



# ANALYTICAL SUMMARY REPORT

December 03, 2021

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

Work Order: B21110057 Quote ID: 5912

Project Name: CV\_18F0126/60571032.02.20.01

Energy Laboratories Inc Billings MT received the following 7 samples from AECOM - Honolulu on 10/30/2021 for analysis.

Lab ID	Client Sample ID	Collect Date	Received Date	Matrix	Test
B21110057-001	ERH1845 (RHMW01R)	10/27/21 13:50	10/30/2021	Ground Water	DRO-Liquid-Liquid Extraction SW3520C Diesel Range Organics SW8015C
B21110057-002	ERH1848 (RHMW02)	10/27/21 14:45	10/30/2021	Ground Water	Same As Above
B21110057-003	ERH1851 (RHMW03)	10/27/21 15:35	10/30/2021	Ground Water	Same As Above
B21110057-004	ERH1854 (RHMW05)	10/27/21 12:50	10/30/2021	Ground Water	Same As Above
B21110057-005	ERH1857 (RHMW2254-01)	10/26/21 13:05	10/30/2021	Ground Water	Same As Above
B21110057-006	ERH1860 (RHSF)	10/26/21 12:50	10/30/2021	Drinking Water	Same As Above
B21110057-007	ERH1862 (RHSF)	10/26/21 12:50	10/30/2021	Drinking Water	Same As Above

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:** CV\_18F0126/60571032.02.20.01  
**Work Order:** B21110057

**Report Date:** 12/3/2021

## 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.

Corrective actions regarding Semi-Volatile Petroleum Hydrocarbons by SW8015C analysis are summarized below.

#### Method SW8015C:

Sample: CV\_18F0126/60571032.02.20.01, B21110057-002

Due to low surrogate recovery of o-Terphenyl after silica gel treatment, the sample was re-extracted and re-analyzed. Re-analysis of the sample produced similar results. The result of the re-analysis is included in the Analytical Report with the original results.



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# Chain of Custody & Analytical Request Record 202110-18

DoD Samples

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COC# NOI Page 1 of 3

### 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"/> NELAC <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 "non-PO" on invoice.
5. Note: NOI log in separate from other COCs

### Project Information

Project Name, PWSID, Permit, etc.	CV18F0126/60571032.02.20.01		
Sampler Name	KL, MM, NL, CF	Sampler Phone	808-636-3319
Sample Origin State	Hawaii	EPA/State Compliance	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>URANIUM MINING CLIENTS MUST indicate sample type</b>			
<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 - Blossay
- O - Oil
- DW - Drinking Water

### Analysis Requested

Sample ID	Date	Time	Number of Containers	Matrix (See Codes Above)	Analysis Requested		See Attached
					EPA 8015 TPH-DRO/RRO w/ SGC	EPA 8015 TPH-DRO/RRO	
1	10/27/2021	9:50 am	2	GW	✓	✓	
2	10/27/2021	10:45 am	2	GW	✓	✓	
3	10/27/2021	11:35 am	2	GW	✓	✓	
4	10/27/2021	8:50 am	0	GW	✓	✓	
5	10/26/2021	9:05 am	0	GW	✓	✓	
6	10/26/2021	8:50 am	0	DW	✓	✓	
7	10/26/2021	8:50 am	0	DW	✓	✓	
8							
9							

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	See Attached	RUSH TAT	ELI LAB ID
	Date	Time						X	Laboratory Use Only
1 ERH1845 (RHMW01R)	10/27/2021	9:50 am	2	GW	✓	✓	X	B21110057	
2 ERH1848 (RHMW02)	10/27/2021	10:45 am	2	GW	✓	✓	X		
3 ERH1851 (RHMW03)	10/27/2021	11:35 am	2	GW	✓	✓	X		
4 ERH1854 (RHMW05)	10/27/2021	8:50 am	0	GW	✓	✓	X		
5 ERH1857 (RHMW2254-01)	10/26/2021	9:05 am	0	GW	✓	✓	X		
6 ERH1860 (RHSF)	10/26/2021	8:50 am	0	DW	✓	✓	X		
7 ERH1862 (RHSF)	10/26/2021	8:50 am	0	DW	✓	✓	X		
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)	Date/Time	Signature	Received by (print)	Date/Time	Signature
	Tianzhen Nie	10/28/21 13:00	<i>[Signature]</i>	M. Tenduranc	10/30/21 12:20	<i>[Signature]</i>
<b>LABORATORY USE ONLY</b>						
Shipped By	Cooler ID(s)	Custody Seals	Intact	Receipt Temp	Temp Blank	On Ice
	#1	Y N C B	Y N	0.0 °C	Y N	Y N
Payment Type			Amount	Receipt Number (cash/check only)		
CC Cash Check			\$			

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.



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# Chain of Custody & Analytical Request Record 202110-19

DoD Samples

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coc# NOI Page 2 of 3

### 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"/> INELAC <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 "non-PO" on invoice.
5. Note: NOI log in separate from other COCs

### Project Information

Project Name	PWSID, Permit, etc. CV18F0126/60571032 02.20.01	
Sampler Name	KL, MM, NL, CF	Sampler Phone 808-636-3319
Sample Origin State	Hawaii	EPA/State Compliance <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>URANIUM MINING CLIENTS MUST indicate sample type</b>		
<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 - Soils/ Solids
- V - Vegetation
- B - Bioassay
- O - Oil
- DW - Drinking Water

### Analysis Requested

	EPA 8015 TPH-DRO/RRO w/SGC	EPA 8015 TPH-DRO/ RRO																
1	✓	✓																
2	✓	✓																
3	✓	✓																
4	✓	✓																
5	✓	✓																
6	✓	✓																
7	✓	✓																
8																		
9																		

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	See Attached	RUSH TAT	ELI LAB ID (Laboratory Use Only)
	Date	Time							
1 ERH1845 (RHMW01R)	10/27/2021	9:50 am	0	GW	✓	✓	×	B21110057	
2 ERH1848 (RHMW02)	10/27/2021	10:45 am	0	GW	✓	✓	×		
3 ERH1851 (RHMW03)	10/27/2021	11:35 am	0	GW	✓	✓	×		
4 ERH1854 (RHMW05)	10/27/2021	8:50 am	2	GW	✓	✓	×		
5 ERH1857 (RHMW2254-01)	10/26/2021	9:05 am	0	GW	✓	✓	×		
6 ERH1860 (RHSF)	10/26/2021	8:50 am	0	DW	✓	✓	×		
7 ERH1862 (RHSF)	10/26/2021	8:50 am	0	DW	✓	✓	×		
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) <b>Tianzhen Nie</b>	Date/Time <b>10/28/21 13:00</b>	Signature <i>[Signature]</i>	Received by (print)	Date/Time	Signature			
	Relinquished by (print)	Date/Time	Signature	Received by Laboratory (print) <b>M. J. [Signature]</b>	Date/Time <b>10/29/21 1220</b>	Signature <i>[Signature]</i>			
<b>LABORATORY USE ONLY</b>									
Shipped By	Cooler ID(s) <b>#2</b>	Custody Seals Y N C B	Intact Y N	Receipt Temp <b>0.0</b> °C	Temp Blank Y N	On Ice Y N	Payment Type CC Cash Check	Amount \$	Receipt Number (cash/check only)

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# Chain of Custody & Analytical Request Record 202110-20

DoD Samples

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coc# NOI Page 3 of 3

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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 (if 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 type="checkbox"/> Email		
Special Report/Formats:		
<input checked="" type="checkbox"/> LEVEL IV <input type="checkbox"/> NELAC <input type="checkbox"/> EDD/EDT (contact laboratory) <input type="checkbox"/> Other		

### Comments

1. Project performed under DoD QSM.
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Sampler Name <b>KL, MM, NL, CF</b>	Sampler Phone <b>808-636-3319</b>
Sample Origin State <b>Hawaii</b>	EPA/State Compliance <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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<input type="checkbox"/> Processed Ore (Ground or Refined) <b>**CALL BEFORE SENDING</b>	
<input type="checkbox"/> 11(e)2 Byproduct Material (Can ONLY be Submitted to ELI Casper Location)	

### Matrix Codes

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- S - Solts/ Solids
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- B - Bioassay
- O - Oil
- DW - Drinking Water

### Analysis Requested

Sample ID	Date	Time	Number of Containers	Matrix (See Codes Above)	Analysis Requested		See Attached
					EPA 8015 TPH-DRO/RRO w/ SGC	EPA 8015 TPH-DRO/RRO	
1 ERH1845 (RHMW01R)	10/27/2021	9:50 am	0	GW	✓	✓	X
2 ERH1848 (RHMW02)	10/27/2021	10:45 am	0	GW	✓	✓	X
3 ERH1851 (RHMW03)	10/27/2021	11:35 am	0	GW	✓	✓	X
4 ERH1854 (RHMW05)	10/27/2021	8:50 am	0	GW	✓	✓	X
5 ERH1857 (RHMW2254-01)	10/26/2021	9:05 am	2	GW	✓	✓	X
6 ERH1860 (RHSF)	10/26/2021	8:50 am	2	DW	✓	✓	X
7 ERH1862 (RHSF)	10/26/2021	8:50 am	2	DW	✓	✓	X
8							
9							

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	See Attached	RUSH TAT	ELI LAB ID Laboratory Use Only
	Date	Time							
1 ERH1845 (RHMW01R)	10/27/2021	9:50 am	0	GW	✓	✓	X	B2110057	
2 ERH1848 (RHMW02)	10/27/2021	10:45 am	0	GW	✓	✓	X		
3 ERH1851 (RHMW03)	10/27/2021	11:35 am	0	GW	✓	✓	X		
4 ERH1854 (RHMW05)	10/27/2021	8:50 am	0	GW	✓	✓	X		
5 ERH1857 (RHMW2254-01)	10/26/2021	9:05 am	2	GW	✓	✓	X		
6 ERH1860 (RHSF)	10/26/2021	8:50 am	2	DW	✓	✓	X		
7 ERH1862 (RHSF)	10/26/2021	8:50 am	2	DW	✓	✓	X		
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) <b>Tianzhen Nie</b>	Date/Time <b>10/28/21 13:00</b>	Signature <i>Tianzhen Nie</i>	Received by (print)	Date/Time	Signature
	Relinquished by (print)	Date/Time	Signature	Received by Laboratory (print) <i>M. Pennington</i>	Date/Time <b>10/28/21 1220</b>	Signature <i>M. Pennington</i>
<b>LABORATORY USE ONLY</b>						
Shipped By	Cooler ID(s) <b>#3</b>	Custody Seals Y N C B	Intact Y N	Receipt Temp <b>0.0</b> °C	Temp Blank <b>(Y)</b>	Ice <b>(Y)</b>
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

B21110057

Login completed by: Leslie S. Cadreau
Reviewed by: BL2000\gmccartney
Reviewed Date: 11/2/2021

Date Received: 10/30/2021
Received by: leb
Carrier name: FedEx

- Shipping container/cooler in good condition? Yes [checked] No [ ] Not Present [ ]
Custody seals intact on all shipping container(s)/cooler(s)? Yes [checked] No [ ] Not Present [ ]
Custody seals intact on all sample bottles? Yes [checked] No [ ] Not Present [ ]
Chain of custody present? Yes [checked] No [ ]
Chain of custody signed when relinquished and received? Yes [checked] No [ ]
Chain of custody agrees with sample labels? Yes [checked] No [ ]
Samples in proper container/bottle? Yes [checked] No [ ]
Sample containers intact? Yes [checked] No [ ]
Sufficient sample volume for indicated test? Yes [checked] No [ ]
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.) Yes [checked] No [ ]
Temp Blank received in all shipping container(s)/cooler(s)? Yes [checked] No [ ] Not Applicable [ ]
Container/Temp Blank temperature: °C On Ice
Water - VOA vials have zero headspace? Yes [ ] No [ ] Not Applicable [checked]
Water - pH acceptable upon receipt? Yes [checked] 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 0.0°C (Chain of Custody 1 of 3), shipping container 2 was 0.0°C (Chain of Custody 2 of 3) and shipping container 3 was 0.0°C (Chain of Custody 3 of 3).

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 Daylight Time.

## 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: B21110057-001

Collection Date: 10/27/2021 13:50

Date Received: 10/30/2021

Report Date: 12/03/2021

**Client:** AECOM - Honolulu  
**Client Sample ID:** ERH1845 (RHMW01R)  
**Project:** CV\_18F0126/60571032.02.20.01  
**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)	0.40	mg/L	1		0.31	0.15	0.040		SW8015C	11/3/2021 21:24/amn	GCFID-HP5-B_211103A : 12	160878
Diesel Range Organics (SGT-C10 to C24)	0.078	mg/L	1	J	0.31	0.12	0.040		SW8015C	11/5/2021 01:22/amn	GCFID-HP5-B_211103B : 8	160878
Oil Range Hydrocarbons (C24 to C40)	0.23	mg/L	1	J	0.31	0.15	0.090		SW8015C	11/3/2021 21:24/amn	GCFID-HP5-B_211103A : 12	160878
Oil Range Hydrocarbons (SGT-C24 to C40)	ND	mg/L	1	U	0.31	0.15	0.090		SW8015C	11/5/2021 01:22/amn	GCFID-HP5-B_211103B : 8	160878
Total Extractable Hydrocarbons	0.70	mg/L	1		0.31	0.15	0.076		SW8015C	11/3/2021 21:24/amn	GCFID-HP5-B_211103A : 12	160878
Total Extractable Hydrocarbons (SGT)	0.088	mg/L	1	J	0.31	0.12	0.034		SW8015C	11/5/2021 01:22/amn	GCFID-HP5-B_211103B : 8	160878
Surr: o-Terphenyl	77.0	%REC	1		56-125				SW8015C	11/3/2021 21:24/amn	GCFID-HP5-B_211103A : 12	160878
Surr: o-Terphenyl (SGT)	63.0	%REC	1		56-125				SW8015C	11/5/2021 01:22/amn	GCFID-HP5-B_211103B : 8	160878
Surr: n-Triacontane	92.0	%REC	1		50-150				SW8015C	11/3/2021 21:24/amn	GCFID-HP5-B_211103A : 12	160878
Surr: n-Triacontane (SGT)	72.0	%REC	1		50-150				SW8015C	11/5/2021 01:22/amn	GCFID-HP5-B_211103B : 8	160878

- 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: B21110057-002

Collection Date: 10/27/2021 14:45

Date Received: 10/30/2021

Report Date: 12/03/2021

**Client:** AECOM - Honolulu  
**Client Sample ID:** ERH1848 (RHMW02)  
**Project:** CV\_18F0126/60571032.02.20.01  
**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)	3.6	mg/L	1		0.31	0.15	0.040		SW8015C	11/11/2021 19:04/amn	GCFID-HP5-B_211111A : 16	161122
Diesel Range Organics (C10 to C24)	3.3	mg/L	1		0.30	0.15	0.038		SW8015C	11/3/2021 20:41/amn	GCFID-HP5-B_211103A : 11	160878
Diesel Range Organics (SGT-C10 to C24)	0.68	mg/L	1		0.31	0.12	0.040		SW8015C	11/12/2021 16:22/amn	GCFID-HP5-B_211111B : 13	161122
Diesel Range Organics (SGT-C10 to C24)	0.76	mg/L	1		0.30	0.12	0.038		SW8015C	11/5/2021 02:05/amn	GCFID-HP5-B_211103B : 9	160878
Oil Range Hydrocarbons (C24 to C40)	0.47	mg/L	1		0.31	0.15	0.091		SW8015C	11/11/2021 19:04/amn	GCFID-HP5-B_211111A : 16	161122
Oil Range Hydrocarbons (C24 to C40)	0.39	mg/L	1		0.30	0.15	0.086		SW8015C	11/3/2021 20:41/amn	GCFID-HP5-B_211103A : 11	160878
Oil Range Hydrocarbons (SGT-C24 to C40)	0.11	mg/L	1	J	0.31	0.15	0.091		SW8015C	11/12/2021 16:22/amn	GCFID-HP5-B_211111B : 13	161122
Oil Range Hydrocarbons (SGT-C24 to C40)	0.10	mg/L	1	J	0.30	0.15	0.086		SW8015C	11/5/2021 02:05/amn	GCFID-HP5-B_211103B : 9	160878
Total Extractable Hydrocarbons	4.2	mg/L	1		0.31	0.15	0.077		SW8015C	11/11/2021 19:04/amn	GCFID-HP5-B_211111A : 16	161122
Total Extractable Hydrocarbons	3.7	mg/L	1		0.30	0.15	0.073		SW8015C	11/3/2021 20:41/amn	GCFID-HP5-B_211103A : 11	160878
Total Extractable Hydrocarbons (SGT)	0.80	mg/L	1		0.31	0.12	0.034		SW8015C	11/12/2021 16:22/amn	GCFID-HP5-B_211111B : 13	161122
Total Extractable Hydrocarbons (SGT)	0.89	mg/L	1		0.30	0.12	0.032		SW8015C	11/5/2021 02:05/amn	GCFID-HP5-B_211103B : 9	160878
Surr: o-Terphenyl	69.0	%REC	1		56-125				SW8015C	11/11/2021 19:04/amn	GCFID-HP5-B_211111A : 16	161122
Surr: o-Terphenyl	58.0	%REC	1		56-125				SW8015C	11/3/2021 20:41/amn	GCFID-HP5-B_211103A : 11	160878
Surr: o-Terphenyl (SGT)	56.0	%REC	1		56-125				SW8015C	11/12/2021 16:22/amn	GCFID-HP5-B_211111B : 13	161122
Surr: o-Terphenyl (SGT)	45.0	%REC	1	S	56-125				SW8015C	11/5/2021 02:05/amn	GCFID-HP5-B_211103B : 9	160878
Surr: n-Triacontane	93.0	%REC	1		50-150				SW8015C	11/11/2021 19:04/amn	GCFID-HP5-B_211111A : 16	161122
Surr: n-Triacontane	86.0	%REC	1		50-150				SW8015C	11/3/2021 20:41/amn	GCFID-HP5-B_211103A : 11	160878
Surr: n-Triacontane (SGT)	79.0	%REC	1		50-150				SW8015C	11/12/2021 16:22/amn	GCFID-HP5-B_211111B : 13	161122
Surr: n-Triacontane (SGT)	63.0	%REC	1		50-150				SW8015C	11/5/2021 02:05/amn	GCFID-HP5-B_211103B : 9	160878

- Due to low surrogate recovery of o-Terphenyl after silica gel treatment, the sample was re-extracted and re-analyzed. Re-analysis of the sample produced similar results.

- 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:** B21110057-003  
**Collection Date:** 10/27/2021 15:35  
**Date Received:** 10/30/2021  
**Report Date:** 12/03/2021

**Client:** AECOM - Honolulu  
**Client Sample ID:** ERH1851 (RHMW03)  
**Project:** CV\_18F0126/60571032.02.20.01  
**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)	0.16	mg/L	1	J	0.30	0.15	0.039		SW8015C	11/3/2021 19:58/amn	GCFID-HP5-B_211103A : 1C	160878
Diesel Range Organics (SGT-C10 to C24)	ND	mg/L	1	U	0.30	0.12	0.039		SW8015C	11/5/2021 00:39/amn	GCFID-HP5-B_211103B : 7	160878
Oil Range Hydrocarbons (C24 to C40)	0.37	mg/L	1		0.30	0.15	0.089		SW8015C	11/3/2021 19:58/amn	GCFID-HP5-B_211103A : 1C	160878
Oil Range Hydrocarbons (SGT-C24 to C40)	ND	mg/L	1	U	0.30	0.15	0.089		SW8015C	11/5/2021 00:39/amn	GCFID-HP5-B_211103B : 7	160878
Total Extractable Hydrocarbons	0.58	mg/L	1		0.30	0.15	0.076		SW8015C	11/3/2021 19:58/amn	GCFID-HP5-B_211103A : 1C	160878
Total Extractable Hydrocarbons (SGT)	ND	mg/L	1	U	0.30	0.12	0.033		SW8015C	11/5/2021 00:39/amn	GCFID-HP5-B_211103B : 7	160878
Surr: o-Terphenyl	90.0	%REC	1		56-125				SW8015C	11/3/2021 19:58/amn	GCFID-HP5-B_211103A : 1C	160878
Surr: o-Terphenyl (SGT)	76.0	%REC	1		56-125				SW8015C	11/5/2021 00:39/amn	GCFID-HP5-B_211103B : 7	160878
Surr: n-Triacontane	86.0	%REC	1		50-150				SW8015C	11/3/2021 19:58/amn	GCFID-HP5-B_211103A : 1C	160878
Surr: n-Triacontane (SGT)	69.0	%REC	1		50-150				SW8015C	11/5/2021 00:39/amn	GCFID-HP5-B_211103B : 7	160878

- 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: B21110057-004

Collection Date: 10/27/2021 12:50

Date Received: 10/30/2021

Report Date: 12/03/2021

**Client:** AECOM - Honolulu  
**Client Sample ID:** ERH1854 (RHMW05)  
**Project:** CV\_18F0126/60571032.02.20.01  
**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)	0.084	mg/L	1	J	0.30	0.15	0.038		SW8015C	11/3/2021 19:14/amn	GCFID-HP5-B_211103A : 9	160878
Diesel Range Organics (SGT-C10 to C24)	ND	mg/L	1	U	0.30	0.12	0.038		SW8015C	11/4/2021 23:56/amn	GCFID-HP5-B_211103B : 6	160878
Oil Range Hydrocarbons (C24 to C40)	0.13	mg/L	1	J	0.30	0.15	0.085		SW8015C	11/3/2021 19:14/amn	GCFID-HP5-B_211103A : 9	160878
Oil Range Hydrocarbons (SGT-C24 to C40)	ND	mg/L	1	U	0.30	0.15	0.085		SW8015C	11/4/2021 23:56/amn	GCFID-HP5-B_211103B : 6	160878
Total Extractable Hydrocarbons	0.26	mg/L	1	J	0.30	0.15	0.073		SW8015C	11/3/2021 19:14/amn	GCFID-HP5-B_211103A : 9	160878
Total Extractable Hydrocarbons (SGT)	ND	mg/L	1	U	0.30	0.12	0.032		SW8015C	11/4/2021 23:56/amn	GCFID-HP5-B_211103B : 6	160878
Surr: o-Terphenyl	89.0	%REC	1		56-125				SW8015C	11/3/2021 19:14/amn	GCFID-HP5-B_211103A : 9	160878
Surr: o-Terphenyl (SGT)	69.0	%REC	1		56-125				SW8015C	11/4/2021 23:56/amn	GCFID-HP5-B_211103B : 6	160878
Surr: n-Triacontane	94.0	%REC	1		50-150				SW8015C	11/3/2021 19:14/amn	GCFID-HP5-B_211103A : 9	160878
Surr: n-Triacontane (SGT)	68.0	%REC	1		50-150				SW8015C	11/4/2021 23:56/amn	GCFID-HP5-B_211103B : 6	160878

- 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:** ERH1857 (RHMW2254-01)  
**Project:** CV\_18F0126/60571032.02.20.01  
**Matrix:** Ground Water

**Lab ID:** B21110057-005  
**Collection Date:** 10/26/2021 13:05  
**Date Received:** 10/30/2021  
**Report Date:** 12/03/2021

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)	ND	mg/L	1	U	0.30	0.15	0.038		SW8015C	11/3/2021 17:48/amn	GCFID-HP5-B_211103A : 7	160878
Oil Range Hydrocarbons (C24 to C40)	ND	mg/L	1	U	0.30	0.15	0.085		SW8015C	11/3/2021 17:48/amn	GCFID-HP5-B_211103A : 7	160878
Total Extractable Hydrocarbons	ND	mg/L	1	U	0.30	0.15	0.073		SW8015C	11/3/2021 17:48/amn	GCFID-HP5-B_211103A : 7	160878
Surr: o-Terphenyl	93.0	%REC	1		56-125				SW8015C	11/3/2021 17:48/amn	GCFID-HP5-B_211103A : 7	160878
Surr: n-Triacontane	87.0	%REC	1		50-150				SW8015C	11/3/2021 17:48/amn	GCFID-HP5-B_211103A : 7	160878

- Note: Total Extractable Hydrocarbons are defined as the total hydrocarbon responses regardless of elution time.  
 - Since there were no detectable hydrocarbons, Silica Gel Treatment (SGT) results are equivalent to non-SGT results.



### LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Client Sample ID:** ERH1860 (RHSF)  
**Project:** CV\_18F0126/60571032.02.20.01  
**Matrix:** Drinking Water

**Lab ID:** B21110057-006  
**Collection Date:** 10/26/2021 12:50  
**Date Received:** 10/30/2021  
**Report Date:** 12/03/2021

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)	ND	mg/L	1	U	0.30	0.15	0.038		SW8015C	11/3/2021 18:31/amn	GCFID-HP5-B_211103A : 8	160878
Oil Range Hydrocarbons (C24 to C40)	ND	mg/L	1	U	0.30	0.15	0.086		SW8015C	11/3/2021 18:31/amn	GCFID-HP5-B_211103A : 8	160878
Total Extractable Hydrocarbons	ND	mg/L	1	U	0.30	0.15	0.073		SW8015C	11/3/2021 18:31/amn	GCFID-HP5-B_211103A : 8	160878
Surr: o-Terphenyl	93.0	%REC	1		56-125				SW8015C	11/3/2021 18:31/amn	GCFID-HP5-B_211103A : 8	160878
Surr: n-Triacontane	88.0	%REC	1		50-150				SW8015C	11/3/2021 18:31/amn	GCFID-HP5-B_211103A : 8	160878

- Note: Total Extractable Hydrocarbons are defined as the total hydrocarbon responses regardless of elution time.  
 - Since there were no detectable hydrocarbons, Silica Gel Treatment (SGT) results are equivalent to non-SGT results.



**LABORATORY ANALYTICAL REPORT**

Prepared by Billings, MT Branch

**Lab ID:** B21110057-007

**Collection Date:** 10/26/2021 12:50

**Date Received:** 10/30/2021

**Report Date:** 12/03/2021

**Client:** AECOM - Honolulu  
**Client Sample ID:** ERH1862 (RHSF)  
**Project:** CV\_18F0126/60571032.02.20.01  
**Matrix:** Drinking 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)	ND	mg/L	1	U	0.30	0.14	0.037		SW8015C	11/3/2021 16:21/amn	GCFID-HP5-B_211103A : 6	160878
Oil Range Hydrocarbons (C24 to C40)	ND	mg/L	1	U	0.30	0.14	0.084		SW8015C	11/3/2021 16:21/amn	GCFID-HP5-B_211103A : 6	160878
Total Extractable Hydrocarbons	ND	mg/L	1	U	0.30	0.14	0.071		SW8015C	11/3/2021 16:21/amn	GCFID-HP5-B_211103A : 6	160878
Surr: o-Terphenyl	89.0	%REC	1		56-125				SW8015C	11/3/2021 16:21/amn	GCFID-HP5-B_211103A : 6	160878
Surr: n-Triacontane	82.0	%REC	1		50-150				SW8015C	11/3/2021 16:21/amn	GCFID-HP5-B_211103A : 6	160878

- Note: Total Extractable Hydrocarbons are defined as the total hydrocarbon responses regardless of elution time.  
- Since there were no detectable hydrocarbons, Silica Gel Treatment (SGT) results are equivalent to non-SGT results.



### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21110057  
**Project:** CV\_18F0126/60571032.02.20.01

**Report Date:** 12/03/2021

**Run ID: Run Order:** GCFID-HP5-B\_211103A: 5      **SampType:** Method Blank      **Batch ID:** 160878  
**Method:** SW8015C      **Analysis Date:** 11/03/2021 15:38      **Prep Date:** 11/01/2021 12:22  
**Lab ID:** MB-160878      **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	0.18	0.0020	0.20		91.0	56	125				
Surr: n-Triacontane	0.083	0.0020	0.10		83.0	50	150				

Associated Samples: B21110057-001A, B21110057-002A, B21110057-003A, B21110057-004A, B21110057-005A, B21110057-006A, B21110057-007A

**Run ID: Run Order:** GCFID-HP5-B\_211103B: 5      **SampType:** Method Blank      **Batch ID:** 160878  
**Method:** SW8015C      **Analysis Date:** 11/04/2021 23:13      **Prep Date:** 11/01/2021 12:22  
**Lab ID:** MB-160878      **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)	0.16	0.0020	0.20		82.0	56	125				
Surr: n-Triacontane (SGT)	0.071	0.0020	0.10		71.0	50	150				

Associated Samples: B21110057-001A, B21110057-002A, B21110057-003A, B21110057-004A, B21110057-005A, B21110057-006A, B21110057-007A





### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21110057  
**Project:** CV\_18F0126/60571032.02.20.01

**Report Date:** 12/03/2021

**Run ID: Run Order:** GCFID-HP5-B\_211103A: 4      **SampType:** Laboratory Control Sample      **Batch ID:** 160878  
**Method:** SW8015C      **Analysis Date:** 11/03/2021 14:55      **Prep Date:** 11/01/2021 12:22  
**Lab ID:** LCS-160878      **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)	12	0.30	15		83.0	36	132				
Total Extractable Hydrocarbons	13	0.30	15		89.0	60	132				
Surr: o-Terphenyl	0.20	0.0020	0.20		100.0	56	125				

Associated Samples: B21110057-001A, B21110057-002A, B21110057-003A, B21110057-004A, B21110057-005A, B21110057-006A, B21110057-007A

**Run ID: Run Order:** GCFID-HP5-B\_211103A: 21      **SampType:** Laboratory Control Sample      **Batch ID:** 160878  
**Method:** SW8015C      **Analysis Date:** 11/04/2021 07:25      **Prep Date:** 11/01/2021 12:23  
**Lab ID:** LCS-160878-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)	4.5	0.30	5.0		89.0	41	113				
Surr: n-Triacontane	0.085	0.0020	0.10		85.0	50	150				

Associated Samples: B21110057-001A, B21110057-002A, B21110057-003A, B21110057-004A, B21110057-005A, B21110057-006A, B21110057-007A

**Run ID: Run Order:** GCFID-HP5-B\_211103B: 4      **SampType:** Laboratory Control Sample      **Batch ID:** 160878  
**Method:** SW8015C      **Analysis Date:** 11/04/2021 22:30      **Prep Date:** 11/01/2021 12:22  
**Lab ID:** LCS-160878      **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)	11	0.30	15		74.0	36	132				
Total Extractable Hydrocarbons (SGT)	12	0.30	15		79.0	60	132				
Surr: o-Terphenyl (SGT)	0.19	0.0020	0.20		93.0	56	125				

Associated Samples: B21110057-001A, B21110057-002A, B21110057-003A, B21110057-004A, B21110057-005A, B21110057-006A, B21110057-007A



### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21110057  
**Project:** CV\_18F0126/60571032.02.20.01

**Report Date:** 12/03/2021

**Run ID: Run Order:** GCFID-HP5-B\_211103B: 22      **SampType:** Laboratory Control Sample      **Batch ID:** 160878  
**Method:** SW8015C      **Analysis Date:** 11/05/2021 16:55      **Prep Date:** 11/01/2021 12:23  
**Lab ID:** LCS-160878-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)	4.4	0.30	5.0		87.0	41	113				
Surr: n-Triacontane (SGT)	0.078	0.0020	0.10		78.0	50	150				

Associated Samples: B21110057-001A, B21110057-002A, B21110057-003A, B21110057-004A, B21110057-005A, B21110057-006A, B21110057-007A

**Run ID: Run Order:** GCFID-HP5-B\_211103A: 17      **SampType:** Sample Matrix Spike      **Batch ID:** 160878  
**Method:** SW8015C      **Analysis Date:** 11/04/2021 02:25      **Prep Date:** 11/01/2021 17:52  
**Lab ID:** B21110079-001BMS      **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	14	0.0	89.0	36	132				
Total Extractable Hydrocarbons	14	0.30	14	0.0	98.0	60	132				
Surr: o-Terphenyl	0.21	0.0020	0.19	0.0	107.0	56	125				

Associated Samples: B21110057-001A, B21110057-002A, B21110057-003A, B21110057-004A, B21110057-005A, B21110057-006A, B21110057-007A

**Run ID: Run Order:** GCFID-HP5-B\_211103A: 18      **SampType:** Sample Matrix Spike Duplicate      **Batch ID:** 160878  
**Method:** SW8015C      **Analysis Date:** 11/04/2021 03:07      **Prep Date:** 11/01/2021 17:52  
**Lab ID:** B21110079-001BMSD      **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	0.0	86.0	36	132	13	2.6	20.0	
Total Extractable Hydrocarbons	14	0.30	15	0.0	92.0	60	132	14	3.9	20.0	
Surr: o-Terphenyl	0.20	0.0020	0.20	0.0	100.0	56	125	0.0			

Associated Samples: B21110057-001A, B21110057-002A, B21110057-003A, B21110057-004A, B21110057-005A, B21110057-006A, B21110057-007A



### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21110057  
**Project:** CV\_18F0126/60571032.02.20.01

**Report Date:** 12/03/2021

**Run ID: Run Order:** GCFID-HP5-B\_211103A: 19      **SampType:** Sample Matrix Spike      **Batch ID:** 160878  
**Method:** SW8015C      **Analysis Date:** 11/04/2021 04:33      **Prep Date:** 11/01/2021 17:53  
**Lab ID:** B21110079-001BMS-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)	4.4	0.30	4.8	0.0	93.0	41	113				
Surr: n-Triacontane	0.086	0.0020	0.095	0.0	90.0	50	150				

Associated Samples: B21110057-001A, B21110057-002A, B21110057-003A, B21110057-004A, B21110057-005A, B21110057-006A, B21110057-007A

**Run ID: Run Order:** GCFID-HP5-B\_211103A: 20      **SampType:** Sample Matrix Spike Duplicate      **Batch ID:** 160878  
**Method:** SW8015C      **Analysis Date:** 11/04/2021 05:59      **Prep Date:** 11/01/2021 17:53  
**Lab ID:** B21110079-001BMSD-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)	4.4	0.30	4.7	0.0	94.0	41	113	4.4	0.5	20.0	
Surr: n-Triacontane	0.086	0.0020	0.094	0.0	92.0	50	150	0.0			

Associated Samples: B21110057-001A, B21110057-002A, B21110057-003A, B21110057-004A, B21110057-005A, B21110057-006A, B21110057-007A

**Run ID: Run Order:** GCFID-HP5-B\_211103B: 11      **SampType:** Sample Matrix Spike      **Batch ID:** 160878  
**Method:** SW8015C      **Analysis Date:** 11/05/2021 04:14      **Prep Date:** 11/01/2021 17:52  
**Lab ID:** B21110079-001BMS      **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	14	0.0	86.0	36	132				
Total Extractable Hydrocarbons (SGT)	13	0.30	14	0.0	92.0	60	132				
Surr: o-Terphenyl (SGT)	0.20	0.0020	0.19	0.0	105.0	56	125				

Associated Samples: B21110057-001A, B21110057-002A, B21110057-003A, B21110057-004A, B21110057-005A, B21110057-006A, B21110057-007A



### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21110057  
**Project:** CV\_18F0126/60571032.02.20.01

**Report Date:** 12/03/2021

**Run ID: Run Order:** GCFID-HP5-B\_211103B: 19      **SampType:** Sample Matrix Spike Duplicate      **Batch ID:** 160878  
**Method:** SW8015C      **Analysis Date:** 11/05/2021 13:21      **Prep Date:** 11/01/2021 17:52  
**Lab ID:** B21110079-001BMSD      **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	0.0	89.0	36	132	12	5.1	20.0	
Total Extractable Hydrocarbons (SGT)	14	0.30	15	0.0	95.0	60	132	13	4.6	20.0	
Surr: o-Terphenyl (SGT)	0.21	0.0020	0.20	0.0	107.0	56	125	0.0			

Associated Samples: B21110057-001A, B21110057-002A, B21110057-003A, B21110057-004A, B21110057-005A, B21110057-006A, B21110057-007A

**Run ID: Run Order:** GCFID-HP5-B\_211103B: 20      **SampType:** Sample Matrix Spike      **Batch ID:** 160878  
**Method:** SW8015C      **Analysis Date:** 11/05/2021 14:04      **Prep Date:** 11/01/2021 17:53  
**Lab ID:** B21110079-001BMS-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)	4.4	0.30	4.8	0.0	92.0	41	113				
Surr: n-Triacontane (SGT)	0.081	0.0020	0.095	0.0	85.0	50	150				

Associated Samples: B21110057-001A, B21110057-002A, B21110057-003A, B21110057-004A, B21110057-005A, B21110057-006A, B21110057-007A

**Run ID: Run Order:** GCFID-HP5-B\_211103B: 21      **SampType:** Sample Matrix Spike Duplicate      **Batch ID:** 160878  
**Method:** SW8015C      **Analysis Date:** 11/05/2021 15:29      **Prep Date:** 11/01/2021 17:53  
**Lab ID:** B21110079-001BMSD-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)	4.1	0.30	4.7	0.0	88.0	41	113	4.4	5.7	20.0	
Surr: n-Triacontane (SGT)	0.074	0.0020	0.094	0.0	78.0	50	150	0.0			

Associated Samples: B21110057-001A, B21110057-002A, B21110057-003A, B21110057-004A, B21110057-005A, B21110057-006A, B21110057-007A



### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21110057  
**Project:** CV\_18F0126/60571032.02.20.01

**Report Date:** 12/03/2021

**Run ID: Run Order:** GCFID-HP5-B\_211111A: 6      **SampType:** Method Blank      **Batch ID:** 161122  
**Method:** SW8015C      **Analysis Date:** 11/11/2021 09:48      **Prep Date:** 11/08/2021 15:08  
**Lab ID:** MB-161122      **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		96.0	56	125				
Surr: n-Triacontane	0.087	0.0020	0.10		87.0	50	150				

Associated Samples: **B21110057-002A**

**Run ID: Run Order:** GCFID-HP5-B\_211111B: 6      **SampType:** Method Blank      **Batch ID:** 161122  
**Method:** SW8015C      **Analysis Date:** 11/12/2021 09:12      **Prep Date:** 11/08/2021 15:08  
**Lab ID:** MB-161122      **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)	0.13	0.0020	0.20		67.0	56	125				
Surr: n-Triacontane (SGT)	0.063	0.0020	0.10		63.0	50	150				

Associated Samples: **B21110057-002A**



### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21110057  
**Project:** CV\_18F0126/60571032.02.20.01

**Report Date:** 12/03/2021

**Run ID: Run Order:** GCFID-HP5-B\_211111A: 4      **SampType:** Laboratory Control Sample      **Batch ID:** 161122  
**Method:** SW8015C      **Analysis Date:** 11/11/2021 08:22      **Prep Date:** 11/08/2021 15:08  
**Lab ID:** LCS-161122      **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		89.0	36	132				
Total Extractable Hydrocarbons	14	0.30	15		95.0	60	132				
Surr: o-Terphenyl	0.21	0.0020	0.20		105.0	56	125				

Associated Samples: **B21110057-002A**

**Run ID: Run Order:** GCFID-HP5-B\_211111A: 5      **SampType:** Laboratory Control Sample Duplicate      **Batch ID:** 161122  
**Method:** SW8015C      **Analysis Date:** 11/11/2021 09:05      **Prep Date:** 11/08/2021 15:10  
**Lab ID:** LCSD-161122      **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	13	4.6	20.0	
Total Extractable Hydrocarbons	14	0.30	15		91.0	60	132	14	4.4	20.0	
Surr: o-Terphenyl	0.20	0.0020	0.20		101.0	56	125	0.0			

Associated Samples: **B21110057-002A**

**Run ID: Run Order:** GCFID-HP5-B\_211111A: 19      **SampType:** Laboratory Control Sample      **Batch ID:** 161122  
**Method:** SW8015C      **Analysis Date:** 11/11/2021 21:55      **Prep Date:** 11/08/2021 15:50  
**Lab ID:** LCS-161122-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)	4.8	0.30	5.0		95.0	41	113				
Surr: n-Triacontane	0.090	0.0020	0.10		90.0	50	150				

Associated Samples: **B21110057-002A**



### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21110057  
**Project:** CV\_18F0126/60571032.02.20.01

**Report Date:** 12/03/2021

**Run ID: Run Order:** GCFID-HP5-B\_211111A: 20      **SampType:** Laboratory Control Sample Duplicate      **Batch ID:** 161122  
**Method:** SW8015C      **Analysis Date:** 11/11/2021 23:21      **Prep Date:** 11/08/2021 15:10  
**Lab ID:** LCSD-161122-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)	4.4	0.30	5.0		88.0	41	113	4.8	7.4	20.0	
Surr: n-Triacontane	0.084	0.0020	0.10		84.0	50	150	0.0			

Associated Samples: **B21110057-002A**

**Run ID: Run Order:** GCFID-HP5-B\_211111B: 4      **SampType:** Laboratory Control Sample      **Batch ID:** 161122  
**Method:** SW8015C      **Analysis Date:** 11/12/2021 07:46      **Prep Date:** 11/08/2021 15:08  
**Lab ID:** LCS-161122      **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)	9.8	0.30	15		65.0	36	132				
Total Extractable Hydrocarbons (SGT)	10	0.30	15		70.0	60	132				
Surr: o-Terphenyl (SGT)	0.16	0.0020	0.20		82.0	56	125				

Associated Samples: **B21110057-002A**

**Run ID: Run Order:** GCFID-HP5-B\_211111B: 5      **SampType:** Laboratory Control Sample Duplicate      **Batch ID:** 161122  
**Method:** SW8015C      **Analysis Date:** 11/12/2021 08:29      **Prep Date:** 11/08/2021 15:10  
**Lab ID:** LCSD-161122      **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)	9.9	0.30	15		66.0	36	132	9.8	0.4	20.0	
Total Extractable Hydrocarbons (SGT)	11	0.30	15		70.0	60	132	10	0.2	20.0	
Surr: o-Terphenyl (SGT)	0.17	0.0020	0.20		83.0	56	125	0.0			

Associated Samples: **B21110057-002A**



### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21110057  
**Project:** CV\_18F0126/60571032.02.20.01

**Report Date:** 12/03/2021

**Run ID: Run Order:** GCFID-HP5-B\_211111B: 16      **SampType:** Laboratory Control Sample      **Batch ID:** 161122  
**Method:** SW8015C      **Analysis Date:** 11/12/2021 19:14      **Prep Date:** 11/08/2021 15:50  
**Lab ID:** LCS-161122-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)	4.2	0.30	5.0		83.0	41	113				
Surr: n-Triacontane (SGT)	0.076	0.0020	0.10		76.0	50	150				

Associated Samples: **B21110057-002A**

**Run ID: Run Order:** GCFID-HP5-B\_211111B: 17      **SampType:** Laboratory Control Sample Duplicate      **Batch ID:** 161122  
**Method:** SW8015C      **Analysis Date:** 11/12/2021 20:40      **Prep Date:** 11/08/2021 15:10  
**Lab ID:** LCSD-161122-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)	3.9	0.30	5.0		78.0	41	113	4.2	7.3	20.0	
Surr: n-Triacontane (SGT)	0.068	0.0020	0.10		68.0	50	150	0.0			

Associated Samples: **B21110057-002A**

**Run ID: Run Order:** GCFID-HP5-B\_211111A: 18      **SampType:** Sample Matrix Spike      **Batch ID:** 161122  
**Method:** SW8015C      **Analysis Date:** 11/11/2021 20:29      **Prep Date:** 11/08/2021 15:10  
**Lab ID:** B21110712-001AMS      **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	0.47	84.0	36	132				
Total Extractable Hydrocarbons	14	0.30	15	0.90	90.0	60	132				
Surr: o-Terphenyl	0.19	0.0020	0.20	0.0	97.0	56	125				

Associated Samples: **B21110057-002A**





### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21110057  
**Project:** CV\_18F0126/60571032.02.20.01

**Report Date:** 12/03/2021

**Run ID: Run Order:** GCFID-HP5-B\_211111A: 21      **SampType:** Sample Matrix Spike      **Batch ID:** 161122  
**Method:** SW8015C      **Analysis Date:** 11/12/2021 00:46      **Prep Date:** 11/08/2021 15:10  
**Lab ID:** B21110712-002AMS-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	4.7	1.0	78.0	41	113				
Surr: n-Triacontane	0.083	0.0020	0.095	0.0	88.0	50	150				

Associated Samples: **B21110057-002A**

**Run ID: Run Order:** GCFID-HP5-B\_211111B: 15      **SampType:** Sample Matrix Spike      **Batch ID:** 161122  
**Method:** SW8015C      **Analysis Date:** 11/12/2021 17:48      **Prep Date:** 11/08/2021 15:10  
**Lab ID:** B21110712-001AMS      **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	0.078	82.0	36	132				
Total Extractable Hydrocarbons (SGT)	13	0.30	15	0.087	87.0	60	132				
Surr: o-Terphenyl (SGT)	0.19	0.0020	0.20	0.0	96.0	56	125				

Associated Samples: **B21110057-002A**

**Run ID: Run Order:** GCFID-HP5-B\_211111B: 18      **SampType:** Sample Matrix Spike      **Batch ID:** 161122  
**Method:** SW8015C      **Analysis Date:** 11/12/2021 22:06      **Prep Date:** 11/08/2021 15:10  
**Lab ID:** B21110712-002AMS-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)	3.8	0.30	4.7	0.0	81.0	41	113				
Surr: n-Triacontane (SGT)	0.068	0.0020	0.095	0.0	72.0	50	150				

Associated Samples: **B21110057-002A**



### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21110057  
**Project:** CV\_18F0126/60571032.02.20.01

**Report Date:** 12/03/2021

**Run ID: Run Order:** GCFID-HP5-B\_211103A: 2      **SampType:** Continuing Calibration Verification Standard      **Batch ID:** R369766  
**Method:** SW8015C      **Analysis Date:** 11/03/2021 11:59      **Prep Date:**  
**Lab ID:** CCV\_1103HP505r-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	0.20	0.0020	0.20		99.0	80	120				

Associated Samples: B21110057-001A, B21110057-002A, B21110057-003A, B21110057-004A, B21110057-005A, B21110057-006A, B21110057-007A

**Run ID: Run Order:** GCFID-HP5-B\_211103A: 3      **SampType:** Continuing Calibration Verification Standard      **Batch ID:** R369766  
**Method:** SW8015C      **Analysis Date:** 11/03/2021 13:28      **Prep Date:**  
**Lab ID:** CCV\_1103HP506r      **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)	14	0.30	15		91.0	80	120				
Total Extractable Hydrocarbons	14	0.30	15		95.0	80	120				
Surr: o-Terphenyl	0.24	0.0020	0.20		118.0	80	120				

Associated Samples: B21110057-001A, B21110057-002A, B21110057-003A, B21110057-004A, B21110057-005A, B21110057-006A, B21110057-007A

**Run ID: Run Order:** GCFID-HP5-B\_211103A: 14      **SampType:** Continuing Calibration Verification Standard      **Batch ID:** R369766  
**Method:** SW8015C      **Analysis Date:** 11/03/2021 23:33      **Prep Date:**  
**Lab ID:** CCV\_1103HP520r-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		97.0	80	120				
Surr: n-Triacontane	0.20	0.0020	0.20		98.0	80	120				

Associated Samples: B21110057-001A, B21110057-002A, B21110057-003A, B21110057-004A, B21110057-005A, B21110057-006A, B21110057-007A



### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21110057  
**Project:** CV\_18F0126/60571032.02.20.01

**Report Date:** 12/03/2021

**Run ID: Run Order:** GCFID-HP5-B\_211103A: 15      **SampType:** Continuing Calibration Verification Standard      **Batch ID:** R369766  
**Method:** SW8015C      **Analysis Date:** 11/04/2021 00:16      **Prep Date:**  
**Lab ID:** CCV\_1103HP521r      **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)	14	0.30	15		94.0	80	120				
Total Extractable Hydrocarbons	15	0.30	15		98.0	80	120				
Surr: o-Terphenyl	0.19	0.0020	0.20		97.0	80	120				

Associated Samples: B21110057-001A, B21110057-002A, B21110057-003A, B21110057-004A, B21110057-005A, B21110057-006A, B21110057-007A

**Run ID: Run Order:** GCFID-HP5-B\_211103B: 2      **SampType:** Continuing Calibration Verification Standard      **Batch ID:** R369846  
**Method:** SW8015C      **Analysis Date:** 11/04/2021 20:21      **Prep Date:**  
**Lab ID:** CCV\_1103HP549r-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	0.19	0.0020	0.20		97.0	80	120				

Associated Samples: B21110057-001A, B21110057-002A, B21110057-003A, B21110057-004A

**Run ID: Run Order:** GCFID-HP5-B\_211103B: 3      **SampType:** Continuing Calibration Verification Standard      **Batch ID:** R369846  
**Method:** SW8015C      **Analysis Date:** 11/04/2021 21:04      **Prep Date:**  
**Lab ID:** CCV\_1103HP550r      **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)	14	0.30	15		93.0	80	120				
Total Extractable Hydrocarbons	14	0.30	15		96.0	80	120				
Surr: o-Terphenyl	0.19	0.0020	0.20		95.0	80	120				

Associated Samples: B21110057-001A, B21110057-002A, B21110057-003A, B21110057-004A



### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21110057  
**Project:** CV\_18F0126/60571032.02.20.01

**Report Date:** 12/03/2021

**Run ID: Run Order:** GCFID-HP5-B\_211103B: 13      **SampType:** Continuing Calibration Verification Standard      **Batch ID:** R369846  
**Method:** SW8015C      **Analysis Date:** 11/05/2021 08:21      **Prep Date:**  
**Lab ID:** CCV\_1103HP564r-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	0.20	0.0020	0.20		98.0	80	120				

Associated Samples: **B21110057-001A, B21110057-002A, B21110057-003A, B21110057-004A**

**Run ID: Run Order:** GCFID-HP5-B\_211103B: 14      **SampType:** Continuing Calibration Verification Standard      **Batch ID:** R369846  
**Method:** SW8015C      **Analysis Date:** 11/05/2021 09:03      **Prep Date:**  
**Lab ID:** CCV\_1103HP565r      **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		97.0	80	120				
Total Extractable Hydrocarbons	15	0.30	15		100.0	80	120				
Surr: o-Terphenyl	0.20	0.0020	0.20		98.0	80	120				

Associated Samples: **B21110057-001A, B21110057-002A, B21110057-003A, B21110057-004A**

**Run ID: Run Order:** GCFID-HP5-B\_211111A: 14      **SampType:** Continuing Calibration Verification Standard      **Batch ID:** R370204  
**Method:** SW8015C      **Analysis Date:** 11/11/2021 16:55      **Prep Date:**  
**Lab ID:** CCV\_1111HP519r-W      **Units:** mg/L      **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
TEH(Oil Range)	4.6	0.30	5.0		92.0	80	120				
Surr: n-Triacontane	0.19	0.0020	0.20		96.0	80	120				

Associated Samples: **B21110057-002A**



### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21110057  
**Project:** CV\_18F0126/60571032.02.20.01

**Report Date:** 12/03/2021

**Run ID: Run Order:** GCFID-HP5-B\_211111A: 15      **SampType:** Continuing Calibration Verification Standard      **Batch ID:** R370204  
**Method:** SW8015C      **Analysis Date:** 11/11/2021 17:38      **Prep Date:**  
**Lab ID:** CCV\_1111HP520r      **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)	14	0.30	15		96.0	80	120				
Total Extractable Hydrocarbons	15	0.30	15		99.0	80	120				
Surr: o-Terphenyl	0.20	0.0020	0.20		98.0	80	120				

Associated Samples: **B21110057-002A**

**Run ID: Run Order:** GCFID-HP5-B\_211111A: 23      **SampType:** Continuing Calibration Verification Standard      **Batch ID:** R370204  
**Method:** SW8015C      **Analysis Date:** 11/12/2021 02:55      **Prep Date:**  
**Lab ID:** CCV\_1111HP532r-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	0.20	0.0020	0.20		101.0	80	120				

Associated Samples: **B21110057-002A**

**Run ID: Run Order:** GCFID-HP5-B\_211111A: 24      **SampType:** Continuing Calibration Verification Standard      **Batch ID:** R370204  
**Method:** SW8015C      **Analysis Date:** 11/12/2021 03:38      **Prep Date:**  
**Lab ID:** CCV\_1111HP533r      **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		103.0	80	120				
Surr: o-Terphenyl	0.20	0.0020	0.20		101.0	80	120				

Associated Samples: **B21110057-002A**



### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21110057  
**Project:** CV\_18F0126/60571032.02.20.01

**Report Date:** 12/03/2021

**Run ID: Run Order:** GCFID-HP5-B\_211111B: 11      **SampType:** Continuing Calibration Verification Standard      **Batch ID:** R370291  
**Method:** SW8015C      **Analysis Date:** 11/12/2021 14:14      **Prep Date:**  
**Lab ID:** CCV\_1111HP545r-W      **Units:** mg/L      **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
TEH(Oil Range)	4.5	0.30	5.0		90.0	80	120				
Surr: n-Triacontane	0.19	0.0020	0.20		95.0	80	120				

Associated Samples: **B21110057-002A**

**Run ID: Run Order:** GCFID-HP5-B\_211111B: 12      **SampType:** Continuing Calibration Verification Standard      **Batch ID:** R370291  
**Method:** SW8015C      **Analysis Date:** 11/12/2021 14:57      **Prep Date:**  
**Lab ID:** CCV\_1111HP546r      **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	15	0.30	15		103.0	80	120				
Surr: o-Terphenyl	0.20	0.0020	0.20		101.0	80	120				

Associated Samples: **B21110057-002A**

**Run ID: Run Order:** GCFID-HP5-B\_211111B: 20      **SampType:** Continuing Calibration Verification Standard      **Batch ID:** R370291  
**Method:** SW8015C      **Analysis Date:** 11/13/2021 00:16      **Prep Date:**  
**Lab ID:** CCV\_1111HP559r-W      **Units:** mg/L      **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
TEH(Oil Range)	4.7	0.30	5.0		93.0	80	120				
Surr: n-Triacontane	0.19	0.0020	0.20		96.0	80	120				

Associated Samples: **B21110057-002A**



### Analytical QC Summary Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21110057  
**Project:** CV\_18F0126/60571032.02.20.01

**Report Date:** 12/03/2021

**Run ID: Run Order:** GCFID-HP5-B\_211111B: 21      **SampType:** Continuing Calibration Verification Standard      **Batch ID:** R370291  
**Method:** SW8015C      **Analysis Date:** 11/13/2021 00:59      **Prep Date:**  
**Lab ID:** CCV\_1111HP560r      **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	0.20	0.0020	0.20		102.0	80	120				

Associated Samples: **B21110057-002A**



## Analytical QC Exceptions Report

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu  
**Workorder:** B21110057  
**Project:** CV\_18F0126/60571032.02.20.01

**Report Date:** 12/03/2021

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





## Preparation and Analysis Dates Report

**Work Order:** B21110057

**Client:** AECOM - Honolulu

**Project Name:** CV\_18F0126/60571032.02.20.01

**Report Date:** 12/03/2021

Lab ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Method	Prep Date	Prep Batch	Analysis Method	Analysis Date
001A	ERH1845 (RHMW01R)	10/27/2021 13:50	Ground Water	Diesel Range Organics		SW3520C	11/01/2021 15:47	160878	SW8015C	11/03/2021 21:24
						SW3520C	11/01/2021 15:47	160878	SW8015C	11/05/2021 01:22
002A	ERH1848 (RHMW02)	10/27/2021 14:45	Ground Water	Diesel Range Organics		SW3520C	11/01/2021 15:47	160878	SW8015C	11/03/2021 20:41
						SW3520C	11/01/2021 15:47	160878	SW8015C	11/05/2021 02:05
						SW3520C	11/08/2021 15:49	161122	SW8015C	11/11/2021 19:04
						SW3520C	11/08/2021 15:49	161122	SW8015C	11/12/2021 16:22
003A	ERH1851 (RHMW03)	10/27/2021 15:35	Ground Water	Diesel Range Organics		SW3520C	11/01/2021 15:47	160878	SW8015C	11/03/2021 19:58
						SW3520C	11/01/2021 15:47	160878	SW8015C	11/05/2021 00:39
004A	ERH1854 (RHMW05)	10/27/2021 12:50	Ground Water	Diesel Range Organics		SW3520C	11/01/2021 15:47	160878	SW8015C	11/03/2021 19:14
						SW3520C	11/01/2021 15:47	160878	SW8015C	11/04/2021 23:56
005A	ERH1857 (RHMW2254-01)	10/26/2021 13:05	Ground Water	Diesel Range Organics		SW3520C	11/01/2021 15:47	160878	SW8015C	11/03/2021 17:48
006A	ERH1860 (RHSF)	10/26/2021 12:50	Drinking Water	Diesel Range Organics		SW3520C	11/01/2021 15:47	160878	SW8015C	11/03/2021 18:31
007A	ERH1862 (RHSF)	10/26/2021 12:50	Drinking Water	Diesel Range Organics		SW3520C	11/01/2021 15:47	160878	SW8015C	11/03/2021 16:21



## Chemical Abstracts Service (CAS) Registry Numbers

Prepared by Billings, MT Branch

**Client:** AECOM - Honolulu

**Workorder:** B21110057

**Project:** CV\_18F0126/60571032.02.20.01

**Report Date:** 12/03/2021

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**Analyses**

**CAS No**

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**PETROLEUM HYDROCARBONS-SEMI-VOLATILE**

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

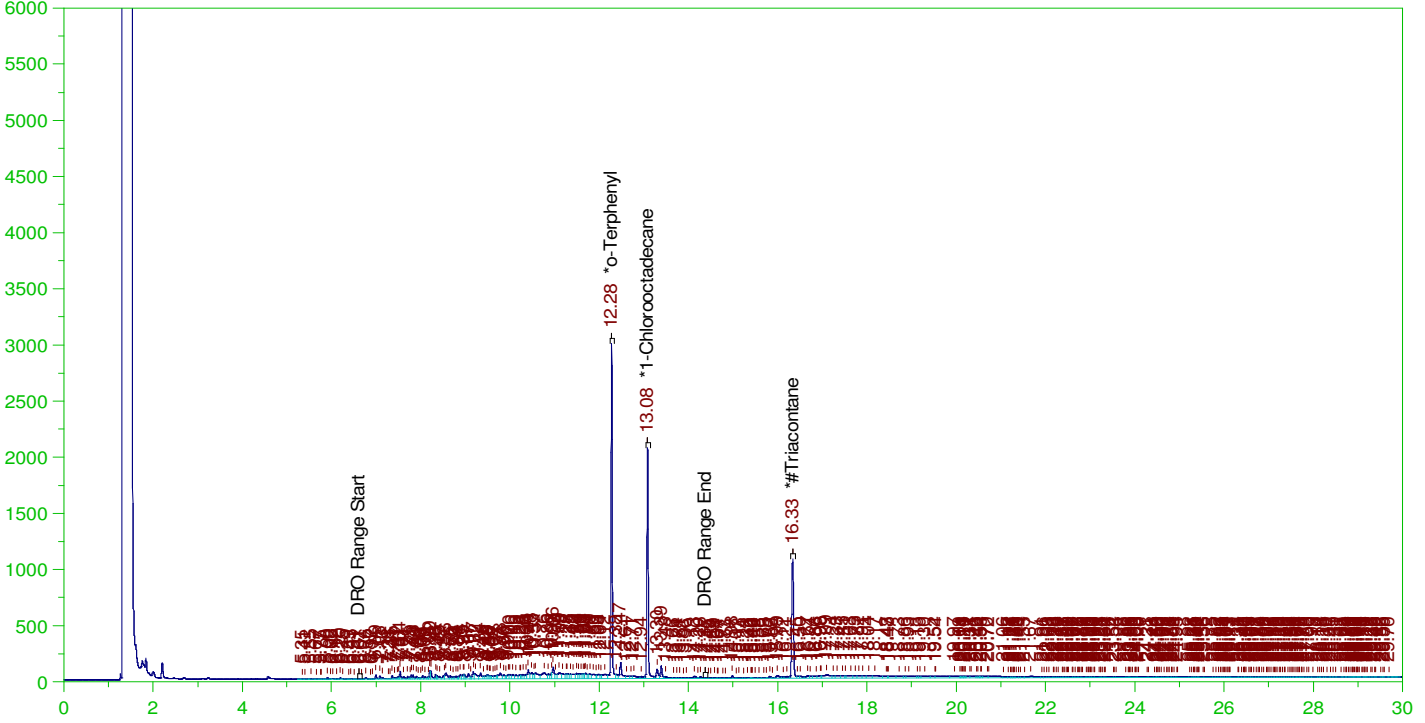
Total Extractable Hydrocarbons (SGT)

ERH1845 (RHMW01R)

G:\org\HP5\DAT\HP5110321\_b\1103HP5.0017.RAW

Batch ID: 160878

B21110057-001A ; 1103HP5 , \$HC-8015-DRO-W,



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21110057-001A ; 1103HP5 , \$HC-8015-DRO-W,  
Raw File: G:\org\HP5\DAT\HP5110321\_b\1103HP5.0017.RAW  
Date & Time Acquired: 11/3/2021 9:24:23 PM  
Method File: G:\Org\HP5\Methods\D3\_8015-110317-C24T-IA-L%.met  
Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IA-24-Tri.CAL  
Sample Weight: 980 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.59 to 14.43

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.276	.204	.167	81.98	-
*1-Chlorooctadecane	13.079	.204	.129	63.13	-
*#Triacontane	16.331	.204	.099	48.64	-

DRO Area: 1.244405E+07 DRO Amount: 0.4049989

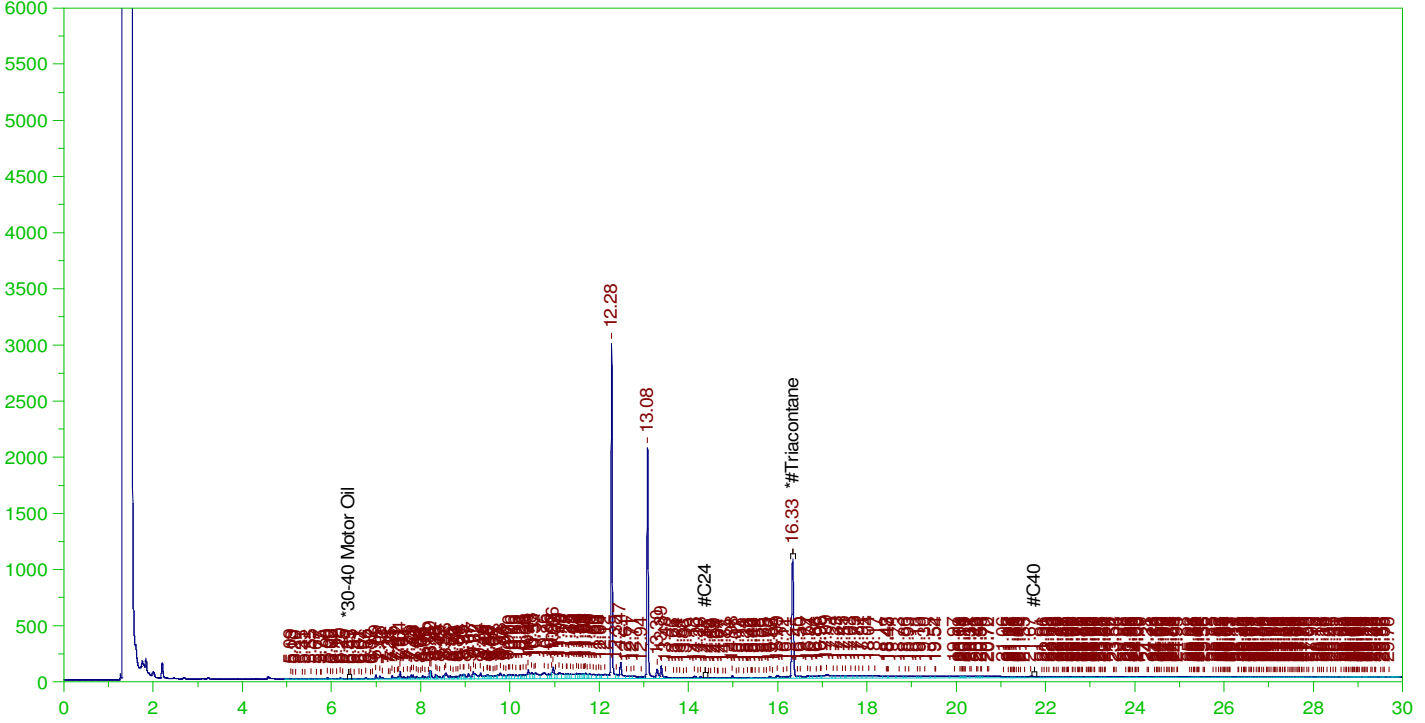
TEH Area: 2.160833E+07 TEH Amount: 0.703256

ERH1845 (RHMW01R)

Batch ID: 160878

G:\org\HP5\DAT\HP5110321\_b\1103HP5.0017.RAW

B21110057-001A ; 1103HP5 , \$HC-8015-DRO-W,



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21110057-001A ; 1103HP5 , \$HC-8015-DRO-W,  
Raw File: G:\org\HP5\DAT\HP5110321\_b\1103HP5.0017.RAW  
Date & Time Acquired: 11/3/2021 9:24:23 PM  
Method File: G:\Org\HP5\Methods\D3\_OROS-110317-AC-L%.MET  
Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AC-SAMP.CAL  
Sample Weight: 980 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41  
Rt range for Residual Range Organics: 14.33 to 21.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.331	.51	.099	19.46	-

RRO Area:6538442

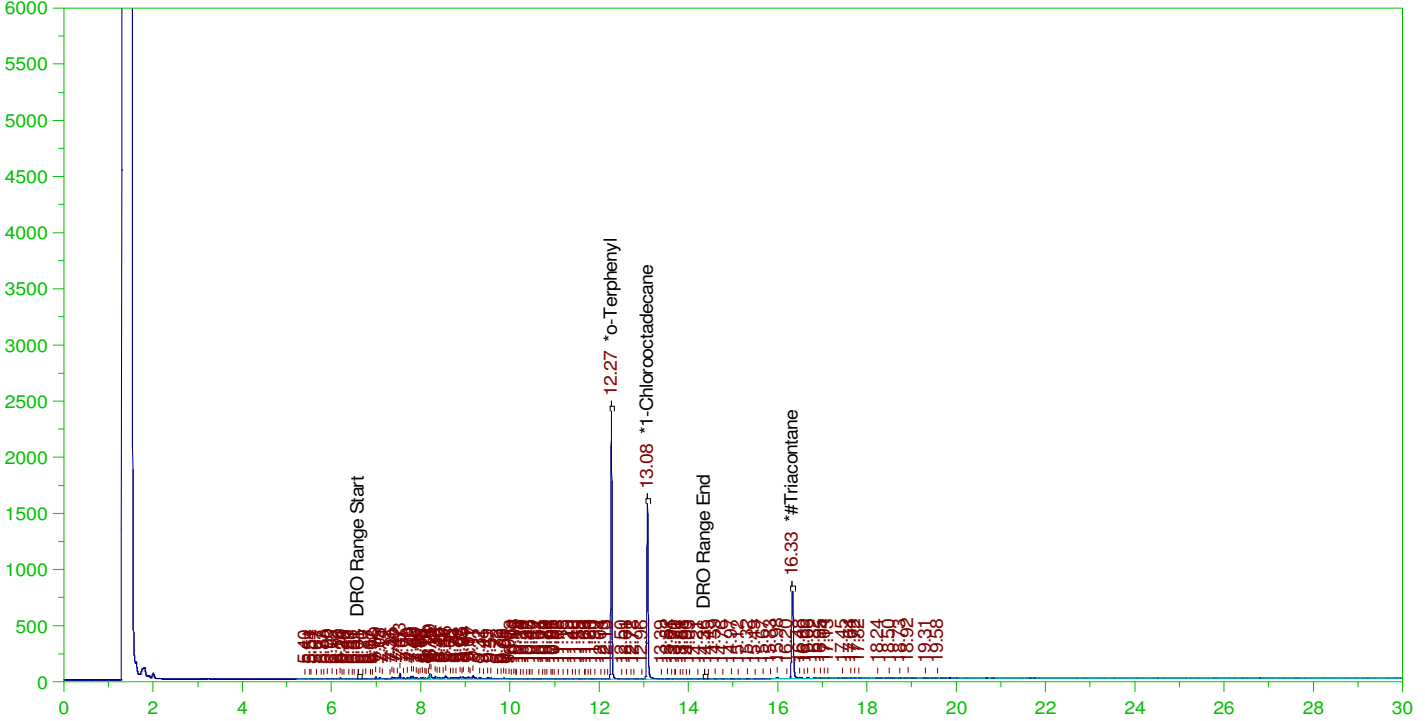
RRO AMOUNT: 0.2337532

ERH1845 (RHMW01R)

Batch ID: 160878

G:\org\HP5\DAT\HP5110321\_b\1103HP5.0056.RAW

B21110057-001A ; 1103HP5 , \$HC-8015-DRO-W, SGT



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21110057-001A ; 1103HP5 , \$HC-8015-DRO-W, SGT  
 Raw File: G:\org\HP5\DAT\HP5110321\_b\1103HP5.0056.RAW  
 Date & Time Acquired: 11/5/2021 1:22:14 AM  
 Method File: G:\Org\HP5\Methods\DR\_8015-C24T-IA-L%.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IA-24-Tri.CAL  
 Sample Weight: 980 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.59 to 14.43

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.272	.204	.129	63.31	-
*1-Chlorooctadecane	13.076	.204	.101	49.35	-
*#Triacontane	16.328	.204	.074	36.19	-

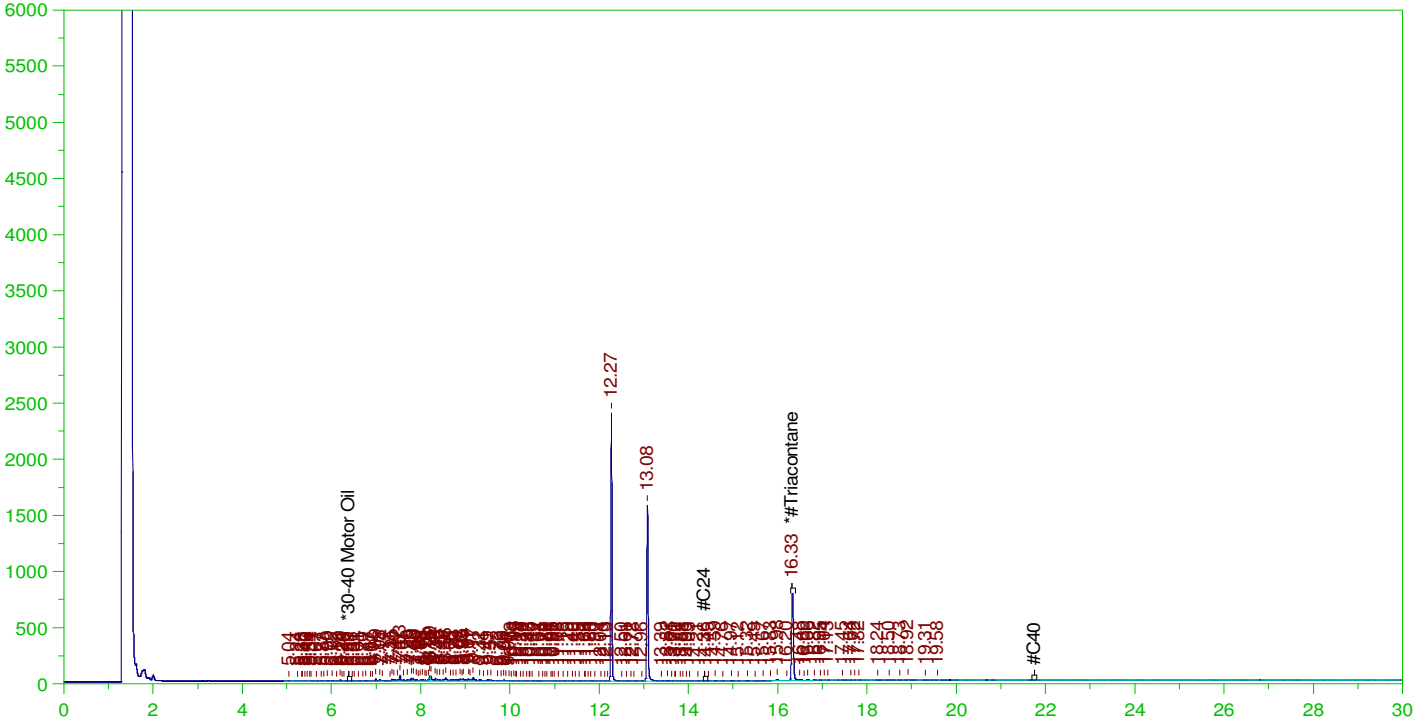
DRO Area: 2405104 DRO Amount: 7.827552E-02  
 TEH Area: 2718371 TEH Amount: 8.847097E-02

ERH1845 (RHMW01R)

Batch ID: 160878

G:\org\HP5\DAT\HP5110321\_b\1103HP5.0056.RAW

B21110057-001A ; 1103HP5 , \$HC-8015-DRO-W, SGT



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21110057-001A ; 1103HP5 , \$HC-8015-DRO-W, SGT  
 Raw File: G:\org\HP5\DAT\HP5110321\_b\1103HP5.0056.RAW  
 Date & Time Acquired: 11/5/2021 1:22:14 AM  
 Method File: G:\Org\HP5\Methods\DR\_OROSb-AC-L%.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AC-SAMP.CAL  
 Sample Weight: 980 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41  
 Rt range for Residual Range Organics: 14.33 to 21.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.328	.51	.074	14.48	-

RRO Area:199145

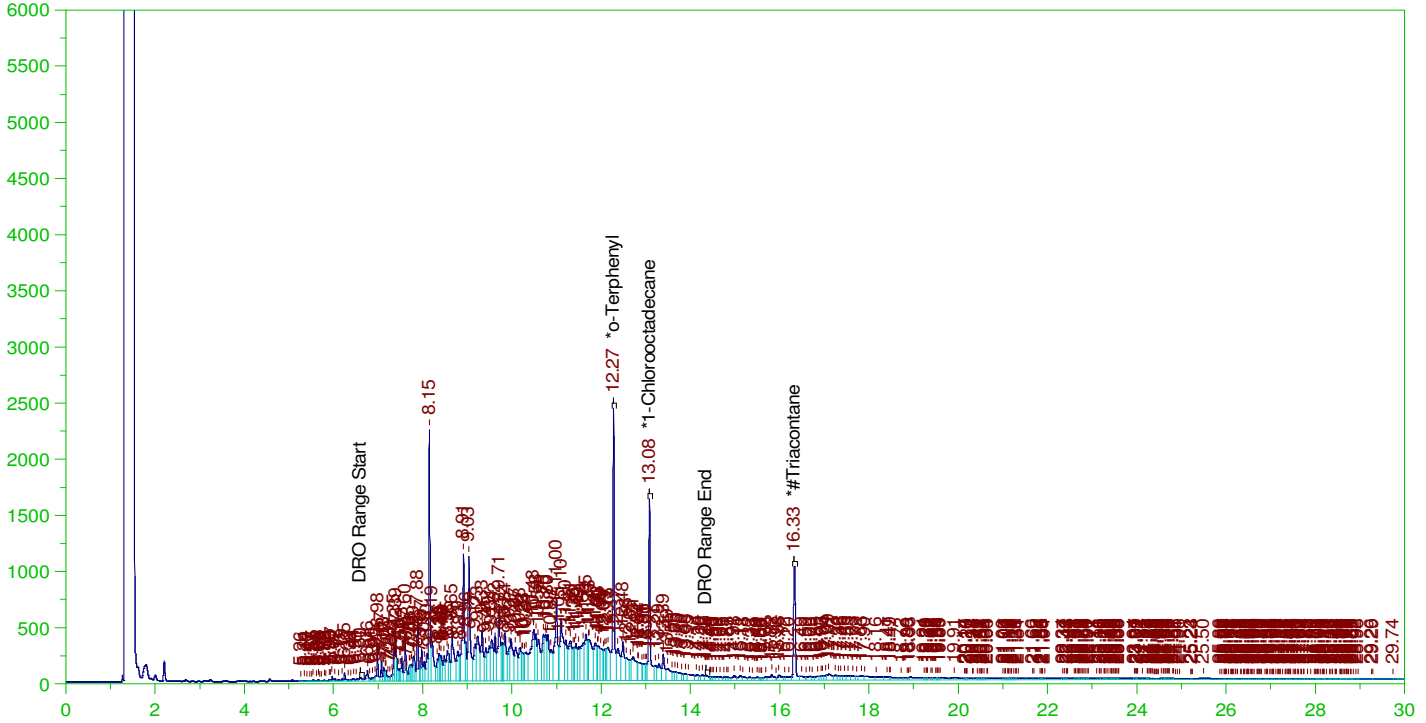
RRO AMOUNT: 7.119553E-03

ERH1848 (RHMW02)

Batch ID: 160878

G:\Org\HP5\DAT\HP5110321\_b\1103HP5.0016.RAW

B21110057-002A ; 1103HP5 , \$HC-8015-DRO-W,



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21110057-002A ; 1103HP5 , \$HC-8015-DRO-W,  
Raw File: G:\Org\HP5\DAT\HP5110321\_b\1103HP5.0016.RAW  
Date & Time Acquired: 11/3/2021 8:41:15 PM  
Method File: G:\Org\HP5\Methods\D3\_8015-C24T-IA-L%.met  
Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IA-24-Tri.CAL  
Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.59 to 14.43

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.275	.196	.163	83.34	-
*1-Chlorooctadecane	13.075	.196	.117	59.83	-
*#Triacontane	16.327	.196	.096	49.05	-

DRO Area: 1.041868E+08 DRO Amount: 3.257849

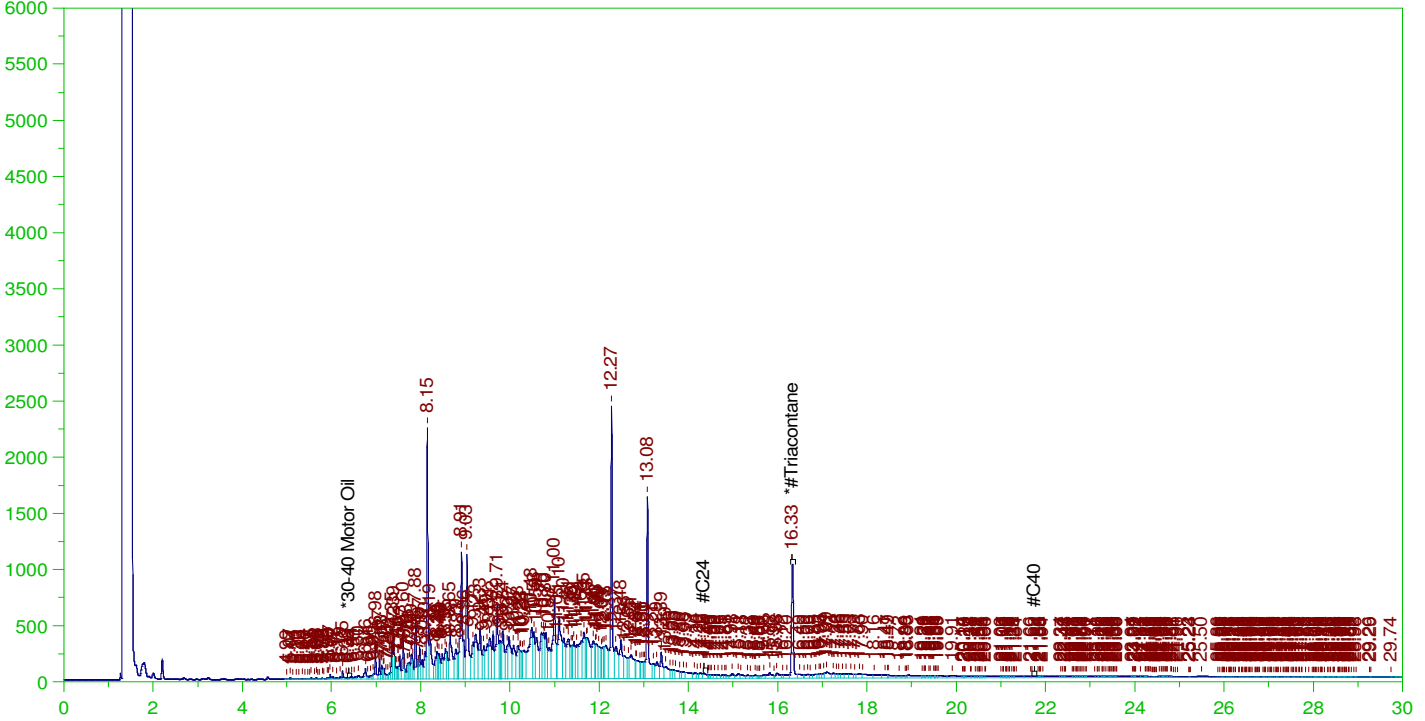
TEH Area: 1.192822E+08 TEH Amount: 3.72987

ERH1848 (RHMW02)

Batch ID: 160878

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B21110057-002A ; 1103HP5 , \$HC-8015-DRO-W,



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21110057-002A ; 1103HP5 , \$HC-8015-DRO-W,  
Raw File: G:\org\HP5\DAT\HP5110321\_b\1103HP5.0016.RAW  
Date & Time Acquired: 11/3/2021 8:41:15 PM  
Method File: G:\Org\HP5\Methods\D3\_OROS-AC-L%.MET  
Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AC-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: 14.33 to 21.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.327	.49	.096	19.63	-

RRO Area: 1.137174E+07 RRO AMOUNT: 0.3906036

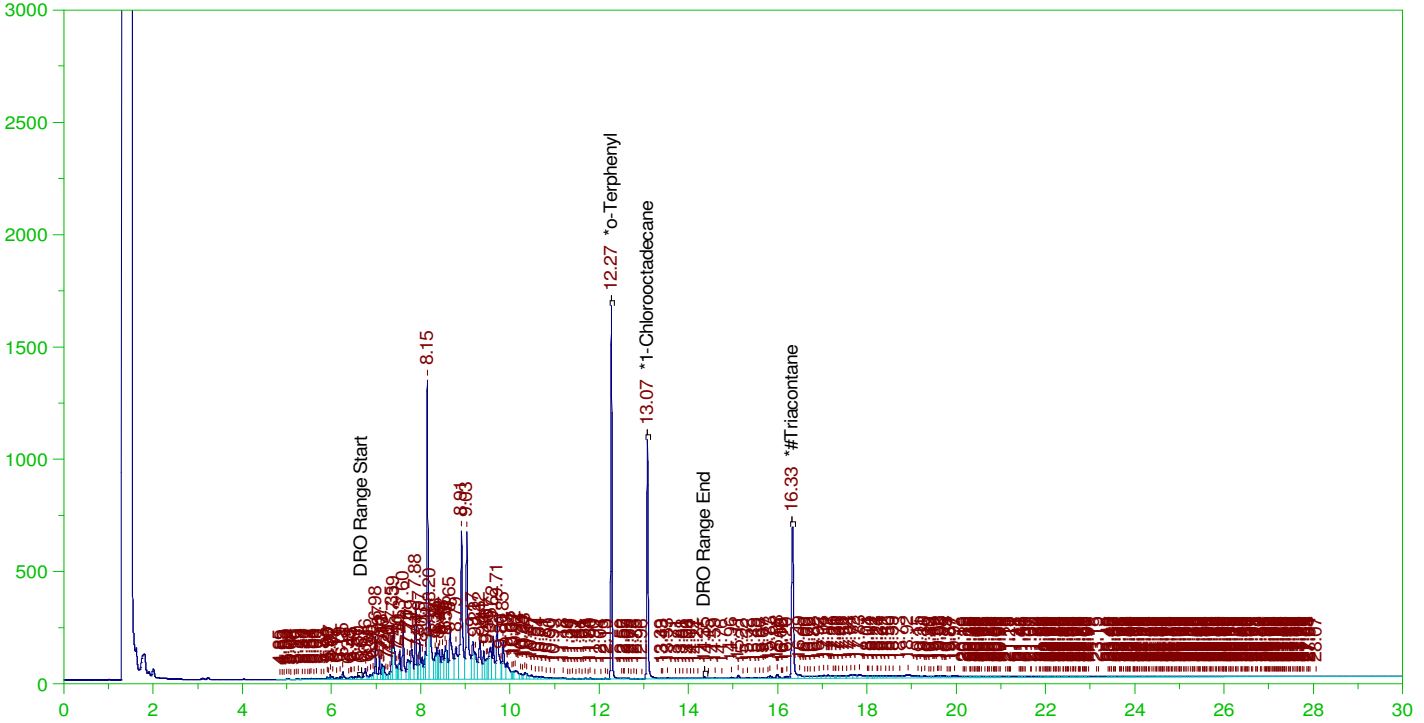


ERH1848 (RHMW02)

Batch ID: 160878

G:\Org\HP5\DAT\HP5110321\_b\1103HP5.0057.RAW

B21110057-002A ; 1103HP5 , \$HC-8015-DRO-W, SGT



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21110057-002A ; 1103HP5 , \$HC-8015-DRO-W, SGT  
 Raw File: G:\Org\HP5\DAT\HP5110321\_b\1103HP5.0057.RAW  
 Date & Time Acquired: 11/5/2021 2:05:12 AM  
 Method File: G:\Org\HP5\Methods\D3\_8015-110357-C24T-IA-L%.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IA-24-Tri.CAL  
 Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.59 to 14.43

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.271	.196	.088	44.91	-
*1-Chlorooctadecane	13.075	.196	.066	33.67	-
*#Triacontane	16.328	.196	.064	32.77	-

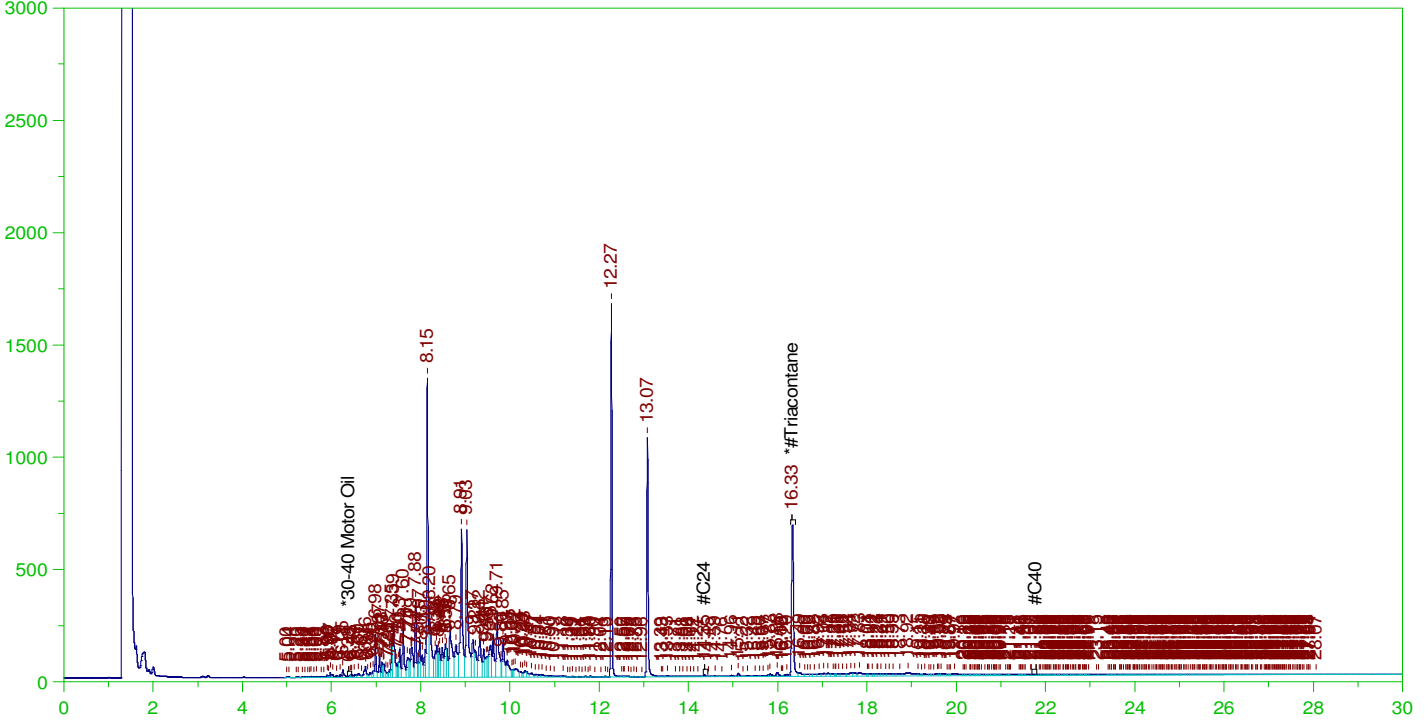
DRO Area: 2.415433E+07 DRO Amount: 0.7552887  
 TEH Area: 2.854957E+07 TEH Amount: 0.8927249

ERH1848 (RHMW02)

Batch ID: 160878

G:\org\HP5\DAT\HP5110321\_b\1103HP5.0057.RAW

B21110057-002A ; 1103HP5 , \$HC-8015-DRO-W, SGT



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21110057-002A ; 1103HP5 , \$HC-8015-DRO-W, SGT  
 Raw File: G:\org\HP5\DAT\HP5110321\_b\1103HP5.0057.RAW  
 Date & Time Acquired: 11/5/2021 2:05:12 AM  
 Method File: G:\Org\HP5\Methods\D3\_OROSb-110357-AC-L%.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AC-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: 14.33 to 21.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.328	.49	.064	13.11	-

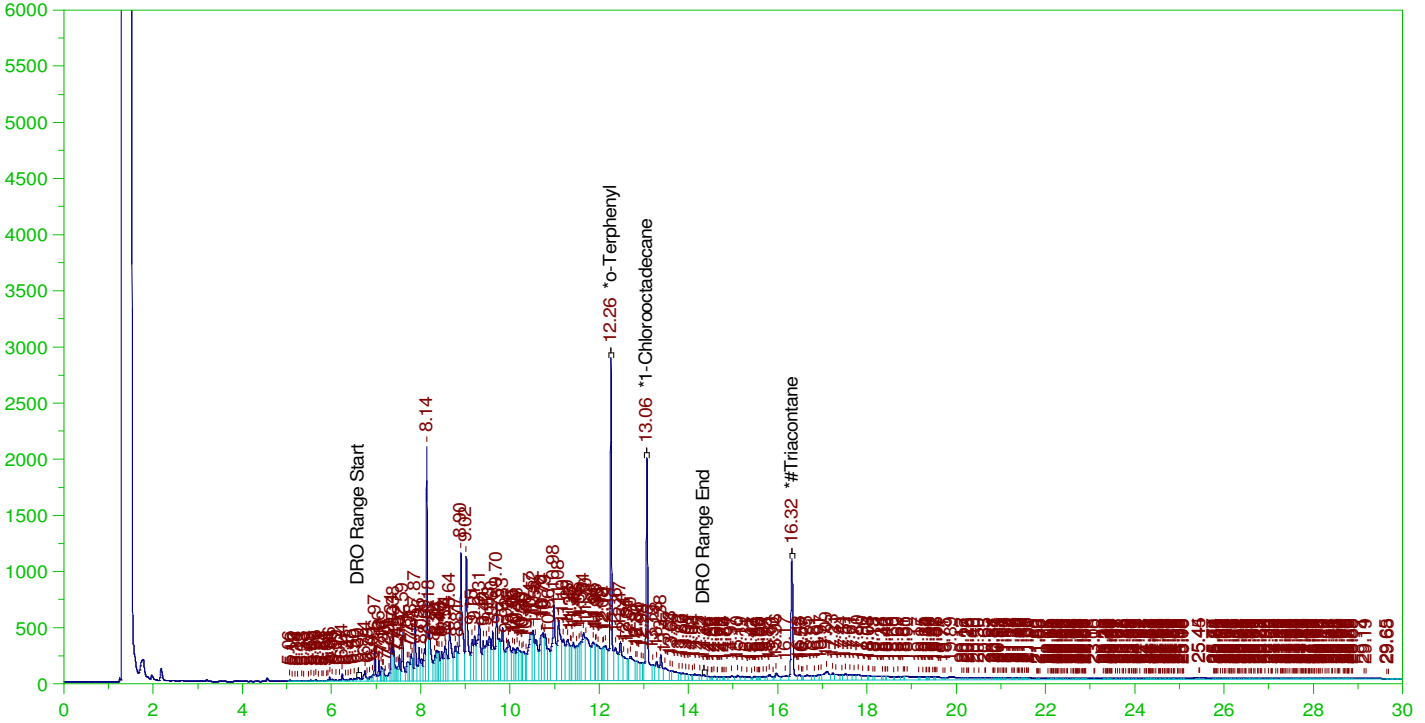
RRO Area:3005375 RRO AMOUNT: 0.1032304

ERH1848 (RHMW02)

G:\Org\HP5\DAT\HP5111121\_b\1111HP5.0021.RAW

Batch ID: 160878

B21110057-002A ; 1111HP5 , \$HC-8015-DRO-W, RX



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21110057-002A ; 1111HP5 , \$HC-8015-DRO-W, RX  
 Raw File: G:\Org\HP5\DAT\HP5111121\_b\1111HP5.0021.RAW  
 Date & Time Acquired: 11/11/2021 7:04:23 PM  
 Method File: G:\Org\HP5\Methods\D3\_8015-C24T-IB-L%.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24-Tri.CAL  
 Sample Weight: 975 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.262	.205	.2	97.56	-
*1-Chlorooctadecane	13.064	.205	.156	76.12	-
*#Triacontane	16.315	.205	.11	53.75	-

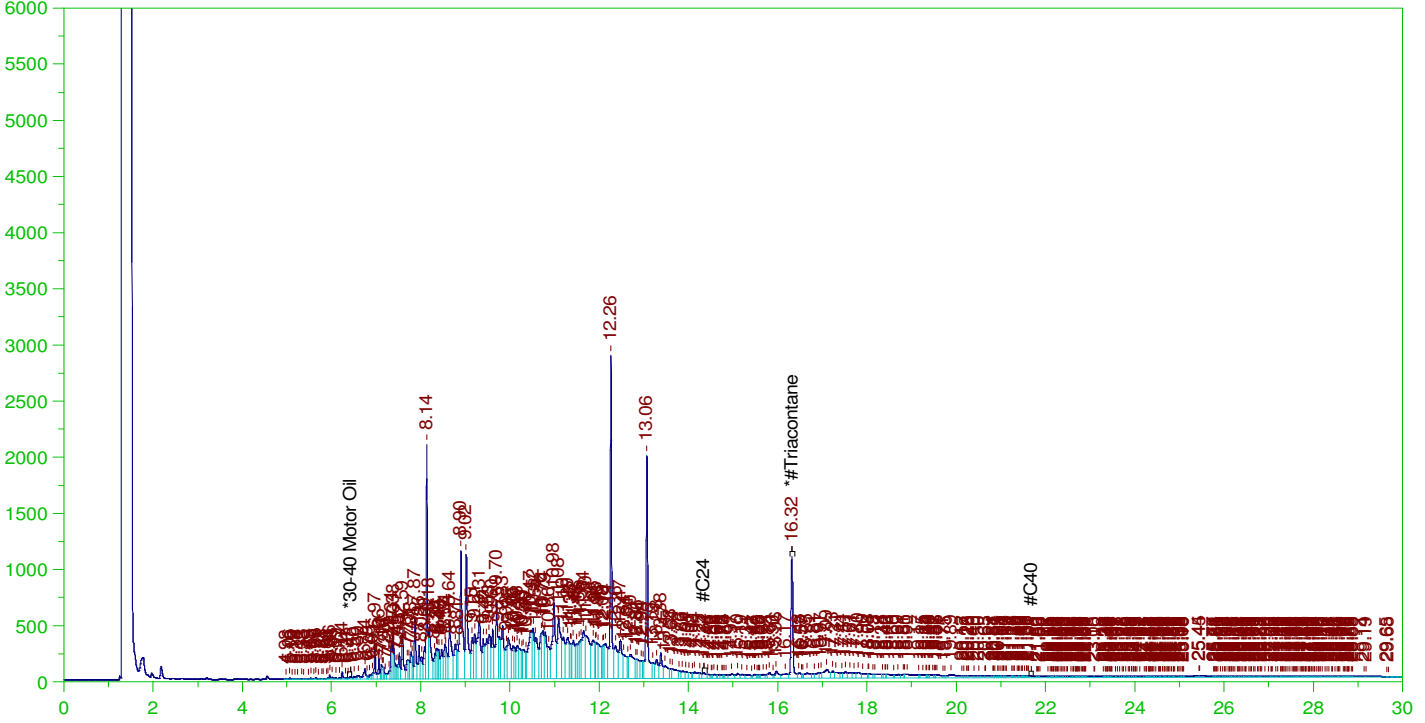
DRO Area: 1.113514E+08 DRO Amount: 3.642582  
 TEH Area: 1.283149E+08 TEH Amount: 4.197502

ERH1848 (RHMW02)

Batch ID: 160878

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0021.RAW

B21110057-002A ; 1111HP5, \$HC-8015-DRO-W, RX



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21110057-002A ; 1111HP5 , \$HC-8015-DRO-W, RX  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0021.RAW  
 Date & Time Acquired: 11/11/2021 7:04:23 PM  
 Method File: G:\Org\HP5\Methods\D3\_OROS-AD-L%.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD-SAMP.CAL  
 Sample Weight: 975 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41  
 Rt range for Residual Range Organics: 14.32 to 21.73

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.315	.513	.11	21.51	-

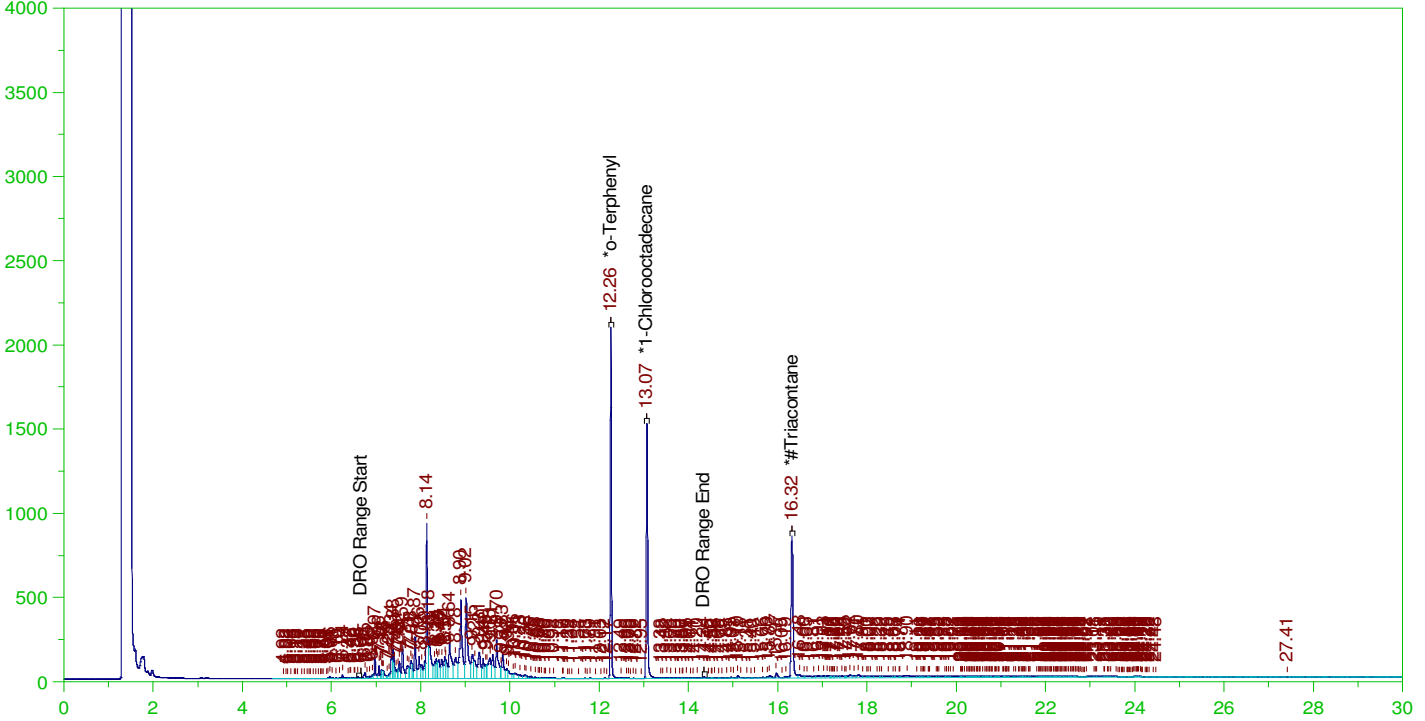
RRO Area: 1.298301E+07 RRO AMOUNT: 0.4665307

ERH1848 (RHMW02)

Batch ID: 160878

G:\Org\HP5\DAT\HP5111121\_b\1111HP5.0048.RAW

B21110057-002A ;1111HP5 , \$HC-8015-DRO-W, RX-SGT



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21110057-002A ;1111HP5 , \$HC-8015-DRO-W, RX-SGT  
 Raw File: G:\Org\HP5\DAT\HP5111121\_b\1111HP5.0048.RAW  
 Date & Time Acquired: 11/12/2021 4:22:15 PM  
 Method File: G:\Org\HP5\Methods\DR\_8015-111148-IB-L%.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IB-24-Tri.CAL  
 Sample Weight: 975 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.57 to 14.42

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.26	.205	.116	56.33	-
*1-Chlorooctadecane	13.065	.205	.1	48.65	-
*#Triacontane	16.317	.205	.085	41.24	-

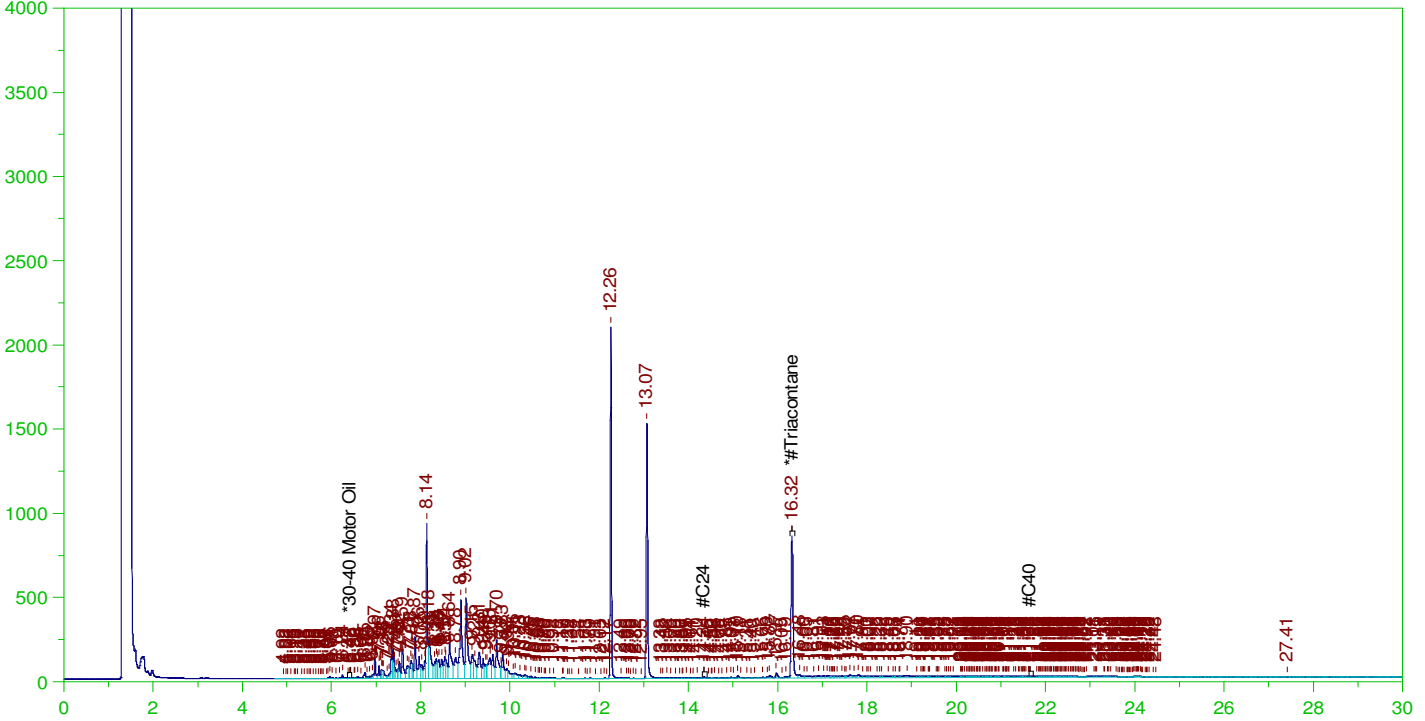
DRO Area: 2.079589E+07 DRO Amount: 0.6802855  
 TEH Area: 2.453008E+07 TEH Amount: 0.8024402

ERH1848 (RHMW02)

Batch ID: 160878

G:\org\HP5\DAT\HP5111121\_b\1111HP5.0048.RAW

B21110057-002A ;1111HP5 , \$HC-8015-DRO-W, RX-SGT



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21110057-002A ;1111HP5 , \$HC-8015-DRO-W, RX-SGT  
 Raw File: G:\org\HP5\DAT\HP5111121\_b\1111HP5.0048.RAW  
 Date & Time Acquired: 11/12/2021 4:22:15 PM  
 Method File: G:\Org\HP5\Methods\DR\_OROS-111148-AD-L%.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AD-SAMP.CAL  
 Sample Weight: 975 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41  
 Rt range for Residual Range Organics: 14.32 to 21.73

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.317	.513	.085	16.5

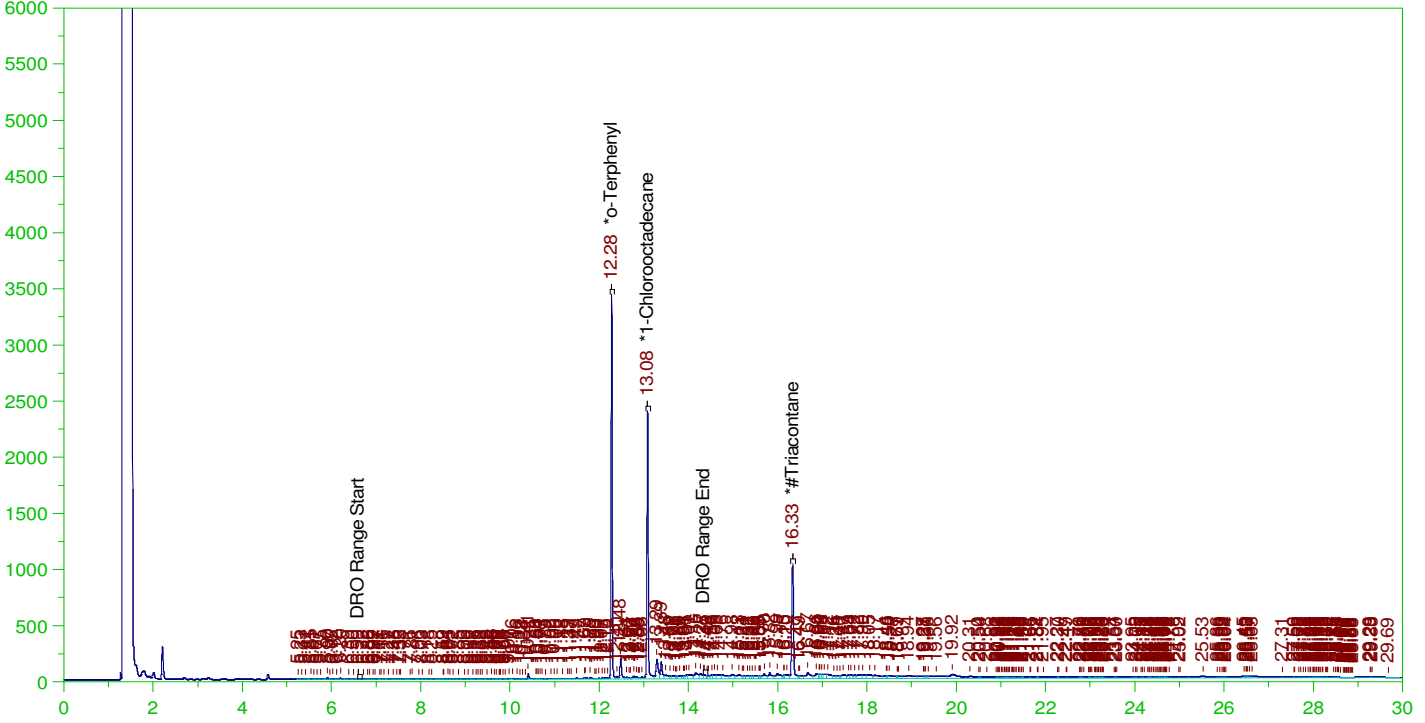
RRO Area:3128920 RRO AMOUNT: 0.1124344

ERH1851 (RHMW03)

Batch ID: 160878

G:\Org\HP5\DAT\HP5110321\_b\1103HP5.0015.RAW

B21110057-003A ; 1103HP5 , \$HC-8015-DRO-W,



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21110057-003A ; 1103HP5 , \$HC-8015-DRO-W,  
Raw File: G:\Org\HP5\DAT\HP5110321\_b\1103HP5.0015.RAW  
Date & Time Acquired: 11/3/2021 7:58:08 PM  
Method File: G:\Org\HP5\Methods\D3\_8015-C24T-IA-L%.met  
Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IA-24-Tri.CAL  
Sample Weight: 990 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19  
Rt range for Diesel Range Organics: 6.59 to 14.43

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.277	.202	.185	91.56	-
*1-Chlorooctadecane	13.079	.202	.147	72.89	-
*#Triacontane	16.33	.202	.098	48.61	-

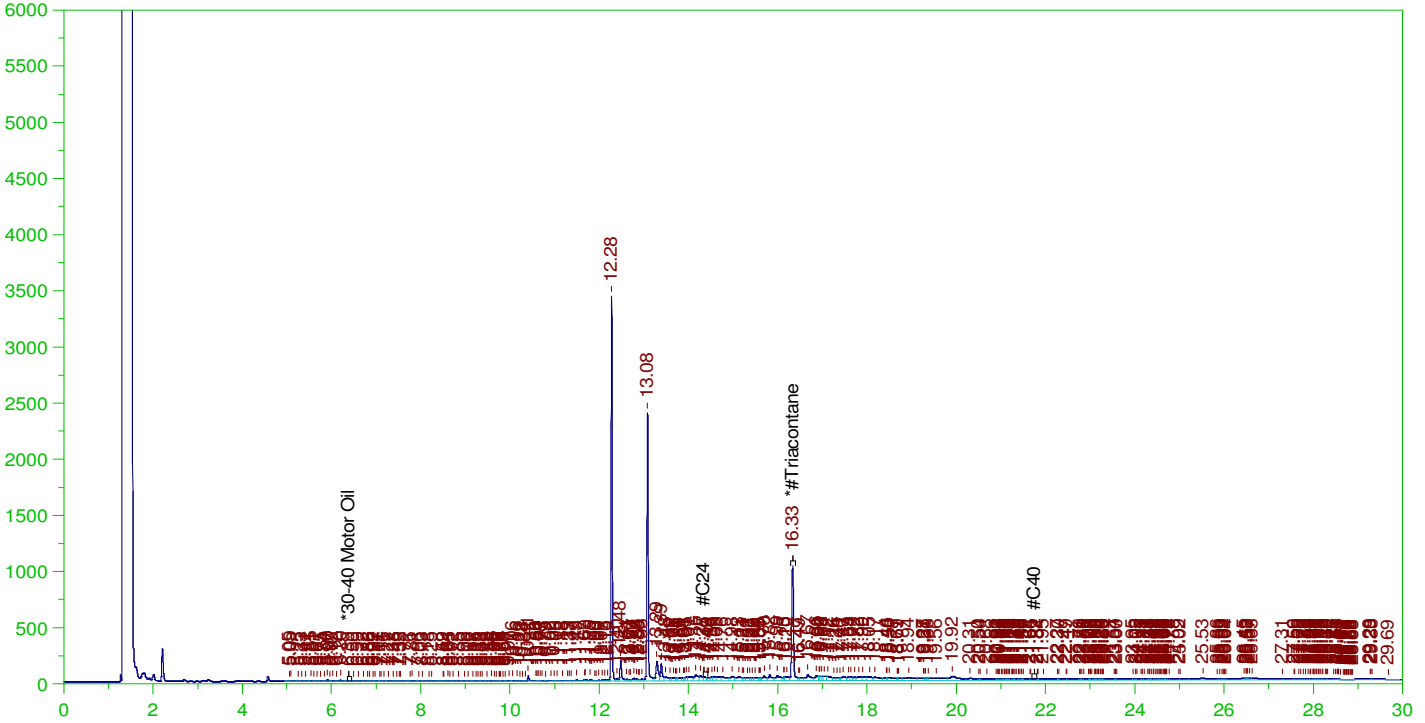
DRO Area: 4853354 DRO Amount: 0.1563598  
TEH Area: 1.813485E+07 TEH Amount: 0.5842478

ERH1851 (RHMW03)

Batch ID: 160878

G:\org\HP5\DAT\HP5110321\_b\1103HP5.0015.RAW

B21110057-003A ;1103HP5 , \$HC-8015-DRO-W,



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21110057-003A ;1103HP5 , \$HC-8015-DRO-W,  
Raw File: G:\org\HP5\DAT\HP5110321\_b\1103HP5.0015.RAW  
Date & Time Acquired: 11/3/2021 7:58:08 PM  
Method File: G:\Org\HP5\Methods\D3\_OROS-AC-L%.MET  
Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AC-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: 14.33 to 21.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.33	.505	.098	19.44

RRO Area:1.034768E+07 RRO AMOUNT: 0.3661989

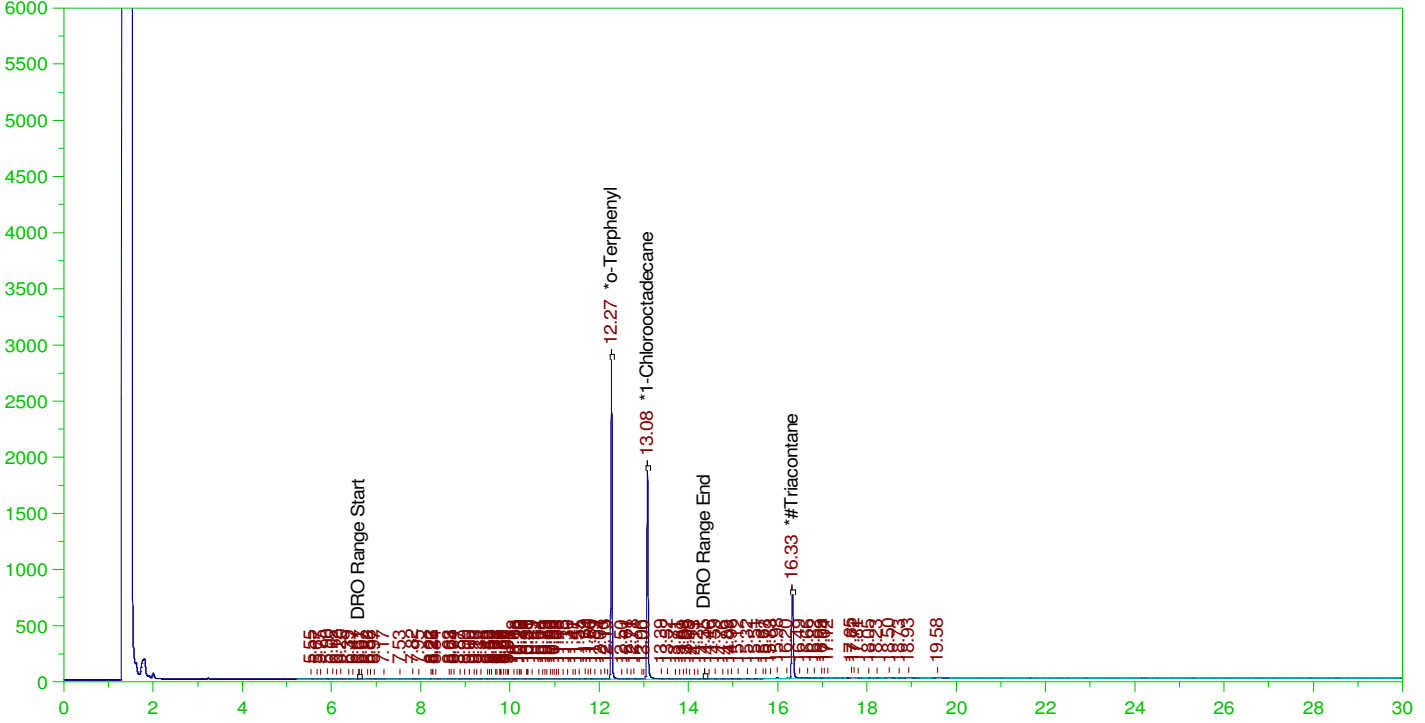


ERH1851 (RHMW03)

Batch ID: 160878

G:\org\HP5\DAT\HP5110321\_b\1103HP5.0055.RAW

B21110057-003A ; 1103HP5 , \$HC-8015-DRO-W, SGT



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21110057-003A ; 1103HP5 , \$HC-8015-DRO-W, SGT  
 Raw File: G:\org\HP5\DAT\HP5110321\_b\1103HP5.0055.RAW  
 Date & Time Acquired: 11/5/2021 12:39:08 AM  
 Method File: G:\Org\HP5\Methods\DR\_8015-C24T-IA-L%.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IA-24-Tri.CAL  
 Sample Weight: 990 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19  
 Rt range for Diesel Range Organics: 6.59 to 14.43

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.273	.202	.154	76.15	-
*1-Chlorooctadecane	13.076	.202	.117	57.94	-
*#Triacontane	16.328	.202	.07	34.45	-

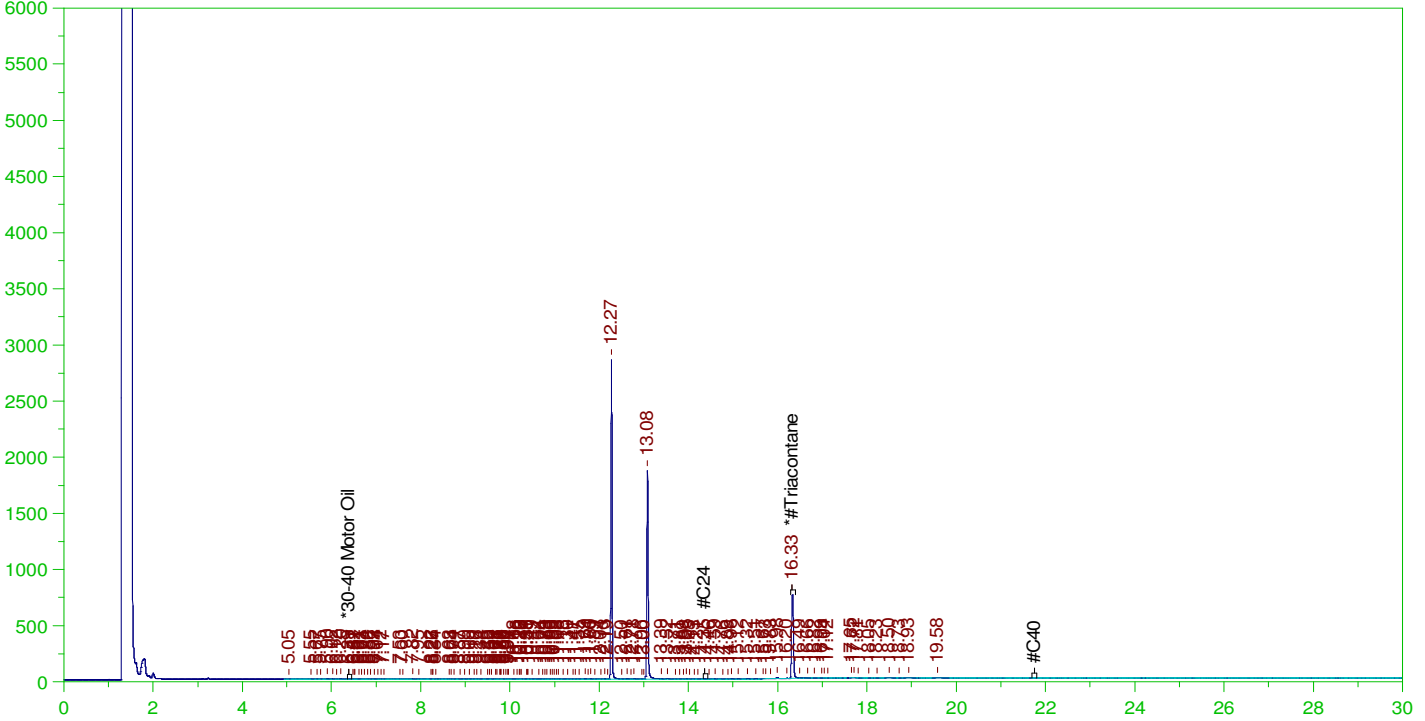
DRO Area: 346511.5 DRO Amount: 1.116351E-02  
 TEH Area: 711102.8 TEH Amount: 2.290949E-02

ERH1851 (RHMW03)

G:\org\HP5\DAT\HP5110321\_b\1103HP5.0055.RAW

Batch ID: 160878

B21110057-003A ; 1103HP5 , \$HC-8015-DRO-W, SGT



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21110057-003A ; 1103HP5 , \$HC-8015-DRO-W, SGT  
 Raw File: G:\org\HP5\DAT\HP5110321\_b\1103HP5.0055.RAW  
 Date & Time Acquired: 11/5/2021 12:39:08 AM  
 Method File: G:\Org\HP5\Methods\DR\_OROSb-AC-L%.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AC-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: 14.33 to 21.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.328	.505	.07	13.77	-

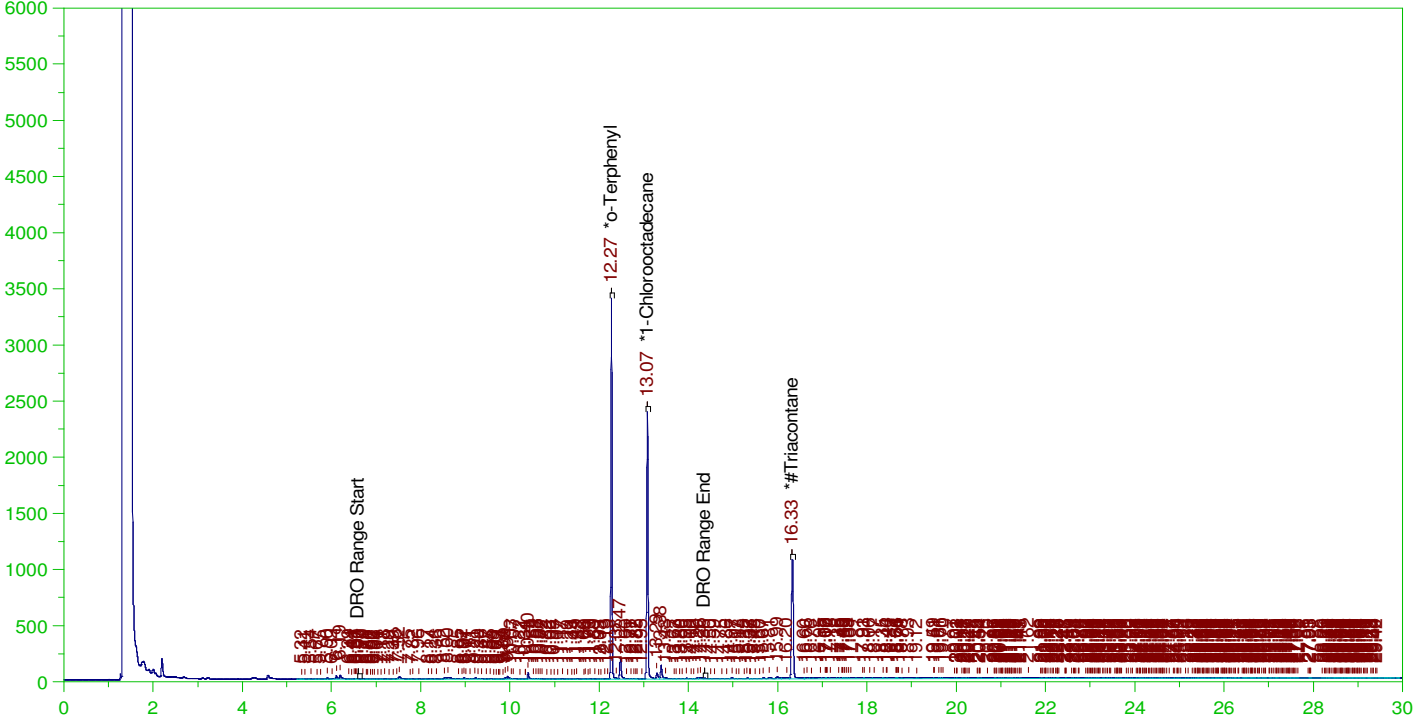
RRO Area: 272478.9 RRO AMOUNT: 9.642886E-03

ERH1854 (RHMW05)

G:\org\HP5\DAT\HP5110321\_b\1103HP5.0014.RAW

Batch ID: 160878

B21110057-004A ; 1103HP5 , \$HC-8015-DRO-W,



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21110057-004A ; 1103HP5 , \$HC-8015-DRO-W,  
Raw File: G:\org\HP5\DAT\HP5110321\_b\1103HP5.0014.RAW  
Date & Time Acquired: 11/3/2021 7:14:53 PM  
Method File: G:\Org\HP5\Methods\D3\_8015-C24T-IA-L%.met  
Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IA-24-Tri.CAL  
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.59 to 14.43

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.273	.194	.174	89.77	-
*1-Chlorooctadecane	13.075	.194	.14	72.16	-
*#Triacontane	16.325	.194	.097	50.13	-

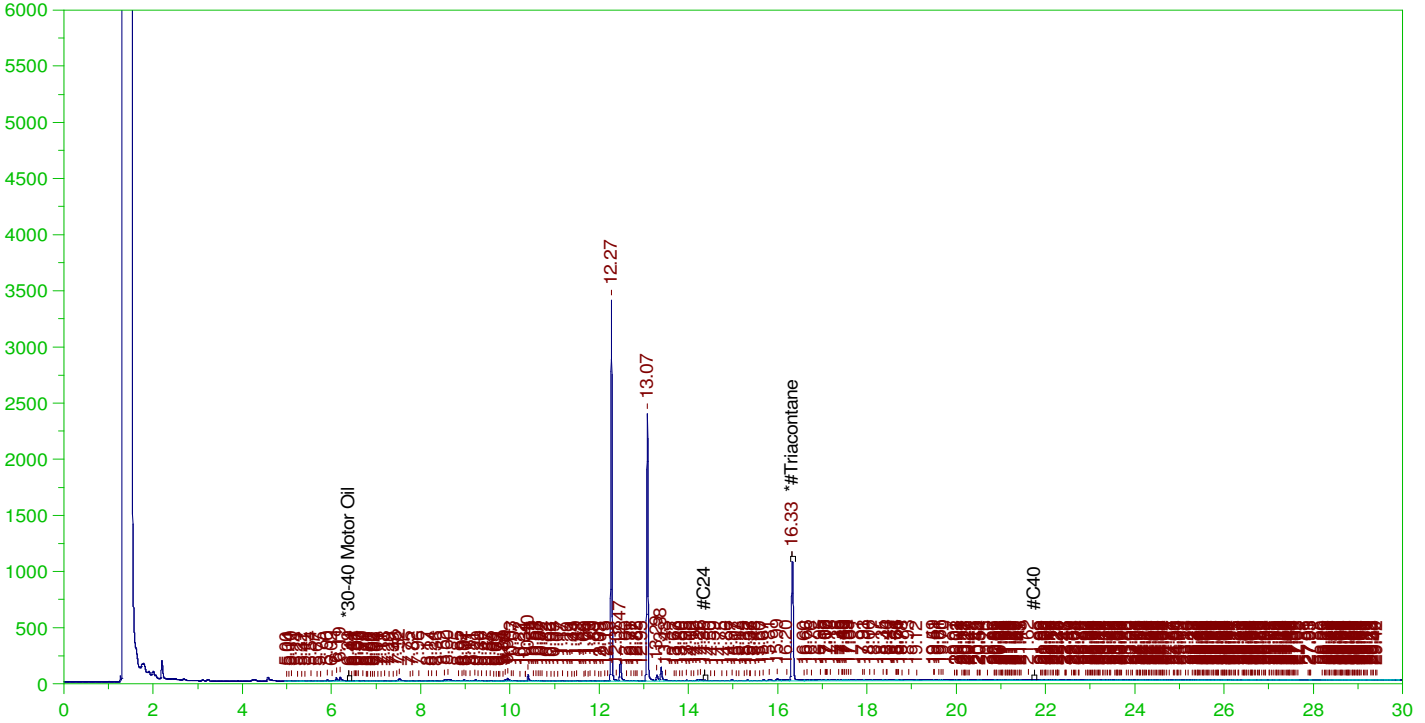
DRO Area: 2718301 DRO Amount: 8.417411E-02  
TEH Area: 8338602 TEH Amount: 0.2582107

ERH1854 (RHMW05)

Batch ID: 160878

G:\org\HP5\DAT\HP5110321\_b\1103HP5.0014.RAW

B21110057-004A ; 1103HP5 , \$HC-8015-DRO-W,



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21110057-004A ; 1103HP5 , \$HC-8015-DRO-W,  
Raw File: G:\org\HP5\DAT\HP5110321\_b\1103HP5.0014.RAW  
Date & Time Acquired: 11/3/2021 7:14:53 PM  
Method File: G:\Org\HP5\Methods\D3\_OROS-AC-L%.MET  
Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AC-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: 14.33 to 21.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.325	.485	.097	20.05

RRO Area:3829353

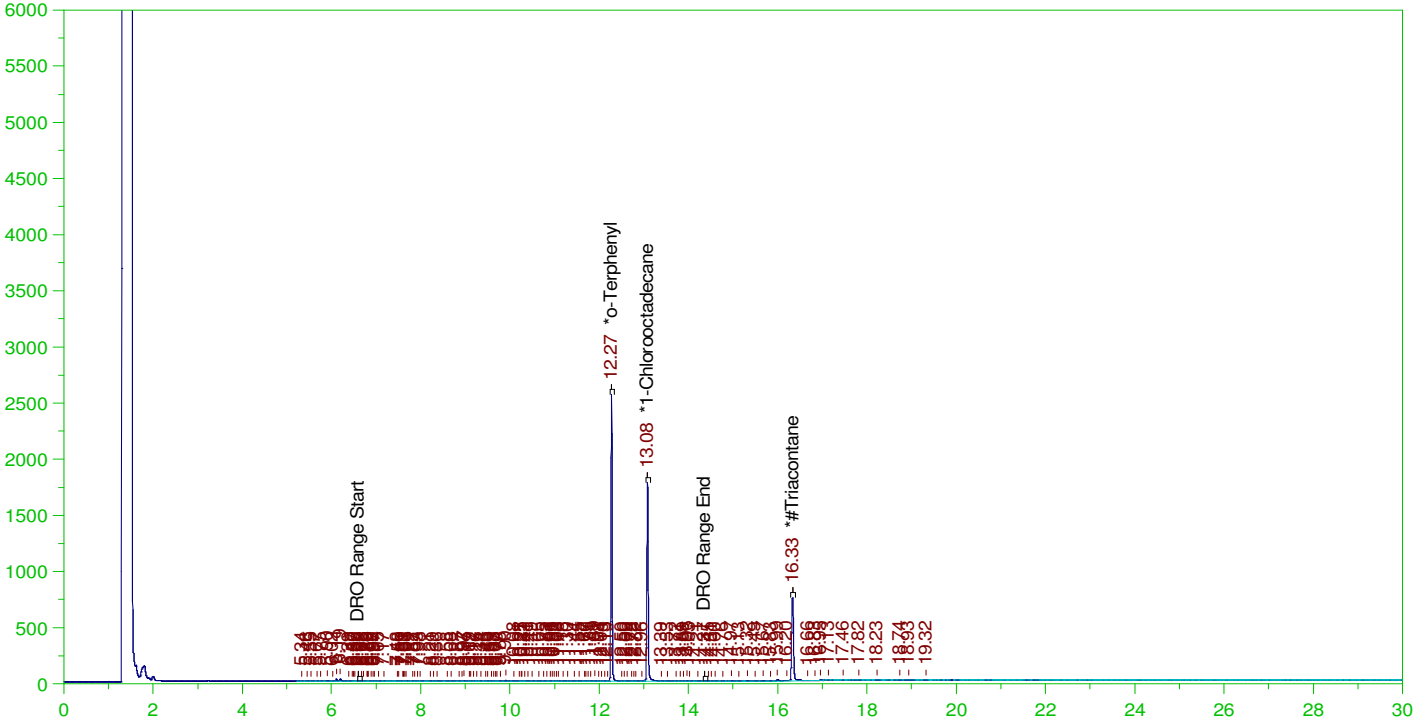
RRO AMOUNT: 0.1302559

ERH1854 (RHMW05)

Batch ID: 160878

G:\Org\HP5\DAT\HP5110321\_b\1103HP5.0054.RAW

B21110057-004A ; 1103HP5 , \$HC-8015-DRO-W, SGT



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21110057-004A ; 1103HP5 , \$HC-8015-DRO-W, SGT  
 Raw File: G:\Org\HP5\DAT\HP5110321\_b\1103HP5.0054.RAW  
 Date & Time Acquired: 11/4/2021 11:56:04 PM  
 Method File: G:\Org\HP5\Methods\DR\_8015-C24T-IA-L%.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IA-24-Tri.CAL  
 Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.59 to 14.43

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.274	.194	.135	69.52	-
*1-Chlorooctadecane	13.078	.194	.108	55.5	-
*#Triacontane	16.329	.194	.067	34.57	-

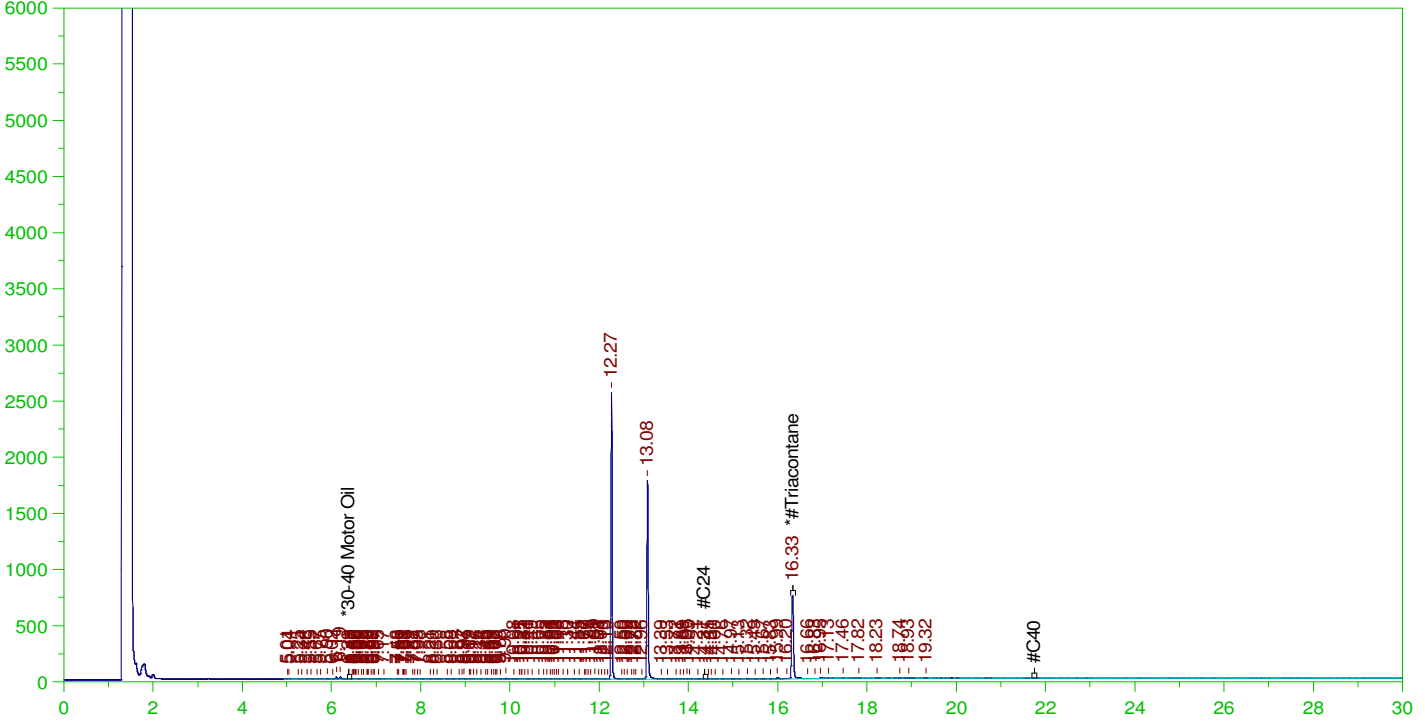
DRO Area: 394119.2 DRO Amount: 1.220418E-02  
 TEH Area: 718141 TEH Amount: 2.223774E-02

ERH1854 (RHMW05)

Batch ID: 160878

G:\org\HP5\DAT\HP5110321\_b\1103HP5.0054.RAW

B21110057-004A ; 1103HP5 , \$HC-8015-DRO-W, SGT



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21110057-004A ; 1103HP5 , \$HC-8015-DRO-W, SGT  
 Raw File: G:\org\HP5\DAT\HP5110321\_b\1103HP5.0054.RAW  
 Date & Time Acquired: 11/4/2021 11:56:04 PM  
 Method File: G:\Org\HP5\Methods\DR\_OROSb-AC-L%.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AC-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: 14.33 to 21.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.329	.485	.067	13.83

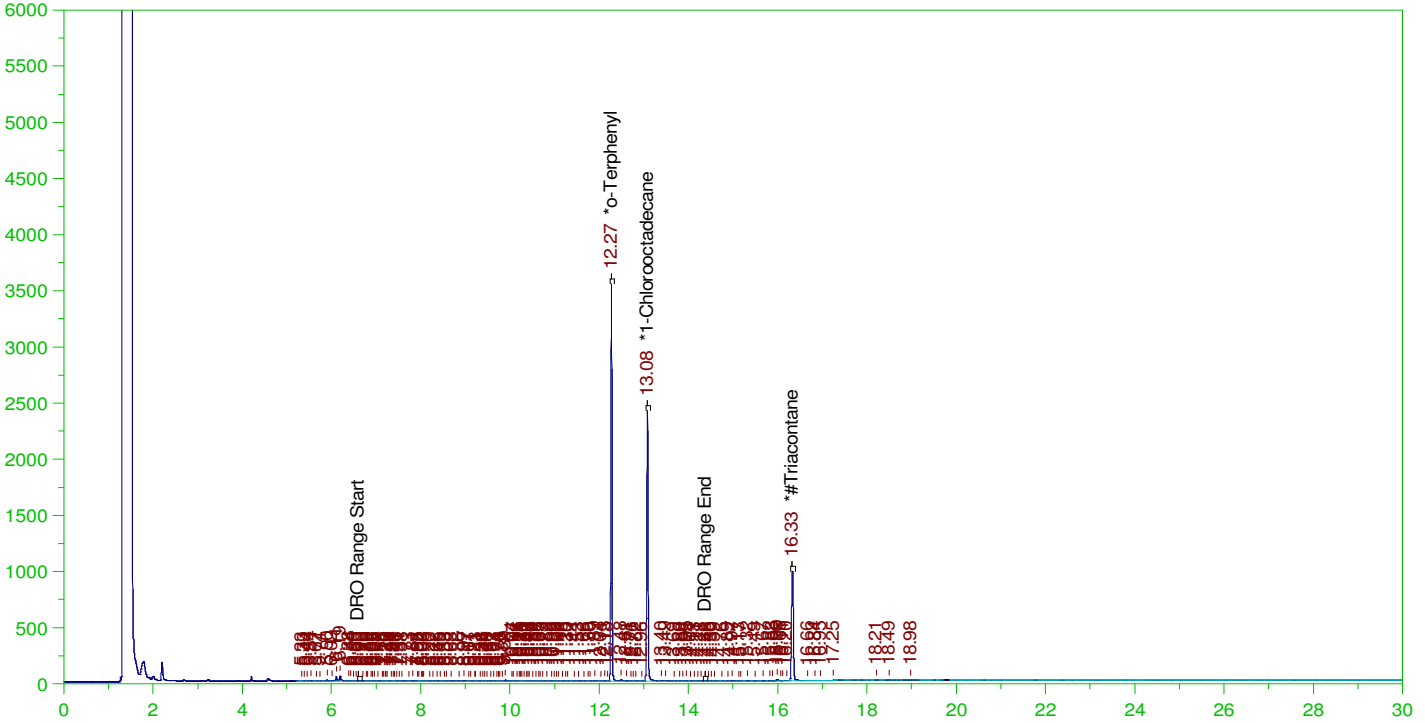
RRO Area:136034.3 RRO AMOUNT: 4.627223E-03

ERH1857 (RHMW2254-01)

Batch ID: 160878

G:\Org\HP5\DAT\HP5110321\_b\1103HP5.0012.RAW

B21110057-005A ; 1103HP5 , \$HC-8015-DRO-W,



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21110057-005A ; 1103HP5 , \$HC-8015-DRO-W,  
Raw File: G:\Org\HP5\DAT\HP5110321\_b\1103HP5.0012.RAW  
Date & Time Acquired: 11/3/2021 5:48:25 PM  
Method File: G:\Org\HP5\Methods\DR\_8015-C24T-IA-L%.met  
Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IA-24-Tri.CAL  
Sample Weight: 1030 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.59 to 14.43

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.272	.194	.182	93.57	-
*1-Chlorooctadecane	13.075	.194	.142	73.15	-
*#Triacontane	16.326	.194	.086	44.04	-

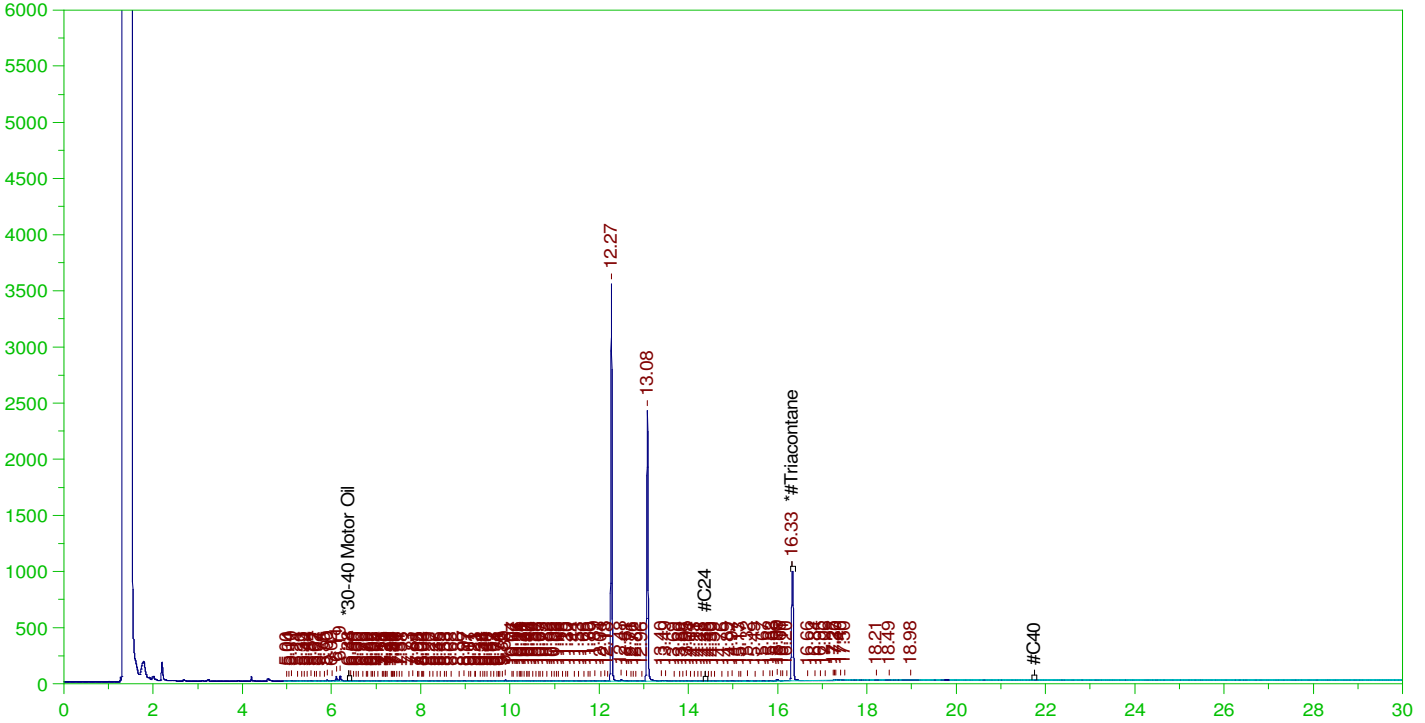
DRO Area: 613615.8 DRO Amount: 1.900105E-02  
TEH Area: 1136423 TEH Amount: 3.519015E-02

ERH1857 (RHMW2254-01)

Batch ID: 160878

G:\org\HP5\DAT\HP5110321\_b\1103HP5.0012.RAW

B21110057-005A ; 1103HP5 , \$HC-8015-DRO-W,



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21110057-005A ; 1103HP5 , \$HC-8015-DRO-W,  
Raw File: G:\org\HP5\DAT\HP5110321\_b\1103HP5.0012.RAW  
Date & Time Acquired: 11/3/2021 5:48:25 PM  
Method File: G:\Org\HP5\Methods\DR\_OROS-AC-L%.MET  
Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AC-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: 14.33 to 21.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.326	.485	.086	17.62

RRO Area:183228.9 RRO AMOUNT: 6.232555E-03

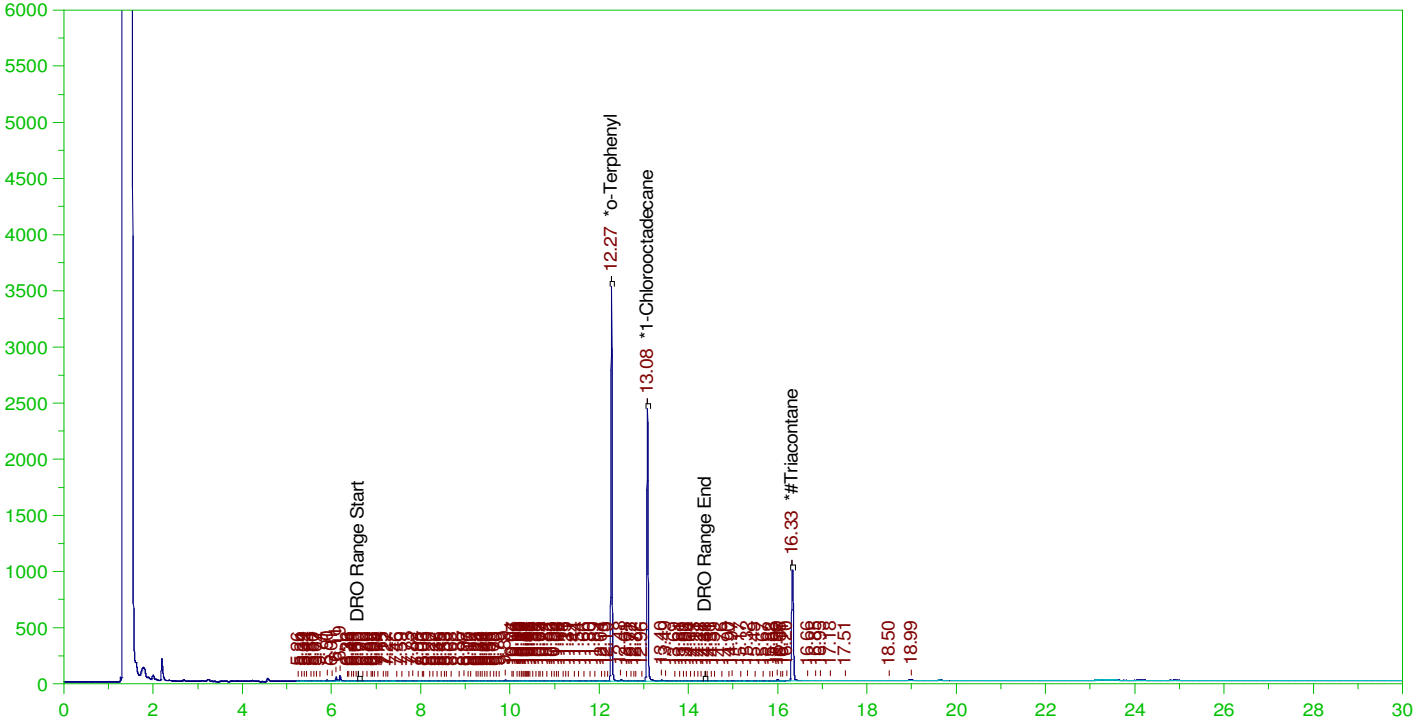


ERH1860 (RHSF)

Batch ID: 160878

G:\Org\HP5\DAT\HP5110321\_b\1103HP5.0013.RAW

B21110057-006A ; 1103HP5 , \$HC-8015-DRO-W, RR



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21110057-006A ; 1103HP5 , \$HC-8015-DRO-W, RR  
 Raw File: G:\Org\HP5\DAT\HP5110321\_b\1103HP5.0013.RAW  
 Date & Time Acquired: 11/3/2021 6:31:41 PM  
 Method File: G:\Org\HP5\Methods\DR\_8015-C24T-IA-L%.met  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IA-24-Tri.CAL  
 Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.59 to 14.43

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.274	.196	.184	93.79	-
*1-Chlorooctadecane	13.077	.196	.144	73.44	-
*Triacontane	16.327	.196	.087	44.29	-

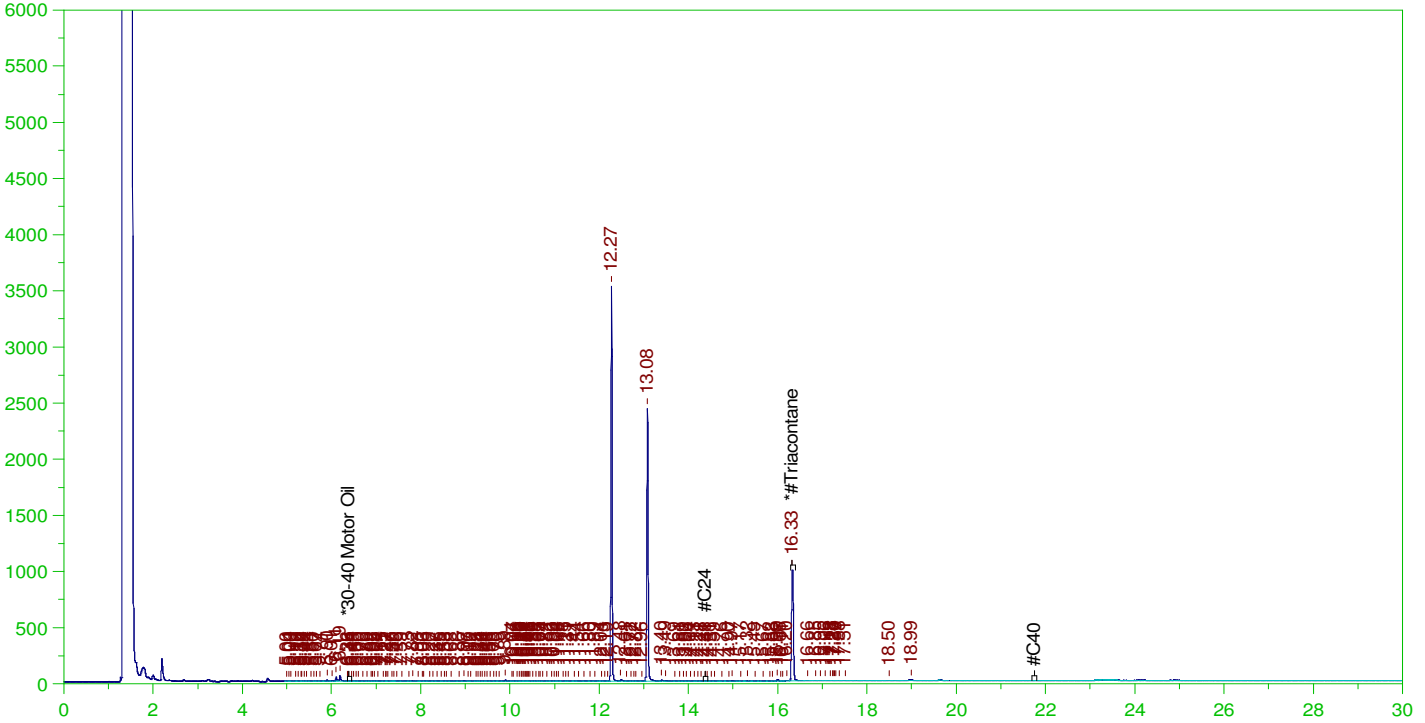
DRO Area: 622825.4 DRO Amount: 1.947531E-02  
 TEH Area: 1136072 TEH Amount: 3.552417E-02

ERH1860 (RHSF)

Batch ID: 160878

G:\org\HP5\DAT\HP5110321\_b\1103HP5.0013.RAW

B21110057-006A ; 1103HP5 , \$HC-8015-DRO-W, RR



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21110057-006A ; 1103HP5 , \$HC-8015-DRO-W, RR  
 Raw File: G:\org\HP5\DAT\HP5110321\_b\1103HP5.0013.RAW  
 Date & Time Acquired: 11/3/2021 6:31:41 PM  
 Method File: G:\Org\HP5\Methods\DR\_OROS-AC-L%.MET  
 Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AC-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: 14.33 to 21.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.327	.49	.087	17.72	-

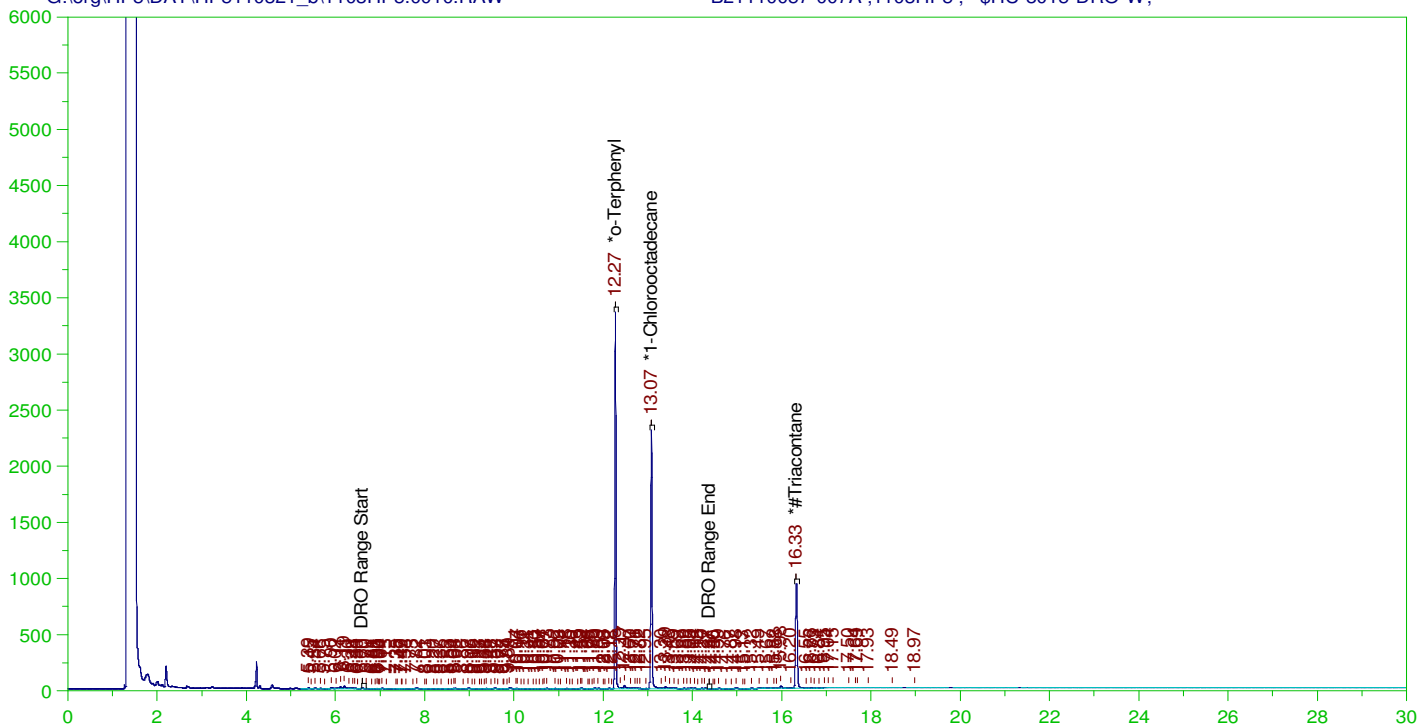
RRO Area:175005.2 RRO AMOUNT: 6.011184E-03

ERH1862 (RHSF)

G:\Org\HP5\DAT\HP5110321\_b\1103HP5.0010.RAW

Batch ID: 160878

B21110057-007A ; 1103HP5 , \$HC-8015-DRO-W,



**DIESEL RANGE ORGANICS CHROMATOGRAM REPORT**

Sample Name: B21110057-007A ; 1103HP5 , \$HC-8015-DRO-W,  
Raw File: G:\Org\HP5\DAT\HP5110321\_b\1103HP5.0010.RAW  
Date & Time Acquired: 11/3/2021 4:21:37 PM  
Method File: G:\Org\HP5\Methods\DR\_8015-C24T-IA-L%.met  
Calibration File: G:\Org\HP5\Cals\SW8015C\_DRO211102IA-24-Tri.CAL  
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.59 to 14.43

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.271	.19	.17	89.3	-
*1-Chlorooctadecane	13.075	.19	.133	70.06	-
*#Triacontane	16.326	.19	.079	41.57	-

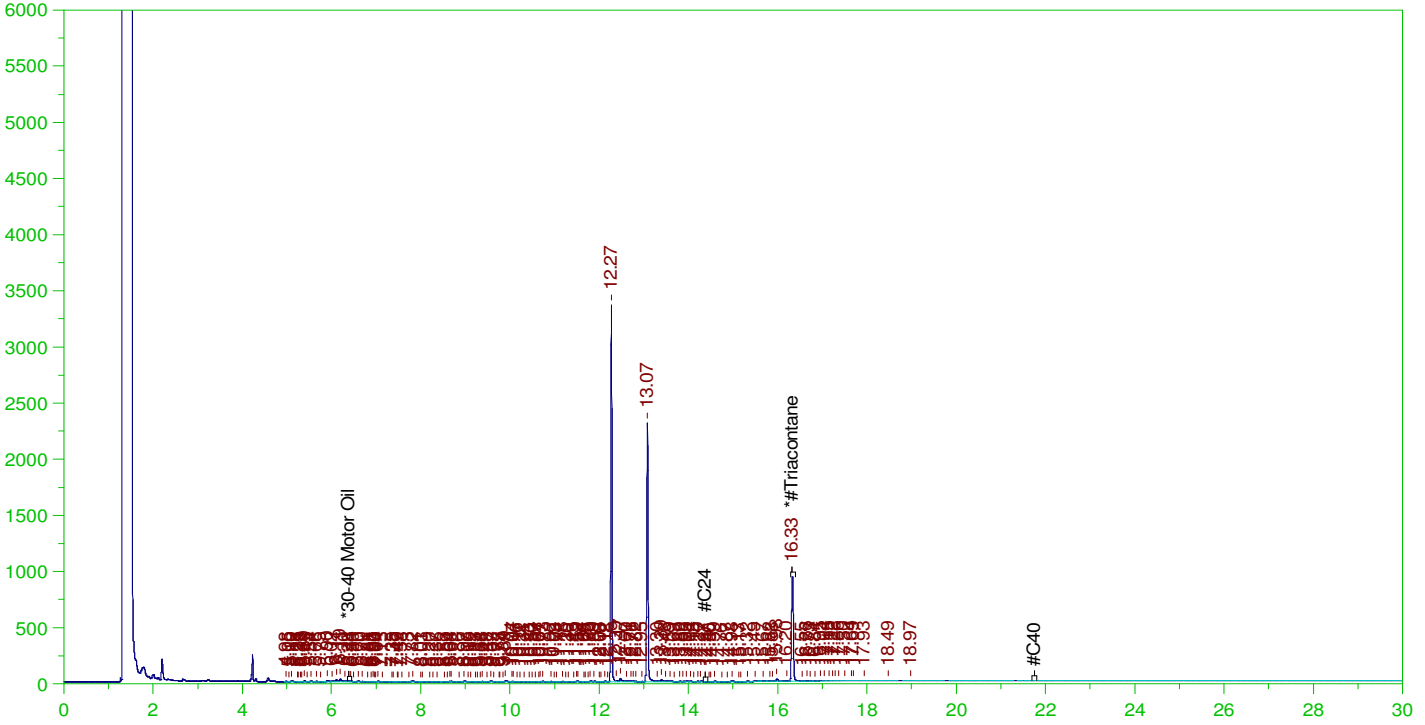
DRO Area: 687323.1 DRO Amount: 2.087805E-02  
TEH Area: 1145988 TEH Amount: 3.481039E-02

ERH1862 (RHSF)

Batch ID: 160878

G:\org\HP5\DAT\HP5110321\_b\1103HP5.0010.RAW

B21110057-007A ; 1103HP5 , \$HC-8015-DRO-W,



**RESIDUAL RANGE ORGANICS CHROMATOGRAM**

Sample Name: B21110057-007A ; 1103HP5 , \$HC-8015-DRO-W,  
Raw File: G:\org\HP5\DAT\HP5110321\_b\1103HP5.0010.RAW  
Date & Time Acquired: 11/3/2021 4:21:37 PM  
Method File: G:\Org\HP5\Methods\DR\_OROS-AC-L%.MET  
Calibration File: G:\Org\HP5\Cals\SW8015C\_ORO211017AC-SAMP.CAL  
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41  
Rt range for Residual Range Organics: 14.33 to 21.8

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.326	.476	.079	16.63

RRO Area: 230885

RRO AMOUNT: 7.703993E-03