



## ANALYTICAL SUMMARY REPORT

January 10, 2022

AECOM - Honolulu  
1001 Bishop Street, Suite 1600  
Honolulu HI, 96813-3698

Work Order: B21120381

Quote ID: 5912

Project Name: CV18F0126/60571032.02.20.01

Energy Laboratories Inc Billings MT received the following 12 samples from AECOM - Honolulu on 12/6/2021 for analysis.

Lab ID	Client Sample ID	Collect Date	Received Date	Matrix	Test
B21120381-001	ERH2003 (RHMW01R)	12/01/21 15:07	12/06/2021	Ground Water	DRO-Liquid-Liquid Extraction SW3520C Diesel Range Organics SW8015C
B21120381-002	ERH2006 (RHMW02)	12/01/21 16:15	12/06/2021	Ground Water	Same As Above
B21120381-003	ERH2009 (RHMW03)	12/01/21 17:25	12/06/2021	Ground Water	Same As Above
B21120381-004	ERH2011 (RHMW05)	12/01/21 13:50	12/06/2021	Ground Water	DRO-Liquid-Liquid Extraction SW3520C Separatory Funnel SW3510C Liquid-Liquid Ext. 8260-Volatile Organic Compounds-BTEX SW8260B Gasoline Range Organics SW8015C Diesel Range Organics SW8015C Low Level PAH SW8270C
B21120381-005	ERH2013 (RHMW08)	12/01/21 19:25	12/06/2021	Ground Water	Same As Above
B21120381-006	ERH2014 (RHMW08)	12/01/21 19:25	12/06/2021	Ground Water	Same As Above
B21120381-007	ERH2018 (RHMW2254-01)	12/01/21 13:45	12/06/2021	Ground Water	Same As Above
B21120381-008	ERH2020 (OWDFMW01)	12/01/21 17:30	12/06/2021	Ground Water	Same As Above
B21120381-009	ERH2010 Trip Blank 2 Client	12/01/21 13:45	12/06/2021	Trip Blank	8260-Volatile Organic Compounds-BTEX SW8260B Gasoline Range Organics SW8015C
B21120381-010	ERH2012 Trip Blank 1 Client	12/01/21 19:25	12/06/2021	Trip Blank	Same As Above
B21120381-011	ERH2017 Trip Blank 3 Client	12/01/21 13:45	12/06/2021	Trip Blank	Same As Above



## ANALYTICAL SUMMARY REPORT

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B21120381-012   ERH2019 Trip Blank 3   12/01/21 13:45   12/06/2021   Trip Blank   Same As Above  
Client

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The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the report package. Any issues encountered during sample receipt are documented in the Work Order Receipt Checklist.

The results as reported relate only to the item(s) submitted for testing. This report shall be used or copied only in its entirety. Energy Laboratories, Inc. is not responsible for the consequences arising from the use of a partial report.

If you have any questions regarding these test results, please contact your Project Manager.

Report Approved By:



**CLIENT:** AECOM - Honolulu  
**Project:** CV18F0126/60571032.02.20.01  
**Work Order:** B21120381

**Report Date:** 1/10/2022

## CASE NARRATIVE

### General Comments:

For any question please contact your Project Manager at (406) 252-6325 or [billingspm@energylab.com](mailto:billingspm@energylab.com).

All analyses have been performed in accordance with DOD QSM Version 5.3 unless otherwise noted below. The specific methodologies used in obtaining the enclosed analytical results are indicated on the Analytical Summary Report and the Laboratory Analytical Report. The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted in the Work Order Receipt Checklist.

The tests listed below are accredited and meet the requirements of DoD QSM Version 5.3 as verified by ANSI-ASQ National Accreditation Board (ANAB) certificate number ADE-2588. Exceptions to this require client authorization and records documenting this approval are attached in the Sample Management Records. Accreditation may not be offered or required for all methods and analytes reported in this package. Refer to the certificate and scope of accreditation located at <https://www.energylab.com/whyus/certifications-quality-control/> or contact your project manager.

Project specific matrix quality control samples may not be reported if site specific samples were not submitted. Matrix quality control samples were performed on project samples where adequate volume was available. All quality control measures met criteria unless otherwise noted in the Analytical QC Exceptions report and in the Analysis Specific Comments below. Where available, sample management records are attached.

The Level IV Validation Package includes data reports for all analyses associated with the instrument calibration, quality control (QC) sample analysis, and sample analysis. All analytical data is within method specifications except as noted in the Analytical QC Exceptions report or the Analysis Specific Comments below. The analytical report identifies preparation batch and analytical run IDs associated with each result for a sample. Only the raw data associated with the parameters listed on this report should be validated.

### Analysis Specific Comments:

An Analytical QC Exceptions Report has been attached, summarizing all qualified QC results. All quality control measures met criteria; therefore there were no analytical QC exceptions on this report.



Trust our People. Trust our Data.

# Chain of Custody & Analytical Request Record 202112-

DoD Samples

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COC# 01-NOI

Page 1 of 4

### Account Information (Billing Information)

Company/Name <b>AECOM</b>		
Contact <b>Alethea Ramos / Margie Pascua</b>		
Phone <b>808-529-7283 / 808-358-5373</b>		
Mailing Address <b>1001 Bishop St., Suite 1600</b>		
City, State, Zip <b>Honolulu, Hawaii 96813</b>		
Email <b>alethea.ramos@aecom.com / margie.pascua@aecom.com</b>		
Receive Invoice <input type="checkbox"/> Hard Copy <input checked="" type="checkbox"/> Email	Receive Report <input type="checkbox"/> Hard Copy <input checked="" type="checkbox"/> Email	
Purchase Order <b>N/A</b>	Quote <b>N/A</b>	Bottle Order <b>N/A</b>

### Report Information (Different than Account Information)

Company/Name <b>AECOM</b>	
Contact <b>see Account Information</b>	
Phone	
Mailing Address	
City, State, Zip	
Email <b>USAPImaging@aecom.com</b>	
Receive Report <input type="checkbox"/> Hard Copy <input checked="" type="checkbox"/> Email	
Special Report/Formats <input checked="" type="checkbox"/> LEVEL IV <input type="checkbox"/> INELAC <input type="checkbox"/> ED/EDT (contact laboratory) <input type="checkbox"/> Other	

### Comments

1. Project performed under DoD QSM.
2. TPH-DRO/RRO needs 3520 extraction.
3. Preliminary data (or Level 1) in 1-2-business days; Level IV report in 10 working days.
4. Note: NOI log is separate from other COCs.

### Project Information

Project Name, PWSID, Permit, etc. <b>CV18F0126/60571032 02.20.01</b>	
Sampler Name <b>GM, MY, NL</b>	Sampler Phone <b>808-987-3201</b>
Sample Origin State <b>Hawaii</b>	EPA/State Compliance <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
URANIUM MINING CLIENTS MUST indicate sample type <input type="checkbox"/> Unprocessed Ore <input type="checkbox"/> Processed Ore (Ground or Refined) **CALL BEFORE SENDING <input type="checkbox"/> 11(e)2 Byproduct Material (Can ONLY be Submitted to ELI Casper Location)	

### Matrix Codes

- A - Air
- W - Water
- S - Solids/Solids
- V - Vegetation
- B - Biossary
- O - Oil
- DW - Drinking Water

### Analysis Requested

Analysis Requested	See Attached
EPA 8015 TPH-DRO/RRO w/ SGC	See Attached
EPA 8015 TPH-DRO/RRO	
8260 BTEX, 8015 TPH-GRO	
PAHs (Naph, 1-82-MIN) by 8270D SIM	

All turnaround times are standard unless marked as RUSH  
 Energy Laboratories MUST be contacted prior to RUSH sample submittal for charges and scheduling - See Instructions Page

Sample Identification (Name, Location, Interval, etc.)	Collection		Number of Containers	Matrix (See Codes Above)	EPA 8015 TPH-DRO/RRO w/ SGC	EPA 8015 TPH-DRO/RRO	8260 BTEX, 8015 TPH-GRO	PAHs (Naph, 1-82-MIN) by 8270D SIM	See Attached	RUSH TAT	REL. LAB. ID
	Date	Time									
1 ERH2003 (RHMW01R)	12/01/2021	11:07 am	2	GW	✓	✓			✓		B2120881-001
2 ERH2006 (RHMW02)	12/01/2021	12:15 pm	2	GW	✓	✓			✓		-002
3 ERH2009 (RHMW03)	12/01/2021	1:25 pm	2	GW	✓	✓			✓		-003
4 ERH2010 (Trip Blank) <i>2 client</i>	12/01/2021	9:45 am	0	WQ			✓		✓		-009
2 5 ERH2011 (RHMW05)	12/01/2021	9:50 am	0	GW	✓	✓	✓	✓	✓		-004
6 ERH2012 (Trip Blank) <i>1 client</i>	12/01/2021	2:55 pm	0	WQ			✓		✓		-010
7 ERH2013 (RHMW08)	12/01/2021	3:25 pm	0	GW	✓	✓	✓	✓	✓		-005
8 ERH2014 (RHMW08)	12/01/2021	3:25 pm	0	GW	✓	✓	✓	✓	✓		-006

ELI is REQUIRED to provide preservative traceability. If the preservatives supplied with the bottle order were NOT used, please attach your preservative information with this COC

Custody Record MUST be signed	Relinquished by (print) <b>Tianzhen Nie</b>	Date/Time <b>12/02/21 15:00</b>	Signature <i>[Signature]</i>	Received by (print)	Date/Time	Signature
	Relinquished by (print)	Date/Time	Signature	Received by Laboratory (print)	Date/Time	Signature
LABORATORY USE ONLY						
Shipped By	Cooler ID(s)	Custody Seals Y N C B	Intact Y N	Receipt Temp °C	Temp Blank Y N	Payment Type CC Cash Check
					Amount \$	Receipt Number (cash/check only)

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.





# Chain of Custody & Analytical Request Record 202112-

DoD Samples

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COC# 03-NOI

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### Account Information (Billing Information)

Company/Name	AECOM		
Contact	Alethea Ramos / Margie Pascua		
Phone	808-529-7283 / 808-356-5373		
Mailing Address	1001 Bishop St., Suite 1600		
City, State, Zip	Honolulu, Hawaii 96813		
Email	alethea.ramos@aecom.com / margie.pascua@aecom.com		
Receive Invoice	<input type="checkbox"/> Hard Copy <input checked="" type="checkbox"/> Email	Receive Report	<input type="checkbox"/> Hard Copy <input checked="" type="checkbox"/> Email
Purchase Order	Quote	Bottle Order	
N/A	N/A	N/A	

### Report Information (if different than Account Information)

Company/Name	AECOM		
Contact	see Account Information		
Phone			
Mailing Address			
City, State, Zip			
Email	USAPImaging@aecom.com		
Receive Report	<input type="checkbox"/> Hard Copy <input type="checkbox"/> Email		
Special Report/Formats:	<input checked="" type="checkbox"/> LEVEL IV <input type="checkbox"/> ONELAC <input type="checkbox"/> EDD/EDT (contact laboratory) <input type="checkbox"/> Other		

### Comments

1. Project performed under DoD QSM.
2. TPH-DRO/RRO needs 3520 extraction.
3. Preliminary data (or Level 1) in 1-2-business days; Level IV report in 10 working days.
4. Note: NOI log is separate from other COCs.

### Project Information

Project Name	PWSID, Permit, etc. CV18F0126/60571032.02.20.01		
Sampler Name	GM, MY, NL	Sampler Phone	808-987-3201
Sample Origin State	Hawaii	EPA/State Compliance	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
URANIUM MINING CLIENTS MUST indicate sample type			
<input type="checkbox"/> Unprocessed Ore			
<input type="checkbox"/> Processed Ore (Ground or Refined) **CALL BEFORE SENDING			
<input checked="" type="checkbox"/> 11(e)2 Byproduct Material (Can ONLY be Submitted to ELJ Casper Location)			

### Matrix Codes

- A - Air
- W - Water
- S - Soil/ Solids
- V - Vegetation
- B - Bioassay
- O - Oil
- DW - Drinking Water

### Analysis Requested

Matrix Code	EPA 8015 TPH-DRO/RRO w/SGC	EPA 8015 TPH-DRO/RRO	8260 BTEX, 8015 TPH-GRO	PAHs (Naph, 1-&2-MN) by 8270D SIM														
GW	✓	✓																
WQ			✓															
GW	✓	✓	✓	✓														
GW	✓	✓	✓	✓														
GW	✓	✓	✓	✓														
GW	✓	✓	✓	✓														
GW	✓	✓	✓	✓														

All turnaround times are standard unless marked as RUSH

Energy Laboratories MUST be contacted prior to RUSH sample submittal for charges and scheduling - See Instructions Page

Sample Identification (Name, Location, Interval, etc.)	Collection		Number of Containers	Matrix (See Codes Above)	EPA 8015 TPH-DRO/RRO w/SGC	EPA 8015 TPH-DRO/RRO	8260 BTEX, 8015 TPH-GRO	PAHs (Naph, 1-&2-MN) by 8270D SIM											See Attached	RUSH TAT	LAB ID
	Date	Time																		X	
1 ERH2003 (RHMW01R)	12/01/2021	11:07 am	0	GW	✓	✓														X	621120381-001
2 ERH2006 (RHMW02)	12/01/2021	12:15 pm	0	GW	✓	✓														X	-002
3 ERH2009 (RHMW03)	12/01/2021	1:25 pm	0	GW	✓	✓														X	-003
4 ERH2010 (Trip Blank) 2 client	12/01/2021	9:45 am	3	WQ			✓													X	-009
2 5 ERH2011 (RHMW05)	12/01/2021	9:50 am	10	GW	✓	✓	✓	✓												X	-004
6 ERH2012 (Trip Blank) 1 client	12/01/2021	2:55 pm	0	WQ			✓													X	-010
7 ERH2013 (RHMW08)	12/01/2021	3:25 pm	0	GW	✓	✓	✓	✓												X	-005
8 ERH2014 (RHMW08)	12/01/2021	3:25 pm	0	GW	✓	✓	✓	✓												X	-006
2 9 ERH2018 (RHMW2254-01)	12/01/2021	9:45 am	2	GW	✓	✓	✓	✓												X	-007

ELJ is REQUIRED to provide preservative traceability. If the preservatives supplied with the bottle order were NOT used, please attach your preservative information with this COC

Custody Record MUST be signed	Relinquished by (print) <b>Tianzhen Nie</b>	Date/Time <b>12/02/21 15:00</b>	Signature <i>[Signature]</i>	Received by (print)	Date/Time	Signature			
	Relinquished by (print)	Date/Time	Signature	Received by Laboratory (print)	Date/Time	Signature			
Shipped By	Cooler ID(s)	Custody Seals Y N C B	Intact Y N	Receipt Temp 1.0 °C	Temp Blank O N	On Ice O N	Payment Type CC Cash Check	Amount \$	Receipt Number (cash/check only)

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.



# Chain of Custody & Analytical Request Record

202112

DoD Samples

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COC# -04-NOI

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### Account Information (Billing Information)

Company/Name AECOM		
Contact Alethea Ramos / Margie Pascua		
Phone 808-529-7283 / 808-356-5373		
Mailing Address 1001 Bishop St., Suite 1600		
City, State, Zip Honolulu, Hawaii 96813		
Email alethea.ramos@aecom.com / margie.pascua@aecom.com		
Receive Invoice <input type="checkbox"/> Hard Copy <input checked="" type="checkbox"/> Email	Receive Report <input type="checkbox"/> Hard Copy <input checked="" type="checkbox"/> Email	
Purchase Order N/A	Quote N/A	Bottle Order N/A

### Report Information (if different than Account Information)

Company/Name AECOM		
Contact see Account Information		
Phone		
Mailing Address		
City, State, Zip		
Email USAPImaging@aecom.com		
Receive Report <input type="checkbox"/> Hard Copy <input checked="" type="checkbox"/> Email		
Special Report/Format: <input checked="" type="checkbox"/> LEVEL IV <input type="checkbox"/> ONELAC <input type="checkbox"/> EDD/EDT (contact laboratory) <input type="checkbox"/> Other		

### Comments

1. Project performed under DoD QSM.
2. TPH-DRO/RRO needs 3520 extraction.
3. Preliminary data (or Level 1) in 1-2-business days; Level IV report in 10 working days.
4. Note: NOI log is separate from other COCs.

### Project Information

Project Name, PWSID, Permit, etc. CV18F0126/60571032.02.20.01	
Sampler Name DM, AM	Sampler Phone 310-625-1283
Sample Origin State Hawaii	EPA/State Compliance <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
URANIUM MINING CLIENTS MUST indicate sample type <input type="checkbox"/> Unprocessed Ore <input type="checkbox"/> Processed Ore (Ground or Refined) **CALL BEFORE SENDING <input checked="" type="checkbox"/> 11(e)2 Byproduct Material (Can ONLY be Submitted to ELI Casper Location)	

### Matrix Codes

- A- Air
- W- Water
- S- Solids
- V- Vegetation
- B- Biosolids
- O- Oil
- DW- Drinking Water

### Analysis Requested

Analysis Requested	Matrix	Number of Containers	Collection Date	Collection Time
EPA 8015 TPH-DRO/RRO w/SGC	WQ	3	12/01/2021	9:00 am
EPA 8015 TPH-DRO/RRO	GW	8	12/01/2021	9:45 am
8260 BTEX, 8015 TPH-GRO	WQ	3	12/01/2021	1:20 pm
PAHs (Naph, 1-2 MIN) by 8270D	GW	10	12/01/2021	1:30 pm

See Attached

All turnaround times are standard unless marked as RUSH  
Energy Laboratories MUST be contacted prior to RUSH sample submittal for charges and scheduling - See Instructions Page

Sample Identification (Name, Location, Interval, etc.)	Collection		Number of Containers	Matrix (See Codes Above)	EPA 8015 TPH-DRO/RRO w/SGC	EPA 8015 TPH-DRO/RRO	8260 BTEX, 8015 TPH-GRO	PAHs (Naph, 1-2 MIN) by 8270D	Analysis Requested	Matrix	Number of Containers	Collection Date	Collection Time	ELI LAB ID
	Date	Time												
1 ERH2017 (Trip Blank) 3-1	12/01/2021	9:00 am	3	WQ								12/01/2021	9:00 am	82120381-011
2 ERH2018 (RHMW2254-01)	12/01/2021	9:45 am	8	GW								12/01/2021	9:45 am	82120381-007
3 ERH2019 (Trip Blank) 3-2	12/01/2021	1:20 pm	3	WQ								12/01/2021	1:20 pm	012-04
4 ERH2020 (OWDFMW01)	12/01/2021	1:30 pm	10	GW								12/01/2021	1:30 pm	-008
5														
6														
7														
8														
9														

ELI is REQUIRED to provide preservative traceability. If the preservatives supplied with the bottle order were NOT used, please attach your preservative information with this COC.

Custody Record MUST be signed	Relinquished by (print) Tianzhen Nie	Date/Time 12/02/21 15:00	Signature <i>[Signature]</i>	Received by (print) Chimn Bland	Date/Time 12/02/21 09:10	Signature <i>[Signature]</i>
	Relinquished by (print)	Date/Time	Signature	Received by Laboratory (print)	Date/Time	Signature
LABORATORY USE ONLY						
Shipped By	Cooler ID(s)	Custody Seals Y N C B	Intact Y N	Recept Temp 0.2 °C	Temp Blank Y N	On Ice Y N
Payment Type CC Cash Check			Amount \$	Receipt Number (cash/check only)		

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.



# Work Order Receipt Checklist

AECOM - Honolulu

B21120381

Login completed by: Leslie S. Cadreau
Reviewed by: BL2000\gmccartney
Reviewed Date: 12/7/2021

Date Received: 12/6/2021
Received by: dac
Carrier name: FedEx

- Shipping container/cooler in good condition? Yes [x] No [ ] Not Present [ ]
Custody seals intact on all shipping container(s)/cooler(s)? Yes [x] No [ ] Not Present [ ]
Custody seals intact on all sample bottles? Yes [x] No [ ] Not Present [ ]
Chain of custody present? Yes [x] No [ ]
Chain of custody signed when relinquished and received? Yes [x] No [ ]
Chain of custody agrees with sample labels? Yes [x] No [ ]
Samples in proper container/bottle? Yes [x] No [ ]
Sample containers intact? Yes [x] No [ ]
Sufficient sample volume for indicated test? Yes [x] No [ ]
All samples received within holding time? Yes [x] No [ ]
Temp Blank received in all shipping container(s)/cooler(s)? Yes [ ] No [x] Not Applicable [ ]
Container/Temp Blank temperature: °C On Ice
Water - VOA vials have zero headspace? Yes [x] No [ ] Not Applicable [ ]
Water - pH acceptable upon receipt? Yes [x] No [ ] Not Applicable [ ]

## Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as -dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

## Contact and Corrective Action Comments:

The Temperature Blank temperature for shipping container 1 was 0.2°C (Chain of Custody 1 of 4) shipping container 2 was 2.1°C (Chain of Custody 2 of 4) and shipping container 4 was 1.0°C (Chain of Custody 4 of 4). The temperature of the sample (s) for shipping container 3 was 1.4°C (Chain of Custody 3 of 4).

The collection time indicated on the Chain of Custody for all samples is in Hawaii-Aleutian Standard Time. The collection time has been converted (+4 Hours) to Mountain Standard Time.

The Trip Blanks were prepared by the client. Preservative traceability is not available for these containers.



## Qualifiers and Abbreviations

Qualifier	Qualifier Description
##	Limit of Quantitation (LOQ) for this analyte exceeds the Maximum Contaminant Level (MCL)
*	Result exceeds the Maximum Contaminant Level (MCL)
A	The analyte level was greater than four times the spike level - in accordance with the method, percent recovery is not calculated
B	Analyte detected in the method blank
C	Continuing calibration verification was outside of the quality control advisory limits
D	Limit of Quantitation (LOQ) increased due to sample matrix
E	Estimated value - result exceeds the instrument upper quantitation limit
H	Analysis performed past the method holding time
J	The reported result is an estimated value
L	Lowest Limit of Quantitation (LOQ) available for the analytical method used
N	Analyte concentration was not sufficiently high to calculate a Relative Percent Difference (RPD) for the serial dilution test
O	Diluted out
P	Poor method performance - method validations have shown no recoveries at low concentrations or method performance was erratic
Q	Values reported below the Limit of Quantitation (LOQ) are statistically invalid
R	Relative Percent Difference (RPD) exceeds advisory limit
S	Spike recovery outside of advisory limits
T	Analyte detected in the associated trip blank
U	Not detected at the Limit of Detection (LOD)
V	The RPD value for this duplicate represents the RER value and the RPD limit of 2 is the RER upper limit.

## Qualifiers and Abbreviations

### Abbreviation

Reporting	Explanation of Abbreviation
DF	Dilution Factor
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
MCL	Maximum Contaminant Level
MDC	Minimum Detectable Concentration
ND	Not detected at the Limit of Quantitation (LOQ)
RBSL	Risk-Based Screening Levels
REC	Recovery
RER	Relative Error Ratio
RPD	Relative Percent Difference
SPK	Spike

Sample Types	Explanation of Abbreviation
CCB	Continuing Calibration Blank
CCV	Continuing Calibration Verification Standard
DUP	Sample Duplicate
ICSA	Interference Check Sample A
ICSAB	Interference Check Sample AB
ICV	Initial Calibration Verification Standard
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LFB	Laboratory Fortified Blank
LRB	Laboratory Reagent Blank
MBLK	Method Blank
MS	Sample Matrix Spike
MSD	Sample Matrix Spike Duplicate
PDS	Post Digestion/Distillation Spike
QCS	Quality Control Sample
SD	Serial Dilution
SRM	Standard Reference Material



### LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Lab ID:** B21120381-001  
**Collection Date:** 12/01/2021 15:07  
**Date Received:** 12/06/2021  
**Report Date:** 01/10/2022

**Client:** AECOM - Honolulu  
**Client Sample ID:** ERH2003 (RHMW01R)  
**Project:** CV18F0126/60571032.02.20.01  
**Matrix:** Ground Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
<b>PETROLEUM HYDROCARBONS-SEMI-VOLATILE</b>												
Diesel Range Organics (C10 to C24)	0.57	mg/L	1		0.30	0.15	0.038		SW8015C	12/9/2021 07:02/amn	GCFID-HP5-B_211207B : 25	161934
Diesel Range Organics (SGT-C10 to C24)	0.066	mg/L	1	J	0.30	0.12	0.038		SW8015C	12/10/2021 03:54/amn	GCFID-HP5-B_211209A : 17	161934
Oil Range Hydrocarbons (C24 to C40)	0.65	mg/L	1		0.30	0.15	0.086		SW8015C	12/9/2021 07:02/amn	GCFID-HP5-B_211207B : 25	161934
Oil Range Hydrocarbons (SGT-C24 to C40)	ND	mg/L	1	U	0.30	0.15	0.086		SW8015C	12/10/2021 03:54/amn	GCFID-HP5-B_211209A : 17	161934
Total Extractable Hydrocarbons	1.3	mg/L	1		0.30	0.15	0.073		SW8015C	12/9/2021 07:02/amn	GCFID-HP5-B_211207B : 25	161934
Total Extractable Hydrocarbons (SGT)	0.083	mg/L	1	J	0.30	0.12	0.032		SW8015C	12/10/2021 03:54/amn	GCFID-HP5-B_211209A : 17	161934
Surr: o-Terphenyl	92.0	%REC	1		56-125				SW8015C	12/9/2021 07:02/amn	GCFID-HP5-B_211207B : 25	161934
Surr: o-Terphenyl (SGT)	92.0	%REC	1		56-125				SW8015C	12/10/2021 03:54/amn	GCFID-HP5-B_211209A : 17	161934
Surr: n-Triacontane	90.0	%REC	1		50-150				SW8015C	12/9/2021 07:02/amn	GCFID-HP5-B_211207B : 25	161934
Surr: n-Triacontane (SGT)	84.0	%REC	1		50-150				SW8015C	12/10/2021 03:54/amn	GCFID-HP5-B_211209A : 17	161934

- Note: Total Extractable Hydrocarbons are defined as the total hydrocarbon responses regardless of elution time.



### LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B21120381-002

Collection Date: 12/01/2021 16:15

Date Received: 12/06/2021

Report Date: 01/10/2022

**Client:** AECOM - Honolulu  
**Client Sample ID:** ERH2006 (RHMW02)  
**Project:** CV18F0126/60571032.02.20.01  
**Matrix:** Ground Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
<b>PETROLEUM HYDROCARBONS-SEMI-VOLATILE</b>												
Diesel Range Organics (C10 to C24)	2.3	mg/L	1		0.30	0.15	0.038		SW8015C	12/8/2021 15:08/amn	GCFID-HP5-B_211207B : 17	161934
Diesel Range Organics (SGT-C10 to C24)	0.42	mg/L	1		0.30	0.12	0.038		SW8015C	12/10/2021 06:03/amn	GCFID-HP5-B_211209A : 19	161934
Oil Range Hydrocarbons (C24 to C40)	1.3	mg/L	1		0.30	0.15	0.085		SW8015C	12/8/2021 15:08/amn	GCFID-HP5-B_211207B : 17	161934
Oil Range Hydrocarbons (SGT-C24 to C40)	ND	mg/L	1	U	0.30	0.15	0.085		SW8015C	12/10/2021 06:03/amn	GCFID-HP5-B_211209A : 19	161934
Total Extractable Hydrocarbons	3.7	mg/L	1		0.30	0.15	0.073		SW8015C	12/8/2021 15:08/amn	GCFID-HP5-B_211207B : 17	161934
Total Extractable Hydrocarbons (SGT)	0.45	mg/L	1		0.30	0.12	0.032		SW8015C	12/10/2021 06:03/amn	GCFID-HP5-B_211209A : 19	161934
Surr: o-Terphenyl	69.0	%REC	1		56-125				SW8015C	12/8/2021 15:08/amn	GCFID-HP5-B_211207B : 17	161934
Surr: o-Terphenyl (SGT)	66.0	%REC	1		56-125				SW8015C	12/10/2021 06:03/amn	GCFID-HP5-B_211209A : 19	161934
Surr: n-Triacontane	98.0	%REC	1		50-150				SW8015C	12/8/2021 15:08/amn	GCFID-HP5-B_211207B : 17	161934
Surr: n-Triacontane (SGT)	89.0	%REC	1		50-150				SW8015C	12/10/2021 06:03/amn	GCFID-HP5-B_211209A : 19	161934

- Note: Total Extractable Hydrocarbons are defined as the total hydrocarbon responses regardless of elution time.



### LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Client Sample ID:** ERH2009 (RHMW03)  
**Project:** CV18F0126/60571032.02.20.01  
**Matrix:** Ground Water

**Lab ID:** B21120381-003  
**Collection Date:** 12/01/2021 17:25  
**Date Received:** 12/06/2021  
**Report Date:** 01/10/2022

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
<b>PETROLEUM HYDROCARBONS-SEMI-VOLATILE</b>												
Diesel Range Organics (C10 to C24)	0.11	mg/L	1	J	0.30	0.15	0.039		SW8015C	12/8/2021 05:49/amn	GCFID-HP5-B_211207B : 9	161934
Diesel Range Organics (SGT-C10 to C24)	ND	mg/L	1	U	0.30	0.12	0.039		SW8015C	12/9/2021 20:01/amn	GCFID-HP5-B_211209A : 9	161934
Oil Range Hydrocarbons (C24 to C40)	0.23	mg/L	1	J	0.30	0.15	0.089		SW8015C	12/8/2021 05:49/amn	GCFID-HP5-B_211207B : 9	161934
Oil Range Hydrocarbons (SGT-C24 to C40)	ND	mg/L	1	U	0.30	0.15	0.089		SW8015C	12/9/2021 20:01/amn	GCFID-HP5-B_211209A : 9	161934
Total Extractable Hydrocarbons	0.47	mg/L	1		0.30	0.15	0.076		SW8015C	12/8/2021 05:49/amn	GCFID-HP5-B_211207B : 9	161934
Total Extractable Hydrocarbons (SGT)	ND	mg/L	1	U	0.30	0.12	0.033		SW8015C	12/9/2021 20:01/amn	GCFID-HP5-B_211209A : 9	161934
Surr: o-Terphenyl	72.0	%REC	1		56-125				SW8015C	12/8/2021 05:49/amn	GCFID-HP5-B_211207B : 9	161934
Surr: o-Terphenyl (SGT)	70.0	%REC	1		56-125				SW8015C	12/9/2021 20:01/amn	GCFID-HP5-B_211209A : 9	161934
Surr: n-Triacontane	92.0	%REC	1		50-150				SW8015C	12/8/2021 05:49/amn	GCFID-HP5-B_211207B : 9	161934
Surr: n-Triacontane (SGT)	86.0	%REC	1		50-150				SW8015C	12/9/2021 20:01/amn	GCFID-HP5-B_211209A : 9	161934

- Note: Total Extractable Hydrocarbons are defined as the total hydrocarbon responses regardless of elution time.



**LABORATORY ANALYTICAL REPORT**

Prepared by Billings, MT Branch

**Lab ID:** B21120381-004  
**Collection Date:** 12/01/2021 13:50  
**Date Received:** 12/06/2021  
**Report Date:** 01/10/2022

**Client:** AECOM - Honolulu  
**Client Sample ID:** ERH2011 (RHMW05)  
**Project:** CV18F0126/60571032.02.20.01  
**Matrix:** Ground Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
<b>VOLATILE ORGANIC COMPOUNDS</b>												
Benzene	ND	ug/L	1	U	1.0	0.20	0.05		SW8260B	12/6/2021 16:00/sbd	SV5972.I_211206A : 9	R371353
Ethylbenzene	ND	ug/L	1	U	1.0	0.20	0.05		SW8260B	12/6/2021 16:00/sbd	SV5972.I_211206A : 9	R371353
Toluene	ND	ug/L	1	U	1.0	0.20	0.06		SW8260B	12/6/2021 16:00/sbd	SV5972.I_211206A : 9	R371353
m+p-Xylenes	ND	ug/L	1	U	1.0	0.20	0.07		SW8260B	12/6/2021 16:00/sbd	SV5972.I_211206A : 9	R371353
o-Xylene	ND	ug/L	1	U	1.0	0.20	0.04		SW8260B	12/6/2021 16:00/sbd	SV5972.I_211206A : 9	R371353
Xylenes, Total	ND	ug/L	1	U	1.0	0.20	0.04		SW8260B	12/6/2021 16:00/sbd	SV5972.I_211206A : 9	R371353
Surr: 1,2-Dichloroethane-d4	94.0	%REC	1		81-118				SW8260B	12/6/2021 16:00/sbd	SV5972.I_211206A : 9	R371353
Surr: Dibromofluoromethane	100.0	%REC	1		80-119				SW8260B	12/6/2021 16:00/sbd	SV5972.I_211206A : 9	R371353
Surr: p-Bromofluorobenzene	102.0	%REC	1		85-114				SW8260B	12/6/2021 16:00/sbd	SV5972.I_211206A : 9	R371353
Surr: Toluene-d8	93.0	%REC	1		89-112				SW8260B	12/6/2021 16:00/sbd	SV5972.I_211206A : 9	R371353
<b>PETROLEUM HYDROCARBONS-VOLATILE</b>												
C6 to C10	ND	ug/L	1	U	20	8.7	2.3		SW8015C	12/10/2021 12:38/jp	PE 1_211210A : 5	R371606
Total Purgeable Hydrocarbons	ND	ug/L	1	U	20	10	3.6		SW8015C	12/10/2021 12:38/jp	PE 1_211210A : 5	R371606
Surr: Trifluorotoluene	80.0	%REC	1		70-130				SW8015C	12/10/2021 12:38/jp	PE 1_211210A : 5	R371606
- Note 1: C6 to C10 is defined as all hydrocarbons eluting between 2-Methylpentane and 1,2,4-Trimethylbenzene.												
- Note 2: Total Purgeable Hydrocarbons are defined as the total hydrocarbon response regardless of elution time.												
<b>PETROLEUM HYDROCARBONS-SEMI-VOLATILE</b>												
Diesel Range Organics (C10 to C24)	0.23	mg/L	1	J	0.30	0.15	0.038		SW8015C	12/8/2021 07:59/amn	GCFID-HP5-B_211207B : 11	161934
Diesel Range Organics (SGT-C10 to C24)	ND	mg/L	1	U	0.30	0.12	0.038		SW8015C	12/9/2021 21:27/amn	GCFID-HP5-B_211209A : 11	161934
Oil Range Hydrocarbons (C24 to C40)	0.45	mg/L	1		0.30	0.15	0.085		SW8015C	12/8/2021 07:59/amn	GCFID-HP5-B_211207B : 11	161934
Oil Range Hydrocarbons (SGT-C24 to C40)	ND	mg/L	1	U	0.30	0.15	0.085		SW8015C	12/9/2021 21:27/amn	GCFID-HP5-B_211209A : 11	161934
Total Extractable Hydrocarbons	0.79	mg/L	1		0.30	0.15	0.073		SW8015C	12/8/2021 07:59/amn	GCFID-HP5-B_211207B : 11	161934
Total Extractable Hydrocarbons (SGT)	0.060	mg/L	1	J	0.30	0.12	0.032		SW8015C	12/9/2021 21:27/amn	GCFID-HP5-B_211209A : 11	161934
Surr: o-Terphenyl	83.0	%REC	1		56-125				SW8015C	12/8/2021 07:59/amn	GCFID-HP5-B_211207B : 11	161934
Surr: o-Terphenyl (SGT)	79.0	%REC	1		56-125				SW8015C	12/9/2021 21:27/amn	GCFID-HP5-B_211209A : 11	161934
Surr: n-Triacontane	96.0	%REC	1		50-150				SW8015C	12/8/2021 07:59/amn	GCFID-HP5-B_211207B : 11	161934
Surr: n-Triacontane (SGT)	89.0	%REC	1		50-150				SW8015C	12/9/2021 21:27/amn	GCFID-HP5-B_211209A : 11	161934
- Note: Total Extractable Hydrocarbons are defined as the total hydrocarbon responses regardless of elution time.												
<b>SEMI-VOLATILE ORGANIC COMPOUNDS (LOW LEVEL) BY SIM</b>												
1-Methylnaphthalene	ND	ug/L	1	U	0.11	0.11	0.023		SW8270C	12/8/2021 16:11/jph	SV5975.I_211208A : 15	161925
2-Methylnaphthalene	ND	ug/L	1	U	0.11	0.11	0.020		SW8270C	12/8/2021 16:11/jph	SV5975.I_211208A : 15	161925
Naphthalene	ND	ug/L	1	U	0.11	0.11	0.032		SW8270C	12/8/2021 16:11/jph	SV5975.I_211208A : 15	161925
Surr: 2-Fluorobiphenyl	63.0	%REC	1		53-106				SW8270C	12/8/2021 16:11/jph	SV5975.I_211208A : 15	161925
Surr: Nitrobenzene-d5	60.0	%REC	1		55-111				SW8270C	12/8/2021 16:11/jph	SV5975.I_211208A : 15	161925
Surr: Terphenyl-d14	77.0	%REC	1		58-132				SW8270C	12/8/2021 16:11/jph	SV5975.I_211208A : 15	161925



**LABORATORY ANALYTICAL REPORT**

Prepared by Billings, MT Branch

**Lab ID:** B21120381-005  
**Collection Date:** 12/01/2021 19:25  
**Date Received:** 12/06/2021  
**Report Date:** 01/10/2022

**Client:** AECOM - Honolulu  
**Client Sample ID:** ERH2013 (RHMW08)  
**Project:** CV18F0126/60571032.02.20.01  
**Matrix:** Ground Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
<b>VOLATILE ORGANIC COMPOUNDS</b>												
Benzene	ND	ug/L	1	U	1.0	0.20	0.05		SW8260B	12/6/2021 16:25/sbd	SV5972.I_211206A : 10	R371353
Ethylbenzene	ND	ug/L	1	U	1.0	0.20	0.05		SW8260B	12/6/2021 16:25/sbd	SV5972.I_211206A : 10	R371353
Toluene	ND	ug/L	1	U	1.0	0.20	0.06		SW8260B	12/6/2021 16:25/sbd	SV5972.I_211206A : 10	R371353
m+p-Xylenes	ND	ug/L	1	U	1.0	0.20	0.07		SW8260B	12/6/2021 16:25/sbd	SV5972.I_211206A : 10	R371353
o-Xylene	ND	ug/L	1	U	1.0	0.20	0.04		SW8260B	12/6/2021 16:25/sbd	SV5972.I_211206A : 10	R371353
Xylenes, Total	ND	ug/L	1	U	1.0	0.20	0.04		SW8260B	12/6/2021 16:25/sbd	SV5972.I_211206A : 10	R371353
Surr: 1,2-Dichloroethane-d4	93.0	%REC	1		81-118				SW8260B	12/6/2021 16:25/sbd	SV5972.I_211206A : 10	R371353
Surr: Dibromofluoromethane	99.0	%REC	1		80-119				SW8260B	12/6/2021 16:25/sbd	SV5972.I_211206A : 10	R371353
Surr: p-Bromofluorobenzene	102.0	%REC	1		85-114				SW8260B	12/6/2021 16:25/sbd	SV5972.I_211206A : 10	R371353
Surr: Toluene-d8	94.0	%REC	1		89-112				SW8260B	12/6/2021 16:25/sbd	SV5972.I_211206A : 10	R371353
<b>PETROLEUM HYDROCARBONS-VOLATILE</b>												
C6 to C10	ND	ug/L	1	U	20	8.7	2.3		SW8015C	12/10/2021 13:46/jp	PE 1_211210A : 6	R371606
Total Purgeable Hydrocarbons	ND	ug/L	1	U	20	10	3.6		SW8015C	12/10/2021 13:46/jp	PE 1_211210A : 6	R371606
Surr: Trifluorotoluene	81.0	%REC	1		70-130				SW8015C	12/10/2021 13:46/jp	PE 1_211210A : 6	R371606
- Note 1: C6 to C10 is defined as all hydrocarbons eluting between 2-Methylpentane and 1,2,4-Trimethylbenzene.												
- Note 2: Total Purgeable Hydrocarbons are defined as the total hydrocarbon response regardless of elution time.												
<b>PETROLEUM HYDROCARBONS-SEMI-VOLATILE</b>												
Diesel Range Organics (C10 to C24)	1.3	mg/L	1		0.30	0.15	0.038		SW8015C	12/8/2021 13:00/amn	GCFID-HP5-B_211207B : 16	161934
Diesel Range Organics (SGT-C10 to C24)	ND	mg/L	1	U	0.30	0.12	0.038		SW8015C	12/10/2021 03:11/amn	GCFID-HP5-B_211209A : 16	161934
Oil Range Hydrocarbons (C24 to C40)	1.2	mg/L	1		0.30	0.15	0.086		SW8015C	12/8/2021 13:00/amn	GCFID-HP5-B_211207B : 16	161934
Oil Range Hydrocarbons (SGT-C24 to C40)	ND	mg/L	1	U	0.30	0.15	0.086		SW8015C	12/10/2021 03:11/amn	GCFID-HP5-B_211209A : 16	161934
Total Extractable Hydrocarbons	2.7	mg/L	1		0.30	0.15	0.073		SW8015C	12/8/2021 13:00/amn	GCFID-HP5-B_211207B : 16	161934
Total Extractable Hydrocarbons (SGT)	ND	mg/L	1	U	0.30	0.12	0.032		SW8015C	12/10/2021 03:11/amn	GCFID-HP5-B_211209A : 16	161934
Surr: o-Terphenyl	91.0	%REC	1		56-125				SW8015C	12/8/2021 13:00/amn	GCFID-HP5-B_211207B : 16	161934
Surr: o-Terphenyl (SGT)	90.0	%REC	1		56-125				SW8015C	12/10/2021 03:11/amn	GCFID-HP5-B_211209A : 16	161934
Surr: n-Triacontane	92.0	%REC	1		50-150				SW8015C	12/8/2021 13:00/amn	GCFID-HP5-B_211207B : 16	161934
Surr: n-Triacontane (SGT)	85.0	%REC	1		50-150				SW8015C	12/10/2021 03:11/amn	GCFID-HP5-B_211209A : 16	161934
- Note: Total Extractable Hydrocarbons are defined as the total hydrocarbon responses regardless of elution time.												
<b>SEMI-VOLATILE ORGANIC COMPOUNDS (LOW LEVEL) BY SIM</b>												
1-Methylnaphthalene	ND	ug/L	1	U	0.10	0.10	0.022		SW8270C	12/8/2021 16:44/jph	SV5975.I_211208A : 16	161925
2-Methylnaphthalene	ND	ug/L	1	U	0.10	0.10	0.018		SW8270C	12/8/2021 16:44/jph	SV5975.I_211208A : 16	161925
Naphthalene	ND	ug/L	1	U	0.10	0.10	0.030		SW8270C	12/8/2021 16:44/jph	SV5975.I_211208A : 16	161925
Surr: 2-Fluorobiphenyl	68.0	%REC	1		53-106				SW8270C	12/8/2021 16:44/jph	SV5975.I_211208A : 16	161925
Surr: Nitrobenzene-d5	70.0	%REC	1		55-111				SW8270C	12/8/2021 16:44/jph	SV5975.I_211208A : 16	161925
Surr: Terphenyl-d14	62.0	%REC	1		58-132				SW8270C	12/8/2021 16:44/jph	SV5975.I_211208A : 16	161925



**LABORATORY ANALYTICAL REPORT**

Prepared by Billings, MT Branch

**Lab ID:** B21120381-006  
**Collection Date:** 12/01/2021 19:25  
**Date Received:** 12/06/2021  
**Report Date:** 01/10/2022

**Client:** AECOM - Honolulu  
**Client Sample ID:** ERH2014 (RHMW08)  
**Project:** CV18F0126/60571032.02.20.01  
**Matrix:** Ground Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
<b>VOLATILE ORGANIC COMPOUNDS</b>												
Benzene	ND	ug/L	1	U	1.0	0.20	0.05		SW8260B	12/6/2021 16:50/sbd	SV5972.I_211206A : 11	R371353
Ethylbenzene	ND	ug/L	1	U	1.0	0.20	0.05		SW8260B	12/6/2021 16:50/sbd	SV5972.I_211206A : 11	R371353
Toluene	ND	ug/L	1	U	1.0	0.20	0.06		SW8260B	12/6/2021 16:50/sbd	SV5972.I_211206A : 11	R371353
m+p-Xylenes	ND	ug/L	1	U	1.0	0.20	0.07		SW8260B	12/6/2021 16:50/sbd	SV5972.I_211206A : 11	R371353
o-Xylene	ND	ug/L	1	U	1.0	0.20	0.04		SW8260B	12/6/2021 16:50/sbd	SV5972.I_211206A : 11	R371353
Xylenes, Total	ND	ug/L	1	U	1.0	0.20	0.04		SW8260B	12/6/2021 16:50/sbd	SV5972.I_211206A : 11	R371353
Surr: 1,2-Dichloroethane-d4	93.0	%REC	1		81-118				SW8260B	12/6/2021 16:50/sbd	SV5972.I_211206A : 11	R371353
Surr: Dibromofluoromethane	100.0	%REC	1		80-119				SW8260B	12/6/2021 16:50/sbd	SV5972.I_211206A : 11	R371353
Surr: p-Bromofluorobenzene	101.0	%REC	1		85-114				SW8260B	12/6/2021 16:50/sbd	SV5972.I_211206A : 11	R371353
Surr: Toluene-d8	95.0	%REC	1		89-112				SW8260B	12/6/2021 16:50/sbd	SV5972.I_211206A : 11	R371353
<b>PETROLEUM HYDROCARBONS-VOLATILE</b>												
C6 to C10	ND	ug/L	1	U	20	8.7	2.3		SW8015C	12/10/2021 14:55/jp	PE 1_211210A : 7	R371606
Total Purgeable Hydrocarbons	ND	ug/L	1	U	20	10	3.6		SW8015C	12/10/2021 14:55/jp	PE 1_211210A : 7	R371606
Surr: Trifluorotoluene	80.0	%REC	1		70-130				SW8015C	12/10/2021 14:55/jp	PE 1_211210A : 7	R371606
- Note 1: C6 to C10 is defined as all hydrocarbons eluting between 2-Methylpentane and 1,2,4-Trimethylbenzene.												
- Note 2: Total Purgeable Hydrocarbons are defined as the total hydrocarbon response regardless of elution time.												
<b>PETROLEUM HYDROCARBONS-SEMI-VOLATILE</b>												
Diesel Range Organics (C10 to C24)	0.052	mg/L	1	J	0.30	0.14	0.037		SW8015C	12/8/2021 02:56/amn	GCFID-HP5-B_211207B : 7	161934
Diesel Range Organics (SGT-C10 to C24)	ND	mg/L	1	U	0.30	0.12	0.037		SW8015C	12/9/2021 17:51/amn	GCFID-HP5-B_211209A : 7	161934
Oil Range Hydrocarbons (C24 to C40)	0.14	mg/L	1	J	0.30	0.14	0.085		SW8015C	12/8/2021 02:56/amn	GCFID-HP5-B_211207B : 7	161934
Oil Range Hydrocarbons (SGT-C24 to C40)	ND	mg/L	1	U	0.30	0.14	0.085		SW8015C	12/9/2021 17:51/amn	GCFID-HP5-B_211209A : 7	161934
Total Extractable Hydrocarbons	0.44	mg/L	1		0.30	0.14	0.072		SW8015C	12/8/2021 02:56/amn	GCFID-HP5-B_211207B : 7	161934
Total Extractable Hydrocarbons (SGT)	ND	mg/L	1	U	0.30	0.12	0.032		SW8015C	12/9/2021 17:51/amn	GCFID-HP5-B_211209A : 7	161934
Surr: o-Terphenyl	77.0	%REC	1		56-125				SW8015C	12/8/2021 02:56/amn	GCFID-HP5-B_211207B : 7	161934
Surr: o-Terphenyl (SGT)	79.0	%REC	1		56-125				SW8015C	12/9/2021 17:51/amn	GCFID-HP5-B_211209A : 7	161934
Surr: n-Triacontane	89.0	%REC	1		50-150				SW8015C	12/8/2021 02:56/amn	GCFID-HP5-B_211207B : 7	161934
Surr: n-Triacontane (SGT)	86.0	%REC	1		50-150				SW8015C	12/9/2021 17:51/amn	GCFID-HP5-B_211209A : 7	161934
- Note: Total Extractable Hydrocarbons are defined as the total hydrocarbon responses regardless of elution time.												
<b>SEMI-VOLATILE ORGANIC COMPOUNDS (LOW LEVEL) BY SIM</b>												
1-Methylnaphthalene	ND	ug/L	1	U	0.10	0.10	0.021		SW8270C	12/8/2021 17:16/jph	SV5975.I_211208A : 17	161925
2-Methylnaphthalene	ND	ug/L	1	U	0.10	0.10	0.018		SW8270C	12/8/2021 17:16/jph	SV5975.I_211208A : 17	161925
Naphthalene	ND	ug/L	1	U	0.10	0.10	0.029		SW8270C	12/8/2021 17:16/jph	SV5975.I_211208A : 17	161925
Surr: 2-Fluorobiphenyl	72.0	%REC	1		53-106				SW8270C	12/8/2021 17:16/jph	SV5975.I_211208A : 17	161925
Surr: Nitrobenzene-d5	76.0	%REC	1		55-111				SW8270C	12/8/2021 17:16/jph	SV5975.I_211208A : 17	161925
Surr: Terphenyl-d14	89.0	%REC	1		58-132				SW8270C	12/8/2021 17:16/jph	SV5975.I_211208A : 17	161925





**LABORATORY ANALYTICAL REPORT**

Prepared by Billings, MT Branch

**Lab ID:** B21120381-007  
**Collection Date:** 12/01/2021 13:45  
**Date Received:** 12/06/2021  
**Report Date:** 01/10/2022

**Client:** AECOM - Honolulu  
**Client Sample ID:** ERH2018 (RHMW2254-01)  
**Project:** CV18F0126/60571032.02.20.01  
**Matrix:** Ground Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
<b>VOLATILE ORGANIC COMPOUNDS</b>												
Benzene	ND	ug/L	1	U	1.0	0.20	0.05		SW8260B	12/6/2021 17:15/sbd	SV5972.I_211206A : 12	R371353
Ethylbenzene	0.06	ug/L	1	J	1.0	0.20	0.05		SW8260B	12/6/2021 17:15/sbd	SV5972.I_211206A : 12	R371353
Toluene	ND	ug/L	1	U	1.0	0.20	0.06		SW8260B	12/6/2021 17:15/sbd	SV5972.I_211206A : 12	R371353
m+p-Xylenes	0.15	ug/L	1	J	1.0	0.20	0.07		SW8260B	12/6/2021 17:15/sbd	SV5972.I_211206A : 12	R371353
o-Xylene	0.18	ug/L	1	J	1.0	0.20	0.04		SW8260B	12/6/2021 17:15/sbd	SV5972.I_211206A : 12	R371353
Xylenes, Total	0.33	ug/L	1	J	1.0	0.20	0.04		SW8260B	12/6/2021 17:15/sbd	SV5972.I_211206A : 12	R371353
Surr: 1,2-Dichloroethane-d4	94.0	%REC	1		81-118				SW8260B	12/6/2021 17:15/sbd	SV5972.I_211206A : 12	R371353
Surr: Dibromofluoromethane	99.0	%REC	1		80-119				SW8260B	12/6/2021 17:15/sbd	SV5972.I_211206A : 12	R371353
Surr: p-Bromofluorobenzene	102.0	%REC	1		85-114				SW8260B	12/6/2021 17:15/sbd	SV5972.I_211206A : 12	R371353
Surr: Toluene-d8	94.0	%REC	1		89-112				SW8260B	12/6/2021 17:15/sbd	SV5972.I_211206A : 12	R371353
<b>PETROLEUM HYDROCARBONS-VOLATILE</b>												
C6 to C10	2.8	ug/L	1	J	20	8.7	2.3		SW8015C	12/10/2021 16:03/jp	PE 1_211210A : 8	R371606
Total Purgeable Hydrocarbons	10	ug/L	1	J	20	10	3.6		SW8015C	12/10/2021 16:03/jp	PE 1_211210A : 8	R371606
Surr: Trifluorotoluene	78.0	%REC	1		70-130				SW8015C	12/10/2021 16:03/jp	PE 1_211210A : 8	R371606
- Note 1: C6 to C10 is defined as all hydrocarbons eluting between 2-Methylpentane and 1,2,4-Trimethylbenzene.												
- Note 2: Total Purgeable Hydrocarbons are defined as the total hydrocarbon response regardless of elution time.												
<b>PETROLEUM HYDROCARBONS-SEMI-VOLATILE</b>												
Diesel Range Organics (C10 to C24)	0.64	mg/L	1		0.30	0.15	0.038		SW8015C	12/8/2021 03:39/amn	GCFID-HP5-B_211207B : 8	161934
Diesel Range Organics (SGT-C10 to C24)	ND	mg/L	1	U	0.30	0.12	0.038		SW8015C	12/9/2021 18:35/amn	GCFID-HP5-B_211209A : 8	161934
Oil Range Hydrocarbons (C24 to C40)	0.58	mg/L	1		0.30	0.15	0.086		SW8015C	12/8/2021 03:39/amn	GCFID-HP5-B_211207B : 8	161934
Oil Range Hydrocarbons (SGT-C24 to C40)	ND	mg/L	1	U	0.30	0.15	0.086		SW8015C	12/9/2021 18:35/amn	GCFID-HP5-B_211209A : 8	161934
Total Extractable Hydrocarbons	1.4	mg/L	1		0.30	0.15	0.073		SW8015C	12/8/2021 03:39/amn	GCFID-HP5-B_211207B : 8	161934
Total Extractable Hydrocarbons (SGT)	0.043	mg/L	1	J	0.30	0.12	0.032		SW8015C	12/9/2021 18:35/amn	GCFID-HP5-B_211209A : 8	161934
Surr: o-Terphenyl	96.0	%REC	1		56-125				SW8015C	12/8/2021 03:39/amn	GCFID-HP5-B_211207B : 8	161934
Surr: o-Terphenyl (SGT)	95.0	%REC	1		56-125				SW8015C	12/9/2021 18:35/amn	GCFID-HP5-B_211209A : 8	161934
Surr: n-Triacontane	97.0	%REC	1		50-150				SW8015C	12/8/2021 03:39/amn	GCFID-HP5-B_211207B : 8	161934
Surr: n-Triacontane (SGT)	91.0	%REC	1		50-150				SW8015C	12/9/2021 18:35/amn	GCFID-HP5-B_211209A : 8	161934
- Note: Total Extractable Hydrocarbons are defined as the total hydrocarbon responses regardless of elution time.												
<b>SEMI-VOLATILE ORGANIC COMPOUNDS (LOW LEVEL) BY SIM</b>												
1-Methylnaphthalene	ND	ug/L	1	U	0.10	0.10	0.021		SW8270C	12/8/2021 17:49/jph	SV5975.I_211208A : 18	161925
2-Methylnaphthalene	ND	ug/L	1	U	0.10	0.10	0.018		SW8270C	12/8/2021 17:49/jph	SV5975.I_211208A : 18	161925
Naphthalene	ND	ug/L	1	U	0.10	0.10	0.030		SW8270C	12/8/2021 17:49/jph	SV5975.I_211208A : 18	161925
Surr: 2-Fluorobiphenyl	78.0	%REC	1		53-106				SW8270C	12/8/2021 17:49/jph	SV5975.I_211208A : 18	161925
Surr: Nitrobenzene-d5	73.0	%REC	1		55-111				SW8270C	12/8/2021 17:49/jph	SV5975.I_211208A : 18	161925
Surr: Terphenyl-d14	104.0	%REC	1		58-132				SW8270C	12/8/2021 17:49/jph	SV5975.I_211208A : 18	161925



**LABORATORY ANALYTICAL REPORT**

Prepared by Billings, MT Branch

**Lab ID:** B21120381-008  
**Collection Date:** 12/01/2021 17:30  
**Date Received:** 12/06/2021  
**Report Date:** 01/10/2022

**Client:** AECOM - Honolulu  
**Client Sample ID:** ERH2020 (OWDFMW01)  
**Project:** CV18F0126/60571032.02.20.01  
**Matrix:** Ground Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
<b>VOLATILE ORGANIC COMPOUNDS</b>												
Benzene	ND	ug/L	1	U	1.0	0.20	0.05		SW8260B	12/6/2021 17:40/sbd	SV5972.I_211206A : 13	R371353
Ethylbenzene	ND	ug/L	1	U	1.0	0.20	0.05		SW8260B	12/6/2021 17:40/sbd	SV5972.I_211206A : 13	R371353
Toluene	ND	ug/L	1	U	1.0	0.20	0.06		SW8260B	12/6/2021 17:40/sbd	SV5972.I_211206A : 13	R371353
m+p-Xylenes	ND	ug/L	1	U	1.0	0.20	0.07		SW8260B	12/6/2021 17:40/sbd	SV5972.I_211206A : 13	R371353
o-Xylene	ND	ug/L	1	U	1.0	0.20	0.04		SW8260B	12/6/2021 17:40/sbd	SV5972.I_211206A : 13	R371353
Xylenes, Total	ND	ug/L	1	U	1.0	0.20	0.04		SW8260B	12/6/2021 17:40/sbd	SV5972.I_211206A : 13	R371353
Surr: 1,2-Dichloroethane-d4	93.0	%REC	1		81-118				SW8260B	12/6/2021 17:40/sbd	SV5972.I_211206A : 13	R371353
Surr: Dibromofluoromethane	99.0	%REC	1		80-119				SW8260B	12/6/2021 17:40/sbd	SV5972.I_211206A : 13	R371353
Surr: p-Bromofluorobenzene	102.0	%REC	1		85-114				SW8260B	12/6/2021 17:40/sbd	SV5972.I_211206A : 13	R371353
Surr: Toluene-d8	93.0	%REC	1		89-112				SW8260B	12/6/2021 17:40/sbd	SV5972.I_211206A : 13	R371353
<b>PETROLEUM HYDROCARBONS-VOLATILE</b>												
C6 to C10	ND	ug/L	1	U	20	8.7	2.3		SW8015C	12/10/2021 17:12/jp	PE 1_211210A : 9	R371606
Total Purgeable Hydrocarbons	ND	ug/L	1	U	20	10	3.6		SW8015C	12/10/2021 17:12/jp	PE 1_211210A : 9	R371606
Surr: Trifluorotoluene	80.0	%REC	1		70-130				SW8015C	12/10/2021 17:12/jp	PE 1_211210A : 9	R371606
- Note 1: C6 to C10 is defined as all hydrocarbons eluting between 2-Methylpentane and 1,2,4-Trimethylbenzene.												
- Note 2: Total Purgeable Hydrocarbons are defined as the total hydrocarbon response regardless of elution time.												
<b>PETROLEUM HYDROCARBONS-SEMI-VOLATILE</b>												
Diesel Range Organics (C10 to C24)	0.097	mg/L	1	J	0.30	0.15	0.039		SW8015C	12/8/2021 12:17/amn	GCFID-HP5-B_211207B : 15	161934
Diesel Range Organics (SGT-C10 to C24)	ND	mg/L	1	U	0.30	0.12	0.039		SW8015C	12/9/2021 22:53/amn	GCFID-HP5-B_211209A : 12	161934
Oil Range Hydrocarbons (C24 to C40)	0.27	mg/L	1	J	0.30	0.15	0.088		SW8015C	12/8/2021 12:17/amn	GCFID-HP5-B_211207B : 15	161934
Oil Range Hydrocarbons (SGT-C24 to C40)	ND	mg/L	1	U	0.30	0.15	0.088		SW8015C	12/9/2021 22:53/amn	GCFID-HP5-B_211209A : 12	161934
Total Extractable Hydrocarbons	0.47	mg/L	1		0.30	0.15	0.075		SW8015C	12/8/2021 12:17/amn	GCFID-HP5-B_211207B : 15	161934
Total Extractable Hydrocarbons (SGT)	ND	mg/L	1	U	0.30	0.12	0.033		SW8015C	12/9/2021 22:53/amn	GCFID-HP5-B_211209A : 12	161934
Surr: o-Terphenyl	93.0	%REC	1		56-125				SW8015C	12/8/2021 12:17/amn	GCFID-HP5-B_211207B : 15	161934
Surr: o-Terphenyl (SGT)	83.0	%REC	1		56-125				SW8015C	12/9/2021 22:53/amn	GCFID-HP5-B_211209A : 12	161934
Surr: n-Triacontane	93.0	%REC	1		50-150				SW8015C	12/8/2021 12:17/amn	GCFID-HP5-B_211207B : 15	161934
Surr: n-Triacontane (SGT)	76.0	%REC	1		50-150				SW8015C	12/9/2021 22:53/amn	GCFID-HP5-B_211209A : 12	161934
- Note: Total Extractable Hydrocarbons are defined as the total hydrocarbon responses regardless of elution time.												
<b>SEMI-VOLATILE ORGANIC COMPOUNDS (LOW LEVEL) BY SIM</b>												
1-Methylnaphthalene	ND	ug/L	1	U	0.10	0.10	0.021		SW8270C	12/8/2021 18:21/jph	SV5975.I_211208A : 19	161925
2-Methylnaphthalene	ND	ug/L	1	U	0.10	0.10	0.018		SW8270C	12/8/2021 18:21/jph	SV5975.I_211208A : 19	161925
Naphthalene	ND	ug/L	1	U	0.10	0.10	0.030		SW8270C	12/8/2021 18:21/jph	SV5975.I_211208A : 19	161925
Surr: 2-Fluorobiphenyl	71.0	%REC	1		53-106				SW8270C	12/8/2021 18:21/jph	SV5975.I_211208A : 19	161925
Surr: Nitrobenzene-d5	78.0	%REC	1		55-111				SW8270C	12/8/2021 18:21/jph	SV5975.I_211208A : 19	161925
Surr: Terphenyl-d14	106.0	%REC	1		58-132				SW8270C	12/8/2021 18:21/jph	SV5975.I_211208A : 19	161925



### LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B21120381-009

Collection Date: 12/01/2021 13:45

Date Received: 12/06/2021

Report Date: 01/10/2022

**Client:** AECOM - Honolulu  
**Client Sample ID:** ERH2010 Trip Blank 2 Client  
**Project:** CV18F0126/60571032.02.20.01  
**Matrix:** Trip Blank

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
<b>VOLATILE ORGANIC COMPOUNDS</b>												
Benzene	ND	ug/L	1	U	1.0	0.20	0.05		SW8260B	12/6/2021 14:19/sbd	SV5972.I_211206A : 5	R371353
Ethylbenzene	ND	ug/L	1	U	1.0	0.20	0.05		SW8260B	12/6/2021 14:19/sbd	SV5972.I_211206A : 5	R371353
Toluene	ND	ug/L	1	U	1.0	0.20	0.06		SW8260B	12/6/2021 14:19/sbd	SV5972.I_211206A : 5	R371353
m+p-Xylenes	ND	ug/L	1	U	1.0	0.20	0.07		SW8260B	12/6/2021 14:19/sbd	SV5972.I_211206A : 5	R371353
o-Xylene	ND	ug/L	1	U	1.0	0.20	0.04		SW8260B	12/6/2021 14:19/sbd	SV5972.I_211206A : 5	R371353
Xylenes, Total	ND	ug/L	1	U	1.0	0.20	0.04		SW8260B	12/6/2021 14:19/sbd	SV5972.I_211206A : 5	R371353
Surr: 1,2-Dichloroethane-d4	93.0	%REC	1		81-118				SW8260B	12/6/2021 14:19/sbd	SV5972.I_211206A : 5	R371353
Surr: Dibromofluoromethane	99.0	%REC	1		80-119				SW8260B	12/6/2021 14:19/sbd	SV5972.I_211206A : 5	R371353
Surr: p-Bromofluorobenzene	106.0	%REC	1		85-114				SW8260B	12/6/2021 14:19/sbd	SV5972.I_211206A : 5	R371353
Surr: Toluene-d8	95.0	%REC	1		89-112				SW8260B	12/6/2021 14:19/sbd	SV5972.I_211206A : 5	R371353
<b>PETROLEUM HYDROCARBONS-VOLATILE</b>												
C6 to C10	ND	ug/L	1	U	20	8.7	2.3		SW8015C	12/10/2021 18:21/jp	PE 1_211210A : 10	R371606
Total Purgeable Hydrocarbons	ND	ug/L	1	U	20	10	3.6		SW8015C	12/10/2021 18:21/jp	PE 1_211210A : 10	R371606
Surr: Trifluorotoluene	78.0	%REC	1		70-130				SW8015C	12/10/2021 18:21/jp	PE 1_211210A : 10	R371606
- Note 1: C6 to C10 is defined as all hydrocarbons eluting between 2-Methylpentane and 1,2,4-Trimethylbenzene.												
- Note 2: Total Purgeable Hydrocarbons are defined as the total hydrocarbon response regardless of elution time.												



### LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Lab ID:** B21120381-010  
**Collection Date:** 12/01/2021 19:25  
**Date Received:** 12/06/2021  
**Report Date:** 01/10/2022

**Client:** AECOM - Honolulu  
**Client Sample ID:** ERH2012 Trip Blank 1 Client  
**Project:** CV18F0126/60571032.02.20.01  
**Matrix:** Trip Blank

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
<b>VOLATILE ORGANIC COMPOUNDS</b>												
Benzene	ND	ug/L	1	U	1.0	0.20	0.05		SW8260B	12/6/2021 14:44/sbd	SV5972.I_211206A : 6	R371353
Ethylbenzene	ND	ug/L	1	U	1.0	0.20	0.05		SW8260B	12/6/2021 14:44/sbd	SV5972.I_211206A : 6	R371353
Toluene	ND	ug/L	1	U	1.0	0.20	0.06		SW8260B	12/6/2021 14:44/sbd	SV5972.I_211206A : 6	R371353
m+p-Xylenes	ND	ug/L	1	U	1.0	0.20	0.07		SW8260B	12/6/2021 14:44/sbd	SV5972.I_211206A : 6	R371353
o-Xylene	ND	ug/L	1	U	1.0	0.20	0.04		SW8260B	12/6/2021 14:44/sbd	SV5972.I_211206A : 6	R371353
Xylenes, Total	ND	ug/L	1	U	1.0	0.20	0.04		SW8260B	12/6/2021 14:44/sbd	SV5972.I_211206A : 6	R371353
Surr: 1,2-Dichloroethane-d4	95.0	%REC	1		81-118				SW8260B	12/6/2021 14:44/sbd	SV5972.I_211206A : 6	R371353
Surr: Dibromofluoromethane	101.0	%REC	1		80-119				SW8260B	12/6/2021 14:44/sbd	SV5972.I_211206A : 6	R371353
Surr: p-Bromofluorobenzene	103.0	%REC	1		85-114				SW8260B	12/6/2021 14:44/sbd	SV5972.I_211206A : 6	R371353
Surr: Toluene-d8	95.0	%REC	1		89-112				SW8260B	12/6/2021 14:44/sbd	SV5972.I_211206A : 6	R371353
<b>PETROLEUM HYDROCARBONS-VOLATILE</b>												
C6 to C10	ND	ug/L	1	U	20	8.7	2.3		SW8015C	12/10/2021 18:55/jp	PE 1_211210A : 11	R371606
Total Purgeable Hydrocarbons	ND	ug/L	1	U	20	10	3.6		SW8015C	12/10/2021 18:55/jp	PE 1_211210A : 11	R371606
Surr: Trifluorotoluene	77.0	%REC	1		70-130				SW8015C	12/10/2021 18:55/jp	PE 1_211210A : 11	R371606
- Note 1: C6 to C10 is defined as all hydrocarbons eluting between 2-Methylpentane and 1,2,4-Trimethylbenzene.												
- Note 2: Total Purgeable Hydrocarbons are defined as the total hydrocarbon response regardless of elution time.												



**LABORATORY ANALYTICAL REPORT**

Prepared by Billings, MT Branch

Lab ID: B21120381-011

Collection Date: 12/01/2021 13:45

Date Received: 12/06/2021

Report Date: 01/10/2022

**Client:** AECOM - Honolulu  
**Client Sample ID:** ERH2017 Trip Blank 3 Client  
**Project:** CV18F0126/60571032.02.20.01  
**Matrix:** Trip Blank

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
<b>VOLATILE ORGANIC COMPOUNDS</b>												
Benzene	ND	ug/L	1	U	1.0	0.20	0.05		SW8260B	12/6/2021 15:10/sbd	SV5972.I_211206A : 7	R371353
Ethylbenzene	ND	ug/L	1	U	1.0	0.20	0.05		SW8260B	12/6/2021 15:10/sbd	SV5972.I_211206A : 7	R371353
Toluene	ND	ug/L	1	U	1.0	0.20	0.06		SW8260B	12/6/2021 15:10/sbd	SV5972.I_211206A : 7	R371353
m+p-Xylenes	ND	ug/L	1	U	1.0	0.20	0.07		SW8260B	12/6/2021 15:10/sbd	SV5972.I_211206A : 7	R371353
o-Xylene	ND	ug/L	1	U	1.0	0.20	0.04		SW8260B	12/6/2021 15:10/sbd	SV5972.I_211206A : 7	R371353
Xylenes, Total	ND	ug/L	1	U	1.0	0.20	0.04		SW8260B	12/6/2021 15:10/sbd	SV5972.I_211206A : 7	R371353
Surr: 1,2-Dichloroethane-d4	93.0	%REC	1		81-118				SW8260B	12/6/2021 15:10/sbd	SV5972.I_211206A : 7	R371353
Surr: Dibromofluoromethane	100.0	%REC	1		80-119				SW8260B	12/6/2021 15:10/sbd	SV5972.I_211206A : 7	R371353
Surr: p-Bromofluorobenzene	103.0	%REC	1		85-114				SW8260B	12/6/2021 15:10/sbd	SV5972.I_211206A : 7	R371353
Surr: Toluene-d8	93.0	%REC	1		89-112				SW8260B	12/6/2021 15:10/sbd	SV5972.I_211206A : 7	R371353
<b>PETROLEUM HYDROCARBONS-VOLATILE</b>												
C6 to C10	ND	ug/L	1	U	20	8.7	2.3		SW8015C	12/10/2021 19:29/jp	PE 1_211210A : 12	R371606
Total Purgeable Hydrocarbons	ND	ug/L	1	U	20	10	3.6		SW8015C	12/10/2021 19:29/jp	PE 1_211210A : 12	R371606
Surr: Trifluorotoluene	78.0	%REC	1		70-130				SW8015C	12/10/2021 19:29/jp	PE 1_211210A : 12	R371606
- Note 1: C6 to C10 is defined as all hydrocarbons eluting between 2-Methylpentane and 1,2,4-Trimethylbenzene.												
- Note 2: Total Purgeable Hydrocarbons are defined as the total hydrocarbon response regardless of elution time.												



### LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B21120381-012

Collection Date: 12/01/2021 13:45

Date Received: 12/06/2021

Report Date: 01/10/2022

**Client:** AECOM - Honolulu  
**Client Sample ID:** ERH2019 Trip Blank 3 Client  
**Project:** CV18F0126/60571032.02.20.01  
**Matrix:** Trip Blank

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
<b>VOLATILE ORGANIC COMPOUNDS</b>												
Benzene	ND	ug/L	1	U	1.0	0.20	0.05		SW8260B	12/10/2021 12:26/sbd	SV5972.I_211210A : 5	R371671
Ethylbenzene	ND	ug/L	1	U	1.0	0.20	0.05		SW8260B	12/10/2021 12:26/sbd	SV5972.I_211210A : 5	R371671
Toluene	ND	ug/L	1	U	1.0	0.20	0.06		SW8260B	12/10/2021 12:26/sbd	SV5972.I_211210A : 5	R371671
m+p-Xylenes	ND	ug/L	1	U	1.0	0.20	0.07		SW8260B	12/10/2021 12:26/sbd	SV5972.I_211210A : 5	R371671
o-Xylene	ND	ug/L	1	U	1.0	0.20	0.04		SW8260B	12/10/2021 12:26/sbd	SV5972.I_211210A : 5	R371671
Xylenes, Total	ND	ug/L	1	U	1.0	0.20	0.04		SW8260B	12/10/2021 12:26/sbd	SV5972.I_211210A : 5	R371671
Surr: 1,2-Dichloroethane-d4	95.0	%REC	1		81-118				SW8260B	12/10/2021 12:26/sbd	SV5972.I_211210A : 5	R371671
Surr: Dibromofluoromethane	100.0	%REC	1		80-119				SW8260B	12/10/2021 12:26/sbd	SV5972.I_211210A : 5	R371671
Surr: p-Bromofluorobenzene	100.0	%REC	1		85-114				SW8260B	12/10/2021 12:26/sbd	SV5972.I_211210A : 5	R371671
Surr: Toluene-d8	97.0	%REC	1		89-112				SW8260B	12/10/2021 12:26/sbd	SV5972.I_211210A : 5	R371671
<b>PETROLEUM HYDROCARBONS-VOLATILE</b>												
C6 to C10	ND	ug/L	1	U	20	8.7	2.3		SW8015C	12/10/2021 20:04/jp	PE 1_211210A : 13	R371606
Total Purgeable Hydrocarbons	ND	ug/L	1	U	20	10	3.6		SW8015C	12/10/2021 20:04/jp	PE 1_211210A : 13	R371606
Surr: Trifluorotoluene	78.0	%REC	1		70-130				SW8015C	12/10/2021 20:04/jp	PE 1_211210A : 13	R371606
- Note 1: C6 to C10 is defined as all hydrocarbons eluting between 2-Methylpentane and 1,2,4-Trimethylbenzene.												
- Note 2: Total Purgeable Hydrocarbons are defined as the total hydrocarbon response regardless of elution time.												



### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21120381  
**Project:** CV18F0126/60571032.02.20.01

**Report Date:** 01/10/2022

**Run ID: Run Order:** SV5972.I\_211206A: 4      **SampType:** Method Blank      **Batch ID:** R371353  
**Method:** SW8260B      **Analysis Date:** 12/06/2021 13:21      **Prep Date:**  
**Lab ID:** MBLK120621      **Units:** ug/L      **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Benzene	ND	0.50									
Ethylbenzene	ND	0.50									
Toluene	ND	0.50									
m+p-Xylenes	ND	0.50									
o-Xylene	ND	0.50									
Xylenes, Total	ND	0.50									
Surr: 1,2-Dichloroethane-d4	9.4	0.50	10		94.0	81	118				
Surr: Dibromofluoromethane	10	0.50	10		100.0	80	119				
Surr: p-Bromofluorobenzene	10	0.50	10		100.0	85	114				
Surr: Toluene-d8	9.4	0.50	10		94.0	89	112				

Associated Samples: B21120381-004C, B21120381-005C, B21120381-006C, B21120381-007C, B21120381-008C, B21120381-009A, B21120381-010A, B21120381-011A



### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21120381  
**Project:** CV18F0126/60571032.02.20.01

**Report Date:** 01/10/2022

**Run ID: Run Order:** SV5972.I\_211206A: 3      **SampType:** Laboratory Control Sample      **Batch ID:** R371353  
**Method:** SW8260B      **Analysis Date:** 12/06/2021 12:31      **Prep Date:**  
**Lab ID:** LCS120621      **Units:** ug/L      **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Benzene	4.9	0.50	5.0		98.0	79	120				
Ethylbenzene	4.8	0.50	5.0		97.0	79	121				
Toluene	4.9	0.50	5.0		98.0	80	121				
m+p-Xylenes	9.7	0.50	10		97.0	80	121				
o-Xylene	5.0	0.50	5.0		99.0	78	122				
Xylenes, Total	15	0.50	15		97.0	79	121				
Surr: 1,2-Dichloroethane-d4	9.4	0.50	10		94.0	81	118				
Surr: Dibromofluoromethane	9.9	0.50	10		99.0	80	119				
Surr: p-Bromofluorobenzene	9.9	0.50	10		99.0	85	114				
Surr: Toluene-d8	9.4	0.50	10		94.0	89	112				

Associated Samples: B21120381-004C, B21120381-005C, B21120381-006C, B21120381-007C, B21120381-008C, B21120381-009A, B21120381-010A, B21120381-011A

**Run ID: Run Order:** SV5972.I\_211206A: 16      **SampType:** Sample Matrix Spike      **Batch ID:** R371353  
**Method:** SW8260B      **Analysis Date:** 12/06/2021 18:30      **Prep Date:**  
**Lab ID:** B21120381-004CMS      **Units:** ug/L      **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Benzene	5.0	0.50	5.0	0.0	100.0	79	120				
Ethylbenzene	4.9	0.50	5.0	0.0	97.0	79	121				
Toluene	5.0	0.50	5.0	0.0	101.0	80	121				
m+p-Xylenes	9.7	0.50	10	0.0	97.0	80	121				
o-Xylene	5.0	0.50	5.0	0.0	100.0	78	122				
Xylenes, Total	15	0.50	15	0.0	98.0	79	121				
Surr: 1,2-Dichloroethane-d4	9.3	0.50	10	0.0	93.0	81	118				
Surr: Dibromofluoromethane	9.9	0.50	10	0.0	99.0	80	119				
Surr: p-Bromofluorobenzene	10	0.50	10	0.0	102.0	85	114				





### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21120381  
**Project:** CV18F0126/60571032.02.20.01

**Report Date:** 01/10/2022

**Run ID: Run Order:** SV5972.I\_211206A: 16      **SampType:** Sample Matrix Spike      **Batch ID:** R371353  
**Method:** SW8260B      **Analysis Date:** 12/06/2021 18:30      **Prep Date:**  
**Lab ID:** B21120381-004CMS      **Units:** ug/L      **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Surr: Toluene-d8	9.4	0.50	10	0.0	94.0	89	112				

Associated Samples: B21120381-004C, B21120381-005C, B21120381-006C, B21120381-007C, B21120381-008C, B21120381-009A, B21120381-010A, B21120381-011A

**Run ID: Run Order:** SV5972.I\_211206A: 17      **SampType:** Sample Matrix Spike Duplicate      **Batch ID:** R371353  
**Method:** SW8260B      **Analysis Date:** 12/06/2021 18:56      **Prep Date:**  
**Lab ID:** B21120381-004CMSD      **Units:** ug/L      **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Benzene	4.9	0.50	5.0	0.0	98.0	79	120	5.0	1.5	20.0	
Ethylbenzene	4.8	0.50	5.0	0.0	97.0	79	121	4.9	0.7	20.0	
Toluene	5.0	0.50	5.0	0.0	100.0	80	121	5.0	0.5	20.0	
m+p-Xylenes	9.4	0.50	10	0.0	94.0	80	121	9.7	2.9	20.0	
o-Xylene	4.8	0.50	5.0	0.0	97.0	78	122	5.0	3.6	20.0	
Xylenes, Total	14	0.50	15	0.0	95.0	79	121	15	3.2	20.0	
Surr: 1,2-Dichloroethane-d4	9.5	0.50	10	0.0	95.0	81	118	0.0			
Surr: Dibromofluoromethane	10	0.50	10	0.0	100.0	80	119	0.0			
Surr: p-Bromofluorobenzene	10	0.50	10	0.0	103.0	85	114	0.0			
Surr: Toluene-d8	9.6	0.50	10	0.0	96.0	89	112	0.0			

Associated Samples: B21120381-004C, B21120381-005C, B21120381-006C, B21120381-007C, B21120381-008C, B21120381-009A, B21120381-010A, B21120381-011A



### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21120381  
**Project:** CV18F0126/60571032.02.20.01

**Report Date:** 01/10/2022

**Run ID: Run Order:** SV5972.I\_211210A: 4      **SampType:** Method Blank      **Batch ID:** R371671  
**Method:** SW8260B      **Analysis Date:** 12/10/2021 12:00      **Prep Date:**  
**Lab ID:** MBLK121021      **Units:** ug/L      **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Benzene	ND	0.50									
Ethylbenzene	ND	0.50									
Toluene	ND	0.50									
m+p-Xylenes	ND	0.50									
o-Xylene	ND	0.50									
Xylenes, Total	ND	0.50									
Surr: 1,2-Dichloroethane-d4	9.4	0.50	10		94.0	81	118				
Surr: Dibromofluoromethane	10	0.50	10		100.0	80	119				
Surr: p-Bromofluorobenzene	10	0.50	10		103.0	85	114				
Surr: Toluene-d8	9.3	0.50	10		93.0	89	112				

Associated Samples: **B21120381-012A**



### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21120381  
**Project:** CV18F0126/60571032.02.20.01

**Report Date:** 01/10/2022

**Run ID: Run Order:** SV5972.I\_211210A: 3      **SampType:** Laboratory Control Sample      **Batch ID:** R371671  
**Method:** SW8260B      **Analysis Date:** 12/10/2021 11:07      **Prep Date:**  
**Lab ID:** LCS121021      **Units:** ug/L      **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Benzene	4.6	0.50	5.0		93.0	79	120				
Ethylbenzene	4.6	0.50	5.0		92.0	79	121				
Toluene	4.5	0.50	5.0		91.0	80	121				
m+p-Xylenes	8.9	0.50	10		89.0	80	121				
o-Xylene	4.6	0.50	5.0		91.0	78	122				
Xylenes, Total	13	0.50	15		90.0	79	121				
Surr: 1,2-Dichloroethane-d4	9.6	0.50	10		96.0	81	118				
Surr: Dibromofluoromethane	10	0.50	10		100.0	80	119				
Surr: p-Bromofluorobenzene	10	0.50	10		102.0	85	114				
Surr: Toluene-d8	9.1	0.50	10		91.0	89	112				

Associated Samples: **B21120381-012A**

**Run ID: Run Order:** SV5972.I\_211210A: 7      **SampType:** Sample Matrix Spike      **Batch ID:** R371671  
**Method:** SW8260B      **Analysis Date:** 12/10/2021 18:46      **Prep Date:**  
**Lab ID:** B21120800-003FMS      **Units:** ug/L      **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Benzene	4.6	0.50	5.0	0.0	93.0	79	120				
Ethylbenzene	4.6	0.50	5.0	0.0	92.0	79	121				
Toluene	4.6	0.50	5.0	0.0	93.0	80	121				
m+p-Xylenes	9.0	0.50	10	0.0	90.0	80	121				
o-Xylene	4.7	0.50	5.0	0.0	94.0	78	122				
Xylenes, Total	14	0.50	15	0.0	91.0	79	121				
Surr: 1,2-Dichloroethane-d4	9.4	0.50	10	0.0	94.0	81	118				
Surr: Dibromofluoromethane	9.9	0.50	10	0.0	99.0	80	119				
Surr: p-Bromofluorobenzene	11	0.50	10	0.0	106.0	85	114				



### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21120381  
**Project:** CV18F0126/60571032.02.20.01

**Report Date:** 01/10/2022

**Run ID: Run Order:** SV5972.I\_211210A: 7      **SampType:** Sample Matrix Spike      **Batch ID:** R371671  
**Method:** SW8260B      **Analysis Date:** 12/10/2021 18:46      **Prep Date:**  
**Lab ID:** B21120800-003FMS      **Units:** ug/L      **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Surr: Toluene-d8	9.5	0.50	10	0.0	95.0	89	112				

Associated Samples: **B21120381-012A**

**Run ID: Run Order:** SV5972.I\_211210A: 8      **SampType:** Sample Matrix Spike Duplicate      **Batch ID:** R371671  
**Method:** SW8260B      **Analysis Date:** 12/10/2021 19:14      **Prep Date:**  
**Lab ID:** B21120800-003FMSD      **Units:** ug/L      **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Benzene	4.7	0.50	5.0	0.0	94.0	79	120	4.6	1.5	20.0	
Ethylbenzene	4.6	0.50	5.0	0.0	91.0	79	121	4.6	0.6	20.0	
Toluene	4.7	0.50	5.0	0.0	93.0	80	121	4.6	0.7	20.0	
m+p-Xylenes	8.8	0.50	10	0.0	88.0	80	121	9.0	2.5	20.0	
o-Xylene	4.5	0.50	5.0	0.0	90.0	78	122	4.7	3.5	20.0	
Xylenes, Total	13	0.50	15	0.0	89.0	79	121	14	2.8	20.0	
Surr: 1,2-Dichloroethane-d4	9.7	0.50	10	0.0	97.0	81	118	0.0			
Surr: Dibromofluoromethane	10	0.50	10	0.0	100.0	80	119	0.0			
Surr: p-Bromofluorobenzene	10	0.50	10	0.0	103.0	85	114	0.0			
Surr: Toluene-d8	9.6	0.50	10	0.0	96.0	89	112	0.0			

Associated Samples: **B21120381-012A**



### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21120381  
**Project:** CV18F0126/60571032.02.20.01

**Report Date:** 01/10/2022

**Run ID: Run Order:** SV5972.I\_211206A: 2      **SampType:** Continuing Calibration Verification Standard      **Batch ID:** R371353  
**Method:** SW8260B      **Analysis Date:** 12/06/2021 12:06      **Prep Date:**  
**Lab ID:** CCV120621      **Units:** ug/L      **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Benzene	4.8	0.50	5.0		97.0	80	120				
Ethylbenzene	4.6	0.50	5.0		92.0	80	120				
Toluene	4.7	0.50	5.0		94.0	80	120				
m+p-Xylenes	9.4	0.50	10		94.0	80	120				
o-Xylene	4.7	0.50	5.0		93.0	80	120				
Xylenes, Total	14	0.50	15		94.0	80	120				
Surr: 1,2-Dichloroethane-d4	9.5	0.50	10		95.0	80	120				
Surr: Dibromofluoromethane	10	0.50	10		100.0	80	120				
Surr: p-Bromofluorobenzene	9.9	0.50	10		99.0	80	120				
Surr: Toluene-d8	9.3	0.50	10		93.0	80	120				

Associated Samples: B21120381-004C, B21120381-005C, B21120381-006C, B21120381-007C, B21120381-008C, B21120381-009A, B21120381-010A, B21120381-011A



### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21120381  
**Project:** CV18F0126/60571032.02.20.01

**Report Date:** 01/10/2022

**Run ID: Run Order:** SV5972.I\_211206A: 18      **SampType:** Continuing Calibration Verification Standard      **Batch ID:** R371353  
**Method:** SW8260B      **Analysis Date:** 12/06/2021 19:21      **Prep Date:**  
**Lab ID:** CCV120621\_CLOSING      **Units:** ug/L      **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Benzene	4.8	0.50	5.0		96.0	50	150				
Ethylbenzene	4.7	0.50	5.0		94.0	50	150				
Toluene	4.8	0.50	5.0		96.0	50	150				
m+p-Xylenes	9.4	0.50	10		94.0	50	150				
o-Xylene	4.7	0.50	5.0		93.0	50	150				
Xylenes, Total	14	0.50	15		94.0	50	150				
Surr: 1,2-Dichloroethane-d4	9.3	0.50	10		93.0	50	150				
Surr: Dibromofluoromethane	10	0.50	10		100.0	50	150				
Surr: p-Bromofluorobenzene	9.8	0.50	10		98.0	50	150				
Surr: Toluene-d8	9.5	0.50	10		95.0	50	150				

Associated Samples: B21120381-004C, B21120381-005C, B21120381-006C, B21120381-007C, B21120381-008C, B21120381-009A, B21120381-010A, B21120381-011A



### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21120381  
**Project:** CV18F0126/60571032.02.20.01

**Report Date:** 01/10/2022

**Run ID: Run Order:** SV5972.I\_211210A: 2      **SampType:** Continuing Calibration Verification Standard      **Batch ID:** R371671  
**Method:** SW8260B      **Analysis Date:** 12/10/2021 10:42      **Prep Date:**  
**Lab ID:** CCV121021      **Units:** ug/L      **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Benzene	4.7	0.50	5.0		94.0	80	120				
Ethylbenzene	4.6	0.50	5.0		92.0	80	120				
Toluene	4.9	0.50	5.0		97.0	80	120				
m+p-Xylenes	9.1	0.50	10		91.0	80	120				
o-Xylene	4.6	0.50	5.0		91.0	80	120				
Xylenes, Total	14	0.50	15		91.0	80	120				
Surr: 1,2-Dichloroethane-d4	9.5	0.50	10		95.0	80	120				
Surr: Dibromofluoromethane	9.9	0.50	10		99.0	80	120				
Surr: p-Bromofluorobenzene	10	0.50	10		100.0	80	120				
Surr: Toluene-d8	9.8	0.50	10		98.0	80	120				

Associated Samples: **B21120381-012A**



### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21120381  
**Project:** CV18F0126/60571032.02.20.01

**Report Date:** 01/10/2022

**Run ID: Run Order:** SV5972.I\_211210A: 9      **SampType:** Continuing Calibration Verification Standard      **Batch ID:** R371671  
**Method:** SW8260B      **Analysis Date:** 12/10/2021 20:07      **Prep Date:**  
**Lab ID:** CCV\_CLOSING121021      **Units:** ug/L      **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Benzene	4.7	0.50	5.0		94.0	50	150				
Ethylbenzene	4.7	0.50	5.0		93.0	50	150				
Toluene	4.6	0.50	5.0		92.0	50	150				
m+p-Xylenes	9.2	0.50	10		92.0	50	150				
o-Xylene	4.6	0.50	5.0		91.0	50	150				
Xylenes, Total	14	0.50	15		92.0	50	150				
Surr: 1,2-Dichloroethane-d4	9.5	0.50	10		95.0	50	150				
Surr: Dibromofluoromethane	9.8	0.50	10		98.0	50	150				
Surr: p-Bromofluorobenzene	9.9	0.50	10		99.0	50	150				
Surr: Toluene-d8	9.1	0.50	10		91.0	50	150				

Associated Samples: **B21120381-012A**





### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21120381  
**Project:** CV18F0126/60571032.02.20.01

**Report Date:** 01/10/2022

**Run ID: Run Order:** GCFID-HP5-B\_211207B: 6      **SampType:** Method Blank      **Batch ID:** 161934  
**Method:** SW8015C      **Analysis Date:** 12/08/2021 02:13      **Prep Date:** 12/06/2021 15:40  
**Lab ID:** MB-161934      **Units:** mg/L      **Prep Method:** SW3520C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diesel Range Organics (C10 to C24)	ND	0.15									
Oil Range Hydrocarbons (C24 to C40)	ND	0.15									
Total Extractable Hydrocarbons	ND	0.15									
Surr: o-Terphenyl	0.19	0.0020	0.20		95.0	56	125				
Surr: n-Triacontane	0.093	0.0020	0.10		93.0	50	150				

Associated Samples: B21120381-001A, B21120381-002A, B21120381-003A, B21120381-004B, B21120381-005B, B21120381-006B, B21120381-007B, B21120381-008B

**Run ID: Run Order:** GCFID-HP5-B\_211209A: 6      **SampType:** Method Blank      **Batch ID:** 161934  
**Method:** SW8015C      **Analysis Date:** 12/09/2021 17:08      **Prep Date:** 12/06/2021 15:40  
**Lab ID:** MB-161934      **Units:** mg/L      **Prep Method:** SW3520C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diesel Range Organics (SGT-C10 to C24)	ND	0.15									
Oil Range Hydrocarbons (SGT-C24 to C40)	ND	0.15									
Total Extractable Hydrocarbons (SGT)	ND	0.15									
Surr: o-Terphenyl (SGT)	0.20	0.0020	0.20		99.0	56	125				
Surr: n-Triacontane (SGT)	0.095	0.0020	0.10		95.0	50	150				

Associated Samples: B21120381-001A, B21120381-002A, B21120381-003A, B21120381-004B, B21120381-005B, B21120381-006B, B21120381-007B, B21120381-008B



### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21120381  
**Project:** CV18F0126/60571032.02.20.01

**Report Date:** 01/10/2022

**Run ID: Run Order:** GCFID-HP5-B\_211207B: 4      **SampType:** Laboratory Control Sample      **Batch ID:** 161934  
**Method:** SW8015C      **Analysis Date:** 12/08/2021 00:46      **Prep Date:** 12/06/2021 15:40  
**Lab ID:** LCS-161934      **Units:** mg/L      **Prep Method:** SW3520C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diesel Range Organics (C10 to C24)	13	0.30	15		85.0	36	132				
Total Extractable Hydrocarbons	14	0.30	15		91.0	60	132				
Surr: o-Terphenyl	0.19	0.0020	0.20		93.0	56	125				

Associated Samples: B21120381-001A, B21120381-002A, B21120381-003A, B21120381-004B, B21120381-005B, B21120381-006B, B21120381-007B, B21120381-008B

**Run ID: Run Order:** GCFID-HP5-B\_211207B: 5      **SampType:** Laboratory Control Sample Duplicate      **Batch ID:** 161934  
**Method:** SW8015C      **Analysis Date:** 12/08/2021 01:30      **Prep Date:** 12/06/2021 15:41  
**Lab ID:** LCSD-161934      **Units:** mg/L      **Prep Method:** SW3520C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diesel Range Organics (C10 to C24)	13	0.30	15		84.0	36	132	13	1.2	20.0	
Total Extractable Hydrocarbons	13	0.30	15		90.0	60	132	14	1.2	20.0	
Surr: o-Terphenyl	0.18	0.0020	0.20		90.0	56	125	0.0			

Associated Samples: B21120381-001A, B21120381-002A, B21120381-003A, B21120381-004B, B21120381-005B, B21120381-006B, B21120381-007B, B21120381-008B

**Run ID: Run Order:** GCFID-HP5-B\_211207B: 20      **SampType:** Laboratory Control Sample      **Batch ID:** 161934  
**Method:** SW8015C      **Analysis Date:** 12/08/2021 18:01      **Prep Date:** 12/06/2021 15:41  
**Lab ID:** LCS-161934-RRO      **Units:** mg/L      **Prep Method:** SW3520C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
TEH(Oil Range)	5.0	0.30	5.0		101.0	41	113				
Surr: n-Triacontane	0.094	0.0020	0.10		94.0	50	150				

Associated Samples: B21120381-001A, B21120381-002A, B21120381-003A, B21120381-004B, B21120381-005B, B21120381-006B, B21120381-007B, B21120381-008B



### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21120381  
**Project:** CV18F0126/60571032.02.20.01

**Report Date:** 01/10/2022

**Run ID: Run Order:** GCFID-HP5-B\_211207B: 21      **SampType:** Laboratory Control Sample Duplicate      **Batch ID:** 161934  
**Method:** SW8015C      **Analysis Date:** 12/08/2021 19:28      **Prep Date:** 12/06/2021 15:41  
**Lab ID:** LCSD-161934-RRO      **Units:** mg/L      **Prep Method:** SW3520C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
TEH(Oil Range)	4.7	0.30	5.0		95.0	41	113	5.0	5.7	20.0	
Surr: n-Triacontane	0.090	0.0020	0.10		90.0	50	150	0.0			

Associated Samples: B21120381-001A, B21120381-002A, B21120381-003A, B21120381-004B, B21120381-005B, B21120381-006B, B21120381-007B, B21120381-008B

**Run ID: Run Order:** GCFID-HP5-B\_211209A: 4      **SampType:** Laboratory Control Sample      **Batch ID:** 161934  
**Method:** SW8015C      **Analysis Date:** 12/09/2021 15:43      **Prep Date:** 12/06/2021 15:40  
**Lab ID:** LCS-161934      **Units:** mg/L      **Prep Method:** SW3520C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diesel Range Organics (SGT-C10 to C24)	13	0.30	15		88.0	36	132				
Total Extractable Hydrocarbons (SGT)	14	0.30	15		94.0	60	132				
Surr: o-Terphenyl (SGT)	0.20	0.0020	0.20		102.0	56	125				

Associated Samples: B21120381-001A, B21120381-002A, B21120381-003A, B21120381-004B, B21120381-005B, B21120381-006B, B21120381-007B, B21120381-008B

**Run ID: Run Order:** GCFID-HP5-B\_211209A: 5      **SampType:** Laboratory Control Sample Duplicate      **Batch ID:** 161934  
**Method:** SW8015C      **Analysis Date:** 12/09/2021 16:25      **Prep Date:** 12/06/2021 15:41  
**Lab ID:** LCSD-161934      **Units:** mg/L      **Prep Method:** SW3520C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diesel Range Organics (SGT-C10 to C24)	13	0.30	15		87.0	36	132	13	1.7	20.0	
Total Extractable Hydrocarbons (SGT)	14	0.30	15		92.0	60	132	14	1.6	20.0	
Surr: o-Terphenyl (SGT)	0.19	0.0020	0.20		96.0	56	125	0.0			

Associated Samples: B21120381-001A, B21120381-002A, B21120381-003A, B21120381-004B, B21120381-005B, B21120381-006B, B21120381-007B, B21120381-008B



### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21120381  
**Project:** CV18F0126/60571032.02.20.01

**Report Date:** 01/10/2022

**Run ID: Run Order:** GCFID-HP5-B\_211209A: 21      **SampType:** Laboratory Control Sample      **Batch ID:** 161934  
**Method:** SW8015C      **Analysis Date:** 12/10/2021 08:11      **Prep Date:** 12/06/2021 15:41  
**Lab ID:** LCS-161934-RRO      **Units:** mg/L      **Prep Method:** SW3520C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
TEH (SGT-Oil Range)	5.3	0.30	5.0		107.0	41	113				
Surr: n-Triacontane (SGT)	0.099	0.0020	0.10		99.0	50	150				

Associated Samples: B21120381-001A, B21120381-002A, B21120381-003A, B21120381-004B, B21120381-005B, B21120381-006B, B21120381-007B, B21120381-008B

**Run ID: Run Order:** GCFID-HP5-B\_211209A: 22      **SampType:** Laboratory Control Sample Duplicate      **Batch ID:** 161934  
**Method:** SW8015C      **Analysis Date:** 12/10/2021 09:37      **Prep Date:** 12/06/2021 15:41  
**Lab ID:** LCSD-161934-RRO      **Units:** mg/L      **Prep Method:** SW3520C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
TEH (SGT-Oil Range)	5.2	0.30	5.0		103.0	41	113	5.3	3.2	20.0	
Surr: n-Triacontane (SGT)	0.096	0.0020	0.10		96.0	50	150	0.0			

Associated Samples: B21120381-001A, B21120381-002A, B21120381-003A, B21120381-004B, B21120381-005B, B21120381-006B, B21120381-007B, B21120381-008B

**Run ID: Run Order:** GCFID-HP5-B\_211207B: 10      **SampType:** Sample Matrix Spike      **Batch ID:** 161934  
**Method:** SW8015C      **Analysis Date:** 12/08/2021 06:32      **Prep Date:** 12/06/2021 15:41  
**Lab ID:** B21120381-003AMS      **Units:** mg/L      **Prep Method:** SW3520C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diesel Range Organics (C10 to C24)	14	0.30	15	0.11	92.0	36	132				
Total Extractable Hydrocarbons	15	0.30	15	0.47	98.0	60	132				
Surr: o-Terphenyl	0.19	0.0020	0.19	0.0	98.0	56	125				

Associated Samples: B21120381-001A, B21120381-002A, B21120381-003A, B21120381-004B, B21120381-005B, B21120381-006B, B21120381-007B, B21120381-008B



### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21120381  
**Project:** CV18F0126/60571032.02.20.01

**Report Date:** 01/10/2022

**Run ID: Run Order:** GCFID-HP5-B\_211207B: 19      **SampType:** Sample Matrix Spike      **Batch ID:** 161934  
**Method:** SW8015C      **Analysis Date:** 12/08/2021 16:34      **Prep Date:** 12/06/2021 15:41  
**Lab ID:** B21120381-004BMS-RRO      **Units:** mg/L      **Prep Method:** SW3520C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
TEH(Oil Range)	5.0	0.30	5.0	0.71	88.0	41	113				
Surr: n-Triacontane	0.090	0.0020	0.099	0.0	91.0	50	150				

Associated Samples: B21120381-001A, B21120381-002A, B21120381-003A, B21120381-004B, B21120381-005B, B21120381-006B, B21120381-007B, B21120381-008B

**Run ID: Run Order:** GCFID-HP5-B\_211209A: 10      **SampType:** Sample Matrix Spike      **Batch ID:** 161934  
**Method:** SW8015C      **Analysis Date:** 12/09/2021 20:44      **Prep Date:** 12/06/2021 15:41  
**Lab ID:** B21120381-003AMS      **Units:** mg/L      **Prep Method:** SW3520C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diesel Range Organics (SGT-C10 to C24)	12	0.30	15	0.0	83.0	36	132				
Total Extractable Hydrocarbons (SGT)	13	0.30	15	0.0	89.0	60	132				
Surr: o-Terphenyl (SGT)	0.18	0.0020	0.19	0.0	91.0	56	125				

Associated Samples: B21120381-001A, B21120381-002A, B21120381-003A, B21120381-004B, B21120381-005B, B21120381-006B, B21120381-007B, B21120381-008B

**Run ID: Run Order:** GCFID-HP5-B\_211209A: 20      **SampType:** Sample Matrix Spike      **Batch ID:** 161934  
**Method:** SW8015C      **Analysis Date:** 12/10/2021 06:45      **Prep Date:** 12/06/2021 15:41  
**Lab ID:** B21120381-004BMS-RRO      **Units:** mg/L      **Prep Method:** SW3520C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
TEH (SGT-Oil Range)	4.7	0.30	5.0	0.0	94.0	41	113				
Surr: n-Triacontane (SGT)	0.086	0.0020	0.099	0.0	87.0	50	150				

Associated Samples: B21120381-001A, B21120381-002A, B21120381-003A, B21120381-004B, B21120381-005B, B21120381-006B, B21120381-007B, B21120381-008B



### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21120381  
**Project:** CV18F0126/60571032.02.20.01

**Report Date:** 01/10/2022

**Run ID: Run Order:** PE 1\_211210A: 4      **SampType:** Method Blank      **Batch ID:** R371606  
**Method:** SW8015C      **Analysis Date:** 12/10/2021 12:03      **Prep Date:**  
**Lab ID:** MBLK\_1210PE106r      **Units:** ug/L      **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
C6 to C10	ND	10									
Total Purgeable Hydrocarbons	ND	10									
Surr: Trifluorotoluene	20	1.0	25		81.0	70	130				

Associated Samples: B21120381-004D, B21120381-005D, B21120381-006D, B21120381-007D, B21120381-008D, B21120381-009B, B21120381-010B, B21120381-011B, B21120381-012B

**Run ID: Run Order:** PE 1\_211210A: 18      **SampType:** Method Blank      **Batch ID:** R371606  
**Method:** SW8015C      **Analysis Date:** 12/10/2021 23:29      **Prep Date:**  
**Lab ID:** MBLK\_1210PE126r      **Units:** ug/L      **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
C6 to C10	ND	10									
Total Purgeable Hydrocarbons	ND	10									
Surr: Trifluorotoluene	19	1.0	25		78.0	70	130				

Associated Samples: B21120381-004D, B21120381-005D, B21120381-006D, B21120381-007D, B21120381-008D, B21120381-009B, B21120381-010B, B21120381-011B, B21120381-012B

**Run ID: Run Order:** PE 1\_211210A: 3      **SampType:** Laboratory Control Sample      **Batch ID:** R371606  
**Method:** SW8015C      **Analysis Date:** 12/10/2021 11:29      **Prep Date:**  
**Lab ID:** LCS\_1210PE105r      **Units:** ug/L      **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
C6 to C10	136	20	170		80.0	78	122				
Total Purgeable Hydrocarbons	166	20	200		83.0	70	130				
Surr: Trifluorotoluene	22	1.0	25		87.0	70	130				

Associated Samples: B21120381-004D, B21120381-005D, B21120381-006D, B21120381-007D, B21120381-008D, B21120381-009B, B21120381-010B, B21120381-011B, B21120381-012B



### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21120381  
**Project:** CV18F0126/60571032.02.20.01

**Report Date:** 01/10/2022

**Run ID: Run Order:** PE 1\_211210A: 17      **SampType:** Laboratory Control Sample      **Batch ID:** R371606  
**Method:** SW8015C      **Analysis Date:** 12/10/2021 22:55      **Prep Date:**  
**Lab ID:** LCS\_1210PE125r      **Units:** ug/L      **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
C6 to C10	175	20	170		103.0	78	122				
Total Purgeable Hydrocarbons	213	20	200		107.0	70	130				
Surr: Trifluorotoluene	22	1.0	25		89.0	70	130				

Associated Samples: B21120381-004D, B21120381-005D, B21120381-006D, B21120381-007D, B21120381-008D, B21120381-009B, B21120381-010B, B21120381-011B, B21120381-012B

**Run ID: Run Order:** PE 1\_211210A: 20      **SampType:** Sample Matrix Spike      **Batch ID:** R371606  
**Method:** SW8015C      **Analysis Date:** 12/11/2021 01:12      **Prep Date:**  
**Lab ID:** B21120381-005DMS      **Units:** ug/L      **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
C6 to C10	171	20	170	0.0	100.0	78	122				
Total Purgeable Hydrocarbons	207	20	200	0.0	104.0	70	130				
Surr: Trifluorotoluene	22	1.0	25	0.0	90.0	70	130				

Associated Samples: B21120381-004D, B21120381-005D, B21120381-006D, B21120381-007D, B21120381-008D, B21120381-009B, B21120381-010B, B21120381-011B, B21120381-012B

**Run ID: Run Order:** PE 1\_211210A: 21      **SampType:** Sample Matrix Spike Duplicate      **Batch ID:** R371606  
**Method:** SW8015C      **Analysis Date:** 12/11/2021 01:47      **Prep Date:**  
**Lab ID:** B21120381-005DMSD      **Units:** ug/L      **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
C6 to C10	170	20	170	0.0	100.0	78	122	171	0.2	20.0	
Total Purgeable Hydrocarbons	207	20	200	0.0	103.0	70	130	207	0.2	20.0	
Surr: Trifluorotoluene	22	1.0	25	0.0	90.0	70	130	0.0			

Associated Samples: B21120381-004D, B21120381-005D, B21120381-006D, B21120381-007D, B21120381-008D, B21120381-009B, B21120381-010B, B21120381-011B, B21120381-012B



### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21120381  
**Project:** CV18F0126/60571032.02.20.01

**Report Date:** 01/10/2022

**Run ID: Run Order:** GCFID-HP5-B\_211207B: 2      **SampType:** Continuing Calibration Verification Standard      **Batch ID:** R371406  
**Method:** SW8015C      **Analysis Date:** 12/07/2021 22:37      **Prep Date:**  
**Lab ID:** CCV\_1207HP517r-W      **Units:** mg/L      **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
TEH(Oil Range)	4.9	0.30	5.0		97.0	80	120				
Surr: n-Triacontane	0.21	0.0020	0.20		105.0	80	120				

Associated Samples: B21120381-001A, B21120381-002A, B21120381-003A, B21120381-004B, B21120381-005B, B21120381-006B, B21120381-007B, B21120381-008B

**Run ID: Run Order:** GCFID-HP5-B\_211207B: 3      **SampType:** Continuing Calibration Verification Standard      **Batch ID:** R371406  
**Method:** SW8015C      **Analysis Date:** 12/07/2021 23:20      **Prep Date:**  
**Lab ID:** CCV\_1207HP518r      **Units:** mg/L      **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diesel Range Organics (C10 to C24)	15	0.30	15		101.0	80	120				
Total Extractable Hydrocarbons	16	0.30	15		104.0	80	120				
Surr: o-Terphenyl	0.21	0.0020	0.20		103.0	80	120				

Associated Samples: B21120381-001A, B21120381-002A, B21120381-003A, B21120381-004B, B21120381-005B, B21120381-006B, B21120381-007B, B21120381-008B

**Run ID: Run Order:** GCFID-HP5-B\_211207B: 13      **SampType:** Continuing Calibration Verification Standard      **Batch ID:** R371406  
**Method:** SW8015C      **Analysis Date:** 12/08/2021 10:08      **Prep Date:**  
**Lab ID:** CCV\_1207HP533r-W      **Units:** mg/L      **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
TEH(Oil Range)	5.0	0.30	5.0		100.0	80	120				
Surr: n-Triacontane	0.21	0.0020	0.20		106.0	80	120				

Associated Samples: B21120381-001A, B21120381-002A, B21120381-003A, B21120381-004B, B21120381-005B, B21120381-006B, B21120381-007B, B21120381-008B





### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21120381  
**Project:** CV18F0126/60571032.02.20.01

**Report Date:** 01/10/2022

**Run ID: Run Order:** GCFID-HP5-B\_211207B: 14      **SampType:** Continuing Calibration Verification Standard      **Batch ID:** R371406  
**Method:** SW8015C      **Analysis Date:** 12/08/2021 10:51      **Prep Date:**  
**Lab ID:** CCV\_1207HP534r      **Units:** mg/L      **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diesel Range Organics (C10 to C24)	16	0.30	15		103.0	80	120				
Total Extractable Hydrocarbons	16	0.30	15		107.0	80	120				
Surr: o-Terphenyl	0.21	0.0020	0.20		107.0	80	120				

Associated Samples: B21120381-001A, B21120381-002A, B21120381-003A, B21120381-004B, B21120381-005B, B21120381-006B, B21120381-007B, B21120381-008B

**Run ID: Run Order:** GCFID-HP5-B\_211207B: 23      **SampType:** Continuing Calibration Verification Standard      **Batch ID:** R371406  
**Method:** SW8015C      **Analysis Date:** 12/08/2021 21:39      **Prep Date:**  
**Lab ID:** CCV\_1207HP549r-W      **Units:** mg/L      **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
TEH(Oil Range)	5.1	0.30	5.0		102.0	80	120				
Surr: n-Triacontane	0.21	0.0020	0.20		106.0	80	120				

Associated Samples: B21120381-001A, B21120381-002A, B21120381-003A, B21120381-004B, B21120381-005B, B21120381-006B, B21120381-007B, B21120381-008B

**Run ID: Run Order:** GCFID-HP5-B\_211207B: 24      **SampType:** Continuing Calibration Verification Standard      **Batch ID:** R371406  
**Method:** SW8015C      **Analysis Date:** 12/08/2021 22:22      **Prep Date:**  
**Lab ID:** CCV\_1207HP550r      **Units:** mg/L      **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diesel Range Organics (C10 to C24)	15	0.30	15		99.0	80	120				
Total Extractable Hydrocarbons	15	0.30	15		102.0	80	120				
Surr: o-Terphenyl	0.20	0.0020	0.20		102.0	80	120				

Associated Samples: B21120381-001A, B21120381-002A, B21120381-003A, B21120381-004B, B21120381-005B, B21120381-006B, B21120381-007B, B21120381-008B



### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21120381  
**Project:** CV18F0126/60571032.02.20.01

**Report Date:** 01/10/2022

**Run ID: Run Order:** GCFID-HP5-B\_211209A: 2      **SampType:** Continuing Calibration Verification Standard      **Batch ID:** R371557  
**Method:** SW8015C      **Analysis Date:** 12/09/2021 13:35      **Prep Date:**  
**Lab ID:** CCV\_1209HP505r-W      **Units:** mg/L      **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
TEH(Oil Range)	4.8	0.30	5.0		96.0	80	120				
Surr: n-Triacontane	0.21	0.0020	0.20		105.0	80	120				

Associated Samples: B21120381-001A, B21120381-002A, B21120381-003A, B21120381-004B, B21120381-005B, B21120381-006B, B21120381-007B, B21120381-008B

**Run ID: Run Order:** GCFID-HP5-B\_211209A: 3      **SampType:** Continuing Calibration Verification Standard      **Batch ID:** R371557  
**Method:** SW8015C      **Analysis Date:** 12/09/2021 14:17      **Prep Date:**  
**Lab ID:** CCV\_1209HP506r      **Units:** mg/L      **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diesel Range Organics (C10 to C24)	15	0.30	15		101.0	80	120				
Total Extractable Hydrocarbons	16	0.30	15		104.0	80	120				
Surr: o-Terphenyl	0.21	0.0020	0.20		103.0	80	120				

Associated Samples: B21120381-001A, B21120381-002A, B21120381-003A, B21120381-004B, B21120381-005B, B21120381-006B, B21120381-007B, B21120381-008B

**Run ID: Run Order:** GCFID-HP5-B\_211209A: 14      **SampType:** Continuing Calibration Verification Standard      **Batch ID:** R371557  
**Method:** SW8015C      **Analysis Date:** 12/10/2021 01:02      **Prep Date:**  
**Lab ID:** CCV\_1209HP521r-W      **Units:** mg/L      **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
TEH(Oil Range)	4.8	0.30	5.0		95.0	80	120				
Surr: n-Triacontane	0.21	0.0020	0.20		105.0	80	120				

Associated Samples: B21120381-001A, B21120381-002A, B21120381-003A, B21120381-004B, B21120381-005B, B21120381-006B, B21120381-007B, B21120381-008B



### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21120381  
**Project:** CV18F0126/60571032.02.20.01

**Report Date:** 01/10/2022

**Run ID: Run Order:** GCFID-HP5-B\_211209A: 15      **SampType:** Continuing Calibration Verification Standard      **Batch ID:** R371557  
**Method:** SW8015C      **Analysis Date:** 12/10/2021 01:45      **Prep Date:**  
**Lab ID:** CCV\_1209HP522r      **Units:** mg/L      **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diesel Range Organics (C10 to C24)	15	0.30	15		102.0	80	120				
Total Extractable Hydrocarbons	16	0.30	15		105.0	80	120				
Surr: o-Terphenyl	0.21	0.0020	0.20		104.0	80	120				

Associated Samples: B21120381-001A, B21120381-002A, B21120381-003A, B21120381-004B, B21120381-005B, B21120381-006B, B21120381-007B, B21120381-008B

**Run ID: Run Order:** GCFID-HP5-B\_211209A: 24      **SampType:** Continuing Calibration Verification Standard      **Batch ID:** R371557  
**Method:** SW8015C      **Analysis Date:** 12/10/2021 11:46      **Prep Date:**  
**Lab ID:** CCV\_1209HP536r-W      **Units:** mg/L      **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
TEH(Oil Range)	4.9	0.30	5.0		99.0	80	120				
Surr: n-Triacontane	0.22	0.0020	0.20		108.0	80	120				

Associated Samples: B21120381-001A, B21120381-002A, B21120381-003A, B21120381-004B, B21120381-005B, B21120381-006B, B21120381-007B, B21120381-008B

**Run ID: Run Order:** GCFID-HP5-B\_211209A: 25      **SampType:** Continuing Calibration Verification Standard      **Batch ID:** R371557  
**Method:** SW8015C      **Analysis Date:** 12/10/2021 12:29      **Prep Date:**  
**Lab ID:** CCV\_1209HP537r      **Units:** mg/L      **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diesel Range Organics (C10 to C24)	15	0.30	15		100.0	80	120				
Total Extractable Hydrocarbons	16	0.30	15		104.0	80	120				
Surr: o-Terphenyl	0.20	0.0020	0.20		102.0	80	120				

Associated Samples: B21120381-001A, B21120381-002A, B21120381-003A, B21120381-004B, B21120381-005B, B21120381-006B, B21120381-007B, B21120381-008B



### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21120381  
**Project:** CV18F0126/60571032.02.20.01

**Report Date:** 01/10/2022

**Run ID: Run Order:** PE 1\_211210A: 2      **SampType:** Continuing Calibration Verification Standard      **Batch ID:** R371606  
**Method:** SW8015C      **Analysis Date:** 12/10/2021 10:55      **Prep Date:**  
**Lab ID:** CCV\_1210PE104r      **Units:** ug/L      **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
C6 to C10	175	20	168		104.0	80	120				
Total Purgeable Hydrocarbons	209	20	200		105.0	80	120				
Surr: Trifluorotoluene	24	1.0	25		95.0	80	120				

Associated Samples: **B21120381-004D, B21120381-005D, B21120381-006D, B21120381-007D, B21120381-008D, B21120381-009B, B21120381-010B, B21120381-011B, B21120381-012B**

**Run ID: Run Order:** PE 1\_211210A: 24      **SampType:** Continuing Calibration Verification Standard      **Batch ID:** R371606  
**Method:** SW8015C      **Analysis Date:** 12/11/2021 05:12      **Prep Date:**  
**Lab ID:** CCV\_1210PE136r      **Units:** ug/L      **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
C6 to C10	163	20	168		97.0	80	120				
Total Purgeable Hydrocarbons	195	20	200		98.0	80	120				
Surr: Trifluorotoluene	22	1.0	25		89.0	80	120				

Associated Samples: **B21120381-004D, B21120381-005D, B21120381-006D, B21120381-007D, B21120381-008D, B21120381-009B, B21120381-010B, B21120381-011B, B21120381-012B**



### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21120381  
**Project:** CV18F0126/60571032.02.20.01

**Report Date:** 01/10/2022

**Run ID: Run Order:** SV5975.I\_211208A: 11      **SampType:** Method Blank      **Batch ID:** 161925  
**Method:** SW8270C      **Analysis Date:** 12/08/2021 14:01      **Prep Date:** 12/06/2021 11:08  
**Lab ID:** MB-161925      **Units:** ug/L      **Prep Method:** SW3510C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1-Methylnaphthalene	ND	0.10									
2-Methylnaphthalene	ND	0.10									
Naphthalene	ND	0.10									

Associated Samples: B21120381-004A, B21120381-005A, B21120381-006A, B21120381-007A, B21120381-008A

**Run ID: Run Order:** SV5975.I\_211208A: 12      **SampType:** Method Blank      **Batch ID:** 161925  
**Method:** SW8270C      **Analysis Date:** 12/08/2021 14:33      **Prep Date:** 12/06/2021 11:08  
**Lab ID:** MB-161925      **Units:** ug/L      **Prep Method:** SW3510C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Surr: 2-Fluorobiphenyl	57	2.0	100		57.0	53	106				
Surr: Nitrobenzene-d5	73	2.0	100		73.0	55	111				
Surr: Terphenyl-d14	114	2.0	100		114.0	58	132				

Associated Samples: B21120381-004A, B21120381-005A, B21120381-006A, B21120381-007A, B21120381-008A



### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21120381  
**Project:** CV18F0126/60571032.02.20.01

**Report Date:** 01/10/2022

**Run ID: Run Order:** SV5975.I\_211208A: 13      **SampType:** Laboratory Control Sample      **Batch ID:** 161925  
**Method:** SW8270C      **Analysis Date:** 12/08/2021 15:06      **Prep Date:** 12/06/2021 11:08  
**Lab ID:** LLCS-161925      **Units:** ug/L      **Prep Method:** SW3510C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1-Methylnaphthalene	3.3	0.10	5.0		65.0	41	115				
2-Methylnaphthalene	3.4	0.10	5.0		68.0	39	114				
Naphthalene	3.3	0.10	5.0		65.0	43	114				
Surr: 2-Fluorobiphenyl	3.7	0.10	5.0		75.0	53	106				
Surr: Nitrobenzene-d5	3.5	0.10	5.0		70.0	55	111				
Surr: Terphenyl-d14	4.9	0.10	5.0		98.0	58	132				

Associated Samples: **B21120381-004A, B21120381-005A, B21120381-006A, B21120381-007A, B21120381-008A**

**Run ID: Run Order:** SV5975.I\_211208A: 14      **SampType:** Laboratory Control Sample Duplicate      **Batch ID:** 161925  
**Method:** SW8270C      **Analysis Date:** 12/08/2021 15:38      **Prep Date:** 12/06/2021 15:03  
**Lab ID:** LLCSD-161925      **Units:** ug/L      **Prep Method:** SW3510C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1-Methylnaphthalene	4.2	0.10	5.0		83.0	41	115	3.3	24.0	40.0	
2-Methylnaphthalene	4.2	0.10	5.0		83.0	39	114	3.4	20.0	40.0	
Naphthalene	3.8	0.10	5.0		76.0	43	114	3.3	15.0	40.0	
Surr: 2-Fluorobiphenyl	4.2	0.10	5.0		84.0	53	106	0.0	0.0		
Surr: Nitrobenzene-d5	3.9	0.10	5.0		77.0	55	111	0.0	0.0		
Surr: Terphenyl-d14	5.6	0.10	5.0		111.0	58	132	0.0	0.0		

Associated Samples: **B21120381-004A, B21120381-005A, B21120381-006A, B21120381-007A, B21120381-008A**

- Insufficient sample was submitted to perform a Matrix Spike/Duplicate, so a Laboratory Control Sample Duplicate is included in the reporting package to assess precision.



### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21120381  
**Project:** CV18F0126/60571032.02.20.01

**Report Date:** 01/10/2022

**Run ID: Run Order:** SV5975.I\_211208A: 21      **SampType:** Sample Matrix Spike      **Batch ID:** 161925  
**Method:** SW8270C      **Analysis Date:** 12/08/2021 19:27      **Prep Date:** 12/06/2021 15:03  
**Lab ID:** B21120396-001ALMS      **Units:** ug/L      **Prep Method:** SW3510C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1-Methylnaphthalene	3.0	0.11	5.4	0.0	55.0	41	115				
2-Methylnaphthalene	3.0	0.11	5.4	0.0	56.0	39	114				
Naphthalene	2.7	0.11	5.4	0.0	50.0	43	114				
Surr: 2-Fluorobiphenyl	4.0	0.11	5.4	0.0	73.0	53	106				
Surr: Nitrobenzene-d5	4.2	0.11	5.4	0.0	76.0	55	111				
Surr: Terphenyl-d14	5.8	0.11	5.4	0.0	107.0	58	132				

Associated Samples: B21120381-004A, B21120381-005A, B21120381-006A, B21120381-007A, B21120381-008A

**Run ID: Run Order:** SV5975.I\_211208A: 22      **SampType:** Continuing Calibration Verification Standard      **Batch ID:** R371450  
**Method:** SW8270C      **Analysis Date:** 12/08/2021 19:59      **Prep Date:**  
**Lab ID:** 08-Dec-21\_CCv\_22      **Units:** ug/L      **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1-Methylnaphthalene	2.2	0.10	2.0		108.0	50	150				
2-Methylnaphthalene	2.1	0.10	2.0		106.0	50	150				
Naphthalene	2.0	0.10	2.0		100.0	50	150				
Surr: 2-Fluorobiphenyl	1.9	0.10	2.0		97.0	50	150				
Surr: Nitrobenzene-d5	2.0	0.10	2.0		102.0	50	150				
Surr: Terphenyl-d14	1.8	0.10	2.0		89.0	50	150				

Associated Samples: B21120381-004A, B21120381-005A, B21120381-006A, B21120381-007A, B21120381-008A



### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21120381  
**Project:** CV18F0126/60571032.02.20.01

**Report Date:** 01/10/2022

**Run ID: Run Order:** SV5975.I\_211208A: 9      **SampType:** Initial Calibration Verification Standard      **Batch ID:** R371450  
**Method:** SW8270C      **Analysis Date:** 12/08/2021 12:56      **Prep Date:**  
**Lab ID:** 08-Dec-21\_CCV\_9      **Units:** ug/L      **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1-Methylnaphthalene	2.2	0.10	2.0		110.0	80	120				
2-Methylnaphthalene	2.2	0.10	2.0		108.0	80	120				
Naphthalene	2.1	0.10	2.0		104.0	80	120				
Surr: 2-Fluorobiphenyl	2.0	0.10	2.0		98.0	80	120				
Surr: Nitrobenzene-d5	2.1	0.10	2.0		104.0	80	120				
Surr: Terphenyl-d14	2.1	0.10	2.0		107.0	80	120				

Associated Samples: **B21120381-004A, B21120381-005A, B21120381-006A, B21120381-007A, B21120381-008A**





## Analytical QC Exceptions Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21120381  
**Project:** CV18F0126/60571032.02.20.01

**Report Date:** 01/10/2022

All quality control measures met criteria; there were no Analytical QC Exceptions.



## Preparation and Analysis Dates Report

Work Order: B21120381

Client: AECOM - Honolulu

Project Name: CV18F0126/60571032.02.20.01

Report Date: 1/10/2022

Lab ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Method	Prep Date	Prep Batch	Analysis Method	Analysis Date
001A	ERH2003 (RHMW01R)	12/01/2021 15:07	Ground Water	Diesel Range Organics		SW3520C	12/06/2021 15:42	161934	SW8015C	12/09/2021 07:02
						SW3520C	12/06/2021 15:42	161934	SW8015C	12/10/2021 03:54
002A	ERH2006 (RHMW02)	12/01/2021 16:15	Ground Water	Diesel Range Organics		SW3520C	12/06/2021 15:42	161934	SW8015C	12/08/2021 15:08
						SW3520C	12/06/2021 15:42	161934	SW8015C	12/10/2021 06:03
003A	ERH2009 (RHMW03)	12/01/2021 17:25	Ground Water	Diesel Range Organics		SW3520C	12/06/2021 15:41	161934	SW8015C	12/08/2021 05:49
						SW3520C	12/06/2021 15:41	161934	SW8015C	12/09/2021 20:01
004A	ERH2011 (RHMW05)	12/01/2021 13:50	Ground Water	Low Level PAH		SW3510C	12/06/2021 15:03	161925	SW8270C	12/08/2021 16:11
004B	ERH2011 (RHMW05)	12/01/2021 13:50	Ground Water	Diesel Range Organics		SW3520C	12/06/2021 15:41	161934	SW8015C	12/08/2021 07:59
						SW3520C	12/06/2021 15:41	161934	SW8015C	12/09/2021 21:27
005A	ERH2013 (RHMW08)	12/01/2021 19:25	Ground Water	Low Level PAH		SW3510C	12/06/2021 15:03	161925	SW8270C	12/08/2021 16:44
005B	ERH2013 (RHMW08)	12/01/2021 19:25	Ground Water	Diesel Range Organics		SW3520C	12/06/2021 15:42	161934	SW8015C	12/08/2021 13:00
						SW3520C	12/06/2021 15:42	161934	SW8015C	12/10/2021 03:11
006A	ERH2014 (RHMW08)	12/01/2021 19:25	Ground Water	Low Level PAH		SW3510C	12/06/2021 15:03	161925	SW8270C	12/08/2021 17:16
006B	ERH2014 (RHMW08)	12/01/2021 19:25	Ground Water	Diesel Range Organics		SW3520C	12/06/2021 15:42	161934	SW8015C	12/08/2021 02:56
						SW3520C	12/06/2021 15:42	161934	SW8015C	12/09/2021 17:51
007A	ERH2018 (RHMW2254-01)	12/01/2021 13:45	Ground Water	Low Level PAH		SW3510C	12/06/2021 15:03	161925	SW8270C	12/08/2021 17:49
007B	ERH2018 (RHMW2254-01)	12/01/2021 13:45	Ground Water	Diesel Range Organics		SW3520C	12/06/2021 15:42	161934	SW8015C	12/08/2021 03:39
						SW3520C	12/06/2021 15:42	161934	SW8015C	12/09/2021 18:35
008A	ERH2020 (OWDFMW01)	12/01/2021 17:30	Ground Water	Low Level PAH		SW3510C	12/06/2021 15:03	161925	SW8270C	12/08/2021 18:21
008B	ERH2020 (OWDFMW01)	12/01/2021 17:30	Ground Water	Diesel Range Organics		SW3520C	12/06/2021 15:42	161934	SW8015C	12/08/2021 12:17
						SW3520C	12/06/2021 15:42	161934	SW8015C	12/09/2021 22:53



## Chemical Abstracts Service (CAS) Registry Numbers

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu

**Workorder:** B21120381

**Project:** CV18F0126/60571032.02.20.01

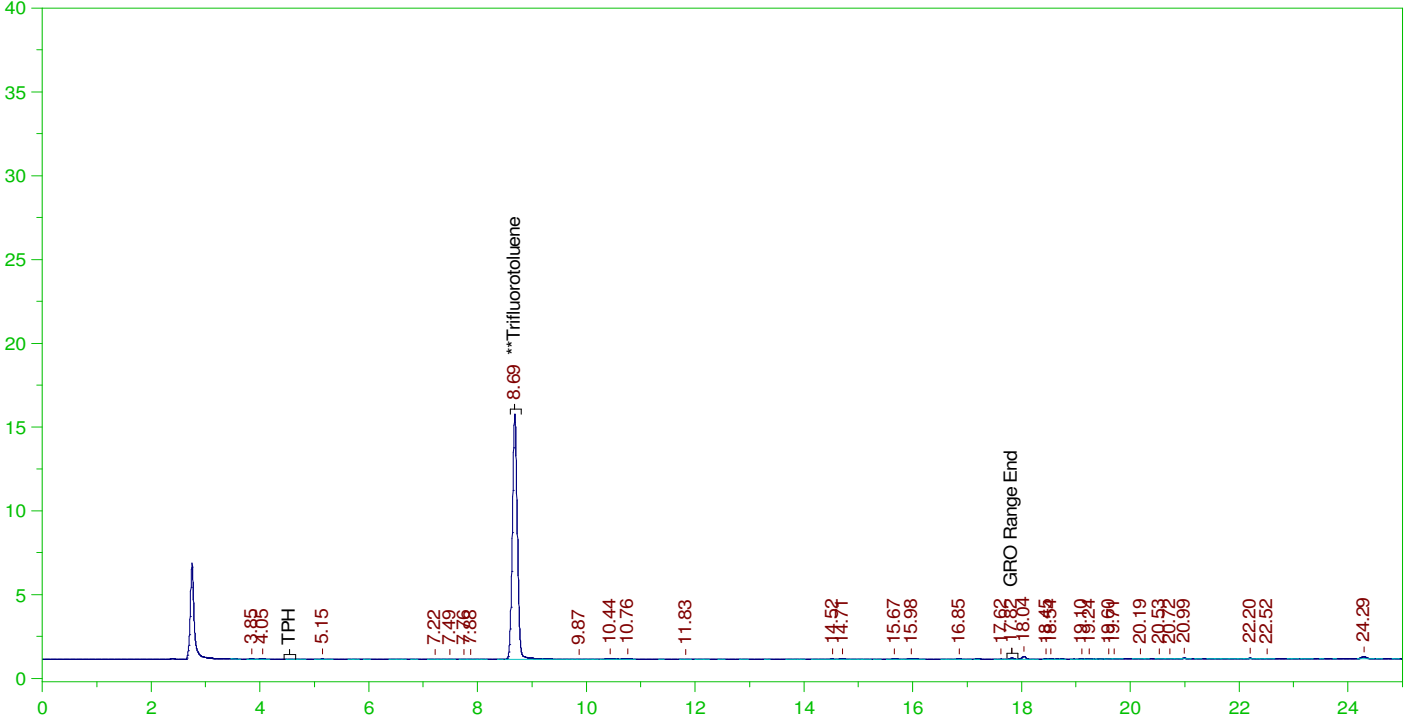
**Report Date:** 01/10/2022

Analyses	CAS No
<b>VOLATILE ORGANIC COMPOUNDS</b>	
Benzene	71-43-2
Ethylbenzene	100-41-4
Toluene	108-88-3
m+p-Xylenes	179601-23-1
o-Xylene	95-47-6
Xylenes, Total	1330-20-7
<b>PETROLEUM HYDROCARBONS-VOLATILE</b>	
C6 to C10	
Total Purgeable Hydrocarbons	
<b>PETROLEUM HYDROCARBONS-SEMI-VOLATILE</b>	
Diesel Range Organics (C10 to C24)	
Diesel Range Organics (SGT-C10 to C24)	
Oil Range Hydrocarbons (C24 to C40)	
Oil Range Hydrocarbons (SGT-C24 to C40)	
Total Extractable Hydrocarbons	
Total Extractable Hydrocarbons (SGT)	
<b>SEMI-VOLATILE ORGANIC COMPOUNDS (LOW LEVEL) BY SIM</b>	
1-Methylnaphthalene	90-12-0
2-Methylnaphthalene	91-57-6
Naphthalene	91-20-3

ERH2011 (RHMW05)

G:\Org\PE1\DAT\PE1121021\_b\1210PE1B.0007.RAW

B21120381-004D ;1210PE1 , \$HC-8015-GRO-W,



**GASOLINE RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21120381-004D ;1210PE1 , \$HC-8015-GRO-W,  
Raw File: G:\Org\PE1\DAT\PE1121021\_b\1210PE1B.0007.RAW  
Date & Time Acquired: 12/10/2021 12:38:03 PM  
Method File: G:\Org\PE1\Methods\211208GROB%.MET  
Calibration File: G:\Org\PE1\Cals\211208GRO8015CB.CAL  
Sample Weight: 5 Dilution: 1 S.A.: 1

Mean RF for GRO: 945.9678  
Mean RF for TPH: 909.3915  
Rt range for Gasoline Range Organics: 4.45 to 17.93

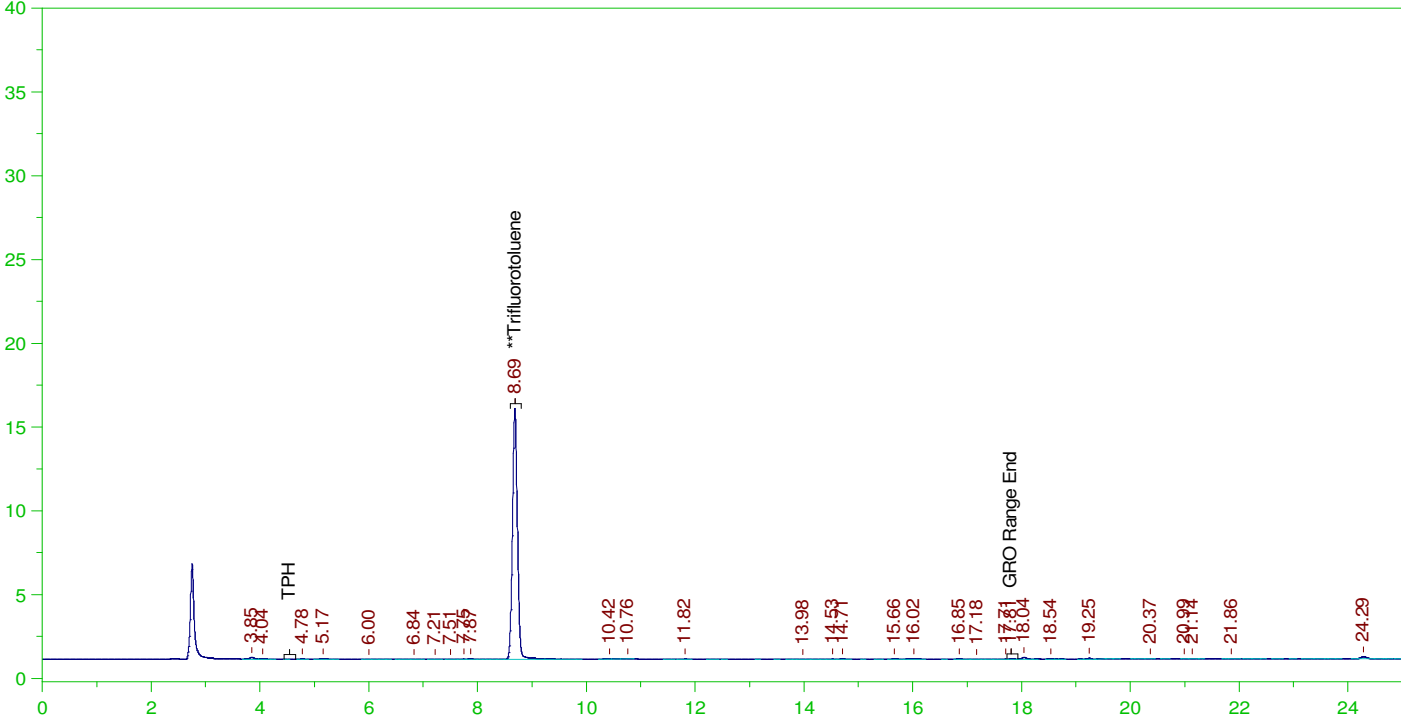
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
**Trifluorotoluene	8.685	25.	19.909	79.64

GRO Area:3415.882 GRO Amount: 0.7221984  
TPH Area:7027.476 TPH Amount: 1.545534

ERH2013 (RHMW08)

G:\Org\PE1\DAT\PE1121021\_b\1210PE1B.0009.RAW

B21120381-005D ;1210PE1 , \$HC-8015-GRO-W,



**GASOLINE RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21120381-005D ;1210PE1 , \$HC-8015-GRO-W,  
Raw File: G:\Org\PE1\DAT\PE1121021\_b\1210PE1B.0009.RAW  
Date & Time Acquired: 12/10/2021 1:46:44 PM  
Method File: G:\Org\PE1\Methods\211208GROB%.MET  
Calibration File: G:\Org\PE1\Cals\211208GRO8015CB.CAL  
Sample Weight: 5 Dilution: 1 S.A.: 1

Mean RF for GRO: 945.9678  
Mean RF for TPH: 909.3915  
Rt range for Gasoline Range Organics: 4.45 to 17.93

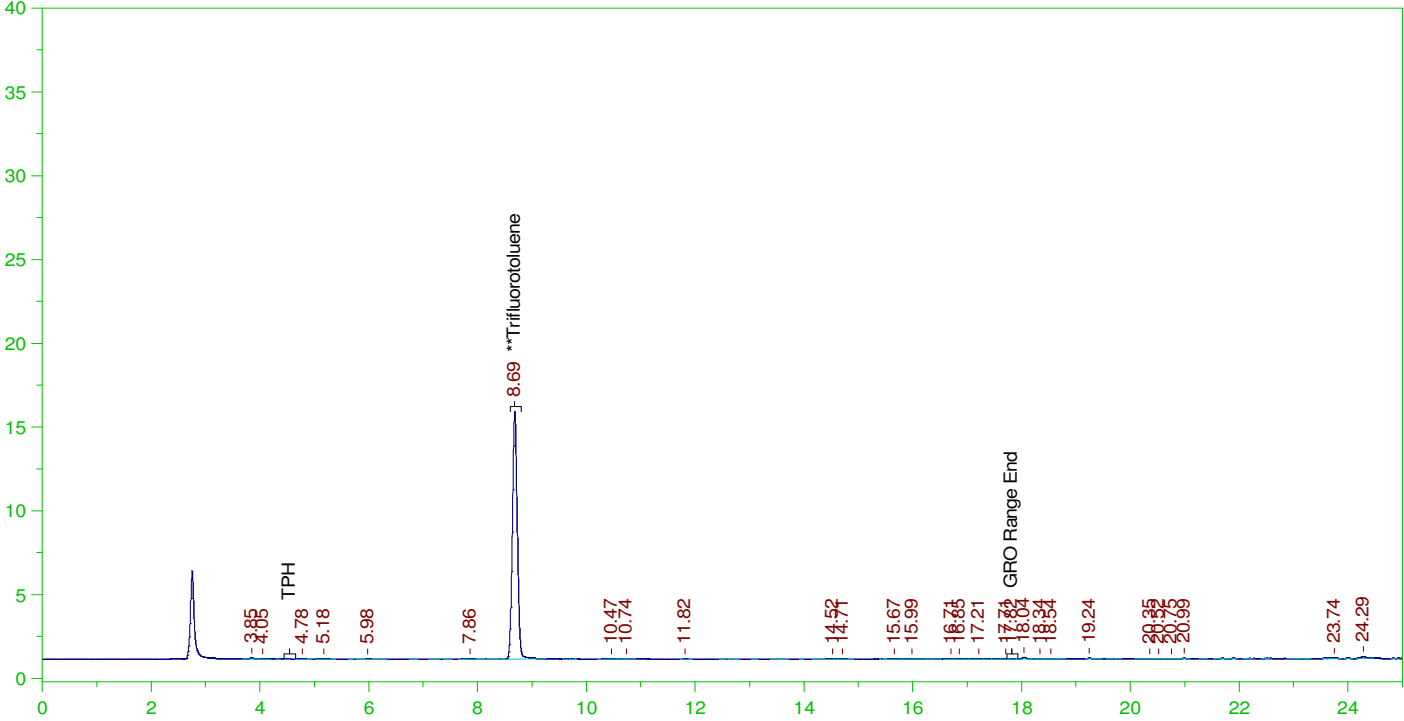
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
**Trifluorotoluene	8.687	25.	20.306	81.22

GRO Area:3084.716 GRO Amount: 0.6521821  
TPH Area:6346.149 TPH Amount: 1.395691

ERH2014 (RHMW08)

G:\Org\PE1\DAT\PE1121021\_b\1210PE1B.0011.RAW

B21120381-006D ;1210PE1 , \$HC-8015-GRO-W,



**GASOLINE RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21120381-006D ;1210PE1 , \$HC-8015-GRO-W,  
Raw File: G:\Org\PE1\DAT\PE1121021\_b\1210PE1B.0011.RAW  
Date & Time Acquired: 12/10/2021 2:55:27 PM  
Method File: G:\Org\PE1\Methods\211208GROB%.MET  
Calibration File: G:\Org\PE1\Cals\211208GRO8015CB.CAL  
Sample Weight: 5 Dilution: 1 S.A.: 1

Mean RF for GRO: 945.9678  
Mean RF for TPH: 909.3915  
Rt range for Gasoline Range Organics: 4.45 to 17.93

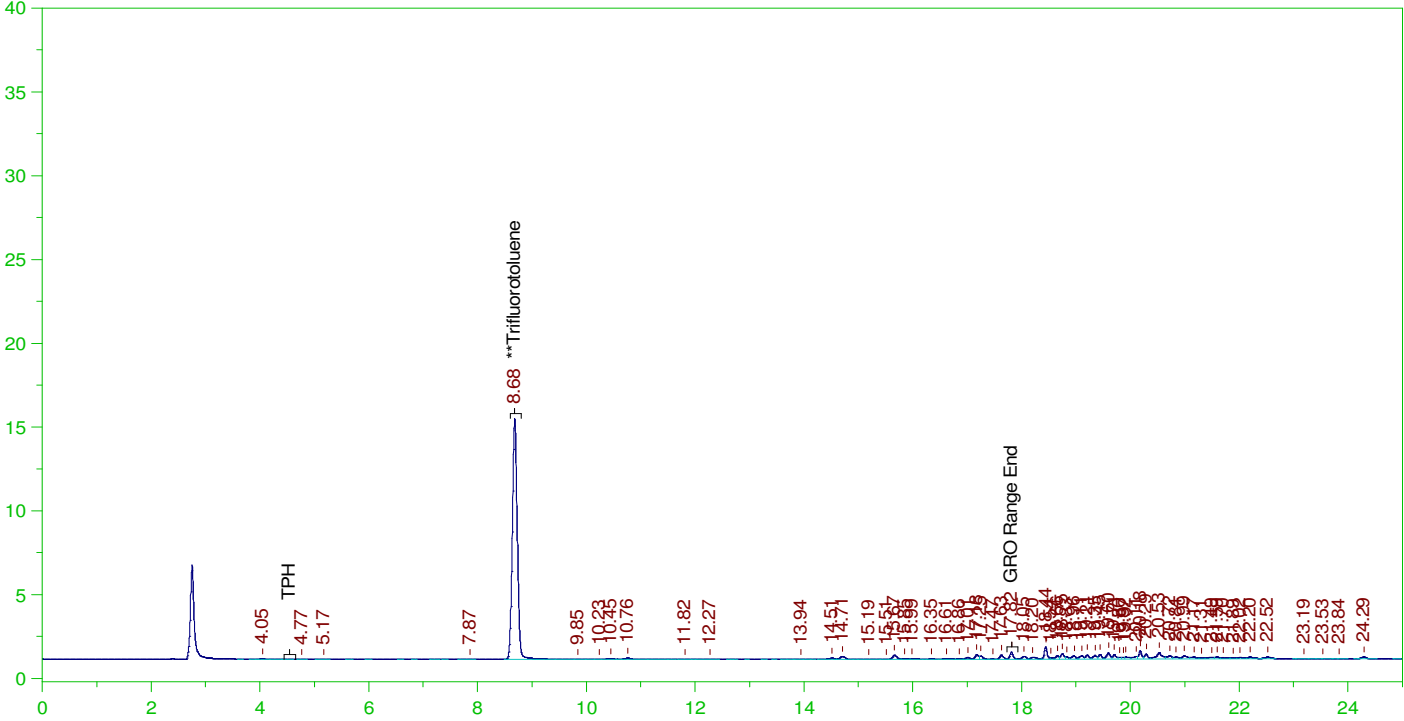
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
**Trifluorotoluene	8.685	25.	19.974	79.9

GRO Area:2971.005 GRO Amount: 0.6281409  
TPH Area:5781.533 TPH Amount: 1.271517

ERH2018 (RHMW2254-01)

G:\Org\PE1\DAT\PE1121021\_b\1210PE1B.0013.RAW

B21120381-007D ;1210PE1 , \$HC-8015-GRO-W,



**GASOLINE RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21120381-007D ;1210PE1 , \$HC-8015-GRO-W,  
 Raw File: G:\Org\PE1\DAT\PE1121021\_b\1210PE1B.0013.RAW  
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 Calibration File: G:\Org\PE1\Cals\211208GRO8015CB.CAL  
 Sample Weight: 5 Dilution: 1 S.A.: 1

Mean RF for GRO: 945.9678  
 Mean RF for TPH: 909.3915  
 Rt range for Gasoline Range Organics: 4.45 to 17.93

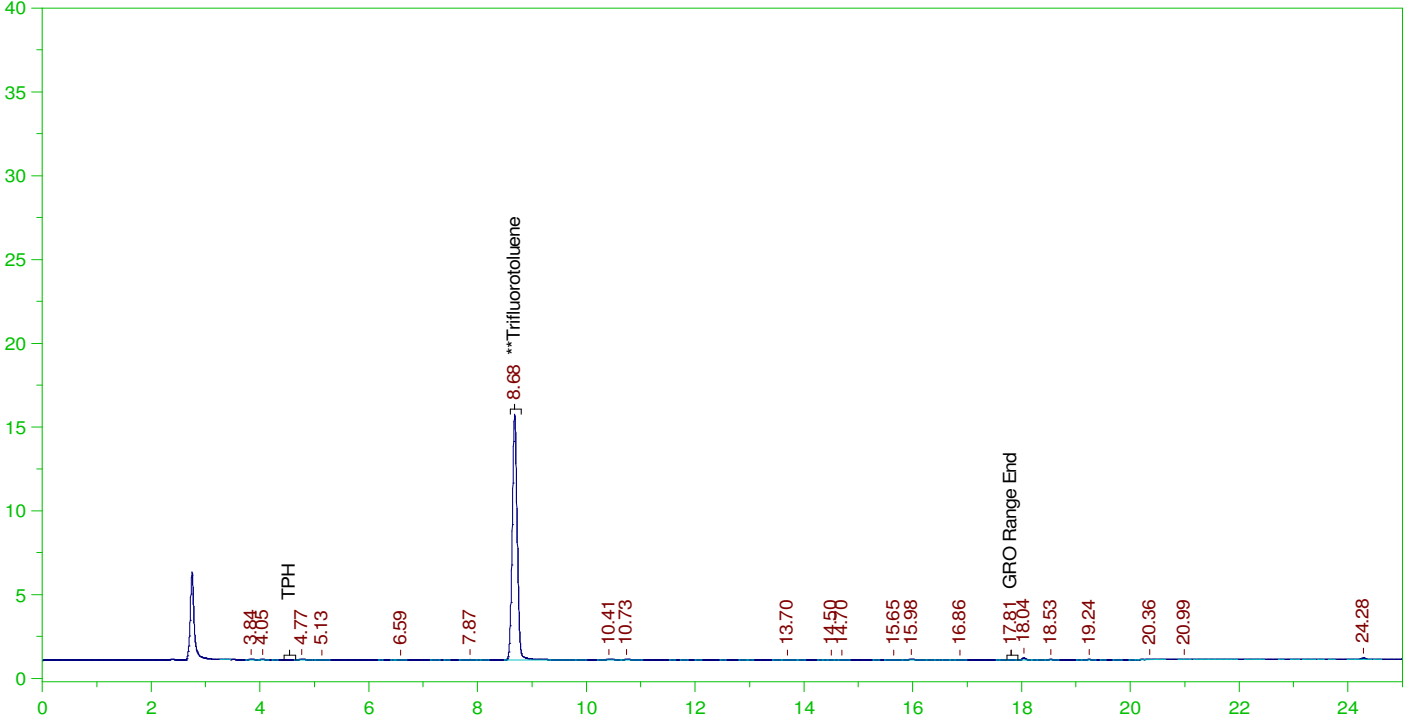
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
**Trifluorotoluene	8.684	25.	19.537	78.15

GRO Area:13408.45 GRO Amount: 2.834864  
 TPH Area:45644.05 TPH Amount: 10.03837

ERH2020 (OWDFMW01)

G:\Org\PE1\DAT\PE1121021\_b\1210PE1B.0015.RAW

B21120381-008D ;1210PE1 , \$HC-8015-GRO-W,



**GASOLINE RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21120381-008D ;1210PE1 , \$HC-8015-GRO-W,  
Raw File: G:\Org\PE1\DAT\PE1121021\_b\1210PE1B.0015.RAW  
Date & Time Acquired: 12/10/2021 5:12:37 PM  
Method File: G:\Org\PE1\Methods\211208GROB%.MET  
Calibration File: G:\Org\PE1\Cals\211208GRO8015CB.CAL  
Sample Weight: 5 Dilution: 1 S.A.: 1

Mean RF for GRO: 945.9678  
Mean RF for TPH: 909.3915  
Rt range for Gasoline Range Organics: 4.45 to 17.93

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
**Trifluorotoluene	8.683	25.	19.944	79.77

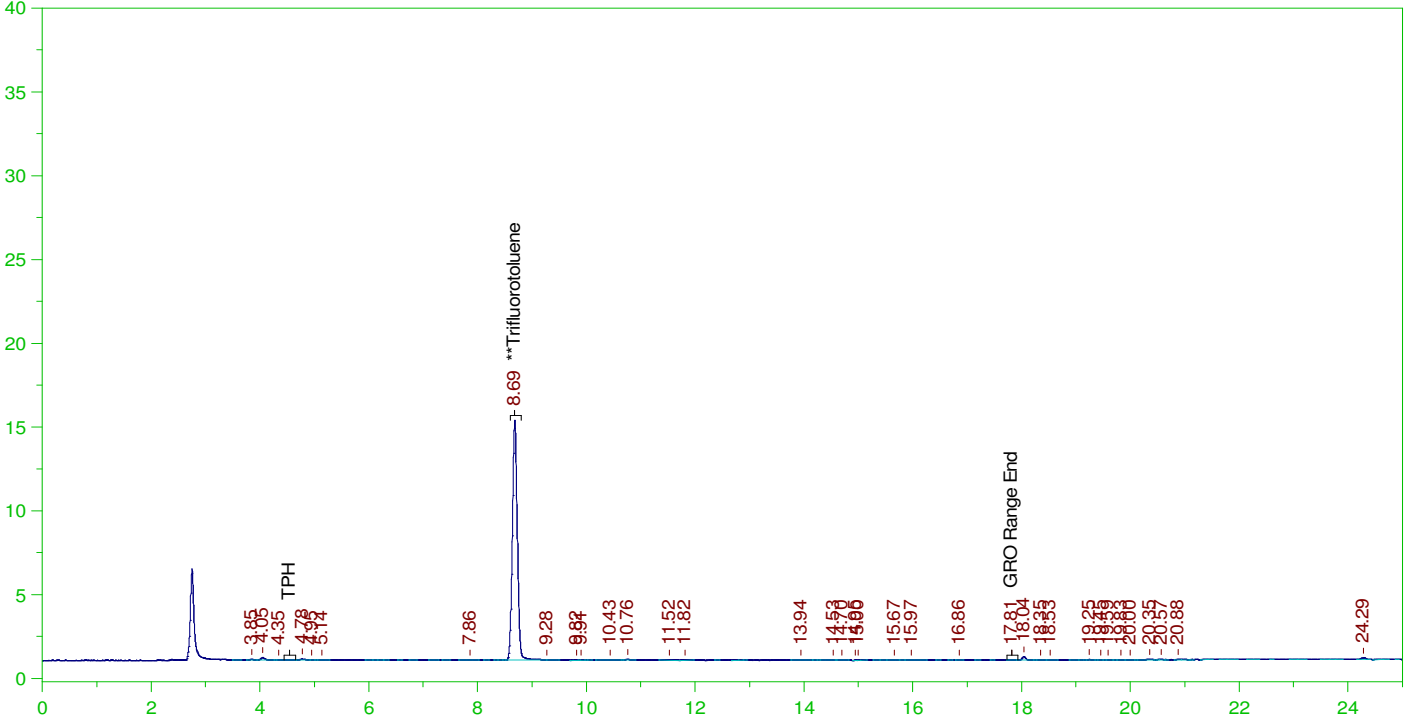
GRO Area:2675.019 GRO Amount: 0.5655624  
TPH Area:5011.443 TPH Amount: 1.102153



ERH2010 Trip Blank 2 Client

G:\Org\PE1\DAT\PE1121021\_b\1210PE1B.0017.RAW

B21120381-009B ;1210PE1 , \$HC-8015-GRO-W,



**GASOLINE RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21120381-009B ;1210PE1 , \$HC-8015-GRO-W,  
Raw File: G:\Org\PE1\DAT\PE1121021\_b\1210PE1B.0017.RAW  
Date & Time Acquired: 12/10/2021 6:21:17 PM  
Method File: G:\Org\PE1\Methods\211208GROB%.MET  
Calibration File: G:\Org\PE1\Cals\211208GRO8015CB.CAL  
Sample Weight: 5 Dilution: 1 S.A.: 1

Mean RF for GRO: 945.9678  
Mean RF for TPH: 909.3915  
Rt range for Gasoline Range Organics: 4.45 to 17.93

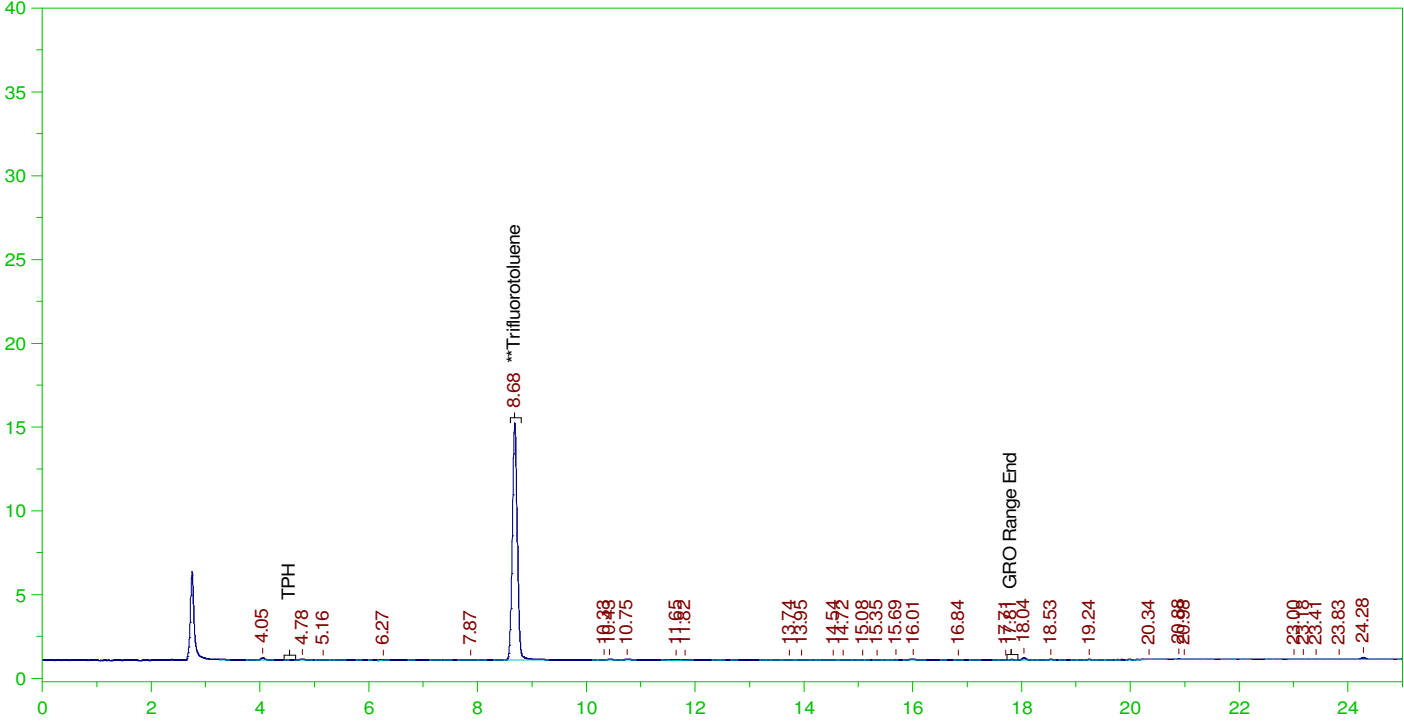
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
**Trifluorotoluene	8.685	25.	19.457	77.83

GRO Area:3776.816 GRO Amount: 0.7985084  
TPH Area:8038.336 TPH Amount: 1.76785

ERH2012 Trip Blank 1 Client

G:\Org\PE1\DAT\PE1121021\_b\1210PE1B.0018.RAW

B21120381-010B ;1210PE1 , \$HC-8015-GRO-W,



**GASOLINE RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21120381-010B ;1210PE1 , \$HC-8015-GRO-W,  
 Raw File: G:\Org\PE1\DAT\PE1121021\_b\1210PE1B.0018.RAW  
 Date & Time Acquired: 12/10/2021 6:55:37 PM  
 Method File: G:\Org\PE1\Methods\211208GROB%.MET  
 Calibration File: G:\Org\PE1\Cals\211208GRO8015CB.CAL  
 Sample Weight: 5 Dilution: 1 S.A.: 1

Mean RF for GRO: 945.9678  
 Mean RF for TPH: 909.3915  
 Rt range for Gasoline Range Organics: 4.45 to 17.93

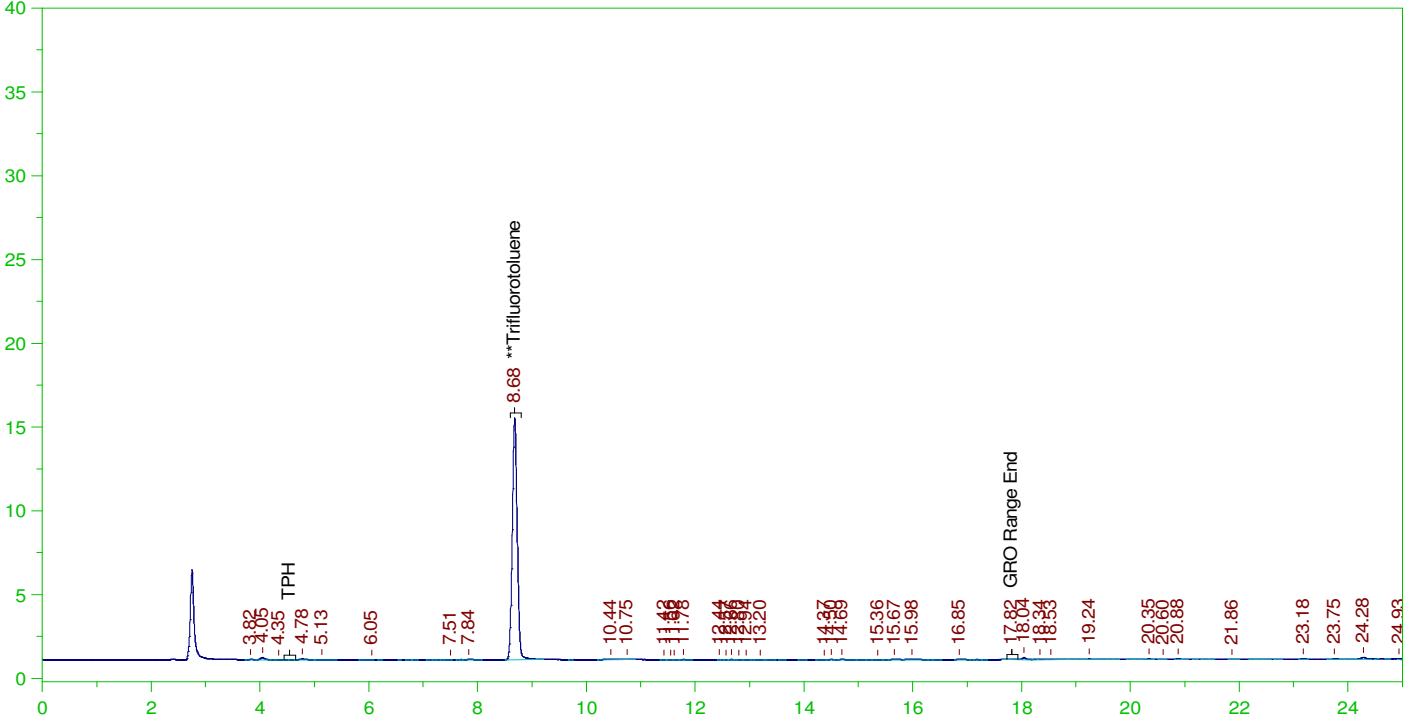
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
**Trifluorotoluene	8.685	25.	19.159	76.64

GRO Area:3499.861 GRO Amount: 0.7399536  
 TPH Area:6961.445 TPH Amount: 1.531012

ERH2017 Trip Blank 3 Client

G:\Org\PE1\DAT\PE1121021\_b\1210PE1B.0019.RAW

B21120381-011B ;1210PE1 , \$HC-8015-GRO-W,



**GASOLINE RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21120381-011B ;1210PE1 , \$HC-8015-GRO-W,  
Raw File: G:\Org\PE1\DAT\PE1121021\_b\1210PE1B.0019.RAW  
Date & Time Acquired: 12/10/2021 7:29:57 PM  
Method File: G:\Org\PE1\Methods\211208GROB%.MET  
Calibration File: G:\Org\PE1\Cals\211208GRO8015CB.CAL  
Sample Weight: 5 Dilution: 1 S.A.: 1

Mean RF for GRO: 945.9678  
Mean RF for TPH: 909.3915  
Rt range for Gasoline Range Organics: 4.45 to 17.93

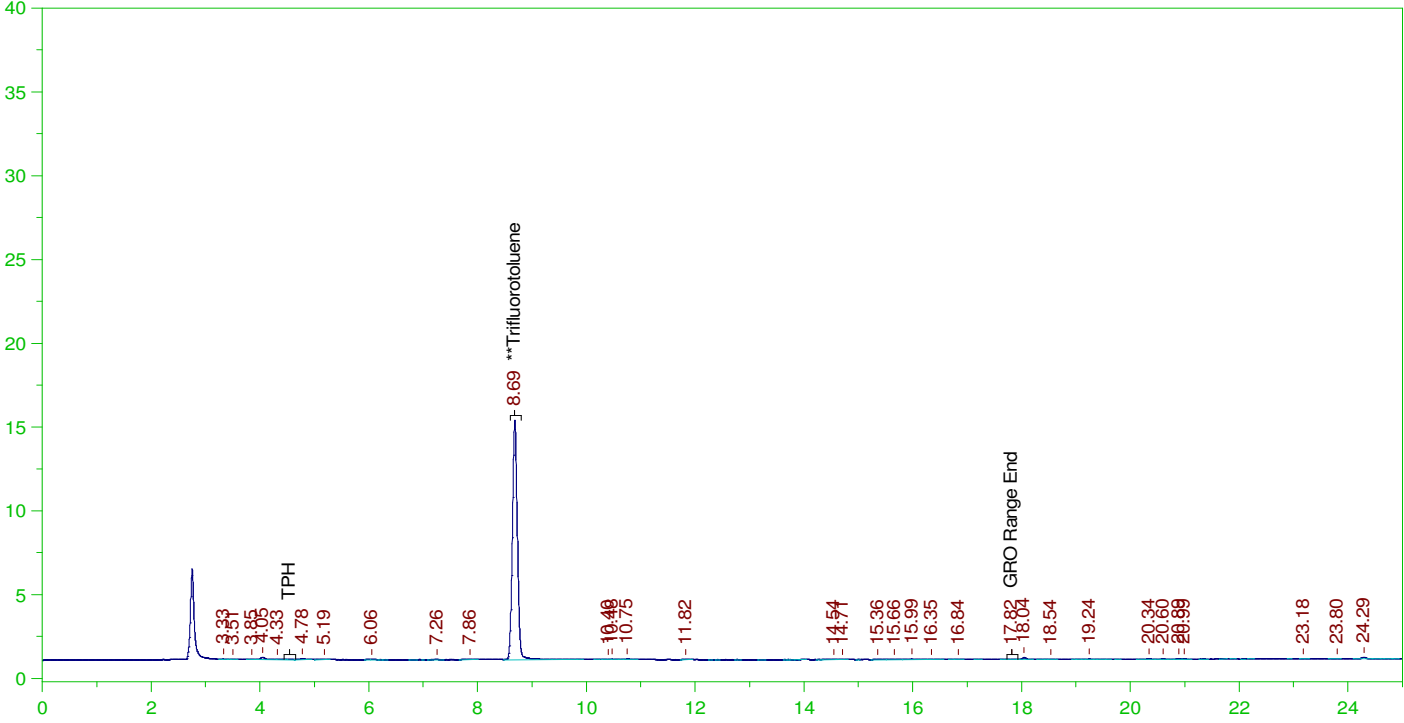
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
**Trifluorotoluene	8.684	25.	19.478	77.91

GRO Area:3993.937 GRO Amount: 0.8444128  
TPH Area:7385.57 TPH Amount: 1.624288

ERH2019 Trip Blank 3 Client

G:\Org\PE1\DAT\PE1121021\_b\1210PE1B.0020.RAW

B21120381-012B ;1210PE1 , \$HC-8015-GRO-W,



**GASOLINE RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21120381-012B ;1210PE1 , \$HC-8015-GRO-W,  
Raw File: G:\Org\PE1\DAT\PE1121021\_b\1210PE1B.0020.RAW  
Date & Time Acquired: 12/10/2021 8:04:23 PM  
Method File: G:\Org\PE1\Methods\211208GROB%.MET  
Calibration File: G:\Org\PE1\Cals\211208GRO8015CB.CAL  
Sample Weight: 5 Dilution: 1 S.A.: 1

Mean RF for GRO: 945.9678  
Mean RF for TPH: 909.3915  
Rt range for Gasoline Range Organics: 4.45 to 17.93

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
**Trifluorotoluene	8.686	25.	19.465	77.86

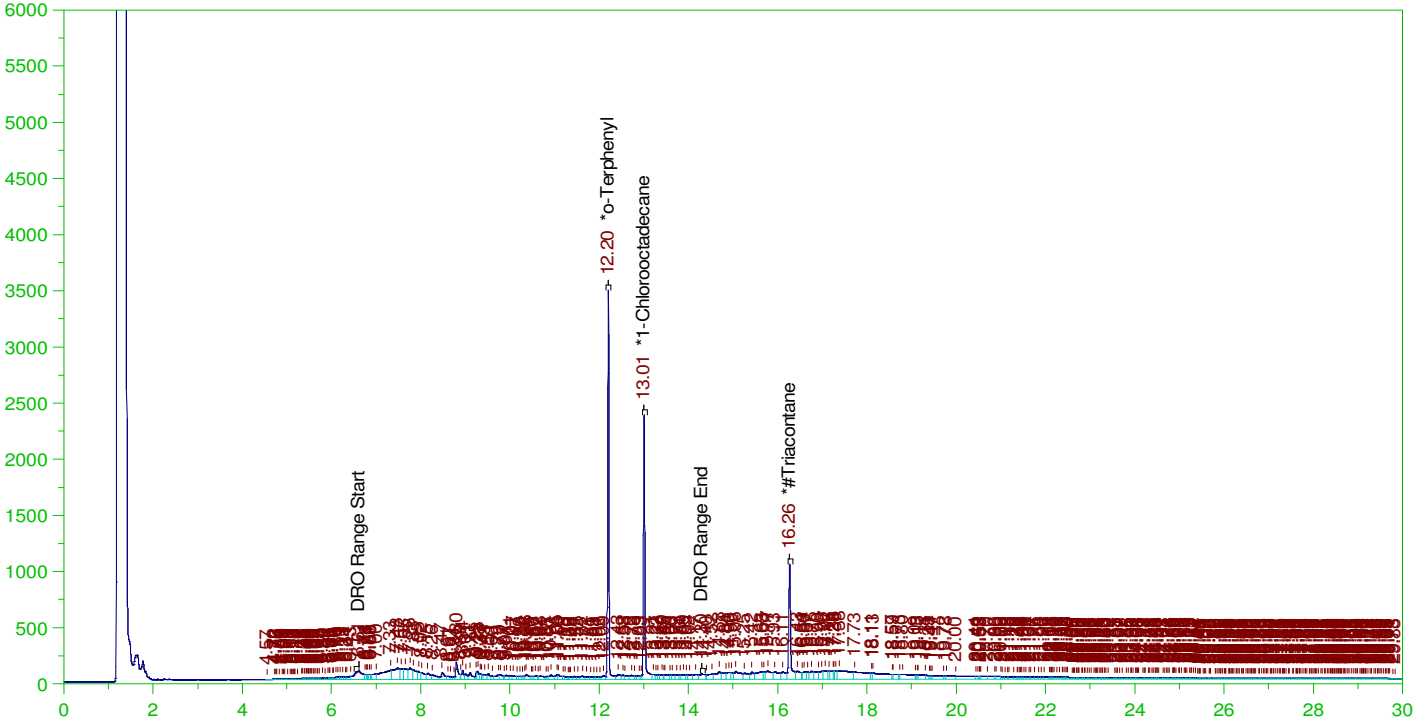
GRO Area:3180.006 GRO Amount: 0.6723286  
TPH Area:6615.908 TPH Amount: 1.455019

ERH2003 (RHMW01R)

G:\org\HP5\DAT\HP5120721\_b\1207HP5.0062.RAW

Batch ID: 161934

B21120381-001A ;1207HP5, \$HC-8015-DRO-W, RR



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21120381-001A ;1207HP5, \$HC-8015-DRO-W, RR  
 Raw File: G:\org\HP5\DAT\HP5120721\_b\1207HP5.0062.RAW  
 Date & Time Acquired: 12/9/2021 7:02:18 AM  
 Method File: G:\Org\HP5\Methods\D3\_8015-120724-IE-L%.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IE-24-Tri.CAL  
 Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.51 to 14.37

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.2	.196	.189	96.58	-
*1-Chlorooctadecane	13.006	.196	.154	78.3	-
*#Triacontane	16.263	.196	.11	56.	-

DRO Area:1.833639E+07 DRO Amount: 0.5733661

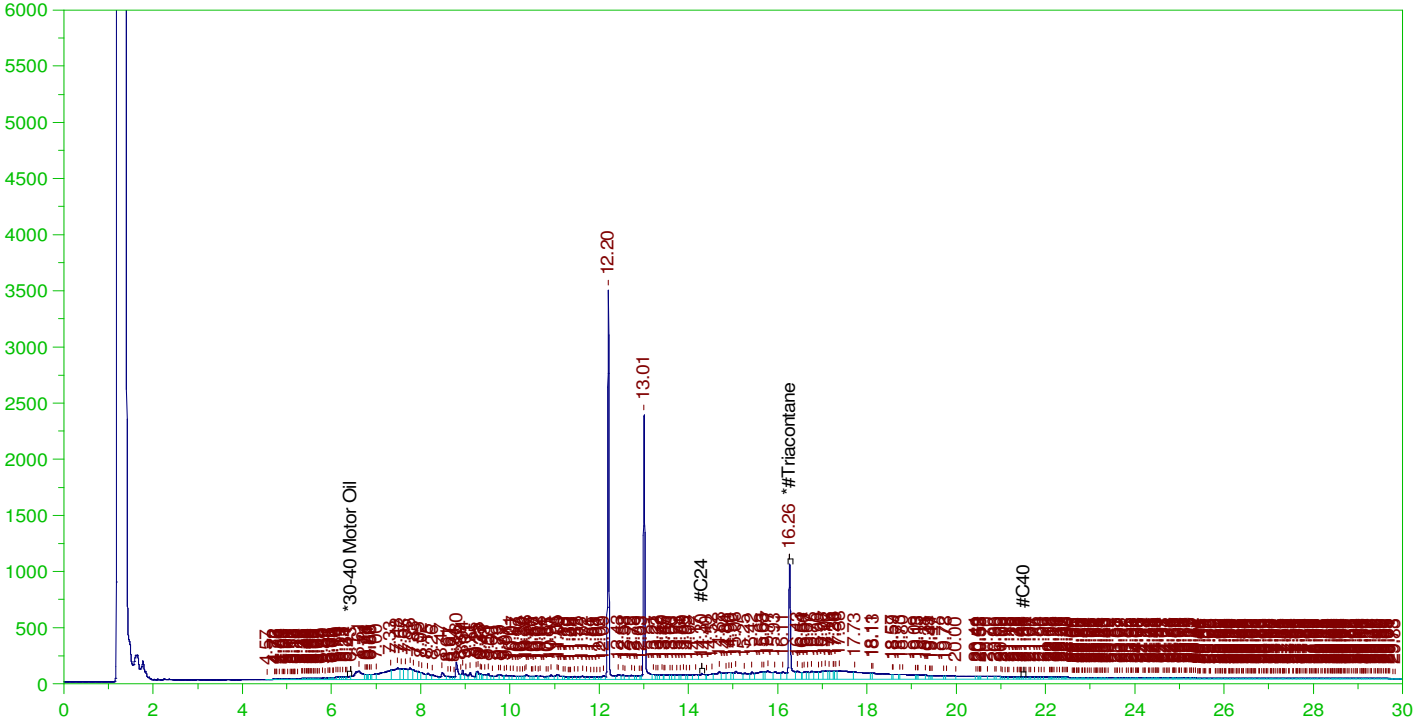
TEH Area:4.16469E+07 TEH Amount: 1.302269

ERH2003 (RHMW01R)

G:\org\HP5\DAT\HP5120721\_b\1207HP5.0062.RAW

Batch ID: 161934

B21120381-001A ;1207HP5 , \$HC-8015-DRO-W, RR



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21120381-001A ;1207HP5 , \$HC-8015-DRO-W, RR  
 Raw File: G:\org\HP5\DAT\HP5120721\_b\1207HP5.0062.RAW  
 Date & Time Acquired: 12/9/2021 7:02:18 AM  
 Method File: G:\Org\HP5\Methods\D3\_OROS-120724-AG-L%.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AG-SAMP.CAL  
 Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41  
 Rt range for Residual Range Organics: 14.26 to 21.56

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.263	.49	.11	22.4

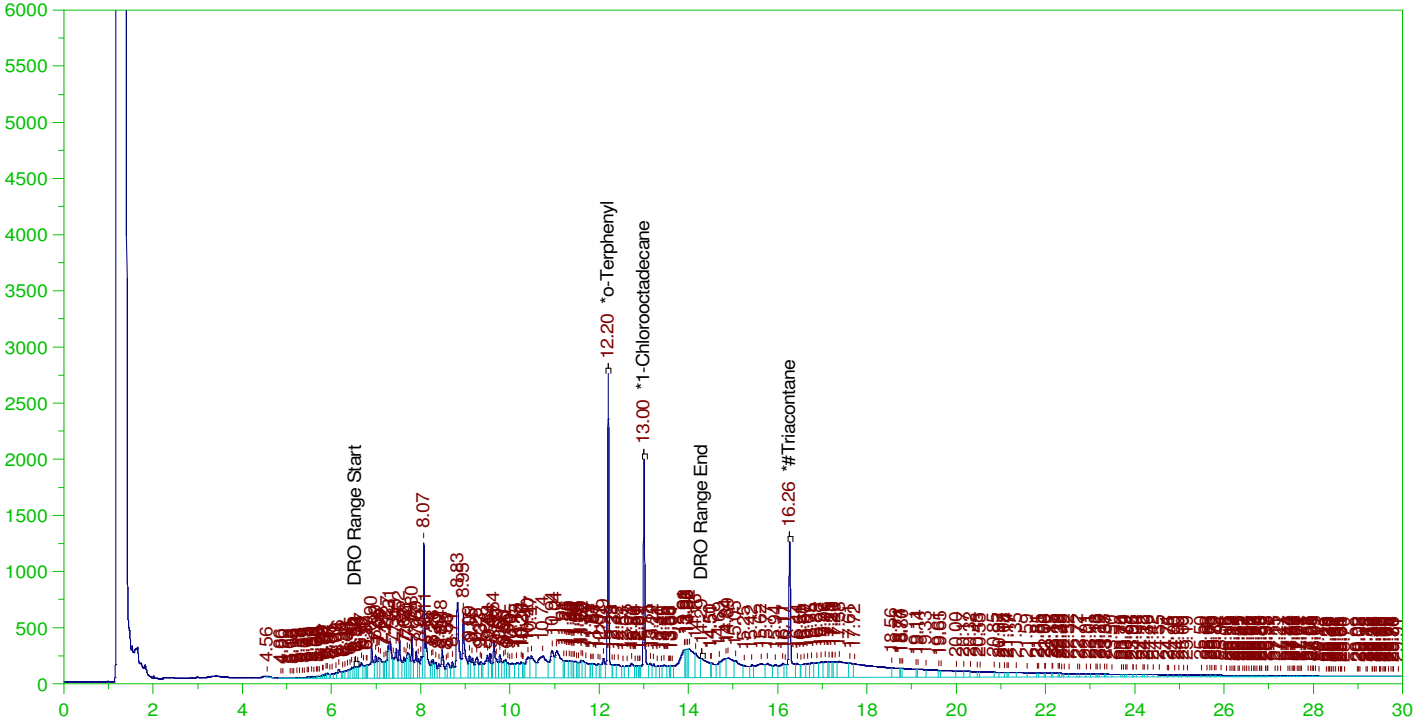
RRO Area:1.882007E+07 RRO AMOUNT: 0.6464432

ERH2006 (RHMW02)

Batch ID: 161934

G:\org\HP5\DAT\HP5120721\_b\1207HP5.0040.RAW

B21120381-002A ;1207HP5 , \$HC-8015-DRO-W,



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21120381-002A ;1207HP5 , \$HC-8015-DRO-W,  
Raw File: G:\org\HP5\DAT\HP5120721\_b\1207HP5.0040.RAW  
Date & Time Acquired: 12/8/2021 3:08:48 PM  
Method File: G:\Org\HP5\Methods\D3\_8015-120724-IE-L%.met  
Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IE-24-Tri.CAL  
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.51 to 14.37

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.198	.194	.159	81.78	-
*1-Chlorooctadecane	13.005	.194	.138	70.89	-
*#Triacontane	16.265	.194	.14	72.29	-

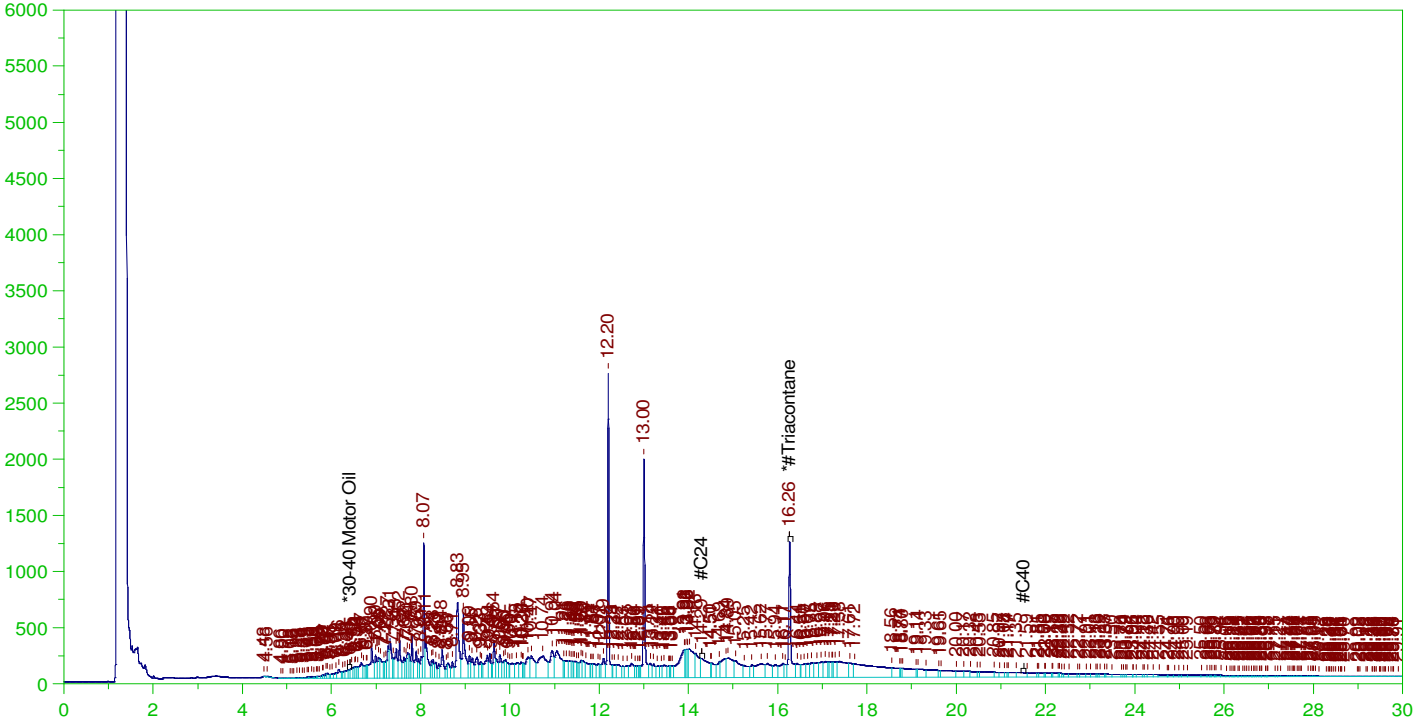
DRO Area: 7.34145E+07 DRO Amount: 2.273332  
TEH Area: 1.204903E+08 TEH Amount: 3.731069

ERH2006 (RHMW02)

Batch ID: 161934

G:\org\HP5\DAT\HP5120721\_b\1207HP5.0040.RAW

B21120381-002A ;1207HP5 , \$HC-8015-DRO-W,



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21120381-002A ;1207HP5 , \$HC-8015-DRO-W,  
Raw File: G:\org\HP5\DAT\HP5120721\_b\1207HP5.0040.RAW  
Date & Time Acquired: 12/8/2021 3:08:48 PM  
Method File: G:\Org\HP5\Methods\D3\_OROS-120724-AG-L%.MET  
Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AG-SAMP.CAL  
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41  
Rt range for Residual Range Organics: 14.26 to 21.56

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.265	.485	.14	28.92	-

RRO Area:3.93204E+07 RRO AMOUNT: 1.337489

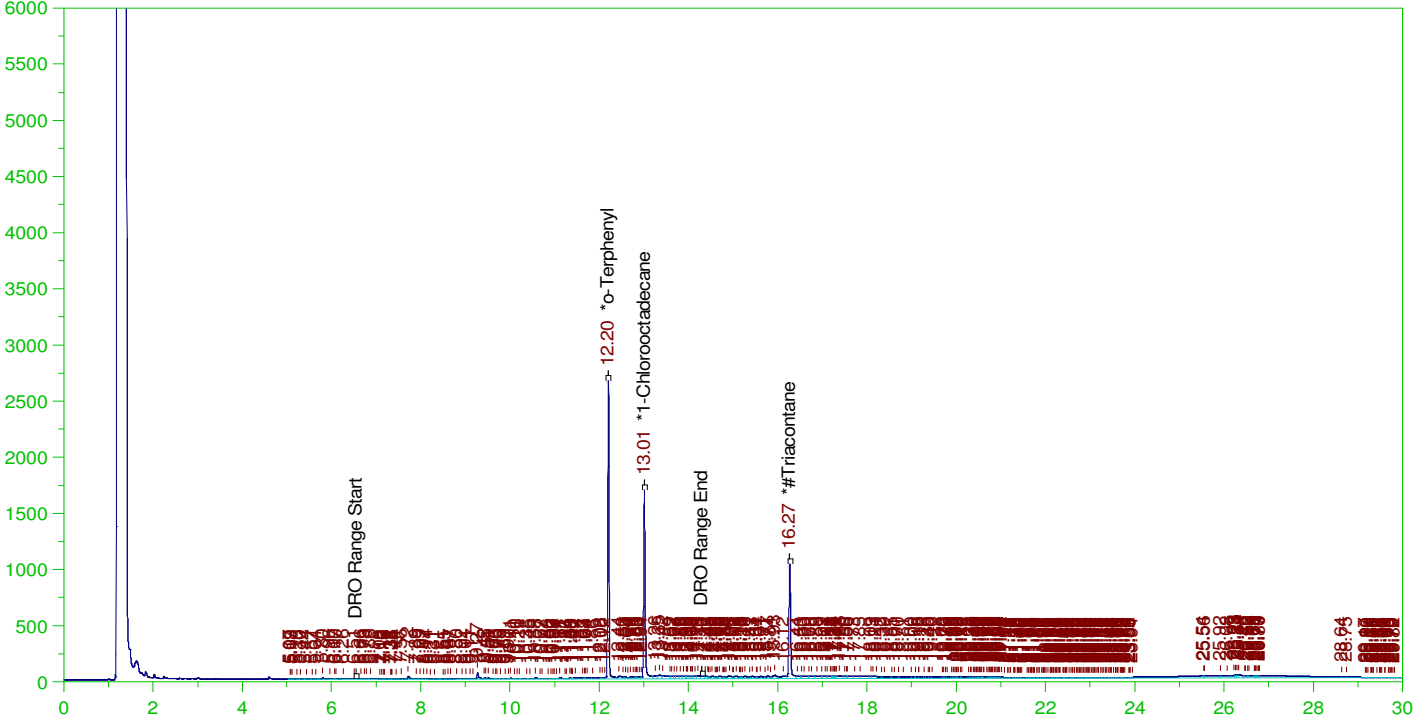


ERH2009 (RHMW03)

G:\org\HP5\DAT\HP5120721\_b\1207HP5.0027.RAW

Batch ID: 161934

B21120381-003A ;1207HP5 , \$HC-8015-DRO-W,



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21120381-003A ;1207HP5 , \$HC-8015-DRO-W,  
Raw File: G:\org\HP5\DAT\HP5120721\_b\1207HP5.0027.RAW  
Date & Time Acquired: 12/8/2021 5:49:23 AM  
Method File: G:\Org\HP5\Methods\D3\_8015-C24T-IE-L%.met  
Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IE-24-Tri.CAL  
Sample Weight: 990 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.51 to 14.37

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.202	.202	.151	74.68	-
*1-Chlorooctadecane	13.011	.202	.113	55.86	-
*#Triacontane	16.268	.202	.101	50.07	-

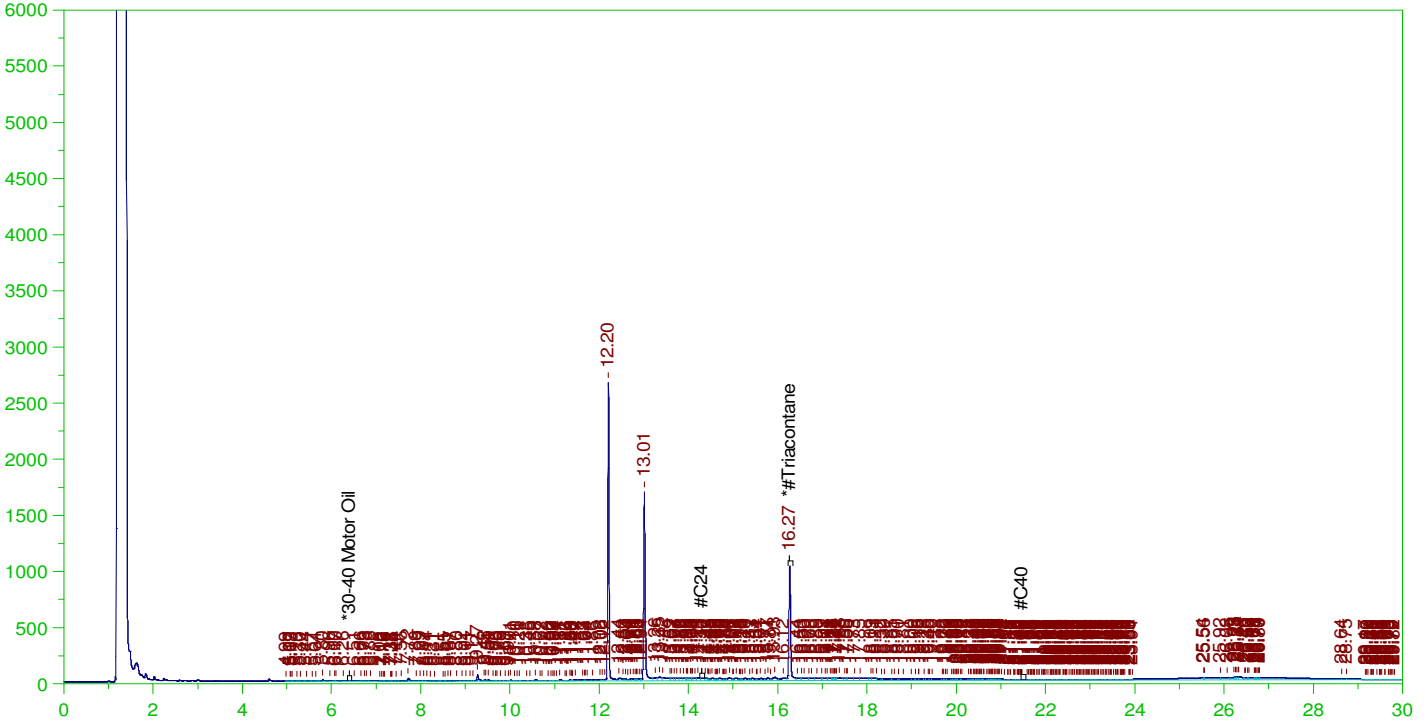
DRO Area:3355163 DRO Amount: 0.1080928  
TEH Area:1.461388E+07 TEH Amount: 0.4708131

ERH2009 (RHMW03)

G:\org\HP5\DAT\HP5120721\_b\1207HP5.0027.RAW

Batch ID: 161934

B21120381-003A ;1207HP5 , \$HC-8015-DRO-W,



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21120381-003A ;1207HP5 , \$HC-8015-DRO-W,  
Raw File: G:\org\HP5\DAT\HP5120721\_b\1207HP5.0027.RAW  
Date & Time Acquired: 12/8/2021 5:49:23 AM  
Method File: G:\Org\HP5\Methods\D3\_OROS-AG-L%.MET  
Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AG-SAMP.CAL  
Sample Weight: 990 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41  
Rt range for Residual Range Organics: 14.26 to 21.56

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacantane	16.268	.505	.101	20.03

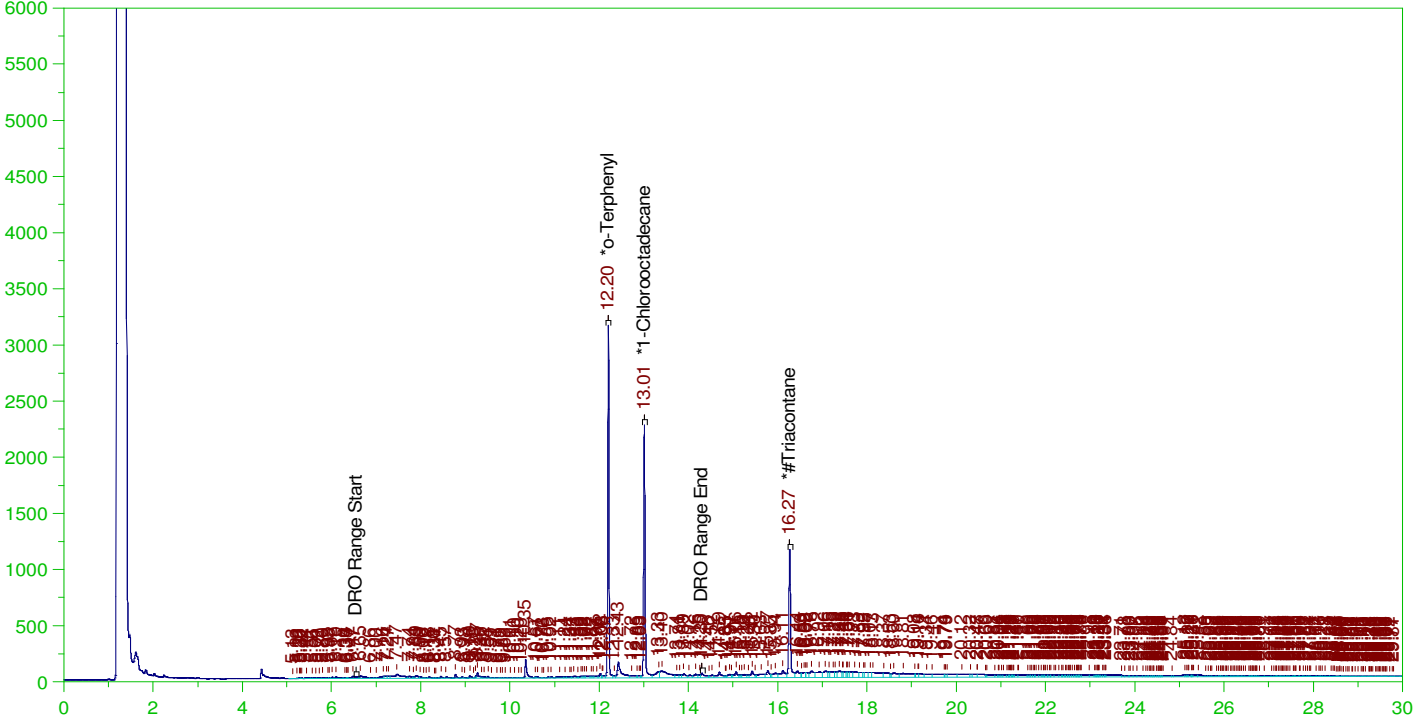
RRO Area:6451515 RRO AMOUNT: 0.2283157

ERH2011 (RHMW05)

Batch ID: 161934

G:\org\HP5\DAT\HP5120721\_b\1207HP5.0030.RAW

B21120381-004B ;1207HP5 , \$HC-8015-DRO-W,



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21120381-004B ;1207HP5 , \$HC-8015-DRO-W,  
Raw File: G:\org\HP5\DAT\HP5120721\_b\1207HP5.0030.RAW  
Date & Time Acquired: 12/8/2021 7:59:02 AM  
Method File: G:\Org\HP5\Methods\D3\_8015-120730-IE-L%.met  
Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IE-24-Tri.CAL  
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.51 to 14.37

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.2	.194	.165	85.13	-
*1-Chlorooctadecane	13.01	.194	.14	72.17	-
*#Triacontane	16.265	.194	.109	56.35	-

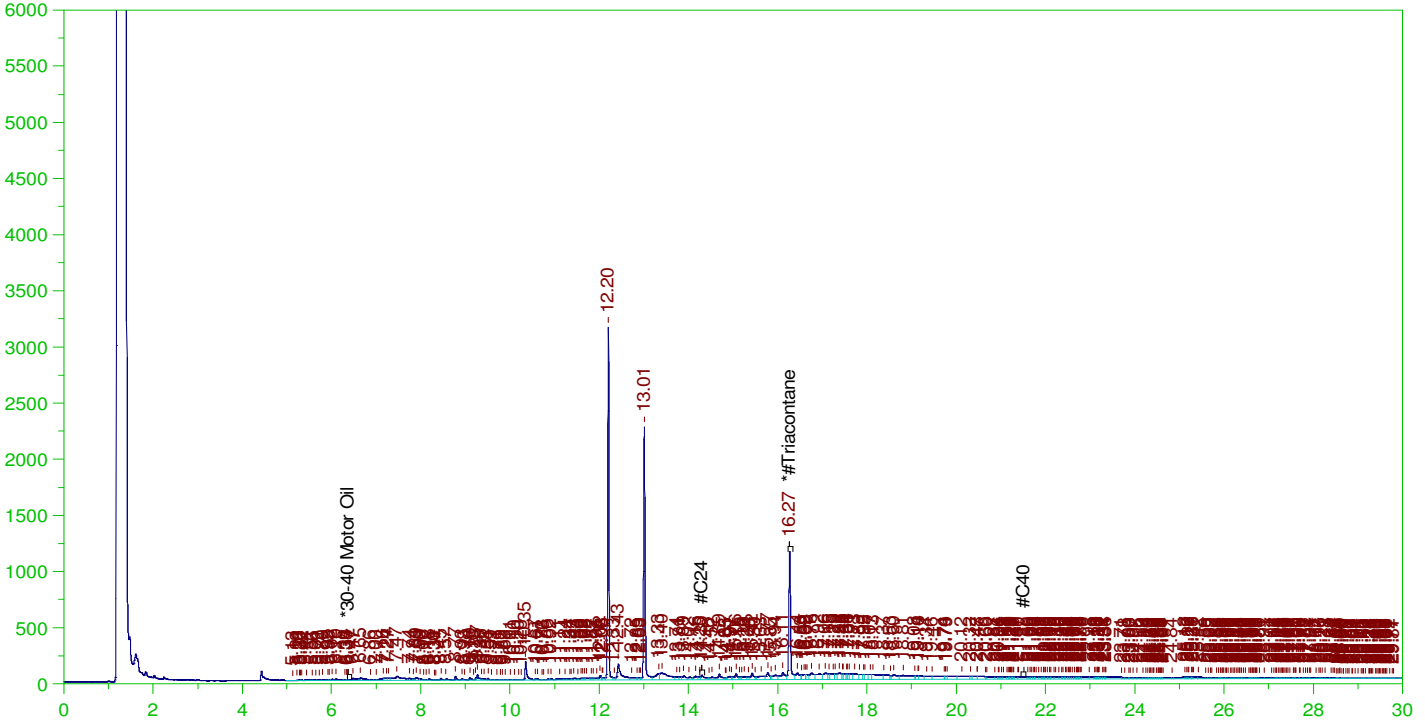
DRO Area:7406595 DRO Amount: 0.2293505  
TEH Area:2.539407E+07 TEH Amount: 0.7863455

ERH2011 (RHMW05)

G:\org\HP5\DAT\HP5120721\_b\1207HP5.0030.RAW

Batch ID: 161934

B21120381-004B ;1207HP5 , \$HC-8015-DRO-W,



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21120381-004B ;1207HP5 , \$HC-8015-DRO-W,  
Raw File: G:\org\HP5\DAT\HP5120721\_b\1207HP5.0030.RAW  
Date & Time Acquired: 12/8/2021 7:59:02 AM  
Method File: G:\Org\HP5\Methods\D3\_OROS-120730-AG-L%.MET  
Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AG-SAMP.CAL  
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41  
Rt range for Residual Range Organics: 14.26 to 21.56

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.265	.485	.109	22.54

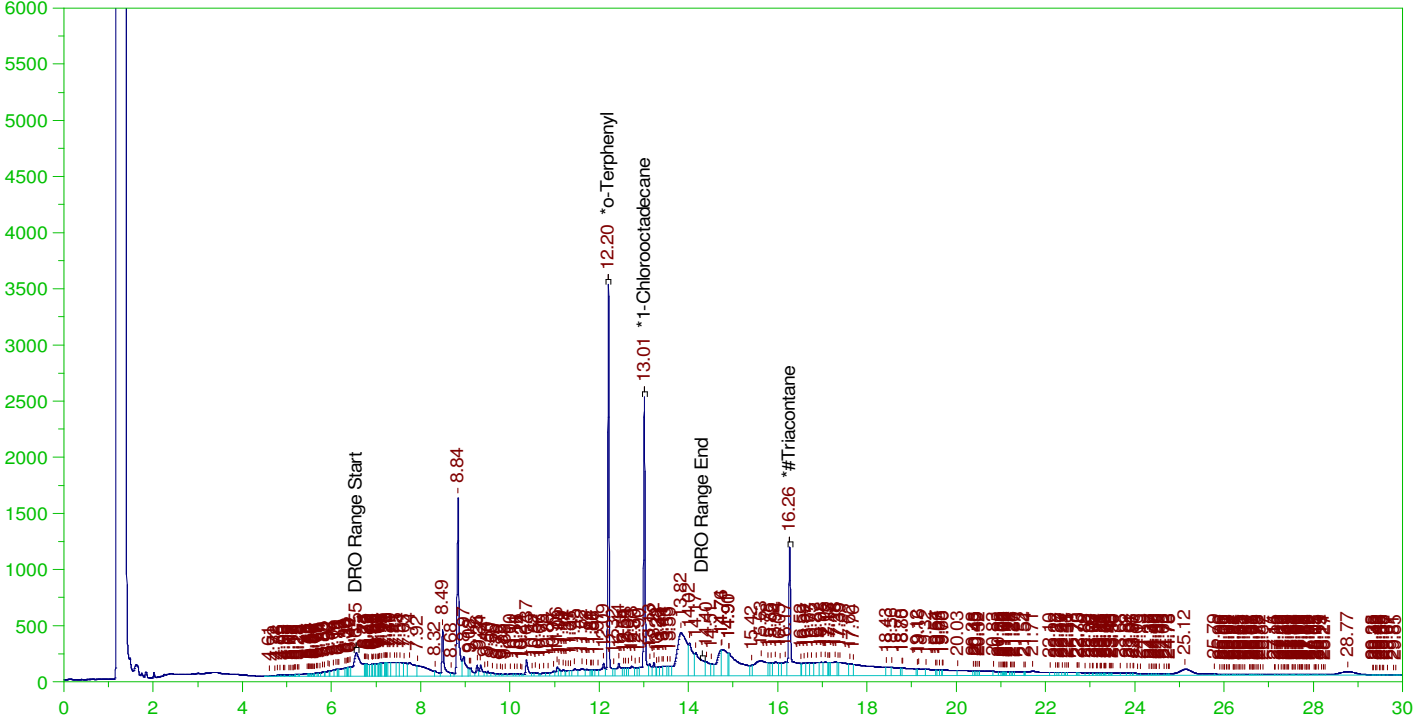
RRO Area:1.328565E+07 RRO AMOUNT: 0.451913

ERH2013 (RHMW08)

Batch ID: 161934

G:\org\HP5\DAT\HP5120721\_b\1207HP5.0037.RAW

B21120381-005B ;1207HP5 , \$HC-8015-DRO-W,



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21120381-005B ;1207HP5 , \$HC-8015-DRO-W,  
Raw File: G:\org\HP5\DAT\HP5120721\_b\1207HP5.0037.RAW  
Date & Time Acquired: 12/8/2021 1:00:36 PM  
Method File: G:\Org\HP5\Methods\D3\_8015-120724-IE-L%.met  
Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IE-24-Tri.CAL  
Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.51 to 14.37

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.203	.196	.195	99.22	-
*1-Chlorooctadecane	13.01	.196	.164	83.64	-
*#Triacontane	16.265	.196	.162	82.67	-

DRO Area: 4.210094E+07 DRO Amount: 1.316467

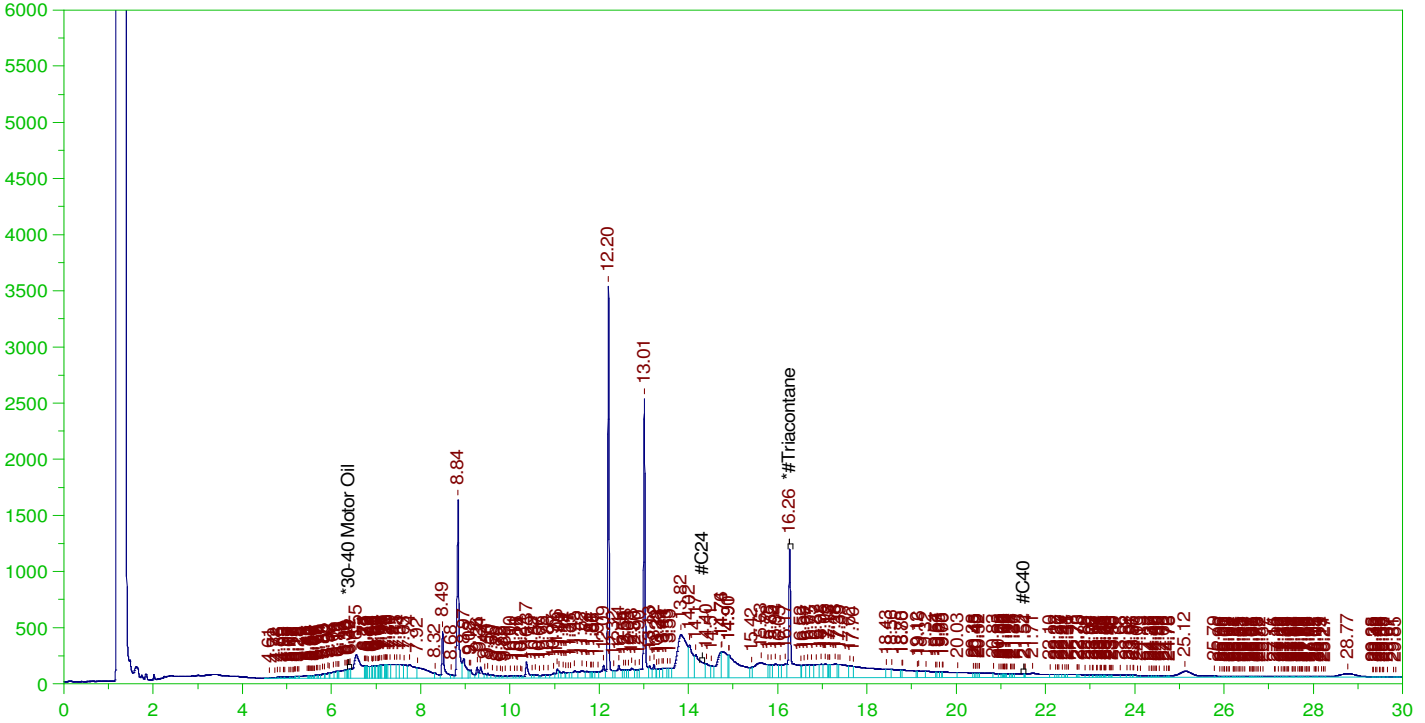
TEH Area: 8.686158E+07 TEH Amount: 2.7161

ERH2013 (RHMW08)

G:\org\HP5\DAT\HP5120721\_b\1207HP5.0037.RAW

Batch ID: 161934

B21120381-005B ;1207HP5 , \$HC-8015-DRO-W,



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21120381-005B ;1207HP5 , \$HC-8015-DRO-W,  
Raw File: G:\org\HP5\DAT\HP5120721\_b\1207HP5.0037.RAW  
Date & Time Acquired: 12/8/2021 1:00:36 PM  
Method File: G:\Org\HP5\Methods\D3\_OROS-120724-AG-L%.MET  
Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AG-SAMP.CAL  
Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41  
Rt range for Residual Range Organics: 14.26 to 21.56

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.265	.49	.162	33.07	-

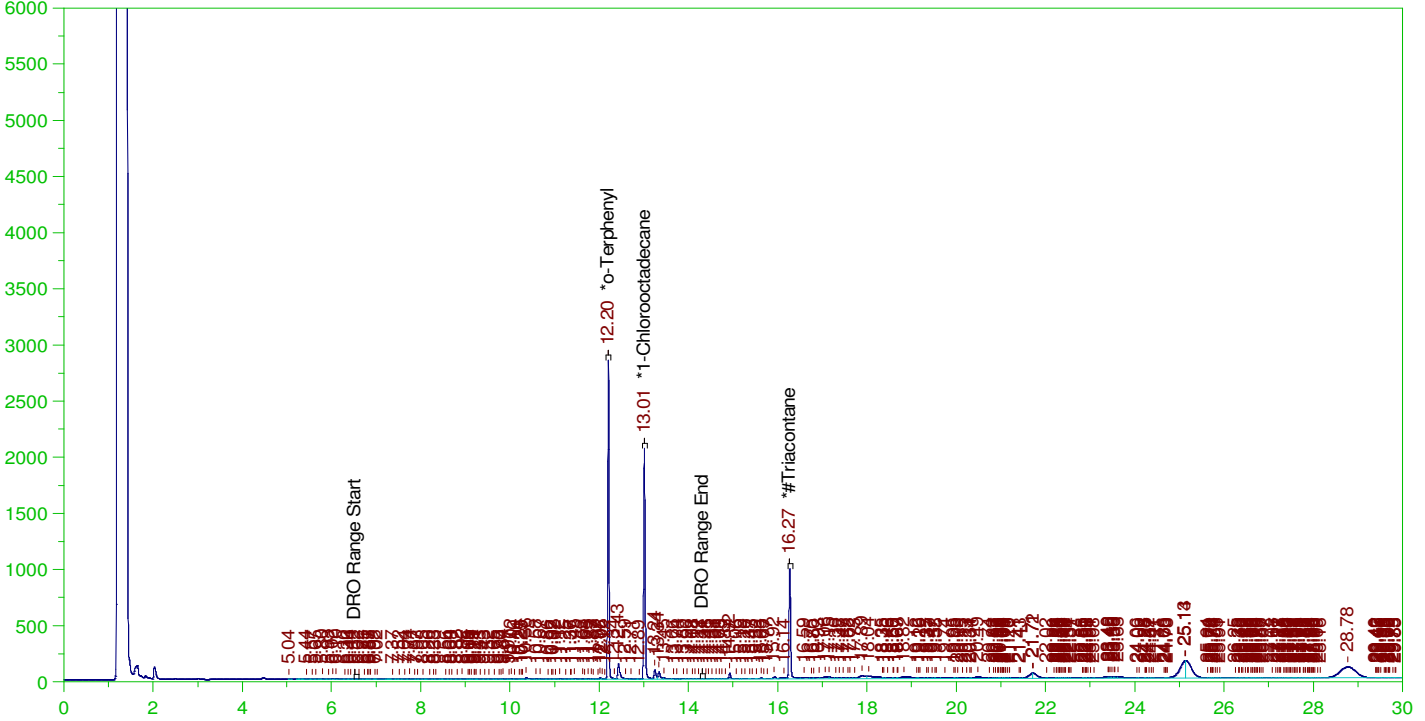
RRO Area:3.431719E+07 RRO AMOUNT: 1.178748

ERH2014 (RHMW08)

G:\org\HP5\DAT\HP5120721\_b\1207HP5.0023.RAW

Batch ID: 161934

B21120381-006B ;1207HP5 , \$HC-8015-DRO-W,



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21120381-006B ;1207HP5 , \$HC-8015-DRO-W,  
Raw File: G:\org\HP5\DAT\HP5120721\_b\1207HP5.0023.RAW  
Date & Time Acquired: 12/8/2021 2:56:28 AM  
Method File: G:\Org\HP5\Methods\D3\_8015-C24T-IE-L%.met  
Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IE-24-Tri.CAL  
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.51 to 14.37

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.201	.192	.148	77.17	-
*1-Chlorooctadecane	13.011	.192	.125	64.81	-
*#Triacontane	16.267	.192	.091	47.27	-

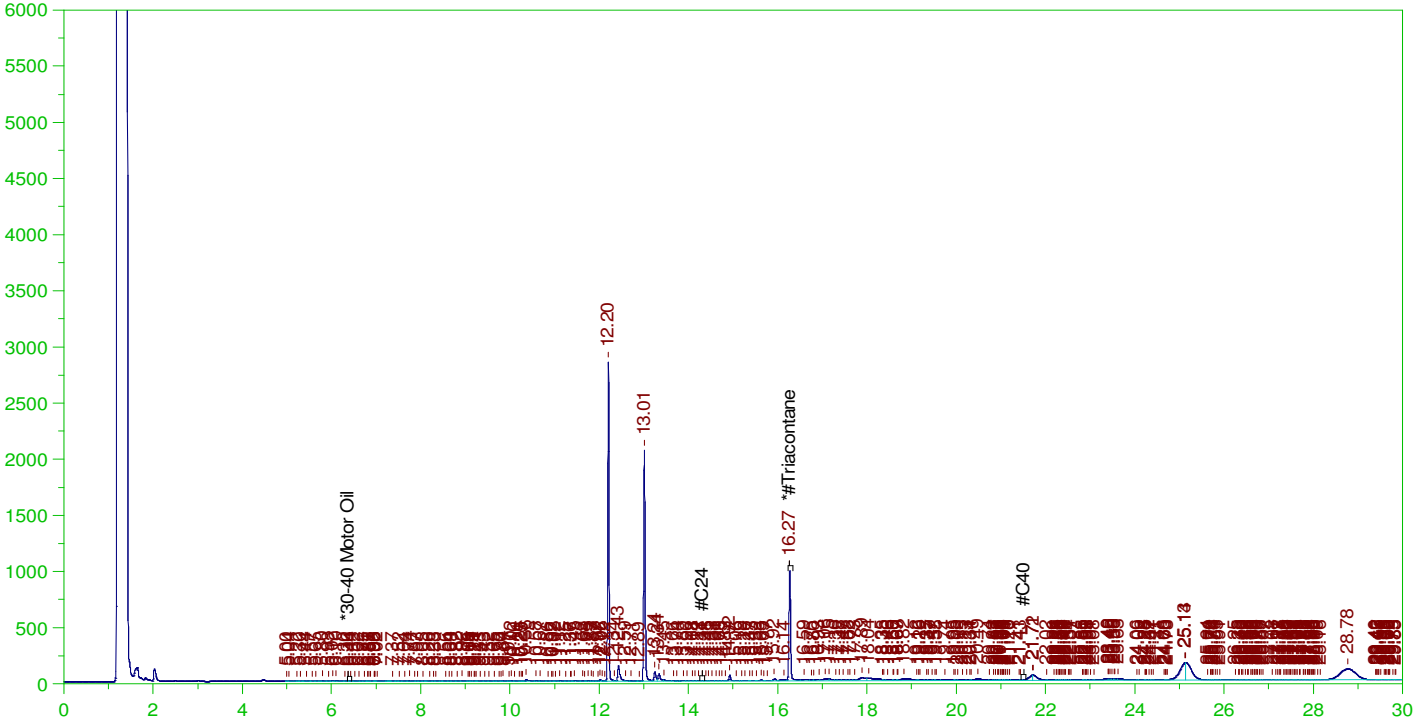
DRO Area:1706539 DRO Amount: 5.233606E-02  
TEH Area:1.431123E+07 TEH Amount: 0.4388961

ERH2014 (RHMW08)

G:\org\HP5\DAT\HP5120721\_b\1207HP5.0023.RAW

Batch ID: 161934

B21120381-006B ;1207HP5 , \$HC-8015-DRO-W,



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21120381-006B ;1207HP5 , \$HC-8015-DRO-W,  
Raw File: G:\org\HP5\DAT\HP5120721\_b\1207HP5.0023.RAW  
Date & Time Acquired: 12/8/2021 2:56:28 AM  
Method File: G:\Org\HP5\Methods\D3\_OROS-AG-L%.MET  
Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AG-SAMP.CAL  
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41  
Rt range for Residual Range Organics: 14.26 to 21.56

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.267	.481	.091	18.91

RRO Area:4221454 RRO AMOUNT: 0.1422126

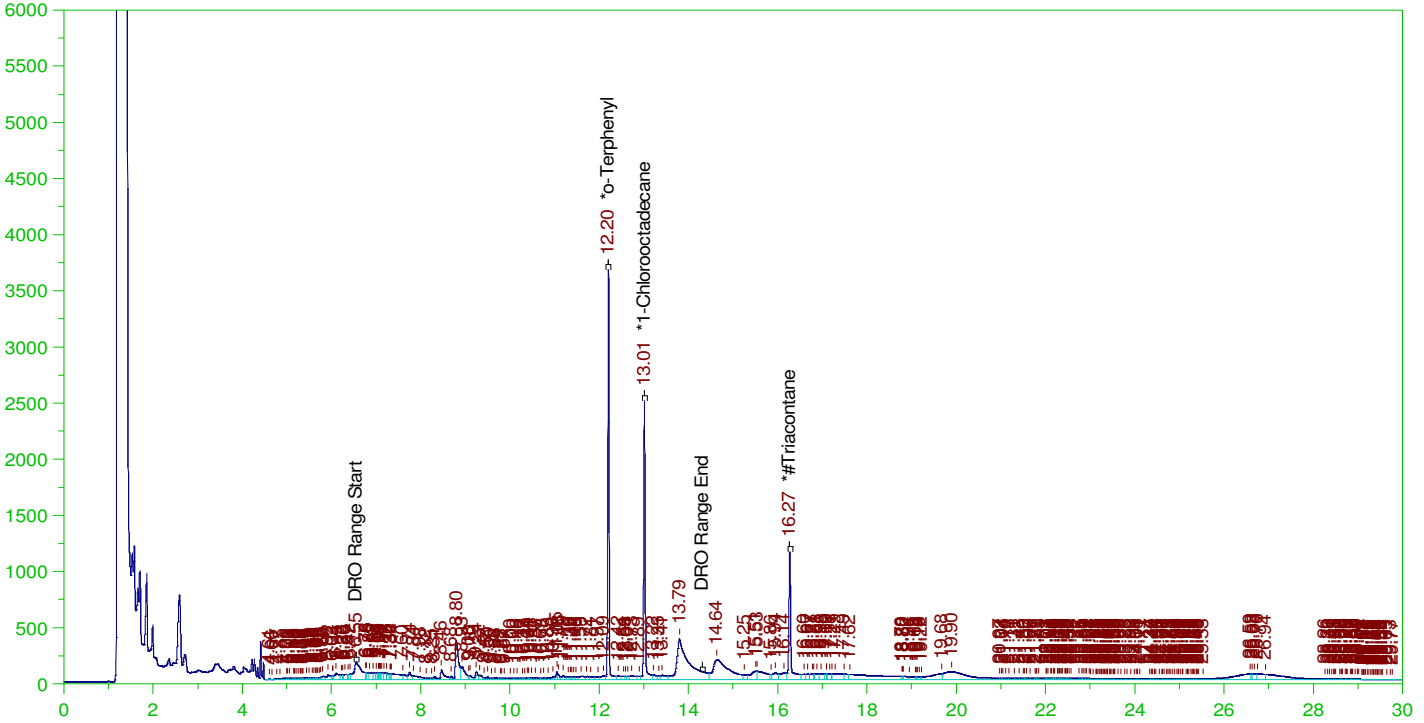


ERH2018 (RHMW2254-01)

G:\org\HP5\DAT\HP5120721\_b\1207HP5.0024.RAW

Batch ID: 161934

B21120381-007B ;1207HP5 , \$HC-8015-DRO-W,



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21120381-007B ;1207HP5 , \$HC-8015-DRO-W,  
Raw File: G:\org\HP5\DAT\HP5120721\_b\1207HP5.0024.RAW  
Date & Time Acquired: 12/8/2021 3:39:42 AM  
Method File: G:\Org\HP5\Methods\D3\_8015-120724-IE-L%.met  
Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IE-24-Tri.CAL  
Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.51 to 14.37

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.203	.196	.198	100.86	-
*1-Chlorooctadecane	13.012	.196	.16	81.74	-
*#Triacontane	16.268	.196	.126	64.21	-

DRO Area:2.035325E+07 DRO Amount: 0.6364316

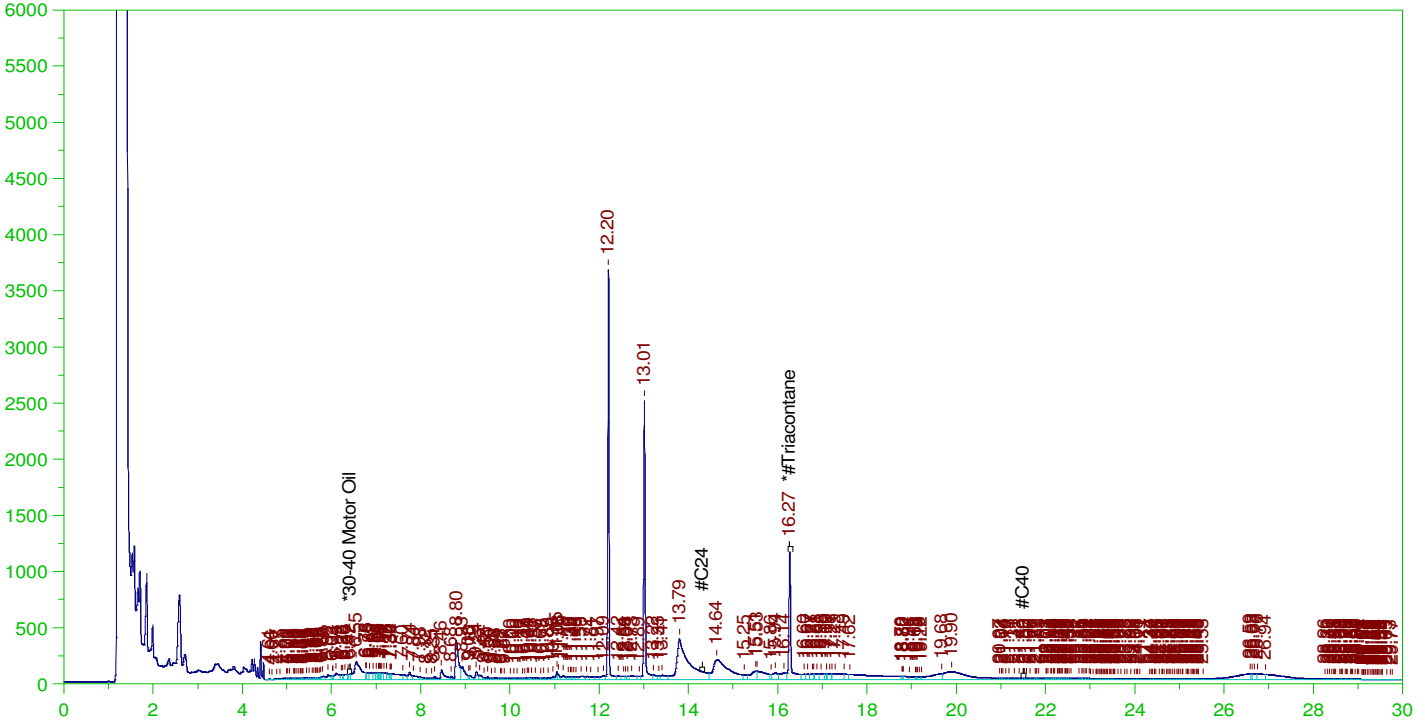
TEH Area:4.463746E+07 TEH Amount: 1.395782

ERH2018 (RHMW2254-01)

G:\org\HP5\DAT\HP5120721\_b\1207HP5.0024.RAW

Batch ID: 161934

B21120381-007B ;1207HP5 , \$HC-8015-DRO-W,



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21120381-007B ;1207HP5 , \$HC-8015-DRO-W,  
Raw File: G:\org\HP5\DAT\HP5120721\_b\1207HP5.0024.RAW  
Date & Time Acquired: 12/8/2021 3:39:42 AM  
Method File: G:\Org\HP5\Methods\D3\_OROS-120724-AG-L%.MET  
Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AG-SAMP.CAL  
Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41  
Rt range for Residual Range Organics: 14.26 to 21.56

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.268	.49	.126	25.69

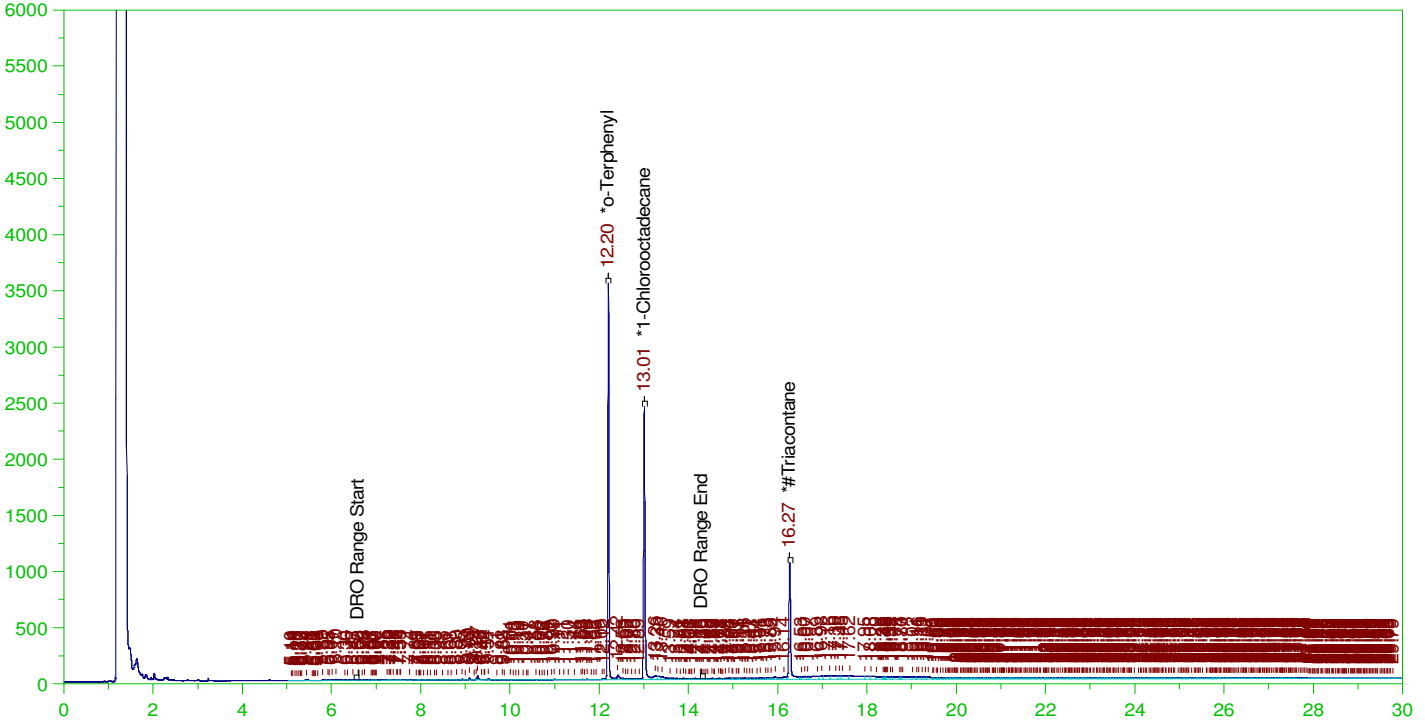
RRO Area:1.701586E+07 RRO AMOUNT: 0.5844712

ERH2020 (OWDFMW01)

G:\Org\HP5\DAT\HP5120721\_b\1207HP5.0036.RAW

Batch ID: 161934

B21120381-008B ;1207HP5 , \$HC-8015-DRO-W, RR



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21120381-008B ;1207HP5 , \$HC-8015-DRO-W, RR  
 Raw File: G:\Org\HP5\DAT\HP5120721\_b\1207HP5.0036.RAW  
 Date & Time Acquired: 12/8/2021 12:17:35 PM  
 Method File: G:\Org\HP5\Methods\D3\_8015-C24T-IE-L%.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IE-24-Tri.CAL  
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.51 to 14.37

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.201	.2	.19	95.11	-
*1-Chlorooctadecane	13.009	.2	.152	76.17	-
*#Triacontane	16.266	.2	.106	52.92	-

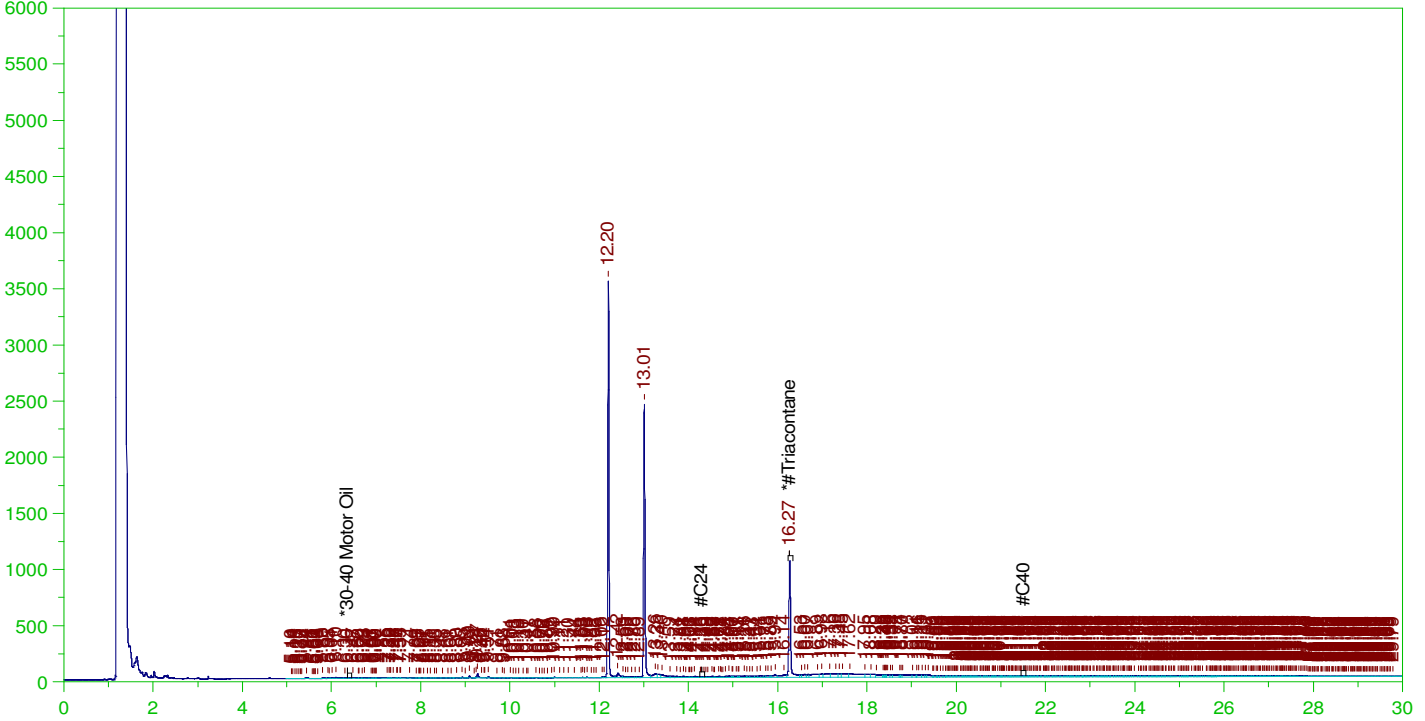
DRO Area:3034795 DRO Amount: 9.679382E-02  
 TEH Area:1.463348E+07 TEH Amount: 0.4667303

ERH2020 (OWDFMW01)

G:\org\HP5\DAT\HP5120721\_b\1207HP5.0036.RAW

Batch ID: 161934

B21120381-008B ;1207HP5 , \$HC-8015-DRO-W, RR



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21120381-008B ;1207HP5 , \$HC-8015-DRO-W, RR  
 Raw File: G:\org\HP5\DAT\HP5120721\_b\1207HP5.0036.RAW  
 Date & Time Acquired: 12/8/2021 12:17:35 PM  
 Method File: G:\Org\HP5\Methods\D3\_OROS-AG-L%.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AG-SAMP.CAL  
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41  
 Rt range for Residual Range Organics: 14.26 to 21.56

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.266	.5	.106	21.17

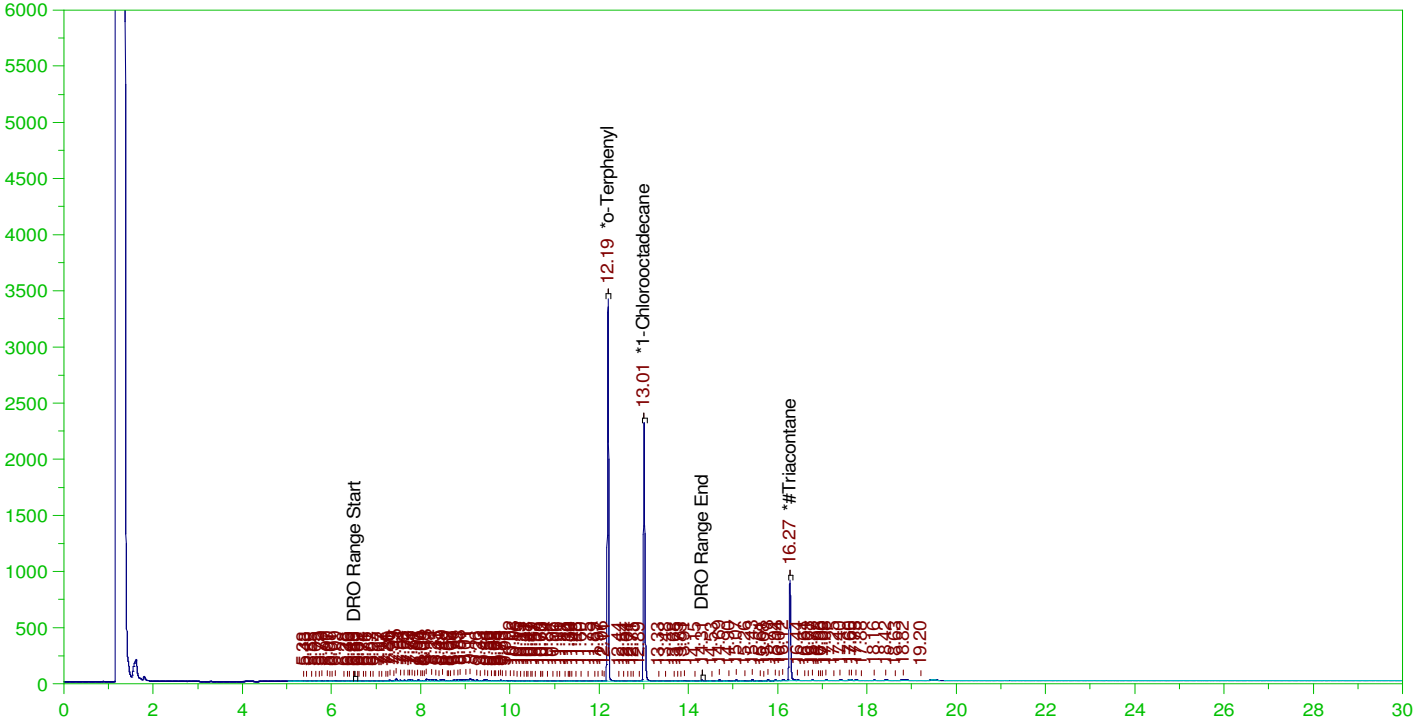
RRO Area:7746630 RRO AMOUNT: 0.2714077

ERH2003 (RHMW01R)

Batch ID: 161934

G:\org\HP5\DAT\HP5120921\_b\1209HP5.0025.RAW

B21120381-001A ;1209HP5 , \$HC-8015-DRO-W, SGT



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21120381-001A ;1209HP5 , \$HC-8015-DRO-W, SGT  
 Raw File: G:\org\HP5\DAT\HP5120921\_b\1209HP5.0025.RAW  
 Date & Time Acquired: 12/10/2021 3:54:02 AM  
 Method File: G:\Org\HP5\Methods\DR\_8015-C24T-IF-L%.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IF-24-Tri.CAL  
 Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.49 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.193	.196	.18	91.89	-
*1-Chlorooctadecane	13.005	.196	.145	73.79	-
*#Triacontane	16.271	.196	.083	42.18	-

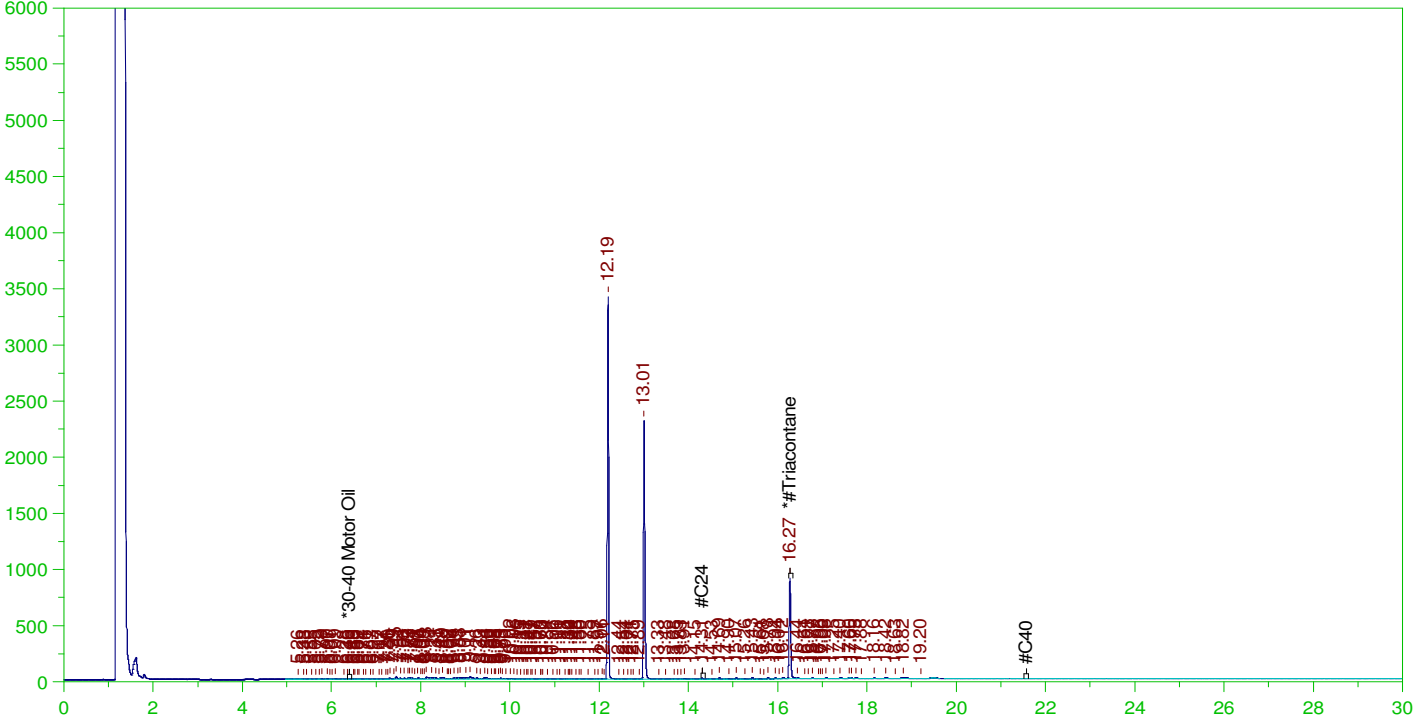
DRO Area:2121970 DRO Amount: 6.635249E-02  
 TEH Area:2654494 TEH Amount: 8.300415E-02

ERH2003 (RHMW01R)

G:\org\HP5\DAT\HP5120921\_b\1209HP5.0025.RAW

Batch ID: 161934

B21120381-001A ;1209HP5 , \$HC-8015-DRO-W, SGT



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21120381-001A ;1209HP5 , \$HC-8015-DRO-W, SGT  
 Raw File: G:\org\HP5\DAT\HP5120921\_b\1209HP5.0025.RAW  
 Date & Time Acquired: 12/10/2021 3:54:02 AM  
 Method File: G:\Org\HP5\Methods\DR\_OROS-AH-L%.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AH-SAMP.CAL  
 Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41  
 Rt range for Residual Range Organics: 14.28 to 21.62

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.271	.49	.083	16.87	-

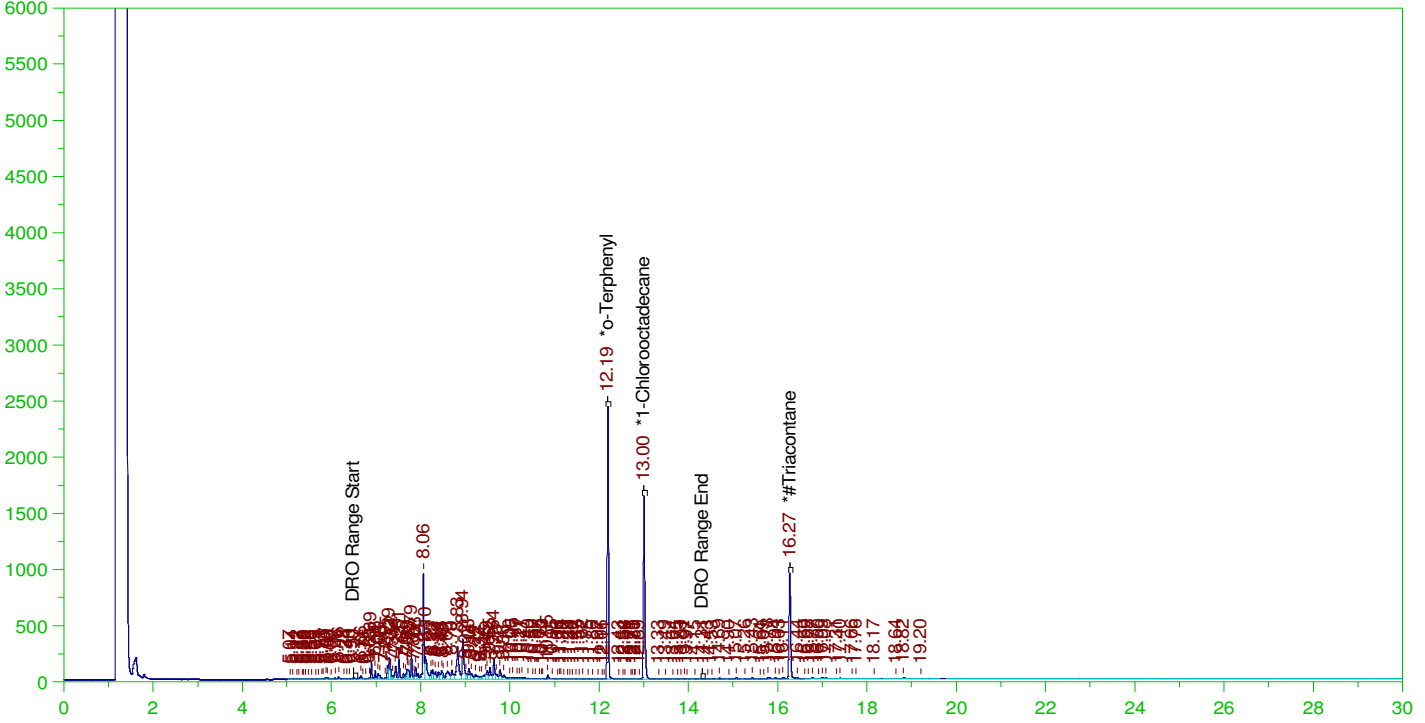
RRO Area:435461.8 RRO AMOUNT: 1.495751E-02

ERH2006 (RHMW02)

G:\Org\HP5\DAT\HP5120921\_b\1209HP5.0028.RAW

Batch ID: 161934

B21120381-002A ;1209HP5 , \$HC-8015-DRO-W, SGT



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21120381-002A ;1209HP5 , \$HC-8015-DRO-W, SGT  
 Raw File: G:\Org\HP5\DAT\HP5120921\_b\1209HP5.0028.RAW  
 Date & Time Acquired: 12/10/2021 6:03:02 AM  
 Method File: G:\Org\HP5\Methods\DR\_8015-C24T-IF-L%.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IF-24-Tri.CAL  
 Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.49 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.191	.194	.128	66.04	-
*1-Chlorooctadecane	13.004	.194	.106	54.75	-
*#Triacontane	16.269	.194	.087	44.67	-

DRO Area:1.369191E+07 DRO Amount: 0.4239798

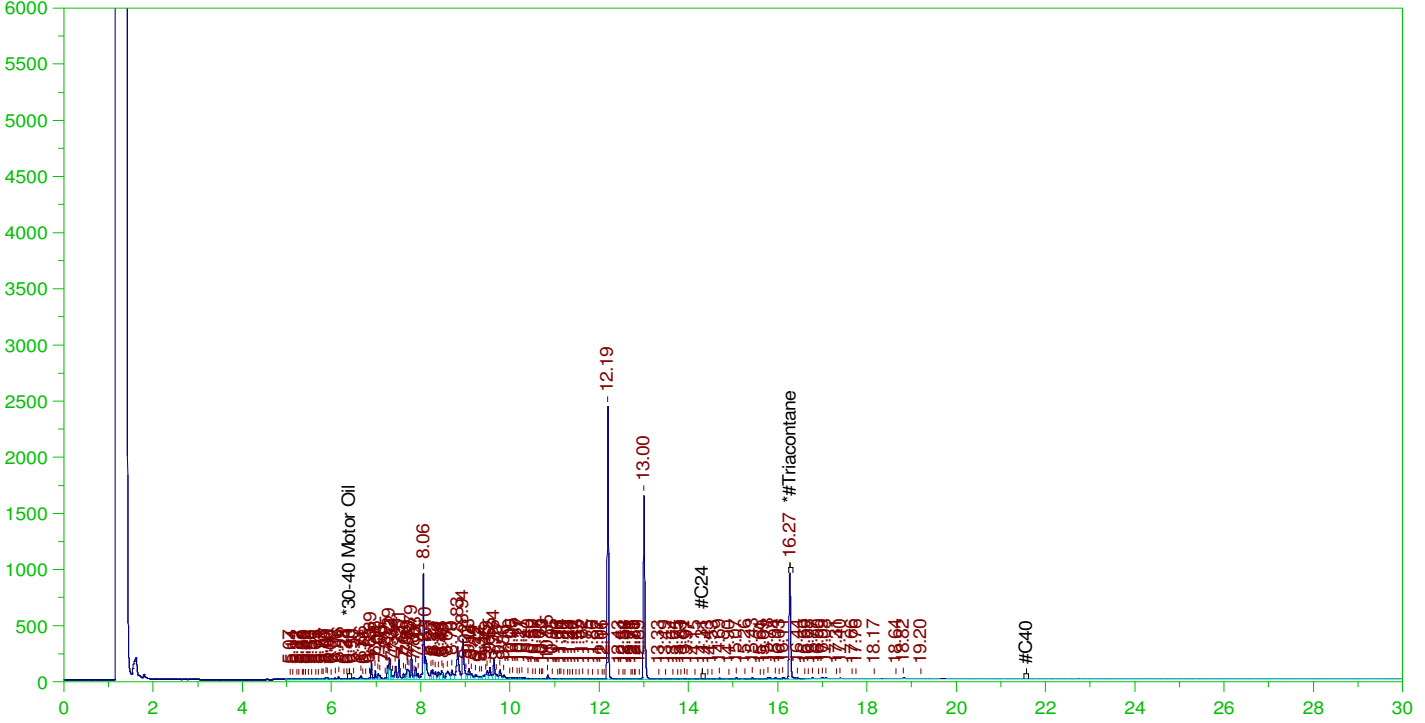
TEH Area:1.451452E+07 TEH Amount: 0.4494523

ERH2006 (RHMW02)

G:\org\HP5\DAT\HP5120921\_b\1209HP5.0028.RAW

Batch ID: 161934

B21120381-002A ;1209HP5, \$HC-8015-DRO-W, SGT



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21120381-002A ;1209HP5, \$HC-8015-DRO-W, SGT  
 Raw File: G:\org\HP5\DAT\HP5120921\_b\1209HP5.0028.RAW  
 Date & Time Acquired: 12/10/2021 6:03:02 AM  
 Method File: G:\Org\HP5\Methods\DR\_OROS-AH-L%.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AH-SAMP.CAL  
 Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41  
 Rt range for Residual Range Organics: 14.28 to 21.62

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.269	.485	.087	17.87

RRO Area:501392.1 RRO AMOUNT: 1.705492E-02

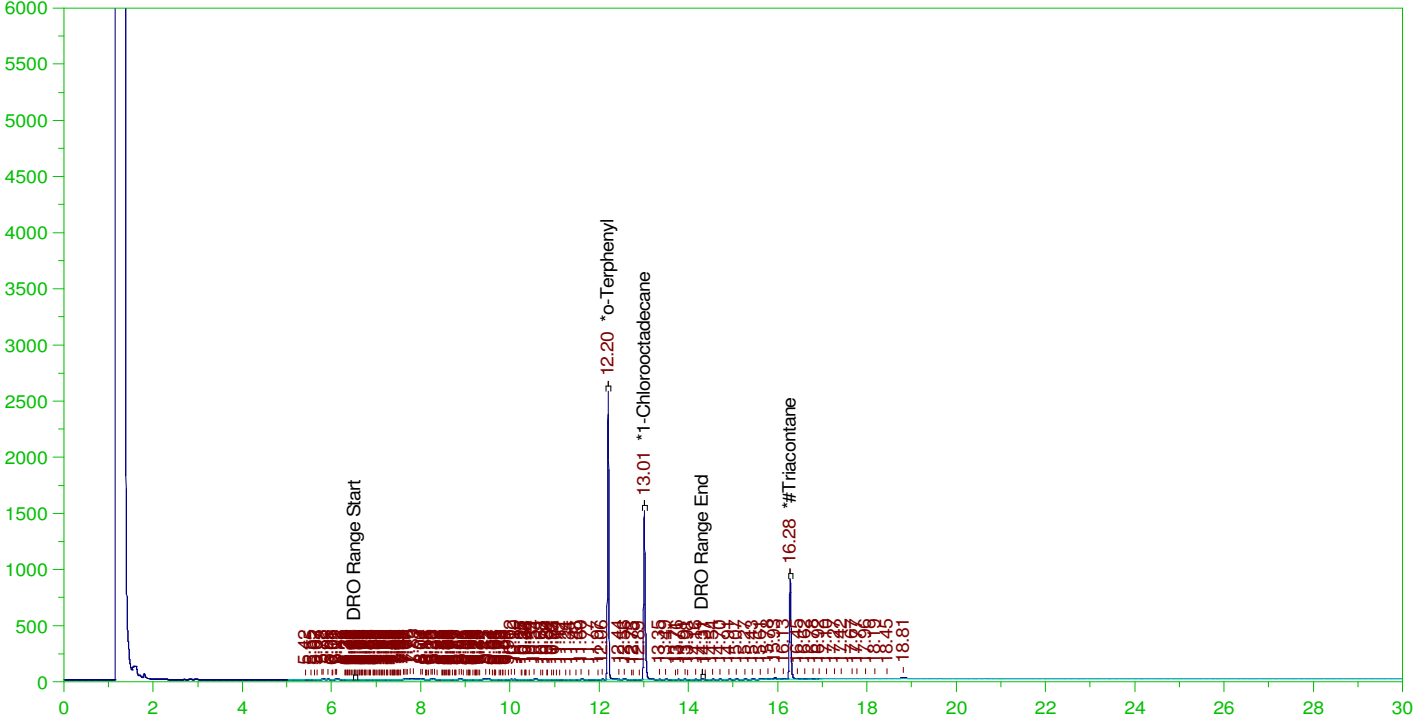


ERH2009 (RHMW03)

G:\org\HP5\DAT\HP5120921\_b\1209HP5.0014.RAW

Batch ID: 161934

B21120381-003A ;1209HP5 , \$HC-8015-DRO-W, SGT



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21120381-003A ;1209HP5 , \$HC-8015-DRO-W, SGT  
 Raw File: G:\org\HP5\DAT\HP5120921\_b\1209HP5.0014.RAW  
 Date & Time Acquired: 12/9/2021 8:01:06 PM  
 Method File: G:\Org\HP5\Methods\DR\_8015-C24T-IF-L%.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IF-24-Tri.CAL  
 Sample Weight: 990 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.49 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.196	.202	.142	70.16	-
*1-Chlorooctadecane	13.01	.202	.105	51.76	-
*#Triacontane	16.275	.202	.087	43.17	-

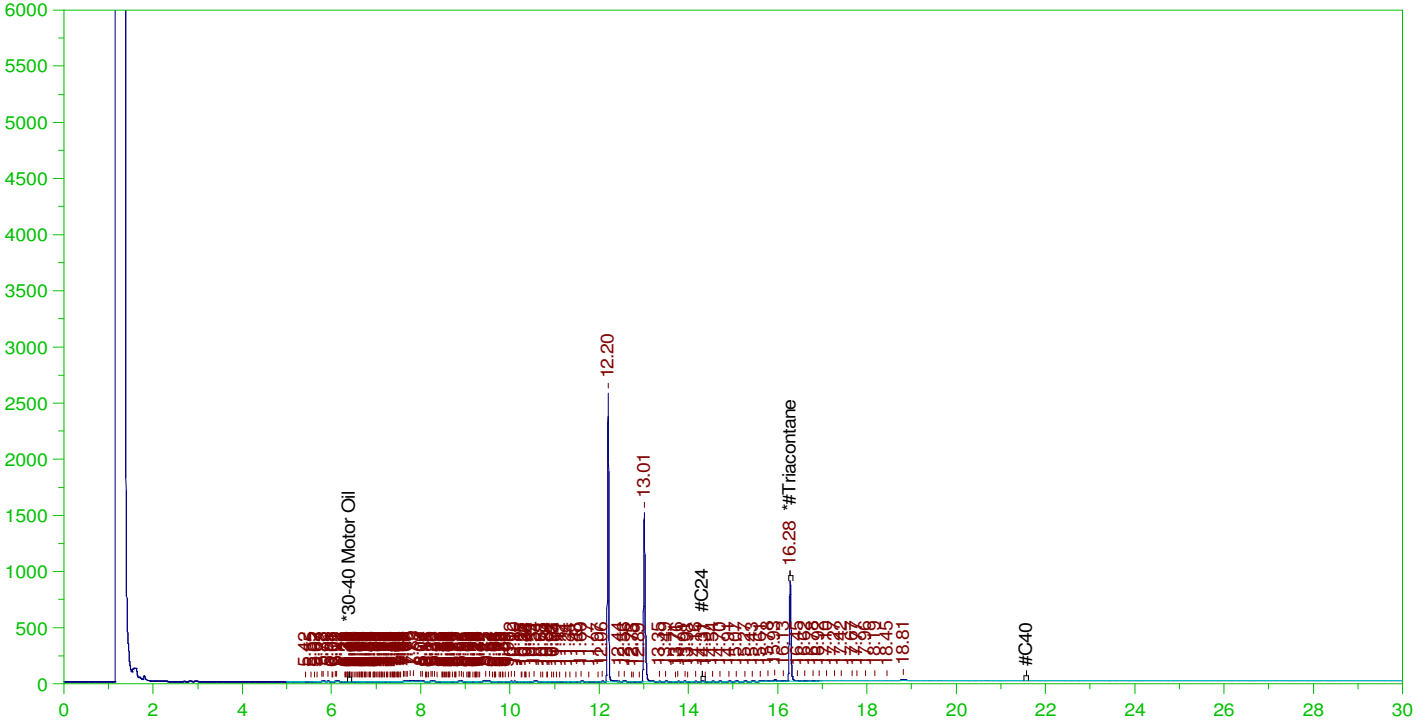
DRO Area:484330.2 DRO Amount: 1.560359E-02  
 TEH Area:859158.1 TEH Amount: 2.767937E-02

ERH2009 (RHMW03)

Batch ID: 161934

G:\org\HP5\DAT\HP5120921\_b\1209HP5.0014.RAW

B21120381-003A ;1209HP5 , \$HC-8015-DRO-W, SGT



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21120381-003A ;1209HP5 , \$HC-8015-DRO-W, SGT  
 Raw File: G:\org\HP5\DAT\HP5120921\_b\1209HP5.0014.RAW  
 Date & Time Acquired: 12/9/2021 8:01:06 PM  
 Method File: G:\Org\HP5\Methods\DR\_OROS-AH-L%.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AH-SAMP.CAL  
 Sample Weight: 990 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41  
 Rt range for Residual Range Organics: 14.28 to 21.62

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.275	.505	.087	17.27

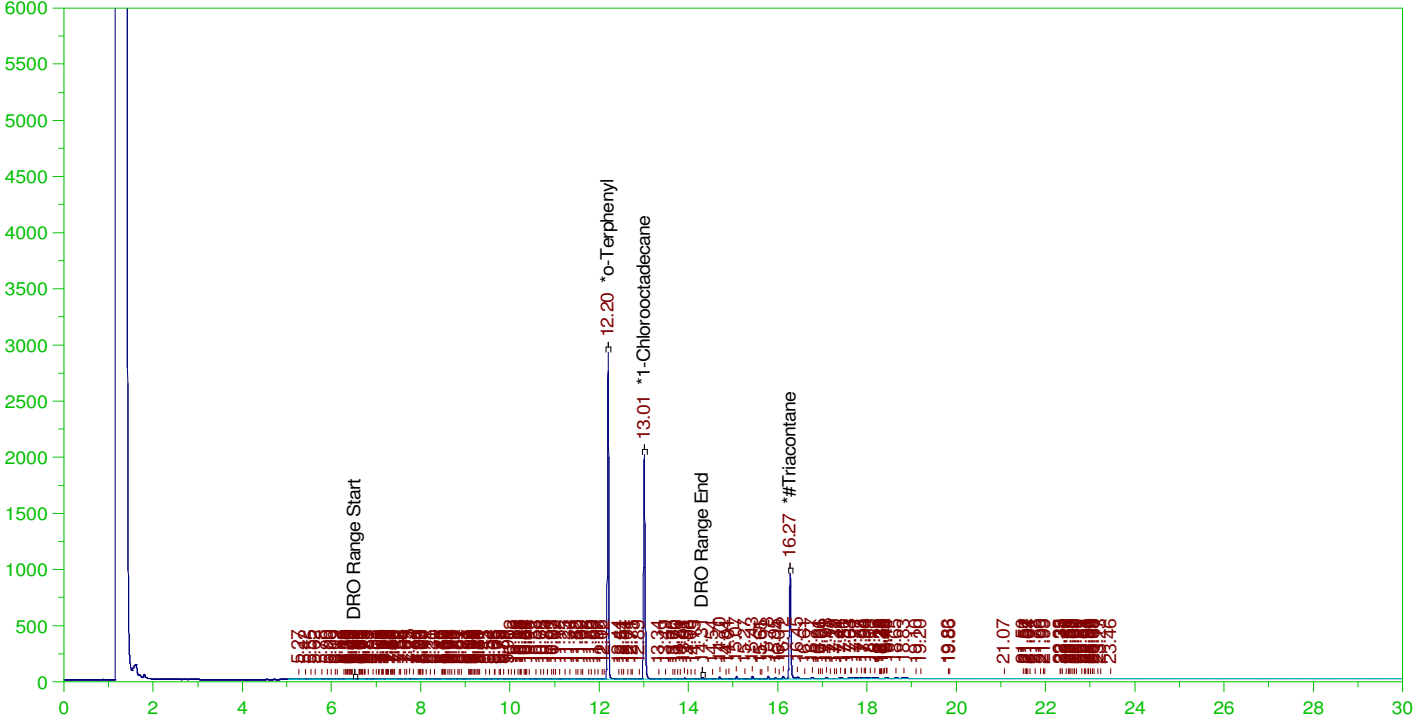
RRO Area:308275.6 RRO AMOUNT: 1.090971E-02

ERH2011 (RHMW05)

Batch ID: 161934

G:\org\HP5\DAT\HP5120921\_b\1209HP5.0016.RAW

B21120381-004B ;1209HP5 , \$HC-8015-DRO-W, SGT



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21120381-004B ;1209HP5 , \$HC-8015-DRO-W, SGT  
 Raw File: G:\org\HP5\DAT\HP5120921\_b\1209HP5.0016.RAW  
 Date & Time Acquired: 12/9/2021 9:27:12 PM  
 Method File: G:\Org\HP5\Methods\DR\_8015-120916-IF-L%.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IF-24-Tri.CAL  
 Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.49 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.195	.194	.154	79.36	-
*1-Chlorooctadecane	13.008	.194	.128	66.09	-
*#Triacontane	16.275	.194	.087	44.8	-

DRO Area:565289.9

DRO Amount: 0.0175046

TEH Area:1929451

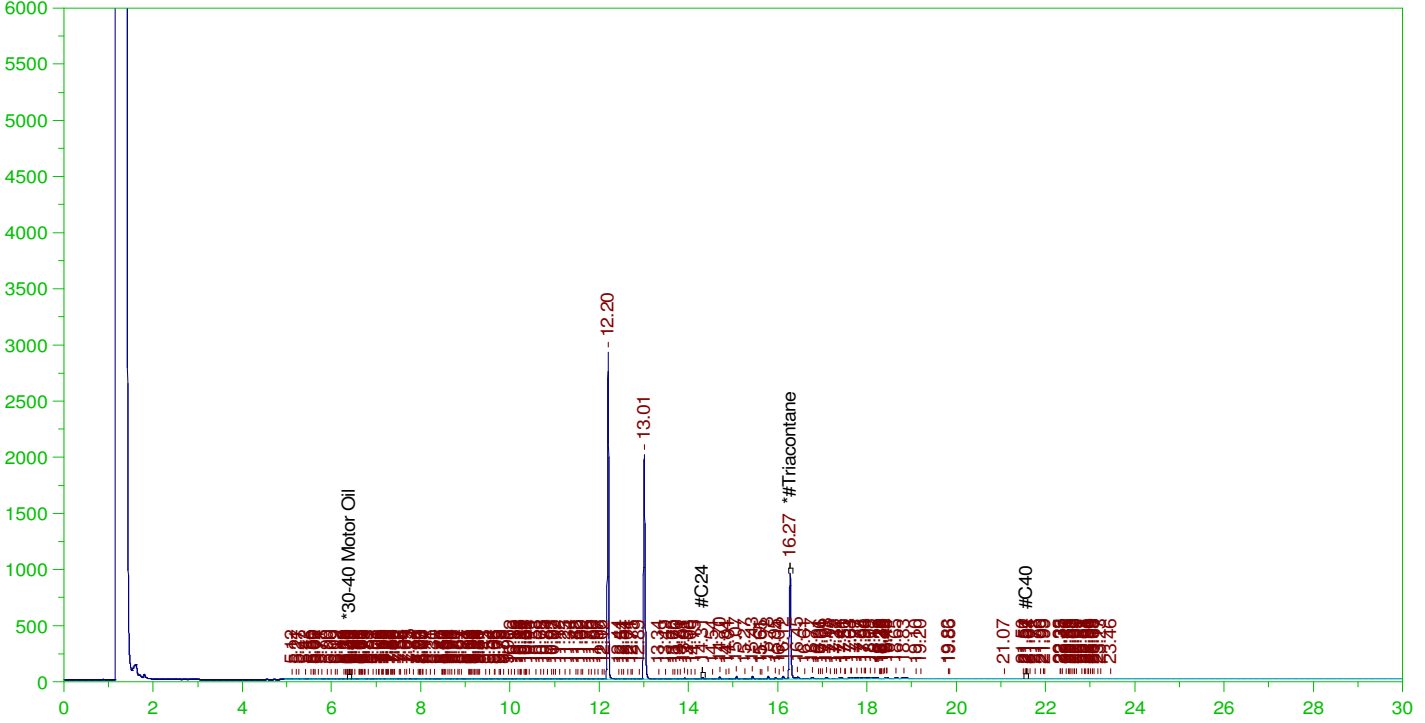
TEH Amount: 5.974681E-02

ERH2011 (RHMW05)

Batch ID: 161934

G:\org\HP5\DAT\HP5120921\_b\1209HP5.0016.RAW

B21120381-004B ;1209HP5 , \$HC-8015-DRO-W, SGT



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21120381-004B ;1209HP5 , \$HC-8015-DRO-W, SGT  
 Raw File: G:\org\HP5\DAT\HP5120921\_b\1209HP5.0016.RAW  
 Date & Time Acquired: 12/9/2021 9:27:12 PM  
 Method File: G:\Org\HP5\Methods\DR\_OROS-120916-AH-L%.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AH-SAMP.CAL  
 Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41  
 Rt range for Residual Range Organics: 14.28 to 21.62

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.275	.485	.087	17.92

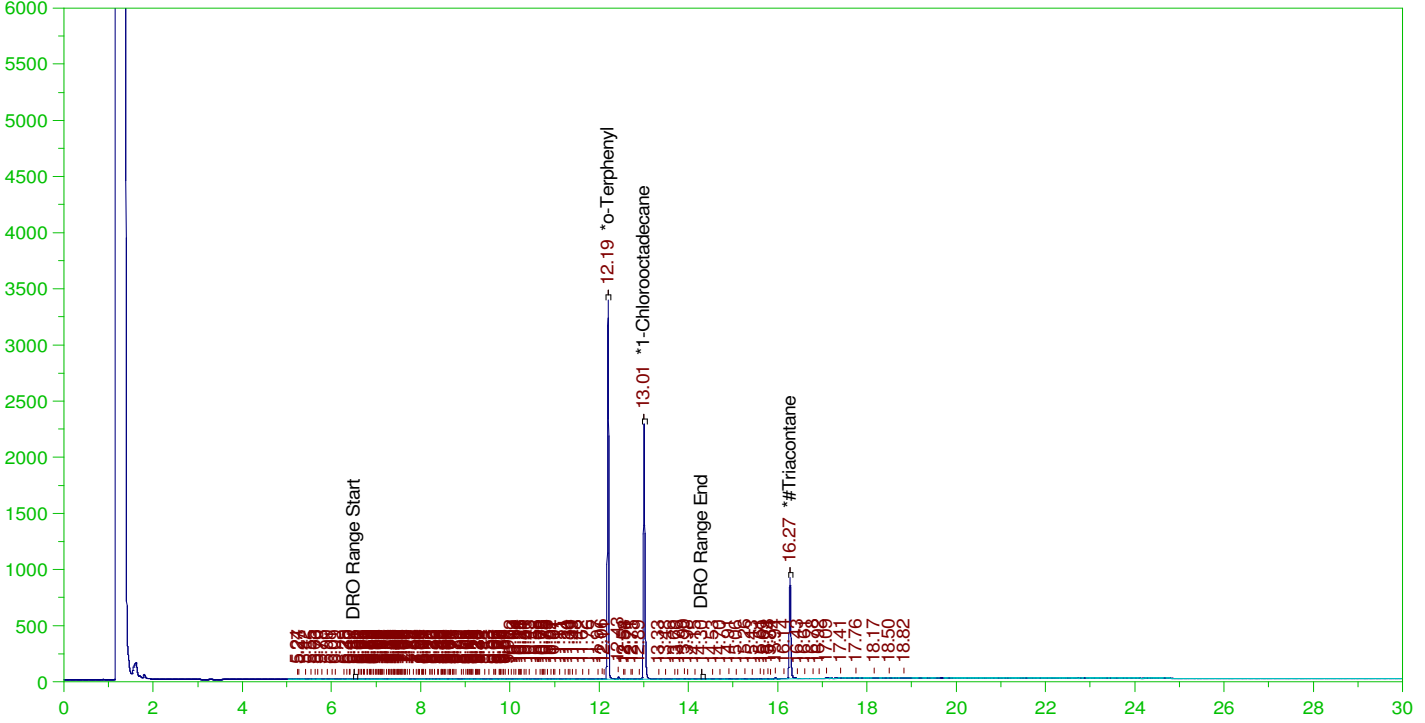
RRO Area:1224251 RRO AMOUNT: 4.164307E-02

ERH2013 (RHMW08)

G:\org\HP5\DAT\HP5120921\_b\1209HP5.0024.RAW

Batch ID: 161934

B21120381-005B ;1209HP5, \$HC-8015-DRO-W, SGT



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21120381-005B ;1209HP5 , \$HC-8015-DRO-W, SGT  
 Raw File: G:\org\HP5\DAT\HP5120921\_b\1209HP5.0024.RAW  
 Date & Time Acquired: 12/10/2021 3:11:06 AM  
 Method File: G:\Org\HP5\Methods\DR\_8015-C24T-IF-L%.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IF-24-Tri.CAL  
 Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.49 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.195	.196	.178	90.68	-
*1-Chlorooctadecane	13.006	.196	.144	73.68	-
*#Triacontane	16.273	.196	.084	42.71	-

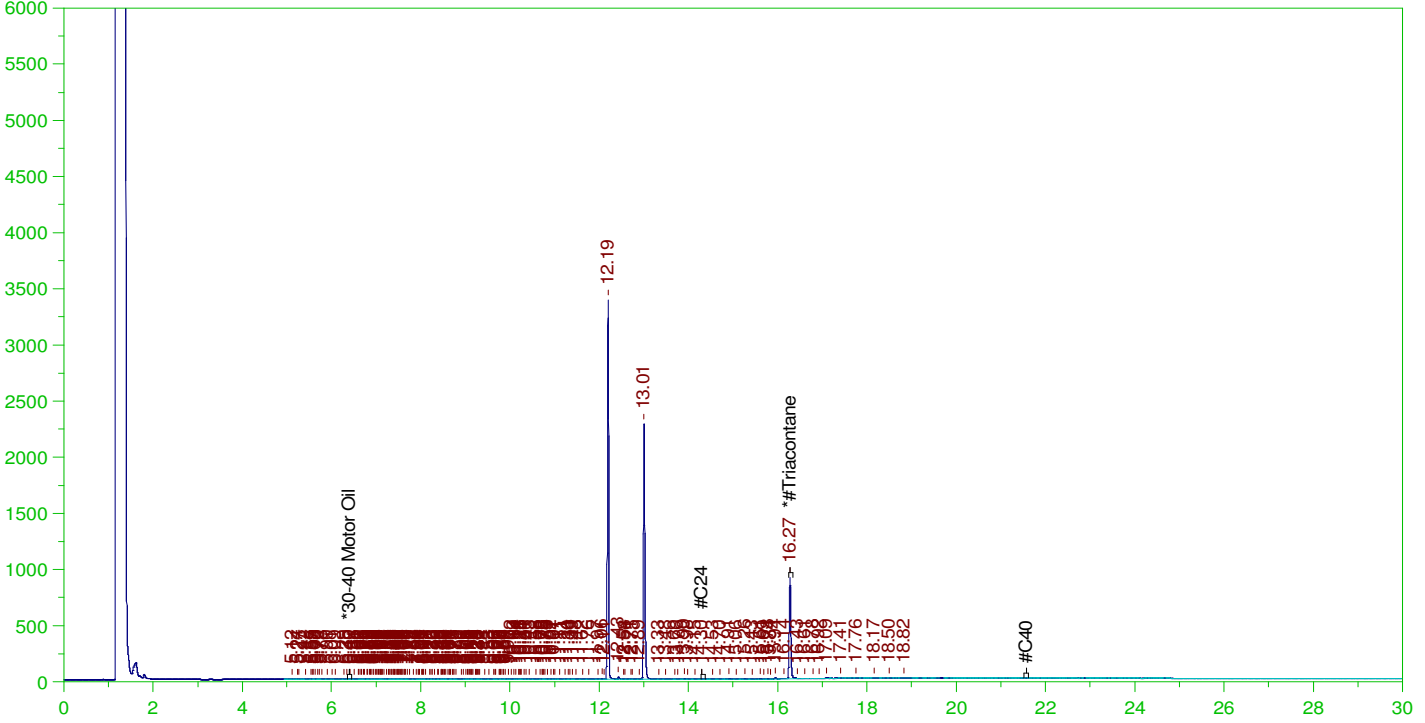
DRO Area:551963.8 DRO Amount: 1.725952E-02  
 TEH Area:797586.8 TEH Amount: 2.493998E-02

ERH2013 (RHMW08)

G:\org\HP5\DAT\HP5120921\_b\1209HP5.0024.RAW

Batch ID: 161934

B21120381-005B ;1209HP5 , \$HC-8015-DRO-W, SGT



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21120381-005B ;1209HP5 , \$HC-8015-DRO-W, SGT  
 Raw File: G:\org\HP5\DAT\HP5120921\_b\1209HP5.0024.RAW  
 Date & Time Acquired: 12/10/2021 3:11:06 AM  
 Method File: G:\Org\HP5\Methods\DR\_OROS-AH-L%.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AH-SAMP.CAL  
 Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41  
 Rt range for Residual Range Organics: 14.28 to 21.62

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.273	.49	.084	17.08	-

RRO Area:157279

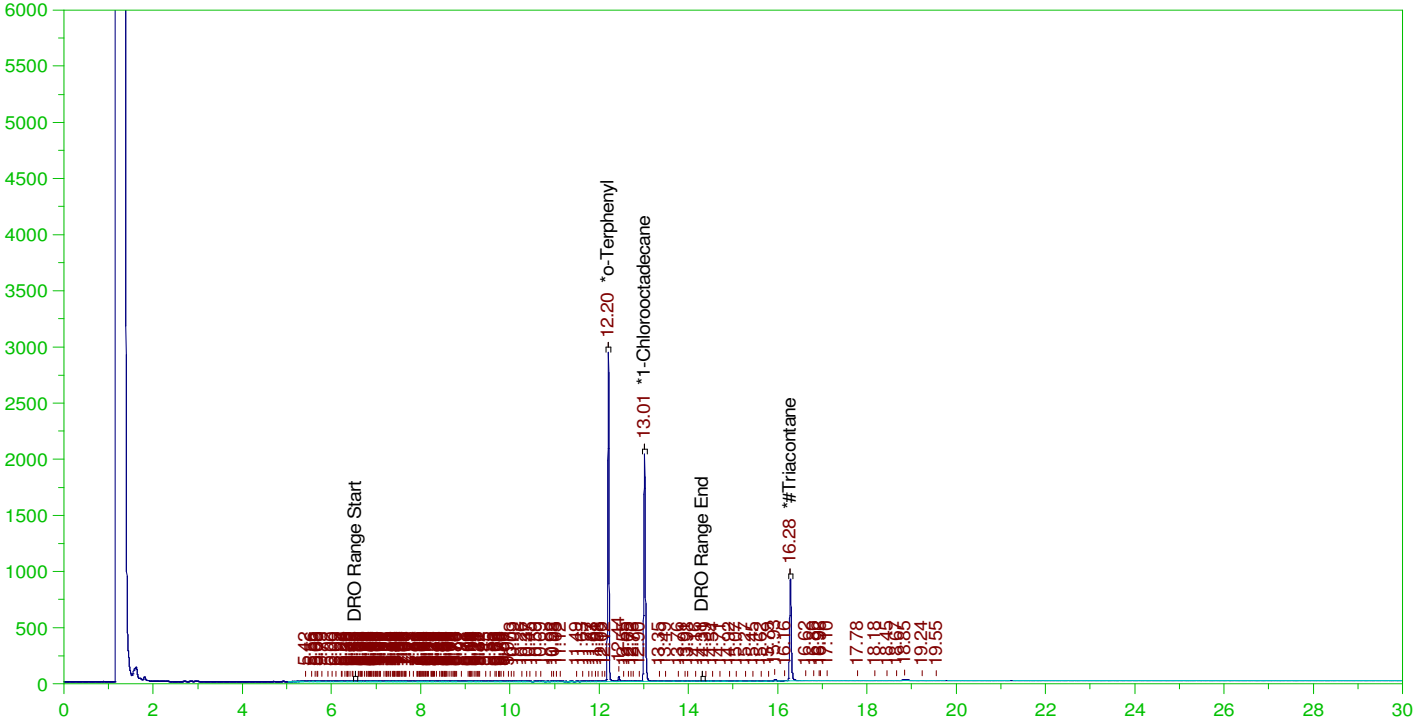
RRO AMOUNT: 5.402314E-03

ERH2014 (RHMW08)

G:\org\HP5\DAT\HP5120921\_b\1209HP5.0011.RAW

Batch ID: 161934

B21120381-006B ;1209HP5 , \$HC-8015-DRO-W, SGT



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21120381-006B ;1209HP5 , \$HC-8015-DRO-W, SGT  
 Raw File: G:\org\HP5\DAT\HP5120921\_b\1209HP5.0011.RAW  
 Date & Time Acquired: 12/9/2021 5:51:58 PM  
 Method File: G:\Org\HP5\Methods\DR\_8015-C24T-IF-L%.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IF-24-Tri.CAL  
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.49 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.201	.192	.152	78.89	-
*1-Chlorooctadecane	13.014	.192	.128	66.73	-
*#Triacontane	16.283	.192	.084	43.42	-

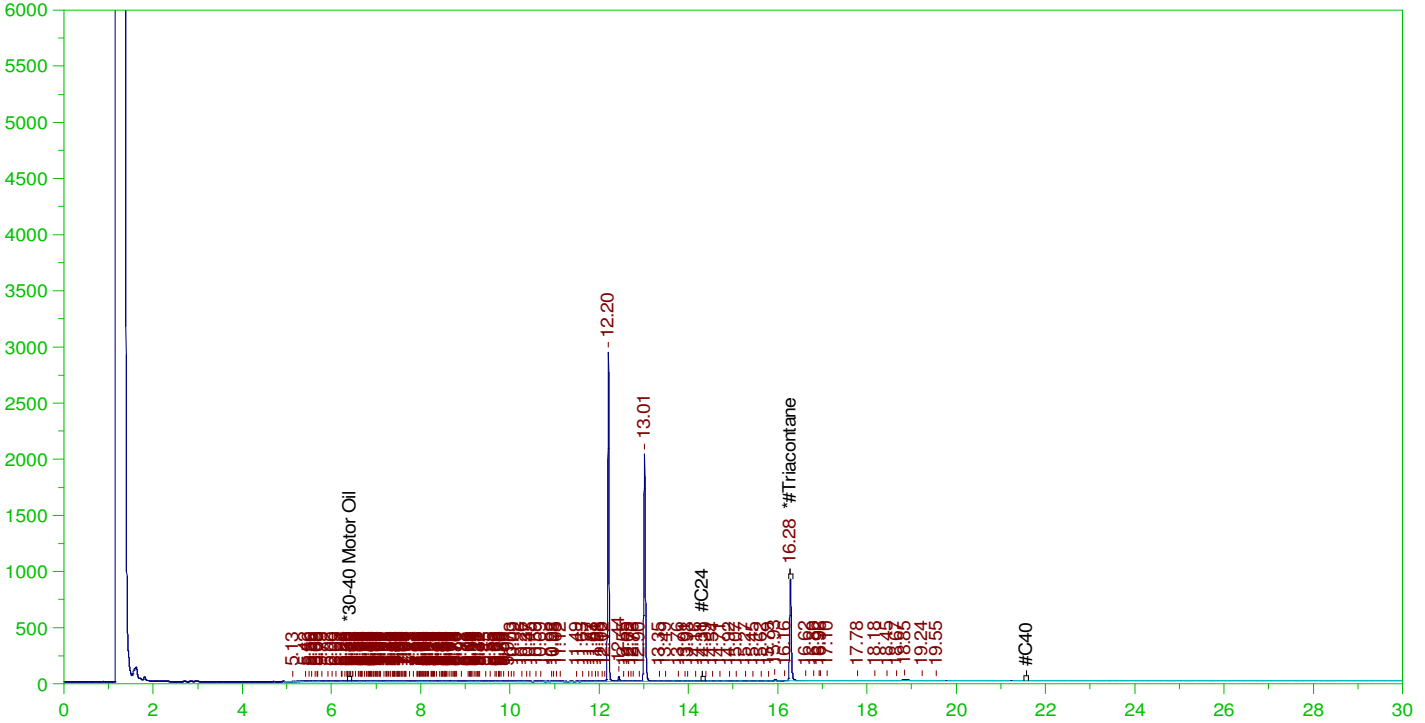
DRO Area:471251.8 DRO Amount: 1.445233E-02  
 TEH Area:771238.8 TEH Amount: 2.365232E-02

ERH2014 (RHMW08)

G:\org\HP5\DAT\HP5120921\_b\1209HP5.0011.RAW

Batch ID: 161934

B21120381-006B ;1209HP5 , \$HC-8015-DRO-W, SGT



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21120381-006B ;1209HP5 , \$HC-8015-DRO-W, SGT  
 Raw File: G:\org\HP5\DAT\HP5120921\_b\1209HP5.0011.RAW  
 Date & Time Acquired: 12/9/2021 5:51:58 PM  
 Method File: G:\Org\HP5\Methods\DR\_OROS-AH-L%.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AH-SAMP.CAL  
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41  
 Rt range for Residual Range Organics: 14.28 to 21.62

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.283	.481	.084	17.37

RRO Area:177739.5 RRO AMOUNT: 5.987701E-03

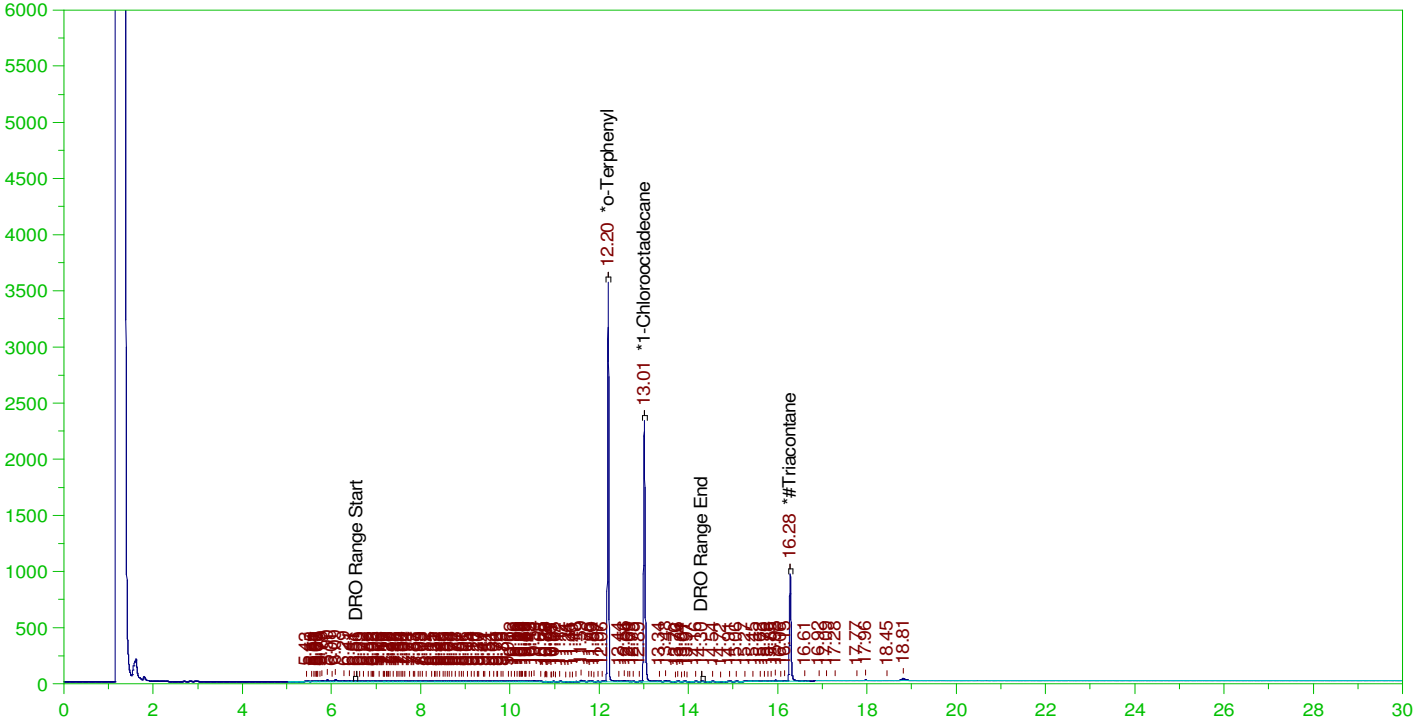


ERH2018 (RHMW2254-01)

Batch ID: 161934

G:\org\HP5\DAT\HP5120921\_b\1209HP5.0012.RAW

B21120381-007B ; 1209HP5 , \$HC-8015-DRO-W, SGT



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21120381-007B ; 1209HP5 , \$HC-8015-DRO-W, SGT  
 Raw File: G:\org\HP5\DAT\HP5120921\_b\1209HP5.0012.RAW  
 Date & Time Acquired: 12/9/2021 6:35:02 PM  
 Method File: G:\Org\HP5\Methods\DR\_8015-C24T-IF-L%.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IF-24-Tri.CAL  
 Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.49 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.197	.196	.187	95.54	-
*1-Chlorooctadecane	13.01	.196	.149	76.06	-
*#Triacontane	16.277	.196	.09	45.79	-

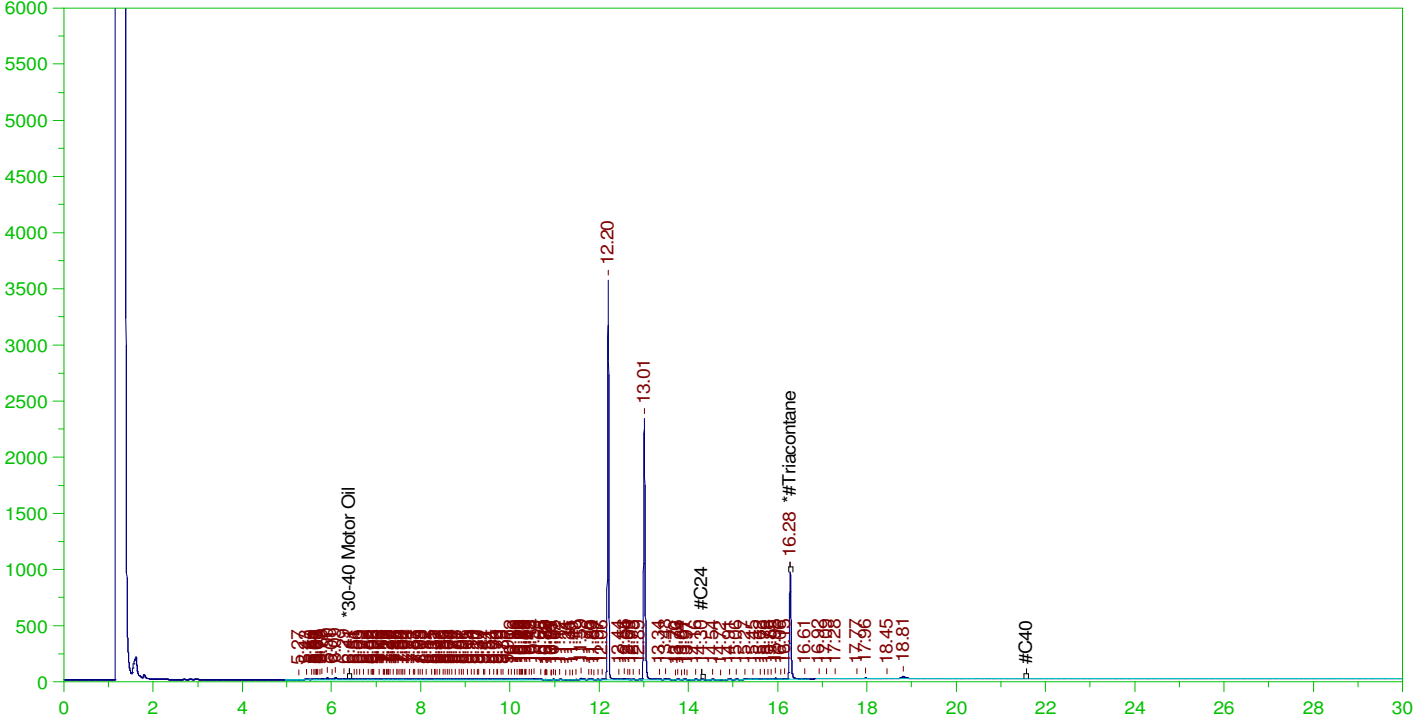
DRO Area: 844241.1 DRO Amount: 2.639882E-02  
 TEH Area: 1369495 TEH Amount: 4.282313E-02

ERH2018 (RHMW2254-01)

G:\org\HP5\DAT\HP5120921\_b\1209HP5.0012.RAW

Batch ID: 161934

B21120381-007B ;1209HP5 , \$HC-8015-DRO-W, SGT



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21120381-007B ;1209HP5 , \$HC-8015-DRO-W, SGT  
 Raw File: G:\org\HP5\DAT\HP5120921\_b\1209HP5.0012.RAW  
 Date & Time Acquired: 12/9/2021 6:35:02 PM  
 Method File: G:\Org\HP5\Methods\DR\_OROS-AH-L%.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AH-SAMP.CAL  
 Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41  
 Rt range for Residual Range Organics: 14.28 to 21.62

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.277	.49	.09	18.32

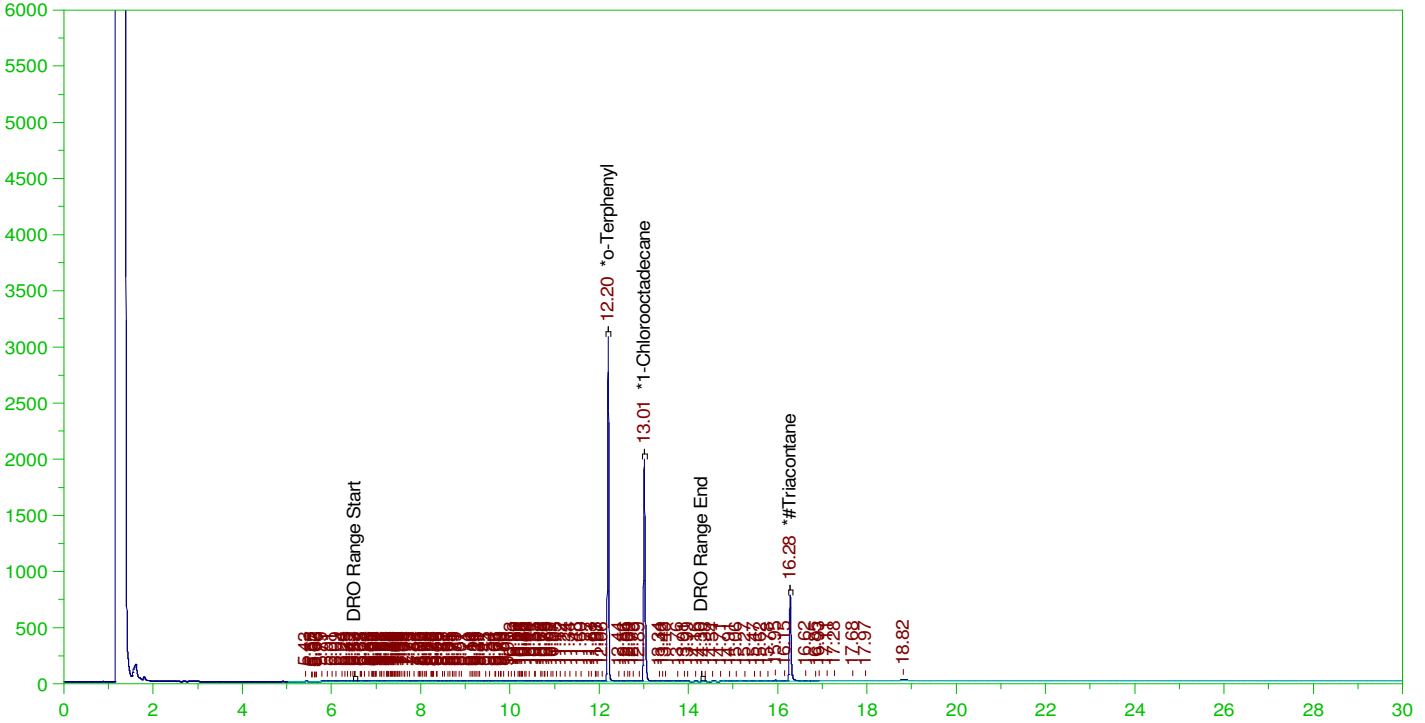
RRO Area:257618.6 RRO AMOUNT: 8.848841E-03

ERH2020 (OWDFMW01)

G:\org\HP5\DAT\HP5120921\_b\1209HP5.0018.RAW

Batch ID: 161934

B21120381-008B ;1209HP5 , \$HC-8015-DRO-W, SGT



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21120381-008B ;1209HP5 , \$HC-8015-DRO-W, SGT  
 Raw File: G:\org\HP5\DAT\HP5120921\_b\1209HP5.0018.RAW  
 Date & Time Acquired: 12/9/2021 10:53:15 PM  
 Method File: G:\Org\HP5\Methods\DR\_8015-C24T-IF-L%.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IF-24-Tri.CAL  
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.49 to 14.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.197	.2	.167	83.72	-
*1-Chlorooctadecane	13.01	.2	.134	67.07	-
*#Triacontane	16.277	.2	.077	38.54	-

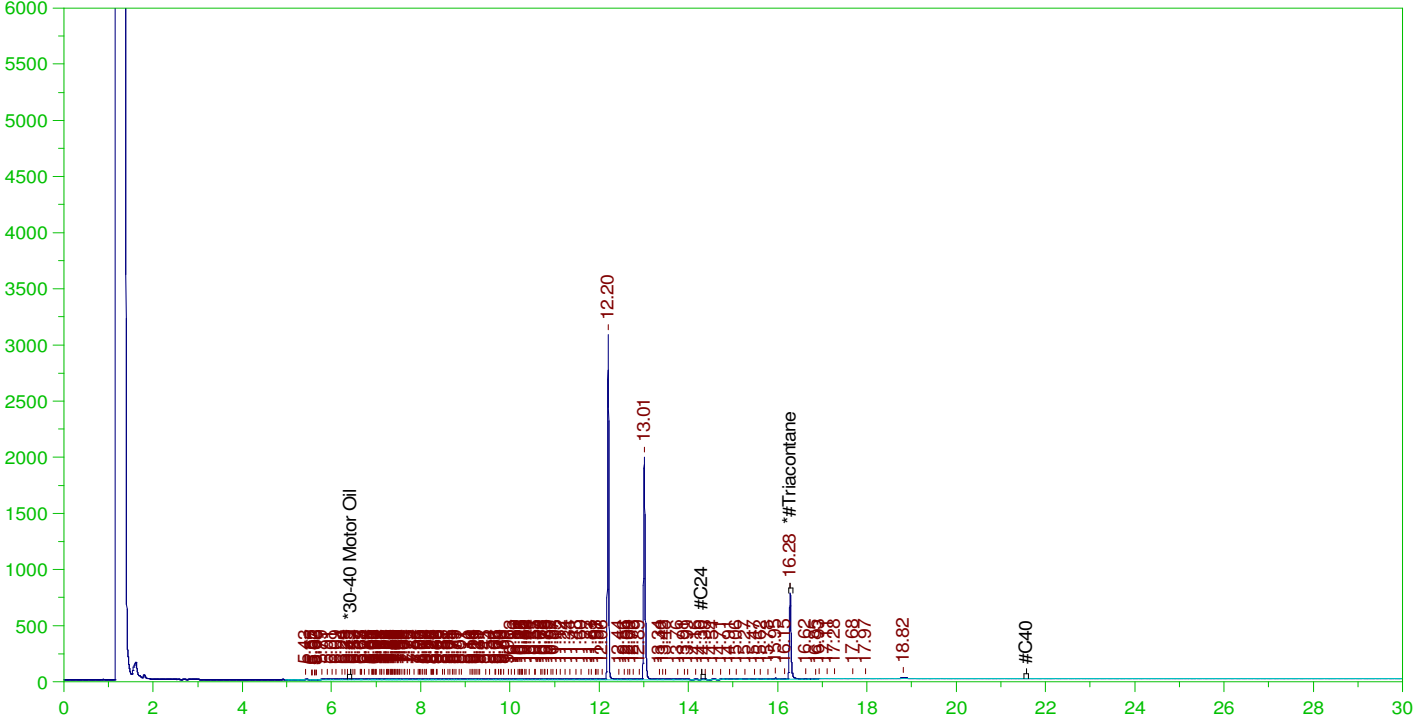
DRO Area:527800.4 DRO Amount: 1.683402E-02  
 TEH Area:850606.4 TEH Amount: 2.712982E-02

ERH2020 (OWDFMW01)

G:\org\HP5\DAT\HP5120921\_b\1209HP5.0018.RAW

Batch ID: 161934

B21120381-008B ;1209HP5 , \$HC-8015-DRO-W, SGT



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21120381-008B ;1209HP5 , \$HC-8015-DRO-W, SGT  
 Raw File: G:\org\HP5\DAT\HP5120921\_b\1209HP5.0018.RAW  
 Date & Time Acquired: 12/9/2021 10:53:15 PM  
 Method File: G:\Org\HP5\Methods\DR\_OROS-AH-L%.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AH-SAMP.CAL  
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41  
 Rt range for Residual Range Organics: 14.28 to 21.62

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.277	.5	.077	15.42

RRO Area:198386.6 RRO AMOUNT: 6.95059E-03