ANALYTICAL SUMMARY REPORT

March 31, 2022

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

Work Order: B22031699 Quote ID: 5912

Project Name: CV18F0126, 60571032.02.46.01

Energy Laboratories Inc Billings MT received the following 15 samples from AECOM - Honolulu on 3/23/2022 for analysis.

Lab ID	Client Sample ID	Collect Date	Received Date	Matrix	Test
B22031699-001	ERH2865 (RHMW19)	03/21/22 12:50	03/23/2022	Ground Water	Metals Digestion by SW3010A DRO-Liquid-Liquid Extraction SW3520C Carbon, Total Organic SW9060A Metals by ICP-MS, Dissolved SW6020 Metals by ICP-MS, Total SW6020 8260-Volatile Organic Compounds-Short List SW8260B EDB in Water by ECD SW8011 Gasoline Range Organics SW8015C Diesel Range Organics SW8015C Headspace Gas Analysis SW8015M SW8011 Microextraction
B22031699-002	ERH2864 (Trip Blank) 14833	03/21/22 12:50	03/23/2022	Trip Blank	8260-Volatile Organic Compounds-Short List SW8260B
B22031699-003	ERH2864 (Trip Blank) 14833	03/21/22 12:50	03/23/2022	Trip Blank	Gasoline Range Organics SW8015C
B22031699-004	ERH2864 (Trip Blank) 14894	03/21/22 12:50	03/23/2022	Trip Blank	EDB in Water by ECD SW8011 SW8011 Microextraction
B22031699-005	ERH2864 (Trip Blank) 14895	03/21/22 12:50	03/23/2022	Trip Blank	Headspace Gas Analysis SW8015M
B22031699-006	ERH2856 (RHMW15-05)	03/21/22 13:10	03/23/2022	Ground Water	Metals Digestion by SW3010A DRO-Liquid-Liquid Extraction SW3520C Carbon, Total Organic SW9060A Metals by ICP-MS, Dissolved SW6020 Metals by ICP-MS, Total SW6020 8260-Volatile Organic Compounds-Short List SW8260B EDB in Water by ECD SW8011 Gasoline Range Organics SW8015C Diesel Range Organics SW8015C Headspace Gas Analysis SW8015M SW8011 Microextraction

ANALYTICAL SUMMARY REPORT

B22031699-007	ERH2855 (Trip Blank) 14894	03/21/22 13:10	03/23/2022	Trip Blank	8260-Volatile Organic Compounds-Short List SW8260B
B22031699-008	ERH2855 (Trip Blank) 14733	03/21/22 13:10	03/23/2022	Trip Blank	Gasoline Range Organics SW8015C
B22031699-009	ERH2855 (Trip Blank) 14833	03/21/22 13:10	03/23/2022	Trip Blank	EDB in Water by ECD SW8011 SW8011 Microextraction
B22031699-010	ERH2855 (Trip Blank) 14895	03/21/22 13:10	03/23/2022	Trip Blank	Headspace Gas Analysis SW8015M
B22031699-011	ERH2862 (RHMW09)	03/21/22 15:05	03/23/2022	Ground Water	Metals Digestion by SW3010A DRO-Liquid-Liquid Extraction SW3520C Carbon, Total Organic SW9060A Metals by ICP-MS, Dissolved SW6020 Metals by ICP-MS, Total SW6020 8260-Volatile Organic Compounds-Short List SW8260B EDB in Water by ECD SW8011 Gasoline Range Organics SW8015C Diesel Range Organics SW8015C Headspace Gas Analysis SW8015M SW8011 Microextraction
B22031699-012	ERH2861 (Trip Blank) 14833	03/21/22 15:05	03/23/2022	Trip Blank	8260-Volatile Organic Compounds-Short List SW8260B
B22031699-013	ERH2861 (Trip Blank) 14894	03/21/22 15:05	03/23/2022	Trip Blank	Gasoline Range Organics SW8015C
B22031699-014	ERH2861 (Trip Blank) 14894	03/21/22 15:05	03/23/2022	Trip Blank	EDB in Water by ECD SW8011 SW8011 Microextraction
B22031699-015	ERH2861 (Trip Blank) 14895	03/21/22 15:05	03/23/2022	Trip Blank	Headspace Gas Analysis SW8015M

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:

Quality Assurance Manager

Digitally signed by
Leigh Ann. Wise
Date: 2022.03.31 16:45:15 -06:00

CLIENT: AECOM - Honolulu
Project: CV18F0126, 60571032.02.46.01
Work Order: B22031699

Report Date: 3/31/2022

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.

Tests for Total Organic Carbon by SW9060A associated with analyst identified as ELI-CA were subcontracted to Energy Laboratories, PO Box 247, Casper, WY, EPA Number WY00002.

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 Stage 4 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. Instances where manual integrations were performed including the technical justification are included in the Integration Summary Reports in the Stage 4 Validation Package. 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

COC # 202203-65NOI

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DoD Samples Page 1 of 1

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 / margie pascua@aecom com
Receive Invoice	☐Hard Copy ☒Email
Receive Report	☐Hard Copy ☒Email
Purchase Order	N/A
Quote	N/A
Bottle Order	N/A

Report Information (if different than Account Information)

Company/Name	AECOM
Contact	see Account information
Phone	
Mailing Address	
City, State, Zip	
Email	USAPimaging@aecom com
Receive Report	☐Hard Copy ☒Email
Special Report/Formats:	☒ LEVEL IV ☐NELAC ☒ EDD/EDT (contact laboratory) ☐ Other_____

Comments

1. Project performed under DoD QSM.
2 TPH-d/o needs 3520 extraction.
3. Preliminary data (or Level II) in 7 business days.
4 Note. NOI log is separate from other COC's.

Project Information

Project Name, PWSID, Permit, etc.	CV18F0126. 60571032.02.46.01
Sampler Name	Nicolette Lawler
Sampler Phone	916-835-6025
Sample Origin State	Hawaii
EPA/State Compliance	☐ Yes ☒ No

The following tests will be subcontracted to other certified laboratories as shown. Signing this COC is authorization to subcontract the analyses as indicated.

Analysis	Subcontract Lab
TOC	Energy Laboratories Inc., Casper

Matrix Codes

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

Analysis Requested

Sample Identification (Name, Location, Interval, etc.)	Collection Date	Collection Time	Number of Containers	Matrix (See Codes Above)	8260 VOC's (Full Suite) + DCA* [40ml VOA w/HCL]	8015 TPH-g [40ml VOA w/ HCL]	RSK175 Methane [40ml VOA w/H2SO4]	8011 EDB [40ml VOA w/HCL]	EPA 3630/8015 TPH-d/o +SGC [1-L AG w/H2SO4]	EPA 6020 Diss. Lead [250ml HDPE w/HNO3] (field Filtered)	EPA 9060 TOC [250ml AG w/ H3PO4]	EPA 6020 Total Lead [250ml HDPE w/HNO3]		See Attached	RUSH TAT	ELI LAB ID (Laboratory Use Only)
1 ERH2865 (RHMW19)	3/21/22	8:50	17	GW	✓	✓	✓	✓	✓	✓	✓	✓			X	572031099-001
2 ERH2864 (Trip Blank)	3/21/22	8:40	8	WQ	✓	✓	✓	✓							X	-002,003,004,005
3																
4 TB 8260 14933			2													-002
5 TB GRO 14933			2													-003
6 TB 8011 ~~14895~~ 14932 ~~14895~~			2													-004
7 TB Methane 14895	3/23/22		2													-005
8 TB 3/23/22																
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

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
	Brittany Follett	3/21/22 1400		Alex Edmonds	3/22/22 1410	
	Relinquished by (print)	Date/Time	Signature	Received by Laboratory (print)	Date/Time	Signature
	Zoe Diermier	3/21/22 1414		Tamia Jones	3/23/22 0930	

LABORATORY USE ONLY

Shipped By	Cooler ID(s)	Custody Seals Y N C B	Intact Y N	Receipt Temp	Temp Blank Y N	On Ice Y N	Payment Type CC Cash Check_____	Amount $	Receipt Number (cash/check only)
				0.9 °C					

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.

ELI-COC-01/21 v.4

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Chain of Custody & Analytical Request Record

COC # 202203-62NOI

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DoD Samples Page 1 of 1

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 / margie pascua@aecom.com
Receive Invoice	☐Hard Copy ☒Email
Receive Report	☐Hard Copy ☒Email
Purchase Order	N/A
Quote	N/A
Bottle Order	N/A

Report Information (if different than Account Information)

Company/Name	AECOM
Contact	see Account information
Phone	
Mailing Address	
City, State, Zip	
Email	USAPimaging@aecom.com
Receive Report	☐Hard Copy ☒Email
Special Report/Formats:	☒ LEVEL IV ☐NELAC ☒ EDD/EDT (contact laboratory) ☐ Other_____

Comments

1. Project performed under DoD QSM.
2. TPH-d/o needs 3520 extraction.
3. Preliminary data (or Level II) in 7 business days
4. Note: NOI log is separate from other COC's.

Project Information

Project Name, PWSID, Permit, etc.	CV18F0126, 60571032.02.46.01
Sampler Name	CH, SW, CL, TB
Sampler Phone	808.987.3201
Sample Origin State	Hawaii
EPA/State Compliance	☐ Yes ☒ No

The following tests will be subcontracted to other certified laboratories as shown. Signing this COC is authorization to subcontract the analyses as indicated:

Analysis	Subcontract Lab
TOC	Energy Laboratories Inc., Casper

Matrix Codes

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

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 Date	Collection Time	Number of Containers	Matrix (See Codes Above)	8260 VOCs (Full Suite) + DCA* [40ml VOA w/HCL]	8015 TPH-g [40ml VOA w/ HCL]	RSK175 Methane [40ml VOA w/H2SO4]	8011 EDB [40ml VOA w/HCL]	EPA 3630/8015 TPH-d/o +SGC [1-L AG w/H2SO4]	EPA 6020 Diss. Lead [250ml HDPE w/HNO3] (field Filtered)	EPA 9060 TOC [250ml AG w/ H3PO4]	EPA 6020 Total Lead [250ml HDPE w/HNO3]		See Attached	RUSH TAT	ELI LAB ID Laboratory Use Only
1	ERH2856 (RHMW15-05)	03/21/22	0910	17	GW	✓	✓	✓	✓	✓	✓	✓	✓			X	B220316099-006
2	ERH2855 (Trip Blank)	03/21/22	0845	8	WQ	✓	✓	✓	✓							X	-007 006,009,010
3	TB-8260-148941			3													-007
4	TB GRO-14733			1													-008
5	TB 8011-14833			1													-009
6	TB Methane-14895																-010
7																	
8																	
9																	

3/23/22

03-21-22 TW

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
	Ciara Un	03/21/22		Taylor White	03-21-22 14:10	
	Taylor White	03-21-22 14:10		Received by Laboratory (print)	Date/Time	Signature
				Tayliorjones	3/23/22 0930	

LABORATORY USE ONLY

Shipped By	Cooler ID(s)	Custody Seals Y N C B	Intact Y N	Receipt Temp	Temp Blank Y (N)	On Ice (Y) N	Payment Type CC Cash Check_____	Amount $	Receipt Number (cash/check only)
				2.6 °C					

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.

ELI-COC-01/21 v.4

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Chain of Custody & Analytical Request Record

COC # 202203-64NOI

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DoD Samples Page 1 of 1

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 / margie.pascua@aecom.com
Receive Invoice	☐Hard Copy ☒Email
Receive Report	☐Hard Copy ☒Email
Purchase Order	N/A
Quote	N/A
Bottle Order	N/A

Report Information (if different than Account Information)

Company/Name	AECOM
Contact	see Account information
Phone	
Mailing Address	
City, State, Zip	
Email	USAPimaging@aecom.com
Receive Report	☐Hard Copy ☒Email
Special Report/Formats:	☒ LEVEL IV ☐NELAC ☒ EDD/EDT (contact laboratory) ☐ Other

Comments

1. Project performed under DoD QSM.
2. TPH-d/o needs 3520 extraction.
3. Preliminary data (or Level II) in 7 business days.
4. Note: NOI log is separate from other COC's.

Project Information

Project Name, PWSID, Permit, etc.	CV18F0126, 60571032.02.46.01
Sampler Name	Brittany Follett
Sampler Phone	419-307-0236
Sample Origin State	Hawaii
EPA/State Compliance	☐ Yes ☒ No

The following tests will be subcontracted to other certified laboratories as shown. Signing this COC is authorization to subcontract the analyses as indicated.

Analysis	Subcontract Lab
TOC	Energy Laboratories Inc., Casper

Matrix Codes: A - Air; W - Water; S - Soils/Solids; V - Vegetation; B - Bioassay; O - Oil; DW - Drinking Water

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 Date	Collection Time	Number of Containers	Matrix (See Codes Above)	8260 VOCs (Full Suite) + DCA* [40ml VOA w/HCL]	8015 TPH-g [40ml VOA w/ HCL]	RSK175 Methane [40ml VOA w/H2SO4]	8011 EDB [40ml VOA w/HCL]	EPA 3630/8015 TPH-d/o +SGC [1-L AG w/H2SO4]	EPA 6020 Diss. Lead [250ml HDPE w/HNO3] (field Filtered)	EPA 9060 TOC [250ml AG w/ H3PO4]	EPA 6020 Total Lead [250ml HDPE w/HNO3]		See Attached	RUSH TAT	ELI LAB ID (Laboratory Use Only)
1	ERH2862 (RHMW09)	3/21/22	1105	17	GW	✓	✓	✓	✓	✓	✓	✓	✓			X	822631099-011
2	ERH2861 (Trip Blank)	3/21/22	1050	8	WQ	✓	✓	✓	✓							X	-012, 013, 014, 015
3	TB 8260 - 14893			2													-012
4	TB GRO - 14894			2													-013
5	TB 8011 - 14894			2													-014
6	TB Methane - 14895			2 HCl		3/21/22											-015
7	TJ 3/23/22																
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 3/21/22 1456	Signature	Received by (print) Alex Edmonds	Date/Time 3/21/22 1400	Signature	
	Relinquished by (print) Alex Edmonds	Date/Time 3/21/22 1432	Signature	Received by Laboratory (print)	Date/Time 3/23/22 0930	Signature	

LABORATORY USE ONLY

Shipped By	Cooler ID(s)	Custody Seals Y N C B	Intact Y N	Receipt Temp 2.8 °C	Temp Blank Y N	On Ice Y N	Payment Type CC Cash Check	Amount $	Receipt Number (cash/check only)

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

ELI-COC-01/21 v.4

Work Order Receipt Checklist

AECOM - Honolulu

B22031699

Login completed by: Leslie S. Cadreau
Date Received: 3/23/2022

Reviewed by: BL2000\gmccartney
Received by: tkj

Reviewed Date: 3/29/2022
Carrier name: FedEx

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

he Temperature Blank temperature for shipping container 1 was 2.6°C, shipping container 2 was 0.9°C and shipping container 3 was 2.8°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.

All Methane containers except sample ERH2865 were received without preservative traceability. Proceed with analysis per Shari Endy, Energy Laboratories Project Manager.

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 RPDLimit 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 Quantitaton (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

Client: AECOM - Honolulu
Client Sample ID: ERH2865 (RHMW19)
Project: CV18F0126, 60571032.02.46.01
Matrix: Ground Water

Lab ID: B22031699-001
Collection Date: 03/21/2022 12:50
Date Received: 03/23/2022
Report Date: 03/31/2022

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
AGGREGATE ORGANICS												
Organic Carbon, Total (TOC) - TOC Range is 0.3 to 0.3	0.28	mg/L	1	J	0.50	0.50	0.17		SW9060A	03/25/2022 16:51/eli-ca	SUB-C280899 : 4	C_R280899
METALS, DISSOLVED												
Lead	ND	mg/L	1	U	0.001	0.00005	0.00003		SW6020	03/25/2022 15:46/car	ICPMS207-B_220325A : 36	R377810
METALS, TOTAL												
Lead	ND	mg/L	1	U	0.001	0.0001	0.00005		SW6020	03/25/2022 16:17/car	ICPMS207-B_220325A : 41	164804
VOLATILE ORGANIC COMPOUNDS												
Benzene	ND	ug/L	1	U	1.0	0.20	0.091		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
Bromobenzene	ND	ug/L	1	U	1.0	0.20	0.083		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
Bromochloromethane	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
Bromodichloromethane	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
Bromoform	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
Carbon tetrachloride	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
Chlorobenzene	ND	ug/L	1	U	1.0	0.20	0.091		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
Chlorodibromomethane	ND	ug/L	1	U	1.0	0.20	0.084		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
Chloroethane	ND	ug/L	1	U	1.0	0.50	0.17		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
Chloroform	ND	ug/L	1	U	1.0	0.20	0.079		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
Chloromethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
1,2-Dibromoethane	ND	ug/L	1	U	1.0	0.20	0.092		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
2-Chlorotoluene	ND	ug/L	1	U	1.0	0.20	0.088		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
4-Chlorotoluene	ND	ug/L	1	U	1.0	0.20	0.073		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
Dibromomethane	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
1,2-Dichlorobenzene	ND	ug/L	1	U	1.0	0.20	0.075		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
1,3-Dichlorobenzene	ND	ug/L	1	U	1.0	0.20	0.080		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
1,4-Dichlorobenzene	ND	ug/L	1	U	1.0	0.20	0.086		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
Dichlorodifluoromethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
1,1-Dichloroethane	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
1,2-Dichloroethane	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
1,1-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
cis-1,2-Dichloroethene	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
trans-1,2-Dichloroethene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
1,2-Dichloropropane	ND	ug/L	1	U	1.0	0.20	0.085		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
1,3-Dichloropropane	ND	ug/L	1	U	1.0	0.20	0.079		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
2,2-Dichloropropane	ND	ug/L	1	U	1.0	0.50	0.19		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
1,1-Dichloropropene	ND	ug/L	1	U	1.0	0.20	0.083		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
cis-1,3-Dichloropropene	ND	ug/L	1	U	1.0	0.20	0.073		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
trans-1,3-Dichloropropene	ND	ug/L	1	U	1.0	0.20	0.085		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
Ethylbenzene	ND	ug/L	1	U	1.0	0.20	0.084		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Client Sample ID: ERH2865 (RHMW19)
Project: CV18F0126, 60571032.02.46.01
Matrix: Ground Water

Lab ID: B22031699-001
Collection Date: 03/21/2022 12:50
Date Received: 03/23/2022
Report Date: 03/31/2022

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
VOLATILE ORGANIC COMPOUNDS												
Methyl ethyl ketone	ND	ug/L	1	U	20	5.0	1.8		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
Methyl tert-butyl ether (MTBE)	ND	ug/L	1	U	1.0	0.25	0.10		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
Methylene chloride	ND	ug/L	1	U	1.0	0.50	0.34		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
Styrene	ND	ug/L	1	U	1.0	0.20	0.067		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
1,1,1,2-Tetrachloroethane	ND	ug/L	1	U	1.0	0.25	0.10		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
1,1,2,2-Tetrachloroethane	ND	ug/L	1	U	1.0	0.20	0.087		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
Tetrachloroethene	ND	ug/L	1	U	1.0	0.20	0.067		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
Toluene	ND	ug/L	1	U	1.0	0.20	0.068		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
1,1,1-Trichloroethane	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
1,1,2-Trichloroethane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
Trichloroethene	ND	ug/L	1	U	1.0	0.20	0.099		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
Trichlorofluoromethane	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
1,2,3-Trichloropropane	ND	ug/L	1	U	1.0	0.50	0.24		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
Vinyl chloride	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
m+p-Xylenes	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
o-Xylene	ND	ug/L	1	U	1.0	0.20	0.060		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
Xylenes, Total	ND	ug/L	1	U	1.0	0.20	0.060		SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
Surr: Dibromofluoromethane	109.0	%REC	1		80-119				SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
Surr: 1,2-Dichloroethane-d4	112.0	%REC	1		81-118				SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
Surr: Toluene-d8	95.0	%REC	1		89-112				SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
Surr: p-Bromofluorobenzene	111.0	%REC	1		85-114				SW8260B	03/24/2022 15:43/msc	VOA5975C.I_220324A : 6	R377852
VOCS BY MICROEXTRACTION-ECD												
1,2-Dibromoethane	ND	ug/L	1	U	0.010	0.0049	0.0025		SW8011	03/25/2022 19:50/clt	GECD.I_220325A : 18	164860
Surr: 1,1,1,2-Tetrachloroethane	91.0	%REC	1		70-130				SW8011	03/25/2022 19:50/clt	GECD.I_220325A : 18	164860
PETROLEUM HYDROCARBONS-VOLATILE												
C6 to C10	ND	ug/L	1	U	20	8.7	2.0		SW8015C	03/25/2022 19:40/jp	VARIAN1_220325A : 14	R376802
Total Purgeable Hydrocarbons	ND	ug/L	1	U	20	10	3.1		SW8015C	03/25/2022 19:40/jp	VARIAN1_220325A : 14	R376802
Surr: Trifluorotoluene	82.0	%REC	1		70-130				SW8015C	03/25/2022 19:40/jp	VARIAN1_220325A : 14	R376802
- Note 1: C6 to C10 is defined as all hydrocarbons eluting between 2-Methylpentane and 1,2,4-Trimethylbenzene.												
- Note 2: Total Purgeable Hydrocarbons are defined as the total hydrocarbon response regardless of elution time.												
PETROLEUM HYDROCARBONS-SEMI-VOLATILE												
Diesel Range Organics (C10 to C24)	ND	mg/L	1	U	0.30	0.14	0.034		SW8015C	03/26/2022 14:53/jlb	GCFID-HP4-B_220325A : 20	164847
Oil Range Hydrocarbons (C24 to C40)	ND	mg/L	1	U	0.30	0.14	0.049		SW8015C	03/26/2022 14:53/jlb	GCFID-HP4-B_220325A : 20	164847
Total Extractable Hydrocarbons	ND	mg/L	1	U	0.30	0.14	0.074		SW8015C	03/26/2022 14:53/jlb	GCFID-HP4-B_220325A : 20	164847
Surr: o-Terphenyl	94.0	%REC	1		56-125				SW8015C	03/26/2022 14:53/jlb	GCFID-HP4-B_220325A : 20	164847
Surr: n-Triacontane	96.0	%REC	1		50-150				SW8015C	03/26/2022 14:53/jlb	GCFID-HP4-B_220325A : 20	164847
- 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: B22031699-001
Client: AECOM - Honolulu
Collection Date: 03/21/2022 12:50
Client Sample ID: ERH2865 (RHMW19)
Date Received: 03/23/2022
Project: CV18F0126, 60571032.02.46.01
Report Date: 03/31/2022
Matrix: Ground Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
ORGANIC CHARACTERISTICS												
Methane	ND	mg/L	1	U	0.0020	0.0012	0.00070		SW8015M	03/25/2022 10:02/jdw	FID-HEADSPACE_220325A : 5	R376761

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Client Sample ID: ERH2864 (Trip Blank) 14833
Project: CV18F0126, 60571032.02.46.01
Matrix: Trip Blank

Lab ID: B22031699-002
Collection Date: 03/21/2022 12:50
Date Received: 03/23/2022
Report Date: 03/31/2022

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
VOLATILE ORGANIC COMPOUNDS												
Benzene	ND	ug/L	1	U	1.0	0.20	0.091		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
Bromobenzene	ND	ug/L	1	U	1.0	0.20	0.083		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
Bromochloromethane	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
Bromodichloromethane	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
Bromoform	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
Carbon tetrachloride	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
Chlorobenzene	ND	ug/L	1	U	1.0	0.20	0.091		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
Chlorodibromomethane	ND	ug/L	1	U	1.0	0.20	0.084		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
Chloroethane	ND	ug/L	1	U	1.0	0.50	0.17		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
Chloroform	ND	ug/L	1	U	1.0	0.20	0.079		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
Chloromethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
1,2-Dibromoethane	ND	ug/L	1	U	1.0	0.20	0.092		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
2-Chlorotoluene	ND	ug/L	1	U	1.0	0.20	0.088		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
4-Chlorotoluene	ND	ug/L	1	U	1.0	0.20	0.073		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
Dibromomethane	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
1,2-Dichlorobenzene	ND	ug/L	1	U	1.0	0.20	0.075		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
1,3-Dichlorobenzene	ND	ug/L	1	U	1.0	0.20	0.080		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
1,4-Dichlorobenzene	ND	ug/L	1	U	1.0	0.20	0.086		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
Dichlorodifluoromethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
1,1-Dichloroethane	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
1,2-Dichloroethane	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
1,1-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
cis-1,2-Dichloroethene	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
trans-1,2-Dichloroethene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
1,2-Dichloropropane	ND	ug/L	1	U	1.0	0.20	0.085		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
1,3-Dichloropropane	ND	ug/L	1	U	1.0	0.20	0.079		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
2,2-Dichloropropane	ND	ug/L	1	U	1.0	0.50	0.19		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
1,1-Dichloropropene	ND	ug/L	1	U	1.0	0.20	0.083		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
cis-1,3-Dichloropropene	ND	ug/L	1	U	1.0	0.20	0.073		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
trans-1,3-Dichloropropene	ND	ug/L	1	U	1.0	0.20	0.085		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
Ethylbenzene	ND	ug/L	1	U	1.0	0.20	0.084		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
Methyl ethyl ketone	ND	ug/L	1	U	20	5.0	1.8		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
Methyl tert-butyl ether (MTBE)	ND	ug/L	1	U	1.0	0.25	0.10		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
Methylene chloride	ND	ug/L	1	U	1.0	0.50	0.34		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
Styrene	ND	ug/L	1	U	1.0	0.20	0.067		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
1,1,1,2-Tetrachloroethane	ND	ug/L	1	U	1.0	0.25	0.10		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
1,1,2,2-Tetrachloroethane	ND	ug/L	1	U	1.0	0.20	0.087		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
Tetrachloroethene	ND	ug/L	1	U	1.0	0.20	0.067		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
Toluene	ND	ug/L	1	U	1.0	0.20	0.068		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B22031699-002
Client: AECOM - Honolulu
Collection Date: 03/21/2022 12:50
Client Sample ID: ERH2864 (Trip Blank) 14833
Date Received: 03/23/2022
Project: CV18F0126, 60571032.02.46.01
Report Date: 03/31/2022
Matrix: Trip Blank

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
VOLATILE ORGANIC COMPOUNDS												
1,1,1-Trichloroethane	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
1,1,2-Trichloroethane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
Trichloroethene	ND	ug/L	1	U	1.0	0.20	0.099		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
Trichlorofluoromethane	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
1,2,3-Trichloropropane	ND	ug/L	1	U	1.0	0.50	0.24		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
Vinyl chloride	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
m+p-Xylenes	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
o-Xylene	ND	ug/L	1	U	1.0	0.20	0.060		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
Xylenes, Total	ND	ug/L	1	U	1.0	0.20	0.060		SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
Surr: Dibromofluoromethane	106.0	%REC	1		80-119				SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
Surr: 1,2-Dichloroethane-d4	106.0	%REC	1		81-118				SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
Surr: Toluene-d8	96.0	%REC	1		89-112				SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852
Surr: p-Bromofluorobenzene	108.0	%REC	1		85-114				SW8260B	03/24/2022 20:16/msc	VOA5975C.I_220324A : 16	R377852

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B22031699-003
Client: AECOM - Honolulu
Collection Date: 03/21/2022 12:50
Client Sample ID: ERH2864 (Trip Blank) 14833
Date Received: 03/23/2022
Project: CV18F0126, 60571032.02.46.01
Report Date: 03/31/2022
Matrix: Trip Blank

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
PETROLEUM HYDROCARBONS-VOLATILE												
C6 to C10	ND	ug/L	1	U	20	8.7	2.0		SW8015C	03/25/2022 15:05/jp	VARIAN1_220325A : 6	R376802
Total Purgeable Hydrocarbons	ND	ug/L	1	U	20	10	3.1		SW8015C	03/25/2022 15:05/jp	VARIAN1_220325A : 6	R376802
Surr: Trifluorotoluene	82.0	%REC	1		70-130				SW8015C	03/25/2022 15:05/jp	VARIAN1_220325A : 6	R376802

- Note 1: C6 to C10 is defined as all hydrocarbons eluting between 2-Methylpentane and 1,2,4-Trimethylbenzene.
- Note 2: Total Purgeable Hydrocarbons are defined as the total hydrocarbon response regardless of elution time.

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Client Sample ID: ERH2864 (Trip Blank) 14894
Project: CV18F0126, 60571032.02.46.01
Matrix: Trip Blank

Lab ID: B22031699-004
Collection Date: 03/21/2022 12:50
Date Received: 03/23/2022
Report Date: 03/31/2022

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
VOCS BY MICROEXTRACTION-ECD												
1,2-Dibromoethane	ND	ug/L	1	U	0.010	0.0049	0.0025		SW8011	03/25/2022 18:11/clt	GECD.I_220325A : 13	164860
Surr: 1,1,1,2-Tetrachloroethane	90.0	%REC	1		70-130				SW8011	03/25/2022 18:11/clt	GECD.I_220325A : 13	164860

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Client Sample ID: ERH2864 (Trip Blank) 14895
Project: CV18F0126, 60571032.02.46.01
Matrix: Trip Blank

Lab ID: B22031699-005
Collection Date: 03/21/2022 12:50
Date Received: 03/23/2022
Report Date: 03/31/2022

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
ORGANIC CHARACTERISTICS												
Methane	ND	mg/L	1	U	0.0020	0.0012	0.00070		SW8015M	03/25/2022 10:06/jdw	FID-HEADSPACE_220325A : 6	R376761

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Client Sample ID: ERH2856 (RHMW15-05)
Project: CV18F0126, 60571032.02.46.01
Matrix: Ground Water

Lab ID: B22031699-006
Collection Date: 03/21/2022 13:10
Date Received: 03/23/2022
Report Date: 03/31/2022

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
AGGREGATE ORGANICS												
Organic Carbon, Total (TOC) - TOC Range is 0.3 to 0.3	0.27	mg/L	1	J	0.50	0.50	0.17		SW9060A	03/25/2022 18:52/eli-ca	SUB-C280899 : 7	C_R280899
METALS, DISSOLVED												
Lead	ND	mg/L	1	U	0.001	0.00005	0.00003		SW6020	03/25/2022 16:23/car	ICPMS207-B_220325A : 42	R377810
METALS, TOTAL												
Lead	ND	mg/L	1	U	0.001	0.0001	0.00005		SW6020	03/25/2022 16:42/car	ICPMS207-B_220325A : 45	164804
VOLATILE ORGANIC COMPOUNDS												
Benzene	ND	ug/L	1	U	1.0	0.20	0.091		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
Bromobenzene	ND	ug/L	1	U	1.0	0.20	0.083		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
Bromochloromethane	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
Bromodichloromethane	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
Bromoform	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
Carbon tetrachloride	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
Chlorobenzene	ND	ug/L	1	U	1.0	0.20	0.091		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
Chlorodibromomethane	ND	ug/L	1	U	1.0	0.20	0.084		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
Chloroethane	ND	ug/L	1	U	1.0	0.50	0.17		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
Chloroform	ND	ug/L	1	U	1.0	0.20	0.079		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
Chloromethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
1,2-Dibromoethane	ND	ug/L	1	U	1.0	0.20	0.092		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
2-Chlorotoluene	ND	ug/L	1	U	1.0	0.20	0.088		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
4-Chlorotoluene	ND	ug/L	1	U	1.0	0.20	0.073		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
Dibromomethane	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
1,2-Dichlorobenzene	ND	ug/L	1	U	1.0	0.20	0.075		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
1,3-Dichlorobenzene	ND	ug/L	1	U	1.0	0.20	0.080		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
1,4-Dichlorobenzene	ND	ug/L	1	U	1.0	0.20	0.086		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
Dichlorodifluoromethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
1,1-Dichloroethane	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
1,2-Dichloroethane	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
1,1-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
cis-1,2-Dichloroethene	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
trans-1,2-Dichloroethene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
1,2-Dichloropropane	ND	ug/L	1	U	1.0	0.20	0.085		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
1,3-Dichloropropane	ND	ug/L	1	U	1.0	0.20	0.079		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
2,2-Dichloropropane	ND	ug/L	1	U	1.0	0.50	0.19		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
1,1-Dichloropropene	ND	ug/L	1	U	1.0	0.20	0.083		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
cis-1,3-Dichloropropene	ND	ug/L	1	U	1.0	0.20	0.073		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
trans-1,3-Dichloropropene	ND	ug/L	1	U	1.0	0.20	0.085		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
Ethylbenzene	ND	ug/L	1	U	1.0	0.20	0.084		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Client Sample ID: ERH2856 (RHMW15-05)
Project: CV18F0126, 60571032.02.46.01
Matrix: Ground Water

Lab ID: B22031699-006
Collection Date: 03/21/2022 13:10
Date Received: 03/23/2022
Report Date: 03/31/2022

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
VOLATILE ORGANIC COMPOUNDS												
Methyl ethyl ketone	ND	ug/L	1	U	20	5.0	1.8		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
Methyl tert-butyl ether (MTBE)	ND	ug/L	1	U	1.0	0.25	0.10		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
Methylene chloride	ND	ug/L	1	U	1.0	0.50	0.34		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
Styrene	ND	ug/L	1	U	1.0	0.20	0.067		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
1,1,1,2-Tetrachloroethane	ND	ug/L	1	U	1.0	0.25	0.10		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
1,1,2,2-Tetrachloroethane	ND	ug/L	1	U	1.0	0.20	0.087		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
Tetrachloroethene	ND	ug/L	1	U	1.0	0.20	0.067		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
Toluene	ND	ug/L	1	U	1.0	0.20	0.068		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
1,1,1-Trichloroethane	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
1,1,2-Trichloroethane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
Trichloroethene	ND	ug/L	1	U	1.0	0.20	0.099		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
Trichlorofluoromethane	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
1,2,3-Trichloropropane	ND	ug/L	1	U	1.0	0.50	0.24		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
Vinyl chloride	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
m+p-Xylenes	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
o-Xylene	ND	ug/L	1	U	1.0	0.20	0.060		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
Xylenes, Total	ND	ug/L	1	U	1.0	0.20	0.060		SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
Surr: Dibromofluoromethane	107.0	%REC	1		80-119				SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
Surr: 1,2-Dichloroethane-d4	110.0	%REC	1		81-118				SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
Surr: Toluene-d8	95.0	%REC	1		89-112				SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
Surr: p-Bromofluorobenzene	111.0	%REC	1		85-114				SW8260B	03/24/2022 16:10/msc	VOA5975C.I_220324A : 7	R377852
VOCS BY MICROEXTRACTION-ECD												
1,2-Dibromoethane	ND	ug/L	1	U	0.010	0.0050	0.0026		SW8011	03/25/2022 18:31/clt	GECD.I_220325A : 14	164860
Surr: 1,1,1,2-Tetrachloroethane	94.0	%REC	1		70-130				SW8011	03/25/2022 18:31/clt	GECD.I_220325A : 14	164860
PETROLEUM HYDROCARBONS-VOLATILE												
C6 to C10	ND	ug/L	1	U	20	8.7	2.0		SW8015C	03/26/2022 01:23/jp	VARIAN1_220325A : 21	R376802
Total Purgeable Hydrocarbons	ND	ug/L	1	U	20	10	3.1		SW8015C	03/26/2022 01:23/jp	VARIAN1_220325A : 21	R376802
Surr: Trifluorotoluene	80.0	%REC	1		70-130				SW8015C	03/26/2022 01:23/jp	VARIAN1_220325A : 21	R376802
- Note 1: C6 to C10 is defined as all hydrocarbons eluting between 2-Methylpentane and 1,2,4-Trimethylbenzene.												
- Note 2: Total Purgeable Hydrocarbons are defined as the total hydrocarbon response regardless of elution time.												
PETROLEUM HYDROCARBONS-SEMI-VOLATILE												
Diesel Range Organics (C10 to C24)	ND	mg/L	1	U	0.30	0.15	0.035		SW8015C	03/26/2022 14:08/jlb	GCFID-HP4-B_220325A : 19	164847
Oil Range Hydrocarbons (C24 to C40)	ND	mg/L	1	U	0.30	0.15	0.051		SW8015C	03/26/2022 14:08/jlb	GCFID-HP4-B_220325A : 19	164847
Total Extractable Hydrocarbons	ND	mg/L	1	U	0.30	0.15	0.077		SW8015C	03/26/2022 14:08/jlb	GCFID-HP4-B_220325A : 19	164847
Surr: o-Terphenyl	90.0	%REC	1		56-125				SW8015C	03/26/2022 14:08/jlb	GCFID-HP4-B_220325A : 19	164847
Surr: n-Triacontane	90.0	%REC	1		50-150				SW8015C	03/26/2022 14:08/jlb	GCFID-HP4-B_220325A : 19	164847
- 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: B22031699-006
Client: AECOM - Honolulu
Collection Date: 03/21/2022 13:10
Client Sample ID: ERH2856 (RHMW15-05)
Date Received: 03/23/2022
Project: CV18F0126, 60571032.02.46.01
Report Date: 03/31/2022
Matrix: Ground Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
ORGANIC CHARACTERISTICS												
Methane	ND	mg/L	1	U	0.0020	0.0012	0.00070		SW8015M	03/25/2022 10:12/jdw	FID-HEADSPACE_220325A : 7	R376761

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Client Sample ID: ERH2855 (Trip Blank) 14894
Project: CV18F0126, 60571032.02.46.01
Matrix: Trip Blank

Lab ID: B22031699-007
Collection Date: 03/21/2022 13:10
Date Received: 03/23/2022
Report Date: 03/31/2022

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
VOLATILE ORGANIC COMPOUNDS												
Benzene	ND	ug/L	1	U	1.0	0.20	0.091		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
Bromobenzene	ND	ug/L	1	U	1.0	0.20	0.083		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
Bromochloromethane	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
Bromodichloromethane	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
Bromoform	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
Carbon tetrachloride	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
Chlorobenzene	ND	ug/L	1	U	1.0	0.20	0.091		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
Chlorodibromomethane	ND	ug/L	1	U	1.0	0.20	0.084		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
Chloroethane	ND	ug/L	1	U	1.0	0.50	0.17		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
Chloroform	ND	ug/L	1	U	1.0	0.20	0.079		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
Chloromethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
1,2-Dibromoethane	ND	ug/L	1	U	1.0	0.20	0.092		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
2-Chlorotoluene	ND	ug/L	1	U	1.0	0.20	0.088		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
4-Chlorotoluene	ND	ug/L	1	U	1.0	0.20	0.073		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
Dibromomethane	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
1,2-Dichlorobenzene	ND	ug/L	1	U	1.0	0.20	0.075		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
1,3-Dichlorobenzene	ND	ug/L	1	U	1.0	0.20	0.080		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
1,4-Dichlorobenzene	ND	ug/L	1	U	1.0	0.20	0.086		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
Dichlorodifluoromethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
1,1-Dichloroethane	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
1,2-Dichloroethane	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
1,1-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
cis-1,2-Dichloroethene	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
trans-1,2-Dichloroethene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
1,2-Dichloropropane	ND	ug/L	1	U	1.0	0.20	0.085		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
1,3-Dichloropropane	ND	ug/L	1	U	1.0	0.20	0.079		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
2,2-Dichloropropane	ND	ug/L	1	U	1.0	0.50	0.19		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
1,1-Dichloropropene	ND	ug/L	1	U	1.0	0.20	0.083		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
cis-1,3-Dichloropropene	ND	ug/L	1	U	1.0	0.20	0.073		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
trans-1,3-Dichloropropene	ND	ug/L	1	U	1.0	0.20	0.085		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
Ethylbenzene	ND	ug/L	1	U	1.0	0.20	0.084		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
Methyl ethyl ketone	ND	ug/L	1	U	20	5.0	1.8		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
Methyl tert-butyl ether (MTBE)	ND	ug/L	1	U	1.0	0.25	0.10		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
Methylene chloride	ND	ug/L	1	U	1.0	0.50	0.34		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
Styrene	ND	ug/L	1	U	1.0	0.20	0.067		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
1,1,1,2-Tetrachloroethane	ND	ug/L	1	U	1.0	0.25	0.10		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
1,1,2,2-Tetrachloroethane	ND	ug/L	1	U	1.0	0.20	0.087		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
Tetrachloroethene	ND	ug/L	1	U	1.0	0.20	0.067		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
Toluene	ND	ug/L	1	U	1.0	0.20	0.068		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B22031699-007
Client: AECOM - Honolulu
Collection Date: 03/21/2022 13:10
Client Sample ID: ERH2855 (Trip Blank) 14894
Date Received: 03/23/2022
Project: CV18F0126, 60571032.02.46.01
Report Date: 03/31/2022
Matrix: Trip Blank

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
VOLATILE ORGANIC COMPOUNDS												
1,1,1-Trichloroethane	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
1,1,2-Trichloroethane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
Trichloroethene	ND	ug/L	1	U	1.0	0.20	0.099		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
Trichlorofluoromethane	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
1,2,3-Trichloropropane	ND	ug/L	1	U	1.0	0.50	0.24		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
Vinyl chloride	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
m+p-Xylenes	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
o-Xylene	ND	ug/L	1	U	1.0	0.20	0.060		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
Xylenes, Total	ND	ug/L	1	U	1.0	0.20	0.060		SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
Surr: Dibromofluoromethane	108.0	%REC	1		80-119				SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
Surr: 1,2-Dichloroethane-d4	111.0	%REC	1		81-118				SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
Surr: Toluene-d8	95.0	%REC	1		89-112				SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852
Surr: p-Bromofluorobenzene	109.0	%REC	1		85-114				SW8260B	03/24/2022 20:43/msc	VOA5975C.I_220324A : 17	R377852

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B22031699-008
Client: AECOM - Honolulu
Collection Date: 03/21/2022 13:10
Client Sample ID: ERH2855 (Trip Blank) 14733
Date Received: 03/23/2022
Project: CV18F0126, 60571032.02.46.01
Report Date: 03/31/2022
Matrix: Trip Blank

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
PETROLEUM HYDROCARBONS-VOLATILE												
C6 to C10	ND	ug/L	1	U	20	8.7	2.0		SW8015C	03/25/2022 15:40/jp	VARIAN1_220325A : 7	R376802
Total Purgeable Hydrocarbons	ND	ug/L	1	U	20	10	3.1		SW8015C	03/25/2022 15:40/jp	VARIAN1_220325A : 7	R376802
Surr: Trifluorotoluene	83.0	%REC	1		70-130				SW8015C	03/25/2022 15:40/jp	VARIAN1_220325A : 7	R376802

- Note 1: C6 to C10 is defined as all hydrocarbons eluting between 2-Methylpentane and 1,2,4-Trimethylbenzene.
- Note 2: Total Purgeable Hydrocarbons are defined as the total hydrocarbon response regardless of elution time.

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Client Sample ID: ERH2855 (Trip Blank) 14833
Project: CV18F0126, 60571032.02.46.01
Matrix: Trip Blank

Lab ID: B22031699-009
Collection Date: 03/21/2022 13:10
Date Received: 03/23/2022
Report Date: 03/31/2022

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
VOCS BY MICROEXTRACTION-ECD												
1,2-Dibromoethane	ND	ug/L	1	U	0.010	0.0049	0.0025		SW8011	03/25/2022 18:51/clt	GECD.I_220325A : 15	164860
Surr: 1,1,1,2-Tetrachloroethane	91.0	%REC	1		70-130				SW8011	03/25/2022 18:51/clt	GECD.I_220325A : 15	164860

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Client Sample ID: ERH2855 (Trip Blank) 14895
Project: CV18F0126, 60571032.02.46.01
Matrix: Trip Blank

Lab ID: B22031699-010
Collection Date: 03/21/2022 13:10
Date Received: 03/23/2022
Report Date: 03/31/2022

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
ORGANIC CHARACTERISTICS												
Methane	ND	mg/L	1	U	0.0020	0.0012	0.00070		SW8015M	03/25/2022 10:18/jdw	FID-HEADSPACE_220325A : 8	R376761

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Client Sample ID: ERH2862 (RHMW09)
Project: CV18F0126, 60571032.02.46.01
Matrix: Ground Water

Lab ID: B22031699-011
Collection Date: 03/21/2022 15:05
Date Received: 03/23/2022
Report Date: 03/31/2022

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
AGGREGATE ORGANICS												
Organic Carbon, Total (TOC) - TOC Range is 0.3 to 0.3	0.27	mg/L	1	J	0.50	0.50	0.17		SW9060A	03/25/2022 19:31/eli-ca	SUB-C280899 : 8	C_R280899
METALS, DISSOLVED												
Lead	ND	mg/L	1	U	0.001	0.00005	0.00003		SW6020	03/25/2022 17:19/car	ICPMS207-B_220325A : 51	R377810
METALS, TOTAL												
Lead	ND	mg/L	1	U	0.001	0.0001	0.00005		SW6020	03/25/2022 17:26/car	ICPMS207-B_220325A : 52	164804
VOLATILE ORGANIC COMPOUNDS												
Benzene	ND	ug/L	1	U	1.0	0.20	0.091		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
Bromobenzene	ND	ug/L	1	U	1.0	0.20	0.083		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
Bromochloromethane	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
Bromodichloromethane	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
Bromoform	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
Carbon tetrachloride	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
Chlorobenzene	ND	ug/L	1	U	1.0	0.20	0.091		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
Chlorodibromomethane	ND	ug/L	1	U	1.0	0.20	0.084		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
Chloroethane	ND	ug/L	1	U	1.0	0.50	0.17		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
Chloroform	ND	ug/L	1	U	1.0	0.20	0.079		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
Chloromethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
1,2-Dibromoethane	ND	ug/L	1	U	1.0	0.20	0.092		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
2-Chlorotoluene	ND	ug/L	1	U	1.0	0.20	0.088		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
4-Chlorotoluene	ND	ug/L	1	U	1.0	0.20	0.073		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
Dibromomethane	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
1,2-Dichlorobenzene	ND	ug/L	1	U	1.0	0.20	0.075		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
1,3-Dichlorobenzene	ND	ug/L	1	U	1.0	0.20	0.080		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
1,4-Dichlorobenzene	ND	ug/L	1	U	1.0	0.20	0.086		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
Dichlorodifluoromethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
1,1-Dichloroethane	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
1,2-Dichloroethane	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
1,1-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
cis-1,2-Dichloroethene	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
trans-1,2-Dichloroethene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
1,2-Dichloropropane	ND	ug/L	1	U	1.0	0.20	0.085		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
1,3-Dichloropropane	ND	ug/L	1	U	1.0	0.20	0.079		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
2,2-Dichloropropane	ND	ug/L	1	U	1.0	0.50	0.19		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
1,1-Dichloropropene	ND	ug/L	1	U	1.0	0.20	0.083		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
cis-1,3-Dichloropropene	ND	ug/L	1	U	1.0	0.20	0.073		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
trans-1,3-Dichloropropene	ND	ug/L	1	U	1.0	0.20	0.085		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
Ethylbenzene	ND	ug/L	1	U	1.0	0.20	0.084		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Client Sample ID: ERH2862 (RHMW09)
Project: CV18F0126, 60571032.02.46.01
Matrix: Ground Water

Lab ID: B22031699-011
Collection Date: 03/21/2022 15:05
Date Received: 03/23/2022
Report Date: 03/31/2022

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
VOLATILE ORGANIC COMPOUNDS												
Methyl ethyl ketone	ND	ug/L	1	U	20	5.0	1.8		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
Methyl tert-butyl ether (MTBE)	ND	ug/L	1	U	1.0	0.25	0.10		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
Methylene chloride	ND	ug/L	1	U	1.0	0.50	0.34		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
Styrene	ND	ug/L	1	U	1.0	0.20	0.067		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
1,1,1,2-Tetrachloroethane	ND	ug/L	1	U	1.0	0.25	0.10		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
1,1,2,2-Tetrachloroethane	ND	ug/L	1	U	1.0	0.20	0.087		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
Tetrachloroethene	ND	ug/L	1	U	1.0	0.20	0.067		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
Toluene	ND	ug/L	1	UT	1.0	0.20	0.068		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
1,1,1-Trichloroethane	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
1,1,2-Trichloroethane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
Trichloroethene	ND	ug/L	1	U	1.0	0.20	0.099		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
Trichlorofluoromethane	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
1,2,3-Trichloropropane	ND	ug/L	1	U	1.0	0.50	0.24		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
Vinyl chloride	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
m+p-Xylenes	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
o-Xylene	ND	ug/L	1	U	1.0	0.20	0.060		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
Xylenes, Total	ND	ug/L	1	U	1.0	0.20	0.060		SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
Surr: Dibromofluoromethane	108.0	%REC	1		80-119				SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
Surr: 1,2-Dichloroethane-d4	107.0	%REC	1		81-118				SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
Surr: Toluene-d8	95.0	%REC	1		89-112				SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
Surr: p-Bromofluorobenzene	109.0	%REC	1		85-114				SW8260B	03/24/2022 16:38/msc	VOA5975C.I_220324A : 8	R377852
VOCS BY MICROEXTRACTION-ECD												
1,2-Dibromoethane	ND	ug/L	1	U	0.010	0.0049	0.0025		SW8011	03/25/2022 19:10/clt	GECD.I_220325A : 16	164860
Surr: 1,1,1,2-Tetrachloroethane	90.0	%REC	1		70-130				SW8011	03/25/2022 19:10/clt	GECD.I_220325A : 16	164860
PETROLEUM HYDROCARBONS-VOLATILE												
C6 to C10	ND	ug/L	1	U	20	8.7	2.0		SW8015C	03/25/2022 13:57/jp	VARIAN1_220325A : 5	R376802
Total Purgeable Hydrocarbons	ND	ug/L	1	U	20	10	3.1		SW8015C	03/25/2022 13:57/jp	VARIAN1_220325A : 5	R376802
Surr: Trifluorotoluene	82.0	%REC	1		70-130				SW8015C	03/25/2022 13:57/jp	VARIAN1_220325A : 5	R376802
- Note 1: C6 to C10 is defined as all hydrocarbons eluting between 2-Methylpentane and 1,2,4-Trimethylbenzene.												
- Note 2: Total Purgeable Hydrocarbons are defined as the total hydrocarbon response regardless of elution time.												
PETROLEUM HYDROCARBONS-SEMI-VOLATILE												
Diesel Range Organics (C10 to C24)	0.037	mg/L	1	J	0.30	0.15	0.036		SW8015C	03/26/2022 13:23/jlb	GCFID-HP4-B_220325A : 18	164847
Diesel Range Organics (SGT-C10 to C24)	ND	mg/L	1	U	0.30	0.15	0.036		SW8015C	03/29/2022 03:46/jlb	GCFID-HP4-B_220328A : 12	164847
Oil Range Hydrocarbons (C24 to C40)	ND	mg/L	1	U	0.30	0.15	0.051		SW8015C	03/26/2022 13:23/jlb	GCFID-HP4-B_220325A : 18	164847
Oil Range Hydrocarbons (SGT-C24 to C40)	ND	mg/L	1	U	0.30	0.15	0.051		SW8015C	03/29/2022 03:46/jlb	GCFID-HP4-B_220328A : 12	164847
Total Extractable Hydrocarbons	ND	mg/L	1	U	0.30	0.15	0.078		SW8015C	03/26/2022 13:23/jlb	GCFID-HP4-B_220325A : 18	164847
Total Extractable Hydrocarbons (SGT)	ND	mg/L	1	U	0.30	0.15	0.078		SW8015C	03/29/2022 03:46/jlb	GCFID-HP4-B_220328A : 12	164847

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B22031699-011
Client: AECOM - Honolulu
Collection Date: 03/21/2022 15:05
Client Sample ID: ERH2862 (RHMW09)
Date Received: 03/23/2022
Project: CV18F0126, 60571032.02.46.01
Report Date: 03/31/2022
Matrix: Ground Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
PETROLEUM HYDROCARBONS-SEMI-VOLATILE												
Surr: o-Terphenyl	96.0	%REC	1		56-125				SW8015C	03/26/2022 13:23/jlb	GCFID-HP4-B_220325A : 18	164847
Surr: o-Terphenyl (SGT)	88.0	%REC	1		56-125				SW8015C	03/29/2022 03:46/jlb	GCFID-HP4-B_220328A : 12	164847
Surr: n-Triacontane	97.0	%REC	1		50-150				SW8015C	03/26/2022 13:23/jlb	GCFID-HP4-B_220325A : 18	164847
Surr: n-Triacontane (SGT)	83.0	%REC	1		50-150				SW8015C	03/29/2022 03:46/jlb	GCFID-HP4-B_220328A : 12	164847
- Note: Total Extractable Hydrocarbons are defined as the total hydrocarbon responses regardless of elution time.												
ORGANIC CHARACTERISTICS												
Methane	ND	mg/L	1	U	0.0020	0.0012	0.00070		SW8015M	03/25/2022 10:23/jdw	FID-HEADSPACE_220325A : 9	R376761

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Client Sample ID: ERH2861 (Trip Blank) 14833
Project: CV18F0126, 60571032.02.46.01
Matrix: Trip Blank

Lab ID: B22031699-012
Collection Date: 03/21/2022 15:05
Date Received: 03/23/2022
Report Date: 03/31/2022

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
VOLATILE ORGANIC COMPOUNDS												
Benzene	ND	ug/L	1	U	1.0	0.20	0.091		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
Bromobenzene	ND	ug/L	1	U	1.0	0.20	0.083		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
Bromochloromethane	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
Bromodichloromethane	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
Bromoform	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
Carbon tetrachloride	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
Chlorobenzene	ND	ug/L	1	U	1.0	0.20	0.091		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
Chlorodibromomethane	ND	ug/L	1	U	1.0	0.20	0.084		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
Chloroethane	ND	ug/L	1	U	1.0	0.50	0.17		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
Chloroform	ND	ug/L	1	U	1.0	0.20	0.079		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
Chloromethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
1,2-Dibromoethane	ND	ug/L	1	U	1.0	0.20	0.092		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
2-Chlorotoluene	ND	ug/L	1	U	1.0	0.20	0.088		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
4-Chlorotoluene	ND	ug/L	1	U	1.0	0.20	0.073		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
Dibromomethane	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
1,2-Dichlorobenzene	ND	ug/L	1	U	1.0	0.20	0.075		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
1,3-Dichlorobenzene	ND	ug/L	1	U	1.0	0.20	0.080		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
1,4-Dichlorobenzene	ND	ug/L	1	U	1.0	0.20	0.086		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
Dichlorodifluoromethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
1,1-Dichloroethane	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
1,2-Dichloroethane	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
1,1-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
cis-1,2-Dichloroethene	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
trans-1,2-Dichloroethene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
1,2-Dichloropropane	ND	ug/L	1	U	1.0	0.20	0.085		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
1,3-Dichloropropane	ND	ug/L	1	U	1.0	0.20	0.079		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
2,2-Dichloropropane	ND	ug/L	1	U	1.0	0.50	0.19		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
1,1-Dichloropropene	ND	ug/L	1	U	1.0	0.20	0.083		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
cis-1,3-Dichloropropene	ND	ug/L	1	U	1.0	0.20	0.073		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
trans-1,3-Dichloropropene	ND	ug/L	1	U	1.0	0.20	0.085		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
Ethylbenzene	ND	ug/L	1	U	1.0	0.20	0.084		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
Methyl ethyl ketone	ND	ug/L	1	U	20	5.0	1.8		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
Methyl tert-butyl ether (MTBE)	ND	ug/L	1	U	1.0	0.25	0.10		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
Methylene chloride	ND	ug/L	1	U	1.0	0.50	0.34		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
Styrene	ND	ug/L	1	U	1.0	0.20	0.067		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
1,1,1,2-Tetrachloroethane	ND	ug/L	1	U	1.0	0.25	0.10		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
1,1,2,2-Tetrachloroethane	ND	ug/L	1	U	1.0	0.20	0.087		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
Tetrachloroethene	ND	ug/L	1	U	1.0	0.20	0.067		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
Toluene	0.11	ug/L	1	J	1.0	0.20	0.068		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B22031699-012
Client: AECOM - Honolulu
Collection Date: 03/21/2022 15:05
Client Sample ID: ERH2861 (Trip Blank) 14833
Date Received: 03/23/2022
Project: CV18F0126, 60571032.02.46.01
Report Date: 03/31/2022
Matrix: Trip Blank

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
VOLATILE ORGANIC COMPOUNDS												
1,1,1-Trichloroethane	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
1,1,2-Trichloroethane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
Trichloroethene	ND	ug/L	1	U	1.0	0.20	0.099		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
Trichlorofluoromethane	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
1,2,3-Trichloropropane	ND	ug/L	1	U	1.0	0.50	0.24		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
Vinyl chloride	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
m+p-Xylenes	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
o-Xylene	ND	ug/L	1	U	1.0	0.20	0.060		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
Xylenes, Total	ND	ug/L	1	U	1.0	0.20	0.060		SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
Surr: Dibromofluoromethane	110.0	%REC	1		80-119				SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
Surr: 1,2-Dichloroethane-d4	112.0	%REC	1		81-118				SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
Surr: Toluene-d8	94.0	%REC	1		89-112				SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852
Surr: p-Bromofluorobenzene	111.0	%REC	1		85-114				SW8260B	03/24/2022 21:11/msc	VOA5975C.I_220324A : 18	R377852

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B22031699-013
Client: AECOM - Honolulu
Collection Date: 03/21/2022 15:05
Client Sample ID: ERH2861 (Trip Blank) 14894
Date Received: 03/23/2022
Project: CV18F0126, 60571032.02.46.01
Report Date: 03/31/2022
Matrix: Trip Blank

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
PETROLEUM HYDROCARBONS-VOLATILE												
C6 to C10	ND	ug/L	1	U	20	8.7	2.0		SW8015C	03/25/2022 16:14/jp	VARIAN1_220325A : 8	R376802
Total Purgeable Hydrocarbons	ND	ug/L	1	U	20	10	3.1		SW8015C	03/25/2022 16:14/jp	VARIAN1_220325A : 8	R376802
Surr: Trifluorotoluene	83.0	%REC	1		70-130				SW8015C	03/25/2022 16:14/jp	VARIAN1_220325A : 8	R376802

- Note 1: C6 to C10 is defined as all hydrocarbons eluting between 2-Methylpentane and 1,2,4-Trimethylbenzene.
- Note 2: Total Purgeable Hydrocarbons are defined as the total hydrocarbon response regardless of elution time.

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Client Sample ID: ERH2861 (Trip Blank) 14894
Project: CV18F0126, 60571032.02.46.01
Matrix: Trip Blank

Lab ID: B22031699-014
Collection Date: 03/21/2022 15:05
Date Received: 03/23/2022
Report Date: 03/31/2022

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
VOCS BY MICROEXTRACTION-ECD												
1,2-Dibromoethane	ND	ug/L	1	U	0.010	0.0049	0.0025		SW8011	03/25/2022 19:30/clt	GECD.I_220325A : 17	164860
Surr: 1,1,1,2-Tetrachloroethane	93.0	%REC	1		70-130				SW8011	03/25/2022 19:30/clt	GECD.I_220325A : 17	164860

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Client Sample ID: ERH2861 (Trip Blank) 14895
Project: CV18F0126, 60571032.02.46.01
Matrix: Trip Blank

Lab ID: B22031699-015
Collection Date: 03/21/2022 15:05
Date Received: 03/23/2022
Report Date: 03/31/2022

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
ORGANIC CHARACTERISTICS												
Methane	ND	mg/L	1	U	0.0020	0.0012	0.00070		SW8015M	03/25/2022 10:28/jdw	FID-HEADSPACE_220325A : 10	R376761

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22031699
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 03/31/2022

Run ID: Run Order: SUB-C280899: 2 **SampType:** Method Blank **Batch ID:** C_R280899
Method: SW9060A **Analysis Date:** 03/25/2022 15:31 **Prep Date:**
Lab ID: MBLK **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Organic Carbon, Total (TOC)	ND	0.20									

Associated Samples: **B22031699-001D, B22031699-006D, B22031699-011D**
- TOC Range is 0.0 to 0.0

Run ID: Run Order: SUB-C280899: 1 **SampType:** Laboratory Control Sample **Batch ID:** C_R280899
Method: SW9060A **Analysis Date:** 03/25/2022 14:50 **Prep Date:**
Lab ID: LCS **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Organic Carbon, Total (TOC)	5.2	0.50	5.0		104.0	91	111				

Associated Samples: **B22031699-001D, B22031699-006D, B22031699-011D**
- TOC Range is 5.1 to 5.3

Run ID: Run Order: SUB-C280899: 5 **SampType:** Sample Matrix Spike **Batch ID:** C_R280899
Method: SW9060A **Analysis Date:** 03/25/2022 17:30 **Prep Date:**
Lab ID: B22031699-001D **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Organic Carbon, Total (TOC)	5.0	0.50	5.0	0.28	95.0	91	111				

Associated Samples: **B22031699-001D, B22031699-006D, B22031699-011D**
- TOC Range is 5.0 to 5.1

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22031699
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 03/31/2022

Run ID: Run Order: SUB-C280899: 6 **SampType:** Sample Matrix Spike Duplicate **Batch ID:** C_R280899
Method: SW9060A **Analysis Date:** 03/25/2022 18:12 **Prep Date:**
Lab ID: B22031699-001D **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Organic Carbon, Total (TOC)	5.2	0.50	5.0	0.28	99.0	91	111	5.0	3.4	10.0	

Associated Samples: **B22031699-001D, B22031699-006D, B22031699-011D**
- TOC Range is 5.0 to 5.4

Run ID: Run Order: SUB-C280899: 3 **SampType:** Continuing Calibration Verification Standard **Batch ID:** C_R280899
Method: SW9060A **Analysis Date:** 03/25/2022 16:10 **Prep Date:**
Lab ID: CCV **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Organic Carbon, Total (TOC)	5.1	0.50	5.0		102.0	90	110				

Associated Samples: **B22031699-001D, B22031699-006D, B22031699-011D**
- TOC Range is 5.1 to 5.1

Run ID: Run Order: SUB-C280899: 9 **SampType:** Continuing Calibration Verification Standard **Batch ID:** C_R280899
Method: SW9060A **Analysis Date:** 03/25/2022 23:41 **Prep Date:**
Lab ID: CCV **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Organic Carbon, Total (TOC)	5.0	0.50	5.0		101.0	90	110				

Associated Samples: **B22031699-001D, B22031699-006D, B22031699-011D**
- TOC Range is 5.0 to 5.1

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22031699
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 03/31/2022

Run ID: Run Order: ICPMS207-B_220325A: 21 **SampType:** Laboratory Fortified Blank **Batch ID:** R377810
Method: SW6020 **Analysis Date:** 03/25/2022 14:12 **Prep Date:**
Lab ID: LFB **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Lead	0.052	0.001	0.050		104.0	88	115				

Associated Samples: **B22031699-001A, B22031699-006A, B22031699-011A**

Run ID: Run Order: ICPMS207-B_220325A: 20 **SampType:** Method Blank **Batch ID:** R377810
Method: SW6020 **Analysis Date:** 03/25/2022 14:06 **Prep Date:**
Lab ID: LRB **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Lead	ND	0.0005									

Associated Samples: **B22031699-001A, B22031699-006A, B22031699-011A**

Run ID: Run Order: ICPMS207-B_220325A: 38 **SampType:** Sample Matrix Spike **Batch ID:** R377810
Method: SW6020 **Analysis Date:** 03/25/2022 15:58 **Prep Date:**
Lab ID: B22031699-001AMS **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Lead	0.051	0.001	0.050	0.00	101.0	88	115				

Associated Samples: **B22031699-001A, B22031699-006A, B22031699-011A**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22031699
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 03/31/2022

Run ID: Run Order: ICPMS207-B_220325A: 39 **SampType:** Sample Matrix Spike Duplicate **Batch ID:** R377810
Method: SW6020 **Analysis Date:** 03/25/2022 16:04 **Prep Date:**
Lab ID: B22031699-001AMSD **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Lead	0.051	0.001	0.050	0.00	102.0	88	115	0.051	1.2	20.0	

Associated Samples: **B22031699-001A, B22031699-006A, B22031699-011A**

Run ID: Run Order: ICPMS207-B_220325A: 37 **SampType:** Serial Dilution **Batch ID:** R377810
Method: SW6020 **Analysis Date:** 03/25/2022 15:52 **Prep Date:**
Lab ID: B22031699-001ADIL **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Lead	ND	0.001						0.00		10.0	

Associated Samples: **B22031699-001A, B22031699-006A, B22031699-011A**

Run ID: Run Order: ICPMS207-B_220325A: 33 **SampType:** Laboratory Control Sample **Batch ID:** 164804
Method: SW6020 **Analysis Date:** 03/25/2022 15:27 **Prep Date:** 03/23/2022 14:39
Lab ID: LCS4-164804 **Units:** mg/L **Prep Method:** SW3010A

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Lead	0.101	0.001	0.100		101.0	88	115				

Associated Samples: **B22031699-001B, B22031699-006B, B22031699-011B**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22031699
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 03/31/2022

Run ID: Run Order: ICPMS207-B_220325A: 47 **SampType:** Post Digestion/Distillation Spike **Batch ID:** 164804
Method: SW6020 **Analysis Date:** 03/25/2022 16:54 **Prep Date:** 03/23/2022 14:41
Lab ID: B22031699-006BPDS1 **Units:** mg/L **Prep Method:** SW3010A

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Lead	0.052	0.001	0.052	0.00	100.0	80	120				

Associated Samples: **B22031699-001B, B22031699-006B, B22031699-011B**

Run ID: Run Order: ICPMS207-B_220325A: 48 **SampType:** Matrix Spike **Batch ID:** 164804
Method: SW6020 **Analysis Date:** 03/25/2022 17:01 **Prep Date:** 03/23/2022 14:41
Lab ID: B22031699-006BMS4 **Units:** mg/L **Prep Method:** SW3010A

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Lead	0.103	0.001	0.100	0.00	103.0	88	115				

Associated Samples: **B22031699-001B, B22031699-006B, B22031699-011B**

Run ID: Run Order: ICPMS207-B_220325A: 49 **SampType:** Sample Matrix Spike Duplicate **Batch ID:** 164804
Method: SW6020 **Analysis Date:** 03/25/2022 17:07 **Prep Date:** 03/23/2022 14:41
Lab ID: B22031699-006BMSD4 **Units:** mg/L **Prep Method:** SW3010A

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Lead	0.104	0.001	0.100	0.00	104.0	88	115	0.103	0.8	20.0	

Associated Samples: **B22031699-001B, B22031699-006B, B22031699-011B**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22031699
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 03/31/2022

Run ID: Run Order: ICPMS207-B_220325A: 31 **SampType:** Method Blank **Batch ID:** 164804
Method: SW6020 **Analysis Date:** 03/25/2022 15:15 **Prep Date:** 03/23/2022 14:39
Lab ID: MB-164804 **Units:** mg/L **Prep Method:** SW3010A

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Lead	ND	0.0005									

Associated Samples: **B22031699-001B, B22031699-006B, B22031699-011B**

Run ID: Run Order: ICPMS207-B_220325A: 46 **SampType:** Serial Dilution **Batch ID:** 164804
Method: SW6020 **Analysis Date:** 03/25/2022 16:48 **Prep Date:** 03/23/2022 14:41
Lab ID: B22031699-006BDIL **Units:** mg/L **Prep Method:** SW3010A

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Lead	ND	0.001						0.00		10.0	

Associated Samples: **B22031699-001B, B22031699-006B, B22031699-011B**

Run ID: Run Order: ICPMS207-B_220325A: 28 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R377810
Method: SW6020 **Analysis Date:** 03/25/2022 14:56 **Prep Date:**
Lab ID: CCV **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Lead	0.051	0.001	0.050		103.0	90	110				

Associated Samples: **B22031699-001A, B22031699-001B, B22031699-006A, B22031699-006B, B22031699-011A, B22031699-011B**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22031699
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 03/31/2022

Run ID: Run Order: ICPMS207-B_220325A: 43 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R377810
Method: SW6020 **Analysis Date:** 03/25/2022 16:29 **Prep Date:**
Lab ID: CCV **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Lead	0.050	0.001	0.050		101.0	90	110				

Associated Samples: **B22031699-001A, B22031699-001B, B22031699-006A, B22031699-006B, B22031699-011A, B22031699-011B**

Run ID: Run Order: ICPMS207-B_220325A: 56 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R377810
Method: SW6020 **Analysis Date:** 03/25/2022 17:50 **Prep Date:**
Lab ID: CCV **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Lead	0.051	0.001	0.050		103.0	90	110				

Associated Samples: **B22031699-001A, B22031699-001B, B22031699-006A, B22031699-006B, B22031699-011A, B22031699-011B**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22031699
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 03/31/2022

Run ID: Run Order: VOA5975C.I_220324A: 4 **SampType:** Method Blank **Batch ID:** R377852
Method: SW8260B **Analysis Date:** 03/24/2022 15:16 **Prep Date:**
Lab ID: MBLK032422_ **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Benzene	ND	0.50									
Bromobenzene	ND	0.50									
Bromochloromethane	ND	0.50									
Bromodichloromethane	ND	0.50									
Bromoform	ND	0.50									
Carbon tetrachloride	ND	0.50									
Chlorobenzene	ND	0.50									
Chlorodibromomethane	ND	0.50									
Chloroethane	ND	0.50									
Chloroform	ND	0.50									
Chloromethane	ND	0.50									
1,2-Dibromoethane	ND	0.50									
2-Chlorotoluene	ND	0.50									
Dibromomethane	ND	0.50									
1,2-Dichlorobenzene	ND	0.50									
4-Chlorotoluene	ND	0.50									
1,3-Dichlorobenzene	ND	0.50									
1,4-Dichlorobenzene	ND	0.50									
Dichlorodifluoromethane	ND	0.50									
1,1-Dichloroethane	ND	0.50									
1,2-Dichloroethane	ND	0.50									
1,1-Dichloroethene	ND	0.50									
cis-1,2-Dichloroethene	ND	0.50									
trans-1,2-Dichloroethene	ND	0.50									
1,2-Dichloropropane	ND	0.50									
1,3-Dichloropropane	ND	0.50									
2,2-Dichloropropane	ND	0.50									

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22031699
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 03/31/2022

Run ID: Run Order: VOA5975C.I_220324A: 4 **SampType:** Method Blank **Batch ID:** R377852
Method: SW8260B **Analysis Date:** 03/24/2022 15:16 **Prep Date:**
Lab ID: MBLK032422_ **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	0.50									
cis-1,3-Dichloropropene	ND	0.50									
trans-1,3-Dichloropropene	ND	0.50									
Ethylbenzene	ND	0.50									
Methyl tert-butyl ether (MTBE)	ND	0.50									
Methyl ethyl ketone	ND	10									
Methylene chloride	ND	0.50									
Styrene	ND	0.50									
1,1,1,2-Tetrachloroethane	ND	0.50									
1,1,2,2-Tetrachloroethane	ND	0.50									
Tetrachloroethene	ND	0.50									
Toluene	ND	0.50									
1,1,1-Trichloroethane	ND	0.50									
1,1,2-Trichloroethane	ND	0.50									
Trichloroethene	ND	0.50									
Trichlorofluoromethane	ND	0.50									
1,2,3-Trichloropropane	ND	0.50									
Vinyl chloride	ND	0.50									
m+p-Xylenes	ND	0.50									
o-Xylene	ND	0.50									
Xylenes, Total	ND	0.50									
Surr: 1,2-Dichloroethane-d4	11	0.50	10		108.0	81	118				
Surr: Dibromofluoromethane	11	0.50	10		109.0	80	119				
Surr: p-Bromofluorobenzene	11	0.50	10		107.0	85	114				
Surr: Toluene-d8	9.6	0.50	10		96.0	89	112				

Associated Samples: **B22031699-001E, B22031699-002A, B22031699-006E, B22031699-007A, B22031699-011E, B22031699-012A**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22031699
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 03/31/2022

Run ID: Run Order: VOA5975C.I_220324A: 3 **SampType:** Laboratory Control Sample **Batch ID:** R377852
Method: SW8260B **Analysis Date:** 03/24/2022 14:21 **Prep Date:**
Lab ID: LCS032422_ **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Benzene	5.1	0.50	5.0		102.0	79	120				
Bromobenzene	5.0	0.50	5.0		99.0	80	120				
Bromochloromethane	4.8	0.50	5.0		97.0	78	123				
Bromodichloromethane	5.1	0.50	5.0		102.0	79	125				
Bromoform	4.8	0.50	5.0		97.0	66	130				
Carbon tetrachloride	4.9	0.50	5.0		98.0	72	136				
Chlorobenzene	4.9	0.50	5.0		97.0	82	118				
Chlorodibromomethane	4.7	0.50	5.0		95.0	74	126				
Chloroethane	4.7	0.50	5.0		94.0	60	138				
Chloroform	4.9	0.50	5.0		97.0	79	124				
Chloromethane	4.4	0.50	5.0		87.0	50	139				
1,2-Dibromoethane	4.7	0.50	5.0		94.0	78	122				
2-Chlorotoluene	5.2	0.50	5.0		104.0	79	122				
Dibromomethane	4.9	0.50	5.0		98.0	79	123				
1,2-Dichlorobenzene	5.0	0.50	5.0		100.0	80	119				
4-Chlorotoluene	5.4	0.50	5.0		108.0	78	122				
1,3-Dichlorobenzene	5.2	0.50	5.0		103.0	80	119				
1,4-Dichlorobenzene	5.0	0.50	5.0		101.0	79	118				
Dichlorodifluoromethane	4.0	0.50	5.0		80.0	32	152				
1,1-Dichloroethane	5.1	0.50	5.0		103.0	77	125				
1,2-Dichloroethane	5.0	0.50	5.0		99.0	73	128				
1,1-Dichloroethene	5.3	0.50	5.0		105.0	71	131				
cis-1,2-Dichloroethene	5.0	0.50	5.0		101.0	78	123				
trans-1,2-Dichloroethene	5.0	0.50	5.0		100.0	75	124				
1,2-Dichloropropane	4.9	0.50	5.0		97.0	78	122				
1,3-Dichloropropane	4.7	0.50	5.0		95.0	80	119				
2,2-Dichloropropane	5.1	0.50	5.0		103.0	60	139				

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22031699
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 03/31/2022

Run ID: Run Order: VOA5975C.I_220324A: 3 **SampType:** Laboratory Control Sample **Batch ID:** R377852
Method: SW8260B **Analysis Date:** 03/24/2022 14:21 **Prep Date:**
Lab ID: LCS032422_ **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,1-Dichloropropene	4.9	0.50	5.0		98.0	79	125				
cis-1,3-Dichloropropene	4.4	0.50	5.0		88.0	75	124				
trans-1,3-Dichloropropene	5.1	0.50	5.0		101.0	73	127				
Ethylbenzene	4.9	0.50	5.0		97.0	79	121				
Methyl tert-butyl ether (MTBE)	4.6	0.50	5.0		92.0	71	124				
Methyl ethyl ketone	55	10	50		111.0	56	143				
Methylene chloride	5.0	0.50	5.0		101.0	74	124				
Styrene	4.9	0.50	5.0		98.0	78	123				
1,1,1,2-Tetrachloroethane	4.8	0.50	5.0		96.0	78	124				
1,1,2,2-Tetrachloroethane	5.1	0.50	5.0		102.0	71	121				
Tetrachloroethene	4.6	0.50	5.0		93.0	74	129				
Toluene	5.1	0.50	5.0		101.0	80	121				
1,1,1-Trichloroethane	4.8	0.50	5.0		97.0	74	131				
1,1,2-Trichloroethane	5.0	0.50	5.0		99.0	80	119				
Trichloroethene	4.9	0.50	5.0		99.0	79	123				
Trichlorofluoromethane	4.7	0.50	5.0		94.0	65	141				
1,2,3-Trichloropropane	4.8	0.50	5.0		95.0	73	125				
Vinyl chloride	4.6	0.50	5.0		92.0	58	137				
m+p-Xylenes	9.5	0.50	10		95.0	80	121				
o-Xylene	4.8	0.50	5.0		96.0	78	122				
Xylenes, Total	14	0.50	15		96.0	79	121				
Surr: 1,2-Dichloroethane-d4	10	0.50	10		104.0	81	118				
Surr: Dibromofluoromethane	10	0.50	10		100.0	80	119				
Surr: p-Bromofluorobenzene	11	0.50	10		106.0	85	114				
Surr: Toluene-d8	10	0.50	10		101.0	89	112				

Associated Samples: **B22031699-001E, B22031699-002A, B22031699-006E, B22031699-007A, B22031699-011E, B22031699-012A**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22031699
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 03/31/2022

Run ID: Run Order: VOA5975C.I_220324A: 21 **SampType:** Sample Matrix Spike **Batch ID:** R377852
Method: SW8260B **Analysis Date:** 03/24/2022 22:32 **Prep Date:**
Lab ID: B22031699-001EMS **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Benzene	4.9	0.50	5.0	0.0	98.0	79	120				
Bromobenzene	4.8	0.50	5.0	0.0	96.0	80	120				
Bromochloromethane	4.7	0.50	5.0	0.0	95.0	78	123				
Bromodichloromethane	5.0	0.50	5.0	0.0	99.0	79	125				
Bromoform	4.8	0.50	5.0	0.0	97.0	66	130				
Carbon tetrachloride	4.7	0.50	5.0	0.0	94.0	72	136				
Chlorobenzene	4.7	0.50	5.0	0.0	94.0	82	118				
Chlorodibromomethane	4.6	0.50	5.0	0.0	91.0	74	126				
Chloroethane	5.1	0.50	5.0	0.0	102.0	60	138				
Chloroform	4.7	0.50	5.0	0.0	94.0	79	124				
Chloromethane	4.8	0.50	5.0	0.0	96.0	50	139				
1,2-Dibromoethane	4.5	0.50	5.0	0.0	89.0	78	122				
2-Chlorotoluene	4.9	0.50	5.0	0.0	98.0	79	122				
Dibromomethane	4.8	0.50	5.0	0.0	96.0	79	123				
1,2-Dichlorobenzene	4.7	0.50	5.0	0.0	93.0	80	119				
4-Chlorotoluene	5.1	0.50	5.0	0.0	102.0	78	122				
1,3-Dichlorobenzene	4.8	0.50	5.0	0.0	96.0	80	119				
1,4-Dichlorobenzene	4.7	0.50	5.0	0.0	95.0	79	118				
Dichlorodifluoromethane	4.2	0.50	5.0	0.0	84.0	32	152				
1,1-Dichloroethane	5.0	0.50	5.0	0.0	99.0	77	125				
1,2-Dichloroethane	4.8	0.50	5.0	0.0	96.0	73	128				
1,1-Dichloroethene	5.1	0.50	5.0	0.0	102.0	71	131				
cis-1,2-Dichloroethene	4.7	0.50	5.0	0.0	94.0	78	123				
trans-1,2-Dichloroethene	4.7	0.50	5.0	0.0	93.0	75	124				
1,2-Dichloropropane	4.6	0.50	5.0	0.0	93.0	78	122				
1,3-Dichloropropane	4.5	0.50	5.0	0.0	90.0	80	119				
2,2-Dichloropropane	4.4	0.50	5.0	0.0	88.0	60	139				

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22031699
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 03/31/2022

Run ID: Run Order: VOA5975C.I_220324A: 21 **SampType:** Sample Matrix Spike **Batch ID:** R377852
Method: SW8260B **Analysis Date:** 03/24/2022 22:32 **Prep Date:**
Lab ID: B22031699-001EMS **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,1-Dichloropropene	4.6	0.50	5.0	0.0	93.0	79	125				
cis-1,3-Dichloropropene	4.2	0.50	5.0	0.0	83.0	75	124				
trans-1,3-Dichloropropene	4.6	0.50	5.0	0.0	91.0	73	127				
Ethylbenzene	4.6	0.50	5.0	0.0	92.0	79	121				
Methyl tert-butyl ether (MTBE)	4.6	0.50	5.0	0.0	93.0	71	124				
Methyl ethyl ketone	53	10	50	0.0	106.0	56	143				
Methylene chloride	4.8	0.50	5.0	0.0	97.0	74	124				
Styrene	4.6	0.50	5.0	0.0	92.0	78	123				
1,1,1,2-Tetrachloroethane	4.5	0.50	5.0	0.0	91.0	78	124				
1,1,2,2-Tetrachloroethane	5.0	0.50	5.0	0.0	100.0	71	121				
Tetrachloroethene	4.5	0.50	5.0	0.0	89.0	74	129				
Toluene	4.9	0.50	5.0	0.0	98.0	80	121				
1,1,1-Trichloroethane	4.6	0.50	5.0	0.0	92.0	74	131				
1,1,2-Trichloroethane	4.8	0.50	5.0	0.0	96.0	80	119				
Trichloroethene	4.6	0.50	5.0	0.0	93.0	79	123				
Trichlorofluoromethane	5.2	0.50	5.0	0.0	104.0	65	141				
1,2,3-Trichloropropane	4.4	0.50	5.0	0.0	89.0	73	125				
Vinyl chloride	4.9	0.50	5.0	0.0	98.0	58	137				
m+p-Xylenes	9.1	0.50	10	0.0	91.0	80	121				
o-Xylene	4.6	0.50	5.0	0.0	92.0	78	122				
Xylenes, Total	14	0.50	15	0.0	91.0	79	121				
Surr: 1,2-Dichloroethane-d4	10	0.50	10	0.0	104.0	81	118				
Surr: Dibromofluoromethane	10	0.50	10	0.0	102.0	80	119				
Surr: p-Bromofluorobenzene	11	0.50	10	0.0	108.0	85	114				
Surr: Toluene-d8	10	0.50	10	0.0	100.0	89	112				

Associated Samples: **B22031699-001E, B22031699-002A, B22031699-006E, B22031699-007A, B22031699-011E, B22031699-012A**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22031699
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 03/31/2022

Run ID: Run Order: VOA5975C.I_220324A: 22 **SampType:** Sample Matrix Spike Duplicate **Batch ID:** R377852
Method: SW8260B **Analysis Date:** 03/24/2022 23:00 **Prep Date:**
Lab ID: B22031699-001EMSD **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Benzene	5.2	0.50	5.0	0.0	105.0	79	120	4.9	7.0	20.0	
Bromobenzene	5.0	0.50	5.0	0.0	101.0	80	120	4.8	4.4	20.0	
Bromochloromethane	5.1	0.50	5.0	0.0	103.0	78	123	4.7	7.9	20.0	
Bromodichloromethane	5.2	0.50	5.0	0.0	104.0	79	125	5.0	5.2	20.0	
Bromoform	5.1	0.50	5.0	0.0	102.0	66	130	4.8	5.9	20.0	
Carbon tetrachloride	5.0	0.50	5.0	0.0	101.0	72	136	4.7	7.1	20.0	
Chlorobenzene	4.9	0.50	5.0	0.0	99.0	82	118	4.7	5.0	20.0	
Chlorodibromomethane	4.8	0.50	5.0	0.0	97.0	74	126	4.6	6.0	20.0	
Chloroethane	5.1	0.50	5.0	0.0	103.0	60	138	5.1	0.7	20.0	
Chloroform	5.0	0.50	5.0	0.0	100.0	79	124	4.7	6.2	20.0	
Chloromethane	4.9	0.50	5.0	0.0	98.0	50	139	4.8	2.6	20.0	
1,2-Dibromoethane	4.9	0.50	5.0	0.0	98.0	78	122	4.5	9.1	20.0	
2-Chlorotoluene	5.3	0.50	5.0	0.0	105.0	79	122	4.9	6.9	20.0	
Dibromomethane	5.1	0.50	5.0	0.0	102.0	79	123	4.8	6.3	20.0	
1,2-Dichlorobenzene	5.1	0.50	5.0	0.0	102.0	80	119	4.7	9.2	20.0	
4-Chlorotoluene	5.4	0.50	5.0	0.0	108.0	78	122	5.1	5.7	20.0	
1,3-Dichlorobenzene	5.2	0.50	5.0	0.0	104.0	80	119	4.8	7.7	20.0	
1,4-Dichlorobenzene	5.0	0.50	5.0	0.0	101.0	79	118	4.7	5.9	20.0	
Dichlorodifluoromethane	4.3	0.50	5.0	0.0	86.0	32	152	4.2	3.2	20.0	
1,1-Dichloroethane	5.3	0.50	5.0	0.0	107.0	77	125	5.0	7.1	20.0	
1,2-Dichloroethane	5.1	0.50	5.0	0.0	101.0	73	128	4.8	5.7	20.0	
1,1-Dichloroethene	5.4	0.50	5.0	0.0	107.0	71	131	5.1	5.0	20.0	
cis-1,2-Dichloroethene	5.1	0.50	5.0	0.0	103.0	78	123	4.7	8.9	20.0	
trans-1,2-Dichloroethene	5.2	0.50	5.0	0.0	104.0	75	124	4.7	11.0	20.0	
1,2-Dichloropropane	4.9	0.50	5.0	0.0	99.0	78	122	4.6	6.3	20.0	
1,3-Dichloropropane	4.8	0.50	5.0	0.0	97.0	80	119	4.5	7.8	20.0	
2,2-Dichloropropane	4.7	0.50	5.0	0.0	95.0	60	139	4.4	7.5	20.0	

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22031699
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 03/31/2022

Run ID: Run Order: VOA5975C.I_220324A: 22 **SampType:** Sample Matrix Spike Duplicate **Batch ID:** R377852
Method: SW8260B **Analysis Date:** 03/24/2022 23:00 **Prep Date:**
Lab ID: B22031699-001EMSD **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,1-Dichloropropene	5.0	0.50	5.0	0.0	100.0	79	125	4.6	7.7	20.0	
cis-1,3-Dichloropropene	4.4	0.50	5.0	0.0	89.0	75	124	4.2	6.3	20.0	
trans-1,3-Dichloropropene	5.0	0.50	5.0	0.0	101.0	73	127	4.6	10.0	20.0	
Ethylbenzene	4.9	0.50	5.0	0.0	98.0	79	121	4.6	6.4	20.0	
Methyl tert-butyl ether (MTBE)	5.1	0.50	5.0	0.0	101.0	71	124	4.6	8.8	20.0	
Methyl ethyl ketone	59	10	50	0.0	118.0	56	143	53	11.0	20.0	
Methylene chloride	5.2	0.50	5.0	0.0	104.0	74	124	4.8	6.9	20.0	
Styrene	4.9	0.50	5.0	0.0	98.0	78	123	4.6	5.9	20.0	
1,1,1,2-Tetrachloroethane	4.9	0.50	5.0	0.0	98.0	78	124	4.5	7.9	20.0	
1,1,2,2-Tetrachloroethane	5.3	0.50	5.0	0.0	107.0	71	121	5.0	6.3	20.0	
Tetrachloroethene	4.8	0.50	5.0	0.0	95.0	74	129	4.5	6.6	20.0	
Toluene	5.2	0.50	5.0	0.0	104.0	80	121	4.9	5.7	20.0	
1,1,1-Trichloroethane	5.0	0.50	5.0	0.0	100.0	74	131	4.6	8.4	20.0	
1,1,2-Trichloroethane	5.1	0.50	5.0	0.0	101.0	80	119	4.8	5.4	20.0	
Trichloroethene	4.9	0.50	5.0	0.0	98.0	79	123	4.6	5.6	20.0	
Trichlorofluoromethane	5.2	0.50	5.0	0.0	105.0	65	141	5.2	0.6	20.0	
1,2,3-Trichloropropane	5.1	0.50	5.0	0.0	102.0	73	125	4.4	14.0	20.0	
Vinyl chloride	4.9	0.50	5.0	0.0	97.0	58	137	4.9	0.5	20.0	
m+p-Xylenes	9.8	0.50	10	0.0	98.0	80	121	9.1	7.5	20.0	
o-Xylene	4.9	0.50	5.0	0.0	98.0	78	122	4.6	5.8	20.0	
Xylenes, Total	15	0.50	15	0.0	98.0	79	121	14	6.9	20.0	
Surr: 1,2-Dichloroethane-d4	11	0.50	10	0.0	108.0	81	118	0.0			
Surr: Dibromofluoromethane	10	0.50	10	0.0	103.0	80	119	0.0			
Surr: p-Bromofluorobenzene	11	0.50	10	0.0	108.0	85	114	0.0			
Surr: Toluene-d8	10	0.50	10	0.0	100.0	89	112	0.0			

Associated Samples: **B22031699-001E, B22031699-002A, B22031699-006E, B22031699-007A, B22031699-011E, B22031699-012A**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22031699
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 03/31/2022

Run ID: Run Order: VOA5975C.I_220324A: 2 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R377852
Method: SW8260B **Analysis Date:** 03/24/2022 13:45 **Prep Date:**
Lab ID: CCV032422_ **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Benzene	4.9	0.50	5.0		97.0	80	120				
Bromobenzene	4.7	0.50	5.0		95.0	80	120				
Bromochloromethane	4.8	0.50	5.0		96.0	80	120				
Bromodichloromethane	4.7	0.50	5.0		94.0	80	120				
Bromoform	4.5	0.50	5.0		90.0	80	120				
Carbon tetrachloride	4.4	0.50	5.0		88.0	80	120				
Chlorobenzene	4.7	0.50	5.0		94.0	80	120				
Chlorodibromomethane	4.6	0.50	5.0		92.0	80	120				
Chloroethane	5.3	0.50	5.0		106.0	80	120				
Chloroform	4.8	0.50	5.0		96.0	80	120				
Chloromethane	5.3	0.50	5.0		106.0	80	120				
1,2-Dibromoethane	4.6	0.50	5.0		92.0	80	120				
2-Chlorotoluene	4.7	0.50	5.0		94.0	80	120				
Dibromomethane	4.6	0.50	5.0		91.0	80	120				
1,2-Dichlorobenzene	4.7	0.50	5.0		94.0	80	120				
4-Chlorotoluene	5.0	0.50	5.0		99.0	80	120				
1,3-Dichlorobenzene	4.8	0.50	5.0		95.0	80	120				
1,4-Dichlorobenzene	4.6	0.50	5.0		93.0	80	120				
Dichlorodifluoromethane	5.5	0.50	5.0		109.0	80	120				
1,1-Dichloroethane	4.9	0.50	5.0		97.0	80	120				
1,2-Dichloroethane	4.9	0.50	5.0		97.0	80	120				
1,1-Dichloroethene	4.8	0.50	5.0		97.0	80	120				
cis-1,2-Dichloroethene	4.7	0.50	5.0		95.0	80	120				
trans-1,2-Dichloroethene	4.7	0.50	5.0		95.0	80	120				
1,2-Dichloropropane	4.7	0.50	5.0		94.0	80	120				
1,3-Dichloropropane	4.6	0.50	5.0		92.0	80	120				
2,2-Dichloropropane	4.8	0.50	5.0		96.0	80	120				

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22031699
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 03/31/2022

Run ID: Run Order: VOA5975C.I_220324A: 2 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R377852
Method: SW8260B **Analysis Date:** 03/24/2022 13:45 **Prep Date:**
Lab ID: CCV032422_ **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,1-Dichloropropene	4.6	0.50	5.0		92.0	80	120				
cis-1,3-Dichloropropene	4.5	0.50	5.0		90.0	80	120				
trans-1,3-Dichloropropene	4.8	0.50	5.0		95.0	80	120				
Ethylbenzene	4.5	0.50	5.0		91.0	80	120				
Methyl tert-butyl ether (MTBE)	4.6	0.50	5.0		91.0	80	120				
Methyl ethyl ketone	52	10	50		103.0	80	120				
Methylene chloride	4.7	0.50	5.0		95.0	80	120				
Styrene	4.7	0.50	5.0		94.0	80	120				
1,1,1,2-Tetrachloroethane	4.6	0.50	5.0		91.0	80	120				
1,1,2,2-Tetrachloroethane	5.0	0.50	5.0		101.0	80	120				
Tetrachloroethene	4.4	0.50	5.0		88.0	80	120				
Toluene	4.9	0.50	5.0		98.0	80	120				
1,1,1-Trichloroethane	4.6	0.50	5.0		91.0	80	120				
1,1,2-Trichloroethane	4.7	0.50	5.0		95.0	80	120				
Trichloroethene	4.6	0.50	5.0		93.0	80	120				
Trichlorofluoromethane	5.4	0.50	5.0		107.0	80	120				
1,2,3-Trichloropropane	4.8	0.50	5.0		96.0	80	120				
Vinyl chloride	5.2	0.50	5.0		104.0	80	120				
m+p-Xylenes	9.2	0.50	10		92.0	80	120				
o-Xylene	4.7	0.50	5.0		93.0	80	120				
Xylenes, Total	14	0.50	15		92.0	80	120				
Surr: 1,2-Dichloroethane-d4	11	0.50	10		107.0	80	120				
Surr: Dibromofluoromethane	10	0.50	10		104.0	80	120				
Surr: p-Bromofluorobenzene	11	0.50	10		107.0	80	120				
Surr: Toluene-d8	9.9	0.50	10		99.0	80	120				

Associated Samples: **B22031699-001E, B22031699-002A, B22031699-006E, B22031699-007A, B22031699-011E, B22031699-012A**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22031699
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 03/31/2022

Run ID: Run Order: VOA5975C.I_220324A: 23 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R377852
Method: SW8260B **Analysis Date:** 03/24/2022 23:54 **Prep Date:**
Lab ID: CCV032422_Closing **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Benzene	5.2	0.50	5.0		104.0	50	150				
Bromobenzene	5.1	0.50	5.0		102.0	50	150				
Bromochloromethane	5.1	0.50	5.0		101.0	50	150				
Bromodichloromethane	5.0	0.50	5.0		100.0	50	150				
Bromoform	4.8	0.50	5.0		95.0	50	150				
Carbon tetrachloride	4.9	0.50	5.0		98.0	50	150				
Chlorobenzene	5.0	0.50	5.0		99.0	50	150				
Chlorodibromomethane	4.7	0.50	5.0		94.0	50	150				
Chloroethane	5.5	0.50	5.0		109.0	50	150				
Chloroform	5.0	0.50	5.0		99.0	50	150				
Chloromethane	5.5	0.50	5.0		110.0	50	150				
1,2-Dibromoethane	4.7	0.50	5.0		94.0	50	150				
2-Chlorotoluene	5.2	0.50	5.0		104.0	50	150				
Dibromomethane	5.0	0.50	5.0		99.0	50	150				
1,2-Dichlorobenzene	4.9	0.50	5.0		97.0	50	150				
4-Chlorotoluene	5.4	0.50	5.0		107.0	50	150				
1,3-Dichlorobenzene	5.0	0.50	5.0		100.0	50	150				
1,4-Dichlorobenzene	4.9	0.50	5.0		99.0	50	150				
Dichlorodifluoromethane	5.6	0.50	5.0		112.0	50	150				
1,1-Dichloroethane	5.0	0.50	5.0		100.0	50	150				
1,2-Dichloroethane	5.0	0.50	5.0		100.0	50	150				
1,1-Dichloroethene	5.2	0.50	5.0		103.0	50	150				
cis-1,2-Dichloroethene	4.9	0.50	5.0		99.0	50	150				
trans-1,2-Dichloroethene	4.9	0.50	5.0		98.0	50	150				
1,2-Dichloropropane	5.0	0.50	5.0		100.0	50	150				
1,3-Dichloropropane	5.0	0.50	5.0		101.0	50	150				
2,2-Dichloropropane	4.6	0.50	5.0		92.0	50	150				

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22031699
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 03/31/2022

Run ID: Run Order: VOA5975C.I_220324A: 23 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R377852
Method: SW8260B **Analysis Date:** 03/24/2022 23:54 **Prep Date:**
Lab ID: CCV032422_Closing **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,1-Dichloropropene	5.0	0.50	5.0		101.0	50	150				
cis-1,3-Dichloropropene	4.7	0.50	5.0		94.0	50	150				
trans-1,3-Dichloropropene	4.8	0.50	5.0		96.0	50	150				
Ethylbenzene	4.9	0.50	5.0		98.0	50	150				
Methyl tert-butyl ether (MTBE)	4.7	0.50	5.0		93.0	50	150				
Methyl ethyl ketone	57	10	50		113.0	50	150				
Methylene chloride	4.9	0.50	5.0		98.0	50	150				
Styrene	4.9	0.50	5.0		99.0	50	150				
1,1,1,2-Tetrachloroethane	4.9	0.50	5.0		98.0	50	150				
1,1,2,2-Tetrachloroethane	5.2	0.50	5.0		105.0	50	150				
Tetrachloroethene	4.7	0.50	5.0		95.0	50	150				
Toluene	5.3	0.50	5.0		105.0	50	150				
1,1,1-Trichloroethane	4.9	0.50	5.0		98.0	50	150				
1,1,2-Trichloroethane	5.0	0.50	5.0		99.0	50	150				
Trichloroethene	5.0	0.50	5.0		99.0	50	150				
Trichlorofluoromethane	5.6	0.50	5.0		113.0	50	150				
1,2,3-Trichloropropane	5.0	0.50	5.0		100.0	50	150				
Vinyl chloride	5.4	0.50	5.0		109.0	50	150				
m+p-Xylenes	9.9	0.50	10		99.0	50	150				
o-Xylene	4.9	0.50	5.0		99.0	50	150				
Xylenes, Total	15	0.50	15		99.0	50	150				
Surr: 1,2-Dichloroethane-d4	11	0.50	10		106.0	50	150				
Surr: Dibromofluoromethane	10	0.50	10		101.0	50	150				
Surr: p-Bromofluorobenzene	11	0.50	10		108.0	50	150				
Surr: Toluene-d8	10	0.50	10		101.0	50	150				

Associated Samples: **B22031699-001E, B22031699-002A, B22031699-006E, B22031699-007A, B22031699-011E, B22031699-012A**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22031699
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 03/31/2022

Run ID: Run Order: GECD.I_220325A: 10 **SampType:** Method Blank **Batch ID:** 164860
Method: SW8011 **Analysis Date:** 03/25/2022 16:53 **Prep Date:** 03/25/2022 08:20
Lab ID: MB-164860 **Units:** ug/L **Prep Method:** SW8011

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.0050									
Surr: 1,1,1,2-Tetrachloroethane	0.087	0.020	0.10		87.0	70	130				

Associated Samples: **B22031699-001G, B22031699-004A, B22031699-006G, B22031699-009A, B22031699-011G, B22031699-014A**

Run ID: Run Order: GECD.I_220325A: 11 **SampType:** Laboratory Control Sample **Batch ID:** 164860
Method: SW8011 **Analysis Date:** 03/25/2022 17:12 **Prep Date:** 03/25/2022 08:20
Lab ID: LCS-164860 **Units:** ug/L **Prep Method:** SW8011

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.24	0.010	0.25		94.0	60	140				
Surr: 1,1,1,2-Tetrachloroethane	0.089	0.020	0.10		89.0	70	130				

Associated Samples: **B22031699-001G, B22031699-004A, B22031699-006G, B22031699-009A, B22031699-011G, B22031699-014A**

Run ID: Run Order: GECD.I_220325A: 12 **SampType:** Laboratory Control Sample **Batch ID:** 164860
Method: SW8011 **Analysis Date:** 03/25/2022 17:32 **Prep Date:** 03/25/2022 08:21
Lab ID: LCS1-164860 **Units:** ug/L **Prep Method:** SW8011

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.097	0.010	0.10		97.0	60	140				
Surr: 1,1,1,2-Tetrachloroethane	0.090	0.020	0.10		90.0	70	130				

Associated Samples: **B22031699-001G, B22031699-004A, B22031699-006G, B22031699-009A, B22031699-011G, B22031699-014A**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22031699
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 03/31/2022

Run ID: Run Order: GECD.I_220325A: 19 **SampType:** Sample Matrix Spike **Batch ID:** 164860
Method: SW8011 **Analysis Date:** 03/25/2022 20:09 **Prep Date:** 03/25/2022 08:22
Lab ID: B22031699-001GMS **Units:** ug/L **Prep Method:** SW8011

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.23	0.010	0.24	0.0	94.0	60	140				
Surr: 1,1,1,2-Tetrachloroethane	0.088	0.020	0.096	0.0	92.0	70	130				

Associated Samples: **B22031699-001G, B22031699-004A, B22031699-006G, B22031699-009A, B22031699-011G, B22031699-014A**

Run ID: Run Order: GECD.I_220325A: 20 **SampType:** Sample Matrix Spike Duplicate **Batch ID:** 164860
Method: SW8011 **Analysis Date:** 03/25/2022 20:29 **Prep Date:** 03/25/2022 08:22
Lab ID: B22031699-001GMSD **Units:** ug/L **Prep Method:** SW8011

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.24	0.010	0.24	0.0	97.0	60	140	0.23	3.7	20.0	
Surr: 1,1,1,2-Tetrachloroethane	0.088	0.020	0.097	0.0	91.0	70	130	0.0			

Associated Samples: **B22031699-001G, B22031699-004A, B22031699-006G, B22031699-009A, B22031699-011G, B22031699-014A**

Run ID: Run Order: GECD.I_220325A: 9 **SampType:** Continuing Calibration Verification Standard **Batch ID:** 164860
Method: SW8011 **Analysis Date:** 03/25/2022 16:33 **Prep Date:** 03/25/2022 08:21
Lab ID: CK5-164860 **Units:** ug/L **Prep Method:** SW8011

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.40	0.010	0.40		99.0	80	120				
Surr: 1,1,1,2-Tetrachloroethane	0.41	0.020	0.40		102.0	80	120				

Associated Samples: **B22031699-001G, B22031699-004A, B22031699-006G, B22031699-009A, B22031699-011G, B22031699-014A**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22031699
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 03/31/2022

Run ID: Run Order: GECD.I_220325A: 21 **SampType:** Continuing Calibration Verification Standard **Batch ID:** 164860
Method: SW8011 **Analysis Date:** 03/25/2022 21:08 **Prep Date:** 03/25/2022 08:21
Lab ID: CK3-164860 **Units:** ug/L **Prep Method:** SW8011

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.10	0.010	0.10		101.0	80	120				
Surr: 1,1,1,2-Tetrachloroethane	0.093	0.020	0.10		93.0	80	120				

Associated Samples: **B22031699-001G, B22031699-004A, B22031699-006G, B22031699-009A, B22031699-011G, B22031699-014A**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22031699
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 03/31/2022

Run ID: Run Order: VARIAN1_220325A: 4 **SampType:** Method Blank **Batch ID:** R376802
Method: SW8015C **Analysis Date:** 03/25/2022 13:23 **Prep Date:**
Lab ID: MBLK_0325VAR08r **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
C6 to C10	ND	10									
Total Purgeable Hydrocarbons	ND	10									
Surr: Trifluorotoluene	21	1.0	25		83.0	70	130				

Associated Samples: **B22031699-001F, B22031699-003A, B22031699-006F, B22031699-008A, B22031699-011F, B22031699-013A**

Run ID: Run Order: VARIAN1_220325A: 20 **SampType:** Method Blank **Batch ID:** R376802
Method: SW8015C **Analysis Date:** 03/26/2022 00:49 **Prep Date:**
Lab ID: MBLK_0325VAR28r **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
C6 to C10	ND	10									
Total Purgeable Hydrocarbons	ND	10									
Surr: Trifluorotoluene	20	1.0	25		80.0	70	130				

Associated Samples: **B22031699-001F, B22031699-003A, B22031699-006F, B22031699-008A, B22031699-011F, B22031699-013A**

Run ID: Run Order: VARIAN1_220325A: 3 **SampType:** Laboratory Control Sample **Batch ID:** R376802
Method: SW8015C **Analysis Date:** 03/25/2022 12:14 **Prep Date:**
Lab ID: LCS_0325VAR06r **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
C6 to C10	172	20	170		101.0	78	122				
Total Purgeable Hydrocarbons	209	20	200		104.0	70	130				
Surr: Trifluorotoluene	24	1.0	25		97.0	70	130				

Associated Samples: **B22031699-001F, B22031699-003A, B22031699-006F, B22031699-008A, B22031699-011F, B22031699-013A**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22031699
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 03/31/2022

Run ID: Run Order: VARIAN1_220325A: 19 **SampType:** Laboratory Control Sample **Batch ID:** R376802
Method: SW8015C **Analysis Date:** 03/25/2022 23:40 **Prep Date:**
Lab ID: LCS_0325VAR26r **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
C6 to C10	167	20	170		98.0	78	122				
Total Purgeable Hydrocarbons	203	20	200		101.0	70	130				
Surr: Trifluorotoluene	23	1.0	25		93.0	70	130				

Associated Samples: **B22031699-001F, B22031699-003A, B22031699-006F, B22031699-008A, B22031699-011F, B22031699-013A**

Run ID: Run Order: VARIAN1_220325A: 15 **SampType:** Sample Matrix Spike **Batch ID:** R376802
Method: SW8015C **Analysis Date:** 03/25/2022 20:49 **Prep Date:**
Lab ID: B22031699-011FMS **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
C6 to C10	165	20	170	0.0	97.0	78	122				
Total Purgeable Hydrocarbons	199	20	200	0.0	99.0	70	130				
Surr: Trifluorotoluene	23	1.0	25	0.0	92.0	70	130				

Associated Samples: **B22031699-001F, B22031699-003A, B22031699-006F, B22031699-008A, B22031699-011F, B22031699-013A**

Run ID: Run Order: VARIAN1_220325A: 16 **SampType:** Sample Matrix Spike Duplicate **Batch ID:** R376802
Method: SW8015C **Analysis Date:** 03/25/2022 21:23 **Prep Date:**
Lab ID: B22031699-011FMSD **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
C6 to C10	168	20	170	0.0	99.0	78	122	165	1.4	20.0	
Total Purgeable Hydrocarbons	203	20	200	0.0	101.0	70	130	199	2.1	20.0	
Surr: Trifluorotoluene	23	1.0	25	0.0	93.0	70	130	0.0			

Associated Samples: **B22031699-001F, B22031699-003A, B22031699-006F, B22031699-008A, B22031699-011F, B22031699-013A**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22031699
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 03/31/2022

Run ID: Run Order: GCFID-HP4-B_220325A: 5 **SampType:** Method Blank **Batch ID:** 164847
Method: SW8015C **Analysis Date:** 03/25/2022 15:28 **Prep Date:** 03/24/2022 14:13
Lab ID: MB-164847 **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		93.0	56	125				
Surr: n-Triacontane	0.094	0.0020	0.10		94.0	50	150				

Associated Samples: **B22031699-001C, B22031699-006C, B22031699-011C**

Run ID: Run Order: GCFID-HP4-B_220328A: 5 **SampType:** Method Blank **Batch ID:** 164847
Method: SW8015C **Analysis Date:** 03/28/2022 17:54 **Prep Date:** 03/24/2022 14:13
Lab ID: MB-164847 **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)	0.18	0.0020	0.20		89.0	56	125				
Surr: n-Triacontane (SGT)	0.087	0.0020	0.10		87.0	50	150				

Associated Samples: **B22031699-001C, B22031699-006C, B22031699-011C**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22031699
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 03/31/2022

Run ID: Run Order: GCFID-HP4-B_220325A: 3 **SampType:** Laboratory Control Sample **Batch ID:** 164847
Method: SW8015C **Analysis Date:** 03/25/2022 13:57 **Prep Date:** 03/24/2022 14:13
Lab ID: LCS-164847 **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		87.0	36	132				
Total Extractable Hydrocarbons	14	0.30	15		94.0	60	132				
Surr: o-Terphenyl	0.20	0.0020	0.20		98.0	56	125				

Associated Samples: **B22031699-001C, B22031699-006C, B22031699-011C**

Run ID: Run Order: GCFID-HP4-B_220325A: 4 **SampType:** Laboratory Control Sample Duplicate **Batch ID:** 164847
Method: SW8015C **Analysis Date:** 03/25/2022 14:42 **Prep Date:** 03/24/2022 14:14
Lab ID: LCSD-164847 **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		87.0	36	132	13	0.1	20.0	
Total Extractable Hydrocarbons	14	0.30	15		94.0	60	132	14	0.1	20.0	
Surr: o-Terphenyl	0.20	0.0020	0.20		98.0	56	125	0.0			

Associated Samples: **B22031699-001C, B22031699-006C, B22031699-011C**

Run ID: Run Order: GCFID-HP4-B_220325A: 8 **SampType:** Laboratory Control Sample **Batch ID:** 164847
Method: SW8015C **Analysis Date:** 03/25/2022 19:16 **Prep Date:** 03/24/2022 14:14
Lab ID: LCS-164847-RRO **Units:** mg/L **Prep Method:** SW3520C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
TEH(Oil Range)	4.7	0.30	5.0		94.0	41	113				
Surr: n-Triacontane	0.093	0.0020	0.10		93.0	50	150				

Associated Samples: **B22031699-001C, B22031699-006C, B22031699-011C**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22031699
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 03/31/2022

Run ID: Run Order: GCFID-HP4-B_220325A: 9 **SampType:** Laboratory Control Sample Duplicate **Batch ID:** 164847
Method: SW8015C **Analysis Date:** 03/25/2022 20:01 **Prep Date:** 03/24/2022 14:14
Lab ID: LCSD-164847-RRO **Units:** mg/L **Prep Method:** SW3520C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
TEH(Oil Range)	5.0	0.30	5.0		100.0	41	113	4.7	6.3	20.0	
Surr: n-Triacontane	0.095	0.0020	0.10		95.0	50	150	0.0			

Associated Samples: **B22031699-001C, B22031699-006C, B22031699-011C**

Run ID: Run Order: GCFID-HP4-B_220328A: 3 **SampType:** Laboratory Control Sample **Batch ID:** 164847
Method: SW8015C **Analysis Date:** 03/28/2022 16:22 **Prep Date:** 03/24/2022 14:13
Lab ID: LCS-164847 **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		84.0	36	132				
Total Extractable Hydrocarbons (SGT)	13	0.30	15		90.0	60	132				
Surr: o-Terphenyl (SGT)	0.20	0.0020	0.20		99.0	56	125				

Associated Samples: **B22031699-001C, B22031699-006C, B22031699-011C**

Run ID: Run Order: GCFID-HP4-B_220328A: 4 **SampType:** Laboratory Control Sample Duplicate **Batch ID:** 164847
Method: SW8015C **Analysis Date:** 03/28/2022 17:08 **Prep Date:** 03/24/2022 14:14
Lab ID: LCSD-164847 **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		79.0	36	132	13	6.2	20.0	
Total Extractable Hydrocarbons (SGT)	13	0.30	15		84.0	60	132	13	6.3	20.0	
Surr: o-Terphenyl (SGT)	0.18	0.0020	0.20		92.0	56	125	0.0			

Associated Samples: **B22031699-001C, B22031699-006C, B22031699-011C**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22031699
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 03/31/2022

Run ID: Run Order: GCFID-HP4-B_220328A: 8 **SampType:** Laboratory Control Sample **Batch ID:** 164847
Method: SW8015C **Analysis Date:** 03/28/2022 21:42 **Prep Date:** 03/24/2022 14:14
Lab ID: LCS-164847-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		91.0	41	113				
Surr: n-Triacontane (SGT)	0.084	0.0020	0.10		84.0	50	150				

Associated Samples: **B22031699-001C, B22031699-006C, B22031699-011C**

Run ID: Run Order: GCFID-HP4-B_220328A: 9 **SampType:** Laboratory Control Sample Duplicate **Batch ID:** 164847
Method: SW8015C **Analysis Date:** 03/28/2022 23:13 **Prep Date:** 03/24/2022 14:14
Lab ID: LCSD-164847-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)	4.8	0.30	5.0		97.0	41	113	4.6	5.7	20.0	
Surr: n-Triacontane (SGT)	0.089	0.0020	0.10		89.0	50	150	0.0			

Associated Samples: **B22031699-001C, B22031699-006C, B22031699-011C**

Run ID: Run Order: GCFID-HP4-B_220325A: 7 **SampType:** Sample Matrix Spike **Batch ID:** 164847
Method: SW8015C **Analysis Date:** 03/25/2022 17:45 **Prep Date:** 03/24/2022 14:14
Lab ID: B22031740-011CMS **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	0.28	86.0	36	132				
Total Extractable Hydrocarbons	14	0.30	14	0.44	91.0	60	132				
Surr: o-Terphenyl	0.19	0.0020	0.19	0.0	96.0	56	125				

Associated Samples: **B22031699-001C, B22031699-006C, B22031699-011C**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22031699
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 03/31/2022

Run ID: Run Order: GCFID-HP4-B_220325A: 10 **SampType:** Sample Matrix Spike **Batch ID:** 164847
Method: SW8015C **Analysis Date:** 03/25/2022 21:32 **Prep Date:** 03/24/2022 14:14
Lab ID: B22031740-012AMS-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)	4.9	0.30	4.8	0.15	100.0	41	113				
Surr: n-Triacontane	0.098	0.0020	0.096	0.0	102.0	50	150				

Associated Samples: **B22031699-001C, B22031699-006C, B22031699-011C**

Run ID: Run Order: GCFID-HP4-B_220328A: 7 **SampType:** Sample Matrix Spike **Batch ID:** 164847
Method: SW8015C **Analysis Date:** 03/28/2022 20:11 **Prep Date:** 03/24/2022 14:14
Lab ID: B22031740-011CMS **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	14	0.040	77.0	36	132				
Total Extractable Hydrocarbons (SGT)	12	0.30	14	0.0	82.0	60	132				
Surr: o-Terphenyl (SGT)	0.18	0.0020	0.19	0.0	92.0	56	125				

Associated Samples: **B22031699-001C, B22031699-006C, B22031699-011C**

Run ID: Run Order: GCFID-HP4-B_220328A: 17 **SampType:** Sample Matrix Spike **Batch ID:** 164847
Method: SW8015C **Analysis Date:** 03/29/2022 08:17 **Prep Date:** 03/24/2022 14:14
Lab ID: B22031740-012AMS-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)	4.8	0.30	4.8	0.0	100.0	41	113				
Surr: n-Triacontane (SGT)	0.091	0.0020	0.096	0.0	95.0	50	150				

Associated Samples: **B22031699-001C, B22031699-006C, B22031699-011C**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22031699
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 03/31/2022

Run ID: Run Order: VARIAN1_220325A: 2 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R376802
Method: SW8015C **Analysis Date:** 03/25/2022 11:40 **Prep Date:**
Lab ID: CCV_0325VAR05r **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
C6 to C10	173	20	168		103.0	80	120				
Total Purgeable Hydrocarbons	205	20	200		103.0	80	120				
Surr: Trifluorotoluene	24	1.0	25		97.0	80	120				

Associated Samples: **B22031699-001F, B22031699-003A, B22031699-006F, B22031699-008A, B22031699-011F, B22031699-013A**

Run ID: Run Order: VARIAN1_220325A: 18 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R376802
Method: SW8015C **Analysis Date:** 03/25/2022 23:06 **Prep Date:**
Lab ID: CCV_0325VAR25r **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
C6 to C10	168	20	168		100.0	80	120				
Total Purgeable Hydrocarbons	200	20	200		100.0	80	120				
Surr: Trifluorotoluene	23	1.0	25		92.0	80	120				

Associated Samples: **B22031699-001F, B22031699-003A, B22031699-006F, B22031699-008A, B22031699-011F, B22031699-013A**

Run ID: Run Order: VARIAN1_220325A: 29 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R376802
Method: SW8015C **Analysis Date:** 03/26/2022 09:59 **Prep Date:**
Lab ID: CCV_0325VAR44r **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
C6 to C10	165	20	168		98.0	80	120				
Total Purgeable Hydrocarbons	197	20	200		99.0	80	120				
Surr: Trifluorotoluene	24	1.0	25		95.0	80	120				

Associated Samples: **B22031699-001F, B22031699-003A, B22031699-006F, B22031699-008A, B22031699-011F, B22031699-013A**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22031699
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 03/31/2022

Run ID: Run Order: GCFID-HP4-B_220325A: 16 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R377832
Method: SW8015C **Analysis Date:** 03/26/2022 10:23 **Prep Date:**
Lab ID: CCV_0325HP434r-W **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
TEH(Oil Range)	5.2	0.30	5.0		105.0	80	120				
Surr: n-Triacontane	0.22	0.0020	0.20		108.0	80	120				

Associated Samples: **B22031699-001C, B22031699-006C, B22031699-011C**

Run ID: Run Order: GCFID-HP4-B_220325A: 17 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R377832
Method: SW8015C **Analysis Date:** 03/26/2022 11:08 **Prep Date:**
Lab ID: CCV_0325HP435r **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	0.22	0.0020	0.20		109.0	80	120				

Associated Samples: **B22031699-001C, B22031699-006C, B22031699-011C**

Run ID: Run Order: GCFID-HP4-B_220325A: 24 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R377832
Method: SW8015C **Analysis Date:** 03/26/2022 19:25 **Prep Date:**
Lab ID: CCV_0325HP446r **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	0.22	0.0020	0.20		112.0	80	120				

Associated Samples: **B22031699-001C, B22031699-006C, B22031699-011C**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22031699
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 03/31/2022

Run ID: Run Order: GCFID-HP4-B_220328A: 10 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R377920
Method: SW8015C **Analysis Date:** 03/29/2022 00:44 **Prep Date:**
Lab ID: CCV_0328HP419r-W **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
TEH(Oil Range)	5.4	0.30	5.0		108.0	80	120				
Surr: n-Triacontane	0.22	0.0020	0.20		112.0	80	120				

Associated Samples: **B22031699-011C**

Run ID: Run Order: GCFID-HP4-B_220328A: 11 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R377920
Method: SW8015C **Analysis Date:** 03/29/2022 01:29 **Prep Date:**
Lab ID: CCV_0328HP420r **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)	17	0.30	15		111.0	80	120				
Total Extractable Hydrocarbons	17	0.30	15		115.0	80	120				
Surr: o-Terphenyl	0.24	0.0020	0.20		120.0	80	120				

Associated Samples: **B22031699-011C**

Run ID: Run Order: GCFID-HP4-B_220328A: 18 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R377920
Method: SW8015C **Analysis Date:** 03/29/2022 10:53 **Prep Date:**
Lab ID: CCV_0328HP431r-W **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
TEH(Oil Range)	5.6	0.30	5.0		113.0	80	120				
Surr: n-Triacontane	0.23	0.0020	0.20		113.0	80	120				

Associated Samples: **B22031699-011C**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22031699
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 03/31/2022

Run ID: Run Order: GCFID-HP4-B_220328A: 19 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R377920
Method: SW8015C **Analysis Date:** 03/29/2022 11:38 **Prep Date:**
Lab ID: CCV_0328HP432r **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		107.0	80	120				
Total Extractable Hydrocarbons	17	0.30	15		110.0	80	120				
Surr: o-Terphenyl	0.23	0.0020	0.20		115.0	80	120				

Associated Samples: **B22031699-011C**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22031699
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 03/31/2022

Run ID: Run Order: FID-HEADSPACE_220325A: 4 **SampType:** Method Blank **Batch ID:** R376761
Method: SW8015M **Analysis Date:** 03/25/2022 09:57 **Prep Date:**
Lab ID: MBLK **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Methane	ND	0.0010			0.0						

Associated Samples: **B22031699-001H, B22031699-005A, B22031699-006H, B22031699-010A, B22031699-011H, B22031699-015A**

Run ID: Run Order: FID-HEADSPACE_220325A: 2 **SampType:** Laboratory Control Sample **Batch ID:** R376761
Method: SW8015M **Analysis Date:** 03/25/2022 08:54 **Prep Date:**
Lab ID: LCS **Units:** ppm **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Methane	98	2.0	100		98.0	85	115				

Associated Samples: **B22031699-001H, B22031699-005A, B22031699-006H, B22031699-010A, B22031699-011H, B22031699-015A**

Run ID: Run Order: FID-HEADSPACE_220325A: 3 **SampType:** Laboratory Control Sample Duplicate **Batch ID:** R376761
Method: SW8015M **Analysis Date:** 03/25/2022 08:58 **Prep Date:**
Lab ID: LCSD **Units:** ppm **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Methane	97	2.0	100		97.0	85	115	98	1.0	20.0	

Associated Samples: **B22031699-001H, B22031699-005A, B22031699-006H, B22031699-010A, B22031699-011H, B22031699-015A**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22031699
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 03/31/2022

Run ID: Run Order: FID-HEADSPACE_220325A: 14 **SampType:** Sample Duplicate **Batch ID:** R376761
Method: SW8015M **Analysis Date:** 03/25/2022 11:02 **Prep Date:**
Lab ID: B22031740-006HDUP **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Methane	3.2	0.16			0.0			3.3	0.3	20.0	

Associated Samples: **B22031699-001H, B22031699-005A, B22031699-006H, B22031699-010A, B22031699-011H, B22031699-015A**

Run ID: Run Order: FID-HEADSPACE_220325A: 1 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R376761
Method: SW8015M **Analysis Date:** 03/25/2022 08:47 **Prep Date:**
Lab ID: CCV **Units:** ppm **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Methane	99	2.0	100		99.0	85	115				

Associated Samples: **B22031699-001H, B22031699-005A, B22031699-006H, B22031699-010A, B22031699-011H, B22031699-015A**

Run ID: Run Order: FID-HEADSPACE_220325A: 22 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R376761
Method: SW8015M **Analysis Date:** 03/25/2022 12:09 **Prep Date:**
Lab ID: CCV **Units:** ppm **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Methane	99	2.0	100		99.0	85	115				

Associated Samples: **B22031699-001H, B22031699-005A, B22031699-006H, B22031699-010A, B22031699-011H, B22031699-015A**

Analytical QC Exceptions Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22031699
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/31/2022

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

Preparation and Analysis Dates Report

Work Order: B22031699
Client: AECOM - Honolulu
Project Name: CV18F0126, 60571032.02.46.01
Report Date: 3/31/2022

Lab ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Method	Prep Date	Prep Batch	Analysis Method	Analysis Date
001B	ERH2865 (RHMW19)	03/21/2022 12:50	Ground Water	Metals by ICP-MS, Total		SW3010A	03/23/2022 14:41	164804	SW6020	03/25/2022 16:17
001C	ERH2865 (RHMW19)	03/21/2022 12:50	Ground Water	Diesel Range Organics		SW3520C	03/24/2022 14:14	164847	SW8015C	03/26/2022 14:53
001G	ERH2865 (RHMW19)	03/21/2022 12:50	Ground Water	EDB in Water by ECD		SW8011	03/25/2022 08:21	164860	SW8011	03/25/2022 19:50
004A	ERH2864 (Trip Blank) 14894	03/21/2022 12:50	Trip Blank	EDB in Water by ECD		SW8011	03/25/2022 08:22	164860	SW8011	03/25/2022 18:11
006B	ERH2856 (RHMW15-05)	03/21/2022 13:10	Ground Water	Metals by ICP-MS, Total		SW3010A	03/23/2022 14:41	164804	SW6020	03/25/2022 16:42
006C	ERH2856 (RHMW15-05)	03/21/2022 13:10	Ground Water	Diesel Range Organics		SW3520C	03/24/2022 14:14	164847	SW8015C	03/26/2022 14:08
006G	ERH2856 (RHMW15-05)	03/21/2022 13:10	Ground Water	EDB in Water by ECD		SW8011	03/25/2022 08:22	164860	SW8011	03/25/2022 18:31
009A	ERH2855 (Trip Blank) 14833	03/21/2022 13:10	Trip Blank	EDB in Water by ECD		SW8011	03/25/2022 08:22	164860	SW8011	03/25/2022 18:51
011B	ERH2862 (RHMW09)	03/21/2022 15:05	Ground Water	Metals by ICP-MS, Total		SW3010A	03/23/2022 14:41	164804	SW6020	03/25/2022 17:26
011C	ERH2862 (RHMW09)	03/21/2022 15:05	Ground Water	Diesel Range Organics		SW3520C	03/24/2022 14:14	164847	SW8015C	03/26/2022 13:23
						SW3520C	03/24/2022 14:14	164847	SW8015C	03/29/2022 03:46
011G	ERH2862 (RHMW09)	03/21/2022 15:05	Ground Water	EDB in Water by ECD		SW8011	03/25/2022 08:22	164860	SW8011	03/25/2022 19:10
014A	ERH2861 (Trip Blank) 14894	03/21/2022 15:05	Trip Blank	EDB in Water by ECD		SW8011	03/25/2022 08:22	164860	SW8011	03/25/2022 19:30

Chemical Abstracts Service (CAS) Registry Numbers

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22031699
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 03/31/2022

Analyses	CAS No
AGGREGATE ORGANICS	
Organic Carbon, Total (TOC)	7440-44-0
METALS, TOTAL	
Lead	7439-92-1
METALS, DISSOLVED	
Lead	7439-92-1
VOLATILE ORGANIC COMPOUNDS	
Benzene	71-43-2
Bromobenzene	108-86-1
Bromochloromethane	74-97-5
Bromodichloromethane	75-27-4
Bromoform	75-25-2
Carbon tetrachloride	56-23-5
Chlorobenzene	108-90-7
Chlorodibromomethane	124-48-1
Chloroethane	75-00-3
Chloroform	67-66-3
Chloromethane	74-87-3
1,2-Dibromoethane	106-93-4
2-Chlorotoluene	95-49-8
4-Chlorotoluene	106-43-4
Dibromomethane	74-95-3
1,2-Dichlorobenzene	95-50-1
1,3-Dichlorobenzene	541-73-1
1,4-Dichlorobenzene	106-46-7
Dichlorodifluoromethane	75-71-8
1,1-Dichloroethane	75-34-3
1,2-Dichloroethane	107-06-2
1,1-Dichloroethene	75-35-4
cis-1,2-Dichloroethene	156-59-2
trans-1,2-Dichloroethene	156-60-5
1,2-Dichloropropane	78-87-5
1,3-Dichloropropane	142-28-9
2,2-Dichloropropane	594-20-7
1,1-Dichloropropene	563-58-6
cis-1,3-Dichloropropene	10061-01-5
trans-1,3-Dichloropropene	10061-02-6
Ethylbenzene	100-41-4

Methyl ethyl ketone	78-93-3
Methyl tert-butyl ether (MTBE)	1634-04-4
Methylene chloride	75-09-2
Styrene	100-42-5
1,1,1,2-Tetrachloroethane	630-20-6
1,1,2,2-Tetrachloroethane	79-34-5
Tetrachloroethene	127-18-4
Toluene	108-88-3
1,1,1-Trichloroethane	71-55-6
1,1,2-Trichloroethane	79-00-5
Trichloroethene	79-01-6
Trichlorofluoromethane	75-69-4
1,2,3-Trichloropropane	96-18-4
Vinyl chloride	75-01-4
m+p-Xylenes	179601-23-1
o-Xylene	95-47-6
Xylenes, Total	1330-20-7

VOCS BY MICROEXTRACTION-ECD

1,2-Dibromoethane	106-93-4

PETROLEUM HYDROCARBONS-VOLATILE

C6 to C10
Total Purgeable Hydrocarbons

PETROLEUM HYDROCARBONS-SEMI-VOLATILE

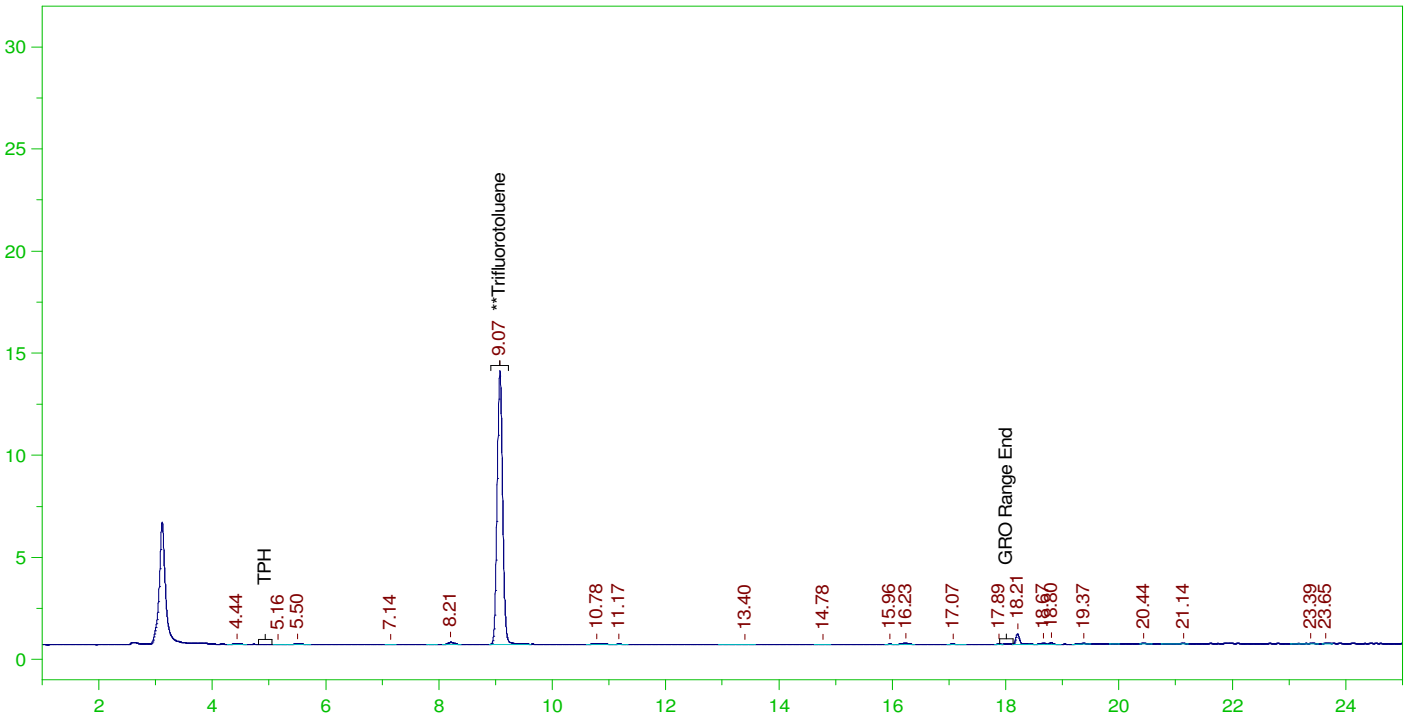
Diesel Range Organics (C10 to C24)
Diesel Range Organics (SGT-C10 to C24)
Oil Range Hydrocarbons (C24 to C40)
Oil Range Hydrocarbons (SGT-C24 to C40)
Total Extractable Hydrocarbons
Total Extractable Hydrocarbons (SGT)

ORGANIC CHARACTERISTICS

Methane	74-82-8

ERH2865 (RHMW19)

G:\Org\VAR\DAT\VAR032522_b\0325VARB.0019.RAW B22031699-001F ;0325VAR , $HC-8015-GRO-W,



GASOLINE RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22031699-001F ;0325VAR , $HC-8015-GRO-W,
Raw File: G:\Org\VAR\DAT\VAR032522_b\0325VARB.0019.RAW
Date & Time Acquired: 3/25/2022 7:40:29 PM
Method File: G:\Org\VAR\Methods\220324GRO_DoDB%.MET
Calibration File: G:\Org\VAR\Cals\220324GRO8015CB.CAL
Sample Weight: 5 Dilution: 1 S.A.: 1

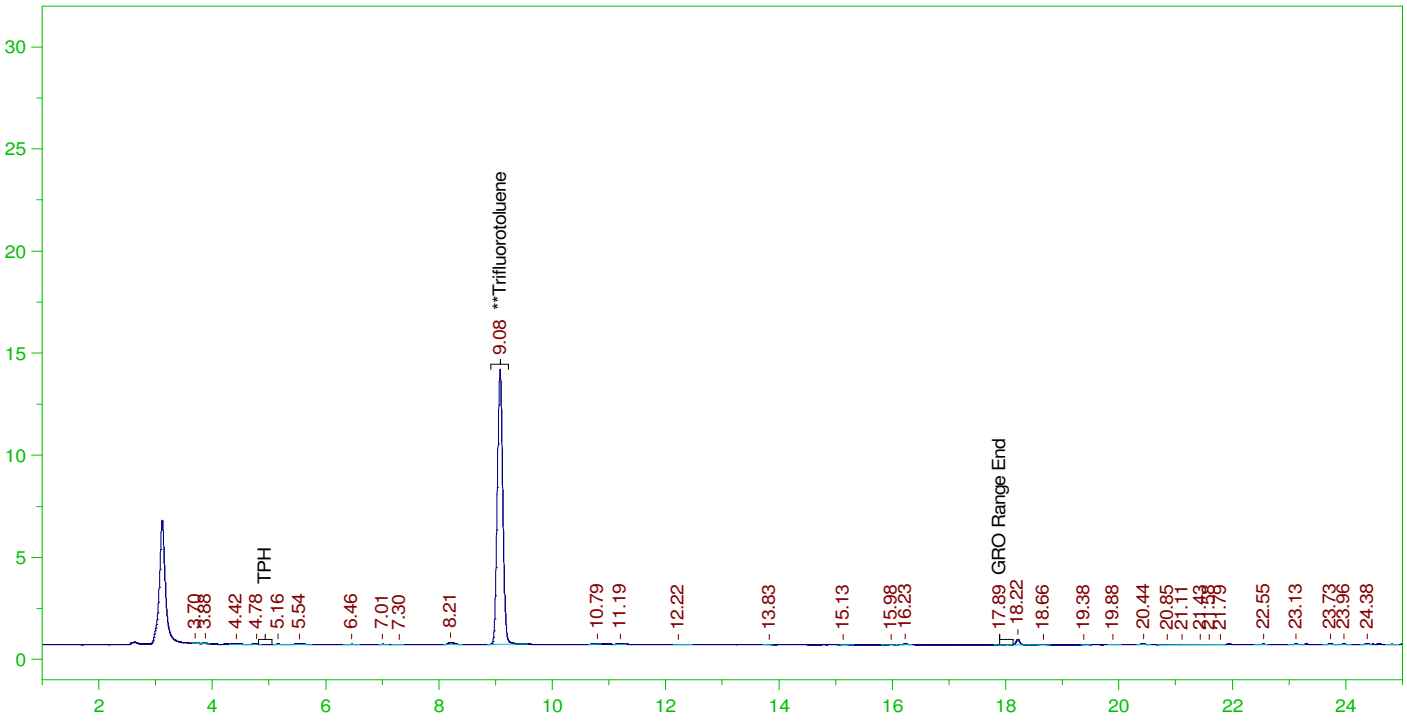
Mean RF for C6 to C10: 964.1908
Mean RF for TPH: 948.6828
Rt range for Gasoline Range Organics: 4.81 to 18.13

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
**Trifluorotoluene	9.075	25.	20.511	82.04	-

C6 to C10 Area:3170.969 C6 to C10 Amount: 0.6577471
TPH Area:7646.326 TPH Amount: 1.611988

ERH2864 (Trip Blank) 14833

G:\Org\VAR\DAT\VAR032522_b\0325VARB.0011.RAW B22031699-003A ;0325VAR , $HC-8015-GRO-W,



GASOLINE RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22031699-003A ;0325VAR , $HC-8015-GRO-W,
Raw File: G:\Org\VAR\DAT\VAR032522_b\0325VARB.0011.RAW
Date & Time Acquired: 3/25/2022 3:05:54 PM
Method File: G:\Org\VAR\Methods\220324GRO_DoDB%.MET
Calibration File: G:\Org\VAR\Cals\220324GRO8015CB.CAL
Sample Weight: 5 Dilution: 1 S.A.: 1

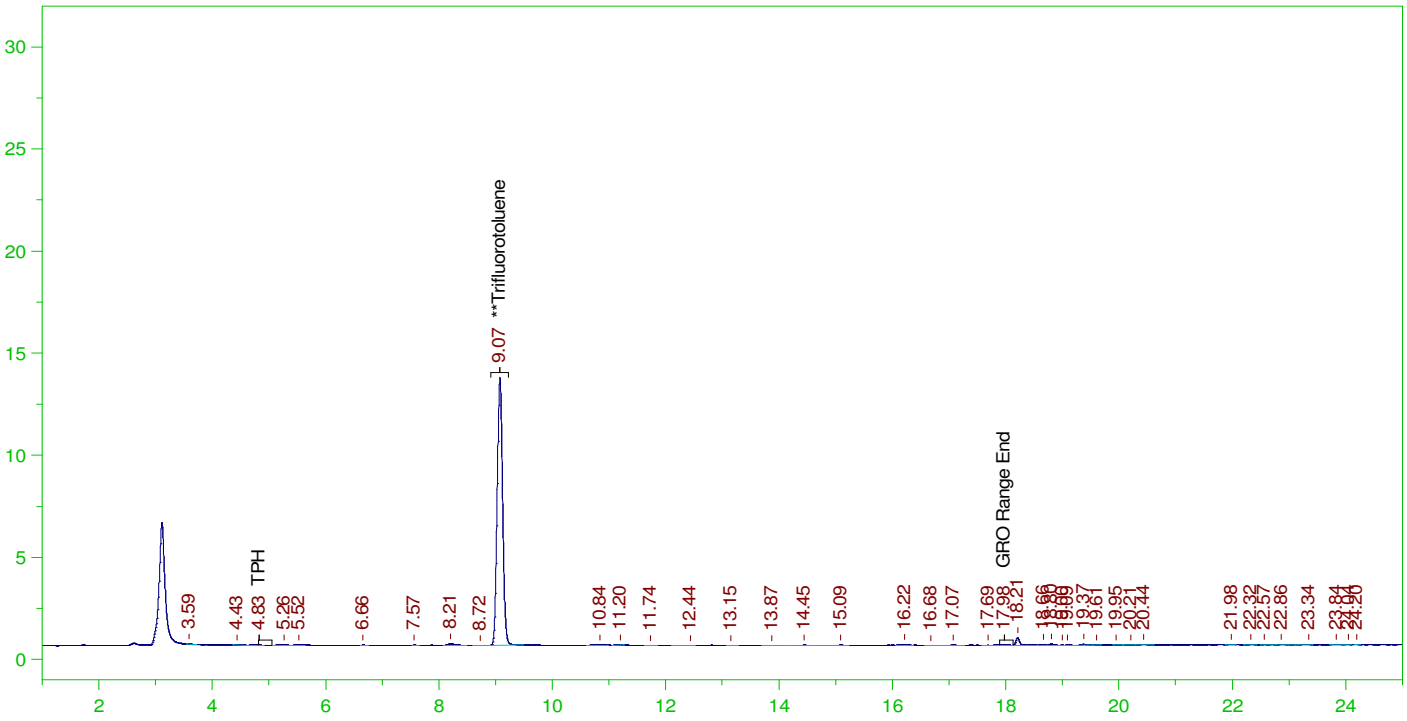
Mean RF for C6 to C10: 964.1908
Mean RF for TPH: 948.6828
Rt range for Gasoline Range Organics: 4.81 to 18.13

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
**Trifluorotoluene	9.077	25.	20.572	82.29	-

C6 to C10 Area:2634.539 C6 to C10 Amount: 0.5464767
TPH Area:6552.714 TPH Amount: 1.381434

ERH2856 (RHMW15-05)

G:\Org\VAR\DAT\VAR032522_b\0325VARB.0029.RAW B22031699-006F ;0325VAR , $HC-8015-GRO-W,



GASOLINE RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22031699-006F ;0325VAR , $HC-8015-GRO-W,
Raw File: G:\Org\VAR\DAT\VAR032522_b\0325VARB.0029.RAW
Date & Time Acquired: 3/26/2022 1:23:24 AM
Method File: G:\Org\VAR\Methods\220324GRO_DoDB%.MET
Calibration File: G:\Org\VAR\Cals\220324GRO8015CB.CAL
Sample Weight: 5 Dilution: 1 S.A.: 1

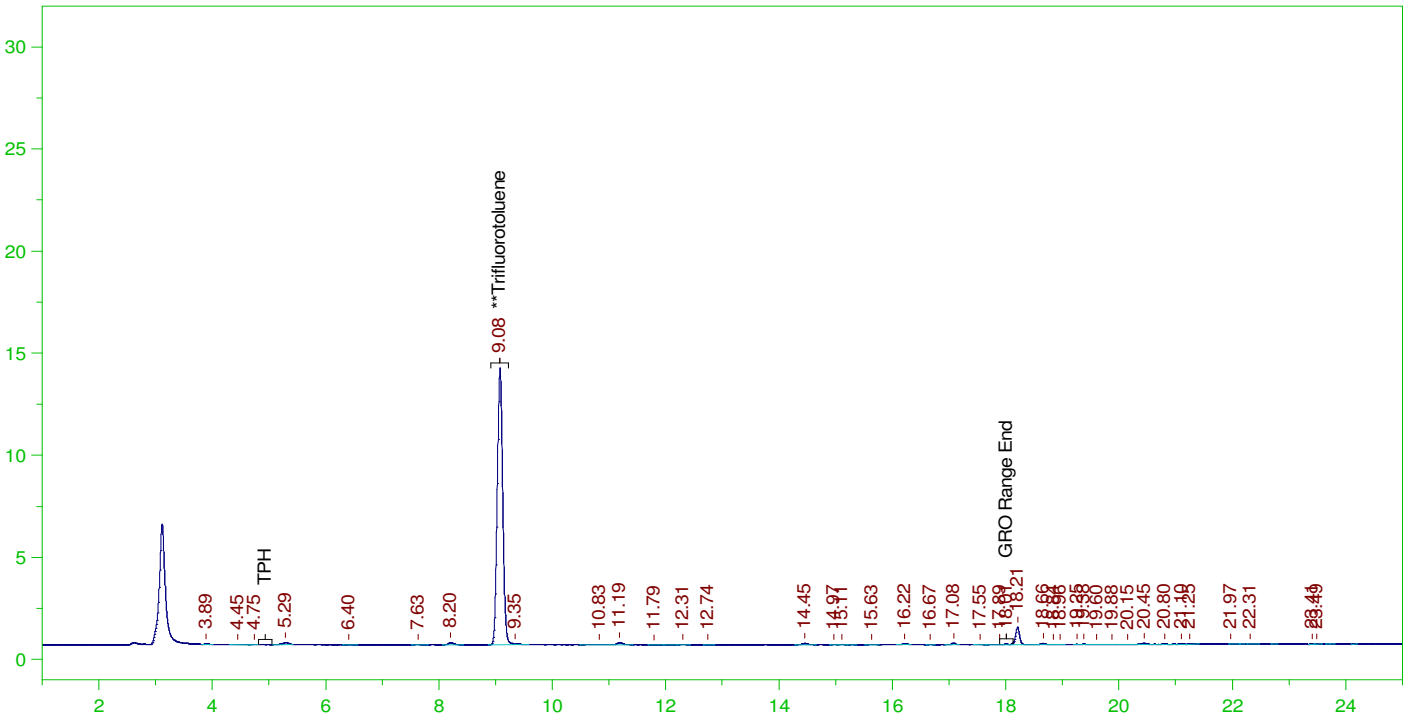
Mean RF for C6 to C10: 964.1908
Mean RF for TPH: 948.6828
Rt range for Gasoline Range Organics: 4.81 to 18.13

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
**Trifluorotoluene	9.075	25.	20.054	80.21	-

C6 to C10 Area:4561.806 C6 to C10 Amount: 0.9462456
TPH Area:10364.94 TPH Amount: 2.185122

ERH2855 (Trip Blank) 14733

G:\Org\VAR\DAT\VAR032522_b\0325VARB.0012.RAW B22031699-008A ;0325VAR , $HC-8015-GRO-W,



GASOLINE RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22031699-008A ;0325VAR , $HC-8015-GRO-W,
Raw File: G:\Org\VAR\DAT\VAR032522_b\0325VARB.0012.RAW
Date & Time Acquired: 3/25/2022 3:40:10 PM
Method File: G:\Org\VAR\Methods\220324G1699-8DoDB%.MET
Calibration File: G:\Org\VAR\Cals\220324GRO8015CB.CAL
Sample Weight: 5 Dilution: 1 S.A.: 1

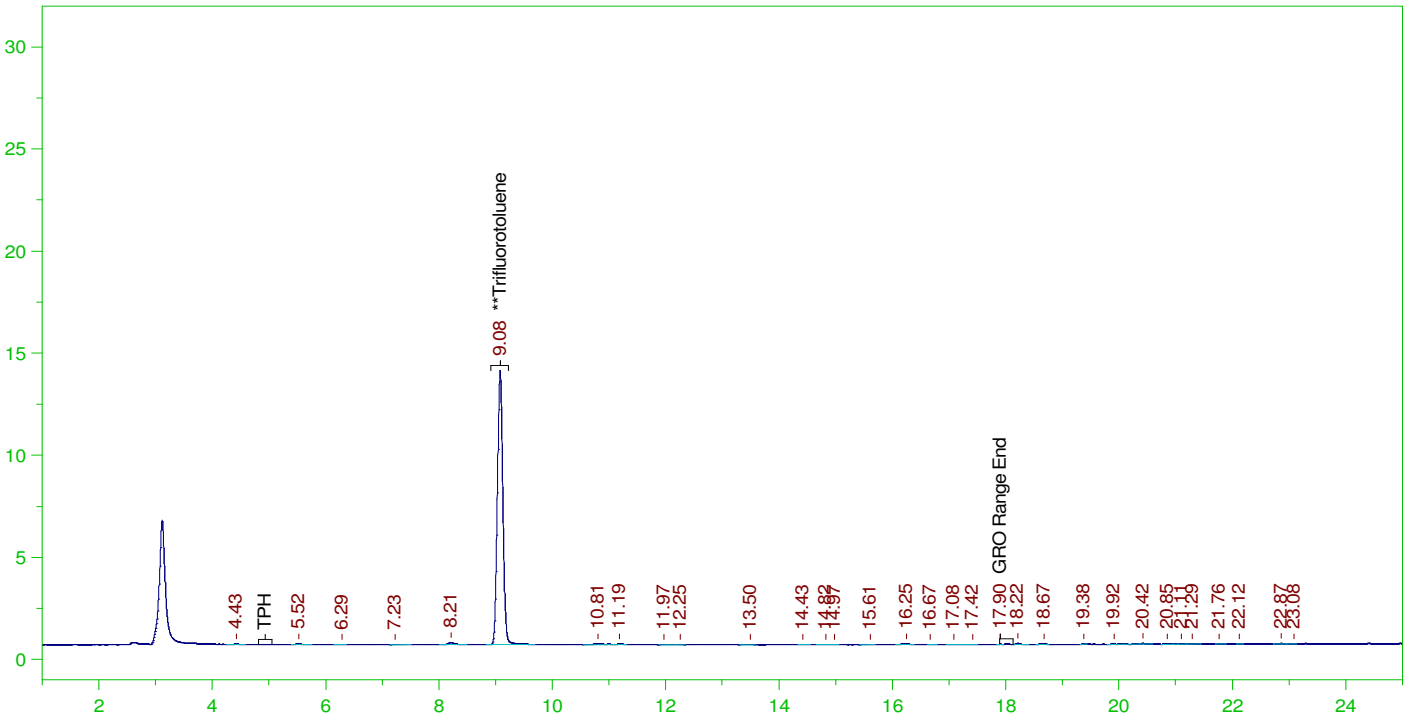
Mean RF for C6 to C10: 964.1908
Mean RF for TPH: 948.6828
Rt range for Gasoline Range Organics: 4.81 to 18.13

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
**Trifluorotoluene	9.077	25.	20.728	82.91	-

C6 to C10 Area:6069.244 C6 to C10 Amount: 1.25893
TPH Area:13485.85 TPH Amount: 2.843069

ERH2862 (RHMW09)

G:\Org\VAR\DAT\VAR032522_b\0325VARB.0009.RAW B22031699-011F ;0325VAR , $HC-8015-GRO-W,



GASOLINE RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22031699-011F ;0325VAR , $HC-8015-GRO-W,
Raw File: G:\Org\VAR\DAT\VAR032522_b\0325VARB.0009.RAW
Date & Time Acquired: 3/25/2022 1:57:25 PM
Method File: G:\Org\VAR\Methods\220324GRO_DoDB%.MET
Calibration File: G:\Org\VAR\Cals\220324GRO8015CB.CAL
Sample Weight: 5 Dilution: 1 S.A.: 1

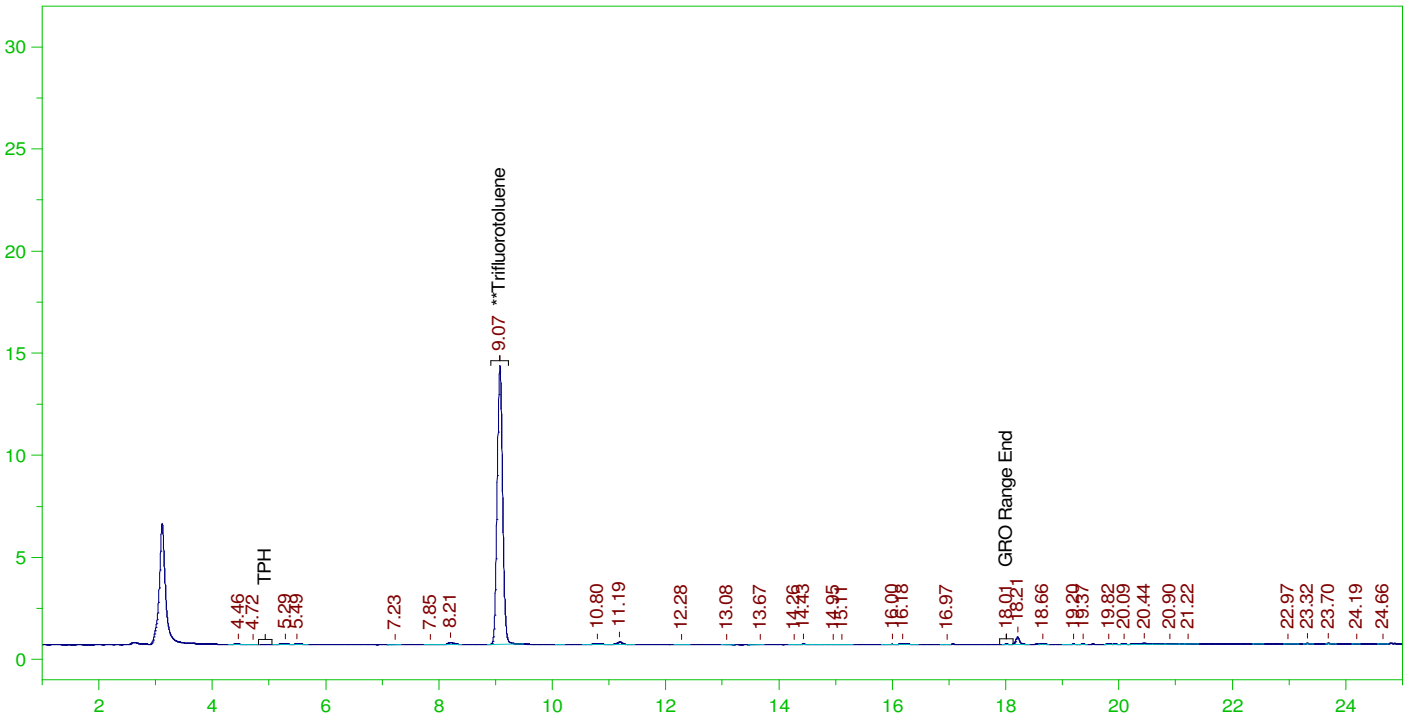
Mean RF for C6 to C10: 964.1908
Mean RF for TPH: 948.6828
Rt range for Gasoline Range Organics: 4.81 to 18.13

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
**Trifluorotoluene	9.079	25.	20.535	82.14	-

C6 to C10 Area:3284.34 C6 to C10 Amount: 0.6812635
TPH Area:5163.978 TPH Amount: 1.088663

ERH2861 (Trip Blank) 14894

G:\Org\VAR\DAT\VAR032522_b\0325VARB.0013.RAW B22031699-013A ;0325VAR , $HC-8015-GRO-W,



GASOLINE RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22031699-013A ;0325VAR , $HC-8015-GRO-W,
Raw File: G:\Org\VAR\DAT\VAR032522_b\0325VARB.0013.RAW
Date & Time Acquired: 3/25/2022 4:14:29 PM
Method File: G:\Org\VAR\Methods\220324GRO_DoDB%.MET
Calibration File: G:\Org\VAR\Cals\220324GRO8015CB.CAL
Sample Weight: 5 Dilution: 1 S.A.: 1

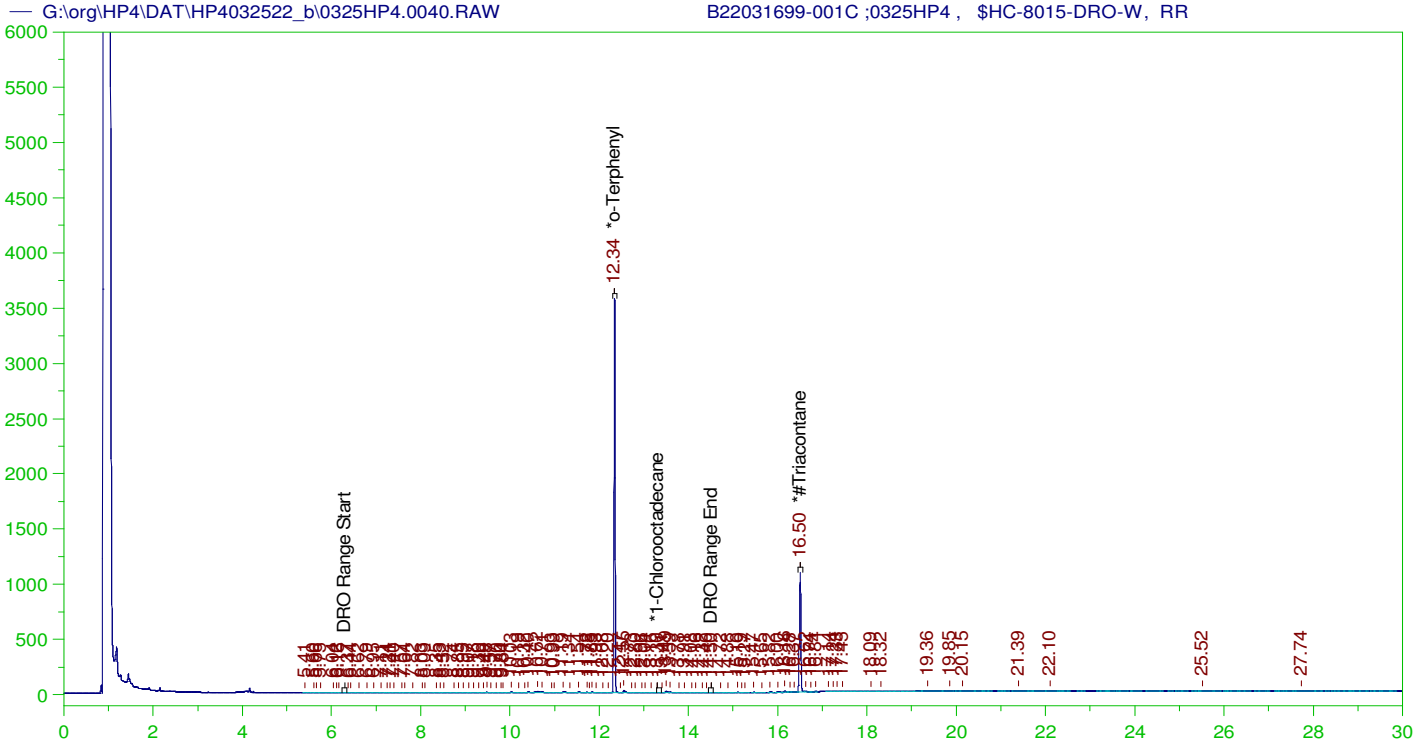
Mean RF for C6 to C10: 964.1908
Mean RF for TPH: 948.6828
Rt range for Gasoline Range Organics: 4.81 to 18.13

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
**Trifluorotoluene	9.075	25.	20.844	83.37	-

C6 to C10 Area:4631.29 C6 to C10 Amount: 0.9606584
TPH Area:8437.197 TPH Amount: 1.778718

ERH2865 (RHMW19) Batch ID: 164847

G:\org\HP4\DAT\HP4032522_b\0325HP4.0040.RAW B22031699-001C ;0325HP4 , $HC-8015-DRO-W, RR



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22031699-001C ;0325HP4 , $HC-8015-DRO-W, RR
Raw File: G:\org\HP4\DAT\HP4032522_b\0325HP4.0040.RAW
Date & Time Acquired: 3/26/2022 2:53:22 PM
Method File: G:\Org\HP4\methods\DR_8015-C24T-OR-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OR-C24-TRI.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

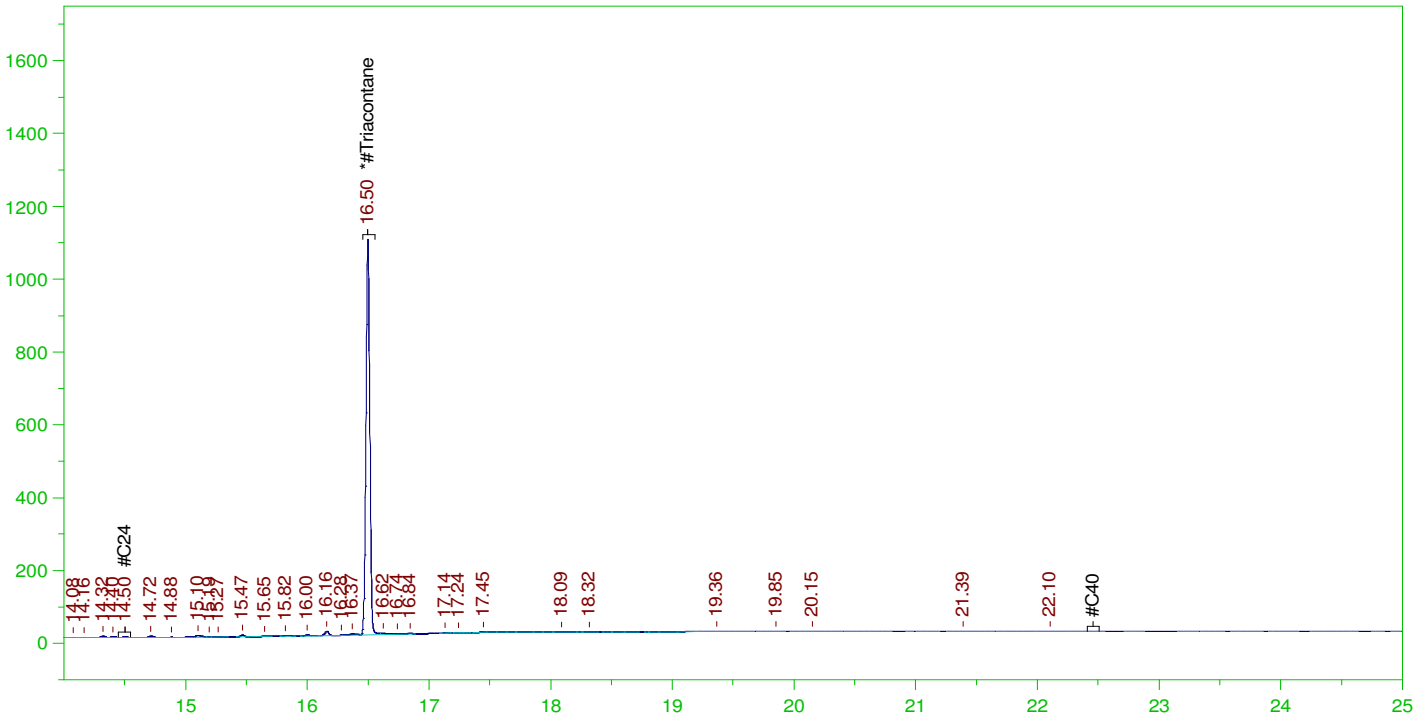
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.24 to 14.55

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.34	.19	.179	94.03	-
*1-Chlorooctadecane	13.301	.19	.	.08	-
*#Triacontane	16.499	.19	.092	48.05	-

DRO Area:1014782 DRO Amount: 3.290267E-02
TEH Area:1202291 TEH Amount: 3.898234E-02

ERH2865 (RHMW19) Batch ID: 164847

G:\org\HP4\DAT\HP4032522_b\0325HP4.0040.RAW B22031699-001C ;0325HP4 , $HC-8015-DRO-W, RR



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22031699-001C ;0325HP4 , $HC-8015-DRO-W, RR
Raw File: G:\org\HP4\DAT\HP4032522_b\0325HP4.0040.RAW
Date & Time Acquired: 3/26/2022 2:53:22 PM
Method File: G:\Org\HP4\Methods\DR_ORO-S-AL-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AL-SAMPLE.CAL
Sample Weight: 1050 Dilution: 1 S.A.: 1

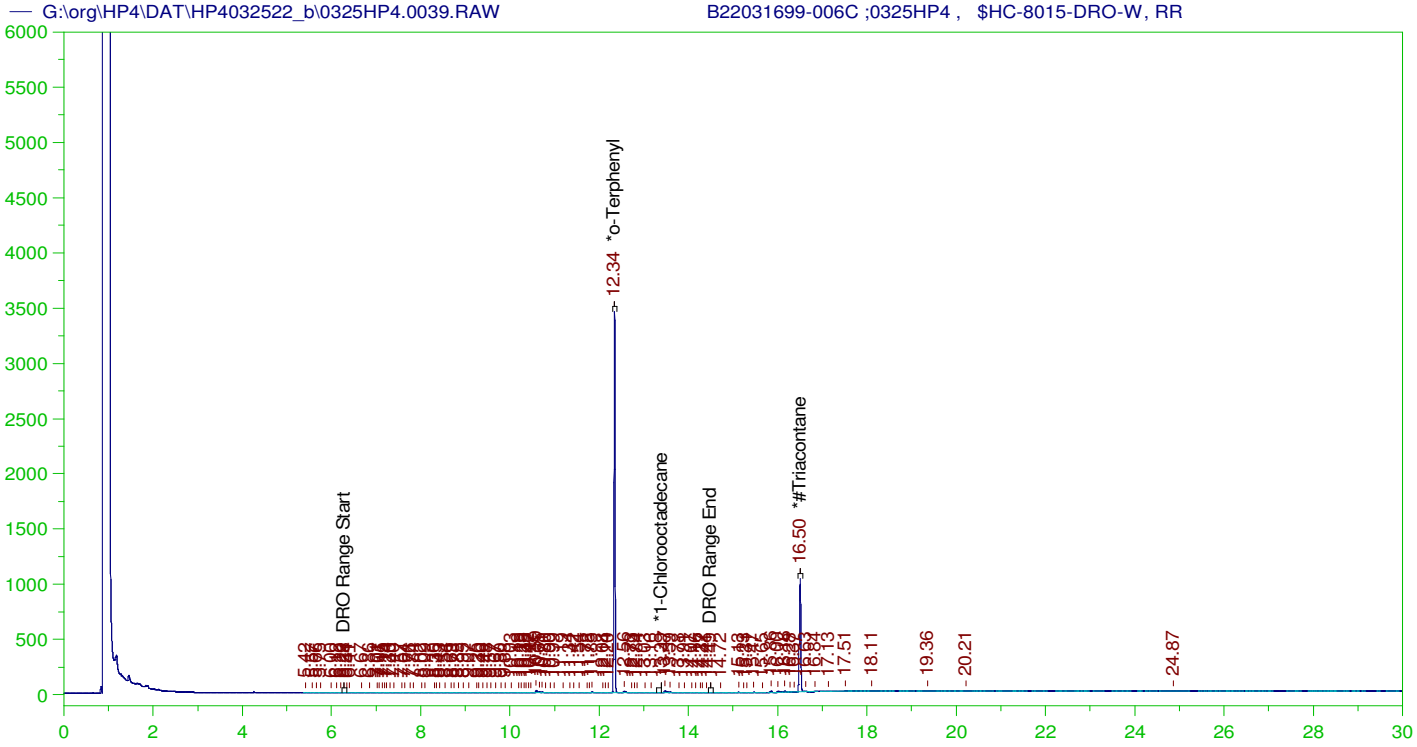
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.45 to 22.51

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.499	.476	.092	19.22	-

RRO Area:138622.5 RRO AMOUNT: 5.382134E-03

ERH2856 (RHMW15-05) Batch ID: 164847

G:\org\HP4\DAT\HP4032522_b\0325HP4.0039.RAW B22031699-006C ;0325HP4 , $HC-8015-DRO-W, RR



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22031699-006C ;0325HP4 , $HC-8015-DRO-W, RR
Raw File: G:\org\HP4\DAT\HP4032522_b\0325HP4.0039.RAW
Date & Time Acquired: 3/26/2022 2:08:10 PM
Method File: G:\Org\HP4\methods\DR_8015-C24T-OR-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OR-C24-TRI.CAL
Sample Weight: 1010 Dilution: 1 S.A.: 1

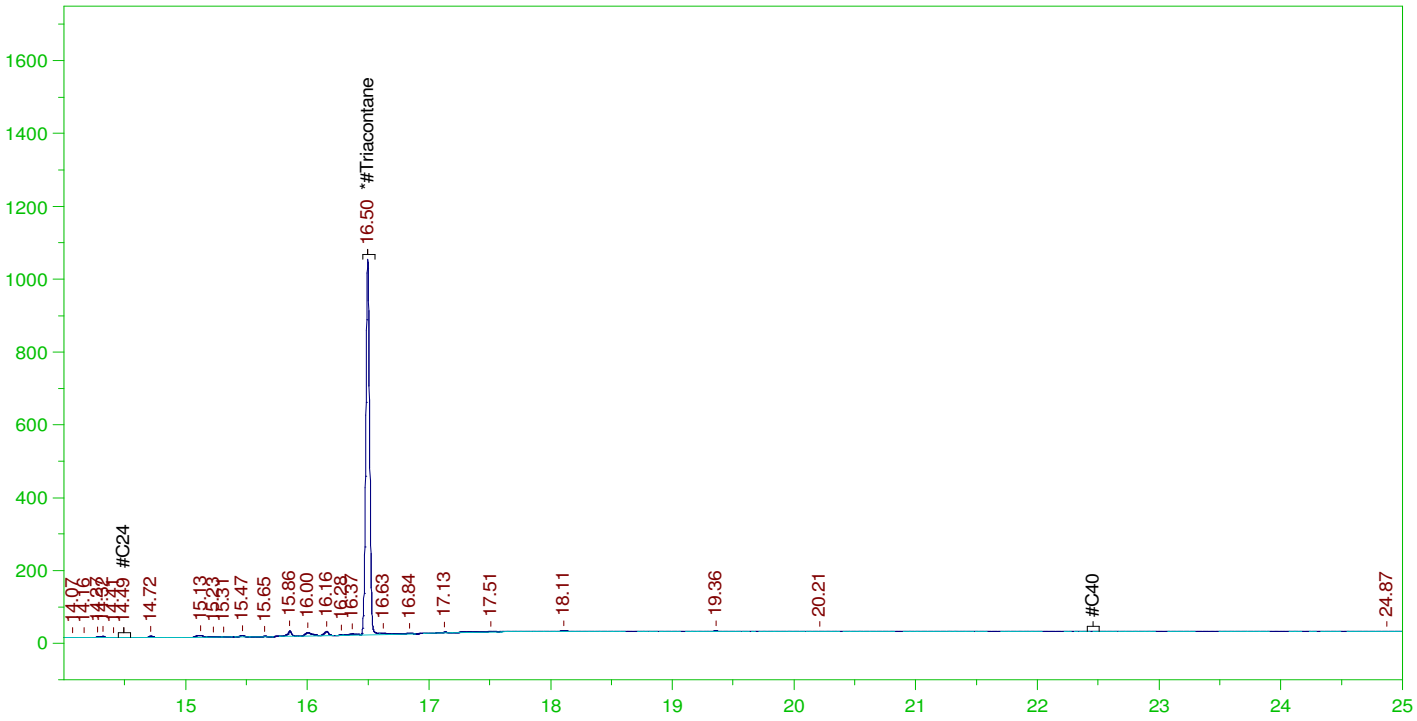
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.24 to 14.55

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.339	.198	.179	90.22	-
*1-Chlorooctadecane	13.388	.198	.	.01	-
*#Triacontane	16.497	.198	.09	45.45	-

DRO Area:760271.9 DRO Amount: 2.562685E-02
TEH Area:1007283 TEH Amount: 3.395296E-02

ERH2856 (RHMW15-05) Batch ID: 164847

G:\org\HP4\DAT\HP4032522_b\0325HP4.0039.RAW B22031699-006C ;0325HP4 , $HC-8015-DRO-W, RR



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22031699-006C ;0325HP4 , $HC-8015-DRO-W, RR
Raw File: G:\org\HP4\DAT\HP4032522_b\0325HP4.0039.RAW
Date & Time Acquired: 3/26/2022 2:08:10 PM
Method File: G:\Org\HP4\Methods\DR_ORO-S-AL-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AL-SAMPLE.CAL
Sample Weight: 1010 Dilution: 1 S.A.: 1

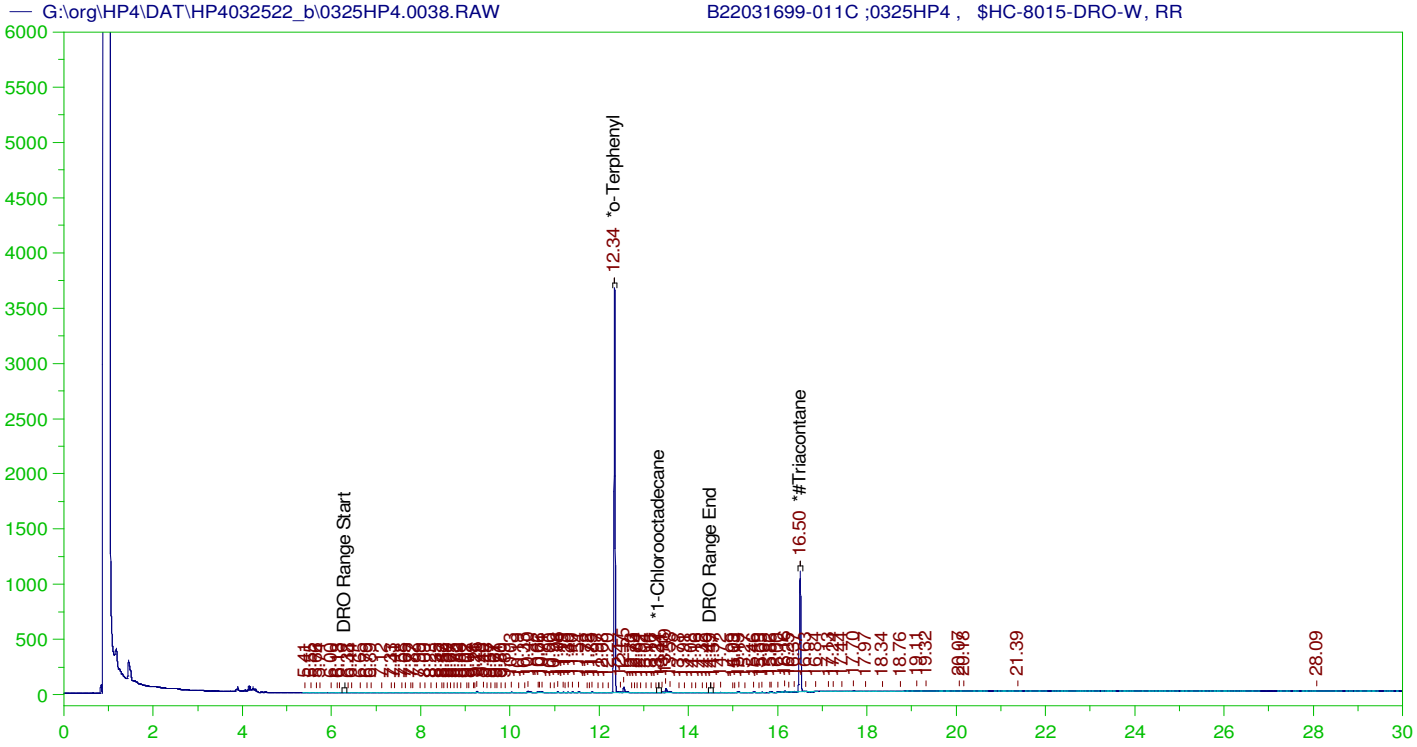
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.45 to 22.51

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.497	.495	.09	18.18	-

RRO Area:210659.2 RRO AMOUNT: 8.502942E-03

ERH2862 (RHMW09) Batch ID: 164847

G:\org\HP4\DAT\HP4032522_b\0325HP4.0038.RAW B22031699-011C ;0325HP4 , $HC-8015-DRO-W, RR



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22031699-011C ;0325HP4 , $HC-8015-DRO-W, RR
Raw File: G:\org\HP4\DAT\HP4032522_b\0325HP4.0038.RAW
Date & Time Acquired: 3/26/2022 1:23:24 PM
Method File: G:\Org\HP4\methods\DR_8015-C24T-OR-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OR-C24-TRI.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

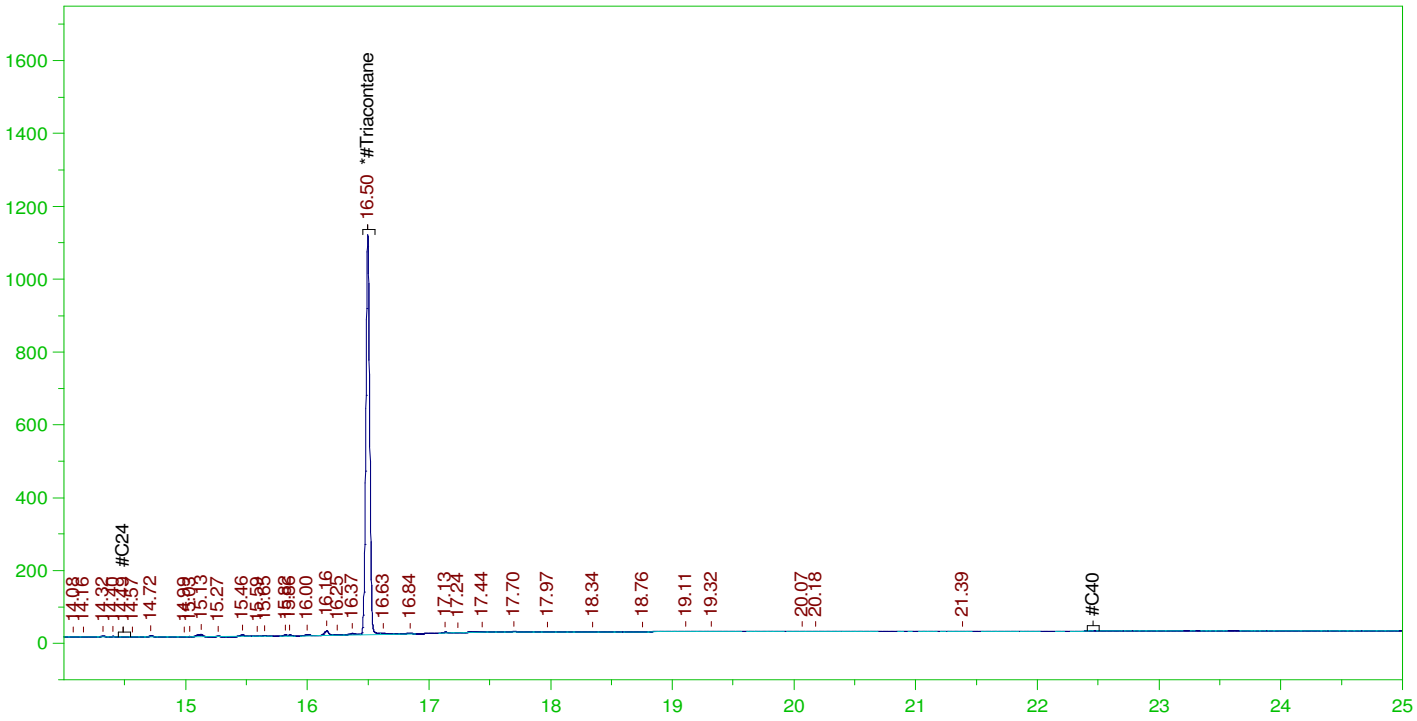
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.24 to 14.55

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.34	.2	.194	96.79	-
*1-Chlorooctadecane	13.339	.2	.	.01	-
*#Triacontane	16.498	.2	.097	48.55	-

DRO Area:1085794 DRO Amount: 3.696536E-02
TEH Area:1287277 TEH Amount: 4.382477E-02

ERH2862 (RHMW09) Batch ID: 164847

G:\org\HP4\DAT\HP4032522_b\0325HP4.0038.RAW B22031699-011C ;0325HP4 , $HC-8015-DRO-W, RR



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22031699-011C ;0325HP4 , $HC-8015-DRO-W, RR
Raw File: G:\org\HP4\DAT\HP4032522_b\0325HP4.0038.RAW
Date & Time Acquired: 3/26/2022 1:23:24 PM
Method File: G:\Org\HP4\Methods\DR_ORO-S-AL-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AL-SAMPLE.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

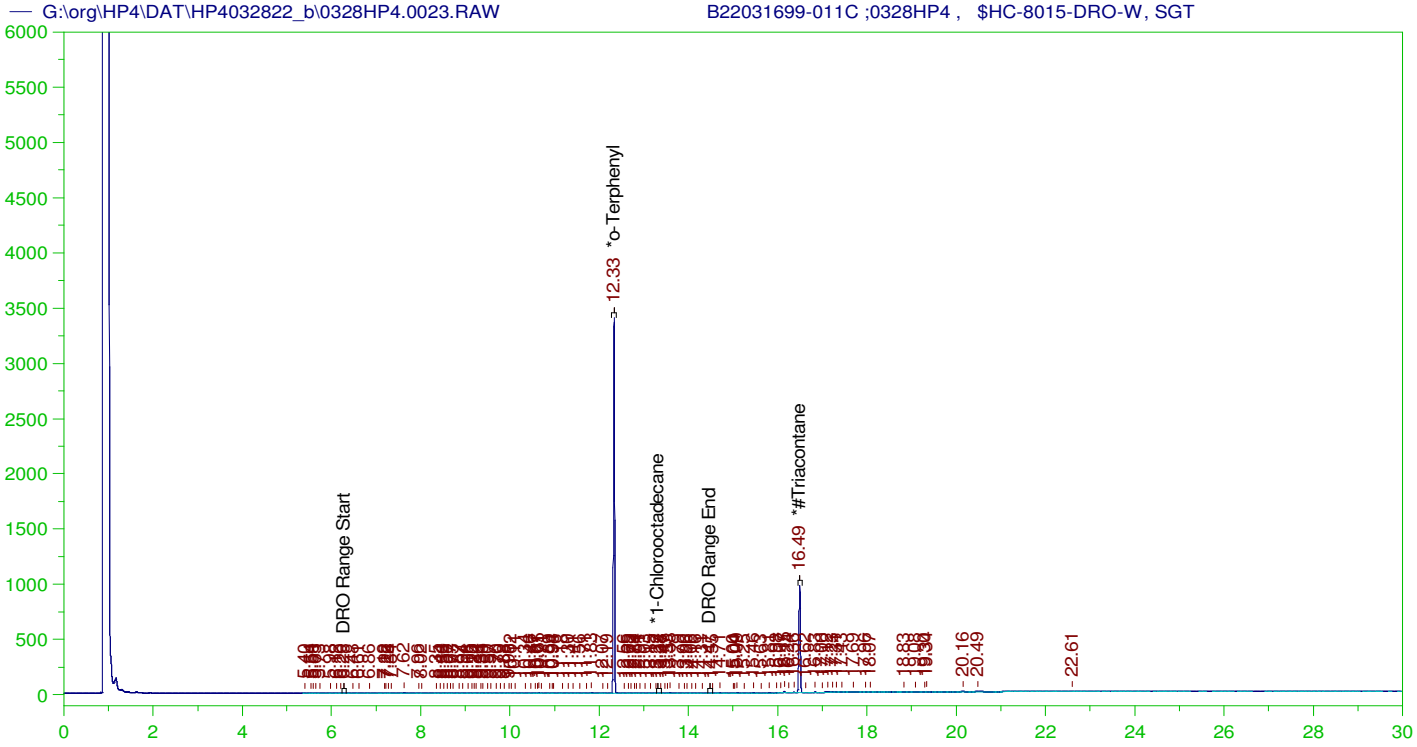
Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.45 to 22.51

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.498	.5	.097	19.42	-

RRO Area:160744.6 RRO AMOUNT: 6.553097E-03

ERH2862 (RHMW09) Batch ID: 164847

G:\org\HP4\DAT\HP4032822_b\0328HP4.0023.RAW B22031699-011C ;0328HP4 , $HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22031699-011C ;0328HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4032822_b\0328HP4.0023.RAW
Date & Time Acquired: 3/29/2022 3:46:13 AM
Method File: G:\Org\HP4\methods\DR_8015-C24T-OS-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OS-C24-TRI.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

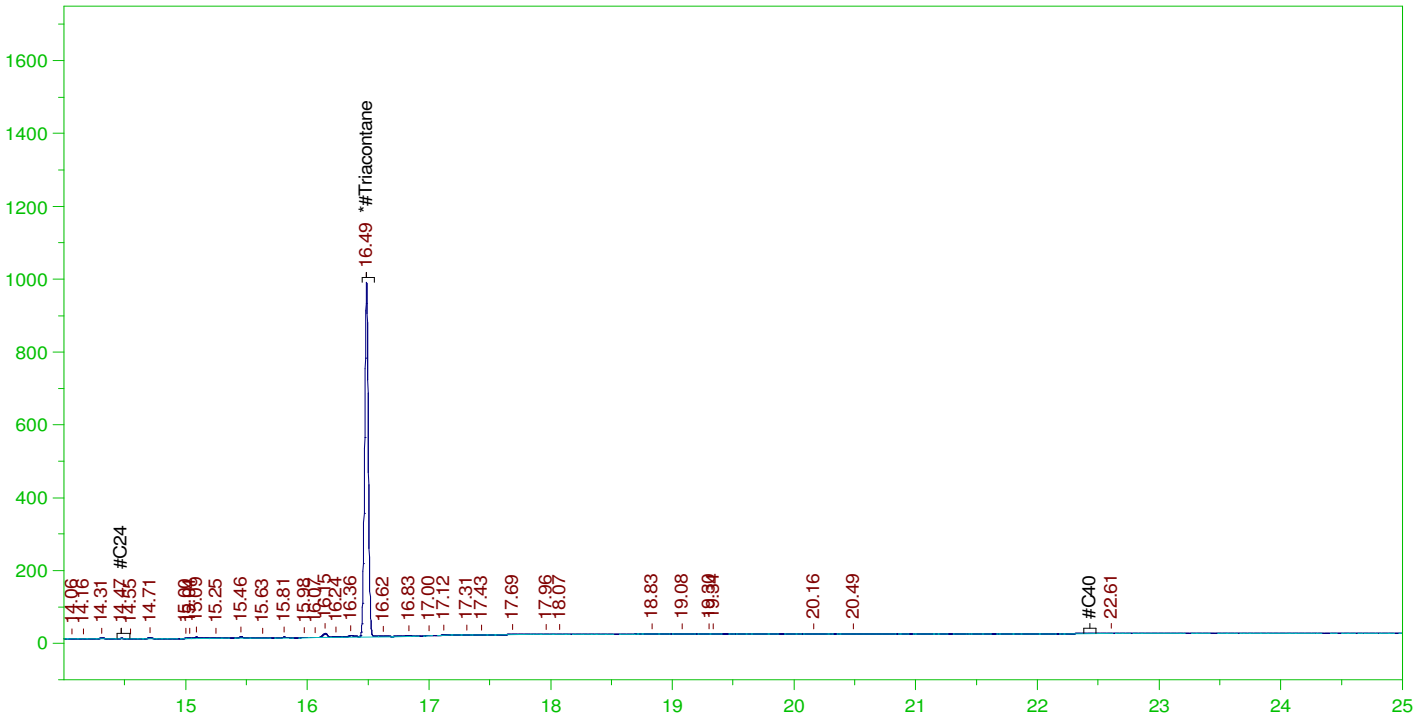
Mean RF for TEH: 29373.28
Rt range for Diesel Range Organics: 6.23 to 14.54

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.328	.2	.177	88.57	-
*1-Chlorooctadecane	13.321	.2	.01		-
*#Triacontane	16.487	.2	.083	41.73	-

DRO Area:287965.3 DRO Amount: 9.803651E-03
TEH Area:450476.2 TEH Amount: 1.533626E-02

ERH2862 (RHMW09) Batch ID: 164847

G:\org\HP4\DAT\HP4032822_b\0328HP4.0023.RAW B22031699-011C ;0328HP4 , $HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22031699-011C ;0328HP4 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP4\DAT\HP4032822_b\0328HP4.0023.RAW
Date & Time Acquired: 3/29/2022 3:46:13 AM
Method File: G:\Org\HP4\Methods\DR_ORO-S-AM-L%.met
Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AM-SAMPLE.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 24529.56
Rt range for Residual Range Organics: 14.44 to 22.48

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.487	.5	.083	16.69	-

RRO Area:126935.3 RRO AMOUNT: 5.17479E-03

From: Ramos, Alethea <alethea.ramos@aecom.com>
Sent: Monday, December 13, 2021 3:11 PM
To: Tabitha Edwards
Cc: Pascua, Margie; billingsPM@energylab.com
Subject: RE: [EXTERNAL] FW: CV18F0126: Expedited NOI Groundwater Samples, Saturday 12/12 Submission

Categories: Must Attend

Hi Tabitha,

I believe Casper WY is DoD ELAP accredited in the TOC 9060 method. I spoke to Shari and she indicated there is a daily courier between Billings and Casper, and would be appx. a day delay. Under those stipulations, please subcontract these samples and inform on expedited TAT.

Thank you,

Alethea Ramos, CIH
Environmental Scientist, Environmental Health & Science, Environment
D +1-808-529-7283
M +1-808-389-5383
alethea.ramos@aecom.com

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Suite 1600
Honolulu, HI 96813, United States of America
aecom.com

From: Tabitha Edwards <tedwards@energylab.com>
Sent: Monday, December 13, 2021 7:05 AM
To: Ramos, Alethea <alethea.ramos@aecom.com>
Cc: Pascua, Margie <Margie.Pascua@aecom.com>; billingsPM@energylab.com
Subject: [EXTERNAL] FW: CV18F0126: Expedited NOI Groundwater Samples, Saturday 12/12 Submission
Importance: High

Alethea,

The TOC by 9060 must be subcontracted to our office in Casper, WY. I need authorization from you to subcontract these. Once that has been received we will discuss the TAT with them and let you know what is achievable.

Thank you,

Energy Laboratories, Inc.
Trust our People. Trust our Data.

Tabitha Edwards | Office Manager | Billings, MT
O: 406-869-6286 | tedwards@energylab.com | www.energylab.com

***We want to help you ship successfully**! Please plan ahead and allow extra time to receive supplies from the lab and for the lab to receive your samples. All carriers are in full-swing holiday peak season operating with double the volume and limited capacity. We appreciate your business so please contact your local branch or Project Manager to discuss adjustments to your shipping schedule or to ask questions.*

From: Ramos, Alethea [mailto:alethea.ramos@aecom.com]
Sent: Saturday, December 11, 2021 3:20 AM
To: Shari Endy; billingsPM@energylab.com
Cc: Jillian Miller; Pascua, Margie; KaaihiliChoy, Terri Ann
Subject: CV18F0126: Expedited NOI Groundwater Samples, Saturday 12/12 Submission
Importance: High

Hi Shari and Billings PM,

You will be receiving a Saturday shipment (12/12) of groundwater samples indicated in the attached COCs. We will need results by **Wednesday, December 15th**, and will pay any fees incurred for an expedited TAT. Please proceed with analysis without preservation traceability. Please see below tracking information links:

https://www.fedex.com/fedextrack/?trknbr=287337969629&trkqual=2459558000~287337969629~FX
https://www.fedex.com/fedextrack/?trknbr=287343101019&trkqual=2459559000~287343101019~FX

Thank you,

Alethea Ramos, CIH
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