ANALYTICAL SUMMARY REPORT

February 25, 2022

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

Work Order: B22010219 Quote ID: 5912

Project Name: CV18F0126, 60571032.02.46.01

Energy Laboratories Inc Billings MT received the following 5 samples from AECOM - Honolulu on 1/5/2022 for analysis.

Lab ID	Client Sample ID	Collect Date	Received Date	Matrix	Test
B22010219-001	ERH2301 (OWDFMW05A)	12/31/21 15:25	01/05/2022	Drinking Water	Metals Digestion by SW3010A DRO-Liquid-Liquid Extraction SW3520C Low Level PAH by 8270C SIM SW8270CSIM Separatory Funnel SW3510C Liquid-Liquid Ext. Carbon, Total Organic SW9060A Metals by ICP-MS, Dissolved SW6020 Metals by ICP-MS, Total SW6020 8260-Volatile Organic Compounds-Short List SW8260B EDB in Water by ECD SW8011 Gasoline Range Organics SW8015C Diesel Range Organics SW8015C Headspace Gas Analysis SW8015M Semi-Volatile Organic Compounds, Extended List SW8270C SW8011 Microextraction
B22010219-002	ERH2300-14575	12/31/21 15:25	01/05/2022	Trip Blank	8260-Volatile Organic Compounds-Short List SW8260B
B22010219-003	ERH2300-14575	12/31/21 15:25	01/05/2022	Trip Blank	Gasoline Range Organics SW8015C
B22010219-004	ERH2300-14525	12/31/21 15:25	01/05/2022	Trip Blank	EDB in Water by ECD SW8011 SW8011 Microextraction

ANALYTICAL SUMMARY REPORT

B22010219-005	ERH2300-14576	12/31/21 15:25	01/05/2022	Trip Blank	Headspace Gas Analysis SW8015M

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

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

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

Report Approved By:

Digitally signed by
Leigh Ann. Wise
Date: 2022.02.25 12:05:40 -07:00

CLIENT: AECOM - Honolulu
Project: CV18F0126, 60571032.02.46.01
Work Order: B22010219

Report Date: 2/25/2022

CASE NARRATIVE

General Comments:

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

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

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

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

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

The Stage 4 Validation Package includes data reports for all analyses associated with the instrument calibration, quality control (QC) sample analysis, and sample analysis. All analytical data is within method specifications except as noted in the Analytical QC Exceptions report or the Analysis Specific Comments below. The analytical report identifies preparation batch and analytical run IDs associated with each result for a sample. 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. Where qualified, an analyte exceeded quality control limits, but was not detected in the associated sample(s).

Chain of Custody & Analytical Request Record – DoD Project

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www.energylab.com

COC#202112-81NOI 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, HI 96813
Email	alethea.ramos@aecom.com / margie.pascua@aecom.com
Receive Invoice	☐Hard Copy ☑Email
Receive Report	☐Hard Copy ☑Email
Purchase Order	N/A
Quote	N/A
Bottle Order	N/A

Report Information (if different than Account Information)

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

Comments

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

Project Information

Project Name, PWSID, Permit, etc.	CV18F0126, 60571032 02 46 01
Sampler Name	GM, AE, CB
Sampler Phone	808-987-3201
Sample Origin State	Hawaii
EPA/State Compliance	☐Yes ☐No

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

Analysis	Subcontract Lab
TOC	Energy Laboratories Inc., Casper

Matrix Codes

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

Analysis Requested

All turnaround times are standard unless marked as RUSH.

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

	Sample Identification (Name, Location, Interval, etc.)	Collection Date	Collection Time	Number of Containers	Matrix (See Codes Above)	8260 VOC's (Full Suite) + DCA* [40ml VOA w/HCL]	8015 TPH-g [40ml VOA w/ HCL]	RSK175 Methane [40ml VOA w/H2SO4]	8011 EDB [40ml VOA w/HCL]	SVOCs (full suite+Nap, 1-2-Methylnap) by 8270DSIM*	EPA 3630/8015 TPH-d/o +SGC [1-L AG w/H2SO4]	EPA 9060 TOC [250ml AG w/ H3PO4]	EPA 6020 Total Lead [250ml HDPE w/HNO3]	EPA 6020 Diss. Lead [250ml HDPE w/HNO3] (field Filtered)	See Attached	RUSH TAT	
1	ERH2301 (OWDFMW05A)	12/31/21	11:25	22	GW	X	X	X	X	X	X	X	X	X		✓	1522010219
2	ERH2300 (Trip Blank)	12/31/21	11:00	8	WQ	X	X	X	X							✓	
3																	
4	TB-145725 (8270)			2													
5	TB-145725 (GRO)			1													
6	TB-145725 (8011)																
7	TB-145726 (Methane)			1													
8	8011 TB-146496			4													
9																	
10																	

01/03/22

Custody Record MUST be signed	Relinquished by (print)	Date/Time	Signature	Received by (print)	Date/Time	Signature
	CHRIS WOMACK	01/03/22 1500				
	Relinquished by (print)	Date/Time	Signature	Received by Laboratory (print)	Date/Time	Signature
					1/5/22 10:10	

Shipped By	Cooler ID(s)	Custody Seals Y N C B	Intact Y N	Receipt Temp	Temp Blank Y N	On Ice Y N	Payment Type CC Cash Check	Amount $	Receipt Number (cash/check only)
				1.0 °C	Y	Y			

Work Order Receipt Checklist

AECOM - Honolulu

B22010219

Login completed by: Richard L. Shular
Date Received: 1/5/2022

Reviewed by: BL2000\gmccartney
Received by: dac

Reviewed Date: 1/11/2022
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all sample bottles?	Yes ☑	No ☐	Not Present ☐
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	1.0°C On Ice		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	Not Applicable ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

Standard Reporting Procedures:

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

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

Contact and Corrective Action Comments:

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.

Qualifiers and Abbreviations

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

Qualifiers and Abbreviations

Abbreviation

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

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

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Client Sample ID: ERH2301 (OWDFMW05A)
Project: CV18F0126, 60571032.02.46.01
Matrix: Drinking Water

Lab ID: B22010219-001
Collection Date: 12/31/2021 15:25
Date Received: 01/05/2022
Report Date: 02/25/2022

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
LOW LEVEL PAH BY 8270C SIM												
1-Methylnaphthalene	ND	ug/L	1	U	0.10	0.052	0.021		SW8270CSIM	01/13/2022 22:12/jph	SV5975.I_220113A : 14	162744
2-Methylnaphthalene	ND	ug/L	1	U	0.10	0.052	0.018		SW8270CSIM	01/13/2022 22:12/jph	SV5975.I_220113A : 14	162744
Acenaphthene	ND	ug/L	1	U	0.10	0.052	0.033		SW8270CSIM	01/13/2022 22:12/jph	SV5975.I_220113A : 14	162744
Acenaphthylene	ND	ug/L	1	U	0.10	0.052	0.026		SW8270CSIM	01/13/2022 22:12/jph	SV5975.I_220113A : 14	162744
Anthracene	ND	ug/L	1	U	0.10	0.052	0.029		SW8270CSIM	01/13/2022 22:12/jph	SV5975.I_220113A : 14	162744
Benzo(a)anthracene	ND	ug/L	1	U	0.10	0.052	0.028		SW8270CSIM	01/13/2022 22:12/jph	SV5975.I_220113A : 14	162744
Benzo(a)pyrene	ND	ug/L	1	U	0.10	0.052	0.036		SW8270CSIM	01/13/2022 22:12/jph	SV5975.I_220113A : 14	162744
Benzo(b)fluoranthene	ND	ug/L	1	U	0.10	0.052	0.023		SW8270CSIM	01/13/2022 22:12/jph	SV5975.I_220113A : 14	162744
Benzo(g,h,i)perylene	ND	ug/L	1	U	0.10	0.052	0.028		SW8270CSIM	01/13/2022 22:12/jph	SV5975.I_220113A : 14	162744
Benzo(k)fluoranthene	ND	ug/L	1	U	0.10	0.052	0.030		SW8270CSIM	01/13/2022 22:12/jph	SV5975.I_220113A : 14	162744
Chrysene	ND	ug/L	1	U	0.10	0.052	0.047		SW8270CSIM	01/13/2022 22:12/jph	SV5975.I_220113A : 14	162744
Dibenzo(a,h)anthracene	ND	ug/L	1	U	0.10	0.052	0.038		SW8270CSIM	01/13/2022 22:12/jph	SV5975.I_220113A : 14	162744
Fluoranthene	ND	ug/L	1	U	0.10	0.052	0.024		SW8270CSIM	01/13/2022 22:12/jph	SV5975.I_220113A : 14	162744
Fluorene	ND	ug/L	1	U	0.10	0.052	0.023		SW8270CSIM	01/13/2022 22:12/jph	SV5975.I_220113A : 14	162744
Indeno(1,2,3-cd)pyrene	ND	ug/L	1	U	0.10	0.052	0.051		SW8270CSIM	01/13/2022 22:12/jph	SV5975.I_220113A : 14	162744
Naphthalene	ND	ug/L	1	U	0.10	0.052	0.030		SW8270CSIM	01/13/2022 22:12/jph	SV5975.I_220113A : 14	162744
Phenanthrene	ND	ug/L	1	U	0.10	0.052	0.030		SW8270CSIM	01/13/2022 22:12/jph	SV5975.I_220113A : 14	162744
Pyrene	ND	ug/L	1	U	0.10	0.052	0.025		SW8270CSIM	01/13/2022 22:12/jph	SV5975.I_220113A : 14	162744
AGGREGATE ORGANICS												
Organic Carbon, Total (TOC) - TOC Range is 0.5 to 0.6	0.56	mg/L	1		0.50	0.50	0.17		SW9060A	01/8/2022 05:52/eli-ca	SUB-C278588 : 22	C_R278588
METALS, DISSOLVED												
Lead	ND	mg/L	1	U	0.001	0.0001	0.00006		SW6020	01/14/2022 15:25/car	ICPMS207-B_220114A : 34	R373222
METALS, TOTAL												
Lead	ND	mg/L	1	U	0.001	0.0001	0.00008		SW6020	01/12/2022 23:35/car	ICPMS207-B_220112A : 68	162735
VOLATILE ORGANIC COMPOUNDS												
Benzene	ND	ug/L	1	U	1.0	0.20	0.091		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
Bromobenzene	ND	ug/L	1	U	1.0	0.20	0.083		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
Bromochloromethane	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
Bromodichloromethane	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
Bromoform	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
Carbon tetrachloride	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
Chlorobenzene	ND	ug/L	1	U	1.0	0.20	0.091		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
Chlorodibromomethane	ND	ug/L	1	U	1.0	0.20	0.084		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
Chloroethane	ND	ug/L	1	U	1.0	0.50	0.17		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
Chloroform	ND	ug/L	1	U	1.0	0.20	0.079		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
Chloromethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Client Sample ID: ERH2301 (OWDFMW05A)
Project: CV18F0126, 60571032.02.46.01
Matrix: Drinking Water

Lab ID: B22010219-001
Collection Date: 12/31/2021 15:25
Date Received: 01/05/2022
Report Date: 02/25/2022

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
VOLATILE ORGANIC COMPOUNDS												
1,2-Dibromoethane	ND	ug/L	1	U	1.0	0.20	0.092		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
2-Chlorotoluene	ND	ug/L	1	U	1.0	0.20	0.088		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
4-Chlorotoluene	ND	ug/L	1	U	1.0	0.20	0.073		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
Dibromomethane	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
1,2-Dichlorobenzene	ND	ug/L	1	U	1.0	0.20	0.075		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
1,3-Dichlorobenzene	ND	ug/L	1	U	1.0	0.20	0.080		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
1,4-Dichlorobenzene	ND	ug/L	1	U	1.0	0.20	0.086		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
Dichlorodifluoromethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
1,1-Dichloroethane	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
1,2-Dichloroethane	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
1,1-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
cis-1,2-Dichloroethene	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
trans-1,2-Dichloroethene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
1,2-Dichloropropane	ND	ug/L	1	U	1.0	0.20	0.085		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
1,3-Dichloropropane	ND	ug/L	1	U	1.0	0.20	0.079		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
2,2-Dichloropropane	ND	ug/L	1	U	1.0	0.50	0.19		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
1,1-Dichloropropene	ND	ug/L	1	U	1.0	0.20	0.083		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
cis-1,3-Dichloropropene	ND	ug/L	1	U	1.0	0.20	0.073		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
trans-1,3-Dichloropropene	ND	ug/L	1	U	1.0	0.20	0.085		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
Ethylbenzene	ND	ug/L	1	U	1.0	0.20	0.084		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
Methyl ethyl ketone	ND	ug/L	1	U	20	5.0	1.8		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
Methyl tert-butyl ether (MTBE)	ND	ug/L	1	U	1.0	0.25	0.10		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
Methylene chloride	ND	ug/L	1	U	1.0	0.50	0.34		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
Styrene	ND	ug/L	1	U	1.0	0.20	0.067		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
1,1,1,2-Tetrachloroethane	ND	ug/L	1	U	1.0	0.25	0.10		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
1,1,2,2-Tetrachloroethane	ND	ug/L	1	U	1.0	0.20	0.087		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
Tetrachloroethene	ND	ug/L	1	U	1.0	0.20	0.067		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
Toluene	ND	ug/L	1	UT	1.0	0.20	0.068		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
1,1,1-Trichloroethane	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
1,1,2-Trichloroethane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
Trichloroethene	ND	ug/L	1	U	1.0	0.20	0.099		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
Trichlorofluoromethane	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
1,2,3-Trichloropropane	ND	ug/L	1	U	1.0	0.50	0.24		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
Vinyl chloride	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
m+p-Xylenes	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
o-Xylene	ND	ug/L	1	U	1.0	0.20	0.060		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
Xylenes, Total	ND	ug/L	1	U	1.0	0.20	0.060		SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
Surr: Dibromofluoromethane	111.0	%REC	1		80-119				SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
Surr: 1,2-Dichloroethane-d4	118.0	%REC	1		81-118				SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B22010219-001
Client: AECOM - Honolulu
Collection Date: 12/31/2021 15:25
Client Sample ID: ERH2301 (OWDFMW05A)
Date Received: 01/05/2022
Project: CV18F0126, 60571032.02.46.01
Report Date: 02/25/2022
Matrix: Drinking Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
VOLATILE ORGANIC COMPOUNDS												
Surr: Toluene-d8	108.0	%REC	1		89-112				SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
Surr: p-Bromofluorobenzene	108.0	%REC	1		85-114				SW8260B	01/7/2022 14:14/msc	VOA5975C.I_220107A : 9	R373037
VOCS BY MICROEXTRACTION-ECD												
1,2-Dibromoethane	ND	ug/L	1	U	0.010	0.0048	0.0025		SW8011	01/7/2022 22:55/clt	GECD.I_220107B : 21	162738
Surr: 1,1,1,2-Tetrachloroethane	93.0	%REC	1		70-130				SW8011	01/7/2022 22:55/clt	GECD.I_220107B : 21	162738
PETROLEUM HYDROCARBONS-VOLATILE												
C6 to C10	ND	ug/L	1	U	20	8.7	2.3		SW8015C	01/7/2022 01:17/jp	PE 1_220106A : 10	R372930
Total Purgeable Hydrocarbons	ND	ug/L	1	U	20	10	3.6		SW8015C	01/7/2022 01:17/jp	PE 1_220106A : 10	R372930
Surr: Trifluorotoluene	82.0	%REC	1		70-130				SW8015C	01/7/2022 01:17/jp	PE 1_220106A : 10	R372930
- 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)	0.057	mg/L	1	J	0.30	0.15	0.039		SW8015C	01/7/2022 02:34/amn	GCFID-HP5-B_220106A : 19	162703
Diesel Range Organics (SGT-C10 to C24)	ND	mg/L	1	U	0.30	0.12	0.039		SW8015C	01/8/2022 10:05/amn	GCFID-HP5-B_220106B : 18	162703
Oil Range Hydrocarbons (C24 to C40)	0.12	mg/L	1	J	0.30	0.15	0.088		SW8015C	01/7/2022 02:34/amn	GCFID-HP5-B_220106A : 19	162703
Oil Range Hydrocarbons (SGT-C24 to C40)	ND	mg/L	1	U	0.30	0.15	0.088		SW8015C	01/8/2022 10:05/amn	GCFID-HP5-B_220106B : 18	162703
Total Extractable Hydrocarbons	0.23	mg/L	1	J	0.30	0.15	0.075		SW8015C	01/7/2022 02:34/amn	GCFID-HP5-B_220106A : 19	162703
Total Extractable Hydrocarbons (SGT)	ND	mg/L	1	U	0.30	0.12	0.033		SW8015C	01/8/2022 10:05/amn	GCFID-HP5-B_220106B : 18	162703
Surr: o-Terphenyl	100.0	%REC	1		56-125				SW8015C	01/7/2022 02:34/amn	GCFID-HP5-B_220106A : 19	162703
Surr: o-Terphenyl (SGT)	98.0	%REC	1		56-125				SW8015C	01/8/2022 10:05/amn	GCFID-HP5-B_220106B : 18	162703
Surr: n-Triacontane	114.0	%REC	1		50-150				SW8015C	01/7/2022 02:34/amn	GCFID-HP5-B_220106A : 19	162703
Surr: n-Triacontane (SGT)	110.0	%REC	1		50-150				SW8015C	01/8/2022 10:05/amn	GCFID-HP5-B_220106B : 18	162703
- Note: Total Extractable Hydrocarbons are defined as the total hydrocarbon responses regardless of elution time.												
ORGANIC CHARACTERISTICS												
Methane	0.0091	mg/L	1		0.0020	0.0012	0.00070		SW8015M	01/6/2022 11:47/jdw	FID-HEADSPACE_220106A : 17	R372805
SEMI-VOLATILE ORGANIC COMPOUNDS												
1,2,4-Trichlorobenzene	ND	ug/L	1	U	10	5.2	2.0		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
1,2-Dichlorobenzene	ND	ug/L	1	U	10	5.2	2.0		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
1,3-Dichlorobenzene	ND	ug/L	1	U	10	5.2	2.2		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
1,4-Dichlorobenzene	ND	ug/L	1	U	10	5.2	2.1		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
2,4,5-Trichlorophenol	ND	ug/L	1	U	10	5.2	2.3		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
2,4,6-Trichlorophenol	ND	ug/L	1	U	10	5.2	2.7		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
2,4-Dichlorophenol	ND	ug/L	1	U	10	5.2	1.7		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
2,4-Dimethylphenol	ND	ug/L	1	U	10	5.2	1.7		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
2,4-Dinitrophenol	ND	ug/L	1	U	10	10	4.4		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
2,4-Dinitrotoluene	ND	ug/L	1	U	10	5.2	3.1		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Client Sample ID: ERH2301 (OWDFMW05A)
Project: CV18F0126, 60571032.02.46.01
Matrix: Drinking Water

Lab ID: B22010219-001
Collection Date: 12/31/2021 15:25
Date Received: 01/05/2022
Report Date: 02/25/2022

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
SEMI-VOLATILE ORGANIC COMPOUNDS												
2,6-Dinitrotoluene	ND	ug/L	1	U	10	5.2	3.3		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
2-Chloronaphthalene	ND	ug/L	1	U	10	5.2	2.2		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
2-Chlorophenol	ND	ug/L	1	U	10	5.2	2.6		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
2-Nitrophenol	ND	ug/L	1	U	10	5.2	2.4		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
3,3´-Dichlorobenzidine	ND	ug/L	1	U	10	5.2	2.2		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
4,6-Dinitro-2-methylphenol	ND	ug/L	1	U	10	10	2.4		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
4-Bromophenyl phenyl ether	ND	ug/L	1	U	10	5.2	1.8		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
4-Chloro-3-methylphenol	ND	ug/L	1	U	10	5.2	1.5		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
4-Chlorophenol	ND	ug/L	1	U	10	5.2	2.7		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
4-Chlorophenyl phenyl ether	ND	ug/L	1	U	10	5.2	2.1		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
4-Nitrophenol	ND	ug/L	1	U	10	10	2.6		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
Azobenzene	ND	ug/L	1	U	10	5.2	1.1		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
bis(-2-chloroethoxy)Methane	ND	ug/L	1	U	10	5.2	1.4		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
bis(-2-chloroethyl)Ether	ND	ug/L	1	U	10	5.2	2.6		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
bis(2-chloroisopropyl)Ether	ND	ug/L	1	U	10	5.2	1.5		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
bis(2-ethylhexyl)Phthalate	ND	ug/L	1	U	10	5.2	2.0		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
Butylbenzylphthalate	ND	ug/L	1	U	10	5.2	1.6		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
Di-n-butyl phthalate	ND	ug/L	1	U	10	5.2	0.96		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
Di-n-octyl phthalate	ND	ug/L	1	U	10	5.2	1.4		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
Diethyl phthalate	ND	ug/L	1	U	10	5.2	2.2		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
Dimethyl phthalate	ND	ug/L	1	U	10	5.2	1.8		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
Hexachlorobenzene	ND	ug/L	1	U	10	5.2	1.4		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
Hexachlorobutadiene	ND	ug/L	1	U	10	5.2	2.4		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
Hexachlorocyclopentadiene	ND	ug/L	1	U	10	5.2	3.1		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
Hexachloroethane	ND	ug/L	1	U	10	5.2	1.8		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
Isophorone	ND	ug/L	1	U	10	5.2	1.7		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
m+p-Cresols	ND	ug/L	1	U	10	5.2	1.8		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
n-Nitroso-di-n-propylamine	ND	ug/L	1	U	10	5.2	1.6		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
n-Nitrosodimethylamine	ND	ug/L	1	U	10	5.2	1.6		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
n-Nitrosodiphenylamine	ND	ug/L	1	U	10	5.2	1.2		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
Nitrobenzene	ND	ug/L	1	U	10	5.2	2.4		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
o-Cresol	ND	ug/L	1	U	10	5.2	1.9		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
Pentachlorophenol	ND	ug/L	1	U	10	10	4.4		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
Phenol	ND	ug/L	1	U	10	5.2	1.5		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
Pyridine	ND	ug/L	1	U	10	5.2	3.3		SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
Surr: 2,4,6-Tribromophenol	71.0	%REC	1		43-140				SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
Surr: 2-Fluorobiphenyl	67.0	%REC	1		44-119				SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
Surr: 2-Fluorophenol	30.0	%REC	1		19-119				SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
Surr: Nitrobenzene-d5	67.0	%REC	1		44-120				SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B22010219-001
Client: AECOM - Honolulu
Collection Date: 12/31/2021 15:25
Client Sample ID: ERH2301 (OWDFMW05A)
Date Received: 01/05/2022
Project: CV18F0126, 60571032.02.46.01
Report Date: 02/25/2022
Matrix: Drinking Water

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
SEMI-VOLATILE ORGANIC COMPOUNDS												
Surr: Phenol-d5	34.0	%REC	1		10-65				SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744
Surr: Terphenyl-d14	98.0	%REC	1		50-134				SW8270C	01/15/2022 05:31/dsm	SV5973N.I_220114B : 8	162744

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B22010219-002
Collection Date: 12/31/2021 15:25
Date Received: 01/05/2022
Report Date: 02/25/2022

Client: AECOM - Honolulu
Client Sample ID: ERH2300-14575
Project: CV18F0126, 60571032.02.46.01
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	0.20	0.091		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
Bromobenzene	ND	ug/L	1	U	1.0	0.20	0.083		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
Bromochloromethane	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
Bromodichloromethane	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
Bromoform	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
Carbon tetrachloride	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
Chlorobenzene	ND	ug/L	1	U	1.0	0.20	0.091		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
Chlorodibromomethane	ND	ug/L	1	U	1.0	0.20	0.084		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
Chloroethane	ND	ug/L	1	U	1.0	0.50	0.17		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
Chloroform	ND	ug/L	1	U	1.0	0.20	0.079		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
Chloromethane	ND	ug/L	1	U	1.0	0.50	0.16		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
1,2-Dibromoethane	ND	ug/L	1	U	1.0	0.20	0.092		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
2-Chlorotoluene	ND	ug/L	1	U	1.0	0.20	0.088		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
4-Chlorotoluene	ND	ug/L	1	U	1.0	0.20	0.073		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
Dibromomethane	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
1,2-Dichlorobenzene	ND	ug/L	1	U	1.0	0.20	0.075		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
1,3-Dichlorobenzene	ND	ug/L	1	U	1.0	0.20	0.080		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
1,4-Dichlorobenzene	ND	ug/L	1	U	1.0	0.20	0.086		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
Dichlorodifluoromethane	ND	ug/L	1	U	1.0	0.50	0.18		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
1,1-Dichloroethane	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
1,2-Dichloroethane	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
1,1-Dichloroethene	ND	ug/L	1	U	1.0	0.50	0.14		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
cis-1,2-Dichloroethene	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
trans-1,2-Dichloroethene	ND	ug/L	1	U	1.0	0.25	0.12		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
1,2-Dichloropropane	ND	ug/L	1	U	1.0	0.20	0.085		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
1,3-Dichloropropane	ND	ug/L	1	U	1.0	0.20	0.079		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
2,2-Dichloropropane	ND	ug/L	1	U	1.0	0.50	0.19		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
1,1-Dichloropropene	ND	ug/L	1	U	1.0	0.20	0.083		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
cis-1,3-Dichloropropene	ND	ug/L	1	U	1.0	0.20	0.073		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
trans-1,3-Dichloropropene	ND	ug/L	1	U	1.0	0.20	0.085		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
Ethylbenzene	ND	ug/L	1	U	1.0	0.20	0.084		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
Methyl ethyl ketone	ND	ug/L	1	U	20	5.0	1.8		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
Methyl tert-butyl ether (MTBE)	ND	ug/L	1	U	1.0	0.25	0.10		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
Methylene chloride	ND	ug/L	1	U	1.0	0.50	0.34		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
Styrene	ND	ug/L	1	U	1.0	0.20	0.067		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
1,1,1,2-Tetrachloroethane	ND	ug/L	1	U	1.0	0.25	0.10		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
1,1,2,2-Tetrachloroethane	ND	ug/L	1	U	1.0	0.20	0.087		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
Tetrachloroethene	ND	ug/L	1	U	1.0	0.20	0.067		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
Toluene	0.072	ug/L	1	J	1.0	0.20	0.068		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B22010219-002
Client: AECOM - Honolulu
Collection Date: 12/31/2021 15:25
Client Sample ID: ERH2300-14575
Date Received: 01/05/2022
Project: CV18F0126, 60571032.02.46.01
Report Date: 02/25/2022
Matrix: Trip Blank

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
VOLATILE ORGANIC COMPOUNDS												
1,1,1-Trichloroethane	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
1,1,2-Trichloroethane	ND	ug/L	1	U	1.0	0.25	0.11		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
Trichloroethene	ND	ug/L	1	U	1.0	0.20	0.099		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
Trichlorofluoromethane	ND	ug/L	1	U	1.0	0.50	0.13		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
1,2,3-Trichloropropane	ND	ug/L	1	U	1.0	0.50	0.24		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
Vinyl chloride	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
m+p-Xylenes	ND	ug/L	1	U	1.0	0.50	0.15		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
o-Xylene	ND	ug/L	1	U	1.0	0.20	0.060		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
Xylenes, Total	ND	ug/L	1	U	1.0	0.20	0.060		SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
Surr: Dibromofluoromethane	110.0	%REC	1		80-119				SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
Surr: 1,2-Dichloroethane-d4	116.0	%REC	1		81-118				SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
Surr: Toluene-d8	106.0	%REC	1		89-112				SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037
Surr: p-Bromofluorobenzene	112.0	%REC	1		85-114				SW8260B	01/7/2022 12:52/msc	VOA5975C.I_220107A : 6	R373037

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B22010219-003
Client: AECOM - Honolulu
Collection Date: 12/31/2021 15:25
Client Sample ID: ERH2300-14575
Date Received: 01/05/2022
Project: CV18F0126, 60571032.02.46.01
Report Date: 02/25/2022
Matrix: Trip Blank

Analyses	Result	Units	DF	Qual	LOQ	LOD	DL	MCL	Method	Analysis Date / By	RunID : Run Order	BatchID
PETROLEUM HYDROCARBONS-VOLATILE												
C6 to C10	ND	ug/L	1	U	20	8.7	2.3		SW8015C	01/7/2022 17:05/jp	PE 1_220106A : 25	R372930
Total Purgeable Hydrocarbons	ND	ug/L	1	U	20	10	3.6		SW8015C	01/7/2022 17:05/jp	PE 1_220106A : 25	R372930
Surr: Trifluorotoluene	82.0	%REC	1		70-130				SW8015C	01/7/2022 17:05/jp	PE 1_220106A : 25	R372930

- 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: B22010219-004
Client: AECOM - Honolulu
Collection Date: 12/31/2021 15:25
Client Sample ID: ERH2300-14525
Date Received: 01/05/2022
Project: CV18F0126, 60571032.02.46.01
Report Date: 02/25/2022
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	0.0048	0.0025		SW8011	01/7/2022 22:35/clt	GECD.I_220107B : 20	162738
Surr: 1,1,1,2-Tetrachloroethane	87.0	%REC	1		70-130				SW8011	01/7/2022 22:35/clt	GECD.I_220107B : 20	162738

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Client Sample ID: ERH2300-14576
Project: CV18F0126, 60571032.02.46.01
Matrix: Trip Blank

Lab ID: B22010219-005
Collection Date: 12/31/2021 15:25
Date Received: 01/05/2022
Report Date: 02/25/2022

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	01/6/2022 11:58/jdw	FID-HEADSPACE_220106A : 18	R372805

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: SV5975.I_220113A: 6 **SampType:** Method Blank **Batch ID:** 162744
Method: SW8270CSIM **Analysis Date:** 01/13/2022 17:53 **Prep Date:** 01/06/2022 09:18
Lab ID: MB-162744 **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									
Acenaphthene	ND	0.10									
Acenaphthylene	ND	0.10									
Anthracene	ND	0.10									
Benzo(a)anthracene	ND	0.10									
Benzo(a)pyrene	ND	0.10									
Benzo(b)fluoranthene	ND	0.10									
Benzo(g,h,i)perylene	ND	0.10									
Benzo(k)fluoranthene	ND	0.10									
Chrysene	ND	0.10									
Dibenzo(a,h)anthracene	ND	0.10									
Fluoranthene	ND	0.10									
Fluorene	ND	0.10									
Indeno(1,2,3-cd)pyrene	ND	0.10									
Naphthalene	ND	0.10									
Phenanthrene	ND	0.10									
Pyrene	ND	0.10									

Associated Samples: **B22010219-001C**

Run ID: Run Order: SV5975.I_220113A: 7 **SampType:** Laboratory Control Sample **Batch ID:** 162744
Method: SW8270CSIM **Analysis Date:** 01/13/2022 18:25 **Prep Date:** 01/06/2022 15:26
Lab ID: LLCS-162744 **Units:** ug/L **Prep Method:** SW3510C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1-Methylnaphthalene	3.5	0.10	5.0		69.0	41	115				

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: SV5975.I_220113A: 7 **SampType:** Laboratory Control Sample **Batch ID:** 162744
Method: SW8270CSIM **Analysis Date:** 01/13/2022 18:25 **Prep Date:** 01/06/2022 15:26
Lab ID: LLCS-162744 **Units:** ug/L **Prep Method:** SW3510C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
2-Methylnaphthalene	3.5	0.10	5.0		70.0	39	114				
Acenaphthene	3.7	0.10	5.0		73.0	48	114				
Acenaphthylene	4.1	0.10	5.0		81.0	35	121				
Anthracene	4.7	0.10	5.0		93.0	53	119				
Benzo(a)anthracene	4.9	0.10	5.0		98.0	59	120				
Benzo(a)pyrene	4.2	0.10	5.0		85.0	53	120				
Benzo(b)fluoranthene	4.0	0.10	5.0		80.0	53	126				
Benzo(g,h,i)perylene	4.6	0.10	5.0		91.0	44	128				
Benzo(k)fluoranthene	4.0	0.10	5.0		81.0	54	125				
Chrysene	4.6	0.10	5.0		92.0	57	120				
Dibenzo(a,h)anthracene	4.9	0.10	5.0		98.0	44	141				
Fluoranthene	4.0	0.10	5.0		81.0	58	120				
Fluorene	3.8	0.10	5.0		76.0	50	118				
Indeno(1,2,3-cd)pyrene	4.8	0.10	5.0		97.0	48	130				
Naphthalene	3.4	0.10	5.0		69.0	43	114				
Phenanthrene	4.4	0.10	5.0		87.0	53	115				
Pyrene	4.2	0.10	5.0		84.0	53	121				

Associated Samples: **B22010219-001C**

Run ID: Run Order: SV5975.I_220113A: 8 **SampType:** Laboratory Control Sample Duplicate **Batch ID:** 162744
Method: SW8270CSIM **Analysis Date:** 01/13/2022 18:58 **Prep Date:** 01/06/2022 15:26
Lab ID: LLCSD-162744 **Units:** ug/L **Prep Method:** SW3510C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1-Methylnaphthalene	2.9	0.10	5.0		57.0	41	115	3.5	19.0	40.0	
2-Methylnaphthalene	3.0	0.10	5.0		60.0	39	114	3.5	15.0	40.0	

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: SV5975.I_220113A: 8 **SampType:** Laboratory Control Sample Duplicate **Batch ID:** 162744
Method: SW8270CSIM **Analysis Date:** 01/13/2022 18:58 **Prep Date:** 01/06/2022 15:26
Lab ID: LLCSD-162744 **Units:** ug/L **Prep Method:** SW3510C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Acenaphthene	3.8	0.10	5.0		76.0	48	114	3.7	3.3	40.0	
Acenaphthylene	4.1	0.10	5.0		81.0	35	121	4.1	0.1	40.0	
Anthracene	4.8	0.10	5.0		96.0	53	119	4.7	2.6	40.0	
Benzo(a)anthracene	5.1	0.10	5.0		102.0	59	120	4.9	3.6	40.0	
Benzo(a)pyrene	4.3	0.10	5.0		87.0	53	120	4.2	2.4	40.0	
Benzo(b)fluoranthene	4.2	0.10	5.0		84.0	53	126	4.0	5.4	40.0	
Benzo(g,h,i)perylene	4.7	0.10	5.0		94.0	44	128	4.6	2.6	40.0	
Benzo(k)fluoranthene	4.2	0.10	5.0		84.0	54	125	4.0	4.0	40.0	
Chrysene	4.8	0.10	5.0		95.0	57	120	4.6	3.5	40.0	
Dibenzo(a,h)anthracene	4.7	0.10	5.0		94.0	44	141	4.9	4.3	40.0	
Fluoranthene	4.3	0.10	5.0		85.0	58	120	4.0	5.8	40.0	
Fluorene	3.9	0.10	5.0		78.0	50	118	3.8	3.3	40.0	
Indeno(1,2,3-cd)pyrene	4.9	0.10	5.0		97.0	48	130	4.8	0.9	40.0	
Naphthalene	3.0	0.10	5.0		59.0	43	114	3.4	15.0	40.0	
Phenanthrene	4.5	0.10	5.0		90.0	53	115	4.4	2.7	40.0	
Pyrene	4.4	0.10	5.0		88.0	53	121	4.2	4.5	40.0	

Associated Samples: **B22010219-001C**

- 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_220113A: 12 **SampType:** Sample Matrix Spike **Batch ID:** 162744
Method: SW8270CSIM **Analysis Date:** 01/13/2022 21:08 **Prep Date:** 01/06/2022 13:02
Lab ID: B22010213-003CLMS **Units:** ug/L **Prep Method:** SW3510C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1-Methylnaphthalene	2.9	0.10	5.0	0.0	59.0	41	115				
2-Methylnaphthalene	2.8	0.10	5.0	0.0	57.0	39	114				
Acenaphthene	3.2	0.10	5.0	0.0	64.0	48	114				

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: SV5975.I_220113A: 12 **SampType:** Sample Matrix Spike **Batch ID:** 162744
Method: SW8270CSIM **Analysis Date:** 01/13/2022 21:08 **Prep Date:** 01/06/2022 13:02
Lab ID: B22010213-003CLMS **Units:** ug/L **Prep Method:** SW3510C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Acenaphthylene	3.8	0.10	5.0	0.0	76.0	35	121				
Anthracene	4.5	0.10	5.0	0.0	90.0	53	119				
Benzo(a)anthracene	4.9	0.10	5.0	0.0	99.0	59	120				
Benzo(a)pyrene	3.9	0.10	5.0	0.0	79.0	53	120				
Benzo(b)fluoranthene	3.8	0.10	5.0	0.0	77.0	53	126				
Benzo(g,h,i)perylene	4.0	0.10	5.0	0.0	81.0	44	128				
Benzo(k)fluoranthene	3.7	0.10	5.0	0.0	74.0	54	125				
Chrysene	4.4	0.10	5.0	0.0	89.0	57	120				
Dibenzo(a,h)anthracene	4.2	0.10	5.0	0.0	86.0	44	141				
Fluoranthene	4.0	0.10	5.0	0.0	81.0	58	120				
Fluorene	3.5	0.10	5.0	0.0	70.0	50	118				
Indeno(1,2,3-cd)pyrene	4.3	0.10	5.0	0.0	87.0	48	130				
Naphthalene	2.9	0.10	5.0	0.0	58.0	43	114				
Phenanthrene	3.5	0.10	5.0	0.0	70.0	53	115				
Pyrene	4.1	0.10	5.0	0.0	83.0	53	121				

Associated Samples: **B22010219-001C**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: SV5975.I_220113A: 15 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R373164
Method: SW8270CSIM **Analysis Date:** 01/13/2022 15:43 **Prep Date:**
Lab ID: 13-Jan-22_CCV_2 **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1-Methylnaphthalene	2.2	0.10	2.0		110.0	80	120				
2-Methylnaphthalene	1.9	0.10	2.0		97.0	80	120				
Acenaphthene	2.0	0.10	2.0		99.0	80	120				
Acenaphthylene	2.2	0.10	2.0		111.0	80	120				
Anthracene	2.1	0.10	2.0		105.0	80	120				
Benzo(a)anthracene	2.1	0.10	2.0		105.0	80	120				
Benzo(a)pyrene	2.0	0.10	2.0		100.0	80	120				
Benzo(b)fluoranthene	1.8	0.10	2.0		90.0	80	120				
Benzo(g,h,i)perylene	2.1	0.10	2.0		103.0	80	120				
Benzo(k)fluoranthene	2.0	0.10	2.0		98.0	80	120				
Chrysene	2.1	0.10	2.0		105.0	80	120				
Dibenzo(a,h)anthracene	1.9	0.10	2.0		97.0	80	120				
Fluoranthene	1.8	0.10	2.0		92.0	80	120				
Fluorene	2.0	0.10	2.0		99.0	80	120				
Indeno(1,2,3-cd)pyrene	2.0	0.10	2.0		101.0	80	120				
Naphthalene	1.9	0.10	2.0		97.0	80	120				
Phenanthrene	2.0	0.10	2.0		100.0	80	120				
Pyrene	1.9	0.10	2.0		93.0	80	120				

Associated Samples: **B22010219-001C**

Run ID: Run Order: SV5975.I_220113A: 16 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R373164
Method: SW8270CSIM **Analysis Date:** 01/13/2022 22:45 **Prep Date:**
Lab ID: 13-Jan-22_CCV_15 **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1-Methylnaphthalene	2.3	0.10	2.0		115.0	50	150				

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: SV5975.I_220113A: 16 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R373164
Method: SW8270CSIM **Analysis Date:** 01/13/2022 22:45 **Prep Date:**
Lab ID: 13-Jan-22_CCV_15 **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
2-Methylnaphthalene	2.1	0.10	2.0		106.0	50	150				
Acenaphthene	2.1	0.10	2.0		106.0	50	150				
Acenaphthylene	2.3	0.10	2.0		117.0	50	150				
Anthracene	2.3	0.10	2.0		116.0	50	150				
Benzo(a)anthracene	2.3	0.10	2.0		117.0	50	150				
Benzo(a)pyrene	2.1	0.10	2.0		103.0	50	150				
Benzo(b)fluoranthene	1.8	0.10	2.0		91.0	50	150				
Benzo(g,h,i)perylene	2.1	0.10	2.0		106.0	50	150				
Benzo(k)fluoranthene	1.9	0.10	2.0		94.0	50	150				
Chrysene	2.3	0.10	2.0		116.0	50	150				
Dibenzo(a,h)anthracene	2.0	0.10	2.0		98.0	50	150				
Fluoranthene	2.0	0.10	2.0		98.0	50	150				
Fluorene	2.2	0.10	2.0		109.0	50	150				
Indeno(1,2,3-cd)pyrene	2.1	0.10	2.0		104.0	50	150				
Naphthalene	2.2	0.10	2.0		110.0	50	150				
Phenanthrene	2.1	0.10	2.0		105.0	50	150				
Pyrene	2.1	0.10	2.0		106.0	50	150				

Associated Samples: **B22010219-001C**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: SUB-C278588: 2 **SampType:** Method Blank **Batch ID:** C_R278588
Method: SW9060A **Analysis Date:** 01/07/2022 16:18 **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: **B22010219-001E**
- TOC Range is 0.0 to 0.0

Run ID: Run Order: SUB-C278588: 1 **SampType:** Laboratory Control Sample **Batch ID:** C_R278588
Method: SW9060A **Analysis Date:** 01/07/2022 15:37 **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		101.0	91	111				

Associated Samples: **B22010219-001E**
- TOC Range is 5.0 to 5.1

Run ID: Run Order: SUB-C278588: 5 **SampType:** Sample Matrix Spike **Batch ID:** C_R278588
Method: SW9060A **Analysis Date:** 01/07/2022 18:16 **Prep Date:**
Lab ID: C22010116-001EMS **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	0.25	103.0	91	111				

Associated Samples: **B22010219-001E**
- TOC Range is 5.3 to 5.4

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: SUB-C278588: 6 **SampType:** Sample Matrix Spike Duplicate **Batch ID:** C_R278588
Method: SW9060A **Analysis Date:** 01/07/2022 18:57 **Prep Date:**
Lab ID: C22010116-001EMSD **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	0.25	103.0	91	111	5.4	0.4	10.0	

Associated Samples: **B22010219-001E**
- TOC Range is 5.3 to 5.4

Run ID: Run Order: SUB-C278588: 7 **SampType:** Continuing Calibration Verification Standard **Batch ID:** C_R278588
Method: SW9060A **Analysis Date:** 01/08/2022 01:51 **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: **B22010219-001E**
- TOC Range is 5.1 to 5.1

Run ID: Run Order: SUB-C278588: 8 **SampType:** Continuing Calibration Verification Standard **Batch ID:** C_R278588
Method: SW9060A **Analysis Date:** 01/08/2022 06:34 **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: **B22010219-001E**
- TOC Range is 5.0 to 5.1

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: ICPMS207-B_220112A: 37 **SampType:** Method Blank **Batch ID:** 162735
Method: SW6020 **Analysis Date:** 01/12/2022 20:22 **Prep Date:** 01/05/2022 15:45
Lab ID: MB-162735 **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: **B22010219-001B**

Run ID: Run Order: ICPMS207-B_220112A: 39 **SampType:** Laboratory Control Sample **Batch ID:** 162735
Method: SW6020 **Analysis Date:** 01/12/2022 20:35 **Prep Date:** 01/05/2022 15:45
Lab ID: LCS4-162735 **Units:** mg/L **Prep Method:** SW3010A

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

Associated Samples: **B22010219-001B**

Run ID: Run Order: ICPMS207-B_220112A: 52 **SampType:** Sample Matrix Spike **Batch ID:** 162735
Method: SW6020 **Analysis Date:** 01/12/2022 21:56 **Prep Date:** 01/05/2022 15:52
Lab ID: B22010209-001BMS4 **Units:** mg/L **Prep Method:** SW3010A

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Lead	0.096	0.001	0.100	0.00	96.0	88	115				

Associated Samples: **B22010219-001B**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: ICPMS207-B_220112A: 53 **SampType:** Sample Matrix Spike Duplicate **Batch ID:** 162735
Method: SW6020 **Analysis Date:** 01/12/2022 22:02 **Prep Date:** 01/05/2022 15:52
Lab ID: B22010209-001BMSD4 **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	0.00	100.0	88	115	0.096	4.3	20.0	

Associated Samples: **B22010219-001B**

Run ID: Run Order: ICPMS207-B_220112A: 51 **SampType:** Post Digestion/Distillation Spike **Batch ID:** 162735
Method: SW6020 **Analysis Date:** 01/12/2022 21:49 **Prep Date:** 01/05/2022 15:52
Lab ID: B22010209-001BPDS1 **Units:** mg/L **Prep Method:** SW3010A

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Lead	0.049	0.001	0.052	0.00	96.0	80	120				

Associated Samples: **B22010219-001B**

Run ID: Run Order: ICPMS207-B_220112A: 48 **SampType:** Serial Dilution **Batch ID:** 162735
Method: SW6020 **Analysis Date:** 01/12/2022 21:31 **Prep Date:** 01/05/2022 15:52
Lab ID: B22010209-001BDIL **Units:** mg/L **Prep Method:** SW3010A

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

Associated Samples: **B22010219-001B**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: ICPMS207-B_220114A: 18 **SampType:** Method Blank **Batch ID:** R373222
Method: SW6020 **Analysis Date:** 01/14/2022 13:45 **Prep Date:**
Lab ID: LRB **Units:** mg/L **Prep Method:**

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

Associated Samples: **B22010219-001A**

Run ID: Run Order: ICPMS207-B_220114A: 19 **SampType:** Laboratory Fortified Blank **Batch ID:** R373222
Method: SW6020 **Analysis Date:** 01/14/2022 13:51 **Prep Date:**
Lab ID: LFB **Units:** mg/L **Prep Method:**

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

Associated Samples: **B22010219-001A**

Run ID: Run Order: ICPMS207-B_220114A: 29 **SampType:** Sample Matrix Spike **Batch ID:** R373222
Method: SW6020 **Analysis Date:** 01/14/2022 14:54 **Prep Date:**
Lab ID: B22010212-001AMS **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Lead	0.050	0.001	0.050	0.00	99.0	88	115				

Associated Samples: **B22010219-001A**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: ICPMS207-B_220114A: 30 **SampType:** Sample Matrix Spike Duplicate **Batch ID:** R373222
Method: SW6020 **Analysis Date:** 01/14/2022 15:00 **Prep Date:**
Lab ID: B22010212-001AMSD **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Lead	0.050	0.001	0.050	0.00	101.0	88	115	0.050	1.4	20.0	

Associated Samples: **B22010219-001A**

Run ID: Run Order: ICPMS207-B_220114A: 28 **SampType:** Serial Dilution **Batch ID:** R373222
Method: SW6020 **Analysis Date:** 01/14/2022 14:47 **Prep Date:**
Lab ID: B22010212-001ADIL **Units:** mg/L **Prep Method:**

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

Associated Samples: **B22010219-001A**

Run ID: Run Order: ICPMS207-B_220114A: 44 **SampType:** Serial Dilution **Batch ID:** R373222
Method: SW6020 **Analysis Date:** 01/14/2022 16:27 **Prep Date:**
Lab ID: B22010411-001ADIL **Units:** mg/L **Prep Method:**

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

Associated Samples: **B22010219-001A**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: ICPMS207-B_220112A: 62 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R373171
Method: SW6020 **Analysis Date:** 01/12/2022 22:58 **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	0.049	0.001	0.050		98.0	90	110				

Associated Samples: **B22010219-001A, B22010219-001B**

Run ID: Run Order: ICPMS207-B_220112A: 74 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R373171
Method: SW6020 **Analysis Date:** 01/13/2022 00:13 **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: **B22010219-001A, B22010219-001B**

Run ID: Run Order: ICPMS207-B_220114A: 24 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R373222
Method: SW6020 **Analysis Date:** 01/14/2022 14:22 **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	0.052	0.001	0.050		103.0	90	110				

Associated Samples: **B22010219-001A**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: ICPMS207-B_220114A: 38 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R373222
Method: SW6020 **Analysis Date:** 01/14/2022 15:50 **Prep Date:**
Lab ID: CCV **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Lead	0.052	0.001	0.050		104.0	90	110				

Associated Samples: **B22010219-001A**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: VOA5975C.I_220107A: 4 **SampType:** Method Blank **Batch ID:** R373037
Method: SW8260B **Analysis Date:** 01/07/2022 11:45 **Prep Date:**
Lab ID: MBLK010722_ **Units:** ug/L **Prep Method:**

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

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: VOA5975C.I_220107A: 4 **SampType:** Method Blank **Batch ID:** R373037
Method: SW8260B **Analysis Date:** 01/07/2022 11:45 **Prep Date:**
Lab ID: MBLK010722_ **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	0.50									
cis-1,3-Dichloropropene	ND	0.50									
trans-1,3-Dichloropropene	ND	0.50									
Ethylbenzene	ND	0.50									
Methyl tert-butyl ether (MTBE)	ND	0.50									
Methyl ethyl ketone	ND	10									
Methylene chloride	ND	0.50									
Styrene	ND	0.50									
1,1,1,2-Tetrachloroethane	ND	0.50									
1,1,2,2-Tetrachloroethane	ND	0.50									
Tetrachloroethene	ND	0.50									
Toluene	ND	0.50									
1,1,1-Trichloroethane	ND	0.50									
1,1,2-Trichloroethane	ND	0.50									
Trichloroethene	ND	0.50									
Trichlorofluoromethane	ND	0.50									
1,2,3-Trichloropropane	ND	0.50									
Vinyl chloride	ND	0.50									
m+p-Xylenes	ND	0.50									
o-Xylene	ND	0.50									
Xylenes, Total	ND	0.50									
Surr: 1,2-Dichloroethane-d4	11	0.50	10		112.0	81	118				
Surr: Dibromofluoromethane	11	0.50	10		108.0	80	119				
Surr: p-Bromofluorobenzene	11	0.50	10		110.0	85	114				
Surr: Toluene-d8	11	0.50	10		106.0	89	112				

Associated Samples: **B22010219-001F, B22010219-002A**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: VOA5975C.I_220107A: 3 **SampType:** Laboratory Control Sample **Batch ID:** R373037
Method: SW8260B **Analysis Date:** 01/07/2022 10:50 **Prep Date:**
Lab ID: LCS010722_ **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Benzene	5.1	0.50	5.0		102.0	79	120				
Bromobenzene	5.3	0.50	5.0		105.0	80	120				
Bromochloromethane	4.8	0.50	5.0		96.0	78	123				
Bromodichloromethane	5.1	0.50	5.0		102.0	79	125				
Bromoform	5.2	0.50	5.0		105.0	66	130				
Carbon tetrachloride	4.7	0.50	5.0		94.0	72	136				
Chlorobenzene	5.0	0.50	5.0		101.0	82	118				
Chlorodibromomethane	4.9	0.50	5.0		98.0	74	126				
Chloroethane	4.4	0.50	5.0		88.0	60	138				
Chloroform	4.8	0.50	5.0		95.0	79	124				
Chloromethane	4.3	0.50	5.0		87.0	50	139				
1,2-Dibromoethane	4.9	0.50	5.0		99.0	78	122				
2-Chlorotoluene	5.2	0.50	5.0		104.0	79	122				
Dibromomethane	5.0	0.50	5.0		99.0	79	123				
1,2-Dichlorobenzene	5.0	0.50	5.0		100.0	80	119				
4-Chlorotoluene	5.4	0.50	5.0		108.0	78	122				
1,3-Dichlorobenzene	5.3	0.50	5.0		106.0	80	119				
1,4-Dichlorobenzene	5.1	0.50	5.0		103.0	79	118				
Dichlorodifluoromethane	4.1	0.50	5.0		83.0	32	152				
1,1-Dichloroethane	5.2	0.50	5.0		105.0	77	125				
1,2-Dichloroethane	4.9	0.50	5.0		98.0	73	128				
1,1-Dichloroethene	5.3	0.50	5.0		107.0	71	131				
cis-1,2-Dichloroethene	5.2	0.50	5.0		104.0	78	123				
trans-1,2-Dichloroethene	5.2	0.50	5.0		104.0	75	124				
1,2-Dichloropropane	5.0	0.50	5.0		99.0	78	122				
1,3-Dichloropropane	4.9	0.50	5.0		97.0	80	119				
2,2-Dichloropropane	5.2	0.50	5.0		103.0	60	139				

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: VOA5975C.I_220107A: 3 **SampType:** Laboratory Control Sample **Batch ID:** R373037
Method: SW8260B **Analysis Date:** 01/07/2022 10:50 **Prep Date:**
Lab ID: LCS010722_ **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,1-Dichloropropene	4.7	0.50	5.0		94.0	79	125				
cis-1,3-Dichloropropene	4.7	0.50	5.0		94.0	75	124				
trans-1,3-Dichloropropene	5.3	0.50	5.0		105.0	73	127				
Ethylbenzene	5.0	0.50	5.0		101.0	79	121				
Methyl tert-butyl ether (MTBE)	5.3	0.50	5.0		106.0	71	124				
Methyl ethyl ketone	46	10	50		91.0	56	143				
Methylene chloride	4.7	0.50	5.0		94.0	74	124				
Styrene	5.3	0.50	5.0		106.0	78	123				
1,1,1,2-Tetrachloroethane	5.0	0.50	5.0		100.0	78	124				
1,1,2,2-Tetrachloroethane	4.9	0.50	5.0		98.0	71	121				
Tetrachloroethene	4.8	0.50	5.0		95.0	74	129				
Toluene	5.2	0.50	5.0		103.0	80	121				
1,1,1-Trichloroethane	4.9	0.50	5.0		98.0	74	131				
1,1,2-Trichloroethane	5.0	0.50	5.0		100.0	80	119				
Trichloroethene	5.0	0.50	5.0		101.0	79	123				
Trichlorofluoromethane	4.5	0.50	5.0		90.0	65	141				
1,2,3-Trichloropropane	5.0	0.50	5.0		100.0	73	125				
Vinyl chloride	4.8	0.50	5.0		95.0	58	137				
m+p-Xylenes	10	0.50	10		100.0	80	121				
o-Xylene	5.2	0.50	5.0		104.0	78	122				
Xylenes, Total	15	0.50	15		102.0	79	121				
Surr: 1,2-Dichloroethane-d4	11	0.50	10		113.0	81	118				
Surr: Dibromofluoromethane	11	0.50	10		108.0	80	119				
Surr: p-Bromofluorobenzene	11	0.50	10		109.0	85	114				
Surr: Toluene-d8	11	0.50	10		108.0	89	112				

Associated Samples: **B22010219-001F, B22010219-002A**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: VOA5975C.I_220107A: 14 **SampType:** Sample Matrix Spike **Batch ID:** R373037
Method: SW8260B **Analysis Date:** 01/07/2022 17:07 **Prep Date:**
Lab ID: B22010219-001FMS **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	5.3	0.50	5.0	0.0	107.0	80	120				
Bromochloromethane	5.0	0.50	5.0	0.0	100.0	78	123				
Bromodichloromethane	5.1	0.50	5.0	0.0	103.0	79	125				
Bromoform	5.2	0.50	5.0	0.0	104.0	66	130				
Carbon tetrachloride	4.9	0.50	5.0	0.0	97.0	72	136				
Chlorobenzene	5.1	0.50	5.0	0.0	103.0	82	118				
Chlorodibromomethane	5.0	0.50	5.0	0.0	100.0	74	126				
Chloroethane	5.6	0.50	5.0	0.0	113.0	60	138				
Chloroform	4.9	0.50	5.0	0.0	97.0	79	124				
Chloromethane	4.5	0.50	5.0	0.0	89.0	50	139				
1,2-Dibromoethane	5.0	0.50	5.0	0.0	100.0	78	122				
2-Chlorotoluene	5.3	0.50	5.0	0.0	105.0	79	122				
Dibromomethane	5.0	0.50	5.0	0.0	101.0	79	123				
1,2-Dichlorobenzene	5.0	0.50	5.0	0.0	101.0	80	119				
4-Chlorotoluene	5.3	0.50	5.0	0.0	107.0	78	122				
1,3-Dichlorobenzene	5.3	0.50	5.0	0.0	105.0	80	119				
1,4-Dichlorobenzene	5.2	0.50	5.0	0.0	104.0	79	118				
Dichlorodifluoromethane	4.3	0.50	5.0	0.0	86.0	32	152				
1,1-Dichloroethane	5.4	0.50	5.0	0.0	108.0	77	125				
1,2-Dichloroethane	5.1	0.50	5.0	0.0	102.0	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	105.0	78	123				
trans-1,2-Dichloroethene	5.2	0.50	5.0	0.0	104.0	75	124				
1,2-Dichloropropane	5.0	0.50	5.0	0.0	100.0	78	122				
1,3-Dichloropropane	5.1	0.50	5.0	0.0	101.0	80	119				
2,2-Dichloropropane	5.3	0.50	5.0	0.0	105.0	60	139				

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: VOA5975C.I_220107A: 14 **SampType:** Sample Matrix Spike **Batch ID:** R373037
Method: SW8260B **Analysis Date:** 01/07/2022 17:07 **Prep Date:**
Lab ID: B22010219-001FMS **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,1-Dichloropropene	4.9	0.50	5.0	0.0	97.0	79	125				
cis-1,3-Dichloropropene	4.8	0.50	5.0	0.0	97.0	75	124				
trans-1,3-Dichloropropene	5.3	0.50	5.0	0.0	106.0	73	127				
Ethylbenzene	5.1	0.50	5.0	0.0	102.0	79	121				
Methyl tert-butyl ether (MTBE)	5.6	0.50	5.0	0.0	112.0	71	124				
Methyl ethyl ketone	50	10	50	0.0	101.0	56	143				
Methylene chloride	4.9	0.50	5.0	0.0	98.0	74	124				
Styrene	5.3	0.50	5.0	0.0	106.0	78	123				
1,1,1,2-Tetrachloroethane	5.0	0.50	5.0	0.0	99.0	78	124				
1,1,2,2-Tetrachloroethane	5.2	0.50	5.0	0.0	105.0	71	121				
Tetrachloroethene	4.9	0.50	5.0	0.0	98.0	74	129				
Toluene	5.2	0.50	5.0	0.0	103.0	80	121				
1,1,1-Trichloroethane	5.0	0.50	5.0	0.0	100.0	74	131				
1,1,2-Trichloroethane	4.9	0.50	5.0	0.0	99.0	80	119				
Trichloroethene	5.0	0.50	5.0	0.0	100.0	79	123				
Trichlorofluoromethane	5.0	0.50	5.0	0.0	100.0	65	141				
1,2,3-Trichloropropane	5.0	0.50	5.0	0.0	99.0	73	125				
Vinyl chloride	4.9	0.50	5.0	0.0	98.0	58	137				
m+p-Xylenes	10	0.50	10	0.0	101.0	80	121				
o-Xylene	5.2	0.50	5.0	0.0	105.0	78	122				
Xylenes, Total	15	0.50	15	0.0	102.0	79	121				
Surr: 1,2-Dichloroethane-d4	11	0.50	10	0.0	111.0	81	118				
Surr: Dibromofluoromethane	11	0.50	10	0.0	109.0	80	119				
Surr: p-Bromofluorobenzene	11	0.50	10	0.0	110.0	85	114				
Surr: Toluene-d8	11	0.50	10	0.0	109.0	89	112				

Associated Samples: **B22010219-001F, B22010219-002A**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: VOA5975C.I_220107A: 15 **SampType:** Sample Matrix Spike Duplicate **Batch ID:** R373037
Method: SW8260B **Analysis Date:** 01/07/2022 17:34 **Prep Date:**
Lab ID: B22010219-001FMSD **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	2.2	20.0	
Bromobenzene	5.7	0.50	5.0	0.0	114.0	80	120	5.3	6.5	20.0	
Bromochloromethane	5.1	0.50	5.0	0.0	102.0	78	123	5.0	2.7	20.0	
Bromodichloromethane	5.4	0.50	5.0	0.0	108.0	79	125	5.1	5.4	20.0	
Bromoform	5.6	0.50	5.0	0.0	112.0	66	130	5.2	7.5	20.0	
Carbon tetrachloride	5.0	0.50	5.0	0.0	100.0	72	136	4.9	2.4	20.0	
Chlorobenzene	5.4	0.50	5.0	0.0	109.0	82	118	5.1	5.8	20.0	
Chlorodibromomethane	5.1	0.50	5.0	0.0	102.0	74	126	5.0	2.0	20.0	
Chloroethane	4.9	0.50	5.0	0.0	97.0	60	138	5.6	15.0	20.0	
Chloroform	5.0	0.50	5.0	0.0	101.0	79	124	4.9	3.9	20.0	
Chloromethane	4.7	0.50	5.0	0.0	94.0	50	139	4.5	5.2	20.0	
1,2-Dibromoethane	5.3	0.50	5.0	0.0	105.0	78	122	5.0	5.3	20.0	
2-Chlorotoluene	5.6	0.50	5.0	0.0	113.0	79	122	5.3	7.3	20.0	
Dibromomethane	5.2	0.50	5.0	0.0	104.0	79	123	5.0	2.9	20.0	
1,2-Dichlorobenzene	5.3	0.50	5.0	0.0	106.0	80	119	5.0	5.4	20.0	
4-Chlorotoluene	5.7	0.50	5.0	0.0	114.0	78	122	5.3	6.4	20.0	
1,3-Dichlorobenzene	5.5	0.50	5.0	0.0	110.0	80	119	5.3	4.9	20.0	
1,4-Dichlorobenzene	5.5	0.50	5.0	0.0	110.0	79	118	5.2	5.6	20.0	
Dichlorodifluoromethane	4.4	0.50	5.0	0.0	89.0	32	152	4.3	3.0	20.0	
1,1-Dichloroethane	5.6	0.50	5.0	0.0	112.0	77	125	5.4	2.8	20.0	
1,2-Dichloroethane	5.1	0.50	5.0	0.0	102.0	73	128	5.1	0.1	20.0	
1,1-Dichloroethene	5.4	0.50	5.0	0.0	108.0	71	131	5.2	2.6	20.0	
cis-1,2-Dichloroethene	5.4	0.50	5.0	0.0	107.0	78	123	5.3	2.0	20.0	
trans-1,2-Dichloroethene	5.5	0.50	5.0	0.0	110.0	75	124	5.2	6.2	20.0	
1,2-Dichloropropane	5.3	0.50	5.0	0.0	107.0	78	122	5.0	6.2	20.0	
1,3-Dichloropropane	5.3	0.50	5.0	0.0	106.0	80	119	5.1	4.6	20.0	
2,2-Dichloropropane	5.6	0.50	5.0	0.0	113.0	60	139	5.3	6.9	20.0	

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: VOA5975C.I_220107A: 15 **SampType:** Sample Matrix Spike Duplicate **Batch ID:** R373037
Method: SW8260B **Analysis Date:** 01/07/2022 17:34 **Prep Date:**
Lab ID: B22010219-001FMSD **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,1-Dichloropropene	5.0	0.50	5.0	0.0	100.0	79	125	4.9	3.4	20.0	
cis-1,3-Dichloropropene	5.1	0.50	5.0	0.0	102.0	75	124	4.8	5.2	20.0	
trans-1,3-Dichloropropene	5.4	0.50	5.0	0.0	109.0	73	127	5.3	2.4	20.0	
Ethylbenzene	5.4	0.50	5.0	0.0	108.0	79	121	5.1	6.4	20.0	
Methyl tert-butyl ether (MTBE)	5.7	0.50	5.0	0.0	114.0	71	124	5.6	2.0	20.0	
Methyl ethyl ketone	49	10	50	0.0	97.0	56	143	50	3.1	20.0	
Methylene chloride	5.0	0.50	5.0	0.0	101.0	74	124	4.9	3.1	20.0	
Styrene	5.7	0.50	5.0	0.0	113.0	78	123	5.3	6.6	20.0	
1,1,1,2-Tetrachloroethane	5.1	0.50	5.0	0.0	102.0	78	124	5.0	2.4	20.0	
1,1,2,2-Tetrachloroethane	5.5	0.50	5.0	0.0	110.0	71	121	5.2	4.3	20.0	
Tetrachloroethene	5.3	0.50	5.0	0.0	106.0	74	129	4.9	7.6	20.0	
Toluene	5.5	0.50	5.0	0.0	111.0	80	121	5.2	6.7	20.0	
1,1,1-Trichloroethane	5.2	0.50	5.0	0.0	104.0	74	131	5.0	3.9	20.0	
1,1,2-Trichloroethane	5.1	0.50	5.0	0.0	103.0	80	119	4.9	3.8	20.0	
Trichloroethene	5.3	0.50	5.0	0.0	107.0	79	123	5.0	6.3	20.0	
Trichlorofluoromethane	4.8	0.50	5.0	0.0	96.0	65	141	5.0	3.4	20.0	
1,2,3-Trichloropropane	5.4	0.50	5.0	0.0	108.0	73	125	5.0	8.3	20.0	
Vinyl chloride	5.0	0.50	5.0	0.0	100.0	58	137	4.9	2.0	20.0	
m+p-Xylenes	11	0.50	10	0.0	106.0	80	121	10	4.6	20.0	
o-Xylene	5.6	0.50	5.0	0.0	111.0	78	122	5.2	6.4	20.0	
Xylenes, Total	16	0.50	15	0.0	108.0	79	121	15	5.2	20.0	
Surr: 1,2-Dichloroethane-d4	11	0.50	10	0.0	109.0	81	118	0.0			
Surr: Dibromofluoromethane	11	0.50	10	0.0	107.0	80	119	0.0			
Surr: p-Bromofluorobenzene	11	0.50	10	0.0	108.0	85	114	0.0			
Surr: Toluene-d8	11	0.50	10	0.0	111.0	89	112	0.0			

Associated Samples: **B22010219-001F, B22010219-002A**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: VOA5975C.I_220107A: 2 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R373037
Method: SW8260B **Analysis Date:** 01/07/2022 09:43 **Prep Date:**
Lab ID: CCV010722_ **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Benzene	5.1	0.50	5.0		102.0	80	120				
Bromobenzene	5.2	0.50	5.0		104.0	80	120				
Bromochloromethane	5.1	0.50	5.0		103.0	80	120				
Bromodichloromethane	5.0	0.50	5.0		99.0	80	120				
Bromoform	5.1	0.50	5.0		103.0	80	120				
Carbon tetrachloride	4.8	0.50	5.0		96.0	80	120				
Chlorobenzene	4.9	0.50	5.0		99.0	80	120				
Chlorodibromomethane	5.0	0.50	5.0		100.0	80	120				
Chloroethane	4.7	0.50	5.0		94.0	80	120				
Chloroform	4.9	0.50	5.0		97.0	80	120				
Chloromethane	4.7	0.50	5.0		93.0	80	120				
1,2-Dibromoethane	5.0	0.50	5.0		100.0	80	120				
2-Chlorotoluene	5.2	0.50	5.0		103.0	80	120				
Dibromomethane	4.9	0.50	5.0		97.0	80	120				
1,2-Dichlorobenzene	5.0	0.50	5.0		99.0	80	120				
4-Chlorotoluene	5.3	0.50	5.0		106.0	80	120				
1,3-Dichlorobenzene	5.0	0.50	5.0		100.0	80	120				
1,4-Dichlorobenzene	5.0	0.50	5.0		101.0	80	120				
Dichlorodifluoromethane	4.6	0.50	5.0		92.0	80	120				
1,1-Dichloroethane	5.1	0.50	5.0		102.0	80	120				
1,2-Dichloroethane	4.9	0.50	5.0		99.0	80	120				
1,1-Dichloroethene	4.9	0.50	5.0		97.0	80	120				
cis-1,2-Dichloroethene	5.1	0.50	5.0		103.0	80	120				
trans-1,2-Dichloroethene	5.0	0.50	5.0		100.0	80	120				
1,2-Dichloropropane	5.1	0.50	5.0		102.0	80	120				
1,3-Dichloropropane	5.0	0.50	5.0		100.0	80	120				
2,2-Dichloropropane	5.2	0.50	5.0		104.0	80	120				

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: VOA5975C.I_220107A: 2 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R373037
Method: SW8260B **Analysis Date:** 01/07/2022 09:43 **Prep Date:**
Lab ID: CCV010722_ **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,1-Dichloropropene	5.0	0.50	5.0		100.0	80	120				
cis-1,3-Dichloropropene	4.9	0.50	5.0		98.0	80	120				
trans-1,3-Dichloropropene	5.1	0.50	5.0		102.0	80	120				
Ethylbenzene	5.0	0.50	5.0		99.0	80	120				
Methyl tert-butyl ether (MTBE)	5.1	0.50	5.0		102.0	80	120				
Methyl ethyl ketone	50	10	50		101.0	80	120				
Methylene chloride	4.8	0.50	5.0		95.0	80	120				
Styrene	5.2	0.50	5.0		104.0	80	120				
1,1,1,2-Tetrachloroethane	4.7	0.50	5.0		94.0	80	120				
1,1,2,2-Tetrachloroethane	5.2	0.50	5.0		104.0	80	120				
Tetrachloroethene	4.7	0.50	5.0		94.0	80	120				
Toluene	5.1	0.50	5.0		102.0	80	120				
1,1,1-Trichloroethane	5.0	0.50	5.0		100.0	80	120				
1,1,2-Trichloroethane	4.9	0.50	5.0		99.0	80	120				
Trichloroethene	4.8	0.50	5.0		97.0	80	120				
Trichlorofluoromethane	4.5	0.50	5.0		90.0	80	120				
1,2,3-Trichloropropane	5.2	0.50	5.0		104.0	80	120				
Vinyl chloride	4.9	0.50	5.0		97.0	80	120				
m+p-Xylenes	10	0.50	10		101.0	80	120				
o-Xylene	5.0	0.50	5.0		100.0	80	120				
Xylenes, Total	15	0.50	15		101.0	80	120				
Surr: 1,2-Dichloroethane-d4	11	0.50	10		112.0	80	120				
Surr: Dibromofluoromethane	11	0.50	10		112.0	80	120				
Surr: p-Bromofluorobenzene	11	0.50	10		111.0	80	120				
Surr: Toluene-d8	11	0.50	10		108.0	80	120				

Associated Samples: **B22010219-001F, B22010219-002A**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: VOA5975C.I_220107A: 16 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R373037
Method: SW8260B **Analysis Date:** 01/07/2022 18:29 **Prep Date:**
Lab ID: CCV010722_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	4.6	0.50	5.0		92.0	50	150				
Bromodichloromethane	4.7	0.50	5.0		95.0	50	150				
Bromoform	4.8	0.50	5.0		97.0	50	150				
Carbon tetrachloride	4.7	0.50	5.0		94.0	50	150				
Chlorobenzene	4.8	0.50	5.0		97.0	50	150				
Chlorodibromomethane	4.7	0.50	5.0		95.0	50	150				
Chloroethane	4.9	0.50	5.0		97.0	50	150				
Chloroform	4.7	0.50	5.0		95.0	50	150				
Chloromethane	4.6	0.50	5.0		91.0	50	150				
1,2-Dibromoethane	4.8	0.50	5.0		96.0	50	150				
2-Chlorotoluene	5.0	0.50	5.0		99.0	50	150				
Dibromomethane	4.8	0.50	5.0		97.0	50	150				
1,2-Dichlorobenzene	4.7	0.50	5.0		95.0	50	150				
4-Chlorotoluene	5.1	0.50	5.0		101.0	50	150				
1,3-Dichlorobenzene	4.9	0.50	5.0		97.0	50	150				
1,4-Dichlorobenzene	4.8	0.50	5.0		97.0	50	150				
Dichlorodifluoromethane	4.6	0.50	5.0		92.0	50	150				
1,1-Dichloroethane	5.0	0.50	5.0		100.0	50	150				
1,2-Dichloroethane	4.6	0.50	5.0		92.0	50	150				
1,1-Dichloroethene	4.8	0.50	5.0		95.0	50	150				
cis-1,2-Dichloroethene	4.9	0.50	5.0		98.0	50	150				
trans-1,2-Dichloroethene	4.8	0.50	5.0		97.0	50	150				
1,2-Dichloropropane	5.0	0.50	5.0		99.0	50	150				
1,3-Dichloropropane	4.9	0.50	5.0		97.0	50	150				
2,2-Dichloropropane	4.9	0.50	5.0		97.0	50	150				

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: VOA5975C.I_220107A: 16 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R373037
Method: SW8260B **Analysis Date:** 01/07/2022 18:29 **Prep Date:**
Lab ID: CCV010722_Closing **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,1-Dichloropropene	4.8	0.50	5.0		96.0	50	150				
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		97.0	50	150				
Methyl tert-butyl ether (MTBE)	4.8	0.50	5.0		95.0	50	150				
Methyl ethyl ketone	47	10	50		93.0	50	150				
Methylene chloride	4.6	0.50	5.0		92.0	50	150				
Styrene	5.1	0.50	5.0		101.0	50	150				
1,1,1,2-Tetrachloroethane	4.7	0.50	5.0		93.0	50	150				
1,1,2,2-Tetrachloroethane	4.9	0.50	5.0		97.0	50	150				
Tetrachloroethene	4.8	0.50	5.0		96.0	50	150				
Toluene	5.0	0.50	5.0		99.0	50	150				
1,1,1-Trichloroethane	4.8	0.50	5.0		95.0	50	150				
1,1,2-Trichloroethane	4.7	0.50	5.0		94.0	50	150				
Trichloroethene	4.9	0.50	5.0		98.0	50	150				
Trichlorofluoromethane	4.2	0.50	5.0		84.0	50	150				
1,2,3-Trichloropropane	4.6	0.50	5.0		92.0	50	150				
Vinyl chloride	4.7	0.50	5.0		94.0	50	150				
m+p-Xylenes	9.9	0.50	10		99.0	50	150				
o-Xylene	4.9	0.50	5.0		99.0	50	150				
Xylenes, Total	15	0.50	15		99.0	50	150				
Surr: 1,2-Dichloroethane-d4	11	0.50	10		110.0	50	150				
Surr: Dibromofluoromethane	11	0.50	10		107.0	50	150				
Surr: p-Bromofluorobenzene	11	0.50	10		107.0	50	150				
Surr: Toluene-d8	11	0.50	10		109.0	50	150				

Associated Samples: **B22010219-001F, B22010219-002A**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: GECD.I_220107B: 10 **SampType:** Method Blank **Batch ID:** 162738
Method: SW8011 **Analysis Date:** 01/07/2022 18:53 **Prep Date:** 01/06/2022 08:12
Lab ID: MB-162738 **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	0.089	0.020	0.10		89.0	70	130				

Associated Samples: **B22010219-001H, B22010219-004A**

Run ID: Run Order: GECD.I_220107B: 11 **SampType:** Laboratory Control Sample **Batch ID:** 162738
Method: SW8011 **Analysis Date:** 01/07/2022 19:13 **Prep Date:** 01/06/2022 08:12
Lab ID: LCS-162738 **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		94.0	60	140				
Surr: 1,1,1,2-Tetrachloroethane	0.088	0.020	0.10		88.0	70	130				

Associated Samples: **B22010219-001H, B22010219-004A**

Run ID: Run Order: GECD.I_220107B: 12 **SampType:** Laboratory Control Sample **Batch ID:** 162738
Method: SW8011 **Analysis Date:** 01/07/2022 19:33 **Prep Date:** 01/06/2022 08:12
Lab ID: LCS1-162738 **Units:** ug/L **Prep Method:** SW8011

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.095	0.010	0.10		95.0	60	140				
Surr: 1,1,1,2-Tetrachloroethane	0.087	0.020	0.10		87.0	70	130				

Associated Samples: **B22010219-001H, B22010219-004A**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: GECD.I_220107B: 22 **SampType:** Sample Matrix Spike **Batch ID:** 162738
Method: SW8011 **Analysis Date:** 01/07/2022 23:16 **Prep Date:** 01/06/2022 08:13
Lab ID: B22010219-001HMS **Units:** ug/L **Prep Method:** SW8011

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.23	0.010	0.24	0.0	98.0	60	140				
Surr: 1,1,1,2-Tetrachloroethane	0.088	0.020	0.096	0.0	91.0	70	130				

Associated Samples: **B22010219-001H, B22010219-004A**

Run ID: Run Order: GECD.I_220107B: 23 **SampType:** Sample Matrix Spike Duplicate **Batch ID:** 162738
Method: SW8011 **Analysis Date:** 01/07/2022 23:36 **Prep Date:** 01/06/2022 08:13
Lab ID: B22010219-001HMSD **Units:** ug/L **Prep Method:** SW8011

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.24	0.010	0.24	0.0	100.0	60	140	0.23	2.3	20.0	
Surr: 1,1,1,2-Tetrachloroethane	0.093	0.020	0.096	0.0	97.0	70	130	0.0			

Associated Samples: **B22010219-001H, B22010219-004A**

Run ID: Run Order: GECD.I_220107B: 9 **SampType:** Continuing Calibration Verification Standard **Batch ID:** 162738
Method: SW8011 **Analysis Date:** 01/07/2022 18:33 **Prep Date:** 01/06/2022 08:12
Lab ID: CK3-162738 **Units:** ug/L **Prep Method:** SW8011

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.10	0.010	0.10		100.0	80	120				
Surr: 1,1,1,2-Tetrachloroethane	0.10	0.020	0.10		102.0	80	120				

Associated Samples: **B22010219-001H, B22010219-004A**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: GECD.I_220107B: 24 **SampType:** Continuing Calibration Verification Standard **Batch ID:** 162738
Method: SW8011 **Analysis Date:** 01/08/2022 00:16 **Prep Date:** 01/06/2022 08:12
Lab ID: CK5-162738 **Units:** ug/L **Prep Method:** SW8011

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.40	0.010	0.40		99.0	80	120				
Surr: 1,1,1,2-Tetrachloroethane	0.44	0.020	0.40		111.0	80	120				

Associated Samples: **B22010219-001H, B22010219-004A**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: GCFID-HP5-B_220106A: 5 **SampType:** Method Blank **Batch ID:** 162703
Method: SW8015C **Analysis Date:** 01/06/2022 13:32 **Prep Date:** 01/04/2022 16:45
Lab ID: MB-162703 **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	0.23	0.0020	0.20		114.0	56	125				
Surr: n-Triacontane	0.13	0.0020	0.10		129.0	50	150				

Associated Samples: **B22010219-001D**

Run ID: Run Order: GCFID-HP5-B_220106B: 5 **SampType:** Method Blank **Batch ID:** 162703
Method: SW8015C **Analysis Date:** 01/07/2022 22:27 **Prep Date:** 01/04/2022 16:45
Lab ID: MB-162703 **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)	0.24	0.0020	0.20		122.0	56	125				
Surr: n-Triacontane (SGT)	0.13	0.0020	0.10		132.0	50	150				

Associated Samples: **B22010219-001D**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: GCFID-HP5-B_220106A: 3 **SampType:** Laboratory Control Sample **Batch ID:** 162703
Method: SW8015C **Analysis Date:** 01/06/2022 12:06 **Prep Date:** 01/04/2022 16:45
Lab ID: LCS-162703 **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)	17	0.30	15		116.0	36	132				
Total Extractable Hydrocarbons	19	0.30	15		124.0	60	132				
Surr: o-Terphenyl	0.24	0.0020	0.20		119.0	56	125				

Associated Samples: **B22010219-001D**

Run ID: Run Order: GCFID-HP5-B_220106A: 4 **SampType:** Laboratory Control Sample Duplicate **Batch ID:** 162703
Method: SW8015C **Analysis Date:** 01/06/2022 12:49 **Prep Date:** 01/04/2022 16:45
Lab ID: LCSD-162703 **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)	16	0.30	15		108.0	36	132	17	7.3	20.0	
Total Extractable Hydrocarbons	17	0.30	15		115.0	60	132	19	7.3	20.0	
Surr: o-Terphenyl	0.23	0.0020	0.20		114.0	56	125	0.0			

Associated Samples: **B22010219-001D**

Run ID: Run Order: GCFID-HP5-B_220106A: 28 **SampType:** Laboratory Control Sample **Batch ID:** 162703
Method: SW8015C **Analysis Date:** 01/07/2022 12:16 **Prep Date:** 01/04/2022 16:45
Lab ID: LCS-162703-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		110.0	41	113				
Surr: n-Triacontane	0.11	0.0020	0.10		110.0	50	150				

Associated Samples: **B22010219-001D**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: GCFID-HP5-B_220106A: 29 **SampType:** Laboratory Control Sample Duplicate **Batch ID:** 162703
Method: SW8015C **Analysis Date:** 01/07/2022 13:01 **Prep Date:** 01/04/2022 16:45
Lab ID: LCSD-162703-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)	5.7	0.30	5.0		113.0	41	113	5.5	2.7	20.0	
Surr: n-Triacontane	0.11	0.0020	0.10		114.0	50	150	0.0			

Associated Samples: **B22010219-001D**

Run ID: Run Order: GCFID-HP5-B_220106B: 3 **SampType:** Laboratory Control Sample **Batch ID:** 162703
Method: SW8015C **Analysis Date:** 01/07/2022 21:00 **Prep Date:** 01/04/2022 16:45
Lab ID: LCS-162703 **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)	17	0.30	15		116.0	36	132				
Total Extractable Hydrocarbons (SGT)	18	0.30	15		123.0	60	132				
Surr: o-Terphenyl (SGT)	0.25	0.0020	0.20		123.0	56	125				

Associated Samples: **B22010219-001D**

Run ID: Run Order: GCFID-HP5-B_220106B: 4 **SampType:** Laboratory Control Sample Duplicate **Batch ID:** 162703
Method: SW8015C **Analysis Date:** 01/07/2022 21:44 **Prep Date:** 01/04/2022 16:45
Lab ID: LCSD-162703 **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)	16	0.30	15		105.0	36	132	17	10.0	20.0	
Total Extractable Hydrocarbons (SGT)	17	0.30	15		112.0	60	132	18	10.0	20.0	
Surr: o-Terphenyl (SGT)	0.23	0.0020	0.20		115.0	56	125	0.0			

Associated Samples: **B22010219-001D**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: GCFID-HP5-B_220106B: 22 **SampType:** Laboratory Control Sample **Batch ID:** 162703
Method: SW8015C **Analysis Date:** 01/08/2022 13:42 **Prep Date:** 01/04/2022 16:45
Lab ID: LCS-162703-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)	4.9	0.30	5.0		97.0	41	113				
Surr: n-Triacontane (SGT)	0.094	0.0020	0.10		94.0	50	150				

Associated Samples: **B22010219-001D**

Run ID: Run Order: GCFID-HP5-B_220106B: 23 **SampType:** Laboratory Control Sample Duplicate **Batch ID:** 162703
Method: SW8015C **Analysis Date:** 01/08/2022 15:08 **Prep Date:** 01/04/2022 16:45
Lab ID: LCSD-162703-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)	5.1	0.30	5.0		102.0	41	113	4.9	4.8	20.0	
Surr: n-Triacontane (SGT)	0.098	0.0020	0.10		98.0	50	150	0.0			

Associated Samples: **B22010219-001D**

Run ID: Run Order: GCFID-HP5-B_220106A: 8 **SampType:** Sample Matrix Spike **Batch ID:** 162703
Method: SW8015C **Analysis Date:** 01/06/2022 15:42 **Prep Date:** 01/04/2022 16:45
Lab ID: B22010096-001DMS **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)	16	0.30	15	0.0	110.0	36	132				
Total Extractable Hydrocarbons	17	0.30	15	0.0	119.0	60	132				
Surr: o-Terphenyl	0.22	0.0020	0.19	0.0	113.0	56	125				

Associated Samples: **B22010219-001D**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: GCFID-HP5-B_220106A: 30 **SampType:** Sample Matrix Spike **Batch ID:** 162703
Method: SW8015C **Analysis Date:** 01/07/2022 13:44 **Prep Date:** 01/04/2022 16:45
Lab ID: B22010120-001DMS-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)	5.8	0.30	4.9	0.80	103.0	41	113				
Surr: n-Triacontane	0.11	0.0020	0.097	0.0	111.0	50	150				

Associated Samples: **B22010219-001D**

Run ID: Run Order: GCFID-HP5-B_220106B: 8 **SampType:** Sample Matrix Spike **Batch ID:** 162703
Method: SW8015C **Analysis Date:** 01/08/2022 00:39 **Prep Date:** 01/04/2022 16:45
Lab ID: B22010096-001DMS **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)	15	0.30	15	0.0	105.0	36	132				
Total Extractable Hydrocarbons (SGT)	16	0.30	15	0.0	111.0	60	132				
Surr: o-Terphenyl (SGT)	0.23	0.0020	0.19	0.0	117.0	56	125				

Associated Samples: **B22010219-001D**

Run ID: Run Order: GCFID-HP5-B_220106B: 24 **SampType:** Sample Matrix Spike **Batch ID:** 162703
Method: SW8015C **Analysis Date:** 01/08/2022 16:34 **Prep Date:** 01/04/2022 16:45
Lab ID: B22010120-001DMS-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)	5.1	0.30	4.9	0.0	105.0	41	113				
Surr: n-Triacontane (SGT)	0.10	0.0020	0.097	0.0	104.0	50	150				

Associated Samples: **B22010219-001D**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: PE 1_220106A: 4 **SampType:** Method Blank **Batch ID:** R372930
Method: SW8015C **Analysis Date:** 01/06/2022 17:18 **Prep Date:**
Lab ID: MBLK_0106PE104r **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	22	1.0	25		87.0	70	130				

Associated Samples: **B22010219-001G, B22010219-003A**

Run ID: Run Order: PE 1_220106A: 16 **SampType:** Method Blank **Batch ID:** R372930
Method: SW8015C **Analysis Date:** 01/07/2022 10:14 **Prep Date:**
Lab ID: MBLK_0106PE127r **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		86.0	70	130				

Associated Samples: **B22010219-001G, B22010219-003A**

Run ID: Run Order: PE 1_220106A: 3 **SampType:** Laboratory Control Sample **Batch ID:** R372930
Method: SW8015C **Analysis Date:** 01/06/2022 16:43 **Prep Date:**
Lab ID: LCS_0106PE103r **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
C6 to C10	164	20	170		96.0	78	122				
Total Purgeable Hydrocarbons	195	20	200		98.0	70	130				
Surr: Trifluorotoluene	24	1.0	25		97.0	70	130				

Associated Samples: **B22010219-001G, B22010219-003A**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: PE 1_220106A: 15 **SampType:** Laboratory Control Sample **Batch ID:** R372930
Method: SW8015C **Analysis Date:** 01/07/2022 09:39 **Prep Date:**
Lab ID: LCS_0106PE126r **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		99.0	78	122				
Total Purgeable Hydrocarbons	200	20	200		100.0	70	130				
Surr: Trifluorotoluene	24	1.0	25		97.0	70	130				

Associated Samples: **B22010219-001G, B22010219-003A**

Run ID: Run Order: PE 1_220106A: 17 **SampType:** Sample Matrix Spike **Batch ID:** R372930
Method: SW8015C **Analysis Date:** 01/07/2022 10:48 **Prep Date:**
Lab ID: B22010219-001GMS **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
C6 to C10	166	20	170	0.0	98.0	78	122				
Total Purgeable Hydrocarbons	198	20	200	0.0	99.0	70	130				
Surr: Trifluorotoluene	24	1.0	25	0.0	98.0	70	130				

Associated Samples: **B22010219-001G, B22010219-003A**

Run ID: Run Order: PE 1_220106A: 18 **SampType:** Sample Matrix Spike Duplicate **Batch ID:** R372930
Method: SW8015C **Analysis Date:** 01/07/2022 11:22 **Prep Date:**
Lab ID: B22010219-001GMSD **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
C6 to C10	169	20	170	0.0	99.0	78	122	166	1.7	20.0	
Total Purgeable Hydrocarbons	202	20	200	0.0	101.0	70	130	198	1.9	20.0	
Surr: Trifluorotoluene	24	1.0	25	0.0	97.0	70	130	0.0			

Associated Samples: **B22010219-001G, B22010219-003A**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: GCFID-HP5-B_220106A: 12 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372834
Method: SW8015C **Analysis Date:** 01/06/2022 20:03 **Prep Date:**
Lab ID: CCV_0106HP518r-W **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
TEH(Oil Range)	4.9	0.30	5.0		97.0	80	120				
Surr: n-Triacontane	0.21	0.0020	0.20		103.0	80	120				

Associated Samples: **B22010219-001D**

Run ID: Run Order: GCFID-HP5-B_220106A: 13 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372834
Method: SW8015C **Analysis Date:** 01/06/2022 20:47 **Prep Date:**
Lab ID: CCV_0106HP519r **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diesel Range Organics (C10 to C24)	15	0.30	15		102.0	80	120				
Total Extractable Hydrocarbons	16	0.30	15		106.0	80	120				
Surr: o-Terphenyl	0.20	0.0020	0.20		101.0	80	120				

Associated Samples: **B22010219-001D**

Run ID: Run Order: GCFID-HP5-B_220106A: 24 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372834
Method: SW8015C **Analysis Date:** 01/07/2022 07:37 **Prep Date:**
Lab ID: CCV_0106HP534r-W **Units:** mg/L **Prep Method:**

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

Associated Samples: **B22010219-001D**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: GCFID-HP5-B_220106A: 25 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372834
Method: SW8015C **Analysis Date:** 01/07/2022 08:20 **Prep Date:**
Lab ID: CCV_0106HP535r **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diesel Range Organics (C10 to C24)	16	0.30	15		104.0	80	120				
Total Extractable Hydrocarbons	16	0.30	15		108.0	80	120				
Surr: o-Terphenyl	0.21	0.0020	0.20		103.0	80	120				

Associated Samples: **B22010219-001D**

Run ID: Run Order: GCFID-HP5-B_220106B: 14 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372779
Method: SW8015C **Analysis Date:** 01/08/2022 06:28 **Prep Date:**
Lab ID: CCV_0106HP565r-W **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
TEH(Oil Range)	4.9	0.30	5.0		98.0	80	120				
Surr: n-Triacontane	0.21	0.0020	0.20		104.0	80	120				

Associated Samples: **B22010219-001D**

Run ID: Run Order: GCFID-HP5-B_220106B: 15 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372779
Method: SW8015C **Analysis Date:** 01/08/2022 07:12 **Prep Date:**
Lab ID: CCV_0106HP566r **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diesel Range Organics (C10 to C24)	16	0.30	15		107.0	80	120				
Total Extractable Hydrocarbons	17	0.30	15		111.0	80	120				
Surr: o-Terphenyl	0.21	0.0020	0.20		106.0	80	120				

Associated Samples: **B22010219-001D**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: GCFID-HP5-B_220106B: 25 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372779
Method: SW8015C **Analysis Date:** 01/08/2022 18:01 **Prep Date:**
Lab ID: CCV_0106HP581r-W **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
TEH(Oil Range)	5.2	0.30	5.0		103.0	80	120				
Surr: n-Triacontane	0.22	0.0020	0.20		109.0	80	120				

Associated Samples: **B22010219-001D**

Run ID: Run Order: GCFID-HP5-B_220106B: 26 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372779
Method: SW8015C **Analysis Date:** 01/08/2022 18:45 **Prep Date:**
Lab ID: CCV_0106HP582r **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		108.0	80	120				
Total Extractable Hydrocarbons	17	0.30	15		112.0	80	120				
Surr: o-Terphenyl	0.21	0.0020	0.20		107.0	80	120				

Associated Samples: **B22010219-001D**

Run ID: Run Order: PE 1_220106A: 2 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372930
Method: SW8015C **Analysis Date:** 01/06/2022 16:09 **Prep Date:**
Lab ID: CCV_0106PE102r **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
C6 to C10	184	20	168		109.0	80	120				
Total Purgeable Hydrocarbons	221	20	200		110.0	80	120				
Surr: Trifluorotoluene	25	1.0	25		99.0	80	120				

Associated Samples: **B22010219-001G, B22010219-003A**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: PE 1_220106A: 12 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372930
Method: SW8015C **Analysis Date:** 01/07/2022 03:00 **Prep Date:**
Lab ID: CCV_0106PE121r **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	168		104.0	80	120				
Total Purgeable Hydrocarbons	210	20	200		105.0	80	120				
Surr: Trifluorotoluene	24	1.0	25		96.0	80	120				

Associated Samples: **B22010219-001G, B22010219-003A**

Run ID: Run Order: PE 1_220106A: 14 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372930
Method: SW8015C **Analysis Date:** 01/07/2022 09:05 **Prep Date:**
Lab ID: CCV_0106PE125r **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
C6 to C10	178	20	168		106.0	80	120				
Total Purgeable Hydrocarbons	214	20	200		107.0	80	120				
Surr: Trifluorotoluene	24	1.0	25		96.0	80	120				

Associated Samples: **B22010219-001G, B22010219-003A**

Run ID: Run Order: PE 1_220106A: 28 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372930
Method: SW8015C **Analysis Date:** 01/07/2022 21:04 **Prep Date:**
Lab ID: CCV_0106PE146r **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
C6 to C10	181	20	168		108.0	80	120				
Total Purgeable Hydrocarbons	218	20	200		109.0	80	120				
Surr: Trifluorotoluene	24	1.0	25		97.0	80	120				

Associated Samples: **B22010219-001G, B22010219-003A**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: FID-HEADSPACE_220106A: 4 **SampType:** Method Blank **Batch ID:** R372805
Method: SW8015M **Analysis Date:** 01/06/2022 10:18 **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: **B22010219-001I, B22010219-005A**

Run ID: Run Order: FID-HEADSPACE_220106A: 2 **SampType:** Laboratory Control Sample **Batch ID:** R372805
Method: SW8015M **Analysis Date:** 01/06/2022 09:03 **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	97	2.0	100		97.0	85	115				

Associated Samples: **B22010219-001I, B22010219-005A**

Run ID: Run Order: FID-HEADSPACE_220106A: 3 **SampType:** Laboratory Control Sample Duplicate **Batch ID:** R372805
Method: SW8015M **Analysis Date:** 01/06/2022 09:09 **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	98	2.0	100		98.0	85	115	97	0.7	20.0	

Associated Samples: **B22010219-001I, B22010219-005A**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: FID-HEADSPACE_220106A: 12 **SampType:** Sample Duplicate **Batch ID:** R372805
Method: SW8015M **Analysis Date:** 01/06/2022 11:10 **Prep Date:**
Lab ID: B22010213-001IDUP **Units:** mg/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Methane	0.0026	0.0020			0.0			0.0025	6.0	20.0	

Associated Samples: **B22010219-001I, B22010219-005A**

Run ID: Run Order: FID-HEADSPACE_220106A: 1 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372805
Method: SW8015M **Analysis Date:** 01/06/2022 08:59 **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	98	2.0	100		98.0	85	115				

Associated Samples: **B22010219-001I, B22010219-005A**

Run ID: Run Order: FID-HEADSPACE_220106A: 19 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R372805
Method: SW8015M **Analysis Date:** 01/06/2022 12:05 **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	98	2.0	100		98.0	85	115				

Associated Samples: **B22010219-001I, B22010219-005A**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: SV5973N.I_220114A: 19 **SampType:** Method Blank **Batch ID:** 162744
Method: SW8270C **Analysis Date:** 01/14/2022 22:43 **Prep Date:** 01/06/2022 09:18
Lab ID: MB-162744 **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	ND	5.0									
1,2-Dichlorobenzene	ND	5.0									
1,3-Dichlorobenzene	ND	5.0									
1,4-Dichlorobenzene	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	10									
2,4-Dinitrotoluene	ND	5.0									
2,6-Dinitrotoluene	ND	5.0									
2-Chloronaphthalene	ND	5.0									
2-Chlorophenol	ND	5.0									
2-Nitrophenol	ND	5.0									
3,3´-Dichlorobenzidine	ND	10									
4,6-Dinitro-2-methylphenol	ND	10									
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	10									
Azobenzene	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									

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: SV5973N.I_220114A: 19 **SampType:** Method Blank **Batch ID:** 162744
Method: SW8270C **Analysis Date:** 01/14/2022 22:43 **Prep Date:** 01/06/2022 09:18
Lab ID: MB-162744 **Units:** ug/L **Prep Method:** SW3510C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diethyl phthalate	ND	5.0									
Dimethyl phthalate	ND	5.0									
Di-n-butyl phthalate	ND	5.0									
Di-n-octyl phthalate	ND	5.0									
Hexachlorobenzene	ND	5.0									
Hexachlorobutadiene	ND	5.0									
Hexachlorocyclopentadiene	ND	5.0									
Hexachloroethane	ND	5.0									
Isophorone	ND	5.0									
m+p-Cresols	ND	5.0									
Nitrobenzene	ND	5.0									
n-Nitrosodimethylamine	ND	5.0									
n-Nitroso-di-n-propylamine	ND	5.0									
n-Nitrosodiphenylamine	ND	10									
o-Cresol	ND	5.0									
Pentachlorophenol	ND	10									
Phenol	ND	5.0									
Pyridine	ND	5.0									
Surr: 2,4,6-Tribromophenol	176	5.0	200		88.0	43	140				
Surr: 2-Fluorobiphenyl	62	5.0	100		62.0	44	119				
Surr: 2-Fluorophenol	86	5.0	200		43.0	19	119				
Surr: Nitrobenzene-d5	76	5.0	100		76.0	44	120				
Surr: Phenol-d5	94	5.0	200		47.0	10	65				
Surr: Terphenyl-d14	104	5.0	100		104.0	50	134				

Associated Samples: **B22010219-001C**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: SV5973N.I_220114A: 20 **SampType:** Laboratory Control Sample **Batch ID:** 162744
Method: SW8270C **Analysis Date:** 01/14/2022 23:15 **Prep Date:** 01/06/2022 09:18
Lab ID: LCS-162744 **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	67	10	100		67.0	29	116				
1,2-Dichlorobenzene	63	10	100		63.0	32	111				
1,3-Dichlorobenzene	64	10	100		64.0	28	110				
1,4-Dichlorobenzene	61	10	100		61.0	29	112				
2,4,5-Trichlorophenol	80	10	100		80.0	53	123				
2,4,6-Trichlorophenol	83	10	100		83.0	50	125				
2,4-Dichlorophenol	77	10	100		77.0	47	121				
2,4-Dimethylphenol	78	10	100		78.0	31	124				
2,4-Dinitrophenol	72	10	100		72.0	23	142				
2,4-Dinitrotoluene	85	10	100		85.0	57	128				
2,6-Dinitrotoluene	77	10	100		77.0	50	118				
2-Chloronaphthalene	76	10	100		76.0	40	116				
2-Chlorophenol	70	10	100		70.0	38	117				
2-Nitrophenol	76	10	100		76.0	47	123				
3,3´-Dichlorobenzidine	76	10	100		76.0	27	129				
4,6-Dinitro-2-methylphenol	81	10	100		81.0	44	137				
4-Bromophenyl phenyl ether	87	10	100		87.0	55	124				
4-Chloro-3-methylphenol	88	10	100		88.0	52	119				
4-Chlorophenol	74	10	100		74.0	41	81				
4-Chlorophenyl phenyl ether	83	10	100		83.0	53	121				
4-Nitrophenol	36	10	100		36.0	15	36				
Azobenzene	84	10	100		84.0	61	116				
bis(-2-chloroethoxy)Methane	89	10	100		89.0	48	120				
bis(-2-chloroethyl)Ether	77	10	100		77.0	43	118				
bis(2-chloroisopropyl)Ether	62	10	100		62.0	37	130				
bis(2-ethylhexyl)Phthalate	97	10	100		97.0	55	135				
Butylbenzylphthalate	98	10	100		98.0	53	134				

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: SV5973N.I_220114A: 20 **SampType:** Laboratory Control Sample **Batch ID:** 162744
Method: SW8270C **Analysis Date:** 01/14/2022 23:15 **Prep Date:** 01/06/2022 09:18
Lab ID: LCS-162744 **Units:** ug/L **Prep Method:** SW3510C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diethyl phthalate	90	10	100		90.0	56	125				
Dimethyl phthalate	96	10	100		96.0	45	127				
Di-n-butyl phthalate	98	10	100		98.0	59	127				
Di-n-octyl phthalate	93	10	100		93.0	51	140				
Hexachlorobenzene	82	10	100		82.0	53	125				
Hexachlorobutadiene	62	10	100		62.0	22	124				
Hexachlorocyclopentadiene	62	10	100		62.0	39	91				
Hexachloroethane	54	10	100		54.0	21	115				
Isophorone	88	10	100		88.0	42	124				
m+p-Cresols	74	10	100		74.0	29	110				
Nitrobenzene	79	10	100		79.0	45	121				
n-Nitrosodimethylamine	39	10	100		39.0	20	45				
n-Nitroso-di-n-propylamine	84	10	100		84.0	49	119				
n-Nitrosodiphenylamine	94	10	100		94.0	51	123				
o-Cresol	77	10	100		77.0	30	117				
Pentachlorophenol	97	10	100		97.0	35	138				
Phenol	48	10	100		48.0	37	75				
Pyridine	31	10	100		31.0	16	45				
Surr: 2,4,6-Tribromophenol	181	10	200		91.0	43	140				
Surr: 2-Fluorobiphenyl	76	10	100		76.0	44	119				
Surr: 2-Fluorophenol	83	10	200		41.0	19	119				
Surr: Nitrobenzene-d5	69	10	100		69.0	44	120				
Surr: Phenol-d5	90	10	200		45.0	10	65				
Surr: Terphenyl-d14	95	10	100		95.0	50	134				

Associated Samples: **B22010219-001C**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: SV5973N.I_220114A: 21 **SampType:** Laboratory Control Sample Duplicate **Batch ID:** 162744
Method: SW8270C **Analysis Date:** 01/14/2022 23:48 **Prep Date:** 01/06/2022 09:19
Lab ID: LCSD-162744 **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	67	1.7	20.0	
1,2-Dichlorobenzene	64	10	100		64.0	32	111	63	0.8	20.0	
1,3-Dichlorobenzene	63	10	100		63.0	28	110	64	1.4	20.0	
1,4-Dichlorobenzene	64	10	100		64.0	29	112	61	4.6	20.0	
2,4,5-Trichlorophenol	81	10	100		81.0	53	123	80	1.6	20.0	
2,4,6-Trichlorophenol	84	10	100		84.0	50	125	83	1.7	20.0	
2,4-Dichlorophenol	79	10	100		79.0	47	121	77	2.7	20.0	
2,4-Dimethylphenol	80	10	100		80.0	31	124	78	2.3	20.0	
2,4-Dinitrophenol	74	10	100		74.0	23	142	72	1.7	20.0	
2,4-Dinitrotoluene	83	10	100		83.0	57	128	85	3.3	20.0	
2,6-Dinitrotoluene	81	10	100		81.0	50	118	77	4.1	20.0	
2-Chloronaphthalene	78	10	100		78.0	40	116	76	2.5	20.0	
2-Chlorophenol	74	10	100		74.0	38	117	70	5.5	20.0	
2-Nitrophenol	76	10	100		76.0	47	123	76	1.1	20.0	
3,3´-Dichlorobenzidine	74	10	100		74.0	27	129	76	2.0	20.0	
4,6-Dinitro-2-methylphenol	77	10	100		77.0	44	137	81	4.8	20.0	
4-Bromophenyl phenyl ether	90	10	100		90.0	55	124	87	2.5	20.0	
4-Chloro-3-methylphenol	88	10	100		88.0	52	119	88	0.2	20.0	
4-Chlorophenol	73	10	100		73.0	41	81	74	1.5	20.0	
4-Chlorophenyl phenyl ether	87	10	100		87.0	53	121	83	4.9	20.0	
4-Nitrophenol	36	10	100		36.0	15	36	36	0.9	20.0	
Azobenzene	81	10	100		81.0	61	116	84	3.1	20.0	
bis(-2-chloroethoxy)Methane	89	10	100		89.0	48	120	89	0.1	20.0	
bis(-2-chloroethyl)Ether	79	10	100		79.0	43	118	77	2.3	20.0	
bis(2-chloroisopropyl)Ether	62	10	100		62.0	37	130	62	0.1	20.0	
bis(2-ethylhexyl)Phthalate	94	10	100		94.0	55	135	97	4.0	20.0	
Butylbenzylphthalate	94	10	100		94.0	53	134	98	3.3	20.0	

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: SV5973N.I_220114A: 21 **SampType:** Laboratory Control Sample Duplicate **Batch ID:** 162744
Method: SW8270C **Analysis Date:** 01/14/2022 23:48 **Prep Date:** 01/06/2022 09:19
Lab ID: LCSD-162744 **Units:** ug/L **Prep Method:** SW3510C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diethyl phthalate	86	10	100		86.0	56	125	90	4.7	20.0	
Dimethyl phthalate	91	10	100		91.0	45	127	96	5.4	20.0	
Di-n-butyl phthalate	94	10	100		94.0	59	127	98	3.5	20.0	
Di-n-octyl phthalate	93	10	100		93.0	51	140	93	0.0	20.0	
Hexachlorobenzene	80	10	100		80.0	53	125	82	3.0	20.0	
Hexachlorobutadiene	64	10	100		64.0	22	124	62	3.5	20.0	
Hexachlorocyclopentadiene	63	10	100		63.0	39	91	62	2.2	20.0	
Hexachloroethane	55	10	100		55.0	21	115	54	2.8	20.0	
Isophorone	86	10	100		86.0	42	124	88	1.6	20.0	
m+p-Cresols	75	10	100		75.0	29	110	74	0.6	20.0	
Nitrobenzene	81	10	100		81.0	45	121	79	3.3	20.0	
n-Nitrosodimethylamine	44	10	100		44.0	20	45	39	11.0	20.0	
n-Nitroso-di-n-propylamine	88	10	100		88.0	49	119	84	4.5	20.0	
n-Nitrosodiphenylamine	94	10	100		94.0	51	123	94	0.2	20.0	
o-Cresol	79	10	100		79.0	30	117	77	2.2	20.0	
Pentachlorophenol	94	10	100		94.0	35	138	97	3.3	20.0	
Phenol	49	10	100		49.0	37	75	48	1.3	20.0	
Pyridine	33	10	100		33.0	16	45	31	7.5	20.0	
Surr: 2,4,6-Tribromophenol	176	10	200		88.0	43	140	0.0	0.0		
Surr: 2-Fluorobiphenyl	74	10	100		74.0	44	119	0.0	0.0		
Surr: 2-Fluorophenol	88	10	200		44.0	19	119	0.0	0.0		
Surr: Nitrobenzene-d5	71	10	100		71.0	44	120	0.0	0.0		
Surr: Phenol-d5	91	10	200		45.0	10	65	0.0	0.0		
Surr: Terphenyl-d14	91	10	100		91.0	50	134	0.0	0.0		

Associated Samples: **B22010219-001C**

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

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: SV5973N.I_220114A: 23 **SampType:** Sample Matrix Spike **Batch ID:** 162744
Method: SW8270C **Analysis Date:** 01/15/2022 00:52 **Prep Date:** 01/06/2022 09:19
Lab ID: B22010213-001CMS **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	61	10	97	0.0	63.0	29	116				
1,2-Dichlorobenzene	62	10	97	0.0	64.0	32	111				
1,3-Dichlorobenzene	60	10	97	0.0	61.0	28	110				
1,4-Dichlorobenzene	61	10	97	0.0	62.0	29	112				
2,4,5-Trichlorophenol	80	10	97	0.0	82.0	53	123				
2,4,6-Trichlorophenol	83	10	97	0.0	85.0	50	125				
2,4-Dichlorophenol	74	10	97	0.0	76.0	47	121				
2,4-Dimethylphenol	81	10	97	0.0	84.0	31	124				
2,4-Dinitrophenol	79	10	97	0.0	82.0	23	142				
2,4-Dinitrotoluene	84	10	97	0.0	86.0	57	128				
2,6-Dinitrotoluene	83	10	97	0.0	85.0	50	118				
2-Chloronaphthalene	80	10	97	0.0	82.0	40	116				
2-Chlorophenol	68	10	97	0.0	70.0	38	117				
2-Nitrophenol	71	10	97	0.0	73.0	47	123				
3,3´-Dichlorobenzidine	61	10	97	0.0	63.0	27	129				
4,6-Dinitro-2-methylphenol	75	10	97	0.0	77.0	44	137				
4-Bromophenyl phenyl ether	86	10	97	0.0	88.0	55	124				
4-Chloro-3-methylphenol	84	10	97	0.0	87.0	52	119				
4-Chlorophenol	70	10	97	0.0	72.0	41	81				
4-Chlorophenyl phenyl ether	86	10	97	0.0	89.0	53	121				
4-Nitrophenol	41	10	97	0.0	43.0	15	36				S
Azobenzene	75	10	97	0.0	77.0	61	116				
bis(-2-chloroethoxy)Methane	82	10	97	0.0	84.0	48	120				
bis(-2-chloroethyl)Ether	78	10	97	0.0	80.0	43	118				
bis(2-chloroisopropyl)Ether	59	10	97	0.0	61.0	37	130				
bis(2-ethylhexyl)Phthalate	92	10	97	0.0	95.0	55	135				
Butylbenzylphthalate	93	10	97	0.0	96.0	53	134				

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: SV5973N.I_220114A: 23 **SampType:** Sample Matrix Spike **Batch ID:** 162744
Method: SW8270C **Analysis Date:** 01/15/2022 00:52 **Prep Date:** 01/06/2022 09:19
Lab ID: B22010213-001CMS **Units:** ug/L **Prep Method:** SW3510C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diethyl phthalate	87	10	97	0.0	89.0	56	125				
Dimethyl phthalate	93	10	97	0.0	96.0	45	127				
Di-n-butyl phthalate	94	10	97	0.0	97.0	59	127				
Di-n-octyl phthalate	90	10	97	0.0	93.0	51	140				
Hexachlorobenzene	75	10	97	0.0	77.0	53	125				
Hexachlorobutadiene	59	10	97	0.0	61.0	22	124				
Hexachlorocyclopentadiene	60	10	97	0.0	62.0	39	91				
Hexachloroethane	54	10	97	0.0	56.0	21	115				
Isophorone	80	10	97	0.0	82.0	42	124				
m+p-Cresols	74	10	97	0.0	76.0	29	110				
Nitrobenzene	76	10	97	0.0	78.0	45	121				
n-Nitrosodimethylamine	39	10	97	0.0	40.0	20	45				
n-Nitroso-di-n-propylamine	85	10	97	0.0	87.0	49	119				
n-Nitrosodiphenylamine	89	10	97	0.0	92.0	51	123				
o-Cresol	100	10	97	0.0	103.0	30	117				
Pentachlorophenol	91	10	97	0.0	94.0	35	138				
Phenol	48	10	97	0.0	49.0	37	75				
Pyridine	29	10	97	0.0	30.0	16	45				
Surr: 2,4,6-Tribromophenol	170	10	194	0.0	88.0	43	140				
Surr: 2-Fluorobiphenyl	77	10	97	0.0	79.0	44	119				
Surr: 2-Fluorophenol	80	10	194	0.0	41.0	19	119				
Surr: Nitrobenzene-d5	69	10	97	0.0	71.0	44	120				
Surr: Phenol-d5	91	10	194	0.0	47.0	10	65				
Surr: Terphenyl-d14	90	10	97	0.0	93.0	50	134				

Associated Samples: **B22010219-001C**

- 1 = This is a known very reactive compound. The recovery of this compound was normal in the Laboratory Control Sample (LCS). The compound appears to have reacted with the sample matrix.

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: SV5973N.I_220114B: 5 **SampType:** Sample Matrix Spike **Batch ID:** 162744
Method: SW8270C **Analysis Date:** 01/15/2022 03:54 **Prep Date:** 01/06/2022 09:19
Lab ID: B22010213-002AMS **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	62	10	97	0.0	64.0	29	116				
1,2-Dichlorobenzene	56	10	97	0.0	57.0	32	111				
1,3-Dichlorobenzene	56	10	97	0.0	58.0	28	110				
1,4-Dichlorobenzene	55	10	97	0.0	57.0	29	112				
2,4,5-Trichlorophenol	76	10	97	0.0	78.0	53	123				
2,4,6-Trichlorophenol	77	10	97	0.0	79.0	50	125				
2,4-Dichlorophenol	77	10	97	0.0	79.0	47	121				
2,4-Dimethylphenol	84	10	97	0.0	87.0	31	124				
2,4-Dinitrophenol	71	10	97	0.0	73.0	23	142				
2,4-Dinitrotoluene	82	10	97	0.0	85.0	57	128				
2,6-Dinitrotoluene	79	10	97	0.0	82.0	50	118				
2-Chloronaphthalene	73	10	97	0.0	75.0	40	116				
2-Chlorophenol	67	10	97	0.0	69.0	38	117				
2-Nitrophenol	72	10	97	0.0	74.0	47	123				
3,3´-Dichlorobenzidine	56	10	97	0.0	57.0	27	129				
4,6-Dinitro-2-methylphenol	68	10	97	0.0	70.0	44	137				
4-Bromophenyl phenyl ether	82	10	97	0.0	84.0	55	124				
4-Chloro-3-methylphenol	86	10	97	0.0	89.0	52	119				
4-Chlorophenol	70	10	97	0.0	72.0	41	81				
4-Chlorophenyl phenyl ether	80	10	97	0.0	83.0	53	121				
4-Nitrophenol	36	10	97	0.0	37.0	15	36				S
Azobenzene	75	10	97	0.0	77.0	61	116				
bis(-2-chloroethoxy)Methane	86	10	97	0.0	88.0	48	120				
bis(-2-chloroethyl)Ether	74	10	97	0.0	76.0	43	118				
bis(2-chloroisopropyl)Ether	56	10	97	0.0	57.0	37	130				
bis(2-ethylhexyl)Phthalate	89	10	97	2.6	89.0	55	135				
Butylbenzylphthalate	90	10	97	0.0	93.0	53	134				

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: SV5973N.I_220114B: 5 **SampType:** Sample Matrix Spike **Batch ID:** 162744
Method: SW8270C **Analysis Date:** 01/15/2022 03:54 **Prep Date:** 01/06/2022 09:19
Lab ID: B22010213-002AMS **Units:** ug/L **Prep Method:** SW3510C

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diethyl phthalate	83	10	97	0.0	86.0	56	125				
Dimethyl phthalate	91	10	97	0.0	93.0	45	127				
Di-n-butyl phthalate	92	10	97	0.0	94.0	59	127				
Di-n-octyl phthalate	84	10	97	0.0	87.0	51	140				
Hexachlorobenzene	74	10	97	0.0	76.0	53	125				
Hexachlorobutadiene	58	10	97	0.0	60.0	22	124				
Hexachlorocyclopentadiene	56	10	97	0.0	58.0	39	91				
Hexachloroethane	49	10	97	0.0	50.0	21	115				
Isophorone	82	10	97	0.0	85.0	42	124				
m+p-Cresols	70	10	97	0.0	72.0	29	110				
Nitrobenzene	77	10	97	0.0	80.0	45	121				
n-Nitrosodimethylamine	38	10	97	0.0	39.0	20	45				
n-Nitroso-di-n-propylamine	79	10	97	0.0	81.0	49	119				
n-Nitrosodiphenylamine	87	10	97	0.0	90.0	51	123				
o-Cresol	74	10	97	0.0	77.0	30	117				
Pentachlorophenol	80	10	97	0.0	82.0	35	138				
Phenol	45	10	97	0.0	46.0	37	75				
Pyridine	27	10	97	0.0	28.0	16	45				
Surr: 2,4,6-Tribromophenol	148	10	194	0.0	76.0	43	140				
Surr: 2-Fluorobiphenyl	66	10	97	0.0	68.0	44	119				
Surr: 2-Fluorophenol	78	10	194	0.0	40.0	19	119				
Surr: Nitrobenzene-d5	66	10	97	0.0	68.0	44	120				
Surr: Phenol-d5	81	10	194	0.0	42.0	10	65				
Surr: Terphenyl-d14	85	10	97	0.0	87.0	50	134				

Associated Samples: **B22010219-001C**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: SV5973N.I_220114B: 2 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R373356
Method: SW8270C **Analysis Date:** 01/15/2022 02:18 **Prep Date:**
Lab ID: 14-Jan-22_CCV_26 **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	75	10	75		99.0	80	120				
1,2-Dichlorobenzene	76	10	75		101.0	80	120				
1,3-Dichlorobenzene	75	10	75		100.0	80	120				
1,4-Dichlorobenzene	75	10	75		100.0	80	120				
2,4,5-Trichlorophenol	82	10	75		109.0	80	120				
2,4,6-Trichlorophenol	80	10	75		107.0	80	120				
2,4-Dichlorophenol	80	10	75		106.0	80	120				
2,4-Dimethylphenol	78	10	75		104.0	80	120				
2,4-Dinitrophenol	67	10	75		90.0	80	120				
2,4-Dinitrotoluene	76	10	75		102.0	80	120				
2,6-Dinitrotoluene	65	10	75		87.0	80	120				
2-Chloronaphthalene	73	10	75		98.0	80	120				
2-Chlorophenol	80	10	75		107.0	80	120				
2-Nitrophenol	73	10	75		98.0	80	120				
3,3´-Dichlorobenzidine	78	10	75		104.0	80	120				
4,6-Dinitro-2-methylphenol	67	10	75		89.0	80	120				
4-Bromophenyl phenyl ether	78	10	75		104.0	80	120				
4-Chloro-3-methylphenol	78	10	75		105.0	80	120				
4-Chlorophenol	81	10	75		108.0	80	120				
4-Chlorophenyl phenyl ether	72	10	75		96.0	80	120				
4-Nitrophenol	74	10	75		98.0	80	120				
Azobenzene	76	10	75		102.0	80	120				
bis(-2-chloroethoxy)Methane	79	10	75		106.0	80	120				
bis(-2-chloroethyl)Ether	76	10	75		102.0	80	120				
bis(2-chloroisopropyl)Ether	69	10	75		92.0	80	120				
bis(2-ethylhexyl)Phthalate	79	10	75		105.0	80	120				
Butylbenzylphthalate	79	10	75		105.0	80	120				

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: SV5973N.I_220114B: 2 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R373356
Method: SW8270C **Analysis Date:** 01/15/2022 02:18 **Prep Date:**
Lab ID: 14-Jan-22_CCV_26 **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diethyl phthalate	79	10	75		105.0	80	120				
Dimethyl phthalate	78	10	75		104.0	80	120				
Di-n-butyl phthalate	79	10	75		106.0	80	120				
Di-n-octyl phthalate	79	10	75		105.0	80	120				
Hexachlorobenzene	73	10	75		98.0	80	120				
Hexachlorobutadiene	76	10	75		102.0	80	120				
Hexachlorocyclopentadiene	69	10	75		92.0	80	120				
Hexachloroethane	72	10	75		96.0	80	120				
Isophorone	82	10	75		110.0	80	120				
m+p-Cresols	75	10	75		100.0	80	120				
Nitrobenzene	78	10	75		104.0	80	120				
n-Nitrosodimethylamine	71	10	75		94.0	80	120				
n-Nitroso-di-n-propylamine	72	10	75		96.0	80	120				
n-Nitrosodiphenylamine	83	10	75		110.0	80	120				
o-Cresol	78	10	75		104.0	80	120				
Pentachlorophenol	78	10	75		104.0	80	120				
Phenol	80	10	75		107.0	80	120				
Pyridine	65	10	75		87.0	80	120				
Surr: 2,4,6-Tribromophenol	75	10	75		100.0	80	120				
Surr: 2-Fluorobiphenyl	78	10	75		104.0	80	120				
Surr: 2-Fluorophenol	79	10	75		105.0	80	120				
Surr: Nitrobenzene-d5	72	10	75		97.0	80	120				
Surr: Phenol-d5	77	10	75		103.0	80	120				
Surr: Terphenyl-d14	76	10	75		101.0	80	120				

Associated Samples: **B22010219-001C**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: SV5973N.I_220114B: 25 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R373356
Method: SW8270C **Analysis Date:** 01/15/2022 14:37 **Prep Date:**
Lab ID: 14-Jan-22_CCV_49 **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	77	10	75		103.0	50	150				
1,2-Dichlorobenzene	73	10	75		97.0	50	150				
1,3-Dichlorobenzene	74	10	75		99.0	50	150				
1,4-Dichlorobenzene	75	10	75		99.0	50	150				
2,4,5-Trichlorophenol	74	10	75		99.0	50	150				
2,4,6-Trichlorophenol	74	10	75		98.0	50	150				
2,4-Dichlorophenol	81	10	75		108.0	50	150				
2,4-Dimethylphenol	72	10	75		96.0	50	150				
2,4-Dinitrophenol	43	10	75		57.0	50	150				
2,4-Dinitrotoluene	88	10	75		118.0	50	150				
2,6-Dinitrotoluene	67	10	75		89.0	50	150				
2-Chloronaphthalene	60	10	75		79.0	50	150				
2-Chlorophenol	77	10	75		103.0	50	150				
2-Nitrophenol	77	10	75		102.0	50	150				
3,3´-Dichlorobenzidine	68	10	75		90.0	50	150				
4,6-Dinitro-2-methylphenol	44	10	75		59.0	50	150				
4-Bromophenyl phenyl ether	71	10	75		95.0	50	150				
4-Chloro-3-methylphenol	76	10	75		102.0	50	150				
4-Chlorophenol	82	10	75		109.0	50	150				
4-Chlorophenyl phenyl ether	97	10	75		129.0	50	150				
4-Nitrophenol	68	10	75		90.0	50	150				
Azobenzene	67	10	75		90.0	50	150				
bis(-2-chloroethoxy)Methane	65	10	75		86.0	50	150				
bis(-2-chloroethyl)Ether	72	10	75		96.0	50	150				
bis(2-chloroisopropyl)Ether	69	10	75		91.0	50	150				
bis(2-ethylhexyl)Phthalate	79	10	75		105.0	50	150				
Butylbenzylphthalate	78	10	75		104.0	50	150				

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: SV5973N.I_220114B: 25 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R373356
Method: SW8270C **Analysis Date:** 01/15/2022 14:37 **Prep Date:**
Lab ID: 14-Jan-22_CCV_49 **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
Diethyl phthalate	97	10	75		130.0	50	150				
Dimethyl phthalate	72	10	75		96.0	50	150				
Di-n-butyl phthalate	72	10	75		96.0	50	150				
Di-n-octyl phthalate	78	10	75		104.0	50	150				
Hexachlorobenzene	70	10	75		93.0	50	150				
Hexachlorobutadiene	87	10	75		116.0	50	150				
Hexachlorocyclopentadiene	66	10	75		88.0	50	150				
Hexachloroethane	54	10	75		72.0	50	150				
Isophorone	72	10	75		96.0	50	150				
m+p-Cresols	54	10	75		72.0	50	150				
Nitrobenzene	51	10	75		68.0	50	150				
n-Nitrosodimethylamine	31	10	75		42.0	50	150				S
n-Nitroso-di-n-propylamine	66	10	75		88.0	50	150				
n-Nitrosodiphenylamine	73	10	75		97.0	50	150				
o-Cresol	72	10	75		97.0	50	150				
Pentachlorophenol	58	10	75		77.0	50	150				
Phenol	77	10	75		102.0	50	150				
Pyridine	33	10	75		44.0	50	150				S
Surr: 2,4,6-Tribromophenol	69	10	75		92.0	50	150				
Surr: 2-Fluorobiphenyl	66	10	75		88.0	50	150				
Surr: 2-Fluorophenol	70	10	75		94.0	50	150				
Surr: Nitrobenzene-d5	44	10	75		59.0	50	150				
Surr: Phenol-d5	80	10	75		107.0	50	150				
Surr: Terphenyl-d14	73	10	75		97.0	50	150				

Associated Samples: **B22010219-001C**

Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Run ID: Run Order: SV5973N.I_220114B: 28 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R373356
Method: SW8270C **Analysis Date:** 01/15/2022 15:31 **Prep Date:**
Lab ID: 14-Jan-22_CCV_51 **Units:** ug/L **Prep Method:**

Analytes	Result	LOQ	Spk value	Spk RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
n-Nitrosodimethylamine	65	10	75		86.0	50	150				
Pyridine	71	10	75		95.0	50	150				
Surr: 2,4,6-Tribromophenol	73	10	75		98.0	50	150				
Surr: 2-Fluorobiphenyl	77	10	75		102.0	50	150				
Surr: 2-Fluorophenol	70	10	75		93.0	50	150				
Surr: Nitrobenzene-d5	71	10	75		95.0	50	150				
Surr: Phenol-d5	77	10	75		103.0	50	150				
Surr: Terphenyl-d14	73	10	75		98.0	50	150				

Associated Samples: **B22010219-001C**

Analytical QC Exceptions Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01

Report Date: 02/25/2022

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, Dissolved	R373222	001A	SD	B22010212-001ADIL	1/14/2022	14:47	Lead					10.0	N
SW8270C	Semi-Volatile Organic Compounds, Extended List	162744	001C	MS-DOD	B22010213-001CMS	1/15/2022	00:52	4-Nitrophenol	43.0	15	36			S
				MS-DOD	B22010213-002AMS	1/15/2022	03:54	4-Nitrophenol	37.0	15	36			S
		R373356	001C	CCV	14-Jan-22_CCV_49	1/15/2022	14:37	n-Nitrosodimethylamine	42.0	50	150			S
								Pyridine	44.0	50	150			S

Preparation and Analysis Dates Report

Work Order: B22010219
Client: AECOM - Honolulu
Project Name: CV18F0126, 60571032.02.46.01
Report Date: 2/25/2022

Lab ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Method	Prep Date	Prep Batch	Analysis Method	Analysis Date
001B	ERH2301 (OWDFMW05A)	12/31/2021 15:25	Drinking Water	Metals by ICP-MS, Total		SW3010A	01/05/2022 15:52	162735	SW6020	01/12/2022 23:35
001C	ERH2301 (OWDFMW05A)	12/31/2021 15:25	Drinking Water	Low Level PAH by 8270C SIM		SW3510C	01/06/2022 09:19	162744	SW8270CSIM	01/13/2022 22:12
				Semi-Volatile Organic Compounds, Extended List		SW3510C	01/06/2022 09:19	162744	SW8270C	01/15/2022 05:31
001D	ERH2301 (OWDFMW05A)	12/31/2021 15:25	Drinking Water	Diesel Range Organics		SW3520C	01/05/2022 15:18	162703	SW8015C	01/07/2022 02:34
						SW3520C	01/05/2022 15:18	162703	SW8015C	01/08/2022 10:05
001H	ERH2301 (OWDFMW05A)	12/31/2021 15:25	Drinking Water	EDB in Water by ECD		SW8011	01/06/2022 08:13	162738	SW8011	01/07/2022 22:55
004A	ERH2300-14525	12/31/2021 15:25	Trip Blank	EDB in Water by ECD		SW8011	01/06/2022 08:13	162738	SW8011	01/07/2022 22:35

Chemical Abstracts Service (CAS) Registry Numbers

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22010219
Project: CV18F0126, 60571032.02.46.01 **Report Date:** 02/25/2022

Analyses	CAS No
LOW LEVEL PAH BY 8270C SIM	
1-Methylnaphthalene	90-12-0
2-Methylnaphthalene	91-57-6
Acenaphthene	83-32-9
Acenaphthylene	208-96-8
Anthracene	120-12-7
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
Chrysene	218-01-9
Dibenzo(a,h)anthracene	53-70-3
Fluoranthene	206-44-0
Fluorene	86-73-7
Indeno(1,2,3-cd)pyrene	193-39-5
Naphthalene	91-20-3
Phenanthrene	85-01-8
Pyrene	129-00-0
AGGREGATE ORGANICS	
Organic Carbon, Total (TOC)	7440-44-0
METALS, TOTAL	
Lead	7439-92-1
METALS, DISSOLVED	
Lead	7439-92-1
VOLATILE ORGANIC COMPOUNDS	
Benzene	71-43-2
Bromobenzene	108-86-1
Bromochloromethane	74-97-5
Bromodichloromethane	75-27-4
Bromoform	75-25-2
Carbon tetrachloride	56-23-5
Chlorobenzene	108-90-7
Chlorodibromomethane	124-48-1
Chloroethane	75-00-3
Chloroform	67-66-3
Chloromethane	74-87-3
1,2-Dibromoethane	106-93-4

2-Chlorotoluene	95-49-8
4-Chlorotoluene	106-43-4
Dibromomethane	74-95-3
1,2-Dichlorobenzene	95-50-1
1,3-Dichlorobenzene	541-73-1
1,4-Dichlorobenzene	106-46-7
Dichlorodifluoromethane	75-71-8
1,1-Dichloroethane	75-34-3
1,2-Dichloroethane	107-06-2
1,1-Dichloroethene	75-35-4
cis-1,2-Dichloroethene	156-59-2
trans-1,2-Dichloroethene	156-60-5
1,2-Dichloropropane	78-87-5
1,3-Dichloropropane	142-28-9
2,2-Dichloropropane	594-20-7
1,1-Dichloropropene	563-58-6
cis-1,3-Dichloropropene	10061-01-5
trans-1,3-Dichloropropene	10061-02-6
Ethylbenzene	100-41-4
Methyl ethyl ketone	78-93-3
Methyl tert-butyl ether (MTBE)	1634-04-4
Methylene chloride	75-09-2
Styrene	100-42-5
1,1,1,2-Tetrachloroethane	630-20-6
1,1,2,2-Tetrachloroethane	79-34-5
Tetrachloroethene	127-18-4
Toluene	108-88-3
1,1,1-Trichloroethane	71-55-6
1,1,2-Trichloroethane	79-00-5
Trichloroethene	79-01-6
Trichlorofluoromethane	75-69-4
1,2,3-Trichloropropane	96-18-4
Vinyl chloride	75-01-4
m+p-Xylenes	179601-23-1
o-Xylene	95-47-6
Xylenes, Total	1330-20-7

VOCS BY MICROEXTRACTION-ECD

1,2-Dibromoethane	106-93-4

PETROLEUM HYDROCARBONS-VOLATILE

C6 to C10

Total Purgeable Hydrocarbons

PETROLEUM HYDROCARBONS-SEMI-VOLATILE

Diesel Range Organics (C10 to C24)

Diesel Range Organics (SGT-C10 to C24)

Oil Range Hydrocarbons (C24 to C40)

Oil Range Hydrocarbons (SGT-C24 to C40)

Total Extractable Hydrocarbons

Total Extractable Hydrocarbons (SGT)

ORGANIC CHARACTERISTICS

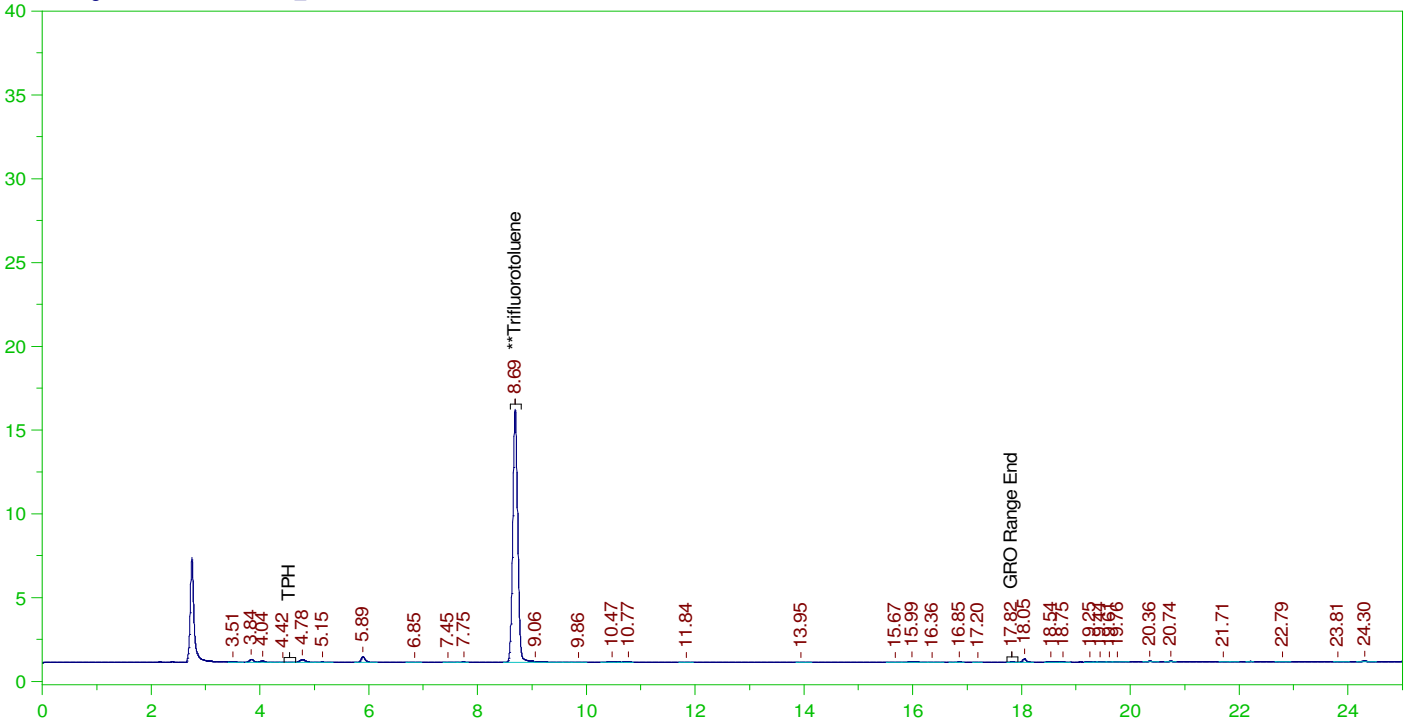
Methane	74-82-8

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
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-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
Azobenzene	103-33-3
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
Di-n-butyl phthalate	84-74-2
Di-n-octyl phthalate	117-84-0
Diethyl phthalate	84-66-2
Dimethyl phthalate	131-11-3
Hexachlorobenzene	118-74-1
Hexachlorobutadiene	87-68-3
Hexachlorocyclopentadiene	77-47-4
Hexachloroethane	67-72-1
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
Nitrobenzene	98-95-3
o-Cresol	95-48-7
Pentachlorophenol	87-86-5
Phenol	108-95-2
Pyridine	110-86-1

ERH2301 (OWDFMW05A)

G:\Org\PE1\DAT\PE1010622_b\0106PE1B.0018.RAW B22010219-001G ;0106PE1 , $HC-8015-GRO-W,



GASOLINE RANGE ORGANICS CHROMATOGRAM REPORT

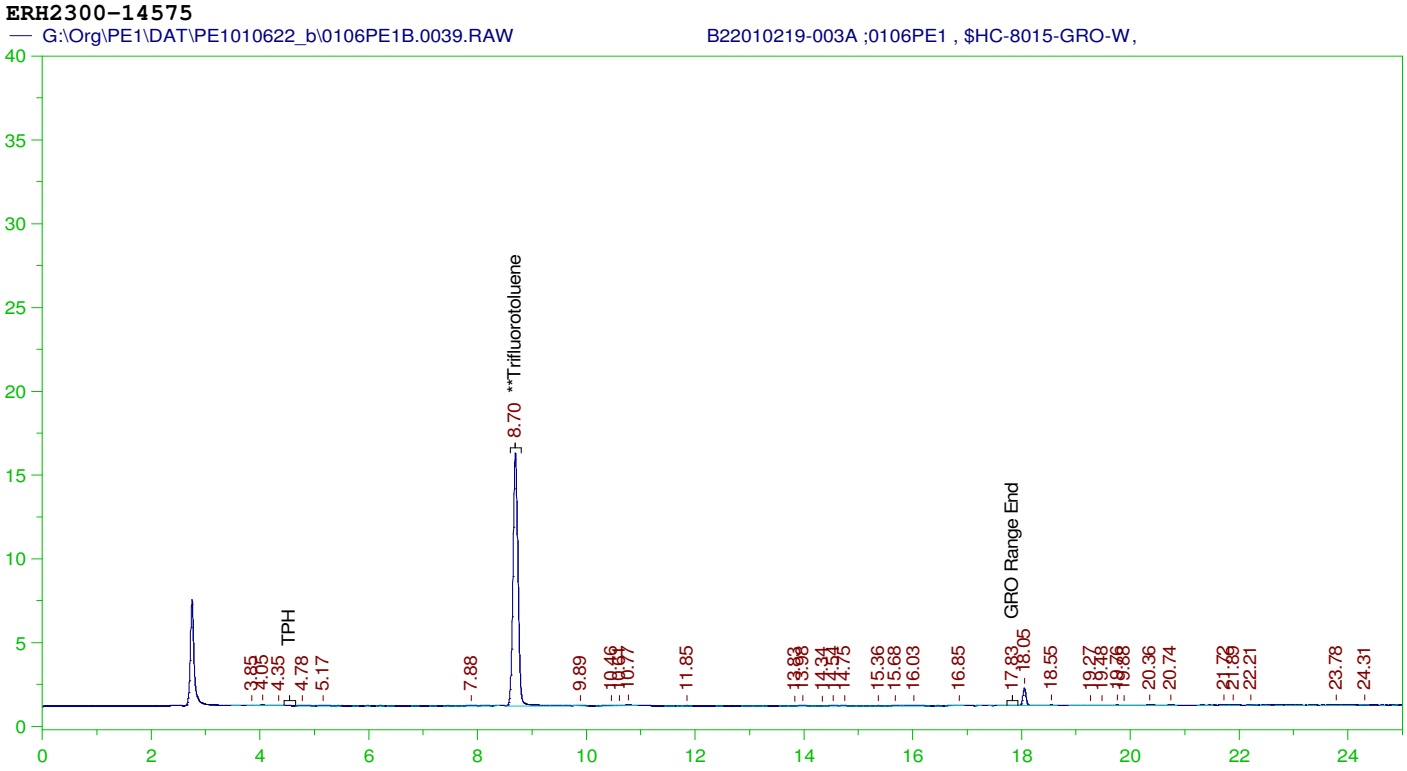
Sample Name: B22010219-001G ;0106PE1 , $HC-8015-GRO-W,
Raw File: G:\Org\PE1\DAT\PE1010622_b\0106PE1B.0018.RAW
Date & Time Acquired: 1/7/2022 1:17:37 AM
Method File: G:\Org\PE1\Methods\211208G219-1B%.MET
Calibration File: G:\Org\PE1\Cals\211208GRO8015CB.CAL
Sample Weight: 5 Dilution: 1 S.A.: 1

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	8.693	25.	20.469	81.88	-

GRO Area:6530.027 GRO Amount: 1.380602
TPH Area:10674.64 TPH Amount: 2.347645

ERH2300-14575



GASOLINE RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010219-003A ;0106PE1 , $HC-8015-GRO-W,
Raw File: G:\Org\PE1\DAT\PE1010622_b\0106PE1B.0039.RAW
Date & Time Acquired: 1/7/2022 5:05:24 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

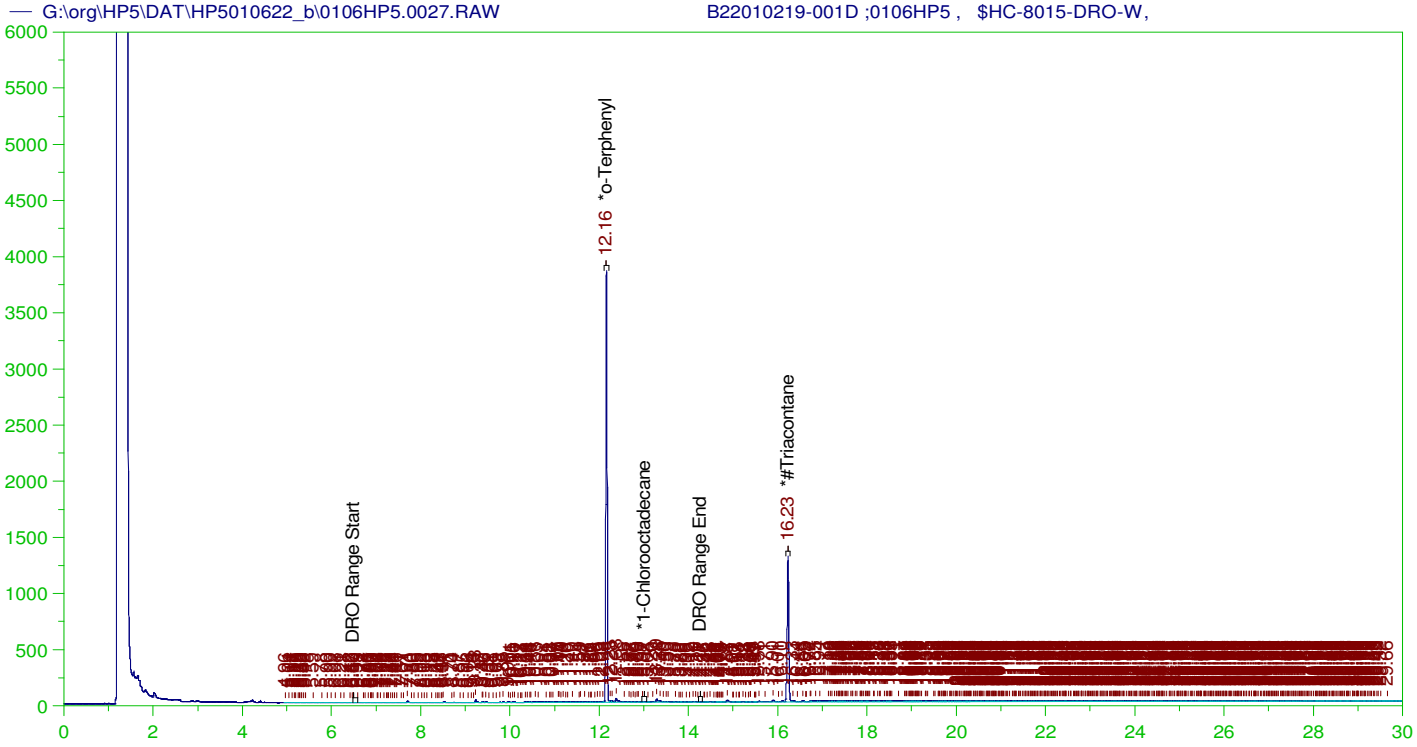
Mean RF for GRO: 945.9678
Mean RF for TPH: 909.3915
Rt range for Gasoline Range Organics: 4.45 to 17.93

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
**Trifluorotoluene	8.697	25.	20.501	82.	-

GRO Area:3534.704 GRO Amount: 0.7473201
TPH Area:10083.82 TPH Amount: 2.217706

ERH2301 (OWDFMW05A) Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0027.RAW B22010219-001D ;0106HP5 , $HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010219-001D ;0106HP5 , $HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0027.RAW
Date & Time Acquired: 1/7/2022 2:34:15 AM
Method File: G:\Org\HP5\Methods\D3_8015-C24T-IN-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24-Tri.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

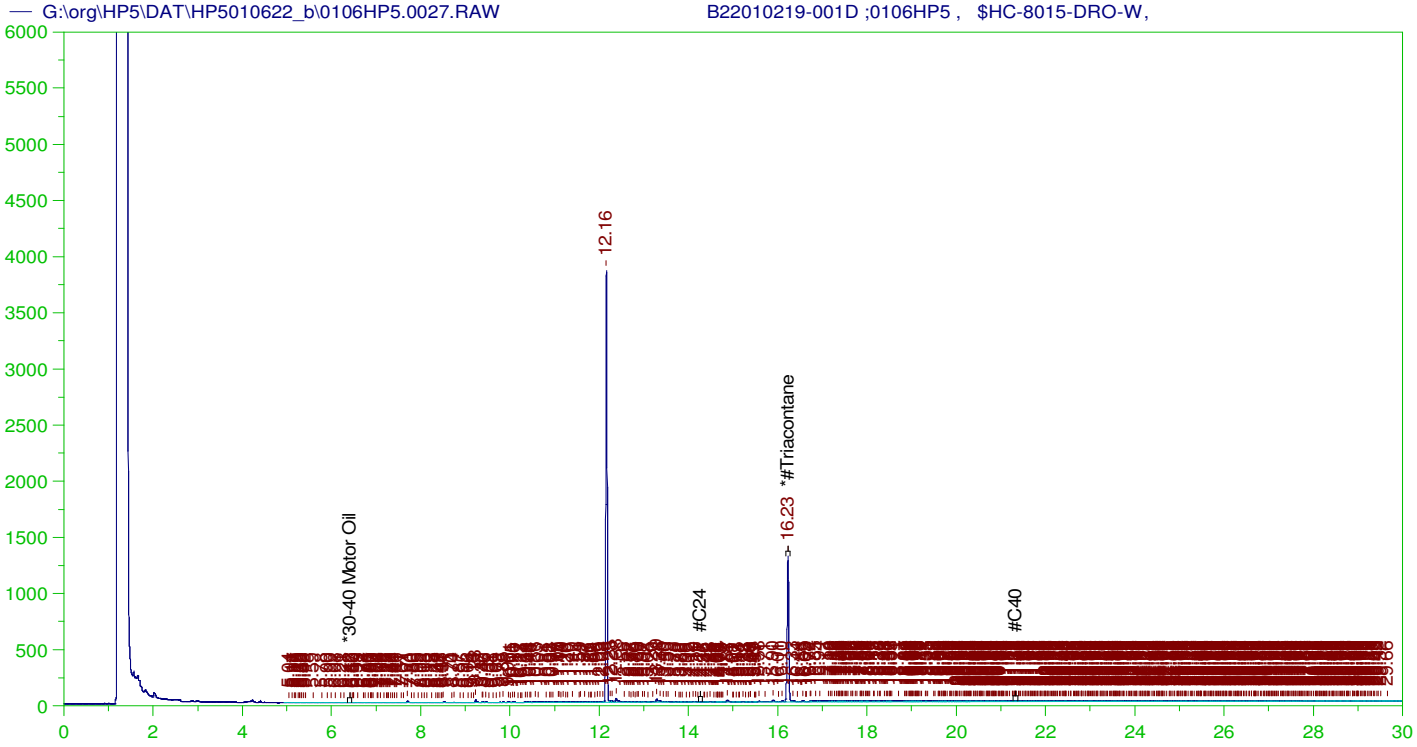
Mean RF for TEH: 31353.19
Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.161	.2	.203	101.3	-
*1-Chlorooctadecane	13.015	.2	.001	.34	-
*#Triacontane	16.225	.2	.117	58.26	-

DRO Area:1775737 DRO Amount: 5.663655E-02
TEH Area:7366031 TEH Amount: 0.2349372

ERH2301 (OWDFMW05A) Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0027.RAW B22010219-001D ;0106HP5 , $HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010219-001D ;0106HP5 , $HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0027.RAW
Date & Time Acquired: 1/7/2022 2:34:15 AM
Method File: G:\Org\HP5\Methods\D3_OROS-AN-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AN-SAMP.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

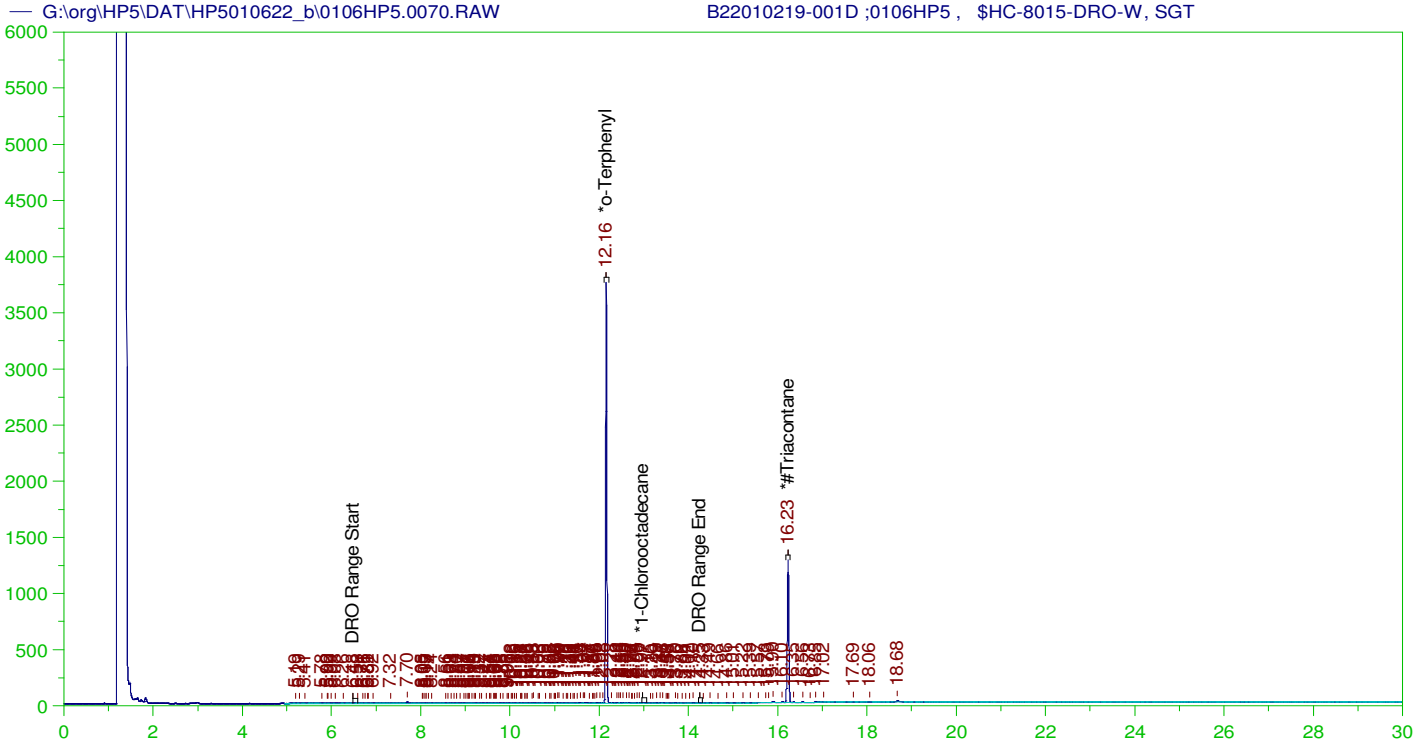
Mean RF for for Residual Range Organics Calculations: 28542.41
Rt range for Residual Range Organics: 14.22 to 21.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.225	.5	.117	23.31	-

RRO Area:3554104 RRO AMOUNT: 0.1245201

ERH2301 (OWDFMW05A) Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0070.RAW B22010219-001D ;0106HP5 , $HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22010219-001D ;0106HP5 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0070.RAW
Date & Time Acquired: 1/8/2022 10:05:46 AM
Method File: G:\Org\HP5\Methods\DR_8015-C24T-IN-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO211102IN-24-Tri.CAL
Sample Weight: 1000 Dilution: 1 S.A.: 1

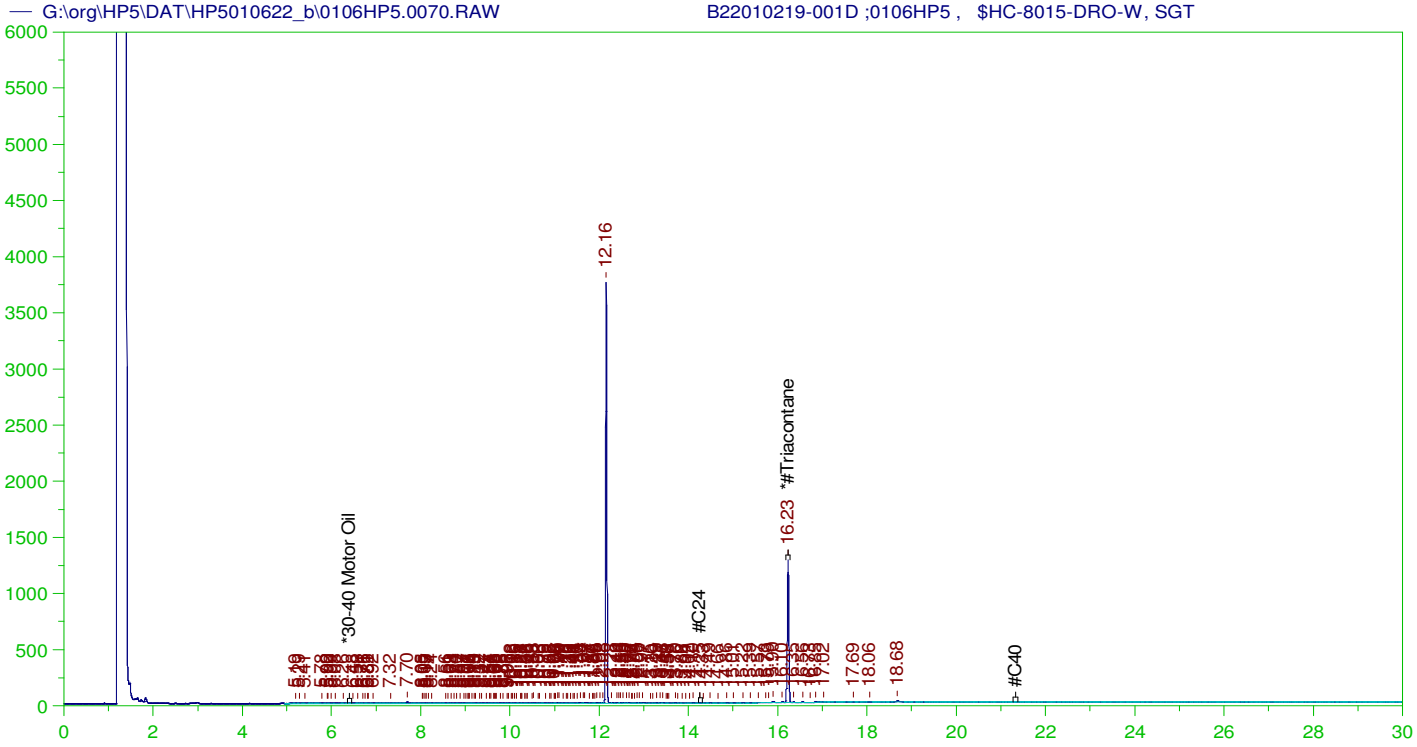
Mean RF for TEH: 31353.19
Rt range for Diesel Range Organics: 6.48 to 14.32

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*o-Terphenyl	12.156	.2	.197	98.38	-
*1-Chlorooctadecane	12.969	.2	.001	.35	-
*#Triacontane	16.228	.2	.111	55.54	-

DRO Area:547033.4 DRO Amount: 1.744745E-02
TEH Area:812765.4 TEH Amount: 2.592289E-02

ERH2301 (OWDFMW05A) Batch ID: 162703

G:\org\HP5\DAT\HP5010622_b\0106HP5.0070.RAW B22010219-001D ;0106HP5 , $HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22010219-001D ;0106HP5 , $HC-8015-DRO-W, SGT
Raw File: G:\org\HP5\DAT\HP5010622_b\0106HP5.0070.RAW
Date & Time Acquired: 1/8/2022 10:05:46 AM
Method File: G:\Org\HP5\Methods\DR_OROS-AN-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO211017AN-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: 14.22 to 21.38

SURROGATE COMPOUND	RT	ACTUAL	MEASURED	%REC	
*#Triacontane	16.228	.5	.111	22.21	-

RRO Area:204253.1 RRO AMOUNT: 7.156125E-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

AECOM
1001 Bishop Street
Suite 1600
Honolulu, HI 96813, United States of America
aecom.com

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

Alethea,

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

Thank you,

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

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

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

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

Hi Shari and Billings PM,

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

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

Thank you,

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