



ANALYTICAL SUMMARY REPORT

March 02, 2022

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

Work Order: B22011228

Quote ID: 5912

Project Name: CV18F0126, 60571032.02.46.01

Energy Laboratories Inc Billings MT received the following 5 samples from AECOM - Honolulu on 1/20/2022 for analysis.

| Lab ID | Client Sample ID | Collect Date | Received Date | Matrix | Test |
|---------------|----------------------------|----------------|---------------|--------------|---|
| B22011228-001 | ERH2424 (RHMW14 Zone3) | 01/18/22 13:30 | 01/20/2022 | Ground 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 |
| B22011228-002 | ERH2423 (Trip Blank) 14694 | 01/18/22 13:30 | 01/20/2022 | Trip Blank | 8260-Volatile Organic Compounds-Short List SW8260B |
| B22011228-003 | ERH2423 (Trip Blank) 14733 | 01/18/22 13:30 | 01/20/2022 | Trip Blank | Gasoline Range Organics SW8015C |
| B22011228-004 | ERH2423 (Trip Blank) 14733 | 01/18/22 13:30 | 01/20/2022 | Trip Blank | EDB in Water by ECD SW8011 SW8011 Microextraction |



ANALYTICAL SUMMARY REPORT

B22011228-005 ERH2423 (Trip Blank) 01/18/22 13:30 01/20/2022 Trip Blank Headspace Gas Analysis
14709 SW8015M

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

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

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

Report Approved By:



CLIENT: AECOM - Honolulu
Project: CV18F0126, 60571032.02.46.01
Work Order: B22011228

Report Date: 3/2/2022

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 SW0060A 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

www.energylab.com

COC#202201-62NOI 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 | <input type="checkbox"/> Hard Copy | <input checked="" type="checkbox"/> Email | Receive Report |
| Purchase Order | Quote | Bottle Order | <input type="checkbox"/> Hard Copy <input checked="" type="checkbox"/> Email |
| N/A | N/A | N/A | |

Report Information (if different than Account Information)

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

Comments

1 Project performed under DoD QSM
 2 TPH-d/o needs 3520 extraction
 3 Preliminary data (or level 1) in 1-2 business days, Level IV report in 10 working days.
 4 Note: NOI log is separate from other 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 | CB, CA, MO, CW | Sampler Phone | 808-987-3201 |
| Sample Origin State | Hawaii | EPA/State Compliance | <input type="checkbox"/> Yes <input type="checkbox"/> 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- Solids/Solids
- V- vegetation
- B- Bioassay
- O- Other
- DW- Drinking Water

Analysis Requested

| 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-Methylmap) 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 |
|---|-----------------------------|-----------------------------------|---------------------------|--|---|---------------------------------|---|--|--------------|
|---|-----------------------------|-----------------------------------|---------------------------|--|---|---------------------------------|---|--|--------------|

All turnaround times are standard unless marked as RUSH.
 Energy Laboratories MUST be contacted prior to RUSH sample submittal for charges and scheduling - See Instructions Page

| Sample Identification (Name, Location, Interval, etc.) | Collection | | Number of Containers | Matrix (See Codes Above) | Analysis Requested | | | | | | | | | RUSH TAT | ELI LAB ID Laboratory Use Only | | |
|---|------------|------|----------------------|-----------------------------|---|-----------------------------|-----------------------------------|---------------------------|--|---|---------------------------------|---|--|----------|-----------------------------------|---|------------|
| | Date | Time | | | 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-Methylmap) 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) | | | | |
| 1 ERH2424 (RHMW14 Zone3) | 1/18/22 | 0930 | 19 | GW | X | X | X | X | X | X | X | X | X | X | X | ✓ | B-22011228 |
| 2 ERH2423 (Trip Blank) | 1/18/22 | 0855 | 8 | WQ | X | X | X | X | | | | | | | | ✓ | |
| 3 | | | | | | | | | | | | | | | | | |
| 4 TB-14694 (S260) | | | 2 | | | | | | | | | | | | | | |
| 5 TB-14733 (S260) | | | 1 | | | | | | | | | | | | | | |
| 6 TB-14733 (S260) | | | 1 | | | | | | | | | | | | | | |
| 7 TB-14709 (Methane) | 1/18/22 | | 1 | | | | | | | | | | | | | | |
| 8 TB-14732 (Methane) | | | 1 | | | | | | | | | | | | | | |
| 9 TB-14705 | 1/20/22 | | 2 | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | |

| | | | | | | |
|-------------------------------|-------------------------|--------------|-------------|--------------------------------|-----------|-------------|
| Custody Record MUST be signed | Relinquished by (print) | Date/Time | Signature | Received by (print) | Date/Time | Signature |
| | Matthew Kim | 1/18/22 1800 | [Signature] | [Signature] | | |
| | Relinquished by (print) | Date/Time | Signature | Received by Laboratory (print) | Date/Time | Signature |
| | | | | [Signature] | | [Signature] |

LABORATORY USE ONLY

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



Work Order Receipt Checklist

AECOM - Honolulu

B22011228

Login completed by: Taylor K. Burris
Reviewed by: BL2000\rshular
Reviewed Date: 1/23/2022

Date Received: 1/20/2022
Received by: tjg
Carrier name: FedEx

- Shipping container/cooler in good condition? Yes [checked] No [] Not Present []
Custody seals intact on all shipping container(s)/cooler(s)? Yes [checked] No [] Not Present []
Custody seals intact on all sample bottles? Yes [] No [checked] Not Present []
Chain of custody present? Yes [checked] No []
Chain of custody signed when relinquished and received? Yes [checked] No []
Chain of custody agrees with sample labels? Yes [checked] No []
Samples in proper container/bottle? Yes [checked] No []
Sample containers intact? Yes [checked] No []
Sufficient sample volume for indicated test? Yes [checked] No []
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.) Yes [checked] No []
Temp Blank received in all shipping container(s)/cooler(s)? Yes [checked] No [] Not Applicable []
Container/Temp Blank temperature: 0.7°C On Ice
Water - VOA vials have zero headspace? Yes [checked] No [] Not Applicable []
Water - pH acceptable upon receipt? Yes [checked] No [] Not Applicable []

Standard Reporting Procedures:

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

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

Contact and Corrective Action Comments:

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

Custody Seals were not present on the 250ML Amber Glass Non Filtered Phosphoric preserved containers.

Qualifiers and Abbreviations

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

Qualifiers and Abbreviations

Abbreviation

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

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



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B22011228-001

Collection Date: 01/18/2022 13:30

Date Received: 01/20/2022

Report Date: 03/02/2022

Client: AECOM - Honolulu
Client Sample ID: ERH2424 (RHMW14 Zone3)
Project: CV18F0126, 60571032.02.46.01
Matrix: Ground Water

| 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 | 0.050 | 0.021 | | SW8270CSIM | 01/31/2022 21:40/jph | SV5975.I_220131B : 12 | 163174 |
| 2-Methylnaphthalene | ND | ug/L | 1 | U | 0.10 | 0.050 | 0.018 | | SW8270CSIM | 01/31/2022 21:40/jph | SV5975.I_220131B : 12 | 163174 |
| Acenaphthene | ND | ug/L | 1 | U | 0.10 | 0.050 | 0.032 | | SW8270CSIM | 01/31/2022 21:40/jph | SV5975.I_220131B : 12 | 163174 |
| Acenaphthylene | ND | ug/L | 1 | U | 0.10 | 0.050 | 0.025 | | SW8270CSIM | 01/31/2022 21:40/jph | SV5975.I_220131B : 12 | 163174 |
| Anthracene | ND | ug/L | 1 | U | 0.10 | 0.050 | 0.029 | | SW8270CSIM | 01/31/2022 21:40/jph | SV5975.I_220131B : 12 | 163174 |
| Benzo(a)anthracene | ND | ug/L | 1 | U | 0.10 | 0.050 | 0.027 | | SW8270CSIM | 01/31/2022 21:40/jph | SV5975.I_220131B : 12 | 163174 |
| Benzo(a)pyrene | ND | ug/L | 1 | U | 0.10 | 0.050 | 0.035 | | SW8270CSIM | 01/31/2022 21:40/jph | SV5975.I_220131B : 12 | 163174 |
| Benzo(b)fluoranthene | ND | ug/L | 1 | U | 0.10 | 0.050 | 0.023 | | SW8270CSIM | 01/31/2022 21:40/jph | SV5975.I_220131B : 12 | 163174 |
| Benzo(g,h,i)perylene | ND | ug/L | 1 | U | 0.10 | 0.050 | 0.027 | | SW8270CSIM | 01/31/2022 21:40/jph | SV5975.I_220131B : 12 | 163174 |
| Benzo(k)fluoranthene | ND | ug/L | 1 | U | 0.10 | 0.050 | 0.030 | | SW8270CSIM | 01/31/2022 21:40/jph | SV5975.I_220131B : 12 | 163174 |
| Chrysene | ND | ug/L | 1 | U | 0.10 | 0.050 | 0.046 | | SW8270CSIM | 01/31/2022 21:40/jph | SV5975.I_220131B : 12 | 163174 |
| Dibenzo(a,h)anthracene | ND | ug/L | 1 | U | 0.10 | 0.050 | 0.037 | | SW8270CSIM | 01/31/2022 21:40/jph | SV5975.I_220131B : 12 | 163174 |
| Fluoranthene | ND | ug/L | 1 | U | 0.10 | 0.050 | 0.024 | | SW8270CSIM | 01/31/2022 21:40/jph | SV5975.I_220131B : 12 | 163174 |
| Fluorene | ND | ug/L | 1 | U | 0.10 | 0.050 | 0.023 | | SW8270CSIM | 01/31/2022 21:40/jph | SV5975.I_220131B : 12 | 163174 |
| Indeno(1,2,3-cd)pyrene | ND | ug/L | 1 | U | 0.10 | 0.050 | 0.050 | | SW8270CSIM | 01/31/2022 21:40/jph | SV5975.I_220131B : 12 | 163174 |
| Naphthalene | ND | ug/L | 1 | U | 0.10 | 0.050 | 0.029 | | SW8270CSIM | 01/31/2022 21:40/jph | SV5975.I_220131B : 12 | 163174 |
| Phenanthrene | ND | ug/L | 1 | U | 0.10 | 0.050 | 0.030 | | SW8270CSIM | 01/31/2022 21:40/jph | SV5975.I_220131B : 12 | 163174 |
| Pyrene | ND | ug/L | 1 | U | 0.10 | 0.050 | 0.024 | | SW8270CSIM | 01/31/2022 21:40/jph | SV5975.I_220131B : 12 | 163174 |
| AGGREGATE ORGANICS | | | | | | | | | | | | |
| Organic Carbon, Total (TOC) - TOC Range is 0.2 to 0.2 | 0.21 | mg/L | 1 | J | 0.50 | 0.50 | 0.17 | | SW9060A | 01/27/2022 21:03/eli-ca | SUB-C279130 : 10 | C_R279130 |
| METALS, DISSOLVED | | | | | | | | | | | | |
| Lead | ND | mg/L | 1 | U | 0.001 | 0.0001 | 0.00006 | | SW6020 | 01/22/2022 02:51/car | ICPMS207-B_220121A : 104 | R373694 |
| METALS, TOTAL | | | | | | | | | | | | |
| Lead | 0.00013 | mg/L | 1 | J | 0.001 | 0.0001 | 0.00008 | | SW6020 | 01/22/2022 02:57/car | ICPMS207-B_220121A : 105 | 163116 |
| VOLATILE ORGANIC COMPOUNDS | | | | | | | | | | | | |
| Benzene | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.091 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| Bromobenzene | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.083 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| Bromochloromethane | ND | ug/L | 1 | U | 1.0 | 0.50 | 0.14 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| Bromodichloromethane | ND | ug/L | 1 | U | 1.0 | 0.25 | 0.12 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| Bromoform | ND | ug/L | 1 | U | 1.0 | 0.25 | 0.12 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| Carbon tetrachloride | ND | ug/L | 1 | U | 1.0 | 0.50 | 0.14 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| Chlorobenzene | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.091 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| Chlorodibromomethane | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.084 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| Chloroethane | ND | ug/L | 1 | U | 1.0 | 0.50 | 0.17 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| Chloroform | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.079 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| Chloromethane | ND | ug/L | 1 | U | 1.0 | 0.50 | 0.16 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B22011228-001

Collection Date: 01/18/2022 13:30

Date Received: 01/20/2022

Report Date: 03/02/2022

Client: AECOM - Honolulu
Client Sample ID: ERH2424 (RHMW14 Zone3)
Project: CV18F0126, 60571032.02.46.01
Matrix: Ground Water

| Analyses | Result | Units | DF | Qual | LOQ | LOD | DL | MCL | Method | Analysis Date / By | RunID : Run Order | BatchID |
|-----------------------------------|--------|-------|----|------|-----|--------|-------|-----|---------|----------------------|-------------------------|---------|
| VOLATILE ORGANIC COMPOUNDS | | | | | | | | | | | | |
| 1,2-Dibromoethane | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.092 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| 2-Chlorotoluene | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.088 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| 4-Chlorotoluene | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.073 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| Dibromomethane | ND | ug/L | 1 | U | 1.0 | 0.50 | 0.15 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| 1,2-Dichlorobenzene | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.075 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| 1,3-Dichlorobenzene | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.080 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| 1,4-Dichlorobenzene | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.086 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| Dichlorodifluoromethane | ND | ug/L | 1 | U | 1.0 | 0.50 | 0.18 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| 1,1-Dichloroethane | ND | ug/L | 1 | U | 1.0 | 0.50 | 0.14 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| 1,2-Dichloroethane | ND | ug/L | 1 | U | 1.0 | 0.25 | 0.12 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| 1,1-Dichloroethene | ND | ug/L | 1 | U | 1.0 | 0.50 | 0.14 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| cis-1,2-Dichloroethene | ND | ug/L | 1 | U | 1.0 | 0.25 | 0.11 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| trans-1,2-Dichloroethene | ND | ug/L | 1 | U | 1.0 | 0.25 | 0.12 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| 1,2-Dichloropropane | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.085 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| 1,3-Dichloropropane | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.079 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| 2,2-Dichloropropane | ND | ug/L | 1 | U | 1.0 | 0.50 | 0.19 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| 1,1-Dichloropropene | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.083 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| cis-1,3-Dichloropropene | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.073 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| trans-1,3-Dichloropropene | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.085 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| Ethylbenzene | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.084 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| Methyl ethyl ketone | ND | ug/L | 1 | U | 20 | 5.0 | 1.8 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| Methyl tert-butyl ether (MTBE) | ND | ug/L | 1 | U | 1.0 | 0.25 | 0.10 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| Methylene chloride | ND | ug/L | 1 | U | 1.0 | 0.50 | 0.34 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| Styrene | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.067 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 1 | U | 1.0 | 0.25 | 0.10 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.087 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| Tetrachloroethene | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.067 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| Toluene | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.068 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| 1,1,1-Trichloroethane | ND | ug/L | 1 | U | 1.0 | 0.50 | 0.13 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| 1,1,2-Trichloroethane | ND | ug/L | 1 | U | 1.0 | 0.25 | 0.11 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| Trichloroethene | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.099 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| Trichlorofluoromethane | ND | ug/L | 1 | U | 1.0 | 0.50 | 0.13 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| 1,2,3-Trichloropropane | ND | ug/L | 1 | U | 1.0 | 0.50 | 0.24 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| Vinyl chloride | ND | ug/L | 1 | U | 1.0 | 0.50 | 0.15 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| m+p-Xylenes | ND | ug/L | 1 | U | 1.0 | 0.50 | 0.15 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| o-Xylene | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.060 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| Xylenes, Total | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.060 | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| Surr: Dibromofluoromethane | 107.0 | %REC | 1 | | | 80-119 | | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| Surr: 1,2-Dichloroethane-d4 | 107.0 | %REC | 1 | | | 81-118 | | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B22011228-001
Collection Date: 01/18/2022 13:30
Date Received: 01/20/2022
Report Date: 03/02/2022

Client: AECOM - Honolulu
Client Sample ID: ERH2424 (RHMW14 Zone3)
Project: CV18F0126, 60571032.02.46.01
Matrix: Ground Water

| Analyses | Result | Units | DF | Qual | LOQ | LOD | DL | MCL | Method | Analysis Date / By | RunID : Run Order | BatchID |
|--|--------|-------|----|------|--------|--------|---------|-----|---------|----------------------|----------------------------|---------|
| VOLATILE ORGANIC COMPOUNDS | | | | | | | | | | | | |
| Surr: Toluene-d8 | 102.0 | %REC | 1 | | 89-112 | | | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| Surr: p-Bromofluorobenzene | 106.0 | %REC | 1 | | 85-114 | | | | SW8260B | 01/25/2022 15:47/msc | VOA5975C.I_220125A : 13 | R373812 |
| VOCS BY MICROEXTRACTION-ECD | | | | | | | | | | | | |
| 1,2-Dibromoethane | ND | ug/L | 1 | U | 0.010 | 0.0049 | 0.0025 | | SW8011 | 01/22/2022 17:13/clt | GECD.I_220121A : 64 | 163129 |
| Surr: 1,1,1,2-Tetrachloroethane | 88.0 | %REC | 1 | | 70-130 | | | | SW8011 | 01/22/2022 17:13/clt | GECD.I_220121A : 64 | 163129 |
| PETROLEUM HYDROCARBONS-VOLATILE | | | | | | | | | | | | |
| C6 to C10 | ND | ug/L | 1 | U | 20 | 8.7 | 2.3 | | SW8015C | 01/22/2022 04:00/jp | PE 1_220120A : 55 | R373498 |
| Total Purgeable Hydrocarbons | ND | ug/L | 1 | U | 20 | 10 | 3.6 | | SW8015C | 01/22/2022 04:00/jp | PE 1_220120A : 55 | R373498 |
| Surr: Trifluorotoluene | 76.0 | %REC | 1 | | 70-130 | | | | SW8015C | 01/22/2022 04:00/jp | PE 1_220120A : 55 | R373498 |
| - 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) | 0.10 | mg/L | 1 | J | 0.30 | 0.15 | 0.038 | | SW8015C | 01/24/2022 14:15/amn | GCFID-HP5-B_220124A : 5 | 163074 |
| Diesel Range Organics (SGT-C10 to C24) | ND | mg/L | 1 | U | 0.30 | 0.12 | 0.038 | | SW8015C | 01/25/2022 17:57/amn | GCFID-HP5-B_220124B : 23 | 163074 |
| Oil Range Hydrocarbons (C24 to C40) | 0.20 | mg/L | 1 | J | 0.30 | 0.15 | 0.086 | | SW8015C | 01/24/2022 14:15/amn | GCFID-HP5-B_220124A : 5 | 163074 |
| Oil Range Hydrocarbons (SGT-C24 to C40) | ND | mg/L | 1 | U | 0.30 | 0.15 | 0.086 | | SW8015C | 01/25/2022 17:57/amn | GCFID-HP5-B_220124B : 23 | 163074 |
| Total Extractable Hydrocarbons | 0.31 | mg/L | 1 | | 0.30 | 0.15 | 0.073 | | SW8015C | 01/24/2022 14:15/amn | GCFID-HP5-B_220124A : 5 | 163074 |
| Total Extractable Hydrocarbons (SGT) | ND | mg/L | 1 | U | 0.30 | 0.12 | 0.032 | | SW8015C | 01/25/2022 17:57/amn | GCFID-HP5-B_220124B : 23 | 163074 |
| Surr: o-Terphenyl | 97.0 | %REC | 1 | | 56-125 | | | | SW8015C | 01/24/2022 14:15/amn | GCFID-HP5-B_220124A : 5 | 163074 |
| Surr: o-Terphenyl (SGT) | 85.0 | %REC | 1 | | 56-125 | | | | SW8015C | 01/25/2022 17:57/amn | GCFID-HP5-B_220124B : 23 | 163074 |
| Surr: n-Triacontane | 102.0 | %REC | 1 | | 50-150 | | | | SW8015C | 01/24/2022 14:15/amn | GCFID-HP5-B_220124A : 5 | 163074 |
| Surr: n-Triacontane (SGT) | 82.0 | %REC | 1 | | 50-150 | | | | SW8015C | 01/25/2022 17:57/amn | GCFID-HP5-B_220124B : 23 | 163074 |
| - Note: Total Extractable Hydrocarbons are defined as the total hydrocarbon responses regardless of elution time. | | | | | | | | | | | | |
| ORGANIC CHARACTERISTICS | | | | | | | | | | | | |
| Methane | ND | mg/L | 1 | U | 0.0020 | 0.0012 | 0.00070 | | SW8015M | 01/21/2022 11:40/jdw | FID-HEADSPACE_220121A : 18 | R373537 |
| SEMI-VOLATILE ORGANIC COMPOUNDS | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | ug/L | 1 | U | 10 | 5.0 | 1.9 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| 1,2-Dichlorobenzene | ND | ug/L | 1 | U | 10 | 5.0 | 2.0 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| 1,3-Dichlorobenzene | ND | ug/L | 1 | U | 10 | 5.0 | 2.2 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| 1,4-Dichlorobenzene | ND | ug/L | 1 | U | 10 | 5.0 | 2.0 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| 2,4,5-Trichlorophenol | ND | ug/L | 1 | U | 10 | 5.0 | 2.3 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| 2,4,6-Trichlorophenol | ND | ug/L | 1 | U | 10 | 5.0 | 2.7 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| 2,4-Dichlorophenol | ND | ug/L | 1 | U | 10 | 5.0 | 1.7 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| 2,4-Dimethylphenol | ND | ug/L | 1 | U | 10 | 5.0 | 1.7 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| 2,4-Dinitrophenol | ND | ug/L | 1 | U | 10 | 10 | 4.3 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| 2,4-Dinitrotoluene | ND | ug/L | 1 | U | 10 | 5.0 | 3.1 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B22011228-001

Collection Date: 01/18/2022 13:30

Date Received: 01/20/2022

Report Date: 03/02/2022

Client: AECOM - Honolulu
Client Sample ID: ERH2424 (RHMW14 Zone3)
Project: CV18F0126, 60571032.02.46.01
Matrix: Ground Water

| Analyses | Result | Units | DF | Qual | LOQ | LOD | DL | MCL | Method | Analysis Date / By | RunID : Run Order | BatchID |
|--|--------|-------|----|------|--------|-----|------|-----|---------|---------------------|------------------------|---------|
| SEMI-VOLATILE ORGANIC COMPOUNDS | | | | | | | | | | | | |
| 2,6-Dinitrotoluene | ND | ug/L | 1 | U | 10 | 5.0 | 3.2 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| 2-Chloronaphthalene | ND | ug/L | 1 | U | 10 | 5.0 | 2.2 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| 2-Chlorophenol | ND | ug/L | 1 | U | 10 | 5.0 | 2.5 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| 2-Nitrophenol | ND | ug/L | 1 | U | 10 | 5.0 | 2.4 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| 3,3'-Dichlorobenzidine | ND | ug/L | 1 | U | 10 | 5.0 | 2.1 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| 4,6-Dinitro-2-methylphenol | ND | ug/L | 1 | U | 10 | 10 | 2.4 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| 4-Bromophenyl phenyl ether | ND | ug/L | 1 | U | 10 | 5.0 | 1.8 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| 4-Chloro-3-methylphenol | ND | ug/L | 1 | U | 10 | 5.0 | 1.5 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| 4-Chlorophenol | ND | ug/L | 1 | U | 10 | 5.0 | 2.7 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| 4-Chlorophenyl phenyl ether | ND | ug/L | 1 | U | 10 | 5.0 | 2.1 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| 4-Nitrophenol | ND | ug/L | 1 | U | 10 | 10 | 2.5 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| Azobenzene | ND | ug/L | 1 | U | 10 | 5.0 | 1.1 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| bis(-2-chloroethoxy)Methane | ND | ug/L | 1 | U | 10 | 5.0 | 1.4 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| bis(-2-chloroethyl)Ether | ND | ug/L | 1 | U | 10 | 5.0 | 2.6 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| bis(2-chloroisopropyl)Ether | ND | ug/L | 1 | U | 10 | 5.0 | 1.5 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| bis(2-ethylhexyl)Phthalate | ND | ug/L | 1 | U | 10 | 5.0 | 1.9 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| Butylbenzylphthalate | ND | ug/L | 1 | U | 10 | 5.0 | 1.6 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| Di-n-butyl phthalate | ND | ug/L | 1 | U | 10 | 5.0 | 0.94 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| Di-n-octyl phthalate | ND | ug/L | 1 | U | 10 | 5.0 | 1.4 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| Diethyl phthalate | ND | ug/L | 1 | U | 10 | 5.0 | 2.2 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| Dimethyl phthalate | ND | ug/L | 1 | U | 10 | 5.0 | 1.7 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| Hexachlorobenzene | ND | ug/L | 1 | U | 10 | 5.0 | 1.3 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| Hexachlorobutadiene | ND | ug/L | 1 | U | 10 | 5.0 | 2.3 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| Hexachlorocyclopentadiene | ND | ug/L | 1 | U | 10 | 5.0 | 3.0 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| Hexachloroethane | ND | ug/L | 1 | U | 10 | 5.0 | 1.8 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| Isophorone | ND | ug/L | 1 | U | 10 | 5.0 | 1.7 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| m+p-Cresols | ND | ug/L | 1 | U | 10 | 5.0 | 1.8 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| n-Nitroso-di-n-propylamine | ND | ug/L | 1 | U | 10 | 5.0 | 1.6 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| n-Nitrosodimethylamine | ND | ug/L | 1 | U | 10 | 5.0 | 1.5 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| n-Nitrosodiphenylamine | ND | ug/L | 1 | U | 10 | 5.0 | 1.2 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| Nitrobenzene | ND | ug/L | 1 | U | 10 | 5.0 | 2.3 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| o-Cresol | ND | ug/L | 1 | U | 10 | 5.0 | 1.8 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| Pentachlorophenol | ND | ug/L | 1 | U | 10 | 10 | 4.3 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| Phenol | ND | ug/L | 1 | U | 10 | 5.0 | 1.5 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| Pyridine | ND | ug/L | 1 | U | 10 | 5.0 | 3.3 | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| Surr: 2,4,6-Tribromophenol | 71.0 | %REC | 1 | | 43-140 | | | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| Surr: 2-Fluorobiphenyl | 50.0 | %REC | 1 | | 44-119 | | | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| Surr: 2-Fluorophenol | 22.0 | %REC | 1 | | 19-119 | | | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| Surr: Nitrobenzene-d5 | 44.0 | %REC | 1 | | 44-120 | | | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B22011228-001

Collection Date: 01/18/2022 13:30

Date Received: 01/20/2022

Report Date: 03/02/2022

Client: AECOM - Honolulu
Client Sample ID: ERH2424 (RHMW14 Zone3)
Project: CV18F0126, 60571032.02.46.01
Matrix: Ground Water

| Analyses | Result | Units | DF | Qual | LOQ | LOD | DL | MCL | Method | Analysis Date / By | RunID : Run Order | BatchID |
|--|--------|-------|----|------|--------|-----|----|-----|---------|---------------------|------------------------|---------|
| SEMI-VOLATILE ORGANIC COMPOUNDS | | | | | | | | | | | | |
| Surr: Phenol-d5 | 23.0 | %REC | 1 | | 10-65 | | | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |
| Surr: Terphenyl-d14 | 88.0 | %REC | 1 | | 50-134 | | | | SW8270C | 02/2/2022 14:37/dsm | SV5973N.I_220201B : 17 | 163174 |



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B22011228-002

Collection Date: 01/18/2022 13:30

Date Received: 01/20/2022

Report Date: 03/02/2022

Client: AECOM - Honolulu
Client Sample ID: ERH2423 (Trip Blank) 14694
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 | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| Bromobenzene | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.083 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| Bromochloromethane | ND | ug/L | 1 | U | 1.0 | 0.50 | 0.14 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| Bromodichloromethane | ND | ug/L | 1 | U | 1.0 | 0.25 | 0.12 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| Bromoform | ND | ug/L | 1 | U | 1.0 | 0.25 | 0.12 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| Carbon tetrachloride | ND | ug/L | 1 | U | 1.0 | 0.50 | 0.14 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| Chlorobenzene | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.091 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| Chlorodibromomethane | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.084 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| Chloroethane | ND | ug/L | 1 | U | 1.0 | 0.50 | 0.17 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| Chloroform | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.079 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| Chloromethane | ND | ug/L | 1 | U | 1.0 | 0.50 | 0.16 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| 1,2-Dibromoethane | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.092 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| 2-Chlorotoluene | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.088 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| 4-Chlorotoluene | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.073 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| Dibromomethane | ND | ug/L | 1 | U | 1.0 | 0.50 | 0.15 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| 1,2-Dichlorobenzene | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.075 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| 1,3-Dichlorobenzene | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.080 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| 1,4-Dichlorobenzene | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.086 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| Dichlorodifluoromethane | ND | ug/L | 1 | U | 1.0 | 0.50 | 0.18 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| 1,1-Dichloroethane | ND | ug/L | 1 | U | 1.0 | 0.50 | 0.14 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| 1,2-Dichloroethane | ND | ug/L | 1 | U | 1.0 | 0.25 | 0.12 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| 1,1-Dichloroethene | ND | ug/L | 1 | U | 1.0 | 0.50 | 0.14 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| cis-1,2-Dichloroethene | ND | ug/L | 1 | U | 1.0 | 0.25 | 0.11 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| trans-1,2-Dichloroethene | ND | ug/L | 1 | U | 1.0 | 0.25 | 0.12 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| 1,2-Dichloropropane | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.085 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| 1,3-Dichloropropane | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.079 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| 2,2-Dichloropropane | ND | ug/L | 1 | U | 1.0 | 0.50 | 0.19 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| 1,1-Dichloropropene | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.083 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| cis-1,3-Dichloropropene | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.073 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| trans-1,3-Dichloropropene | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.085 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| Ethylbenzene | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.084 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| Methyl ethyl ketone | ND | ug/L | 1 | U | 20 | 5.0 | 1.8 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| Methyl tert-butyl ether (MTBE) | ND | ug/L | 1 | U | 1.0 | 0.25 | 0.10 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| Methylene chloride | ND | ug/L | 1 | U | 1.0 | 0.50 | 0.34 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| Styrene | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.067 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 1 | U | 1.0 | 0.25 | 0.10 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.087 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| Tetrachloroethene | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.067 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| Toluene | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.068 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B22011228-002

Collection Date: 01/18/2022 13:30

Date Received: 01/20/2022

Report Date: 03/02/2022

Client: AECOM - Honolulu
Client Sample ID: ERH2423 (Trip Blank) 14694
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 | | | | | | | | | | | | |
| 1,1,1-Trichloroethane | ND | ug/L | 1 | U | 1.0 | 0.50 | 0.13 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| 1,1,2-Trichloroethane | ND | ug/L | 1 | U | 1.0 | 0.25 | 0.11 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| Trichloroethene | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.099 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| Trichlorofluoromethane | ND | ug/L | 1 | U | 1.0 | 0.50 | 0.13 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| 1,2,3-Trichloropropane | ND | ug/L | 1 | U | 1.0 | 0.50 | 0.24 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| Vinyl chloride | ND | ug/L | 1 | U | 1.0 | 0.50 | 0.15 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| m+p-Xylenes | ND | ug/L | 1 | U | 1.0 | 0.50 | 0.15 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| o-Xylene | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.060 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| Xylenes, Total | ND | ug/L | 1 | U | 1.0 | 0.20 | 0.060 | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| Surr: Dibromofluoromethane | 107.0 | %REC | 1 | | 80-119 | | | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| Surr: 1,2-Dichloroethane-d4 | 112.0 | %REC | 1 | | 81-118 | | | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| Surr: Toluene-d8 | 102.0 | %REC | 1 | | 89-112 | | | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |
| Surr: p-Bromofluorobenzene | 106.0 | %REC | 1 | | 85-114 | | | | SW8260B | 01/25/2022 16:14/msc | VOA5975C.I_220125A : 14 | R373812 |



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Lab ID: B22011228-003

Collection Date: 01/18/2022 13:30

Date Received: 01/20/2022

Report Date: 03/02/2022

Client: AECOM - Honolulu
Client Sample ID: ERH2423 (Trip Blank) 14733
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 |
|--|--------|-------|----|------|--------|-----|-----|-----|---------|---------------------|-------------------|---------|
| PETROLEUM HYDROCARBONS-VOLATILE | | | | | | | | | | | | |
| C6 to C10 | ND | ug/L | 1 | U | 20 | 8.7 | 2.3 | | SW8015C | 01/21/2022 15:25/jp | PE 1_220120A : 41 | R373498 |
| Total Purgeable Hydrocarbons | ND | ug/L | 1 | U | 20 | 10 | 3.6 | | SW8015C | 01/21/2022 15:25/jp | PE 1_220120A : 41 | R373498 |
| Surr: Trifluorotoluene | 79.0 | %REC | 1 | | 70-130 | | | | SW8015C | 01/21/2022 15:25/jp | PE 1_220120A : 41 | R373498 |

- 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: B22011228-004

Collection Date: 01/18/2022 13:30

Date Received: 01/20/2022

Report Date: 03/02/2022

Client: AECOM - Honolulu
Client Sample ID: ERH2423 (Trip Blank) 14733
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 |
|------------------------------------|--------|-------|----|------|--------|--------|--------|-----|--------|----------------------|---------------------|---------|
| VOCS BY MICROEXTRACTION-ECD | | | | | | | | | | | | |
| 1,2-Dibromoethane | ND | ug/L | 1 | U | 0.010 | 0.0049 | 0.0025 | | SW8011 | 01/22/2022 17:33/clt | GECD.I_220121A : 65 | 163129 |
| Surr: 1,1,1,2-Tetrachloroethane | 92.0 | %REC | 1 | | 70-130 | | | | SW8011 | 01/22/2022 17:33/clt | GECD.I_220121A : 65 | 163129 |



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Client Sample ID: ERH2423 (Trip Blank) 14709
Project: CV18F0126, 60571032.02.46.01
Matrix: Trip Blank

Lab ID: B22011228-005
Collection Date: 01/18/2022 13:30
Date Received: 01/20/2022
Report Date: 03/02/2022

| 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 | 01/21/2022 11:46/jdw | FID-HEADSPACE_220121A : 19 | R373537 |



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: SV5975.I_220131B: 7 **SampType:** Method Blank **Batch ID:** 163174
Method: SW8270CSIM **Analysis Date:** 01/31/2022 18:57 **Prep Date:** 01/24/2022 11:48
Lab ID: MB-163174 **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: **B22011228-001C**

Run ID: Run Order: SV5975.I_220131B: 8 **SampType:** Laboratory Control Sample **Batch ID:** 163174
Method: SW8270CSIM **Analysis Date:** 01/31/2022 19:30 **Prep Date:** 01/24/2022 11:48
Lab ID: LLCS-163174 **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: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: SV5975.I_220131B: 8 **SampType:** Laboratory Control Sample **Batch ID:** 163174
Method: SW8270CSIM **Analysis Date:** 01/31/2022 19:30 **Prep Date:** 01/24/2022 11:48
Lab ID: LLCS-163174 **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 | 4.3 | 0.10 | 5.0 | | 86.0 | 48 | 114 | | | | |
| Acenaphthylene | 4.2 | 0.10 | 5.0 | | 85.0 | 35 | 121 | | | | |
| Anthracene | 5.0 | 0.10 | 5.0 | | 101.0 | 53 | 119 | | | | |
| Benzo(a)anthracene | 5.4 | 0.10 | 5.0 | | 107.0 | 59 | 120 | | | | |
| Benzo(a)pyrene | 5.1 | 0.10 | 5.0 | | 101.0 | 53 | 120 | | | | |
| Benzo(b)fluoranthene | 5.1 | 0.10 | 5.0 | | 101.0 | 53 | 126 | | | | |
| Benzo(g,h,i)perylene | 4.9 | 0.10 | 5.0 | | 99.0 | 44 | 128 | | | | |
| Benzo(k)fluoranthene | 4.8 | 0.10 | 5.0 | | 96.0 | 54 | 125 | | | | |
| Chrysene | 5.1 | 0.10 | 5.0 | | 103.0 | 57 | 120 | | | | |
| Dibenzo(a,h)anthracene | 5.2 | 0.10 | 5.0 | | 104.0 | 44 | 141 | | | | |
| Fluoranthene | 5.0 | 0.10 | 5.0 | | 100.0 | 58 | 120 | | | | |
| Fluorene | 4.5 | 0.10 | 5.0 | | 91.0 | 50 | 118 | | | | |
| Indeno(1,2,3-cd)pyrene | 5.2 | 0.10 | 5.0 | | 104.0 | 48 | 130 | | | | |
| Naphthalene | 3.2 | 0.10 | 5.0 | | 65.0 | 43 | 114 | | | | |
| Phenanthrene | 4.7 | 0.10 | 5.0 | | 94.0 | 53 | 115 | | | | |
| Pyrene | 4.7 | 0.10 | 5.0 | | 94.0 | 53 | 121 | | | | |

Associated Samples: **B22011228-001C**

Run ID: Run Order: SV5975.I_220131B: 9 **SampType:** Laboratory Control Sample Duplicate **Batch ID:** 163174
Method: SW8270CSIM **Analysis Date:** 01/31/2022 20:02 **Prep Date:** 01/24/2022 11:48
Lab ID: LLCSD-163174 **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 | | 70.0 | 41 | 115 | 3.5 | 0.8 | 40.0 | |
| 2-Methylnaphthalene | 3.5 | 0.10 | 5.0 | | 70.0 | 39 | 114 | 3.5 | 0.4 | 40.0 | |



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: SV5975.I_220131B: 9 **SampType:** Laboratory Control Sample Duplicate **Batch ID:** 163174
Method: SW8270CSIM **Analysis Date:** 01/31/2022 20:02 **Prep Date:** 01/24/2022 11:48
Lab ID: LLCSD-163174 **Units:** ug/L **Prep Method:** SW3510C

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|------------------------|--------|------|-----------|------------|-------|----------|-----------|------------|------|----------|------|
| Acenaphthene | 4.0 | 0.10 | 5.0 | | 80.0 | 48 | 114 | 4.3 | 7.5 | 40.0 | |
| Acenaphthylene | 4.0 | 0.10 | 5.0 | | 79.0 | 35 | 121 | 4.2 | 6.4 | 40.0 | |
| Anthracene | 5.1 | 0.10 | 5.0 | | 102.0 | 53 | 119 | 5.0 | 1.1 | 40.0 | |
| Benzo(a)anthracene | 5.4 | 0.10 | 5.0 | | 108.0 | 59 | 120 | 5.4 | 0.6 | 40.0 | |
| Benzo(a)pyrene | 5.1 | 0.10 | 5.0 | | 102.0 | 53 | 120 | 5.1 | 0.8 | 40.0 | |
| Benzo(b)fluoranthene | 5.1 | 0.10 | 5.0 | | 102.0 | 53 | 126 | 5.1 | 0.7 | 40.0 | |
| Benzo(g,h,i)perylene | 5.0 | 0.10 | 5.0 | | 99.0 | 44 | 128 | 4.9 | 0.9 | 40.0 | |
| Benzo(k)fluoranthene | 5.0 | 0.10 | 5.0 | | 99.0 | 54 | 125 | 4.8 | 3.1 | 40.0 | |
| Chrysene | 5.2 | 0.10 | 5.0 | | 105.0 | 57 | 120 | 5.1 | 1.8 | 40.0 | |
| Dibenzo(a,h)anthracene | 5.4 | 0.10 | 5.0 | | 108.0 | 44 | 141 | 5.2 | 4.2 | 40.0 | |
| Fluoranthene | 5.0 | 0.10 | 5.0 | | 100.0 | 58 | 120 | 5.0 | 0.4 | 40.0 | |
| Fluorene | 4.3 | 0.10 | 5.0 | | 85.0 | 50 | 118 | 4.5 | 6.2 | 40.0 | |
| Indeno(1,2,3-cd)pyrene | 4.9 | 0.10 | 5.0 | | 98.0 | 48 | 130 | 5.2 | 5.3 | 40.0 | |
| Naphthalene | 3.4 | 0.10 | 5.0 | | 68.0 | 43 | 114 | 3.2 | 5.2 | 40.0 | |
| Phenanthrene | 4.7 | 0.10 | 5.0 | | 94.0 | 53 | 115 | 4.7 | 0.3 | 40.0 | |
| Pyrene | 4.8 | 0.10 | 5.0 | | 96.0 | 53 | 121 | 4.7 | 2.4 | 40.0 | |

Associated Samples: **B22011228-001C**

Run ID: Run Order: SV5975.I_220131B: 16 **SampType:** Sample Matrix Spike **Batch ID:** 163174
Method: SW8270CSIM **Analysis Date:** 01/31/2022 23:51 **Prep Date:** 01/25/2022 08:25
Lab ID: B22011446-011CLMS **Units:** ug/L **Prep Method:** SW3510C

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|---------------------|--------|------|-----------|------------|------|----------|-----------|------------|------|----------|------|
| 1-Methylnaphthalene | 3.4 | 0.10 | 5.1 | 0.0 | 66.0 | 41 | 115 | | | | |
| 2-Methylnaphthalene | 3.5 | 0.10 | 5.1 | 0.0 | 69.0 | 39 | 114 | | | | |
| Acenaphthene | 4.1 | 0.10 | 5.1 | 0.0 | 81.0 | 48 | 114 | | | | |



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: SV5975.I_220131B: 16
Method: SW8270CSIM
Lab ID: B22011446-011CLMS

SampType: Sample Matrix Spike
Analysis Date: 01/31/2022 23:51
Units: ug/L

Batch ID: 163174
Prep Date: 01/25/2022 08:25
Prep Method: SW3510C

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|------------------------|--------|------|-----------|------------|-------|----------|-----------|------------|------|----------|------|
| Acenaphthylene | 4.0 | 0.10 | 5.1 | 0.0 | 78.0 | 35 | 121 | | | | |
| Anthracene | 4.9 | 0.10 | 5.1 | 0.0 | 96.0 | 53 | 119 | | | | |
| Benzo(a)anthracene | 5.2 | 0.10 | 5.1 | 0.0 | 103.0 | 59 | 120 | | | | |
| Benzo(a)pyrene | 4.6 | 0.10 | 5.1 | 0.0 | 91.0 | 53 | 120 | | | | |
| Benzo(b)fluoranthene | 4.6 | 0.10 | 5.1 | 0.0 | 91.0 | 53 | 126 | | | | |
| Benzo(g,h,i)perylene | 4.8 | 0.10 | 5.1 | 0.0 | 93.0 | 44 | 128 | | | | |
| Benzo(k)fluoranthene | 4.3 | 0.10 | 5.1 | 0.0 | 85.0 | 54 | 125 | | | | |
| Chrysene | 4.8 | 0.10 | 5.1 | 0.0 | 94.0 | 57 | 120 | | | | |
| Dibenzo(a,h)anthracene | 4.9 | 0.10 | 5.1 | 0.0 | 97.0 | 44 | 141 | | | | |
| Fluoranthene | 4.9 | 0.10 | 5.1 | 0.0 | 95.0 | 58 | 120 | | | | |
| Fluorene | 4.1 | 0.10 | 5.1 | 0.0 | 81.0 | 50 | 118 | | | | |
| Indeno(1,2,3-cd)pyrene | 5.0 | 0.10 | 5.1 | 0.0 | 97.0 | 48 | 130 | | | | |
| Naphthalene | 3.0 | 0.10 | 5.1 | 0.0 | 58.0 | 43 | 114 | | | | |
| Phenanthrene | 4.5 | 0.10 | 5.1 | 0.0 | 89.0 | 53 | 115 | | | | |
| Pyrene | 4.7 | 0.10 | 5.1 | 0.0 | 92.0 | 53 | 121 | | | | |

Associated Samples: **B22011228-001C**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: SV5975.I_220131B: 19
Method: SW8270CSIM
Lab ID: B22011446-017CLMS

SampType: Sample Matrix Spike
Analysis Date: 02/01/2022 01:28
Units: ug/L

Batch ID: 163174
Prep Date: 01/25/2022 08:26
Prep Method: SW3510C

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|------------------------|--------|------|-----------|------------|-------|----------|-----------|------------|------|----------|------|
| 1-Methylnaphthalene | 3.6 | 0.10 | 4.8 | 0.0 | 75.0 | 41 | 115 | | | | |
| 2-Methylnaphthalene | 3.6 | 0.10 | 4.8 | 0.0 | 75.0 | 39 | 114 | | | | |
| Acenaphthene | 4.4 | 0.10 | 4.8 | 0.0 | 91.0 | 48 | 114 | | | | |
| Acenaphthylene | 4.1 | 0.10 | 4.8 | 0.0 | 85.0 | 35 | 121 | | | | |
| Anthracene | 4.9 | 0.10 | 4.8 | 0.0 | 101.0 | 53 | 119 | | | | |
| Benzo(a)anthracene | 5.3 | 0.10 | 4.8 | 0.0 | 110.0 | 59 | 120 | | | | |
| Benzo(a)pyrene | 4.8 | 0.10 | 4.8 | 0.0 | 100.0 | 53 | 120 | | | | |
| Benzo(b)fluoranthene | 4.8 | 0.10 | 4.8 | 0.0 | 99.0 | 53 | 126 | | | | |
| Benzo(g,h,i)perylene | 4.7 | 0.10 | 4.8 | 0.0 | 98.0 | 44 | 128 | | | | |
| Benzo(k)fluoranthene | 4.8 | 0.10 | 4.8 | 0.0 | 100.0 | 54 | 125 | | | | |
| Chrysene | 4.7 | 0.10 | 4.8 | 0.0 | 98.0 | 57 | 120 | | | | |
| Dibenzo(a,h)anthracene | 5.3 | 0.10 | 4.8 | 0.0 | 110.0 | 44 | 141 | | | | |
| Fluoranthene | 4.9 | 0.10 | 4.8 | 0.0 | 101.0 | 58 | 120 | | | | |
| Fluorene | 4.3 | 0.10 | 4.8 | 0.0 | 90.0 | 50 | 118 | | | | |
| Indeno(1,2,3-cd)pyrene | 5.1 | 0.10 | 4.8 | 0.0 | 105.0 | 48 | 130 | | | | |
| Naphthalene | 3.2 | 0.10 | 4.8 | 0.0 | 67.0 | 43 | 114 | | | | |
| Phenanthrene | 4.6 | 0.10 | 4.8 | 0.0 | 96.0 | 53 | 115 | | | | |
| Pyrene | 4.7 | 0.10 | 4.8 | 0.0 | 98.0 | 53 | 121 | | | | |

Associated Samples: **B22011228-001C**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: SV5975.I_220131B: 2 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R373993
Method: SW8270CSIM **Analysis Date:** 01/31/2022 16:14 **Prep Date:**
Lab ID: 31-Jan-22_CCV_9 **Units:** ug/L **Prep Method:**

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|------------------------|--------|------|-----------|------------|-------|----------|-----------|------------|------|----------|------|
| 1-Methylnaphthalene | 2.4 | 0.10 | 2.0 | | 118.0 | 80 | 120 | | | | |
| 2-Methylnaphthalene | 2.2 | 0.10 | 2.0 | | 108.0 | 80 | 120 | | | | |
| Acenaphthene | 1.9 | 0.10 | 2.0 | | 94.0 | 80 | 120 | | | | |
| Acenaphthylene | 2.1 | 0.10 | 2.0 | | 106.0 | 80 | 120 | | | | |
| Anthracene | 2.1 | 0.10 | 2.0 | | 107.0 | 80 | 120 | | | | |
| Benzo(a)anthracene | 2.3 | 0.10 | 2.0 | | 115.0 | 80 | 120 | | | | |
| Benzo(a)pyrene | 2.2 | 0.10 | 2.0 | | 110.0 | 80 | 120 | | | | |
| Benzo(b)fluoranthene | 2.0 | 0.10 | 2.0 | | 98.0 | 80 | 120 | | | | |
| Benzo(g,h,i)perylene | 1.9 | 0.10 | 2.0 | | 96.0 | 80 | 120 | | | | |
| Benzo(k)fluoranthene | 2.0 | 0.10 | 2.0 | | 99.0 | 80 | 120 | | | | |
| Chrysene | 2.0 | 0.10 | 2.0 | | 100.0 | 80 | 120 | | | | |
| Dibenzo(a,h)anthracene | 2.1 | 0.10 | 2.0 | | 105.0 | 80 | 120 | | | | |
| Fluoranthene | 2.0 | 0.10 | 2.0 | | 99.0 | 80 | 120 | | | | |
| Fluorene | 2.0 | 0.10 | 2.0 | | 101.0 | 80 | 120 | | | | |
| Indeno(1,2,3-cd)pyrene | 2.2 | 0.10 | 2.0 | | 112.0 | 80 | 120 | | | | |
| Naphthalene | 2.2 | 0.10 | 2.0 | | 108.0 | 80 | 120 | | | | |
| Phenanthrene | 2.0 | 0.10 | 2.0 | | 101.0 | 80 | 120 | | | | |
| Pyrene | 2.1 | 0.10 | 2.0 | | 105.0 | 80 | 120 | | | | |

Associated Samples: **B22011228-001C**

Run ID: Run Order: SV5975.I_220131B: 23 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R373993
Method: SW8270CSIM **Analysis Date:** 02/01/2022 03:38 **Prep Date:**
Lab ID: 31-Jan-22_CCV_30 **Units:** ug/L **Prep Method:**

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|---------------------|--------|------|-----------|------------|-------|----------|-----------|------------|------|----------|------|
| 1-Methylnaphthalene | 2.4 | 0.10 | 2.0 | | 119.0 | 50 | 150 | | | | |



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: SV5975.I_220131B: 23 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R373993
Method: SW8270CSIM **Analysis Date:** 02/01/2022 03:38 **Prep Date:**
Lab ID: 31-Jan-22_CCV_30 **Units:** ug/L **Prep Method:**

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|------------------------|--------|------|-----------|------------|-------|----------|-----------|------------|------|----------|------|
| 2-Methylnaphthalene | 2.2 | 0.10 | 2.0 | | 110.0 | 50 | 150 | | | | |
| Acenaphthene | 2.1 | 0.10 | 2.0 | | 107.0 | 50 | 150 | | | | |
| Acenaphthylene | 2.1 | 0.10 | 2.0 | | 105.0 | 50 | 150 | | | | |
| Anthracene | 1.6 | 0.10 | 2.0 | | 82.0 | 50 | 150 | | | | |
| Benzo(a)anthracene | 2.1 | 0.10 | 2.0 | | 105.0 | 50 | 150 | | | | |
| Benzo(a)pyrene | 2.1 | 0.10 | 2.0 | | 105.0 | 50 | 150 | | | | |
| Benzo(b)fluoranthene | 2.1 | 0.10 | 2.0 | | 104.0 | 50 | 150 | | | | |
| Benzo(g,h,i)perylene | 2.1 | 0.10 | 2.0 | | 107.0 | 50 | 150 | | | | |
| Benzo(k)fluoranthene | 2.0 | 0.10 | 2.0 | | 102.0 | 50 | 150 | | | | |
| Chrysene | 2.0 | 0.10 | 2.0 | | 99.0 | 50 | 150 | | | | |
| Dibenzo(a,h)anthracene | 2.1 | 0.10 | 2.0 | | 103.0 | 50 | 150 | | | | |
| Fluoranthene | 2.0 | 0.10 | 2.0 | | 102.0 | 50 | 150 | | | | |
| Fluorene | 1.9 | 0.10 | 2.0 | | 96.0 | 50 | 150 | | | | |
| Indeno(1,2,3-cd)pyrene | 2.0 | 0.10 | 2.0 | | 100.0 | 50 | 150 | | | | |
| Naphthalene | 2.1 | 0.10 | 2.0 | | 107.0 | 50 | 150 | | | | |
| Phenanthrene | 2.0 | 0.10 | 2.0 | | 101.0 | 50 | 150 | | | | |
| Pyrene | 2.0 | 0.10 | 2.0 | | 98.0 | 50 | 150 | | | | |

Associated Samples: **B22011228-001C**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: SUB-C279130: 2 **SampType:** Method Blank **Batch ID:** C_R279130
Method: SW9060A **Analysis Date:** 01/27/2022 16:50 **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) | 0.20 | 0.20 | | | | | | | | | |

Associated Samples: **B22011228-001E**
- TOC Range is 0.2 to 0.2

Run ID: Run Order: SUB-C279130: 1 **SampType:** Laboratory Control Sample **Batch ID:** C_R279130
Method: SW9060A **Analysis Date:** 01/27/2022 16:09 **Prep Date:**
Lab ID: LCS **Units:** mg/L **Prep Method:**

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|-----------------------------|--------|------|-----------|------------|-------|----------|-----------|------------|------|----------|------|
| Organic Carbon, Total (TOC) | 5.1 | 0.50 | 5.0 | | 102.0 | 91 | 111 | | | | |

Associated Samples: **B22011228-001E**
- TOC Range is 5.1 to 5.1

Run ID: Run Order: SUB-C279130: 5 **SampType:** Sample Matrix Spike **Batch ID:** C_R279130
Method: SW9060A **Analysis Date:** 01/27/2022 18:53 **Prep Date:**
Lab ID: C22010677-001EMS **Units:** mg/L **Prep Method:**

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|-----------------------------|--------|------|-----------|------------|-------|----------|-----------|------------|------|----------|------|
| Organic Carbon, Total (TOC) | 5.7 | 0.50 | 5.0 | 0.68 | 101.0 | 91 | 111 | | | | |

Associated Samples: **B22011228-001E**
- TOC Range is 5.7 to 5.8



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: SUB-C279130: 6 **SampType:** Sample Matrix Spike Duplicate **Batch ID:** C_R279130
Method: SW9060A **Analysis Date:** 01/27/2022 19:36 **Prep Date:**
Lab ID: C22010677-001EMSD **Units:** mg/L **Prep Method:**

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|-----------------------------|--------|------|-----------|------------|-------|----------|-----------|------------|------|----------|------|
| Organic Carbon, Total (TOC) | 5.7 | 0.50 | 5.0 | 0.68 | 101.0 | 91 | 111 | 5.7 | 0.2 | 10.0 | |

Associated Samples: **B22011228-001E**
- TOC Range is 5.7 to 5.8

Run ID: Run Order: SUB-C279130: 3 **SampType:** Continuing Calibration Verification Standard **Batch ID:** C_R279130
Method: SW9060A **Analysis Date:** 01/27/2022 17:30 **Prep Date:**
Lab ID: CCV **Units:** mg/L **Prep Method:**

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

Associated Samples: **B22011228-001E**
- TOC Range is 5.0 to 5.1

Run ID: Run Order: SUB-C279130: 7 **SampType:** Continuing Calibration Verification Standard **Batch ID:** C_R279130
Method: SW9060A **Analysis Date:** 01/28/2022 02:28 **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) | 4.9 | 0.50 | 5.0 | | 99.0 | 90 | 110 | | | | |

Associated Samples: **B22011228-001E**
- TOC Range is 4.8 to 5.0



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: ICPMS207-B_220121A: 29 **SampType:** Method Blank **Batch ID:** R373694
Method: SW6020 **Analysis Date:** 01/21/2022 19:03 **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: **B22011228-001A**

Run ID: Run Order: ICPMS207-B_220121A: 30 **SampType:** Laboratory Fortified Blank **Batch ID:** R373694
Method: SW6020 **Analysis Date:** 01/21/2022 19:09 **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 | 0.050 | 0.001 | 0.050 | | 100.0 | 88 | 115 | | | | |

Associated Samples: **B22011228-001A**

Run ID: Run Order: ICPMS207-B_220121A: 45 **SampType:** Sample Matrix Spike **Batch ID:** R373694
Method: SW6020 **Analysis Date:** 01/21/2022 20:43 **Prep Date:**
Lab ID: B22011124-001AMS **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 | 0.00 | 99.0 | 88 | 115 | | | | |

Associated Samples: **B22011228-001A**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: ICPMS207-B_220121A: 46 **SampType:** Sample Matrix Spike Duplicate **Batch ID:** R373694
Method: SW6020 **Analysis Date:** 01/21/2022 20:49 **Prep Date:**
Lab ID: B22011124-001AMSD **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 | 99.0 | 88 | 115 | 0.049 | 0.3 | 20.0 | |

Associated Samples: **B22011228-001A**

Run ID: Run Order: ICPMS207-B_220121A: 44 **SampType:** Serial Dilution **Batch ID:** R373694
Method: SW6020 **Analysis Date:** 01/21/2022 20:36 **Prep Date:**
Lab ID: B22011124-001ADIL **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: **B22011228-001A**

Run ID: Run Order: ICPMS207-B_220121A: 39 **SampType:** Method Blank **Batch ID:** 163116
Method: SW6020 **Analysis Date:** 01/21/2022 20:05 **Prep Date:** 01/20/2022 13:11
Lab ID: MB-163116 **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: **B22011228-001B**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: ICPMS207-B_220121A: 41 **SampType:** Laboratory Control Sample **Batch ID:** 163116
Method: SW6020 **Analysis Date:** 01/21/2022 20:18 **Prep Date:** 01/20/2022 13:11
Lab ID: LCS4-163116 **Units:** mg/L **Prep Method:** SW3010A

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|----------|--------|-------|-----------|------------|------|----------|-----------|------------|------|----------|------|
| Lead | 0.098 | 0.001 | 0.100 | | 98.0 | 88 | 115 | | | | |

Associated Samples: **B22011228-001B**

Run ID: Run Order: ICPMS207-B_220121A: 97 **SampType:** Sample Matrix Spike **Batch ID:** 163116
Method: SW6020 **Analysis Date:** 01/22/2022 02:07 **Prep Date:** 01/20/2022 13:17
Lab ID: B22011214-001BMS4 **Units:** mg/L **Prep Method:** SW3010A

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|----------|--------|-------|-----------|------------|-------|----------|-----------|------------|------|----------|------|
| Lead | 0.104 | 0.001 | 0.100 | 0 | 104.0 | 88 | 115 | | | | |

Associated Samples: **B22011228-001B**

Run ID: Run Order: ICPMS207-B_220121A: 98 **SampType:** Sample Matrix Spike Duplicate **Batch ID:** 163116
Method: SW6020 **Analysis Date:** 01/22/2022 02:13 **Prep Date:** 01/20/2022 13:17
Lab ID: B22011214-001BMSD4 **Units:** mg/L **Prep Method:** SW3010A

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|----------|--------|-------|-----------|------------|-------|----------|-----------|------------|------|----------|------|
| Lead | 0.105 | 0.001 | 0.100 | 0 | 105.0 | 88 | 115 | 0.104 | 1.5 | 20.0 | |

Associated Samples: **B22011228-001B**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: ICPMS207-B_220121A: 96 **SampType:** Post Digestion/Distillation Spike **Batch ID:** 163116
Method: SW6020 **Analysis Date:** 01/22/2022 02:01 **Prep Date:** 01/20/2022 13:17
Lab ID: B22011214-001BPDS1 **Units:** mg/L **Prep Method:** SW3010A

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|----------|--------|-------|-----------|------------|-------|----------|-----------|------------|------|----------|------|
| Lead | 0.053 | 0.001 | 0.052 | 0 | 102.0 | 80 | 120 | | | | |

Associated Samples: **B22011228-001B**

Run ID: Run Order: ICPMS207-B_220121A: 95 **SampType:** Serial Dilution **Batch ID:** 163116
Method: SW6020 **Analysis Date:** 01/22/2022 01:55 **Prep Date:** 01/20/2022 13:17
Lab ID: B22011214-001BDIL **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 | | 10.0 | |

Associated Samples: **B22011228-001B**

Run ID: Run Order: ICPMS207-B_220121A: 101 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R373694
Method: SW6020 **Analysis Date:** 01/22/2022 02:32 **Prep Date:**
Lab ID: CCV **Units:** mg/L **Prep Method:**

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|----------|--------|-------|-----------|------------|-------|----------|-----------|------------|------|----------|------|
| Lead | 0.051 | 0.001 | 0.050 | | 101.0 | 90 | 110 | | | | |

Associated Samples: **B22011228-001A, B22011228-001B**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: ICPMS207-B_220121A: 107
Method: SW6020
Lab ID: CCV

SampType: Continuing Calibration Verification Standard
Analysis Date: 01/22/2022 03:10
Units: mg/L

Batch ID: R373694
Prep Date:
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 | 90 | 110 | | | | |

Associated Samples: **B22011228-001A, B22011228-001B**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: VOA5975C.I_220125A: 4 **SampType:** Method Blank **Batch ID:** R373812
Method: SW8260B **Analysis Date:** 01/25/2022 11:41 **Prep Date:**
Lab ID: MBLK012522_ **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: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: VOA5975C.I_220125A: 4 **SampType:** Method Blank **Batch ID:** R373812
Method: SW8260B **Analysis Date:** 01/25/2022 11:41 **Prep Date:**
Lab ID: MBLK012522_ **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 | | 109.0 | 81 | 118 | | | | |
| Surr: Dibromofluoromethane | 11 | 0.50 | 10 | | 107.0 | 80 | 119 | | | | |
| Surr: p-Bromofluorobenzene | 10 | 0.50 | 10 | | 104.0 | 85 | 114 | | | | |
| Surr: Toluene-d8 | 10 | 0.50 | 10 | | 102.0 | 89 | 112 | | | | |

Associated Samples: **B22011228-001F, B22011228-002A**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: VOA5975C.I_220125A: 3 **SampType:** Laboratory Control Sample **Batch ID:** R373812
Method: SW8260B **Analysis Date:** 01/25/2022 10:46 **Prep Date:**
Lab ID: LCS012522_ **Units:** ug/L **Prep Method:**

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|--------------------------|--------|------|-----------|------------|-------|----------|-----------|------------|------|----------|------|
| Benzene | 5.2 | 0.50 | 5.0 | | 104.0 | 79 | 120 | | | | |
| Bromobenzene | 5.3 | 0.50 | 5.0 | | 106.0 | 80 | 120 | | | | |
| Bromochloromethane | 5.1 | 0.50 | 5.0 | | 102.0 | 78 | 123 | | | | |
| Bromodichloromethane | 5.2 | 0.50 | 5.0 | | 105.0 | 79 | 125 | | | | |
| Bromoform | 5.2 | 0.50 | 5.0 | | 104.0 | 66 | 130 | | | | |
| Carbon tetrachloride | 5.0 | 0.50 | 5.0 | | 101.0 | 72 | 136 | | | | |
| Chlorobenzene | 5.3 | 0.50 | 5.0 | | 106.0 | 82 | 118 | | | | |
| Chlorodibromomethane | 5.1 | 0.50 | 5.0 | | 101.0 | 74 | 126 | | | | |
| Chloroethane | 4.7 | 0.50 | 5.0 | | 94.0 | 60 | 138 | | | | |
| Chloroform | 4.9 | 0.50 | 5.0 | | 98.0 | 79 | 124 | | | | |
| Chloromethane | 4.8 | 0.50 | 5.0 | | 96.0 | 50 | 139 | | | | |
| 1,2-Dibromoethane | 5.3 | 0.50 | 5.0 | | 105.0 | 78 | 122 | | | | |
| 2-Chlorotoluene | 5.2 | 0.50 | 5.0 | | 105.0 | 79 | 122 | | | | |
| Dibromomethane | 5.3 | 0.50 | 5.0 | | 105.0 | 79 | 123 | | | | |
| 1,2-Dichlorobenzene | 5.2 | 0.50 | 5.0 | | 105.0 | 80 | 119 | | | | |
| 4-Chlorotoluene | 5.4 | 0.50 | 5.0 | | 107.0 | 78 | 122 | | | | |
| 1,3-Dichlorobenzene | 5.4 | 0.50 | 5.0 | | 107.0 | 80 | 119 | | | | |
| 1,4-Dichlorobenzene | 5.2 | 0.50 | 5.0 | | 105.0 | 79 | 118 | | | | |
| Dichlorodifluoromethane | 4.7 | 0.50 | 5.0 | | 93.0 | 32 | 152 | | | | |
| 1,1-Dichloroethane | 5.5 | 0.50 | 5.0 | | 109.0 | 77 | 125 | | | | |
| 1,2-Dichloroethane | 5.0 | 0.50 | 5.0 | | 100.0 | 73 | 128 | | | | |
| 1,1-Dichloroethene | 5.3 | 0.50 | 5.0 | | 106.0 | 71 | 131 | | | | |
| cis-1,2-Dichloroethene | 5.3 | 0.50 | 5.0 | | 106.0 | 78 | 123 | | | | |
| trans-1,2-Dichloroethene | 5.1 | 0.50 | 5.0 | | 103.0 | 75 | 124 | | | | |
| 1,2-Dichloropropane | 5.1 | 0.50 | 5.0 | | 102.0 | 78 | 122 | | | | |
| 1,3-Dichloropropane | 5.1 | 0.50 | 5.0 | | 101.0 | 80 | 119 | | | | |
| 2,2-Dichloropropane | 5.3 | 0.50 | 5.0 | | 106.0 | 60 | 139 | | | | |



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: VOA5975C.I_220125A: 3 **SampType:** Laboratory Control Sample **Batch ID:** R373812
Method: SW8260B **Analysis Date:** 01/25/2022 10:46 **Prep Date:**
Lab ID: LCS012522_ **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 | 79 | 125 | | | | |
| cis-1,3-Dichloropropene | 5.0 | 0.50 | 5.0 | | 99.0 | 75 | 124 | | | | |
| trans-1,3-Dichloropropene | 5.4 | 0.50 | 5.0 | | 107.0 | 73 | 127 | | | | |
| Ethylbenzene | 5.1 | 0.50 | 5.0 | | 102.0 | 79 | 121 | | | | |
| Methyl tert-butyl ether (MTBE) | 5.3 | 0.50 | 5.0 | | 105.0 | 71 | 124 | | | | |
| Methyl ethyl ketone | 51 | 10 | 50 | | 101.0 | 56 | 143 | | | | |
| Methylene chloride | 5.0 | 0.50 | 5.0 | | 100.0 | 74 | 124 | | | | |
| Styrene | 5.3 | 0.50 | 5.0 | | 106.0 | 78 | 123 | | | | |
| 1,1,1,2-Tetrachloroethane | 5.3 | 0.50 | 5.0 | | 105.0 | 78 | 124 | | | | |
| 1,1,2,2-Tetrachloroethane | 5.4 | 0.50 | 5.0 | | 108.0 | 71 | 121 | | | | |
| Tetrachloroethene | 4.9 | 0.50 | 5.0 | | 99.0 | 74 | 129 | | | | |
| Toluene | 5.3 | 0.50 | 5.0 | | 105.0 | 80 | 121 | | | | |
| 1,1,1-Trichloroethane | 5.2 | 0.50 | 5.0 | | 104.0 | 74 | 131 | | | | |
| 1,1,2-Trichloroethane | 5.2 | 0.50 | 5.0 | | 105.0 | 80 | 119 | | | | |
| Trichloroethene | 5.0 | 0.50 | 5.0 | | 100.0 | 79 | 123 | | | | |
| Trichlorofluoromethane | 5.0 | 0.50 | 5.0 | | 99.0 | 65 | 141 | | | | |
| 1,2,3-Trichloropropane | 5.1 | 0.50 | 5.0 | | 102.0 | 73 | 125 | | | | |
| Vinyl chloride | 5.1 | 0.50 | 5.0 | | 103.0 | 58 | 137 | | | | |
| m+p-Xylenes | 10 | 0.50 | 10 | | 100.0 | 80 | 121 | | | | |
| o-Xylene | 5.1 | 0.50 | 5.0 | | 102.0 | 78 | 122 | | | | |
| Xylenes, Total | 15 | 0.50 | 15 | | 101.0 | 79 | 121 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 11 | 0.50 | 10 | | 108.0 | 81 | 118 | | | | |
| Surr: Dibromofluoromethane | 11 | 0.50 | 10 | | 107.0 | 80 | 119 | | | | |
| Surr: p-Bromofluorobenzene | 10 | 0.50 | 10 | | 104.0 | 85 | 114 | | | | |
| Surr: Toluene-d8 | 10 | 0.50 | 10 | | 105.0 | 89 | 112 | | | | |

Associated Samples: B22011228-001F, B22011228-002A



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: VOA5975C.I_220125A: 23 **SampType:** Sample Matrix Spike **Batch ID:** R373812
Method: SW8260B **Analysis Date:** 01/25/2022 19:53 **Prep Date:**
Lab ID: B22011446-006FMS **Units:** ug/L **Prep Method:**

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|--------------------------|--------|------|-----------|------------|-------|----------|-----------|------------|------|----------|------|
| Benzene | 5.0 | 0.50 | 5.0 | 0.0 | 101.0 | 79 | 120 | | | | |
| Bromobenzene | 5.0 | 0.50 | 5.0 | 0.0 | 101.0 | 80 | 120 | | | | |
| Bromochloromethane | 4.7 | 0.50 | 5.0 | 0.0 | 94.0 | 78 | 123 | | | | |
| Bromodichloromethane | 5.1 | 0.50 | 5.0 | 0.0 | 101.0 | 79 | 125 | | | | |
| Bromoform | 4.8 | 0.50 | 5.0 | 0.0 | 96.0 | 66 | 130 | | | | |
| Carbon tetrachloride | 5.0 | 0.50 | 5.0 | 0.0 | 100.0 | 72 | 136 | | | | |
| Chlorobenzene | 5.1 | 0.50 | 5.0 | 0.0 | 103.0 | 82 | 118 | | | | |
| Chlorodibromomethane | 4.9 | 0.50 | 5.0 | 0.0 | 99.0 | 74 | 126 | | | | |
| Chloroethane | 4.5 | 0.50 | 5.0 | 0.0 | 91.0 | 60 | 138 | | | | |
| Chloroform | 5.0 | 0.50 | 5.0 | 0.65 | 87.0 | 79 | 124 | | | | |
| Chloromethane | 4.4 | 0.50 | 5.0 | 0.0 | 88.0 | 50 | 139 | | | | |
| 1,2-Dibromoethane | 5.1 | 0.50 | 5.0 | 0.0 | 101.0 | 78 | 122 | | | | |
| 2-Chlorotoluene | 5.1 | 0.50 | 5.0 | 0.0 | 103.0 | 79 | 122 | | | | |
| Dibromomethane | 5.0 | 0.50 | 5.0 | 0.0 | 100.0 | 79 | 123 | | | | |
| 1,2-Dichlorobenzene | 5.1 | 0.50 | 5.0 | 0.0 | 102.0 | 80 | 119 | | | | |
| 4-Chlorotoluene | 5.3 | 0.50 | 5.0 | 0.0 | 106.0 | 78 | 122 | | | | |
| 1,3-Dichlorobenzene | 5.2 | 0.50 | 5.0 | 0.0 | 104.0 | 80 | 119 | | | | |
| 1,4-Dichlorobenzene | 5.1 | 0.50 | 5.0 | 0.0 | 102.0 | 79 | 118 | | | | |
| Dichlorodifluoromethane | 4.3 | 0.50 | 5.0 | 0.0 | 87.0 | 32 | 152 | | | | |
| 1,1-Dichloroethane | 5.2 | 0.50 | 5.0 | 0.0 | 104.0 | 77 | 125 | | | | |
| 1,2-Dichloroethane | 4.8 | 0.50 | 5.0 | 0.0 | 97.0 | 73 | 128 | | | | |
| 1,1-Dichloroethene | 5.1 | 0.50 | 5.0 | 0.0 | 102.0 | 71 | 131 | | | | |
| cis-1,2-Dichloroethene | 5.0 | 0.50 | 5.0 | 0.0 | 100.0 | 78 | 123 | | | | |
| trans-1,2-Dichloroethene | 5.0 | 0.50 | 5.0 | 0.0 | 99.0 | 75 | 124 | | | | |
| 1,2-Dichloropropane | 5.2 | 0.50 | 5.0 | 0.0 | 104.0 | 78 | 122 | | | | |
| 1,3-Dichloropropane | 4.8 | 0.50 | 5.0 | 0.0 | 97.0 | 80 | 119 | | | | |
| 2,2-Dichloropropane | 4.7 | 0.50 | 5.0 | 0.0 | 93.0 | 60 | 139 | | | | |



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: VOA5975C.I_220125A: 23 **SampType:** Sample Matrix Spike **Batch ID:** R373812
Method: SW8260B **Analysis Date:** 01/25/2022 19:53 **Prep Date:**
Lab ID: B22011446-006FMS **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 | 98.0 | 79 | 125 | | | | |
| cis-1,3-Dichloropropene | 4.6 | 0.50 | 5.0 | 0.0 | 93.0 | 75 | 124 | | | | |
| trans-1,3-Dichloropropene | 5.0 | 0.50 | 5.0 | 0.0 | 99.0 | 73 | 127 | | | | |
| Ethylbenzene | 5.1 | 0.50 | 5.0 | 0.0 | 102.0 | 79 | 121 | | | | |
| Methyl tert-butyl ether (MTBE) | 5.0 | 0.50 | 5.0 | 0.0 | 100.0 | 71 | 124 | | | | |
| Methyl ethyl ketone | 49 | 10 | 50 | 0.0 | 97.0 | 56 | 143 | | | | |
| Methylene chloride | 4.8 | 0.50 | 5.0 | 0.0 | 97.0 | 74 | 124 | | | | |
| Styrene | 5.1 | 0.50 | 5.0 | 0.0 | 102.0 | 78 | 123 | | | | |
| 1,1,1,2-Tetrachloroethane | 5.1 | 0.50 | 5.0 | 0.0 | 103.0 | 78 | 124 | | | | |
| 1,1,2,2-Tetrachloroethane | 5.0 | 0.50 | 5.0 | 0.0 | 100.0 | 71 | 121 | | | | |
| Tetrachloroethene | 5.0 | 0.50 | 5.0 | 0.0 | 100.0 | 74 | 129 | | | | |
| Toluene | 5.2 | 0.50 | 5.0 | 0.0 | 104.0 | 80 | 121 | | | | |
| 1,1,1-Trichloroethane | 5.0 | 0.50 | 5.0 | 0.0 | 100.0 | 74 | 131 | | | | |
| 1,1,2-Trichloroethane | 5.1 | 0.50 | 5.0 | 0.0 | 102.0 | 80 | 119 | | | | |
| Trichloroethene | 5.0 | 0.50 | 5.0 | 0.0 | 100.0 | 79 | 123 | | | | |
| Trichlorofluoromethane | 4.8 | 0.50 | 5.0 | 0.0 | 96.0 | 65 | 141 | | | | |
| 1,2,3-Trichloropropane | 4.8 | 0.50 | 5.0 | 0.0 | 96.0 | 73 | 125 | | | | |
| Vinyl chloride | 4.7 | 0.50 | 5.0 | 0.0 | 93.0 | 58 | 137 | | | | |
| m+p-Xylenes | 9.9 | 0.50 | 10 | 0.0 | 99.0 | 80 | 121 | | | | |
| o-Xylene | 5.0 | 0.50 | 5.0 | 0.0 | 100.0 | 78 | 122 | | | | |
| Xylenes, Total | 15 | 0.50 | 15 | 0.0 | 99.0 | 79 | 121 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.7 | 0.50 | 10 | 0.0 | 97.0 | 81 | 118 | | | | |
| Surr: Dibromofluoromethane | 9.5 | 0.50 | 10 | 0.0 | 95.0 | 80 | 119 | | | | |
| Surr: p-Bromofluorobenzene | 9.4 | 0.50 | 10 | 0.0 | 94.0 | 85 | 114 | | | | |
| Surr: Toluene-d8 | 9.8 | 0.50 | 10 | 0.0 | 98.0 | 89 | 112 | | | | |

Associated Samples: B22011228-001F, B22011228-002A



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: VOA5975C.I_220125A: 24 **SampType:** Sample Matrix Spike Duplicate **Batch ID:** R373812
Method: SW8260B **Analysis Date:** 01/25/2022 20:20 **Prep Date:**
Lab ID: B22011446-006FMSD **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 | 5.0 | 2.9 | 20.0 | |
| Bromobenzene | 5.4 | 0.50 | 5.0 | 0.0 | 108.0 | 80 | 120 | 5.0 | 7.5 | 20.0 | |
| Bromochloromethane | 5.0 | 0.50 | 5.0 | 0.0 | 99.0 | 78 | 123 | 4.7 | 5.4 | 20.0 | |
| Bromodichloromethane | 5.3 | 0.50 | 5.0 | 0.0 | 106.0 | 79 | 125 | 5.1 | 4.8 | 20.0 | |
| Bromoform | 5.2 | 0.50 | 5.0 | 0.0 | 105.0 | 66 | 130 | 4.8 | 9.0 | 20.0 | |
| Carbon tetrachloride | 5.3 | 0.50 | 5.0 | 0.0 | 105.0 | 72 | 136 | 5.0 | 5.2 | 20.0 | |
| Chlorobenzene | 5.4 | 0.50 | 5.0 | 0.0 | 107.0 | 82 | 118 | 5.1 | 4.2 | 20.0 | |
| Chlorodibromomethane | 5.1 | 0.50 | 5.0 | 0.0 | 103.0 | 74 | 126 | 4.9 | 3.9 | 20.0 | |
| Chloroethane | 4.7 | 0.50 | 5.0 | 0.0 | 95.0 | 60 | 138 | 4.5 | 4.2 | 20.0 | |
| Chloroform | 5.1 | 0.50 | 5.0 | 0.65 | 89.0 | 79 | 124 | 5.0 | 1.6 | 20.0 | |
| Chloromethane | 4.7 | 0.50 | 5.0 | 0.0 | 93.0 | 50 | 139 | 4.4 | 6.3 | 20.0 | |
| 1,2-Dibromoethane | 5.2 | 0.50 | 5.0 | 0.0 | 104.0 | 78 | 122 | 5.1 | 2.9 | 20.0 | |
| 2-Chlorotoluene | 5.6 | 0.50 | 5.0 | 0.0 | 111.0 | 79 | 122 | 5.1 | 8.0 | 20.0 | |
| Dibromomethane | 5.1 | 0.50 | 5.0 | 0.0 | 103.0 | 79 | 123 | 5.0 | 3.0 | 20.0 | |
| 1,2-Dichlorobenzene | 5.4 | 0.50 | 5.0 | 0.0 | 108.0 | 80 | 119 | 5.1 | 5.6 | 20.0 | |
| 4-Chlorotoluene | 5.6 | 0.50 | 5.0 | 0.0 | 112.0 | 78 | 122 | 5.3 | 6.3 | 20.0 | |
| 1,3-Dichlorobenzene | 5.5 | 0.50 | 5.0 | 0.0 | 110.0 | 80 | 119 | 5.2 | 5.6 | 20.0 | |
| 1,4-Dichlorobenzene | 5.3 | 0.50 | 5.0 | 0.0 | 106.0 | 79 | 118 | 5.1 | 3.2 | 20.0 | |
| Dichlorodifluoromethane | 4.6 | 0.50 | 5.0 | 0.0 | 93.0 | 32 | 152 | 4.3 | 7.2 | 20.0 | |
| 1,1-Dichloroethane | 5.4 | 0.50 | 5.0 | 0.0 | 107.0 | 77 | 125 | 5.2 | 3.1 | 20.0 | |
| 1,2-Dichloroethane | 5.0 | 0.50 | 5.0 | 0.0 | 100.0 | 73 | 128 | 4.8 | 3.0 | 20.0 | |
| 1,1-Dichloroethene | 5.3 | 0.50 | 5.0 | 0.0 | 107.0 | 71 | 131 | 5.1 | 4.7 | 20.0 | |
| cis-1,2-Dichloroethene | 5.2 | 0.50 | 5.0 | 0.0 | 105.0 | 78 | 123 | 5.0 | 4.5 | 20.0 | |
| trans-1,2-Dichloroethene | 5.3 | 0.50 | 5.0 | 0.0 | 106.0 | 75 | 124 | 5.0 | 6.9 | 20.0 | |
| 1,2-Dichloropropane | 5.2 | 0.50 | 5.0 | 0.0 | 103.0 | 78 | 122 | 5.2 | 0.3 | 20.0 | |
| 1,3-Dichloropropane | 5.0 | 0.50 | 5.0 | 0.0 | 101.0 | 80 | 119 | 4.8 | 3.8 | 20.0 | |
| 2,2-Dichloropropane | 4.9 | 0.50 | 5.0 | 0.0 | 98.0 | 60 | 139 | 4.7 | 4.9 | 20.0 | |



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: VOA5975C.I_220125A: 24 **SampType:** Sample Matrix Spike Duplicate **Batch ID:** R373812
Method: SW8260B **Analysis Date:** 01/25/2022 20:20 **Prep Date:**
Lab ID: B22011446-006FMSD **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 | 101.0 | 79 | 125 | 4.9 | 2.8 | 20.0 | |
| cis-1,3-Dichloropropene | 4.9 | 0.50 | 5.0 | 0.0 | 97.0 | 75 | 124 | 4.6 | 4.8 | 20.0 | |
| trans-1,3-Dichloropropene | 5.2 | 0.50 | 5.0 | 0.0 | 104.0 | 73 | 127 | 5.0 | 4.9 | 20.0 | |
| Ethylbenzene | 5.3 | 0.50 | 5.0 | 0.0 | 105.0 | 79 | 121 | 5.1 | 3.2 | 20.0 | |
| Methyl tert-butyl ether (MTBE) | 5.3 | 0.50 | 5.0 | 0.0 | 106.0 | 71 | 124 | 5.0 | 6.0 | 20.0 | |
| Methyl ethyl ketone | 51 | 10 | 50 | 0.0 | 102.0 | 56 | 143 | 49 | 4.7 | 20.0 | |
| Methylene chloride | 5.0 | 0.50 | 5.0 | 0.0 | 99.0 | 74 | 124 | 4.8 | 2.5 | 20.0 | |
| Styrene | 5.2 | 0.50 | 5.0 | 0.0 | 104.0 | 78 | 123 | 5.1 | 2.1 | 20.0 | |
| 1,1,1,2-Tetrachloroethane | 5.1 | 0.50 | 5.0 | 0.0 | 103.0 | 78 | 124 | 5.1 | 0.2 | 20.0 | |
| 1,1,2,2-Tetrachloroethane | 5.3 | 0.50 | 5.0 | 0.0 | 106.0 | 71 | 121 | 5.0 | 5.7 | 20.0 | |
| Tetrachloroethene | 5.2 | 0.50 | 5.0 | 0.0 | 104.0 | 74 | 129 | 5.0 | 4.2 | 20.0 | |
| Toluene | 5.4 | 0.50 | 5.0 | 0.0 | 108.0 | 80 | 121 | 5.2 | 3.4 | 20.0 | |
| 1,1,1-Trichloroethane | 5.2 | 0.50 | 5.0 | 0.0 | 105.0 | 74 | 131 | 5.0 | 4.6 | 20.0 | |
| 1,1,2-Trichloroethane | 5.2 | 0.50 | 5.0 | 0.0 | 104.0 | 80 | 119 | 5.1 | 2.2 | 20.0 | |
| Trichloroethene | 5.3 | 0.50 | 5.0 | 0.0 | 105.0 | 79 | 123 | 5.0 | 4.4 | 20.0 | |
| Trichlorofluoromethane | 5.3 | 0.50 | 5.0 | 0.0 | 107.0 | 65 | 141 | 4.8 | 11.0 | 20.0 | |
| 1,2,3-Trichloropropane | 5.2 | 0.50 | 5.0 | 0.0 | 103.0 | 73 | 125 | 4.8 | 7.3 | 20.0 | |
| Vinyl chloride | 5.0 | 0.50 | 5.0 | 0.0 | 100.0 | 58 | 137 | 4.7 | 6.5 | 20.0 | |
| m+p-Xylenes | 10 | 0.50 | 10 | 0.0 | 103.0 | 80 | 121 | 9.9 | 4.2 | 20.0 | |
| o-Xylene | 5.3 | 0.50 | 5.0 | 0.0 | 105.0 | 78 | 122 | 5.0 | 5.2 | 20.0 | |
| Xylenes, Total | 16 | 0.50 | 15 | 0.0 | 104.0 | 79 | 121 | 15 | 4.5 | 20.0 | |
| Surr: 1,2-Dichloroethane-d4 | 10 | 0.50 | 10 | 0.0 | 103.0 | 81 | 118 | 0.0 | | | |
| Surr: Dibromofluoromethane | 10 | 0.50 | 10 | 0.0 | 101.0 | 80 | 119 | 0.0 | | | |
| Surr: p-Bromofluorobenzene | 10 | 0.50 | 10 | 0.0 | 104.0 | 85 | 114 | 0.0 | | | |
| Surr: Toluene-d8 | 11 | 0.50 | 10 | 0.0 | 105.0 | 89 | 112 | 0.0 | | | |

Associated Samples: B22011228-001F, B22011228-002A



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: VOA5975C.I_220125A: 2 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R373812
Method: SW8260B **Analysis Date:** 01/25/2022 10:09 **Prep Date:**
Lab ID: CCV012522_ **Units:** ug/L **Prep Method:**

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|--------------------------|--------|------|-----------|------------|-------|----------|-----------|------------|------|----------|------|
| Benzene | 5.0 | 0.50 | 5.0 | | 99.0 | 80 | 120 | | | | |
| Bromobenzene | 4.9 | 0.50 | 5.0 | | 97.0 | 80 | 120 | | | | |
| Bromochloromethane | 5.0 | 0.50 | 5.0 | | 99.0 | 80 | 120 | | | | |
| Bromodichloromethane | 4.8 | 0.50 | 5.0 | | 97.0 | 80 | 120 | | | | |
| Bromoform | 4.8 | 0.50 | 5.0 | | 97.0 | 80 | 120 | | | | |
| Carbon tetrachloride | 4.8 | 0.50 | 5.0 | | 97.0 | 80 | 120 | | | | |
| Chlorobenzene | 4.9 | 0.50 | 5.0 | | 99.0 | 80 | 120 | | | | |
| Chlorodibromomethane | 5.1 | 0.50 | 5.0 | | 102.0 | 80 | 120 | | | | |
| Chloroethane | 4.7 | 0.50 | 5.0 | | 94.0 | 80 | 120 | | | | |
| Chloroform | 4.8 | 0.50 | 5.0 | | 96.0 | 80 | 120 | | | | |
| Chloromethane | 4.8 | 0.50 | 5.0 | | 97.0 | 80 | 120 | | | | |
| 1,2-Dibromoethane | 5.0 | 0.50 | 5.0 | | 101.0 | 80 | 120 | | | | |
| 2-Chlorotoluene | 5.0 | 0.50 | 5.0 | | 99.0 | 80 | 120 | | | | |
| Dibromomethane | 5.1 | 0.50 | 5.0 | | 102.0 | 80 | 120 | | | | |
| 1,2-Dichlorobenzene | 4.8 | 0.50 | 5.0 | | 96.0 | 80 | 120 | | | | |
| 4-Chlorotoluene | 5.1 | 0.50 | 5.0 | | 101.0 | 80 | 120 | | | | |
| 1,3-Dichlorobenzene | 4.9 | 0.50 | 5.0 | | 97.0 | 80 | 120 | | | | |
| 1,4-Dichlorobenzene | 4.9 | 0.50 | 5.0 | | 98.0 | 80 | 120 | | | | |
| Dichlorodifluoromethane | 4.6 | 0.50 | 5.0 | | 92.0 | 80 | 120 | | | | |
| 1,1-Dichloroethane | 4.9 | 0.50 | 5.0 | | 98.0 | 80 | 120 | | | | |
| 1,2-Dichloroethane | 4.5 | 0.50 | 5.0 | | 90.0 | 80 | 120 | | | | |
| 1,1-Dichloroethene | 4.8 | 0.50 | 5.0 | | 96.0 | 80 | 120 | | | | |
| cis-1,2-Dichloroethene | 4.9 | 0.50 | 5.0 | | 98.0 | 80 | 120 | | | | |
| trans-1,2-Dichloroethene | 4.8 | 0.50 | 5.0 | | 96.0 | 80 | 120 | | | | |
| 1,2-Dichloropropane | 5.0 | 0.50 | 5.0 | | 100.0 | 80 | 120 | | | | |
| 1,3-Dichloropropane | 4.9 | 0.50 | 5.0 | | 99.0 | 80 | 120 | | | | |
| 2,2-Dichloropropane | 5.1 | 0.50 | 5.0 | | 101.0 | 80 | 120 | | | | |



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: VOA5975C.I._220125A: 2 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R373812
Method: SW8260B **Analysis Date:** 01/25/2022 10:09 **Prep Date:**
Lab ID: CCV012522_ **Units:** ug/L **Prep Method:**

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|--------------------------------|--------|------|-----------|------------|-------|----------|-----------|------------|------|----------|------|
| 1,1-Dichloropropene | 4.9 | 0.50 | 5.0 | | 98.0 | 80 | 120 | | | | |
| cis-1,3-Dichloropropene | 5.0 | 0.50 | 5.0 | | 100.0 | 80 | 120 | | | | |
| trans-1,3-Dichloropropene | 5.0 | 0.50 | 5.0 | | 101.0 | 80 | 120 | | | | |
| Ethylbenzene | 4.9 | 0.50 | 5.0 | | 99.0 | 80 | 120 | | | | |
| Methyl tert-butyl ether (MTBE) | 4.7 | 0.50 | 5.0 | | 94.0 | 80 | 120 | | | | |
| Methyl ethyl ketone | 46 | 10 | 50 | | 93.0 | 80 | 120 | | | | |
| Methylene chloride | 4.7 | 0.50 | 5.0 | | 94.0 | 80 | 120 | | | | |
| Styrene | 5.0 | 0.50 | 5.0 | | 100.0 | 80 | 120 | | | | |
| 1,1,1,2-Tetrachloroethane | 4.9 | 0.50 | 5.0 | | 97.0 | 80 | 120 | | | | |
| 1,1,2,2-Tetrachloroethane | 5.0 | 0.50 | 5.0 | | 100.0 | 80 | 120 | | | | |
| Tetrachloroethene | 4.8 | 0.50 | 5.0 | | 97.0 | 80 | 120 | | | | |
| Toluene | 5.0 | 0.50 | 5.0 | | 100.0 | 80 | 120 | | | | |
| 1,1,1-Trichloroethane | 4.8 | 0.50 | 5.0 | | 96.0 | 80 | 120 | | | | |
| 1,1,2-Trichloroethane | 5.0 | 0.50 | 5.0 | | 101.0 | 80 | 120 | | | | |
| Trichloroethene | 5.0 | 0.50 | 5.0 | | 99.0 | 80 | 120 | | | | |
| Trichlorofluoromethane | 4.8 | 0.50 | 5.0 | | 96.0 | 80 | 120 | | | | |
| 1,2,3-Trichloropropane | 4.8 | 0.50 | 5.0 | | 96.0 | 80 | 120 | | | | |
| Vinyl chloride | 4.8 | 0.50 | 5.0 | | 97.0 | 80 | 120 | | | | |
| m+p-Xylenes | 9.8 | 0.50 | 10 | | 98.0 | 80 | 120 | | | | |
| o-Xylene | 5.0 | 0.50 | 5.0 | | 99.0 | 80 | 120 | | | | |
| Xylenes, Total | 15 | 0.50 | 15 | | 99.0 | 80 | 120 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | 0.50 | 10 | | 103.0 | 80 | 120 | | | | |
| Surr: Dibromofluoromethane | 10 | 0.50 | 10 | | 103.0 | 80 | 120 | | | | |
| Surr: p-Bromofluorobenzene | 10 | 0.50 | 10 | | 101.0 | 80 | 120 | | | | |
| Surr: Toluene-d8 | 10 | 0.50 | 10 | | 104.0 | 80 | 120 | | | | |

Associated Samples: B22011228-001F, B22011228-002A



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: VOA5975C.I_220125A: 25 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R373812
Method: SW8260B **Analysis Date:** 01/25/2022 21:15 **Prep Date:**
Lab ID: CCV012522_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 | | 99.0 | 50 | 150 | | | | |
| Bromobenzene | 4.9 | 0.50 | 5.0 | | 98.0 | 50 | 150 | | | | |
| Bromochloromethane | 4.7 | 0.50 | 5.0 | | 94.0 | 50 | 150 | | | | |
| Bromodichloromethane | 5.0 | 0.50 | 5.0 | | 100.0 | 50 | 150 | | | | |
| Bromoform | 4.6 | 0.50 | 5.0 | | 91.0 | 50 | 150 | | | | |
| Carbon tetrachloride | 5.2 | 0.50 | 5.0 | | 104.0 | 50 | 150 | | | | |
| Chlorobenzene | 5.0 | 0.50 | 5.0 | | 100.0 | 50 | 150 | | | | |
| Chlorodibromomethane | 4.8 | 0.50 | 5.0 | | 96.0 | 50 | 150 | | | | |
| Chloroethane | 4.3 | 0.50 | 5.0 | | 87.0 | 50 | 150 | | | | |
| Chloroform | 4.8 | 0.50 | 5.0 | | 96.0 | 50 | 150 | | | | |
| Chloromethane | 4.8 | 0.50 | 5.0 | | 97.0 | 50 | 150 | | | | |
| 1,2-Dibromoethane | 4.8 | 0.50 | 5.0 | | 97.0 | 50 | 150 | | | | |
| 2-Chlorotoluene | 5.0 | 0.50 | 5.0 | | 100.0 | 50 | 150 | | | | |
| Dibromomethane | 4.7 | 0.50 | 5.0 | | 94.0 | 50 | 150 | | | | |
| 1,2-Dichlorobenzene | 5.0 | 0.50 | 5.0 | | 99.0 | 50 | 150 | | | | |
| 4-Chlorotoluene | 5.1 | 0.50 | 5.0 | | 102.0 | 50 | 150 | | | | |
| 1,3-Dichlorobenzene | 4.9 | 0.50 | 5.0 | | 98.0 | 50 | 150 | | | | |
| 1,4-Dichlorobenzene | 4.9 | 0.50 | 5.0 | | 98.0 | 50 | 150 | | | | |
| Dichlorodifluoromethane | 4.8 | 0.50 | 5.0 | | 96.0 | 50 | 150 | | | | |
| 1,1-Dichloroethane | 5.0 | 0.50 | 5.0 | | 100.0 | 50 | 150 | | | | |
| 1,2-Dichloroethane | 4.8 | 0.50 | 5.0 | | 96.0 | 50 | 150 | | | | |
| 1,1-Dichloroethene | 4.9 | 0.50 | 5.0 | | 97.0 | 50 | 150 | | | | |
| cis-1,2-Dichloroethene | 4.9 | 0.50 | 5.0 | | 99.0 | 50 | 150 | | | | |
| trans-1,2-Dichloroethene | 4.9 | 0.50 | 5.0 | | 99.0 | 50 | 150 | | | | |
| 1,2-Dichloropropane | 4.9 | 0.50 | 5.0 | | 98.0 | 50 | 150 | | | | |
| 1,3-Dichloropropane | 4.8 | 0.50 | 5.0 | | 96.0 | 50 | 150 | | | | |
| 2,2-Dichloropropane | 4.6 | 0.50 | 5.0 | | 91.0 | 50 | 150 | | | | |



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: VOA5975C.I_220125A: 25 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R373812
Method: SW8260B **Analysis Date:** 01/25/2022 21:15 **Prep Date:**
Lab ID: CCV012522_Closing **Units:** ug/L **Prep Method:**

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|--------------------------------|--------|------|-----------|------------|-------|----------|-----------|------------|------|----------|------|
| 1,1-Dichloropropene | 5.0 | 0.50 | 5.0 | | 101.0 | 50 | 150 | | | | |
| cis-1,3-Dichloropropene | 4.8 | 0.50 | 5.0 | | 96.0 | 50 | 150 | | | | |
| trans-1,3-Dichloropropene | 4.9 | 0.50 | 5.0 | | 98.0 | 50 | 150 | | | | |
| Ethylbenzene | 5.0 | 0.50 | 5.0 | | 100.0 | 50 | 150 | | | | |
| Methyl tert-butyl ether (MTBE) | 4.4 | 0.50 | 5.0 | | 88.0 | 50 | 150 | | | | |
| Methyl ethyl ketone | 44 | 10 | 50 | | 87.0 | 50 | 150 | | | | |
| Methylene chloride | 4.7 | 0.50 | 5.0 | | 94.0 | 50 | 150 | | | | |
| Styrene | 5.0 | 0.50 | 5.0 | | 100.0 | 50 | 150 | | | | |
| 1,1,1,2-Tetrachloroethane | 4.8 | 0.50 | 5.0 | | 97.0 | 50 | 150 | | | | |
| 1,1,2,2-Tetrachloroethane | 4.9 | 0.50 | 5.0 | | 97.0 | 50 | 150 | | | | |
| Tetrachloroethene | 5.1 | 0.50 | 5.0 | | 101.0 | 50 | 150 | | | | |
| Toluene | 5.1 | 0.50 | 5.0 | | 102.0 | 50 | 150 | | | | |
| 1,1,1-Trichloroethane | 5.0 | 0.50 | 5.0 | | 101.0 | 50 | 150 | | | | |
| 1,1,2-Trichloroethane | 4.7 | 0.50 | 5.0 | | 94.0 | 50 | 150 | | | | |
| Trichloroethene | 5.1 | 0.50 | 5.0 | | 102.0 | 50 | 150 | | | | |
| Trichlorofluoromethane | 4.9 | 0.50 | 5.0 | | 99.0 | 50 | 150 | | | | |
| 1,2,3-Trichloropropane | 5.0 | 0.50 | 5.0 | | 100.0 | 50 | 150 | | | | |
| Vinyl chloride | 4.9 | 0.50 | 5.0 | | 98.0 | 50 | 150 | | | | |
| m+p-Xylenes | 10 | 0.50 | 10 | | 100.0 | 50 | 150 | | | | |
| o-Xylene | 5.0 | 0.50 | 5.0 | | 99.0 | 50 | 150 | | | | |
| Xylenes, Total | 15 | 0.50 | 15 | | 100.0 | 50 | 150 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | 0.50 | 10 | | 103.0 | 50 | 150 | | | | |
| Surr: Dibromofluoromethane | 10 | 0.50 | 10 | | 102.0 | 50 | 150 | | | | |
| Surr: p-Bromofluorobenzene | 10 | 0.50 | 10 | | 103.0 | 50 | 150 | | | | |
| Surr: Toluene-d8 | 11 | 0.50 | 10 | | 106.0 | 50 | 150 | | | | |

Associated Samples: B22011228-001F, B22011228-002A



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: GECD.I_220121A: 35 **SampType:** Method Blank **Batch ID:** 163129
Method: SW8011 **Analysis Date:** 01/22/2022 05:36 **Prep Date:** 01/21/2022 07:48
Lab ID: MB-163129 **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 | 0.094 | 0.020 | 0.10 | | 94.0 | 70 | 130 | | | | |

Associated Samples: **B22011228-001H, B22011228-004A**

Run ID: Run Order: GECD.I_220121A: 36 **SampType:** Laboratory Control Sample **Batch ID:** 163129
Method: SW8011 **Analysis Date:** 01/22/2022 05:56 **Prep Date:** 01/21/2022 07:48
Lab ID: LCS-163129 **Units:** ug/L **Prep Method:** SW8011

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|---------------------------------|--------|-------|-----------|------------|------|----------|-----------|------------|------|----------|------|
| 1,2-Dibromoethane | 0.24 | 0.010 | 0.25 | | 94.0 | 60 | 140 | | | | |
| Surr: 1,1,1,2-Tetrachloroethane | 0.093 | 0.020 | 0.10 | | 93.0 | 70 | 130 | | | | |

Associated Samples: **B22011228-001H, B22011228-004A**

Run ID: Run Order: GECD.I_220121A: 37 **SampType:** Laboratory Control Sample **Batch ID:** 163129
Method: SW8011 **Analysis Date:** 01/22/2022 06:16 **Prep Date:** 01/21/2022 07:48
Lab ID: LCS1-163129 **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 | 60 | 140 | | | | |
| Surr: 1,1,1,2-Tetrachloroethane | 0.093 | 0.020 | 0.10 | | 93.0 | 70 | 130 | | | | |

Associated Samples: **B22011228-001H, B22011228-004A**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: GECD.I_220121A: 50 **SampType:** Sample Matrix Spike **Batch ID:** 163129
Method: SW8011 **Analysis Date:** 01/22/2022 10:55 **Prep Date:** 01/21/2022 07:48
Lab ID: B22011131-001HMS **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 | 93.0 | 60 | 140 | | | | |
| Surr: 1,1,1,2-Tetrachloroethane | 0.085 | 0.020 | 0.097 | 0.0 | 88.0 | 70 | 130 | | | | |

Associated Samples: **B22011228-001H, B22011228-004A**

Run ID: Run Order: GECD.I_220121A: 51 **SampType:** Sample Matrix Spike Duplicate **Batch ID:** 163129
Method: SW8011 **Analysis Date:** 01/22/2022 11:15 **Prep Date:** 01/21/2022 07:48
Lab ID: B22011131-001HMSD **Units:** ug/L **Prep Method:** SW8011

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|---------------------------------|--------|-------|-----------|------------|------|----------|-----------|------------|------|----------|------|
| 1,2-Dibromoethane | 0.22 | 0.010 | 0.24 | 0.0 | 92.0 | 60 | 140 | 0.23 | 1.6 | 20.0 | |
| Surr: 1,1,1,2-Tetrachloroethane | 0.088 | 0.020 | 0.097 | 0.0 | 91.0 | 70 | 130 | 0.0 | | | |

Associated Samples: **B22011228-001H, B22011228-004A**

Run ID: Run Order: GECD.I_220121A: 63 **SampType:** Continuing Calibration Verification Standard **Batch ID:** 163129
Method: SW8011 **Analysis Date:** 01/22/2022 16:53 **Prep Date:** 01/21/2022 07:48
Lab ID: CK3-163129 **Units:** ug/L **Prep Method:** SW8011

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|---------------------------------|--------|-------|-----------|------------|-------|----------|-----------|------------|------|----------|------|
| 1,2-Dibromoethane | 0.10 | 0.010 | 0.10 | | 101.0 | 80 | 120 | | | | |
| Surr: 1,1,1,2-Tetrachloroethane | 0.090 | 0.020 | 0.10 | | 90.0 | 80 | 120 | | | | |

Associated Samples: **B22011228-001H, B22011228-004A**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: GECD.I_220121A: 66 **SampType:** Continuing Calibration Verification Standard **Batch ID:** 163129
Method: SW8011 **Analysis Date:** 01/22/2022 18:13 **Prep Date:** 01/21/2022 07:48
Lab ID: CK5-163129 **Units:** ug/L **Prep Method:** SW8011

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|---------------------------------|--------|-------|-----------|------------|-------|----------|-----------|------------|------|----------|------|
| 1,2-Dibromoethane | 0.39 | 0.010 | 0.40 | | 98.0 | 80 | 120 | | | | |
| Surr: 1,1,1,2-Tetrachloroethane | 0.42 | 0.020 | 0.40 | | 106.0 | 80 | 120 | | | | |

Associated Samples: **B22011228-001H, B22011228-004A**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: PE 1_220120A: 31 **SampType:** Method Blank **Batch ID:** R373498
Method: SW8015C **Analysis Date:** 01/21/2022 09:08 **Prep Date:**
Lab ID: MBLK_0120PE144r **Units:** ug/L **Prep Method:**

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|------------------------------|--------|-----|-----------|------------|------|----------|-----------|------------|------|----------|------|
| C6 to C10 | ND | 10 | | | | | | | | | |
| Total Purgeable Hydrocarbons | ND | 10 | | | | | | | | | |
| Surr: Trifluorotoluene | 20 | 1.0 | 25 | | 81.0 | 70 | 130 | | | | |

Associated Samples: **B22011228-001G, B22011228-003A**

Run ID: Run Order: PE 1_220120A: 47 **SampType:** Method Blank **Batch ID:** R373498
Method: SW8015C **Analysis Date:** 01/21/2022 20:00 **Prep Date:**
Lab ID: MBLK_0120PE163r **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 | 19 | 1.0 | 25 | | 74.0 | 70 | 130 | | | | |

Associated Samples: **B22011228-001G, B22011228-003A**

Run ID: Run Order: PE 1_220120A: 30 **SampType:** Laboratory Control Sample **Batch ID:** R373498
Method: SW8015C **Analysis Date:** 01/21/2022 08:34 **Prep Date:**
Lab ID: LCS_0120PE143r **Units:** ug/L **Prep Method:**

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|------------------------------|--------|-----|-----------|------------|------|----------|-----------|------------|------|----------|------|
| C6 to C10 | 156 | 20 | 170 | | 92.0 | 78 | 122 | | | | |
| Total Purgeable Hydrocarbons | 184 | 20 | 200 | | 92.0 | 70 | 130 | | | | |
| Surr: Trifluorotoluene | 22 | 1.0 | 25 | | 89.0 | 70 | 130 | | | | |

Associated Samples: **B22011228-001G, B22011228-003A**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: PE 1_220120A: 46 **SampType:** Laboratory Control Sample **Batch ID:** R373498
Method: SW8015C **Analysis Date:** 01/21/2022 19:25 **Prep Date:**
Lab ID: LCS_0120PE162r **Units:** ug/L **Prep Method:**

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|------------------------------|--------|-----|-----------|------------|------|----------|-----------|------------|------|----------|------|
| C6 to C10 | 147 | 20 | 170 | | 86.0 | 78 | 122 | | | | |
| Total Purgeable Hydrocarbons | 173 | 20 | 200 | | 87.0 | 70 | 130 | | | | |
| Surr: Trifluorotoluene | 21 | 1.0 | 25 | | 84.0 | 70 | 130 | | | | |

Associated Samples: **B22011228-001G, B22011228-003A**

Run ID: Run Order: PE 1_220120A: 42 **SampType:** Sample Matrix Spike **Batch ID:** R373498
Method: SW8015C **Analysis Date:** 01/21/2022 16:33 **Prep Date:**
Lab ID: B22011136-001GMS **Units:** ug/L **Prep Method:**

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|------------------------------|--------|-----|-----------|------------|------|----------|-----------|------------|------|----------|------|
| C6 to C10 | 152 | 20 | 170 | 0.0 | 89.0 | 78 | 122 | | | | |
| Total Purgeable Hydrocarbons | 180 | 20 | 200 | 0.0 | 90.0 | 70 | 130 | | | | |
| Surr: Trifluorotoluene | 21 | 1.0 | 25 | 0.0 | 83.0 | 70 | 130 | | | | |

Associated Samples: **B22011228-001G, B22011228-003A**

Run ID: Run Order: PE 1_220120A: 43 **SampType:** Sample Matrix Spike Duplicate **Batch ID:** R373498
Method: SW8015C **Analysis Date:** 01/21/2022 17:08 **Prep Date:**
Lab ID: B22011136-001GMSD **Units:** ug/L **Prep Method:**

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|------------------------------|--------|-----|-----------|------------|------|----------|-----------|------------|------|----------|------|
| C6 to C10 | 154 | 20 | 170 | 0.0 | 90.0 | 78 | 122 | 152 | 1.3 | 20.0 | |
| Total Purgeable Hydrocarbons | 181 | 20 | 200 | 0.0 | 91.0 | 70 | 130 | 180 | 1.0 | 20.0 | |
| Surr: Trifluorotoluene | 22 | 1.0 | 25 | 0.0 | 86.0 | 70 | 130 | 0.0 | | | |

Associated Samples: **B22011228-001G, B22011228-003A**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: GCFID-HP5-B_220122A: 4 **SampType:** Method Blank **Batch ID:** 163074
Method: SW8015C **Analysis Date:** 01/22/2022 15:56 **Prep Date:** 01/19/2022 16:29
Lab ID: MB-163074 **Units:** mg/L **Prep Method:** SW3520C

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|-------------------------------------|--------|--------|-----------|------------|------|----------|-----------|------------|------|----------|------|
| Diesel Range Organics (C10 to C24) | ND | 0.15 | | | | | | | | | |
| Oil Range Hydrocarbons (C24 to C40) | ND | 0.15 | | | | | | | | | |
| Total Extractable Hydrocarbons | ND | 0.15 | | | | | | | | | |
| Surr: o-Terphenyl | 0.19 | 0.0020 | 0.20 | | 95.0 | 56 | 125 | | | | |
| Surr: n-Triacontane | 0.099 | 0.0020 | 0.10 | | 99.0 | 50 | 150 | | | | |

Associated Samples: **B22011228-001D**

Run ID: Run Order: GCFID-HP5-B_220124B: 13 **SampType:** Method Blank **Batch ID:** 163074
Method: SW8015C **Analysis Date:** 01/25/2022 08:02 **Prep Date:** 01/19/2022 16:29
Lab ID: MB-163074 **Units:** mg/L **Prep Method:** SW3520C

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|---|--------|--------|-----------|------------|------|----------|-----------|------------|------|----------|------|
| Diesel Range Organics (SGT-C10 to C24) | ND | 0.15 | | | | | | | | | |
| Oil Range Hydrocarbons (SGT-C24 to C40) | ND | 0.15 | | | | | | | | | |
| Total Extractable Hydrocarbons (SGT) | ND | 0.15 | | | | | | | | | |
| Surr: o-Terphenyl (SGT) | 0.16 | 0.0020 | 0.20 | | 79.0 | 56 | 125 | | | | |
| Surr: n-Triacontane (SGT) | 0.077 | 0.0020 | 0.10 | | 77.0 | 50 | 150 | | | | |

Associated Samples: **B22011228-001D**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: GCFID-HP5-B_220122A: 3 **SampType:** Laboratory Control Sample **Batch ID:** 163074
Method: SW8015C **Analysis Date:** 01/22/2022 15:13 **Prep Date:** 01/19/2022 16:29
Lab ID: LCS-163074 **Units:** mg/L **Prep Method:** SW3520C

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|------------------------------------|--------|--------|-----------|------------|------|----------|-----------|------------|------|----------|------|
| Diesel Range Organics (C10 to C24) | 12 | 0.30 | 15 | | 83.0 | 36 | 132 | | | | |
| Total Extractable Hydrocarbons | 13 | 0.30 | 15 | | 89.0 | 60 | 132 | | | | |
| Surr: o-Terphenyl | 0.19 | 0.0020 | 0.20 | | 97.0 | 56 | 125 | | | | |

Associated Samples: **B22011228-001D**

Run ID: Run Order: GCFID-HP5-B_220122A: 24 **SampType:** Laboratory Control Sample **Batch ID:** 163074
Method: SW8015C **Analysis Date:** 01/23/2022 16:52 **Prep Date:** 01/19/2022 16:30
Lab ID: LCS-163074-RRO **Units:** mg/L **Prep Method:** SW3520C

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|---------------------|--------|--------|-----------|------------|-------|----------|-----------|------------|------|----------|------|
| TEH(Oil Range) | 5.0 | 0.30 | 5.0 | | 100.0 | 41 | 113 | | | | |
| Surr: n-Triacontane | 0.098 | 0.0020 | 0.10 | | 98.0 | 50 | 150 | | | | |

Associated Samples: **B22011228-001D**

Run ID: Run Order: GCFID-HP5-B_220124B: 3 **SampType:** Laboratory Control Sample **Batch ID:** 163074
Method: SW8015C **Analysis Date:** 01/24/2022 19:57 **Prep Date:** 01/19/2022 16:29
Lab ID: LCS-163074 **Units:** mg/L **Prep Method:** SW3520C

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|--|--------|--------|-----------|------------|------|----------|-----------|------------|------|----------|------|
| Diesel Range Organics (SGT-C10 to C24) | 12 | 0.30 | 15 | | 78.0 | 36 | 132 | | | | |
| Total Extractable Hydrocarbons (SGT) | 12 | 0.30 | 15 | | 83.0 | 60 | 132 | | | | |
| Surr: o-Terphenyl (SGT) | 0.19 | 0.0020 | 0.20 | | 93.0 | 56 | 125 | | | | |

Associated Samples: **B22011228-001D**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: GCFID-HP5-B_220124B: 9 **SampType:** Laboratory Control Sample **Batch ID:** 163074
Method: SW8015C **Analysis Date:** 01/25/2022 03:03 **Prep Date:** 01/19/2022 16:30
Lab ID: LCS-163074-RRO **Units:** mg/L **Prep Method:** SW3520C

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|---------------------------|--------|--------|-----------|------------|------|----------|-----------|------------|------|----------|------|
| TEH (SGT-Oil Range) | 4.8 | 0.30 | 5.0 | | 95.0 | 41 | 113 | | | | |
| Surr: n-Triacontane (SGT) | 0.089 | 0.0020 | 0.10 | | 89.0 | 50 | 150 | | | | |

Associated Samples: **B22011228-001D**

Run ID: Run Order: GCFID-HP5-B_220122A: 10 **SampType:** Sample Matrix Spike **Batch ID:** 163074
Method: SW8015C **Analysis Date:** 01/22/2022 20:56 **Prep Date:** 01/19/2022 16:30
Lab ID: B22011136-001DMS **Units:** mg/L **Prep Method:** SW3520C

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|------------------------------------|--------|--------|-----------|------------|------|----------|-----------|------------|------|----------|------|
| Diesel Range Organics (C10 to C24) | 12 | 0.30 | 15 | 0.041 | 81.0 | 36 | 132 | | | | |
| Total Extractable Hydrocarbons | 13 | 0.30 | 15 | 0.13 | 86.0 | 60 | 132 | | | | |
| Surr: o-Terphenyl | 0.18 | 0.0020 | 0.20 | 0.0 | 91.0 | 56 | 125 | | | | |

Associated Samples: **B22011228-001D**

Run ID: Run Order: GCFID-HP5-B_220122A: 11 **SampType:** Sample Matrix Spike Duplicate **Batch ID:** 163074
Method: SW8015C **Analysis Date:** 01/22/2022 21:39 **Prep Date:** 01/19/2022 16:30
Lab ID: B22011136-001DMSD **Units:** mg/L **Prep Method:** SW3520C

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|------------------------------------|--------|--------|-----------|------------|------|----------|-----------|------------|------|----------|------|
| Diesel Range Organics (C10 to C24) | 13 | 0.30 | 15 | 0.041 | 86.0 | 36 | 132 | 12 | 6.9 | 20.0 | |
| Total Extractable Hydrocarbons | 14 | 0.30 | 15 | 0.13 | 92.0 | 60 | 132 | 13 | 7.2 | 20.0 | |
| Surr: o-Terphenyl | 0.19 | 0.0020 | 0.20 | 0.0 | 97.0 | 56 | 125 | 0.0 | | | |

Associated Samples: **B22011228-001D**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: GCFID-HP5-B_220122A: 25 **SampType:** Sample Matrix Spike **Batch ID:** 163074
Method: SW8015C **Analysis Date:** 01/23/2022 18:18 **Prep Date:** 01/19/2022 16:30
Lab ID: B22011136-001DMS-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) | 4.8 | 0.30 | 5.0 | 0.13 | 93.0 | 41 | 113 | | | | |
| Surr: n-Triacontane | 0.094 | 0.0020 | 0.10 | 0.0 | 94.0 | 50 | 150 | | | | |

Associated Samples: **B22011228-001D**

Run ID: Run Order: GCFID-HP5-B_220122A: 26 **SampType:** Sample Matrix Spike Duplicate **Batch ID:** 163074
Method: SW8015C **Analysis Date:** 01/23/2022 19:01 **Prep Date:** 01/19/2022 16:30
Lab ID: B22011136-001DMSD-RRO **Units:** mg/L **Prep Method:** SW3520C

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|---------------------|--------|--------|-----------|------------|------|----------|-----------|------------|------|----------|------|
| TEH(Oil Range) | 4.9 | 0.30 | 4.9 | 0.13 | 98.0 | 41 | 113 | 4.8 | 1.9 | 20.0 | |
| Surr: n-Triacontane | 0.088 | 0.0020 | 0.097 | 0.0 | 91.0 | 50 | 150 | 0.0 | | | |

Associated Samples: **B22011228-001D**

Run ID: Run Order: GCFID-HP5-B_220124B: 5 **SampType:** Sample Matrix Spike **Batch ID:** 163074
Method: SW8015C **Analysis Date:** 01/24/2022 22:47 **Prep Date:** 01/19/2022 16:30
Lab ID: B22011136-001DMS **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) | 11 | 0.30 | 15 | 0.0 | 71.0 | 36 | 132 | | | | |
| Total Extractable Hydrocarbons (SGT) | 11 | 0.30 | 15 | 0.0 | 76.0 | 60 | 132 | | | | |
| Surr: o-Terphenyl (SGT) | 0.16 | 0.0020 | 0.20 | 0.0 | 82.0 | 56 | 125 | | | | |

Associated Samples: **B22011228-001D**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: GCFID-HP5-B_220124B: 6 **SampType:** Sample Matrix Spike Duplicate **Batch ID:** 163074
Method: SW8015C **Analysis Date:** 01/24/2022 23:30 **Prep Date:** 01/19/2022 16:30
Lab ID: B22011136-001DMSD **Units:** mg/L **Prep Method:** SW3520C

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|--|--------|--------|-----------|------------|------|----------|-----------|------------|------|----------|------|
| Diesel Range Organics (SGT-C10 to C24) | 11 | 0.30 | 15 | 0.0 | 77.0 | 36 | 132 | 11 | 7.6 | 20.0 | |
| Total Extractable Hydrocarbons (SGT) | 12 | 0.30 | 15 | 0.0 | 82.0 | 60 | 132 | 11 | 7.2 | 20.0 | |
| Surr: o-Terphenyl (SGT) | 0.17 | 0.0020 | 0.20 | 0.0 | 88.0 | 56 | 125 | 0.0 | | | |

Associated Samples: **B22011228-001D**

Run ID: Run Order: GCFID-HP5-B_220124B: 7 **SampType:** Sample Matrix Spike **Batch ID:** 163074
Method: SW8015C **Analysis Date:** 01/25/2022 00:13 **Prep Date:** 01/19/2022 16:30
Lab ID: B22011136-001DMS-RRO **Units:** mg/L **Prep Method:** SW3520C

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|---------------------------|--------|--------|-----------|------------|------|----------|-----------|------------|------|----------|------|
| TEH (SGT-Oil Range) | 4.8 | 0.30 | 5.0 | 0.0 | 96.0 | 41 | 113 | | | | |
| Surr: n-Triacontane (SGT) | 0.088 | 0.0020 | 0.10 | 0.0 | 88.0 | 50 | 150 | | | | |

Associated Samples: **B22011228-001D**

Run ID: Run Order: GCFID-HP5-B_220124B: 8 **SampType:** Sample Matrix Spike Duplicate **Batch ID:** 163074
Method: SW8015C **Analysis Date:** 01/25/2022 01:38 **Prep Date:** 01/19/2022 16:30
Lab ID: B22011136-001DMSD-RRO **Units:** mg/L **Prep Method:** SW3520C

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|---------------------------|--------|--------|-----------|------------|-------|----------|-----------|------------|------|----------|------|
| TEH (SGT-Oil Range) | 5.3 | 0.30 | 4.9 | 0.0 | 109.0 | 41 | 113 | 4.8 | 9.7 | 20.0 | |
| Surr: n-Triacontane (SGT) | 0.096 | 0.0020 | 0.097 | 0.0 | 99.0 | 50 | 150 | 0.0 | | | |

Associated Samples: **B22011228-001D**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: PE 1_220120A: 29 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R373498
Method: SW8015C **Analysis Date:** 01/21/2022 07:59 **Prep Date:**
Lab ID: CCV_0120PE142r **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 | 168 | | 101.0 | 80 | 120 | | | | |
| Total Purgeable Hydrocarbons | 203 | 20 | 200 | | 101.0 | 80 | 120 | | | | |
| Surr: Trifluorotoluene | 22 | 1.0 | 25 | | 90.0 | 80 | 120 | | | | |

Associated Samples: **B22011228-001G, B22011228-003A**

Run ID: Run Order: PE 1_220120A: 45 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R373498
Method: SW8015C **Analysis Date:** 01/21/2022 18:51 **Prep Date:**
Lab ID: CCV_0120PE161r **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 | | 107.0 | 80 | 120 | | | | |
| Total Purgeable Hydrocarbons | 218 | 20 | 200 | | 109.0 | 80 | 120 | | | | |
| Surr: Trifluorotoluene | 22 | 1.0 | 25 | | 89.0 | 80 | 120 | | | | |

Associated Samples: **B22011228-001G, B22011228-003A**

Run ID: Run Order: PE 1_220120A: 57 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R373498
Method: SW8015C **Analysis Date:** 01/22/2022 05:43 **Prep Date:**
Lab ID: CCV_0120PE180r **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 | 209 | 20 | 200 | | 105.0 | 80 | 120 | | | | |
| Surr: Trifluorotoluene | 22 | 1.0 | 25 | | 89.0 | 80 | 120 | | | | |

Associated Samples: **B22011228-001G, B22011228-003A**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: GCFID-HP5-B_220124A: 1 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R373655
Method: SW8015C **Analysis Date:** 01/24/2022 09:37 **Prep Date:**
Lab ID: CCV_0124HP503r **Units:** mg/L **Prep Method:**

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|------------------------------------|--------|--------|-----------|------------|-------|----------|-----------|------------|------|----------|------|
| Diesel Range Organics (C10 to C24) | 14 | 0.30 | 15 | | 96.0 | 80 | 120 | | | | |
| Total Extractable Hydrocarbons | 15 | 0.30 | 15 | | 99.0 | 80 | 120 | | | | |
| Surr: o-Terphenyl | 0.21 | 0.0020 | 0.20 | | 103.0 | 80 | 120 | | | | |

Associated Samples: **B22011228-001D**

Run ID: Run Order: GCFID-HP5-B_220124A: 2 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R373655
Method: SW8015C **Analysis Date:** 01/24/2022 10:43 **Prep Date:**
Lab ID: CCV_0124HP504r-W **Units:** mg/L **Prep Method:**

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|---------------------|--------|--------|-----------|------------|-------|----------|-----------|------------|------|----------|------|
| TEH(Oil Range) | 4.5 | 0.30 | 5.0 | | 91.0 | 80 | 120 | | | | |
| Surr: n-Triacontane | 0.20 | 0.0020 | 0.20 | | 102.0 | 80 | 120 | | | | |

Associated Samples: **B22011228-001D**

Run ID: Run Order: GCFID-HP5-B_220124A: 8 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R373655
Method: SW8015C **Analysis Date:** 01/24/2022 17:06 **Prep Date:**
Lab ID: CCV_0124HP513r-W **Units:** mg/L **Prep Method:**

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|---------------------|--------|--------|-----------|------------|-------|----------|-----------|------------|------|----------|------|
| TEH(Oil Range) | 4.7 | 0.30 | 5.0 | | 95.0 | 80 | 120 | | | | |
| Surr: n-Triacontane | 0.21 | 0.0020 | 0.20 | | 103.0 | 80 | 120 | | | | |

Associated Samples: **B22011228-001D**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: GCFID-HP5-B_220124A: 9 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R373655
Method: SW8015C **Analysis Date:** 01/24/2022 17:49 **Prep Date:**
Lab ID: CCV_0124HP514r **Units:** mg/L **Prep Method:**

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|------------------------------------|--------|--------|-----------|------------|-------|----------|-----------|------------|------|----------|------|
| Diesel Range Organics (C10 to C24) | 14 | 0.30 | 15 | | 97.0 | 80 | 120 | | | | |
| Total Extractable Hydrocarbons | 15 | 0.30 | 15 | | 100.0 | 80 | 120 | | | | |
| Surr: o-Terphenyl | 0.21 | 0.0020 | 0.20 | | 106.0 | 80 | 120 | | | | |

Associated Samples: **B22011228-001D**

Run ID: Run Order: GCFID-HP5-B_220124B: 20 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R373703
Method: SW8015C **Analysis Date:** 01/25/2022 14:24 **Prep Date:**
Lab ID: CCV_0124HP543r-W **Units:** mg/L **Prep Method:**

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|---------------------|--------|--------|-----------|------------|-------|----------|-----------|------------|------|----------|------|
| TEH(Oil Range) | 4.5 | 0.30 | 5.0 | | 89.0 | 80 | 120 | | | | |
| Surr: n-Triacontane | 0.20 | 0.0020 | 0.20 | | 100.0 | 80 | 120 | | | | |

Associated Samples: **B22011228-001D**

Run ID: Run Order: GCFID-HP5-B_220124B: 21 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R373703
Method: SW8015C **Analysis Date:** 01/25/2022 15:07 **Prep Date:**
Lab ID: CCV_0124HP544r **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) | 13 | 0.30 | 15 | | 89.0 | 80 | 120 | | | | |
| Total Extractable Hydrocarbons | 14 | 0.30 | 15 | | 92.0 | 80 | 120 | | | | |
| Surr: o-Terphenyl | 0.18 | 0.0020 | 0.20 | | 92.0 | 80 | 120 | | | | |

Associated Samples: **B22011228-001D**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: GCFID-HP5-B_220124B: 26 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R373703
Method: SW8015C **Analysis Date:** 01/25/2022 21:31 **Prep Date:**
Lab ID: CCV_0124HP553r-W **Units:** mg/L **Prep Method:**

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|---------------------|--------|--------|-----------|------------|------|----------|-----------|------------|------|----------|------|
| TEH(Oil Range) | 4.4 | 0.30 | 5.0 | | 88.0 | 80 | 120 | | | | |
| Surr: n-Triacontane | 0.20 | 0.0020 | 0.20 | | 99.0 | 80 | 120 | | | | |

Associated Samples: **B22011228-001D**

Run ID: Run Order: GCFID-HP5-B_220124B: 27 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R373703
Method: SW8015C **Analysis Date:** 01/25/2022 22:14 **Prep Date:**
Lab ID: CCV_0124HP554r **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) | 13 | 0.30 | 15 | | 88.0 | 80 | 120 | | | | |
| Total Extractable Hydrocarbons | 14 | 0.30 | 15 | | 91.0 | 80 | 120 | | | | |
| Surr: o-Terphenyl | 0.18 | 0.0020 | 0.20 | | 90.0 | 80 | 120 | | | | |

Associated Samples: **B22011228-001D**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: FID-HEADSPACE_220121A: 4 **SampType:** Method Blank **Batch ID:** R373537
Method: SW8015M **Analysis Date:** 01/21/2022 09:43 **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: B22011228-001I, B22011228-005A

Run ID: Run Order: FID-HEADSPACE_220121A: 2 **SampType:** Laboratory Control Sample **Batch ID:** R373537
Method: SW8015M **Analysis Date:** 01/21/2022 08:39 **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: B22011228-001I, B22011228-005A

Run ID: Run Order: FID-HEADSPACE_220121A: 3 **SampType:** Laboratory Control Sample Duplicate **Batch ID:** R373537
Method: SW8015M **Analysis Date:** 01/21/2022 08:43 **Prep Date:**
Lab ID: LCSD **Units:** ppm **Prep Method:**

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|----------|--------|-----|-----------|------------|------|----------|-----------|------------|------|----------|------|
| Methane | 97 | 2.0 | 100 | | 97.0 | 85 | 115 | 97 | 0.2 | 20.0 | |

Associated Samples: B22011228-001I, B22011228-005A



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: FID-HEADSPACE_220121A: 6 **SampType:** Sample Duplicate **Batch ID:** R373537
Method: SW8015M **Analysis Date:** 01/21/2022 10:11 **Prep Date:**
Lab ID: B22011134-001IDUP **Units:** mg/L **Prep Method:**

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|----------|--------|------|-----------|------------|------|----------|-----------|------------|------|----------|------|
| Methane | 0.56 | 0.16 | | | 0.0 | | | 0.56 | 0.0 | 20.0 | |

Associated Samples: **B22011228-001I, B22011228-005A**

Run ID: Run Order: FID-HEADSPACE_220121A: 1 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R373537
Method: SW8015M **Analysis Date:** 01/21/2022 08:35 **Prep Date:**
Lab ID: CCV **Units:** ppm **Prep Method:**

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|----------|--------|-----|-----------|------------|------|----------|-----------|------------|------|----------|------|
| Methane | 95 | 2.0 | 100 | | 95.0 | 85 | 115 | | | | |

Associated Samples: **B22011228-001I, B22011228-005A**

Run ID: Run Order: FID-HEADSPACE_220121A: 20 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R373537
Method: SW8015M **Analysis Date:** 01/21/2022 11:50 **Prep Date:**
Lab ID: CCV **Units:** ppm **Prep Method:**

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|----------|--------|-----|-----------|------------|------|----------|-----------|------------|------|----------|------|
| Methane | 95 | 2.0 | 100 | | 95.0 | 85 | 115 | | | | |

Associated Samples: **B22011228-001I, B22011228-005A**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: SV5973N.I_220201B: 12 **SampType:** Method Blank **Batch ID:** 163174
Method: SW8270C **Analysis Date:** 02/02/2022 11:56 **Prep Date:** 01/24/2022 11:48
Lab ID: MB-163174 **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: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: SV5973N.I_220201B: 12 **SampType:** Method Blank **Batch ID:** 163174
Method: SW8270C **Analysis Date:** 02/02/2022 11:56 **Prep Date:** 01/24/2022 11:48
Lab ID: MB-163174 **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 | 185 | 5.0 | 200 | | 93.0 | 43 | 140 | | | | |
| Surr: 2-Fluorobiphenyl | 54 | 5.0 | 100 | | 54.0 | 44 | 119 | | | | |
| Surr: 2-Fluorophenol | 76 | 5.0 | 200 | | 38.0 | 19 | 119 | | | | |
| Surr: Nitrobenzene-d5 | 66 | 5.0 | 100 | | 66.0 | 44 | 120 | | | | |
| Surr: Phenol-d5 | 74 | 5.0 | 200 | | 37.0 | 10 | 65 | | | | |
| Surr: Terphenyl-d14 | 91 | 5.0 | 100 | | 91.0 | 50 | 134 | | | | |

Associated Samples: **B22011228-001C**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: SV5973N.I_220201B: 13 **SampType:** Laboratory Control Sample **Batch ID:** 163174
Method: SW8270C **Analysis Date:** 02/02/2022 12:28 **Prep Date:** 01/24/2022 11:48
Lab ID: LCS-163174 **Units:** ug/L **Prep Method:** SW3510C

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|-----------------------------|--------|-----|-----------|------------|------|----------|-----------|------------|------|----------|------|
| 1,2,4-Trichlorobenzene | 64 | 10 | 100 | | 64.0 | 29 | 116 | | | | |
| 1,2-Dichlorobenzene | 60 | 10 | 100 | | 60.0 | 32 | 111 | | | | |
| 1,3-Dichlorobenzene | 58 | 10 | 100 | | 58.0 | 28 | 110 | | | | |
| 1,4-Dichlorobenzene | 57 | 10 | 100 | | 57.0 | 29 | 112 | | | | |
| 2,4,5-Trichlorophenol | 84 | 10 | 100 | | 84.0 | 53 | 123 | | | | |
| 2,4,6-Trichlorophenol | 87 | 10 | 100 | | 87.0 | 50 | 125 | | | | |
| 2,4-Dichlorophenol | 73 | 10 | 100 | | 73.0 | 47 | 121 | | | | |
| 2,4-Dimethylphenol | 58 | 10 | 100 | | 58.0 | 31 | 124 | | | | |
| 2,4-Dinitrophenol | 62 | 10 | 100 | | 62.0 | 23 | 142 | | | | |
| 2,4-Dinitrotoluene | 83 | 10 | 100 | | 83.0 | 57 | 128 | | | | |
| 2,6-Dinitrotoluene | 93 | 10 | 100 | | 93.0 | 50 | 118 | | | | |
| 2-Chloronaphthalene | 85 | 10 | 100 | | 85.0 | 40 | 116 | | | | |
| 2-Chlorophenol | 62 | 10 | 100 | | 62.0 | 38 | 117 | | | | |
| 2-Nitrophenol | 75 | 10 | 100 | | 75.0 | 47 | 123 | | | | |
| 3,3'-Dichlorobenzidine | 76 | 10 | 100 | | 76.0 | 27 | 129 | | | | |
| 4,6-Dinitro-2-methylphenol | 70 | 10 | 100 | | 70.0 | 44 | 137 | | | | |
| 4-Bromophenyl phenyl ether | 80 | 10 | 100 | | 80.0 | 55 | 124 | | | | |
| 4-Chloro-3-methylphenol | 85 | 10 | 100 | | 85.0 | 52 | 119 | | | | |
| 4-Chlorophenol | 64 | 10 | 100 | | 64.0 | 41 | 81 | | | | |
| 4-Chlorophenyl phenyl ether | 89 | 10 | 100 | | 89.0 | 53 | 121 | | | | |
| 4-Nitrophenol | 40 | 10 | 100 | | 40.0 | 15 | 36 | | | | S |
| Azobenzene | 76 | 10 | 100 | | 76.0 | 61 | 116 | | | | |
| bis(-2-chloroethoxy)Methane | 85 | 10 | 100 | | 85.0 | 48 | 120 | | | | |
| bis(-2-chloroethyl)Ether | 73 | 10 | 100 | | 73.0 | 43 | 118 | | | | |
| bis(2-chloroisopropyl)Ether | 57 | 10 | 100 | | 57.0 | 37 | 130 | | | | |
| bis(2-ethylhexyl)Phthalate | 92 | 10 | 100 | | 92.0 | 55 | 135 | | | | |
| Butylbenzylphthalate | 91 | 10 | 100 | | 91.0 | 53 | 134 | | | | |



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: SV5973N.I_220201B: 13 **SampType:** Laboratory Control Sample **Batch ID:** 163174
Method: SW8270C **Analysis Date:** 02/02/2022 12:28 **Prep Date:** 01/24/2022 11:48
Lab ID: LCS-163174 **Units:** ug/L **Prep Method:** SW3510C

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|----------------------------|--------|-----|-----------|------------|-------|----------|-----------|------------|------|----------|------|
| Diethyl phthalate | 100 | 10 | 100 | | 100.0 | 56 | 125 | | | | |
| Dimethyl phthalate | 89 | 10 | 100 | | 89.0 | 45 | 127 | | | | |
| Di-n-butyl phthalate | 97 | 10 | 100 | | 97.0 | 59 | 127 | | | | |
| Di-n-octyl phthalate | 89 | 10 | 100 | | 89.0 | 51 | 140 | | | | |
| Hexachlorobenzene | 78 | 10 | 100 | | 78.0 | 53 | 125 | | | | |
| Hexachlorobutadiene | 63 | 10 | 100 | | 63.0 | 22 | 124 | | | | |
| Hexachlorocyclopentadiene | 61 | 10 | 100 | | 61.0 | 39 | 91 | | | | |
| Hexachloroethane | 57 | 10 | 100 | | 57.0 | 21 | 115 | | | | |
| Isophorone | 73 | 10 | 100 | | 73.0 | 42 | 124 | | | | |
| m+p-Cresols | 69 | 10 | 100 | | 69.0 | 29 | 110 | | | | |
| Nitrobenzene | 74 | 10 | 100 | | 74.0 | 45 | 121 | | | | |
| n-Nitrosodimethylamine | 49 | 10 | 100 | | 49.0 | 20 | 45 | | | | S |
| n-Nitroso-di-n-propylamine | 83 | 10 | 100 | | 83.0 | 49 | 119 | | | | |
| n-Nitrosodiphenylamine | 79 | 10 | 100 | | 79.0 | 51 | 123 | | | | |
| o-Cresol | 69 | 10 | 100 | | 69.0 | 30 | 117 | | | | |
| Pentachlorophenol | 94 | 10 | 100 | | 94.0 | 35 | 138 | | | | |
| Phenol | 45 | 10 | 100 | | 45.0 | 37 | 75 | | | | |
| Pyridine | 32 | 10 | 100 | | 32.0 | 16 | 45 | | | | |
| Surr: 2,4,6-Tribromophenol | 200 | 10 | 200 | | 100.0 | 43 | 140 | | | | |
| Surr: 2-Fluorobiphenyl | 71 | 10 | 100 | | 71.0 | 44 | 119 | | | | |
| Surr: 2-Fluorophenol | 74 | 10 | 200 | | 37.0 | 19 | 119 | | | | |
| Surr: Nitrobenzene-d5 | 71 | 10 | 100 | | 71.0 | 44 | 120 | | | | |
| Surr: Phenol-d5 | 82 | 10 | 200 | | 41.0 | 10 | 65 | | | | |
| Surr: Terphenyl-d14 | 88 | 10 | 100 | | 88.0 | 50 | 134 | | | | |

Associated Samples: **B22011228-001C**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: SV5973N.I_220201B: 14 **SampType:** Laboratory Control Sample Duplicate **Batch ID:** 163174
Method: SW8270C **Analysis Date:** 02/02/2022 13:00 **Prep Date:** 01/24/2022 11:48
Lab ID: LCSD-163174 **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 | 74 | 10 | 100 | | 74.0 | 29 | 116 | 64 | 14.0 | 20.0 | |
| 1,2-Dichlorobenzene | 72 | 10 | 100 | | 72.0 | 32 | 111 | 60 | 18.0 | 20.0 | |
| 1,3-Dichlorobenzene | 70 | 10 | 100 | | 70.0 | 28 | 110 | 58 | 18.0 | 20.0 | |
| 1,4-Dichlorobenzene | 69 | 10 | 100 | | 69.0 | 29 | 112 | 57 | 18.0 | 20.0 | |
| 2,4,5-Trichlorophenol | 102 | 10 | 100 | | 102.0 | 53 | 123 | 84 | 20.0 | 20.0 | |
| 2,4,6-Trichlorophenol | 105 | 10 | 100 | | 105.0 | 50 | 125 | 87 | 19.0 | 20.0 | |
| 2,4-Dichlorophenol | 83 | 10 | 100 | | 83.0 | 47 | 121 | 73 | 13.0 | 20.0 | |
| 2,4-Dimethylphenol | 67 | 10 | 100 | | 67.0 | 31 | 124 | 58 | 14.0 | 20.0 | |
| 2,4-Dinitrophenol | 73 | 10 | 100 | | 73.0 | 23 | 142 | 62 | 17.0 | 20.0 | |
| 2,4-Dinitrotoluene | 104 | 10 | 100 | | 104.0 | 57 | 128 | 83 | 23.0 | 20.0 | R |
| 2,6-Dinitrotoluene | 105 | 10 | 100 | | 105.0 | 50 | 118 | 93 | 13.0 | 20.0 | |
| 2-Chloronaphthalene | 98 | 10 | 100 | | 98.0 | 40 | 116 | 85 | 14.0 | 20.0 | |
| 2-Chlorophenol | 79 | 10 | 100 | | 79.0 | 38 | 117 | 62 | 24.0 | 20.0 | R |
| 2-Nitrophenol | 87 | 10 | 100 | | 87.0 | 47 | 123 | 75 | 14.0 | 20.0 | |
| 3,3'-Dichlorobenzidine | 86 | 10 | 100 | | 86.0 | 27 | 129 | 76 | 12.0 | 20.0 | |
| 4,6-Dinitro-2-methylphenol | 79 | 10 | 100 | | 79.0 | 44 | 137 | 70 | 11.0 | 20.0 | |
| 4-Bromophenyl phenyl ether | 93 | 10 | 100 | | 93.0 | 55 | 124 | 80 | 15.0 | 20.0 | |
| 4-Chloro-3-methylphenol | 98 | 10 | 100 | | 98.0 | 52 | 119 | 85 | 14.0 | 20.0 | |
| 4-Chlorophenol | 77 | 10 | 100 | | 77.0 | 41 | 81 | 64 | 19.0 | 20.0 | |
| 4-Chlorophenyl phenyl ether | 104 | 10 | 100 | | 104.0 | 53 | 121 | 89 | 15.0 | 20.0 | |
| 4-Nitrophenol | 47 | 10 | 100 | | 47.0 | 15 | 36 | 40 | 15.0 | 20.0 | S |
| Azobenzene | 89 | 10 | 100 | | 89.0 | 61 | 116 | 76 | 16.0 | 20.0 | |
| bis(-2-chloroethoxy)Methane | 92 | 10 | 100 | | 92.0 | 48 | 120 | 85 | 7.6 | 20.0 | |
| bis(-2-chloroethyl)Ether | 88 | 10 | 100 | | 88.0 | 43 | 118 | 73 | 18.0 | 20.0 | |
| bis(2-chloroisopropyl)Ether | 70 | 10 | 100 | | 70.0 | 37 | 130 | 57 | 21.0 | 20.0 | R |
| bis(2-ethylhexyl)Phthalate | 103 | 10 | 100 | | 103.0 | 55 | 135 | 92 | 12.0 | 20.0 | |
| Butylbenzylphthalate | 107 | 10 | 100 | | 107.0 | 53 | 134 | 91 | 15.0 | 20.0 | |



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: SV5973N.I_220201B: 14 **SampType:** Laboratory Control Sample Duplicate **Batch ID:** 163174
Method: SW8270C **Analysis Date:** 02/02/2022 13:00 **Prep Date:** 01/24/2022 11:48
Lab ID: LCSD-163174 **Units:** ug/L **Prep Method:** SW3510C

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|----------------------------|--------|-----|-----------|------------|-------|----------|-----------|------------|------|----------|------|
| Diethyl phthalate | 114 | 10 | 100 | | 114.0 | 56 | 125 | 100 | 13.0 | 20.0 | |
| Dimethyl phthalate | 106 | 10 | 100 | | 106.0 | 45 | 127 | 89 | 17.0 | 20.0 | |
| Di-n-butyl phthalate | 110 | 10 | 100 | | 110.0 | 59 | 127 | 97 | 13.0 | 20.0 | |
| Di-n-octyl phthalate | 102 | 10 | 100 | | 102.0 | 51 | 140 | 89 | 14.0 | 20.0 | |
| Hexachlorobenzene | 98 | 10 | 100 | | 98.0 | 53 | 125 | 78 | 23.0 | 20.0 | R |
| Hexachlorobutadiene | 66 | 10 | 100 | | 66.0 | 22 | 124 | 63 | 4.7 | 20.0 | |
| Hexachlorocyclopentadiene | 73 | 10 | 100 | | 73.0 | 39 | 91 | 61 | 18.0 | 20.0 | |
| Hexachloroethane | 67 | 10 | 100 | | 67.0 | 21 | 115 | 57 | 17.0 | 20.0 | |
| Isophorone | 86 | 10 | 100 | | 86.0 | 42 | 124 | 73 | 16.0 | 20.0 | |
| m+p-Cresols | 83 | 10 | 100 | | 83.0 | 29 | 110 | 69 | 19.0 | 20.0 | |
| Nitrobenzene | 87 | 10 | 100 | | 87.0 | 45 | 121 | 74 | 17.0 | 20.0 | |
| n-Nitrosodimethylamine | 56 | 10 | 100 | | 56.0 | 20 | 45 | 49 | 14.0 | 20.0 | S |
| n-Nitroso-di-n-propylamine | 102 | 10 | 100 | | 102.0 | 49 | 119 | 83 | 21.0 | 20.0 | R |
| n-Nitrosodiphenylamine | 95 | 10 | 100 | | 95.0 | 51 | 123 | 79 | 18.0 | 20.0 | |
| o-Cresol | 83 | 10 | 100 | | 83.0 | 30 | 117 | 69 | 18.0 | 20.0 | |
| Pentachlorophenol | 119 | 10 | 100 | | 119.0 | 35 | 138 | 94 | 23.0 | 20.0 | R |
| Phenol | 51 | 10 | 100 | | 51.0 | 37 | 75 | 45 | 14.0 | 20.0 | |
| Pyridine | 37 | 10 | 100 | | 37.0 | 16 | 45 | 32 | 15.0 | 20.0 | |
| Surr: 2,4,6-Tribromophenol | 239 | 10 | 200 | | 120.0 | 43 | 140 | 0.0 | 0.0 | | |
| Surr: 2-Fluorobiphenyl | 85 | 10 | 100 | | 85.0 | 44 | 119 | 0.0 | 0.0 | | |
| Surr: 2-Fluorophenol | 91 | 10 | 200 | | 45.0 | 19 | 119 | 0.0 | 0.0 | | |
| Surr: Nitrobenzene-d5 | 82 | 10 | 100 | | 82.0 | 44 | 120 | 0.0 | 0.0 | | |
| Surr: Phenol-d5 | 96 | 10 | 200 | | 48.0 | 10 | 65 | 0.0 | 0.0 | | |
| Surr: Terphenyl-d14 | 102 | 10 | 100 | | 102.0 | 50 | 134 | 0.0 | 0.0 | | |

Associated Samples: **B22011228-001C**

- 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: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: SV5973N.I_220201B: 21 **SampType:** Sample Matrix Spike **Batch ID:** 163174
Method: SW8270C **Analysis Date:** 02/02/2022 16:45 **Prep Date:** 01/25/2022 08:25
Lab ID: B22011446-006CMS **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 | 63 | 10 | 103 | 0.0 | 61.0 | 29 | 116 | | | | |
| 1,2-Dichlorobenzene | 61 | 10 | 103 | 0.0 | 59.0 | 32 | 111 | | | | |
| 1,3-Dichlorobenzene | 59 | 10 | 103 | 0.0 | 57.0 | 28 | 110 | | | | |
| 1,4-Dichlorobenzene | 57 | 10 | 103 | 0.0 | 56.0 | 29 | 112 | | | | |
| 2,4,5-Trichlorophenol | 69 | 10 | 103 | 0.0 | 67.0 | 53 | 123 | | | | |
| 2,4,6-Trichlorophenol | 75 | 10 | 103 | 0.0 | 72.0 | 50 | 125 | | | | |
| 2,4-Dichlorophenol | 59 | 10 | 103 | 0.0 | 57.0 | 47 | 121 | | | | |
| 2,4-Dimethylphenol | 52 | 10 | 103 | 0.0 | 51.0 | 31 | 124 | | | | |
| 2,4-Dinitrophenol | 54 | 10 | 103 | 0.0 | 52.0 | 23 | 142 | | | | |
| 2,4-Dinitrotoluene | 78 | 10 | 103 | 0.0 | 75.0 | 57 | 128 | | | | |
| 2,6-Dinitrotoluene | 83 | 10 | 103 | 0.0 | 81.0 | 50 | 118 | | | | |
| 2-Chloronaphthalene | 78 | 10 | 103 | 0.0 | 76.0 | 40 | 116 | | | | |
| 2-Chlorophenol | 55 | 10 | 103 | 0.0 | 53.0 | 38 | 117 | | | | |
| 2-Nitrophenol | 64 | 10 | 103 | 0.0 | 62.0 | 47 | 123 | | | | |
| 3,3'-Dichlorobenzidine | 60 | 10 | 103 | 0.0 | 59.0 | 27 | 129 | | | | |
| 4,6-Dinitro-2-methylphenol | 64 | 10 | 103 | 0.0 | 62.0 | 44 | 137 | | | | |
| 4-Bromophenyl phenyl ether | 80 | 10 | 103 | 0.0 | 78.0 | 55 | 124 | | | | |
| 4-Chloro-3-methylphenol | 77 | 10 | 103 | 0.0 | 74.0 | 52 | 119 | | | | |
| 4-Chlorophenol | 53 | 10 | 103 | 0.0 | 51.0 | 41 | 81 | | | | |
| 4-Chlorophenyl phenyl ether | 86 | 10 | 103 | 0.0 | 83.0 | 53 | 121 | | | | |
| 4-Nitrophenol | 39 | 10 | 103 | 0.0 | 38.0 | 15 | 36 | | | | S |
| Azobenzene | 78 | 10 | 103 | 0.0 | 75.0 | 61 | 116 | | | | |
| bis(-2-chloroethoxy)Methane | 76 | 10 | 103 | 0.0 | 74.0 | 48 | 120 | | | | |
| bis(-2-chloroethyl)Ether | 71 | 10 | 103 | 0.0 | 69.0 | 43 | 118 | | | | |
| bis(2-chloroisopropyl)Ether | 55 | 10 | 103 | 0.0 | 54.0 | 37 | 130 | | | | |
| bis(2-ethylhexyl)Phthalate | 79 | 10 | 103 | 0.0 | 77.0 | 55 | 135 | | | | |
| Butylbenzylphthalate | 83 | 10 | 103 | 0.0 | 81.0 | 53 | 134 | | | | |



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: SV5973N.I_220201B: 21 **SampType:** Sample Matrix Spike **Batch ID:** 163174
Method: SW8270C **Analysis Date:** 02/02/2022 16:45 **Prep Date:** 01/25/2022 08:25
Lab ID: B22011446-006CMS **Units:** ug/L **Prep Method:** SW3510C

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|----------------------------|--------|-----|-----------|------------|------|----------|-----------|------------|------|----------|------|
| Diethyl phthalate | 97 | 10 | 103 | 0.0 | 94.0 | 56 | 125 | | | | |
| Dimethyl phthalate | 85 | 10 | 103 | 0.0 | 82.0 | 45 | 127 | | | | |
| Di-n-butyl phthalate | 94 | 10 | 103 | 0.0 | 91.0 | 59 | 127 | | | | |
| Di-n-octyl phthalate | 82 | 10 | 103 | 0.0 | 79.0 | 51 | 140 | | | | |
| Hexachlorobenzene | 80 | 10 | 103 | 0.0 | 78.0 | 53 | 125 | | | | |
| Hexachlorobutadiene | 54 | 10 | 103 | 0.0 | 52.0 | 22 | 124 | | | | |
| Hexachlorocyclopentadiene | 45 | 10 | 103 | 0.0 | 44.0 | 39 | 91 | | | | |
| Hexachloroethane | 55 | 10 | 103 | 0.0 | 54.0 | 21 | 115 | | | | |
| Isophorone | 66 | 10 | 103 | 0.0 | 65.0 | 42 | 124 | | | | |
| m+p-Cresols | 59 | 10 | 103 | 0.0 | 57.0 | 29 | 110 | | | | |
| Nitrobenzene | 74 | 10 | 103 | 0.0 | 72.0 | 45 | 121 | | | | |
| n-Nitrosodimethylamine | 34 | 10 | 103 | 0.0 | 33.0 | 20 | 45 | | | | |
| n-Nitroso-di-n-propylamine | 81 | 10 | 103 | 0.0 | 79.0 | 49 | 119 | | | | |
| n-Nitrosodiphenylamine | 82 | 10 | 103 | 0.0 | 80.0 | 51 | 123 | | | | |
| o-Cresol | 63 | 10 | 103 | 0.0 | 61.0 | 30 | 117 | | | | |
| Pentachlorophenol | 93 | 10 | 103 | 0.0 | 90.0 | 35 | 138 | | | | |
| Phenol | 35 | 10 | 103 | 0.0 | 34.0 | 37 | 75 | | | | S |
| Pyridine | 25 | 10 | 103 | 0.0 | 24.0 | 16 | 45 | | | | |
| Surr: 2,4,6-Tribromophenol | 190 | 10 | 206 | 0.0 | 92.0 | 43 | 140 | | | | |
| Surr: 2-Fluorobiphenyl | 66 | 10 | 103 | 0.0 | 64.0 | 44 | 119 | | | | |
| Surr: 2-Fluorophenol | 65 | 10 | 206 | 0.0 | 31.0 | 19 | 119 | | | | |
| Surr: Nitrobenzene-d5 | 69 | 10 | 103 | 0.0 | 67.0 | 44 | 120 | | | | |
| Surr: Phenol-d5 | 69 | 10 | 206 | 0.0 | 33.0 | 10 | 65 | | | | |
| Surr: Terphenyl-d14 | 85 | 10 | 103 | 0.0 | 83.0 | 50 | 134 | | | | |

Associated Samples: **B22011228-001C**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: SV5973N.I_220201B: 24
Method: SW8270C
Lab ID: B22011446-012AMS

SampType: Sample Matrix Spike
Analysis Date: 02/02/2022 18:21
Units: ug/L

Batch ID: 163174
Prep Date: 01/25/2022 08:25
Prep Method: SW3510C

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|-----------------------------|--------|-----|-----------|------------|------|----------|-----------|------------|------|----------|------|
| 1,2,4-Trichlorobenzene | 65 | 10 | 102 | 0.0 | 64.0 | 29 | 116 | | | | |
| 1,2-Dichlorobenzene | 60 | 10 | 102 | 0.0 | 59.0 | 32 | 111 | | | | |
| 1,3-Dichlorobenzene | 61 | 10 | 102 | 0.0 | 60.0 | 28 | 110 | | | | |
| 1,4-Dichlorobenzene | 59 | 10 | 102 | 0.0 | 58.0 | 29 | 112 | | | | |
| 2,4,5-Trichlorophenol | 73 | 10 | 102 | 0.0 | 72.0 | 53 | 123 | | | | |
| 2,4,6-Trichlorophenol | 72 | 10 | 102 | 0.0 | 71.0 | 50 | 125 | | | | |
| 2,4-Dichlorophenol | 70 | 10 | 102 | 0.0 | 69.0 | 47 | 121 | | | | |
| 2,4-Dimethylphenol | 54 | 10 | 102 | 0.0 | 53.0 | 31 | 124 | | | | |
| 2,4-Dinitrophenol | 57 | 10 | 102 | 0.0 | 56.0 | 23 | 142 | | | | |
| 2,4-Dinitrotoluene | 79 | 10 | 102 | 0.0 | 77.0 | 57 | 128 | | | | |
| 2,6-Dinitrotoluene | 88 | 10 | 102 | 0.0 | 86.0 | 50 | 118 | | | | |
| 2-Chloronaphthalene | 84 | 10 | 102 | 0.0 | 82.0 | 40 | 116 | | | | |
| 2-Chlorophenol | 62 | 10 | 102 | 0.0 | 61.0 | 38 | 117 | | | | |
| 2-Nitrophenol | 72 | 10 | 102 | 0.0 | 70.0 | 47 | 123 | | | | |
| 3,3'-Dichlorobenzidine | 50 | 10 | 102 | 0.0 | 49.0 | 27 | 129 | | | | |
| 4,6-Dinitro-2-methylphenol | 59 | 10 | 102 | 0.0 | 58.0 | 44 | 137 | | | | |
| 4-Bromophenyl phenyl ether | 82 | 10 | 102 | 0.0 | 81.0 | 55 | 124 | | | | |
| 4-Chloro-3-methylphenol | 79 | 10 | 102 | 0.0 | 77.0 | 52 | 119 | | | | |
| 4-Chlorophenol | 64 | 10 | 102 | 0.0 | 63.0 | 41 | 81 | | | | |
| 4-Chlorophenyl phenyl ether | 83 | 10 | 102 | 0.0 | 81.0 | 53 | 121 | | | | |
| 4-Nitrophenol | 41 | 10 | 102 | 0.0 | 40.0 | 15 | 36 | | | | S |
| Azobenzene | 78 | 10 | 102 | 0.0 | 77.0 | 61 | 116 | | | | |
| bis(-2-chloroethoxy)Methane | 81 | 10 | 102 | 0.0 | 80.0 | 48 | 120 | | | | |
| bis(-2-chloroethyl)Ether | 75 | 10 | 102 | 0.0 | 73.0 | 43 | 118 | | | | |
| bis(2-chloroisopropyl)Ether | 59 | 10 | 102 | 0.0 | 58.0 | 37 | 130 | | | | |
| bis(2-ethylhexyl)Phthalate | 78 | 10 | 102 | 0.0 | 77.0 | 55 | 135 | | | | |
| Butylbenzylphthalate | 90 | 10 | 102 | 0.0 | 88.0 | 53 | 134 | | | | |



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: SV5973N.I_220201B: 24 **SampType:** Sample Matrix Spike **Batch ID:** 163174
Method: SW8270C **Analysis Date:** 02/02/2022 18:21 **Prep Date:** 01/25/2022 08:25
Lab ID: B22011446-012AMS **Units:** ug/L **Prep Method:** SW3510C

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|----------------------------|--------|-----|-----------|------------|------|----------|-----------|------------|------|----------|------|
| Diethyl phthalate | 98 | 10 | 102 | 0.0 | 96.0 | 56 | 125 | | | | |
| Dimethyl phthalate | 86 | 10 | 102 | 0.0 | 85.0 | 45 | 127 | | | | |
| Di-n-butyl phthalate | 96 | 10 | 102 | 3.1 | 91.0 | 59 | 127 | | | | |
| Di-n-octyl phthalate | 79 | 10 | 102 | 0.0 | 78.0 | 51 | 140 | | | | |
| Hexachlorobenzene | 72 | 10 | 102 | 0.0 | 71.0 | 53 | 125 | | | | |
| Hexachlorobutadiene | 52 | 10 | 102 | 0.0 | 51.0 | 22 | 124 | | | | |
| Hexachlorocyclopentadiene | 45 | 10 | 102 | 0.0 | 45.0 | 39 | 91 | | | | |
| Hexachloroethane | 53 | 10 | 102 | 0.0 | 52.0 | 21 | 115 | | | | |
| Isophorone | 68 | 10 | 102 | 0.0 | 67.0 | 42 | 124 | | | | |
| m+p-Cresols | 63 | 10 | 102 | 0.0 | 62.0 | 29 | 110 | | | | |
| Nitrobenzene | 79 | 10 | 102 | 0.0 | 77.0 | 45 | 121 | | | | |
| n-Nitrosodimethylamine | 50 | 10 | 102 | 0.0 | 49.0 | 20 | 45 | | | | S |
| n-Nitroso-di-n-propylamine | 82 | 10 | 102 | 0.0 | 81.0 | 49 | 119 | | | | |
| n-Nitrosodiphenylamine | 83 | 10 | 102 | 0.0 | 82.0 | 51 | 123 | | | | |
| o-Cresol | 66 | 10 | 102 | 0.0 | 65.0 | 30 | 117 | | | | |
| Pentachlorophenol | 82 | 10 | 102 | 0.0 | 80.0 | 35 | 138 | | | | |
| Phenol | 46 | 10 | 102 | 0.0 | 45.0 | 37 | 75 | | | | |
| Pyridine | 28 | 10 | 102 | 0.0 | 27.0 | 16 | 45 | | | | |
| Surr: 2,4,6-Tribromophenol | 167 | 10 | 204 | 0.0 | 82.0 | 43 | 140 | | | | |
| Surr: 2-Fluorobiphenyl | 71 | 10 | 102 | 0.0 | 69.0 | 44 | 119 | | | | |
| Surr: 2-Fluorophenol | 75 | 10 | 204 | 0.0 | 37.0 | 19 | 119 | | | | |
| Surr: Nitrobenzene-d5 | 70 | 10 | 102 | 0.0 | 69.0 | 44 | 120 | | | | |
| Surr: Phenol-d5 | 80 | 10 | 204 | 0.0 | 39.0 | 10 | 65 | | | | |
| Surr: Terphenyl-d14 | 90 | 10 | 102 | 0.0 | 88.0 | 50 | 134 | | | | |

Associated Samples: **B22011228-001C**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: SV5973N.I_220201B: 2 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R374159
Method: SW8270C **Analysis Date:** 02/02/2022 06:35 **Prep Date:**
Lab ID: 01-Feb-22_CCV_27 **Units:** ug/L **Prep Method:**

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|-----------------------------|--------|-----|-----------|------------|-------|----------|-----------|------------|------|----------|------|
| 1,2,4-Trichlorobenzene | 79 | 10 | 75 | | 106.0 | 80 | 120 | | | | |
| 1,2-Dichlorobenzene | 76 | 10 | 75 | | 102.0 | 80 | 120 | | | | |
| 1,3-Dichlorobenzene | 81 | 10 | 75 | | 108.0 | 80 | 120 | | | | |
| 1,4-Dichlorobenzene | 74 | 10 | 75 | | 98.0 | 80 | 120 | | | | |
| 2,4,5-Trichlorophenol | 81 | 10 | 75 | | 108.0 | 80 | 120 | | | | |
| 2,4,6-Trichlorophenol | 86 | 10 | 75 | | 115.0 | 80 | 120 | | | | |
| 2,4-Dichlorophenol | 80 | 10 | 75 | | 106.0 | 80 | 120 | | | | |
| 2,4-Dimethylphenol | 71 | 10 | 75 | | 94.0 | 80 | 120 | | | | |
| 2,4-Dinitrophenol | 60 | 10 | 75 | | 80.0 | 80 | 120 | | | | |
| 2,4-Dinitrotoluene | 76 | 10 | 75 | | 102.0 | 80 | 120 | | | | |
| 2,6-Dinitrotoluene | 77 | 10 | 75 | | 102.0 | 80 | 120 | | | | |
| 2-Chloronaphthalene | 87 | 10 | 75 | | 115.0 | 80 | 120 | | | | |
| 2-Chlorophenol | 79 | 10 | 75 | | 106.0 | 80 | 120 | | | | |
| 2-Nitrophenol | 75 | 10 | 75 | | 101.0 | 80 | 120 | | | | |
| 3,3'-Dichlorobenzidine | 82 | 10 | 75 | | 109.0 | 80 | 120 | | | | |
| 4,6-Dinitro-2-methylphenol | 71 | 10 | 75 | | 95.0 | 80 | 120 | | | | |
| 4-Bromophenyl phenyl ether | 81 | 10 | 75 | | 107.0 | 80 | 120 | | | | |
| 4-Chloro-3-methylphenol | 81 | 10 | 75 | | 108.0 | 80 | 120 | | | | |
| 4-Chlorophenol | 77 | 10 | 75 | | 103.0 | 80 | 120 | | | | |
| 4-Chlorophenyl phenyl ether | 78 | 10 | 75 | | 104.0 | 80 | 120 | | | | |
| 4-Nitrophenol | 80 | 10 | 75 | | 106.0 | 80 | 120 | | | | |
| Azobenzene | 74 | 10 | 75 | | 99.0 | 80 | 120 | | | | |
| bis(-2-chloroethoxy)Methane | 85 | 10 | 75 | | 113.0 | 80 | 120 | | | | |
| bis(-2-chloroethyl)Ether | 79 | 10 | 75 | | 106.0 | 80 | 120 | | | | |
| bis(2-chloroisopropyl)Ether | 76 | 10 | 75 | | 101.0 | 80 | 120 | | | | |
| bis(2-ethylhexyl)Phthalate | 76 | 10 | 75 | | 102.0 | 80 | 120 | | | | |
| Butylbenzylphthalate | 77 | 10 | 75 | | 103.0 | 80 | 120 | | | | |



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: SV5973N.I_220201B: 2 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R374159
Method: SW8270C **Analysis Date:** 02/02/2022 06:35 **Prep Date:**
Lab ID: 01-Feb-22_CCV_27 **Units:** ug/L **Prep Method:**

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|----------------------------|--------|-----|-----------|------------|-------|----------|-----------|------------|------|----------|------|
| Diethyl phthalate | 77 | 10 | 75 | | 103.0 | 80 | 120 | | | | |
| Dimethyl phthalate | 79 | 10 | 75 | | 105.0 | 80 | 120 | | | | |
| Di-n-butyl phthalate | 81 | 10 | 75 | | 108.0 | 80 | 120 | | | | |
| Di-n-octyl phthalate | 75 | 10 | 75 | | 100.0 | 80 | 120 | | | | |
| Hexachlorobenzene | 71 | 10 | 75 | | 94.0 | 80 | 120 | | | | |
| Hexachlorobutadiene | 74 | 10 | 75 | | 99.0 | 80 | 120 | | | | |
| Hexachlorocyclopentadiene | 71 | 10 | 75 | | 95.0 | 80 | 120 | | | | |
| Hexachloroethane | 80 | 10 | 75 | | 107.0 | 80 | 120 | | | | |
| Isophorone | 79 | 10 | 75 | | 105.0 | 80 | 120 | | | | |
| m+p-Cresols | 76 | 10 | 75 | | 101.0 | 80 | 120 | | | | |
| Nitrobenzene | 80 | 10 | 75 | | 107.0 | 80 | 120 | | | | |
| n-Nitrosodimethylamine | 81 | 10 | 75 | | 108.0 | 80 | 120 | | | | |
| n-Nitroso-di-n-propylamine | 76 | 10 | 75 | | 102.0 | 80 | 120 | | | | |
| n-Nitrosodiphenylamine | 78 | 10 | 75 | | 104.0 | 80 | 120 | | | | |
| o-Cresol | 75 | 10 | 75 | | 100.0 | 80 | 120 | | | | |
| Pentachlorophenol | 74 | 10 | 75 | | 98.0 | 80 | 120 | | | | |
| Phenol | 81 | 10 | 75 | | 108.0 | 80 | 120 | | | | |
| Pyridine | 64 | 10 | 75 | | 86.0 | 80 | 120 | | | | |
| Surr: 2,4,6-Tribromophenol | 77 | 10 | 75 | | 102.0 | 80 | 120 | | | | |
| Surr: 2-Fluorobiphenyl | 79 | 10 | 75 | | 106.0 | 80 | 120 | | | | |
| Surr: 2-Fluorophenol | 79 | 10 | 75 | | 105.0 | 80 | 120 | | | | |
| Surr: Nitrobenzene-d5 | 77 | 10 | 75 | | 103.0 | 80 | 120 | | | | |
| Surr: Phenol-d5 | 80 | 10 | 75 | | 107.0 | 80 | 120 | | | | |
| Surr: Terphenyl-d14 | 77 | 10 | 75 | | 103.0 | 80 | 120 | | | | |

Associated Samples: **B22011228-001C**



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: SV5973N.I_220201B: 25 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R374159
Method: SW8270C **Analysis Date:** 02/02/2022 18:54 **Prep Date:**
Lab ID: 01-Feb-22_CCV_50 **Units:** ug/L **Prep Method:**

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|-----------------------------|--------|-----|-----------|------------|-------|----------|-----------|------------|------|----------|------|
| 1,2,4-Trichlorobenzene | 73 | 10 | 75 | | 98.0 | 50 | 150 | | | | |
| 1,2-Dichlorobenzene | 78 | 10 | 75 | | 104.0 | 50 | 150 | | | | |
| 1,3-Dichlorobenzene | 82 | 10 | 75 | | 109.0 | 50 | 150 | | | | |
| 1,4-Dichlorobenzene | 79 | 10 | 75 | | 106.0 | 50 | 150 | | | | |
| 2,4,5-Trichlorophenol | 84 | 10 | 75 | | 112.0 | 50 | 150 | | | | |
| 2,4,6-Trichlorophenol | 83 | 10 | 75 | | 111.0 | 50 | 150 | | | | |
| 2,4-Dichlorophenol | 79 | 10 | 75 | | 105.0 | 50 | 150 | | | | |
| 2,4-Dimethylphenol | 72 | 10 | 75 | | 96.0 | 50 | 150 | | | | |
| 2,4-Dinitrophenol | 54 | 10 | 75 | | 72.0 | 50 | 150 | | | | |
| 2,4-Dinitrotoluene | 70 | 10 | 75 | | 93.0 | 50 | 150 | | | | |
| 2,6-Dinitrotoluene | 77 | 10 | 75 | | 103.0 | 50 | 150 | | | | |
| 2-Chloronaphthalene | 78 | 10 | 75 | | 104.0 | 50 | 150 | | | | |
| 2-Chlorophenol | 84 | 10 | 75 | | 111.0 | 50 | 150 | | | | |
| 2-Nitrophenol | 74 | 10 | 75 | | 99.0 | 50 | 150 | | | | |
| 3,3'-Dichlorobenzidine | 79 | 10 | 75 | | 105.0 | 50 | 150 | | | | |
| 4,6-Dinitro-2-methylphenol | 65 | 10 | 75 | | 87.0 | 50 | 150 | | | | |
| 4-Bromophenyl phenyl ether | 74 | 10 | 75 | | 99.0 | 50 | 150 | | | | |
| 4-Chloro-3-methylphenol | 78 | 10 | 75 | | 104.0 | 50 | 150 | | | | |
| 4-Chlorophenol | 73 | 10 | 75 | | 97.0 | 50 | 150 | | | | |
| 4-Chlorophenyl phenyl ether | 76 | 10 | 75 | | 101.0 | 50 | 150 | | | | |
| 4-Nitrophenol | 80 | 10 | 75 | | 106.0 | 50 | 150 | | | | |
| Azobenzene | 76 | 10 | 75 | | 102.0 | 50 | 150 | | | | |
| bis(-2-chloroethoxy)Methane | 79 | 10 | 75 | | 105.0 | 50 | 150 | | | | |
| bis(-2-chloroethyl)Ether | 81 | 10 | 75 | | 108.0 | 50 | 150 | | | | |
| bis(2-chloroisopropyl)Ether | 78 | 10 | 75 | | 103.0 | 50 | 150 | | | | |
| bis(2-ethylhexyl)Phthalate | 75 | 10 | 75 | | 100.0 | 50 | 150 | | | | |
| Butylbenzylphthalate | 76 | 10 | 75 | | 101.0 | 50 | 150 | | | | |



Analytical QC Summary Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

Run ID: Run Order: SV5973N.I_220201B: 25 **SampType:** Continuing Calibration Verification Standard **Batch ID:** R374159
Method: SW8270C **Analysis Date:** 02/02/2022 18:54 **Prep Date:**
Lab ID: 01-Feb-22_CCV_50 **Units:** ug/L **Prep Method:**

| Analytes | Result | LOQ | Spk value | Spk RefVal | %REC | LowLimit | HighLimit | RPD RefVal | %RPD | RPDLimit | Qual |
|----------------------------|--------|-----|-----------|------------|-------|----------|-----------|------------|------|----------|------|
| Diethyl phthalate | 82 | 10 | 75 | | 109.0 | 50 | 150 | | | | |
| Dimethyl phthalate | 76 | 10 | 75 | | 101.0 | 50 | 150 | | | | |
| Di-n-butyl phthalate | 80 | 10 | 75 | | 106.0 | 50 | 150 | | | | |
| Di-n-octyl phthalate | 74 | 10 | 75 | | 99.0 | 50 | 150 | | | | |
| Hexachlorobenzene | 73 | 10 | 75 | | 97.0 | 50 | 150 | | | | |
| Hexachlorobutadiene | 71 | 10 | 75 | | 95.0 | 50 | 150 | | | | |
| Hexachlorocyclopentadiene | 70 | 10 | 75 | | 94.0 | 50 | 150 | | | | |
| Hexachloroethane | 83 | 10 | 75 | | 110.0 | 50 | 150 | | | | |
| Isophorone | 73 | 10 | 75 | | 98.0 | 50 | 150 | | | | |
| m+p-Cresols | 83 | 10 | 75 | | 110.0 | 50 | 150 | | | | |
| Nitrobenzene | 76 | 10 | 75 | | 102.0 | 50 | 150 | | | | |
| n-Nitrosodimethylamine | 77 | 10 | 75 | | 102.0 | 50 | 150 | | | | |
| n-Nitroso-di-n-propylamine | 79 | 10 | 75 | | 106.0 | 50 | 150 | | | | |
| n-Nitrosodiphenylamine | 73 | 10 | 75 | | 97.0 | 50 | 150 | | | | |
| o-Cresol | 79 | 10 | 75 | | 105.0 | 50 | 150 | | | | |
| Pentachlorophenol | 73 | 10 | 75 | | 97.0 | 50 | 150 | | | | |
| Phenol | 81 | 10 | 75 | | 107.0 | 50 | 150 | | | | |
| Pyridine | 76 | 10 | 75 | | 101.0 | 50 | 150 | | | | |
| Surr: 2,4,6-Tribromophenol | 72 | 10 | 75 | | 96.0 | 50 | 150 | | | | |
| Surr: 2-Fluorobiphenyl | 72 | 10 | 75 | | 96.0 | 50 | 150 | | | | |
| Surr: 2-Fluorophenol | 84 | 10 | 75 | | 112.0 | 50 | 150 | | | | |
| Surr: Nitrobenzene-d5 | 78 | 10 | 75 | | 104.0 | 50 | 150 | | | | |
| Surr: Phenol-d5 | 88 | 10 | 75 | | 118.0 | 50 | 150 | | | | |
| Surr: Terphenyl-d14 | 74 | 10 | 75 | | 99.0 | 50 | 150 | | | | |

Associated Samples: **B22011228-001C**

Analytical QC Exceptions Report

Prepared by Billings, MT Branch

Client: AECOM - Honolulu
Workorder: B22011228
Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

| 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 | | |
|-----------------|--|----------|--------------------|-------------|------------------|---------------|---------------|-----------------------------|-------|------------------------|------------|-------|-----------|------|--|---|
| SW8270C | Semi-Volatile Organic Compounds, Extended List | 163174 | 001C | LCS-DOD | LCS-163174 | 2/2/2022 | 12:28 | 4-Nitrophenol | 40.0 | 15 | 36 | | | S | | |
| | | | | | | | | | | n-Nitrosodimethylamine | 49.0 | 20 | 45 | | | S |
| | | | | LCS-DOD | LCS-D-163174 | 2/2/2022 | 13:00 | 2,4-Dinitrotoluene | 104.0 | 57 | 128 | 23 | 20.0 | R | | |
| | | | | | | | | 2-Chlorophenol | 79.0 | 38 | 117 | 24 | 20.0 | R | | |
| | | | | | | | | 4-Nitrophenol | 47.0 | 15 | 36 | 15 | 20.0 | S | | |
| | | | | | | | | bis(2-chloroisopropyl)Ether | 70.0 | 37 | 130 | 21 | 20.0 | R | | |
| | | | | | | | | Hexachlorobenzene | 98.0 | 53 | 125 | 23 | 20.0 | R | | |
| | | | | | | | | n-Nitrosodimethylamine | 56.0 | 20 | 45 | 14 | 20.0 | S | | |
| | | | | | | | | n-Nitroso-di-n-propylamine | 102.0 | 49 | 119 | 21 | 20.0 | R | | |
| | | | | | | | | Pentachlorophenol | 119.0 | 35 | 138 | 23 | 20.0 | R | | |
| | | | | MS-DOD | B22011446-006CMS | 2/2/2022 | 16:45 | 4-Nitrophenol | 38.0 | 15 | 36 | | | S | | |
| | | | | | | | | Phenol | 34.0 | 37 | 75 | | | S | | |
| | | | | MS-DOD | B22011446-012AMS | 2/2/2022 | 18:21 | 4-Nitrophenol | 40.0 | 15 | 36 | | | S | | |
| | | | | | | | | n-Nitrosodimethylamine | 49.0 | 20 | 45 | | | S | | |



Preparation and Analysis Dates Report

Work Order: B22011228

Client: AECOM - Honolulu

Project Name: CV18F0126, 60571032.02.46.01

Report Date: 3/02/2022

| Lab ID | Client Sample ID | Collection Date | Matrix | Test Name | TCLP Date | Prep Method | Prep Date | Prep Batch | Analysis Method | Analysis Date |
|--------|----------------------------|------------------|--------------|--|-----------|-------------|------------------|------------|-----------------|------------------|
| 001B | ERH2424 (RHMW14 Zone3) | 01/18/2022 13:30 | Ground Water | Metals by ICP-MS, Total | | SW3010A | 01/20/2022 14:02 | 163116 | SW6020 | 01/22/2022 02:57 |
| 001C | ERH2424 (RHMW14 Zone3) | 01/18/2022 13:30 | Ground Water | Low Level PAH by 8270C SIM | | SW3510C | 01/24/2022 11:49 | 163174 | SW8270CSIM | 01/31/2022 21:40 |
| | | | | Semi-Volatile Organic Compounds, Extended List | | SW3510C | 01/24/2022 11:49 | 163174 | SW8270C | 02/02/2022 14:37 |
| 001D | ERH2424 (RHMW14 Zone3) | 01/18/2022 13:30 | Ground Water | Diesel Range Organics | | SW3520C | 01/20/2022 14:21 | 163074 | SW8015C | 01/24/2022 14:15 |
| | | | | | | SW3520C | 01/20/2022 14:21 | 163074 | SW8015C | 01/25/2022 17:57 |
| 001H | ERH2424 (RHMW14 Zone3) | 01/18/2022 13:30 | Ground Water | EDB in Water by ECD | | SW8011 | 01/21/2022 07:49 | 163129 | SW8011 | 01/22/2022 17:13 |
| 004A | ERH2423 (Trip Blank) 14733 | 01/18/2022 13:30 | Trip Blank | EDB in Water by ECD | | SW8011 | 01/21/2022 07:49 | 163129 | SW8011 | 01/22/2022 17:33 |



Chemical Abstracts Service (CAS) Registry Numbers

Prepared by Billings, MT Branch

Client: AECOM - Honolulu

Workorder: B22011228

Project: CV18F0126, 60571032.02.46.01

Report Date: 03/02/2022

| 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

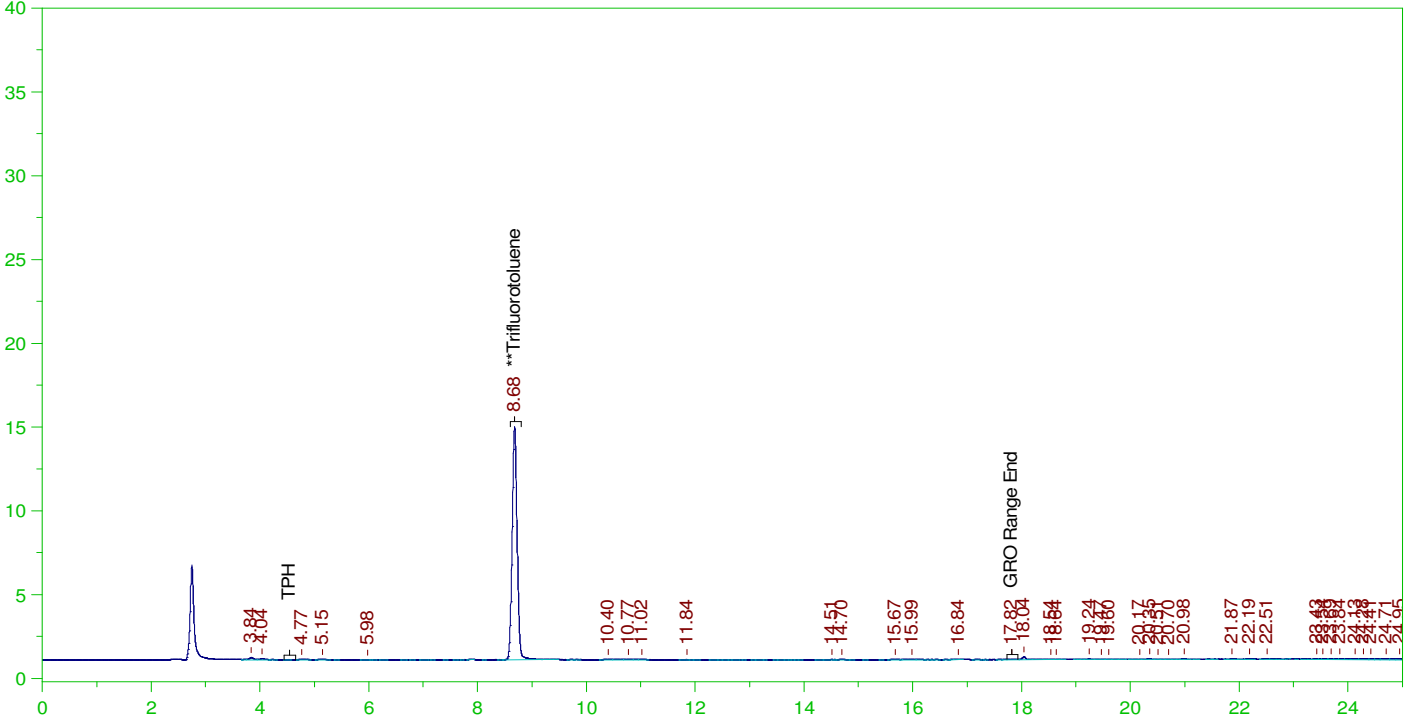
SEMI-VOLATILE ORGANIC COMPOUNDS

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

ERH2424 (RHMW14 Zone3)

G:\Org\PE1\DAT\PE1012022_b\0120PE1B.0077.RAW

B22011228-001G ;0120PE1 , \$HC-8015-GRO-W,



GASOLINE RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22011228-001G ;0120PE1 , \$HC-8015-GRO-W,
Raw File: G:\Org\PE1\DAT\PE1012022_b\0120PE1B.0077.RAW
Date & Time Acquired: 1/22/2022 4:00:23 AM
Method File: G:\Org\PE1\Methods\211208GRO_DoDB%.MET
Calibration File: G:\Org\PE1\Cals\211208GRO8015CB.CAL
Sample Weight: 5 Dilution: 1 S.A.: 1

Mean RF for C6 to C10: 945.9678
Mean RF for TPH: 909.3915
Rt range for Gasoline Range Organics: 4.45 to 17.93

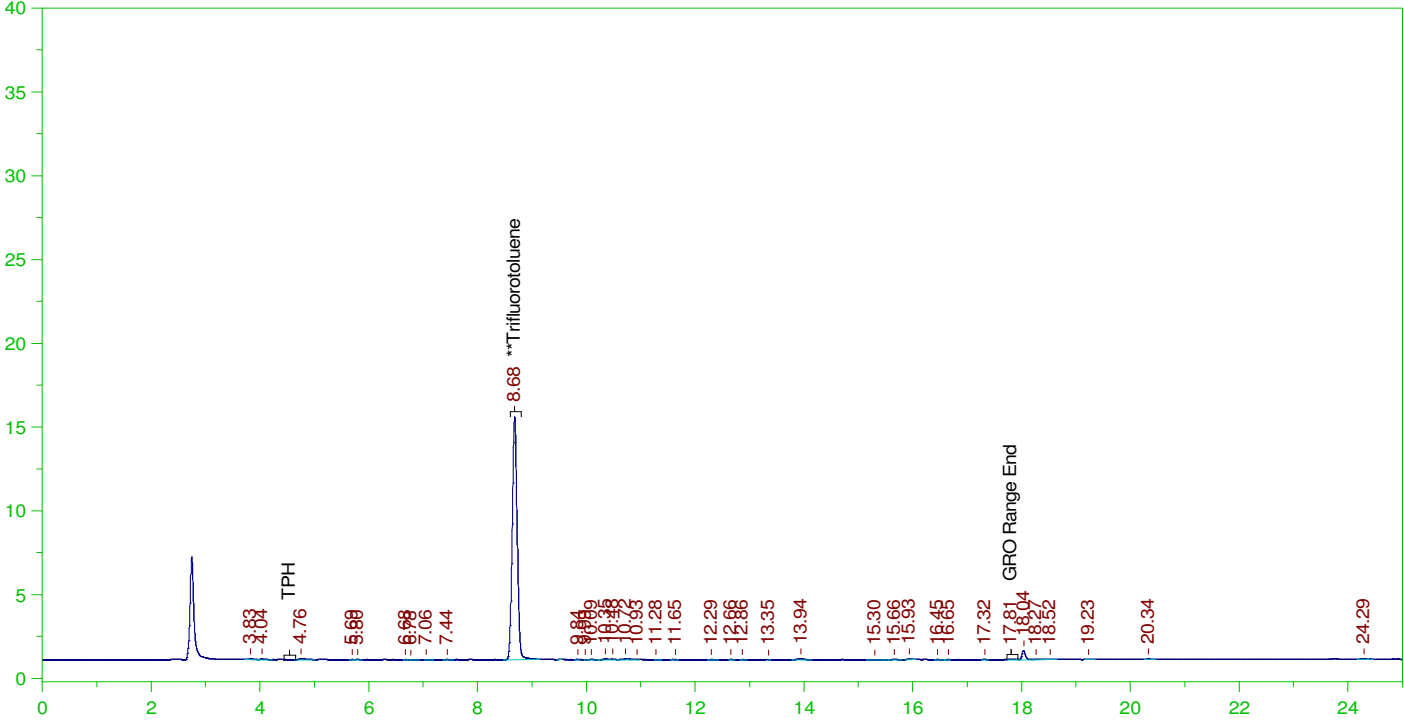
| SURROGATE COMPOUND | RT | ACTUAL | MEASURED | %REC |
|--------------------|-------|--------|----------|-------|
| **Trifluorotoluene | 8.682 | 25. | 18.935 | 75.74 |

C6 to C10 Area:3002.852 C6 to C10 Amount: 0.634874
TPH Area:9021.959 TPH Amount: 1.984175

ERH2423 (Trip Blank) 14733

G:\Org\PE1\DAT\PE1012022_b\0120PE1B.0055.RAW

B22011228-003A ;0120PE1 , \$HC-8015-GRO-W,



GASOLINE RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22011228-003A ;0120PE1 , \$HC-8015-GRO-W,
Raw File: G:\Org\PE1\DAT\PE1012022_b\0120PE1B.0055.RAW
Date & Time Acquired: 1/21/2022 3:25:16 PM
Method File: G:\Org\PE1\Methods\211208G1228-3DoDB%.MET
Calibration File: G:\Org\PE1\Cals\211208GRO8015CB.CAL
Sample Weight: 5 Dilution: 1 S.A.: 1

Mean RF for C6 to C10: 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 | 8.683 | 25. | 19.649 | 78.59 |

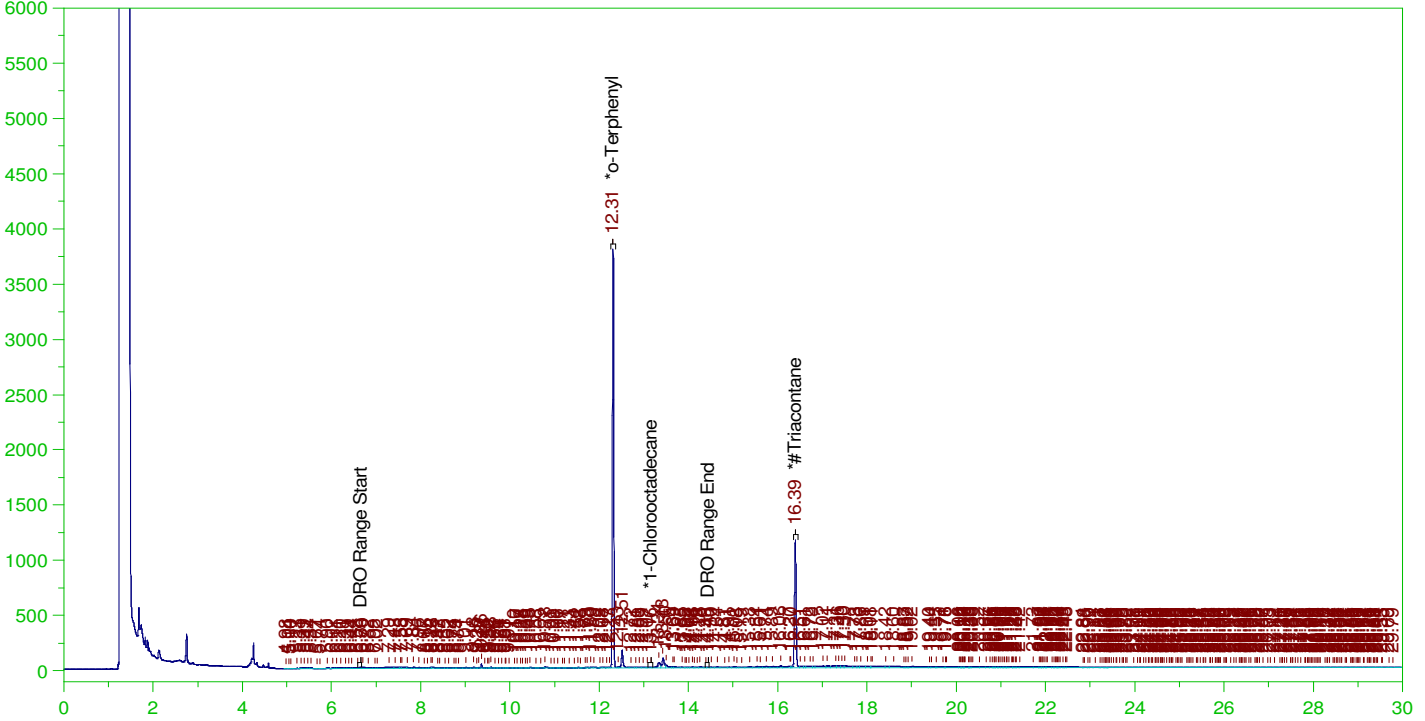
C6 to C10 Area:5655.1 C6 to C10 Amount: 1.195622
TPH Area:9125.988 TPH Amount: 2.007054

ERH2424 (RHMW14 Zone3)

Batch ID: 163074

G:\org\HP5\DAT\HP5012422_b\0124HP5.0009.RAW

B22011228-001D ;0124HP5 , \$HC-8015-DRO-W,



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22011228-001D ;0124HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5012422_b\0124HP5.0009.RAW
Date & Time Acquired: 1/24/2022 2:15:47 PM
Method File: G:\Org\HP5\Methods\D3_8015-012409-JC-L%.met
Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JC-C24-T.CAL
Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.58 to 14.47

| SURROGATE COMPOUND | RT | ACTUAL | MEASURED | %REC | |
|---------------------|--------|--------|----------|-------|---|
| *o-Terphenyl | 12.308 | .196 | .191 | 97.43 | - |
| *1-Chlorooctadecane | 13.162 | .196 | .001 | .69 | - |
| *#Triacontane | 16.39 | .196 | .105 | 53.65 | - |

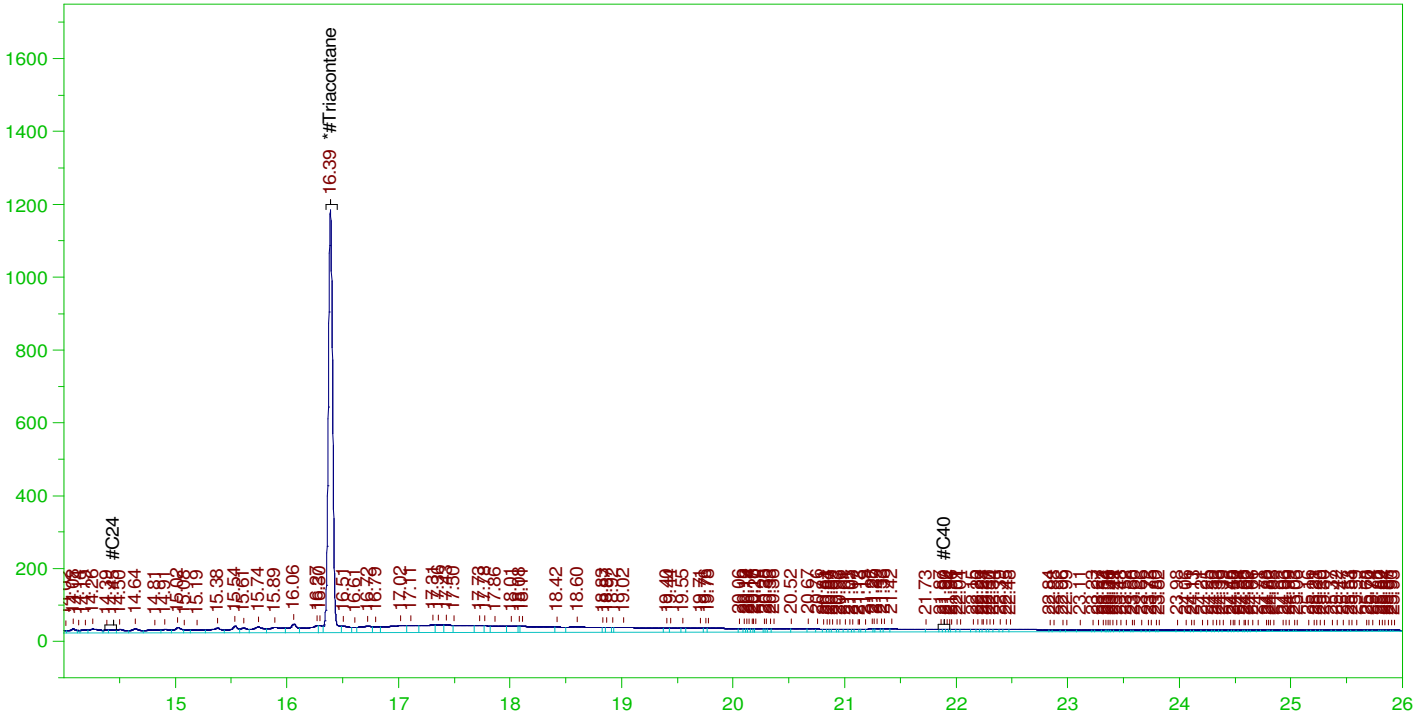
DRO Area:3387593 DRO Amount: 0.1016414
TEH Area:1.044978E+07 TEH Amount: 0.3135355

ERH2424 (RHMW14 Zone3)

Batch ID: 163074

G:\org\HP5\DAT\HP5012422_b\0124HP5.0009.RAW

B22011228-001D ;0124HP5 , \$HC-8015-DRO-W,



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22011228-001D ;0124HP5 , \$HC-8015-DRO-W,
Raw File: G:\org\HP5\DAT\HP5012422_b\0124HP5.0009.RAW
Date & Time Acquired: 1/24/2022 2:15:47 PM
Method File: G:\Org\HP5\Methods\D3_OROS-012409-BC-L%.MET
Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BC_SAMP.CAL
Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 26424.55
Rt range for Residual Range Organics: 14.37 to 21.94

| SURROGATE COMPOUND | RT | ACTUAL | MEASURED | %REC |
|--------------------|-------|--------|----------|-------|
| *#Triacontane_____ | 16.39 | .49 | .105 | 21.46 |

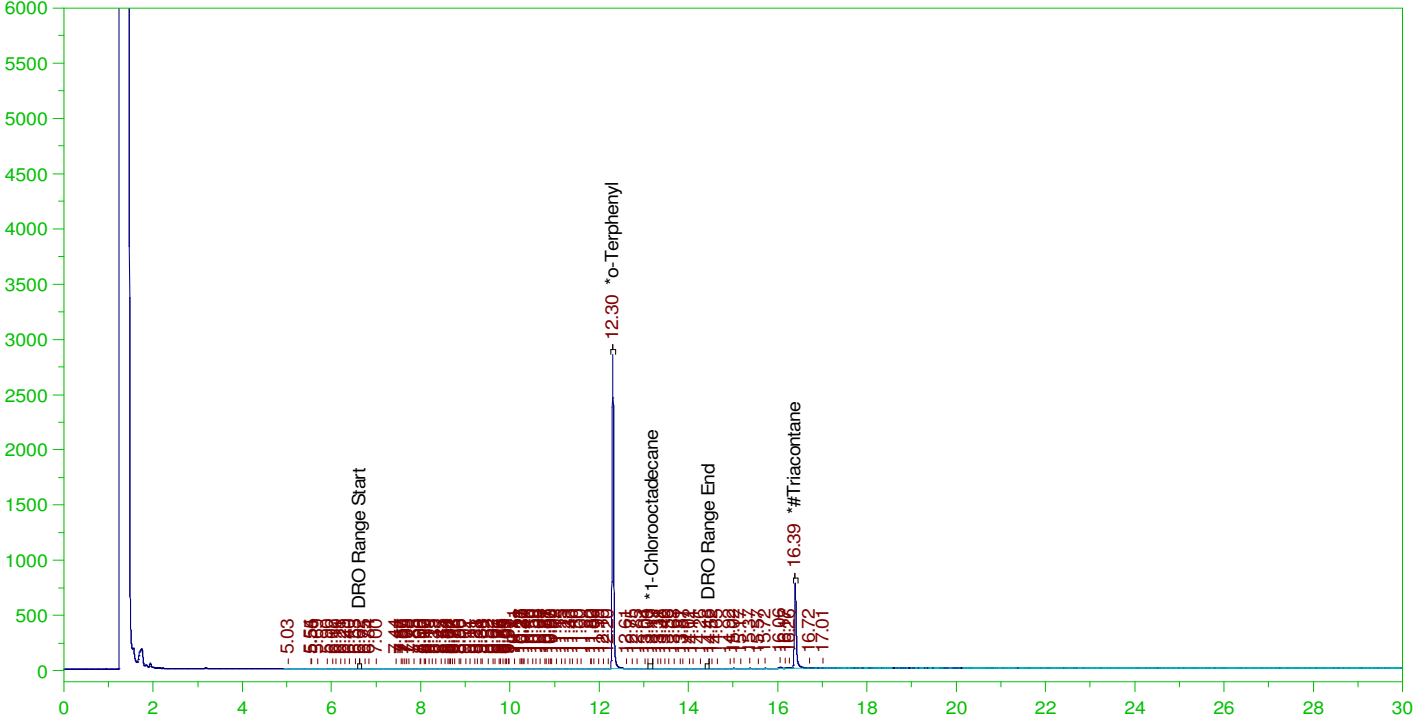
RRO Area:5487106 RRO AMOUNT: 0.2035802

ERH2424 (RHMW14 Zone3)

Batch ID: 163074

G:\org\HP5\DAT\HP5012422_b\0124HP5.0048.RAW

B22011228-001D ;0124HP5 , \$HC-8015-DRO-W, SGT



DIESEL RANGE ORGANICS CHROMATOGRAM REPORT

Sample Name: B22011228-001D ;0124HP5 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP5\DAT\HP5012422_b\0124HP5.0048.RAW
 Date & Time Acquired: 1/25/2022 5:57:47 PM
 Method File: G:\Org\HP5\Methods\DR_8015-C24T-JC-L%.met
 Calibration File: G:\Org\HP5\Cals\SW8015C_DRO220111JC-C24-T.CAL
 Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for TEH: 32675.36

Rt range for Diesel Range Organics: 6.58 to 14.47

| SURROGATE COMPOUND | RT | ACTUAL | MEASURED | %REC | |
|---------------------|--------|--------|----------|-------|---|
| *o-Terphenyl | 12.303 | .196 | .168 | 85.52 | - |
| *1-Chlorooctadecane | 13.189 | .196 | . | .05 | - |
| *#Triacontane | 16.388 | .196 | .081 | 41.52 | - |

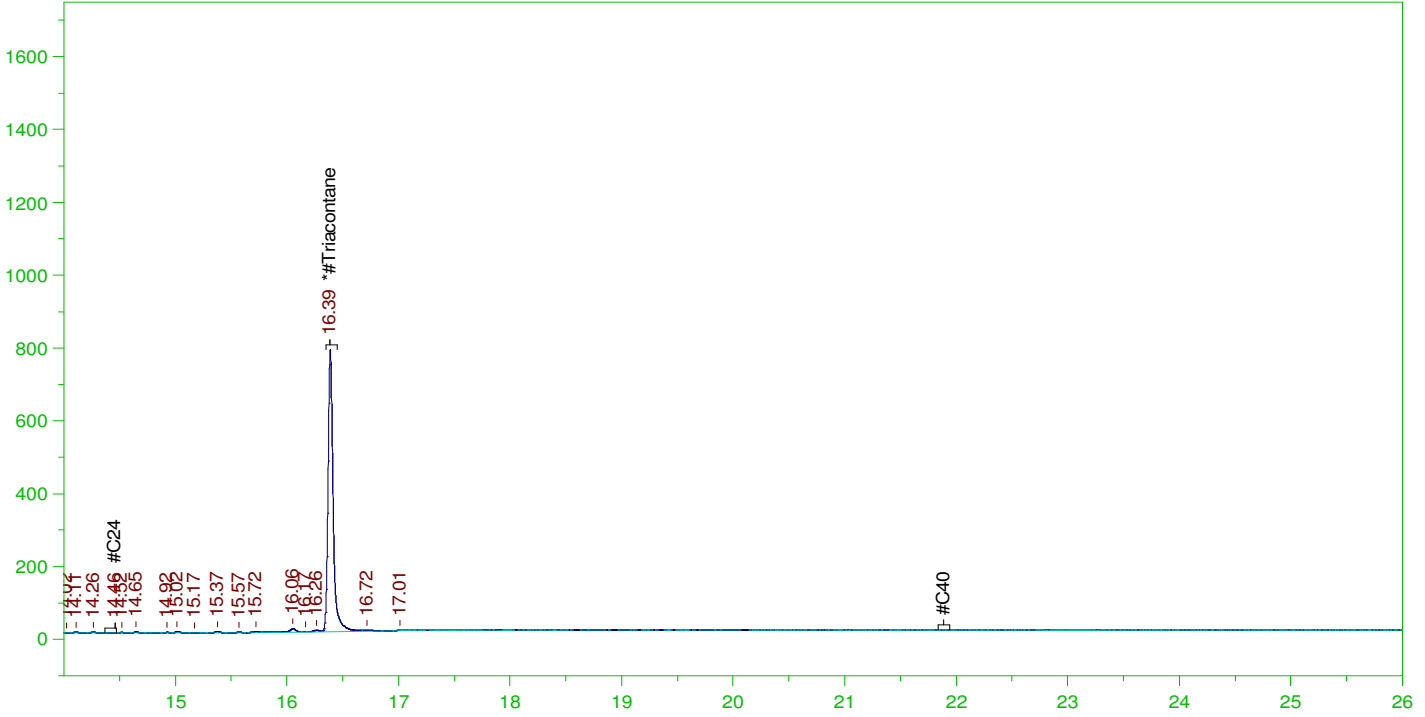
DRO Area:293337.1 DRO Amount: 8.801291E-03
 TEH Area:452147 TEH Amount: 1.356623E-02

ERH2424 (RHMW14 Zone3)

Batch ID: 163074

G:\org\HP5\DAT\HP5012422_b\0124HP5.0048.RAW

B22011228-001D ;0124HP5 , \$HC-8015-DRO-W, SGT



RESIDUAL RANGE ORGANICS CHROMATOGRAM

Sample Name: B22011228-001D ;0124HP5 , \$HC-8015-DRO-W, SGT
 Raw File: G:\org\HP5\DAT\HP5012422_b\0124HP5.0048.RAW
 Date & Time Acquired: 1/25/2022 5:57:47 PM
 Method File: G:\Org\HP5\Methods\DR_OROS-BC-L%.MET
 Calibration File: G:\Org\HP5\Cals\SW8015C_ORO220111BC_SAMP.CAL
 Sample Weight: 1020 Dilution: 1 S.A.: 1

Mean RF for for Residual Range Organics Calculations: 26424.55
 Rt range for Residual Range Organics: 14.37 to 21.94

| SURROGATE COMPOUND | RT | ACTUAL | MEASURED | %REC | |
|--------------------|--------|--------|----------|-------|---|
| *#Triacontane_____ | 16.388 | .49 | .081 | 16.61 | - |

RRO Area:120801.1 RRO AMOUNT: 4.48191E-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
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From: Tabitha Edwards <tedwards@energylab.com>
Sent: Monday, December 13, 2021 7:05 AM
To: Ramos, Alethea <alethea.ramos@aecom.com>
Cc: Pascua, Margie <Margie.Pascua@aecom.com>; billingsPM@energylab.com
Subject: [EXTERNAL] FW: CV18F0126: Expedited NOI Groundwater Samples, Saturday 12/12 Submission
Importance: High

Alethea,

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

Thank you,

Energy Laboratories, Inc.

Trust our People. Trust our Data.

Tabitha Edwards | Office Manager | Billings, MT

O: 406-869-6286 | tedwards@energylab.com | www.energylab.com

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

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

From: Ramos, Alethea [<mailto:alethea.ramos@aecom.com>]

Sent: Saturday, December 11, 2021 3:20 AM

To: Shari Endy; billingsPM@energylab.com

Cc: Jillian Miller; Pascua, Margie; KaaihiliChoy, Terri Ann

Subject: CV18F0126: Expedited NOI Groundwater Samples, Saturday 12/12 Submission

Importance: High

Hi Shari and Billings PM,

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

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

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

Thank you,

Alethea Ramos, CIH

Environmental Scientist, Environmental Health & Science, Environment

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