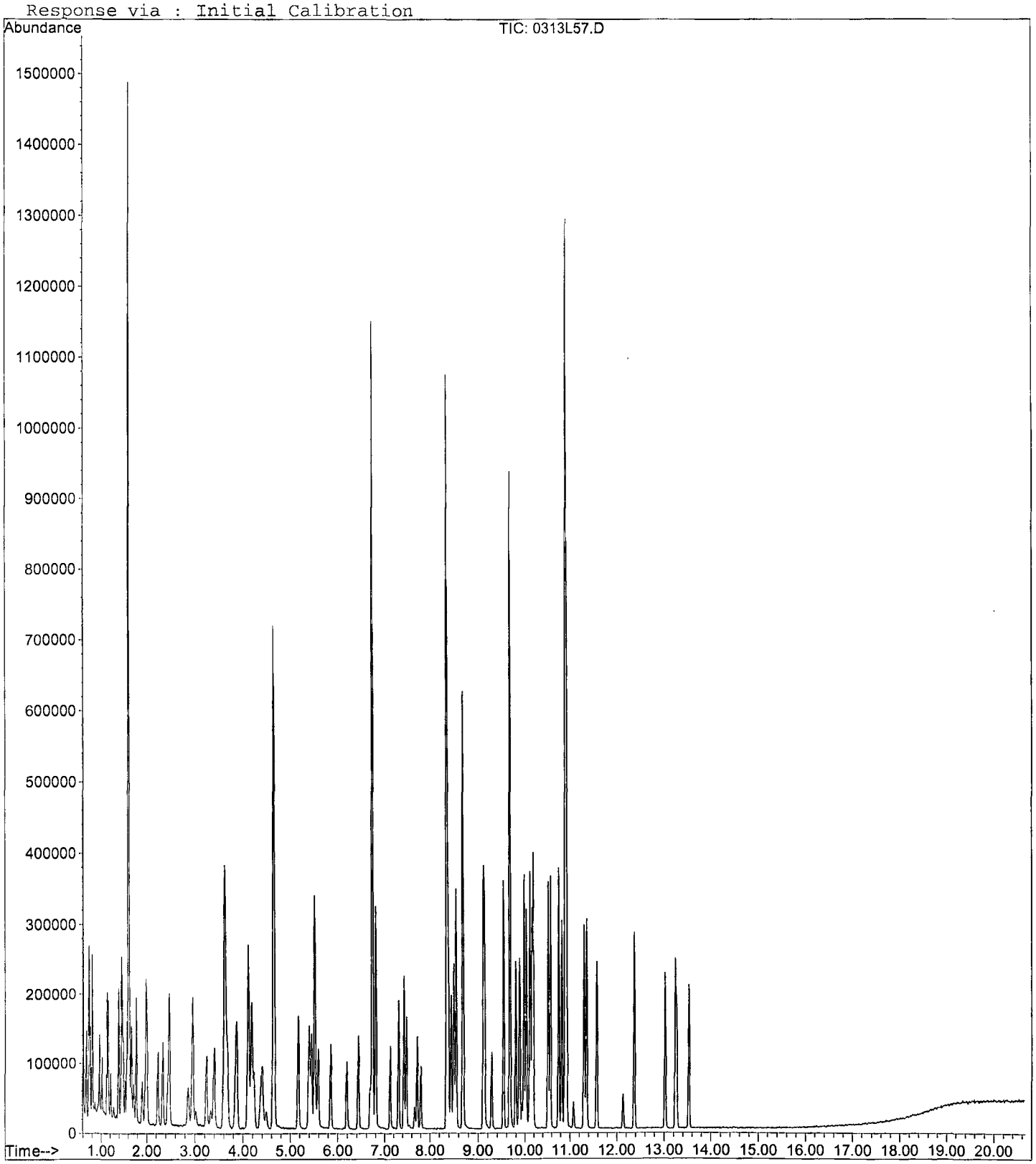
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0313157.D Vial: 56
Acq On : 14 Mar 20 12:09 Operator:
Sample : Ending CCV 10ug/L 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:16 2020 Quant Results File: L0312W.RES

Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



ORGANICS
Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\200312\0313L48.D Vial: 47
Acq On : 14 Mar 20 7:51 Operator:
Sample : BA08369W01 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 19 8:06 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	96	331840	25.000 ppb	0.00
64) Chlorobenzene-D5 (IS)	8.36	117	348288	25.000 ppb	0.00
79) 1,4-Dichlorobenzene-D (IS)	10.90	152	168448	25.000 ppb	0.00
System Monitoring Compounds					
39) Dibromofluoromethane(S)	3.62	111	246705	26.058 ppb	0.00
Spiked Amount 25.000			Recovery =	104.232%	
44) 1,2-DCA-D4(S)	4.11	65	236408	24.777 ppb	0.00
Spiked Amount 25.000			Recovery =	99.108%	
65) Toluene-D8(S)	6.73	98	774460	25.786 ppb	0.00
Spiked Amount 25.000			Recovery =	103.144%	
73) 4-Bromofluorobenzene(S)	9.66	95	270382	23.819 ppb	0.00
Spiked Amount 25.000			Recovery =	95.276%	
Target Compounds					Qvalue
14) Acetone	1.61	43	37413	27.020 ppb	# 49

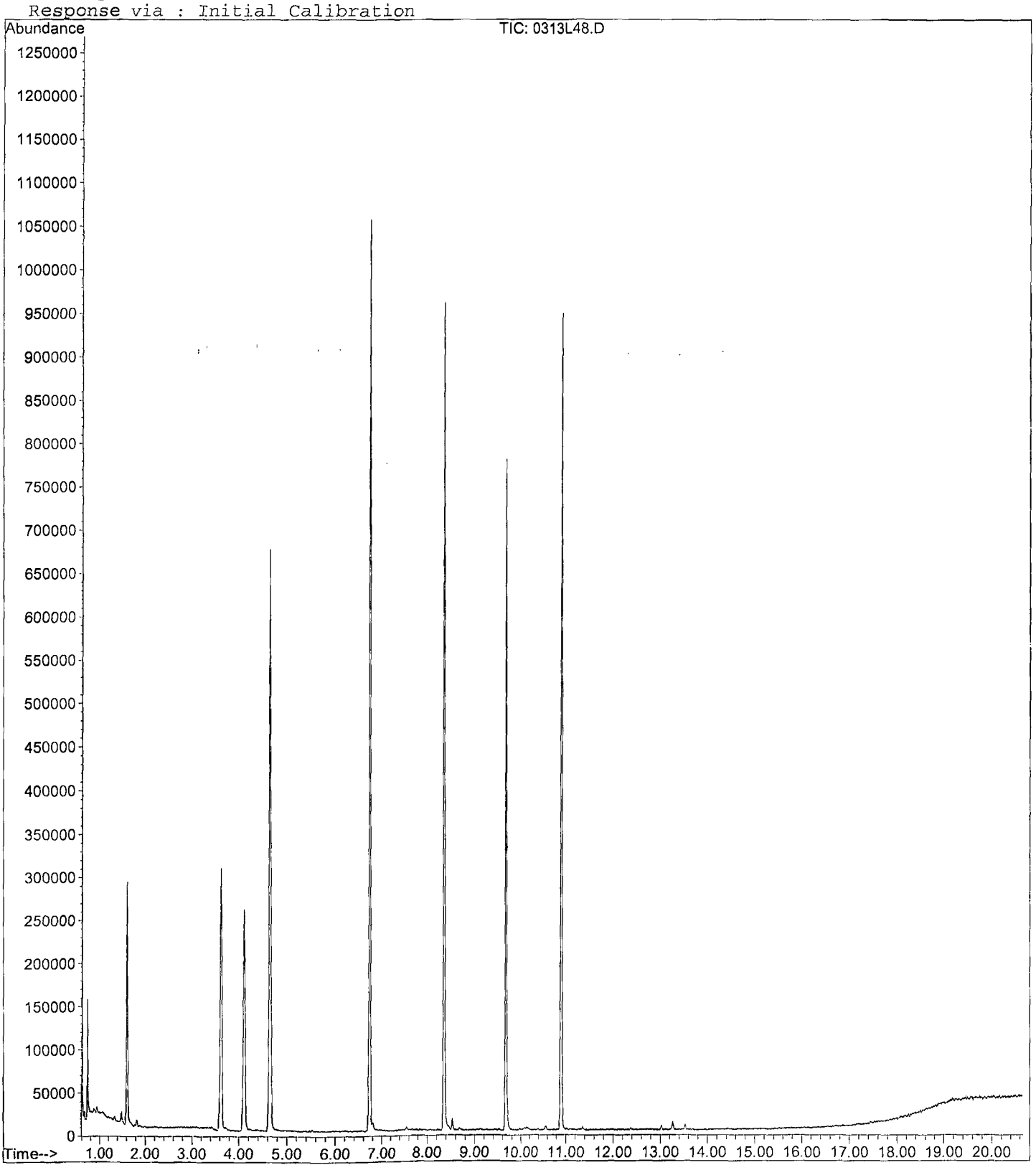
(#) = qualifier out of range (m) = manual integration

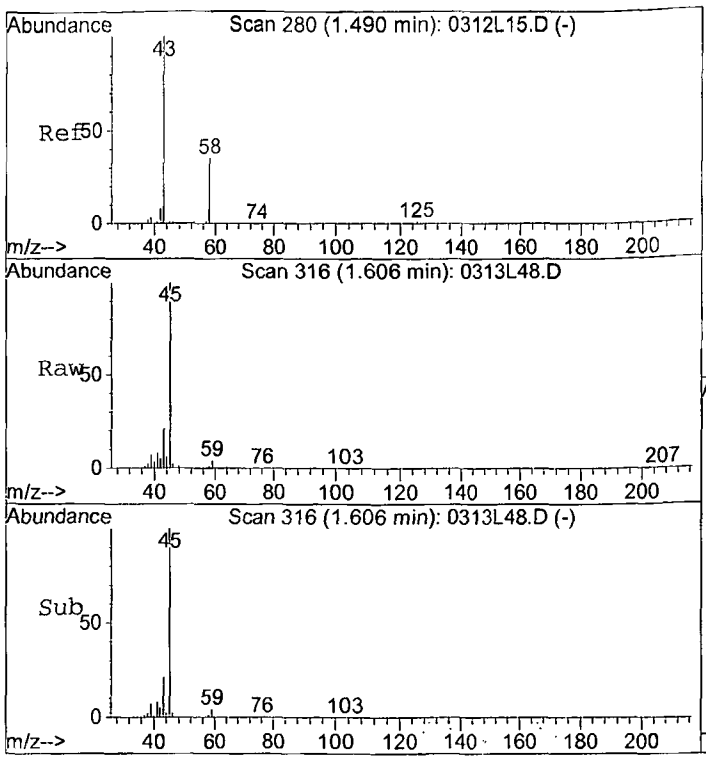
Quantitation Report

Data File : M:\LOKI\DATA\200312\0313L48.D Vial: 47
Acq On : 14 Mar 20 7:51 Operator:
Sample : BA08369W01 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 19 8:06 2020 Quant Results File: L0312W.RES

Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration

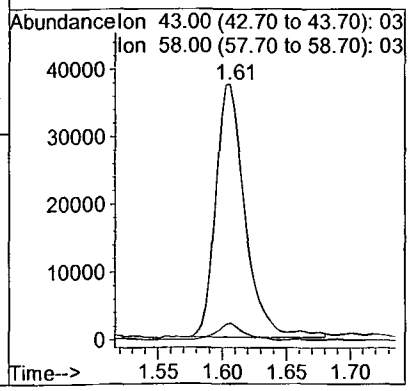




#14
Acetone
Concen: 27.020 ppb
RT: 1.61 min Scan# 316
Delta R.T. 0.12 min
Lab File: 0313L48.D
Acq: 14 Mar 20 7:51

Tgt Ion: 43 Resp: 37413

Ion	Ratio	Lower	Upper
43	100		
58	6.6	29.6	44.4#



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\200312\0313L49.D Vial: 48
Acq On : 14 Mar 20 8:20 Operator:
Sample : BA08370W01 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 12:08 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	4.65	96	349248	25.00	ppb		0.00
64) Chlorobenzene-D5 (IS)	8.36	117	401216	25.00	ppb		0.00
79) 1,4-Dichlorobenzene-D (IS)	10.90	152	247872	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	3.63	111	212112	21.29	ppb		0.01
Spiked Amount 25.000			Recovery =	85.152%			
44) 1,2-DCA-D4(S)	4.12	65	245298	24.43	ppb		0.00
Spiked Amount 25.000			Recovery =	97.712%			
65) Toluene-D8(S)	6.73	98	842963	24.36	ppb		0.00
Spiked Amount 25.000			Recovery =	97.456%			
73) 4-Bromofluorobenzene(S)	9.67	95	320474	24.51	ppb		0.00
Spiked Amount 25.000			Recovery =	98.028%			
Target Compounds							Qvalue
14) Acetone	1.64	43	3316032	2853.10	ppb	#	39

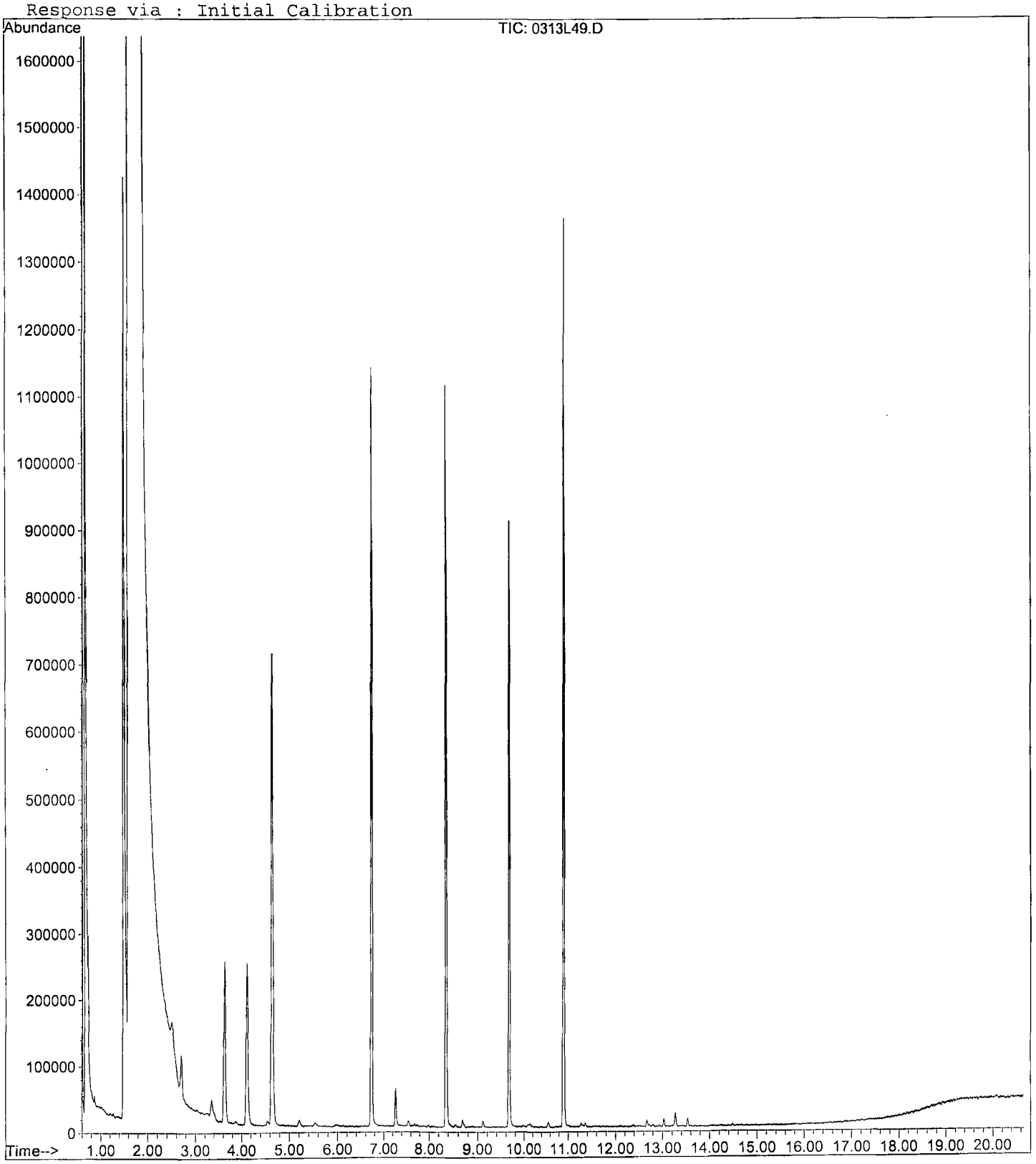
(#) = qualifier out of range (m) = manual integration

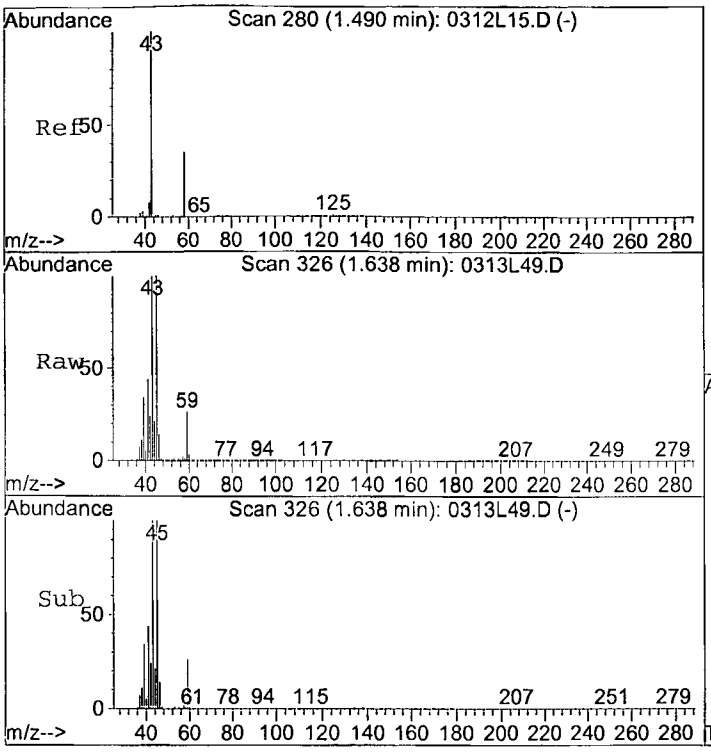
Quantitation Report

Data File : M:\LOKI\DATA\200312\0313L49.D Vial: 48
Acq On : 14 Mar 20 8:20 Operator:
Sample : BA08370W01 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 12:08 2020 Quant Results File: L0312W.RES

Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration

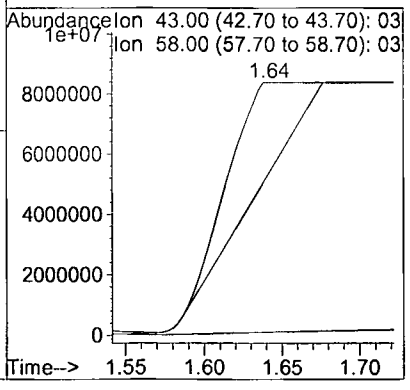




#14
Acetone
Concen: 2853.10 ppb
RT: 1.64 min Scan# 326
Delta R.T. 0.15 min
Lab File: 0313L49.D
Acq: 14 Mar 20 8:20

Tgt Ion: 43 Resp: 3316032

Ion	Ratio	Lower	Upper
43	100		
58	0.9	29.6	44.4#



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\200312\0313L50.D Vial: 49
Acq On : 14 Mar 20 8:48 Operator:
Sample : BA08371W01 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:29 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	4.65	96	357504	25.00	ppb		0.00
64) Chlorobenzene-D5 (IS)	8.36	117	404608	25.00	ppb		0.00
79) 1,4-Dichlorobenzene-D (IS)	10.90	152	185216	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	3.62	111	258477	25.34	ppb		0.00
Spiked Amount 25.000			Recovery = 101.368%				
44) 1,2-DCA-D4(S)	4.11	65	260530	25.35	ppb		0.00
Spiked Amount 25.000			Recovery = 101.380%				
65) Toluene-D8(S)	6.73	98	843740	24.18	ppb		0.00
Spiked Amount 25.000			Recovery = 96.728%				
73) 4-Bromofluorobenzene(S)	9.66	95	296325	22.47	ppb		0.00
Spiked Amount 25.000			Recovery = 89.884%				
Target Compounds							Qvalue
14) Acetone	1.64	43	8376008	7050.45	ppb	#	40

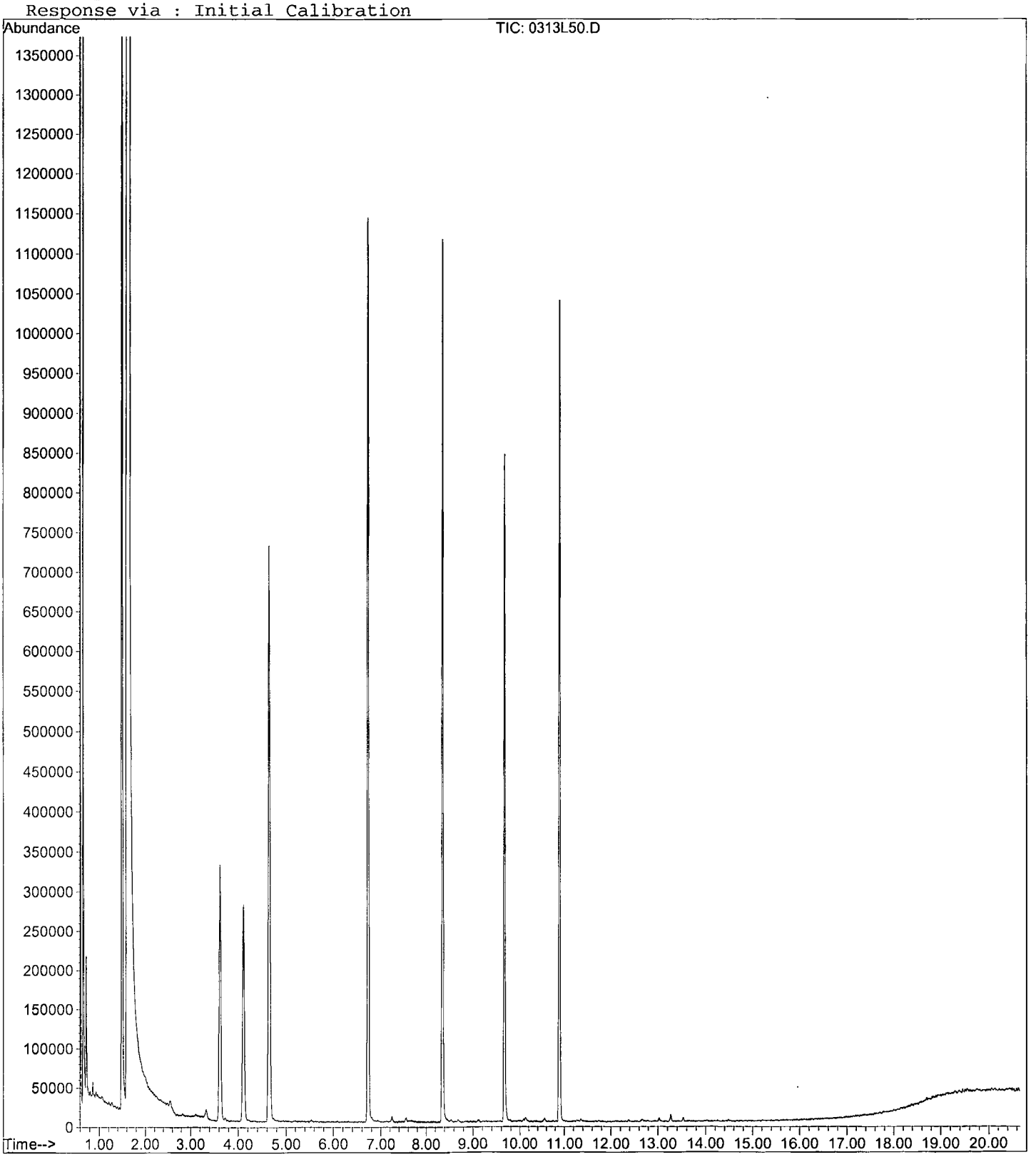
(#) = qualifier out of range (m) = manual integration

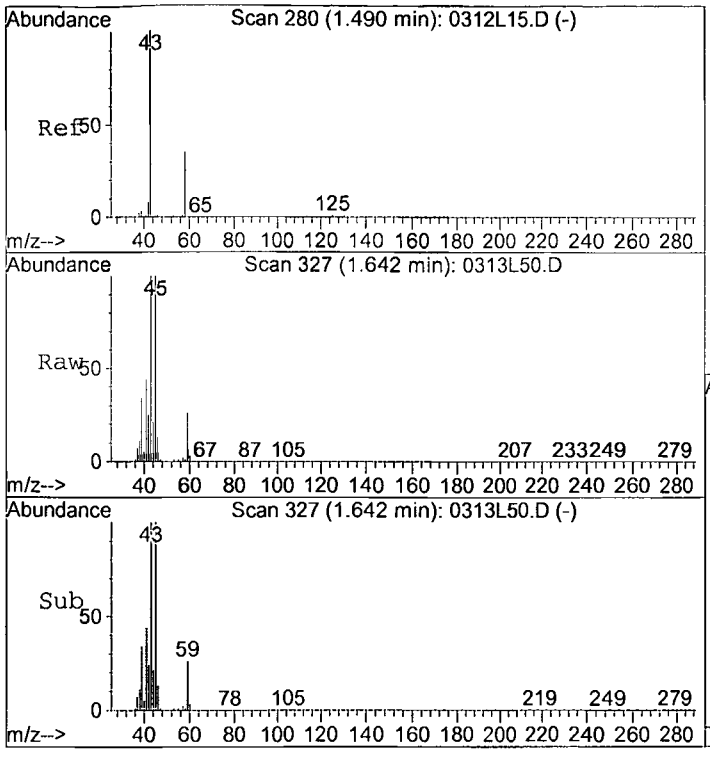
Quantitation Report

Data File : M:\LOKI\DATA\200312\0313L50.D Vial: 49
Acq On : 14 Mar 20 8:48 Operator:
Sample : BA08371W01 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:29 2020 Quant Results File: L0312W.RES

Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration

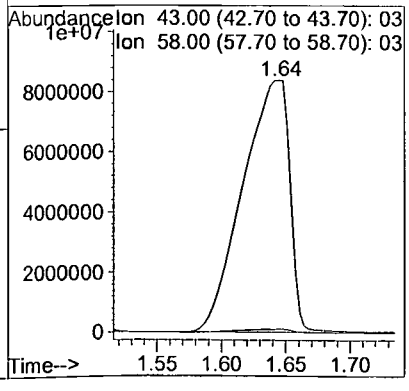




#14
Acetone
Concen: 7050.45 ppb
RT: 1.64 min Scan# 327
Delta R.T. 0.15 min
Lab File: 0313L50.D
Acq: 14 Mar 20 8:48

Tgt Ion: 43 Resp: 8376008

Ion	Ratio	Lower	Upper
43	100		
58	1.4	29.6	44.4#



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\200312\0313145.D Vial: 44
Acq On : 14 Mar 20 6:26 Operator:
Sample : 200313B Blk Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:23 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	96	339840	25.00	ppb	0.00
64) Chlorobenzene-D5 (IS)	8.36	117	360704	25.00	ppb	0.00
79) 1,4-Dichlorobenzene-D (IS)	10.90	152	186688	25.00	ppb	0.00
System Monitoring Compounds						
39) Dibromofluoromethane(S)	3.62	111	240419	24.80	ppb	0.00
Spiked Amount 25.000			Recovery = 99.188%			
44) 1,2-DCA-D4(S)	4.11	65	236652	24.22	ppb	0.00
Spiked Amount 25.000			Recovery = 96.876%			
65) Toluene-D8(S)	6.73	98	787479	25.32	ppb	0.00
Spiked Amount 25.000			Recovery = 101.268%			
73) 4-Bromofluorobenzene(S)	9.66	95	279691	23.79	ppb	0.00
Spiked Amount 25.000			Recovery = 95.164%			

Target Compounds Qvalue

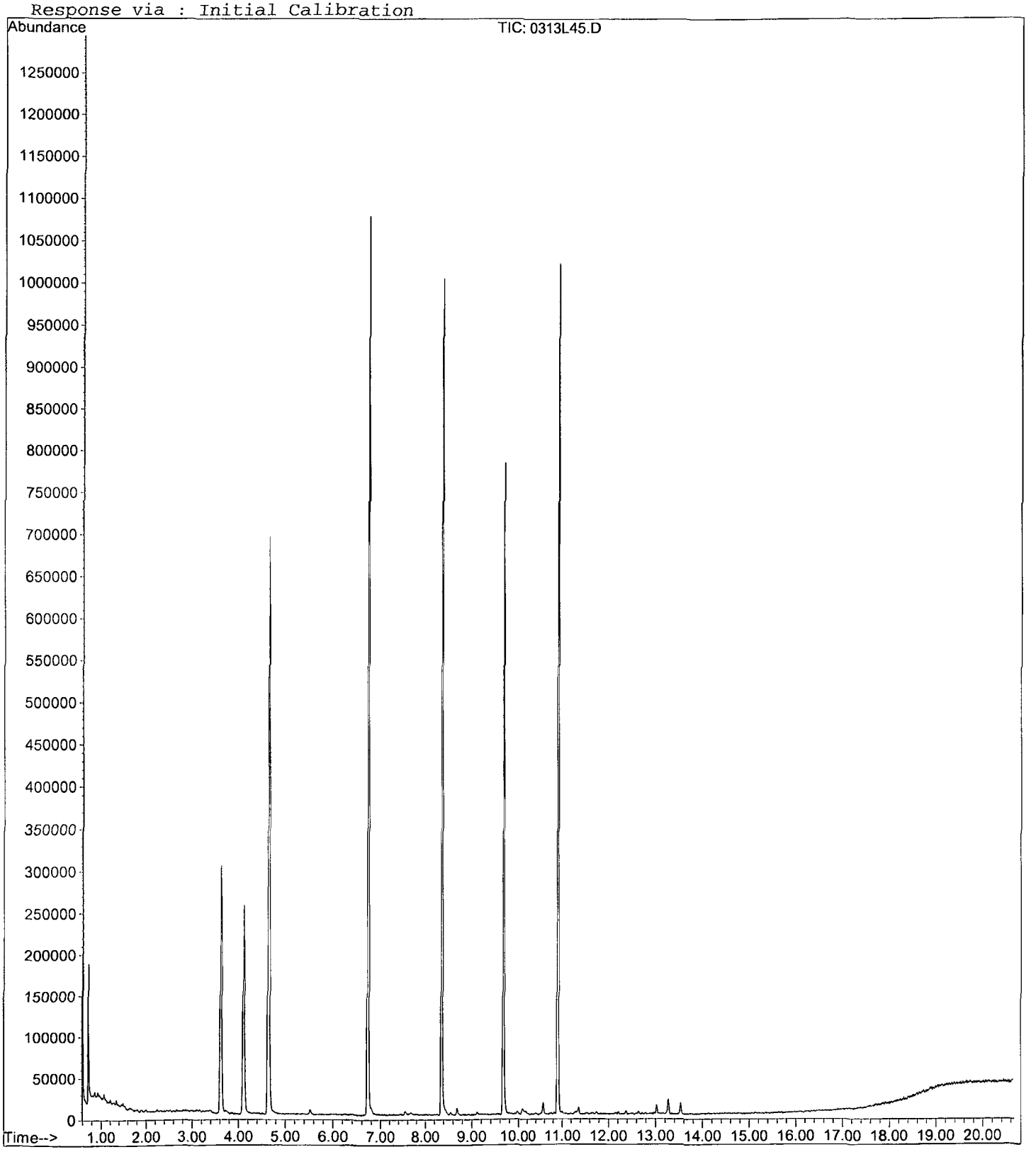
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0313145.D Vial: 44
Acq On : 14 Mar 20 6:26 Operator:
Sample : 200313B Blk Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:23 2020 Quant Results File: L0312W.RES

Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0313140.D Vial: 39
Acq On : 14 Mar 20 4:03 Operator:
Sample : 200313B LCS 10ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 10:38 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	4.64	96	349376	25.00 ppb	0.00
64) Chlorobenzene-D5 (IS)	8.36	117	388608	25.00 ppb	0.00
79) 1,4-Dichlorobenzene-D (IS)	10.90	152	209600	25.00 ppb	0.00
System Monitoring Compounds					
39) Dibromofluoromethane(S)	3.62	111	249963	25.08 ppb	0.00
Spiked Amount 25.000			Recovery =	100.308%	
44) 1,2-DCA-D4(S)	4.11	65	249759	24.86 ppb	0.00
Spiked Amount 25.000			Recovery =	99.452%	
65) Toluene-D8(S)	6.73	98	836433	24.96 ppb	0.00
Spiked Amount 25.000			Recovery =	99.840%	
73) 4-Bromofluorobenzene(S)	9.66	95	317962	25.10 ppb	0.00
Spiked Amount 25.000			Recovery =	100.416%	
Target Compounds					Qvalue
3) Dichlorodifluoromethane	0.67	85	50221	9.77 ppb	98
4) Freon 114	0.73	85	49320	9.43 ppb	99
5) Chloromethane	0.76	50	66708	9.79 ppb	94
6) Vinyl chloride	0.81	62	71568	9.71 ppb	98
8) Bromomethane	0.96	94	33616	12.75 ppb	93
9) Chloroethane	1.02	66	12530	9.91 ppb	88
10) Dichlorofluoromethane	1.13	67	94152	10.30 ppb	99
11) Trichlorofluoromethane	1.16	101	87035	10.52 ppb	95
13) Acrolein	1.39	56	56711	104.39 ppb	87
14) Acetone	1.49	43	14344	5.43 ppb	95
15) Freon-113	1.46	101	48094	9.97 ppb	97
16) 1,1-DCE	1.45	61	73440	10.19 ppb	97
17) t-Butanol	1.91	59	49555	109.09 ppb	99
19) Acetonitrile	1.66	41	104340	125.74 ppb	94
20) Methyl Acetate	1.72	43	40272	9.72 ppb	96
21) Iodomethane	1.53	142	35481	5.77 ppb	97
22) Acrylonitrile	1.96	53	25245	10.54 ppb	95
23) Methylene chloride	1.77	84	63102	10.22 ppb	97
24) Carbon disulfide	1.57	76	128319	9.66 ppb	97
25) Methyl t-butyl ether (MtBE	2.00	73	105941	8.86 ppb	98
26) Trans-1,2-DCE	1.98	61	73052	10.28 ppb	98
27) Diisopropyl Ether	2.47	45	165665	9.86 ppb	98
29) 1,1-DCA	2.34	63	105557	10.37 ppb	99
30) Vinyl Acetate	2.47	45	165665	9.86 ppb	98
32) MEK (2-Butanone)	3.02	43	9848	8.53 ppb	87
33) Cis-1,2-DCE	2.96	61	88044	9.80 ppb	98
34) 2,2-Dichloropropane	2.94	77	66526	8.58 ppb	99
37) Chloroform	3.40	83	115052	10.69 ppb	96
38) Bromochloromethane	3.25	130	47750	10.73 ppb	93
40) 1,1,1-TCA	3.60	97	90093	10.85 ppb	97
41) Cyclohexane	3.67	56	67558	9.31 ppb	97
42) 1,1-Dichloropropene	3.87	75	67187	9.64 ppb	98
43) 2,2,4-Trimethylpentane	4.40	57	124288	8.28 ppb	98
45) Carbon Tetrachloride	3.85	117	75853	10.38 ppb	90
48) 1,2-DCA	4.23	62	80945	10.64 ppb	100
49) Benzene	4.18	78	224951	9.83 ppb	100
50) TCE	5.17	130	70627	10.95 ppb	98
51) 2-Pentanone	5.52	43	323692	115.67 ppb	98
52) 1,2-Dichloropropane	5.45	63	62789	10.82 ppb	93

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0313140.D Vial: 39
Acq On : 14 Mar 20 4:03 Operator:
Sample : 200313B LCS 10ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 10:38 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
53)	Bromodichloromethane	5.85	83	85518	10.74	ppb	99
54)	Methyl Cyclohexane	5.40	83	66437	8.98	ppb	99
55)	Dibromomethane	5.59	174	49998	10.50	ppb	96
57)	MIBK (methyl isobutyl ket	6.68	43	40391	9.72	ppb	90
58)	1-Bromo-2-chloroethane	6.19	63	88701	10.83	ppb	100
59)	Cis-1,3-Dichloropropene	6.43	75	84411	9.90	ppb	98
60)	Toluene	6.80	91	247559	10.10	ppb	100
61)	Trans-1,3-Dichloropropene	7.12	75	70384	9.98	ppb	99
62)	1,1,2-TCA	7.31	97	61702	10.70	ppb	98
63)	2-Hexanone	7.67	43	15376	10.05	ppb	98
66)	1,2-EDB	7.80	107	60651	10.29	ppb	100
67)	Tetrachloroethene	7.43	166	73706	10.11	ppb	97
68)	1-Chlorohexane	8.45	91	62004	9.10	ppb	98
69)	1,1,1,2-Tetrachloroethane	8.50	131	68631	10.47	ppb	98
70)	m&p-Xylene	8.69	91	386244	19.12	ppb	98
71)	o-Xylene	9.11	91	198273	9.44	ppb	98
72)	Styrene	9.13	104	152774	9.49	ppb	99
74)	1,3-Dichloropropane	7.48	76	97499	10.43	ppb	97
75)	Dibromochloromethane	7.72	129	69798	10.67	ppb	98
76)	Chlorobenzene	8.39	112	169104	9.95	ppb	98
77)	Ethylbenzene	8.55	91	255595	9.53	ppb	99
78)	Bromoform	9.28	173	50332	10.91	ppb	91
80)	Isopropylbenzene	9.53	105	143488	9.37	ppb	98
81)	1,1,2,2-Tetrachloroethane	9.87	83	75339	10.73	ppb	97
82)	1,2,3-Trichloropropane	9.88	110	23642	10.26	ppb	100
83)	t-1,4-Dichloro-2-Butene	9.93	53	9302	8.42	ppb	93
84)	Bromobenzene	9.79	156	77462	10.31	ppb	94
85)	n-Propylbenzene	9.98	91	285587	9.89	ppb	99
86)	4-Ethyltoluene	10.11	105	143744	9.58	ppb	99
87)	2-Chlorotoluene	10.02	91	108788	10.18	ppb	95
88)	1,3,5-Trimethylbenzene	10.18	105	223537	10.14	ppb	98
89)	4-Chlorotoluene	10.15	91	118226	10.26	ppb	99
90)	Tert-Butylbenzene	10.52	119	179234	9.99	ppb	98
91)	1,2,4-Trimethylbenzene	10.57	105	207802	9.24	ppb	97
92)	Sec-Butylbenzene	10.75	105	257536	9.78	ppb	99
93)	p-Isopropyltoluene	10.92	119	228843	9.94	ppb	98
94)	Benzyl Chloride	11.08	91	34091	6.74	ppb	94
95)	1,3-DCB	10.82	146	136838	9.70	ppb	97
96)	1,4-DCB	10.92	146	139628	10.38	ppb	96
97)	n-Butylbenzene	11.36	91	167022	8.79	ppb	99
98)	1,2-DCB	11.31	146	133692	10.59	ppb	98
99)	Hexachloroethane	11.57	117	49307	11.51	ppb	98
100)	1,2-Dibromo-3-chloropropan	12.14	157	13886	11.44	ppb	88
101)	1,2,4-Trichlorobenzene	13.03	180	69956	8.79	ppb	98
102)	Hexachlorobutadiene	13.25	225	29976	10.27	ppb	96
103)	Naphthalene	13.27	128	100120	7.70	ppb	98
104)	1,2,3-Trichlorobenzene	13.53	182	35984	9.15	ppb	99

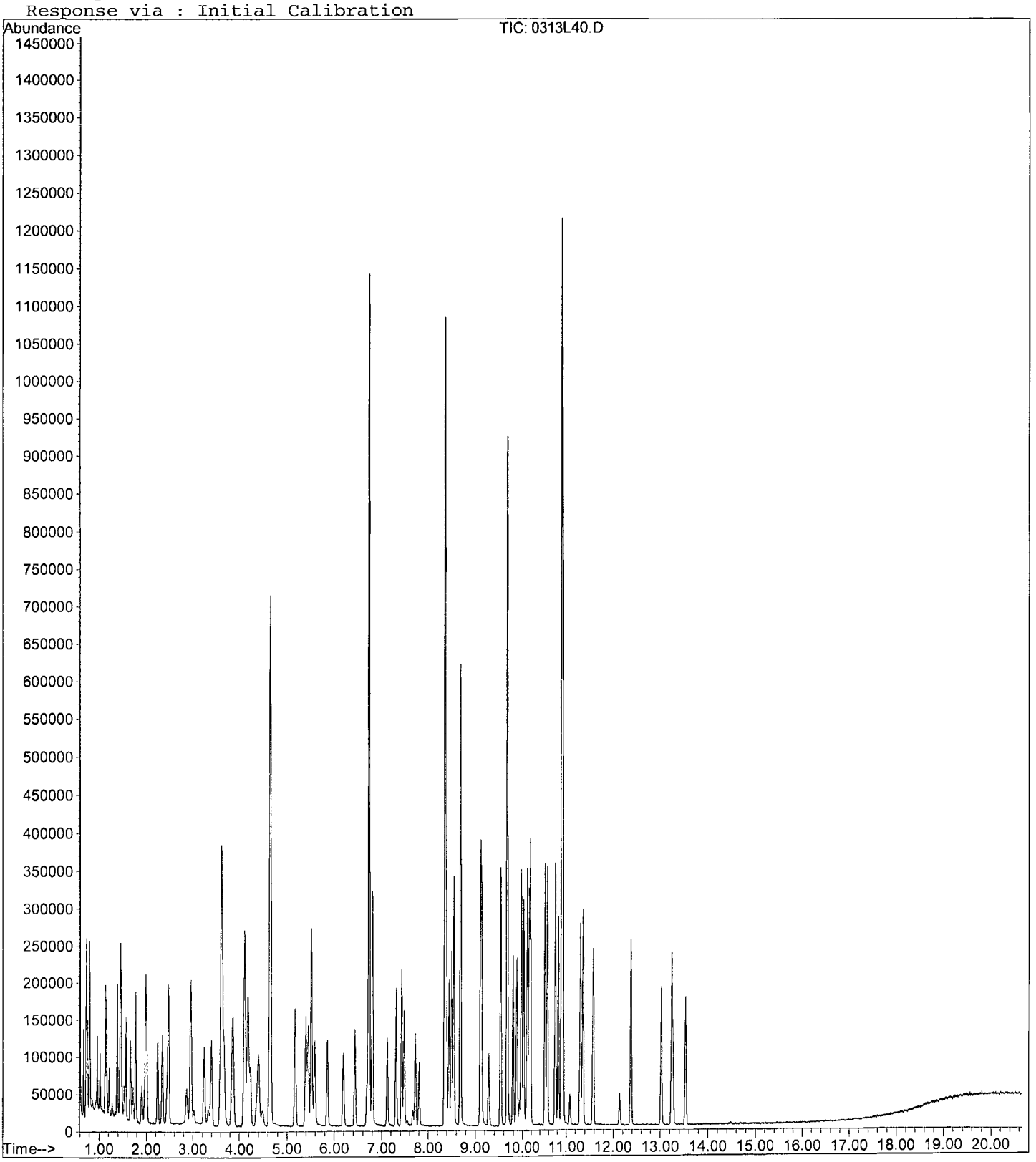
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0313140.D Vial: 39
Acq On : 14 Mar 20 4:03 Operator:
Sample : 200313B LCS 10ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 10:38 2020 Quant Results File: L0312W.RES

Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0313L41.D Vial: 40
Acq On : 14 Mar 20 4:31 Operator:
Sample : 200313B LCSD 10ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 10:39 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Fluorobenzene (IS)	4.65	96	357120	25.00	ppb		0.00
64) Chlorobenzene-D5 (IS)	8.35	117	389376	25.00	ppb		0.00
79) 1,4-Dichlorobenzene-D (IS)	10.90	152	215872	25.00	ppb		0.00
System Monitoring Compounds							
39) Dibromofluoromethane(S)	3.62	111	259149	25.44	ppb		0.00
Spiked Amount 25.000			Recovery = 101.740%				
44) 1,2-DCA-D4(S)	4.11	65	252816	24.62	ppb		0.00
Spiked Amount 25.000			Recovery = 98.484%				
65) Toluene-D8(S)	6.73	98	855846	25.49	ppb		0.00
Spiked Amount 25.000			Recovery = 101.956%				
73) 4-Bromofluorobenzene(S)	9.66	95	323558	25.50	ppb		0.00
Spiked Amount 25.000			Recovery = 101.980%				
Target Compounds							Qvalue
3) Dichlorodifluoromethane	0.67	85	44721	8.51	ppb		100
4) Freon 114	0.73	85	44034	8.23	ppb		95
5) Chloromethane	0.76	50	63806	9.15	ppb		99
6) Vinyl chloride	0.81	62	66352	8.81	ppb		97
8) Bromomethane	0.97	94	32809	12.17	ppb		96
9) Chloroethane	1.02	66	12333	9.54	ppb		85
10) Dichlorofluoromethane	1.13	67	93464	10.00	ppb		96
11) Trichlorofluoromethane	1.16	101	78122	9.23	ppb		99
13) Acrolein	1.39	56	45481	81.90	ppb	#	67
14) Acetone	1.49	43	15515	6.15	ppb		97
15) Freon-113	1.46	101	44870	9.10	ppb		94
16) 1,1-DCE	1.45	61	68708	9.32	ppb		97
17) t-Butanol	1.91	59	47293	101.86	ppb		97
19) Acetonitrile	1.66	41	95599	112.71	ppb		90
20) Methyl Acetate	1.72	43	38667	9.12	ppb		98
21) Iodomethane	1.53	142	37335	5.91	ppb		95
22) Acrylonitrile	1.96	53	23776	9.67	ppb		85
23) Methylene chloride	1.77	84	60748	9.58	ppb		93
24) Carbon disulfide	1.57	76	123556	9.10	ppb		97
25) Methyl t-butyl ether (MtBE	2.00	73	104624	8.56	ppb		98
26) Trans-1,2-DCE	1.99	61	70984	9.77	ppb		99
27) Diisopropyl Ether	2.47	45	161674	9.41	ppb		97
29) 1,1-DCA	2.34	63	102391	9.84	ppb		99
30) Vinyl Acetate	2.47	45	161674	9.41	ppb		97
32) MEK (2-Butanone)	3.02	43	9945	8.43	ppb		96
33) Cis-1,2-DCE	2.96	61	85133	9.27	ppb		98
34) 2,2-Dichloropropane	2.94	77	60427	7.62	ppb		96
37) Chloroform	3.40	83	106504	9.68	ppb		96
38) Bromochloromethane	3.24	130	44747	9.84	ppb		94
40) 1,1,1-TCA	3.60	97	84582	9.97	ppb		93
41) Cyclohexane	3.67	56	62112	8.38	ppb		95
42) 1,1-Dichloropropene	3.87	75	64913	9.11	ppb		99
43) 2,2,4-Trimethylpentane	4.40	57	114352	7.45	ppb		98
45) Carbon Tetrachloride	3.85	117	73941	9.90	ppb		91
48) 1,2-DCA	4.23	62	78041	10.03	ppb		98
49) Benzene	4.18	78	217870	9.31	ppb		98
50) TCE	5.17	130	67725	10.27	ppb		95
51) 2-Pentanone	5.52	43	343757	120.18	ppb		97
52) 1,2-Dichloropropane	5.45	63	60267	10.16	ppb		100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0313L41.D Vial: 40
Acq On : 14 Mar 20 4:31 Operator:
Sample : 200313B LCSD 10ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 10:39 2020 Quant Results File: L0312W.RES

Quant Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
53)	Bromodichloromethane	5.85	83	85460	10.50	ppb	97
54)	Methyl Cyclohexane	5.40	83	62533	8.27	ppb	99
55)	Dibromomethane	5.59	174	49185	10.10	ppb	96
57)	MIBK (methyl isobutyl ket	6.68	43	42974	10.12	ppb	96
58)	1-Bromo-2-chloroethane	6.19	63	84115	10.05	ppb	98
59)	Cis-1,3-Dichloropropene	6.43	75	83418	9.57	ppb	100
60)	Toluene	6.80	91	239401	9.56	ppb	98
61)	Trans-1,3-Dichloropropene	7.12	75	66699	9.25	ppb	94
62)	1,1,2-TCA	7.31	97	61938	10.51	ppb	96
63)	2-Hexanone	7.66	43	18095	11.42	ppb	88
66)	1,2-EDB	7.81	107	59909	10.14	ppb	96
67)	Tetrachloroethene	7.43	166	68025	9.31	ppb	97
68)	1-Chlorohexane	8.45	91	59436	8.70	ppb	99
69)	1,1,1,2-Tetrachloroethane	8.50	131	67487	10.27	ppb	95
70)	m&p-Xylene	8.69	91	372275	18.39	ppb	99
71)	o-Xylene	9.11	91	192572	9.15	ppb	97
72)	Styrene	9.13	104	151761	9.41	ppb	96
74)	1,3-Dichloropropane	7.48	76	93427	9.98	ppb	99
75)	Dibromochloromethane	7.72	129	70249	10.71	ppb	97
76)	Chlorobenzene	8.39	112	162093	9.52	ppb	97
77)	Ethylbenzene	8.55	91	245985	9.15	ppb	97
78)	Bromoform	9.28	173	50360	10.89	ppb	92
80)	Isopropylbenzene	9.53	105	136896	8.68	ppb	99
81)	1,1,2,2-Tetrachloroethane	9.87	83	71215	9.85	ppb	93
82)	1,2,3-Trichloropropane	9.88	110	24017	10.12	ppb	100
83)	t-1,4-Dichloro-2-Butene	9.93	53	9303	8.18	ppb	94
84)	Bromobenzene	9.79	156	73789	9.53	ppb	94
85)	n-Propylbenzene	9.98	91	277256	9.35	ppb	99
86)	4-Ethyltoluene	10.10	105	141568	9.18	ppb	99
87)	2-Chlorotoluene	10.02	91	108777	9.89	ppb	100
88)	1,3,5-Trimethylbenzene	10.18	105	213577	9.40	ppb	99
89)	4-Chlorotoluene	10.15	91	108929	9.18	ppb	98
90)	Tert-Butylbenzene	10.52	119	171174	9.28	ppb	99
91)	1,2,4-Trimethylbenzene	10.57	105	204008	8.81	ppb	97
92)	Sec-Butylbenzene	10.75	105	249328	9.21	ppb	100
93)	p-Isopropyltoluene	10.92	119	220225	9.31	ppb	100
94)	Benzyl Chloride	11.08	91	30059	5.77	ppb	98
95)	1,3-DCB	10.82	146	136426	9.39	ppb	98
96)	1,4-DCB	10.92	146	143079	10.33	ppb	99
97)	n-Butylbenzene	11.36	91	165033	8.44	ppb	98
98)	1,2-DCB	11.31	146	132603	10.20	ppb	97
99)	Hexachloroethane	11.57	117	45775	10.37	ppb	96
100)	1,2-Dibromo-3-chloropropan	12.14	157	14929	11.94	ppb	96
101)	1,2,4-Trichlorobenzene	13.02	180	75804	9.22	ppb	95
102)	Hexachlorobutadiene	13.24	225	29568	9.84	ppb	90
103)	Naphthalene	13.27	128	117964	8.71	ppb	100
104)	1,2,3-Trichlorobenzene	13.53	182	39256	9.68	ppb	98

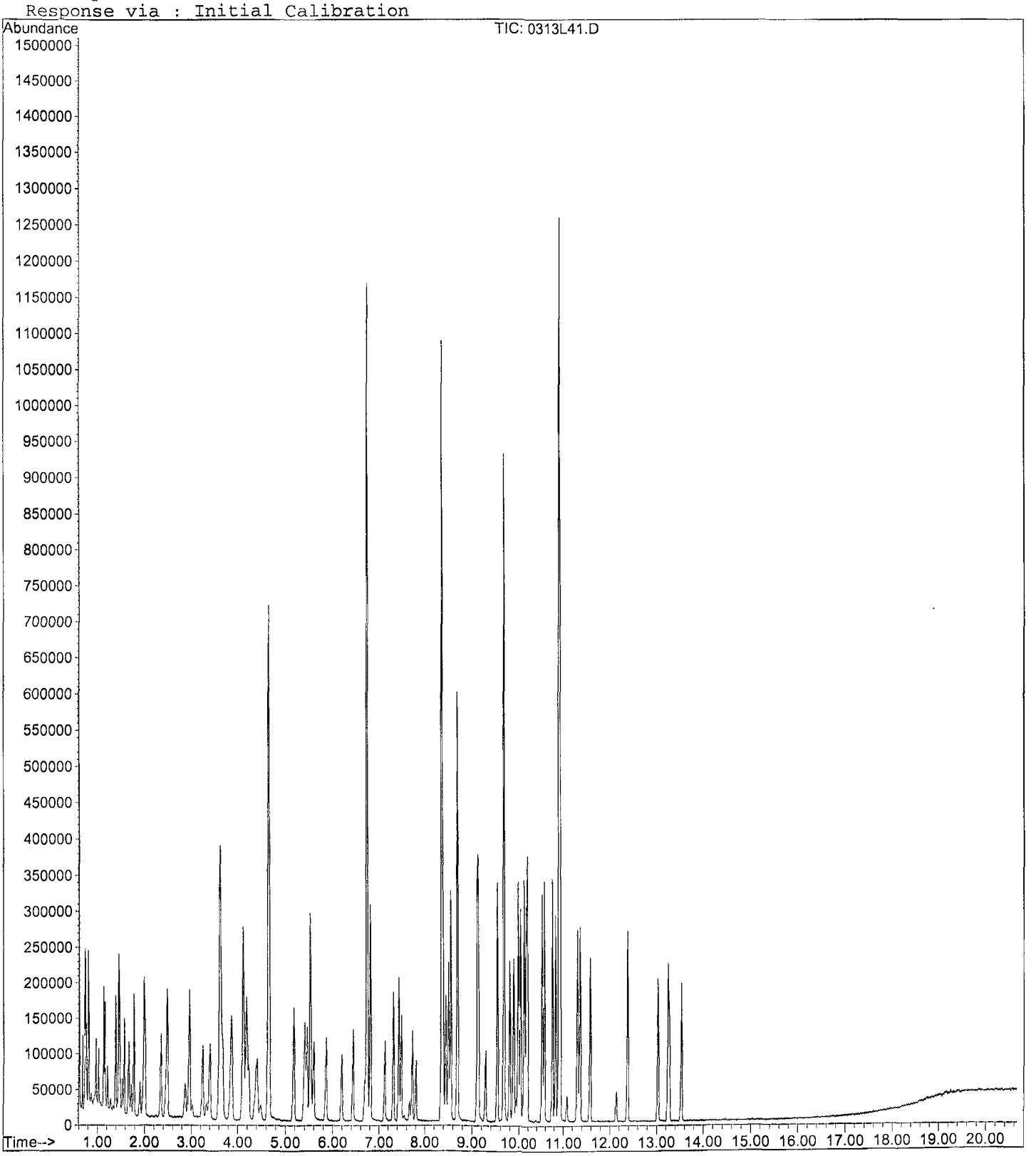
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0313L41.D Vial: 40
Acq On : 14 Mar 20 4:31 Operator:
Sample : 200313B LCSD 10ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

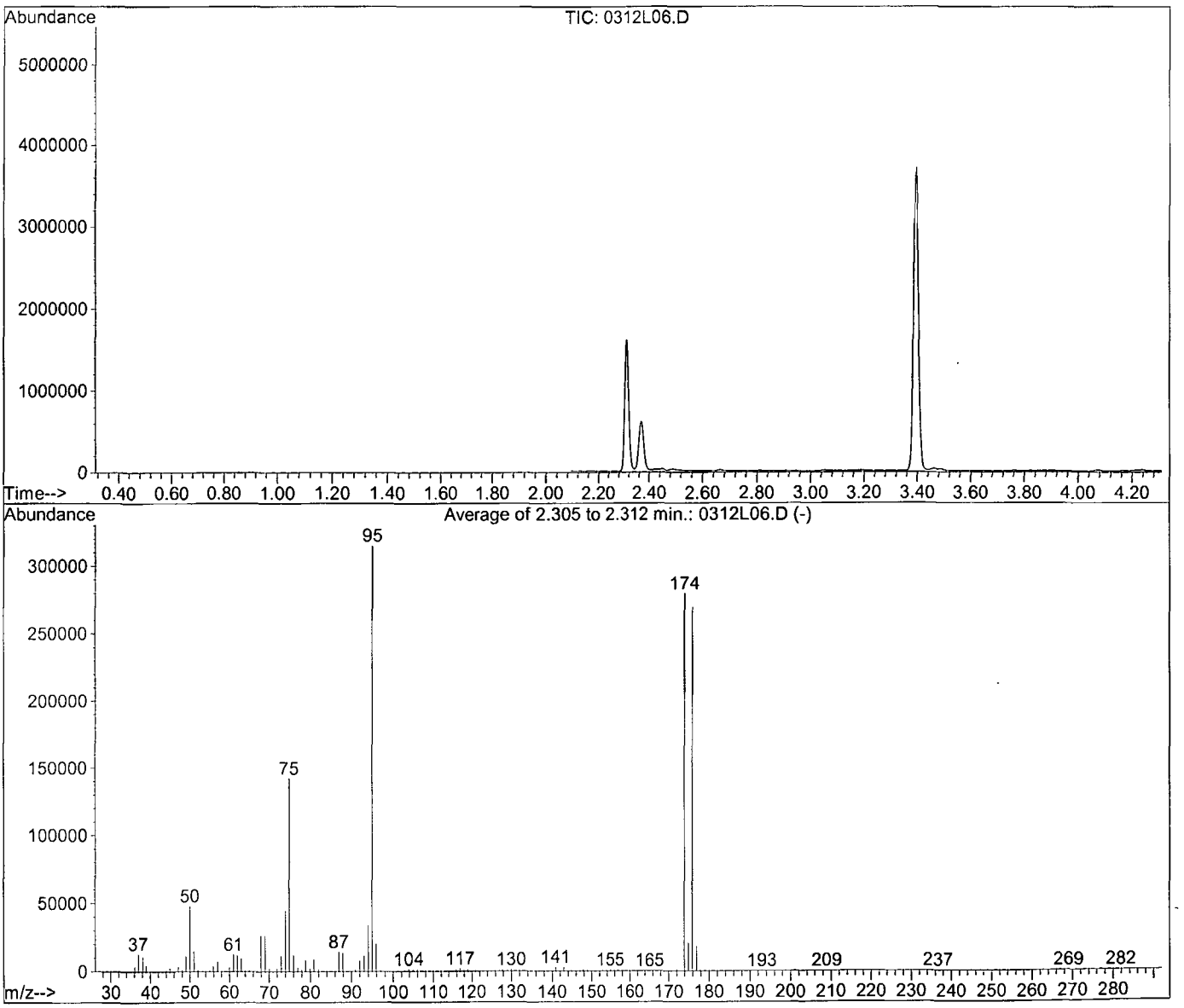
Quant Time: Mar 16 10:39 2020 Quant Results File: L0312W.RES

Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration



Data File : M:\LOKI\DATA\200312\0312l06.D Vial: 1
Acq On : 12 Mar 20 10:21 Operator:
Sample : 25ug/L BFB STD 2/13/20 Inst : Loki
Misc : 2uL Multiplr: 1.00

Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B



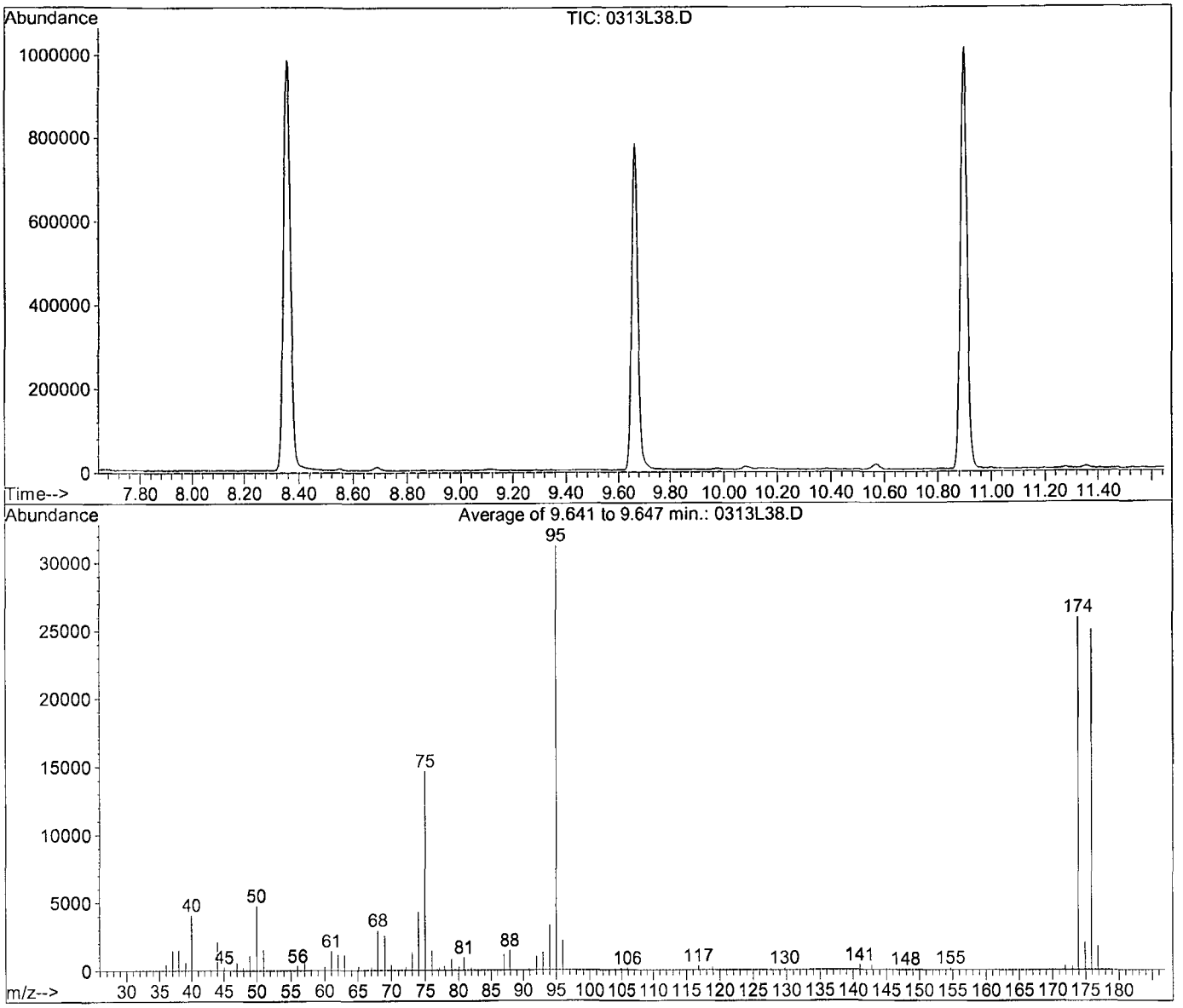
Spectrum Information: Average of 2.305 to 2.312 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.2	47768	PASS
75	95	30	60	45.2	142310	PASS
95	95	100	100	100.0	314965	PASS
96	95	5	9	6.4	20237	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	200	88.7	279339	PASS
175	174	5	9	7.2	20133	PASS
176	174	95	101	96.4	269419	PASS
177	176	5	9	6.6	17898	PASS

0312106.D L0312W.M Tue Mar 17 11:54:55 2020

Data File : M:\LOKI\DATA\200312\0313138.D Vial: 37
Acq On : 14 Mar 20 3:06 Operator:
Sample : 25ug/L BFB STD 2/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Method : M:\LOKI\DATA\200312\L0312W.M (RTE Integrator)
Title : METHOD 8260B



Spectrum Information: Average of 9.641 to 9.647 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.2	4746	PASS
75	95	30	60	46.8	14644	PASS
95	95	100	100	100.0	31272	PASS
96	95	5	9	6.9	2157	PASS
173	174	0.00	2	0.8	215	PASS
174	95	50	200	82.8	25894	PASS
175	174	5	9	7.7	1992	PASS
176	174	95	101	96.5	24977	PASS
177	176	5	9	6.9	1727	PASS

0313138.D L0312W.M Tue Mar 17 11:55:05 2020

Loki 8260 Standard Prep

Loki 8260 Water Calibration Curve

0.3ug/L

Prepared: 03/12/20

Expires: 04/11/20

Prepared By (Initials): CH

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	O2SI	0.3ug/L	5	Prepared 03/05/20	05/04/20	N/A	3uL	50mL	P&T Water	0.3
VOA STD. 12	O2SI		5	Prepared 03/05/20	05/04/20	N/A	3uL			0.3
VOA STD. 15	O2SI		5	Prepared 03/02/20	05/01/20	N/A	3uL			0.3
VOA STD. TBA	Various		5	Prepared 12/12/19	04/01/20	N/A	2uL			10

0.5ug/L

Prepared: 03/12/20

Expires: 04/11/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	O2SI	0.5ug/L	5	Prepared 03/05/20	05/04/20	N/A	5uL	50mL	P&T Water	0.5
VOA STD. 12	O2SI		5	Prepared 03/05/20	05/04/20	N/A	5uL			0.5
VOA STD. 15	O2SI		5	Prepared 03/02/20	05/01/20	N/A	5uL			0.5
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	5uL			25

1.0ug/L

Prepared: 03/12/20

Expires: 04/11/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	O2SI	1.0ug/L	5	Prepared 03/05/20	05/04/20	N/A	10uL	50mL	P&T Water	1
VOA STD. 12	O2SI		5	Prepared 03/05/20	05/04/20	N/A	10uL			1
VOA STD. 15	O2SI		5	Prepared 03/02/20	05/01/20	N/A	10uL			1
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	10uL			50

2.0ug/L

Prepared: 03/12/20

Expires: 04/11/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	O2SI	2.0ug/L	5	Prepared 03/05/20	05/04/20	N/A	20uL	50mL	P&T Water	2
VOA STD. 12	O2SI		5	Prepared 03/05/20	05/04/20	N/A	20uL			2
VOA STD. 15	O2SI		5	Prepared 03/02/20	05/01/20	N/A	20uL			2
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	15uL			75

5ug/L

Prepared: 03/12/20

Expires: 04/11/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	5ug/L	50	Prepared 03/05/20	05/04/20	N/A	5uL	50mL	P&T Water	5
VOA STD. 8	Phenova		50	Prepared 03/05/20	04/01/20	N/A	5uL			5
VOA STD. 2	O2SI		50	Prepared 03/05/20	05/04/20	N/A	5uL			5
VOA STD. 5	O2SI		50	Prepared 03/02/20	05/01/20	N/A	5uL			5
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	20uL			100

10ug/L

Prepared: 03/12/20

Expires: 04/11/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	10ug/L	50	Prepared 03/05/20	05/04/20	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova		50	Prepared 03/05/20	04/01/20	N/A	10uL			10
VOA STD. 2	O2SI		50	Prepared 03/05/20	05/04/20	N/A	10uL			10
VOA STD. 5	O2SI		50	Prepared 03/02/20	05/01/20	N/A	10uL			10
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	25uL			125

20ug/L

Prepared: 03/12/20

Expires: 04/11/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	20ug/L	50	Prepared 03/05/20	05/04/20	N/A	20uL	50mL	P&T Water	20
VOA STD. 8	Phenova		50	Prepared 03/05/20	04/01/20	N/A	20uL			20
VOA STD. 2	O2SI		50	Prepared 03/05/20	05/04/20	N/A	20uL			20
VOA STD. 5	O2SI		50	Prepared 03/02/20	05/01/20	N/A	20uL			20
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	30uL			150

40ug/L

Prepared: 03/12/20

Expires: 04/11/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	40ug/L	50	Prepared 03/05/20	05/04/20	N/A	40uL	50mL	P&T Water.	40
VOA STD. 8	Phenova		50	Prepared 03/05/20	04/01/20	N/A	40uL			40
VOA STD. 2	O2SI		50	Prepared 03/05/20	05/04/20	N/A	40uL			40
VOA STD. 5	O2SI		50	Prepared 03/02/20	05/01/20	N/A	40uL			40
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	35uL			175

100ug/L

Prepared: 03/12/20

Expires: 04/11/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	100ug/L	50	Prepared 03/05/20	05/04/20	N/A	100uL	50mL	P&T Water	100
VOA STD. 8	Phenova		50	Prepared 03/05/20	04/01/20	N/A	100uL			100
VOA STD. 2	O2SI		50	Prepared 03/05/20	05/04/20	N/A	100uL			100
VOA STD. 5	O2SI		50	Prepared 03/02/20	05/01/20	N/A	100uL			100
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	40uL			200

Loki 8260 Water Second Source (SS)

Prepared: 03/12/20

Prepared By (Initials): CH

Expires: 04/11/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 3	Phenova	8260 Water SS	50	Prepared 03/05/20	05/04/20	N/A	10uL	50mL	P&T Water	10
VOA STD. Gases	O2SI	8260 Water SS	50	Prepared 03/05/20	05/04/20	N/A	10uL			10
VOA STD. 6	Various	8260 Water SS	50	Prepared 03/05/20	03/11/20	N/A	10uL			10
VOA STD. 25	Absolute	8260 Water SS	50	Prepared 03/02/20	05/01/20	N/A	10uL			10
VOA STD. 0	Absolute	8260 Water SS	50	Prepared 03/05/20	05/04/20	N/A	100uL			100
Voa STD. TBA	Various	8260 Water SS	250	Prepared 03/05/20	03/11/20	N/A	25uL			250

8260 Water Continuing Calibrations (CCV)/ Lab Control Spikes (LCS)

Prepared: 03/12/20

Prepared By (Initials): CH

Expires: 03/13/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	CCV/ LCS	50	Prepared 03/05/20	05/04/20	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova	CCV/ LCS	50	Prepared 03/05/20	04/01/20	N/A	10uL			10
VOA STD. 2	O2SI	CCV/ LCS	50	Prepared 03/05/20	05/04/20	N/A	10uL			10
VOA STD. 5	O2SI	CCV/ LCS	50	Prepared 03/02/20	05/01/20	N/A	10uL			10
VOA STD. TBA	Various	CCV/ LCS	250	Prepared 03/05/20	04/01/20	N/A	25uL			125

LCS (X4 Ketones)

Prepared: 03/12/20

Prepared By (Initials): CH

Expires: 03/13/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	LCS X4 Ketones	50	Prepared 03/05/20	05/04/20	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova	LCS X4 Ketones	50	Prepared 03/05/20	04/01/20	N/A	10uL			10
VOA STD. 2	O2SI	LCS X4 Ketones	50	Prepared 03/05/20	05/04/20	N/A	40uL			40
VOA STD. 5	O2SI	LCS X4 Ketones	50	Prepared 03/02/20	05/01/20	N/A	10uL			10
VOA STD. TBA	Various	LCS X4 Ketones	250	Prepared 03/05/20	04/01/20	N/A	25uL			125

Primary and Secondary Working Standards

Primary Standards

VOA STD 7

Prepared: 03/05/20 A
Expires: 05/04/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Gasses STD	Phenova	ALO-101206	2,000	CL14052-49491	03/05/21	08/31/24	100uL	4mL	Methanol	50
Hexachloroethane	Absolute	70199	1,000	091818-49868	03/05/21	09/18/23	200uL			50
Benzyl Chloride	Accusta	M-8010-01	1,000	011320-49734	03/05/21	01/13/21	200uL			50

VOA STD 8

Prepared: 03/05/20 B
Expires: 04/01/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Additions STD	Phenova	ALO-130175	2,000	CL12744-49507	03/05/21	08/31/20	100uL	4mL	Methanol	50
502.2 Cal. Std.	Phenova	ALO-101200	2,000	CL14381-49690	03/05/21	10/31/24	100uL			50
Vinyl Acetate	Phenova	ALO-101228	2,000	CL15060-49887	03/05/21	04/01/20	100uL			50

VOA STD TBA

Prepared: 03/05/20 C
Expires: 04/01/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Custom VOC Mix	Phenova	ALO-130176	2,000	CL12929-49790	03/05/21	11/30/20	500uL	4mL	Methanol	250
Acrolein	Phenova	ALO-130549	10,000	CL15071-49888	03/05/21	04/01/20	100uL			250

VOA STD 1

Prepared: 03/05/20 D
Expires: 05/04/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
2-CEVE	Absolute	82408	2,000	011320-49737	03/05/21	01/13/23	50	2mL	Methanol	50

VOA STD 2

Prepared: 03/05/20 E
Expires: 05/04/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Ketones Std.	Phenova	ALO-109211	2,000	CL12730-49780	03/05/21	08/31/28	100	4mL	Methanol	50

VOA STD 9

Prepared: 03/05/20 F
Expires: 05/04/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA STD. 7		VOA STD. 9	50	Prepared 03/05/20	03/05/21	N/A	200uL	2mL	Methanol	5
VOA STD. 8			50	Prepared 03/05/20	03/05/21	N/A	200uL			5

VOA STD. 10

Prepared: 03/05/20 G
Expires: 05/04/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA STD. 1		VOA STD. 10	50	Prepared 03/05/20	03/05/21	N/A	200uL	2mL	Methanol	5

VOA STD. 12

Prepared: 03/05/20 H
Expires: 05/04/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA STD. 2		VOA STD. 12	50	Prepared 03/05/20	03/05/21	N/A	200uL	2mL	Methanol	5

Second Source (SS) Standards

VOA STD. 3

Prepared: 03/05/20 I
Expires: 05/04/20
Methanol Lot No. DW117-US-0095

Prepared By (Initials): CH

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Ketones Standard	Phenova	ALO-101211	2,000	CL13994-49785	03/05/21	08/31/29	50uL	2mL	Methanol	50

VOA STD. Gases

Prepared: 03/05/20 J
Expires: 05/04/20
Methanol Lot No. DW117-US-0095

Prepared By (Initials): CH

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
8260 Gases (SS)	Phenova	ALO-101206	2,000	CL14504-49901	03/05/21	10/31/24	50uL	2mL	Methanol	50

VOA STD. 6

Prepared: 03/05/20 K
Expires: 03/11/20
Methanol Lot No. DW117-US-0095

Prepared By (Initials): CH

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
502.2 Calibration STD. (54-compounds)	Phenova	ALO-101200	2,000	CL14379-49508	02/18/21	10/31/24	50uL	2mL	Methanol	50
Vinyl Acetate	Phenova	ALO-101228	2,000	CL14964-49837	02/18/21	03/11/20	50uL			50
Hexachloroethane	Accustan	AS-E0011	1,000	219061767-49740	03/05/21	06/28/29	100uL			50
Benzyl Chloride	Accustan	M-8010-01	200	219041664-49375	03/05/21	05/22/21	500uL			50

VOA STD. TBA

Prepared: 03/05/20 L
Expires: 03/11/20
Methanol Lot No. DW117-US-0095

Prepared By (Initials): CH

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Custom VOA Mix (4-3)	Phenova	ALO-130176	2,000	CL12929-49684	03/05/21	11/30/20	250uL	2mL	Methanol	250
Acrolein	Phenova	ALO-101224	10,000	CL14963-49838	02/18/21	03/11/20	50uL			250

VOA STD. 0

Prepared: 03/05/20 M
Expires: 05/04/20
Methanol Lot No. DW117-US-0095

Prepared By (Initials): CH

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Addition STD.	Phenova	ALO-130175	2,000	CL14058-49851	03/05/21	08/31/21	50uL	2mL	Methanol	50

VOA STD. 2-CEVE

Prepared: 03/05/20 N
Expires: 05/04/20
Methanol Lot No. DW117-US-0095

Prepared By (Initials): CH

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
2-CEVE (SS)	Absolute	82408	2,000	121119-49635	02/18/21	12/11/22	50uL	2mL	Methanol	50

Injection Log

Directory: M:\LOKI\DATA\200312\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	0312L06.D	1	25ug/L BFB STD 2/13/20	2uL	12 Mar 20 10:21
4	0312L10.D	1	0.3ug/L VOC STD 3/12/20	IS&S:03/10/20	12 Mar 20 12:10
5	0312L11.D	1	0.5ug/L VOC STD 3/12/20	IS&S:03/10/20	12 Mar 20 12:39
6	0312L12.D	1	1.0ug/L VOC STD 3/12/20	IS&S:03/10/20	12 Mar 20 13:07
7	0312L13.D	1	2.0ug/L VOC STD 3/12/20	IS&S:03/10/20	12 Mar 20 13:36
8	0312L14.D	1	5.0ug/L VOC STD 3/12/20	IS&S:03/10/20	12 Mar 20 14:05
9	0312L15.D	1	10ug/L VOC STD 3/12/20	IS&S:03/10/20	12 Mar 20 14:33
10	0312L16.D	1	20ug/L VOC STD 3/12/20	IS&S:03/10/20	12 Mar 20 15:02
11	0312L17.D	1	40ug/L VOC STD 3/12/20	IS&S:03/10/20	12 Mar 20 15:30
12	0312L18.D	1	100ug/L VOC STD 3/12/20	IS&S:03/10/20	12 Mar 20 15:59
15	0312L21.D	1	(SS)10ug/L VOC STD 3/12/20	IS&S:03/10/20	12 Mar 20 17:25
37	0313L38.D	1	25ug/L BFB STD 2/13/20	IS&S:03/10/20	14 Mar 20 3:06
38	0313L39.D	1	200313B CCV 10ug/L	IS&S:03/10/20	14 Mar 20 3:34
39	0313L40.D	1	200313B LCS 10ug/L	IS&S:03/10/20	14 Mar 20 4:03
40	0313L41.D	1	200313B LCSD 10ug/L	IS&S:03/10/20	14 Mar 20 4:31
44	0313L45.D	1	200313B Blk	IS&S:03/10/20	14 Mar 20 6:26
47	0313L48.D	1	BA08369W01	IS&S:03/10/20	14 Mar 20 7:51
48	0313L49.D	1	BA08370W01	IS&S:03/10/20	14 Mar 20 8:20
49	0313L50.D	1	BA08371W01	IS&S:03/10/20	14 Mar 20 8:48
56	0313L57.D	1	Ending CCV 10ug/L 3/13/20	IS&S:03/10/20	14 Mar 20 12:09

ORGANICS
Calibration Data

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 03/12/20
Matrix: Instrument: Loki Initials: DP

0312L10 D 0312L11 D 0312L12 D 0312L13.D 0312L14.D 0312L15.D 0312L16 D 0312L17.D 0312L18 D

		Compound	1	2	3	4	5	6	7	8	9		Avg	%RSD	Type	r^2	Q	MRF
1	I	Fluorobenzene (IS)																
2	S	Dibromofluoromethane(S)	0.9655	0.7142	0.6902	0.7022	0.6963	0.7140	0.6569	0.6712	0.6088		0.71	14	S			
3	S	1,2-DCA-D4(S)	0.9637	0.7277	0.6937	0.7185	0.6936	0.7189	0.6549	0.6775	0.6210		0.72	14	S			
4	I	Chlorobenzene-D5 (IS)																
5	S	Toluene-D8(S)		2.260	2.037	2.196	2.206	2.320	2.105	2.133	1.988		2.2	5.2	S			
6	S	4-Bromofluorobenzene(S)		0.8958	0.7818	0.8269	0.8022	0.8543	0.7947	0.8070	0.7560		0.81	5.4	S			
7	I	1,4-Dichlorobenzene-D (IS)																
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Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L10.D Vial: 4
Acq On : 12 Mar 20 12:10 Operator:
Sample : 0.3ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Quant Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	96	380864	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.36	117	407424	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	10.90	152	230144	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	3.62	111	73542	6.77	ppb	0.00
Spiked Amount 25.000			Recovery =	27.072%		
3) 1,2-DCA-D4(S)	4.11	65	73406	6.70	ppb	0.00
Spiked Amount 25.000			Recovery =	26.812%		
5) Toluene-D8(S)	6.73	98	245880	7.00	ppb	0.00
Spiked Amount 25.000			Recovery =	27.992%		
6) 4-Bromofluorobenzene(S)	9.66	95	99612	7.50	ppb	0.00
Spiked Amount 25.000			Recovery =	30.004%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L11.D Vial: 5
Acq On : 12 Mar 20 12:39 Operator:
Sample : 0.5ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Quant Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.64	96	392064	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.36	117	424896	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	10.90	152	230976	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	3.62	111	56000	5.01	ppb	0.00
Spiked Amount 25.000			Recovery =	20.024%		
3) 1,2-DCA-D4(S)	4.11	65	57061	5.06	ppb	0.00
Spiked Amount 25.000			Recovery =	20.248%		
5) Toluene-D8(S)	6.73	98	192095	5.24	ppb	0.00
Spiked Amount 25.000			Recovery =	20.972%		
6) 4-Bromofluorobenzene(S)	9.66	95	76122	5.50	ppb	0.00
Spiked Amount 25.000			Recovery =	21.988%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L12.D Vial: 6
Acq On : 12 Mar 20 13:07 Operator:
Sample : 1.0ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Quant Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.64	96	384960	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.36	117	426432	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	10.90	152	218688	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	3.62	111	106273	9.68	ppb	0.00
Spiked Amount 25.000			Recovery = 38.704%			
3) 1,2-DCA-D4(S)	4.11	65	106813	9.65	ppb	0.00
Spiked Amount 25.000			Recovery = 38.600%			
5) Toluene-D8(S)	6.73	98	347519	9.45	ppb	0.00
Spiked Amount 25.000			Recovery = 37.800%			
6) 4-Bromofluorobenzene(S)	9.66	95	133350	9.59	ppb	0.00
Spiked Amount 25.000			Recovery = 38.380%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L13.D Vial: 7
Acq On : 12 Mar 20 13:36 Operator:
Sample : 2.0ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Quant Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	96	379008	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.36	117	403200	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	10.90	152	222720	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	3.62	111	106459	9.85	ppb	0.00
Spiked Amount 25.000			Recovery = 39.380%			
3) 1,2-DCA-D4(S)	4.11	65	108929	10.00	ppb	0.00
Spiked Amount 25.000			Recovery = 39.984%			
5) Toluene-D8(S)	6.73	98	354209	10.19	ppb	0.00
Spiked Amount 25.000			Recovery = 40.748%			
6) 4-Bromofluorobenzene(S)	9.66	95	133355	10.15	ppb	0.00
Spiked Amount 25.000			Recovery = 40.592%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L14.D Vial: 8
Acq On : 12 Mar 20 14:05 Operator:
Sample : 5.0ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Quant Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	96	401984	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.36	117	429376	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	10.90	152	240192	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	3.62	111	279895	24.41	ppb	0.00
Spiked Amount 25.000			Recovery = 97.620%			
3) 1,2-DCA-D4(S)	4.11	65	278823	24.12	ppb	0.00
Spiked Amount 25.000			Recovery = 96.492%			
5) Toluene-D8(S)	6.73	98	947179	25.58	ppb	0.00
Spiked Amount 25.000			Recovery = 102.324%			
6) 4-Bromofluorobenzene(S)	9.66	95	344450	24.61	ppb	0.00
Spiked Amount 25.000			Recovery = 98.452%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L15.D Vial: 9
Acq On : 12 Mar 20 14:33 Operator:
Sample : 10ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Quant Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.64	96	397184	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.36	117	425536	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	10.90	152	251200	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	3.62	111	283588	25.03	ppb	0.00
Spiked Amount 25.000			Recovery = 100.104%			
3) 1,2-DCA-D4(S)	4.11	65	285520	25.00	ppb	0.00
Spiked Amount 25.000			Recovery = 100.004%			
5) Toluene-D8(S)	6.72	98	987286	26.90	ppb	0.00
Spiked Amount 25.000			Recovery = 107.620%			
6) 4-Bromofluorobenzene(S)	9.66	95	363539	26.21	ppb	0.00
Spiked Amount 25.000			Recovery = 104.848%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L16.D Vial: 10
Acq On : 12 Mar 20 15:02 Operator:
Sample : 20ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Quant Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.64	96	405144	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.35	117	446656	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	10.89	152	259136	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	3.62	111	532316	46.05	ppb	0.00
Spiked Amount 25.000			Recovery =	184.212%		
3) 1,2-DCA-D4(S)	4.11	65	530676	45.56	ppb	0.00
Spiked Amount 25.000			Recovery =	182.220%		
5) Toluene-D8(S)	6.72	98	1880369	48.82	ppb	0.00
Spiked Amount 25.000			Recovery =	195.276%		
6) 4-Bromofluorobenzene(S)	9.66	95	709894	48.76	ppb	0.00
Spiked Amount 25.000			Recovery =	195.056%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L17.D Vial: 11
Acq On : 12 Mar 20 15:30 Operator:
Sample : 40ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Quant Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.64	96	401408	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.35	117	451392	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	10.90	152	264320	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	3.62	111	538881	47.05	ppb	0.00
Spiked Amount 25.000			Recovery =	188.220%		
3) 1,2-DCA-D4(S)	4.11	65	543882	47.12	ppb	0.00
Spiked Amount 25.000			Recovery =	188.496%		
5) Toluene-D8(S)	6.72	98	1926049	49.48	ppb	0.00
Spiked Amount 25.000			Recovery =	197.924%		
6) 4-Bromofluorobenzene(S)	9.66	95	728514	49.52	ppb	0.00
Spiked Amount 25.000			Recovery =	198.072%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0312L18.D Vial: 12
Acq On : 12 Mar 20 15:59 Operator:
Sample : 100ug/L VOC STD 3/12/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Quant Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	96	422016	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.36	117	476800	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	10.90	152	284544	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	3.62	111	1027658	85.35	ppb	0.00
Spiked Amount 25.000			Recovery =	341.412%		
3) 1,2-DCA-D4(S)	4.11	65	1048208	86.39	ppb	0.00
Spiked Amount 25.000			Recovery =	345.540%		
5) Toluene-D8(S)	6.73	98	3792024	92.23	ppb	0.00
Spiked Amount 25.000			Recovery =	368.908%		
6) 4-Bromofluorobenzene(S)	9.66	95	1441788	92.78	ppb	0.00
Spiked Amount 25.000			Recovery =	371.112%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 03/13/20
Matrix: Instrument: Loki Initials: DP

			0313L29 D	0313L30 D	0313L31 D	0313L32 D	0313L33 D	0313L34.D	0313L35 D									
		Compound	1	2	3	4	5	6	7				Avg	%RSD	Type	r^2	Q	MRF
1	I	Fluorobenzene (IS)																
2	TMHBL	Gasoline C6-C10	18.6	7.782	4.330	2.011	1.499	1.328	1.285				5.3	121	TMHBL	0.999		
3	I	Chlorobenzene-D5 (IS)																
4	I	1,4-Dichlorobenzene-D (IS)																
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
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Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\200312\0313L29.D Vial: 28
Acq On : 13 Mar 20 22:48 Operator:
Sample : 20ug/L GAS STD 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:05 2020 Quant Results File: LGAS0312.RES

Quant Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	TIC	669134	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.36	TIC	1011581	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	10.90	TIC	1008778	25.00	ppb	0.00

System Monitoring Compounds

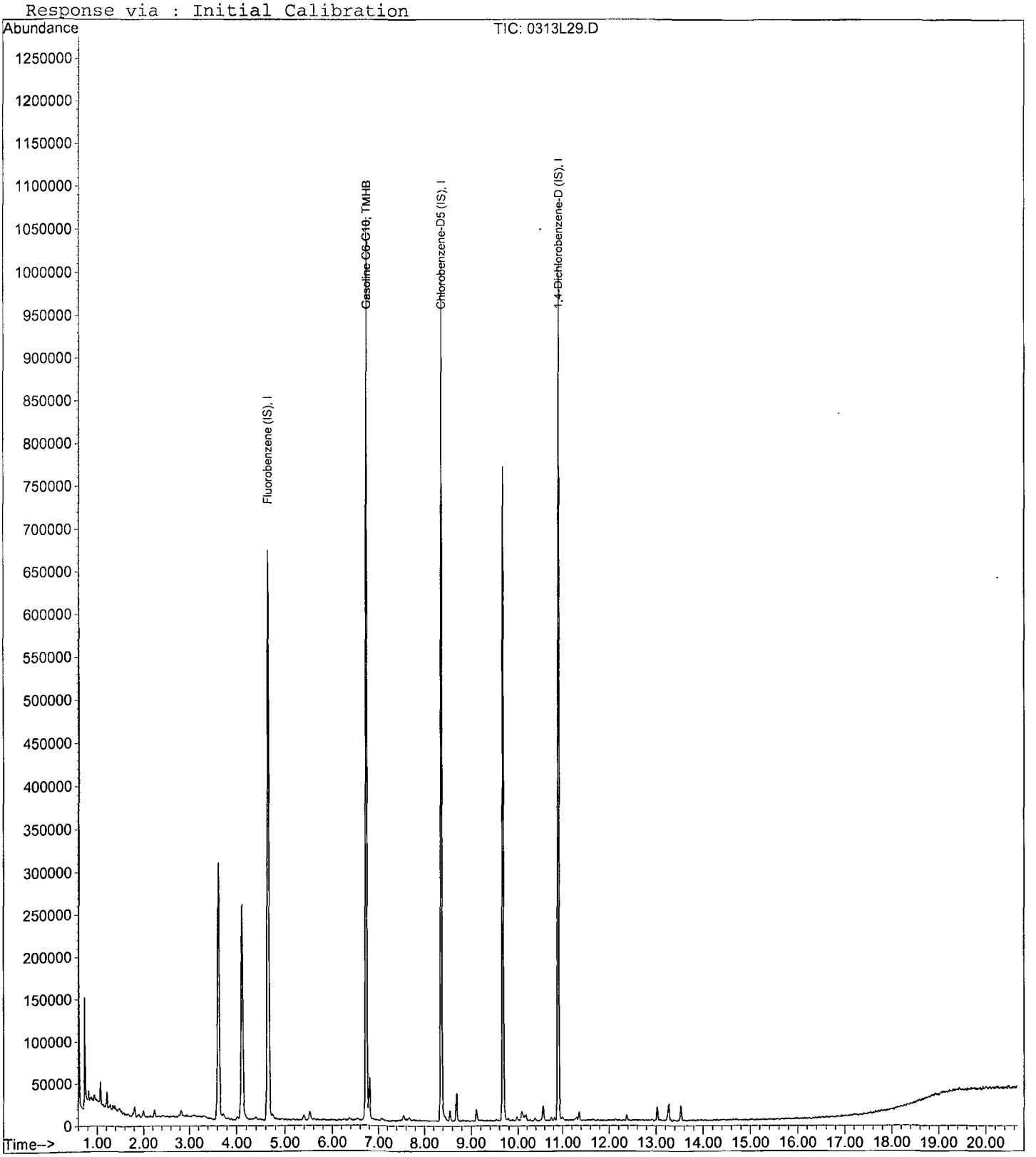
Target Compounds						Qvalue
2) Gasoline C6-C10	6.73	TIC	9977282m	40.96	ppb	100

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\200312\0313L29.D Vial: 28
Acq On : 13 Mar 20 22:48 Operator:
Sample : 20ug/L GAS STD 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:05 2020 Quant Results File: LGAS0312.RES

Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\200312\0313L30.D Vial: 29
Acq On : 13 Mar 20 23:17 Operator:
Sample : 50ug/L GAS STD 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:03 2020 Quant Results File: LGAS0312.RES

Quant Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:01:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	TIC	700081	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.36	TIC	1064621	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	10.90	TIC	1027059	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	6.73	TIC	10895767m	54.82	ppb	100

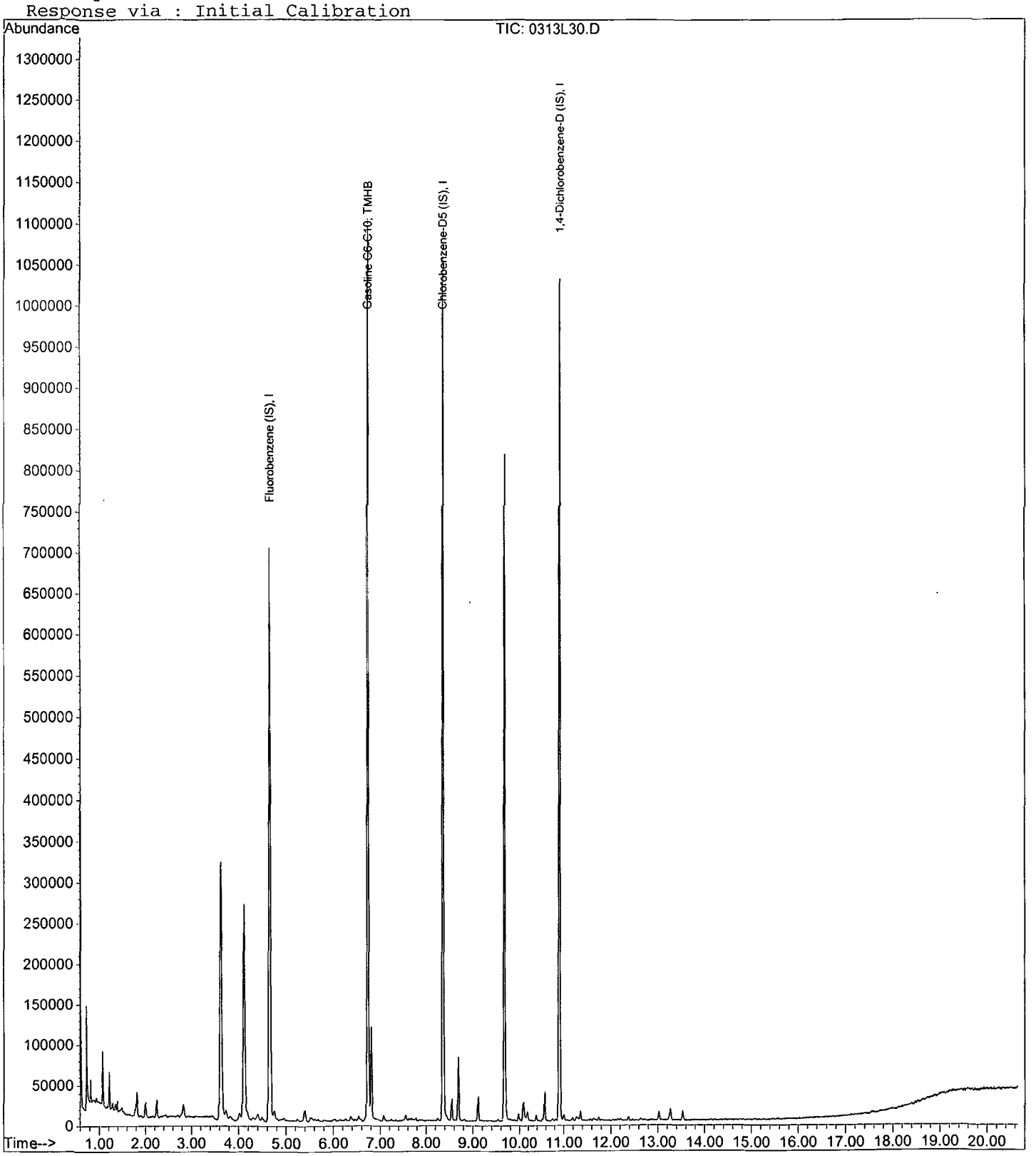
(#) = qualifier out of range (m) = manual integration
0313L30.D LGAS0312.M Tue Mar 17 15:44:10 2020 Page 1

Quantitation Report

Data File : M:\LOKI\DATA\200312\0313L30.D Vial: 29
Acq On : 13 Mar 20 23:17 Operator:
Sample : 50ug/L GAS STD 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:03 2020 Quant Results File: LGAS0312.RES

Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\200312\0313L31.D Vial: 30
Acq On : 13 Mar 20 23:46 Operator:
Sample : 100ug/L GAS STD 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:03 2020 Quant Results File: LGAS0312.RES

Quant Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:01:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.64	TIC	685395	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.36	TIC	1035938	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	10.90	TIC	1073149	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	6.73	TIC	11870188m	104.05	ppb	100

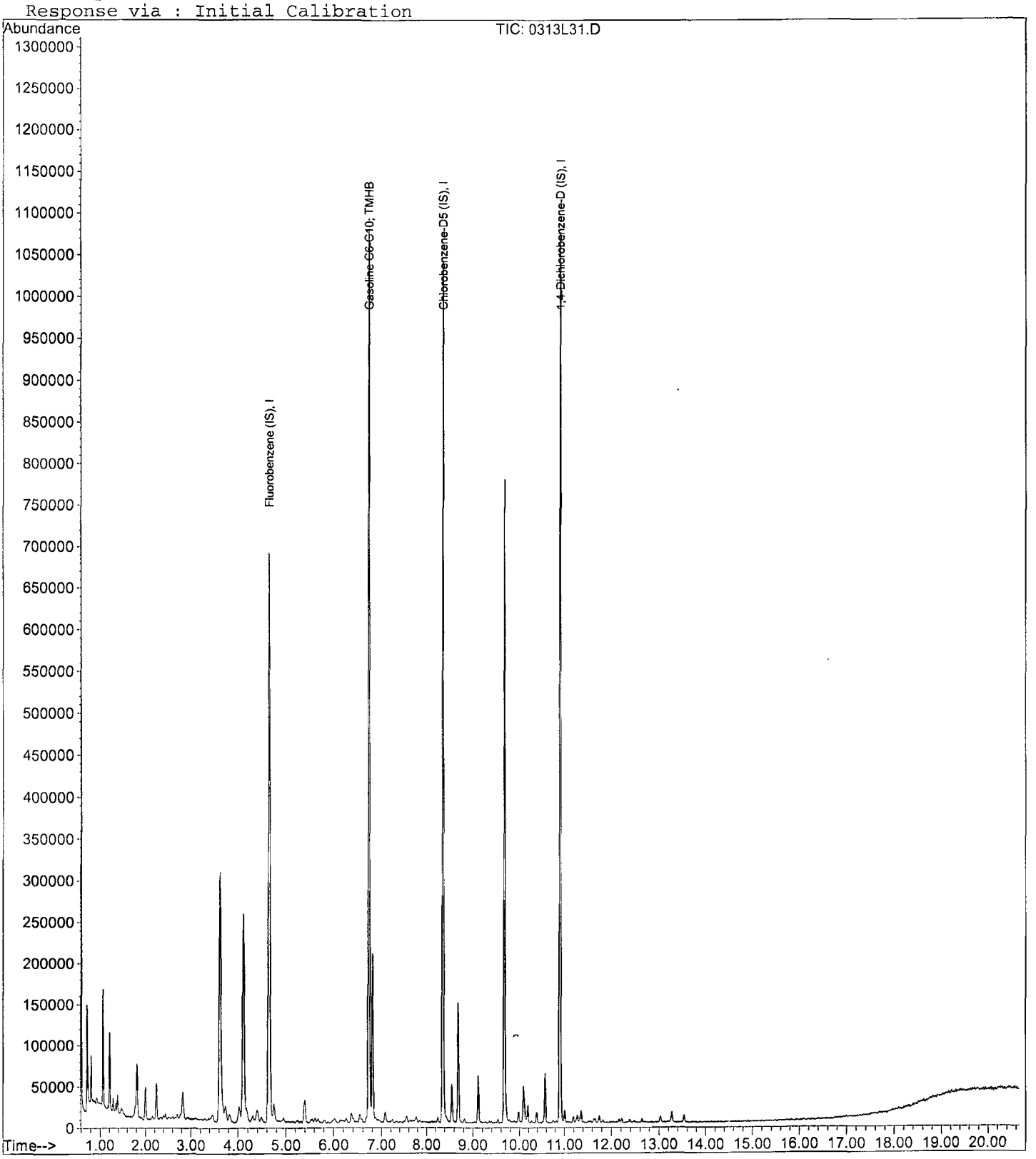
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0313L31.D Vial: 30
Acq On : 13 Mar 20 23:46 Operator:
Sample : 100ug/L GAS STD 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:03 2020 Quant Results File: LGAS0312.RES

Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\200312\0313L32.D Vial: 31
Acq On : 14 Mar 20 00:14 Operator:
Sample : 300ug/L GAS STD 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:03 2020 Quant Results File: LGAS0312.RES

Quant Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:01:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.64	TIC	691509	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.36	TIC	1047736	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	10.90	TIC	1074692	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	6.73	TIC	16685769m	288.45	ppb	100

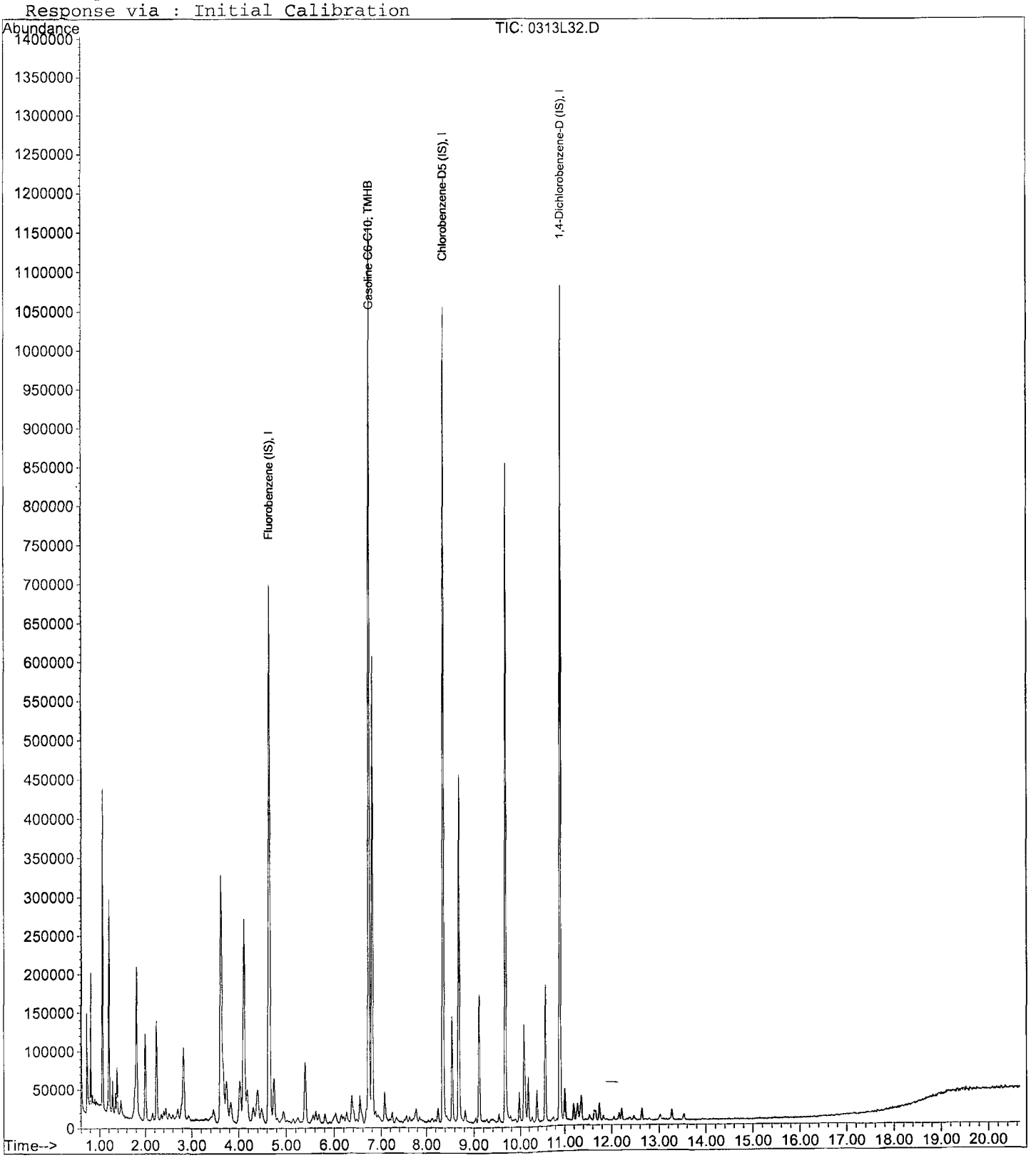
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0313L32.D Vial: 31
Acq On : 14 Mar 20 00:14 Operator:
Sample : 300ug/L GAS STD 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:03 2020 Quant Results File: LGAS0312.RES

Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\200312\0313L33.D Vial: 32
Acq On : 14 Mar 20 00:43 Operator:
Sample : 600ug/L GAS STD 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:03 2020 Quant Results File: LGAS0312.RES

Quant Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:01:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	TIC	717623	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.36	TIC	1072076	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	10.90	TIC	1140664	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline C6-C10	6.80	TIC	25818193m	595.03	ppb	100

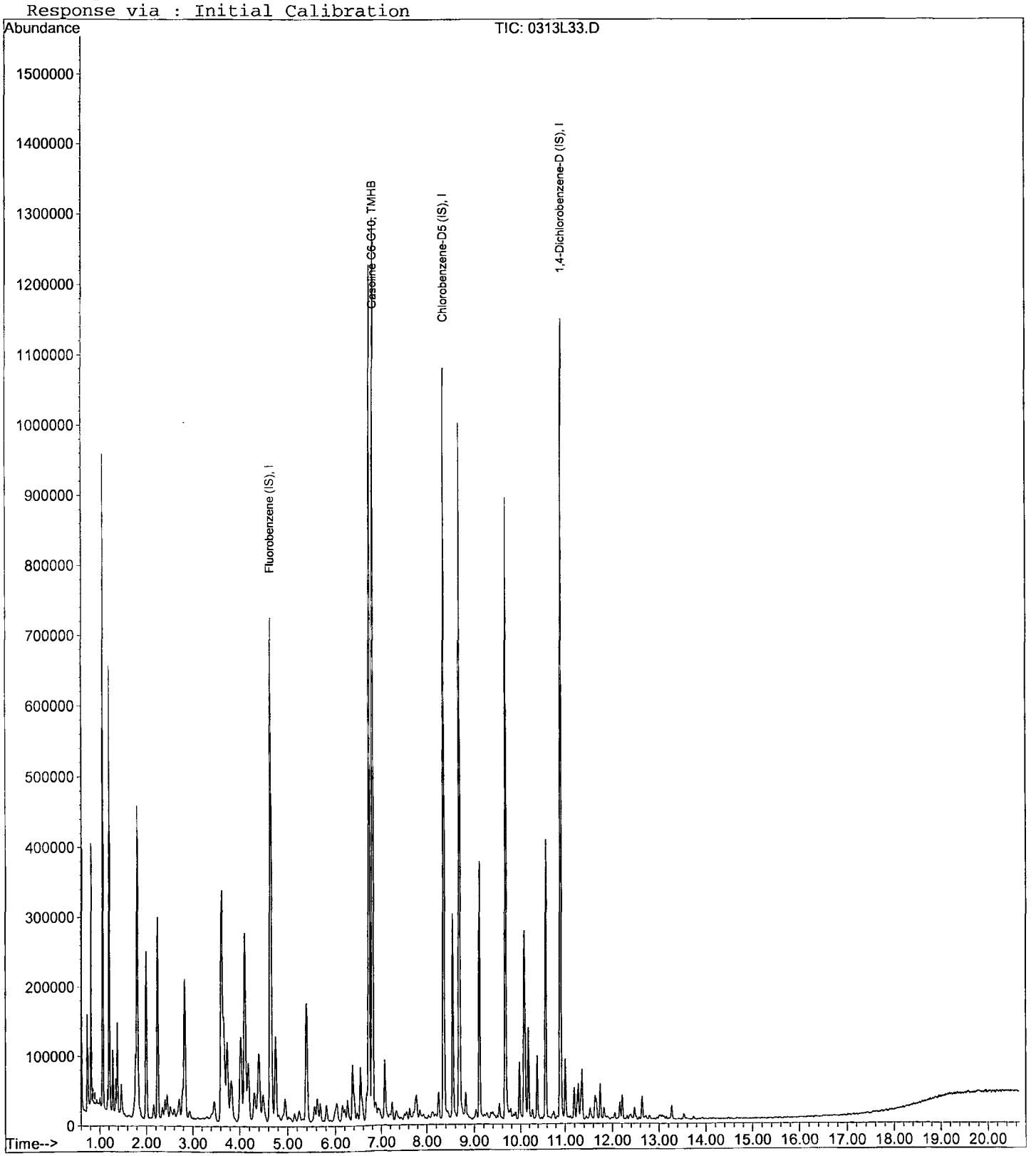
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0313L33.D Vial: 32
Acq On : 14 Mar 20 00:43 Operator:
Sample : 600ug/L GAS STD 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:03 2020 Quant Results File: LGAS0312.RES

Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\200312\0313L34.D Vial: 33
Acq On : 14 Mar 20 1:11 Operator:
Sample : 800ug/L GAS STD 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:04 2020 Quant Results File: LGAS0312.RES

Quant Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:01:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.64	TIC	705163	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.36	TIC	1076681	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	10.90	TIC	1166567	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	6.80	TIC	29976930m	747.68	ppb	100

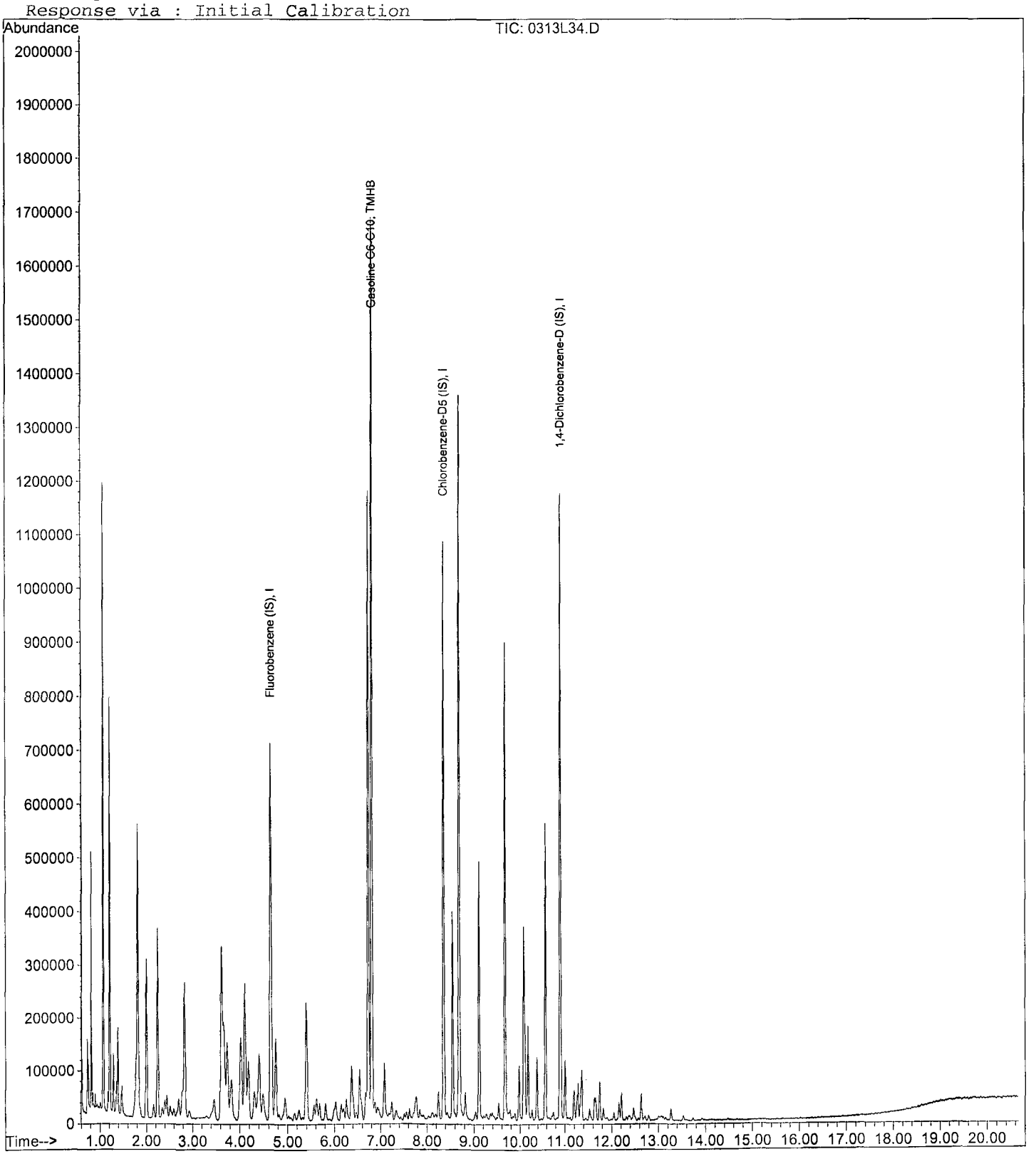
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0313L34.D Vial: 33
Acq On : 14 Mar 20 1:11 Operator:
Sample : 800ug/L GAS STD 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:04 2020 Quant Results File: LGAS0312.RES

Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\200312\0313L35.D Vial: 34
Acq On : 14 Mar 20 1:40 Operator:
Sample : 1000ug/L GAS STD 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:05 2020 Quant Results File: LGAS0312.RES

Quant Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.64	TIC	703330	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.36	TIC	1072432	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	10.90	TIC	1155789	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	6.80	TIC	36150298m	777.46	ppb	100

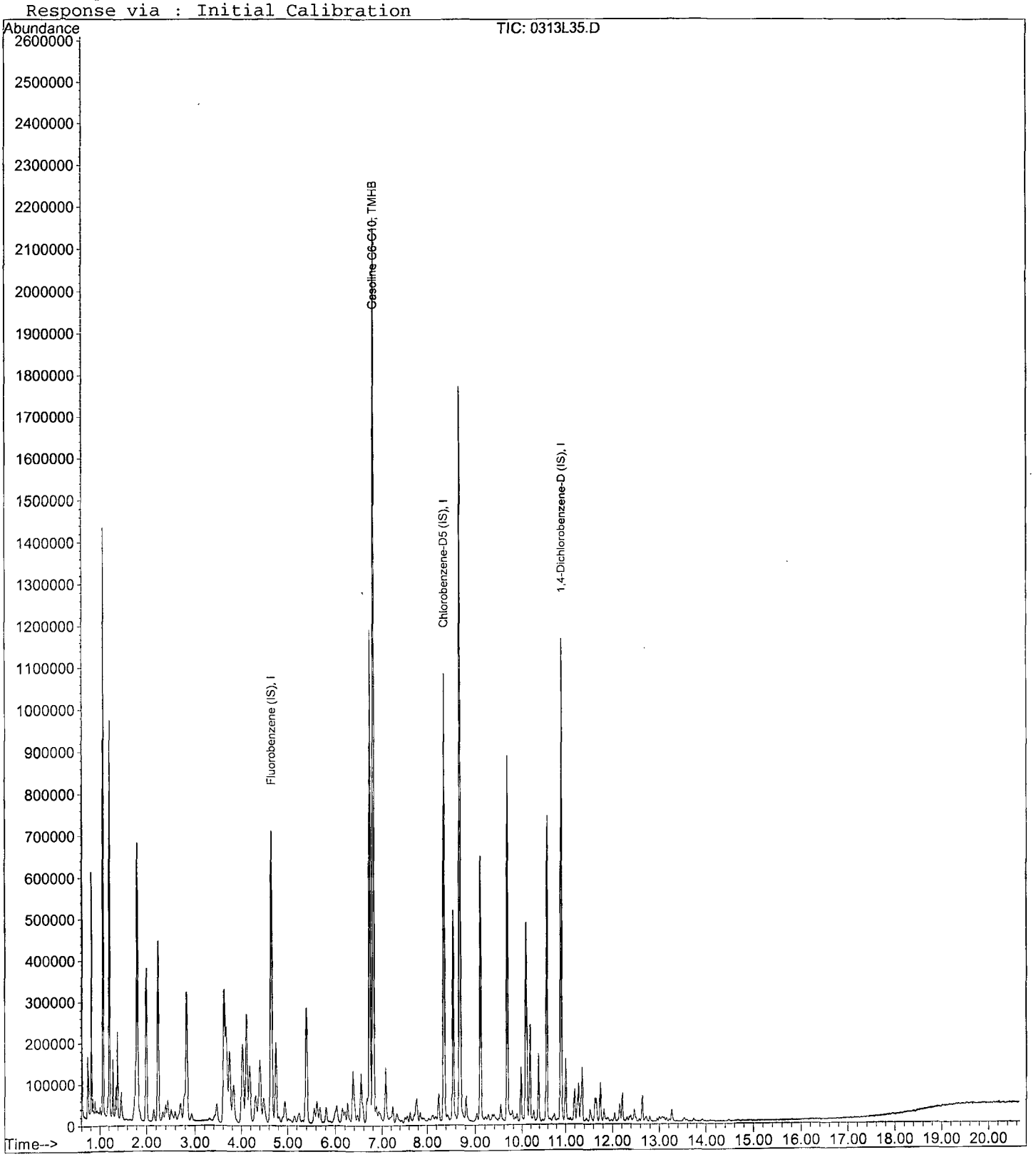
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0313L35.D Vial: 34
Acq On : 14 Mar 20 1:40 Operator:
Sample : 1000ug/L GAS STD 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:05 2020 Quant Results File: LGAS0312.RES

Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 03/14/20
Instrument: Loki
Initial Cal. Date: 03/12/20
Data File: 0313l42.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	5.268	2.030	61	TMHBL	3.6
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
5							
6							
7							
8							
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35							
36							
37							
38							
39							
40							
		Average			61.0		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 03/14/20
Matrix: Instrument: Loki
Initial Cal. Date: 03/12/20
Data File: 0313I42.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	S	Dibromofluoromethane(S)	0.7133	0.7110	0.32	S	
3	S	1,2-DCA-D4(S)	0.7188	0.7008	2.5	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	2.156	2.265	5.0	S	
6	S	4-Bromofluorobenzene(S)	0.8148	0.8044	1.3	S	
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
14							
15							
16							
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36							
37							
38							
39							
40							
		Average			2.3		

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\200312\0313142.D Vial: 41
Acq On : 14 Mar 20 5:00 Operator:
Sample : 200313B CCV 300ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:14 2020 Quant Results File: LGAS0312.RES

Quant Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.64	TIC	710756	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.36	TIC	1031032	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	10.90	TIC	1076761	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	6.73	TIC	17311793m	289.21	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0313142.D Vial: 41
Acq On : 14 Mar 20 5:00 Operator:
Sample : 200313B CCV 300ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Quant Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.64	96	353664	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.36	117	370048	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	10.90	152	197568	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	3.62	111	251447	24.92	ppb	0.00
Spiked Amount 25.000			Recovery = 99.680%			
3) 1,2-DCA-D4(S)	4.11	65	247838	24.37	ppb	0.00
Spiked Amount 25.000			Recovery = 97.488%			
5) Toluene-D8(S)	6.73	98	837990	26.26	ppb	0.00
Spiked Amount 25.000			Recovery = 105.040%			
6) 4-Bromofluorobenzene(S)	9.66	95	297665	24.68	ppb	0.00
Spiked Amount 25.000			Recovery = 98.720%			

Target Compounds Qvalue

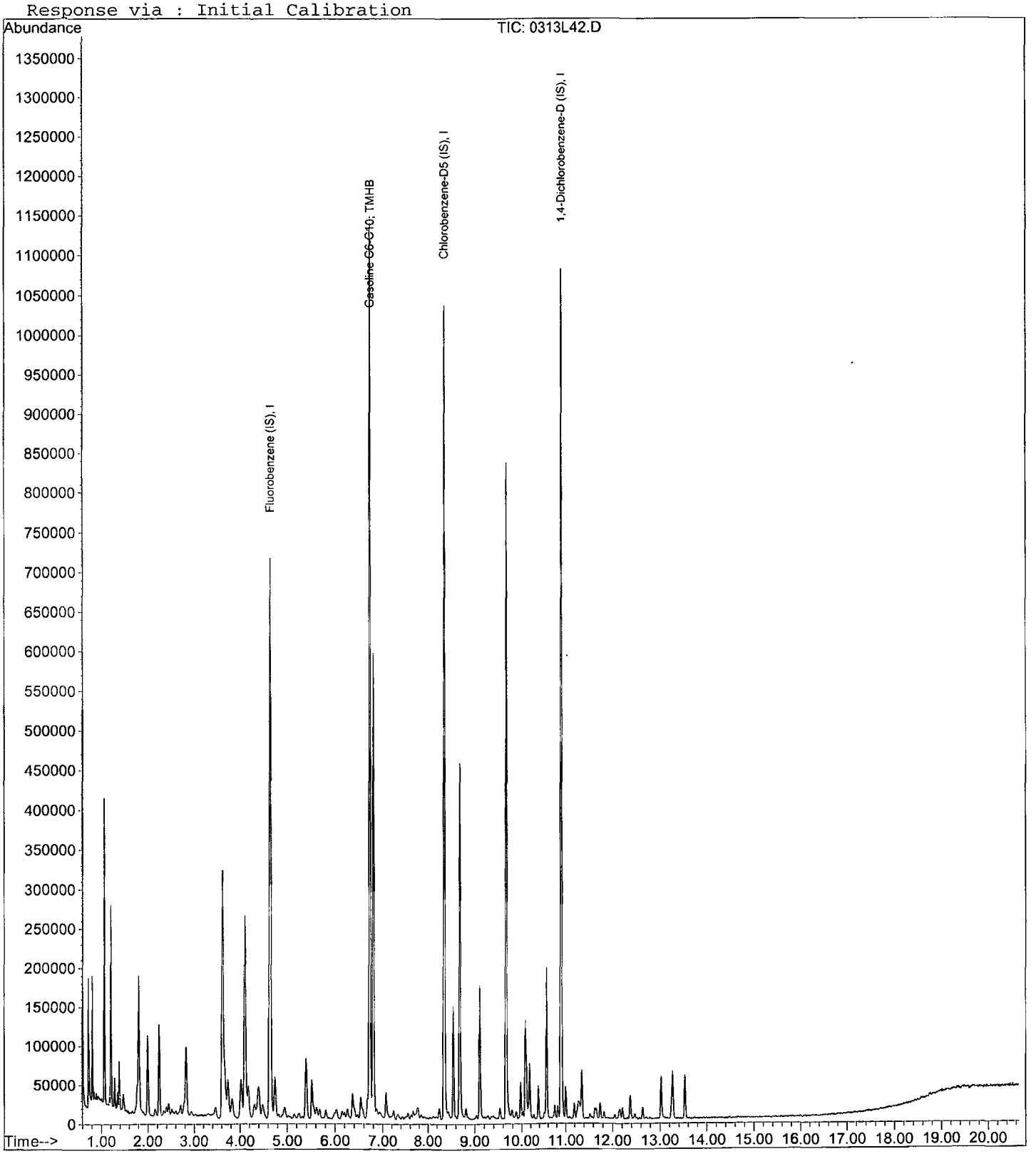
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0313142.D Vial: 41
Acq On : 14 Mar 20 5:00 Operator:
Sample : 200313B CCV 300ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:14 2020 Quant Results File: LGAS0312.RES

Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 03/14/20
Matrix: Instrument: Loki
Initial Cal. Date: 03/12/20
Data File: 0313I58.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline C6-C10	5.268	2.079	61	TMHBL	1.7
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
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22							
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26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			61.0		

VOLATILE ORGANIC ANALYSIS
VOLATILE ORGANIC COMPOUNDS

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 03/14/20
Matrix: Instrument: Loki
Initial Cal. Date: 03/12/20
Data File: 0313I58.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	S	Dibromofluoromethane(S)	0.7133	0.7284	2.1	S	
3	S	1,2-DCA-D4(S)	0.7188	0.7263	1.0	S	
4	I	Chlorobenzene-D5 (IS)	ISTD			I	
5	S	Toluene-D8(S)	2.156	2.320	7.6	S	
6	S	4-Bromofluorobenzene(S)	0.8148	0.8439	3.6	S	
7	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
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28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			3.6		

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\200312\0313158.D Vial: 57
Acq On : 14 Mar 20 12:37 Operator:
Sample : Ending CCV 300ug/L 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:16 2020 Quant Results File: LGAS0312.RES

Quant Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	TIC	715432	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.36	TIC	1047235	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	10.90	TIC	1122615	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	6.73	TIC	17845613m	305.06	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0313158.D Vial: 57
Acq On : 14 Mar 20 12:37 Operator:
Sample : Ending CCV 300ug/L 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 17 15:37 2020 Quant Results File: LSUR0312.RES

Quant Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	96	354816	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.36	117	376320	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	10.90	152	203904	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	3.62	111	258436	25.53	ppb	0.00
Spiked Amount 25.000			Recovery = 102.120%			
3) 1,2-DCA-D4(S)	4.11	65	257716	25.26	ppb	0.00
Spiked Amount 25.000			Recovery = 101.044%			
5) Toluene-D8(S)	6.73	98	873080	26.90	ppb	0.00
Spiked Amount 25.000			Recovery = 107.616%			
6) 4-Bromofluorobenzene(S)	9.66	95	317573	25.89	ppb	0.00
Spiked Amount 25.000			Recovery = 103.568%			

Target Compounds Qvalue

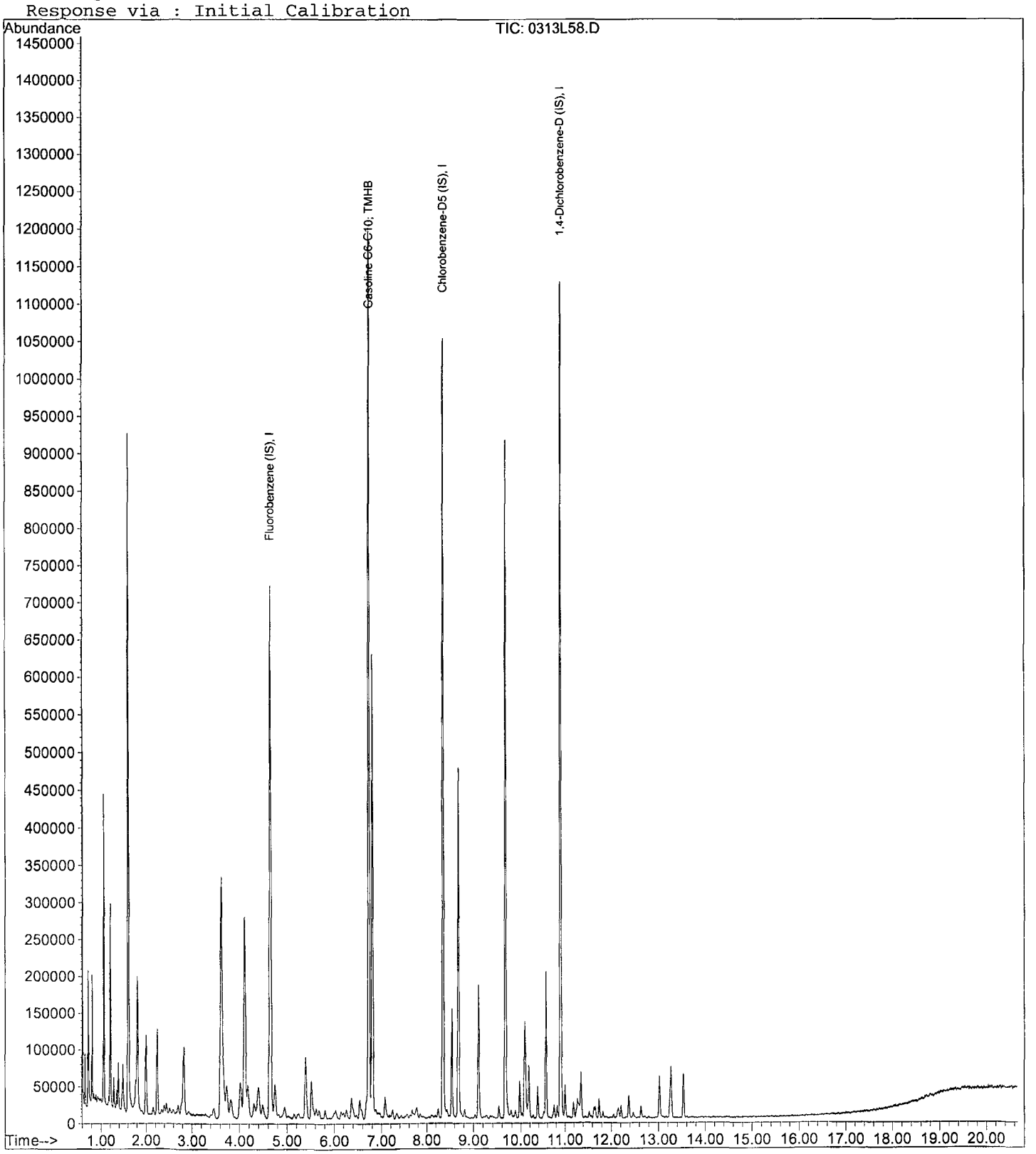
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0313158.D Vial: 57
Acq On : 14 Mar 20 12:37 Operator:
Sample : Ending CCV 300ug/L 3/13/20 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:16 2020 Quant Results File: LGAS0312.RES

Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration



ORGANICS
Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\200312\0313L48.D Vial: 47
Acq On : 14 Mar 20 7:51 Operator:
Sample : BA08369W01 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:40 2020 Quant Results File: LGAS0312.RES

Quant Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	TIC	670796	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.36	TIC	956952	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	10.90	TIC	942715	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0313L48.D LGAS0312.M Tue Mar 17 15:46:16 2020 Page 1

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0313L48.D Vial: 47
Acq On : 14 Mar 20 7:51 Operator:
Sample : BA08369W01 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Quant Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	96	331840	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.36	117	348288	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	10.90	152	168448	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	3.62	111	246705	26.06	ppb	0.00
Spiked Amount 25.000			Recovery = 104.232%			
3) 1,2-DCA-D4(S)	4.11	65	236408	24.78	ppb	0.00
Spiked Amount 25.000			Recovery = 99.108%			
5) Toluene-D8(S)	6.73	98	774460	25.79	ppb	0.00
Spiked Amount 25.000			Recovery = 103.144%			
6) 4-Bromofluorobenzene(S)	9.66	95	270382	23.82	ppb	0.00
Spiked Amount 25.000			Recovery = 95.276%			

Target Compounds Qvalue

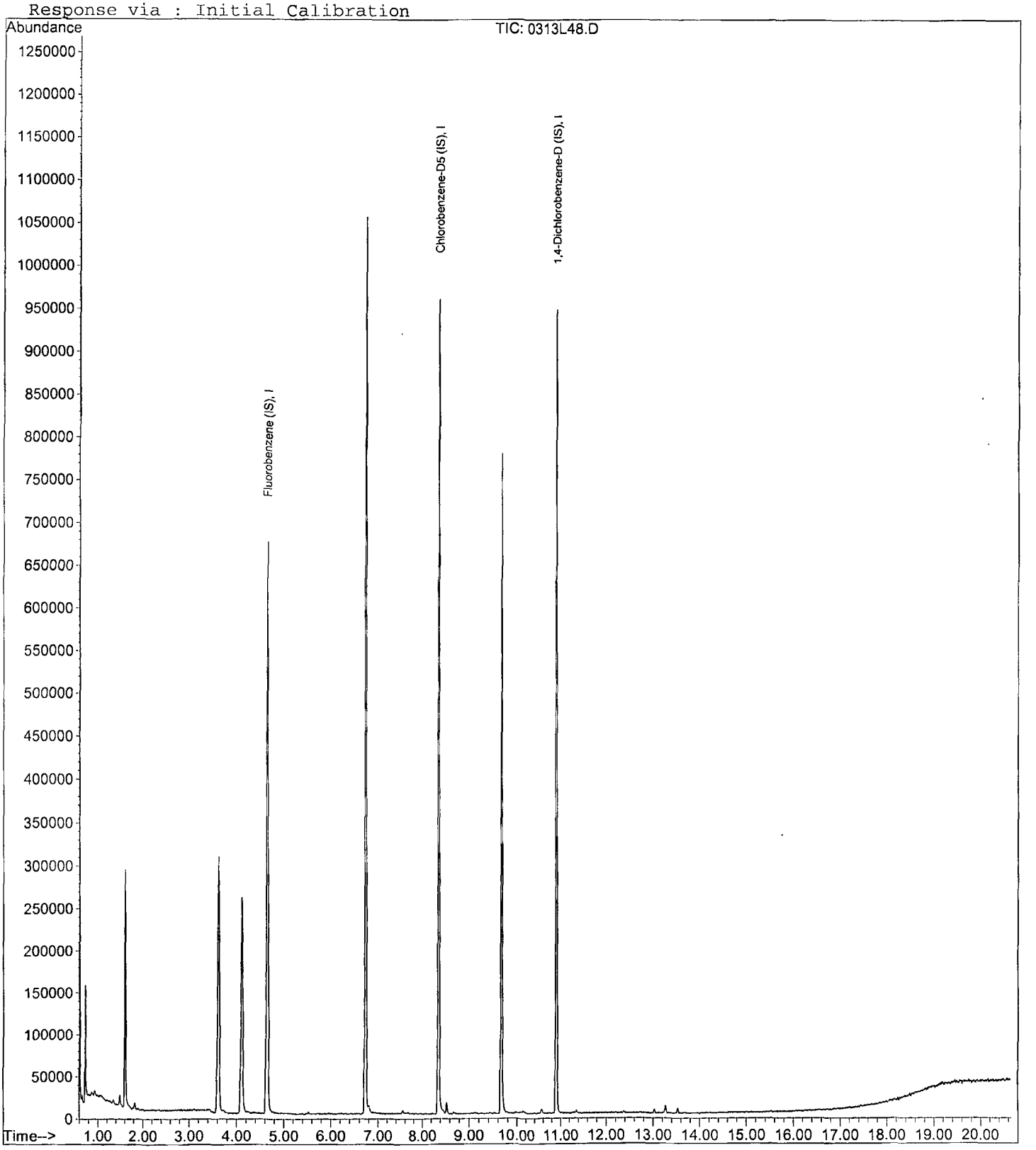
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0313L48.D Vial: 47
Acq On : 14 Mar 20 7:51 Operator:
Sample : BA08369W01 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:40 2020 Quant Results File: LGAS0312.RES

Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\200312\0313L49.D Vial: 48
Acq On : 14 Mar 20 8:20 Operator:
Sample : BA08370W01 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:40 2020 Quant Results File: LGAS0312.RES

Quant Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	TIC	705582	25.00 ppb	0.00
3) Chlorobenzene-D5 (IS)	8.36	TIC	1109805	25.00 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	10.90	TIC	1357301	25.00 ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0313L49.D Vial: 48
Acq On : 14 Mar 20 8:20 Operator:
Sample : BA08370W01 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Quant Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	96	349248	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.36	117	401216	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	10.90	152	247872	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	3.63	111	212112	21.29	ppb	0.01
Spiked Amount 25.000			Recovery =	85.152%		
3) 1,2-DCA-D4(S)	4.12	65	245298	24.43	ppb	0.00
Spiked Amount 25.000			Recovery =	97.712%		
5) Toluene-D8(S)	6.73	98	842963	24.36	ppb	0.00
Spiked Amount 25.000			Recovery =	97.456%		
6) 4-Bromofluorobenzene(S)	9.67	95	320474	24.51	ppb	0.00
Spiked Amount 25.000			Recovery =	98.028%		

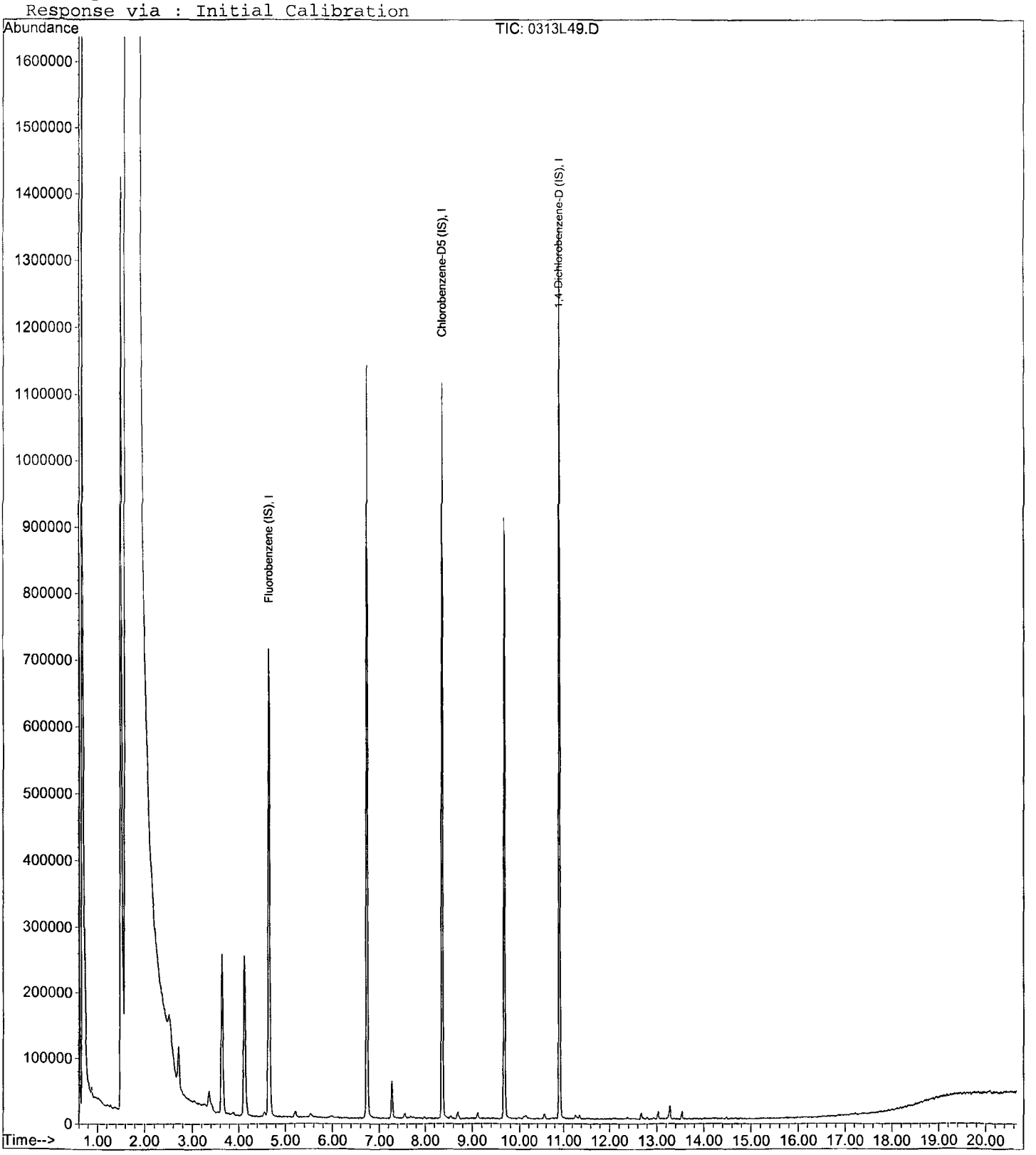
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\200312\0313L49.D Vial: 48
Acq On : 14 Mar 20 8:20 Operator:
Sample : BA08370W01 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:40 2020 Quant Results File: LGAS0312.RES

Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\200312\0313L50.D Vial: 49
Acq On : 14 Mar 20 8:48 Operator:
Sample : BA08371W01 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:40 2020 Quant Results File: LGAS0312.RES

Quant Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	TIC	726526	25.00 ppb	0.00
3) Chlorobenzene-D5 (IS)	8.36	TIC	1111842	25.00 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	10.90	TIC	1034924	25.00 ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0313L50.D LGAS0312.M Tue Mar 17 15:46:35 2020 Page 1

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0313L50.D Vial: 49
Acq On : 14 Mar 20 8:48 Operator:
Sample : BA08371W01 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Quant Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	96	357504	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.36	117	404608	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	10.90	152	185216	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	3.62	111	258477	25.34	ppb	0.00
Spiked Amount 25.000			Recovery = 101.368%			
3) 1,2-DCA-D4(S)	4.11	65	260530	25.35	ppb	0.00
Spiked Amount 25.000			Recovery = 101.380%			
5) Toluene-D8(S)	6.73	98	843740	24.18	ppb	0.00
Spiked Amount 25.000			Recovery = 96.728%			
6) 4-Bromofluorobenzene(S)	9.66	95	296325	22.47	ppb	0.00
Spiked Amount 25.000			Recovery = 89.884%			

Target Compounds Qvalue

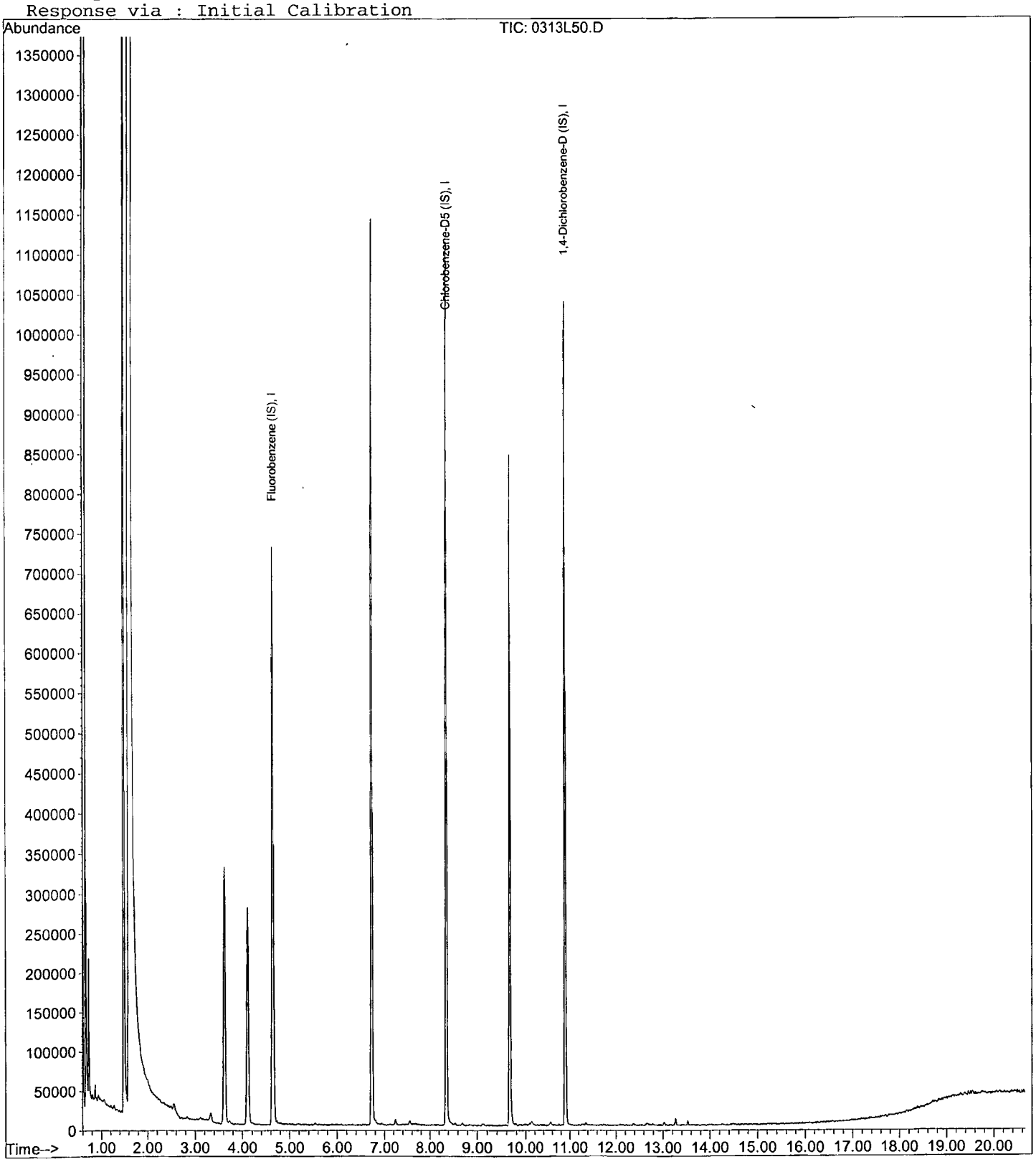
(#) = qualifier out of range (m) = manual integration
0313L50.D LSUR0312.M Tue Mar 17 15:46:40 2020 Page 1

Quantitation Report

Data File : M:\LOKI\DATA\200312\0313L50.D Vial: 49
Acq On : 14 Mar 20 8:48 Operator:
Sample : BA08371W01 Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:40 2020 Quant Results File: LGAS0312.RES

Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\200312\0313L45.D Vial: 44
Acq On : 14 Mar 20 6:26 Operator:
Sample : 200313B Blk Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:39 2020 Quant Results File: LGAS0312.RES

Quant Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	TIC	689738	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.36	TIC	999971	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	10.90	TIC	1016977	25.00	ppb	0.00

System Monitoring Compounds

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0313L45.D Vial: 44
Acq On : 14 Mar 20 6:26 Operator:
Sample : 200313B Blk Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Quant Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	96	339840	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.36	117	360704	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	10.90	152	186688	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	3.62	111	240419	24.80	ppb	0.00
Spiked Amount 25.000			Recovery = 99.188%			
3) 1,2-DCA-D4(S)	4.11	65	236652	24.22	ppb	0.00
Spiked Amount 25.000			Recovery = 96.876%			
5) Toluene-D8(S)	6.73	98	787479	25.32	ppb	0.00
Spiked Amount 25.000			Recovery = 101.268%			
6) 4-Bromofluorobenzene(S)	9.66	95	279691	23.79	ppb	0.00
Spiked Amount 25.000			Recovery = 95.164%			

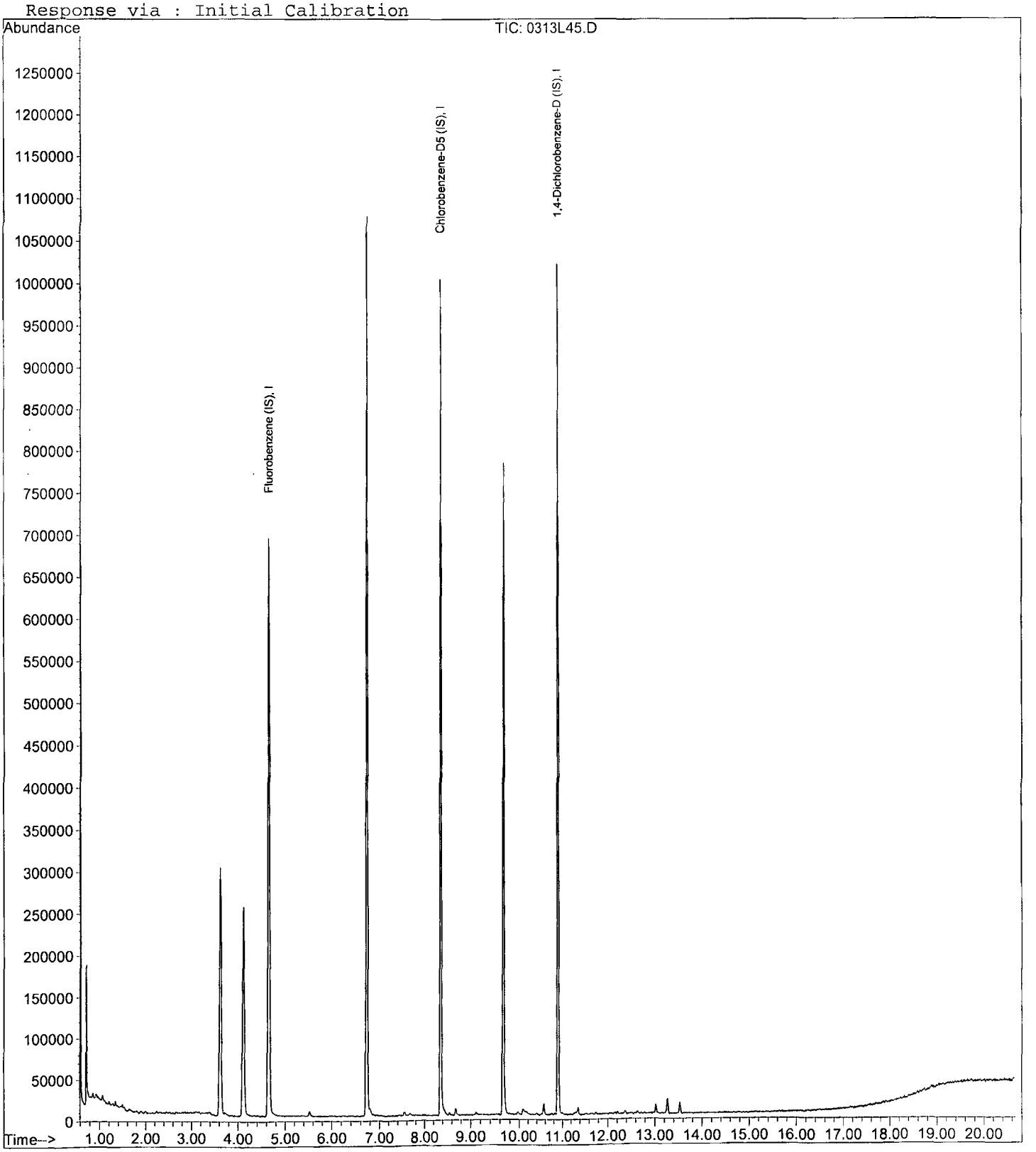
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration
0313L45.D LSUR0312.M Tue Mar 17 15:46:10 2020 Page 1

Data File : M:\LOKI\DATA\200312\0313L45.D Vial: 44
Acq On : 14 Mar 20 6:26 Operator:
Sample : 200313B Blk Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:39 2020 Quant Results File: LGAS0312.RES

Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\200312\0313143.D Vial: 42
Acq On : 14 Mar 20 5:28 Operator:
Sample : 200313B LCS 300ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:15 2020 Quant Results File: LGAS0312.RES

Quant Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	TIC	716342	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.36	TIC	1078156	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	10.90	TIC	1104264	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	6.73	TIC	18124394m	314.71	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0313143.D Vial: 42
Acq On : 14 Mar 20 5:28 Operator:
Sample : 200313B LCS 300ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Quant Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.65	96	355584	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.36	117	387264	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	10.90	152	196288	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	3.62	111	252266	24.87	ppb	0.00
Spiked Amount 25.000			Recovery =	99.464%		
3) 1,2-DCA-D4(S)	4.11	65	243123	23.78	ppb	0.00
Spiked Amount 25.000			Recovery =	95.120%		
5) Toluene-D8(S)	6.73	98	842373	25.22	ppb	0.00
Spiked Amount 25.000			Recovery =	100.896%		
6) 4-Bromofluorobenzene(S)	9.66	95	306172	24.26	ppb	0.00
Spiked Amount 25.000			Recovery =	97.028%		

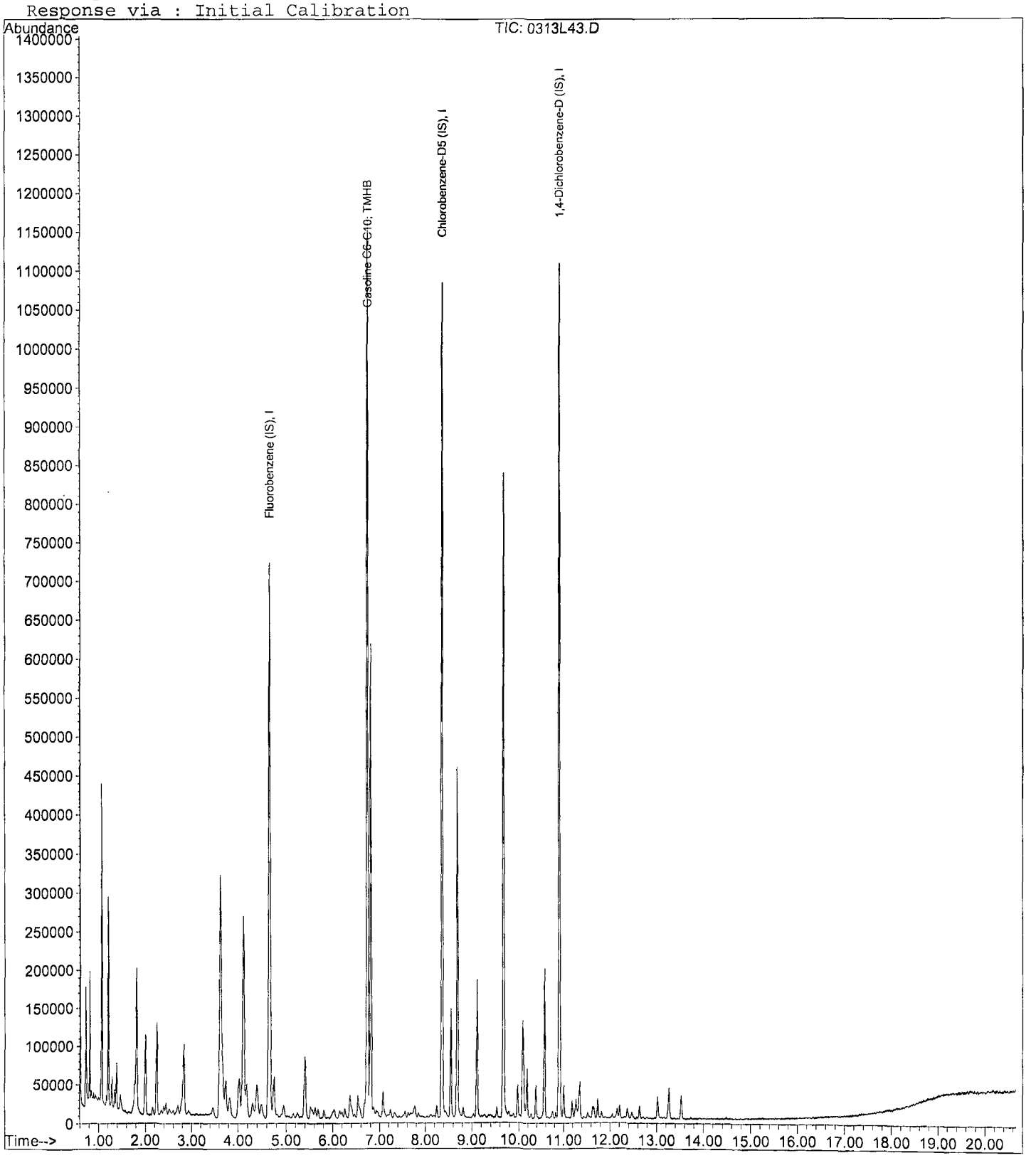
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Data File : M:\LOKI\DATA\200312\0313143.D Vial: 42
Acq On : 14 Mar 20 5:28 Operator:
Sample : 200313B LCS 300ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:15 2020 Quant Results File: LGAS0312.RES

Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LOKI\DATA\200312\0313L44.D Vial: 43
Acq On : 14 Mar 20 5:57 Operator:
Sample : 200313B LCSD 300ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:15 2020 Quant Results File: LGAS0312.RES

Quant Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.64	TIC	703945	25.00	ppb	0.00
3) Chlorobenzene-D5 (IS)	8.36	TIC	1043568	25.00	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	10.90	TIC	1092017	25.00	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline C6-C10	6.73	TIC	17583328m	305.99	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\LOKI\DATA\200312\0313L44.D Vial: 43
Acq On : 14 Mar 20 5:57 Operator:
Sample : 200313B LCSD 300ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:43 2020 Quant Results File: LSUR0312.RES

Quant Method : M:\LOKI\DATA\200312\LSUR0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Mar 13 13:25:49 2020
Response via : Initial Calibration
DataAcq Meth : L8260

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	4.64	96	352320	25.00	ppb	0.00
4) Chlorobenzene-D5 (IS)	8.36	117	376384	25.00	ppb	0.00
7) 1,4-Dichlorobenzene-D (IS)	10.90	152	198208	25.00	ppb	0.00
System Monitoring Compounds						
2) Dibromofluoromethane(S)	3.62	111	244997	24.37	ppb	0.00
Spiked Amount 25.000			Recovery =	97.496%		
3) 1,2-DCA-D4(S)	4.11	65	240474	23.74	ppb	0.00
Spiked Amount 25.000			Recovery =	94.952%		
5) Toluene-D8(S)	6.73	98	810923	24.98	ppb	0.00
Spiked Amount 25.000			Recovery =	99.936%		
6) 4-Bromofluorobenzene(S)	9.66	95	298157	24.30	ppb	0.00
Spiked Amount 25.000			Recovery =	97.220%		

Target Compounds Qvalue

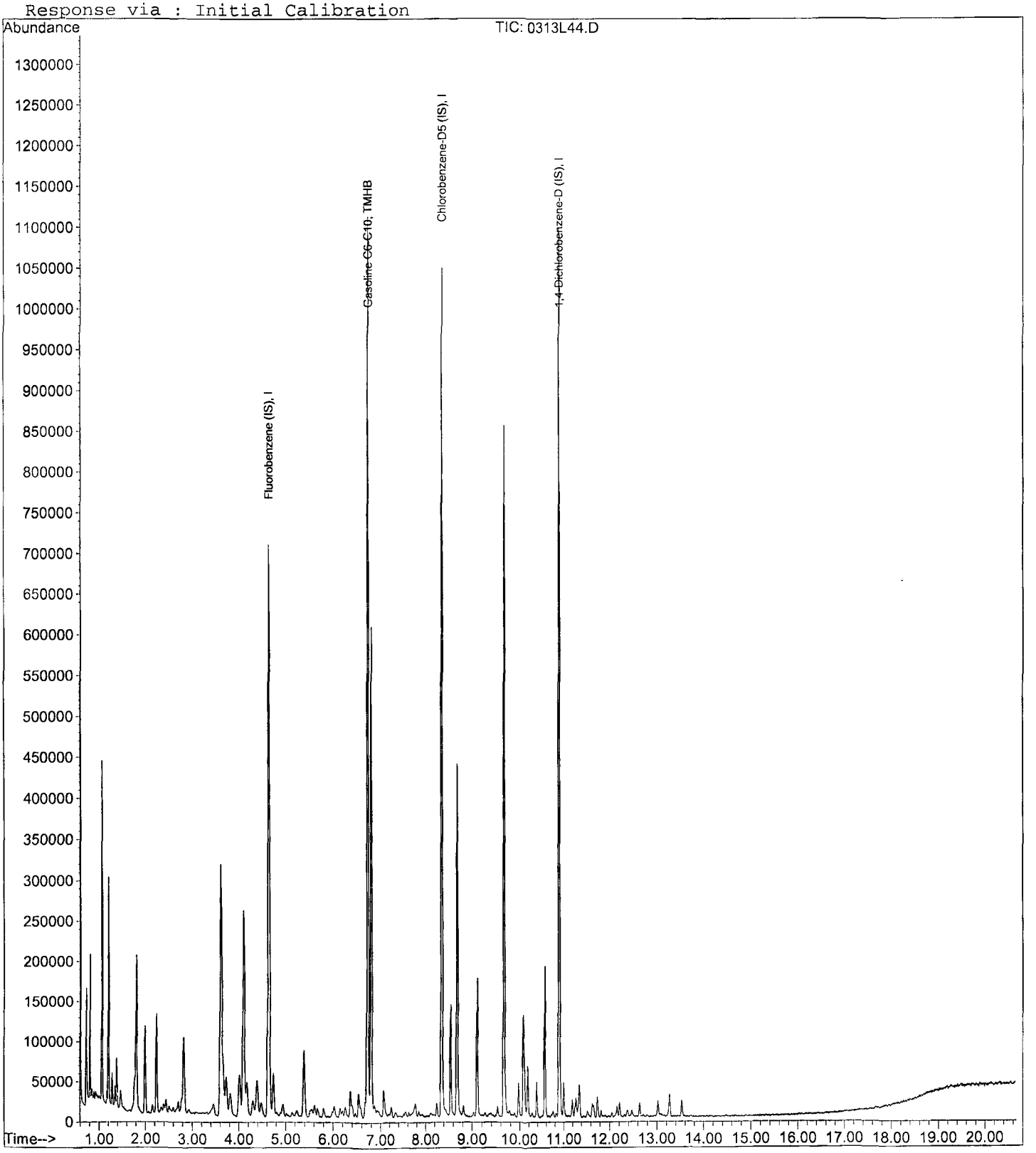
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LOKI\DATA\200312\0313L44.D Vial: 43
Acq On : 14 Mar 20 5:57 Operator:
Sample : 200313B LCSD 300ug/L Inst : Loki
Misc : IS&S:03/10/20 Multiplr: 1.00

Quant Time: Mar 16 11:15 2020 Quant Results File: LGAS0312.RES

Method : M:\LOKI\DATA\200312\LGAS0312.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Mon Mar 16 11:04:50 2020
Response via : Initial Calibration



Loki 8260 Standard Prep

Loki 8260 Water Calibration Curve

0.3ug/L

Prepared: 03/12/20

Expires: 04/11/20

Prepared By (Initials): CH

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	O2SI	0.3ug/L	5	Prepared 03/05/20	05/04/20	N/A	3uL	50mL	P&T Water	0.3
VOA STD. 12	O2SI		5	Prepared 03/05/20	05/04/20	N/A	3uL			0.3
VOA STD. 15	O2SI		5	Prepared 03/02/20	05/01/20	N/A	3uL			0.3
VOA STD. TBA	Various		5	Prepared 12/12/19	04/01/20	N/A	2uL			10

0.5ug/L

Prepared: 03/12/20

Expires: 04/11/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	O2SI	0.5ug/L	5	Prepared 03/05/20	05/04/20	N/A	5uL	50mL	P&T Water	0.5
VOA STD. 12	O2SI		5	Prepared 03/05/20	05/04/20	N/A	5uL			0.5
VOA STD. 15	O2SI		5	Prepared 03/02/20	05/01/20	N/A	5uL			0.5
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	5uL			25

1.0ug/L

Prepared: 03/12/20

Expires: 04/11/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	O2SI	1.0ug/L	5	Prepared 03/05/20	05/04/20	N/A	10uL	50mL	P&T Water	1
VOA STD. 12	O2SI		5	Prepared 03/05/20	05/04/20	N/A	10uL			1
VOA STD. 15	O2SI		5	Prepared 03/02/20	05/01/20	N/A	10uL			1
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	10uL			50

2.0ug/L

Prepared: 03/12/20

Expires: 04/11/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 9	O2SI	2.0ug/L	5	Prepared 03/05/20	05/04/20	N/A	20uL	50mL	P&T Water	2
VOA STD. 12	O2SI		5	Prepared 03/05/20	05/04/20	N/A	20uL			2
VOA STD. 15	O2SI		5	Prepared 03/02/20	05/01/20	N/A	20uL			2
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	15uL			75

5ug/L

Prepared: 03/12/20

Expires: 04/11/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	5ug/L	50	Prepared 03/05/20	05/04/20	N/A	5uL	50mL	P&T Water	5
VOA STD. 8	Phenova		50	Prepared 03/05/20	04/01/20	N/A	5uL			5
VOA STD. 2	O2SI		50	Prepared 03/05/20	05/04/20	N/A	5uL			5
VOA STD. 5	O2SI		50	Prepared 03/02/20	05/01/20	N/A	5uL			5
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	20uL			100

10ug/L

Prepared: 03/12/20

Expires: 04/11/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	10ug/L	50	Prepared 03/05/20	05/04/20	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova		50	Prepared 03/05/20	04/01/20	N/A	10uL			10
VOA STD. 2	O2SI		50	Prepared 03/05/20	05/04/20	N/A	10uL			10
VOA STD. 5	O2SI		50	Prepared 03/02/20	05/01/20	N/A	10uL			10
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	25uL			125

20ug/L

Prepared: 03/12/20

Expires: 04/11/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	20ug/L	50	Prepared 03/05/20	05/04/20	N/A	20uL	50mL	P&T Water	20
VOA STD. 8	Phenova		50	Prepared 03/05/20	04/01/20	N/A	20uL			20
VOA STD. 2	O2SI		50	Prepared 03/05/20	05/04/20	N/A	20uL			20
VOA STD. 5	O2SI		50	Prepared 03/02/20	05/01/20	N/A	20uL			20
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	30uL			150

40ug/L

Prepared: 03/12/20

Expires: 04/11/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	40ug/L	50	Prepared 03/05/20	05/04/20	N/A	40uL	50mL	P&T Water	40
VOA STD. 8	Phenova		50	Prepared 03/05/20	04/01/20	N/A	40uL			40
VOA STD. 2	O2SI		50	Prepared 03/05/20	05/04/20	N/A	40uL			40
VOA STD. 5	O2SI		50	Prepared 03/02/20	05/01/20	N/A	40uL			40
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	35uL			175

100ug/L

Prepared: 03/12/20

Expires: 04/11/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	100ug/L	50	Prepared 03/05/20	05/04/20	N/A	100uL	50mL	P&T Water	100
VOA STD. 8	Phenova		50	Prepared 03/05/20	04/01/20	N/A	100uL			100
VOA STD. 2	O2SI		50	Prepared 03/05/20	05/04/20	N/A	100uL			100
VOA STD. 5	O2SI		50	Prepared 03/02/20	05/01/20	N/A	100uL			100
VOA STD. TBA	Various		250	Prepared 03/05/20	04/01/20	N/A	40uL			200

Loki 8260 Water Second Source (SS)

Prepared: 03/12/20

Prepared By (Initials): CH

Expires: 04/11/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 3	Phenova	8260 Water SS	50	Prepared 03/05/20	05/04/20	N/A	10uL	50mL	P&T Water	10
VOA STD. Gases	O2SI	8260 Water SS	50	Prepared 03/05/20	05/04/20	N/A	10uL			10
VOA STD. 6	Various	8260 Water SS	50	Prepared 03/05/20	03/11/20	N/A	10uL			10
VOA STD. 25	Absolute	8260 Water SS	50	Prepared 03/02/20	05/01/20	N/A	10uL			10
VOA STD. 0	Absolute	8260 Water SS	50	Prepared 03/05/20	05/04/20	N/A	100uL			100
Voa STD. TBA	Various	8260 Water SS	250	Prepared 03/05/20	03/11/20	N/A	25uL			250

8260 Water Continuing Calibrations (CCV)/ Lab Control Spikes (LCS)

Prepared: 03/12/20

Prepared By (Initials): CH

Expires: 03/13/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	CCV/ LCS	50	Prepared 03/05/20	05/04/20	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova	CCV/ LCS	50	Prepared 03/05/20	04/01/20	N/A	10uL			10
VOA STD. 2	O2SI	CCV/ LCS	50	Prepared 03/05/20	05/04/20	N/A	10uL			10
VOA STD. 5	O2SI	CCV/ LCS	50	Prepared 03/02/20	05/01/20	N/A	10uL			10
VOA STD. TBA	Various	CCV/ LCS	250	Prepared 03/05/20	04/01/20	N/A	25uL			125

LCS (X4 Ketones)

Prepared: 03/12/20

Prepared By (Initials): CH

Expires: 03/13/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA STD. 7	Various	LCS X4 Ketones	50	Prepared 03/05/20	05/04/20	N/A	10uL	50mL	P&T Water	10
VOA STD. 8	Phenova	LCS X4 Ketones	50	Prepared 03/05/20	04/01/20	N/A	10uL			10
VOA STD. 2	O2SI	LCS X4 Ketones	50	Prepared 03/05/20	05/04/20	N/A	40uL			40
VOA STD. 5	O2SI	LCS X4 Ketones	50	Prepared 03/02/20	05/01/20	N/A	10uL			10
VOA STD. TBA	Various	LCS X4 Ketones	250	Prepared 03/05/20	04/01/20	N/A	25uL			125

Primary and Secondary Working Standards

Primary Standards

VOA STD 7

Prepared: 03/05/20 A
Expires: 05/04/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Gasses STD	Phenova	ALO-101206	2,000	CL14052-49491	03/05/21	08/31/24	100uL	4mL	Methanol	50
Hexachloroethane	Absolute	70199	1,000	091818-49868	03/05/21	09/18/23	200uL			50
Benzyl Chloride	Accusta	M-8010-01	1,000	011320-49734	03/05/21	01/13/21	200uL			50

VOA STD 8

Prepared: 03/05/20 B
Expires: 04/01/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Additions STD	Phenova	ALO-130175	2,000	CL12744-49507	03/05/21	08/31/20	100uL	4mL	Methanol	50
502.2 Cal. Std.	Phenova	ALO-101200	2,000	CL14381-49690	03/05/21	10/31/24	100uL			50
Vinyl Acetate	Phenova	ALO-101228	2,000	CL15060-49887	03/05/21	04/01/20	100uL			50

VOA STD TBA

Prepared: 03/05/20 C
Expires: 04/01/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Custom VOC Mix	Phenova	ALO-130176	2,000	CL12929-49790	03/05/21	11/30/20	500uL	4mL	Methanol	250
Acrolein	Phenova	ALO-130549	10,000	CL15071-49888	03/05/21	04/01/20	100uL			250

VOA STD 1

Prepared: 03/05/20 D
Expires: 05/04/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
2-CEVE	Absolute	82408	2,000	011320-49737	03/05/21	01/13/23	50	2mL	Methanol	50

VOA STD 2

Prepared: 03/05/20 E
Expires: 05/04/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Ketones Std.	Phenova	ALO-109211	2,000	CL12730-49780	03/05/21	08/31/28	100	4mL	Methanol	50

VOA STD 9

Prepared: 03/05/20 F
Expires: 05/04/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA STD. 7		VOA STD. 9	50	Prepared 03/05/20	03/05/21	N/A	200uL	2mL	Methanol	5
VOA STD. 8			50	Prepared 03/05/20	03/05/21	N/A	200uL			5

VOA STD. 10

Prepared: 03/05/20 G
Expires: 05/04/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA STD. 1		VOA STD. 10	50	Prepared 03/05/20	03/05/21	N/A	200uL	2mL	Methanol	5

VOA STD. 12

Prepared: 03/05/20 H
Expires: 05/04/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA STD. 2		VOA STD. 12	50	Prepared 03/05/20	03/05/21	N/A	200uL	2mL	Methanol	5

Second Source (SS) Standards

VOA STD. 3

Prepared: 03/05/20 I
Expires: 05/04/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Ketones Standard	Phenova	ALO-101211	2,000	CL13994-49785	03/05/21	08/31/29	50uL	2mL	Methanol	50

VOA STD. Gases

Prepared: 03/05/20 J
Expires: 05/04/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
8260 Gases (SS)	Phenova	ALO-101206	2,000	CL14504-49801	03/05/21	10/31/24	50uL	2mL	Methanol	50

VOA STD. 6

Prepared: 03/05/20 K
Expires: 03/11/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
502.2 Calibration STD. (54-compounds)	Phenova	ALO-101200	2,000	CL14379-49508	02/18/21	10/31/24	50uL	2mL	Methanol	50
Vinyl Acetate	Phenova	ALO-101228	2,000	CL14964-49837	02/18/21	03/11/20	50uL			50
Hexachloroethane	Accustan	AS-E0011	1,000	219081767-49740	03/05/21	06/28/29	100uL			50
Benzyl Chloride	Accustan	M-8010-01	200	219041664-49375	03/05/21	05/22/21	500uL			50

VOA STD. TBA

Prepared: 03/05/20 L
Expires: 03/11/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Custom VOA Mix (4-3)	Phenova	ALO-130176	2,000	CL12929-49684	03/05/21	11/30/20	250uL	2mL	Methanol	250
Acrolein	Phenova	ALO-101224	10,000	CL14963-49838	02/18/21	03/11/20	50uL			250

VOA STD. 0

Prepared: 03/05/20 M
Expires: 05/04/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Addition STD.	Phenova	ALO-130175	2,000	CL14058-49851	03/05/21	08/31/21	50uL	2mL	Methanol	50

VOA STD. 2-CEVE

Prepared: 03/05/20 N
Expires: 05/04/20
Prepared By (Initials): CH
Methanol Lot No. DW117-US-0095

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
2-CEVE (SS)	Absolute	82408	2,000	121119-49635	02/18/21	12/11/22	50uL	2mL	Methanol	50

Loki Gas Standard Prep

Gas Primary Working Standard

Prepared: 01/06/20 — **Prepared By (Initials): CH**

Expires: 01/05/21

Methanol Lot No. 58019-00962

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
50,000ug/mL Gas STD	Restek	30205	50,000	A0132443-39859	01/06/21	12/31/24	80uL	2mL	Methanol	2,000

Gas Second Source (SS) Working Standard

Prepared: 01/06/20 — **Prepared By (Initials): CH**

Expires: 01/05/21

Methanol Lot No. 58019-00962

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Gasoline (50,000ppm)	Phenova	ALO-101543	50,000	CL11750-40999	01/06/21	02/28/27	80uL	2mL	Methanol	2,000

Loki Gas Calibration Curve

Prepared: 03/13/20 — **Prepared By (Initials): CH**

Expires: 05/12/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
VOA Gasses Standards	Phenova	20ug/L	2,000	Prepared 01/06/20	01/05/21	N/A	1uL	100mL	P&T Water	20
VOA Gasses Standards	Phenova	50ug/L	2,000	Prepared 01/06/20	01/05/21	N/A	2.5uL	100mL	P&T Water	50
VOA Gasses Standards	Phenova	100ug/L	2,000	Prepared 01/06/20	01/05/21	N/A	5uL	100mL	P&T Water	100
VOA Gasses Standards	Phenova	300ug/L	2,000	Prepared 01/06/20	01/05/21	N/A	15uL	100mL	P&T Water	300
VOA Gasses Standards	Phenova	600ug/L	2,000	Prepared 01/06/20	01/05/21	N/A	30uL	100mL	P&T Water	600
VOA Gasses Standards	Phenova	800ug/L	2,000	Prepared 01/06/20	01/05/21	N/A	40uL	100mL	P&T Water	800
VOA Gasses Standards	Phenova	1,000ug/L	2,000	Prepared 01/06/20	01/05/21	N/A	50uL	100mL	P&T Water	1,000

Loki Gas Second Source

Prepared: 03/13/20 — **Prepared By (Initials): CH**

Expires: 05/12/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/L)
50,000ug/mL Gas STD	Phenova	SS 300ug/L	2,000	Prepared 01/06/20	01/05/21	N/A	15uL	100mL	P&T Water	300

Loki Gas Continuing Calibrations/Lab Control Spikes

Prepared: 03/13/20 — **Prepared By (Initials): CH**

Expires: 03/14/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier P/N#	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr)	Exp. Date (Manufacturers)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
VOA Gasses Standards	Phenova	300ug/L	2,000	Prepared 01/06/20	01/05/21	N/A	15uL	100mL	P&T Water	300

Injection Log

Directory: M:\LOKI\DATA\200312\

Vial	FileName	Multiplier	SampleName	Misc Info	Injected
4	0312L10.D	1	0.3ug/L VOC STD 3/12/20	IS&S:03/10/20	12 Mar 20 12:10
5	0312L11.D	1	0.5ug/L VOC STD 3/12/20	IS&S:03/10/20	12 Mar 20 12:39
6	0312L12.D	1	1.0ug/L VOC STD 3/12/20	IS&S:03/10/20	12 Mar 20 13:07
7	0312L13.D	1	2.0ug/L VOC STD 3/12/20	IS&S:03/10/20	12 Mar 20 13:36
8	0312L14.D	1	5.0ug/L VOC STD 3/12/20	IS&S:03/10/20	12 Mar 20 14:05
9	0312L15.D	1	10ug/L VOC STD 3/12/20	IS&S:03/10/20	12 Mar 20 14:33
10	0312L16.D	1	20ug/L VOC STD 3/12/20	IS&S:03/10/20	12 Mar 20 15:02
11	0312L17.D	1	40ug/L VOC STD 3/12/20	IS&S:03/10/20	12 Mar 20 15:30
12	0312L18.D	1	100ug/L VOC STD 3/12/20	IS&S:03/10/20	12 Mar 20 15:59
28	0313L29.D	1	20ug/L GAS STD 3/13/20	IS&S:03/10/20	13 Mar 20 22:48
29	0313L30.D	1	50ug/L GAS STD 3/13/20	IS&S:03/10/20	13 Mar 20 23:17
30	0313L31.D	1	100ug/L GAS STD 3/13/20	IS&S:03/10/20	13 Mar 20 23:46
31	0313L32.D	1	300ug/L GAS STD 3/13/20	IS&S:03/10/20	14 Mar 20 00:14
32	0313L33.D	1	600ug/L GAS STD 3/13/20	IS&S:03/10/20	14 Mar 20 00:43
33	0313L34.D	1	800ug/L GAS STD 3/13/20	IS&S:03/10/20	14 Mar 20 1:11
34	0313L35.D	1	1000ug/L GAS STD 3/13/20	IS&S:03/10/20	14 Mar 20 1:40
36	0313L37.D	1	(SS) 300ug/L GAS STD 3/13/20	IS&S:03/10/20	14 Mar 20 2:37
41	0313L42.D	1	200313B CCV 300ug/L	IS&S:03/10/20	14 Mar 20 5:00
42	0313L43.D	1	200313B LCS 300ug/L	IS&S:03/10/20	14 Mar 20 5:28
43	0313L44.D	1	200313B LCSD 300ug/L	IS&S:03/10/20	14 Mar 20 5:57
44	0313L45.D	1	200313B Blk	IS&S:03/10/20	14 Mar 20 6:26
47	0313L48.D	1	BA08369W01	IS&S:03/10/20	14 Mar 20 7:51
48	0313L49.D	1	BA08370W01	IS&S:03/10/20	14 Mar 20 8:20
49	0313L50.D	1	BA08371W01	IS&S:03/10/20	14 Mar 20 8:48
57	0313L58.D	1	Ending CCV 300ug/L 3/13/20	IS&S:03/10/20	14 Mar 20 12:37

ORGANICS
Calibration Data

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 03/11/20
Matrix: Instrument: 7890
Initials:

			0311R03.D	0311R04.D	0311R07.D	0311R08.D	0311R09 D	0311R11.D	0311R13 D								
		Compound	1	2	3	4	5	6	7				Avg	%RSD	Type	r^2	Q
1	ATML	Methane	29734	15773	13580	17096	20094	18490	14651				18488	29	ATM	0.995	
2	ATML	Ethane	23899	13476	11688	13961	16062	14509	11867				15066	28	ATM	0.996	
3	ATML	Ethene	18360	10463	8970	10401	12628	10583	9230				11519	28	ATM	0.998	
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2.435739

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200311RS\0311R03.D Vial: 3
Acq On : 11 Mar 20 13:00 Operator: GA
Sample : RSK Std 1 03/11/2020 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 11 13:42 2020 Quant Results File: RSK0311.RES

Method : G:\ROCKY\DATA\200311RS\RSK0311.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Mar 11 13:35:17 2020
Response via : Multiple Level Calibration

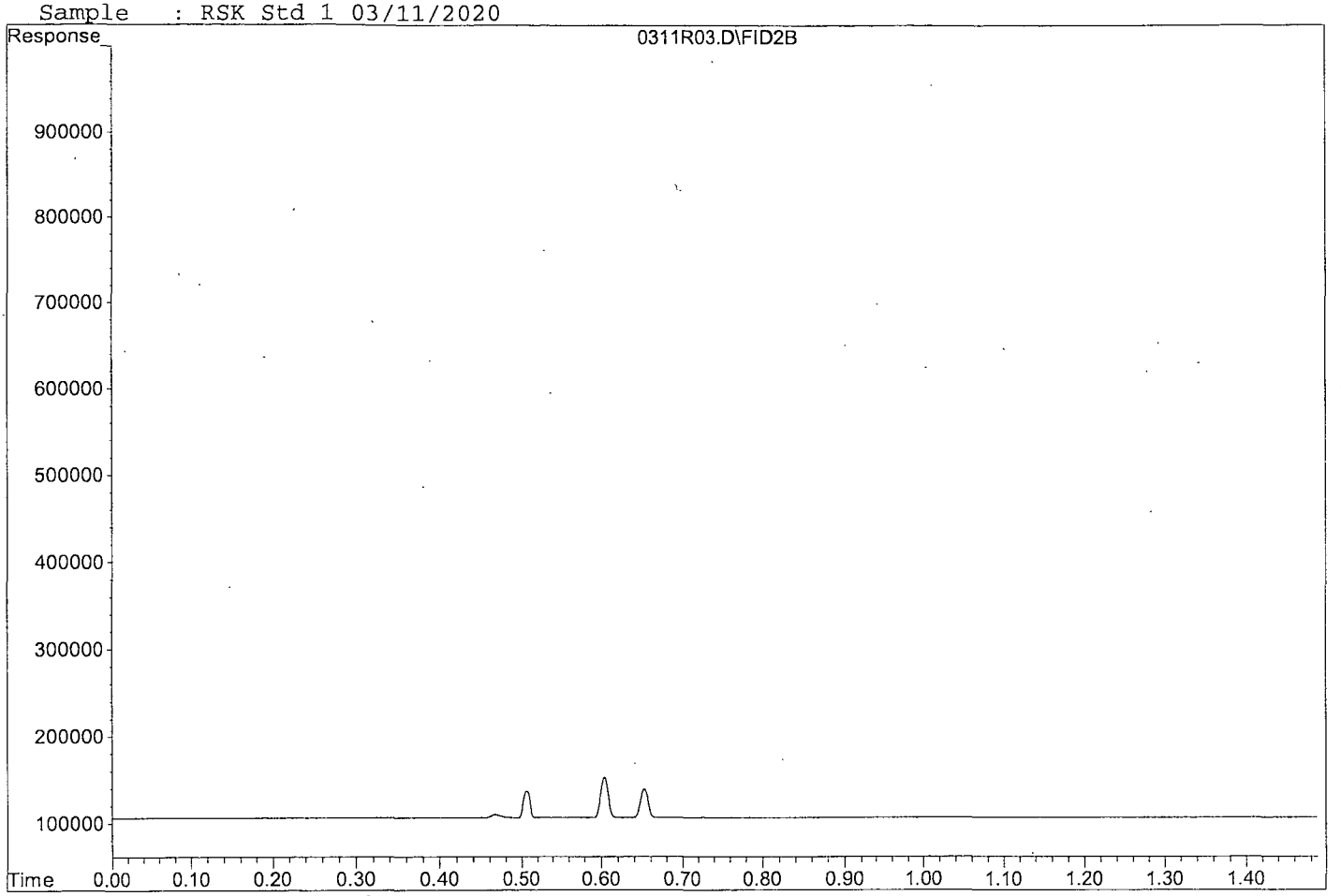
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.51	30923	N.D.	ppb
2) ATM Ethane	0.60	46722	N.D.	ppb
3) ATM Ethene	0.65	33507	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\ROCKY\DATA\200311RS\0311R03.D
Sample : RSK Std 1 03/11/2020



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200311RS\0311R04.D Vial: 4
Acq On : 11 Mar 20 13:03 Operator: GA
Sample : RSK Std 2 03/11/2020 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 11 13:42 2020 Quant Results File: RSK0311.RES

Method : G:\ROCKY\DATA\200311RS\RSK0311.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Mar 11 13:35:17 2020
Response via : Multiple Level Calibration

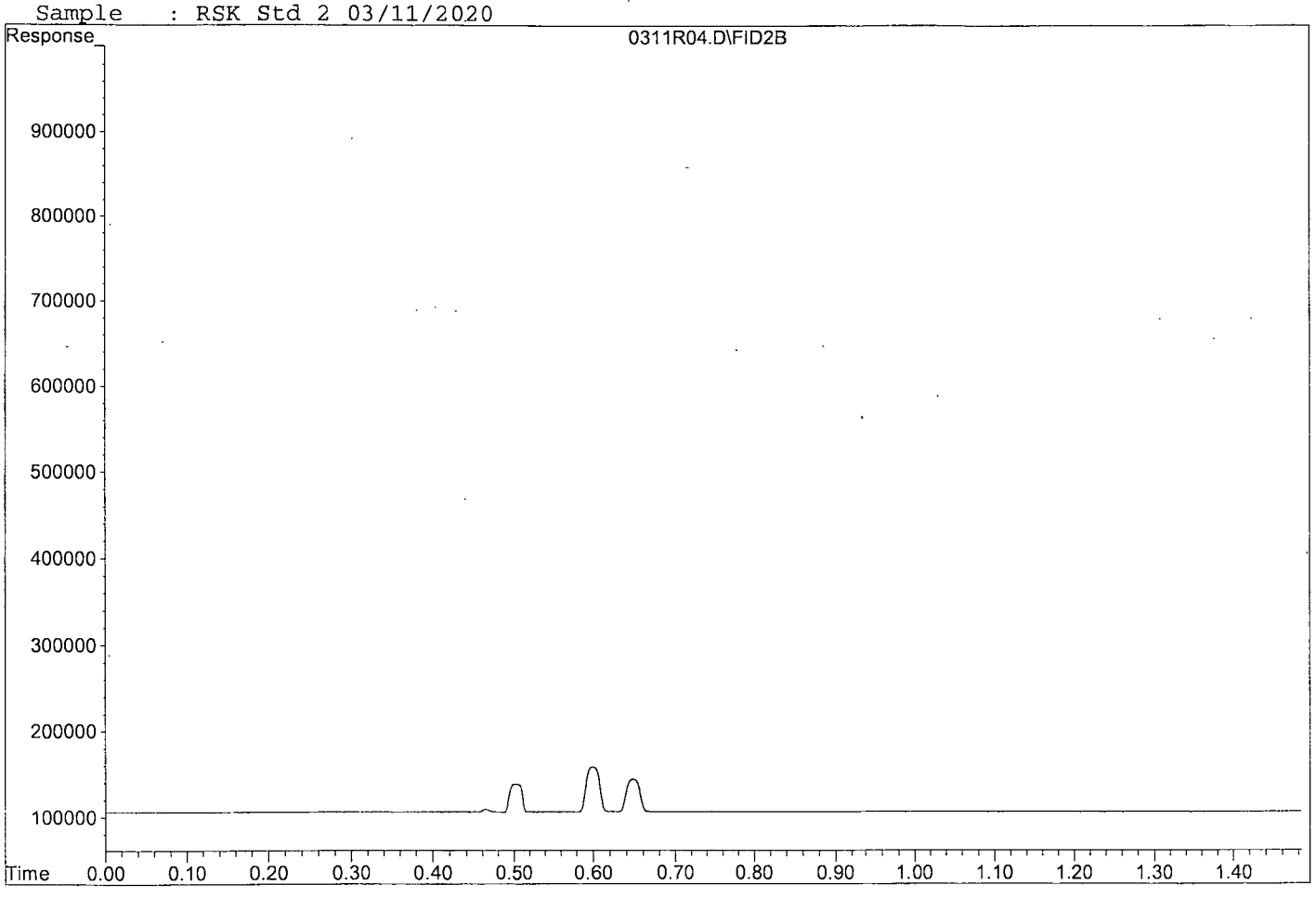
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.50	32807	N.D.	ppb
2) ATM Ethane	0.60	52625	N.D.	ppb
3) ATM Ethene	0.65	38189	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\ROCKY\DATA\200311RS\0311R04.D
Sample : RSK Std 2 03/11/2020



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200311RS\0311R07.D Vial: 7
Acq On : 11 Mar 20 13:12 Operator: GA
Sample : RSK Std 3 03/11/2020 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 11 13:42 2020 Quant Results File: RSK0311.RES

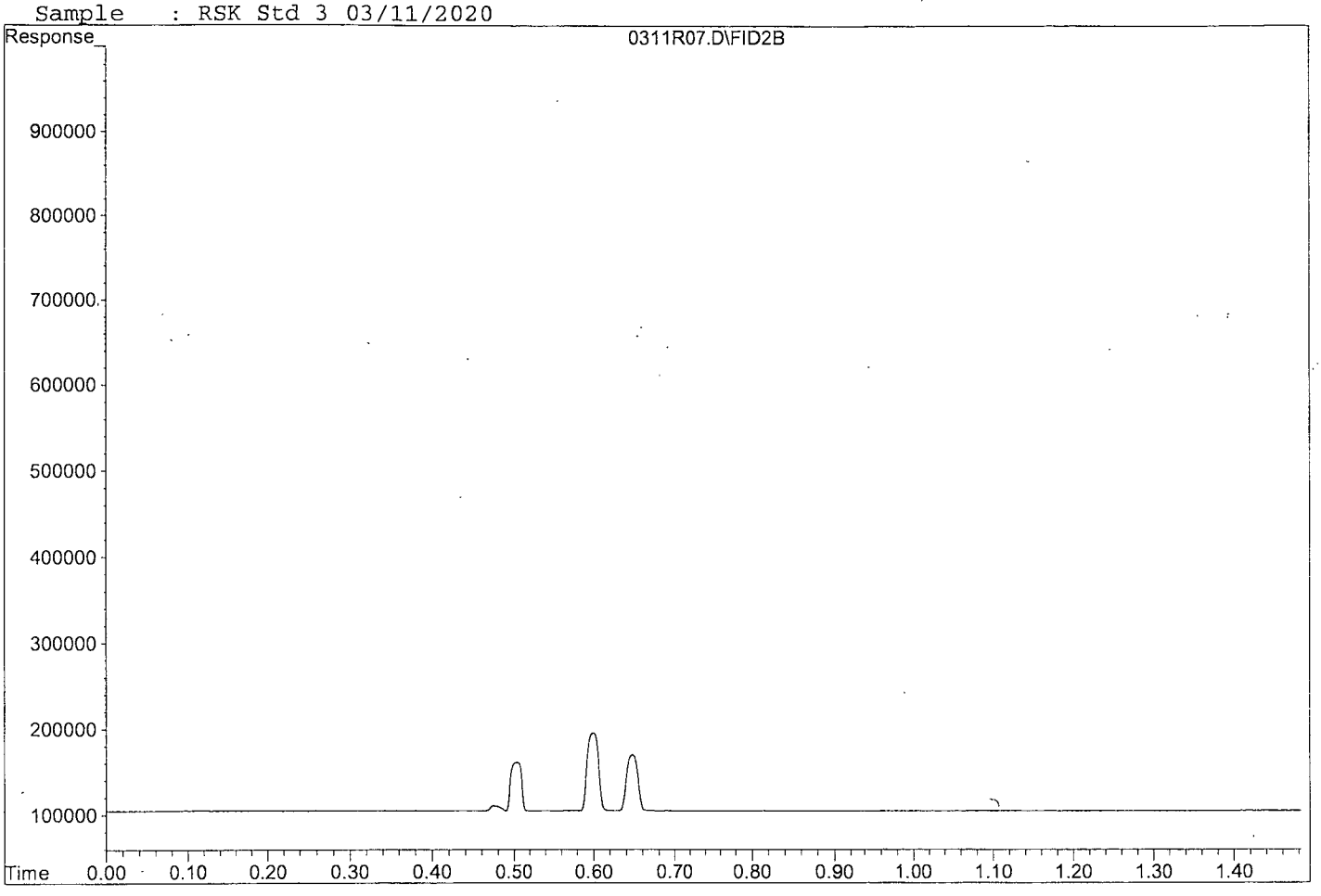
Method : G:\ROCKY\DATA\200311RS\RSK0311.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Mar 11 13:35:17 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
Target Compounds				
1) ATM Methane	0.50	56629	N.D.	ppb
2) ATM Ethane	0.60	91168	N.D.	ppb
3) ATM Ethene	0.65	65481	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200311RS\0311R07.D
Sample : RSK Std 3 03/11/2020



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200311RS\0311R08.D Vial: 8
Acq On : 11 Mar 20 13:15 Operator: GA
Sample : RSK Std 4 03/11/2020 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 17 11:28 2020 Quant Results File: RSK0311.RES

Method : G:\ROCKY\DATA\200311RS\RSK0311.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Mar 17 11:20:36 2020
Response via : Multiple Level Calibration

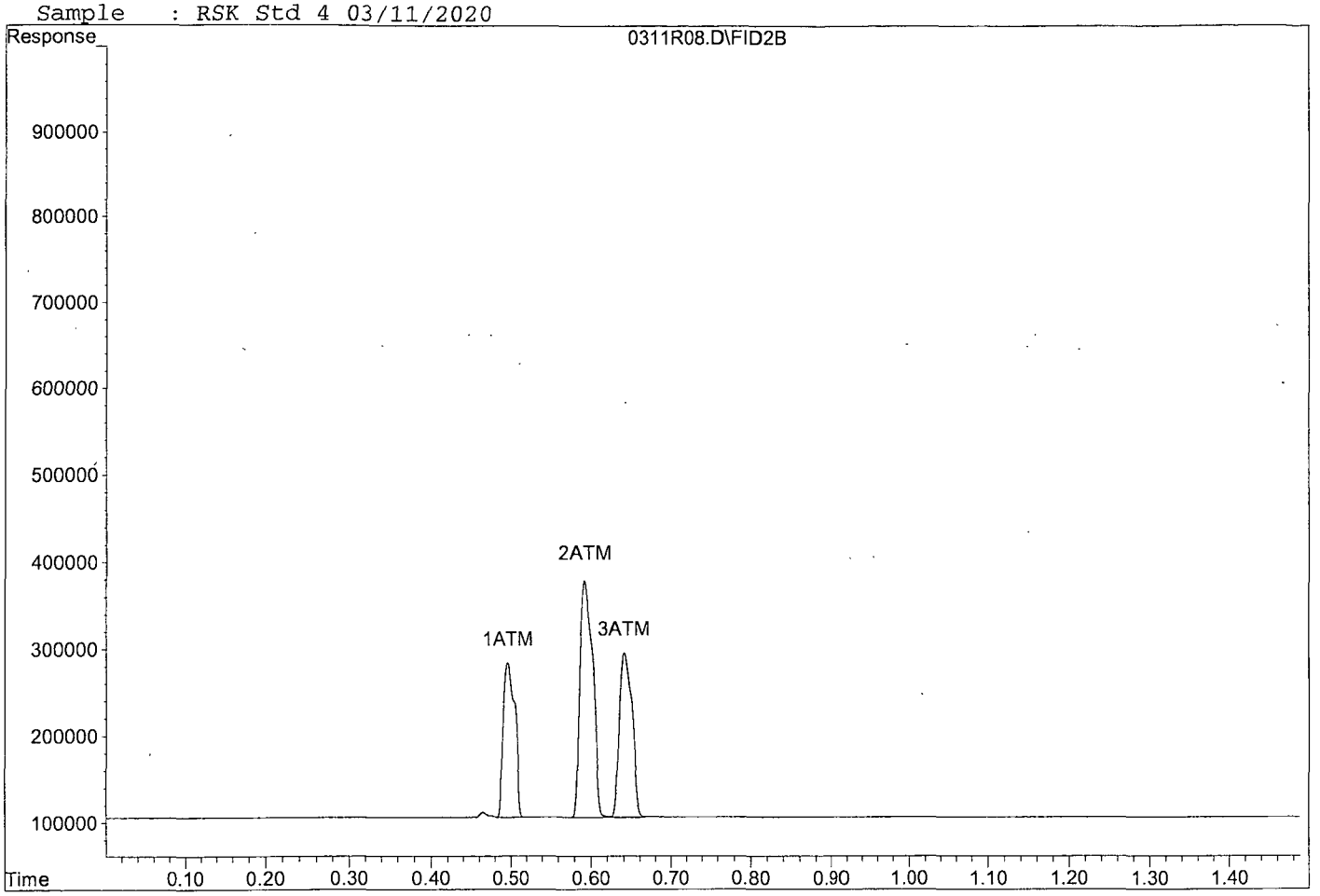
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.50	178225	11.047 ppb
2) ATM Ethane	0.59	272861	23.257 ppb
3) ATM Ethene	0.64	189615	23.557 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200311RS\0311R08.D
Sample : RSK Std 4 03/11/2020



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200311RS\0311R09.D Vial: 9
Acq On : 11 Mar 20 13:17 Operator: GA
Sample : RSK Std 5 03/11/2020 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 11 13:42 2020 Quant Results File: RSK0311.RES

Method : G:\ROCKY\DATA\200311RS\RSK0311.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Mar 11 13:35:17 2020
Response via : Multiple Level Calibration

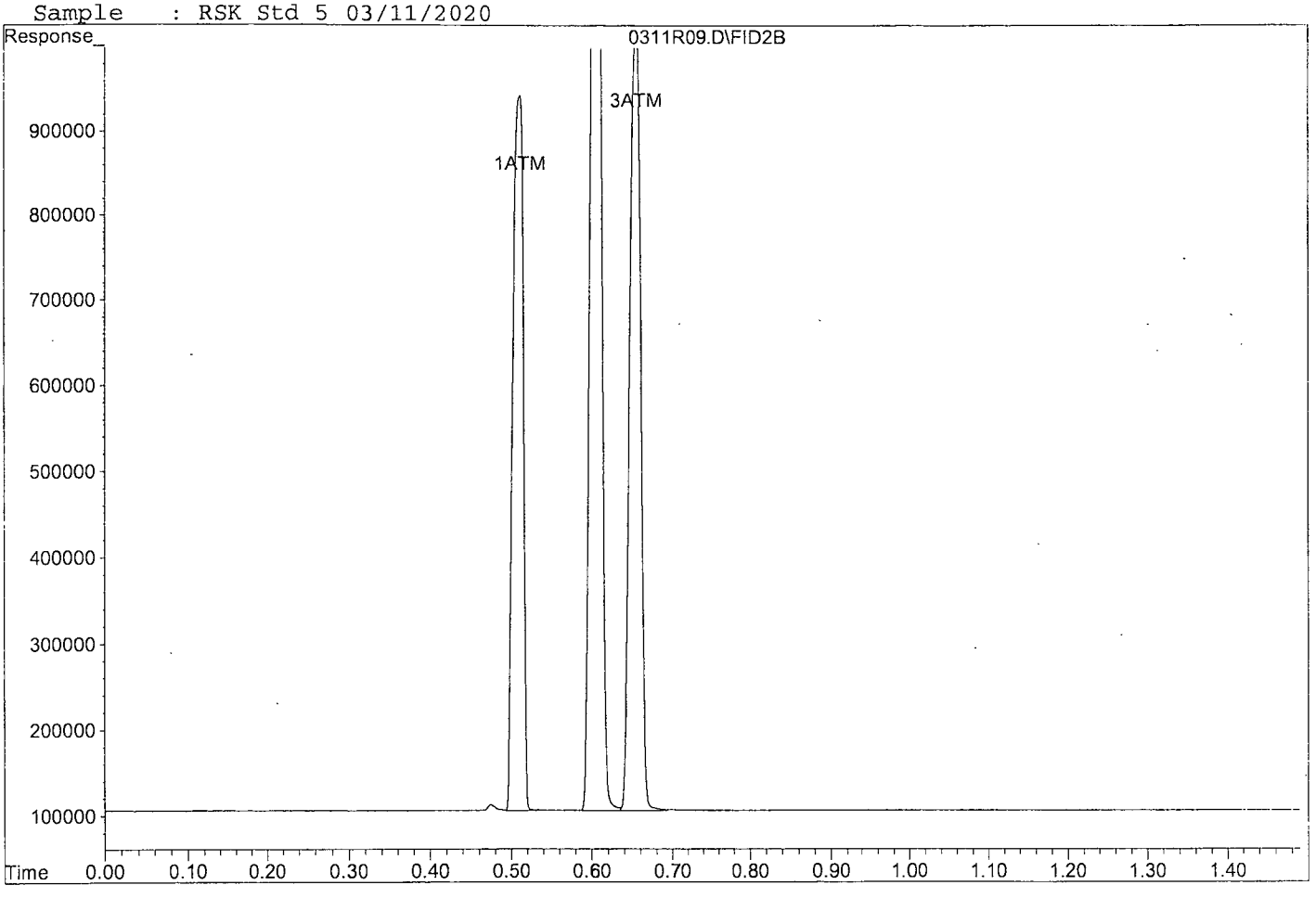
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.51	837925	101.270 ppb
2) ATM Ethane	0.61	1255676	189.317 ppb
3) ATM Ethene	0.66	920839	182.581 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200311RS\0311R09.D
Sample : RSK Std 5 03/11/2020



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200311RS\0311R11.D Vial: 11
Acq On : 11 Mar 20 13:22 Operator: GA
Sample : RSK Std 6 03/11/2020 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 11 13:42 2020 Quant Results File: RSK0311.RES

Method : G:\ROCKY\DATA\200311RS\RSK0311.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Mar 11 13:35:17 2020
Response via : Multiple Level Calibration

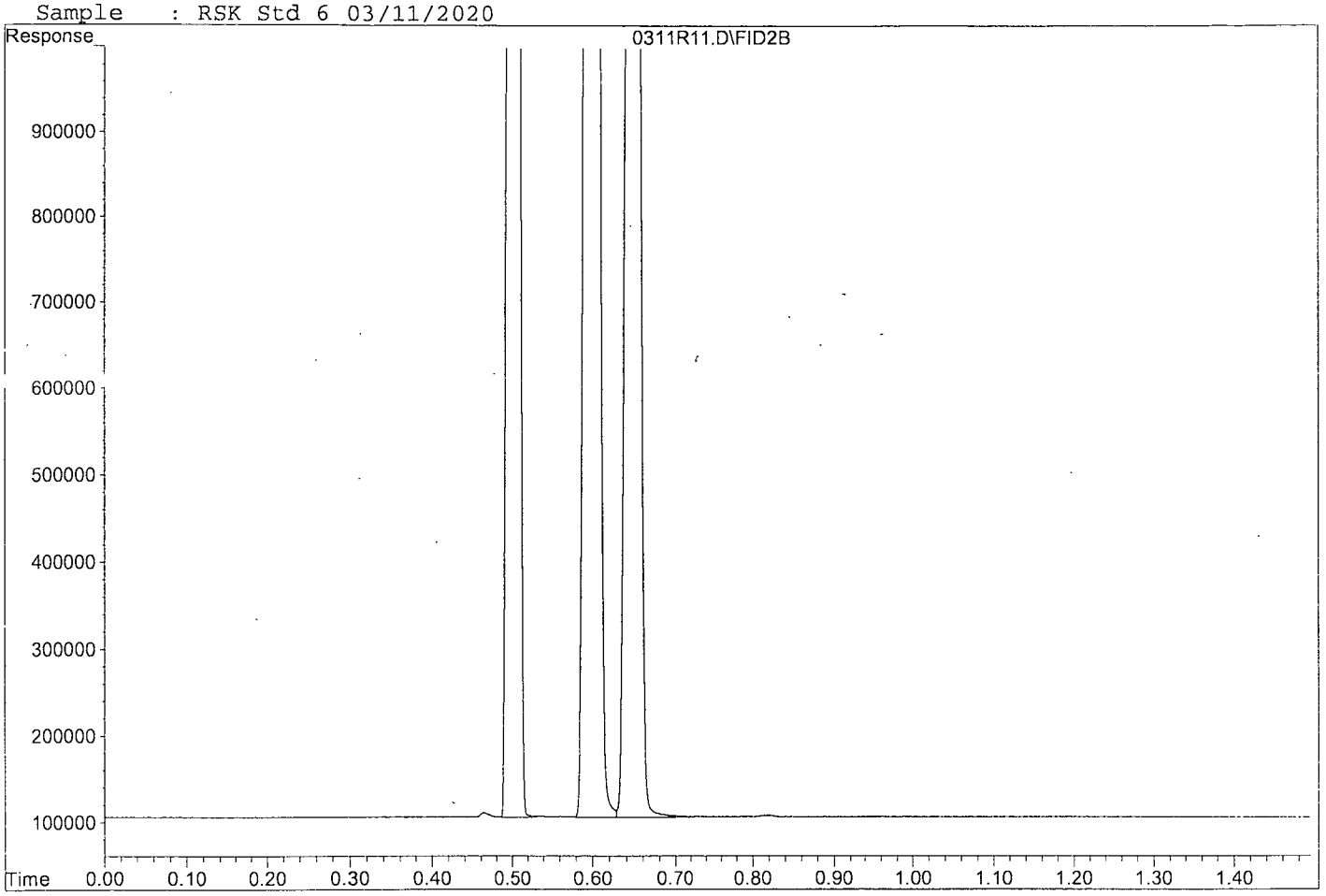
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.50	1927571	250.295 ppb
2) ATM Ethane	0.60	2835810	456.301 ppb
3) ATM Ethene	0.65	1929291	401.895 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200311RS\0311R11.D
Sample : RSK Std 6 03/11/2020



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200311RS\0311R13.D Vial: 13
Acq On : 11 Mar 20 13:28 Operator: GA
Sample : RSK Std 7 03/11/2020 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 17 11:30 2020 Quant Results File: RSK0311.RES

Method : G:\ROCKY\DATA\200311RS\RSK0311.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Mar 17 11:20:36 2020
Response via : Multiple Level Calibration

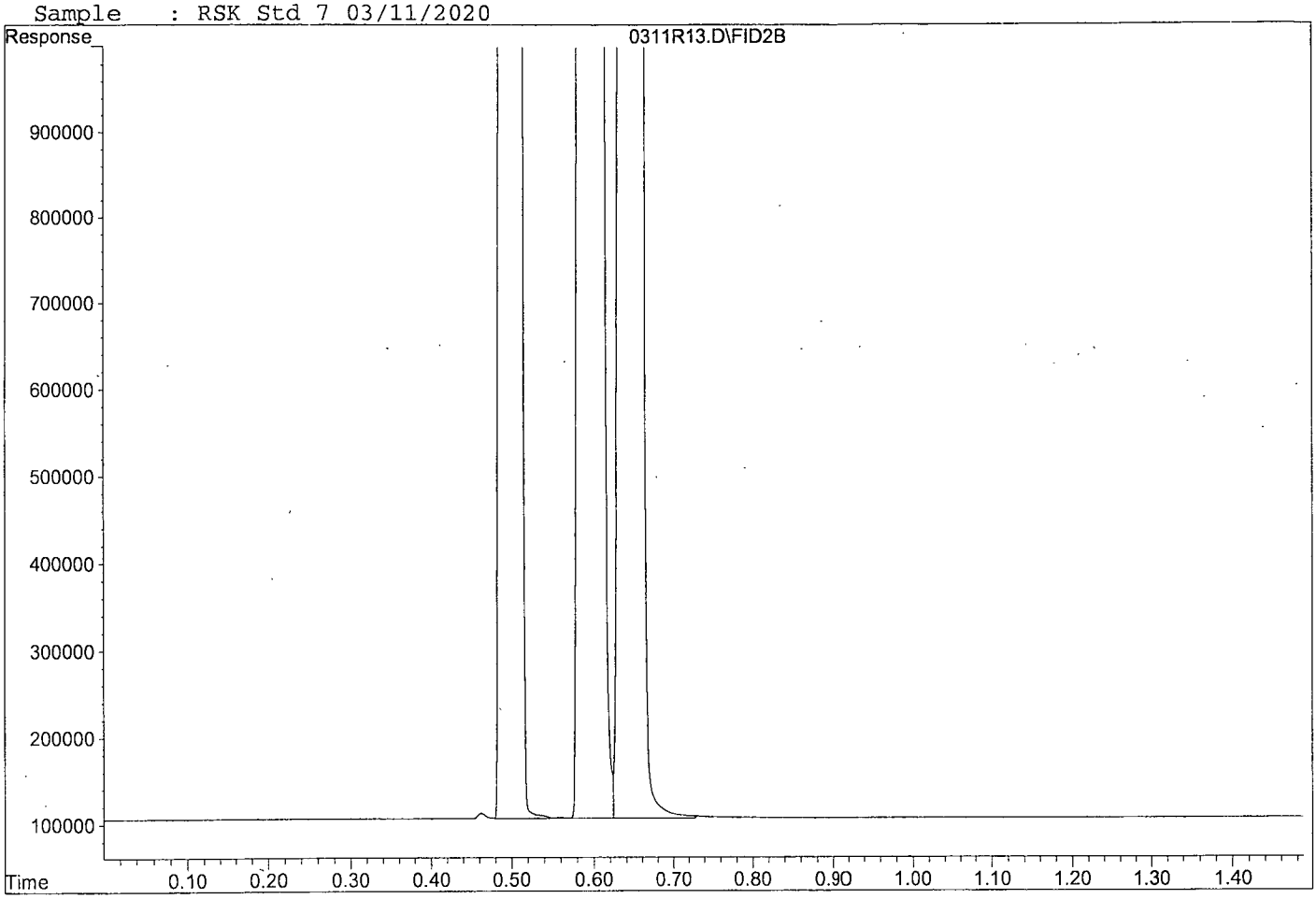
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

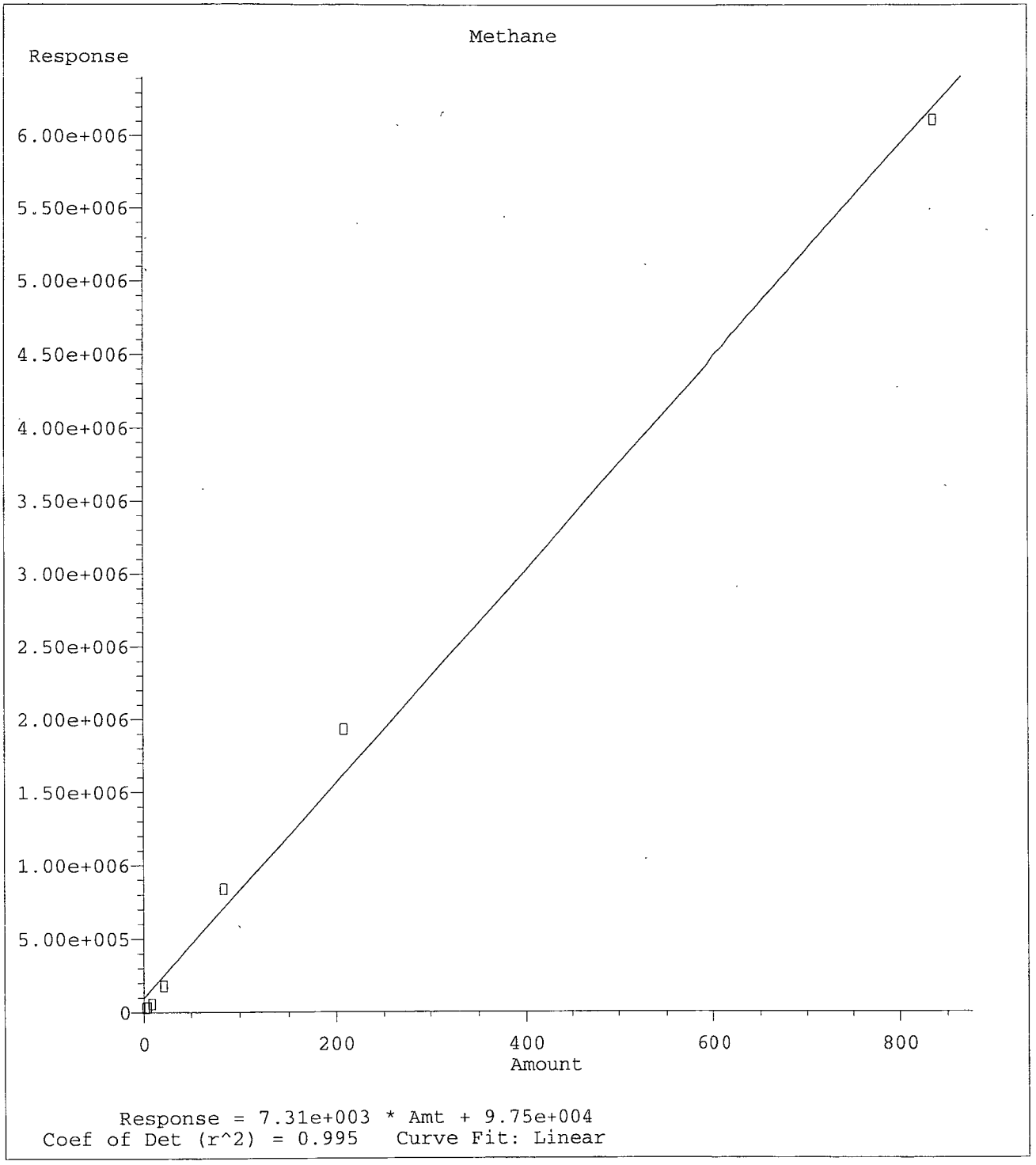
Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.50	6109561	822.241	ppb
2) ATM Ethane	0.60	9277052	1544.634	ppb
3) ATM Ethene	0.64	6730405	1446.024	ppb

Target Compounds

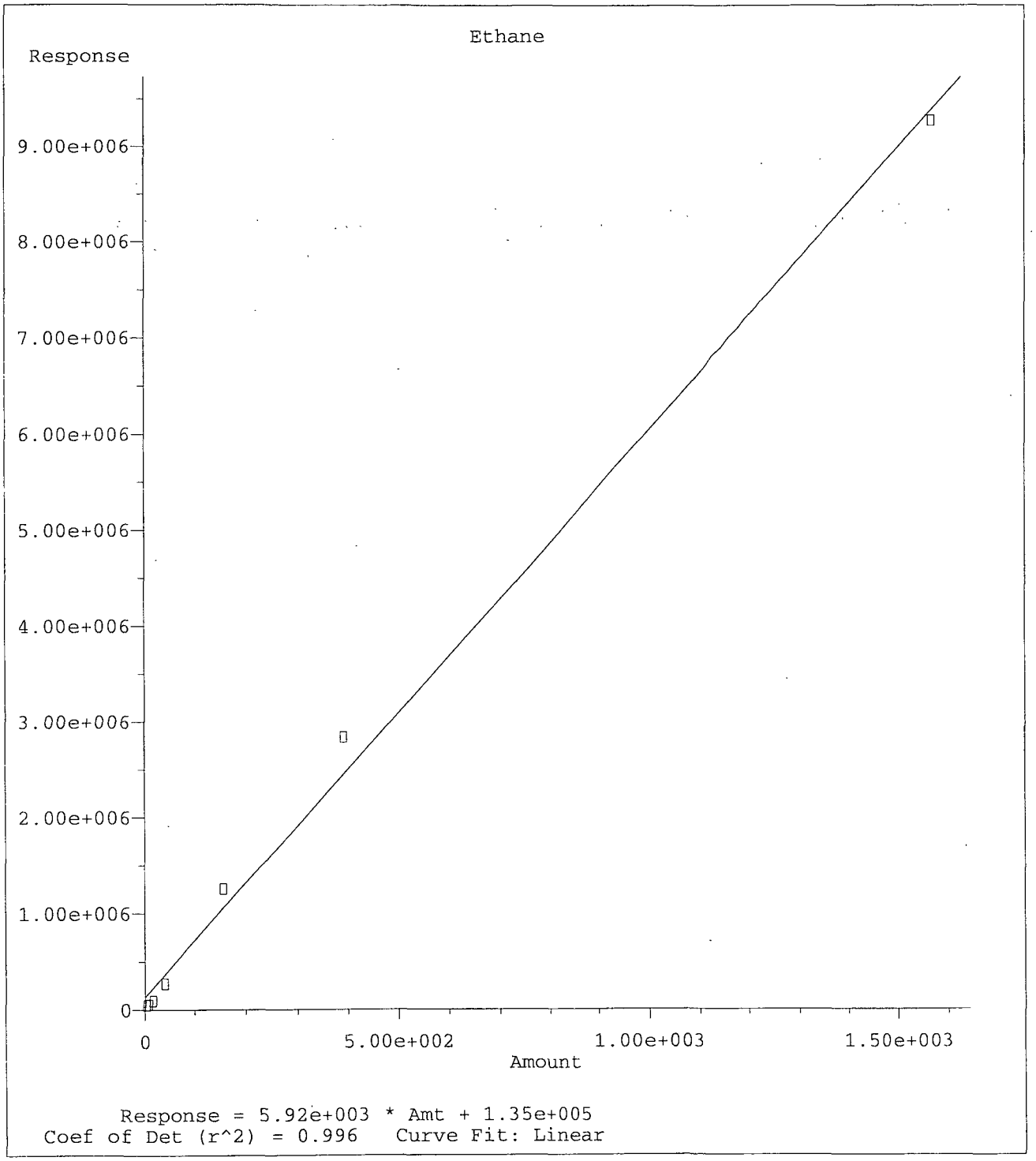
(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200311RS\0311R13.D
Sample : RSK Std 7 03/11/2020

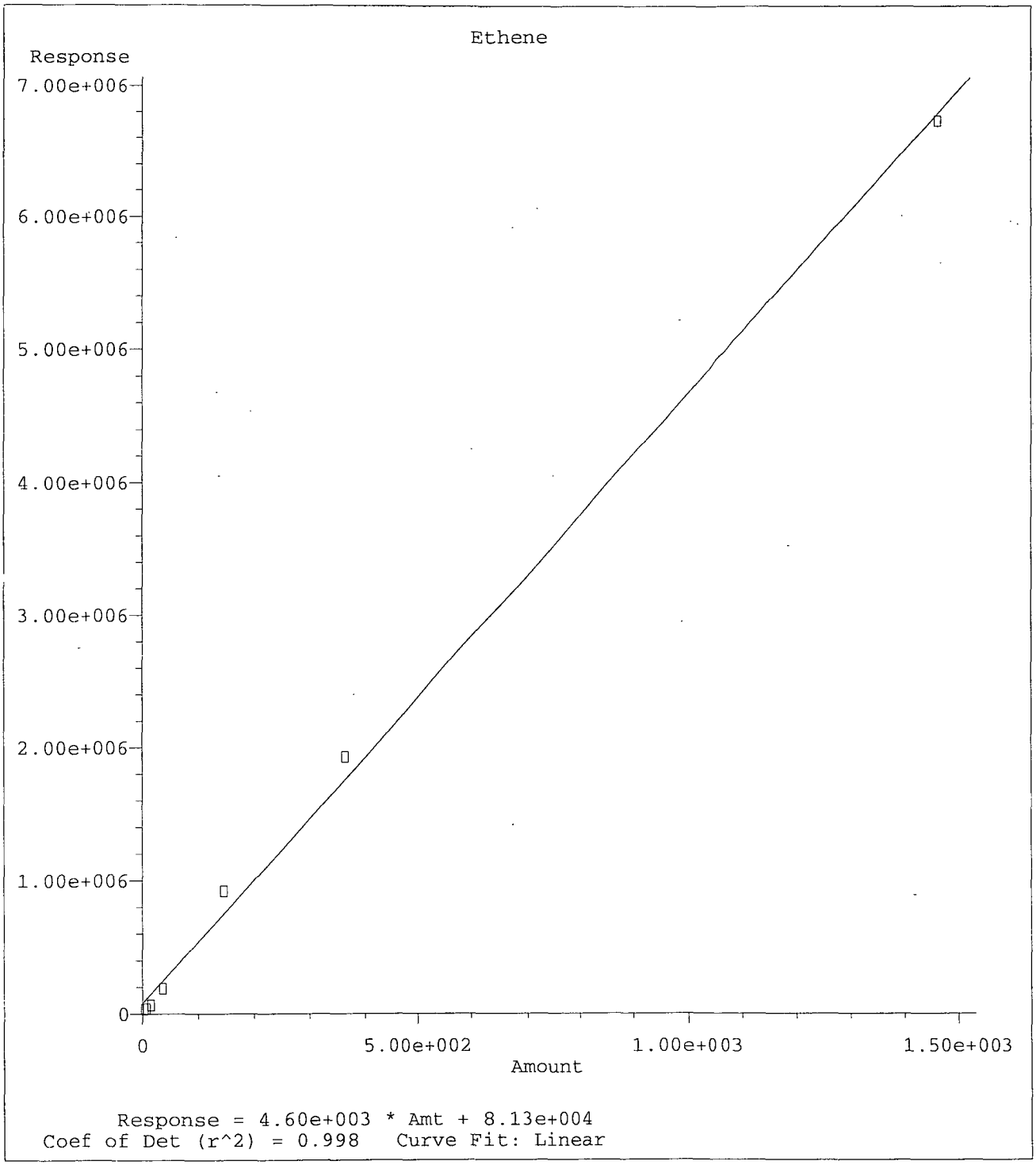




Method Name: G:\ROCKY\DATA\200311RS\RSK0311.M
Calibration Table Last Updated: Wed Mar 11 13:35:17 2020



Method Name: G:\ROCKY\DATA\200311RS\RSK0311.M
Calibration Table Last Updated: Wed Mar 11 13:35:17 2020



Method Name: G:\ROCKY\DATA\200311RS\RSK0311.M
Calibration Table Last Updated: Wed Mar 11 13:35:17 2020

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 03/11/20
Instrument: 7890
Initial Cal. Date: 03/11/20
Data File: 0311R15.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	18488	16733	9.5	ATML	1.6
2	ATML	Ethane	15066	13396	11	ATML	1.4
3	ATML	Ethene	11519	10439	9.4	ATML	1.4
4							
5							
6							
7							
8							
9							
10							
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12							
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37							
38							
39							
40							
		Average			10.0		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200311RS\0311R15.D Vial: 15
Acq On : 11 Mar 20 13:38 Operator: GA
Sample : RSK SS Std 5 03/11/2020 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 11 13:40 2020 Quant Results File: RSK0311.RES

Method : G:\ROCKY\DATA\200311RS\RSK0311.M (Chemstation Integrator)
Title : RSK 175
Last Update : Wed Mar 11 13:35:17 2020
Response via : Multiple Level Calibration

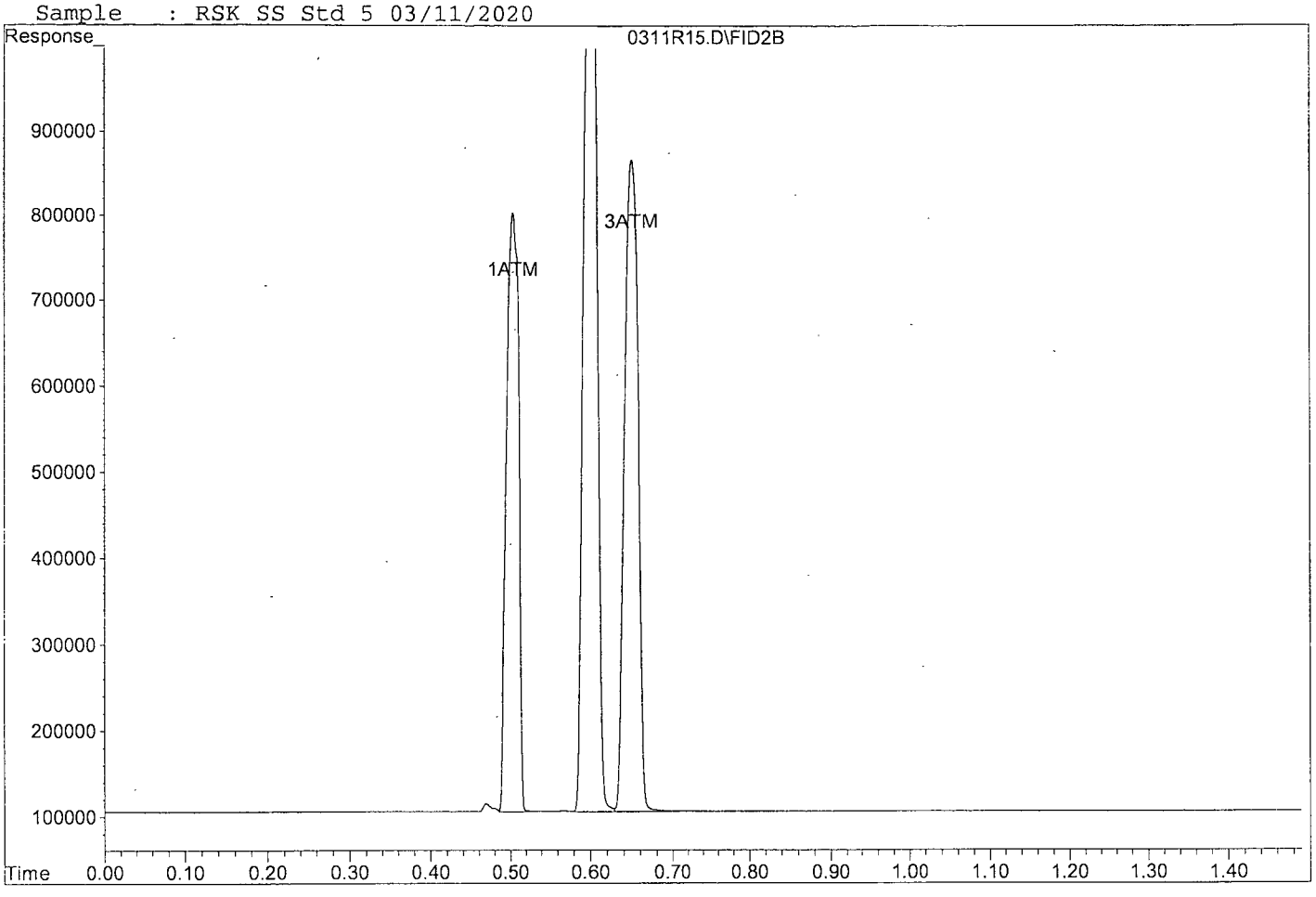
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.50	697755	82.100 ppb
2) ATM Ethane	0.60	1047226	154.096 ppb
3) ATM Ethene	0.65	761233	147.870 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200311RS\0311R15.D
Sample : RSK SS Std 5 03/11/2020



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 03/17/20
Instrument: 7890
Initial Cal. Date: 03/11/20
Data File: 0317R01.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	18488	17799	3.7	ATML	5.7
2	ATML	Ethane	15066	15039	0.18	ATML	12
3	ATML	Ethene	11519	12382	7.5	ATML	23
4							
5							
6							
7							
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9							
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11							
12							
13							
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37							
38							
39							
40							
		Average			3.8		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200311RS\0317R01.D Vial: 1
Acq On : 17 Mar 20 10:13 Operator: GA
Sample : 200317A CCV/LCS RSK Std 5 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 17 10:15 2020 Quant Results File: RSK0311.RES

Method : G:\ROCKY\DATA\200311RS\RSK0311.M (Chemstation Integrator)
Title : RSK 175
Last Update : Thu Mar 12 09:46:32 2020
Response via : Multiple Level Calibration

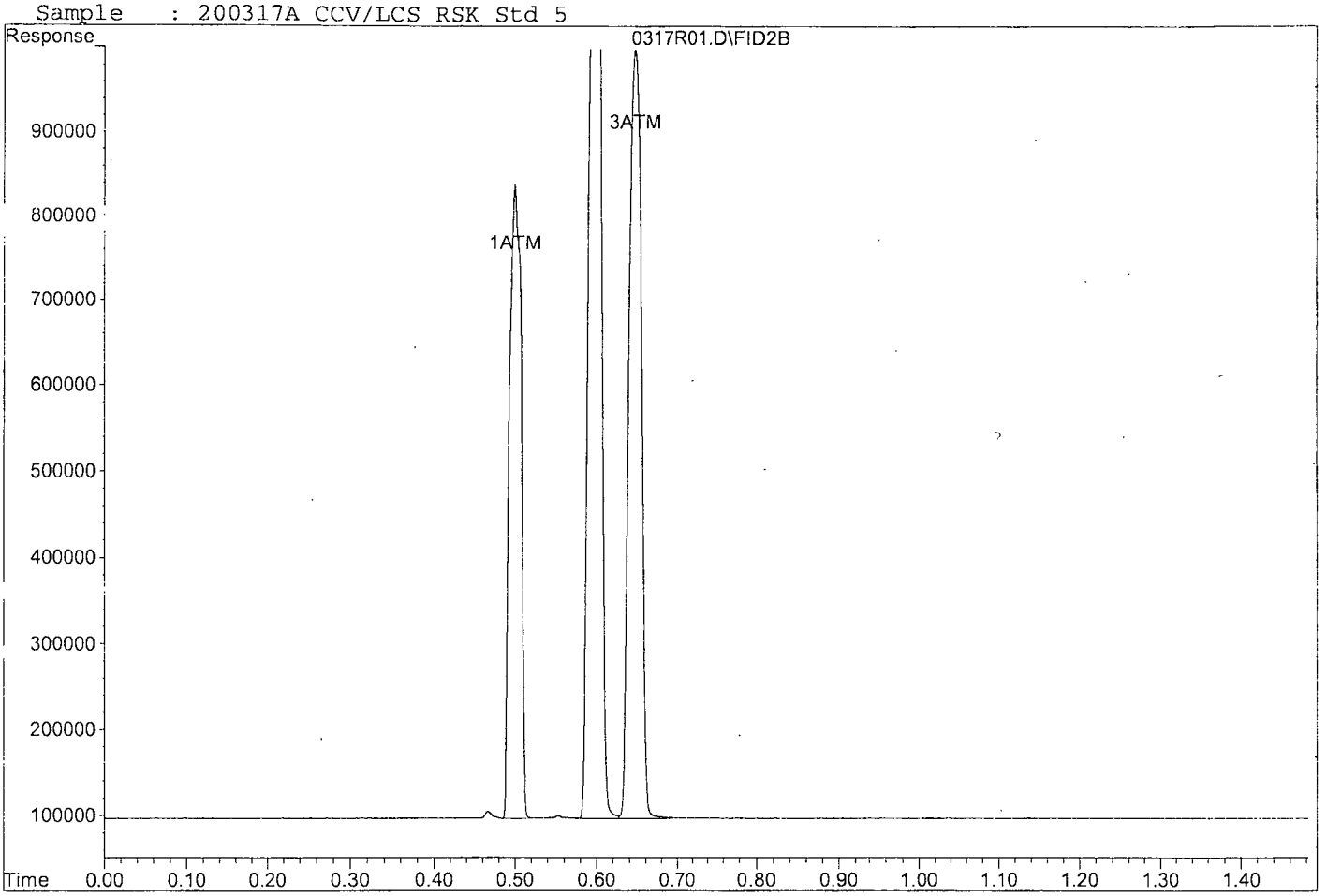
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.50	742212	88.180 ppb
2) ATM Ethane	0.60	1175676	175.800 ppb
3) ATM Ethene	0.65	902894	178.678 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200311RS\0317R01.D
Sample : 200317A CCV/LCS RSK Std 5



Form 7

Ending Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 03/17/20
Instrument: 7890
Initial Cal. Date: 03/11/20
Data File: 0317R09.D

		Compound	MEAN	CCRF	%D		%Drift
1	ATML	Methane	18488	16973	8.2	ATML	0.08
2	ATML	Ethane	15066	13339	11	ATML	1.9
3	ATML	Ethene	11519	10764	6.6	ATML	4.9
4							
5							
6							
7							
8							
9							
10							
11							
12							
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32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			8.6		

Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200311RS\0317R09.D Vial: 9
Acq On : 17 Mar 20 10:38 Operator: GA
Sample : Ending CCV RSK Std 5 03/17/2020 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 17 10:40 2020 Quant Results File: RSK0311.RES

Method : G:\ROCKY\DATA\200311RS\RSK0311.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Mar 17 10:18:58 2020
Response via : Multiple Level Calibration

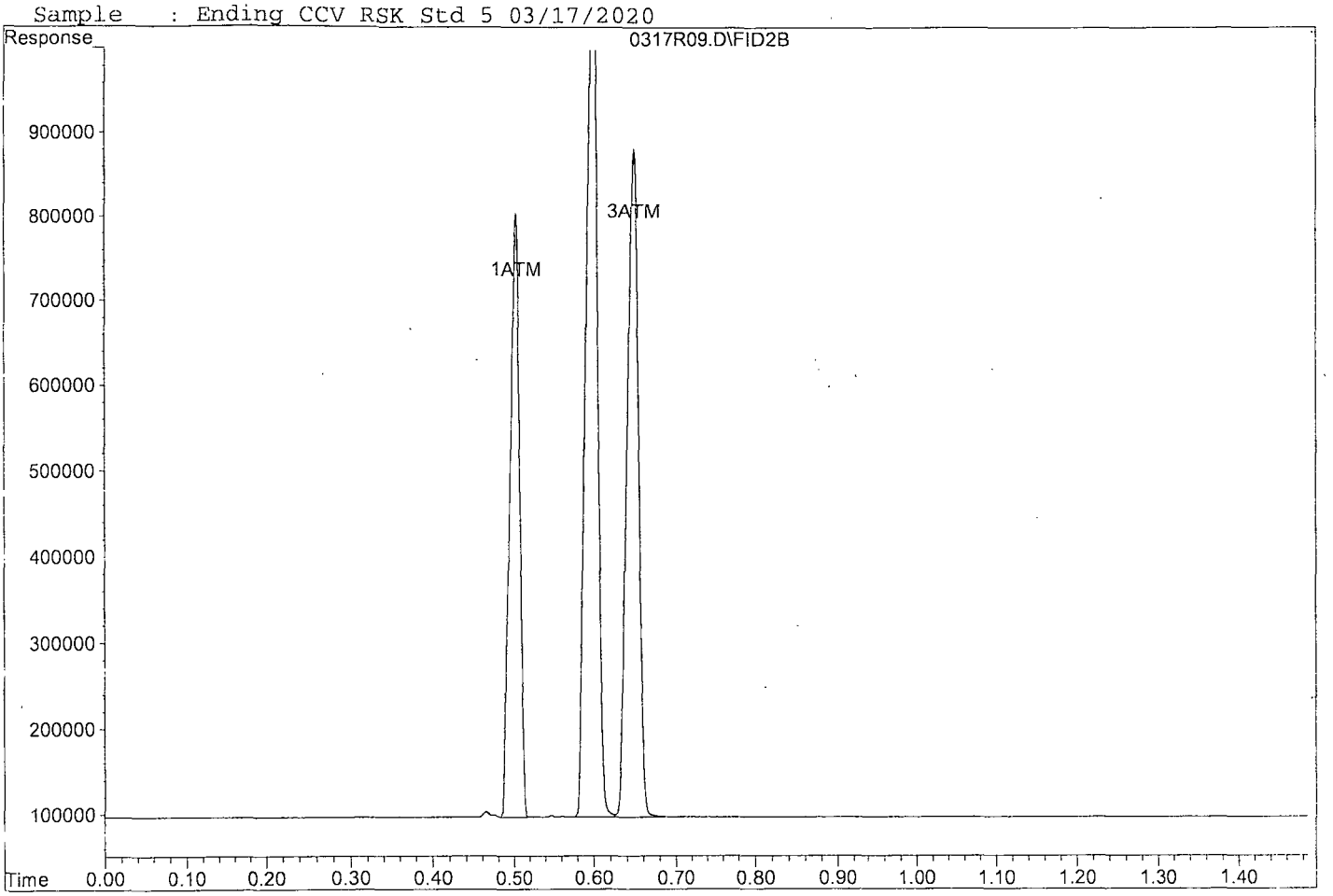
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units
Target Compounds				
1) ATM Methane	0.50	707770	83.470	ppb
2) ATM Ethane	0.60	1042734	153.337	ppb
3) ATM Ethene	0.65	784910	153.019	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200311RS\0317R09.D
Sample : Ending CCV RSK Std 5 03/17/2020



ORGANICS
Raw Data

Quantitation Report (QT Reviewed)

Data File : G:\ROCKY\DATA\200311RS\0317R07.D Vial: 7
Acq On : 17 Mar 20 10:30 Operator: GA
Sample : BA08369W02 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 17 10:33 2020 Quant Results File: RSK0311.RES

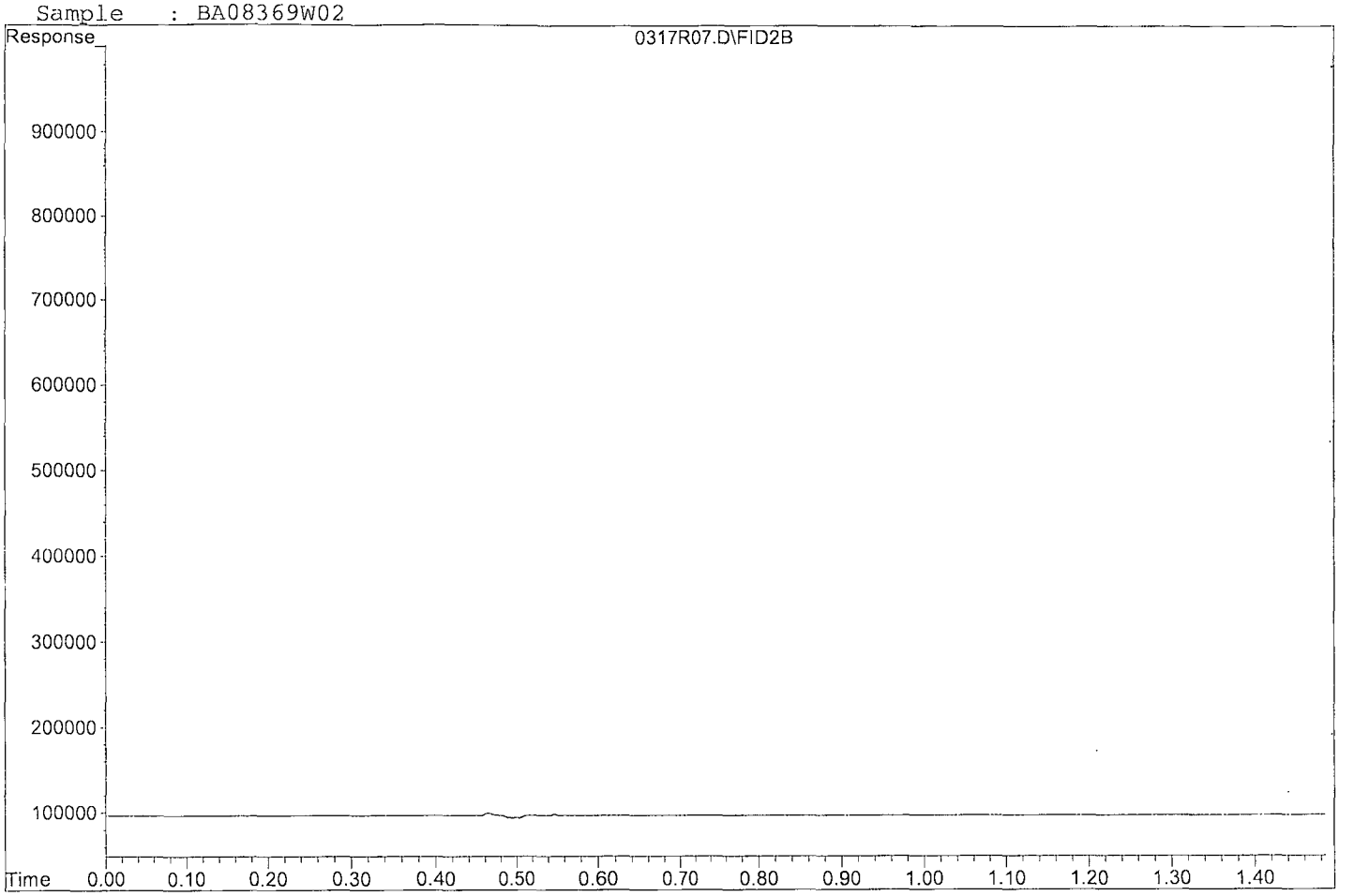
Method : G:\ROCKY\DATA\200311RS\RSK0311.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Mar 17 10:18:58 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units	
Target Compounds					
Target Compounds					
1) ATM Methane	0.00	0	N.D.	ppb	d
2) ATM Ethane	0.00	0	N.D.	ppb	d
3) ATM Ethene	0.00	0	N.D.	ppb	d

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200311RS\0317R07.D
Sample : BA08369W02



Quantitation Report (QT Reviewed)

Data File : G:\ROCKY\DATA\200311RS\0317R08.D Vial: 8
Acq On : 17 Mar 20 10:32 Operator: GA
Sample : BA08370W02 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 17 10:35 2020 Quant Results File: RSK0311.RES

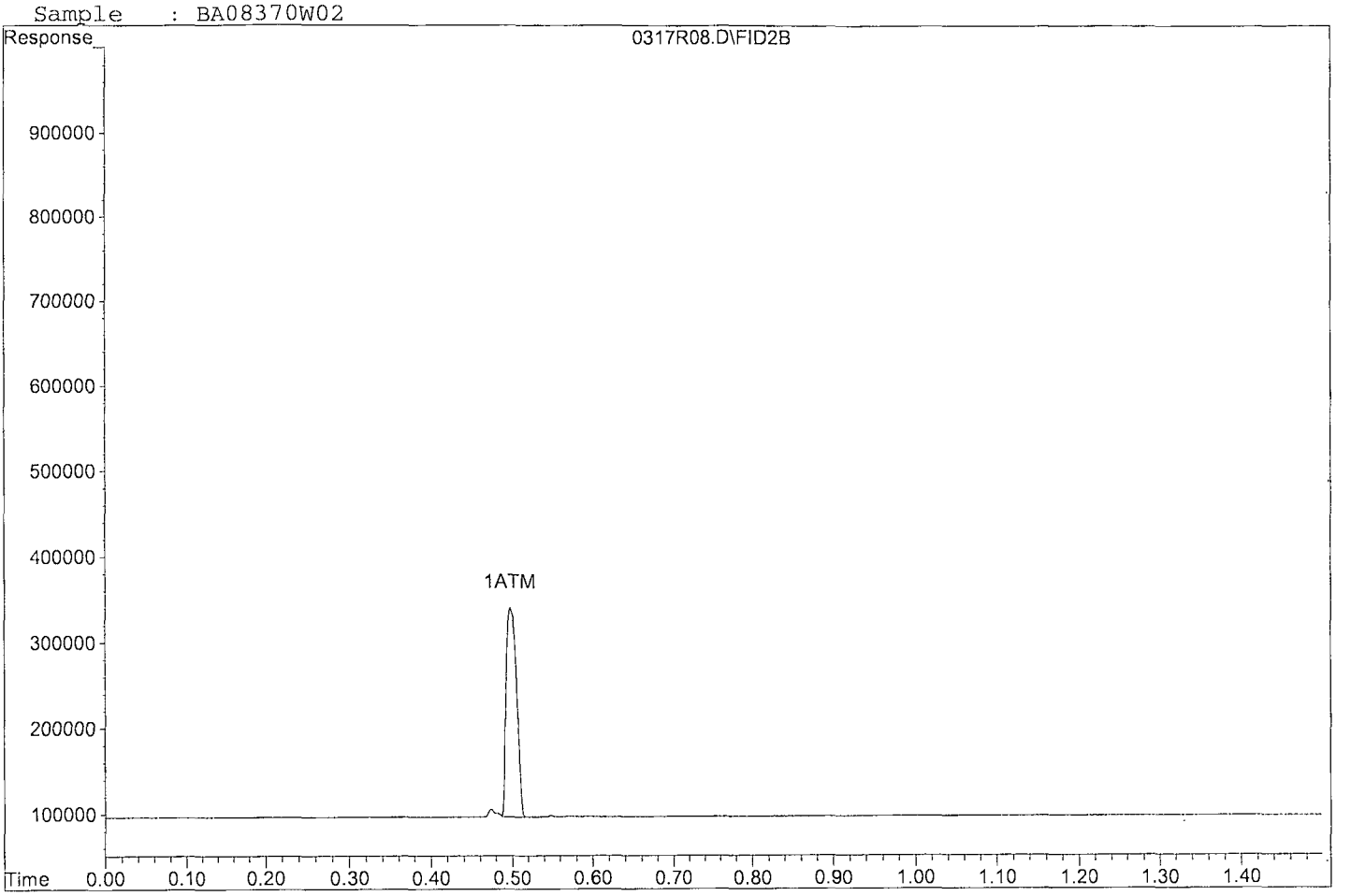
Method : G:\ROCKY\DATA\200311RS\RSK0311.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Mar 17 10:18:58 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units	
Target Compounds					
1) ATM Methane	0.50	243840	20.021	ppb	
Target Compounds					
2) ATM Ethane	0.00	0	N.D.	ppb	d
3) ATM Ethene	0.00	0	N.D.	ppb	d

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200311RS\0317R08.D
Sample : BA08370W02



Quantitation Report (QT Reviewed)

Data File : G:\ROCKY\DATA\200311RS\0317R04.D Vial: 4
Acq On : 17 Mar 20 10:22 Operator: GA
Sample : 200317A Blk Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 17 10:24 2020 Quant Results File: RSK0311.RES

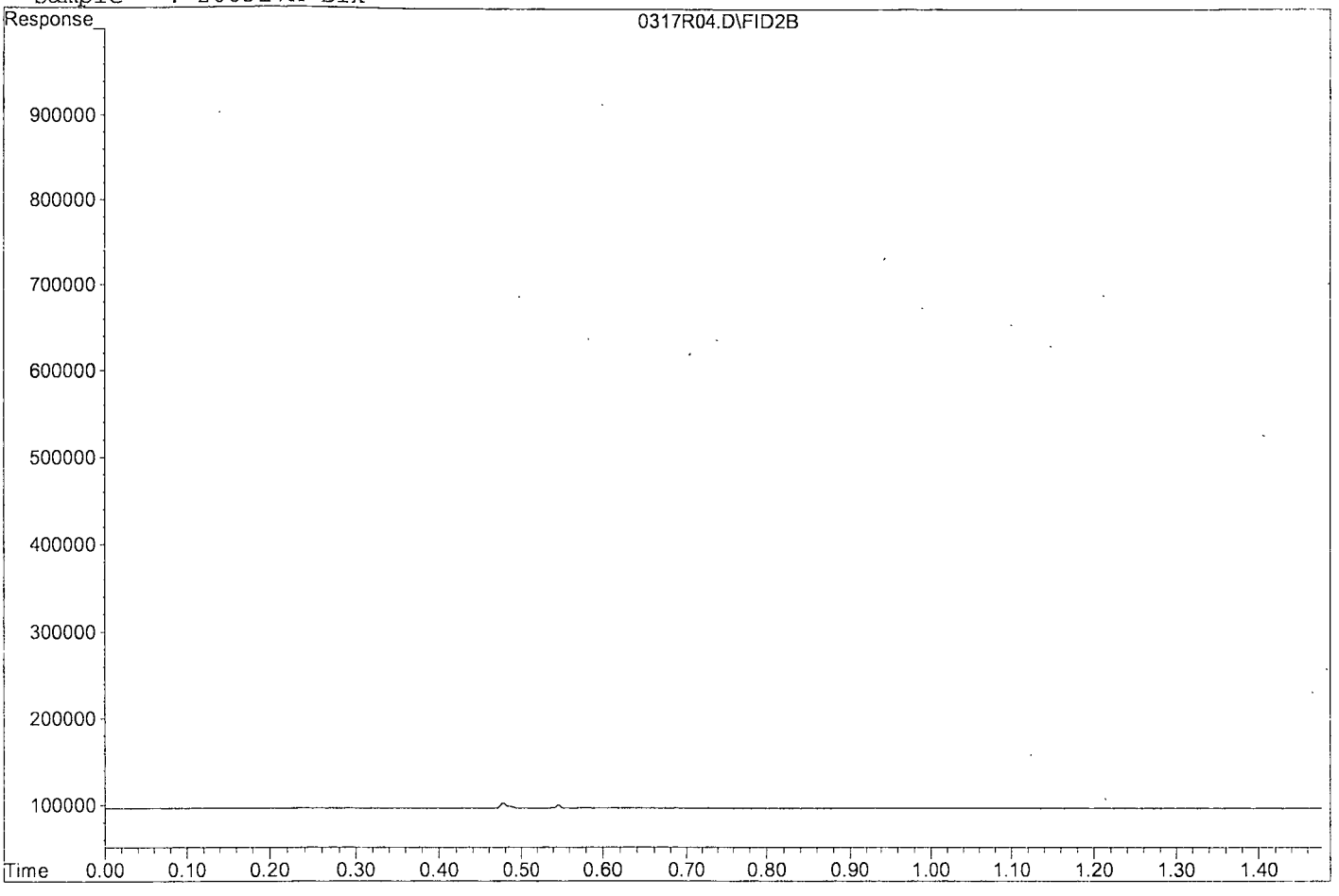
Method : G:\ROCKY\DATA\200311RS\RSK0311.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Mar 17 10:18:58 2020
Response via : Multiple Level Calibration

Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc	Units	
Target Compounds					
Target Compounds					
1) ATM Methane	0.00	0	N.D.	ppb	d
2) ATM Ethane	0.00	0	N.D.	ppb	d
3) ATM Ethene	0.00	0	N.D.	ppb	d

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200311RS\0317R04.D
Sample : 200317A Blk



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200311RS\0317R01.D Vial: 1
Acq On : 17 Mar 20 10:13 Operator: GA
Sample : 200317A CCV/LCS RSK Std 5 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 17 10:15 2020 Quant Results File: RSK0311.RES

Method : G:\ROCKY\DATA\200311RS\RSK0311.M (Chemstation Integrator)
Title : RSK 175
Last Update : Thu Mar 12 09:46:32 2020
Response via : Multiple Level Calibration

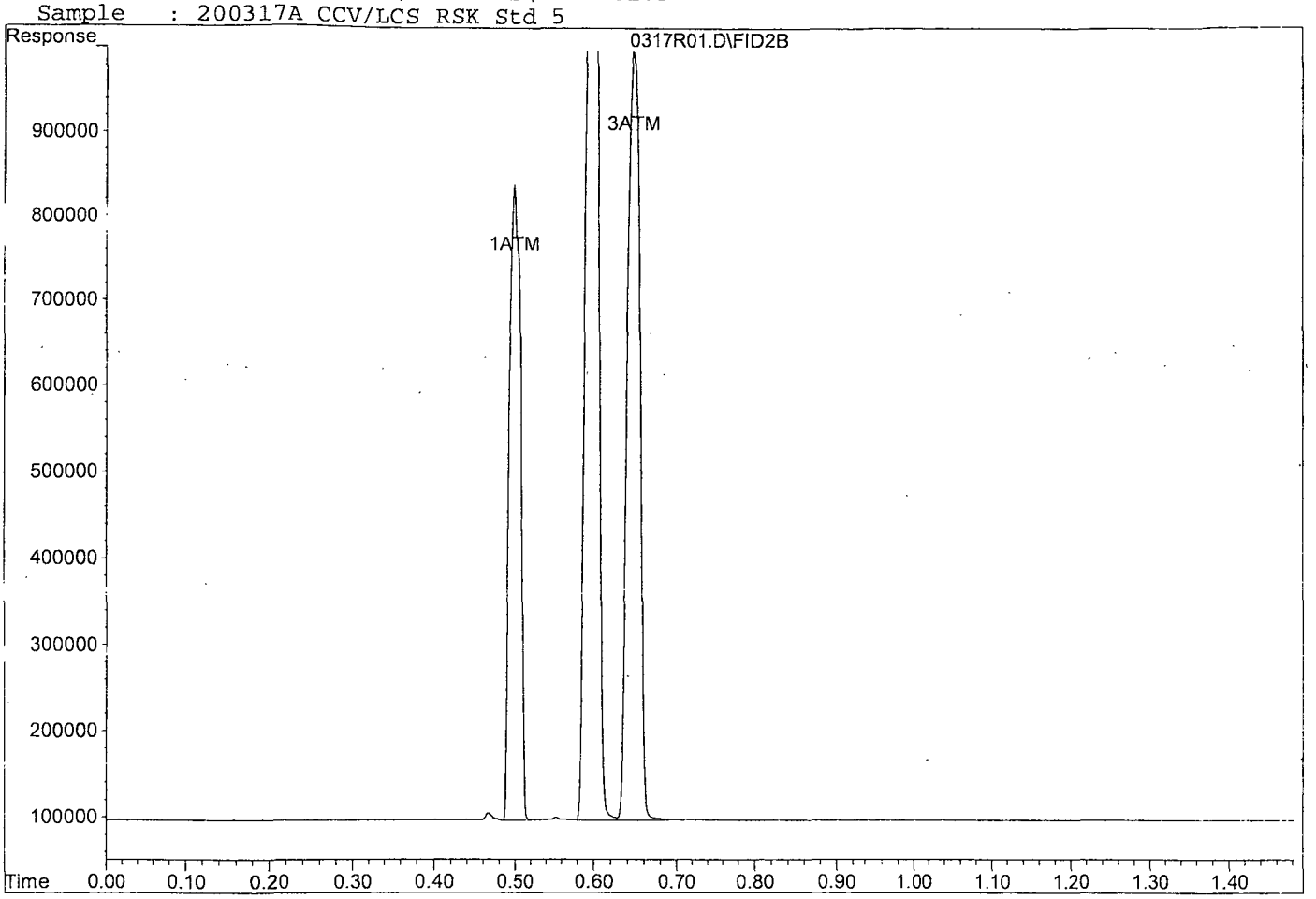
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.50	742212	88.180 ppb
2) ATM Ethane	0.60	1175676	175.800 ppb
3) ATM Ethene	0.65	902894	178.678 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200311RS\0317R01.D
Sample : 200317A CCV/LCS RSK Std 5



Quantitation Report (Not Reviewed)

Data File : G:\ROCKY\DATA\200311RS\0317R03.D Vial: 3
Acq On : 17 Mar 20 10:19 Operator: GA
Sample : 200317A LCSD RSK Std 5 Inst : 7890
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Mar 17 10:21 2020 Quant Results File: RSK0311.RES

Method : G:\ROCKY\DATA\200311RS\RSK0311.M (Chemstation Integrator)
Title : RSK 175
Last Update : Tue Mar 17 10:18:58 2020
Response via : Multiple Level Calibration

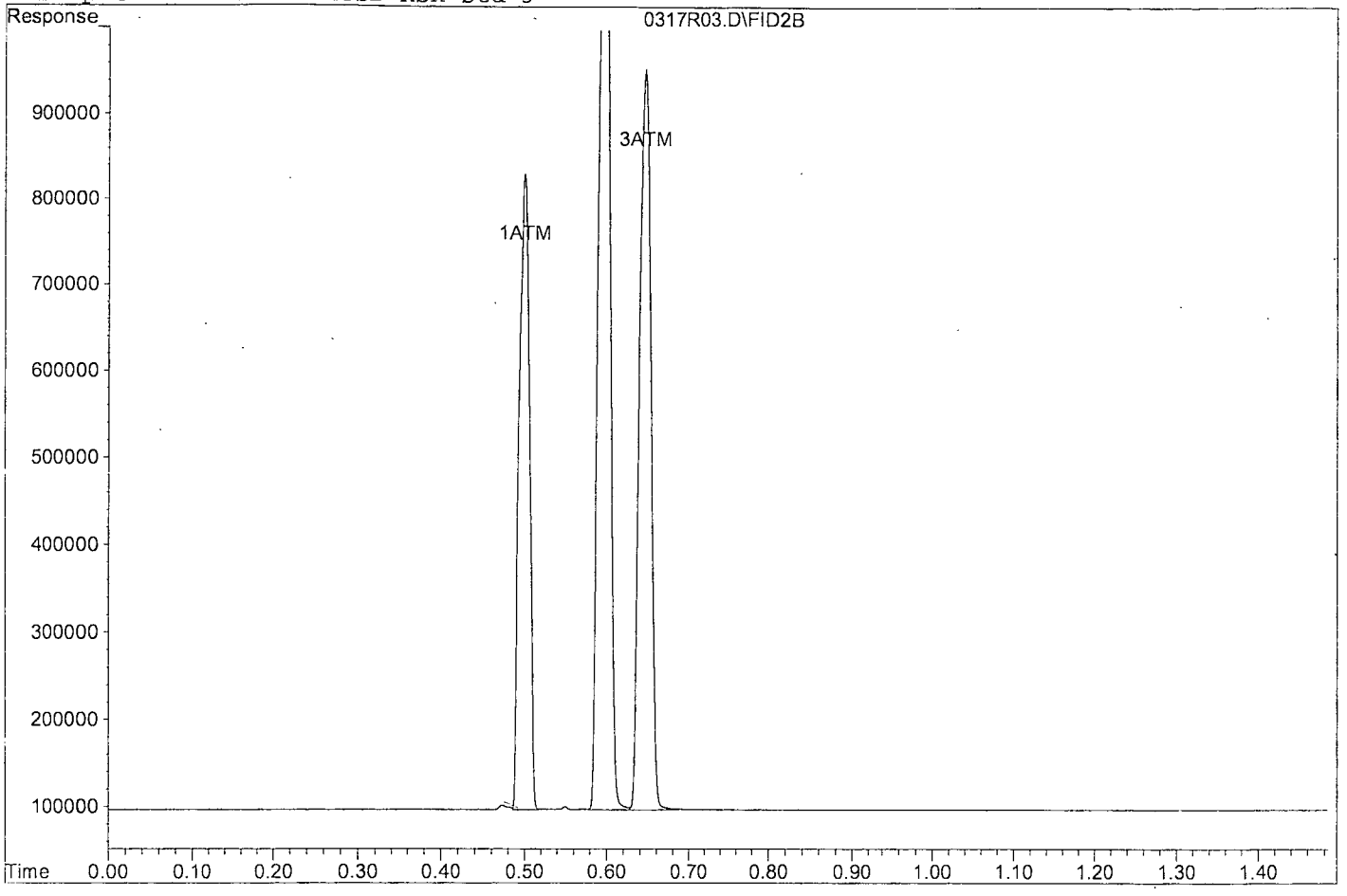
Volume Inj. : 0.500 mL
Signal Phase : CARBOPACK
Signal Info :

Compound	R.T.	Response	Conc Units
Target Compounds			
1) ATM Methane	0.50	734180	87.082 ppb
2) ATM Ethane	0.60	1131198	168.284 ppb
3) ATM Ethene	0.65	857658	168.840 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\ROCKY\DATA\200311RS\0317R03.D
Sample : 200317A LCSD RSK Std 5



Primary Stock Source

10,000ppmV **Manufacture Expiration:** 09/21/21

RSK Gas Mix (Scott Specialty Gas) CAT#X04NI97CP140001 LOT#160-401558175-1

1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

RSK Calibration Curve (prepared in 1.0 L Tedlar Bags at room temp) **05/11/20** **03/11/20**

Analyte	Conc Std 1 (1/2 = LOD) (ug/L)	Conc Std 2 (LOQ Chk) (ug/L)	Conc Std 3 (ug/L)	Conc Std 4 (ug/L)	Conc Std 5 (ug/L)	Conc Std 6 (ug/L)	Conc Std 7 (ug/L)
Methane (MW 16.04)	2.08	4.16	8.34	20.85	83.40	208.5	834.0
Ethane (MW 30.07)	3.91	7.81	15.6	39.09	156.35	390.9	1563.5
Ethene (MW 28.05)	3.65	7.30	14.6	36.46	145.84	364.6	1458.4
Stock Source	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1	160-401558175-1
Stock Conc (ppmv)	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV	10,000 ppmV
Stock Aliquot (mL)	0.010	0.020	0.040	0.100	0.400	1.00	4.00
Final Volume P&T Water	32 mL	32 mL	32 mL	32 mL	32 mL	32 mL	32 mL

Second Source Stock Standard 10,000ppmV **Manufacturer Exp date 9-21-2021**

RSK Gas Mix (Scott Specialty Gas) Cat.# 23452, Lot # 160-401303032-1-39774

1% Gas Concentration Moles = 10,000ppmV Methane, Ethane, Ethene

Second Source **Expires 03/12/2020** **CMM 03/11/2020**

2.0mL of SS from tank into 980 mL Nitrogen

final conc: 13.3ug/L Methane, 25.0 ug/L Ethane, and 23.3 ug/L Ethene

CCV/LCS/LCSD **CMM.03/17/20**

Spike 0.400mL of 10,000ppmV into 32mL DI water, with 8mL Nitrogen headspace

final conc: 83.40ug/L Methane, 156.35ug/L Ethane, and 145.84ug/L Ethene

Injection Log

Directory: G:\ROCKY\DATA\200311RS\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	3	0311R03.D	1	RSK Std 1 03/11/2020		11 Mar 20 13:00
2	4	0311R04.D	1	RSK Std 2 03/11/2020		11 Mar 20 13:03
3	7	0311R07.D	1	RSK Std 3 03/11/2020		11 Mar 20 13:12
4	8	0311R08.D	1	RSK Std 4 03/11/2020		11 Mar 20 13:15
5	9	0311R09.D	1	RSK Std 5 03/11/2020		11 Mar 20 13:17
6	11	0311R11.D	1	RSK Std 6 03/11/2020		11 Mar 20 13:22
7	13	0311R13.D	1	RSK Std 7 03/11/2020		11 Mar 20 13:28
8	15	0311R15.D	1	RSK SS Std 5 03/11/2020		11 Mar 20 13:38
9	1	0317R01.D	1	200317A CCV/LCS RSK Std 5		17 Mar 20 10:13
10	3	0317R03.D	1	200317A LCSD RSK Std 5		17 Mar 20 10:19
11	4	0317R04.D	1	200317A Blk		17 Mar 20 10:22
12	7	0317R07.D	1	BA08369W02		17 Mar 20 10:30
13	8	0317R08.D	1	BA08370W02		17 Mar 20 10:32
14	9	0317R09.D	1	Ending CCV RSK Std 5 03/17/2020		17 Mar 20 10:38

METALS

Calibration Data

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No: 91653 SDG: 91653

Analysis Date: 03/18/20 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 10:25	%R(1)	True CCV1	Found 12:25	%R(1)	True	Found	%R(1)	
Calcium (Ca)	12500	12448.1	99.6	25000	24437.9	97.8				P
Potassium (K)	12500	12475.5	99.8	10000	10344.8	103				P
Magnesium (Mg)	12500	12428.2	99.4	25000	25368.5	101				P
Manganese (Mn)	500	493.47	98.7	500	506.25	101				P
Sodium (Na)	12500	12428.1	99.4	12500	12947.6	104				P

(1) Control Limits: Metals 90-110 ILM02.0

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: AECOM

ARF No.: 91653 SDG: 91653

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analysis Date: 03/18/20

Analyte	Initial Calibration Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
	10:30		12:30						09:54		
Calcium (Ca)	1000.00	U	1000.00	U					1000.00	U	P
Potassium (K)	3000.00	U	3000.00	U					3000.00	U	P
Magnesium (Mg)	500.00	U	500.00	U					500.00	U	P
Manganese (Mn)	10.00	U	10.00	U					10.00	U	P
Sodium (Na)	5000.00	U	5000.00	U					5000.00	U	P

A.P.P.L. INC.
4
ICP INTERFERENCE CHECK SAMPLE

Lab Name:	A.P.P.L. INC.	Contract:	AECOM
ARF No.:	91653	SDG:	91653
ICP ID Number:	Cyrus	ICS Source:	Environmental Express

Analysis Date: 03/18/20 Concentration Units: ug/L

Analyte	True		Initial Found		
	Sol A	Sol AB	Sol A 10:52	Sol AB 11:10	%R(1)
Calcium (Ca)	100000	100000	100346.17	98709.35	98.7
Potassium (K)			-25.09	-26.59	
Magnesium (Mg)	100000	100000	102069.23	101705.49	102
Manganese (Mn)		250	-0.31	238.78	95.5
Sodium (Na)			-15.3	-7.77	

(1) Control Limits: Metals 80-120

Low Level ICV

Sample Name	Acq Date Time	Run Sequence	Analyte	Actual Conc (ug/L)	Spiked Conc (ug/L)	Control Limits	% Recovery	QC Flag
LLICV	3/18/20 10:34 AM	200318A	Calcium	51.29	50	80-120%	103	
LLICV	3/18/20 10:34 AM	200318A	Potassium	497.8	500	80-120%	100	
LLICV	3/18/20 10:34 AM	200318A	Magnesium	27.82	25	80-120%	111	
LLICV	3/18/20 10:34 AM	200318A	Manganese	0.95	1	80-120%	95	
LLICV	3/18/20 10:34 AM	200318A	Sodium	522.7	500	80-120%	105	

Solution Name: Blank

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
Blank	03/18/20 9:54:53 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	0.00	ug/L	45.00	0.00
Ag C (338.289 nm)	0.00	ug/L	10.44	0.00
Al (237.312 nm)	0.00	ug/L	20.56	0.00
Al C (308.215 nm)	0.00	ug/L	4198.51	0.00
Al C (396.152 nm)	0.00	ug/L	296.87	0.00
Al RAD (396.152 nm)	0.00	ug/L	32.55	0.00
As (188.980 nm)	0.00	ug/L	-5.07	0.00
As C (193.696 nm)	0.00	ug/L	16.56	0.00
B (249.678 nm)	0.00	ug/L	37.62	0.00
Ba (233.527 nm)	0.00	ug/L	12.50	0.00
Ba (455.403 nm)	0.00	ug/L	528.00	0.00
Ba RAD (233.527 nm)	0.00	ug/L	6.24	0.00
Be (313.107 nm)	0.00	ug/L	130.41	0.00
Be C (234.861 nm)	0.00	ug/L	30.95	0.00
Ca (315.887 nm)	0.00	ug/L	155.04	0.00
Ca RAD (315.887 nm)	0.00	ug/L	24.88	0.00
Cd (214.439 nm)	0.00	ug/L	17.26	0.00
Cd C (226.502 nm)	0.00	ug/L	31.77	0.00
Cd C (228.802 nm)	0.00	ug/L	4.76	0.00
Co (228.615 nm)	0.00	ug/L	31.14	0.00
Co C (230.786 nm)	0.00	ug/L	23.78	0.00
Cr (267.716 nm)	0.00	ug/L	11.87	0.00
Cr C (205.560 nm)	0.00	ug/L	18.21	0.00
Cu (327.395 nm)	0.00	ug/L	38.34	0.00
Cu C (324.754 nm)	0.00	ug/L	767.58	0.00
Fe (259.940 nm)	0.00	ug/L	197.69	0.00
Fe (261.187 nm)	0.00	ug/L	62.01	0.00
Fe C (238.204 nm)	0.00	ug/L	322.44	0.00
Fe RAD (259.940 nm)	0.00	ug/L	20.58	0.00
Fe RAD (261.187 nm)	0.00	ug/L	10.32	0.00
K RAD (766.491 nm)	0.00	ug/L	105.35	0.00
Mg C (279.078 nm)	0.00	ug/L	64.77	0.00
Mg RAD (279.078 nm)	0.00	ug/L	11.08	0.00
Mn (257.610 nm)	0.00	ug/L	80.17	0.00
Mn C (260.568 nm)	0.00	ug/L	19.29	0.00
Mo (202.032 nm)	0.00	ug/L	15.52	0.00
Mo C (203.846 nm)	0.00	ug/L	1.20	0.00
Mo C (204.598 nm)	0.00	ug/L	6.58	0.00
Na RAD (588.995 nm)	0.00	ug/L	2147.08	0.00
Na RAD (589.592 nm)	0.00	ug/L	116.21	0.00
Ni (231.604 nm)	0.00	ug/L	6.80	0.00
Ni C (221.648 nm)	0.00	ug/L	4.90	0.00
P (213.618 nm)	0.00	ug/L	13.85	0.00
P C (214.914 nm)	0.00	ug/L	6.94	0.00

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	0.00	ug/L	29.07	0.00
Sb (206.834 nm)	0.00	ug/L	16.88	0.00
Sb (217.582 nm)	0.00	ug/L	10.90	0.00
Sb C (231.146 nm)	0.00	ug/L	10.27	0.00
Se (196.026 nm)	0.00	ug/L	12.88	0.00
Sn (189.925 nm)	0.00	ug/L	9.76	0.00
Sr RAD (421.552 nm)	0.00	ug/L	50.29	0.00
Ti (334.941 nm)	0.00	ug/L	27.55	0.00
Tl (190.794 nm)	0.00	ug/L	1.23	0.00
V (292.401 nm)	0.00	ug/L	-0.10	0.00
V C (311.837 nm)	0.00	ug/L	50.51	0.00
Zn (206.200 nm)	0.00	ug/L	24.60	0.00
Zn C (202.548 nm)	0.00	ug/L	72.84	0.00
Zn RAD (206.200 nm)	0.00	ug/L	4.19	0.00

Solution Name: Standard 1

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
Standard 1	03/18/20 9:59:19 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)		ug/L	81.17	
Ag C (338.289 nm)		ug/L	16.35	
Al (237.312 nm)	50.00	ug/L	148.91	50.00
Al C (308.215 nm)	50.00	ug/L	4722.32	50.00
Al C (396.152 nm)	50.00	ug/L	2263.44	50.00
Al RAD (396.152 nm)	50.00	ug/L	317.13	50.00
As (188.980 nm)		ug/L	-1.04	
As C (193.696 nm)		ug/L	24.07	
B (249.678 nm)	25.00	ug/L	555.77	25.00
Ba (233.527 nm)	1.50	ug/L	162.33	1.50
Ba (455.403 nm)	1.50	ug/L	3565.19	1.50
Ba RAD (233.527 nm)	1.50	ug/L	18.77	1.50
Be (313.107 nm)	1.00	ug/L	1994.42	1.00
Be C (234.861 nm)	1.00	ug/L	681.18	1.00
Ca (315.887 nm)	50.00	ug/L	1142.35	50.00
Ca RAD (315.887 nm)	50.00	ug/L	101.14	50.00
Cd (214.439 nm)		ug/L	47.67	
Cd C (226.502 nm)		ug/L	48.84	
Cd C (228.802 nm)		ug/L	13.10	
Co (228.615 nm)		ug/L	70.23	
Co C (230.786 nm)		ug/L	86.06	
Cr (267.716 nm)		ug/L	57.98	
Cr C (205.560 nm)		ug/L	46.95	
Cu (327.395 nm)		ug/L	174.59	
Cu C (324.754 nm)		ug/L	876.51	
Fe (259.940 nm)	25.00	ug/L	1393.54	25.00
Fe (261.187 nm)	25.00	ug/L	285.53	25.00
Fe C (238.204 nm)	25.00	ug/L	2350.94	25.00
Fe RAD (259.940 nm)	25.00	ug/L	160.19	25.00
Fe RAD (261.187 nm)	25.00	ug/L	44.91	25.00
K RAD (766.491 nm)	500.00	ug/L	867.93	500.00
Mg C (279.078 nm)	25.00	ug/L	292.77	25.00
Mg RAD (279.078 nm)	25.00	ug/L	27.74	25.00
Mn (257.610 nm)	1.00	ug/L	437.67	1.00
Mn C (260.568 nm)	1.00	ug/L	96.43	1.00
Mo (202.032 nm)		ug/L	33.68	
Mo C (203.846 nm)		ug/L	10.59	
Mo C (204.598 nm)		ug/L	19.65	
Na RAD (588.995 nm)	500.00	ug/L	14686.68	500.00
Na RAD (589.592 nm)	500.00	ug/L	8280.54	500.00
Ni (231.604 nm)		ug/L	36.14	
Ni C (221.648 nm)		ug/L	28.67	
P (213.618 nm)	12.50	ug/L	61.17	12.50
P C (214.914 nm)	12.50	ug/L	18.66	12.50

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)		ug/L	40.12	
Sb (206.834 nm)		ug/L	24.71	
Sb (217.582 nm)		ug/L	17.99	
Sb C (231.146 nm)		ug/L	16.83	
Se (196.026 nm)		ug/L	11.06	
Sn (189.925 nm)		ug/L	31.09	
Sr RAD (421.552 nm)	1.00	ug/L	543.34	1.00
Ti (334.941 nm)		ug/L	886.01	
Tl (190.794 nm)		ug/L	4.11	
V (292.401 nm)		ug/L	13.73	
V C (311.837 nm)		ug/L	49.28	
Zn (206.200 nm)	25.00	ug/L	1093.35	25.00
Zn C (202.548 nm)	25.00	ug/L	2725.10	25.00
Zn RAD (206.200 nm)	25.00	ug/L	59.17	25.00

Solution Name: Standard 2

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
Standard 2	03/18/20 10:03:46 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	1.00	ug/L	128.07	1.00
Ag C (338.289 nm)	1.00	ug/L	16.12	1.00
Al (237.312 nm)	100.00	ug/L	296.38	100.00
Al C (308.215 nm)	100.00	ug/L	5298.98	100.00
Al C (396.152 nm)	100.00	ug/L	4307.62	100.00
Al RAD (396.152 nm)	100.00	ug/L	614.37	100.00
As (188.980 nm)	4.00	ug/L	8.36	4.00
As C (193.696 nm)	4.00	ug/L	26.09	4.00
B (249.678 nm)	50.00	ug/L	1061.98	50.00
Ba (233.527 nm)	3.00	ug/L	311.90	3.00
Ba (455.403 nm)	3.00	ug/L	6830.86	3.00
Ba RAD (233.527 nm)	3.00	ug/L	32.08	3.00
Be (313.107 nm)	2.00	ug/L	3933.88	2.00
Be C (234.861 nm)	2.00	ug/L	1361.62	2.00
Ca (315.887 nm)	100.00	ug/L	2027.75	100.00
Ca RAD (315.887 nm)	100.00	ug/L	189.74	100.00
Cd (214.439 nm)	0.50	ug/L	74.78	0.50
Cd C (226.502 nm)	0.50	ug/L	73.63	0.50
Cd C (228.802 nm)	0.50	ug/L	21.25	0.50
Co (228.615 nm)	5.00	ug/L	108.53	5.00
Co C (230.786 nm)	5.00	ug/L	158.92	5.00
Cr (267.716 nm)	1.00	ug/L	90.87	1.00
Cr C (205.560 nm)	1.00	ug/L	72.36	1.00
Cu (327.395 nm)	5.00	ug/L	300.33	5.00
Cu C (324.754 nm)	5.00	ug/L	1001.71	5.00
Fe (259.940 nm)	50.00	ug/L	2774.46	50.00
Fe (261.187 nm)	50.00	ug/L	559.92	50.00
Fe C (238.204 nm)	50.00	ug/L	4666.36	50.00
Fe RAD (259.940 nm)	50.00	ug/L	321.50	50.00
Fe RAD (261.187 nm)	50.00	ug/L	74.62	50.00
K RAD (766.491 nm)	1000.00	ug/L	1641.61	1000.00
Mg C (279.078 nm)	50.00	ug/L	539.11	50.00
Mg RAD (279.078 nm)	50.00	ug/L	54.78	50.00
Mn (257.610 nm)	2.00	ug/L	832.43	2.00
Mn C (260.568 nm)	2.00	ug/L	186.76	2.00
Mo (202.032 nm)	2.00	ug/L	51.47	2.00
Mo C (203.846 nm)	2.00	ug/L	18.17	2.00
Mo C (204.598 nm)	2.00	ug/L	34.55	2.00
Na RAD (588.995 nm)	1000.00	ug/L	26728.48	1000.00
Na RAD (589.592 nm)	1000.00	ug/L	16284.24	1000.00
Ni (231.604 nm)	2.00	ug/L	65.20	2.00
Ni C (221.648 nm)	2.00	ug/L	48.25	2.00
P (213.618 nm)	25.00	ug/L	111.12	25.00
P C (214.914 nm)	25.00	ug/L	39.89	25.00

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	3.00	ug/L	52.38	3.00
Sb (206.834 nm)	4.00	ug/L	31.80	4.00
Sb (217.582 nm)	4.00	ug/L	21.81	4.00
Sb C (231.146 nm)	4.00	ug/L	21.64	4.00
Se (196.026 nm)	4.00	ug/L	15.82	4.00
Sn (189.925 nm)	6.00	ug/L	54.26	6.00
Sr RAD (421.552 nm)	2.00	ug/L	1069.25	2.00
Ti (334.941 nm)	5.00	ug/L	1758.43	5.00
Tl (190.794 nm)		ug/L	7.40	
V (292.401 nm)	1.00	ug/L	25.70	1.00
V C (311.837 nm)	1.00	ug/L	55.29	1.00
Zn (206.200 nm)	50.00	ug/L	2176.12	50.00
Zn C (202.548 nm)	50.00	ug/L	5441.53	50.00
Zn RAD (206.200 nm)	50.00	ug/L	117.86	50.00

Solution Name: Standard 3

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
Standard 3	03/18/20 10:08:12 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	3.00	ug/L	321.77	3.00
Ag C (338.289 nm)	3.00	ug/L	36.44	3.00
Al (237.312 nm)		ug/L	837.94	
Al C (308.215 nm)		ug/L	7451.59	
Al C (396.152 nm)		ug/L	12203.03	
Al RAD (396.152 nm)		ug/L	1736.94	
As (188.980 nm)		ug/L	42.05	
As C (193.696 nm)		ug/L	50.91	
B (249.678 nm)	150.00	ug/L	2939.18	150.00
Ba (233.527 nm)		ug/L	895.95	
Ba (455.403 nm)		ug/L	19295.83	
Ba RAD (233.527 nm)		ug/L	86.09	
Be (313.107 nm)	6.00	ug/L	11487.50	6.00
Be C (234.861 nm)	6.00	ug/L	4047.08	6.00
Ca (315.887 nm)	300.00	ug/L	6216.67	300.00
Ca RAD (315.887 nm)	300.00	ug/L	517.20	300.00
Cd (214.439 nm)	1.50	ug/L	191.18	1.50
Cd C (226.502 nm)	1.50	ug/L	198.08	1.50
Cd C (228.802 nm)	1.50	ug/L	48.57	1.50
Co (228.615 nm)		ug/L	251.81	
Co C (230.786 nm)		ug/L	421.57	
Cr (267.716 nm)	3.00	ug/L	231.91	3.00
Cr C (205.560 nm)	3.00	ug/L	172.93	3.00
Cu (327.395 nm)		ug/L	857.64	
Cu C (324.754 nm)		ug/L	1461.59	
Fe (259.940 nm)	150.00	ug/L	7866.24	150.00
Fe (261.187 nm)	150.00	ug/L	1534.20	150.00
Fe C (238.204 nm)	150.00	ug/L	13235.21	150.00
Fe RAD (259.940 nm)	150.00	ug/L	901.98	150.00
Fe RAD (261.187 nm)	150.00	ug/L	193.47	150.00
K RAD (766.491 nm)	3000.00	ug/L	4669.94	3000.00
Mg C (279.078 nm)	150.00	ug/L	1520.65	150.00
Mg RAD (279.078 nm)	150.00	ug/L	145.54	150.00
Mn (257.610 nm)	6.00	ug/L	2363.27	6.00
Mn C (260.568 nm)	6.00	ug/L	526.87	6.00
Mo (202.032 nm)	6.00	ug/L	132.93	6.00
Mo C (203.846 nm)	6.00	ug/L	43.83	6.00
Mo C (204.598 nm)	6.00	ug/L	88.66	6.00
Na RAD (588.995 nm)	3000.00	ug/L	73833.41	3000.00
Na RAD (589.592 nm)	3000.00	ug/L	47033.32	3000.00
Ni (231.604 nm)	6.00	ug/L	147.96	6.00
Ni C (221.648 nm)	6.00	ug/L	118.76	6.00
P (213.618 nm)		ug/L	310.92	
P C (214.914 nm)		ug/L	110.37	

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)		ug/L	113.20	
Sb (206.834 nm)		ug/L	50.66	
Sb (217.582 nm)		ug/L	41.68	
Sb C (231.146 nm)		ug/L	40.09	
Se (196.026 nm)		ug/L	29.95	
Sn (189.925 nm)		ug/L	148.37	
Sr RAD (421.552 nm)	6.00	ug/L	3118.39	6.00
Ti (334.941 nm)		ug/L	5082.75	
Tl (190.794 nm)		ug/L	26.77	
V (292.401 nm)	3.00	ug/L	129.62	3.00
V C (311.837 nm)	3.00	ug/L	146.33	3.00
Zn (206.200 nm)	150.00	ug/L	6343.03	150.00
Zn C (202.548 nm)	150.00	ug/L	16007.79	150.00
Zn RAD (206.200 nm)	150.00	ug/L	337.15	150.00

Solution Name: Standard 4

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
Standard 4	03/18/20 10:12:39 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	5.00	ug/L	524.40	5.00
Ag C (338.289 nm)	5.00	ug/L	43.30	5.00
Al (237.312 nm)	200.00	ug/L	589.32	200.00
Al C (308.215 nm)	200.00	ug/L	6425.34	200.00
Al C (396.152 nm)	200.00	ug/L	8528.14	200.00
Al RAD (396.152 nm)	200.00	ug/L	1244.67	200.00
As (188.980 nm)	10.00	ug/L	37.71	10.00
As C (193.696 nm)	10.00	ug/L	46.96	10.00
B (249.678 nm)		ug/L	250.61	
Ba (233.527 nm)	10.00	ug/L	1034.42	10.00
Ba (455.403 nm)	10.00	ug/L	22252.52	10.00
Ba RAD (233.527 nm)	10.00	ug/L	101.14	10.00
Be (313.107 nm)	10.00	ug/L	20146.61	10.00
Be C (234.861 nm)	10.00	ug/L	7040.58	10.00
Ca (315.887 nm)	500.00	ug/L	11013.18	500.00
Ca RAD (315.887 nm)	500.00	ug/L	917.82	500.00
Cd (214.439 nm)	10.00	ug/L	1261.84	10.00
Cd C (226.502 nm)	10.00	ug/L	1209.10	10.00
Cd C (228.802 nm)	10.00	ug/L	301.42	10.00
Co (228.615 nm)	10.00	ug/L	185.44	10.00
Co C (230.786 nm)	10.00	ug/L	293.63	10.00
Cr (267.716 nm)	10.00	ug/L	773.19	10.00
Cr C (205.560 nm)	10.00	ug/L	555.39	10.00
Cu (327.395 nm)	10.00	ug/L	577.95	10.00
Cu C (324.754 nm)	10.00	ug/L	1226.36	10.00
Fe (259.940 nm)	200.00	ug/L	11043.16	200.00
Fe (261.187 nm)	200.00	ug/L	2145.35	200.00
Fe C (238.204 nm)	200.00	ug/L	18623.57	200.00
Fe RAD (259.940 nm)	200.00	ug/L	1282.45	200.00
Fe RAD (261.187 nm)	200.00	ug/L	271.66	200.00
K RAD (766.491 nm)		ug/L	446.15	
Mg C (279.078 nm)	500.00	ug/L	5200.31	500.00
Mg RAD (279.078 nm)	500.00	ug/L	502.61	500.00
Mn (257.610 nm)	10.00	ug/L	4085.05	10.00
Mn C (260.568 nm)	10.00	ug/L	910.20	10.00
Mo (202.032 nm)	10.00	ug/L	227.47	10.00
Mo C (203.846 nm)	10.00	ug/L	72.52	10.00
Mo C (204.598 nm)	10.00	ug/L	146.79	10.00
Na RAD (588.995 nm)		ug/L	8865.15	
Na RAD (589.592 nm)		ug/L	4587.71	
Ni (231.604 nm)	10.00	ug/L	248.52	10.00
Ni C (221.648 nm)	10.00	ug/L	193.89	10.00
P (213.618 nm)	50.00	ug/L	220.99	50.00
P C (214.914 nm)	50.00	ug/L	76.19	50.00

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	10.00	ug/L	126.57	10.00
Sb (206.834 nm)	10.00	ug/L	49.23	10.00
Sb (217.582 nm)	10.00	ug/L	47.89	10.00
Sb C (231.146 nm)	10.00	ug/L	35.65	10.00
Se (196.026 nm)	10.00	ug/L	33.45	10.00
Sn (189.925 nm)	10.00	ug/L	90.58	10.00
Sr RAD (421.552 nm)	10.00	ug/L	5407.87	10.00
Ti (334.941 nm)	10.00	ug/L	3590.35	10.00
Tl (190.794 nm)	10.00	ug/L	22.97	10.00
V (292.401 nm)	10.00	ug/L	423.11	10.00
V C (311.837 nm)	10.00	ug/L	637.49	10.00
Zn (206.200 nm)		ug/L	495.87	
Zn C (202.548 nm)		ug/L	1262.34	
Zn RAD (206.200 nm)		ug/L	29.62	

Solution Name: Standard 5

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
Standard 5	03/18/20 10:17:06 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	250.00	ug/L	23045.37	250.00
Ag C (338.289 nm)	250.00	ug/L	1680.99	250.00
Al (237.312 nm)	10000.00	ug/L	27142.46	10000.00
Al C (308.215 nm)	10000.00	ug/L	114238.82	10000.00
Al C (396.152 nm)	10000.00	ug/L	416199.91	10000.00
Al RAD (396.152 nm)	10000.00	ug/L	56765.85	10000.00
As (188.980 nm)	500.00	ug/L	2115.80	500.00
As C (193.696 nm)	500.00	ug/L	1529.60	500.00
B (249.678 nm)	500.00	ug/L	9910.22	500.00
Ba (233.527 nm)	500.00	ug/L	47759.10	500.00
Ba (455.403 nm)	500.00	ug/L	1020165.55	500.00
Ba RAD (233.527 nm)	500.00	ug/L	4445.49	500.00
Be (313.107 nm)	500.00	ug/L	970473.74	500.00
Be C (234.861 nm)	500.00	ug/L	340794.78	500.00
Ca (315.887 nm)	25000.00	ug/L	506315.18	25000.00
Ca RAD (315.887 nm)	25000.00	ug/L	41520.75	25000.00
Cd (214.439 nm)	500.00	ug/L	57490.38	500.00
Cd C (226.502 nm)	500.00	ug/L	55191.85	500.00
Cd C (228.802 nm)	500.00	ug/L	14130.47	500.00
Co (228.615 nm)	500.00	ug/L	6725.13	500.00
Co C (230.786 nm)	500.00	ug/L	12400.57	500.00
Cr (267.716 nm)	500.00	ug/L	35127.63	500.00
Cr C (205.560 nm)	500.00	ug/L	24909.38	500.00
Cu (327.395 nm)	500.00	ug/L	26613.09	500.00
Cu C (324.754 nm)	500.00	ug/L	22978.14	500.00
Fe (259.940 nm)	10000.00	ug/L	495607.07	10000.00
Fe (261.187 nm)	10000.00	ug/L	95903.81	10000.00
Fe C (238.204 nm)	10000.00	ug/L	836338.98	10000.00
Fe RAD (259.940 nm)	10000.00	ug/L	57494.26	10000.00
Fe RAD (261.187 nm)	10000.00	ug/L	11856.45	10000.00
K RAD (766.491 nm)	10000.00	ug/L	15405.10	10000.00
Mg C (279.078 nm)	25000.00	ug/L	243108.41	25000.00
Mg RAD (279.078 nm)	25000.00	ug/L	23343.52	25000.00
Mn (257.610 nm)	500.00	ug/L	185126.12	500.00
Mn C (260.568 nm)	500.00	ug/L	40987.33	500.00
Mo (202.032 nm)	500.00	ug/L	10015.74	500.00
Mo C (203.846 nm)	500.00	ug/L	3088.33	500.00
Mo C (204.598 nm)	500.00	ug/L	6565.18	500.00
Na RAD (588.995 nm)	12500.00	ug/L	296450.43	12500.00
Na RAD (589.592 nm)	12500.00	ug/L	194713.91	12500.00
Ni (231.604 nm)	500.00	ug/L	10814.34	500.00
Ni C (221.648 nm)	500.00	ug/L	8652.19	500.00
P (213.618 nm)	2500.00	ug/L	10188.35	2500.00
P C (214.914 nm)	2500.00	ug/L	3408.58	2500.00

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	500.00	ug/L	4233.63	500.00
Sb (206.834 nm)	500.00	ug/L	1341.75	500.00
Sb (217.582 nm)	500.00	ug/L	1889.94	500.00
Sb C (231.146 nm)	500.00	ug/L	1175.99	500.00
Se (196.026 nm)	500.00	ug/L	1035.62	500.00
Sn (189.925 nm)	500.00	ug/L	3771.08	500.00
Sr RAD (421.552 nm)	500.00	ug/L	251771.06	500.00
Ti (334.941 nm)	500.00	ug/L	168883.81	500.00
Tl (190.794 nm)	500.00	ug/L	1017.54	500.00
V (292.401 nm)	500.00	ug/L	19959.03	500.00
V C (311.837 nm)	500.00	ug/L	33450.29	500.00
Zn (206.200 nm)	500.00	ug/L	19583.66	500.00
Zn C (202.548 nm)	500.00	ug/L	50124.62	500.00
Zn RAD (206.200 nm)	500.00	ug/L	1069.87	500.00

Solution Name: Standard 6

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
Standard 6	03/18/20 10:21:33 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	500.00	ug/L	45778.61	500.00
Ag C (338.289 nm)	500.00	ug/L	3350.33	500.00
Al (237.312 nm)	20000.00	ug/L	53548.81	20000.00
Al C (308.215 nm)	20000.00	ug/L	226510.40	20000.00
Al C (396.152 nm)	20000.00	ug/L	837693.76	20000.00
Al RAD (396.152 nm)	20000.00	ug/L	111969.77	20000.00
As (188.980 nm)	1000.00	ug/L	4215.09	1000.00
As C (193.696 nm)	1000.00	ug/L	2999.63	1000.00
B (249.678 nm)	1000.00	ug/L	19744.75	1000.00
Ba (233.527 nm)	1000.00	ug/L	93860.98	1000.00
Ba (455.403 nm)	1000.00	ug/L	2015371.19	1000.00
Ba RAD (233.527 nm)	1000.00	ug/L	8649.28	1000.00
Be (313.107 nm)	1000.00	ug/L	1914492.71	1000.00
Be C (234.861 nm)	1000.00	ug/L	671152.12	1000.00
Ca (315.887 nm)	50000.00	ug/L	993628.78	50000.00
Ca RAD (315.887 nm)	50000.00	ug/L	81407.91	50000.00
Cd (214.439 nm)	1000.00	ug/L	111972.77	1000.00
Cd C (226.502 nm)	1000.00	ug/L	107673.12	1000.00
Cd C (228.802 nm)	1000.00	ug/L	27911.37	1000.00
Co (228.615 nm)	1000.00	ug/L	13117.66	1000.00
Co C (230.786 nm)	1000.00	ug/L	24281.68	1000.00
Cr (267.716 nm)	1000.00	ug/L	69014.18	1000.00
Cr C (205.560 nm)	1000.00	ug/L	48637.97	1000.00
Cu (327.395 nm)	1000.00	ug/L	53380.10	1000.00
Cu C (324.754 nm)	1000.00	ug/L	44842.87	1000.00
Fe (259.940 nm)	20000.00	ug/L	965940.92	20000.00
Fe (261.187 nm)	20000.00	ug/L	187546.41	20000.00
Fe C (238.204 nm)	20000.00	ug/L	1625561.77	20000.00
Fe RAD (259.940 nm)	20000.00	ug/L	111798.02	20000.00
Fe RAD (261.187 nm)	20000.00	ug/L	23095.28	20000.00
K RAD (766.491 nm)	20000.00	ug/L	30195.98	20000.00
Mg C (279.078 nm)	50000.00	ug/L	480814.24	50000.00
Mg RAD (279.078 nm)	50000.00	ug/L	45849.04	50000.00
Mn (257.610 nm)	1000.00	ug/L	362836.39	1000.00
Mn C (260.568 nm)	1000.00	ug/L	80179.80	1000.00
Mo (202.032 nm)	1000.00	ug/L	19764.89	1000.00
Mo C (203.846 nm)	1000.00	ug/L	6103.36	1000.00
Mo C (204.598 nm)	1000.00	ug/L	13010.09	1000.00
Na RAD (588.995 nm)	25000.00	ug/L	575272.79	25000.00
Na RAD (589.592 nm)	25000.00	ug/L	383889.87	25000.00
Ni (231.604 nm)	1000.00	ug/L	21086.00	1000.00
Ni C (221.648 nm)	1000.00	ug/L	16860.96	1000.00
P (213.618 nm)	5000.00	ug/L	20207.81	5000.00
P C (214.914 nm)	5000.00	ug/L	6775.48	5000.00

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	1000.00	ug/L	8261.86	1000.00
Sb (206.834 nm)	1000.00	ug/L	2614.65	1000.00
Sb (217.582 nm)	1000.00	ug/L	3721.70	1000.00
Sb C (231.146 nm)	1000.00	ug/L	2307.12	1000.00
Se (196.026 nm)	1000.00	ug/L	2034.95	1000.00
Sn (189.925 nm)	1000.00	ug/L	7342.58	1000.00
Sr RAD (421.552 nm)	1000.00	ug/L	490901.15	1000.00
Ti (334.941 nm)	1000.00	ug/L	334597.15	1000.00
Tl (190.794 nm)	1000.00	ug/L	2037.04	1000.00
V (292.401 nm)	1000.00	ug/L	39331.66	1000.00
V C (311.837 nm)	1000.00	ug/L	66488.27	1000.00
Zn (206.200 nm)	1000.00	ug/L	37560.35	1000.00
Zn C (202.548 nm)	1000.00	ug/L	97615.92	1000.00
Zn RAD (206.200 nm)	1000.00	ug/L	2055.01	1000.00

Solution Name: ICV

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
ICV	03/18/20 10:25:59 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	246.47	ug/L	22631.67	246.47
Ag C (338.289 nm)	245.63	ug/L	1650.88	245.63
Al (237.312 nm)	12458.54	ug/L	33530.27	12458.54
Al C (308.215 nm)	12279.51	ug/L	140193.80	12279.51
Al C (396.152 nm)	12332.58	ug/L	510424.69	12332.58
Al RAD (396.152 nm)	12389.82	ug/L	70281.32	12389.82
As (188.980 nm)	499.59	ug/L	2110.12	499.59
As C (193.696 nm)	492.77	ug/L	1503.76	492.77
B (249.678 nm)	494.36	ug/L	9830.13	494.36
Ba (233.527 nm)	499.42	ug/L	47797.53	499.42
Ba (455.403 nm)	491.49	ug/L	1017504.87	491.49
Ba RAD (233.527 nm)	504.15	ug/L	4439.87	504.15
Be (313.107 nm)	486.60	ug/L	953756.69	486.60
Be C (234.861 nm)	485.36	ug/L	333888.98	485.36
Ca (315.887 nm)	11764.11	ug/L	252975.30	11764.11
Ca RAD (315.887 nm)	12448.13	ug/L	20630.97	12448.13
Cd (214.439 nm)	484.84	ug/L	57212.64	484.84
Cd C (226.502 nm)	Uncal	ug/L	54888.56 Q	Uncal
Cd C (228.802 nm)	496.59	ug/L	13952.79	496.59
Co (228.615 nm)	497.54	ug/L	6788.10	497.54
Co C (230.786 nm)	506.08	ug/L	12505.61	506.08
Cr (267.716 nm)	496.53	ug/L	34746.03	496.53
Cr C (205.560 nm)	Uncal	ug/L	24635.98 Q	Uncal
Cu (327.395 nm)	493.82	ug/L	26379.03	493.82
Cu C (324.754 nm)	498.42	ug/L	22808.31	498.42
Fe (259.940 nm)	11410.41	ug/L	615447.06	11410.41
Fe (261.187 nm)	12221.72	ug/L	119182.83	12221.72
Fe C (238.204 nm)	11550.15	ug/L	1039026.87	11550.15
Fe RAD (259.940 nm)	12461.04	ug/L	71404.89	12461.04
Fe RAD (261.187 nm)	12469.37	ug/L	14714.25	12469.37
K RAD (766.491 nm)	12475.57	ug/L	19017.99	12475.57
Mg C (279.078 nm)	12108.68	ug/L	120954.39	12108.68
Mg RAD (279.078 nm)	12428.28	ug/L	11554.01	12428.28
Mn (257.610 nm)	493.47	ug/L	182845.62	493.47
Mn C (260.568 nm)	Uncal	ug/L	40383.45 Q	Uncal
Mo (202.032 nm)	483.84	ug/L	9648.73	483.84
Mo C (203.846 nm)	483.76	ug/L	2984.65	483.76
Mo C (204.598 nm)	485.46	ug/L	6345.75	485.46
Na RAD (588.995 nm)	12428.10	ug/L	293380.39	12428.10
Na RAD (589.592 nm)	12327.97	ug/L	192834.96	12327.97
Ni (231.604 nm)	498.86	ug/L	10879.34	498.86
Ni C (221.648 nm)	510.10	ug/L	8722.40	510.10
P (213.618 nm)	2449.44	ug/L	10005.05	2449.44
P C (214.914 nm)	2473.82	ug/L	3368.01	2473.82

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	494.79	ug/L	4212.45	494.79
Sb (206.834 nm)	466.63	ug/L	1251.47	466.63
Sb (217.582 nm)	470.15	ug/L	1762.07	470.15
Sb C (231.146 nm)	470.62	ug/L	1093.13	470.62
Se (196.026 nm)	Uncal	ug/L	1017.61 Q	Uncal
Sn (189.925 nm)	250.34	ug/L	1858.45	250.34
Sr RAD (421.552 nm)	495.47	ug/L	248787.80	495.47
Ti (334.941 nm)	489.29	ug/L	164564.64	489.29
Tl (190.794 nm)	501.61	ug/L	1027.10	501.61
V (292.401 nm)	Uncal	ug/L	19523.98 Q	Uncal
V C (311.837 nm)	489.13	ug/L	32626.23	489.13
Zn (206.200 nm)	500.44	ug/L	20178.31	500.44
Zn C (202.548 nm)	514.56	ug/L	51946.95	514.56
Zn RAD (206.200 nm)	514.55	ug/L	1091.14	514.55

Solution Name: ICB

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
ICB	03/18/20 10:30:23 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	-0.22	ug/L	39.92	-0.22
Ag C (338.289 nm)	1.14 Z	ug/L	18.16 Z	1.14 Z
Al (237.312 nm)	-8.82	ug/L	14.51	-8.82
Al C (308.215 nm)	10.85	ug/L	4309.60	10.85
Al C (396.152 nm)	0.56	ug/L	284.85	0.56
Al RAD (396.152 nm)	-1.53	ug/L	38.07	-1.53
As (188.980 nm)	-0.98	ug/L	-10.13	-0.98
As C (193.696 nm)	-0.25	ug/L	15.91	-0.25
B (249.678 nm)	-0.53	ug/L	49.05	-0.53
Ba (233.527 nm)	-0.18	ug/L	21.16	-0.18
Ba (455.403 nm)	-0.14	ug/L	523.04	-0.14
Ba RAD (233.527 nm)	-0.19	ug/L	4.67	-0.19
Be (313.107 nm)	0.06	ug/L	187.17	0.06
Be C (234.861 nm)	0.05	ug/L	57.08	0.05
Ca (315.887 nm)	3.80	ug/L	176.32	3.80
Ca RAD (315.887 nm)	0.57	ug/L	23.15	0.57
Cd (214.439 nm)	0.02	ug/L	19.00	0.02
Cd C (226.502 nm)	Uncal	ug/L	27.58 Z	Uncal
Cd C (228.802 nm)	-0.06	ug/L	5.12	-0.06
Co (228.615 nm)	-0.15	ug/L	36.31	-0.15
Co C (230.786 nm)	-0.52	ug/L	22.01	-0.52
Cr (267.716 nm)	0.08	ug/L	27.89	0.08
Cr C (205.560 nm)	Uncal	ug/L	20.38 Z	Uncal
Cu (327.395 nm)	-0.21	ug/L	29.25	-0.21
Cu C (324.754 nm)	0.20	ug/L	790.97	0.20
Fe (259.940 nm)	0.69	ug/L	202.88	0.69
Fe (261.187 nm)	-3.16	ug/L	53.52	-3.16
Fe C (238.204 nm)	1.17	ug/L	341.72	1.17
Fe RAD (259.940 nm)	-0.41	ug/L	24.09	-0.41
Fe RAD (261.187 nm)	-2.82	ug/L	12.25	-2.82
K RAD (766.491 nm)	-9.61	ug/L	98.41	-9.61
Mg C (279.078 nm)	2.70	ug/L	74.93	2.70
Mg RAD (279.078 nm)	5.83	ug/L	13.82	5.83
Mn (257.610 nm)	-0.02	ug/L	90.00	-0.02
Mn C (260.568 nm)	Uncal	ug/L	19.83 Z	Uncal
Mo (202.032 nm)	0.35	ug/L	24.32	0.35
Mo C (203.846 nm)	0.39	ug/L	4.84	0.39
Mo C (204.598 nm)	-0.06	ug/L	8.73	-0.06
Na RAD (588.995 nm)	-9.54	ug/L	2170.33	-9.54
Na RAD (589.592 nm)	7.37	ug/L	237.22	7.37
Ni (231.604 nm)	-0.14	ug/L	10.27	-0.14
Ni C (221.648 nm)	0.20	ug/L	13.45	0.20
P (213.618 nm)	0.94	ug/L	14.40	0.94
P C (214.914 nm)	1.93	ug/L	5.33	1.93

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	-0.13	ug/L	29.55	-0.13
Sb (206.834 nm)	-0.86	ug/L	20.68	-0.86
Sb (217.582 nm)	1.23	ug/L	13.88	1.23
Sb C (231.146 nm)	-1.94	ug/L	7.77	-1.94
Se (196.026 nm)	Uncal	ug/L	9.35 Z	Uncal
Sn (189.925 nm)	-0.49	ug/L	12.30	-0.49
Sr RAD (421.552 nm)	0.02	ug/L	62.39	0.02
Ti (334.941 nm)	-0.16	ug/L	35.97	-0.16
Tl (190.794 nm)	0.55	ug/L	2.48	0.55
V (292.401 nm)	Uncal	ug/L	10.65 Z	Uncal
V C (311.837 nm)	1.19 Z	ug/L	54.40 Z	1.19 Z
Zn (206.200 nm)	-1.72	ug/L	33.86	-1.72
Zn C (202.548 nm)	0.03	ug/L	81.93	0.03
Zn RAD (206.200 nm)	-1.05	ug/L	3.26	-1.05

Solution Name: LLICV

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
LLICV	03/18/20 10:34:47 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	0.36 R	ug/L	92.52 R	0.36 R
Ag C (338.289 nm)	-0.38 R	ug/L	8.02 R	-0.38 R
Al (237.312 nm)	41.48	ug/L	149.74	41.48
Al C (308.215 nm)	54.19	ug/L	4789.67	54.19
Al C (396.152 nm)	48.52	ug/L	2269.01	48.52
Al RAD (396.152 nm)	48.79	ug/L	323.27	48.79
As (188.980 nm)	1.04 R	ug/L	-1.57 R	1.04 R
As C (193.696 nm)	0.24 R	ug/L	17.38 R	0.24 R
B (249.678 nm)	26.07	ug/L	573.83	26.07
Ba (233.527 nm)	1.33	ug/L	165.69	1.33
Ba (455.403 nm)	1.35	ug/L	3608.41	1.35
Ba RAD (233.527 nm)	0.90 R	ug/L	14.25 R	0.90 R
Be (313.107 nm)	0.99	ug/L	2011.10	0.99
Be C (234.861 nm)	0.97	ug/L	694.79	0.97
Ca (315.887 nm)	48.56	ug/L	1138.42	48.56
Ca RAD (315.887 nm)	51.25	ug/L	107.03	51.25
Cd (214.439 nm)	0.21	ug/L	43.62	0.21
Cd C (226.502 nm)	Uncal	ug/L	51.36 R	Uncal
Cd C (228.802 nm)	0.16 R	ug/L	11.35 R	0.16 R
Co (228.615 nm)	2.51	ug/L	73.77	2.51
Co C (230.786 nm)	2.28	ug/L	90.73	2.28
Cr (267.716 nm)	0.58	ug/L	62.58	0.58
Cr C (205.560 nm)	Uncal	ug/L	48.70 R	Uncal
Cu (327.395 nm)	2.42	ug/L	169.24	2.42
Cu C (324.754 nm)	2.57	ug/L	895.86	2.57
Fe (259.940 nm)	22.87	ug/L	1398.86	22.87
Fe (261.187 nm)	21.38	ug/L	292.66	21.38
Fe C (238.204 nm)	23.64	ug/L	2363.00	23.64
Fe RAD (259.940 nm)	24.35	ug/L	165.90	24.35
Fe RAD (261.187 nm)	25.06	ug/L	45.12	25.06
K RAD (766.491 nm)	497.81	ug/L	867.34	497.81
Mg C (279.078 nm)	25.33	ug/L	300.92	25.33
Mg RAD (279.078 nm)	27.82	ug/L	34.25	27.82
Mn (257.610 nm)	0.95	ug/L	449.68	0.95
Mn C (260.568 nm)	Uncal	ug/L	103.39 R	Uncal
Mo (202.032 nm)	0.73 R	ug/L	31.80 R	0.73 R
Mo C (203.846 nm)	1.71 R	ug/L	13.01 R	1.71 R
Mo C (204.598 nm)	1.06	ug/L	23.35	1.06
Na RAD (588.995 nm)	522.66	ug/L	14631.06	522.66
Na RAD (589.592 nm)	523.86	ug/L	8311.08	523.86
Ni (231.604 nm)	1.08	ug/L	37.86	1.08
Ni C (221.648 nm)	0.80 R	ug/L	23.66 R	0.80 R
P (213.618 nm)	12.13	ug/L	60.48	12.13
P C (214.914 nm)	15.16 R	ug/L	23.32 R	15.16 R

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	1.48	ug/L	43.59	1.48
Sb (206.834 nm)	-0.20 R	ug/L	22.41 R	-0.20 R
Sb (217.582 nm)	2.41 R	ug/L	18.27 R	2.41 R
Sb C (231.146 nm)	1.07 R	ug/L	14.70 R	1.07 R
Se (196.026 nm)	Uncal	ug/L	13.96 R	Uncal
Sn (189.925 nm)	1.98 R	ug/L	30.50 R	1.98 R
Sr RAD (421.552 nm)	1.04	ug/L	573.86	1.04
Ti (334.941 nm)	2.42	ug/L	902.45	2.42
Tl (190.794 nm)	2.12	ug/L	5.68	2.12
V (292.401 nm)	Uncal	ug/L	26.00 R	Uncal
V C (311.837 nm)	1.16 R	ug/L	52.36 R	1.16 R
Zn (206.200 nm)	24.59	ug/L	1089.42	24.59
Zn C (202.548 nm)	26.47	ug/L	2747.59	26.47
Zn RAD (206.200 nm)	24.59	ug/L	57.36	24.59

Solution Name: ICSA

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
ICSA	03/18/20 10:52:24 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	-0.38	ug/L	27.62	-0.38
Ag C (338.289 nm)	3.21 K	ug/L	32.02 K	3.21 K
Al (237.312 nm)	103578.94	ug/L	278467.36	103578.94
Al C (308.215 nm)	103804.21 o	ug/L	1153895.80	103804.21 o
Al C (396.152 nm)	104861.56 o	ug/L	4338078.39	104861.56 o
Al RAD (396.152 nm)	101955.86 o	ug/L	578007.27	101955.86 o
As (188.980 nm)	-1.90	ug/L	-15.43	-1.90
As C (193.696 nm)	0.73	ug/L	23.35	0.73
B (249.678 nm)	-0.99	ug/L	34.12	-0.99
Ba (233.527 nm)	-0.44	ug/L	75.25	-0.44
Ba (455.403 nm)	-0.23	ug/L	330.85	-0.23
Ba RAD (233.527 nm)	1.65 K	ug/L	20.84 K	1.65 K
Be (313.107 nm)	0.01	ug/L	80.98	0.01
Be C (234.861 nm)	0.03	ug/L	46.33	0.03
Ca (315.887 nm)	94808.20	ug/L	2037683.18	94808.20
Ca RAD (315.887 nm)	100346.17	ug/L	166092.74	100346.17
Cd (214.439 nm)	-0.28 K	ug/L	78.20 K	-0.28 K
Cd C (226.502 nm)	Uncal	ug/L	656.69 K	Uncal
Cd C (228.802 nm)	-0.02	ug/L	9.15	-0.02
Co (228.615 nm)	-5.21 K	ug/L	93.39 K	-5.21 K
Co C (230.786 nm)	-3.77 K	ug/L	187.74 K	-3.77 K
Cr (267.716 nm)	-0.12	ug/L	31.64	-0.12
Cr C (205.560 nm)	Uncal	ug/L	26.50 K	Uncal
Cu (327.395 nm)	0.19	ug/L	63.63	0.19
Cu C (324.754 nm)	-0.46	ug/L	761.98	-0.46
Fe (259.940 nm)	84968.74	ug/L	4581920.56	84968.74
Fe (261.187 nm)	94662.94 o	ug/L	922557.63	94662.94 o
Fe C (238.204 nm)	84740.20 o	ug/L	7621551.42	84740.20 o
Fe RAD (259.940 nm)	95869.77 o	ug/L	549181.27	95869.77 o
Fe RAD (261.187 nm)	96911.06 o	ug/L	114252.70	96911.06 o
K RAD (766.491 nm)	-25.09	ug/L	74.95	-25.09
Mg C (279.078 nm)	99368.13 o	ug/L	992248.89	99368.13 o
Mg RAD (279.078 nm)	102069.23	ug/L	94828.50	102069.23
Mn (257.610 nm)	-0.31	ug/L	518.10	-0.31
Mn C (260.568 nm)	Uncal	ug/L	491.57 K	Uncal
Mo (202.032 nm)	-0.27	ug/L	12.00	-0.27
Mo C (203.846 nm)	1.89 K	ug/L	14.09 K	1.89 K
Mo C (204.598 nm)	1.59 K	ug/L	30.25 K	1.59 K
Na RAD (588.995 nm)	-15.30	ug/L	2035.68	-15.30
Na RAD (589.592 nm)	0.72	ug/L	133.20	0.72
Ni (231.604 nm)	4.56 K	ug/L	116.70 K	4.56 K
Ni C (221.648 nm)	4.77 K	ug/L	91.44 K	4.77 K
P (213.618 nm)	1.06	ug/L	14.92	1.06
P C (214.914 nm)	34.66 K	ug/L	49.81 K	34.66 K

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	-2.48 K	ug/L	26.11 K	-2.48 K
Sb (206.834 nm)	2.25 K	ug/L	33.08 K	2.25 K
Sb (217.582 nm)	2.14 K	ug/L	18.41 K	2.14 K
Sb C (231.146 nm)	-1.06	ug/L	9.80	-1.06
Se (196.026 nm)	Uncal	ug/L	5.11 K	Uncal
Sn (189.925 nm)	-0.81	ug/L	9.99	-0.81
Sr RAD (421.552 nm)	0.77	ug/L	442.13	0.77
Ti (334.941 nm)	-0.29	ug/L	-7.22	-0.29
Tl (190.794 nm)	0.25	ug/L	1.91	0.25
V (292.401 nm)	Uncal	ug/L	-8.89 K	Uncal
V C (311.837 nm)	0.80 K	ug/L	28.19 K	0.80 K
Zn (206.200 nm)	5.99	ug/L	343.48	5.99
Zn C (202.548 nm)	7.79	ug/L	864.84	7.79
Zn RAD (206.200 nm)	6.69	ug/L	19.59	6.69

Solution Name: ICSAB

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
ICSAB	03/18/20 11:10:32 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	507.85	ug/L	46564.84	507.85
Ag C (338.289 nm)	506.58	ug/L	3394.42	506.58
Al (237.312 nm)	103028.17	ug/L	276987.91	103028.17
Al C (308.215 nm)	102853.68 o	ug/L	1143367.92	102853.68 o
Al C (396.152 nm)	104251.17 o	ug/L	4312828.40	104251.17 o
Al RAD (396.152 nm)	101489.65 o	ug/L	575364.48	101489.65 o
As (188.980 nm)	248.09	ug/L	1043.57	248.09
As C (193.696 nm)	239.83	ug/L	744.61	239.83
B (249.678 nm)	-0.76	ug/L	48.47	-0.76
Ba (233.527 nm)	244.91	ug/L	23532.29	244.91
Ba (455.403 nm)	244.47	ug/L	506523.16	244.47
Ba RAD (233.527 nm)	243.06	ug/L	2143.83	243.06
Be (313.107 nm)	241.90	ug/L	474158.46	241.90
Be C (234.861 nm)	239.50	ug/L	164768.61	239.50
Ca (315.887 nm)	93478.52	ug/L	2009132.67	93478.52
Ca RAD (315.887 nm)	98709.35	ug/L	163387.91	98709.35
Cd (214.439 nm)	464.61	ug/L	55023.52	464.61
Cd C (226.502 nm)	Uncal	ug/L	53441.31	Uncal
Cd C (228.802 nm)	493.08	ug/L	13856.89	493.08
Co (228.615 nm)	228.13	ug/L	3304.38	228.13
Co C (230.786 nm)	238.46	ug/L	6146.85	238.46
Cr (267.716 nm)	245.12	ug/L	17181.01	245.12
Cr C (205.560 nm)	Uncal	ug/L	12076.12	Uncal
Cu (327.395 nm)	257.00	ug/L	13759.43	257.00
Cu C (324.754 nm)	253.82	ug/L	11998.93	253.82
Fe (259.940 nm)	83936.35	ug/L	4526251.27	83936.35
Fe (261.187 nm)	94009.25 o	ug/L	916187.50	94009.25 o
Fe C (238.204 nm)	84029.03 o	ug/L	7557591.17	84029.03 o
Fe RAD (259.940 nm)	95037.09 o	ug/L	544411.56	95037.09 o
Fe RAD (261.187 nm)	96232.90 o	ug/L	113453.29	96232.90 o
K RAD (766.491 nm)	-26.59	ug/L	72.69	-26.59
Mg C (279.078 nm)	98593.04 o	ug/L	984509.51	98593.04 o
Mg RAD (279.078 nm)	101705.49	ug/L	94490.60	101705.49
Mn (257.610 nm)	238.78	ug/L	89027.69	238.78
Mn C (260.568 nm)	Uncal	ug/L	19932.14	Uncal
Mo (202.032 nm)	238.47	ug/L	4764.24	238.47
Mo C (203.846 nm)	240.18	ug/L	1483.07	240.18
Mo C (204.598 nm)	241.59	ug/L	3162.74	241.59
Na RAD (588.995 nm)	-7.77	ug/L	2211.77	-7.77
Na RAD (589.592 nm)	-6.40	ug/L	21.91	-6.40
Ni (231.604 nm)	474.52	ug/L	10368.61	474.52
Ni C (221.648 nm)	484.11	ug/L	8278.54	484.11
P (213.618 nm)	-0.21	ug/L	15.56	-0.21
P C (214.914 nm)	29.33	ug/L	44.53	29.33

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	476.91	ug/L	4079.70	476.91
Sb (206.834 nm)	232.88	ug/L	640.01	232.88
Sb (217.582 nm)	228.34	ug/L	862.05	228.34
Sb C (231.146 nm)	229.81	ug/L	539.88	229.81
Se (196.026 nm)	Uncal	ug/L	504.28 G	Uncal
Sn (189.925 nm)	-0.38	ug/L	13.14	-0.38
Sr RAD (421.552 nm)	0.77	ug/L	438.71	0.77
Ti (334.941 nm)	-0.32	ug/L	-1.53	-0.32
Tl (190.794 nm)	244.18	ug/L	500.38	244.18
V (292.401 nm)	Uncal	ug/L	9775.73 G	Uncal
V C (311.837 nm)	244.03	ug/L	16265.12	244.03
Zn (206.200 nm)	447.41	ug/L	18051.29	447.41
Zn C (202.548 nm)	473.40	ug/L	47797.72	473.40
Zn RAD (206.200 nm)	469.77	ug/L	996.66	469.77

Solution Name: CCV

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
CCV	03/18/20 12:25:44 PM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	254.26	ug/L	23345.15	254.26
Ag C (338.289 nm)	250.61	ug/L	1684.18	250.61
Al (237.312 nm)	10270.94	ug/L	27649.82	10270.94
Al C (308.215 nm)	10045.35	ug/L	115448.93	10045.35
Al C (396.152 nm)	10241.52	ug/L	423923.46	10241.52
Al RAD (396.152 nm)	10174.39	ug/L	57722.60	10174.39
As (188.980 nm)	516.22	ug/L	2180.64	516.22
As C (193.696 nm)	514.28	ug/L	1568.58	514.28
B (249.678 nm)	513.25	ug/L	10202.89	513.25
Ba (233.527 nm)	504.93	ug/L	48322.66	504.93
Ba (455.403 nm)	500.64	ug/L	1036443.71	500.64
Ba RAD (233.527 nm)	501.35	ug/L	4415.22	501.35
Be (313.107 nm)	502.03	ug/L	983995.72	502.03
Be C (234.861 nm)	506.28	ug/L	348275.96	506.28
Ca (315.887 nm)	23525.67	ug/L	505732.65	23525.67
Ca RAD (315.887 nm)	24437.96	ug/L	40470.50	24437.96
Cd (214.439 nm)	493.01	ug/L	58122.90	493.01
Cd C (226.502 nm)	Uncal	ug/L	56188.31 Q	Uncal
Cd C (228.802 nm)	511.17	ug/L	14362.26	511.17
Co (228.615 nm)	500.86	ug/L	6829.35	500.86
Co C (230.786 nm)	508.45	ug/L	12558.67	508.45
Cr (267.716 nm)	506.37	ug/L	35433.73	506.37
Cr C (205.560 nm)	Uncal	ug/L	25242.74 Q	Uncal
Cu (327.395 nm)	507.56	ug/L	27111.16	507.56
Cu C (324.754 nm)	512.12	ug/L	23413.47	512.12
Fe (259.940 nm)	9293.21	ug/L	501281.67	9293.21
Fe (261.187 nm)	9948.21	ug/L	97027.82	9948.21
Fe C (238.204 nm)	9421.94	ug/L	847621.29	9421.94
Fe RAD (259.940 nm)	9962.34	ug/L	57092.04	9962.34
Fe RAD (261.187 nm)	10069.41	ug/L	11885.22	10069.41
K RAD (766.491 nm)	10344.86	ug/L	15789.20	10344.86
Mg C (279.078 nm)	24524.48	ug/L	244927.43	24524.48
Mg RAD (279.078 nm)	25368.56	ug/L	23575.24	25368.56
Mn (257.610 nm)	506.25	ug/L	187565.42	506.25
Mn C (260.568 nm)	Uncal	ug/L	41109.00 Q	Uncal
Mo (202.032 nm)	509.96	ug/L	10168.64	509.96
Mo C (203.846 nm)	510.37	ug/L	3148.67	510.37
Mo C (204.598 nm)	512.07	ug/L	6693.08	512.07
Na RAD (588.995 nm)	12947.68	ug/L	305545.79	12947.68
Na RAD (589.592 nm)	12684.20	ug/L	198403.61	12684.20
Ni (231.604 nm)	501.51	ug/L	10934.84	501.51
Ni C (221.648 nm)	510.93	ug/L	8736.63	510.93
P (213.618 nm)	2568.84	ug/L	10487.45	2568.84
P C (214.914 nm)	2569.86	ug/L	3498.63	2569.86

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	504.05	ug/L	4288.15	504.05
Sb (206.834 nm)	514.17	ug/L	1376.48	514.17
Sb (217.582 nm)	517.46	ug/L	1937.92	517.46
Sb C (231.146 nm)	515.33	ug/L	1195.84	515.33
Se (196.026 nm)	Uncal	ug/L	1064.03 Q	Uncal
Sn (189.925 nm)	500.32	ug/L	3698.35	500.32
Sr RAD (421.552 nm)	511.11	ug/L	256640.00	511.11
Ti (334.941 nm)	511.47	ug/L	172018.98	511.47
Tl (190.794 nm)	514.62	ug/L	1053.69	514.62
V (292.401 nm)	Uncal	ug/L	20155.87 Q	Uncal
V C (311.837 nm)	508.67	ug/L	33930.46	508.67
Zn (206.200 nm)	475.37	ug/L	19172.59	475.37
Zn C (202.548 nm)	503.53	ug/L	50835.04	503.53
Zn RAD (206.200 nm)	488.91	ug/L	1037.05	488.91

Solution Name: CCB

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
CCB	03/18/20 12:30:09 PM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	-0.19	ug/L	42.43	-0.19
Ag C (338.289 nm)	0.99 Z	ug/L	17.15 Z	0.99 Z
Al (237.312 nm)	-5.62	ug/L	23.13	-5.62
Al C (308.215 nm)	25.03	ug/L	4466.62	25.03
Al C (396.152 nm)	1.13	ug/L	308.67	1.13
Al RAD (396.152 nm)	-1.23	ug/L	39.75	-1.23
As (188.980 nm)	-1.36	ug/L	-11.73	-1.36
As C (193.696 nm)	0.23	ug/L	17.37	0.23
B (249.678 nm)	-0.91	ug/L	41.52	-0.91
Ba (233.527 nm)	-0.24	ug/L	15.08	-0.24
Ba (455.403 nm)	-0.14	ug/L	518.31	-0.14
Ba RAD (233.527 nm)	-0.51	ug/L	1.84	-0.51
Be (313.107 nm)	0.07	ug/L	196.75	0.07
Be C (234.861 nm)	0.04	ug/L	52.73	0.04
Ca (315.887 nm)	4.08	ug/L	182.25	4.08
Ca RAD (315.887 nm)	0.39	ug/L	22.84	0.39
Cd (214.439 nm)	0.03	ug/L	21.06	0.03
Cd C (226.502 nm)	Uncal	ug/L	30.70 Z	Uncal
Cd C (228.802 nm)	0.05	ug/L	8.18	0.05
Co (228.615 nm)	0.23	ug/L	41.66	0.23
Co C (230.786 nm)	-0.36	ug/L	25.97	-0.36
Cr (267.716 nm)	0.03	ug/L	24.23	0.03
Cr C (205.560 nm)	Uncal	ug/L	20.92 Z	Uncal
Cu (327.395 nm)	-0.25	ug/L	26.77	-0.25
Cu C (324.754 nm)	0.70	ug/L	812.97	0.70
Fe (259.940 nm)	0.67	ug/L	201.66	0.67
Fe (261.187 nm)	-2.43	ug/L	60.62	-2.43
Fe C (238.204 nm)	1.11	ug/L	336.70	1.11
Fe RAD (259.940 nm)	0.06	ug/L	26.76	0.06
Fe RAD (261.187 nm)	-4.51	ug/L	10.26	-4.51
K RAD (766.491 nm)	-18.02	ug/L	85.66	-18.02
Mg C (279.078 nm)	2.98	ug/L	77.71	2.98
Mg RAD (279.078 nm)	0.67	ug/L	9.03	0.67
Mn (257.610 nm)	-0.03	ug/L	86.30	-0.03
Mn C (260.568 nm)	Uncal	ug/L	20.59 Z	Uncal
Mo (202.032 nm)	0.09	ug/L	19.15	0.09
Mo C (203.846 nm)	0.91	ug/L	8.06	0.91
Mo C (204.598 nm)	0.09	ug/L	10.60	0.09
Na RAD (588.995 nm)	-17.36	ug/L	1987.40	-17.36
Na RAD (589.592 nm)	1.09	ug/L	138.94	1.09
Ni (231.604 nm)	0.01	ug/L	13.65	0.01
Ni C (221.648 nm)	-0.30	ug/L	4.82	-0.30
P (213.618 nm)	0.91	ug/L	14.28	0.91
P C (214.914 nm)	1.87	ug/L	5.25	1.87

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	0.58	ug/L	35.76	0.58
Sb (206.834 nm)	-0.91	ug/L	20.55	-0.91
Sb (217.582 nm)	1.82	ug/L	16.07	1.82
Sb C (231.146 nm)	-2.50 Z	ug/L	6.50 Z	-2.50 Z
Se (196.026 nm)	Uncal	ug/L	8.89 Z	Uncal
Sn (189.925 nm)	-1.15	ug/L	7.44	-1.15
Sr RAD (421.552 nm)	0.00	ug/L	51.64	0.00
Ti (334.941 nm)	-0.19	ug/L	26.48	-0.19
Tl (190.794 nm)	0.35	ug/L	2.08	0.35
V (292.401 nm)	Uncal	ug/L	-1.28 Z	Uncal
V C (311.837 nm)	0.76 Z	ug/L	25.96 Z	0.76 Z
Zn (206.200 nm)	-1.75	ug/L	32.86	-1.75
Zn C (202.548 nm)	0.06	ug/L	85.69	0.06
Zn RAD (206.200 nm)	-0.45	ug/L	4.52	-0.45

METALS

Raw Data

Solution Name: BA08370W24

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
BA08370W24	03/18/20 11:54:55 AM	1	1	5

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	-0.19	ug/L	42.75	-0.93
Ag C (338.289 nm)	0.49	ug/L	13.80	2.44
Al (237.312 nm)	-10.87	ug/L	8.99	-54.35
Al C (308.215 nm)	26.90	ug/L	4487.43	134.52
Al C (396.152 nm)	0.90	ug/L	299.11	4.51
Al RAD (396.152 nm)	-2.04	ug/L	35.13	-10.22
As (188.980 nm)	-0.64	ug/L	-8.70	-3.22
As C (193.696 nm)	0.15	ug/L	17.13	0.77
B (249.678 nm)	9.78	ug/L	252.44	48.90
Ba (233.527 nm)	1.37	ug/L	169.86	6.87
Ba (455.403 nm)	1.45	ug/L	3813.85	7.27
Ba RAD (233.527 nm)	1.32	ug/L	17.90	6.60
Be (313.107 nm)	0.00	ug/L	66.64	0.00
Be C (234.861 nm)	-0.02	ug/L	9.74	-0.12
Ca (315.887 nm)	4152.49	ug/L	89332.70	20762.47
Ca RAD (315.887 nm)	4372.54	ug/L	7257.54	21862.72
Cd (214.439 nm)	-0.07	ug/L	7.95	-0.37
Cd C (226.502 nm)	Uncal	ug/L	17.49	Uncal
Cd C (228.802 nm)	-0.02	ug/L	6.14	-0.11
Co (228.615 nm)	-0.29	ug/L	34.46	-1.45
Co C (230.786 nm)	-0.28	ug/L	28.20	-1.39
Cr (267.716 nm)	4.52	ug/L	338.32	22.61
Cr C (205.560 nm)	Uncal	ug/L	248.37	Uncal
Cu (327.395 nm)	-0.14	ug/L	32.75	-0.70
Cu C (324.754 nm)	0.37	ug/L	798.58	1.86
Fe (259.940 nm)	54.29	ug/L	3092.90	271.43
Fe (261.187 nm)	55.51	ug/L	625.30	277.56
Fe C (238.204 nm)	55.56	ug/L	5233.64	277.81
Fe RAD (259.940 nm)	57.20	ug/L	354.05	286.00
Fe RAD (261.187 nm)	55.71	ug/L	81.24	278.55
K RAD (766.491 nm)	675.66	ug/L	1136.85	3378.31
Mg C (279.078 nm)	2884.09	ug/L	28845.93	14420.47
Mg RAD (279.078 nm)	2979.98	ug/L	2776.75	14899.92
Mn (257.610 nm)	23.47	ug/L	8786.97	117.37
Mn C (260.568 nm)	Uncal	ug/L	1932.89	Uncal
Mo (202.032 nm)	7.46	ug/L	165.77	37.29
Mo C (203.846 nm)	8.26	ug/L	53.40	41.32
Mo C (204.598 nm)	7.32	ug/L	105.01	36.60
Na RAD (588.995 nm)	9491.24	ug/L	224618.01	47456.21
Na RAD (589.592 nm)	9232.11	ug/L	144439.87	46160.53
Ni (231.604 nm)	2.82	ug/L	77.30	14.09
Ni C (221.648 nm)	2.67	ug/L	55.68	13.37
P (213.618 nm)	3.40	ug/L	24.53	17.02
P C (214.914 nm)	4.37	ug/L	8.64	21.83

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	0.00	ug/L	30.73	0.01
Sb (206.834 nm)	-0.40	ug/L	21.89	-1.98
Sb (217.582 nm)	1.84	ug/L	16.14	9.20
Sb C (231.146 nm)	2.98	ug/L	19.09	14.92
Se (196.026 nm)	Uncal	ug/L	13.10	Uncal
Sn (189.925 nm)	-1.06	ug/L	8.11	-5.31
Sr RAD (421.552 nm)	30.81	ug/L	15522.06	154.07
Ti (334.941 nm)	-0.24	ug/L	9.60	-1.20
Tl (190.794 nm)	-0.60	ug/L	0.23	-3.00
V (292.401 nm)	Uncal	ug/L	-0.25	Uncal
V C (311.837 nm)	0.83	ug/L	30.25	4.13
Zn (206.200 nm)	-1.75	ug/L	33.03	-8.73
Zn C (202.548 nm)	-0.02	ug/L	77.48	-0.09
Zn RAD (206.200 nm)	-0.56	ug/L	4.29	-2.82

Solution Name: 200313B BLK

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
200313B BLK	03/18/20 11:19:24 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	-0.23	ug/L	38.66	-0.23
Ag C (338.289 nm)	0.10	ug/L	11.24	0.10
Al (237.312 nm)	-5.64	ug/L	23.07	-5.64
Al C (308.215 nm)	10.01	ug/L	4300.36	10.01
Al C (396.152 nm)	0.97	ug/L	302.06	0.97
Al RAD (396.152 nm)	-2.89	ug/L	30.32	-2.89
As (188.980 nm)	-0.50	ug/L	-8.09	-0.50
As C (193.696 nm)	-0.14	ug/L	16.23	-0.14
B (249.678 nm)	-1.05	ug/L	38.75	-1.05
Ba (233.527 nm)	-0.26	ug/L	14.03	-0.26
Ba (455.403 nm)	-0.20	ug/L	398.71	-0.20
Ba RAD (233.527 nm)	-0.31	ug/L	3.54	-0.31
Be (313.107 nm)	0.00	ug/L	70.28	0.00
Be C (234.861 nm)	-0.05	ug/L	-5.74	-0.05
Ca (315.887 nm)	9.55	ug/L	299.86	9.55
Ca RAD (315.887 nm)	6.84	ug/L	33.52	6.84
Cd (214.439 nm)	0.00	ug/L	16.67	0.00
Cd C (226.502 nm)	Uncal	ug/L	30.37	Uncal
Cd C (228.802 nm)	0.13	ug/L	10.46	0.13
Co (228.615 nm)	-0.34	ug/L	33.73	-0.34
Co C (230.786 nm)	-0.35	ug/L	26.06	-0.35
Cr (267.716 nm)	0.05	ug/L	25.47	0.05
Cr C (205.560 nm)	Uncal	ug/L	19.32	Uncal
Cu (327.395 nm)	-0.22	ug/L	28.42	-0.22
Cu C (324.754 nm)	-0.17	ug/L	774.74	-0.17
Fe (259.940 nm)	0.30	ug/L	181.73	0.30
Fe (261.187 nm)	-2.65	ug/L	58.53	-2.65
Fe C (238.204 nm)	0.64	ug/L	294.12	0.64
Fe RAD (259.940 nm)	-0.83	ug/L	21.65	-0.83
Fe RAD (261.187 nm)	-3.40	ug/L	11.57	-3.40
K RAD (766.491 nm)	-20.60	ug/L	81.77	-20.60
Mg C (279.078 nm)	3.95	ug/L	87.37	3.95
Mg RAD (279.078 nm)	3.78	ug/L	11.92	3.78
Mn (257.610 nm)	-0.11	ug/L	56.54	-0.11
Mn C (260.568 nm)	Uncal	ug/L	13.89	Uncal
Mo (202.032 nm)	0.26	ug/L	22.57	0.26
Mo C (203.846 nm)	0.93	ug/L	8.19	0.93
Mo C (204.598 nm)	-0.12	ug/L	7.87	-0.12
Na RAD (588.995 nm)	-13.11	ug/L	2086.77	-13.11
Na RAD (589.592 nm)	6.50	ug/L	223.59	6.50
Ni (231.604 nm)	-0.24	ug/L	8.13	-0.24
Ni C (221.648 nm)	0.19	ug/L	13.26	0.19
P (213.618 nm)	1.60	ug/L	17.11	1.60
P C (214.914 nm)	2.34	ug/L	5.88	2.34

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	1.00	ug/L	39.37	1.00
Sb (206.834 nm)	1.06	ug/L	25.73	1.06
Sb (217.582 nm)	2.00	ug/L	16.72	2.00
Sb C (231.146 nm)	-1.27	ug/L	9.32	-1.27
Se (196.026 nm)	Uncal	ug/L	9.95	Uncal
Sn (189.925 nm)	-0.70	ug/L	10.77	-0.70
Sr RAD (421.552 nm)	-0.08	ug/L	15.48	-0.08
Ti (334.941 nm)	-0.19	ug/L	25.99	-0.19
Tl (190.794 nm)	-0.11	ug/L	1.14	-0.11
V (292.401 nm)	Uncal	ug/L	0.23	Uncal
V C (311.837 nm)	0.96	ug/L	39.34	0.96
Zn (206.200 nm)	-1.38	ug/L	47.89	-1.38
Zn C (202.548 nm)	0.58	ug/L	138.00	0.58
Zn RAD (206.200 nm)	-0.98	ug/L	3.41	-0.98

Solution Name: 200313B LCS

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
200313B LCS	03/18/20 11:23:50 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	100.57	ug/L	9270.38	100.57
Ag C (338.289 nm)	98.37	ug/L	667.45	98.37
Al (237.312 nm)	2026.42	ug/L	5486.42	2026.42
Al C (308.215 nm)	2033.38	ug/L	26710.55	2033.38
Al C (396.152 nm)	2039.03	ug/L	84610.32	2039.03
Al RAD (396.152 nm)	2005.80	ug/L	11417.08	2005.80
As (188.980 nm)	245.84	ug/L	1035.42	245.84
As C (193.696 nm)	244.77	ug/L	755.15	244.77
B (249.678 nm)	244.38	ug/L	4889.81	244.38
Ba (233.527 nm)	252.37	ug/L	24168.57	252.37
Ba (455.403 nm)	248.14	ug/L	514120.72	248.14
Ba RAD (233.527 nm)	248.52	ug/L	2191.77	248.52
Be (313.107 nm)	48.83	ug/L	95771.80	48.83
Be C (234.861 nm)	48.44	ug/L	33344.64	48.44
Ca (315.887 nm)	23510.80	ug/L	505376.17	23510.80
Ca RAD (315.887 nm)	24424.08	ug/L	40441.63	24424.08
Cd (214.439 nm)	46.02	ug/L	5720.54	46.02
Cd C (226.502 nm)	Uncal	ug/L	5505.46	Uncal
Cd C (228.802 nm)	49.92	ug/L	1408.60	49.92
Co (228.615 nm)	244.54	ug/L	3412.40	244.54
Co C (230.786 nm)	252.64	ug/L	6247.98	252.64
Cr (267.716 nm)	255.35	ug/L	17878.65	255.35
Cr C (205.560 nm)	Uncal	ug/L	12628.86	Uncal
Cu (327.395 nm)	255.74	ug/L	13679.63	255.74
Cu C (324.754 nm)	255.09	ug/L	12054.80	255.09
Fe (259.940 nm)	937.39	ug/L	50712.26	937.39
Fe (261.187 nm)	993.57	ug/L	9766.50	993.57
Fe C (238.204 nm)	948.65	ug/L	85555.99	948.65
Fe RAD (259.940 nm)	990.31	ug/L	5699.06	990.31
Fe RAD (261.187 nm)	990.22	ug/L	1182.82	990.22
K RAD (766.491 nm)	5009.55	ug/L	7704.27	5009.55
Mg C (279.078 nm)	24255.14	ug/L	242237.97	24255.14
Mg RAD (279.078 nm)	24615.26	ug/L	22875.45	24615.26
Mn (257.610 nm)	251.05	ug/L	93043.76	251.05
Mn C (260.568 nm)	Uncal	ug/L	20536.87	Uncal
Mo (202.032 nm)	255.87	ug/L	5110.78	255.87
Mo C (203.846 nm)	255.57	ug/L	1577.92	255.57
Mo C (204.598 nm)	256.79	ug/L	3361.15	256.79
Na RAD (588.995 nm)	24971.83	ug/L	587074.47	24971.83
Na RAD (589.592 nm)	24961.39	ug/L	390322.85	24961.39
Ni (231.604 nm)	243.94	ug/L	5433.51	243.94
Ni C (221.648 nm)	252.88	ug/L	4329.13	252.88
P (213.618 nm)	1965.12	ug/L	8039.98	1965.12
P C (214.914 nm)	1982.98	ug/L	2699.21	1982.98

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	246.68	ug/L	2143.52	246.68
Sb (206.834 nm)	233.86	ug/L	638.46	233.86
Sb (217.582 nm)	240.13	ug/L	904.53	240.13
Sb C (231.146 nm)	240.28	ug/L	564.10	240.28
Se (196.026 nm)	Uncal	ug/L	470.69	Uncal
Sn (189.925 nm)	254.71	ug/L	1890.59	254.71
Sr RAD (421.552 nm)	249.63	ug/L	125369.08	249.63
Ti (334.941 nm)	255.74	ug/L	86055.32	255.74
Tl (190.794 nm)	252.43	ug/L	517.20	252.43
V (292.401 nm)	Uncal	ug/L	10121.47	Uncal
V C (311.837 nm)	253.25	ug/L	16880.30	253.25
Zn (206.200 nm)	467.09	ug/L	18840.60	467.09
Zn C (202.548 nm)	488.26	ug/L	49295.53	488.26
Zn RAD (206.200 nm)	475.56	ug/L	1008.89	475.56

Solution Name: 200313B LCSD

Solution Name	Date	Weight (g)	Volume (mL)	Dilution
200313B LCSD	03/18/20 11:28:17 AM	1	1	1

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Ag (328.068 nm)	99.28	ug/L	9152.19	99.28
Ag C (338.289 nm)	97.22	ug/L	659.75	97.22
Al (237.312 nm)	1995.15	ug/L	5402.34	1995.15
Al C (308.215 nm)	2002.69	ug/L	26370.62	2002.69
Al C (396.152 nm)	2008.97	ug/L	83367.17	2008.97
Al RAD (396.152 nm)	1982.43	ug/L	11284.58	1982.43
As (188.980 nm)	242.44	ug/L	1021.02	242.44
As C (193.696 nm)	241.68	ug/L	745.83	241.68
B (249.678 nm)	239.90	ug/L	4801.32	239.90
Ba (233.527 nm)	248.36	ug/L	23785.43	248.36
Ba (455.403 nm)	244.43	ug/L	506432.59	244.43
Ba RAD (233.527 nm)	245.79	ug/L	2167.76	245.79
Be (313.107 nm)	48.08	ug/L	94291.56	48.08
Be C (234.861 nm)	47.67	ug/L	32815.69	47.67
Ca (315.887 nm)	23158.87	ug/L	497812.59	23158.87
Ca RAD (315.887 nm)	24130.15	ug/L	39955.19	24130.15
Cd (214.439 nm)	45.33	ug/L	5635.48	45.33
Cd C (226.502 nm)	Uncal	ug/L	5410.85	Uncal
Cd C (228.802 nm)	48.90	ug/L	1379.98	48.90
Co (228.615 nm)	240.89	ug/L	3362.95	240.89
Co C (230.786 nm)	249.51	ug/L	6171.15	249.51
Cr (267.716 nm)	251.86	ug/L	17634.08	251.86
Cr C (205.560 nm)	Uncal	ug/L	12446.32	Uncal
Cu (327.395 nm)	251.79	ug/L	13468.95	251.79
Cu C (324.754 nm)	251.09	ug/L	11878.11	251.09
Fe (259.940 nm)	919.52	ug/L	49748.74	919.52
Fe (261.187 nm)	979.91	ug/L	9633.41	979.91
Fe C (238.204 nm)	932.51	ug/L	84103.58	932.51
Fe RAD (259.940 nm)	978.64	ug/L	5632.18	978.64
Fe RAD (261.187 nm)	977.83	ug/L	1168.22	977.83
K RAD (766.491 nm)	4937.16	ug/L	7594.57	4937.16
Mg C (279.078 nm)	23865.24	ug/L	238344.80	23865.24
Mg RAD (279.078 nm)	24295.66	ug/L	22578.55	24295.66
Mn (257.610 nm)	246.16	ug/L	91231.98	246.16
Mn C (260.568 nm)	Uncal	ug/L	20229.96	Uncal
Mo (202.032 nm)	252.27	ug/L	5038.97	252.27
Mo C (203.846 nm)	252.49	ug/L	1558.97	252.49
Mo C (204.598 nm)	252.88	ug/L	3310.04	252.88
Na RAD (588.995 nm)	24683.99	ug/L	580334.89	24683.99
Na RAD (589.592 nm)	24623.85	ug/L	385046.36	24623.85
Ni (231.604 nm)	239.88	ug/L	5344.99	239.88
Ni C (221.648 nm)	249.64	ug/L	4273.74	249.64
P (213.618 nm)	1935.85	ug/L	7921.23	1935.85
P C (214.914 nm)	1950.60	ug/L	2655.18	1950.60

Label	Solution Concentration	Unit	Intensity (c/s)	Calculated Concentration
Pb (220.353 nm)	242.61	ug/L	2109.07	242.61
Sb (206.834 nm)	231.91	ug/L	633.33	231.91
Sb (217.582 nm)	235.31	ug/L	886.58	235.31
Sb C (231.146 nm)	244.42	ug/L	573.61	244.42
Se (196.026 nm)	Uncal	ug/L	467.46	Uncal
Sn (189.925 nm)	251.89	ug/L	1869.87	251.89
Sr RAD (421.552 nm)	246.29	ug/L	123693.01	246.29
Ti (334.941 nm)	250.86	ug/L	84418.32	250.86
Tl (190.794 nm)	249.44	ug/L	511.06	249.44
V (292.401 nm)	Uncal	ug/L	9971.92	Uncal
V C (311.837 nm)	249.49	ug/L	16629.24	249.49
Zn (206.200 nm)	461.40	ug/L	18612.35	461.40
Zn C (202.548 nm)	480.62	ug/L	48526.30	480.62
Zn RAD (206.200 nm)	470.09	ug/L	997.35	470.09

ICP-OES Calibration Standard Prep

Prepared: 03/18/20
Expires: 03/25/20
1% HNO3 / 5% HCl Prep: 03/18/20
Prepared By (Initials): PW

Calibration Standard 3

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. Range (ug/mL)	Lot Number - QA Number/ APPL Prep Date	Exp Date	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. Range (ug/L)
Solution A	Texas Scientific	HP1810-250	200 - 5,000	m2meb662248-38391	10/11/20	500uL	100mL	1% HNO3 / 5% HCl	1000 - 25,000
Solution B	Texas Scientific	HP1810-250	4000 - 10,000	m2meb662249-38389	10/11/20	500uL			2000 - 50,000
Solution C	Texas Scientific	HP1810-250	100 - 200	m2meb662250-38394	10/11/20	500uL			500 - 1000
Calibration Standard 2									
ICP-OES Calib Standard 3	Texas Scientific	Standard 2/CCV1	0.5 - 50	Prepared 03/18/20	03/25/20	25mL	50mL	1% HNO3 / 5% HCl	250 - 25,000
Calibration Standard 1									
200.7 LDL	O2SI	160634-01-01	0.05 - 100	10080366-3-41267	02/07/21	250uL	50mL	1% HNO3 / 5% HCl	0.25 - 200

ICP-OES ICV (SS)

Prepared: 03/18/20
Expires: 08/09/19
1% HNO3 / 5% HCl Prep: 03/18/20
Prepared By (Initials): PW

ICP-OES ICV 1

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. Range (ug/mL)	Lot Number - QA Number	Exp Date	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. Range (ug/mL)
QCS ICV Soln A	CPI	4400-070615RH01	50 - 500	10062445-11-49481	05/14/21	250uL	50mL	1% HNO3 / 5% HCl	0.25 - 2.5
QCS ICV Soln B	CPI	4400-070615RH01	2,500	10062445-12-49482	05/14/21	250uL			12.5

ICP-OES ICV Ba

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. Range (ug/mL)	Lot Number - QA Number	Exp Date	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. Range (ug/mL)
Custom 23 Element Mix #314	O2SI	161314-01-03	5 - 25,00	1064561-8-38870	08/09/19	1mL	50mL	1% HNO3 / 5% HCl	0.1 - 50
Custom 23 Element Mix #315	O2SI	161314-01-03	10 - 25	1064561-7-38869	08/09/19	1mL			0.2 - 0.5

ICP-OES CCV2

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. Range (ug/mL)	APPL Prep Date	Exp Date	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. Range (ug/mL)
ICP-OES Calib Standard 3	Texas Scientific	CCV2	0.5 - 50	Prepared 03/18/20	03/25/20	15mL	40mL	1% HNO3 / 5% HCl	0.15 - 15

ICP-OES Low Levels (LLICV)

Prepared: 03/18/20
Expires: 04/01/20
1% HNO3 / 5% HCl Prep: 03/18/20
Prepared By (Initials): PW

LLICV

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. Range ug/mL	Lot Number - QA Number	Exp Date	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. Range (ug/L)
200.7 LDL	O2SI	160634-01-01	0.05 - 100	10080366-3-41267	02/07/21	250uL	50mL	1% HNO3 / 5% HCl	0.25 - 200
LLICVX2									
200.7 LDL	O2SI	160634-01-01	0.05 - 100	10080366-3-41267	02/07/21	500uL	50mL	1% HNO3 / 5% HCl	0.50 - 400
LLICVX6									
200.7 LDL	O2SI	160634-01-01	0.05 - 100	10080366-3-41267	02/07/21	1.5mL	50mL	1% HNO3 / 5% HCl	1.5 - 1,200
LLICVX10									
200.7 LDL	O2SI	160634-01-01	0.05 - 100	10080366-3-41267	02/07/21	2.5mL	50mL	1% HNO3 / 5% HCl	2.5 - 2,000
LLICV 10									
ICP-OES Calib Standard 3	Texas Scientific	HP1810-250	0.5 - 50	10080366-3-41267	03/25/20	500uL	50mL	1% HNO3 / 5% HCl	5 - 500
LLICV 50									
ICP-OES Calib Standard 3	Texas Scientific	HP1810-250	0.5 - 50	10080366-3-41267	03/25/20	2.5mL	50mL	1% HNO3 / 5% HCl	25 - 2,500

ICP-OES Interference Check Solution A

Prepared: 03/18/20
Expires: 04/01/20
1% HNO3 / 5% HCl Prep: 03/18/20
Prepared By (Initials): PW

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp Date	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Aluminum	Inorganic Ventures	35-APPLTSP-6010ICSA	10,000	N2-MEB670092-39414	07/25/22	500uL	50mL	1% HNO3 / 5% HCl	100
Calcium			10,000						100
Magnesium			10,000						100
Iron			10,000						100
ICP-OES Interference Check Solution AB									
Aluminum	Inorganic Ventures	35-APPLTSP-6010ICSA	10,000	N2-MEB670092-39414	07/25/22	500uL	50mL	1% HNO3 / 5% HCl	100
Calcium			10,000						100
Magnesium			10,000						100
Iron			10,000						100
Special Mix (Interference)	O2SI	160495-01-01	100	10081266-2-49725	07/13/21	250uL			0.5

ICP-OES Internal Standards

Prepared: 03/18/20
Expires: 04/18/20
1% HNO3 / 5% HCl Prep: 03/18/20
Prepared By (Initials): PW

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (mg/L)	Lot Number - QA Number	Exp Date	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (mg/L)
Yttrium	O2SI	060039-04-03	1,000	10083563-2-49726	07/13/21	4mL	2L	1% HNO3 / 5% HCl	2

Metals Digestion Worksheet

Method Name 3010A Digestion **Prep Method** M3010 **Set** 200313B **Units** mL

Spikes			
Spiked ID 1	LCSW LOT# 10064561-13-49551 Pipette AP-21		
Spiked ID 2	LCSW LOT# 10064561-14-49600		
Spiked ID 3			
Spiked ID 4			
Spiked By	NM	Date:	03/13/20 8:06:00 AM
Witnessed By	SJ	Date:	03/13/20 8:06:00 AM

Starting Temp:	SLOT 32 THERM:MT1 93.2C
Ending Temp:	SLOT 32 95.2C
Temperature Type:	Mod Block
Sufficient Vol for Matrix QC:	YES
End Date/Time	03/13/20 12:15

	Sample	Sample Container	Spike Amount	Spike ID	Digested Amount	Final Volume	Start Date/Time	Comments
1	200313B Blk				50mL	50mL	03/13/20 8:06	equip: Modblock2
2	200313B LCS		500uL	1+2	50mL	50mL	03/13/20 8:06	equip: Modblock2
3	200313B LCSD		500uL	1+2	50mL	50mL	03/13/20 8:06	equip: Modblock2
4	BA08341	BA08341W48			50mL	50mL	03/13/20 8:06	equip: Modblock2 91638
5	BA08341 MS	BA08341W48	500uL	1+2	50mL	50mL	03/13/20 8:06	equip: Modblock2
6	BA08341 MSD	BA08341W48	500uL	1+2	50mL	50mL	03/13/20 8:06	equip: Modblock2
7	BA08343	BA08343W09			50mL	50mL	03/13/20 8:06	equip: Modblock2 91637
8	BA08344	BA08344W09			50mL	50mL	03/13/20 8:06	equip: Modblock2 91637
9	BA08345	BA08345W09			50mL	50mL	03/13/20 8:06	equip: Modblock2 91637
10	BA08346	BA08346W09			50mL	50mL	03/13/20 8:06	equip: Modblock2 91637
11	BA08347	BA08347W09			50mL	50mL	03/13/20 8:06	equip: Modblock2 91637
12	BA08348	BA08348W09			50mL	50mL	03/13/20 8:06	equip: Modblock2 91637
13	BA08349	BA08349W09			50mL	50mL	03/13/20 8:06	equip: Modblock2 91637
14	BA08350	BA08350W09			50mL	50mL	03/13/20 8:06	equip: Modblock2 91637
15	BA08370	BA08370W24			50mL	50mL	03/13/20 8:06	equip: Modblock2 91653

Solvent and Lot#
HNO3 BDH 1119020 15579
1:1 HCL 1-28-20
50mL vessel 1-28-20

Sample COC Transfer	
Sample prep employee Initials	nm
Analyst's initials	
Date	
Time	
Moved to	

Technician's Initials	
Scanned By	nm
Sample Preparation	nm
Digestion	nm
Bring up to volume	
Modified	03/13/20 7:38:17 AM

Reviewed By: **Date:**

6010C/3010A Injection Log

Directory: K:\ICP-OES Cyrus\Backup Excel\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	18 Mar 2020	09:54	Blank		200318A200	1.
2	18 Mar 2020	09:59	Standard 1		200318A200	1.
3	18 Mar 2020	10:03	Standard 2		200318A200	1.
4	18 Mar 2020	10:08	Standard 3		200318A200	1.
5	18 Mar 2020	10:12	Standard 4		200318A200	1.
6	18 Mar 2020	10:17	Standard 5		200318A200	1.
7	18 Mar 2020	10:21	Standard 6		200318A200	1.
8	18 Mar 2020	10:25	ICV		200318A200	1.
9	18 Mar 2020	10:30	ICB		200318A200	1.
10	18 Mar 2020	10:34	LLICV		200318A200	1.
14	18 Mar 2020	10:52	ICSA		200318A200	1.
16	18 Mar 2020	11:10	ICSAB		200318A200	1.
18	18 Mar 2020	11:19	200313B BLK		200318A200	1.
19	18 Mar 2020	11:23	200313B LCS		200318A200	1.
20	18 Mar 2020	11:28	200313B LCSD		200318A200	1.
26	18 Mar 2020	11:54	BA08370W24		200318A200	1.
27	18 Mar 2020	12:25	CCV		200318A200	1.
28	18 Mar 2020	12:30	CCB		200318A200	1.

INORGANIC ANALYSIS
Calibration Data

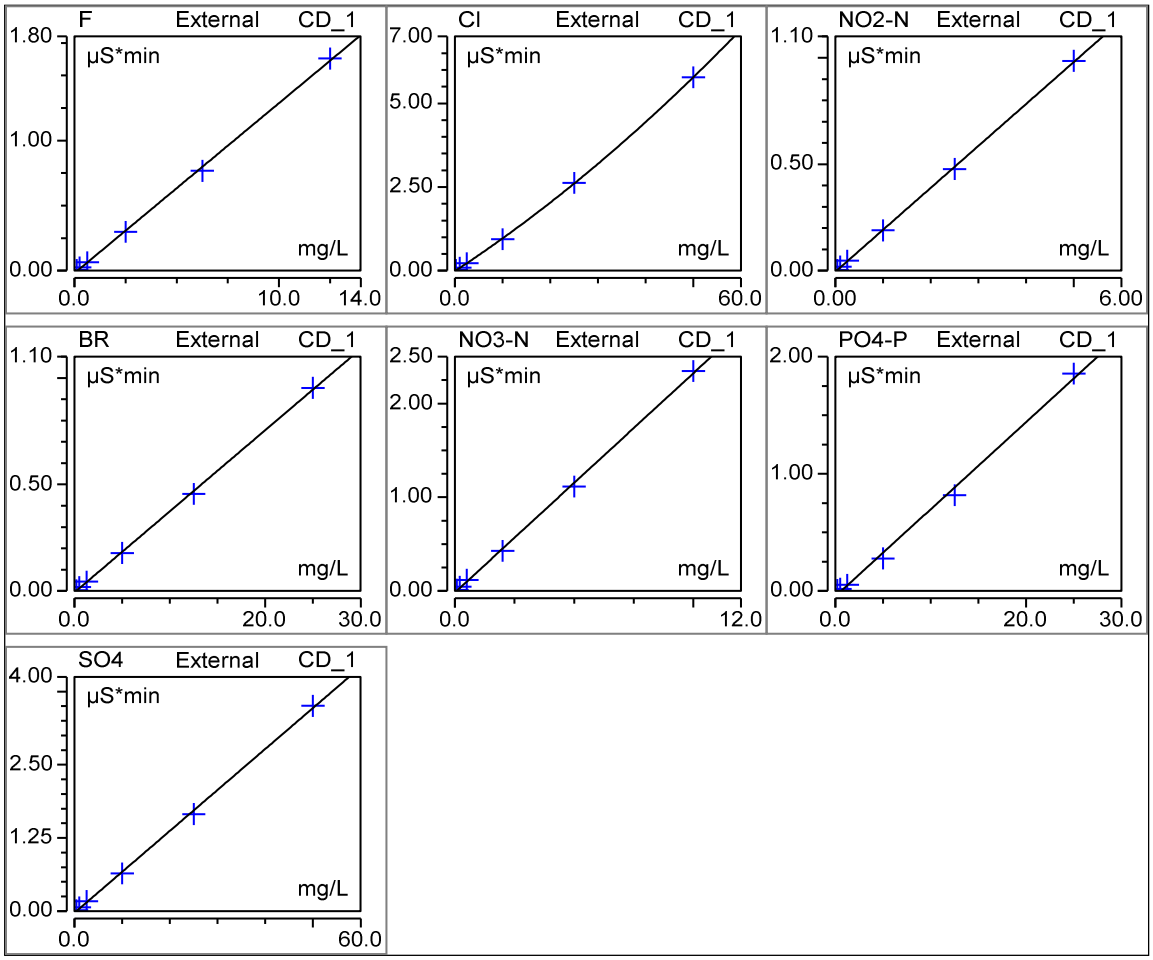
Calibration Batch Report

Sequence:	**200312**	*Injection Volume:*	**25.00**
Instrument Method:	**Anions IM**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Mar-2020 / 10:40**	*Run Time:*	**7.5**

Calibration Summary

Peak Name	Eval.Type	Cal.Type	Points	Offset (C0)	Slope (C1)	Curve (C2)	Coeff.Det. %
F	Area	Lin, WithOffset	6.000	-0.018	0.131	0.000	99.9240
Cl	Area	Quad, WithOffset	6.000	-0.012	0.093	0.000	99.9952
NO2-N	Area	Lin, WithOffset	6.000	-0.005	0.197	0.000	99.9779
BR	Area	Lin, WithOffset	6.000	-0.007	0.038	0.000	99.9522
NO3-N	Area	Lin, WithOffset	6.000	-0.017	0.234	0.000	99.9210
PO4-P	Area	Lin, WithOffset	6.000	-0.047	0.074	0.000	99.5900
SO4	Area	Lin, WithOffset	6.000	-0.027	0.070	0.000	99.9219

Injection Name	Amount mg/L CD_1 F	Amount mg/L CD_1 Cl	Amount mg/L CD_1 NO2-N	Amount mg/L CD_1 BR	Amount mg/L CD_1 NO3-N	Amount mg/L CD_1 PO4-P	Amount mg/L CD_1 SO4
Cal 1 2020.03.12	0.183	0.3234	0.0401	0.2592	0.1203	0.7374	0.5904
Cal 2	0.337	1.0494	0.1225	0.6623	0.2599	0.8678	1.2859
Cal 3	0.631	2.4664	0.2654	1.3323	0.5731	1.3300	2.8251
Cal 5	2.430	9.7342	0.9855	4.8563	1.8964	4.3465	9.6035
Cal 6	6.016	25.1506	2.4494	12.1381	4.8295	11.6066	24.0786
Cal 8	12.629	49.9763	5.0270	25.2019	10.1008	25.5618	50.5165

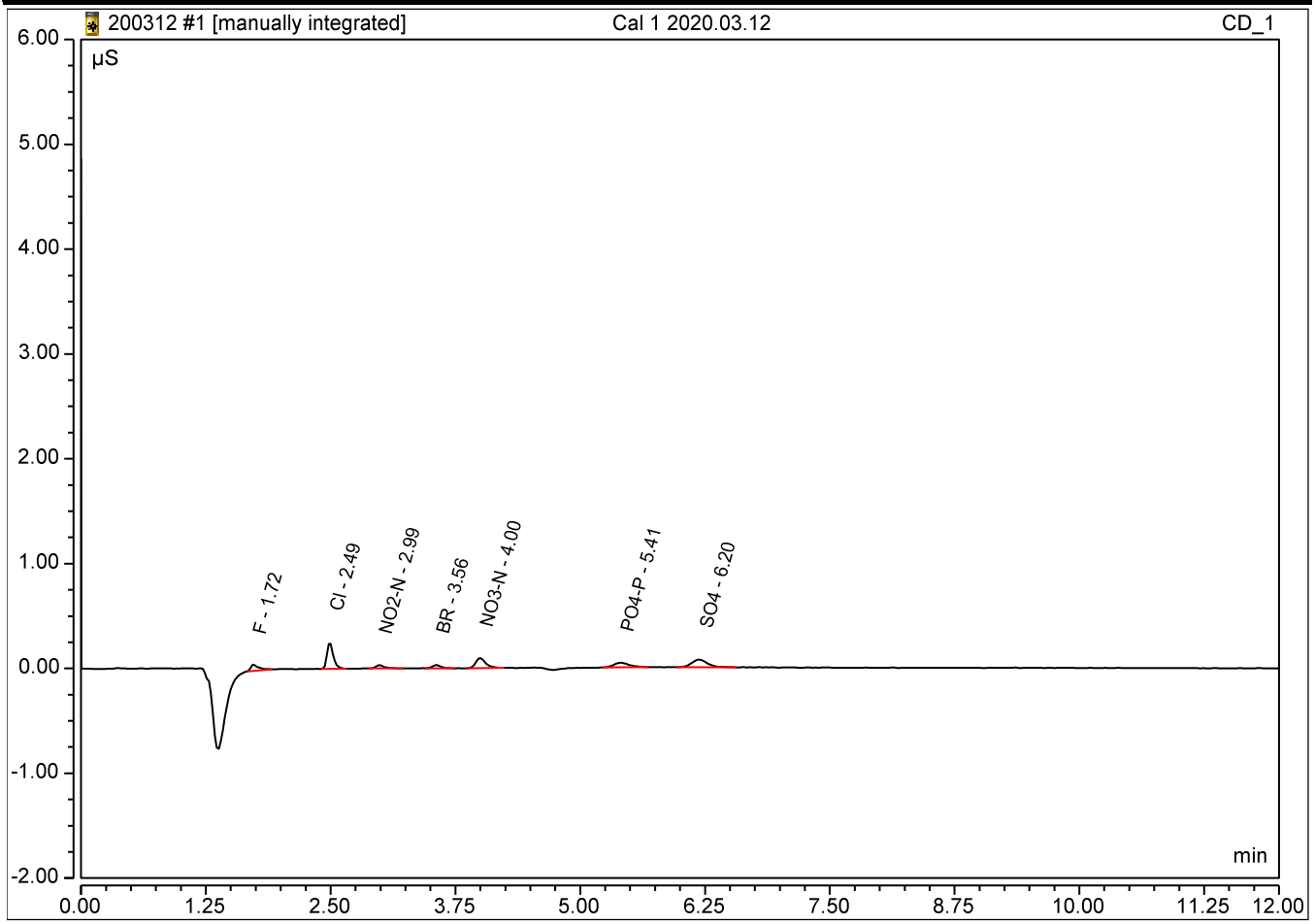


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200312

Peak Integration Report

Sample Name:	**Cal 1 2020.03.12**	*Inj. Vol.:*	**25uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.03.12**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Mar-2020 / 09:27**	*Run Time:*	**12.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	1.72	**F**	BMB*	0.006	0.060	0.18	0.1	183.2%
2	2.49	**Cl**	BMB	0.018	0.257	0.32	0.2	161.7%
3	2.99	**NO2-N**	BMB	0.003	0.031	0.04	0.04	100.3%
4	3.56	**BR**	BMB	0.003	0.030	0.26	0.2	129.6%
5	4.00	**NO3-N**	BMB	0.011	0.097	0.12	0.08	150.4%
6	5.41	**PO4-P**	BMB	0.008	0.045	0.74	0.2	368.7%
7	6.20	**SO4**	BMB	0.014	0.074	0.59	0.4	147.6%

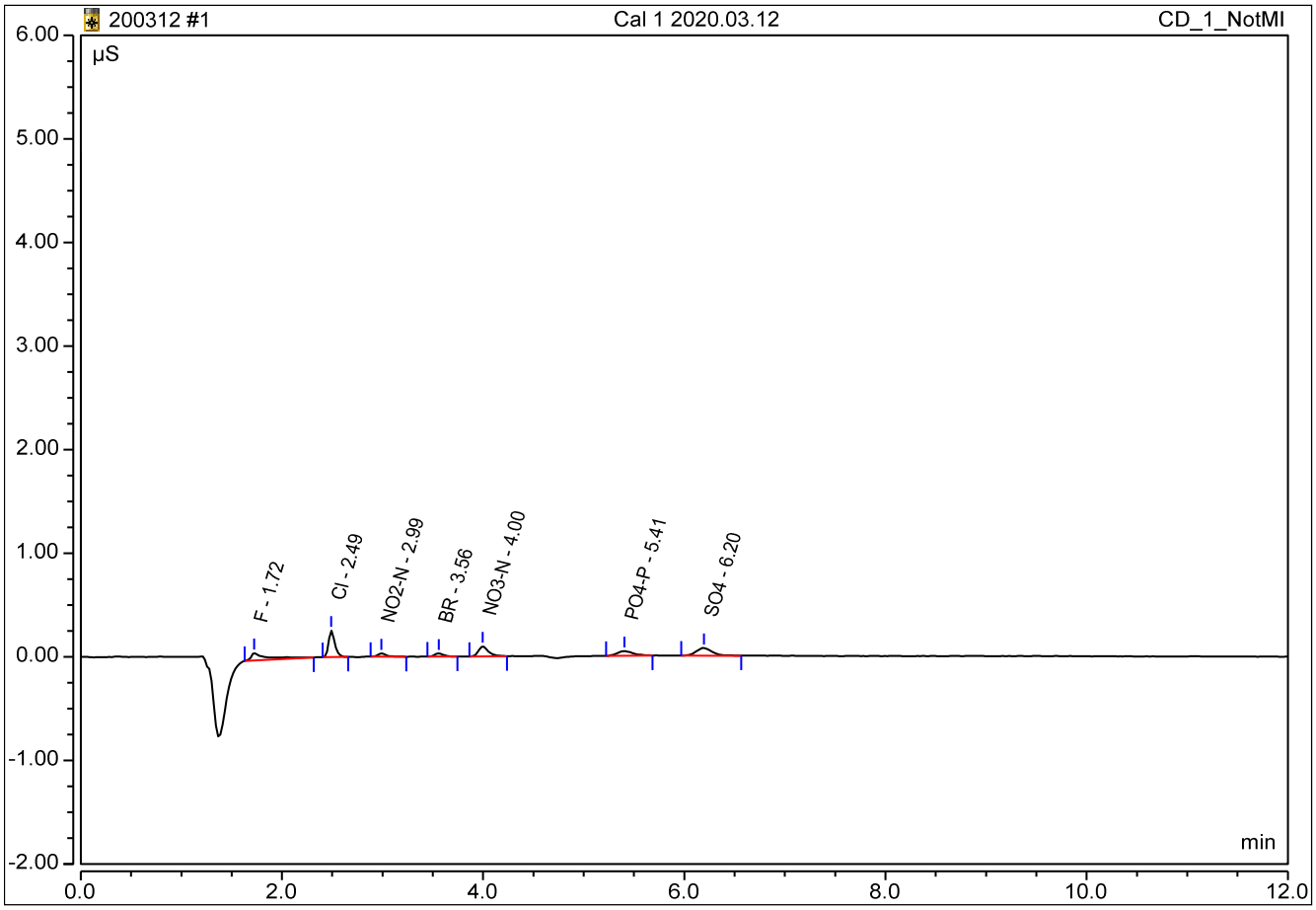


F GA mi1 2020.03.12, HH

Not Manipulated Peak Integration Report

Sample Name:	**Cal 1 2020.03.12**	*Inj. Vol.:*	**25uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.03.12**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Mar-2020 / 09:27**	*Run Time:*	**12.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	1.72	**F**	BMB*	0.013	0.070	0.1957
2	2.49	**Cl**	BMB	0.018	0.257	0.3239
3	2.99	**NO2-N**	BMB	0.003	0.031	0.0401
4	3.56	**BR**	BMB	0.003	0.030	0.2592
5	4.00	**NO3-N**	BMB	0.011	0.097	0.1203
6	5.41	**PO4-P**	BMB	0.008	0.045	0.7374
7	6.20	**SO4**	BMB	0.014	0.074	0.5904

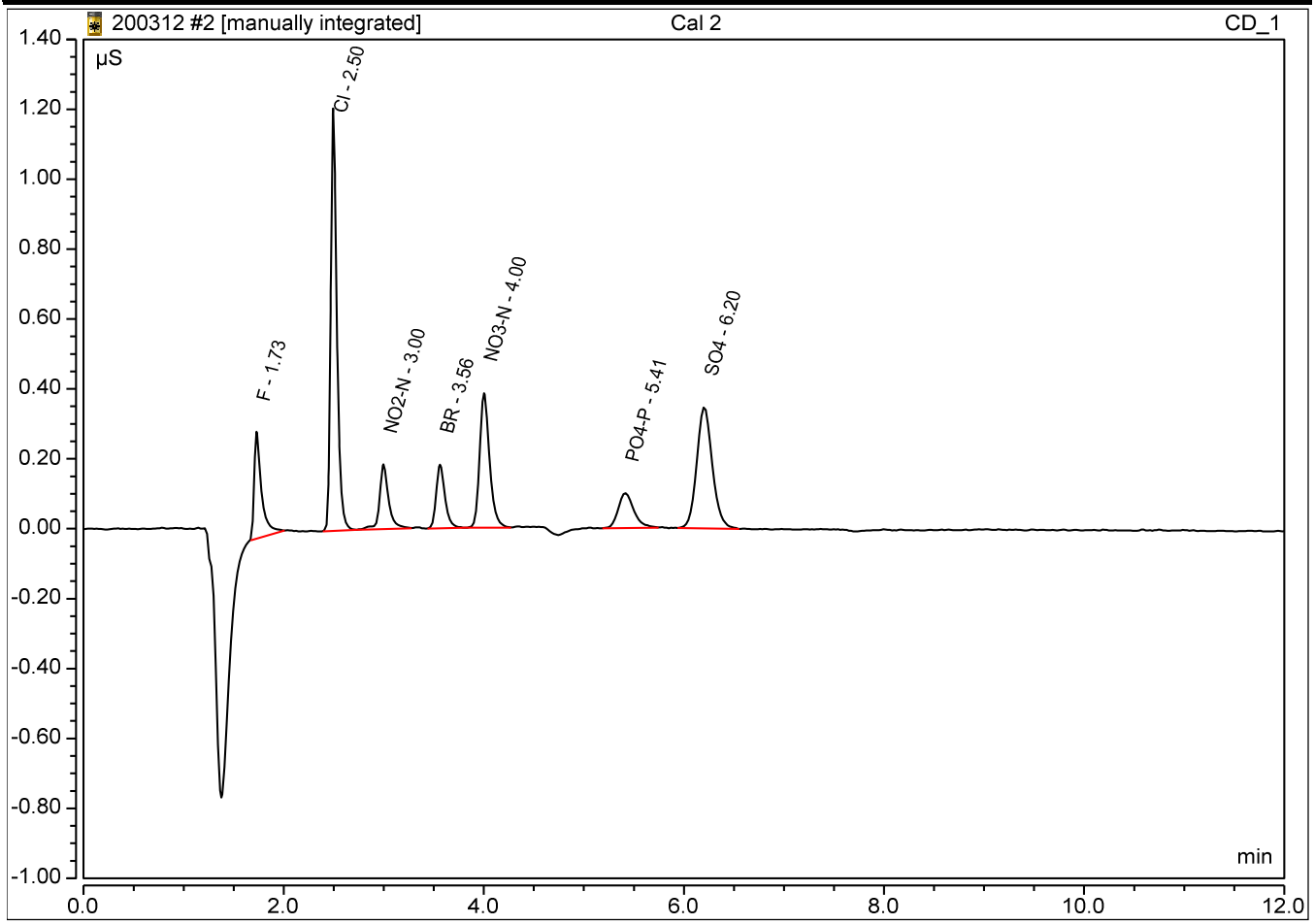


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200312

Peak Integration Report

Sample Name:	**Cal 2**	*Inj. Vol.:*	**25uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.03.12**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Mar-2020 / 09:42**	*Run Time:*	**12.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	1.73	**F**	MB*	0.026	0.305	0.34	0.25	134.9%
2	2.50	**Cl**	BMB	0.087	1.208	1.05	1	104.9%
3	3.00	**NO2-N**	BMB	0.019	0.185	0.12	0.1	122.5%
4	3.56	**BR**	BMB	0.018	0.182	0.66	0.5	132.5%
5	4.00	**NO3-N**	BMB	0.044	0.385	0.26	0.2	130.0%
6	5.41	**PO4-P**	BMB	0.018	0.100	0.87	0.5	173.6%
7	6.20	**SO4**	BMB	0.063	0.347	1.29	1	128.6%

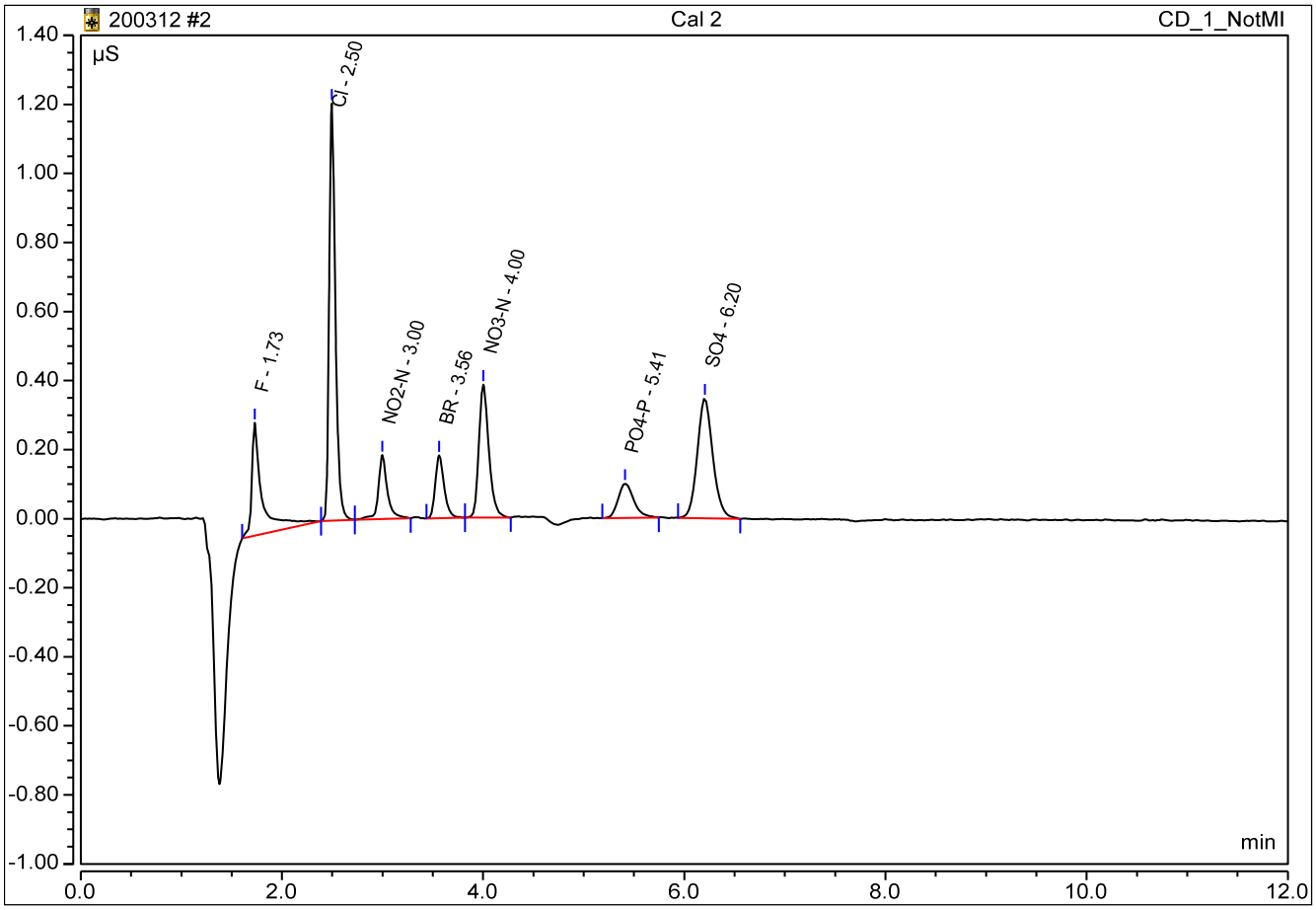


F GA mi1 2020.03.12, HH

Not Manipulated Peak Integration Report

Sample Name:	**Cal 2**	*Inj. Vol.:*	**25uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.0000**
Program:	**Anion APM 2020.03.12**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Mar-2020 / 09:42**	*Run Time:*	**12.00**

No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Ammount mg/L
1	1.73	**F**	MB*	0.039	0.326	0.3991
2	2.50	**Cl**	BMB	0.087	1.208	1.0546
3	3.00	**NO2-N**	BMB	0.019	0.185	0.1225
4	3.56	**BR**	BMB	0.018	0.182	0.6623
5	4.00	**NO3-N**	BMB	0.044	0.385	0.2599
6	5.41	**PO4-P**	BMB	0.018	0.100	0.8678
7	6.20	**SO4**	BMB	0.063	0.347	1.2859

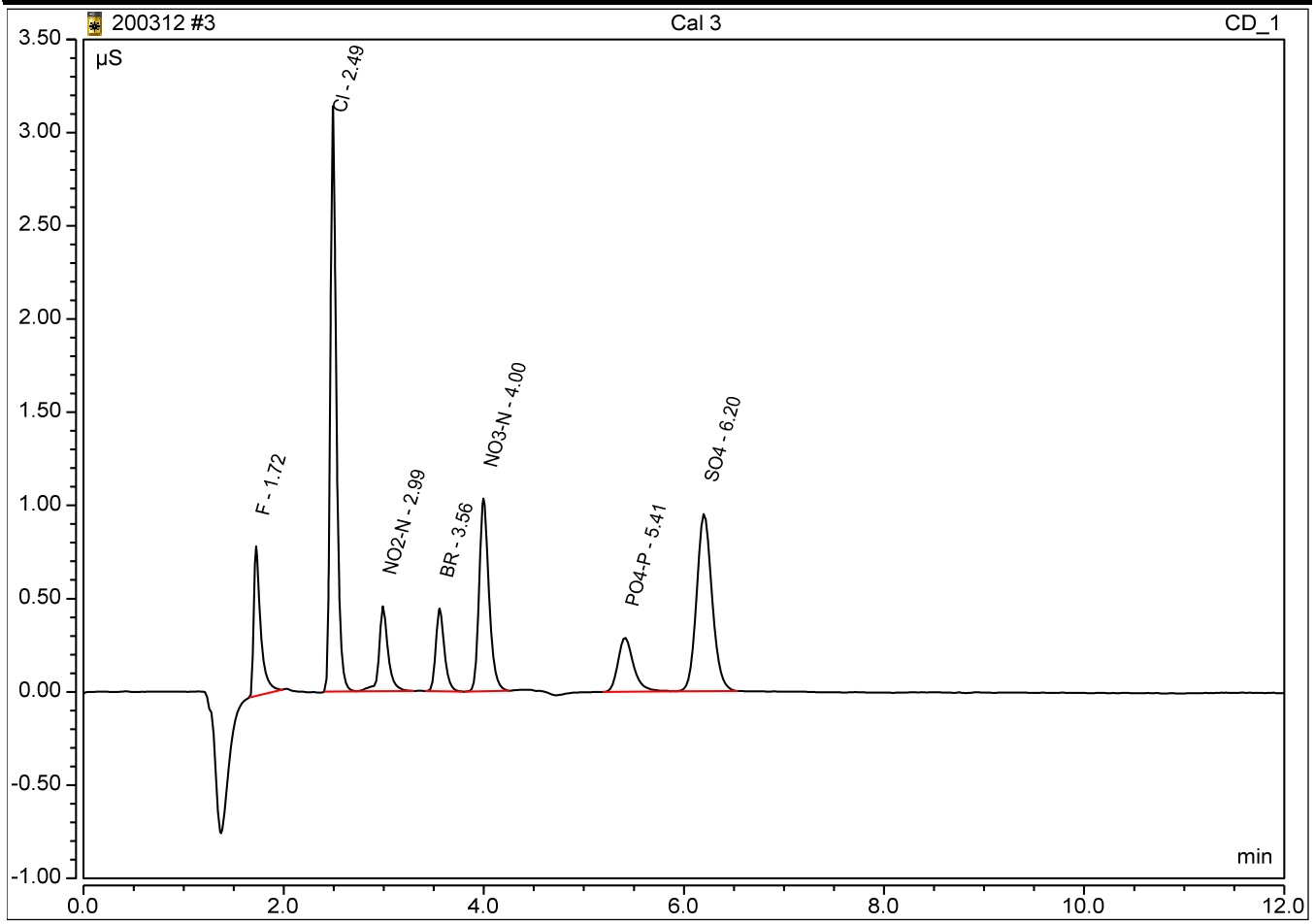


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200312

Peak Integration Report

Sample Name:	**Cal 3**	*Inj. Vol.:*	**25uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.03.12**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Mar-2020 / 09:56**	*Run Time:*	**12.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	1.72	**F**	BMB	0.064	0.802	0.63	0.625	100.9%
2	2.49	**Cl**	BMB	0.221	3.140	2.47	2.5	98.7%
3	2.99	**NO2-N**	BMB	0.047	0.457	0.27	0.25	106.2%
4	3.56	**BR**	BMB	0.044	0.444	1.33	1.25	106.6%
5	4.00	**NO3-N**	BMB	0.117	1.035	0.57	0.5	114.6%
6	5.41	**PO4-P**	BMB	0.052	0.291	1.33	1.25	106.4%
7	6.20	**SO4**	BMB	0.170	0.953	2.83	2.5	113.0%

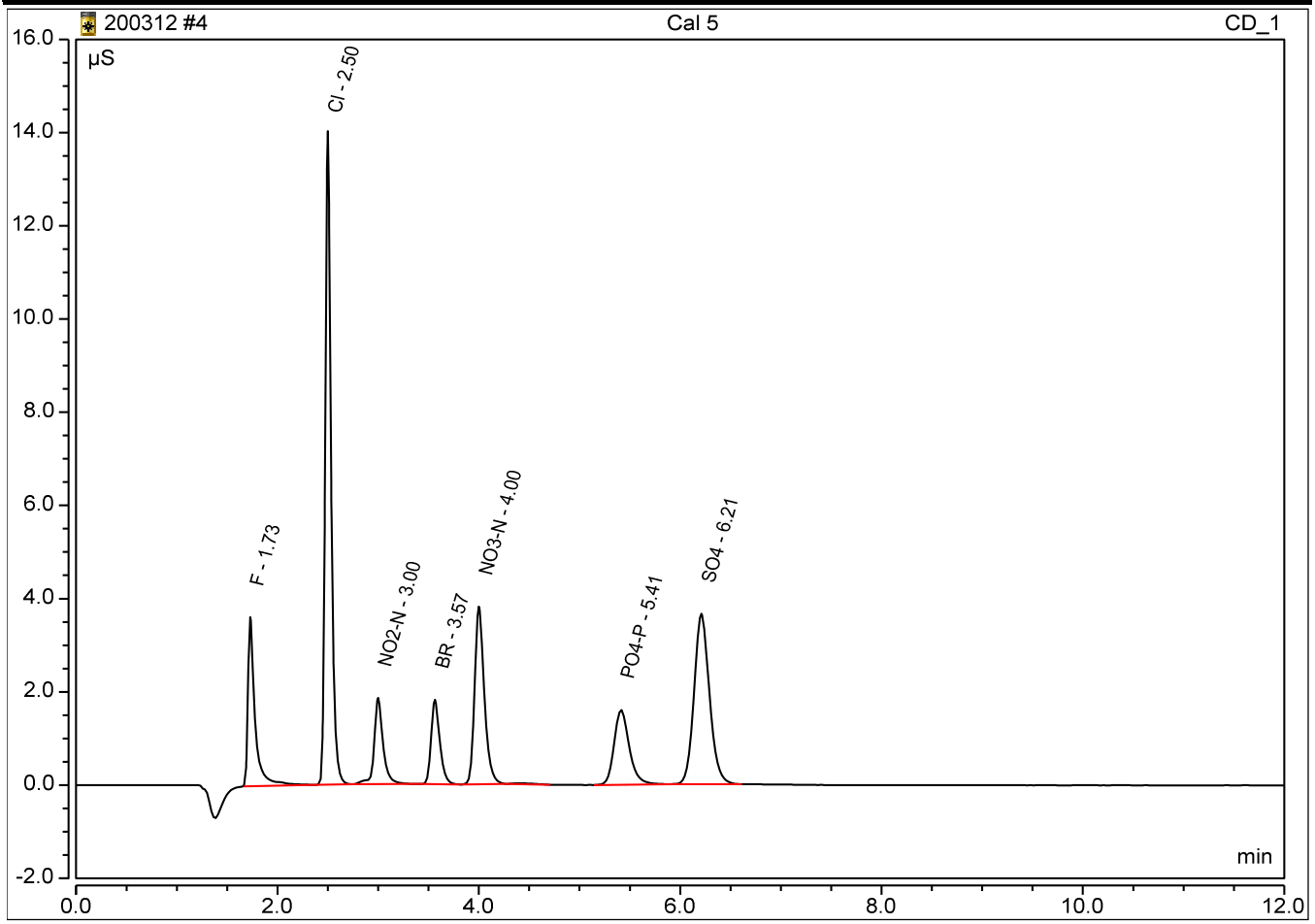


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200312

Peak Integration Report

Sample Name:	**Cal 5**	*Inj. Vol.:*	**25uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.03.12**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Mar-2020 / 10:11**	*Run Time:*	**12.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	1.73	**F**	BMB	0.299	3.629	2.43	2.5	97.2%
2	2.50	**Cl**	BMB	0.941	14.024	9.73	10	97.3%
3	3.00	**NO2-N**	BMB	0.189	1.849	0.99	1	98.6%
4	3.57	**BR**	BMB	0.178	1.808	4.86	5	97.1%
5	4.00	**NO3-N**	BMB	0.427	3.815	1.90	2	94.8%
7	5.41	**PO4-P**	BMB	0.277	1.605	4.35	5	86.9%
8	6.21	**SO4**	BMB	0.644	3.655	9.60	10	96.0%

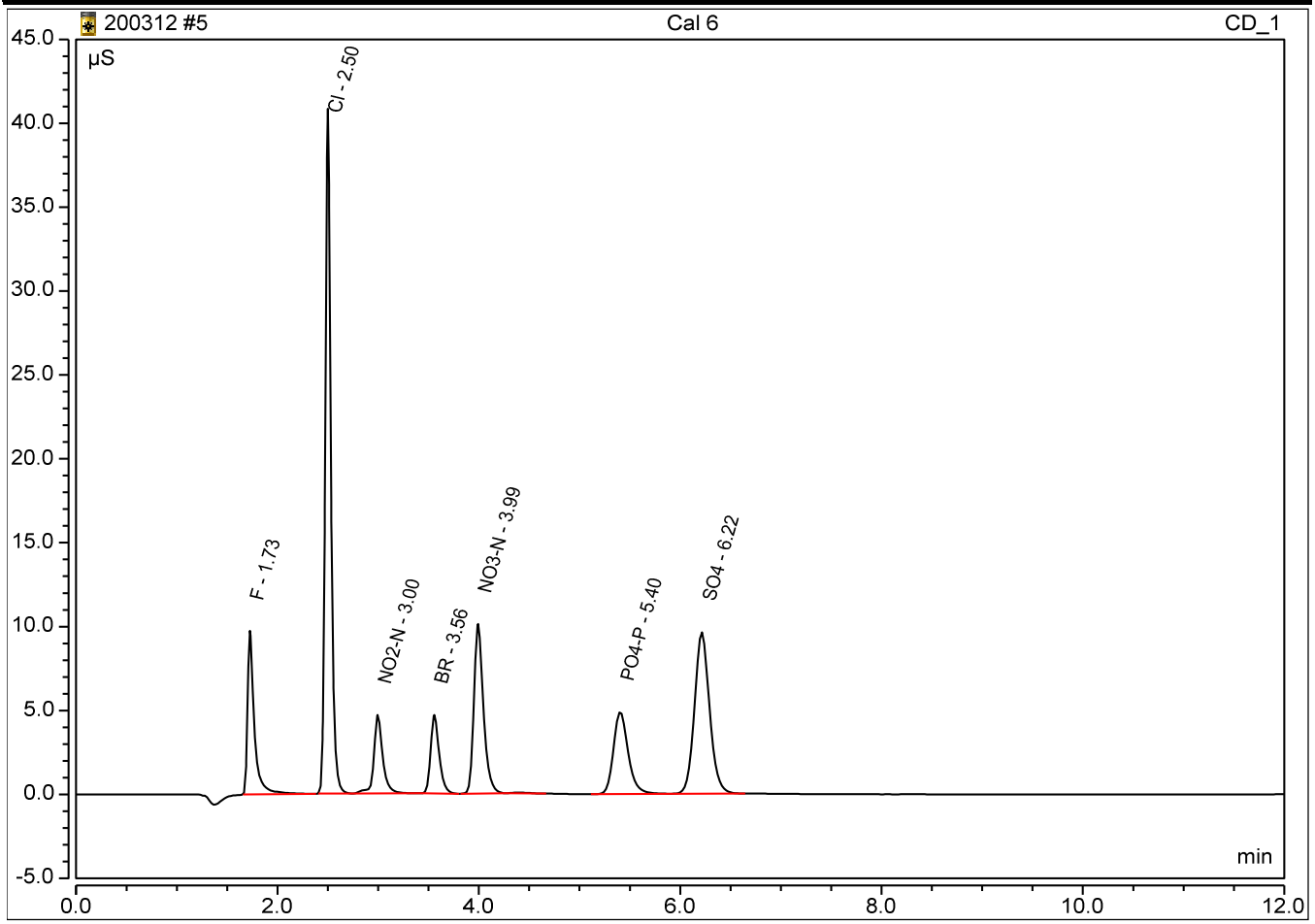


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200312

Peak Integration Report

Sample Name:	**Cal 6**	*Inj. Vol.:*	**25uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.03.12**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Mar-2020 / 10:26**	*Run Time:*	**12.00**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	1.73	**F**	BMB	0.767	9.755	6.02	6.25	96.2%
2	2.50	**Cl**	BMB	2.623	40.820	25.15	25	100.6%
3	3.00	**NO2-N**	BMB	0.478	4.682	2.45	2.5	98.0%
4	3.56	**BR**	BMB	0.456	4.688	12.14	12.5	97.1%
5	3.99	**NO3-N**	BMB	1.114	10.103	4.83	5	96.6%
7	5.40	**PO4-P**	BMB	0.817	4.894	11.61	12.5	92.9%
8	6.22	**SO4**	BMB	1.657	9.625	24.08	25	96.3%

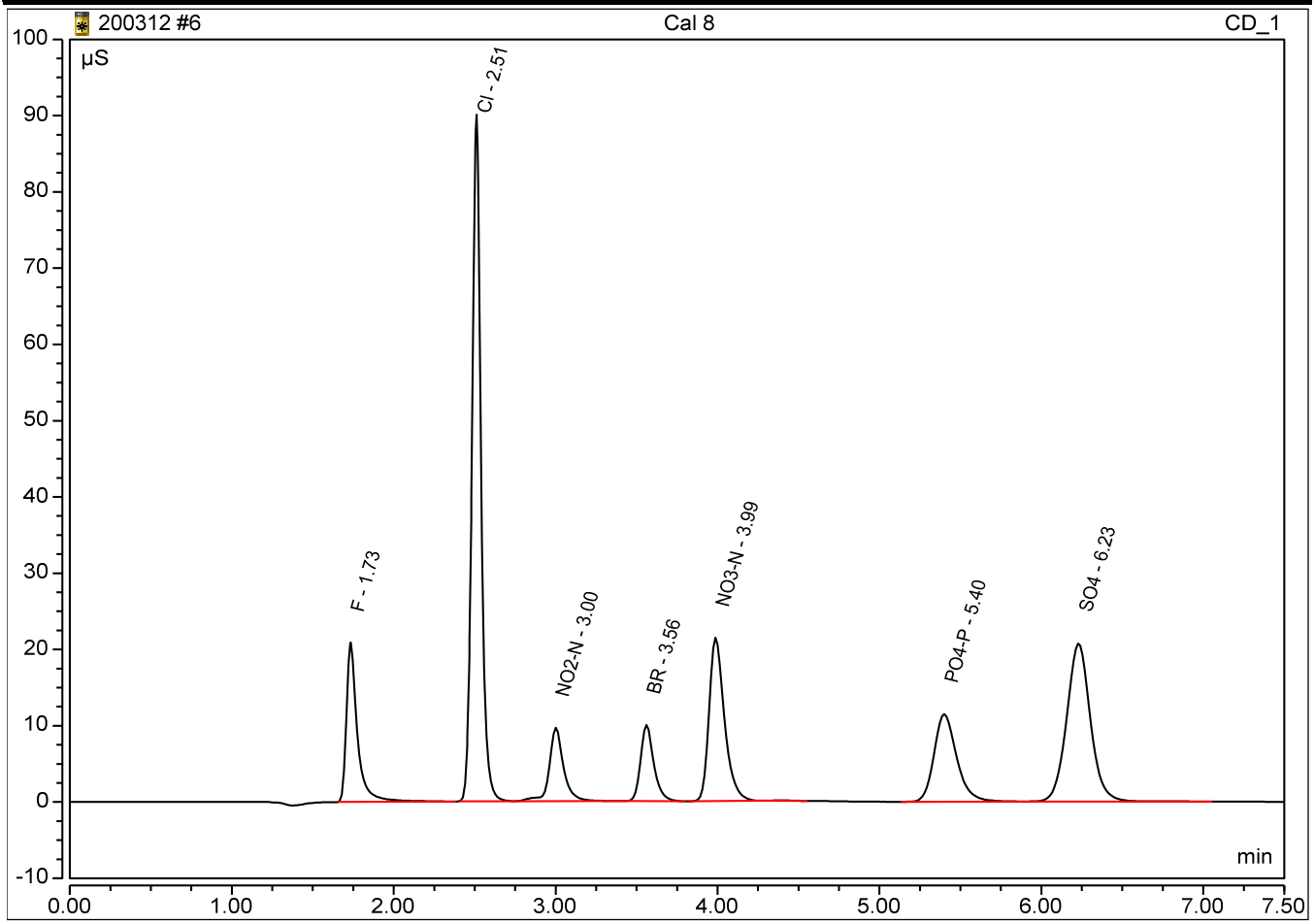


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200312

Peak Integration Report

Sample Name:	**Cal 8**	*Inj. Vol.:*	**25uL**
Injection Type:	**Calibration Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.03.12**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Mar-2020 / 10:40**	*Run Time:*	**7.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	1.73	**F**	BMB	1.631	20.895	12.63	12.5	101.0%
2	2.51	**Cl**	BMB	5.782	90.021	49.98	50	100.0%
3	3.00	**NO2-N**	BMB	0.986	9.627	5.03	5	100.5%
4	3.56	**BR**	BMB	0.954	10.009	25.20	25	100.8%
5	3.99	**NO3-N**	BMB	2.348	21.431	10.10	10	101.0%
7	5.40	**PO4-P**	BMB	1.856	11.477	25.56	25	102.2%
8	6.23	**SO4**	BMB	3.506	20.730	50.52	50	101.0%

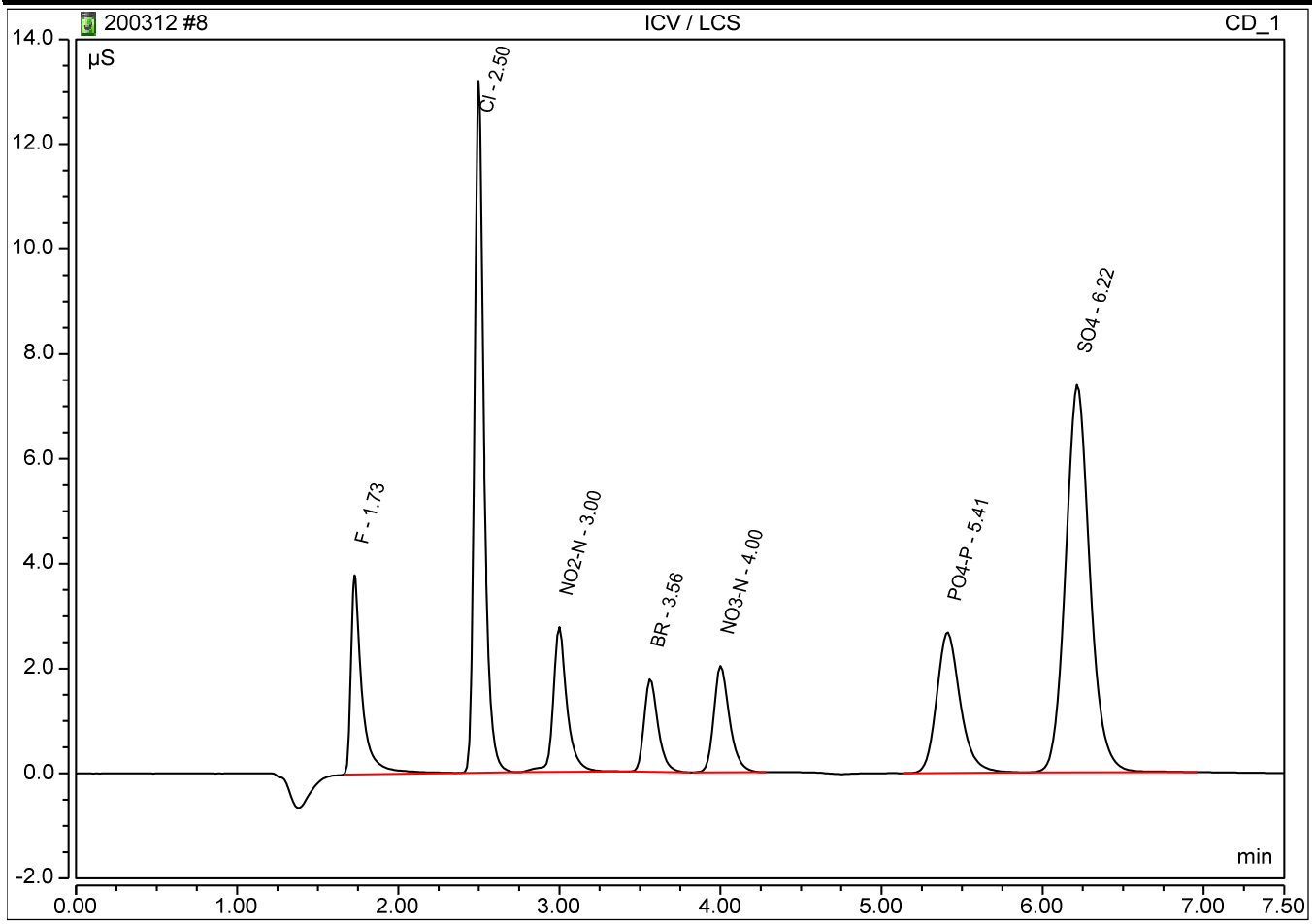


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200312

Peak Integration Report

Sample Name:	**ICV / LCS**	*Inj. Vol.:*	**25uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.03.12**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Mar-2020 / 11:01**	*Run Time:*	**7.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	1.73	**F**	BMB	0.310	3.804	2.52	2.5	100.6%
2	2.50	**Cl**	BMB	0.897	13.197	9.30	10	93.0%
3	3.00	**NO2-N**	BMB	0.277	2.767	1.43	1.522334	94.0%
4	3.56	**BR**	BMB	0.176	1.777	4.80	5	96.1%
5	4.00	**NO3-N**	BMB	0.231	2.031	1.06	1.129525	93.8%
6	5.41	**PO4-P**	BMB	0.456	2.686	6.75	6.522	103.5%
7	6.22	**SO4**	BMB	1.295	7.392	18.91	20	94.6%

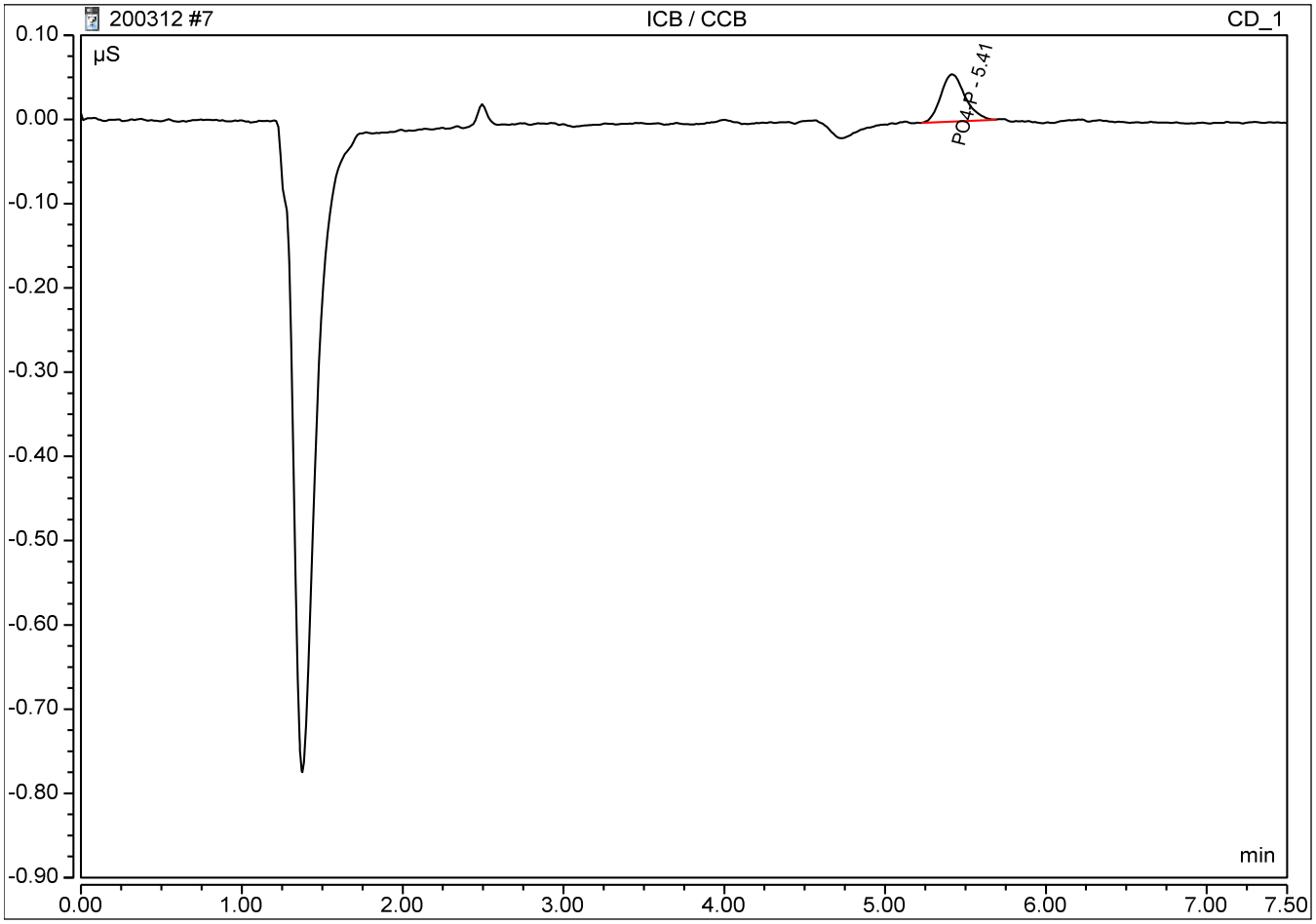


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200312

Peak Integration Report

Sample Name:	**ICB / CCB**	*Inj. Vol.:*	**25uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.03.12**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**12-Mar-2020 / 10:50**	*Run Time:*	**7.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	5.41	**PO4-P**	BMB	0.010	0.056	0.76		

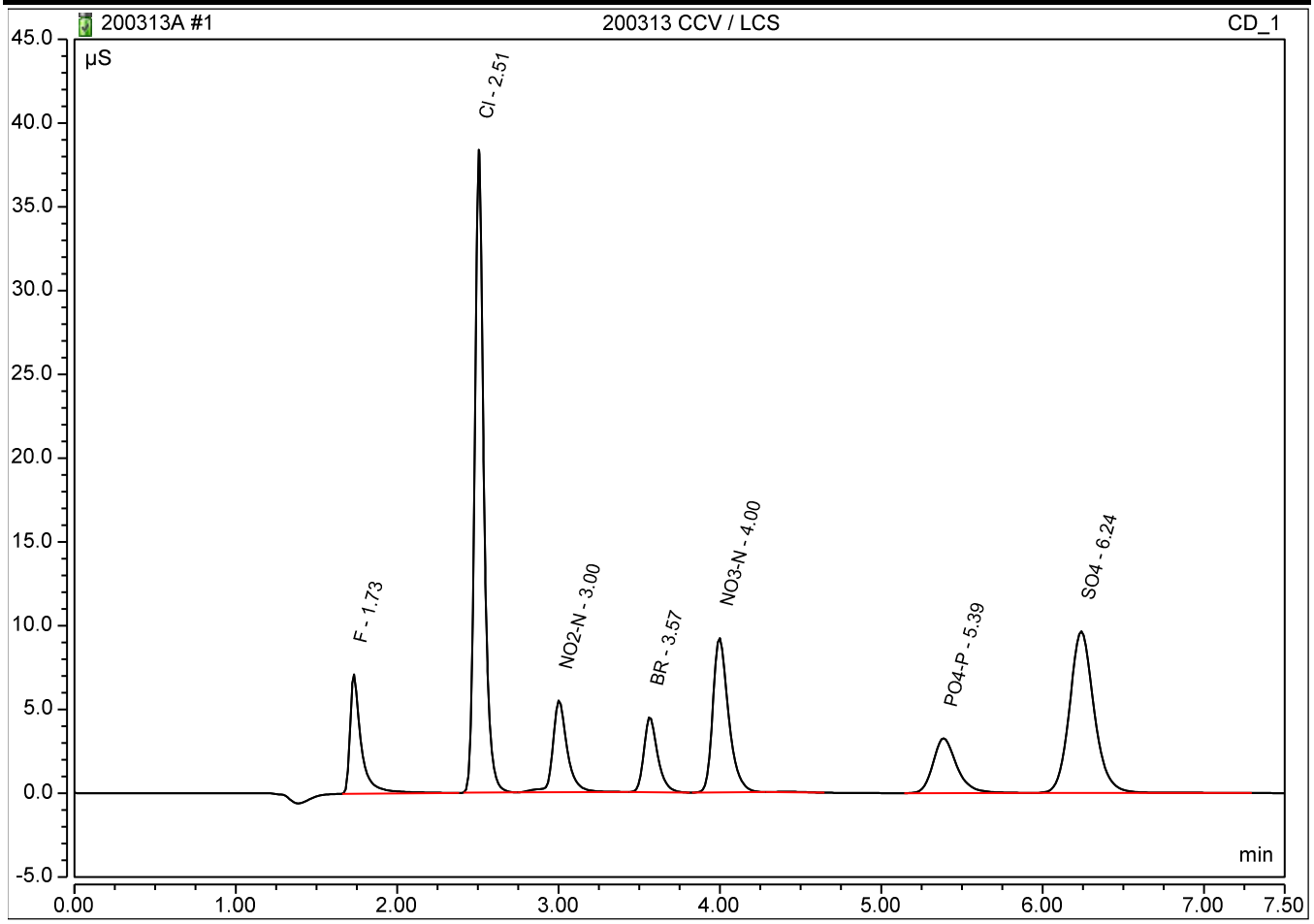


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200313A

Peak Integration Report

Sample Name:	**200313 CCV / LCS**	*Inj. Vol.:*	**25uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.03.12**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**13-Mar-2020 / 09:48**	*Run Time:*	**7.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	1.73	**F**	BMB	0.584	7.139	4.61	5	92.2%
2	2.51	**Cl**	BMB	2.533	38.351	24.37	25	97.5%
3	3.00	**NO2-N**	BMB	0.567	5.503	2.90	3.04	95.4%
4	3.57	**BR**	BMB	0.446	4.499	11.89	12.5	95.1%
5	4.00	**NO3-N**	BMB	1.040	9.234	4.52	5	90.3%
7	5.39	**PO4-P**	BMB	0.561	3.273	8.16	10	81.6%
8	6.24	**SO4**	BMB	1.708	9.641	24.82	25	99.3%

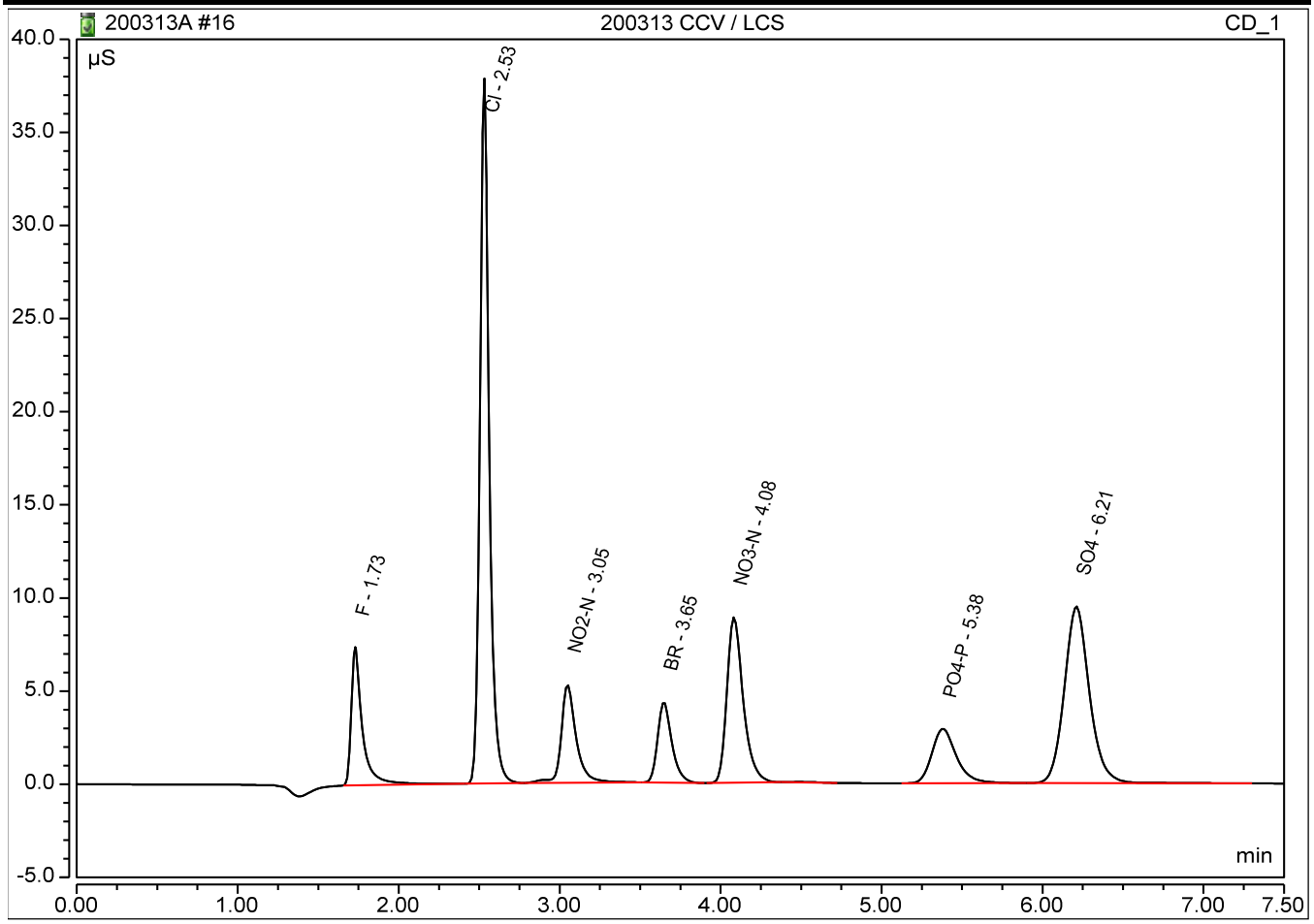


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200313A

Peak Integration Report

Sample Name:	**200313 CCV / LCS**	*Inj. Vol.:*	**25uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.03.12**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**13-Mar-2020 / 12:55**	*Run Time:*	**7.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	1.73	**F**	BMB	0.602	7.416	4.75	5	95.0%
2	2.53	**Cl**	BMB	2.550	37.853	24.52	25	98.1%
3	3.05	**NO2-N**	BMB	0.569	5.273	2.91	3.04	95.9%
4	3.65	**BR**	BMB	0.447	4.335	11.90	12.5	95.2%
5	4.08	**NO3-N**	BMB	1.046	8.888	4.54	5	90.8%
7	5.38	**PO4-P**	BMB	0.518	2.928	7.59	10	75.9%
8	6.21	**SO4**	BMB	1.721	9.492	25.00	25	100.0%

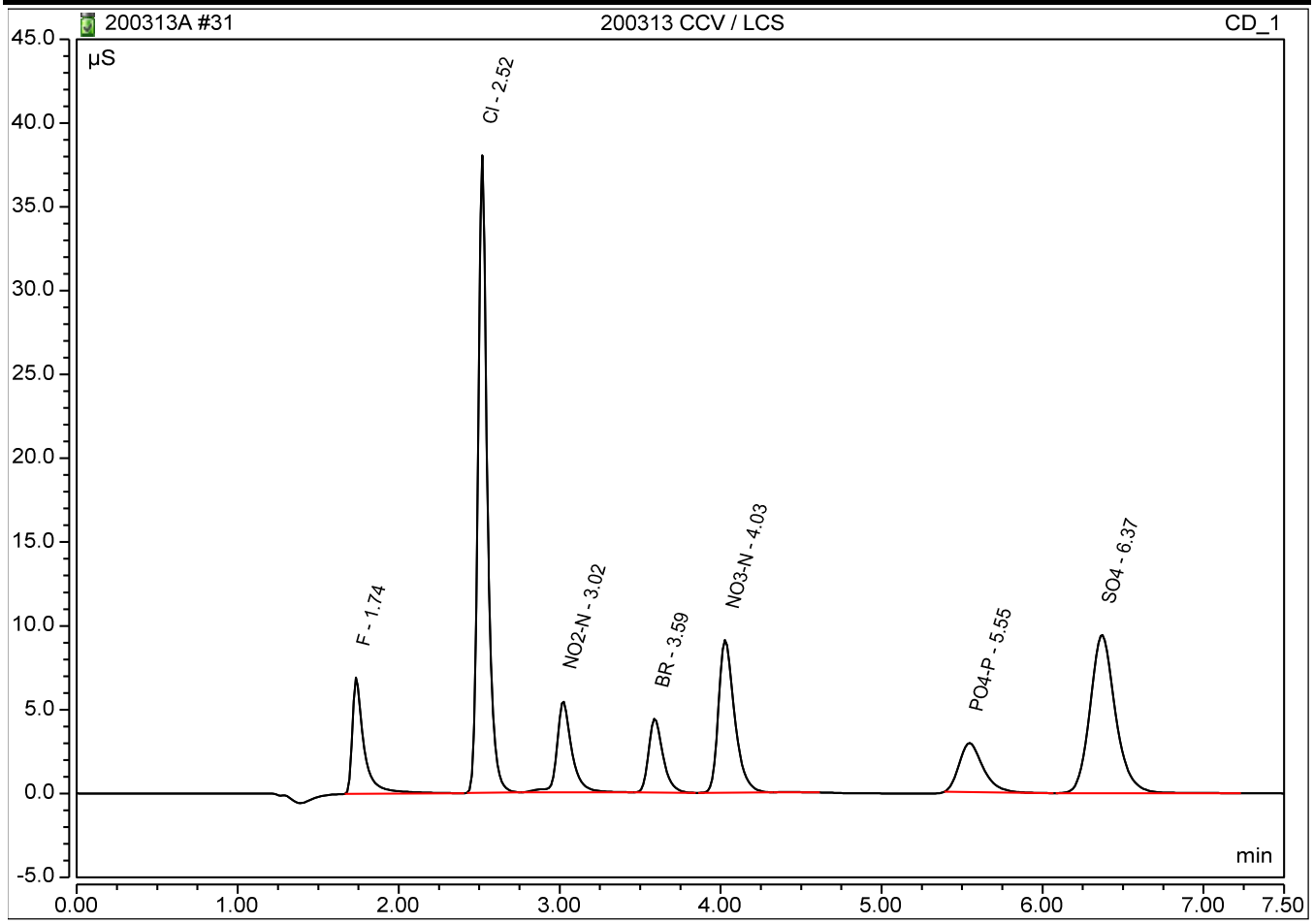


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200313A

Peak Integration Report

Sample Name:	**200313 CCV / LCS**	*Inj. Vol.:*	**25uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.03.12**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**13-Mar-2020 / 16:13**	*Run Time:*	**7.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	1.74	**F**	BMB	0.596	6.969	4.71	5	94.1%
2	2.52	**Cl**	BMB	2.567	38.032	24.66	25	98.7%
3	3.02	**NO2-N**	BMB	0.585	5.466	2.99	3.04	98.5%
4	3.59	**BR**	BMB	0.453	4.423	12.07	12.5	96.6%
5	4.03	**NO3-N**	BMB	1.058	9.119	4.59	5	91.9%
7	5.55	**PO4-P**	BMB	0.507	2.929	7.44	10	74.4%
8	6.37	**SO4**	BMB	1.735	9.465	25.19	25	100.8%

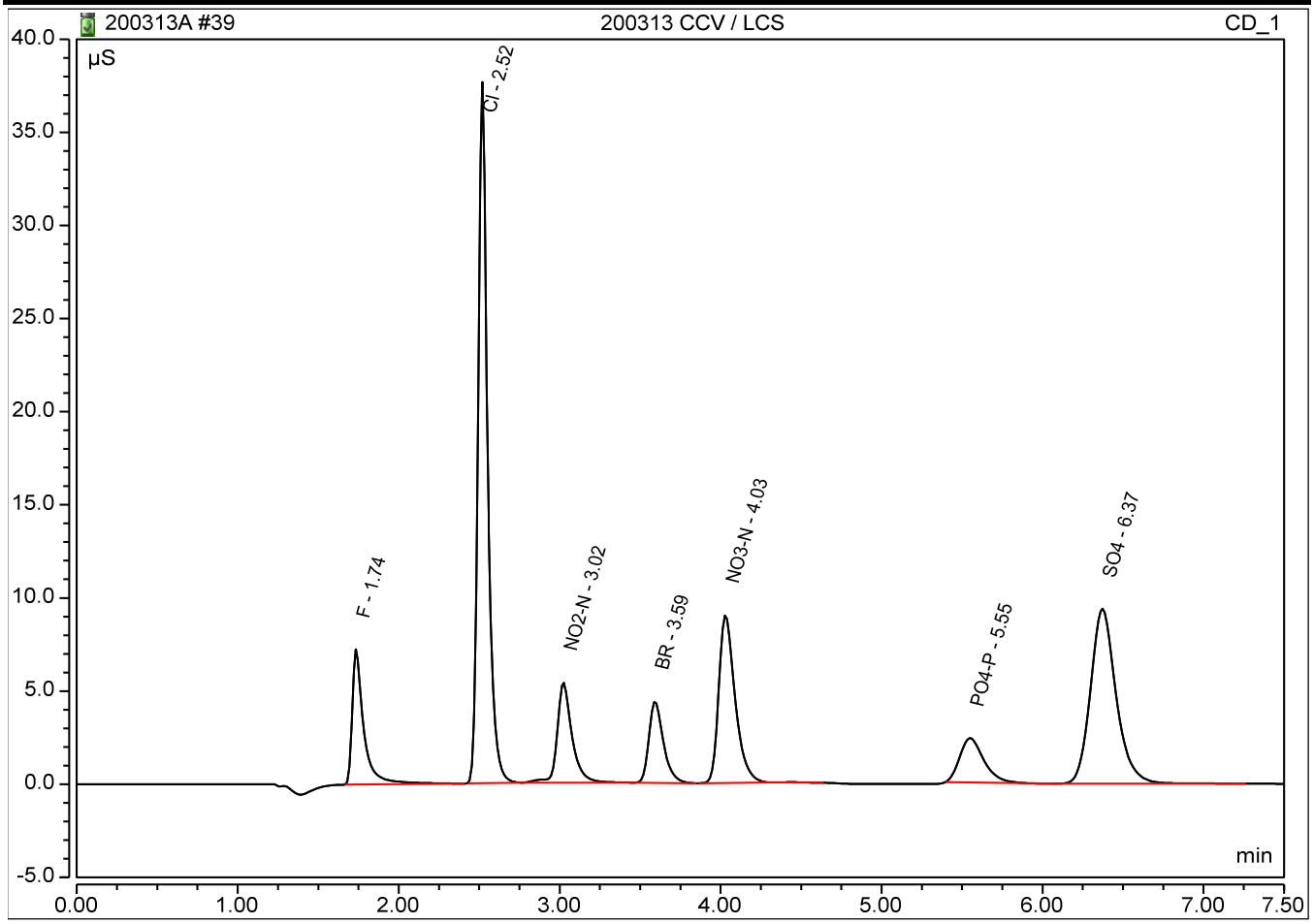


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200313A

Peak Integration Report

Sample Name:	**200313 CCV / LCS**	*Inj. Vol.:*	**25uL**
Injection Type:	**Check Standard**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.03.12**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**13-Mar-2020 / 17:33**	*Run Time:*	**7.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	1.74	**F**	BMB	0.610	7.275	4.81	5	96.3%
2	2.52	**Cl**	BMB	2.570	37.638	24.69	25	98.8%
3	3.02	**NO2-N**	BMB	0.578	5.398	2.96	3.04	97.3%
4	3.59	**BR**	BMB	0.454	4.383	12.10	12.5	96.8%
5	4.03	**NO3-N**	BMB	1.061	9.020	4.60	5	92.1%
7	5.55	**PO4-P**	BMB	0.415	2.386	6.20	10	62.0%
8	6.37	**SO4**	BMB	1.740	9.411	25.27	25	101.1%

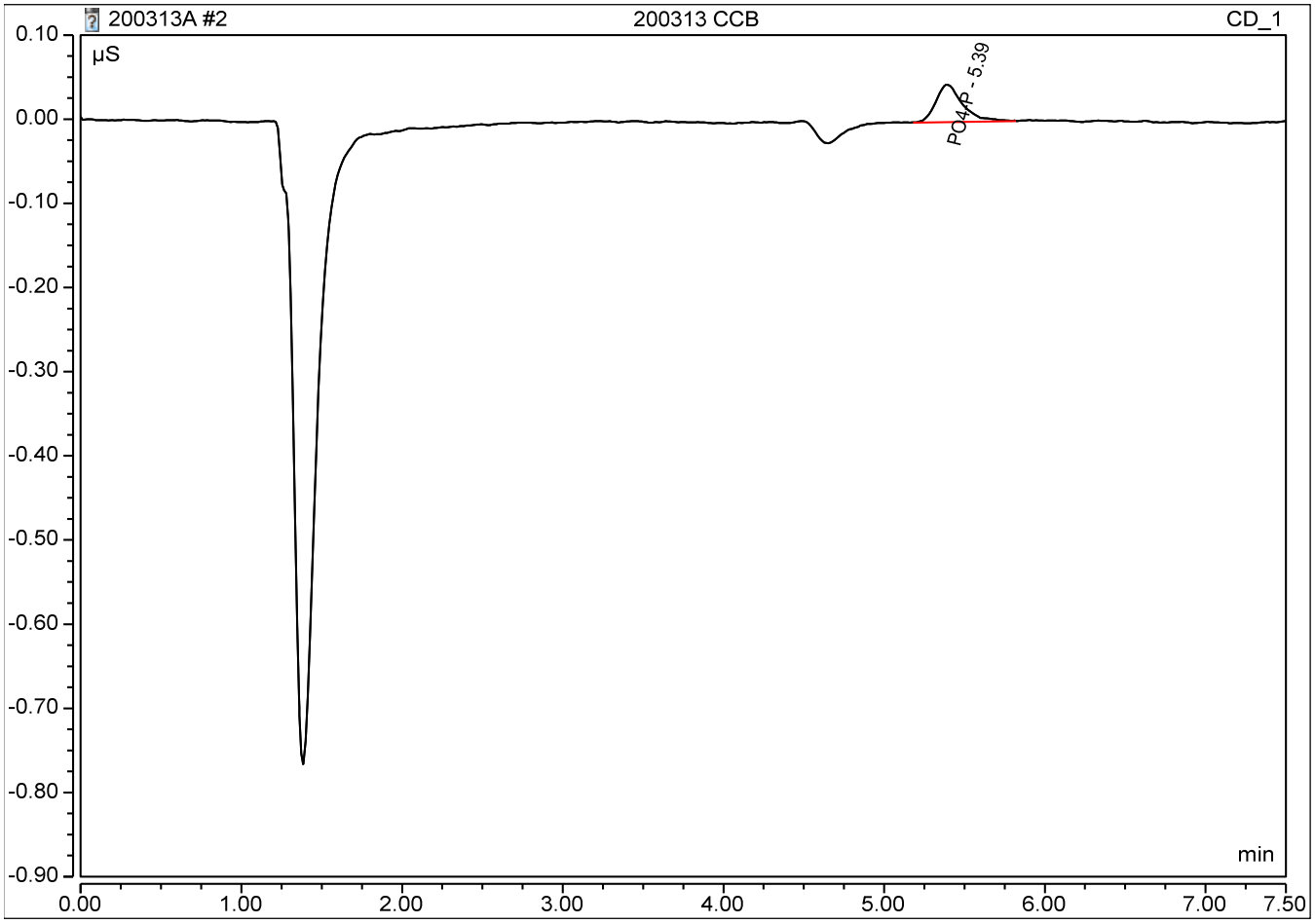


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200313A

Peak Integration Report

Sample Name:	**200313 CCB**	*Inj. Vol.:*	**25uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.03.12**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**13-Mar-2020 / 09:58**	*Run Time:*	**7.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	5.39	**PO4-P**	BMB	0.009	0.045	0.74		

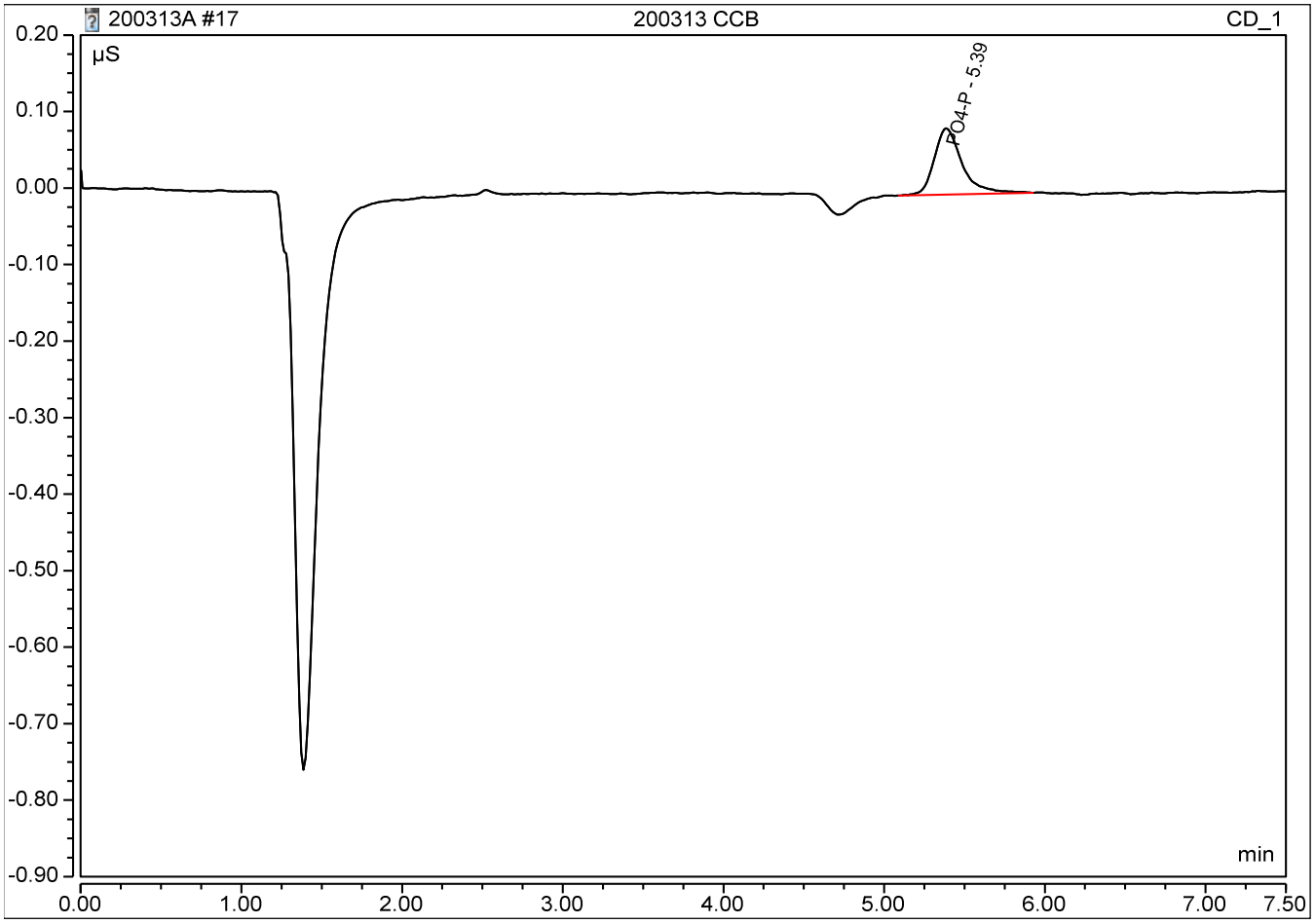


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200313A

Peak Integration Report

Sample Name:	**200313 CCB**	*Inj. Vol.:*	**25uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.03.12**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**13-Mar-2020 / 13:04**	*Run Time:*	**7.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	5.39	**PO4-P**	BMB	0.018	0.087	0.86		

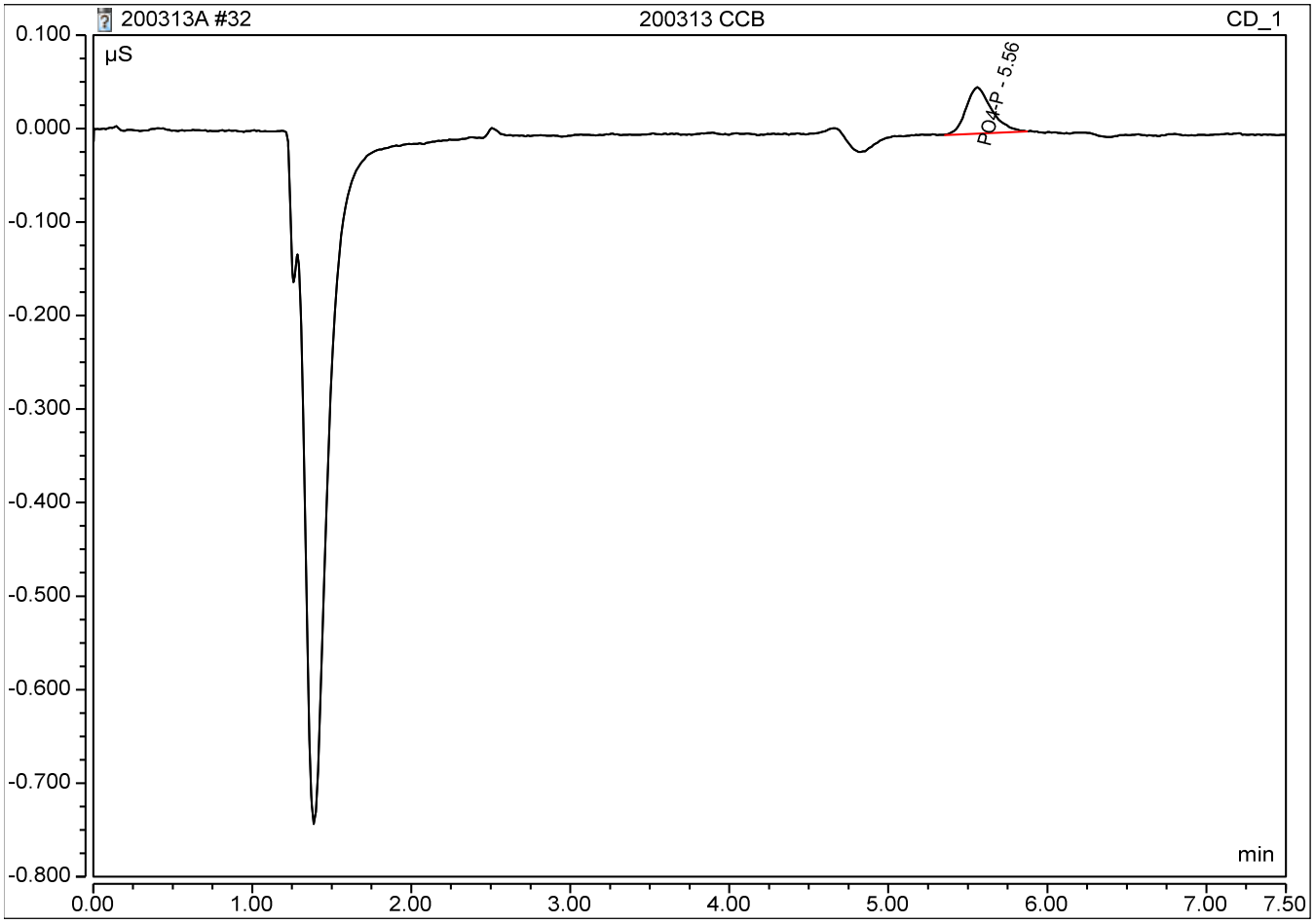


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200313A

Peak Integration Report

Sample Name:	**200313 CCB**	*Inj. Vol.:*	**25uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.03.12**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**13-Mar-2020 / 16:23**	*Run Time:*	**7.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	5.56	**PO4-P**	BMB	0.009	0.050	0.75		

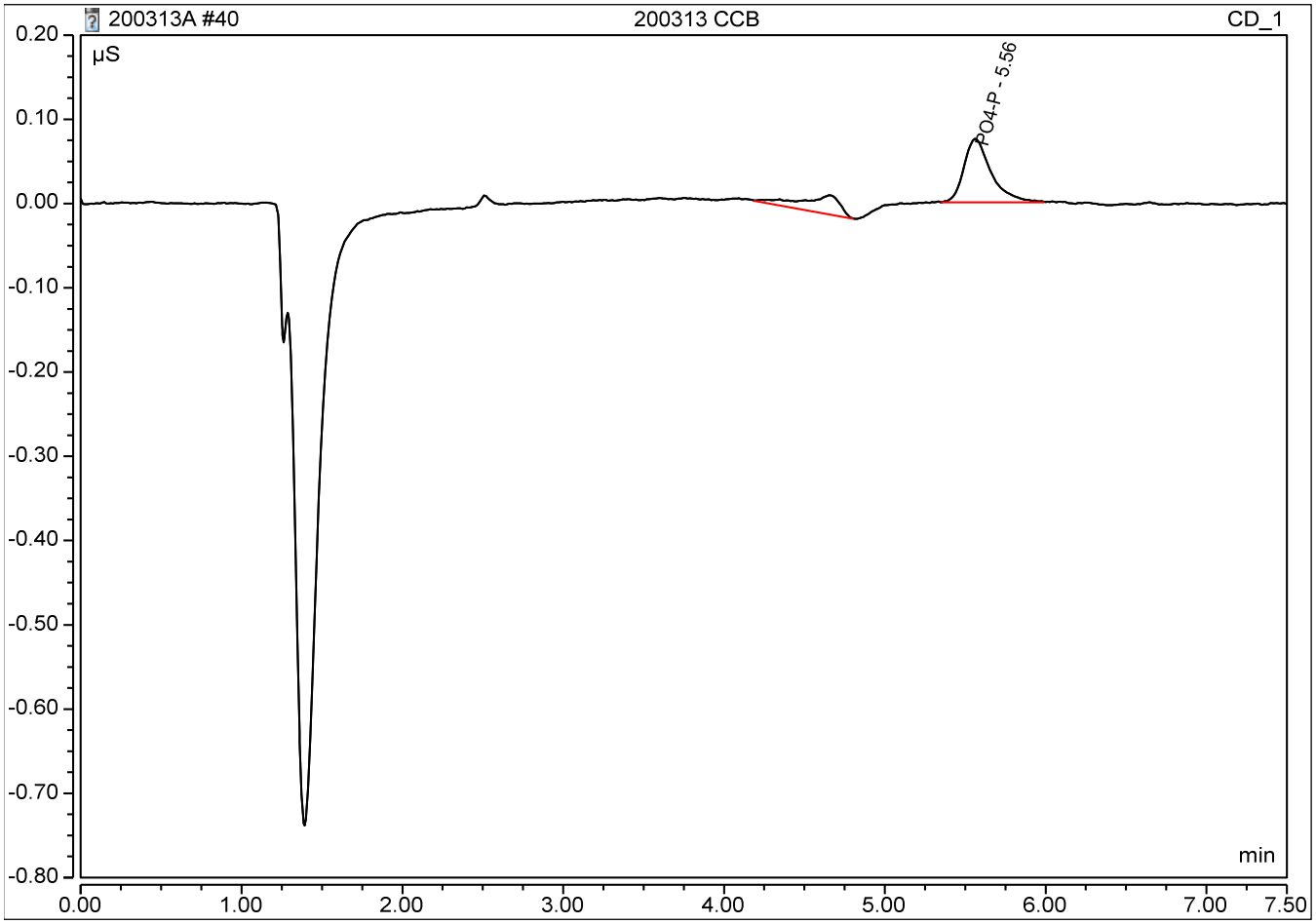


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200313A

Peak Integration Report

Sample Name:	**200313 CCB**	*Inj. Vol.:*	**25uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.03.12**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**13-Mar-2020 / 17:43**	*Run Time:*	**7.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
2	5.56	**PO4-P**	BMB	0.015	0.076	0.83		



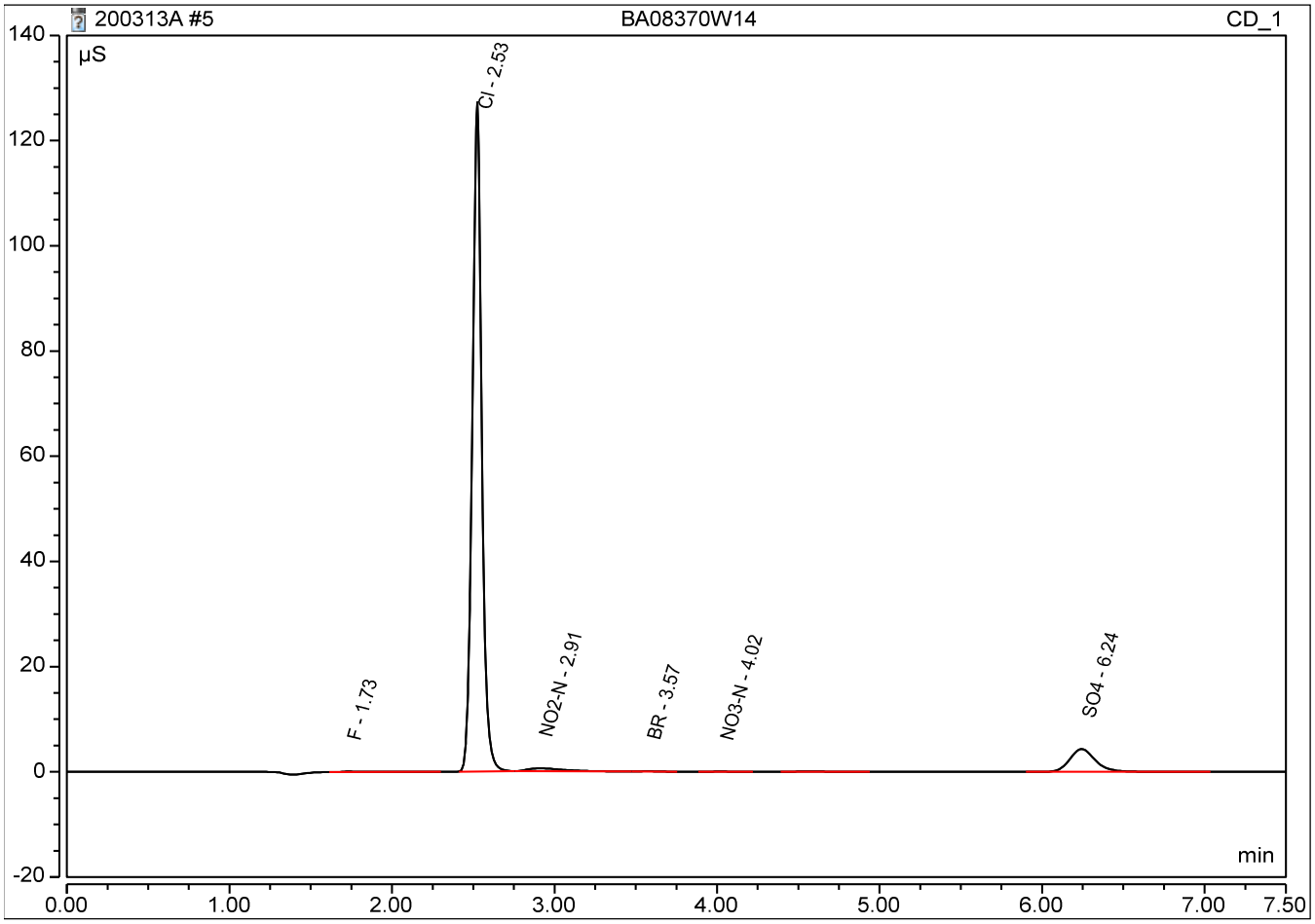
INORGANIC ANALYSIS
Raw Data

Logged on User: BW
Instrument: Charlie System_1
Sequence: 200313A

Peak Integration Report

Sample Name:	**BA08370W14**	*Inj. Vol.:*	**25uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**1.00**
Program:	**Anion APM 2020.03.12**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**13-Mar-2020 / 10:28**	*Run Time:*	**7.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	1.73	**F**	BMB	0.016	0.109	0.26		
2	2.53	**Cl**	BMB	8.500	127.230	68.51		
3	2.91	**NO2-N**	BMB	0.138	0.536	0.73		
4	3.57	**BR**	BMB	0.008	0.087	0.40		
5	4.02	**NO3-N**	BMB	0.004	0.037	0.09		
7	6.24	**SO4**	BMB	0.789	4.332	11.67		

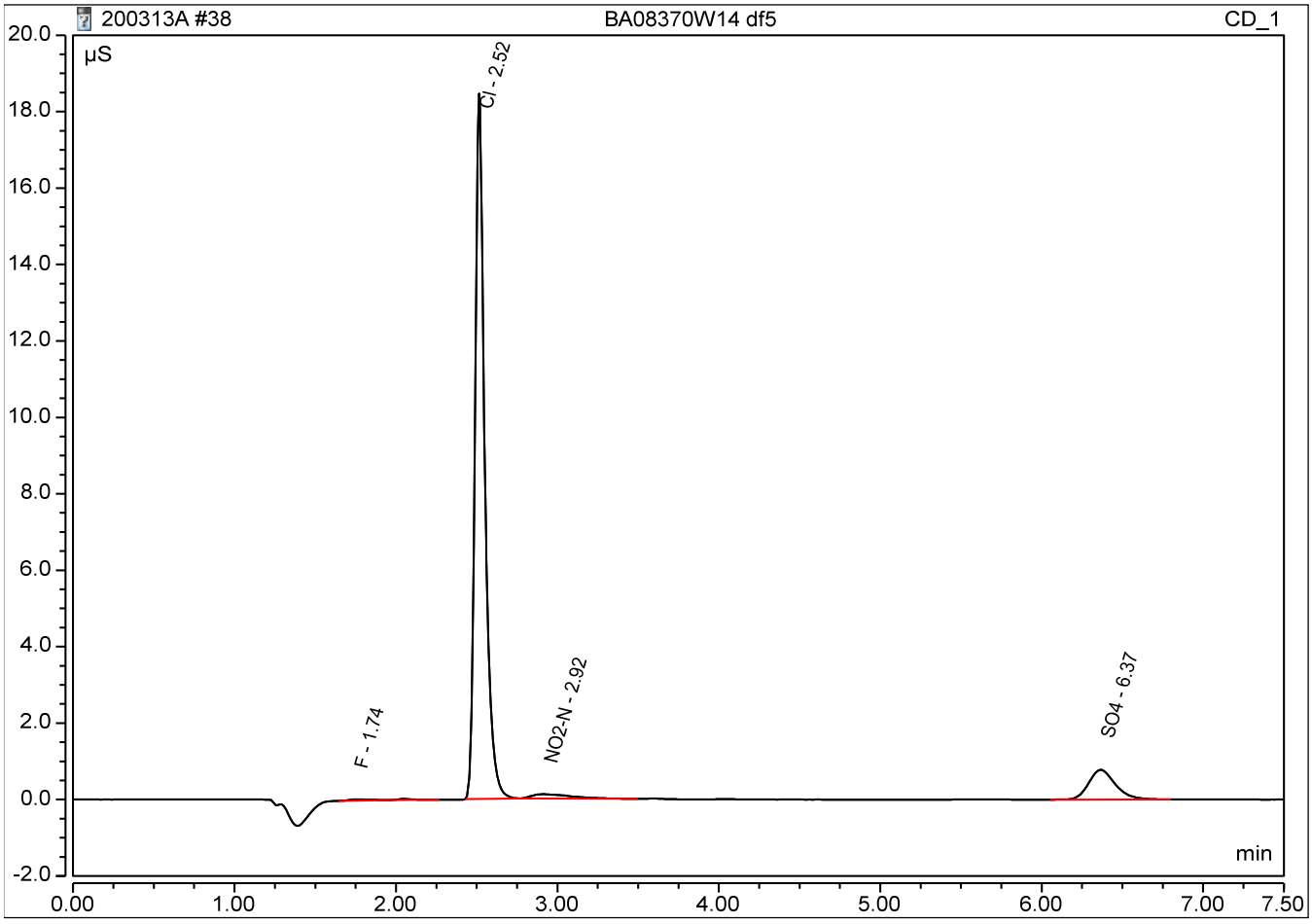


Logged on User: BW
Instrument: Charlie System_1
Sequence: 200313A

Peak Integration Report

Sample Name:	**BA08370W14 df5**	*Inj. Vol.:*	**25uL**
Injection Type:	**Unknown**	*Dilution Factor:*	**5.00**
Program:	**Anion APM 2020.03.12**	*Operator:*	**chemist_wetlab**
Inj. Date / Time:	**13-Mar-2020 / 17:24**	*Run Time:*	**7.50**

No.	Time (min) min	Peak Name	Peak Type	Area (µS*min) µS*min	Height (µS) µS	Amount mg/L	Spike Level mg/L	Recovery
1	1.74	**F**	BMB	0.004	0.031	0.87		
3	2.52	**Cl**	BMB	1.296	18.462	65.77		
4	2.92	**NO2-N**	BMB	0.033	0.112	0.95		
5	6.37	**SO4**	BMB	0.150	0.781	12.69		



Anion Chromatography Working Standard

Prep Date: 03/12/20

Exp Date: 03/12/20

Prep'd By (Initials): CD

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Ion Chromatography Standard Fluoride 1000 µg/mL in H2O	o2si	O2SI-062002-01-01	1000	**687393-38-40744**	**10/30/20**	312.5 µL	25 mL	Millipore Water	12.5
Ion Chromatography Standard Nitrite 1000 µg/mL in H2O	Inorganic Ventures	ICCL1	1000	**P2-CL675597-41353**	**01/15/23**	411 µL	25 mL	Millipore Water	5 as NO2-N
Ion Chromatography Standard Chloride 5000 µg/mL in H2O	Inorganic Ventures	ICNO21	1000	**N2-NOX672889-49601**	**01/30/23**	1250 µL	25 mL	Millipore Water	50
Ortho-Phosphate as P Standard	Agilent	ICC-005A	1000	**G34-CP-3323-49590**	**05/31/25**	625 µL	25 mL	Millipore Water	25
Ion Chromatography Standard Nitrate as N 1000 µg/mL in H2O	Inorganic Ventures	P2-NOX675324	1000	**P2-NOX675324-49391**	**02/14/23**	250 µL	25 mL	Millipore Water	10
Bromide Standard	CPI international	4400-IC8M	1000	**1011817-12-49602**	**06/04/21**	625 µL	25 mL	Millipore Water	25
Sulfate Standard	Inorganic Ventures	ICS041	1000	**P2-SOX677315**	**04/03/23**	1250 µL	25 mL	Millipore Water	50

Anion Chromatography Calibration Curve

Prep Date: 03/12/20

Exp Date: 03/13/20

Prep'd By (Initials): CD

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. Range (ug/mL)	Reference To APPL Prep Date	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc. Range (µg/mL)
Anion Chromatography Working Standard	Varies	ICal1	5.0-50.0	Prepared 03/12/20	03/13/20	4 µL	1000 µL	Millipore Water	0.04-0.40
Anion Chromatography Working Standard	Varies	ICal2	5.0-50.0	Prepared 03/12/20	03/13/20	20 µL	1000 µL	Millipore Water	0.1-1.0
Anion Chromatography Working Standard	Varies	ICal3	5.0-50.0	Prepared 03/12/20	03/13/20	50 µL	1000 µL	Millipore Water	0.25-2.5
Anion Chromatography Working Standard	Varies	ICal4	5.0-50.0	Prepared 03/12/20	03/13/20	100 µL	1000 µL	Millipore Water	0.5-5.0
Anion Chromatography Working Standard	Varies	ICal5	5.0-50.0	Prepared 03/12/20	03/13/20	200 µL	1000 µL	Millipore Water	1.0-10.0
Anion Chromatography Working Standard	Varies	ICal6	5.0-50.0	Prepared 03/12/20	03/13/20	500 µL	1000 µL	Millipore Water	2.5-25.0
Anion Chromatography Working Standard	Varies	ICal7	5.0-50.0	Prepared 03/12/20	03/13/20	700 µL	1000 µL	Millipore Water	3.5-35.0
Anion Chromatography Working Standard	Varies	ICal8	5.0-50.0	Prepared 03/12/20	03/13/20	1000 µL	1000 µL	Millipore Water	5.0-50.0

Anion Chromatography ICV Absolute COA 49866

Prep Date: See injection Log

Exp Date: 24 hours after prep

Prep'd By (Initials): Absolute

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. Range (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Flouride	Absolute	50021	2.5	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	2.5
Nitrite	Absolute	50021	1.522334	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	1.522334
Chloride	Absolute	50021	1.522334	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	1.522334
O-Phosphate as P	Absolute	50021	6.522	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	6.522
Nitrate as N	Absolute	50021	1.129525	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	1.129525
Ion Chromatography Standard Bromide, 1000 µg/mL in H2O	Absolute	50021	5	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	5
Sulfate	Absolute	50021	20	**111419-49866**	**11/14/21**	1000 µL	1000 µL	N / A	20

Anion Chromatography CCV / LCS

Prep Date: See injection Log

Exp Date: 24 hours after prep

Prep'd By (Initials): GA

Initial Standard Information						Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
Ion Chromatography Standard Fluoride 1000 µg/mL in H2O	o2si	O2SI-062002-01-01	1000	**687393-38-40744**	**10/30/20**	125 µL	25 mL	Millipore Water	5
Ion Chromatography Standard Nitrite 1000 µg/mL in H2O	Inorganic Ventures	ICCL1	1000	**P2-CL675597-41353**	**01/15/23**	250 µL	25 mL	Millipore Water	10
Ion Chromatography Standard Chloride 5000 µg/mL in H2O	Inorganic Ventures	ICNO21	1000	**N2-NOX672889-49601**	**01/30/23**	125 µL	25 mL	Millipore Water	25
Ortho-Phosphate as P Standard	Agilent	ICC-005A	1000	**G34-CP-3323-49590**	**05/31/25**	250 µL	25 mL	Millipore Water	10
Ion Chromatography Standard Nitrate as N 1000 µg/mL in H2O	Inorganic Ventures	P2-NOX675324	1000	**P2-NOX675324-49391**	**02/14/23**	125 µL	25 mL	Millipore Water	5
Bromide Standard	CPI international	4400-IC8M	1000	**1011817-12-49602**	**06/04/21**	250 µL	25 mL	Millipore Water	10
Sulfate Standard	Inorganic Ventures	ICS041	1000	**P2-SOX677315**	**04/03/23**	625 µL	25 mL	Millipore Water	25

Method 300 and 9056 Injection Log

No.	Position	Injection Description	Inject Time		Type	Comment
1	GA2	Cal 1 2020.03.12	12/Mar/2020	09:27	Calibration Standard	
2	GA3	Cal 2	12/Mar/2020	09:42	Calibration Standard	
3	GA4	Cal 3	12/Mar/2020	09:56	Calibration Standard	
4	GA5	Cal 5	12/Mar/2020	10:11	Calibration Standard	
5	GA6	Cal 6	12/Mar/2020	10:26	Calibration Standard	
6	GA1	Cal 8	12/Mar/2020	10:40	Calibration Standard	
7	R1	ICB / CCB	12/Mar/2020	10:50	Unknown	
8	GA7	ICV / LCS	12/Mar/2020	11:01	Check Standard	
9	GA7	ICV / LCSD	12/Mar/2020	11:23	Check Standard	
10	GA8	BA08277W12	12/Mar/2020	11:34	Unknown	
11	GA9	BA08292W01	12/Mar/2020	11:44	Unknown	
12	GA10	BA08298W03	12/Mar/2020	11:54	Unknown	
13	GA11	BA08301W01	12/Mar/2020	12:04	Unknown	
14	GA12	BA08301W01 MS	12/Mar/2020	12:14	Unknown	
15	GB1	BA08301W01 MSD	12/Mar/2020	12:24	Unknown	
16	GB2	BA08315W01	12/Mar/2020	12:35	Unknown	
17	R2	CCV	12/Mar/2020	12:45	Check Standard	
18	R1	CCB	12/Mar/2020	12:54	Unknown	
19	GC1	BA08106W03	12/Mar/2020	13:32	Unknown	
20	GC2	BA08317W01	12/Mar/2020	13:42	Unknown	
21	GC3	BA08318W01	12/Mar/2020	13:53	Unknown	
22	GH1	xxx	12/Mar/2020	14:03	Unknown	
23	GC4	BA08319W01	12/Mar/2020	14:23	Unknown	
24	GH2	BA08106W03 df5	12/Mar/2020	14:33	Unknown	
25	GC5	BA08321W01	12/Mar/2020	14:43	Unknown	
26	GC6	BA08320W01	12/Mar/2020	14:54	Unknown	
27	R2	CCV	12/Mar/2020	15:03	Check Standard	
28	R1	CCB	12/Mar/2020	15:13	Unknown	
29	R2	stop	n.a.		Unknown	

Method 300 and 9056 Injection Log

No.	Position	Injection Description	Inject Time		Type	Comment
1	R2	200313 CCV / LCS	13/Mar/2020	09:48	Check Standard	
2	R1	200313 CCB	13/Mar/2020	09:58	Unknown	
3	RE8	200313 LCS	13/Mar/2020	10:08	Unknown	
4	RE8	230313 LCSD	13/Mar/2020	10:18	Unknown	
5	RB1	BA08370W14	13/Mar/2020	10:28	Unknown	NDF5
6	GA1	BA08315W01	13/Mar/2020	10:38	Unknown	
7	GA2	BA08316W01	13/Mar/2020	10:48	Unknown	
8	GA3	BA08317W01	13/Mar/2020	10:59	Unknown	
9	GA4	BA08318W01	13/Mar/2020	11:09	Unknown	
10	GA5	BA08319W01xxx	13/Mar/2020	11:19	Unknown	column problem starts
11	GA6	BA08320W01xxx	13/Mar/2020	11:29	Unknown	
12	GA7	BA08321W01xxx	13/Mar/2020	11:40	Unknown	
13	GA8	BA08370W14 df5xxx	13/Mar/2020	11:50	Unknown	
14	R2	xxx	13/Mar/2020	12:00	Check Standard	
15	R2	xxx	13/Mar/2020	12:23	Check Standard	
16	R2	200313 CCV / LCS	13/Mar/2020	12:55	Check Standard	reverse flushed column fix'd it
17	R1	200313 CCB	13/Mar/2020	13:04	Unknown	
18	GB1	BA08323W03	13/Mar/2020	13:15	Unknown	
19	GB2	BA08386W01	13/Mar/2020	13:25	Unknown	
20	GB3	BA08387W01	13/Mar/2020	13:35	Unknown	
21	GB4	BA08389W01	13/Mar/2020	13:45	Unknown	
22	GB5	BA08390W01	13/Mar/2020	13:55	Unknown	
23	GB6	BA08391W01	13/Mar/2020	14:05	Unknown	
24	GB7	BA08392W01	13/Mar/2020	14:16	Unknown	
25	GB8	BA08450W06xxx	13/Mar/2020	14:26	Unknown	ran out of eluent
26	GB8	BA08450W06xxx	13/Mar/2020	14:58	Unknown	
27	R2	200313 CCV / LCSxxx	13/Mar/2020	15:08	Check Standard	
28	R1	200313 CCBxxx	13/Mar/2020	15:18	Unknown	
29	R2	200313 CCV / LCSxxx	13/Mar/2020	15:28	Check Standard	
30	R1	200313 CCB	13/Mar/2020	16:03	Unknown	
31	R2	200313 CCV / LCS	13/Mar/2020	16:13	Check Standard	
32	R1	200313 CCB	13/Mar/2020	16:23	Unknown	
33	GB8	BA08450W06	13/Mar/2020	16:33	Unknown	
34	GA5	BA08319W01	13/Mar/2020	16:43	Unknown	
35	GA6	BA08320W01	13/Mar/2020	16:53	Unknown	
36	GA7	BA08321W01	13/Mar/2020	17:03	Unknown	
37	RA5	BA08320W01 df5	13/Mar/2020	17:13	Unknown	
38	GA8	BA08370W14 df5	13/Mar/2020	17:24	Unknown	
39	R2	200313 CCV / LCS	13/Mar/2020	17:33	Check Standard	
40	R1	200313 CCB	13/Mar/2020	17:43	Unknown	
41	GC1	200313A BLK	13/Mar/2020	18:17	Unknown	
42	GC2	200313A LCS	13/Mar/2020	18:27	Unknown	
43	GC3	200313A LCSD	13/Mar/2020	18:37	Unknown	
44	GC4	BA08029S04	13/Mar/2020	18:48	Unknown	
45	GC5	BA08030S04	13/Mar/2020	18:58	Unknown	
46	GC6	BA08063S04	13/Mar/2020	19:08	Unknown	
47	GC7	BA08064S04	13/Mar/2020	19:18	Unknown	
48	R2	200313 CCV / LCS	13/Mar/2020	19:28	Check Standard	
49	R1	200313 CCB	13/Mar/2020	19:38	Unknown	
50	GC8	BA08024S01	13/Mar/2020	19:48	Unknown	
51	GC9	BA08025S01	13/Mar/2020	19:58	Unknown	
52	GC10	BA08026S01	13/Mar/2020	20:09	Unknown	
53	GC11	BA08027S01	13/Mar/2020	20:19	Unknown	
54	GC12	BA08028S01	13/Mar/2020	20:29	Unknown	
55	GD1	BA08024S01 MS	13/Mar/2020	20:39	Unknown	1.8476
56	GD2	BA08024S01 MSD	13/Mar/2020	20:49	Unknown	2.0790
57	GD3	BA08024S01 DUP	13/Mar/2020	20:59	Unknown	
58	R2	200313 CCV / LCS	13/Mar/2020	21:09	Check Standard	
59	R1	200313 CCB	13/Mar/2020	21:19	Unknown	
60	GH1	91663 1145 FB 1	13/Mar/2020	21:29	Unknown	
61	GH2	91663 DUP 1	13/Mar/2020	21:40	Unknown	NDF10
62	GH3	91663 1540 -77	13/Mar/2020	21:50	Unknown	NDF10
63	GH4	91663 1615 EB 1	13/Mar/2020	22:00	Unknown	
64	GH5	91663 -102	13/Mar/2020	22:10	Unknown	NDF5
65	GH6	91663 1030 -74	13/Mar/2020	22:20	Unknown	NDF5
66	GH7	91663 1130 -98	13/Mar/2020	22:30	Unknown	NDF5
67	GH8	91663 1420 -55	13/Mar/2020	22:41	Unknown	NDF50
68	GH9	91663 DUP 2	13/Mar/2020	22:51	Unknown	NDF5
69	R2	200313 CCV / LCS	13/Mar/2020	23:01	Check Standard	
70	R1	200313 CCB	13/Mar/2020	23:10	Unknown	
71	R1	stop	13/Mar/2020	23:18	Unknown	

INORGANIC ANALYSIS
Calibration and Raw Data

Ferrous Iron — Rev 2, 04-05-19

Method SM3500Fe | Units mg/L | Instrument: Genisis Spectrometer
Analyte Fe2+ | QCG: 200313A | Wavelength: 510 nm
Analyist fjr | Final Volume: 50mL | Units: mg/L

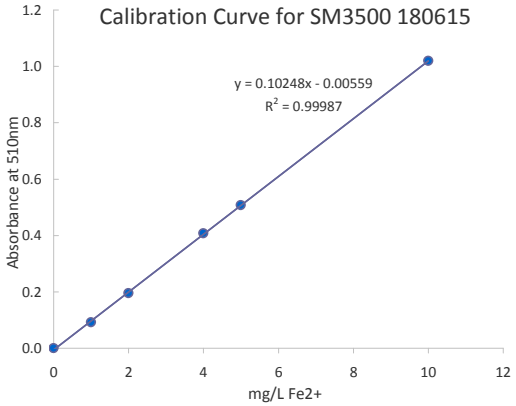
Date	Time	Appl ID	[Fe2+]	Absorbance	% Recovery
06/28/19	12:48	ICB	0.00	0.000	
06/28/19	12:49	Ical 1	1.00	0.092	95.2%
06/28/19	12:50	Ical 2	2.00	0.195	97.9%
06/28/19	12:51	Ical 3	4.00	0.408	100.9%
06/28/19	12:51	Ical 4	5.00	0.507	100.0%
06/28/19	12:52	Ical 5	10.00	1.019	100.0%
06/28/19	13:08	ICV	3.00	0.326	107.9%
06/28/19	12:53	ICB	0.00	0.002	

Slope	0.102479592
Intercept	-0.005591837
Coefficient of Determination	0.999872044

Algortithm Check:	Appl ID	Absorbance	Result
	LCS 200313A	0.305	3.03

Result = (Absorbance-Raw Blk-Intercept)/ Slope

Test:	FJR	03/13/20	3.03



Date	Time	Appl ID	DF	Raw Result	SubSample Amount	Raw BLK	Calc Conc	Result	QC True	% Recovery
03/13/20	20:11	CCV 4.0 200313A	1	0.408	25mL		4.04	4.04	4.00	100.9%
03/13/20	20:10	CCB 200313A	1	0.000	25mL		0.05	0.05		
03/13/20	20:12	LCS 200313A	1	0.305	25mL		3.03	3.03	3.00	101.0%
03/13/20	20:12	LCSD 200313A	1	0.302	25mL		3.00	3.00	3.00	100.0%
03/13/20	20:13	BA08370W16	1	0.010	25mL		0.15	0.15		
03/13/20	20:13	BA08370W16 MS	1	0.322	25mL		3.20	3.20		
03/13/20	20:14	BA08370W16 MSD	1	0.325	25mL		3.23	3.23		
03/13/20	20:14	CCV 4.0 200313A	1	0.407	25mL		4.03	4.03	4.00	100.7%
03/13/20	20:14	CCB 200313A	1	-0.001	25mL		0.04	0.04		

Standard Prep

	Ferrous Iron Standards		Prep'd By (Initials)		FJR		
Prep Date	06/28/18						
Exp Date	06/28/19						
Stock Label	Supplier	Batch Number	Exp Date	Aliquot from Stock	Final Volume	Solvent	Ferrous Iron Concentration
Ferrous Ammonium Sulfate	J.T.Baker	0000184592	08/21/20	0.351	250mL	5ml H2SO4 (0000167828) Diluted with water	200ug/L
Ferrous Sulfate	Mallinckrodt	Lot 5056 KDRX	NA	0.250	250mL	5ml H2SO4 (0000167828) Diluted with water	200ug/L
Ferrous Iron CCV/LCS/MS/ICV			Prep'd By (Initials)		FJR		
Prep Date	See Injection Log						
Exp Date	24 Hours						
Initial Standard Information	Supplier	Batch Number	Exp Date	Final Standard Information			
Ferrous Iron CCV	J.T.Baker	0000184592	06/14/19	500uL	25mL	Deionized water	4mg/L
Ferrous Iron ICV/LCS	Mallinckrodt	Lot 5056 KDRX	06/14/19	375uL	25mL	Deionized water	3mg/L
	Ferrous Iron Calibration Curve		Prep'd By (Initials)		FJR		
Prep Date	06/28/18						
Exp Date	06/28/19						
Final Standard Information							
Point Label	Supplier	Batch Number	Exp Date	Aliquot from Stock (mL)	Final Volume	Solvent	Ferrous Iron Concentration
CCB	J.T.Baker	0000184592	06/14/19	0	25mL	Deionized water	0mg/L
Ical 1	J.T.Baker	0000184592	06/14/19	0.125	25mL	Deionized water	1mg/L
Ical 2	J.T.Baker	0000184592	06/14/19	0.25	25mL	Deionized water	2mg/L
Ical 3	J.T.Baker	0000184592	06/14/19	0.5	25mL	Deionized water	4mg/L
Ical 4	J.T.Baker	0000184592	06/14/19	0.625	25mL	Deionized water	5mg/L
Ical 5	J.T.Baker	0000184592	06/14/19	1.25	25mL	Deionized water	10mg/L
ICV	Mallinckrodt	Lot 5056 KDRX	06/14/19	0.375	25mL	Deionized water	3mg/L

Reagent Prep

Reagent	Chemical Lot #	Chemical	Chemical Expiration Date	Amount	Date Prep
Colorizer	0747C107	1,10-phenanthroline	na	1.008	03/12/20
		10% HCL conc	na	enough to dissolve	03/12/20
Buffer	Z28B018	Ammonia Acetate	na	248	01/03/20
	2018071399	Glacial Acetic Acid	06/27/20	700mL	

Silica | Rev 2, 04/05/19 controlled copy

Method SM4500SiD | Units mg/L | Instrument: Genisis Spectrometer
Analyte Silica | QCG: 200318A | Wavelength: 410 nm
Analyist HH | Final Volume: 25mL | Units: mg/L

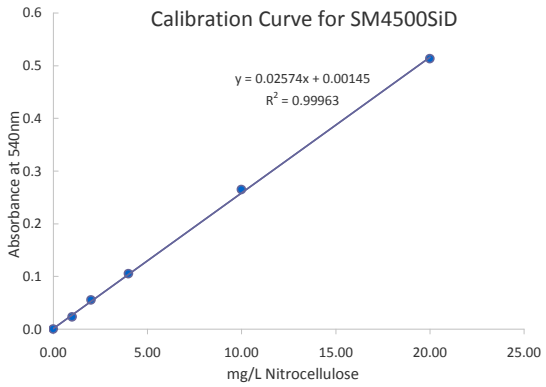
Date	Time	Appl ID	[SiO2]	Absorbance	% Recovery
03/18/20	14:20	ICB	0.00	0.000	
03/18/20	14:21	Ical 1	1.00	0.023	83.7%
03/18/20	14:22	Ical 2	2.00	0.055	104.0%
03/18/20	14:22	Ical 3	4.00	0.105	89.9%
03/18/20	14:23	Ical 4	10.00	0.265	102.4%
03/18/20	14:23	Ical 5	20.00	0.513	99.4%
03/18/20	14:25	ICV	4.00	0.099	94.8%
03/18/20	14:25	ICB	0.00	-0.001	

Slope	0.025737621
Intercept	0.001451338
Coefficient of Determination	0.999625494

Algortithm Check:	Appl ID	Absorbance	Result
	200318A 4 LCSD	0.105	4.02

Result = (Absorbance-Raw Blk-Intercept)/ Slope

Test:	03/18/20	HH	4.020



	Date	Time	Appl ID	DF	Raw Result	Sample Amount	Raw BLK	Calc Conc	Result	QC True	% Recovery
id	03/18/20	14:20	ICB	1	0.000	25.0mL		-0.06	-0.06		
id	03/18/20	14:21	Ical 1	1	0.023	25.0mL		0.84	0.84	1.00	83.7%
id	03/18/20	14:22	Ical 2	1	0.055	25.0mL		2.08	2.08	2.00	104.0%
id	03/18/20	14:22	Ical 3	1	0.094	25.0mL		3.60	3.60	4.00	89.9%
id	03/18/20	14:23	Ical 4	1	0.265	25.0mL		10.24	10.24	10.00	102.4%
id	03/18/20	14:23	Ical 5	1	0.513	25.0mL		19.88	19.88	20.00	99.4%
id	03/18/20	14:25	ICV	1	0.099	25.0mL		3.79	3.79	4.00	94.8%
id	03/18/20	14:25	ICB	1	-0.001	25.0mL		-0.10	-0.10		
	03/18/20	14:47	200318A CCV1 4	1	0.109	25.0mL		4.18	4.18	4.00	104.5%
	03/18/20	14:48	200318A CCB	1	-0.001	25.0mL		-0.10	-0.10		
	03/18/20	14:48	200318A 4 LCS	1	0.105	25.0mL		4.02	4.02	4.00	100.6%
	03/18/20	14:49	200318A 4 LCSD	1	0.105	25.0mL		4.02	4.02	4.00	100.6%
	03/18/20	14:51	BA08341W23 T	5	0.255	25.0mL		9.85	49.26		
	03/18/20	14:51	BA08341W22 D	5	0.260	25.0mL		10.05	50.23		
	03/18/20	14:52	BA08370W12 T	5	0.048	25.0mL		1.81	9.04		
	03/18/20	14:52	BA08370W13 D	5	0.048	25.0mL		1.81	9.04		
	03/18/20	14:53	200309ACCV1 3	1	0.102	25.0mL		3.91	3.91	4.00	97.7%
	03/18/20	14:54	200309A CCB	1	0.001	25.0mL		-0.02	-0.02		

Silica Standard Prep

Spike Amount (uL)*	Final Volume (mL)	Final Concentration (ppm)
25	25	1
50	25	2
100 (CCV2)	25	4
250 (CCV1)	25	10
500	25	20

*Curve Spiked with 1000 ppm SiO_2 o2si lot 1098096-37186 (exp: 4/29/18)

ICV/LCS = 4ppm SiO_2
100 uL of 1000 ppm SiO_2 Ultra Scientific Lot P01064-32895 (exp: 11/30/19) brought up to 25mL with DI

MS = 4ppm SiO_2
100 uL of 1000 ppm SiO_2 Ultra Scientific Lot P01064-32895 (exp: 11/30/19) brought up to 25mL with sample

Prep: 10/25/19
Exp: 10/25/19

Initials: FJR

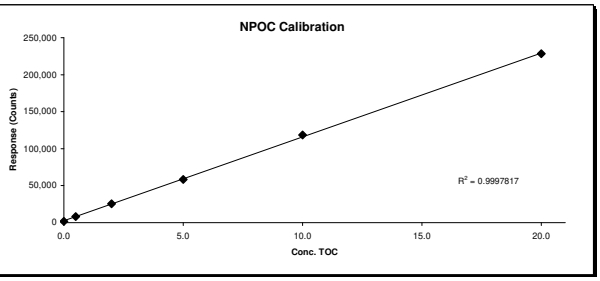
TOTAL ORGANIC CARBON

Method: WetChem | Units mg/L | Instrument: Tic Toc

Analyte: DOC | QCG: 200318A

Analyist: AR | Final Volume: 40mL

Date	Time	Appl ID	[TOC]	Raw	% Recovery
01/15/20	13:42	QC blank	0.00	1639	
01/15/20	14:25	Ical 1	0.50	8021	
01/15/20	15:01	Ical 2	2.00	25461	
01/15/20	15:37	Ical 3	5.00	58252	
01/15/20	16:13	Ical 4	10.00	118315	
01/15/20	16:49	Ical 5	20.00	228427	
01/16/20	15:11	ICB	0.08	906	
01/16/20	14:33	ICV	5.20	59018	104.0%



Date	Time	Appl ID	DF	Raw Result	SubSample Amount	Filter Blank Subtract	Calc Conc	Result	Range (mg/L)	QC True	% Recovery
2020-03-19	06:02 PM	QCB	1	1484	40mL	0.000	0	0.00	0.00		
2020-03-19	06:40 PM	CCV	1	55538	40mL	0.000	4.762	4.76	0.00	5.00	95.2%
2020-03-19	07:19 PM	CCB	1	1218	40mL	0.000	0	0.00	0.00		
2020-03-19	08:15 PM	200318A LCS	1	59038	40mL	0.000	5.071	5.07	0.11	5.00	101.4%
2020-03-19	08:55 PM	200318A LCSD	1	58440	40mL	0.000	5.018	5.02	0.08	5.00	100.4%
2020-03-19	09:35 PM	BA08341W21	1	8720	40mL	0.000	0.739	0.74	0.02		
2020-03-19	10:12 PM	BA08341W21 DUP	1	8464	40mL	0.000	0.715	0.72	0.42		
2020-03-19	10:49 PM	BA08341W21 MS	1	64016	40mL	0.000	5.61	5.61	0.03		
2020-03-19	11:27 PM	BA08341W21 MSD	1	61268	40mL	0.000	5.367	5.37	1.09		
2020-03-20	12:04 AM	BA08370W08 DF 4	1	4474	40mL	0.000	0.364	0.36	0.00		
2020-03-20	12:40 AM	CCV	1	55588	40mL	0.000	4.766	4.77	0.01	5.00	95.3%
2020-03-20	01:19 AM	CCB	1	1270	40mL	0.000	0.082	0.08	0.00		

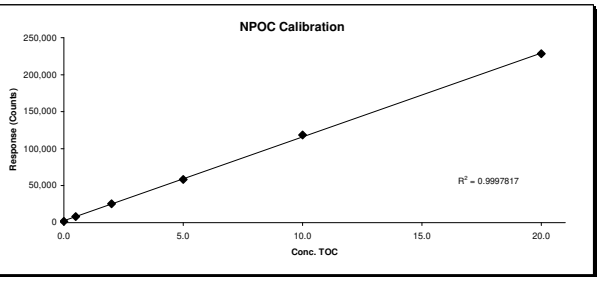
TOTAL ORGANIC CARBON

Method: WetChem | Units mg/L | Instrument: Tic Toc

Analyte: TOC | QCG: 200318A

Analyist: AR | Final Volume: 40mL

Date	Time	Appl ID	[TOC]	Raw	% Recovery
01/15/20	13:42	QC blank	0.00	1639	
01/15/20	14:25	Ical 1	0.50	8021	
01/15/20	15:01	Ical 2	2.00	25461	
01/15/20	15:37	Ical 3	5.00	58252	
01/15/20	16:13	Ical 4	10.00	118315	
01/15/20	16:49	Ical 5	20.00	228427	
01/16/20	15:11	ICB	0.08	906	
01/16/20	14:33	ICV	5.20	59018	104.0%



Date	Time	Appl ID	DF	Raw Result	SubSample Amount	Filter Blank Subtract	Calc Conc	Result	Range (mg/L)	QC True	% Recovery
2020-03-19	06:02 PM	QCB	1	1484	40mL	0.000	0	0.00	0.00		
2020-03-19	06:40 PM	CCV	1	55538	40mL	0.000	4.762	4.76	0.00	5.00	95.2%
2020-03-19	07:19 PM	CCB	1	1218	40mL	0.000	0	0.00	0.00		
2020-03-19	08:15 PM	200318A LCS	1	59038	40mL	0.000	5.071	5.07	0.11	5.00	101.4%
2020-03-19	08:55 PM	200318A LCSD	1	58440	40mL	0.000	5.018	5.02	0.08	5.00	100.4%
2020-03-19	09:35 PM	BA08341W21	1	8720	40mL	0.000	0.739	0.74	0.02		
2020-03-19	10:12 PM	BA08341W21 DUP	1	8464	40mL	0.000	0.715	0.72	0.42		
2020-03-19	10:49 PM	BA08341W21 MS	1	64016	40mL	0.000	5.61	5.61	0.03		
2020-03-19	11:27 PM	BA08341W21 MSD	1	61268	40mL	0.000	5.367	5.37	1.09		
2020-03-20	12:04 AM	BA08370W08 DF 4	4	4474	40mL	0.000	0.364	1.46	0.02		
2020-03-20	12:40 AM	CCV	1	55588	40mL	0.000	4.766	4.77	0.01	5.00	95.3%
2020-03-20	01:19 AM	CCB	1	1270	40mL	0.000	0.082	0.08	0.00		
2020-03-20	01:55 AM	200318A LCS	1	58006	40mL	0.000	4.98	4.98	0.02	5.00	99.6%
2020-03-20	02:35 AM	200318A LCSD	1	59171	40mL	0.000	5.082	5.08	0.04	5.00	101.6%
2020-03-20	03:16 AM	BA08370W11 DF4	4	84495	40mL	0.000	7.414	29.66	0.26		
2020-03-20	03:53 AM	BA08649W02	1	86173	40mL	0.000	7.562	7.56	0.30		
2020-03-20	04:31 AM	BA08650W02	1	126187	40mL	0.000	11.087	11.09	0.10		
2020-03-20	05:09 AM	BA08651W02	1	109891	40mL	0.000	9.651	9.65	0.22		
2020-03-20	05:47 AM	BA08825W14	1	114045	40mL	0.000	10.017	10.02	1.85		
2020-03-20	06:25 AM	BA08829W14	1	42711	40mL	0.000	3.733	3.73	0.45		
2020-03-20	07:03 AM	CCV	1	55484	40mL	0.000	4.757	4.76	0.07	5.00	95.1%
2020-03-20	07:42 AM	CCB	1	1392	40mL	0.000	0.093	0.09	0.02		

Name of Final Standard **TOC Calibration Curve** **Prep'd By (Initials)** **HH**

Prep Date **01/15/20**

Exp Date **02/12/20**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	20 uL	40 mL	**DI Water**	0.5 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	100 uL	40 mL	**DI Water**	2 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	250 uL	40 mL	**DI Water**	5 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	500 uL	40 mL	**DI Water**	10 ppm
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	1000 uL	40 mL	**DI Water**	20 ppm

Name of Final Standard **ICV (TOC)** **Prep'd By (Initials)** **AR**

Prep Date **01/16/20**

Exp Date **02/13/20**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
1000 PPM ICV TOC Intermediate	APPL Inc.	Prep: 2/11/19	1000 mg/L	**Prep: 2/11/19**	**02/13/20**	500 uL	40mL	**DI Water**	10 ppm

Name of Final Standard **CCV (TOC)** **Prep'd By (Initials)** **AR**

Prep Date **See Data**

Exp Date **1 year**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	Agilent	IQC-1 06-5	1000 mg/L	**CS-5157-40233**	**11/30/20**	200 uL	40 mL	**DI Water**	5 ppm

Name of Final Standard **TOC LCS/LCSD** **Prep'd By (Initials)** **AR**

Prep Date **See Data**

Exp Date **1 year**

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Total Organic Carbon (TOC) Standard	ULTRA Scientific	IQC-106-5	1000 mg/L	**CR-0328-37639**	**02/28/19**	200 uL	40 mL	**DI Water**	5 ppm

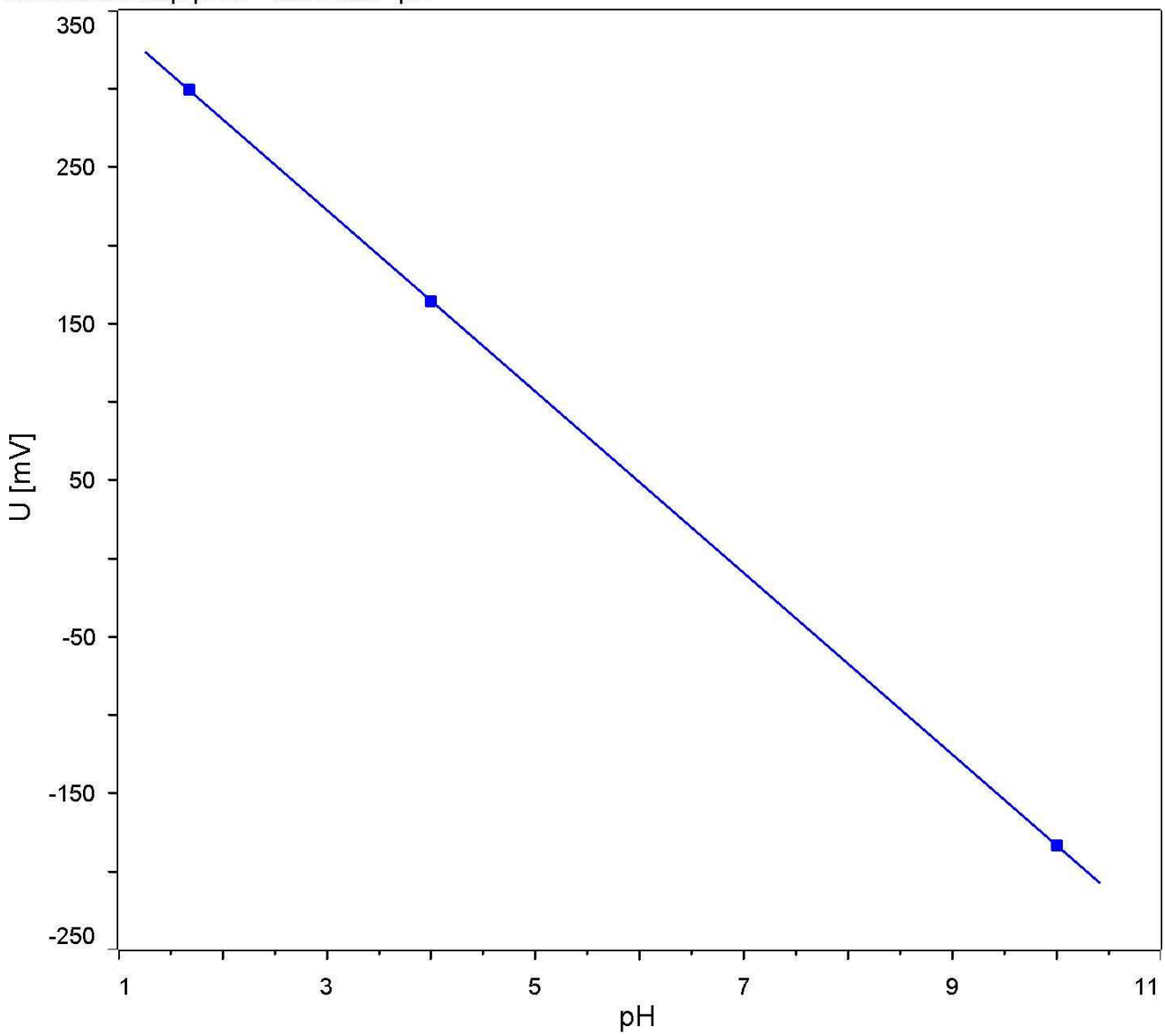
Timao Calibration Curve

2020-03-18 14:17:05

Calculations

Buffer 7	7.07	
Formula	'MEAS pH.EME'	
MEAS pH.EME	7.0698	
Slope	99.20	
Formula	'Calibration loop pH.SLO'	
Calibration loop pH.SLO	99.2	
pH(as)	6.84	
Formula	'Calibration loop pH.ENP'	
Calibration loop pH.ENP	6.838	
Res19	21.5	°C
Formula	'CAL MEAS pH.ETE'	
CAL MEAS pH.ETE	21.4501	

Calibration loop pH.1 - CAL LOOP pH



Metrohm 814/809 Titrando Data

Sample ID	Analysis Date/Time	Method	Titration Volume (to 8.3)	Titration Volume (total)	OH	CO3	HCO3	Total Alk	Unit	Sample Vol	N	Batch	Initials
BA08370W14	2020-03-18 21:11:17 UTC-8	Alkalinity	0.070	2.292	0.00	5.52	84.79	90.30	mg/L	25 mL	0.0197	200318A	AR
200318A LCSD	2020-03-18 18:49:17 UTC-8	Alkalinity	0.108	6.220	0.00	8.51	236.56	245.07	mg/L	25 mL	0.0197	200318A	AR
200318A LCS	2020-03-18 18:40:09 UTC-8	Alkalinity	0.154	6.228	0.00	12.14	233.25	245.38	mg/L	25 mL	0.0197	200318A	AR
200318A BLK	2020-03-18 15:44:30 UTC-8	Alkalinity	0.000	0.048	0.00	0.00	1.89	1.89	mg/L	25 mL	0.0197	200318A	AR

Tiamo Alkalinity Standard Prep

Prep Date:

Exp Date:

Prep'd By (Initials): AR

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Unit	Conc	Lot Number - QA Number	Prep/Opened	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc
Sulfuric Acid (H2SO4)	J.T.Baker	NA	NA	167828	NA	NA	PURCHASED	NA	NA	NA
0.10N Sulfuric Acid (H2SO4)	J.T.Baker	Normality	0.1N	167828	05/24/19	05/24/20	3ml	1L	DI	0.10N
0.02N Sulfuric Acid (H2SO4)	J.T.Baker	Normality	0.02N	167828	05/24/19	05/24/20	200mL	1L	DI	0.02N
Inorganic Spike(NaHCO3)	BDH	NA	NA	1575C510	10/18/18	08/14/20	PURCHASED	NA	NA	NA
Inorganic Spike Solution	BDH	Milligrams/Liters	250mg/L	1575C510	01/30/20	07/30/20	3.5g	500mL	DI	250mg/L
Standarizing Solution(NaCO3)	J.T.Baker	Normality	1N	178494	07/25/17	07/25/19	PURCHASED	NA	NA	NA

Tiamo Electroconductivity Standard Prep

Prep Date:

Exp Date:

Prep'd By (Initials): AR

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Units	Conc	Lot Number	Prep/Opened	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc. Range (µg/mL)
EC Spike(KCl)	Mallinckrodt AR	Na	NA	6858 KHMV	NA	NA	PURCHASED	NA	NA	NA
EC Spike Solution	Mallinckrodt AR	Moles/Conductivity	0.01M	6858 KHMV	11/26/18	11/26/19	0.7456g	1L	DI	1412umos
EC Daily LCS Solution	Mallinckrodt AR	Moles/Conductivity	0.0070824M	6858 KHMV	06/06/19	6/6/20	0.5280g	1L	DI	1000umos
Storage Solution EC Probe	APPL	NA	NA	NA	NA	NA	NA	NA	DI	NA

Tiamo pH Buffer Reference Standards

Prep Date: Daily

Exp Date: Daily

Prep'd By (Initials): AR

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Units	pH	Lot Number - QA Number	Opened	Exp. Date	Aliquot from Stock	Final Volume	Solvent	Final Standard Conc (µg/mL)
pH 1.68 Buffer	ORION	pH Units	1.68	WX1-40709	04/22/19	01/01/21	NA	NA	NA	NA
pH 4.00 Buffer	RICCA	pH Units	4	1807191-39782	04/22/19	01/01/21	NA	NA	NA	NA
pH 10.01 Buffer	VWR	pH Units	10.01	0903980-40707	04/22/19	08/27/19	NA	NA	NA	NA
pH 7.00 Buffer	Ricca	pH Units	7	1805M17 - 39765	10/11/18	05/01/20	NA	NA	NA	NA

908 North Temperance Ave. ∇ Clovis, CA 93611 ∇ Phone 559-275-2175 ∇ Fax 559-275-4422

Certification Number: CA1312
NELAP Certification number: CA00046
DoD-ELAP Certificate number: 4064.01

Data Validatable Report

May 7, 2020

AECOM
1001 Bishop Street, Suite 1600
Honolulu, Hawaii 96813

Attn: Margie Pascua

Title: Report of Data: Case 91926

Project: 60571032 CV18F0126 Red Hill Fuel Storage, HI

Contract #: Prime contract # for DoD: NAVY CLEAN N62742-17-F-1800, CV18F0126
Subcontract: 18S-22209-HI27

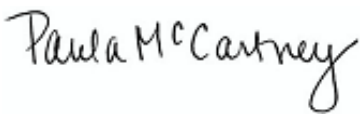
Dear Ms. Pascua:

Six water samples were received April 21, 2020. Written results for the requested analyses are being provided on this May 7, 2020.

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

If you have any questions or require further information, please contact your APPL Project Manager, Libby Cheeseborough, libby@applinc.com, at your convenience. Thank you for choosing APPL, Inc.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. These test results meet all requirements of NELAC and DoD QSM. Release of the hard copy has been authorized by the Laboratory Manager or her designee, as verified by the following signature.



Paula McCartney, Laboratory Director
APPL, Inc.

PM/lac
Enclosure
cc: File

Data Validation Package
for
60571032 CV18F0126 Red Hill Fuel Storage
APPL SDG 91926
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CASE NARRATIVE

Case Narrative

ARF: 91926

Project: 60571032 CV18F0126 Red Hill Fuel Storage. HI

Sample Receipt Information:

Six water samples were received April 21, 2020, at 1.5°C, 2.6°C, and 0.5°C. The sample group was assigned Analytical Request Form (ARF) number 91926.

Sample Preparation and Analysis Information:

For the EPA 8015B analysis, the sample was extracted according to EPA method 3520C. The sample extracts were silica gel cleaned according to APPL's SOP CLN004 and placed on hold.

For the EPA 8270D Phenol analysis, the samples were extracted according to EPA method 3520C.

For the EPA 8270D SIM analysis, the samples were extracted according to EPA method 3520C.

For the APPL SOP ANA2MEE analysis, the samples were extracted according to EPA method 3535.

For the EPA 8260B analysis, the samples were purged according to EPA method 5030B.

For the RSK-175 analysis, the samples were allowed to equilibrate for 10 minutes at 40°C and a portion of the headspace was analyzed.

For the EPA 9060A, 300.0, 353.2, SM 2320B, and SM 3500FeB analyses, the sample was prepared according to the methods.

Only the portion of the injection log relative to these samples is included. A full sequence log is available upon request. Measurement uncertainty can be reported upon request.

Analytical Exceptions, Deviations and Abnormalities:

EPA 8015B: In the 200422A LCS/LCSD, Oil recovered above the upper control limit. The samples were reextracted past the recommended holding time. Both sets of data were reported.

In the sample ERH1055, the surrogate Octacosane recovered above the upper control limit. The sample was reextracted past the recommended holding time. Both sets of data were reported.

EPA 8270D: Manual integrations were performed in accordance with APPL's SOP. Chromatograms of before and after manual integration are enclosed.

EPA 8260B: Manual integrations were performed in accordance with APPL's SOP. Chromatograms of before and after manual integration are enclosed.

SDG	Received	Client ID	APPL ID	Collected DateTime	Matrix	Method	Method Description
91926	04/21/20	ERH1046	BA09850	04/20/20 8:20:00 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
91926	04/21/20	ERH1046	BA09850	04/20/20 8:20:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
91926	04/21/20	ERH1046	BA09850	04/20/20 8:20:00 AM	WATER	RSK 175	METHANE BY RSK 175
91926	04/21/20	ERH1047	BA09851	04/20/20 8:45:00 AM	WATER	SM 2320B	Wetlab 2320B - Water
91926	04/21/20	ERH1047	BA09851	04/20/20 8:45:00 AM	WATER	EPA 300.0	Wetlab 300.0 - Water
91926	04/21/20	ERH1047	BA09851	04/20/20 8:45:00 AM	WATER	SM3500FeB	Ferrous Iron
91926	04/21/20	ERH1047	BA09851	04/20/20 8:45:00 AM	WATER	EPA 353.2	EPA 353.2 - WATER
91926	04/21/20	ERH1047	BA09851	04/20/20 8:45:00 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
91926	04/21/20	ERH1047	BA09851	04/20/20 8:45:00 AM	WATER	EPA 8270D	EPA 8270D WATER
91926	04/21/20	ERH1047	BA09851	04/20/20 8:45:00 AM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
91926	04/21/20	ERH1047	BA09851	04/20/20 8:45:00 AM	WATER	EPA 8015B-eHL	EPA 8015B TPH LIQ-LIQ
91926	04/21/20	ERH1047	BA09851	04/20/20 8:45:00 AM	WATER	EPA 8015B-eHL	EPA 8015B TPH RE-EXTRACT
91926	04/21/20	ERH1047	BA09851	04/20/20 8:45:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
91926	04/21/20	ERH1047	BA09851	04/20/20 8:45:00 AM	WATER	RSK 175	METHANE BY RSK 175
91926	04/21/20	ERH1047	BA09851	04/20/20 8:45:00 AM	WATER	8270D-SIM	EPA 8270D SIM LIQ-LIQ
91926	04/21/20	ERH1047	BA09851	04/20/20 8:45:00 AM	WATER	SW846 9060A	9060A TOC
91926	04/21/20	ERH1052	BA09852	04/20/20 10:25:00 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
91926	04/21/20	ERH1052	BA09852	04/20/20 10:25:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
91926	04/21/20	ERH1052	BA09852	04/20/20 10:25:00 AM	WATER	RSK 175	METHANE BY RSK 175
91926	04/21/20	ERH1053	BA09853	04/20/20 11:05:00 AM	WATER	SM 2320B	Wetlab 2320B - Water
91926	04/21/20	ERH1053	BA09853	04/20/20 11:05:00 AM	WATER	EPA 300.0	Wetlab 300.0 - Water
91926	04/21/20	ERH1053	BA09853	04/20/20 11:05:00 AM	WATER	EPA 300.0	Wetlab 300.0 - Water
91926	04/21/20	ERH1053	BA09853	04/20/20 11:05:00 AM	WATER	SM3500FeB	Ferrous Iron
91926	04/21/20	ERH1053	BA09853	04/20/20 11:05:00 AM	WATER	EPA 353.2	EPA 353.2 - WATER
91926	04/21/20	ERH1053	BA09853	04/20/20 11:05:00 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
91926	04/21/20	ERH1053	BA09853	04/20/20 11:05:00 AM	WATER	EPA 8270D	EPA 8270D WATER
91926	04/21/20	ERH1053	BA09853	04/20/20 11:05:00 AM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
91926	04/21/20	ERH1053	BA09853	04/20/20 11:05:00 AM	WATER	EPA 8015B-eHL	EPA 8015B TPH LIQ-LIQ
91926	04/21/20	ERH1053	BA09853	04/20/20 11:05:00 AM	WATER	EPA 8015B-eHL	EPA 8015B TPH RE-EXTRACT
91926	04/21/20	ERH1053	BA09853	04/20/20 11:05:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
91926	04/21/20	ERH1053	BA09853	04/20/20 11:05:00 AM	WATER	RSK 175	METHANE BY RSK 175
91926	04/21/20	ERH1053	BA09853	04/20/20 11:05:00 AM	WATER	8270D-SIM	EPA 8270D SIM LIQ-LIQ
91926	04/21/20	ERH1053	BA09853	04/20/20 11:05:00 AM	WATER	SW846 9060A	9060A TOC
91926	04/21/20	ERH1054	BA09854	04/20/20 8:10:00 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
91926	04/21/20	ERH1054	BA09854	04/20/20 8:10:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER

91926	04/21/20	ERH1054	BA09854	04/20/20 8:10:00 AM	WATER	RSK 175	METHANE BY RSK 175
91926	04/21/20	ERH1055	BA09855	04/20/20 8:35:00 AM	WATER	SM 2320B	Wetlab 2320B - Water
91926	04/21/20	ERH1055	BA09855	04/20/20 8:35:00 AM	WATER	EPA 300.0	Wetlab 300.0 - Water
91926	04/21/20	ERH1055	BA09855	04/20/20 8:35:00 AM	WATER	SM3500FeB	Ferrous Iron
91926	04/21/20	ERH1055	BA09855	04/20/20 8:35:00 AM	WATER	EPA 353.2	EPA 353.2 - WATER
91926	04/21/20	ERH1055	BA09855	04/20/20 8:35:00 AM	WATER	EPA 8260B	EPA 8260B BTEX WATER
91926	04/21/20	ERH1055	BA09855	04/20/20 8:35:00 AM	WATER	EPA 8270D	EPA 8270D WATER
91926	04/21/20	ERH1055	BA09855	04/20/20 8:35:00 AM	WATER	EPA 8270D	EPA 8270D MODIFIED WATER
91926	04/21/20	ERH1055	BA09855	04/20/20 8:35:00 AM	WATER	EPA 8015B-eHL	EPA 8015B TPH LIQ-LIQ
91926	04/21/20	ERH1055	BA09855	04/20/20 8:35:00 AM	WATER	EPA 8015B-eHL	EPA 8015B TPH RE-EXTRACT
91926	04/21/20	ERH1055	BA09855	04/20/20 8:35:00 AM	WATER	EPA 8260B	EPA 8260B GRO WATER
91926	04/21/20	ERH1055	BA09855	04/20/20 8:35:00 AM	WATER	RSK 175	METHANE BY RSK 175
91926	04/21/20	ERH1055	BA09855	04/20/20 8:35:00 AM	WATER	8270D-SIM	EPA 8270D SIM LIQ-LIQ
91926	04/21/20	ERH1055	BA09855	04/20/20 8:35:00 AM	WATER	SW846 9060A	9060A TOC

Abbreviations and Flags

FLAG	DESCRIPTION
#	Recovery or RPD outside control limits
*	Recovery or RPD outside control limits
B	Analyte detected in associated method blank
C1	Reason for correction: wrote incorrect response
C2	Reason for correction: calculated incorrectly
C3	Reason for correction: needs to be rechecked
C4	Reason for correction: data not usable
DO	Diluted out
E	Exceeds linear range
F	Estimated value
G1	Includes a wide range of hydrocarbons which does not match our gasoline standard
G10	Includes a match to hydrocarbon profiles within the range of mineral spirits
G11	Includes a match to hydrocarbon profiles within the range of JP-4
G12	Pattern does not match the gasoline standard; the carbon range for this sample is consistent with JP8
G13	Closely resembles the hydrocarbon profile of aviation gasoline
G14	Analyte concentration may be biased due to carry over
G2	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G3	Includes higher boiling hydrocarbons
G4	Includes dominant peak(s) not indicative of petroleum hydrocarbons
G5	Is mainly dominant peak(s) not indicative of petroleum hydrocarbons
G6	Contains recognizable contaminant peak(s) which has been removed from quantitation
G7	Is mainly a match to hydrocarbons within the range of gasoline
G8	Closely resembles the boiling point hydrocarbon profile consistent with weathered gasoline
G9	Includes hydrocarbons within the range of kerosene
J	Estimated value
M	Matrix effect
MI1	Manual integration: integration does not follow baseline
MI2	Manual integration: non-target peak interference
MI3	Manual integration: to split a peak that was integrated as one peak by the computer
MI4	Manual integration: to integrate a split peak
MI5	Manual integration: the whole peak or part of the peak was not integrated
MI6	Manual integration: computer integrated wrong peak
MI7	Manual integration: other - explain
MDL	Method detection limit
ND	Not detected
NT	Non-target
Q	Acceptance criteria not met
T1 I	Includes wide range of hydrocarbons not indicative of diesel
T1 M	Is mainly wide range of hydrocarbons not necessarily indicative of diesel
T2 I	Includes lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T2 M	Is mainly lower boiling hydrocarbons, i.e. mineral spirits, kerosene, stoddard solvent, white gas
T3 I	Includes higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T3 M	Is mainly higher boiling hydrocarbons, i.e. asphaltene, waster oil, motor oil, or weathered diesel fuel
T4 I	Includes dominant peak(s) not indicative of hydrocarbons
T4 M	Is mainly dominant peak(s) not indicative of hydrocarbons
T5	Contains recognizable contaminant peak(s) which has been removed from quantitation
T6	Is mainly a match to hydrocarbons within range of diesel fuel
T7	Closely resembles the boiling point hydrocarbon profile consistent with diesel fuel
T8	Includes a match to hydrocarbon profiles within range of diesel and kerosene fuel
T9 I	Includes non-diesel hydrocarbons within boiling point range of diesel fuel
T9 M	Is mainly non-diesel hydrocarbons within boiling point range of diesel fuel.
Y	Percent difference between primary and confirmation column > 40%

SAMPLE RECORDS MANAGEMENT

CHAIN OF CUSTODY,

ARF, CRF, AND

CLIENT COMMUNICATION

APPL - Analysis Request Form 91926

Client: **AECOM**
Address: **1001 Bishop Street, Suite 1600**
Honolulu, HI 96813
Attn: **Margie Pascua**
Phone: **808-356-5373** Fax: **808-523-8950**
Job: **60571032 CV18F0126 Red Hill Fuel Storage**
PO #: **18S-22209-HI27 PO# 102604**
Chain of Custody (Y/N): **Y** # **196,199,200**
RAD Screen (Y/N): **Y** pH (Y/N): **Y**
Turn Around Type: **1 WEEK**

Received by: **AAR**
Date Received: **04/21/20** Time: **10:15**
Delivered by: **FEDEX**
Shuttle Custody Seals (Y/N): **Y** Time Zone: **-10**
Chest Temp(s): **1.5,2.6,0.5 °C**
Color: **VFRG/B-Red**
Samples Chilled until Placed in Refrig/Freezer: **Y**
Project Manager: **Libby Cheesebor**
QC Report Type: **DVP4DOD/EQUIS/HI**
Due Date: **04/28/20**

Comments:
PM: login and F1s to Margie.Pascua@aecom.com
AN: 7 day TAT for Form 1s; 21 day TAT for PKG STYLE 1; DOD v5.1; DOD Forms: LOD database
Wetlab: NO3, CL, & SO4 by EPA 300 & NO3-N & NO2-N by 353.2; report MS/MSD/DUPs when AECOM sample used
TPH D & O both with and w/o SGC, reverse surrogate for the SGC; analyze SGC if detections
RSK: Methane only; 8011: EDB only; $87DC53W5: report phenol only; PAH short list
MS/MSD on Sample BA06604 is for 8260, BTEX, GRO, 8011, 8015, SIM, 8270, & 2-MEE only
FR: 2 labeled CDs to Margie AFTER validation; email ftp info to Margie, Stella, trommelfanger@lab-data
EDD: AECOM EQuIS EDD 2.5.3 Red Hill 87DMEE->3535A to Margie.Pascua@aecom.com & jecklund@lab-data.com

Sample Distribution:
GC: 3-$87DC53W5, 3-$87DMEEW5, 1-$DOC53SGCW5LIQ, 3-$DOC53W5LIQ, 3-$SIM53LIQ51
Extractions: 3-_LIQ003, 3-_LIQ005, 3-_MWE2MEE
VOA: 6-$86BTOTXDOD5W, 6-$GASBL, 6-$GRO86BW, 6-$RSKMETH
Wetlab: 3-$232W(HCO3,CO3,ALK), 3-$300W, 3-$35FE, 3-$35OF, 3-$TOCW53

Charges:

Invoice To:
ACCOUNTS PAYABLE
1001 Bishop Street, Ste 1600
USAPImaging@aecom.com
mary.basano@aecom.com

	Client ID		APPL ID	Sampled	Analyses Requested
1.	ERH1046	LCSD	BA09850W	04/20/20 08:20	$86BTOTXDOD5W, $GASBL, $GRO86BW, $RSKMETH -- see comments
2.	ERH1047	LCSD	BA09851W	04/20/20 08:45	$232W(HCO3,CO3,ALK), $300W, $35FE, $35OF, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53SGCW5LIQ, $DOC53W5LIQ, $GASBL, $GRO86BW, $RSKMETH, $SIM53LIQ51, $TOCW53 -- see comments
3.	ERH1052	LCSD	BA09852W	04/20/20 10:25	$86BTOTXDOD5W, $GASBL, $GRO86BW, $RSKMETH -- see comments

Note: All times, excluding sample collection times, are Pacific Time Zone unless noted otherwise. Collection times are in: -10 UTC

4.	ERH1053	LCSD	BA09853W	04/20/20 11:05	$232W(HCO3,CO3,ALK), $300W, $35FE, $35OF, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5LIQ, $GASBL, $GRO86BW, $RSKMETH, $SIM53LIQ51, $TOCW53 -- see comments
5.	ERH1054	LCSD	BA09854W	04/20/20 08:10	$86BTOTXDOD5W, $GASBL, $GRO86BW, $RSKMETH -- see comments
6.	ERH1055	LCSD	BA09855W	04/20/20 08:35	$232W(HCO3,CO3,ALK), $300W, $35FE, $35OF, $86BTOTXDOD5W, $87DC53W5, $87DMEEW5, $DOC53W5LIQ, $GASBL, $GRO86BW, $RSKMETH, $SIM53LIQ51, $TOCW53 -- see comments

APPL Sample Receipt Form

ARF# **91926**

Sample	Container Type	Count	p
BA09850	[13] VOAs - HCL	4	NA
BA09851	[3] PL 250mL	1	NA
	[10] PL 250mL - H2SO4	1	1.3
	[13] VOAs - HCL	4	NA
	[17] Amber Liter	4	NA
	[32] Clear VOA - H2SO4	2	NA
	[38] 250mL brn poly, HCl prsvd	1	1.6
	[40] 500mL Amber, unprsrvd	3	NA
BA09852	[13] VOAs - HCL	4	NA
BA09853	[3] PL 250mL	1	NA
	[10] PL 250mL - H2SO4	1	1.3
	[13] VOAs - HCL	4	NA
	[17] Amber Liter	4	NA
	[32] Clear VOA - H2SO4	2	NA
	[38] 250mL brn poly, HCl prsvd	1	1.6
	[40] 500mL Amber, unprsrvd	3	NA
BA09854	[13] VOAs - HCL	4	NA
BA09855	[3] PL 250mL	1	NA
	[10] PL 250mL - H2SO4	1	1.3
	[13] VOAs - HCL	4	NA
	[17] Amber Liter	4	NA
	[32] Clear VOA - H2SO4	2	NA
	[38] 250mL brn poly, HCl prsvd	1	1.6
	[40] 500mL Amber, unprsrvd	3	NA

Sample	Container Type	Count	p

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com
Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

CHAIN OF CUSTODY RECORD

C.O.C. 196

Report to: PLEASE PRINT

Company Name: AECOM Phone: 808-356-5373

Address: 1001 Bishop St, Suite 1600, Honolulu, HI 96813 Fax: 808-523-8950

Attn: Margie Pascua

Email: margie.pascua@aecom.com

Invoice to: PLEASE PRINT

Company Name: AECOM Phone: 808-529-7249

Address: 1001 Bishop St, Suite 1600, Honolulu, HI 96813 Fax: 808-523-8950

Attn: Mary Basano

Email: mary.basano@aecom.com; usapimaging@aecom.com

Project Name/Number: CV18F0126 / 60571032

Purchase Order Number: 102604

Sampler (Print): MC for KL, MM, EH

Sampler (Signature): for KL, MM, EH

Date Shipped: 4/20/20

Carrier: FedEx

Waybill No.:

Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil
ERH1046	Trip Blank	04/20/2020	0820	HST	4	X		
ERH1047	RHMW03	04/20/2020	0845	HST	16	X		

Analysis Requested/Method Number

Sample Identification	8260C BTEX,TPH-g	8260C DCA 8011 EDB	8015C TPH-d/o	3630/8015C TPH-d/o w/ SGT	8270DSIM PAHs short list	8270D Phenol, TICs	8270D 2-(2-methoxy ethoxy)-ethanol	RSK175M Methane	SM3500-Fe Ferrous Iron	353.2 Nitrate-Nitrite N	SM2320B Alkalinity 300.0 Nitrate,Sulfate,Chloride	300.0 Bromide/Fluoride 6010 Total Ca,Mg,Mn,K,Na SM4500 Total & Dissolved Silica	9060A TOC
ERH1046	X							X					
ERH1047	X		X	X	X	X	X	X	X	X	X		X

*Analyze TPH w/SGT only if TPH-d/o detected.

TPH-d/o & PAHs need liquid-liquid extraction.

04/20/2020

Shuttle Temperature: 1.5/1.5 IR @ 2.6/2.6, 0.5/0.5

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other:

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
Sampler: AECOM	4/20/2020	1200					
	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					4/21/20	1015	

See page 2 for Container Preservative and Sampling Information

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com
Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

CHAIN OF CUSTODY RECORD

C.O.C. 199

Report to: PLEASE PRINT	Invoice to: PLEASE PRINT
Company Name: AECOM Phone: 808-356-5373	Company Name: AECOM Phone: 808-529-7249
Address: 1001 Bishop St, Suite 1600 Honolulu, HI 96813 Fax: 808-523-8950	Address: 1001 Bishop St, Suite 1600 Honolulu, HI 96813 Fax: 808-523-8950
Attn: Margie Pascua	Attn: Mary Basano
Email: margie.pascua@aecom.com	Email: mary.basano@aecom.com; usapimaging@aecom.com

Project Name/Number: CV18F0126 / 60571032
Purchase Order Number: 102604
Sampler (Print): GM, CE, RS
Sampler (Signature): for GM, CE, RS

Date Shipped: 4/20/20
Carrier: FedEx
Waybill No.:
Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	8260C BTEX,TPH-g	8260C DCA 8011 EDB	8015C TPH-d/o	3630/8015C TPH-d/o w/ SGT	8270DSIM PAHs short list	8270D Phenol, TICs	8270D 2-(2-methoxy ethoxy)-ethanol	RSK175M Methane	SM3500-Fe Ferrous Iron	353.2 Nitrate-Nitrite N	SM2320B Alkalinity 300.0 Nitrate,Sulfate,Chloride	300.0 Bromide/Fluoride 3010 Total Ca,Mg,Mn,K,Na SM4500 Total & Dissolved Silica	9060A TOC
ERH1052	Trip Blank	4/20/2020	1025	HST	4	X			X							X					
ERH1053	RHMW06	4/20/2020	1105	HST	16	X			X		X	X*	X	X	X	X	X	X	X		X

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*Analyze TPH w/SGT only if TPH-d/o detected.

TPH-d/o & PAHs need liquid-liquid extraction.

4/20/2020

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other: _____

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler: AECOM	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
	4/20/2020	1240					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					4/21/20	1015	

See page 2 for Container Preservative and Sampling Information

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611
www.applinc.com
Phone: (559) 275-2175
Fax: (559) 275-4422
coc@applinc.com

CHAIN OF CUSTODY RECORD

C.O.C. 200

Report to: PLEASE PRINT

Company Name: AECOM Phone: 808-356-5373

Address: 1001 Bishop St, Suite 1600
Honolulu, HI 96813 Fax: 808-523-8950

Attn: Margie Pascua

Email: margie.pascua@aecom.com

Invoice to: PLEASE PRINT

Company Name: AECOM Phone: 808-529-7249

Address: 1001 Bishop St, Suite 1600
Honolulu, HI 96813 Fax: 808-523-8950

Attn: Mary Basano

Email: mary.basano@aecom.com; usapimaging@aecom.com

Project Name/Number: CV18F0126 / 60571032

Purchase Order Number: 102604

Sampler (Print): GM, CE, RS

Sampler (Signature): [signature] for GM, CE, RS

Date Shipped: 4/20/20

Carrier: FedEx

Waybill No.:

Comments:

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	8260C BTEX,TPH-g	8260C DCA 8011 EDB	8015C TPH-d/o	3630/8015C TPH-d/o w/ SGT	8270DSIM PAHs short list	8270D Phenol, TICs	8270D 2-(2-methoxy ethoxy)-ethanol	RSK175M Methane	SM3500-Fe Ferrous Iron	353.2 Nitrate-Nitrite N	SM2320B Alkalinity 300.0 Nitrate,Sulfate,Chloride	300.0 Bromide/Fluoride 3010 Total Ca,Mg,Mn,K,Na SM4500 Total & Dissolved Silica	9060A TOC
ERH1054	Trip Blank	4/20/2020	0810	HST	4	X			X							X					
ERH1055	RHMW07	4/20/2020	0835	HST	16	x			X		X	X*	X	X	X	X	X	X	X		X

Page 14 of 753

*Analyze TPH w/SGT only if TPH-d/o detected.

TPH-d/o & PAHs need liquid-liquid extraction.

Shuttle Temperature:

Turnaround Requested: Check one
☐ Standard 2-3 wk ☒ One week ☐ 3 days ☐ 24/48 Hrs. ☐ Other: _____

Sample Disposal:
☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler: AECOM	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
[signature]	4/20/20	1250					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					4/21/20	1015	[signature]

See page 2 for Container Preservative and Sampling Information

COOLER RECEIPT FORM **ARF: 91926**

1) Project: 60571032 CV18F0126 Red Hill Fuel Storage Date Received: 04/21/20

2) Coolers: Number of Coolers: 3

3) YES Were custody seals present and intact?
How many? 6 Name/Date on seal? See Below

4) YES Was there a shipping slip? Carrier name: FEDEX

5) Type of packing in cooler: X bubble wrap __ popcorn __ foam X plastic bags __ other
X wet ice __ dry ice __ no ice __ gel ice

6) YES Were cooler temperatures acceptable?

7) Serial number of certified NIST thermometer use IR @ 0.0°C

8) Cooler temp(s): In °C. Thermometer Temp / Corrected Temp
1: 1.5/1.5 2: 2.6/2.6 3: 0.5/0.5 4: _____ 5: _____ 6: _____
7: _____ 8: _____ 9: _____ 10: _____ 11: _____ 12: _____

Chain of custody:

9) YES Was a chain of custody received?

10) YES Were the custody papers complete/signed in the appropriate places?

Sample Labels:

11) YES Were all sample labels complete (sample ID, date/time of sampling, etc.)?

12) YES Did all container labels agree with custody papers?

Sample Containers:

13) Yes Were all containers sealed in separate bags?

14) YES Did all containers arrive in good condition:(unbroken, no leakage, no cracked/broken lids)?

15) YES Were correct containers and preservatives used for the tests indicated?

16) YES Was a sufficient amount of sample sent for tests indicated?

17) No Were bubbles present in volatile samples?
If yes, the following were received with air bubbles:
Larger than a pea: _____
Smaller than a pea: _____

Preservation Hold time:

18) Yes Was a sufficient amount of holding time remaining to analyze the samples?

19) Yes Was the pH taken of all non-VOA preserved samples and written on the sample container?

20) Yes Was the pH of acid preserved non-VOA samples < 2?

21) NA Was the pH of the "basic" preserved samples for Cyanide > 12, Sulfide >9, Hexchrom >9?

22) NO Were unpreserved VOA Vials received?

23) NA Are unpreserved VOA vials noted in the ADD TEST FIELD on the ARF?
pH strip lot number: HC982588
Lab notified if pH was not adequate:

Notes/Deficiencies:

CUSTODY SEAL
APPL, Inc. (559) 275-2175
Initials MC Date 4/20

Personnel receiving samples: AA Second reviewer: AA
Personnel labeling samples: RB
Project manager notified: AA Date/Time of notification 04/21/20 10:58:00 AM
Name of client notified: _____ Date/Time of notification _____

SAMPLE RESULTS

EPA 8015B TPH LIQ-LIQ

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91926

Sample ID: ERH1047

APPL ID: BA09851

Sample Collection Date: 04/20/20

QCG: #DOC53-200422A-252131

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	220 J	320	300.0	150.0	ug/L	04/22/20	04/24/20
EPA 8015B-e	OIL (C24-C40)	240 J	320	300.0	150.0	ug/L	04/22/20	04/24/20
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	132	60-142			%	04/22/20	04/24/20
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	100.0	56-125			%	04/22/20	04/24/20

J = Estimated value.

Quant Method:	DOC0310.M
Run #:	424014
Instrument:	Apollo
Sequence:	200424
Dilution Factor:	1
Initials:	SSE

Printed: 05/05/20 2:05:10 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPH WATER L-L SGC

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91926

Sample ID: ERH1047

APPL ID: BA09851

Sample Collection Date: 04/20/20

QCG: #DOC53-200422A1-252580

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	04/22/20	05/07/20
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	04/22/20	05/07/20
EPA 8015B-e	SURROGATE: (R) DECANOIC ACID (S)	0.0	0-1			%	04/22/20	05/07/20
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	149 #	60-142			%	04/22/20	05/07/20
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	113	56-125			%	04/22/20	05/07/20

= Recovery (or RPD) is outside QC limits.

Quant Method:	DOC0310.M
Run #:	424185
Instrument:	Apollo
Sequence:	200424
Dilution Factor:	1
Initials:	SSE

Printed: 05/13/20 11:28:20 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPH RE-EXTRACT

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91926

Sample ID: ERH1047

APPL ID: BA09851

Sample Collection Date: 04/20/20

QCG: #DOC53-200430A-252258

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	190 J	320	300.0	150.0	ug/L	04/30/20	05/04/20
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	04/30/20	05/04/20
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	95.6	60-142			%	04/30/20	05/04/20
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	77.1	56-125			%	04/30/20	05/04/20

J = Estimated value.

Quant Method:	DOC0310.M
Run #:	424099
Instrument:	Apollo
Sequence:	200424
Dilution Factor:	1
Initials:	SSE

Printed: 05/05/20 2:05:10 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPHW SGC REEXTRACT

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91926

Sample ID: ERH1047

APPL ID: BA09851

Sample Collection Date: 04/20/20

QCG: #DOC53-200430A2-252581

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	04/30/20	05/07/20
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	04/30/20	05/07/20
EPA 8015B-e	SURROGATE: (R) DECANOIC ACID (S)	0.0	0-1			%	04/30/20	05/07/20
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	77.5	60-142			%	04/30/20	05/07/20
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	62.4	56-125			%	04/30/20	05/07/20

Quant Method:	DOC0310.M
Run #:	424190
Instrument:	Apollo
Sequence:	200424
Dilution Factor:	1
Initials:	SSE

Printed: 05/13/20 11:28:20 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPH LIQ-LIQ

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91926

Sample ID: ERH1053

APPL ID: BA09853

Sample Collection Date: 04/20/20

QCG: #DOC53-200422A-252131

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	04/22/20	04/24/20
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	04/22/20	04/24/20
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	120	60-142			%	04/22/20	04/24/20
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	92.0	56-125			%	04/22/20	04/24/20

Quant Method:	DOC0310.M
Run #:	424005
Instrument:	Apollo
Sequence:	200424
Dilution Factor:	1
Initials:	SSE

Printed: 05/05/20 2:05:10 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPH WATER L-L SGC

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91926

Sample ID: ERH1053

APPL ID: BA09853

Sample Collection Date: 04/20/20

QCG: #DOC53-200422A1-252580

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	04/22/20	05/12/20
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	04/22/20	05/12/20
EPA 8015B-e	SURROGATE: (R) DECANOIC ACID (S)	0.0	0-1			%	04/22/20	05/12/20
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	130	60-142			%	04/22/20	05/12/20
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	98.9	56-125			%	04/22/20	05/12/20

Quant Method:	DOC0310.M
Run #:	424244
Instrument:	Apollo
Sequence:	200424
Dilution Factor:	1
Initials:	SSE

Printed: 05/13/20 11:28:20 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPH RE-EXTRACT

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91926

Sample ID: ERH1053

APPL ID: BA09853

Sample Collection Date: 04/20/20

QCG: #DOC53-200430A-252258

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	160 J	320	300.0	150.0	ug/L	04/30/20	05/04/20
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	04/30/20	05/04/20
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	89.8	60-142			%	04/30/20	05/04/20
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	75.8	56-125			%	04/30/20	05/04/20

J = Estimated value.

Quant Method:	DOC0310.M
Run #:	424100
Instrument:	Apollo
Sequence:	200424
Dilution Factor:	1
Initials:	SSE

Printed: 05/05/20 2:05:10 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPHW SGC REEXTRACT

AECOM
1001 Bishop Street, Suite 1600
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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91926

Sample ID: ERH1053

APPL ID: BA09853

Sample Collection Date: 04/20/20

QCG: #DOC53-200430A2-252581

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	04/30/20	05/12/20
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	04/30/20	05/12/20
EPA 8015B-e	SURROGATE: (R) DECANOIC ACID (S)	0.0	0-1			%	04/30/20	05/12/20
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	112	60-142			%	04/30/20	05/12/20
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	82.1	56-125			%	04/30/20	05/12/20

Quant Method: DOC0310.M
Run #: 424251
Instrument: Apollo
Sequence: 200424
Dilution Factor: 1
Initials: SSE

Printed: 05/13/20 11:28:20 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPH LIQ-LIQ

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91926

Sample ID: ERH1055

APPL ID: BA09855

Sample Collection Date: 04/20/20

QCG: #DOC53-200422A-252131

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	04/22/20	04/24/20
EPA 8015B-e	OIL (C24-C40)	150 J	320	300.0	150.0	ug/L	04/22/20	04/24/20
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	154 #	60-142			%	04/22/20	04/24/20
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	116	56-125			%	04/22/20	04/24/20

J = Estimated value.
# = Recovery (or RPD) is outside QC limits.

Quant Method:	DOC0310.M
Run #:	424006
Instrument:	Apollo
Sequence:	200424
Dilution Factor:	1
Initials:	SSE

Printed: 05/05/20 2:05:10 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPH WATER L-L SGC

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91926

Sample ID: ERH1055

APPL ID: BA09855

Sample Collection Date: 04/20/20

QCG: #DOC53-200422A1-252580

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	04/22/20	05/12/20
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	04/22/20	05/12/20
EPA 8015B-e	SURROGATE: (R) DECANOIC ACID (S)	0.0	0-1			%	04/22/20	05/12/20
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	173 #	60-142			%	04/22/20	05/12/20
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	128 #	56-125			%	04/22/20	05/12/20

= Recovery (or RPD) is outside QC limits.

Quant Method:	DOC0310.M
Run #:	424245
Instrument:	Apollo
Sequence:	200424
Dilution Factor:	1
Initials:	SSE

Printed: 05/13/20 11:28:20 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPH RE-EXTRACT

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91926

Sample ID: ERH1055

APPL ID: BA09855

Sample Collection Date: 04/20/20

QCG: #DOC53-200430A-252258

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	04/30/20	05/04/20
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	04/30/20	05/04/20
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	91.6	60-142			%	04/30/20	05/04/20
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	74.0	56-125			%	04/30/20	05/04/20

Quant Method:	DOC0310.M
Run #:	424101
Instrument:	Apollo
Sequence:	200424
Dilution Factor:	1
Initials:	SSE

Printed: 05/05/20 2:05:10 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8015B TPHW SGC REEXTRACT

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91926

Sample ID: ERH1055

APPL ID: BA09855

Sample Collection Date: 04/20/20

QCG: #DOC53-200430A2-252581

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-e	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	04/30/20	05/12/20
EPA 8015B-e	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	04/30/20	05/12/20
EPA 8015B-e	SURROGATE: (R) DECANOIC ACID (S)	0.0	0-1			%	04/30/20	05/12/20
EPA 8015B-e	SURROGATE: OCTACOSANE (S)	107	60-142			%	04/30/20	05/12/20
EPA 8015B-e	SURROGATE: ORTHO-TERPHENYL (S)	84.2	56-125			%	04/30/20	05/12/20

Quant Method:	DOC0310.M
Run #:	424252
Instrument:	Apollo
Sequence:	200424
Dilution Factor:	1
Initials:	SSE

Printed: 05/13/20 11:28:20 AM

APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91926

Sample ID: ERH1047

APPL ID: BA09851

Sample Collection Date: 04/20/20

QCG: #87DC5-200423A-252047

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	04/23/20	04/27/20
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHENO	104	43-140			%	04/23/20	04/27/20
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	93.9	44-119			%	04/23/20	04/27/20
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	76.7	19-119			%	04/23/20	04/27/20
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	90.1	44-120			%	04/23/20	04/27/20
EPA 8270D	SURROGATE: PHENOL-D6 (S)	77.9	10-115			%	04/23/20	04/27/20
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	111	50-134			%	04/23/20	04/27/20

Quant Method: Y0420.M
Run #: 0420Y081
Instrument: Yoda
Sequence: Y200420
Dilution Factor: 1
Initials: SSE

Printed: 04/28/20 10:32:47 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91926

Sample ID: ERH1053

APPL ID: BA09853

Sample Collection Date: 04/20/20

QCG: #87DC5-200423A-252047

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	04/23/20	04/27/20
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHENO	101	43-140			%	04/23/20	04/27/20
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	96.3	44-119			%	04/23/20	04/27/20
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	68.0	19-119			%	04/23/20	04/27/20
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	92.6	44-120			%	04/23/20	04/27/20
EPA 8270D	SURROGATE: PHENOL-D6 (S)	68.0	10-115			%	04/23/20	04/27/20
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	114	50-134			%	04/23/20	04/27/20

Quant Method: Y0420.M
Run #: 0420Y082
Instrument: Yoda
Sequence: Y200420
Dilution Factor: 1
Initials: SSE

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91926

Sample ID: ERH1055

APPL ID: BA09855

Sample Collection Date: 04/20/20

QCG: #87DC5-200423A-252047

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	04/23/20	04/27/20
EPA 8270D	SURROGATE: 2,4,6-TRIBROMOPHENO	102	43-140			%	04/23/20	04/27/20
EPA 8270D	SURROGATE: 2-FLUORBIPHENYL (S)	93.7	44-119			%	04/23/20	04/27/20
EPA 8270D	SURROGATE: 2-FLUOROPHENOL (S)	72.1	19-119			%	04/23/20	04/27/20
EPA 8270D	SURROGATE: NITROBENZENE-D5 (S)	88.4	44-120			%	04/23/20	04/27/20
EPA 8270D	SURROGATE: PHENOL-D6 (S)	72.6	10-115			%	04/23/20	04/27/20
EPA 8270D	SURROGATE: TERPHENYL-D14 (S)	113	50-134			%	04/23/20	04/27/20

Quant Method: Y0420.M
Run #: 0420Y083
Instrument: Yoda
Sequence: Y200420
Dilution Factor: 1
Initials: SSE

Printed: 04/28/20 10:32:47 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D SIM LIQ-LIQ

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Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91926

Sample ID: ERH1047

APPL ID: BA09851

Sample Collection Date: 04/20/20

QCG: #SIM53-200423A-252060

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	04/23/20	04/28/20
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	04/23/20	04/28/20
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	04/23/20	04/28/20
8270D-SIM	SURROGATE: 2-METHYLNAPHTHALEN	80.9	39-114			%	04/23/20	04/28/20
8270D-SIM	SURROGATE: FLUORANTHENE-D10 (S	82.3	58-120			%	04/23/20	04/28/20

Quant Method: L0204.M
Run #: 0424L050
Instrument: Linus
Sequence: L200424
Dilution Factor: 1
Initials: MA

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D SIM LIQ-LIQ

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Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91926

Sample ID: ERH1053

APPL ID: BA09853

Sample Collection Date: 04/20/20

QCG: #SIM53-200423A-252060

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	04/23/20	04/28/20
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	04/23/20	04/28/20
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	04/23/20	04/28/20
8270D-SIM	SURROGATE: 2-METHYLNAPHTHALEN	81.9	39-114			%	04/23/20	04/28/20
8270D-SIM	SURROGATE: FLUORANTHENE-D10 (S	82.9	58-120			%	04/23/20	04/28/20

Quant Method: L0204.M
Run #: 0424L051
Instrument: Linus
Sequence: L200424
Dilution Factor: 1
Initials: MA

Printed: 04/29/20 1:12:10 PM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D SIM LIQ-LIQ

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Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91926

Sample ID: ERH1055

APPL ID: BA09855

Sample Collection Date: 04/20/20

QCG: #SIM53-200423A-252060

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	04/23/20	04/28/20
8270D-SIM	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	04/23/20	04/28/20
8270D-SIM	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	04/23/20	04/28/20
8270D-SIM	SURROGATE: 2-METHYLNAPHTHALEN	79.3	39-114			%	04/23/20	04/28/20
8270D-SIM	SURROGATE: FLUORANTHENE-D10 (S	82.5	58-120			%	04/23/20	04/28/20

Quant Method: L0204.M
Run #: 0424L052
Instrument: Linus
Sequence: L200424
Dilution Factor: 1
Initials: MA

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8270D MODIFIED WATER

AECOM
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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91926

Sample ID: ERH1047

APPL ID: BA09851

Sample Collection Date: 04/20/20

QCG: #87DME-200423A-252034

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	04/23/20	04/24/20

Quant Method:	YMEE0122.M
Run #:	0122Y093
Instrument:	Yoda
Sequence:	Y200122M
Dilution Factor:	1
Initials:	MA

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EPA 8270D MODIFIED WATER

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APPL Inc.
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Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91926

Sample ID: ERH1053

APPL ID: BA09853

Sample Collection Date: 04/20/20

QCG: #87DME-200423A-252034

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	04/23/20	04/24/20

Quant Method:	YMEE0122.M
Run #:	0122Y094
Instrument:	Yoda
Sequence:	Y200122M
Dilution Factor:	1
Initials:	MA

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EPA 8270D MODIFIED WATER

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Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91926

Sample ID: ERH1055

APPL ID: BA09855

Sample Collection Date: 04/20/20

QCG: #87DME-200423A-252034

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8270D	2-(2-METHOXYETHOXY)-ETHANOL	80.0 U	100	80.0	40.0	ug/L	04/23/20	04/27/20

Quant Method:	YMEE0122.M
Run #:	0122Y111
Instrument:	Yoda
Sequence:	Y200122M
Dilution Factor:	1
Initials:	MA

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APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX WATER

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APPL Inc.
908 North Temperance Avenue
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Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91926

Sample ID: ERH 1046

APPL ID: BA09850

Sample Collection Date: 04/20/20

QCG: #86BTO-AT200421-251911

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	04/21/20	04/21/20
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	04/21/20	04/21/20
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	04/21/20	04/21/20
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	04/21/20	04/21/20
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	102	81-118			%	04/21/20	04/21/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	95.4	85-114			%	04/21/20	04/21/20
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	106	80-119			%	04/21/20	04/21/20
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	97.9	89-112			%	04/21/20	04/21/20

Quant Method: T0414W.M
Run #: 0421T19
Instrument: Thor
Sequence: T200414
Dilution Factor: 1
Initials: DPO

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EPA 8260B BTEX WATER

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Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91926

Sample ID: ERH 1047

APPL ID: BA09851

Sample Collection Date: 04/20/20

QCG: #86BTO-AT200421-251911

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	04/21/20	04/21/20
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	04/21/20	04/21/20
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	04/21/20	04/21/20
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	04/21/20	04/21/20
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	104	81-118			%	04/21/20	04/21/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	97.7	85-114			%	04/21/20	04/21/20
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	106	80-119			%	04/21/20	04/21/20
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	101	89-112			%	04/21/20	04/21/20

Quant Method: T0414W.M
Run #: 0421T22
Instrument: Thor
Sequence: T200414
Dilution Factor: 1
Initials: DPO

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EPA 8260B BTEX WATER

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Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91926

Sample ID: ERH 1052

APPL ID: BA09852

Sample Collection Date: 04/20/20

QCG: #86BTO-AT200421-251911

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	04/21/20	04/21/20
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	04/21/20	04/21/20
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	04/21/20	04/21/20
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	04/21/20	04/21/20
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	103	81-118			%	04/21/20	04/21/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	93.6	85-114			%	04/21/20	04/21/20
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	105	80-119			%	04/21/20	04/21/20
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	99.1	89-112			%	04/21/20	04/21/20

Quant Method: T0414W.M
Run #: 0421T21
Instrument: Thor
Sequence: T200414
Dilution Factor: 1
Initials: DPO

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EPA 8260B BTEX WATER

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Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91926

Sample ID: ERH 1053

APPL ID: BA09853

Sample Collection Date: 04/20/20

QCG: #86BTO-AT200421-251911

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	04/21/20	04/21/20
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	04/21/20	04/21/20
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	04/21/20	04/21/20
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	04/21/20	04/21/20
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	103	81-118			%	04/21/20	04/21/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	94.0	85-114			%	04/21/20	04/21/20
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	104	80-119			%	04/21/20	04/21/20
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	99.3	89-112			%	04/21/20	04/21/20

Quant Method: T0414W.M
Run #: 0421T23
Instrument: Thor
Sequence: T200414
Dilution Factor: 1
Initials: DPO

Printed: 04/22/20 9:56:55 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX WATER

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Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91926

Sample ID: ERH 1054

APPL ID: BA09854

Sample Collection Date: 04/20/20

QCG: #86BTO-AT200421-251911

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	04/21/20	04/21/20
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	04/21/20	04/21/20
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	04/21/20	04/21/20
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	04/21/20	04/21/20
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	103	81-118			%	04/21/20	04/21/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	96.8	85-114			%	04/21/20	04/21/20
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	107	80-119			%	04/21/20	04/21/20
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	101	89-112			%	04/21/20	04/21/20

Quant Method: T0414W.M
Run #: 0421T20
Instrument: Thor
Sequence: T200414
Dilution Factor: 1
Initials: DPO

Printed: 04/22/20 9:56:55 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B BTEX WATER

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Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91926

Sample ID: ERH 1055

APPL ID: BA09855

Sample Collection Date: 04/20/20

QCG: #86BTO-AT200421-251911

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	04/21/20	04/21/20
EPA 8260B	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	04/21/20	04/21/20
EPA 8260B	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	04/21/20	04/21/20
EPA 8260B	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	04/21/20	04/21/20
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE-	105	81-118			%	04/21/20	04/21/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	96.8	85-114			%	04/21/20	04/21/20
EPA 8260B	SURROGATE: DIBROMOFLUOROMETH	106	80-119			%	04/21/20	04/21/20
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	98.1	89-112			%	04/21/20	04/21/20

Quant Method: T0414W.M
Run #: 0421T24
Instrument: Thor
Sequence: T200414
Dilution Factor: 1
Initials: DPO

Printed: 04/22/20 9:56:55 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

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908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91926

Sample ID: ERH 1046

APPL ID: BA09850

Sample Collection Date: 04/20/20

QCG: #GRO86-AT200421-251914

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	04/21/20	04/21/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	95.4	85-114			%	04/21/20	04/21/20

Quant Method: TGAS0414.M
Run #: 0421T19
Instrument: Thor
Sequence: T200414
Dilution Factor: 1
Initials: DPO

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EPA 8260B GRO WATER

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Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91926

Sample ID: ERH 1047

APPL ID: BA09851

Sample Collection Date: 04/20/20

QCG: #GRO86-AT200421-251914

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	04/21/20	04/21/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	97.7	85-114			%	04/21/20	04/21/20

Quant Method: TGAS0414.M
Run #: 0421T22
Instrument: Thor
Sequence: T200414
Dilution Factor: 1
Initials: DPO

Printed: 04/22/20 10:17:35 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91926

Sample ID: ERH 1052

APPL ID: BA09852

Sample Collection Date: 04/20/20

QCG: #GRO86-AT200421-251914

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	04/21/20	04/21/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	93.6	85-114			%	04/21/20	04/21/20

Quant Method: TGAS0414.M
Run #: 0421T21
Instrument: Thor
Sequence: T200414
Dilution Factor: 1
Initials: DPO

Printed: 04/22/20 10:17:35 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
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Attn: Margie Pascua

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91926

Sample ID: ERH 1053

APPL ID: BA09853

Sample Collection Date: 04/20/20

QCG: #GRO86-AT200421-251914

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	04/21/20	04/21/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	94.0	85-114			%	04/21/20	04/21/20

Quant Method: TGAS0414.M
Run #: 0421T23
Instrument: Thor
Sequence: T200414
Dilution Factor: 1
Initials: DPO

Printed: 04/22/20 10:17:35 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Pascua

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91926

Sample ID: ERH 1054

APPL ID: BA09854

Sample Collection Date: 04/20/20

QCG: #GRO86-AT200421-251914

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	04/21/20	04/21/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	96.8	85-114			%	04/21/20	04/21/20

Quant Method: TGAS0414.M
Run #: 0421T20
Instrument: Thor
Sequence: T200414
Dilution Factor: 1
Initials: DPO

Printed: 04/22/20 10:17:35 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

EPA 8260B GRO WATER

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

Attn: Margie Pascua

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91926

Sample ID: ERH 1055

APPL ID: BA09855

Sample Collection Date: 04/20/20

QCG: #GRO86-AT200421-251914

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	04/21/20	04/21/20
EPA 8260B	SURROGATE: 4-BROMOFLUOROBENZ	96.8	85-114			%	04/21/20	04/21/20

Quant Method: TGAS0414.M
Run #: 0421T24
Instrument: Thor
Sequence: T200414
Dilution Factor: 1
Initials: DPO

Printed: 04/22/20 10:17:35 AM
APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91926

Sample ID: ERH1046

APPL ID: BA09850

Sample Collection Date: 04/20/20

QCG: #RSKME-200423A-251963

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	04/23/20	04/23/20

Quant Method:	RSK0311.M
Run #:	0423R12
Instrument:	Rocky
Sequence:	200311
Dilution Factor:	1
Initials:	CMO

Printed: 04/23/20 2:20:40 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91926

Sample ID: ERH1047

APPL ID: BA09851

Sample Collection Date: 04/20/20

QCG: #RSKME-200423A-251963

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	04/23/20	04/23/20

Quant Method:	RSK0311.M
Run #:	0423R13
Instrument:	Rocky
Sequence:	200311
Dilution Factor:	1
Initials:	CMO

Printed: 04/23/20 2:20:40 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91926

Sample ID: ERH1052

APPL ID: BA09852

Sample Collection Date: 04/20/20

QCG: #RSKME-200423A-251963

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	04/23/20	04/23/20

Quant Method:	RSK0311.M
Run #:	0423R14
Instrument:	Rocky
Sequence:	200311
Dilution Factor:	1
Initials:	CMO

Printed: 04/23/20 2:20:40 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91926

Sample ID: ERH1053

APPL ID: BA09853

Sample Collection Date: 04/20/20

QCG: #RSKME-200423A-251963

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	04/23/20	04/23/20

Quant Method:	RSK0311.M
Run #:	0423R15
Instrument:	Rocky
Sequence:	200311
Dilution Factor:	1
Initials:	CMO

Printed: 04/23/20 2:20:40 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91926

Sample ID: ERH1054

APPL ID: BA09854

Sample Collection Date: 04/20/20

QCG: #RSKME-200423A-251963

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	04/23/20	04/23/20

Quant Method:	RSK0311.M
Run #:	0423R16
Instrument:	Rocky
Sequence:	200311
Dilution Factor:	1
Initials:	CMO

Printed: 04/23/20 2:20:40 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

METHANE

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

ARF: 91926

Sample ID: ERH1055

APPL ID: BA09855

Sample Collection Date: 04/20/20

QCG: #RSKME-200423A-251963

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
RSK 175	METHANE	1.00 U	5.0	1.00	0.25	ug/L	04/23/20	04/23/20

Quant Method:	RSK0311.M
Run #:	0423R17
Instrument:	Rocky
Sequence:	200311
Dilution Factor:	1
Initials:	CMO

Printed: 04/23/20 2:20:40 PM

APPL-F1-SC-NoMC-REG MDLs-DOD

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1047

APPL ID: BA09851

Sample Collection Date: 04/20/20

ARF: 91926

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	CHLORIDE	46.3	1.0	0.20	0.08	mg/L	1	04/21/20	04/21/20
EPA 300.0	NITRATE	7.3	0.5	0.18	0.04	mg/L	1	04/21/20	04/21/20
EPA 300.0	SULFATE	47.7	1.0	0.20	0.09	mg/L	1	04/21/20	04/21/20

Printed: 04/28/20 1:27:30 PM

APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1053

APPL ID: BA09853

Sample Collection Date: 04/20/20

ARF: 91926

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	CHLORIDE	301	20.0	4.00	1.60	mg/L	20	04/22/20	04/22/20
EPA 300.0	SULFATE	70.3	20.0	4.00	1.80	mg/L	20	04/22/20	04/22/20
EPA 300.0	NITRATE	2.6	0.5	0.18	0.04	mg/L	1	04/21/20	04/21/20

Printed: 04/28/20 1:27:30 PM

APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1055

APPL ID: BA09855

Sample Collection Date: 04/20/20

ARF: 91926

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 300.0	NITRATE	4.5	0.5	0.18	0.04	mg/L	1	04/21/20	04/21/20
EPA 300.0	CHLORIDE	415	10.0	2.00	0.80	mg/L	10	04/21/20	04/21/20
EPA 300.0	SULFATE	83.2	10.0	2.00	0.90	mg/L	10	04/21/20	04/21/20

Printed: 04/28/20 1:27:30 PM

APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1047

APPL ID: BA09851

Sample Collection Date: 04/20/20

ARF: 91926

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 353.2	NITRATE-NITRITE-N	1.6	0.10	0.090	0.028	mg/L	1	04/23/20	04/23/20
SM 2320B	BICARBONATE AS CACO3	286	2.0	1.70	0.85	mg/L	1	04/23/20	04/23/20
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	04/23/20	04/23/20
SM 2320B	TOTAL ALKALINITY AS CACO	286	2.0	1.70	0.85	mg/L	1	04/23/20	04/23/20
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	04/22/20	04/22/20
SW846 9060A	TOTAL ORGANIC CARBON	1.5	0.93	0.350	0.130	mg/L	1	04/21/20	04/21/20

Printed: 04/28/20 1:30:21 PM

APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1053

APPL ID: BA09853

Sample Collection Date: 04/20/20

ARF: 91926

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 353.2	NITRATE-NITRITE-N	0.59	0.10	0.090	0.028	mg/L	1	04/23/20	04/23/20
SM 2320B	BICARBONATE AS CACO3	103	2.0	1.70	0.85	mg/L	1	04/23/20	04/23/20
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	04/23/20	04/23/20
SM 2320B	TOTAL ALKALINITY AS CACO	103	2.0	1.70	0.85	mg/L	1	04/23/20	04/23/20
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	04/22/20	04/22/20
SW846 9060A	TOTAL ORGANIC CARBON	0.19 J	0.93	0.350	0.130	mg/L	1	04/21/20	04/21/20

J = Estimated value.

Printed: 04/28/20 1:30:21 PM

APPL-F1-SC-NoMC-REG MDLs

Wet Lab Analysis

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Margie Pascua

Project: 60571032 CV18F0126 Red Hill Fuel Storage

Sample ID: ERH1055

APPL ID: BA09855

Sample Collection Date: 04/20/20

ARF: 91926

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
EPA 353.2	NITRATE-NITRITE-N	1.0	0.10	0.090	0.028	mg/L	1	04/23/20	04/23/20
SM 2320B	BICARBONATE AS CACO3	101	2.0	1.70	0.85	mg/L	1	04/23/20	04/23/20
SM 2320B	CARBONATE AS CACO3	1.70 U	2.0	1.70	0.85	mg/L	1	04/23/20	04/23/20
SM 2320B	TOTAL ALKALINITY AS CACO	101	2.0	1.70	0.85	mg/L	1	04/23/20	04/23/20
SM3500FeB	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	1	04/22/20	04/22/20
SW846 9060A	TOTAL ORGANIC CARBON	0.28 J	0.93	0.350	0.130	mg/L	1	04/21/20	04/21/20

J = Estimated value.

Printed: 04/28/20 1:30:21 PM

APPL-F1-SC-NoMC-REG MDLs

QC FORMS

EPA 8015B-eHL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91926

Case No: 91926 Date Analyzed: 04/24/20

Matrix: WATER Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: OCTACOSANE (S)			SURROGATE: ORTHO-TERPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
200422A-BLK	Blank	60-142	128		56-125	101	
200422A-LCS	Lab Control Spike	60-142	128		56-125	107	
200422A-LCSD	Lab Control SpikeD	60-142	128		56-125	113	
BA09853	ERH1053	60-142	120		56-125	92.0	
BA09855	ERH1055	60-142	154	#	56-125	116	
BA09851	ERH1047	60-142	132		56-125	100.0	

Comments: Batch: #DOC53-200422A

= Recovery outside of Control Limits on Sample.

EPA 8015B-eHL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91926

Case No: 91926 Date Analyzed: 05/04/20

Matrix: WATER Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: OCTACOSANE (S)			SURROGATE: ORTHO-TERPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
200430A-BLK	Blank	60-142	87.0		56-125	73.1	
200430A-LCS	Lab Control Spike	60-142	94.5		56-125	84.5	
200430A-LCSD	Lab Control SpikeD	60-142	91.1		56-125	83.2	
BA09851	ERH1047	60-142	95.6		56-125	77.1	
BA09853	ERH1053	60-142	89.8		56-125	75.8	
BA09855	ERH1055	60-142	91.6		56-125	74.0	

Comments: Batch: #DOC53-200430A

EPA 8015B-eH

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91926

Case No: 91926 Date Analyzed: 04/24/20

Matrix: WATER Instrument: Apollo

Blank ID: 200422A-BLK Time Analyzed: 1403

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200422A-BLK	Blank	424001	04/24/20 1403
200422A-LCS	Lab Control Spike	424002	04/24/20 1426
200422A-LCSD	Lab Control SpikeD	424003	04/24/20 1448
BA09853	ERH1053	424005	04/24/20 1534
BA09855	ERH1055	424006	04/24/20 1557
BA09851	ERH1047	424014	04/24/20 1859

Comments: Batch: #DOC53-200422A

Method Blank
EPA 8015B TPH LIQ-LIQ

Blank Name/QCG: **200422W-09851 - 252131**
Batch ID: #DOC53-200422A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	04/22/20	04/24/20
BLANK	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	04/22/20	04/24/20
BLANK	SURROGATE: OCTACOSANE (S)	128	60-142			%	04/22/20	04/24/20
BLANK	SURROGATE: ORTHO-TERPHEN	101	56-125			%	04/22/20	04/24/20

Quant Method: DOC0310.M
Run #: 424001
Instrument: Apollo
Sequence: 200424
Initials: SSE

GC SC-Blank-REG MDLs-DOD
Printed: 05/05/20 2:07:00 PM

EPA 8015B-eH

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91926

Case No: 91926 Date Analyzed: 05/04/20

Matrix: WATER Instrument: Apollo

Blank ID: 200430A-BLK Time Analyzed: 1527

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200430A-BLK	Blank	424096	05/04/20 1527
200430A-LCS	Lab Control Spike	424097	05/04/20 1550
200430A-LCSD	Lab Control SpikeD	424098	05/04/20 1613
BA09851	ERH1047	424099	05/04/20 1635
BA09853	ERH1053	424100	05/04/20 1658
BA09855	ERH1055	424101	05/04/20 1721

Comments: Batch: #DOC53-200430A

Method Blank
EPA 8015B TPH RE-EXTRACT

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **200430W-09851 - 252258**
Batch ID: #DOC53-200430A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	150 J	320	300.0	150.0	ug/L	04/30/20	05/04/20
BLANK	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	04/30/20	05/04/20
BLANK	SURROGATE: OCTACOSANE (S)	87.0	60-142			%	04/30/20	05/04/20
BLANK	SURROGATE: ORTHO-TERPHEN	73.1	56-125			%	04/30/20	05/04/20

J = Estimated value.

Quant Method: DOC0310.M
Run #: 424096
Instrument: Apollo
Sequence: 200424
Initials: SSE

GC SC-Blank-REG MDLs-DOD
Printed: 05/05/20 2:07:00 PM

EPA 8015B-eH

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 91926

Case No: 91926 Date Analyzed: 04/24/20

Matrix: WATER Instrument: Apollo

LCS ID: 200422A-LCS Time Analyzed: 1426

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200422A-BLK	Blank	424001	04/24/20 1403
200422A-LCS	Lab Control Spike	424002	04/24/20 1426
200422A-LCSD	Lab Control SpikeD	424003	04/24/20 1448
BA09853	ERH1053	424005	04/24/20 1534
BA09855	ERH1055	424006	04/24/20 1557
BA09851	ERH1047	424014	04/24/20 1859

Comments: Batch: #DOC53-200422A

Laboratory Control Spike Recoveries
EPA 8015B TPH LIQ-LIQ

APPL ID: **200422W-09851 LCS - 252131**
Batch ID: #DOC53-200422A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
DIESEL (C10-C24)	1250	1480	1520	118	122	36-132	2.7	30
OIL (C24-C40)	1250	1480	1550	118 #	124 #	41-113	4.6	30
SURROGATE: OCTACOSANE (S)	75.0	96.1	96.3	128	128	60-142		
SURROGATE: ORTHO-TERPHENYL (S)	75.0	80.6	84.7	107	113	56-125		

= Recovery is outside QC limits.

Comments:

Primary	SPK	DUP
Quant Method :	DOC0310.M	DOC0310.M
Extraction Date :	04/22/20	04/22/20
Analysis Date :	04/24/20	04/24/20
Instrument :	Apollo	Apollo
Run :	424002	424003
Initials :	SSE	

EPA 8015B-eH

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 91926

Case No: 91926 Date Analyzed: 05/04/20

Matrix: WATER Instrument: Apollo

LCS ID: 200430A-LCS Time Analyzed: 1550

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200430A-BLK	Blank	424096	05/04/20 1527
200430A-LCS	Lab Control Spike	424097	05/04/20 1550
200430A-LCSD	Lab Control SpikeD	424098	05/04/20 1613
BA09851	ERH1047	424099	05/04/20 1635
BA09853	ERH1053	424100	05/04/20 1658
BA09855	ERH1055	424101	05/04/20 1721

Comments: Batch: #DOC53-200430A

Laboratory Control Spike Recoveries
EPA 8015B TPH RE-EXTRACT

APPL ID: **200430W-09851 LCS - 252258**
Batch ID: #DOC53-200430A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
DIESEL (C10-C24)	1250	1200	1140	96.0	91.2	36-132	5.1	30
OIL (C24-C40)	1250	1150	1120	92.0	89.6	41-113	2.6	30
SURROGATE: OCTACOSANE (S)	75.0	70.9	68.3	94.5	91.1	60-142		
SURROGATE: ORTHO-TERPHENYL (S)	75.0	63.4	62.4	84.5	83.2	56-125		

Comments:

Primary	SPK	DUP
Quant Method :	DOC0310.M	DOC0310.M
Extraction Date :	04/30/20	04/30/20
Analysis Date :	05/04/20	05/04/20
Instrument :	Apollo	Apollo
Run :	424097	424098
Initials :	SSE	

EPA 8015B-eHL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91926

Case No: 91926 Date Analyzed: 05/07/20

Matrix: WATER Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: (R) DECANOIC ACID (S)			SURROGATE: OCTACOSANE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
200422A1-BLK	Blank	0-1	0.0		60-142	158	#
200422A1-LCS	Lab Control Spike	0-1	0.0		60-142	136	
200422A1-LCSD	Lab Control SpikeD	0-1	0.0		60-142	136	
BA09851	ERH1047	0-1	0.0		60-142	149	#
BA09853	ERH1053	0-1	0.0		60-142	130	
BA09855	ERH1055	0-1	0.0		60-142	173	#

Comments: Batch: #DOC53-200422A1

= Recovery outside of Control Limits on Sample.

EPA 8015B-eHL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91926

Case No: 91926 Date Analyzed: 05/07/20

Matrix: WATER Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: ORTHO-TERPHENYL (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
200422A1-BLK	Blank	56-125	124				
200422A1-LCS	Lab Control Spike	56-125	117				
200422A1-LCSD	Lab Control SpikeD	56-125	123				
BA09851	ERH1047	56-125	113				
BA09853	ERH1053	56-125	98.9				
BA09855	ERH1055	56-125	128	#			

Comments: Batch: #DOC53-200422A1

= Recovery outside of Control Limits on Sample.

EPA 8015B-eHL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91926

Case No: 91926 Date Analyzed: 05/07/20

Matrix: WATER Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: (R) DECANOIC ACID (S)			SURROGATE: OCTACOSANE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
200430A2-BLK	Blank	0-1	0.0		60-142	88.3	
200430A2-LCS	Lab Control Spike	0-1	0.0		60-142	96.9	
200430A2-LCSD	Lab Control SpikeD	0-1	0.0		60-142	82.0	
BA09851	ERH1047	0-1	0.0		60-142	77.5	
BA09853	ERH1053	0-1	0.0		60-142	112	
BA09855	ERH1055	0-1	0.0		60-142	107	

Comments: Batch: #DOC53-200430A2

EPA 8015B-eHL

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91926

Case No: 91926 Date Analyzed: 05/07/20

Matrix: WATER Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: ORTHO-TERPHENYL (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
200430A2-BLK	Blank	56-125	73.8				
200430A2-LCS	Lab Control Spike	56-125	87.3				
200430A2-LCSD	Lab Control SpikeD	56-125	77.5				
BA09851	ERH1047	56-125	62.4				
BA09853	ERH1053	56-125	82.1				
BA09855	ERH1055	56-125	84.2				

Comments: Batch: #DOC53-200430A2

EPA 8015B-eH

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91926

Case No: 91926 Date Analyzed: 05/07/20

Matrix: WATER Instrument: Apollo

Blank ID: 200422A1-BLK Time Analyzed: 1602

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200422A1-BLK	Blank	424182	05/07/20 1602
200422A1-LCS	Lab Control Spike	424183	05/07/20 1625
200422A1-LCSD	Lab Control SpikeD	424184	05/07/20 1647
BA09851	ERH1047	424185	05/07/20 1710
BA09853	ERH1053	424244	05/12/20 1513
BA09855	ERH1055	424245	05/12/20 1536

Comments: Batch: #DOC53-200422A1

EPA 8015B-eH

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91926

Case No: 91926 Date Analyzed: 05/07/20

Matrix: WATER Instrument: Apollo

Blank ID: 200430A2-BLK Time Analyzed: 1755

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200430A2-BLK	Blank	424187	05/07/20 1755
200430A2-LCS	Lab Control Spike	424188	05/07/20 1818
200430A2-LCSD	Lab Control SpikeD	424189	05/07/20 1841
BA09851	ERH1047	424190	05/07/20 1904
BA09853	ERH1053	424251	05/12/20 1752
BA09855	ERH1055	424252	05/12/20 1814

Comments: Batch: #DOC53-200430A2

Method Blank
EPA 8015B TPH WATER L-L SGC

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **200422W-09851 - 252580**
Batch ID: #DOC53-200422A1

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	04/22/20	05/07/20
BLANK	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	04/22/20	05/07/20
BLANK	SURROGATE: (R) DECANOIC AC	0.0	0-1			%	04/22/20	05/07/20
BLANK	SURROGATE: OCTACOSANE (S)	158 #	60-142			%	04/22/20	05/07/20
BLANK	SURROGATE: ORTHO-TERPHEN	124	56-125			%	04/22/20	05/07/20

= Recovery (or RPD) is outside QC limits.

Quant Method: DOC0310.M
Run #: 424182
Instrument: Apollo
Sequence: 200424
Initials: SSE

GC SC-Blank-REG MDLs-DOD
Printed: 05/13/20 11:28:20 AM

Method Blank
EPA 8015B TPHW SGC REEXTRACT

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **200430W-09851 - 252581**
Batch ID: #DOC53-200430A2

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL (C10-C24)	300.0 U	320	300.0	150.0	ug/L	04/30/20	05/07/20
BLANK	OIL (C24-C40)	300.0 U	320	300.0	150.0	ug/L	04/30/20	05/07/20
BLANK	SURROGATE: (R) DECANOIC AC	0.0	0-1			%	04/30/20	05/07/20
BLANK	SURROGATE: OCTACOSANE (S)	88.3	60-142			%	04/30/20	05/07/20
BLANK	SURROGATE: ORTHO-TERPHEN	73.8	56-125			%	04/30/20	05/07/20

Quant Method: DOC0310.M
Run #: 424187
Instrument: Apollo
Sequence: 200424
Initials: SSE

GC SC-Blank-REG MDLs-DOD
Printed: 05/13/20 11:28:20 AM

EPA 8015B-eH

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91926
Case No:	91926	Date Analyzed:	05/07/20
Matrix:	WATER	Instrument:	Apollo
LCS ID:	200422A1-LCS	Time Analyzed:	1625

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200422A1-BLK	Blank	424182	05/07/20 1602
200422A1-LCS	Lab Control Spike	424183	05/07/20 1625
200422A1-LCSD	Lab Control SpikeD	424184	05/07/20 1647
BA09851	ERH1047	424185	05/07/20 1710
BA09853	ERH1053	424244	05/12/20 1513
BA09855	ERH1055	424245	05/12/20 1536

Comments: Batch: #DOC53-200422A1

EPA 8015B-eH

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91926
Case No:	91926	Date Analyzed:	05/07/20
Matrix:	WATER	Instrument:	Apollo
LCS ID:	200430A2-LCS	Time Analyzed:	1818

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200430A2-BLK	Blank	424187	05/07/20 1755
200430A2-LCS	Lab Control Spike	424188	05/07/20 1818
200430A2-LCSD	Lab Control SpikeD	424189	05/07/20 1841
BA09851	ERH1047	424190	05/07/20 1904
BA09853	ERH1053	424251	05/12/20 1752
BA09855	ERH1055	424252	05/12/20 1814

Comments: Batch: #DOC53-200430A2

Laboratory Control Spike Recoveries
EPA 8015B TPH WATER L-L SGC

APPL ID: **200422W-09851 LCS - 252580**
Batch ID: #DOC53-200422A1

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
DIESEL (C10-C24)	1250	1280	1420	102	114	36-132	10.4	30
OIL (C24-C40)	1250	1450	1500	116 #	120 #	41-113	3.4	30
SURROGATE: (R) DECANOIC ACID (S)	10.00	0	0	0.0	0.0	0-1		
SURROGATE: OCTACOSANE (S)	75.0	102	102	136	136	60-142		
SURROGATE: ORTHO-TERPHENYL (S)	75.0	87.6	91.9	117	123	56-125		

= Recovery is outside QC limits.

Comments:

Primary	SPK	DUP
Quant Method :	DOC0310.M	DOC0310.M
Extraction Date :	04/22/20	04/22/20
Analysis Date :	05/07/20	05/07/20
Instrument :	Apollo	Apollo
Run :	424183	424184
Initials :	SSE	

Laboratory Control Spike Recoveries
EPA 8015B TPHW SGC REEXTRACT

APPL ID: **200430W-09851 LCS - 252581**
Batch ID: #DOC53-200430A2

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
DIESEL (C10-C24)	1250	921	867	73.7	69.4	36-132	6.0	30
OIL (C24-C40)	1250	1170	1020	93.6	81.6	41-113	13.7	30
SURROGATE: (R) DECANOIC ACID (S)	10.00	0	0	0.0	0.0	0-1		
SURROGATE: OCTACOSANE (S)	75.0	72.7	61.5	96.9	82.0	60-142		
SURROGATE: ORTHO-TERPHENYL (S)	75.0	65.5	58.1	87.3	77.5	56-125		

Comments:

Primary	SPK	DUP
Quant Method :	DOC0310.M	DOC0310.M
Extraction Date :	04/30/20	04/30/20
Analysis Date :	05/07/20	05/07/20
Instrument :	Apollo	Apollo
Run :	424188	424189
Initials :	SSE	

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91926

Case No: 91926 Date Analyzed: 04/27/20

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2,4,6-TRIBROMOPHENOL (S)			SURROGATE: 2-FLUORBIPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
200423A-BLK	Blank	43-140	101		44-119	91.6	
200423A-LCS	Lab Control Spike	43-140	108		44-119	97.6	
200423A-LCSD	Lab Control SpikeD	43-140	100		44-119	89.6	
BA09851	ERH1047	43-140	104		44-119	93.9	
BA09853	ERH1053	43-140	101		44-119	96.3	
BA09855	ERH1055	43-140	102		44-119	93.7	

Comments: Batch: #87DC5-200423A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91926

Case No: 91926 Date Analyzed: 04/27/20

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: 2-FLUOROPHENOL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
200423A-BLK	Blank	19-119	74.0		44-120	88.7	
200423A-LCS	Lab Control Spike	19-119	77.2		44-120	90.4	
200423A-LCSD	Lab Control SpikeD	19-119	70.8		44-120	84.8	
BA09851	ERH1047	19-119	76.7		44-120	90.1	
BA09853	ERH1053	19-119	68.0		44-120	92.6	
BA09855	ERH1055	19-119	72.1		44-120	88.4	

Comments: Batch: #87DC5-200423A

EPA 8270D

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91926

Case No: 91926 Date Analyzed: 04/27/20

Matrix: WATER Instrument: Yoda

APPL ID.	Client Sample No.	SURROGATE: PHENOL-D6 (S)			SURROGATE: TERPHENYL-D14 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
200423A-BLK	Blank	10-115	72.7		50-134	108	
200423A-LCS	Lab Control Spike	10-115	81.2		50-134	104	
200423A-LCSD	Lab Control SpikeD	10-115	75.2		50-134	95.2	
BA09851	ERH1047	10-115	77.9		50-134	111	
BA09853	ERH1053	10-115	68.0		50-134	114	
BA09855	ERH1055	10-115	72.6		50-134	113	

Comments: Batch: #87DC5-200423A

EPA 8270D

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91926

Case No: 91926 Date Analyzed: 04/27/20

Matrix: WATER Instrument: Yoda

Blank ID: 200423A-BLK Time Analyzed: 1548

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200423A-BLK	Blank	0420Y078	04/27/20 1548
200423A-LCS	Lab Control Spike	0420Y079	04/27/20 1616
200423A-LCSD	Lab Control SpikeD	0420Y080	04/27/20 1645
BA09851	ERH1047	0420Y081	04/27/20 1713
BA09853	ERH1053	0420Y082	04/27/20 1741
BA09855	ERH1055	0420Y083	04/27/20 1810

Comments: Batch: #87DC5-200423A

Method Blank
EPA 8270D WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **200423W-09851 - 252047**
Batch ID: #87DC5-200423A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	PHENOL	4.00 U	5.0	4.00	1.00	ug/L	04/23/20	04/27/20
BLANK	SURROGATE: 2,4,6-TRIBROMOP	101	43-140			%	04/23/20	04/27/20
BLANK	SURROGATE: 2-FLUORBIPHENY	91.6	44-119			%	04/23/20	04/27/20
BLANK	SURROGATE: 2-FLUOROPHENO	74.0	19-119			%	04/23/20	04/27/20
BLANK	SURROGATE: NITROBENZENE-	88.7	44-120			%	04/23/20	04/27/20
BLANK	SURROGATE: PHENOL-D6 (S)	72.7	10-115			%	04/23/20	04/27/20
BLANK	SURROGATE: TERPHENYL-D14 (	108	50-134			%	04/23/20	04/27/20

Quant Method: Y0420.M
Run #: 0420Y078
Instrument: Yoda
Sequence: Y200420
Initials: SSE

GC SC-Blank-REG MDLs-DOD
Printed: 04/28/20 10:32:46 AM

EPA 8270D

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91926
Case No:	91926	Date Analyzed:	04/27/20
Matrix:	WATER	Instrument:	Yoda
LCS ID:	200423A-LCS	Time Analyzed:	1616

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200423A-BLK	Blank	0420Y078	04/27/20 1548
200423A-LCS	Lab Control Spike	0420Y079	04/27/20 1616
200423A-LCSD	Lab Control SpikeD	0420Y080	04/27/20 1645
BA09851	ERH1047	0420Y081	04/27/20 1713
BA09853	ERH1053	0420Y082	04/27/20 1741
BA09855	ERH1055	0420Y083	04/27/20 1810

Comments: Batch: #87DC5-200423A

Laboratory Control Spike Recoveries
EPA 8270D WATER

APPL ID: **200423W-09851 LCS - 252047**
Batch ID: #87DC5-200423A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
PHENOL	62.5	47.0	43.6	75.2	69.8	10-115	7.5	20
SURROGATE: 2,4,6-TRIBROMOPHENOL	250	269	250	108	100	43-140		
SURROGATE: 2-FLUORBIPHENYL (S)	125	122	112	97.6	89.6	44-119		
SURROGATE: 2-FLUOROPHENOL (S)	250	193	177	77.2	70.8	19-119		
SURROGATE: NITROBENZENE-D5 (S)	125	113	106	90.4	84.8	44-120		
SURROGATE: PHENOL-D6 (S)	250	203	188	81.2	75.2	10-115		
SURROGATE: TERPHENYL-D14 (S)	125	130	119	104	95.2	50-134		

Comments:

Primary	SPK	DUP
Quant Method :	Y0420.M	Y0420.M
Extraction Date :	04/23/20	04/23/20
Analysis Date :	04/27/20	04/27/20
Instrument :	Yoda	Yoda
Run :	0420Y079	0420Y080
Initials :	SSE	

Printed: 04/28/20 10:32:52 AM
APPL Standard LCSD

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Water
ID: 0420Y002.D

SDG No:
Date Analyzed: 04/20/20
Instrument: Yoda
Time Analyzed: 9:12

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		4ug/ml 8270 3/4/20	0420Y003.D	04/20/20 9:28
2		5ug/ml 8270 3/4/20	0420Y004.D	04/20/20 9:57
3		10ug/ml 8270 3/4/20	0420Y005.D	04/20/20 10:31
4		20ug/ml 8270 3/4/20	0420Y006.D	04/20/20 11:00
5		40ug/ml 8270 3/4/20	0420Y007.D	04/20/20 11:28
6		50ug/ml 8270 3/4/20	0420Y008.D	04/20/20 11:57
7		60ug/ml 8270 3/4/20	0420Y009.D	04/20/20 12:26
8		80ug/ml 8270 3/4/20	0420Y010.D	04/20/20 12:55
9		100ug/ml 8270 3/4/20	0420Y011.D	04/20/20 13:24
10		SS 8270 3/4/20	0420Y012.D	04/20/20 13:53
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	10 - 80% of mass 198	34.1
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.8
127	10 - 80% of mass 198	48.2
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.9
275	10 - 60% of mass 198	27.9
365	1 - 100% of mass 198	3.2
441	0.01 - 24% of mass 442	1.3
442	50 - 500% of mass 198	87.6
443	15 - 24% of mass 442	19.0

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 91926
Matrix: Water
ID: 0420Y076.D

SDG No: 91926
Date Analyzed: 04/27/20
Instrument: Yoda
Time Analyzed: 15:03

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/ml 8270 3/30/20	0420Y077.D	04/27/20 15:19
2	Blank	200423A BLK 1/800	0420Y078.D	04/27/20 15:48
3	Lab Control Spike	200423A LCS-1 1/800	0420Y079.D	04/27/20 16:16
4	Lab Control SpikeD	200423A LCSD-1 1/800	0420Y080.D	04/27/20 16:45
5	ERH1047	BA09851W16 1/800	0420Y081.D	04/27/20 17:13
6	ERH1053	BA09853W14 1/800	0420Y082.D	04/27/20 17:41
7	ERH1055	BA09855W15 1/800	0420Y083.D	04/27/20 18:10
8		50ug/ml 8270 3/30/20	0420Y108.D	04/28/20 6:00
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	10 - 80% of mass 198	36.3
68	0 - 2% of mass 69	0.0
70	0 - 2% of mass 69	0.6
127	10 - 80% of mass 198	50.9
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.7
275	10 - 60% of mass 198	26.7
365	1 - 100% of mass 198	2.9
441	0.01 - 24% of mass 442	16.6
442	50 - 500% of mass 198	79.6
443	15 - 24% of mass 442	19.3

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0420Y077.D Date Analyzed: 04/27/20

Instrument ID: Yoda Time Analyzed: 15:19

GC Column: ID: Heated Purge: (Y/N)

		1,4-dichlorobenzene-D4(IS)		Napthalene-D8(IS)		Acenaphthene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	481309	5.28	2015610	6.72	1208660	8.74
	UPPER LIMIT	962618	5.45	4031220	6.89	2417320	8.91
	LOWER LIMIT	240655	5.11	1007805	6.55	604330	8.57
	SAMPLE NO.						
01	200423A BLK 1/800	448190	5.27	1804150	6.71	1069040	8.74
02	200423A LCS-1 1/800	415144	5.28	1693530	6.71	994215	8.74
03	200423A LCSD-1 1/800	437416	5.28	1758460	6.71	1046770	8.74
04	BA09851W16 1/800	424863	5.27	1756710	6.71	1046670	8.74
05	BA09853W14 1/800	412845	5.28	1734920	6.71	1031270	8.74
06	BA09855W15 1/800	442510	5.27	1818650	6.71	1075250	8.74
07	50ug/ml 8270 3/30/20 (3	499177	5.28	2083680	6.72	1285380	8.74
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0420Y077.D Date Analyzed: 04/27/20

Instrument ID: Yoda Time Analyzed: 15:19

GC Column: ID: Heated Purge: (Y/N)

		Phenanthrene-D10(IS)		Chrysene-D12(IS)		Perylene-D12(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	2258190	10.47	2609610	13.56	2159370	15.35
	UPPER LIMIT	4516380	10.64	5219220	13.73	4318740	15.52
	LOWER LIMIT	1129095	10.30	1304805	13.39	1079685	15.18
	SAMPLE NO.						
01	200423A BLK 1/800	2064250	10.46	1994330	13.55	1908970	15.34
02	200423A LCS-1 1/800	1854360	10.46	2034490	13.56	1769390	15.35
03	200423A LCSD-1 1/800	1955550	10.47	2117250	13.56	1818280	15.35
04	BA09851W16 1/800	1987970	10.46	1884010	13.55	1808820	15.34
05	BA09853W14 1/800	1957480	10.47	1882890	13.55	1785230	15.34
06	BA09855W15 1/800	2033530	10.46	1939150	13.55	1883070	15.34
07	50ug/ml 8270 3/30/20 (3	2367340	10.47	2556590	13.56	1977120	15.34
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8270D-SIM

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91926

Case No: 91926 Date Analyzed: 04/28/20

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: 2-METHYLNAPHTHALENE-D10 (S)			SURROGATE: FLUORANTHENE-D10 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
200423A-BLK	Blank	39-114	81.3		58-120	81.8	
200423A-LCS	Lab Control Spike	39-114	81.0		58-120	78.9	
200423A-LCSD	Lab Control SpikeD	39-114	82.1		58-120	82.6	
BA09851	ERH1047	39-114	80.9		58-120	82.3	
BA09853	ERH1053	39-114	81.9		58-120	82.9	
BA09855	ERH1055	39-114	79.3		58-120	82.5	

Comments: Batch: #SIM53-200423A

8270D-SIM

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91926

Case No: 91926 Date Analyzed: 04/28/20

Matrix: WATER Instrument: Linus

Blank ID: 200423A-BLK Time Analyzed: 0925

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200423A-BLK	Blank	0424L047	04/28/20 0925
200423A-LCS	Lab Control Spike	0424L048	04/28/20 0947
200423A-LCSD	Lab Control SpikeD	0424L049	04/28/20 1009
BA09851	ERH1047	0424L050	04/28/20 1032
BA09853	ERH1053	0424L051	04/28/20 1054
BA09855	ERH1055	0424L052	04/28/20 1116

Comments: Batch: #SIM53-200423A

Method Blank
EPA 8270D SIM LIQ-LIQ

Blank Name/QCG: **200423W-09851 - 252060**
Batch ID: #SIM53-200423A

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	04/23/20	04/28/20
BLANK	2-METHYLNAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	04/23/20	04/28/20
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.04	ug/L	04/23/20	04/28/20
BLANK	SURROGATE: 2-METHYLNAPHT	81.3	39-114			%	04/23/20	04/28/20
BLANK	SURROGATE: FLUORANTHENE-	81.8	58-120			%	04/23/20	04/28/20

Quant Method:L0204.M
Run #:0424L047
Instrument:Linus
Sequence:L200424
Initials:MA

GC SC-Blank-REG MDLs-DOD
Printed: 04/29/20 1:18:25 PM

8270D-SIM

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91926
Case No:	91926	Date Analyzed:	04/28/20
Matrix:	WATER	Instrument:	Linus
LCS ID:	200423A-LCS	Time Analyzed:	0947

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200423A-BLK	Blank	0424L047	04/28/20 0925
200423A-LCS	Lab Control Spike	0424L048	04/28/20 0947
200423A-LCSD	Lab Control SpikeD	0424L049	04/28/20 1009
BA09851	ERH1047	0424L050	04/28/20 1032
BA09853	ERH1053	0424L051	04/28/20 1054
BA09855	ERH1055	0424L052	04/28/20 1116

Comments: Batch: #SIM53-200423A

Laboratory Control Spike Recoveries
EPA 8270D SIM LIQ-LIQ

APPL ID: **200423W-09851 LCS - 252060**
Batch ID: #SIM53-200423A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
1-METHYLNAPHTHALENE	6.25	4.85	4.93	77.6	78.9	41-115	1.6	20
2-METHYLNAPHTHALENE	6.25	5.02	5.14	80.3	82.2	39-114	2.4	20
NAPHTHALENE	6.25	4.74	4.82	75.8	77.1	43-114	1.7	20
SURROGATE: 2-METHYLNAPHTHALEN	6.25	5.06	5.13	81.0	82.1	39-114		
SURROGATE: FLUORANTHENE-D10 (S)	6.25	4.93	5.16	78.9	82.6	58-120		

Comments:

Primary	SPK	DUP
Quant Method :	L0204.M	L0204.M
Extraction Date :	04/23/20	04/23/20
Analysis Date :	04/28/20	04/28/20
Instrument :	Linus	Linus
Run :	0424L048	0424L049
Initials :	MA	

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No:
Matrix: Water
ID: 0204L002.D

SDG No:
Date Analyzed: 02/04/20
Instrument: Linus
Time Analyzed: 9:32

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.1 SIM 02/03/20	0204L003.D	02/04/20 9:48
2		0.2 SIM 02/03/20	0204L004.D	02/04/20 10:09
3		0.5 SIM 02/03/20	0204L005.D	02/04/20 10:31
4		1 SIM 02/03/20	0204L006.D	02/04/20 10:53
5		5 SIM 02/03/20	0204L007.D	02/04/20 11:15
6		10 SIM 02/03/20	0204L008.D	02/04/20 11:37
7		50 SIM 02/03/20	0204L009.D	02/04/20 11:59
8		100 SIM 02/03/20	0204L010.D	02/04/20 12:21
9		SS SIM 02/03/20	0204L011.D	02/04/20 13:21
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.1% of mass 198	18.6
68	0 - 2.05% of mass 69	0.0
70	0 - 2% of mass 69	0.4
127	10 - 80% of mass 198	40.9
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.3
275	10 - 60% of mass 198	30.0
365	1 - 100% of mass 198	4.7
441	0.01 - 24% of mass 442	15.8
442	50 - 500% of mass 198	200.3
443	15 - 24% of mass 442	19.3

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 91926
Matrix: Water
ID: 0424L045.D

SDG No: 91926
Date Analyzed: 04/28/20
Instrument: Linus
Time Analyzed: 8:43

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		5 SIM 2/4/20 (3)	0424L046.D	04/28/20 8:59
2	Blank	200423A BLK 1/800	0424L047.D	04/28/20 9:25
3	Lab Control Spike	200423A LCS-2 1/800	0424L048.D	04/28/20 9:47
4	Lab Control SpikeD	200423A LCSD-2 1/800	0424L049.D	04/28/20 10:09
5	ERH1047	BA09851W16 1/800	0424L050.D	04/28/20 10:32
6	ERH1053	BA09853W14 1/800	0424L051.D	04/28/20 10:54
7	ERH1055	BA09855W15 1/800	0424L052.D	04/28/20 11:16
8		5 SIM 2/4/20 (3)	0424L065.D	04/28/20 16:04
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.1% of mass 198	14.6
68	0 - 2.05% of mass 69	0.0
70	0 - 2% of mass 69	0.5
127	10 - 80% of mass 198	35.6
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.6
275	10 - 60% of mass 198	33.9
365	1 - 100% of mass 198	4.7
441	0.01 - 24% of mass 442	15.7
442	50 - 500% of mass 198	242.4
443	15 - 24% of mass 442	19.1

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0424L046.D Date Analyzed: 04/28/20

Instrument ID: Linus Time Analyzed: 8:59

GC Column: ID: Heated Purge: (Y/N)

		Napthalene-D8(IS)		Acenaphthene-D10(IS)		Phenanthrene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	90486	4.13	51384	6.13	98053	7.86
	UPPER LIMIT	180972	4.30	102768	6.30	196106	8.03
	LOWER LIMIT	45243	3.96	25692	5.96	49027	7.69
	SAMPLE NO.						
01	200423A BLK 1/800	89584	4.13	51281	6.13	100730	7.86
02	200423A LCS-2 1/800	88316	4.13	49691	6.13	98323	7.86
03	200423A LCSD-2 1/800	86874	4.13	48732	6.13	96624	7.86
04	BA09851W16 1/800	64528	4.13	37272	6.13	71900	7.86
05	BA09853W14 1/800	87901	4.13	49655	6.13	96178	7.86
06	BA09855W15 1/800	88518	4.14	49427	6.13	97169	7.86
07	5 SIM 2/4/20 (3)	86281	4.14	47111	6.13	91433	7.86
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0424L046.D Date Analyzed: 04/28/20

Instrument ID: Linus Time Analyzed: 8:59

GC Column: ID: Heated Purge: (Y/N)

		Chrysene-D12(IS)		Perylene-D12(IS)			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	126845	10.97	157449	13.40		
	UPPER LIMIT	253690	11.14	314898	13.57		
	LOWER LIMIT	63423	10.80	78725	13.23		
	SAMPLE NO.						
01	200423A BLK 1/800	131107	10.98	163192	13.40		
02	200423A LCS-2 1/800	124748	10.98	149432	13.40		
03	200423A LCSD-2 1/800	123492	10.98	148217	13.40		
04	BA09851W16 1/800	94566	10.98	112800	13.40		
05	BA09853W14 1/800	126725	10.98	154706	13.41		
06	BA09855W15 1/800	127961	10.98	155715	13.41		
07	5 SIM 2/4/20 (3)	119525	10.98	145913	13.41		
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

EPA 8270D

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91926

Case No: 91926 Date Analyzed: 04/24/20

Matrix: WATER Instrument: Yoda

Blank ID: 200423A-BLK Time Analyzed: 1606

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200423A-BLK	Blank	0122Y089	04/24/20 1606
200423A-LCS	Lab Control Spike	0122Y091	04/24/20 1654
200423A-LCSD	Lab Control SpikeD	0122Y092	04/24/20 1719
BA09851	ERH1047	0122Y093	04/24/20 1743
BA09853	ERH1053	0122Y094	04/24/20 1808
BA09855	ERH1055	0122Y111	04/27/20 1119

Comments: Batch: #87DME-200423A

Method Blank
EPA 8270D MODIFIED WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **200423W-09851 - 252034**
Batch ID: #87DME-200423A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	2-(2-METHOXYETHOXY)-ETHAN	80.0 U	100	80.0	40.0	ug/L	04/23/20	04/24/20

Quant Method: YMEE0122.M
Run #: 0122Y089
Instrument: Yoda
Sequence: Y200122M
Initials: MA

GC SC-Blank-REG MDLs-DOD
Printed: 04/27/20 4:06:19 PM

EPA 8270D

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91926
Case No:	91926	Date Analyzed:	04/24/20
Matrix:	WATER	Instrument:	Yoda
LCS ID:	200423A-LCS	Time Analyzed:	1654

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200423A-BLK	Blank	0122Y089	04/24/20 1606
200423A-LCS	Lab Control Spike	0122Y091	04/24/20 1654
200423A-LCSD	Lab Control SpikeD	0122Y092	04/24/20 1719
BA09851	ERH1047	0122Y093	04/24/20 1743
BA09853	ERH1053	0122Y094	04/24/20 1808
BA09855	ERH1055	0122Y111	04/27/20 1119

Comments: Batch: #87DME-200423A

Laboratory Control Spike Recoveries
EPA 8270D MODIFIED WATER

APPL ID: **200423W-09851 LCS - 252034**
Batch ID: #87DME-200423A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
2-(2-METHOXYETHOXY)-ETHANOL	80.0	66.5	73.1	83.1	91.4	30-130	9.5	20

Comments:

Primary	SPK	DUP
Quant Method :	YMEE0122.M	YMEE0122.M
Extraction Date :	04/23/20	04/23/20
Analysis Date :	04/24/20	04/24/20
Instrument :	Yoda	Yoda
Run :	0122Y091	0122Y092
Initials :	MA	

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No:
Case No: Date Analyzed: 01/22/20
Matrix: Water Instrument: Yoda
ID: 0122Y002.D Time Analyzed: 15:31

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		50ug/ml MEE 01/22/20	0122Y003.D	01/22/20 15:46
2		100ug/ml MEE 01/22/2	0122Y004.D	01/22/20 16:10
3		200ug/ml MEE 01/22/2	0122Y005.D	01/22/20 16:33
4		400ug/ml MEE 01/22/2	0122Y006.D	01/22/20 16:57
5		500ug/ml MEE 01/22/2	0122Y007.D	01/22/20 17:21
6		600ug/ml MEE 01/22/2	0122Y008.D	01/22/20 17:45
7		800ug/ml MEE 01/22/2	0122Y009.D	01/22/20 18:08
8		1000ug/ml MEE 01/22/	0122Y010.D	01/22/20 18:32
9		SS MEE 01/22/20	0122Y011.D	01/22/20 18:55
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.04% of mass 198	37.2
68	0 - 2.04% of mass 69	0.0
70	0 - 2.04% of mass 69	0.2
127	10 - 80% of mass 198	50.4
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	7.1
275	10 - 60% of mass 198	30.1
365	1 - 100% of mass 198	3.7
441	0.01 - 24% of mass 442	15.9
442	50 - 500% of mass 198	109.9
443	15 - 24% of mass 442	19.8

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No: 91926
Case No: 91926 Date Analyzed: 04/24/20
Matrix: Water Instrument: Yoda
ID: 0122Y087.D Time Analyzed: 14:56

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		400ug/ml MEE 01/22/2	0122Y088.D	04/24/20 15:38
2	Blank	200423A BLK 2/500	0122Y089.D	04/24/20 16:06
3	Lab Control Spike	200423A LCS-1 2/500	0122Y091.D	04/24/20 16:54
4	Lab Control SpikeD	200423A LCSD-1 2/500	0122Y092.D	04/24/20 17:19
5	ERH1047	BA09851W11 2/500	0122Y093.D	04/24/20 17:43
6	ERH1053	BA09853W10 2/500	0122Y094.D	04/24/20 18:08
7		500ug/ml MEE 01/29/2	0122Y108.D	04/24/20 23:51
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.04% of mass 198	35.6
68	0 - 2.04% of mass 69	0.0
70	0 - 2.04% of mass 69	0.3
127	10 - 80% of mass 198	50.9
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 198.05	100.0
199	5 - 9% of mass 198	6.7
275	10 - 60% of mass 198	26.6
365	1 - 100% of mass 198	3.0
441	0.01 - 24% of mass 442	11.9
442	50 - 500% of mass 198.05	77.7
443	15 - 24% of mass 442	19.3

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No: 91926
Case No: 91926 Date Analyzed: 04/27/20
Matrix: Water Instrument: Yoda
ID: 0122Y109.D Time Analyzed: 10:11

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		400ug/ml MEE 01/22/2	0122Y110.D	04/27/20 10:28
2	ERH1055	BA09855W11 2/500	0122Y111.D	04/27/20 11:19
3		400ug/ml MEE 01/22/2	0122Y116.D	04/27/20 14:39
4				
5				
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11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
51	9.95 - 80.04% of mass 198	37.4
68	0 - 2.04% of mass 69	0.0
70	0 - 2.04% of mass 69	0.4
127	10 - 80% of mass 198	50.6
197	0 - 2% of mass 198	0.0
198	100 - 100% of mass 197.95	100.0
199	5 - 9% of mass 198	6.8
275	10 - 60% of mass 198	26.9
365	1 - 100% of mass 198	2.8
441	0.01 - 24% of mass 442	6.1
442	50 - 500% of mass 197.95	78.1
443	15 - 24% of mass 442	19.2

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0122Y088.D Date Analyzed: 04/24/20

Instrument ID: Yoda Time Analyzed: 15:38

GC Column: ID: Heated Purge: (Y/N)

	1,4-dichlorobenzene-D4(IS)							
		AREA #	RT #	AREA #	RT #	AREA #	RT #	
	12 HOUR STD	397962	5.07					
	UPPER LIMIT	795924	5.24					
	LOWER LIMIT	198981	4.90					
	SAMPLE NO.							
01	200423A BLK 2/500	320008	5.05					
02	200423A LCS-1 2/500	261640	5.05					
03	200423A LCSD-1 2/500	236091	5.05					
04	BA09851W11 2/500	240692	5.05					
05	BA09853W10 2/500	220148	5.05					
06	500ug/ml MEE 01/29/20	334294	5.06					
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0122Y110.D Date Analyzed: 04/27/20

Instrument ID: Yoda Time Analyzed: 10:28

GC Column: ID: Heated Purge: (Y/N)

	1,4-dichlorobenzene-D4(IS)							
		AREA #	RT #	AREA #	RT #	AREA #	RT #	
	12 HOUR STD	403616						
	UPPER LIMIT	807232						
	LOWER LIMIT	201808						
	SAMPLE NO.							
01	BA09855W11 2/500	256423						
02	400ug/ml MEE 01/22/20	395349						
03								
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91926

Case No: 91926 Date Analyzed: 04/21/20

Matrix: WATER Instrument: Thor

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
AT200421-LCS	Lab Control Spike	81-118	100		85-114	101	
AT200421-LCSD	Lab Control SpikeD	81-118	100		85-114	101	
AT200421-BLK	Blank	81-118	102		85-114	99.5	
BA09850	ERH 1046	81-118	102		85-114	95.4	
BA09854	ERH 1054	81-118	103		85-114	96.8	
BA09852	ERH 1052	81-118	103		85-114	93.6	
BA09851	ERH 1047	81-118	104		85-114	97.7	
BA09853	ERH 1053	81-118	103		85-114	94.0	
BA09855	ERH 1055	81-118	105		85-114	96.8	

Comments: Batch: #86BTO-AT200421

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91926

Case No: 91926 Date Analyzed: 04/21/20

Matrix: WATER Instrument: Thor

APPL ID.	Client Sample No.	SURROGATE: DIBROMOFLUOROMETHANE (S)			SURROGATE: TOLUENE-D8 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
AT200421-LCS	Lab Control Spike	80-119	102		89-112	98.0	
AT200421-LCSD	Lab Control SpikeD	80-119	104		89-112	98.8	
AT200421-BLK	Blank	80-119	105		89-112	98.4	
BA09850	ERH 1046	80-119	106		89-112	97.9	
BA09854	ERH 1054	80-119	107		89-112	101	
BA09852	ERH 1052	80-119	105		89-112	99.1	
BA09851	ERH 1047	80-119	106		89-112	101	
BA09853	ERH 1053	80-119	104		89-112	99.3	
BA09855	ERH 1055	80-119	106		89-112	98.1	

Comments: Batch: #86BTO-AT200421

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91926

Case No: 91926 Date Analyzed: 04/21/20

Matrix: WATER Instrument: Thor

Blank ID: AT200421-BLK Time Analyzed: 1456

APPL ID.	Client Sample No.	File ID.	Date Analyzed
AT200421-LCS	Lab Control Spike	0421T03	04/21/20 1236
AT200421-LCSD	Lab Control SpikeD	0421T04	04/21/20 1304
AT200421-BLK	Blank	0421T08	04/21/20 1456
BA09850	ERH 1046	0421T19	04/21/20 2000
BA09854	ERH 1054	0421T20	04/21/20 2028
BA09852	ERH 1052	0421T21	04/21/20 2055
BA09851	ERH 1047	0421T22	04/21/20 2123
BA09853	ERH 1053	0421T23	04/21/20 2151
BA09855	ERH 1055	0421T24	04/21/20 2218

Comments: Batch: #86BTO-AT200421

Method Blank
EPA 8260B BTEX WATER

Blank Name/QCG: **AT2004W-09850 - 251911**
Batch ID: #86BTO-AT200421

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	BENZENE	0.30 U	1.0	0.30	0.15	ug/L	04/21/20	04/21/20
BLANK	ETHYLBENZENE	0.50 U	1.0	0.50	0.23	ug/L	04/21/20	04/21/20
BLANK	TOLUENE	0.30 U	1.0	0.30	0.15	ug/L	04/21/20	04/21/20
BLANK	XYLENES (TOTAL)	0.30 U	2.0	0.30	0.15	ug/L	04/21/20	04/21/20
BLANK	SURROGATE: 1,2-DICHLOROET	102	81-118			%	04/21/20	04/21/20
BLANK	SURROGATE: 4-BROMOFLUORO	99.5	85-114			%	04/21/20	04/21/20
BLANK	SURROGATE: DIBROMOFLUOR	105	80-119			%	04/21/20	04/21/20
BLANK	SURROGATE: TOLUENE-D8 (S)	98.4	89-112			%	04/21/20	04/21/20

Quant Method: T0414W.M
Run #: 0421T08
Instrument: Thor
Sequence: T200414
Initials: DPO

GC SC-Blank-REG MDLs-DOD
Printed: 04/22/20 10:00:31 AM

EPA 8260B

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91926
Case No:	91926	Date Analyzed:	04/21/20
Matrix:	WATER	Instrument:	Thor
LCS ID:	AT200421-LCS	Time Analyzed:	1236

APPL ID.	Client Sample No.	File ID.	Date Analyzed
AT200421-LCS	Lab Control Spike	0421T03	04/21/20 1236
AT200421-LCSD	Lab Control SpikeD	0421T04	04/21/20 1304
AT200421-BLK	Blank	0421T08	04/21/20 1456
BA09850	ERH 1046	0421T19	04/21/20 2000
BA09854	ERH 1054	0421T20	04/21/20 2028
BA09852	ERH 1052	0421T21	04/21/20 2055
BA09851	ERH 1047	0421T22	04/21/20 2123
BA09853	ERH 1053	0421T23	04/21/20 2151
BA09855	ERH 1055	0421T24	04/21/20 2218

Comments: Batch: #86BTO-AT200421

Laboratory Control Spike Recoveries
EPA 8260B BTEX WATER

APPL ID: **200421W-09850 LCS - 251911**
Batch ID: #86BTO-AT200421

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
BENZENE	10.00	9.64	10.2	96.4	102	79-120	5.6	20
ETHYLBENZENE	10.00	9.86	10.6	98.6	106	79-121	7.2	20
TOLUENE	10.00	9.95	10.5	99.5	105	80-121	5.4	20
XYLENES (TOTAL)	30.0	29.0	31.4	96.7	105	79-121	7.9	20
SURROGATE: 1,2-DICHLOROETHANE-D	25.0	25.0	25.1	100	100	81-118		
SURROGATE: 4-BROMOFLUOROBENZE	25.0	25.3	25.2	101	101	85-114		
SURROGATE: DIBROMOFLUOROMETH	25.0	25.4	26.0	102	104	80-119		
SURROGATE: TOLUENE-D8 (S)	25.0	24.5	24.7	98.0	98.8	89-112		

Comments:

Primary	SPK	DUP
Quant Method :	T0414W.M	T0414W.M
Extraction Date :	04/21/20	04/21/20
Analysis Date :	04/21/20	04/21/20
Instrument :	Thor	Thor
Run :	0421T03	0421T04
Initials :	DPO	

Printed: 04/22/20 10:00:13 AM
APPL Standard LCSD

Lab Name: APPL Inc. SDG No: 91926
Case No: 91926 Date Analyzed: 04/21/20
Matrix: Water Instrument: Thor
ID: 0421T00.D Time Analyzed: 11:13

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		200421A CCV 10ug/L	0421T02.D	04/21/20 12:08
2	Lab Control Spike	200421A LCS 10ug/L	0421T03.D	04/21/20 12:36
3	Lab Control SpikeD	200421A LCSD 10ug/L	0421T04.D	04/21/20 13:04
4	Blank	200421A BLK	0421T08.D	04/21/20 14:56
5	ERH 1046	BA09850W01	0421T19.D	04/21/20 20:00
6	ERH 1054	BA09854W01	0421T20.D	04/21/20 20:28
7	ERH 1052	BA09852W01	0421T21.D	04/21/20 20:55
8	ERH 1047	BA09851W01	0421T22.D	04/21/20 21:23
9	ERH 1053	BA09853W01	0421T23.D	04/21/20 21:51
10	ERH 1055	BA09855W01	0421T24.D	04/21/20 22:18
11		Ending CCV 10ug/L 4/	0421T25.D	04/21/20 22:46
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	15.7
75	30 - 60% of mass 95	46.4
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	7.5
173	0 - 2.05% of mass 174	0.0
174	50 - 200% of mass 95	114.2
175	5 - 9% of mass 174	7.6
176	95 - 101% of mass 174	95.6
177	5 - 9% of mass 176	6.7

Form 5
Tune Summary

Lab Name: APPL Inc. SDG No:
Case No: Date Analyzed: 04/14/20
Matrix: Water Instrument: Thor
ID: 0414T00.D Time Analyzed: 14:20

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		0.3ug/L VOC STD 4/14	0414T02.D	04/14/20 15:15
2		0.5ug/L VOC STD 4/14	0414T03.D	04/14/20 15:42
3		1ug/L VOC STD 4/14/2	0414T04.D	04/14/20 16:15
4		2ug/L VOC STD 4/14/2	0414T05.D	04/14/20 16:43
5		5ug/L VOC STD 4/14/2	0414T06.D	04/14/20 17:11
6		10ug/L VOC STD 4/14/	0414T07.D	04/14/20 17:38
7		20ug/L VOC STD 4/14/	0414T08.D	04/14/20 18:06
8		40ug/L VOC STD 4/14/	0414T09.D	04/14/20 18:34
9		100ug/L VOC STD 4/14	0414T10.D	04/14/20 19:01
10		(SS) 10ug/L VOC STD	0414T12.D	04/14/20 19:57
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	15.1
75	30 - 60% of mass 95	47.7
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	6.8
173	0 - 2.05% of mass 174	1.4
174	50 - 200% of mass 95	106.2
175	5 - 9% of mass 174	8.3
176	95 - 101% of mass 174	96.2
177	5 - 9% of mass 176	6.7

Form 5
Tune Summary

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract:

Lab Code: SDG No.:

Lab File ID (Standard): 0414T07.D Date Analyzed: 04/14/20

Instrument ID: Thor Time Analyzed: 17:38

GC Column: ID: Heated Purge: (Y/N)

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	728704	6.38	636280	9.84	394036	12.40
	UPPER LIMIT	1457408	6.55	1272560	10.01	788072	12.57
	LOWER LIMIT	364352	6.21	318140	9.67	197018	12.23
	SAMPLE NO.						
01	200421A CCV 10ug/L	673272	6.38	602062	9.84	381199	12.40
02	200421A LCS 10ug/L	659345	6.38	588754	9.84	373499	12.40
03	200421A LCSD 10ug/L	661323	6.38	584924	9.84	370507	12.40
04	200421A BLK	642748	5.95	586984	9.75	356089	12.38
05	BA09850W01	627118	6.38	553741	9.84	318362	12.40
06	BA09854W01	624288	6.38	547244	9.84	315978	12.40
07	BA09852W01	622028	6.38	547435	9.84	326577	12.40
08	BA09851W01	615926	6.38	546690	9.84	328724	12.40
09	BA09853W01	610252	6.38	542092	9.84	320606	12.40
10	BA09855W01	604967	6.38	543643	9.84	332006	12.40
11	Ending CCV 10ug/L 4/2	622101	6.38	545746	9.84	341296	12.40
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.17 minutes of internal standard RT
RT LOWER LIMIT = -0.17 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

EPA 8260B

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 91926

Case No: 91926 Date Analyzed: 04/21/20

Matrix: WATER Instrument: Thor

APPL ID.	Client Sample No.	SURROGATE: 4-BROMOFLUOROBENZENE (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
AT200421-LCS	Lab Control Spike	85-114	102				
AT200421-LCSD	Lab Control SpikeD	85-114	98.8				
AT200421-BLK	Blank	85-114	101				
BA09850	ERH 1046	85-114	95.4				
BA09854	ERH 1054	85-114	96.8				
BA09852	ERH 1052	85-114	93.6				
BA09851	ERH 1047	85-114	97.7				
BA09853	ERH 1053	85-114	94.0				
BA09855	ERH 1055	85-114	96.8				

Comments: Batch: #GRO86-AT200421

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91926

Case No: 91926 Date Analyzed: 04/21/20

Matrix: WATER Instrument: Thor

Blank ID: AT200421-BLK Time Analyzed: 1456

APPL ID.	Client Sample No.	File ID.	Date Analyzed
AT200421-LCS	Lab Control Spike	0421T06	04/21/20 1359
AT200421-LCSD	Lab Control SpikeD	0421T07	04/21/20 1427
AT200421-BLK	Blank	0421T08	04/21/20 1456
BA09850	ERH 1046	0421T19	04/21/20 2000
BA09854	ERH 1054	0421T20	04/21/20 2028
BA09852	ERH 1052	0421T21	04/21/20 2055
BA09851	ERH 1047	0421T22	04/21/20 2123
BA09853	ERH 1053	0421T23	04/21/20 2151
BA09855	ERH 1055	0421T24	04/21/20 2218

Comments: Batch: #GRO86-AT200421

Method Blank
EPA 8260B GRO WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **AT2004W-09850 - 251914**
Batch ID: #GRO86-AT200421

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE RANGE ORGANICS	18.0 U	20	18.0	8.6	ug/L	04/21/20	04/21/20
BLANK	SURROGATE: 4-BROMOFLUORO	101	85-114			%	04/21/20	04/21/20

Quant Method: TGAS0414.M
Run #: 0421T08
Instrument: Thor
Sequence: T200414
Initials: DPO

GC SC-Blank-REG MDLs-DOD
Printed: 04/22/20 10:19:38 AM

EPA 8260B

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 91926

Case No: 91926 Date Analyzed: 04/21/20

Matrix: WATER Instrument: Thor

LCS ID: AT200421-LCS Time Analyzed: 1359

APPL ID.	Client Sample No.	File ID.	Date Analyzed
AT200421-LCS	Lab Control Spike	0421T06	04/21/20 1359
AT200421-LCSD	Lab Control SpikeD	0421T07	04/21/20 1427
AT200421-BLK	Blank	0421T08	04/21/20 1456
BA09850	ERH 1046	0421T19	04/21/20 2000
BA09854	ERH 1054	0421T20	04/21/20 2028
BA09852	ERH 1052	0421T21	04/21/20 2055
BA09851	ERH 1047	0421T22	04/21/20 2123
BA09853	ERH 1053	0421T23	04/21/20 2151
BA09855	ERH 1055	0421T24	04/21/20 2218

Comments: Batch: #GRO86-AT200421

Laboratory Control Spike Recoveries
EPA 8260B GRO WATER

APPL ID: **200421W-09850 LCS - 251914**
Batch ID: #GRO86-AT200421

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
GASOLINE RANGE ORGANICS	300	286	290	95.3	96.7	78-122	1.4	20
SURROGATE: 4-BROMOFLUOROBENZE	25.0	25.4	24.7	102	98.8	85-114		

Comments:

Primary	SPK	DUP
Quant Method :	TGAS0414.M	TGAS0414.M
Extraction Date :	04/21/20	04/21/20
Analysis Date :	04/21/20	04/21/20
Instrument :	Thor	Thor
Run :	0421T06	0421T07
Initials :	DPO	

Printed: 04/22/20 10:19:15 AM
APPL Standard LCSD

RSK 175

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91926

Case No: 91926 Date Analyzed: 04/23/20

Matrix: WATER Instrument: Rocky

Blank ID: 200423A-BLK Time Analyzed: 1259

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200423A-LCS	Lab Control Spike	0423R09	04/23/20 1252
200423A-LCSD	Lab Control SpikeD	0423R10	04/23/20 1255
200423A-BLK	Blank	0423R11	04/23/20 1259
BA09850	ERH1046	0423R12	04/23/20 1302
BA09851	ERH1047	0423R13	04/23/20 1304
BA09852	ERH1052	0423R14	04/23/20 1306
BA09853	ERH1053	0423R15	04/23/20 1309
BA09854	ERH1054	0423R16	04/23/20 1311
BA09855	ERH1055	0423R17	04/23/20 1313

Comments: Batch: #RSKME-200423A

Method Blank
METHANE

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **200423W-09850 - 251963**
Batch ID: #RSKME-200423A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	METHANE	1.00 U	5.0	1.00	0.25	ug/L	04/23/20	04/23/20

Quant Method: RSK0311.M
Run #: 0423R11
Instrument: Rocky
Sequence: 200311
Initials: CMO

GC SC-Blank-REG MDLs-DOD
Printed: 04/23/20 2:20:40 PM

RSK 175

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 91926

Case No: 91926 Date Analyzed: 04/23/20

Matrix: WATER Instrument: Rocky

LCS ID: 200423A-LCS Time Analyzed: 1252

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200423A-LCS	Lab Control Spike	0423R09	04/23/20 1252
200423A-LCSD	Lab Control SpikeD	0423R10	04/23/20 1255
200423A-BLK	Blank	0423R11	04/23/20 1259
BA09850	ERH1046	0423R12	04/23/20 1302
BA09851	ERH1047	0423R13	04/23/20 1304
BA09852	ERH1052	0423R14	04/23/20 1306
BA09853	ERH1053	0423R15	04/23/20 1309
BA09854	ERH1054	0423R16	04/23/20 1311
BA09855	ERH1055	0423R17	04/23/20 1313

Comments: Batch: #RSKME-200423A

Laboratory Control Spike Recoveries
METHANE

APPL ID: **200423W-09850 LCS - 251963**
Batch ID: #RSKME-200423A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
METHANE	83.4	85.4	92.8	102	111	72-125	8.3	30

Comments:

Primary	SPK	DUP
Quant Method :	RSK0311.M	RSK0311.M
Extraction Date :	04/23/20	04/23/20
Analysis Date :	04/23/20	04/23/20
Instrument :	Rocky	Rocky
Run :	0423R09	0423R10
Initials :	CMO	

EPA 300.0

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91926

Case No: 91926 Date Analyzed: 04/21/20

Matrix: WATER Instrument: Charlie

Blank ID: 200421A-BLK Time Analyzed: 1036

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200421A-LCS	Lab Control Spike	1	04/21/20 1019
200421A-BLK	Blank	2	04/21/20 1036
BA09851	ERH1047	3	04/21/20 1733
BA09853	ERH1053	4	04/21/20 1750
BA09855	ERH1055	5	04/21/20 1808
BA09855	ERH1055	8	04/21/20 1900
200421A-LCSD	Lab Control SpikeD	9	04/21/20 1917

Comments: Batch: #300W-200421A

EPA 300.0

Form 4

Blank Summary

Lab Name:	APPL, Inc.	SDG No:	91926
Case No:	91926	Date Analyzed:	04/22/20
Matrix:	WATER	Instrument:	Charlie
Blank ID:	200422A-BLK	Time Analyzed:	1117

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200422A-LCS	Lab Control Spike	11	04/22/20 1059
200422A-BLK	Blank	12	04/22/20 1117
BA09853	ERH1053	13	04/22/20 1223
200422A-LCSD	Lab Control SpikeD	23	04/22/20 1652

Comments: Batch: #300WD-200422A

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
EPA 300.0	CHLORIDE	0.20 U	1.0	0.20	0.08	mg/L	04/21/20	04/21/20	#300W-200421A-BA09851
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	04/21/20	04/21/20	#300W-200421A-BA09851
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	04/21/20	04/21/20	#300W-200421A-BA09851
EPA 300.0	CHLORIDE	0.14 J	1.0	0.20	0.08	mg/L	04/22/20	04/22/20	#300WD-200422A-BA09853
EPA 300.0	NITRATE	0.18 U	0.5	0.18	0.04	mg/L	04/22/20	04/22/20	#300WD-200422A-BA09853
EPA 300.0	SULFATE	0.20 U	1.0	0.20	0.09	mg/L	04/22/20	04/22/20	#300WD-200422A-BA09853

J = Estimated value.

Wetlab SC-Blank-REG MDLs
Printed: 04/28/20 1:27:30 PM

EPA 300.0

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91926
Case No:	91926	Date Analyzed:	04/21/20
Matrix:	WATER	Instrument:	Charlie
LCS ID:	200421A-LCS	Time Analyzed:	1019

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200421A-LCS	Lab Control Spike	1	04/21/20 1019
200421A-BLK	Blank	2	04/21/20 1036
BA09851	ERH1047	3	04/21/20 1733
BA09853	ERH1053	4	04/21/20 1750
BA09855	ERH1055	5	04/21/20 1808
BA09855	ERH1055	8	04/21/20 1900
200421A-LCSD	Lab Control SpikeD	9	04/21/20 1917

Comments: Batch: #300W-200421A

EPA 300.0

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91926
Case No:	91926	Date Analyzed:	04/22/20
Matrix:	WATER	Instrument:	Charlie
LCS ID:	200422A-LCS	Time Analyzed:	1059

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200422A-LCS	Lab Control Spike	11	04/22/20 1059
200422A-BLK	Blank	12	04/22/20 1117
BA09853	ERH1053	13	04/22/20 1223
200422A-LCSD	Lab Control SpikeD	23	04/22/20 1652

Comments: Batch: #300WD-200422A

Laboratory Control Spike Recoveries

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
EPA 300.0	CHLORIDE	25.0	23.8	23.9	95.2	95.6	0.42	20	90-110	04/21/20	04/21/20	04/21/20	04/21/20	#300W-200421A-BA09851
EPA 300.0	NITRATE	22.1	21.0	21.2	95.0	95.9	0.95	20	90-110	04/21/20	04/21/20	04/21/20	04/21/20	#300W-200421A-BA09851
EPA 300.0	SULFATE	25.0	24.6	24.8	98.4	99.2	0.81	20	90-110	04/21/20	04/21/20	04/21/20	04/21/20	#300W-200421A-BA09851

Comments:

Laboratory Control Spike Recoveries

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
EPA 300.0	CHLORIDE	25.0	23.5	23.8	94.0	95.2	1.3	20	90-110	04/22/20	04/22/20	04/22/20	04/22/20	#300WD-200422A-BA0985
EPA 300.0	SULFATE	25.0	25.0	24.6	100	98.4	1.6	20	90-110	04/22/20	04/22/20	04/22/20	04/22/20	#300WD-200422A-BA0985

Comments:

EPA 353.2

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91926

Case No: 91926 Date Analyzed: 04/23/20

Matrix: WATER Instrument: EVE

Blank ID: 200423A-BLK Time Analyzed: 1220

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200423A-BLK	Blank	12	04/23/20 1220
200423A-LCS	Lab Control Spike	13	04/23/20 1222
200423A-LCSD	Lab Control SpikeD	14	04/23/20 1224
200423A-MS	Matrix Spike	18	04/23/20 1233
200423A-MSD	Matrix SpikeD	19	04/23/20 1235
BA09851	ERH1047	22	04/23/20 1242
BA09853	ERH1053	23	04/23/20 1244
BA09855	ERH1055	24	04/23/20 1245

Comments: Batch: #35OF-200423A

SM 2320B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91926

Case No: 91926 Date Analyzed: 04/23/20

Matrix: WATER Instrument: Tiamo

Blank ID: 200423A-BLK Time Analyzed: 1518

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200423A-BLK	Blank	1	04/23/20 1518
200423A-LCS	Lab Control Spike	2	04/23/20 1520
200423A-LCSD	Lab Control SpikeD	3	04/23/20 1530
BA09851	ERH1047	4	04/23/20 1620
BA09853	ERH1053	5	04/23/20 1630
BA09855	ERH1055	6	04/23/20 1636

Comments: Batch: #232W-200423A

SM3500FeB

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91926

Case No: 91926 Date Analyzed: 04/22/20

Matrix: WATER Instrument: Manual Spec

Blank ID: A200422-BLK Time Analyzed: 1317

APPL ID.	Client Sample No.	File ID.	Date Analyzed
A200422-BLK	Blank	22	04/22/20 1317
A200422-LCSD	Lab Control SpikeD	24	04/22/20 1318
A200422-LCS	Lab Control Spike	25	04/22/20 1318
BA09851	ERH1047	26	04/22/20 1319
BA09853	ERH1053	27	04/22/20 1319
BA09855	ERH1055	28	04/22/20 1320
A200422-MS	Matrix Spike	29	04/22/20 1321
A200422-MSD	Matrix SpikeD	31	04/22/20 1322

Comments: Batch: #35FE-A200422

SW846 9060A

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 91926

Case No: 91926 Date Analyzed: 04/21/20

Matrix: WATER Instrument: TICTOC

Blank ID: 200421A-BLK Time Analyzed: 1853

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200421A-BLK	Blank	33	04/21/20 1853
200421A-LCS	Lab Control Spike	34	04/21/20 1931
200421A-LCSD	Lab Control SpikeD	35	04/21/20 2012
BA09851	ERH1047	36	04/21/20 2053
BA09853	ERH1053	37	04/21/20 2130
BA09855	ERH1055	38	04/21/20 2205

Comments: Batch: #TOCW5-200421A

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
SM 2320B	BICARBONATE AS	4.0	2.0	1.70	0.85	mg/L	04/23/20	04/23/20	#232W-200423A-BA09851
SM 2320B	CARBONATE AS C	1.70 U	2.0	1.70	0.85	mg/L	04/23/20	04/23/20	#232W-200423A-BA09851
SM 2320B	TOTAL ALKALINITY	4.0	2.0	1.70	0.85	mg/L	04/23/20	04/23/20	#232W-200423A-BA09851
EPA 353.2	NITRATE-NITRITE-	0.090 U	0.10	0.090	0.028	mg/L	04/23/20	04/23/20	#35OF-200423A-BA09851
SW846 90	TOTAL ORGANIC C	0.350 U	0.93	0.350	0.130	mg/L	04/21/20	04/21/20	#TOCW5-200421A-BA09853
SM3500Fe	FERROUS IRON	0.32 U	1.0	0.32	0.16	mg/L	04/22/20	04/22/20	#35FE-A200422-BA09855

Wetlab SC-Blank-REG MDLs
Printed: 04/28/20 1:30:20 PM

EPA 353.2

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 91926

Case No: 91926 Date Analyzed: 04/23/20

Matrix: WATER Instrument: EVE

LCS ID: 200423A-LCS Time Analyzed: 1222

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200423A-BLK	Blank	12	04/23/20 1220
200423A-LCS	Lab Control Spike	13	04/23/20 1222
200423A-LCSD	Lab Control SpikeD	14	04/23/20 1224
200423A-MS	Matrix Spike	18	04/23/20 1233
200423A-MSD	Matrix SpikeD	19	04/23/20 1235
BA09851	ERH1047	22	04/23/20 1242
BA09853	ERH1053	23	04/23/20 1244
BA09855	ERH1055	24	04/23/20 1245

Comments: Batch: #35OF-200423A

SM 2320B

Form 4

LCS Summary

Lab Name:	APPL, Inc.	SDG No:	91926
Case No:	91926	Date Analyzed:	04/23/20
Matrix:	WATER	Instrument:	Tiamo
LCS ID:	200423A-LCS	Time Analyzed:	1520

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200423A-BLK	Blank	1	04/23/20 1518
200423A-LCS	Lab Control Spike	2	04/23/20 1520
200423A-LCSD	Lab Control SpikeD	3	04/23/20 1530
BA09851	ERH1047	4	04/23/20 1620
BA09853	ERH1053	5	04/23/20 1630
BA09855	ERH1055	6	04/23/20 1636

Comments: Batch: #232W-200423A

SM3500FeB

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 91926

Case No: 91926 Date Analyzed: 04/22/20

Matrix: WATER Instrument: Manual Spec

LCS ID: A200422-LCS Time Analyzed: 1318

APPL ID.	Client Sample No.	File ID.	Date Analyzed
A200422-BLK	Blank	22	04/22/20 1317
A200422-LCSD	Lab Control SpikeD	24	04/22/20 1318
A200422-LCS	Lab Control Spike	25	04/22/20 1318
BA09851	ERH1047	26	04/22/20 1319
BA09853	ERH1053	27	04/22/20 1319
BA09855	ERH1055	28	04/22/20 1320
A200422-MS	Matrix Spike	29	04/22/20 1321
A200422-MSD	Matrix SpikeD	31	04/22/20 1322

Comments: Batch: #35FE-A200422

SW846 9060A

Form 4

LCS Summary

Lab Name: APPL, Inc. SDG No: 91926

Case No: 91926 Date Analyzed: 04/21/20

Matrix: WATER Instrument: TICTOC

LCS ID: 200421A-LCS Time Analyzed: 1931

APPL ID.	Client Sample No.	File ID.	Date Analyzed
200421A-BLK	Blank	33	04/21/20 1853
200421A-LCS	Lab Control Spike	34	04/21/20 1931
200421A-LCSD	Lab Control SpikeD	35	04/21/20 2012
BA09851	ERH1047	36	04/21/20 2053
BA09853	ERH1053	37	04/21/20 2130
BA09855	ERH1055	38	04/21/20 2205

Comments: Batch: #TOCW5-200421A

Laboratory Control Spike Recoveries

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
EPA 353.2	NITRATE-NITRITE-N	3.00	3.27	3.25	109	108	0.61	20	90-110	04/23/20	04/23/20	04/23/20	04/23/20	#35OF-200423A-BA09851
SM 2320B	BICARBONATE AS CACO3	250	248	249	99.2	99.6	0.40	20	90-110	04/23/20	04/23/20	04/23/20	04/23/20	#232W-200423A-BA09851
SM 2320B	TOTAL ALKALINITY AS CA	239	258	260	108	109	0.77	20	90-110	04/23/20	04/23/20	04/23/20	04/23/20	#232W-200423A-BA09851

Comments:

Laboratory Control Spike Recoveries

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
SW846 90	TOTAL ORGANIC CARBO	5.00	4.81	4.74	96.2	94.8	1.5	20	80-120	04/21/20	04/21/20	04/21/20	04/21/20	#TOCW5-200421A-BA098

Comments:

Laboratory Control Spike Recoveries

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
SM3500Fe	FERROUS IRON	3.00	2.97	2.96	99.0	98.7	0.34	20	80-120	04/22/20	04/22/20	04/22/20	04/22/20	#35FE-A200422-BA09855

Comments:

Matrix Spike Recoveries

WETLAB

APPL ID: **200423W-09851 MS - 251965**

Sample ID: BA09851

Client ID: ERH1047

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	Matrix Res mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
EPA 353.2	NITRATE-NITRITE-N	3.23	1.6	5.02	5.12	106	109	2.0	20	90-110	04/23/20	04/23/20	04/23/20	04/23/20	251965	BA09851

Comments:

Matrix Spike Recoveries

WETLAB

APPL ID: **200422W-09855 MS - 251925**

Sample ID: BA09855

Client ID: ERH1055

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	Matrix Res mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
SM3500Fe	FERROUS IRON	3.00	0.084	3.01	3.03	97.5	98.2	0.66	20	80-120	04/22/20	04/22/20	04/22/20	04/22/20	251925	BA09855

Comments:

ORGANICS
Calibration Data

TPH Extractables
DOC0310

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 03/10/20
Matrix: Water Instrument: Apollo
Initials: SS/M

310003 D 310004 D 310005 D 310006.D 310007.D 310008.D

		Compound	1	2	3	4	5	6					Avg	%RSD	Type	r^2	Q
1	HATM	Diesel (C10-C24)	1402793	2048774	1956346	1950680	1978298	2168778					1917612	14	HATM		
2	HBTM	Motor Oil (C24-C40)	1787356	1629558	1383257	1334462	1324161	1387579					1474395	13	HBTM		
3	SA	Ortho-Terphenyl(S)	2782070	2786055	2347676	2294556	2308475	2544283					2510519	9.2	SA		
4	SA	Octacosane(S)	1771075	1912436	1683790	1654254	1670744	1785274					1746262	5.6	SA		
5																	
6																	
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8																	
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1.184705

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310003.D Vial: 3
Acq On : 3-10-20 9:37:22 Operator: SS
Sample : Diesel Motor Oil-1 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 10 11:58 2020 Quant Results File: DOC0310.RES

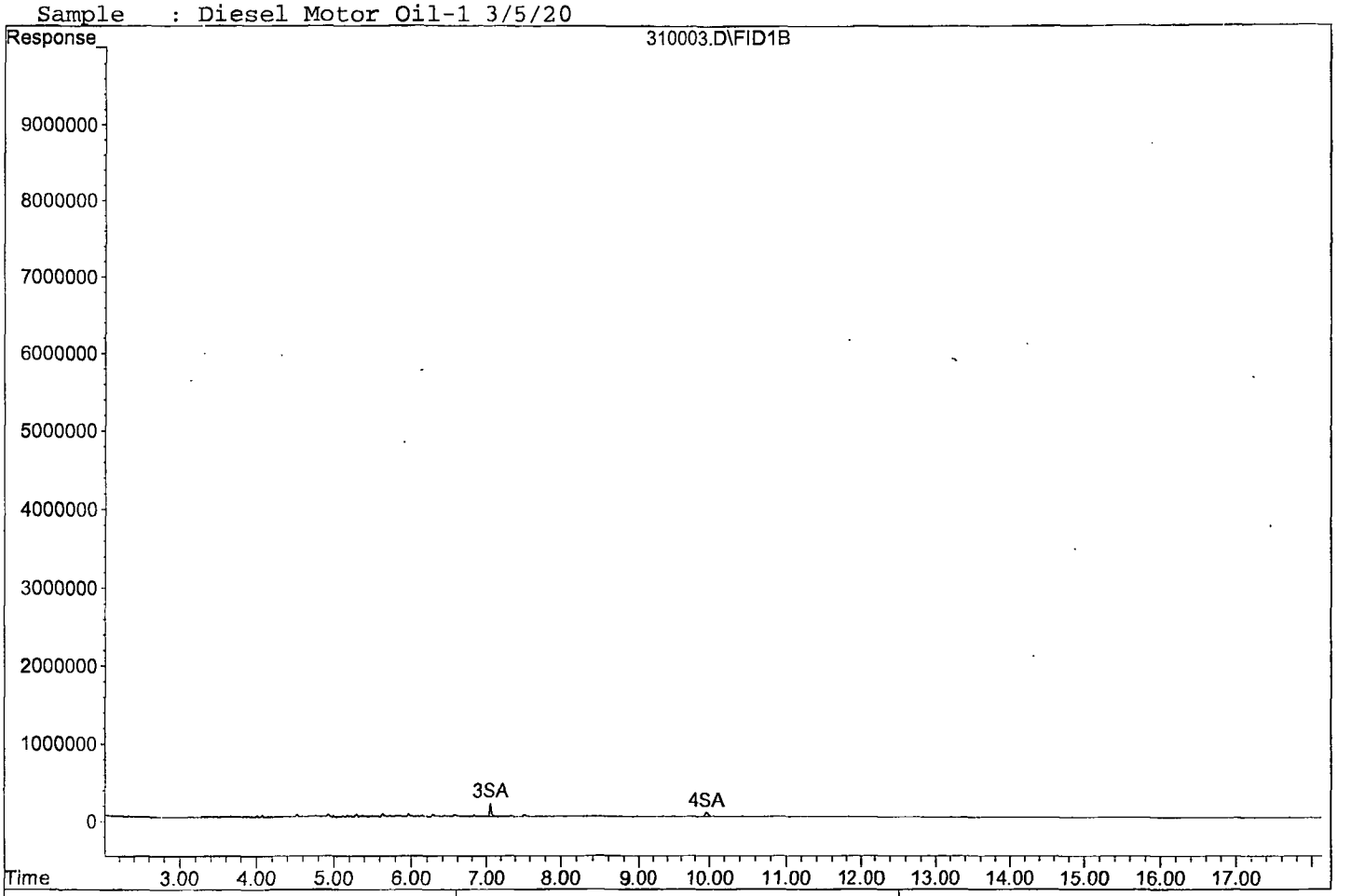
Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

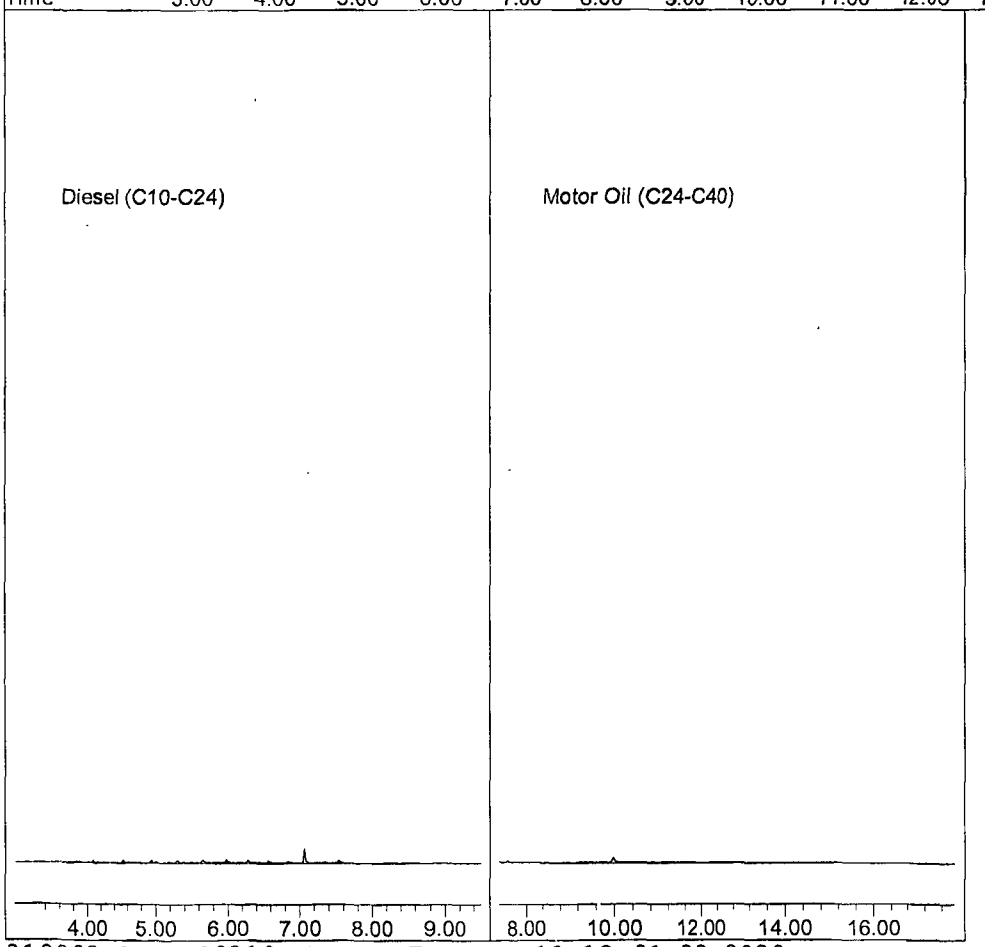
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.06	2782070	0.554 ppb
Surrogate Spike 30.000	Recovery =		1.85%
4) SA Octacosane(S)	9.97	1771075	0.507 ppb
Surrogate Spike 30.000	Recovery =		1.69%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	28055866	7.315 ppb
2) HBTM Motor Oil (C24-C40)	12.60	35747115	12.123 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200310\310003.D
Sample : Diesel Motor Oil-1 3/5/20





310003.D DOC0310.M Tue Mar 10 12:01:33 2020

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310004.D Vial: 4
Acq On : 3-10-20 9:59:49 Operator: SS
Sample : Diesel Motor Oil-2 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 10 11:58 2020 Quant Results File: DOC0310.RES

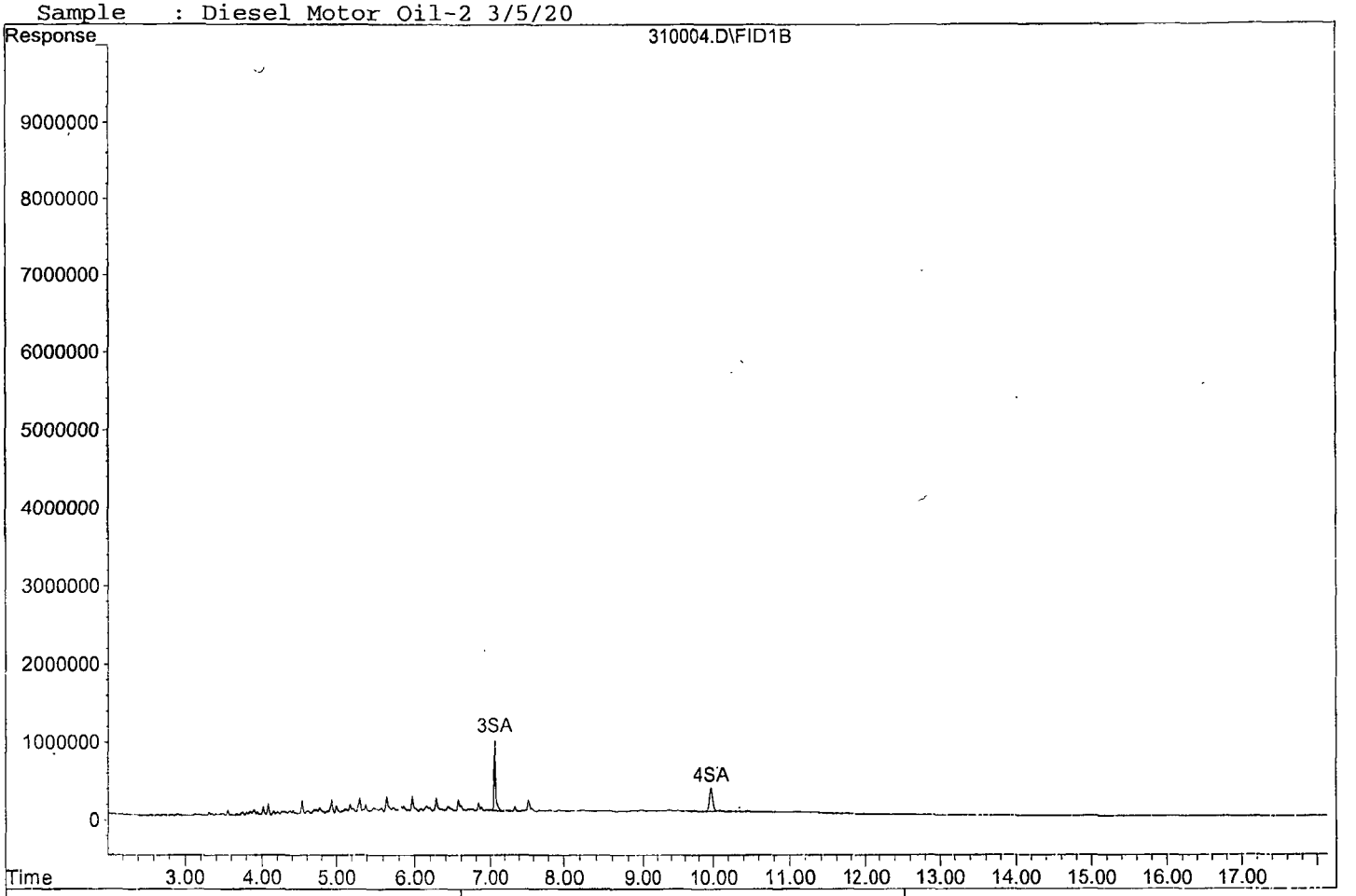
Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

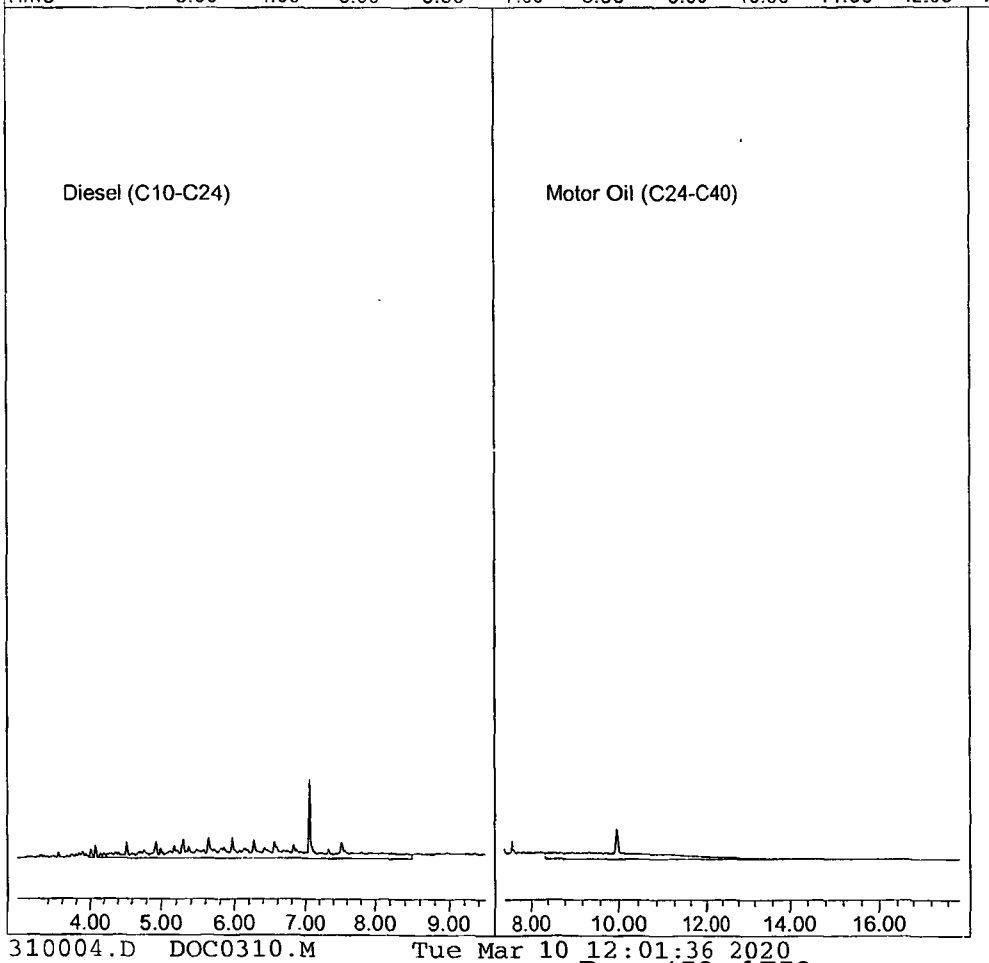
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.06	13930276	2.774 ppb
Surrogate Spike 30.000	Recovery =		9.25%
4) SA Octacosane(S)	9.97	9562178	2.738 ppb
Surrogate Spike 30.000	Recovery =		9.13%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	204877430	53.420 ppb
2) HBTM Motor Oil (C24-C40)	12.60	162955782	55.262 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200310\310004.D
Sample : Diesel Motor Oil-2 3/5/20





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310005.D Vial: 5
Acq On : 3-10-20 10:22:19 Operator: SS
Sample : Diesel Motor Oil-3 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 10 11:58 2020 Quant Results File: DOC0310.RES

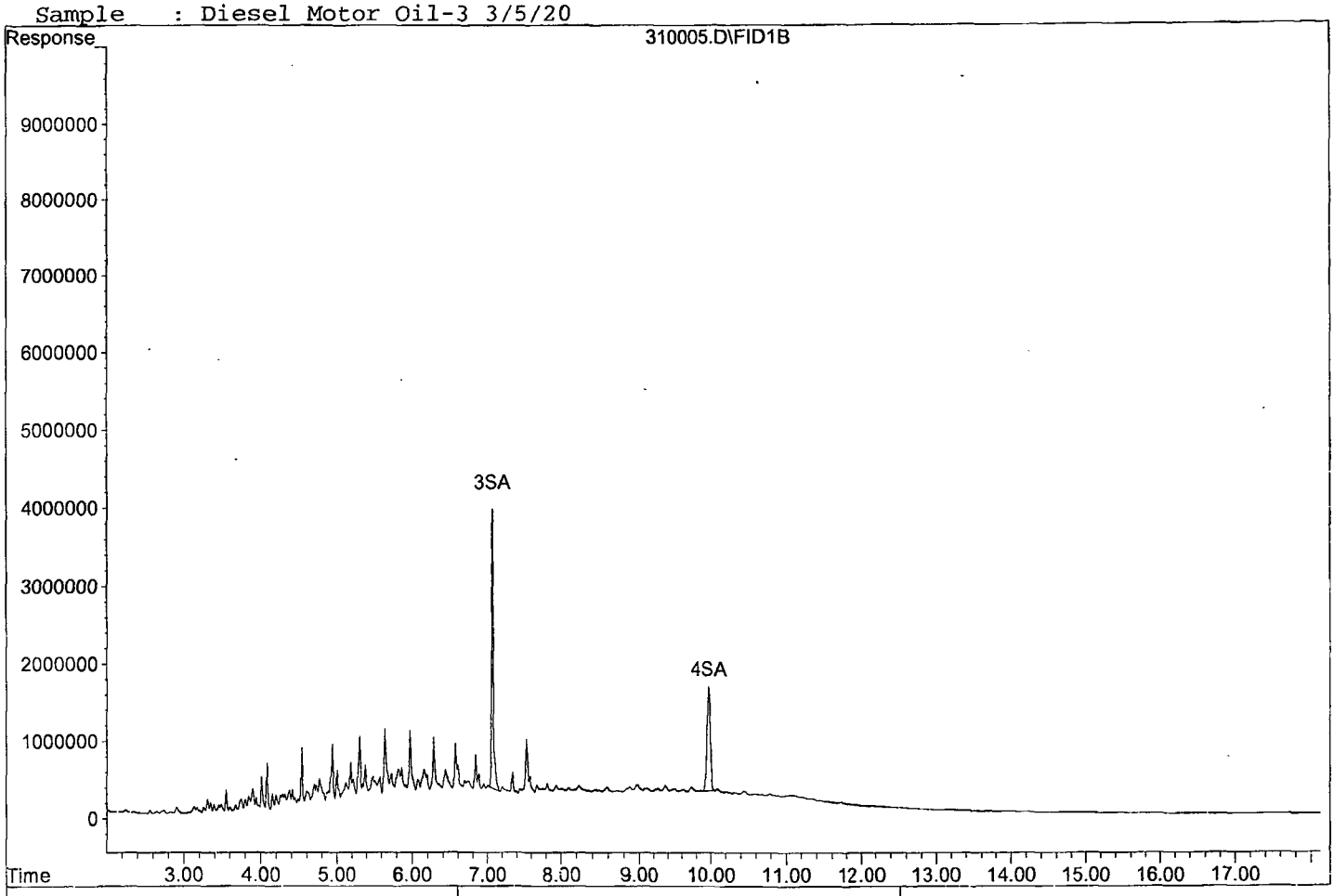
Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

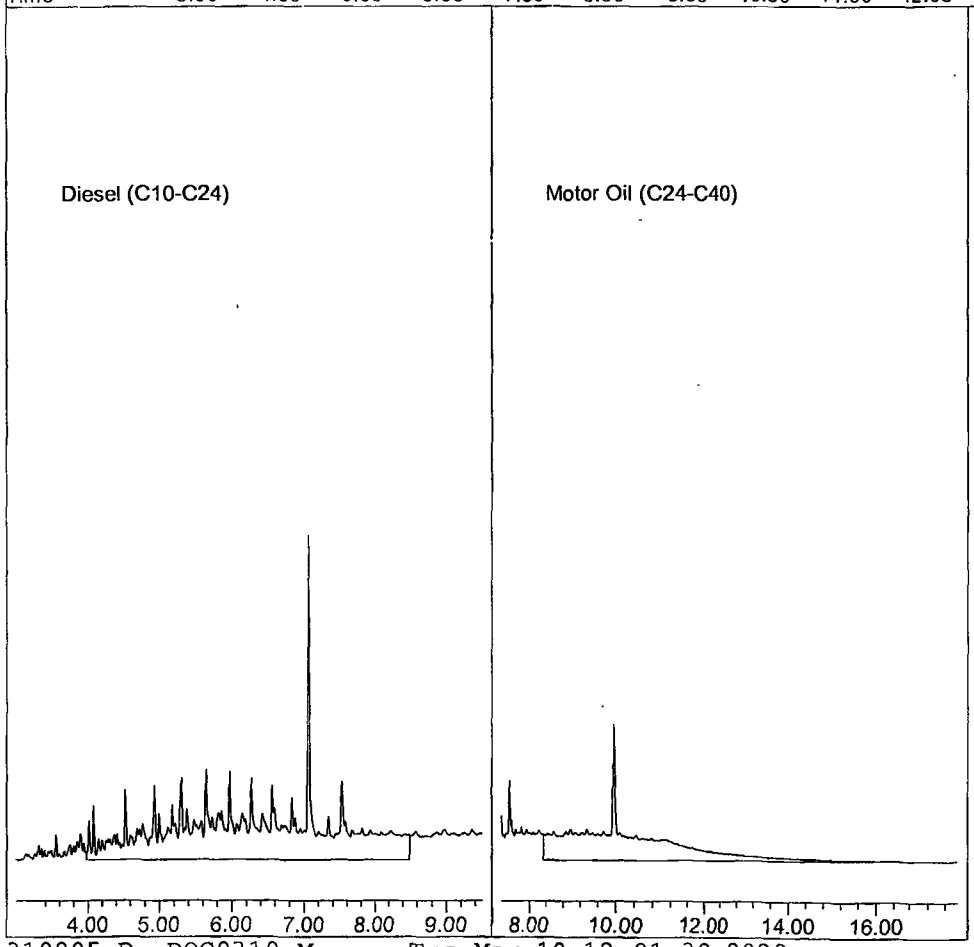
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.06	58691912	11.689 ppb
Surrogate Spike 30.000	Recovery =		38.96%
4) SA Octacosane(S)	9.97	42094760	12.053 ppb
Surrogate Spike 30.000	Recovery =		40.18%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	978173133	255.050 ppb
2) HBTM Motor Oil (C24-C40)	12.60	691628331	234.546 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200310\310005.D
Sample : Diesel Motor Oil-3 3/5/20





310005.D DOC0310.M Tue Mar 10 12:01:38 2020

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310006.D Vial: 6
Acq On : 3-10-20 10:44:50 Operator: SS
Sample : Diesel Motor Oil-4 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 10 11:58 2020 Quant Results File: DOC0310.RES

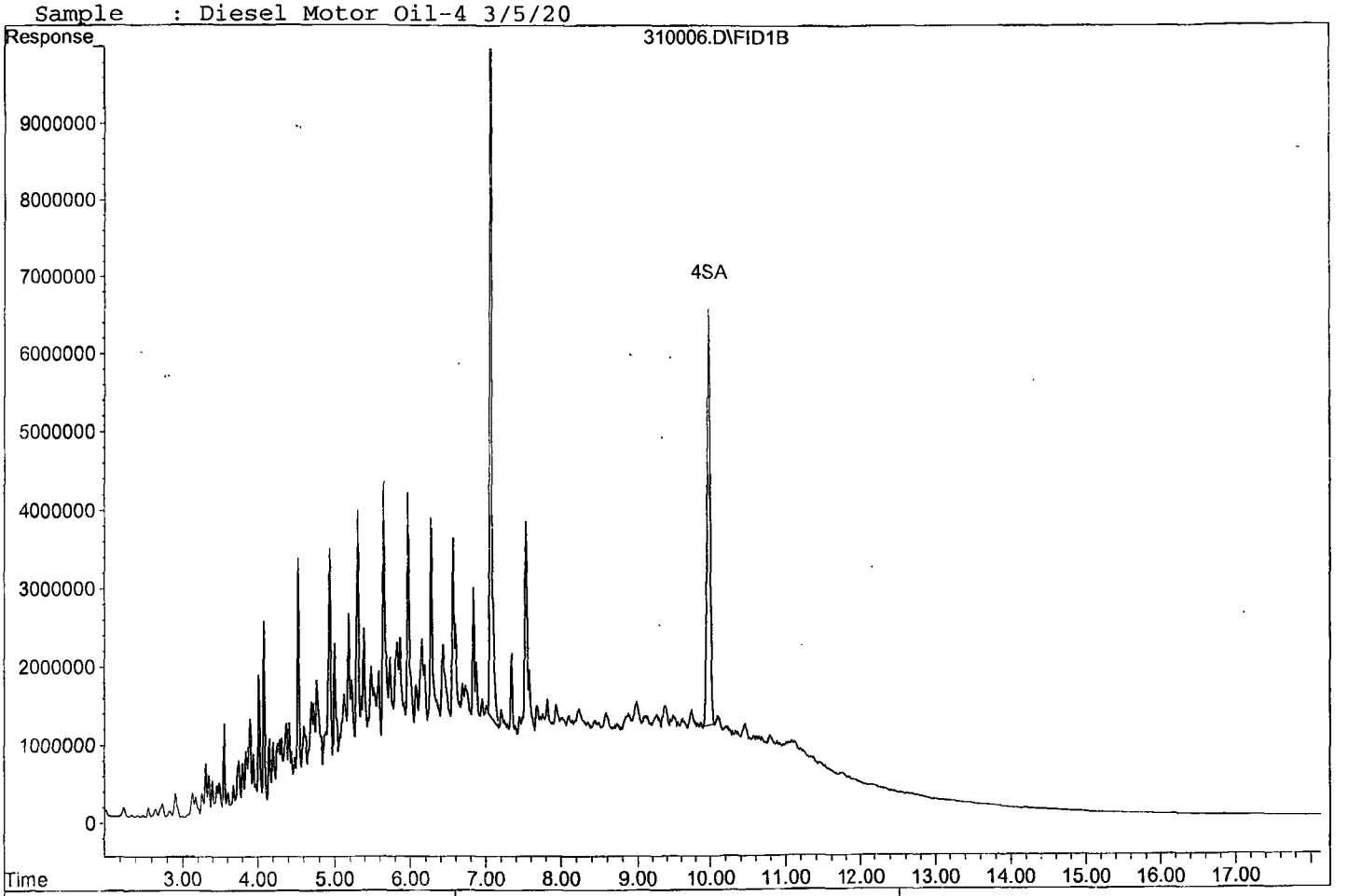
Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

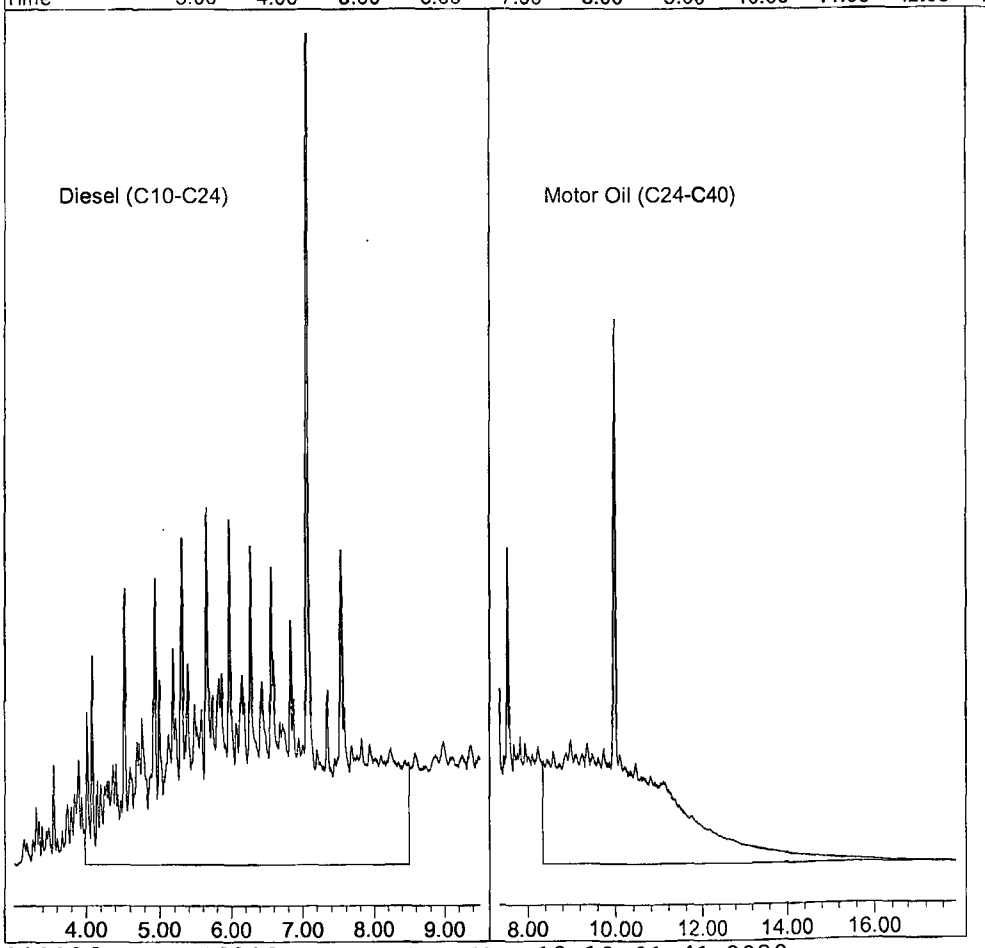
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.07	229455620	45.699	ppb
Surrogate Spike 30.000		Recovery =	152.33%	
4) SA Octacosane(S)	9.98	165425400	47.366	ppb
Surrogate Spike 30.000		Recovery =	157.89%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.24	3901360613	1017.245	ppb
2) HBTM Motor Oil (C24-C40)	12.60	2668923786	905.091	ppb
Target Compounds				

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200310\310006.D
Sample : Diesel Motor Oil-4 3/5/20





310006.D DOC0310.M Tue Mar 10 12:01:41 2020

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310007.D Vial: 7
Acq On : 3-10-20 11:07:20 Operator: SS
Sample : Diesel Motor Oil-5 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 10 11:58 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

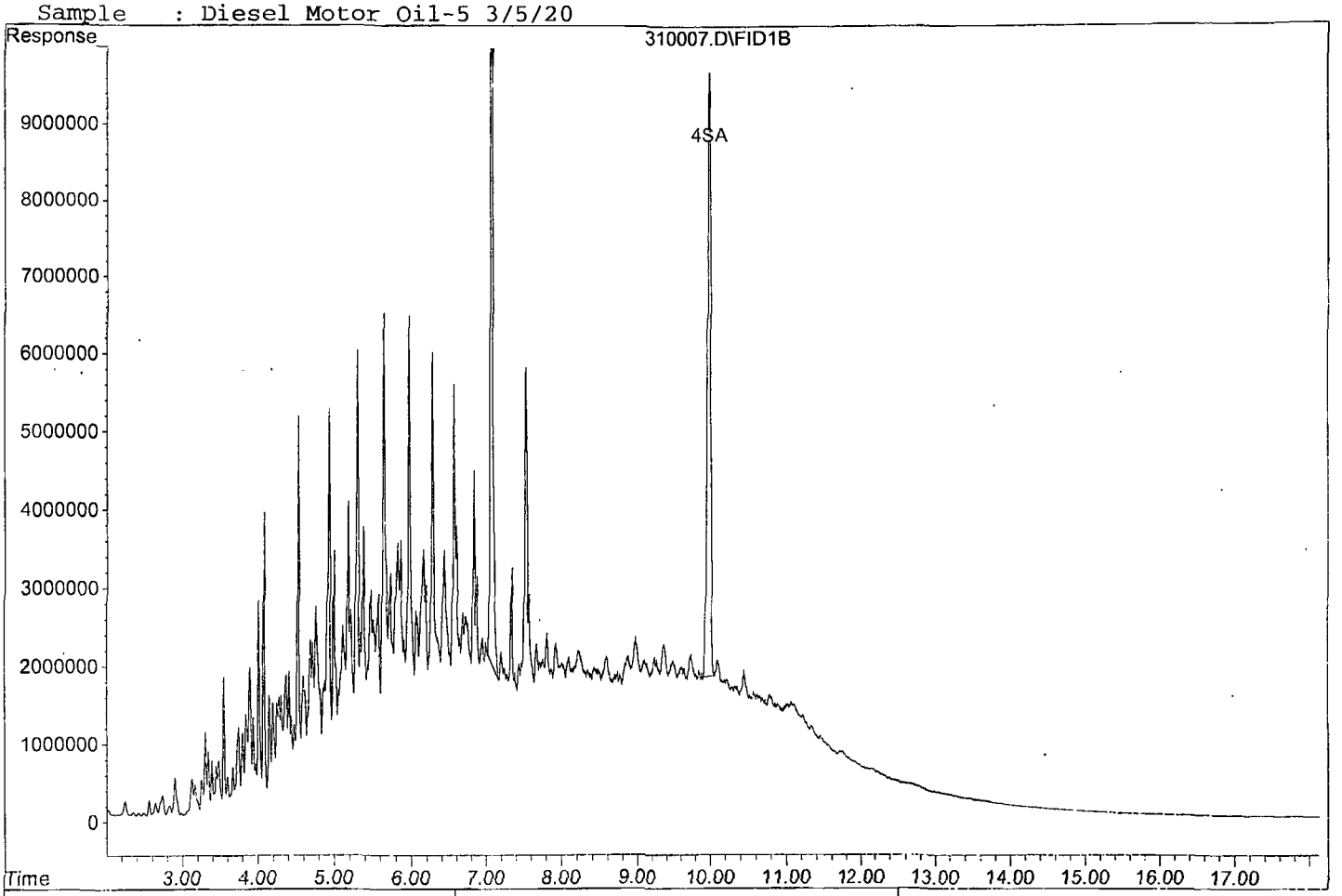
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

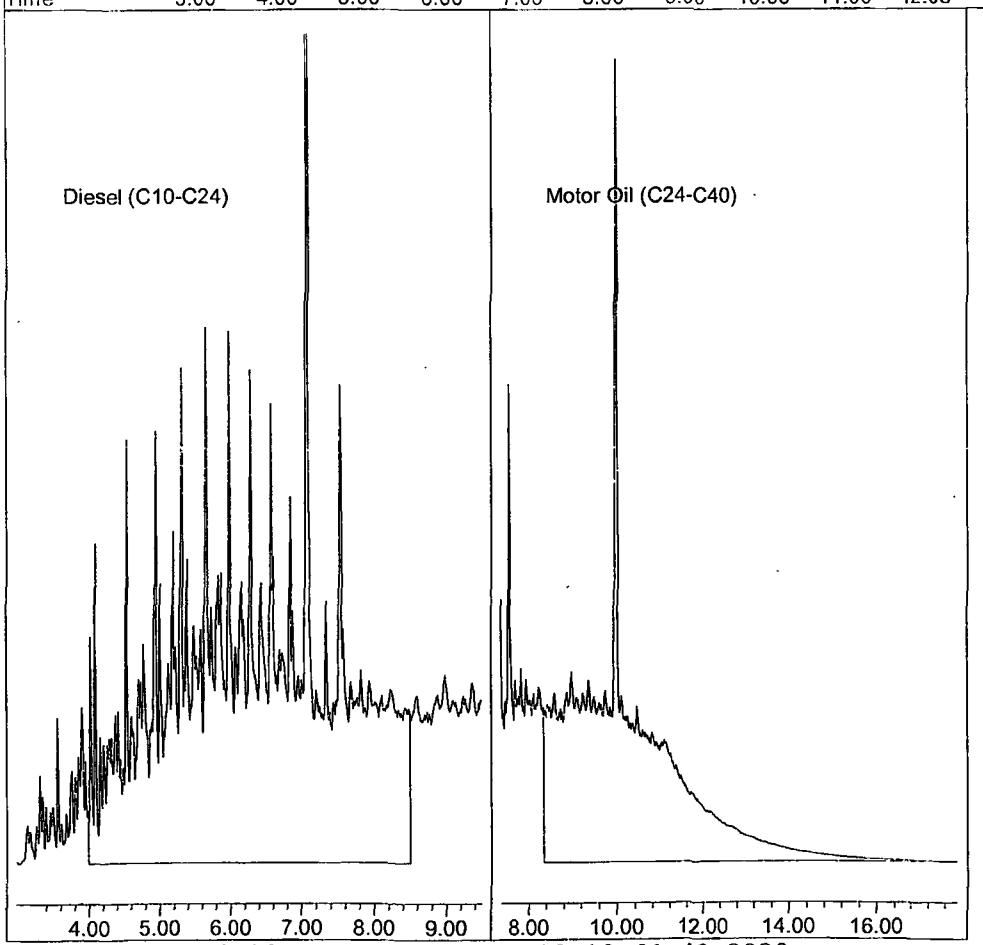
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.07	346271320	68.964	ppb
Surrogate Spike 30.000		Recovery =	229.88%	
4) SA Octacosane(S)	9.98	250611670	71.757	ppb
Surrogate Spike 30.000		Recovery =	239.19%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.24	5934893648	1547.470	ppb
2) HBTM Motor Oil (C24-C40)	12.60	3972483300	1347.157	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200310\310007.D
Sample : Diesel Motor Oil-5 3/5/20





310007.D DOC0310.M Tue Mar 10 12:01:43 2020

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310008.D Vial: 8
Acq On : 3-10-20 11:29:51 Operator: SS
Sample : Diesel Motor Oil-6 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 10 11:58 2020 Quant Results File: DOC0310.RES

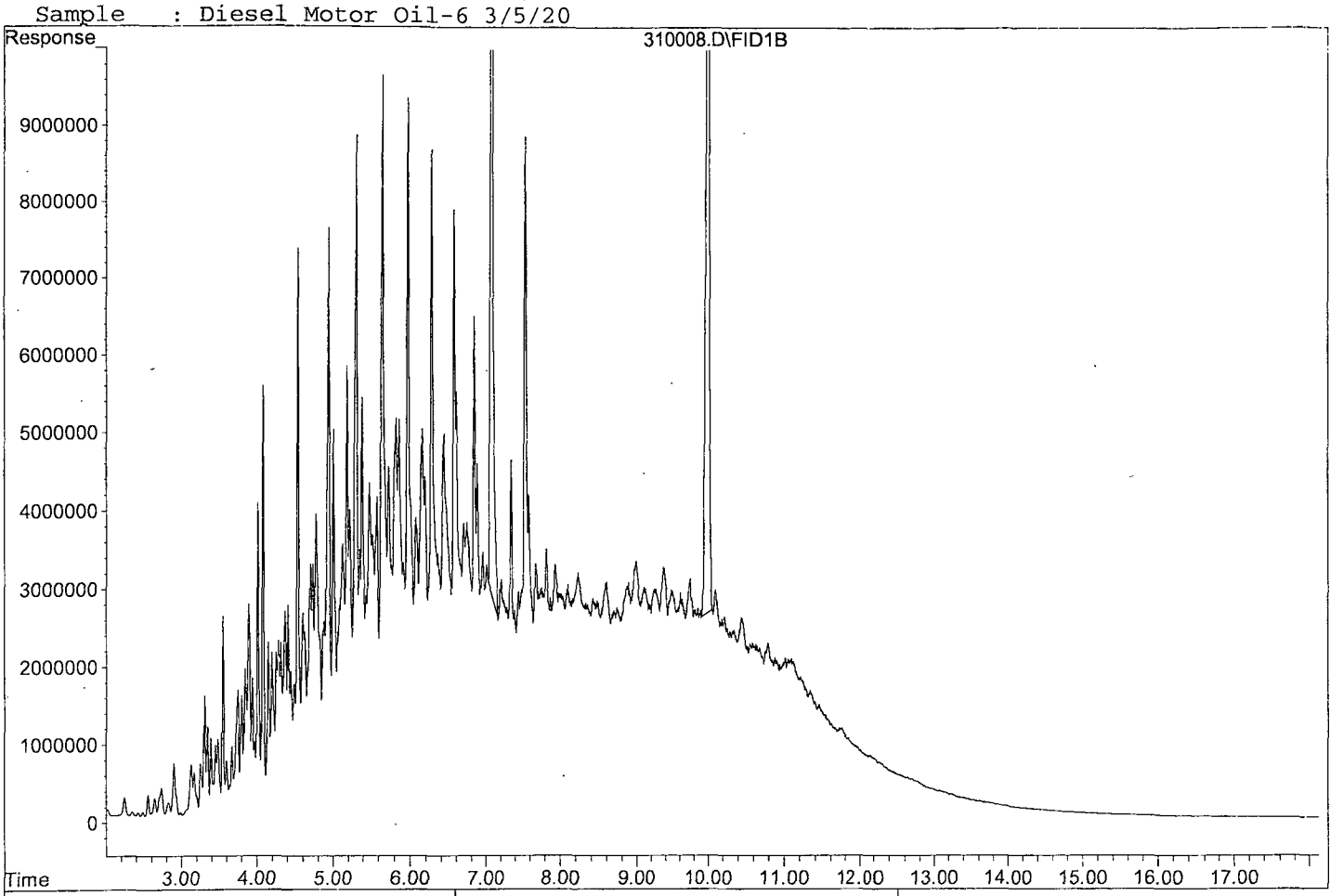
Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

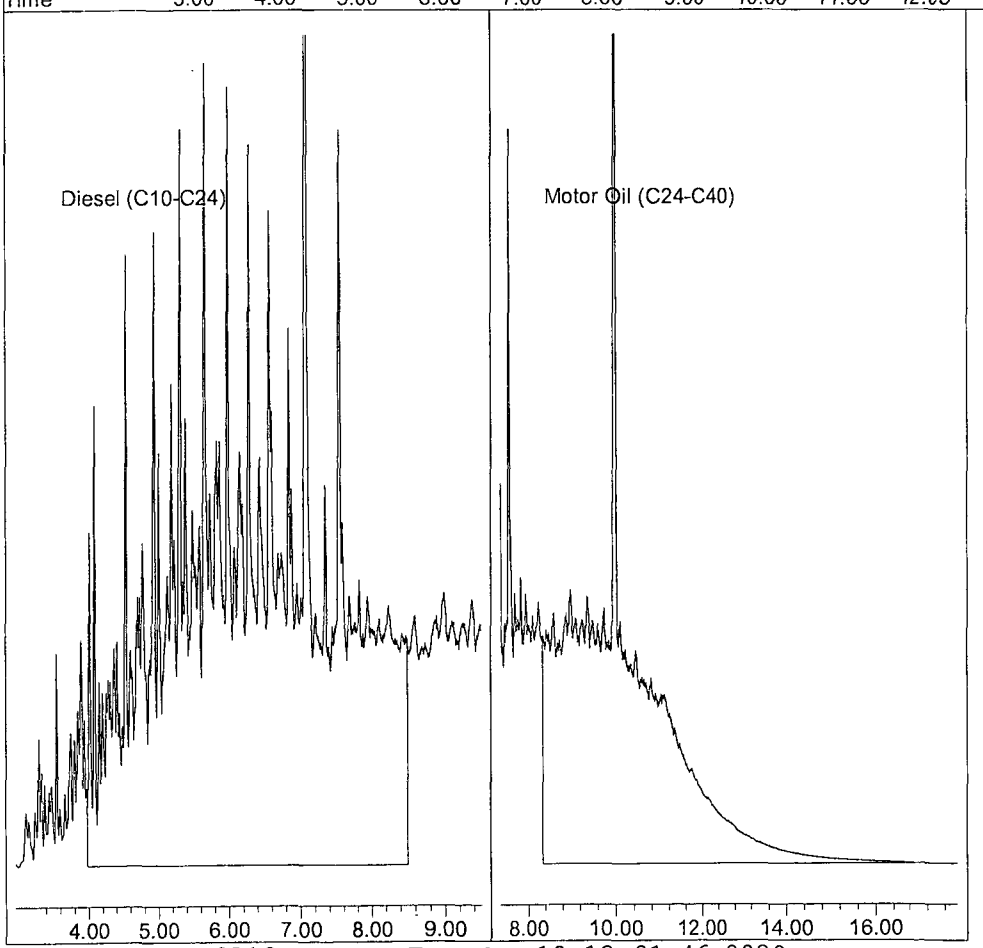
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.07	508856564	101.345	ppb
Surrogate Spike 30.000		Recovery =	337.82%	
4) SA Octacosane(S)	9.99	357054728	102.234	ppb
Surrogate Spike 30.000		Recovery =	340.78%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.24	8675111292	2261.957	ppb
2) HBTM Motor Oil (C24-C40)	12.60	5550316563	1882.235	ppb
Target Compounds				

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200310\310008.D
Sample : Diesel Motor Oil-6 3/5/20





TPH Extractables
DOC0310

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 03/10/20
Instrument: Apollo
Initial Cal. Date: 03/10/20
Data File: 310009.D

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C24)	1917610	2127840	11	HATM	
2	HBTM	Motor Oil (C24-C40)	1474400	1535490	4.1	HBTM	
3							
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		Average			7.6		

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200310\310009.D Vial: 9
Acq On : 3-10-20 11:52:24 Operator: SS
Sample : Diesel Motor Oil-SS 3/5/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 10 12:11 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200310\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 10 11:57:01 2020
Response via : Multiple Level Calibration

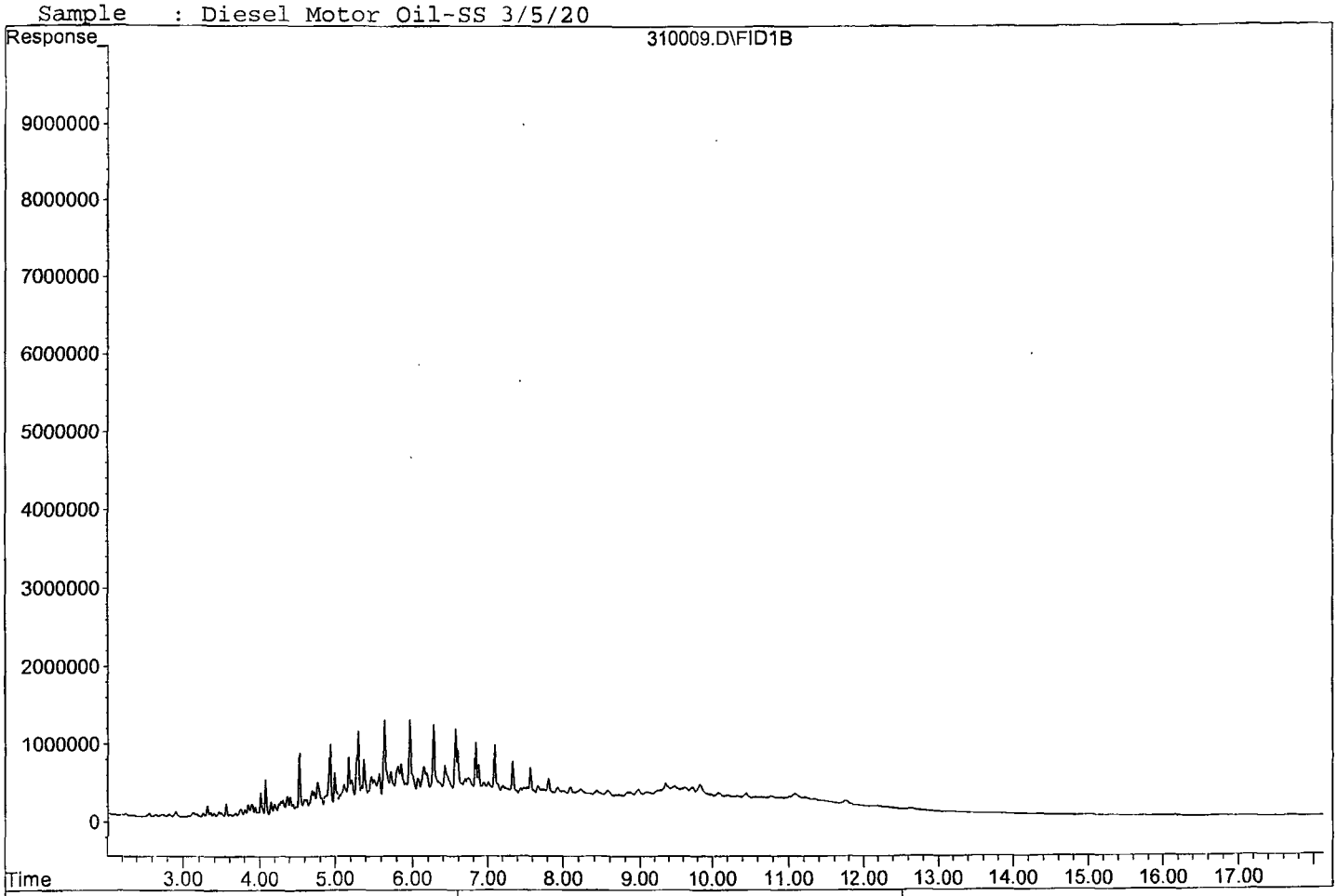
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

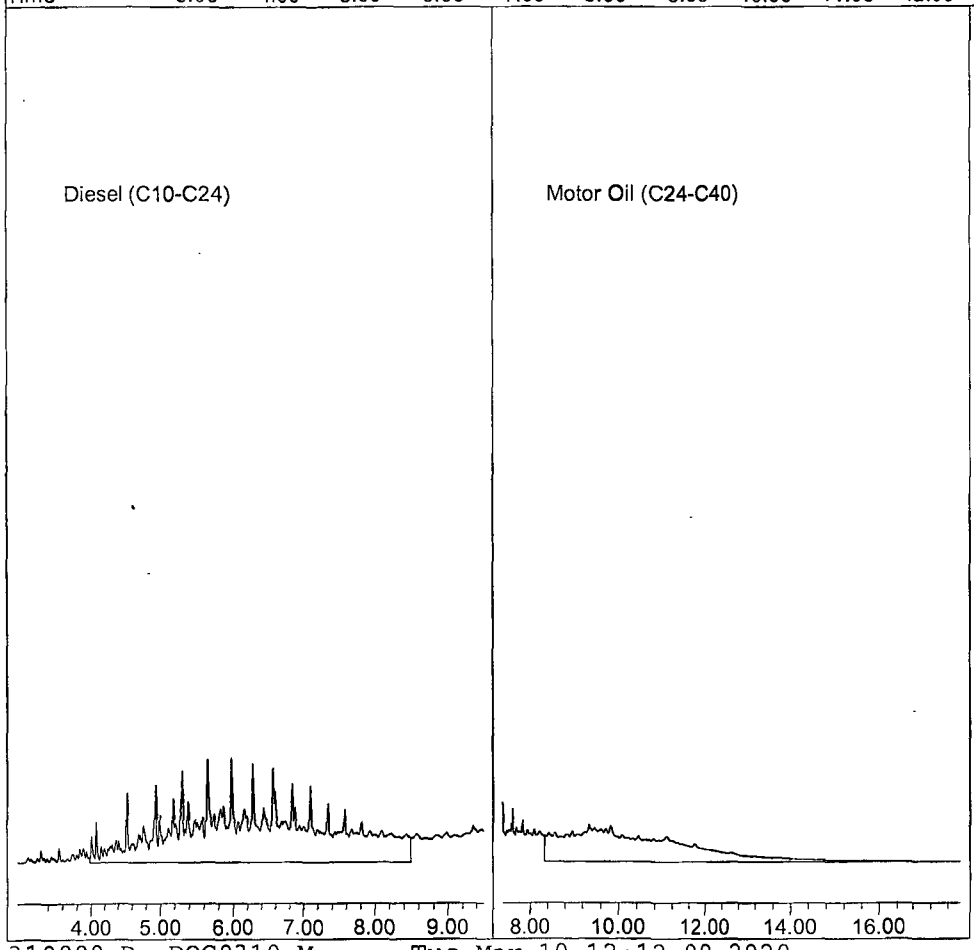
Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
3) SA Ortho-Terphenyl(S)	0.00	0	N.D.	ppb	d
Surrogate Spike 30.000	Recovery	=	0.00%		
4) SA Octacosane(S)	0.00	0	N.D.	ppb	d
Surrogate Spike 30.000	Recovery	=	0.00%		
Target Compounds					
1) HATM Diesel (C10-C24)	6.24	1063920828	277.408	ppb	
2) HBTM Motor Oil (C24-C40)	12.60	767745055	260.359	ppb	

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200310\310009.D
Sample : Diesel Motor Oil-SS 3/5/20





TPH Extractables
DOC0310

Form 7
Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 04/24/20
Instrument: Apollo
Initial Cal. Date: 03/10/20
Data File: _424001A.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1917610	2201200	15	HATM	
2	HBTM	Motor Oil (C24-C40)	1474400	1568910	6.4	HBTM	
3	SA	Ortho-Terphenyl(S)	2510520	2599020	3.5	SA	
4	SA	Octacosane(S)	1746260	1981480	13	SA	
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		Average			9.5		

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424_424001A.D Vial: 22
Acq On : 4-24-20 13:03:50 Operator: SS
Sample : Diesel Motor Oil-CCV 3/17/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Apr 24 13:35 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200424\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Apr 21 10:56:52 2020
Response via : Multiple Level Calibration

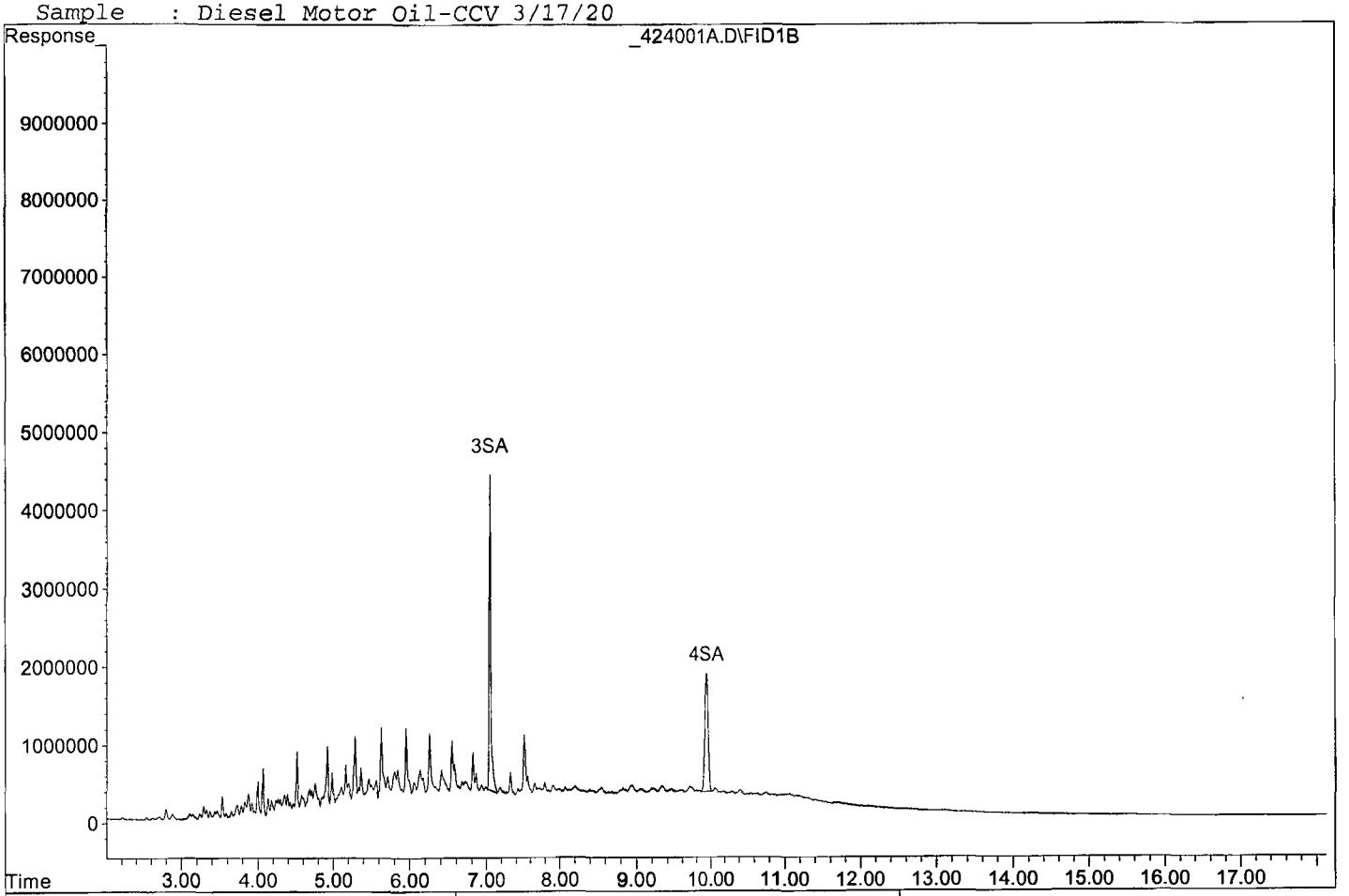
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

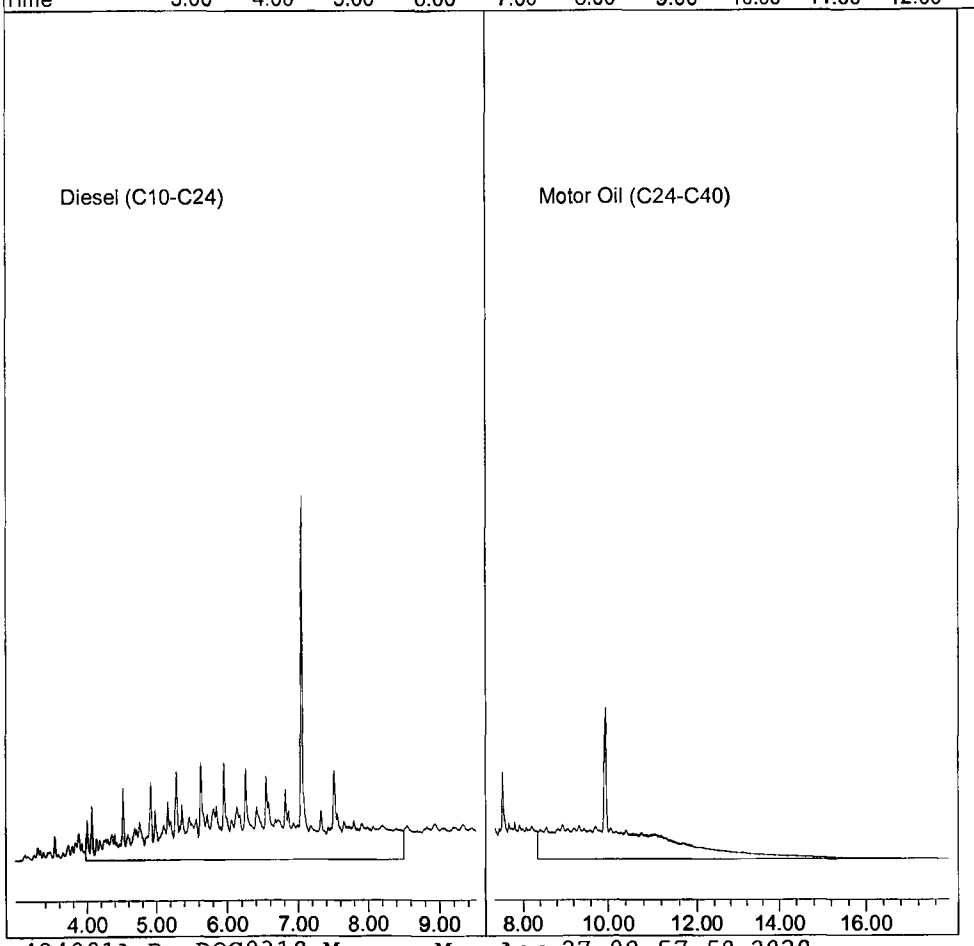
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.04	64975473	12.941	ppb
Surrogate Spike 30.000	Recovery =		43.14%	
4) SA Octacosane(S)	9.94	49536959	14.184	ppb
Surrogate Spike 30.000	Recovery =		47.28%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.24	1100602047	286.972	ppb
2) HBTM Motor Oil (C24-C40)	12.60	784452920	266.025	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200424_424001A.D
Sample : Diesel Motor Oil-CCV 3/17/20





_424001A.D DOC0310.M Mon Apr 27 09:57:59 2020

TPH Extractables
DOC0310

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 04/24/20
Instrument: Apollo
Initial Cal. Date: 03/10/20
Data File: 424014.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1917610	2287820	19	HATM	
2	HBTM	Motor Oil (C24-C40)	1474400	1601540	8.6	HBTM	
3	SA	Ortho-Terphenyl(S)	2510520	2705390	7.8	SA	
4	SA	Octacosane(S)	1746260	2068000	18	SA	
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		Average			13.4		

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424014.D Vial: 14
Acq On : 4-24-20 18:59:07 Operator: SS
Sample : Diesel Motor Oil-CCV 3/17/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Apr 25 8:55 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200424\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Apr 21 10:56:52 2020
Response via : Multiple Level Calibration

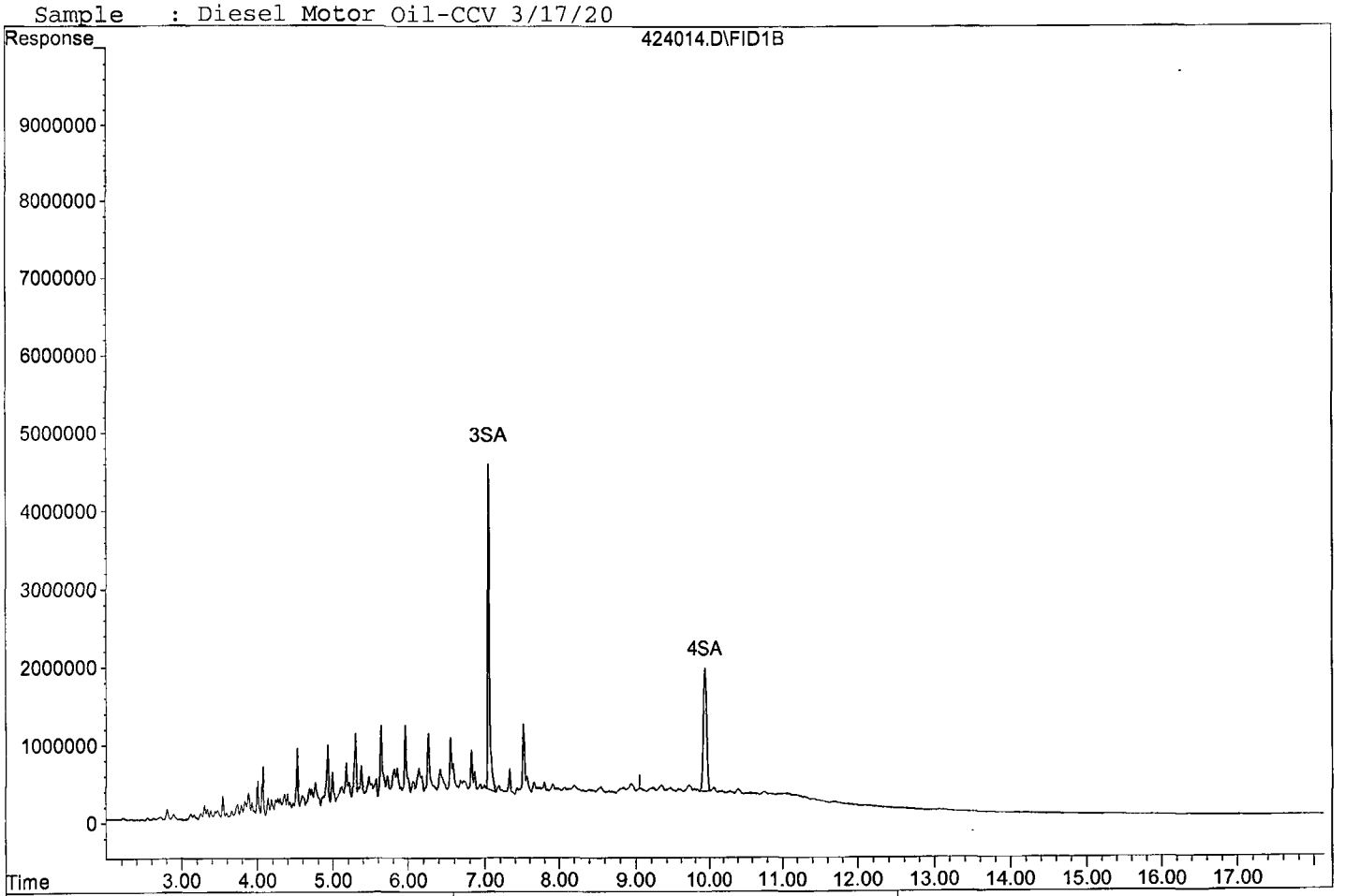
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

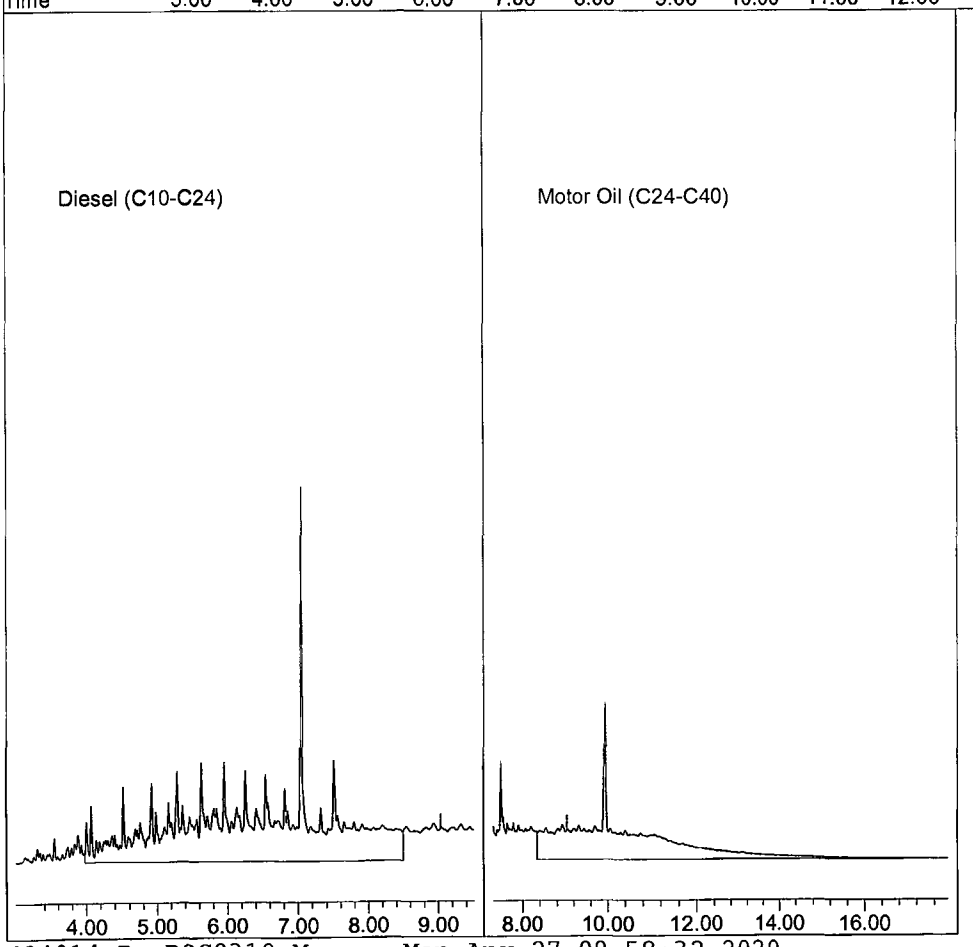
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.05	67634864	13.470 ppb
Surrogate Spike 30.000	Recovery =		44.90%
4) SA Octacosane(S)	9.94	51700105	14.803 ppb
Surrogate Spike 30.000	Recovery =		49.34%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	1143909051	298.264 ppb
2) HBTM Motor Oil (C24-C40)	12.60	800770576	271.559 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200424\424014.D
Sample : Diesel Motor Oil-CCV 3/17/20





424014.D DOC0310.M Mon Apr 27 09:58:32 2020

TPH Extractables
DOC0310

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 05/04/20
Instrument: Apollo
Initial Cal. Date: 03/10/20
Data File: 424095.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1917610	2067120	7.8	HATM	
2	HBTM	Motor Oil (C24-C40)	1474400	1399240	5.1	HBTM	
3	SA	Ortho-Terphenyl(S)	2510520	2451320	2.4	SA	
4	SA	Octacosane(S)	1746260	1836860	5.2	SA	
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40							
		Average			5.1		

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424095.D Vial: 95
Acq On : 5-4-20 15:02:27 Operator: SS
Sample : Diesel Motor Oil-CCV 4/29/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: May 5 11:08 2020 Quant Results File: DOC0310.RES

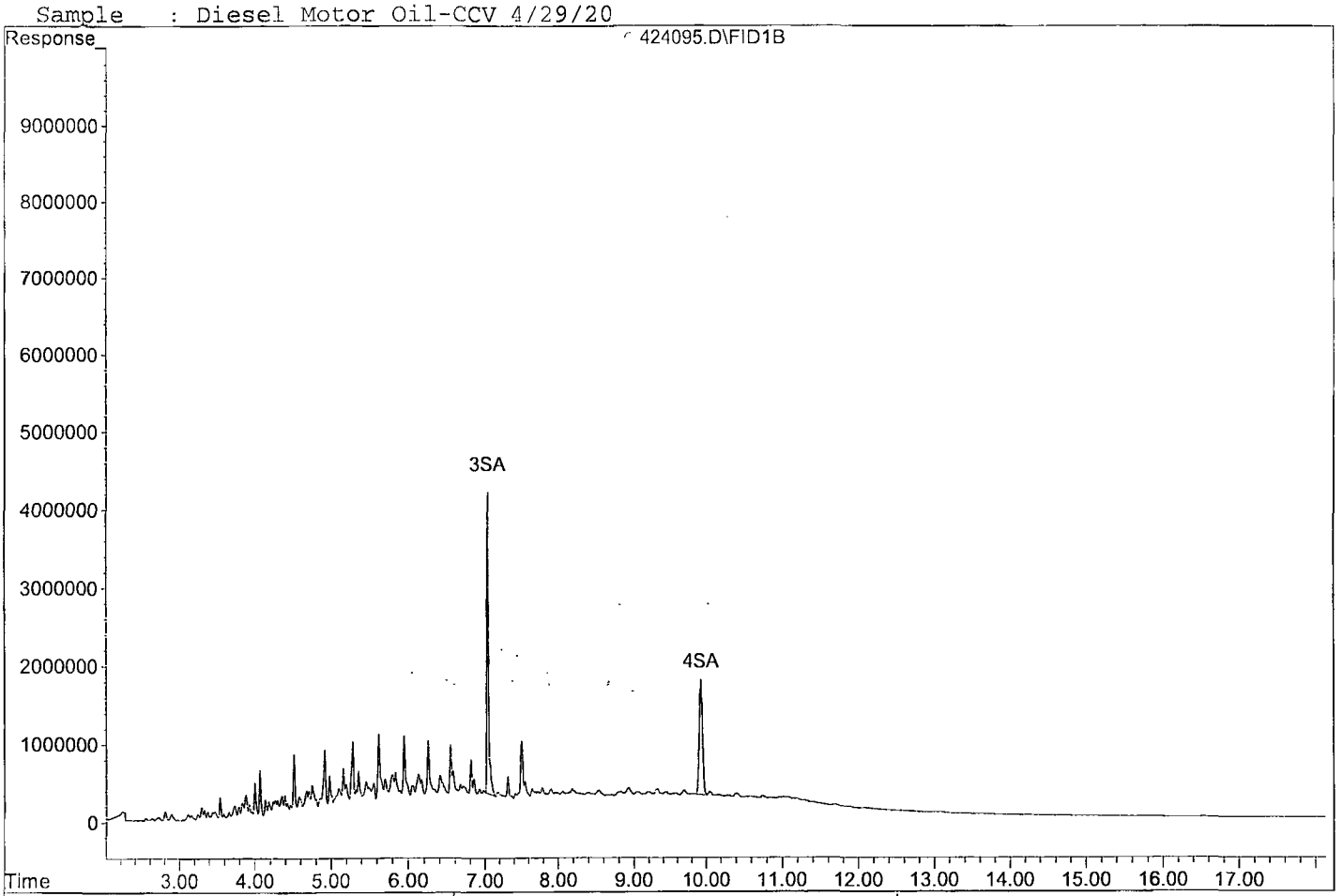
Method : G:\APOLLO\DATA\200424\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Apr 21 10:56:52 2020
Response via : Multiple Level Calibration

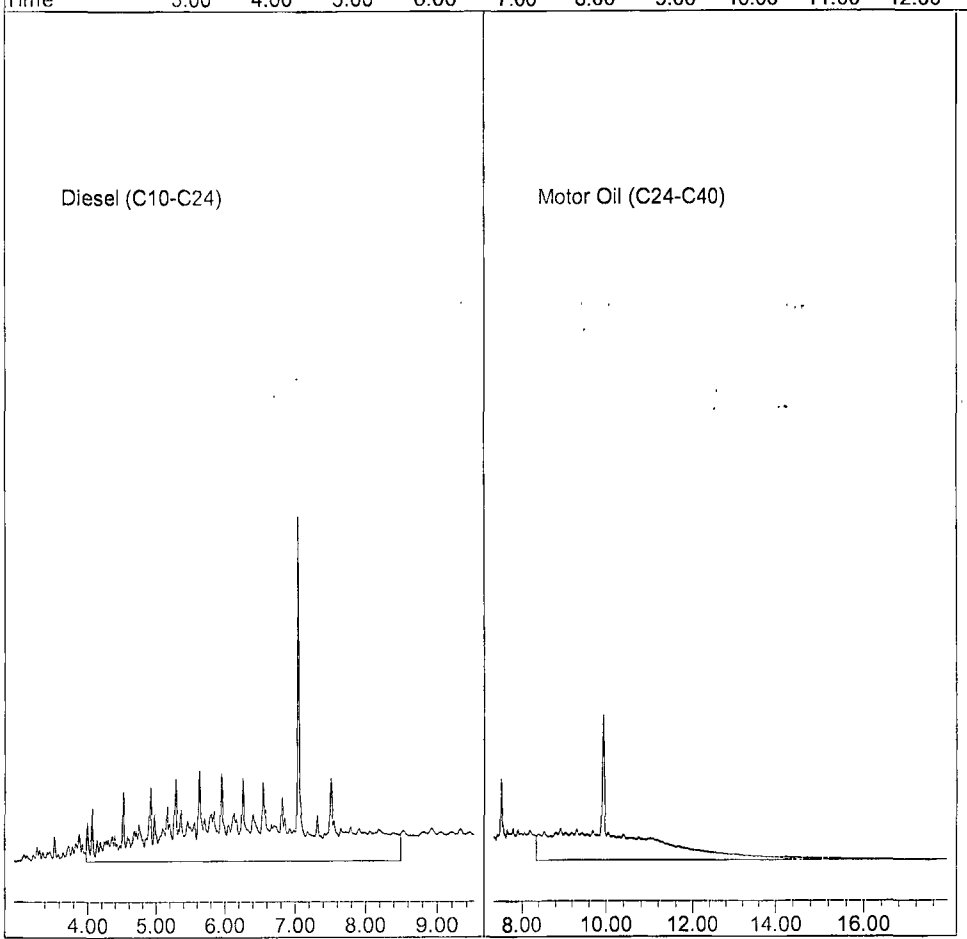
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.04	61283036	12.205 ppb
Surrogate Spike 30.000	Recovery =		40.68%
4) SA Octacosane(S)	9.93	45921597	13.149 ppb
Surrogate Spike 30.000	Recovery =		43.83%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	1033560680	269.492 ppb
2) HBTM Motor Oil (C24-C40)	12.60	699618352	237.256 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200424\424095.D
Sample : Diesel Motor Oil-CCV 4/29/20





TPH Extractables
DOC0310

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 05/04/20
Instrument: Apollo
Initial Cal. Date: 03/10/20
Data File: 424109.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1917610	2178910	14	HATM	
2	HBTM	Motor Oil (C24-C40)	1474400	1473420	0.07	HBTM	
3	SA	Ortho-Terphenyl(S)	2510520	2592740	3.3	SA	
4	SA	Octacosane(S)	1746260	1917580	9.8	SA	
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		Average			6.8		

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424109.D Vial: 9
Acq On : 5-4-20 20:22:31 Operator: SS
Sample : Diesel Motor Oil-CCV 4/29/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: May 5 9:42 2020 Quant Results File: DOC0310.RES

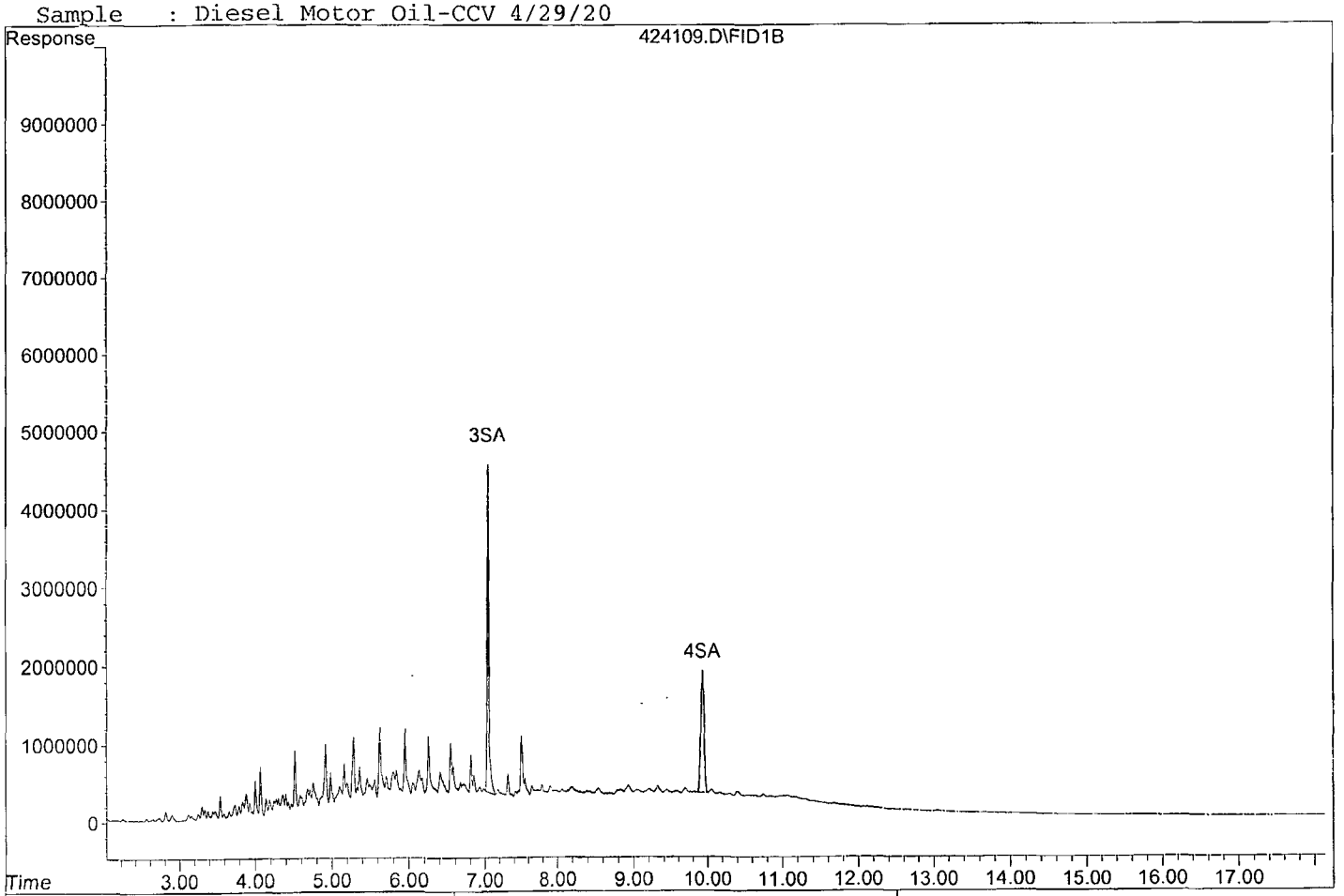
Method : G:\APOLLO\DATA\200424\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Apr 21 10:56:52 2020
Response via : Multiple Level Calibration

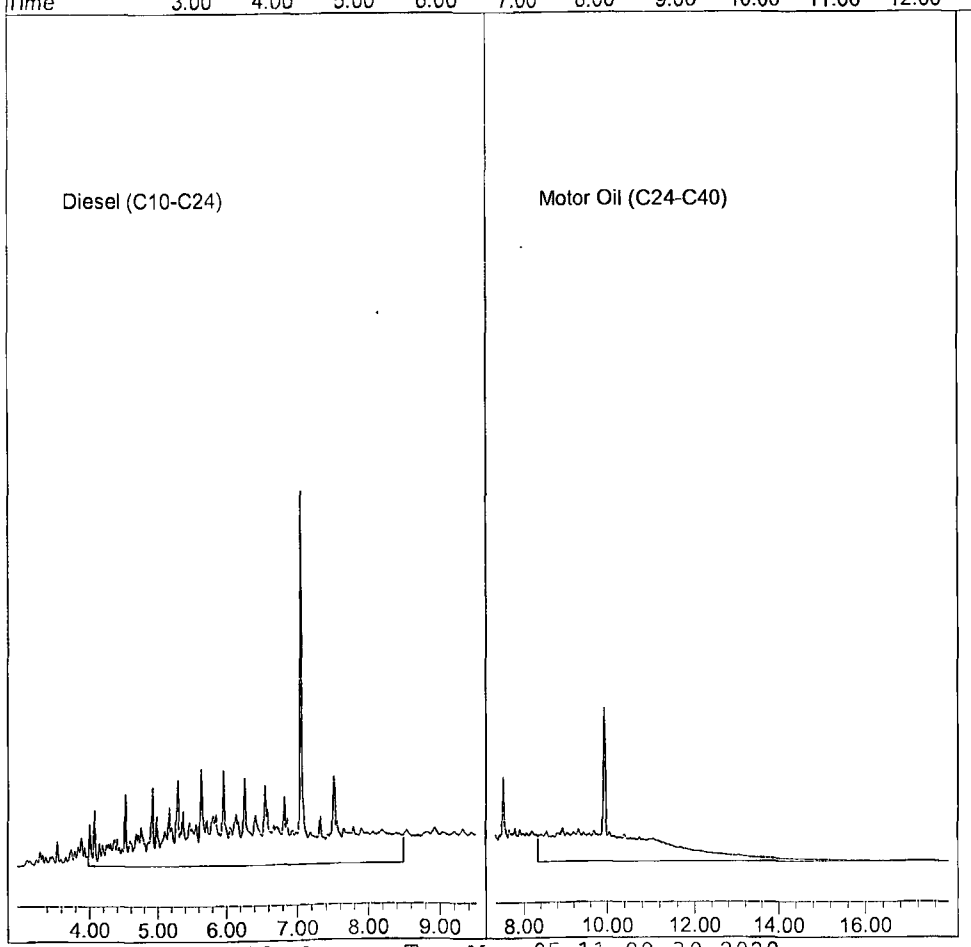
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.04	64818621	12.909 ppb
Surrogate Spike 30.000	Recovery =		43.03%
4) SA Octacosane(S)	9.93	47939624	13.726 ppb
Surrogate Spike 30.000	Recovery =		45.75%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	1089454045	284.065 ppb
2) HBTM Motor Oil (C24-C40)	12.60	736709642	249.834 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200424\424109.D
Sample : Diesel Motor Oil-CCV 4/29/20





424109.D DOC0310.M Tue May 05 11:09:30 2020

TPH Extractables
DEC0317

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 03/17/20
Matrix: Water Instrument: Apollo

Initials: SS/AV

			317002.D	317003 D	317004.D	317005.D	317006.D	317007.D									
		Compound	1	2	3	4	5	6					Avg	%RSD	Type	r^2	Q
1	SC	Decanoic Acid(S)	1325318	1449828	1357030	1682528	1897028	1689607					1566890	14	SC		
2																	
3																	
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0.4106

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317002.D Vial: 2
Acq On : 3-17-20 8:14:08 Operator: SS
Sample : Decanoic Acid-1 3/10/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 17 10:51 2020 Quant Results File: DEC0317.RES

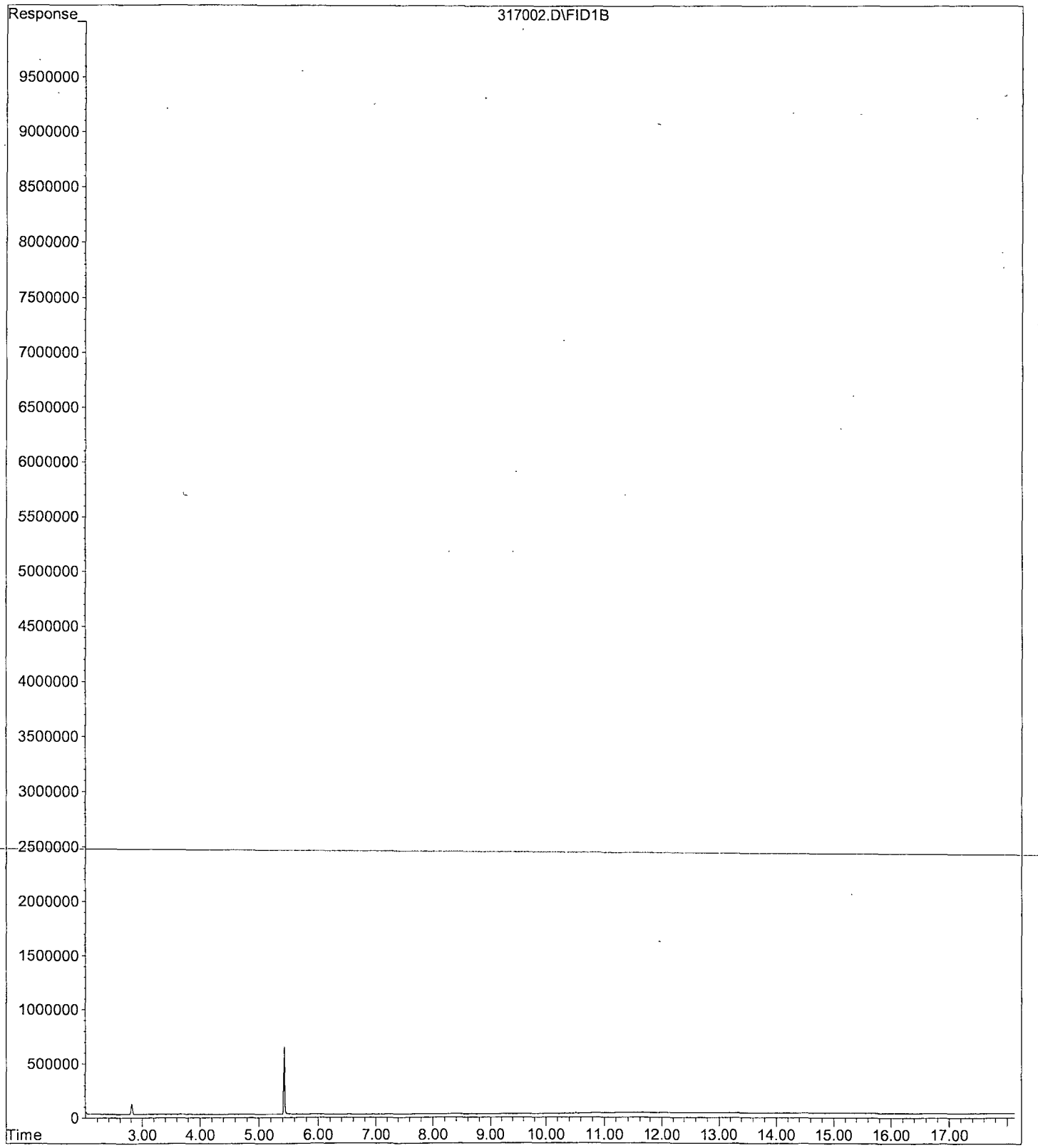
Method : G:\APOLLO\DATA\2019\191115\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	5.43	7951908	2.537 ppb
Surrogate Spike 24.000		Recovery =	10.57%
Target Compounds			
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

File : G:\APOLLO\DATA\200317\317002.D
Operator : SS
Acquired : 3-17-20 8:14:08 using AcqMethod TPHSN.M
Instrument : Apollo
Sample Name: Decanoic Acid-1 3/10/20
Misc Info : water
Vial Number: 2



Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317003.D Vial: 3
Acq On : 3-17-20 8:36:27 Operator: SS
Sample : Decanoic Acid-2 3/10/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 17 10:51 2020 Quant Results File: DEC0317.RES

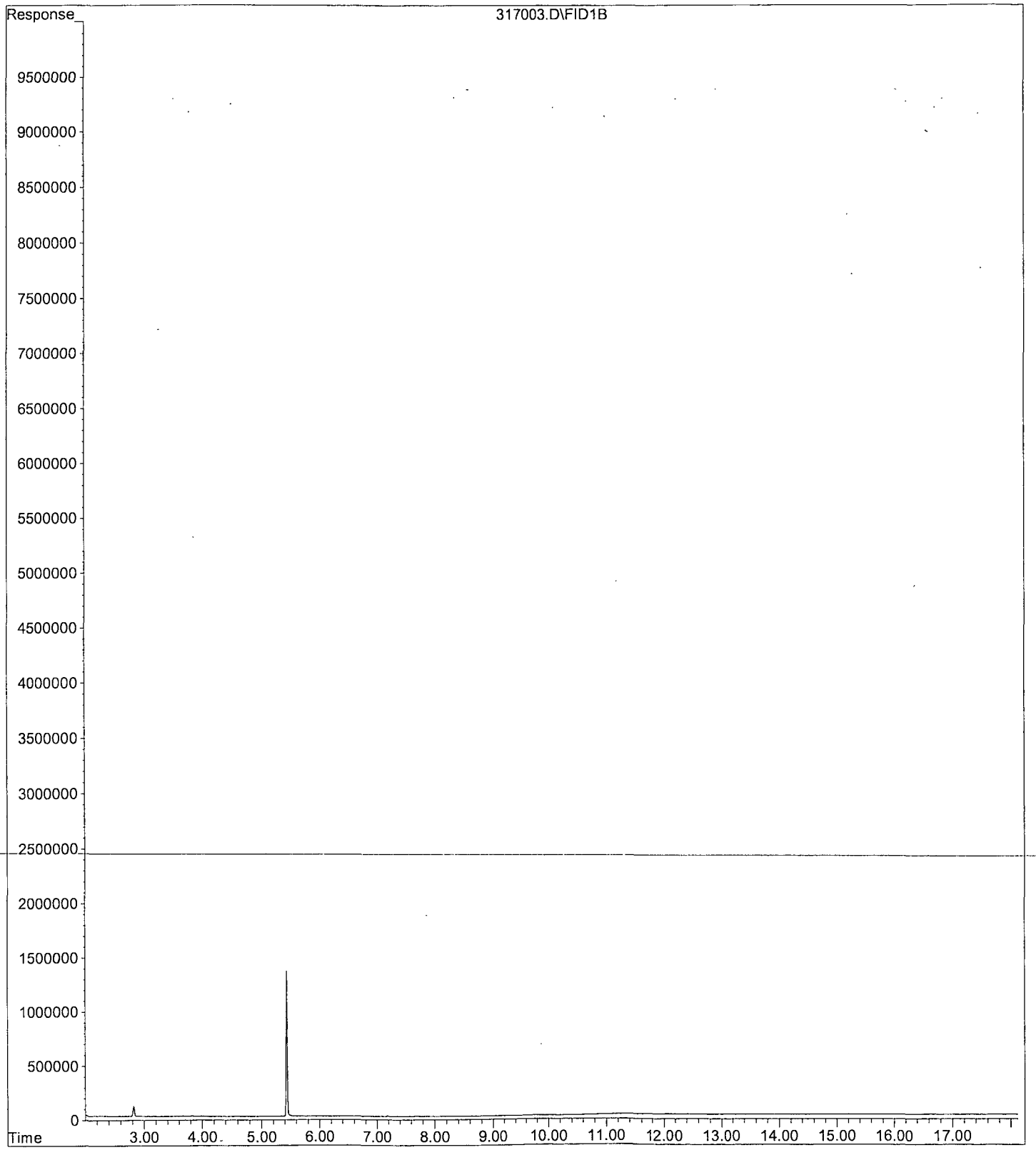
Method : G:\APOLLO\DATA\2019\191115\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	5.44	17397937	5.552 ppb
Surrogate Spike 24.000		Recovery =	23.13%
Target Compounds			
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

File : G:\APOLLO\DATA\200317\317003.D
Operator : SS
Acquired : 3-17-20 8:36:27 using AcqMethod TPHSN.M
Instrument : Apollo
Sample Name: Decanoic Acid-2 3/10/20
Misc Info : water
Vial Number: 3



Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317004.D Vial: 4
Acq On : 3-17-20 8:58:53 Operator: SS
Sample : Decanoic Acid-3 3/10/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 17 10:51 2020 Quant Results File: DEC0317.RES

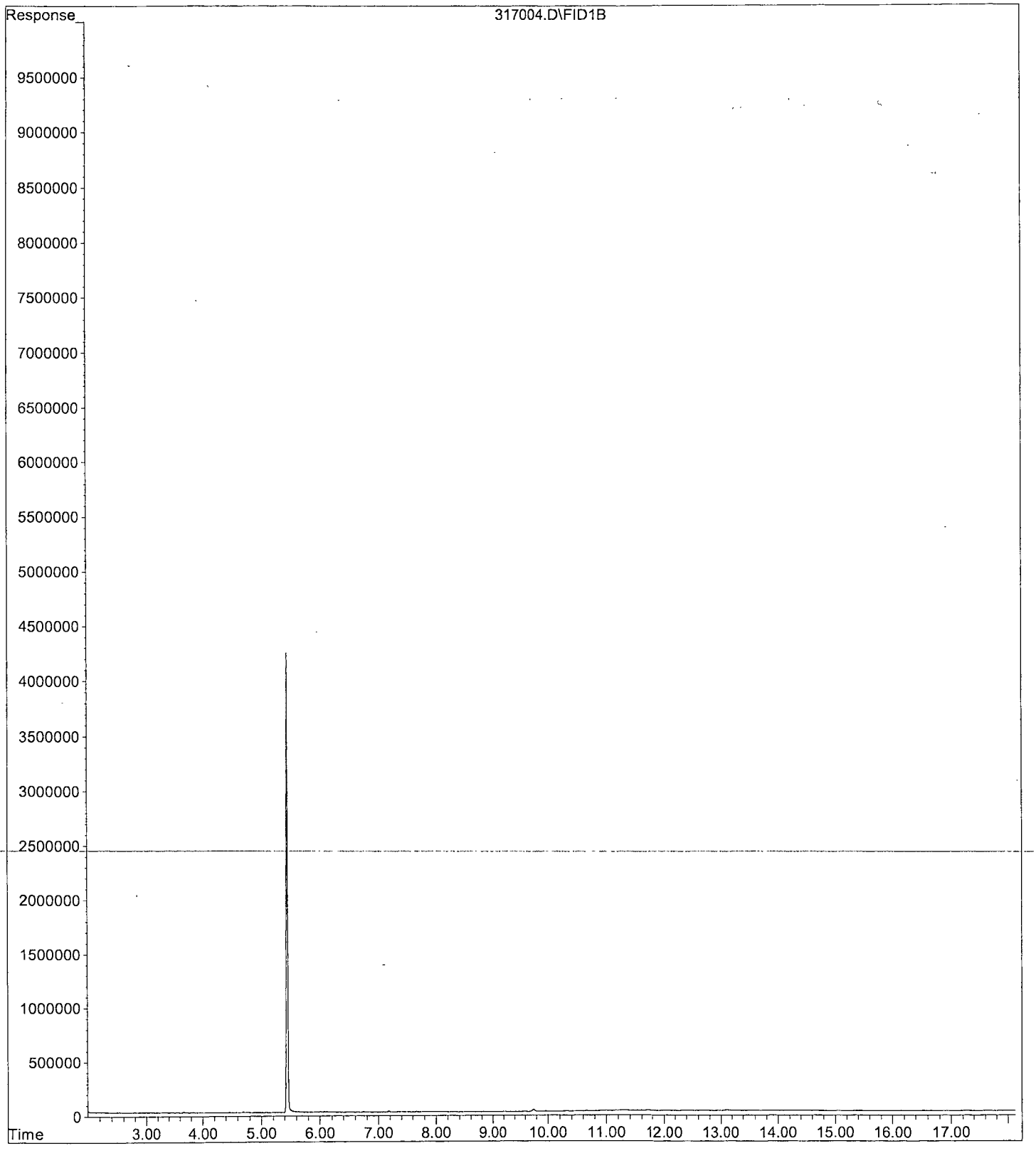
Method : G:\APOLLO\DATA\2019\191115\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	5.45	65137449	20.786 ppb
Surrogate Spike 24.000	Recovery =		86.61%
Target Compounds			
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

File : G:\APOLLO\DATA\200317\317004.D
Operator : SS
Acquired : 3-17-20 8:58:53 using AcqMethod TPHSN.M
Instrument : Apollo
Sample Name: Decanoic Acid-3 3/10/20
Misc Info : water
Vial Number: 4



Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317005.D Vial: 5
Acq On : 3-17-20 9:21:15 Operator: SS
Sample : Decanoic Acid-4 3/10/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 17 10:51 2020 Quant Results File: DEC0317.RES

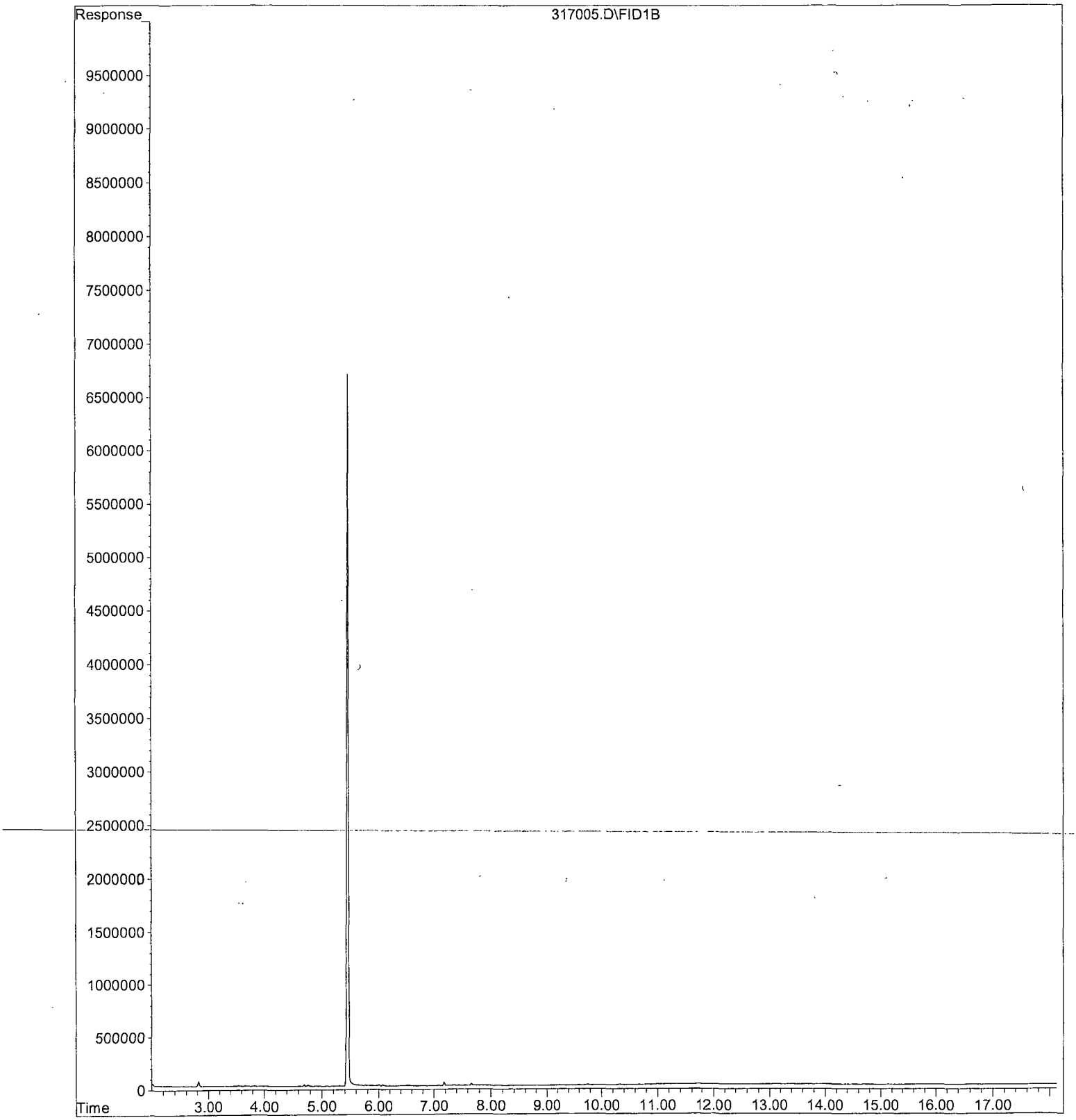
Method : G:\APOLLO\DATA\2019\191115\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	5.46	121142045	38.657 ppb
Surrogate Spike 24.000		Recovery =	161.07%
Target Compounds			
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

File : G:\APOLLO\DATA\200317\317005.D
Operator : SS
Acquired : 3-17-20 9:21:15 using AcqMethod TPHSN.M
Instrument : Apollo
Sample Name: Decanoic Acid-4 3/10/20
Misc Info : water
Vial Number: 5



Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317006.D Vial: 6
Acq On : 3-17-20 9:43:41 Operator: SS
Sample : Decanoic Acid-5 3/10/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 17 10:51 2020 Quant Results File: DEC0317.RES

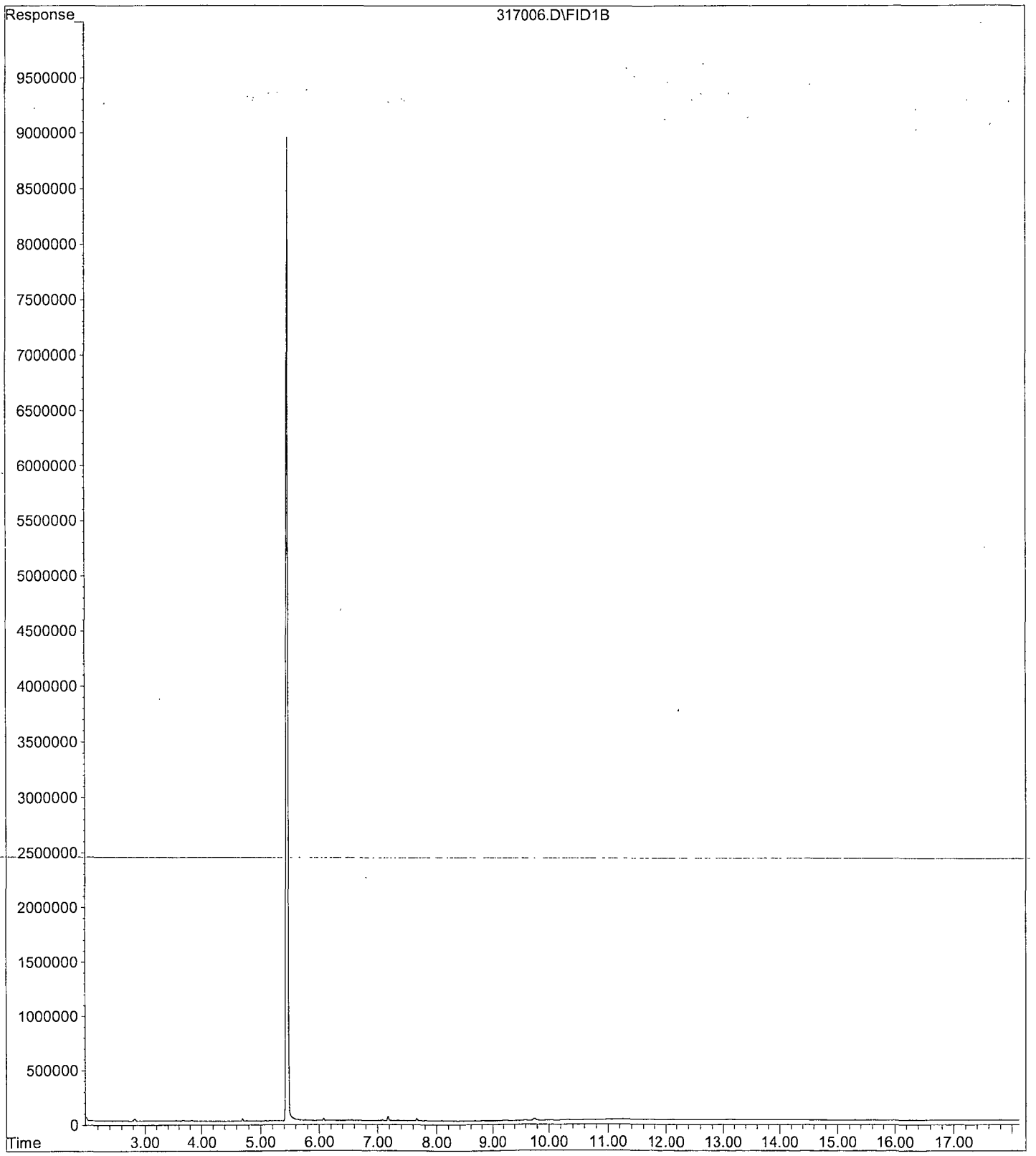
Method : G:\APOLLO\DATA\2019\191115\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	5.47	182114736	58.113 ppb
Surrogate Spike 24.000		Recovery =	242.14%
Target Compounds			
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

File : G:\APOLLO\DATA\200317\317006.D
Operator : SS
Acquired : 3-17-20 9:43:41 using AcqMethod TPHSN.M
Instrument : Apollo
Sample Name: Decanoic Acid-5 3/10/20
Misc Info : water
Vial Number: 6



Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200317\317007.D Vial: 7
Acq On : 3-17-20 10:06:06 Operator: SS
Sample : Decanoic Acid-6 3/10/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: Mar 17 10:51 2020 Quant Results File: DEC0317.RES

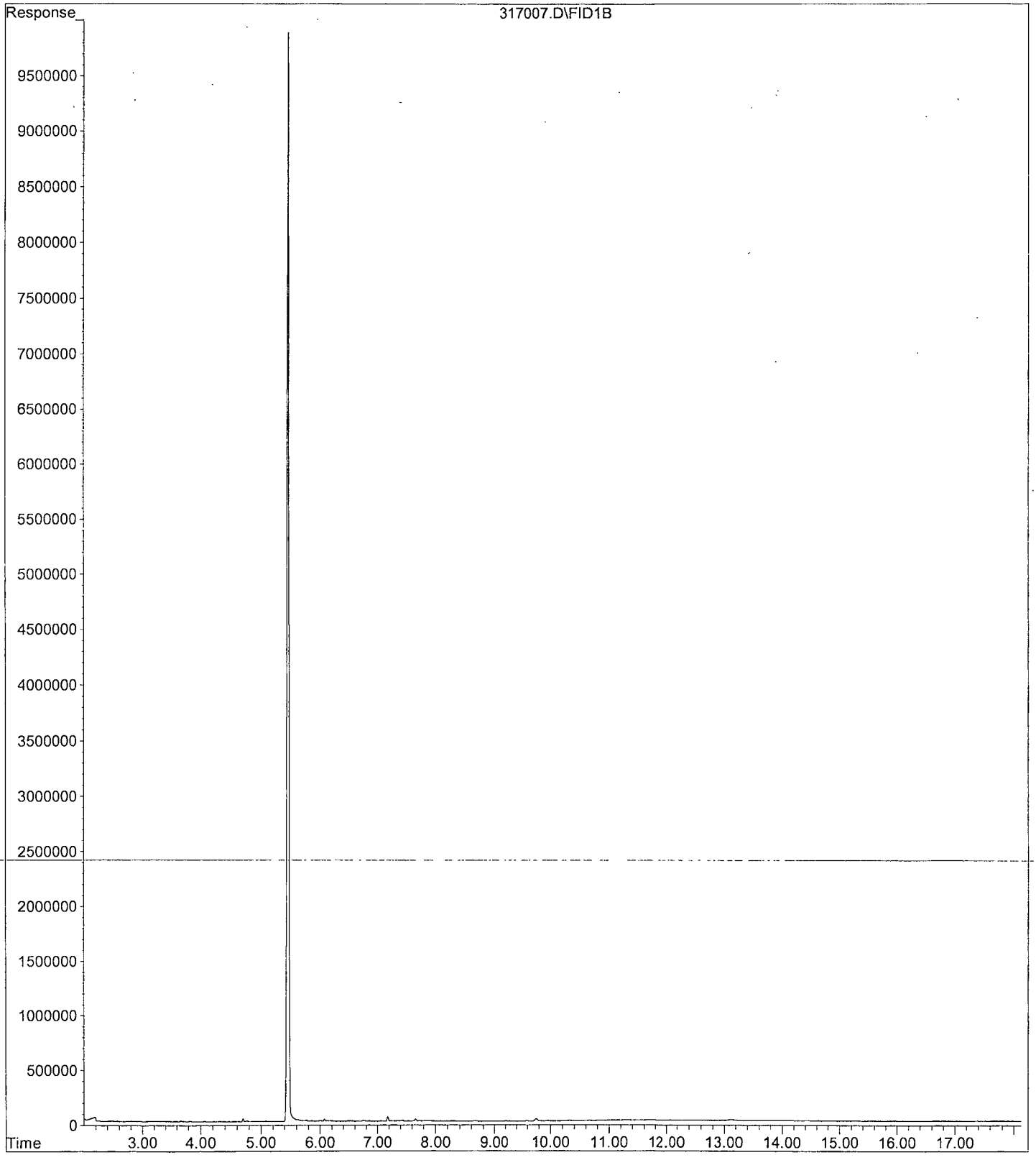
Method : G:\APOLLO\DATA\2019\191115\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) SC Decanoic Acid(S)	5.47	202752841	64.699	ppb
Surrogate Spike 24.000	Recovery = 269.58%			
Target Compounds				
Target Compounds				

(f)=RT Delta > 1/2 Window (m)=manual int.

File : G:\APOLLO\DATA\200317\317007.D
Operator : SS
Acquired : 3-17-20 10:06:06 using AcqMethod TPHSN.M
Instrument : Apollo
Sample Name: Decanoic Acid-6 3/10/20
Misc Info : water
Vial Number: 7



TPH Extractables
DOC0310

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 05/07/20
Instrument: Apollo
Initial Cal. Date: 03/10/20
Data File: 424180.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1917610	2106300	9.8	HATM	
2	HBTM	Motor Oil (C24-C40)	1474400	1414190	4.1	HBTM	
3	SA	Ortho-Terphenyl(S)	2510520	2494060	0.66	SA	
4	SA	Octacosane(S)	1746260	1881780	7.8	SA	
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		Average			5.6		

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424180.D Vial: 80
Acq On : 5-7-20 14:35:12 Operator: SS
Sample : Diesel Motor Oil-CCV 4/29/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: May 7 14:56 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200424\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Apr 21 10:56:52 2020
Response via : Multiple Level Calibration

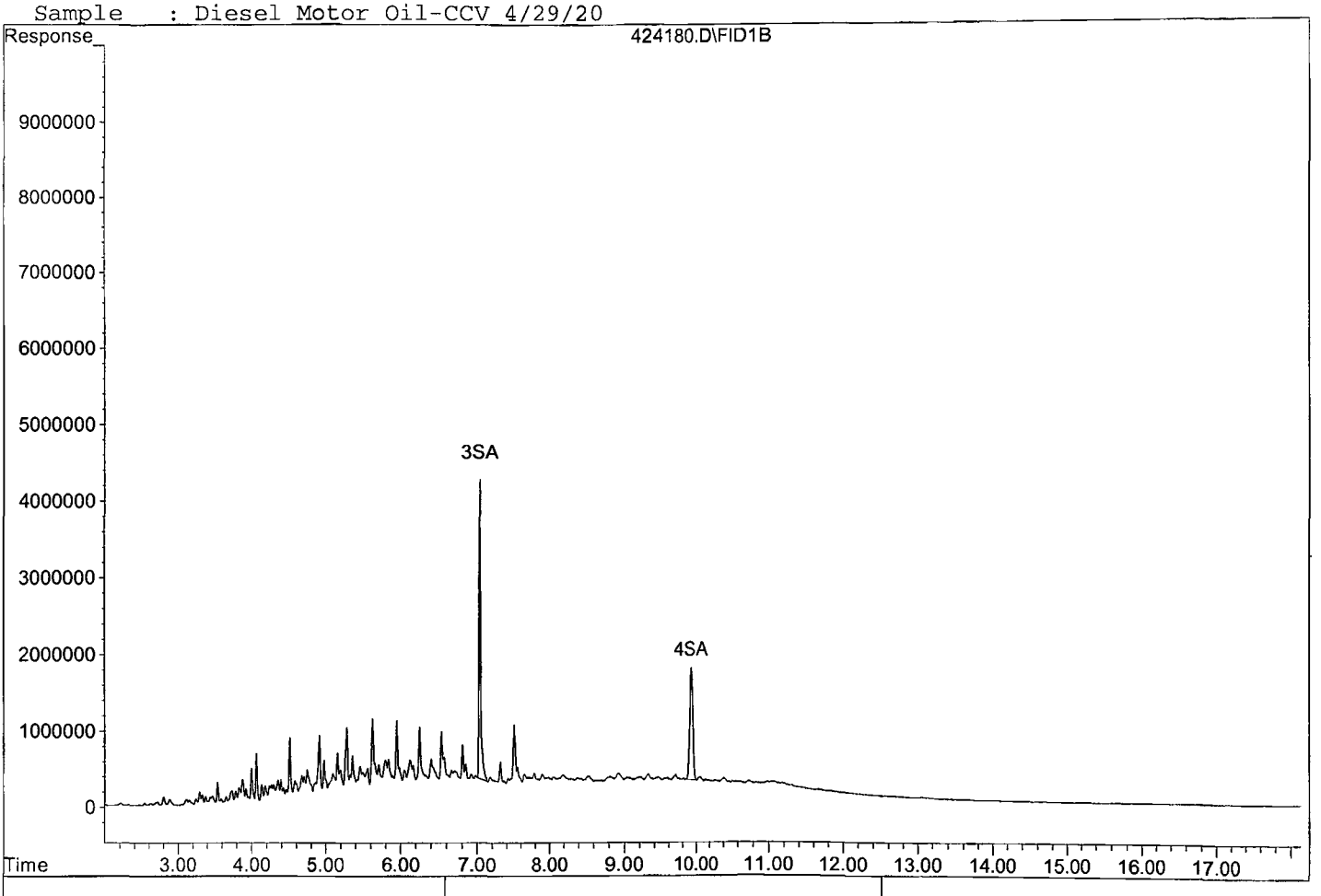
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

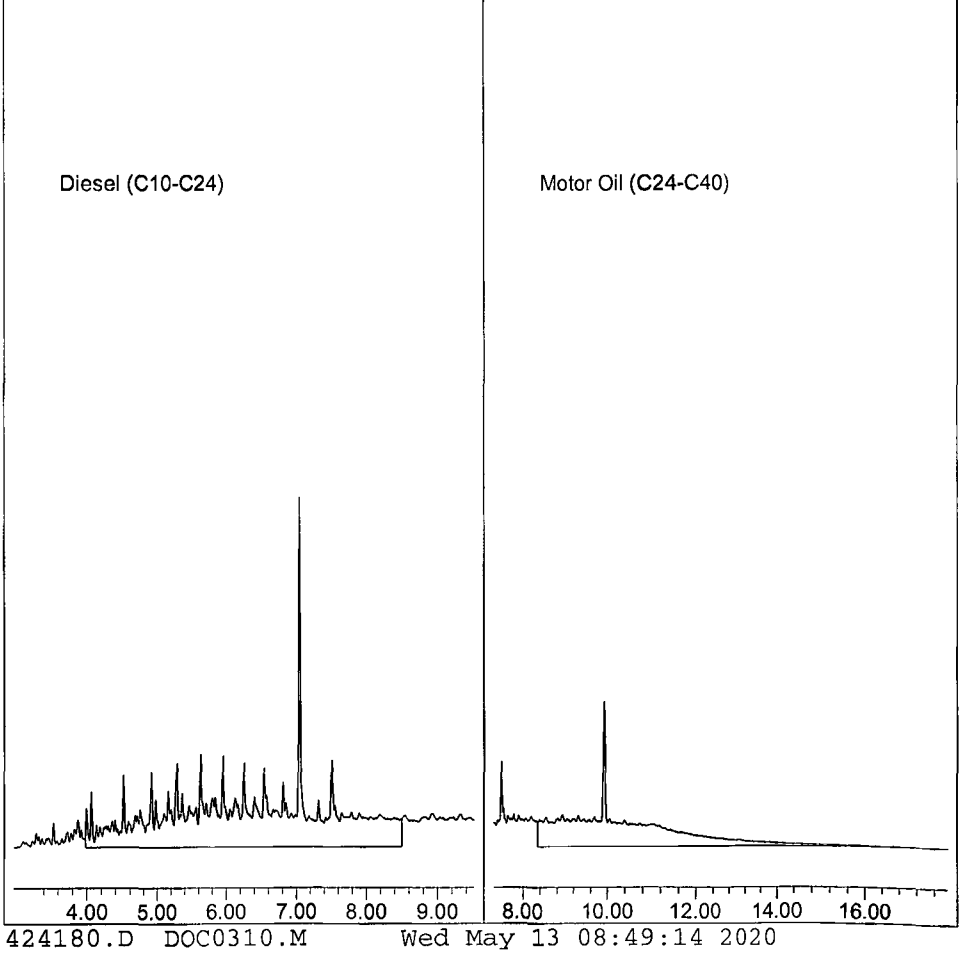
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.04	62351386	12.418 ppb
Surrogate Spike 30.000	Recovery =		41.39%
4) SA Octacosane(S)	9.93	47044435	13.470 ppb
Surrogate Spike 30.000	Recovery =		44.90%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	1053149626	274.599 ppb
2) HBTM Motor Oil (C24-C40)	12.60	707097237	239.792 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200424\424180.D
Sample : Diesel Motor Oil-CCV 4/29/20





424180.D DOC0310.M Wed May 13 08:49:14 2020

TPH Extractables
DEC0317

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 05/07/20
Instrument: Apollo
Initial Cal. Date: 03/17/20
Data File: 424181.D

		Compound	MEAN	CCRF	%D	%Drift	
1	SC	Decanoic Acid(S)	1566890	1557620	0.59	SC	
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3							
4							
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40							
		Average			0.6		

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424181.D Vial: 81
Acq On : 5-7-20 15:24:14 Operator: SS
Sample : Decanoic Acid-CCV 3/20/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 9:11 2020 Quant Results File: DEC0317.RES

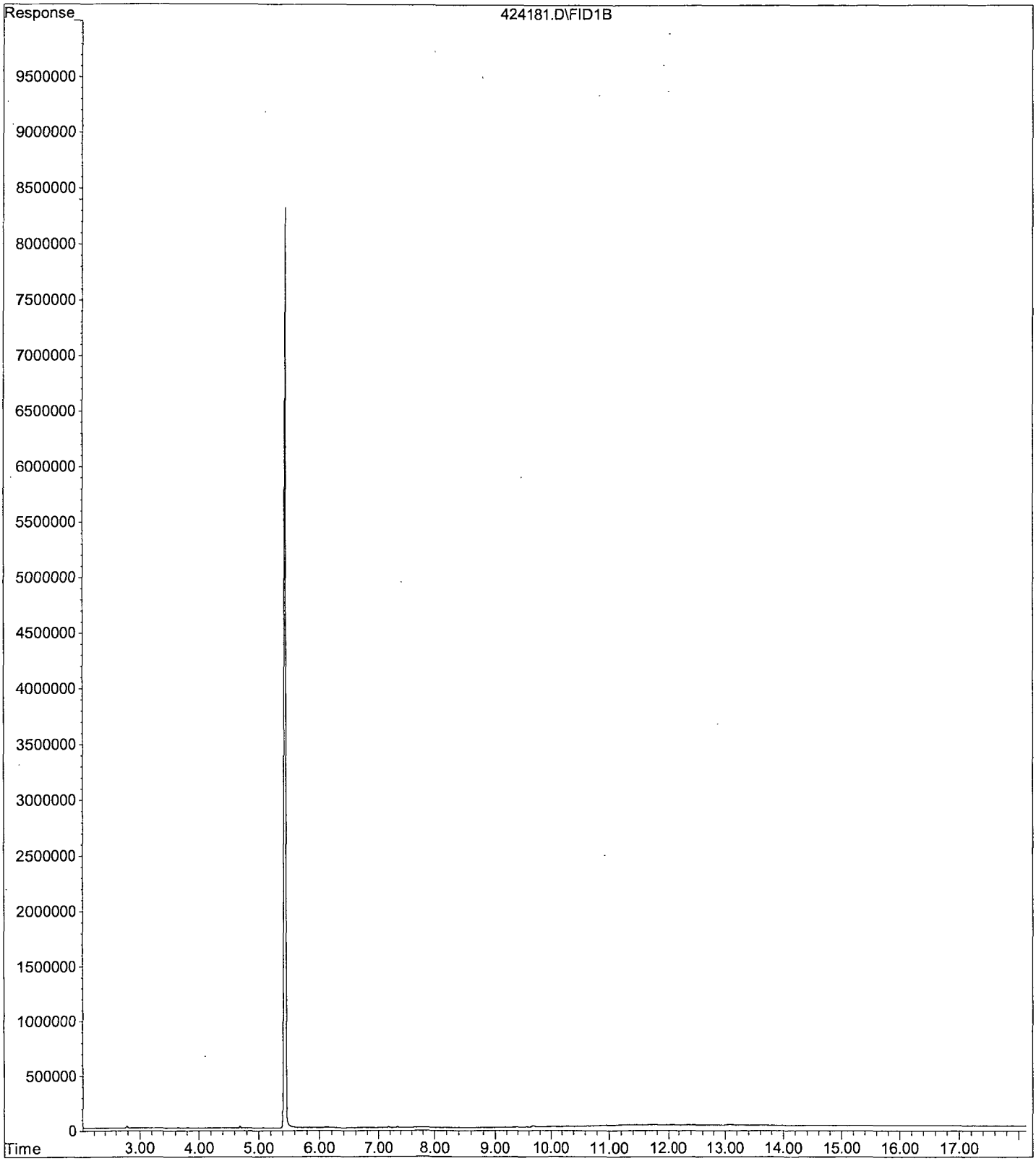
Method : G:\APOLLO\DATA\200424\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	5.45	149531458	47.716 ppb
Surrogate Spike 24.000		Recovery =	198.82%
Target Compounds			
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

File : G:\APOLLO\DATA\200424\424181.D
Operator : SS
Acquired : 5-7-20 15:24:14 using AcqMethod TPHSN.M
Instrument : Apollo
Sample Name: Decanoic Acid-CCV 3/20/20
Misc Info : water
Vial Number: 81



TPH Extractables
DEC0317

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 05/07/20
Instrument: Apollo
Initial Cal. Date: 03/17/20
Data File: 424192.D

		Compound	MEAN	CCRF	%D		%Drift
1	SC	Decanoic Acid(S)	1566890	1603480	2.3	SC	
2							
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40							
		Average			2.3		

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424192.D Vial: 92
Acq On : 5-7-20 19:49:42 Operator: SS
Sample : Decanoic Acid-CCV 3/20/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 9:13 2020 Quant Results File: DEC0317.RES

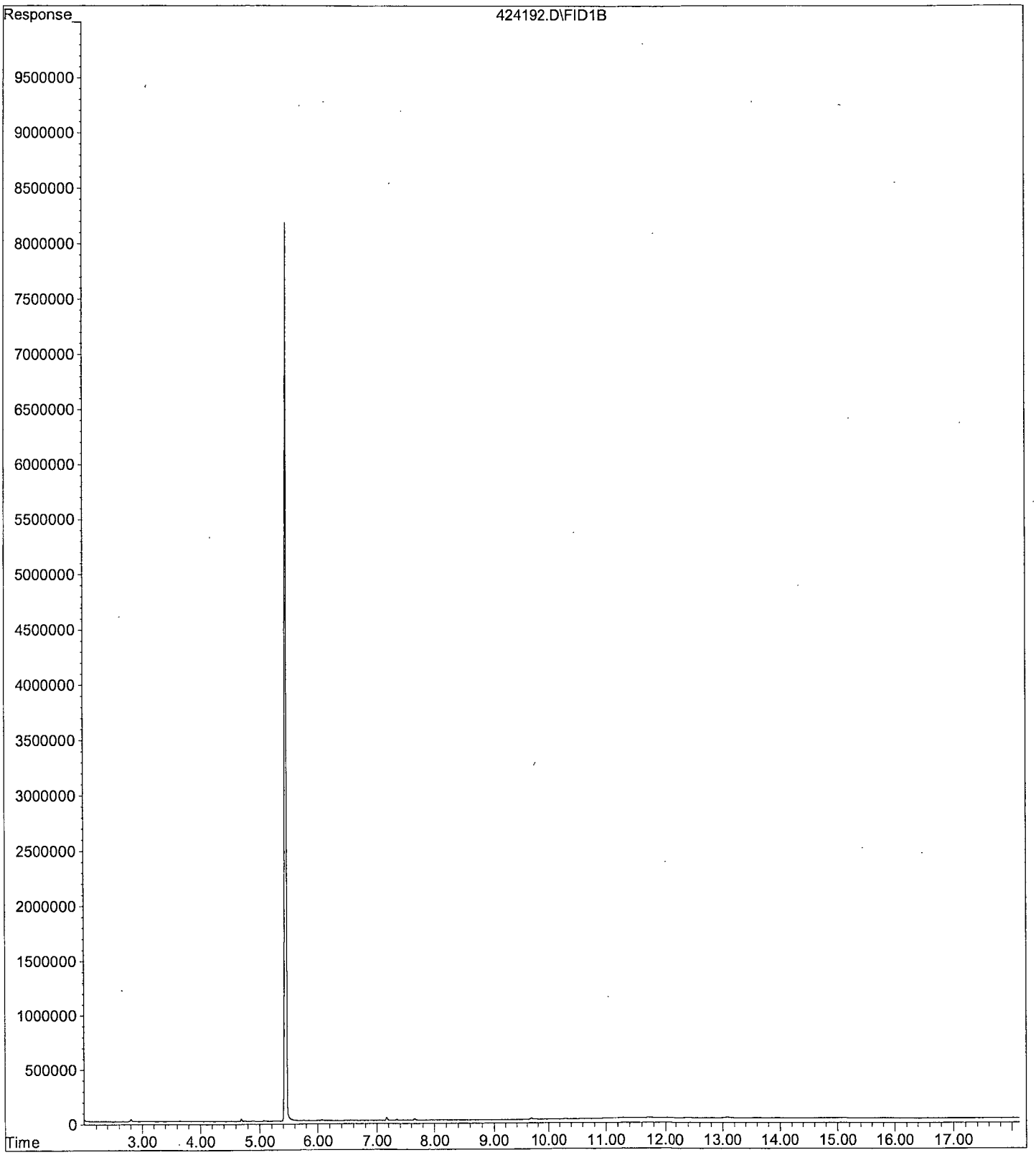
Method : G:\APOLLO\DATA\200424\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	5.46	153933665	49.121 ppb
Surrogate Spike 24.000		Recovery =	204.67%
Target Compounds			
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

File : G:\APOLLO\DATA\200424\424192.D
Operator : SS
Acquired : 5-7-20 19:49:42 using AcqMethod TPHSN.M
Instrument : Apollo
Sample Name: Decanoic Acid-CCV 3/20/20
Misc Info : water
Vial Number: 92



TPH Extractables
DOC0310

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 05/07/20
Instrument: Apollo
Initial Cal. Date: 03/10/20
Data File: 424193.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1917610	2104510	9.7	HATM	
2	HBTM	Motor Oil (C24-C40)	1474400	1416120	4.0	HBTM	
3	SA	Ortho-Terphenyl(S)	2510520	2495190	0.61	SA	
4	SA	Octacosane(S)	1746260	1863570	6.7	SA	
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		Average			5.3		

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424193.D Vial: 93
Acq On : 5-7-20 20:12:24 Operator: SS
Sample : Diesel Motor Oil-CCV 4/29/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 8:39 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200424\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Apr 21 10:56:52 2020
Response via : Multiple Level Calibration

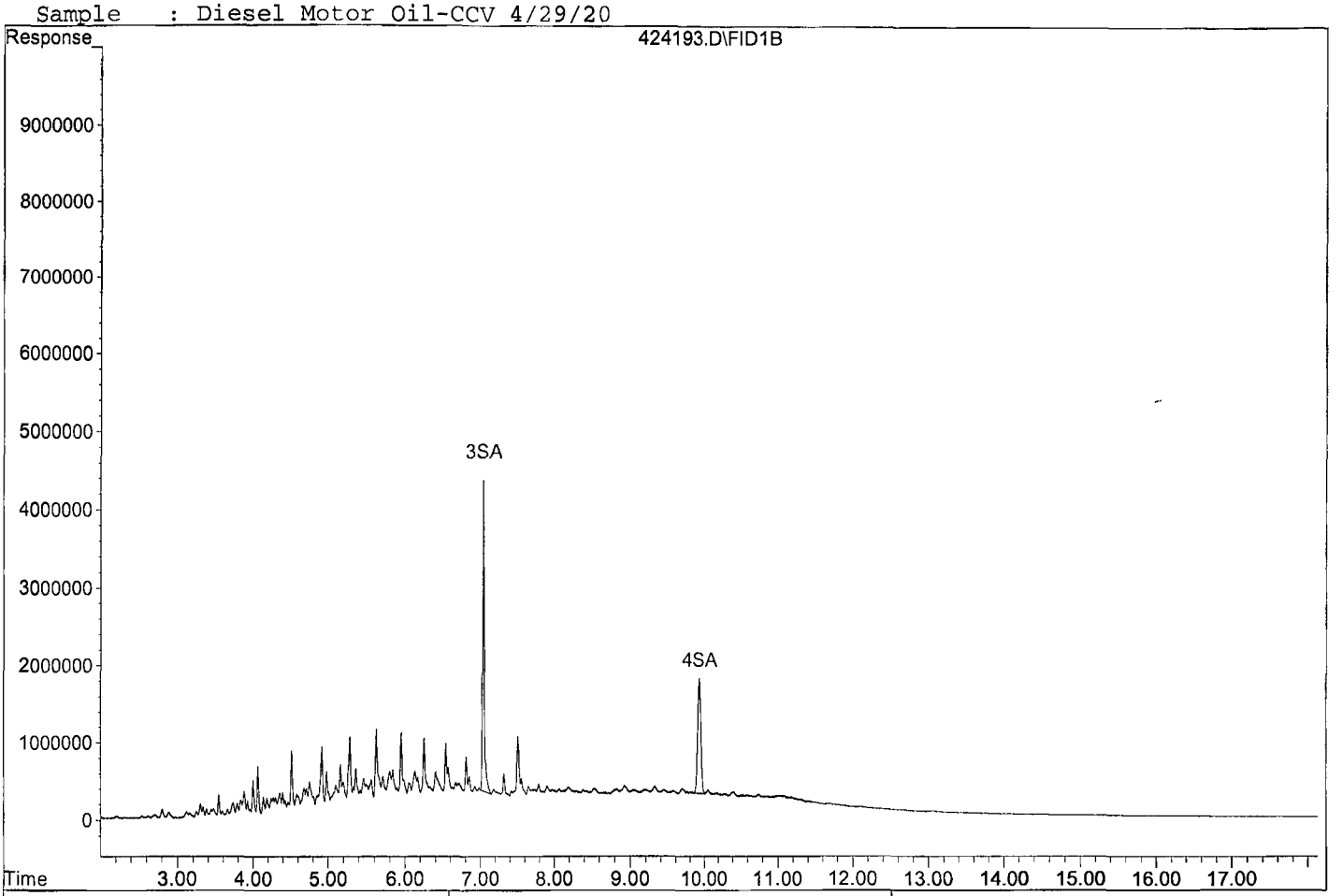
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

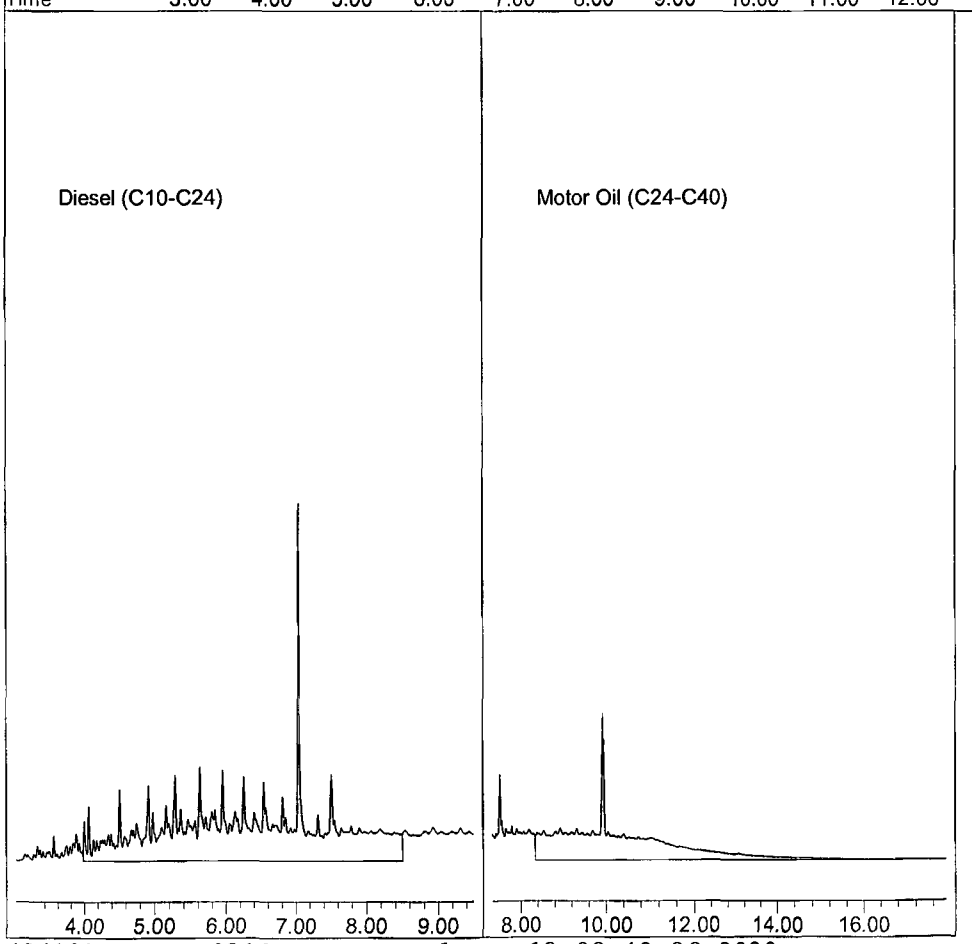
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.04	62379860	12.424 ppb
Surrogate Spike 30.000		Recovery =	41.41%
4) SA Octacosane(S)	9.93	46589171	13.340 ppb
Surrogate Spike 30.000		Recovery =	44.47%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	1052255779	274.366 ppb
2) HBTM Motor Oil (C24-C40)	12.60	708061893	240.119 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200424\424193.D
Sample : Diesel Motor Oil-CCV 4/29/20





424193.D DOC0310.M Wed May 13 08:49:38 2020

TPH Extractables
DOC0310

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 05/12/20
Instrument: Apollo
Initial Cal. Date: 03/10/20
Data File: 424242.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1917610	2150090	12	HATM	
2	HBTM	Motor Oil (C24-C40)	1474400	1456330	1.2	HBTM	
3	SA	Ortho-Terphenyl(S)	2510520	2535950	1.0	SA	
4	SA	Octacosane(S)	1746260	1908730	9.3	SA	
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		Average			5.9		

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424242.D Vial: 42
Acq On : 5-12-20 13:36:05 Operator: SS
Sample : Diesel Motor Oil-CCV 4/29/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: May 12 14:18 2020 Quant Results File: DOC0310.RES

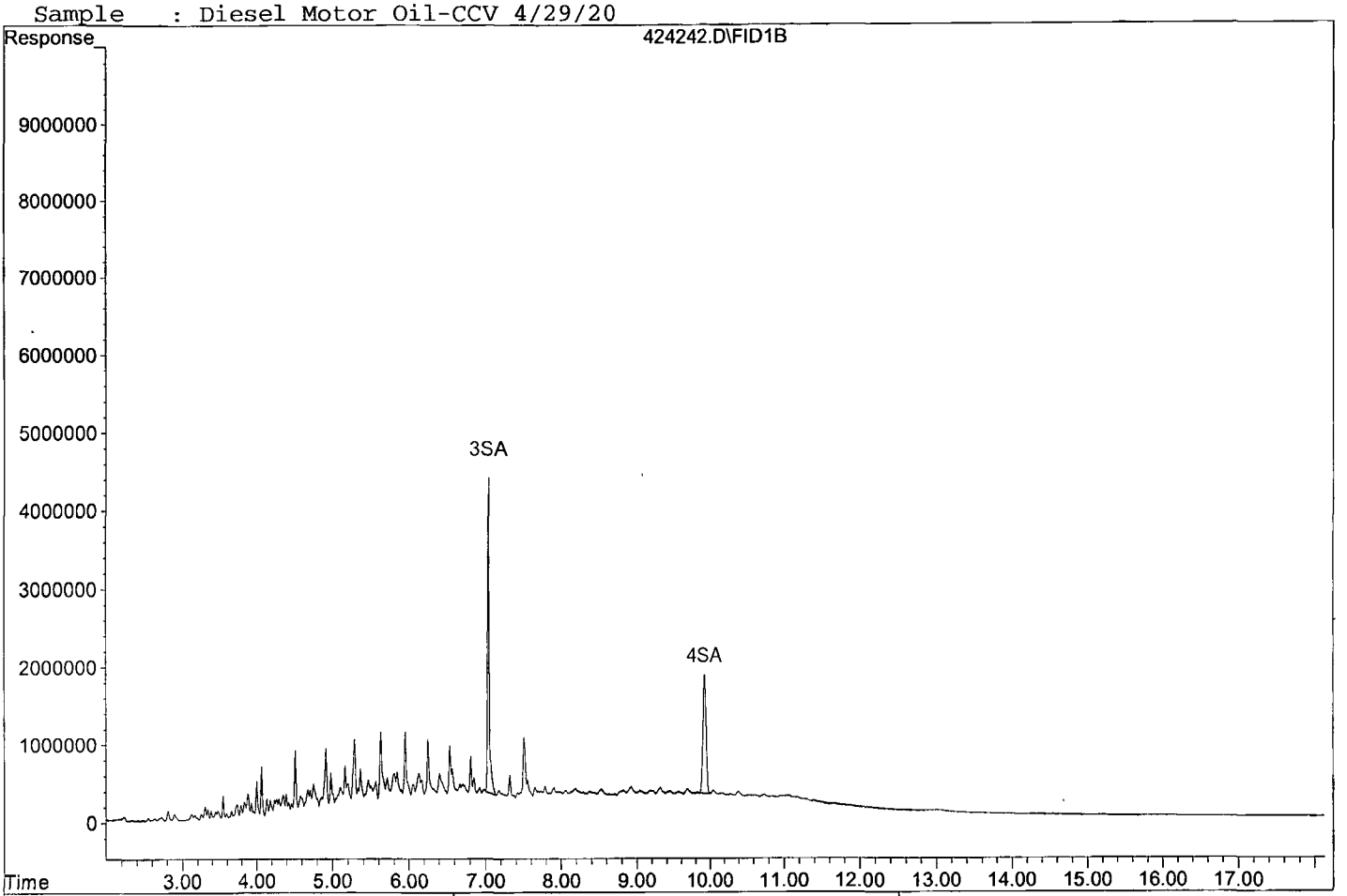
Method : G:\APOLLO\DATA\200424\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Apr 21 10:56:52 2020
Response via : Multiple Level Calibration

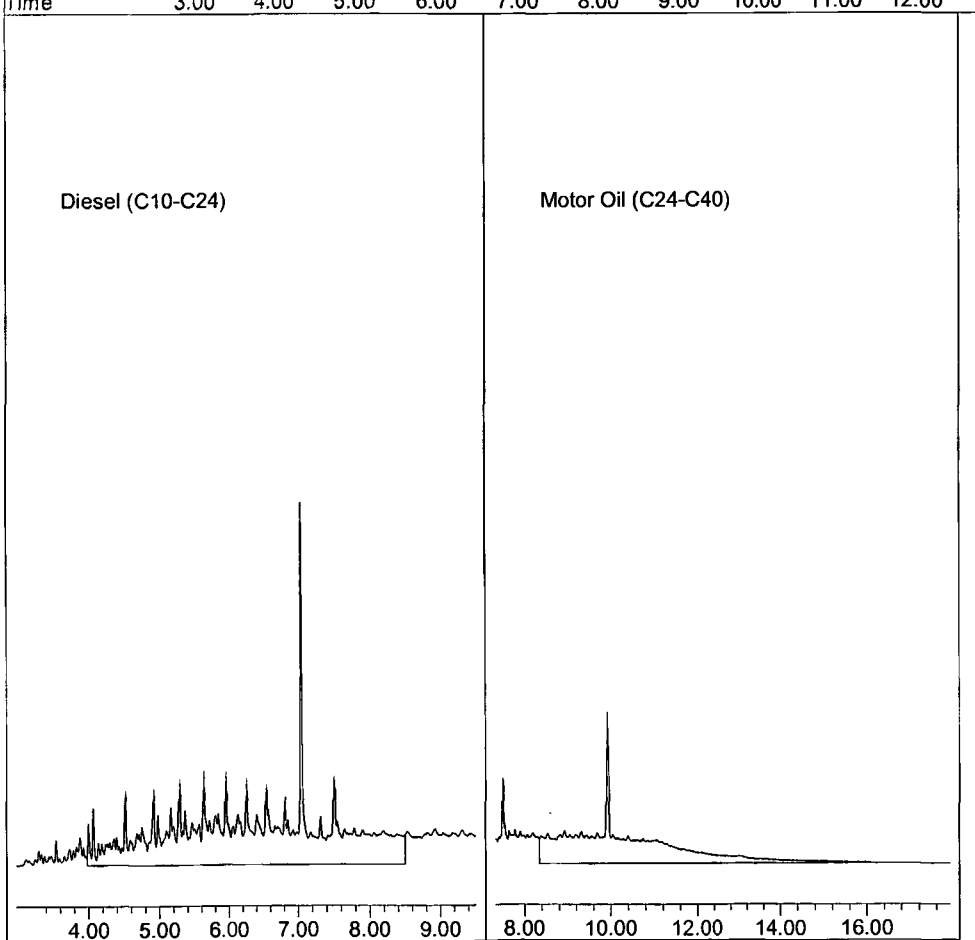
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.04	63398861	12.627 ppb
Surrogate Spike 30.000	Recovery =		42.09%
4) SA Octacosane(S)	9.92	47718285	13.663 ppb
Surrogate Spike 30.000	Recovery =		45.54%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	1075044059	280.308 ppb
2) HBTM Motor Oil (C24-C40)	12.60	728162697	246.936 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200424\424242.D
Sample : Diesel Motor Oil-CCV 4/29/20





TPH Extractables
DEC0317

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 05/12/20
Instrument: Apollo
Initial Cal. Date: 03/17/20
Data File: 424243.D

		Compound	MEAN	CCRF	%D		%Drift
1	SC	Decanoic Acid(S)	1566890	1707820	9.0	SC	
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			9.0		

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424243.D Vial: 43
Acq On : 5-12-20 13:58:44 Operator: SS
Sample : Decanoic Acid-CCV 3/20/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 9:14 2020 Quant Results File: DEC0317.RES

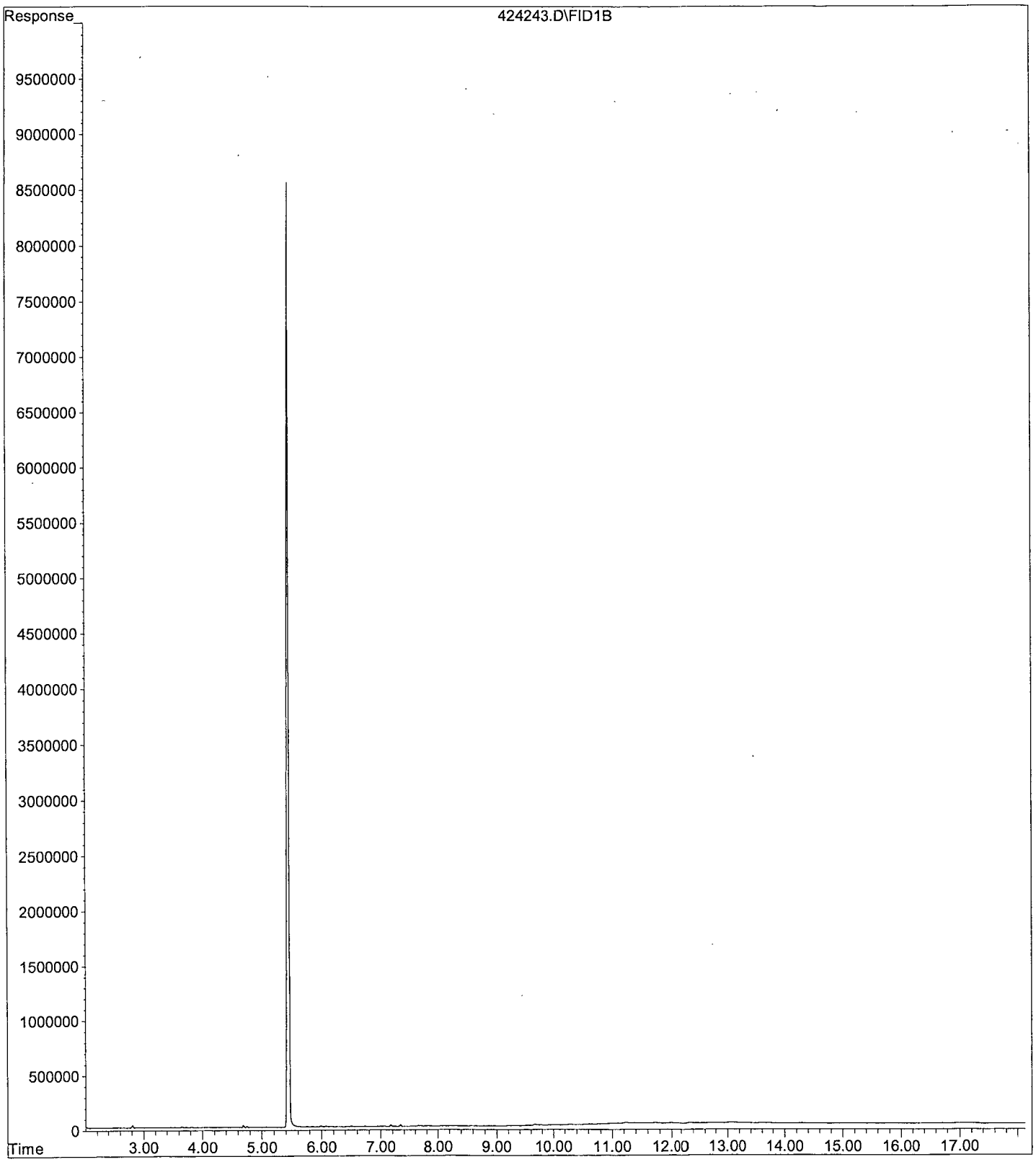
Method : G:\APOLLO\DATA\200424\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	5.46	163950799	52.317 ppb
Surrogate Spike 24.000		Recovery =	217.99%
Target Compounds			
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

File : G:\APOLLO\DATA\200424\424243.D
Operator : SS
Acquired : 5-12-20 13:58:44 using AcqMethod TPHSN.M
Instrument : Apollo
Sample Name: Decanoic Acid-CCV 3/20/20
Misc Info : water
Vial Number: 43



TPH Extractables
DOC0310

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 05/12/20
Instrument: Apollo
Initial Cal. Date: 03/10/20
Data File: 424254.D

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C24)	1917610	2065950	7.7	HATM	
2	HBTM	Motor Oil (C24-C40)	1474400	1398630	5.1	HBTM	
3	SA	Ortho-Terphenyl(S)	2510520	2441400	2.8	SA	
4	SA	Octacosane(S)	1746260	1851470	6.0	SA	
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			5.4		

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424254.D Vial: 54
Acq On : 5-12-20 19:00:27 Operator: SS
Sample : Diesel Motor Oil-CCV 4/29/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 8:39 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200424\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Apr 21 10:56:52 2020
Response via : Multiple Level Calibration

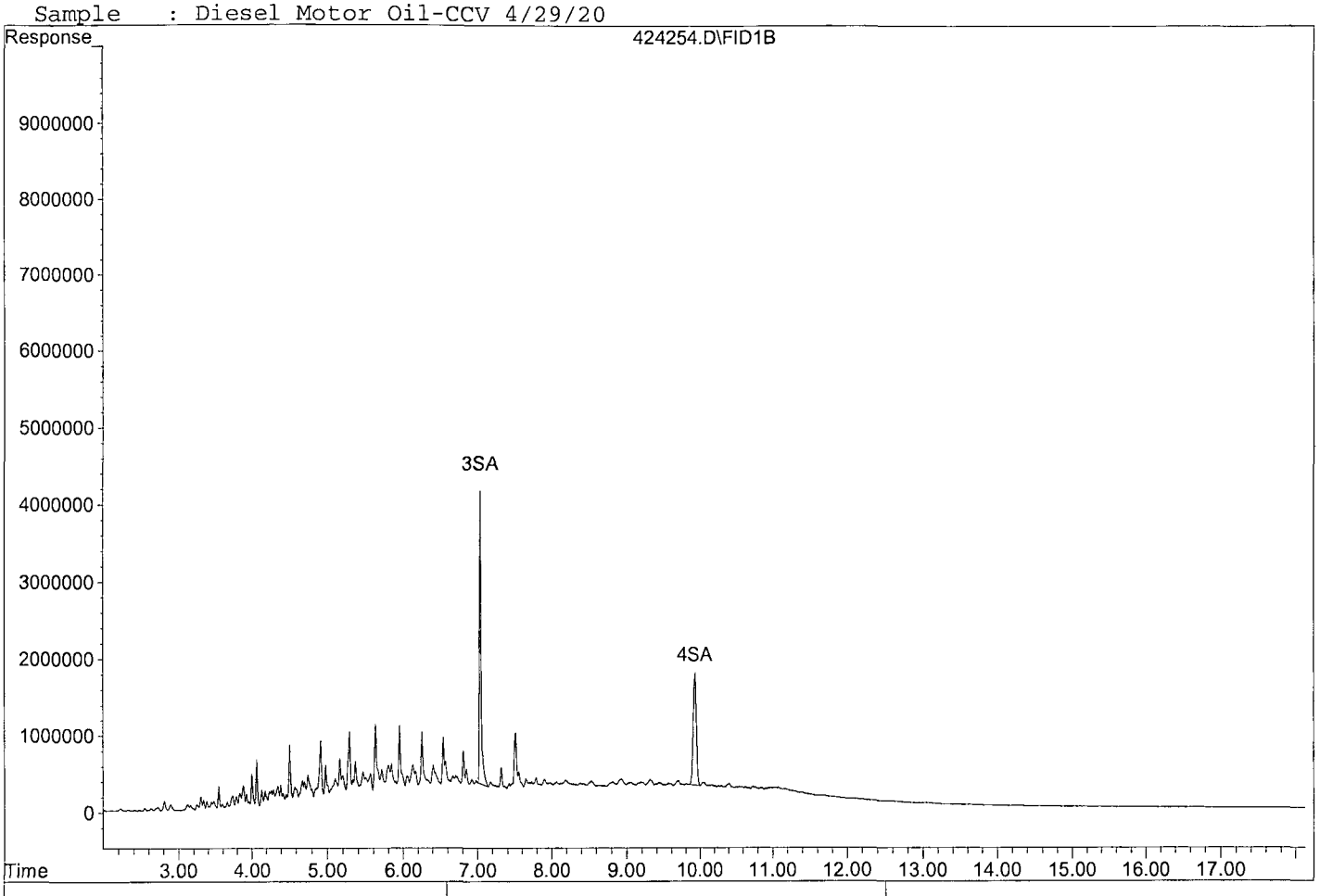
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

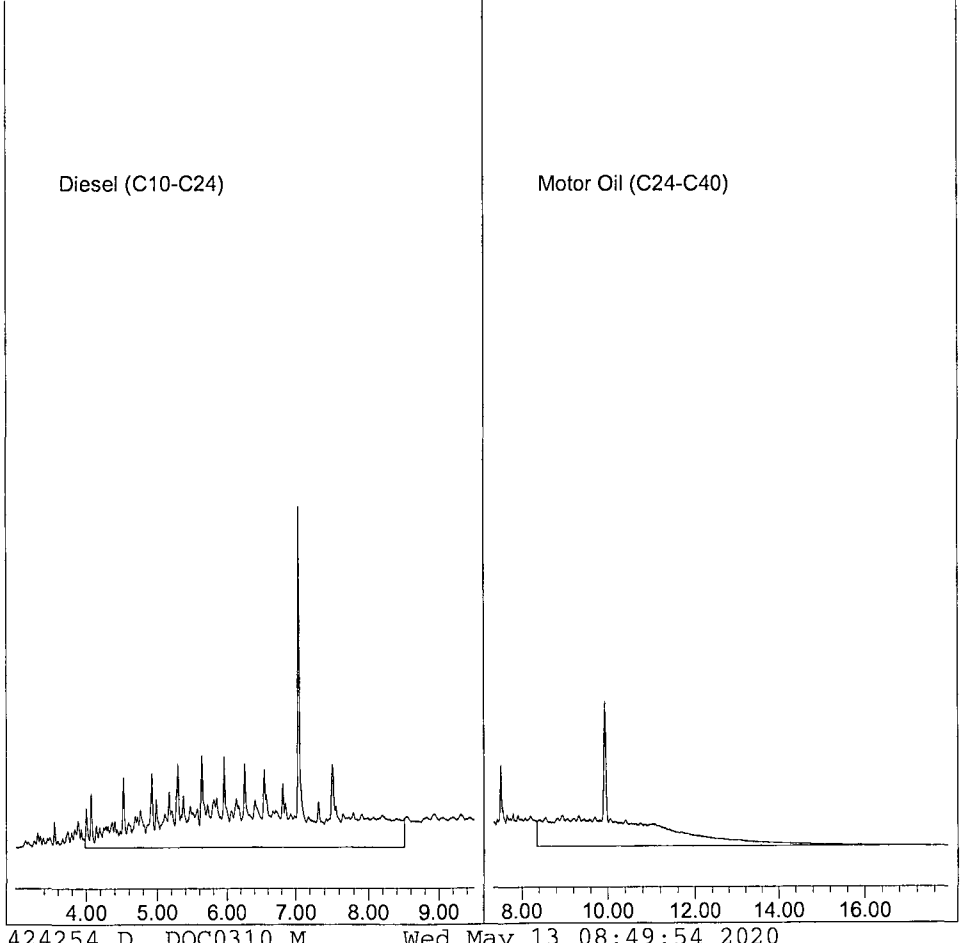
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.04	61035065	12.156 ppb
Surrogate Spike 30.000	Recovery =		40.52%
4) SA Octacosane(S)	9.93	46286714	13.253 ppb
Surrogate Spike 30.000	Recovery =		44.18%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	1032974672	269.339 ppb
2) HBTM Motor Oil (C24-C40)	12.60	699317054	237.154 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200424\424254.D
Sample : Diesel Motor Oil-CCV 4/29/20





TPH Extractables
DEC0317

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No:
Date Analyzed: 05/12/20
Instrument: Apollo
Initial Cal. Date: 03/17/20
Data File: 424255.D

		Compound	MEAN	CCRF	%D		%Drift
1	SC	Decanoic Acid(S)	1566890	1819110	16	SC	
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
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28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			16.0		

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424255.D Vial: 55
Acq On : 5-12-20 19:23:05 Operator: SS
Sample : Decanoic Acid-CCV 3/20/20 Inst : Apollo
Misc : water Multiplr: 1.00
IntFile : events.e
Quant Time: May 13 9:15 2020 Quant Results File: DEC0317.RES

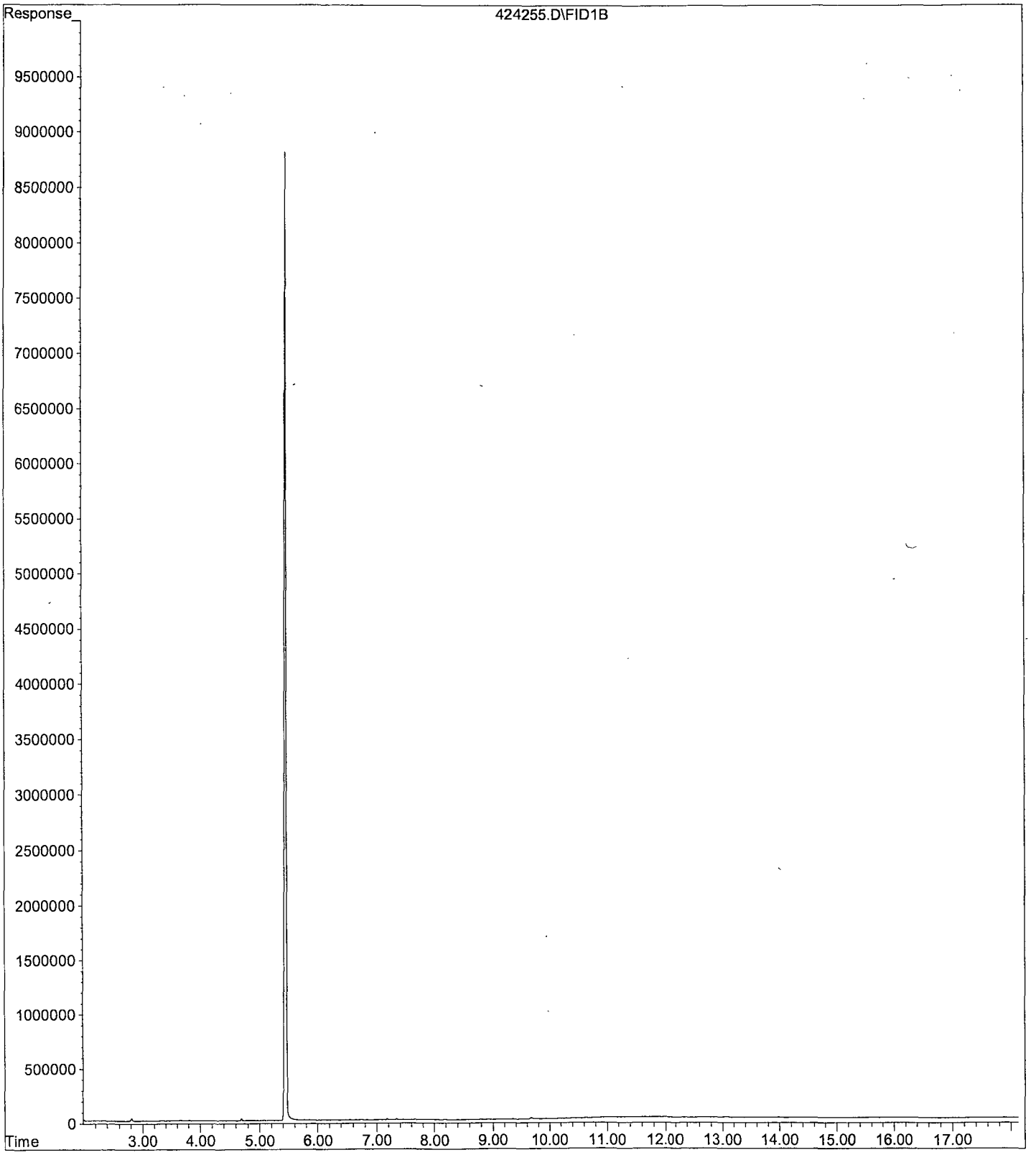
Method : G:\APOLLO\DATA\200424\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	5.46	174634389	55.726 ppb
Surrogate Spike 24.000		Recovery =	232.19%
Target Compounds			
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

File : G:\APOLLO\DATA\200424\424255.D
Operator : SS
Acquired : 5-12-20 19:23:05 using AcqMethod TPHSN.M
Instrument : Apollo
Sample Name: Decanoic Acid-CCV 3/20/20
Misc Info : water
Vial Number: 55



ORGANICS
Raw Data

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424004.D Vial: 4
Acq On : 4-24-20 15:11:38 Operator: SS
Sample : BA09851W14 2/800 Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Apr 27 8:57 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200424\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Apr 21 10:56:52 2020
Response via : Multiple Level Calibration

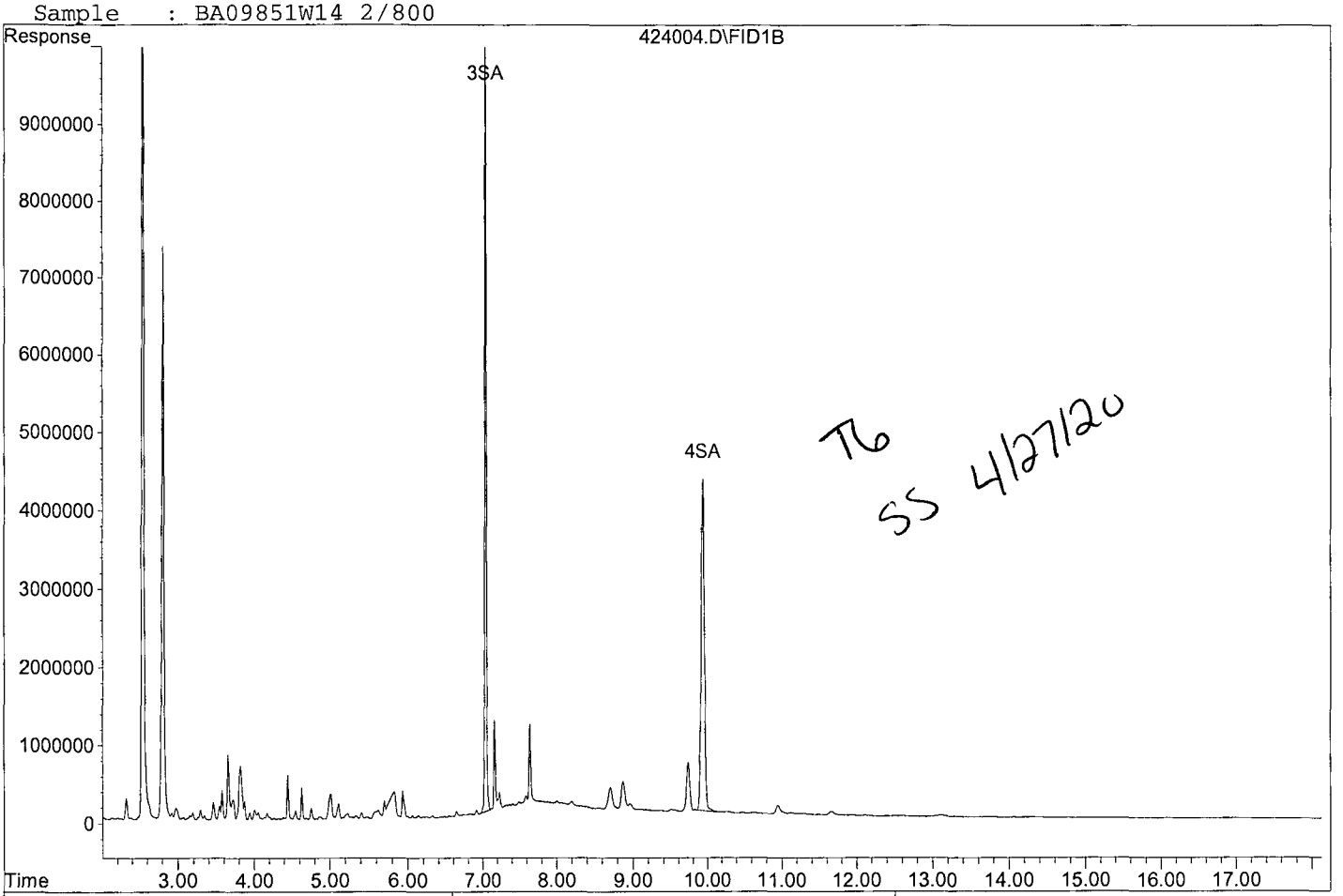
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.05	150993917	75.181	ppb
Surrogate Spike 75.000	Recovery =		100.24%	
4) SA Octacosane(S)	9.94	138127940	98.874	ppb
Surrogate Spike 75.000	Recovery =		131.83%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.24	332065784	216.458	ppb
2) HBTM Motor Oil (C24-C40)	12.60	283847322	240.647	ppb

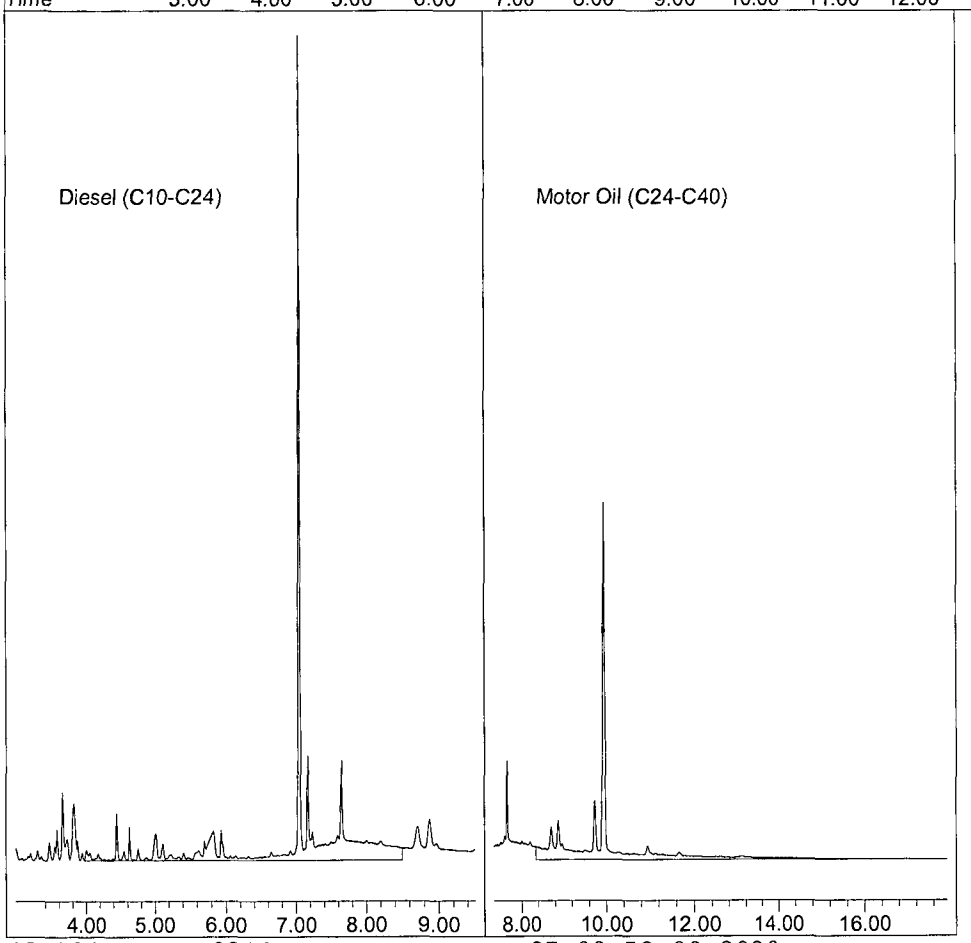
Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200424\424004.D
Sample : BA09851W14 2/800



TL
SS 4/27/20



424004.D DOC0310.M Mon Apr 27 09:58:09 2020

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424099.D Vial: 99
Acq On : 5-4-20 16:35:44 Operator: SS
Sample : BA09851W13 2/800 Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: May 5 9:42 2020 Quant Results File: DOC0310.RES

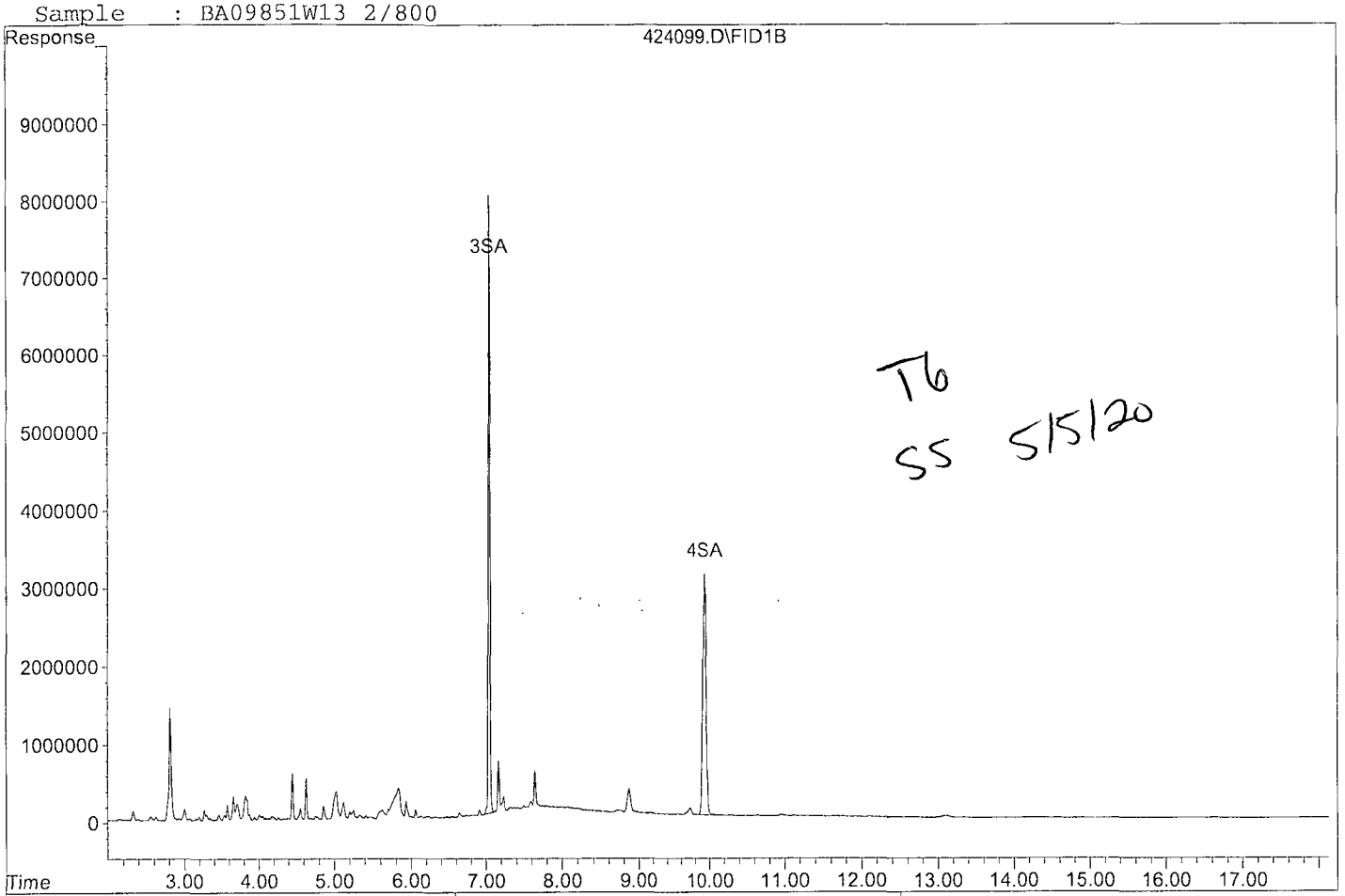
Method : G:\APOLLO\DATA\200424\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Apr 21 10:56:52 2020
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

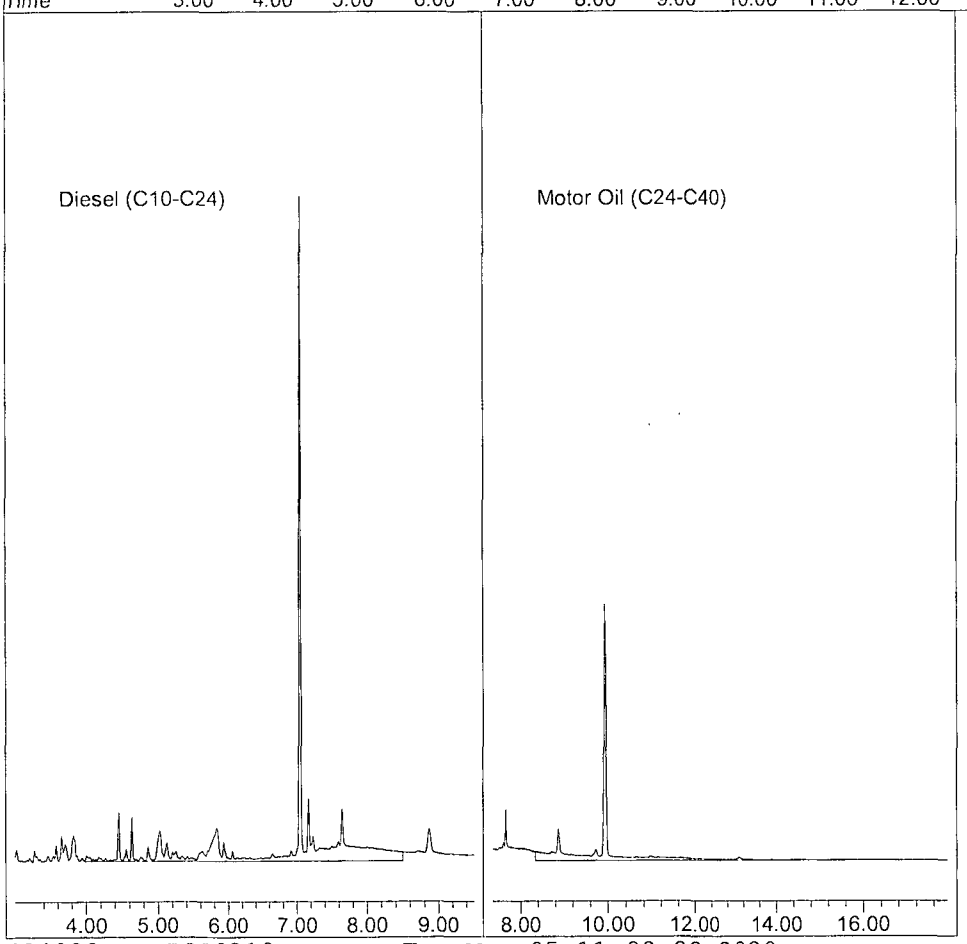
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.04	116107902	57.811 ppb
Surrogate Spike 75.000		Recovery =	77.08%
4) SA Octacosane(S)	9.93	100146178	71.686 ppb
Surrogate Spike 75.000		Recovery =	95.58%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	288091907	187.793 ppb
2) HBTM Motor Oil (C24-C40)	12.60	147763101	125.274 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200424\424099.D
Sample : BA09851W13 2/800



T6
SS 515120



Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424005.D Vial: 5
Acq On : 4-24-20 15:34:22 Operator: SS
Sample : BA09853W16 2/800 Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Apr 27 8:57 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200424\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Apr 21 10:56:52 2020
Response via : Multiple Level Calibration

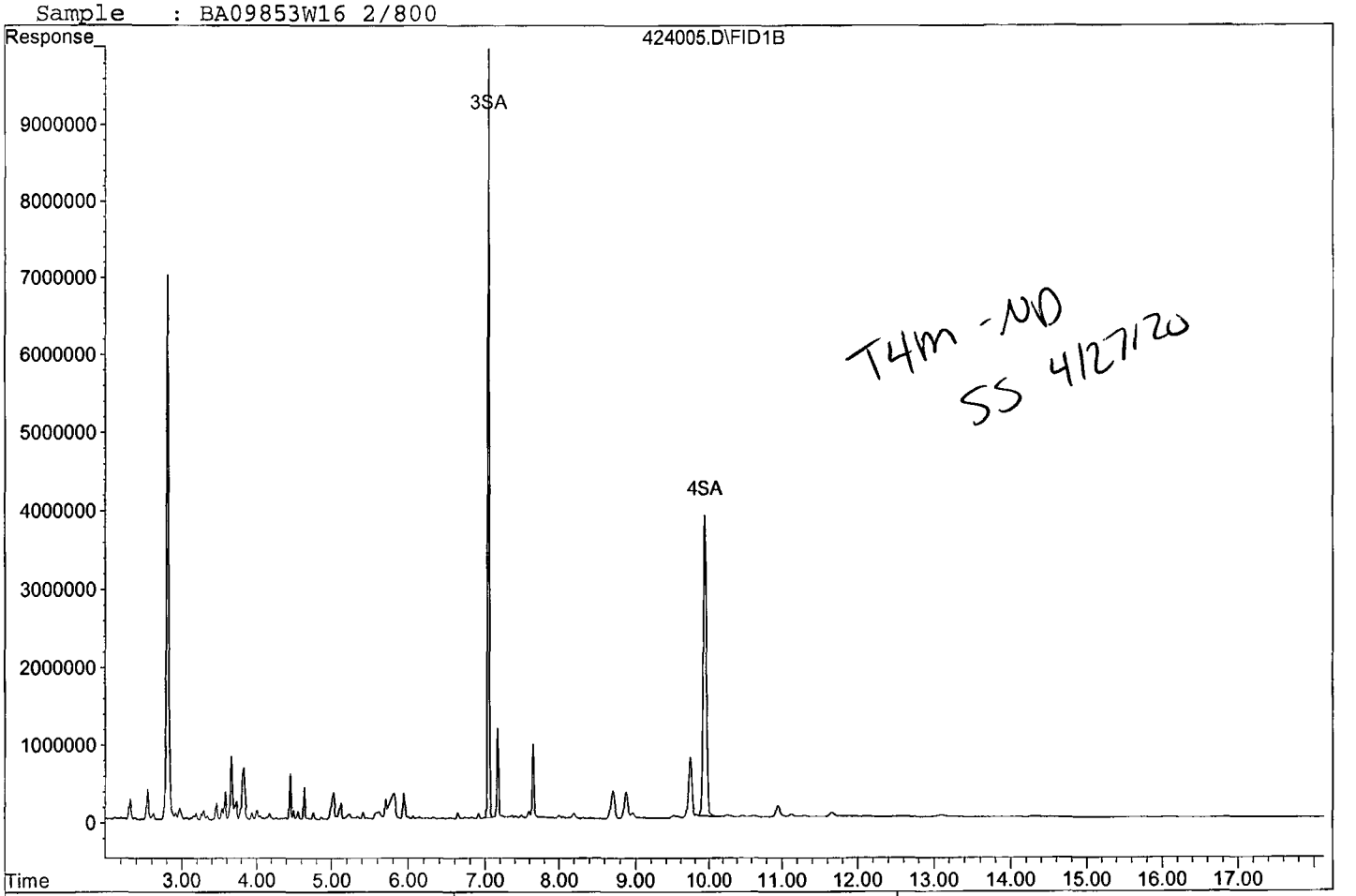
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.05	138555788	68.988 ppb
Surrogate Spike 75.000	Recovery =		91.98%
4) SA Octacosane(S)	9.94	125218036	89.633 ppb
Surrogate Spike 75.000	Recovery =		119.51%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	166237227	108.362 ppb
2) HBTM Motor Oil (C24-C40)	12.60	150750788	127.807 ppb

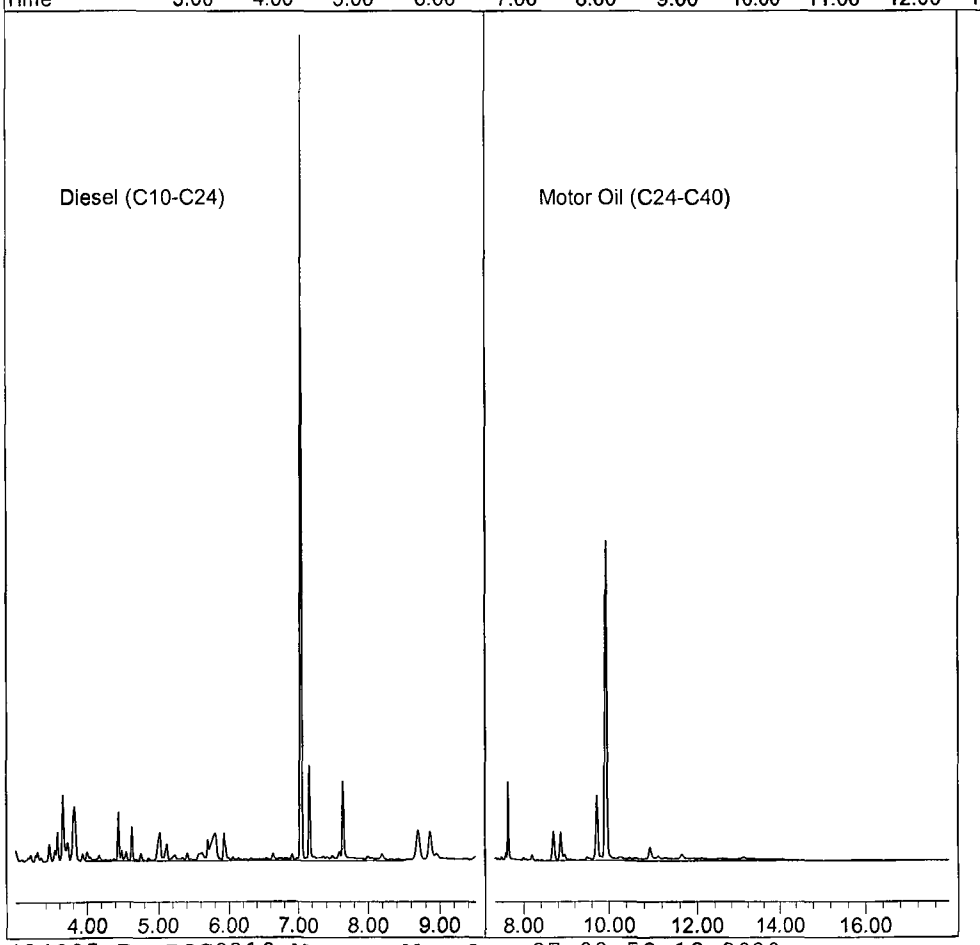
Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200424\424005.D
Sample : BA09853W16 2/800



THm - ND
SS 4/27/20



424005.D DOC0310.M Mon Apr 27 09:58:12 2020

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424100.D Vial: 100
Acq On : 5-4-20 16:58:22 Operator: SS
Sample : BA09853W13 2/800 Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: May 5 9:42 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200424\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Apr 21 10:56:52 2020
Response via : Multiple Level Calibration

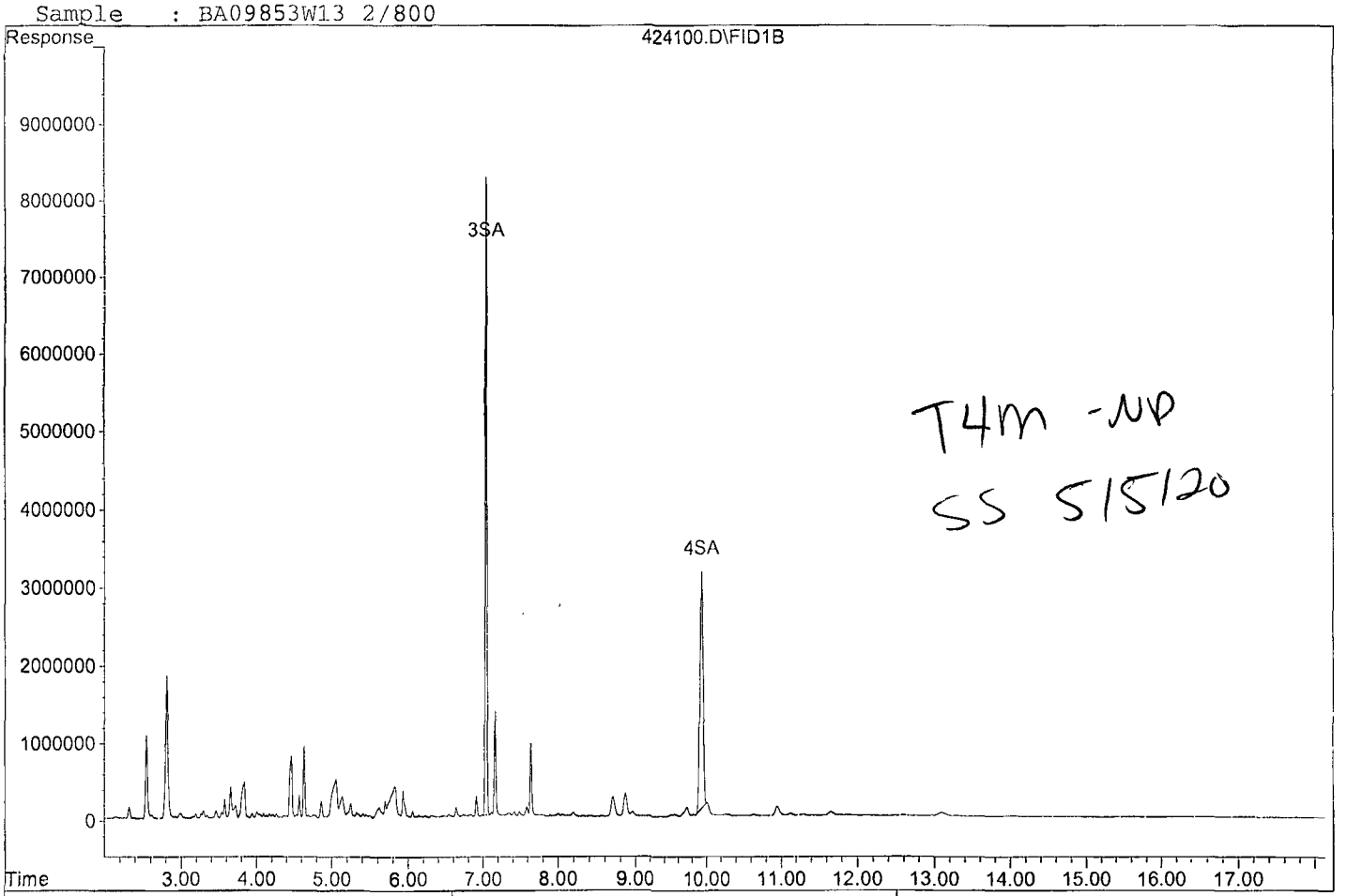
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.04	114178619	56.850 ppb
Surrogate Spike 75.000		Recovery =	75.80%
4) SA Octacosane(S)	9.94	94116193	67.370 ppb
Surrogate Spike 75.000		Recovery =	89.83%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	242653703	158.174 ppb
2) HBTM Motor Oil (C24-C40)	12.60	111945247	94.908 ppb

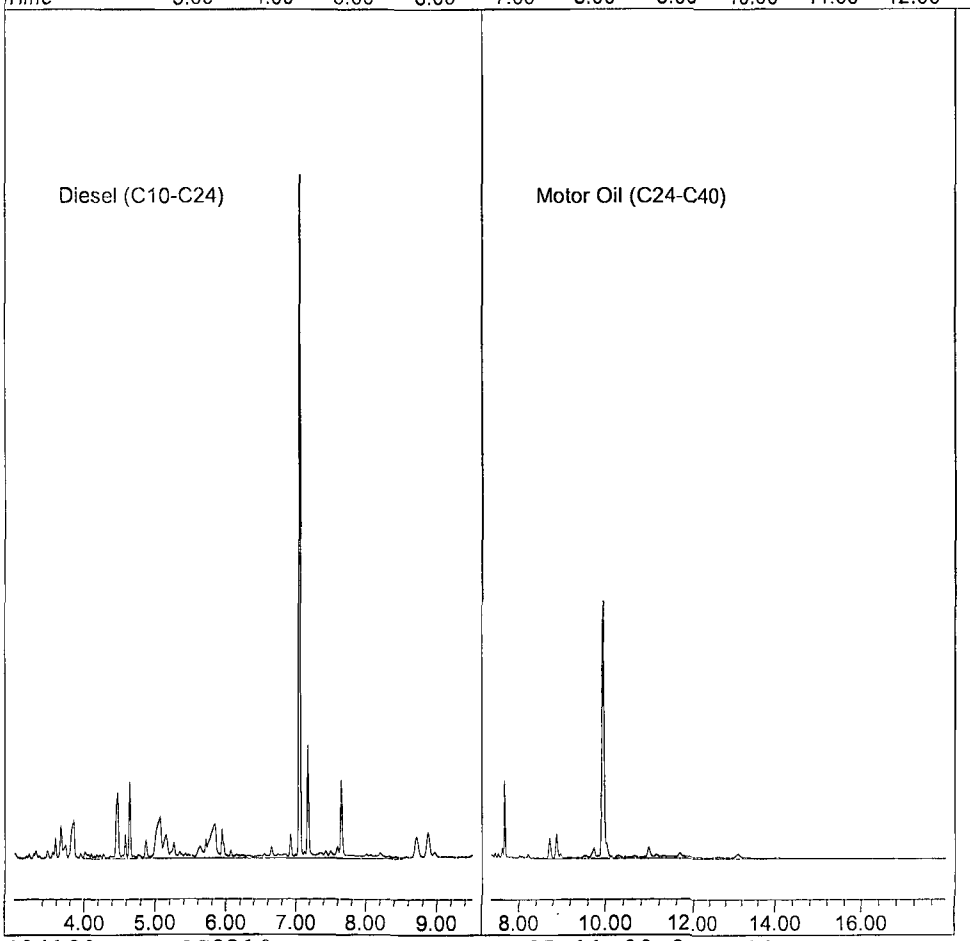
Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200424\424100.D
Sample : BA09853W13 2/800



T4m -NP
SS 5/5/20



Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424006.D Vial: 6
Acq On : 4-24-20 15:57:07 Operator: SS
Sample : BA09855W14 2/800 Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Apr 27 8:57 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200424\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Apr 21 10:56:52 2020
Response via : Multiple Level Calibration

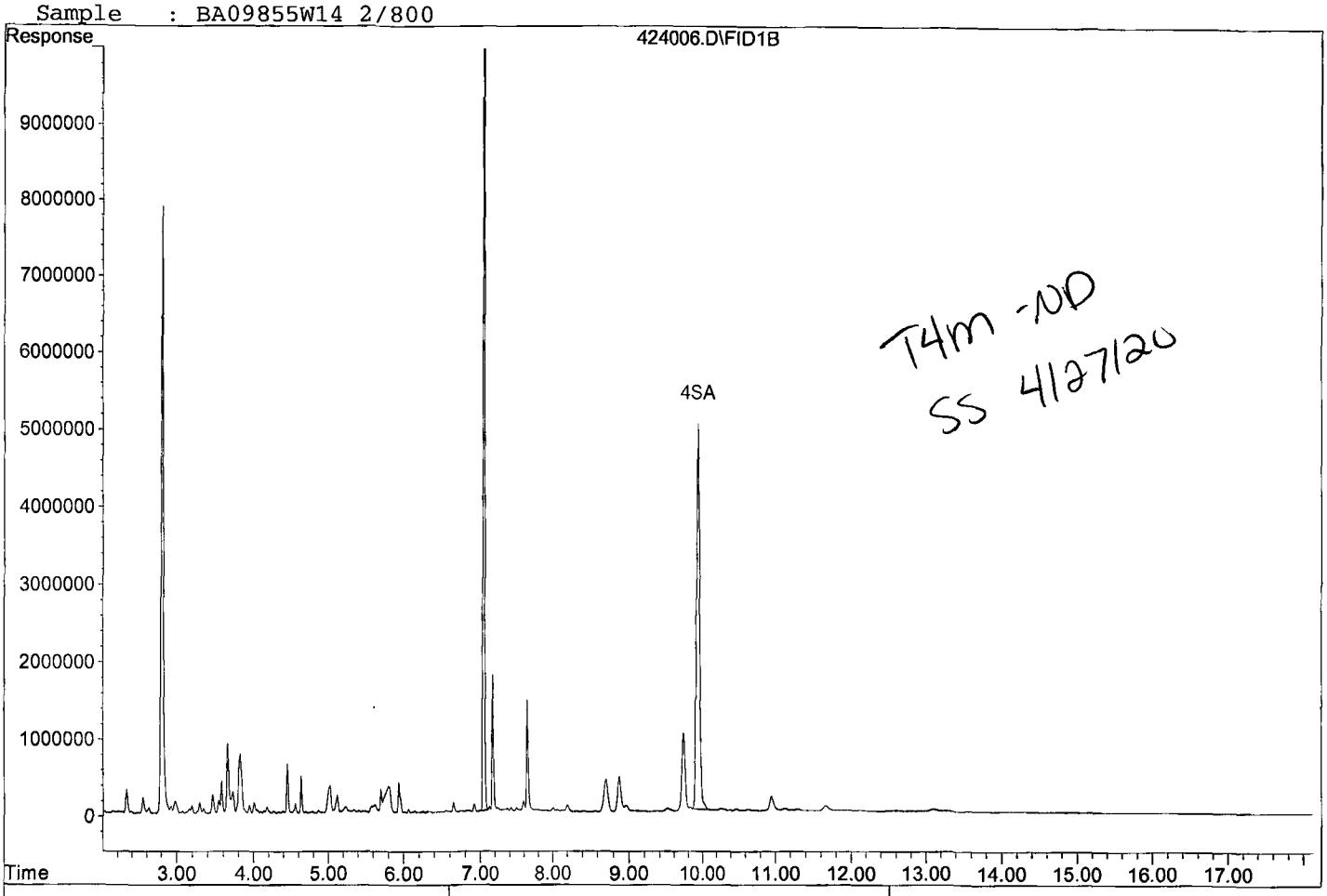
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.05	174751308	87.010 ppb
Surrogate Spike 75.000		Recovery =	116.01%
4) SA Octacosane(S)	9.94	160984374	115.235 ppb
Surrogate Spike 75.000		Recovery =	153.65%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	202975529	132.310 ppb
2) HBTM Motor Oil (C24-C40)	12.60	171226358	145.167 ppb

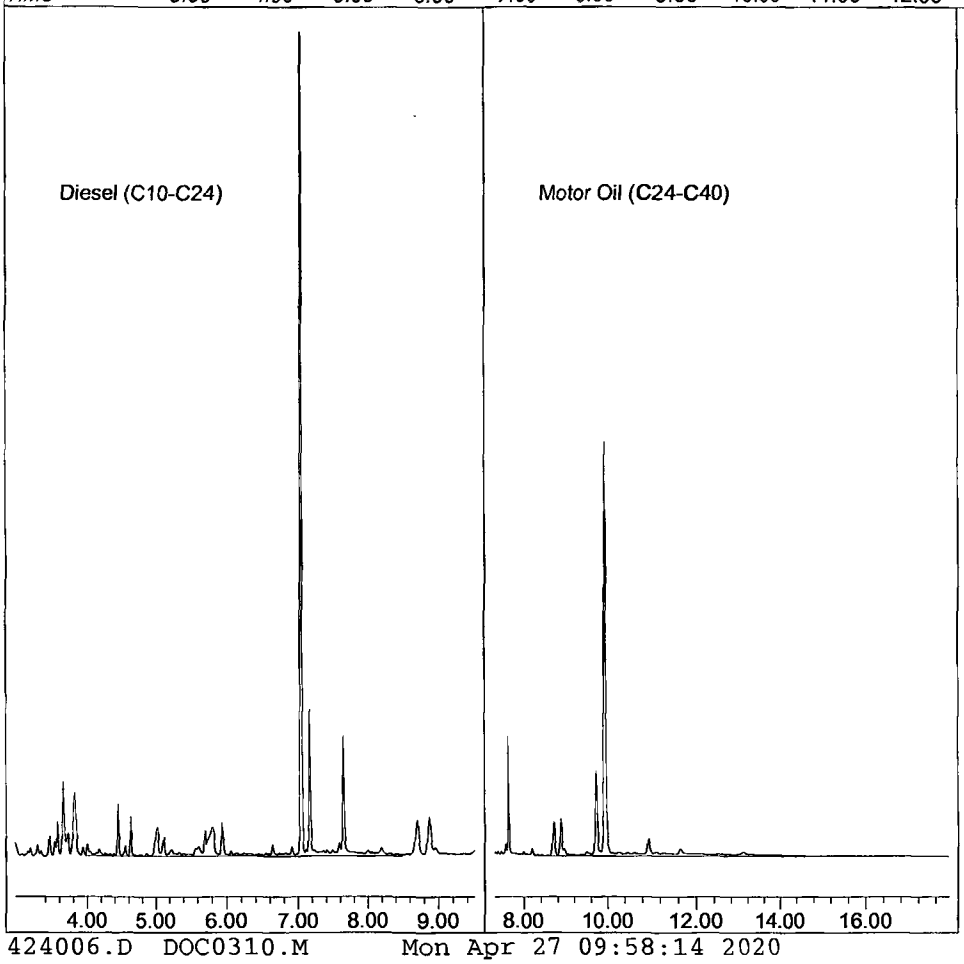
Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200424\424006.D
Sample : BA09855W14 2/800



T4m -10
SS 4/27/20



Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424101.D Vial: 1
Acq On : 5-4-20 17:21:00 Operator: SS
Sample : BA09855W16 2/800 Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: May 5 9:42 2020 Quant Results File: DOC0310.RES

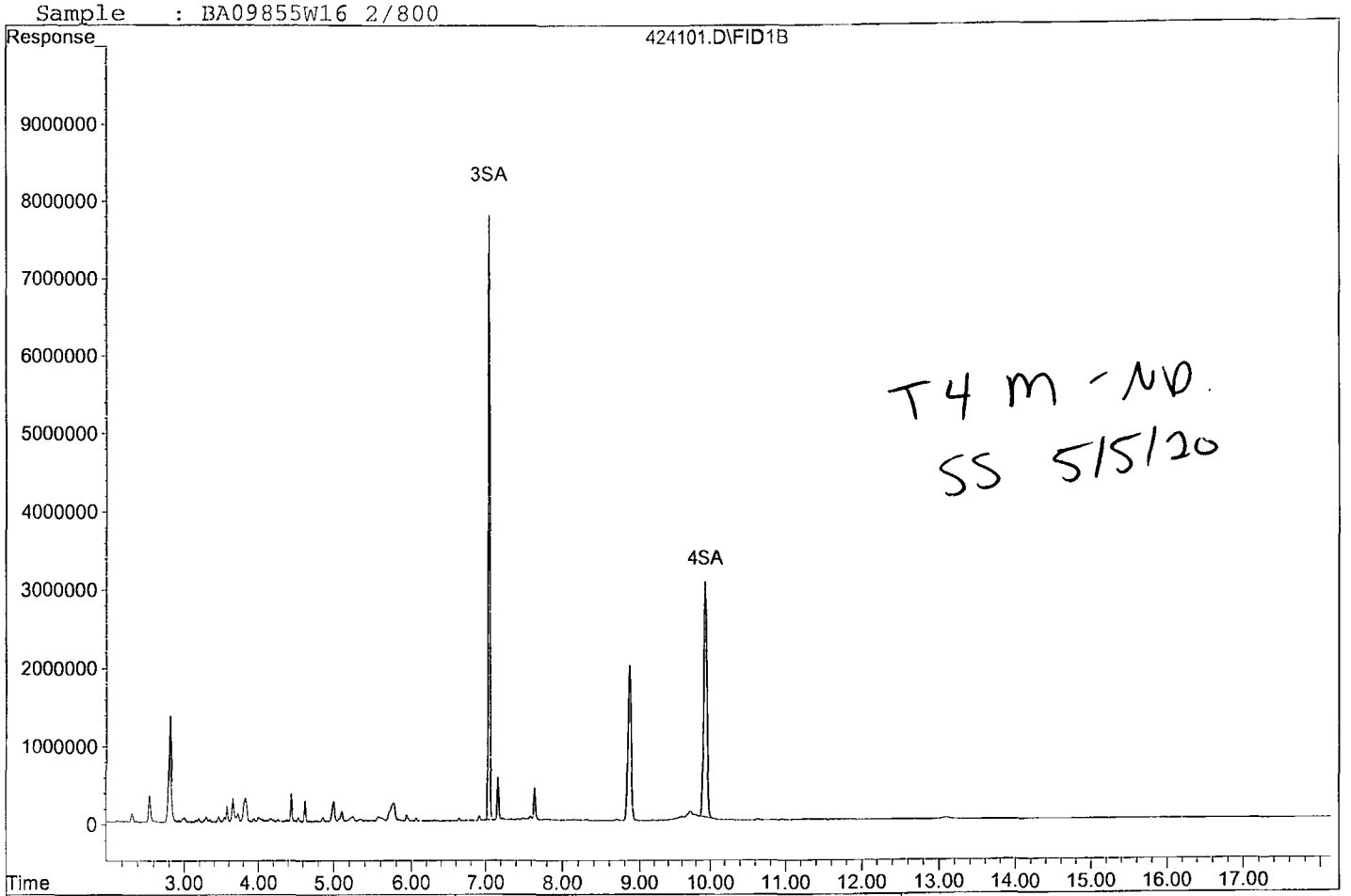
Method : G:\APOLLO\DATA\200424\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Apr 21 10:56:52 2020
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

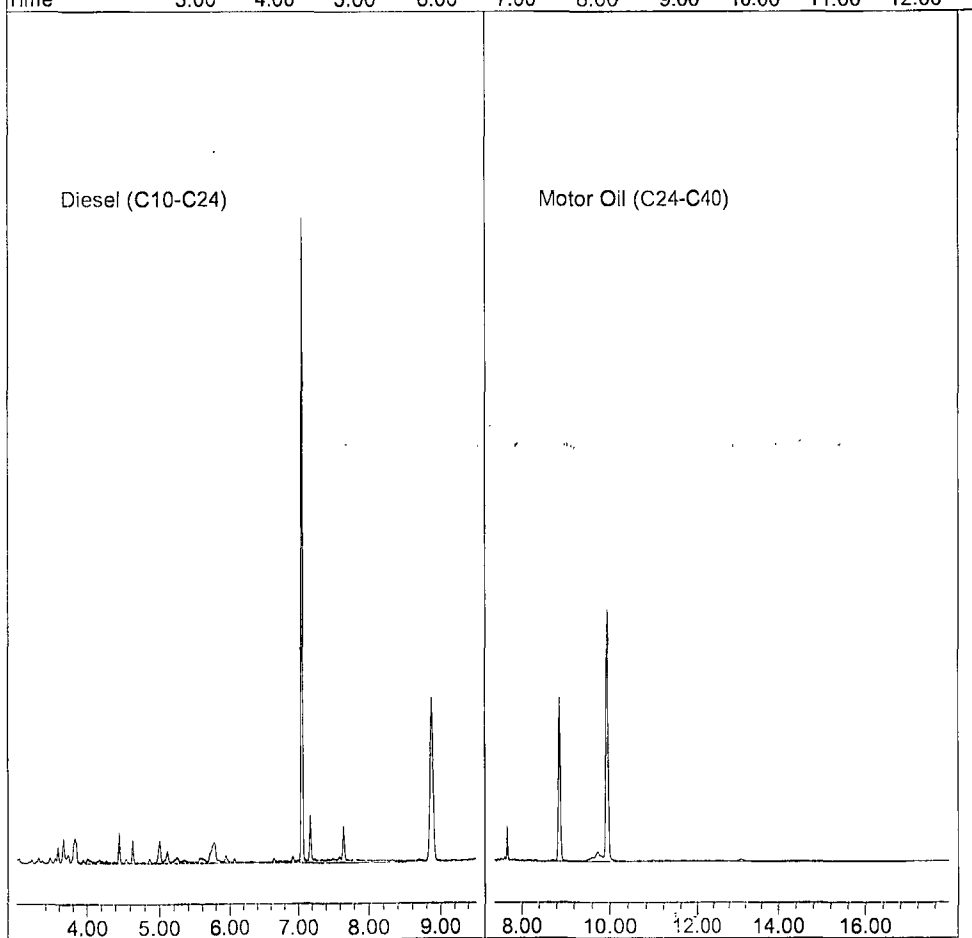
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.04	111532788	55.533 ppb
Surrogate Spike 75.000	Recovery =		74.04%
4) SA Octacosane(S)	9.93	95972185	68.698 ppb
Surrogate Spike 75.000	Recovery =		91.60%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	101475437	66.147 ppb
2) HBTM Motor Oil (C24-C40)	12.60	114125353	96.756 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200424\424101.D
Sample : BA09855W16 2/800



T4 m - ND.
SS 5/5/20



424101.D DOC0310.M Tue May 05 11:09:27 2020

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424001.D Vial: 1
Acq On : 4-24-20 14:03:41 Operator: SS
Sample : 200422A BLK 2/800 Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Apr 27 8:57 2020 Quant Results File: DOC0310.RES

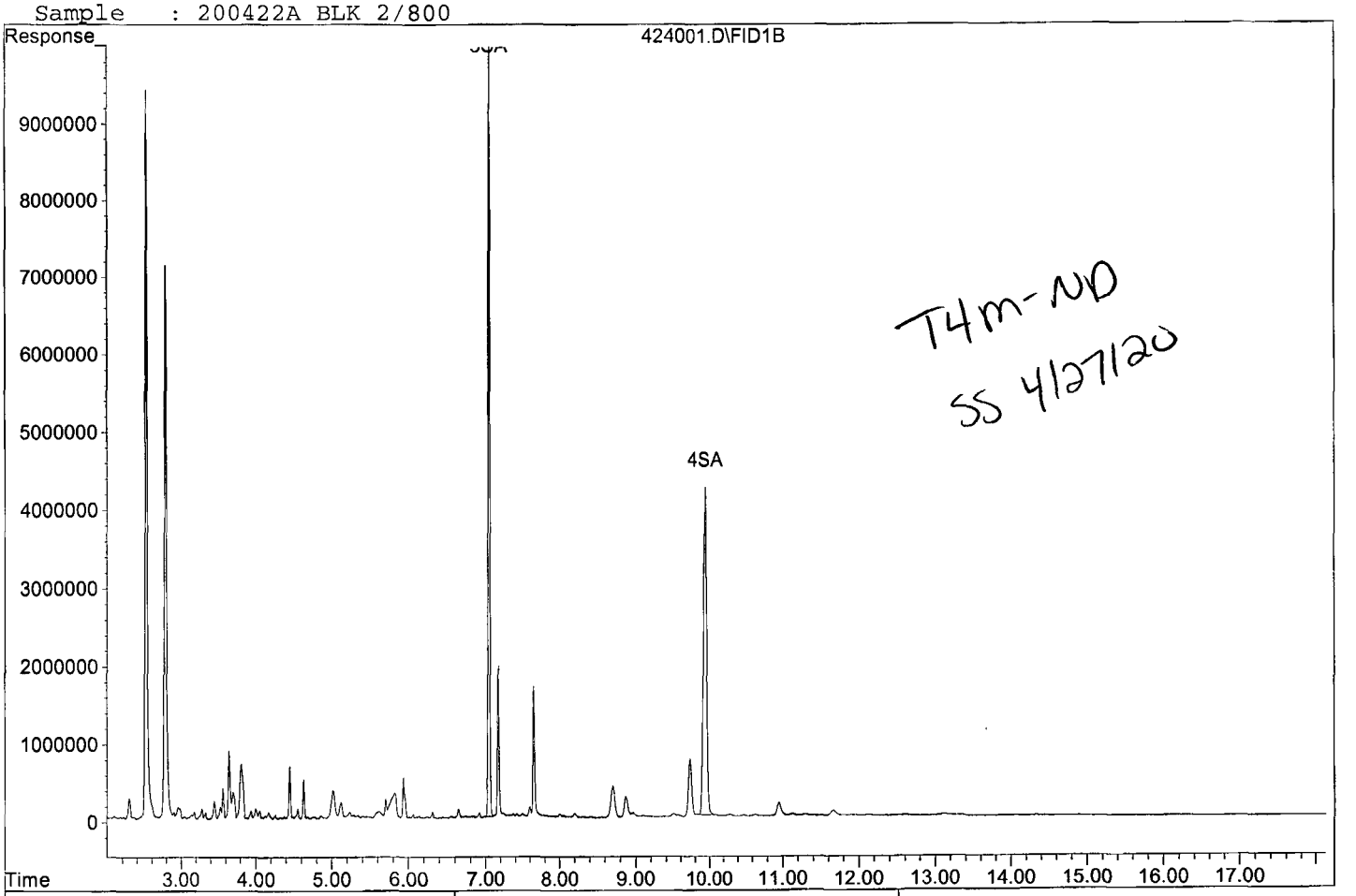
Method : G:\APOLLO\DATA\200424\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Apr 21 10:56:52 2020
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

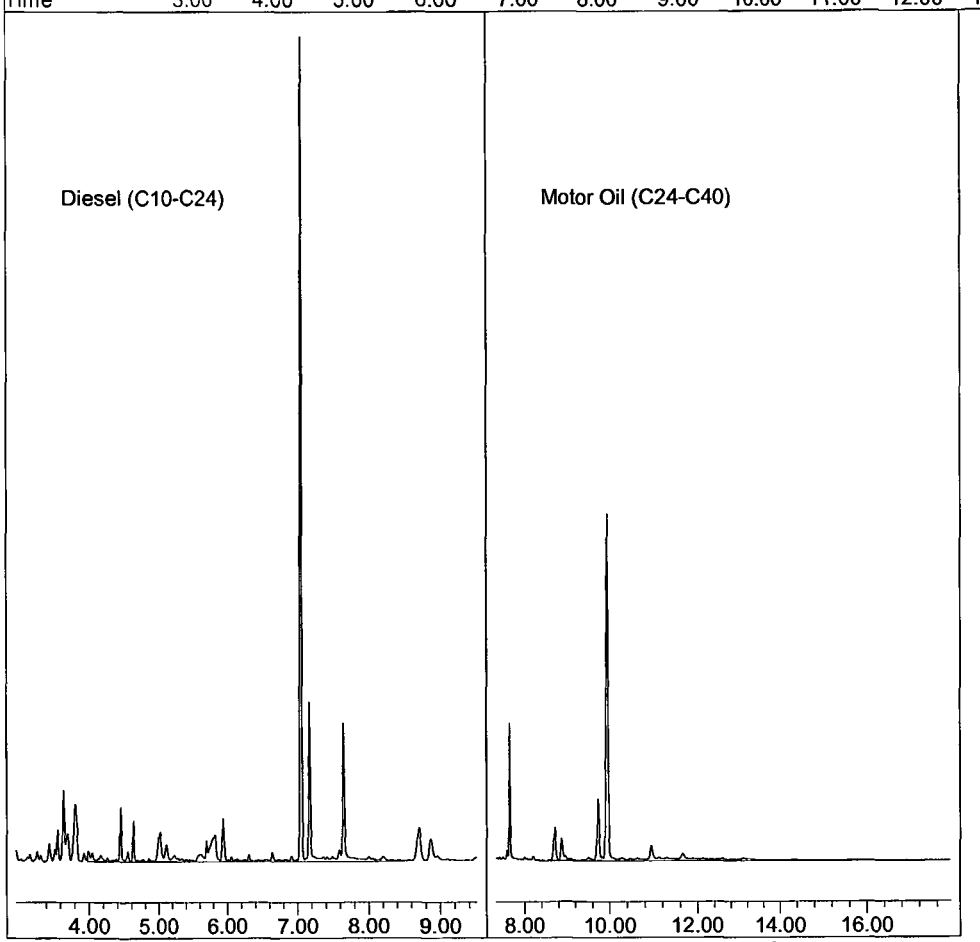
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.05	151495810	75.431 ppb
Surrogate Spike 75.000		Recovery =	100.57%
4) SA Octacosane(S)	9.94	134324953	96.152 ppb
Surrogate Spike 75.000		Recovery =	128.20%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	196667519	128.198 ppb
2) HBTM Motor Oil (C24-C40)	12.60	139996128	118.689 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200424\424001.D
Sample : 200422A BLK 2/800



THm-ND
SS 4/27/20



424001.D DOC0310.M Mon Apr 27 09:58:01 2020

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424096.D Vial: 96
Acq On : 5-4-20 15:27:53 Operator: SS
Sample : 200430A BLK 2/800 Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: May 5 9:48 2020 Quant Results File: DOC0310.RES

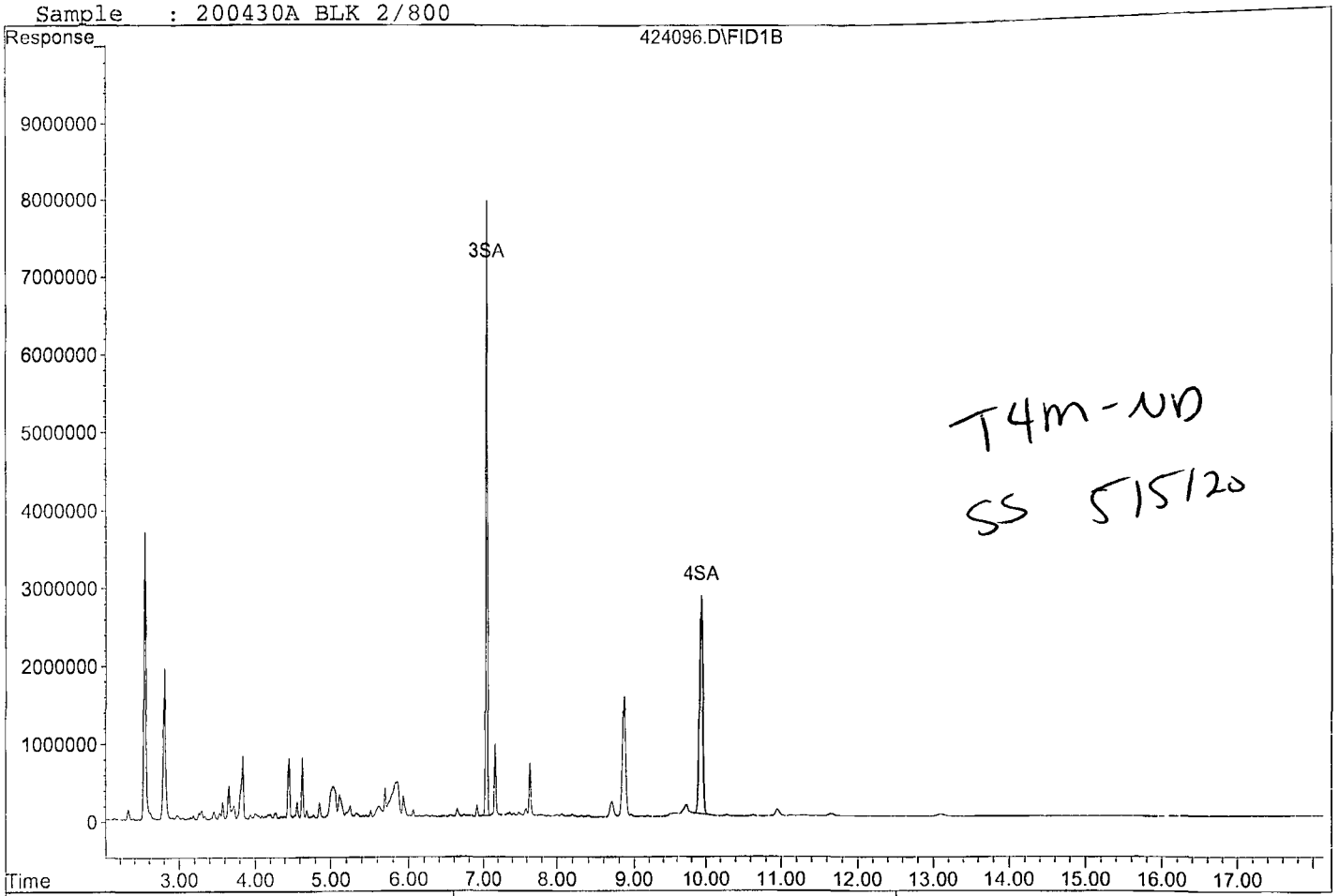
Method : G:\APOLLO\DATA\200424\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Apr 21 10:56:52 2020
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

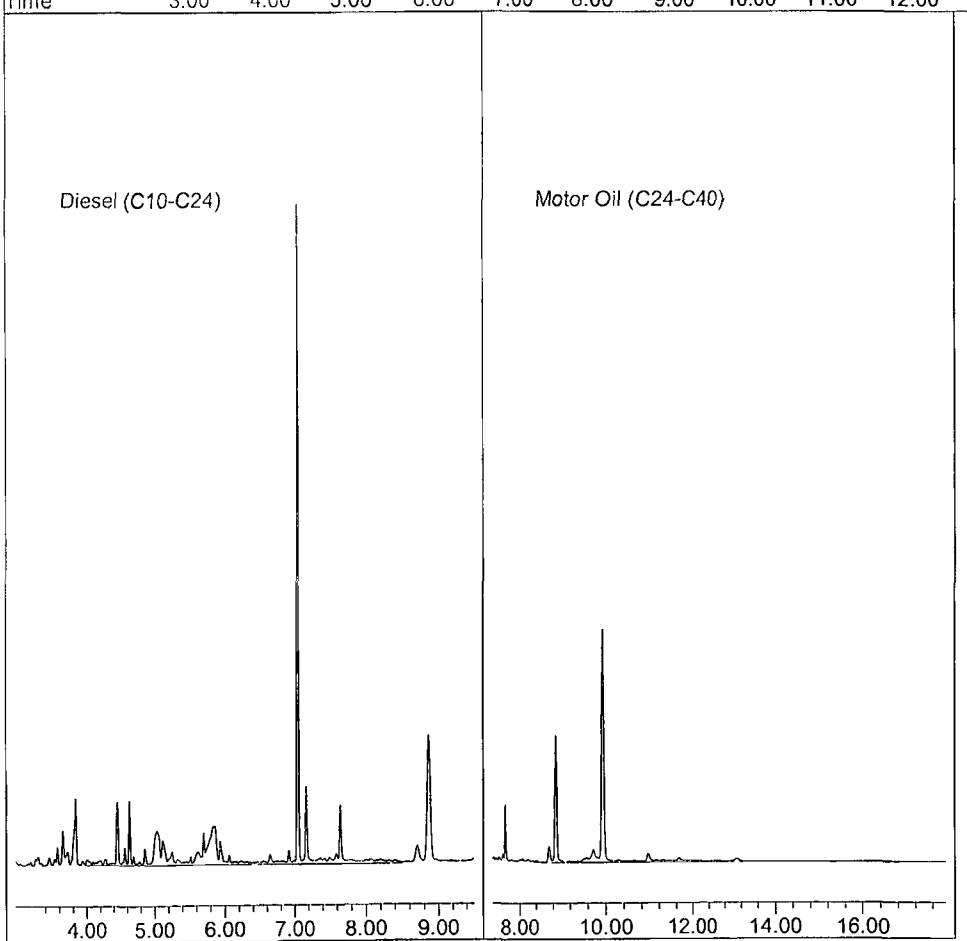
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.04	110088759	54.814 ppb
Surrogate Spike 75.000	Recovery =		73.09%
4) SA Octacosane(S)	9.93	91199024	65.282 ppb
Surrogate Spike 75.000	Recovery =		87.04%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	231719004	151.047 ppb
2) HBTM Motor Oil (C24-C40)	12.60	131413234	111.413 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200424\424096.D
Sample : 200430A BLK 2/800



T4m-ND
SS 5/5/20



424096.D DOC0310.M Tue May 05 11:09:14 2020 Page 2

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424002.D Vial: 2
Acq On : 4-24-20 14:26:16 Operator: SS
Sample : 200422A LCS-1 2/800 Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Apr 27 9:00 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200424\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Apr 21 10:56:52 2020
Response via : Multiple Level Calibration

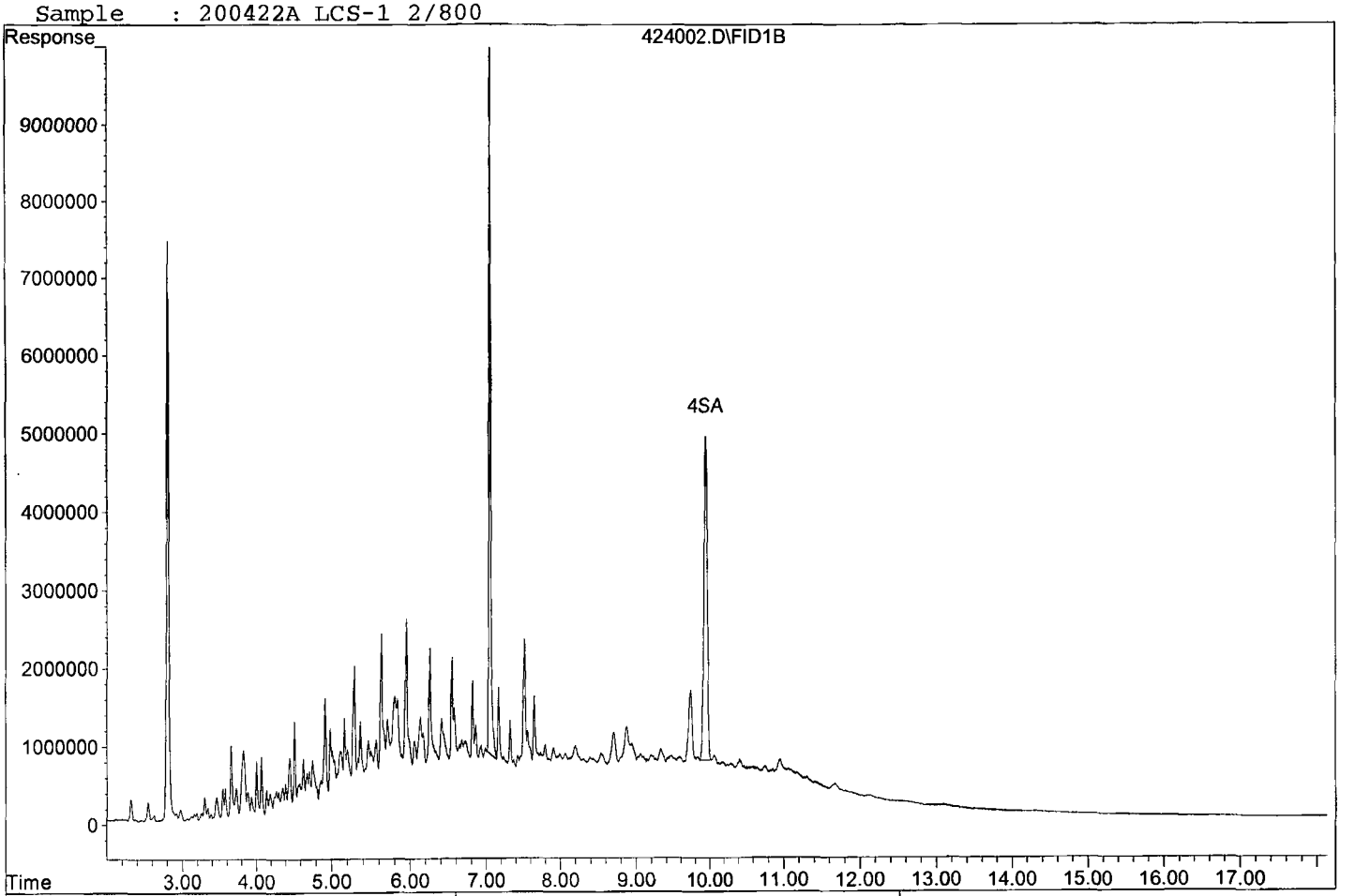
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

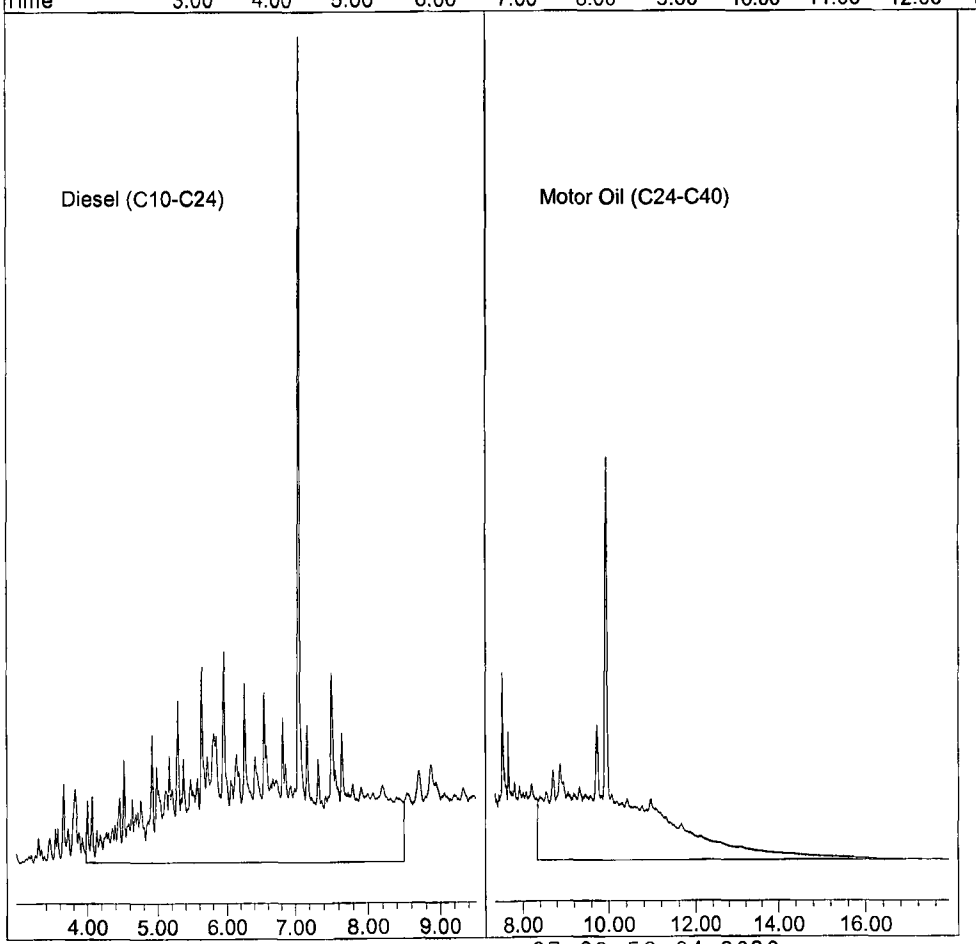
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.05	161809953	80.566	ppb
Surrogate Spike 75.000	Recovery = 107.42%			
4) SA Octacosane(S)	9.94	134232516	96.086	ppb
Surrogate Spike 75.000	Recovery = 128.11%			
Target Compounds				
1) HATM Diesel (C10-C24)	6.24	2270012295	1479.713	ppb
2) HBTM Motor Oil (C24-C40)	12.60	1740930792	1475.970	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200424\424002.D
Sample : 200422A LCS-1 2/800





424002.D DOC0310.M Mon Apr 27 09:58:04 2020

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424097.D Vial: 97
Acq On : 5-4-20 15:50:26 Operator: SS
Sample : 200430A LCS-1 2/800 Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: May 5 9:47 2020 Quant Results File: DOC0310.RES

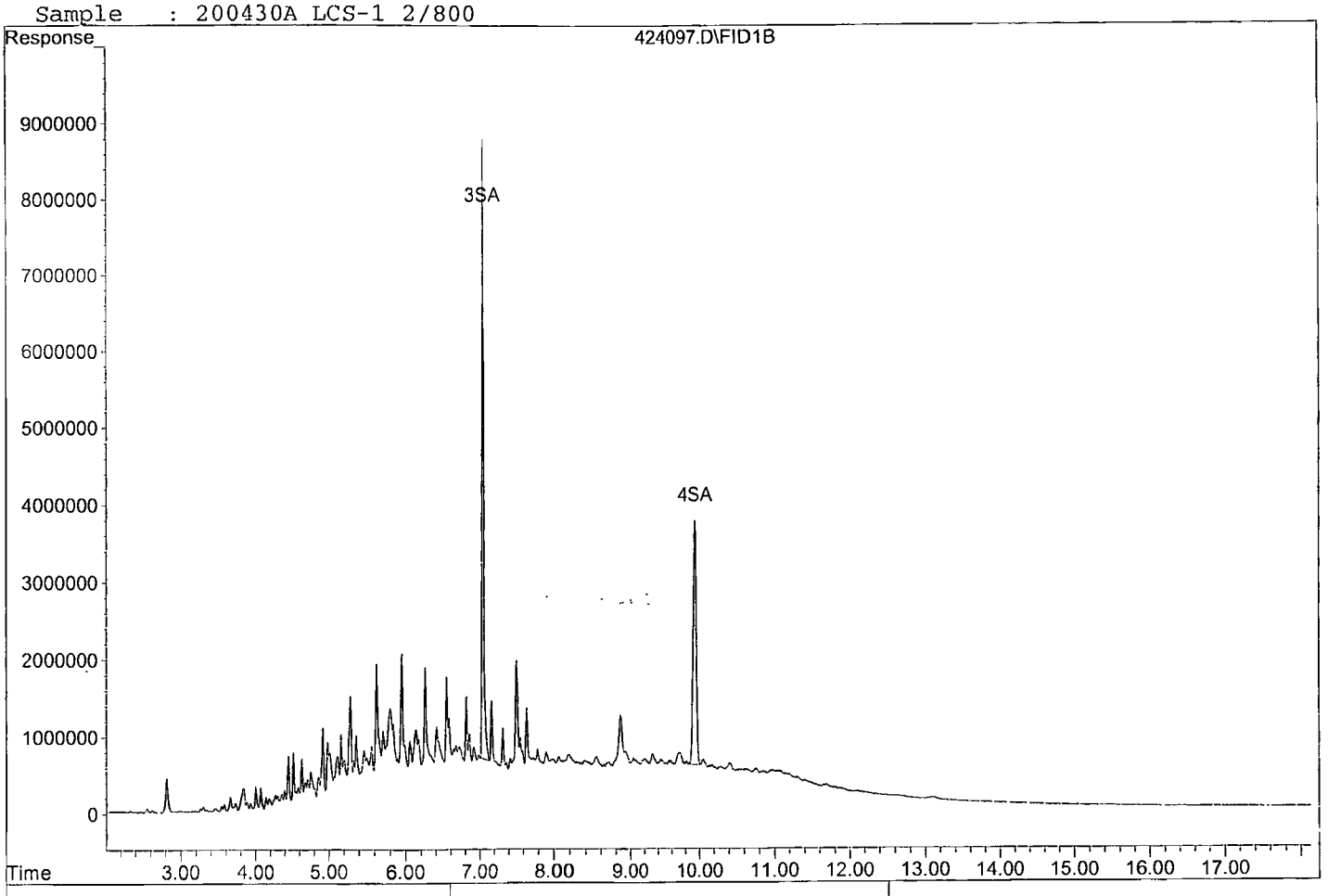
Method : G:\APOLLO\DATA\200424\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Apr 21 10:56:52 2020
Response via : Multiple Level Calibration

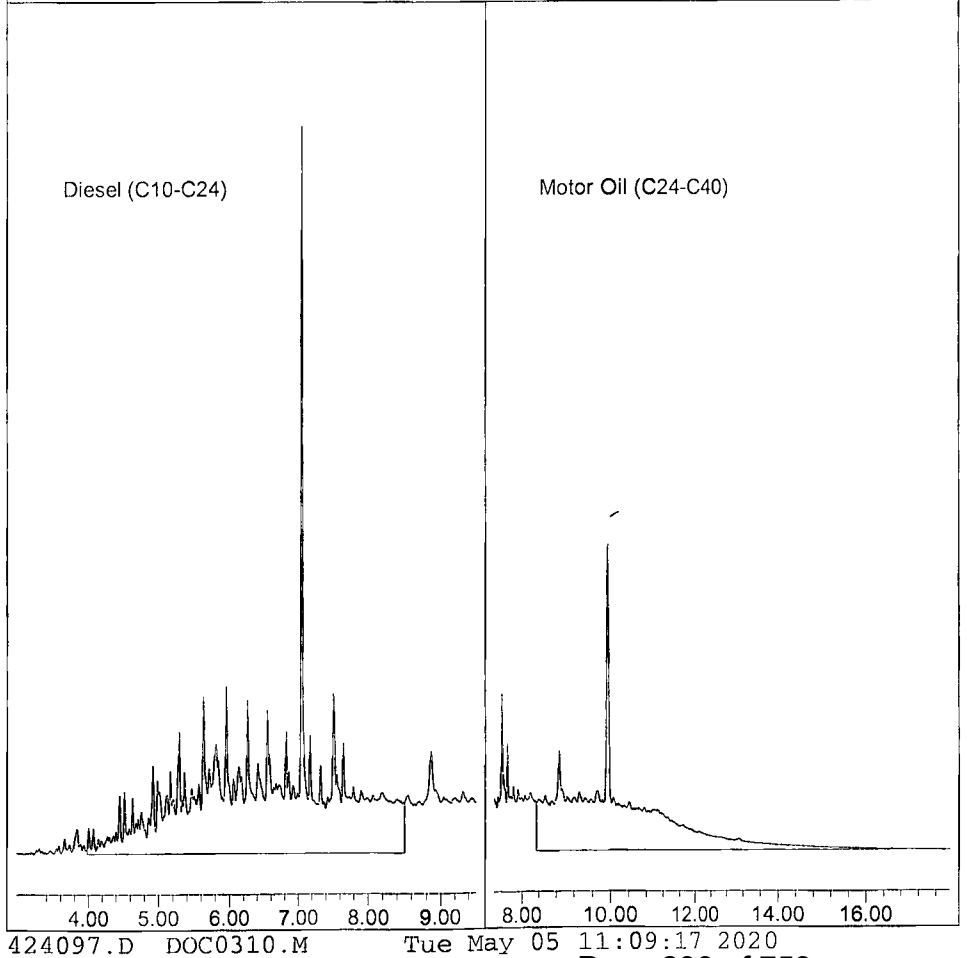
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.05	127306065	63.386 ppb
Surrogate Spike 75.000		Recovery =	84.51%
4) SA Octacosane(S)	9.94	99038275	70.893 ppb
Surrogate Spike 75.000		Recovery =	94.52%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	1833419363	1195.119 ppb
2) HBTM Motor Oil (C24-C40)	12.60	1355486807	1149.189 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200424\424097.D
Sample : 200430A LCS-1 2/800





424097.D DOC0310.M Tue May 05 11:09:17 2020

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424003.D Vial: 3
Acq On : 4-24-20 14:48:54 Operator: SS
Sample : 200422A LCSD-1 2/800 Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: Apr 27 8:57 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200424\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Apr 21 10:56:52 2020
Response via : Multiple Level Calibration

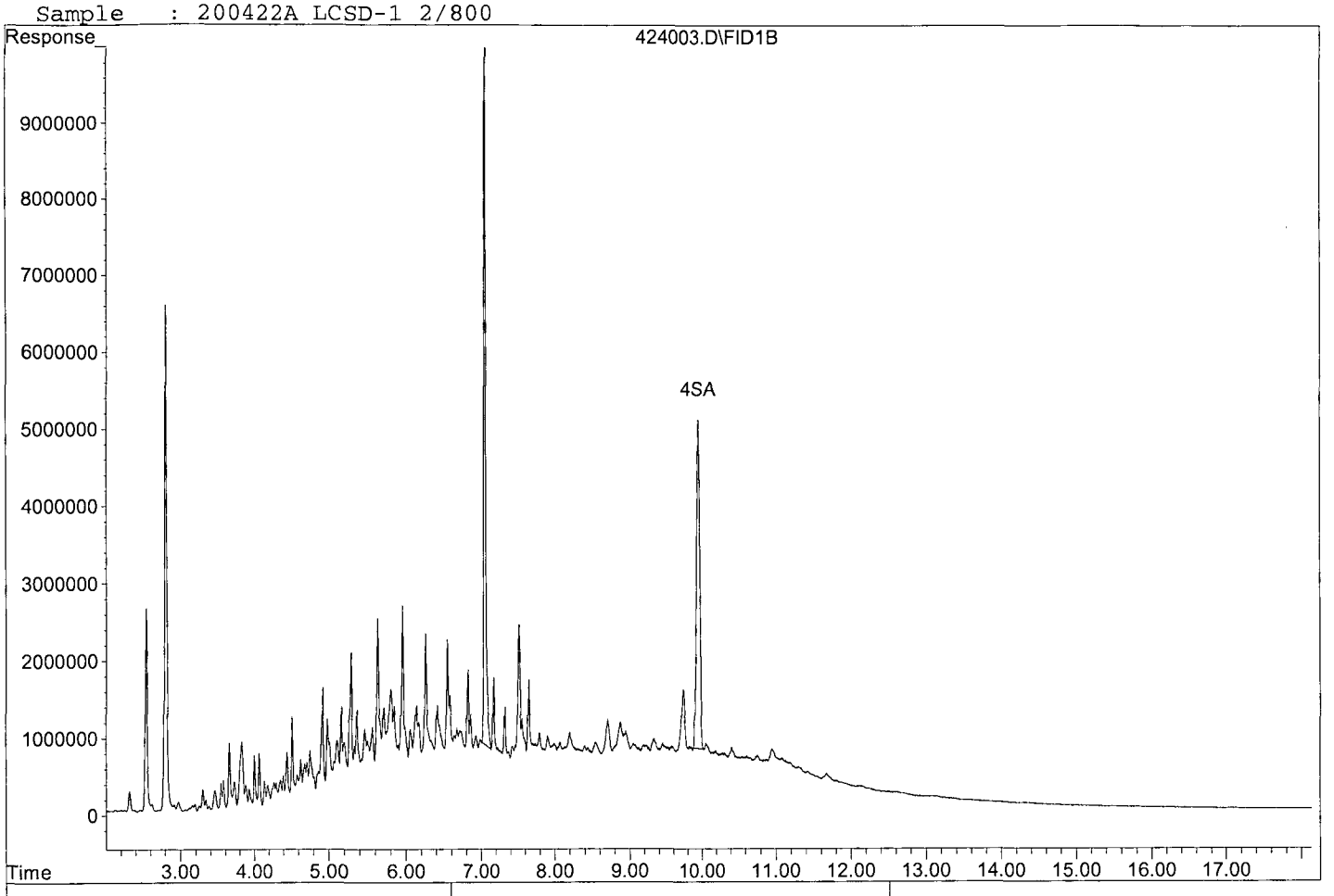
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

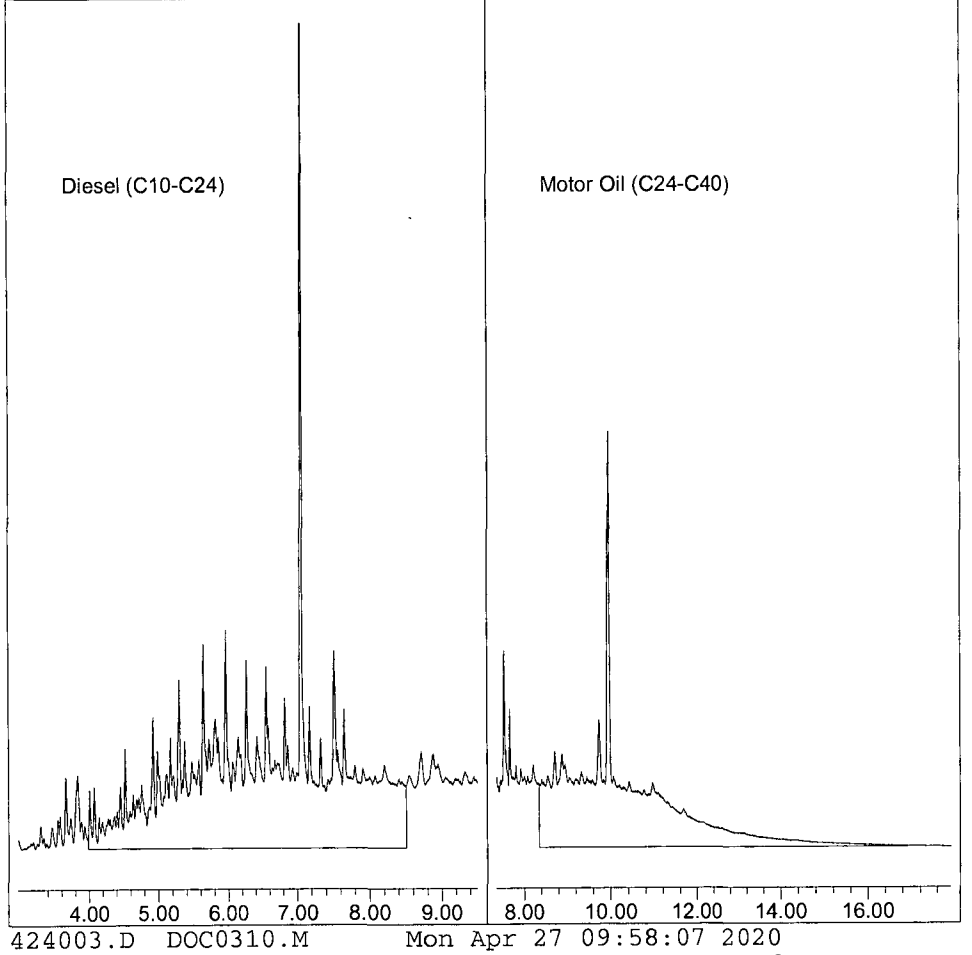
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.05	170043567	84.666	ppb
Surrogate Spike 75.000		Recovery =	112.89%	
4) SA Octacosane(S)	9.94	134464298	96.252	ppb
Surrogate Spike 75.000		Recovery =	128.34%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.24	2324198662	1515.035	ppb
2) HBTM Motor Oil (C24-C40)	12.60	1825384120	1547.570	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200424\424003.D
Sample : 200422A LCSD-1 2/800





424003.D DOC0310.M Mon Apr 27 09:58:07 2020

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424098.D Vial: 98
Acq On : 5-4-20 16:13:05 Operator: SS
Sample : 200430A LCSD-1 2/800 Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: May 5 9:42 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200424\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Apr 21 10:56:52 2020
Response via : Multiple Level Calibration

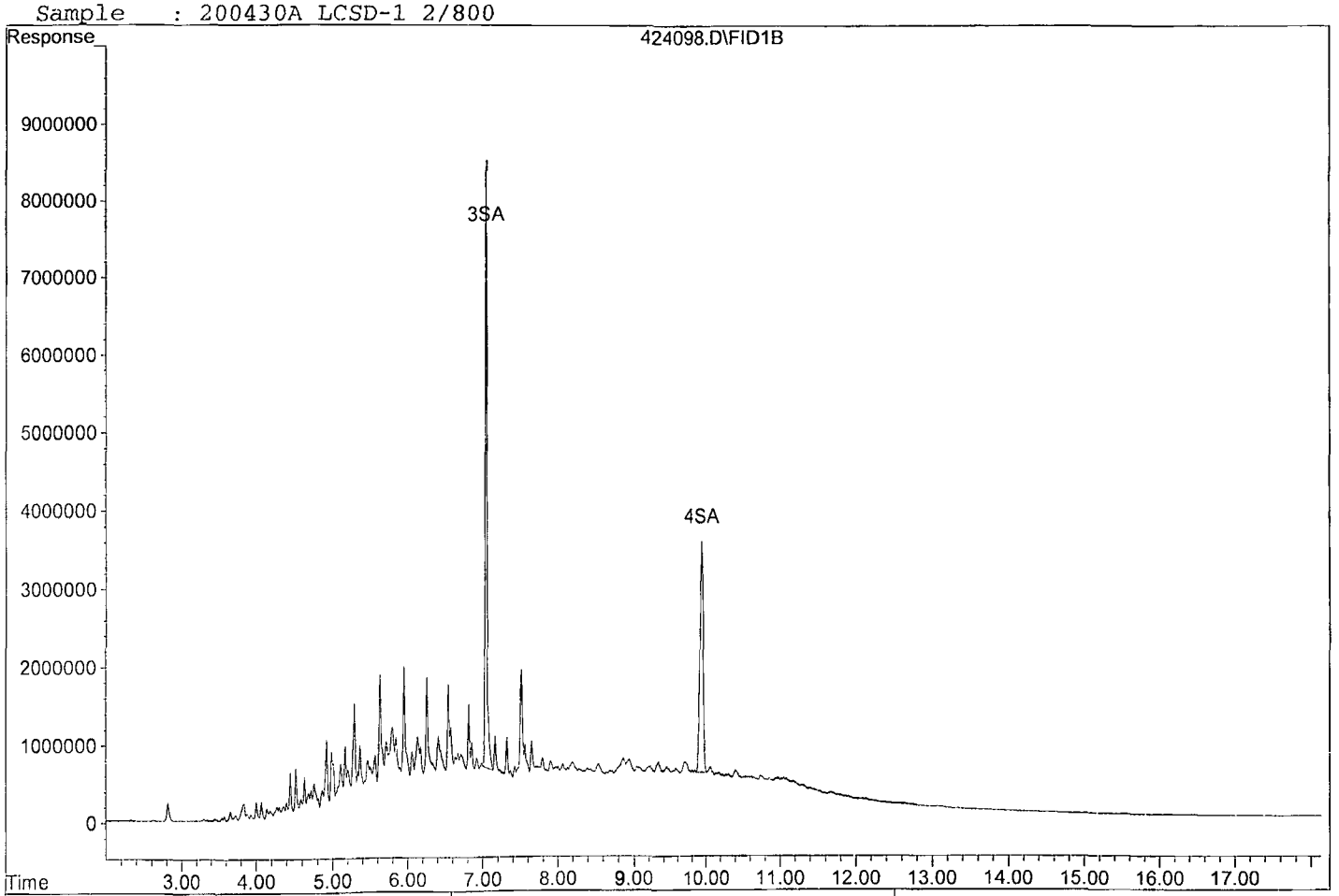
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

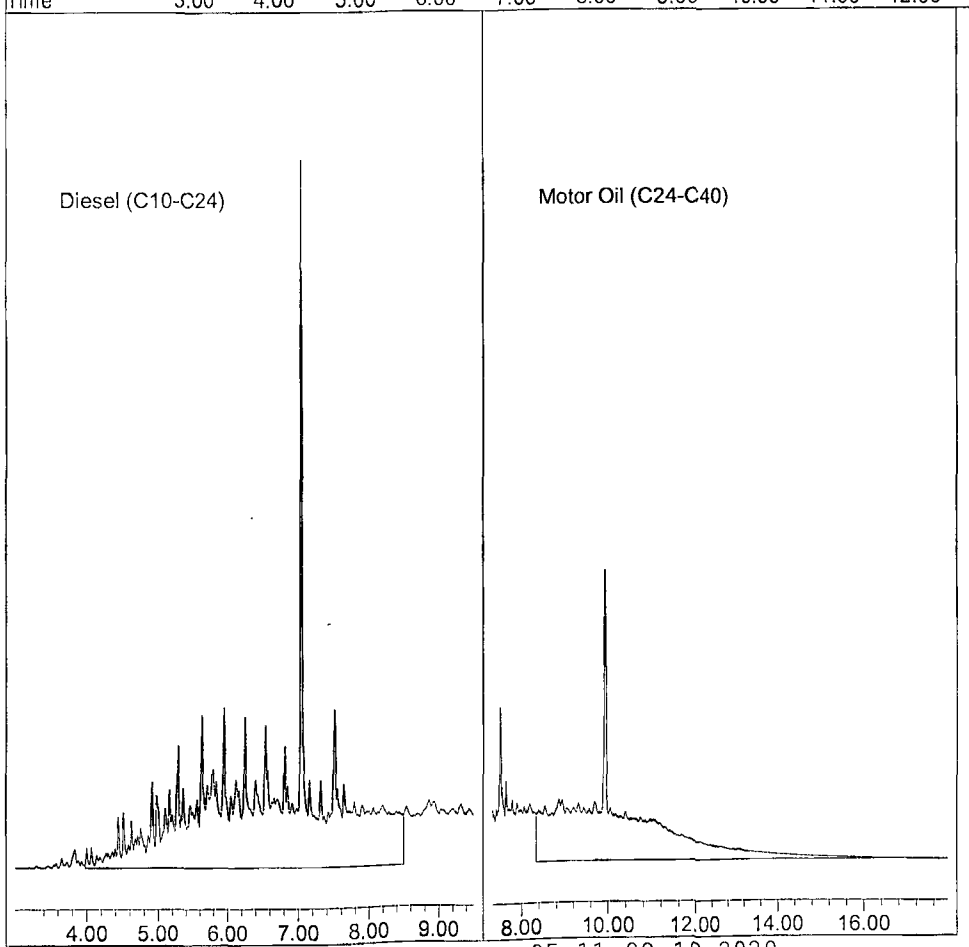
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.05	125367296	62.421 ppb
Surrogate Spike 75.000	Recovery =		83.23%
4) SA Octacosane(S)	9.94	95364544	68.263 ppb
Surrogate Spike 75.000	Recovery =		91.02%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	1752873976	1142.615 ppb
2) HBTM Motor Oil (C24-C40)	12.60	1320919560	1119.882 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200424\424098.D
Sample : 200430A LCSD-1 2/800





424098.D DOC0310.M Tue May 05 11:09:19 2020

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424185.D Vial: 85
Acq On : 5-7-20 17:10:23 Operator: SS
Sample : BA09851W14 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: May 13 8:39 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200424\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Apr 21 10:56:52 2020
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.04	170911758	85.098 ppb
Surrogate Spike 75.000	Recovery =		113.46%
4) SA Octacosane(S)	9.93	155918228	111.609 ppb
Surrogate Spike 75.000	Recovery =		148.81%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	47316986	30.844 ppb
2) HBTM Motor Oil (C24-C40)	12.60	76380627	64.756 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424185.D Vial: 85
Acq On : 5-7-20 17:10:23 Operator: SS
Sample : BA09851W14 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: May 13 9:18 2020 Quant Results File: DEC0317.RES

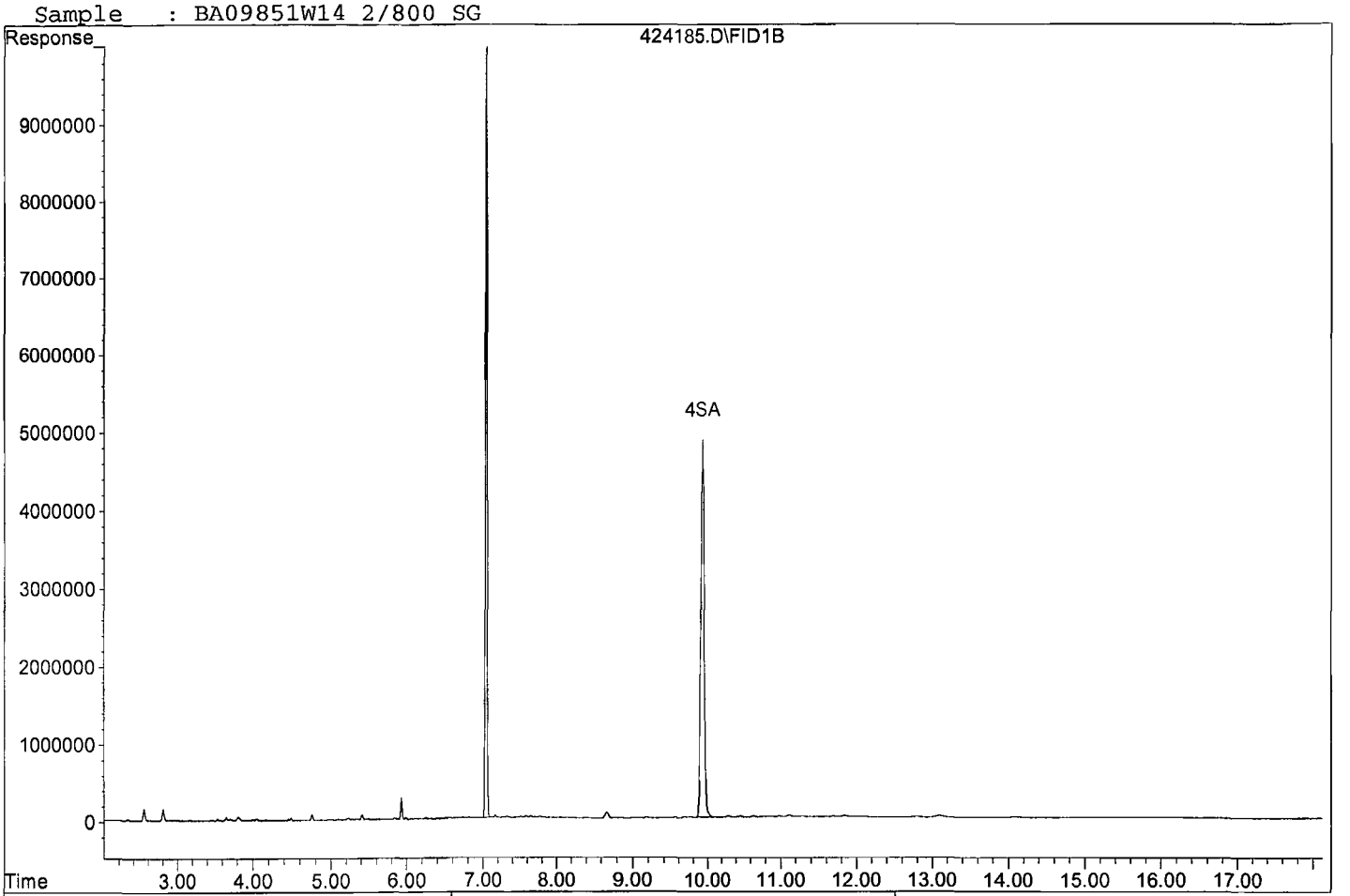
Method : G:\APOLLO\DATA\200424\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

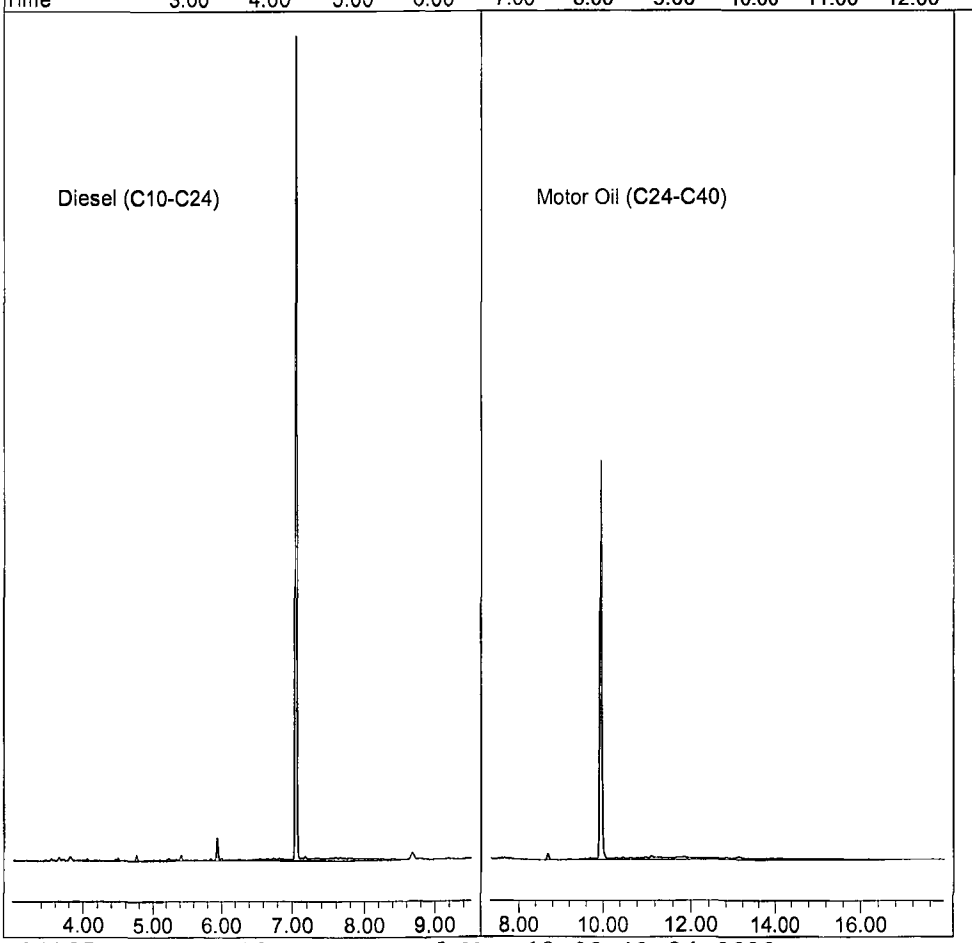
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	0.00	0	N.D. ppb
Surrogate Spike 60.000	Recovery	=	0.00%
Target Compounds			
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200424\424185.D
Sample : BA09851W14 2/800 SG





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424190.D Vial: 90
Acq On : 5-7-20 19:04:14 Operator: SS
Sample : BA09851W13 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: May 13 8:39 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200424\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Apr 21 10:56:52 2020
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.04	93912337	46.759 ppb
Surrogate Spike 75.000	Recovery =		62.35%
4) SA Octacosane(S)	9.93	81150342	58.089 ppb
Surrogate Spike 75.000	Recovery =		77.45%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	21191836	13.814 ppb
2) HBTM Motor Oil (C24-C40)	12.60	82534741	69.973 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424190.D Vial: 90
Acq On : 5-7-20 19:04:14 Operator: SS
Sample : BA09851W13 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: May 13 9:18 2020 Quant Results File: DEC0317.RES

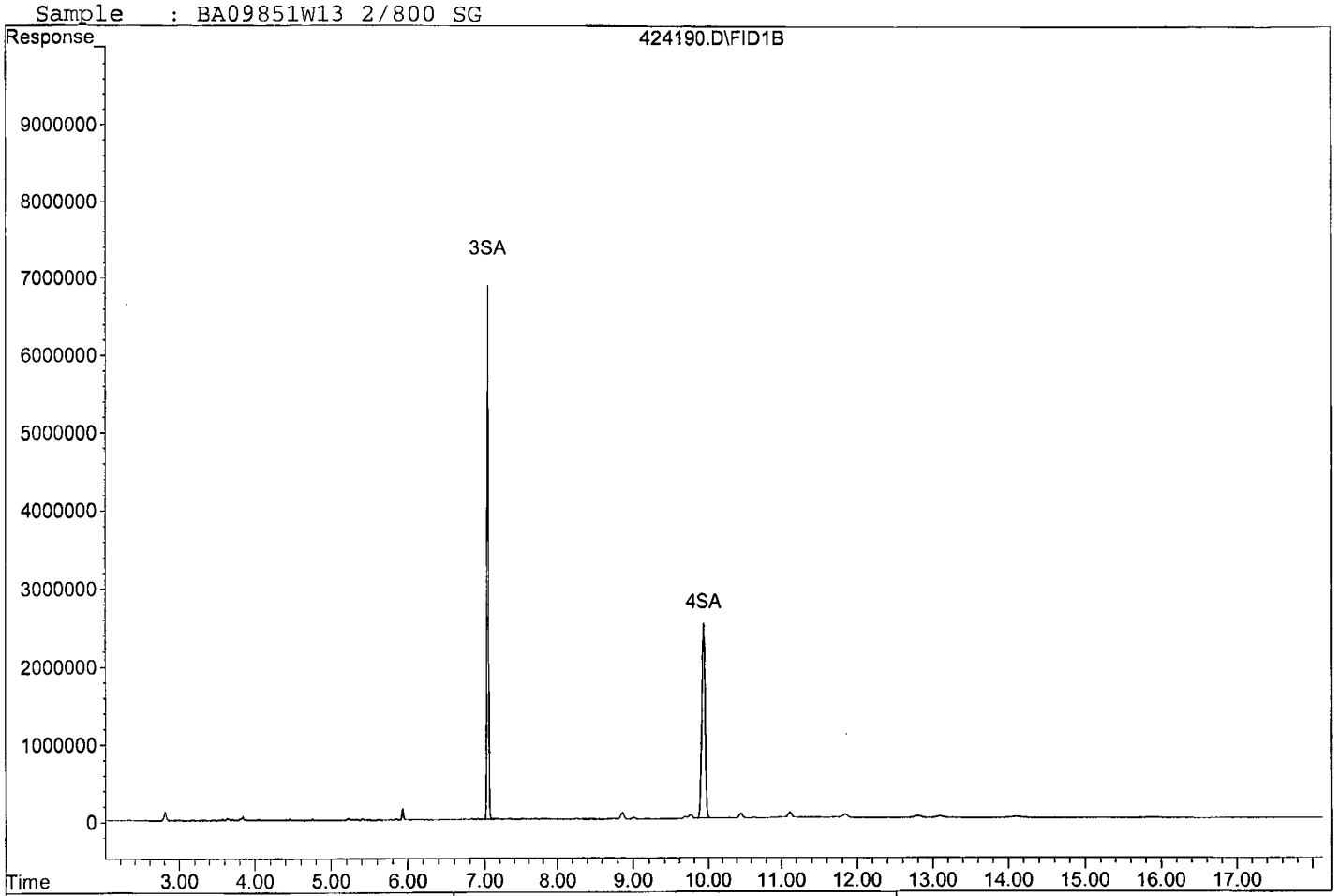
Method : G:\APOLLO\DATA\200424\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

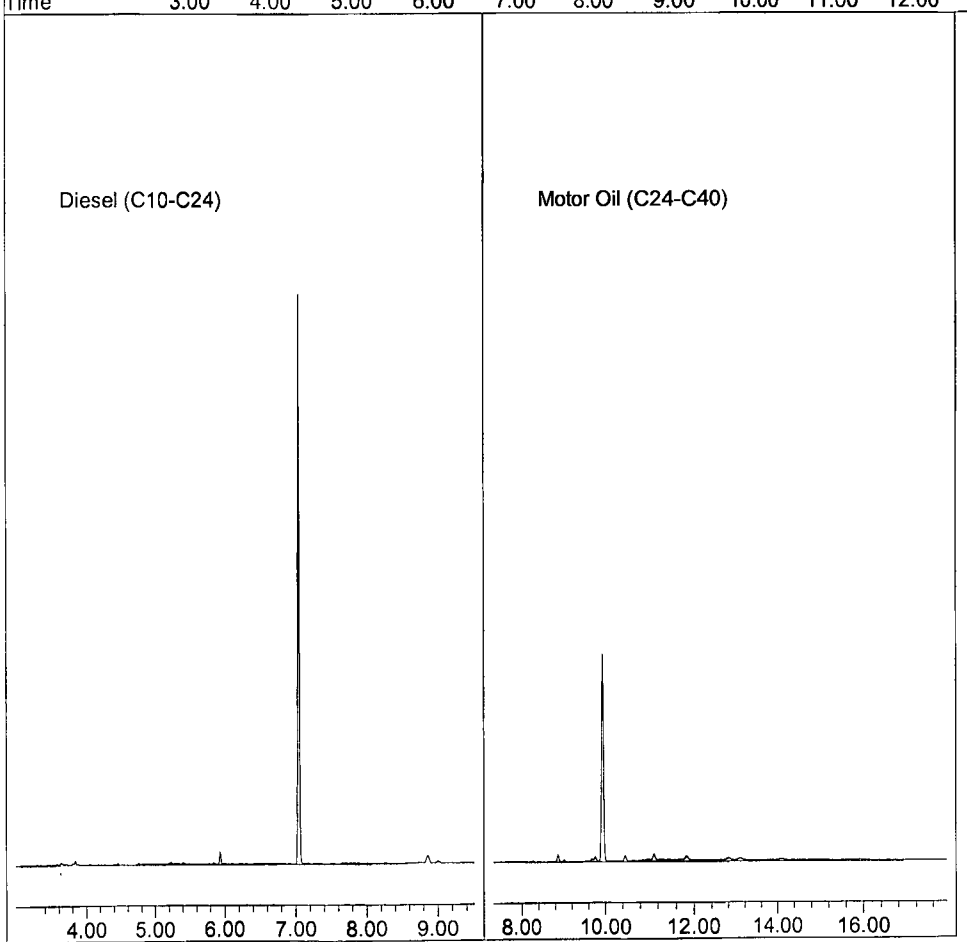
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	0.00	0	N.D. ppb
Surrogate Spike 60.000	Recovery	=	0.00%
Target Compounds			
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200424\424190.D
Sample : BA09851W13 2/800 SG





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424244.D Vial: 44
Acq On : 5-12-20 15:13:28 Operator: SS
Sample : BA09853W16 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: May 13 8:39 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200424\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Apr 21 10:56:52 2020
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.04	148897130	74.137 ppb
Surrogate Spike 75.000		Recovery =	98.85%
4) SA Octacosane(S)	9.93	136335586	97.591 ppb
Surrogate Spike 75.000		Recovery =	130.12%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	48404922	31.553 ppb
2) HBTM Motor Oil (C24-C40)	12.60	98807245	83.769 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424244.D Vial: 44
Acq On : 5-12-20 15:13:28 Operator: SS
Sample : BA09853W16 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: May 13 9:18 2020 Quant Results File: DEC0317.RES

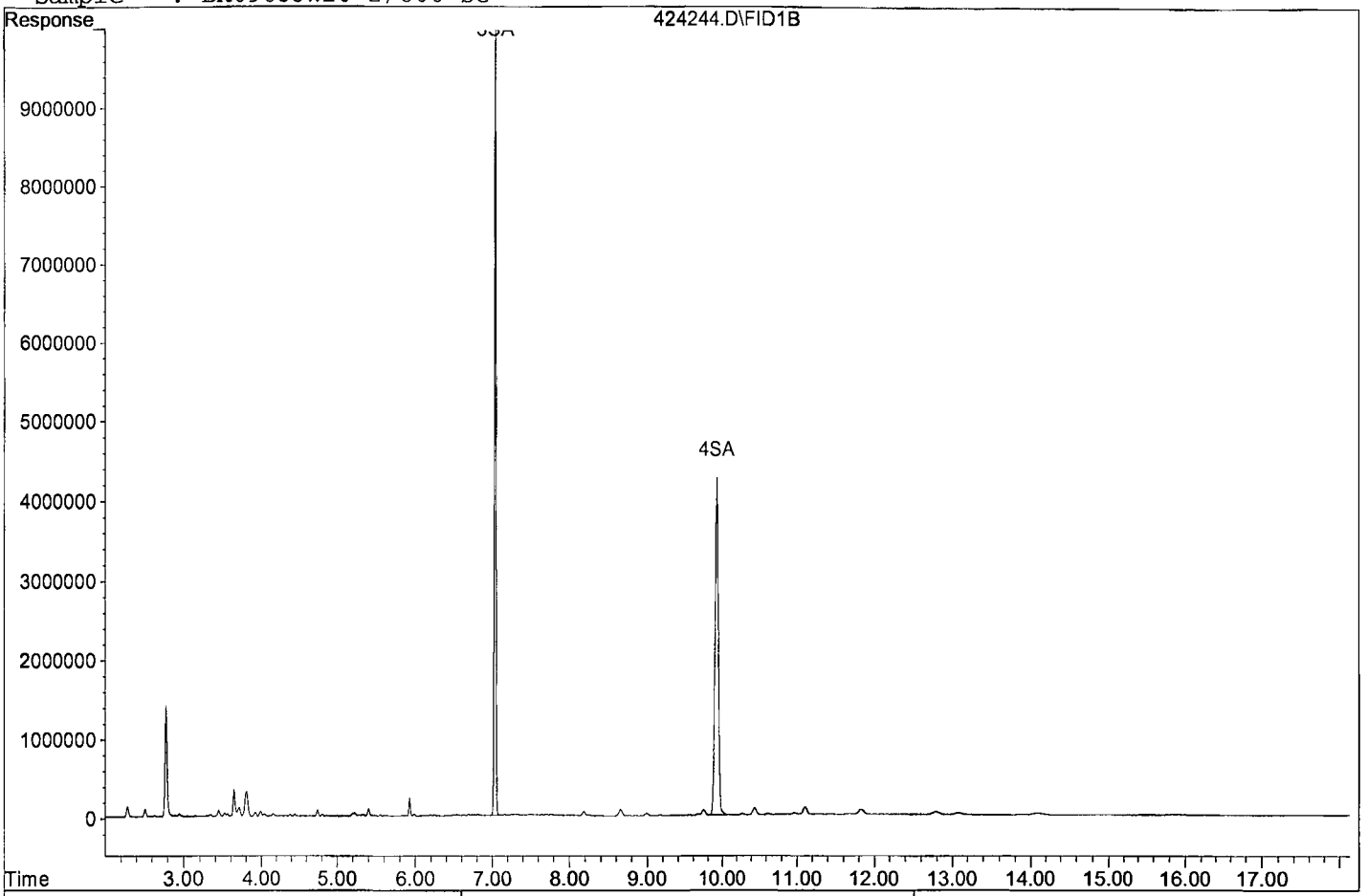
Method : G:\APOLLO\DATA\200424\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

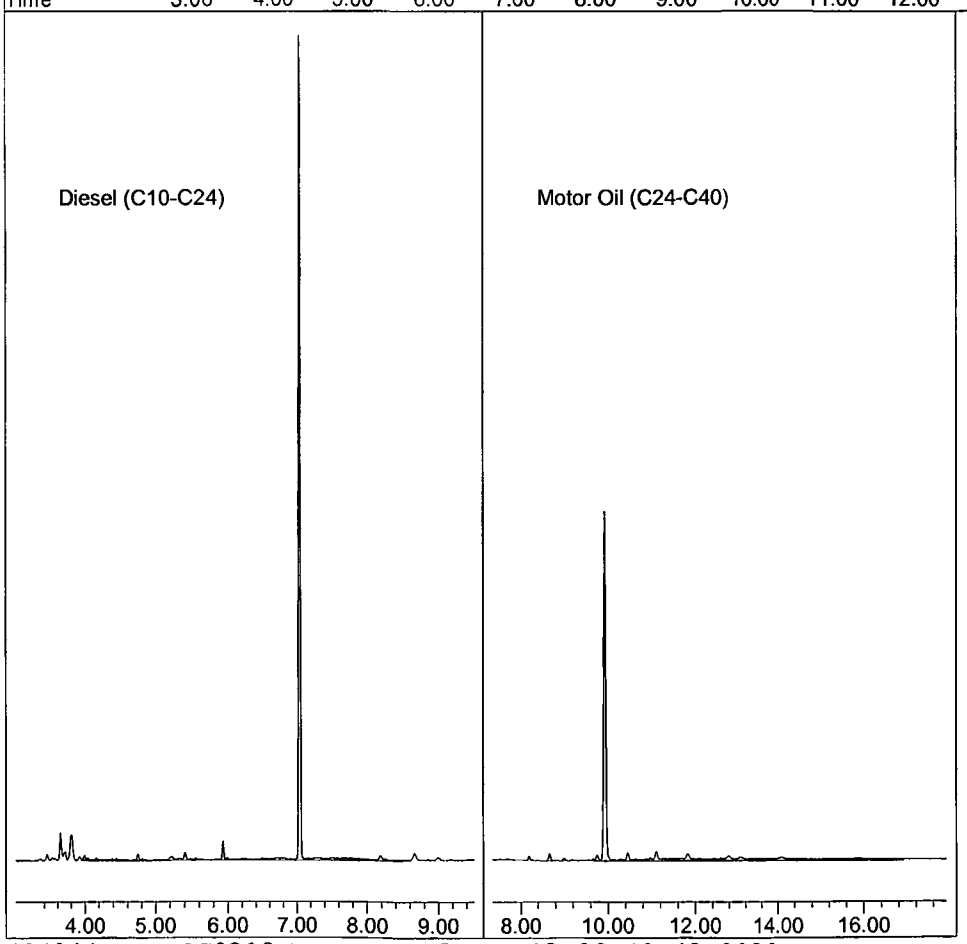
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	0.00	0	N.D. ppb
Surrogate Spike 60.000	Recovery	=	0.00%
Target Compounds			
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200424\424244.D
Sample : BA09853W16 2/800 SG





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424251.D Vial: 51
Acq On : 5-12-20 17:52:13 Operator: SS
Sample : BA09853W13 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: May 13 8:39 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200424\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Apr 21 10:56:52 2020
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.04	123585725	61.534 ppb
Surrogate Spike 75.000	Recovery =		82.05%
4) SA Octacosane(S)	9.93	117349577	84.001 ppb
Surrogate Spike 75.000	Recovery =		112.00%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	48089319	31.347 ppb
2) HBTM Motor Oil (C24-C40)	12.60	78510240	66.561 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424251.D Vial: 51
Acq On : 5-12-20 17:52:13 Operator: SS
Sample : BA09853W13 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: May 13 9:19 2020 Quant Results File: DEC0317.RES

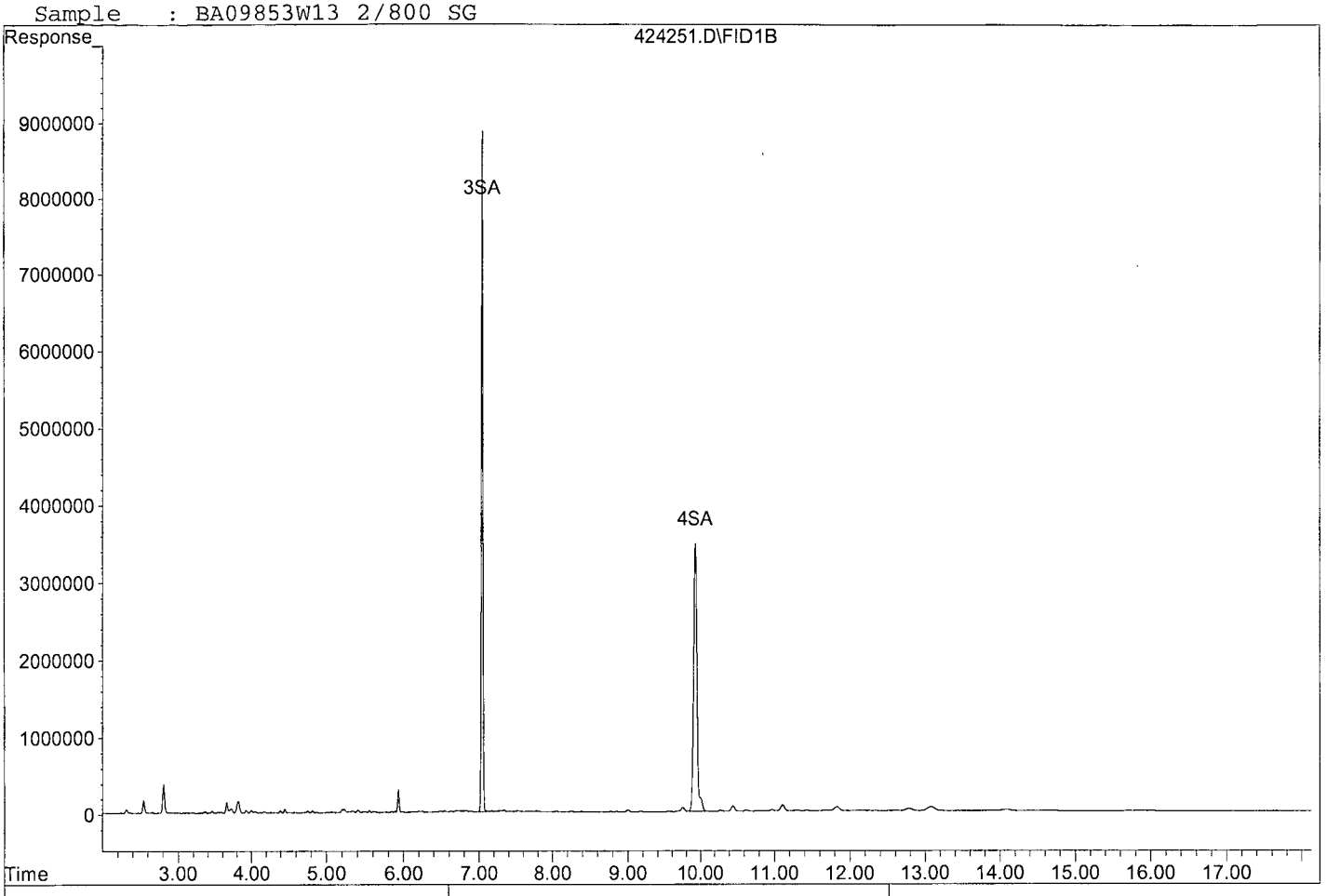
Method : G:\APOLLO\DATA\200424\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

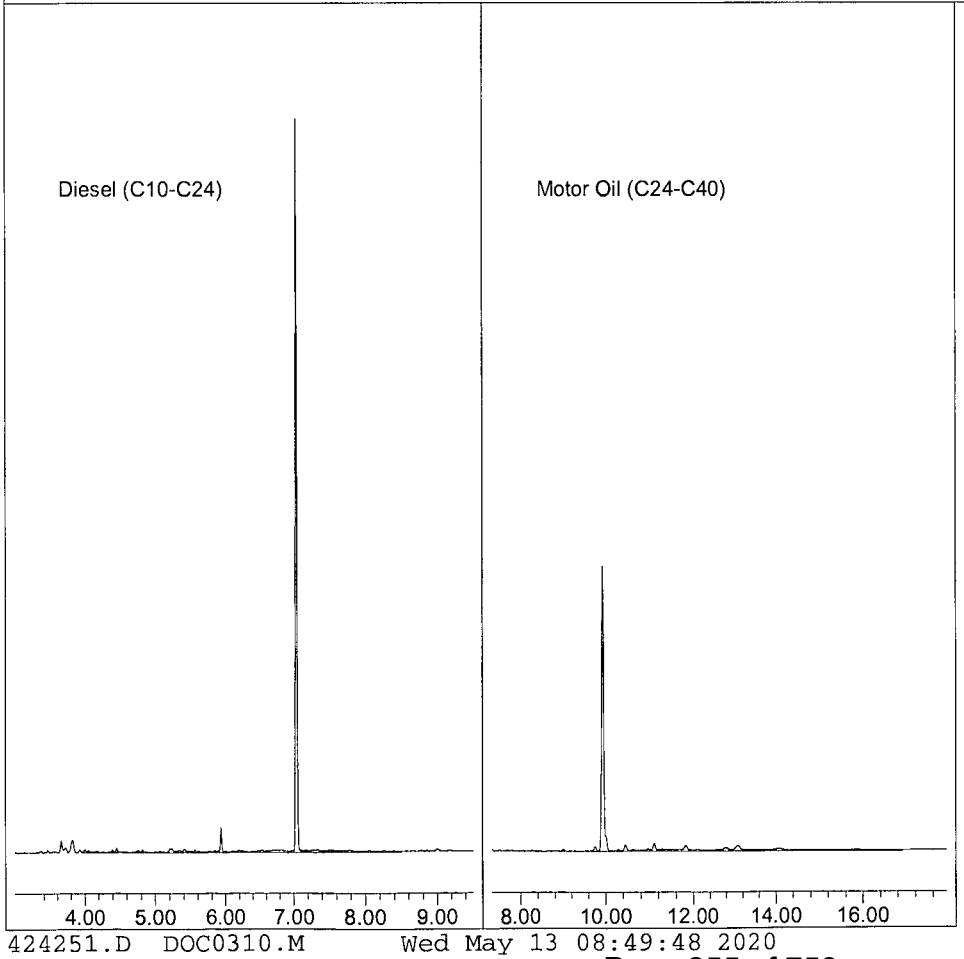
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	0.00	0	N.D. ppb
Surrogate Spike 60.000	Recovery	=	0.00%
Target Compounds			
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200424\424251.D
Sample : BA09853W13 2/800 SG





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424245.D Vial: 45
Acq On : 5-12-20 15:36:05 Operator: SS
Sample : BA09855W14 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: May 13 8:39 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200424\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Apr 21 10:56:52 2020
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.04	192114145	95.655 ppb
Surrogate Spike 75.000	Recovery =		127.54%
4) SA Octacosane(S)	9.93	180920978	129.506 ppb
Surrogate Spike 75.000	Recovery =		172.67%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	79655419	51.924 ppb
2) HBTM Motor Oil (C24-C40)	12.60	84096591	71.298 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424245.D Vial: 45
Acq On : 5-12-20 15:36:05 Operator: SS
Sample : BA09855W14 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: May 13 9:18 2020 Quant Results File: DEC0317.RES

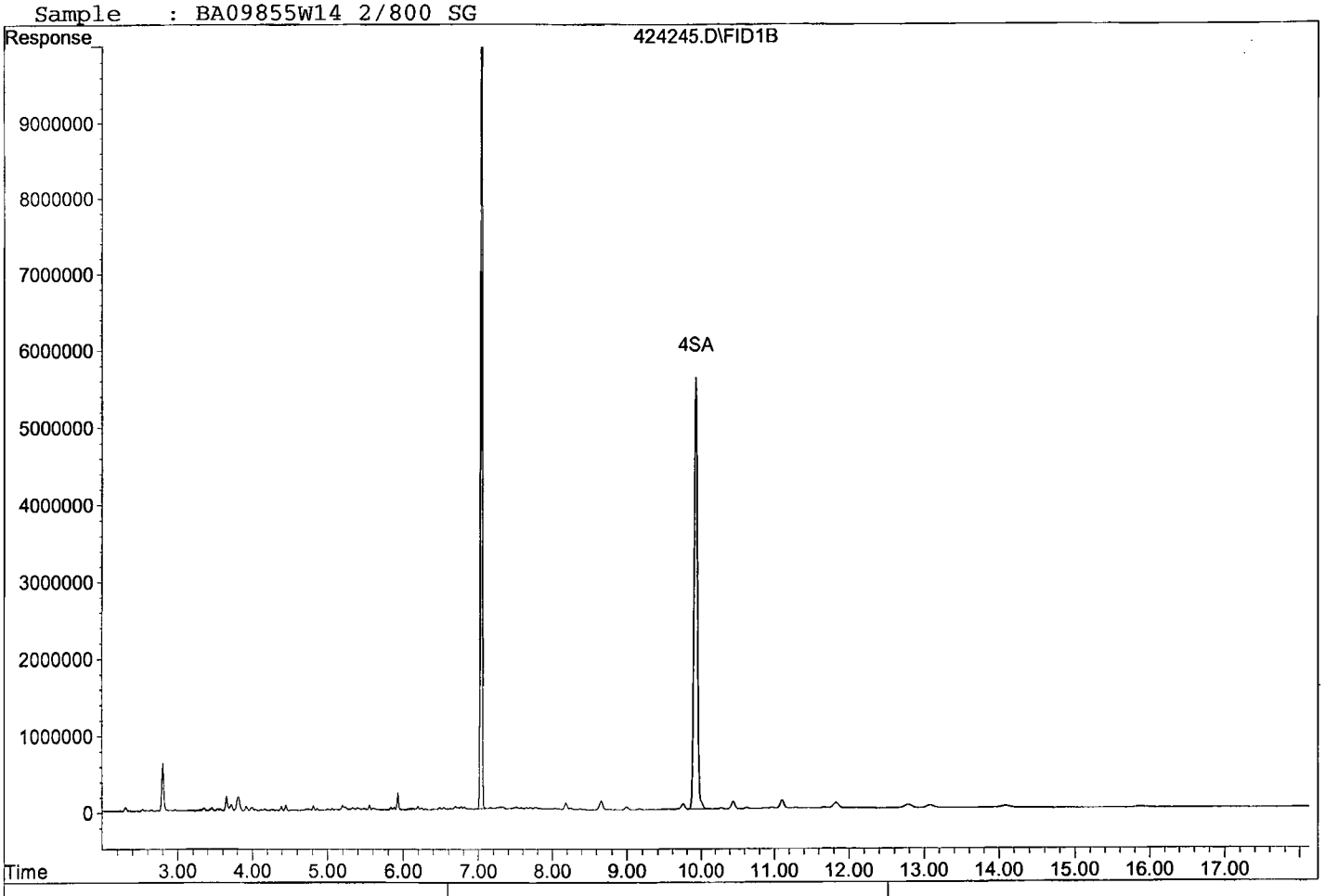
Method : G:\APOLLO\DATA\200424\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

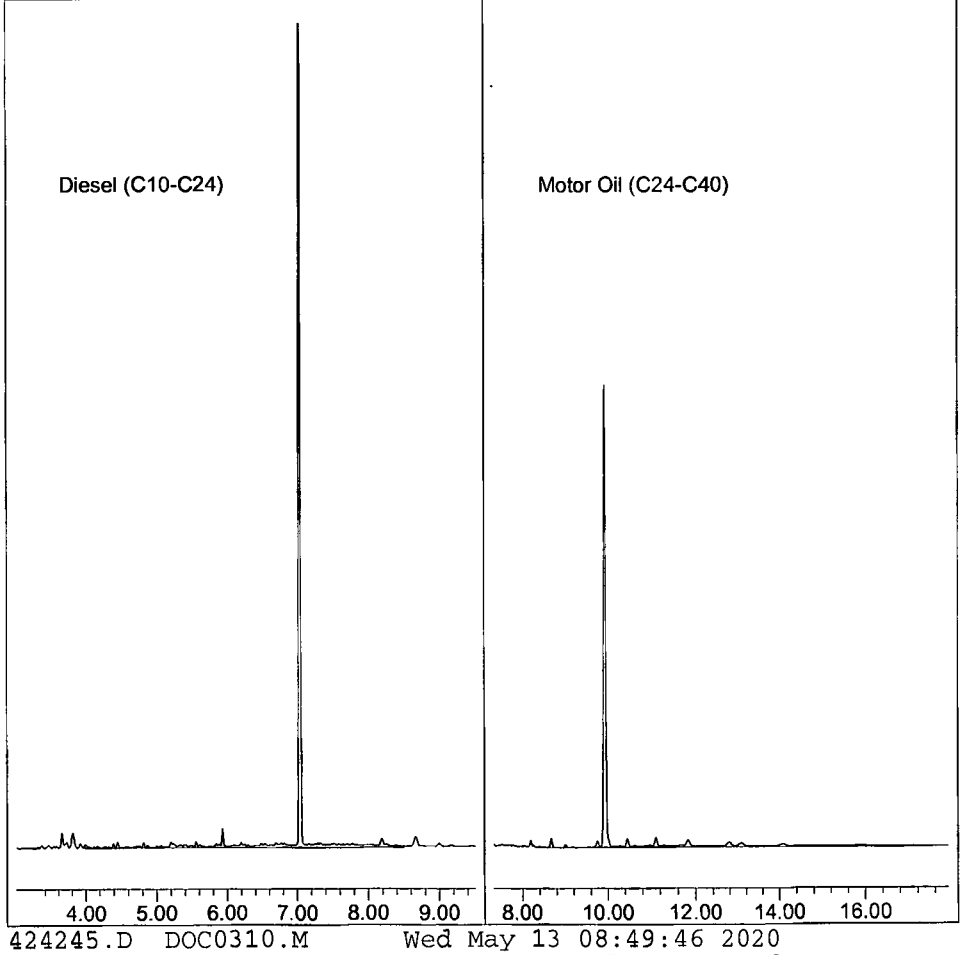
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	0.00	0	N.D. ppb
Surrogate Spike 60.000	Recovery	=	0.00%
Target Compounds			
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200424\424245.D
Sample : BA09855W14 2/800 SG





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424252.D Vial: 52
Acq On : 5-12-20 18:14:59 Operator: SS
Sample : BA09855W16 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: May 13 8:39 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200424\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Apr 21 10:56:52 2020
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.04	126832308	63.150 ppb
Surrogate Spike 75.000	Recovery =		84.20%
4) SA Octacosane(S)	9.93	111938574	80.127 ppb
Surrogate Spike 75.000	Recovery =		106.84%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	49880372	32.515 ppb
2) HBTM Motor Oil (C24-C40)	12.60	64572496	54.745 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424252.D Vial: 52
Acq On : 5-12-20 18:14:59 Operator: SS
Sample : BA09855W16 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: May 13 9:19 2020 Quant Results File: DEC0317.RES

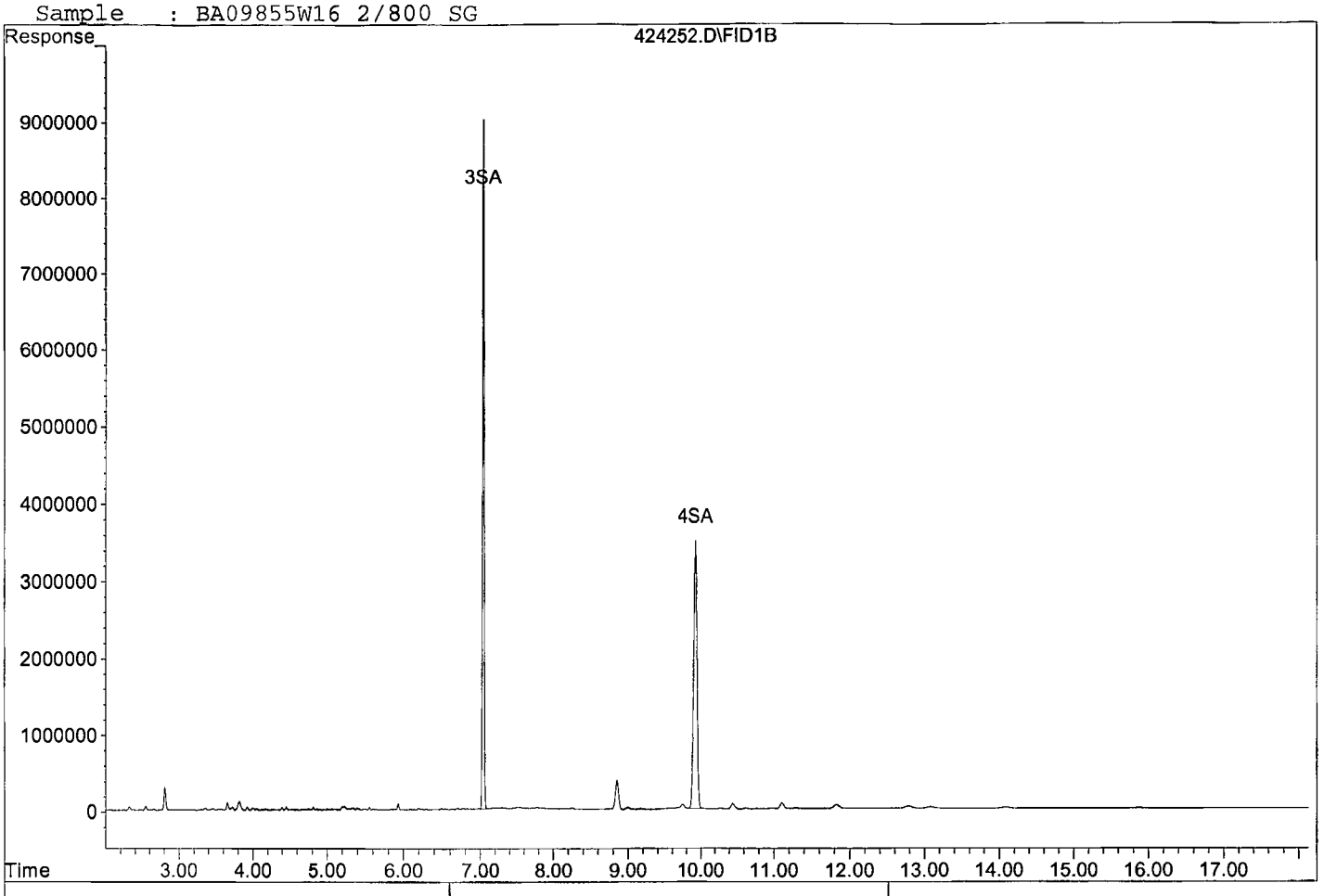
Method : G:\APOLLO\DATA\200424\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

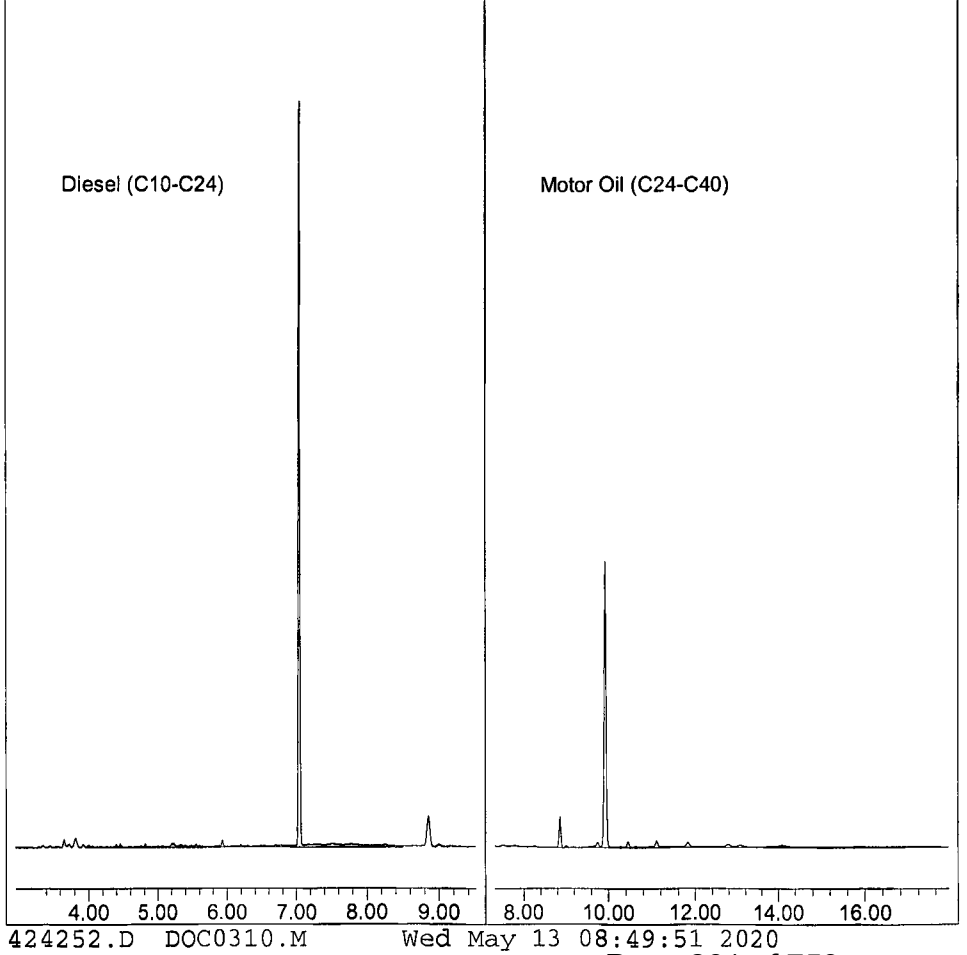
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) SC Decanoic Acid(S)	0.00	0	N.D.	ppb
Surrogate Spike 60.000	Recovery	=	0.00%	
Target Compounds				
Target Compounds				

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200424\424252.D
Sample : BA09855W16 2/800 SG





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424182.D Vial: 82
Acq On : 5-7-20 16:02:36 Operator: SS
Sample : 200422A BLK 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: May 13 8:39 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200424\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Apr 21 10:56:52 2020
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.04	187246025	93.231 ppb
Surrogate Spike 75.000	Recovery =		124.31%
4) SA Octacosane(S)	9.93	165708241	118.616 ppb
Surrogate Spike 75.000	Recovery =		158.15%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	62818988	40.949 ppb
2) HBTM Motor Oil (C24-C40)	12.60	157914992	133.881 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424182.D Vial: 82
Acq On : 5-7-20 16:02:36 Operator: SS
Sample : 200422A BLK 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: May 13 9:18 2020 Quant Results File: DEC0317.RES

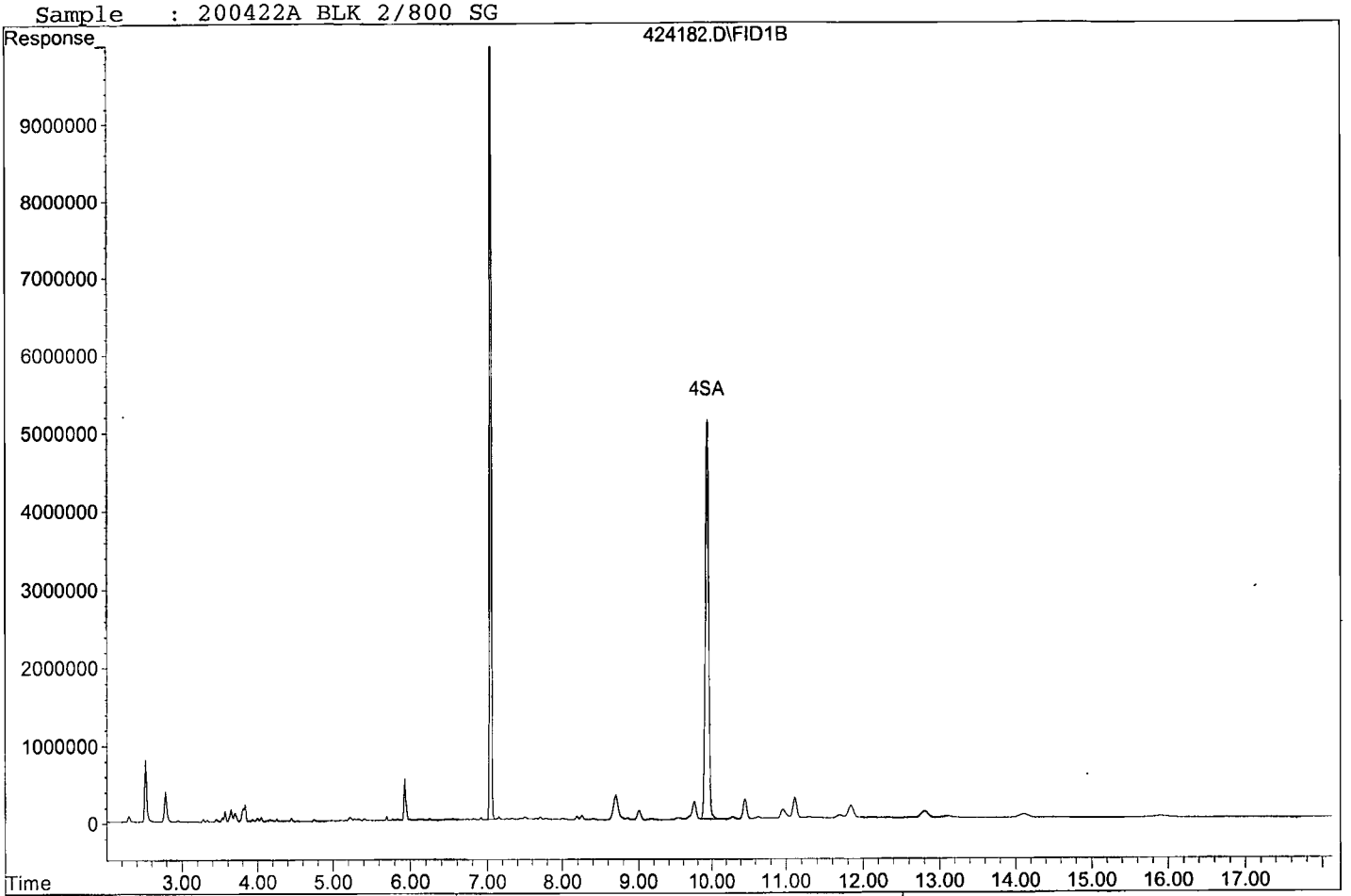
Method : G:\APOLLO\DATA\200424\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

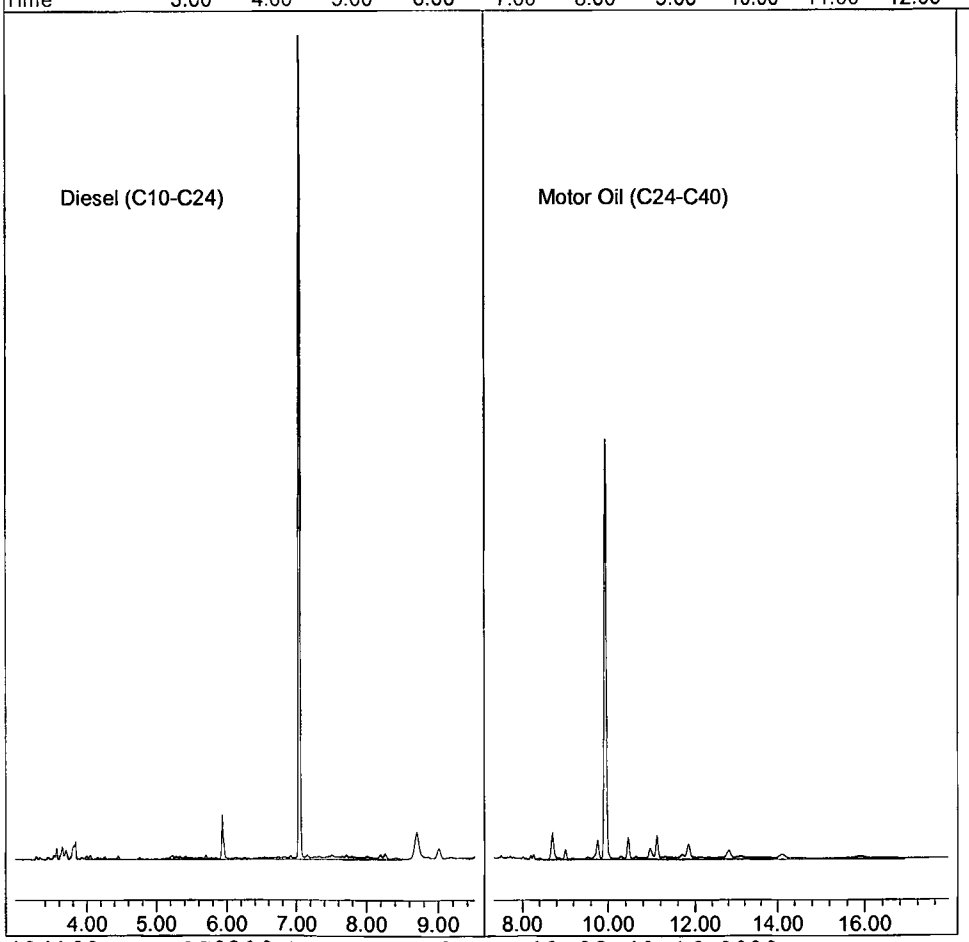
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	0.00	0	N.D. ppb
Surrogate Spike 60.000	Recovery	=	0.00%
Target Compounds			
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200424\424182.D
Sample : 200422A BLK 2/800 SG





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424187.D Vial: 87
Acq On : 5-7-20 17:55:57 Operator: SS
Sample : 200430A BLK 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: May 13 8:39 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200424\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Apr 21 10:56:52 2020
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.04	111197776	55.366 ppb
Surrogate Spike 75.000	Recovery =		73.82%
4) SA Octacosane(S)	9.93	92539528	66.241 ppb
Surrogate Spike 75.000	Recovery =		88.32%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	42725399	27.851 ppb
2) HBTM Motor Oil (C24-C40)	12.60	101446591	86.007 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424187.D Vial: 87
Acq On : 5-7-20 17:55:57 Operator: SS
Sample : 200430A BLK 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: May 13 9:18 2020 Quant Results File: DEC0317.RES

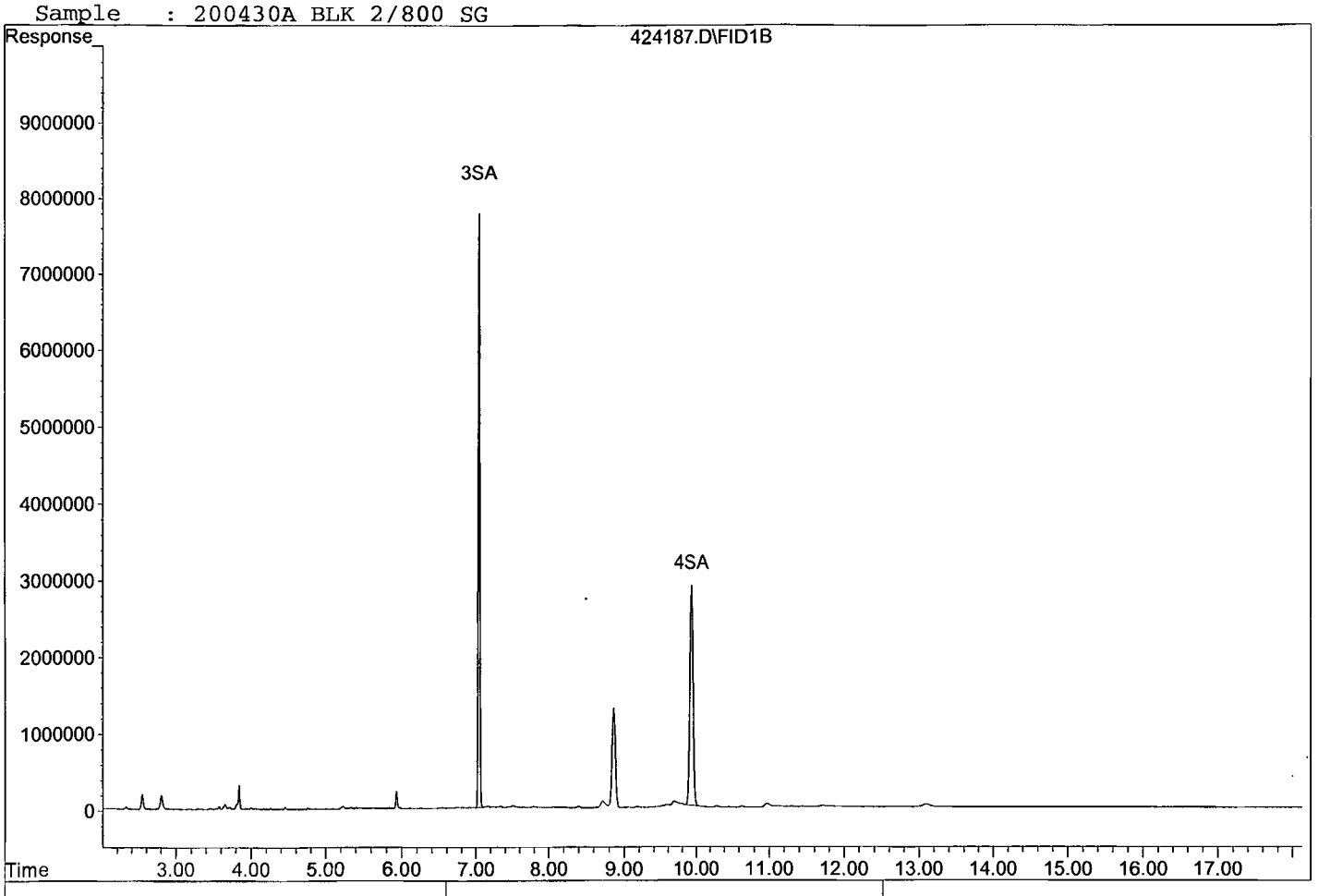
Method : G:\APOLLO\DATA\200424\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

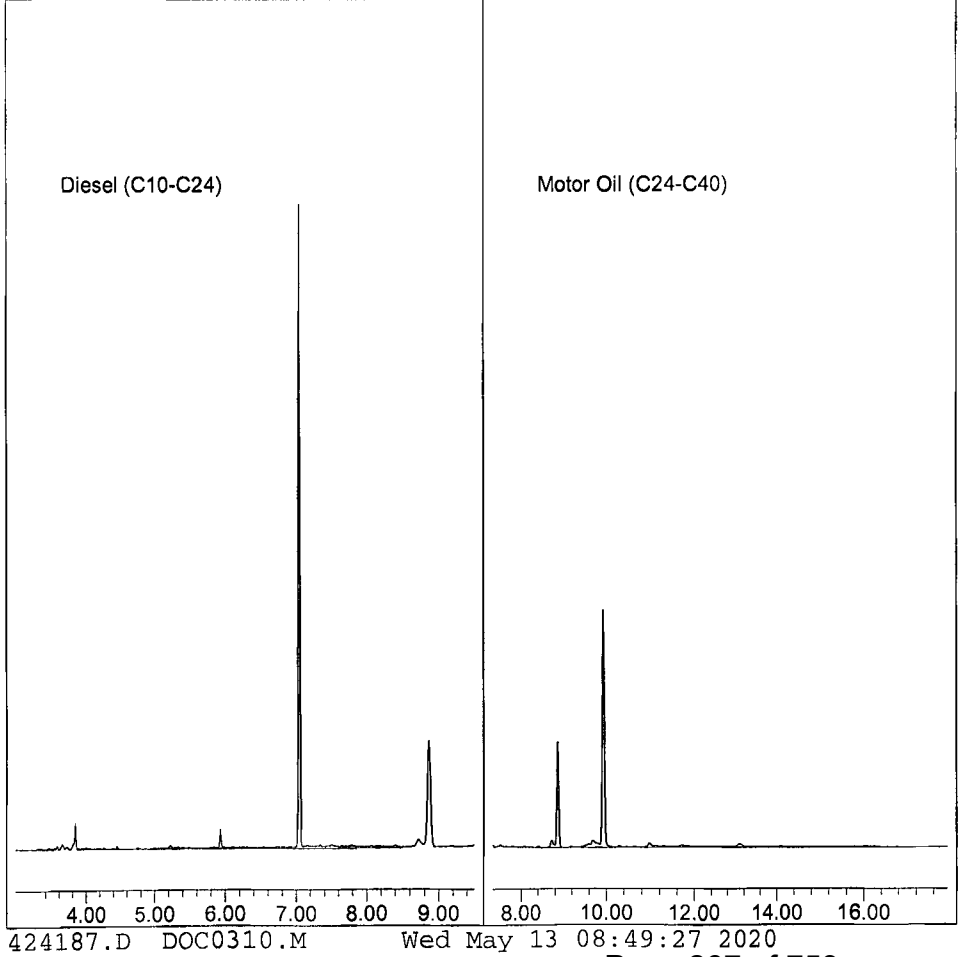
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) SC Decanoic Acid(S)	0.00	0	N.D. ppb
Surrogate Spike 60.000	Recovery	=	0.00%
Target Compounds			
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200424\424187.D
Sample : 200430A BLK 2/800 SG





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424183.D Vial: 83
Acq On : 5-7-20 16:25:08 Operator: SS
Sample : 200422A LCS-1 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: May 13 8:39 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200424\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Apr 21 10:56:52 2020
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.04	175938907	87.601 ppb
Surrogate Spike 75.000	Recovery =		116.80%
4) SA Octacosane(S)	9.94	142041786	101.676 ppb
Surrogate Spike 75.000	Recovery =		135.57%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	1960676715	1278.072 ppb
2) HBTM Motor Oil (C24-C40)	12.60	1707403863	1447.546 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424183.D Vial: 83
Acq On : 5-7-20 16:25:08 Operator: SS
Sample : 200422A LCS-1 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: May 13 9:24 2020 Quant Results File: DEC0317.RES

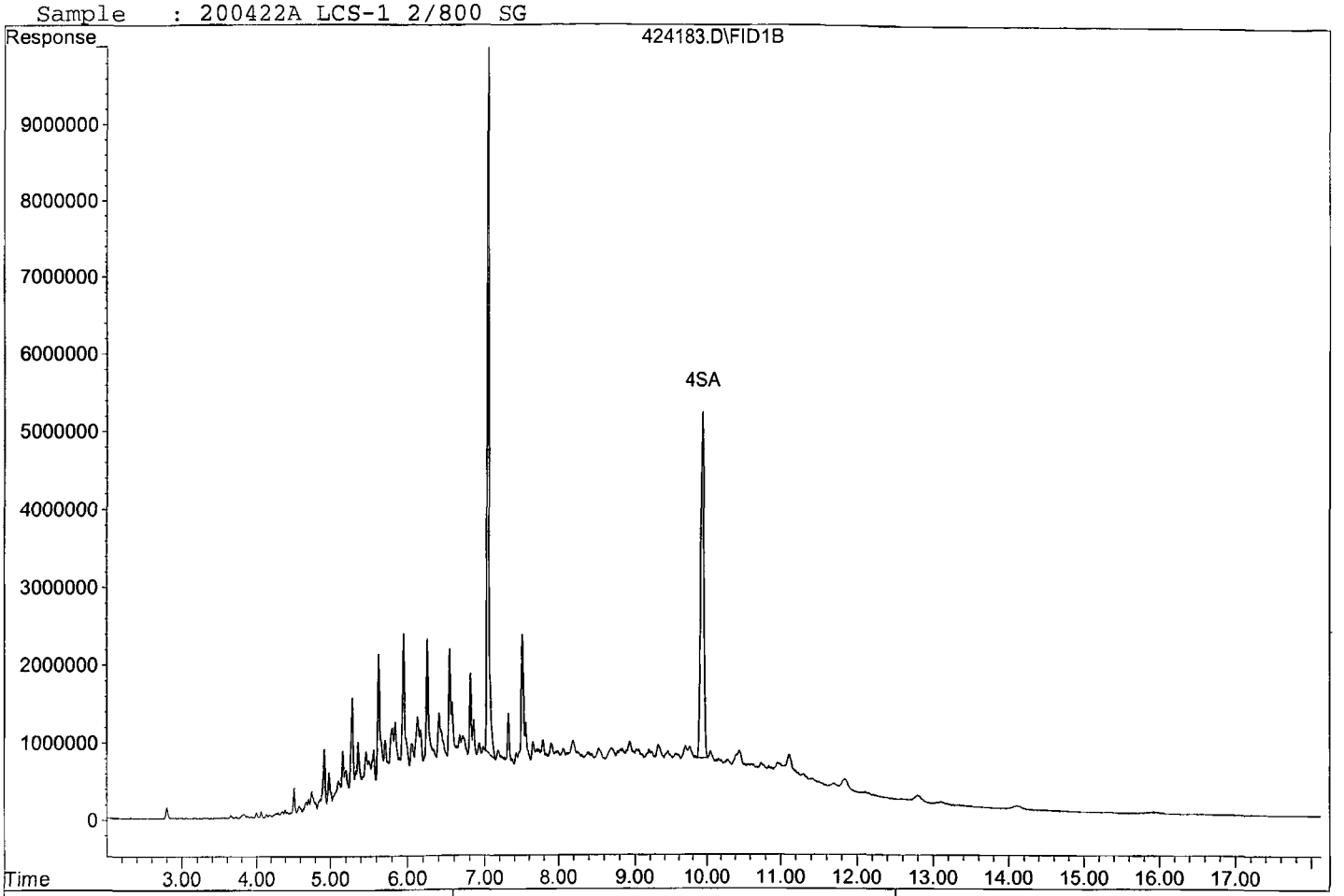
Method : G:\APOLLO\DATA\200424\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

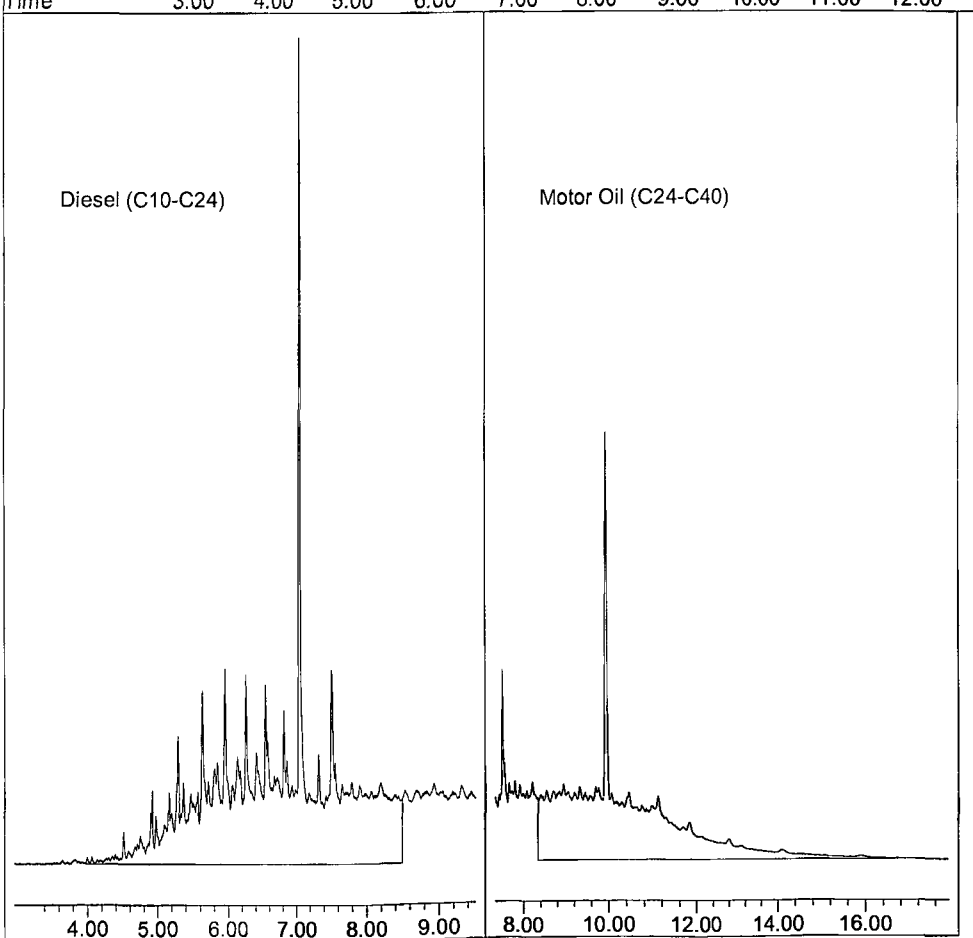
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) SC Decanoic Acid(S)	0.00	0	N.D.	ppb d
Surrogate Spike 60.000	Recovery	=	0.00%	
Target Compounds				
Target Compounds				

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200424\424183.D
Sample : 200422A LCS-1 2/800 SG





424183.D DOC0310.M Wed May 13 08:49:19 2020

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424188.D Vial: 88
Acq On : 5-7-20 18:18:45 Operator: SS
Sample : 200430A LCS-1 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: May 13 8:39 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200424\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Apr 21 10:56:52 2020
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
3) SA Ortho-Terphenyl(S)	7.04	131559528	65.504	ppb
Surrogate Spike 75.000		Recovery =	87.34%	
4) SA Octacosane(S)	9.93	101629696	72.748	ppb
Surrogate Spike 75.000		Recovery =	97.00%	
Target Compounds				
1) HATM Diesel (C10-C24)	6.24	1413147832	921.164	ppb
2) HBTM Motor Oil (C24-C40)	12.60	1374644914	1165.431	ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424188.D Vial: 88
Acq On : 5-7-20 18:18:45 Operator: SS
Sample : 200430A LCS-1 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: May 13 9:23 2020 Quant Results File: DEC0317.RES

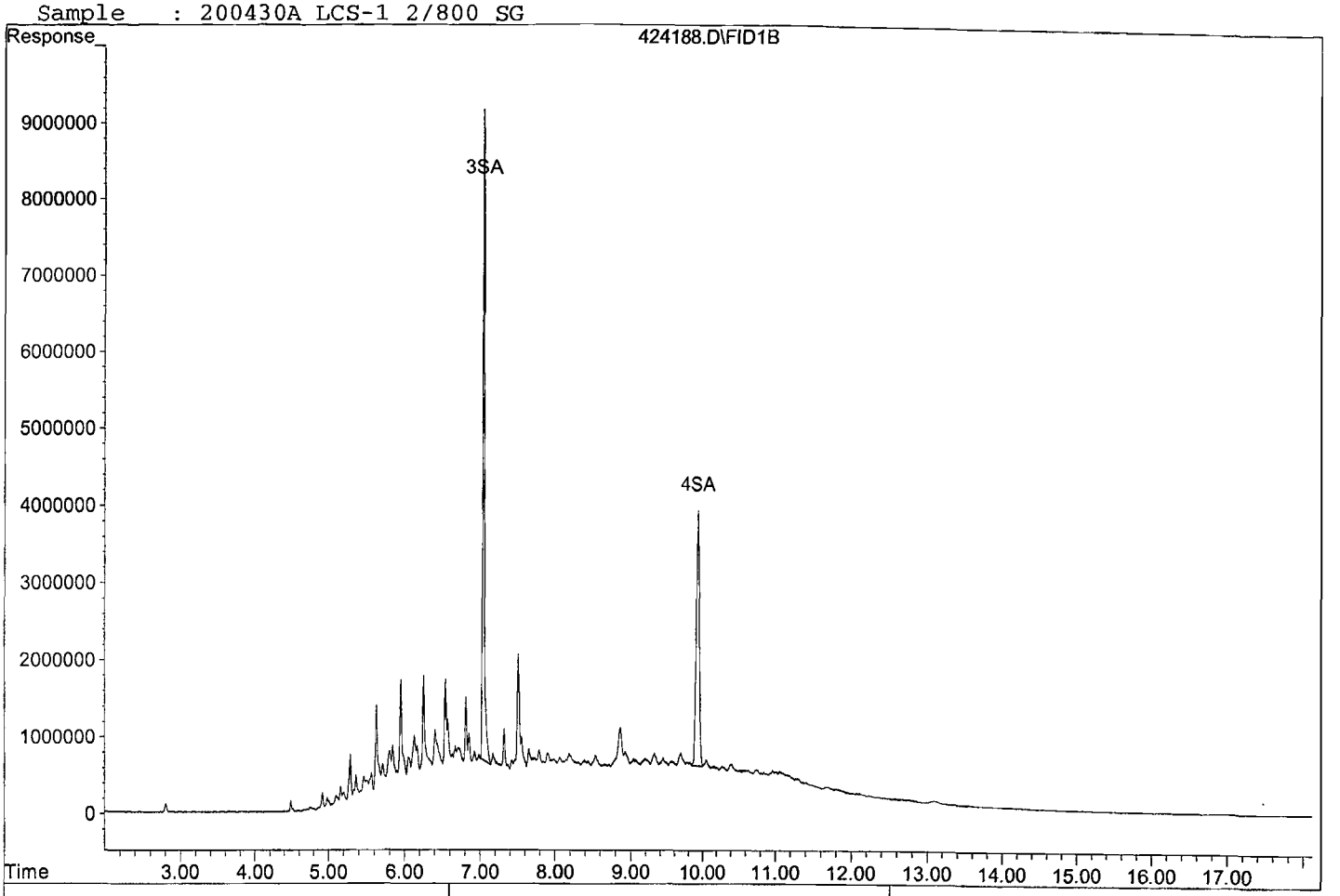
Method : G:\APOLLO\DATA\200424\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

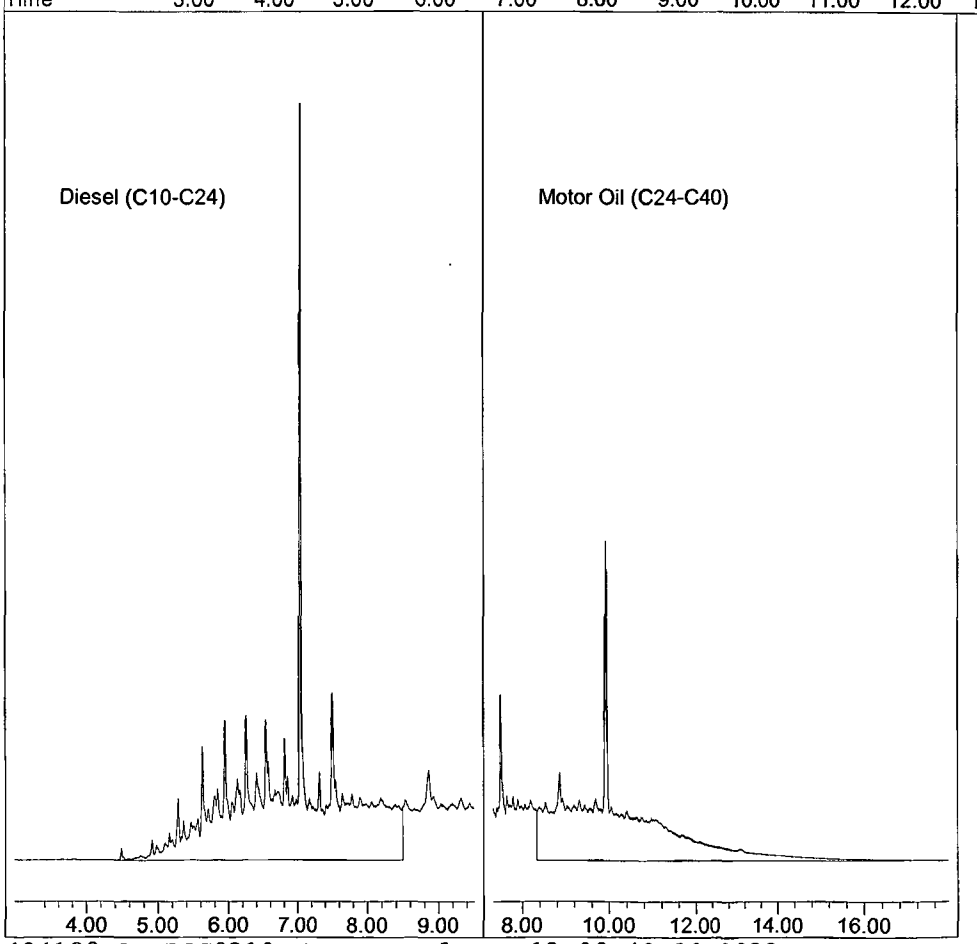
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
1) SC Decanoic Acid(S)	0.00	0	N.D.	ppb	d
Surrogate Spike 60.000	Recovery	=	0.00%		
Target Compounds					
Target Compounds					

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200424\424188.D
Sample : 200430A LCS-1 2/800 SG





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424184.D Vial: 84
Acq On : 5-7-20 16:47:44 Operator: SS
Sample : 200422A LCSD-1 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: May 13 8:39 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200424\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Apr 21 10:56:52 2020
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.04	184533764	91.880 ppb
Surrogate Spike 75.000		Recovery =	122.51%
4) SA Octacosane(S)	9.93	142265707	101.836 ppb
Surrogate Spike 75.000		Recovery =	135.78%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	2173549480	1416.834 ppb
2) HBTM Motor Oil (C24-C40)	12.60	1764260787	1495.749 ppb

Target Compounds

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424184.D
Acq On : 5-7-20 16:47:44
Sample : 200422A LCSD-1 2/800 SG
Misc : water
IntFile : events.e
Quant Time: May 13 9:24 2020 Quant Results File: DEC0317.RES

Vial: 84
Operator: SS
Inst : Apollo
Multiplr: 2.50

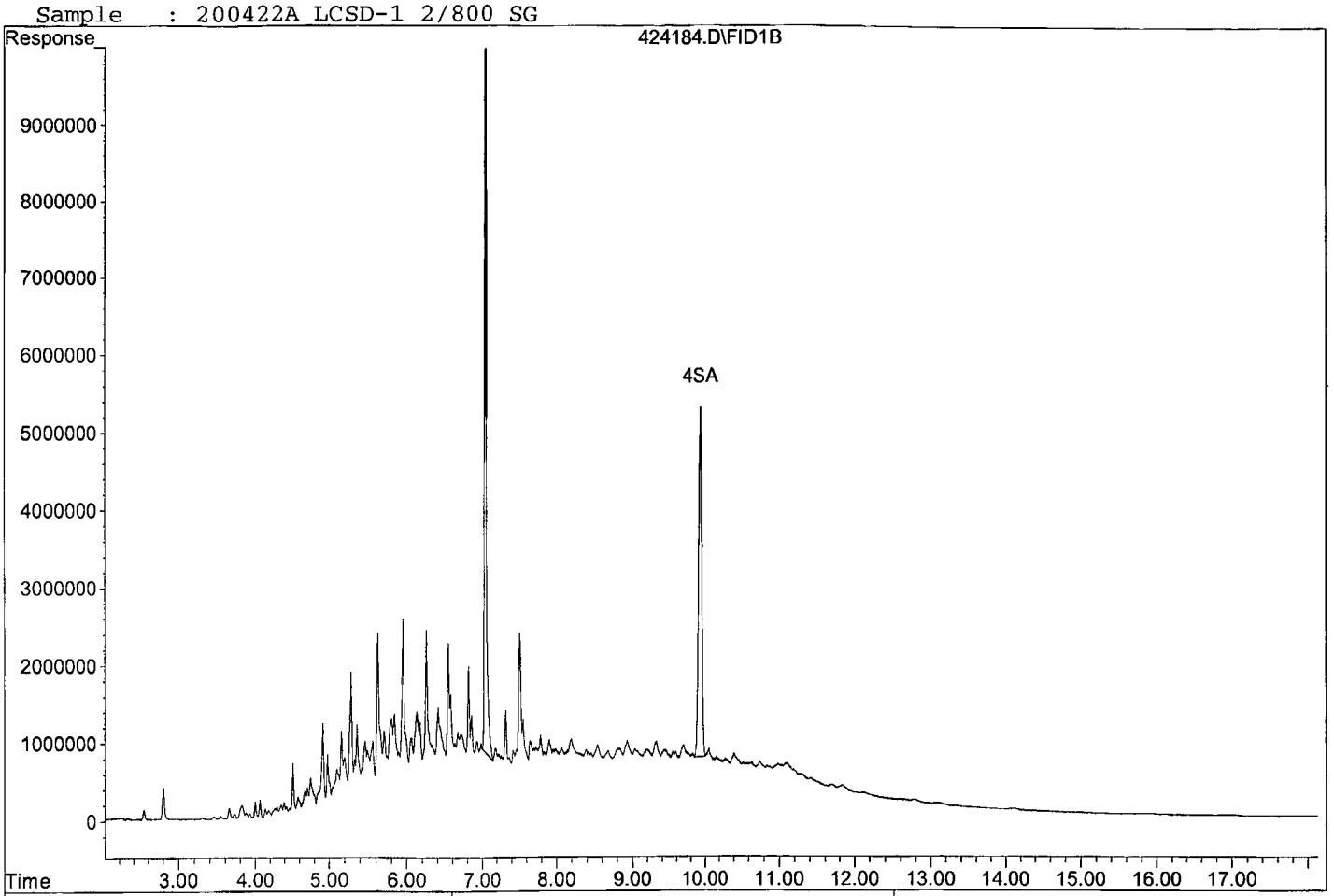
Method : G:\APOLLO\DATA\200424\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

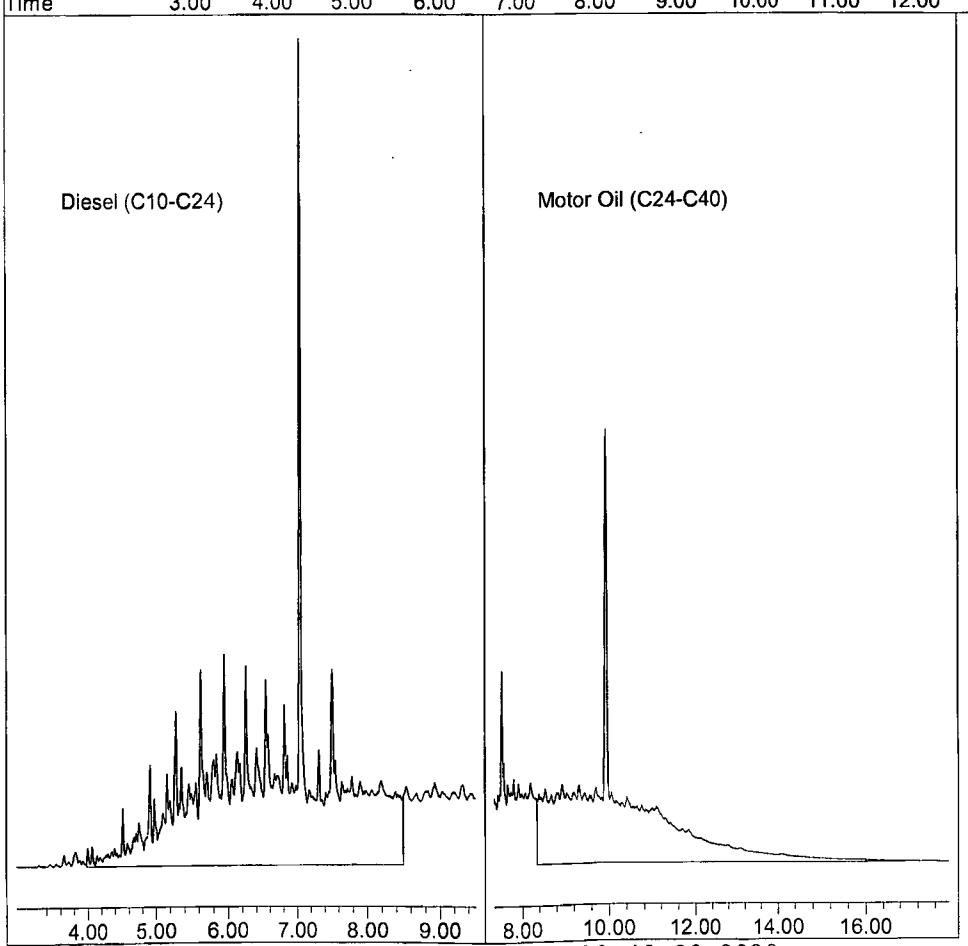
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
1) SC Decanoic Acid(S)	0.00	0	N.D.	ppb	d
Surrogate Spike 60.000	Recovery	=	0.00%		
Target Compounds					
Target Compounds					

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200424\424184.D
Sample : 200422A LCSD-1 2/800 SG





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424189.D Vial: 89
Acq On : 5-7-20 18:41:29 Operator: SS
Sample : 200430A LCSD-1 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: May 13 8:39 2020 Quant Results File: DOC0310.RES

Method : G:\APOLLO\DATA\200424\DOC0310.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Apr 21 10:56:52 2020
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
3) SA Ortho-Terphenyl(S)	7.04	116618319	58.065 ppb
Surrogate Spike 75.000	Recovery =		77.42%
4) SA Octacosane(S)	9.94	85853890	61.455 ppb
Surrogate Spike 75.000	Recovery =		81.94%
Target Compounds			
1) HATM Diesel (C10-C24)	6.24	1329986388	866.955 ppb
2) HBTM Motor Oil (C24-C40)	12.60	1203263524	1020.133 ppb
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\200424\424189.D Vial: 89
Acq On : 5-7-20 18:41:29 Operator: SS
Sample : 200430A LCSD-1 2/800 SG Inst : Apollo
Misc : water Multiplr: 2.50
IntFile : events.e
Quant Time: May 13 9:23 2020 Quant Results File: DEC0317.RES

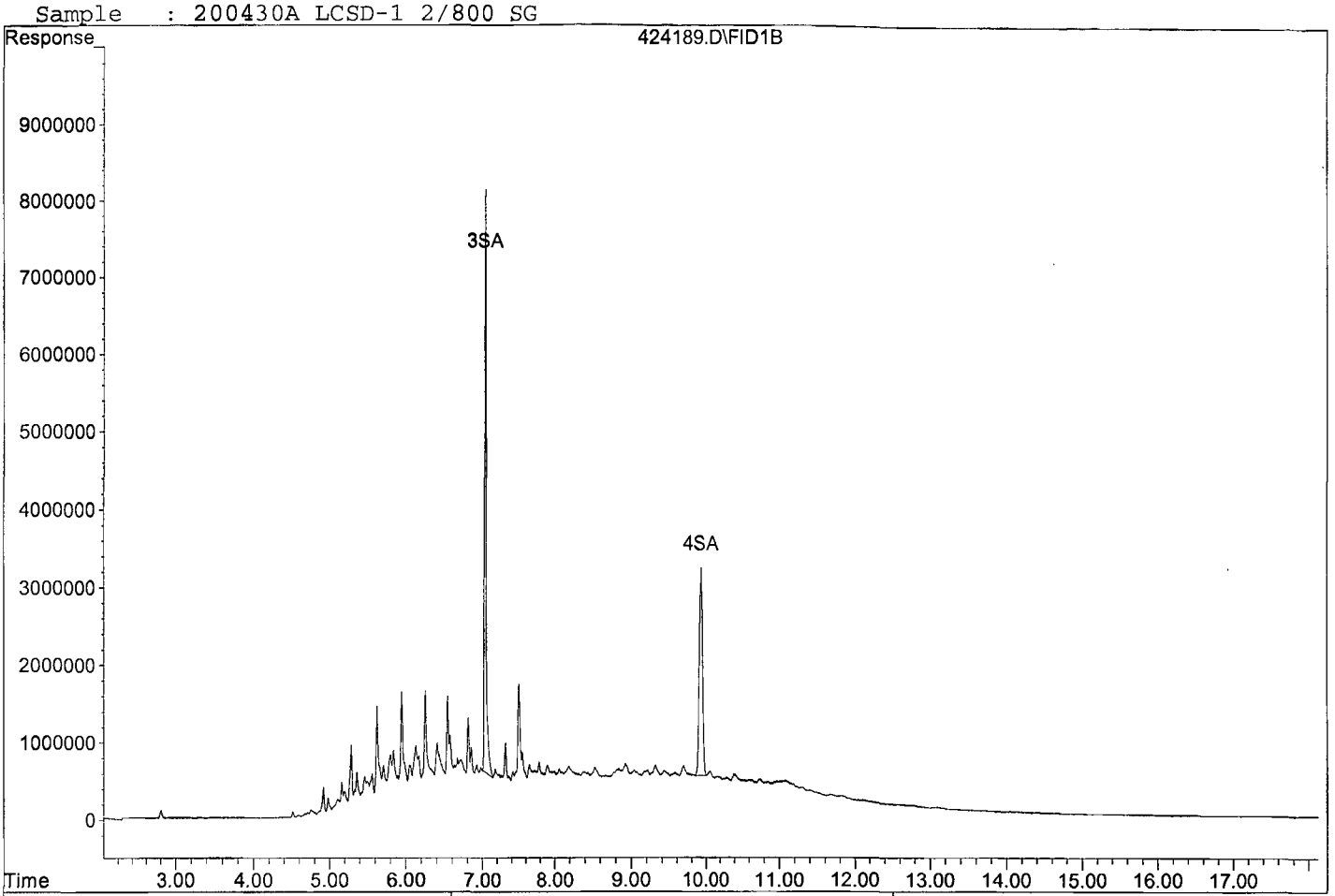
Method : G:\APOLLO\DATA\200424\DEC0317.M (Chemstation Integrator)
Title : 8015 B&C
Last Update : Tue Mar 17 10:50:54 2020
Response via : Multiple Level Calibration

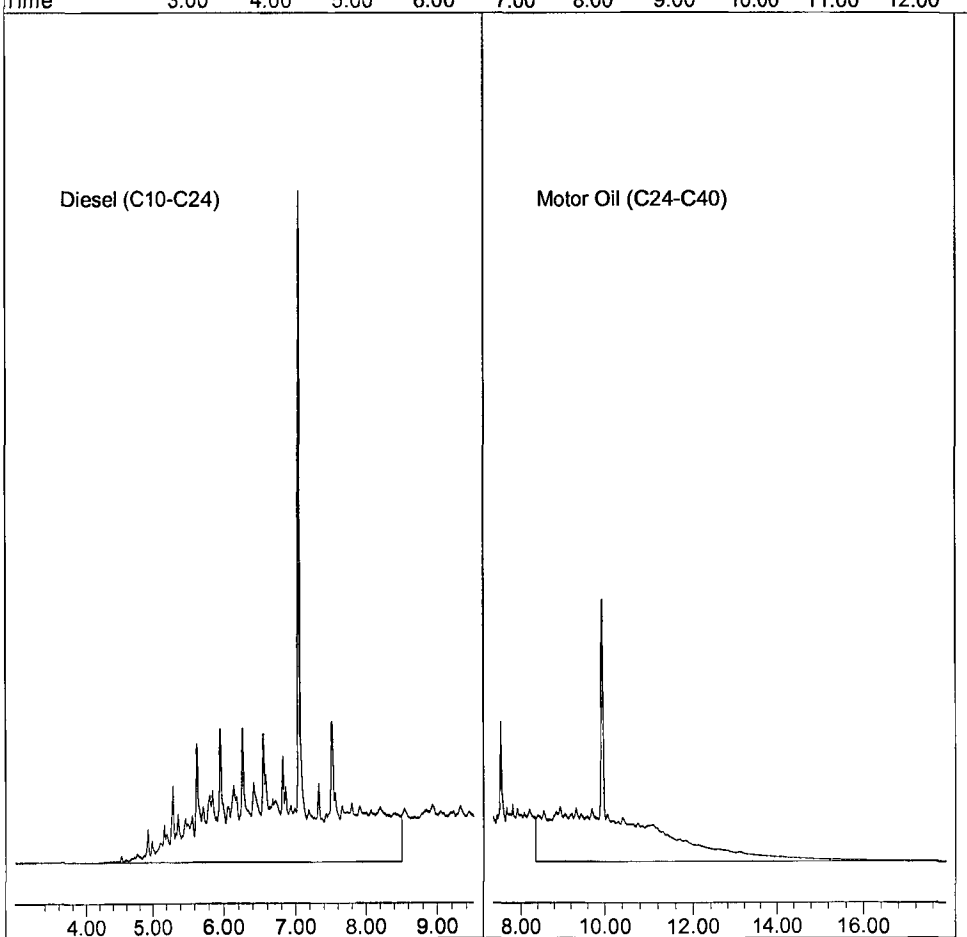
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
1) SC Decanoic Acid(S)	0.00	0	N.D.	ppb	d
Surrogate Spike 60.000	Recovery	=	0.00%		
Target Compounds					
Target Compounds					

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\200424\424189.D
Sample : 200430A LCSD-1 2/800 SG





Decanoic Acid Spike

Prepared: 03/17/20 **Prepared By (Initials): SS**

Expires: 03/17/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Decanoic Acid Spike	O2SI	011729-01-05-5PAK	1,000	**371298-40661**	**12/11/20**	**03/31/21**	N/A	N/A	N/A	1,000

Decanoic Acid Calibration Curve

Prepared: 03/10/20

Expires: 01/24/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference To APPL Prep Date	Exp. Date	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Decanoic Acid STD	O2SI	Decanoic Acid-1	60	Prepared 01/24/20	01/24/21	N/A	50uL	1mL	MC	3
Decanoic Acid STD	O2SI	Decanoic Acid-2	60	Prepared 01/24/20	01/24/21	N/A	100uL	1mL	MC	6
Decanoic Acid STD	O2SI	Decanoic Acid-3	60	Prepared 01/24/20	01/24/21	N/A	400uL	1mL	MC	24
Decanoic Acid STD	O2SI	Decanoic Acid-4	60	Prepared 01/24/20	01/24/21	N/A	600uL	1mL	MC	36
Decanoic Acid STD	O2SI	Decanoic Acid-5	60	Prepared 01/24/20	01/24/21	N/A	800uL	1mL	MC	48
Decanoic Acid STD	O2SI	Decanoic Acid-6	60	Prepared 01/24/20	01/24/21	N/A	100uL	100uL	N/A	60

Decanoic Acid Standard

Prepared: 01/24/20

Expires: 01/24/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Decanoic Acid	O2SI	011729-01-05-5PAK	1,000	**397380**	**01/24/21**	**12/30/21**	600uL	10mL	MC	60

Decanoic Acid CCV

Prepared: 03/21/20

Expires: 03/21/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Decanoic Acid	O2SI	011729-01-05-5PAK	1,000	**397380**	03/21/21	**12/30/21**	360uL	10mL	MC	36

THC Surrogate

Prepared: 04/16/20 **Prepared By (Initials): SS**

Expires: 04/16/20

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
O-terphenyl / Octacosane Mix	Phenova	ALO-130161	600	**CL14921-49845**	**03/25/21**	**02/28/25**	N/A	N/A	N/A	600

Diesel Motor Oil Mix

Prepared: 04/01/20

Expires: 04/01/21

Prepared By (Initials): BT

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel Fuel #2	Restek	31258	50,000	**A0149066-41321, A0145169-49609, A0149169-49608**	**04/01/21**	**06/30/26**	3.5 mL	7.0 mL	NA	25,000
Motor Oil Composite	Restek	31464	50,000	**A0153599-49761, A0153599-49763, A0153577-49615**	**04/01/21**	**11/30/26**	3.5 mL			25,000

Diesel / Motor Oil Calibration Standard

Prepared: 03/05/20

Expires: 03/05/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel Fuel #2	Restek	31258	50,000	**A0153536-49756**	**04/13/21**	**06/30/26**	400uL	10mL	MC	2000
Motor Oil	Restek	31464	50,000	**A0153577-49615**	**04/01/21**	**05/31/26**	400uL			2000
THC Surrogate	Phenova	ALO-130161	600	**CL14921-49845**	**03/25/21**	**11/28/24**	1666uL			100

Diesel / Motor Oil Calibration Curve

Prepared: 03/05/20

Expires: 02/13/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference to APPL Prep Date	Exp. Date	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel / Motor Oil Calibration STD	Restek	Diesel / Motor Oil - 1	2,000	Prepared 03/05/20	02/13/21	N/A	5uL	1mL	MC	10
Diesel / Motor Oil Calibration STD	Restek	Diesel / Motor Oil -2	2,000	Prepared 03/05/20	02/13/21	N/A	25uL	1mL	MC	50
Diesel / Motor Oil Calibration STD	Restek	Diesel / Motor Oil - 3	2,000	Prepared 03/05/20	02/13/21	N/A	125uL	1mL	MC	250
Diesel / Motor Oil Calibration STD	Restek	Diesel / Motor Oil - 4	2,000	Prepared 03/05/20	02/13/21	N/A	500uL	1mL	MC	1000
Diesel / Motor Oil Calibration STD	Restek	Diesel / Motor Oil - 5	2,000	Prepared 03/05/20	02/13/21	N/A	750uL	1mL	MC	1500
Diesel / Motor Oil Calibration STD	Restek	Diesel / Motor Oil - 6	2,000	Prepared 03/05/20	02/13/21	N/A	100uL	100uL	N/A	2,000

Diesel / Motor Oil Second Source

Prepared: 03/05/20

Expires: 07/18/20

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp. Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel Fuel #2 Second Source	O2SI	G34-011598-03	50,000	**G34-319187-38959**	**10/13/20**	**09/29/21**	50uL	10mL	MC	250
Motor Oil Second Source	O2SI	116390-02-SS	50,000	**010918-39582**	**07/18/20**	**03/05/22**	50uL			

Diesel / Motor Oil CCV

Prepared: 03/17/20

Expires: 02/13/21

Prepared By (Initials): CD

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference to APPL Prep Date	Exp. Date	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel / Motor Oil STD	Restek	Diesel / Motor Oil CCV	2,000	03/17/20	02/13/21	02/13/21	1250uL	10mL	MC	250

THC Surrogate

Prepared: 04/29/20 **Prepared By (Initials): LP**

Expires: 04/29/21

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	Supplier Part No.	Conc. (ug/mL)	Lot Number - QA Number	Exp Date (1 yr.)	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc (ug/mL)
O-terphenyl / Octacosane Mix	Phenova	ALO-130161	600	CL14921-49848	04/29/21	02/28/25	N/A	N/A	N/A	600

Diesel / Motor Oil CCV

Prepared: 04/29/20
Expires: 02/13/21

Prepared By (Initials): SS

Methylene Chloride Lot No. 58059

Initial Standard Information							Final Standard Information			
Name of Initial Standard (QAU Label)	Supplier	APPL Mix Name	Conc. (ug/mL)	Reference to APPL Prep Date	Exp. Date	Exp. Date (Manufacturer)	Aliquot From Stock	Final Volume	Solvent	Final Standard Conc. (ug/mL)
Diesel / Motor Oil STD	Restek	Diesel / Motor Oil CCV	2,000	04/13/20	03/25/21	03/25/21	1250uL	10mL	MC	250

Organic Extraction Worksheet

Method	Continuous Liq/Liq TPH-Diesel/MO 3520C	Extraction Set	200422A	Extraction Method	LIQ005	Units	mL

Spiked ID 1	Diesel Motor Oil Mix 4-1-20 4-1-21		Surrogate ID 1	THC Surrogate 4-16-20 4-16-21	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	04/22/20 13:00	
Spiked ID 8			Ext. End Time:	04/23/20 7:00	
			GC Requires Extract By:		

pH1	2	04/22/20 12:10	Water Bath Temp 1 °C	35/38.5 °C
pH2			Water Bath Temp 2 °C	35/34.5
pH3			Water Bath Temp 3 °C	35/34.4 °C

Spiked By: DL **Date** 04/22/20 **Witnessed By:** CFM **Date** 04/22/20

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	200422A Blk				0.100	1	800	2	2	04/22/20 12:15	
						equip	E-HP51 E-WB1				
2	200422A LCS-1		0.040	1	0.100	1	800	2	2	04/22/20 12:15	
						equip	E-HP50 E-WB2				
3	200422A LCSD-1		0.040	1	0.100	1	800	2	2	04/22/20 12:15	
						equip	E-HP49 E-WB3				
4	BA09851	BA09851W14			0.100	1	800	2	2	04/22/20 12:15	91926
						equip	E-HP48 E-WB1				
5	BA09853	BA09853W16			0.100	1	800	2	2	04/22/20 12:15	91926
						equip	E-HP47 E-WB2				
6	BA09855	BA09855W14			0.100	1	800	2	2	04/22/20 12:15	91926
						equip	E-HP25 E-WB3				
7	BA09915	BA09915W16			0.100	1	800	2	2	04/22/20 12:15	91941
						equip	E-HP26 E-WB1				
8	BA09917	BA09917W16			0.100	1	800	2	2	04/22/20 12:15	91941
						equip	E-HP27 E-WB2				
9	BA09919	BA09919W16			0.100	1	800	2	2	04/22/20 12:15	91941
						equip	E-HP28 E-WB3				
10	BA09921	BA09921W16			0.100	1	800	2	2	04/22/20 12:15	91941
						equip	E-HP14 E-WB1				
11	BA09923	BA09923W13			0.100	1	800	2	2	04/22/20 12:15	91941
						equip	E-HP29 E-WB1				
12	BA09924	BA09924W13			0.100	1	800	2	2	04/22/20 12:15	91941
						equip	E-HP30 E-WB2				
13	BA09926	BA09926W16			0.100	1	800	2	2	04/22/20 12:15	91941
						equip	E-HP13 E-WB3				
14	BA09928	BA09928W19			0.100	1	800	2	2	04/22/20 12:15	91941
						equip	E-HP15 E-WB2				

Solvent and Lot#	
1+1 HCL Amber Liter	2-15-20
PH Strips	HC998032
Dicholormethane	59239
Filter Paper	400171
B. Sodium Sulfate	2019020631

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	SS
Date	4/23/20
Time	14:30
Refrigerator	HOBART

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL
Concentration	DL,DS

Modified	04/24/20 10:09:31 AM

Reviewed By: KY **Date** 04/24/20

Organic Extraction Worksheet

Method	Continuous Liq/Liq TPH-Diesel/MO 3520C	Extraction Set	200430A	Extraction Method	LIQ005	Units	mL

Spiked ID 1	Diesel Motor Oil Mix 4-1-20 4-1-21		Surrogate ID 1	THC Surrogate 4-29-20 4-29-21	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	04/30/20 14:35	
Spiked ID 8			Ext. End Time:	05/01/20 8:30	
			GC Requires Extract By:		

pH1	2	04/30/20 13:25	Water Bath Temp 1 °C	35/38.5 °C
pH2			Water Bath Temp 2 °C	35/34.5
pH3			Water Bath Temp 3 °C	35/34.4 °C

Spiked By: KY **Date** 04/30/20 **Witnessed By:** CFM **Date** 04/30/20

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	200430A Blk				0.100	1	800	2	2	04/30/20 13:30	
						equip	E-HP51 E-WB1				
2	200430A LCS-1		0.040	1	0.100	1	800	2	2	04/30/20 13:30	
						equip	E-HP50 E-WB2				
3	200430A LCSD-1		0.040	1	0.100	1	800	2	2	04/30/20 13:30	
						equip	E-HP49 E-WB3				
4	BA09851	BA09851W13			0.100	1	800	2	2	04/30/20 13:30	91926
						equip	E-HP48 E-WB1				
5	BA09853	BA09853W13			0.100	1	800	2	2	04/30/20 13:30	91926
						equip	E-HP47 E-WB2				
6	BA09855	BA09855W16			0.100	1	800	2	2	04/30/20 13:30	91926
						equip	E-HP25 E-WB3				
7	BA09915	BA09915W13			0.100	1	800	2	2	04/30/20 13:30	91941
						equip	E-HP26 E-WB1				
8	BA09917	BA09917W15			0.100	1	800	2	2	04/30/20 13:30	91941
						equip	E-HP27 E-WB2				
9	BA09919	BA09919W15			0.100	1	800	2	2	04/30/20 13:30	91941
						equip	E-HP28 E-WB3				
10	BA09921	BA09921W13			0.100	1	800	2	2	04/30/20 13:30	91941
						equip	E-HP29 E-WB1				
11	BA09923	BA09923W11			0.100	1	800	2	2	04/30/20 13:30	91941
						equip	E-HP30 E-WB2				
12	BA09924	BA09924W12			0.100	1	800	2	2	04/30/20 13:30	91941
						equip	E-HP16 E-WB3				
13	BA09926	BA09926W13			0.100	1	800	2	2	04/30/20 13:30	91941
						equip	E-HP15 E-WB1				
14	BA09928	BA09928W17			0.100	1	800	2	2	04/30/20 13:30	91941
						equip	E-HP14 E-WB2				
15	BA10439	BA10439W17			0.100	1	800	2	2	04/30/20 13:30	92025
						equip	E-HP13 E-WB3				
16	BA10504	BA10504W19			0.100	1	800	2	2	04/30/20 13:30	92039
						equip	E-HP12 E-WB1				

Solvent and Lot#	
1+1 HCL Amber Liter	4-30-20
PH Strips	HC998032
Dicholormethane	59239
Filter Paper	400171
B. Sodium Sulfate	2019020631

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	CD
Date	5/4/20
Time	14:15
Refrigerator	HOBART

	Technician's Initials
Scanned By	KY
Sample Preparation	KY,CD,CFM
Extraction	KY,CD,CFM
Concentration	DL

Modified	05/04/20 2:28:46 PM

Reviewed By: KY **Date** 05/04/20

Organic Extraction Worksheet

Method	Continuous Liq/Liq TPH-Diesel/MO 3520C	Extraction Set	200430A	Extraction Method	LIQ005	Units	mL

Spiked ID 1	Diesel Motor Oil Mix 4-1-20 4-1-21		Surrogate ID 1	THC Surrogate 4-29-20 4-29-21	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	04/30/20 14:35	
Spiked ID 8			Ext. End Time:	05/01/20 8:30	
			GC Requires Extract By:		

pH1	2	04/30/20 13:25	Water Bath Temp 1 °C	35/38.5 °C
pH2			Water Bath Temp 2 °C	35/34.5
pH3			Water Bath Temp 3 °C	35/34.4 °C

Spiked By: KY **Date** 04/30/20 **Witnessed By:** CFM **Date** 04/30/20

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
17	BA10505	BA10505W14			0.100	1	800	2	2	04/30/20 13:30	92039
						equip	E-HP11 E-WB2				

Solvent and Lot#	
1+1 HCL Amber Liter	4-30-20
PH Strips	HC998032
Dicholormethane	59239
Filter Paper	400171
B. Sodium Sulfate	2019020631

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	CD
Date	
Time	
Refrigerator	HOBART

	Technician's Initials
Scanned By	KY
Sample Preparation	KY,CD,CFM
Extraction	KY,CD,CFM
Concentration	DL

Modified	05/04/20 2:28:46 PM

Reviewed By: KY **Date** 05/04/20

Injection Log

Directory: G:\APOLLO\DATA\200310\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	3	310003.D	1	Diesel Motor Oil-1 3/5/20	water	3-10-20 9:37:22
2	4	310004.D	1	Diesel Motor Oil-2 3/5/20	water	3-10-20 9:59:49
3	5	310005.D	1	Diesel Motor Oil-3 3/5/20	water	3-10-20 10:22:19
4	6	310006.D	1	Diesel Motor Oil-4 3/5/20	water	3-10-20 10:44:50
5	7	310007.D	1	Diesel Motor Oil-5 3/5/20	water	3-10-20 11:07:20
6	8	310008.D	1	Diesel Motor Oil-6 3/5/20	water	3-10-20 11:29:51
7	9	310009.D	1	Diesel Motor Oil-SS 3/5/20	water	3-10-20 11:52:24
8	22	_424001A.D	1	Diesel Motor Oil-CCV 3/17/20	water	4-24-20 13:03:50
9	1	424001.D	2.5	200422A BLK 2/800	water	4-24-20 14:03:41
10	2	424002.D	2.5	200422A LCS-1 2/800	water	4-24-20 14:26:16
11	3	424003.D	2.5	200422A LCSD-1 2/800	water	4-24-20 14:48:54
12	4	424004.D	2.5	BA09851W14 2/800	water	4-24-20 15:11:38
13	5	424005.D	2.5	BA09853W16 2/800	water	4-24-20 15:34:22
14	6	424006.D	2.5	BA09855W14 2/800	water	4-24-20 15:57:07
15	14	424014.D	1	Diesel Motor Oil-CCV 3/17/20	water	4-24-20 18:59:07
16	95	424095.D	1	Diesel Motor Oil-CCV 4/29/20	water	5-4-20 15:02:27
17	96	424096.D	2.5	200430A BLK 2/800	water	5-4-20 15:27:53
18	97	424097.D	2.5	200430A LCS-1 2/800	water	5-4-20 15:50:26
19	98	424098.D	2.5	200430A LCSD-1 2/800	water	5-4-20 16:13:05
20	99	424099.D	2.5	BA09851W13 2/800	water	5-4-20 16:35:44
21	100	424100.D	2.5	BA09853W13 2/800	water	5-4-20 16:58:22
22	1	424101.D	2.5	BA09855W16 2/800	water	5-4-20 17:21:00
23	9	424109.D	1	Diesel Motor Oil-CCV 4/29/20	water	5-4-20 20:22:31

Injection Log

Directory: G:\APOLLO\DATA\200317\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	317002.D	1	Decanoic Acid-1 3/10/20	water	3-17-20 8:14:08
2	3	317003.D	1	Decanoic Acid-2 3/10/20	water	3-17-20 8:36:27
3	4	317004.D	1	Decanoic Acid-3 3/10/20	water	3-17-20 8:58:53
4	5	317005.D	1	Decanoic Acid-4 3/10/20	water	3-17-20 9:21:15
5	6	317006.D	1	Decanoic Acid-5 3/10/20	water	3-17-20 9:43:41
6	7	317007.D	1	Decanoic Acid-6 3/10/20	water	3-17-20 10:06:06
7	80	424180.D	1	Diesel Motor Oil-CCV 4/29/20	water	5-7-20 14:35:12
8	81	424181.D	1	Decanoic Acid-CCV 3/20/20	water	5-7-20 15:24:14
9	82	424182.D	2.5	200422A BLK 2/800 SG	water	5-7-20 16:02:36
10	83	424183.D	2.5	200422A LCS-1 2/800 SG	water	5-7-20 16:25:08
11	84	424184.D	2.5	200422A LCSD-1 2/800 SG	water	5-7-20 16:47:44
12	85	424185.D	2.5	BA09851W14 2/800 SG	water	5-7-20 17:10:23
13	87	424187.D	2.5	200430A BLK 2/800 SG	water	5-7-20 17:55:57
14	88	424188.D	2.5	200430A LCS-1 2/800 SG	water	5-7-20 18:18:45
15	89	424189.D	2.5	200430A LCSD-1 2/800 SG	water	5-7-20 18:41:29
16	90	424190.D	2.5	BA09851W13 2/800 SG	water	5-7-20 19:04:14
17	92	424192.D	1	Decanoic Acid-CCV 3/20/20	water	5-7-20 19:49:42
18	93	424193.D	1	Diesel Motor Oil-CCV 4/29/20	water	5-7-20 20:12:24
19	42	424242.D	1	Diesel Motor Oil-CCV 4/29/20	water	5-12-20 13:36:05
20	43	424243.D	1	Decanoic Acid-CCV 3/20/20	water	5-12-20 13:58:44
21	44	424244.D	2.5	BA09853W16 2/800 SG	water	5-12-20 15:13:28
22	45	424245.D	2.5	BA09855W14 2/800 SG	water	5-12-20 15:36:05
23	51	424251.D	2.5	BA09853W13 2/800 SG	water	5-12-20 17:52:13
24	52	424252.D	2.5	BA09855W16 2/800 SG	water	5-12-20 18:14:59
25	54	424254.D	1	Diesel Motor Oil-CCV 4/29/20	water	5-12-20 19:00:27
26	55	424255.D	1	Decanoic Acid-CCV 3/20/20	water	5-12-20 19:23:05

ORGANICS
Calibration Data

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 04/20/20
Matrix: Instrument: Yoda
Initials: MA / [illegible]

			0420Y003.D	0420Y004.D	0420Y005.D	0420Y006.D	0420Y007.D	0420Y008.D	0420Y009.D	0420Y010.D	0420Y011.D							
		Compound	4	5	10	20	40	50	60	80	100		Avg	%RSD	Type	r^2	Q	MRF
1	I	1,4-dichlorobenzene-D4(IS)	ISTD															
2		1,4-Dioxane		0.5864	0.5354	0.4682	0.4345	0.4509	0.4717	0.4765	0.4405		0.48	11				
3	TM	n-Nitrosodimethylamine		0.6003	0.6335	0.7148	0.6880	0.6158	0.7455	0.7830	0.7263		0.69	9.6	TM			
4	TM	Pyridine		1.669	1.877	1.743	1.759	1.694	2.122	1.862	1.746		1.8	8.1	TM			
5	S	2-Fluorophenol (S)		1.147	1.301	1.366	1.513	1.454	1.750	1.661	1.571		1.5	13	S			
6	S	Phenol-D6 (S)		1.553	1.677	1.763	1.978	1.912	2.328	2.224	2.135		1.9	14	S			
7	*TM	Phenol		2.247	2.588	2.412	2.503	2.403	2.733	2.767	2.561		2.5	6.9	*TM			0.800
8	TM	Aniline		1.126	1.548	1.414	1.551	1.477	1.699	1.508	1.320		1.5	12	TM			
9	TM	Bis (2-chloroethyl) ether		0.9650	1.047	0.9876	1.011	0.9765	1.077	1.077	0.9908		1.0	4.4	TM			0.700
10	TM	2-Chlorophenol		1.743	1.964	1.828	1.896	1.816	2.039	2.036	1.886		1.9	5.6	TM			0.800
11	TM	1,3-DCB		1.908	2.144	1.964	2.023	1.970	2.176	2.164	2.027		2.0	5.0	TM			
12	*TM	1,4-DCB		2.002	2.203	2.006	2.055	1.986	2.188	2.187	2.061		2.1	4.4	*TM			
13	TM	Benzyl alcohol		0.8548	1.022	0.9933	1.053	1.025	1.159	1.189	1.104		1.0	10.0	TM			
14	TM	1,2-DCB		1.850	2.055	1.893	1.941	1.884	2.121	2.135	2.019		2.0	5.6	TM			
15	TM	2-Methylphenol		1.393	1.564	1.447	1.518	1.458	1.662	1.675	1.562		1.5	6.6	TM			0.700
16	TM	Bis (2-chloroisopropyl) ether		1.143	1.263	1.174	1.210	1.160	1.300	1.300	1.215		1.2	5.0	TM			0.010
17	TM	Acetophenone		2.153	2.437	2.279	2.378	2.295	2.599	2.592	2.421		2.4	6.4	TM			0.010
18	TM	3&4-Methylphenol		1.706	1.963	1.830	1.907	1.860	2.086	2.150	2.015		1.9	7.4	TM			0.600
19	**TM	n-Nitrosodi-n-propylamine		1.183	1.410	1.318	1.389	1.328	1.497	1.506	1.397		1.4	7.6	**TM			0.500
20	TM	Hexachloroethane		0.7178	0.8044	0.7414	0.7689	0.7504	0.8345	0.8254	0.7698		0.78	5.3	TM			0.300
21	I	Napthalene-D8(IS)	ISTD															
22	S	Nitrobenzene-D5(S)		0.3459	0.3683	0.3884	0.4101	0.4134	0.4847	0.4504	0.4080		0.41	11	S			
23	TM	Nitrobenzene		0.4241	0.4842	0.4590	0.4556	0.4666	0.5044	0.4976	0.4424		0.47	5.9	TM			0.200
24	TM	Isophorone		0.7098	0.7816	0.7688	0.7670	0.7856	0.8636	0.8464	0.7552		0.78	6.3	TM			0.400
25	*TM	2-Nitrophenol		0.2135	0.2402	0.2365	0.2367	0.2478	0.2667	0.2677	0.2403		0.24	7.2	*TM			0.100
26	TM	2,4-Dimethylphenol		0.3548	0.3853	0.3748	0.3693	0.3720	0.4138	0.4073	0.3680		0.38	5.3	TM			0.200
27	TM	Benzoic acid			0.2565	0.2948	0.3219	0.3275	0.3664	0.3449	0.3078		0.32	11	TM			
28	TM	Bis (2-chloroethoxy) methane		0.4396	0.4756	0.4462	0.4470	0.4546	0.4906	0.4818	0.4298		0.46	4.8	TM			0.300
29	*TM	2,4-Dichlorophenol		0.3429	0.3774	0.3615	0.3618	0.3670	0.4047	0.4062	0.3625		0.37	5.9	*TM			0.200
30	TM	1,2,4-Trichlorobenzene		0.3924	0.4320	0.4037	0.4024	0.4052	0.4449	0.4404	0.3956		0.41	5.1	TM			
31	TM	3,4-Dimethylphenol		0.5434	0.5880	0.5429	0.5343	0.5444	0.5953	0.5852	0.5254		0.56	4.9	TM			
32	TM	Naphthalene		1.173	1.283	1.200	1.185	1.222	1.314	1.309	1.166		1.2	5.0	TM			0.700
33	TM	4-Chloroaniline		0.4459	0.4956	0.4963	0.4786	0.4780	0.5335	0.5055	0.4230		0.48	7.2	TM			0.010
34	TM	2,6-Dichlorophenol		0.3343	0.3676	0.3541	0.3610	0.3646	0.4028	0.4098	0.3684		0.37	6.7	TM			
35	TM	Hexachloropropene		0.2703	0.3097	0.2957	0.3031	0.3151	0.3445	0.3447	0.3147		0.31	7.9	TM			

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 04/20/20
Matrix: Instrument: Yoda Initials:

		Compound	4	5	10	20	40	50	60	80	100		Avg	%RSD	Type		Q	
36	*TM	Hexachlorobutadiene		0.2424	0.2554	0.2430	0.2416	0.2436	0.2690	0.2657	0.2419		0.25	4.6	*TM			0.010
37	TM	Caprolactum		0.1057	0.1180	0.1235	0.1227	0.1236	0.1398	0.1344	0.1139		0.12	8.8	TM			0.010
38	*TM	4-Chloro-3-methylphenol		0.3679	0.4124	0.3998	0.4005	0.4039	0.4463	0.4428	0.3910		0.41	6.4	*TM			0.200
39	TM	2-Methylnaphthalene		0.7763	0.8452	0.7963	0.7956	0.8129	0.9082	0.8940	0.8003		0.83	5.9	TM			0.400
40	TM	1-Methylnaphthalene		0.8118	0.8571	0.8184	0.8211	0.8371	0.9112	0.9104	0.8199		0.85	4.8	TM			
41	I	Acenaphthene-D10(IS)	ISTD															
42	**TML	Hexachlorocyclopentadiene		0.2431	0.3477	0.3397	0.3969	0.4611	0.4652	0.4842			0.39	22	**TML	0.994		0.050
43	TM	1,2,4,5-Tetrachlorobenzene		0.6576	0.7065	0.6666	0.6567	0.6995	0.6969	0.7287	0.6844		0.69	3.7	TM			0.010
44	*TM	2,4,6-Trichlorophenol		0.4141	0.4673	0.4454	0.4436	0.4737	0.4731	0.4979	0.4641		0.46	5.5	*TM			0.200
45	TM	2,4,5-Trichlorophenol		0.4351	0.4940	0.4779	0.4634	0.4930	0.5031	0.5253	0.4882		0.49	5.6	TM			0.200
46	S	2-Fluorobiphenyl(S)		1.276	1.329	1.359	1.384	1.465	1.556	1.529	1.475		1.4	7.0	S			
47	TM	1,1'-Biphenyl		1.712	1.790	1.728	1.682	1.801	1.794	1.854	1.767		1.8	3.2	TM			0.010
48	TM	2-Chloronaphthalene		1.391	1.446	1.376	1.322	1.430	1.412	1.472	1.379		1.4	3.4	TM			0.800
49	TM	2-Nitroaniline		0.3352	0.3841	0.3938	0.3915	0.4105	0.4145	0.4227	0.3976		0.39	6.8	TM			0.010
50	TM	Dimethyl phthalate		1.639	1.710	1.652	1.615	1.714	1.730	1.768	1.648		1.7	3.2	TM			0.010
51	TM	2,6-DNT		0.3298	0.3649	0.3699	0.3693	0.3983	0.3969	0.4118	0.3832		0.38	6.8	TM			0.200
52	TM	Acenaphthylene		1.987	2.183	2.075	2.024	2.141	2.176	2.234	2.101		2.1	4.0	TM			0.900
53	TM	3-Nitroaniline		0.3682	0.4251	0.4382	0.4398	0.4675	0.4838	0.4968	0.4587		0.45	8.9	TM			0.010
54	*TM	Acenaphthene		1.340	1.417	1.318	1.270	1.361	1.369	1.439	1.331		1.4	4.0	*TM			0.900
55	**TML	2,4-Dinitrophenol		0.1256	0.1672	0.2087	0.2403	0.2577	0.2678	0.2801	0.2622		0.23	24	**TML	0.996		0.010
56	**TM	4-Nitrophenol		0.2449	0.2835	0.2976	0.3115	0.3318	0.3431	0.3536	0.3351		0.31	12	**TM			0.010
57	TM	Dibenzofuran		1.931	2.048	1.950	1.891	2.035	2.035	2.141	1.983		2.0	4.0	TM			0.800
58	TM	2,4-DNT		0.4480	0.5323	0.5354	0.5260	0.5578	0.5783	0.5931	0.5559		0.54	8.1	TM			0.200
59	TM	2,3,4,6-Tetrachlorophenol		0.3420	0.3829	0.3719	0.3728	0.3930	0.3993	0.4183	0.3871		0.38	5.9	TM			0.010
60	TM	Diethyl phthalate		1.614	1.736	1.621	1.566	1.668	1.663	1.703	1.611		1.6	3.4	TM			0.010
61	TM	4-Chlorophenyl phenyl ether		0.8543	0.8924	0.8560	0.8520	0.9144	0.9349	0.9779	0.9445		0.90	5.3	TM			0.400
62	TM	Fluorene		1.591	1.661	1.597	1.568	1.685	1.733	1.834	1.712		1.7	5.3	TM			0.900
63	TM	4-Nitroaniline		0.3161	0.3606	0.3604	0.3652	0.3806	0.3821	0.3821	0.3476		0.36	6.2	TM			0.010
64	S	2,4,6-Tribromophenol(S)		0.1648	0.1786	0.1856	0.2030	0.2078	0.2288	0.2385	0.2325		0.20	13	S			
65	I	Phenanthrene-D10(IS)	ISTD															
66	TM	4,6-Dinitro-2-methylphenol					0.1670	0.1752	0.1887	0.1828	0.2006	0.1915	0.18	6.5	TM			0.010
67	TM	Diphenyl amine		0.6352	0.6679	0.6304	0.6292	0.6704	0.6525	0.7076	0.6593		0.66	4.0	TM			
68	*TM	n-Nitrosodiphenylamine		0.6352	0.6679	0.6304	0.6292	0.6704	0.6525	0.7076	0.6593		0.66	4.0	*TM			0.010
69	TM	1,2-Diphenylhydrazine		0.7894	0.8393	0.7925	0.7895	0.8119	0.7763	0.9900	0.9199		0.84	9.1	TM			
70	TM	4-Bromophenyl phenyl ether		0.2322	0.2542	0.2372	0.2468	0.2645	0.2498	0.2744	0.2584		0.25	5.5	TM			0.100

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 04/20/20
Matrix: Instrument: Yoda Initials:

		Compound	4	5	10	20	40	50	60	80	100		Avg	%RSD	Type		Q	
71	TM	Hexachlorobenzene		0.2436	0.2617	0.2489	0.2492	0.2651	0.2551	0.2743	0.2625		0.26	4.0	TM			0.100
72	TM	Atrazine		0.2268	0.2477	0.2316	0.2397	0.2506	0.2369	0.2626	0.2396		0.24	4.7	TM			0.010
73	*TM	Pentachlorophenol		0.1244	0.1372	0.1458	0.1543	0.1647	0.1656	0.1845	0.1735		0.16	13	*TM			0.050
74	TM	Phenanthrene		1.200	1.270	1.186	1.184	1.233	1.183	1.264	1.200		1.2	3.0	TM			0.700
75	TM	Anthracene		1.241	1.329	1.236	1.208	1.277	1.231	1.348	1.260		1.3	3.9	TM			0.700
76	TM	Carbazol		1.114	1.184	1.099	1.105	1.169	1.132	1.198	1.141		1.1	3.3	TM			0.010
77	TM	Di-n-butylphthalate		1.334	1.469	1.415	1.447	1.517	1.476	1.577	1.423		1.5	5.0	TM			0.010
78		2-Nitrodiphenylamine				0.2897	0.3175	0.3385	0.3354	0.3603	0.3395		0.33	7.3				
79	*TM	Fluoranthene		1.346	1.443	1.356	1.352	1.434	1.393	1.478	1.389		1.4	3.5	*TM			0.600
80	I	Chrysene-D12(IS)	ISTD															
81	TM	Benzidine		0.3038	0.3700	0.3956	0.3288	0.3260	0.3178	0.2977	0.2740		0.33	12	TM			
82	TM	Pyrene		1.443	1.562	1.441	1.319	1.395	1.296	1.310	1.238		1.4	7.6	TM			0.600
83	S	Terphenyl-D14(S)		0.8981	0.9238	0.9229	0.8968	0.9160	0.9330	0.9065	0.8900		0.91	1.7	S			
84	TM	Butyl benzylphthalate		0.6203	0.6945	0.6643	0.6142	0.6462	0.6119	0.6206	0.6047		0.63	4.9	TM			0.010
85	TM	3,3'-Dichlorobenzidine		0.4443	0.5032	0.4675	0.4227	0.4341	0.4097	0.3992			0.44	8.1	TM			0.010
86	TM	Benz (a) anthracene		1.433	1.513	1.415	1.297	1.451	1.334	1.356	1.287		1.4	5.8	TM			0.800
87	TM	Bis (2-ethylhexyl) phthalate		0.9844	1.015	0.9906	0.9182	0.9908	0.9387	0.9518	0.8936		0.96	4.3	TM			0.010
88	TM	Chrysene		1.358	1.456	1.339	1.221	1.254	1.182	1.212	1.158		1.3	8.0	TM			0.700
89	*TM	Di-n-octylphthalate		1.555	1.678	1.580	1.514	1.607	1.478	1.456	1.419		1.5	5.6	*TM			0.010
90	I	Perylene-D12(IS)	ISTD															
91	TM	Benzo (b) fluoranthene		1.503	1.414	1.436	1.569	1.520	1.400	1.644	1.517		1.5	5.5	TM			0.700
92	TM	Benzo (k) fluoranthene		1.200	1.528	1.430	1.212	1.395	1.414	1.300	1.409		1.4	8.4	TM			0.700
93	*TM	Benzo (a) pyrene	0.9739	1.253	1.351	1.326	1.321	1.371	1.331	1.376	1.358		1.3	9.7	*TM			0.700
94	TM	Indeno (1,2,3-cd) pyrene		1.489	1.594	1.550	1.508	1.580	1.519	1.577	1.544		1.5	2.4	TM			0.500
95	TM	Dibenz (a,h) anthracene	1.025	1.296	1.405	1.370	1.338	1.398	1.356	1.417	1.393		1.3	9.1	TM			0.400
96	TM	Benzo (g,h,i) perylene		1.194	1.284	1.245	1.200	1.248	1.197	1.235	1.206		1.2	2.6	TM			0.500
97																		
98																		
99																		
100																		
101																		
102																		
103																		
104																		
105																		

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y200420\0420Y003.D Vial: 3
Acq On : 20 Apr 20 9:28 Operator: MA
Sample : 4ug/ml 8270 3/4/20 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Apr 20 12:49 2020 Quant Results File: Y0420.RES

Quant Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Apr 17 16:03:50 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.28	152	455328	40.00000	ppb	0.00
21) Napthalene-D8(IS)	6.72	136	1940113	40.00000	ppb	0.00
41) Acenaphthene-D10(IS)	8.74	164	1151456	40.00000	ppb	0.00
65) Phenanthrene-D10(IS)	10.48	188	2224606	40.00000	ppb	0.00
80) Chrysene-D12(IS)	13.56	240	2167465	40.00000	ppb	0.00
90) Perylene-D12(IS)	15.35	264	2168500	40.00000	ppb	0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	0.00	112	0d	0.00000	ppb	
Spiked Amount 200.000			Recovery =	0.000%		
6) Phenol-D6 (S)	0.00	99	0d	0.00000	ppb	
Spiked Amount 200.000			Recovery =	0.000%		
22) Nitrobenzene-D5(S)	0.00	82	0d	0.00000	ppb	
Spiked Amount 100.000			Recovery =	0.000%		
46) 2-Fluorobiphenyl(S)	0.00	172	0d	0.00000	ppb	
Spiked Amount 100.000			Recovery =	0.000%		
64) 2,4,6-Tribromophenol(S)	0.00	330	0d	0.00000	ppb	
Spiked Amount 200.000			Recovery =	0.000%		
83) Terphenyl-D14(S)	0.00	244	0d	0.00000	ppb	
Spiked Amount 100.000			Recovery =	0.000%		
Target Compounds						Qvalue
93) Benzo (a) pyrene	15.28	252	211187	2.97197	ppb	98
95) Dibenz (a,h) anthracene	17.19	278	222253	3.12409	ppb	98

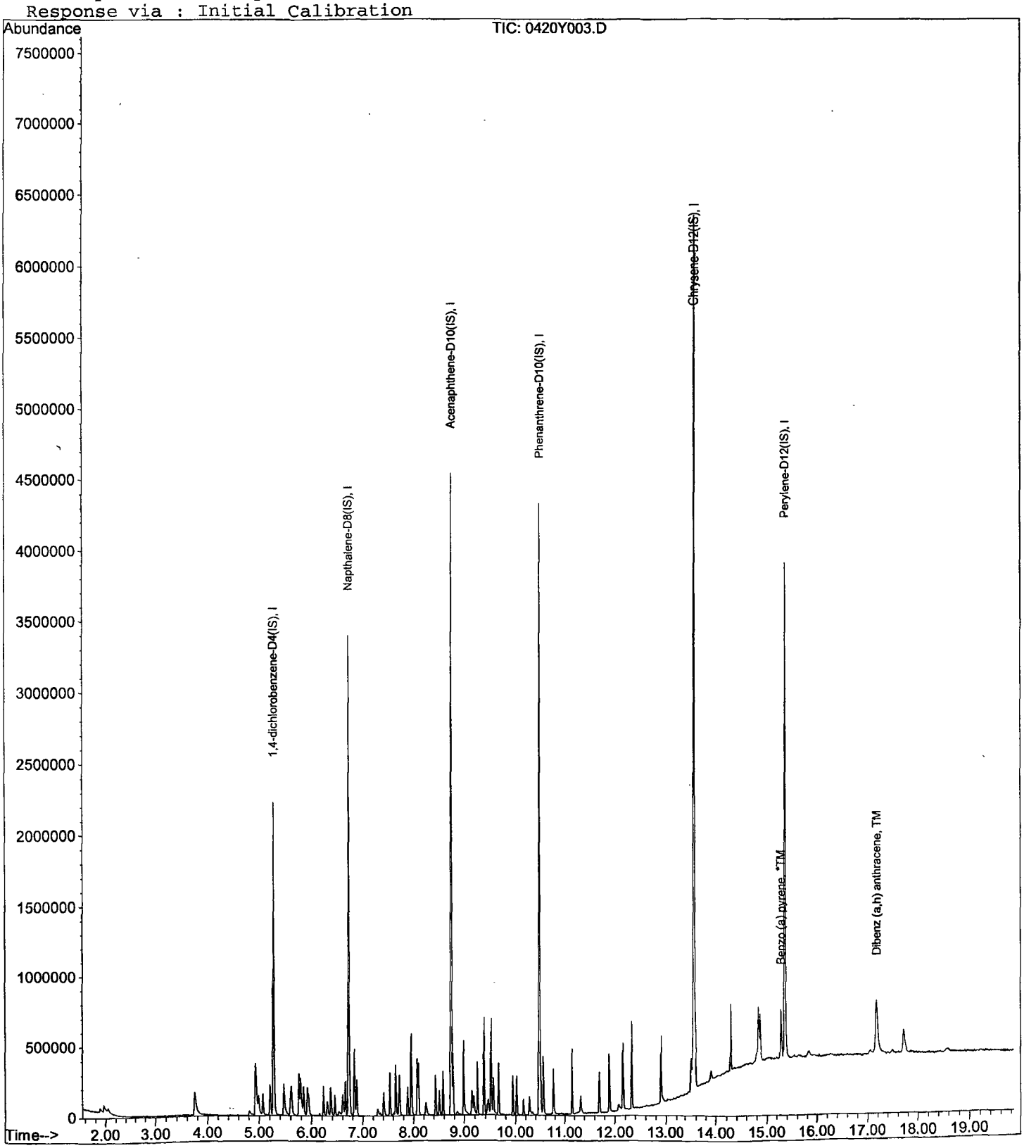
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200420\0420Y003.D Vial: 3
Acq On : 20 Apr 20 9:28 Operator: MA
Sample : 4ug/ml 8270 3/4/20 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Apr 20 12:49 2020 Quant Results File: Y0420.RES

Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Apr 20 14:37:25 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200420\0420Y004.D Vial: 4
Acq On : 20 Apr 20 9:57 Operator: MA
Sample : 5ug/ml 8270 3/4/20 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Apr 20 12:47 2020 Quant Results File: Y0420.RES

Quant Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Apr 17 16:03:50 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.28	152	485305	40.00000	ppb		0.00
21) Napthalene-D8(IS)	6.72	136	2056071	40.00000	ppb		0.00
41) Acenaphthene-D10(IS)	8.74	164	1224741	40.00000	ppb		0.00
65) Phenanthrene-D10(IS)	10.47	188	2325192	40.00000	ppb		0.00
80) Chrysene-D12(IS)	13.56	240	2299828	40.00000	ppb		0.00
90) Perylene-D12(IS)	15.35	264	2263400	40.00000	ppb		0.00
System Monitoring Compounds							
5) 2-Fluorophenol (S)	3.74	112	139102	7.38925	ppb		0.00
Spiked Amount 200.000			Recovery	= 3.695%			
6) Phenol-D6 (S)	4.92	99	188414	7.38130	ppb		0.00
Spiked Amount 200.000			Recovery	= 3.691%			
22) Nitrobenzene-D5(S)	5.92	82	88890	3.66922	ppb		0.00
Spiked Amount 100.000			Recovery	= 3.669%			
46) 2-Fluorobiphenyl(S)	7.96	172	195340	4.50559	ppb		0.00
Spiked Amount 100.000			Recovery	= 4.506%			
64) 2,4,6-Tribromophenol(S)	9.67	330	50444	8.97320	ppb		0.00
Spiked Amount 200.000			Recovery	= 4.487%			
83) Terphenyl-D14(S)	12.33	244	258181	5.13166	ppb		0.00
Spiked Amount 100.000			Recovery	= 5.132%			
Target Compounds							Qvalue
2) 1,4-Dioxane	1.65	58	3557	0.47324			63
3) n-Nitrosodimethylamine	1.89	42	36415	3.58785	ppb		93
4) Pyridine	1.95	79	101246	3.81947	ppb		99
7) Phenol	4.94	94	136305	4.10346	ppb		95
8) Aniline	4.92	93	68288	3.07178	ppb		88
9) Bis (2-chloroethyl) ether	4.99	63	58540	4.00795	ppb		99
10) 2-Chlorophenol	5.06	128	105741	4.47011	ppb		95
11) 1,3-DCB	5.21	146	115758	4.54967	ppb		98
12) 1,4-DCB	5.29	146	121425	4.67009	ppb		98
13) Benzyl alcohol	5.48	108	51857	3.73975	ppb		97
14) 1,2-DCB	5.47	146	112232	4.60728	ppb		99
15) 2-Methylphenol	5.61	107	84528	4.22315	ppb		95
16) Bis (2-chloroisopropyl) et	5.59	45	69360	3.79621	ppb	#	44
17) Acetophenone	5.76	105	130626	4.03445	ppb		97
18) 3&4-Methylphenol	5.79	107	206927	8.07643	ppb		96
19) n-Nitrosodi-n-propylamine	5.76	70	71755	3.56051	ppb		95
20) Hexachloroethane	5.84	117	43543	4.17246	ppb		84
23) Nitrobenzene	5.93	77	108990	3.94905	ppb		93
24) Isophorone	6.22	82	182430	3.95761	ppb		95
25) 2-Nitrophenol	6.30	139	54871	4.29915	ppb		97
26) 2,4-Dimethylphenol	6.36	122	91194	4.54434	ppb		99
27) Benzoic acid	6.52	105	49446	3.10954	ppb		92
28) Bis (2-chloroethoxy) metha	6.45	93	112980	4.37945	ppb		98
29) 2,4-Dichlorophenol	6.59	162	88132	4.68687	ppb		98
30) 1,2,4-Trichlorobenzene	6.66	180	100862	4.91827	ppb		96
31) 3,4-Dimethylphenol	6.71	107	139667	4.50710	ppb		99
32) Naphthalene	6.74	128	301529	4.63765	ppb		98
33) 4-Chloroaniline	6.83	127	114595	4.38024	ppb		97
34) 2,6-Dichlorophenol	6.83	162	85911	4.60939	ppb		97
35) Hexachloropropene	6.84	213	69461	4.36668	ppb		97
36) Hexachlorobutadiene	6.88	225	62299	5.00268	ppb		99
37) Caprolactum	7.28	55	27154	3.38198	ppb		93

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y200420\0420Y004.D Vial: 4
Acq On : 20 Apr 20 9:57 Operator: MA
Sample : 5ug/ml 8270 3/4/20 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Apr 20 12:47 2020 Quant Results File: Y0420.RES

Quant Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Fri Apr 17 16:03:50 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.40	107	94548	4.23772	ppb		99
39)	2-Methylnaphthalene	7.54	142	199522	4.68836	ppb		99
40)	1-Methylnaphthalene	7.65	142	208627	4.79123	ppb		100
42)	Hexachlorocyclopentadiene	7.72	237	37216	8.67075	ppb		98
43)	1,2,4,5-Tetrachlorobenzene	7.73	216	100673	5.02789	ppb		96
44)	2,4,6-Trichlorophenol	7.88	196	63397	4.77454	ppb		97
45)	2,4,5-Trichlorophenol	7.94	196	66618	4.70475	ppb	#	88
47)	1,1'-Biphenyl	8.07	154	262111	4.75810	ppb		97
48)	2-Chloronaphthalene	8.10	162	212882	4.94071	ppb		96
49)	2-Nitroaniline	8.24	65	51318	3.42456	ppb		89
50)	Dimethyl phthalate	8.44	163	250866	4.78899	ppb		99
51)	2,6-DNT	8.51	165	50484	4.26956	ppb		89
52)	Acenaphthylene	8.58	152	304219	4.58642	ppb		99
53)	3-Nitroaniline	8.24	138	56373	3.83644	ppb		88
54)	Acenaphthene	8.78	154	205134	4.83577	ppb		100
55)	2,4-Dinitrophenol	8.86	184	19235	8.75628	ppb		93
56)	4-Nitrophenol	8.99	65	37486	3.79923	ppb		81
57)	Dibenzofuran	8.98	168	295588	4.77235	ppb		100
58)	2,4-DNT	8.98	165	68587	4.03425	ppb	#	55
59)	2,3,4,6-Tetrachlorophenol	9.15	232	52362	4.97711	ppb	#	89
60)	Diethyl phthalate	9.25	149	247071	4.62888	ppb		99
61)	4-Chlorophenyl phenyl ethe	9.38	204	130794	4.77103	ppb		98
62)	Fluorene	9.38	166	243509	4.66236	ppb		98
63)	4-Nitroaniline	8.72	138	48390	3.98643	ppb	#	93
66)	4,6-Dinitro-2-methylphenol	9.46	198	38206	3.86312	ppb		94
67)	Diphenyl amine	9.52	169	369221	9.34910	ppb		100
68)	n-Nitrosodiphenylamine	9.52	169	369221	9.34910	ppb		100
69)	1,2-Diphenylhydrazine	9.56	77	229449	3.80899	ppb		93
70)	4-Bromophenyl phenyl ether	9.95	248	67488	4.83215	ppb		95
71)	Hexachlorobenzene	10.02	284	70803	5.12457	ppb	#	81
72)	Atrazine	10.16	200	32953	2.21238	ppb		97
73)	Pentachlorophenol	10.27	266	36146	4.92955	ppb		98
74)	Phenanthrene	10.50	178	348718	4.81638	ppb		99
75)	Anthracene	10.56	178	360825	4.74046	ppb		99
76)	Carbazol	10.76	167	323829	4.65797	ppb		98
77)	Di-n-butylphthalate	11.15	149	387592	4.25911	ppb		99
78)	2-Nitrodiphenylamine	11.33	167	32416	1.54869	ppb	#	88
79)	Fluoranthene	11.89	202	391335	4.79410	ppb	#	97
81)	Benzidine	12.06	184	87338	3.42242	ppb		96
82)	Pyrene	12.15	202	414898	5.14364	ppb		99
84)	Butyl benzylphthalate	12.90	149	178322	4.43257	ppb		93
85)	3,3'-Dichlorobenzidine	13.52	252	127727	5.19403	ppb		99
86)	Benz (a) anthracene	13.55	228	411997	5.11495	ppb		98
87)	Bis (2-ethylhexyl) phthala	13.56	149	282988	4.53966	ppb		97
88)	Chrysene	13.58	228	390448	5.53262	ppb		98
89)	Di-n-octylphthalate	14.29	149	447028	4.63195	ppb		96
91)	Benzo (b) fluoranthene	14.83	252	425367	4.98944	ppb		98
92)	Benzo (k) fluoranthene	14.86	252	339399	4.24236	ppb		100
93)	Benzo (a) pyrene	15.27	252	354632	4.78137	ppb		99
94)	Indeno (1,2,3-cd) pyrene	17.16	276	421365	4.87996	ppb		98
95)	Dibenz (a,h) anthracene	17.19	278	366544	4.93628	ppb		98
96)	Benzo (g,h,i) perylene	17.71	276	337705	4.98869	ppb		99

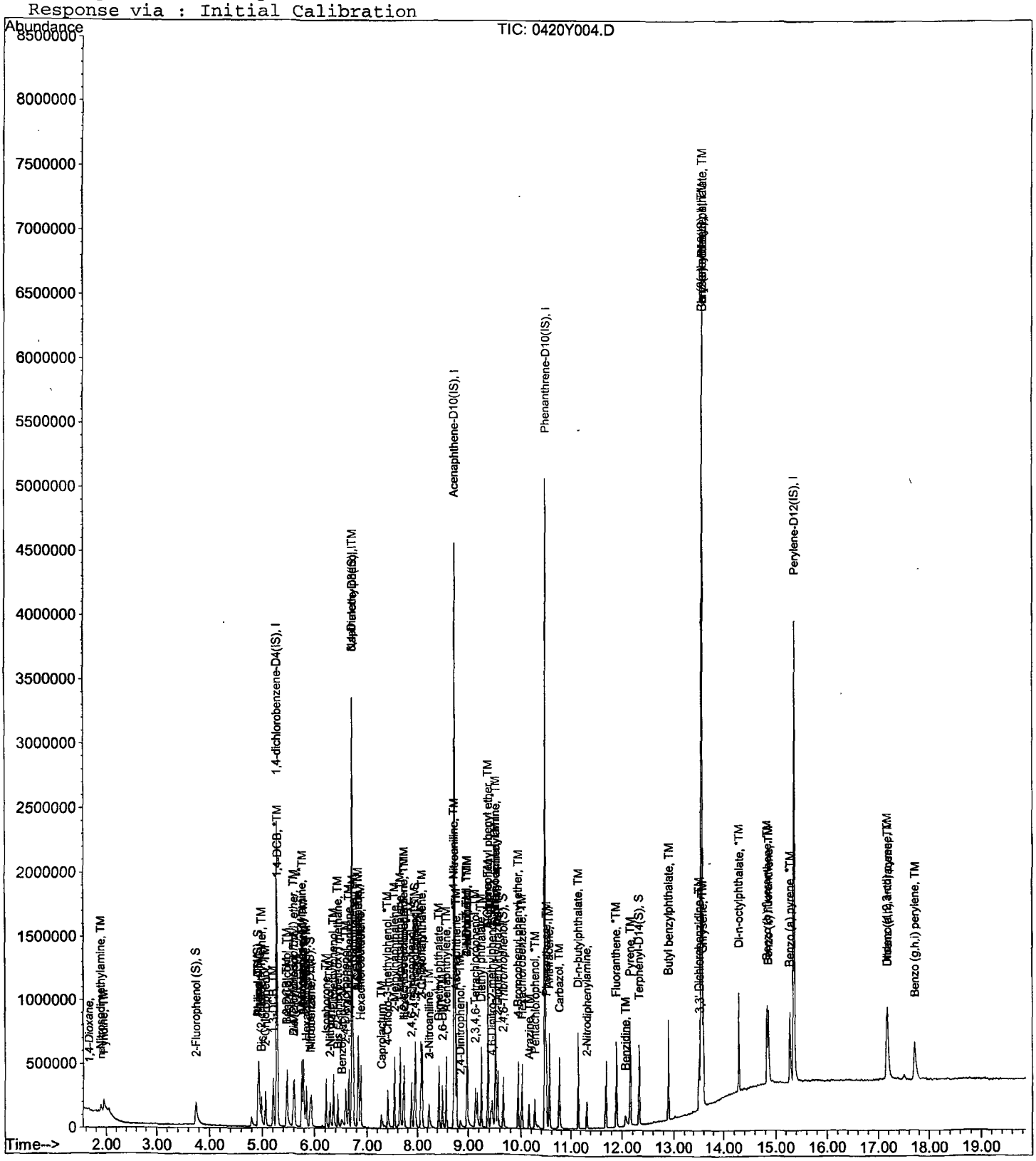
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200420\0420Y004.D Vial: 4
Acq On : 20 Apr 20 9:57 Operator: MA
Sample : 5ug/ml 8270 3/4/20 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Apr 20 12:47 2020 Quant Results File: Y0420.RES

Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Apr 20 14:37:25 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y200420\0420Y005.D Vial: 5
Acq On : 20 Apr 20 10:31 Operator: MA
Sample : 10ug/ml 8270 3/4/20 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Apr 20 14:35 2020 Quant Results File: Y0420.RES

Quant Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Apr 20 14:30:40 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.28	152	411517	40.00000	ppb		0.00
21) Napthalene-D8(IS)	6.72	136	1787905	40.00000	ppb		0.00
41) Acenaphthene-D10(IS)	8.74	164	1077923	40.00000	ppb		0.00
65) Phenanthrene-D10(IS)	10.47	188	2053303	40.00000	ppb		0.00
80) Chrysene-D12(IS)	13.56	240	1987380	40.00000	ppb		0.00
90) Perylene-D12(IS)	15.36	264	1938494	40.00000	ppb		0.00
System Monitoring Compounds							
5) 2-Fluorophenol (S)	3.73	112	267768	17.70025	ppb		0.00
Spiked Amount 200.000			Recovery =	8.850%			
6) Phenol-D6 (S)	4.92	99	344978	17.23074	ppb		0.00
Spiked Amount 200.000			Recovery =	8.616%			
22) Nitrobenzene-D5(S)	5.92	82	164606	9.01156	ppb		0.00
Spiked Amount 100.000			Recovery =	9.012%			
46) 2-Fluorobiphenyl(S)	7.96	172	358099	9.34832	ppb		0.00
Spiked Amount 100.000			Recovery =	9.348%			
64) 2,4,6-Tribromophenol(S)	9.67	330	96267	17.43082	ppb		0.00
Spiked Amount 200.000			Recovery =	8.716%			
83) Terphenyl-D14(S)	12.33	244	459003	10.14184	ppb		0.00
Spiked Amount 100.000			Recovery =	10.142%			
Target Compounds							Qvalue
2) 1,4-Dioxane	1.65	58	5508m	1.11006			23
3) n-Nitrosodimethylamine	1.88	42	65173	9.20259	ppb		89
4) Pyridine	1.93	79	193080	10.37468	ppb		99
7) Phenol	4.93	94	266236	10.24195	ppb		86
8) Aniline	4.92	93	159232	10.63571	ppb		92
9) Bis (2-chloroethyl) ether	4.99	63	107729	10.30174	ppb		90
10) 2-Chlorophenol	5.06	128	202043	10.33126	ppb		97
11) 1,3-DCB	5.21	146	220621	10.47519	ppb		99
12) 1,4-DCB	5.29	146	226661	10.56157	ppb		97
13) Benzyl alcohol	5.47	108	105103	9.73097	ppb		96
14) 1,2-DCB	5.47	146	211415	10.34100	ppb		96
15) 2-Methylphenol	5.60	107	160916	10.19033	ppb		99
16) Bis (2-chloroisopropyl) et	5.59	45	129965	10.34754	ppb	#	49
17) Acetophenone	5.75	105	250669	10.17705	ppb		93
18) 3&4-Methylphenol	5.78	107	404001	20.24692	ppb		98
19) n-Nitrosodi-n-propylamine	5.75	70	145081	10.23017	ppb		98
20) Hexachloroethane	5.84	117	82754	10.35815	ppb		83
23) Nitrobenzene	5.93	77	216430	10.37437	ppb		96
24) Isophorone	6.22	82	349370	9.96039	ppb		98
25) 2-Nitrophenol	6.30	139	107342	9.85589	ppb		96
26) 2,4-Dimethylphenol	6.36	122	172223	10.12163	ppb		98
27) Benzoic acid	6.51	105	114649	8.08854	ppb		98
28) Bis (2-chloroethoxy) metha	6.45	93	212602	10.38199	ppb		98
29) 2,4-Dichlorophenol	6.59	162	168670	10.11668	ppb		96
30) 1,2,4-Trichlorobenzene	6.66	180	193098	10.42008	ppb		99
31) 3,4-Dimethylphenol	6.70	107	262842	10.55028	ppb		96
32) Naphthalene	6.74	128	573540	10.41828	ppb		99
33) 4-Chloroaniline	6.83	127	221542	10.28185	ppb		97
34) 2,6-Dichlorophenol	6.83	162	164290	9.92548	ppb		99
35) Hexachloropropene	6.84	213	138413	9.91819	ppb		98
36) Hexachlorobutadiene	6.88	225	114154	10.20203	ppb		98
37) Caprolactum	7.27	55	52746	9.61756	ppb		89

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y200420\0420Y005.D Vial: 5
Acq On : 20 Apr 20 10:31 Operator: MA
Sample : 10ug/ml 8270 3/4/20 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Apr 20 14:35 2020 Quant Results File: Y0420.RES

Quant Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Apr 20 14:30:40 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.40	107	184351	10.10697	ppb		96
39)	2-Methylnaphthalene	7.54	142	377779	10.20026	ppb		99
40)	1-Methylnaphthalene	7.65	142	383100	10.10286	ppb		98
42)	Hexachlorocyclopentadiene	7.72	237	93696	11.47811	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.74	216	190382	10.28200	ppb		96
44)	2,4,6-Trichlorophenol	7.88	196	125929	10.16069	ppb		99
45)	2,4,5-Trichlorophenol	7.94	196	133127	10.18579	ppb		95
47)	1,1'-Biphenyl	8.07	154	482438	10.13662	ppb	#	96
48)	2-Chloronaphthalene	8.10	162	389751	10.30456	ppb		96
49)	2-Nitroaniline	8.24	65	103517	9.75574	ppb		95
50)	Dimethyl phthalate	8.44	163	460735	10.14981	ppb		99
51)	2,6-DNT	8.51	165	98326	9.65272	ppb	#	80
52)	Acenaphthylene	8.58	152	588203	10.32058	ppb		99
53)	3-Nitroaniline	8.24	138	114565	9.50532	ppb		96
54)	Acenaphthene	8.78	154	381896	10.45441	ppb		99
55)	2,4-Dinitrophenol	8.85	184	45060	9.86539	ppb		93
56)	4-Nitrophenol	8.98	65	76411	9.06950	ppb		81
57)	Dibenzofuran	8.98	168	551906	10.23219	ppb		96
58)	2,4-DNT	8.98	165	143436	9.84144	ppb	#	68
59)	2,3,4,6-Tetrachlorophenol	9.14	232	103187	9.98710	ppb		98
60)	Diethyl phthalate	9.25	149	467864	10.53681	ppb		98
61)	4-Chlorophenyl phenyl ethe	9.38	204	240472	9.87872	ppb		99
62)	Fluorene	9.38	166	447706	9.93273	ppb		99
63)	4-Nitroaniline	8.72	138	97168	9.96508	ppb		96
66)	4,6-Dinitro-2-methylphenol	9.46	198	81447	9.09343	ppb		96
67)	Diphenyl amine	9.52	169	685707	20.34571	ppb		100
68)	n-Nitrosodiphenylamine	9.52	169	685707	20.34571	ppb		100
69)	1,2-Diphenylhydrazine	9.56	77	430809	10.00765	ppb	#	91
70)	4-Bromophenyl phenyl ether	9.94	248	130473	10.07873	ppb		94
71)	Hexachlorobenzene	10.02	284	134313	10.15931	ppb	#	82
72)	Atrazine	10.16	200	63588	5.11970	ppb		97
73)	Pentachlorophenol	10.27	266	70414	8.77873	ppb		95
74)	Phenanthrene	10.50	178	652123	10.45729	ppb		100
75)	Anthracene	10.56	178	681997	10.49054	ppb		99
76)	Carbazol	10.76	167	607585	10.35739	ppb		100
77)	Di-n-butylphthalate	11.15	149	753847	10.07823	ppb		99
78)	2-Nitrodiphenylamine	11.33	167	70186	4.41517	ppb		93
79)	Fluoranthene	11.89	202	740853	10.31566	ppb	#	97
81)	Benzidine	12.06	184	183847	11.32570	ppb		99
82)	Pyrene	12.15	202	775988	11.35435	ppb		99
84)	Butyl benzylphthalate	12.90	149	345065	10.94434	ppb		93
85)	3,3'-Dichlorobenzidine	13.52	252	250001	11.65740	ppb		100
86)	Benz (a) anthracene	13.55	228	751595	10.91705	ppb		99
87)	Bis (2-ethylhexyl) phthala	13.56	149	504381	10.57024	ppb		98
88)	Chrysene	13.58	228	723217	11.43853	ppb		99
89)	Di-n-octylphthalate	14.29	149	833555	10.92357	ppb	#	94
91)	Benzo (b) fluoranthene	14.83	252	685042	9.42031	ppb		98
92)	Benzo (k) fluoranthene	14.86	252	740283	11.22519	ppb		99
93)	Benzo (a) pyrene	15.27	252	654589	10.42513	ppb		98
94)	Indeno (1,2,3-cd) pyrene	17.16	276	772343	10.31389	ppb		98
95)	Dibenz (a,h) anthracene	17.18	278	681025	10.54134	ppb		97
96)	Benzo (g,h,i) perylene	17.71	276	622415	10.47443	ppb		99

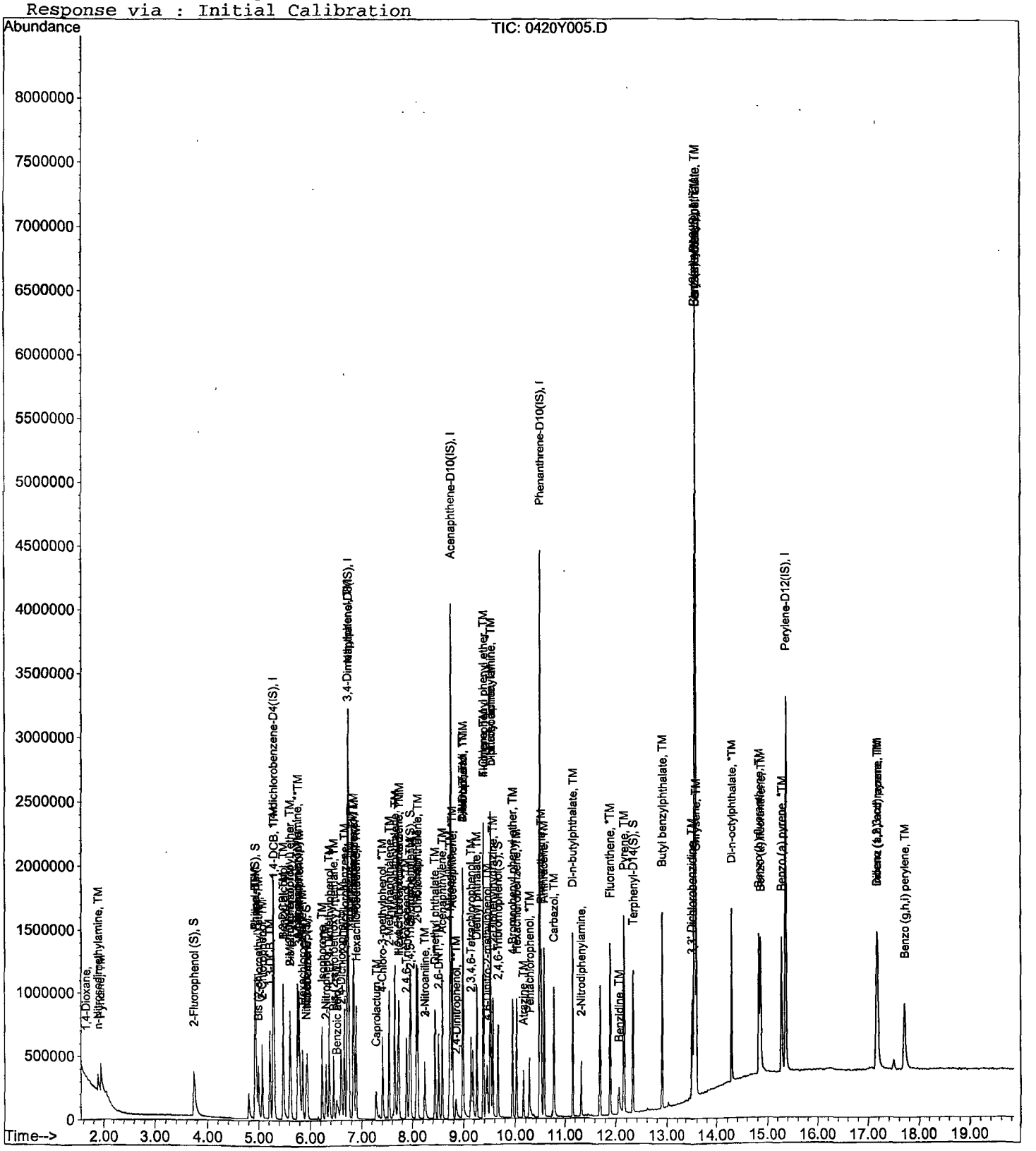
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200420\0420Y005.D Vial: 5
Acq On : 20 Apr 20 10:31 Operator: MA
Sample : 10ug/ml 8270 3/4/20 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Apr 20 14:35 2020 Quant Results File: Y0420.RES

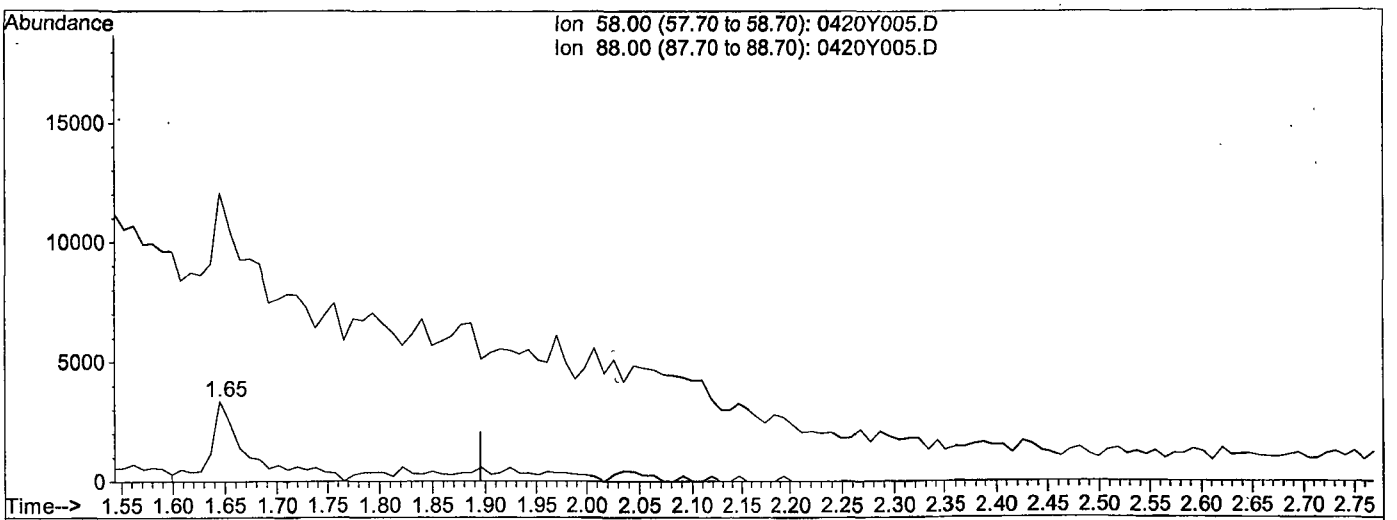
Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Apr 20 14:37:25 2020
Response via : Initial Calibration

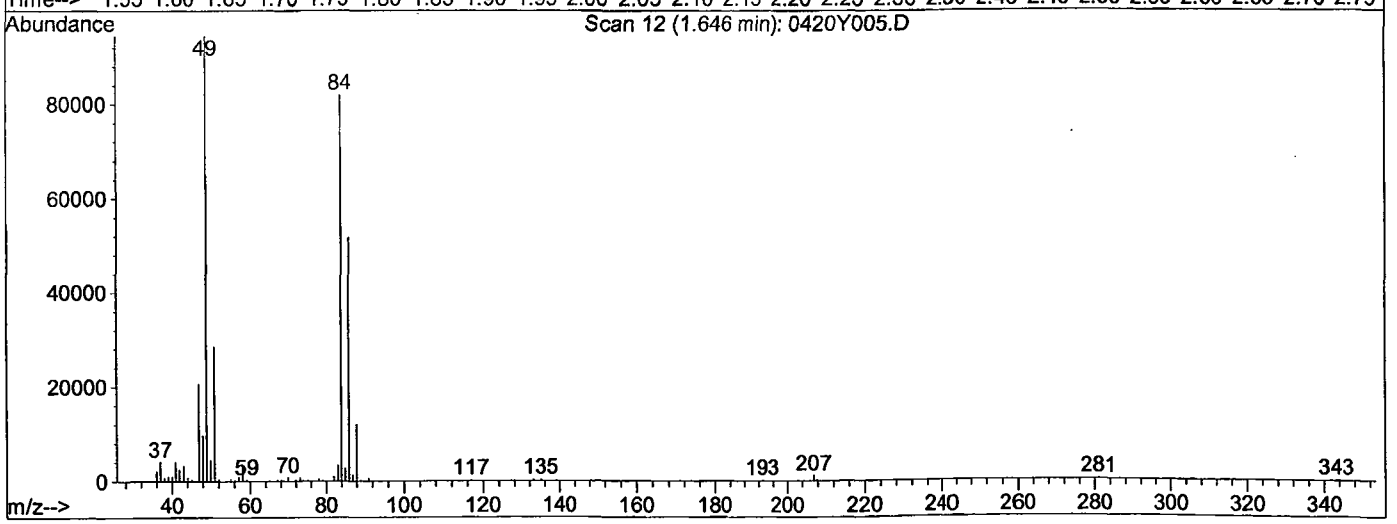


Quantitation Report

Data File : M:\YODA\DATA\Y200420\0420Y005.D Vial: 5
Acq On : 20 Apr 20 10:31 Operator: MA
Sample : 10ug/ml 8270 3/4/20 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Apr 20 14:31 2020 Quant Results File: temp.res

Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Apr 20 14:32:11 2020
Response via : Multiple Level Calibration





TIC: 0420Y005.D

(2) 1,4-Dioxane

1.65min 1.7701

response 8783

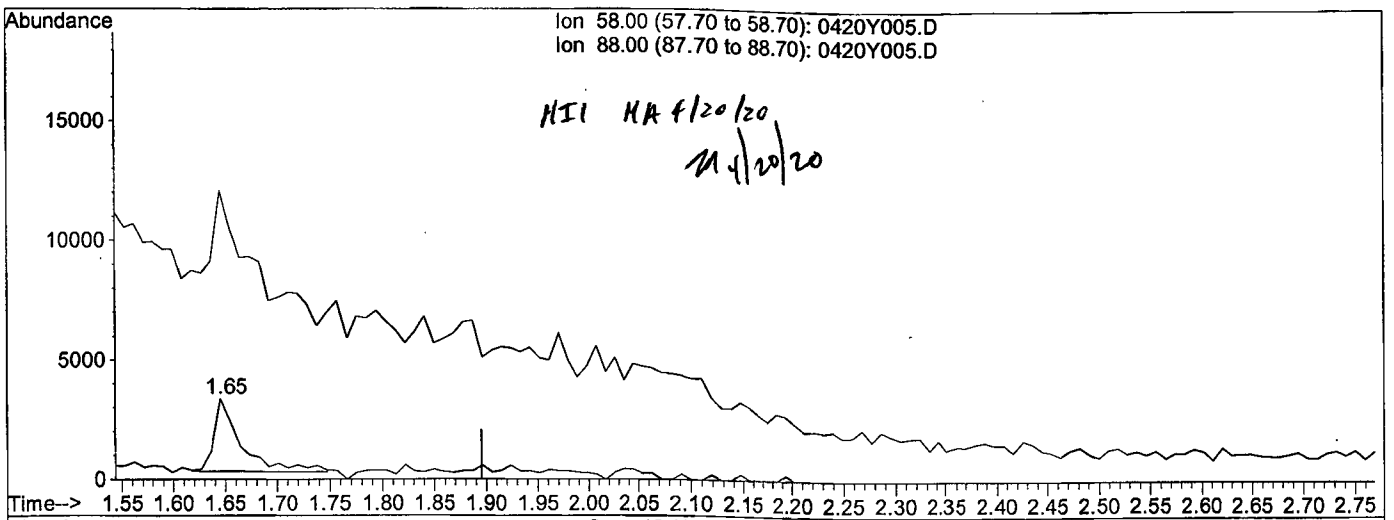
Ion	Exp%	Act%
58.00	100	100
88.00	205.20	85.96#
0.00	0.00	0.00
0.00	0.00	0.00

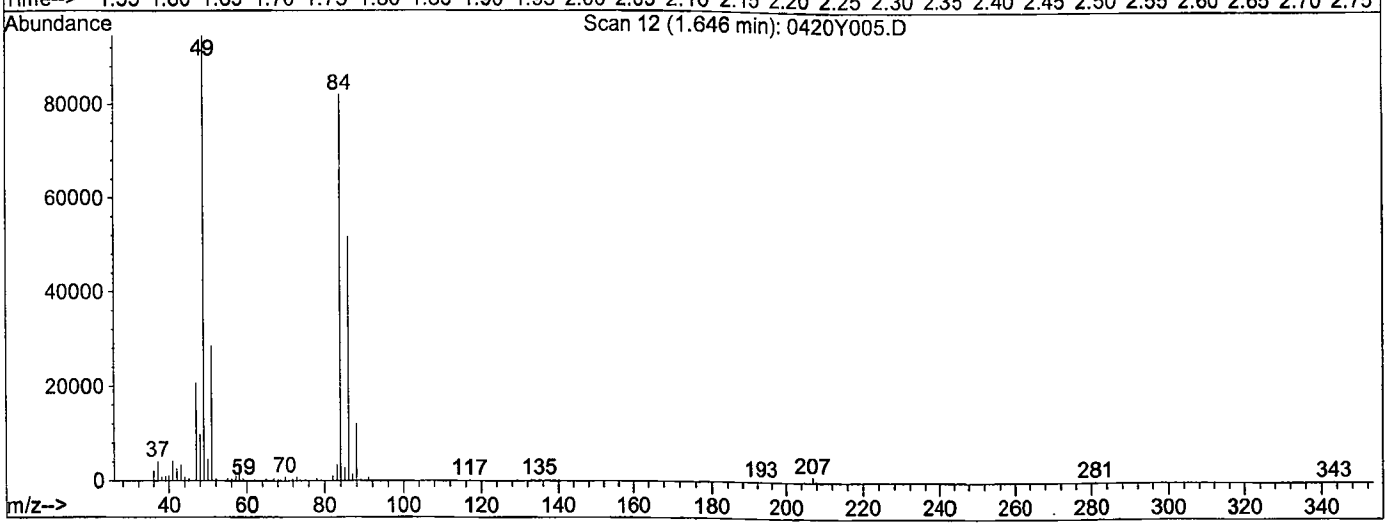
Quantitation Report

Data File : M:\YODA\DATA\Y200420\0420Y005.D
Acq On : 20 Apr 20 10:31
Sample : 10ug/ml 8270 3/4/20
Misc :
Quant Time: Apr 20 14:35 2020

Vial: 5
Operator: MA
Inst : Yoda
Multiplr: 1.00
Quant Results File: temp.res

Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Apr 20 14:32:11 2020
Response via : Multiple Level Calibration





TIC: 0420Y005.D

(2) 1,4-Dioxane

1.65min 1.1101 m

response 5508

Ion	Exp%	Act%
58.00	100	100
88.00	205.20	137.07
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200420\0420Y006.D Vial: 6
Acq On : 20 Apr 20 11:00 Operator: MA
Sample : 20ug/ml 8270 3/4/20 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Apr 20 14:31 2020 Quant Results File: Y0420.RES

Quant Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Apr 20 14:31:21 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.28	152	443176	40.00000 ppb		0.00
21) Napthalene-D8(IS)	6.73	136	1886740	40.00000 ppb		0.00
41) Acenaphthene-D10(IS)	8.74	164	1143699	40.00000 ppb		0.00
65) Phenanthrene-D10(IS)	10.48	188	2205691	40.00000 ppb		0.00
80) Chrysene-D12(IS)	13.56	240	2177433	40.00000 ppb		0.00
90) Perylene-D12(IS)	15.35	264	2036694	40.00000 ppb		0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.74	112	605572	37.17047 ppb		0.00
Spiked Amount 200.000			Recovery = 18.585%			
6) Phenol-D6 (S)	4.92	99	781388	36.24021 ppb		0.00
Spiked Amount 200.000			Recovery = 18.120%			
22) Nitrobenzene-D5(S)	5.92	82	366441	19.01038 ppb		0.00
Spiked Amount 100.000			Recovery = 19.010%			
46) 2-Fluorobiphenyl(S)	7.96	172	776977	19.11677 ppb		0.00
Spiked Amount 100.000			Recovery = 19.117%			
64) 2,4,6-Tribromophenol(S)	9.67	330	212252	36.22165 ppb		0.00
Spiked Amount 200.000			Recovery = 18.111%			
83) Terphenyl-D14(S)	12.33	244	1004778	20.26318 ppb		0.00
Spiked Amount 100.000			Recovery = 20.263%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.65	58	10375	1.94157		52
3) n-Nitrosodimethylamine	1.87	42	158390	20.76737 ppb		88
4) Pyridine	1.93	79	386292	19.27368 ppb		99
7) Phenol	4.93	94	534526	19.09397 ppb		96
8) Aniline	4.92	93	313280	19.43034 ppb		91
9) Bis (2-chloroethyl) ether	4.99	63	218851	19.43292 ppb		93
10) 2-Chlorophenol	5.06	128	405018	19.23072 ppb		98
11) 1,3-DCB	5.21	146	435270	19.19045 ppb		99
12) 1,4-DCB	5.30	146	444445	19.23008 ppb		99
13) Benzyl alcohol	5.47	108	220095	18.92181 ppb		97
14) 1,2-DCB	5.47	146	419544	19.05530 ppb		99
15) 2-Methylphenol	5.60	107	320585	18.85141 ppb		99
16) Bis (2-chloroisopropyl) et	5.59	45	260241	19.23969 ppb	#	66
17) Acetophenone	5.75	105	504953	19.03636 ppb		96
18) 3&4-Methylphenol	5.78	107	811203	37.75006 ppb		97
19) n-Nitrosodi-n-propylamine	5.76	70	292054	19.12261 ppb		94
20) Hexachloroethane	5.84	117	164276	19.09321 ppb		84
23) Nitrobenzene	5.94	77	433002	19.66830 ppb		95
24) Isophorone	6.22	82	725259	19.59369 ppb		99
25) 2-Nitrophenol	6.30	139	223124	19.41354 ppb		98
26) 2,4-Dimethylphenol	6.36	122	353585	19.69180 ppb		97
27) Benzoic acid	6.52	105	278076	18.59070 ppb		98
28) Bis (2-chloroethoxy) metha	6.45	93	420893	19.47679 ppb		98
29) 2,4-Dichlorophenol	6.59	162	341037	19.38359 ppb		99
30) 1,2,4-Trichlorobenzene	6.66	180	380839	19.47454 ppb		99
31) 3,4-Dimethylphenol	6.71	107	512127	19.47957 ppb		99
32) Naphthalene	6.74	128	1132470	19.49357 ppb		99
33) 4-Chloroaniline	6.82	127	468213	20.59165 ppb		95
34) 2,6-Dichlorophenol	6.83	162	334028	19.12299 ppb		95
35) Hexachloropropene	6.85	213	278972	18.94299 ppb		99
36) Hexachlorobutadiene	6.88	225	229269	19.41659 ppb		98
37) Caprolactum	7.27	55	116487	20.12729 ppb		94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200420\0420Y006.D Vial: 6
Acq On : 20 Apr 20 11:00 Operator: MA
Sample : 20ug/ml 8270 3/4/20 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Apr 20 14:31 2020 Quant Results File: Y0420.RES

Quant Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Apr 20 14:31:21 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.40	107	377120	19.59240	ppb		92
39)	2-Methylnaphthalene	7.53	142	751200	19.22035	ppb		97
40)	1-Methylnaphthalene	7.65	142	772050	19.29345	ppb		99
42)	Hexachlorocyclopentadiene	7.72	237	194240	18.08220	ppb		98
43)	1,2,4,5-Tetrachlorobenzene	7.73	216	381178	19.40240	ppb		98
44)	2,4,6-Trichlorophenol	7.88	196	254711	19.36963	ppb		98
45)	2,4,5-Trichlorophenol	7.93	196	273305	19.70843	ppb	#	91
47)	1,1'-Biphenyl	8.07	154	988227	19.56970	ppb		98
48)	2-Chloronaphthalene	8.10	162	786722	19.60377	ppb		97
49)	2-Nitroaniline	8.23	65	225189	20.00193	ppb		87
50)	Dimethyl phthalate	8.43	163	944738	19.61527	ppb		99
51)	2,6-DNT	8.51	165	211533	19.57201	ppb		88
52)	Acenaphthylene	8.58	152	1186565	19.62204	ppb		99
53)	3-Nitroaniline	8.24	138	250585	19.59503	ppb		97
54)	Acenaphthene	8.78	154	753935	19.45201	ppb		98
55)	2,4-Dinitrophenol	8.84	184	119317	18.77672	ppb		93
56)	4-Nitrophenol	8.96	65	170165	19.03592	ppb		97
57)	Dibenzofuran	8.98	168	1115152	19.48559	ppb		99
58)	2,4-DNT	8.98	165	306156	19.79790	ppb		84
59)	2,3,4,6-Tetrachlorophenol	9.14	232	212675	19.40023	ppb		95
60)	Diethyl phthalate	9.25	149	926918	19.67465	ppb		98
61)	4-Chlorophenyl phenyl ethe	9.38	204	489487	18.95193	ppb		94
62)	Fluorene	9.38	166	913187	19.09464	ppb		99
63)	4-Nitroaniline	8.71	138	206111	19.92207	ppb		88
66)	4,6-Dinitro-2-methylphenol	9.46	198	184193	19.14407	ppb		98
67)	Diphenyl amine	9.52	169	1390429	38.40533	ppb		100
68)	n-Nitrosodiphenylamine	9.52	169	1390429	38.40533	ppb		100
69)	1,2-Diphenylhydrazine	9.57	77	873967	18.89952	ppb	#	89
70)	4-Bromophenyl phenyl ether	9.95	248	261557	18.80874	ppb		92
71)	Hexachlorobenzene	10.02	284	274478	19.32689	ppb	#	84
72)	Atrazine	10.15	200	127725	9.57313	ppb		95
73)	Pentachlorophenol	10.26	266	160842	18.66726	ppb		98
74)	Phenanthrene	10.50	178	1307537	19.51874	ppb		99
75)	Anthracene	10.56	178	1363551	19.52518	ppb		100
76)	Carbazol	10.76	167	1212012	19.23352	ppb		99
77)	Di-n-butylphthalate	11.15	149	1560218	19.41756	ppb		99
78)	2-Nitrodiphenylamine	11.32	167	159748	9.35494	ppb		86
79)	Fluoranthene	11.89	202	1495955	19.39063	ppb		98
81)	Benzidine	12.05	184	430743	24.21938	ppb		98
82)	Pyrene	12.16	202	1568719	20.95022	ppb		100
84)	Butyl benzylphthalate	12.90	149	723202	20.93556	ppb		91
85)	3,3'-Dichlorobenzidine	13.51	252	509016	21.66345	ppb	#	98
86)	Benz (a) anthracene	13.55	228	1540003	20.41641	ppb		99
87)	Bis (2-ethylhexyl) phthala	13.56	149	1078473	20.62868	ppb		99
88)	Chrysene	13.59	228	1457536	21.04054	ppb		100
89)	Di-n-octylphthalate	14.29	149	1720241	20.57576	ppb	#	95
91)	Benzo (b) fluoranthene	14.82	252	1462840	19.14625	ppb		99
92)	Benzo (k) fluoranthene	14.86	252	1456250	21.01700	ppb		100
93)	Benzo (a) pyrene	15.28	252	1350265	20.46777	ppb		100
94)	Indeno (1,2,3-cd) pyrene	17.16	276	1578287	20.06028	ppb		98
95)	Dibenz (a,h) anthracene	17.18	278	1395501	20.55899	ppb		99
96)	Benzo (g,h,i) perylene	17.70	276	1267475	20.30152	ppb		99

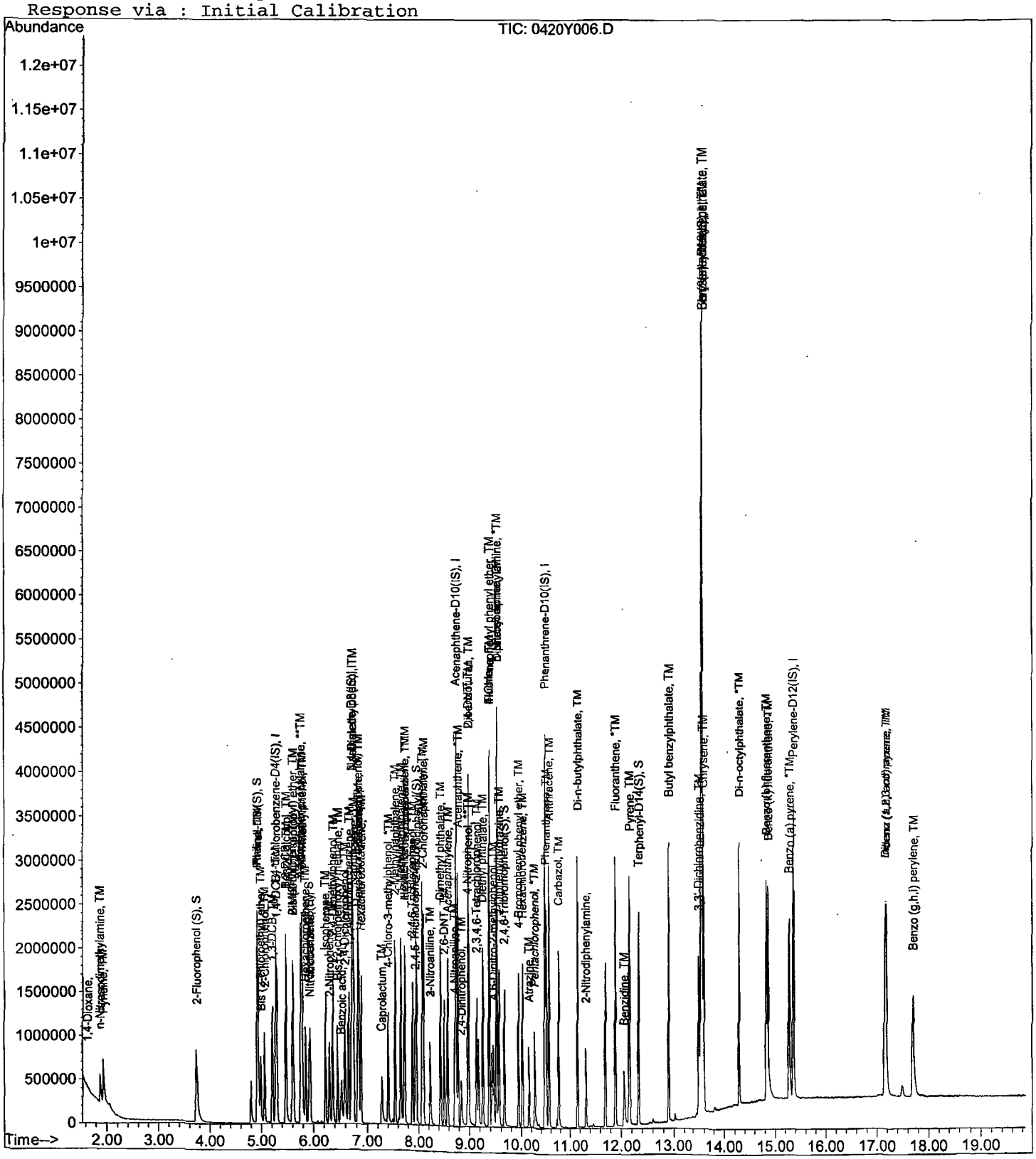
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200420\0420Y006.D Vial: 6
Acq On : 20 Apr 20 11:00 Operator: MA
Sample : 20ug/ml 8270 3/4/20 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Apr 20 14:31 2020 Quant Results File: Y0420.RES

Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Apr 20 14:37:25 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200420\0420Y007.D Vial: 7
Acq On : 20 Apr 20 11:28 Operator: MA
Sample : 40ug/ml 8270 3/4/20 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Apr 20 14:31 2020 Quant Results File: Y0420.RES

Quant Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Apr 20 14:31:21 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.28	152	478543	40.00000	ppb		0.00
21) Napthalene-D8(IS)	6.73	136	2109187	40.00000	ppb		0.00
41) Acenaphthene-D10(IS)	8.74	164	1307414	40.00000	ppb		0.00
65) Phenanthrene-D10(IS)	10.48	188	2474116	40.00000	ppb		0.00
80) Chrysene-D12(IS)	13.56	240	2659220	40.00000	ppb		0.00
90) Perylene-D12(IS)	15.35	264	2349652	40.00000	ppb		0.00
System Monitoring Compounds							
5) 2-Fluorophenol (S)	3.73	112	1448204	82.32226	ppb		0.00
Spiked Amount 200.000			Recovery = 41.161%				
6) Phenol-D6 (S)	4.92	99	1893197	81.31582	ppb		0.00
Spiked Amount 200.000			Recovery = 40.658%				
22) Nitrobenzene-D5(S)	5.92	82	865065	40.14510	ppb		0.00
Spiked Amount 100.000			Recovery = 40.145%				
46) 2-Fluorobiphenyl(S)	7.96	172	1809860	38.95381	ppb		0.00
Spiked Amount 100.000			Recovery = 38.954%				
64) 2,4,6-Tribromophenol(S)	9.67	330	530816	79.24266	ppb		0.00
Spiked Amount 200.000			Recovery = 39.622%				
83) Terphenyl-D14(S)	12.33	244	2384888	39.38183	ppb		0.00
Spiked Amount 100.000			Recovery = 39.382%				
Target Compounds							Qvalue
2) 1,4-Dioxane	1.65	58	20792	3.60344			76
3) n-Nitrosodimethylamine	1.87	42	329220	39.97562	ppb		99
4) Pyridine	1.92	79	841711	38.89262	ppb		99
7) Phenol	4.94	94	1197920	39.62875	ppb		94
8) Aniline	4.92	93	742208	42.63131	ppb		89
9) Bis (2-chloroethyl) ether	4.99	63	483623	39.76964	ppb		96
10) 2-Chlorophenol	5.06	128	907204	39.89160	ppb		95
11) 1,3-DCB	5.21	146	968171	39.53063	ppb		99
12) 1,4-DCB	5.30	146	983410	39.40515	ppb		98
13) Benzyl alcohol	5.47	108	503829	40.11354	ppb		99
14) 1,2-DCB	5.47	146	928743	39.06511	ppb		99
15) 2-Methylphenol	5.60	107	726322	39.55351	ppb		96
16) Bis (2-chloroisopropyl) et	5.59	45	579155	39.65266	ppb	#	71
17) Acetophenone	5.75	105	1137854	39.72599	ppb		93
18) 3&4-Methylphenol	5.78	107	1824689	78.63796	ppb		97
19) n-Nitrosodi-n-propylamine	5.76	70	664556	40.29682	ppb		96
20) Hexachloroethane	5.84	117	367955	39.60545	ppb		83
23) Nitrobenzene	5.94	77	960962	39.04631	ppb		95
24) Isophorone	6.23	82	1617712	39.09501	ppb		97
25) 2-Nitrophenol	6.30	139	499310	38.86204	ppb		97
26) 2,4-Dimethylphenol	6.36	122	778841	38.80050	ppb		96
27) Benzoic acid	6.55	105	679024	40.60825	ppb		98
28) Bis (2-chloroethoxy) metha	6.45	93	942706	39.02284	ppb		98
29) 2,4-Dichlorophenol	6.59	162	763131	38.79973	ppb		98
30) 1,2,4-Trichlorobenzene	6.66	180	848841	38.82837	ppb		99
31) 3,4-Dimethylphenol	6.71	107	1126965	38.34504	ppb		98
32) Naphthalene	6.75	128	2500115	38.49653	ppb		99
33) 4-Chloroaniline	6.82	127	1009533	39.71597	ppb		96
34) 2,6-Dichlorophenol	6.83	162	761439	38.99464	ppb		97
35) Hexachloropropene	6.85	213	639320	38.83320	ppb		99
36) Hexachlorobutadiene	6.88	225	509616	38.60715	ppb		98
37) Caprolactum	7.29	55	258802	40.00115	ppb		94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200420\0420Y007.D Vial: 7
Acq On : 20 Apr 20 11:28 Operator: MA
Sample : 40ug/ml 8270 3/4/20 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Apr 20 14:31 2020 Quant Results File: Y0420.RES

Quant Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Apr 20 14:31:21 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.40	107	844704	39.25632 ppb		94
39)	2-Methylnaphthalene	7.53	142	1677984	38.40524 ppb		99
40)	1-Methylnaphthalene	7.66	142	1731748	38.71205 ppb		98
42)	Hexachlorocyclopentadiene	7.72	237	518912	36.16827 ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.73	216	858527	38.22788 ppb		99
44)	2,4,6-Trichlorophenol	7.88	196	579963	38.58091 ppb		99
45)	2,4,5-Trichlorophenol	7.93	196	605796	38.21461 ppb		92
47)	1,1'-Biphenyl	8.07	154	2198445	38.08393 ppb		98
48)	2-Chloronaphthalene	8.10	162	1728910	37.68679 ppb		97
49)	2-Nitroaniline	8.24	65	511828	39.76924 ppb		93
50)	Dimethyl phthalate	8.44	163	2111991	38.35955 ppb		99
51)	2,6-DNT	8.51	165	482775	39.07515 ppb	#	77
52)	Acenaphthylene	8.58	152	2645664	38.27242 ppb		99
53)	3-Nitroaniline	8.24	138	574989	39.33227 ppb		97
54)	Acenaphthene	8.78	154	1660209	37.47071 ppb		98
55)	2,4-Dinitrophenol	8.84	184	314165	38.15631 ppb		92
56)	4-Nitrophenol	8.95	65	407295	39.85761 ppb		92
57)	Dibenzofuran	8.98	168	2471698	37.78101 ppb		97
58)	2,4-DNT	8.98	165	687672	38.90061 ppb	#	73
59)	2,3,4,6-Tetrachlorophenol	9.14	232	487370	38.89090 ppb		96
60)	Diethyl phthalate	9.26	149	2047374	38.01556 ppb		98
61)	4-Chlorophenyl phenyl ethe	9.38	204	1113936	37.72864 ppb		94
62)	Fluorene	9.38	166	2050012	37.49788 ppb		99
63)	4-Nitroaniline	8.71	138	477430	40.36841 ppb		85
66)	4,6-Dinitro-2-methylphenol	9.47	198	433550	40.17214 ppb	#	81
67)	Diphenyl amine	9.53	169	3113288	76.66314 ppb		100
68)	n-Nitrosodiphenylamine	9.53	169	3113288	76.66314 ppb		100
69)	1,2-Diphenylhydrazine	9.57	77	1953303	37.65736 ppb		95
70)	4-Bromophenyl phenyl ether	9.95	248	610642	39.14756 ppb		92
71)	Hexachlorobenzene	10.02	284	616540	38.70262 ppb	#	80
72)	Atrazine	10.16	200	296564	19.81623 ppb		98
73)	Pentachlorophenol	10.27	266	381705	39.49422 ppb		97
74)	Phenanthrene	10.51	178	2929901	38.99199 ppb		100
75)	Anthracene	10.56	178	2989528	38.16373 ppb		100
76)	Carbazol	10.76	167	2734506	38.68613 ppb		98
77)	Di-n-butylphthalate	11.15	149	3580869	39.73036 ppb		99
78)	2-Nitrodiphenylamine	11.32	167	392790	20.50646 ppb		87
79)	Fluoranthene	11.89	202	3345765	38.66281 ppb	#	97
81)	Benzidine	12.06	184	874294	40.25249 ppb		99
82)	Pyrene	12.16	202	3507174	38.35229 ppb		100
84)	Butyl benzylphthalate	12.90	149	1633249	38.71399 ppb		90
85)	3,3'-Dichlorobenzidine	13.51	252	1124049	39.17166 ppb	#	98
86)	Benz (a) anthracene	13.55	228	3448772	37.43801 ppb		99
87)	Bis (2-ethylhexyl) phthala	13.56	149	2441659	38.24175 ppb		99
88)	Chrysene	13.60	228	3248232	38.39504 ppb		100
89)	Di-n-octylphthalate	14.29	149	4025742	39.42784 ppb	#	95
91)	Benzo (b) fluoranthene	14.83	252	3687014	41.82961 ppb		98
92)	Benzo (k) fluoranthene	14.87	252	2848022	35.62873 ppb		98
93)	Benzo (a) pyrene	15.28	252	3104017	40.78475 ppb		98
94)	Indeno (1,2,3-cd) pyrene	17.17	276	3544043	39.04562 ppb		100
95)	Dibenz (a,h) anthracene	17.19	278	3143980	40.14890 ppb		99
96)	Benzo (g,h,i) perylene	17.71	276	2819420	39.14453 ppb		99

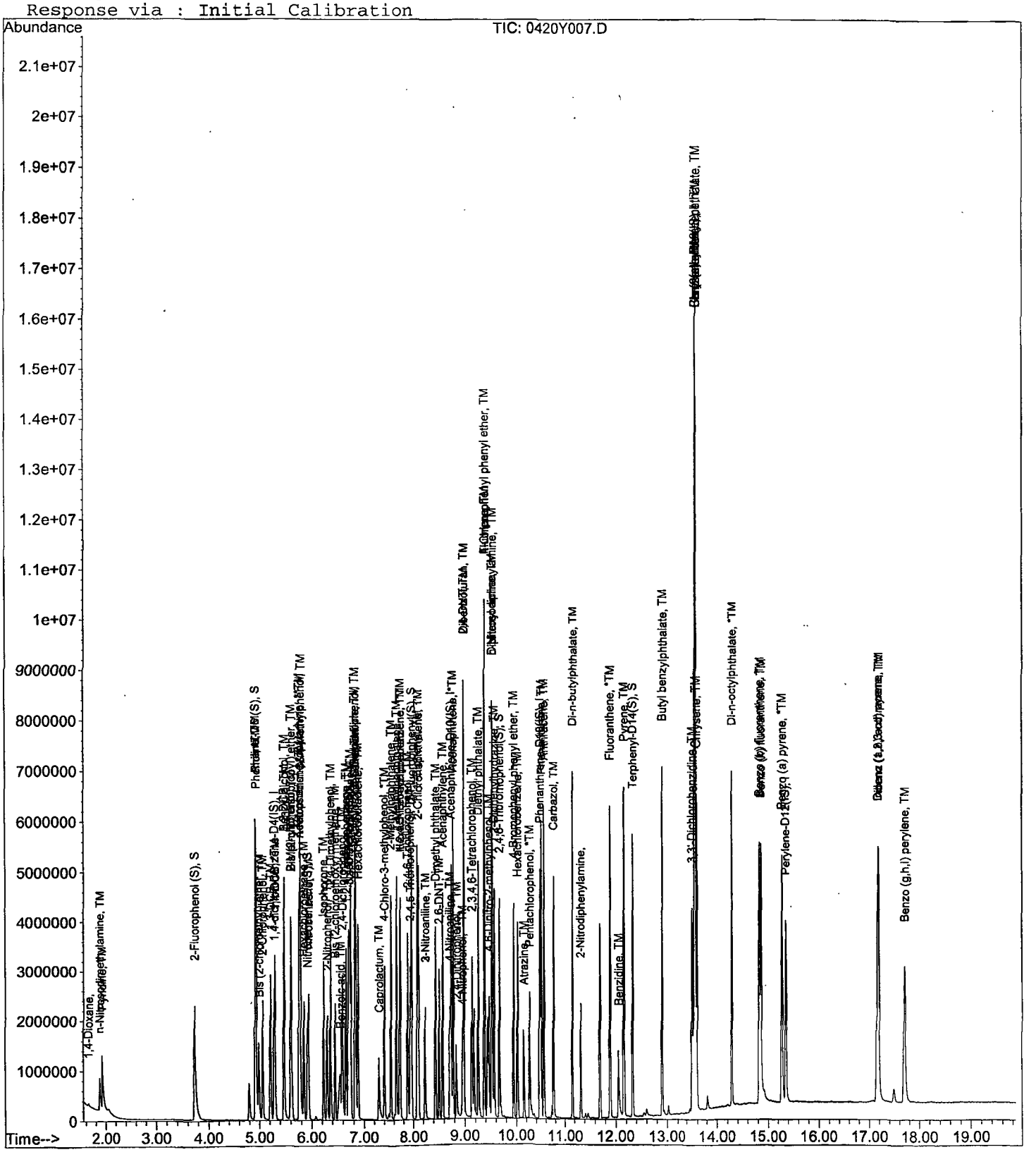
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200420\0420Y007.D Vial: 7
Acq On : 20 Apr 20 11:28 Operator: MA
Sample : 40ug/ml 8270 3/4/20 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Apr 20 14:31 2020 Quant Results File: Y0420.RES

Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Apr 20 14:37:25 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200420\0420Y008.D Vial: 8
Acq On : 20 Apr 20 11:57 Operator: MA
Sample : 50ug/ml 8270 3/4/20 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Apr 20 14:31 2020 Quant Results File: Y0420.RES

Quant Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Apr 20 14:31:21 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.28	152	464082	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.72	136	1945448	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.74	164	1146170	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.47	188	2180724	40.00000 ppb	0.00
80) Chrysene-D12(IS)	13.57	240	2320927	40.00000 ppb	0.00
90) Perylene-D12(IS)	15.36	264	2075407	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.73	112	1687452	98.91114 ppb	0.00
Spiked Amount 200.000				Recovery = 49.456%	
6) Phenol-D6 (S)	4.92	99	2217810	98.22677 ppb	0.00
Spiked Amount 200.000				Recovery = 49.114%	
22) Nitrobenzene-D5(S)	5.92	82	1005399	50.58452 ppb	0.00
Spiked Amount 100.000				Recovery = 50.585%	
46) 2-Fluorobiphenyl(S)	7.96	172	2099495	51.54469 ppb	0.00
Spiked Amount 100.000				Recovery = 51.545%	
64) 2,4,6-Tribromophenol(S)	9.68	330	595407	101.38952 ppb	0.00
Spiked Amount 200.000				Recovery = 50.695%	
83) Terphenyl-D14(S)	12.33	244	2657586	50.28148 ppb	0.00
Spiked Amount 100.000				Recovery = 50.281%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.65	58	26158	4.67468	100
3) n-Nitrosodimethylamine	1.87	42	357205	44.72525 ppb	100
4) Pyridine	1.91	79	982452	46.81034 ppb	100
7) Phenol	4.93	94	1393874	47.54801 ppb	100
8) Aniline	4.92	93	856768	50.74492 ppb	100
9) Bis (2-chloroethyl) ether	4.99	63	566496	48.03611 ppb	100
10) 2-Chlorophenol	5.06	128	1053302	47.75904 ppb	100
11) 1,3-DCB	5.21	146	1142818	48.11550 ppb	100
12) 1,4-DCB	5.30	146	1152364	47.61396 ppb	100
13) Benzyl alcohol	5.47	108	594585	48.81440 ppb	100
14) 1,2-DCB	5.47	146	1092963	47.40511 ppb	100
15) 2-Methylphenol	5.60	107	845527	47.47988 ppb	100
16) Bis (2-chloroisopropyl) et	5.60	45	672884	47.50551 ppb	100
17) Acetophenone	5.76	105	1331190	47.92416 ppb	100
18) 3&4-Methylphenol	5.78	107	2158011	95.90104 ppb	100
19) n-Nitrosodi-n-propylamine	5.76	70	770346	48.16719 ppb	100
20) Hexachloroethane	5.85	117	435299	48.31412 ppb	100
23) Nitrobenzene	5.94	77	1134639	49.98354 ppb	100
24) Isophorone	6.23	82	1910371	50.05337 ppb	100
25) 2-Nitrophenol	6.30	139	602537	50.84339 ppb	100
26) 2,4-Dimethylphenol	6.36	122	904670	48.86232 ppb	100
27) Benzoic acid	6.56	105	796444	51.63924 ppb	100
28) Bis (2-chloroethoxy) metha	6.45	93	1105565	49.61607 ppb	100
29) 2,4-Dichlorophenol	6.58	162	892544	49.19882 ppb	100
30) 1,2,4-Trichlorobenzene	6.66	180	985399	48.86865 ppb	100
31) 3,4-Dimethylphenol	6.71	107	1323759	48.83185 ppb	100
32) Naphthalene	6.75	128	2971757	49.61013 ppb	100
33) 4-Chloroaniline	6.83	127	1162424	49.57979 ppb	100
34) 2,6-Dichlorophenol	6.83	162	886600	49.22583 ppb	100
35) Hexachloropropene	6.84	213	766208	50.45765 ppb	100
36) Hexachlorobutadiene	6.88	225	592381	48.65430 ppb	100
37) Caprolactum	7.30	55	300663	50.38256 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200420\0420Y008.D Vial: 8
Acq On : 20 Apr 20 11:57 Operator: MA
Sample : 50ug/ml 8270 3/4/20 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Apr 20 14:31 2020 Quant Results File: Y0420.RES

Quant Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Apr 20 14:31:21 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
38)	4-Chloro-3-methylphenol	7.40	107	982234	49.48977	ppb	100
39)	2-Methylnaphthalene	7.54	142	1976795	49.05235	ppb	100
40)	1-Methylnaphthalene	7.65	142	2035778	49.33866	ppb	100
42)	Hexachlorocyclopentadiene	7.72	237	660672	50.46713	ppb	100
43)	1,2,4,5-Tetrachlorobenzene	7.74	216	1002192	50.90276	ppb	100
44)	2,4,6-Trichlorophenol	7.88	196	678711	51.50165	ppb	100
45)	2,4,5-Trichlorophenol	7.94	196	706356	50.82657	ppb	100
47)	1,1'-Biphenyl	8.08	154	2580728	50.99557	ppb	100
48)	2-Chloronaphthalene	8.11	162	2049050	50.94874	ppb	100
49)	2-Nitroaniline	8.24	65	588162	52.12959	ppb	100
50)	Dimethyl phthalate	8.44	163	2455281	50.86824	ppb	100
51)	2,6-DNT	8.52	165	570683	52.68839	ppb	100
52)	Acenaphthylene	8.58	152	3066777	50.60548	ppb	100
53)	3-Nitroaniline	8.24	138	669741	52.25893	ppb	100
54)	Acenaphthene	8.78	154	1949594	50.19234	ppb	100
55)	2,4-Dinitrophenol	8.84	184	369165	49.81386	ppb	100
56)	4-Nitrophenol	8.96	65	475348	53.06131	ppb	100
57)	Dibenzofuran	8.98	168	2915234	50.82949	ppb	100
58)	2,4-DNT	8.99	165	799228	51.57151	ppb	100
59)	2,3,4,6-Tetrachlorophenol	9.14	232	563014	51.24747	ppb	100
60)	Diethyl phthalate	9.26	149	2390030	50.62111	ppb	100
61)	4-Chlorophenyl phenyl ethe	9.38	204	1310131	50.61622	ppb	100
62)	Fluorene	9.38	166	2413683	50.36103	ppb	100
63)	4-Nitroaniline	8.72	138	545323	52.59566	ppb	100
66)	4,6-Dinitro-2-methylphenol	9.47	198	514339	54.06978	ppb	100
67)	Diphenyl amine	9.53	169	3654802	102.10583	ppb	100
68)	n-Nitrosodiphenylamine	9.53	169	3654802	102.10583	ppb	100
69)	1,2-Diphenylhydrazine	9.56	77	2213256	48.40958	ppb	100
70)	4-Bromophenyl phenyl ether	9.94	248	720976	52.43945	ppb	100
71)	Hexachlorobenzene	10.03	284	722770	51.47526	ppb	100
72)	Atrazine	10.16	200	341616	25.89764	ppb	100
73)	Pentachlorophenol	10.27	266	449056	52.71395	ppb	100
74)	Phenanthrene	10.50	178	3359807	50.72899	ppb	100
75)	Anthracene	10.57	178	3482202	50.43378	ppb	100
76)	Carbazol	10.76	167	3186921	51.15253	ppb	100
77)	Di-n-butylphthalate	11.15	149	4134400	52.04343	ppb	100
78)	2-Nitrodiphenylamine	11.33	167	461312	27.32400	ppb	100
79)	Fluoranthene	11.89	202	3908833	51.24653	ppb	100
81)	Benzidine	12.05	184	945762	49.88959	ppb	100
82)	Pyrene	12.15	202	4047593	50.71351	ppb	100
84)	Butyl benzylphthalate	12.90	149	1874606	50.91178	ppb	100
85)	3,3'-Dichlorobenzidine	13.52	252	1259534	50.29090	ppb	100
86)	Benz (a) anthracene	13.55	228	4208919	52.34939	ppb	100
87)	Bis (2-ethylhexyl) phthala	13.56	149	2874442	51.58211	ppb	100
88)	Chrysene	13.59	228	3638508	49.27699	ppb	100
89)	Di-n-octylphthalate	14.30	149	4661995	52.31445	ppb	100
91)	Benzo (b) fluoranthene	14.83	252	3942453	50.63792	ppb	100
92)	Benzo (k) fluoranthene	14.87	252	3619140	51.25812	ppb	100
93)	Benzo (a) pyrene	15.28	252	3556612	52.90667	ppb	100
94)	Indeno (1,2,3-cd) pyrene	17.18	276	4098411	51.11979	ppb	100
95)	Dibenz (a,h) anthracene	17.20	278	3627606	52.44622	ppb	100
96)	Benzo (g,h,i) perylene	17.72	276	3237849	50.89419	ppb	100

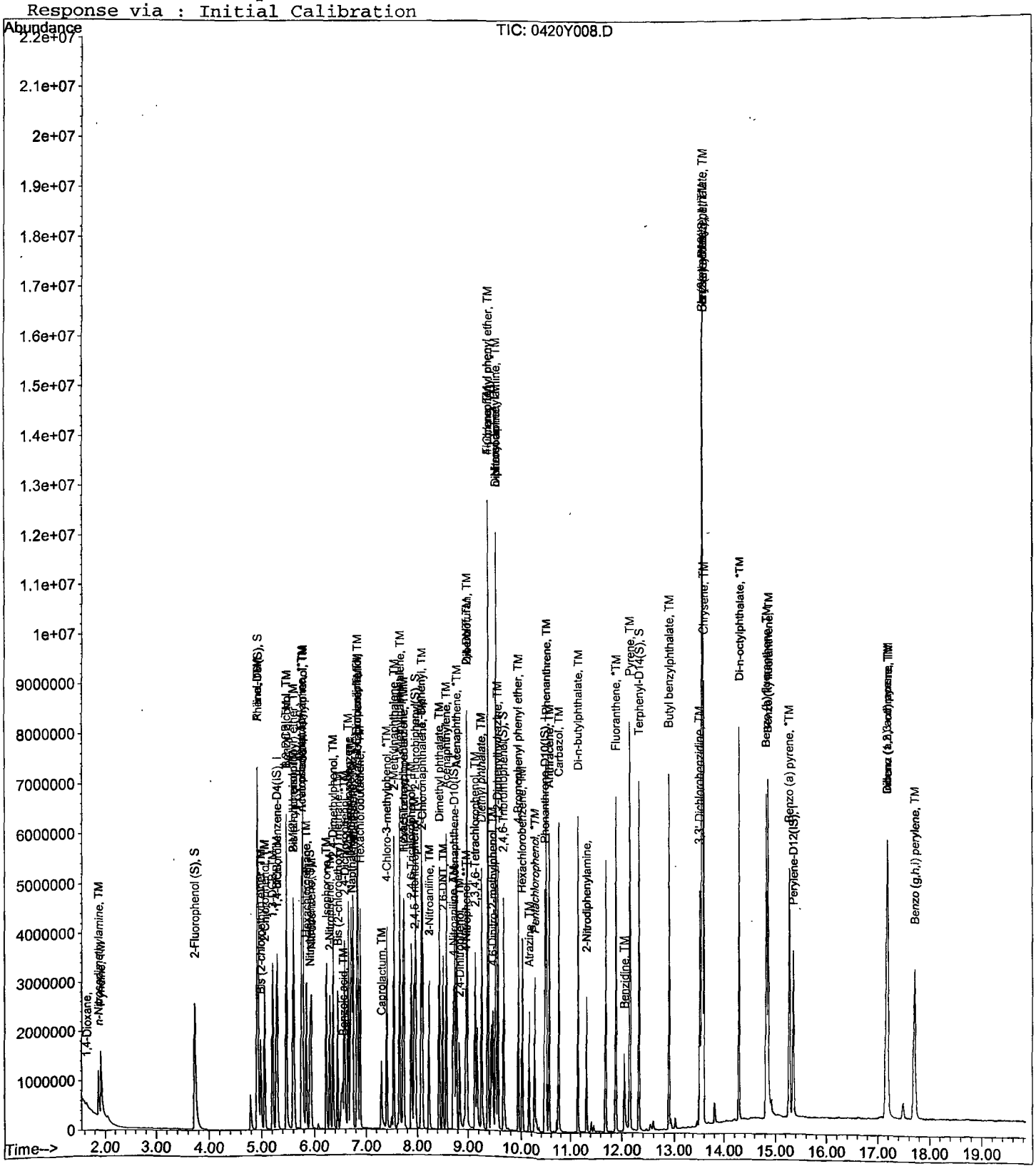
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200420\0420Y008.D Vial: 8
Acq On : 20 Apr 20 11:57 Operator: MA
Sample : 50ug/ml 8270 3/4/20 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Apr 20 14:31 2020 Quant Results File: Y0420.RES

Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Apr 20 14:37:25 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200420\0420Y009.D Vial: 9
Acq On : 20 Apr 20 12:26 Operator: MA
Sample : 60ug/ml 8270 3/4/20 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Apr 20 14:31 2020 Quant Results File: Y0420.RES

Quant Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Apr 20 14:31:21 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.28	152	436364	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.72	136	1873852	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.75	164	1215037	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.47	188	2435855	40.00000 ppb	0.00
80) Chrysene-D12(IS)	13.57	240	2704658	40.00000 ppb	0.00
90) Perylene-D12(IS)	15.36	264	2324834	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.72	112	2290754	142.80323 ppb	0.00
Spiked Amount 200.000			Recovery	= 71.402%	
6) Phenol-D6 (S)	4.92	99	3046911	143.51956 ppb	0.00
Spiked Amount 200.000			Recovery	= 71.760%	
22) Nitrobenzene-D5(S)	5.93	82	1362396	71.16508 ppb	0.00
Spiked Amount 100.000			Recovery	= 71.165%	
46) 2-Fluorobiphenyl(S)	7.96	172	2835015	65.65745 ppb	0.00
Spiked Amount 100.000			Recovery	= 65.657%	
64) 2,4,6-Tribromophenol(S)	9.68	330	834117	133.98792 ppb	0.00
Spiked Amount 200.000			Recovery	= 66.994%	
83) Terphenyl-D14(S)	12.33	244	3785280	61.45651 ppb	0.00
Spiked Amount 100.000			Recovery	= 61.457%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.65	58	30878	5.86871	91
3) n-Nitrosodimethylamine	1.87	42	487954	64.97705 ppb	99
4) Pyridine	1.91	79	1389157	70.39269 ppb	95
7) Phenol	4.93	94	1788637	64.88986 ppb	93
8) Aniline	4.92	93	1112064	70.04948 ppb	94
9) Bis (2-chloroethyl) ether	4.99	63	704999	63.57777 ppb	98
10) 2-Chlorophenol	5.06	128	1334652	64.36007 ppb	99
11) 1,3-DCB	5.21	146	1423967	63.76078 ppb	98
12) 1,4-DCB	5.30	146	1431999	62.92643 ppb	99
13) Benzyl alcohol	5.47	108	758761	66.24984 ppb	98
14) 1,2-DCB	5.47	146	1388054	64.02829 ppb	99
15) 2-Methylphenol	5.60	107	1087943	64.97317 ppb	98
16) Bis (2-chloroisopropyl) et	5.60	45	851154	63.90837 ppb	94
17) Acetophenone	5.76	105	1700883	65.12305 ppb	99
18) 3&4-Methylphenol	5.79	107	2730310	129.04091 ppb	94
19) n-Nitrosodi-n-propylamine	5.77	70	980125	65.17676 ppb	94
20) Hexachloroethane	5.85	117	546249	64.47968 ppb	99
23) Nitrobenzene	5.94	77	1417690	64.83879 ppb	98
24) Isophorone	6.23	82	2427271	66.02649 ppb	97
25) 2-Nitrophenol	6.30	139	749560	65.66615 ppb	95
26) 2,4-Dimethylphenol	6.36	122	1163119	65.22175 ppb	99
27) Benzoic acid	6.57	105	1029933	69.32948 ppb	99
28) Bis (2-chloroethoxy) metha	6.45	93	1378851	64.24506 ppb	99
29) 2,4-Dichlorophenol	6.58	162	1137617	65.10367 ppb	98
30) 1,2,4-Trichlorobenzene	6.66	180	1250463	64.38333 ppb	99
31) 3,4-Dimethylphenol	6.70	107	1673256	64.08272 ppb	100
32) Naphthalene	6.75	128	3694094	64.02496 ppb	99
33) 4-Chloroaniline	6.83	127	1499581	66.40402 ppb	99
34) 2,6-Dichlorophenol	6.83	162	1132074	65.25660 ppb	94
35) Hexachloropropene	6.84	213	968406	66.20979 ppb	99
36) Hexachlorobutadiene	6.88	225	756000	64.46534 ppb	100
37) Caprolactum	7.31	55	392980	68.36834 ppb	99

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y200420\0420Y009.D Vial: 9
Acq On : 20 Apr 20 12:26 Operator: MA
Sample : 60ug/ml 8270 3/4/20 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Apr 20 14:31 2020 Quant Results File: Y0420.RES

Quant Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Apr 20 14:31:21 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.40	107	1254539	65.62495 ppb		97
39)	2-Methylnaphthalene	7.54	142	2552843	65.76678 ppb		99
40)	1-Methylnaphthalene	7.65	142	2561184	64.44393 ppb		99
42)	Hexachlorocyclopentadiene	7.72	237	847872	60.13674 ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.74	216	1270197	60.85847 ppb		100
44)	2,4,6-Trichlorophenol	7.88	196	862309	61.72466 ppb		99
45)	2,4,5-Trichlorophenol	7.94	196	916998	62.24365 ppb		98
47)	1,1'-Biphenyl	8.08	154	3269599	60.94586 ppb		99
48)	2-Chloronaphthalene	8.11	162	2573329	60.35813 ppb		99
49)	2-Nitroaniline	8.24	65	755474	63.16353 ppb		96
50)	Dimethyl phthalate	8.44	163	3153562	61.63203 ppb		99
51)	2,6-DNT	8.52	165	723384	63.00114 ppb		91
52)	Acenaphthylene	8.58	152	3965447	61.72585 ppb		99
53)	3-Nitroaniline	8.24	138	881704	64.89869 ppb		97
54)	Acenaphthene	8.78	154	2494385	60.57819 ppb		100
55)	2,4-Dinitrophenol	8.85	184	488003	61.15213 ppb		85
56)	4-Nitrophenol	8.96	65	625328	65.84665 ppb		98
57)	Dibenzofuran	8.99	168	3709254	61.00823 ppb		93
58)	2,4-DNT	8.99	165	1053960	64.15386 ppb		93
59)	2,3,4,6-Tetrachlorophenol	9.15	232	727683	62.48201 ppb		90
60)	Diethyl phthalate	9.27	149	3030096	60.54025 ppb		98
61)	4-Chlorophenyl phenyl ethe	9.38	204	1703996	62.10165 ppb		96
62)	Fluorene	9.39	166	3158644	62.16910 ppb		99
63)	4-Nitroaniline	8.72	138	696363	63.35651 ppb		92
66)	4,6-Dinitro-2-methylphenol	9.47	198	667804	62.84973 ppb	#	83
67)	Diphenyl amine	9.53	169	4768523	119.26688 ppb		100
68)	n-Nitrosodiphenylamine	9.53	169	4768523	119.26688 ppb		100
69)	1,2-Diphenylhydrazine	9.56	77	2836579	55.54485 ppb		96
70)	4-Bromophenyl phenyl ether	9.95	248	912850	59.44099 ppb	#	83
71)	Hexachlorobenzene	10.03	284	932164	59.43469 ppb		92
72)	Atrazine	10.16	200	432801	29.37376 ppb		99
73)	Pentachlorophenol	10.27	266	605108	63.59269 ppb		97
74)	Phenanthrene	10.50	178	4320899	58.40705 ppb		99
75)	Anthracene	10.57	178	4496066	58.29745 ppb		100
76)	Carbazol	10.76	167	4135479	59.42523 ppb		99
77)	Di-n-butylphthalate	11.16	149	5393506	60.78184 ppb		98
78)	2-Nitrodiphenylamine	11.33	167	612797	32.49492 ppb		96
79)	Fluoranthene	11.89	202	5089956	59.74212 ppb		99
81)	Benzidine	12.05	184	1289227	58.35883 ppb		99
82)	Pyrene	12.15	202	5258838	56.54129 ppb		100
84)	Butyl benzylphthalate	12.91	149	2482533	57.85653 ppb		80
85)	3,3'-Dichlorobenzidine	13.52	252	1662033	56.94666 ppb		99
86)	Benz (a) anthracene	13.56	228	5410816	57.75012 ppb		99
87)	Bis (2-ethylhexyl) phthala	13.57	149	3808428	58.64628 ppb	#	94
88)	Chrysene	13.59	228	4795255	55.72905 ppb		99
89)	Di-n-octylphthalate	14.30	149	5995928	57.73715 ppb		99
91)	Benzo (b) fluoranthene	14.84	252	4883355	55.99367 ppb		99
92)	Benzo (k) fluoranthene	14.87	252	4929989	62.33250 ppb		97
93)	Benzo (a) pyrene	15.28	252	4642725	61.65357 ppb		99
94)	Indeno (1,2,3-cd) pyrene	17.18	276	5297580	58.98783 ppb		98
95)	Dibenz (a,h) anthracene	17.20	278	4729500	61.04086 ppb		97
96)	Benzo (g,h,i) perylene	17.72	276	4174992	58.58394 ppb		99

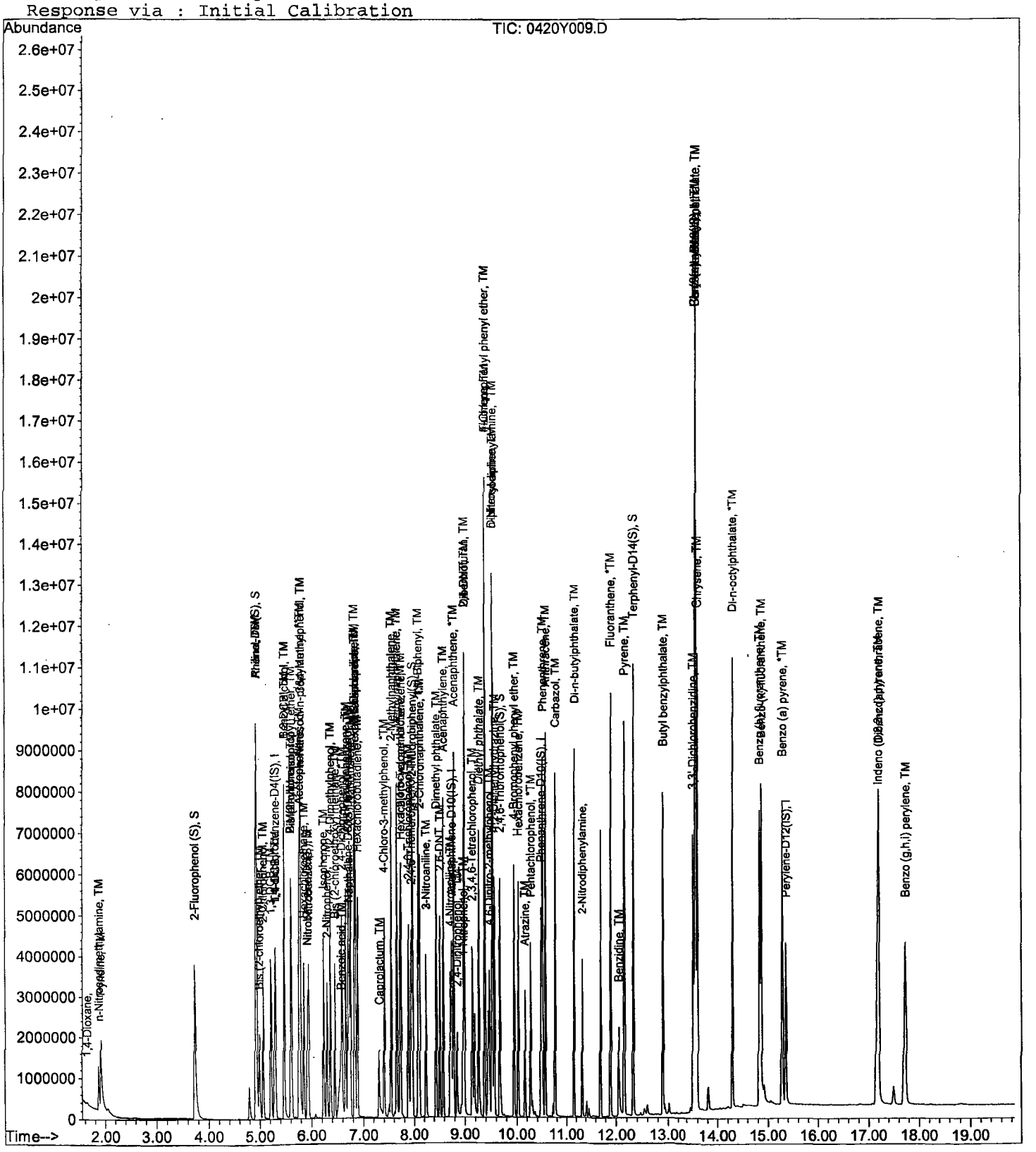
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200420\0420Y009.D Vial: 9
Acq On : 20 Apr 20 12:26 Operator: MA
Sample : 60ug/ml 8270 3/4/20 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Apr 20 14:31 2020 Quant Results File: Y0420.RES

Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Apr 20 14:37:25 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200420\0420Y010.D Vial: 10
Acq On : 20 Apr 20 12:55 Operator: MA
Sample : 80ug/ml 8270 3/4/20 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Apr 20 14:31 2020 Quant Results File: Y0420.RES

Quant Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Apr 20 14:31:21 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.29	152	452784	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.73	136	1977757	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.75	164	1230776	40.00000 ppb	0.01
65) Phenanthrene-D10(IS)	10.48	188	2370466	40.00000 ppb	0.00
80) Chrysene-D12(IS)	13.57	240	2794538	40.00000 ppb	0.00
90) Perylene-D12(IS)	15.36	264	2317807	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.73	112	3008842	180.76603 ppb	0.00
Spiked Amount 200.000			Recovery =	90.383%	
6) Phenol-D6 (S)	4.92	99	4027615	182.83406 ppb	0.00
Spiked Amount 200.000			Recovery =	91.417%	
22) Nitrobenzene-D5(S)	5.93	82	1781724	88.17924 ppb	0.01
Spiked Amount 100.000			Recovery =	88.179%	
46) 2-Fluorobiphenyl(S)	7.97	172	3762552	86.02440 ppb	0.01
Spiked Amount 100.000			Recovery =	86.024%	
64) 2,4,6-Tribromophenol(S)	9.68	330	1174080	186.18592 ppb	0.00
Spiked Amount 200.000			Recovery =	93.093%	
83) Terphenyl-D14(S)	12.33	244	5066753	79.61629 ppb	0.00
Spiked Amount 100.000			Recovery =	79.616%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.64	58	43148	7.90336	65
3) n-Nitrosodimethylamine	1.86	42	709089	90.99964 ppb	85
4) Pyridine	1.91	79	1686334	82.35267 ppb	99
7) Phenol	4.94	94	2506107	87.62178 ppb	84
8) Aniline	4.92	93	1365504	82.89454 ppb	92
9) Bis (2-chloroethyl) ether	4.99	63	975240	84.75906 ppb	100
10) 2-Chlorophenol	5.06	128	1843861	85.69086 ppb	99
11) 1,3-DCB	5.21	146	1960017	84.58072 ppb	97
12) 1,4-DCB	5.30	146	1980642	83.87919 ppb	100
13) Benzyl alcohol	5.47	108	1076387	90.57454 ppb	99
14) 1,2-DCB	5.47	146	1933356	85.94789 ppb	100
15) 2-Methylphenol	5.61	107	1517234	87.32494 ppb	94
16) Bis (2-chloroisopropyl) et	5.60	45	1177311	85.19197 ppb	93
17) Acetophenone	5.76	105	2347582	86.62413 ppb	97
18) 3&4-Methylphenol	5.79	107	3893930	177.36235 ppb	95
19) n-Nitrosodi-n-propylamine	5.77	70	1363675	87.39367 ppb	96
20) Hexachloroethane	5.85	117	747477	85.03308 ppb	98
23) Nitrobenzene	5.95	77	1968426	85.29726 ppb	96
24) Isophorone	6.23	82	3347838	86.28330 ppb	95
25) 2-Nitrophenol	6.30	139	1058730	87.87851 ppb	96
26) 2,4-Dimethylphenol	6.37	122	1611248	85.60380 ppb	96
27) Benzoic acid	6.59	105	1364255	87.00954 ppb	97
28) Bis (2-chloroethoxy) metha	6.46	93	1905828	84.13341 ppb	99
29) 2,4-Dichlorophenol	6.59	162	1606545	87.10932 ppb	98
30) 1,2,4-Trichlorobenzene	6.66	180	1742176	84.98787 ppb	100
31) 3,4-Dimethylphenol	6.71	107	2314909	83.99914 ppb	100
32) Naphthalene	6.75	128	5178136	85.03098 ppb	99
33) 4-Chloroaniline	6.83	127	1999533	83.89100 ppb	98
34) 2,6-Dichlorophenol	6.84	162	1621140	88.53857 ppb	95
35) Hexachloropropene	6.85	213	1363366	88.31603 ppb	99
36) Hexachlorobutadiene	6.88	225	1051175	84.92623 ppb	99
37) Caprolactum	7.32	55	531480	87.60601 ppb	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200420\0420Y010.D Vial: 10
Acq On : 20 Apr 20 12:55 Operator: MA
Sample : 80ug/ml 8270 3/4/20 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Apr 20 14:31 2020 Quant Results File: Y0420.RES

Quant Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Apr 20 14:31:21 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.41	107	1751478	86.80642	ppb		92
39)	2-Methylnaphthalene	7.54	142	3536264	86.31565	ppb		100
40)	1-Methylnaphthalene	7.65	142	3601084	85.84932	ppb		99
42)	Hexachlorocyclopentadiene	7.72	237	1191936	81.69261	ppb		98
43)	1,2,4,5-Tetrachlorobenzene	7.74	216	1793743	84.84390	ppb		99
44)	2,4,6-Trichlorophenol	7.89	196	1225719	86.61581	ppb		100
45)	2,4,5-Trichlorophenol	7.94	196	1292942	86.63956	ppb		98
47)	1,1'-Biphenyl	8.08	154	4564938	84.00306	ppb		99
48)	2-Chloronaphthalene	8.11	162	3624398	83.92412	ppb		99
49)	2-Nitroaniline	8.24	65	1040554	85.88593	ppb		94
50)	Dimethyl phthalate	8.44	163	4351564	83.95778	ppb		100
51)	2,6-DNT	8.52	165	1013664	87.15334	ppb		87
52)	Acenaphthylene	8.58	152	5498405	84.49327	ppb		99
53)	3-Nitroaniline	8.24	138	1222808	88.85501	ppb		96
54)	Acenaphthene	8.79	154	3541529	84.90907	ppb		99
55)	2,4-Dinitrophenol	8.85	184	689451	83.74861	ppb		87
56)	4-Nitrophenol	8.96	65	870397	90.48023	ppb		99
57)	Dibenzofuran	8.99	168	5268974	85.55362	ppb		92
58)	2,4-DNT	8.99	165	1460028	87.73449	ppb		84
59)	2,3,4,6-Tetrachlorophenol	9.15	232	1029581	87.27378	ppb	#	89
60)	Diethyl phthalate	9.27	149	4192098	82.68558	ppb		98
61)	4-Chlorophenyl phenyl ethe	9.38	204	2407029	86.60169	ppb		98
62)	Fluorene	9.39	166	4514876	87.72639	ppb		100
63)	4-Nitroaniline	8.72	138	940606	84.48387	ppb		89
66)	4,6-Dinitro-2-methylphenol	9.48	198	950855	91.95735	ppb		96
67)	Diphenyl amine	9.54	169	6709428	172.44045	ppb		99
68)	n-Nitrosodiphenylamine	9.54	169	6709428	172.44045	ppb		99
69)	1,2-Diphenylhydrazine	9.57	77	4693590	94.44344	ppb		97
70)	4-Bromophenyl phenyl ether	9.96	248	1300852	87.04267	ppb	#	84
71)	Hexachlorobenzene	10.03	284	1300583	85.21253	ppb		91
72)	Atrazine	10.16	200	622536	43.41636	ppb		97
73)	Pentachlorophenol	10.27	266	874821	94.47376	ppb		97
74)	Phenanthrene	10.50	178	5991749	83.22666	ppb		100
75)	Anthracene	10.57	178	6392996	85.18026	ppb		100
76)	Carbazol	10.76	167	5681395	83.89146	ppb		99
77)	Di-n-butylphthalate	11.16	149	7477407	86.59073	ppb		98
78)	2-Nitrodiphenylamine	11.33	167	854111	46.54047	ppb		97
79)	Fluoranthene	11.90	202	7008686	84.53196	ppb		98
81)	Benzidine	12.05	184	1664108	72.90562	ppb		100
82)	Pyrene	12.16	202	7321650	76.18811	ppb		99
84)	Butyl benzylphthalate	12.90	149	3468723	78.24009	ppb		99
85)	3,3'-Dichlorobenzidine	13.52	252	2231267	73.99161	ppb		99
86)	Benz (a) anthracene	13.56	228	7580340	78.30350	ppb		99
87)	Bis (2-ethylhexyl) phthala	13.57	149	5319516	79.28100	ppb	#	92
88)	Chrysene	13.60	228	6774081	76.19433	ppb		99
89)	Di-n-octylphthalate	14.30	149	8137690	75.84072	ppb		98
91)	Benzo (b) fluoranthene	14.84	252	7622010	87.66069	ppb		99
92)	Benzo (k) fluoranthene	14.88	252	6024028	76.39594	ppb		99
93)	Benzo (a) pyrene	15.28	252	6377422	84.94642	ppb		98
94)	Indeno (1,2,3-cd) pyrene	17.19	276	7312568	81.67131	ppb		99
95)	Dibenz (a,h) anthracene	17.22	278	6566929	85.01243	ppb		97
96)	Benzo (g,h,i) perylene	17.74	276	5724960	80.57681	ppb		98

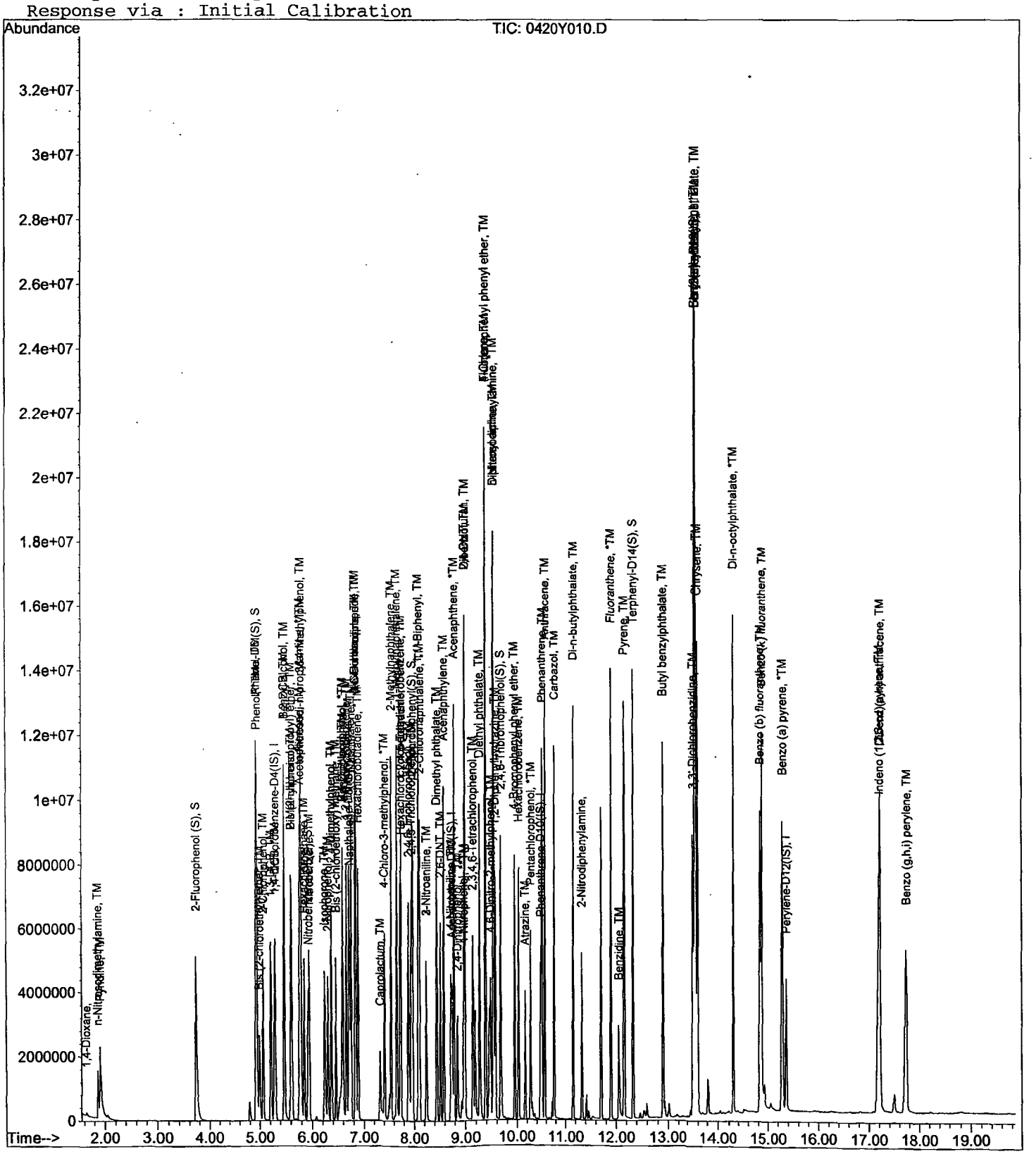
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200420\0420Y010.D Vial: 10
Acq On : 20 Apr 20 12:55 Operator: MA
Sample : 80ug/ml 8270 3/4/20 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Apr 20 14:31 2020 Quant Results File: Y0420.RES

Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Apr 20 14:37:25 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200420\0420Y011.D Vial: 11
Acq On : 20 Apr 20 13:24 Operator: MA
Sample : 100ug/ml 8270 3/4/20 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Apr 20 14:31 2020 Quant Results File: Y0420.RES

Quant Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Apr 20 14:31:21 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.28	152	467031	40.00000	ppb		0.00
21) Napthalene-D8(IS)	6.72	136	2117800	40.00000	ppb		0.00
41) Acenaphthene-D10(IS)	8.75	164	1252418	40.00000	ppb		0.00
65) Phenanthrene-D10(IS)	10.47	188	2386542	40.00000	ppb		0.00
80) Chrysene-D12(IS)	13.57	240	2768036	40.00000	ppb		0.00
90) Perylene-D12(IS)	15.36	264	2214064	40.00000	ppb		0.00
System Monitoring Compounds							
5) 2-Fluorophenol (S)	3.73	112	3667481	213.61447	ppb		0.00
Spiked Amount 200.000			Recovery	= 106.807%			
6) Phenol-D6 (S)	4.93	99	4985381	219.40821	ppb		0.00
Spiked Amount 200.000			Recovery	= 109.704%			
22) Nitrobenzene-D5(S)	5.92	82	2160063	99.83442	ppb		0.00
Spiked Amount 100.000			Recovery	= 99.834%			
46) 2-Fluorobiphenyl(S)	7.97	172	4617050	103.73694	ppb		0.00
Spiked Amount 100.000			Recovery	= 103.737%			
64) 2,4,6-Tribromophenol(S)	9.68	330	1455823	226.87542	ppb		0.00
Spiked Amount 200.000			Recovery	= 113.438%			
83) Terphenyl-D14(S)	12.33	244	6159158	97.70839	ppb		0.00
Spiked Amount 100.000			Recovery	= 97.708%			
Target Compounds							Qvalue
2) 1,4-Dioxane	1.64	58	51428	9.13263			77
3) n-Nitrosodimethylamine	1.87	42	847956	105.50125	ppb		98
4) Pyridine	1.91	79	2038407	96.50956	ppb		100
7) Phenol	4.94	94	2989652	101.33943	ppb		93
8) Aniline	4.92	93	1541120	90.70157	ppb		88
9) Bis (2-chloroethyl) ether	5.00	63	1156820	97.47333	ppb		96
10) 2-Chlorophenol	5.06	128	2201912	99.20914	ppb		97
11) 1,3-DCB	5.22	146	2367137	99.03309	ppb		97
12) 1,4-DCB	5.30	146	2406688	98.81285	ppb		98
13) Benzyl alcohol	5.48	108	1288433	105.11021	ppb		98
14) 1,2-DCB	5.47	146	2357182	101.59255	ppb		99
15) 2-Methylphenol	5.61	107	1823863	101.77083	ppb		95
16) Bis (2-chloroisopropyl) et	5.60	45	1418682	99.52630	ppb	#	73
17) Acetophenone	5.77	105	2826815	101.12554	ppb		98
18) 3&4-Methylphenol	5.79	107	4704377	207.74031	ppb		93
19) n-Nitrosodi-n-propylamine	5.78	70	1630899	101.33082	ppb		95
20) Hexachloroethane	5.85	117	898747	99.12265	ppb		97
23) Nitrobenzene	5.95	77	2342307	94.78678	ppb		98
24) Isophorone	6.24	82	3998243	96.23199	ppb		97
25) 2-Nitrophenol	6.31	139	1272264	98.61948	ppb		93
26) 2,4-Dimethylphenol	6.37	122	1948607	96.68139	ppb		97
27) Benzoic acid	6.59	105	1629448	97.05095	ppb		98
28) Bis (2-chloroethoxy) metha	6.45	93	2275587	93.81369	ppb		98
29) 2,4-Dichlorophenol	6.59	162	1919439	97.19279	ppb		98
30) 1,2,4-Trichlorobenzene	6.66	180	2094526	95.41984	ppb		99
31) 3,4-Dimethylphenol	6.71	107	2781939	94.27065	ppb		97
32) Naphthalene	6.75	128	6170977	94.63366	ppb		99
33) 4-Chloroaniline	6.83	127	2239400	87.74179	ppb		96
34) 2,6-Dichlorophenol	6.83	162	1950680	99.49150	ppb		97
35) Hexachloropropene	6.84	213	1666221	100.79701	ppb		99
36) Hexachlorobutadiene	6.89	225	1280857	96.63967	ppb		98
37) Caprolactum	7.33	55	603224	92.85677	ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200420\0420Y011.D Vial: 11
Acq On : 20 Apr 20 13:24 Operator: MA
Sample : 100ug/ml 8270 3/4/20 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Apr 20 14:31 2020 Quant Results File: Y0420.RES

Quant Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Apr 20 14:31:21 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.41	107	2070139	95.81526	ppb		98
39)	2-Methylnaphthalene	7.54	142	4236980	96.58045	ppb		100
40)	1-Methylnaphthalene	7.66	142	4340964	96.64464	ppb		99
42)	Hexachlorocyclopentadiene	7.72	237	1172480	79.12228	ppb		98
43)	1,2,4,5-Tetrachlorobenzene	7.74	216	2142767	99.60132	ppb		98
44)	2,4,6-Trichlorophenol	7.88	196	1453027	100.90430	ppb		99
45)	2,4,5-Trichlorophenol	7.94	196	1528443	100.65055	ppb	#	91
47)	1,1'-Biphenyl	8.09	154	5533265	100.06251	ppb		99
48)	2-Chloronaphthalene	8.11	162	4317529	98.24623	ppb		97
49)	2-Nitroaniline	8.25	65	1245049	100.98888	ppb		96
50)	Dimethyl phthalate	8.45	163	5160425	97.84322	ppb		100
51)	2,6-DNT	8.52	165	1199699	101.36594	ppb		99
52)	Acenaphthylene	8.59	152	6578257	99.34041	ppb		99
53)	3-Nitroaniline	8.25	138	1436226	102.55956	ppb		99
54)	Acenaphthene	8.78	154	4167355	98.18689	ppb		99
55)	2,4-Dinitrophenol	8.85	184	821014	97.34121	ppb		96
56)	4-Nitrophenol	8.96	65	1049316	107.19446	ppb		91
57)	Dibenzofuran	8.99	168	6207595	99.05249	ppb		97
58)	2,4-DNT	9.00	165	1740398	102.77499	ppb		95
59)	2,3,4,6-Tetrachlorophenol	9.15	232	1212086	100.96862	ppb		95
60)	Diethyl phthalate	9.28	149	5044263	97.77454	ppb		96
61)	4-Chlorophenyl phenyl ethe	9.39	204	2957398	104.56456	ppb		92
62)	Fluorene	9.39	166	5360800	102.36317	ppb		100
63)	4-Nitroaniline	8.73	138	1088440	96.07276	ppb		98
66)	4,6-Dinitro-2-methylphenol	9.49	198	1142448	109.74209	ppb		97
67)	Diphenyl amine	9.54	169	7867178	200.83402	ppb		98
68)	n-Nitrosodiphenylamine	9.54	169	7867178	200.83402	ppb		98
69)	1,2-Diphenylhydrazine	9.57	77	5488668	109.69788	ppb		97
70)	4-Bromophenyl phenyl ether	9.95	248	1541887	102.47585	ppb		93
71)	Hexachlorobenzene	10.03	284	1565936	101.90701	ppb	#	80
72)	Atrazine	10.17	200	714815	49.51620	ppb		99
73)	Pentachlorophenol	10.27	266	1035226	111.04317	ppb		97
74)	Phenanthrene	10.51	178	7157932	98.75545	ppb		99
75)	Anthracene	10.57	178	7520586	99.52928	ppb		99
76)	Carbazol	10.77	167	6807094	99.83646	ppb		99
77)	Di-n-butylphthalate	11.16	149	8490383	97.65901	ppb		99
78)	2-Nitrodiphenylamine	11.33	167	1012711	54.81087	ppb		92
79)	Fluoranthene	11.89	202	8286368	99.26890	ppb	#	97
81)	Benzidine	12.05	184	1895787	83.85083	ppb		99
82)	Pyrene	12.16	202	8567473	90.00555	ppb		99
84)	Butyl benzylphthalate	12.91	149	4184742	95.29425	ppb		87
85)	3,3'-Dichlorobenzidine	13.53	252	2576658	86.26329	ppb		99
86)	Benz (a) anthracene	13.56	228	8907876	92.89770	ppb		99
87)	Bis (2-ethylhexyl) phthala	13.57	149	6183758	93.04388	ppb	#	94
88)	Chrysene	13.60	228	8015189	91.01738	ppb		98
89)	Di-n-octylphthalate	14.30	149	9821626	92.41085	ppb	#	95
91)	Benzo (b) fluoranthene	14.84	252	8398942	101.12232	ppb		100
92)	Benzo (k) fluoranthene	14.87	252	7798903	103.53899	ppb		99
93)	Benzo (a) pyrene	15.29	252	7514718	104.78515	ppb		99
94)	Indeno (1,2,3-cd) pyrene	17.20	276	8546059	99.92004	ppb		96
95)	Dibenz (a,h) anthracene	17.22	278	7708096	104.46104	ppb		98
96)	Benzo (g,h,i) perylene	17.74	276	6677747	98.39084	ppb		100

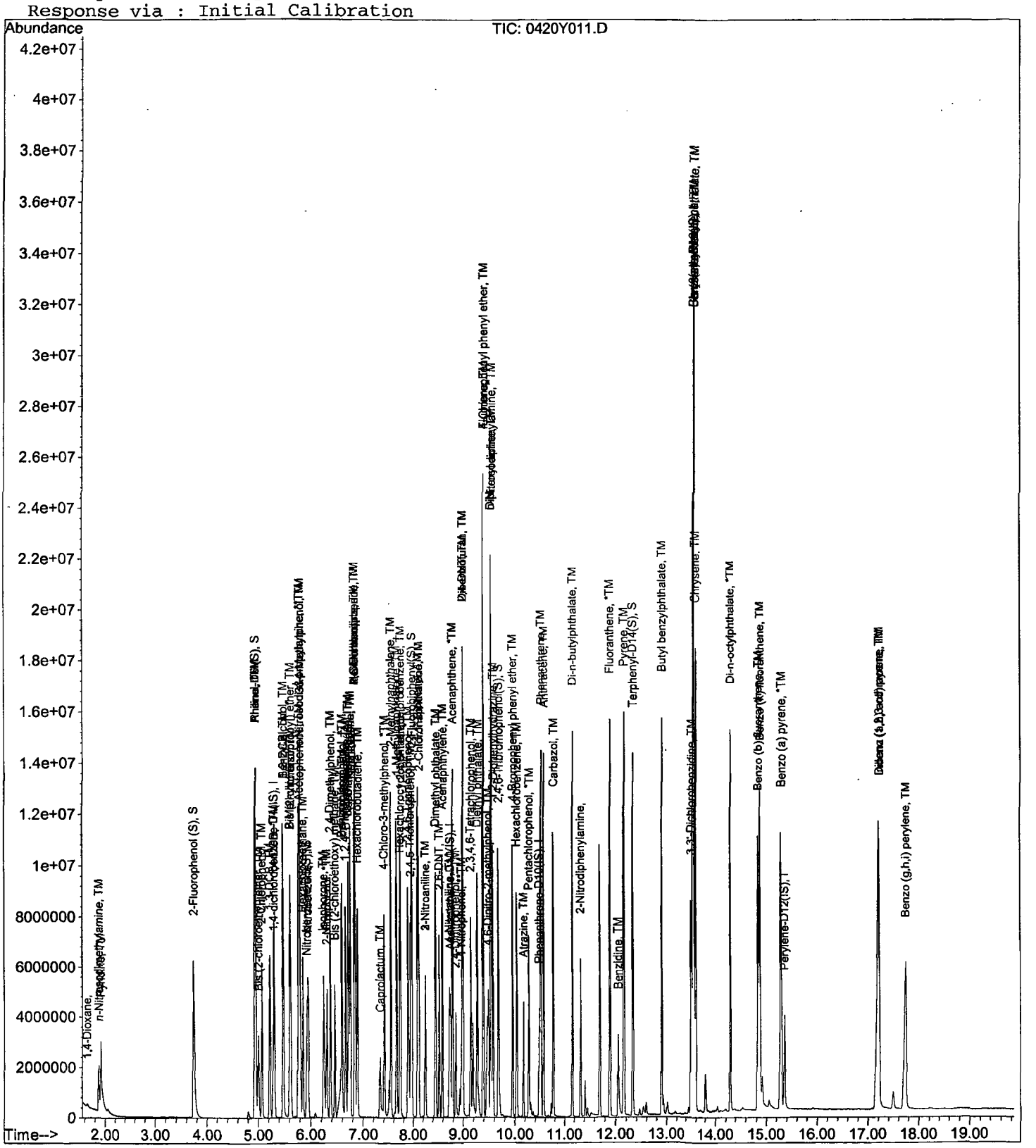
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200420\0420Y011.D Vial: 11
Acq On : 20 Apr 20 13:24 Operator: MA
Sample : 100ug/ml 8270 3/4/20 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Apr 20 14:31 2020 Quant Results File: Y0420.RES

Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Mon Apr 20 14:37:25 2020
Response via : Initial Calibration



Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 04/20/20
Instrument: Yoda
Initial Cal. Date: 04/20/20
Data File: 0420Y012.D

		Compound	MEAN	CCRF	%D		%Drift
1		1,4-Dioxane	0.4830	0.4696	2.8		
2	TM	n-Nitrosodimethylamine	0.6884	0.7485	8.7	TM	
3	TM	Pyridine	1.809	1.792	0.95	TM	
4	*TM	Phenol	2.527	2.512	0.58	*TM	
5	TM	Aniline	1.455	1.444	0.78	TM	
6	TM	Bis (2-chloroethyl) ether	1.016	0.9778	3.8	TM	
7	TM	2-Chlorophenol	1.901	1.841	3.2	TM	
8	TM	1,3-DCB	2.047	1.947	4.9	TM	
9	*TM	1,4-DCB	2.086	1.992	4.5	*TM	
10	TM	Benzyl alcohol	1.050	1.097	4.5	TM	
11	TM	1,2-DCB	1.987	1.914	3.7	TM	
12	TM	2-Methylphenol	1.535	1.518	1.1	TM	
13	TM	Bis (2-chloroisopropyl) ether	1.221	1.198	1.9	TM	
14	TM	Acetophenone	2.394	2.399	0.19	TM	
15	TM	3&4-Methylphenol	1.940	1.889	2.6	TM	
16	**TM	n-Nitrosodi-n-propylamine	1.378	1.356	1.7	**TM	
17	TM	Hexachloroethane	0.7766	0.7531	3.0	TM	
18	TM	Nitrobenzene	0.4667	0.4529	3.0	TM	
19	TM	Isophorone	0.7847	0.7601	3.1	TM	
20	*TM	2-Nitrophenol	0.2437	0.2398	1.6	*TM	
21	TM	2,4-Dimethylphenol	0.3807	0.3700	2.8	TM	
22	TM	Benzoic acid	0.3171	0.3339	5.3	TM	
23	TM	Bis (2-chloroethoxy) methane	0.4581	0.4444	3.0	TM	
24	*TM	2,4-Dichlorophenol	0.3730	0.3595	3.6	*TM	
25	TM	1,2,4-Trichlorobenzene	0.4146	0.3917	5.5	TM	
26	TM	3,4-Dimethylphenol	0.5574	0.5419	2.8	TM	
27	TM	Naphthalene	1.232	1.208	1.9	TM	
28	TM	4-Chloroaniline	0.4821	0.4736	1.7	TM	
29	TM	2,6-Dichlorophenol	0.3703	0.3565	3.7	TM	
30	TM	Hexachloropropene	0.3122	0.3024	3.1	TM	
31	*TM	Hexachlorobutadiene	0.2503	0.2390	4.5	*TM	
32	TM	Caprolactum	0.1227	0.1245	1.5	TM	
33	*TM	4-Chloro-3-methylphenol	0.4081	0.3945	3.3	*TM	
34	TM	2-Methylnaphthalene	0.8286	0.8297	0.14	TM	
35	TM	1-Methylnaphthalene	0.8484	0.8187	3.5	TM	
36	**TML	Hexachlorocyclopentadiene	0.3911	0.4295	9.8	**TML	5.4
37	TM	1,2,4,5-Tetrachlorobenzene	0.6871	0.6662	3.0	TM	
38	*TM	2,4,6-Trichlorophenol	0.4599	0.4556	0.94	*TM	
39	TM	2,4,5-Trichlorophenol	0.4850	0.4809	0.84	TM	
40	TM	1,1'-Biphenyl	1.766	1.710	3.2	TM	
		Average			3.0		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 04/20/20
Matrix: 0 Instrument: Yoda
Cal. Date: 04/20/20
Data File: 0420Y012.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	2-Chloronaphthalene	1.404	1.339	4.6	TM	
42	TM	2-Nitroaniline	0.3938	0.4185	6.3	TM	
43	TM	Dimethyl phthalate	1.684	1.634	3.0	TM	
44	TM	2,6-DNT	0.3780	0.3798	0.47	TM	
45	TM	Acenaphthylene	2.115	2.097	0.84	TM	
46	TM	3-Nitroaniline	0.4473	0.4783	6.9	TM	
47	*TM	Acenaphthene	1.356	1.335	1.5	*TM	
48	**TML	2,4-Dinitrophenol	0.2262	0.2483	9.8	**TML	3.7
49	**TM	4-Nitrophenol	0.3126	0.3281	4.9	**TM	
50	TM	Dibenzofuran	2.002	2.050	2.4	TM	
51	TM	2,4-DNT	0.5408	0.5427	0.34	TM	
52	TM	2,3,4,6-Tetrachlorophenol	0.3834	0.3804	0.77	TM	
53	TM	Diethyl phthalate	1.648	1.593	3.3	TM	
54	TM	4-Chlorophenyl phenyl ether	0.9033	0.8837	2.2	TM	
55	TM	Fluorene	1.673	1.648	1.5	TM	
56	TM	4-Nitroaniline	0.3618	0.3808	5.2	TM	
57	TM	4,6-Dinitro-2-methylphenol	0.1843	0.1866	1.2	TM	
58	TM	Diphenyl amine	0.6566	0.6862	4.5	TM	
59	*TM	n-Nitrosodiphenylamine	0.6566	0.6862	4.5	*TM	
60	TM	1,2-Diphenylhydrazine	0.8386	0.7749	7.6	TM	
61	TM	4-Bromophenyl phenyl ether	0.2522	0.2470	2.0	TM	
62	TM	Hexachlorobenzene	0.2576	0.2593	0.68	TM	
63	TM	Atrazine	0.2420	0.2350	2.9	TM	
64	*TM	Pentachlorophenol	0.1563	0.1539	1.5	*TM	
65	TM	Phenanthrene	1.215	1.207	0.65	TM	
66	TM	Anthracene	1.266	1.260	0.51	TM	
67	TM	Carbazol	1.143	1.141	0.16	TM	
68	TM	Di-n-butylphthalate	1.457	1.462	0.30	TM	
69		2-Nitrodiphenylamine	0.3302	0.3242	1.8		
70	*TM	Fluoranthene	1.399	1.406	0.48	*TM	
71	TM	Benzidine	0.3267	0.3067	6.1	TM	
72	TM	Pyrene	1.376	1.349	1.9	TM	
73	TM	Butyl benzylphthalate	0.6346	0.6170	2.8	TM	
74	TM	3,3'-Dichlorobenzidine	0.4401	0.4376	0.56	TM	
75	TM	Benz (a) anthracene	1.386	1.384	0.13	TM	
76	TM	Bis (2-ethylhexyl) phthalate	0.9604	0.9242	3.8	TM	
77	TM	Chrysene	1.273	1.199	5.8	TM	
78	*TM	Di-n-octylphthalate	1.536	1.521	0.99	*TM	
79	TM	Benzo (b) fluoranthene	1.501	1.489	0.77	TM	
80	TM	Benzo (k) fluoranthene	1.361	1.345	1.1	TM	
		Average			2.7		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 04/20/20
Instrument: Yoda
Cal. Date: 04/20/20
Data File: 0420Y012.D

		Compound	MEAN	CCRF	%D		%Drift
81	*TM	Benzo (a) pyrene	1.296	1.329	2.6	*TM	
82	TM	Indeno (1,2,3-cd) pyrene	1.545	1.454	5.9	TM	
83	TM	Dibenz (a,h) anthracene	1.333	1.347	1.1	TM	
84	TM	Benzo (g,h,i) perylene	1.226	1.268	3.5	TM	
85							
86							
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117							
118							
119							
120							
		Average			3.3		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200420\0420Y012.D Vial: 12
Acq On : 20 Apr 20 13:53 Operator: MA
Sample : SS 8270 3/4/20 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Apr 21 10:39 2020 Quant Results File: Y0420.RES

Quant Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Apr 21 09:58:57 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.28	152	460635	40.00000 ppb		0.00
21) Napthalene-D8(IS)	6.72	136	2017163	40.00000 ppb		0.00
41) Acenaphthene-D10(IS)	8.74	164	1209528	40.00000 ppb		0.00
65) Phenanthrene-D10(IS)	10.47	188	2303576	40.00000 ppb		0.00
80) Chrysene-D12(IS)	13.57	240	2505055	40.00000 ppb		0.00
90) Perylene-D12(IS)	15.36	264	2209029	40.00000 ppb		0.00
System Monitoring Compounds						
5) 2-Fluorophenol (S)	3.72	112	3807650	224.85813 ppb		0.00
Spiked Amount 200.000			Recovery	= 112.429%		
6) Phenol-D6 (S)	4.92	99	5026037	224.26886 ppb		0.00
Spiked Amount 200.000			Recovery	= 112.135%		
22) Nitrobenzene-D5(S)	5.92	82	2241284	108.75638 ppb		0.00
Spiked Amount 100.000			Recovery	= 108.756%		
46) 2-Fluorobiphenyl(S)	7.97	172	4771488	111.00845 ppb		0.00
Spiked Amount 100.000			Recovery	= 111.008%		
64) 2,4,6-Tribromophenol(S)	9.68	330	1494454	241.15418 ppb		0.00
Spiked Amount 200.000			Recovery	= 120.577%		
83) Terphenyl-D14(S)	12.33	244	6329316	110.94858 ppb		0.00
Spiked Amount 100.000			Recovery	= 110.949%		
Target Compounds						Qvalue
2) 1,4-Dioxane	1.64	58	27041	4.86154		94
3) n-Nitrosodimethylamine	1.87	42	430996	54.36837 ppb		100
4) Pyridine	1.91	79	1031727	49.52597 ppb		100
7) Phenol	4.93	94	1446483	49.71185 ppb		92
8) Aniline	4.92	93	831424	49.61233 ppb	#	88
9) Bis (2-chloroethyl) ether	4.99	63	562987	48.09580 ppb		98
10) 2-Chlorophenol	5.06	128	1059962	48.42067 ppb		99
11) 1,3-DCB	5.21	146	1120940	47.54754 ppb		99
12) 1,4-DCB	5.30	146	1146747	47.73644 ppb		99
13) Benzyl alcohol	5.47	108	631662	52.24643 ppb		98
14) 1,2-DCB	5.47	146	1101886	48.14977 ppb		100
15) 2-Methylphenol	5.60	107	873986	49.44522 ppb		99
16) Bis (2-chloroisopropyl) et	5.60	45	689531	49.04507 ppb		99
17) Acetophenone	5.76	105	1381133	50.09424 ppb		100
18) 3&4-Methylphenol	5.78	107	2175292	97.39239 ppb		100
19) n-Nitrosodi-n-propylamine	5.77	70	780569	49.17162 ppb		93
20) Hexachloroethane	5.85	117	433627	48.48870 ppb		100
23) Nitrobenzene	5.94	77	1141858	48.51321 ppb		100
24) Isophorone	6.22	82	1916528	48.42944 ppb		95
25) 2-Nitrophenol	6.30	139	604602	49.20384 ppb		99
26) 2,4-Dimethylphenol	6.36	122	933031	48.60250 ppb		98
27) Benzoic acid	6.56	105	841898	52.64568 ppb		98
28) Bis (2-chloroethoxy) metha	6.45	93	1120421	48.49511 ppb		100
29) 2,4-Dichlorophenol	6.58	162	906505	48.19188 ppb		99
30) 1,2,4-Trichlorobenzene	6.66	180	987748	47.24361 ppb		99
31) 3,4-Dimethylphenol	6.70	107	1366327	48.61021 ppb		99
32) Naphthalene	6.75	128	3046750	49.05378 ppb		100
33) 4-Chloroaniline	6.83	127	1194266	49.12695 ppb		99
34) 2,6-Dichlorophenol	6.83	162	898883	48.13346 ppb		99
35) Hexachloropropene	6.84	213	762467	48.42616 ppb		100
36) Hexachlorobutadiene	6.88	225	602576	47.73210 ppb		99
37) Caprolactum	7.29	55	313945	50.73790 ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200420\0420Y012.D Vial: 12
Acq On : 20 Apr 20 13:53 Operator: MA
Sample : SS 8270 3/4/20 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Apr 21 10:39 2020 Quant Results File: Y0420.RES

Quant Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Apr 21 09:58:57 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.40	107	994721	48.33708 ppb		99
39)	2-Methylnaphthalene	7.54	142	2092125	50.06848 ppb		99
40)	1-Methylnaphthalene	7.65	142	2064257	48.25022 ppb		99
42)	Hexachlorocyclopentadiene	7.72	237	649408	47.32035 ppb		98
43)	1,2,4,5-Tetrachlorobenzene	7.74	216	1007203	48.47753 ppb		99
44)	2,4,6-Trichlorophenol	7.88	196	688836	49.53192 ppb		99
45)	2,4,5-Trichlorophenol	7.94	196	727143	49.58155 ppb		96
47)	1,1'-Biphenyl	8.08	154	2585858	48.42036 ppb		99
48)	2-Chloronaphthalene	8.11	162	2023815	47.68533 ppb		99
49)	2-Nitroaniline	8.24	65	632800	53.14800 ppb		100
50)	Dimethyl phthalate	8.44	163	2470849	48.50928 ppb		100
51)	2,6-DNT	8.51	165	574192	50.23544 ppb		97
52)	Acenaphthylene	8.58	152	3170565	49.57756 ppb		99
53)	3-Nitroaniline	8.24	138	723169	53.47201 ppb		99
54)	Acenaphthene	8.78	154	2019070	49.25811 ppb		99
55)	2,4-Dinitrophenol	8.84	184	375458	48.15072 ppb		99
56)	4-Nitrophenol	8.95	65	496069	52.47368 ppb		89
57)	Dibenzofuran	8.98	168	3099167	51.20595 ppb		99
58)	2,4-DNT	8.99	165	820469	50.16888 ppb		99
59)	2,3,4,6-Tetrachlorophenol	9.14	232	575204	49.61446 ppb		100
60)	Diethyl phthalate	9.27	149	2407964	48.32940 ppb		96
61)	4-Chlorophenyl phenyl ethe	9.38	204	1336146	48.91725 ppb		99
62)	Fluorene	9.38	166	2491835	49.26821 ppb		99
63)	4-Nitroaniline	8.72	138	575778	52.62405 ppb		99
66)	4,6-Dinitro-2-methylphenol	9.47	198	537205	50.61641 ppb		92
67)	Diphenyl amine	9.53	169	3951790	104.51502 ppb		100
68)	n-Nitrosodiphenylamine	9.53	169	3951790	104.51502 ppb		100
69)	1,2-Diphenylhydrazine	9.56	77	2231212	46.19965 ppb		100
70)	4-Bromophenyl phenyl ether	9.94	248	711342	48.97946 ppb		94
71)	Hexachlorobenzene	10.03	284	746662	50.34086 ppb		97
72)	Atrazine	10.16	200	338327	24.28045 ppb		99
73)	Pentachlorophenol	10.27	266	443187	49.25045 ppb		99
74)	Phenanthrene	10.50	178	3475244	49.67356 ppb		100
75)	Anthracene	10.57	178	3628033	49.74357 ppb		100
76)	Carbazol	10.76	167	3285414	49.92109 ppb		100
77)	Di-n-butylphthalate	11.16	149	4208371	50.14938 ppb		98
78)	2-Nitrodiphenylamine	11.33	167	466724	24.54738 ppb		99
79)	Fluoranthene	11.89	202	4047928	50.23985 ppb		100
81)	Benzidine	12.05	184	960440	46.93994 ppb		99
82)	Pyrene	12.15	202	4224931	49.04454 ppb		100
84)	Butyl benzylphthalate	12.90	149	1932102	48.61637 ppb		99
85)	3,3'-Dichlorobenzidine	13.52	252	1370351	49.71822 ppb		99
86)	Benz (a) anthracene	13.55	228	4333439	49.93648 ppb		99
87)	Bis (2-ethylhexyl) phthala	13.56	149	2893922	48.11457 ppb		99
88)	Chrysene	13.59	228	3754529	47.11080 ppb		100
89)	Di-n-octylphthalate	14.30	149	4761432	49.50301 ppb		97
91)	Benzo (b) fluoranthene	14.83	252	4111371	49.61327 ppb		99
92)	Benzo (k) fluoranthene	14.86	252	3715241	49.43632 ppb		100
93)	Benzo (a) pyrene	15.27	252	3669419	51.28296 ppb	#	97
94)	Indeno (1,2,3-cd) pyrene	17.17	276	4014423	47.04339 ppb		99
95)	Dibenz (a,h) anthracene	17.19	278	3719968	50.52836 ppb		99
96)	Benzo (g,h,i) perylene	17.71	276	3502576	51.72506 ppb		98

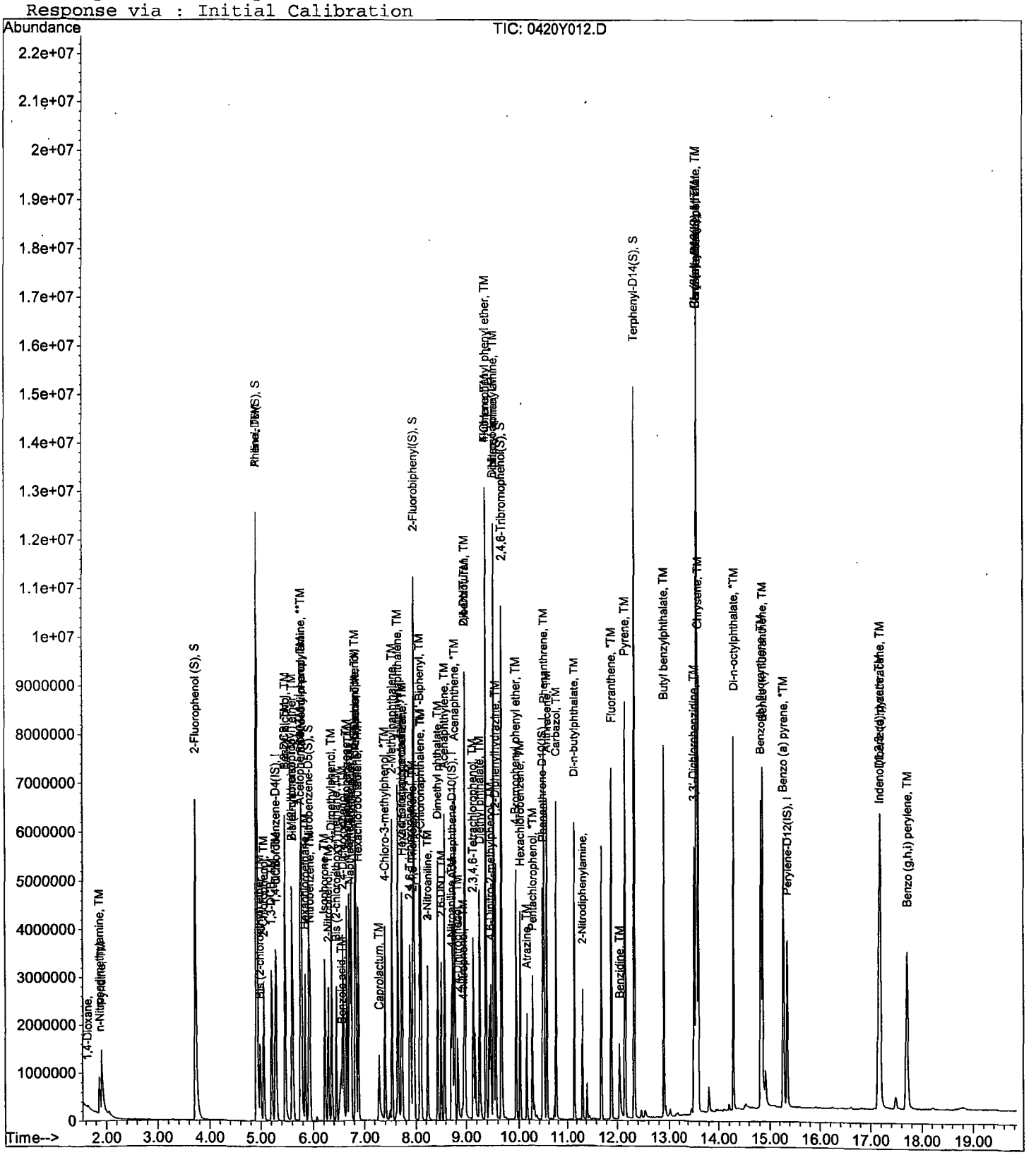
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200420\0420Y012.D Vial: 12
Acq On : 20 Apr 20 13:53 Operator: MA
Sample : SS 8270 3/4/20 Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Apr 21 10:39 2020 Quant Results File: Y0420.RES

Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Apr 21 09:58:57 2020
Response via : Initial Calibration



Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Date Analyzed: 04/27/20
Matrix: Instrument: Yoda
Initial Cal. Date: 04/20/20
Data File: 0420Y077.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2		1,4-Dioxane	0.4830	0.4636	4.0		
3	TM	n-Nitrosodimethylamine	0.6884	0.8060	17	TM	
4	TM	Pyridine	1.809	1.921	6.2	TM	
5	S	2-Fluorophenol (S)	1.470	1.500	2.0	S	
6	S	Phenol-D6 (S)	1.946	2.085	7.1	S	
7	*TM	Phenol	2.527	2.595	2.7	*TM	
8	TM	Aniline	1.455	1.547	6.3	TM	
9	TM	Bis (2-chloroethyl) ether	1.016	1.011	0.58	TM	
10	TM	2-Chlorophenol	1.901	1.863	2.0	TM	
11	TM	1,3-DCB	2.047	2.037	0.52	TM	
12	*TM	1,4-DCB	2.086	2.089	0.14	*TM	
13	TM	Benzyl alcohol	1.050	1.074	2.3	TM	
14	TM	1,2-DCB	1.987	1.998	0.52	TM	
15	TM	2-Methylphenol	1.535	1.580	2.9	TM	
16	TM	Bis (2-chloroisopropyl) ether	1.221	1.150	5.8	TM	
17	TM	Acetophenone	2.394	2.513	5.0	TM	
18	TM	3&4-Methylphenol	1.940	2.014	3.8	TM	
19	**TM	n-Nitrosodi-n-propylamine	1.378	1.438	4.3	**TM	
20	TM	Hexachloroethane	0.7766	0.7880	1.5	TM	
21	I	Napthalene-D8(IS)	ISTD			I	
22	S	Nitrobenzene-D5(S)	0.4087	0.4515	10	S	
23	TM	Nitrobenzene	0.4667	0.4934	5.7	TM	
24	TM	Isophorone	0.7847	0.8534	8.8	TM	
25	*TM	2-Nitrophenol	0.2437	0.2537	4.1	*TM	
26	TM	2,4-Dimethylphenol	0.3807	0.4056	6.6	TM	
27	TM	Benzoic acid	0.3171	0.3041	4.1	TM	
28	TM	Bis (2-chloroethoxy) methane	0.4581	0.4762	3.9	TM	
29	*TM	2,4-Dichlorophenol	0.3730	0.3978	6.7	*TM	
30	TM	1,2,4-Trichlorobenzene	0.4146	0.4357	5.1	TM	
31	TM	3,4-Dimethylphenol	0.5574	0.6053	8.6	TM	
32	TM	Naphthalene	1.232	1.329	7.9	TM	
33	TM	4-Chloroaniline	0.4821	0.5422	12	TM	
34	TM	2,6-Dichlorophenol	0.3703	0.4075	10	TM	
35	TM	Hexachloropropene	0.3122	0.3456	11	TM	
36	*TM	Hexachlorobutadiene	0.2503	0.2704	8.0	*TM	
37	TM	Caprolactum	0.1227	0.1325	8.0	TM	
38	*TM	4-Chloro-3-methylphenol	0.4081	0.4416	8.2	*TM	
39	TM	2-Methylnaphthalene	0.8286	0.8947	8.0	TM	
40	TM	1-Methylnaphthalene	0.8484	0.9277	9.3	TM	
		Average			5.8		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 04/27/20
Instrument: Yoda
Cal. Date: 04/20/20
Data File: 0420Y077.D

		Compound	MEAN	CCRF	%D		%Drift
41	I	Acenaphthene-D10(IS)	ISTD			I	
42	**TML	Hexachlorocyclopentadiene	0.3911	0.4491	15	**TML	1.5
43	TM	1,2,4,5-Tetrachlorobenzene	0.6871	0.7522	9.5	TM	
44	*TM	2,4,6-Trichlorophenol	0.4599	0.5059	10.0	*TM	
45	TM	2,4,5-Trichlorophenol	0.4850	0.5216	7.5	TM	
46	S	2-Fluorobiphenyl(S)	1.421	1.646	16	S	
47	TM	1,1'-Biphenyl	1.766	1.973	12	TM	
48	TM	2-Chloronaphthalene	1.404	1.523	8.5	TM	
49	TM	2-Nitroaniline	0.3938	0.4440	13	TM	
50	TM	Dimethyl phthalate	1.684	1.849	9.8	TM	
51	TM	2,6-DNT	0.3780	0.4251	12	TM	
52	TM	Acenaphthylene	2.115	2.374	12	TM	
53	TM	3-Nitroaniline	0.4473	0.5067	13	TM	
54	*TM	Acenaphthene	1.356	1.503	11	*TM	
55	**TML	2,4-Dinitrophenol	0.2262	0.2021	11	**TML	20
56	**TM	4-Nitrophenol	0.3126	0.3527	13	**TM	
57	TM	Dibenzofuran	2.002	2.262	13	TM	
58	TM	2,4-DNT	0.5408	0.6169	14	TM	
59	TM	2,3,4,6-Tetrachlorophenol	0.3834	0.4229	10	TM	
60	TM	Diethyl phthalate	1.648	1.800	9.3	TM	
61	TM	4-Chlorophenyl phenyl ether	0.9033	1.044	16	TM	
62	TM	Fluorene	1.673	1.948	16	TM	
63	TM	4-Nitroaniline	0.3618	0.4182	16	TM	
64	S	2,4,6-Tribromophenol(S)	0.2049	0.2415	18	S	
65	I	Phenanthrene-D10(IS)	ISTD			I	
66	TM	4,6-Dinitro-2-methylphenol	0.1843	0.1862	1.0	TM	
67	TM	Diphenyl amine	0.6566	0.7754	18	TM	
68	*TM	n-Nitrosodiphenylamine	0.6566	0.7754	18	*TM	
69	TM	1,2-Diphenylhydrazine	0.8386	0.9304	11	TM	
70	TM	4-Bromophenyl phenyl ether	0.2522	0.2905	15	TM	
71	TM	Hexachlorobenzene	0.2576	0.2948	14	TM	
72	TM	Atrazine	0.2420	0.2617	8.1	TM	
73	*TM	Pentachlorophenol	0.1563	0.1808	16	*TM	
74	TM	Phenanthrene	1.215	1.404	16	TM	
75	TM	Anthracene	1.266	1.468	16	TM	
76	TM	Carbazol	1.143	1.327	16	TM	
77	TM	Di-n-butylphthalate	1.457	1.698	17	TM	
78		2-Nitrodiphenylamine	0.3302	0.3862	17		
79	*TM	Fluoranthene	1.399	1.629	16	*TM	
80	I	Chrysene-D12(IS)	ISTD			I	
		Average			13.1		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 04/27/20
Instrument: Yoda
Cal. Date: 04/20/20
Data File: 0420Y077.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	Benzidine	0.3267	0.3824	17	TM	
82	TM	Pyrene	1.376	1.484	7.9	TM	
83	S	Terphenyl-D14(S)	0.9109	0.9759	7.1	S	
84	TM	Butyl benzylphthalate	0.6346	0.6927	9.2	TM	
85	TM	3,3'-Dichlorobenzidine	0.4401	0.5137	17	TM	
86	TM	Benz (a) anthracene	1.386	1.515	9.3	TM	
87	TM	Bis (2-ethylhexyl) phthalate	0.9604	1.060	10	TM	
88	TM	Chrysene	1.273	1.356	6.6	TM	
89	*TM	Di-n-octylphthalate	1.536	1.611	4.9	*TM	
90	I	Perylene-D12(IS)	ISTD			I	
91	TM	Benzo (b) fluoranthene	1.501	1.785	19	TM	
92	TM	Benzo (k) fluoranthene	1.361	1.450	6.6	TM	
93	*TM	Benzo (a) pyrene	1.296	1.513	17	*TM	
94	TM	Indeno (1,2,3-cd) pyrene	1.545	1.724	12	TM	
95	TM	Dibenz (a,h) anthracene	1.333	1.527	15	TM	
96	TM	Benzo (g,h,i) perylene	1.226	1.341	9.3	TM	
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			11.2		

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y200420\0420Y077.D Vial: 77
Acq On : 27 Apr 20 15:19 Operator: MA
Sample : 50ug/ml 8270 3/30/20 (1) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Apr 27 15:37 2020 Quant Results File: Y0420.RES

Quant Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Apr 21 09:58:57 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.28	152	481309	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.72	136	2015610	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.74	164	1208662	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.47	188	2258185	40.00000 ppb	0.00
80) Chrysene-D12(IS)	13.56	240	2609605	40.00000 ppb	0.00
90) Perylene-D12(IS)	15.35	264	2159365	40.00000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.72	112	1804896	102.00858 ppb	-0.02
Spiked Amount 200.000			Recovery = 51.005%		
6) Phenol-D6 (S)	4.91	99	2508443	107.12245 ppb	0.00
Spiked Amount 200.000			Recovery = 53.561%		
22) Nitrobenzene-D5(S)	5.92	82	1137537	55.24053 ppb	0.00
Spiked Amount 100.000			Recovery = 55.241%		
46) 2-Fluorobiphenyl(S)	7.96	172	2486916	57.89944 ppb	0.00
Spiked Amount 100.000			Recovery = 57.899%		
64) 2,4,6-Tribromophenol(S)	9.67	330	729693	117.83206 ppb	0.00
Spiked Amount 200.000			Recovery = 58.916%		
83) Terphenyl-D14(S)	12.33	244	3183349	53.56631 ppb	0.00
Spiked Amount 100.000			Recovery = 53.566%		
Target Compounds					Qvalue
2) 1,4-Dioxane	1.64	58	27891	4.79897	82
3) n-Nitrosodimethylamine	1.86	42	484896	58.54026 ppb	94
4) Pyridine	1.88	79	1155849	53.10095 ppb	97
7) Phenol	4.92	94	1561258	51.35163 ppb	98
8) Aniline	4.91	93	930752	53.15377 ppb	100
9) Bis (2-chloroethyl) ether	4.99	63	608008	49.71083 ppb	95
10) 2-Chlorophenol	5.05	128	1120574	48.99074 ppb	97
11) 1,3-DCB	5.21	146	1225240	49.73932 ppb	98
12) 1,4-DCB	5.29	146	1256850	50.07244 ppb	97
13) Benzyl alcohol	5.46	108	646004	51.13756 ppb	96
14) 1,2-DCB	5.47	146	1201787	50.25948 ppb	99
15) 2-Methylphenol	5.60	107	950672	51.47348 ppb	96
16) Bis (2-chloroisopropyl) et	5.59	45	691586	47.07830 ppb	91
17) Acetophenone	5.75	105	1512179	52.49143 ppb	100
18) 3&4-Methylphenol	5.78	107	2423259	103.83415 ppb	94
19) n-Nitrosodi-n-propylamine	5.76	70	864920	52.14494 ppb	95
20) Hexachloroethane	5.84	117	474086	50.73578 ppb	84
23) Nitrobenzene	5.93	77	1243035	52.85253 ppb	94
24) Isophorone	6.21	82	2150269	54.37779 ppb	96
25) 2-Nitrophenol	6.30	139	639304	52.06805 ppb	97
26) 2,4-Dimethylphenol	6.36	122	1021944	53.27509 ppb	97
27) Benzoic acid	6.55	105	766172	47.94728 ppb	99
28) Bis (2-chloroethoxy) metha	6.44	93	1199817	51.97161 ppb	98
29) 2,4-Dichlorophenol	6.58	162	1002339	53.32769 ppb	97
30) 1,2,4-Trichlorobenzene	6.66	180	1097687	52.54240 ppb	99
31) 3,4-Dimethylphenol	6.70	107	1525182	54.30365 ppb	97
32) Naphthalene	6.74	128	3348936	53.96063 ppb	100
33) 4-Chloroaniline	6.82	127	1366092	56.23843 ppb	95
34) 2,6-Dichlorophenol	6.83	162	1026694	55.01985 ppb	97
35) Hexachloropropene	6.84	213	870725	55.34451 ppb	99
36) Hexachlorobutadiene	6.88	225	681400	54.01761 ppb	98
37) Caprolactum	7.27	55	333886	54.00222 ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y200420\0420Y077.D Vial: 77
Acq On : 27 Apr 20 15:19 Operator: MA
Sample : 50ug/ml 8270 3/30/20 (1) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Apr 27 15:37 2020 Quant Results File: Y0420.RES

Quant Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Apr 21 09:58:57 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

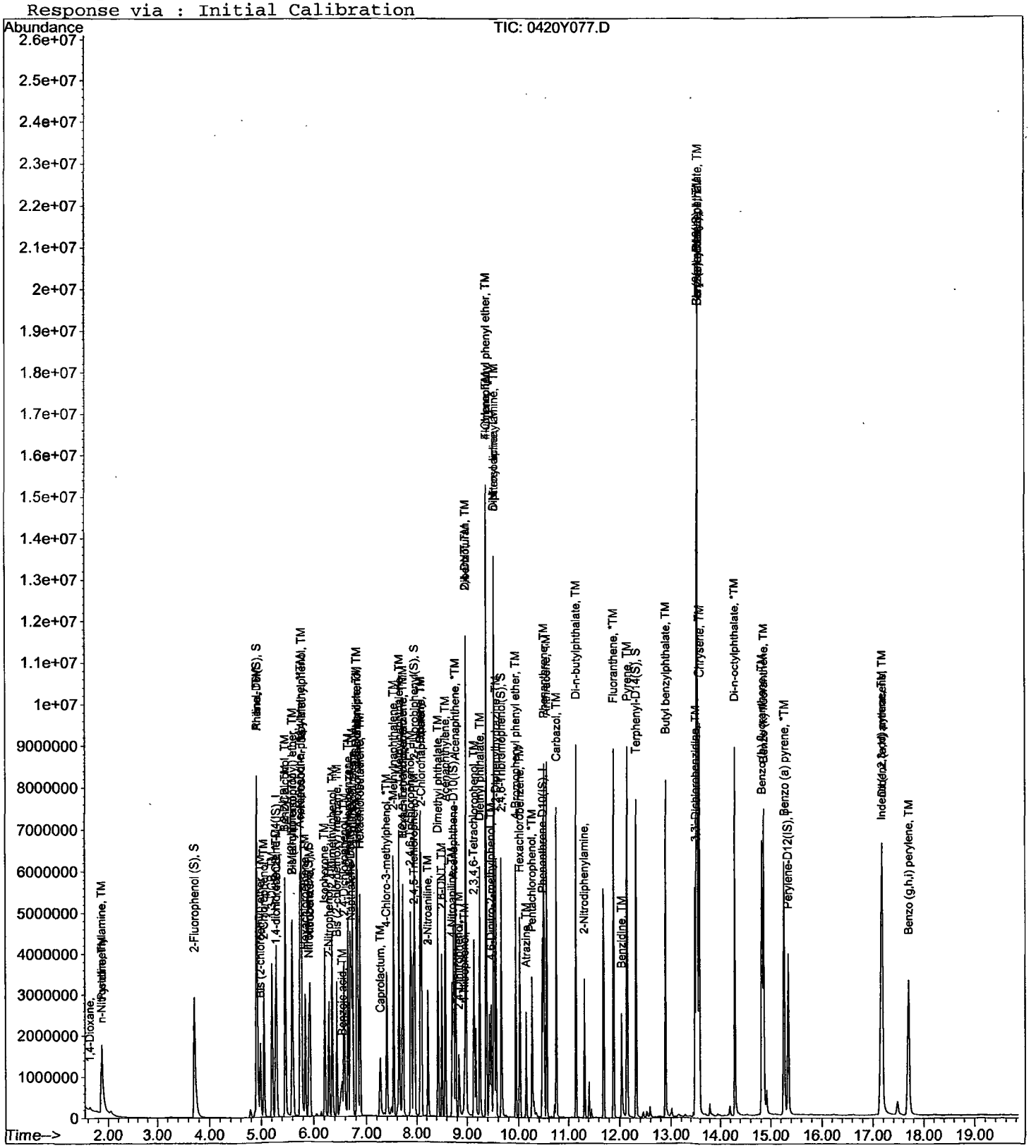
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.40	107	1112654	54.10953	ppb		95
39)	2-Methylnaphthalene	7.53	142	2254279	53.99070	ppb		100
40)	1-Methylnaphthalene	7.65	142	2337247	54.67322	ppb		100
42)	Hexachlorocyclopentadiene	7.72	237	678528	49.27002	ppb		99
43)	1,2,4,5-Tetrachlorobenzene	7.74	216	1136409	54.73552	ppb		99
44)	2,4,6-Trichlorophenol	7.87	196	764325	54.99947	ppb		99
45)	2,4,5-Trichlorophenol	7.94	196	788063	53.77399	ppb		99
47)	1,1'-Biphenyl	8.08	154	2980588	55.85169	ppb		100
48)	2-Chloronaphthalene	8.10	162	2301401	54.26470	ppb		96
49)	2-Nitroaniline	8.23	65	670811	56.38086	ppb		89
50)	Dimethyl phthalate	8.43	163	2794255	54.89790	ppb		99
51)	2,6-DNT	8.52	165	642307	56.23502	ppb		90
52)	Acenaphthylene	8.58	152	3586672	56.12434	ppb		99
53)	3-Nitroaniline	8.24	138	765585	56.64886	ppb		96
54)	Acenaphthene	8.78	154	2270233	55.42528	ppb		100
55)	2,4-Dinitrophenol	8.84	184	305279m	39.90671	ppb		98
56)	4-Nitrophenol	8.95	65	532897	56.40969	ppb		100
57)	Dibenzofuran	8.98	168	3417647	56.50849	ppb		98
58)	2,4-DNT	8.99	165	932062	57.03325	ppb		90
59)	2,3,4,6-Tetrachlorophenol	9.14	232	638978	55.15480	ppb		96
60)	Diethyl phthalate	9.26	149	2719999	54.63126	ppb		97
61)	4-Chlorophenyl phenyl ethe	9.38	204	1577700	57.80210	ppb		95
62)	Fluorene	9.38	166	2942690	58.22414	ppb		99
63)	4-Nitroaniline	8.71	138	631838	57.78910	ppb		87
66)	4,6-Dinitro-2-methylphenol	9.47	198	525497	50.50851	ppb		93
67)	Diphenyl amine	9.53	169	4377749	118.10784	ppb		99
68)	n-Nitrosodiphenylamine	9.53	169	4377749	118.10784	ppb		99
69)	1,2-Diphenylhydrazine	9.56	77	2626189	55.47110	ppb		96
70)	4-Bromophenyl phenyl ether	9.94	248	820042	57.59896	ppb		96
71)	Hexachlorobenzene	10.03	284	832183	57.23457	ppb		99
72)	Atrazine	10.15	200	369302	27.03615	ppb		99
73)	Pentachlorophenol	10.27	266	510350m	57.85413	ppb		98
74)	Phenanthrene	10.50	178	3963915	57.79728	ppb		99
75)	Anthracene	10.56	178	4142714	57.94203	ppb		100
76)	Carbazol	10.75	167	3746415	58.07014	ppb		98
77)	Di-n-butylphthalate	11.15	149	4793063	58.26500	ppb		99
78)	2-Nitrodiphenylamine	11.32	167	545120	29.24692	ppb		89
79)	Fluoranthene	11.89	202	4598071	58.21491	ppb		98
81)	Benzidine	12.04	184	1247420	58.52312	ppb		98
82)	Pyrene	12.15	202	4840514	53.93926	ppb		100
84)	Butyl benzylphthalate	12.90	149	2259756	54.58289	ppb		85
85)	3,3'-Dichlorobenzidine	13.52	252	1675680	58.36027	ppb		98
86)	Benz (a) anthracene	13.55	228	4940457	54.65059	ppb		99
87)	Bis (2-ethylhexyl) phthala	13.56	149	3458104	55.19126	ppb	#	94
88)	Chrysene	13.59	228	4423808	53.28486	ppb		100
89)	Di-n-octylphthalate	14.29	149	5255324	52.44886	ppb		96
91)	Benzo (b) fluoranthene	14.83	252	4817333	59.46936	ppb		99
92)	Benzo (k) fluoranthene	14.87	252	3914799	53.28979	ppb		99
93)	Benzo (a) pyrene	15.27	252	4083455	58.38199	ppb		99
94)	Indeno (1,2,3-cd) pyrene	17.17	276	4652553	55.77533	ppb		100
95)	Dibenz (a,h) anthracene	17.19	278	4121114	57.26456	ppb		99
96)	Benzo (g,h,i) perylene	17.71	276	3618710	54.66918	ppb		99

(#) = qualifier out of range (m) = manual integration

Data File : M:\YODA\DATA\Y200420\0420Y077.D Vial: 77
Acq On : 27 Apr 20 15:19 Operator: MA
Sample : 50ug/ml 8270 3/30/20 (1) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Apr 27 15:37 2020 Quant Results File: Y0420.RES

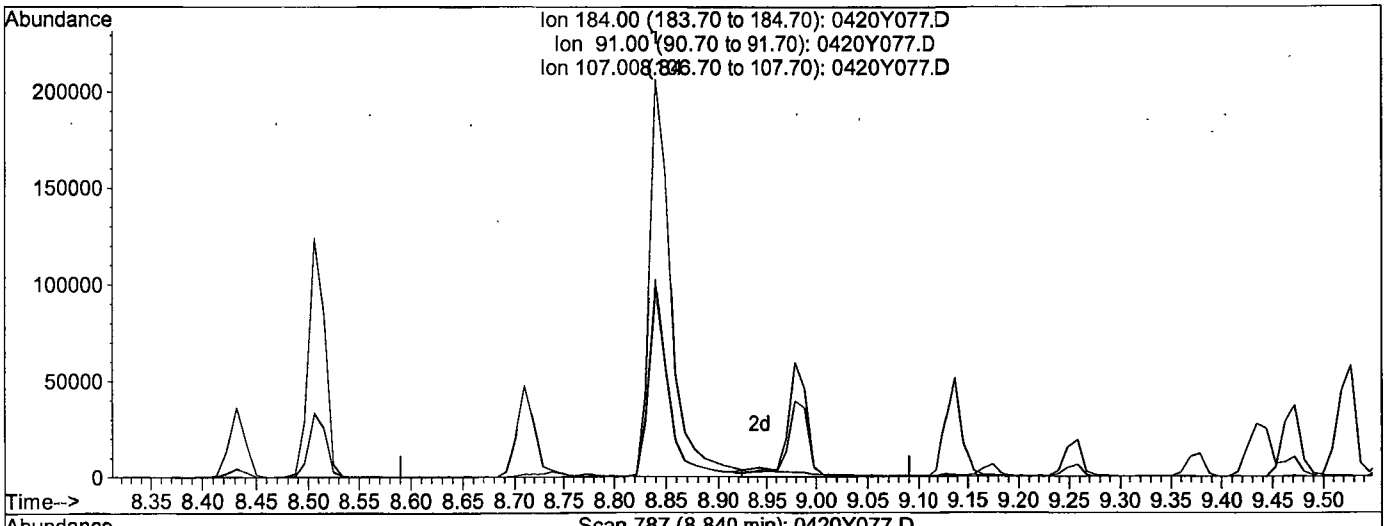
Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Apr 21 09:58:57 2020
Response via : Initial Calibration

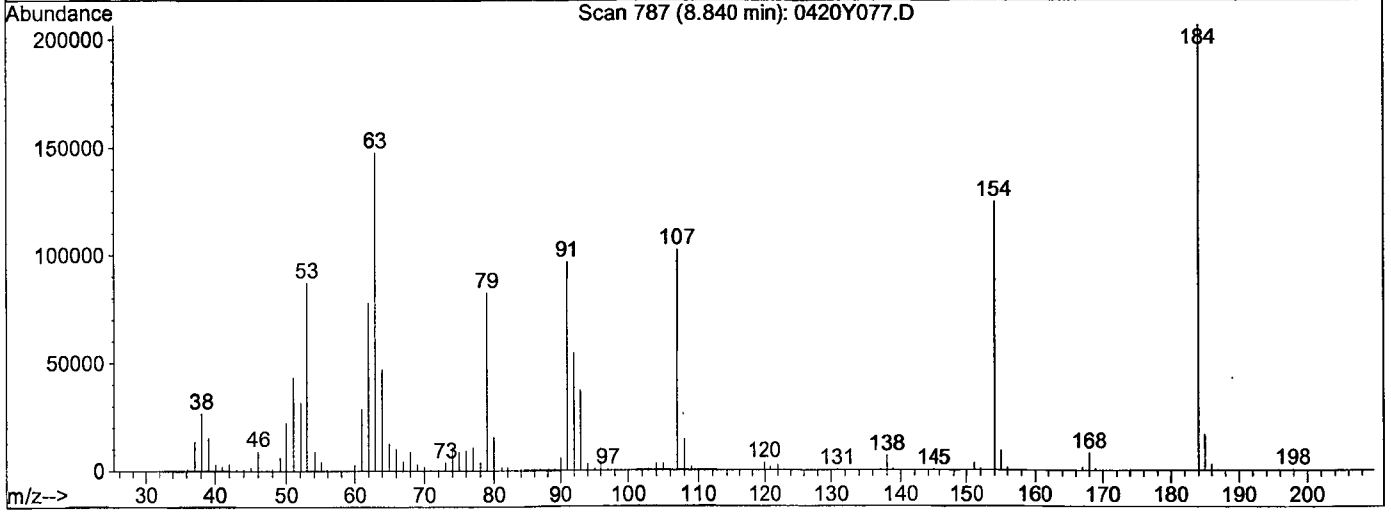


Quantitation Report

Data File : M:\YODA\DATA\Y200420\0420Y077.D Vial: 77
Acq On : 27 Apr 20 15:19 Operator: MA
Sample : 50ug/ml 8270 3/30/20 (1) Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Apr 27 15:23 2020 Quant Results File: temp.res

Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Apr 21 09:58:57 2020
Response via : Multiple Level Calibration





TIC: 0420Y077.D

(55) 2,4-Dinitrophenol (**TM)

8.84min 38.8447ppb

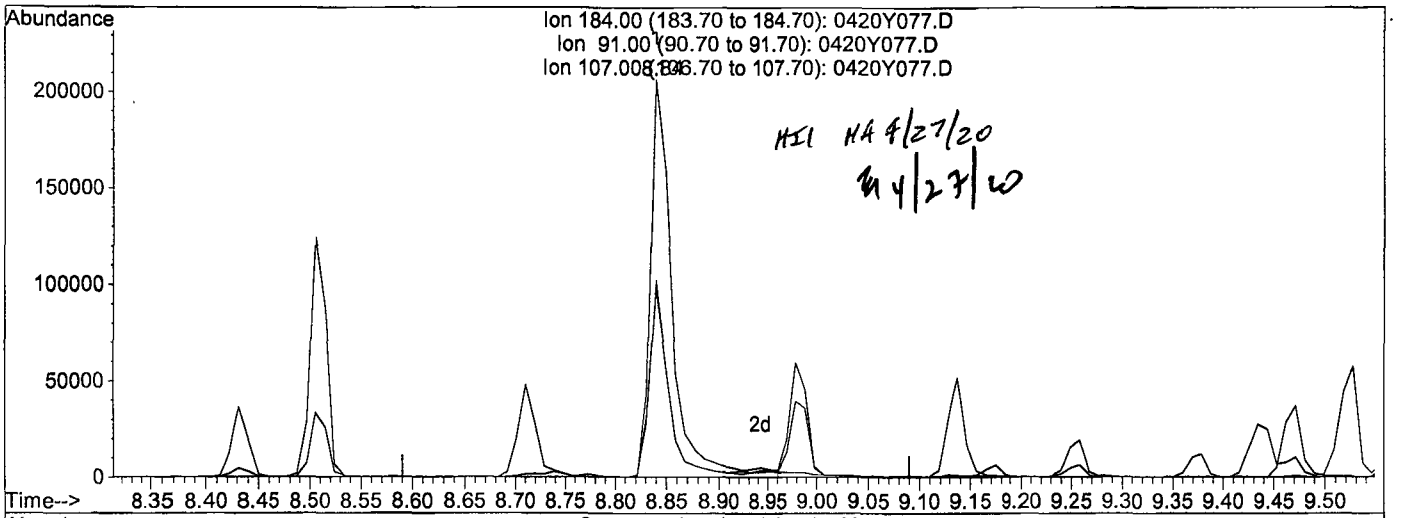
response 296273

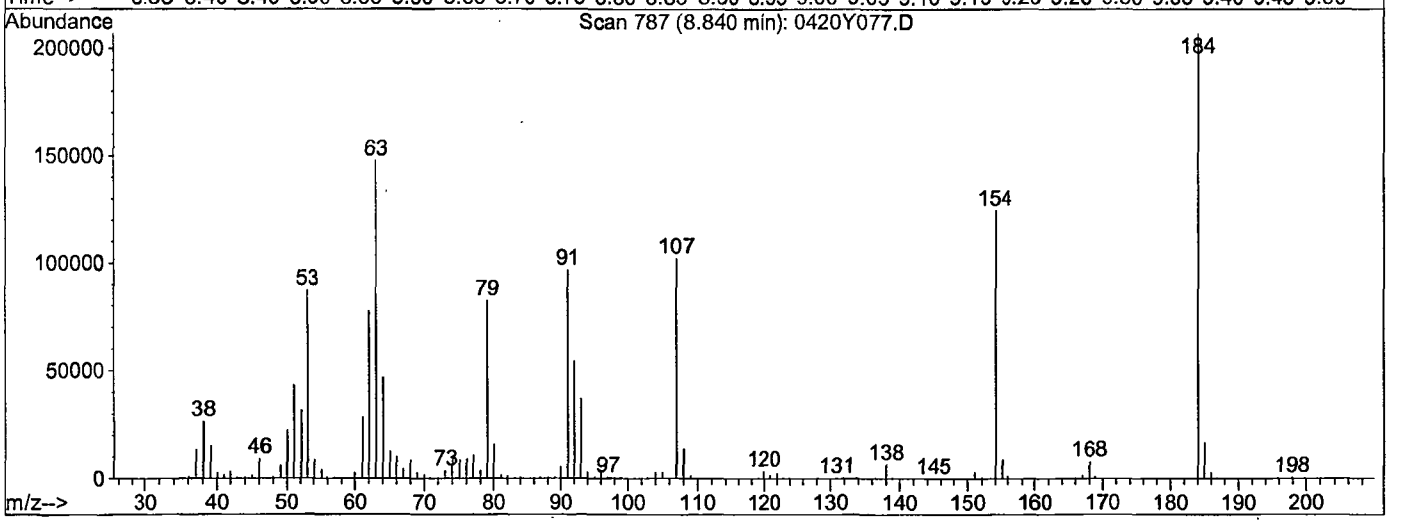
Ion	Exp%	Act%
184.00	100	100
91.00	45.70	46.33
107.00	47.40	49.48
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y200420\0420Y077.D Vial: 77
Acq On : 27 Apr 20 15:19 Operator: MA
Sample : 50ug/ml 8270 3/30/20 (1) Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Apr 27 15:25 2020 Quant Results File: temp.res

Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Apr 21 09:58:57 2020
Response via : Multiple Level Calibration





TIC: 0420Y077.D

(55) 2,4-Dinitrophenol (**TM)

8.84min 39.9067ppb m

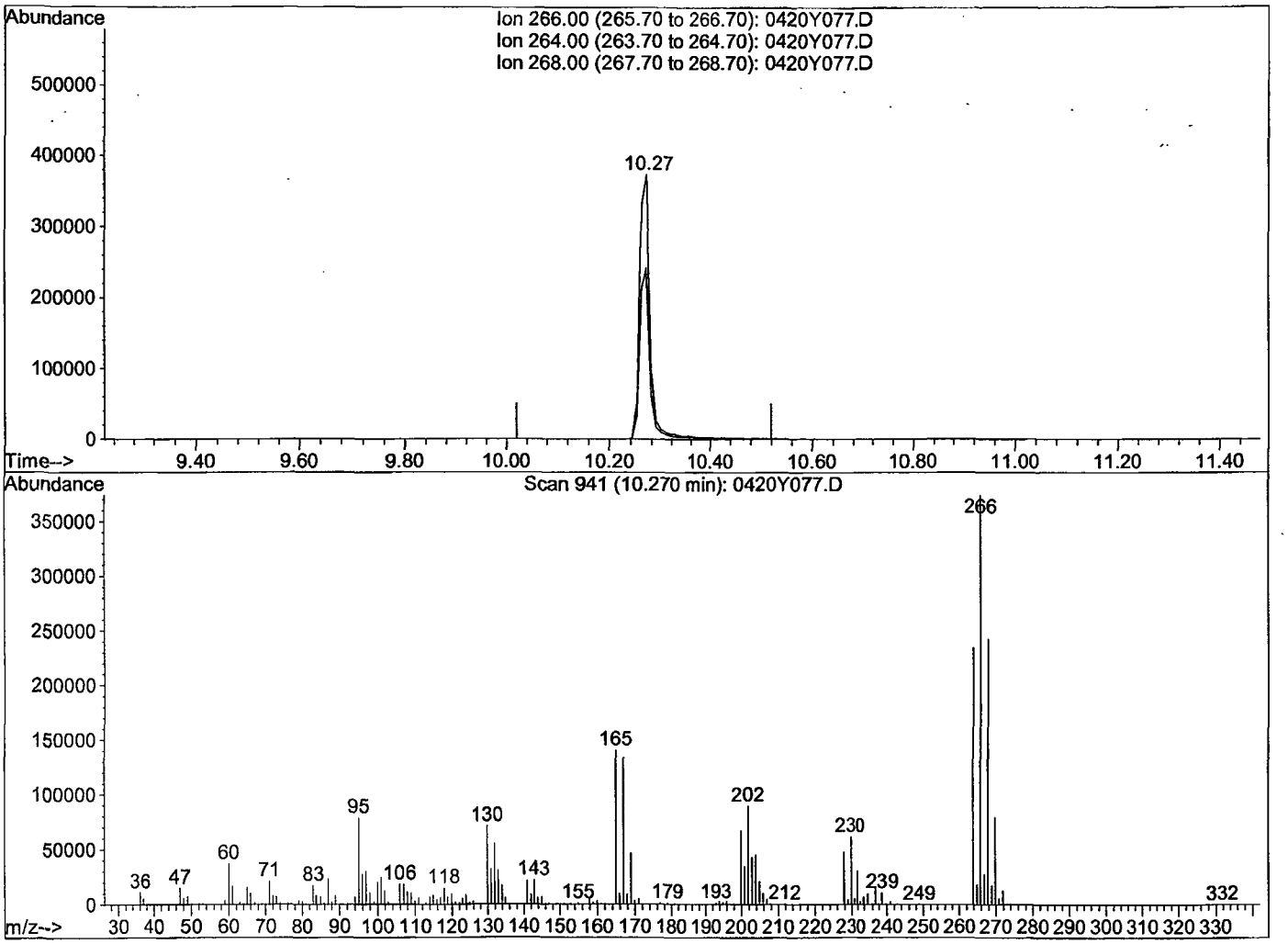
response 305279

Ion	Exp%	Act%
184.00	100	100
91.00	45.70	46.80
107.00	47.40	49.49
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y200420\0420Y077.D Vial: 77
Acq On : 27 Apr 20 15:19 Operator: MA
Sample : 50ug/ml 8270 3/30/20 (1) Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Apr 27 15:25 2020 Quant Results File: temp.res

Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Apr 21 09:58:57 2020
Response via : Multiple Level Calibration



TIC: 0420Y077.D

(73) Pentachlorophenol (*TM)

10.27min 61.2007ppb

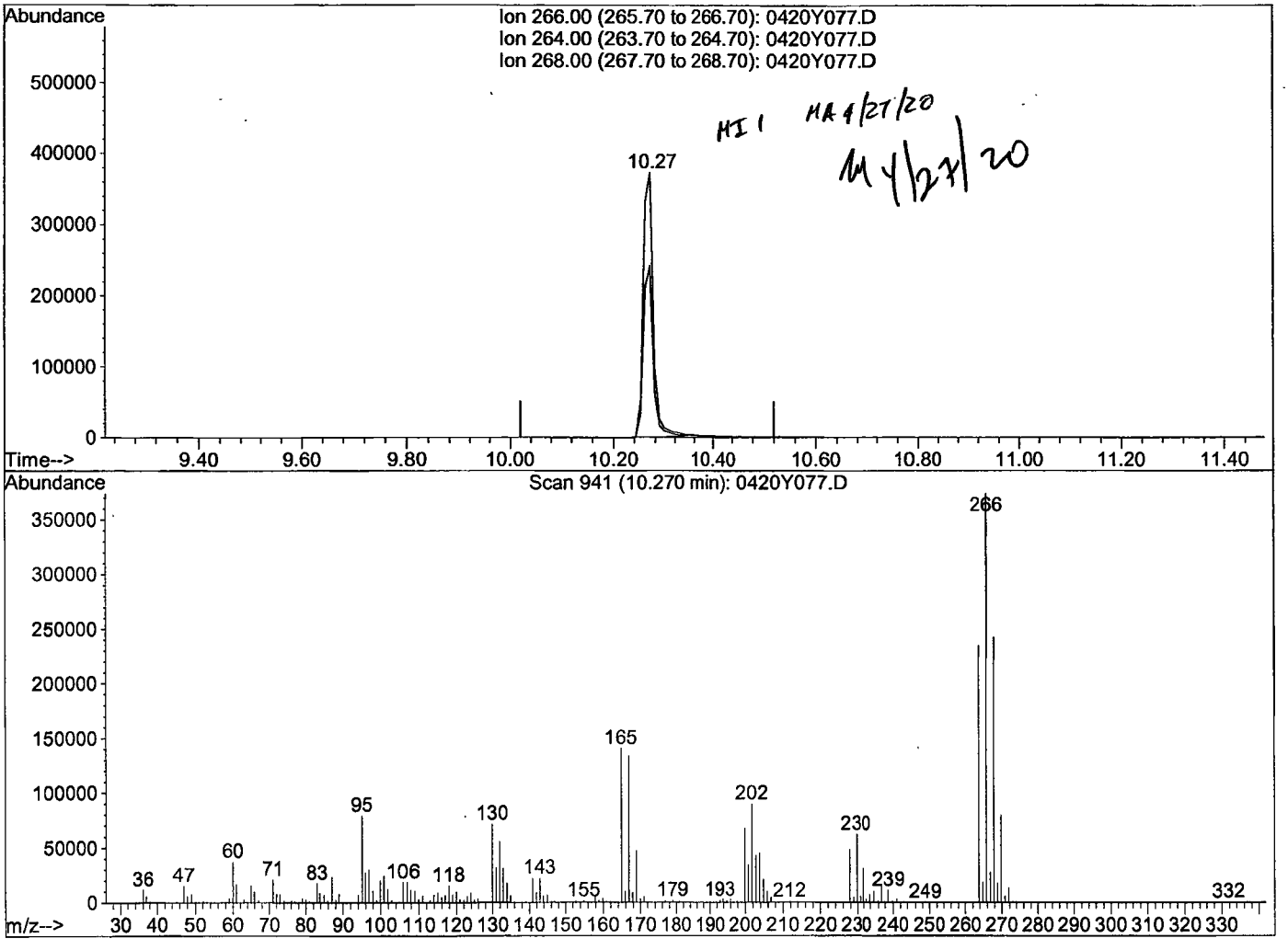
response 539871

Ion	Exp%	Act%
266.00	100	100
264.00	64.80	62.87
268.00	66.20	64.97
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y200420\0420Y077.D Vial: 77
Acq On : 27 Apr 20 15:19 Operator: MA
Sample : 50ug/ml 8270 3/30/20 (1) Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Apr 27 15:37 2020 Quant Results File: temp.res

Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Apr 21 09:58:57 2020
Response via : Multiple Level Calibration



TIC: 0420Y077.D

(73) Pentachlorophenol (*TM)

10.27min 57.8541ppb m

response 510350

Ion	Exp%	Act%
266.00	100	100
264.00	64.80	62.87
268.00	66.20	64.97
0.00	0.00	0.00

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 04/28/20
Instrument: Yoda
Initial Cal. Date: 04/20/20
Data File: 0420Y108.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	1,4-dichlorobenzene-D4(IS)	ISTD			I	
2		1,4-Dioxane	0.4830	0.4432	8.2		
3	TM	n-Nitrosodimethylamine	0.6884	0.7298	6.0	TM	
4	TM	Pyridine	1.809	1.916	5.9	TM	
5	S	2-Fluorophenol (S)	1.470	1.463	0.54	S	
6	S	Phenol-D6 (S)	1.946	1.957	0.56	S	
7	*TM	Phenol	2.527	2.420	4.2	*TM	
8	TM	Aniline	1.455	1.331	8.6	TM	
9	TM	Bis (2-chloroethyl) ether	1.016	0.9337	8.1	TM	
10	TM	2-Chlorophenol	1.901	1.786	6.1	TM	
11	TM	1,3-DCB	2.047	1.911	6.6	TM	
12	*TM	1,4-DCB	2.086	1.963	5.9	*TM	
13	TM	Benzyl alcohol	1.050	1.026	2.2	TM	
14	TM	1,2-DCB	1.987	1.866	6.1	TM	
15	TM	2-Methylphenol	1.535	1.477	3.8	TM	
16	TM	Bis (2-chloroisopropyl) ether	1.221	1.130	7.4	TM	
17	TM	Acetophenone	2.394	2.349	1.9	TM	
18	TM	3&4-Methylphenol	1.940	1.891	2.5	TM	
19	**TM	n-Nitrosodi-n-propylamine	1.378	1.355	1.7	**TM	
20	TM	Hexachloroethane	0.7766	0.7198	7.3	TM	
21	I	Napthalene-D8(IS)	ISTD			I	
22	S	Nitrobenzene-D5(S)	0.4087	0.4330	6.0	S	
23	TM	Nitrobenzene	0.4667	0.4671	0.08	TM	
24	TM	Isophorone	0.7847	0.7875	0.36	TM	
25	*TM	2-Nitrophenol	0.2437	0.2468	1.3	*TM	
26	TM	2,4-Dimethylphenol	0.3807	0.3820	0.36	TM	
27	TM	Benzoic acid	0.3171	0.3277	3.3	TM	
28	TM	Bis (2-chloroethoxy) methane	0.4581	0.4474	2.4	TM	
29	*TM	2,4-Dichlorophenol	0.3730	0.3733	0.08	*TM	
30	TM	1,2,4-Trichlorobenzene	0.4146	0.4057	2.1	TM	
31	TM	3,4-Dimethylphenol	0.5574	0.5567	0.12	TM	
32	TM	Naphthalene	1.232	1.215	1.3	TM	
33	TM	4-Chloroaniline	0.4821	0.4930	2.3	TM	
34	TM	2,6-Dichlorophenol	0.3703	0.3725	0.60	TM	
35	TM	Hexachloropropene	0.3122	0.2647	15	TM	
36	*TM	Hexachlorobutadiene	0.2503	0.2500	0.12	*TM	
37	TM	Caprolactum	0.1227	0.1284	4.6	TM	
38	*TM	4-Chloro-3-methylphenol	0.4081	0.4107	0.64	*TM	
39	TM	2-Methylnaphthalene	0.8286	0.8108	2.2	TM	
40	TM	1-Methylnaphthalene	0.8484	0.8410	0.87	TM	
		Average			3.6		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 04/28/20
Instrument: Yoda
Cal. Date: 04/20/20
Data File: 0420Y108.D

		Compound	MEAN	CCRF	%D		%Drift
41	I	Acenaphthene-D10(IS)	ISTD			I	
42	**TML	Hexachlorocyclopentadiene	0.3911	0.2104	46	**TML	49
43	TM	1,2,4,5-Tetrachlorobenzene	0.6871	0.6702	2.5	TM	
44	*TM	2,4,6-Trichlorophenol	0.4599	0.4558	0.89	*TM	
45	TM	2,4,5-Trichlorophenol	0.4850	0.4769	1.7	TM	
46	S	2-Fluorobiphenyl(S)	1.421	1.461	2.8	S	
47	TM	1,1'-Biphenyl	1.766	1.732	1.9	TM	
48	TM	2-Chloronaphthalene	1.404	1.370	2.4	TM	
49	TM	2-Nitroaniline	0.3938	0.4116	4.5	TM	
50	TM	Dimethyl phthalate	1.684	1.654	1.8	TM	
51	TM	2,6-DNT	0.3780	0.3825	1.2	TM	
52	TM	Acenaphthylene	2.115	2.097	0.83	TM	
53	TM	3-Nitroaniline	0.4473	0.4589	2.6	TM	
54	*TM	Acenaphthene	1.356	1.333	1.7	*TM	
55	**TML	2,4-Dinitrophenol	0.2262	0.1417	37	**TML	42
56	**TM	4-Nitrophenol	0.3126	0.3220	3.0	**TM	
57	TM	Dibenzofuran	2.002	2.001	0.02	TM	
58	TM	2,4-DNT	0.5408	0.5579	3.1	TM	
59	TM	2,3,4,6-Tetrachlorophenol	0.3834	0.3773	1.6	TM	
60	TM	Diethyl phthalate	1.648	1.622	1.6	TM	
61	TM	4-Chlorophenyl phenyl ether	0.9033	0.9157	1.4	TM	
62	TM	Fluorene	1.673	1.711	2.3	TM	
63	TM	4-Nitroaniline	0.3618	0.3791	4.8	TM	
64	S	2,4,6-Tribromophenol(S)	0.2049	0.2133	4.1	S	
65	I	Phenanthrene-D10(IS)	ISTD			I	
66	TM	4,6-Dinitro-2-methylphenol	0.1843	0.1304	29	TM	
67	TM	Diphenyl amine	0.6566	0.6881	4.8	TM	
68	*TM	n-Nitrosodiphenylamine	0.6566	0.6881	4.8	*TM	
69	TM	1,2-Diphenylhydrazine	0.8386	0.8214	2.1	TM	
70	TM	4-Bromophenyl phenyl ether	0.2522	0.2582	2.4	TM	
71	TM	Hexachlorobenzene	0.2576	0.2642	2.6	TM	
72	TM	Atrazine	0.2420	0.2175	10	TM	
73	*TM	Pentachlorophenol	0.1563	0.1617	3.5	*TM	
74	TM	Phenanthrene	1.215	1.242	2.2	TM	
75	TM	Anthracene	1.266	1.297	2.4	TM	
76	TM	Carbazol	1.143	1.174	2.7	TM	
77	TM	Di-n-butylphthalate	1.457	1.539	5.6	TM	
78		2-Nitrodiphenylamine	0.3302	0.3552	7.6		
79	*TM	Fluoranthene	1.399	1.431	2.3	*TM	
80	I	Chrysene-D12(IS)	ISTD			I	
		Average			5.7		

Semi-Volatile Analysis by GC-MS
EPA 8270

Form 7

Ending Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: 0

SDG No:
Date Analyzed: 04/28/20
Instrument: Yoda
Cal. Date: 04/20/20
Data File: 0420Y108.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	Benzidine	0.3267	0.3608	10	TM	
82	TM	Pyrene	1.376	1.348	2.0	TM	
83	S	Terphenyl-D14(S)	0.9109	0.9128	0.21	S	
84	TM	Butyl benzylphthalate	0.6346	0.6293	0.83	TM	
85	TM	3,3'-Dichlorobenzidine	0.4401	0.4796	9.0	TM	
86	TM	Benz (a) anthracene	1.386	1.387	0.12	TM	
87	TM	Bis (2-ethylhexyl) phthalate	0.9604	0.9816	2.2	TM	
88	TM	Chrysene	1.273	1.168	8.2	TM	
89	*TM	Di-n-octylphthalate	1.536	1.537	0.08	*TM	
90	I	Perylene-D12(IS)	ISTD			I	
91	TM	Benzo (b) fluoranthene	1.501	1.607	7.1	TM	
92	TM	Benzo (k) fluoranthene	1.361	1.424	4.7	TM	
93	*TM	Benzo (a) pyrene	1.296	1.371	5.8	*TM	
94	TM	Indeno (1,2,3-cd) pyrene	1.545	1.157	25	TM	
95	TM	Dibenz (a,h) anthracene	1.333	1.052	21	TM	
96	TM	Benzo (g,h,i) perylene	1.226	0.8198	33	TM	
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			8.6		

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200420\0420Y108.D Vial: 8
Acq On : 28 Apr 20 6:00 Operator: MA
Sample : 50ug/ml 8270 3/30/20 (3) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Apr 28 9:10 2020 Quant Results File: Y0420.RES

Quant Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Apr 21 09:58:57 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.28	152	499177	40.00000 ppb	0.00
21) Napthalene-D8(IS)	6.72	136	2083675	40.00000 ppb	0.00
41) Acenaphthene-D10(IS)	8.74	164	1285376	40.00000 ppb	0.00
65) Phenanthrene-D10(IS)	10.47	188	2367342	40.00000 ppb	0.00
80) Chrysene-D12(IS)	13.56	240	2556589	40.00000 ppb	0.00
90) Perylene-D12(IS)	15.34	264	1977124	40.00000 ppb	-0.02
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.72	112	1825139	99.46033 ppb	-0.02
Spiked Amount 200.000				Recovery = 49.730%	
6) Phenol-D6 (S)	4.90	99	2442136	100.55774 ppb	-0.02
Spiked Amount 200.000				Recovery = 50.279%	
22) Nitrobenzene-D5(S)	5.92	82	1127756	52.97659 ppb	0.00
Spiked Amount 100.000				Recovery = 52.977%	
46) 2-Fluorobiphenyl(S)	7.96	172	2347799	51.39831 ppb	0.00
Spiked Amount 100.000				Recovery = 51.398%	
64) 2,4,6-Tribromophenol(S)	9.67	330	685416	104.07639 ppb	0.00
Spiked Amount 200.000				Recovery = 52.038%	
83) Terphenyl-D14(S)	12.32	244	2917054	50.10324 ppb	0.00
Spiked Amount 100.000				Recovery = 50.103%	
Target Compounds					Qvalue
2) 1,4-Dioxane	1.64	58	27655	4.58804	96
3) n-Nitrosodimethylamine	1.86	42	455365	53.00723 ppb	89
4) Pyridine	1.88	79	1195530	52.95794 ppb	98
7) Phenol	4.92	94	1510224	47.89502 ppb	100
8) Aniline	4.91	93	830336	45.72180 ppb	92
9) Bis (2-chloroethyl) ether	4.99	63	582612	45.92938 ppb	92
10) 2-Chlorophenol	5.05	128	1114305	46.97285 ppb	98
11) 1,3-DCB	5.21	146	1192508	46.67769 ppb	99
12) 1,4-DCB	5.29	146	1224679	47.04430 ppb	97
13) Benzyl alcohol	5.46	108	640482	48.88562 ppb	96
14) 1,2-DCB	5.47	146	1164379	46.95202 ppb	99
15) 2-Methylphenol	5.59	107	921579	48.11216 ppb	99
16) Bis (2-chloroisopropyl) et	5.59	45	705364	46.29747 ppb	98
17) Acetophenone	5.74	105	1465528	49.05110 ppb	95
18) 3&4-Methylphenol	5.77	107	2359833	97.49696 ppb	98
19) n-Nitrosodi-n-propylamine	5.75	70	845478	49.14824 ppb	100
20) Hexachloroethane	5.84	117	449113	46.34279 ppb	90
23) Nitrobenzene	5.94	77	1216638	50.04035 ppb	96
24) Isophorone	6.21	82	2051220	50.17848 ppb	100
25) 2-Nitrophenol	6.29	139	642750	50.63870 ppb	93
26) 2,4-Dimethylphenol	6.35	122	995031	50.17764 ppb	99
27) Benzoic acid	6.54	105	853527	51.66918 ppb	99
28) Bis (2-chloroethoxy) metha	6.45	93	1165212	48.82392 ppb	100
29) 2,4-Dichlorophenol	6.58	162	972270	50.03819 ppb	98
30) 1,2,4-Trichlorobenzene	6.65	180	1056776	48.93176 ppb	99
31) 3,4-Dimethylphenol	6.70	107	1449941	49.93835 ppb	100
32) Naphthalene	6.74	128	3165772	49.34309 ppb	99
33) 4-Chloroaniline	6.82	127	1284022	51.13311 ppb	98
34) 2,6-Dichlorophenol	6.83	162	970275	50.29789 ppb	95
35) Hexachloropropene	6.84	213	689531	42.39590 ppb	99
36) Hexachlorobutadiene	6.88	225	651210	49.93796 ppb	99
37) Caprolactum	7.25	55	334330	52.30766 ppb	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\YODA\DATA\Y200420\0420Y108.D Vial: 8
Acq On : 28 Apr 20 6:00 Operator: MA
Sample : 50ug/ml 8270 3/30/20 (3) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Apr 28 9:10 2020 Quant Results File: Y0420.RES

Quant Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Apr 21 09:58:57 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
38)	4-Chloro-3-methylphenol	7.39	107	1069713	50.32194	ppb		100
39)	2-Methylnaphthalene	7.53	142	2111752	48.92499	ppb		99
40)	1-Methylnaphthalene	7.64	142	2190484	49.56631	ppb		98
42)	Hexachlorocyclopentadiene	7.71	237	337984	25.49862	ppb		98
43)	1,2,4,5-Tetrachlorobenzene	7.73	216	1076812	48.76959	ppb		99
44)	2,4,6-Trichlorophenol	7.88	196	732365	49.55445	ppb		99
45)	2,4,5-Trichlorophenol	7.93	196	766262	49.16582	ppb		96
47)	1,1'-Biphenyl	8.07	154	2782364	49.02561	ppb		98
48)	2-Chloronaphthalene	8.10	162	2200882	48.79738	ppb		98
49)	2-Nitroaniline	8.23	65	661323	52.26607	ppb		96
50)	Dimethyl phthalate	8.43	163	2658235	49.10862	ppb		99
51)	2,6-DNT	8.51	165	614584	50.59646	ppb		93
52)	Acenaphthylene	8.57	152	3369809	49.58377	ppb		99
53)	3-Nitroaniline	8.23	138	737292	51.29936	ppb		97
54)	Acenaphthene	8.78	154	2141540	49.16299	ppb		99
55)	2,4-Dinitrophenol	8.84	184	227753	29.16171	ppb		90
56)	4-Nitrophenol	8.94	65	517387	51.49922	ppb		97
57)	Dibenzofuran	8.98	168	3215314	49.99016	ppb		92
58)	2,4-DNT	8.98	165	896342	51.57411	ppb		93
59)	2,3,4,6-Tetrachlorophenol	9.14	232	606293	49.21015	ppb		91
60)	Diethyl phthalate	9.25	149	2606333	49.22402	ppb		99
61)	4-Chlorophenyl phenyl ethe	9.37	204	1471247	50.68500	ppb		96
62)	Fluorene	9.37	166	2749245	51.15012	ppb		99
63)	4-Nitroaniline	8.71	138	609031	52.37865	ppb		99
66)	4,6-Dinitro-2-methylphenol	9.46	198	385876	35.37859	ppb	#	85
67)	Diphenyl amine	9.52	169	4072314	104.80154	ppb		100
68)	n-Nitrosodiphenylamine	9.52	169	4072314	104.80154	ppb		100
69)	1,2-Diphenylhydrazine	9.56	77	2430682	48.97422	ppb		95
70)	4-Bromophenyl phenyl ether	9.95	248	764053	51.19181	ppb	#	83
71)	Hexachlorobenzene	10.02	284	781669	51.28153	ppb	#	89
72)	Atrazine	10.14	200	321875	22.47755	ppb		97
73)	Pentachlorophenol	10.26	266	478362	51.72749	ppb		96
74)	Phenanthrene	10.49	178	3674155	51.10213	ppb		100
75)	Anthracene	10.56	178	3837785	51.20212	ppb		100
76)	Carbazol	10.75	167	3473009	51.35011	ppb		100
77)	Di-n-butylphthalate	11.14	149	4555335	52.82183	ppb		100
78)	2-Nitrodiphenylamine	11.32	167	525617	26.90023	ppb		99
79)	Fluoranthene	11.89	202	4233280	51.12509	ppb		99
81)	Benzidine	12.04	184	1153003	55.21525	ppb		98
82)	Pyrene	12.15	202	4308494	49.00641	ppb		100
84)	Butyl benzylphthalate	12.89	149	2011201	49.58660	ppb		94
85)	3,3'-Dichlorobenzidine	13.51	252	1532792	54.49081	ppb		99
86)	Benz (a) anthracene	13.54	228	4433692	50.06188	ppb		99
87)	Bis (2-ethylhexyl) phthala	13.55	149	3137049	51.10547	ppb		99
88)	Chrysene	13.58	228	3731801	45.88174	ppb		99
89)	Di-n-octylphthalate	14.29	149	4912041	50.03943	ppb		98
91)	Benzo (b) fluoranthene	14.82	252	3972658	53.56238	ppb		99
92)	Benzo (k) fluoranthene	14.86	252	3520128	52.33414	ppb		100
93)	Benzo (a) pyrene	15.27	252	3387920	52.90253	ppb		98
94)	Indeno (1,2,3-cd) pyrene	17.15	276	2860388	37.45139	ppb		99
95)	Dibenz (a,h) anthracene	17.17	278	2600776	39.46994	ppb		99
96)	Benzo (g,h,i) perylene	17.69	276	2026052	33.42963	ppb		97

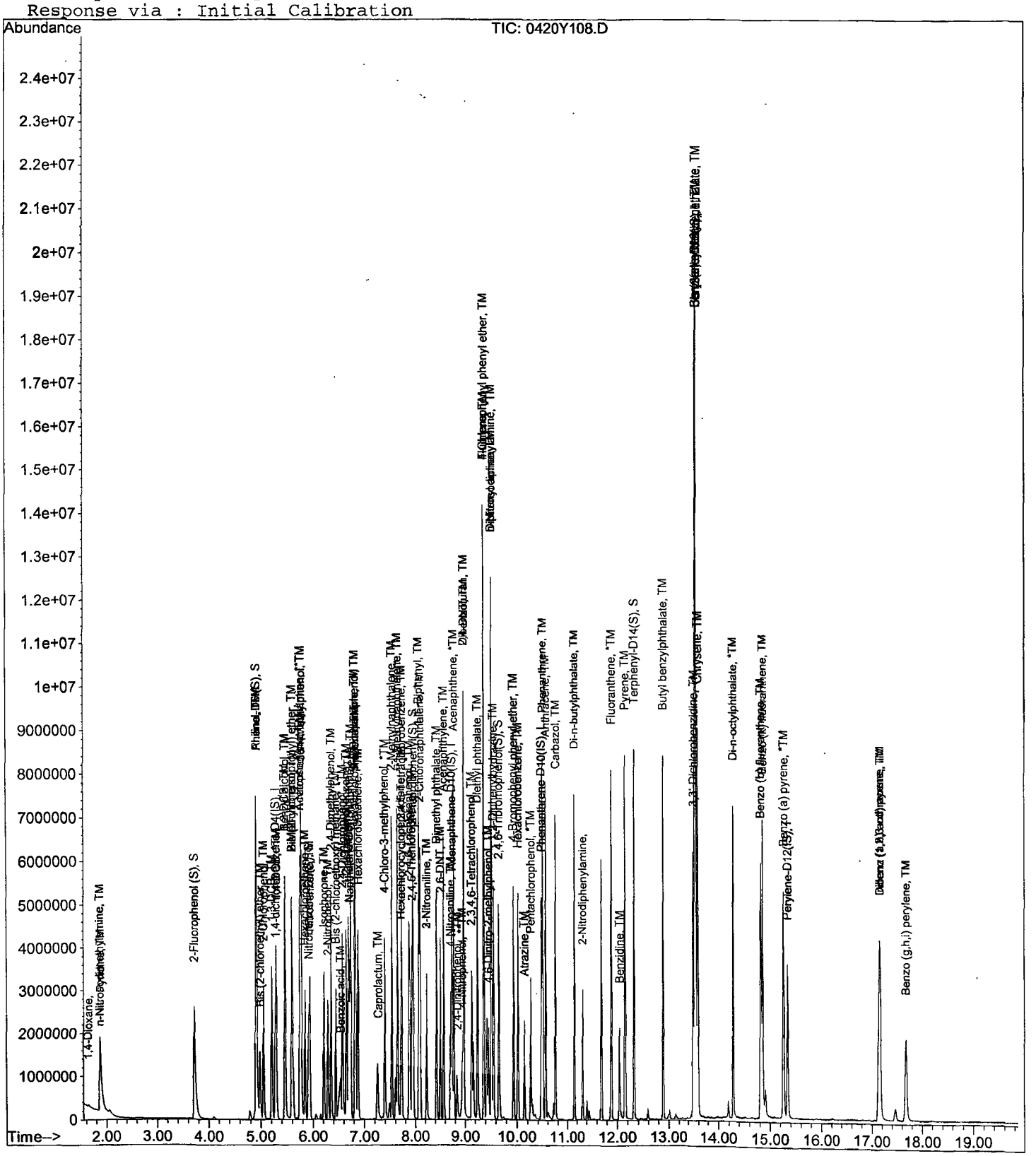
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200420\0420Y108.D Vial: 8
Acq On : 28 Apr 20 6:00 Operator: MA
Sample : 50ug/ml 8270 3/30/20 (3) Inst : Yoda
Misc : Multiplr: 1.00

Quant Time: Apr 28 9:10 2020 Quant Results File: Y0420.RES

Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Apr 21 09:58:57 2020
Response via : Initial Calibration



ORGANICS
Raw Data

Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y200420\0420Y081.D Vial: 81
Acq On : 27 Apr 20 17:13 Operator: MA
Sample : BA09851W16 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Apr 28 9:40 2020 Quant Results File: Y0420.RES

Quant Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Apr 21 09:58:57 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.27	152	424863	40.0000 ppb	-0.01
21) Napthalene-D8(IS)	6.71	136	1756713	40.0000 ppb	-0.01
41) Acenaphthene-D10(IS)	8.74	164	1046668	40.0000 ppb	0.00
65) Phenanthrene-D10(IS)	10.46	188	1987966	40.0000 ppb	-0.01
80) Chrysene-D12(IS)	13.55	240	1884006	40.0000 ppb	-0.02
90) Perylene-D12(IS)	15.34	264	1808822	40.0000 ppb	-0.02
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.71	112	2395111	191.6881 ppb	-0.02
Spiked Amount 250.000			Recovery =	76.675%	
6) Phenol-D6 (S)	4.90	99	3222052	194.8471 ppb	-0.02
Spiked Amount 250.000			Recovery =	77.939%	
22) Nitrobenzene-D5(S)	5.91	82	1617797	112.6762 ppb	-0.01
Spiked Amount 125.000			Recovery =	90.141%	
46) 2-Fluorobiphenyl(S)	7.96	172	3490929	117.3168 ppb	0.00
Spiked Amount 125.000			Recovery =	93.854%	
64) 2,4,6-Tribromophenol(S)	9.67	330	1113825	259.6248 ppb	-0.01
Spiked Amount 250.000			Recovery =	103.850%	
83) Terphenyl-D14(S)	12.33	244	4747707	138.3228 ppb	0.00
Spiked Amount 125.000			Recovery =	110.658%	

Target Compounds Qvalue

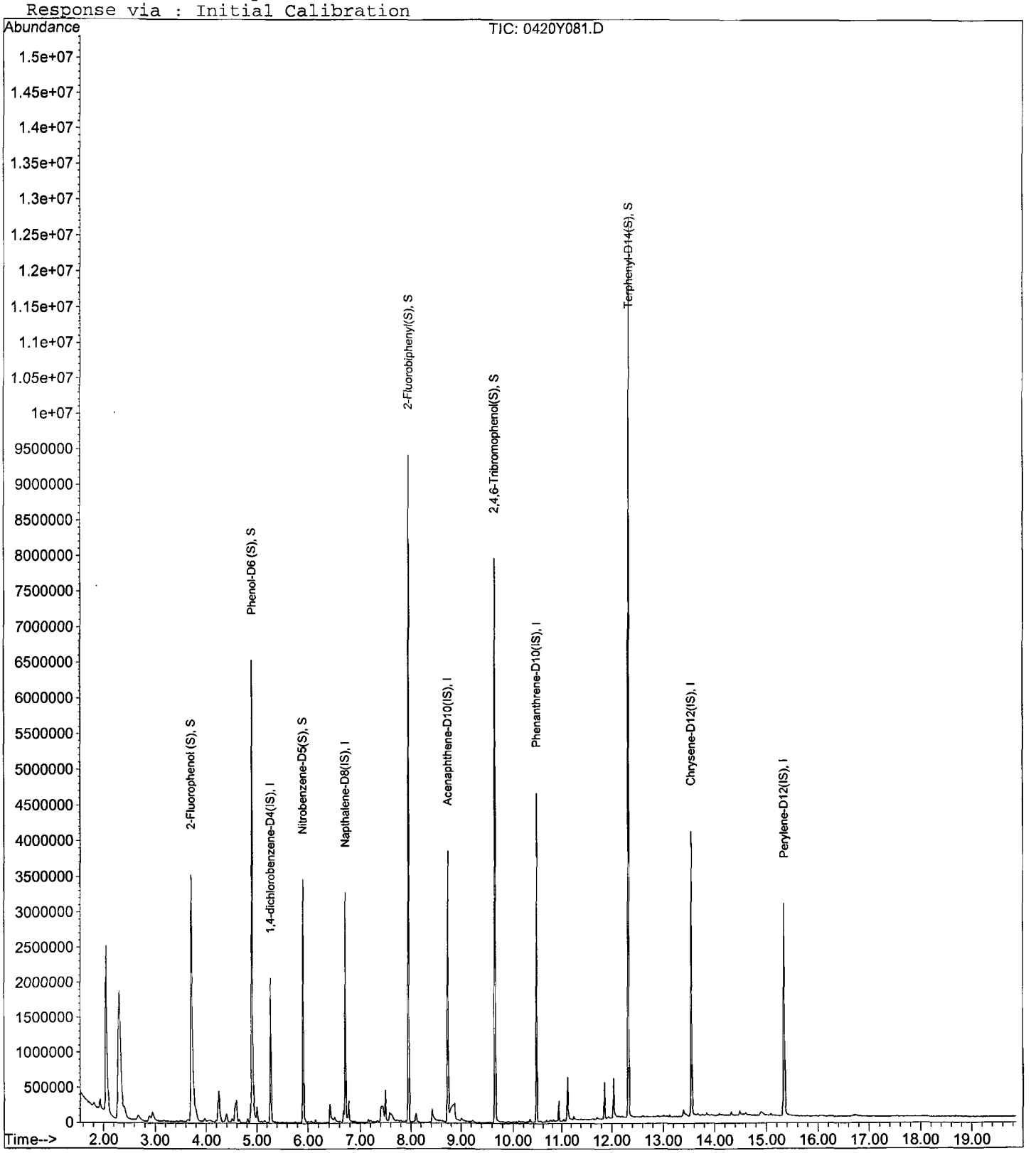
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200420\0420Y081.D Vial: 81
Acq On : 27 Apr 20 17:13 Operator: MA
Sample : BA09851W16 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Apr 28 9:40 2020 Quant Results File: Y0420.RES

Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Apr 21 09:58:57 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y200420\0420Y082.D Vial: 82
Acq On : 27 Apr 20 17:41 Operator: MA
Sample : BA09853W14 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Apr 28 9:38 2020 Quant Results File: Y0420.RES

Quant Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Apr 21 09:58:57 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.28	152	412845	40.0000 ppb	0.00
21) Napthalene-D8(IS)	6.71	136	1734922	40.0000 ppb	0.00
41) Acenaphthene-D10(IS)	8.74	164	1031274	40.0000 ppb	0.00
65) Phenanthrene-D10(IS)	10.47	188	1957482	40.0000 ppb	0.00
80) Chrysene-D12(IS)	13.55	240	1882894	40.0000 ppb	-0.02
90) Perylene-D12(IS)	15.34	264	1785234	40.0000 ppb	-0.02
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.71	112	2064063	170.0022 ppb	-0.03
Spiked Amount 250.000			Recovery =	68.001%	
6) Phenol-D6 (S)	4.90	99	2733549	170.1179 ppb	-0.02
Spiked Amount 250.000			Recovery =	68.047%	
22) Nitrobenzene-D5(S)	5.91	82	1640997	115.7275 ppb	0.00
Spiked Amount 125.000			Recovery =	92.582%	
46) 2-Fluorobiphenyl(S)	7.96	172	3530127	120.4050 ppb	0.00
Spiked Amount 125.000			Recovery =	96.324%	
64) 2,4,6-Tribromophenol(S)	9.67	330	1062242	251.2972 ppb	0.00
Spiked Amount 250.000			Recovery =	100.519%	
83) Terphenyl-D14(S)	12.33	244	4899378	142.8260 ppb	0.00
Spiked Amount 125.000			Recovery =	114.261%	

Target Compounds Qvalue

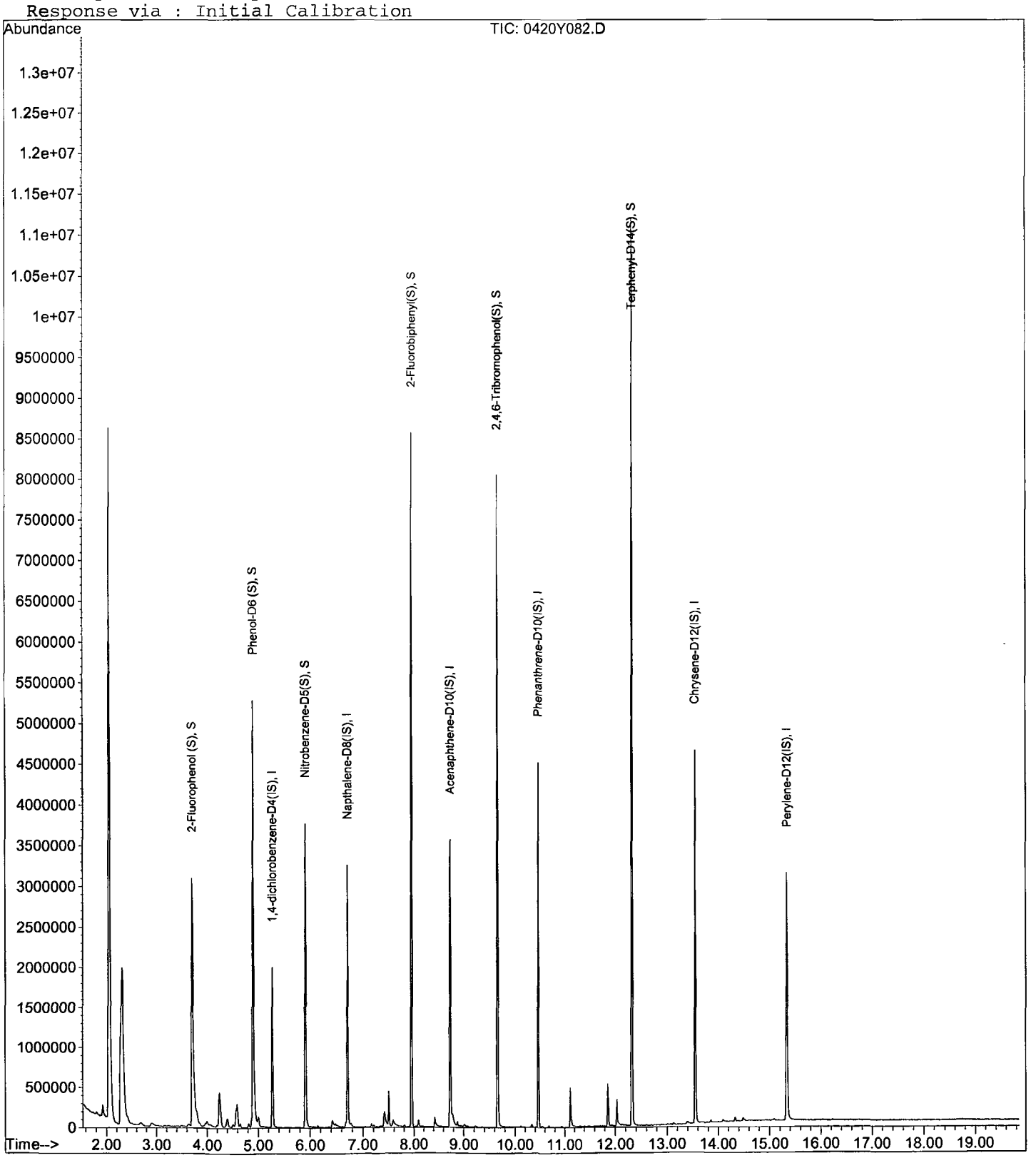
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200420\0420Y082.D Vial: 82
Acq On : 27 Apr 20 17:41 Operator: MA
Sample : BA09853W14 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Apr 28 9:38 2020 Quant Results File: Y0420.RES

Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Apr 21 09:58:57 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y200420\0420Y083.D Vial: 83
Acq On : 27 Apr 20 18:10 Operator: MA
Sample : BA09855W15 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Apr 28 9:32 2020 Quant Results File: Y0420.RES

Quant Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Apr 21 09:58:57 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.27	152	442510	40.0000 ppb	-0.01
21) Napthalene-D8(IS)	6.71	136	1818649	40.0000 ppb	-0.01
41) Acenaphthene-D10(IS)	8.74	164	1075253	40.0000 ppb	0.00
65) Phenanthrene-D10(IS)	10.46	188	2033533	40.0000 ppb	-0.01
80) Chrysene-D12(IS)	13.55	240	1939147	40.0000 ppb	-0.02
90) Perylene-D12(IS)	15.34	264	1883073	40.0000 ppb	-0.02
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.71	112	2347225	180.3641 ppb	-0.03
Spiked Amount 250.000			Recovery =	72.146%	
6) Phenol-D6 (S)	4.90	99	3126530	181.5306 ppb	-0.02
Spiked Amount 250.000			Recovery =	72.612%	
22) Nitrobenzene-D5(S)	5.91	82	1642997	110.5342 ppb	0.00
Spiked Amount 125.000			Recovery =	88.427%	
46) 2-Fluorobiphenyl(S)	7.96	172	3582226	117.1846 ppb	0.00
Spiked Amount 125.000			Recovery =	93.748%	
64) 2,4,6-Tribromophenol(S)	9.67	330	1119105	253.9208 ppb	-0.01
Spiked Amount 250.000			Recovery =	101.568%	
83) Terphenyl-D14(S)	12.33	244	4970780	140.7039 ppb	0.00
Spiked Amount 125.000			Recovery =	112.563%	

Target Compounds Qvalue

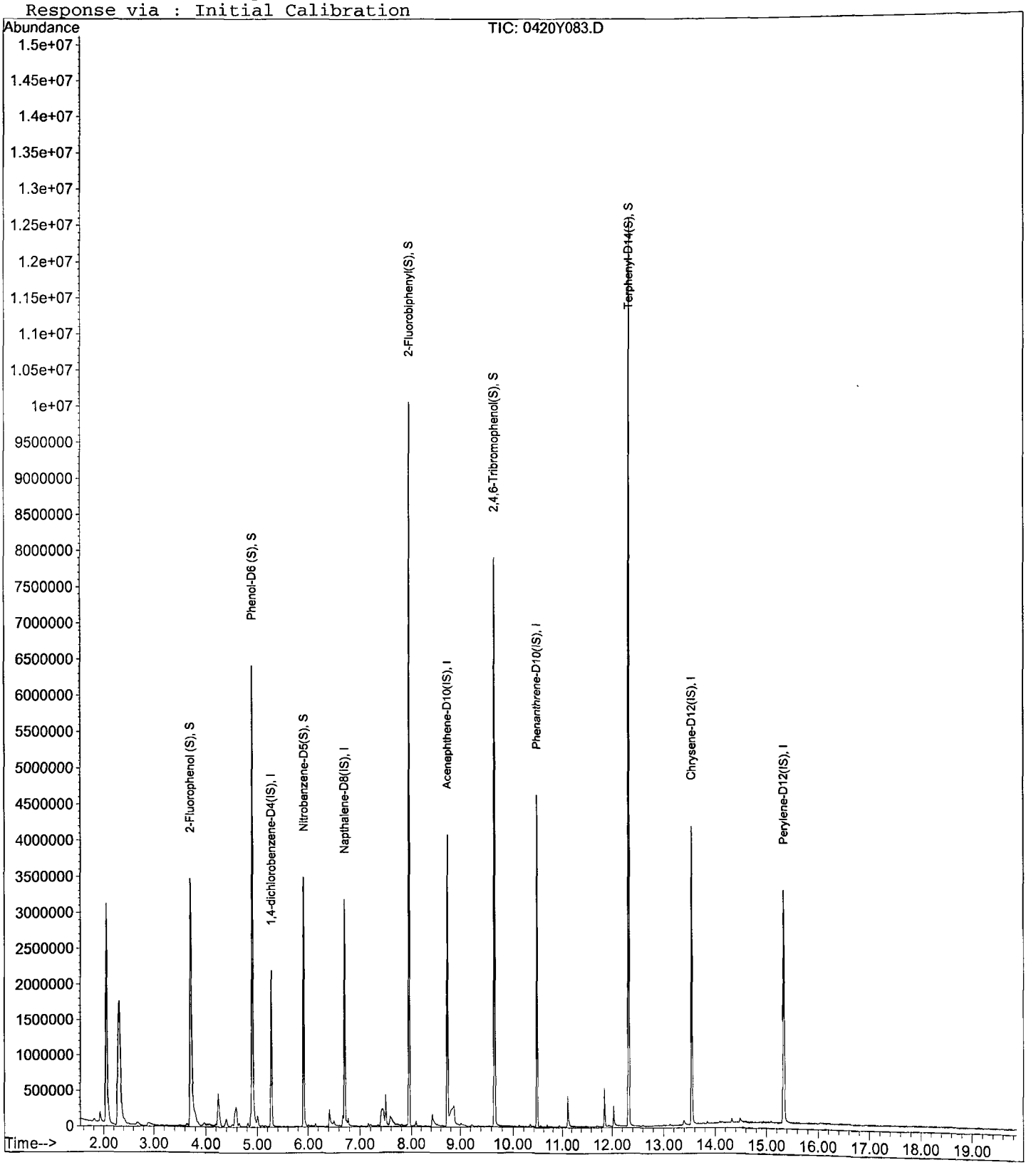
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200420\0420Y083.D Vial: 83
Acq On : 27 Apr 20 18:10 Operator: MA
Sample : BA09855W15 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Apr 28 9:32 2020 Quant Results File: Y0420.RES

Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Apr 21 09:58:57 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y200420\0420Y078.D Vial: 78
Acq On : 27 Apr 20 15:48 Operator: MA
Sample : 200423A BLK 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Apr 28 9:42 2020 Quant Results File: Y0420.RES

Quant Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Apr 21 09:58:57 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.27	152	448190	40.0000 ppb	0.00
21) Napthalene-D8(IS)	6.71	136	1804149	40.0000 ppb	0.00
41) Acenaphthene-D10(IS)	8.74	164	1069037	40.0000 ppb	0.00
65) Phenanthrene-D10(IS)	10.46	188	2064247	40.0000 ppb	0.00
80) Chrysene-D12(IS)	13.55	240	1994329	40.0000 ppb	-0.02
90) Perylene-D12(IS)	15.34	264	1908971	40.0000 ppb	-0.02
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.71	112	2439175	185.0544 ppb	-0.03
Spiked Amount 250.000			Recovery =	74.022%	
6) Phenol-D6 (S)	4.90	99	3170474	181.7491 ppb	-0.02
Spiked Amount 250.000			Recovery =	72.700%	
22) Nitrobenzene-D5(S)	5.91	82	1634786	110.8657 ppb	0.00
Spiked Amount 125.000			Recovery =	88.693%	
46) 2-Fluorobiphenyl(S)	7.96	172	3478164	114.4420 ppb	0.00
Spiked Amount 125.000			Recovery =	91.554%	
64) 2,4,6-Tribromophenol(S)	9.67	330	1105989	252.4040 ppb	0.00
Spiked Amount 250.000			Recovery =	100.962%	
83) Terphenyl-D14(S)	12.33	244	4908582	135.0988 ppb	0.00
Spiked Amount 125.000			Recovery =	108.079%	

Target Compounds Qvalue

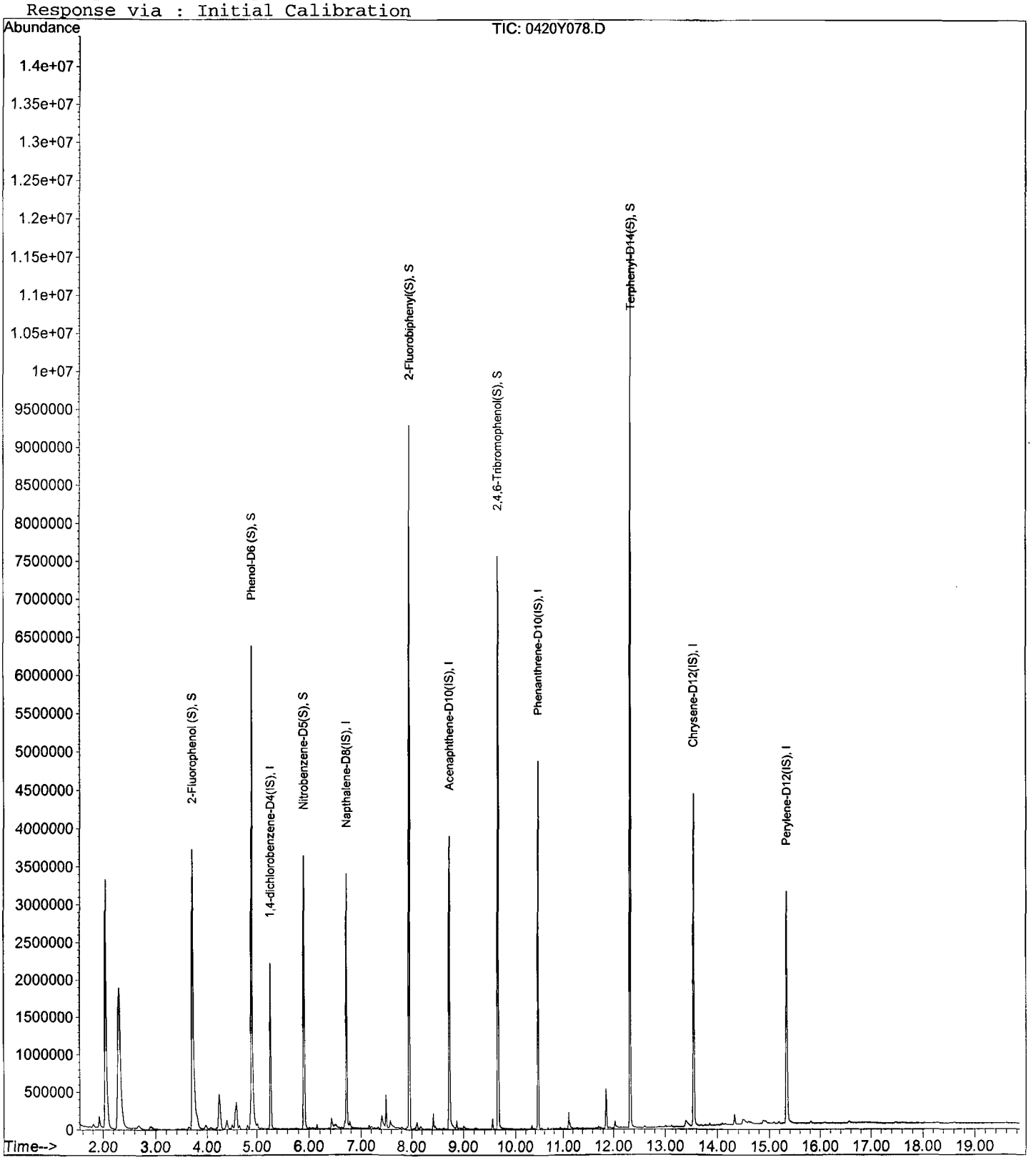
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200420\0420Y078.D Vial: 78
Acq On : 27 Apr 20 15:48 Operator: MA
Sample : 200423A BLK 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Apr 28 9:42 2020 Quant Results File: Y0420.RES

Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Apr 21 09:58:57 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y200420\0420Y079.D Vial: 79
Acq On : 27 Apr 20 16:16 Operator: MA
Sample : 200423A LCS-1 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Apr 28 9:41 2020 Quant Results File: Y0420.RES

Quant Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Apr 21 09:58:57 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.28	152	415144	40.0000 ppb	0.00
21) Napthalene-D8(IS)	6.71	136	1693533	40.0000 ppb	0.00
41) Acenaphthene-D10(IS)	8.74	164	994215	40.0000 ppb	0.00
65) Phenanthrene-D10(IS)	10.46	188	1854364	40.0000 ppb	0.00
80) Chrysene-D12(IS)	13.56	240	2034492	40.0000 ppb	0.00
90) Perylene-D12(IS)	15.35	264	1769387	40.0000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.72	112	2357642	193.1068 ppb	-0.02
Spiked Amount 250.000			Recovery =	77.243%	
6) Phenol-D6 (S)	4.91	99	3272820	202.5506 ppb	0.00
Spiked Amount 250.000			Recovery =	81.020%	
22) Nitrobenzene-D5(S)	5.92	82	1568692	113.3321 ppb	0.00
Spiked Amount 125.000			Recovery =	90.666%	
46) 2-Fluorobiphenyl(S)	7.96	172	3452976	122.1635 ppb	0.00
Spiked Amount 125.000			Recovery =	97.730%	
64) 2,4,6-Tribromophenol(S)	9.67	330	1097070	269.2106 ppb	0.00
Spiked Amount 250.000			Recovery =	107.684%	
83) Terphenyl-D14(S)	12.33	244	4816217	129.9398 ppb	0.00
Spiked Amount 125.000			Recovery =	103.952%	
Target Compounds					Qvalue
7) Phenol	4.92	94	984969	46.9502 ppb	100

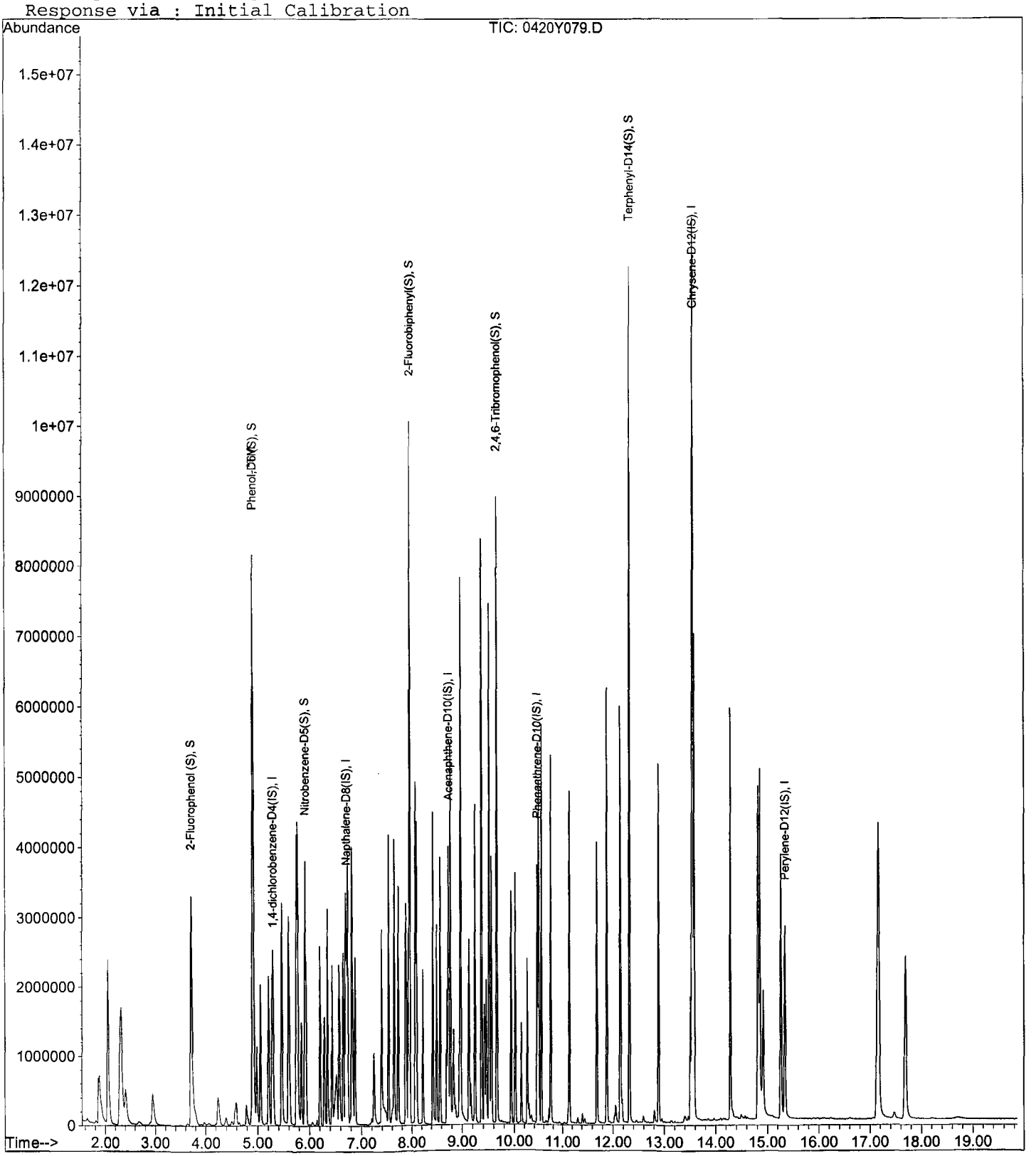
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200420\0420Y079.D Vial: 79
Acq On : 27 Apr 20 16:16 Operator: MA
Sample : 200423A LCS-1 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Apr 28 9:41 2020 Quant Results File: Y0420.RES

Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Apr 21 09:58:57 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\YODA\DATA\Y200420\0420Y080.D Vial: 80
Acq On : 27 Apr 20 16:45 Operator: MA
Sample : 200423A LCSD-1 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Apr 28 9:41 2020 Quant Results File: Y0420.RES

Quant Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Apr 21 09:58:57 2020
Response via : Initial Calibration
DataAcq Meth : SVOC1011

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-dichlorobenzene-D4(IS)	5.28	152	437416	40.0000 ppb	0.00
21) Napthalene-D8(IS)	6.71	136	1758460	40.0000 ppb	0.00
41) Acenaphthene-D10(IS)	8.74	164	1046767	40.0000 ppb	0.00
65) Phenanthrene-D10(IS)	10.47	188	1955547	40.0000 ppb	0.00
80) Chrysene-D12(IS)	13.56	240	2117248	40.0000 ppb	0.00
90) Perylene-D12(IS)	15.35	264	1818277	40.0000 ppb	0.00
System Monitoring Compounds					
5) 2-Fluorophenol (S)	3.71	112	2278632	177.1324 ppb	-0.03
Spiked Amount 250.000			Recovery =	70.853%	
6) Phenol-D6 (S)	4.90	99	3197490	187.8126 ppb	-0.02
Spiked Amount 250.000			Recovery =	75.125%	
22) Nitrobenzene-D5(S)	5.92	82	1520299	105.7804 ppb	0.00
Spiked Amount 125.000			Recovery =	84.624%	
46) 2-Fluorobiphenyl(S)	7.96	172	3347046	112.4708 ppb	0.00
Spiked Amount 125.000			Recovery =	89.977%	
64) 2,4,6-Tribromophenol(S)	9.67	330	1073286	250.1518 ppb	0.00
Spiked Amount 250.000			Recovery =	100.061%	
83) Terphenyl-D14(S)	12.33	244	4607364	119.4464 ppb	0.00
Spiked Amount 125.000			Recovery =	95.557%	
Target Compounds					Qvalue
7) Phenol	4.92	94	963833	43.6034 ppb	99

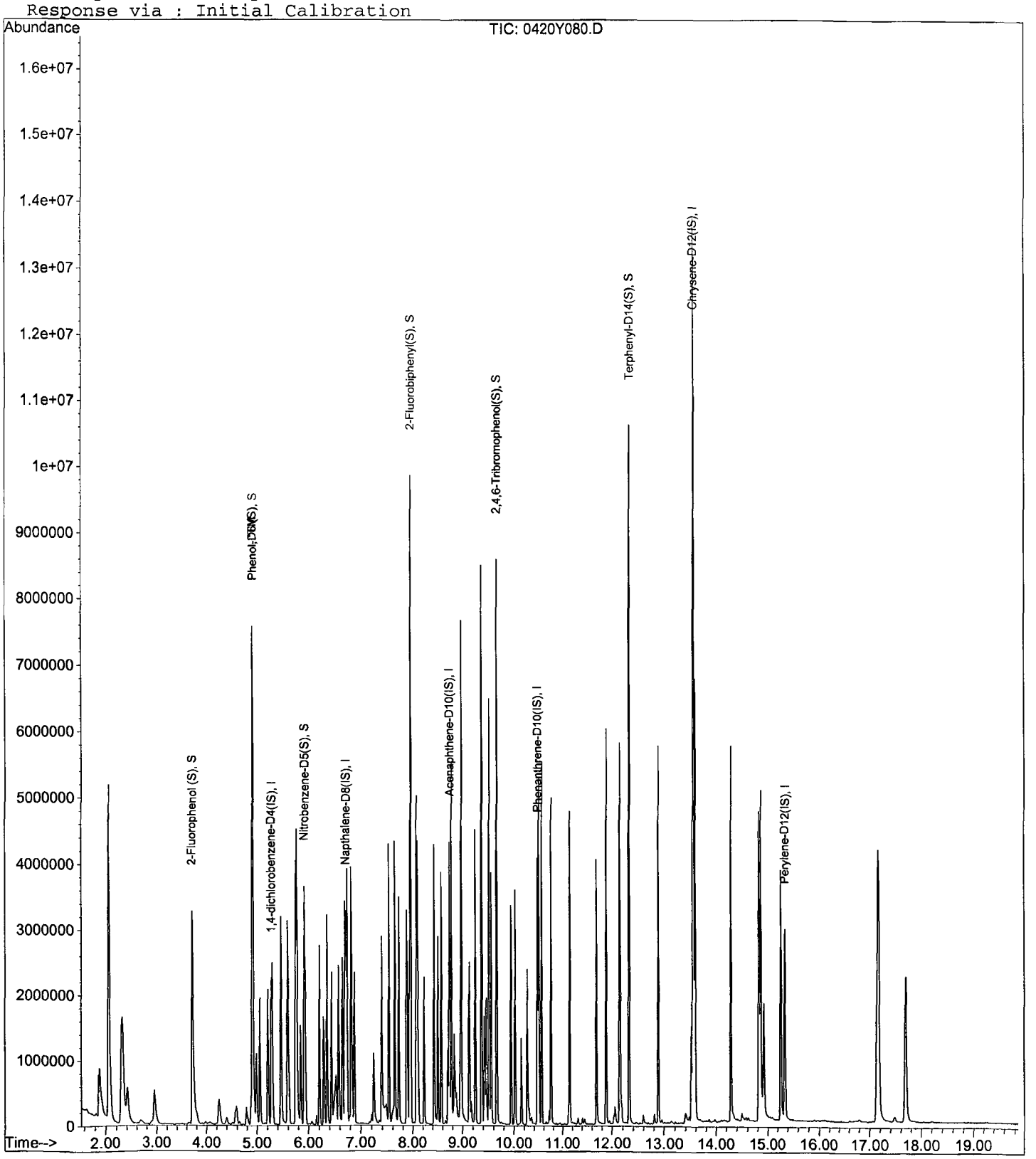
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\YODA\DATA\Y200420\0420Y080.D Vial: 80
Acq On : 27 Apr 20 16:45 Operator: MA
Sample : 200423A LCSD-1 1/800 Inst : Yoda
Misc : Multiplr: 1.25

Quant Time: Apr 28 9:41 2020 Quant Results File: Y0420.RES

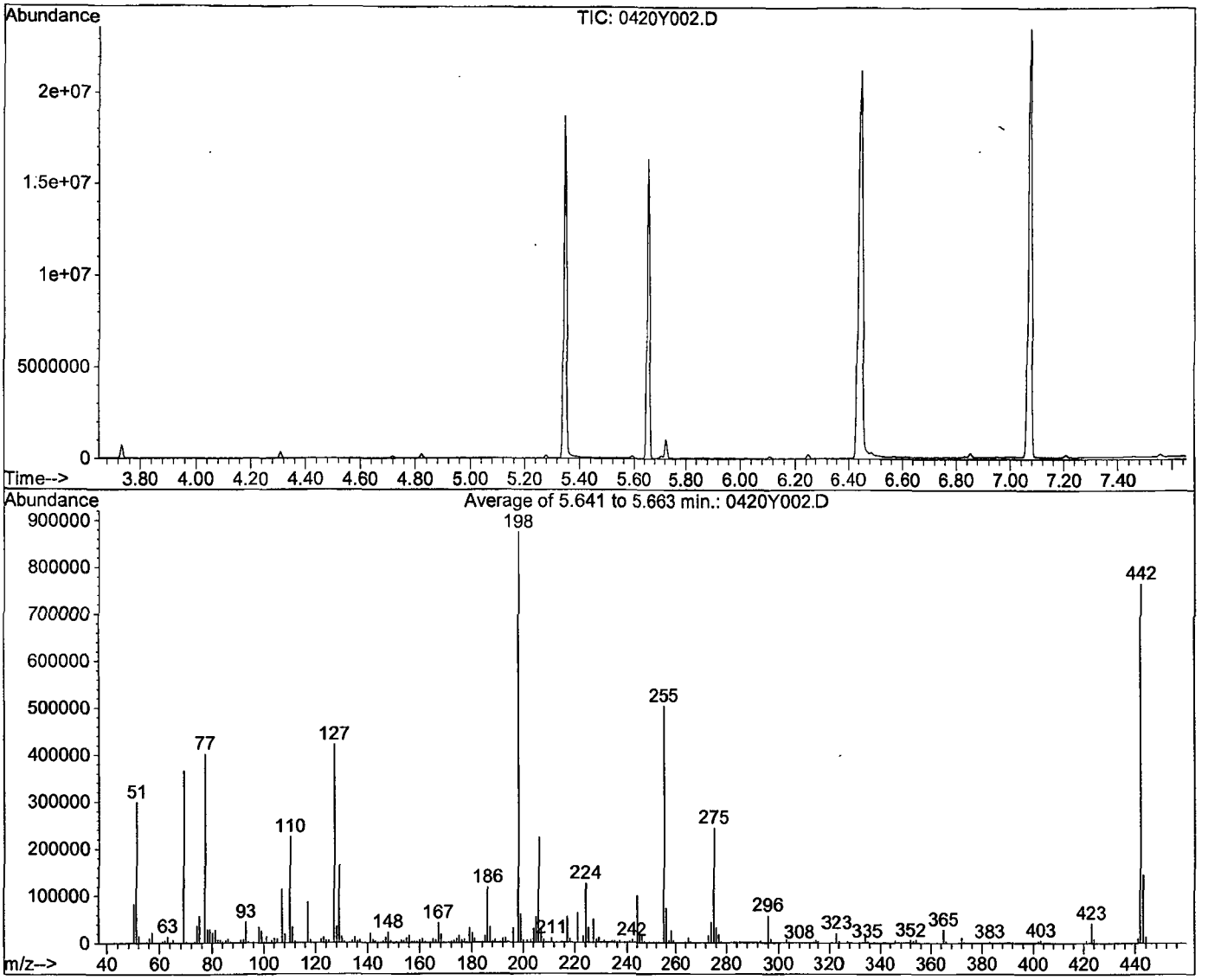
Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C
Last Update : Tue Apr 21 09:58:57 2020
Response via : Initial Calibration



Data File : M:\YODA\DATA\Y200420\0420Y002.D
Acq On : 20 Apr 20 9:12
Sample : SV TUNE 10/01/19
Misc :

Vial: 2
Operator: MA
Inst : Yoda
Multiplr: 1.00

Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C



Spectrum Information: Average of 5.641 to 5.663 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	34.1	299140	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.8	2967	PASS
127	198	10	80	48.2	422251	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	876450	PASS
199	198	5	9	6.9	60492	PASS
275	198	10	60	27.9	244772	PASS
365	198	1	100	3.2	28377	PASS
441	442	0.01	24	1.3	10096	PASS
442	198	50	500	87.6	767865	PASS
443	442	15	24	19.0	145807	PASS

Data File Name:	**0420Y002.D**
Data File Path:	**M:\YODA\DATA\Y200420**
Operator:	**MA**
Date Acquired:	**20 Apr 2020 09:12**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/01/19**
Vial Number:	**2**
Instrument Name:	**Yoda**

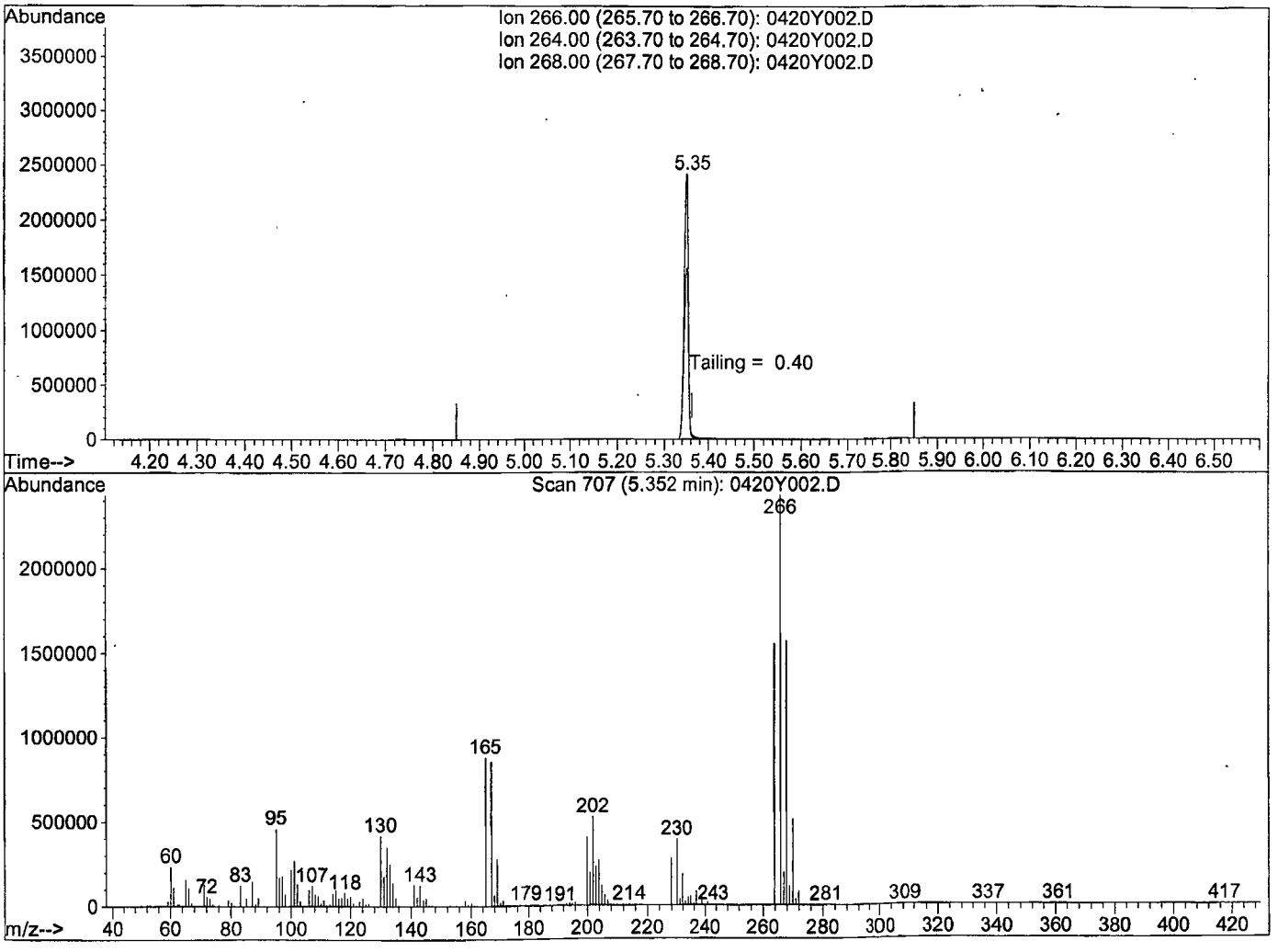
#	Name	Ret Time	Target Response
1)	DDT	7.07	213156000
2)	DDD	6.83	776778
3)	DDE	6.57	433718

Breakdown **0.56**

Quantitation Report

Data File : M:\YODA\DATA\Y200420\0420Y002.D Vial: 2
Acq On : 20 Apr 20 9:12 Operator: MA
Sample : SV TUNE 10/01/19 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Apr 20 9:43 2020 Quant Results File: temp.res

Method : M:\YODA\DATA\Y200327\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 20 09:43:48 2020
Response via : Single Level Calibration



TIC: 0420Y002.D

(5) Pentachlorophenol

5.35min 0.0000

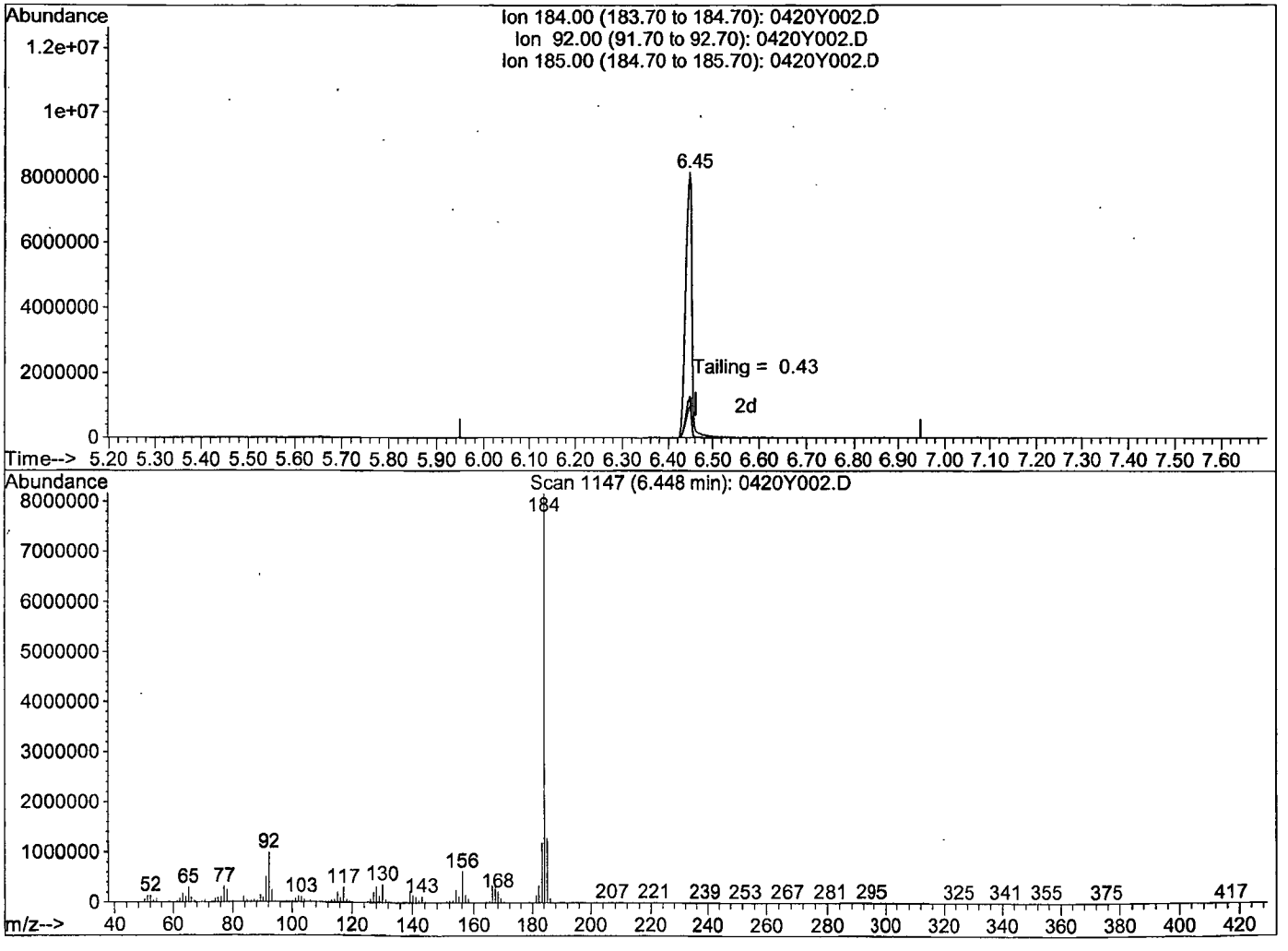
response 17135451

Ion	Exp%	Act%
266.00	100	100
264.00	63.90	62.86
268.00	64.60	63.17
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y200420\0420Y002.D Vial: 2
Acq On : 20 Apr 20 9:12 Operator: MA
Sample : SV TUNE 10/01/19 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Apr 20 9:43 2020 Quant Results File: temp.res

Method : M:\YODA\DATA\Y200327\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Mon Apr 20 09:43:48 2020
Response via : Single Level Calibration



TIC: 0420Y002.D

(6) Benzidine

6.45min 0.0000

response 81506245

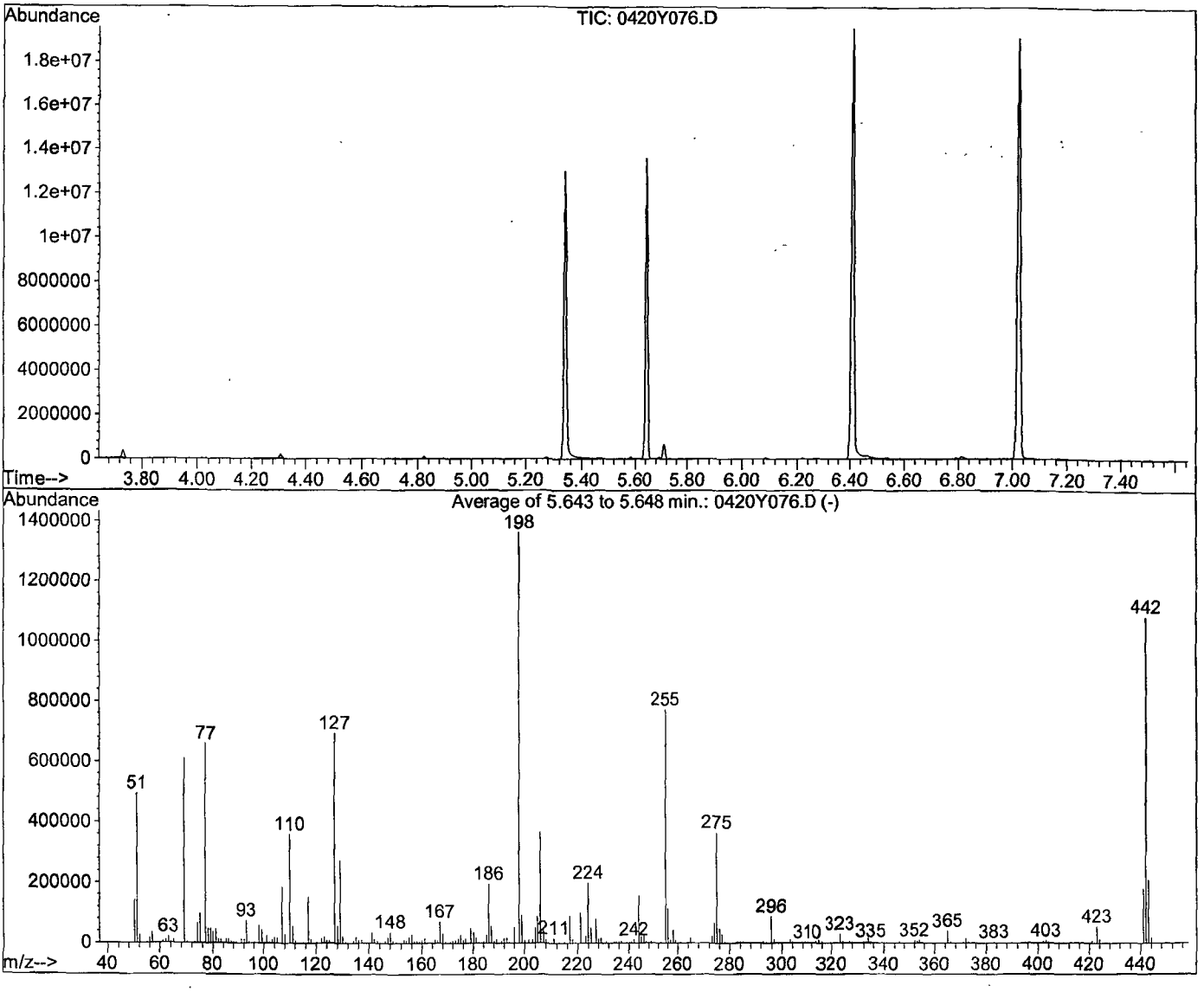
Ion	Exp%	Act%
184.00	100	100
92.00	12.10	10.47
185.00	15.70	14.64
0.00	0.00	0.00

DFTPP

Data File : M:\YODA\DATA\Y200420\0420Y076.D
Acq On : 27 Apr 20 15:03
Sample : SV TUNE 10/01/19
Misc :

Vial: 76
Operator: MA
Inst : Yoda
Multiplr: 1.00

Method : M:\YODA\DATA\Y200420\Y0420.M (RTE Integrator)
Title : EPA 8270C



AutoFind: Scans 823, 824, 825; Background Corrected with Scan 814

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	36.3	494393	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.6	3392	PASS
127	198	10	80	50.9	694165	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	1363285	PASS
199	198	5	9	6.7	91525	PASS
275	198	10	60	26.7	364224	PASS
365	198	1	100	2.9	39379	PASS
441	442	0.01	24	16.6	179925	PASS
442	198	50	500	79.6	1084992	PASS
443	442	15	24	19.3	209429	PASS

Data File Name:	**0420Y076.D**
Data File Path:	**M:\YODA\DATA\Y200420**
Operator:	**MA**
Date Acquired:	**27 Apr 2020 15:03**
Method File:	**DFTPP2.M**
Sample Name:	**SV TUNE 10/01/19**
Vial Number:	**76**
Instrument Name:	**Yoda**

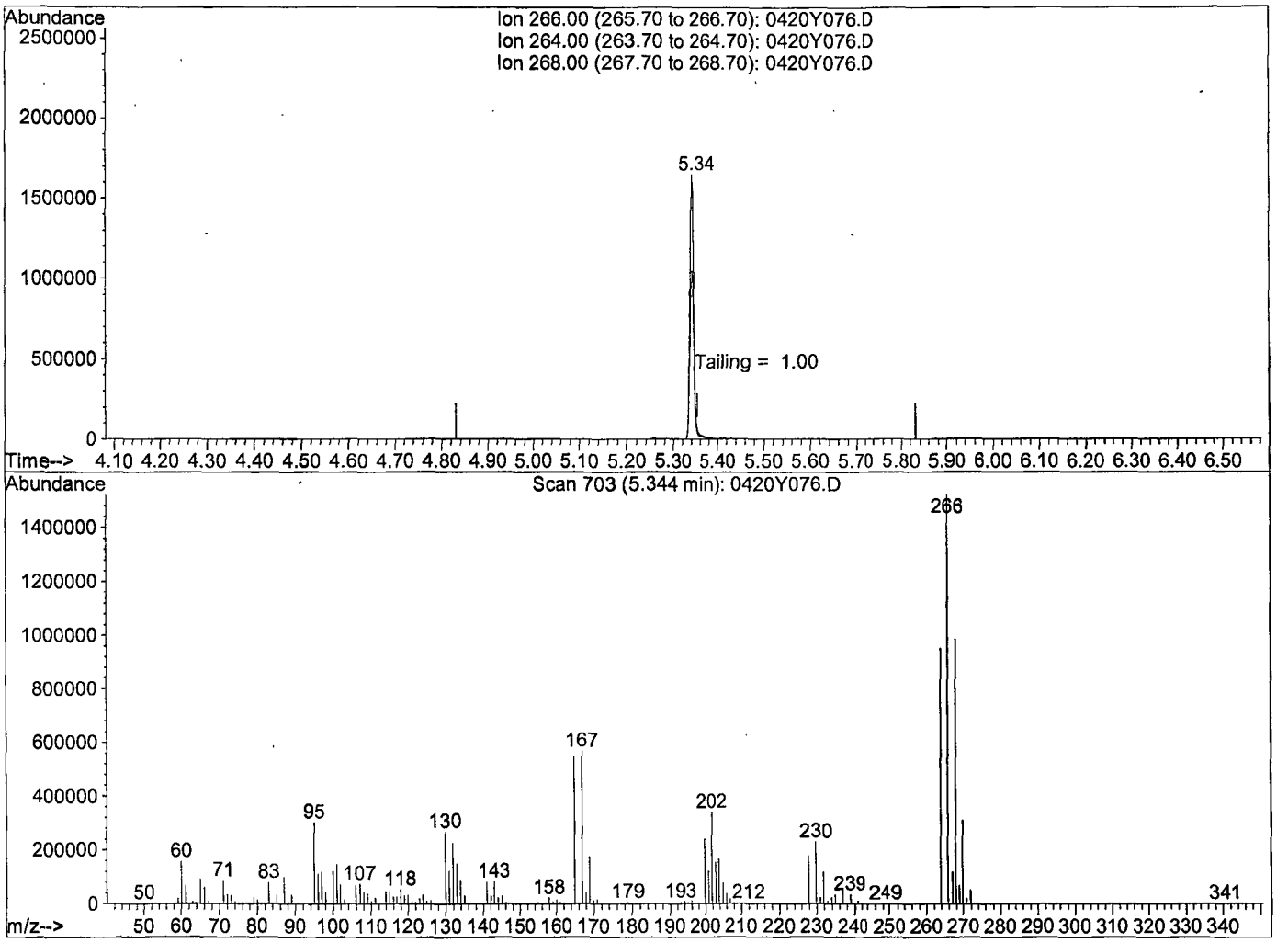
#	Name	Ret Time	Target Response
1)	DDT	7.02	144144000
2)	DDD	6.79	488870
3)	DDE	6.53	517992

Breakdown **0.69**

Quantitation Report

Data File : M:\YODA\DATA\Y200420\0420Y076.D Vial: 76
Acq On : 27 Apr 20 15:03 Operator: MA
Sample : SV TUNE 10/01/19 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Apr 27 15:01 2020 Quant Results File: temp.res

Method : M:\YODA\DATA\Y200420\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Wed Apr 22 12:57:32 2020
Response via : Single Level Calibration



TIC: 0420Y076.D

(5) Pentachlorophenol

5.34min 0.0000

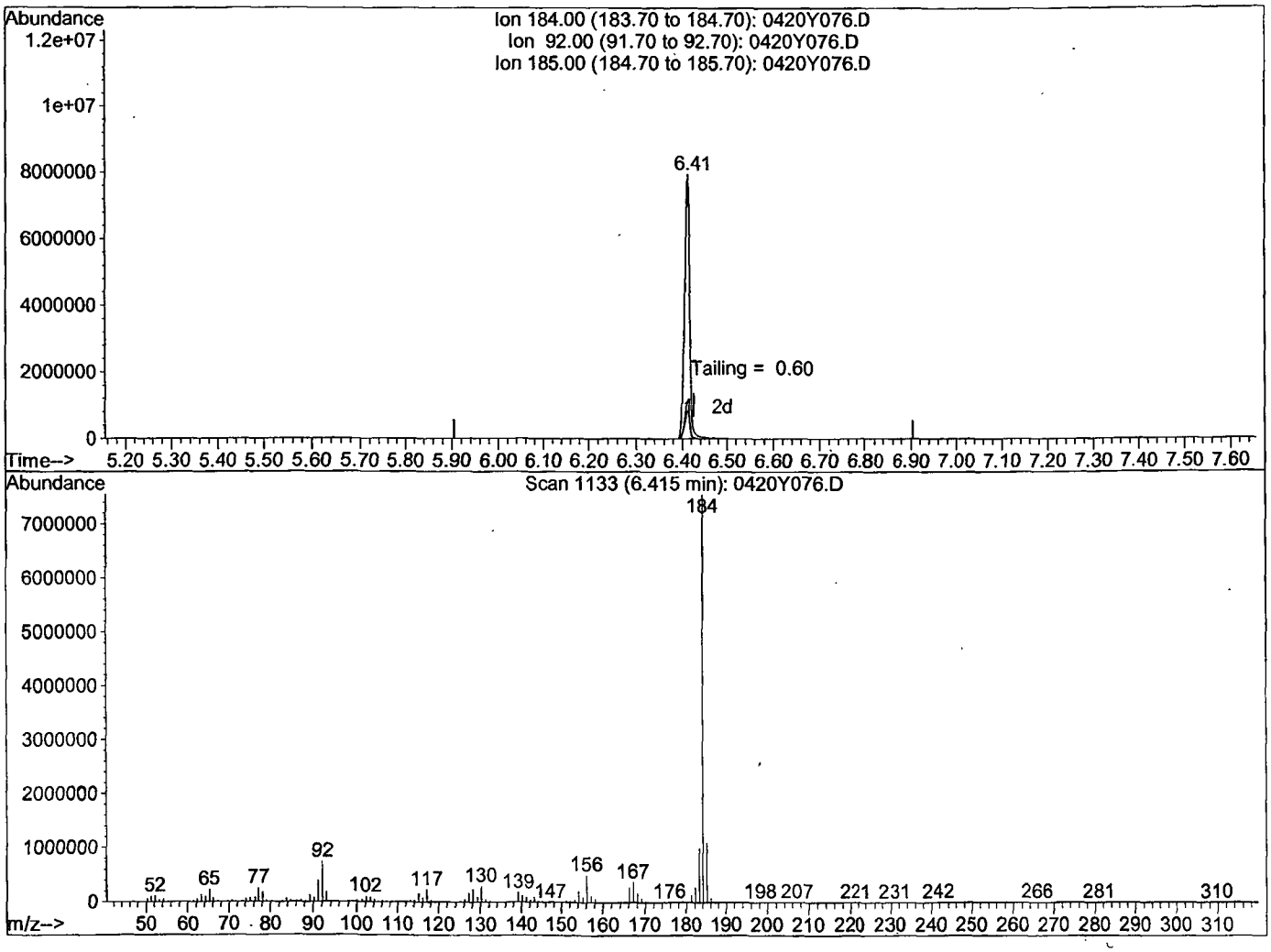
response 10272298

Ion	Exp%	Act%
266.00	100	100
264.00	63.50	63.87
268.00	63.70	62.94
0.00	0.00	0.00

Quantitation Report

Data File : M:\YODA\DATA\Y200420\0420Y076.D Vial: 76
Acq On : 27 Apr 20 15:03 Operator: MA
Sample : SV TUNE 10/01/19 Inst : Yoda
Misc : Multiplr: 1.00
Quant Time: Apr 27 15:01 2020 Quant Results File: temp.res

Method : M:\YODA\DATA\Y200420\DFTPP2.M (Chemstation Integrator)
Title :
Last Update : Wed Apr 22 12:57:32 2020
Response via : Single Level Calibration



TIC: 0420Y076.D

(6) Benzidine

6.41min 0.0000

response 63561950

Ion	Exp%	Act%
184.00	100	100
92.00	9.80	9.71
185.00	14.80	14.42
0.00	0.00	0.00

Name of Final Standard	**8270 Surrogate**	**Prep'd By (Initials)**	**MA**
Prep Date	04/15/20		
Exp Date	**03/02/21**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 Surrogate stock	Restek	8270 Surrogate stock	10,000 ug/mL	**03/03/20**	**03/03/21**	25 mL	250 mL	**Methanol 0235140**	2000 ug/mL
8270 Surrogate stock	Restek	8270 Surrogate stock	5000 ug/mL	**03/03/20**	**03/03/21**	"	"	"	1000 ug/mL

Name of Final Standard	8270 Full Scan Spike	Prep'd By (Initials)	MA
Prep Date	04/01/20		
Exp Date	04/01/21		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
10001	Absolute	10001	2000	081419 - 49569, 49570	08/14/22	2.0 mL	80 mL	**Methanol Lot# 235140**	50 ug/mL
10002	Absolute	10002	2000	090919-49205, 49810	09/09/22	2.0 mL	*	*	50 ug/mL
10004	Absolute	10004	2000	071618-49215, 103119-49814	07/16/23	2.0 mL	*	*	50 ug/mL
10005	Absolute	10005	2000	032018-40225, 49800	03/20/23	2.0 mL	*	*	50 ug/mL
10006	Absolute	10006	2000	030119-49236, 110119-49818	03/01/22	2.0 mL	*	*	50 ug/mL
10007	Absolute	10007	2000	080116-40246, 080116-49805	08/01/21	2.0 mL	*	*	50 ug/mL
10018	Absolute	10018	2000	091919-49564, 49565	01/19/24	2.0 mL	*	*	50 ug/mL
70023	Absolute	70023	1000	012819-49272, 112119-49822	01/28/24	2.0 mL	*	*	25 ug/mL
82705	Absolute	82705	2000	090919--49287, 49826	09/09/22	2.0 mL	*	*	50 ug/mL
94552	Absolute	94552	various	111319-49577, 49799	11/13/21	2.0 mL	*	*	various

Name of Final Standard	**Semivolatile (SV) Tuning Solution**	**Prep'd By (Initials)**	**JP**
Prep Date	**10/01/19**		
Exp Date	**11/30/20**		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from contianer Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
Semivolatile GC/MS Tuning Standard	Ultra Scientific	GCM-150-1	1,000 ug/mL	CR3789A-41241	**11/30/20**	1,250 uL	25 mL	**MC #58240**	50 ug/mL

Name of Final Standard	8270 Full Scan CCV	Prep'd By (Initials)	MA
Prep Date	03/30/20		
Exp Date	03/03/21		

Initial Standard Information						Final Standard Information			
8270 Stock	APPL	8270 Stock	62.5-125 ug/mL	03/03/20	03/03/21	80 uL	200 uL	MC DW717 70 uL	50 ug/mL
8270 Working Surrogate Stock	APPL	8270 Working Surrogate Stock	200-400 ug/mL	03/03/20	03/03/21	50 uL	"	"	"
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	03/03/20	03/03/21	4 uL	"	"	"

Name of Final Standard	8270 Full Scan Standard Curve	Prep'd By (Initials)	JP
Prep Date	03/04/20		
Exp Date	03/03/21		

Initial Standard Information						Final Standard Information			
Name of Initial Standard (from container Label)	Supplier	Supplier P/N# (or APPL Mix Name)	Conc.(range)	Lot # with QA # (or reference to APPL prep date)	Exp Date	Aliquot from Stock	Final Volume	Final Solvent + Lot# (or APPL Prep Date)	Final Standard Conc (range)
8270 Working Stock	APPL	8270 Working Stock	50:100 ug/mL	03/03/20	03/03/21	8 uL	200uL	MC DW717 188 uL	4 ug/mL
8270 Working Surrogate Stock	APPL	8270 Working Surrogate Stock	200:400 ug/mL	03/03/20	03/03/21	4 uL	"	"	"
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	03/03/20	03/03/21	4 uL	"	"	"
8270 Stock	APPL	8270 Stock	62.5 125 ug/mL	03/03/20	03/03/21	8 uL	200uL	MC DW717 187 uL	5 ug/mL
8270 Working Surrogate Stock	APPL	8270 Working Surrogate Stock	200:400 ug/mL	03/03/20	03/03/21	5 uL	"	"	"
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	03/03/20	03/03/21	8 uL	"	"	"
8270 Stock	APPL	8270 Stock	62.5.125 ug/mL	03/03/20	03/03/21	8 uL	100uL	MC DW717 87 uL	10 ug/mL
8270 Working Surrogate Stock	APPL	8270 Working Surrogate Stock	200:400 ug/mL	03/03/20	03/03/21	5 uL	"	"	"
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	03/03/20	03/03/21	4 uL	"	"	"
8270 Stock	APPL	8270 Stock	62.5:125 ug/mL	03/03/20	03/03/21	16 uL	100uL	MC DW717 74 uL	20 ug/mL
8270 Working Surrogate Stock	APPL	8270 Working Surrogate Stock	200:400 ug/mL	03/03/20	03/03/21	10 uL	"	"	"
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	03/03/20	03/03/21	2 uL	"	"	"
8270 Stock	APPL	8270 Stock	62.5:125 ug/mL	03/03/20	03/03/21	32 uL	100uL	MC DW717 48 uL	40 ug/mL
8270 Working Surrogate Stock	APPL	8270 Working Surrogate Stock	200 400 ug/mL	03/03/20	03/03/21	20 uL	"	"	"
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	03/03/20	03/03/21	2 uL	"	"	"
8270 Stock	APPL	8270 Stock	62.5:125 ug/mL	03/03/20	03/03/21	80 uL	200 uL	MC DW717 70 uL	50 ug/mL
8270 Working Surrogate Stock	APPL	8270 Working Surrogate Stock	200:400 ug/mL	03/03/20	03/03/21	50 uL	"	"	"
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	03/03/20	03/03/21	4 uL	"	"	"
8270 Stock	APPL	8270 Stock	62 5 125 ug/mL	03/03/20	03/03/21	48 uL	100uL	MC DW717 22 uL	60 ug/mL
8270 Working Surrogate Stock	APPL	8270 Working Surrogate Stock	200:400 ug/mL	03/03/20	03/03/21	30 uL	"	"	"
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	03/03/20	03/03/21	2 uL	"	"	"
8270 Stock	APPL	8270 Stock	62 5.125 ug/mL	03/03/20	03/03/21	64 uL	100uL	MC DW717 28 uL	80 ug/mL
8270 Surrogate Stock	APPL	8270 Surrogate Stock	1000 2000 ug/mL	03/03/20	03/03/21	8 uL	"	"	"
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	03/03/20	03/03/21	2 uL	"	"	"
8270 Stock	APPL	8270 Stock	62.5:125 ug/mL	03/03/20	03/03/21	80 uL	100uL	MC DW717 10 uL	100 ug/mL
8270 Surrogate Stock	APPL	8270 Surrogate Stock	1000:2000 ug/mL	03/03/20	03/03/21	10 uL	"	"	"
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	03/03/20	03/03/21	2 uL	"	"	"

Name of Final Standard	8270 Full Scan Second Source	Prep'd By (Initials)	JP
Prep Date	03/04/20		
Exp Date	06/30/20		

Initial Standard Information						Final Standard Information			
(from container Label)	Supplier	APPL Mix Name)	Conc.(range)	APPL prep date)	Exp Date	Stock	Volume	APPL Prep Date)	Conc (range)
8270 SS Stock	APPL	8270 SS Stock	100:50 ug/mL	11/20/19	06/30/20	100 uL	200uL	MC DW717 100uL	50:25 ug/mL
8270 Working Surrogate Stock	APPL	8270 Working Surrogate Stock	200:400 ug/mL	03/03/20	03/03/21	50 uL	"	"	"
SV Internal Standard	APPL	SV Internal Standard	2000 ug/mL	03/03/20	03/03/21	4 uL	"	"	"

Organic Extraction Worksheet

Method	Continuous Liquid/Liquid SVOC 3520C	Extraction Set	200423A	Extraction Method	LIQ003	Units	mL

Spiked ID 1	8270T Spike 4-1-20-4-1-21		Surrogate ID 1	8270 Surrogate 4-15-20 3-2-21	
Spiked ID 2	Sim Spike 4-1-20-4-1-21		Surrogate ID 2	SIM Surrogate 4-1-20-4-1-21	
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	04/23/20 13:00	
Spiked ID 8			Ext. End Time:	04/24/20 7:00	
			GC Requires Extract By:		

pH1	2	04/23/20 10:50	Water Bath Temp 1 °C	70/69.2 E-WB5 °
pH2	2	04/23/20 10:50	Water Bath Temp 2 °C	75/74.9 E-WB6
pH3	14	04/24/20 8:30	Water Bath Temp 3 °C	

Spiked By: KY **Date** 04/23/20 **Witnessed By:** DL **Date** 04/23/20

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	200423A Blk				1,0.050	1,2	800	1	2/1	04/23/20 10:40	
						equip	E-HP51 E-WB6				
2	200423A LCS-1		1	1	1	1	800	1	2/1	04/23/20 10:40	
						equip	E-HP50 E-WB6				
3	200423A LCS-2		0.125	2	0.050	2	800	1	2/1	04/23/20 10:40	
						equip	E-HP48 E-WB6				
4	200423A LCSD-1		1	1	1	1	800	1	2/1	04/23/20 10:40	
						equip	E-HP49 E-WB6				
5	200423A LCSD-2		0.125	2	0.050	2	800	1	2/1	04/23/20 10:40	
						equip	E-HP47 E-WB6				
6	BA09851	BA09851W16			1,0.050	1,2	800	1	2/1	04/23/20 10:40	91926
						equip	E-HP25 E-WB6				
7	BA09853	BA09853W14			1,0.050	1,2	800	1	2/1	04/23/20 10:40	91926
						equip	E-HP26 E-WB6				
8	BA09855	BA09855W15			1,0.050	1,2	800	1	2/1	04/23/20 10:40	91926
						equip	E-HP27 E-WB6				
9	BA09915	BA09915W14			1,0.050	1,2	800	1	2/1	04/23/20 10:40	91941
						equip	E-HP28 E-WB6				
10	BA09917	BA09917W13			1,0.050	1,2	800	1	2/1	04/23/20 10:40	91941
						equip	E-HP29 E-WB6				
11	BA09919	BA09919W14			1,0.050	1,2	800	1	2/1	04/23/20 10:40	91941
						equip	E-HP30 E-WB6				
12	BA09921	BA09921W15			1,0.050	1,2	800	1	2/1	04/23/20 10:40	91941
						equip	E-HP13 E-WB5				
13	BA09923	BA09923W12			1,0.050	1,2	800	1	2/1	04/23/20 10:40	91941
						equip	E-HP16 E-WB6				
14	BA09924	BA09924W10			1,0.050	1,2	800	1	2/1	04/23/20 10:40	91941
						equip	E-HP15 E-WB5				
15	BA09926	BA09926W14			1,0.050	1,2	800	1	2/1	04/23/20 10:40	91941
						equip	E-HP14 E-WB5				
16	BA09928	BA09928W18			1,0.050	1,2	800	1	2/1	04/23/20 10:40	91941
						equip	E-HP12 E-WB5				

Solvent and Lot#	
PH Strips	HC998032
Dichloromethane (DCM)	59239
1+1 H2SO4	4-2-20
10N NaOH	3-2-20
Filter Paper	400171
Na2SO4	2019020631

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	MA
Date	4/27/20
Time	14:30
Refrigerator	HOBART

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL
Concentration	ERR

Modified	04/28/20 2:42:33 PM

Reviewed By: KY **Date** 04/28/20

Organic Extraction Worksheet

Method	Continuous Liquid/Liquid SVOC 3520C	Extraction Set	200423A	Extraction Method	LIQ003	Units	mL

Spiked ID 1	8270T Spike 4-1-20-4-1-21		Surrogate ID 1	8270 Surrogate 4-15-20 3-2-21	
Spiked ID 2	Sim Spike 4-1-20-4-1-21		Surrogate ID 2	SIM Surrogate 4-1-20-4-1-21	
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	NO	
Spiked ID 7			Ext. Start Time:	04/23/20 13:00	
Spiked ID 8			Ext. End Time:	04/24/20 7:00	
			GC Requires Extract By:		

pH1	2	04/23/20 10:50	Water Bath Temp 1 °C	70/69.2 E-WB5 °
pH2	2	04/23/20 10:50	Water Bath Temp 2 °C	75/74.9 E-WB6
pH3	14	04/24/20 8:30	Water Bath Temp 3 °C	

Spiked By: KY **Date** 04/23/20 **Witnessed By:** DL **Date** 04/23/20

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
17	BA10087	BA10087W15			1,0.050	1,2	800	1	2/1	04/23/20 12:30	91957
						equip	E-HP11 E-WB5				
18	BA10089	BA10089W14			1,0.050	1,2	800	1	2/1	04/23/20 12:30	91957
						equip	E-HP10 E-WB5				
19	BA10091	BA10091W14			1,0.050	1,2	800	1	2/1	04/23/20 12:30	91957
						equip	E-HP9 E-WB6				

Solvent and Lot#	
PH Strips	HC998032
Dichloromethane (DCM)	59239
1+1 H2SO4	4-2-20
10N NaOH	3-2-20
Filter Paper	400171
Na2SO4	2019020631

Extraction COC Transfer	
Extraction lab employee Initials	KY
GC analyst's initials	MA
Date	
Time	
Refrigerator	HOBART

	Technician's Initials
Scanned By	DL
Sample Preparation	DL
Extraction	DL
Concentration	ERR

Modified	04/28/20 2:42:33 PM

Reviewed By: KY **Date** 04/28/20

Injection Log

Directory: M:\YODA\DATA\Y200420\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	0420Y002.D	1	SV TUNE 10/01/19		20 Apr 20 9:12
2	3	0420Y003.D	1	4ug/ml 8270 3/4/20		20 Apr 20 9:28
3	4	0420Y004.D	1	5ug/ml 8270 3/4/20		20 Apr 20 9:57
4	5	0420Y005.D	1	10ug/ml 8270 3/4/20		20 Apr 20 10:31
5	6	0420Y006.D	1	20ug/ml 8270 3/4/20		20 Apr 20 11:00
6	7	0420Y007.D	1	40ug/ml 8270 3/4/20		20 Apr 20 11:28
7	8	0420Y008.D	1	50ug/ml 8270 3/4/20		20 Apr 20 11:57
8	9	0420Y009.D	1	60ug/ml 8270 3/4/20		20 Apr 20 12:26
9	10	0420Y010.D	1	80ug/ml 8270 3/4/20		20 Apr 20 12:55
10	11	0420Y011.D	1	100ug/ml 8270 3/4/20		20 Apr 20 13:24
11	12	0420Y012.D	1	SS 8270 3/4/20		20 Apr 20 13:53
12	76	0420Y076.D	1	SV TUNE 10/01/19		27 Apr 20 15:03
13	77	0420Y077.D	1	50ug/ml 8270 3/30/20 (1)		27 Apr 20 15:19
14	78	0420Y078.D	1.25	200423A BLK 1/800		27 Apr 20 15:48
15	79	0420Y079.D	1.25	200423A LCS-1 1/800		27 Apr 20 16:16
16	80	0420Y080.D	1.25	200423A LCSD-1 1/800		27 Apr 20 16:45
17	81	0420Y081.D	1.25	BA09851W16 1/800		27 Apr 20 17:13
18	82	0420Y082.D	1.25	BA09853W14 1/800		27 Apr 20 17:41
19	83	0420Y083.D	1.25	BA09855W15 1/800		27 Apr 20 18:10
20	8	0420Y108.D	1	50ug/ml 8270 3/30/20 (3)		28 Apr 20 6:00

ORGANICS
Calibration Data

PAH by GCMS SIM
EPA 8270 SIM

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No:
Case No: Initial Cal. Date: 02/04/20
Matrix: Instrument: Linus Initials: MA

		Compound	0204L003.D 0.1	0204L004.D 0.2	0204L005.D 0.5	0204L006.D 1	0204L007.D 5	0204L008.D 10	0204L009.D 50	0204L010.D 100			Avg	%RSD	Type	r^2	Q	MRF
1	I	Napthalene-D8(IS)																
2	TM	Naphthalene	1.120	1.131	1.072	1.083	1.129	1.047	0.9772	0.9334			1.1	6.9	TM			0.700
3	S	2-Methylnaphthalene-D10 (2M	1.257	1.211	1.175	1.198	1.255	1.218	1.180	1.133			1.2	3.5	S			
4	TM	2-Methylnaphthalene	0.6849	0.6892	0.6742	0.6957	0.7468	0.6960	0.6554	0.6145			0.68	5.5	TM			0.400
5	TM	1-Methylnaphthalene	0.7412	0.7479	0.7192	0.7336	0.7676	0.7029	0.6628	0.6175			0.71	7.0	TM			
6	I	Acenaphthene-D10(IS)																
7	TM	Acenaphthylene	3.869	3.855	3.806	3.892	4.393	4.113	3.818	3.434			3.9	7.0	TM			0.900
8	*TM	Acenaphthene	1.372	1.277	1.234	1.238	1.309	1.218	1.155	1.036			1.2	8.3	*TM			0.900
9	TM	Fluorene	1.476	1.471	1.412	1.485	1.636	1.549	1.427	1.385			1.5	5.5	TM			0.900
10	I	Phenanthrene-D10(IS)																
11	TM	Phenanthrene	1.231	1.222	1.179	1.198	1.290	1.205	1.041	0.9371			1.2	9.9	TM			0.700
12	TM	Anthracene	1.002	1.028	0.9886	1.045	1.160	1.099	0.9848	0.8800			1.0	8.1	TM			0.700
13	S	Fluoranthene-D10 (FRT)	1.457	1.470	1.320	1.355	1.491	1.476	1.437	1.389			1.4	4.4	S			
14	*TM	Fluoranthene	1.604	1.635	1.531	1.601	1.817	1.668	1.480	1.357			1.6	8.6	*TM			0.600
15	I	Chrysene-D12(IS)																
16	TM	Pyrene	1.291	1.315	1.240	1.301	1.386	1.308	1.220	1.113			1.3	6.4	TM			0.600
17	TM	Benz (a) anthracene	1.177	1.123	1.047	1.077	1.191	1.159	1.141	1.081			1.1	4.6	TM			0.800
18	TM	Chrysene	1.461	1.411	1.370	1.360	1.367	1.267	1.174	1.065			1.3	10	TM			0.700
19	TM	Indeno (1,2,3-cd) pyrene	1.438	1.382	1.382	1.402	1.574	1.526	1.551	1.517			1.5	5.4	TM			0.500
20	I	Perylene-D12(IS)																
21	TM	Benzo (b) fluoranthene	0.8206	0.8277	0.8502	0.9180	1.141	1.084	1.118	1.129			0.99	15	TM			0.700
22	TM	Benzo (k) fluoranthene	1.252	1.341	1.294	1.323	1.396	1.330	1.094	1.089			1.3	9.1	TM			0.700
23	*TM	Benzo (a) pyrene	0.8229	0.8399	0.9301	0.9711	1.126	1.087	1.069	1.029			0.98	12	*TM			0.700
24	TM	Dibenz (a,h) anthracene	0.9746	0.9893	0.9980	1.034	1.209	1.157	1.169	1.136			1.1	8.7	TM			0.400
25	TM	Benzo (g,h,i) perylene	1.063	1.069	1.094	1.118	1.274	1.216	1.188	1.145			1.1	6.5	TM			0.500
26																		
27																		
28																		
29																		
30																		
31																		
32																		
33																		
34																		
35																		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L003.D Vial: 3
Acq On : 4 Feb 20 9:48 Operator: MA
Sample : 0.1 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:38:46 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.19	136	98990	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.18	164	52942	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.91	188	98572	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.01	240	123137	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.43	264	142515	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	4.96	152	2488	0.05046 ppb		0.00
Spiked Amount 5.000			Recovery =	1.000%		
13) Fluoranthene-D10 (FRT)	9.28	212	2873	0.04174 ppb		0.00
Spiked Amount 5.000			Recovery =	0.840%		
Target Compounds						Qvalue
2) Naphthalene	4.21	128	4434	0.09312 ppb		99
4) 2-Methylnaphthalene	5.00	142	2712	0.09372 ppb		100
5) 1-Methylnaphthalene	5.11	142	2935	0.09787 ppb		97
7) Acenaphthylene	6.02	152	8194	0.08489 ppb		100
8) Acenaphthene	6.22	154	2905	0.10261 ppb		96
9) Fluorene	6.82	166	3126	0.09002 ppb		94
11) Phenanthrene	7.93	178	4855	0.08909 ppb		99
12) Anthracene	7.99	178	3951	0.08269 ppb		98
14) Fluoranthene	9.30	202	6323	0.08364 ppb	#	92
16) Pyrene	9.57	202	6359	0.07717 ppb	#	94
17) Benz (a) anthracene	11.00	228	5798	0.08414 ppb		99
18) Chrysene	11.04	228	7198	0.09744 ppb		99
19) Indeno (1,2,3-cd) pyrene	14.93	276	7083	0.09610 ppb	#	99
21) Benzo (b) fluoranthene	12.79	252	4678	0.06579 ppb	#	99
22) Benzo (k) fluoranthene	12.85	252	7135	0.09052 ppb		98
23) Benzo (a) pyrene	13.35	252	4691	0.07030 ppb		98
24) Dibenz (a,h) anthracene	14.97	278	5556	0.08385 ppb		99
25) Benzo (g,h,i) perylene	15.29	276	6060	0.08386 ppb		97

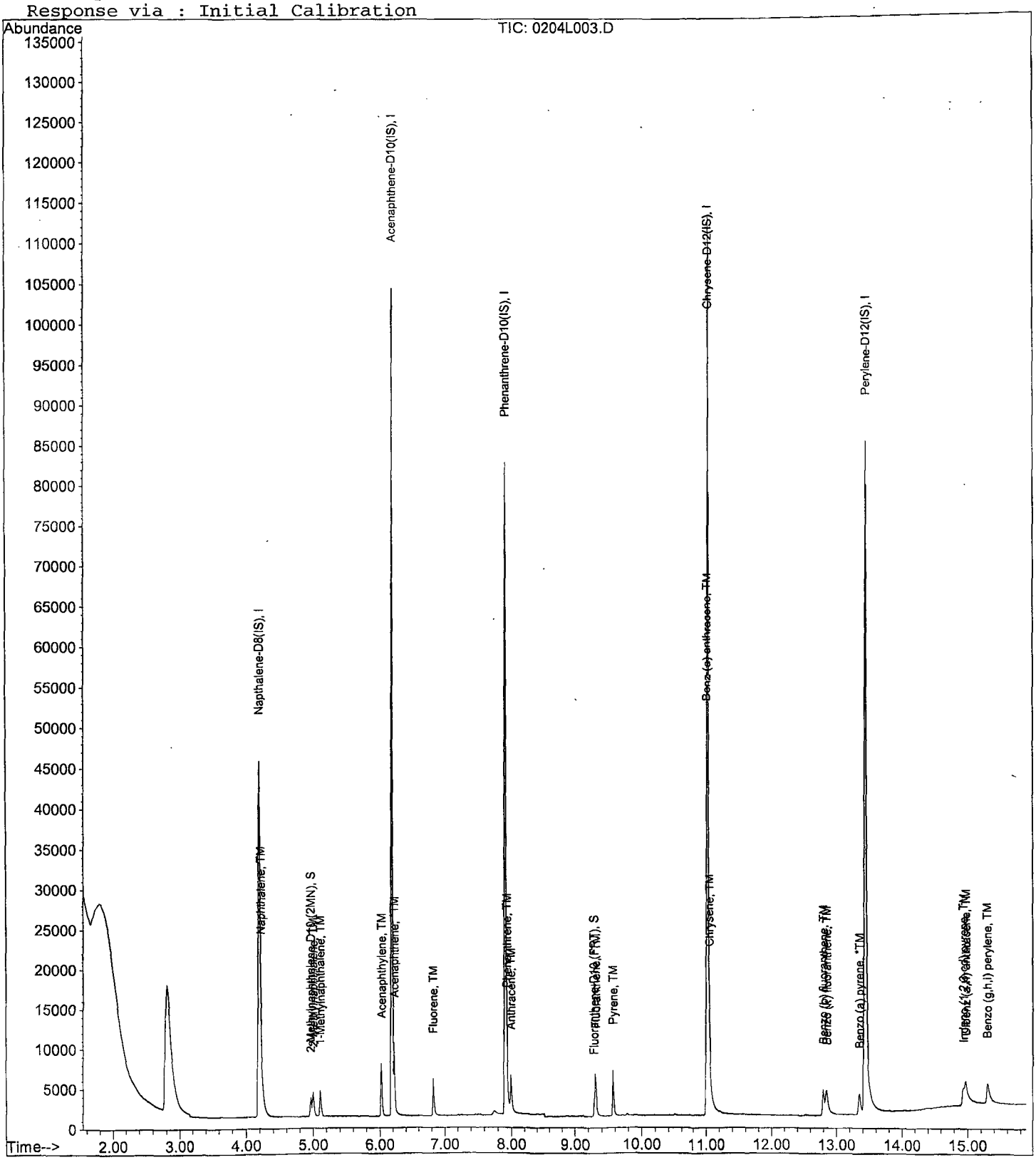
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L003.D Vial: 3
Acq On : 4 Feb 20 9:48 Operator: MA
Sample : 0.1 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L004.D Vial: 4
Acq On : 4 Feb 20 10:09 Operator: MA
Sample : 0.2 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:42:22 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.19	136	95871	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.18	164	51059	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.91	188	94452	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.01	240	119835	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.43	264	136582	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	4.96	152	4644	0.09724	ppb		0.00
Spiked Amount 5.000			Recovery = 1.940%				
13) Fluoranthene-D10 (FRT)	9.28	212	5554	0.08422	ppb		0.00
Spiked Amount 5.000			Recovery = 1.680%				
Target Compounds							Qvalue
2) Naphthalene	4.21	128	8673	0.18807	ppb		99
4) 2-Methylnaphthalene	5.00	142	5286	0.18862	ppb		99
5) 1-Methylnaphthalene	5.11	142	5736	0.19749	ppb		100
7) Acenaphthylene	6.02	152	15747	0.16915	ppb		99
8) Acenaphthene	6.22	154	5216	0.19104	ppb		99
9) Fluorene	6.82	166	6007	0.17936	ppb		96
11) Phenanthrene	7.93	178	9231	0.17678	ppb		99
12) Anthracene	7.99	178	7770	0.16971	ppb		99
14) Fluoranthene	9.30	202	12353	0.17053	ppb	#	93
16) Pyrene	9.57	202	12608	0.15723	ppb	#	91
17) Benz (a) anthracene	11.00	228	10767	0.16055	ppb		99
18) Chrysene	11.04	228	13529	0.18818	ppb		99
19) Indeno (1,2,3-cd) pyrene	14.92	276	13247	0.18469	ppb	#	100
21) Benzo (b) fluoranthene	12.79	252	9044	0.13271	ppb		99
22) Benzo (k) fluoranthene	12.85	252	14654	0.19398	ppb		98
23) Benzo (a) pyrene	13.35	252	9177	0.14350	ppb	#	97
24) Dibenz (a,h) anthracene	14.97	278	10810	0.17022	ppb		99
25) Benzo (g,h,i) perylene	15.29	276	11681	0.16867	ppb		98

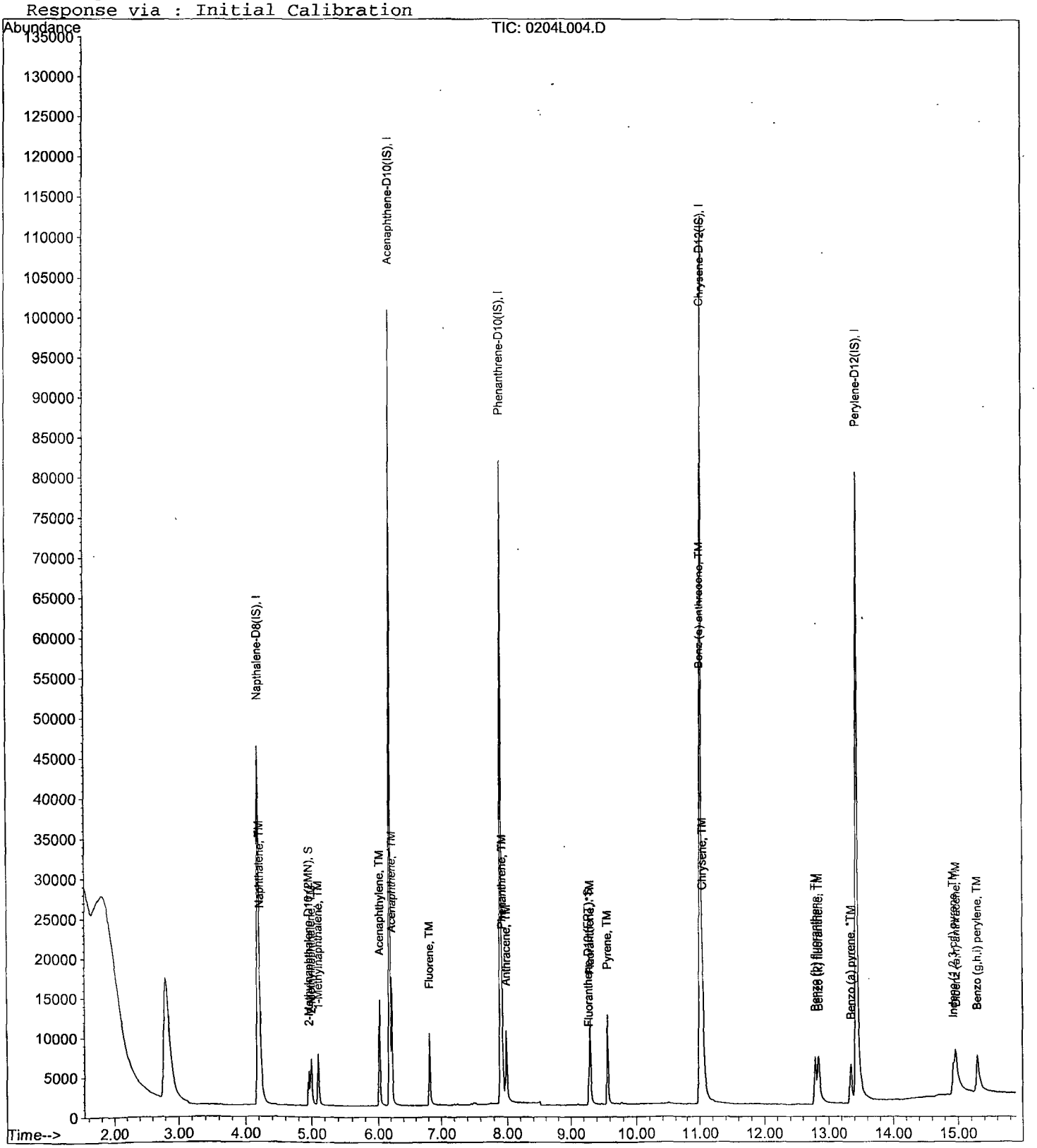
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L004.D Vial: 4
Acq On : 4 Feb 20 10:09 Operator: MA
Sample : 0.2 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L005.D Vial: 5
Acq On : 4 Feb 20 10:31 Operator: MA
Sample : 0.5 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:42:22 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.19	136	93485	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.18	164	49653	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.91	188	91991	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.01	240	112785	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.43	264	128599	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	4.96	152	10986	0.23591	ppb		0.00
Spiked Amount 5.000			Recovery =	4.720%			
13) Fluoranthene-D10 (FRT)	9.28	212	12142	0.18904	ppb		0.00
Spiked Amount 5.000			Recovery =	3.780%			
Target Compounds							Qvalue
2) Naphthalene	4.21	128	20052	0.44592	ppb		100
4) 2-Methylnaphthalene	5.00	142	12606	0.46129	ppb		100
5) 1-Methylnaphthalene	5.11	142	13447	0.47479	ppb		99
7) Acenaphthylene	6.02	152	37792	0.41744	ppb		100
8) Acenaphthene	6.22	154	12256	0.46158	ppb		99
9) Fluorene	6.82	166	14018	0.43041	ppb		96
11) Phenanthrene	7.93	178	21699	0.42667	ppb		98
12) Anthracene	7.99	178	18188	0.40788	ppb		98
14) Fluoranthene	9.30	202	28175	0.39935	ppb	#	93
16) Pyrene	9.57	202	27975	0.37067	ppb	#	93
17) Benz (a) anthracene	11.00	228	23610	0.37407	ppb		100
18) Chrysene	11.04	228	30897	0.45662	ppb		99
19) Indeno (1,2,3-cd) pyrene	14.92	276	31178	0.46186	ppb	#	100
21) Benzo (b) fluoranthene	12.79	252	21866	0.34077	ppb		98
22) Benzo (k) fluoranthene	12.85	252	33289	0.46801	ppb		98
23) Benzo (a) pyrene	13.35	252	23923	0.39730	ppb		98
24) Dibenz (a,h) anthracene	14.96	278	25669	0.42930	ppb	#	95
25) Benzo (g,h,i) perylene	15.29	276	28135	0.43148	ppb		99

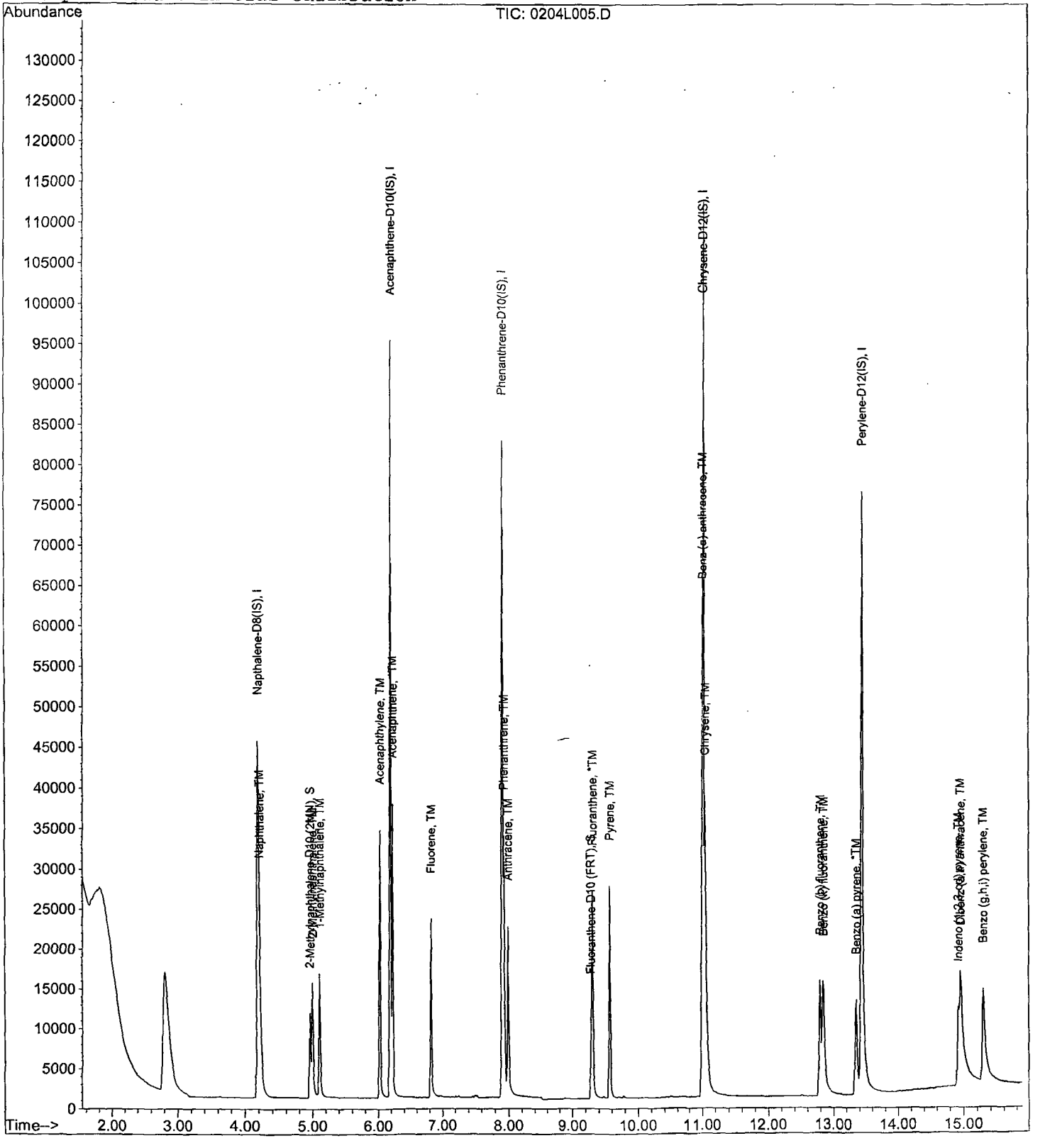
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L005.D Vial: 5
Acq On : 4 Feb 20 10:31 Operator: MA
Sample : 0.5 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L006.D Vial: 6
Acq On : 4 Feb 20 10:53 Operator: MA
Sample : 1 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:42:22 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	4.19	136	95074	2.50000 ppb	0.00
6) Acenaphthene-D10(IS)	6.18	164	50320	2.50000 ppb	0.00
10) Phenanthrene-D10(IS)	7.91	188	93982	2.50000 ppb	0.00
15) Chrysene-D12(IS)	11.01	240	115986	2.50000 ppb	0.00
20) Perylene-D12(IS)	13.43	264	130643	2.50000 ppb	0.00
System Monitoring Compounds					
3) 2-Methylnaphthalene-D10 (2	4.96	152	22777	0.48093 ppb	0.00
Spiked Amount 5.000			Recovery	= 9.620%	
13) Fluoranthene-D10 (FRT)	9.28	212	25468	0.38812 ppb	0.00
Spiked Amount 5.000			Recovery	= 7.760%	
Target Compounds					Qvalue
2) Naphthalene	4.21	128	41177	0.90039 ppb	100
4) 2-Methylnaphthalene	5.00	142	26456	0.95192 ppb	99
5) 1-Methylnaphthalene	5.11	142	27900	0.96864 ppb	98
7) Acenaphthylene	6.02	152	78337	0.85382 ppb	100
8) Acenaphthene	6.22	154	24913	0.92584 ppb	99
9) Fluorene	6.82	166	29892	0.90564 ppb	99
11) Phenanthrene	7.93	178	45036	0.86678 ppb	99
12) Anthracene	7.99	178	39270	0.86199 ppb	99
14) Fluoranthene	9.30	202	60200	0.83519 ppb	97
16) Pyrene	9.57	202	60381	0.77797 ppb	96
17) Benz (a) anthracene	11.00	228	49969	0.76984 ppb	99
18) Chrysene	11.04	228	63085	0.90659 ppb	99
19) Indeno (1,2,3-cd) pyrene	14.92	276	65048	0.93700 ppb	98
21) Benzo (b) fluoranthene	12.79	252	47971	0.73591 ppb	99
22) Benzo (k) fluoranthene	12.84	252	69126	0.95663 ppb	98
23) Benzo (a) pyrene	13.35	252	50746	0.82958 ppb	97
24) Dibenz (a,h) anthracene	14.96	278	54045	0.88973 ppb	97
25) Benzo (g,h,i) perylene	15.29	276	58422	0.88195 ppb	99

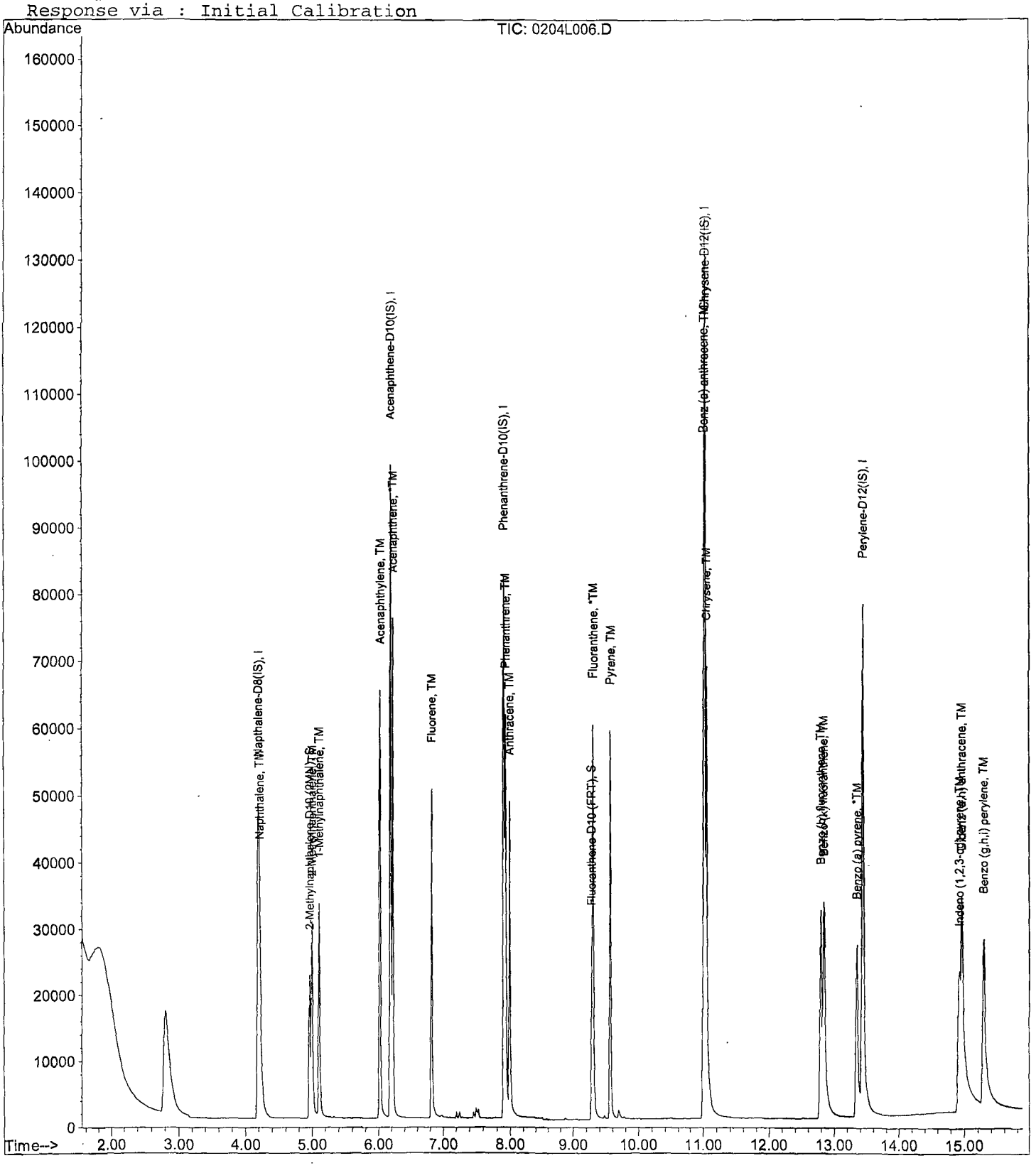
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L006.D Vial: 6
Acq On : 4 Feb 20 10:53 Operator: MA
Sample : 1 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L007.D Vial: 7
Acq On : 4 Feb 20 11:15 Operator: MA
Sample : 5 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:42:22 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.19	136	93559	2.50000 ppb		0.00
6) Acenaphthene-D10(IS)	6.18	164	49173	2.50000 ppb		0.00
10) Phenanthrene-D10(IS)	7.91	188	92273	2.50000 ppb		0.00
15) Chrysene-D12(IS)	11.01	240	120189	2.50000 ppb		0.00
20) Perylene-D12(IS)	13.43	264	131131	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	4.96	152	117393	2.51887 ppb		0.00
Spiked Amount 5.000			Recovery	= 50.380%		
13) Fluoranthene-D10 (FRT)	9.28	212	137624	2.13617 ppb		0.00
Spiked Amount 5.000			Recovery	= 42.720%		
Target Compounds						Qvalue
2) Naphthalene	4.21	128	211249	4.69404 ppb		100
4) 2-Methylnaphthalene	5.00	142	139742	5.10952 ppb		100
5) 1-Methylnaphthalene	5.11	142	143640	5.06770 ppb		100
7) Acenaphthylene	6.02	152	431994	4.81826 ppb		100
8) Acenaphthene	6.22	154	128780	4.89745 ppb		100
9) Fluorene	6.82	166	160921	4.98915 ppb		100
11) Phenanthrene	7.93	178	238077	4.66698 ppb		100
12) Anthracene	7.99	178	213985	4.78406 ppb		100
14) Fluoranthene	9.30	202	335331	4.73840 ppb		100
16) Pyrene	9.57	202	333150	4.14232 ppb		100
17) Benz (a) anthracene	11.00	228	286178	4.25478 ppb		100
18) Chrysene	11.04	228	328507	4.55588 ppb		100
19) Indeno (1,2,3-cd) pyrene	14.91	276	378390	5.26003 ppb	#	100
21) Benzo (b) fluoranthene	12.79	252	299210	4.57302 ppb		100
22) Benzo (k) fluoranthene	12.84	252	366067	5.04713 ppb		100
23) Benzo (a) pyrene	13.34	252	295305	4.80957 ppb		100
24) Dibenz (a,h) anthracene	14.96	278	317098	5.20088 ppb		100
25) Benzo (g,h,i) perylene	15.28	276	334159	5.02577 ppb		100

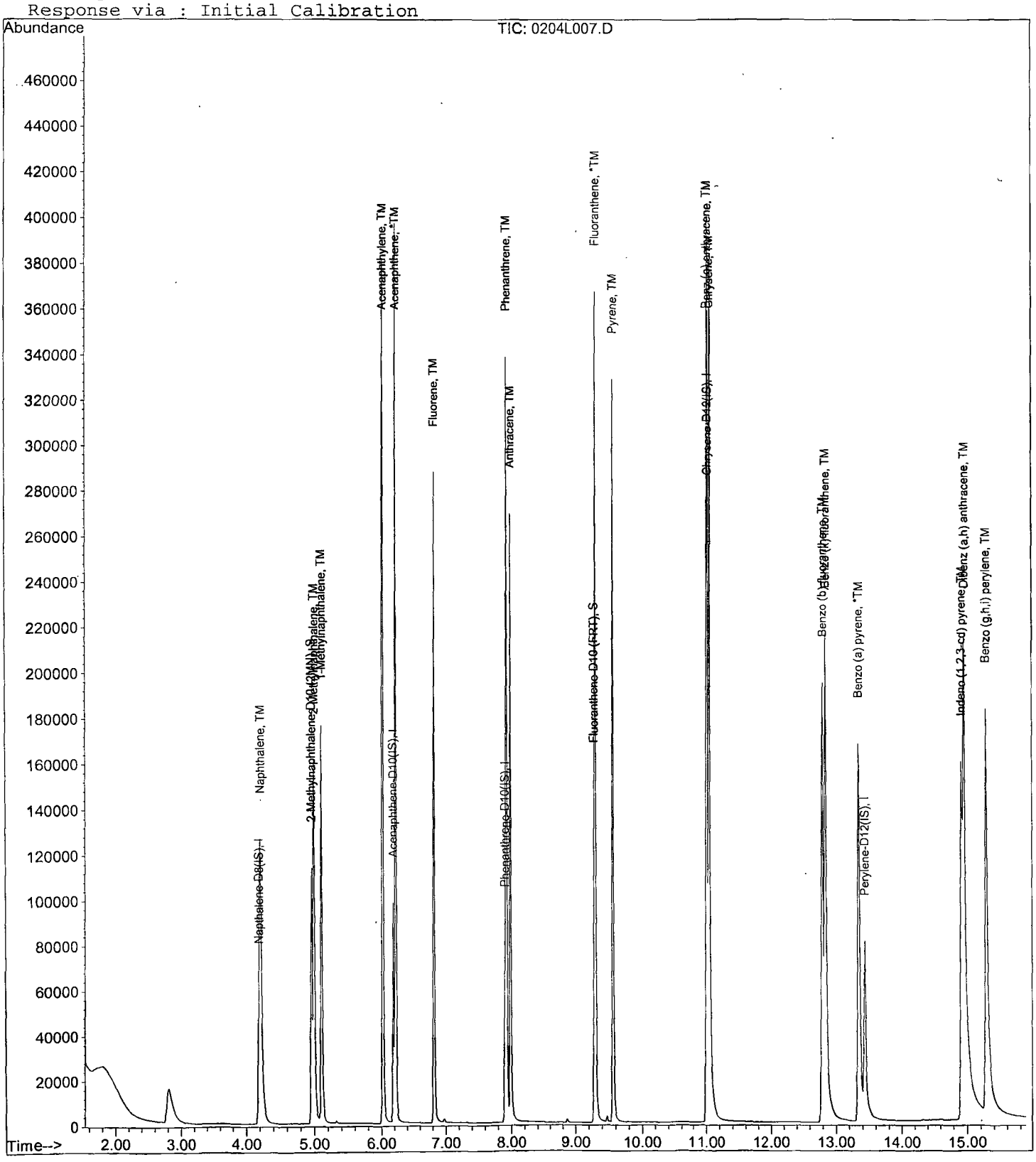
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L007.D Vial: 7
Acq On : 4 Feb 20 11:15 Operator: MA
Sample : 5 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L008.D Vial: 8
Acq On : 4 Feb 20 11:37 Operator: MA
Sample : 10 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:42:22 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.19	136	98020	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.18	164	51392	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.91	188	97154	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.01	240	126338	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.43	264	139162	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	4.96	152	238748	4.88961	ppb		0.00
Spiked Amount 5.000			Recovery	= 97.800%			
13) Fluoranthene-D10 (FRT)	9.28	212	286889	4.22932	ppb		0.00
Spiked Amount 5.000			Recovery	= 84.580%			
Target Compounds							Qvalue
2) Naphthalene	4.21	128	410435	8.70497	ppb		100
4) 2-Methylnaphthalene	5.00	142	272886	9.52368	ppb		99
5) 1-Methylnaphthalene	5.11	142	275593	9.28058	ppb		98
7) Acenaphthylene	6.02	152	845596	9.02415	ppb		99
8) Acenaphthene	6.22	154	250345	9.10944	ppb		98
9) Fluorene	6.82	166	318435	9.44639	ppb		99
11) Phenanthrene	7.93	178	468302	8.71883	ppb		100
12) Anthracene	7.99	178	427236	9.07184	ppb		100
14) Fluoranthene	9.30	202	648356	8.70132	ppb		99
16) Pyrene	9.57	202	660769	7.81599	ppb		100
17) Benz (a) anthracene	11.00	228	585928	8.28736	ppb		99
18) Chrysene	11.04	228	640149	8.44578	ppb		99
19) Indeno (1,2,3-cd) pyrene	14.92	276	770951	10.19544	ppb	#	94
21) Benzo (b) fluoranthene	12.79	252	603563	8.69229	ppb		99
22) Benzo (k) fluoranthene	12.84	252	740450	9.61977	ppb		99
23) Benzo (a) pyrene	13.35	252	605339	9.29007	ppb	#	96
24) Dibenz (a,h) anthracene	14.96	278	643860	9.95084	ppb		99
25) Benzo (g,h,i) perylene	15.28	276	676724	9.59060	ppb		97

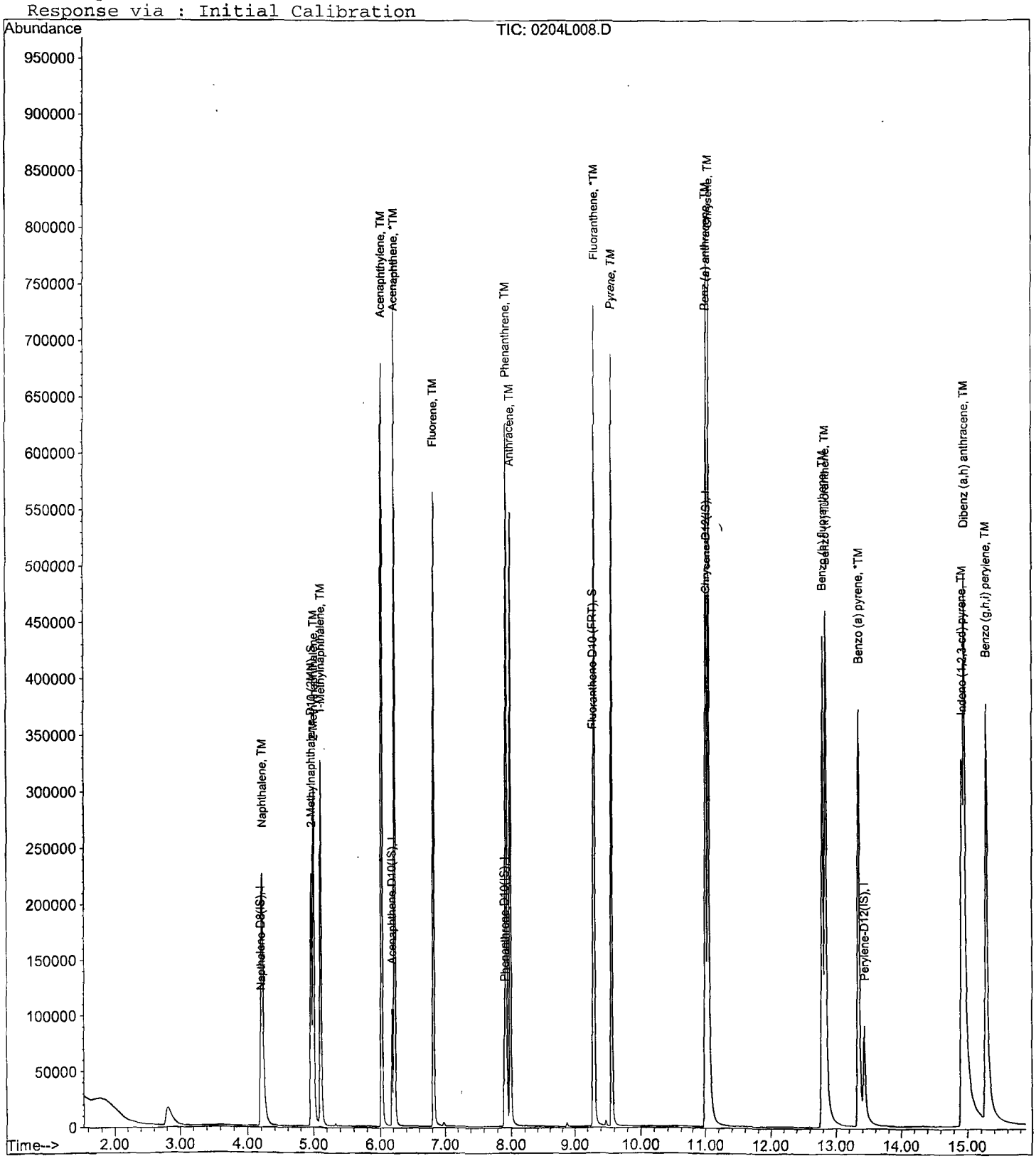
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L008.D Vial: 8
Acq On : 4 Feb 20 11:37 Operator: MA
Sample : 10 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:42 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L009.D Vial: 9
Acq On : 4 Feb 20 11:59 Operator: MA
Sample : 50 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 13:42 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:42:22 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.19	136	91741	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.18	164	48249	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.91	188	92859	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.02	240	119843	2.50000	ppb		0.01
20) Perylene-D12(IS)	13.43	264	135287	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	4.96	152	1082689	23.69132	ppb		0.00
Spiked Amount 5.000			Recovery	= 473.820%			
13) Fluoranthene-D10 (FRT)	9.28	212	1334204	20.57858	ppb		0.00
Spiked Amount 5.000			Recovery	= 411.580%			
Target Compounds							Qvalue
2) Naphthalene	4.21	128	1792980	40.63028	ppb		99
4) 2-Methylnaphthalene	5.00	142	1202511	44.83983	ppb		98
5) 1-Methylnaphthalene	5.11	142	1216206	43.75878	ppb		98
7) Acenaphthylene	6.02	152	3684033	41.87685	ppb		98
8) Acenaphthene	6.22	154	1114731	43.20461	ppb		98
9) Fluorene	6.82	166	1376652	43.49873	ppb		99
11) Phenanthrene	7.93	178	1932753	37.64827	ppb		97
12) Anthracene	7.99	178	1828963	40.63210	ppb		97
14) Fluoranthene	9.32	202	2749439	38.60579	ppb		97
16) Pyrene	9.58	202	2924684	36.46993	ppb		98
17) Benz (a) anthracene	11.01	228	2735399	40.78626	ppb		97
18) Chrysene	11.07	228	2813476	39.13121	ppb		97
19) Indeno (1,2,3-cd) pyrene	14.95	276	3717110	51.82101	ppb		98
21) Benzo (b) fluoranthene	12.82	252	3024809	44.80994	ppb		97
22) Benzo (k) fluoranthene	12.82	252	2960397	39.56247	ppb		97
23) Benzo (a) pyrene	13.36	252	2893742	45.68194	ppb		97
24) Dibenz (a,h) anthracene	14.99	278	3162117	50.27021	ppb	#	95
25) Benzo (g,h,i) perylene	15.32	276	3213468	46.84602	ppb		94

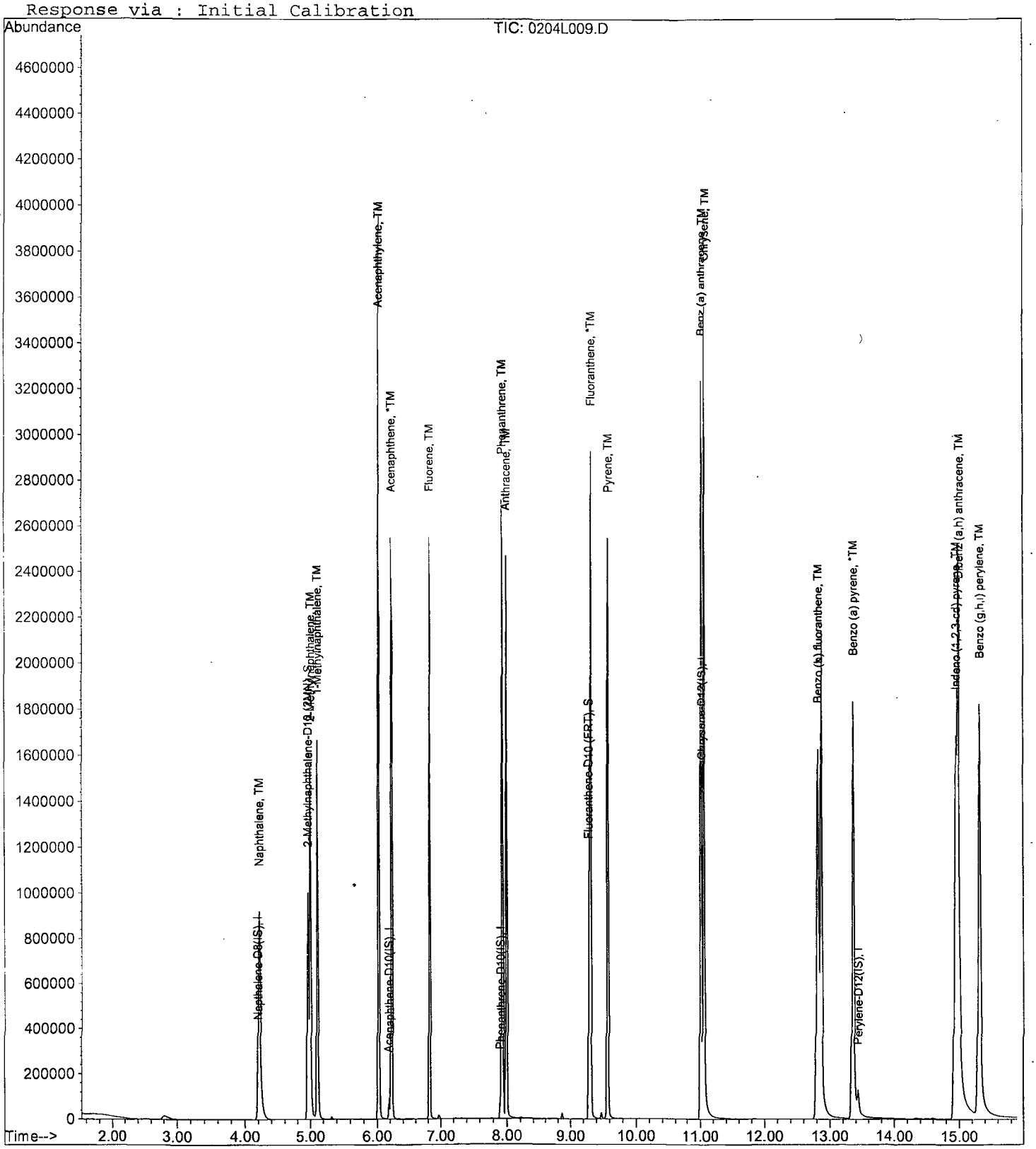
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L009.D Vial: 9
Acq On : 4 Feb 20 11:59 Operator: MA
Sample : 50 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 13:42 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L010.D Vial: 10
Acq On : 4 Feb 20 12:21 Operator: MA
Sample : 100 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:49 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:48:59 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.19	136	94154	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.18	164	49526	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.91	188	95687	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.03	240	125316	2.50000	ppb		0.02
20) Perylene-D12(IS)	13.45	264	141618	2.50000	ppb		0.01
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	4.96	152	2132841	47.06510	ppb		0.00
Spiked Amount 5.000			Recovery = 941.300%				
13) Fluoranthene-D10 (FRT)	9.29	212	2657919	48.74975	ppb		0.01
Spiked Amount 5.000			Recovery = 975.000%				
Target Compounds							Qvalue
2) Naphthalene	4.21	128	3515265	87.92823	ppb		98
4) 2-Methylnaphthalene	5.00	142	2314267	90.08958	ppb		99
5) 1-Methylnaphthalene	5.11	142	2325445	86.77018	ppb		99
7) Acenaphthylene	6.02	152	6802585	88.10489	ppb		97
8) Acenaphthene	6.23	154	2052134	84.22717	ppb		97
9) Fluorene	6.83	166	2744719	93.60760	ppb		100
11) Phenanthrene	7.94	178	3586911	80.58577	ppb		95
12) Anthracene	8.00	178	3368369	85.99155	ppb		95
14) Fluoranthene	9.33	202	5194710	85.53200	ppb		95
16) Pyrene	9.58	202	5580274	87.52935	ppb	#	84
17) Benz (a) anthracene	11.02	228	5418653	96.12929	ppb		94
18) Chrysene	11.08	228	5338591	81.34404	ppb		95
19) Indeno (1,2,3-cd) pyrene	14.99	276	7605000	103.10512	ppb	#	84
21) Benzo (b) fluoranthene	12.84	252	6397741	114.52991	ppb		95
22) Benzo (k) fluoranthene	12.90	252	6168270	86.51444	ppb		100
23) Benzo (a) pyrene	13.38	252	5827644	104.49972	ppb		95
24) Dibenz (a,h) anthracene	15.01	278	6436791	104.88555	ppb	#	94
25) Benzo (g,h,i) perylene	15.35	276	6483695	99.89693	ppb	#	93

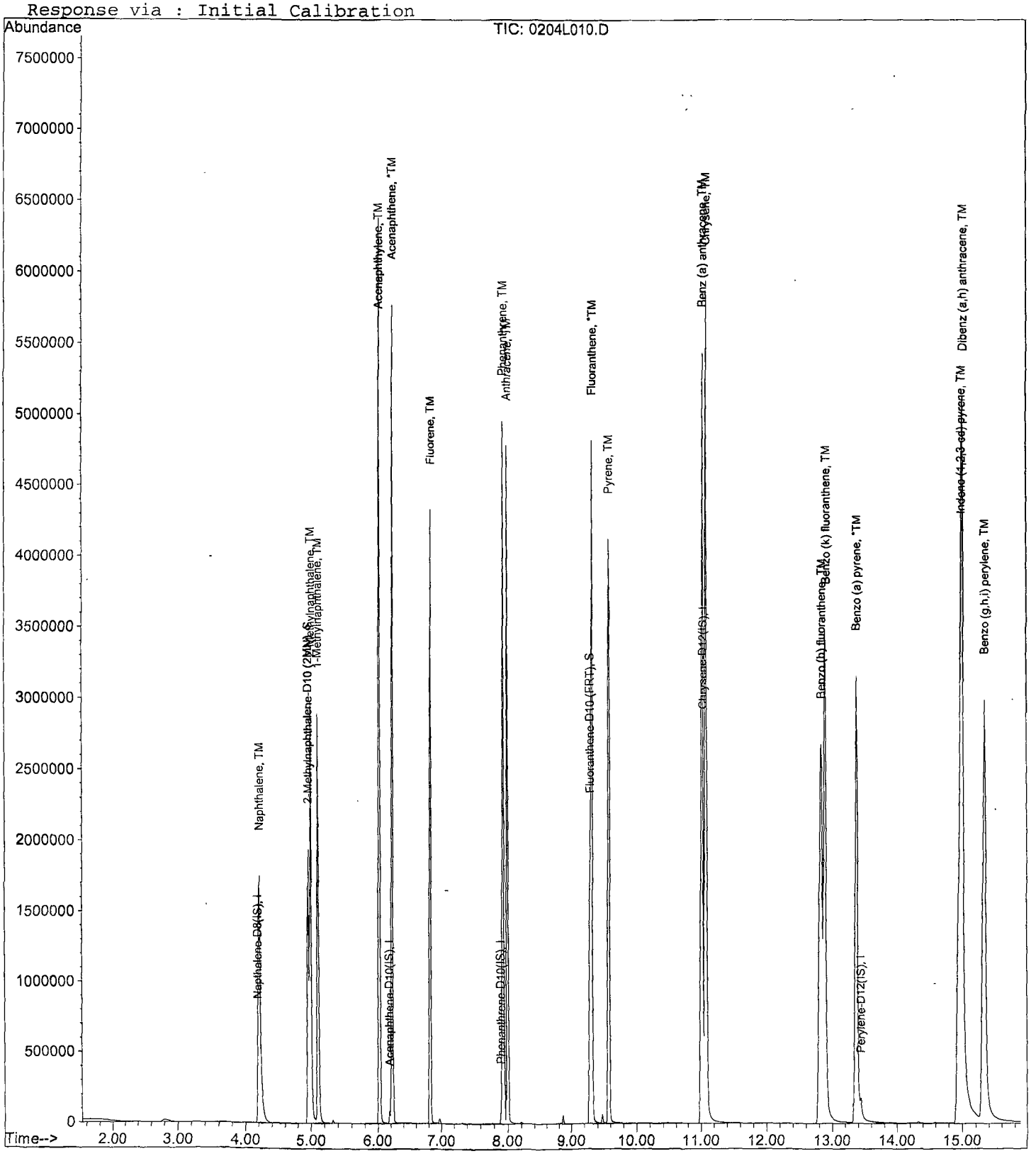
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L010.D Vial: 10
Acq On : 4 Feb 20 12:21 Operator: MA
Sample : 100 SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 12:49 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration



PAH by GCMS SIM
EPA 8270 SIM

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 4 Feb 20 13:21
Instrument: Linus
Initial Cal. Date: 02/04/20
Data File: 0204L011.D

		Compound	MEAN	CCRF	%D		%Drift
1	TM	Naphthalene	1.062	1.033	2.7	TM	
2	TM	2-Methylnaphthalene	0.6821	0.6822	0.02	TM	
3	TM	1-Methylnaphthalene	0.7116	0.6901	3.0	TM	
4	TM	Acenaphthylene	3.897	3.871	0.68	TM	
5	*TM	Acenaphthene	1.230	1.178	4.2	*TM	
6	TM	Fluorene	1.480	1.459	1.5	TM	
7	TM	Phenanthrene	1.163	1.148	1.3	TM	
8	TM	Anthracene	1.023	1.104	7.8	TM	
9	*TM	Fluoranthene	1.587	1.568	1.2	*TM	
10	TM	Pyrene	1.272	1.242	2.3	TM	
11	TM	Benz (a) anthracene	1.125	1.066	5.2	TM	
12	TM	Chrysene	1.309	1.222	6.7	TM	
13	TM	Indeno (1,2,3-cd) pyrene	1.471	1.421	3.4	TM	
14	TM	Benzo (b) fluoranthene	0.9861	0.9690	1.7	TM	
15	TM	Benzo (k) fluoranthene	1.265	1.329	5.1	TM	
16	*TM	Benzo (a) pyrene	0.9845	1.048	6.4	*TM	
17	TM	Dibenz (a,h) anthracene	1.083	1.080	0.29	TM	
18	TM	Benzo (g,h,i) perylene	1.146	1.138	0.70	TM	
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			3.0		

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L200204\0204L011.D Vial: 11
Acq On : 4 Feb 20 13:21 Operator: MA
Sample : SS SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 13:39 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.19	136	96451	2.50000	ppb		0.00
6) Acenaphthene-D10(IS)	6.18	164	52672	2.50000	ppb		0.00
10) Phenanthrene-D10(IS)	7.91	188	97686	2.50000	ppb		0.00
15) Chrysene-D12(IS)	11.01	240	126057	2.50000	ppb		0.00
20) Perylene-D12(IS)	13.43	264	136401	2.50000	ppb		0.00
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	0.00	152	0d	0.00000	ppb		
Spiked Amount 5.000			Recovery	=	0.000%		
13) Fluoranthene-D10 (FRT)	0.00	212	0d	0.00000	ppb		
Spiked Amount 5.000			Recovery	=	0.000%		
Target Compounds							Qvalue
2) Naphthalene	4.21	128	199297	4.86635	ppb		100
4) 2-Methylnaphthalene	5.00	142	131606	5.00114	ppb		100
5) 1-Methylnaphthalene	5.11	142	133123	4.84897	ppb		100
7) Acenaphthylene	6.02	152	407798	4.96620	ppb		100
8) Acenaphthene	6.22	154	124072	4.78822	ppb		100
9) Fluorene	6.82	166	153651	4.92722	ppb		99
11) Phenanthrene	7.93	178	224305	4.93625	ppb		99
12) Anthracene	7.99	178	215622	5.39200	ppb		100
14) Fluoranthene	9.30	202	306319	4.94040	ppb		98
16) Pyrene	9.57	202	313161	4.88321	ppb		98
17) Benz (a) anthracene	11.00	228	268691	4.73868	ppb		100
18) Chrysene	11.05	228	308124	4.66728	ppb	#	96
19) Indeno (1,2,3-cd) pyrene	14.92	276	358273	4.82875	ppb	#	95
21) Benzo (b) fluoranthene	12.79	252	264332	4.91296	ppb		99
22) Benzo (k) fluoranthene	12.84	252	362562	5.25367	ppb		99
23) Benzo (a) pyrene	13.35	252	285781	5.32055	ppb		97
24) Dibenz (a,h) anthracene	14.96	278	294697	4.98566	ppb		98
25) Benzo (g,h,i) perylene	15.29	276	310388	4.96518	ppb		99

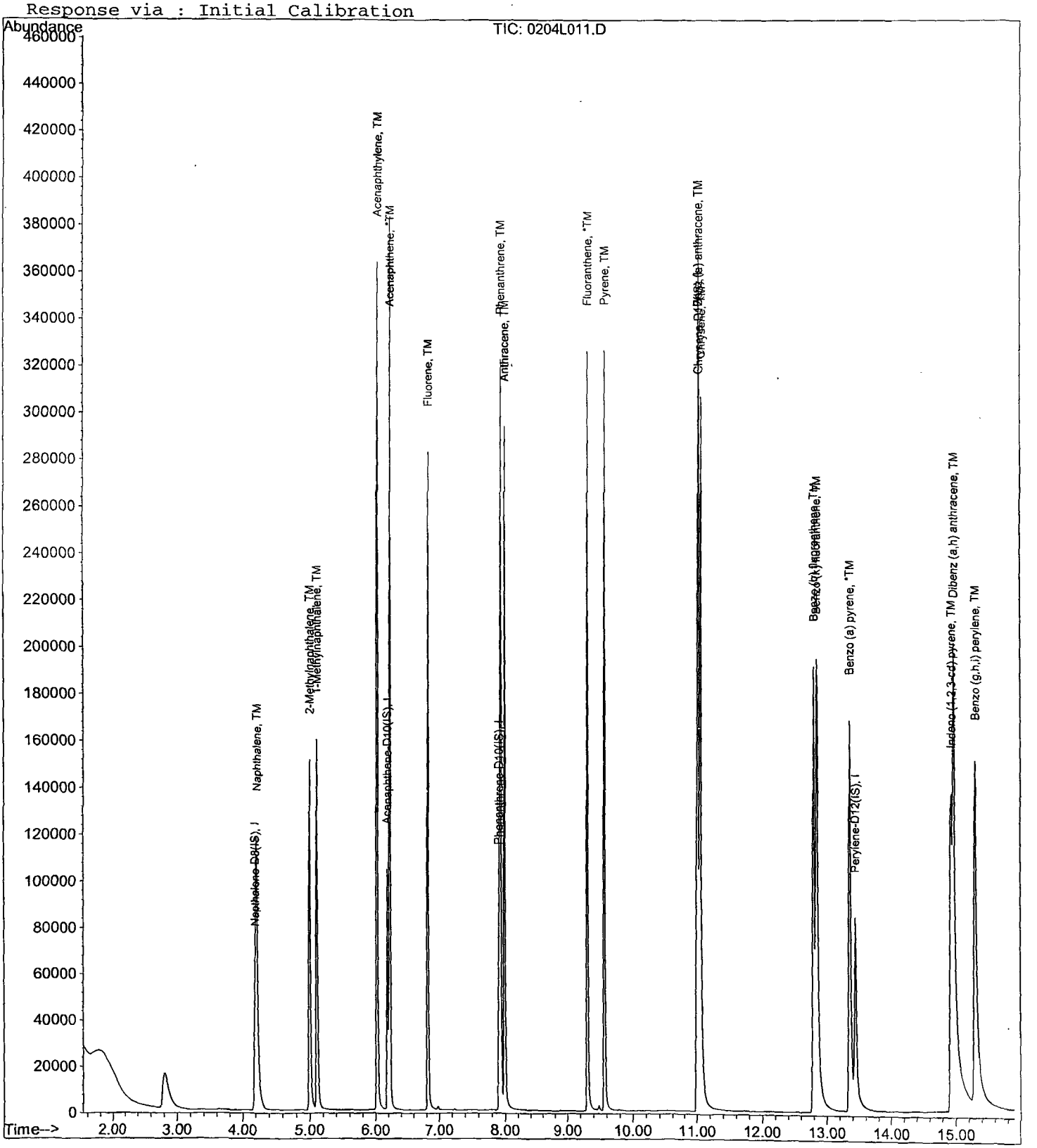
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200204\0204L011.D Vial: 11
Acq On : 4 Feb 20 13:21 Operator: MA
Sample : SS SIM 02/03/20 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Feb 4 13:39 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200204\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Tue Feb 04 12:55:27 2020
Response via : Initial Calibration



PAH by GCMS SIM
EPA 8270 SIM

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 04/28/20
Instrument: Linus
Initial Cal. Date: 02/04/20
Data File: 0424L046.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	TM	Naphthalene	1.062	1.032	2.8	TM	
3	S	2-Methylnaphthalene-D10 (2MN)	1.203	1.318	9.5	S	
4	TM	2-Methylnaphthalene	0.6821	0.7022	2.9	TM	
5	TM	1-Methylnaphthalene	0.7116	0.7242	1.8	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	TM	Acenaphthylene	3.897	3.840	1.5	TM	
8	*TM	Acenaphthene	1.230	1.136	7.6	*TM	
9	TM	Fluorene	1.480	1.471	0.62	TM	
10	I	Phenanthrene-D10(IS)	ISTD			I	
11	TM	Phenanthrene	1.163	1.082	7.0	TM	
12	TM	Anthracene	1.023	1.047	2.3	TM	
13	S	Fluoranthene-D10 (FRT)	1.424	1.491	4.7	S	
14	*TM	Fluoranthene	1.587	1.546	2.6	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.272	1.209	5.0	TM	
17	TM	Benz (a) anthracene	1.125	1.194	6.2	TM	
18	TM	Chrysene	1.309	1.194	8.8	TM	
19	TM	Indeno (1,2,3-cd) pyrene	1.471	1.698	15	TM	
20	I	Perylene-D12(IS)	ISTD			I	
21	TM	Benzo (b) fluoranthene	0.9861	1.155	17	TM	
22	TM	Benzo (k) fluoranthene	1.265	1.060	16	TM	
23	*TM	Benzo (a) pyrene	0.9845	1.035	5.2	*TM	
24	TM	Dibenz (a,h) anthracene	1.083	1.174	8.4	TM	
25	TM	Benzo (g,h,i) perylene	1.146	1.161	1.4	TM	
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			6.3		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200424\0424L046.D Vial: 46
Acq On : 28 Apr 20 8:59 Operator: MA
Sample : 5 SIM 2/4/20 (3) Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Apr 28 9:16 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200424\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	4.13	136	90486	2.50000	ppb		-0.02
6) Acenaphthene-D10(IS)	6.13	164	51384	2.50000	ppb		-0.02
10) Phenanthrene-D10(IS)	7.86	188	98053	2.50000	ppb		-0.02
15) Chrysene-D12(IS)	10.97	240	126845	2.50000	ppb		-0.03
20) Perylene-D12(IS)	13.40	264	157449	2.50000	ppb		-0.01
System Monitoring Compounds							
3) 2-Methylnaphthalene-D10 (2	4.90	152	119241	2.73794	ppb		-0.02
Spiked Amount 5.000			Recovery = 54.760%				
13) Fluoranthene-D10 (FRT)	9.24	212	146238	2.61748	ppb		-0.02
Spiked Amount 5.000			Recovery = 52.340%				
Target Compounds							Qvalue
2) Naphthalene	4.15	128	186702	4.85933	ppb		100
4) 2-Methylnaphthalene	4.94	142	127073	5.14721	ppb		100
5) 1-Methylnaphthalene	5.05	142	131055	5.08833	ppb		100
7) Acenaphthylene	5.98	152	394643	4.92647	ppb		100
8) Acenaphthene	6.17	154	116767	4.61926	ppb		97
9) Fluorene	6.77	166	151160	4.96884	ppb		98
11) Phenanthrene	7.88	178	212136	4.65098	ppb		98
12) Anthracene	7.94	178	205375	5.11653	ppb		98
14) Fluoranthene	9.26	202	303210	4.87195	ppb	#	93
16) Pyrene	9.52	202	306614	4.75142	ppb	#	89
17) Benz (a) anthracene	10.96	228	302995	5.31047	ppb		99
18) Chrysene	11.01	228	302785	4.55792	ppb		99
19) Indeno (1,2,3-cd) pyrene	14.89	276	430664	5.76837	ppb		99
21) Benzo (b) fluoranthene	12.74	252	363635	5.85513	ppb	#	98
22) Benzo (k) fluoranthene	12.79	252	333931	4.19194	ppb		100
23) Benzo (a) pyrene	13.30	252	326061	5.25896	ppb		98
24) Dibenz (a,h) anthracene	14.92	278	369707	5.41854	ppb		99
25) Benzo (g,h,i) perylene	15.26	276	365692	5.06785	ppb	#	95

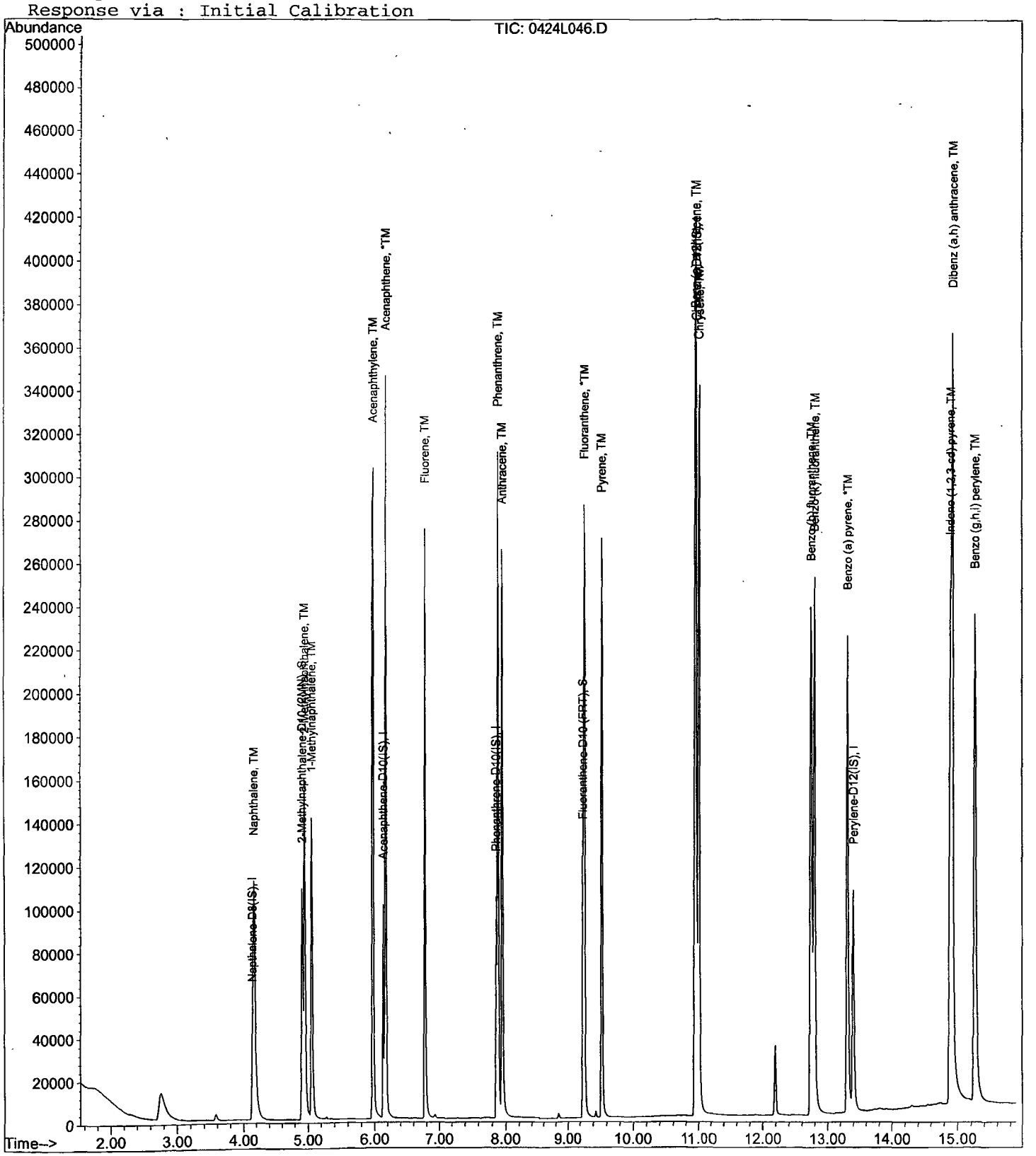
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200424\0424L046.D Vial: 46
Acq On : 28 Apr 20 8:59 Operator: MA
Sample : 5 SIM 2/4/20 (3) Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Apr 28 9:16 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200424\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration



PAH by GCMS SIM
EPA 8270 SIM

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No:
Date Analyzed: 04/28/20
Instrument: Linus
Initial Cal. Date: 02/04/20
Data File: 0424L065.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	TM	Naphthalene	1.062	1.028	3.2	TM	
3	S	2-Methylnaphthalene-D10 (2MN)	1.203	1.229	2.1	S	
4	TM	2-Methylnaphthalene	0.6821	0.6732	1.3	TM	
5	TM	1-Methylnaphthalene	0.7116	0.7028	1.2	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	TM	Acenaphthylene	3.897	3.827	1.8	TM	
8	*TM	Acenaphthene	1.230	1.126	8.4	*TM	
9	TM	Fluorene	1.480	1.444	2.4	TM	
10	I	Phenanthrene-D10(IS)	ISTD			I	
11	TM	Phenanthrene	1.163	1.040	11	TM	
12	TM	Anthracene	1.023	0.9571	6.5	TM	
13	S	Fluoranthene-D10 (FRT)	1.424	1.396	2.0	S	
14	*TM	Fluoranthene	1.587	1.480	6.7	*TM	
15	I	Chrysene-D12(IS)	ISTD			I	
16	TM	Pyrene	1.272	1.163	8.5	TM	
17	TM	Benz (a) anthracene	1.125	1.178	4.8	TM	
18	TM	Chrysene	1.309	1.152	12	TM	
19	TM	Indeno (1,2,3-cd) pyrene	1.471	1.583	7.6	TM	
20	I	Perylene-D12(IS)	ISTD			I	
21	TM	Benzo (b) fluoranthene	0.9861	1.093	11	TM	
22	TM	Benzo (k) fluoranthene	1.265	1.126	11	TM	
23	*TM	Benzo (a) pyrene	0.9845	0.9729	1.2	*TM	
24	TM	Dibenz (a,h) anthracene	1.083	1.139	5.1	TM	
25	TM	Benzo (g,h,i) perylene	1.146	1.105	3.6	TM	
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			5.6		

Quantitation Report (Not Reviewed)

Data File : M:\LINUS\DATA\L200424\0424L065.D Vial: 65
Acq On : 28 Apr 20 16:04 Operator: MA
Sample : 5 SIM 2/4/20 (3) Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Apr 28 16:20 2020 Quant Results File: L0204.RES

Quant Method : M:\LINUS\DATA\L200424\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration
DataAcq Meth : SIM_2

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	4.14	136	86281	2.50000 ppb		-0.01
6) Acenaphthene-D10(IS)	6.13	164	47111	2.50000 ppb		-0.02
10) Phenanthrene-D10(IS)	7.86	188	91433	2.50000 ppb		-0.02
15) Chrysene-D12(IS)	10.98	240	119525	2.50000 ppb		-0.02
20) Perylene-D12(IS)	13.41	264	145913	2.50000 ppb		0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-D10 (2	4.91	152	105997	2.55245 ppb		0.00
Spiked Amount 5.000			Recovery = 51.040%			
13) Fluoranthene-D10 (FRT)	9.25	212	127648	2.45016 ppb		0.00
Spiked Amount 5.000			Recovery = 49.000%			
Target Compounds						Qvalue
2) Naphthalene	4.15	128	177405	4.84239 ppb		99
4) 2-Methylnaphthalene	4.95	142	116177	4.93520 ppb		97
5) 1-Methylnaphthalene	5.06	142	121274	4.93805 ppb		97
7) Acenaphthylene	5.98	152	360604	4.90984 ppb		99
8) Acenaphthene	6.17	154	106115	4.57862 ppb		99
9) Fluorene	6.77	166	136099	4.87954 ppb		96
11) Phenanthrene	7.88	178	190224	4.47253 ppb		97
12) Anthracene	7.95	178	175028	4.67621 ppb		100
14) Fluoranthene	9.27	202	270665	4.66390 ppb		97
16) Pyrene	9.53	202	278049	4.57264 ppb		99
17) Benz (a) anthracene	10.97	228	281709	5.23978 ppb		98
18) Chrysene	11.01	228	275339	4.39860 ppb	#	96
19) Indeno (1,2,3-cd) pyrene	14.90	276	378353	5.37806 ppb	#	97
21) Benzo (b) fluoranthene	12.79	252	318931	5.54132 ppb	#	98
22) Benzo (k) fluoranthene	12.79	252	328713	4.45268 ppb		99
23) Benzo (a) pyrene	13.32	252	283913	4.94119 ppb		97
24) Dibenz (a,h) anthracene	14.93	278	332397	5.25688 ppb		99
25) Benzo (g,h,i) perylene	15.27	276	322455	4.82195 ppb	#	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L200424\0424L065.D Vial: 65
Acq On : 28 Apr 20 16:04 Operator: MA
Sample : 5 SIM 2/4/20 (3) Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Apr 28 16:20 2020 Quant Results File: L0204.RES

Method : M:\LINUS\DATA\L200424\L0204.M (RTE Integrator)
Title : EPA 8270
Last Update : Thu Mar 05 12:40:10 2020
Response via : Initial Calibration