



ANALYTICAL SUMMARY REPORT

February 04, 2022

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

Work Order: B21121841 Quote ID: 5912

Project Name: CV18F0126/60571032.02.20.01

Energy Laboratories Inc Billings MT received the following 12 samples from AECOM - Honolulu on 12/22/2021 for analysis.

Lab ID	Client Sample ID	Collect Date	Received Date	Matrix	Test
B21121841-001	ERH2191 (RHMW09)	12/16/21 18:13	12/22/2021	Ground Water	Metals Digestion by SW3010A DRO-Liquid-Liquid Extraction SW3520C Separatory Funnel SW3510C Liquid-Liquid Ext. Carbon, Total Organic SW9060A 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 Semi-Volatile Organic Compounds SW8270C Low Level PAH SW8270C SW8011 Microextraction
B21121841-002	ERH2189 (RHMW08-FD)	12/16/21 13:33	12/22/2021	Ground Water	DRO-Liquid-Liquid Extraction SW3520C Separatory Funnel SW3510C Liquid-Liquid Ext. 8260-Volatile Organic Compounds-Short List SW8260B Gasoline Range Organics SW8015C Diesel Range Organics SW8015C Semi-Volatile Organic Compounds SW8270C Low Level PAH SW8270C



ANALYTICAL SUMMARY REPORT

B21121841-003	ERH2188 (RHMW08)	12/16/21 13:33	12/22/2021	Ground Water	Metals Digestion by SW3010A DRO-Liquid-Liquid Extraction SW3520C Separatory Funnel SW3510C Liquid-Liquid Ext. Carbon, Total Organic SW9060A 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 Semi-Volatile Organic Compounds SW8270C Low Level PAH SW8270C SW8011 Microextraction
B21121841-004	ERH2199 (RHMW11-5)	12/16/21 15:40	12/22/2021	Ground Water	Same As Above
B21121841-005	ERH2190 (RHMW09-TB) Client Trip Blank	12/16/21 13:22	12/22/2021	Trip Blank	8260-Volatile Organic Compounds-Short List SW8260B
B21121841-006	ERH2190 (RHMW09-TB) Client Trip Blank	12/16/21 13:22	12/22/2021	Trip Blank	Gasoline Range Organics SW8015C
B21121841-007	ERH2190 (RHMW09-TB) Client Trip Blank	12/16/21 13:22	12/22/2021	Trip Blank	EDB in Water by ECD SW8011 SW8011 Microextraction
B21121841-008	ERH2190 (RHMW09-TB) Client Trip Blank	12/16/21 13:22	12/22/2021	Trip Blank	Headspace Gas Analysis SW8015M
B21121841-009	ERH2198 (RHMW11-5TB) Trip Blank-14575	12/16/21 14:35	12/22/2021	Trip Blank	8260-Volatile Organic Compounds-Short List SW8260B
B21121841-010	ERH2198 (RHMW11-5TB) Trip Blank-14575	12/16/21 14:35	12/22/2021	Trip Blank	Gasoline Range Organics SW8015C
B21121841-011	ERH2198 (RHMW11-5TB) Client Trip Blank	12/16/21 14:35	12/22/2021	Trip Blank	EDB in Water by ECD SW8011 SW8011 Microextraction
B21121841-012	ERH2198 (RHMW11-5TB) Trip Blank-14457	12/16/21 14:35	12/22/2021	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:



CLIENT: AECOM - Honolulu
Project: CV18F0126/60571032.02.20.01
Work Order: B21121841

Report Date: 2/4/2022

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

Analysis Specific Comments:

An Analytical QC Exceptions Report has been attached, summarizing all qualified QC results. Corrective actions regarding Semi-Volatile Petroleum Hydrocarbons by SW8015C, Volatile Organic Compounds by EPA 8260B and Semi-Volatile Organic Compounds by EPA 8270C analysis are summarized below.

Method SW8015C:

B21121841-001

The surrogate recovery was outside quality control limits due to co-eluting sample matrix interference. Re-analysis produced similar results.

Method SW8260B:

B21121841-001CMS, B21121841-001CMSD, CCV122721_Closing

The analyte recoveries and RPD values for 1,1-Dichloroethene and 1,1-Dichloroethene were slightly above quality control limits. Bromomethane is a known very reactive compound and often recovers poorly. These analytes were not detected in the associated samples.

B21121841-001, 21121841-002, B21121841-003, B21121841-004, 21121841-005, B21121841-009

The sample was re-analyzed due to a low recovery for Bromomethane in the bracketing CCV. Re-analysis produced similar results. Both the original and re-analysis results are included in the analytical report.

Method SW8270C:

LCS-162432, LCSD-162432, LLCS-162432, B21121841-002AMS

The analyte recoveries for surrogate Terphenyl-d14, 4-Nitrophenol, n-Nitrosodimethylamine, 4-Chlorophenol and Nitrobenzene were slightly above quality control limits. RPD values were above the quality control limit for Benzidine and Naphthalene. The recovery of Naphthalene was slightly below quality control limits. Benzidine is a known very reactive compound and often recovers poorly. These analytes were not detected in the associated samples.



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Chain of Custody & Analytical Request Record

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COC. 202112-15-NOI

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.amos / margie.pascua@aecom.com	
Receive Invoice	<input type="checkbox"/> Hard Copy <input checked="" type="checkbox"/> Email	Receive Report <input type="checkbox"/> Hard Copy <input checked="" type="checkbox"/> Email
Purchase Order	Quote	Bottle Order
N/A	N/A	N/A

Report Information (if different than Account Information)

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

Comments

1. Project performed under DoD QSM.
2. TPH-d/o needs 3520 extraction.
3. Preliminary data (or Level 1) in 1-2 business days; Level IV report in 10 working days.
4. Note: NOI log is separate from other COCs.
5. *SVOC/VOC (full suite); PAH SIM (naphthalene, 1-methylnaphthalene, 2-methylnaphthalene)

Project Information

Project Name, PWSID, Permit, etc.	CV18F0126/60571032 02 20.01		
Sampler Name	JW, CF, MM	Sampler Phone	808-393-6607
Sample Origin State	Hawaii	EPA/State Compliance	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
URANIUM MINING CLIENTS MUST indicate sample type			
<input type="checkbox"/> Unprocessed Ore			
<input type="checkbox"/> Processed Ore (Ground or Refined) **CALL BEFORE SENDING			
<input type="checkbox"/> 11(e)2 Byproduct Material (Can ONLY be Submitted to ELI Casper Location)			

Matrix Codes

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

Analysis Requested

	EPA 3630/8015 TPH-d/o	EPA 3630/8015 TPH-d/o w/ SGC	8260 VOCs (Full Suite) + DCA*	8015 TPH-g	8270D SVOC (Full Suite)* PAH 8270D SIM*	8011 EDB	EPA 9060 TOC	EPA 6020 Total Lead	RSK175 Methane	See Attached
1			X	X		X			X	X
2	X	X	X	X	X	X	X	X	X	X
3	X	X								X
4										
5										
6										
7										
8										
9										

All turnaround times are standard unless marked as RUSH.

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

Sample Identification (Name, Location, Interval, etc.)	Collection		Number of Containers	Matrix (See Codes Above)	Analysis Requested										RUSH TAT	ELI LAB ID Laboratory Use Only	
	Date	Time			EPA 3630/8015 TPH-d/o	EPA 3630/8015 TPH-d/o w/ SGC	8260 VOCs (Full Suite) + DCA*	8015 TPH-g	8270D SVOC (Full Suite)* PAH 8270D SIM*	8011 EDB	EPA 9060 TOC	EPA 6020 Total Lead	RSK175 Methane				
1 ERH2190 (RHMW09-TB)	12/16/21	09:22	8	WQ			X	X		X					X	X	62121841-005,006,007,008
2 ERH2191 (RHMW09)	12/16/21	14:13	21	GW	X	X	X	X	X	X	X	X	X	X	X	X	-001
3 ERH2189 (RHMW08-FD)	12/16/21	09:33	2	GW	X	X											-002
4																	
5 Trip Blank S260: Client																	-005
6 Trip Blank GRB: Client	12/22/21																-004
7 Trip Blank D011: Client				CR													-007
8 Trip Blank Methane: Client																	-008
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) Conner Rothe	Date/Time 12/18/21	Signature <i>Conner Rothe</i>	Received by (print)	Date/Time	Signature
	Relinquished by (print)	Date/Time	Signature	Received by Laboratory (print) Julia Coates	Date/Time 12/22/21 1010	Signature <i>JC</i>
LABORATORY USE ONLY						
Shipped By	Cooler ID(s) i	Custody Seals Y N C B	Intact Y N	Receipt Temp 2.4 °C	Temp Blank Y N	Payment Type CC Cash Check
						Amount \$
						Receipt Number (cash/check only)

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



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Chain of Custody & Analytical Request Record

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COC 20112-37-NOI

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	<input type="checkbox"/> Hard Copy <input checked="" type="checkbox"/> Email	Receive Report <input type="checkbox"/> Hard Copy <input checked="" type="checkbox"/> Email
Purchase Order	Quote	Bottle Order
N/A	N/A	N/A

Report Information (if different than Account Information)

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

Comments

- Project performed under DoD QSM.
- TPH-d/o needs 3520 extraction.
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- Note: NOI log is separate from other COCs.
- *SVOC/VOC (full suite); PAH SIM (naphthalene, 1-methylnaphthalene, 2-methylnaphthalene)

Project Information

Project Name, PWSID, Permit, etc.	CV18F0126/60571032.02.20.01		
Sampler Name	MM, CF	Sampler Phone	808-393-6607
Sample Origin State	Hawaii	EPA/State Compliance	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
URANIUM MINING CLIENTS MUST indicate sample type			
<input type="checkbox"/> Unprocessed Ore			
<input type="checkbox"/> Processed Ore (Ground or Refined) **CALL BEFORE SENDING			
<input type="checkbox"/> 11(e)2 Byproduct Material (Can ONLY be Submitted to ELI Casper Location)			

Matrix Codes

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

Analysis Requested

EPA 3630/8015 TPH-d/o	EPA 3630/8015 TPH-d/o w/SGC	8260 VOCs (Full Suite) + DCA*	8015 TPH-g	8270D SVOC (Full Suite)* PAH 8270D SIM*	8011 EDB	EPA 9060 TOC	EPA 6020 Total Lead	RSK175 Methane	See Attached
X	X	X	X	X	X	X	X	X	X
		X	X						X

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Sample Identification (Name, Location, Interval, etc.)	Collection		Number of Containers	Matrix (See Codes Above)	Analysis Requested									RUSH TAT	ELI LAB ID Laboratory Use Only	
	Date	Time			EPA 3630/8015 TPH-d/o	EPA 3630/8015 TPH-d/o w/SGC	8260 VOCs (Full Suite) + DCA*	8015 TPH-g	8270D SVOC (Full Suite)* PAH 8270D SIM*	8011 EDB	EPA 9060 TOC	EPA 6020 Total Lead	RSK175 Methane			
1 ERHZ188 (RHMW08)	12/16/21	09:33	19	GW	X	X	X	X	X	X	X	X	X	X	X	B212194 -003
2 ERHZ189 (RHMW08-FD)	12/16/21	09:33	6	GW			X	X							X	-002
3																
4																
5																
6																
7																
8																
9																

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Custody Record MUST be signed	Relinquished by (print)	Date/Time	Signature	Received by (print)	Date/Time	Signature
	Conner Roth	12/18/21	Conner Roth			
	Relinquished by (print)	Date/Time	Signature	Received by Laboratory (print)	Date/Time	Signature
				Mick Dalgic	12/21/21 1010	AD
LABORATORY USE ONLY						
Shipped By	Cooler ID(s)	Custody Seals	Intact	Receipt Temp	Temp Blank	On Ice
	2	Y N C B	Y N	3.0 °C	Y N	Y N
Payment Type			Amount	Receipt Number (cash/check only)		
CC Cash Check			\$			

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COC 202112-36-NOI

DoD Samples Page 1 of 1

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

Report Information (if different than Account Information)

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

Comments

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

Project Name, PWSID, Permit, etc.	CV18F0126/60571032.02.20.01	
Sampler Name	AF, GM, EV, NL	Sampler Phone 808-393-6607
Sample Origin State	Hawaii	EPA/State Compliance <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
URANIUM MINING CLIENTS MUST indicate sample type		
<input type="checkbox"/> Unprocessed Ore		
<input type="checkbox"/> Processed Ore (Ground or Refined) **CALL BEFORE SENDING		
<input type="checkbox"/> 11(e)2 Byproduct Material (Can ONLY be Submitted to ELI Casper Location)		

Matrix Codes

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

Analysis Requested

Analysis Requested	EPA 3630/8015 TPH-d/o	EPA 3630/8015 TPH-d/o w/SGC	8260 VOCs (Full Suite) + DCA*	8015 TPH-g	8270D SVOC (Full Suite)* PAH 8270D SIM*	8011 EDB	EPA 9080 TOC	EPA 6020 Total Lead	RSK175 Methane	See Attached
1			X	X		X			X	X
2	X	X	X	X	X	X	X	X	X	X
3					X					X
4										
5										
6										
7										
8										
9										

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

Sample Identification (Name, Location, Interval, etc.)	Collection		Number of Containers	Matrix (See Codes Above)	Analysis Requested										See Attached	RUSH TAT	EE LAB ID Laboratory Use Only
	Date	Time			EPA 3630/8015 TPH-d/o	EPA 3630/8015 TPH-d/o w/SGC	8260 VOCs (Full Suite) + DCA*	8015 TPH-g	8270D SVOC (Full Suite)* PAH 8270D SIM*	8011 EDB	EPA 9080 TOC	EPA 6020 Total Lead	RSK175 Methane				
1 ERHZ198 (RHMW11-5TB)	12/16/21	10:35	8	WA			X	X		X					X	X	B2112841-009, 010, 011, 012
2 ERHZ199 (RHMW11-5)	12/16/21	11:40	21	GW	X	X	X	X	X	X	X	X	X	X	X	X	-004
3 ERHZ189 (RHMW08-FD)	12/16/21	09:33	2	GW						X					X	X	-002
4																	
5 Trip Blank \$260:14575																	-009
6 Trip Blank GRO:14575	16	12/22/21															-010
7 Trip Blank Soil: Client																	-011
8 Trip Blank Methane: 14457																	-012
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) Conner Rothe	Date/Time 12/18/21	Signature <i>Conner Rothe</i>	Received by (print)	Date/Time	Signature			
	Relinquished by (print)	Date/Time	Signature	Received by Laboratory (print) Lyle W. Soren	Date/Time 12/22/21 10:10	Signature <i>[Signature]</i>			
Shipped By	Cooler ID(s) 3	Custody Seals Y N C B	Intact Y N	Receipt Temp 0.8°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 noted on your analytical report.

Work Order Receipt Checklist

AECOM - Honolulu

B21121841

Login completed by: Leslie S. Cadreau
Reviewed by: BL2000\gmccartney
Reviewed Date: 12/27/2021

Date Received: 12/22/2021
Received by: tjg
Carrier name: FedEx

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

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Standard Reporting Procedures:

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

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

Contact and Corrective Action Comments:

The Temperature Blank temperature for shipping container 1 was 2.4°C (Chain of Custody 1 of 3), shipping container 2 was 3.0°C (Chain of Custody 2 of 3) and shipping container 3 was 0.8°C (Chain of Custody 3 of 3).

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

Custody seals were present on all containers except the voa vials for all samples.

Preservative traceability bottle order labels were present on the following containers:

- Sample ERH2199-Total Metals, Total Organic Carbon and Diesel Range Organics
- Sample ERH2188-Diesel Range Organics
- Sample ERH2191-Diesel Range Organics
- Sample ERH2189-Diesel Range Organics

All other containers were received without preservative traceability labels provided by Energy Laboratories, Inc.

Qualifiers and Abbreviations

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

Qualifiers and Abbreviations

Abbreviation

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

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



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B21121841-001
Collection Date: 12/16/2021 18:13
Date Received: 12/22/2021
Report Date: 02/04/2022

Client: AECOM - Honolulu
Client Sample ID: ERH2191 (RHMW09)
Project: CV18F0126/60571032.02.20.01
Matrix: Ground Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
AGGREGATE ORGANICS												
Organic Carbon, Total (TOC) - TOC Range is 1.0 to 1.1	1.1	mg/L	1		0.50	0.50	0.17		SW9060A	12/29/2021 17:21/eli-ca	SUB-C278345 : 4	C_R278345
METALS, TOTAL												
Lead	0.002	mg/L	1		0.001	0.0001	0.00008		SW6020	12/23/2021 16:04/car	ICPMS207-B_211223B : 52	162444
VOLATILE ORGANIC COMPOUNDS												
Benzene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
Benzene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
Bromobenzene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
Bromobenzene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
Bromochloromethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
Bromochloromethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
Bromodichloromethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
Bromodichloromethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
Bromoform	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
Bromoform	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
Bromomethane	ND	ug/L	1	U	1.0	0.50	0.25		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
Bromomethane	ND	ug/L	1	U	1.0	0.50	0.25		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
Carbon tetrachloride	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
Carbon tetrachloride	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
Chlorobenzene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
Chlorobenzene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
Chlorodibromomethane	ND	ug/L	1	U	1.0	0.25	0.084		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
Chlorodibromomethane	ND	ug/L	1	U	1.0	0.25	0.084		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
Chloroethane	ND	ug/L	1	U	1.0	0.50	0.17		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
Chloroethane	ND	ug/L	1	U	1.0	0.50	0.17		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
Chloroform	ND	ug/L	1	U	1.0	0.25	0.079		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
Chloroform	ND	ug/L	1	U	1.0	0.25	0.079		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
Chloromethane	ND	ug/L	1	U	1.0	0.50	0.19		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
Chloromethane	ND	ug/L	1	U	1.0	0.50	0.19		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
1,2-Dibromoethane	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
1,2-Dibromoethane	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
2-Chlorotoluene	ND	ug/L	1	U	1.0	0.25	0.088		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
2-Chlorotoluene	ND	ug/L	1	U	1.0	0.25	0.088		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
4-Chlorotoluene	ND	ug/L	1	U	1.0	0.25	0.091		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
4-Chlorotoluene	ND	ug/L	1	U	1.0	0.25	0.091		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
Dibromomethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
Dibromomethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
1,2-Dichlorobenzene	ND	ug/L	1	U	1.0	0.25	0.086		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B21121841-001

Collection Date: 12/16/2021 18:13

Date Received: 12/22/2021

Report Date: 02/04/2022

Client: AECOM - Honolulu
Client Sample ID: ERH2191 (RHMW09)
Project: CV18F0126/60571032.02.20.01
Matrix: Ground Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
VOLATILE ORGANIC COMPOUNDS												
1,2-Dichlorobenzene	ND	ug/L	1	U	1.0	0.25	0.086		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
1,3-Dichlorobenzene	ND	ug/L	1	U	1.0	0.25	0.10		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
1,3-Dichlorobenzene	ND	ug/L	1	U	1.0	0.25	0.10		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
1,4-Dichlorobenzene	ND	ug/L	1	U	1.0	0.25	0.086		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
1,4-Dichlorobenzene	ND	ug/L	1	U	1.0	0.25	0.086		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
Dichlorodifluoromethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
Dichlorodifluoromethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
1,1-Dichloroethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
1,1-Dichloroethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
1,2-Dichloroethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
1,2-Dichloroethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
1,1-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
1,1-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
cis-1,2-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.17		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
cis-1,2-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.17		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
trans-1,2-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
trans-1,2-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
1,2-Dichloropropane	ND	ug/L	1	U	1.0	0.25	0.089		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
1,2-Dichloropropane	ND	ug/L	1	U	1.0	0.25	0.089		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
1,3-Dichloropropane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
1,3-Dichloropropane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
2,2-Dichloropropane	ND	ug/L	1	U	1.0	0.50	0.20		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
2,2-Dichloropropane	ND	ug/L	1	U	1.0	0.50	0.20		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
1,1-Dichloropropene	ND	ug/L	1	U	1.0	0.25	0.083		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
1,1-Dichloropropene	ND	ug/L	1	U	1.0	0.25	0.083		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
cis-1,3-Dichloropropene	ND	ug/L	1	U	1.0	0.25	0.094		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
cis-1,3-Dichloropropene	ND	ug/L	1	U	1.0	0.25	0.094		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
trans-1,3-Dichloropropene	ND	ug/L	1	U	1.0	0.25	0.085		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
trans-1,3-Dichloropropene	ND	ug/L	1	U	1.0	0.25	0.085		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
Ethylbenzene	ND	ug/L	1	U	1.0	0.25	0.091		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
Ethylbenzene	ND	ug/L	1	U	1.0	0.25	0.091		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
Methyl ethyl ketone	ND	ug/L	1	U	20	5.0	2.2		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
Methyl ethyl ketone	ND	ug/L	1	U	20	5.0	2.2		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
Methyl tert-butyl ether (MTBE)	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
Methyl tert-butyl ether (MTBE)	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
Methylene chloride	ND	ug/L	1	UT	1.0	0.50	0.13		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
Methylene chloride	ND	ug/L	1	UT	1.0	0.50	0.13		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
Styrene	ND	ug/L	1	U	1.0	0.25	0.067		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
Styrene	ND	ug/L	1	U	1.0	0.25	0.067		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B21121841-001

Collection Date: 12/16/2021 18:13

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Client: AECOM - Honolulu
Client Sample ID: ERH2191 (RHMW09)
Project: CV18F0126/60571032.02.20.01
Matrix: Ground Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
VOLATILE ORGANIC COMPOUNDS												
1,1,1,2-Tetrachloroethane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
1,1,1,2-Tetrachloroethane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
1,1,2,2-Tetrachloroethane	ND	ug/L	1	U	1.0	0.25	0.087		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
1,1,2,2-Tetrachloroethane	ND	ug/L	1	U	1.0	0.25	0.087		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
Tetrachloroethene	ND	ug/L	1	U	1.0	0.25	0.067		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
Tetrachloroethene	ND	ug/L	1	U	1.0	0.25	0.067		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
Toluene	ND	ug/L	1	U	1.0	0.25	0.075		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
Toluene	ND	ug/L	1	U	1.0	0.25	0.075		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
1,1,1-Trichloroethane	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
1,1,1-Trichloroethane	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
1,1,2-Trichloroethane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
1,1,2-Trichloroethane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
Trichloroethene	ND	ug/L	1	U	1.0	0.25	0.099		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
Trichloroethene	ND	ug/L	1	U	1.0	0.25	0.099		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
Trichlorofluoromethane	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
Trichlorofluoromethane	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
1,2,3-Trichloropropane	ND	ug/L	1	U	1.0	0.50	0.38		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
1,2,3-Trichloropropane	ND	ug/L	1	U	1.0	0.50	0.38		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
Vinyl chloride	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
Vinyl chloride	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
m+p-Xylenes	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
m+p-Xylenes	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
o-Xylene	ND	ug/L	1	U	1.0	0.20	0.060		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
o-Xylene	ND	ug/L	1	U	1.0	0.20	0.060		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
Xylenes, Total	ND	ug/L	1	U	1.0	0.20	0.060		SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
Xylenes, Total	ND	ug/L	1	U	1.0	0.20	0.060		SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
Surr: Dibromofluoromethane	105.0	%REC	1		80-119				SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
Surr: Dibromofluoromethane	104.0	%REC	1		80-119				SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
Surr: 1,2-Dichloroethane-d4	111.0	%REC	1		81-118				SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
Surr: 1,2-Dichloroethane-d4	102.0	%REC	1		81-118				SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
Surr: Toluene-d8	101.0	%REC	1		89-112				SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
Surr: Toluene-d8	102.0	%REC	1		89-112				SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824
Surr: p-Bromofluorobenzene	107.0	%REC	1		85-114				SW8260B	12/27/2021 14:40/msc	VOA5975C.I_211227A : 11	R372727
Surr: p-Bromofluorobenzene	108.0	%REC	1		85-114				SW8260B	12/28/2021 15:03/msc	VOA5975C.I_211228A : 10	R372824

- The sample was re-analyzed due to a low recovery for Bromomethane in the bracketing CCV. Re-analysis produced similar results. Both the original and re-analysis results are included in the analytical report.

VOCS BY MICROEXTRACTION-ECD

1,2-Dibromoethane	ND	ug/L	1	U	0.010	0.0049	0.0025		SW8011	12/27/2021 22:04/clt	GECD.I_211227A : 14	162467
Surr: 1,1,1,2-Tetrachloroethane	122.0	%REC	1		70-130				SW8011	12/27/2021 22:04/clt	GECD.I_211227A : 14	162467



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B21121841-001

Collection Date: 12/16/2021 18:13

Date Received: 12/22/2021

Report Date: 02/04/2022

Client: AECOM - Honolulu
Client Sample ID: ERH2191 (RHMW09)
Project: CV18F0126/60571032.02.20.01
Matrix: Ground Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
PETROLEUM HYDROCARBONS-VOLATILE												
C6 to C10	ND	ug/L	1	U	20	8.7	2.3		SW8015C	12/28/2021 11:06/jp	PE 1_211228A : 5	R372468
Total Purgeable Hydrocarbons	ND	ug/L	1	U	20	10	3.6		SW8015C	12/28/2021 11:06/jp	PE 1_211228A : 5	R372468
Surr: Trifluorotoluene	84.0	%REC	1		70-130				SW8015C	12/28/2021 11:06/jp	PE 1_211228A : 5	R372468
- 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)	0.68	mg/L	1		0.30	0.14	0.037		SW8015C	12/27/2021 18:06/amn	GCFID-HP5-B_211226B : 8	162439
Diesel Range Organics (SGT-C10 to C24)	ND	mg/L	1	U	0.30	0.12	0.037		SW8015C	12/28/2021 23:05/amn	GCFID-HP5-B_211228A : 8	162439
Oil Range Hydrocarbons (C24 to C40)	1.4	mg/L	1		0.30	0.14	0.085		SW8015C	12/27/2021 18:06/amn	GCFID-HP5-B_211226B : 8	162439
Oil Range Hydrocarbons (SGT-C24 to C40)	0.11	mg/L	1	J	0.30	0.14	0.085		SW8015C	12/28/2021 23:05/amn	GCFID-HP5-B_211228A : 8	162439
Total Extractable Hydrocarbons	2.6	mg/L	1		0.30	0.14	0.072		SW8015C	12/27/2021 18:06/amn	GCFID-HP5-B_211226B : 8	162439
Total Extractable Hydrocarbons (SGT)	0.14	mg/L	1	J	0.30	0.12	0.032		SW8015C	12/28/2021 23:05/amn	GCFID-HP5-B_211228A : 8	162439
Surr: o-Terphenyl	50.0	%REC	1	S	56-125				SW8015C	12/27/2021 18:06/amn	GCFID-HP5-B_211226B : 8	162439
Surr: o-Terphenyl (SGT)	34.0	%REC	1	S	56-125				SW8015C	12/28/2021 23:05/amn	GCFID-HP5-B_211228A : 8	162439
Surr: n-Triacontane	127.0	%REC	1		50-150				SW8015C	12/27/2021 18:06/amn	GCFID-HP5-B_211226B : 8	162439
Surr: n-Triacontane (SGT)	73.0	%REC	1		50-150				SW8015C	12/28/2021 23:05/amn	GCFID-HP5-B_211228A : 8	162439
- Note 1: Diesel Range Organics are defined as all hydrocarbons eluting between C10 and C28.												
- Note 2: Total Extractable Hydrocarbons are defined as the total hydrocarbon response regardless of elution time.												
- S=The surrogate recovery was outside quality control limits due to co-eluting sample matrix interference. Re-analysis produced similar results.												
ORGANIC CHARACTERISTICS												
Methane	ND	mg/L	1	U	0.0020	0.0012	0.00070		SW8015M	12/23/2021 10:25/jdw	FID-HEADSPACE_211223A : 6	R372307
SEMI-VOLATILE ORGANIC COMPOUNDS												
1,2,4-Trichlorobenzene	ND	ug/L	1	U	10	5.0	1.9		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
1,2-Dichlorobenzene	ND	ug/L	1	U	10	5.0	2.0		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
1,3-Dichlorobenzene	ND	ug/L	1	U	10	5.0	2.1		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
1,4-Dichlorobenzene	ND	ug/L	1	U	10	5.0	2.0		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
1-Methylnaphthalene	ND	ug/L	1	U	10	5.0	2.4		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
2,4,5-Trichlorophenol	ND	ug/L	1	U	10	5.0	2.2		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
2,4,6-Trichlorophenol	ND	ug/L	1	U	10	5.0	2.6		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
2,4-Dichlorophenol	ND	ug/L	1	U	10	5.0	1.7		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
2,4-Dimethylphenol	ND	ug/L	1	U	10	5.0	1.7		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
2,4-Dinitrophenol	ND	ug/L	1	U	10	10	4.3		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
2,4-Dinitrotoluene	ND	ug/L	1	U	10	5.0	3.0		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
2,6-Dinitrotoluene	ND	ug/L	1	U	10	5.0	3.2		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
2-Chloronaphthalene	ND	ug/L	1	U	10	5.0	2.1		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
2-Chlorophenol	ND	ug/L	1	U	10	5.0	2.5		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
2-Methylnaphthalene	ND	ug/L	1	U	10	5.0	1.9		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B21121841-001

Collection Date: 12/16/2021 18:13

Date Received: 12/22/2021

Report Date: 02/04/2022

Client: AECOM - Honolulu
Client Sample ID: ERH2191 (RHMW09)
Project: CV18F0126/60571032.02.20.01
Matrix: Ground Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
SEMI-VOLATILE ORGANIC COMPOUNDS												
2-Nitrophenol	ND	ug/L	1	U	10	5.0	2.4		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
3,3'-Dichlorobenzidine	ND	ug/L	1	U	10	5.0	2.1		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
4,6-Dinitro-2-methylphenol	ND	ug/L	1	U	10	10	2.3		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
4-Bromophenyl phenyl ether	ND	ug/L	1	U	10	5.0	1.7		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
4-Chloro-3-methylphenol	ND	ug/L	1	U	10	5.0	1.5		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
4-Chlorophenol	ND	ug/L	1	U	10	5.0	2.6		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
4-Chlorophenyl phenyl ether	ND	ug/L	1	U	10	5.0	2.0		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
4-Nitrophenol	ND	ug/L	1	U	10	10	2.5		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
Acenaphthene	ND	ug/L	1	U	10	5.0	1.9		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
Acenaphthylene	ND	ug/L	1	U	10	5.0	1.6		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
Anthracene	ND	ug/L	1	U	10	5.0	1.2		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
Azobenzene	ND	ug/L	1	U	10	5.0	1.1		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
Benzidine	ND	ug/L	1	U	10	10	6.7		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
Benzo(a)anthracene	ND	ug/L	1	U	10	5.0	0.86		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
Benzo(a)pyrene	ND	ug/L	1	U	10	5.0	1.2		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
Benzo(b)fluoranthene	ND	ug/L	1	U	10	5.0	0.90		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
Benzo(g,h,i)perylene	ND	ug/L	1	U	10	5.0	1.0		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
Benzo(k)fluoranthene	ND	ug/L	1	U	10	5.0	0.97		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
bis(-2-chloroethoxy)Methane	ND	ug/L	1	U	10	5.0	1.4		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
bis(-2-chloroethyl)Ether	ND	ug/L	1	U	10	5.0	2.6		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
bis(2-chloroisopropyl)Ether	ND	ug/L	1	U	10	5.0	1.5		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
bis(2-ethylhexyl)Phthalate	ND	ug/L	1	U	10	5.0	1.9		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
Butylbenzylphthalate	ND	ug/L	1	U	10	5.0	1.6		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
Chrysene	ND	ug/L	1	U	10	5.0	1.2		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
Di-n-butyl phthalate	ND	ug/L	1	U	10	5.0	0.93		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
Di-n-octyl phthalate	ND	ug/L	1	U	10	5.0	1.3		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
Dibenzo(a,h)anthracene	ND	ug/L	1	U	10	5.0	1.2		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
Diethyl phthalate	ND	ug/L	1	U	10	5.0	2.2		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
Dimethyl phthalate	ND	ug/L	1	U	10	5.0	1.7		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
Fluoranthene	ND	ug/L	1	U	10	5.0	0.88		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
Fluorene	ND	ug/L	1	U	10	5.0	1.8		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
Hexachlorobenzene	ND	ug/L	1	U	10	5.0	1.3		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
Hexachlorobutadiene	ND	ug/L	1	U	10	5.0	2.3		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
Hexachlorocyclopentadiene	ND	ug/L	1	U	10	5.0	3.0		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
Hexachloroethane	ND	ug/L	1	U	10	5.0	1.8		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
Indeno(1,2,3-cd)pyrene	ND	ug/L	1	U	10	5.0	1.2		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
Isophorone	ND	ug/L	1	U	10	5.0	1.7		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
m+p-Cresols	ND	ug/L	1	U	10	5.0	1.8		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
n-Nitroso-di-n-propylamine	ND	ug/L	1	U	10	5.0	1.5		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B21121841-001

Collection Date: 12/16/2021 18:13

Date Received: 12/22/2021

Report Date: 02/04/2022

Client: AECOM - Honolulu
Client Sample ID: ERH2191 (RHMW09)
Project: CV18F0126/60571032.02.20.01
Matrix: Ground Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
SEMI-VOLATILE ORGANIC COMPOUNDS												
n-Nitrosodimethylamine	ND	ug/L	1	U	10	5.0	1.5		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
n-Nitrosodiphenylamine	ND	ug/L	1	U	10	5.0	1.2		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
Naphthalene	ND	ug/L	1	U	10	5.0	1.7		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
Nitrobenzene	ND	ug/L	1	U	10	5.0	2.3		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
o-Cresol	ND	ug/L	1	U	10	5.0	1.8		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
Pentachlorophenol	ND	ug/L	1	U	10	10	4.2		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
Phenanthrene	ND	ug/L	1	U	10	5.0	0.78		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
Phenol	ND	ug/L	1	U	10	5.0	1.5		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
Pyrene	ND	ug/L	1	U	10	5.0	0.92		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
Pyridine	ND	ug/L	1	U	10	5.0	3.2		SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
Surr: 2,4,6-Tribromophenol	89.0	%REC	1		43-140				SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
Surr: 2-Fluorobiphenyl	70.0	%REC	1		44-119				SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
Surr: 2-Fluorophenol	28.0	%REC	1		19-119				SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
Surr: Nitrobenzene-d5	57.0	%REC	1		44-120				SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
Surr: Phenol-d5	29.0	%REC	1		10-65				SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
Surr: Terphenyl-d14	119.0	%REC	1		50-134				SW8270C	12/24/2021 12:59/dsm	SV5973N.I_211223B : 10	162432
SEMI-VOLATILE ORGANIC COMPOUNDS (LOW LEVEL) BY SIM												
1-Methylnaphthalene	ND	ug/L	1	U	0.10	0.10	0.021		SW8270C	12/29/2021 07:30/jph	SV5975.I_211228B : 4	162432
2-Methylnaphthalene	ND	ug/L	1	U	0.10	0.10	0.018		SW8270C	12/29/2021 07:30/jph	SV5975.I_211228B : 4	162432
Naphthalene	ND	ug/L	1	U	0.10	0.10	0.029		SW8270C	12/29/2021 07:30/jph	SV5975.I_211228B : 4	162432



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B21121841-002

Collection Date: 12/16/2021 13:33

Date Received: 12/22/2021

Report Date: 02/04/2022

Client: AECOM - Honolulu
Client Sample ID: ERH2189 (RHMW08-FD)
Project: CV18F0126/60571032.02.20.01
Matrix: Ground Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
VOLATILE ORGANIC COMPOUNDS												
Benzene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
Benzene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
Bromobenzene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
Bromobenzene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
Bromochloromethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
Bromochloromethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
Bromodichloromethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
Bromodichloromethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
Bromoform	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
Bromoform	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
Bromomethane	ND	ug/L	1	U	1.0	0.50	0.25		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
Bromomethane	ND	ug/L	1	U	1.0	0.50	0.25		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
Carbon tetrachloride	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
Carbon tetrachloride	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
Chlorobenzene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
Chlorobenzene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
Chlorodibromomethane	ND	ug/L	1	U	1.0	0.25	0.084		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
Chlorodibromomethane	ND	ug/L	1	U	1.0	0.25	0.084		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
Chloroethane	ND	ug/L	1	U	1.0	0.50	0.17		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
Chloroethane	ND	ug/L	1	U	1.0	0.50	0.17		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
Chloroform	ND	ug/L	1	U	1.0	0.25	0.079		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
Chloroform	ND	ug/L	1	U	1.0	0.25	0.079		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
Chloromethane	ND	ug/L	1	U	1.0	0.50	0.19		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
Chloromethane	ND	ug/L	1	U	1.0	0.50	0.19		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
1,2-Dibromoethane	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
1,2-Dibromoethane	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
2-Chlorotoluene	ND	ug/L	1	U	1.0	0.25	0.088		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
2-Chlorotoluene	ND	ug/L	1	U	1.0	0.25	0.088		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
4-Chlorotoluene	ND	ug/L	1	U	1.0	0.25	0.091		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
4-Chlorotoluene	ND	ug/L	1	U	1.0	0.25	0.091		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
Dibromomethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
Dibromomethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
1,2-Dichlorobenzene	ND	ug/L	1	U	1.0	0.25	0.086		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
1,2-Dichlorobenzene	ND	ug/L	1	U	1.0	0.25	0.086		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
1,3-Dichlorobenzene	ND	ug/L	1	U	1.0	0.25	0.10		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
1,3-Dichlorobenzene	ND	ug/L	1	U	1.0	0.25	0.10		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
1,4-Dichlorobenzene	ND	ug/L	1	U	1.0	0.25	0.086		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
1,4-Dichlorobenzene	ND	ug/L	1	U	1.0	0.25	0.086		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
Dichlorodifluoromethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B21121841-002

Collection Date: 12/16/2021 13:33

Date Received: 12/22/2021

Report Date: 02/04/2022

Client: AECOM - Honolulu
Client Sample ID: ERH2189 (RHMW08-FD)
Project: CV18F0126/60571032.02.20.01
Matrix: Ground Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
VOLATILE ORGANIC COMPOUNDS												
Dichlorodifluoromethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
1,1-Dichloroethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
1,1-Dichloroethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
1,2-Dichloroethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
1,2-Dichloroethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
1,1-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
1,1-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
cis-1,2-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.17		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
cis-1,2-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.17		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
trans-1,2-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
trans-1,2-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
1,2-Dichloropropane	ND	ug/L	1	U	1.0	0.25	0.089		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
1,2-Dichloropropane	ND	ug/L	1	U	1.0	0.25	0.089		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
1,3-Dichloropropane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
1,3-Dichloropropane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
2,2-Dichloropropane	ND	ug/L	1	U	1.0	0.50	0.20		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
2,2-Dichloropropane	ND	ug/L	1	U	1.0	0.50	0.20		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
1,1-Dichloropropene	ND	ug/L	1	U	1.0	0.25	0.083		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
1,1-Dichloropropene	ND	ug/L	1	U	1.0	0.25	0.083		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
cis-1,3-Dichloropropene	ND	ug/L	1	U	1.0	0.25	0.094		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
cis-1,3-Dichloropropene	ND	ug/L	1	U	1.0	0.25	0.094		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
trans-1,3-Dichloropropene	ND	ug/L	1	U	1.0	0.25	0.085		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
trans-1,3-Dichloropropene	ND	ug/L	1	U	1.0	0.25	0.085		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
Ethylbenzene	ND	ug/L	1	U	1.0	0.25	0.091		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
Ethylbenzene	ND	ug/L	1	U	1.0	0.25	0.091		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
Methyl ethyl ketone	ND	ug/L	1	U	20	5.0	2.2		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
Methyl ethyl ketone	ND	ug/L	1	U	20	5.0	2.2		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
Methyl tert-butyl ether (MTBE)	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
Methyl tert-butyl ether (MTBE)	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
Methylene chloride	ND	ug/L	1	UT	1.0	0.50	0.13		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
Methylene chloride	ND	ug/L	1	UT	1.0	0.50	0.13		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
Styrene	ND	ug/L	1	U	1.0	0.25	0.067		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
Styrene	ND	ug/L	1	U	1.0	0.25	0.067		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
1,1,1,2-Tetrachloroethane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
1,1,1,2-Tetrachloroethane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
1,1,2,2-Tetrachloroethane	ND	ug/L	1	U	1.0	0.25	0.087		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
1,1,2,2-Tetrachloroethane	ND	ug/L	1	U	1.0	0.25	0.087		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
Tetrachloroethene	ND	ug/L	1	U	1.0	0.25	0.067		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
Tetrachloroethene	ND	ug/L	1	U	1.0	0.25	0.067		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B21121841-002

Collection Date: 12/16/2021 13:33

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Report Date: 02/04/2022

Client: AECOM - Honolulu
Client Sample ID: ERH2189 (RHMW08-FD)
Project: CV18F0126/60571032.02.20.01
Matrix: Ground Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
VOLATILE ORGANIC COMPOUNDS												
Toluene	ND	ug/L	1	U	1.0	0.25	0.075		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
Toluene	ND	ug/L	1	U	1.0	0.25	0.075		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
1,1,1-Trichloroethane	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
1,1,1-Trichloroethane	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
1,1,2-Trichloroethane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
1,1,2-Trichloroethane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
Trichloroethene	ND	ug/L	1	U	1.0	0.25	0.099		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
Trichloroethene	ND	ug/L	1	U	1.0	0.25	0.099		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
Trichlorofluoromethane	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
Trichlorofluoromethane	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
1,2,3-Trichloropropane	ND	ug/L	1	U	1.0	0.50	0.38		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
1,2,3-Trichloropropane	ND	ug/L	1	U	1.0	0.50	0.38		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
Vinyl chloride	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
Vinyl chloride	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
m+p-Xylenes	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
m+p-Xylenes	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
o-Xylene	ND	ug/L	1	U	1.0	0.20	0.060		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
o-Xylene	ND	ug/L	1	U	1.0	0.20	0.060		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
Xylenes, Total	ND	ug/L	1	U	1.0	0.20	0.060		SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
Xylenes, Total	ND	ug/L	1	U	1.0	0.20	0.060		SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
Surr: Dibromofluoromethane	105.0	%REC	1		80-119				SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
Surr: Dibromofluoromethane	106.0	%REC	1		80-119				SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
Surr: 1,2-Dichloroethane-d4	106.0	%REC	1		81-118				SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
Surr: 1,2-Dichloroethane-d4	104.0	%REC	1		81-118				SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
Surr: Toluene-d8	103.0	%REC	1		89-112				SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
Surr: Toluene-d8	104.0	%REC	1		89-112				SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824
Surr: p-Bromofluorobenzene	104.0	%REC	1		85-114				SW8260B	12/27/2021 15:07/msc	VOA5975C.I_211227A : 12	R372727
Surr: p-Bromofluorobenzene	108.0	%REC	1		85-114				SW8260B	12/28/2021 15:30/msc	VOA5975C.I_211228A : 11	R372824

- The sample was re-analyzed due to a low recovery for Bromomethane in the bracketing CCV. Re-analysis produced similar results. Both the original and re-analysis results are included in the analytical report.

PETROLEUM HYDROCARBONS-VOLATILE

C6 to C10	ND	ug/L	1	U	20	8.7	2.3		SW8015C	12/28/2021 12:15/jp	PE 1_211228A : 6	R372468
Total Purgeable Hydrocarbons	ND	ug/L	1	U	20	10	3.6		SW8015C	12/28/2021 12:15/jp	PE 1_211228A : 6	R372468
Surr: Trifluorotoluene	83.0	%REC	1		70-130				SW8015C	12/28/2021 12:15/jp	PE 1_211228A : 6	R372468

- 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)	0.45	mg/L	1		0.31	0.15	0.040		SW8015C	12/27/2021 16:40/amn	GCFID-HP5-B_211226B : 7	162439
Diesel Range Organics (SGT-C10 to C24)	ND	mg/L	1	U	0.31	0.12	0.040		SW8015C	12/28/2021 21:39/amn	GCFID-HP5-B_211228A : 7	162439



LABORATORY ANALYTICAL REPORT

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Client Sample ID: ERH2189 (RHMW08-FD)
Project: CV18F0126/60571032.02.20.01
Matrix: Ground Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
PETROLEUM HYDROCARBONS-SEMI-VOLATILE												
Oil Range Hydrocarbons (C24 to C40)	0.65	mg/L	1		0.31	0.15	0.090		SW8015C	12/27/2021 16:40/amn	GCFID-HP5-B_211226B : 7	162439
Oil Range Hydrocarbons (SGT-C24 to C40)	ND	mg/L	1	U	0.31	0.15	0.090		SW8015C	12/28/2021 21:39/amn	GCFID-HP5-B_211228A : 7	162439
Total Extractable Hydrocarbons	1.3	mg/L	1		0.31	0.15	0.076		SW8015C	12/27/2021 16:40/amn	GCFID-HP5-B_211226B : 7	162439
Total Extractable Hydrocarbons (SGT)	0.042	mg/L	1	J	0.31	0.12	0.034		SW8015C	12/28/2021 21:39/amn	GCFID-HP5-B_211228A : 7	162439
Surr: o-Terphenyl	94.0	%REC	1		56-125				SW8015C	12/27/2021 16:40/amn	GCFID-HP5-B_211226B : 7	162439
Surr: o-Terphenyl (SGT)	79.0	%REC	1		56-125				SW8015C	12/28/2021 21:39/amn	GCFID-HP5-B_211228A : 7	162439
Surr: n-Triacontane	108.0	%REC	1		50-150				SW8015C	12/27/2021 16:40/amn	GCFID-HP5-B_211226B : 7	162439
Surr: n-Triacontane (SGT)	90.0	%REC	1		50-150				SW8015C	12/28/2021 21:39/amn	GCFID-HP5-B_211228A : 7	162439
- Note 1: Diesel Range Organics are defined as all hydrocarbons eluting between C10 and C28.												
- Note 2: Total Extractable Hydrocarbons are defined as the total hydrocarbon response regardless of elution time.												
SEMI-VOLATILE ORGANIC COMPOUNDS												
1,2,4-Trichlorobenzene	ND	ug/L	1	U	10	5.0	1.9		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
1,2-Dichlorobenzene	ND	ug/L	1	U	10	5.0	2.0		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
1,3-Dichlorobenzene	ND	ug/L	1	U	10	5.0	2.2		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
1,4-Dichlorobenzene	ND	ug/L	1	U	10	5.0	2.0		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
1-Methylnaphthalene	ND	ug/L	1	U	10	5.0	2.4		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
2,4,5-Trichlorophenol	ND	ug/L	1	U	10	5.0	2.3		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
2,4,6-Trichlorophenol	ND	ug/L	1	U	10	5.0	2.7		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
2,4-Dichlorophenol	ND	ug/L	1	U	10	5.0	1.7		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
2,4-Dimethylphenol	ND	ug/L	1	U	10	5.0	1.7		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
2,4-Dinitrophenol	ND	ug/L	1	U	10	10	4.3		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
2,4-Dinitrotoluene	ND	ug/L	1	U	10	5.0	3.1		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
2,6-Dinitrotoluene	ND	ug/L	1	U	10	5.0	3.2		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
2-Chloronaphthalene	ND	ug/L	1	U	10	5.0	2.2		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
2-Chlorophenol	ND	ug/L	1	U	10	5.0	2.5		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
2-Methylnaphthalene	ND	ug/L	1	U	10	5.0	1.9		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
2-Nitrophenol	ND	ug/L	1	U	10	5.0	2.4		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
3,3'-Dichlorobenzidine	ND	ug/L	1	U	10	5.0	2.1		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
4,6-Dinitro-2-methylphenol	ND	ug/L	1	U	10	10	2.4		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
4-Bromophenyl phenyl ether	ND	ug/L	1	U	10	5.0	1.8		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
4-Chloro-3-methylphenol	ND	ug/L	1	U	10	5.0	1.5		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
4-Chlorophenol	ND	ug/L	1	U	10	5.0	2.7		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
4-Chlorophenyl phenyl ether	ND	ug/L	1	U	10	5.0	2.1		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
4-Nitrophenol	ND	ug/L	1	U	10	10	2.5		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
Acenaphthene	ND	ug/L	1	U	10	5.0	1.9		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
Acenaphthylene	ND	ug/L	1	U	10	5.0	1.6		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
Anthracene	ND	ug/L	1	U	10	5.0	1.2		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
Azobenzene	ND	ug/L	1	U	10	5.0	1.1		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B21121841-002

Collection Date: 12/16/2021 13:33

Date Received: 12/22/2021

Report Date: 02/04/2022

Client: AECOM - Honolulu
Client Sample ID: ERH2189 (RHMW08-FD)
Project: CV18F0126/60571032.02.20.01
Matrix: Ground Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
SEMI-VOLATILE ORGANIC COMPOUNDS												
Benzidine	ND	ug/L	1	U	10	10	6.8		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
Benzo(a)anthracene	ND	ug/L	1	U	10	5.0	0.86		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
Benzo(a)pyrene	ND	ug/L	1	U	10	5.0	1.3		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
Benzo(b)fluoranthene	ND	ug/L	1	U	10	5.0	0.91		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
Benzo(g,h,i)perylene	ND	ug/L	1	U	10	5.0	1.0		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
Benzo(k)fluoranthene	ND	ug/L	1	U	10	5.0	0.98		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
bis(-2-chloroethoxy)Methane	ND	ug/L	1	U	10	5.0	1.4		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
bis(-2-chloroethyl)Ether	ND	ug/L	1	U	10	5.0	2.6		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
bis(2-chloroisopropyl)Ether	ND	ug/L	1	U	10	5.0	1.5		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
bis(2-ethylhexyl)Phthalate	ND	ug/L	1	U	10	5.0	1.9		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
Butylbenzylphthalate	ND	ug/L	1	U	10	5.0	1.6		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
Chrysene	ND	ug/L	1	U	10	5.0	1.2		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
Di-n-butyl phthalate	ND	ug/L	1	U	10	5.0	0.94		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
Di-n-octyl phthalate	ND	ug/L	1	U	10	5.0	1.4		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
Dibenzo(a,h)anthracene	ND	ug/L	1	U	10	5.0	1.2		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
Diethyl phthalate	ND	ug/L	1	U	10	5.0	2.2		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
Dimethyl phthalate	ND	ug/L	1	U	10	5.0	1.7		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
Fluoranthene	ND	ug/L	1	U	10	5.0	0.89		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
Fluorene	ND	ug/L	1	U	10	5.0	1.8		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
Hexachlorobenzene	ND	ug/L	1	U	10	5.0	1.3		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
Hexachlorobutadiene	ND	ug/L	1	U	10	5.0	2.3		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
Hexachlorocyclopentadiene	ND	ug/L	1	U	10	5.0	3.0		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
Hexachloroethane	ND	ug/L	1	U	10	5.0	1.8		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
Indeno(1,2,3-cd)pyrene	ND	ug/L	1	U	10	5.0	1.3		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
Isophorone	ND	ug/L	1	U	10	5.0	1.7		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
m+p-Cresols	ND	ug/L	1	U	10	5.0	1.8		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
n-Nitroso-di-n-propylamine	ND	ug/L	1	U	10	5.0	1.6		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
n-Nitrosodimethylamine	ND	ug/L	1	U	10	5.0	1.5		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
n-Nitrosodiphenylamine	ND	ug/L	1	U	10	5.0	1.2		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
Naphthalene	ND	ug/L	1	U	10	5.0	1.8		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
Nitrobenzene	ND	ug/L	1	U	10	5.0	2.3		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
o-Cresol	ND	ug/L	1	U	10	5.0	1.8		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
Pentachlorophenol	ND	ug/L	1	U	10	10	4.3		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
Phenanthrene	ND	ug/L	1	U	10	5.0	0.79		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
Phenol	ND	ug/L	1	U	10	5.0	1.5		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
Pyrene	ND	ug/L	1	U	10	5.0	0.93		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
Pyridine	ND	ug/L	1	U	10	5.0	3.3		SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
Surr: 2,4,6-Tribromophenol	96.0	%REC	1		43-140				SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
Surr: 2-Fluorobiphenyl	68.0	%REC	1		44-119				SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432



LABORATORY ANALYTICAL REPORT

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Collection Date: 12/16/2021 13:33
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Report Date: 02/04/2022

Client: AECOM - Honolulu
Client Sample ID: ERH2189 (RHMW08-FD)
Project: CV18F0126/60571032.02.20.01
Matrix: Ground Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
SEMI-VOLATILE ORGANIC COMPOUNDS												
Surr: 2-Fluorophenol	39.0	%REC	1		19-119				SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
Surr: Nitrobenzene-d5	63.0	%REC	1		44-120				SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
Surr: Phenol-d5	33.0	%REC	1		10-65				SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
Surr: Terphenyl-d14	114.0	%REC	1		50-134				SW8270C	12/24/2021 13:32/dsm	SV5973N.I_211223B : 11	162432
SEMI-VOLATILE ORGANIC COMPOUNDS (LOW LEVEL) BY SIM												
1-Methylnaphthalene	ND	ug/L	1	U	0.10	0.10	0.021		SW8270C	12/29/2021 09:08/jph	SV5975.I_211228B : 7	162432
2-Methylnaphthalene	ND	ug/L	1	U	0.10	0.10	0.018		SW8270C	12/29/2021 09:08/jph	SV5975.I_211228B : 7	162432
Naphthalene	ND	ug/L	1	U	0.10	0.10	0.029		SW8270C	12/29/2021 09:08/jph	SV5975.I_211228B : 7	162432



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B21121841-003

Collection Date: 12/16/2021 13:33

Date Received: 12/22/2021

Report Date: 02/04/2022

Client: AECOM - Honolulu
Client Sample ID: ERH2188 (RHMW08)
Project: CV18F0126/60571032.02.20.01
Matrix: Ground Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
AGGREGATE ORGANICS												
Organic Carbon, Total (TOC) - TOC Range is 0.7 to 0.8	0.75	mg/L	1		0.50	0.50	0.17		SW9060A	12/29/2021 18:04/eli-ca	SUB-C278345 : 5	C_R278345
METALS, TOTAL												
Lead	0.00031	mg/L	1	J	0.001	0.0001	0.00008		SW6020	12/23/2021 15:52/car	ICPMS207-B_211223B : 50	162444
VOLATILE ORGANIC COMPOUNDS												
Benzene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
Benzene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
Bromobenzene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
Bromobenzene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
Bromochloromethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
Bromochloromethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
Bromodichloromethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
Bromodichloromethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
Bromoform	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
Bromoform	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
Bromomethane	ND	ug/L	1	U	1.0	0.50	0.25		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
Bromomethane	ND	ug/L	1	U	1.0	0.50	0.25		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
Carbon tetrachloride	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
Carbon tetrachloride	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
Chlorobenzene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
Chlorobenzene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
Chlorodibromomethane	ND	ug/L	1	U	1.0	0.25	0.084		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
Chlorodibromomethane	ND	ug/L	1	U	1.0	0.25	0.084		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
Chloroethane	ND	ug/L	1	U	1.0	0.50	0.17		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
Chloroethane	ND	ug/L	1	U	1.0	0.50	0.17		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
Chloroform	ND	ug/L	1	U	1.0	0.25	0.079		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
Chloroform	ND	ug/L	1	U	1.0	0.25	0.079		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
Chloromethane	ND	ug/L	1	U	1.0	0.50	0.19		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
Chloromethane	ND	ug/L	1	U	1.0	0.50	0.19		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
1,2-Dibromoethane	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
1,2-Dibromoethane	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
2-Chlorotoluene	ND	ug/L	1	U	1.0	0.25	0.088		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
2-Chlorotoluene	ND	ug/L	1	U	1.0	0.25	0.088		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
4-Chlorotoluene	ND	ug/L	1	U	1.0	0.25	0.091		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
4-Chlorotoluene	ND	ug/L	1	U	1.0	0.25	0.091		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
Dibromomethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
Dibromomethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
1,2-Dichlorobenzene	ND	ug/L	1	U	1.0	0.25	0.086		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727



LABORATORY ANALYTICAL REPORT

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Client: AECOM - Honolulu
Client Sample ID: ERH2188 (RHMW08)
Project: CV18F0126/60571032.02.20.01
Matrix: Ground Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
VOLATILE ORGANIC COMPOUNDS												
1,2-Dichlorobenzene	ND	ug/L	1	U	1.0	0.25	0.086		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
1,3-Dichlorobenzene	ND	ug/L	1	U	1.0	0.25	0.10		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
1,3-Dichlorobenzene	ND	ug/L	1	U	1.0	0.25	0.10		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
1,4-Dichlorobenzene	ND	ug/L	1	U	1.0	0.25	0.086		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
1,4-Dichlorobenzene	ND	ug/L	1	U	1.0	0.25	0.086		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
Dichlorodifluoromethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
Dichlorodifluoromethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
1,1-Dichloroethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
1,1-Dichloroethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
1,2-Dichloroethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
1,2-Dichloroethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
1,1-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
1,1-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
cis-1,2-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.17		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
cis-1,2-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.17		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
trans-1,2-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
trans-1,2-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
1,2-Dichloropropane	ND	ug/L	1	U	1.0	0.25	0.089		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
1,2-Dichloropropane	ND	ug/L	1	U	1.0	0.25	0.089		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
1,3-Dichloropropane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
1,3-Dichloropropane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
2,2-Dichloropropane	ND	ug/L	1	U	1.0	0.50	0.20		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
2,2-Dichloropropane	ND	ug/L	1	U	1.0	0.50	0.20		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
1,1-Dichloropropene	ND	ug/L	1	U	1.0	0.25	0.083		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
1,1-Dichloropropene	ND	ug/L	1	U	1.0	0.25	0.083		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
cis-1,3-Dichloropropene	ND	ug/L	1	U	1.0	0.25	0.094		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
cis-1,3-Dichloropropene	ND	ug/L	1	U	1.0	0.25	0.094		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
trans-1,3-Dichloropropene	ND	ug/L	1	U	1.0	0.25	0.085		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
trans-1,3-Dichloropropene	ND	ug/L	1	U	1.0	0.25	0.085		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
Ethylbenzene	ND	ug/L	1	U	1.0	0.25	0.091		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
Ethylbenzene	ND	ug/L	1	U	1.0	0.25	0.091		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
Methyl ethyl ketone	ND	ug/L	1	U	20	5.0	2.2		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
Methyl ethyl ketone	ND	ug/L	1	U	20	5.0	2.2		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
Methyl tert-butyl ether (MTBE)	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
Methyl tert-butyl ether (MTBE)	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
Methylene chloride	ND	ug/L	1	UT	1.0	0.50	0.13		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
Methylene chloride	ND	ug/L	1	UT	1.0	0.50	0.13		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
Styrene	ND	ug/L	1	U	1.0	0.25	0.067		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
Styrene	ND	ug/L	1	U	1.0	0.25	0.067		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B21121841-003

Collection Date: 12/16/2021 13:33

Date Received: 12/22/2021

Report Date: 02/04/2022

Client: AECOM - Honolulu
Client Sample ID: ERH2188 (RHMW08)
Project: CV18F0126/60571032.02.20.01
Matrix: Ground Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
VOLATILE ORGANIC COMPOUNDS												
1,1,1,2-Tetrachloroethane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
1,1,1,2-Tetrachloroethane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
1,1,2,2-Tetrachloroethane	ND	ug/L	1	U	1.0	0.25	0.087		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
1,1,2,2-Tetrachloroethane	ND	ug/L	1	U	1.0	0.25	0.087		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
Tetrachloroethene	ND	ug/L	1	U	1.0	0.25	0.067		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
Tetrachloroethene	ND	ug/L	1	U	1.0	0.25	0.067		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
Toluene	ND	ug/L	1	U	1.0	0.25	0.075		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
Toluene	ND	ug/L	1	U	1.0	0.25	0.075		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
1,1,1-Trichloroethane	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
1,1,1-Trichloroethane	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
1,1,2-Trichloroethane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
1,1,2-Trichloroethane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
Trichloroethene	ND	ug/L	1	U	1.0	0.25	0.099		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
Trichloroethene	ND	ug/L	1	U	1.0	0.25	0.099		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
Trichlorofluoromethane	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
Trichlorofluoromethane	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
1,2,3-Trichloropropane	ND	ug/L	1	U	1.0	0.50	0.38		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
1,2,3-Trichloropropane	ND	ug/L	1	U	1.0	0.50	0.38		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
Vinyl chloride	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
Vinyl chloride	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
m+p-Xylenes	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
m+p-Xylenes	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
o-Xylene	ND	ug/L	1	U	1.0	0.20	0.060		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
o-Xylene	ND	ug/L	1	U	1.0	0.20	0.060		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
Xylenes, Total	ND	ug/L	1	U	1.0	0.20	0.060		SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
Xylenes, Total	ND	ug/L	1	U	1.0	0.20	0.060		SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
Surr: Dibromofluoromethane	105.0	%REC	1		80-119				SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
Surr: Dibromofluoromethane	109.0	%REC	1		80-119				SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
Surr: 1,2-Dichloroethane-d4	104.0	%REC	1		81-118				SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
Surr: 1,2-Dichloroethane-d4	106.0	%REC	1		81-118				SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
Surr: Toluene-d8	104.0	%REC	1		89-112				SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
Surr: Toluene-d8	103.0	%REC	1		89-112				SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824
Surr: p-Bromofluorobenzene	105.0	%REC	1		85-114				SW8260B	12/27/2021 15:35/msc	VOA5975C.I_211227A : 13	R372727
Surr: p-Bromofluorobenzene	106.0	%REC	1		85-114				SW8260B	12/28/2021 15:58/msc	VOA5975C.I_211228A : 12	R372824

- The sample was re-analyzed due to a low recovery for Bromomethane in the bracketing CCV. Re-analysis produced similar results. Both the original and re-analysis results are included in the analytical report.

VOCS BY MICROEXTRACTION-ECD

1,2-Dibromoethane	ND	ug/L	1	U	0.010	0.0049	0.0025		SW8011	12/27/2021 22:24/clt	GECD.I_211227A : 15	162467
Surr: 1,1,1,2-Tetrachloroethane	92.0	%REC	1		70-130				SW8011	12/27/2021 22:24/clt	GECD.I_211227A : 15	162467



LABORATORY ANALYTICAL REPORT

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Lab ID: B21121841-003
Collection Date: 12/16/2021 13:33
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Client: AECOM - Honolulu
Client Sample ID: ERH2188 (RHMW08)
Project: CV18F0126/60571032.02.20.01
Matrix: Ground Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
PETROLEUM HYDROCARBONS-VOLATILE												
C6 to C10	ND	ug/L	1	U	20	8.7	2.3		SW8015C	12/28/2021 13:23/jp	PE 1_211228A : 7	R372468
Total Purgeable Hydrocarbons	ND	ug/L	1	U	20	10	3.6		SW8015C	12/28/2021 13:23/jp	PE 1_211228A : 7	R372468
Surr: Trifluorotoluene	84.0	%REC	1		70-130				SW8015C	12/28/2021 13:23/jp	PE 1_211228A : 7	R372468
- 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)	0.42	mg/L	1		0.31	0.15	0.040		SW8015C	12/27/2021 15:14/amn	GCFID-HP5-B_211226B : 6	162439
Diesel Range Organics (SGT-C10 to C24)	ND	mg/L	1	U	0.31	0.12	0.040		SW8015C	12/28/2021 20:12/amn	GCFID-HP5-B_211228A : 6	162439
Oil Range Hydrocarbons (C24 to C40)	0.48	mg/L	1		0.31	0.15	0.091		SW8015C	12/27/2021 15:14/amn	GCFID-HP5-B_211226B : 6	162439
Oil Range Hydrocarbons (SGT-C24 to C40)	ND	mg/L	1	U	0.31	0.15	0.091		SW8015C	12/28/2021 20:12/amn	GCFID-HP5-B_211228A : 6	162439
Total Extractable Hydrocarbons	1.0	mg/L	1		0.31	0.15	0.077		SW8015C	12/27/2021 15:14/amn	GCFID-HP5-B_211226B : 6	162439
Total Extractable Hydrocarbons (SGT)	0.040	mg/L	1	J	0.31	0.12	0.034		SW8015C	12/28/2021 20:12/amn	GCFID-HP5-B_211228A : 6	162439
Surr: o-Terphenyl	94.0	%REC	1		56-125				SW8015C	12/27/2021 15:14/amn	GCFID-HP5-B_211226B : 6	162439
Surr: o-Terphenyl (SGT)	80.0	%REC	1		56-125				SW8015C	12/28/2021 20:12/amn	GCFID-HP5-B_211228A : 6	162439
Surr: n-Triacontane	122.0	%REC	1		50-150				SW8015C	12/27/2021 15:14/amn	GCFID-HP5-B_211226B : 6	162439
Surr: n-Triacontane (SGT)	101.0	%REC	1		50-150				SW8015C	12/28/2021 20:12/amn	GCFID-HP5-B_211228A : 6	162439
- Note 1: Diesel Range Organics are defined as all hydrocarbons eluting between C10 and C28.												
- Note 2: Total Extractable Hydrocarbons are defined as the total hydrocarbon response regardless of elution time.												
ORGANIC CHARACTERISTICS												
Methane	0.00071	mg/L	1	J	0.0020	0.0012	0.00070		SW8015M	12/23/2021 10:31/jdw	FID-HEADSPACE_211223A : 7	R372307
SEMI-VOLATILE ORGANIC COMPOUNDS												
1,2,4-Trichlorobenzene	ND	ug/L	1	U	10	5.2	2.0		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
1,2-Dichlorobenzene	ND	ug/L	1	U	10	5.2	2.0		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
1,3-Dichlorobenzene	ND	ug/L	1	U	10	5.2	2.2		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
1,4-Dichlorobenzene	ND	ug/L	1	U	10	5.2	2.1		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
1-Methylnaphthalene	ND	ug/L	1	U	10	5.2	2.5		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
2,4,5-Trichlorophenol	ND	ug/L	1	U	10	5.2	2.3		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
2,4,6-Trichlorophenol	ND	ug/L	1	U	10	5.2	2.7		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
2,4-Dichlorophenol	ND	ug/L	1	U	10	5.2	1.7		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
2,4-Dimethylphenol	ND	ug/L	1	U	10	5.2	1.7		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
2,4-Dinitrophenol	ND	ug/L	1	U	10	10	4.4		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
2,4-Dinitrotoluene	ND	ug/L	1	U	10	5.2	3.1		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
2,6-Dinitrotoluene	ND	ug/L	1	U	10	5.2	3.3		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
2-Chloronaphthalene	ND	ug/L	1	U	10	5.2	2.2		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
2-Chlorophenol	ND	ug/L	1	U	10	5.2	2.6		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
2-Methylnaphthalene	ND	ug/L	1	U	10	5.2	2.0		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
2-Nitrophenol	ND	ug/L	1	U	10	5.2	2.4		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432



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Client: AECOM - Honolulu
Client Sample ID: ERH2188 (RHMW08)
Project: CV18F0126/60571032.02.20.01
Matrix: Ground Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
SEMI-VOLATILE ORGANIC COMPOUNDS												
3,3'-Dichlorobenzidine	ND	ug/L	1	U	10	5.2	2.2		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
4,6-Dinitro-2-methylphenol	ND	ug/L	1	U	10	10	2.4		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
4-Bromophenyl phenyl ether	ND	ug/L	1	U	10	5.2	1.8		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
4-Chloro-3-methylphenol	ND	ug/L	1	U	10	5.2	1.5		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
4-Chlorophenol	ND	ug/L	1	U	10	5.2	2.7		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
4-Chlorophenyl phenyl ether	ND	ug/L	1	U	10	5.2	2.1		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
4-Nitrophenol	ND	ug/L	1	U	10	10	2.6		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
Acenaphthene	ND	ug/L	1	U	10	5.2	1.9		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
Acenaphthylene	ND	ug/L	1	U	10	5.2	1.6		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
Anthracene	ND	ug/L	1	U	10	5.2	1.3		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
Azobenzene	ND	ug/L	1	U	10	5.2	1.1		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
Benzidine	ND	ug/L	1	U	10	10	6.9		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
Benzo(a)anthracene	ND	ug/L	1	U	10	5.2	0.88		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
Benzo(a)pyrene	ND	ug/L	1	U	10	5.2	1.3		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
Benzo(b)fluoranthene	ND	ug/L	1	U	10	5.2	0.93		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
Benzo(g,h,i)perylene	ND	ug/L	1	U	10	5.2	1.0		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
Benzo(k)fluoranthene	ND	ug/L	1	U	10	5.2	1.0		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
bis(-2-chloroethoxy)Methane	ND	ug/L	1	U	10	5.2	1.4		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
bis(-2-chloroethyl)Ether	ND	ug/L	1	U	10	5.2	2.6		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
bis(2-chloroisopropyl)Ether	ND	ug/L	1	U	10	5.2	1.5		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
bis(2-ethylhexyl)Phthalate	ND	ug/L	1	U	10	5.2	2.0		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
Butylbenzylphthalate	ND	ug/L	1	U	10	5.2	1.6		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
Chrysene	ND	ug/L	1	U	10	5.2	1.2		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
Di-n-butyl phthalate	ND	ug/L	1	U	10	5.2	0.96		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
Di-n-octyl phthalate	ND	ug/L	1	U	10	5.2	1.4		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
Dibenzo(a,h)anthracene	ND	ug/L	1	U	10	5.2	1.2		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
Diethyl phthalate	ND	ug/L	1	U	10	5.2	2.2		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
Dimethyl phthalate	ND	ug/L	1	U	10	5.2	1.8		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
Fluoranthene	ND	ug/L	1	U	10	5.2	0.91		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
Fluorene	ND	ug/L	1	U	10	5.2	1.9		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
Hexachlorobenzene	ND	ug/L	1	U	10	5.2	1.4		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
Hexachlorobutadiene	ND	ug/L	1	U	10	5.2	2.4		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
Hexachlorocyclopentadiene	ND	ug/L	1	U	10	5.2	3.1		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
Hexachloroethane	ND	ug/L	1	U	10	5.2	1.8		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
Indeno(1,2,3-cd)pyrene	ND	ug/L	1	U	10	5.2	1.3		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
Isophorone	ND	ug/L	1	U	10	5.2	1.7		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
m+p-Cresols	ND	ug/L	1	U	10	5.2	1.8		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
n-Nitroso-di-n-propylamine	ND	ug/L	1	U	10	5.2	1.6		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
n-Nitrosodimethylamine	ND	ug/L	1	U	10	5.2	1.6		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B21121841-003

Collection Date: 12/16/2021 13:33

Date Received: 12/22/2021

Report Date: 02/04/2022

Client: AECOM - Honolulu
Client Sample ID: ERH2188 (RHMW08)
Project: CV18F0126/60571032.02.20.01
Matrix: Ground Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
SEMI-VOLATILE ORGANIC COMPOUNDS												
n-Nitrosodiphenylamine	ND	ug/L	1	U	10	5.2	1.2		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
Naphthalene	ND	ug/L	1	U	10	5.2	1.8		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
Nitrobenzene	ND	ug/L	1	U	10	5.2	2.4		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
o-Cresol	ND	ug/L	1	U	10	5.2	1.9		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
Pentachlorophenol	ND	ug/L	1	U	10	10	4.4		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
Phenanthrene	ND	ug/L	1	U	10	5.2	0.81		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
Phenol	ND	ug/L	1	U	10	5.2	1.5		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
Pyrene	ND	ug/L	1	U	10	5.2	0.95		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
Pyridine	ND	ug/L	1	U	10	5.2	3.3		SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
Surr: 2,4,6-Tribromophenol	91.0	%REC	1		43-140				SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
Surr: 2-Fluorobiphenyl	69.0	%REC	1		44-119				SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
Surr: 2-Fluorophenol	39.0	%REC	1		19-119				SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
Surr: Nitrobenzene-d5	66.0	%REC	1		44-120				SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
Surr: Phenol-d5	35.0	%REC	1		10-65				SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
Surr: Terphenyl-d14	110.0	%REC	1		50-134				SW8270C	12/24/2021 14:37/dsm	SV5973N.I_211223B : 13	162432
SEMI-VOLATILE ORGANIC COMPOUNDS (LOW LEVEL) BY SIM												
1-Methylnaphthalene	ND	ug/L	1	U	0.10	0.10	0.021		SW8270C	12/29/2021 10:12/jph	SV5975.I_211228B : 9	162432
2-Methylnaphthalene	ND	ug/L	1	U	0.10	0.10	0.018		SW8270C	12/29/2021 10:12/jph	SV5975.I_211228B : 9	162432
Naphthalene	ND	ug/L	1	U	0.10	0.10	0.030		SW8270C	12/29/2021 10:12/jph	SV5975.I_211228B : 9	162432



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B21121841-004

Collection Date: 12/16/2021 15:40

Date Received: 12/22/2021

Report Date: 02/04/2022

Client: AECOM - Honolulu
Client Sample ID: ERH2199 (RHMW11-5)
Project: CV18F0126/60571032.02.20.01
Matrix: Ground Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
AGGREGATE ORGANICS												
Organic Carbon, Total (TOC) - TOC Range is 0.4 to 0.4	0.39	mg/L	1	J	0.50	0.50	0.17		SW9060A	12/29/2021 18:46/eli-ca	SUB-C278345 : 6	C_R278345
METALS, TOTAL												
Lead	ND	mg/L	1	U	0.001	0.0001	0.00008		SW6020	12/23/2021 15:58/car	ICPMS207-B_211223B : 51	162444
VOLATILE ORGANIC COMPOUNDS												
Benzene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
Benzene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
Bromobenzene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
Bromobenzene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
Bromochloromethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
Bromochloromethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
Bromodichloromethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
Bromodichloromethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
Bromoform	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
Bromoform	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
Bromomethane	ND	ug/L	1	U	1.0	0.50	0.25		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
Bromomethane	ND	ug/L	1	U	1.0	0.50	0.25		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
Carbon tetrachloride	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
Carbon tetrachloride	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
Chlorobenzene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
Chlorobenzene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
Chlorodibromomethane	ND	ug/L	1	U	1.0	0.25	0.084		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
Chlorodibromomethane	ND	ug/L	1	U	1.0	0.25	0.084		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
Chloroethane	ND	ug/L	1	U	1.0	0.50	0.17		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
Chloroethane	ND	ug/L	1	U	1.0	0.50	0.17		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
Chloroform	ND	ug/L	1	U	1.0	0.25	0.079		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
Chloroform	ND	ug/L	1	U	1.0	0.25	0.079		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
Chloromethane	ND	ug/L	1	U	1.0	0.50	0.19		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
Chloromethane	ND	ug/L	1	U	1.0	0.50	0.19		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
1,2-Dibromoethane	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
1,2-Dibromoethane	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
2-Chlorotoluene	ND	ug/L	1	U	1.0	0.25	0.088		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
2-Chlorotoluene	ND	ug/L	1	U	1.0	0.25	0.088		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
4-Chlorotoluene	ND	ug/L	1	U	1.0	0.25	0.091		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
4-Chlorotoluene	ND	ug/L	1	U	1.0	0.25	0.091		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
Dibromomethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
Dibromomethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
1,2-Dichlorobenzene	ND	ug/L	1	U	1.0	0.25	0.086		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B21121841-004

Collection Date: 12/16/2021 15:40

Date Received: 12/22/2021

Report Date: 02/04/2022

Client: AECOM - Honolulu
Client Sample ID: ERH2199 (RHMW11-5)
Project: CV18F0126/60571032.02.20.01
Matrix: Ground Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
VOLATILE ORGANIC COMPOUNDS												
1,2-Dichlorobenzene	ND	ug/L	1	U	1.0	0.25	0.086		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
1,3-Dichlorobenzene	ND	ug/L	1	U	1.0	0.25	0.10		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
1,3-Dichlorobenzene	ND	ug/L	1	U	1.0	0.25	0.10		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
1,4-Dichlorobenzene	ND	ug/L	1	U	1.0	0.25	0.086		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
1,4-Dichlorobenzene	ND	ug/L	1	U	1.0	0.25	0.086		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
Dichlorodifluoromethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
Dichlorodifluoromethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
1,1-Dichloroethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
1,1-Dichloroethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
1,2-Dichloroethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
1,2-Dichloroethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
1,1-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
1,1-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
cis-1,2-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.17		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
cis-1,2-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.17		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
trans-1,2-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
trans-1,2-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
1,2-Dichloropropane	ND	ug/L	1	U	1.0	0.25	0.089		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
1,2-Dichloropropane	ND	ug/L	1	U	1.0	0.25	0.089		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
1,3-Dichloropropane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
1,3-Dichloropropane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
2,2-Dichloropropane	ND	ug/L	1	U	1.0	0.50	0.20		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
2,2-Dichloropropane	ND	ug/L	1	U	1.0	0.50	0.20		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
1,1-Dichloropropene	ND	ug/L	1	U	1.0	0.25	0.083		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
1,1-Dichloropropene	ND	ug/L	1	U	1.0	0.25	0.083		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
cis-1,3-Dichloropropene	ND	ug/L	1	U	1.0	0.25	0.094		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
cis-1,3-Dichloropropene	ND	ug/L	1	U	1.0	0.25	0.094		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
trans-1,3-Dichloropropene	ND	ug/L	1	U	1.0	0.25	0.085		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
trans-1,3-Dichloropropene	ND	ug/L	1	U	1.0	0.25	0.085		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
Ethylbenzene	ND	ug/L	1	U	1.0	0.25	0.091		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
Ethylbenzene	ND	ug/L	1	U	1.0	0.25	0.091		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
Methyl ethyl ketone	ND	ug/L	1	U	20	5.0	2.2		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
Methyl ethyl ketone	ND	ug/L	1	U	20	5.0	2.2		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
Methyl tert-butyl ether (MTBE)	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
Methyl tert-butyl ether (MTBE)	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
Methylene chloride	ND	ug/L	1	UT	1.0	0.50	0.13		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
Methylene chloride	ND	ug/L	1	UT	1.0	0.50	0.13		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
Styrene	1.1	ug/L	1		1.0	0.25	0.067		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
Styrene	1.2	ug/L	1		1.0	0.25	0.067		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B21121841-004

Collection Date: 12/16/2021 15:40

Date Received: 12/22/2021

Report Date: 02/04/2022

Client: AECOM - Honolulu
Client Sample ID: ERH2199 (RHMW11-5)
Project: CV18F0126/60571032.02.20.01
Matrix: Ground Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
VOLATILE ORGANIC COMPOUNDS												
1,1,1,2-Tetrachloroethane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
1,1,1,2-Tetrachloroethane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
1,1,2,2-Tetrachloroethane	ND	ug/L	1	U	1.0	0.25	0.087		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
1,1,2,2-Tetrachloroethane	ND	ug/L	1	U	1.0	0.25	0.087		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
Tetrachloroethene	ND	ug/L	1	U	1.0	0.25	0.067		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
Tetrachloroethene	ND	ug/L	1	U	1.0	0.25	0.067		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
Toluene	ND	ug/L	1	U	1.0	0.25	0.075		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
Toluene	ND	ug/L	1	U	1.0	0.25	0.075		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
1,1,1-Trichloroethane	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
1,1,1-Trichloroethane	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
1,1,2-Trichloroethane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
1,1,2-Trichloroethane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
Trichloroethene	ND	ug/L	1	U	1.0	0.25	0.099		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
Trichloroethene	ND	ug/L	1	U	1.0	0.25	0.099		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
Trichlorofluoromethane	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
Trichlorofluoromethane	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
1,2,3-Trichloropropane	ND	ug/L	1	U	1.0	0.50	0.38		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
1,2,3-Trichloropropane	ND	ug/L	1	U	1.0	0.50	0.38		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
Vinyl chloride	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
Vinyl chloride	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
m+p-Xylenes	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
m+p-Xylenes	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
o-Xylene	ND	ug/L	1	U	1.0	0.20	0.060		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
o-Xylene	ND	ug/L	1	U	1.0	0.20	0.060		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
Xylenes, Total	ND	ug/L	1	U	1.0	0.20	0.060		SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
Xylenes, Total	ND	ug/L	1	U	1.0	0.20	0.060		SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
Surr: Dibromofluoromethane	105.0	%REC	1		80-119				SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
Surr: Dibromofluoromethane	105.0	%REC	1		80-119				SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
Surr: 1,2-Dichloroethane-d4	107.0	%REC	1		81-118				SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
Surr: 1,2-Dichloroethane-d4	101.0	%REC	1		81-118				SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
Surr: Toluene-d8	102.0	%REC	1		89-112				SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
Surr: Toluene-d8	103.0	%REC	1		89-112				SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824
Surr: p-Bromofluorobenzene	104.0	%REC	1		85-114				SW8260B	12/27/2021 16:02/msc	VOA5975C.I_211227A : 14	R372727
Surr: p-Bromofluorobenzene	106.0	%REC	1		85-114				SW8260B	12/28/2021 16:25/msc	VOA5975C.I_211228A : 13	R372824

- The sample was re-analyzed due to a low recovery for Bromomethane in the bracketing CCV. Re-analysis produced similar results. Both the original and re-analysis results are included in the analytical report.

VOCS BY MICROEXTRACTION-ECD

1,2-Dibromoethane	ND	ug/L	1	U	0.010	0.0050	0.0026		SW8011	12/27/2021 23:24/clt	GECD.I_211227A : 18	162467
Surr: 1,1,1,2-Tetrachloroethane	91.0	%REC	1		70-130				SW8011	12/27/2021 23:24/clt	GECD.I_211227A : 18	162467



LABORATORY ANALYTICAL REPORT

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Lab ID: B21121841-004

Collection Date: 12/16/2021 15:40

Date Received: 12/22/2021

Report Date: 02/04/2022

Client: AECOM - Honolulu
Client Sample ID: ERH2199 (RHMW11-5)
Project: CV18F0126/60571032.02.20.01
Matrix: Ground Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
PETROLEUM HYDROCARBONS-VOLATILE												
C6 to C10	2.8	ug/L	1	J	20	8.7	2.3		SW8015C	12/28/2021 14:32/jp	PE 1_211228A : 8	R372468
Total Purgeable Hydrocarbons	21	ug/L	1		20	10	3.6		SW8015C	12/28/2021 14:32/jp	PE 1_211228A : 8	R372468
Surr: Trifluorotoluene	83.0	%REC	1		70-130				SW8015C	12/28/2021 14:32/jp	PE 1_211228A : 8	R372468
- 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)	0.044	mg/L	1	J	0.30	0.15	0.039		SW8015C	12/30/2021 09:55/amn	GCFID-HP5-B_211228B : 25	162502
Diesel Range Organics (SGT-C10 to C24)	ND	mg/L	1	U	0.30	0.15	0.036		SW8015C	01/3/2022 03:41/amn	GCFID-HP4-B_220102A : 5	162502
Oil Range Hydrocarbons (C24 to C40)	0.14	mg/L	1	J	0.30	0.15	0.088		SW8015C	12/30/2021 09:55/amn	GCFID-HP5-B_211228B : 25	162502
Oil Range Hydrocarbons (SGT-C24 to C40)	ND	mg/L	1	U	0.30	0.15	0.051		SW8015C	01/3/2022 03:41/amn	GCFID-HP4-B_220102A : 5	162502
Total Extractable Hydrocarbons	0.24	mg/L	1	J	0.30	0.15	0.075		SW8015C	12/30/2021 09:55/amn	GCFID-HP5-B_211228B : 25	162502
Total Extractable Hydrocarbons (SGT)	ND	mg/L	1	U	0.30	0.15	0.078		SW8015C	01/3/2022 03:41/amn	GCFID-HP4-B_220102A : 5	162502
Surr: o-Terphenyl	96.0	%REC	1		56-125				SW8015C	12/30/2021 09:55/amn	GCFID-HP5-B_211228B : 25	162502
Surr: o-Terphenyl (SGT)	79.0	%REC	1		56-125				SW8015C	01/3/2022 03:41/amn	GCFID-HP4-B_220102A : 5	162502
Surr: n-Triacontane	102.0	%REC	1		50-150				SW8015C	12/30/2021 09:55/amn	GCFID-HP5-B_211228B : 25	162502
Surr: n-Triacontane (SGT)	93.0	%REC	1		50-150				SW8015C	01/3/2022 03:41/amn	GCFID-HP4-B_220102A : 5	162502
- Note: Total Extractable Hydrocarbons are defined as the total hydrocarbon responses regardless of elution time.												
ORGANIC CHARACTERISTICS												
Methane	0.0018	mg/L	1	J	0.0020	0.0012	0.00070		SW8015M	12/23/2021 10:40/jdw	FID-HEADSPACE_211223A : 8	R372307
SEMI-VOLATILE ORGANIC COMPOUNDS												
1,2,4-Trichlorobenzene	ND	ug/L	1	U	10	5.2	2.0		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
1,2-Dichlorobenzene	ND	ug/L	1	U	10	5.2	2.0		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
1,3-Dichlorobenzene	ND	ug/L	1	U	10	5.2	2.2		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
1,4-Dichlorobenzene	ND	ug/L	1	U	10	5.2	2.1		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
1-Methylnaphthalene	ND	ug/L	1	U	10	5.2	2.5		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
2,4,5-Trichlorophenol	ND	ug/L	1	U	10	5.2	2.3		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
2,4,6-Trichlorophenol	ND	ug/L	1	U	10	5.2	2.7		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
2,4-Dichlorophenol	ND	ug/L	1	U	10	5.2	1.8		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
2,4-Dimethylphenol	ND	ug/L	1	U	10	5.2	1.8		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
2,4-Dinitrophenol	ND	ug/L	1	U	10	10	4.4		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
2,4-Dinitrotoluene	ND	ug/L	1	U	10	5.2	3.2		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
2,6-Dinitrotoluene	ND	ug/L	1	U	10	5.2	3.3		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
2-Chloronaphthalene	ND	ug/L	1	U	10	5.2	2.2		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
2-Chlorophenol	ND	ug/L	1	U	10	5.2	2.6		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
2-Methylnaphthalene	ND	ug/L	1	U	10	5.2	2.0		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
2-Nitrophenol	ND	ug/L	1	U	10	5.2	2.5		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
3,3'-Dichlorobenzidine	ND	ug/L	1	U	10	5.2	2.2		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B21121841-004

Collection Date: 12/16/2021 15:40

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Report Date: 02/04/2022

Client: AECOM - Honolulu
Client Sample ID: ERH2199 (RHMW11-5)
Project: CV18F0126/60571032.02.20.01
Matrix: Ground Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
SEMI-VOLATILE ORGANIC COMPOUNDS												
4,6-Dinitro-2-methylphenol	ND	ug/L	1	U	10	10	2.4		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
4-Bromophenyl phenyl ether	ND	ug/L	1	U	10	5.2	1.8		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
4-Chloro-3-methylphenol	ND	ug/L	1	U	10	5.2	1.5		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
4-Chlorophenol	ND	ug/L	1	U	10	5.2	2.7		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
4-Chlorophenyl phenyl ether	ND	ug/L	1	U	10	5.2	2.1		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
4-Nitrophenol	ND	ug/L	1	U	10	10	2.6		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
Acenaphthene	ND	ug/L	1	U	10	5.2	2.0		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
Acenaphthylene	ND	ug/L	1	U	10	5.2	1.6		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
Anthracene	ND	ug/L	1	U	10	5.2	1.3		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
Azobenzene	ND	ug/L	1	U	10	5.2	1.1		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
Benzidine	ND	ug/L	1	U	10	10	7.0		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
Benzo(a)anthracene	ND	ug/L	1	U	10	5.2	0.89		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
Benzo(a)pyrene	ND	ug/L	1	U	10	5.2	1.3		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
Benzo(b)fluoranthene	ND	ug/L	1	U	10	5.2	0.94		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
Benzo(g,h,i)perylene	ND	ug/L	1	U	10	5.2	1.1		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
Benzo(k)fluoranthene	ND	ug/L	1	U	10	5.2	1.0		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
bis(-2-chloroethoxy)Methane	ND	ug/L	1	U	10	5.2	1.4		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
bis(-2-chloroethyl)Ether	ND	ug/L	1	U	10	5.2	2.7		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
bis(2-chloroisopropyl)Ether	ND	ug/L	1	U	10	5.2	1.5		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
bis(2-ethylhexyl)Phthalate	ND	ug/L	1	U	10	5.2	2.0		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
Butylbenzylphthalate	ND	ug/L	1	U	10	5.2	1.6		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
Chrysene	ND	ug/L	1	U	10	5.2	1.2		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
Di-n-butyl phthalate	ND	ug/L	1	U	10	5.2	0.97		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
Di-n-octyl phthalate	ND	ug/L	1	U	10	5.2	1.4		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
Dibenzo(a,h)anthracene	ND	ug/L	1	U	10	5.2	1.2		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
Diethyl phthalate	ND	ug/L	1	U	10	5.2	2.3		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
Dimethyl phthalate	ND	ug/L	1	U	10	5.2	1.8		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
Fluoranthene	ND	ug/L	1	U	10	5.2	0.92		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
Fluorene	ND	ug/L	1	U	10	5.2	1.9		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
Hexachlorobenzene	ND	ug/L	1	U	10	5.2	1.4		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
Hexachlorobutadiene	ND	ug/L	1	U	10	5.2	2.4		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
Hexachlorocyclopentadiene	ND	ug/L	1	U	10	5.2	3.1		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
Hexachloroethane	ND	ug/L	1	U	10	5.2	1.9		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
Indeno(1,2,3-cd)pyrene	ND	ug/L	1	U	10	5.2	1.3		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
Isophorone	ND	ug/L	1	U	10	5.2	1.7		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
m+p-Cresols	ND	ug/L	1	U	10	5.2	1.9		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
n-Nitroso-di-n-propylamine	ND	ug/L	1	U	10	5.2	1.6		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
n-Nitrosodimethylamine	ND	ug/L	1	U	10	5.2	1.6		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
n-Nitrosodiphenylamine	ND	ug/L	1	U	10	5.2	1.2		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B21121841-004

Collection Date: 12/16/2021 15:40

Date Received: 12/22/2021

Report Date: 02/04/2022

Client: AECOM - Honolulu
Client Sample ID: ERH2199 (RHMW11-5)
Project: CV18F0126/60571032.02.20.01
Matrix: Ground Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
SEMI-VOLATILE ORGANIC COMPOUNDS												
Naphthalene	ND	ug/L	1	U	10	5.2	1.8		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
Nitrobenzene	ND	ug/L	1	U	10	5.2	2.4		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
o-Cresol	ND	ug/L	1	U	10	5.2	1.9		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
Pentachlorophenol	ND	ug/L	1	U	10	10	4.4		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
Phenanthrene	ND	ug/L	1	U	10	5.2	0.82		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
Phenol	ND	ug/L	1	U	10	5.2	1.5		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
Pyrene	ND	ug/L	1	U	10	5.2	0.96		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
Pyridine	ND	ug/L	1	U	10	5.2	3.3		SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
Surr: 2,4,6-Tribromophenol	77.0	%REC	1		43-140				SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
Surr: 2-Fluorobiphenyl	67.0	%REC	1		44-119				SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
Surr: 2-Fluorophenol	36.0	%REC	1		19-119				SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
Surr: Nitrobenzene-d5	60.0	%REC	1		44-120				SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
Surr: Phenol-d5	32.0	%REC	1		10-65				SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
Surr: Terphenyl-d14	101.0	%REC	1		50-134				SW8270C	12/24/2021 15:09/dsm	SV5973N.I_211223B : 14	162432
SEMI-VOLATILE ORGANIC COMPOUNDS (LOW LEVEL) BY SIM												
1-Methylnaphthalene	ND	ug/L	1	U	0.10	0.10	0.021		SW8270C	12/29/2021 11:17/jph	SV5975.I_211228B : 11	162432
2-Methylnaphthalene	ND	ug/L	1	U	0.10	0.10	0.018		SW8270C	12/29/2021 11:17/jph	SV5975.I_211228B : 11	162432
Naphthalene	ND	ug/L	1	U	0.10	0.10	0.030		SW8270C	12/29/2021 11:17/jph	SV5975.I_211228B : 11	162432



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B21121841-005

Collection Date: 12/16/2021 13:22

Date Received: 12/22/2021

Report Date: 02/04/2022

Client: AECOM - Honolulu
Client Sample ID: ERH2190 (RHMW09-TB) Client Trip Blank
Project: CV18F0126/60571032.02.20.01
Matrix: Trip Blank

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
VOLATILE ORGANIC COMPOUNDS												
Benzene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
Benzene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
Bromobenzene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
Bromobenzene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
Bromochloromethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
Bromochloromethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
Bromodichloromethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
Bromodichloromethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
Bromoform	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
Bromoform	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
Bromomethane	ND	ug/L	1	U	1.0	0.50	0.25		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
Bromomethane	ND	ug/L	1	U	1.0	0.50	0.25		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
Carbon tetrachloride	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
Carbon tetrachloride	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
Chlorobenzene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
Chlorobenzene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
Chlorodibromomethane	ND	ug/L	1	U	1.0	0.25	0.084		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
Chlorodibromomethane	ND	ug/L	1	U	1.0	0.25	0.084		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
Chloroethane	ND	ug/L	1	U	1.0	0.50	0.17		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
Chloroethane	ND	ug/L	1	U	1.0	0.50	0.17		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
Chloroform	ND	ug/L	1	U	1.0	0.25	0.079		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
Chloroform	ND	ug/L	1	U	1.0	0.25	0.079		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
Chloromethane	ND	ug/L	1	U	1.0	0.50	0.19		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
Chloromethane	ND	ug/L	1	U	1.0	0.50	0.19		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
1,2-Dibromoethane	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
1,2-Dibromoethane	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
2-Chlorotoluene	ND	ug/L	1	U	1.0	0.25	0.088		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
2-Chlorotoluene	ND	ug/L	1	U	1.0	0.25	0.088		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
4-Chlorotoluene	ND	ug/L	1	U	1.0	0.25	0.091		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
4-Chlorotoluene	ND	ug/L	1	U	1.0	0.25	0.091		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
Dibromomethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
Dibromomethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
1,2-Dichlorobenzene	ND	ug/L	1	U	1.0	0.25	0.086		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
1,2-Dichlorobenzene	ND	ug/L	1	U	1.0	0.25	0.086		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
1,3-Dichlorobenzene	ND	ug/L	1	U	1.0	0.25	0.10		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
1,3-Dichlorobenzene	ND	ug/L	1	U	1.0	0.25	0.10		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
1,4-Dichlorobenzene	ND	ug/L	1	U	1.0	0.25	0.086		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
1,4-Dichlorobenzene	ND	ug/L	1	U	1.0	0.25	0.086		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
Dichlorodifluoromethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B21121841-005

Collection Date: 12/16/2021 13:22

Date Received: 12/22/2021

Report Date: 02/04/2022

Client: AECOM - Honolulu
Client Sample ID: ERH2190 (RHMW09-TB) Client Trip Blank
Project: CV18F0126/60571032.02.20.01
Matrix: Trip Blank

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
VOLATILE ORGANIC COMPOUNDS												
Dichlorodifluoromethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
1,1-Dichloroethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
1,1-Dichloroethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
1,2-Dichloroethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
1,2-Dichloroethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
1,1-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
1,1-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
cis-1,2-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.17		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
cis-1,2-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.17		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
trans-1,2-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
trans-1,2-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
1,2-Dichloropropane	ND	ug/L	1	U	1.0	0.25	0.089		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
1,2-Dichloropropane	ND	ug/L	1	U	1.0	0.25	0.089		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
1,3-Dichloropropane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
1,3-Dichloropropane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
2,2-Dichloropropane	ND	ug/L	1	U	1.0	0.50	0.20		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
2,2-Dichloropropane	ND	ug/L	1	U	1.0	0.50	0.20		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
1,1-Dichloropropene	ND	ug/L	1	U	1.0	0.25	0.083		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
1,1-Dichloropropene	ND	ug/L	1	U	1.0	0.25	0.083		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
cis-1,3-Dichloropropene	ND	ug/L	1	U	1.0	0.25	0.094		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
cis-1,3-Dichloropropene	ND	ug/L	1	U	1.0	0.25	0.094		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
trans-1,3-Dichloropropene	ND	ug/L	1	U	1.0	0.25	0.085		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
trans-1,3-Dichloropropene	ND	ug/L	1	U	1.0	0.25	0.085		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
Ethylbenzene	ND	ug/L	1	U	1.0	0.25	0.091		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
Ethylbenzene	ND	ug/L	1	U	1.0	0.25	0.091		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
Methyl ethyl ketone	ND	ug/L	1	U	20	5.0	2.2		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
Methyl ethyl ketone	ND	ug/L	1	U	20	5.0	2.2		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
Methyl tert-butyl ether (MTBE)	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
Methyl tert-butyl ether (MTBE)	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
Methylene chloride	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
Methylene chloride	0.15	ug/L	1	J	1.0	0.50	0.13		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
Styrene	ND	ug/L	1	U	1.0	0.25	0.067		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
Styrene	ND	ug/L	1	U	1.0	0.25	0.067		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
1,1,1,2-Tetrachloroethane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
1,1,1,2-Tetrachloroethane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
1,1,2,2-Tetrachloroethane	ND	ug/L	1	U	1.0	0.25	0.087		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
1,1,2,2-Tetrachloroethane	ND	ug/L	1	U	1.0	0.25	0.087		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
Tetrachloroethene	ND	ug/L	1	U	1.0	0.25	0.067		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
Tetrachloroethene	ND	ug/L	1	U	1.0	0.25	0.067		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B21121841-005

Collection Date: 12/16/2021 13:22

Date Received: 12/22/2021

Report Date: 02/04/2022

Client: AECOM - Honolulu
Client Sample ID: ERH2190 (RHMW09-TB) Client Trip Blank
Project: CV18F0126/60571032.02.20.01
Matrix: Trip Blank

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
VOLATILE ORGANIC COMPOUNDS												
Toluene	ND	ug/L	1	U	1.0	0.25	0.075		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
Toluene	ND	ug/L	1	U	1.0	0.25	0.075		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
1,1,1-Trichloroethane	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
1,1,1-Trichloroethane	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
1,1,2-Trichloroethane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
1,1,2-Trichloroethane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
Trichloroethene	ND	ug/L	1	U	1.0	0.25	0.099		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
Trichloroethene	ND	ug/L	1	U	1.0	0.25	0.099		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
Trichlorofluoromethane	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
Trichlorofluoromethane	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
1,2,3-Trichloropropane	ND	ug/L	1	U	1.0	0.50	0.38		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
1,2,3-Trichloropropane	ND	ug/L	1	U	1.0	0.50	0.38		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
Vinyl chloride	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
Vinyl chloride	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
m+p-Xylenes	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
m+p-Xylenes	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
o-Xylene	ND	ug/L	1	U	1.0	0.20	0.060		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
o-Xylene	ND	ug/L	1	U	1.0	0.20	0.060		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
Xylenes, Total	ND	ug/L	1	U	1.0	0.20	0.060		SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
Xylenes, Total	ND	ug/L	1	U	1.0	0.20	0.060		SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
Surr: Dibromofluoromethane	106.0	%REC	1		80-119				SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
Surr: Dibromofluoromethane	107.0	%REC	1		80-119				SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
Surr: 1,2-Dichloroethane-d4	102.0	%REC	1		81-118				SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
Surr: 1,2-Dichloroethane-d4	108.0	%REC	1		81-118				SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
Surr: Toluene-d8	105.0	%REC	1		89-112				SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
Surr: Toluene-d8	101.0	%REC	1		89-112				SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824
Surr: p-Bromofluorobenzene	106.0	%REC	1		85-114				SW8260B	12/27/2021 11:57/msc	VOA5975C.I_211227A : 5	R372727
Surr: p-Bromofluorobenzene	106.0	%REC	1		85-114				SW8260B	12/28/2021 12:46/msc	VOA5975C.I_211228A : 5	R372824

- The sample was re-analyzed due to a low recovery for Bromomethane in the bracketing CCV. Re-analysis produced similar results. Both the original and re-analysis results are included in the analytical report.



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Client Sample ID: ERH2190 (RHMW09-TB) Client Trip Blank
Project: CV18F0126/60571032.02.20.01
Matrix: Trip Blank

Lab ID: B21121841-006
Collection Date: 12/16/2021 13:22
Date Received: 12/22/2021
Report Date: 02/04/2022

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	2.3		SW8015C	12/28/2021 15:40/jp	PE 1_211228A : 9	R372468
Total Purgeable Hydrocarbons	ND	ug/L	1	U	20	10	3.6		SW8015C	12/28/2021 15:40/jp	PE 1_211228A : 9	R372468
Surr: Trifluorotoluene	81.0	%REC	1		70-130				SW8015C	12/28/2021 15:40/jp	PE 1_211228A : 9	R372468
- 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: ERH2190 (RHMW09-TB) Client Trip Blank
Project: CV18F0126/60571032.02.20.01
Matrix: Trip Blank

Lab ID: B21121841-007
Collection Date: 12/16/2021 13:22
Date Received: 12/22/2021
Report Date: 02/04/2022

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	0.0050	0.0026		SW8011	12/27/2021 22:44/clt	GECD.I_211227A : 16	162467
Surr: 1,1,1,2-Tetrachloroethane	92.0	%REC	1		70-130				SW8011	12/27/2021 22:44/clt	GECD.I_211227A : 16	162467



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Client Sample ID: ERH2190 (RHMW09-TB) Client Trip Blank
Project: CV18F0126/60571032.02.20.01
Matrix: Trip Blank

Lab ID: B21121841-008
Collection Date: 12/16/2021 13:22
Date Received: 12/22/2021
Report Date: 02/04/2022

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	12/23/2021 11:02/jdw	FID-HEADSPACE_211223A : 10	R372307



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B21121841-009

Collection Date: 12/16/2021 14:35

Date Received: 12/22/2021

Report Date: 02/04/2022

Client: AECOM - Honolulu
Client Sample ID: ERH2198 (RHMW11-5TB) Trip Blank-14575
Project: CV18F0126/60571032.02.20.01
Matrix: Trip Blank

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
VOLATILE ORGANIC COMPOUNDS												
Benzene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
Benzene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
Bromobenzene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
Bromobenzene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
Bromochloromethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
Bromochloromethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
Bromodichloromethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
Bromodichloromethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
Bromoform	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
Bromoform	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
Bromomethane	ND	ug/L	1	U	1.0	0.50	0.25		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
Bromomethane	ND	ug/L	1	U	1.0	0.50	0.25		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
Carbon tetrachloride	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
Carbon tetrachloride	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
Chlorobenzene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
Chlorobenzene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
Chlorodibromomethane	ND	ug/L	1	U	1.0	0.25	0.084		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
Chlorodibromomethane	ND	ug/L	1	U	1.0	0.25	0.084		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
Chloroethane	ND	ug/L	1	U	1.0	0.50	0.17		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
Chloroethane	ND	ug/L	1	U	1.0	0.50	0.17		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
Chloroform	ND	ug/L	1	U	1.0	0.25	0.079		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
Chloroform	ND	ug/L	1	U	1.0	0.25	0.079		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
Chloromethane	ND	ug/L	1	U	1.0	0.50	0.19		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
Chloromethane	ND	ug/L	1	U	1.0	0.50	0.19		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
1,2-Dibromoethane	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
1,2-Dibromoethane	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
2-Chlorotoluene	ND	ug/L	1	U	1.0	0.25	0.088		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
2-Chlorotoluene	ND	ug/L	1	U	1.0	0.25	0.088		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
4-Chlorotoluene	ND	ug/L	1	U	1.0	0.25	0.091		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
4-Chlorotoluene	ND	ug/L	1	U	1.0	0.25	0.091		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
Dibromomethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
Dibromomethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
1,2-Dichlorobenzene	ND	ug/L	1	U	1.0	0.25	0.086		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
1,2-Dichlorobenzene	ND	ug/L	1	U	1.0	0.25	0.086		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
1,3-Dichlorobenzene	ND	ug/L	1	U	1.0	0.25	0.10		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
1,3-Dichlorobenzene	ND	ug/L	1	U	1.0	0.25	0.10		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
1,4-Dichlorobenzene	ND	ug/L	1	U	1.0	0.25	0.086		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
1,4-Dichlorobenzene	ND	ug/L	1	U	1.0	0.25	0.086		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
Dichlorodifluoromethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B21121841-009

Collection Date: 12/16/2021 14:35

Date Received: 12/22/2021

Report Date: 02/04/2022

Client: AECOM - Honolulu
Client Sample ID: ERH2198 (RHMW11-5TB) Trip Blank-14575
Project: CV18F0126/60571032.02.20.01
Matrix: Trip Blank

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
VOLATILE ORGANIC COMPOUNDS												
Dichlorodifluoromethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
1,1-Dichloroethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
1,1-Dichloroethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
1,2-Dichloroethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
1,2-Dichloroethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
1,1-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
1,1-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
cis-1,2-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.17		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
cis-1,2-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.17		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
trans-1,2-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
trans-1,2-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
1,2-Dichloropropane	ND	ug/L	1	U	1.0	0.25	0.089		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
1,2-Dichloropropane	ND	ug/L	1	U	1.0	0.25	0.089		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
1,3-Dichloropropane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
1,3-Dichloropropane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
2,2-Dichloropropane	ND	ug/L	1	U	1.0	0.50	0.20		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
2,2-Dichloropropane	ND	ug/L	1	U	1.0	0.50	0.20		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
1,1-Dichloropropene	ND	ug/L	1	U	1.0	0.25	0.083		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
1,1-Dichloropropene	ND	ug/L	1	U	1.0	0.25	0.083		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
cis-1,3-Dichloropropene	ND	ug/L	1	U	1.0	0.25	0.094		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
cis-1,3-Dichloropropene	ND	ug/L	1	U	1.0	0.25	0.094		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
trans-1,3-Dichloropropene	ND	ug/L	1	U	1.0	0.25	0.085		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
trans-1,3-Dichloropropene	ND	ug/L	1	U	1.0	0.25	0.085		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
Ethylbenzene	ND	ug/L	1	U	1.0	0.25	0.091		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
Ethylbenzene	ND	ug/L	1	U	1.0	0.25	0.091		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
Methyl ethyl ketone	ND	ug/L	1	U	20	5.0	2.2		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
Methyl ethyl ketone	ND	ug/L	1	U	20	5.0	2.2		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
Methyl tert-butyl ether (MTBE)	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
Methyl tert-butyl ether (MTBE)	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
Methylene chloride	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
Methylene chloride	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
Styrene	ND	ug/L	1	U	1.0	0.25	0.067		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
Styrene	ND	ug/L	1	U	1.0	0.25	0.067		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
1,1,1,2-Tetrachloroethane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
1,1,1,2-Tetrachloroethane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
1,1,2,2-Tetrachloroethane	ND	ug/L	1	U	1.0	0.25	0.087		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
1,1,2,2-Tetrachloroethane	ND	ug/L	1	U	1.0	0.25	0.087		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
Tetrachloroethene	ND	ug/L	1	U	1.0	0.25	0.067		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
Tetrachloroethene	ND	ug/L	1	U	1.0	0.25	0.067		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Client Sample ID: ERH2198 (RHMW11-5TB) Trip Blank-14575
Project: CV18F0126/60571032.02.20.01
Matrix: Trip Blank

Lab ID: B21121841-009
Collection Date: 12/16/2021 14:35
Date Received: 12/22/2021
Report Date: 02/04/2022

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
VOLATILE ORGANIC COMPOUNDS												
Toluene	ND	ug/L	1	U	1.0	0.25	0.075		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
Toluene	ND	ug/L	1	U	1.0	0.25	0.075		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
1,1,1-Trichloroethane	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
1,1,1-Trichloroethane	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
1,1,2-Trichloroethane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
1,1,2-Trichloroethane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
Trichloroethene	ND	ug/L	1	U	1.0	0.25	0.099		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
Trichloroethene	ND	ug/L	1	U	1.0	0.25	0.099		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
Trichlorofluoromethane	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
Trichlorofluoromethane	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
1,2,3-Trichloropropane	ND	ug/L	1	U	1.0	0.50	0.38		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
1,2,3-Trichloropropane	ND	ug/L	1	U	1.0	0.50	0.38		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
Vinyl chloride	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
Vinyl chloride	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
m+p-Xylenes	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
m+p-Xylenes	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
o-Xylene	ND	ug/L	1	U	1.0	0.20	0.060		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
o-Xylene	ND	ug/L	1	U	1.0	0.20	0.060		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
Xylenes, Total	ND	ug/L	1	U	1.0	0.20	0.060		SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
Xylenes, Total	ND	ug/L	1	U	1.0	0.20	0.060		SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
Surr: Dibromofluoromethane	105.0	%REC	1		80-119				SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
Surr: Dibromofluoromethane	102.0	%REC	1		80-119				SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
Surr: 1,2-Dichloroethane-d4	103.0	%REC	1		81-118				SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
Surr: 1,2-Dichloroethane-d4	103.0	%REC	1		81-118				SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
Surr: Toluene-d8	94.0	%REC	1		89-112				SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
Surr: Toluene-d8	104.0	%REC	1		89-112				SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824
Surr: p-Bromofluorobenzene	103.0	%REC	1		85-114				SW8260B	12/27/2021 12:24/msc	VOA5975C.I_211227A : 6	R372727
Surr: p-Bromofluorobenzene	105.0	%REC	1		85-114				SW8260B	12/28/2021 13:13/msc	VOA5975C.I_211228A : 6	R372824

- The sample was re-analyzed due to a low recovery for Bromomethane in the bracketing CCV. Re-analysis produced similar results. Both the original and re-analysis results are included in the analytical report.



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B21121841-010

Collection Date: 12/16/2021 14:35

Date Received: 12/22/2021

Report Date: 02/04/2022

Client: AECOM - Honolulu
Client Sample ID: ERH2198 (RHMW11-5TB) Trip Blank-14575
Project: CV18F0126/60571032.02.20.01
Matrix: Trip Blank

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
PETROLEUM HYDROCARBONS-VOLATILE												
C6 to C10	ND	ug/L	1	U	20	8.7	2.3		SW8015C	12/28/2021 16:15/jp	PE 1_211228A : 10	R372468
Total Purgeable Hydrocarbons	ND	ug/L	1	U	20	10	3.6		SW8015C	12/28/2021 16:15/jp	PE 1_211228A : 10	R372468
Surr: Trifluorotoluene	82.0	%REC	1		70-130				SW8015C	12/28/2021 16:15/jp	PE 1_211228A : 10	R372468
- Note 1: C6 to C10 is defined as all hydrocarbons eluting between 2-Methylpentane and 1,2,4-Trimethylbenzene.												
- Note 2: Total Purgeable Hydrocarbons are defined as the total hydrocarbon response regardless of elution time.												



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B21121841-011

Collection Date: 12/16/2021 14:35

Date Received: 12/22/2021

Report Date: 02/04/2022

Client: AECOM - Honolulu
Client Sample ID: ERH2198 (RHMW11-5TB) Client Trip Blank
Project: CV18F0126/60571032.02.20.01
Matrix: Trip Blank

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
VOCS BY MICROEXTRACTION-ECD												
1,2-Dibromoethane	ND	ug/L	1	U	0.010	0.0050	0.0026		SW8011	12/27/2021 23:04/ct	GECD.I_211227A : 17	162467
Surr: 1,1,1,2-Tetrachloroethane	103.0	%REC	1		70-130				SW8011	12/27/2021 23:04/ct	GECD.I_211227A : 17	162467



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Client Sample ID: ERH2198 (RHMW11-5TB) Trip Blank-14457
Project: CV18F0126/60571032.02.20.01
Matrix: Trip Blank

Lab ID: B21121841-012
Collection Date: 12/16/2021 14:35
Date Received: 12/22/2021
Report Date: 02/04/2022

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	12/23/2021 11:13/jdw	FID-HEADSPACE_211223A : 11	R372307



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: SUB-C278345: 2 **SampType:** Method Blank **Batch ID:** C_R278345
Method: SW9060A **Analysis Date:** 12/29/2021 16:01 **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: **B21121841-001G, B21121841-003G, B21121841-004G**

- TOC Range is 0.1 to 0.3

Run ID: Run Order: SUB-C278345: 1 **SampType:** Laboratory Control Sample **Batch ID:** C_R278345
Method: SW9060A **Analysis Date:** 12/29/2021 15:21 **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)	5.1	0.50	5.0		102.0	91	111				

Associated Samples: **B21121841-001G, B21121841-003G, B21121841-004G**

- TOC Range is 5.1 to 5.2

Run ID: Run Order: SUB-C278345: 7 **SampType:** Sample Matrix Spike **Batch ID:** C_R278345
Method: SW9060A **Analysis Date:** 12/29/2021 19:25 **Prep Date:**
Lab ID: C21120782-004GMS **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Organic Carbon, Total (TOC)	5.4	0.50	5.0	0.39	100.0	91	111				

Associated Samples: **B21121841-001G, B21121841-003G, B21121841-004G**

- TOC Range is 5.3 to 5.4



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: SUB-C278345: 8 **SampType:** Sample Matrix Spike Duplicate **Batch ID:** C_R278345
Method: SW9060A **Analysis Date:** 12/29/2021 20:06 **Prep Date:**
Lab ID: C21120782-004GMSD **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Organic Carbon, Total (TOC)	5.4	0.50	5.0	0.39	101.0	91	111	5.4	0.7	10.0	

Associated Samples: **B21121841-001G, B21121841-003G, B21121841-004G**
- TOC Range is 5.4 to 5.4

Run ID: Run Order: SUB-C278345: 3 **SampType:** Continuing Calibration Verification Standard **Batch ID:** C_R278345
Method: SW9060A **Analysis Date:** 12/29/2021 16:40 **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: **B21121841-001G, B21121841-003G, B21121841-004G**
- TOC Range is 5.0 to 5.1

Run ID: Run Order: SUB-C278345: 9 **SampType:** Continuing Calibration Verification Standard **Batch ID:** C_R278345
Method: SW9060A **Analysis Date:** 12/30/2021 01:37 **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: **B21121841-001G, B21121841-003G, B21121841-004G**
- TOC Range is 5.0 to 5.1



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: ICPMS207-B_211223B: 47 **SampType:** Method Blank **Batch ID:** 162444
Method: SW6020 **Analysis Date:** 12/23/2021 15:33 **Prep Date:** 12/22/2021 16:22
Lab ID: MB-162444 **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: B21121841-001H, B21121841-003H, B21121841-004H

Run ID: Run Order: ICPMS207-B_211223B: 48 **SampType:** Laboratory Control Sample **Batch ID:** 162444
Method: SW6020 **Analysis Date:** 12/23/2021 15:40 **Prep Date:** 12/22/2021 16:22
Lab ID: LCS4-162444 **Units:** mg/L **Prep Method:** SW3010A

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Lead	0.100	0.001	0.100		100.0	88	115				

Associated Samples: B21121841-001H, B21121841-003H, B21121841-004H

Run ID: Run Order: ICPMS207-B_211223B: 57 **SampType:** Sample Matrix Spike **Batch ID:** 162444
Method: SW6020 **Analysis Date:** 12/23/2021 16:34 **Prep Date:** 12/22/2021 16:22
Lab ID: B21121841-001HMS4 **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	0.002	101.0	88	115				

Associated Samples: B21121841-001H, B21121841-003H, B21121841-004H



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: ICPMS207-B_211223B: 58 **SampType:** Sample Matrix Spike Duplicate **Batch ID:** 162444
Method: SW6020 **Analysis Date:** 12/23/2021 16:40 **Prep Date:** 12/22/2021 16:22
Lab ID: B21121841-001HMSD4 **Units:** mg/L **Prep Method:** SW3010A

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Lead	0.102	0.001	0.100	0.002	99.0	88	115	0.103	1.5	20.0	

Associated Samples: B21121841-001H, B21121841-003H, B21121841-004H

Run ID: Run Order: ICPMS207-B_211223B: 56 **SampType:** Post Digestion/Distillation Spike **Batch ID:** 162444
Method: SW6020 **Analysis Date:** 12/23/2021 16:28 **Prep Date:** 12/22/2021 16:22
Lab ID: B21121841-001HPDS1 **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	0.002	95.0	80	120				

Associated Samples: B21121841-001H, B21121841-003H, B21121841-004H

Run ID: Run Order: ICPMS207-B_211223B: 55 **SampType:** Serial Dilution **Batch ID:** 162444
Method: SW6020 **Analysis Date:** 12/23/2021 16:22 **Prep Date:** 12/22/2021 16:22
Lab ID: B21121841-001HDIL **Units:** mg/L **Prep Method:** SW3010A

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Lead	0.002	0.001						0.002		10.0	N

Associated Samples: B21121841-001H, B21121841-003H, B21121841-004H



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: ICPMS207-B_211223B: 38 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372324
Method: SW6020 **Analysis Date:** 12/23/2021 14:39 **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	0.048	0.001	0.050		96.0	90	110				

Associated Samples: B21121841-001H, B21121841-003H, B21121841-004H

Run ID: Run Order: ICPMS207-B_211223B: 53 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372324
Method: SW6020 **Analysis Date:** 12/23/2021 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
Lead	0.048	0.001	0.050		95.0	90	110				

Associated Samples: B21121841-001H, B21121841-003H, B21121841-004H



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: VOA5975C.I_211227A: 4
Method: SW8260B
Lab ID: MBLK122721_

SampType: Method Blank
Analysis Date: 12/27/2021 11:30
Units: ug/L

Batch ID: R372727
Prep Date:
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									
Bromomethane	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									



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: VOA5975C.I_211227A: 4
Method: SW8260B
Lab ID: MBLK122721_

SampType: Method Blank
Analysis Date: 12/27/2021 11:30
Units: ug/L

Batch ID: R372727
Prep Date:
Prep Method:

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
2,2-Dichloropropane	ND	0.50									
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	10	0.50	10		105.0	81	118				
Surr: Dibromofluoromethane	10	0.50	10		105.0	80	119				
Surr: p-Bromofluorobenzene	10	0.50	10		103.0	85	114				



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: VOA5975C.I_211227A: 4 **SampType:** Method Blank **Batch ID:** R372727
Method: SW8260B **Analysis Date:** 12/27/2021 11:30 **Prep Date:**
Lab ID: MBLK122721_ **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Surr: Toluene-d8	10	0.50	10		103.0	89	112				

Associated Samples: B21121841-001C, B21121841-002C, B21121841-003C, B21121841-004C, B21121841-005A, B21121841-009A

Run ID: Run Order: VOA5975C.I_211227A: 3 **SampType:** Laboratory Control Sample **Batch ID:** R372727
Method: SW8260B **Analysis Date:** 12/27/2021 10:35 **Prep Date:**
Lab ID: LCS122721_ **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Benzene	5.5	0.50	5.0		109.0	79	120				
Bromobenzene	5.6	0.50	5.0		112.0	80	120				
Bromochloromethane	5.9	0.50	5.0		118.0	78	123				
Bromodichloromethane	5.6	0.50	5.0		111.0	79	125				
Bromoform	5.8	0.50	5.0		117.0	66	130				
Bromomethane	4.4	0.50	5.0		88.0	53	141				
Carbon tetrachloride	5.0	0.50	5.0		101.0	72	136				
Chlorobenzene	5.5	0.50	5.0		111.0	82	118				
Chlorodibromomethane	5.7	0.50	5.0		114.0	74	126				
Chloroethane	4.3	0.50	5.0		85.0	60	138				
Chloroform	5.1	0.50	5.0		103.0	79	124				
Chloromethane	4.7	0.50	5.0		94.0	50	139				
1,2-Dibromoethane	5.8	0.50	5.0		115.0	78	122				
2-Chlorotoluene	5.2	0.50	5.0		104.0	79	122				
Dibromomethane	5.7	0.50	5.0		114.0	79	123				
1,2-Dichlorobenzene	5.4	0.50	5.0		109.0	80	119				



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: VOA5975C.I_211227A: 3 **SampType:** Laboratory Control Sample **Batch ID:** R372727
Method: SW8260B **Analysis Date:** 12/27/2021 10:35 **Prep Date:**
Lab ID: LCS122721_ **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
4-Chlorotoluene	5.5	0.50	5.0		109.0	78	122				
1,3-Dichlorobenzene	5.5	0.50	5.0		110.0	80	119				
1,4-Dichlorobenzene	5.3	0.50	5.0		106.0	79	118				
Dichlorodifluoromethane	4.3	0.50	5.0		85.0	32	152				
1,1-Dichloroethane	5.7	0.50	5.0		114.0	77	125				
1,2-Dichloroethane	5.4	0.50	5.0		107.0	73	128				
1,1-Dichloroethene	5.4	0.50	5.0		108.0	71	131				
cis-1,2-Dichloroethene	5.6	0.50	5.0		113.0	78	123				
trans-1,2-Dichloroethene	5.6	0.50	5.0		112.0	75	124				
1,2-Dichloropropane	5.6	0.50	5.0		112.0	78	122				
1,3-Dichloropropane	5.5	0.50	5.0		110.0	80	119				
2,2-Dichloropropane	5.8	0.50	5.0		115.0	60	139				
1,1-Dichloropropene	5.0	0.50	5.0		99.0	79	125				
cis-1,3-Dichloropropene	5.5	0.50	5.0		111.0	75	124				
trans-1,3-Dichloropropene	6.0	0.50	5.0		119.0	73	127				
Ethylbenzene	5.3	0.50	5.0		106.0	79	121				
Methyl tert-butyl ether (MTBE)	5.7	0.50	5.0		113.0	71	124				
Methyl ethyl ketone	60	10	50		119.0	56	143				
Methylene chloride	5.5	0.50	5.0		110.0	74	124				
Styrene	5.8	0.50	5.0		116.0	78	123				
1,1,1,2-Tetrachloroethane	5.5	0.50	5.0		110.0	78	124				
1,1,2,2-Tetrachloroethane	5.7	0.50	5.0		114.0	71	121				
Tetrachloroethene	5.2	0.50	5.0		104.0	74	129				
Toluene	5.5	0.50	5.0		110.0	80	121				
1,1,1-Trichloroethane	5.2	0.50	5.0		103.0	74	131				
1,1,2-Trichloroethane	5.6	0.50	5.0		112.0	80	119				
Trichloroethene	5.1	0.50	5.0		102.0	79	123				



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: VOA5975C.I_211227A: 3 **SampType:** Laboratory Control Sample **Batch ID:** R372727
Method: SW8260B **Analysis Date:** 12/27/2021 10:35 **Prep Date:**
Lab ID: LCS122721_ **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Trichlorofluoromethane	4.4	0.50	5.0		88.0	65	141				
1,2,3-Trichloropropane	5.7	0.50	5.0		115.0	73	125				
Vinyl chloride	4.7	0.50	5.0		95.0	58	137				
m+p-Xylenes	11	0.50	10		106.0	80	121				
o-Xylene	5.6	0.50	5.0		113.0	78	122				
Xylenes, Total	16	0.50	15		108.0	79	121				
Surr: 1,2-Dichloroethane-d4	10	0.50	10		103.0	81	118				
Surr: Dibromofluoromethane	10	0.50	10		105.0	80	119				
Surr: p-Bromofluorobenzene	10	0.50	10		103.0	85	114				
Surr: Toluene-d8	10	0.50	10		105.0	89	112				

Associated Samples: B21121841-001C, B21121841-002C, B21121841-003C, B21121841-004C, B21121841-005A, B21121841-009A

Run ID: Run Order: VOA5975C.I_211227A: 20 **SampType:** Sample Matrix Spike **Batch ID:** R372727
Method: SW8260B **Analysis Date:** 12/27/2021 18:45 **Prep Date:**
Lab ID: B21121841-001CMS **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Benzene	5.4	0.50	5.0	0.0	107.0	79	120				
Bromobenzene	5.5	0.50	5.0	0.0	109.0	80	120				
Bromochloromethane	5.8	0.50	5.0	0.0	116.0	78	123				
Bromodichloromethane	5.5	0.50	5.0	0.0	110.0	79	125				
Bromoform	6.3	0.50	5.0	0.0	126.0	66	130				
Bromomethane	1.3	0.50	5.0	0.0	26.0	53	141				S
Carbon tetrachloride	5.2	0.50	5.0	0.0	103.0	72	136				
Chlorobenzene	5.4	0.50	5.0	0.0	107.0	82	118				
Chlorodibromomethane	5.7	0.50	5.0	0.0	114.0	74	126				



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: VOA5975C.I_211227A: 20
Method: SW8260B
Lab ID: B21121841-001CMS

SampType: Sample Matrix Spike
Analysis Date: 12/27/2021 18:45
Units: ug/L

Batch ID: R372727
Prep Date:
Prep Method:

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Chloroethane	4.7	0.50	5.0	0.0	95.0	60	138				
Chloroform	5.0	0.50	5.0	0.0	100.0	79	124				
Chloromethane	4.5	0.50	5.0	0.0	90.0	50	139				
1,2-Dibromoethane	5.9	0.50	5.0	0.0	118.0	78	122				
2-Chlorotoluene	5.1	0.50	5.0	0.0	103.0	79	122				
Dibromomethane	5.9	0.50	5.0	0.0	117.0	79	123				
1,2-Dichlorobenzene	5.1	0.50	5.0	0.0	102.0	80	119				
4-Chlorotoluene	5.3	0.50	5.0	0.0	106.0	78	122				
1,3-Dichlorobenzene	5.3	0.50	5.0	0.0	105.0	80	119				
1,4-Dichlorobenzene	5.1	0.50	5.0	0.0	101.0	79	118				
Dichlorodifluoromethane	4.3	0.50	5.0	0.0	86.0	32	152				
1,1-Dichloroethane	5.5	0.50	5.0	0.0	109.0	77	125				
1,2-Dichloroethane	5.3	0.50	5.0	0.0	107.0	73	128				
1,1-Dichloroethene	5.2	0.50	5.0	0.0	105.0	71	131				
cis-1,2-Dichloroethene	5.3	0.50	5.0	0.0	107.0	78	123				
trans-1,2-Dichloroethene	5.5	0.50	5.0	0.0	110.0	75	124				
1,2-Dichloropropane	5.3	0.50	5.0	0.0	106.0	78	122				
1,3-Dichloropropane	5.6	0.50	5.0	0.0	111.0	80	119				
2,2-Dichloropropane	5.5	0.50	5.0	0.0	110.0	60	139				
1,1-Dichloropropene	4.9	0.50	5.0	0.0	99.0	79	125				
cis-1,3-Dichloropropene	5.1	0.50	5.0	0.0	103.0	75	124				
trans-1,3-Dichloropropene	5.6	0.50	5.0	0.0	112.0	73	127				
Ethylbenzene	5.1	0.50	5.0	0.0	102.0	79	121				
Methyl tert-butyl ether (MTBE)	5.2	0.50	5.0	0.0	104.0	71	124				
Methyl ethyl ketone	59	10	50	0.0	119.0	56	143				
Methylene chloride	5.2	0.50	5.0	0.0	104.0	74	124				
Styrene	5.1	0.50	5.0	0.0	103.0	78	123				



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: VOA5975C.I_211227A: 20 **SampType:** Sample Matrix Spike **Batch ID:** R372727
Method: SW8260B **Analysis Date:** 12/27/2021 18:45 **Prep Date:**
Lab ID: B21121841-001CMS **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	5.3	0.50	5.0	0.0	105.0	78	124				
1,1,2,2-Tetrachloroethane	6.2	0.50	5.0	0.0	123.0	71	121				S
Tetrachloroethene	5.2	0.50	5.0	0.0	104.0	74	129				
Toluene	5.4	0.50	5.0	0.0	108.0	80	121				
1,1,1-Trichloroethane	5.3	0.50	5.0	0.0	106.0	74	131				
1,1,2-Trichloroethane	5.8	0.50	5.0	0.0	116.0	80	119				
Trichloroethene	5.1	0.50	5.0	0.0	102.0	79	123				
Trichlorofluoromethane	4.1	0.50	5.0	0.0	83.0	65	141				
1,2,3-Trichloropropane	6.1	0.50	5.0	0.0	121.0	73	125				
Vinyl chloride	4.4	0.50	5.0	0.0	89.0	58	137				
m+p-Xylenes	10	0.50	10	0.0	103.0	80	121				
o-Xylene	5.3	0.50	5.0	0.0	105.0	78	122				
Xylenes, Total	16	0.50	15	0.0	104.0	79	121				
Surr: 1,2-Dichloroethane-d4	11	0.50	10	0.0	108.0	81	118				
Surr: Dibromofluoromethane	10	0.50	10	0.0	104.0	80	119				
Surr: p-Bromofluorobenzene	10	0.50	10	0.0	104.0	85	114				
Surr: Toluene-d8	11	0.50	10	0.0	105.0	89	112				

Associated Samples: **B21121841-001C, B21121841-002C, B21121841-003C, B21121841-004C, B21121841-005A, B21121841-009A**

Run ID: Run Order: VOA5975C.I_211227A: 21 **SampType:** Sample Matrix Spike Duplicate **Batch ID:** R372727
Method: SW8260B **Analysis Date:** 12/27/2021 19:12 **Prep Date:**
Lab ID: B21121841-001CMSD **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Benzene	5.5	0.50	5.0	0.0	109.0	79	120	5.4	1.9	20.0	
Bromobenzene	5.8	0.50	5.0	0.0	116.0	80	120	5.5	5.9	20.0	



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: VOA5975C.I_211227A: 21 **SampType:** Sample Matrix Spike Duplicate **Batch ID:** R372727
Method: SW8260B **Analysis Date:** 12/27/2021 19:12 **Prep Date:**
Lab ID: B21121841-001CMSD **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Bromochloromethane	5.6	0.50	5.0	0.0	111.0	78	123	5.8	4.6	20.0	
Bromodichloromethane	5.5	0.50	5.0	0.0	111.0	79	125	5.5	0.7	20.0	
Bromoform	6.1	0.50	5.0	0.0	122.0	66	130	6.3	3.5	20.0	
Bromomethane	2.1	0.50	5.0	0.0	42.0	53	141	1.3	46.0	20.0	SR
Carbon tetrachloride	5.4	0.50	5.0	0.0	108.0	72	136	5.2	4.7	20.0	
Chlorobenzene	5.5	0.50	5.0	0.0	109.0	82	118	5.4	2.0	20.0	
Chlorodibromomethane	5.9	0.50	5.0	0.0	118.0	74	126	5.7	3.7	20.0	
Chloroethane	4.9	0.50	5.0	0.0	97.0	60	138	4.7	2.7	20.0	
Chloroform	5.1	0.50	5.0	0.0	102.0	79	124	5.0	2.0	20.0	
Chloromethane	4.7	0.50	5.0	0.0	94.0	50	139	4.5	4.7	20.0	
1,2-Dibromoethane	6.0	0.50	5.0	0.0	120.0	78	122	5.9	2.0	20.0	
2-Chlorotoluene	5.3	0.50	5.0	0.0	107.0	79	122	5.1	3.9	20.0	
Dibromomethane	5.8	0.50	5.0	0.0	116.0	79	123	5.9	1.5	20.0	
1,2-Dichlorobenzene	5.4	0.50	5.0	0.0	108.0	80	119	5.1	5.8	20.0	
4-Chlorotoluene	5.5	0.50	5.0	0.0	110.0	78	122	5.3	3.4	20.0	
1,3-Dichlorobenzene	5.5	0.50	5.0	0.0	110.0	80	119	5.3	4.2	20.0	
1,4-Dichlorobenzene	5.3	0.50	5.0	0.0	107.0	79	118	5.1	5.5	20.0	
Dichlorodifluoromethane	4.6	0.50	5.0	0.0	91.0	32	152	4.3	6.1	20.0	
1,1-Dichloroethane	5.6	0.50	5.0	0.0	113.0	77	125	5.5	3.0	20.0	
1,2-Dichloroethane	5.5	0.50	5.0	0.0	109.0	73	128	5.3	2.4	20.0	
1,1-Dichloroethene	5.8	0.50	5.0	0.0	116.0	71	131	5.2	10.0	20.0	
cis-1,2-Dichloroethene	5.4	0.50	5.0	0.0	109.0	78	123	5.3	1.9	20.0	
trans-1,2-Dichloroethene	5.6	0.50	5.0	0.0	113.0	75	124	5.5	2.3	20.0	
1,2-Dichloropropane	5.4	0.50	5.0	0.0	108.0	78	122	5.3	1.7	20.0	
1,3-Dichloropropane	5.6	0.50	5.0	0.0	112.0	80	119	5.6	0.6	20.0	
2,2-Dichloropropane	5.6	0.50	5.0	0.0	112.0	60	139	5.5	1.7	20.0	
1,1-Dichloropropene	5.1	0.50	5.0	0.0	102.0	79	125	4.9	3.3	20.0	



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: VOA5975C.I_211227A: 21 **SampType:** Sample Matrix Spike Duplicate **Batch ID:** R372727
Method: SW8260B **Analysis Date:** 12/27/2021 19:12 **Prep Date:**
Lab ID: B21121841-001CMSD **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
cis-1,3-Dichloropropene	5.4	0.50	5.0	0.0	109.0	75	124	5.1	5.5	20.0	
trans-1,3-Dichloropropene	5.9	0.50	5.0	0.0	118.0	73	127	5.6	5.5	20.0	
Ethylbenzene	5.3	0.50	5.0	0.0	107.0	79	121	5.1	4.9	20.0	
Methyl tert-butyl ether (MTBE)	5.4	0.50	5.0	0.0	109.0	71	124	5.2	4.4	20.0	
Methyl ethyl ketone	59	10	50	0.0	119.0	56	143	59	0.0	20.0	
Methylene chloride	5.3	0.50	5.0	0.0	107.0	74	124	5.2	2.8	20.0	
Styrene	5.5	0.50	5.0	0.0	109.0	78	123	5.1	6.1	20.0	
1,1,1,2-Tetrachloroethane	5.5	0.50	5.0	0.0	109.0	78	124	5.3	3.8	20.0	
1,1,2,2-Tetrachloroethane	6.0	0.50	5.0	0.0	121.0	71	121	6.2	2.1	20.0	
Tetrachloroethene	5.4	0.50	5.0	0.0	109.0	74	129	5.2	4.3	20.0	
Toluene	5.6	0.50	5.0	0.0	111.0	80	121	5.4	3.3	20.0	
1,1,1-Trichloroethane	5.3	0.50	5.0	0.0	106.0	74	131	5.3	0.3	20.0	
1,1,2-Trichloroethane	5.7	0.50	5.0	0.0	114.0	80	119	5.8	1.2	20.0	
Trichloroethene	5.4	0.50	5.0	0.0	108.0	79	123	5.1	5.4	20.0	
Trichlorofluoromethane	4.6	0.50	5.0	0.0	92.0	65	141	4.1	10.0	20.0	
1,2,3-Trichloropropane	6.0	0.50	5.0	0.0	120.0	73	125	6.1	1.3	20.0	
Vinyl chloride	4.7	0.50	5.0	0.0	94.0	58	137	4.4	5.7	20.0	
m+p-Xylenes	11	0.50	10	0.0	108.0	80	121	10	4.7	20.0	
o-Xylene	5.4	0.50	5.0	0.0	107.0	78	122	5.3	2.0	20.0	
Xylenes, Total	16	0.50	15	0.0	108.0	79	121	16	3.8	20.0	
Surr: 1,2-Dichloroethane-d4	10	0.50	10	0.0	104.0	81	118	0.0			
Surr: Dibromofluoromethane	10	0.50	10	0.0	102.0	80	119	0.0			
Surr: p-Bromofluorobenzene	10	0.50	10	0.0	104.0	85	114	0.0			
Surr: Toluene-d8	10	0.50	10	0.0	104.0	89	112	0.0			

Associated Samples: B21121841-001C, B21121841-002C, B21121841-003C, B21121841-004C, B21121841-005A, B21121841-009A



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: VOA5975C.I_211228A: 4 **SampType:** Method Blank **Batch ID:** R372824
Method: SW8260B **Analysis Date:** 12/28/2021 12:19 **Prep Date:**
Lab ID: MBLK122821_ **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									
Bromomethane	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									



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: VOA5975C.I_211228A: 4 **SampType:** Method Blank **Batch ID:** R372824
Method: SW8260B **Analysis Date:** 12/28/2021 12:19 **Prep Date:**
Lab ID: MBLK122821_ **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
2,2-Dichloropropane	ND	0.50									
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									
1,1,1,2,2-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	10	0.50	10		102.0	81	118				
Surr: Dibromofluoromethane	10	0.50	10		102.0	80	119				
Surr: p-Bromofluorobenzene	10	0.50	10		102.0	85	114				



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: VOA5975C.I_211228A: 4 **SampType:** Method Blank **Batch ID:** R372824
Method: SW8260B **Analysis Date:** 12/28/2021 12:19 **Prep Date:**
Lab ID: MBLK122821_ **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Surr: Toluene-d8	10	0.50	10		103.0	89	112				

Associated Samples: B21121841-001C, B21121841-002C, B21121841-003C, B21121841-004C, B21121841-005A, B21121841-009A

Run ID: Run Order: VOA5975C.I_211228A: 3 **SampType:** Laboratory Control Sample **Batch ID:** R372824
Method: SW8260B **Analysis Date:** 12/28/2021 11:24 **Prep Date:**
Lab ID: LCS122821_ **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Benzene	5.3	0.50	5.0		106.0	79	120				
Bromobenzene	5.4	0.50	5.0		108.0	80	120				
Bromochloromethane	5.3	0.50	5.0		106.0	78	123				
Bromodichloromethane	5.4	0.50	5.0		107.0	79	125				
Bromoform	5.5	0.50	5.0		109.0	66	130				
Bromomethane	4.8	0.50	5.0		96.0	53	141				
Carbon tetrachloride	5.1	0.50	5.0		101.0	72	136				
Chlorobenzene	5.5	0.50	5.0		109.0	82	118				
Chlorodibromomethane	5.4	0.50	5.0		108.0	74	126				
Chloroethane	4.0	0.50	5.0		80.0	60	138				
Chloroform	5.0	0.50	5.0		100.0	79	124				
Chloromethane	4.6	0.50	5.0		92.0	50	139				
1,2-Dibromoethane	5.4	0.50	5.0		107.0	78	122				
2-Chlorotoluene	5.2	0.50	5.0		105.0	79	122				
Dibromomethane	5.3	0.50	5.0		107.0	79	123				
1,2-Dichlorobenzene	5.3	0.50	5.0		105.0	80	119				



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: VOA5975C.I_211228A: 3 **SampType:** Laboratory Control Sample **Batch ID:** R372824
Method: SW8260B **Analysis Date:** 12/28/2021 11:24 **Prep Date:**
Lab ID: LCS122821_ **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
4-Chlorotoluene	5.4	0.50	5.0		109.0	78	122				
1,3-Dichlorobenzene	5.4	0.50	5.0		109.0	80	119				
1,4-Dichlorobenzene	5.2	0.50	5.0		104.0	79	118				
Dichlorodifluoromethane	4.3	0.50	5.0		86.0	32	152				
1,1-Dichloroethane	5.4	0.50	5.0		108.0	77	125				
1,2-Dichloroethane	5.1	0.50	5.0		103.0	73	128				
1,1-Dichloroethene	4.6	0.50	5.0		93.0	71	131				
cis-1,2-Dichloroethene	5.3	0.50	5.0		106.0	78	123				
trans-1,2-Dichloroethene	5.5	0.50	5.0		110.0	75	124				
1,2-Dichloropropane	5.3	0.50	5.0		106.0	78	122				
1,3-Dichloropropane	5.2	0.50	5.0		105.0	80	119				
2,2-Dichloropropane	5.6	0.50	5.0		112.0	60	139				
1,1-Dichloropropene	4.9	0.50	5.0		98.0	79	125				
cis-1,3-Dichloropropene	5.2	0.50	5.0		104.0	75	124				
trans-1,3-Dichloropropene	5.5	0.50	5.0		111.0	73	127				
Ethylbenzene	5.3	0.50	5.0		106.0	79	121				
Methyl tert-butyl ether (MTBE)	4.9	0.50	5.0		99.0	71	124				
Methyl ethyl ketone	53	10	50		107.0	56	143				
Methylene chloride	5.1	0.50	5.0		102.0	74	124				
Styrene	5.6	0.50	5.0		113.0	78	123				
1,1,1,2-Tetrachloroethane	5.3	0.50	5.0		107.0	78	124				
1,1,2,2-Tetrachloroethane	5.2	0.50	5.0		104.0	71	121				
Tetrachloroethene	5.5	0.50	5.0		109.0	74	129				
Toluene	5.4	0.50	5.0		107.0	80	121				
1,1,1-Trichloroethane	5.2	0.50	5.0		105.0	74	131				
1,1,2-Trichloroethane	5.3	0.50	5.0		105.0	80	119				
Trichloroethene	5.1	0.50	5.0		103.0	79	123				



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: VOA5975C.I_211228A: 3 **SampType:** Laboratory Control Sample **Batch ID:** R372824
Method: SW8260B **Analysis Date:** 12/28/2021 11:24 **Prep Date:**
Lab ID: LCS122821_ **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Trichlorofluoromethane	4.3	0.50	5.0		86.0	65	141				
1,2,3-Trichloropropane	4.9	0.50	5.0		99.0	73	125				
Vinyl chloride	4.8	0.50	5.0		95.0	58	137				
m+p-Xylenes	11	0.50	10		109.0	80	121				
o-Xylene	5.6	0.50	5.0		112.0	78	122				
Xylenes, Total	17	0.50	15		110.0	79	121				
Surr: 1,2-Dichloroethane-d4	10	0.50	10		101.0	81	118				
Surr: Dibromofluoromethane	10	0.50	10		104.0	80	119				
Surr: p-Bromofluorobenzene	10	0.50	10		102.0	85	114				
Surr: Toluene-d8	11	0.50	10		106.0	89	112				

Associated Samples: B21121841-001C, B21121841-002C, B21121841-003C, B21121841-004C, B21121841-005A, B21121841-009A

Run ID: Run Order: VOA5975C.I_211228A: 19 **SampType:** Sample Matrix Spike **Batch ID:** R372824
Method: SW8260B **Analysis Date:** 12/28/2021 19:09 **Prep Date:**
Lab ID: B21121841-001CMS **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	104.0	79	120				
Bromobenzene	5.4	0.50	5.0	0.0	108.0	80	120				
Bromochloromethane	5.2	0.50	5.0	0.0	104.0	78	123				
Bromodichloromethane	5.3	0.50	5.0	0.0	106.0	79	125				
Bromoform	5.5	0.50	5.0	0.0	110.0	66	130				
Bromomethane	1.0	0.50	5.0	0.0	20.0	53	141				S
Carbon tetrachloride	5.2	0.50	5.0	0.0	103.0	72	136				
Chlorobenzene	5.3	0.50	5.0	0.0	106.0	82	118				
Chlorodibromomethane	5.3	0.50	5.0	0.0	106.0	74	126				



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: VOA5975C.I_211228A: 19 **SampType:** Sample Matrix Spike **Batch ID:** R372824
Method: SW8260B **Analysis Date:** 12/28/2021 19:09 **Prep Date:**
Lab ID: B21121841-001CMS **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Chloroethane	4.4	0.50	5.0	0.0	89.0	60	138				
Chloroform	4.8	0.50	5.0	0.0	97.0	79	124				
Chloromethane	4.1	0.50	5.0	0.0	83.0	50	139				
1,2-Dibromoethane	5.2	0.50	5.0	0.0	103.0	78	122				
2-Chlorotoluene	5.1	0.50	5.0	0.0	102.0	79	122				
Dibromomethane	5.2	0.50	5.0	0.0	104.0	79	123				
1,2-Dichlorobenzene	5.1	0.50	5.0	0.0	102.0	80	119				
4-Chlorotoluene	5.4	0.50	5.0	0.0	107.0	78	122				
1,3-Dichlorobenzene	5.3	0.50	5.0	0.0	106.0	80	119				
1,4-Dichlorobenzene	5.1	0.50	5.0	0.0	103.0	79	118				
Dichlorodifluoromethane	4.0	0.50	5.0	0.0	80.0	32	152				
1,1-Dichloroethane	5.3	0.50	5.0	0.0	106.0	77	125				
1,2-Dichloroethane	5.0	0.50	5.0	0.0	100.0	73	128				
1,1-Dichloroethene	4.4	0.50	5.0	0.0	88.0	71	131				
cis-1,2-Dichloroethene	5.0	0.50	5.0	0.0	101.0	78	123				
trans-1,2-Dichloroethene	4.5	0.50	5.0	0.0	90.0	75	124				
1,2-Dichloropropane	5.1	0.50	5.0	0.0	102.0	78	122				
1,3-Dichloropropane	5.1	0.50	5.0	0.0	102.0	80	119				
2,2-Dichloropropane	5.2	0.50	5.0	0.0	103.0	60	139				
1,1-Dichloropropene	5.0	0.50	5.0	0.0	99.0	79	125				
cis-1,3-Dichloropropene	4.9	0.50	5.0	0.0	99.0	75	124				
trans-1,3-Dichloropropene	5.3	0.50	5.0	0.0	105.0	73	127				
Ethylbenzene	5.2	0.50	5.0	0.0	104.0	79	121				
Methyl tert-butyl ether (MTBE)	4.1	0.50	5.0	0.0	82.0	71	124				
Methyl ethyl ketone	51	10	50	0.0	101.0	56	143				
Methylene chloride	4.1	0.50	5.0	0.0	83.0	74	124				
Styrene	5.4	0.50	5.0	0.0	109.0	78	123				



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: VOA5975C.I_211228A: 19 **SampType:** Sample Matrix Spike **Batch ID:** R372824
Method: SW8260B **Analysis Date:** 12/28/2021 19:09 **Prep Date:**
Lab ID: B21121841-001CMS **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	5.3	0.50	5.0	0.0	105.0	78	124				
1,1,2,2-Tetrachloroethane	5.2	0.50	5.0	0.0	105.0	71	121				
Tetrachloroethene	5.4	0.50	5.0	0.0	108.0	74	129				
Toluene	5.3	0.50	5.0	0.0	106.0	80	121				
1,1,1-Trichloroethane	5.2	0.50	5.0	0.0	103.0	74	131				
1,1,2-Trichloroethane	5.1	0.50	5.0	0.0	103.0	80	119				
Trichloroethene	5.1	0.50	5.0	0.0	101.0	79	123				
Trichlorofluoromethane	4.1	0.50	5.0	0.0	81.0	65	141				
1,2,3-Trichloropropane	5.1	0.50	5.0	0.0	103.0	73	125				
Vinyl chloride	4.0	0.50	5.0	0.0	81.0	58	137				
m+p-Xylenes	11	0.50	10	0.0	105.0	80	121				
o-Xylene	5.3	0.50	5.0	0.0	106.0	78	122				
Xylenes, Total	16	0.50	15	0.0	105.0	79	121				
Surr: 1,2-Dichloroethane-d4	10	0.50	10	0.0	101.0	81	118				
Surr: Dibromofluoromethane	10	0.50	10	0.0	102.0	80	119				
Surr: p-Bromofluorobenzene	10	0.50	10	0.0	104.0	85	114				
Surr: Toluene-d8	11	0.50	10	0.0	105.0	89	112				

Associated Samples: **B21121841-001C, B21121841-002C, B21121841-003C, B21121841-004C, B21121841-005A, B21121841-009A**

Run ID: Run Order: VOA5975C.I_211228A: 20 **SampType:** Sample Matrix Spike Duplicate **Batch ID:** R372824
Method: SW8260B **Analysis Date:** 12/28/2021 19:36 **Prep Date:**
Lab ID: B21121841-001CMSD **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Benzene	5.3	0.50	5.0	0.0	106.0	79	120	5.2	2.4	20.0	
Bromobenzene	5.3	0.50	5.0	0.0	107.0	80	120	5.4	0.9	20.0	



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: VOA5975C.I_211228A: 20 **SampType:** Sample Matrix Spike Duplicate **Batch ID:** R372824
Method: SW8260B **Analysis Date:** 12/28/2021 19:36 **Prep Date:**
Lab ID: B21121841-001CMSD **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Bromochloromethane	5.2	0.50	5.0	0.0	104.0	78	123	5.2	0.1	20.0	
Bromodichloromethane	5.3	0.50	5.0	0.0	106.0	79	125	5.3	0.6	20.0	
Bromoform	5.5	0.50	5.0	0.0	109.0	66	130	5.5	1.0	20.0	
Bromomethane	1.9	0.50	5.0	0.0	38.0	53	141	1.0	61.0	20.0	SR
Carbon tetrachloride	5.3	0.50	5.0	0.0	105.0	72	136	5.2	1.7	20.0	
Chlorobenzene	5.3	0.50	5.0	0.0	106.0	82	118	5.3	0.0	20.0	
Chlorodibromomethane	5.3	0.50	5.0	0.0	106.0	74	126	5.3	0.4	20.0	
Chloroethane	4.1	0.50	5.0	0.0	83.0	60	138	4.4	7.3	20.0	
Chloroform	4.9	0.50	5.0	0.0	98.0	79	124	4.8	1.5	20.0	
Chloromethane	4.6	0.50	5.0	0.0	93.0	50	139	4.1	11.0	20.0	
1,2-Dibromoethane	5.2	0.50	5.0	0.0	104.0	78	122	5.2	0.3	20.0	
2-Chlorotoluene	5.2	0.50	5.0	0.0	103.0	79	122	5.1	1.2	20.0	
Dibromomethane	5.2	0.50	5.0	0.0	105.0	79	123	5.2	1.1	20.0	
1,2-Dichlorobenzene	5.3	0.50	5.0	0.0	107.0	80	119	5.1	4.5	20.0	
4-Chlorotoluene	5.4	0.50	5.0	0.0	109.0	78	122	5.4	1.2	20.0	
1,3-Dichlorobenzene	5.4	0.50	5.0	0.0	107.0	80	119	5.3	0.8	20.0	
1,4-Dichlorobenzene	5.1	0.50	5.0	0.0	102.0	79	118	5.1	0.6	20.0	
Dichlorodifluoromethane	4.4	0.50	5.0	0.0	88.0	32	152	4.0	9.1	20.0	
1,1-Dichloroethane	5.4	0.50	5.0	0.0	108.0	77	125	5.3	1.4	20.0	
1,2-Dichloroethane	5.1	0.50	5.0	0.0	102.0	73	128	5.0	1.6	20.0	
1,1-Dichloroethene	5.6	0.50	5.0	0.0	111.0	71	131	4.4	23.0	20.0	R
cis-1,2-Dichloroethene	5.2	0.50	5.0	0.0	104.0	78	123	5.0	3.5	20.0	
trans-1,2-Dichloroethene	5.5	0.50	5.0	0.0	110.0	75	124	4.5	20.0	20.0	
1,2-Dichloropropane	5.2	0.50	5.0	0.0	103.0	78	122	5.1	1.4	20.0	
1,3-Dichloropropane	4.9	0.50	5.0	0.0	98.0	80	119	5.1	3.7	20.0	
2,2-Dichloropropane	5.2	0.50	5.0	0.0	104.0	60	139	5.2	0.9	20.0	
1,1-Dichloropropene	4.9	0.50	5.0	0.0	99.0	79	125	5.0	0.1	20.0	



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: VOA5975C.I_211228A: 20 **SampType:** Sample Matrix Spike Duplicate **Batch ID:** R372824
Method: SW8260B **Analysis Date:** 12/28/2021 19:36 **Prep Date:**
Lab ID: B21121841-001CMSD **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
cis-1,3-Dichloropropene	4.9	0.50	5.0	0.0	97.0	75	124	4.9	1.2	20.0	
trans-1,3-Dichloropropene	5.3	0.50	5.0	0.0	105.0	73	127	5.3	0.1	20.0	
Ethylbenzene	5.3	0.50	5.0	0.0	105.0	79	121	5.2	1.1	20.0	
Methyl tert-butyl ether (MTBE)	5.0	0.50	5.0	0.0	99.0	71	124	4.1	19.0	20.0	
Methyl ethyl ketone	52	10	50	0.0	105.0	56	143	51	3.2	20.0	
Methylene chloride	5.0	0.50	5.0	0.0	101.0	74	124	4.1	19.0	20.0	
Styrene	5.4	0.50	5.0	0.0	109.0	78	123	5.4	0.2	20.0	
1,1,1,2-Tetrachloroethane	5.3	0.50	5.0	0.0	105.0	78	124	5.3	0.3	20.0	
1,1,2,2-Tetrachloroethane	5.3	0.50	5.0	0.0	107.0	71	121	5.2	1.7	20.0	
Tetrachloroethene	5.4	0.50	5.0	0.0	108.0	74	129	5.4	0.1	20.0	
Toluene	5.4	0.50	5.0	0.0	107.0	80	121	5.3	1.4	20.0	
1,1,1-Trichloroethane	5.2	0.50	5.0	0.0	103.0	74	131	5.2	0.1	20.0	
1,1,2-Trichloroethane	5.4	0.50	5.0	0.0	107.0	80	119	5.1	4.4	20.0	
Trichloroethene	5.0	0.50	5.0	0.0	101.0	79	123	5.1	0.5	20.0	
Trichlorofluoromethane	4.6	0.50	5.0	0.0	92.0	65	141	4.1	12.0	20.0	
1,2,3-Trichloropropane	5.1	0.50	5.0	0.0	101.0	73	125	5.1	1.8	20.0	
Vinyl chloride	4.6	0.50	5.0	0.0	92.0	58	137	4.0	13.0	20.0	
m+p-Xylenes	11	0.50	10	0.0	105.0	80	121	11	0.3	20.0	
o-Xylene	5.5	0.50	5.0	0.0	109.0	78	122	5.3	3.3	20.0	
Xylenes, Total	16	0.50	15	0.0	107.0	79	121	16	1.3	20.0	
Surr: 1,2-Dichloroethane-d4	10	0.50	10	0.0	100.0	81	118	0.0			
Surr: Dibromofluoromethane	10	0.50	10	0.0	104.0	80	119	0.0			
Surr: p-Bromofluorobenzene	10	0.50	10	0.0	103.0	85	114	0.0			
Surr: Toluene-d8	11	0.50	10	0.0	106.0	89	112	0.0			

Associated Samples: B21121841-001C, B21121841-002C, B21121841-003C, B21121841-004C, B21121841-005A, B21121841-009A



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: VOA5975C.I_211227A: 2 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372727
Method: SW8260B **Analysis Date:** 12/27/2021 09:55 **Prep Date:**
Lab ID: CCV122721_ **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		103.0	80	120				
Bromobenzene	5.1	0.50	5.0		103.0	80	120				
Bromochloromethane	5.4	0.50	5.0		107.0	80	120				
Bromodichloromethane	5.3	0.50	5.0		106.0	80	120				
Bromoform	5.4	0.50	5.0		108.0	80	120				
Bromomethane	4.9	0.50	5.0		99.0	80	120				
Carbon tetrachloride	5.0	0.50	5.0		99.0	80	120				
Chlorobenzene	5.3	0.50	5.0		105.0	80	120				
Chlorodibromomethane	5.5	0.50	5.0		110.0	80	120				
Chloroethane	4.1	0.50	5.0		82.0	80	120				
Chloroform	5.1	0.50	5.0		101.0	80	120				
Chloromethane	4.8	0.50	5.0		97.0	80	120				
1,2-Dibromoethane	5.5	0.50	5.0		109.0	80	120				
2-Chlorotoluene	5.0	0.50	5.0		100.0	80	120				
Dibromomethane	5.3	0.50	5.0		106.0	80	120				
1,2-Dichlorobenzene	5.1	0.50	5.0		102.0	80	120				
4-Chlorotoluene	5.1	0.50	5.0		102.0	80	120				
1,3-Dichlorobenzene	5.0	0.50	5.0		101.0	80	120				
1,4-Dichlorobenzene	5.0	0.50	5.0		101.0	80	120				
Dichlorodifluoromethane	4.0	0.50	5.0		81.0	80	120				
1,1-Dichloroethane	5.0	0.50	5.0		101.0	80	120				
1,2-Dichloroethane	5.4	0.50	5.0		108.0	80	120				
1,1-Dichloroethene	4.5	0.50	5.0		89.0	80	120				
cis-1,2-Dichloroethene	5.4	0.50	5.0		108.0	80	120				
trans-1,2-Dichloroethene	4.8	0.50	5.0		95.0	80	120				
1,2-Dichloropropane	5.2	0.50	5.0		105.0	80	120				
1,3-Dichloropropane	5.5	0.50	5.0		109.0	80	120				



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: VOA5975C.I_211227A: 2 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372727
Method: SW8260B **Analysis Date:** 12/27/2021 09:55 **Prep Date:**
Lab ID: CCV122721_ **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
2,2-Dichloropropane	5.7	0.50	5.0		114.0	80	120				
1,1-Dichloropropene	4.9	0.50	5.0		98.0	80	120				
cis-1,3-Dichloropropene	5.5	0.50	5.0		110.0	80	120				
trans-1,3-Dichloropropene	5.6	0.50	5.0		111.0	80	120				
Ethylbenzene	5.1	0.50	5.0		102.0	80	120				
Methyl tert-butyl ether (MTBE)	5.1	0.50	5.0		103.0	80	120				
Methyl ethyl ketone	60	10	50		119.0	80	120				
Methylene chloride	4.5	0.50	5.0		91.0	80	120				
Styrene	5.5	0.50	5.0		109.0	80	120				
1,1,1,2-Tetrachloroethane	5.4	0.50	5.0		107.0	80	120				
1,1,2,2-Tetrachloroethane	5.3	0.50	5.0		106.0	80	120				
Tetrachloroethene	4.9	0.50	5.0		99.0	80	120				
Toluene	5.3	0.50	5.0		105.0	80	120				
1,1,1-Trichloroethane	5.0	0.50	5.0		100.0	80	120				
1,1,2-Trichloroethane	5.4	0.50	5.0		108.0	80	120				
Trichloroethene	5.0	0.50	5.0		100.0	80	120				
Trichlorofluoromethane	4.1	0.50	5.0		82.0	80	120				
1,2,3-Trichloropropane	5.3	0.50	5.0		107.0	80	120				
Vinyl chloride	4.6	0.50	5.0		92.0	80	120				
m+p-Xylenes	11	0.50	10		106.0	80	120				
o-Xylene	5.3	0.50	5.0		106.0	80	120				
Xylenes, Total	16	0.50	15		106.0	80	120				
Surr: 1,2-Dichloroethane-d4	10	0.50	10		102.0	80	120				
Surr: Dibromofluoromethane	10	0.50	10		103.0	80	120				
Surr: p-Bromofluorobenzene	10	0.50	10		102.0	80	120				



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: VOA5975C.I_211227A: 2 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372727
Method: SW8260B **Analysis Date:** 12/27/2021 09:55 **Prep Date:**
Lab ID: CCV122721_ **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Surr: Toluene-d8	10	0.50	10		102.0	80	120				

Associated Samples: **B21121841-001C, B21121841-002C, B21121841-003C, B21121841-004C, B21121841-005A, B21121841-009A**

Run ID: Run Order: VOA5975C.I_211227A: 22 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372727
Method: SW8260B **Analysis Date:** 12/27/2021 20:07 **Prep Date:**
Lab ID: CCV122721_Closing **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Benzene	4.9	0.50	5.0		98.0	50	150				
Bromobenzene	5.0	0.50	5.0		100.0	50	150				
Bromochloromethane	5.2	0.50	5.0		104.0	50	150				
Bromodichloromethane	5.0	0.50	5.0		101.0	50	150				
Bromoform	5.0	0.50	5.0		100.0	50	150				
Bromomethane	2.4	0.50	5.0		47.0	50	150				S
Carbon tetrachloride	4.9	0.50	5.0		97.0	50	150				
Chlorobenzene	4.9	0.50	5.0		99.0	50	150				
Chlorodibromomethane	5.0	0.50	5.0		100.0	50	150				
Chloroethane	4.0	0.50	5.0		79.0	50	150				
Chloroform	4.8	0.50	5.0		96.0	50	150				
Chloromethane	4.4	0.50	5.0		89.0	50	150				
1,2-Dibromoethane	5.0	0.50	5.0		101.0	50	150				
2-Chlorotoluene	4.9	0.50	5.0		99.0	50	150				
Dibromomethane	5.1	0.50	5.0		101.0	50	150				
1,2-Dichlorobenzene	4.9	0.50	5.0		98.0	50	150				



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: VOA5975C.I_211227A: 22 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372727
Method: SW8260B **Analysis Date:** 12/27/2021 20:07 **Prep Date:**
Lab ID: CCV122721_Closing **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
4-Chlorotoluene	5.1	0.50	5.0		101.0	50	150				
1,3-Dichlorobenzene	5.0	0.50	5.0		100.0	50	150				
1,4-Dichlorobenzene	4.8	0.50	5.0		95.0	50	150				
Dichlorodifluoromethane	4.2	0.50	5.0		84.0	50	150				
1,1-Dichloroethane	4.9	0.50	5.0		98.0	50	150				
1,2-Dichloroethane	5.0	0.50	5.0		99.0	50	150				
1,1-Dichloroethene	5.0	0.50	5.0		100.0	50	150				
cis-1,2-Dichloroethene	4.9	0.50	5.0		97.0	50	150				
trans-1,2-Dichloroethene	4.9	0.50	5.0		98.0	50	150				
1,2-Dichloropropane	5.1	0.50	5.0		101.0	50	150				
1,3-Dichloropropane	5.0	0.50	5.0		100.0	50	150				
2,2-Dichloropropane	4.9	0.50	5.0		97.0	50	150				
1,1-Dichloropropene	4.7	0.50	5.0		94.0	50	150				
cis-1,3-Dichloropropene	5.0	0.50	5.0		101.0	50	150				
trans-1,3-Dichloropropene	5.0	0.50	5.0		100.0	50	150				
Ethylbenzene	4.9	0.50	5.0		99.0	50	150				
Methyl tert-butyl ether (MTBE)	4.7	0.50	5.0		95.0	50	150				
Methyl ethyl ketone	51	10	50		103.0	50	150				
Methylene chloride	4.7	0.50	5.0		94.0	50	150				
Styrene	5.2	0.50	5.0		104.0	50	150				
1,1,1,2-Tetrachloroethane	5.0	0.50	5.0		100.0	50	150				
1,1,2,2-Tetrachloroethane	5.1	0.50	5.0		102.0	50	150				
Tetrachloroethene	5.1	0.50	5.0		102.0	50	150				
Toluene	5.2	0.50	5.0		104.0	50	150				
1,1,1-Trichloroethane	4.8	0.50	5.0		95.0	50	150				
1,1,2-Trichloroethane	4.8	0.50	5.0		97.0	50	150				
Trichloroethene	4.9	0.50	5.0		98.0	50	150				



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: VOA5975C.I_211227A: 22 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372727
Method: SW8260B **Analysis Date:** 12/27/2021 20:07 **Prep Date:**
Lab ID: CCV122721_Closing **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Trichlorofluoromethane	4.2	0.50	5.0		84.0	50	150				
1,2,3-Trichloropropane	4.7	0.50	5.0		95.0	50	150				
Vinyl chloride	4.2	0.50	5.0		84.0	50	150				
m+p-Xylenes	10	0.50	10		101.0	50	150				
o-Xylene	5.1	0.50	5.0		103.0	50	150				
Xylenes, Total	15	0.50	15		102.0	50	150				
Surr: 1,2-Dichloroethane-d4	9.8	0.50	10		98.0	50	150				
Surr: Dibromofluoromethane	10	0.50	10		102.0	50	150				
Surr: p-Bromofluorobenzene	10	0.50	10		102.0	50	150				
Surr: Toluene-d8	11	0.50	10		106.0	50	150				

Associated Samples: B21121841-001C, B21121841-002C, B21121841-003C, B21121841-004C, B21121841-005A, B21121841-009A

Run ID: Run Order: VOA5975C.I_211228A: 2 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372824
Method: SW8260B **Analysis Date:** 12/28/2021 10:48 **Prep Date:**
Lab ID: CCV122821_ **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Benzene	5.0	0.50	5.0		100.0	80	120				
Bromobenzene	5.3	0.50	5.0		105.0	80	120				
Bromochloromethane	5.2	0.50	5.0		104.0	80	120				
Bromodichloromethane	5.1	0.50	5.0		102.0	80	120				
Bromoform	5.4	0.50	5.0		108.0	80	120				
Bromomethane	4.9	0.50	5.0		97.0	80	120				
Carbon tetrachloride	4.8	0.50	5.0		96.0	80	120				
Chlorobenzene	5.1	0.50	5.0		102.0	80	120				
Chlorodibromomethane	5.2	0.50	5.0		105.0	80	120				



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: VOA5975C.I_211228A: 2 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372824
Method: SW8260B **Analysis Date:** 12/28/2021 10:48 **Prep Date:**
Lab ID: CCV122821_ **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Chloroethane	4.4	0.50	5.0		88.0	80	120				
Chloroform	4.8	0.50	5.0		96.0	80	120				
Chloromethane	4.5	0.50	5.0		89.0	80	120				
1,2-Dibromoethane	5.2	0.50	5.0		103.0	80	120				
2-Chlorotoluene	5.1	0.50	5.0		101.0	80	120				
Dibromomethane	5.1	0.50	5.0		102.0	80	120				
1,2-Dichlorobenzene	5.0	0.50	5.0		100.0	80	120				
4-Chlorotoluene	5.1	0.50	5.0		102.0	80	120				
1,3-Dichlorobenzene	5.0	0.50	5.0		101.0	80	120				
1,4-Dichlorobenzene	5.0	0.50	5.0		99.0	80	120				
Dichlorodifluoromethane	4.1	0.50	5.0		82.0	80	120				
1,1-Dichloroethane	5.0	0.50	5.0		99.0	80	120				
1,2-Dichloroethane	5.1	0.50	5.0		102.0	80	120				
1,1-Dichloroethene	5.0	0.50	5.0		99.0	80	120				
cis-1,2-Dichloroethene	5.0	0.50	5.0		100.0	80	120				
trans-1,2-Dichloroethene	4.9	0.50	5.0		98.0	80	120				
1,2-Dichloropropane	5.3	0.50	5.0		107.0	80	120				
1,3-Dichloropropane	5.2	0.50	5.0		105.0	80	120				
2,2-Dichloropropane	5.2	0.50	5.0		103.0	80	120				
1,1-Dichloropropene	4.8	0.50	5.0		95.0	80	120				
cis-1,3-Dichloropropene	5.3	0.50	5.0		106.0	80	120				
trans-1,3-Dichloropropene	5.4	0.50	5.0		107.0	80	120				
Ethylbenzene	5.0	0.50	5.0		101.0	80	120				
Methyl tert-butyl ether (MTBE)	5.0	0.50	5.0		99.0	80	120				
Methyl ethyl ketone	50	10	50		101.0	80	120				
Methylene chloride	4.7	0.50	5.0		95.0	80	120				
Styrene	5.3	0.50	5.0		107.0	80	120				



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: VOA5975C.I_211228A: 2 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372824
Method: SW8260B **Analysis Date:** 12/28/2021 10:48 **Prep Date:**
Lab ID: CCV122821_ **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	5.2	0.50	5.0		105.0	80	120				
1,1,2,2-Tetrachloroethane	5.3	0.50	5.0		105.0	80	120				
Tetrachloroethene	5.0	0.50	5.0		100.0	80	120				
Toluene	5.3	0.50	5.0		105.0	80	120				
1,1,1-Trichloroethane	4.9	0.50	5.0		99.0	80	120				
1,1,2-Trichloroethane	5.1	0.50	5.0		103.0	80	120				
Trichloroethene	5.0	0.50	5.0		99.0	80	120				
Trichlorofluoromethane	4.3	0.50	5.0		86.0	80	120				
1,2,3-Trichloropropane	5.1	0.50	5.0		101.0	80	120				
Vinyl chloride	4.4	0.50	5.0		89.0	80	120				
m+p-Xylenes	10	0.50	10		105.0	80	120				
o-Xylene	5.3	0.50	5.0		105.0	80	120				
Xylenes, Total	16	0.50	15		105.0	80	120				
Surr: 1,2-Dichloroethane-d4	10	0.50	10		100.0	80	120				
Surr: Dibromofluoromethane	10	0.50	10		102.0	80	120				
Surr: p-Bromofluorobenzene	10	0.50	10		105.0	80	120				
Surr: Toluene-d8	11	0.50	10		108.0	80	120				

Associated Samples: **B21121841-001C, B21121841-002C, B21121841-003C, B21121841-004C, B21121841-005A, B21121841-009A**

Run ID: Run Order: VOA5975C.I_211228A: 21 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372824
Method: SW8260B **Analysis Date:** 12/28/2021 20:31 **Prep Date:**
Lab ID: CCV122821_Closing **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Benzene	4.9	0.50	5.0		98.0	50	150				
Bromobenzene	4.9	0.50	5.0		98.0	50	150				



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: VOA5975C.I_211228A: 21 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372824
Method: SW8260B **Analysis Date:** 12/28/2021 20:31 **Prep Date:**
Lab ID: CCV122821_Closing **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Bromochloromethane	4.9	0.50	5.0		98.0	50	150				
Bromodichloromethane	5.0	0.50	5.0		99.0	50	150				
Bromoform	4.8	0.50	5.0		96.0	50	150				
Bromomethane	2.4	0.50	5.0		47.0	50	150				S
Carbon tetrachloride	4.9	0.50	5.0		98.0	50	150				
Chlorobenzene	5.0	0.50	5.0		99.0	50	150				
Chlorodibromomethane	5.0	0.50	5.0		99.0	50	150				
Chloroethane	4.2	0.50	5.0		84.0	50	150				
Chloroform	4.6	0.50	5.0		92.0	50	150				
Chloromethane	4.2	0.50	5.0		84.0	50	150				
1,2-Dibromoethane	5.0	0.50	5.0		99.0	50	150				
2-Chlorotoluene	4.6	0.50	5.0		93.0	50	150				
Dibromomethane	4.8	0.50	5.0		95.0	50	150				
1,2-Dichlorobenzene	4.7	0.50	5.0		93.0	50	150				
4-Chlorotoluene	4.9	0.50	5.0		98.0	50	150				
1,3-Dichlorobenzene	4.8	0.50	5.0		95.0	50	150				
1,4-Dichlorobenzene	4.6	0.50	5.0		93.0	50	150				
Dichlorodifluoromethane	4.0	0.50	5.0		79.0	50	150				
1,1-Dichloroethane	4.7	0.50	5.0		94.0	50	150				
1,2-Dichloroethane	4.9	0.50	5.0		98.0	50	150				
1,1-Dichloroethene	4.8	0.50	5.0		96.0	50	150				
cis-1,2-Dichloroethene	4.7	0.50	5.0		94.0	50	150				
trans-1,2-Dichloroethene	4.8	0.50	5.0		95.0	50	150				
1,2-Dichloropropane	5.0	0.50	5.0		100.0	50	150				
1,3-Dichloropropane	4.8	0.50	5.0		97.0	50	150				
2,2-Dichloropropane	4.7	0.50	5.0		94.0	50	150				
1,1-Dichloropropene	4.7	0.50	5.0		94.0	50	150				



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: VOA5975C.I_211228A: 21 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372824
Method: SW8260B **Analysis Date:** 12/28/2021 20:31 **Prep Date:**
Lab ID: CCV122821_Closing **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
cis-1,3-Dichloropropene	4.8	0.50	5.0		95.0	50	150				
trans-1,3-Dichloropropene	5.0	0.50	5.0		100.0	50	150				
Ethylbenzene	4.9	0.50	5.0		98.0	50	150				
Methyl tert-butyl ether (MTBE)	4.5	0.50	5.0		91.0	50	150				
Methyl ethyl ketone	48	10	50		96.0	50	150				
Methylene chloride	4.7	0.50	5.0		95.0	50	150				
Styrene	5.2	0.50	5.0		103.0	50	150				
1,1,1,2-Tetrachloroethane	4.9	0.50	5.0		99.0	50	150				
1,1,2,2-Tetrachloroethane	4.9	0.50	5.0		98.0	50	150				
Tetrachloroethene	5.2	0.50	5.0		104.0	50	150				
Toluene	5.0	0.50	5.0		100.0	50	150				
1,1,1-Trichloroethane	4.8	0.50	5.0		97.0	50	150				
1,1,2-Trichloroethane	4.9	0.50	5.0		98.0	50	150				
Trichloroethene	4.8	0.50	5.0		96.0	50	150				
Trichlorofluoromethane	4.1	0.50	5.0		81.0	50	150				
1,2,3-Trichloropropane	4.6	0.50	5.0		93.0	50	150				
Vinyl chloride	4.0	0.50	5.0		81.0	50	150				
m+p-Xylenes	10	0.50	10		102.0	50	150				
o-Xylene	5.2	0.50	5.0		103.0	50	150				
Xylenes, Total	15	0.50	15		103.0	50	150				
Surr: 1,2-Dichloroethane-d4	9.9	0.50	10		99.0	50	150				
Surr: Dibromofluoromethane	10	0.50	10		103.0	50	150				
Surr: p-Bromofluorobenzene	10	0.50	10		102.0	50	150				
Surr: Toluene-d8	11	0.50	10		106.0	50	150				

Associated Samples: B21121841-001C, B21121841-002C, B21121841-003C, B21121841-004C, B21121841-005A, B21121841-009A



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: GECD.I_211227A: 10 **SampType:** Method Blank **Batch ID:** 162467
Method: SW8011 **Analysis Date:** 12/27/2021 20:25 **Prep Date:** 12/27/2021 08:25
Lab ID: MB-162467 **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	0.10	0.020	0.10		103.0	70	130				

Associated Samples: B21121841-001E, B21121841-003E, B21121841-004E, B21121841-007A, B21121841-011A

Run ID: Run Order: GECD.I_211227A: 11 **SampType:** Laboratory Control Sample **Batch ID:** 162467
Method: SW8011 **Analysis Date:** 12/27/2021 20:45 **Prep Date:** 12/27/2021 08:25
Lab ID: LCS-162467 **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	0.25		92.0	60	140				
Surr: 1,1,1,2-Tetrachloroethane	0.091	0.020	0.10		91.0	70	130				

Associated Samples: B21121841-001E, B21121841-003E, B21121841-004E, B21121841-007A, B21121841-011A

Run ID: Run Order: GECD.I_211227A: 12 **SampType:** Laboratory Control Sample **Batch ID:** 162467
Method: SW8011 **Analysis Date:** 12/27/2021 21:04 **Prep Date:** 12/27/2021 08:27
Lab ID: LCS1-162467 **Units:** ug/L **Prep Method:** SW8011

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.091	0.010	0.10		91.0	60	140				
Surr: 1,1,1,2-Tetrachloroethane	0.087	0.020	0.10		87.0	70	130				

Associated Samples: B21121841-001E, B21121841-003E, B21121841-004E, B21121841-007A, B21121841-011A



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: GECD.I_211227A: 19 **SampType:** Sample Matrix Spike **Batch ID:** 162467
Method: SW8011 **Analysis Date:** 12/27/2021 23:44 **Prep Date:** 12/27/2021 08:28
Lab ID: B21121841-004EMS **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	0.25	0.0	91.0	60	140				
Surr: 1,1,1,2-Tetrachloroethane	0.092	0.020	0.10	0.0	92.0	70	130				

Associated Samples: B21121841-001E, B21121841-003E, B21121841-004E, B21121841-007A, B21121841-011A

Run ID: Run Order: GECD.I_211227A: 20 **SampType:** Sample Matrix Spike Duplicate **Batch ID:** 162467
Method: SW8011 **Analysis Date:** 12/28/2021 00:04 **Prep Date:** 12/27/2021 08:28
Lab ID: B21121841-004EMSD **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	0.0	97.0	60	140	0.23	6.7	20.0	
Surr: 1,1,1,2-Tetrachloroethane	0.10	0.020	0.10	0.0	100.0	70	130	0.0			

Associated Samples: B21121841-001E, B21121841-003E, B21121841-004E, B21121841-007A, B21121841-011A

Run ID: Run Order: GECD.I_211227A: 9 **SampType:** Continuing Calibration Verification Standard **Batch ID:** 162467
Method: SW8011 **Analysis Date:** 12/27/2021 20:05 **Prep Date:** 12/27/2021 08:27
Lab ID: CK3-162467 **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	80	120				
Surr: 1,1,1,2-Tetrachloroethane	0.085	0.020	0.10		85.0	80	120				

Associated Samples: B21121841-001E, B21121841-003E, B21121841-004E, B21121841-007A, B21121841-011A



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: GECD.I_211227A: 21 **SampType:** Continuing Calibration Verification Standard **Batch ID:** 162467
Method: SW8011 **Analysis Date:** 12/28/2021 00:44 **Prep Date:** 12/27/2021 08:27
Lab ID: CK5-162467 **Units:** ug/L **Prep Method:** SW8011

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.39	0.010	0.40		97.0	80	120				
Surr: 1,1,1,2-Tetrachloroethane	0.39	0.020	0.40		99.0	80	120				

Associated Samples: **B21121841-001E, B21121841-003E, B21121841-004E, B21121841-007A, B21121841-011A**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: GCFID-HP5-B_211226B: 5 **SampType:** Method Blank **Batch ID:** 162439
Method: SW8015C **Analysis Date:** 12/27/2021 14:31 **Prep Date:** 12/22/2021 14:01
Lab ID: MB-162439 **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	0.20	0.0020	0.20		101.0	56	125				
Surr: n-Triacontane	0.11	0.0020	0.10		114.0	50	150				

Associated Samples: **B21121841-001B, B21121841-002B, B21121841-003B**

Run ID: Run Order: GCFID-HP5-B_211228A: 5 **SampType:** Method Blank **Batch ID:** 162439
Method: SW8015C **Analysis Date:** 12/28/2021 19:29 **Prep Date:** 12/22/2021 14:01
Lab ID: MB-162439 **Units:** mg/L **Prep Method:** SW3520C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diesel Range Organics (SGT-C10 to C24)	ND	0.15									
Oil Range Hydrocarbons (SGT-C24 to C40)	ND	0.15									
Total Extractable Hydrocarbons (SGT)	ND	0.15									
Surr: o-Terphenyl (SGT)	0.17	0.0020	0.20		83.0	56	125				
Surr: n-Triacontane (SGT)	0.094	0.0020	0.10		94.0	50	150				

Associated Samples: **B21121841-001B, B21121841-002B, B21121841-003B**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: GCFID-HP5-B_211226B: 3 **SampType:** Laboratory Control Sample **Batch ID:** 162439
Method: SW8015C **Analysis Date:** 12/27/2021 13:05 **Prep Date:** 12/22/2021 14:01
Lab ID: LCS-162439 **Units:** mg/L **Prep Method:** SW3520C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diesel Range Organics (C10 to C24)	14	0.30	15		90.0	36	132				
Total Extractable Hydrocarbons	14	0.30	15		96.0	60	132				
Surr: o-Terphenyl	0.19	0.0020	0.20		96.0	56	125				

Associated Samples: **B21121841-001B, B21121841-002B, B21121841-003B**

Run ID: Run Order: GCFID-HP5-B_211226B: 4 **SampType:** Laboratory Control Sample Duplicate **Batch ID:** 162439
Method: SW8015C **Analysis Date:** 12/27/2021 13:48 **Prep Date:** 12/22/2021 14:01
Lab ID: LCSD-162439 **Units:** mg/L **Prep Method:** SW3520C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diesel Range Organics (C10 to C24)	15	0.30	15		97.0	36	132	14	7.2	20.0	
Total Extractable Hydrocarbons	16	0.30	15		104.0	60	132	14	7.2	20.0	
Surr: o-Terphenyl	0.20	0.0020	0.20		102.0	56	125	0.0			

Associated Samples: **B21121841-001B, B21121841-002B, B21121841-003B**

Run ID: Run Order: GCFID-HP5-B_211226B: 15 **SampType:** Laboratory Control Sample **Batch ID:** 162439
Method: SW8015C **Analysis Date:** 12/28/2021 08:26 **Prep Date:** 12/22/2021 14:02
Lab ID: LCS-162439-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)	5.4	0.30	5.0		108.0	41	113				
Surr: n-Triacontane	0.11	0.0020	0.10		113.0	50	150				

Associated Samples: **B21121841-001B, B21121841-002B, B21121841-003B**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: GCFID-HP5-B_211226B: 16 **SampType:** Laboratory Control Sample Duplicate **Batch ID:** 162439
Method: SW8015C **Analysis Date:** 12/28/2021 09:52 **Prep Date:** 12/22/2021 14:02
Lab ID: LCSD-162439-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)	5.5	0.30	5.0		111.0	41	113	5.4	2.5	20.0	
Surr: n-Triacontane	0.11	0.0020	0.10		112.0	50	150	0.0			

Associated Samples: **B21121841-001B, B21121841-002B, B21121841-003B**

Run ID: Run Order: GCFID-HP5-B_211228A: 3 **SampType:** Laboratory Control Sample **Batch ID:** 162439
Method: SW8015C **Analysis Date:** 12/28/2021 18:03 **Prep Date:** 12/22/2021 14:01
Lab ID: LCS-162439 **Units:** mg/L **Prep Method:** SW3520C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diesel Range Organics (SGT-C10 to C24)	13	0.30	15		88.0	36	132				
Total Extractable Hydrocarbons (SGT)	14	0.30	15		94.0	60	132				
Surr: o-Terphenyl (SGT)	0.19	0.0020	0.20		95.0	56	125				

Associated Samples: **B21121841-001B, B21121841-002B, B21121841-003B**

Run ID: Run Order: GCFID-HP5-B_211228A: 4 **SampType:** Laboratory Control Sample Duplicate **Batch ID:** 162439
Method: SW8015C **Analysis Date:** 12/28/2021 18:46 **Prep Date:** 12/22/2021 14:01
Lab ID: LCSD-162439 **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)	15	0.30	15		99.0	36	132	13	12.0	20.0	
Total Extractable Hydrocarbons (SGT)	16	0.30	15		106.0	60	132	14	12.0	20.0	
Surr: o-Terphenyl (SGT)	0.21	0.0020	0.20		107.0	56	125	0.0			

Associated Samples: **B21121841-001B, B21121841-002B, B21121841-003B**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: GCFID-HP5-B_211228A: 13 **SampType:** Laboratory Control Sample **Batch ID:** 162439
Method: SW8015C **Analysis Date:** 12/29/2021 04:07 **Prep Date:** 12/22/2021 14:02
Lab ID: LCS-162439-RRO **Units:** mg/L **Prep Method:** SW3520C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
TEH (SGT-Oil Range)	4.0	0.30	5.0		81.0	41	113				
Surr: n-Triacontane (SGT)	0.081	0.0020	0.10		81.0	50	150				

Associated Samples: **B21121841-001B, B21121841-002B, B21121841-003B**

Run ID: Run Order: GCFID-HP5-B_211228A: 14 **SampType:** Laboratory Control Sample Duplicate **Batch ID:** 162439
Method: SW8015C **Analysis Date:** 12/29/2021 05:32 **Prep Date:** 12/22/2021 14:02
Lab ID: LCSD-162439-RRO **Units:** mg/L **Prep Method:** SW3520C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
TEH (SGT-Oil Range)	3.9	0.30	5.0		77.0	41	113	4.0	4.0	20.0	
Surr: n-Triacontane (SGT)	0.077	0.0020	0.10		77.0	50	150	0.0			

Associated Samples: **B21121841-001B, B21121841-002B, B21121841-003B**

Run ID: Run Order: GCFID-HP5-B_211226B: 9 **SampType:** Sample Matrix Spike **Batch ID:** 162439
Method: SW8015C **Analysis Date:** 12/27/2021 19:32 **Prep Date:** 12/22/2021 14:02
Lab ID: B21121841-001BMS **Units:** mg/L **Prep Method:** SW3520C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diesel Range Organics (C10 to C24)	13	0.30	14	0.68	88.0	36	132				
Total Extractable Hydrocarbons	16	0.30	14	2.6	94.0	60	132				
Surr: o-Terphenyl	0.14	0.0020	0.19	0.0	73.0	56	125				

Associated Samples: **B21121841-001B, B21121841-002B, B21121841-003B**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: GCFID-HP5-B_211226B: 10 **SampType:** Sample Matrix Spike **Batch ID:** 162439
Method: SW8015C **Analysis Date:** 12/27/2021 20:58 **Prep Date:** 12/22/2021 14:02
Lab ID: B21121841-002BMS-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)	6.2	0.32	5.2	1.2	95.0	41	113				
Surr: n-Triacontane	0.12	0.0021	0.10	0.0	118.0	50	150				

Associated Samples: **B21121841-001B, B21121841-002B, B21121841-003B**

Run ID: Run Order: GCFID-HP5-B_211228A: 9 **SampType:** Sample Matrix Spike **Batch ID:** 162439
Method: SW8015C **Analysis Date:** 12/28/2021 23:48 **Prep Date:** 12/22/2021 14:02
Lab ID: B21121841-001BMS **Units:** mg/L **Prep Method:** SW3520C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diesel Range Organics (SGT-C10 to C24)	11	0.30	14	0.0	79.0	36	132				
Total Extractable Hydrocarbons (SGT)	12	0.30	14	0.14	84.0	60	132				
Surr: o-Terphenyl (SGT)	0.12	0.0020	0.19	0.0	61.0	56	125				

Associated Samples: **B21121841-001B, B21121841-002B, B21121841-003B**

Run ID: Run Order: GCFID-HP5-B_211228A: 10 **SampType:** Sample Matrix Spike **Batch ID:** 162439
Method: SW8015C **Analysis Date:** 12/29/2021 00:31 **Prep Date:** 12/22/2021 14:02
Lab ID: B21121841-002BMS-RRO **Units:** mg/L **Prep Method:** SW3520C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
TEH (SGT-Oil Range)	5.0	0.32	5.2	0.0	95.0	41	113				
Surr: n-Triacontane (SGT)	0.10	0.0021	0.10	0.0	97.0	50	150				

Associated Samples: **B21121841-001B, B21121841-002B, B21121841-003B**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: PE 1_211228A: 4 **SampType:** Method Blank **Batch ID:** R372468
Method: SW8015C **Analysis Date:** 12/28/2021 10:32 **Prep Date:**
Lab ID: MBLK_1228PE106r **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		85.0	70	130				

Associated Samples: B21121841-001D, B21121841-002D, B21121841-003D, B21121841-004D, B21121841-006A, B21121841-010A

Run ID: Run Order: PE 1_211228A: 3 **SampType:** Laboratory Control Sample **Batch ID:** R372468
Method: SW8015C **Analysis Date:** 12/28/2021 09:58 **Prep Date:**
Lab ID: LCS_1228PE105r **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
C6 to C10	179	20	170		105.0	78	122				
Total Purgeable Hydrocarbons	214	20	200		107.0	70	130				
Surr: Trifluorotoluene	24	1.0	25		96.0	70	130				

Associated Samples: B21121841-001D, B21121841-002D, B21121841-003D, B21121841-004D, B21121841-006A, B21121841-010A

Run ID: Run Order: PE 1_211228A: 11 **SampType:** Sample Matrix Spike **Batch ID:** R372468
Method: SW8015C **Analysis Date:** 12/28/2021 16:49 **Prep Date:**
Lab ID: B21121841-001DMS **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				
Total Purgeable Hydrocarbons	203	20	200	0.0	102.0	70	130				
Surr: Trifluorotoluene	24	1.0	25	0.0	96.0	70	130				

Associated Samples: B21121841-001D, B21121841-002D, B21121841-003D, B21121841-004D, B21121841-006A, B21121841-010A



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: PE 1_211228A: 12 **SampType:** Sample Matrix Spike Duplicate **Batch ID:** R372468
Method: SW8015C **Analysis Date:** 12/28/2021 17:23 **Prep Date:**
Lab ID: B21121841-001DMSD **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
C6 to C10	174	20	170	0.0	103.0	78	122	168	3.6	20.0	
Total Purgeable Hydrocarbons	210	20	200	0.0	105.0	70	130	203	3.5	20.0	
Surr: Trifluorotoluene	24	1.0	25	0.0	96.0	70	130	0.0			

Associated Samples: **B21121841-001D, B21121841-002D, B21121841-003D, B21121841-004D, B21121841-006A, B21121841-010A**

Run ID: Run Order: GCFID-HP5-B_211228B: 5 **SampType:** Method Blank **Batch ID:** 162502
Method: SW8015C **Analysis Date:** 12/29/2021 11:57 **Prep Date:** 12/27/2021 14:11
Lab ID: MB-162502 **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	0.20	0.0020	0.20		100.0	56	125				
Surr: n-Triacontane	0.10	0.0020	0.10		105.0	50	150				

Associated Samples: **B21121841-004B**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: GCFID-HP4-B_220102A: 12 **SampType:** Method Blank **Batch ID:** 162502
Method: SW8015C **Analysis Date:** 01/03/2022 09:42 **Prep Date:** 12/27/2021 14:11
Lab ID: MB-162502 **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		91.0	56	125				
Surr: n-Triacontane (SGT)	0.11	0.0020	0.10		107.0	50	150				

Associated Samples: **B21121841-004B**

Run ID: Run Order: GCFID-HP5-B_211228B: 4 **SampType:** Laboratory Control Sample **Batch ID:** 162502
Method: SW8015C **Analysis Date:** 12/29/2021 11:14 **Prep Date:** 12/27/2021 14:11
Lab ID: LCS-162502 **Units:** mg/L **Prep Method:** SW3520C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diesel Range Organics (C10 to C24)	13	0.30	15		84.0	36	132				
Total Extractable Hydrocarbons	14	0.30	15		90.0	60	132				
Surr: o-Terphenyl	0.19	0.0020	0.20		97.0	56	125				

Associated Samples: **B21121841-004B**

Run ID: Run Order: GCFID-HP5-B_211228B: 30 **SampType:** Laboratory Control Sample **Batch ID:** 162502
Method: SW8015C **Analysis Date:** 12/30/2021 14:55 **Prep Date:** 12/27/2021 14:11
Lab ID: LCS-162502-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		99.0	60	140				



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: GCFID-HP5-B_211228B: 30 **SampType:** Laboratory Control Sample **Batch ID:** 162502
Method: SW8015C **Analysis Date:** 12/30/2021 14:55 **Prep Date:** 12/27/2021 14:11
Lab ID: LCS-162502-RRO **Units:** mg/L **Prep Method:** SW3520C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Surr: n-Triacontane	0.11	0.0020	0.10		108.0	50	150				

Associated Samples: **B21121841-004B**

Run ID: Run Order: GCFID-HP4-B_220102A: 11 **SampType:** Laboratory Control Sample **Batch ID:** 162502
Method: SW8015C **Analysis Date:** 01/03/2022 08:57 **Prep Date:** 12/27/2021 14:11
Lab ID: LCS-162502 **Units:** mg/L **Prep Method:** SW3520C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diesel Range Organics (SGT-C10 to C24)	11	0.30	15		75.0	36	132				
Total Extractable Hydrocarbons (SGT)	12	0.30	15		80.0	60	132				
Surr: o-Terphenyl (SGT)	0.17	0.0020	0.20		84.0	56	125				

Associated Samples: **B21121841-004B**

Run ID: Run Order: GCFID-HP4-B_220102A: 21 **SampType:** Laboratory Control Sample **Batch ID:** 162502
Method: SW8015C **Analysis Date:** 01/03/2022 19:11 **Prep Date:** 12/27/2021 14:11
Lab ID: LCS-162502-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		93.0	41	113				
Surr: n-Triacontane (SGT)	0.11	0.0020	0.10		111.0	50	150				

Associated Samples: **B21121841-004B**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: GCFID-HP5-B_211228B: 13 **SampType:** Sample Matrix Spike **Batch ID:** 162502
Method: SW8015C **Analysis Date:** 12/29/2021 19:47 **Prep Date:** 12/27/2021 18:24
Lab ID: B21121981-001DMS **Units:** mg/L **Prep Method:** SW3520C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diesel Range Organics (C10 to C24)	12	0.30	14	0.060	84.0	36	132				
Total Extractable Hydrocarbons	13	0.30	14	0.30	89.0	60	132				
Surr: o-Terphenyl	0.18	0.0020	0.19	0.0	95.0	56	125				

Associated Samples: **B21121841-004B**

Run ID: Run Order: GCFID-HP5-B_211228B: 14 **SampType:** Sample Matrix Spike Duplicate **Batch ID:** 162502
Method: SW8015C **Analysis Date:** 12/29/2021 20:30 **Prep Date:** 12/27/2021 18:24
Lab ID: B21121981-001DMSD **Units:** mg/L **Prep Method:** SW3520C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diesel Range Organics (C10 to C24)	12	0.30	14	0.060	84.0	36	132	12	0.5	20.0	
Total Extractable Hydrocarbons	14	0.30	14	0.30	92.0	60	132	13	3.5	20.0	
Surr: o-Terphenyl	0.16	0.0020	0.19	0.0	84.0	56	125	0.0			

Associated Samples: **B21121841-004B**

Run ID: Run Order: GCFID-HP5-B_211228B: 31 **SampType:** Sample Matrix Spike **Batch ID:** 162502
Method: SW8015C **Analysis Date:** 12/30/2021 15:37 **Prep Date:** 12/27/2021 18:24
Lab ID: B21121981-001DMS-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	4.8	0.22	100.0	41	113				
Surr: n-Triacontane	0.10	0.0020	0.096	0.0	107.0	50	150				

Associated Samples: **B21121841-004B**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: GCFID-HP5-B_211228B: 32 **SampType:** Sample Matrix Spike Duplicate **Batch ID:** 162502
Method: SW8015C **Analysis Date:** 12/30/2021 16:20 **Prep Date:** 12/27/2021 18:24
Lab ID: B21121981-001DMSD-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	0.22	97.0	41	113	5.0	2.6	20.0	
Surr: n-Triacontane	0.10	0.0020	0.096	0.0	105.0	50	150	0.0			

Associated Samples: **B21121841-004B**

Run ID: Run Order: GCFID-HP4-B_220102A: 16 **SampType:** Sample Matrix Spike **Batch ID:** 162502
Method: SW8015C **Analysis Date:** 01/03/2022 14:40 **Prep Date:** 12/27/2021 18:24
Lab ID: B21121981-001DMS **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	14	0.0	88.0	36	132				
Total Extractable Hydrocarbons (SGT)	13	0.30	14	0.0	93.0	60	132				
Surr: o-Terphenyl (SGT)	0.16	0.0020	0.19	0.0	85.0	56	125				

Associated Samples: **B21121841-004B**

Run ID: Run Order: GCFID-HP4-B_220102A: 17 **SampType:** Sample Matrix Spike Duplicate **Batch ID:** 162502
Method: SW8015C **Analysis Date:** 01/03/2022 15:25 **Prep Date:** 12/27/2021 18:24
Lab ID: B21121981-001DMSD **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	14	0.0	93.0	36	132	13	6.3	20.0	
Total Extractable Hydrocarbons (SGT)	14	0.30	14	0.0	100.0	60	132	13	6.3	20.0	
Surr: o-Terphenyl (SGT)	0.20	0.0020	0.19	0.0	103.0	56	125	0.0			

Associated Samples: **B21121841-004B**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: GCFID-HP4-B_220102A: 22 **SampType:** Sample Matrix Spike **Batch ID:** 162502
Method: SW8015C **Analysis Date:** 01/03/2022 19:56 **Prep Date:** 12/27/2021 18:24
Lab ID: B21121981-001DMS-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)	4.3	0.30	4.8	0.0	89.0	41	113				
Surr: n-Triacontane (SGT)	0.094	0.0020	0.096	0.0	98.0	50	150				

Associated Samples: **B21121841-004B**

Run ID: Run Order: GCFID-HP4-B_220102A: 23 **SampType:** Sample Matrix Spike Duplicate **Batch ID:** 162502
Method: SW8015C **Analysis Date:** 01/03/2022 21:26 **Prep Date:** 12/27/2021 18:24
Lab ID: B21121981-001DMSD-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)	4.5	0.30	4.8	0.0	93.0	41	113	4.3	4.4	20.0	
Surr: n-Triacontane (SGT)	0.11	0.0020	0.096	0.0	110.0	50	150	0.0			

Associated Samples: **B21121841-004B**

Run ID: Run Order: GCFID-HP5-B_211226B: 1 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372413
Method: SW8015C **Analysis Date:** 12/27/2021 10:52 **Prep Date:**
Lab ID: CCV_1226HP534r-W **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
TEH(Oil Range)	4.8	0.30	5.0		95.0	80	120				
Surr: n-Triacontane	0.22	0.0020	0.20		108.0	80	120				

Associated Samples: **B21121841-001B, B21121841-002B, B21121841-003B**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: GCFID-HP5-B_211226B: 2 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372413
Method: SW8015C **Analysis Date:** 12/27/2021 11:35 **Prep Date:**
Lab ID: CCV_1226HP535r **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diesel Range Organics (C10 to C24)	15	0.30	15		99.0	80	120				
Total Extractable Hydrocarbons	15	0.30	15		103.0	80	120				
Surr: o-Terphenyl	0.20	0.0020	0.20		100.0	80	120				

Associated Samples: **B21121841-001B, B21121841-002B, B21121841-003B**

Run ID: Run Order: GCFID-HP5-B_211226B: 11 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372413
Method: SW8015C **Analysis Date:** 12/27/2021 22:24 **Prep Date:**
Lab ID: CCV_1226HP550r-W **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
TEH(Oil Range)	5.1	0.30	5.0		103.0	80	120				
Surr: n-Triacontane	0.22	0.0020	0.20		109.0	80	120				

Associated Samples: **B21121841-001B, B21121841-002B, B21121841-003B**

Run ID: Run Order: GCFID-HP5-B_211226B: 12 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372413
Method: SW8015C **Analysis Date:** 12/27/2021 23:07 **Prep Date:**
Lab ID: CCV_1226HP551r **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		103.0	80	120				
Total Extractable Hydrocarbons	16	0.30	15		106.0	80	120				
Surr: o-Terphenyl	0.21	0.0020	0.20		106.0	80	120				

Associated Samples: **B21121841-001B, B21121841-002B, B21121841-003B**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: PE 1_211228A: 2 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372468
Method: SW8015C **Analysis Date:** 12/28/2021 09:23 **Prep Date:**
Lab ID: CCV_1228PE104r **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	168		103.0	80	120				
Total Purgeable Hydrocarbons	205	20	200		102.0	80	120				
Surr: Trifluorotoluene	25	1.0	25		98.0	80	120				

Associated Samples: B21121841-001D, B21121841-002D, B21121841-003D, B21121841-004D, B21121841-006A, B21121841-010A

Run ID: Run Order: PE 1_211228A: 17 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372468
Method: SW8015C **Analysis Date:** 12/28/2021 20:49 **Prep Date:**
Lab ID: CCV_1228PE124r **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
C6 to C10	170	20	168		101.0	80	120				
Total Purgeable Hydrocarbons	203	20	200		101.0	80	120				
Surr: Trifluorotoluene	24	1.0	25		96.0	80	120				

Associated Samples: B21121841-001D, B21121841-002D, B21121841-003D, B21121841-004D, B21121841-006A, B21121841-010A

Run ID: Run Order: GCFID-HP5-B_211228A: 1 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372503
Method: SW8015C **Analysis Date:** 12/28/2021 15:54 **Prep Date:**
Lab ID: CCV_1228HP505r-W **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
TEH(Oil Range)	4.6	0.30	5.0		92.0	80	120				
Surr: n-Triacontane	0.21	0.0020	0.20		103.0	80	120				

Associated Samples: B21121841-001B, B21121841-002B, B21121841-003B



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: GCFID-HP5-B_211228A: 2 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372503
Method: SW8015C **Analysis Date:** 12/28/2021 16:37 **Prep Date:**
Lab ID: CCV_1228HP506r **Units:** mg/L **Prep Method:**

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

Associated Samples: **B21121841-001B, B21121841-002B, B21121841-003B**

Run ID: Run Order: GCFID-HP5-B_211228A: 11 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372503
Method: SW8015C **Analysis Date:** 12/29/2021 01:57 **Prep Date:**
Lab ID: CCV_1228HP519r-W **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
TEH(Oil Range)	4.6	0.30	5.0		92.0	80	120				
Surr: n-Triacontane	0.20	0.0020	0.20		102.0	80	120				

Associated Samples: **B21121841-001B, B21121841-002B, B21121841-003B**

Run ID: Run Order: GCFID-HP5-B_211228A: 12 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372503
Method: SW8015C **Analysis Date:** 12/29/2021 02:40 **Prep Date:**
Lab ID: CCV_1228HP520r **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diesel Range Organics (C10 to C24)	15	0.30	15		100.0	80	120				
Total Extractable Hydrocarbons	15	0.30	15		103.0	80	120				
Surr: o-Terphenyl	0.20	0.0020	0.20		99.0	80	120				

Associated Samples: **B21121841-001B, B21121841-002B, B21121841-003B**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: GCFID-HP5-B_211228B: 17 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372550
Method: SW8015C **Analysis Date:** 12/30/2021 00:49 **Prep Date:**
Lab ID: CCV_1228HP551r-W **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
TEH(Oil Range)	4.7	0.30	5.0		94.0	80	120				
Surr: n-Triacontane	0.21	0.0020	0.20		106.0	80	120				

Associated Samples: **B21121841-004B**

Run ID: Run Order: GCFID-HP5-B_211228B: 18 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372550
Method: SW8015C **Analysis Date:** 12/30/2021 01:32 **Prep Date:**
Lab ID: CCV_1228HP536r **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diesel Range Organics (C10 to C24)	15	0.30	15		100.0	80	120				
Total Extractable Hydrocarbons	16	0.30	15		103.0	80	120				
Surr: o-Terphenyl	0.20	0.0020	0.20		100.0	80	120				

Associated Samples: **B21121841-004B**

Run ID: Run Order: GCFID-HP5-B_211228B: 28 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372550
Method: SW8015C **Analysis Date:** 12/30/2021 12:46 **Prep Date:**
Lab ID: CCV_1228HP567r-W **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
TEH(Oil Range)	4.7	0.30	5.0		94.0	80	120				
Surr: n-Triacontane	0.20	0.0020	0.20		102.0	80	120				

Associated Samples: **B21121841-004B**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: GCFID-HP5-B_211228B: 29 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372550
Method: SW8015C **Analysis Date:** 12/30/2021 13:29 **Prep Date:**
Lab ID: CCV_1228HP568r **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diesel Range Organics (C10 to C24)	15	0.30	15		97.0	80	120				
Total Extractable Hydrocarbons	15	0.30	15		101.0	80	120				
Surr: o-Terphenyl	0.19	0.0020	0.20		97.0	80	120				

Associated Samples: **B21121841-004B**

Run ID: Run Order: GCFID-HP4-B_220102A: 1 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372714
Method: SW8015C **Analysis Date:** 01/02/2022 23:57 **Prep Date:**
Lab ID: CCV_0102HP417r-W **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
TEH(Oil Range)	4.6	0.30	5.0		92.0	80	120				
Surr: n-Triacontane	0.23	0.0020	0.20		117.0	80	120				

Associated Samples: **B21121841-004B**

Run ID: Run Order: GCFID-HP4-B_220102A: 2 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372714
Method: SW8015C **Analysis Date:** 01/03/2022 00:42 **Prep Date:**
Lab ID: CCV_0102HP418r **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diesel Range Organics (C10 to C24)	16	0.30	15		103.0	80	120				
Total Extractable Hydrocarbons	16	0.30	15		107.0	80	120				
Surr: o-Terphenyl	0.22	0.0020	0.20		110.0	80	120				

Associated Samples: **B21121841-004B**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: GCFID-HP4-B_220102A: 13 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372714
Method: SW8015C **Analysis Date:** 01/03/2022 11:41 **Prep Date:**
Lab ID: CCV_0102HP432r-W **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
TEH(Oil Range)	4.4	0.30	5.0		88.0	80	120				
Surr: n-Triacontane	0.23	0.0020	0.20		115.0	80	120				

Associated Samples: **B21121841-004B**

Run ID: Run Order: GCFID-HP4-B_220102A: 14 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372714
Method: SW8015C **Analysis Date:** 01/03/2022 12:26 **Prep Date:**
Lab ID: CCV_0102HP433r **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diesel Range Organics (C10 to C24)	15	0.30	15		99.0	80	120				
Total Extractable Hydrocarbons	15	0.30	15		103.0	80	120				
Surr: o-Terphenyl	0.21	0.0020	0.20		105.0	80	120				

Associated Samples: **B21121841-004B**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: FID-HEADSPACE_211223A: 4 **SampType:** Method Blank **Batch ID:** R372307
Method: SW8015M **Analysis Date:** 12/23/2021 10:10 **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: B21121841-001F, B21121841-003F, B21121841-004F, B21121841-008A, B21121841-012A

Run ID: Run Order: FID-HEADSPACE_211223A: 2 **SampType:** Laboratory Control Sample **Batch ID:** R372307
Method: SW8015M **Analysis Date:** 12/23/2021 09:11 **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	95	2.0	100		95.0	85	115				

Associated Samples: B21121841-001F, B21121841-003F, B21121841-004F, B21121841-008A, B21121841-012A

Run ID: Run Order: FID-HEADSPACE_211223A: 3 **SampType:** Laboratory Control Sample Duplicate **Batch ID:** R372307
Method: SW8015M **Analysis Date:** 12/23/2021 09:17 **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	96	2.0	100		96.0	85	115	95	1.0	20.0	

Associated Samples: B21121841-001F, B21121841-003F, B21121841-004F, B21121841-008A, B21121841-012A



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: FID-HEADSPACE_211223A: 9 **SampType:** Sample Duplicate **Batch ID:** R372307
Method: SW8015M **Analysis Date:** 12/23/2021 10:51 **Prep Date:**
Lab ID: B21121841-004FDUP **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Methane	ND	0.0020			0.0			0.0018		20.0	

Associated Samples: B21121841-001F, B21121841-003F, B21121841-004F, B21121841-008A, B21121841-012A

Run ID: Run Order: FID-HEADSPACE_211223A: 1 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372307
Method: SW8015M **Analysis Date:** 12/23/2021 08:46 **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	96	2.0	100		96.0	85	115				

Associated Samples: B21121841-001F, B21121841-003F, B21121841-004F, B21121841-008A, B21121841-012A

Run ID: Run Order: FID-HEADSPACE_211223A: 12 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372307
Method: SW8015M **Analysis Date:** 12/23/2021 11:20 **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	95	2.0	100		95.0	85	115				

Associated Samples: B21121841-001F, B21121841-003F, B21121841-004F, B21121841-008A, B21121841-012A



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: SV5973N.I_211223B: 8
Method: SW8270C
Lab ID: MB-162432

SampType: Method Blank
Analysis Date: 12/24/2021 09:44
Units: ug/L

Batch ID: 162432
Prep Date: 12/22/2021 13:13
Prep Method: SW3510C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	ND	5.0									
1,2-Dichlorobenzene	ND	5.0									
1,3-Dichlorobenzene	ND	5.0									
1,4-Dichlorobenzene	ND	5.0									
1-Methylnaphthalene	ND	5.0									
2,4,5-Trichlorophenol	ND	5.0									
2,4,6-Trichlorophenol	ND	5.0									
2,4-Dichlorophenol	ND	5.0									
2,4-Dimethylphenol	ND	5.0									
2,4-Dinitrophenol	ND	5.0									
2,4-Dinitrotoluene	ND	5.0									
2,6-Dinitrotoluene	ND	5.0									
2-Chloronaphthalene	ND	5.0									
2-Chlorophenol	ND	5.0									
2-Methylnaphthalene	ND	5.0									
2-Nitrophenol	ND	5.0									
3,3'-Dichlorobenzidine	ND	5.0									
4,6-Dinitro-2-methylphenol	ND	5.0									
4-Bromophenyl phenyl ether	ND	5.0									
4-Chloro-3-methylphenol	ND	5.0									
4-Chlorophenol	ND	5.0									
4-Chlorophenyl phenyl ether	ND	5.0									
4-Nitrophenol	ND	5.0									
Acenaphthene	ND	5.0									
Acenaphthylene	ND	5.0									
Anthracene	ND	5.0									
Azobenzene	ND	5.0									



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: SV5973N.I_211223B: 8
Method: SW8270C
Lab ID: MB-162432

SampType: Method Blank
Analysis Date: 12/24/2021 09:44
Units: ug/L

Batch ID: 162432
Prep Date: 12/22/2021 13:13
Prep Method: SW3510C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Benzidine	ND	6.7									
Benzo(a)anthracene	ND	5.0									
Benzo(a)pyrene	ND	5.0									
Benzo(b)fluoranthene	ND	5.0									
Benzo(g,h,i)perylene	ND	5.0									
Benzo(k)fluoranthene	ND	5.0									
bis(-2-chloroethoxy)Methane	ND	5.0									
bis(-2-chloroethyl)Ether	ND	5.0									
bis(2-chloroisopropyl)Ether	ND	5.0									
bis(2-ethylhexyl)Phthalate	ND	5.0									
Butylbenzylphthalate	ND	5.0									
Chrysene	ND	5.0									
Dibenzo(a,h)anthracene	ND	5.0									
Diethyl phthalate	ND	5.0									
Dimethyl phthalate	ND	5.0									
Di-n-butyl phthalate	ND	5.0									
Di-n-octyl phthalate	ND	5.0									
Fluoranthene	ND	5.0									
Fluorene	ND	5.0									
Hexachlorobenzene	ND	5.0									
Hexachlorobutadiene	ND	5.0									
Hexachlorocyclopentadiene	ND	5.0									
Hexachloroethane	ND	5.0									
Indeno(1,2,3-cd)pyrene	ND	5.0									
Isophorone	ND	5.0									
m+p-Cresols	ND	5.0									
Naphthalene	ND	5.0									



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: SV5973N.I_211223B: 8 **SampType:** Method Blank **Batch ID:** 162432
Method: SW8270C **Analysis Date:** 12/24/2021 09:44 **Prep Date:** 12/22/2021 13:13
Lab ID: MB-162432 **Units:** ug/L **Prep Method:** SW3510C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Nitrobenzene	ND	5.0									
n-Nitrosodimethylamine	ND	5.0									
n-Nitroso-di-n-propylamine	ND	5.0									
n-Nitrosodiphenylamine	ND	5.0									
o-Cresol	ND	5.0									
Pentachlorophenol	ND	5.0									
Phenanthrene	ND	5.0									
Phenol	ND	5.0									
Pyrene	ND	5.0									
Pyridine	ND	5.0									
Surr: 2,4,6-Tribromophenol	159	5.0	200		80.0	43	140				
Surr: 2-Fluorobiphenyl	63	5.0	100		63.0	44	119				
Surr: 2-Fluorophenol	66	5.0	200		33.0	19	119				
Surr: Nitrobenzene-d5	59	5.0	100		59.0	44	120				
Surr: Phenol-d5	63	5.0	200		32.0	10	65				
Surr: Terphenyl-d14	114	5.0	100		114.0	50	134				

Associated Samples: B21121841-001A, B21121841-002A, B21121841-003A, B21121841-004A



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: SV5975.I_211228A: 11 **SampType:** Method Blank **Batch ID:** 162432
Method: SW8270C **Analysis Date:** 12/28/2021 22:24 **Prep Date:** 12/22/2021 13:13
Lab ID: MB-162432 **Units:** ug/L **Prep Method:** SW3510C

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

Associated Samples: B21121841-001A, B21121841-002A, B21121841-003A, B21121841-004A

Run ID: Run Order: SV5975.I_211228A: 12 **SampType:** Method Blank **Batch ID:** 162432
Method: SW8270C **Analysis Date:** 12/28/2021 22:56 **Prep Date:** 12/22/2021 13:13
Lab ID: MB-162432 **Units:** ug/L **Prep Method:** SW3510C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Surr: 2-Fluorobiphenyl	67	2.0	100		67.0	53	106				
Surr: Nitrobenzene-d5	74	2.0	100		74.0	55	111				
Surr: Terphenyl-d14	98	2.0	100		98.0	58	132				

Associated Samples: B21121841-001A, B21121841-002A, B21121841-003A, B21121841-004A

Run ID: Run Order: SV5973N.I_211223B: 9 **SampType:** Laboratory Control Sample **Batch ID:** 162432
Method: SW8270C **Analysis Date:** 12/24/2021 10:17 **Prep Date:** 12/22/2021 13:13
Lab ID: LCS-162432 **Units:** ug/L **Prep Method:** SW3510C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	68	10	100		68.0	29	116				
1,2-Dichlorobenzene	64	10	100		64.0	32	111				
1,3-Dichlorobenzene	65	10	100		65.0	28	110				
1,4-Dichlorobenzene	64	10	100		64.0	29	112				
1-Methylnaphthalene	79	10	100		79.0	41	119				
2,4,5-Trichlorophenol	82	10	100		82.0	53	123				



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: SV5973N.I_211223B: 9 **SampType:** Laboratory Control Sample **Batch ID:** 162432
Method: SW8270C **Analysis Date:** 12/24/2021 10:17 **Prep Date:** 12/22/2021 13:13
Lab ID: LCS-162432 **Units:** ug/L **Prep Method:** SW3510C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
2,4,6-Trichlorophenol	89	10	100		89.0	50	125				
2,4-Dichlorophenol	78	10	100		78.0	47	121				
2,4-Dimethylphenol	76	10	100		76.0	31	124				
2,4-Dinitrophenol	80	10	100		80.0	23	142				
2,4-Dinitrotoluene	88	10	100		88.0	57	128				
2,6-Dinitrotoluene	92	10	100		92.0	50	118				
2-Chloronaphthalene	78	10	100		78.0	40	116				
2-Chlorophenol	73	10	100		73.0	38	117				
2-Methylnaphthalene	80	10	100		80.0	40	121				
2-Nitrophenol	83	10	100		83.0	47	123				
3,3'-Dichlorobenzidine	76	10	100		76.0	27	129				
4,6-Dinitro-2-methylphenol	88	10	100		88.0	44	137				
4-Bromophenyl phenyl ether	91	10	100		91.0	55	124				
4-Chloro-3-methylphenol	87	10	100		87.0	52	119				
4-Chlorophenol	73	10	100		73.0	41	81				
4-Chlorophenyl phenyl ether	84	10	100		84.0	53	121				
4-Nitrophenol	42	10	100		42.0	15	36				S
Acenaphthene	93	10	100		93.0	47	122				
Acenaphthylene	81	10	100		81.0	41	130				
Anthracene	90	10	100		90.0	57	123				
Azobenzene	87	10	100		87.0	61	116				
Benzidine	25	10	100		25.0	10	100				
Benzo(a)anthracene	94	10	100		94.0	58	125				
Benzo(a)pyrene	94	10	100		94.0	54	128				
Benzo(b)fluoranthene	97	10	100		97.0	53	131				
Benzo(g,h,i)perylene	98	10	100		98.0	50	134				
Benzo(k)fluoranthene	89	10	100		89.0	57	129				



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: SV5973N.I_211223B: 9 **SampType:** Laboratory Control Sample **Batch ID:** 162432
Method: SW8270C **Analysis Date:** 12/24/2021 10:17 **Prep Date:** 12/22/2021 13:13
Lab ID: LCS-162432 **Units:** ug/L **Prep Method:** SW3510C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
bis(-2-chloroethoxy)Methane	81	10	100		81.0	48	120				
bis(-2-chloroethyl)Ether	74	10	100		74.0	43	118				
bis(2-chloroisopropyl)Ether	61	10	100		61.0	37	130				
bis(2-ethylhexyl)Phthalate	93	10	100		93.0	55	135				
Butylbenzylphthalate	94	10	100		94.0	53	134				
Chrysene	90	10	100		90.0	59	123				
Dibenzo(a,h)anthracene	96	10	100		96.0	51	134				
Diethyl phthalate	93	10	100		93.0	56	125				
Dimethyl phthalate	90	10	100		90.0	45	127				
Di-n-butyl phthalate	91	10	100		91.0	59	127				
Di-n-octyl phthalate	92	10	100		92.0	51	140				
Fluoranthene	90	10	100		90.0	57	128				
Fluorene	85	10	100		85.0	52	124				
Hexachlorobenzene	86	10	100		86.0	53	125				
Hexachlorobutadiene	62	10	100		62.0	22	124				
Hexachlorocyclopentadiene	73	10	100		73.0	39	91				
Hexachloroethane	65	10	100		65.0	21	115				
Indeno(1,2,3-cd)pyrene	96	10	100		96.0	52	134				
Isophorone	78	10	100		78.0	42	124				
m+p-Cresols	76	10	100		76.0	29	110				
Naphthalene	76	10	100		76.0	40	121				
Nitrobenzene	82	10	100		82.0	45	121				
n-Nitrosodimethylamine	44	10	100		44.0	20	45				
n-Nitroso-di-n-propylamine	83	10	100		83.0	49	119				
n-Nitrosodiphenylamine	101	10	100		101.0	51	123				
o-Cresol	78	10	100		78.0	30	117				
Pentachlorophenol	103	10	100		103.0	35	138				



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: SV5973N.I_211223B: 9 **SampType:** Laboratory Control Sample **Batch ID:** 162432
Method: SW8270C **Analysis Date:** 12/24/2021 10:17 **Prep Date:** 12/22/2021 13:13
Lab ID: LCS-162432 **Units:** ug/L **Prep Method:** SW3510C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Phenanthrene	90	10	100		90.0	59	120				
Phenol	49	10	100		49.0	37	75				
Pyrene	89	10	100		89.0	57	126				
Pyridine	36	10	100		36.0	16	45				
Surr: 2,4,6-Tribromophenol	192	10	200		96.0	43	140				
Surr: 2-Fluorobiphenyl	78	10	100		78.0	44	119				
Surr: 2-Fluorophenol	91	10	200		46.0	19	119				
Surr: Nitrobenzene-d5	77	10	100		77.0	44	120				
Surr: Phenol-d5	87	10	200		44.0	10	65				
Surr: Terphenyl-d14	105	10	100		105.0	50	134				

Associated Samples: **B21121841-001A, B21121841-002A, B21121841-003A, B21121841-004A**

Run ID: Run Order: SV5973N.I_211223B: 6 **SampType:** Laboratory Control Sample Duplicate **Batch ID:** 162432
Method: SW8270C **Analysis Date:** 12/24/2021 10:49 **Prep Date:** 12/22/2021 16:55
Lab ID: LCSD-162432 **Units:** ug/L **Prep Method:** SW3510C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	64	10	100		64.0	29	116	68	5.8	20.0	
1,2-Dichlorobenzene	59	10	100		59.0	32	111	64	7.5	20.0	
1,3-Dichlorobenzene	58	10	100		58.0	28	110	65	11.0	20.0	
1,4-Dichlorobenzene	56	10	100		56.0	29	112	64	14.0	20.0	
1-Methylnaphthalene	75	10	100		75.0	41	119	79	5.3	20.0	
2,4,5-Trichlorophenol	85	10	100		85.0	53	123	82	4.3	20.0	
2,4,6-Trichlorophenol	93	10	100		93.0	50	125	89	4.7	20.0	
2,4-Dichlorophenol	79	10	100		79.0	47	121	78	1.0	20.0	
2,4-Dimethylphenol	70	10	100		70.0	31	124	76	7.4	20.0	



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: SV5973N.I_211223B: 6 **SampType:** Laboratory Control Sample Duplicate **Batch ID:** 162432
Method: SW8270C **Analysis Date:** 12/24/2021 10:49 **Prep Date:** 12/22/2021 16:55
Lab ID: LCSD-162432 **Units:** ug/L **Prep Method:** SW3510C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
2,4-Dinitrophenol	81	10	100		81.0	23	142	80	0.5	20.0	
2,4-Dinitrotoluene	93	10	100		93.0	57	128	88	5.1	20.0	
2,6-Dinitrotoluene	95	10	100		95.0	50	118	92	3.4	20.0	
2-Chloronaphthalene	79	10	100		79.0	40	116	78	1.5	20.0	
2-Chlorophenol	70	10	100		70.0	38	117	73	3.5	20.0	
2-Methylnaphthalene	78	10	100		78.0	40	121	80	2.7	20.0	
2-Nitrophenol	82	10	100		82.0	47	123	83	1.0	20.0	
3,3'-Dichlorobenzidine	75	10	100		75.0	27	129	76	1.0	20.0	
4,6-Dinitro-2-methylphenol	89	10	100		89.0	44	137	88	2.0	20.0	
4-Bromophenyl phenyl ether	90	10	100		90.0	55	124	91	1.1	20.0	
4-Chloro-3-methylphenol	83	10	100		83.0	52	119	87	5.2	20.0	
4-Chlorophenol	76	10	100		76.0	41	81	73	4.3	20.0	
4-Chlorophenyl phenyl ether	85	10	100		85.0	53	121	84	1.7	20.0	
4-Nitrophenol	46	10	100		46.0	15	36	42	8.8	20.0	S
Acenaphthene	92	10	100		92.0	47	122	93	1.7	20.0	
Acenaphthylene	81	10	100		81.0	41	130	81	0.8	20.0	
Anthracene	94	10	100		94.0	57	123	90	4.2	20.0	
Azobenzene	90	10	100		90.0	61	116	87	3.2	20.0	
Benzidine	41	10	100		41.0	10	100	25	49.0	20.0	R
Benzo(a)anthracene	98	10	100		98.0	58	125	94	3.9	20.0	
Benzo(a)pyrene	96	10	100		96.0	54	128	94	1.6	20.0	
Benzo(b)fluoranthene	99	10	100		99.0	53	131	97	1.6	20.0	
Benzo(g,h,i)perylene	99	10	100		99.0	50	134	98	1.0	20.0	
Benzo(k)fluoranthene	93	10	100		93.0	57	129	89	4.2	20.0	
bis(-2-chloroethoxy)Methane	78	10	100		78.0	48	120	81	2.6	20.0	
bis(-2-chloroethyl)Ether	70	10	100		70.0	43	118	74	5.7	20.0	
bis(2-chloroisopropyl)Ether	59	10	100		59.0	37	130	61	3.8	20.0	



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: SV5973N.I_211223B: 6 **SampType:** Laboratory Control Sample Duplicate **Batch ID:** 162432
Method: SW8270C **Analysis Date:** 12/24/2021 10:49 **Prep Date:** 12/22/2021 16:55
Lab ID: LCSD-162432 **Units:** ug/L **Prep Method:** SW3510C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
bis(2-ethylhexyl)Phthalate	98	10	100		98.0	55	135	93	5.4	20.0	
Butylbenzylphthalate	96	10	100		96.0	53	134	94	1.7	20.0	
Chrysene	96	10	100		96.0	59	123	90	5.6	20.0	
Dibenzo(a,h)anthracene	97	10	100		97.0	51	134	96	1.6	20.0	
Diethyl phthalate	96	10	100		96.0	56	125	93	2.7	20.0	
Dimethyl phthalate	92	10	100		92.0	45	127	90	2.8	20.0	
Di-n-butyl phthalate	94	10	100		94.0	59	127	91	3.0	20.0	
Di-n-octyl phthalate	93	10	100		93.0	51	140	92	1.6	20.0	
Fluoranthene	92	10	100		92.0	57	128	90	1.7	20.0	
Fluorene	89	10	100		89.0	52	124	85	4.0	20.0	
Hexachlorobenzene	88	10	100		88.0	53	125	86	2.7	20.0	
Hexachlorobutadiene	55	10	100		55.0	22	124	62	11.0	20.0	
Hexachlorocyclopentadiene	71	10	100		71.0	39	91	73	2.0	20.0	
Hexachloroethane	58	10	100		58.0	21	115	65	12.0	20.0	
Indeno(1,2,3-cd)pyrene	96	10	100		96.0	52	134	96	0.2	20.0	
Isophorone	76	10	100		76.0	42	124	78	2.9	20.0	
m+p-Cresols	73	10	100		73.0	29	110	76	4.0	20.0	
Naphthalene	95	10	100		95.0	40	121	76	22.0	20.0	R
Nitrobenzene	78	10	100		78.0	45	121	82	4.8	20.0	
n-Nitrosodimethylamine	41	10	100		41.0	20	45	44	5.5	20.0	
n-Nitroso-di-n-propylamine	83	10	100		83.0	49	119	83	0.2	20.0	
n-Nitrosodiphenylamine	104	10	100		104.0	51	123	101	2.4	20.0	
o-Cresol	74	10	100		74.0	30	117	78	5.1	20.0	
Pentachlorophenol	107	10	100		107.0	35	138	103	3.4	20.0	
Phenanthrene	91	10	100		91.0	59	120	90	2.0	20.0	
Phenol	47	10	100		47.0	37	75	49	5.2	20.0	
Pyrene	92	10	100		92.0	57	126	89	3.2	20.0	



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: SV5973N.I_211223B: 6 **SampType:** Laboratory Control Sample Duplicate **Batch ID:** 162432
Method: SW8270C **Analysis Date:** 12/24/2021 10:49 **Prep Date:** 12/22/2021 16:55
Lab ID: LCSD-162432 **Units:** ug/L **Prep Method:** SW3510C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Pyridine	33	10	100		33.0	16	45	36	9.9	20.0	
Surr: 2,4,6-Tribromophenol	193	10	200		96.0	43	140	0.0	0.0		
Surr: 2-Fluorobiphenyl	76	10	100		76.0	44	119	0.0	0.0		
Surr: 2-Fluorophenol	85	10	200		42.0	19	119	0.0	0.0		
Surr: Nitrobenzene-d5	72	10	100		72.0	44	120	0.0	0.0		
Surr: Phenol-d5	81	10	200		40.0	10	65	0.0	0.0		
Surr: Terphenyl-d14	109	10	100		109.0	50	134	0.0	0.0		

Associated Samples: **B21121841-001A, B21121841-002A, B21121841-003A, B21121841-004A**

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

Run ID: Run Order: SV5975.I_211228A: 13 **SampType:** Laboratory Control Sample **Batch ID:** 162432
Method: SW8270C **Analysis Date:** 12/28/2021 23:29 **Prep Date:** 12/22/2021 16:55
Lab ID: LLCS-162432 **Units:** ug/L **Prep Method:** SW3510C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1-Methylnaphthalene	3.0	0.10	5.0		61.0	41	115				
2-Methylnaphthalene	2.7	0.10	5.0		54.0	39	114				
Naphthalene	2.6	0.10	5.0		51.0	43	114				

Associated Samples: **B21121841-001A, B21121841-002A, B21121841-003A, B21121841-004A**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: SV5975.I_211228A: 14 **SampType:** Laboratory Control Sample **Batch ID:** 162432
Method: SW8270C **Analysis Date:** 12/29/2021 00:01 **Prep Date:** 12/22/2021 16:55
Lab ID: LLCS-162432 **Units:** ug/L **Prep Method:** SW3510C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Surr: 2-Fluorobiphenyl	54	2.0	100		54.0	53	106				
Surr: Nitrobenzene-d5	63	2.0	100		63.0	55	111				
Surr: Terphenyl-d14	112	2.0	100		112.0	58	132				

Associated Samples: B21121841-001A, B21121841-002A, B21121841-003A, B21121841-004A

Run ID: Run Order: SV5975.I_211228A: 15 **SampType:** Laboratory Control Sample Duplicate **Batch ID:** 162432
Method: SW8270C **Analysis Date:** 12/29/2021 00:34 **Prep Date:** 12/22/2021 16:55
Lab ID: LLCSD-162432 **Units:** ug/L **Prep Method:** SW3510C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1-Methylnaphthalene	2.5	0.10	5.0		49.0	41	115	3.0	21.0	40.0	
2-Methylnaphthalene	2.2	0.10	5.0		44.0	39	114	2.7	21.0	40.0	
Naphthalene	2.0	0.10	5.0		41.0	43	114	2.6	23.0	40.0	S
Surr: 2-Fluorobiphenyl	4.3	0.10	5.0		86.0	53	106	0.0	0.0		
Surr: Nitrobenzene-d5	5.4	0.10	5.0		107.0	55	111	0.0	0.0		
Surr: Terphenyl-d14	6.7	0.10	5.0		133.0	58	132	0.0	0.0		S

Associated Samples: B21121841-001A, B21121841-002A, B21121841-003A, B21121841-004A

Run ID: Run Order: SV5973N.I_211223B: 12 **SampType:** Sample Matrix Spike **Batch ID:** 162432
Method: SW8270C **Analysis Date:** 12/24/2021 14:04 **Prep Date:** 12/22/2021 16:55
Lab ID: B21121841-002AMS **Units:** ug/L **Prep Method:** SW3510C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	77	10	105	0.0	73.0	29	116				
1,2-Dichlorobenzene	68	10	105	0.0	65.0	32	111				
1,3-Dichlorobenzene	72	10	105	0.0	69.0	28	110				



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: SV5973N.I_211223B: 12 **SampType:** Sample Matrix Spike **Batch ID:** 162432
Method: SW8270C **Analysis Date:** 12/24/2021 14:04 **Prep Date:** 12/22/2021 16:55
Lab ID: B21121841-002AMS **Units:** ug/L **Prep Method:** SW3510C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,4-Dichlorobenzene	71	10	105	0.0	67.0	29	112				
1-Methylnaphthalene	86	10	105	0.0	82.0	41	119				
2,4,5-Trichlorophenol	109	10	105	0.0	104.0	53	123				
2,4,6-Trichlorophenol	115	10	105	0.0	110.0	50	125				
2,4-Dichlorophenol	103	10	105	0.0	98.0	47	121				
2,4-Dimethylphenol	80	10	105	0.0	76.0	31	124				
2,4-Dinitrophenol	111	10	105	0.0	106.0	23	142				
2,4-Dinitrotoluene	103	10	105	0.0	98.0	57	128				
2,6-Dinitrotoluene	114	10	105	0.0	108.0	50	118				
2-Chloronaphthalene	92	10	105	0.0	87.0	40	116				
2-Chlorophenol	88	10	105	0.0	84.0	38	117				
2-Methylnaphthalene	89	10	105	0.0	84.0	40	121				
2-Nitrophenol	102	10	105	0.0	97.0	47	123				
3,3'-Dichlorobenzidine	74	10	105	0.0	70.0	27	129				
4,6-Dinitro-2-methylphenol	104	10	105	0.0	99.0	44	137				
4-Bromophenyl phenyl ether	100	10	105	0.0	95.0	55	124				
4-Chloro-3-methylphenol	105	10	105	0.0	100.0	52	119				
4-Chlorophenol	97	10	105	0.0	92.0	41	81				S
4-Chlorophenyl phenyl ether	104	10	105	0.0	99.0	53	121				
4-Nitrophenol	52	10	105	0.0	50.0	15	36				S
Acenaphthene	110	10	105	0.0	105.0	47	122				
Acenaphthylene	97	10	105	0.0	93.0	41	130				
Anthracene	105	10	105	0.0	100.0	57	123				
Azobenzene	110	10	105	0.0	105.0	61	116				
Benzidine	16	10	105	0.0	15.0	10	100				
Benzo(a)anthracene	111	10	105	0.0	106.0	58	125				
Benzo(a)pyrene	100	10	105	0.0	95.0	54	128				



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: SV5973N.I_211223B: 12 **SampType:** Sample Matrix Spike **Batch ID:** 162432
Method: SW8270C **Analysis Date:** 12/24/2021 14:04 **Prep Date:** 12/22/2021 16:55
Lab ID: B21121841-002AMS **Units:** ug/L **Prep Method:** SW3510C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Benzo(b)fluoranthene	105	10	105	0.0	100.0	53	131				
Benzo(g,h,i)perylene	108	10	105	0.0	103.0	50	134				
Benzo(k)fluoranthene	97	10	105	0.0	93.0	57	129				
bis(-2-chloroethoxy)Methane	89	10	105	0.0	85.0	48	120				
bis(-2-chloroethyl)Ether	78	10	105	0.0	74.0	43	118				
bis(2-chloroisopropyl)Ether	65	10	105	0.0	62.0	37	130				
bis(2-ethylhexyl)Phthalate	121	10	105	0.0	115.0	55	135				
Butylbenzylphthalate	128	10	105	0.0	122.0	53	134				
Chrysene	100	10	105	0.0	95.0	59	123				
Dibenzo(a,h)anthracene	109	10	105	0.0	104.0	51	134				
Diethyl phthalate	115	10	105	0.0	109.0	56	125				
Dimethyl phthalate	112	10	105	0.0	107.0	45	127				
Di-n-butyl phthalate	114	10	105	0.0	109.0	59	127				
Di-n-octyl phthalate	116	10	105	0.0	110.0	51	140				
Fluoranthene	102	10	105	0.0	97.0	57	128				
Fluorene	104	10	105	0.0	99.0	52	124				
Hexachlorobenzene	95	10	105	0.0	91.0	53	125				
Hexachlorobutadiene	68	10	105	0.0	65.0	22	124				
Hexachlorocyclopentadiene	87	10	105	0.0	83.0	39	91				
Hexachloroethane	67	10	105	0.0	63.0	21	115				
Indeno(1,2,3-cd)pyrene	111	10	105	0.0	106.0	52	134				
Isophorone	88	10	105	0.0	84.0	42	124				
m+p-Cresols	78	10	105	0.0	74.0	29	110				
Naphthalene	83	10	105	0.0	79.0	40	121				
Nitrobenzene	85	10	105	0.0	81.0	45	121				
n-Nitrosodimethylamine	49	10	105	0.0	47.0	20	45				S
n-Nitroso-di-n-propylamine	90	10	105	0.0	85.0	49	119				



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: SV5973N.I_211223B: 12 **SampType:** Sample Matrix Spike **Batch ID:** 162432
Method: SW8270C **Analysis Date:** 12/24/2021 14:04 **Prep Date:** 12/22/2021 16:55
Lab ID: B21121841-002AMS **Units:** ug/L **Prep Method:** SW3510C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
n-Nitrosodiphenylamine	117	10	105	0.0	112.0	51	123				
o-Cresol	88	10	105	0.0	84.0	30	117				
Pentachlorophenol	130	10	105	0.0	124.0	35	138				
Phenanthrene	102	10	105	0.0	97.0	59	120				
Phenol	54	10	105	0.0	51.0	37	75				
Pyrene	105	10	105	0.0	100.0	57	126				
Pyridine	41	10	105	0.0	39.0	16	45				
Surr: 2,4,6-Tribromophenol	221	10	210	0.0	105.0	43	140				
Surr: 2-Fluorobiphenyl	91	10	105	0.0	87.0	44	119				
Surr: 2-Fluorophenol	101	10	210	0.0	48.0	19	119				
Surr: Nitrobenzene-d5	83	10	105	0.0	79.0	44	120				
Surr: Phenol-d5	95	10	210	0.0	45.0	10	65				
Surr: Terphenyl-d14	127	10	105	0.0	121.0	50	134				

Associated Samples: **B21121841-001A, B21121841-002A, B21121841-003A, B21121841-004A**

Run ID: Run Order: SV5975.I_211228B: 6 **SampType:** Sample Matrix Spike **Batch ID:** 162432
Method: SW8270C **Analysis Date:** 12/29/2021 08:35 **Prep Date:** 12/22/2021 16:55
Lab ID: B21121841-001ALMS **Units:** ug/L **Prep Method:** SW3510C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1-Methylnaphthalene	3.1	0.10	5.0	0.0	61.0	41	115				
2-Methylnaphthalene	3.4	0.10	5.0	0.0	67.0	39	114				
Naphthalene	2.6	0.10	5.0	0.0	53.0	43	114				
Surr: 2-Fluorobiphenyl	2.7	0.10	5.0	0.0	55.0	53	106				
Surr: Nitrobenzene-d5	3.6	0.10	5.0	0.0	72.0	55	111				



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: SV5975.I_211228B: 6 **SampType:** Sample Matrix Spike **Batch ID:** 162432
Method: SW8270C **Analysis Date:** 12/29/2021 08:35 **Prep Date:** 12/22/2021 16:55
Lab ID: B21121841-001ALMS **Units:** ug/L **Prep Method:** SW3510C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Surr: Terphenyl-d14	4.8	0.10	5.0	0.0	96.0	58	132				

Associated Samples: B21121841-001A, B21121841-002A, B21121841-003A, B21121841-004A

Run ID: Run Order: SV5973N.I_211223B: 6 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372321
Method: SW8270C **Analysis Date:** 12/24/2021 08:39 **Prep Date:**
Lab ID: 23-Dec-21_CCV_37 **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	73	10	75		98.0	80	120				
1,2-Dichlorobenzene	76	10	75		102.0	80	120				
1,3-Dichlorobenzene	78	10	75		104.0	80	120				
1,4-Dichlorobenzene	74	10	75		99.0	80	120				
1-Methylnaphthalene	75	10	75		100.0	80	120				
2,4,5-Trichlorophenol	82	10	75		109.0	80	120				
2,4,6-Trichlorophenol	79	10	75		106.0	80	120				
2,4-Dichlorophenol	79	10	75		105.0	80	120				
2,4-Dimethylphenol	74	10	75		99.0	80	120				
2,4-Dinitrophenol	72	10	75		96.0	80	120				
2,4-Dinitrotoluene	80	10	75		107.0	80	120				
2,6-Dinitrotoluene	79	10	75		105.0	80	120				
2-Chloronaphthalene	76	10	75		101.0	80	120				
2-Chlorophenol	78	10	75		104.0	80	120				
2-Methylnaphthalene	75	10	75		101.0	80	120				
2-Nitrophenol	75	10	75		100.0	80	120				



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: SV5973N.I_211223B: 6 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372321
Method: SW8270C **Analysis Date:** 12/24/2021 08:39 **Prep Date:**
Lab ID: 23-Dec-21_CCV_37 **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
3,3'-Dichlorobenzidine	78	10	75		104.0	80	120				
4,6-Dinitro-2-methylphenol	73	10	75		97.0	80	120				
4-Bromophenyl phenyl ether	77	10	75		103.0	80	120				
4-Chloro-3-methylphenol	77	10	75		103.0	80	120				
4-Chlorophenol	76	10	75		101.0	80	120				
4-Chlorophenyl phenyl ether	75	10	75		101.0	80	120				
4-Nitrophenol	74	10	75		99.0	80	120				
Acenaphthene	81	10	75		108.0	80	120				
Acenaphthylene	76	10	75		102.0	80	120				
Anthracene	78	10	75		104.0	80	120				
Azobenzene	80	10	75		107.0	80	120				
Benzidine	71	10	75		94.0	80	120				
Benzo(a)anthracene	77	10	75		103.0	80	120				
Benzo(a)pyrene	80	10	75		107.0	80	120				
Benzo(b)fluoranthene	79	10	75		105.0	80	120				
Benzo(g,h,i)perylene	85	10	75		114.0	80	120				
Benzo(k)fluoranthene	82	10	75		109.0	80	120				
bis(-2-chloroethoxy)Methane	73	10	75		97.0	80	120				
bis(-2-chloroethyl)Ether	71	10	75		95.0	80	120				
bis(2-chloroisopropyl)Ether	72	10	75		96.0	80	120				
bis(2-ethylhexyl)Phthalate	74	10	75		99.0	80	120				
Butylbenzylphthalate	75	10	75		100.0	80	120				
Chrysene	78	10	75		103.0	80	120				
Dibenzo(a,h)anthracene	85	10	75		113.0	80	120				
Diethyl phthalate	77	10	75		103.0	80	120				
Dimethyl phthalate	74	10	75		99.0	80	120				
Di-n-butyl phthalate	75	10	75		101.0	80	120				



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: SV5973N.I_211223B: 6 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372321
Method: SW8270C **Analysis Date:** 12/24/2021 08:39 **Prep Date:**
Lab ID: 23-Dec-21_CCV_37 **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Di-n-octyl phthalate	78	10	75		104.0	80	120				
Fluoranthene	75	10	75		99.0	80	120				
Fluorene	79	10	75		105.0	80	120				
Hexachlorobenzene	77	10	75		103.0	80	120				
Hexachlorobutadiene	74	10	75		99.0	80	120				
Hexachlorocyclopentadiene	77	10	75		103.0	80	120				
Hexachloroethane	79	10	75		105.0	80	120				
Indeno(1,2,3-cd)pyrene	86	10	75		115.0	80	120				
Isophorone	72	10	75		96.0	80	120				
m+p-Cresols	79	10	75		105.0	80	120				
Naphthalene	78	10	75		103.0	80	120				
Nitrobenzene	77	10	75		102.0	80	120				
n-Nitrosodimethylamine	63	10	75		84.0	80	120				
n-Nitroso-di-n-propylamine	71	10	75		95.0	80	120				
n-Nitrosodiphenylamine	88	10	75		117.0	80	120				
o-Cresol	76	10	75		101.0	80	120				
Pentachlorophenol	84	10	75		112.0	80	120				
Phenanthrene	77	10	75		103.0	80	120				
Phenol	80	10	75		107.0	80	120				
Pyrene	77	10	75		103.0	80	120				
Pyridine	72	10	75		96.0	80	120				
Surr: 2,4,6-Tribromophenol	82	10	75		110.0	80	120				
Surr: 2-Fluorobiphenyl	78	10	75		104.0	80	120				
Surr: 2-Fluorophenol	82	10	75		109.0	80	120				
Surr: Nitrobenzene-d5	76	10	75		101.0	80	120				
Surr: Phenol-d5	77	10	75		103.0	80	120				



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: SV5973N.I_211223B: 6 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372321
Method: SW8270C **Analysis Date:** 12/24/2021 08:39 **Prep Date:**
Lab ID: 23-Dec-21_CCX_37 **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Surr: Terphenyl-d14	77	10	75		102.0	80	120				

Associated Samples: B21121841-001A, B21121841-002A, B21121841-003A, B21121841-004A

Run ID: Run Order: SV5973N.I_211223B: 16 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372321
Method: SW8270C **Analysis Date:** 12/24/2021 16:14 **Prep Date:**
Lab ID: 23-Dec-21_CCX_51 **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	74	10	75		98.0	50	150				
1,2-Dichlorobenzene	69	10	75		92.0	50	150				
1,3-Dichlorobenzene	73	10	75		97.0	50	150				
1,4-Dichlorobenzene	73	10	75		97.0	50	150				
1-Methylnaphthalene	71	10	75		94.0	50	150				
2,4,5-Trichlorophenol	71	10	75		95.0	50	150				
2,4,6-Trichlorophenol	80	10	75		106.0	50	150				
2,4-Dichlorophenol	76	10	75		101.0	50	150				
2,4-Dimethylphenol	69	10	75		92.0	50	150				
2,4-Dinitrophenol	61	10	75		81.0	50	150				
2,4-Dinitrotoluene	75	10	75		100.0	50	150				
2,6-Dinitrotoluene	75	10	75		101.0	50	150				
2-Chloronaphthalene	75	10	75		100.0	50	150				
2-Chlorophenol	74	10	75		99.0	50	150				
2-Methylnaphthalene	72	10	75		97.0	50	150				
2-Nitrophenol	71	10	75		95.0	50	150				



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: SV5973N.I_211223B: 16 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372321
Method: SW8270C **Analysis Date:** 12/24/2021 16:14 **Prep Date:**
Lab ID: 23-Dec-21_CCV_51 **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
3,3'-Dichlorobenzidine	68	10	75		91.0	50	150				
4,6-Dinitro-2-methylphenol	70	10	75		94.0	50	150				
4-Bromophenyl phenyl ether	78	10	75		104.0	50	150				
4-Chloro-3-methylphenol	70	10	75		93.0	50	150				
4-Chlorophenol	83	10	75		110.0	50	150				
4-Chlorophenyl phenyl ether	73	10	75		98.0	50	150				
4-Nitrophenol	71	10	75		95.0	50	150				
Acenaphthene	79	10	75		105.0	50	150				
Acenaphthylene	77	10	75		102.0	50	150				
Anthracene	76	10	75		102.0	50	150				
Azobenzene	79	10	75		105.0	50	150				
Benzidine	50	10	75		67.0	50	150				
Benzo(a)anthracene	75	10	75		100.0	50	150				
Benzo(a)pyrene	74	10	75		99.0	50	150				
Benzo(b)fluoranthene	69	10	75		93.0	50	150				
Benzo(g,h,i)perylene	79	10	75		106.0	50	150				
Benzo(k)fluoranthene	70	10	75		93.0	50	150				
bis(-2-chloroethoxy)Methane	69	10	75		92.0	50	150				
bis(-2-chloroethyl)Ether	79	10	75		106.0	50	150				
bis(2-chloroisopropyl)Ether	67	10	75		90.0	50	150				
bis(2-ethylhexyl)Phthalate	79	10	75		106.0	50	150				
Butylbenzylphthalate	80	10	75		106.0	50	150				
Chrysene	73	10	75		97.0	50	150				
Dibenzo(a,h)anthracene	77	10	75		103.0	50	150				
Diethyl phthalate	77	10	75		103.0	50	150				
Dimethyl phthalate	72	10	75		96.0	50	150				
Di-n-butyl phthalate	80	10	75		106.0	50	150				



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: SV5973N.I_211223B: 16 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372321
Method: SW8270C **Analysis Date:** 12/24/2021 16:14 **Prep Date:**
Lab ID: 23-Dec-21_CCV_51 **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Di-n-octyl phthalate	75	10	75		99.0	50	150				
Fluoranthene	75	10	75		101.0	50	150				
Fluorene	80	10	75		107.0	50	150				
Hexachlorobenzene	78	10	75		104.0	50	150				
Hexachlorobutadiene	68	10	75		91.0	50	150				
Hexachlorocyclopentadiene	73	10	75		97.0	50	150				
Hexachloroethane	79	10	75		105.0	50	150				
Indeno(1,2,3-cd)pyrene	78	10	75		104.0	50	150				
Isophorone	70	10	75		93.0	50	150				
m+p-Cresols	68	10	75		91.0	50	150				
Naphthalene	75	10	75		100.0	50	150				
Nitrobenzene	73	10	75		98.0	50	150				
n-Nitrosodimethylamine	65	10	75		86.0	50	150				
n-Nitroso-di-n-propylamine	64	10	75		86.0	50	150				
n-Nitrosodiphenylamine	85	10	75		114.0	50	150				
o-Cresol	72	10	75		96.0	50	150				
Pentachlorophenol	76	10	75		101.0	50	150				
Phenanthrene	75	10	75		100.0	50	150				
Phenol	69	10	75		92.0	50	150				
Pyrene	77	10	75		103.0	50	150				
Pyridine	64	10	75		85.0	50	150				
Surr: 2,4,6-Tribromophenol	77	10	75		102.0	50	150				
Surr: 2-Fluorobiphenyl	76	10	75		101.0	50	150				
Surr: 2-Fluorophenol	81	10	75		108.0	50	150				
Surr: Nitrobenzene-d5	75	10	75		100.0	50	150				
Surr: Phenol-d5	72	10	75		96.0	50	150				



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: SV5973N.I_211223B: 16 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372321
Method: SW8270C **Analysis Date:** 12/24/2021 16:14 **Prep Date:**
Lab ID: 23-Dec-21_CCV_51 **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Surr: Terphenyl-d14	76	10	75		102.0	50	150				

Associated Samples: B21121841-001A, B21121841-002A, B21121841-003A, B21121841-004A

Run ID: Run Order: SV5975.I_211228B: 2 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372500
Method: SW8270C **Analysis Date:** 12/29/2021 06:25 **Prep Date:**
Lab ID: 28-Dec-21_CCV_26 **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1-Methylnaphthalene	2.0	0.10	2.0		99.0	80	120				
2-Methylnaphthalene	1.9	0.10	2.0		95.0	80	120				
Naphthalene	1.6	0.10	2.0		81.0	80	120				
Surr: 2-Fluorobiphenyl	1.7	0.10	2.0		85.0	80	120				
Surr: Nitrobenzene-d5	2.1	0.10	2.0		104.0	80	120				
Surr: Terphenyl-d14	1.8	0.10	2.0		90.0	80	120				

Associated Samples: B21121841-001A, B21121841-002A, B21121841-003A, B21121841-004A



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Run ID: Run Order: SV5975.I_211228B: 13 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372500
Method: SW8270C **Analysis Date:** 12/29/2021 12:22 **Prep Date:**
Lab ID: 28-Dec-21_CCV_37 **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1-Methylnaphthalene	1.9	0.10	2.0		96.0	50	150				
2-Methylnaphthalene	1.7	0.10	2.0		83.0	50	150				
Naphthalene	1.8	0.10	2.0		90.0	50	150				
Surr: 2-Fluorobiphenyl	2.0	0.10	2.0		100.0	50	150				
Surr: Nitrobenzene-d5	2.3	0.10	2.0		115.0	50	150				
Surr: Terphenyl-d14	1.8	0.10	2.0		89.0	50	150				

Associated Samples: **B21121841-001A, B21121841-002A, B21121841-003A, B21121841-004A**

Analytical QC Exceptions Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B21121841
Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Analysis Method	Analysis	Batch ID	Associated Samples	Sample Type	Lab ID	Analysis Date	Analysis Time	Analyte	%REC	Low Limit	High Limit	% RPD	RPD Limit	Qual	
SW6020	Metals by ICP-MS, Total	162444	001H, 003H, 004H	SD	B21121841-001HDIL	12/23/2021	16:22	Lead					10.0	N	
SW8260B	8260-Volatile Organic Compounds QC Samples	R372727	001C, 002C, 003C, 004C, 005A, 009A	MS-DOD	B21121841-001CMS	12/27/2021	18:45	1,1,2,2-Tetrachloroethane	123.0	71	121			S	
				Bromomethane		26.0	53	141			S				
				MSD-DOD	B21121841-001CMSD	12/27/2021	19:12	Bromomethane	42.0	53	141	46	20.0	SR	
		CCV	CCV122721_Closing	12/27/2021	20:07	Bromomethane	47.0	50	150			S			
		R372824	001C, 002C, 003C, 004C, 005A, 009A	MS-DOD	B21121841-001CMS	12/28/2021	19:09	Bromomethane	20.0	53	141				S
				MSD-DOD	B21121841-001CMSD	12/28/2021	19:36	1,1-Dichloroethene	111.0	71	131	23	20.0	R	
Bromomethane				38.0	53	141	61	20.0	SR						
CCV	CCV122821_Closing	12/28/2021	20:31	Bromomethane	47.0	50	150			S					
SW8270C	Low Level PAH	162432	001A, 002A, 003A, 004A	LCSD-DOD	LLCSD-162432	12/29/2021	00:34	Surr: Terphenyl-d14	133.0	58	132	0.0		S	
				Naphthalene		41.0	43	114	23	40.0	S				
	Semi-Volatile Organic Compounds, Extended List	162432	001A, 002A, 003A, 004A	LCSD-DOD	LCS-162432	12/24/2021	10:17	4-Nitrophenol	42.0	15	36			S	
				LCSD-DOD	LCSD-162432	12/24/2021	10:49	4-Nitrophenol	46.0	15	36	8.8	20.0	S	
				Benzidine		41.0	10	100	49	20.0	R				
				Naphthalene		95.0	40	121	22	20.0	R				
				MS-DOD	B21121841-002AMS	12/24/2021	14:04	4-Chlorophenol	92.0	41	81			S	
4-Nitrophenol		50.0	15	36			S								
n-Nitrosodimethylamine		47.0	20	45			S								



Preparation and Analysis Dates Report

Work Order: B21121841

Client: AECOM - Honolulu

Project Name: CV18F0126/60571032.02.20.01

Report Date: 2/04/2022

Lab ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Method	Prep Date	Prep Batch	Analysis Method	Analysis Date
001A	ERH2191 (RHMW09)	12/16/2021 18:13	Ground Water	Low Level PAH		SW3510C	12/22/2021 16:55	162432	SW8270C	12/29/2021 07:30
						SW3510C	12/22/2021 16:55	162432	SW8270C	12/29/2021 08:02
				Semi-Volatile Organic Compounds		SW3510C	12/22/2021 16:55	162432	SW8270C	12/24/2021 12:59
001B	ERH2191 (RHMW09)	12/16/2021 18:13	Ground Water	Diesel Range Organics		SW3520C	12/22/2021 14:02	162439	SW8015C	12/27/2021 18:06
						SW3520C	12/22/2021 14:02	162439	SW8015C	12/28/2021 23:05
001E	ERH2191 (RHMW09)	12/16/2021 18:13	Ground Water	EDB in Water by ECD		SW8011	12/27/2021 08:27	162467	SW8011	12/27/2021 22:04
001H	ERH2191 (RHMW09)	12/16/2021 18:13	Ground Water	Metals by ICP-MS, Total		SW3010A	12/22/2021 16:22	162444	SW6020	12/23/2021 16:04
002A	ERH2189 (RHMW08-FD)	12/16/2021 13:33	Ground Water	Low Level PAH		SW3510C	12/22/2021 16:55	162432	SW8270C	12/29/2021 09:08
						SW3510C	12/22/2021 16:55	162432	SW8270C	12/29/2021 09:40
				Semi-Volatile Organic Compounds		SW3510C	12/22/2021 16:55	162432	SW8270C	12/24/2021 13:32
002B	ERH2189 (RHMW08-FD)	12/16/2021 13:33	Ground Water	Diesel Range Organics		SW3520C	12/22/2021 14:02	162439	SW8015C	12/27/2021 16:40
						SW3520C	12/22/2021 14:02	162439	SW8015C	12/28/2021 21:39
003A	ERH2188 (RHMW08)	12/16/2021 13:33	Ground Water	Low Level PAH		SW3510C	12/22/2021 16:55	162432	SW8270C	12/29/2021 10:12
						SW3510C	12/22/2021 16:55	162432	SW8270C	12/29/2021 10:45
				Semi-Volatile Organic Compounds		SW3510C	12/22/2021 16:55	162432	SW8270C	12/24/2021 14:37
003B	ERH2188 (RHMW08)	12/16/2021 13:33	Ground Water	Diesel Range Organics		SW3520C	12/22/2021 14:02	162439	SW8015C	12/27/2021 15:14
						SW3520C	12/22/2021 14:02	162439	SW8015C	12/28/2021 20:12
003E	ERH2188 (RHMW08)	12/16/2021 13:33	Ground Water	EDB in Water by ECD		SW8011	12/27/2021 08:27	162467	SW8011	12/27/2021 22:24
003H	ERH2188 (RHMW08)	12/16/2021 13:33	Ground Water	Metals by ICP-MS, Total		SW3010A	12/22/2021 16:22	162444	SW6020	12/23/2021 15:52
004A	ERH2199 (RHMW11-5)	12/16/2021 15:40	Ground Water	Low Level PAH		SW3510C	12/22/2021 16:55	162432	SW8270C	12/29/2021 11:17
						SW3510C	12/22/2021 16:55	162432	SW8270C	12/29/2021 11:50
				Semi-Volatile Organic Compounds		SW3510C	12/22/2021 16:55	162432	SW8270C	12/24/2021 15:09
004B	ERH2199 (RHMW11-5)	12/16/2021 15:40	Ground Water	Diesel Range Organics		SW3520C	12/27/2021 14:12	162502	SW8015C	12/30/2021 09:55
						SW3520C	12/27/2021 14:12	162502	SW8015C	01/03/2022 03:41
004E	ERH2199 (RHMW11-5)	12/16/2021 15:40	Ground Water	EDB in Water by ECD		SW8011	12/27/2021 08:27	162467	SW8011	12/27/2021 23:24
004H	ERH2199 (RHMW11-5)	12/16/2021 15:40	Ground Water	Metals by ICP-MS, Total		SW3010A	12/22/2021 16:22	162444	SW6020	12/23/2021 15:58
007A	ERH2190 (RHMW09-TB) Client Trip Blank	12/16/2021 13:22	Trip Blank	EDB in Water by ECD		SW8011	12/27/2021 08:28	162467	SW8011	12/27/2021 22:44
011A	ERH2198 (RHMW11-5TB) Client Trip Blank	12/16/2021 14:35	Trip Blank	EDB in Water by ECD		SW8011	12/27/2021 08:28	162467	SW8011	12/27/2021 23:04



Chemical Abstracts Service (CAS) Registry Numbers

Prepared by Billings, MT Branch

Client: AECOM - Honolulu

Workorder: B21121841

Project: CV18F0126/60571032.02.20.01

Report Date: 02/04/2022

Analyses	CAS No
AGGREGATE ORGANICS	
Organic Carbon, Total (TOC)	7440-44-0
METALS, TOTAL	
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
Bromomethane	74-83-9
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
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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
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SEMI-VOLATILE ORGANIC COMPOUNDS

1,2,4-Trichlorobenzene	120-82-1
1,2-Dichlorobenzene	95-50-1
1,3-Dichlorobenzene	541-73-1
1,4-Dichlorobenzene	106-46-7
1-Methylnaphthalene	90-12-0
2,4,5-Trichlorophenol	95-95-4
2,4,6-Trichlorophenol	88-06-2
2,4-Dichlorophenol	120-83-2
2,4-Dimethylphenol	105-67-9
2,4-Dinitrophenol	51-28-5
2,4-Dinitrotoluene	121-14-2
2,6-Dinitrotoluene	606-20-2
2-Chloronaphthalene	91-58-7
2-Chlorophenol	95-57-8
2-Methylnaphthalene	91-57-6
2-Nitrophenol	88-75-5

3,3'-Dichlorobenzidine	91-94-1
4,6-Dinitro-2-methylphenol	534-52-1
4-Bromophenyl phenyl ether	101-55-3
4-Chloro-3-methylphenol	59-50-7
4-Chlorophenol	106-48-9
4-Chlorophenyl phenyl ether	7005-72-3
4-Nitrophenol	100-02-7
Acenaphthene	83-32-9
Acenaphthylene	208-96-8
Anthracene	120-12-7
Azobenzene	103-33-3
Benzidine	92-87-5
Benzo(a)anthracene	56-55-3
Benzo(a)pyrene	50-32-8
Benzo(b)fluoranthene	205-99-2
Benzo(g,h,i)perylene	191-24-2
Benzo(k)fluoranthene	207-08-9
bis(-2-chloroethoxy)Methane	111-91-1
bis(-2-chloroethyl)Ether	111-44-4
bis(2-chloroisopropyl)Ether	108-60-1
bis(2-ethylhexyl)Phthalate	117-81-7
Butylbenzylphthalate	85-68-7
Chrysene	218-01-9
Di-n-butyl phthalate	84-74-2
Di-n-octyl phthalate	117-84-0
Dibenzo(a,h)anthracene	53-70-3
Diethyl phthalate	84-66-2
Dimethyl phthalate	131-11-3
Fluoranthene	206-44-0
Fluorene	86-73-7
Hexachlorobenzene	118-74-1
Hexachlorobutadiene	87-68-3
Hexachlorocyclopentadiene	77-47-4
Hexachloroethane	67-72-1
Indeno(1,2,3-cd)pyrene	193-39-5
Isophorone	78-59-1
m+p-Cresols	15831-10-4
n-Nitroso-di-n-propylamine	621-64-7
n-Nitrosodimethylamine	62-75-9
n-Nitrosodiphenylamine	86-30-6
Naphthalene	91-20-3
Nitrobenzene	98-95-3
o-Cresol	95-48-7
Pentachlorophenol	87-86-5
Phenanthrene	85-01-8
Phenol	108-95-2
Pyrene	129-00-0
Pyridine	110-86-1

SEMI-VOLATILE ORGANIC COMPOUNDS (LOW LEVEL) BY SIM

1-Methylnaphthalene

90-12-0

2-Methylnaphthalene

91-57-6

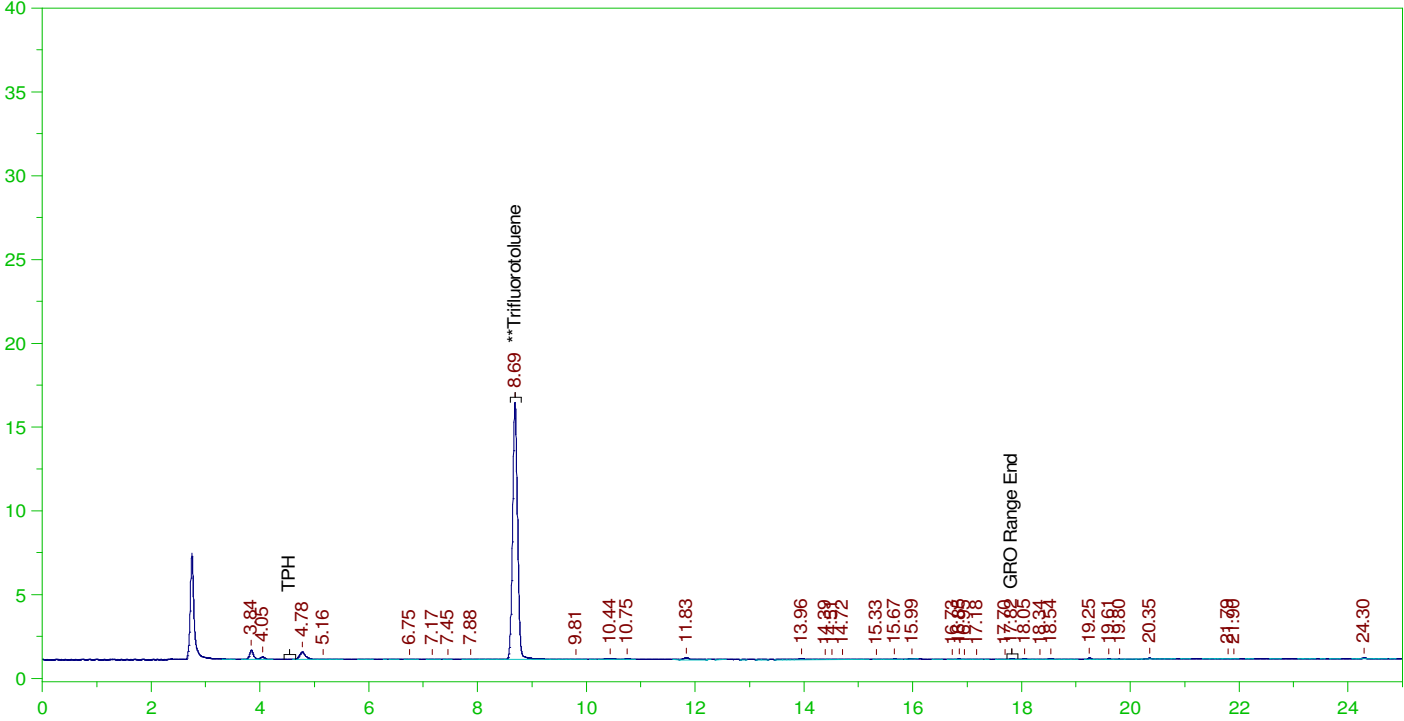
Naphthalene

91-20-3

ERH2191 (RHMW09)

G:\Org\PE1\DAT\PE1122821_b\1228PE1B.0007.RAW

B21121841-001D ;1228PE1 , \$HC-8015-GRO-W,



GASOLINE RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121841-001D ;1228PE1 , \$HC-8015-GRO-W,
Raw File: G:\Org\PE1\DAT\PE1122821_b\1228PE1B.0007.RAW
Date & Time Acquired: 12/28/2021 11:06:32 AM
Method File: G:\Org\PE1\Methods\211208GROB%.MET
Calibration File: G:\Org\PE1\Cals\211208GRO8015CB.CAL
Sample Weight: 5 Dilution: 1 S.A.: 1

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

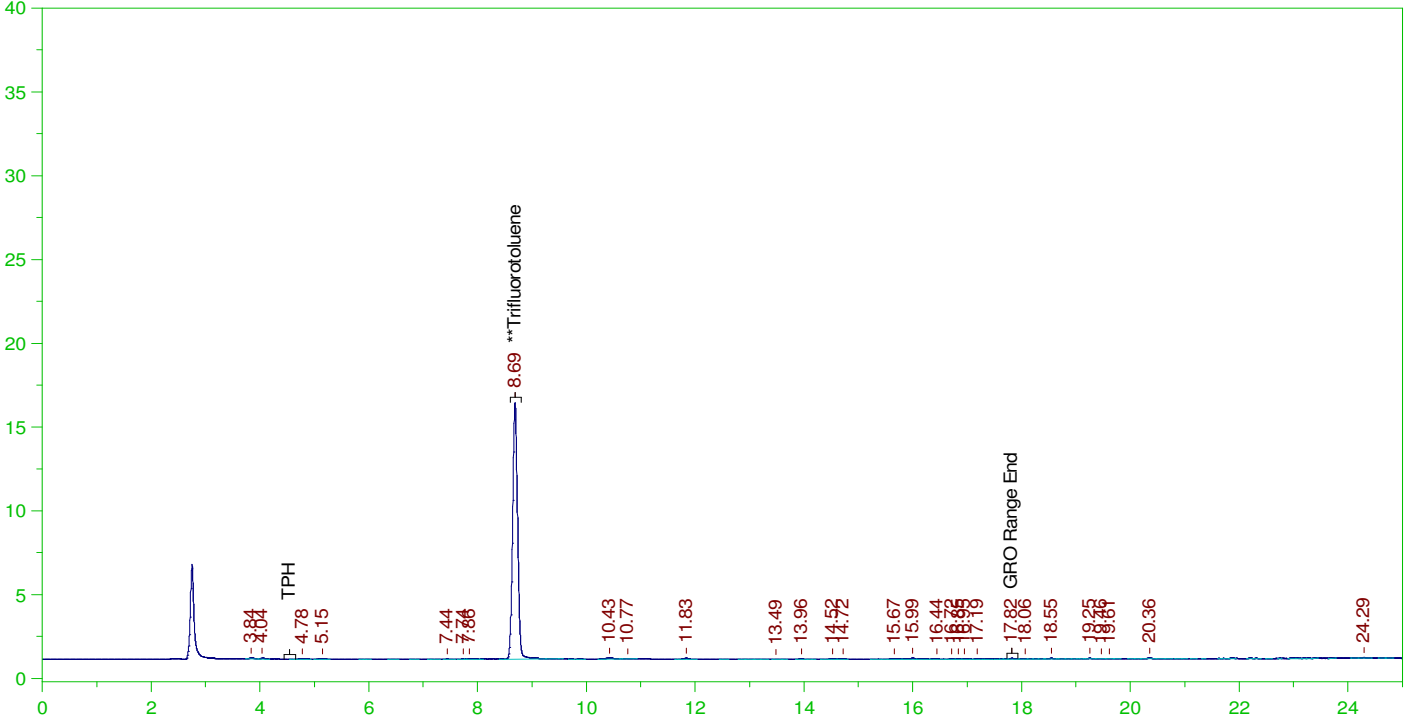
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
**Trifluorotoluene	8.689	25.	20.878	83.51

GRO Area:8902.16 GRO Amount: 1.882128
TPH Area:15031.33 TPH Amount: 3.305801

ERH2189 (RHMW08-FD)

G:\Org\PE1\DAT\PE1122821_b\1228PE1B.0009.RAW

B21121841-002D ;1228PE1 , \$HC-8015-GRO-W,



GASOLINE RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121841-002D ;1228PE1 , \$HC-8015-GRO-W,
Raw File: G:\Org\PE1\DAT\PE1122821_b\1228PE1B.0009.RAW
Date & Time Acquired: 12/28/2021 12:15:09 PM
Method File: G:\Org\PE1\Methods\211208GROB%.MET
Calibration File: G:\Org\PE1\Cals\211208GRO8015CB.CAL
Sample Weight: 5 Dilution: 1 S.A.: 1

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

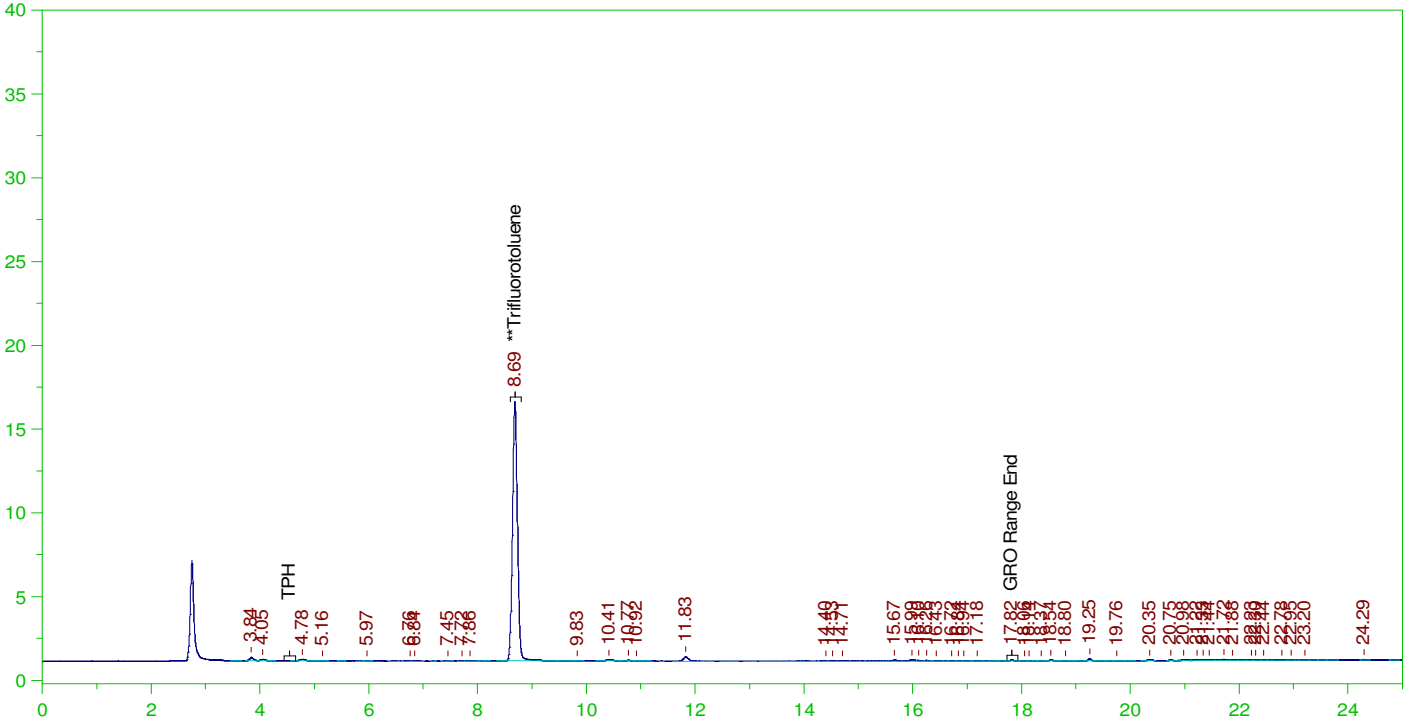
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
**Trifluorotoluene	8.69	25.	20.806	83.22

GRO Area:4277.599 GRO Amount: 0.9043857
TPH Area:6649.601 TPH Amount: 1.462429

ERH2188 (RHMW08)

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B21121841-003D ;1228PE1 , \$HC-8015-GRO-W,



GASOLINE RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121841-003D ;1228PE1 , \$HC-8015-GRO-W,
Raw File: G:\Org\PE1\DAT\PE1122821_b\1228PE1B.0011.RAW
Date & Time Acquired: 12/28/2021 1:23:47 PM
Method File: G:\Org\PE1\Methods\211208G1841-3B%.MET
Calibration File: G:\Org\PE1\Cals\211208GRO8015CB.CAL
Sample Weight: 5 Dilution: 1 S.A.: 1

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

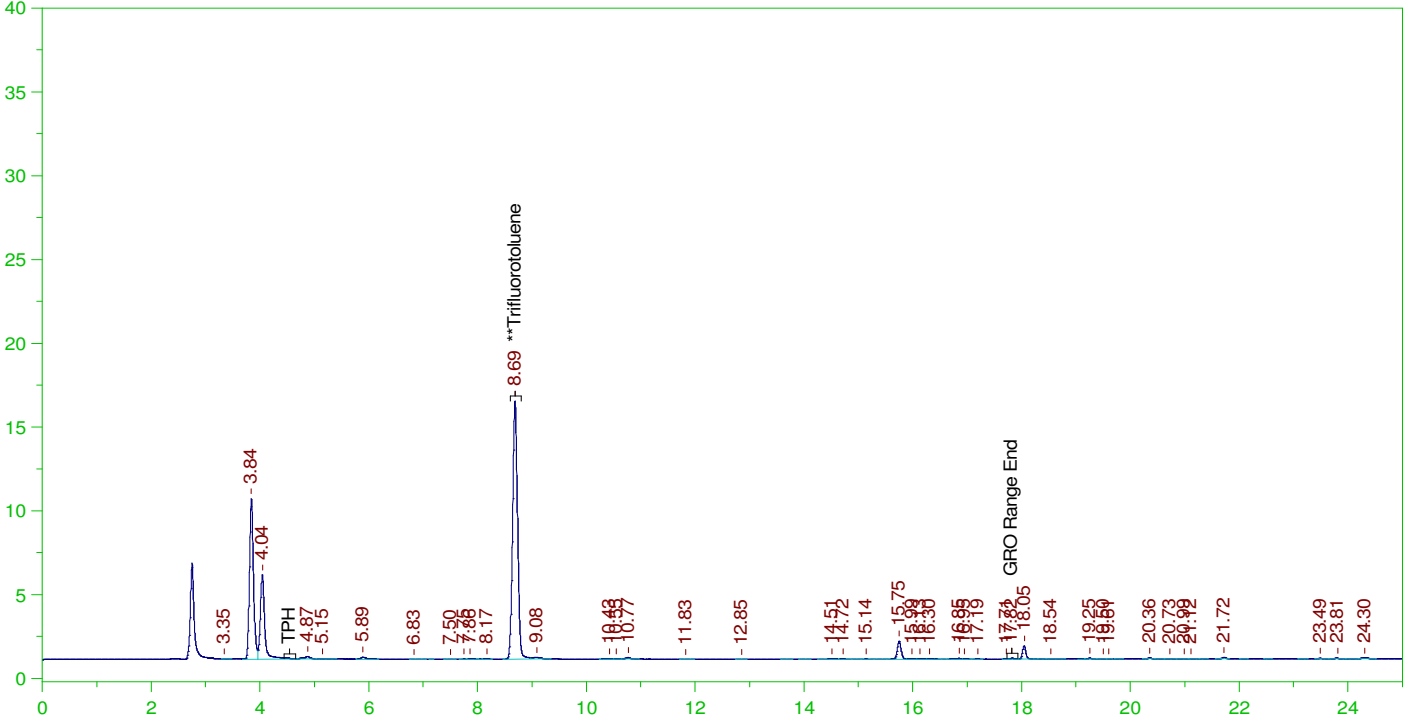
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
**Trifluorotoluene	8.687	25.	21.076	84.3

GRO Area:7670.403 GRO Amount: 1.621705
TPH Area:12661.05 TPH Amount: 2.784511

ERH2199 (RHMW11-5)

G:\Org\PE1\DAT\PE1122821_b\1228PE1B.0013.RAW

B21121841-004D ;1228PE1 , \$HC-8015-GRO-W,



GASOLINE RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121841-004D ;1228PE1 , \$HC-8015-GRO-W,
Raw File: G:\Org\PE1\DAT\PE1122821_b\1228PE1B.0013.RAW
Date & Time Acquired: 12/28/2021 2:32:16 PM
Method File: G:\Org\PE1\Methods\211208G1841-4B%.MET
Calibration File: G:\Org\PE1\Cals\211208GRO8015CB.CAL
Sample Weight: 5 Dilution: 1 S.A.: 1

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

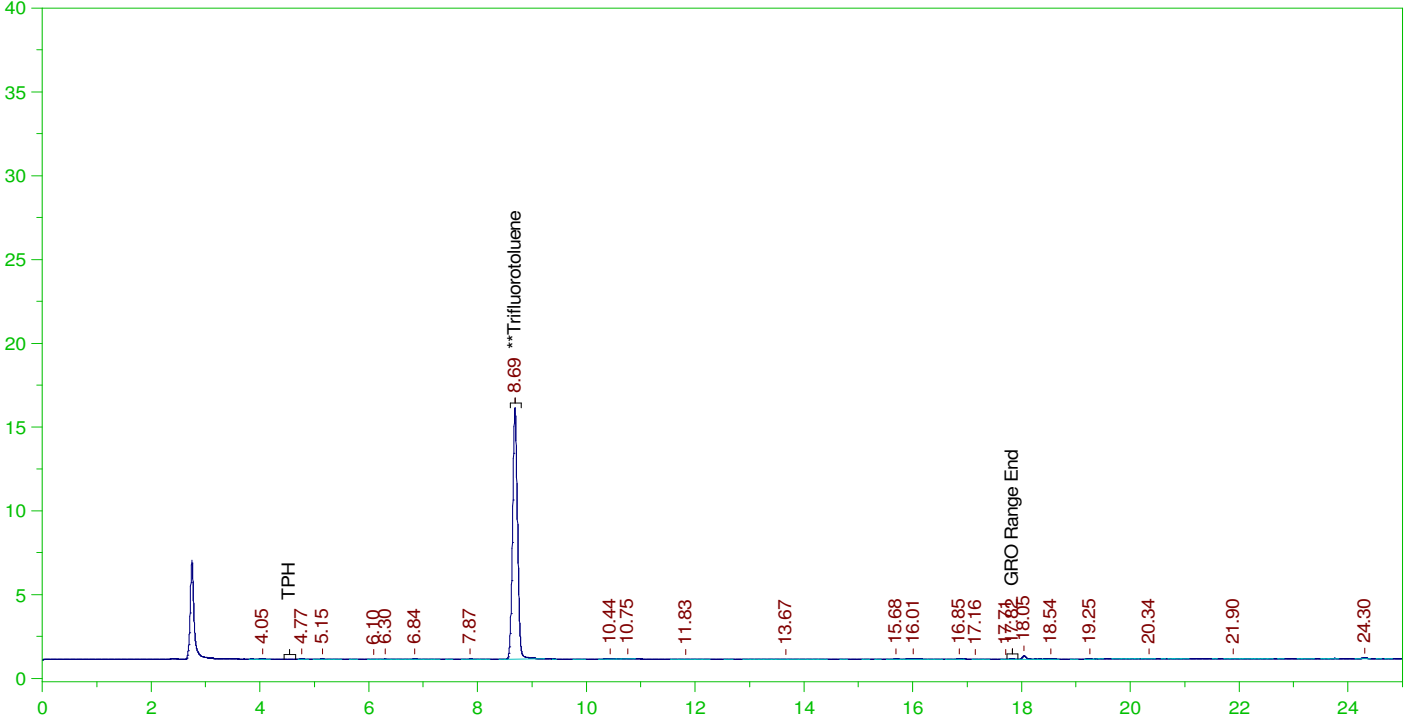
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
**Trifluorotoluene	8.69	25.	20.769	83.08

GRO Area:13160.5 GRO Amount: 2.782442
TPH Area:96532.49 TPH Amount: 21.23013

ERH2190 (RHMW09-TB) Client Trip Blank

G:\Org\PE1\DAT\PE1122821_b\1228PE1B.0015.RAW

B21121841-006A ;1228PE1 , \$HC-8015-GRO-W,



GASOLINE RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121841-006A ;1228PE1 , \$HC-8015-GRO-W,
Raw File: G:\Org\PE1\DAT\PE1122821_b\1228PE1B.0015.RAW
Date & Time Acquired: 12/28/2021 3:40:44 PM
Method File: G:\Org\PE1\Methods\211208GROB%.MET
Calibration File: G:\Org\PE1\Cals\211208GRO8015CB.CAL
Sample Weight: 5 Dilution: 1 S.A.: 1

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

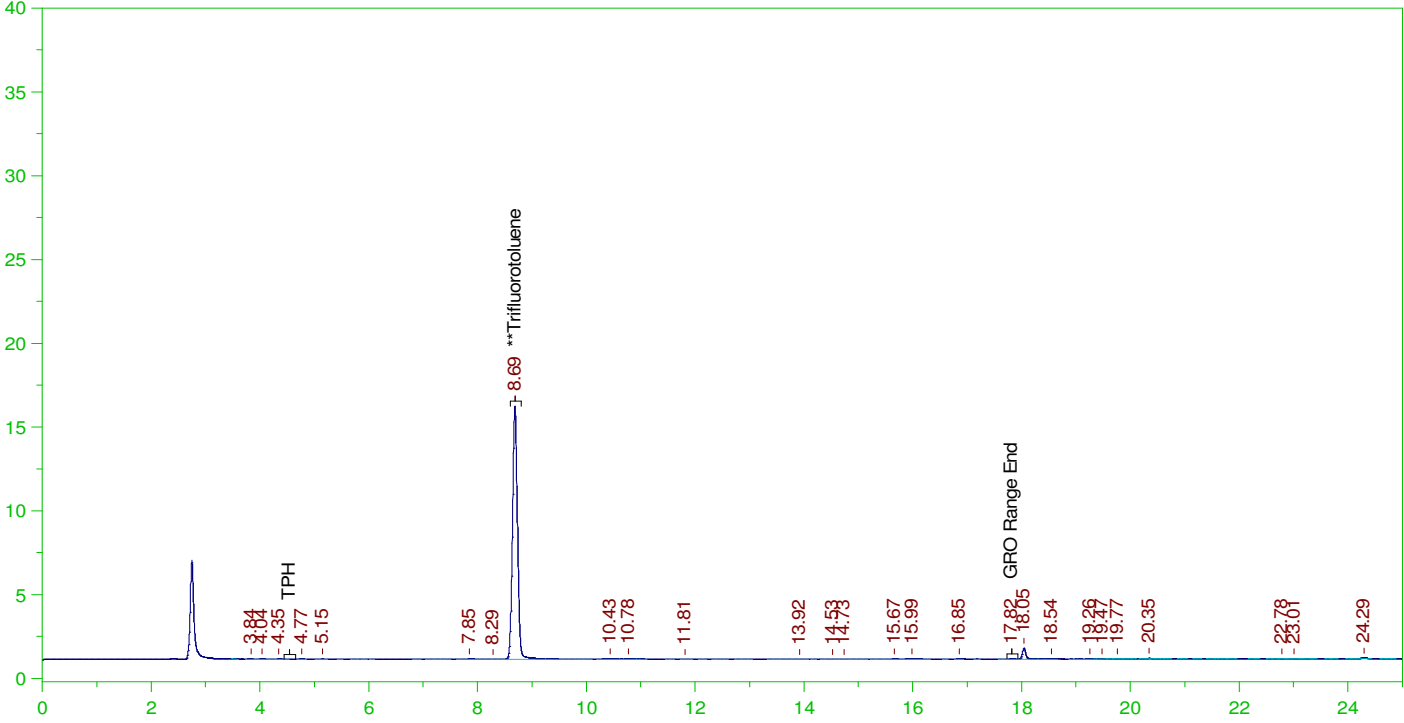
SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
**Trifluorotoluene	8.689	25.	20.262	81.05

GRO Area:3171.187 GRO Amount: 0.6704641
TPH Area:5611.052 TPH Amount: 1.234023

ERH2198 (RHMW11-5TB) Trip Blank-14575

G:\Org\PE1\DAT\PE1122821_b\1228PE1B.0016.RAW

B21121841-010A ;1228PE1 , \$HC-8015-GRO-W,



GASOLINE RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121841-010A ;1228PE1 , \$HC-8015-GRO-W,
 Raw File: G:\Org\PE1\DAT\PE1122821_b\1228PE1B.0016.RAW
 Date & Time Acquired: 12/28/2021 4:15:00 PM
 Method File: G:\Org\PE1\Methods\211208GROB%.MET
 Calibration File: G:\Org\PE1\Cals\211208GRO8015CB.CAL
 Sample Weight: 5 Dilution: 1 S.A.: 1

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

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
**Trifluorotoluene	8.688	25.	20.583	82.33

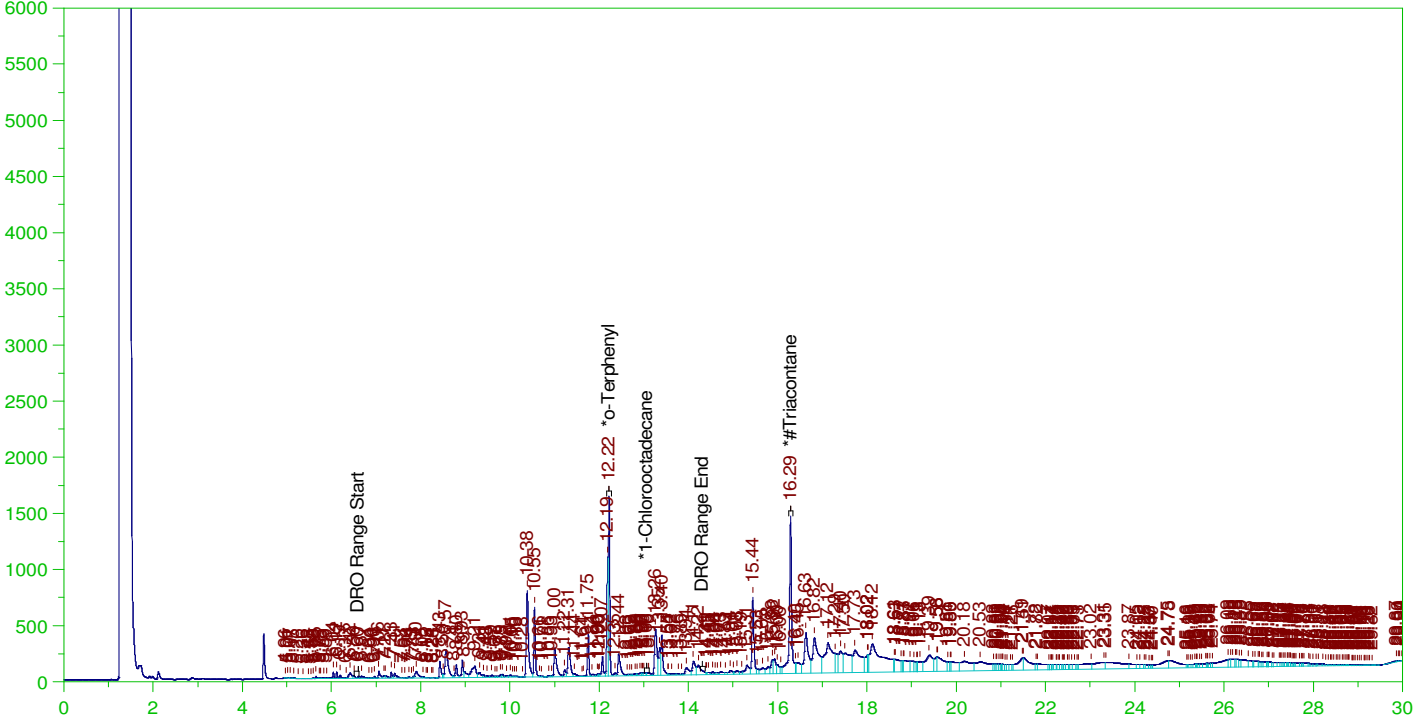
GRO Area:3196.392 GRO Amount: 0.6757931
 TPH Area:7954.415 TPH Amount: 1.749393

ERH2191 (RHMW09)

Batch ID: 162439

G:\Org\HP5\DAT\HP5122621_b\1226HP5.0044.RAW

B21121841-001B ;1226HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121841-001B ;1226HP5 , \$HC-8015-DRO-W,
Raw File: G:\Org\HP5\DAT\HP5122621_b\1226HP5.0044.RAW
Date & Time Acquired: 12/27/2021 6:06:43 PM
Method File: G:\Org\HP5\Methods\D3_8015-C24T-IL-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IL-24-Tri.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.51 to 14.37

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.218	.192	.099	51.37	-
*1-Chlorooctadecane	13.057	.192	.001	.42	-
*#Triacontane	16.286	.192	.172	89.6	-

DRO Area: 2.227415E+07 DRO Amount: 0.6831028

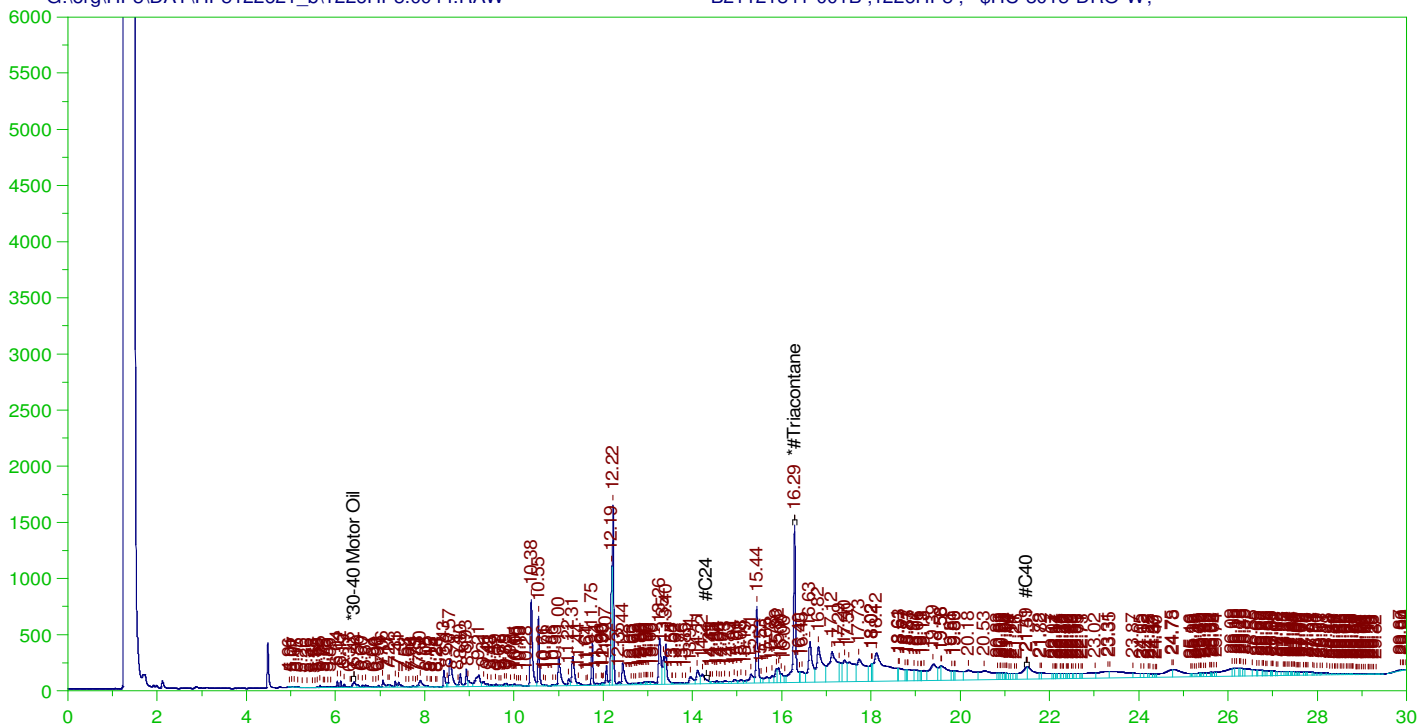
TEH Area: 8.330474E+07 TEH Amount: 2.554786

ERH2191 (RHMW09)

Batch ID: 162439

G:\org\HP5\DAT\HP5122621_b\1226HP5.0044.RAW

B21121841-001B ;1226HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121841-001B ;1226HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122621_b\1226HP5.0044.RAW
Date & Time Acquired: 12/27/2021 6:06:43 PM
Method File: G:\Org\HP5\Methods\D3_OROS-AL-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL-SAMP.CAL
Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.27 to 21.54

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane_____	16.286	.481	.172	35.84

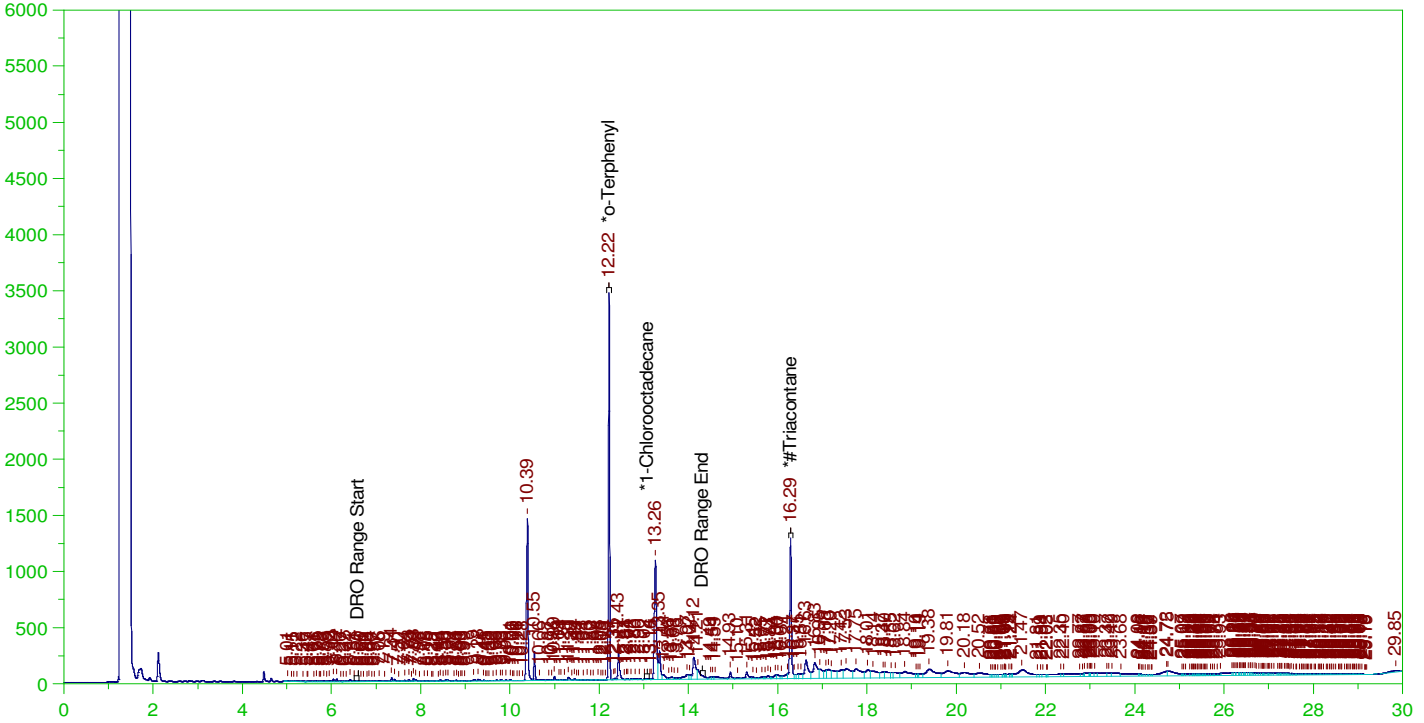
RRO Area:4.28065E+07 RRO AMOUNT: 1.442068

ERH2189 (RHMW08-FD)

Batch ID: 162439

G:\org\HP5\DAT\HP5122621_b\1226HP5.0042.RAW

B21121841-002B ;1226HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121841-002B ;1226HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122621_b\1226HP5.0042.RAW
Date & Time Acquired: 12/27/2021 4:40:31 PM
Method File: G:\Org\HP5\Methods\D3_8015-C24T-IL-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IL-24-Tri.CAL
Sample Weight: 980 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.51 to 14.37

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.217	.204	.193	94.66	-
*1-Chlorooctadecane	29.846	.204	.	.	-
*#Triacontane	16.287	.204	.123	60.19	-

DRO Area:1.386432E+07 DRO Amount: 0.4512224

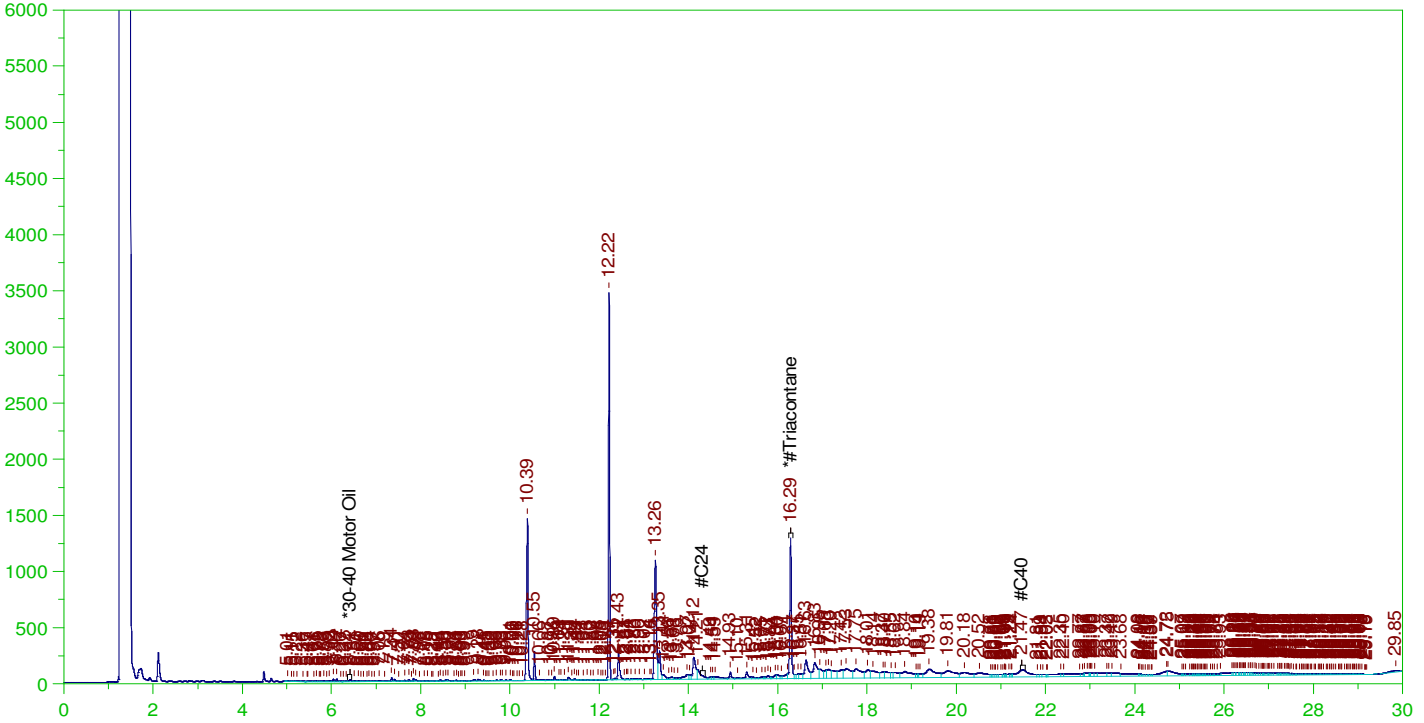
TEH Area:4.023484E+07 TEH Amount: 1.309467

ERH2189 (RHMW08-FD)

Batch ID: 162439

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B21121841-002B ;1226HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121841-002B ;1226HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122621_b\1226HP5.0042.RAW
Date & Time Acquired: 12/27/2021 4:40:31 PM
Method File: G:\Org\HP5\Methods\D3_OROS-AL-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL-SAMP.CAL
Sample Weight: 980 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.27 to 21.54

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.287	.51	.123	24.08	-

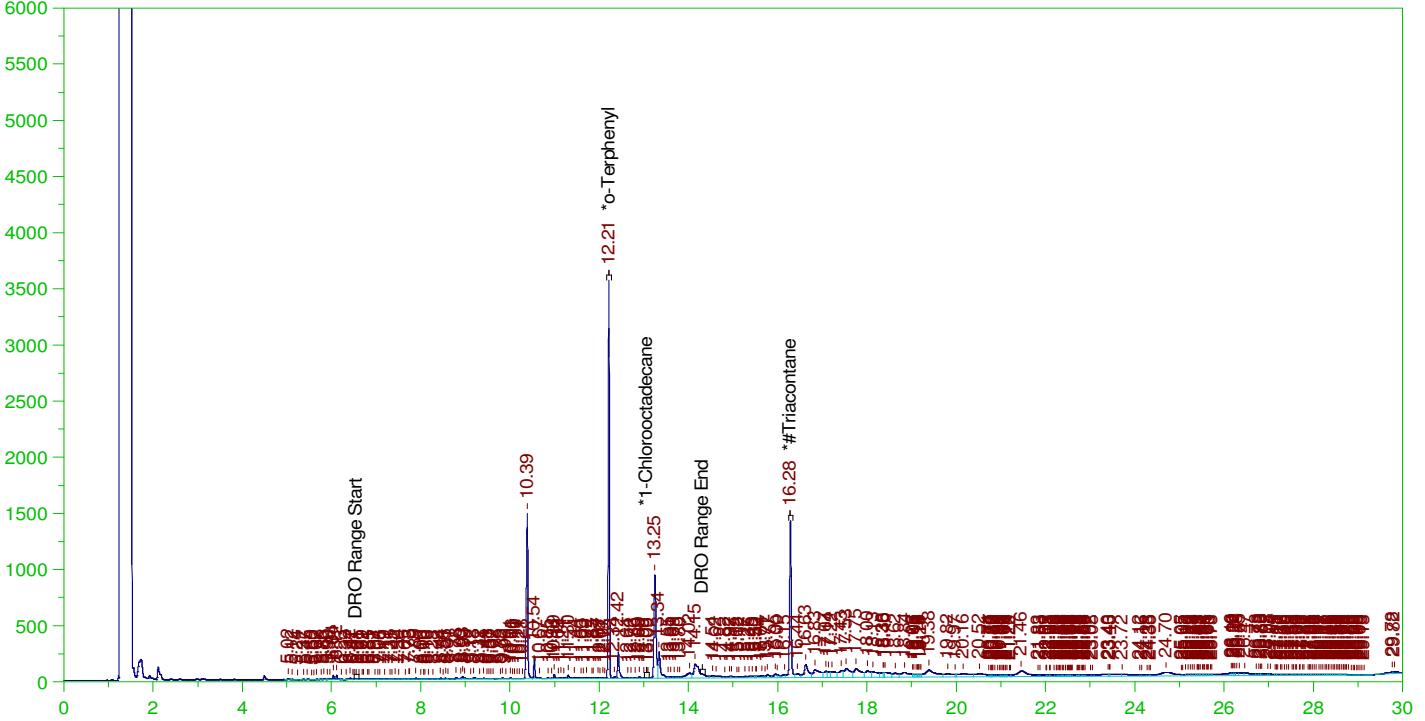
RRO Area:1.826579E+07 RRO AMOUNT: 0.6530127

ERH2188 (RHMW08)

Batch ID: 162439

G:\org\HP5\DAT\HP5122621_b\1226HP5.0040.RAW

B21121841-003B ; 1226HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121841-003B ; 1226HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122621_b\1226HP5.0040.RAW
Date & Time Acquired: 12/27/2021 3:14:50 PM
Method File: G:\Org\HP5\Methods\D3_8015-C24T-IL-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IL-24-Tri.CAL
Sample Weight: 970 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.51 to 14.37

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.212	.206	.195	94.71	-
*1-Chlorooctadecane	13.063	.206	.001	.33	-
*#Triacontane	16.282	.206	.138	66.8	-

DRO Area: 1.263994E+07 DRO Amount: 0.4156154

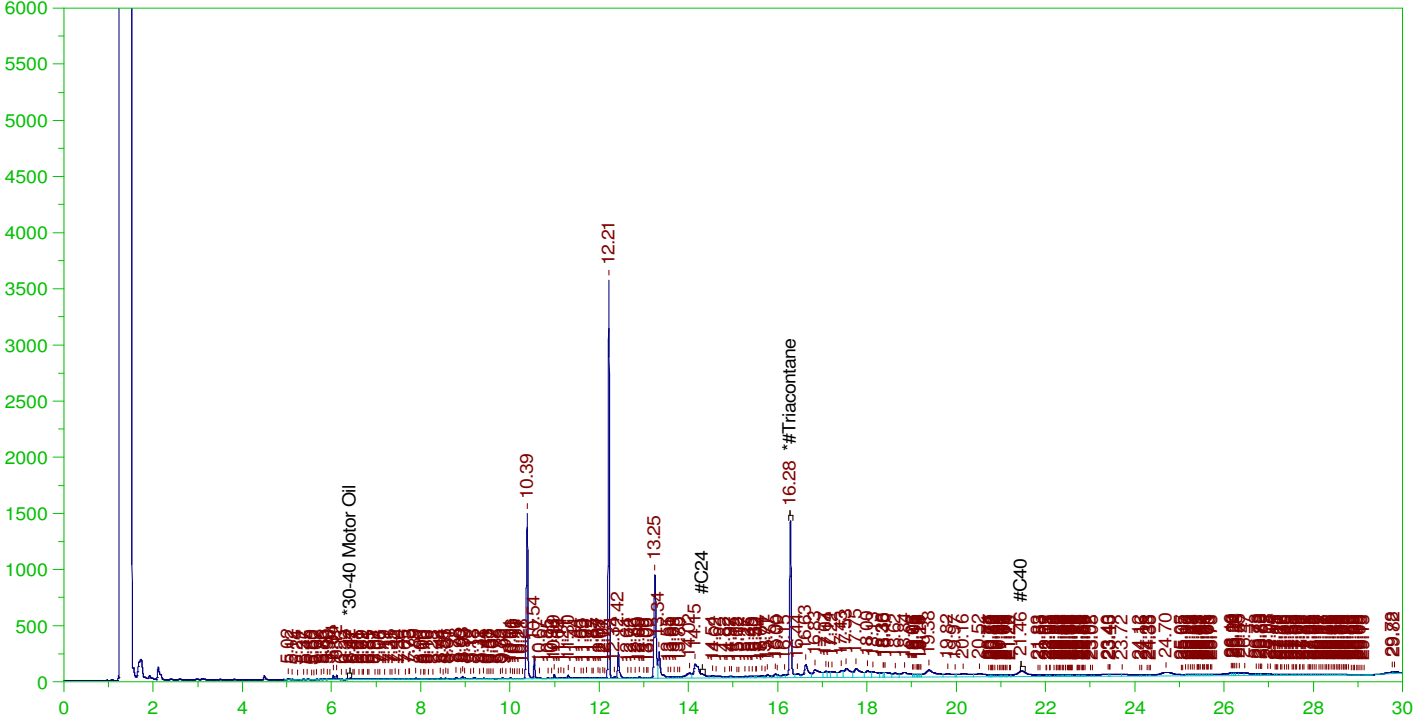
TEH Area: 3.133498E+07 TEH Amount: 1.030329

ERH2188 (RHMW08)

Batch ID: 162439

G:\org\HP5\DAT\HP5122621_b\1226HP5.0040.RAW

B21121841-003B ;1226HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121841-003B ;1226HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5122621_b\1226HP5.0040.RAW
Date & Time Acquired: 12/27/2021 3:14:50 PM
Method File: G:\Org\HP5\Methods\D3_OROS-AL-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL-SAMP.CAL
Sample Weight: 970 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.27 to 21.54

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.282	.515	.138	26.72	-

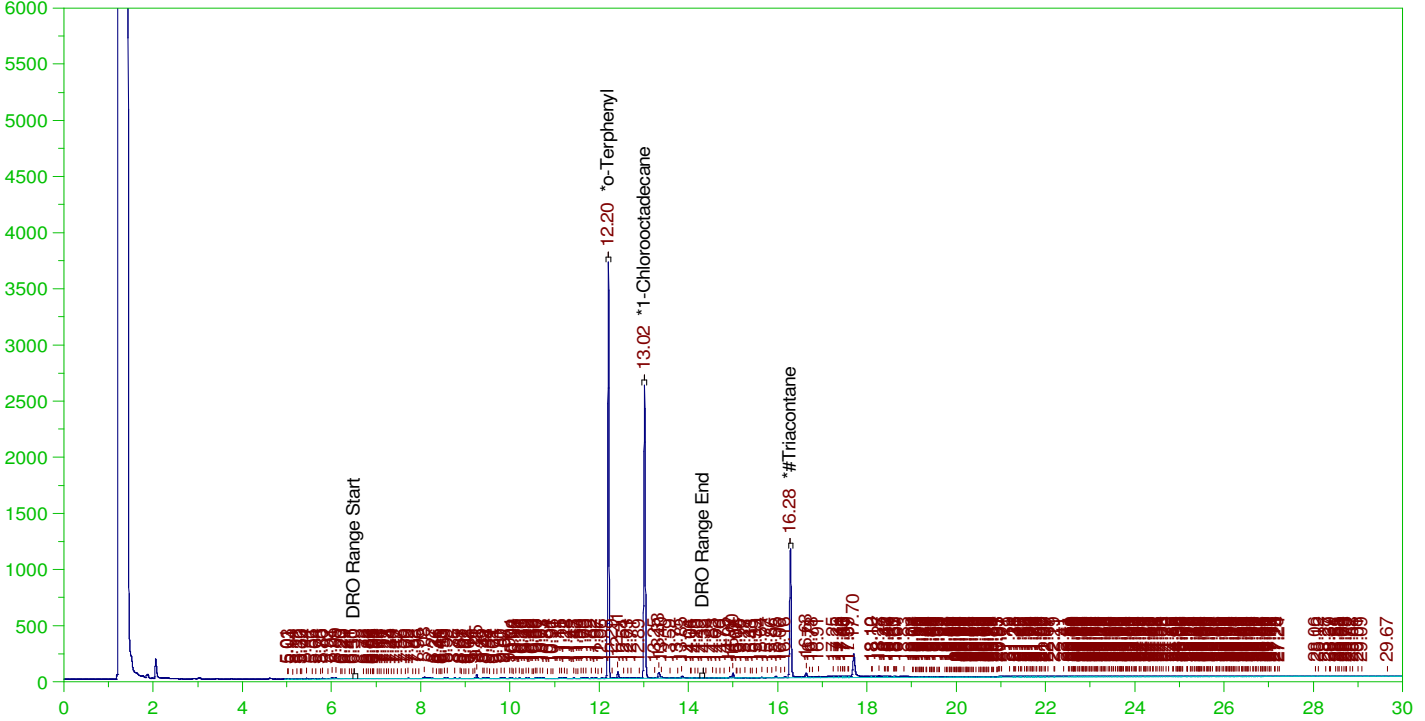
RRO Area:1.334468E+07 RRO AMOUNT: 0.4819986

ERH2199 (RHMW11-5)

Batch ID: 162439

G:\org\HP5\DAT\HP5122821_b\1228HP5.0063.RAW

B21121841-004B ;1228HP5 , \$HC-8015-DRO-W, RR



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121841-004B ;1228HP5 , \$HC-8015-DRO-W, RR
 Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0063.RAW
 Date & Time Acquired: 12/30/2021 9:55:45 AM
 Method File: G:\Org\HP5\Methods\DR_8015-122861-IM-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.201	.2	.192	96.16	-
*1-Chlorooctadecane	13.015	.2	.156	77.75	-
*#Triacontane	16.283	.2	.106	53.22	-

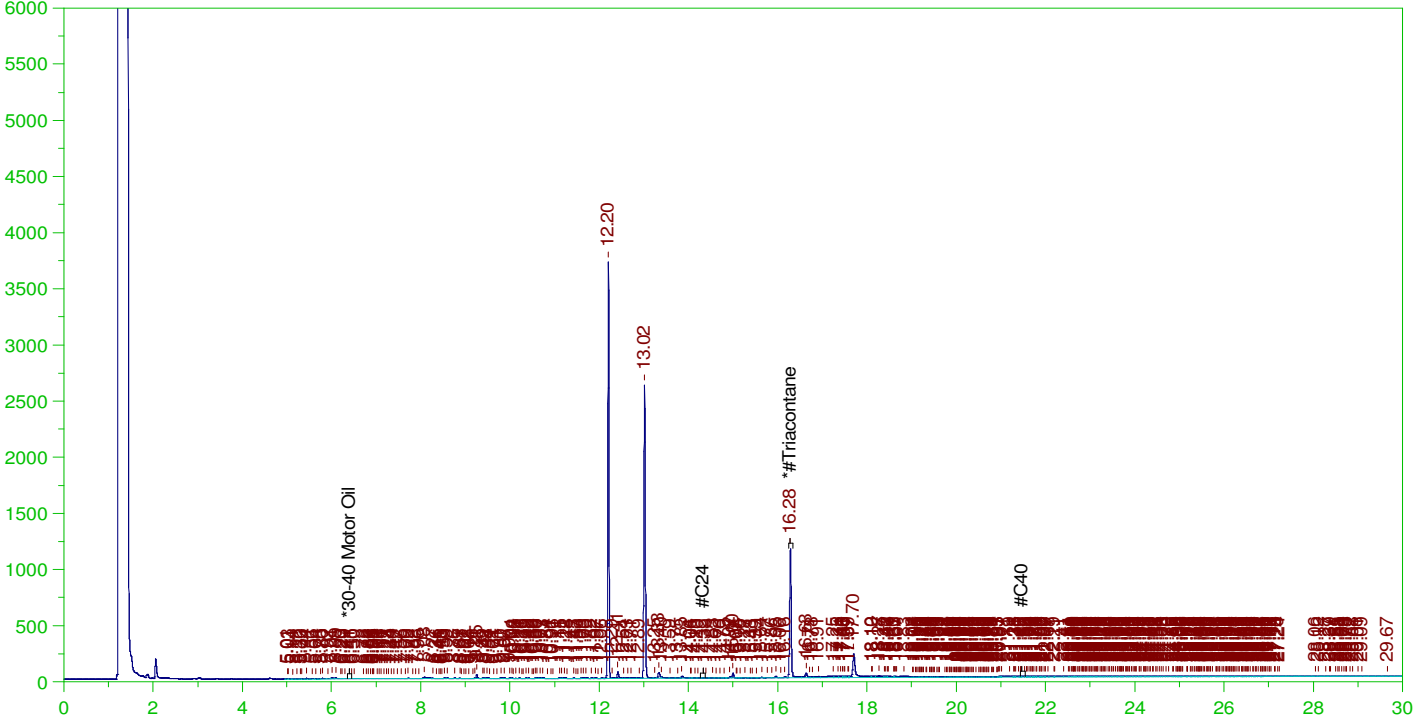
DRO Area:1370907 DRO Amount: 4.372463E-02
 TEH Area:7436570 TEH Amount: 0.237187

ERH2199 (RHMW11-5)

Batch ID: 162439

G:\org\HP5\DAT\HP5122821_b\1228HP5.0063.RAW

B21121841-004B ;1228HP5 , \$HC-8015-DRO-W, RR



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121841-004B ;1228HP5 , \$HC-8015-DRO-W, RR
 Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0063.RAW
 Date & Time Acquired: 12/30/2021 9:55:45 AM
 Method File: G:\Org\HP5\Methods\D3_OROS-122861-AL-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL-SAMP.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
 Rt range for Residual Range Organics: 14.27 to 21.54

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.283	.5	.106	21.29

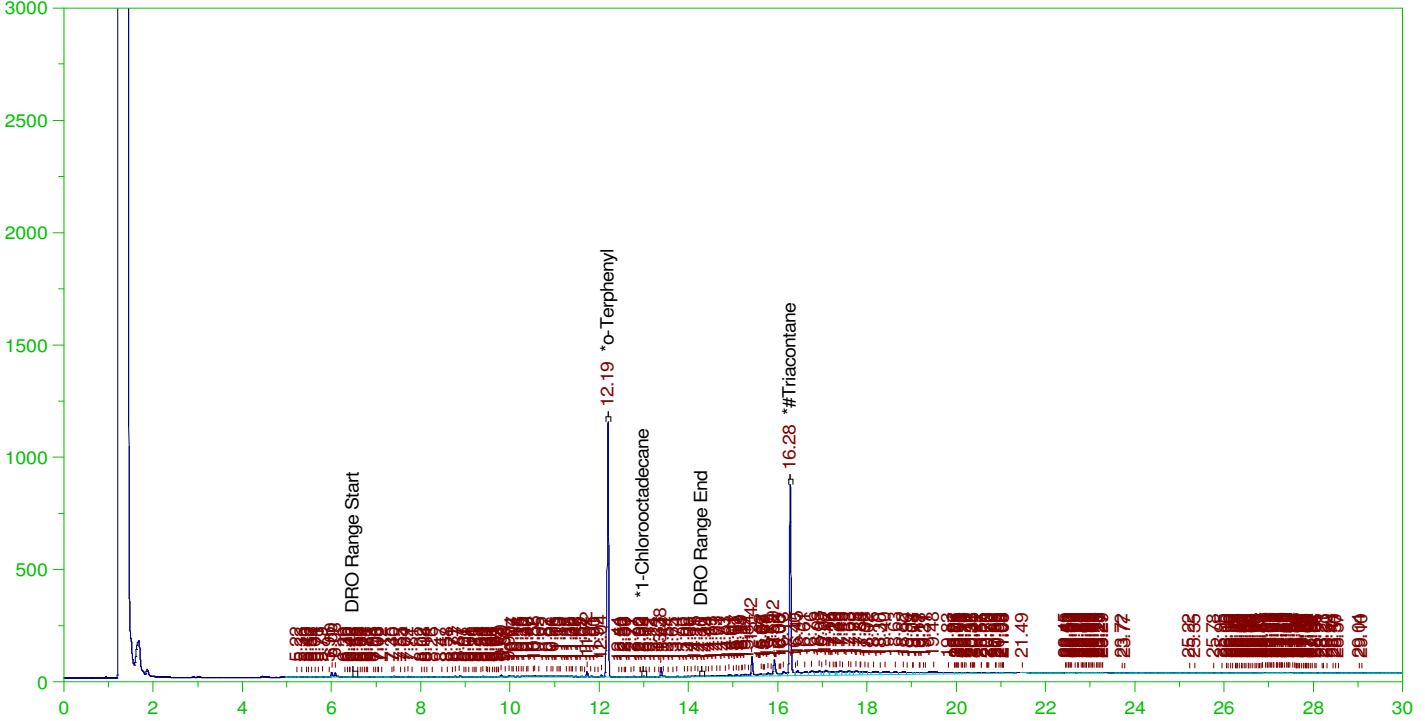
RRO Area:4022263 RRO AMOUNT: 0.1409224

ERH2191 (RHMW09)

G:\org\HP5\DAT\HP5122821_b\1228HP5.0015.RAW

Batch ID: 162439

B21121841-001B ;1228HP5 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121841-001B ;1228HP5 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0015.RAW
 Date & Time Acquired: 12/28/2021 11:05:18 PM
 Method File: G:\Org\HP5\Methods\DR_8015-122815-IM-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.192	.192	.066	34.28	-
*1-Chlorooctadecane	12.988	.192	.	.1	-
*Triacontane	16.278	.192	.075	38.77	-

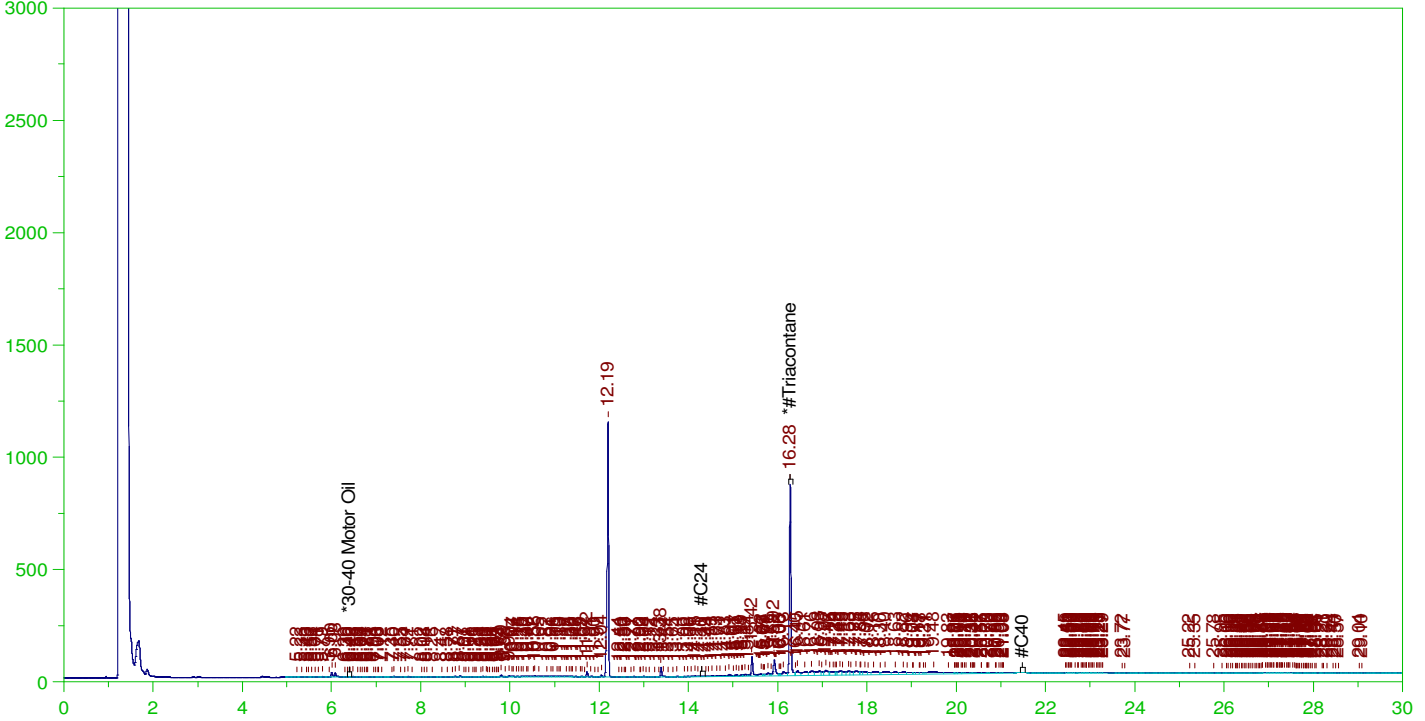
DRO Area: 772940.3 DRO Amount: 0.0237045
 TEH Area: 4439560 TEH Amount: 0.1361522

ERH2191 (RHMW09)

Batch ID: 162439

G:\org\HP5\DAT\HP5122821_b\1228HP5.0015.RAW

B21121841-001B ;1228HP5 , \$HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121841-001B ;1228HP5 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0015.RAW
 Date & Time Acquired: 12/28/2021 11:05:18 PM
 Method File: G:\Org\HP5\Methods\DR_OROS-122815-AL-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL-SAMP.CAL
 Sample Weight: 1040 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
 Rt range for Residual Range Organics: 14.27 to 21.54

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.278	.481	.075	15.51

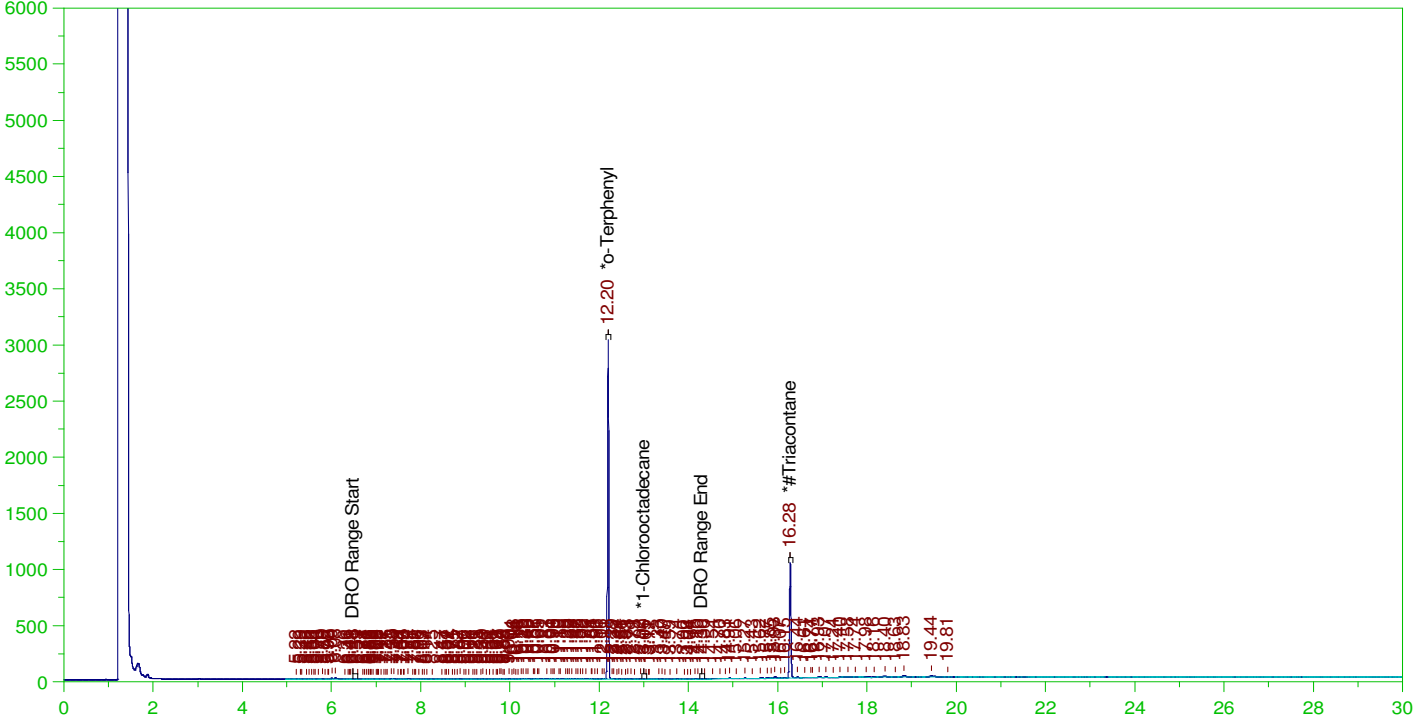
RRO Area:3367819 RRO AMOUNT: 0.1134553

ERH2189 (RHMW08-FD)

Batch ID: 162439

G:\org\HP5\DAT\HP5122821_b\1228HP5.0013.RAW

B21121841-002B ;1228HP5 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121841-002B ;1228HP5 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0013.RAW
 Date & Time Acquired: 12/28/2021 9:39:04 PM
 Method File: G:\Org\HP5\Methods\DR_8015-C24T-IM-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
 Sample Weight: 980 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.196	.204	.162	79.59	-
*1-Chlorooctadecane	13.	.204	.	.08	-
*#Triacontane	16.278	.204	.092	45.19	-

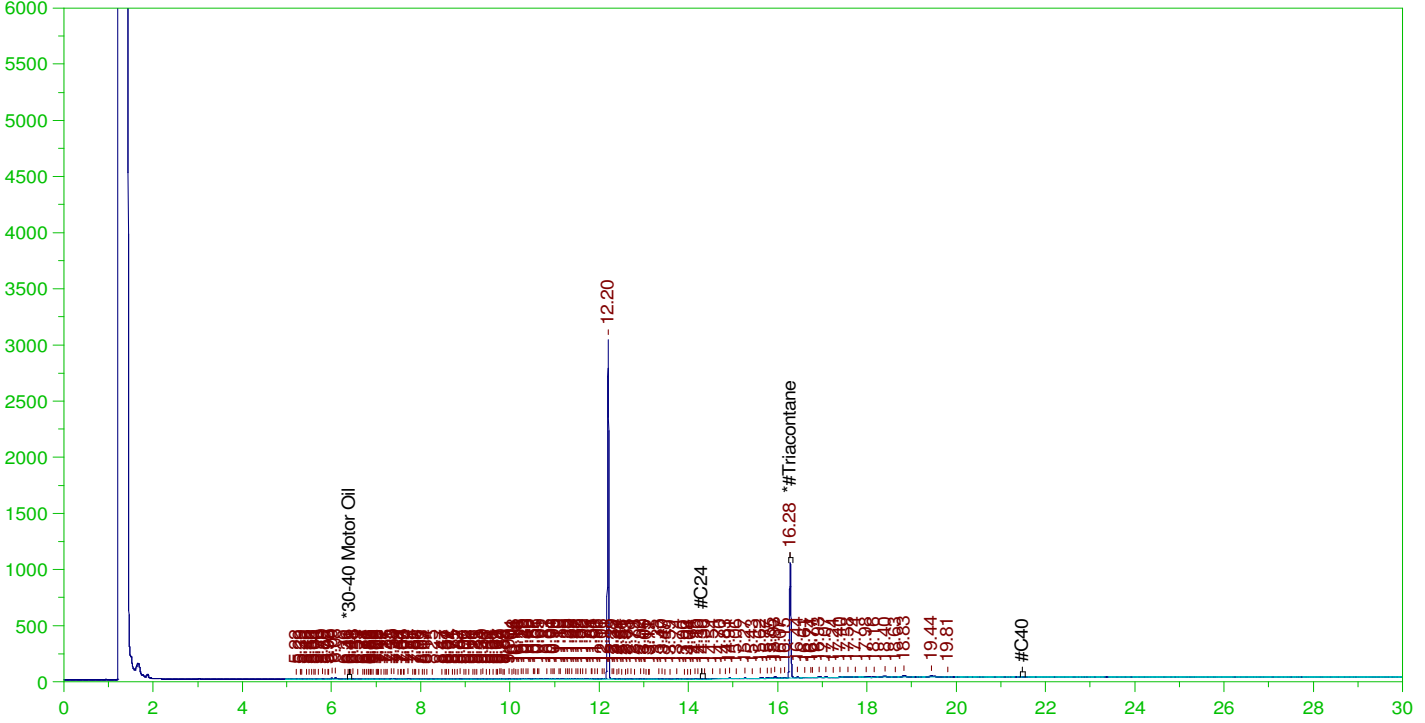
DRO Area:623451 DRO Amount: 2.029058E-02
 TEH Area:1296348 TEH Amount: 0.0421904

ERH2189 (RHMW08-FD)

G:\org\HP5\DAT\HP5122821_b\1228HP5.0013.RAW

Batch ID: 162439

B21121841-002B ;1228HP5 , \$HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121841-002B ;1228HP5 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0013.RAW
 Date & Time Acquired: 12/28/2021 9:39:04 PM
 Method File: G:\Org\HP5\Methods\DR_OROS-AL-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL-SAMP.CAL
 Sample Weight: 980 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
 Rt range for Residual Range Organics: 14.27 to 21.54

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.278	.51	.092	18.08	-

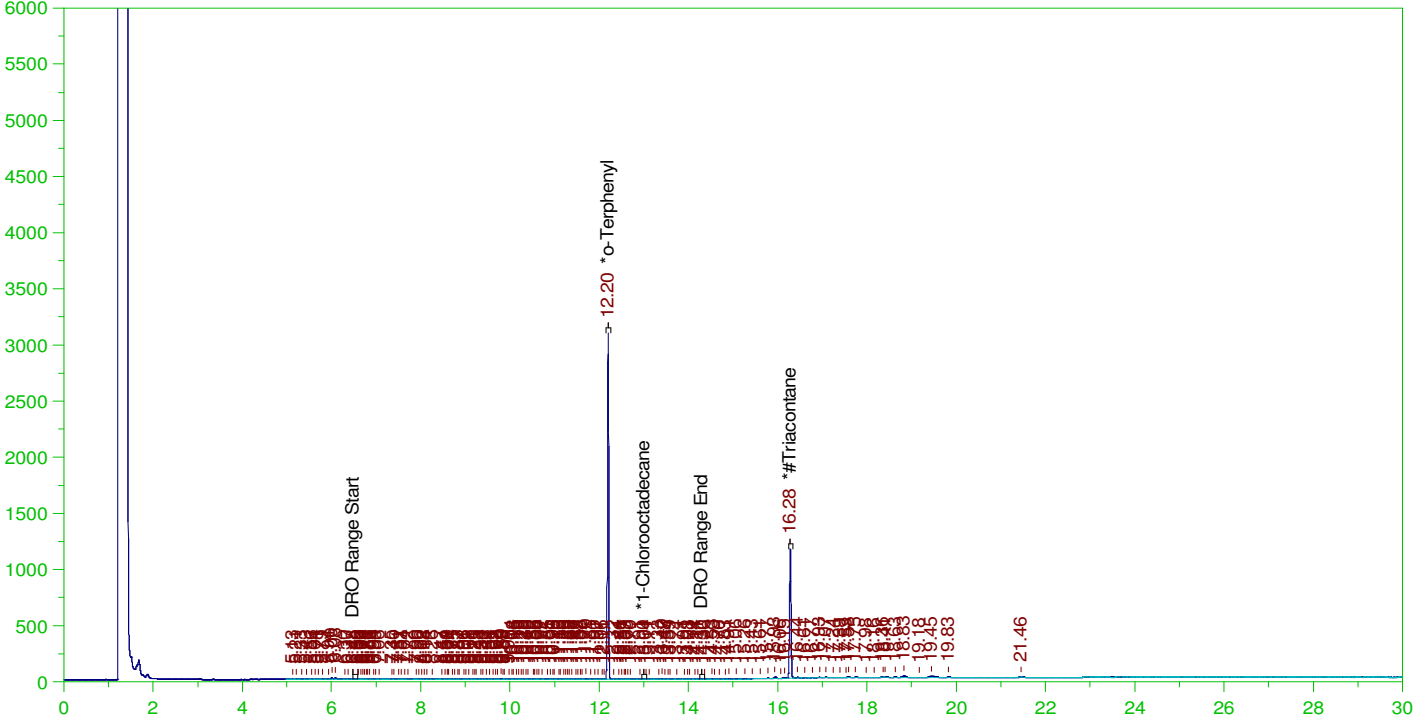
RRO Area:554430.1 RRO AMOUNT: 1.982121E-02

ERH2188 (RHMW08)

Batch ID: 162439

G:\org\HP5\DAT\HP5122821_b\1228HP5.0011.RAW

B21121841-003B ;1228HP5 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121841-003B ;1228HP5 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0011.RAW
 Date & Time Acquired: 12/28/2021 8:12:51 PM
 Method File: G:\Org\HP5\Methods\DR_8015-C24T-IM-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IM-24-Tri.CAL
 Sample Weight: 970 Dilution: 1 S.A.: 1

Mean RF for TEH: 31353.19

Rt range for Diesel Range Organics: 6.48 to 14.36

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.195	.206	.166	80.42	-
*1-Chlorooctadecane	12.998	.206	.	.07	-
*#Triacontane	16.279	.206	.104	50.45	-

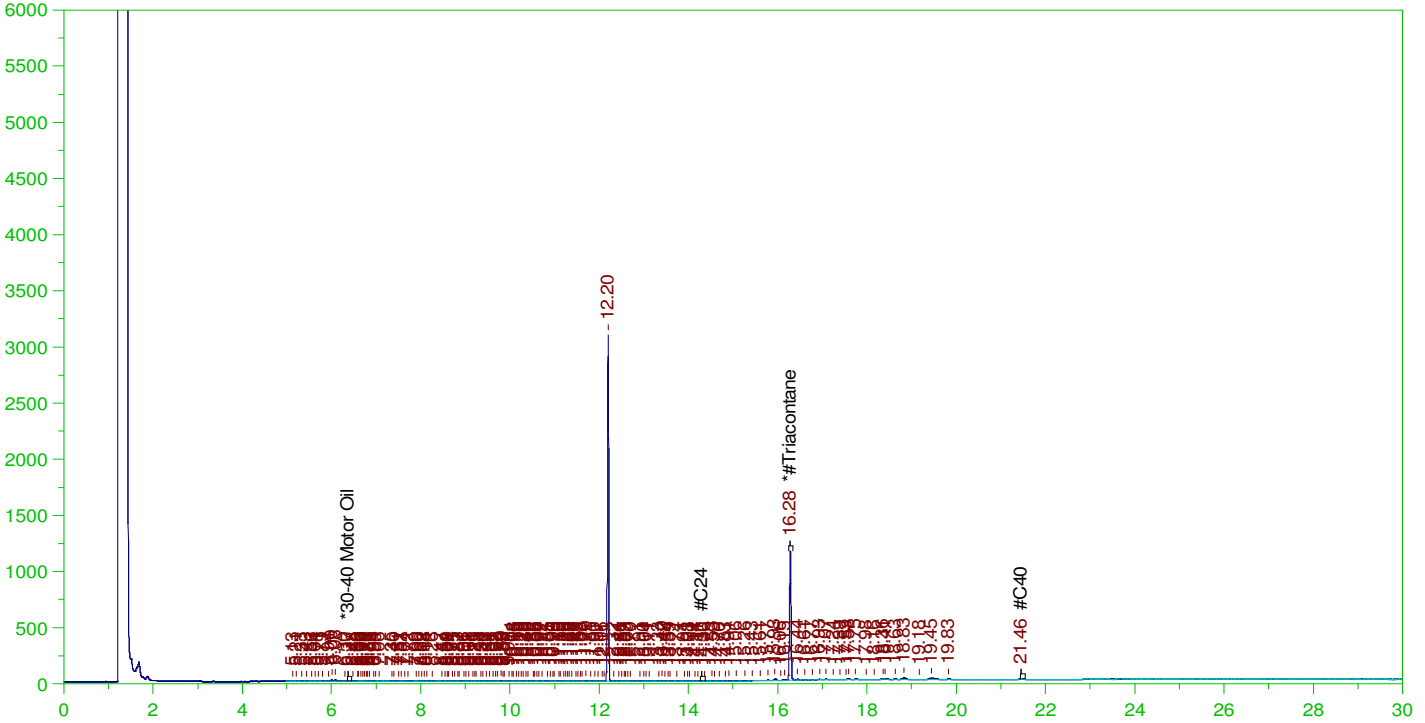
DRO Area:554305.1 DRO Amount: 1.822617E-02
 TEH Area:1221425 TEH Amount: 4.016182E-02

ERH2188 (RHMW08)

Batch ID: 162439

G:\org\HP5\DAT\HP5122821_b\1228HP5.0011.RAW

B21121841-003B ;1228HP5 , \$HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121841-003B ;1228HP5 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP5\DAT\HP5122821_b\1228HP5.0011.RAW
 Date & Time Acquired: 12/28/2021 8:12:51 PM
 Method File: G:\Org\HP5\Methods\DR_OROS-AL-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AL-SAMP.CAL
 Sample Weight: 970 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 28542.41
 Rt range for Residual Range Organics: 14.27 to 21.54

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.279	.515	.104	20.18

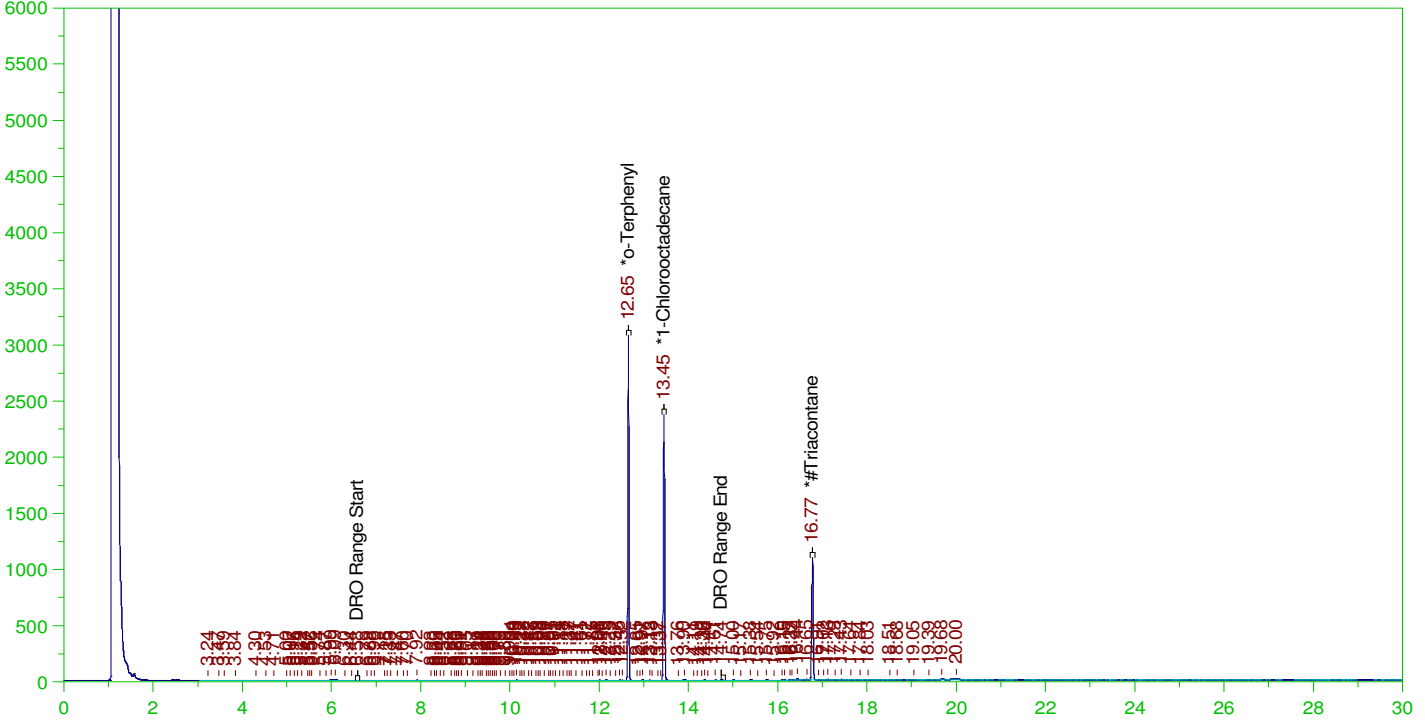
RRO Area:505271.9 RRO AMOUNT: 0.01825

ERH2199 (RHMW11-5)

Batch ID: 162439

G:\org\HP4\DAT\HP4010222_b\0102HP4.0022.RAW

B21121841-004B ;0102HP4, \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B21121841-004B ;0102HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0022.RAW
 Date & Time Acquired: 1/3/2022 3:41:24 AM
 Method File: G:\Org\HP4\methods\DR_8015-C24-OH-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_DRO211102OH-C24-TRI.CAL
 Sample Weight: 1000 Dilution: 1 S.A.: 1

Mean RF for TEH: 29373.28

Rt range for Diesel Range Organics: 6.53 to 14.83

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.65	.2	.158	78.91	-
*1-Chlorooctadecane	13.449	.2	.133	66.51	-
*#Triacontane	16.774	.2	.093	46.68	-

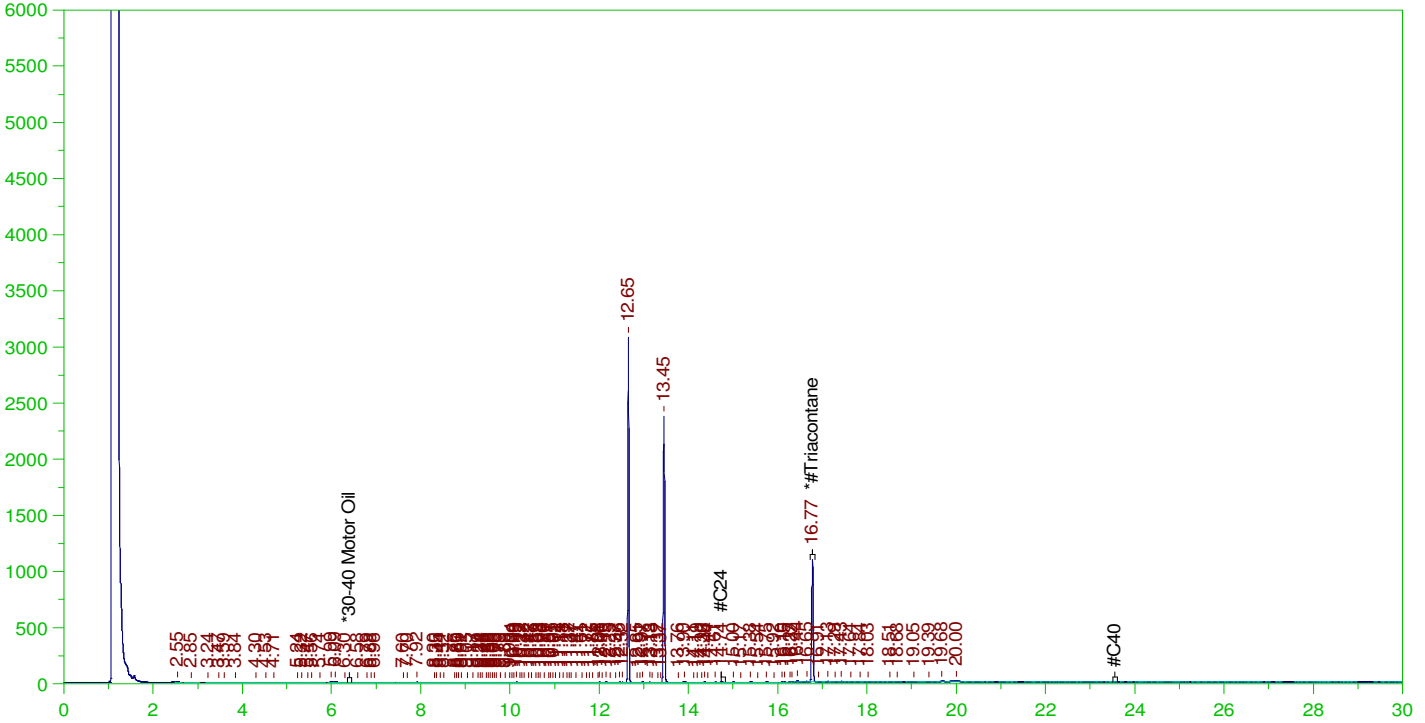
DRO Area:329475.7 DRO Amount: 1.121685E-02
 TEH Area:602664.3 TEH Amount: 2.051743E-02

ERH2199 (RHMW11-5)

Batch ID: 162439

G:\org\HP4\DAT\HP4010222_b\0102HP4.0022.RAW

B21121841-004B ;0102HP4 , \$HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B21121841-004B ;0102HP4 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP4\DAT\HP4010222_b\0102HP4.0022.RAW
 Date & Time Acquired: 1/3/2022 3:41:24 AM
 Method File: G:\Org\HP4\Methods\DR_ORO-S-AB-L%.met
 Calibration File: G:\Org\HP4\Cals\SW8015C_ORO211007AB-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: 14.73 to 23.61

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC
*#Triacontane	16.774	.5	.093	18.6

RRO Area:152759.5 RRO AMOUNT: 6.227565E-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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[Fortune World's Most Admired Companies 2020](#)

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

This transmission may contain confidential information and is for the use of the intended recipient(s). If you received this in error, please contact the sender and delete this email and all copies.

***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

Environmental Scientist, Environmental Health & Science, Environment

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M +1-808-389-5383

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