



ANALYTICAL SUMMARY REPORT

December 16, 2021

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

Work Order: B21111298

Quote ID: 5912

Project Name: CV18F0126/60571032.02.20.01

Energy Laboratories Inc Billings MT received the following 8 samples from AECOM - Honolulu on 11/13/2021 for analysis.

Lab ID	Client Sample ID	Collect Date	Received Date	Matrix	Test
B21111298-001	ERH1893 (RHMW01R)	11/10/21 16:15	11/15/2021	Ground Water	DRO-Liquid-Liquid Extraction SW3520C Diesel Range Organics SW8015C
B21111298-002	ERH1896 (RHMW02)	11/10/21 18:05	11/15/2021	Ground Water	Same As Above
B21111298-003	ERH1899 (RHMW03)	11/10/21 19:13	11/15/2021	Ground Water	Same As Above
B21111298-004	ERH1902 (RHMW05)	11/10/21 15:25	11/13/2021	Ground Water	Same As Above
B21111298-005	ERH1905 (RHM2254-01)	11/10/21 15:20	11/13/2021	Ground Water	Same As Above
B21111298-006	ERH1908 (RHSF)	11/10/21 15:35	11/13/2021	Drinking Water	Same As Above
B21111298-007	ERH1910 (RHSF)	11/10/21 15:35	11/13/2021	Drinking Water	Same As Above
B21111298-008	ERH1916 (Post-Chlorination)	11/10/21 16:50	11/13/2021	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: CV18F0126/60571032.02.20.01
Work Order: B21111298

Report Date: 12/16/2021

CASE NARRATIVE

General Comments:

For any question please contact your Project Manager at (406) 252-6325 or 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.



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Chain of Custody & Analytical Request Record

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coc# NOI

DoD Samples

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 checked="" 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: NOI log is separate from other COCs.
5. ERH1916 hold until further notice.

Project Information

Project Name, PWSID, Permit, etc.	CV18F0126/60571032.02.20.01		
Sampler Name	GM, CF	Sampler Phone	808-636-3319
Sample Origin State	Hawaii	EPA/State Compliance	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
URANIUM MINING CLIENTS MUST indicate sample type			
<input type="checkbox"/> Unprocessed Ore			
<input type="checkbox"/> Processed Ore (Ground or Refined) **CALL BEFORE SENDING			
<input type="checkbox"/> 1(e)2 Byproduct Material (Can ONLY be Submitted to ELI Casper Location)			

Matrix Codes

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

Analysis Requested

Sample ID	Date	Time	Number of Containers	Matrix (See Codes Above)	EPA 8015 TPH-DRO/RRO w/ SGC		Extract and Hold	Other	Other	Other	Other	Other	Other	Other	Other	Other	Other	Other	Other		
					TPH-DRO/RRO	RRO															
1	11/10/2021	12:15 pm	2	GW	✓	✓															
2	11/10/2021	2:05 pm	2	GW	✓	✓															
3	11/10/2021	3:13 pm	2	GW	✓	✓															
4	11/10/2021	11:25 am	0	GW	✓	✓															
5	11/10/2021	11:20 am	0	GW	✓	✓															
6	11/10/2021	11:35 am	0	DW	✓	✓															
7	11/10/2021	11:35 am	0	DW	✓	✓															
8	11/10/2021	12:50 pm	0	DW	✓	✓	✓														
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	Extract and Hold	Other	Other	Other	Other	Other	Other	Other	Other	Other	Other	Other	Other	Other	Other	
	Date	Time																				
1 ERH1893 (RHMW01R)	11/10/2021	12:15 pm	2	GW	✓	✓																
2 ERH1896 (RHMW02)	11/10/2021	2:05 pm	2	GW	✓	✓																
3 ERH1899 (RHMW03)	11/10/2021	3:13 pm	2	GW	✓	✓																
4 ERH1902 (RHMW05)	11/10/2021	11:25 am	0	GW	✓	✓																
5 ERH1905 (RHMW2254-01)	11/10/2021	11:20 am	0	GW	✓	✓																
6 ERH1908 (RHSF)	11/10/2021	11:35 am	0	DW	✓	✓																
7 ERH1910 (RHSF)	11/10/2021	11:35 am	0	DW	✓	✓																
8 ERH1916 (Post-chlorination)	11/10/2021	12:50 pm	0	DW	✓	✓	✓															
9																						

See Attached

RUSH TAT

ELI-LAB ID

02111298

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
	Alex Edmonds	11/11/21 15:00	[Signature]	[Signature]	11/15/21 09:00	[Signature]
LABORATORY-USE ONLY						
Shipped By	Cooler ID(s)	Custody Seals	Intact	Receipt Temp	Temp Blank	On Ice
		Y N C B	Y N	0.3 °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.



Trust our People. Trust our Data.

Chain of Custody & Analytical Request Record 202111-05

DoD Samples

www.energylab.com

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"/> 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: NOI log is separate from other COCs.
5. ERH1916 hold until further notice.

Project Information

Project Name, PWSID, Permit, etc. CV18F0126/60571032.02.20.01	
Sampler Name DM, NL	Sampler Phone 808-636-3319
Sample Origin State Hawaii	EPA/State Compliance <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
URANIUM MINING CLIENTS MUST indicate sample type	
<input type="checkbox"/> Unprocessed Ore	
<input type="checkbox"/> Processed Ore (Ground or Refined) **CALL BEFORE SENDING	
<input 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 - Bioassay
- O - Oil
- DW - Drinking Water

Analysis Requested

EPA 8015 TPH-DRO/RRO w/SGC	EPA 8015 TPH-DRO/ RRO	Extract and Hold	Analysis Requested										See Attached							
✓	✓																			
✓	✓																			
✓	✓																			
✓	✓																			
✓	✓																			
✓	✓																			
✓	✓	✓																		

All turnaround times are standard unless marked as RUSH

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

Sample Identification (Name, Location, Interval, etc.)	Collection		Number of Containers	Matrix (See Codes Above)	EPA 8015 TPH-DRO/RRO w/SGC	EPA 8015 TPH-DRO/ RRO	Extract and Hold	See Attached	RUSH TAT	ELI LAB ID (Laboratory Use Only)
	Date	Time								
1 ERH1893 (RHMW01R)	11/10/2021	12:15 pm	0	GW	✓	✓			×	BZ1111298
2 ERH1897 (RHMW02)	11/10/2021	2:05 pm	0	GW	✓	✓			×	
3 ERH1899 (RHMW03)	11/10/2021	3:13 pm	0	GW	✓	✓			×	
4 ERH1902 (RHMW05)	11/10/2021	11:25 am	2	GW	✓	✓			×	
5 ERH1905 (RHMW2254-01)	11/10/2021	11:20 am	2	GW	✓	✓			×	
6 ERH1908 (RHSF)	11/10/2021	11:35 am	2	DW	✓	✓			×	
7 ERH1910 (RHSF)	11/10/2021	11:35 am	0	DW	✓	✓			×	
8 ERH1916 (Post-chlorination)	11/10/2021	12:50 pm	0	DW	✓	✓	✓		×	
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) Alex Edmonds	Date/Time 11/11/21 15:00	Signature <i>Alex Edmonds</i>	Received by (print)	Date/Time	Signature
	Relinquished by (print)	Date/Time	Signature	Received by Laboratory (print) <i>M. Edmonds</i>	Date/Time 11/13/21 12:05	Signature <i>M. Edmonds</i>
LABORATORY USE ONLY						
Shipped By	Cooler ID(s)	Custody Seals Y N C B	Intact Y N	Receipt Temp 3-2 °C	Temp Blank Y N	Payment Type CC Cash Check
						Amount \$
						Receipt Number (cash/check only)

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Chain of Custody & Analytical Request Record 202111-06

DoD Samples

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coc# NOI Page 3 of 3

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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.
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Project Information

Project Name, PWSID, Permit, etc.	CV18F0126/60571032.02.20.01		
Sampler Name	DM, NL	Sampler Phone	808-636-3319
Sample Origin State	Hawaii	EPA/State Compliance	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
URANIUM MINING CLIENTS MUST indicate sample type			
<input type="checkbox"/> Unprocessed Ore			
<input type="checkbox"/> Processed Ore (Ground or Refined) **CALL BEFORE SENDING			
<input type="checkbox"/> 11(a)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	Extract and Hold	Analysis Requested																	
✓	✓																			
✓	✓																			
✓	✓																			
✓	✓																			
✓	✓																			
✓	✓																			
✓	✓	✓																		

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	Extract and Hold	See Attached	RUSH TAT	ELI LAB ID Laboratory Use Only
	Date	Time								
1 ERH1893 (RHMW01R)	11/10/2021	12:15 pm	0	GW	✓	✓			×	BZ1111298
2 ERH1896 (RHMW02)	11/10/2021	2:05 pm	0	GW	✓	✓			×	
3 ERH1899 (RHMW03)	11/10/2021	3:13 pm	0	GW	✓	✓			×	
4 ERH1902 (RHMW05)	11/10/2021	11:25 am	0	GW	✓	✓			×	
5 ERH1905 (RHMW2254-01)	11/10/2021	11:20 am	0	GW	✓	✓			×	
6 ERH1908 (RHSF)	11/10/2021	11:35 am	0	DW	✓	✓			×	
7 ERH1910 (RHSF)	11/10/2021	11:35 am	2	DW	✓	✓			×	
8 ERH1916 (Post-chlorination)	11/10/2021	12:50 pm	2	DW	✓	✓	✓		×	
9	ah 11/10/21									

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
	Alex Edmonds	11/11/21 15:00	<i>Alex Edmonds</i>			
	Relinquished by (print)	Date/Time	Signature	Received by Laboratory (print)	Date/Time	Signature
				<i>M. Boudurant</i>	11/3/21 12:05	<i>M. Boudurant</i>
LABORATORY USE ONLY:						
Shipped By	Cooler ID(s)	Custody Seals	Intact	Receipt Temp	Temp Blank	On Ice
		Y N C B	Y N	0.2 °C	Y N	Y N
					Payment Type	Amount
					CC Cash Check	\$
						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 noted on your analytical report.

Work Order Receipt Checklist

AECOM - Honolulu

B21111298

Login completed by: Leslie S. Cadreau
Reviewed by: BL2000\gmccartney
Reviewed Date: 11/16/2021

Date Received: 11/13/2021
Received by: leb
Carrier name: FedEx

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

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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 0.3°C and shipping container 3 was 0.2°C. The temperature of the sample(s) for shipping container 2 was 3.2°C.

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.

Samples ERH1893 (RHMW01R), ERH1896 (RHMW02) and ERH1899 (RHMW03) were received on 11/15/21 at 09:40 by Tyler Gasser by FedEx.

The sample identification indicated on the container label for sample ERH1896 (RHMW02) is ERH1896 (RHMW02) and on page two of three of the Chain of Custody it is ERH1897 (RHMW02). Proceeded with the sample identification as indicated on the container label.

Sample ERH1916 (Post-Chlorination) for Diesel Range Organics was extracted but not analyzed per the Chain of Custody. Proceed with analysis per email from Alethea Ramos on 11/19/21.

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: B21111298-001
Collection Date: 11/10/2021 16:15
Date Received: 11/13/2021
Report Date: 12/16/2021

Client: AECOM - Honolulu
Client Sample ID: ERH1893 (RHMW01R)
Project: CV18F0126/60571032.02.20.01
Matrix: Ground Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
PETROLEUM HYDROCARBONS-SEMI-VOLATILE												
Diesel Range Organics (C10 to C24)	0.88	mg/L	1		0.33	0.17	0.043		SW8015C	11/17/2021 16:20/amn	GCFID-HP5-B_211116A : 20	161348
Diesel Range Organics (SGT-C10 to C24)	0.11	mg/L	1	J	0.33	0.13	0.043		SW8015C	11/18/2021 22:48/amn	GCFID-HP5-B_211118A : 13	161348
Oil Range Hydrocarbons (C24 to C40)	0.71	mg/L	1		0.33	0.17	0.098		SW8015C	11/17/2021 16:20/amn	GCFID-HP5-B_211116A : 20	161348
Oil Range Hydrocarbons (SGT-C24 to C40)	ND	mg/L	1	U	0.33	0.17	0.098		SW8015C	11/18/2021 22:48/amn	GCFID-HP5-B_211118A : 13	161348
Total Extractable Hydrocarbons	1.7	mg/L	1		0.33	0.17	0.083		SW8015C	11/17/2021 16:20/amn	GCFID-HP5-B_211116A : 20	161348
Total Extractable Hydrocarbons (SGT)	0.12	mg/L	1	J	0.33	0.13	0.037		SW8015C	11/18/2021 22:48/amn	GCFID-HP5-B_211118A : 13	161348
Surr: o-Terphenyl	90.0	%REC	1		56-125				SW8015C	11/17/2021 16:20/amn	GCFID-HP5-B_211116A : 20	161348
Surr: o-Terphenyl (SGT)	76.0	%REC	1		56-125				SW8015C	11/18/2021 22:48/amn	GCFID-HP5-B_211118A : 13	161348
Surr: n-Triacontane	93.0	%REC	1		50-150				SW8015C	11/17/2021 16:20/amn	GCFID-HP5-B_211116A : 20	161348
Surr: n-Triacontane (SGT)	73.0	%REC	1		50-150				SW8015C	11/18/2021 22:48/amn	GCFID-HP5-B_211118A : 13	161348

- 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: B21111298-002

Collection Date: 11/10/2021 18:05

Date Received: 11/13/2021

Report Date: 12/16/2021

Client: AECOM - Honolulu
Client Sample ID: ERH1896 (RHMW02)
Project: CV18F0126/60571032.02.20.01
Matrix: Ground Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
PETROLEUM HYDROCARBONS-SEMI-VOLATILE												
Diesel Range Organics (C10 to C24)	2.4	mg/L	1		0.30	0.14	0.037		SW8015C	11/17/2021 18:29/amn	GCFID-HP5-B_211116A : 22	161348
Diesel Range Organics (SGT-C10 to C24)	0.67	mg/L	1		0.30	0.12	0.037		SW8015C	11/19/2021 00:57/amn	GCFID-HP5-B_211118A : 15	161348
Oil Range Hydrocarbons (C24 to C40)	0.54	mg/L	1		0.30	0.14	0.085		SW8015C	11/17/2021 18:29/amn	GCFID-HP5-B_211116A : 22	161348
Oil Range Hydrocarbons (SGT-C24 to C40)	0.13	mg/L	1	J	0.30	0.14	0.085		SW8015C	11/19/2021 00:57/amn	GCFID-HP5-B_211118A : 15	161348
Total Extractable Hydrocarbons	3.2	mg/L	1		0.30	0.14	0.072		SW8015C	11/17/2021 18:29/amn	GCFID-HP5-B_211116A : 22	161348
Total Extractable Hydrocarbons (SGT)	0.85	mg/L	1		0.30	0.12	0.032		SW8015C	11/19/2021 00:57/amn	GCFID-HP5-B_211118A : 15	161348
Surr: o-Terphenyl	60.0	%REC	1		56-125				SW8015C	11/17/2021 18:29/amn	GCFID-HP5-B_211116A : 22	161348
Surr: o-Terphenyl (SGT)	59.0	%REC	1		56-125				SW8015C	11/19/2021 00:57/amn	GCFID-HP5-B_211118A : 15	161348
Surr: n-Triacontane	90.0	%REC	1		50-150				SW8015C	11/17/2021 18:29/amn	GCFID-HP5-B_211116A : 22	161348
Surr: n-Triacontane (SGT)	85.0	%REC	1		50-150				SW8015C	11/19/2021 00:57/amn	GCFID-HP5-B_211118A : 15	161348

- 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: B21111298-003
Collection Date: 11/10/2021 19:13
Date Received: 11/13/2021
Report Date: 12/16/2021

Client: AECOM - Honolulu
Client Sample ID: ERH1899 (RHMW03)
Project: CV18F0126/60571032.02.20.01
Matrix: Ground Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
PETROLEUM HYDROCARBONS-SEMI-VOLATILE												
Diesel Range Organics (C10 to C24)	0.20	mg/L	1	J	0.30	0.14	0.037		SW8015C	11/16/2021 20:36/amn	GCFID-HP5-B_211116A : 1	161348
Diesel Range Organics (SGT-C10 to C24)	ND	mg/L	1	U	0.30	0.12	0.037		SW8015C	11/18/2021 18:30/amn	GCFID-HP5-B_211118A : 9	161348
Oil Range Hydrocarbons (C24 to C40)	0.31	mg/L	1		0.30	0.14	0.085		SW8015C	11/16/2021 20:36/amn	GCFID-HP5-B_211116A : 1	161348
Oil Range Hydrocarbons (SGT-C24 to C40)	ND	mg/L	1	U	0.30	0.14	0.085		SW8015C	11/18/2021 18:30/amn	GCFID-HP5-B_211118A : 9	161348
Total Extractable Hydrocarbons	0.74	mg/L	1		0.30	0.14	0.072		SW8015C	11/16/2021 20:36/amn	GCFID-HP5-B_211116A : 1	161348
Total Extractable Hydrocarbons (SGT)	0.040	mg/L	1	J	0.30	0.12	0.032		SW8015C	11/18/2021 18:30/amn	GCFID-HP5-B_211118A : 9	161348
Surr: o-Terphenyl	77.0	%REC	1		56-125				SW8015C	11/16/2021 20:36/amn	GCFID-HP5-B_211116A : 1	161348
Surr: o-Terphenyl (SGT)	75.0	%REC	1		56-125				SW8015C	11/18/2021 18:30/amn	GCFID-HP5-B_211118A : 9	161348
Surr: n-Triacontane	86.0	%REC	1		50-150				SW8015C	11/16/2021 20:36/amn	GCFID-HP5-B_211116A : 1	161348
Surr: n-Triacontane (SGT)	81.0	%REC	1		50-150				SW8015C	11/18/2021 18:30/amn	GCFID-HP5-B_211118A : 9	161348

- 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: B21111298-004

Collection Date: 11/10/2021 15:25

Date Received: 11/13/2021

Report Date: 12/16/2021

Client: AECOM - Honolulu
Client Sample ID: ERH1902 (RHMW05)
Project: CV18F0126/60571032.02.20.01
Matrix: Ground Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
PETROLEUM HYDROCARBONS-SEMI-VOLATILE												
Diesel Range Organics (C10 to C24)	0.086	mg/L	1	J	0.30	0.15	0.039		SW8015C	11/16/2021 19:52/amn	GCFID-HP5-B_211116A : 10	161348
Diesel Range Organics (SGT-C10 to C24)	ND	mg/L	1	U	0.30	0.12	0.039		SW8015C	11/18/2021 17:47/amn	GCFID-HP5-B_211118A : 8	161348
Oil Range Hydrocarbons (C24 to C40)	0.11	mg/L	1	J	0.30	0.15	0.088		SW8015C	11/16/2021 19:52/amn	GCFID-HP5-B_211116A : 10	161348
Oil Range Hydrocarbons (SGT-C24 to C40)	ND	mg/L	1	U	0.30	0.15	0.088		SW8015C	11/18/2021 17:47/amn	GCFID-HP5-B_211118A : 8	161348
Total Extractable Hydrocarbons	0.23	mg/L	1	J	0.30	0.15	0.075		SW8015C	11/16/2021 19:52/amn	GCFID-HP5-B_211116A : 10	161348
Total Extractable Hydrocarbons (SGT)	ND	mg/L	1	U	0.30	0.12	0.033		SW8015C	11/18/2021 17:47/amn	GCFID-HP5-B_211118A : 8	161348
Surr: o-Terphenyl	93.0	%REC	1		56-125				SW8015C	11/16/2021 19:52/amn	GCFID-HP5-B_211116A : 10	161348
Surr: o-Terphenyl (SGT)	85.0	%REC	1		56-125				SW8015C	11/18/2021 17:47/amn	GCFID-HP5-B_211118A : 8	161348
Surr: n-Triacontane	97.0	%REC	1		50-150				SW8015C	11/16/2021 19:52/amn	GCFID-HP5-B_211116A : 10	161348
Surr: n-Triacontane (SGT)	84.0	%REC	1		50-150				SW8015C	11/18/2021 17:47/amn	GCFID-HP5-B_211118A : 8	161348

- 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: ERH1905 (RHM2254-01)
Project: CV18F0126/60571032.02.20.01
Matrix: Ground Water

Lab ID: B21111298-005
Collection Date: 11/10/2021 15:20
Date Received: 11/13/2021
Report Date: 12/16/2021

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
PETROLEUM HYDROCARBONS-SEMI-VOLATILE												
Diesel Range Organics (C10 to C24)	0.043	mg/L	1	J	0.30	0.14	0.037		SW8015C	11/17/2021 14:55/amn	GCFID-HP5-B_211116A : 19	161348
Diesel Range Organics (SGT-C10 to C24)	ND	mg/L	1	U	0.30	0.11	0.037		SW8015C	11/18/2021 17:04/amn	GCFID-HP5-B_211118A : 7	161348
Oil Range Hydrocarbons (C24 to C40)	ND	mg/L	1	U	0.30	0.14	0.084		SW8015C	11/17/2021 14:55/amn	GCFID-HP5-B_211116A : 19	161348
Oil Range Hydrocarbons (SGT-C24 to C40)	ND	mg/L	1	U	0.30	0.14	0.084		SW8015C	11/18/2021 17:04/amn	GCFID-HP5-B_211118A : 7	161348
Total Extractable Hydrocarbons	0.13	mg/L	1	J	0.30	0.14	0.071		SW8015C	11/17/2021 14:55/amn	GCFID-HP5-B_211116A : 19	161348
Total Extractable Hydrocarbons (SGT)	ND	mg/L	1	U	0.30	0.11	0.031		SW8015C	11/18/2021 17:04/amn	GCFID-HP5-B_211118A : 7	161348
Surr: o-Terphenyl	93.0	%REC	1		56-125				SW8015C	11/17/2021 14:55/amn	GCFID-HP5-B_211116A : 19	161348
Surr: o-Terphenyl (SGT)	78.0	%REC	1		56-125				SW8015C	11/18/2021 17:04/amn	GCFID-HP5-B_211118A : 7	161348
Surr: n-Triacontane	93.0	%REC	1		50-150				SW8015C	11/17/2021 14:55/amn	GCFID-HP5-B_211116A : 19	161348
Surr: n-Triacontane (SGT)	73.0	%REC	1		50-150				SW8015C	11/18/2021 17:04/amn	GCFID-HP5-B_211118A : 7	161348

- 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: B21111298-006

Collection Date: 11/10/2021 15:35

Date Received: 11/13/2021

Report Date: 12/16/2021

Client: AECOM - Honolulu
Client Sample ID: ERH1908 (RHSF)
Project: CV18F0126/60571032.02.20.01
Matrix: Drinking Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
PETROLEUM HYDROCARBONS-SEMI-VOLATILE												
Diesel Range Organics (C10 to C24)	ND	mg/L	1	U	0.30	0.14	0.037		SW8015C	11/16/2021 16:59/amn	GCFID-HP5-B_211116A : 8	161348
Oil Range Hydrocarbons (C24 to C40)	ND	mg/L	1	U	0.30	0.14	0.085		SW8015C	11/16/2021 16:59/amn	GCFID-HP5-B_211116A : 8	161348
Total Extractable Hydrocarbons	ND	mg/L	1	U	0.30	0.14	0.072		SW8015C	11/16/2021 16:59/amn	GCFID-HP5-B_211116A : 8	161348
Surr: o-Terphenyl	86.0	%REC	1		56-125				SW8015C	11/16/2021 16:59/amn	GCFID-HP5-B_211116A : 8	161348
Surr: n-Triacontane	87.0	%REC	1		50-150				SW8015C	11/16/2021 16:59/amn	GCFID-HP5-B_211116A : 8	161348

- 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: ERH1910 (RHSF)
Project: CV18F0126/60571032.02.20.01
Matrix: Drinking Water

Lab ID: B21111298-007
Collection Date: 11/10/2021 15:35
Date Received: 11/13/2021
Report Date: 12/16/2021

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
PETROLEUM HYDROCARBONS-SEMI-VOLATILE												
Diesel Range Organics (C10 to C24)	ND	mg/L	1	U	0.30	0.15	0.039		SW8015C	11/16/2021 16:16/amn	GCFID-HP5-B_211116A : 7	161348
Oil Range Hydrocarbons (C24 to C40)	ND	mg/L	1	U	0.30	0.15	0.087		SW8015C	11/16/2021 16:16/amn	GCFID-HP5-B_211116A : 7	161348
Total Extractable Hydrocarbons	ND	mg/L	1	U	0.30	0.15	0.074		SW8015C	11/16/2021 16:16/amn	GCFID-HP5-B_211116A : 7	161348
Surr: o-Terphenyl	90.0	%REC	1		56-125				SW8015C	11/16/2021 16:16/amn	GCFID-HP5-B_211116A : 7	161348
Surr: n-Triacontane	90.0	%REC	1		50-150				SW8015C	11/16/2021 16:16/amn	GCFID-HP5-B_211116A : 7	161348

- 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: ERH1916 (Post-Chlorination)
Project: CV18F0126/60571032.02.20.01
Matrix: Drinking Water

Lab ID: B21111298-008
Collection Date: 11/10/2021 16:50
Date Received: 11/13/2021
Report Date: 12/16/2021

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
PETROLEUM HYDROCARBONS-SEMI-VOLATILE												
Diesel Range Organics (C10 to C24)	0.045	mg/L	1	J	0.30	0.14	0.037		SW8015C	11/16/2021 18:25/amn	GCFID-HP5-B_211116A : 30	161348
Diesel Range Organics (SGT-C10 to C24)	ND	mg/L	1	U	0.30	0.11	0.037		SW8015C	11/19/2021 20:55/amn	GCFID-HP5-B_211118A : 25	161348
Oil Range Hydrocarbons (C24 to C40)	0.12	mg/L	1	J	0.30	0.14	0.084		SW8015C	11/16/2021 18:25/amn	GCFID-HP5-B_211116A : 30	161348
Oil Range Hydrocarbons (SGT-C24 to C40)	ND	mg/L	1	U	0.30	0.14	0.084		SW8015C	11/19/2021 20:55/amn	GCFID-HP5-B_211118A : 25	161348
Total Extractable Hydrocarbons	0.22	mg/L	1	J	0.30	0.14	0.071		SW8015C	11/16/2021 18:25/amn	GCFID-HP5-B_211116A : 30	161348
Total Extractable Hydrocarbons (SGT)	ND	mg/L	1	U	0.30	0.11	0.031		SW8015C	11/19/2021 20:55/amn	GCFID-HP5-B_211118A : 25	161348
Surr: o-Terphenyl	87.0	%REC	1		56-125				SW8015C	11/16/2021 18:25/amn	GCFID-HP5-B_211116A : 30	161348
Surr: o-Terphenyl (SGT)	77.0	%REC	1		56-125				SW8015C	11/19/2021 20:55/amn	GCFID-HP5-B_211118A : 25	161348
Surr: n-Triacontane	87.0	%REC	1		50-150				SW8015C	11/16/2021 18:25/amn	GCFID-HP5-B_211116A : 30	161348
Surr: n-Triacontane (SGT)	77.0	%REC	1		50-150				SW8015C	11/19/2021 20:55/amn	GCFID-HP5-B_211118A : 25	161348

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



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21111298
Project: CV18F0126/60571032.02.20.01

Report Date: 12/16/2021

Run ID: Run Order: GCFID-HP5-B_211116A: 6 **SampType:** Method Blank **Batch ID:** 161348
Method: SW8015C **Analysis Date:** 11/16/2021 15:34 **Prep Date:** 11/15/2021 14:22
Lab ID: MB-161348 **Units:** mg/L **Prep Method:** SW3520C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diesel Range Organics (C10 to C24)	ND	0.15									
Oil Range Hydrocarbons (C24 to C40)	ND	0.15									
Total Extractable Hydrocarbons	ND	0.15									
Surr: o-Terphenyl	0.19	0.0020	0.20		95.0	56	125				
Surr: n-Triacontane	0.095	0.0020	0.10		95.0	50	150				

Associated Samples: B21111298-001A, B21111298-002A, B21111298-003A, B21111298-004A, B21111298-005A, B21111298-006A, B21111298-007A, B21111298-008A

Run ID: Run Order: GCFID-HP5-B_211118A: 6 **SampType:** Method Blank **Batch ID:** 161348
Method: SW8015C **Analysis Date:** 11/18/2021 16:21 **Prep Date:** 11/15/2021 14:22
Lab ID: MB-161348 **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)	0.17	0.0020	0.20		85.0	56	125				
Surr: n-Triacontane (SGT)	0.080	0.0020	0.10		80.0	50	150				

Associated Samples: B21111298-001A, B21111298-002A, B21111298-003A, B21111298-004A, B21111298-005A, B21111298-006A, B21111298-007A, B21111298-008A



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21111298
Project: CV18F0126/60571032.02.20.01

Report Date: 12/16/2021

Run ID: Run Order: GCFID-HP5-B_211116A: 4 **SampType:** Laboratory Control Sample **Batch ID:** 161348
Method: SW8015C **Analysis Date:** 11/16/2021 14:09 **Prep Date:** 11/15/2021 14:22
Lab ID: LCS-161348 **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		81.0	36	132				
Total Extractable Hydrocarbons	13	0.30	15		87.0	60	132				
Surr: o-Terphenyl	0.18	0.0020	0.20		90.0	56	125				

Associated Samples: B21111298-001A, B21111298-002A, B21111298-003A, B21111298-004A, B21111298-005A, B21111298-006A, B21111298-007A, B21111298-008A

Run ID: Run Order: GCFID-HP5-B_211116A: 5 **SampType:** Laboratory Control Sample Duplicate **Batch ID:** 161348
Method: SW8015C **Analysis Date:** 11/16/2021 14:51 **Prep Date:** 11/15/2021 14:22
Lab ID: LCSD-161348 **Units:** mg/L **Prep Method:** SW3520C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diesel Range Organics (C10 to C24)	13	0.30	15		84.0	36	132	12	3.4	20.0	
Total Extractable Hydrocarbons	13	0.30	15		90.0	60	132	13	3.6	20.0	
Surr: o-Terphenyl	0.19	0.0020	0.20		93.0	56	125	0.0			

Associated Samples: B21111298-001A, B21111298-002A, B21111298-003A, B21111298-004A, B21111298-005A, B21111298-006A, B21111298-007A, B21111298-008A

Run ID: Run Order: GCFID-HP5-B_211116A: 27 **SampType:** Laboratory Control Sample **Batch ID:** 161348
Method: SW8015C **Analysis Date:** 11/17/2021 23:29 **Prep Date:** 11/15/2021 14:22
Lab ID: LCS-161348-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		96.0	41	113				
Surr: n-Triacontane	0.088	0.0020	0.10		88.0	50	150				

Associated Samples: B21111298-001A, B21111298-002A, B21111298-003A, B21111298-004A, B21111298-005A, B21111298-006A, B21111298-007A, B21111298-008A



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21111298
Project: CV18F0126/60571032.02.20.01

Report Date: 12/16/2021

Run ID: Run Order: GCFID-HP5-B_211116A: 28 **SampType:** Laboratory Control Sample Duplicate **Batch ID:** 161348
Method: SW8015C **Analysis Date:** 11/18/2021 00:55 **Prep Date:** 11/15/2021 14:22
Lab ID: LCSD-161348-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)	4.6	0.30	5.0		91.0	41	113	4.8	5.4	20.0	
Surr: n-Triacontane	0.090	0.0020	0.10		90.0	50	150	0.0			

Associated Samples: B21111298-001A, B21111298-002A, B21111298-003A, B21111298-004A, B21111298-005A, B21111298-006A, B21111298-007A, B21111298-008A

Run ID: Run Order: GCFID-HP5-B_211118A: 4 **SampType:** Laboratory Control Sample **Batch ID:** 161348
Method: SW8015C **Analysis Date:** 11/18/2021 14:55 **Prep Date:** 11/15/2021 14:22
Lab ID: LCS-161348 **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		77.0	36	132				
Total Extractable Hydrocarbons (SGT)	12	0.30	15		82.0	60	132				
Surr: o-Terphenyl (SGT)	0.18	0.0020	0.20		89.0	56	125				

Associated Samples: B21111298-001A, B21111298-002A, B21111298-003A, B21111298-004A, B21111298-005A, B21111298-006A, B21111298-007A, B21111298-008A

Run ID: Run Order: GCFID-HP5-B_211118A: 5 **SampType:** Laboratory Control Sample Duplicate **Batch ID:** 161348
Method: SW8015C **Analysis Date:** 11/18/2021 15:38 **Prep Date:** 11/15/2021 14:22
Lab ID: LCSD-161348 **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		80.0	36	132	12	2.8	20.0	
Total Extractable Hydrocarbons (SGT)	13	0.30	15		85.0	60	132	12	2.9	20.0	
Surr: o-Terphenyl (SGT)	0.18	0.0020	0.20		92.0	56	125	0.0			

Associated Samples: B21111298-001A, B21111298-002A, B21111298-003A, B21111298-004A, B21111298-005A, B21111298-006A, B21111298-007A, B21111298-008A



Analytical QC Summary Report

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Workorder: B21111298
Project: CV18F0126/60571032.02.20.01

Report Date: 12/16/2021

Run ID: Run Order: GCFID-HP5-B_211118A: 17 **SampType:** Laboratory Control Sample **Batch ID:** 161348
Method: SW8015C **Analysis Date:** 11/19/2021 03:06 **Prep Date:** 11/15/2021 14:22
Lab ID: LCS-161348-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)	4.0	0.30	5.0		81.0	41	113				
Surr: n-Triacontane (SGT)	0.071	0.0020	0.10		71.0	50	150				

Associated Samples: B21111298-001A, B21111298-002A, B21111298-003A, B21111298-004A, B21111298-005A, B21111298-006A, B21111298-007A, B21111298-008A

Run ID: Run Order: GCFID-HP5-B_211118A: 18 **SampType:** Laboratory Control Sample Duplicate **Batch ID:** 161348
Method: SW8015C **Analysis Date:** 11/19/2021 04:31 **Prep Date:** 11/15/2021 14:22
Lab ID: LCSD-161348-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)	4.6	0.30	5.0		92.0	41	113	4.0	13.0	20.0	
Surr: n-Triacontane (SGT)	0.084	0.0020	0.10		84.0	50	150	0.0			

Associated Samples: B21111298-001A, B21111298-002A, B21111298-003A, B21111298-004A, B21111298-005A, B21111298-006A, B21111298-007A, B21111298-008A

Run ID: Run Order: GCFID-HP5-B_211116A: 21 **SampType:** Sample Matrix Spike **Batch ID:** 161348
Method: SW8015C **Analysis Date:** 11/17/2021 17:03 **Prep Date:** 11/15/2021 14:23
Lab ID: B21111298-001AMS **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)	15	0.33	17	0.88	86.0	36	132				
Total Extractable Hydrocarbons	17	0.33	17	1.7	93.0	60	132				
Surr: o-Terphenyl	0.21	0.0022	0.22	0.0	95.0	56	125				

Associated Samples: B21111298-001A, B21111298-002A, B21111298-003A, B21111298-004A, B21111298-005A, B21111298-006A, B21111298-007A, B21111298-008A



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Workorder: B21111298
Project: CV18F0126/60571032.02.20.01

Report Date: 12/16/2021

Run ID: Run Order: GCFID-HP5-B_211116A: 23 **SampType:** Sample Matrix Spike **Batch ID:** 161348
Method: SW8015C **Analysis Date:** 11/17/2021 19:12 **Prep Date:** 11/15/2021 14:23
Lab ID: B21111298-002AMS-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)	5.3	0.30	4.8	1.2	85.0	41	113				
Surr: n-Triacontane	0.079	0.0020	0.096	0.0	82.0	50	150				

Associated Samples: B21111298-001A, B21111298-002A, B21111298-003A, B21111298-004A, B21111298-005A, B21111298-006A, B21111298-007A, B21111298-008A

Run ID: Run Order: GCFID-HP5-B_211118A: 14 **SampType:** Sample Matrix Spike **Batch ID:** 161348
Method: SW8015C **Analysis Date:** 11/18/2021 23:31 **Prep Date:** 11/15/2021 14:23
Lab ID: B21111298-001AMS **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)	13	0.33	17	0.11	75.0	36	132				
Total Extractable Hydrocarbons (SGT)	13	0.33	17	0.12	80.0	60	132				
Surr: o-Terphenyl (SGT)	0.19	0.0022	0.22	0.0	85.0	56	125				

Associated Samples: B21111298-001A, B21111298-002A, B21111298-003A, B21111298-004A, B21111298-005A, B21111298-006A, B21111298-007A, B21111298-008A

Run ID: Run Order: GCFID-HP5-B_211118A: 16 **SampType:** Sample Matrix Spike **Batch ID:** 161348
Method: SW8015C **Analysis Date:** 11/19/2021 01:40 **Prep Date:** 11/15/2021 14:23
Lab ID: B21111298-002AMS-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)	3.5	0.30	4.8	0.16	70.0	41	113				
Surr: n-Triacontane (SGT)	0.065	0.0020	0.096	0.0	68.0	50	150				

Associated Samples: B21111298-001A, B21111298-002A, B21111298-003A, B21111298-004A, B21111298-005A, B21111298-006A, B21111298-007A, B21111298-008A



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Workorder: B21111298
Project: CV18F0126/60571032.02.20.01

Report Date: 12/16/2021

Run ID: Run Order: GCFID-HP5-B_211116A: 2 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R370473
Method: SW8015C **Analysis Date:** 11/16/2021 12:01 **Prep Date:**
Lab ID: CCV_1116HP505r-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	0.20	0.0020	0.20		98.0	80	120				

Associated Samples: B21111298-001A, B21111298-002A, B21111298-003A, B21111298-004A, B21111298-005A, B21111298-006A, B21111298-007A, B21111298-008A

Run ID: Run Order: GCFID-HP5-B_211116A: 3 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R370473
Method: SW8015C **Analysis Date:** 11/16/2021 12:44 **Prep Date:**
Lab ID: CCV_1116HP506r **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: B21111298-001A, B21111298-002A, B21111298-003A, B21111298-004A, B21111298-005A, B21111298-006A, B21111298-007A, B21111298-008A

Run ID: Run Order: GCFID-HP5-B_211116A: 13 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R370473
Method: SW8015C **Analysis Date:** 11/16/2021 23:28 **Prep Date:**
Lab ID: CCV_1116HP521r-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		97.0	80	120				

Associated Samples: B21111298-001A, B21111298-002A, B21111298-003A, B21111298-004A, B21111298-005A, B21111298-006A, B21111298-007A, B21111298-008A



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Workorder: B21111298
Project: CV18F0126/60571032.02.20.01

Report Date: 12/16/2021

Run ID: Run Order: GCFID-HP5-B_211116A: 14 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R370473
Method: SW8015C **Analysis Date:** 11/17/2021 00:11 **Prep Date:**
Lab ID: CCV_1116HP522r **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diesel Range Organics (C10 to C24)	16	0.30	15		103.0	80	120				
Total Extractable Hydrocarbons	16	0.30	15		103.0	80	120				
Surr: o-Terphenyl	0.20	0.0020	0.20		102.0	80	120				

Associated Samples: B21111298-001A, B21111298-002A, B21111298-003A, B21111298-004A, B21111298-005A, B21111298-006A, B21111298-007A, B21111298-008A

Run ID: Run Order: GCFID-HP5-B_211116A: 16 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R370473
Method: SW8015C **Analysis Date:** 11/17/2021 11:21 **Prep Date:**
Lab ID: CCV_1116HP537r **Units:** mg/L **Prep Method:**

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

Associated Samples: B21111298-001A, B21111298-002A, B21111298-003A, B21111298-004A, B21111298-005A, B21111298-006A, B21111298-007A, B21111298-008A

Run ID: Run Order: GCFID-HP5-B_211116A: 17 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R370473
Method: SW8015C **Analysis Date:** 11/17/2021 12:05 **Prep Date:**
Lab ID: CCV_1116HP538r-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: B21111298-001A, B21111298-002A, B21111298-003A, B21111298-004A, B21111298-005A, B21111298-006A, B21111298-007A, B21111298-008A



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Client: AECOM - Honolulu
Workorder: B21111298
Project: CV18F0126/60571032.02.20.01

Report Date: 12/16/2021

Run ID: Run Order: GCFID-HP5-B_211116A: 25 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R370473
Method: SW8015C **Analysis Date:** 11/17/2021 21:20 **Prep Date:**
Lab ID: CCV_1116HP551r-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		95.0	80	120				
Surr: n-Triacontane	0.19	0.0020	0.20		95.0	80	120				

Associated Samples: B21111298-001A, B21111298-002A, B21111298-003A, B21111298-004A, B21111298-005A, B21111298-006A, B21111298-007A, B21111298-008A

Run ID: Run Order: GCFID-HP5-B_211116A: 26 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R370473
Method: SW8015C **Analysis Date:** 11/17/2021 22:03 **Prep Date:**
Lab ID: CCV_1116HP552r **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		98.0	80	120				
Total Extractable Hydrocarbons	15	0.30	15		102.0	80	120				
Surr: o-Terphenyl	0.20	0.0020	0.20		100.0	80	120				

Associated Samples: B21111298-001A, B21111298-002A, B21111298-003A, B21111298-004A, B21111298-005A, B21111298-006A, B21111298-007A, B21111298-008A

Run ID: Run Order: GCFID-HP5-B_211118A: 2 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R370554
Method: SW8015C **Analysis Date:** 11/18/2021 12:47 **Prep Date:**
Lab ID: CCV_1118HP506r-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		93.0	80	120				
Surr: n-Triacontane	0.20	0.0020	0.20		98.0	80	120				

Associated Samples: B21111298-001A, B21111298-002A, B21111298-003A, B21111298-004A, B21111298-005A, B21111298-008A



Analytical QC Summary Report

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Client: AECOM - Honolulu
Workorder: B21111298
Project: CV18F0126/60571032.02.20.01

Report Date: 12/16/2021

Run ID: Run Order: GCFID-HP5-B_211118A: 3 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R370554
Method: SW8015C **Analysis Date:** 11/18/2021 13:30 **Prep Date:**
Lab ID: CCV_1118HP507r **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diesel Range Organics (C10 to C24)	15	0.30	15		102.0	80	120				
Total Extractable Hydrocarbons	16	0.30	15		105.0	80	120				
Surr: o-Terphenyl	0.21	0.0020	0.20		103.0	80	120				

Associated Samples: B21111298-001A, B21111298-002A, B21111298-003A, B21111298-004A, B21111298-005A, B21111298-008A

Run ID: Run Order: GCFID-HP5-B_211118A: 11 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R370554
Method: SW8015C **Analysis Date:** 11/18/2021 20:39 **Prep Date:**
Lab ID: CCV_1118HP517r-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	0.20	0.0020	0.20		98.0	80	120				

Associated Samples: B21111298-001A, B21111298-002A, B21111298-003A, B21111298-004A, B21111298-005A, B21111298-008A

Run ID: Run Order: GCFID-HP5-B_211118A: 12 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R370554
Method: SW8015C **Analysis Date:** 11/18/2021 21:22 **Prep Date:**
Lab ID: CCV_1118HP518r **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		105.0	80	120				
Surr: o-Terphenyl	0.21	0.0020	0.20		103.0	80	120				

Associated Samples: B21111298-001A, B21111298-002A, B21111298-003A, B21111298-004A, B21111298-005A, B21111298-008A



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Workorder: B21111298
Project: CV18F0126/60571032.02.20.01

Report Date: 12/16/2021

Run ID: Run Order: GCFID-HP5-B_211118A: 20 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R370554
Method: SW8015C **Analysis Date:** 11/19/2021 06:40 **Prep Date:**
Lab ID: CCV_1118HP531r-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		93.0	80	120				
Surr: n-Triacontane	0.19	0.0020	0.20		97.0	80	120				

Associated Samples: B21111298-001A, B21111298-002A, B21111298-003A, B21111298-004A, B21111298-005A, B21111298-008A

Run ID: Run Order: GCFID-HP5-B_211118A: 21 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R370554
Method: SW8015C **Analysis Date:** 11/19/2021 07:23 **Prep Date:**
Lab ID: CCV_1118HP532r **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diesel Range Organics (C10 to C24)	16	0.30	15		104.0	80	120				
Total Extractable Hydrocarbons	16	0.30	15		108.0	80	120				
Surr: o-Terphenyl	0.21	0.0020	0.20		106.0	80	120				

Associated Samples: B21111298-001A, B21111298-002A, B21111298-003A, B21111298-004A, B21111298-005A, B21111298-008A

Run ID: Run Order: GCFID-HP5-B_211118A: 23 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R370554
Method: SW8015C **Analysis Date:** 11/19/2021 18:45 **Prep Date:**
Lab ID: CCV_1118HP537r-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		91.0	80	120				
Surr: n-Triacontane	0.19	0.0020	0.20		97.0	80	120				

Associated Samples: B21111298-001A, B21111298-002A, B21111298-003A, B21111298-004A, B21111298-005A, B21111298-008A



Analytical QC Summary Report

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Client: AECOM - Honolulu
Workorder: B21111298
Project: CV18F0126/60571032.02.20.01

Report Date: 12/16/2021

Run ID: Run Order: GCFID-HP5-B_211118A: 24 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R370554
Method: SW8015C **Analysis Date:** 11/19/2021 19:28 **Prep Date:**
Lab ID: CCV_1118HP538r **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diesel Range Organics (C10 to C24)	16	0.30	15		104.0	80	120				
Total Extractable Hydrocarbons	16	0.30	15		108.0	80	120				
Surr: o-Terphenyl	0.21	0.0020	0.20		106.0	80	120				

Associated Samples: B21111298-001A, B21111298-002A, B21111298-003A, B21111298-004A, B21111298-005A, B21111298-008A

Run ID: Run Order: GCFID-HP5-B_211118A: 27 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R370554
Method: SW8015C **Analysis Date:** 11/19/2021 23:04 **Prep Date:**
Lab ID: CCV_1118HP543r-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		91.0	80	120				
Surr: n-Triacontane	0.19	0.0020	0.20		97.0	80	120				

Associated Samples: B21111298-001A, B21111298-002A, B21111298-003A, B21111298-004A, B21111298-005A, B21111298-008A

Run ID: Run Order: GCFID-HP5-B_211118A: 28 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R370554
Method: SW8015C **Analysis Date:** 11/19/2021 23:47 **Prep Date:**
Lab ID: CCV_1118HP544r **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diesel Range Organics (C10 to C24)	16	0.30	15		105.0	80	120				
Total Extractable Hydrocarbons	16	0.30	15		109.0	80	120				
Surr: o-Terphenyl	0.21	0.0020	0.20		107.0	80	120				

Associated Samples: B21111298-001A, B21111298-002A, B21111298-003A, B21111298-004A, B21111298-005A, B21111298-008A



Analytical QC Exceptions Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21111298
Project: CV18F0126/60571032.02.20.01

Report Date: 12/16/2021

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



Preparation and Analysis Dates Report

Work Order: B21111298

Client: AECOM - Honolulu

Project Name: CV18F0126/60571032.02.20.01

Report Date: 12/16/2021

Lab ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Method	Prep Date	Prep Batch	Analysis Method	Analysis Date
001A	ERH1893 (RHMW01R)	11/10/2021 16:15	Ground Water	Diesel Range Organics		SW3520C	11/15/2021 14:22	161348	SW8015C	11/17/2021 16:20
						SW3520C	11/15/2021 14:22	161348	SW8015C	11/18/2021 22:48
002A	ERH1896 (RHMW02)	11/10/2021 18:05	Ground Water	Diesel Range Organics		SW3520C	11/15/2021 14:23	161348	SW8015C	11/17/2021 18:29
						SW3520C	11/15/2021 14:23	161348	SW8015C	11/19/2021 00:57
003A	ERH1899 (RHMW03)	11/10/2021 19:13	Ground Water	Diesel Range Organics		SW3520C	11/15/2021 14:23	161348	SW8015C	11/16/2021 20:36
						SW3520C	11/15/2021 14:23	161348	SW8015C	11/18/2021 18:30
004A	ERH1902 (RHMW05)	11/10/2021 15:25	Ground Water	Diesel Range Organics		SW3520C	11/15/2021 14:23	161348	SW8015C	11/16/2021 19:52
						SW3520C	11/15/2021 14:23	161348	SW8015C	11/18/2021 17:47
005A	ERH1905 (RHM2254-01)	11/10/2021 15:20	Ground Water	Diesel Range Organics		SW3520C	11/15/2021 14:23	161348	SW8015C	11/17/2021 14:55
						SW3520C	11/15/2021 14:23	161348	SW8015C	11/18/2021 17:04
006A	ERH1908 (RHSF)	11/10/2021 15:35	Drinking Water	Diesel Range Organics		SW3520C	11/15/2021 14:23	161348	SW8015C	11/16/2021 16:59
007A	ERH1910 (RHSF)	11/10/2021 15:35	Drinking Water	Diesel Range Organics		SW3520C	11/15/2021 14:23	161348	SW8015C	11/16/2021 16:16
008A	ERH1916 (Post-Chlorination)	11/10/2021 16:50	Drinking Water	Diesel Range Organics		SW3520C	11/15/2021 14:23	161348	SW8015C	11/16/2021 18:25
						SW3520C	11/15/2021 14:23	161348	SW8015C	11/19/2021 20:55



Chemical Abstracts Service (CAS) Registry Numbers

Prepared by Billings, MT Branch

Client: AECOM - Honolulu

Workorder: B21111298

Project: CV18F0126/60571032.02.20.01

Report Date: 12/16/2021

Analyses

CAS No

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

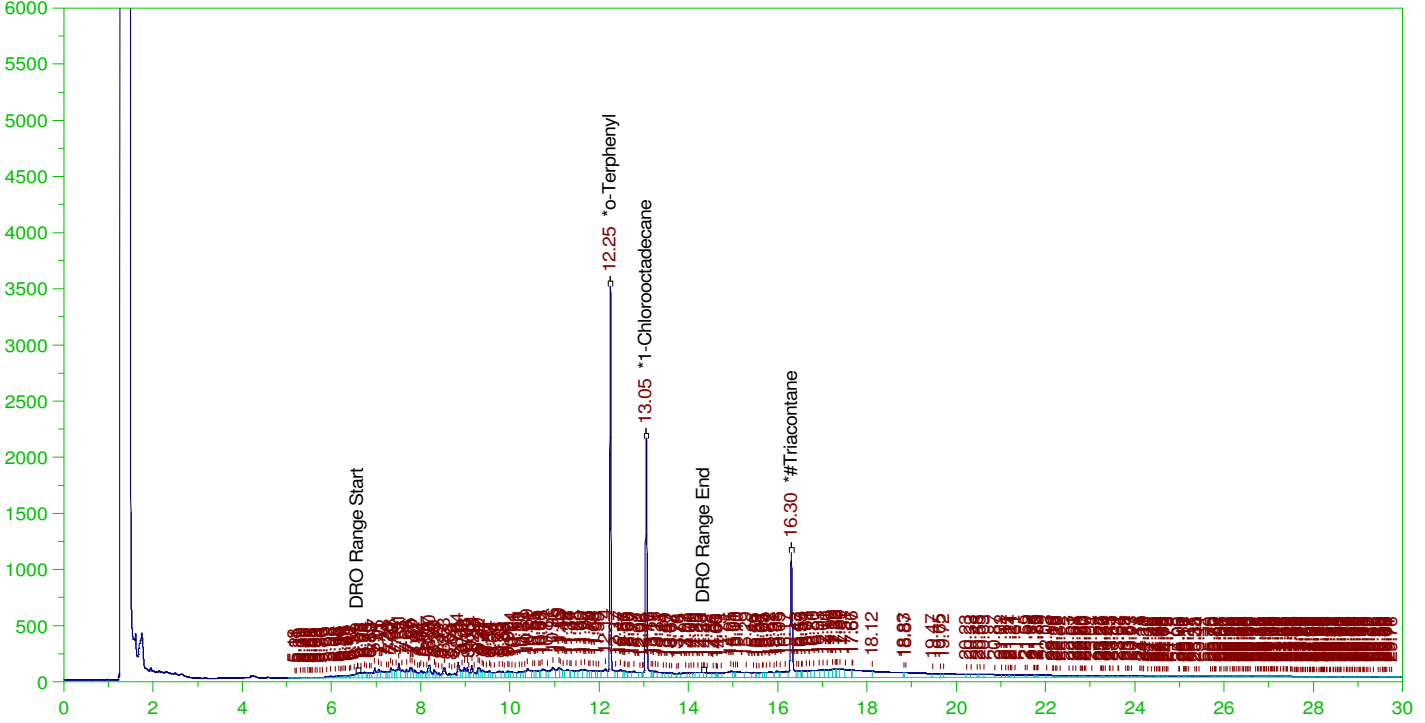
Total Extractable Hydrocarbons (SGT)

ERH1893 (RHMW01R)

G:\Org\HP5\DAT\HP5111621_b\1116HP5.0044.RAW

Batch ID: 161348

B21111298-001A ; 1116HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21111298-001A ; 1116HP5 , \$HC-8015-DRO-W,
Raw File: G:\Org\HP5\DAT\HP5111621_b\1116HP5.0044.RAW
Date & Time Acquired: 11/17/2021 4:20:33 PM
Method File: G:\Org\HP5\Methods\D3_8015-C24T-IC-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IC-24-Tri.CAL
Sample Weight: 900 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19
Rt range for Diesel Range Organics: 6.56 to 14.4

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.249	.222	.217	97.46	-
*1-Chlorooctadecane	13.051	.222	.151	68.06	-
*#Triacontane	16.303	.222	.124	55.97	-

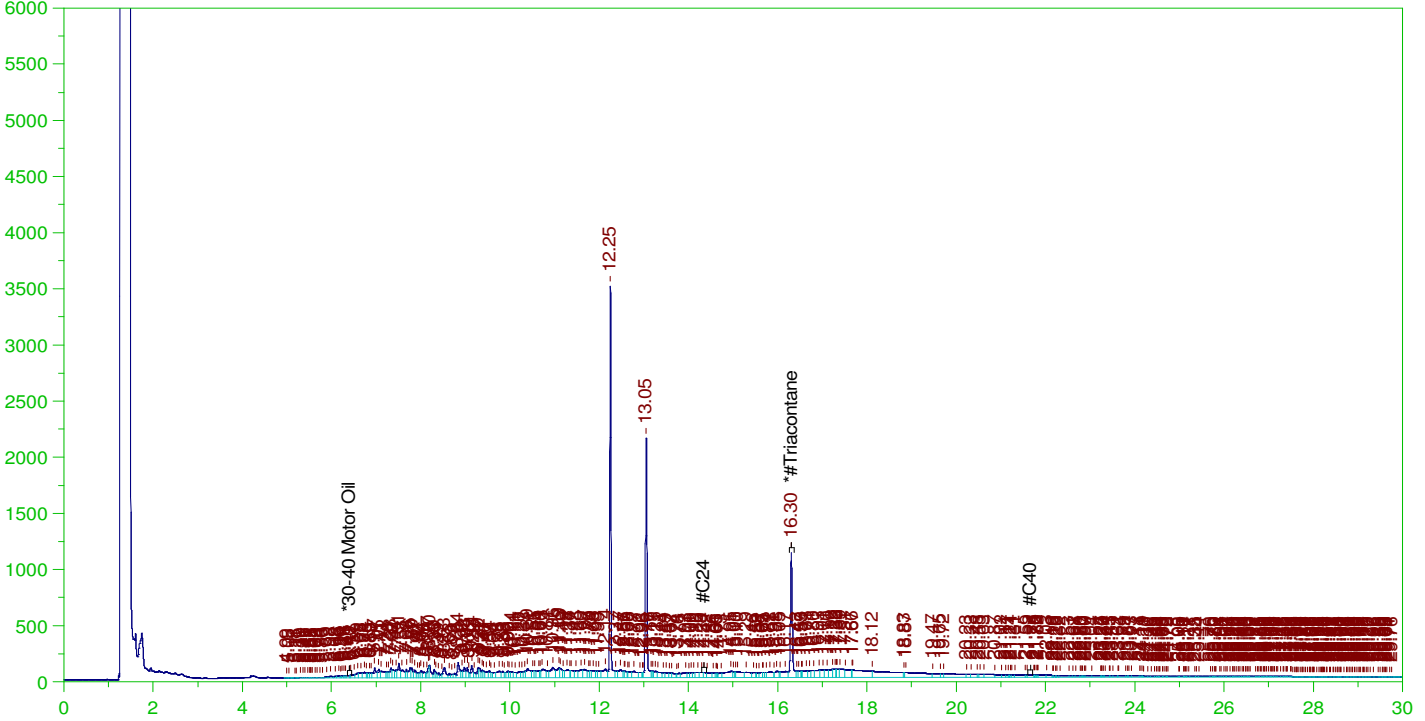
DRO Area: 2.481702E+07 DRO Amount: 0.8794787
TEH Area: 4.733594E+07 TEH Amount: 1.677516

ERH1893 (RHMW01R)

G:\org\HP5\DAT\HP5111621_b\1116HP5.0044.RAW

Batch ID: 161348

B21111298-001A ; 1116HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21111298-001A ; 1116HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5111621_b\1116HP5.0044.RAW
Date & Time Acquired: 11/17/2021 4:20:33 PM
Method File: G:\Org\HP5\Methods\D3_OROS-AE-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AE-SAMP.CAL
Sample Weight: 900 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.3 to 21.71

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.303	.556	.124	22.39	-

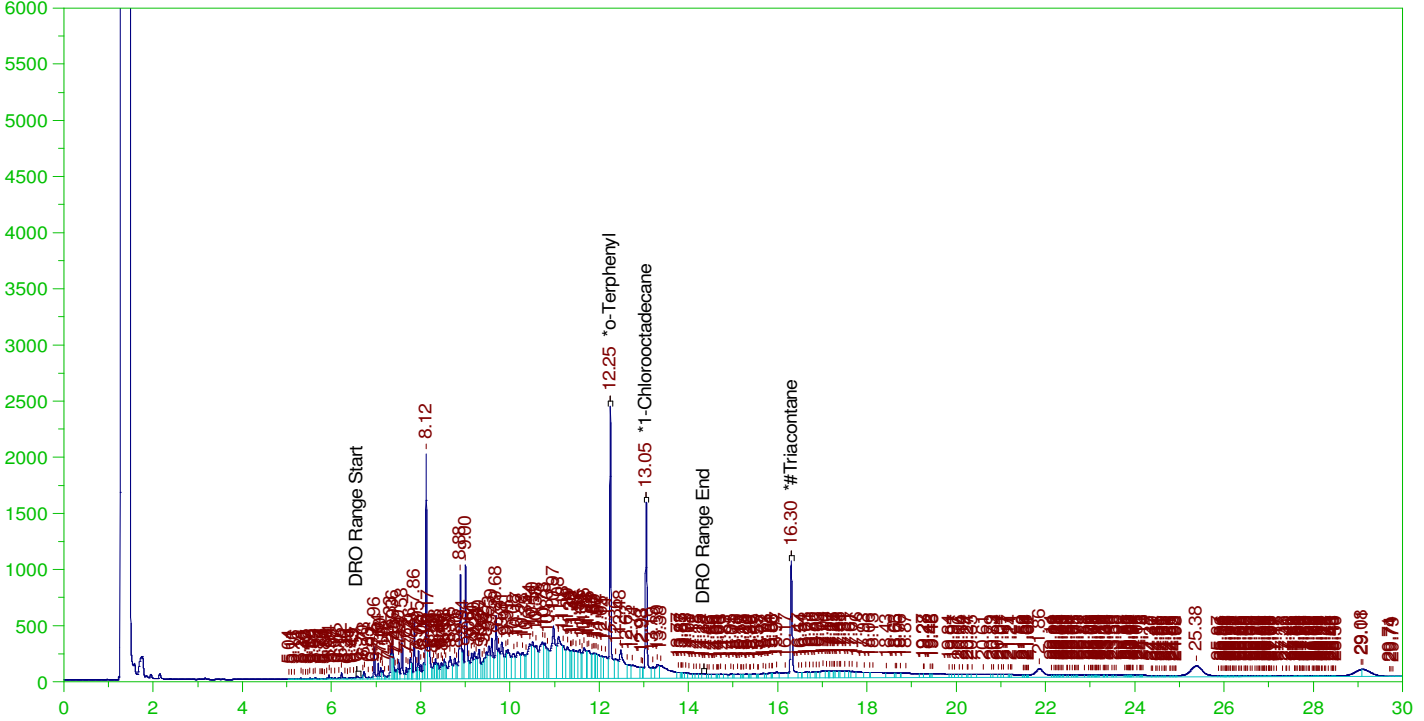
RRO Area: 1.822372E+07 RRO AMOUNT: 0.7094209

ERH1896 (RHMW02)

Batch ID: 161348

G:\org\HP5\DAT\HP5111621_b\1116HP5.0047.RAW

B21111298-002A ; 1116HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21111298-002A ; 1116HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5111621_b\1116HP5.0047.RAW
Date & Time Acquired: 11/17/2021 6:29:39 PM
Method File: G:\Org\HP5\Methods\D3_8015-C24T-IC-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IC-24-Tri.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19
Rt range for Diesel Range Organics: 6.56 to 14.4

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.246	.192	.152	79.13	-
*1-Chlorooctadecane	13.05	.192	.108	56.39	-
*#Triacontane	16.301	.192	.106	55.17	-

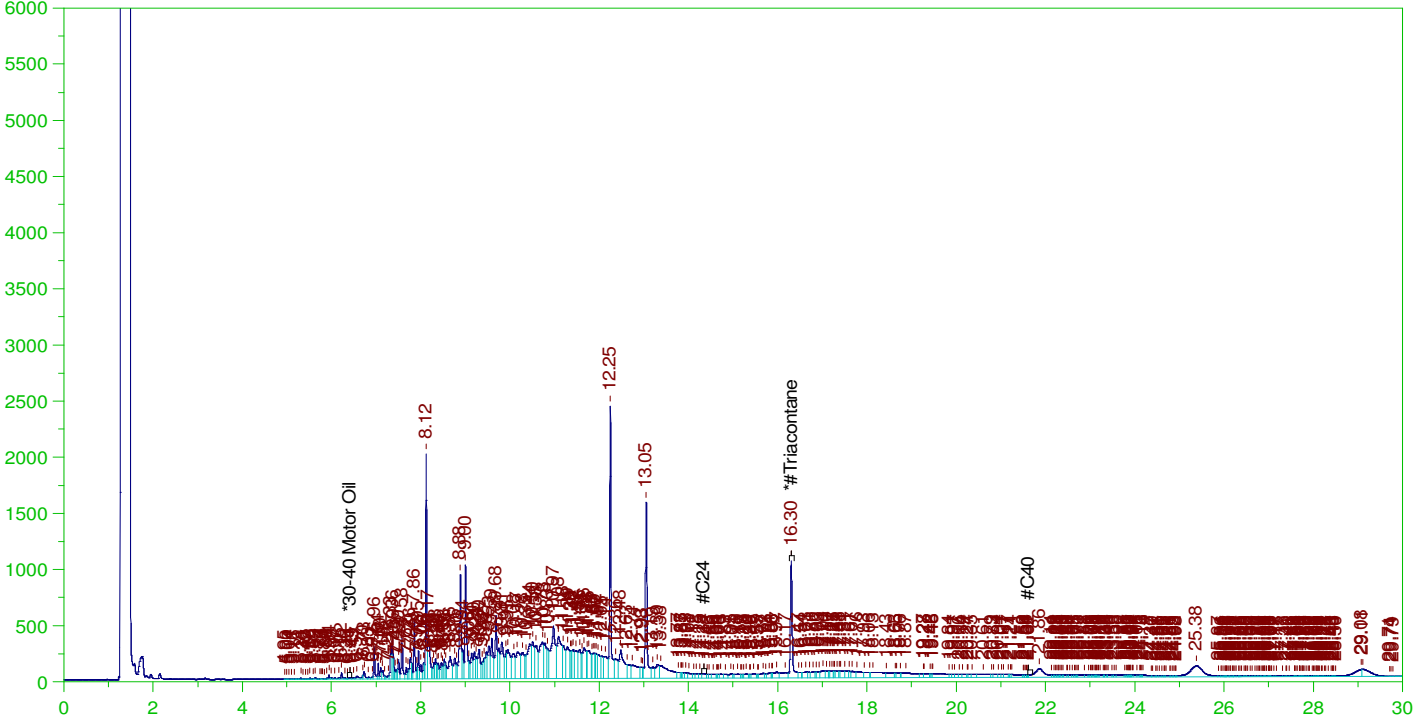
DRO Area: 7.950601E+07 DRO Amount: 2.438287
TEH Area: 1.044045E+08 TEH Amount: 3.201873

ERH1896 (RHMW02)

Batch ID: 161348

G:\org\HP5\DAT\HP5111621_b\1116HP5.0047.RAW

B21111298-002A ; 1116HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21111298-002A ; 1116HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5111621_b\1116HP5.0047.RAW
Date & Time Acquired: 11/17/2021 6:29:39 PM
Method File: G:\Org\HP5\Methods\D3_OROS-AE-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AE-SAMP.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.3 to 21.71

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.301	.481	.106	22.07

RRO Area: 1.604728E+07 RRO AMOUNT: 0.5406017

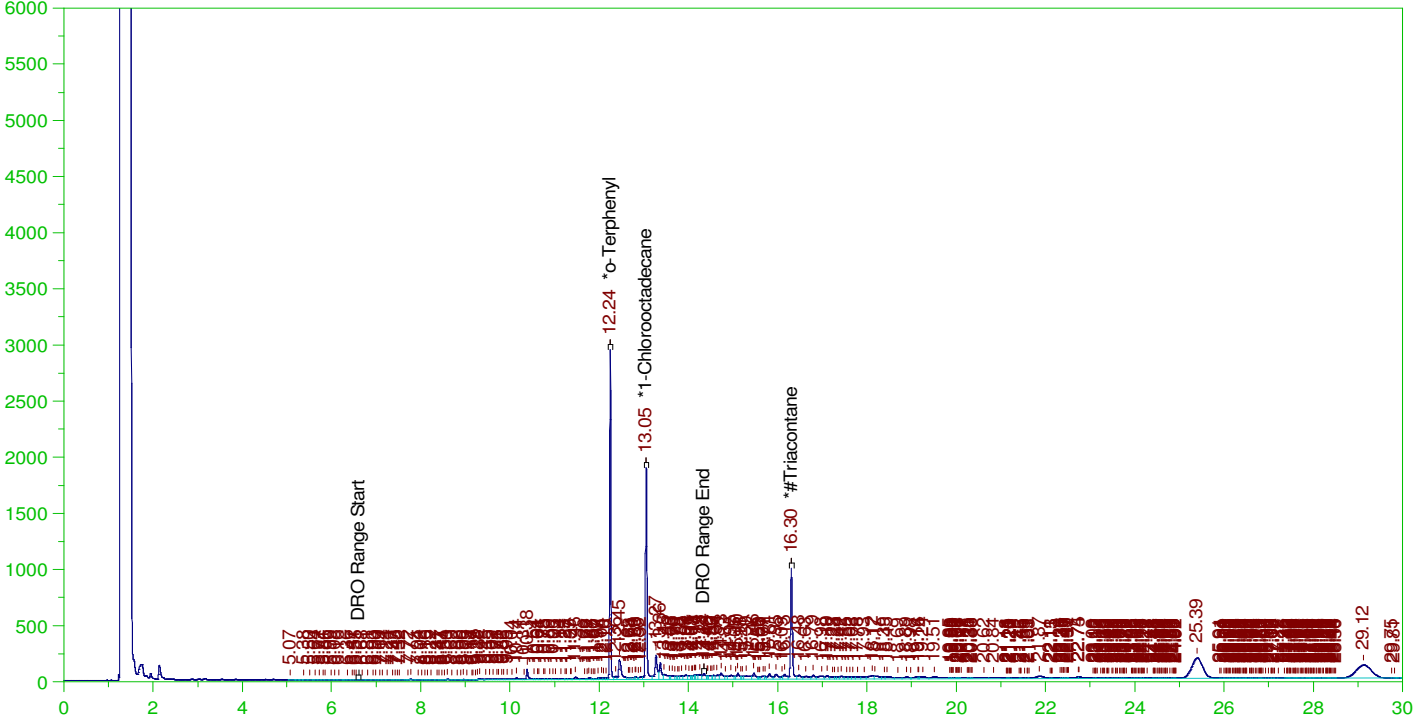


ERH1899 (RHMW03)

Batch ID: 161348

G:\Org\HP5\DAT\HP5111621_b\1116HP5.0017.RAW

B21111298-003A ;1116HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21111298-003A ;1116HP5 , \$HC-8015-DRO-W,
Raw File: G:\Org\HP5\DAT\HP5111621_b\1116HP5.0017.RAW
Date & Time Acquired: 11/16/2021 8:36:13 PM
Method File: G:\Org\HP5\Methods\D3_8015-C24T-IC-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IC-24-Tri.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.56 to 14.4

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.245	.192	.152	79.27	-
*1-Chlorooctadecane	13.049	.192	.115	59.72	-
*#Triacontane	16.304	.192	.092	47.95	-

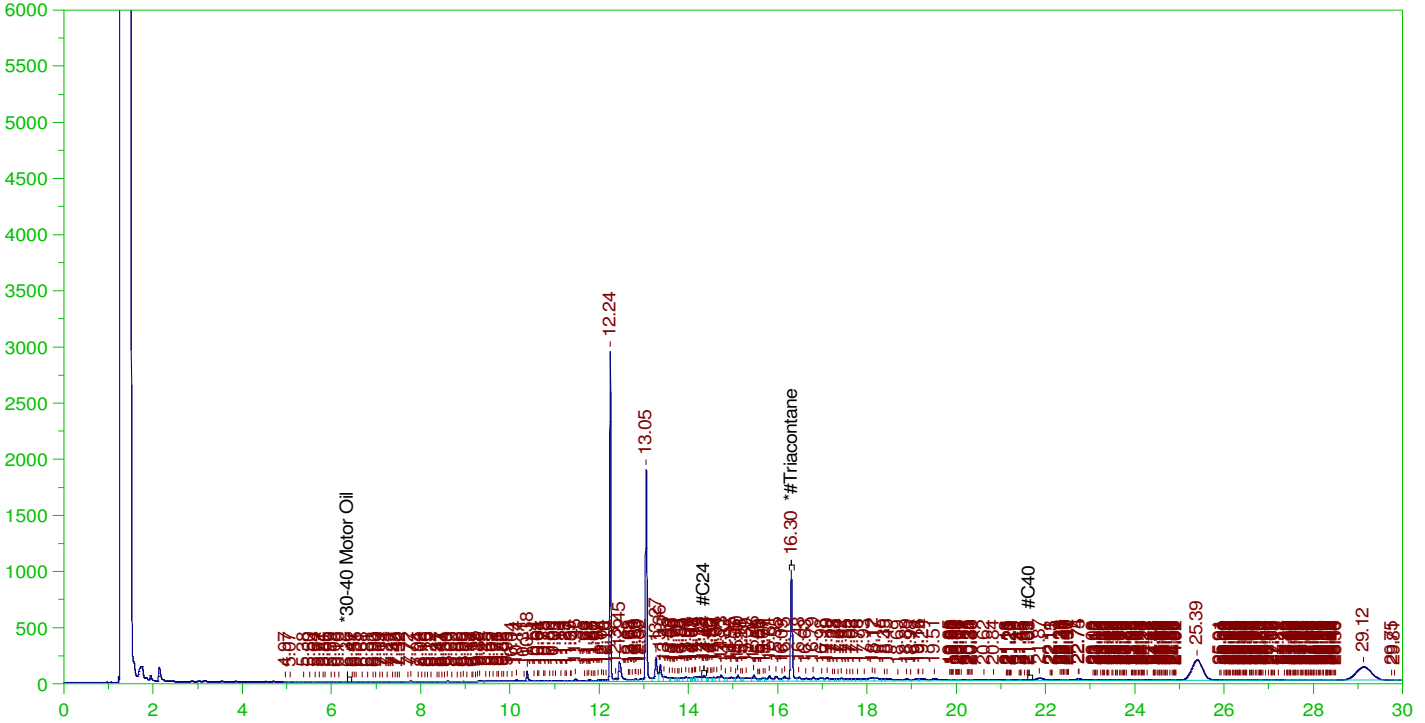
DRO Area: 6537221 DRO Amount: 0.2004832
TEH Area: 2.410662E+07 TEH Amount: 0.7393008

ERH1899 (RHMW03)

G:\org\HP5\DAT\HP5111621_b\1116HP5.0017.RAW

Batch ID: 161348

B21111298-003A ; 1116HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21111298-003A ; 1116HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5111621_b\1116HP5.0017.RAW
Date & Time Acquired: 11/16/2021 8:36:13 PM
Method File: G:\Org\HP5\Methods\D3_OROS-AE-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AE-SAMP.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.3 to 21.71

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.304	.481	.092	19.18

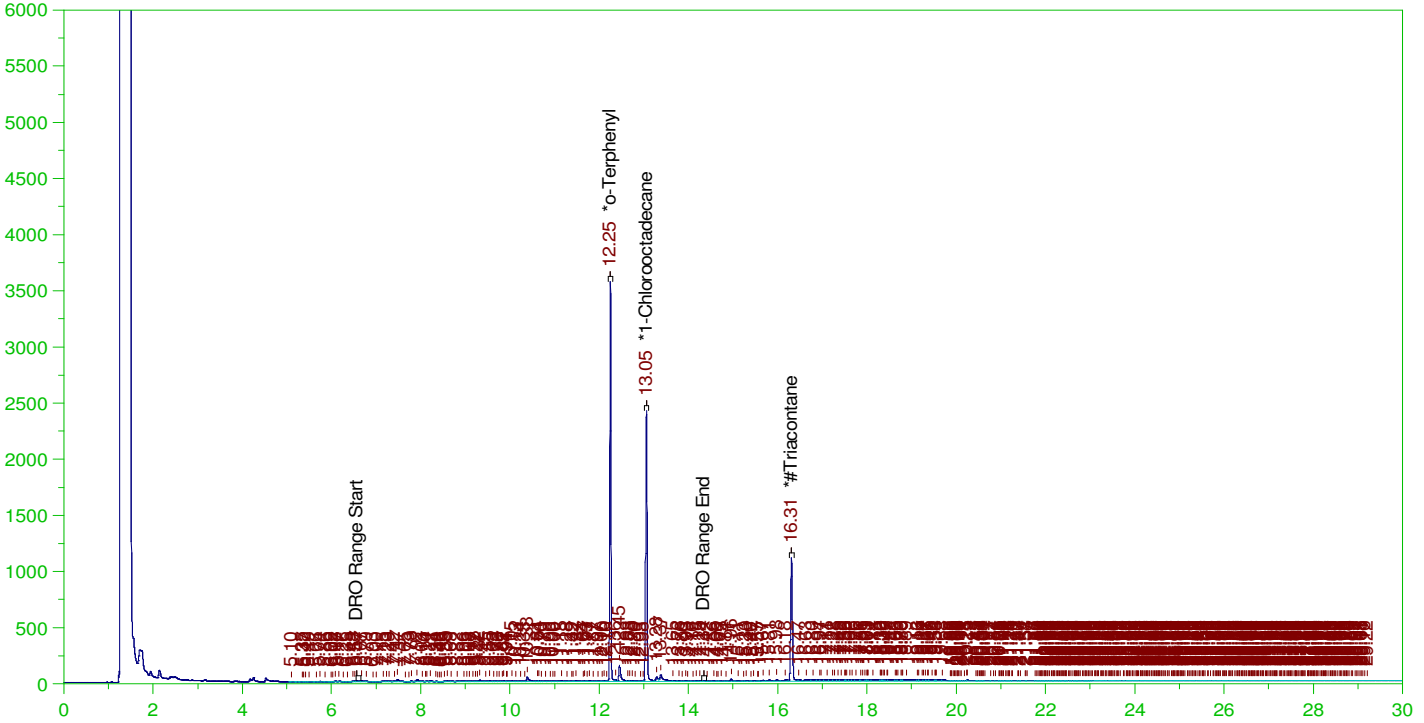
RRO Area: 9278418 RRO AMOUNT: 0.3125719

ERH1902 (RHMW05)

Batch ID: 161348

G:\org\HP5\DAT\HP5111621_b\1116HP5.0016.RAW

B21111298-004A ;1116HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21111298-004A ;1116HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5111621_b\1116HP5.0016.RAW
Date & Time Acquired: 11/16/2021 7:52:59 PM
Method File: G:\Org\HP5\Methods\D3_8015-C24T-IC-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IC-24-Tri.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19
Rt range for Diesel Range Organics: 6.56 to 14.4

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.248	.2	.187	93.36	-
*1-Chlorooctadecane	13.053	.2	.145	72.33	-
*#Triacontane	16.307	.2	.101	50.54	-

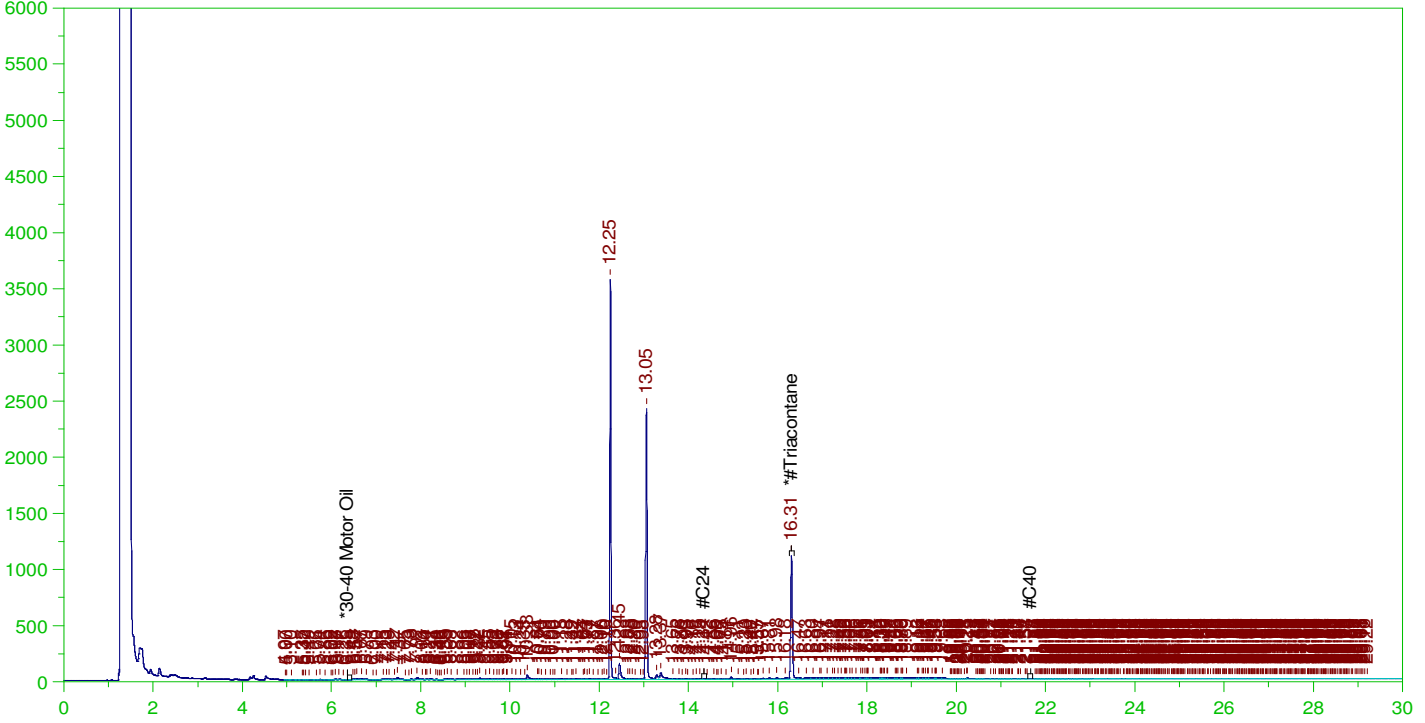
DRO Area:2695946 DRO Amount: 8.598633E-02
TEH Area:7156934 TEH Amount: 0.2282681

ERH1902 (RHMW05)

Batch ID: 161348

G:\org\HP5\DAT\HP5111621_b\1116HP5.0016.RAW

B21111298-004A ;1116HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21111298-004A ;1116HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5111621_b\1116HP5.0016.RAW
Date & Time Acquired: 11/16/2021 7:52:59 PM
Method File: G:\Org\HP5\Methods\D3_OROS-AE-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AE-SAMP.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.3 to 21.71

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.307	.5	.101	20.21

RRO Area:3216846

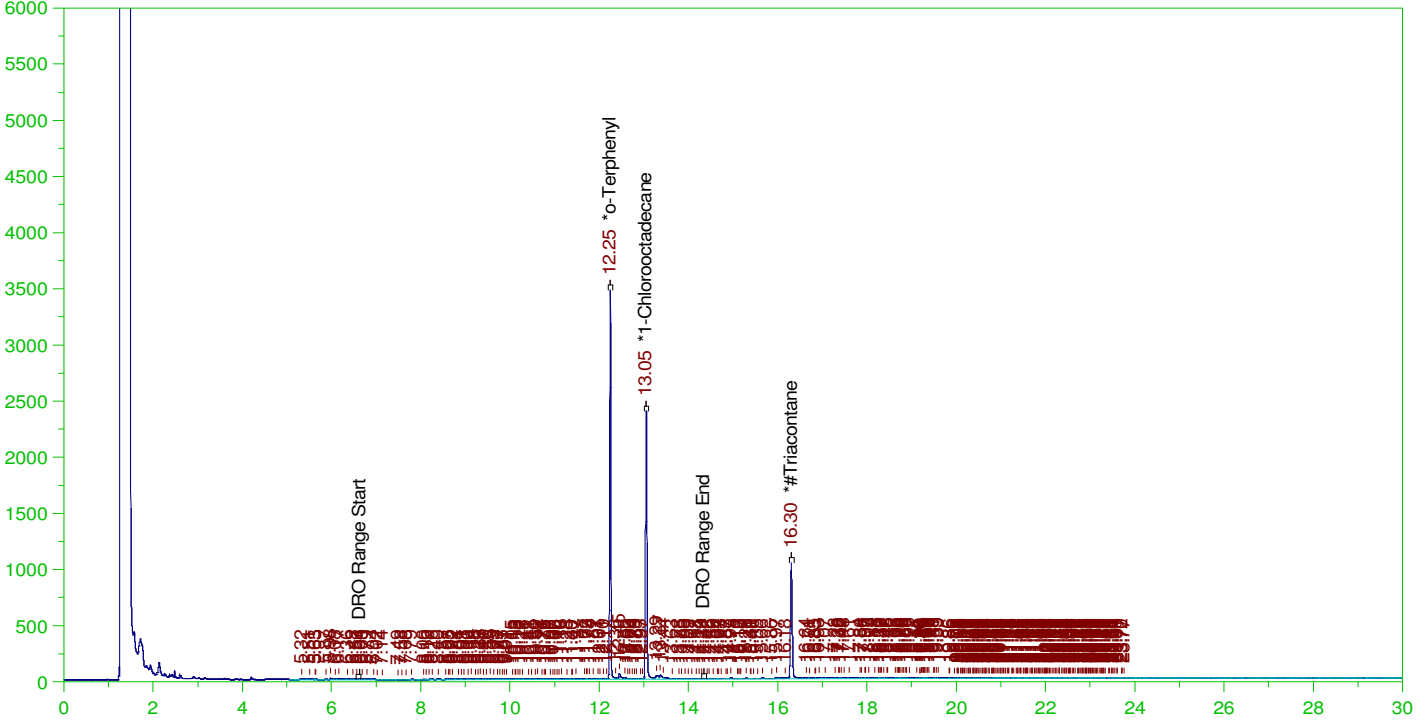
RRO AMOUNT: 0.1127041

ERH1905 (RHM2254-01)

Batch ID: 161348

G:\org\HP5\DAT\HP5111621_b\1116HP5.0042.RAW

B21111298-005A ; 1116HP5 , \$HC-8015-DRO-W, RR



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21111298-005A ; 1116HP5 , \$HC-8015-DRO-W, RR
 Raw File: G:\org\HP5\DAT\HP5111621_b\1116HP5.0042.RAW
 Date & Time Acquired: 11/17/2021 2:55:53 PM
 Method File: G:\Org\HP5\Methods\DR_8015-111642-IC-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IC-24-Tri.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19
 Rt range for Diesel Range Organics: 6.56 to 14.4

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.246	.19	.178	93.34	-
*1-Chlorooctadecane	13.051	.19	.139	72.88	-
*#Triacontane	16.303	.19	.093	48.92	-

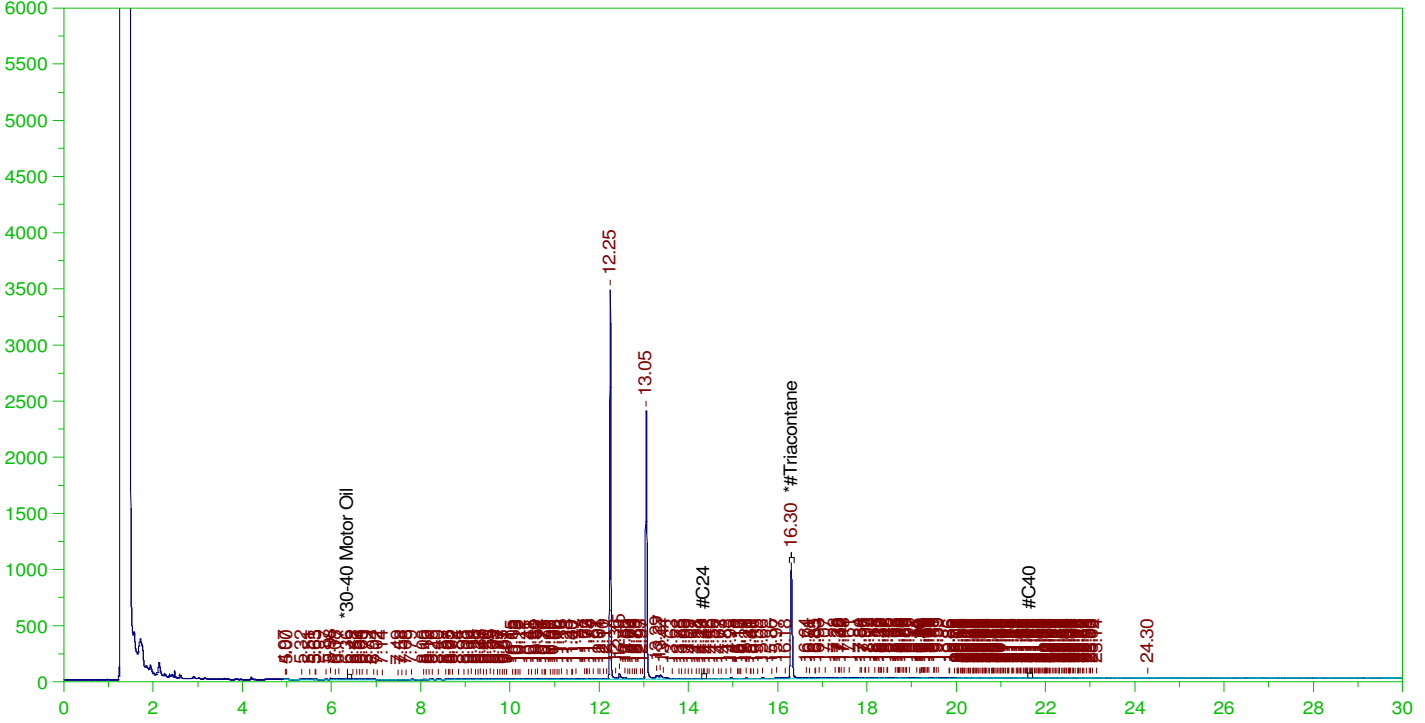
DRO Area: 1427915 DRO Amount: 4.337419E-02
 TEH Area: 4426156 TEH Amount: 0.1344484

ERH1905 (RHM2254-01)

G:\org\HP5\DAT\HP5111621_b\1116HP5.0042.RAW

Batch ID: 161348

B21111298-005A ;1116HP5 , \$HC-8015-DRO-W, RR



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21111298-005A ;1116HP5 , \$HC-8015-DRO-W, RR
 Raw File: G:\org\HP5\DAT\HP5111621_b\1116HP5.0042.RAW
 Date & Time Acquired: 11/17/2021 2:55:53 PM
 Method File: G:\Org\HP5\Methods\DR_OROS-111642-AE-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AE-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: 14.3 to 21.71

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.303	.476	.093	19.5

RRO Area:2375659

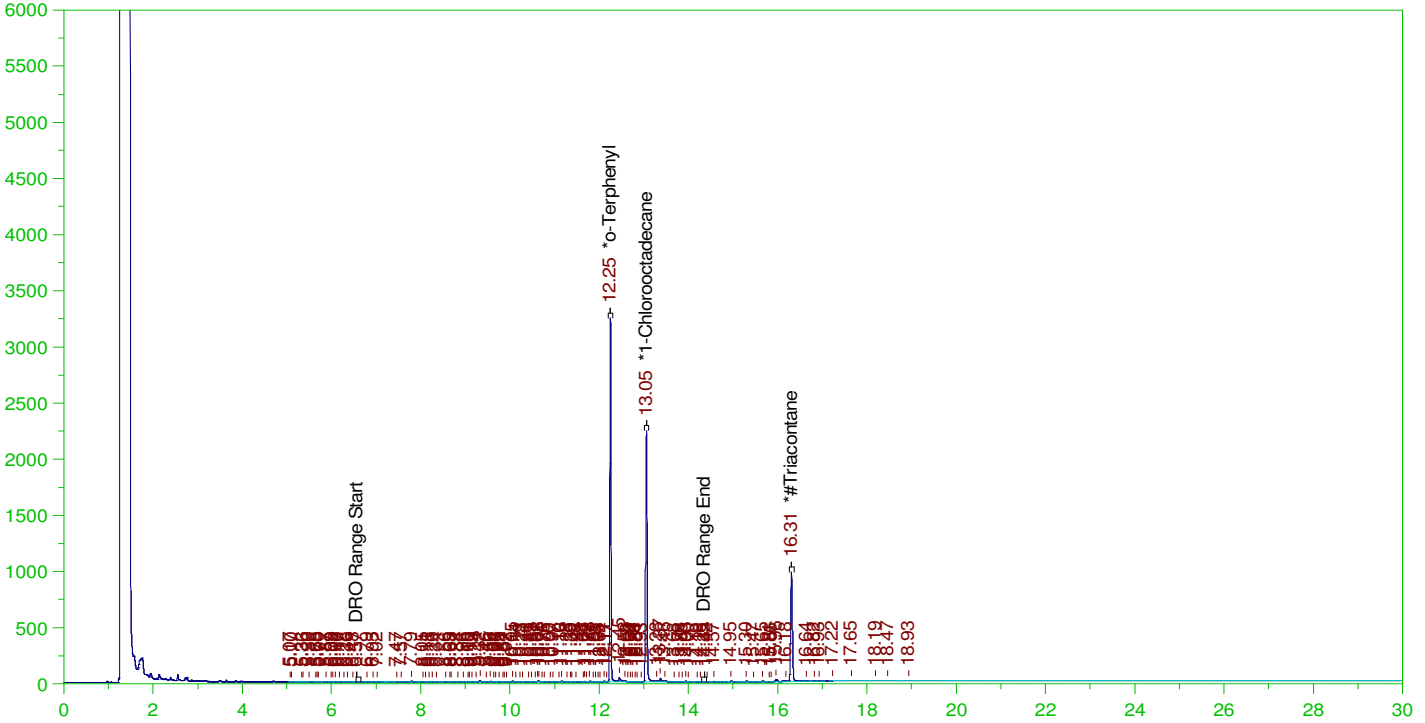
RRO AMOUNT: 7.926913E-02

ERH1908 (RHSF)

Batch ID: 161348

G:\org\HP5\DAT\HP5111621_b\1116HP5.0012.RAW

B21111298-006A ; 1116HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21111298-006A ; 1116HP5 , \$HC-8015-DRO-W,
 Raw File: G:\org\HP5\DAT\HP5111621_b\1116HP5.0012.RAW
 Date & Time Acquired: 11/16/2021 4:59:23 PM
 Method File: G:\Org\HP5\Methods\DR_8015-C24T-IC-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IC-24-Tri.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19
 Rt range for Diesel Range Organics: 6.56 to 14.4

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.249	.192	.166	86.22	-
*1-Chlorooctadecane	13.053	.192	.13	67.68	-
*#Triacontane	16.306	.192	.084	43.93	-

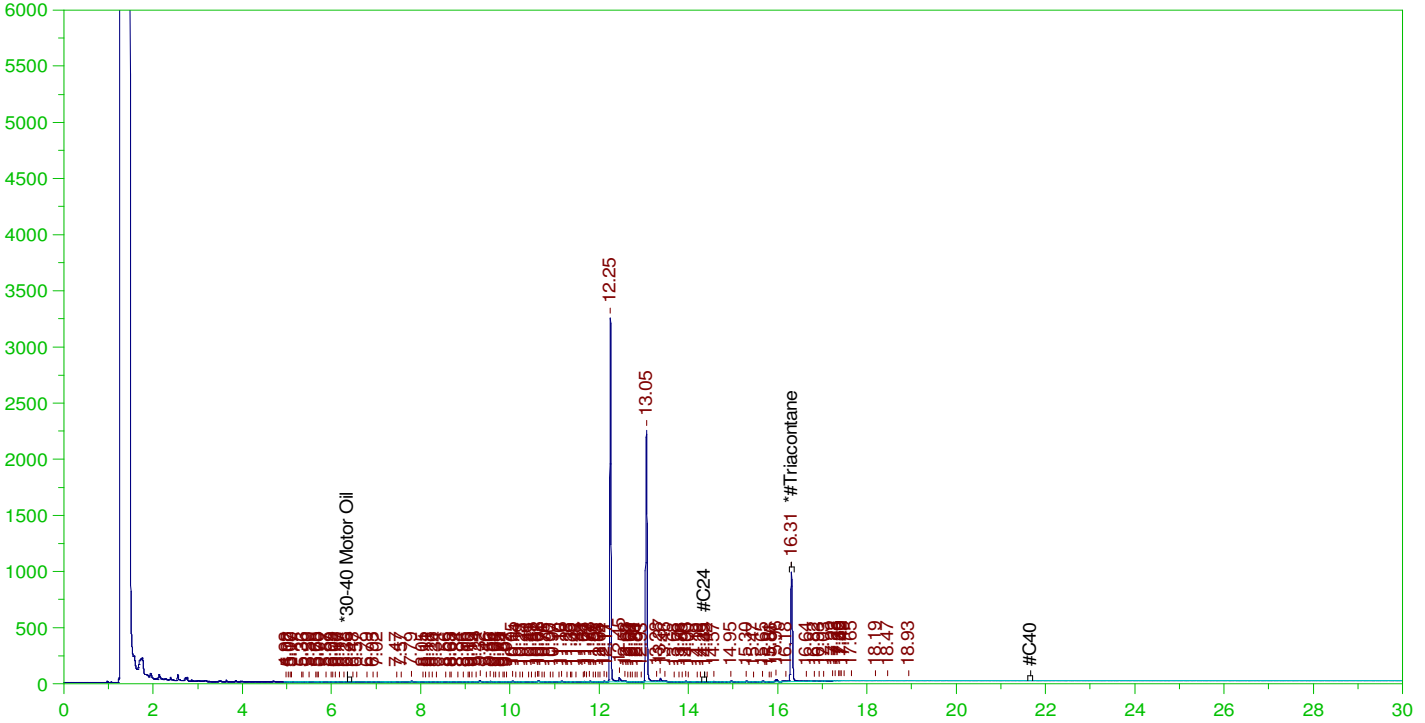
DRO Area: 911093.9 DRO Amount: 2.794139E-02
 TEH Area: 1123562 TEH Amount: 3.445736E-02

ERH1908 (RHSF)

G:\org\HP5\DAT\HP5111621_b\1116HP5.0012.RAW

Batch ID: 161348

B21111298-006A ; 1116HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21111298-006A ; 1116HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5111621_b\1116HP5.0012.RAW
Date & Time Acquired: 11/16/2021 4:59:23 PM
Method File: G:\Org\HP5\Methods\DR_OROS-AE-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AE-SAMP.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.3 to 21.71

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.306	.481	.084	17.57

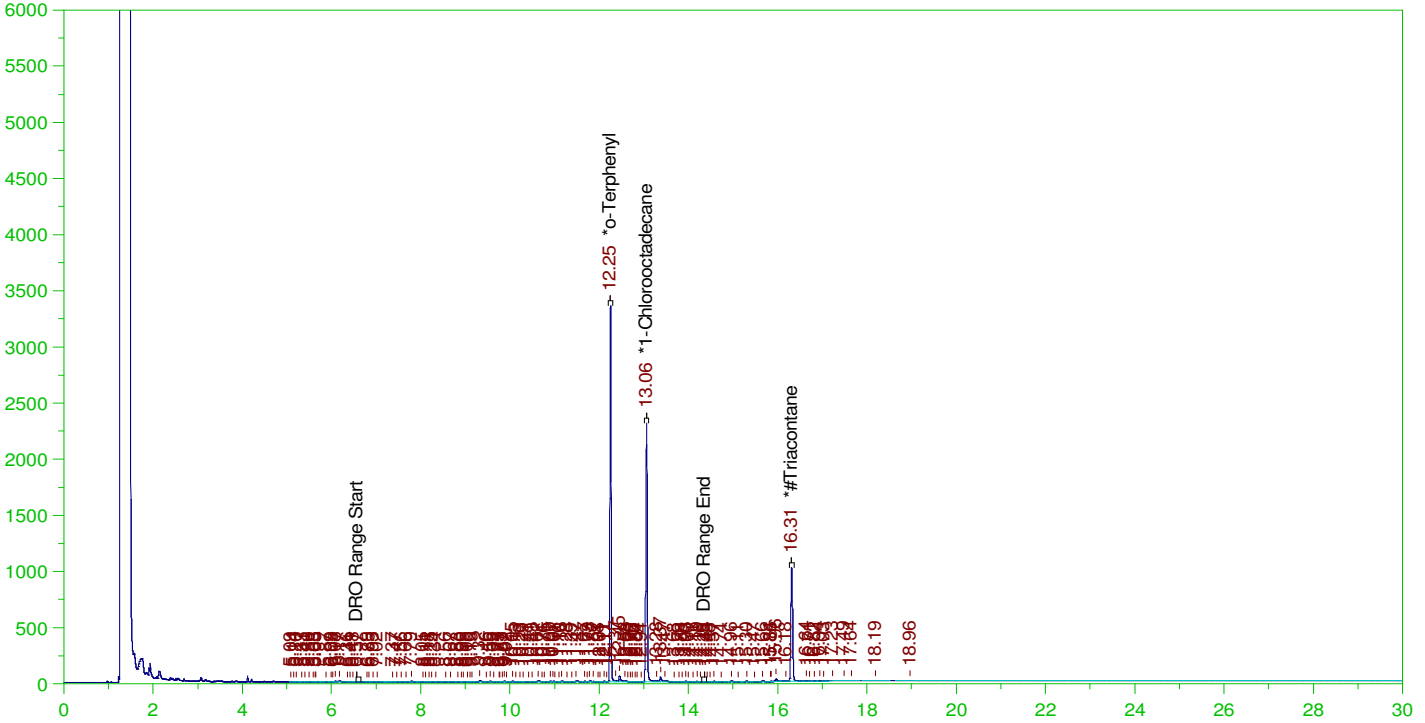
RRO Area: 160717.4 RRO AMOUNT: 5.414257E-03

ERH1910 (RHSF)

Batch ID: 161348

G:\Org\HP5\DAT\HP5111621_b\1116HP5.0011.RAW

B21111298-007A ; 1116HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21111298-007A ; 1116HP5 , \$HC-8015-DRO-W,
Raw File: G:\Org\HP5\DAT\HP5111621_b\1116HP5.0011.RAW
Date & Time Acquired: 11/16/2021 4:16:38 PM
Method File: G:\Org\HP5\Methods\DR_8015-C24T-IC-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IC-24-Tri.CAL
Sample Weight: 1010 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19
Rt range for Diesel Range Organics: 6.56 to 14.4

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.251	.198	.179	90.36	-
*1-Chlorooctadecane	13.057	.198	.14	70.61	-
*#Triacontane	16.311	.198	.09	45.47	-

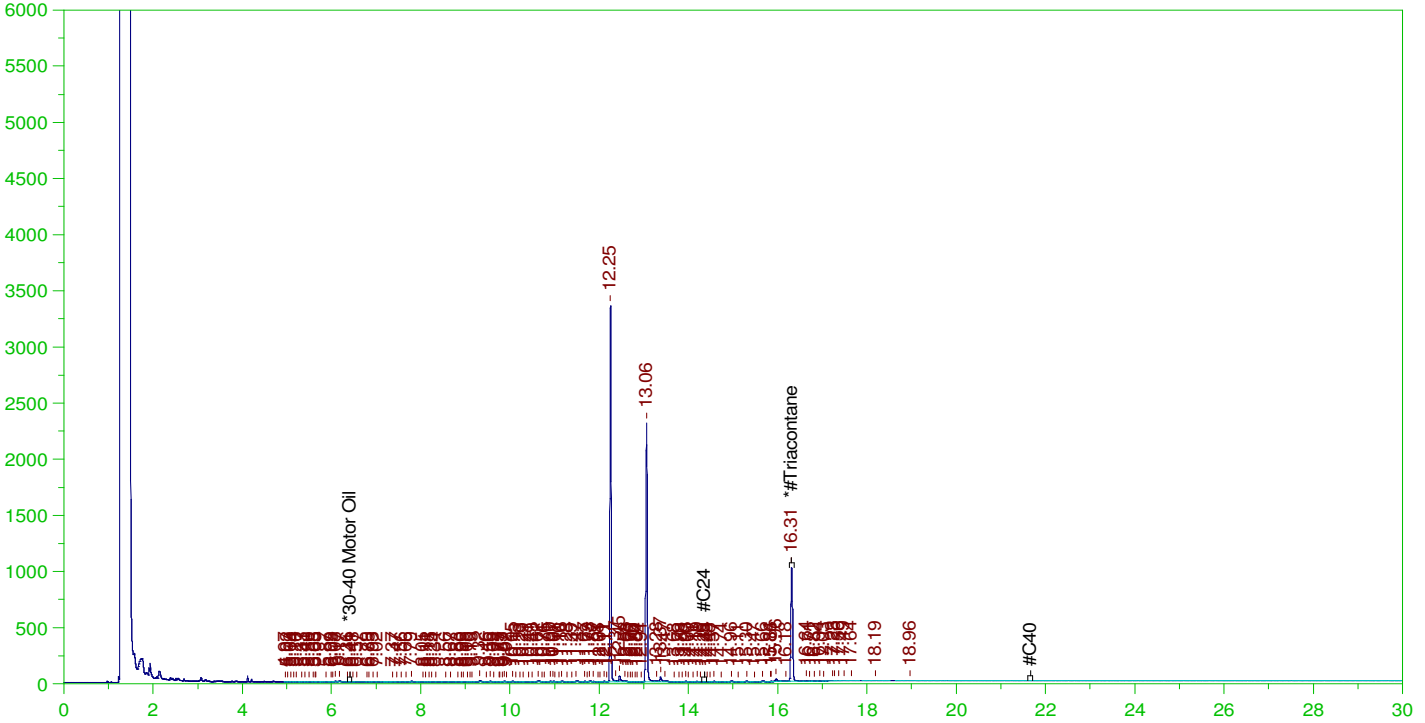
DRO Area: 1091786 DRO Amount: 3.447738E-02
TEH Area: 1375046 TEH Amount: 4.342243E-02

ERH1910 (RHSF)

G:\org\HP5\DAT\HP5111621_b\1116HP5.0011.RAW

Batch ID: 161348

B21111298-007A ; 1116HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21111298-007A ; 1116HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5111621_b\1116HP5.0011.RAW
Date & Time Acquired: 11/16/2021 4:16:38 PM
Method File: G:\Org\HP5\Methods\DR_OROS-AE-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AE-SAMP.CAL
Sample Weight: 1010 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.3 to 21.71

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.311	.495	.09	18.19	-

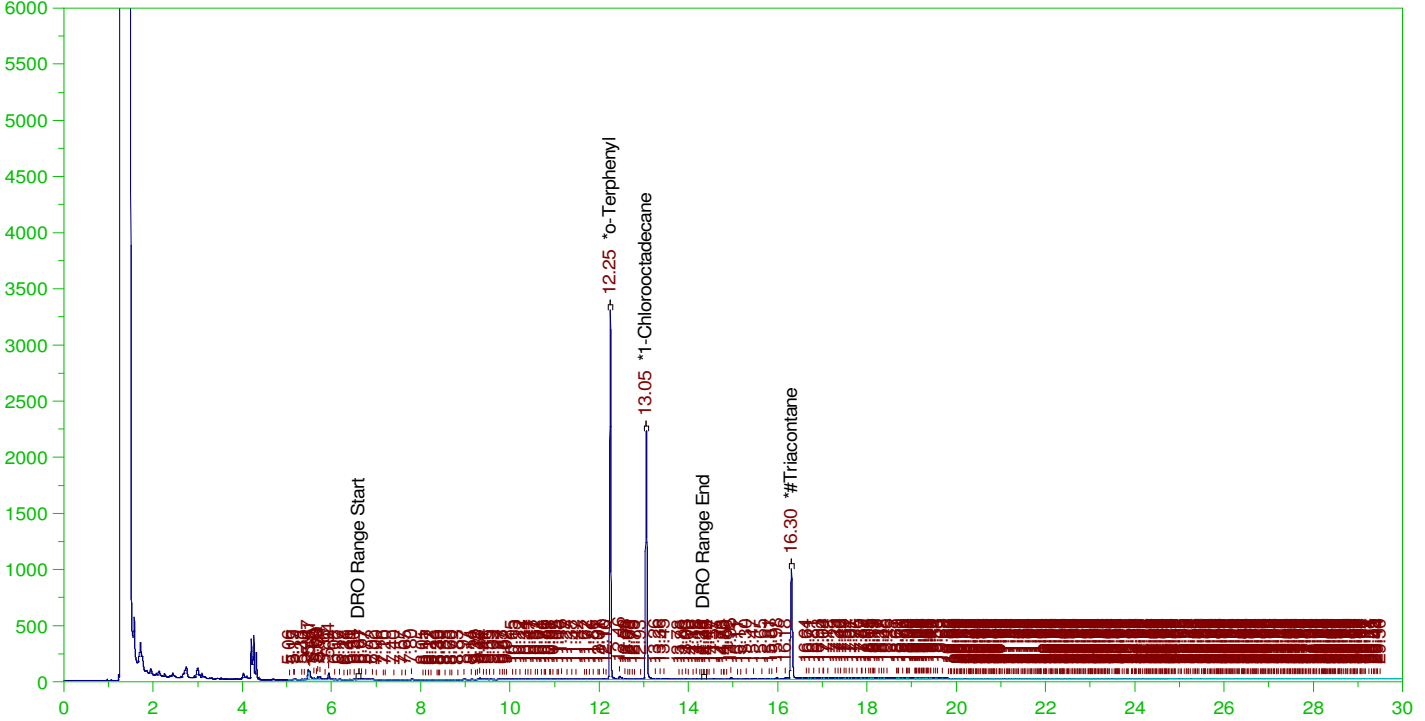
RRO Area: 214217.8 RRO AMOUNT: 7.430938E-03

ERH1916 (Post-Chlorination)

Batch ID: 161348

G:\org\HP5\DAT\HP5111621_b\1116HP5.0014.RAW

B21111298-008A ; 1116HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21111298-008A ; 1116HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5111621_b\1116HP5.0014.RAW
Date & Time Acquired: 11/16/2021 6:25:49 PM
Method File: G:\Org\HP5\Methods\D3_8015-C24T-IC-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IC-24-Tri.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.56 to 14.4

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.247	.19	.167	87.68	-
*1-Chlorooctadecane	13.051	.19	.127	66.7	-
*#Triacontane	16.305	.19	.089	46.76	-

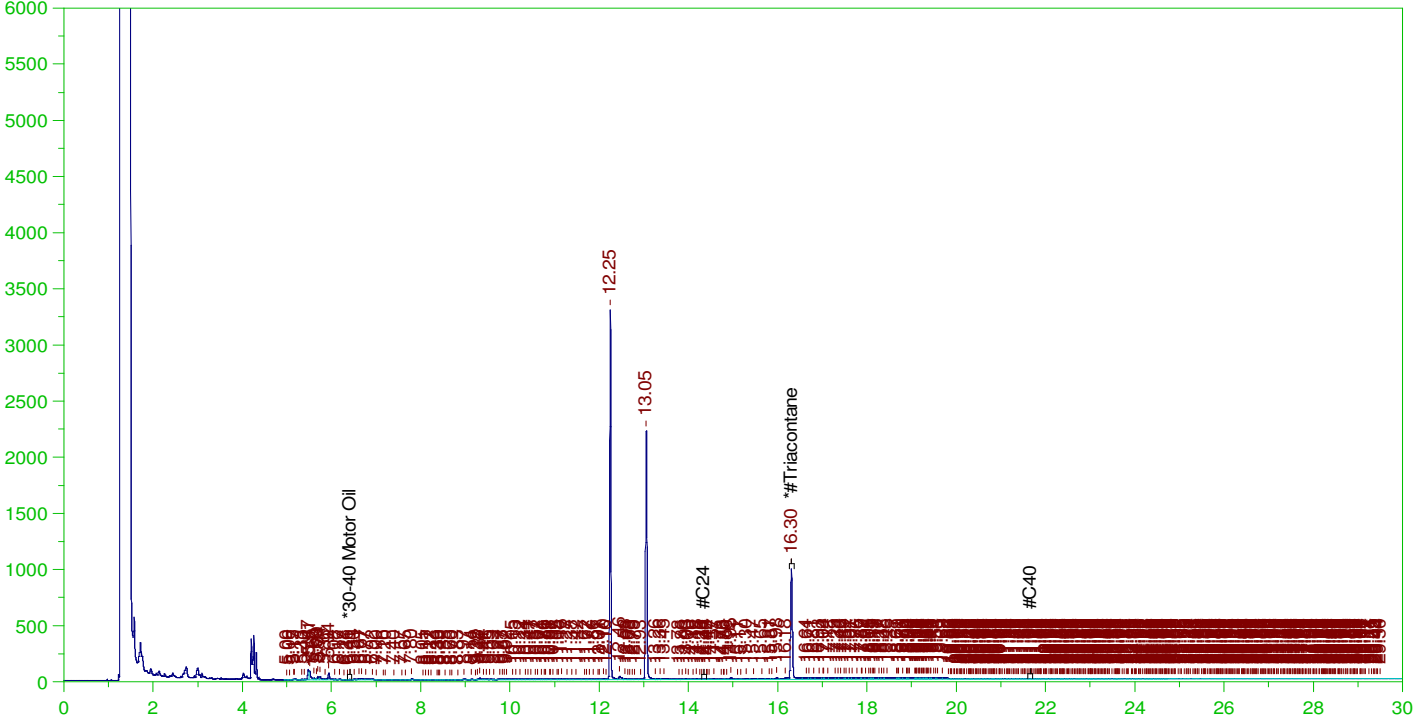
DRO Area: 1488738 DRO Amount: 4.522172E-02
TEH Area: 7405268 TEH Amount: 0.2249416

ERH1916 (Post-Chlorination)

Batch ID: 161348

G:\org\HP5\DAT\HP5111621_b\1116HP5.0014.RAW

B21111298-008A ; 1116HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21111298-008A ; 1116HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5111621_b\1116HP5.0014.RAW
Date & Time Acquired: 11/16/2021 6:25:49 PM
Method File: G:\Org\HP5\Methods\D3_OROS-AE-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AE-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: 14.3 to 21.71

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.305	.476	.089	18.7

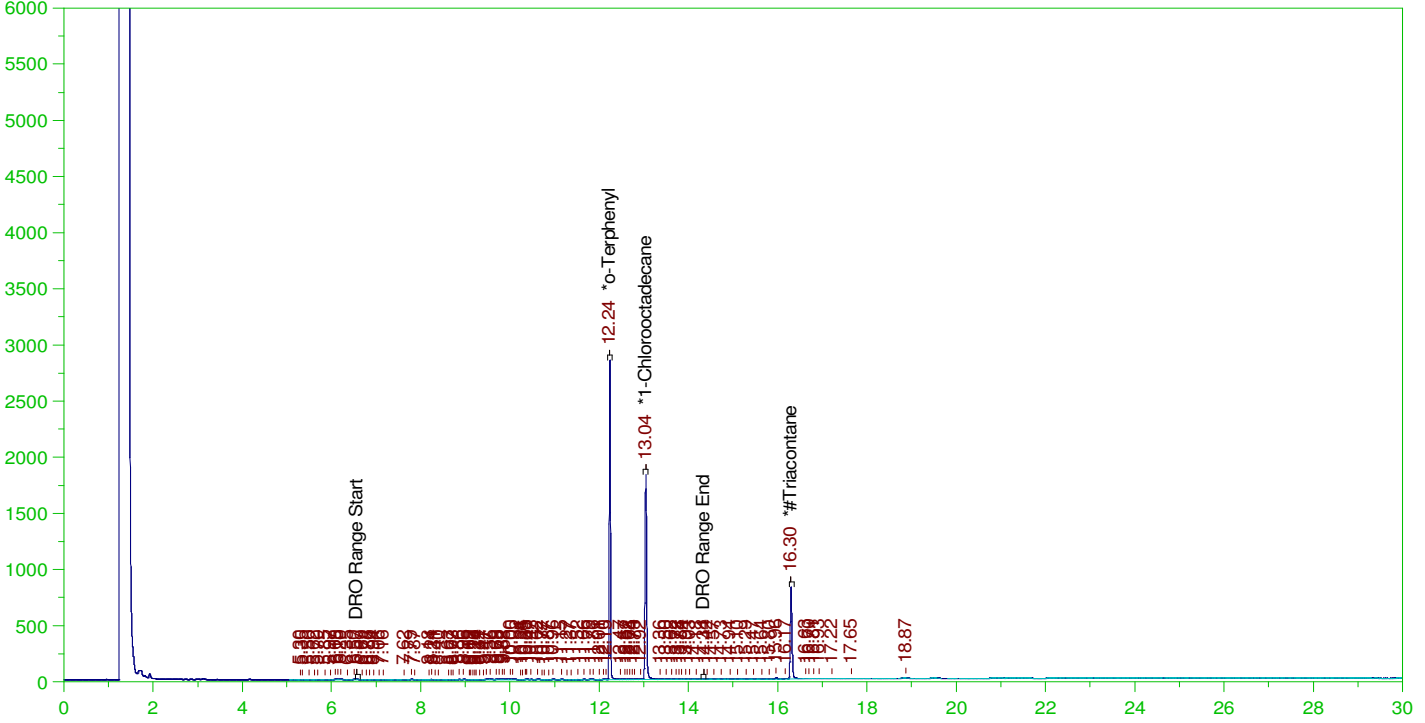
RRO Area:3661775 RRO AMOUNT: 0.1221833

ERH1916 (Post-Chlorination)

G:\org\HP5\DAT\HP5111821_b\1118HP5.0040.RAW

Batch ID: 161348

B21111298-008A ; 1118HP5 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21111298-008A ; 1118HP5 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP5\DAT\HP5111821_b\1118HP5.0040.RAW
 Date & Time Acquired: 11/19/2021 8:55:06 PM
 Method File: G:\Org\HP5\Methods\DR_8015-C24T-ID-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102ID-24-Tri.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.54 to 14.39

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.236	.19	.148	77.62	-
*1-Chlorooctadecane	13.041	.19	.114	59.6	-
*#Triacontane	16.298	.19	.074	38.85	-

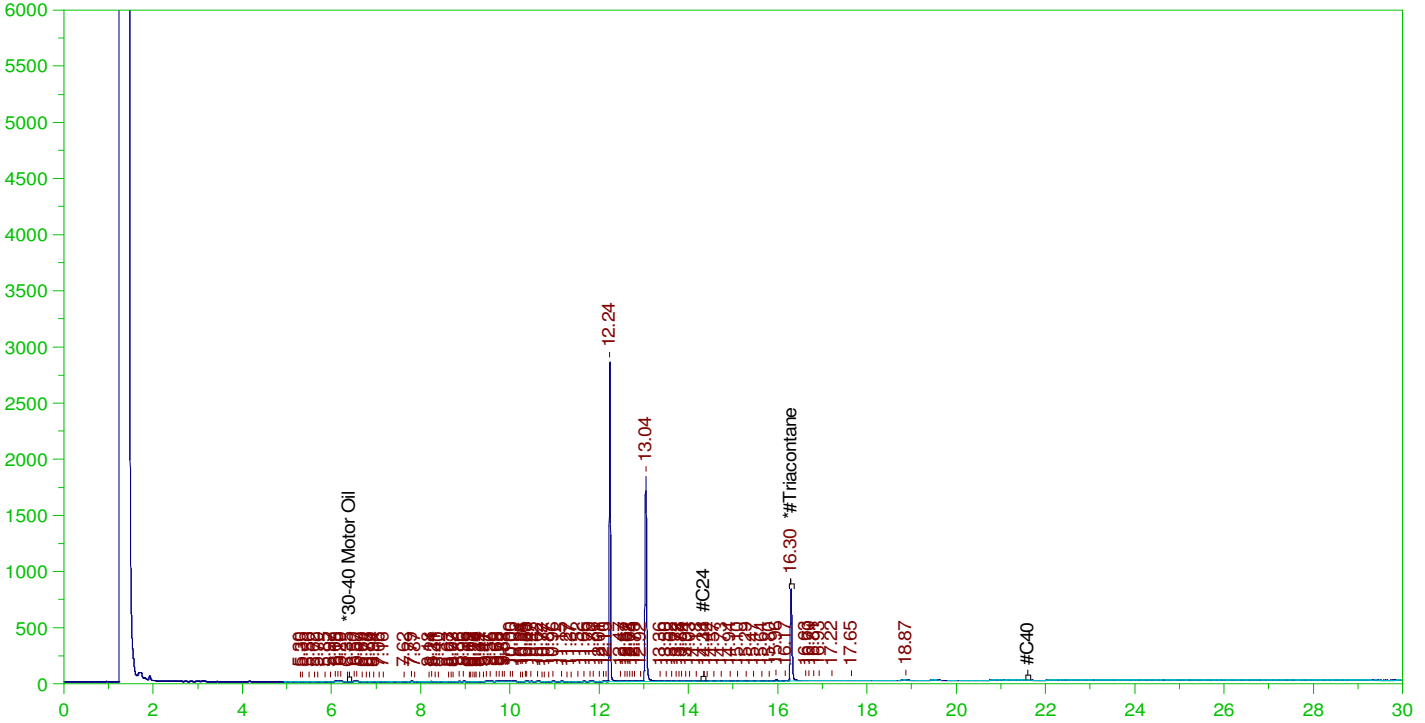
DRO Area: 294411.6 DRO Amount: 8.943013E-03
 TEH Area: 488607 TEH Amount: 1.484187E-02

ERH1916 (Post-Chlorination)

G:\org\HP5\DAT\HP5111821_b\1118HP5.0040.RAW

Batch ID: 161348

B21111298-008A ; 1118HP5 , \$HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21111298-008A ; 1118HP5 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP5\DAT\HP5111821_b\1118HP5.0040.RAW
 Date & Time Acquired: 11/19/2021 8:55:06 PM
 Method File: G:\Org\HP5\Methods\DR_OROS-AF-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AF-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: 14.29 to 21.66

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.298	.476	.074	15.54

RRO Area:134216.4 RRO AMOUNT: 4.478428E-03

ERH1893 (RHMW01R)

Batch ID: 161348

G:\Org\HP5\DAT\HP5111821_b\1118HP5.0020.RAW

B21111298-001A ; 1118HP5 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21111298-001A ; 1118HP5 , \$HC-8015-DRO-W, SGT
 Raw File: G:\Org\HP5\DAT\HP5111821_b\1118HP5.0020.RAW
 Date & Time Acquired: 11/18/2021 10:48:39 PM
 Method File: G:\Org\HP5\Methods\DR_8015-C24T-ID-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102ID-24-Tri.CAL
 Sample Weight: 900 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.54 to 14.39

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.239	.222	.17	76.44	-
*1-Chlorooctadecane	13.045	.222	.116	52.38	-
*#Triacontane	16.303	.222	.082	36.84	-

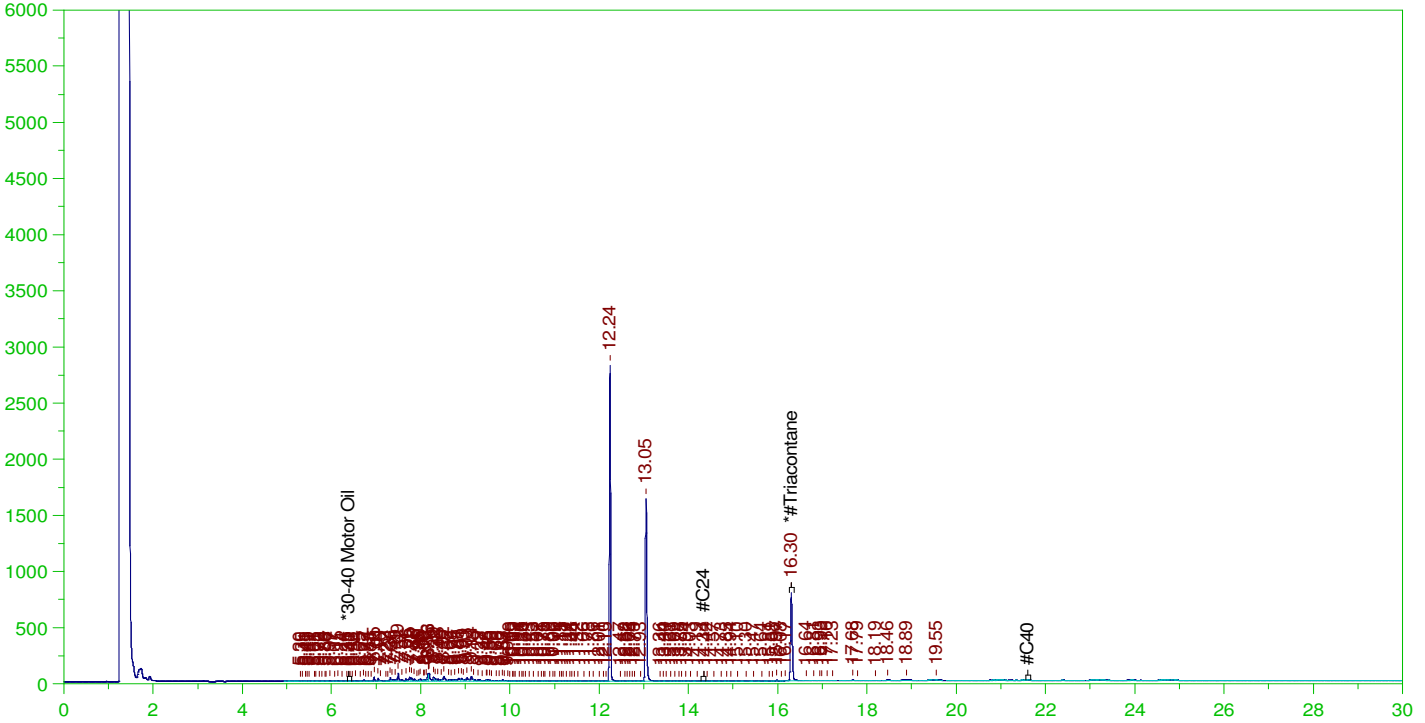
DRO Area: 3212647 DRO Amount: 0.1138515
 TEH Area: 3465239 TEH Amount: 0.122803

ERH1893 (RHMW01R)

Batch ID: 161348

G:\org\HP5\DAT\HP5111821_b\1118HP5.0020.RAW

B21111298-001A ; 1118HP5 , \$HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21111298-001A ; 1118HP5 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP5\DAT\HP5111821_b\1118HP5.0020.RAW
 Date & Time Acquired: 11/18/2021 10:48:39 PM
 Method File: G:\Org\HP5\Methods\DR_OROS-AF-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AF-SAMP.CAL
 Sample Weight: 900 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
 Rt range for Residual Range Organics: 14.29 to 21.66

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.303	.556	.082	14.74

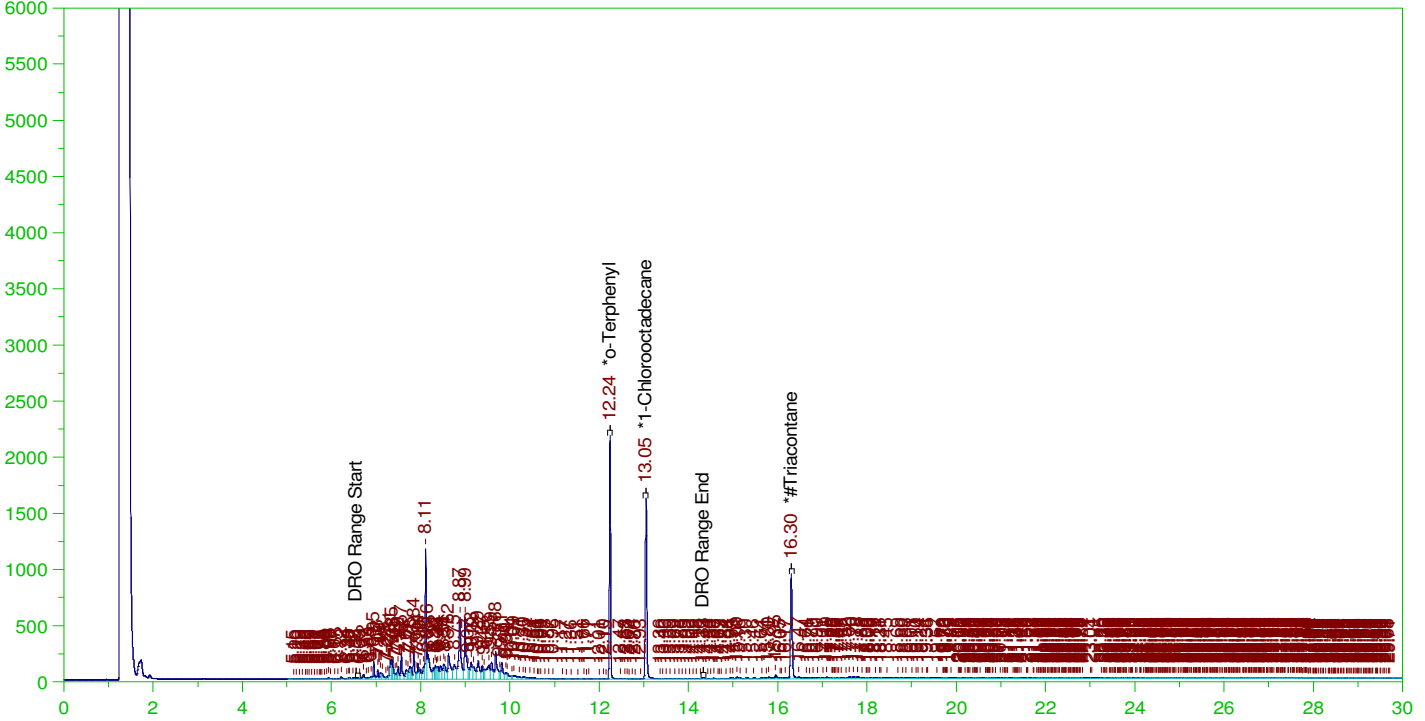
RRO Area: 147438.4 RRO AMOUNT: 5.739543E-03

ERH1896 (RHMW02)

Batch ID: 161348

G:\org\HP5\DAT\HP5111821_b\1118HP5.0023.RAW

B21111298-002A ; 1118HP5 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21111298-002A ; 1118HP5 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP5\DAT\HP5111821_b\1118HP5.0023.RAW
 Date & Time Acquired: 11/19/2021 12:57:17 AM
 Method File: G:\Org\HP5\Methods\D3_8015-C24T-ID-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102Id-24-Tri.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.54 to 14.39

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.238	.192	.113	58.89	-
*1-Chlorooctadecane	13.045	.192	.099	51.42	-
*#Triacontane	16.302	.192	.085	44.2	-

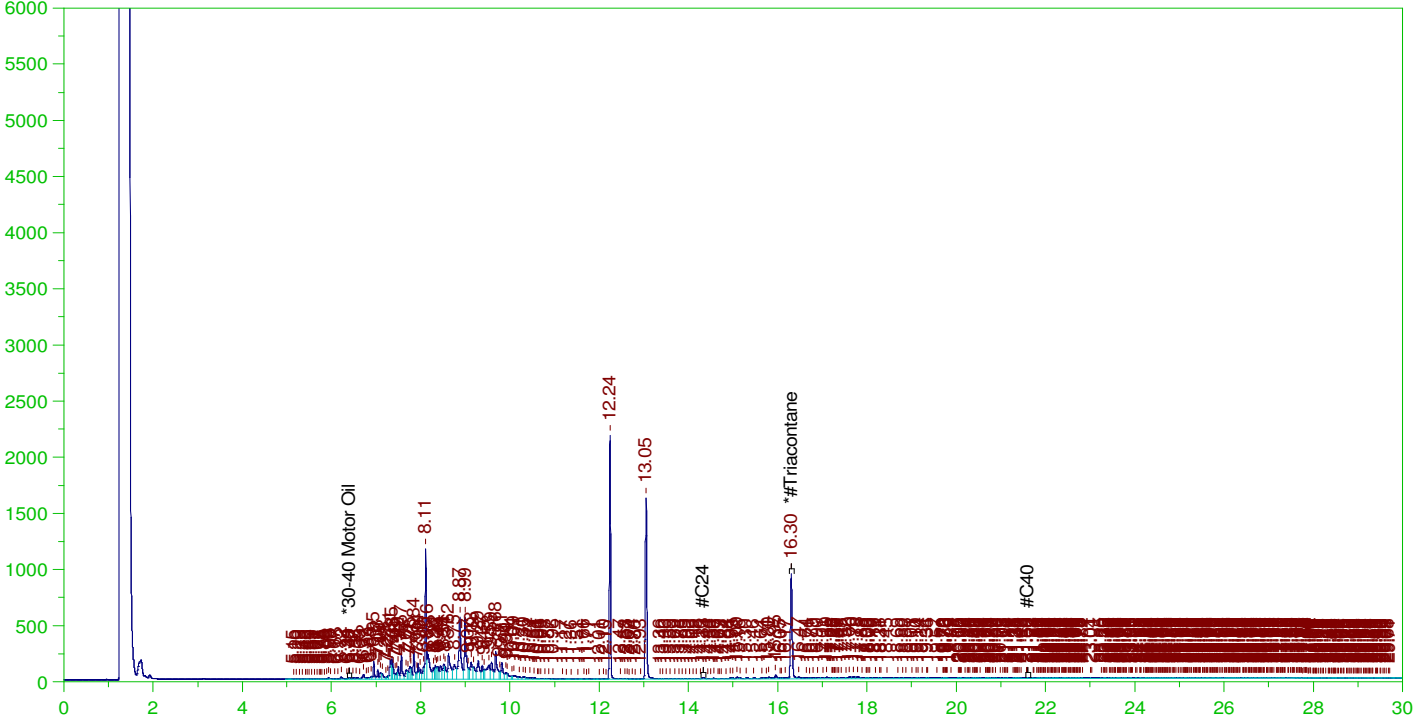
DRO Area: 2.184787E+07 DRO Amount: 0.6700296
 TEH Area: 2.775843E+07 TEH Amount: 0.8512943

ERH1896 (RHMW02)

Batch ID: 161348

G:\org\HP5\DAT\HP5111821_b\1118HP5.0023.RAW

B21111298-002A ; 1118HP5 , \$HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21111298-002A ; 1118HP5 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP5\DAT\HP5111821_b\1118HP5.0023.RAW
 Date & Time Acquired: 11/19/2021 12:57:17 AM
 Method File: G:\Org\HP5\Methods\D3_OROS-AF-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AF-SAMP.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
 Rt range for Residual Range Organics: 14.29 to 21.66

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.302	.481	.085	17.68

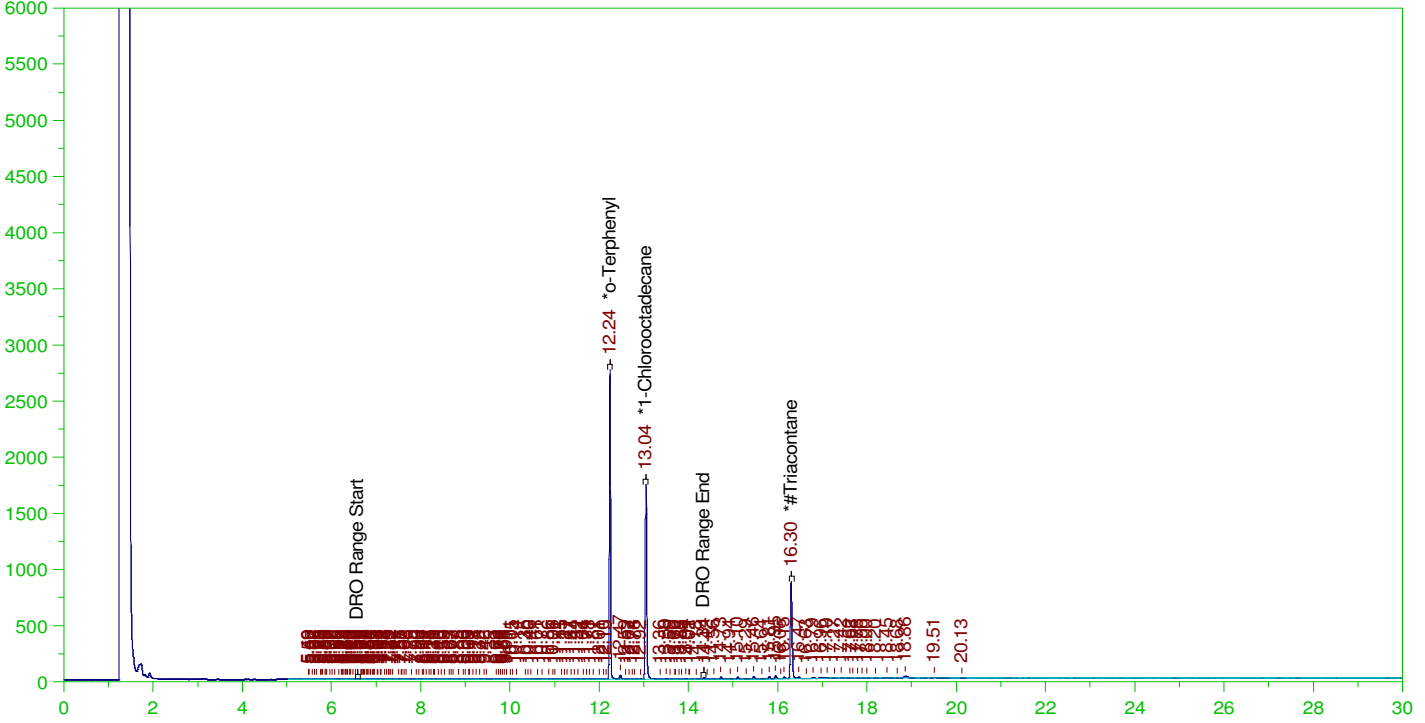
RRO Area:3834421 RRO AMOUNT: 0.1291742

ERH1899 (RHMW03)

Batch ID: 161348

G:\org\HP5\DAT\HP5111821_b\1118HP5.0014.RAW

B21111298-003A ; 1118HP5 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21111298-003A ; 1118HP5 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP5\DAT\HP5111821_b\1118HP5.0014.RAW
 Date & Time Acquired: 11/18/2021 6:30:50 PM
 Method File: G:\Org\HP5\Methods\DR_8015-C24T-ID-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102ID-24-Tri.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.54 to 14.39

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.238	.192	.145	75.32	-
*1-Chlorooctadecane	13.044	.192	.106	55.17	-
*#Triacontane	16.3	.192	.078	40.46	-

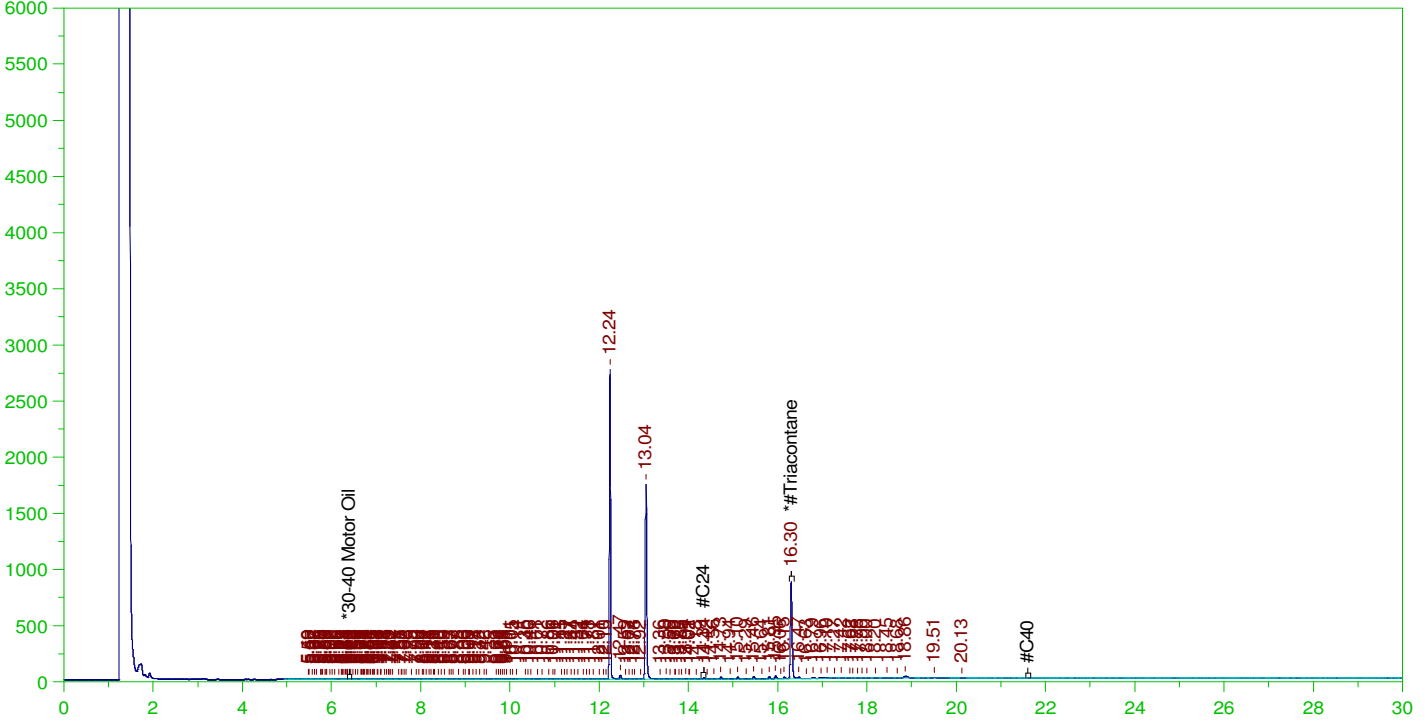
DRO Area: 457928.2 DRO Amount: 1.404372E-02
 TEH Area: 1309759 TEH Amount: 4.016764E-02

ERH1899 (RHMW03)

G:\org\HP5\DAT\HP5111821_b\1118HP5.0014.RAW

Batch ID: 161348

B21111298-003A ; 1118HP5 , \$HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21111298-003A ; 1118HP5 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP5\DAT\HP5111821_b\1118HP5.0014.RAW
 Date & Time Acquired: 11/18/2021 6:30:50 PM
 Method File: G:\Org\HP5\Methods\DR_OROS-AF-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AF-SAMP.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
 Rt range for Residual Range Organics: 14.29 to 21.66

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.3	.481	.078	16.19

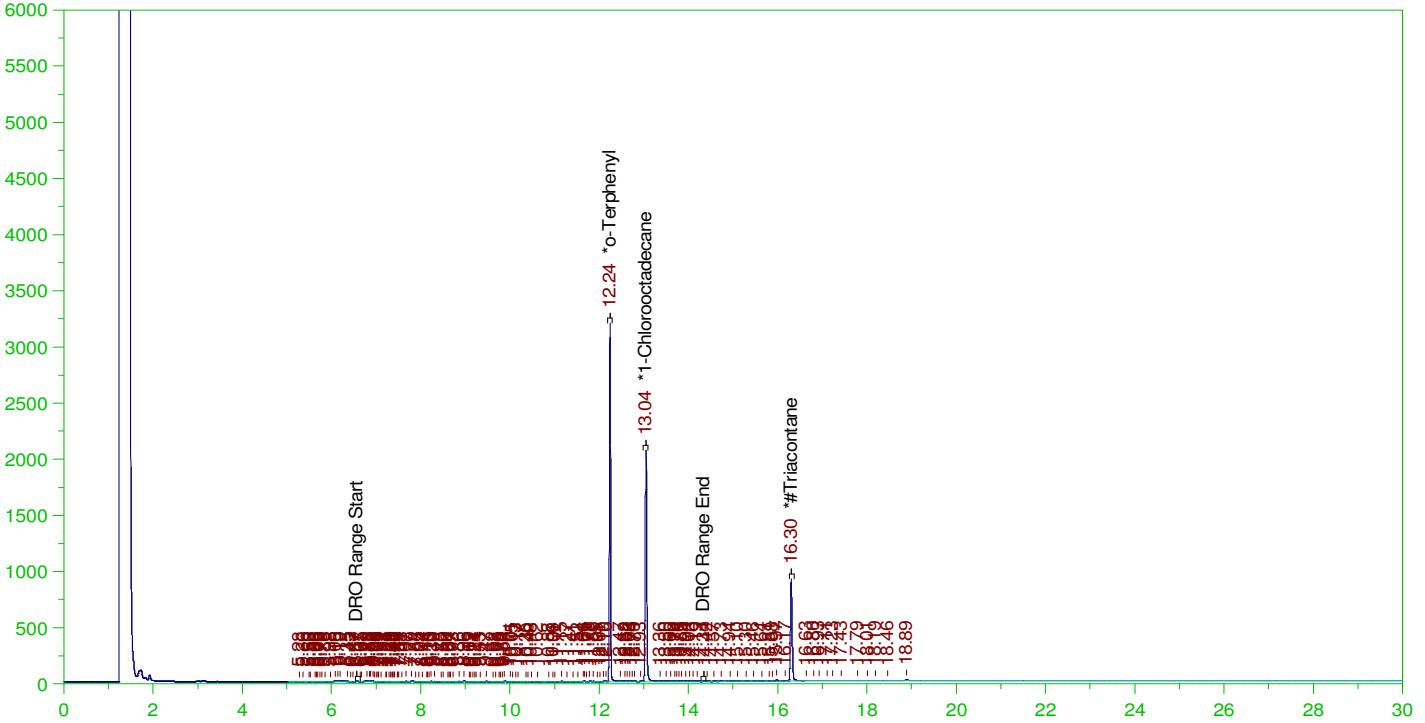
RRO Area: 846145.4 RRO AMOUNT: 0.028505

ERH1902 (RHMW05)

Batch ID: 161348

G:\Org\HP5\DAT\HP5111821_b\1118HP5.0013.RAW

B21111298-004A ; 1118HP5 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21111298-004A ; 1118HP5 , \$HC-8015-DRO-W, SGT
 Raw File: G:\Org\HP5\DAT\HP5111821_b\1118HP5.0013.RAW
 Date & Time Acquired: 11/18/2021 5:47:38 PM
 Method File: G:\Org\HP5\Methods\DR_8015-C24T-ID-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102ID-24-Tri.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.54 to 14.39

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.239	.2	.171	85.65	-
*1-Chlorooctadecane	13.045	.2	.131	65.58	-
*#Triacontane	16.301	.2	.084	42.11	-

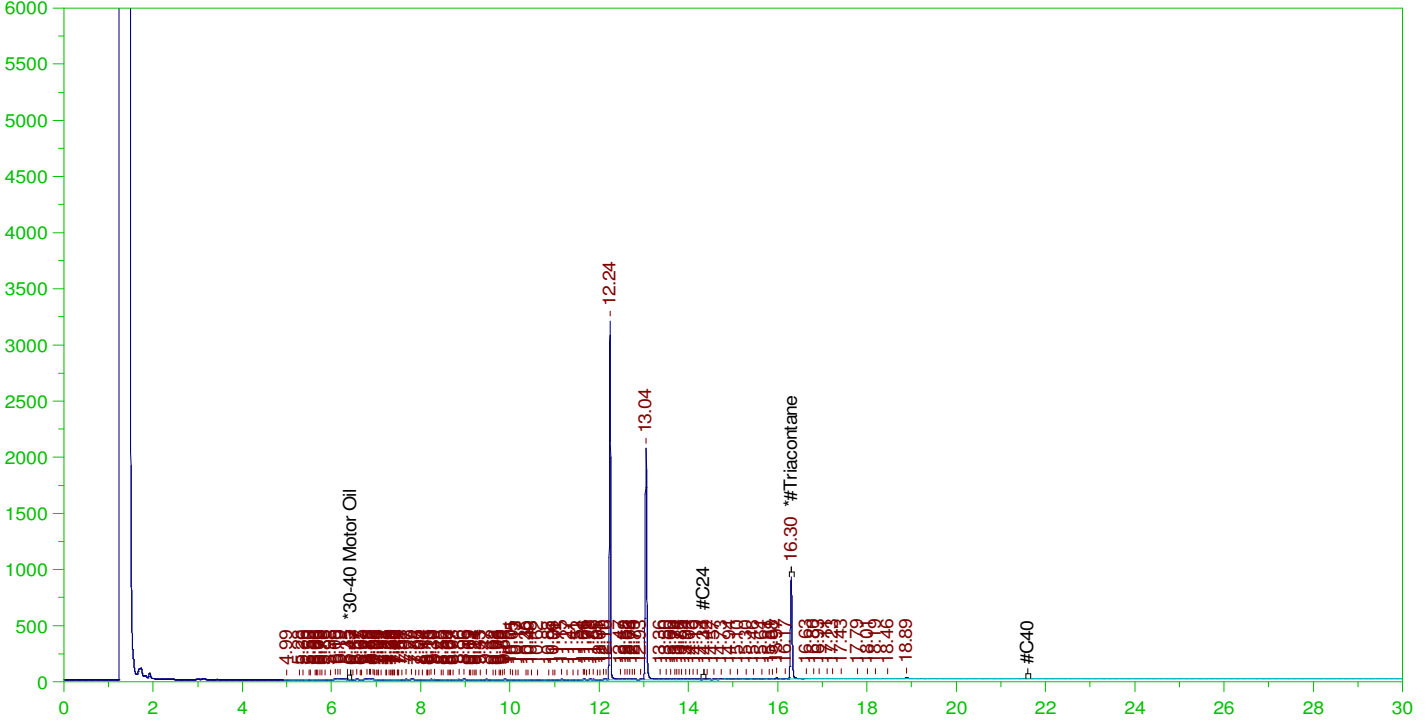
DRO Area: 383190.7 DRO Amount: 1.222174E-02
 TEH Area: 616157.4 TEH Amount: 1.965214E-02

ERH1902 (RHMW05)

G:\org\HP5\DAT\HP5111821_b\1118HP5.0013.RAW

Batch ID: 161348

B21111298-004A ;1118HP5 , \$HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21111298-004A ;1118HP5 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP5\DAT\HP5111821_b\1118HP5.0013.RAW
 Date & Time Acquired: 11/18/2021 5:47:38 PM
 Method File: G:\Org\HP5\Methods\DR_OROS-AF-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AF-SAMP.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
 Rt range for Residual Range Organics: 14.29 to 21.66

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.301	.5	.084	16.84

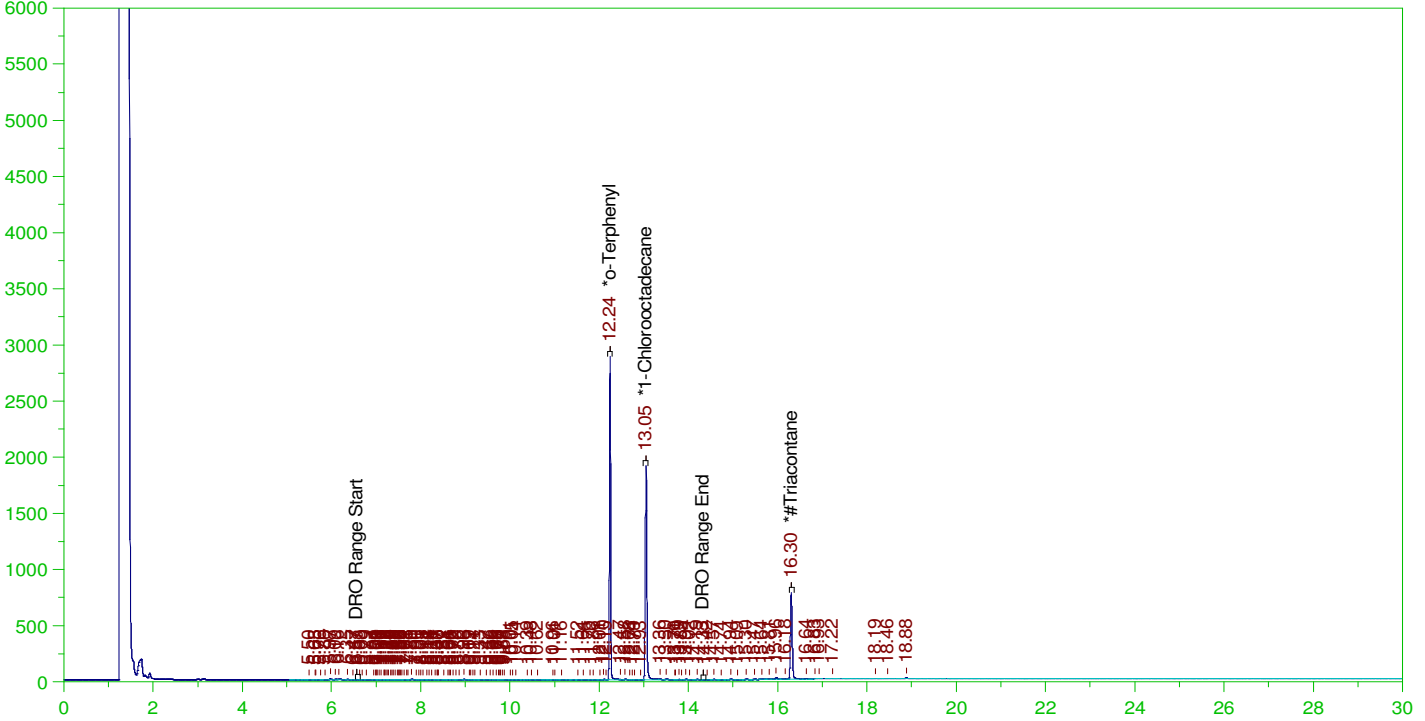
RRO Area:157777.5 RRO AMOUNT: 5.527826E-03

ERH1905 (RHM2254-01)

G:\Org\HP5\DAT\HP5111821_b\1118HP5.0012.RAW

Batch ID: 161348

B21111298-005A ;1118HP5, \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21111298-005A ;1118HP5, \$HC-8015-DRO-W, SGT
 Raw File: G:\Org\HP5\DAT\HP5111821_b\1118HP5.0012.RAW
 Date & Time Acquired: 11/18/2021 5:04:14 PM
 Method File: G:\Org\HP5\Methods\DR_8015-C24T-ID-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102ID-24-Tri.CAL
 Sample Weight: 1050 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.54 to 14.39

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.24	.19	.149	78.	-
*1-Chlorooctadecane	13.046	.19	.115	60.48	-
*#Triacontane	16.301	.19	.07	36.53	-

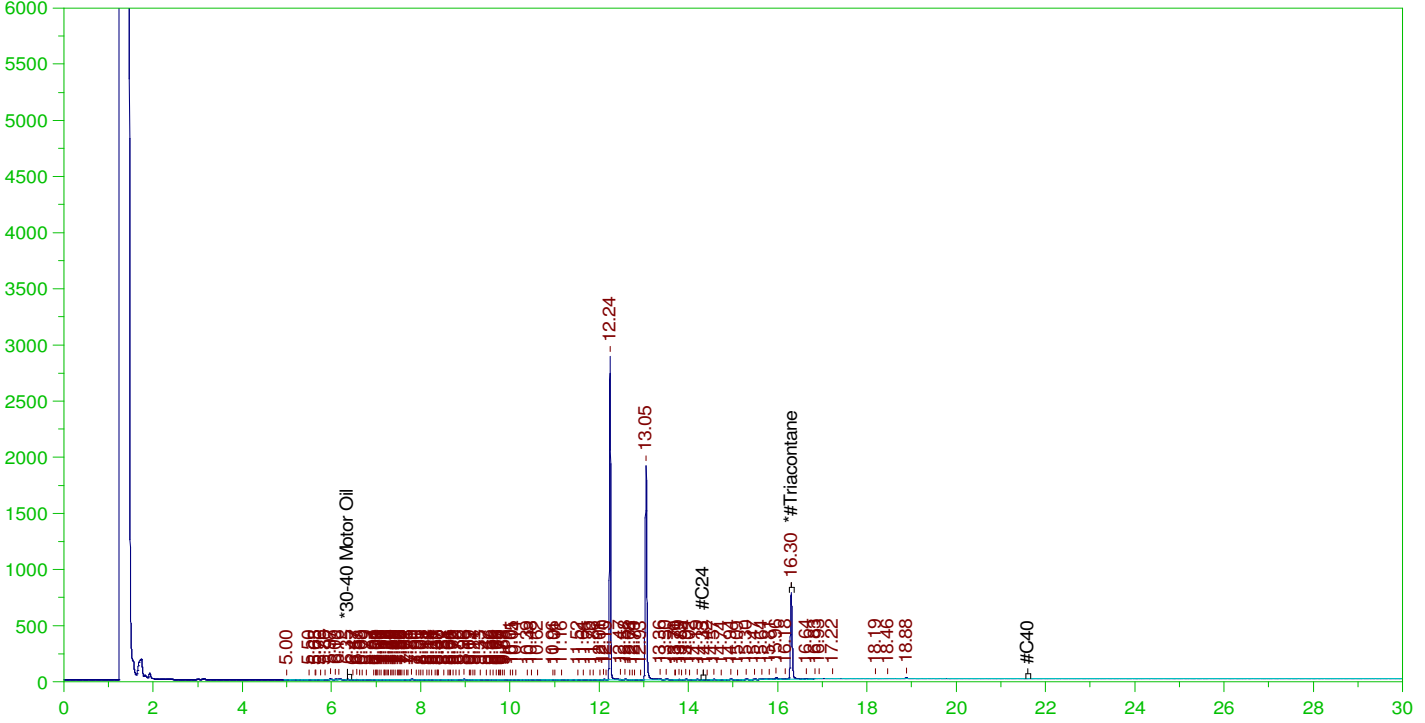
DRO Area:290379.6 DRO Amount: 8.820538E-03
 TEH Area:527979.2 TEH Amount: 1.603783E-02

ERH1905 (RHM2254-01)

G:\org\HP5\DAT\HP5111821_b\1118HP5.0012.RAW

Batch ID: 161348

B21111298-005A ; 1118HP5 , \$HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21111298-005A ; 1118HP5 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP5\DAT\HP5111821_b\1118HP5.0012.RAW
 Date & Time Acquired: 11/18/2021 5:04:14 PM
 Method File: G:\Org\HP5\Methods\DR_OROS-AF-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AF-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: 14.29 to 21.66

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.301	.476	.07	14.61	-

RRO Area:130525.5 RRO AMOUNT: 4.355275E-03