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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Erwin Kawata
City & County of Honolulu
630 South Beretania Street
Public Service Bldg. Room 308
Honolulu, Hawaii 96843

Generated 12/16/2022 10:53:54 AM

JOB DESCRIPTION

RED-HILL

JOB NUMBER

380-24009-1

Eurofins Eaton Monrovia

Job Notes

Laboratory certifies that the test results meet all TNI 2016 and ISO/IEC 17025:2017 requirements unless noted under the individual analysis.

Following the cover page are State Certification List, ISO 17025 Accredited Method List, Acknowledgement of Samples Received, Comments, Hits Report, Data Report, QC Summary, QC Report and Regulatory Forms, as applicable.

Test results relate only to the sample(s) tested.

Test results apply to the sample(s) as received, unless otherwise noted in the comments report (ISO/IEC 17025:2017).

This report shall not be reproduced except in full, without the written approval of the laboratory.

This report includes ISO/IEC 17025 and non-ISO 17025 accredited methods.

Compliance Statement

1. Laboratory is accredited in accordance with TNI 2016 Standards and ISO/IEC 17025:2017.
2. Laboratory certifies that the test results meet all TNI 2016 and ISO/IEC 17025:2017 requirements unless noted under the individual analysis
3. Test results relate only to the sample(s) tested.
4. This report shall not be reproduced except in full, without the written approval of the laboratory.
5. Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below. (DW, Water matrices)

Authorization



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Authorized for release by
Rachelle Arada, Manager of Project Management
Rachelle.Arada@et.eurofinsus.com
(626)386-1106



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Definitions/Glossary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Qualifiers

GC/MS VOA

| Qualifier | Qualifier Description |
|-----------|--|
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

GC/MS VOA TICs

| Qualifier | Qualifier Description |
|-----------|---|
| J | Indicates an Estimated Value for TICs |
| N | Presumptive evidence of material. |
| T | Result is a tentatively identified compound (TIC) and an estimated value. |

GC/MS Semi VOA

| Qualifier | Qualifier Description |
|-----------|--|
| ^3+ | Reporting Limit Check Standard is outside acceptance limits, high biased |
| F1 | MS and/or MSD recovery exceeds control limits. |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

GC/MS Semi VOA TICs

| Qualifier | Qualifier Description |
|-----------|---|
| J | Indicates an Estimated Value for TICs |
| N | Presumptive evidence of material. |
| T | Result is a tentatively identified compound (TIC) and an estimated value. |

GC Semi VOA

| Qualifier | Qualifier Description |
|-----------|--|
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

Metals

| Qualifier | Qualifier Description |
|-----------|--|
| ^2 | Cal bration Blank (ICB and/or CCB) is outside acceptance limits. |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

General Chemistry

| Qualifier | Qualifier Description |
|-----------|--|
| F1 | MS and/or MSD recovery exceeds control limits. |
| HF | Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

Subcontract

| Qualifier | Qualifier Description |
|-----------|--------------------------------|
| U | This analyte was not detected. |

Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|----------------|---|
| α | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CFU | Colony Forming Unit |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MCL | EPA recommended "Maximum Contaminant Level" |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |

Definitions/Glossary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Glossary (Continued)

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|--------------|--|
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| MPN | Most Probable Number |
| MQL | Method Quantitation Limit |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| NEG | Negative / Absent |
| POS | Positive / Present |
| PQL | Practical Quantitation Limit |
| PRES | Presumptive |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |
| TNTC | Too Numerous To Count |

Case Narrative

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Job ID: 380-24009-1

Laboratory: Eurofins Eaton Monrovia

Narrative

Job Narrative 380-24009-1

Comments

No additional comments.

Receipt

The samples were received on 10/12/2022 10:00 AM. Unless otherwise noted below, the samples arrived in good condition, as where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 0.5° C, 2.4° C and 4.7° C

GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC/MS Semi VOA

Method 525.2: The continuing calibration verification (CCV) associated with batch 380-20905 recovered above the upper control limit for Dibenz(a,h)anthracene and Indeno[1,2,3-cd]pyrene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: HALAWA WELLS UNITS 1 (331-023) (380-24009-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HPLC/IC

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

Method 200.8: The continuing calibration blank (CCB) for analytical batch 380-20975 contained Silver above the Method Detect Limit (MDL). All reported samples associated with this CCB were either ND for this analyte or contained this analyte at a concentration greater than 10X the value found in the CCB; therefore, re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Subcontract non-Sister

See attached subcontract report.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Subcontract Work

Methods 8015 Diesel LL (EAL) and Motor Oil, 8015 Ethanol, 8015 Gas (Purgeable) LL (EAL), 8015 Jet Fuel 5 (JP5), 8015 Jet Fuel 8 (JP8): These methods were subcontracted to EMAX Laboratories Inc. The subcontract laboratory certifications are different from that of the facility issuing the final report.

Methods 625 Acid LL (EAL) Physis, 625 Base Neutral LL (EAL) Physis, 625 PAH Physis LL (EAL) + TICs: These methods were subcontracted to Physis Environmental Laboratories. The subcontract laboratory certifications are different from that of the facility issuing the final report.

Detection Summary

Client: City & County of Honolulu
 Project/Site: RED-HILL

Job ID: 380-24009-1

Client Sample ID: HALAWA WELLS UNITS 1 (331-023)

Lab Sample ID: 380-24009-1

| Analyte | Result | Qualifier | RL | Unit | Dil Fac | D | Method | Prep Type |
|---------------------------------|--------|-----------|--------|----------|---------|---|---------------|-------------------|
| Dieldrin | 0.055 | | 0.0020 | ug/L | 1 | | 505 | Total/NA |
| Chlordane (n.o.s.) | 0.25 | | 0.10 | ug/L | 1 | | 505 | Total/NA |
| Heptachlor epoxide | 0.019 | | 0.010 | ug/L | 1 | | 505 | Total/NA |
| Bromide | 730 | | 25 | ug/L | 5 | | 300.0 | Total/NA |
| Chloride | 190 | | 2.5 | mg/L | 5 | | 300.0 | Total/NA |
| Nitrate as N | 1.7 | | 0.25 | mg/L | 5 | | 300.0 | Total/NA |
| Nitrate Nitrite as N | 1.7 | | 0.25 | mg/L | 5 | | 300.0 | Total/NA |
| Sulfate | 43 | | 1.3 | mg/L | 5 | | 300.0 | Total/NA |
| Calcium | 37 | | 1.0 | mg/L | 1 | | 200.7 Rev 4.4 | Total/NA |
| Magnesium | 34 | | 0.10 | mg/L | 1 | | 200.7 Rev 4.4 | Total/NA |
| Potassium | 3.9 | | 1.0 | mg/L | 1 | | 200.7 Rev 4.4 | Total/NA |
| Sodium | 71 | | 1.0 | mg/L | 1 | | 200.7 Rev 4.4 | Total/NA |
| Chromium | 2.2 | | 1.0 | ug/L | 1 | | 200.8 | Total Recoverable |
| A kalinity | 64 | | 2.0 | mg/L | 1 | | SM 2320B | Total/NA |
| Bicarbonate Alkalinity as CaCO3 | 64 | | 2.0 | mg/L | 1 | | SM 2320B | Total/NA |
| Specific Conductance | 850 | | 2.0 | umhos/cm | 1 | | SM 2510B | Total/NA |
| Total Dissolved Solids | 530 | | 20 | mg/L | 1 | | SM 2540C | Total/NA |
| Fluoride | 0.055 | | 0.050 | mg/L | 1 | | SM 4500 F C | Total/NA |
| pH | 7.7 | HF | | SU | 1 | | SM 4500 H+ B | Total/NA |

Client Sample ID: TB: HALAWA WELLS UNITS 1

Lab Sample ID: 380-24009-2

No Detections.

This Detection Summary does not include radiochemical test results.

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Client Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Client Sample ID: HALAWA WELLS UNITS 1 (331-023)

Lab Sample ID: 380-24009-1

Date Collected: 10/11/22 10:12

Matrix: Water

Date Received: 10/12/22 10:00

Method: EPA-DW 524.2 - Volatile Organic Compounds (GC/MS SIM)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|------|---|----------|----------------|---------|
| Tertiary Butyl Alcohol (TBA) | ND | | 2.0 | ug/L | | | 10/18/22 23:01 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | Prepared | Analyzed | Dil Fac |
| Toluene-d8 (Surr) | 98 | | 70 - 130 | | | | 10/18/22 23:01 | 1 |
| 4-Bromofluorobenzene (Surr) | 96 | | 70 - 130 | | | | 10/18/22 23:01 | 1 |
| 1,2-Dichloroethane-d4 (Surr) | 112 | | 70 - 130 | | | | 10/18/22 23:01 | 1 |

Method: EPA-DW 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------------|--------|-----------|------|------|---|----------|----------------|---------|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| 1,1-Dichloroethane | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| 1,1-Dichloroethylene | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| 1,2,4-Trimethy benzene | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| 1,3,5-Trimethy benzene | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| 2-Butanone (MEK) | ND | | 5.0 | ug/L | | | 10/13/22 16:22 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 5.0 | ug/L | | | 10/13/22 16:22 | 1 |
| Acetone | ND | | 500 | ug/L | | | 10/13/22 16:22 | 1 |
| Benzene | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| Bromobenzene | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| Bromochloromethane | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| Bromodichloromethane | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| Bromoform | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| Bromomethane (Methyl Bromide) | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| Carbon disulfide | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| Carbon tetrachloride | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| Chlorobenzene | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| Chlorodibromomethane | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| Chloroethane | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| Chloroform (Trichloromethane) | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| Dichloromethane | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| cis-1,2-Dichloroethylene | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| Dibromomethane | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| Dichlorodifluoromethane | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| Ethylbenzene | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| Isopropy benzene | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| m,p-Xylenes | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| m-Dichlorobenzene (1,3-DCB) | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |

Eurofins Eaton Monrovia

Client Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Client Sample ID: HALAWA WELLS UNITS 1 (331-023)

Lab Sample ID: 380-24009-1

Date Collected: 10/11/22 10:12

Matrix: Water

Date Received: 10/12/22 10:00

Method: EPA-DW 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------------------------------|--------|-----------|------|------|---|----------|----------------|---------|
| Methyl-tert-butyl Ether (MTBE) | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| Naphthalene | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| n-Butylbenzene | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| N-Propylbenzene | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| o-Dichlorobenzene (1,2-DCB) | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| o-Chlorotoluene | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| o-Xylene | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| p-Chlorotoluene | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| p-Dichlorobenzene (1,4-DCB) | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| p-Isopropyltoluene | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| sec-Butylbenzene | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| Styrene | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| Tert-amyl methyl ether | ND | | 3.0 | ug/L | | | 10/13/22 16:22 | 1 |
| Tert-butyl ethyl ether | ND | | 3.0 | ug/L | | | 10/13/22 16:22 | 1 |
| tert-Butylbenzene | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| Tetrachloroethene (PCE) | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| Toluene | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| 1,3-Dichloropropene, Total | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| Xylenes, Total | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| trans-1,2-Dichloroethylene | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| Trichloroethylene (TCE) | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| Trichlorofluoromethane (Freon 11) | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| Vinyl Chloride (VC) | ND | | 0.30 | ug/L | | | 10/13/22 16:22 | 1 |
| Trichlorotrifluoroethane | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| Bromoethane | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| Chloromethane (methyl chloride) | ND | | 0.50 | ug/L | | | 10/13/22 16:22 | 1 |
| Diisopropyl ether | ND | | 3.0 | ug/L | | | 10/13/22 16:22 | 1 |

| Tentatively Identified Compound | Est. Result | Qualifier | Unit | D | RT | CAS No. | Prepared | Analyzed | Dil Fac |
|---------------------------------|-------------|-----------|------|---|-------|----------|----------|----------------|---------|
| Unknown | 25 | T J | ug/L | | 0.99 | | | 10/13/22 16:22 | 1 |
| Furfural | 0.62 | T J N | ug/L | | 9.77 | 98-01-1 | | 10/13/22 16:22 | 1 |
| 1-Hexanol, 2-ethyl- | 0.56 | T J N | ug/L | | 12.03 | 104-76-7 | | 10/13/22 16:22 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 110 | | 70 - 130 | | 10/13/22 16:22 | 1 |
| 4-Bromofluorobenzene (Surr) | 100 | | 70 - 130 | | 10/13/22 16:22 | 1 |
| Toluene-d8 (Surr) | 97 | | 70 - 130 | | 10/13/22 16:22 | 1 |

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|--------------------|--------|-----------|-------|------|---|----------------|----------------|---------|
| 2,4'-DDD | ND | | 0.097 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| 2,4'-DDE | ND | | 0.097 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| 2,4'-DDT | ND | | 0.097 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| 2,4-Dinitrotoluene | ND | | 0.097 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| 2,6-Dinitrotoluene | ND | | 0.097 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| 4,4'-DDD | ND | | 0.097 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| 4,4'-DDE | ND | | 0.097 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| 4,4'-DDT | ND | | 0.097 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Acenaphthene | ND | | 0.097 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |

Eurofins Eaton Monrovia

Client Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Client Sample ID: HALAWA WELLS UNITS 1 (331-023)

Lab Sample ID: 380-24009-1

Date Collected: 10/11/22 10:12

Matrix: Water

Date Received: 10/12/22 10:00

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------------------|--------|-----------|-------|------|---|----------------|----------------|---------|
| Acenaphthylene | ND | | 0.097 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Acetochlor | ND | | 0.097 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Alachlor | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| alpha-BHC | ND | | 0.097 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| alpha-Chlordane | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Anthracene | ND | | 0.019 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Atrazine | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Benz(a)anthracene | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Benzo[a]pyrene | ND | | 0.019 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Benzo[b]fluoranthene | ND | | 0.019 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Benzo[g,h,i]perylene | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Benzo[k]fluoranthene | ND | | 0.019 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| beta-BHC | ND | | 0.097 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Bis(2-ethylhexyl) phthalate | ND | | 0.58 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Bromacil | ND | ^3+ | 0.097 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Butachlor | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Butylbenzylphthalate | ND | | 0.49 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Chlorobenzilate | ND | | 0.097 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Chloroneb | ND | | 0.097 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Chlorothalonil (Draconil, Bravo) | ND | | 0.097 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Chlorpyrifos | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Chrysene | ND | | 0.019 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| delta-BHC | ND | | 0.097 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Di(2-ethylhexyl)adipate | ND | | 0.58 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Dibenz(a,h)anthracene | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Diclorvos (DDVP) | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Dieldrin | ND | | 0.19 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Diethylphthalate | ND | | 0.49 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Dimethylphthalate | ND | | 0.49 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Di-n-butyl phthalate | ND | | 0.97 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Di-n-octyl phthalate | ND | | 0.097 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Endosulfan I (Alpha) | ND | | 0.097 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Endosulfan II (Beta) | ND | | 0.097 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Endosulfan sulfate | ND | | 0.097 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Endrin | ND | ^3+ | 0.097 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Endrin aldehyde | ND | | 0.097 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| EPTC | ND | | 0.097 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Fluoranthene | ND | | 0.097 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Fluorene | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| gamma-BHC (Lindane) | ND | | 0.039 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| gamma-Chlordane | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Heptachlor | ND | | 0.039 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Heptachlor epoxide (isomer B) | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Hexachlorobenzene | ND | ^3+ | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Hexachlorocyclopentadiene | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Isophorone | ND | | 0.49 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Malathion | ND | | 0.097 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Methoxychlor | ND | | 0.097 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |

Eurofins Eaton Monrovia

Client Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Client Sample ID: HALAWA WELLS UNITS 1 (331-023)

Lab Sample ID: 380-24009-1

Date Collected: 10/11/22 10:12

Matrix: Water

Date Received: 10/12/22 10:00

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------------------|--------|-----------|-------|------|---|----------------|----------------|---------|
| Metolachlor | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Metribuzin | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Molinate | ND | | 0.097 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Naphthalene | ND | | 0.29 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Parathion | ND | | 0.097 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Pendimethalin (Penoxaline) | ND | | 0.097 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Phenanthrene | ND | | 0.039 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Propachlor | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Pyrene | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Simazine | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Terbacil | ND | | 0.097 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Terbutylazine | ND | ^3+ | 0.097 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Thiobencarb | ND | | 0.19 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Total Permethrin (mixed isomers) | ND | | 0.19 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| trans-Nonachlor | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Trifluralin | ND | | 0.097 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| 1-Methylnaphthalene | ND | | 0.097 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| 2-Methylnaphthalene | ND | | 0.097 | ug/L | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |

| Tentatively Identified Compound | Est. Result | Qualifier | Unit | D | RT | CAS No. | Prepared | Analyzed | Dil Fac |
|---------------------------------|-------------|-----------|------|---|----|---------|----------------|----------------|---------|
| Tentatively Identified Compound | None | | ug/L | | | | 10/15/22 15:26 | 10/17/22 14:29 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|--------------------|-----------|-----------|----------|----------------|----------------|---------|
| 2-Nitro-m-xylene | 97 | | 70 - 130 | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Perylene-d12 | 91 | | 70 - 130 | 10/15/22 15:26 | 10/17/22 14:29 | 1 |
| Triphenylphosphate | 107 | | 70 - 130 | 10/15/22 15:26 | 10/17/22 14:29 | 1 |

Method: EPA-DW2 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------------------------|--------|-----------|-------|------|---|----------------|----------------|---------|
| 1,2,3-Trichloropropane | ND | | 0.040 | ug/L | | 10/20/22 13:23 | 10/20/22 22:40 | 1 |
| 1,2-D bromo-3-Chloropropane | ND | | 0.010 | ug/L | | 10/20/22 13:23 | 10/20/22 22:40 | 1 |
| 1,2-D bromoethane | ND | | 0.010 | ug/L | | 10/20/22 13:23 | 10/20/22 22:40 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---------------------------|-----------|-----------|----------|----------------|----------------|---------|
| 1,2-Dibromopropane (Surr) | 111 | | 60 - 140 | 10/20/22 13:23 | 10/20/22 22:40 | 1 |

Method: EPA 505 - Organochlorine Pesticides/PCBs (GC)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------------------|--------------|-----------|--------|------|---|----------------|----------------|---------|
| Aldrin | ND | | 0.0020 | ug/L | | 10/13/22 15:16 | 10/13/22 22:13 | 1 |
| Dieldrin | 0.055 | | 0.0020 | ug/L | | 10/13/22 15:16 | 10/13/22 22:13 | 1 |
| Toxaphene | ND | | 0.10 | ug/L | | 10/13/22 15:16 | 10/13/22 22:13 | 1 |
| Alachlor | ND | | 0.10 | ug/L | | 10/13/22 15:16 | 10/13/22 22:13 | 1 |
| Chlordane (n.o.s.) | 0.25 | | 0.10 | ug/L | | 10/13/22 15:16 | 10/13/22 22:13 | 1 |
| Endrin | ND | | 0.010 | ug/L | | 10/13/22 15:16 | 10/13/22 22:13 | 1 |
| Heptachlor | ND | | 0.010 | ug/L | | 10/13/22 15:16 | 10/13/22 22:13 | 1 |
| Heptachlor epoxide | 0.019 | | 0.010 | ug/L | | 10/13/22 15:16 | 10/13/22 22:13 | 1 |
| gamma-BHC (Lindane) | ND | | 0.010 | ug/L | | 10/13/22 15:16 | 10/13/22 22:13 | 1 |
| Methoxychlor | ND | | 0.051 | ug/L | | 10/13/22 15:16 | 10/13/22 22:13 | 1 |
| PCB-1016 | ND | | 0.071 | ug/L | | 10/13/22 15:16 | 10/13/22 22:13 | 1 |
| PCB-1221 | ND | | 0.10 | ug/L | | 10/13/22 15:16 | 10/13/22 22:13 | 1 |
| PCB-1232 | ND | | 0.10 | ug/L | | 10/13/22 15:16 | 10/13/22 22:13 | 1 |

Eurofins Eaton Monrovia

Client Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Client Sample ID: HALAWA WELLS UNITS 1 (331-023)

Lab Sample ID: 380-24009-1

Date Collected: 10/11/22 10:12

Matrix: Water

Date Received: 10/12/22 10:00

Method: EPA 505 - Organochlorine Pesticides/PCBs (GC) (Continued)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------------------|--------|-----------|-------|------|---|----------------|----------------|---------|
| PCB-1242 | ND | | 0.10 | ug/L | | 10/13/22 15:16 | 10/13/22 22:13 | 1 |
| PCB-1248 | ND | | 0.10 | ug/L | | 10/13/22 15:16 | 10/13/22 22:13 | 1 |
| PCB-1254 | ND | | 0.10 | ug/L | | 10/13/22 15:16 | 10/13/22 22:13 | 1 |
| PCB-1260 | ND | | 0.071 | ug/L | | 10/13/22 15:16 | 10/13/22 22:13 | 1 |
| Polychlorinated biphenyls, Total | ND | | 0.10 | ug/L | | 10/13/22 15:16 | 10/13/22 22:13 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|----------------------|-----------|-----------|----------|----------------|----------------|---------|
| Tetrachloro-m-xylene | 97 | | 70 - 130 | 10/13/22 15:16 | 10/13/22 22:13 | 1 |

Method: EPA 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------|--------|-----------|------|------|---|----------|----------------|---------|
| Bromide | 730 | | 25 | ug/L | | | 10/17/22 22:46 | 5 |
| Chloride | 190 | | 2.5 | mg/L | | | 10/12/22 21:03 | 5 |
| Nitrate as N | 1.7 | | 0.25 | mg/L | | | 10/12/22 21:03 | 5 |
| Nitrate Nitrite as N | 1.7 | | 0.25 | mg/L | | | 10/12/22 21:03 | 5 |
| Sulfate | 43 | | 1.3 | mg/L | | | 10/12/22 21:03 | 5 |
| Nitrite as N | ND | | 0.25 | mg/L | | | 10/12/22 21:03 | 5 |

Method: EPA 200.7 Rev 4.4 - Metals (ICP)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------|--------|-----------|------|------|---|----------|----------------|---------|
| Calcium | 37 | | 1.0 | mg/L | | | 10/13/22 13:36 | 1 |
| Magnesium | 34 | | 0.10 | mg/L | | | 10/13/22 13:36 | 1 |
| Potassium | 3.9 | | 1.0 | mg/L | | | 10/13/22 13:36 | 1 |
| Sodium | 71 | | 1.0 | mg/L | | | 10/13/22 13:36 | 1 |

Method: EPA 200.8 - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------|--------|-----------|------|------|---|----------------|----------------|---------|
| Antimony | ND | | 1.0 | ug/L | | 10/14/22 09:23 | 10/17/22 14:05 | 1 |
| Arsenic | ND | | 1.0 | ug/L | | 10/14/22 09:23 | 10/17/22 14:05 | 1 |
| Beryllium | ND | | 1.0 | ug/L | | 10/14/22 09:23 | 10/17/22 14:05 | 1 |
| Cadmium | ND | | 0.50 | ug/L | | 10/14/22 09:23 | 10/17/22 14:05 | 1 |
| Chromium | 2.2 | | 1.0 | ug/L | | 10/14/22 09:23 | 10/17/22 14:05 | 1 |
| Copper | ND | | 2.0 | ug/L | | 10/14/22 09:23 | 10/17/22 14:05 | 1 |
| Lead | ND | | 0.50 | ug/L | | 10/14/22 09:23 | 10/17/22 14:05 | 1 |
| Nickel | ND | | 5.0 | ug/L | | 10/14/22 09:23 | 10/17/22 14:05 | 1 |
| Selenium | ND | | 5.0 | ug/L | | 10/14/22 09:23 | 10/17/22 14:05 | 1 |
| Silver | ND | ^2 | 0.50 | ug/L | | 10/14/22 09:23 | 10/17/22 14:05 | 1 |
| Thallium | ND | | 1.0 | ug/L | | 10/14/22 09:23 | 10/17/22 14:05 | 1 |
| Zinc | ND | | 20 | ug/L | | 10/14/22 09:23 | 10/17/22 14:05 | 1 |

Method: EPA 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|--------|-----------|---------|------|---|----------------|----------------|---------|
| Mercury | ND | | 0.00020 | mg/L | | 10/17/22 12:52 | 10/18/22 14:44 | 1 |

General Chemistry

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|--|--------|-----------|-----|------|---|----------|----------------|---------|
| Alkalinity (SM 2320B) | 64 | | 2.0 | mg/L | | | 10/17/22 20:41 | 1 |
| Bicarbonate Alkalinity as CaCO3 (SM 2320B) | 64 | | 2.0 | mg/L | | | 10/17/22 20:41 | 1 |
| Carbonate Alkalinity as CaCO3 (SM 2320B) | ND | | 2.0 | mg/L | | | 10/17/22 20:41 | 1 |

Eurofins Eaton Monrovia

Client Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Client Sample ID: HALAWA WELLS UNITS 1 (331-023)

Lab Sample ID: 380-24009-1

Date Collected: 10/11/22 10:12

Matrix: Water

Date Received: 10/12/22 10:00

General Chemistry (Continued)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------------------------------|--------|-----------|-------|----------|---|----------|----------------|---------|
| Specific Conductance (SM 2510B) | 850 | | 2.0 | umhos/cm | | | 10/17/22 20:41 | 1 |
| Total Dissolved Solids (SM 2540C) | 530 | | 20 | mg/L | | | 10/12/22 17:53 | 1 |
| Fluoride (SM 4500 F C) | 0.055 | | 0.050 | mg/L | | | 10/17/22 18:35 | 1 |
| pH (SM 4500 H+ B) | 7.7 | HF | | SU | | | 10/17/22 20:41 | 1 |
| Sulfide (SM 4500 S2 D) | ND | | 0.050 | mg/L | | | 10/12/22 18:25 | 1 |

Method: 625 PAH Physis LL (EAL) + TICs - EPA 625 Base/Neutral and Acid Organics i

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------------------|--------|-----------|-------|-------|------|---|----------------|----------------|---------|
| 1-Methylnaphthalene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| 1-Methylphenanthrene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| 2,3,5-Trimethylnaphthalene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| 2,4,5-Trichlorophenol | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| 2,4,6-Trichlorophenol | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| 2,4-Dichlorophenol | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| 2,4-Dinitrophenol | ND | | 0.2 | 0.1 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| 2,6-Dichlorophenol | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| 2,6-Dimethylnaphthalene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| 2,6-Di-tert-butyl-4-methylphenol | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| 2,6-Di-tert-butylphenol | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| 2-Chloronaphthalene | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| 2-Chlorophenol | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| 2-Methyl-4,6-dinitrophenol | ND | | 0.2 | 0.1 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| 2-Methylnaphthalene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| 2-Methylphenol | ND | | 0.2 | 0.1 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| 2-Nitroaniline | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| 2-Nitrophenol | ND | | 0.2 | 0.1 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| 3+4-Methylphenol | ND | | 0.2 | 0.1 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| 3-Nitroaniline | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| 4-Bromophenylphenyl ether | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| 4-Chloro-3-methylphenol | ND | | 0.2 | 0.1 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| 4-Chloroaniline | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| 4-Chlorophenylphenyl ether | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| 4-Nitroaniline | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| 4-Nitrophenol | ND | | 0.2 | 0.1 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| 6-tert-butyl-2,4-dimethylphenol | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| Acenaphthene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| Acenaphthylene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| Aniline | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| Anthracene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| Benz[a]anthracene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| Benzidine | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| Benzo[a]pyrene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| Benzo[b]fluoranthene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| Benzo[e]pyrene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| Benzo[g,h,i]perylene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| Benzo[k]fluoranthene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| Benzoic Acid | ND | | 0.2 | 0.1 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| Benzyl Alcohol | ND | | 0.2 | 0.1 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| Biphenyl | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| Bis(2-Chloroethoxy) methane | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |

Eurofins Eaton Monrovia

Client Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Client Sample ID: HALAWA WELLS UNITS 1 (331-023)

Lab Sample ID: 380-24009-1

Date Collected: 10/11/22 10:12

Matrix: Water

Date Received: 10/12/22 10:00

Method: 625 PAH Physis LL (EAL) + TICs - EPA 625 Base/Neutral and Acid Organics i (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------------|--------|-----------|-------|-------|------|---|----------------|----------------|---------|
| Bis(2-Chloroethyl) ether | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| Bis(2-Chloroisopropyl) ether | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| Chrysene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| Dibenz[a,h]anthracene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| Dibenzo[a,l]pyrene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| Dibenzofuran | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| Dibenzothiophene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| Disalicylidenepropanediamine | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| Fluoranthene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| Fluorene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| Hexachloroethane | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| Naphthalene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| Nitrobenzene | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| N-Nitrosodi-n-propylamine | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| N-Nitrosodiphenylamine | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| Pentachlorophenol | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| Perylene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| Phenanthrene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| Phenol | ND | | 0.2 | 0.1 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| p-tert-Butylphenol | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| Pyrene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/14/22 14:11 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------------|-----------|-----------|----------|----------------|----------------|---------|
| (2,4,6-Tribromophenol) | 111 | | 31 - 143 | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| (d10-Acenaphthene) | 80 | | 45 - 118 | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| (d10-Phenanthrene) | 96 | | 56 - 123 | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| (d12-Chrysene) | 127 | | 36 - 142 | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| (d12-Perylene) | 95 | | 36 - 161 | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| (d5-Phenol) | 36 | | 0 - 85 | 10/18/22 00:00 | 11/14/22 14:11 | 1 |
| (d8-Naphthalene) | 67 | | 20 - 112 | 10/18/22 00:00 | 11/14/22 14:11 | 1 |

Method: 8015 Diesel LL (EAL) and Motor Oil - 8015 - TPH DRO/ORO

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------|--------|-----------|-------|-----|------|---|----------|----------------|---------|
| DIESEL | ND | U | 0.028 | | mg/L | | | 10/24/22 23:55 | 1 |
| JP5 | ND | U | 0.056 | | mg/L | | | 10/24/22 23:55 | 1 |
| JP8 | ND | U | 0.056 | | mg/L | | | 10/24/22 23:55 | 1 |
| MOTOR OIL | ND | U | 0.056 | | mg/L | | | 10/24/22 23:55 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|--------------|-----------|-----------|----------|----------|----------------|---------|
| BROMOBENZENE | 79 | | 60 - 130 | | 10/24/22 23:55 | 1 |
| HEXACOSANE | 106 | | 60 - 130 | | 10/24/22 23:55 | 1 |

Method: 8015 Ethanol - SW846 8015B Gasoline Range Organics

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|--------|-----------|------|-----|------|---|----------|----------------|---------|
| ETHANOL | ND | U | 2000 | | ug/L | | | 10/14/22 13:44 | 1 |

Method: 8015 Gas (Purgeable) LL (EAL) - SW846 8015B Gasoline Range Organics

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|--------|-----------|-------|-----|------|---|----------|----------------|---------|
| GASOLINE | ND | U | 0.020 | | mg/L | | | 10/18/22 09:06 | 1 |

Eurofins Eaton Monrovia

Client Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Client Sample ID: HALAWA WELLS UNITS 1 (331-023)

Lab Sample ID: 380-24009-1

Date Collected: 10/11/22 10:12

Matrix: Water

Date Received: 10/12/22 10:00

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|--------------------|-----------|-----------|----------|----------|----------------|---------|
| BROMOFLUOROBENZENE | 88 | | 60 - 140 | | 10/18/22 09:06 | 1 |

Client Sample ID: TB: HALAWA WELLS UNITS 1

Lab Sample ID: 380-24009-2

Date Collected: 10/11/22 10:12

Matrix: Water

Date Received: 10/12/22 10:00

Method: EPA-DW 524.2 - Volatile Organic Compounds (GC/MS SIM)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|----------|----------------|---------|
| Tertiary Butyl Alcohol (TBA) | ND | | 2.0 | ug/L | | | 10/18/22 23:24 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac | | |
| Toluene-d8 (Surr) | 98 | | 70 - 130 | | 10/18/22 23:24 | 1 | | |
| 4-Bromofluorobenzene (Surr) | 96 | | 70 - 130 | | 10/18/22 23:24 | 1 | | |
| 1,2-Dichloroethane-d4 (Surr) | 112 | | 70 - 130 | | 10/18/22 23:24 | 1 | | |

Method: EPA-DW 524.2 - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------------|--------|-----------|------|------|---|----------|----------------|---------|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| 1,1-Dichloroethane | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| 1,1-Dichloroethylene | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| 1,2,4-Trimethy benzene | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| 1,3,5-Trimethy benzene | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| 2-Butanone (MEK) | ND | | 5.0 | ug/L | | | 10/13/22 16:43 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 5.0 | ug/L | | | 10/13/22 16:43 | 1 |
| Acetone | ND | | 500 | ug/L | | | 10/13/22 16:43 | 1 |
| Benzene | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| Bromobenzene | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| Bromochloromethane | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| Bromodichloromethane | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| Bromoform | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| Bromomethane (Methyl Bromide) | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| Carbon disulfide | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| Carbon tetrachloride | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| Chlorobenzene | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| Chlorodibromomethane | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| Chloroethane | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| Chloroform (Trichloromethane) | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| Dichloromethane | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| cis-1,2-Dichloroethylene | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |

Eurofins Eaton Monrovia

Client Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Client Sample ID: TB: HALAWA WELLS UNITS 1

Lab Sample ID: 380-24009-2

Date Collected: 10/11/22 10:12

Matrix: Water

Date Received: 10/12/22 10:00

Method: EPA-DW 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------------------------------|--------|-----------|------|------|---|----------|----------------|---------|
| Dibromomethane | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| Dichlorodifluoromethane | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| Ethylbenzene | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| Isopropyl benzene | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| m,p-Xylenes | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| m-Dichlorobenzene (1,3-DCB) | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| Methyl-tert-butyl Ether (MTBE) | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| Naphthalene | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| n-Butylbenzene | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| N-Propylbenzene | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| o-Dichlorobenzene (1,2-DCB) | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| o-Chlorotoluene | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| o-Xylene | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| p-Chlorotoluene | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| p-Dichlorobenzene (1,4-DCB) | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| p-Isopropyltoluene | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| sec-Butylbenzene | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| Styrene | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| Tert-amyl methyl ether | ND | | 3.0 | ug/L | | | 10/13/22 16:43 | 1 |
| Tert-butyl ethyl ether | ND | | 3.0 | ug/L | | | 10/13/22 16:43 | 1 |
| tert-Butylbenzene | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| Tetrachloroethene (PCE) | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| Toluene | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| 1,3-Dichloropropene, Total | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| Xylenes, Total | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| trans-1,2-Dichloroethylene | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| Trichloroethylene (TCE) | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| Trichlorofluoromethane (Freon 11) | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| Vinyl Chloride (VC) | ND | | 0.30 | ug/L | | | 10/13/22 16:43 | 1 |
| Trichlorotrifluoroethane | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| Bromoethane | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| Chloromethane (methyl chloride) | ND | | 0.50 | ug/L | | | 10/13/22 16:43 | 1 |
| Diisopropyl ether | ND | | 3.0 | ug/L | | | 10/13/22 16:43 | 1 |

| Tentatively Identified Compound | Est. Result | Qualifier | Unit | D | RT | CAS No. | Prepared | Analyzed | Dil Fac |
|---------------------------------|-------------|-----------|------|---|------|---------|----------|----------------|---------|
| Unknown | 11 | T J | ug/L | | 0.99 | | | 10/13/22 16:43 | 1 |
| Acetaldehyde | 4.3 | T J N | ug/L | | 1.44 | 75-07-0 | | 10/13/22 16:43 | 1 |
| Furfural | 19 | T J N | ug/L | | 9.77 | 98-01-1 | | 10/13/22 16:43 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 105 | | 70 - 130 | | 10/13/22 16:43 | 1 |
| 4-Bromofluorobenzene (Surr) | 105 | | 70 - 130 | | 10/13/22 16:43 | 1 |
| Toluene-d8 (Surr) | 94 | | 70 - 130 | | 10/13/22 16:43 | 1 |

Method: EPA-DW2 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------------------------|--------|-----------|-------|------|---|----------------|----------------|---------|
| 1,2,3-Trichloropropane | ND | | 0.041 | ug/L | | 10/20/22 13:23 | 10/20/22 23:15 | 1 |
| 1,2-D bromo-3-Chloropropane | ND | | 0.010 | ug/L | | 10/20/22 13:23 | 10/20/22 23:15 | 1 |

Eurofins Eaton Monrovia

Client Sample Results

Client: City & County of Honolulu
 Project/Site: RED-HILL

Job ID: 380-24009-1

Client Sample ID: TB: HALAWA WELLS UNITS 1

Lab Sample ID: 380-24009-2

Date Collected: 10/11/22 10:12

Matrix: Water

Date Received: 10/12/22 10:00

Method: EPA-DW2 504.1 - EDB, DBCP and 1,2,3-TCP (GC) (Continued)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------------------|-----------|-----------|----------|------|---|----------------|----------------|---------|
| 1,2-D bromoethane | ND | | 0.010 | ug/L | | 10/20/22 13:23 | 10/20/22 23:15 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | Prepared | Analyzed | Dil Fac |
| 1,2-Dibromopropane (Surr) | 109 | | 60 - 140 | | | 10/20/22 13:23 | 10/20/22 23:15 | 1 |

Method: 8015 Gas (Purgeable) LL (EAL) - SW846 8015B Gasoline Range Organics

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|--------------------|-----------|-----------|----------|-----|------|---|----------|----------------|---------|
| GASOLINE | ND | U | 0.020 | | mg/L | | | 10/18/22 09:41 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| BROMOFLUOROBENZENE | 92 | | 60 - 140 | | | | | 10/18/22 09:41 | 1 |

Action Limit Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Client Sample ID: HALAWA WELLS UNITS 1 (331-023)

Lab Sample ID: 380-24009-1

Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits have been highlighted for your convenience.

| Analyte | Result | Qualifier | Unit | Limit | EPAMCL | HI Org | EPAMCL | Method | Prep Type |
|-------------------------------|--------|-----------|------|-------|--------|--------|--------|--------|-----------|
| | | | | | S | Limit | Limit | | |
| 1,1,1-Trichloroethane | ND | | ug/L | | | 200.0 | 200 | 524.2 | Total/NA |
| 1,1,2-Trichloroethane | ND | | ug/L | | | 5.000 | 5 | 524.2 | Total/NA |
| 1,1-Dichloroethylene | ND | | ug/L | | | 7.000 | 7 | 524.2 | Total/NA |
| 1,2,3-Trichloropropane | ND | | ug/L | | | 0.6000 | | 524.2 | Total/NA |
| 1,2,4-Trichlorobenzene | ND | | ug/L | | | 70.00 | 70 | 524.2 | Total/NA |
| 1,2-Dichloroethane | ND | | ug/L | | | 5.000 | 5 | 524.2 | Total/NA |
| 1,2-Dichloropropane | ND | | ug/L | | | 5.000 | 5 | 524.2 | Total/NA |
| Benzene | ND | | ug/L | | | 5.000 | 5 | 524.2 | Total/NA |
| Carbon tetrachloride | ND | | ug/L | | | 5.000 | 5 | 524.2 | Total/NA |
| Chlorobenzene | ND | | ug/L | | | 100.0 | 100 | 524.2 | Total/NA |
| Dichloromethane | ND | | ug/L | | | 5.000 | 5 | 524.2 | Total/NA |
| cis-1,2-Dichloroethylene | ND | | ug/L | | | 70.00 | 70 | 524.2 | Total/NA |
| Ethylbenzene | ND | | ug/L | | | 700.0 | 700 | 524.2 | Total/NA |
| o-Dichlorobenzene (1,2-DCB) | ND | | ug/L | | | 600.0 | 600 | 524.2 | Total/NA |
| p-Dichlorobenzene (1,4-DCB) | ND | | ug/L | | | 75.000 | 75 | 524.2 | Total/NA |
| Styrene | ND | | ug/L | | | 100.0 | 100 | 524.2 | Total/NA |
| Tetrachloroethene (PCE) | ND | | ug/L | | | 5.000 | 5 | 524.2 | Total/NA |
| Toluene | ND | | ug/L | | | 1000 | 1000 | 524.2 | Total/NA |
| Xylenes, Total | ND | | ug/L | | | 10000 | 10000 | 524.2 | Total/NA |
| trans-1,2-Dichloroethylene | ND | | ug/L | | | 100.0 | 100 | 524.2 | Total/NA |
| Trichloroethylene (TCE) | ND | | ug/L | | | 5.000 | 5 | 524.2 | Total/NA |
| Vinyl Chloride (VC) | ND | | ug/L | | | 2.000 | 2 | 524.2 | Total/NA |
| Alachlor | ND | | ug/L | 2 | | | | 525.2 | Total/NA |
| Atrazine | ND | | ug/L | 3 | | | | 525.2 | Total/NA |
| Benzo[a]pyrene | ND | | ug/L | 0.2 | | | | 525.2 | Total/NA |
| Bis(2-ethylhexyl) phthalate | ND | | ug/L | 6 | | | | 525.2 | Total/NA |
| Di(2-ethylhexyl)adipate | ND | | ug/L | 400 | | | | 525.2 | Total/NA |
| Endrin | ND | ^3+ | ug/L | 2 | | | | 525.2 | Total/NA |
| gamma-BHC (Lindane) | ND | | ug/L | 0.2 | | | | 525.2 | Total/NA |
| Heptachlor | ND | | ug/L | 0.4 | | | | 525.2 | Total/NA |
| Heptachlor epoxide (isomer B) | ND | | ug/L | 0.2 | | | | 525.2 | Total/NA |
| Hexachlorobenzene | ND | ^3+ | ug/L | 1 | | | | 525.2 | Total/NA |
| Hexachlorocyclopentadiene | ND | | ug/L | 50 | | | | 525.2 | Total/NA |
| Methoxychlor | ND | | ug/L | 40 | | | | 525.2 | Total/NA |
| Simazine | ND | | ug/L | 4 | | | | 525.2 | Total/NA |
| 1,2,3-Trichloropropane | ND | | ug/L | | | 0.6000 | | 504.1 | Total/NA |
| 1,2-D bromo-3-Chloropropene | ND | | ug/L | 0.2 | | | | 504.1 | Total/NA |
| 1,2-D bromoethane | ND | | ug/L | 0.05 | | | | 504.1 | Total/NA |
| Toxaphene | ND | | ug/L | 3 | | | | 505 | Total/NA |
| Alachlor | ND | | ug/L | 2 | | | | 505 | Total/NA |
| Endrin | ND | | ug/L | 2 | | | | 505 | Total/NA |
| Heptachlor | ND | | ug/L | 0.4 | | | | 505 | Total/NA |
| Heptachlor epoxide | 0.019 | | ug/L | 0.2 | | | | 505 | Total/NA |
| gamma-BHC (Lindane) | ND | | ug/L | 0.2 | | | | 505 | Total/NA |
| Methoxychlor | ND | | ug/L | 40 | | | | 505 | Total/NA |

Eurofins Eaton Monrovia

Action Limit Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Client Sample ID: HALAWA WELLS UNITS 1 (331-023)
(Continued)

Lab Sample ID: 380-24009-1

Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits have been highlighted for your convenience.

| Analyte | Result | Qualifier | Unit | Limit | EPAMCL S Limit | HI Org Limit | EPAMCL Limit | Method | Prep Type |
|-------------------------------------|------------|-----------|------|-------|----------------------|-----------------|-----------------|-------------|-----------|
| Polychlorinated biphenyls, Total | ND | | ug/L | 0.5 | | | | 505 | Total/NA |
| Chloride | 190 | | mg/L | | 250 | | | 300.0 | Total/NA |
| Nitrate as N | 1.7 | | mg/L | 10 | | | | 300.0 | Total/NA |
| Nitrate Nitrite as N | 1.7 | | mg/L | 10 | | | | 300.0 | Total/NA |
| Sulfate | 43 | | mg/L | | 250 | | | 300.0 | Total/NA |
| Nitrite as N | ND | | mg/L | 1 | | | | 300.0 | Total/NA |
| Mercury | ND | | mg/L | 0.002 | | | | 245.1 | Total/NA |
| Total Dissolved Solids | 530 | | mg/L | | 500 | | | SM 2540C | Total/NA |
| Fluoride | 0.055 | | mg/L | 4 | 2 | | | SM 4500 F C | Total/NA |

Client Sample ID: TB: HALAWA WELLS UNITS 1

Lab Sample ID: 380-24009-2

Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits have been highlighted for your convenience.

| Analyte | Result | Qualifier | Unit | HI Org Limit | EPAMCL Limit | RL | Method | Prep Type |
|-----------------------------|--------|-----------|------|-----------------|-----------------|-------|--------|-----------|
| 1,1,1-Trichloroethane | ND | | ug/L | 200.0 | 200 | 0.50 | 524.2 | Total/NA |
| 1,1,2-Trichloroethane | ND | | ug/L | 5.000 | 5 | 0.50 | 524.2 | Total/NA |
| 1,1-Dichloroethylene | ND | | ug/L | 7.000 | 7 | 0.50 | 524.2 | Total/NA |
| 1,2,3-Trichloropropane | ND | | ug/L | 0.6000 | | 0.50 | 524.2 | Total/NA |
| 1,2,4-Trichlorobenzene | ND | | ug/L | 70.00 | 70 | 0.50 | 524.2 | Total/NA |
| 1,2-Dichloroethane | ND | | ug/L | 5.000 | 5 | 0.50 | 524.2 | Total/NA |
| 1,2-Dichloropropane | ND | | ug/L | 5.000 | 5 | 0.50 | 524.2 | Total/NA |
| Benzene | ND | | ug/L | 5.000 | 5 | 0.50 | 524.2 | Total/NA |
| Carbon tetrachloride | ND | | ug/L | 5.000 | 5 | 0.50 | 524.2 | Total/NA |
| Chlorobenzene | ND | | ug/L | 100.0 | 100 | 0.50 | 524.2 | Total/NA |
| Dichloromethane | ND | | ug/L | 5.000 | 5 | 0.50 | 524.2 | Total/NA |
| cis-1,2-Dichloroethylene | ND | | ug/L | 70.00 | 70 | 0.50 | 524.2 | Total/NA |
| Ethylbenzene | ND | | ug/L | 700.0 | 700 | 0.50 | 524.2 | Total/NA |
| o-Dichlorobenzene (1,2-DCB) | ND | | ug/L | 600.0 | 600 | 0.50 | 524.2 | Total/NA |
| p-Dichlorobenzene (1,4-DCB) | ND | | ug/L | 75.000 | 75 | 0.50 | 524.2 | Total/NA |
| Styrene | ND | | ug/L | 100.0 | 100 | 0.50 | 524.2 | Total/NA |
| Tetrachloroethene (PCE) | ND | | ug/L | 5.000 | 5 | 0.50 | 524.2 | Total/NA |
| Toluene | ND | | ug/L | 1000 | 1000 | 0.50 | 524.2 | Total/NA |
| Xylenes, Total | ND | | ug/L | 10000 | 10000 | 0.50 | 524.2 | Total/NA |
| trans-1,2-Dichloroethylene | ND | | ug/L | 100.0 | 100 | 0.50 | 524.2 | Total/NA |
| Trichloroethylene (TCE) | ND | | ug/L | 5.000 | 5 | 0.50 | 524.2 | Total/NA |
| Vinyl Chloride (VC) | ND | | ug/L | 2.000 | 2 | 0.30 | 524.2 | Total/NA |
| 1,2,3-Trichloropropane | ND | | ug/L | 0.6000 | | 0.041 | 504.1 | Total/NA |
| 1,2-D bromo-3-Chloropropane | ND | | ug/L | | | 0.010 | 504.1 | Total/NA |
| 1,2-D bromoethane | ND | | ug/L | | | 0.010 | 504.1 | Total/NA |

Eurofins Eaton Monrovia

Surrogate Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 524.2 - Volatile Organic Compounds (GC/MS SIM)

Matrix: Water

Prep Type: Total/NA

| Lab Sample ID | Client Sample ID | Percent Surrogate Recovery (Acceptance Limits) | | |
|------------------|----------------------------|--|-----------------|-----------------|
| | | TOL (70-130) | BFB (70-130) | DCA (70-130) |
| 380-24009-1 | HALAWA WELLS UNITS 1 (331) | 98 | 96 | 112 |
| 380-24009-2 | TB: HALAWA WELLS UNITS 1 | 98 | 96 | 112 |
| LCS 380-21101/2 | Lab Control Sample | 98 | 95 | 113 |
| LCSD 380-21101/3 | Lab Control Sample Dup | 99 | 97 | 113 |
| MB 380-21101/5 | Method Blank | 99 | 96 | 113 |

Surrogate Legend
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DCA = 1,2-Dichloroethane-d4 (Surr)

Method: 524.2 - Volatile Organic Compounds (GC/MS SIM)

Matrix: Water

Prep Type: Total/NA

| Lab Sample ID | Client Sample ID | Percent Surrogate Recovery (Acceptance Limits) | | |
|-----------------|--------------------|--|-----------------|-----------------|
| | | TOL (50-150) | BFB (50-150) | DCA (50-150) |
| MRL 380-21101/4 | Lab Control Sample | 100 | 100 | 114 |

Surrogate Legend
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DCA = 1,2-Dichloroethane-d4 (Surr)

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

| Lab Sample ID | Client Sample ID | Percent Surrogate Recovery (Acceptance Limits) | | |
|------------------|----------------------------|--|-----------------|-----------------|
| | | DCA (70-130) | BFB (70-130) | TOL (70-130) |
| 380-24009-1 | HALAWA WELLS UNITS 1 (331) | 110 | 100 | 97 |
| 380-24009-2 | TB: HALAWA WELLS UNITS 1 | 105 | 105 | 94 |
| LCS 380-20582/4 | Lab Control Sample | 98 | 105 | 106 |
| LCSD 380-20582/5 | Lab Control Sample Dup | 97 | 99 | 107 |
| MB 380-20582/8 | Method Blank | 110 | 95 | 87 |
| MRL 380-20582/3 | Lab Control Sample | 102 | 101 | 89 |
| MRL 380-20582/7 | Lab Control Sample | 105 | 102 | 93 |

Surrogate Legend
DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)

Method: 525.2 - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

| Lab Sample ID | Client Sample ID | Percent Surrogate Recovery (Acceptance Limits) | | |
|--------------------|----------------------------|--|-----------------|-----------------|
| | | 2NMX (70-130) | PRY (70-130) | TPP (70-130) |
| 380-24009-1 | HALAWA WELLS UNITS 1 (331) | 97 | 91 | 107 |
| 380-24398-B-1-A MS | Matrix Spike | 99 | 87 | 101 |
| 380-24401-B-1-A DU | Duplicate | 98 | 91 | 106 |

Eurofins Eaton Monrovia

Surrogate Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Matrix: Water

Prep Type: Total/NA

| Lab Sample ID | Client Sample ID | Percent Surrogate Recovery (Acceptance Limits) | | |
|--------------------|------------------------|--|-----------------|-----------------|
| | | 2NMX (70-130) | PRY (70-130) | TPP (70-130) |
| LCS 380-20849/3-A | Lab Control Sample | 98 | 96 | 107 |
| LCSD 380-20849/4-A | Lab Control Sample Dup | 97 | 95 | 108 |
| MB 380-20849/1-A | Method Blank | 98 | 93 | 106 |
| MRL 380-20849/2-A | Lab Control Sample | 88 | 90 | 121 |

Surrogate Legend

2NMX = 2-Nitro-m-xylene
PRY = Perylene-d12
TPP = Triphenylphosphate

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Matrix: Water

Prep Type: Total/NA

| Lab Sample ID | Client Sample ID | Percent Surrogate Recovery (Acceptance Limits) |
|--------------------|-----------------------------------|--|
| | | DBPP2 (60-140) |
| 380-23978-F-1-A MS | Matrix Spike | 111 |
| 380-23978-M-2-A DU | Duplicate | 115 |
| 380-24009-1 | HALAWA WELLS UNITS 1 (331-023) | 111 |
| 380-24009-2 | TB: HALAWA WELLS UNITS 1 | 109 |
| LCS 380-21364/3-A | Lab Control Sample | 113 |
| MBL 380-21364/4-A | Method Blank | 99 |
| MRL 380-21364/1-A | Lab Control Sample | 114 |
| MRL 380-21364/2-A | Lab Control Sample | 111 |

Surrogate Legend

DBPP = 1,2-D bromopropane (Surr)

Method: 505 - Organochlorine Pesticides/PCBs (GC)

Matrix: Water

Prep Type: Total/NA

| Lab Sample ID | Client Sample ID | Percent Surrogate Recovery (Acceptance Limits) |
|---------------------|-----------------------------------|--|
| | | TCX1 (70-130) |
| 380-23418-C-1-B MS | Matrix Spike | 106 |
| 380-23418-D-1-B MS | Matrix Spike | 97 |
| 380-24009-1 | HALAWA WELLS UNITS 1 (331-023) | 97 |
| 380-23784-AI-1-A MS | Matrix Spike | 101 |
| 380-23784-AJ-1-A MS | Matrix Spike | 101 |
| MB 380-20633/7-A | Method Blank | 102 |
| MRL 380-20633/2-A | Lab Control Sample | 106 |
| MRL 380-20633/3-A | Lab Control Sample | 95 |
| MRL 380-20633/4-A | Lab Control Sample | 101 |
| MRL 380-20633/5-A | Lab Control Sample | 100 |
| MRL 380-20633/6-A | Lab Control Sample | 99 |

Surrogate Legend

TCX = Tetrachloro-m-xylene

Surrogate Summary

Client: City & County of Honolulu
 Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 625 PAH Physis LL (EAL) + TICs - EPA 625 Base/Neutral and Acid Organics i

Matrix: BlankMatrix

Prep Type: Total/NA

| Lab Sample ID | Client Sample ID | Percent Surrogate Recovery (Acceptance Limits) | | | | | | |
|---------------|------------------------|--|----------------------|-----------------|-----------------|----------------|-----------------|-----------------|
| | | Acenaphtl (27-133) | Phenanth (43-129) | CRY (52-144) | NPT (25-125) | PHL (0-130) | PRY (36-161) | TBP (30-130) |
| 100802-B1 | Method Blank | 92 | 92 | 82 | 91 | 115 | 84 | 73 |
| 100802-BS1 | Lab Control Sample | 85 | 91 | 91 | 78 | 78 | 92 | 79 |
| 100802-BS2 | Lab Control Sample Dup | 71 | 93 | 93 | 68 | 60 | 97 | 77 |

Surrogate Legend

(d10-Acenaphthene) = (d10-Acenaphthene)
 (d10-Phenanthrene) = (d10-Phenanthrene)
 CRY = (d12-Chrysene)
 NPT = (d8-Naphthalene)
 PHL = (d5-Phenol)
 PRY = (d12-Perylene)
 TBP = (2,4,6-Tribromophenol)

Method: 625 PAH Physis LL (EAL) + TICs - EPA 625 Base/Neutral and Acid Organics i

Matrix: Water

Prep Type: Total/NA

| Lab Sample ID | Client Sample ID | Percent Surrogate Recovery (Acceptance Limits) | | | | | | |
|---------------|----------------------------|--|----------------------|-----------------|-----------------|---------------|-----------------|-----------------|
| | | Acenaphtl (45-118) | Phenanth (56-123) | CRY (36-142) | NPT (20-112) | PHL (0-85) | PRY (36-161) | TBP (31-143) |
| 380-24009-1 | HALAWA WELLS UNITS 1 (331) | 80 | 96 | 127 | 67 | 36 | 95 | 111 |

Surrogate Legend

(d10-Acenaphthene) = (d10-Acenaphthene)
 (d10-Phenanthrene) = (d10-Phenanthrene)
 CRY = (d12-Chrysene)
 NPT = (d8-Naphthalene)
 PHL = (d5-Phenol)
 PRY = (d12-Perylene)
 TBP = (2,4,6-Tribromophenol)

Method: 8015 Diesel LL (EAL) and Motor Oil - 8015 - TPH DRO/ORO

Matrix: WATER

Prep Type: Total/NA

| Lab Sample ID | Client Sample ID | Percent Surrogate Recovery (Acceptance Limits) | |
|---------------|------------------|--|---------|
| | | BB | XACOSAI |
| 22DSJ049WB | Method Blank | | |

Surrogate Legend

BB = BROMOBENZENE
 HEXACOSANE = HEXACOSANE

Method: 8015 Diesel LL (EAL) and Motor Oil - 8015 - TPH DRO/ORO

Matrix: WATER

Prep Type: Total/NA

| Lab Sample ID | Client Sample ID | Percent Surrogate Recovery (Acceptance Limits) | |
|---------------|--------------------|--|---------------------|
| | | BB (60-130) | XACOSAI (60-130) |
| 22DSJ049WL | Lab Control Sample | 103 | 99 |
| 22J197-01M | 380-24009-1 MS | 102 | 111 |
| 22J197-01S | 380-24009-1 MSD | 95 | 109 |
| 22J5J049WL | Lab Control Sample | 102 | 94 |
| 22J8J049WL | Lab Control Sample | 99 | 101 |

Surrogate Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Surrogate Legend

BB = BROMOBENZENE
HEXACOSANE = HEXACOSANE

Method: 8015 Diesel LL (EAL) and Motor Oil - 8015 - TPH DRO/ORO

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

| Lab Sample ID | Client Sample ID | BB (60-130) | HEXACOSANE (60-130) |
|---------------|----------------------------|----------------|------------------------|
| 380-24009-1 | HALAWA WELLS UNITS 1 (331) | 79 | 106 |

Surrogate Legend

BB = BROMOBENZENE
HEXACOSANE = HEXACOSANE

Method: 8015 Gas (Purgeable) LL (EAL) - SW846 8015B Gasoline Range Organics

Matrix: WATER

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

| Lab Sample ID | Client Sample ID | BFB |
|---------------|------------------|-----|
| 22VGH7J09B | Method Blank | |

Surrogate Legend

BFB = BROMOFLUOROBENZENE

Method: 8015 Gas (Purgeable) LL (EAL) - SW846 8015B Gasoline Range Organics

Matrix: WATER

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

| Lab Sample ID | Client Sample ID | BFB (70-130) |
|---------------|--------------------|-----------------|
| 22VGH7J09C | LCD | 105 |
| 22VGH7J09L | Lab Control Sample | 103 |

Surrogate Legend

BFB = BROMOFLUOROBENZENE

Method: 8015 Gas (Purgeable) LL (EAL) - SW846 8015B Gasoline Range Organics

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

| Lab Sample ID | Client Sample ID | BFB (60-140) |
|---------------|----------------------------|-----------------|
| 380-24009-1 | HALAWA WELLS UNITS 1 (331) | 88 |
| 380-24009-2 | TB: HALAWA WELLS UNITS 1 | 92 |

Surrogate Legend

BFB = BROMOFLUOROBENZENE

QC Sample Results

Client: City & County of Honolulu
 Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 380-20582/8
Matrix: Water
Analysis Batch: 20582

Client Sample ID: Method Blank
Prep Type: Total/NA

| Analyte | MB Result | MB Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|--------------------------------|--------------|-----------------|------|------|---|----------|----------------|---------|
| 1,1,1,2-Tetrachloroethane | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| 1,1-Dichloroethane | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| 1,1-Dichlorethylene | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| 1,2,4-Trimethy benzene | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| 1,3,5-Trimethy benzene | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| 2-Butanone (MEK) | ND | | 5.0 | ug/L | | | 10/13/22 14:36 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 5.0 | ug/L | | | 10/13/22 14:36 | 1 |
| Acetone | ND | | 500 | ug/L | | | 10/13/22 14:36 | 1 |
| Benzene | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| Bromobenzene | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| Bromochloromethane | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| Bromodichloromethane | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| Bromoform | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| Bromomethane (Methyl Bromide) | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| Carbon disulfide | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| Carbon tetrachloride | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| Chlorobenzene | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| Chlorodibromomethane | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| Chloroethane | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| Chloroform (Trichloromethane) | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| Dichloromethane | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| cis-1,2-Dichloroethylene | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| Dibromomethane | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| Dichlorodifluoromethane | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| Ethylbenzene | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| Isopropy benzene | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| m,p-Xylenes | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| m-Dichlorobenzene (1,3-DCB) | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| Methyl-tert-butyl Ether (MTBE) | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| Naphthalene | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| n-Butylbenzene | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| N-Propylbenzene | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| o-Dichlorobenzene (1,2-DCB) | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| o-Chlorotoluene | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| o-Xylene | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |

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QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 380-20582/8
Matrix: Water
Analysis Batch: 20582

Client Sample ID: Method Blank
Prep Type: Total/NA

| Analyte | MB Result | MB Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------------------------------|--------------|-----------------|------|------|---|----------|----------------|---------|
| p-Chlorotoluene | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| p-Dichlorobenzene (1,4-DCB) | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| p-Isopropyltoluene | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| sec-Butylbenzene | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| Styrene | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| Tert-amyl methyl ether | ND | | 3.0 | ug/L | | | 10/13/22 14:36 | 1 |
| Tert-butyl ethyl ether | ND | | 3.0 | ug/L | | | 10/13/22 14:36 | 1 |
| tert-Butylbenzene | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| Tetrachloroethene (PCE) | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| Toluene | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| 1,3-Dichloropropene, Total | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| Xylenes, Total | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| trans-1,2-Dichloroethylene | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| Trichloroethylene (TCE) | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| Trichlorofluoromethane (Freon 11) | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| Vinyl Chloride (VC) | ND | | 0.30 | ug/L | | | 10/13/22 14:36 | 1 |
| Trichlorotrifluoroethane | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| Bromoethane | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| Chloromethane (methyl chloride) | ND | | 0.50 | ug/L | | | 10/13/22 14:36 | 1 |
| Diisopropyl ether | ND | | 3.0 | ug/L | | | 10/13/22 14:36 | 1 |

| Tentatively Identified Compound | MB Est. Result | MB Qualifier | Unit | D | RT | CAS No. | Prepared | Analyzed | Dil Fac |
|---------------------------------|-------------------|-----------------|------|---|------|----------|----------|----------------|---------|
| Cyclotrisiloxane, hexamethyl- | 0.731 | T J N | ug/L | | 8.55 | 541-05-9 | | 10/13/22 14:36 | 1 |

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------------|-----------------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 110 | | 70 - 130 | | 10/13/22 14:36 | 1 |
| 4-Bromofluorobenzene (Surr) | 95 | | 70 - 130 | | 10/13/22 14:36 | 1 |
| Toluene-d8 (Surr) | 87 | | 70 - 130 | | 10/13/22 14:36 | 1 |

Lab Sample ID: LCS 380-20582/4
Matrix: Water
Analysis Batch: 20582

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---------------------------|----------------|---------------|------------------|------|---|------|----------------|
| 1,1,1,2-Tetrachloroethane | 5.00 | 5.52 | | ug/L | | 110 | 70 - 130 |
| 1,1,1-Trichloroethane | 5.00 | 4.77 | | ug/L | | 95 | 70 - 130 |
| 1,1,2,2-Tetrachloroethane | 5.00 | 5.47 | | ug/L | | 109 | 70 - 130 |
| 1,1,2-Trichloroethane | 5.00 | 5.70 | | ug/L | | 114 | 70 - 130 |
| 1,1-Dichloroethane | 5.00 | 5.06 | | ug/L | | 101 | 70 - 130 |
| 1,1-Dichlorethylene | 5.00 | 5.19 | | ug/L | | 104 | 70 - 130 |
| 1,1-Dichloropropene | 5.00 | 5.53 | | ug/L | | 111 | 70 - 130 |
| 1,2,3-Trichlorobenzene | 5.00 | 5.45 | | ug/L | | 109 | 70 - 130 |
| 1,2,3-Trichloropropane | 5.00 | 5.52 | | ug/L | | 110 | 70 - 130 |
| 1,2,4-Trichlorobenzene | 5.00 | 5.31 | | ug/L | | 106 | 70 - 130 |
| 1,2,4-Trimethy benzene | 5.00 | 6.30 | | ug/L | | 126 | 70 - 130 |
| 1,2-Dichloroethane | 5.00 | 5.46 | | ug/L | | 109 | 70 - 130 |
| 1,2-Dichloropropane | 5.00 | 5.45 | | ug/L | | 109 | 70 - 130 |

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QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 380-20582/4
Matrix: Water
Analysis Batch: 20582

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|-----------------------------------|----------------|---------------|------------------|------|---|------|----------------|
| 1,3,5-Trimethy benzene | 5.00 | 6.34 | | ug/L | | 127 | 70 - 130 |
| 1,3-Dichloropropane | 5.00 | 5.41 | | ug/L | | 108 | 70 - 130 |
| 2,2-Dichloropropane | 5.00 | 5.27 | | ug/L | | 105 | 70 - 130 |
| 2-Butanone (MEK) | 50.0 | 61.4 | | ug/L | | 123 | 70 - 130 |
| 4-Methyl-2-pentanone (MIBK) | 50.0 | 58.7 | | ug/L | | 117 | 70 - 130 |
| Acetone | 50.0 | 61.6 | J | ug/L | | 123 | 70 - 130 |
| Benzene | 5.00 | 5.56 | | ug/L | | 111 | 70 - 130 |
| Bromobenzene | 5.00 | 5.82 | | ug/L | | 116 | 70 - 130 |
| Bromochloromethane | 5.00 | 5.27 | | ug/L | | 105 | 70 - 130 |
| Bromodichloromethane | 5.00 | 5.34 | | ug/L | | 107 | 70 - 130 |
| Bromoform | 5.00 | 5.25 | | ug/L | | 105 | 70 - 130 |
| Bromomethane (Methyl Bromide) | 5.00 | 5.28 | | ug/L | | 106 | 70 - 130 |
| Carbon disulfide | 5.00 | 5.12 | | ug/L | | 102 | 70 - 130 |
| Carbon tetrachloride | 5.00 | 5.55 | | ug/L | | 111 | 70 - 130 |
| Chlorobenzene | 5.00 | 5.52 | | ug/L | | 110 | 70 - 130 |
| Chlorodibromomethane | 5.00 | 5.43 | | ug/L | | 109 | 70 - 130 |
| Dichloromethane | 5.00 | 4.89 | | ug/L | | 98 | 70 - 130 |
| cis-1,3-Dichloropropene | 5.00 | 4.80 | | ug/L | | 96 | 70 - 130 |
| Ethylbenzene | 5.00 | 5.64 | | ug/L | | 113 | 70 - 130 |
| Hexachlorobutadiene | 5.00 | 5.75 | | ug/L | | 115 | 70 - 130 |
| Isopropyl benzene | 5.00 | 5.73 | | ug/L | | 115 | 70 - 130 |
| m,p-Xylenes | 10.0 | 12.3 | | ug/L | | 123 | 70 - 130 |
| m-Dichlorobenzene (1,3-DCB) | 5.00 | 5.83 | | ug/L | | 117 | 70 - 130 |
| Methyl-tert-butyl Ether (MTBE) | 5.00 | 4.72 | | ug/L | | 94 | 70 - 130 |
| Naphthalene | 5.00 | 4.92 | | ug/L | | 98 | 70 - 130 |
| n-Butylbenzene | 5.00 | 5.99 | | ug/L | | 120 | 70 - 130 |
| N-Propylbenzene | 5.00 | 5.90 | | ug/L | | 118 | 70 - 130 |
| o-Dichlorobenzene (1,2-DCB) | 5.00 | 5.82 | | ug/L | | 116 | 70 - 130 |
| o-Chlorotoluene | 5.00 | 6.02 | | ug/L | | 120 | 70 - 130 |
| o-Xylene | 5.00 | 5.93 | | ug/L | | 119 | 70 - 130 |
| p-Chlorotoluene | 5.00 | 6.33 | | ug/L | | 127 | 70 - 130 |
| p-Dichlorobenzene (1,4-DCB) | 5.00 | 6.02 | | ug/L | | 120 | 70 - 130 |
| p-Isopropyltoluene | 5.00 | 6.10 | | ug/L | | 122 | 70 - 130 |
| sec-Butylbenzene | 5.00 | 6.16 | | ug/L | | 123 | 70 - 130 |
| Styrene | 5.00 | 6.06 | | ug/L | | 121 | 70 - 130 |
| Tert-amyl methyl ether | 5.00 | 4.93 | | ug/L | | 99 | 70 - 130 |
| Tert-butyl ethyl ether | 5.00 | 4.69 | | ug/L | | 94 | 70 - 130 |
| tert-Butylbenzene | 5.00 | 5.81 | | ug/L | | 116 | 70 - 130 |
| Tetrachloroethene (PCE) | 5.00 | 5.56 | | ug/L | | 111 | 70 - 130 |
| Toluene | 5.00 | 5.96 | | ug/L | | 119 | 70 - 130 |
| 1,3-Dichloropropene, Total | 10.0 | 9.42 | | ug/L | | 94 | 70 - 130 |
| Xylenes, Total | 15.0 | 18.2 | | ug/L | | 122 | 70 - 130 |
| trans-1,2-Dichloroethylene | 5.00 | 5.14 | | ug/L | | 103 | 70 - 130 |
| trans-1,3-Dichloropropene | 5.00 | 4.62 | | ug/L | | 92 | 70 - 130 |
| Trichloroethylene (TCE) | 5.00 | 5.62 | | ug/L | | 112 | 70 - 130 |
| Trichlorofluoromethane (Freon 11) | 5.00 | 5.89 | | ug/L | | 118 | 70 - 130 |
| Vinyl Chloride (VC) | 5.00 | 4.97 | | ug/L | | 99 | 70 - 130 |
| Trichlorotrifluoroethane | 5.00 | 5.88 | | ug/L | | 118 | 70 - 130 |

Eurofins Eaton Monrovia

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 380-20582/4
Matrix: Water
Analysis Batch: 20582

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|-------------------|-------------|------------|---------------|------|---|------|-------------|
| Bromoethane | 5.00 | 5.37 | | ug/L | | 107 | 70 - 130 |
| Diisopropyl ether | 5.00 | 4.94 | | ug/L | | 99 | 70 - 130 |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|------------------------------|---------------|---------------|----------|
| 1,2-Dichloroethane-d4 (Surr) | 98 | | 70 - 130 |
| 4-Bromofluorobenzene (Surr) | 105 | | 70 - 130 |
| Toluene-d8 (Surr) | 106 | | 70 - 130 |

Lab Sample ID: LCSD 380-20582/5
Matrix: Water
Analysis Batch: 20582

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|-------------------------------|-------------|-------------|----------------|------|---|------|-------------|-----|-----------|
| 1,1,1,2-Tetrachloroethane | 5.00 | 5.25 | | ug/L | | 105 | 70 - 130 | 5 | 20 |
| 1,1,1-Trichloroethane | 5.00 | 4.81 | | ug/L | | 96 | 70 - 130 | 1 | 20 |
| 1,1,2,2-Tetrachloroethane | 5.00 | 5.36 | | ug/L | | 107 | 70 - 130 | 2 | 20 |
| 1,1,2-Trichloroethane | 5.00 | 5.51 | | ug/L | | 110 | 70 - 130 | 3 | 20 |
| 1,1-Dichloroethane | 5.00 | 4.83 | | ug/L | | 97 | 70 - 130 | 5 | 20 |
| 1,1-Dichlorethylene | 5.00 | 4.78 | | ug/L | | 96 | 70 - 130 | 8 | 20 |
| 1,1-Dichloropropene | 5.00 | 5.19 | | ug/L | | 104 | 70 - 130 | 6 | 20 |
| 1,2,3-Trichlorobenzene | 5.00 | 5.35 | | ug/L | | 107 | 70 - 130 | 2 | 20 |
| 1,2,3-Trichloropropane | 5.00 | 5.45 | | ug/L | | 109 | 70 - 130 | 1 | 20 |
| 1,2,4-Trichlorobenzene | 5.00 | 4.99 | | ug/L | | 100 | 70 - 130 | 6 | 20 |
| 1,2,4-Trimethy benzene | 5.00 | 5.91 | | ug/L | | 118 | 70 - 130 | 6 | 20 |
| 1,2-Dichloroethane | 5.00 | 5.22 | | ug/L | | 104 | 70 - 130 | 4 | 20 |
| 1,2-Dichloropropane | 5.00 | 5.23 | | ug/L | | 105 | 70 - 130 | 4 | 20 |
| 1,3,5-Trimethy benzene | 5.00 | 5.88 | | ug/L | | 118 | 70 - 130 | 7 | 20 |
| 1,3-Dichloropropane | 5.00 | 5.31 | | ug/L | | 106 | 70 - 130 | 2 | 20 |
| 2,2-Dichloropropane | 5.00 | 4.87 | | ug/L | | 97 | 70 - 130 | 8 | 20 |
| 2-Butanone (MEK) | 50.0 | 60.7 | | ug/L | | 121 | 70 - 130 | 1 | 20 |
| 4-Methyl-2-pentanone (MIBK) | 50.0 | 58.5 | | ug/L | | 117 | 70 - 130 | 0 | 20 |
| Acetone | 50.0 | 52.3 | J | ug/L | | 105 | 70 - 130 | 16 | 20 |
| Benzene | 5.00 | 5.32 | | ug/L | | 106 | 70 - 130 | 5 | 20 |
| Bromobenzene | 5.00 | 5.47 | | ug/L | | 109 | 70 - 130 | 6 | 20 |
| Bromochloromethane | 5.00 | 5.20 | | ug/L | | 104 | 70 - 130 | 1 | 20 |
| Bromodichloromethane | 5.00 | 5.12 | | ug/L | | 102 | 70 - 130 | 4 | 20 |
| Bromoform | 5.00 | 4.98 | | ug/L | | 100 | 70 - 130 | 5 | 20 |
| Bromomethane (Methyl Bromide) | 5.00 | 4.45 | | ug/L | | 89 | 70 - 130 | 17 | 20 |
| Carbon disulfide | 5.00 | 4.69 | | ug/L | | 94 | 70 - 130 | 9 | 20 |
| Carbon tetrachloride | 5.00 | 5.34 | | ug/L | | 107 | 70 - 130 | 4 | 20 |
| Chlorobenzene | 5.00 | 5.27 | | ug/L | | 105 | 70 - 130 | 5 | 20 |
| Chlorodibromomethane | 5.00 | 5.06 | | ug/L | | 101 | 70 - 130 | 7 | 20 |
| Dichloromethane | 5.00 | 4.49 | | ug/L | | 90 | 70 - 130 | 9 | 20 |
| cis-1,3-Dichloropropene | 5.00 | 4.53 | | ug/L | | 91 | 70 - 130 | 6 | 20 |
| Ethylbenzene | 5.00 | 5.31 | | ug/L | | 106 | 70 - 130 | 6 | 20 |
| Hexachlorobutadiene | 5.00 | 5.21 | | ug/L | | 104 | 70 - 130 | 10 | 20 |
| Isopropy benzene | 5.00 | 5.54 | | ug/L | | 111 | 70 - 130 | 3 | 20 |
| m,p-Xylenes | 10.0 | 11.5 | | ug/L | | 115 | 70 - 130 | 7 | 20 |

Eurofins Eaton Monrovia

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 380-20582/5
Matrix: Water
Analysis Batch: 20582

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|-----------------------------------|-------------|-------------|----------------|------|---|------|-------------|-----|-----------|
| m-Dichlorobenzene (1,3-DCB) | 5.00 | 5.52 | | ug/L | | 110 | 70 - 130 | 6 | 20 |
| Methyl-tert-butyl Ether (MTBE) | 5.00 | 4.42 | | ug/L | | 88 | 70 - 130 | 7 | 20 |
| Naphthalene | 5.00 | 4.91 | | ug/L | | 98 | 70 - 130 | 0 | 20 |
| n-Butylbenzene | 5.00 | 5.58 | | ug/L | | 112 | 70 - 130 | 7 | 20 |
| N-Propylbenzene | 5.00 | 5.50 | | ug/L | | 110 | 70 - 130 | 7 | 20 |
| o-Dichlorobenzene (1,2-DCB) | 5.00 | 5.54 | | ug/L | | 111 | 70 - 130 | 5 | 20 |
| o-Chlorotoluene | 5.00 | 5.83 | | ug/L | | 117 | 70 - 130 | 3 | 20 |
| o-Xylene | 5.00 | 5.48 | | ug/L | | 110 | 70 - 130 | 8 | 20 |
| p-Chlorotoluene | 5.00 | 5.84 | | ug/L | | 117 | 70 - 130 | 8 | 20 |
| p-Dichlorobenzene (1,4-DCB) | 5.00 | 5.67 | | ug/L | | 113 | 70 - 130 | 6 | 20 |
| p-Isopropyltoluene | 5.00 | 5.72 | | ug/L | | 114 | 70 - 130 | 6 | 20 |
| sec-Butylbenzene | 5.00 | 5.76 | | ug/L | | 115 | 70 - 130 | 7 | 20 |
| Styrene | 5.00 | 5.81 | | ug/L | | 116 | 70 - 130 | 4 | 20 |
| Tert-amyl methyl ether | 5.00 | 5.02 | | ug/L | | 100 | 70 - 130 | 2 | 20 |
| Tert-butyl ethyl ether | 5.00 | 4.53 | | ug/L | | 91 | 70 - 130 | 4 | 20 |
| tert-Butylbenzene | 5.00 | 5.56 | | ug/L | | 111 | 70 - 130 | 4 | 20 |
| Tetrachloroethene (PCE) | 5.00 | 5.12 | | ug/L | | 102 | 70 - 130 | 8 | 20 |
| Toluene | 5.00 | 5.61 | | ug/L | | 112 | 70 - 130 | 6 | 20 |
| 1,3-Dichloropropene, Total | 10.0 | 8.85 | | ug/L | | 89 | 70 - 130 | 6 | 20 |
| Xylenes, Total | 15.0 | 17.0 | | ug/L | | 113 | 70 - 130 | 7 | 20 |
| trans-1,2-Dichloroethylene | 5.00 | 4.76 | | ug/L | | 95 | 70 - 130 | 8 | 20 |
| trans-1,3-Dichloropropene | 5.00 | 4.32 | | ug/L | | 86 | 70 - 130 | 7 | 20 |
| Trichloroethylene (TCE) | 5.00 | 5.24 | | ug/L | | 105 | 70 - 130 | 7 | 20 |
| Trichlorofluoromethane (Freon 11) | 5.00 | 5.49 | | ug/L | | 110 | 70 - 130 | 7 | 20 |
| Vinyl Chloride (VC) | 5.00 | 4.84 | | ug/L | | 97 | 70 - 130 | 3 | 20 |
| Trichlorotrifluoroethane | 5.00 | 5.32 | | ug/L | | 106 | 70 - 130 | 10 | 20 |
| Bromoethane | 5.00 | 4.74 | | ug/L | | 95 | 70 - 130 | 13 | 20 |
| Diisopropyl ether | 5.00 | 4.65 | | ug/L | | 93 | 70 - 130 | 6 | 20 |

| Surrogate | LCSD %Recovery | LCSD Qualifier | LCSD Limits |
|------------------------------|----------------|----------------|-------------|
| 1,2-Dichloroethane-d4 (Surr) | 97 | | 70 - 130 |
| 4-Bromofluorobenzene (Surr) | 99 | | 70 - 130 |
| Toluene-d8 (Surr) | 107 | | 70 - 130 |

Lab Sample ID: MRL 380-20582/3
Matrix: Water
Analysis Batch: 20582

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec Limits |
|---------------------|-------------|------------|---------------|------|---|------|-------------|
| m,p-Xylenes | 0.500 | 0.464 | J | ug/L | | 93 | 50 - 150 |
| Vinyl Chloride (VC) | 0.250 | 0.256 | J | ug/L | | 102 | 50 - 150 |

| Surrogate | MRL %Recovery | MRL Qualifier | MRL Limits |
|------------------------------|---------------|---------------|------------|
| 1,2-Dichloroethane-d4 (Surr) | 102 | | 70 - 130 |
| 4-Bromofluorobenzene (Surr) | 101 | | 70 - 130 |
| Toluene-d8 (Surr) | 89 | | 70 - 130 |

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MRL 380-20582/7
Matrix: Water
Analysis Batch: 20582

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec Limits |
|--------------------------------|----------------|---------------|------------------|------|---|------|----------------|
| 1,1,1,2-Tetrachloroethane | 0.500 | 0.516 | | ug/L | | 103 | 50 - 150 |
| 1,1,1-Trichloroethane | 0.500 | 0.486 | J | ug/L | | 97 | 50 - 150 |
| 1,1,2,2-Tetrachloroethane | 0.500 | 0.596 | | ug/L | | 119 | 50 - 150 |
| 1,1,2-Trichloroethane | 0.500 | 0.528 | | ug/L | | 106 | 50 - 150 |
| 1,1-Dichloroethane | 0.500 | 0.527 | | ug/L | | 105 | 50 - 150 |
| 1,1-Dichlorethylene | 0.500 | 0.500 | | ug/L | | 100 | 50 - 150 |
| 1,1-Dichloropropene | 0.500 | 0.520 | | ug/L | | 104 | 50 - 150 |
| 1,2,3-Trichlorobenzene | 0.500 | 0.482 | J | ug/L | | 96 | 50 - 150 |
| 1,2,3-Trichloropropane | 0.500 | 0.613 | | ug/L | | 123 | 50 - 150 |
| 1,2,4-Trichlorobenzene | 0.500 | 0.458 | J | ug/L | | 92 | 50 - 150 |
| 1,2,4-Trimethy benzene | 0.500 | 0.425 | J | ug/L | | 85 | 50 - 150 |
| 1,2-Dichloroethane | 0.500 | 0.511 | | ug/L | | 102 | 50 - 150 |
| 1,2-Dichloropropane | 0.500 | 0.528 | | ug/L | | 106 | 50 - 150 |
| 1,3,5-Trimethy benzene | 0.500 | 0.432 | J | ug/L | | 86 | 50 - 150 |
| 1,3-Dichloropropane | 0.500 | 0.511 | | ug/L | | 102 | 50 - 150 |
| 2,2-Dichloropropane | 0.500 | 0.450 | J | ug/L | | 90 | 50 - 150 |
| 2-Butanone (MEK) | 5.00 | 5.90 | | ug/L | | 118 | 50 - 150 |
| 4-Methyl-2-pentanone (MIBK) | 5.00 | 4.58 | J | ug/L | | 92 | 50 - 150 |
| Acetone | 5.00 | 4.95 | J | ug/L | | 99 | 50 - 150 |
| Benzene | 0.500 | 0.519 | | ug/L | | 104 | 50 - 150 |
| Bromobenzene | 0.500 | 0.576 | | ug/L | | 115 | 50 - 150 |
| Bromochloromethane | 0.500 | 0.560 | | ug/L | | 112 | 50 - 150 |
| Bromodichloromethane | 0.500 | 0.489 | J | ug/L | | 98 | 50 - 150 |
| Bromoform | 0.500 | 0.527 | | ug/L | | 105 | 50 - 150 |
| Bromomethane (Methyl Bromide) | 0.500 | 0.506 | | ug/L | | 101 | 50 - 150 |
| Carbon disulfide | 0.500 | 0.503 | | ug/L | | 101 | 50 - 150 |
| Carbon tetrachloride | 0.500 | 0.446 | J | ug/L | | 89 | 50 - 150 |
| Chlorobenzene | 0.500 | 0.523 | | ug/L | | 105 | 50 - 150 |
| Chlorodibromomethane | 0.500 | 0.524 | | ug/L | | 105 | 50 - 150 |
| Dichloromethane | 0.500 | 0.564 | | ug/L | | 113 | 50 - 150 |
| cis-1,3-Dichloropropene | 0.500 | 0.409 | J | ug/L | | 82 | 50 - 150 |
| Ethylbenzene | 0.500 | 0.428 | J | ug/L | | 86 | 50 - 150 |
| Hexachlorobutadiene | 0.500 | 0.564 | | ug/L | | 113 | 50 - 150 |
| Isopropy benzene | 0.500 | 0.447 | J | ug/L | | 89 | 50 - 150 |
| m,p-Xylenes | 1.00 | 0.874 | | ug/L | | 87 | 50 - 150 |
| m-Dichlorobenzene (1,3-DCB) | 0.500 | 0.536 | | ug/L | | 107 | 50 - 150 |
| Methyl-tert-butyl Ether (MTBE) | 0.500 | 0.436 | J | ug/L | | 87 | 50 - 150 |
| Naphthalene | 0.500 | 0.412 | J | ug/L | | 82 | 50 - 150 |
| n-Butylbenzene | 0.500 | 0.436 | J | ug/L | | 87 | 50 - 150 |
| N-Propylbenzene | 0.500 | 0.439 | J | ug/L | | 88 | 50 - 150 |
| o-Dichlorobenzene (1,2-DCB) | 0.500 | 0.530 | | ug/L | | 106 | 50 - 150 |
| o-Chlorotoluene | 0.500 | 0.510 | | ug/L | | 102 | 50 - 150 |
| o-Xylene | 0.500 | 0.409 | J | ug/L | | 82 | 50 - 150 |
| p-Chlorotoluene | 0.500 | 0.457 | J | ug/L | | 91 | 50 - 150 |
| p-Dichlorobenzene (1,4-DCB) | 0.500 | 0.525 | | ug/L | | 105 | 50 - 150 |
| p-Isopropyltoluene | 0.500 | 0.405 | J | ug/L | | 81 | 50 - 150 |
| sec-Butylbenzene | 0.500 | 0.446 | J | ug/L | | 89 | 50 - 150 |
| Styrene | 0.500 | 0.357 | J | ug/L | | 71 | 50 - 150 |

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MRL 380-20582/7
Matrix: Water
Analysis Batch: 20582

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec Limits |
|-----------------------------------|-------------|------------|---------------|------|---|------|-------------|
| Tert-amyl methyl ether | 0.500 | 0.452 | J | ug/L | | 90 | 50 - 150 |
| Tert-butyl ethyl ether | 0.500 | 0.429 | J | ug/L | | 86 | 50 - 150 |
| tert-Butylbenzene | 0.500 | 0.453 | J | ug/L | | 91 | 50 - 150 |
| Tetrachloroethene (PCE) | 0.500 | 0.532 | | ug/L | | 106 | 50 - 150 |
| Toluene | 0.500 | 0.600 | | ug/L | | 120 | 50 - 150 |
| 1,3-Dichloropropene, Total | 1.00 | 0.765 | | ug/L | | 77 | 50 - 150 |
| Xylenes, Total | 1.50 | 1.28 | | ug/L | | 86 | 50 - 150 |
| trans-1,2-Dichloroethylene | 0.500 | 0.507 | | ug/L | | 101 | 50 - 150 |
| trans-1,3-Dichloropropene | 0.500 | 0.356 | J | ug/L | | 71 | 50 - 150 |
| Trichloroethylene (TCE) | 0.500 | 0.541 | | ug/L | | 108 | 50 - 150 |
| Trichlorofluoromethane (Freon 11) | 0.500 | 0.449 | J | ug/L | | 90 | 50 - 150 |
| Vinyl Chloride (VC) | 0.500 | 0.561 | | ug/L | | 112 | 50 - 150 |
| Trichlorotrifluoroethane | 0.500 | 0.460 | J | ug/L | | 92 | 50 - 150 |
| Bromoethane | 0.500 | 0.461 | J | ug/L | | 92 | 50 - 150 |
| Diisopropyl ether | 0.500 | 0.518 | J | ug/L | | 104 | 50 - 150 |

| Surrogate | MRL %Recovery | MRL Qualifier | Limits |
|------------------------------|---------------|---------------|----------|
| 1,2-Dichloroethane-d4 (Surr) | 105 | | 70 - 130 |
| 4-Bromofluorobenzene (Surr) | 102 | | 70 - 130 |
| Toluene-d8 (Surr) | 93 | | 70 - 130 |

Method: 524.2 - Volatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 380-21101/5
Matrix: Water
Analysis Batch: 21101

Client Sample ID: Method Blank
Prep Type: Total/NA

| Analyte | MB Result | MB Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|--------------|-----|------|---|----------|----------------|---------|
| Tertiary Butyl Alcohol (TBA) | ND | | 2.0 | ug/L | | | 10/18/22 21:05 | 1 |

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|--------------|--------------|----------|----------|----------------|---------|
| Toluene-d8 (Surr) | 99 | | 70 - 130 | | 10/18/22 21:05 | 1 |
| 4-Bromofluorobenzene (Surr) | 96 | | 70 - 130 | | 10/18/22 21:05 | 1 |
| 1,2-Dichloroethane-d4 (Surr) | 113 | | 70 - 130 | | 10/18/22 21:05 | 1 |

Lab Sample ID: LCS 380-21101/2
Matrix: Water
Analysis Batch: 21101

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|------------------------------|-------------|------------|---------------|------|---|------|-------------|
| Tertiary Butyl Alcohol (TBA) | 5.00 | 5.63 | | ug/L | | 113 | 70 - 130 |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|------------------------------|---------------|---------------|----------|
| Toluene-d8 (Surr) | 98 | | 70 - 130 |
| 4-Bromofluorobenzene (Surr) | 95 | | 70 - 130 |
| 1,2-Dichloroethane-d4 (Surr) | 113 | | 70 - 130 |

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 524.2 - Volatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: LCSD 380-21101/3
Matrix: Water
Analysis Batch: 21101

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|------------------------------|------------------|------------------|----------------|------|---|------|-------------|-----|-----------|
| Tertiary Butyl Alcohol (TBA) | 5.00 | 5.47 | | ug/L | | 109 | 70 - 130 | 3 | 20 |
| LCSD LCSD | | | | | | | | | |
| Surrogate | %Recovery | Qualifier | Limits | | | | | | |
| Toluene-d8 (Surr) | 99 | | 70 - 130 | | | | | | |
| 4-Bromofluorobenzene (Surr) | 97 | | 70 - 130 | | | | | | |
| 1,2-Dichloroethane-d4 (Surr) | 113 | | 70 - 130 | | | | | | |

Lab Sample ID: MRL 380-21101/4
Matrix: Water
Analysis Batch: 21101

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec Limits | | |
|------------------------------|------------------|------------------|---------------|------|---|------|-------------|--|--|
| Tertiary Butyl Alcohol (TBA) | 2.00 | 2.48 | | ug/L | | 124 | 50 - 150 | | |
| MRL MRL | | | | | | | | | |
| Surrogate | %Recovery | Qualifier | Limits | | | | | | |
| Toluene-d8 (Surr) | 100 | | 50 - 150 | | | | | | |
| 4-Bromofluorobenzene (Surr) | 100 | | 50 - 150 | | | | | | |
| 1,2-Dichloroethane-d4 (Surr) | 114 | | 50 - 150 | | | | | | |

Method: 525.2 - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 380-20849/1-A
Matrix: Water
Analysis Batch: 20905

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 20849

| Analyte | MB Result | MB Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------|-----------|--------------|-------|------|---|----------------|----------------|---------|
| 2,4'-DDD | ND | | 0.099 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| 2,4'-DDE | ND | | 0.099 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| 2,4'-DDT | ND | | 0.099 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| 2,4-Dinitrotoluene | ND | | 0.099 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| 2,6-Dinitrotoluene | ND | | 0.099 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| 4,4'-DDD | ND | | 0.099 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| 4,4'-DDE | ND | | 0.099 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| 4,4'-DDT | ND | | 0.099 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Acenaphthene | ND | | 0.099 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Acenaphthylene | ND | | 0.099 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Acetochlor | ND | | 0.099 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Alachlor | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| alpha-BHC | ND | | 0.099 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| alpha-Chlordane | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Anthracene | ND | | 0.020 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Atrazine | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Benz(a)anthracene | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Benzo[a]pyrene | ND | | 0.020 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Benzo[b]fluoranthene | ND | | 0.020 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Benzo[g,h,i]perylene | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Benzo[k]fluoranthene | ND | | 0.020 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| beta-BHC | ND | | 0.099 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |

Eurofins Eaton Monrovia

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 380-20849/1-A
Matrix: Water
Analysis Batch: 20905

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 20849

| Analyte | MB Result | MB Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------------------|-----------|--------------|-------|------|---|----------------|----------------|---------|
| Bis(2-ethylhexyl) phthalate | ND | | 0.59 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Bromacil | ND | | 0.099 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Butachlor | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Butylbenzylphthalate | ND | | 0.49 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Chlorobenzilate | ND | | 0.099 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Chloroneb | ND | | 0.099 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Chlorothalonil (Draconil, Bravo) | ND | | 0.099 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Chlorpyrifos | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Chrysene | ND | | 0.020 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| delta-BHC | ND | | 0.099 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Di(2-ethylhexyl)adipate | ND | | 0.59 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Dibenz(a,h)anthracene | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Diclorvos (DDVP) | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Dieldrin | ND | | 0.20 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Diethylphthalate | ND | | 0.49 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Dimethylphthalate | ND | | 0.49 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Di-n-butyl phthalate | ND | | 0.99 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Di-n-octyl phthalate | ND | | 0.099 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Endosulfan I (Alpha) | ND | | 0.099 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Endosulfan II (Beta) | ND | | 0.099 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Endosulfan sulfate | ND | | 0.099 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Endrin | ND | | 0.099 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Endrin aldehyde | ND | | 0.099 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| EPTC | ND | | 0.099 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Fluoranthene | ND | | 0.099 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Fluorene | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| gamma-BHC (Lindane) | ND | | 0.040 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| gamma-Chlordane | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Heptachlor | ND | | 0.040 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Heptachlor epoxide (isomer B) | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Hexachlorobenzene | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Hexachlorocyclopentadiene | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Isophorone | ND | | 0.49 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Malathion | ND | | 0.099 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Methoxychlor | ND | | 0.099 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Metolachlor | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Metribuzin | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Molinate | ND | | 0.099 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Naphthalene | ND | | 0.30 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Parathion | ND | | 0.099 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Pendimethalin (Penoxaline) | ND | | 0.099 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Phenanthrene | ND | | 0.040 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Propachlor | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Pyrene | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Simazine | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Terbacil | ND | | 0.099 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Terbutylazine | ND | | 0.099 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Thiobencarb | ND | | 0.20 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |

Eurofins Eaton Monrovia

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 380-20849/1-A
Matrix: Water
Analysis Batch: 20905

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 20849

| Analyte | MB Result | MB Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------------------|-----------|--------------|-------|------|---|----------------|----------------|---------|
| Total Permethrin (mixed isomers) | ND | | 0.20 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| trans-Nonachlor | ND | | 0.049 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Trifluralin | ND | | 0.099 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| 1-Methylnaphthalene | ND | | 0.099 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| 2-Methylnaphthalene | ND | | 0.099 | ug/L | | 10/15/22 15:26 | 10/17/22 13:28 | 1 |

| Tentatively Identified Compound | MB Est. Result | MB Qualifier | Unit | D | RT | CAS No. | Prepared | Analyzed | Dil Fac |
|---------------------------------|----------------|--------------|------|---|------|----------|----------------|----------------|---------|
| Decane | 1.31 | T J N | ug/L | | 2.45 | 124-18-5 | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| n-Hexadecanoic acid | 0.547 | T J N | ug/L | | 5.85 | 57-10-3 | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| 9-Octadecenamide, (Z)- | 0.541 | T J N | ug/L | | 7.52 | 301-02-0 | 10/15/22 15:26 | 10/17/22 13:28 | 1 |

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|--------------------|--------------|--------------|----------|----------------|----------------|---------|
| 2-Nitro-m-xylene | 98 | | 70 - 130 | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Perylene-d12 | 93 | | 70 - 130 | 10/15/22 15:26 | 10/17/22 13:28 | 1 |
| Triphenylphosphate | 106 | | 70 - 130 | 10/15/22 15:26 | 10/17/22 13:28 | 1 |

Lab Sample ID: LCS 380-20849/3-A
Matrix: Water
Analysis Batch: 20905

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 20849

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|-----------------------------|-------------|------------|---------------|------|---|------|-------------|
| 2,4'-DDD | 1.97 | 2.04 | | ug/L | | 104 | 70 - 130 |
| 2,4'-DDE | 1.97 | 1.97 | | ug/L | | 100 | 70 - 130 |
| 2,4'-DDT | 1.97 | 2.18 | | ug/L | | 111 | 70 - 130 |
| 2,4-Dinitrotoluene | 1.97 | 1.79 | | ug/L | | 91 | 70 - 130 |
| 2,6-Dinitrotoluene | 1.97 | 1.79 | | ug/L | | 91 | 70 - 130 |
| 4,4'-DDD | 1.97 | 2.20 | | ug/L | | 112 | 70 - 130 |
| 4,4'-DDE | 1.97 | 2.00 | | ug/L | | 102 | 70 - 130 |
| 4,4'-DDT | 1.97 | 2.04 | | ug/L | | 104 | 70 - 130 |
| Acenaphthene | 1.97 | 1.80 | | ug/L | | 92 | 70 - 130 |
| Acenaphthylene | 1.97 | 1.77 | | ug/L | | 90 | 70 - 130 |
| Acetochlor | 1.97 | 1.86 | | ug/L | | 94 | 70 - 130 |
| Alachlor | 1.97 | 2.04 | | ug/L | | 104 | 70 - 130 |
| alpha-BHC | 1.97 | 2.13 | | ug/L | | 108 | 70 - 130 |
| alpha-Chlordane | 1.97 | 1.72 | | ug/L | | 87 | 70 - 130 |
| Anthracene | 1.97 | 1.94 | | ug/L | | 99 | 70 - 130 |
| Atrazine | 1.97 | 2.02 | | ug/L | | 103 | 70 - 130 |
| Benz(a)anthracene | 1.97 | 2.15 | | ug/L | | 109 | 70 - 130 |
| Benzo[a]pyrene | 1.97 | 2.16 | | ug/L | | 110 | 70 - 130 |
| Benzo[b]fluoranthene | 1.97 | 2.23 | | ug/L | | 113 | 70 - 130 |
| Benzo[g,h,i]perylene | 1.97 | 2.23 | | ug/L | | 113 | 70 - 130 |
| Benzo[k]fluoranthene | 1.97 | 2.27 | | ug/L | | 116 | 70 - 130 |
| beta-BHC | 1.97 | 2.04 | | ug/L | | 104 | 70 - 130 |
| Bis(2-ethylhexyl) phthalate | 1.97 | 1.97 | | ug/L | | 100 | 70 - 130 |
| Bromacil | 1.97 | 1.89 | | ug/L | | 96 | 70 - 130 |
| Butachlor | 1.97 | 2.16 | | ug/L | | 110 | 70 - 130 |
| Butylbenzylphthalate | 1.97 | 2.10 | | ug/L | | 107 | 70 - 130 |
| Chlorobenzilate | 1.97 | 2.02 | | ug/L | | 103 | 70 - 130 |

Eurofins Eaton Monrovia

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 380-20849/3-A
Matrix: Water
Analysis Batch: 20905

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 20849

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|----------------------------------|----------------|---------------|------------------|------|---|------|----------------|
| Chloroneb | 1.97 | 2.11 | | ug/L | | 107 | 70 - 130 |
| Chlorothalonil (Draconil, Bravo) | 1.97 | 2.14 | | ug/L | | 109 | 70 - 130 |
| Chlorpyrifos | 1.97 | 2.17 | | ug/L | | 110 | 70 - 130 |
| Chrysene | 1.97 | 2.12 | | ug/L | | 108 | 70 - 130 |
| delta-BHC | 1.97 | 1.95 | | ug/L | | 99 | 70 - 130 |
| Di(2-ethylhexyl)adipate | 1.97 | 2.06 | | ug/L | | 105 | 70 - 130 |
| Dibenz(a,h)anthracene | 1.97 | 2.35 | | ug/L | | 120 | 70 - 130 |
| Diclorvos (DDVP) | 1.97 | 2.08 | | ug/L | | 106 | 70 - 130 |
| Dieldrin | 1.97 | 2.18 | | ug/L | | 111 | 70 - 130 |
| Diethylphthalate | 1.97 | 1.91 | | ug/L | | 97 | 70 - 130 |
| Dimethylphthalate | 1.97 | 1.94 | | ug/L | | 99 | 70 - 130 |
| Di-n-butyl phthalate | 3.93 | 4.40 | | ug/L | | 112 | 70 - 130 |
| Di-n-octyl phthalate | 1.97 | 1.80 | | ug/L | | 92 | 70 - 130 |
| Endosulfan I (Alpha) | 1.97 | 2.15 | | ug/L | | 109 | 70 - 130 |
| Endosulfan II (Beta) | 1.97 | 2.33 | | ug/L | | 119 | 70 - 130 |
| Endosulfan sulfate | 1.97 | 2.39 | | ug/L | | 122 | 70 - 130 |
| Endrin | 1.97 | 2.13 | | ug/L | | 108 | 70 - 130 |
| Endrin aldehyde | 1.97 | 1.47 | | ug/L | | 75 | 70 - 130 |
| EPTC | 1.97 | 1.84 | | ug/L | | 93 | 70 - 130 |
| Fluoranthene | 1.97 | 2.14 | | ug/L | | 109 | 70 - 130 |
| Fluorene | 1.97 | 1.93 | | ug/L | | 98 | 70 - 130 |
| gamma-BHC (Lindane) | 1.97 | 2.14 | | ug/L | | 109 | 70 - 130 |
| gamma-Chlordane | 1.97 | 1.77 | | ug/L | | 90 | 70 - 130 |
| Heptachlor | 1.97 | 2.03 | | ug/L | | 103 | 70 - 130 |
| Heptachlor epoxide (isomer B) | 1.97 | 1.85 | | ug/L | | 94 | 70 - 130 |
| Hexachlorobenzene | 1.97 | 1.75 | | ug/L | | 89 | 70 - 130 |
| Hexachlorocyclopentadiene | 1.97 | 2.17 | | ug/L | | 111 | 70 - 130 |
| Indeno[1,2,3-cd]pyrene | 1.97 | 2.32 | | ug/L | | 118 | 70 - 130 |
| Isophorone | 1.97 | 1.98 | | ug/L | | 101 | 70 - 130 |
| Malathion | 1.97 | 2.12 | | ug/L | | 108 | 70 - 130 |
| Methoxychlor | 1.97 | 2.17 | | ug/L | | 110 | 70 - 130 |
| Metolachlor | 1.97 | 2.11 | | ug/L | | 107 | 70 - 130 |
| Metribuzin | 1.97 | 1.76 | | ug/L | | 89 | 70 - 130 |
| Molinate | 1.97 | 1.97 | | ug/L | | 100 | 70 - 130 |
| Naphthalene | 1.97 | 1.79 | | ug/L | | 91 | 70 - 130 |
| Parathion | 1.97 | 2.03 | | ug/L | | 103 | 70 - 130 |
| Pendimethalin (Penoxaline) | 1.97 | 2.01 | | ug/L | | 102 | 70 - 130 |
| Phenanthrene | 1.97 | 1.95 | | ug/L | | 99 | 70 - 130 |
| Propachlor | 1.97 | 2.08 | | ug/L | | 106 | 70 - 130 |
| Pyrene | 1.97 | 2.17 | | ug/L | | 110 | 70 - 130 |
| Simazine | 1.97 | 2.10 | | ug/L | | 107 | 70 - 130 |
| Terbacil | 1.97 | 1.90 | | ug/L | | 97 | 70 - 130 |
| Terbutylazine | 1.97 | 2.09 | | ug/L | | 106 | 70 - 130 |
| Thiobencarb | 1.97 | 1.92 | | ug/L | | 98 | 70 - 130 |
| trans-Nonachlor | 1.97 | 2.30 | | ug/L | | 117 | 70 - 130 |
| Trifluralin | 1.97 | 2.04 | | ug/L | | 104 | 70 - 130 |
| 1-Methylnaphthalene | 1.97 | 1.78 | | ug/L | | 91 | 70 - 130 |
| 2-Methylnaphthalene | 1.97 | 1.79 | | ug/L | | 91 | 70 - 130 |

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 380-20849/3-A
Matrix: Water
Analysis Batch: 20905

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 20849

| Surrogate | LCS LCS | | Limits |
|--------------------|-----------|-----------|----------|
| | %Recovery | Qualifier | |
| 2-Nitro-m-xylene | 98 | | 70 - 130 |
| Perylene-d12 | 96 | | 70 - 130 |
| Triphenylphosphate | 107 | | 70 - 130 |

Lab Sample ID: LCSD 380-20849/4-A
Matrix: Water
Analysis Batch: 20905

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 20849

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec | | RPD | Limit |
|----------------------------------|-------------|-------------|----------------|------|---|------|----------|-----|-----|-------|
| | | | | | | | Limits | RPD | | |
| 2,4'-DDD | 1.97 | 1.97 | | ug/L | | 100 | 70 - 130 | 3 | | 20 |
| 2,4'-DDE | 1.97 | 1.96 | | ug/L | | 100 | 70 - 130 | 0 | | 20 |
| 2,4'-DDT | 1.97 | 2.16 | | ug/L | | 110 | 70 - 130 | 1 | | 20 |
| 2,4-Dinitrotoluene | 1.97 | 1.79 | | ug/L | | 91 | 70 - 130 | 0 | | 20 |
| 2,6-Dinitrotoluene | 1.97 | 1.74 | | ug/L | | 89 | 70 - 130 | 2 | | 20 |
| 4,4'-DDD | 1.97 | 2.23 | | ug/L | | 113 | 70 - 130 | 1 | | 20 |
| 4,4'-DDE | 1.97 | 2.08 | | ug/L | | 105 | 70 - 130 | 4 | | 20 |
| 4,4'-DDT | 1.97 | 2.02 | | ug/L | | 103 | 70 - 130 | 1 | | 20 |
| Acenaphthene | 1.97 | 1.78 | | ug/L | | 90 | 70 - 130 | 1 | | 20 |
| Acenaphthylene | 1.97 | 1.76 | | ug/L | | 89 | 70 - 130 | 1 | | 20 |
| Acetochlor | 1.97 | 1.87 | | ug/L | | 95 | 70 - 130 | 1 | | 20 |
| Alachlor | 1.97 | 2.03 | | ug/L | | 103 | 70 - 130 | 0 | | 20 |
| alpha-BHC | 1.97 | 2.09 | | ug/L | | 106 | 70 - 130 | 2 | | 20 |
| alpha-Chlordane | 1.97 | 1.71 | | ug/L | | 87 | 70 - 130 | 0 | | 20 |
| Anthracene | 1.97 | 1.90 | | ug/L | | 96 | 70 - 130 | 2 | | 20 |
| Atrazine | 1.97 | 2.00 | | ug/L | | 102 | 70 - 130 | 1 | | 20 |
| Benz(a)anthracene | 1.97 | 2.16 | | ug/L | | 110 | 70 - 130 | 0 | | 20 |
| Benzo[a]pyrene | 1.97 | 2.14 | | ug/L | | 108 | 70 - 130 | 1 | | 20 |
| Benzo[b]fluoranthene | 1.97 | 2.24 | | ug/L | | 114 | 70 - 130 | 1 | | 20 |
| Benzo[g,h,i]perylene | 1.97 | 2.16 | | ug/L | | 110 | 70 - 130 | 3 | | 20 |
| Benzo[k]fluoranthene | 1.97 | 2.21 | | ug/L | | 112 | 70 - 130 | 3 | | 20 |
| beta-BHC | 1.97 | 2.03 | | ug/L | | 103 | 70 - 130 | 1 | | 20 |
| Bis(2-ethylhexyl) phthalate | 1.97 | 1.97 | | ug/L | | 100 | 70 - 130 | 0 | | 20 |
| Bromacil | 1.97 | 1.86 | | ug/L | | 94 | 70 - 130 | 2 | | 20 |
| Butachlor | 1.97 | 2.13 | | ug/L | | 108 | 70 - 130 | 1 | | 20 |
| Butylbenzylphthalate | 1.97 | 2.09 | | ug/L | | 106 | 70 - 130 | 1 | | 20 |
| Chlorobenzilate | 1.97 | 2.10 | | ug/L | | 106 | 70 - 130 | 4 | | 20 |
| Chloroneb | 1.97 | 2.09 | | ug/L | | 106 | 70 - 130 | 1 | | 20 |
| Chlorothalonil (Draconil, Bravo) | 1.97 | 2.14 | | ug/L | | 109 | 70 - 130 | 0 | | 20 |
| Chlorpyrifos | 1.97 | 2.17 | | ug/L | | 110 | 70 - 130 | 0 | | 20 |
| Chrysene | 1.97 | 2.17 | | ug/L | | 110 | 70 - 130 | 2 | | 20 |
| delta-BHC | 1.97 | 1.95 | | ug/L | | 99 | 70 - 130 | 0 | | 20 |
| Di(2-ethylhexyl)adipate | 1.97 | 2.03 | | ug/L | | 103 | 70 - 130 | 2 | | 20 |
| Dibenz(a,h)anthracene | 1.97 | 2.23 | | ug/L | | 113 | 70 - 130 | 5 | | 20 |
| Diclorvos (DDVP) | 1.97 | 2.08 | | ug/L | | 106 | 70 - 130 | 0 | | 20 |
| Dieldrin | 1.97 | 2.19 | | ug/L | | 111 | 70 - 130 | 1 | | 20 |
| Diethylphthalate | 1.97 | 1.91 | | ug/L | | 97 | 70 - 130 | 0 | | 20 |
| Dimethylphthalate | 1.97 | 1.97 | | ug/L | | 100 | 70 - 130 | 1 | | 20 |
| Di-n-butyl phthalate | 3.94 | 4.12 | | ug/L | | 105 | 70 - 130 | 7 | | 20 |

Eurofins Eaton Monrovia

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 380-20849/4-A
Matrix: Water
Analysis Batch: 20905

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 20849

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec | | RPD | Limit |
|-------------------------------|-------------|-------------|----------------|------|---|------|----------|-----|-----|-------|
| | | | | | | | Limits | RPD | | |
| Di-n-octyl phthalate | 1.97 | 1.77 | | ug/L | | 90 | 70 - 130 | 2 | 20 | |
| Endosulfan I (Alpha) | 1.97 | 2.06 | | ug/L | | 105 | 70 - 130 | 4 | 20 | |
| Endosulfan II (Beta) | 1.97 | 2.32 | | ug/L | | 118 | 70 - 130 | 0 | 20 | |
| Endosulfan sulfate | 1.97 | 2.32 | | ug/L | | 118 | 70 - 130 | 3 | 20 | |
| Endrin | 1.97 | 2.19 | | ug/L | | 111 | 70 - 130 | 3 | 20 | |
| Endrin aldehyde | 1.97 | 1.46 | | ug/L | | 74 | 70 - 130 | 1 | 20 | |
| EPTC | 1.97 | 1.85 | | ug/L | | 94 | 70 - 130 | 1 | 20 | |
| Fluoranthene | 1.97 | 2.15 | | ug/L | | 109 | 70 - 130 | 1 | 20 | |
| Fluorene | 1.97 | 1.87 | | ug/L | | 95 | 70 - 130 | 3 | 20 | |
| gamma-BHC (Lindane) | 1.97 | 2.09 | | ug/L | | 106 | 70 - 130 | 3 | 20 | |
| gamma-Chlordane | 1.97 | 1.73 | | ug/L | | 88 | 70 - 130 | 2 | 20 | |
| Heptachlor | 1.97 | 1.96 | | ug/L | | 99 | 70 - 130 | 3 | 20 | |
| Heptachlor epoxide (isomer B) | 1.97 | 1.73 | | ug/L | | 88 | 70 - 130 | 7 | 20 | |
| Hexachlorobenzene | 1.97 | 1.75 | | ug/L | | 89 | 70 - 130 | 0 | 20 | |
| Hexachlorocyclopentadiene | 1.97 | 2.12 | | ug/L | | 107 | 70 - 130 | 3 | 20 | |
| Indeno[1,2,3-cd]pyrene | 1.97 | 2.20 | | ug/L | | 112 | 70 - 130 | 5 | 20 | |
| Isophorone | 1.97 | 1.94 | | ug/L | | 98 | 70 - 130 | 2 | 20 | |
| Malathion | 1.97 | 2.11 | | ug/L | | 107 | 70 - 130 | 0 | 20 | |
| Methoxychlor | 1.97 | 2.22 | | ug/L | | 113 | 70 - 130 | 2 | 20 | |
| Metolachlor | 1.97 | 2.17 | | ug/L | | 110 | 70 - 130 | 3 | 20 | |
| Metribuzin | 1.97 | 1.70 | | ug/L | | 86 | 70 - 130 | 3 | 20 | |
| Molinate | 1.97 | 1.92 | | ug/L | | 98 | 70 - 130 | 2 | 20 | |
| Naphthalene | 1.97 | 1.77 | | ug/L | | 90 | 70 - 130 | 1 | 20 | |
| Parathion | 1.97 | 2.01 | | ug/L | | 102 | 70 - 130 | 1 | 20 | |
| Pendimethalin (Penoxaline) | 1.97 | 1.98 | | ug/L | | 101 | 70 - 130 | 1 | 20 | |
| Phenanthrene | 1.97 | 1.92 | | ug/L | | 98 | 70 - 130 | 1 | 20 | |
| Propachlor | 1.97 | 2.07 | | ug/L | | 105 | 70 - 130 | 1 | 20 | |
| Pyrene | 1.97 | 2.18 | | ug/L | | 111 | 70 - 130 | 1 | 20 | |
| Simazine | 1.97 | 2.08 | | ug/L | | 106 | 70 - 130 | 1 | 20 | |
| Terbacil | 1.97 | 1.84 | | ug/L | | 93 | 70 - 130 | 3 | 20 | |
| Terbutylazine | 1.97 | 2.07 | | ug/L | | 105 | 70 - 130 | 1 | 20 | |
| Thiobencarb | 1.97 | 1.94 | | ug/L | | 99 | 70 - 130 | 1 | 20 | |
| trans-Nonachlor | 1.97 | 2.25 | | ug/L | | 114 | 70 - 130 | 2 | 20 | |
| Trifluralin | 1.97 | 1.96 | | ug/L | | 99 | 70 - 130 | 4 | 20 | |
| 1-Methylnaphthalene | 1.97 | 1.78 | | ug/L | | 90 | 70 - 130 | 0 | 20 | |
| 2-Methylnaphthalene | 1.97 | 1.78 | | ug/L | | 90 | 70 - 130 | 0 | 20 | |

| Surrogate | LCSD | | Limits |
|--------------------|-----------|-----------|----------|
| | %Recovery | Qualifier | |
| 2-Nitro-m-xylene | 97 | | 70 - 130 |
| Perylene-d12 | 95 | | 70 - 130 |
| Triphenylphosphate | 108 | | 70 - 130 |

Lab Sample ID: MRL 380-20849/2-A
Matrix: Water
Analysis Batch: 20905

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 20849

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec | |
|----------|-------------|------------|---------------|------|---|------|----------|-----|
| | | | | | | | Limits | RPD |
| 2,4'-DDD | 0.0989 | 0.123 | | ug/L | | 124 | 50 - 150 | |

Eurofins Eaton Monrovia

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MRL 380-20849/2-A
Matrix: Water
Analysis Batch: 20905

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 20849

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec Limits |
|----------------------------------|-------------|------------|---------------|------|---|------|-------------|
| 2,4'-DDE | 0.0989 | 0.102 | | ug/L | | 103 | 50 - 150 |
| 2,4'-DDT | 0.0989 | 0.104 | | ug/L | | 105 | 50 - 150 |
| 2,4-Dinitrotoluene | 0.0989 | 0.0829 | J | ug/L | | 84 | 50 - 150 |
| 2,6-Dinitrotoluene | 0.0989 | 0.0840 | J | ug/L | | 85 | 50 - 150 |
| 4,4'-DDD | 0.0989 | 0.114 | | ug/L | | 115 | 50 - 150 |
| 4,4'-DDE | 0.0989 | 0.127 | | ug/L | | 128 | 50 - 150 |
| 4,4'-DDT | 0.0989 | 0.124 | | ug/L | | 126 | 50 - 150 |
| Acenaphthene | 0.0989 | 0.0953 | J | ug/L | | 96 | 50 - 150 |
| Acenaphthylene | 0.0989 | 0.0839 | J | ug/L | | 85 | 50 - 150 |
| Acetochlor | 0.0495 | 0.0483 | J | ug/L | | 98 | 50 - 150 |
| Alachlor | 0.0495 | 0.0647 | | ug/L | | 131 | 50 - 150 |
| alpha-BHC | 0.0989 | 0.115 | | ug/L | | 116 | 50 - 150 |
| alpha-Chlordane | 0.0495 | 0.0563 | | ug/L | | 114 | 50 - 150 |
| Anthracene | 0.0198 | ND | | ug/L | | 83 | 50 - 150 |
| Atrazine | 0.0495 | 0.0646 | | ug/L | | 131 | 50 - 150 |
| Benz(a)anthracene | 0.0495 | 0.0566 | | ug/L | | 114 | 50 - 150 |
| Benzo[a]pyrene | 0.0198 | 0.0175 | J | ug/L | | 89 | 50 - 150 |
| Benzo[b]fluoranthene | 0.0198 | 0.0195 | J | ug/L | | 98 | 50 - 150 |
| Benzo[g,h,i]perylene | 0.0495 | 0.0359 | J | ug/L | | 73 | 50 - 150 |
| Benzo[k]fluoranthene | 0.0198 | ND | | ug/L | | 84 | 50 - 150 |
| beta-BHC | 0.0989 | 0.122 | | ug/L | | 124 | 50 - 150 |
| Bis(2-ethylhexyl) phthalate | 0.593 | 0.807 | | ug/L | | 136 | 50 - 150 |
| Bromacil | 0.0989 | 0.157 | ^3+ | ug/L | | 159 | 50 - 150 |
| Butachlor | 0.0495 | 0.0640 | | ug/L | | 129 | 50 - 150 |
| Butylbenzylphthalate | 0.148 | 0.208 | J | ug/L | | 140 | 50 - 150 |
| Chlorobenzilate | 0.0989 | 0.127 | | ug/L | | 129 | 50 - 150 |
| Chloroneb | 0.0989 | 0.100 | | ug/L | | 101 | 50 - 150 |
| Chlorothalonil (Draconil, Bravo) | 0.0989 | 0.0945 | J | ug/L | | 96 | 50 - 150 |
| Chlorpyrifos | 0.0495 | 0.0532 | | ug/L | | 108 | 50 - 150 |
| Chrysene | 0.0198 | 0.0232 | | ug/L | | 117 | 50 - 150 |
| delta-BHC | 0.0989 | 0.117 | | ug/L | | 119 | 50 - 150 |
| Di(2-ethylhexyl)adipate | 0.297 | 0.410 | J | ug/L | | 138 | 50 - 150 |
| Dibenz(a,h)anthracene | 0.0495 | 0.0356 | J | ug/L | | 72 | 50 - 150 |
| Diclorvos (DDVP) | 0.0495 | 0.0577 | | ug/L | | 117 | 50 - 150 |
| Dieldrin | 0.0989 | 0.116 | J | ug/L | | 117 | 50 - 150 |
| Diethylphthalate | 0.148 | 0.205 | J | ug/L | | 138 | 50 - 150 |
| Dimethylphthalate | 0.297 | 0.291 | J | ug/L | | 98 | 50 - 150 |
| Di-n-butyl phthalate | 0.297 | 0.424 | J | ug/L | | 143 | 49 - 243 |
| Di-n-octyl phthalate | 0.0989 | 0.0936 | J | ug/L | | 95 | 50 - 150 |
| Endosulfan I (Alpha) | 0.0989 | 0.114 | | ug/L | | 115 | 50 - 150 |
| Endosulfan II (Beta) | 0.0989 | 0.142 | | ug/L | | 144 | 50 - 150 |
| Endosulfan sulfate | 0.0989 | 0.0986 | J | ug/L | | 100 | 50 - 150 |
| Endrin | 0.0989 | 0.158 | ^3+ | ug/L | | 160 | 50 - 150 |
| Endrin aldehyde | 0.0989 | 0.115 | | ug/L | | 116 | 50 - 150 |
| EPTC | 0.0989 | 0.0933 | J | ug/L | | 94 | 50 - 150 |
| Fluoranthene | 0.0495 | 0.0546 | J | ug/L | | 110 | 50 - 150 |
| Fluorene | 0.0495 | 0.0504 | | ug/L | | 102 | 50 - 150 |
| gamma-BHC (Lindane) | 0.0495 | 0.0501 | | ug/L | | 101 | 50 - 150 |
| gamma-Chlordane | 0.0495 | 0.0513 | | ug/L | | 104 | 50 - 150 |

Eurofins Eaton Monrovia

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MRL 380-20849/2-A
Matrix: Water
Analysis Batch: 20905

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 20849

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec Limits |
|-------------------------------|-------------|------------|---------------|------|---|------|-------------|
| Heptachlor | 0.0396 | 0.0512 | | ug/L | | 130 | 50 - 150 |
| Heptachlor epoxide (isomer B) | 0.0495 | 0.0542 | | ug/L | | 110 | 50 - 150 |
| Hexachlorobenzene | 0.0495 | 0.0851 | ^3+ | ug/L | | 172 | 50 - 150 |
| Hexachlorocyclopentadiene | 0.0495 | 0.0393 | J | ug/L | | 79 | 50 - 150 |
| Indeno[1,2,3-cd]pyrene | 0.0495 | 0.0359 | J | ug/L | | 73 | 50 - 150 |
| Isophorone | 0.0989 | 0.101 | J | ug/L | | 102 | 50 - 150 |
| Malathion | 0.0989 | 0.0928 | J | ug/L | | 94 | 50 - 150 |
| Methoxychlor | 0.0989 | 0.130 | | ug/L | | 132 | 50 - 150 |
| Metolachlor | 0.0495 | 0.0592 | | ug/L | | 120 | 50 - 150 |
| Metribuzin | 0.0495 | 0.0689 | | ug/L | | 139 | 50 - 150 |
| Molinate | 0.0989 | 0.101 | | ug/L | | 102 | 50 - 150 |
| Naphthalene | 0.0989 | 0.0944 | J | ug/L | | 95 | 50 - 150 |
| Parathion | 0.0989 | 0.116 | | ug/L | | 118 | 50 - 150 |
| Pendimethalin (Penoxaline) | 0.0989 | 0.129 | | ug/L | | 130 | 50 - 150 |
| Phenanthrene | 0.0198 | 0.0199 | J | ug/L | | 101 | 50 - 150 |
| Propachlor | 0.0495 | 0.0656 | | ug/L | | 133 | 50 - 150 |
| Pyrene | 0.0495 | 0.0582 | | ug/L | | 118 | 50 - 150 |
| Simazine | 0.0495 | 0.0740 | | ug/L | | 150 | 50 - 150 |
| Terbacil | 0.0989 | 0.115 | | ug/L | | 117 | 50 - 150 |
| Terbutylazine | 0.0989 | 0.160 | ^3+ | ug/L | | 162 | 50 - 150 |
| Thiobencarb | 0.0989 | 0.129 | J | ug/L | | 130 | 50 - 150 |
| trans-Nonachlor | 0.0495 | 0.0454 | J | ug/L | | 92 | 50 - 150 |
| Trifluralin | 0.0989 | 0.107 | | ug/L | | 108 | 50 - 150 |
| 1-Methylnaphthalene | 0.0989 | 0.102 | | ug/L | | 103 | 50 - 150 |
| 2-Methylnaphthalene | 0.0989 | 0.0983 | J | ug/L | | 99 | 50 - 150 |

| Surrogate | MRL %Recovery | MRL Qualifier | Limits |
|--------------------|---------------|---------------|----------|
| 2-Nitro-m-xylene | 88 | | 70 - 130 |
| Perylene-d12 | 90 | | 70 - 130 |
| Triphenylphosphate | 121 | | 70 - 130 |

Lab Sample ID: 380-24398-B-1-A MS
Matrix: Water
Analysis Batch: 20905

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 20849

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|--------------------|---------------|------------------|-------------|-----------|--------------|------|---|------|-------------|
| 2,4'-DDD | ND | | 1.95 | 2.04 | | ug/L | | 104 | 70 - 130 |
| 2,4'-DDE | ND | | 1.95 | 1.94 | | ug/L | | 100 | 70 - 130 |
| 2,4'-DDT | ND | | 1.95 | 2.19 | | ug/L | | 112 | 70 - 130 |
| 2,4-Dinitrotoluene | ND | | 1.95 | 1.85 | | ug/L | | 95 | 70 - 130 |
| 2,6-Dinitrotoluene | ND | | 1.95 | 1.86 | | ug/L | | 95 | 70 - 130 |
| 4,4'-DDD | ND | | 1.95 | 2.19 | | ug/L | | 112 | 70 - 130 |
| 4,4'-DDE | ND | | 1.95 | 2.04 | | ug/L | | 105 | 70 - 130 |
| 4,4'-DDT | ND | | 1.95 | 1.99 | | ug/L | | 102 | 70 - 130 |
| Acenaphthene | ND | | 1.95 | 1.76 | | ug/L | | 90 | 70 - 130 |
| Acenaphthylene | ND | | 1.95 | 1.71 | | ug/L | | 88 | 70 - 130 |
| Acetochlor | ND | | 1.95 | 1.77 | | ug/L | | 91 | 70 - 130 |
| Alachlor | ND | | 1.95 | 1.96 | | ug/L | | 100 | 70 - 130 |

Eurofins Eaton Monrovia

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 380-24398-B-1-A MS
Matrix: Water
Analysis Batch: 20905

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 20849

| Analyte | Sample | Sample | Spike | MS | MS | Unit | D | %Rec | %Rec |
|----------------------------------|--------|-----------|-------|--------|-----------|------|---|------|----------|
| | Result | Qualifier | Added | Result | Qualifier | | | | |
| alpha-BHC | ND | | 1.95 | 2.12 | | ug/L | | 109 | 70 - 130 |
| alpha-Chlordane | ND | | 1.95 | 1.66 | | ug/L | | 85 | 70 - 130 |
| Anthracene | ND | F1 | 1.95 | 1.16 | F1 | ug/L | | 60 | 70 - 130 |
| Atrazine | ND | | 1.95 | 1.94 | | ug/L | | 99 | 70 - 130 |
| Benz(a)anthracene | ND | | 1.95 | 1.85 | | ug/L | | 95 | 70 - 130 |
| Benzo[a]pyrene | ND | | 1.95 | 1.58 | | ug/L | | 81 | 70 - 130 |
| Benzo[b]fluoranthene | ND | | 1.95 | 2.20 | | ug/L | | 113 | 70 - 130 |
| Benzo[g,h,i]perylene | ND | | 1.95 | 2.19 | | ug/L | | 112 | 70 - 130 |
| Benzo[k]fluoranthene | ND | | 1.95 | 2.19 | | ug/L | | 112 | 70 - 130 |
| beta-BHC | ND | | 1.95 | 2.01 | | ug/L | | 103 | 70 - 130 |
| Bis(2-ethylhexyl) phthalate | ND | | 1.95 | 2.19 | | ug/L | | 112 | 70 - 130 |
| Bromacil | ND | ^3+ | 1.95 | 1.87 | | ug/L | | 96 | 70 - 130 |
| Butachlor | ND | | 1.95 | 2.11 | | ug/L | | 108 | 70 - 130 |
| Butylbenzylphthalate | ND | | 1.95 | 2.28 | | ug/L | | 106 | 70 - 130 |
| Chlorobenzilate | ND | | 1.95 | 2.13 | | ug/L | | 109 | 70 - 130 |
| Chloroneb | ND | | 1.95 | 2.10 | | ug/L | | 108 | 70 - 130 |
| Chlorothalonil (Draconil, Bravo) | ND | | 1.95 | 2.08 | | ug/L | | 107 | 70 - 130 |
| Chlorpyrifos | ND | | 1.95 | 2.07 | | ug/L | | 106 | 70 - 130 |
| Chrysene | ND | | 1.95 | 2.17 | | ug/L | | 111 | 70 - 130 |
| delta-BHC | ND | | 1.95 | 1.91 | | ug/L | | 98 | 70 - 130 |
| Di(2-ethylhexyl)adipate | ND | | 1.95 | 2.02 | | ug/L | | 104 | 70 - 130 |
| Dibenz(a,h)anthracene | ND | | 1.95 | 2.32 | | ug/L | | 119 | 70 - 130 |
| Diclorvos (DDVP) | ND | | 1.95 | 1.94 | | ug/L | | 99 | 70 - 130 |
| Dieldrin | ND | | 1.95 | 2.14 | | ug/L | | 110 | 70 - 130 |
| Diethylphthalate | ND | | 1.95 | 1.92 | | ug/L | | 98 | 70 - 130 |
| Dimethylphthalate | ND | | 1.95 | 1.86 | | ug/L | | 96 | 70 - 130 |
| Di-n-butyl phthalate | ND | | 3.90 | 4.20 | | ug/L | | 108 | 70 - 130 |
| Di-n-octyl phthalate | ND | | 1.95 | 1.96 | | ug/L | | 101 | 70 - 130 |
| Endosulfan I (Alpha) | ND | | 1.95 | 2.11 | | ug/L | | 108 | 70 - 130 |
| Endosulfan II (Beta) | ND | | 1.95 | 2.31 | | ug/L | | 118 | 70 - 130 |
| Endosulfan sulfate | ND | | 1.95 | 2.32 | | ug/L | | 119 | 70 - 130 |
| Endrin | ND | ^3+ | 1.95 | 1.92 | | ug/L | | 98 | 70 - 130 |
| Endrin aldehyde | ND | | 1.95 | 1.38 | | ug/L | | 71 | 70 - 130 |
| EPTC | ND | | 1.95 | 1.86 | | ug/L | | 95 | 70 - 130 |
| Fluoranthene | ND | | 1.95 | 2.10 | | ug/L | | 107 | 70 - 130 |
| Fluorene | ND | | 1.95 | 1.90 | | ug/L | | 97 | 70 - 130 |
| gamma-BHC (Lindane) | ND | | 1.95 | 2.10 | | ug/L | | 108 | 70 - 130 |
| gamma-Chlordane | ND | | 1.95 | 1.74 | | ug/L | | 89 | 70 - 130 |
| Heptachlor | ND | | 1.95 | 2.01 | | ug/L | | 103 | 70 - 130 |
| Heptachlor epoxide (isomer B) | ND | | 1.95 | 1.64 | | ug/L | | 84 | 70 - 130 |
| Hexachlorobenzene | ND | ^3+ | 1.95 | 1.78 | | ug/L | | 91 | 70 - 130 |
| Hexachlorocyclopentadiene | ND | | 1.95 | 2.22 | | ug/L | | 114 | 70 - 130 |
| Indeno[1,2,3-cd]pyrene | ND | | 1.95 | 2.30 | | ug/L | | 118 | 70 - 130 |
| Isophorone | ND | | 1.95 | 1.84 | | ug/L | | 94 | 70 - 130 |
| Malathion | ND | | 1.95 | 2.15 | | ug/L | | 110 | 70 - 130 |
| Methoxychlor | ND | | 1.95 | 2.30 | | ug/L | | 118 | 70 - 130 |
| Metolachlor | ND | | 1.95 | 2.06 | | ug/L | | 106 | 70 - 130 |
| Metribuzin | ND | | 1.95 | 1.64 | | ug/L | | 84 | 70 - 130 |
| Molinate | ND | | 1.95 | 1.93 | | ug/L | | 99 | 70 - 130 |

Eurofins Eaton Monrovia

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 380-24398-B-1-A MS

Matrix: Water

Analysis Batch: 20905

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 20849

| Analyte | Sample | Sample | Spike | MS | MS | Unit | D | %Rec | %Rec |
|----------------------------|--------|-----------|-------|--------|-----------|------|---|------|----------|
| | Result | Qualifier | Added | Result | Qualifier | | | | |
| Naphthalene | ND | | 1.95 | 1.76 | | ug/L | | 90 | 70 - 130 |
| Parathion | ND | | 1.95 | 2.06 | | ug/L | | 106 | 70 - 130 |
| Pendimethalin (Penoxaline) | ND | | 1.95 | 2.02 | | ug/L | | 103 | 70 - 130 |
| Phenanthrene | ND | | 1.95 | 1.91 | | ug/L | | 98 | 70 - 130 |
| Propachlor | ND | | 1.95 | 2.04 | | ug/L | | 105 | 70 - 130 |
| Pyrene | ND | | 1.95 | 2.11 | | ug/L | | 108 | 70 - 130 |
| Simazine | ND | | 1.95 | 2.01 | | ug/L | | 103 | 70 - 130 |
| Terbacil | ND | | 1.95 | 1.76 | | ug/L | | 90 | 70 - 130 |
| Terbutylazine | ND | ^3+ | 1.95 | 2.03 | | ug/L | | 104 | 70 - 130 |
| Thiobencarb | ND | | 1.95 | 1.92 | | ug/L | | 98 | 70 - 130 |
| trans-Nonachlor | ND | | 1.95 | 2.23 | | ug/L | | 114 | 70 - 130 |
| Trifluralin | ND | | 1.95 | 2.01 | | ug/L | | 103 | 70 - 130 |
| 1-Methylnaphthalene | ND | | 1.95 | 1.77 | | ug/L | | 91 | 70 - 130 |
| 2-Methylnaphthalene | ND | | 1.95 | 1.80 | | ug/L | | 92 | 70 - 130 |

| Surrogate | MS | MS | Limits |
|--------------------|-----------|-----------|----------|
| | %Recovery | Qualifier | |
| 2-Nitro-m-xylene | 99 | | 70 - 130 |
| Perylene-d12 | 87 | | 70 - 130 |
| Triphenylphosphate | 101 | | 70 - 130 |

Lab Sample ID: 380-24401-B-1-A DU

Matrix: Water

Analysis Batch: 20905

Client Sample ID: Duplicate

Prep Type: Total/NA

Prep Batch: 20849

| Analyte | Sample | Sample | DU | DU | Unit | D | RPD | RPD |
|-----------------------------|--------|-----------|--------|-----------|------|---|-----|-----|
| | Result | Qualifier | Result | Qualifier | | | | |
| 2,4'-DDD | ND | | ND | | ug/L | | NC | 20 |
| 2,4'-DDE | ND | | ND | | ug/L | | NC | 20 |
| 2,4'-DDT | ND | | ND | | ug/L | | NC | 20 |
| 2,4-Dinitrotoluene | ND | | ND | | ug/L | | NC | 20 |
| 2,6-Dinitrotoluene | ND | | ND | | ug/L | | NC | 20 |
| 4,4'-DDD | ND | | ND | | ug/L | | NC | 20 |
| 4,4'-DDE | ND | | ND | | ug/L | | NC | 20 |
| 4,4'-DDT | ND | | ND | | ug/L | | NC | 20 |
| Acenaphthene | ND | | ND | | ug/L | | NC | 20 |
| Acenaphthylene | ND | | ND | | ug/L | | NC | 20 |
| Acetochlor | ND | | ND | | ug/L | | NC | 20 |
| Alachlor | ND | | ND | | ug/L | | NC | 20 |
| alpha-BHC | ND | | ND | | ug/L | | NC | 20 |
| alpha-Chlordane | ND | | ND | | ug/L | | NC | 20 |
| Anthracene | ND | | ND | | ug/L | | NC | 20 |
| Atrazine | ND | | ND | | ug/L | | NC | 20 |
| Benz(a)anthracene | ND | | ND | | ug/L | | NC | 20 |
| Benzo[a]pyrene | ND | | ND | | ug/L | | NC | 20 |
| Benzo[b]fluoranthene | ND | | ND | | ug/L | | NC | 20 |
| Benzo[g,h,i]perylene | ND | | ND | | ug/L | | NC | 20 |
| Benzo[k]fluoranthene | ND | | ND | | ug/L | | NC | 20 |
| beta-BHC | ND | | ND | | ug/L | | NC | 20 |
| Bis(2-ethylhexyl) phthalate | ND | | ND | | ug/L | | NC | 20 |

Eurofins Eaton Monrovia

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 380-24401-B-1-A DU
Matrix: Water
Analysis Batch: 20905

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 20849

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | Limit |
|----------------------------------|---------------|------------------|-----------|--------------|------|---|-----|-------|
| Bromacil | ND | ^3+ | ND | | ug/L | | NC | 20 |
| Butachlor | ND | | ND | | ug/L | | NC | 20 |
| Butylbenzylphthalate | ND | | ND | | ug/L | | NC | 20 |
| Chlorobenzilate | ND | | ND | | ug/L | | NC | 20 |
| Chloroneb | ND | | ND | | ug/L | | NC | 20 |
| Chlorothalonil (Draconil, Bravo) | ND | | ND | | ug/L | | NC | 20 |
| Chlorpyrifos | ND | | ND | | ug/L | | NC | 20 |
| Chrysene | ND | | ND | | ug/L | | NC | 20 |
| delta-BHC | ND | | ND | | ug/L | | NC | 20 |
| Di(2-ethylhexyl)adipate | ND | | ND | | ug/L | | NC | 20 |
| Dibenz(a,h)anthracene | ND | | ND | | ug/L | | NC | 20 |
| Diclorvos (DDVP) | ND | | ND | | ug/L | | NC | 20 |
| Dieldrin | ND | | ND | | ug/L | | NC | 20 |
| Diethylphthalate | ND | | ND | | ug/L | | NC | 20 |
| Dimethylphthalate | ND | | ND | | ug/L | | NC | 20 |
| Di-n-butyl phthalate | ND | | ND | | ug/L | | NC | 20 |
| Di-n-octyl phthalate | ND | | ND | | ug/L | | NC | 20 |
| Endosulfan I (Alpha) | ND | | ND | | ug/L | | NC | 20 |
| Endosulfan II (Beta) | ND | | ND | | ug/L | | NC | 20 |
| Endosulfan sulfate | ND | | ND | | ug/L | | NC | 20 |
| Endrin | ND | ^3+ | ND | | ug/L | | NC | 20 |
| Endrin aldehyde | ND | | ND | | ug/L | | NC | 20 |
| EPTC | ND | | ND | | ug/L | | NC | 20 |
| Fluoranthene | ND | | ND | | ug/L | | NC | 20 |
| Fluorene | ND | | ND | | ug/L | | NC | 20 |
| gamma-BHC (Lindane) | ND | | ND | | ug/L | | NC | 20 |
| gamma-Chlordane | ND | | ND | | ug/L | | NC | 20 |
| Heptachlor | ND | | ND | | ug/L | | NC | 20 |
| Heptachlor epoxide (isomer B) | ND | | ND | | ug/L | | NC | 20 |
| Hexachlorobenzene | ND | ^3+ | ND | | ug/L | | NC | 20 |
| Hexachlorocyclopentadiene | ND | | ND | | ug/L | | NC | 20 |
| Indeno[1,2,3-cd]pyrene | ND | | ND | | ug/L | | NC | 20 |
| Isophorone | ND | | ND | | ug/L | | NC | 20 |
| Malathion | ND | | ND | | ug/L | | NC | 20 |
| Methoxychlor | ND | | ND | | ug/L | | NC | 20 |
| Metolachlor | ND | | ND | | ug/L | | NC | 20 |
| Metribuzin | ND | | ND | | ug/L | | NC | 20 |
| Molinate | ND | | ND | | ug/L | | NC | 20 |
| Naphthalene | ND | | ND | | ug/L | | NC | 20 |
| Parathion | ND | | ND | | ug/L | | NC | 20 |
| Pendimethalin (Penoxaline) | ND | | ND | | ug/L | | NC | 20 |
| Phenanthrene | ND | | ND | | ug/L | | NC | 20 |
| Propachlor | ND | | ND | | ug/L | | NC | 20 |
| Pyrene | ND | | ND | | ug/L | | NC | 20 |
| Simazine | ND | | ND | | ug/L | | NC | 20 |
| Terbacil | ND | | ND | | ug/L | | NC | 20 |
| Terbutylazine | ND | ^3+ | ND | | ug/L | | NC | 20 |
| Thiobencarb | ND | | ND | | ug/L | | NC | 20 |
| Total Permethrin (mixed isomers) | ND | | ND | | ug/L | | NC | 20 |

Eurofins Eaton Monrovia

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 380-24401-B-1-A DU
Matrix: Water
Analysis Batch: 20905

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 20849

| Analyte | Sample | Sample | DU | DU | Unit | D | RPD | Limit |
|---------------------|------------------|------------------|---------------|-----------|------|---|-----|-------|
| | Result | Qualifier | Result | Qualifier | | | | |
| trans-Nonachlor | ND | | ND | | ug/L | | NC | 20 |
| Trifluralin | ND | | ND | | ug/L | | NC | 20 |
| 1-Methylnaphthalene | ND | | ND | | ug/L | | NC | 20 |
| 2-Methylnaphthalene | ND | | ND | | ug/L | | NC | 20 |
| DU DU | | | | | | | | |
| Surrogate | %Recovery | Qualifier | Limits | | | | | |
| 2-Nitro-m-xylene | 98 | | 70 - 130 | | | | | |
| Perylene-d12 | 91 | | 70 - 130 | | | | | |
| Triphenylphosphate | 106 | | 70 - 130 | | | | | |

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Lab Sample ID: MBL 380-21364/4-A
Matrix: Water
Analysis Batch: 21577

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 21364

| Analyte | MBL | MBL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------------------------|------------------|------------------|---------------|------|---|-----------------|-----------------|----------------|
| | Result | Qualifier | | | | | | |
| 1,2,3-Trichloropropane | ND | | 0.040 | ug/L | | 10/20/22 13:23 | 10/20/22 17:55 | 1 |
| 1,2-D bromo-3-Chloropropane | ND | | 0.010 | ug/L | | 10/20/22 13:23 | 10/20/22 17:55 | 1 |
| 1,2-D bromoethane | ND | | 0.010 | ug/L | | 10/20/22 13:23 | 10/20/22 17:55 | 1 |
| MBL MBL | | | | | | | | |
| Surrogate | %Recovery | Qualifier | Limits | | | Prepared | Analyzed | Dil Fac |
| 1,2-Dibromopropane (Surr) | 99 | | 60 - 140 | | | 10/20/22 13:23 | 10/20/22 17:55 | 1 |

Lab Sample ID: LCS 380-21364/3-A
Matrix: Water
Analysis Batch: 21577

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 21364

| Analyte | Spike Added | LCS | LCS | Unit | D | %Rec | %Rec Limits |
|-----------------------------|------------------|------------------|---------------|------|---|------|-------------|
| | | Result | Qualifier | | | | |
| 1,2,3-Trichloropropane | 0.200 | 0.242 | | ug/L | | 121 | 70 - 130 |
| 1,2-D bromo-3-Chloropropane | 0.200 | 0.199 | | ug/L | | 100 | 70 - 130 |
| 1,2-D bromoethane | 0.200 | 0.227 | | ug/L | | 113 | 70 - 130 |
| LCS LCS | | | | | | | |
| Surrogate | %Recovery | Qualifier | Limits | | | | |
| 1,2-Dibromopropane (Surr) | 113 | | 60 - 140 | | | | |

Lab Sample ID: MRL 380-21364/1-A
Matrix: Water
Analysis Batch: 21577

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 21364

| Analyte | Spike Added | MRL | MRL | Unit | D | %Rec | %Rec Limits |
|---------------------------|------------------|------------------|---------------|------|---|------|-------------|
| | | Result | Qualifier | | | | |
| 1,2,3-Trichloropropane | 0.0400 | 0.0531 | | ug/L | | 133 | 60 - 140 |
| MRL MRL | | | | | | | |
| Surrogate | %Recovery | Qualifier | Limits | | | | |
| 1,2-Dibromopropane (Surr) | 114 | | 60 - 140 | | | | |

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC) (Continued)

Lab Sample ID: MRL 380-21364/2-A
Matrix: Water
Analysis Batch: 21577

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 21364

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec Limits |
|-----------------------------|------------------|----------------------|---------------|------|---|------|-------------|
| 1,2,3-Trichloropropane | 0.0500 | 0.0651 | | ug/L | | 130 | 60 - 140 |
| 1,2-D bromo-3-Chloropropane | 0.0100 | 0.0137 | | ug/L | | 137 | 60 - 140 |
| 1,2-D bromoethane | 0.0100 | 0.0110 | | ug/L | | 110 | 60 - 140 |
| Surrogate | %Recovery | MRL Qualifier | Limits | | | | |
| 1,2-Dibromopropane (Surr) | 111 | | 60 - 140 | | | | |

Lab Sample ID: 380-23978-F-1-A MS
Matrix: Water
Analysis Batch: 21577

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 21364

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|-----------------------------|------------------|---------------------|---------------|-----------|--------------|------|---|------|-------------|
| 1,2,3-Trichloropropane | ND | | 1.25 | 1.29 | | ug/L | | 103 | 65 - 135 |
| 1,2-D bromo-3-Chloropropane | ND | | 0.250 | 0.256 | | ug/L | | 103 | 65 - 135 |
| 1,2-D bromoethane | ND | | 0.250 | 0.238 | | ug/L | | 95 | 65 - 135 |
| Surrogate | %Recovery | MS Qualifier | Limits | | | | | | |
| 1,2-Dibromopropane (Surr) | 111 | | 60 - 140 | | | | | | |

Lab Sample ID: 380-23978-M-2-A DU
Matrix: Water
Analysis Batch: 21577

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 21364

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|-----------------------------|------------------|---------------------|---------------|--------------|------|---|-----|-----------|
| 1,2,3-Trichloropropane | ND | | ND | | ug/L | | NC | 20 |
| 1,2-D bromo-3-Chloropropane | ND | | ND | | ug/L | | 6 | 20 |
| 1,2-D bromoethane | ND | | ND | | ug/L | | NC | 20 |
| Surrogate | %Recovery | DU Qualifier | Limits | | | | | |
| 1,2-Dibromopropane (Surr) | 115 | | 60 - 140 | | | | | |

Method: 505 - Organochlorine Pesticides/PCBs (GC)

Lab Sample ID: MB 380-20633/7-A
Matrix: Water
Analysis Batch: 20914

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 20633

| Analyte | MB Result | MB Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------------|-----------|--------------|--------|------|---|----------------|----------------|---------|
| Aldrin | ND | | 0.0020 | ug/L | | 10/13/22 15:16 | 10/13/22 20:03 | 1 |
| Dieldrin | ND | | 0.0020 | ug/L | | 10/13/22 15:16 | 10/13/22 20:03 | 1 |
| Toxaphene | ND | | 0.10 | ug/L | | 10/13/22 15:16 | 10/13/22 20:03 | 1 |
| Alachlor | ND | | 0.10 | ug/L | | 10/13/22 15:16 | 10/13/22 20:03 | 1 |
| Chlordane (n.o.s.) | ND | | 0.10 | ug/L | | 10/13/22 15:16 | 10/13/22 20:03 | 1 |
| Endrin | ND | | 0.010 | ug/L | | 10/13/22 15:16 | 10/13/22 20:03 | 1 |
| Heptachlor | ND | | 0.010 | ug/L | | 10/13/22 15:16 | 10/13/22 20:03 | 1 |
| Heptachlor epoxide | ND | | 0.010 | ug/L | | 10/13/22 15:16 | 10/13/22 20:03 | 1 |
| gamma-BHC (Lindane) | ND | | 0.010 | ug/L | | 10/13/22 15:16 | 10/13/22 20:03 | 1 |
| Methoxychlor | ND | | 0.050 | ug/L | | 10/13/22 15:16 | 10/13/22 20:03 | 1 |

Eurofins Eaton Monrovia

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 505 - Organochlorine Pesticides/PCBs (GC) (Continued)

Lab Sample ID: MB 380-20633/7-A
Matrix: Water
Analysis Batch: 20914

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 20633

| Analyte | MB | MB | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------------------|--------|-----------|-------|------|---|----------------|----------------|---------|
| | Result | Qualifier | | | | | | |
| PCB-1016 | ND | | 0.070 | ug/L | | 10/13/22 15:16 | 10/13/22 20:03 | 1 |
| PCB-1221 | ND | | 0.10 | ug/L | | 10/13/22 15:16 | 10/13/22 20:03 | 1 |
| PCB-1232 | ND | | 0.10 | ug/L | | 10/13/22 15:16 | 10/13/22 20:03 | 1 |
| PCB-1242 | ND | | 0.10 | ug/L | | 10/13/22 15:16 | 10/13/22 20:03 | 1 |
| PCB-1248 | ND | | 0.10 | ug/L | | 10/13/22 15:16 | 10/13/22 20:03 | 1 |
| PCB-1254 | ND | | 0.10 | ug/L | | 10/13/22 15:16 | 10/13/22 20:03 | 1 |
| PCB-1260 | ND | | 0.070 | ug/L | | 10/13/22 15:16 | 10/13/22 20:03 | 1 |
| Polychlorinated biphenyls, Total | ND | | 0.10 | ug/L | | 10/13/22 15:16 | 10/13/22 20:03 | 1 |

| Surrogate | MB | MB | Limits | Prepared | Analyzed | Dil Fac |
|----------------------|-----------|-----------|----------|----------------|----------------|---------|
| | %Recovery | Qualifier | | | | |
| Tetrachloro-m-xylene | 102 | | 70 - 130 | 10/13/22 15:16 | 10/13/22 20:03 | 1 |

Lab Sample ID: MRL 380-20633/2-A
Matrix: Water
Analysis Batch: 20914

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 20633

| Analyte | Spike Added | MRL | MRL | Unit | D | %Rec | %Rec Limits |
|----------|-------------|--------|-----------|------|---|------|-------------|
| | | Result | Qualifier | | | | |
| Aldrin | 0.00200 | ND | | ug/L | | 77 | 50 - 150 |
| Dieldrin | 0.00200 | ND | | ug/L | | 77 | 50 - 150 |

| Surrogate | MRL | MRL | Limits |
|----------------------|-----------|-----------|----------|
| | %Recovery | Qualifier | |
| Tetrachloro-m-xylene | 106 | | 70 - 130 |

Lab Sample ID: MRL 380-20633/3-A
Matrix: Water
Analysis Batch: 20914

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 20633

| Analyte | Spike Added | MRL | MRL | Unit | D | %Rec | %Rec Limits |
|---------------------|-------------|---------|-----------|------|---|------|-------------|
| | | Result | Qualifier | | | | |
| Aldrin | 0.0100 | 0.00827 | | ug/L | | 83 | 50 - 150 |
| Dieldrin | 0.0100 | 0.00827 | | ug/L | | 83 | 50 - 150 |
| Alachlor | 0.100 | 0.121 | | ug/L | | 121 | 50 - 150 |
| Endrin | 0.0100 | 0.0122 | | ug/L | | 122 | 50 - 150 |
| Heptachlor | 0.0100 | 0.0127 | | ug/L | | 127 | 50 - 150 |
| Heptachlor epoxide | 0.0100 | 0.0124 | | ug/L | | 124 | 50 - 150 |
| gamma-BHC (Lindane) | 0.0100 | 0.0127 | | ug/L | | 127 | 50 - 150 |
| Methoxychlor | 0.0500 | 0.0668 | | ug/L | | 134 | 50 - 150 |

| Surrogate | MRL | MRL | Limits |
|----------------------|-----------|-----------|----------|
| | %Recovery | Qualifier | |
| Tetrachloro-m-xylene | 95 | | 70 - 130 |

Lab Sample ID: MRL 380-20633/4-A
Matrix: Water
Analysis Batch: 20914

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 20633

| Analyte | Spike Added | MRL | MRL | Unit | D | %Rec | %Rec Limits |
|-----------|-------------|--------|-----------|------|---|------|-------------|
| | | Result | Qualifier | | | | |
| Toxaphene | 0.100 | 0.0873 | J | ug/L | | 87 | 50 - 150 |

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 505 - Organochlorine Pesticides/PCBs (GC) (Continued)

Lab Sample ID: MRL 380-20633/4-A
Matrix: Water
Analysis Batch: 20914

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 20633

| <i>Surrogate</i> | <i>%Recovery</i> | <i>MRL Qualifier</i> | <i>Limits</i> |
|-----------------------------|------------------|----------------------|---------------|
| <i>Tetrachloro-m-xylene</i> | 101 | | 70 - 130 |

Lab Sample ID: MRL 380-20633/5-A
Matrix: Water
Analysis Batch: 20914

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 20633

| <i>Analyte</i> | <i>Spike Added</i> | <i>MRL Result</i> | <i>MRL Qualifier</i> | <i>Unit</i> | <i>D</i> | <i>%Rec</i> | <i>%Rec Limits</i> |
|----------------|--------------------|-------------------|----------------------|-------------|----------|-------------|--------------------|
| Toxaphene | 0.500 | 0.497 | | ug/L | | 99 | 50 - 150 |

| <i>Surrogate</i> | <i>%Recovery</i> | <i>MRL Qualifier</i> | <i>Limits</i> |
|-----------------------------|------------------|----------------------|---------------|
| <i>Tetrachloro-m-xylene</i> | 100 | | 70 - 130 |

Lab Sample ID: MRL 380-20633/6-A
Matrix: Water
Analysis Batch: 20914

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 20633

| <i>Analyte</i> | <i>Spike Added</i> | <i>MRL Result</i> | <i>MRL Qualifier</i> | <i>Unit</i> | <i>D</i> | <i>%Rec</i> | <i>%Rec Limits</i> |
|--------------------|--------------------|-------------------|----------------------|-------------|----------|-------------|--------------------|
| Chlordane (n.o.s.) | 0.100 | 0.0906 | J | ug/L | | 91 | 50 - 150 |

| <i>Surrogate</i> | <i>%Recovery</i> | <i>MRL Qualifier</i> | <i>Limits</i> |
|-----------------------------|------------------|----------------------|---------------|
| <i>Tetrachloro-m-xylene</i> | 99 | | 70 - 130 |

Lab Sample ID: 380-23418-C-1-B MS
Matrix: Water
Analysis Batch: 20914

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 20633

| <i>Analyte</i> | <i>Sample Result</i> | <i>Sample Qualifier</i> | <i>Spike Added</i> | <i>MS Result</i> | <i>MS Qualifier</i> | <i>Unit</i> | <i>D</i> | <i>%Rec</i> | <i>%Rec Limits</i> |
|--------------------|----------------------|-------------------------|--------------------|------------------|---------------------|-------------|----------|-------------|--------------------|
| Chlordane (n.o.s.) | ND | | 0.504 | 0.511 | | ug/L | | 101 | 65 - 135 |

| <i>Surrogate</i> | <i>%Recovery</i> | <i>MS Qualifier</i> | <i>Limits</i> |
|-----------------------------|------------------|---------------------|---------------|
| <i>Tetrachloro-m-xylene</i> | 106 | | 70 - 130 |

Lab Sample ID: 380-23418-D-1-B MS
Matrix: Water
Analysis Batch: 20914

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 20633

| <i>Analyte</i> | <i>Sample Result</i> | <i>Sample Qualifier</i> | <i>Spike Added</i> | <i>MS Result</i> | <i>MS Qualifier</i> | <i>Unit</i> | <i>D</i> | <i>%Rec</i> | <i>%Rec Limits</i> |
|---------------------|----------------------|-------------------------|--------------------|------------------|---------------------|-------------|----------|-------------|--------------------|
| Aldrin | ND | | 0.101 | 0.0933 | | ug/L | | 92 | 65 - 135 |
| Dieldrin | ND | | 0.101 | 0.0900 | | ug/L | | 89 | 65 - 135 |
| Alachlor | ND | | 1.01 | 0.858 | | ug/L | | 85 | 65 - 135 |
| Endrin | ND | | 0.101 | 0.0856 | | ug/L | | 85 | 65 - 135 |
| Heptachlor | ND | | 0.101 | 0.0850 | | ug/L | | 84 | 65 - 135 |
| Heptachlor epoxide | ND | | 0.101 | 0.0880 | | ug/L | | 87 | 65 - 135 |
| gamma-BHC (Lindane) | ND | | 0.101 | 0.0870 | | ug/L | | 86 | 65 - 135 |
| Methoxychlor | ND | | 0.504 | 0.413 | | ug/L | | 82 | 65 - 135 |

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 505 - Organochlorine Pesticides/PCBs (GC) (Continued)

Lab Sample ID: 380-23418-D-1-B MS
Matrix: Water
Analysis Batch: 20914

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 20633

| | <i>MS</i> | <i>MS</i> | |
|-----------------------------|------------------|------------------|---------------|
| <i>Surrogate</i> | <i>%Recovery</i> | <i>Qualifier</i> | <i>Limits</i> |
| <i>Tetrachloro-m-xylene</i> | 97 | | 70 - 130 |

Lab Sample ID: 380-23784-AI-1-A MS
Matrix: Water
Analysis Batch: 20914

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 20633

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS MS | | Unit | D | %Rec | %Rec Limits |
|---------------------|----------------------|-------------------------|--------------------|---------------|------------------|-------------|----------|-------------|--------------------|
| | | | | Result | Qualifier | | | | |
| Aldrin | ND | | 0.0199 | 0.0156 | | ug/L | | 78 | 65 - 135 |
| Dieldrin | 0.0031 | | 0.0199 | 0.0187 | | ug/L | | 78 | 65 - 135 |
| Alachlor | ND | | 0.199 | 0.198 | | ug/L | | 99 | 65 - 135 |
| Endrin | ND | | 0.0199 | 0.0192 | | ug/L | | 96 | 65 - 135 |
| Heptachlor | ND | | 0.0199 | 0.0194 | | ug/L | | 97 | 65 - 135 |
| Heptachlor epoxide | ND | | 0.0199 | 0.0204 | | ug/L | | 102 | 65 - 135 |
| gamma-BHC (Lindane) | ND | | 0.0199 | 0.0199 | | ug/L | | 100 | 65 - 135 |
| Methoxychlor | ND | | 0.0997 | 0.100 | | ug/L | | 100 | 65 - 135 |

| | <i>MS</i> | <i>MS</i> | |
|-----------------------------|------------------|------------------|---------------|
| <i>Surrogate</i> | <i>%Recovery</i> | <i>Qualifier</i> | <i>Limits</i> |
| <i>Tetrachloro-m-xylene</i> | 101 | | 70 - 130 |

Lab Sample ID: 380-23784-AJ-1-A MS
Matrix: Water
Analysis Batch: 20914

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 20633

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS MS | | Unit | D | %Rec | %Rec Limits |
|----------------|----------------------|-------------------------|--------------------|---------------|------------------|-------------|----------|-------------|--------------------|
| | | | | Result | Qualifier | | | | |
| Toxaphene | ND | | 2.48 | 2.36 | | ug/L | | 95 | 65 - 135 |

| | <i>MS</i> | <i>MS</i> | |
|-----------------------------|------------------|------------------|---------------|
| <i>Surrogate</i> | <i>%Recovery</i> | <i>Qualifier</i> | <i>Limits</i> |
| <i>Tetrachloro-m-xylene</i> | 101 | | 70 - 130 |

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 380-20522/4
Matrix: Water
Analysis Batch: 20522

Client Sample ID: Method Blank
Prep Type: Total/NA

| Analyte | MB MB | | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------|---------------|------------------|-----------|-------------|----------|-----------------|-----------------|----------------|
| | Result | Qualifier | | | | | | |
| Nitrate as N | ND | | 0.050 | mg/L | | | 10/12/22 15:27 | 1 |
| Nitrate Nitrite as N | ND | | 0.050 | mg/L | | | 10/12/22 15:27 | 1 |
| Nitrite as N | ND | | 0.050 | mg/L | | | 10/12/22 15:27 | 1 |

Lab Sample ID: MB 380-20522/40
Matrix: Water
Analysis Batch: 20522

Client Sample ID: Method Blank
Prep Type: Total/NA

| Analyte | MB MB | | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------|---------------|------------------|-----------|-------------|----------|-----------------|-----------------|----------------|
| | Result | Qualifier | | | | | | |
| Nitrate as N | ND | | 0.050 | mg/L | | | 10/12/22 22:59 | 1 |
| Nitrate Nitrite as N | ND | | 0.050 | mg/L | | | 10/12/22 22:59 | 1 |
| Nitrite as N | ND | | 0.050 | mg/L | | | 10/12/22 22:59 | 1 |

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QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 380-20522/7
Matrix: Water
Analysis Batch: 20522

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|----------------------|-------------|------------|---------------|------|---|------|-------------|
| Nitrate as N | 2.50 | 2.63 | | mg/L | | 105 | 90 - 110 |
| Nitrate Nitrite as N | 3.50 | 3.61 | | mg/L | | 103 | 90 - 110 |
| Nitrite as N | 1.00 | 0.983 | | mg/L | | 98 | 90 - 110 |

Lab Sample ID: LCSD 380-20522/8
Matrix: Water
Analysis Batch: 20522

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|----------------------|-------------|-------------|----------------|------|---|------|-------------|-----|-----------|
| Nitrate as N | 2.50 | 2.63 | | mg/L | | 105 | 90 - 110 | 0 | 20 |
| Nitrate Nitrite as N | 3.50 | 3.63 | | mg/L | | 104 | 90 - 110 | 0 | 20 |
| Nitrite as N | 1.00 | 0.996 | | mg/L | | 100 | 90 - 110 | 1 | 20 |

Lab Sample ID: MRL 380-20522/41
Matrix: Water
Analysis Batch: 20522

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec Limits |
|----------------------|-------------|------------|---------------|------|---|------|-------------|
| Nitrate as N | 0.0125 | 0.0112 | | mg/L | | 90 | 50 - 150 |
| Nitrate Nitrite as N | 0.0250 | 0.0221 | | mg/L | | 88 | 50 - 150 |
| Nitrite as N | 0.0125 | 0.0109 | | mg/L | | 87 | 50 - 150 |

Lab Sample ID: MRL 380-20522/5
Matrix: Water
Analysis Batch: 20522

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec Limits |
|----------------------|-------------|------------|---------------|------|---|------|-------------|
| Nitrate as N | 0.0125 | 0.0104 | | mg/L | | 83 | 50 - 150 |
| Nitrate Nitrite as N | 0.0250 | 0.0214 | | mg/L | | 86 | 50 - 150 |
| Nitrite as N | 0.0125 | 0.0110 | | mg/L | | 88 | 50 - 150 |

Lab Sample ID: MRL 380-20522/6
Matrix: Water
Analysis Batch: 20522

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec Limits |
|----------------------|-------------|------------|---------------|------|---|------|-------------|
| Nitrate as N | 0.0500 | 0.0436 | | mg/L | | 87 | 50 - 150 |
| Nitrate Nitrite as N | 0.100 | 0.0886 | | mg/L | | 89 | 50 - 150 |
| Nitrite as N | 0.0500 | 0.0450 | | mg/L | | 90 | 50 - 150 |

Lab Sample ID: 380-23733-D-2 MS
Matrix: Water
Analysis Batch: 20522

Client Sample ID: Matrix Spike
Prep Type: Total/NA

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|----------------------|---------------|------------------|-------------|-----------|--------------|------|---|------|-------------|
| Nitrate as N | 13 | | 6.25 | 19.5 | | mg/L | | 105 | 80 - 120 |
| Nitrate Nitrite as N | 13 | | 8.75 | 21.9 | | mg/L | | 102 | 80 - 120 |
| Nitrite as N | ND | | 2.50 | 2.44 | | mg/L | | 98 | 80 - 120 |

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 380-23733-D-2 MSD
Matrix: Water
Analysis Batch: 20522

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|----------------------|---------------|------------------|-------------|------------|---------------|------|---|------|-------------|-----|-----------|
| Nitrate as N | 13 | | 6.25 | 19.5 | | mg/L | | 105 | 80 - 120 | 0 | 20 |
| Nitrate Nitrite as N | 13 | | 8.75 | 21.9 | | mg/L | | 102 | 80 - 120 | 0 | 20 |
| Nitrite as N | ND | | 2.50 | 2.44 | | mg/L | | 97 | 80 - 120 | 0 | 20 |

Lab Sample ID: MB 380-20523/4
Matrix: Water
Analysis Batch: 20523

Client Sample ID: Method Blank
Prep Type: Total/NA

| Analyte | MB Result | MB Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|-----------|--------------|------|------|---|----------|----------------|---------|
| Chloride | ND | | 0.50 | mg/L | | | 10/12/22 15:27 | 1 |
| Sulfate | ND | | 0.25 | mg/L | | | 10/12/22 15:27 | 1 |

Lab Sample ID: MB 380-20523/40
Matrix: Water
Analysis Batch: 20523

Client Sample ID: Method Blank
Prep Type: Total/NA

| Analyte | MB Result | MB Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|-----------|--------------|------|------|---|----------|----------------|---------|
| Chloride | ND | | 0.50 | mg/L | | | 10/12/22 22:59 | 1 |
| Sulfate | ND | | 0.25 | mg/L | | | 10/12/22 22:59 | 1 |

Lab Sample ID: LCS 380-20523/7
Matrix: Water
Analysis Batch: 20523

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|----------|-------------|------------|---------------|------|---|------|-------------|
| Chloride | 25.0 | 26.3 | | mg/L | | 105 | 90 - 110 |
| Sulfate | 50.0 | 52.4 | | mg/L | | 105 | 90 - 110 |

Lab Sample ID: LCSD 380-20523/8
Matrix: Water
Analysis Batch: 20523

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|----------|-------------|-------------|----------------|------|---|------|-------------|-----|-----------|
| Chloride | 25.0 | 26.2 | | mg/L | | 105 | 90 - 110 | 0 | 20 |
| Sulfate | 50.0 | 52.7 | | mg/L | | 105 | 90 - 110 | 0 | 20 |

Lab Sample ID: MRL 380-20523/41
Matrix: Water
Analysis Batch: 20523

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec Limits |
|----------|-------------|------------|---------------|------|---|------|-------------|
| Chloride | 0.125 | 0.109 | | mg/L | | 87 | 50 - 150 |
| Sulfate | 0.250 | 0.225 | | mg/L | | 90 | 50 - 150 |

Lab Sample ID: MRL 380-20523/5
Matrix: Water
Analysis Batch: 20523

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec Limits |
|----------|-------------|------------|---------------|------|---|------|-------------|
| Chloride | 0.125 | 0.0945 | | mg/L | | 76 | 50 - 150 |

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QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MRL 380-20523/5
Matrix: Water
Analysis Batch: 20523

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec Limits |
|---------|-------------|------------|---------------|------|---|------|-------------|
| Sulfate | 0.250 | 0.221 | | mg/L | | 89 | 50 - 150 |

Lab Sample ID: MRL 380-20523/6
Matrix: Water
Analysis Batch: 20523

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec Limits |
|----------|-------------|------------|---------------|------|---|------|-------------|
| Chloride | 0.500 | 0.562 | | mg/L | | 112 | 50 - 150 |
| Sulfate | 1.00 | 0.925 | | mg/L | | 92 | 50 - 150 |

Lab Sample ID: 380-23733-D-2 MS
Matrix: Water
Analysis Batch: 20523

Client Sample ID: Matrix Spike
Prep Type: Total/NA

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|----------|---------------|------------------|-------------|-----------|--------------|------|---|------|-------------|
| Chloride | 25 | | 62.5 | 91.2 | | mg/L | | 105 | 80 - 120 |
| Sulfate | 64 | | 125 | 195 | | mg/L | | 105 | 80 - 120 |

Lab Sample ID: 380-23733-D-2 MSD
Matrix: Water
Analysis Batch: 20523

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|----------|---------------|------------------|-------------|------------|---------------|------|---|------|-------------|-----|-----------|
| Chloride | 25 | | 62.5 | 91.2 | | mg/L | | 105 | 80 - 120 | 0 | 20 |
| Sulfate | 64 | | 125 | 197 | | mg/L | | 107 | 80 - 120 | 1 | 20 |

Lab Sample ID: MB 380-20828/4
Matrix: Water
Analysis Batch: 20828

Client Sample ID: Method Blank
Prep Type: Total/NA

| Analyte | MB Result | MB Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|-----------|--------------|-----|------|---|----------|----------------|---------|
| Bromide | ND | | 5.0 | ug/L | | | 10/14/22 17:52 | 1 |

Lab Sample ID: LCS 380-20828/5
Matrix: Water
Analysis Batch: 20828

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---------|-------------|------------|---------------|------|---|------|-------------|
| Bromide | 100 | 101 | | ug/L | | 101 | 90 - 110 |

Lab Sample ID: LCSD 380-20828/6
Matrix: Water
Analysis Batch: 20828

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---------|-------------|-------------|----------------|------|---|------|-------------|-----|-----------|
| Bromide | 100 | 101 | | ug/L | | 101 | 90 - 110 | 0 | 10 |

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MRL 380-20828/3
Matrix: Water
Analysis Batch: 20828

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec Limits |
|---------|-------------|------------|---------------|------|---|------|-------------|
| Bromide | 5.00 | 5.26 | | ug/L | | 105 | 75 - 125 |

Lab Sample ID: 380-23052-A-1 MS
Matrix: Water
Analysis Batch: 20828

Client Sample ID: Matrix Spike
Prep Type: Total/NA

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---------|---------------|------------------|-------------|-----------|--------------|------|---|------|-------------|
| Bromide | ND | | 50.0 | 50.4 | | ug/L | | 101 | 80 - 120 |

Lab Sample ID: 380-23052-A-1 MSD
Matrix: Water
Analysis Batch: 20828

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---------|---------------|------------------|-------------|------------|---------------|------|---|------|-------------|-----|-----------|
| Bromide | ND | | 50.0 | 51.5 | | ug/L | | 103 | 80 - 120 | 2 | 20 |

Lab Sample ID: MB 380-20985/4
Matrix: Water
Analysis Batch: 20985

Client Sample ID: Method Blank
Prep Type: Total/NA

| Analyte | MB Result | MB Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|-----------|--------------|-----|------|---|----------|----------------|---------|
| Bromide | ND | | 5.0 | ug/L | | | 10/17/22 20:07 | 1 |

Lab Sample ID: LCS 380-20985/5
Matrix: Water
Analysis Batch: 20985

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---------|-------------|------------|---------------|------|---|------|-------------|
| Bromide | 100 | 100 | | ug/L | | 100 | 90 - 110 |

Lab Sample ID: LCSD 380-20985/6
Matrix: Water
Analysis Batch: 20985

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---------|-------------|-------------|----------------|------|---|------|-------------|-----|-----------|
| Bromide | 100 | 103 | | ug/L | | 103 | 90 - 110 | 3 | 10 |

Lab Sample ID: MRL 380-20985/3
Matrix: Water
Analysis Batch: 20985

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec Limits |
|---------|-------------|------------|---------------|------|---|------|-------------|
| Bromide | 5.00 | 5.64 | | ug/L | | 113 | 75 - 125 |

Lab Sample ID: 380-23967-A-6 MS
Matrix: Water
Analysis Batch: 20985

Client Sample ID: Matrix Spike
Prep Type: Total/NA

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---------|---------------|------------------|-------------|-----------|--------------|------|---|------|-------------|
| Bromide | ND | | 50.0 | 53.7 | | ug/L | | 107 | 80 - 120 |

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QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 380-23967-A-6 MSD
Matrix: Water
Analysis Batch: 20985

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---------|---------------|------------------|-------------|------------|---------------|------|---|------|-------------|-----|-----------|
| Bromide | ND | | 50.0 | 52.0 | | ug/L | | 104 | 80 - 120 | 3 | 20 |

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 380-20622/52
Matrix: Water
Analysis Batch: 20622

Client Sample ID: Method Blank
Prep Type: Total/NA

| Analyte | MB Result | MB Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------|-----------|--------------|------|------|---|----------|----------------|---------|
| Calcium | ND | | 1.0 | mg/L | | | 10/13/22 13:23 | 1 |
| Magnesium | ND | | 0.10 | mg/L | | | 10/13/22 13:23 | 1 |
| Potassium | ND | | 1.0 | mg/L | | | 10/13/22 13:23 | 1 |
| Sodium | ND | | 1.0 | mg/L | | | 10/13/22 13:23 | 1 |

Lab Sample ID: LCS 380-20622/54
Matrix: Water
Analysis Batch: 20622

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|-----------|-------------|------------|---------------|------|---|------|-------------|
| Calcium | 50.0 | 50.1 | | mg/L | | 100 | 85 - 115 |
| Magnesium | 20.0 | 19.7 | | mg/L | | 99 | 85 - 115 |
| Potassium | 20.0 | 19.9 | | mg/L | | 100 | 85 - 115 |
| Sodium | 50.0 | 49.7 | | mg/L | | 99 | 85 - 115 |

Lab Sample ID: LCSD 380-20622/55
Matrix: Water
Analysis Batch: 20622

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|-----------|-------------|-------------|----------------|------|---|------|-------------|-----|-----------|
| Calcium | 50.0 | 50.1 | | mg/L | | 100 | 85 - 115 | 0 | 20 |
| Magnesium | 20.0 | 19.7 | | mg/L | | 98 | 85 - 115 | 0 | 20 |
| Potassium | 20.0 | 19.9 | | mg/L | | 100 | 85 - 115 | 0 | 20 |
| Sodium | 50.0 | 49.7 | | mg/L | | 99 | 85 - 115 | 0 | 20 |

Lab Sample ID: LLCS 380-20622/53
Matrix: Water
Analysis Batch: 20622

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec Limits |
|-----------|-------------|-------------|----------------|------|---|------|-------------|
| Calcium | 1.00 | 1.01 | | mg/L | | 101 | 50 - 150 |
| Magnesium | 0.100 | 0.0967 | J | mg/L | | 97 | 50 - 150 |
| Potassium | 1.00 | 0.617 | J | mg/L | | 62 | 50 - 150 |
| Sodium | 1.00 | 1.06 | | mg/L | | 106 | 50 - 150 |

Lab Sample ID: 380-23590-S-1 MS
Matrix: Water
Analysis Batch: 20622

Client Sample ID: Matrix Spike
Prep Type: Total/NA

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---------|---------------|------------------|-------------|-----------|--------------|------|---|------|-------------|
| Calcium | 13 | | 50.0 | 62.8 | | mg/L | | 100 | 70 - 130 |

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QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

Lab Sample ID: 380-23590-S-1 MS
Matrix: Water
Analysis Batch: 20622

Client Sample ID: Matrix Spike
Prep Type: Total/NA

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|-----------|---------------|------------------|-------------|-----------|--------------|------|---|------|-------------|
| Magnesium | 4.3 | | 20.0 | 24.5 | | mg/L | | 101 | 70 - 130 |
| Potassium | 6.3 | | 20.0 | 27.1 | | mg/L | | 104 | 70 - 130 |
| Sodium | 18 | | 50.0 | 66.0 | | mg/L | | 95 | 70 - 130 |

Lab Sample ID: 380-23590-S-1 MSD
Matrix: Water
Analysis Batch: 20622

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|-----------|---------------|------------------|-------------|------------|---------------|------|---|------|-------------|-----|-----------|
| Calcium | 13 | | 50.0 | 65.0 | | mg/L | | 105 | 70 - 130 | 4 | 20 |
| Magnesium | 4.3 | | 20.0 | 25.3 | | mg/L | | 105 | 70 - 130 | 4 | 20 |
| Potassium | 6.3 | | 20.0 | 28.0 | | mg/L | | 109 | 70 - 130 | 3 | 20 |
| Sodium | 18 | | 50.0 | 68.8 | | mg/L | | 101 | 70 - 130 | 4 | 20 |

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 380-20708/1-A
Matrix: Water
Analysis Batch: 20975

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 20708

| Analyte | MB Result | MB Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------|-----------|--------------|------|------|---|----------------|----------------|---------|
| Antimony | ND | | 1.0 | ug/L | | 10/14/22 09:23 | 10/17/22 13:42 | 1 |
| Arsenic | ND | | 1.0 | ug/L | | 10/14/22 09:23 | 10/17/22 13:42 | 1 |
| Beryllium | ND | | 1.0 | ug/L | | 10/14/22 09:23 | 10/17/22 13:42 | 1 |
| Cadmium | ND | | 0.50 | ug/L | | 10/14/22 09:23 | 10/17/22 13:42 | 1 |
| Chromium | ND | | 1.0 | ug/L | | 10/14/22 09:23 | 10/17/22 13:42 | 1 |
| Copper | ND | | 2.0 | ug/L | | 10/14/22 09:23 | 10/17/22 13:42 | 1 |
| Lead | ND | | 0.50 | ug/L | | 10/14/22 09:23 | 10/17/22 13:42 | 1 |
| Nickel | ND | | 5.0 | ug/L | | 10/14/22 09:23 | 10/17/22 13:42 | 1 |
| Selenium | ND | | 5.0 | ug/L | | 10/14/22 09:23 | 10/17/22 13:42 | 1 |
| Silver | ND | | 0.50 | ug/L | | 10/14/22 09:23 | 10/17/22 13:42 | 1 |
| Thallium | ND | | 1.0 | ug/L | | 10/14/22 09:23 | 10/17/22 13:42 | 1 |
| Zinc | ND | | 20 | ug/L | | 10/14/22 09:23 | 10/17/22 13:42 | 1 |

Lab Sample ID: LCS 380-20708/3-A
Matrix: Water
Analysis Batch: 20975

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 20708

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|-----------|-------------|------------|---------------|------|---|------|-------------|
| Antimony | 50.0 | 52.8 | | ug/L | | 106 | 85 - 115 |
| Arsenic | 50.0 | 53.0 | | ug/L | | 106 | 85 - 115 |
| Beryllium | 25.0 | 26.1 | | ug/L | | 104 | 85 - 115 |
| Cadmium | 25.0 | 26.2 | | ug/L | | 105 | 85 - 115 |
| Chromium | 50.0 | 53.4 | | ug/L | | 107 | 85 - 115 |
| Copper | 50.0 | 56.0 | | ug/L | | 112 | 85 - 115 |
| Lead | 50.0 | 52.7 | | ug/L | | 105 | 85 - 115 |
| Nickel | 50.0 | 53.5 | | ug/L | | 107 | 85 - 115 |
| Selenium | 50.0 | 54.1 | | ug/L | | 108 | 85 - 115 |
| Silver | 25.0 | 23.2 | | ug/L | | 93 | 85 - 115 |
| Thallium | 50.0 | 52.8 | | ug/L | | 106 | 85 - 115 |

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QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 380-20708/3-A
Matrix: Water
Analysis Batch: 20975

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 20708

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---------|-------------|------------|---------------|------|---|------|-------------|
| Zinc | 50.0 | 53.6 | | ug/L | | 107 | 85 - 115 |

Lab Sample ID: LCSD 380-20708/4-A
Matrix: Water
Analysis Batch: 20975

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 20708

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|-----------|-------------|-------------|----------------|------|---|------|-------------|-----|-----------|
| Antimony | 50.0 | 52.5 | | ug/L | | 105 | 85 - 115 | 1 | 20 |
| Arsenic | 50.0 | 52.4 | | ug/L | | 105 | 85 - 115 | 1 | 20 |
| Beryllium | 25.0 | 25.6 | | ug/L | | 102 | 85 - 115 | 2 | 20 |
| Cadmium | 25.0 | 26.0 | | ug/L | | 104 | 85 - 115 | 1 | 20 |
| Chromium | 50.0 | 52.7 | | ug/L | | 105 | 85 - 115 | 1 | 20 |
| Copper | 50.0 | 54.6 | | ug/L | | 109 | 85 - 115 | 3 | 20 |
| Lead | 50.0 | 51.9 | | ug/L | | 104 | 85 - 115 | 1 | 20 |
| Nickel | 50.0 | 52.7 | | ug/L | | 105 | 85 - 115 | 1 | 20 |
| Selenium | 50.0 | 53.8 | | ug/L | | 108 | 85 - 115 | 1 | 20 |
| Silver | 25.0 | 23.1 | | ug/L | | 93 | 85 - 115 | 0 | 20 |
| Thallium | 50.0 | 52.0 | | ug/L | | 104 | 85 - 115 | 2 | 20 |
| Zinc | 50.0 | 53.2 | | ug/L | | 106 | 85 - 115 | 1 | 20 |

Lab Sample ID: LLCS 380-20708/2-A
Matrix: Water
Analysis Batch: 20975

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 20708

| Analyte | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec Limits |
|-----------|-------------|-------------|----------------|------|---|------|-------------|
| Antimony | 1.00 | 1.01 | | ug/L | | 101 | 50 - 150 |
| Arsenic | 1.00 | 0.980 | J | ug/L | | 98 | 50 - 150 |
| Beryllium | 1.00 | 0.965 | J | ug/L | | 97 | 50 - 150 |
| Cadmium | 0.500 | 0.531 | | ug/L | | 106 | 50 - 150 |
| Chromium | 1.00 | 0.929 | J | ug/L | | 93 | 50 - 150 |
| Copper | 2.00 | 2.08 | | ug/L | | 104 | 50 - 150 |
| Lead | 0.500 | 0.518 | | ug/L | | 104 | 50 - 150 |
| Nickel | 5.00 | 5.06 | | ug/L | | 101 | 50 - 150 |
| Selenium | 5.00 | 5.09 | | ug/L | | 102 | 50 - 150 |
| Silver | 0.500 | 0.447 | J | ug/L | | 89 | 50 - 150 |
| Thallium | 1.00 | 1.02 | | ug/L | | 102 | 50 - 150 |
| Zinc | 20.0 | 20.8 | | ug/L | | 104 | 50 - 150 |

Lab Sample ID: 380-23973-B-1-B MS
Matrix: Water
Analysis Batch: 20975

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 20708

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|-----------|---------------|------------------|-------------|-----------|--------------|------|---|------|-------------|
| Antimony | ND | | 50.0 | 55.4 | | ug/L | | 111 | 70 - 130 |
| Arsenic | 2.5 | | 50.0 | 55.3 | | ug/L | | 106 | 70 - 130 |
| Beryllium | ND | | 25.0 | 26.4 | | ug/L | | 105 | 70 - 130 |
| Cadmium | ND | | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 |
| Chromium | 3.5 | | 50.0 | 54.8 | | ug/L | | 103 | 70 - 130 |
| Copper | ND | | 50.0 | 49.6 | | ug/L | | 98 | 70 - 130 |

Eurofins Eaton Monrovia

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 380-23973-B-1-B MS
Matrix: Water
Analysis Batch: 20975

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 20708

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|----------|---------------|------------------|-------------|-----------|--------------|------|---|------|-------------|
| Lead | ND | | 50.0 | 49.9 | | ug/L | | 100 | 70 - 130 |
| Nickel | ND | | 50.0 | 50.4 | | ug/L | | 99 | 70 - 130 |
| Selenium | ND | | 50.0 | 53.6 | | ug/L | | 105 | 70 - 130 |
| Silver | ND | | 25.0 | 21.7 | | ug/L | | 86 | 70 - 130 |
| Thallium | ND | | 50.0 | 49.2 | | ug/L | | 98 | 70 - 130 |
| Zinc | ND | | 50.0 | 52.6 | | ug/L | | 105 | 70 - 130 |

Lab Sample ID: 380-23973-B-1-C MSD
Matrix: Water
Analysis Batch: 20975

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 20708

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|-----------|---------------|------------------|-------------|------------|---------------|------|---|------|-------------|-----|-----------|
| Antimony | ND | | 50.0 | 56.2 | | ug/L | | 112 | 70 - 130 | 1 | 20 |
| Arsenic | 2.5 | | 50.0 | 55.8 | | ug/L | | 107 | 70 - 130 | 1 | 20 |
| Beryllium | ND | | 25.0 | 26.7 | | ug/L | | 107 | 70 - 130 | 1 | 20 |
| Cadmium | ND | | 25.0 | 25.5 | | ug/L | | 102 | 70 - 130 | 0 | 20 |
| Chromium | 3.5 | | 50.0 | 56.0 | | ug/L | | 105 | 70 - 130 | 2 | 20 |
| Copper | ND | | 50.0 | 50.1 | | ug/L | | 99 | 70 - 130 | 1 | 20 |
| Lead | ND | | 50.0 | 51.3 | | ug/L | | 103 | 70 - 130 | 3 | 20 |
| Nickel | ND | | 50.0 | 50.7 | | ug/L | | 100 | 70 - 130 | 1 | 20 |
| Selenium | ND | | 50.0 | 54.1 | | ug/L | | 106 | 70 - 130 | 1 | 20 |
| Silver | ND | | 25.0 | 22.0 | | ug/L | | 87 | 70 - 130 | 1 | 20 |
| Thallium | ND | | 50.0 | 51.0 | | ug/L | | 102 | 70 - 130 | 3 | 20 |
| Zinc | ND | | 50.0 | 53.6 | | ug/L | | 107 | 70 - 130 | 2 | 20 |

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 570-273241/1-A
Matrix: Water
Analysis Batch: 273666

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 273241

| Analyte | MB Result | MB Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|-----------|--------------|---------|------|---|----------------|----------------|---------|
| Mercury | ND | | 0.00020 | mg/L | | 10/17/22 12:52 | 10/18/22 14:33 | 1 |

Lab Sample ID: LCS 570-273241/2-A
Matrix: Water
Analysis Batch: 273666

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 273241

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---------|-------------|------------|---------------|------|---|------|-------------|
| Mercury | 0.00800 | 0.00799 | | mg/L | | 100 | 85 - 115 |

Lab Sample ID: LCSD 570-273241/3-A
Matrix: Water
Analysis Batch: 273666

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 273241

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---------|-------------|-------------|----------------|------|---|------|-------------|-----|-----------|
| Mercury | 0.00800 | 0.00795 | | mg/L | | 99 | 85 - 115 | 0 | 10 |

Eurofins Eaton Monrovia

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: 380-23959-R-1-B MS
Matrix: Water
Analysis Batch: 273666

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 273241

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---------|---------------|------------------|-------------|-----------|--------------|------|---|------|-------------|
| Mercury | ND | | 0.00800 | 0.00788 | | mg/L | | 99 | 85 - 115 |

Lab Sample ID: 380-23959-R-1-C MSD
Matrix: Water
Analysis Batch: 273666

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 273241

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | Limit |
|---------|---------------|------------------|-------------|------------|---------------|------|---|------|-------------|-----|-------|
| Mercury | ND | | 0.00800 | 0.00792 | | mg/L | | 99 | 85 - 115 | 0 | 10 |

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 380-21054/7
Matrix: Water
Analysis Batch: 21054

Client Sample ID: Method Blank
Prep Type: Total/NA

| Analyte | MB Result | MB Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------------------------|-----------|--------------|-----|------|---|----------|----------------|---------|
| A kalinity | ND | | 2.0 | mg/L | | | 10/17/22 16:45 | 1 |
| Bicarbonate Alkalinity as CaCO3 | ND | | 2.0 | mg/L | | | 10/17/22 16:45 | 1 |
| Carbonate Alkalinity as CaCO3 | ND | | 2.0 | mg/L | | | 10/17/22 16:45 | 1 |

Lab Sample ID: LCS 380-21054/5
Matrix: Water
Analysis Batch: 21054

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|------------|-------------|------------|---------------|------|---|------|-------------|
| A kalinity | 100 | 97.2 | | mg/L | | 97 | 90 - 110 |

Lab Sample ID: LCSD 380-21054/22
Matrix: Water
Analysis Batch: 21054

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | Limit |
|------------|-------------|-------------|----------------|------|---|------|-------------|-----|-------|
| A kalinity | 100 | 98.1 | | mg/L | | 98 | 90 - 110 | 1 | 20 |

Lab Sample ID: LLCS 380-21054/6
Matrix: Water
Analysis Batch: 21054

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec Limits |
|------------|-------------|-------------|----------------|------|---|------|-------------|
| A kalinity | 20.0 | 20.2 | | mg/L | | 101 | 90 - 110 |

Lab Sample ID: MRL 380-21054/8
Matrix: Water
Analysis Batch: 21054

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec Limits |
|------------|-------------|------------|---------------|------|---|------|-------------|
| A kalinity | 2.00 | 2.02 | | mg/L | | 101 | 50 - 150 |

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: 380-24134-AG-1 MS
Matrix: Water
Analysis Batch: 21054

Client Sample ID: Matrix Spike
Prep Type: Total/NA

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|------------|---------------|------------------|-------------|-----------|--------------|------|---|------|-------------|
| A kalinity | 140 | F1 | 100 | 171 | F1 | mg/L | | 28 | 80 - 120 |

Lab Sample ID: 380-24134-AG-1 MSD
Matrix: Water
Analysis Batch: 21054

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|------------|---------------|------------------|-------------|------------|---------------|------|---|------|-------------|-----|-----------|
| A kalinity | 140 | F1 | 100 | 169 | F1 | mg/L | | 26 | 80 - 120 | 1 | 20 |

Lab Sample ID: 380-24134-AG-1 DU
Matrix: Water
Analysis Batch: 21054

Client Sample ID: Duplicate
Prep Type: Total/NA

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---------------------------------|---------------|------------------|-----------|--------------|------|---|-----|-----------|
| A kalinity | 140 | F1 | 143 | | mg/L | | 0.3 | 20 |
| Bicarbonate Alkalinity as CaCO3 | 140 | | 143 | | mg/L | | 0.3 | 20 |
| Carbonate Alkalinity as CaCO3 | ND | | ND | | mg/L | | NC | 20 |

Method: SM 2510B - Conductivity, Specific Conductance

Lab Sample ID: MB 380-21055/7
Matrix: Water
Analysis Batch: 21055

Client Sample ID: Method Blank
Prep Type: Total/NA

| Analyte | MB Result | MB Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------|-----------|--------------|-----|----------|---|----------|----------------|---------|
| Specific Conductance | ND | | 2.0 | umhos/cm | | | 10/17/22 16:45 | 1 |

Lab Sample ID: LCS 380-21055/10
Matrix: Water
Analysis Batch: 21055

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|----------------------|-------------|------------|---------------|----------|---|------|-------------|
| Specific Conductance | 1000 | 1000 | | umhos/cm | | 100 | 90 - 110 |

Lab Sample ID: LCSD 380-21055/22
Matrix: Water
Analysis Batch: 21055

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|----------------------|-------------|-------------|----------------|----------|---|------|-------------|-----|-----------|
| Specific Conductance | 1000 | 992 | | umhos/cm | | 99 | 90 - 110 | 1 | 10 |

Lab Sample ID: MRL 380-21055/8
Matrix: Water
Analysis Batch: 21055

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec Limits |
|----------------------|-------------|------------|---------------|----------|---|------|-------------|
| Specific Conductance | 2.00 | 1.90 | J | umhos/cm | | 95 | 50 - 150 |

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: SM 2510B - Conductivity, Specific Conductance (Continued)

Lab Sample ID: 380-24134-AG-1 DU
Matrix: Water
Analysis Batch: 21055

Client Sample ID: Duplicate
Prep Type: Total/NA

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|----------------------|---------------|------------------|-----------|--------------|----------|---|-----|-----------|
| Specific Conductance | 580 | | 576 | | umhos/cm | | 0.2 | 20 |

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 380-20504/1
Matrix: Water
Analysis Batch: 20504

Client Sample ID: Method Blank
Prep Type: Total/NA

| Analyte | MB Result | MB Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|-----------|--------------|----|------|---|----------|----------------|---------|
| Total Dissolved Solids | ND | | 10 | mg/L | | | 10/12/22 17:52 | 1 |

Lab Sample ID: HLCS 380-20504/5
Matrix: Water
Analysis Batch: 20504

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | HLCS Result | HLCS Qualifier | Unit | D | %Rec | %Rec Limits |
|------------------------|-------------|-------------|----------------|------|---|------|-------------|
| Total Dissolved Solids | 700 | 690 | | mg/L | | 99 | 80 - 114 |

Lab Sample ID: LCS 380-20504/4
Matrix: Water
Analysis Batch: 20504

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|------------------------|-------------|------------|---------------|------|---|------|-------------|
| Total Dissolved Solids | 175 | 168 | | mg/L | | 96 | 80 - 114 |

Lab Sample ID: MRL 380-20504/2
Matrix: Water
Analysis Batch: 20504

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec Limits |
|------------------------|-------------|------------|---------------|------|---|------|-------------|
| Total Dissolved Solids | 10.0 | 9.00 | J | mg/L | | 90 | 50 - 150 |

Lab Sample ID: MRL 380-20504/3
Matrix: Water
Analysis Batch: 20504

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec Limits |
|------------------------|-------------|------------|---------------|------|---|------|-------------|
| Total Dissolved Solids | 10.0 | 10.0 | | mg/L | | 100 | 50 - 150 |

Lab Sample ID: 380-24009-1 DU
Matrix: Water
Analysis Batch: 20504

Client Sample ID: HALAWA WELLS UNITS 1 (331-023)
Prep Type: Total/NA

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|------------------------|---------------|------------------|-----------|--------------|------|---|-----|-----------|
| Total Dissolved Solids | 530 | | 504 | | mg/L | | 4 | 10 |

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 380-21056/6
Matrix: Water
Analysis Batch: 21056

Client Sample ID: Method Blank
Prep Type: Total/NA

| Analyte | MB Result | MB Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|-----------|--------------|-------|------|---|----------|----------------|---------|
| Fluoride | ND | | 0.050 | mg/L | | | 10/17/22 18:02 | 1 |

Lab Sample ID: LCS 380-21056/8
Matrix: Water
Analysis Batch: 21056

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|----------|-------------|------------|---------------|------|---|------|-------------|
| Fluoride | 1.00 | 1.02 | | mg/L | | 102 | 90 - 110 |

Lab Sample ID: LCSD 380-21056/9
Matrix: Water
Analysis Batch: 21056

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|----------|-------------|-------------|----------------|------|---|------|-------------|-----|-----------|
| Fluoride | 1.00 | 0.985 | | mg/L | | 99 | 90 - 110 | 3 | 10 |

Lab Sample ID: MRL 380-21056/7
Matrix: Water
Analysis Batch: 21056

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec Limits |
|----------|-------------|------------|---------------|------|---|------|-------------|
| Fluoride | 0.0500 | 0.0508 | | mg/L | | 102 | 50 - 150 |

Lab Sample ID: 380-23728-L-1 MS
Matrix: Water
Analysis Batch: 21056

Client Sample ID: Matrix Spike
Prep Type: Total/NA

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|----------|---------------|------------------|-------------|-----------|--------------|------|---|------|-------------|
| Fluoride | 0.27 | | 1.00 | 1.46 | | mg/L | | 119 | 80 - 120 |

Lab Sample ID: 380-23728-L-1 MSD
Matrix: Water
Analysis Batch: 21056

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|----------|---------------|------------------|-------------|------------|---------------|------|---|------|-------------|-----|-----------|
| Fluoride | 0.27 | | 1.00 | 1.44 | | mg/L | | 117 | 80 - 120 | 1 | 20 |

Method: SM 4500 H+ B - pH

Lab Sample ID: MB 380-21057/9
Matrix: Water
Analysis Batch: 21057

Client Sample ID: Method Blank
Prep Type: Total/NA

| Analyte | MB Result | MB Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|-----------|--------------|----|------|---|----------|----------------|---------|
| pH | 5.8 | | | SU | | | 10/17/22 16:45 | 1 |

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: SM 4500 H+ B - pH (Continued)

Lab Sample ID: LCS 380-21057/10
Matrix: Water
Analysis Batch: 21057

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---------|-------------|------------|---------------|------|---|------|-------------|
| pH | 6.00 | 6.0 | | SU | | 100 | 98 - 102 |

Lab Sample ID: LCSD 380-21057/23
Matrix: Water
Analysis Batch: 21057

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---------|-------------|-------------|----------------|------|---|------|-------------|-----|-----------|
| pH | 6.00 | 6.0 | | SU | | 100 | 98 - 102 | 0 | 2 |

Lab Sample ID: 380-24134-AG-1 DU
Matrix: Water
Analysis Batch: 21057

Client Sample ID: Duplicate
Prep Type: Total/NA

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---------|---------------|------------------|-----------|--------------|------|---|-----|-----------|
| pH | 8.1 | | 8.1 | | SU | | 0.1 | 2 |

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 380-20512/1
Matrix: Water
Analysis Batch: 20512

Client Sample ID: Method Blank
Prep Type: Total/NA

| Analyte | MB Result | MB Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|-----------|--------------|-------|------|---|----------|----------------|---------|
| Sulfide | ND | | 0.050 | mg/L | | | 10/12/22 18:25 | 1 |

Lab Sample ID: LCS 380-20512/4
Matrix: Water
Analysis Batch: 20512

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---------|-------------|------------|---------------|------|---|------|-------------|
| Sulfide | 0.250 | 0.257 | | mg/L | | 103 | 90 - 110 |

Lab Sample ID: LCSD 380-20512/18
Matrix: Water
Analysis Batch: 20512

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---------|-------------|-------------|----------------|------|---|------|-------------|-----|-----------|
| Sulfide | 0.250 | 0.256 | | mg/L | | 102 | 90 - 110 | 0 | 20 |

Lab Sample ID: MRL 380-20512/17
Matrix: Water
Analysis Batch: 20512

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec Limits |
|---------|-------------|------------|---------------|------|---|------|-------------|
| Sulfide | 0.0500 | 0.0430 | J | mg/L | | 86 | 50 - 150 |

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: SM 4500 S2 D - Sulfide, Total (Continued)

Lab Sample ID: MRL 380-20512/2
Matrix: Water
Analysis Batch: 20512

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec Limits |
|---------|-------------|------------|---------------|------|---|------|-------------|
| Sulfide | 0.0500 | 0.0520 | | mg/L | | 104 | 50 - 150 |

Lab Sample ID: 380-23890-B-1 MS
Matrix: Water
Analysis Batch: 20512

Client Sample ID: Matrix Spike
Prep Type: Total/NA

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---------|---------------|------------------|-------------|-----------|--------------|------|---|------|-------------|
| Sulfide | ND | F1 | 0.250 | ND | F1 | mg/L | | 0 | 80 - 120 |

Lab Sample ID: 380-23890-B-1 MSD
Matrix: Water
Analysis Batch: 20512

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---------|---------------|------------------|-------------|------------|---------------|------|---|------|-------------|-----|-----------|
| Sulfide | ND | F1 | 0.250 | ND | F1 | mg/L | | 0 | 80 - 120 | NC | 20 |

Method: 625 PAH Physis LL (EAL) + TICs - EPA 625 Base/Neutral and Acid Organics i

Lab Sample ID: 100802-B1
Matrix: BlankMatrix
Analysis Batch: O-40006

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: O-40006_P

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------------------|--------------|-----------------|-------|-------|------|---|----------------|----------------|---------|
| 1-Methylnaphthalene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| 1-Methylphenanthrene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| 2,3,5-Trimethylnaphthalene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| 2,4,5-Trichlorophenol | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| 2,4,6-Trichlorophenol | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| 2,4-Dichlorophenol | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| 2,4-Dinitrophenol | ND | | 0.2 | 0.1 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| 2,6-Dichlorophenol | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| 2,6-Dimethylnaphthalene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| 2,6-Di-tert-butyl-4-methylphenol | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| 2,6-Di-tert-butylphenol | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| 2-Chloronaphthalene | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| 2-Chlorophenol | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| 2-Methyl-4,6-dinitrophenol | ND | | 0.2 | 0.1 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| 2-Methylnaphthalene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| 2-Methylphenol | ND | | 0.2 | 0.1 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| 2-Nitroaniline | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| 2-Nitrophenol | ND | | 0.2 | 0.1 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| 3+4-Methylphenol | ND | | 0.2 | 0.1 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| 3-Nitroaniline | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| 4-Bromophenylphenyl ether | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| 4-Chloro-3-methylphenol | ND | | 0.2 | 0.1 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| 4-Chloroaniline | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| 4-Chlorophenylphenyl ether | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| 4-Nitroaniline | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| 4-Nitrophenol | ND | | 0.2 | 0.1 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |

Eurofins Eaton Monrovia

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 625 PAH Physis LL (EAL) + TICs - EPA 625 Base/Neutral and Acid Organics i (Continued)

Lab Sample ID: 100802-B1
Matrix: BlankMatrix
Analysis Batch: O-40006

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: O-40006_P

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------------------------|--------------|-----------------|-------|-------|------|---|----------------|----------------|---------|
| 6-tert-butyl-2,4-dimethylphenol | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| Acenaphthene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| Acenaphthylene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| Aniline | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| Anthracene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| Benz[a]anthracene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| Benzidine | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| Benzo[a]pyrene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| Benzo[b]fluoranthene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| Benzo[e]pyrene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| Benzo[g,h,i]perylene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| Benzo[k]fluoranthene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| Benzoic Acid | ND | | 0.2 | 0.1 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| Benzyl Alcohol | ND | | 0.2 | 0.1 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| Biphenyl | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| Bis(2-Chloroethoxy) methane | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| Bis(2-Chloroethyl) ether | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| Bis(2-Chloroisopropyl) ether | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| Chrysene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| Dibenz[a,h]anthracene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| Dibenzo[a,i]pyrene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| Dibenzofuran | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| Dibenzothiophene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| Disalicylidenepropanediamine | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| Fluoranthene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| Fluorene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| Hexachloroethane | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| Naphthalene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| Nitrobenzene | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| N-Nitrosodi-n-propylamine | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| N-Nitrosodiphenylamine | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| Pentachlorophenol | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| Perylene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| Phenanthrene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| Phenol | ND | | 0.2 | 0.1 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| p-tert-Butylphenol | ND | | 0.1 | 0.05 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| Pyrene | ND | | 0.005 | 0.001 | µg/L | | 10/18/22 00:00 | 11/13/22 18:11 | 1 |

| Surrogate | Blank %Recovery | Blank Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------------|-----------------|-----------------|----------|----------------|----------------|---------|
| (2,4,6-Tribromophenol) | 73 | | 30 - 130 | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| (d10-Acenaphthene) | 92 | | 27 - 133 | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| (d10-Phenanthrene) | 92 | | 43 - 129 | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| (d12-Chrysene) | 82 | | 52 - 144 | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| (d12-Perylene) | 84 | | 36 - 161 | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| (d5-Phenol) | 115 | | 0 - 130 | 10/18/22 00:00 | 11/13/22 18:11 | 1 |
| (d8-Naphthalene) | 91 | | 25 - 125 | 10/18/22 00:00 | 11/13/22 18:11 | 1 |

Eurofins Eaton Monrovia

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 625 PAH Physis LL (EAL) + TICs - EPA 625 Base/Neutral and Acid Organics i (Continued)

Lab Sample ID: 100802-BS1
Matrix: BlankMatrix
Analysis Batch: O-40006

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-40006_P

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|----------------------------------|-------------|------------|---------------|------|---|------|-------------|
| 1-Methylnaphthalene | 0.5 | 0.404 | | µg/L | | 81 | 31 - 128 |
| 1-Methylphenanthrene | 0.5 | 0.46 | | µg/L | | 92 | 66 - 127 |
| 2,3,5-Trimethylnaphthalene | 0.5 | 0.425 | | µg/L | | 85 | 55 - 122 |
| 2,4,5-Trichlorophenol | 1 | 0.756 | | µg/L | | 76 | 30 - 130 |
| 2,4,6-Trichlorophenol | 1 | 0.778 | | µg/L | | 78 | 30 - 130 |
| 2,4-Dichlorophenol | 1 | 0.787 | | µg/L | | 79 | 51 - 117 |
| 2,4-Dinitrophenol | 1 | 0.495 | | µg/L | | 50 | 0 - 152 |
| 2,6-Dichlorophenol | 1 | 0.783 | | µg/L | | 78 | 30 - 130 |
| 2,6-Dimethylnaphthalene | 0.5 | 0.416 | | µg/L | | 83 | 48 - 120 |
| 2,6-Di-tert-butyl-4-methylphenol | 1 | 0.626 | | µg/L | | 63 | 50 - 150 |
| 2,6-Di-tert-butylphenol | 1 | 0.688 | | µg/L | | 69 | 50 - 150 |
| 2-Chloronaphthalene | 1 | 0.827 | | µg/L | | 83 | 53 - 130 |
| 2-Chlorophenol | 1 | 0.794 | | µg/L | | 79 | 41 - 120 |
| 2-Methyl-4,6-dinitrophenol | 1 | 0.706 | | µg/L | | 71 | 0 - 141 |
| 2-Methylnaphthalene | 1.5 | 1.29 | | µg/L | | 86 | 47 - 130 |
| 2-Methylphenol | 1 | 0.898 | | µg/L | | 90 | 40 - 117 |
| 2-Nitroaniline | 1 | 0.824 | | µg/L | | 82 | 69 - 114 |
| 2-Nitrophenol | 1 | 0.591 | | µg/L | | 59 | 40 - 117 |
| 3+4-Methylphenol | 1 | 0.804 | | µg/L | | 80 | 0 - 130 |
| 3-Nitroaniline | 1 | 0.735 | | µg/L | | 74 | 23 - 137 |
| 4-Bromophenylphenyl ether | 1 | 0.931 | | µg/L | | 93 | 61 - 132 |
| 4-Chloro-3-methylphenol | 1 | 0.716 | | µg/L | | 72 | 51 - 128 |
| 4-Chloroaniline | 1 | 1.18 | | µg/L | | 118 | 50 - 150 |
| 4-Chlorophenylphenyl ether | 1 | 0.921 | | µg/L | | 92 | 63 - 130 |
| 4-Nitroaniline | 1 | 1.06 | | µg/L | | 106 | 10 - 159 |
| 4-Nitrophenol | 1 | 0.423 | | µg/L | | 42 | 10 - 164 |
| 6-tert-butyl-2,4-dimethylphenol | 1 | 0.68 | | µg/L | | 68 | 50 - 150 |
| Acenaphthene | 1.5 | 1.34 | | µg/L | | 89 | 53 - 131 |
| Acenaphthylene | 1.5 | 1.37 | | µg/L | | 91 | 43 - 140 |
| Aniline | 1 | 1.06 | | µg/L | | 106 | 50 - 150 |
| Anthracene | 1.5 | 1.47 | | µg/L | | 98 | 58 - 135 |
| Benz[a]anthracene | 1.5 | 1.53 | | µg/L | | 102 | 55 - 145 |
| Benzo[a]pyrene | 1.5 | 1.45 | | µg/L | | 97 | 51 - 143 |
| Benzo[b]fluoranthene | 1.5 | 1.51 | | µg/L | | 101 | 46 - 165 |
| Benzo[e]pyrene | 0.5 | 0.469 | | µg/L | | 94 | 42 - 152 |
| Benzo[g,h,i]perylene | 1.5 | 1.54 | | µg/L | | 103 | 63 - 133 |
| Benzo[k]fluoranthene | 1.5 | 1.41 | | µg/L | | 94 | 56 - 145 |
| Benzyl Alcohol | 1 | 0.816 | | µg/L | | 82 | 43 - 148 |
| Biphenyl | 0.5 | 0.434 | | µg/L | | 87 | 56 - 119 |
| Bis(2-Chloroethoxy) methane | 1 | 0.875 | | µg/L | | 88 | 66 - 122 |
| Bis(2-Chloroethyl) ether | 1 | 0.802 | | µg/L | | 80 | 43 - 127 |
| Bis(2-Chloroisopropyl) ether | 2 | 1.63 | | µg/L | | 81 | 49 - 128 |
| Chrysene | 1.5 | 1.46 | | µg/L | | 97 | 56 - 141 |
| Dibenz[a,h]anthracene | 1.5 | 1.53 | | µg/L | | 102 | 55 - 150 |
| Dibenzo[a,l]pyrene | 0.25 | 0.171 | | µg/L | | 68 | 50 - 150 |
| Dibenzofuran | 1 | 0.89 | | µg/L | | 89 | 50 - 150 |
| Dibenzothiophene | 0.5 | 0.457 | | µg/L | | 91 | 75 - 113 |
| Disalicylidenepropanediamine | 25 | 20.7 | | µg/L | | 83 | 50 - 150 |

Eurofins Eaton Monrovia

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 625 PAH Physis LL (EAL) + TICs - EPA 625 Base/Neutral and Acid Organics i (Continued)

Lab Sample ID: 100802-BS1
Matrix: BlankMatrix
Analysis Batch: O-40006

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-40006_P

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---------------------------|-------------|------------|---------------|------|---|------|-------------|
| Fluoranthene | 1.5 | 1.59 | | µg/L | | 106 | 60 - 146 |
| Fluorene | 1.5 | 1.42 | | µg/L | | 95 | 58 - 131 |
| Hexachloroethane | 1 | 0.928 | | µg/L | | 93 | 27 - 130 |
| Indeno[1,2,3-cd]pyrene | 1.5 | 1.59 | | µg/L | | 106 | 50 - 151 |
| Naphthalene | 1.5 | 1.23 | | µg/L | | 82 | 41 - 126 |
| Nitrobenzene | 1 | 0.845 | | µg/L | | 85 | 54 - 111 |
| N-Nitrosodi-n-propylamine | 1 | 0.775 | | µg/L | | 77 | 61 - 152 |
| N-Nitrosodiphenylamine | 1 | 0.81 | | µg/L | | 81 | 49 - 142 |
| Pentachlorophenol | 1 | 0.525 | | µg/L | | 52 | 36 - 111 |
| Perylene | 0.5 | 0.476 | | µg/L | | 95 | 48 - 141 |
| Phenanthrene | 1.5 | 1.45 | | µg/L | | 97 | 67 - 127 |
| Phenol | 1 | 0.779 | | µg/L | | 78 | 29 - 114 |
| p-tert-Butylphenol | 1 | 0.798 | | µg/L | | 80 | 50 - 150 |
| Pyrene | 1.5 | 1.6 | | µg/L | | 107 | 54 - 156 |

| Surrogate | LCS %Recovery | LCS Qualifier | LCS Limits |
|------------------------|---------------|---------------|------------|
| (2,4,6-Tribromophenol) | 79 | | 30 - 130 |
| (d10-Acenaphthene) | 85 | | 27 - 133 |
| (d10-Phenanthrene) | 91 | | 43 - 129 |
| (d12-Chrysene) | 91 | | 52 - 144 |
| (d12-Perylene) | 92 | | 36 - 161 |
| (d5-Phenol) | 78 | | 0 - 130 |
| (d8-Naphthalene) | 78 | | 25 - 125 |

Lab Sample ID: 100802-BS2
Matrix: BlankMatrix
Analysis Batch: O-40006

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: O-40006_P

| Analyte | Spike Added | LCS DUP Result | LCS DUP Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|----------------------------------|-------------|----------------|-------------------|------|---|------|-------------|-----|-----------|
| 1-Methylnaphthalene | 0.5 | 0.383 | | µg/L | | 77 | 31 - 128 | 5 | 30 |
| 1-Methylphenanthrene | 0.5 | 0.465 | | µg/L | | 93 | 66 - 127 | 1 | 30 |
| 2,3,5-Trimethylnaphthalene | 0.5 | 0.366 | | µg/L | | 73 | 55 - 122 | 15 | 30 |
| 2,4,5-Trichlorophenol | 1 | 0.64 | | µg/L | | 64 | 30 - 130 | 17 | 30 |
| 2,4,6-Trichlorophenol | 1 | 0.703 | | µg/L | | 70 | 30 - 130 | 11 | 30 |
| 2,4-Dichlorophenol | 1 | 0.649 | | µg/L | | 65 | 51 - 117 | 19 | 30 |
| 2,4-Dinitrophenol | 1 | 0.533 | | µg/L | | 53 | 0 - 152 | 6 | 30 |
| 2,6-Dichlorophenol | 1 | 0.676 | | µg/L | | 68 | 30 - 130 | 14 | 30 |
| 2,6-Dimethylnaphthalene | 0.5 | 0.399 | | µg/L | | 80 | 48 - 120 | 4 | 30 |
| 2,6-Di-tert-butyl-4-methylphenol | 1 | 0.513 | | µg/L | | 51 | 50 - 150 | 21 | 30 |
| 2,6-Di-tert-butylphenol | 1 | 0.598 | | µg/L | | 60 | 50 - 150 | 14 | 30 |
| 2-Chloronaphthalene | 1 | 0.774 | | µg/L | | 77 | 53 - 130 | 8 | 30 |
| 2-Chlorophenol | 1 | 0.629 | | µg/L | | 63 | 41 - 120 | 23 | 30 |
| 2-Methyl-4,6-dinitrophenol | 1 | 0.743 | | µg/L | | 74 | 0 - 141 | 4 | 30 |
| 2-Methylnaphthalene | 1.5 | 1.15 | | µg/L | | 77 | 47 - 130 | 11 | 30 |
| 2-Methylphenol | 1 | 0.769 | | µg/L | | 77 | 40 - 117 | 16 | 30 |
| 2-Nitroaniline | 1 | 0.815 | | µg/L | | 81 | 69 - 114 | 0 | 30 |
| 2-Nitrophenol | 1 | 0.528 | | µg/L | | 53 | 40 - 117 | 11 | 30 |
| 3+4-Methylphenol | 1 | 0.642 | | µg/L | | 64 | 0 - 130 | 22 | 30 |

Eurofins Eaton Monrovia

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 625 PAH Physis LL (EAL) + TICs - EPA 625 Base/Neutral and Acid Organics i (Continued)

Lab Sample ID: 100802-BS2
Matrix: BlankMatrix
Analysis Batch: O-40006

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: O-40006_P

| Analyte | Spike Added | LCS DUP Result | LCS DUP Qualifier | Unit | D | %Rec | %Rec | | RPD | Limit |
|---------------------------------|-------------|----------------|-------------------|------|---|------|----------|-----|-----|-------|
| | | | | | | | Limits | RPD | | |
| 3-Nitroaniline | 1 | 0.63 | | µg/L | | 63 | 23 - 137 | 16 | 30 | |
| 4-Bromophenylphenyl ether | 1 | 0.917 | | µg/L | | 92 | 61 - 132 | 1 | 30 | |
| 4-Chloro-3-methylphenol | 1 | 0.673 | | µg/L | | 67 | 51 - 128 | 7 | 30 | |
| 4-Chloroaniline | 1 | 0.989 | | µg/L | | 99 | 50 - 150 | 18 | 30 | |
| 4-Chlorophenylphenyl ether | 1 | 0.788 | | µg/L | | 79 | 63 - 130 | 15 | 30 | |
| 4-Nitroaniline | 1 | 1.06 | | µg/L | | 106 | 10 - 159 | 0 | 30 | |
| 4-Nitrophenol | 1 | 0.375 | | µg/L | | 38 | 10 - 164 | 10 | 30 | |
| 6-tert-butyl-2,4-dimethylphenol | 1 | 0.671 | | µg/L | | 67 | 50 - 150 | 1 | 30 | |
| Acenaphthene | 1.5 | 1.13 | | µg/L | | 75 | 53 - 131 | 17 | 30 | |
| Acenaphthylene | 1.5 | 1.17 | | µg/L | | 78 | 43 - 140 | 15 | 30 | |
| Aniline | 1 | 0.889 | | µg/L | | 89 | 50 - 150 | 17 | 30 | |
| Anthracene | 1.5 | 1.52 | | µg/L | | 101 | 58 - 135 | 3 | 30 | |
| Benz[a]anthracene | 1.5 | 1.55 | | µg/L | | 103 | 55 - 145 | 1 | 30 | |
| Benzo[a]pyrene | 1.5 | 1.53 | | µg/L | | 102 | 51 - 143 | 5 | 30 | |
| Benzo[b]fluoranthene | 1.5 | 1.53 | | µg/L | | 102 | 46 - 165 | 1 | 30 | |
| Benzo[e]pyrene | 0.5 | 0.487 | | µg/L | | 97 | 42 - 152 | 3 | 30 | |
| Benzo[g,h,i]perylene | 1.5 | 1.57 | | µg/L | | 105 | 63 - 133 | 2 | 30 | |
| Benzo[k]fluoranthene | 1.5 | 1.42 | | µg/L | | 95 | 56 - 145 | 1 | 30 | |
| Benzyl Alcohol | 1 | 0.625 | | µg/L | | 62 | 43 - 148 | 28 | 30 | |
| Biphenyl | 0.5 | 0.418 | | µg/L | | 84 | 56 - 119 | 4 | 30 | |
| Bis(2-Chloroethoxy) methane | 1 | 0.723 | | µg/L | | 72 | 66 - 122 | 20 | 30 | |
| Bis(2-Chloroethyl) ether | 1 | 0.611 | | µg/L | | 61 | 43 - 127 | 27 | 30 | |
| Bis(2-Chloroisopropyl) ether | 2 | 1.24 | | µg/L | | 62 | 49 - 128 | 28 | 30 | |
| Chrysene | 1.5 | 1.46 | | µg/L | | 97 | 56 - 141 | 0 | 30 | |
| Dibenz[a,h]anthracene | 1.5 | 1.58 | | µg/L | | 105 | 55 - 150 | 3 | 30 | |
| Dibenzo[a,l]pyrene | 0.25 | 0.185 | | µg/L | | 74 | 50 - 150 | 8 | 30 | |
| Dibenzofuran | 1 | 0.689 | | µg/L | | 69 | 50 - 150 | 25 | 30 | |
| Dibenzothiophene | 0.5 | 0.478 | | µg/L | | 96 | 75 - 113 | 5 | 30 | |
| Disalicylidenepropanediamine | 25 | 24 | | µg/L | | 96 | 50 - 150 | 15 | 30 | |
| Fluoranthene | 1.5 | 1.63 | | µg/L | | 109 | 60 - 146 | 3 | 30 | |
| Fluorene | 1.5 | 1.25 | | µg/L | | 83 | 58 - 131 | 13 | 30 | |
| Hexachloroethane | 1 | 0.715 | | µg/L | | 71 | 27 - 130 | 25 | 30 | |
| Indeno[1,2,3-cd]pyrene | 1.5 | 1.67 | | µg/L | | 111 | 50 - 151 | 5 | 30 | |
| Naphthalene | 1.5 | 1.06 | | µg/L | | 71 | 41 - 126 | 14 | 30 | |
| Nitrobenzene | 1 | 0.656 | | µg/L | | 66 | 54 - 111 | 24 | 30 | |
| N-Nitrosodi-n-propylamine | 1 | 0.662 | | µg/L | | 66 | 61 - 152 | 17 | 30 | |
| N-Nitrosodiphenylamine | 1 | 0.775 | | µg/L | | 77 | 49 - 142 | 4 | 30 | |
| Pentachlorophenol | 1 | 0.563 | | µg/L | | 56 | 36 - 111 | 7 | 30 | |
| Perylene | 0.5 | 0.505 | | µg/L | | 101 | 48 - 141 | 6 | 30 | |
| Phenanthrene | 1.5 | 1.48 | | µg/L | | 99 | 67 - 127 | 2 | 30 | |
| Phenol | 1 | 0.59 | | µg/L | | 59 | 29 - 114 | 28 | 30 | |
| p-tert-Butylphenol | 1 | 0.718 | | µg/L | | 72 | 50 - 150 | 11 | 30 | |
| Pyrene | 1.5 | 1.6 | | µg/L | | 107 | 54 - 156 | 0 | 30 | |

| Surrogate | LCS DUP | | Limits |
|------------------------|-----------|-----------|----------|
| | %Recovery | Qualifier | |
| (2,4,6-Tribromophenol) | 77 | | 30 - 130 |
| (d10-Acenaphthene) | 71 | | 27 - 133 |
| (d10-Phenanthrene) | 93 | | 43 - 129 |

Eurofins Eaton Monrovia

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 625 PAH Physis LL (EAL) + TICs - EPA 625 Base/Neutral and Acid Organics i (Continued)

Lab Sample ID: 100802-BS2
Matrix: BlankMatrix
Analysis Batch: O-40006

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: O-40006_P

| Surrogate | LCS DUP %Recovery | LCS DUP Qualifier | Limits |
|------------------|----------------------|----------------------|----------|
| (d12-Chrysene) | 93 | | 52 - 144 |
| (d12-Perylene) | 97 | | 36 - 161 |
| (d5-Phenol) | 60 | | 0 - 130 |
| (d8-Naphthalene) | 68 | | 25 - 125 |

Method: 8015 Diesel LL (EAL) and Motor Oil - 8015 - TPH DRO/ORO

Lab Sample ID: 22DSJ049WB
Matrix: WATER
Analysis Batch: 22DSJ049W

Client Sample ID: Method Blank
Prep Type: Total/NA

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------|--------------|-----------------|-------|-----|------|---|----------|----------------|---------|
| DIESEL | ND | U | 0.025 | | mg/L | | | 10/24/22 19:18 | 1 |
| JP5 | ND | U | 0.050 | | mg/L | | | 10/24/22 19:18 | 1 |
| JP8 | ND | U | 0.050 | | mg/L | | | 10/24/22 19:18 | 1 |
| MOTOR OIL | ND | U | 0.050 | | mg/L | | | 10/24/22 19:18 | 1 |

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|--------------|-----------------|-----------------|--------|----------|----------------|---------|
| BROMOBENZENE | | | | | 10/24/22 19:18 | 1 |
| HEXACOSANE | | | | | 10/24/22 19:18 | 1 |

Lab Sample ID: 22DSJ049WL
Matrix: WATER
Analysis Batch: 22DSJ049W

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---------|----------------|---------------|------------------|------|---|------|----------------|
| DIESEL | 2.50 | 2.70 | | mg/L | | 108 | 50 - 130 |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|--------------|------------------|------------------|----------|
| BROMOBENZENE | 103 | | 60 - 130 |
| HEXACOSANE | 99 | | 60 - 130 |

Lab Sample ID: 22J5J049WL
Matrix: WATER
Analysis Batch: 22DSJ049W

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---------|----------------|---------------|------------------|------|---|------|----------------|
| JP5 | 2.50 | 2.20 | | mg/L | | 88 | 30 - 160 |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|--------------|------------------|------------------|----------|
| BROMOBENZENE | 102 | | 60 - 130 |
| HEXACOSANE | 94 | | 60 - 130 |

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 8015 Diesel LL (EAL) and Motor Oil - 8015 - TPH DRO/ORO (Continued)

Lab Sample ID: 22J8J049WL
Matrix: WATER
Analysis Batch: 22DSJ049W

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|------------------|------------------|------------------|---------------|------|---|------|-------------|
| JP8 | 2.50 | 2.50 | | mg/L | | 100 | 30 - 160 |
| LCS LCS | | | | | | | |
| Surrogate | %Recovery | Qualifier | Limits | | | | |
| BROMOBENZENE | 99 | | 60 - 130 | | | | |
| HEXACOSANE | 101 | | 60 - 130 | | | | |

Lab Sample ID: 22J197-01M
Matrix: WATER
Analysis Batch: 22DSJ049W

Client Sample ID: 380-24009-1 MS
Prep Type: Total/NA

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|------------------|------------------|------------------|---------------|-----------|--------------|------|---|------|-------------|
| JP8 | ND | | 2.65 | 2.71 | | mg/L | | 102 | 30 - 160 |
| MS MS | | | | | | | | | |
| Surrogate | %Recovery | Qualifier | Limits | | | | | | |
| BROMOBENZENE | 102 | | 60 - 130 | | | | | | |
| HEXACOSANE | 111 | | 60 - 130 | | | | | | |

Lab Sample ID: 22J197-01S
Matrix: WATER
Analysis Batch: 22DSJ049W

Client Sample ID: 380-24009-1 MSD
Prep Type: Total/NA

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|------------------|------------------|------------------|---------------|------------|---------------|------|---|------|-------------|-----|-----------|
| JP8 | ND | | 2.80 | 2.97 | | mg/L | | 106 | 30 - 160 | 9 | 30 |
| MSD MSD | | | | | | | | | | | |
| Surrogate | %Recovery | Qualifier | Limits | | | | | | | | |
| BROMOBENZENE | 95 | | 60 - 130 | | | | | | | | |
| HEXACOSANE | 109 | | 60 - 130 | | | | | | | | |

Method: 8015 Ethanol - SW846 8015B Gasoline Range Organics

Lab Sample ID: 22MEJ003WB
Matrix: WATER
Analysis Batch: 22MEJ003W

Client Sample ID: Method Blank
Prep Type: Total/NA

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|-----------|--------------|------|-----|------|---|----------|----------------|---------|
| ETHANOL | ND | U | 2000 | | ug/L | | | 10/14/22 11:59 | 1 |

Lab Sample ID: 22MEJ003WL
Matrix: WATER
Analysis Batch: 22MEJ003W

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---------|-------------|------------|---------------|------|---|------|-------------|
| ETHANOL | 10000 | 11100 | | ug/L | | 111 | 60 - 130 |

QC Sample Results

Client: City & County of Honolulu
 Project/Site: RED-HILL

Job ID: 380-24009-1

Method: 8015 Gas (Purgeable) LL (EAL) - SW846 8015B Gasoline Range Organics

Lab Sample ID: 22VGH7J09B
Matrix: WATER
Analysis Batch: 22VGH7J09

Client Sample ID: Method Blank
Prep Type: Total/NA

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|--------------------|-----------------|-----------------|--------|-----|------|---|----------|----------------|---------|
| GASOLINE | ND | U | 0.020 | | mg/L | | | 10/17/22 21:22 | 1 |
| Surrogate | MB %Recovery | MB Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| BROMOFLUOROBENZENE | | | | | | | | 10/17/22 21:22 | 1 |

Lab Sample ID: 22VGH7J09L
Matrix: WATER
Analysis Batch: 22VGH7J09

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|--------------------|------------------|------------------|------------------|------|---|------|----------------|
| GASOLINE | 0.500 | 0.426 | | mg/L | | 85 | 60 - 130 |
| Surrogate | LCS %Recovery | LCS Qualifier | Limits | | | | |
| BROMOFLUOROBENZENE | 103 | | 70 - 130 | | | | |



QC Association Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

GC/MS VOA

Analysis Batch: 20582

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|------------------|--------------------------------|-----------|--------|--------|------------|
| 380-24009-1 | HALAWA WELLS UNITS 1 (331-023) | Total/NA | Water | 524.2 | |
| 380-24009-2 | TB: HALAWA WELLS UNITS 1 | Total/NA | Water | 524.2 | |
| MB 380-20582/8 | Method Blank | Total/NA | Water | 524.2 | |
| LCS 380-20582/4 | Lab Control Sample | Total/NA | Water | 524.2 | |
| LCSD 380-20582/5 | Lab Control Sample Dup | Total/NA | Water | 524.2 | |
| MRL 380-20582/3 | Lab Control Sample | Total/NA | Water | 524.2 | |
| MRL 380-20582/7 | Lab Control Sample | Total/NA | Water | 524.2 | |

Analysis Batch: 21101

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|------------------|--------------------------------|-----------|--------|--------|------------|
| 380-24009-1 | HALAWA WELLS UNITS 1 (331-023) | Total/NA | Water | 524.2 | |
| 380-24009-2 | TB: HALAWA WELLS UNITS 1 | Total/NA | Water | 524.2 | |
| MB 380-21101/5 | Method Blank | Total/NA | Water | 524.2 | |
| LCS 380-21101/2 | Lab Control Sample | Total/NA | Water | 524.2 | |
| LCSD 380-21101/3 | Lab Control Sample Dup | Total/NA | Water | 524.2 | |
| MRL 380-21101/4 | Lab Control Sample | Total/NA | Water | 524.2 | |

GC/MS Semi VOA

Prep Batch: 20849

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------------------|-----------|--------|--------|------------|
| 380-24009-1 | HALAWA WELLS UNITS 1 (331-023) | Total/NA | Water | 525.2 | |
| MB 380-20849/1-A | Method Blank | Total/NA | Water | 525.2 | |
| LCS 380-20849/3-A | Lab Control Sample | Total/NA | Water | 525.2 | |
| LCSD 380-20849/4-A | Lab Control Sample Dup | Total/NA | Water | 525.2 | |
| MRL 380-20849/2-A | Lab Control Sample | Total/NA | Water | 525.2 | |
| 380-24398-B-1-A MS | Matrix Spike | Total/NA | Water | 525.2 | |
| 380-24401-B-1-A DU | Duplicate | Total/NA | Water | 525.2 | |

Analysis Batch: 20905

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------------------|-----------|--------|--------|------------|
| 380-24009-1 | HALAWA WELLS UNITS 1 (331-023) | Total/NA | Water | 525.2 | 20849 |
| MB 380-20849/1-A | Method Blank | Total/NA | Water | 525.2 | 20849 |
| LCS 380-20849/3-A | Lab Control Sample | Total/NA | Water | 525.2 | 20849 |
| LCSD 380-20849/4-A | Lab Control Sample Dup | Total/NA | Water | 525.2 | 20849 |
| MRL 380-20849/2-A | Lab Control Sample | Total/NA | Water | 525.2 | 20849 |
| 380-24398-B-1-A MS | Matrix Spike | Total/NA | Water | 525.2 | 20849 |
| 380-24401-B-1-A DU | Duplicate | Total/NA | Water | 525.2 | 20849 |

GC Semi VOA

Prep Batch: 20633

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------------------|-----------|--------|--------|------------|
| 380-24009-1 | HALAWA WELLS UNITS 1 (331-023) | Total/NA | Water | 505 | |
| MB 380-20633/7-A | Method Blank | Total/NA | Water | 505 | |
| MRL 380-20633/2-A | Lab Control Sample | Total/NA | Water | 505 | |
| MRL 380-20633/3-A | Lab Control Sample | Total/NA | Water | 505 | |
| MRL 380-20633/4-A | Lab Control Sample | Total/NA | Water | 505 | |
| MRL 380-20633/5-A | Lab Control Sample | Total/NA | Water | 505 | |
| MRL 380-20633/6-A | Lab Control Sample | Total/NA | Water | 505 | |
| 380-23418-C-1-B MS | Matrix Spike | Total/NA | Water | 505 | |
| 380-23418-D-1-B MS | Matrix Spike | Total/NA | Water | 505 | |

Eurofins Eaton Monrovia

QC Association Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

GC Semi VOA (Continued)

Prep Batch: 20633 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------------|------------------|-----------|--------|--------|------------|
| 380-23784-AI-1-A MS | Matrix Spike | Total/NA | Water | 505 | |
| 380-23784-AJ-1-A MS | Matrix Spike | Total/NA | Water | 505 | |

Analysis Batch: 20914

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------------|--------------------------------|-----------|--------|--------|------------|
| 380-24009-1 | HALAWA WELLS UNITS 1 (331-023) | Total/NA | Water | 505 | 20633 |
| MB 380-20633/7-A | Method Blank | Total/NA | Water | 505 | 20633 |
| MRL 380-20633/2-A | Lab Control Sample | Total/NA | Water | 505 | 20633 |
| MRL 380-20633/3-A | Lab Control Sample | Total/NA | Water | 505 | 20633 |
| MRL 380-20633/4-A | Lab Control Sample | Total/NA | Water | 505 | 20633 |
| MRL 380-20633/5-A | Lab Control Sample | Total/NA | Water | 505 | 20633 |
| MRL 380-20633/6-A | Lab Control Sample | Total/NA | Water | 505 | 20633 |
| 380-23418-C-1-B MS | Matrix Spike | Total/NA | Water | 505 | 20633 |
| 380-23418-D-1-B MS | Matrix Spike | Total/NA | Water | 505 | 20633 |
| 380-23784-AI-1-A MS | Matrix Spike | Total/NA | Water | 505 | 20633 |
| 380-23784-AJ-1-A MS | Matrix Spike | Total/NA | Water | 505 | 20633 |

Prep Batch: 21364

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------------------|-----------|--------|--------|------------|
| 380-24009-1 | HALAWA WELLS UNITS 1 (331-023) | Total/NA | Water | 504.1 | |
| 380-24009-2 | TB: HALAWA WELLS UNITS 1 | Total/NA | Water | 504.1 | |
| MBL 380-21364/4-A | Method Blank | Total/NA | Water | 504.1 | |
| LCS 380-21364/3-A | Lab Control Sample | Total/NA | Water | 504.1 | |
| MRL 380-21364/1-A | Lab Control Sample | Total/NA | Water | 504.1 | |
| MRL 380-21364/2-A | Lab Control Sample | Total/NA | Water | 504.1 | |
| 380-23978-F-1-A MS | Matrix Spike | Total/NA | Water | 504.1 | |
| 380-23978-M-2-A DU | Duplicate | Total/NA | Water | 504.1 | |

Analysis Batch: 21577

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------------------|-----------|--------|--------|------------|
| 380-24009-1 | HALAWA WELLS UNITS 1 (331-023) | Total/NA | Water | 504.1 | 21364 |
| 380-24009-2 | TB: HALAWA WELLS UNITS 1 | Total/NA | Water | 504.1 | 21364 |
| MBL 380-21364/4-A | Method Blank | Total/NA | Water | 504.1 | 21364 |
| LCS 380-21364/3-A | Lab Control Sample | Total/NA | Water | 504.1 | 21364 |
| MRL 380-21364/1-A | Lab Control Sample | Total/NA | Water | 504.1 | 21364 |
| MRL 380-21364/2-A | Lab Control Sample | Total/NA | Water | 504.1 | 21364 |
| 380-23978-F-1-A MS | Matrix Spike | Total/NA | Water | 504.1 | 21364 |
| 380-23978-M-2-A DU | Duplicate | Total/NA | Water | 504.1 | 21364 |

HPLC/IC

Analysis Batch: 20522

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|------------------|--------------------------------|-----------|--------|--------|------------|
| 380-24009-1 | HALAWA WELLS UNITS 1 (331-023) | Total/NA | Water | 300.0 | |
| MB 380-20522/4 | Method Blank | Total/NA | Water | 300.0 | |
| MB 380-20522/40 | Method Blank | Total/NA | Water | 300.0 | |
| LCS 380-20522/7 | Lab Control Sample | Total/NA | Water | 300.0 | |
| LCSD 380-20522/8 | Lab Control Sample Dup | Total/NA | Water | 300.0 | |
| MRL 380-20522/41 | Lab Control Sample | Total/NA | Water | 300.0 | |
| MRL 380-20522/5 | Lab Control Sample | Total/NA | Water | 300.0 | |
| MRL 380-20522/6 | Lab Control Sample | Total/NA | Water | 300.0 | |

Eurofins Eaton Monrovia

QC Association Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

HPLC/IC (Continued)

Analysis Batch: 20522 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|-------------------|------------------------|-----------|--------|--------|------------|
| 380-23733-D-2 MS | Matrix Spike | Total/NA | Water | 300.0 | |
| 380-23733-D-2 MSD | Matrix Spike Duplicate | Total/NA | Water | 300.0 | |

Analysis Batch: 20523

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|-------------------|--------------------------------|-----------|--------|--------|------------|
| 380-24009-1 | HALAWA WELLS UNITS 1 (331-023) | Total/NA | Water | 300.0 | |
| MB 380-20523/4 | Method Blank | Total/NA | Water | 300.0 | |
| MB 380-20523/40 | Method Blank | Total/NA | Water | 300.0 | |
| LCS 380-20523/7 | Lab Control Sample | Total/NA | Water | 300.0 | |
| LCSD 380-20523/8 | Lab Control Sample Dup | Total/NA | Water | 300.0 | |
| MRL 380-20523/41 | Lab Control Sample | Total/NA | Water | 300.0 | |
| MRL 380-20523/5 | Lab Control Sample | Total/NA | Water | 300.0 | |
| MRL 380-20523/6 | Lab Control Sample | Total/NA | Water | 300.0 | |
| 380-23733-D-2 MS | Matrix Spike | Total/NA | Water | 300.0 | |
| 380-23733-D-2 MSD | Matrix Spike Duplicate | Total/NA | Water | 300.0 | |

Analysis Batch: 20828

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|-------------------|------------------------|-----------|--------|--------|------------|
| MB 380-20828/4 | Method Blank | Total/NA | Water | 300.0 | |
| LCS 380-20828/5 | Lab Control Sample | Total/NA | Water | 300.0 | |
| LCSD 380-20828/6 | Lab Control Sample Dup | Total/NA | Water | 300.0 | |
| MRL 380-20828/3 | Lab Control Sample | Total/NA | Water | 300.0 | |
| 380-23052-A-1 MS | Matrix Spike | Total/NA | Water | 300.0 | |
| 380-23052-A-1 MSD | Matrix Spike Duplicate | Total/NA | Water | 300.0 | |

Analysis Batch: 20985

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|-------------------|--------------------------------|-----------|--------|--------|------------|
| 380-24009-1 | HALAWA WELLS UNITS 1 (331-023) | Total/NA | Water | 300.0 | |
| MB 380-20985/4 | Method Blank | Total/NA | Water | 300.0 | |
| LCS 380-20985/5 | Lab Control Sample | Total/NA | Water | 300.0 | |
| LCSD 380-20985/6 | Lab Control Sample Dup | Total/NA | Water | 300.0 | |
| MRL 380-20985/3 | Lab Control Sample | Total/NA | Water | 300.0 | |
| 380-23967-A-6 MS | Matrix Spike | Total/NA | Water | 300.0 | |
| 380-23967-A-6 MSD | Matrix Spike Duplicate | Total/NA | Water | 300.0 | |

Metals

Analysis Batch: 20622

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|-------------------|--------------------------------|-----------|--------|---------------|------------|
| 380-24009-1 | HALAWA WELLS UNITS 1 (331-023) | Total/NA | Water | 200.7 Rev 4.4 | |
| MB 380-20622/52 | Method Blank | Total/NA | Water | 200.7 Rev 4.4 | |
| LCS 380-20622/54 | Lab Control Sample | Total/NA | Water | 200.7 Rev 4.4 | |
| LCSD 380-20622/55 | Lab Control Sample Dup | Total/NA | Water | 200.7 Rev 4.4 | |
| LLCS 380-20622/53 | Lab Control Sample | Total/NA | Water | 200.7 Rev 4.4 | |
| 380-23590-S-1 MS | Matrix Spike | Total/NA | Water | 200.7 Rev 4.4 | |
| 380-23590-S-1 MSD | Matrix Spike Duplicate | Total/NA | Water | 200.7 Rev 4.4 | |

Prep Batch: 20708

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|------------------|--------------------------------|-------------------|--------|--------|------------|
| 380-24009-1 | HALAWA WELLS UNITS 1 (331-023) | Total Recoverable | Water | 200.8 | |
| MB 380-20708/1-A | Method Blank | Total Recoverable | Water | 200.8 | |

Eurofins Eaton Monrovia

QC Association Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Metals (Continued)

Prep Batch: 20708 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------------|------------------------|-------------------|--------|--------|------------|
| LCS 380-20708/3-A | Lab Control Sample | Total Recoverable | Water | 200.8 | |
| LCSD 380-20708/4-A | Lab Control Sample Dup | Total Recoverable | Water | 200.8 | |
| LLCS 380-20708/2-A | Lab Control Sample | Total Recoverable | Water | 200.8 | |
| 380-23973-B-1-B MS | Matrix Spike | Total Recoverable | Water | 200.8 | |
| 380-23973-B-1-C MSD | Matrix Spike Duplicate | Total Recoverable | Water | 200.8 | |

Analysis Batch: 20975

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------------|--------------------------------|-------------------|--------|--------|------------|
| 380-24009-1 | HALAWA WELLS UNITS 1 (331-023) | Total Recoverable | Water | 200.8 | 20708 |
| MB 380-20708/1-A | Method Blank | Total Recoverable | Water | 200.8 | 20708 |
| LCS 380-20708/3-A | Lab Control Sample | Total Recoverable | Water | 200.8 | 20708 |
| LCSD 380-20708/4-A | Lab Control Sample Dup | Total Recoverable | Water | 200.8 | 20708 |
| LLCS 380-20708/2-A | Lab Control Sample | Total Recoverable | Water | 200.8 | 20708 |
| 380-23973-B-1-B MS | Matrix Spike | Total Recoverable | Water | 200.8 | 20708 |
| 380-23973-B-1-C MSD | Matrix Spike Duplicate | Total Recoverable | Water | 200.8 | 20708 |

Prep Batch: 273241

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------------|--------------------------------|-----------|--------|--------|------------|
| 380-24009-1 | HALAWA WELLS UNITS 1 (331-023) | Total/NA | Water | 245.1 | |
| MB 570-273241/1-A | Method Blank | Total/NA | Water | 245.1 | |
| LCS 570-273241/2-A | Lab Control Sample | Total/NA | Water | 245.1 | |
| LCSD 570-273241/3-A | Lab Control Sample Dup | Total/NA | Water | 245.1 | |
| 380-23959-R-1-B MS | Matrix Spike | Total/NA | Water | 245.1 | |
| 380-23959-R-1-C MSD | Matrix Spike Duplicate | Total/NA | Water | 245.1 | |

Analysis Batch: 273666

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------------|--------------------------------|-----------|--------|--------|------------|
| 380-24009-1 | HALAWA WELLS UNITS 1 (331-023) | Total/NA | Water | 245.1 | 273241 |
| MB 570-273241/1-A | Method Blank | Total/NA | Water | 245.1 | 273241 |
| LCS 570-273241/2-A | Lab Control Sample | Total/NA | Water | 245.1 | 273241 |
| LCSD 570-273241/3-A | Lab Control Sample Dup | Total/NA | Water | 245.1 | 273241 |
| 380-23959-R-1-B MS | Matrix Spike | Total/NA | Water | 245.1 | 273241 |
| 380-23959-R-1-C MSD | Matrix Spike Duplicate | Total/NA | Water | 245.1 | 273241 |

General Chemistry

Analysis Batch: 20504

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|------------------|--------------------------------|-----------|--------|----------|------------|
| 380-24009-1 | HALAWA WELLS UNITS 1 (331-023) | Total/NA | Water | SM 2540C | |
| MB 380-20504/1 | Method Blank | Total/NA | Water | SM 2540C | |
| HLCS 380-20504/5 | Lab Control Sample | Total/NA | Water | SM 2540C | |
| LCS 380-20504/4 | Lab Control Sample | Total/NA | Water | SM 2540C | |
| MRL 380-20504/2 | Lab Control Sample | Total/NA | Water | SM 2540C | |
| MRL 380-20504/3 | Lab Control Sample | Total/NA | Water | SM 2540C | |
| 380-24009-1 DU | HALAWA WELLS UNITS 1 (331-023) | Total/NA | Water | SM 2540C | |

Analysis Batch: 20512

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|-----------------|--------------------------------|-----------|--------|--------------|------------|
| 380-24009-1 | HALAWA WELLS UNITS 1 (331-023) | Total/NA | Water | SM 4500 S2 D | |
| MB 380-20512/1 | Method Blank | Total/NA | Water | SM 4500 S2 D | |
| LCS 380-20512/4 | Lab Control Sample | Total/NA | Water | SM 4500 S2 D | |

Eurofins Eaton Monrovia

QC Association Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

General Chemistry (Continued)

Analysis Batch: 20512 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|-------------------|------------------------|-----------|--------|--------------|------------|
| LCSD 380-20512/18 | Lab Control Sample Dup | Total/NA | Water | SM 4500 S2 D | |
| MRL 380-20512/17 | Lab Control Sample | Total/NA | Water | SM 4500 S2 D | |
| MRL 380-20512/2 | Lab Control Sample | Total/NA | Water | SM 4500 S2 D | |
| 380-23890-B-1 MS | Matrix Spike | Total/NA | Water | SM 4500 S2 D | |
| 380-23890-B-1 MSD | Matrix Spike Duplicate | Total/NA | Water | SM 4500 S2 D | |

Analysis Batch: 21054

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------------------|-----------|--------|----------|------------|
| 380-24009-1 | HALAWA WELLS UNITS 1 (331-023) | Total/NA | Water | SM 2320B | |
| MB 380-21054/7 | Method Blank | Total/NA | Water | SM 2320B | |
| LCS 380-21054/5 | Lab Control Sample | Total/NA | Water | SM 2320B | |
| LCSD 380-21054/22 | Lab Control Sample Dup | Total/NA | Water | SM 2320B | |
| LLCS 380-21054/6 | Lab Control Sample | Total/NA | Water | SM 2320B | |
| MRL 380-21054/8 | Lab Control Sample | Total/NA | Water | SM 2320B | |
| 380-24134-AG-1 MS | Matrix Spike | Total/NA | Water | SM 2320B | |
| 380-24134-AG-1 MSD | Matrix Spike Duplicate | Total/NA | Water | SM 2320B | |
| 380-24134-AG-1 DU | Duplicate | Total/NA | Water | SM 2320B | |

Analysis Batch: 21055

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|-------------------|--------------------------------|-----------|--------|----------|------------|
| 380-24009-1 | HALAWA WELLS UNITS 1 (331-023) | Total/NA | Water | SM 2510B | |
| MB 380-21055/7 | Method Blank | Total/NA | Water | SM 2510B | |
| LCS 380-21055/10 | Lab Control Sample | Total/NA | Water | SM 2510B | |
| LCSD 380-21055/22 | Lab Control Sample Dup | Total/NA | Water | SM 2510B | |
| MRL 380-21055/8 | Lab Control Sample | Total/NA | Water | SM 2510B | |
| 380-24134-AG-1 DU | Duplicate | Total/NA | Water | SM 2510B | |

Analysis Batch: 21056

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|-------------------|--------------------------------|-----------|--------|-------------|------------|
| 380-24009-1 | HALAWA WELLS UNITS 1 (331-023) | Total/NA | Water | SM 4500 F C | |
| MB 380-21056/6 | Method Blank | Total/NA | Water | SM 4500 F C | |
| LCS 380-21056/8 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |
| LCSD 380-21056/9 | Lab Control Sample Dup | Total/NA | Water | SM 4500 F C | |
| MRL 380-21056/7 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |
| 380-23728-L-1 MS | Matrix Spike | Total/NA | Water | SM 4500 F C | |
| 380-23728-L-1 MSD | Matrix Spike Duplicate | Total/NA | Water | SM 4500 F C | |

Analysis Batch: 21057

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|-------------------|--------------------------------|-----------|--------|--------------|------------|
| 380-24009-1 | HALAWA WELLS UNITS 1 (331-023) | Total/NA | Water | SM 4500 H+ B | |
| MB 380-21057/9 | Method Blank | Total/NA | Water | SM 4500 H+ B | |
| LCS 380-21057/10 | Lab Control Sample | Total/NA | Water | SM 4500 H+ B | |
| LCSD 380-21057/23 | Lab Control Sample Dup | Total/NA | Water | SM 4500 H+ B | |
| 380-24134-AG-1 DU | Duplicate | Total/NA | Water | SM 4500 H+ B | |

Subcontract

Analysis Batch: O-40006

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------|--------------------------------|-----------|--------|-----------------------------------|------------|
| 380-24009-1 | HALAWA WELLS UNITS 1 (331-023) | Total/NA | Water | 625 PAH Physis LL (EAL) + TICs | O-40006_P |

Eurofins Eaton Monrovia

QC Association Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Subcontract (Continued)

Analysis Batch: O-40006 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------|------------------------|-----------|-------------|-----------------------------------|------------|
| 100802-B1 | Method Blank | Total/NA | BlankMatrix | 625 PAH Physis LL (EAL) + TICs | O-40006_P |
| 100802-BS1 | Lab Control Sample | Total/NA | BlankMatrix | 625 PAH Physis LL (EAL) + TICs | O-40006_P |
| 100802-BS2 | Lab Control Sample Dup | Total/NA | BlankMatrix | 625 PAH Physis LL (EAL) + TICs | O-40006_P |

Analysis Batch: 22DSJ049W

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------|--------------------------------|-----------|--------|--|------------|
| 380-24009-1 | HALAWA WELLS UNITS 1 (331-023) | Total/NA | Water | 8015 Diesel LL (EAL) and Motor Oil | |
| 22DSJ049WB | Method Blank | Total/NA | WATER | 8015 Diesel LL (EAL) and Motor Oil | |
| 22DSJ049WL | Lab Control Sample | Total/NA | WATER | 8015 Diesel LL (EAL) and Motor Oil | |
| 22J5J049WL | Lab Control Sample | Total/NA | WATER | 8015 Diesel LL (EAL) and Motor Oil | |
| 22J8J049WL | Lab Control Sample | Total/NA | WATER | 8015 Diesel LL (EAL) and Motor Oil | |
| 22J197-01M | 380-24009-1 MS | Total/NA | WATER | 8015 Diesel LL (EAL) and Motor Oil | |
| 22J197-01S | 380-24009-1 MSD | Total/NA | WATER | 8015 Diesel LL (EAL) and Motor Oil | |

Analysis Batch: 22MEJ003W

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------|--------------------------------|-----------|--------|--------------|------------|
| 380-24009-1 | HALAWA WELLS UNITS 1 (331-023) | Total/NA | Water | 8015 Ethanol | |
| 22MEJ003WB | Method Blank | Total/NA | WATER | 8015 Ethanol | |
| 22MEJ003WL | Lab Control Sample | Total/NA | WATER | 8015 Ethanol | |

Analysis Batch: 22VGH7J09

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------|--------------------------------|-----------|--------|-------------------------------------|------------|
| 380-24009-1 | HALAWA WELLS UNITS 1 (331-023) | Total/NA | Water | 8015 Gas (Purgeable) LL (EAL) | |
| 380-24009-2 | TB: HALAWA WELLS UNITS 1 | Total/NA | Water | 8015 Gas (Purgeable) LL (EAL) | |
| 22VGH7J09B | Method Blank | Total/NA | WATER | 8015 Gas (Purgeable) LL (EAL) | |
| 22VGH7J09L | Lab Control Sample | Total/NA | WATER | 8015 Gas (Purgeable) LL (EAL) | |

Prep Batch: O-40006_P

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------|--------------------------------|-----------|-------------|---------|------------|
| 380-24009-1 | HALAWA WELLS UNITS 1 (331-023) | Total/NA | Water | EPA_625 | |
| 100802-B1 | Method Blank | Total/NA | BlankMatrix | EPA_625 | |

Eurofins Eaton Monrovia

QC Association Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Subcontract (Continued)

Prep Batch: O-40006_P (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------|------------------------|-----------|-------------|---------|------------|
| 100802-BS1 | Lab Control Sample | Total/NA | BlankMatrix | EPA_625 | |
| 100802-BS2 | Lab Control Sample Dup | Total/NA | BlankMatrix | EPA_625 | |

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Lab Chronicle

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Client Sample ID: HALAWA WELLS UNITS 1 (331-023)

Lab Sample ID: 380-24009-1

Date Collected: 10/11/22 10:12

Matrix: Water

Date Received: 10/12/22 10:00

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Batch Analyst | Lab | Prepared or Analyzed |
|-------------------|------------|------------------------------------|-----|-----------------|--------------|---------------|-----------|--|
| Total/NA | Analysis | 524.2 | | 1 | 20582 | AAE8 | EA MON | 10/13/22 16:22 |
| Total/NA | Analysis | 524.2 | | 1 | 21101 | P3EE | EA MON | 10/18/22 23:01 |
| Total/NA | Prep | 525.2 | | | 20849 | N8NE | EA MON | 10/15/22 15:26 |
| Total/NA | Analysis | 525.2 | | 1 | 20905 | UPAC | EA MON | 10/17/22 14:29 |
| Total/NA | Prep | 504.1 | | | 21364 | K9GY | EA MON | 10/20/22 13:23 - 10/20/22 14:28 ¹ |
| Total/NA | Analysis | 504.1 | | 1 | 21577 | K9GY | EA MON | 10/20/22 22:40 |
| Total/NA | Prep | 505 | | | 20633 | DR5R | EA MON | 10/13/22 15:16 - 10/13/22 16:45 ¹ |
| Total/NA | Analysis | 505 | | 1 | 20914 | YNB8 | EA MON | 10/13/22 22:13 |
| Total/NA | Analysis | 300.0 | | 5 | 20985 | UNJR | EA MON | 10/17/22 22:46 |
| Total/NA | Analysis | 300.0 | | 5 | 20522 | LM8C | EA MON | 10/12/22 21:03 |
| Total/NA | Analysis | 300.0 | | 5 | 20523 | P6LW | EA MON | 10/12/22 21:03 |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 20622 | UNSI | EA MON | 10/13/22 13:36 |
| Total Recoverable | Prep | 200.8 | | | 20708 | NQM8 | EA MON | 10/14/22 09:23 |
| Total Recoverable | Analysis | 200.8 | | 1 | 20975 | DHX7 | EA MON | 10/17/22 14:05 |
| Total/NA | Prep | 245.1 | | | 273241 | JP8N | EET CAL 4 | 10/17/22 12:52 |
| Total/NA | Analysis | 245.1 | | 1 | 273666 | C0YH | EET CAL 4 | 10/18/22 14:44 |
| Total/NA | Analysis | SM 2320B | | 1 | 21054 | ZYV7 | EA MON | 10/17/22 20:41 |
| Total/NA | Analysis | SM 2510B | | 1 | 21055 | ZYV7 | EA MON | 10/17/22 20:41 |
| Total/NA | Analysis | SM 2540C | | 1 | 20504 | XLG4 | EA MON | 10/12/22 17:53 |
| Total/NA | Analysis | SM 4500 F C | | 1 | 21056 | ZYV7 | EA MON | 10/17/22 18:35 |
| Total/NA | Analysis | SM 4500 H+ B | | 1 | 21057 | ZYV7 | EA MON | 10/17/22 20:41 |
| Total/NA | Analysis | SM 4500 S2 D | | 1 | 20512 | PK4Q | EA MON | 10/12/22 18:25 |
| Total/NA | Prep | EPA_625 | | 1 | O-40006_P | | | 10/18/22 00:00 |
| Total/NA | Analysis | 625 PAH Physis LL (EAL) + TICs | | 1 | O-40006 | YC | | 11/14/22 14:11 |
| Total/NA | Analysis | 8015 Diesel LL (EAL) and Motor Oil | | 1 | 22DSJ049W | SDees | | 10/24/22 23:55 |
| Total/NA | Analysis | 8015 Ethanol | | 1 | 22MEJ003W | ASitu | | 10/14/22 13:44 |
| Total/NA | Analysis | 8015 Gas (Purgeable) LL (EAL) | | 1 | 22VGH7J09 | SCerva | | 10/18/22 09:06 |

Client Sample ID: TB: HALAWA WELLS UNITS 1

Lab Sample ID: 380-24009-2

Date Collected: 10/11/22 10:12

Matrix: Water

Date Received: 10/12/22 10:00

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Batch Analyst | Lab | Prepared or Analyzed |
|-----------|------------|-------------------------------|-----|-----------------|--------------|---------------|--------|--|
| Total/NA | Analysis | 524.2 | | 1 | 20582 | AAE8 | EA MON | 10/13/22 16:43 |
| Total/NA | Analysis | 524.2 | | 1 | 21101 | P3EE | EA MON | 10/18/22 23:24 |
| Total/NA | Prep | 504.1 | | | 21364 | K9GY | EA MON | 10/20/22 13:23 - 10/20/22 14:28 ¹ |
| Total/NA | Analysis | 504.1 | | 1 | 21577 | K9GY | EA MON | 10/20/22 23:15 |
| Total/NA | Analysis | 8015 Gas (Purgeable) LL (EAL) | | 1 | 22VGH7J09 | SCerva | | 10/18/22 09:41 |

¹ Completion dates and times are reported or not reported per method requirements or individual lab discretion.

Lab Chronicle

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Laboratory References:

= Physis Environmental Laboratories, 1904 Wright Circle, Anaheim, CA 92806

EA MON = Eurofins Eaton Monrovia, 750 Royal Oaks Drive, Suite 100, Monrovia, CA 91016, TEL (626)386-1100

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

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Accreditation/Certification Summary

Client: City & County of Honolulu
 Project/Site: RED-HILL

Job ID: 380-24009-1

Laboratory: Eurofins Eaton Monrovia

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

| Authority | Program | Identification Number | Expiration Date |
|-----------|---------|-----------------------|-----------------|
| Hawaii | State | CA00006 | 01-31-23 |

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

| Analysis Method | Prep Method | Matrix | Analyte |
|-----------------|-------------|--------|----------------------------------|
| 300.0 | | Water | Nitrate Nitrite as N |
| 505 | 505 | Water | Polychlorinated biphenyls, Total |
| 524.2 | | Water | 1,3-Dichloropropene, Total |
| 524.2 | | Water | 2-Butanone (MEK) |
| 524.2 | | Water | 4-Methyl-2-pentanone (MIBK) |
| 524.2 | | Water | Acetone |
| 524.2 | | Water | Bromoethane |
| 524.2 | | Water | m,p-Xylenes |
| 524.2 | | Water | o-Xylene |
| 525.2 | 525.2 | Water | 1-Methylnaphthalene |
| 525.2 | 525.2 | Water | 2,4'-DDD |
| 525.2 | 525.2 | Water | 2,4'-DDE |
| 525.2 | 525.2 | Water | 2,4'-DDT |
| 525.2 | 525.2 | Water | 2,4-Dinitrotoluene |
| 525.2 | 525.2 | Water | 2,6-Dinitrotoluene |
| 525.2 | 525.2 | Water | 2-Methylnaphthalene |
| 525.2 | 525.2 | Water | 4,4'-DDD |
| 525.2 | 525.2 | Water | 4,4'-DDE |
| 525.2 | 525.2 | Water | 4,4'-DDT |
| 525.2 | 525.2 | Water | Acenaphthene |
| 525.2 | 525.2 | Water | Acenaphthylene |
| 525.2 | 525.2 | Water | Acetochlor |
| 525.2 | 525.2 | Water | alpha-BHC |
| 525.2 | 525.2 | Water | alpha-Chlordane |
| 525.2 | 525.2 | Water | Anthracene |
| 525.2 | 525.2 | Water | Benz(a)anthracene |
| 525.2 | 525.2 | Water | Benzo[b]fluoranthene |
| 525.2 | 525.2 | Water | Benzo[g,h,i]perylene |
| 525.2 | 525.2 | Water | Benzo[k]fluoranthene |
| 525.2 | 525.2 | Water | beta-BHC |
| 525.2 | 525.2 | Water | Bromacil |
| 525.2 | 525.2 | Water | Butylbenzylphthalate |
| 525.2 | 525.2 | Water | Chlorobenzilate |
| 525.2 | 525.2 | Water | Chloroneb |
| 525.2 | 525.2 | Water | Chlorothalonil (Draconil, Bravo) |
| 525.2 | 525.2 | Water | Chlorpyrifos |
| 525.2 | 525.2 | Water | Chrysene |
| 525.2 | 525.2 | Water | delta-BHC |
| 525.2 | 525.2 | Water | Dibenz(a,h)anthracene |
| 525.2 | 525.2 | Water | Diclorvos (DDVP) |
| 525.2 | 525.2 | Water | Diethylphthalate |
| 525.2 | 525.2 | Water | Dimethylphthalate |
| 525.2 | 525.2 | Water | Di-n-butyl phthalate |
| 525.2 | 525.2 | Water | Di-n-octyl phthalate |
| 525.2 | 525.2 | Water | Endosulfan I (Alpha) |

Accreditation/Certification Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

Laboratory: Eurofins Eaton Monrovia (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

| Authority | Program | Identification Number | Expiration Date |
|---|-------------|-----------------------|---|
| The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification. | | | |
| Analysis Method | Prep Method | Matrix | Analyte |
| 525.2 | 525.2 | Water | Endosulfan II (Beta) |
| 525.2 | 525.2 | Water | Endosulfan sulfate |
| 525.2 | 525.2 | Water | Endrin aldehyde |
| 525.2 | 525.2 | Water | EPTC |
| 525.2 | 525.2 | Water | Fluoranthene |
| 525.2 | 525.2 | Water | Fluorene |
| 525.2 | 525.2 | Water | gamma-Chlordane |
| 525.2 | 525.2 | Water | Indeno[1,2,3-cd]pyrene |
| 525.2 | 525.2 | Water | Isophorone |
| 525.2 | 525.2 | Water | Malathion |
| 525.2 | 525.2 | Water | Molinate |
| 525.2 | 525.2 | Water | Naphthalene |
| 525.2 | 525.2 | Water | Parathion |
| 525.2 | 525.2 | Water | Pendimethalin (Penoxaline) |
| 525.2 | 525.2 | Water | Phenanthrene |
| 525.2 | 525.2 | Water | Pyrene |
| 525.2 | 525.2 | Water | Terbacil |
| 525.2 | 525.2 | Water | Terbutylazine |
| 525.2 | 525.2 | Water | Thiobencarb |
| 525.2 | 525.2 | Water | Total Permethrin (mixed isomers) |
| 525.2 | 525.2 | Water | trans-Nonachlor |
| 525.2 | 525.2 | Water | Trifluralin |
| SM 2320B | | Water | Bicarbonate Alkalinity as CaCO ₃ |
| SM 2320B | | Water | Carbonate Alkalinity as CaCO ₃ |
| SM 4500 S2 D | | Water | Sulfide |

Laboratory: Eurofins Calscience

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|------------|---|-----------------------|-----------------|
| California | Los Angeles County Sanitation Districts | 10109 | 07-31-23 |
| California | SCAQMD LAP | 17LA0919 | 12-01-22 |
| California | State | 3082 | 07-31-23 |
| Nevada | State | CA00111 | 08-01-23 |
| Oregon | NELAP | 4175 | 02-02-23 |
| USDA | US Federal Programs | P330-20-00034 | 02-10-23 |
| Washington | State | C916-18 | 10-12-22 * |

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

| Method | Method Description | Protocol | Laboratory |
|---------------|--|----------|------------|
| 524.2 | Volatile Organic Compounds (GC/MS SIM) | EPA-DW | EA MON |
| 524.2 | Volatile Organic Compounds (GC/MS) | EPA-DW | EA MON |
| 525.2 | Semivolatile Organic Compounds (GC/MS) | EPA | EA MON |
| 504.1 | EDB, DBCP and 1,2,3-TCP (GC) | EPA-DW2 | EA MON |
| 505 | Organochlorine Pesticides/PCBs (GC) | EPA | EA MON |
| 300.0 | Anions, Ion Chromatography | EPA | EA MON |
| 200.7 Rev 4.4 | Metals (ICP) | EPA | EA MON |
| 200.8 | Metals (ICP/MS) | EPA | EA MON |
| 245.1 | Mercury (CVAA) | EPA | EET CAL 4 |
| SM 2320B | Alkalinity | SM | EA MON |
| SM 2510B | Conductivity, Specific Conductance | SM | EA MON |
| SM 2540C | Solids, Total Dissolved (TDS) | SM | EA MON |
| SM 4500 F C | Fluoride | SM | EA MON |
| SM 4500 H+ B | pH | SM | EA MON |
| SM 4500 S2 D | Sulfide, Total | SM | EA MON |
| 625 | EPA 625 Base/Neutral and Acid Organics i | EPA | |
| 8015 | 8015 - Jet Fuel 5 (JP5) | EPA | |
| 8015 | 8015 - Jet Fuel 8 (JP8) | EPA | |
| 8015 | 8015 - TPH DRO/ORO | EPA | |
| 8015B | SW846 8015B Gasoline Range Organics | SW846 | |
| 200.8 | Preparation, Total Recoverable Metals | EPA | EA MON |
| 245.1 | Preparation, Mercury | EPA | EET CAL 4 |
| 504.1 | Microextraction | EPA-DW | EA MON |
| 505 | Extraction, Organochlorine Pesticides/PCBs | EPA | EA MON |
| 525.2 | Extraction of Semivolatile Compounds | EPA | EA MON |
| None | Autocomplete Prep - Metals - No Digestion required | None | EA MON |

Protocol References:

EPA = US Environmental Protection Agency

EPA-DW = "Methods For The Determination Of Organic Compounds In Drinking Water", EPA/600/4-88/039, December 1988 And Its Supplements.

EPA-DW2 = "Methods For The Determination of Organic Compounds in Drinking Water - Supplement III ", EPA/600/R-95-131, August 1995

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

= Physis Environmental Laboratories, 1904 Wright Circle, Anaheim, CA 92806

EA MON = Eurofins Eaton Monrovia, 750 Royal Oaks Drive, Suite 100, Monrovia, CA 91016, TEL (626)386-1100

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

Sample Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-24009-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---------------|--------------------------------|--------|----------------|----------------|
| 380-24009-1 | HALAWA WELLS UNITS 1 (331-023) | Water | 10/11/22 10:12 | 10/12/22 10:00 |
| 380-24009-2 | TB: HALAWA WELLS UNITS 1 | Water | 10/11/22 10:12 | 10/12/22 10:00 |

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Date: 11-08-2022
EMAX Batch No.: 22J197

Attn: Jackie Contreras

Eurofins Eaton Analytical
750 Royal Oaks Dr., Suite 100
Monrovia, CA 91016-3629

Subject: Laboratory Report
Project: 380-24009

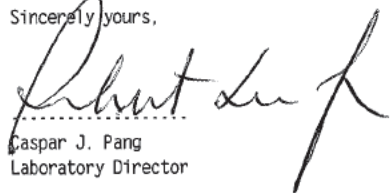
Enclosed is the Laboratory report for samples received on 10/13/22.
The data reported relate only to samples listed below :

| Sample ID | Control # | Col Date | Matrix | Analysis |
|----------------|-----------|----------|--------|--------------------------------|
| 380-24009-1 | J197-01 | 10/11/22 | WATER | TPH GASOLINE TPH ETHANOL |
| 380-24009-2 | J197-02 | 10/11/22 | WATER | TPH GASOLINE |
| 380-24009-1MS | J197-01M | 10/11/22 | WATER | TPH JP-8 |
| 380-24009-1MSD | J197-01S | 10/11/22 | WATER | TPH JP-8 |

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,


Gaspar J. Pang
Laboratory Director

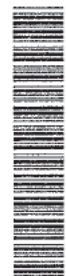
This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all TNI & DOD requirements unless noted in the Case Narrative.

NELAP Accredited Certificate Number CA002912022-22
ANAB Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing
California ELAP Accredited Certificate Number 2672



Chain of Custody Record



Monrovia, CA (Suite 100)
750 Royal Oaks Drive Suite 100
Monrovia, CA 91016
Phone: 626-386-1100

225 197

Client Information (Sub Contract Lab)
Client Contact: **EMAX Laboratories Inc**
Shipping/Receiving: **EMAX Laboratories Inc**
Address: **3051 Fujita Street, Torrance, CA, 90505**
City: **Torrance**
State, Zip: **CA, 90505**
Phone: **PO #:**
Email: **WFO #:**
Project Name: **RED-HILL**
Project #: **38001111**
Site: **SSOW#:**
Honolulu BWS SitesSampler: **Arada, Rachelle**
Lab P/N: **Arada, Rachelle**
E-Mail: **Rachelle.Arada@et.eurofins.com**
Accreditations Required (See note): **State - Hawaii**
Carrier Tracking No(s): **380-24115-1**
COC No: **380-24115-1**
Page: **Page 1 of 1**

Date Requested: **10/26/2022**
TAT Requested (days): **10/26/2022**
Due Date Requested: **10/26/2022**
Analysis Requested

Field Filtered Sample (Yes or No)
Perform MS/MSD (Yes or No)
SUB (8015 Jet Fuel 8 (JP8))/ 8015 Jet Fuel 8 (JP8)
SUB (8015 Jet Fuel 5 (JP5))/ 8015 Jet Fuel 5 (JP5)
SUB (8015 Diesel LL (EAL) and Motor Oil)/ 8015 Diesel LL (EAL) and Motor Oil
SUB (8015 Gas (Purgeable) LL (EAL))/ 8015 Gas (Purgeable) LL (EAL)
SUB (8015 Ethanol)/ 8015 Ethanol

| Sample ID | Sample Date | Sample Time | Sample Type (G=grab) | Matrix (Water, Oil, Soil, etc.) | Preservation Code | Total Number of containers | Special Instructions/Note |
|--|-------------|-------------|----------------------|---------------------------------|-------------------|----------------------------|---------------------------|
| HALAWA WELLS UNITS 1 (331-023) (380-24009-1) | 10/11/22 | 10:12 | Water | Water | | 11 | See Attached Instructions |
| HALAWA WELLS UNITS 1 (380-24009-2) | 10/11/22 | 10:12 | Water | Water | | 2 | See Attached Instructions |

Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyze & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to Eurofins Eaton Analytical, LLC.

Possible Hazard Identification
Deliverable Requested: I, II, III, IV, Other (specify) **Primary Deliverable Rank: 2**
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For **Months**

Unconfirmed
Empty Kit Relinquished by: **Date:**
Relinquished by: **Date/Time:** **Company:**
Relinquished by: **Date/Time:** **Company:**
Relinquished by: **Date/Time:** **Company:**
Custody Seats Intact: **Custody Seal No.:**
 Yes No

Received by: **Date/Time:** **Company:**
Received by: **Date/Time:** **Company:**
Received by: **Date/Time:** **Company:**
Cooler Temperature(s) °C and Other Remarks: **Temp. 12.2 @ 4.1**



| | | |
|--|---------------------------|--|
| Type of Delivery <input type="checkbox"/> Fedex <input type="checkbox"/> UPS <input type="checkbox"/> GSO <input type="checkbox"/> Others <input checked="" type="checkbox"/> EMAX Courier <input checked="" type="checkbox"/> Client Delivery | Airbill / Tracking Number | ECN <u>22J197</u> Recipient <u>Alan Ramos</u> Date <u>10/13/22</u> Time <u>13:53</u> |
|--|---------------------------|--|

COC INSPECTION

| | | | | | |
|---|---|--|--|--|--|
| <input checked="" type="checkbox"/> Client Name | <input checked="" type="checkbox"/> Client PM/FC | <input type="checkbox"/> Sampler Name | <input checked="" type="checkbox"/> Sampling Date/Time | <input checked="" type="checkbox"/> Sample ID | <input checked="" type="checkbox"/> Matrix |
| <input type="checkbox"/> Address | <input type="checkbox"/> Tel # / Fax # | <input type="checkbox"/> Courier Signature | <input checked="" type="checkbox"/> Analysis Required | <input type="checkbox"/> Preservative (if any) | <input checked="" type="checkbox"/> NAT |
| Safety Issues (if any) | <input type="checkbox"/> High concentrations expected | <input type="checkbox"/> From Superfund Site | <input type="checkbox"/> Rad screening required | | |

Note: _____

PACKAGING INSPECTION

| | | | |
|---|--|--|--|
| Container | <input checked="" type="checkbox"/> Cooler | <input type="checkbox"/> Box | <input type="checkbox"/> Other |
| Condition | <input type="checkbox"/> Custody Seal | <input type="checkbox"/> Intact | <input type="checkbox"/> Damaged |
| Packaging | <input checked="" type="checkbox"/> Bubble Pack | <input type="checkbox"/> Styrofoam | <input type="checkbox"/> Popcorn |
| Temperatures (Cool, ≤6 °C but not frozen) | <input checked="" type="checkbox"/> Cooler 1 <u>2.2</u> °C | <input checked="" type="checkbox"/> Cooler 2 <u>4.1</u> °C | <input type="checkbox"/> Cooler 3 _____ °C |
| | <input type="checkbox"/> Cooler 6 _____ °C | <input type="checkbox"/> Cooler 7 _____ °C | <input type="checkbox"/> Cooler 8 _____ °C |
| Thermometer: | A - S/N _____ | B - S/N <u>210760277</u> | C - S/N _____ |

Comments: Temperature is out of range. PM was informed IMMEDIATELY.

Note: _____

DISCREPANCIES

| LabSampleID | LabSampleContainerID | Code | ClientSample Label ID / Information | Corrective Action |
|-------------|----------------------|------|-------------------------------------|-------------------|
| | | | | |

pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time.

NOTES/OBSERVATIONS:

SAMPLE MATRIX IS DRINKING WATER? YES NO

- LEGEND:**
- | | | |
|--|---|--|
| <p><input type="checkbox"/> Continue to next page.</p> <p>Code Description-Sample Management</p> <p>D1 Analysis is not indicated in _____</p> <p>D2 Analysis mismatch COC vs label</p> <p>D3 Sample ID mismatch COC vs label</p> <p>D4 Sample ID is not indicated in _____</p> <p>D5 Container -[improper] [leaking] [broken]</p> <p>D6 Date/Time is not indicated in _____</p> <p>D7 Date/Time mismatch COC vs label</p> <p>D8 Sample listed in COC is not received</p> <p>D9 Sample received is not listed in COC</p> <p>D10 No initial/date on corrections in COC/label</p> <p>D11 Container count mismatch COC vs received</p> <p>D12 Container size mismatch COC vs received</p> | <p>Code Description-Sample Management</p> <p>D13 Out of Holding Time</p> <p>D14 Bubble is >6mm</p> <p>D15 No trip blank in cooler</p> <p>D16 Preservation not indicated in _____</p> <p>D17 Preservation mismatch COC vs label</p> <p>D18 Insufficient chemical preservative</p> <p>D19 Insufficient Sample</p> <p>D20 No filtration info for dissolved analysis</p> <p>D21 No sample for moisture determination</p> <p>D22 _____</p> <p>D23 _____</p> <p>D24 _____</p> | <p>Code Description-Sample Management</p> <p>R1 Proceed as indicated in <input type="checkbox"/> COC <input type="checkbox"/> Label</p> <p>R2 Refer to attached instruction</p> <p>R3 Cancel the analysis</p> <p>R4 Use vial with smallest bubble first</p> <p>R5 Log-in with latest sampling date and time+1 min</p> <p>R6 Adjust pH as necessary</p> <p>R7 Filter and preserved as necessary</p> <p>R8 _____</p> <p>R9 _____</p> <p>R10 _____</p> <p>R11 _____</p> <p>R12 _____</p> |
|--|---|--|

REVIEWS:

Sample Labeling Maria Rivera SRF Rivera PM RB
 Date 10/13/22 Date 10/13/22 Date 10/17/22

REPORTING CONVENTIONS

DATA QUALIFIERS:

| Lab Qualifier | AFCEE Qualifier | Description |
|---------------|-----------------|--|
| J | F | Indicates that the analyte is positively identified and the result is less than RL but greater than MDL. |
| N | | Indicates presumptive evidence of a compound. |
| B | B | Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level. |
| E | J | Indicates that the result is above the maximum calibration range or estimated value. |
| * | * | Out of QC limit. |

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

| | |
|------|-----------------------------------|
| CRDL | Contract Required Detection Limit |
| RL | Reporting Limit |
| MRL | Method Reporting Limit |
| PQL | Practical Quantitation Limit |
| MDL | Method Detection Limit |
| DO | Diluted out |

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-24009

METHOD 5030B/8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

SDG#: 22J197



CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-24009

SDG : 22J197

METHOD 5030B/8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

A total of two(2) water samples were received on 10/13/22 to be analyzed for Total Petroleum Hydrocarbons by Purge and Trap in accordance with Method 5030B/8015B and project specific requirements.

Holding Time

Samples were analyzed within the prescribed holding time.

Calibration

Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details. MRL was analyzed as required by the project. Refer to MRL summary form for details.

Method Blank

Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. VGH7J09B - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample

Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. VGH7J09L/VGH7J09C were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample

Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Gasoline was within MS QC limits in J162-01M/J162-01S. Refer to Matrix QC summary form for details.

Surrogate

Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis

Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client : EUROFINS EATON ANALYTICAL
Project : 380-24009
SDG NO. : 22J197
Instrument ID : H7

| Client Sample ID | Laboratory Sample ID | Dilution Factor | % Moist | Analysis DateTime | Extraction DateTime | Sample Data FN | Calibration Data FN | Prep. Batch | Notes |
|------------------|----------------------|-----------------|---------|-------------------|---------------------|----------------|---------------------|-------------|--------------------------|
| MBLK1W | VGH7J09B | 1 | NA | 10/17/2221:22 | 10/17/2221:22 | AJ16059A | AJ16058A | 22VGH7J09 | Method Blank |
| LCS1W | VGH7J09L | 1 | NA | 10/17/2221:57 | 10/17/2221:57 | AJ16060A | AJ16058A | 22VGH7J09 | Lab Control Sample (LCS) |
| LCD1W | VGH7J09C | 1 | NA | 10/17/2222:32 | 10/17/2222:32 | AJ16061A | AJ16058A | 22VGH7J09 | LCS Duplicate |
| 380-24009-1 | J197-01 | 1 | NA | 10/18/2209:06 | 10/18/2209:06 | AJ16079A | AJ16070A | 22VGH7J09 | Field Sample |
| 380-24009-2 | J197-02 | 1 | NA | 10/18/2209:41 | 10/18/2209:41 | AJ16080A | AJ16070A | 22VGH7J09 | Field Sample |

FN - Filename
% Moist - Percent Moisture



| |
|----|
| 1 |
| 2 |
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| 4 |
| 5 |
| 6 |
| 7 |
| 8 |
| 9 |
| 10 |
| 11 |
| 12 |
| 13 |
| 14 |
| 15 |
| 16 |
| 17 |

SAMPLE RESULTS

METHOD 5030B/8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

```

=====
Client      : EUOFINS EATON ANALYTICAL   Date Collected: 10/11/22 10:12
Project     : 380-24009                 Date Received: 10/13/22
Batch No.   : 22J197                    Date Extracted: 10/18/22 09:06
Sample ID   : 380-24009-1              Date Analyzed: 10/18/22 09:06
Lab Samp ID: J197-01                   Dilution Factor: 1
Lab File ID: AJ16079A                  Matrix: WATER
Ext Btch ID: 22VGH7J09                 % Moisture: NA
Calib. Ref.: AJ16070A                  Instrument ID: H7
=====
  
```

| PARAMETERS | RESULTS (mg/L) | RL (mg/L) | MDL (mg/L) |
|------------|-------------------|--------------|---------------|
| GASOLINE | ND | 0.020 | 0.010 |

| SURROGATE PARAMETERS | RESULT | SPK_AMT | %RECOVERY | QC LIMIT |
|----------------------|--------|---------|-----------|----------|
| Bromofluorobenzene | 0.0352 | 0.0400 | 88 | 60-140 |

Notes:
 Parameter H-C Range
 Gasoline C6-C10
 Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.
 Sample Amount : 5ml Final Volume : 5ml
 Prepared by : SCerva Analyzed by : SCerva

METHOD 5030B/8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/11/22 10:12
Project     : 380-24009                   Date Received: 10/13/22
Batch No.   : 22J197                       Date Extracted: 10/18/22 09:41
Sample ID   : 380-24009-2                 Date Analyzed: 10/18/22 09:41
Lab Samp ID: J197-02                       Dilution Factor: 1
Lab File ID: AJ16080A                       Matrix: WATER
Ext Btch ID: 22VGH7J09                     % Moisture: NA
Calib. Ref.: AJ16070A                       Instrument ID: H7
=====

```

| PARAMETERS | RESULTS (mg/L) | RL (mg/L) | MDL (mg/L) |
|------------|-------------------|--------------|---------------|
| GASOLINE | ND | 0.020 | 0.010 |

| SURROGATE PARAMETERS | RESULT | SPK_AMT | %RECOVERY | QC LIMIT |
|----------------------|--------|---------|-----------|----------|
| Bromofluorobenzene | 0.0369 | 0.0400 | 92 | 60-140 |

Notes:

Parameter H-C Range
Gasoline C6-C10
Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.
Sample Amount : 5ml Final Volume : 5ml
Prepared by : SCerva Analyzed by : SCerva

| |
|----|
| 1 |
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| 3 |
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| 5 |
| 6 |
| 7 |
| 8 |
| 9 |
| 10 |
| 11 |
| 12 |
| 13 |
| 14 |
| 15 |
| 16 |
| 17 |

QC SUMMARIES

METHOD 5030B/8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/17/22 21:22
Project     : 380-24009                   Date Received: 10/17/22
Batch No.   : 22J197                       Date Extracted: 10/17/22 21:22
Sample ID   : MBLK1W                       Date Analyzed: 10/17/22 21:22
Lab Samp ID: VGH7J09B                     Dilution Factor: 1
Lab File ID: AJ16059A                     Matrix: WATER
Ext Btch ID: 22VGH7J09                   % Moisture: NA
Calib. Ref.: AJ16058A                     Instrument ID: H7
=====

```

| PARAMETERS | RESULTS (mg/L) | RL (mg/L) | MDL (mg/L) |
|------------|-------------------|--------------|---------------|
| GASOLINE | ND | 0.020 | 0.010 |

| SURROGATE PARAMETERS | RESULT | SPK_AMT | %RECOVERY | QC LIMIT |
|----------------------|--------|---------|-----------|----------|
| Bromofluorobenzene | 0.0346 | 0.0400 | 87 | 60-140 |

Notes:

Parameter H-C Range
Gasoline C6-C10
Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.
Sample Amount : 5ml Final Volume : 5ml
Prepared by : SCerva Analyzed by : SCerva

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-24009
BATCH NO. : 22J197
METHOD : 5030B/8015B

```

=====
MATRIX : WATER % MOISTURE:NA
DILUTION FACTOR: 1 1
SAMPLE ID : MBLK1W LCS1W LCD1W
LAB SAMPLE ID : VGH7J09B VGH7J09L VGH7J09C
LAB FILE ID : AJ16059A AJ16060A AJ16061A
DATE PREPARED : 10/17/22 21:22 10/17/22 21:57 10/17/22 22:32
DATE ANALYZED : 10/17/22 21:22 10/17/22 21:57 10/17/22 22:32
PREP BATCH : 22VGH7J09 22VGH7J09 22VGH7J09
CALIBRATION REF: AJ16058A AJ16058A AJ16058A
  
```

ACCESSION:

| PARAMETERS | MBResult (mg/L) | SpikeAmt (mg/L) | LCSResult (mg/L) | LCSRec (%) | SpikeAmt (mg/L) | LCDResult (mg/L) | LCDRec (%) | RPD (%) | QCLimit (%) | MaxRPD (%) |
|------------|--------------------|--------------------|---------------------|---------------|--------------------|---------------------|---------------|------------|----------------|---------------|
| Gasoline | ND | 0.500 | 0.426 | 85 | 0.500 | 0.453 | 91 | 6 | 60-130 | 30 |

| SURROGATE PARAMETER | SpikeAmt (mg/L) | LCSResult (mg/L) | LCSRec (%) | SpikeAmt (mg/L) | LCDResult (mg/L) | LCDRec (%) | QCLimit (%) |
|---------------------|--------------------|---------------------|---------------|--------------------|---------------------|---------------|----------------|
| Bromofluorobenzene | 0.0400 | 0.0410 | 103 | 0.0400 | 0.0419 | 105 | 70-130 |

MB: Method Blank sample LCS: Lab Control Sample LCD: Lab Control Sample Duplicate

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-23784
BATCH NO. : 22J162
METHOD : 5030B/8015B

```

=====
MATRIX      : WATER                               % MOISTURE:NA
DILUTION FACTOR: 1                               1
SAMPLE ID   : 380-23784-1                         380-23784-1MS
LAB SAMPLE ID : J162-01                           J162-01M
LAB FILE ID  : AJ16062A                           AJ16063A
DATE PREPARED : 10/17/22 23:07                    10/17/22 23:43
DATE ANALYZED : 10/17/22 23:07                    10/17/22 23:43
PREP BATCH   : 22VGH7J09                          22VGH7J09
CALIBRATION REF: AJ16058A                          AJ16058A
=====
  
```

ACCESSION:

| PARAMETERS | PSResult (mg/L) | SpikeAmt (mg/L) | MSResult (mg/L) | MSRec (%) | SpikeAmt (mg/L) | MSDResult (mg/L) | MSDRec (%) | RPD (%) | QCLimit (%) | MaxRPD (%) |
|------------|--------------------|--------------------|--------------------|--------------|--------------------|---------------------|---------------|------------|----------------|---------------|
| Gasoline | ND | 0.500 | 0.464 | 93 | 0.500 | 0.486 | 97 | 5 | 50-130 | 30 |

| SURROGATE PARAMETER | SpikeAmt (mg/L) | MSResult (mg/L) | MSRec (%) | SpikeAmt (mg/L) | MSDResult (mg/L) | MSDRec (%) | QCLimit (%) |
|---------------------|--------------------|--------------------|--------------|--------------------|---------------------|---------------|----------------|
| Bromofluorobenzene | 0.0400 | 0.0457 | 114 | 0.0400 | 0.0477 | 119 | 60-140 |

PS: Parent Sample MS: Matrix Spike MSD: Matrix Spike Duplicate

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-24009

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 22J197



CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-24009

SDG : 22J197

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 10/13/22 to be analyzed for Total Petroleum Hydrocarbons by Extraction in accordance with Method 3520C/8015B and project specific requirements.

Holding Time

The sample was analyzed within the prescribed holding time.

Calibration

Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details. MRL was analyzed as required by the project. Refer to MRL summary form for details.

Method Blank

Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. DSJ049WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample

Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) LCS was analyzed. Percent recovery for Diesel was within LCS QC limits in DSJ049WL. Refer to LCS summary form for details.

Matrix QC Sample

Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Diesel was within MS QC limits in 22J162-01M/22J162-01S. Refer to Matrix QC summary form for details.

Surrogate

Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis

The sample was analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-24009

SDG : 22J197

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 10/13/22 to be analyzed for Petroleum Hydrocarbons by Extraction in accordance with Method 3520C/8015B and project specific requirements.

Holding Time

The sample was analyzed within the prescribed holding time.

Calibration

Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details. MRL was analyzed as required by the project. Refer to MRL summary form for details.

Method Blank

Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. DSJ049WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample

Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) LCS was analyzed. Percent recovery for JP5 was within LCS QC limits in J5J049WL. Refer to LCS summary form for details.

Matrix QC Sample

Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. JP5 was within MS QC limits in 22J162-01M/22J162-01S. Refer to Matrix QC summary form for details.

Surrogate

Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis

The sample was analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-24009

SDG : 22J197

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 10/13/22 to be analyzed for Petroleum Hydrocarbons by Extraction in accordance with Method 3520C/8015B and project specific requirements.

Holding Time

The sample was analyzed within the prescribed holding time.

Calibration

Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details. MRL was analyzed as required by the project. Refer to MRL summary form for details.

Method Blank

Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. DSJ049WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample

Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) LCS was analyzed. Percent recovery for JP8 was within LCS QC limits in J8J049WL. Refer to LCS summary form for details.

Matrix QC Sample

Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. JP8 was within MS QC limits in 22J197-01M/22J197-01S. Refer to Matrix QC summary form for details.

Surrogate

Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis

The sample was analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL
Project    : 380-24009
=====
SDG NO.    : 22J197
Instrument ID : D5
=====

```

| Client Sample ID | Laboratory Sample ID | Dilution Factor | % Moist | Analysis DateTime | Extraction DateTime | Sample Data FN | Calibration Data FN | Prep. Batch | Notes |
|------------------|----------------------|-----------------|---------|-------------------|---------------------|----------------|---------------------|-------------|--------------------------|
| | WATER | | | | | | | | |
| MBLK1W | DSJ049WB | 1 | NA | 10/24/2219:18 | 10/22/2213:30 | LJ24029A | LJ24023A | 22DSJ049W | Method Blank |
| LCS1W | DSJ049WL | 1 | NA | 10/24/2219:36 | 10/22/2213:30 | LJ24030A | LJ24023A | 22DSJ049W | Lab Control Sample (LCS) |
| 380-24009-1 | J197-01 | 1 | NA | 10/24/2223:55 | 10/22/2213:30 | LJ24044A | LJ24023A | 22DSJ049W | Field Sample |

FN - Filename
% Moist - Percent Moisture



LAB CHRONICLE
PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL
Project    : 380-24009
=====
SDG NO.    : 22J197
Instrument ID : D5
=====
  
```

| Client Sample ID | Laboratory Sample ID | Dilution Factor | % Moist | Analysis DateTime | Extraction DateTime | Sample Data FN | Calibration Data FN | Prep. Batch | Notes |
|------------------|----------------------|-----------------|---------|-------------------|---------------------|----------------|---------------------|-------------|--------------------------|
| | | | | | | | | | |
| | WATER | | | | | | | | |
| MBLK1W | DSJ049WB | 1 | NA | 10/24/2219:18 | 10/22/2213:30 | LJ24029A | LJ24024A | 22DSJ049W | Method Blank |
| LCS1W | J5J049WL | 1 | NA | 10/24/2219:55 | 10/22/2213:30 | LJ24031A | LJ24024A | 22DSJ049W | Lab Control Sample (LCS) |
| 380-24009-1 | J197-01 | 1 | NA | 10/24/2223:55 | 10/22/2213:30 | LJ24044A | LJ24024A | 22DSJ049W | Field Sample |

```

FN      - Filename
% Moist - Percent Moisture
  
```



LAB CHRONICLE
 PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL
 Project : 380-24009
 SDG NO. : 22J197
 Instrument ID : D5

| Client Sample ID | Laboratory Sample ID | Dilution Factor | % Moist | Analysis DateTime | Extraction DateTime | Sample Data FN | Calibration Data FN | Prep. Batch | Notes |
|------------------|----------------------|-----------------|---------|-------------------|---------------------|----------------|---------------------|-------------|--------------------------|
| MBLK1W | DSJ049WB | 1 | NA | 10/24/2219:18 | 10/22/2213:30 | LJ24029A | LJ24025A | 22DSJ049W | Method Blank |
| LCS1W | J8J049WL | 1 | NA | 10/24/2220:13 | 10/22/2213:30 | LJ24032A | LJ24025A | 22DSJ049W | Lab Control Sample (LCS) |
| 380-24009-1 | J197-01 | 1 | NA | 10/24/2223:55 | 10/22/2213:30 | LJ24044A | LJ24025A | 22DSJ049W | Field Sample |
| 380-24009-1MS | J197-01M | 1 | NA | 10/25/2200:13 | 10/22/2213:30 | LJ24045A | LJ24025A | 22DSJ049W | Matrix Spike Sample (MS) |
| 380-24009-1MSD | J197-01S | 1 | NA | 10/25/2200:32 | 10/22/2213:30 | LJ24046A | LJ24025A | 22DSJ049W | MS Duplicate (MSD) |

FN - Filename
 % Moist - Percent Moisture



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SAMPLE RESULTS

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/11/22 10:12
Project     : 380-24009                   Date Received: 10/13/22
Batch No.   : 22J197                      Date Extracted: 10/22/22 13:30
Sample ID   : 380-24009-1                Date Analyzed: 10/24/22 23:55
Lab Samp ID : 22J197-01                   Dilution Factor: 1
Lab File ID : LJ24044A                     Matrix: WATER
Ext Btch ID : 22DSJ049W                   % Moisture: NA
Calib. Ref.: LJ24023A                     Instrument ID: D5
=====

```

| PARAMETERS | RESULTS (mg/L) | RL (mg/L) | MDL (mg/L) |
|------------|-------------------|--------------|---------------|
| Diesel | ND | 0.028 | 0.014 |
| Motor Oil | ND | 0.056 | 0.028 |

| SURROGATE PARAMETERS | RESULT | SPK_AMT | %RECOVERY | QC LIMIT |
|----------------------|--------|---------|-----------|----------|
| Bromobenzene | 0.441 | 0.555 | 79 | 60-130 |
| Hexacosane | 0.147 | 0.139 | 106 | 60-130 |

Notes:

Parameter H-C Range
Diesel C10-C24
Motor Oil C24-C36

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount : 900ml Final Volume : 5ml
Prepared by : DLi Analyzed by : SDeeso

METHOD 3520C/8015B
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/11/22 10:12
Project     : 380-24009                   Date Received: 10/13/22
Batch No.   : 22J197                       Date Extracted: 10/22/22 13:30
Sample ID   : 380-24009-1                 Date Analyzed: 10/24/22 23:55
Lab Samp ID: 22J197-01                     Dilution Factor: 1
Lab File ID: LJ24044A                       Matrix: WATER
Ext Btch ID: 22DSJ049W                     % Moisture: NA
Calib. Ref.: LJ24024A                       Instrument ID: D5
=====
  
```

| PARAMETERS | RESULTS (mg/L) | RL (mg/L) | MDL (mg/L) |
|------------|-------------------|--------------|---------------|
| JP5 | ND | 0.056 | 0.028 |

| SURROGATE PARAMETERS | RESULT | SPK_AMT | %RECOVERY | QC LIMIT |
|----------------------|--------|---------|-----------|----------|
| Bromobenzene | 0.441 | 0.555 | 79 | 60-130 |
| Hexacosane | 0.147 | 0.139 | 106 | 60-130 |

Notes:

RL : Reporting Limit
 Parameter H-C Range
 JP5 C8-C18
 Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.
 Sample Amount : 900ml Final Volume : 5ml
 Prepared by : DLi Analyzed by : SDeeso

METHOD 3520C/8015B
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL      Date Collected: 10/11/22 10:12
Project     : 380-24009                      Date Received: 10/13/22
Batch No.   : 22J197                         Date Extracted: 10/22/22 13:30
Sample ID   : 380-24009-1                   Date Analyzed: 10/24/22 23:55
Lab Samp ID : 22J197-01                     Dilution Factor: 1
Lab File ID : LJ24044A                      Matrix: WATER
Ext Btch ID : 22DSJ049W                     % Moisture: NA
Calib. Ref.: LJ24025A                       Instrument ID: D5
=====
  
```

| PARAMETERS | RESULTS (mg/L) | RL (mg/L) | MDL (mg/L) |
|------------|-------------------|--------------|---------------|
| JPB | ND | 0.056 | 0.028 |

| SURROGATE PARAMETERS | RESULT | SPK_AMT | %RECOVERY | QC LIMIT |
|----------------------|--------|---------|-----------|----------|
| Bromobenzene | 0.441 | 0.555 | 79 | 60-130 |
| Hexacosane | 0.147 | 0.139 | 106 | 60-130 |

Notes:

RL : Reporting Limit
 Parameter H-C Range
 JPB CB-C18
 Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.
 Sample Amount : 900ml Final Volume : 5ml
 Prepared by : DLi Analyzed by : SDeeso

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QC SUMMARIES

METHOD 3520C/8015B
 TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client       : EUROFINS EATON ANALYTICAL   Date Collected: 10/22/22 13:30
Project      : 380-24009                   Date Received: 10/22/22
Batch No.    : 22J197                       Date Extracted: 10/22/22 13:30
Sample ID    : MBLK1W                       Date Analyzed: 10/24/22 19:18
Lab Samp ID  : DSJ049WB                     Dilution Factor: 1
Lab File ID  : LJ24029A                     Matrix: WATER
Ext Btch ID  : 22DSJ049W                   % Moisture: NA
Calib. Ref. : LJ24023A                     Instrument ID: D5
=====
  
```

| PARAMETERS | RESULTS (mg/L) | RL (mg/L) | MDL (mg/L) |
|------------|-------------------|--------------|---------------|
| Diesel | ND | 0.025 | 0.012 |
| Motor Oil | ND | 0.050 | 0.025 |

| SURROGATE PARAMETERS | RESULT | SPK_AMT | %RECOVERY | QC LIMIT |
|----------------------|--------|---------|-----------|----------|
| Bromobenzene | 0.493 | 0.500 | 99 | 60-130 |
| Hexacosane | 0.132 | 0.125 | 106 | 60-130 |

Notes:

Parameter H-C Range
 Diesel C10-C24
 Motor Oil C24-C36

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount : 1000ml Final Volume : 5ml
 Prepared by : DLi Analyzed by : SDeeso

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-24009
BATCH NO. : 22J197
METHOD : 3520C/8015B

=====

| | | |
|------------------|------------------|----------------|
| MATRIX | : WATER | % MOISTURE:NA |
| DILUTION FACTOR: | 1 | 1 |
| SAMPLE ID | : MBLK1W | LCS1W |
| LAB SAMPLE ID | : DSJ049WB | DSJ049WL |
| LAB FILE ID | : LJ24029A | LJ24030A |
| DATE PREPARED | : 10/22/22 13:30 | 10/22/22 13:30 |
| DATE ANALYZED | : 10/24/22 19:18 | 10/24/22 19:36 |
| PREP BATCH | : 22DSJ049W | 22DSJ049W |
| CALIBRATION REF: | LJ24023A | LJ24023A |

ACCESSION:

| PARAMETERS | MBResult (mg/L) | SpikeAmt (mg/L) | LCSResult (mg/L) | LCSRec (%) | QCLimit (%) |
|------------|--------------------|--------------------|---------------------|---------------|----------------|
| Diesel | ND | 2.50 | 2.70 | 108 | 50-130 |

| SURROGATE PARAMETERS | SpikeAmt (mg/L) | LCSResult (mg/L) | LCSRec (%) | QCLimit (%) |
|----------------------|--------------------|---------------------|---------------|----------------|
| Bromobenzene | 0.500 | 0.517 | 103 | 60-130 |
| Hexacosane | 0.125 | 0.124 | 99 | 60-130 |

=====

MB: Method Blank sample LCS: Lab Control Sample

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-23784
BATCH NO. : 22J162
METHOD : 3520C/8015B

| | | | |
|------------------|------------------|----------------|----------------|
| MATRIX | : WATER | | % MOISTURE:NA |
| DILUTION FACTOR: | 1 | 1 | 1 |
| SAMPLE ID | : 380-23784-1 | 380-23784-1MS | 380-23784-1MSD |
| LAB SAMPLE ID | : 22J162-01 | 22J162-01M | 22J162-01S |
| LAB FILE ID | : LJ24033A | LJ24034A | LJ24035A |
| DATE PREPARED | : 10/22/22 13:30 | 10/22/22 13:30 | 10/22/22 13:30 |
| DATE ANALYZED | : 10/24/22 20:32 | 10/24/22 20:50 | 10/24/22 21:09 |
| PREP BATCH | : 22DSJ049W | 22DSJ049W | 22DSJ049W |
| CALIBRATION REF: | LJ24023A | LJ24023A | LJ24023A |

ACCESSION:

| PARAMETERS | PSResult (mg/L) | SpikeAmt (mg/L) | MSResult (mg/L) | MSRec (%) | SpikeAmt (mg/L) | MSDResult (mg/L) | MSDRec (%) | RPD (%) | QCLimit (%) | MaxRPD (%) |
|------------|--------------------|--------------------|--------------------|--------------|--------------------|---------------------|---------------|------------|----------------|---------------|
| Diesel | ND | 2.38 | 2.64 | 111 | 2.40 | 2.69 | 112 | 2 | 50-130 | 30 |

| SURROGATE PARAMETERS | SpikeAmt (mg/L) | MSResult (mg/L) | MSRec (%) | SpikeAmt (mg/L) | MSDResult (mg/L) | MSDRec (%) | QCLimit (%) |
|----------------------|--------------------|--------------------|--------------|--------------------|---------------------|---------------|----------------|
| Bromobenzene | 0.475 | 0.435 | 92 | 0.480 | 0.513 | 107 | 60-130 |
| Hexacosane | 0.119 | 0.122 | 103 | 0.120 | 0.129 | 108 | 60-130 |

PS: Parent Sample MS: Matrix Spike MSD: Matrix Spike Duplicate

METHOD 3520C/8015B
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/22/22 13:30
Project    : 380-24009                   Date Received: 10/22/22
Batch No.  : 22J197                       Date Extracted: 10/22/22 13:30
Sample ID  : MBLK1W                       Date Analyzed: 10/24/22 19:18
Lab Samp ID: DSJ049WB                     Dilution Factor: 1
Lab File ID: LJ24029A                     Matrix: WATER
Ext Btch ID: 22DSJ049W                    % Moisture: NA
Calib. Ref.: LJ24024A                     Instrument ID: D5
=====
    
```

| PARAMETERS | RESULTS (mg/L) | RL (mg/L) | MDL (mg/L) |
|------------|-------------------|--------------|---------------|
| JP5 | ND | 0.050 | 0.025 |

| SURROGATE PARAMETERS | RESULT | SPK_AMT | %RECOVERY | QC LIMIT |
|----------------------|--------|---------|-----------|----------|
| Bromobenzene | 0.493 | 0.500 | 99 | 60-130 |
| Hexacosane | 0.132 | 0.125 | 106 | 60-130 |

Notes:

RL : Reporting Limit
 Parameter H-C Range
 JP5 C8-C18
 Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.
 Sample Amount : 1000ml Final Volume : 5ml
 Prepared by : DLi Analyzed by : SDeeso

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-24009
BATCH NO. : 22J197
METHOD : 3520C/8015B

MATRIX : WATER % MOISTURE:NA
DILUTION FACTOR: 1 1
SAMPLE ID : MBLK1W LCS1W
LAB SAMPLE ID : DSJ049WB J5J049WL
LAB FILE ID : LJ24029A LJ24031A
DATE PREPARED : 10/22/22 13:30 10/22/22 13:30
DATE ANALYZED : 10/24/22 19:18 10/24/22 19:55
PREP BATCH : 22DSJ049W 22DSJ049W
CALIBRATION REF: LJ24024A LJ24024A

ACCESSION:

| PARAMETERS | MBResult (mg/L) | SpikeAmt (mg/L) | LCSResult (mg/L) | LCSRec (%) | QCLimit (%) |
|------------|--------------------|--------------------|---------------------|---------------|----------------|
| JP5 | ND | 2.50 | 2.20 | 88 | 30-160 |

| SURROGATE PARAMETERS | SpikeAmt (mg/L) | LCSResult (mg/L) | LCSRec (%) | QCLimit (%) |
|----------------------|--------------------|---------------------|---------------|----------------|
| Bromobenzene | 0.500 | 0.510 | 102 | 60-130 |
| Hexacosane | 0.125 | 0.118 | 94 | 60-130 |

MB: Method Blank sample LCS: Lab Control Sample

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-23784
BATCH NO. : 22J162
METHOD : 3520c/8015B

| | | | |
|------------------|------------------|----------------|----------------|
| MATRIX | : WATER | | % MOISTURE:NA |
| DILUTION FACTOR: | 1 | 1 | 1 |
| SAMPLE ID | : 380-23784-1 | 380-23784-1MS | 380-23784-1MSD |
| LAB SAMPLE ID | : 22J162-01 | 22J162-01M | 22J162-01S |
| LAB FILE ID | : LJ24033A | LJ24036A | LJ24037A |
| DATE PREPARED | : 10/22/22 13:30 | 10/22/22 13:30 | 10/22/22 13:30 |
| DATE ANALYZED | : 10/24/22 20:32 | 10/24/22 21:27 | 10/24/22 21:46 |
| PREP BATCH | : 22DSJ049W | 22DSJ049W | 22DSJ049W |
| CALIBRATION REF: | LJ24024A | LJ24024A | LJ24024A |

ACCESSION:

| PARAMETERS | PSResult (mg/L) | SpikeAmt (mg/L) | MSResult (mg/L) | MSRec (%) | SpikeAmt (mg/L) | MSDResult (mg/L) | MSDRec (%) | RPD (%) | QCLimit (%) | MaxRPD (%) |
|------------|--------------------|--------------------|--------------------|--------------|--------------------|---------------------|---------------|------------|----------------|---------------|
| JP5 | ND | 2.65 | 2.19 | 83 | 2.72 | 2.40 | 88 | 9 | 30-160 | 30 |

| SURROGATE PARAMETERS | SpikeAmt (mg/L) | MSResult (mg/L) | MSRec (%) | SpikeAmt (mg/L) | MSDResult (mg/L) | MSDRec (%) | QCLimit (%) |
|----------------------|--------------------|--------------------|--------------|--------------------|---------------------|---------------|----------------|
| Bromobenzene | 0.530 | 0.562 | 106 | 0.545 | 0.581 | 107 | 60-130 |
| Hexacosane | 0.132 | 0.131 | 99 | 0.136 | 0.129 | 95 | 60-130 |

PS: Parent Sample MS: Matrix Spike MSD: Matrix Spike Duplicate

METHOD 3520C/8015B
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/22/22 13:30
Project    : 380-24009                   Date Received: 10/22/22
Batch No.  : 22J197                       Date Extracted: 10/22/22 13:30
Sample ID  : MBLK1W                       Date Analyzed: 10/24/22 19:18
Lab Samp ID: DSJ049WB                     Dilution Factor: 1
Lab File ID: LJ24029A                     Matrix: WATER
Ext Btch ID: 22DSJ049W                   % Moisture: NA
Calib. Ref.: LJ24025A                   Instrument ID: D5
=====
    
```

| PARAMETERS | RESULTS (mg/L) | RL (mg/L) | MDL (mg/L) |
|------------|-------------------|--------------|---------------|
| JP8 | ND | 0.050 | 0.025 |

| SURROGATE PARAMETERS | RESULT | SPK_AMT | %RECOVERY | QC LIMIT |
|----------------------|--------|---------|-----------|----------|
| Bromobenzene | 0.493 | 0.500 | 99 | 60-130 |
| Hexacosane | 0.132 | 0.125 | 106 | 60-130 |

Notes:

RL : Reporting Limit
 Parameter H-C Range
 JP8 C8-C18

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount : 1000ml Final Volume : 5ml
 Prepared by : DLi Analyzed by : SDeeso

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-24009
BATCH NO. : 22J197
METHOD : 3520C/8015B

MATRIX : WATER % MOISTURE:NA
DILUTION FACTOR: 1 1
SAMPLE ID : MBLK1W LCS1W
LAB SAMPLE ID : DSJ049WB J8J049WL
LAB FILE ID : LJ24029A LJ24032A
DATE PREPARED : 10/22/22 13:30 10/22/22 13:30
DATE ANALYZED : 10/24/22 19:18 10/24/22 20:13
PREP BATCH : 22DSJ049W 22DSJ049W
CALIBRATION REF: LJ24025A LJ24025A

ACCESSION:

| PARAMETERS | MBResult (mg/L) | SpikeAmt (mg/L) | LCSResult (mg/L) | LCSRec (%) | QCLimit (%) |
|------------|--------------------|--------------------|---------------------|---------------|----------------|
| JP8 | ND | 2.50 | 2.50 | 100 | 30-160 |

| SURROGATE PARAMETERS | SpikeAmt (mg/L) | LCSResult (mg/L) | LCSRec (%) | QCLimit (%) |
|----------------------|--------------------|---------------------|---------------|----------------|
| Bromobenzene | 0.500 | 0.494 | 99 | 60-130 |
| Hexacosane | 0.125 | 0.127 | 102 | 60-130 |

MB: Method Blank sample LCS: Lab Control Sample

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-24009
BATCH NO. : 22J197
METHOD : 3520C/8015B

| | | | |
|------------------|------------------|----------------|----------------|
| MATRIX | : WATER | | % MOISTURE:NA |
| DILUTION FACTOR: | 1 | 1 | 1 |
| SAMPLE ID | : 380-24009-1 | 380-24009-1MS | 380-24009-1MSD |
| LAB SAMPLE ID | : 22J197-01 | 22J197-01M | 22J197-01S |
| LAB FILE ID | : LJ24044A | LJ24045A | LJ24046A |
| DATE PREPARED | : 10/22/22 13:30 | 10/22/22 13:30 | 10/22/22 13:30 |
| DATE ANALYZED | : 10/24/22 23:55 | 10/25/22 00:13 | 10/25/22 00:32 |
| PREP BATCH | : 22DSJ049W | 22DSJ049W | 22DSJ049W |
| CALIBRATION REF: | LJ24025A | LJ24025A | LJ24025A |

ACCESSION:

| PARAMETERS | PSResult (mg/L) | SpikeAmt (mg/L) | MSResult (mg/L) | MSRec (%) | SpikeAmt (mg/L) | MSDResult (mg/L) | MSDRec (%) | RPD (%) | QCLimit (%) | MaxRPD (%) |
|------------|--------------------|--------------------|--------------------|--------------|--------------------|---------------------|---------------|------------|----------------|---------------|
| JP8 | ND | 2.65 | 2.71 | 102 | 2.80 | 2.97 | 106 | 9 | 30-160 | 30 |

| SURROGATE PARAMETERS | SpikeAmt (mg/L) | MSResult (mg/L) | MSRec (%) | SpikeAmt (mg/L) | MSDResult (mg/L) | MSDRec (%) | QCLimit (%) |
|----------------------|--------------------|--------------------|--------------|--------------------|---------------------|---------------|----------------|
| Bromobenzene | 0.530 | 0.540 | 102 | 0.560 | 0.534 | 95 | 60-130 |
| Hexacosane | 0.132 | 0.147 | 111 | 0.140 | 0.152 | 109 | 60-130 |

PS: Parent Sample MS: Matrix Spike MSD: Matrix Spike Duplicate

LABORATORY REPORT FOR
EUROFINS EATON ANALYTICAL

380-24009

METHOD SW8015C
ALCOHOLS BY GC

SDG#: 22J197



CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-24009

SDG : 22J197

METHOD SW8015C
ALCOHOLS BY GC

One(1) water sample was received on 10/13/22 to be analyzed for Alcohols by GC in accordance with Method SW8015C and project specific requirements.

Holding Time

The sample was analyzed within the prescribed holding time.

Calibration

Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details. MRL was analyzed as required by the project. Refer to MRL summary form for details.

Method Blank

Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. MEJ003WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample

Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. MEJ003WL/MEJ003WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample

No matrix QC sample was provided on this SDG. Ethanol was within MS QC limits in J162-01M/J162-01S. Refer to Matrix QC summary form for details.

Sample Analysis

The sample was analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
ALCOHOLS BY GC

Client : EUROFINS EATON ANALYTICAL
Project : 380-24009

SDG NO. : 22J197
Instrument ID : GCT050

| Client Sample ID | Laboratory Sample ID | Dilution Factor | % Moist | Analysis DateTime | Extraction DateTime | Sample Data FN | Calibration Data FN | Prep. Batch | Notes |
|------------------|----------------------|-----------------|---------|-------------------|---------------------|----------------|---------------------|-------------|--------------------------|
| 380-24009-1 | MBLK1W | 1 | NA | 10/14/2211:59 | NA | TJ14004A | TJ14002A | MEJ003W | Method Blank |
| | LCS1W | 1 | NA | 10/14/2212:17 | NA | TJ14005A | TJ14002A | MEJ003W | Lab Control Sample (LCS) |
| | LCD1W | 1 | NA | 10/14/2212:30 | NA | TJ14006A | TJ14002A | MEJ003W | LCS Duplicate |
| | | J197-01 | 1 | NA | 10/14/2213:44 | NA | TJ14011A | TJ14002A | MEJ003W |

FN - Filename
% Moist - Percent Moisture



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SAMPLE RESULTS

METHOD SW8015C
ALCOHOLS BY GC

```

=====
Client      : EUROFINS EATON ANALYTICAL      Date Collected: 10/11/22
Project    : 380-24009                      Date Received: 10/13/22
Batch No.  : 22J197                          Date Extracted: NA
Sample ID: 380-24009-1                      Date Analyzed: 10/14/22 13:44
Lab Samp ID: J197-01                        Dilution Factor: 1
Lab File ID: TJ14011A                       Matrix          : WATER
Ext Btch ID: MEJ003W                         % Moisture      : NA
Calib. Ref.: TJ14002A                       Instrument ID   : GCT050
=====

```

| PARAMETERS | RESULTS (ug/L) | RL (ug/L) | MDL (ug/L) |
|------------|-------------------|--------------|---------------|
| ETHANOL | ND | 2000 | 500 |

RL : Reporting Limit



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QC SUMMARIES

METHOD SW8015C
ALCOHOLS BY GC

```
=====
Client      : EUROFINS EATON ANALYTICAL      Date Collected: NA
Project     : 380-24009                      Date Received: NA
Batch No.   : 22J197                         Date Extracted: NA
Sample ID:  MBLK1W                           Date Analyzed: 10/14/22 11:59
Lab Samp ID: MEJ003WB                       Dilution Factor: 1
Lab File ID: TJ14004A                       Matrix          : WATER
Ext Btch ID: MEJ003W                         % Moisture     : NA
Calib. Ref.: TJ14002A                       Instrument ID  : GCT050
=====
```

| PARAMETERS | RESULTS | RL | MDL |
|------------|---------|--------|--------|
| ----- | (ug/L) | (ug/L) | (ug/L) |
| ETHANOL | ND | 2000 | 500 |

RL : Reporting Limit



EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 380-24009
BATCH NO.: 22J197
METHOD: METHOD SW8015C

=====

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1 1
SAMPLE ID: MBLK1W
LAB SAMP ID: MEJ003WB MEJ003WL MEJ003WC
LAB FILE ID: TJ14004A TJ14005A TJ14006A
DATE EXTRACTED: NA NA NA DATE COLLECTED: NA
DATE ANALYZED: 10/14/2211:59 10/14/2212:17 10/14/2212:30 DATE RECEIVED: NA
PREP. BATCH: MEJ003W MEJ003W MEJ003W
CALIB. REF: TJ14002A TJ14002A TJ14002A

ACCESSION:

| PARAMETER | BLNK RSLT (ug/L) | SPIKE AMT (ug/L) | BS RSLT (ug/L) | BS % REC | SPIKE AMT (ug/L) | BSD RSLT (ug/L) | BSD % REC | RPD (%) | QC LIMIT (%) | MAX RPD (%) |
|-----------|---------------------|---------------------|-------------------|-------------|---------------------|--------------------|--------------|--------------|-------------------|------------------|
| Ethanol | ND | 10000 | 11100 | 111 | 10000 | 11000 | 110 | 1 | 60-130 | 30 |

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 380-23784
BATCH NO.: 22J162
METHOD: METHOD SW8015C

=====

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1 1
SAMPLE ID: 380-23784-1
LAB SAMP ID: J162-01 J162-01M J162-01S
LAB FILE ID: TJ14007A TJ14008A TJ14009A
DATE EXTRACTED: NA NA NA DATE COLLECTED: 10/10/22
DATE ANALYZED: 10/14/2212:47 10/14/2213:01 10/14/2213:16 DATE RECEIVED: 10/12/22
PREP. BATCH: MEJ003W MEJ003W MEJ003W
CALIB. REF: TJ14002A TJ14002A TJ14002A

ACCESSION:

| PARAMETER | SMPL RSLT (ug/L) | SPIKE AMT (ug/L) | MS RSLT (ug/L) | MS % REC | SPIKE AMT (ug/L) | MSD RSLT (ug/L) | MSD % REC | RPD (%) | QC LIMIT (%) | MAX RPD (%) |
|-----------|---------------------|---------------------|-------------------|-------------|---------------------|--------------------|--------------|--------------|-------------------|------------------|
| Ethanol | ND | 10000 | 10300 | 103 | 10000 | 11200 | 112 | 8 | 60-130 | 30 |

December 07, 2022

Debbie Frank
 Eurofins Eaton Analytical
 750 Royal Oaks Drive
 Suite 100
 Monrovia, CA 91016-

Project Name: RED-HILL Project # 38001111 Job # 380-24009-1
 Physis Project ID: 1407003-319

Dear Debbie,

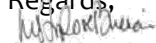
Enclosed are the analytical results for the sample submitted to PHYSIS Environmental Laboratories, Inc. (PHYSIS) on 10/13/2022. A total of 1 sample was received for analysis in accordance with the attached chain of custody (COC). Per the COC, the sample was analyzed for:

| Organics |
|---|
| Polynuclear Aromatic Hydrocarbons by EPA 625.1 |
| Disalicylidenepropanediamine by EPA 625.1 |
| Dibenzo [a,l] Pyrene w/ PAHs by EPA 625.1 |
| Base/Neutral Extractable Compounds by EPA 625.1 |
| Acid Extractable Compounds w/ PAHs by EPA 625.1 |
| 6-tert-Butyl-2,4-dimethylphenol by EPA 625.1 |
| 2,6-Di-tert-butylphenol by EPA 625.1 |
| 2,6-Di-tert-butyl-4-methylphenol by EPA 625.1 |
| p-tert-Butylphenol by EPA 625.1 |

Analytical results in this report apply only to samples submitted to PHYSIS in accordance with the COC and are intended to be considered in their entirety.

Please feel free to contact me at any time with any questions. PHYSIS appreciates the opportunity to provide you with our analytical and support services.

Regards,



Misty Mercier
 714 602-5320
 Extension 202
 mistymercier@physislabs.com



PROJECT SAMPLE LIST

Eurofins Eaton Analytical

PHYSIS Project ID: 1407003-319

RED-HILL Project # 38001111 Job # 380-24009-1

Total Samples: 1

| PHYSIS ID | Sample ID | Description | Date | Time | Matrix | Sample Type |
|-----------|----------------------|-----------------------|-----------|-------|-------------|---------------|
| 100803 | HALAWA WELLS UNITS 1 | 331-023 (380-24009-1) | 10/11/202 | 10:12 | Samplewater | Not Specified |



ABBREVIATIONS and ACRONYMS

| | |
|------|--|
| QM | Quality Manual |
| QA | Quality Assurance |
| QC | Quality Control |
| MDL | method detection limit |
| RL | reporting limit |
| R1 | project sample |
| R2 | project sample replicate |
| MS1 | matrix spike |
| MS2 | matrix spike replicate |
| B1 | procedural blank |
| B2 | procedural blank replicate |
| BS1 | blank spike |
| BS2 | blank spike replicate |
| LCS1 | laboratory control spike |
| LCS2 | laboratory control spike replicate |
| LCM1 | laboratory control material |
| LCM2 | laboratory control material replicate |
| CRM1 | certified reference material |
| CRM2 | certified reference material replicate |
| RPD | relative percent difference |
| LMW | low molecular weight |
| HMW | high molecular weight |

QUALITY ASSURANCE SUMMARY

LABORATORY BATCH: Physis' QM defines a laboratory batch as a group of 20 or fewer project samples of similar matrix, processed together under the same conditions and with the same reagents. QC samples are associated with each batch and were used to assess the validity of the sample analyses.

PROCEDURAL BLANK: Laboratory contamination introduced during method use is assessed through the preparation and analysis of procedural blanks is provided at a minimum frequency of one per batch.

ACCURACY: Accuracy of analytical measurements is the degree of closeness based on percent recovery calculations between measured values and the actual or true value and includes a combination of reproducibility error and systematic bias due to sampling and analytical operations. Accuracy of the project data was indicated by analysis of MS, BS, LCS, LCM, CRM, and/or surrogate spikes on a minimum frequency of one per batch. Physis' QM requires that 95% of the target compounds greater than 10 times the MDL be within the specified acceptance limits.

PRECISION: Precision is the agreement among a set of replicate measurements without assumption of knowledge of the true value and is based on RPD calculations between repeated values. Precision of the project data was determined by analysis of replicate MS₁/MS₂, BS₁/BS₂, LCS₁/LCS₂, LCM₁/LCM₂, CRM₁/CRM₂, surrogate spikes and/or replicate project sample analysis (R₁/R₂) on a minimum frequency of one per batch. Physis' QM requires that for 95% of the compounds greater than 10 times the MDL, the percent RPD should be within the specified acceptance range.

BLANK SPIKES: BS is the introduction of a known concentration of analyte into the procedural blank. BS demonstrates performance of the preparation and analytical methods on a clean matrix void of potential matrix related interferences. The BS is performed in laboratory deionized water, making these recoveries a better indicator of the efficiency of the laboratory method per se.

MATRIX SPIKES: MS is the introduction of a known concentration of analyte into a sample. MS samples demonstrate the effect a particular project sample matrix has on the accuracy of a measurement. Individually, MS samples also indicate the bias of analytical measurements due to chemical interferences inherent in the in the specific project sample spiked. Intrinsic target analyte concentration in the specific project sample can also significantly impact MS recovery.

CERTIFIED REFERENCE MATERIALS: CRMs are materials of various matrices for which analytical information has been determined and certified by a recognized authority. These are used to provide a quantitative assessment of the accuracy of an analytical method. CRMs provide evidence that the laboratory preparation and analysis produces results that are comparable to those obtained by an independent organization.

LABORATORY CONTROL MATERIAL: LCM is provided because a suitable natural seawater CRM is not available and can be used to indicate accuracy of the method. Physis' internal LCM is seawater collected at ~800 meters in the Southern California San Pedro Basin and can be used as a reference for background concentrations in clean, natural seawater for comparison to project samples.

LABORATORY CONTROL SPIKES: LCS is the introduction of a known concentration of analyte into Physis' LCM. LCS samples were employed to assess the effect the seawater matrix has on the accuracy of a measurement. LCS also indicate the bias of this method due to chemical interferences inherent in the in the seawater matrix. Intrinsic LCM concentration can also significantly impact LCS recovery.

SURROGATES: A surrogate is a pure analyte unlikely to be found in any project sample, behaves similarly to

the target analyte and most often used with organic analytical procedures. Surrogates are added in known concentration to all samples and are measured to indicate overall efficiency of the method including processing and analyses.

HOLDING TIME: Method recommended holding times are the length of time a project sample can be stored under specific conditions after collection and prior to analysis without significantly affecting the analyte's concentration. Holding times can be extended if preservation techniques are employed to reduce biodegradation, volatilization, oxidation, sorption, precipitation, and other physical and chemical processes.

SAMPLE STORAGE/RETENTION: In order to maintain chemical integrity prior to analysis, all samples submitted to Physis are refrigerated (liquids) or frozen (solids) upon receipt unless otherwise recommended by applicable methods. Solid samples are retained for 1 year from collection while liquid samples are retained until method recommended holding times elapse.

TOTAL/DISSOLVED FRACTION: In some instances, the results for the dissolved fraction may be higher than the total fraction for a particular analyte (e.g. trace metals). This is typically caused by the analytical variation for each result and indicates that the target analyte is primarily in the dissolved phase, within the sample.

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PHYSIS QUALIFIER CODES

| CODE | DEFINITION |
|------|---|
| # | see Case Narrative |
| ND | analyte not detected at or above the MDL |
| B | analyte was detected in the procedural blank greater than 10 times the MDL |
| E | analyte concentration exceeds the upper limit of the linear calibration range, reported value is estimated |
| H | sample received and/or analyzed past the recommended holding time |
| J | analyte was detected at a concentration below the RL and above the MDL, reported value is estimated |
| N | insufficient sample, analysis could not be performed |
| M | analyte was outside the specified accuracy and/or precision acceptance limits due to matrix interference. The associated B/BS were within limits, therefore the sample data was reported without further clarification |
| SH | analyte concentration in the project sample exceeded the spike concentration, therefore accuracy and/or precision acceptance limits do not apply |
| SL | analyte results were lower than 10 times the MDL, therefore accuracy and/or precision acceptance limits do not apply |
| NH | project sample was heterogeneous and sample homogeneity could not be readily achieved using routine laboratory practices, therefore accuracy and/or precision acceptance limits do not apply |
| Q | analyte was outside the specified QAPP acceptance limits for precision and/or accuracy but within Physis derived acceptance limits, therefore the sample data was reported without further clarification |
| R | Physis' QM allows for 5% of the target compounds greater than 10 times the MDL to be outside the specified acceptance limits for precision and/or accuracy. This is often due to random error and does not indicate any significant problems with the analysis of these project samples |

CASE NARRATIVE

QUALIFIER NOTES

In addition to the use of analyte specific Physis Qualifier Codes where applicable, the following were also noted.

ND

MDL is listed due to report format restrictions; it is not used in reporting. Analytical results reported are ND at the RL.

BIANALYTICALS

REPORT

TERRA AURA
ENVIRONMENTAL LABORATORIES, INC.

Innovative Solutions for Nature

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Acid Extractable Compounds

| ANALYTE | Method | Units | RESULT | DF | MDL | RL | Fraction | QA CODE | Batch ID | Date Processed | Date Analyzed |
|----------------------------------|---|------------|--------|----|------|-----|-----------------|------------------|--------------|------------------|------------------|
| Sample ID: 100803-R1 | HALAWA WELLS UNITS 1 331-023 (3 Matrix: Samplewater) | | | | | | Sampled: | 11-Oct-22 | 10:12 | Received: | 13-Oct-22 |
| (2,4,6-Tribromophenol) | EPA 625.1 | % Recovery | 111 | 1 | | | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| (d5-Phenol) | EPA 625.1 | % Recovery | 36 | 1 | | | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| 2,4,5-Trichlorophenol | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| 2,4,6-Trichlorophenol | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| 2,4-Dichlorophenol | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| 2,4-Dinitrophenol | EPA 625.1 | µg/L | ND | 1 | 0.1 | 0.2 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| 2,6-Dichlorophenol | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| 2,6-Di-tert-butyl-4-methylphenol | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| 2,6-Di-tert-butylphenol | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| 2-Chlorophenol | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| 2-Methyl-4,6-dinitrophenol | EPA 625.1 | µg/L | ND | 1 | 0.1 | 0.2 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| 2-Methylphenol | EPA 625.1 | µg/L | ND | 1 | 0.1 | 0.2 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| 2-Nitrophenol | EPA 625.1 | µg/L | ND | 1 | 0.1 | 0.2 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| 3+4-Methylphenol | EPA 625.1 | µg/L | ND | 1 | 0.1 | 0.2 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| 4-Chloro-3-methylphenol | EPA 625.1 | µg/L | ND | 1 | 0.1 | 0.2 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| 4-Nitrophenol | EPA 625.1 | µg/L | ND | 1 | 0.1 | 0.2 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| 6-tert-butyl-2,4-dimethylphenol | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| Benzoic Acid | EPA 625.1 | µg/L | ND | 1 | 0.1 | 0.2 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| Benzyl Alcohol | EPA 625.1 | µg/L | ND | 1 | 0.1 | 0.2 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| Pentachlorophenol | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| Phenol | EPA 625.1 | µg/L | ND | 1 | 0.1 | 0.2 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| p-tert-Butylphenol | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |

Base/Neutral Extractable Compounds

| ANALYTE | Method | Units | RESULT | DF | MDL | RL | Fraction | QA CODE | Batch ID | Date Processed | Date Analyzed |
|------------------------------|---|-------|--------|----|------|-----|-----------------|------------------|--------------|------------------|------------------|
| Sample ID: 100803-R1 | HALAWA WELLS UNITS 1 331-023 (3 Matrix: Samplewater) | | | | | | Sampled: | 11-Oct-22 | 10:12 | Received: | 13-Oct-22 |
| 2-Chloronaphthalene | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| 2-Nitroaniline | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| 3-Nitroaniline | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| 4-Bromophenylphenyl ether | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| 4-Chloroaniline | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| 4-Chlorophenylphenyl ether | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| 4-Nitroaniline | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| Aniline | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| Benzidine | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| Bis(2-Chloroethoxy) methane | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| Bis(2-Chloroethyl) ether | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| Bis(2-Chloroisopropyl) ether | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| D benzofuran | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| Disalicylidenepropanediamine | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| Hexachloroethane | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| Nitrobenzene | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| N-Nitrosodi-n-propylamine | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| N-Nitrosodiphenylamine | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |

Polynuclear Aromatic Hydrocarbons

| ANALYTE | Method | Units | RESULT | DF | MDL | RL | Fraction | QA CODE | Batch ID | Date Processed | Date Analyzed |
|-----------------------------|---|------------|--------|----|-------|-------|-----------------|------------------------|------------------|------------------|---------------|
| Sample ID: 100803-R1 | HALAWA WELLS UNITS 1 331-023 (3 Matrix: Samplewater) | | | | | | Sampled: | 11-Oct-22 10:12 | Received: | 13-Oct-22 | |
| (d10-Acenaphthene) | EPA 625.1 | % Recovery | 80 | 1 | | | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| (d10-Phenanthrene) | EPA 625.1 | % Recovery | 96 | 1 | | | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| (d12-Chrysene) | EPA 625.1 | % Recovery | 127 | 1 | | | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| (d12-Perylene) | EPA 625.1 | % Recovery | 95 | 1 | | | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| (d8-Naphthalene) | EPA 625.1 | % Recovery | 67 | 1 | | | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| 1-Methylnaphthalene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| 1-Methylphenanthrene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| 2,3,5-Trimethylnaphthalene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| 2,6-Dimethylnaphthalene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| 2-Methylnaphthalene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| Acenaphthene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| Acenaphthylene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| Anthracene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| Benz[a]anthracene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| Benzo[a]pyrene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| Benzo[b]fluoranthene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| Benzo[e]pyrene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| Benzo[g,h,i]perylene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| Benzo[k]fluoranthene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| Biphenyl | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| Chrysene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| D benz[a,h]anthracene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| D benzo[a,l]pyrene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| D benzothiophene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |

Polynuclear Aromatic Hydrocarbons

| ANALYTE | Method | Units | RESULT | DF | MDL | RL | Fraction | QA CODE | Batch ID | Date Processed | Date Analyzed |
|------------------------|-----------|-------|--------|----|-------|-------|----------|---------|----------|----------------|---------------|
| Fluoranthene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| Fluorene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| Indeno[1,2,3-cd]pyrene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| Naphthalene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| Perylene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| Phenanthrene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |
| Pyrene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-40006 | 18-Oct-22 | 14-Nov-22 |



QUALITY CONTROL REPORT

TERRA ENVIRONMENTAL LABORATORIES, INC. AURA

Innovative Solutions for Nature

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Acid Extractable Compounds

QUALITY CONTROL REPORT

| ANALYTE | FRACTION | RESULT | DF | MDL | RL | UNITS | SPIKE | SOURCE | ACCURACY | PRECISION | QA CODE | |
|----------------------------------|----------|------------------------------|----|------|----------------------------|-------|------------|---------------------|----------|---------------------|---------|--------|
| | | | | | | | LEVEL | RESULT | % | LIMITS | % | LIMITS |
| Sample ID: 100802-B1 | | QAQC Procedural Blank | | | Matrix: BlankMatrix | | | Sampled: | | Received: | | |
| | | Method: EPA 625.1 | | | Batch ID: O-40006 | | | Prepared: 18-Oct-22 | | Analyzed: 13-Nov-22 | | |
| (2,4,6-Tribromophenol) | Total | 73 | 1 | | | | % Recovery | 100 | 73 | 30 - 130% | PASS | |
| (d5-Phenol) | Total | 115 | 1 | | | | % Recovery | 100 | 115 | 0 - 130% | PASS | |
| 2,4,5-Trichlorophenol | Total | ND | 1 | 0.05 | 0.1 | µg/L | | | | | | |
| 2,4,6-Trichlorophenol | Total | ND | 1 | 0.05 | 0.1 | µg/L | | | | | | |
| 2,4-Dichlorophenol | Total | ND | 1 | 0.05 | 0.1 | µg/L | | | | | | |
| 2,4-Dinitrophenol | Total | ND | 1 | 0.1 | 0.2 | µg/L | | | | | | |
| 2,6-Dichlorophenol | Total | ND | 1 | 0.05 | 0.1 | µg/L | | | | | | |
| 2,6-Di-tert-butyl-4-methylphenol | Total | ND | 1 | 0.05 | 0.1 | µg/L | | | | | | |
| 2,6-Di-tert-butylphenol | Total | ND | 1 | 0.05 | 0.1 | µg/L | | | | | | |
| 2-Chlorophenol | Total | ND | 1 | 0.05 | 0.1 | µg/L | | | | | | |
| 2-Methyl-4,6-dinitrophenol | Total | ND | 1 | 0.1 | 0.2 | µg/L | | | | | | |
| 2-Methylphenol | Total | ND | 1 | 0.1 | 0.2 | µg/L | | | | | | |
| 2-Nitrophenol | Total | ND | 1 | 0.1 | 0.2 | µg/L | | | | | | |
| 3+4-Methylphenol | Total | ND | 1 | 0.1 | 0.2 | µg/L | | | | | | |
| 4-Chloro-3-methylphenol | Total | ND | 1 | 0.1 | 0.2 | µg/L | | | | | | |
| 4-Nitrophenol | Total | ND | 1 | 0.1 | 0.2 | µg/L | | | | | | |
| 6-tert-butyl-2,4-dimethylphenol | Total | ND | 1 | 0.05 | 0.1 | µg/L | | | | | | |
| Benzoic Acid | Total | ND | 1 | 0.1 | 0.2 | µg/L | | | | | | |
| Benzyl Alcohol | Total | ND | 1 | 0.1 | 0.2 | µg/L | | | | | | |
| Pentachlorophenol | Total | ND | 1 | 0.05 | 0.1 | µg/L | | | | | | |
| Phenol | Total | ND | 1 | 0.1 | 0.2 | µg/L | | | | | | |
| p-tert-Butylphenol | Total | ND | 1 | 0.05 | 0.1 | µg/L | | | | | | |

Acid Extractable Compounds

QUALITY CONTROL REPORT

| ANALYTE | FRACTION | RESULT | DF | MDL | RL | UNITS | SPIKE | SOURCE | ACCURACY | | PRECISION | QA CODE |
|----------------------------------|----------|------------------------------|----|------|----------------------------|------------|---------------------|-----------------|----------|------------------|-----------|---------|
| | | | | | | | LEVEL | RESULT | % | LIMITS | % | LIMITS |
| Sample ID: 100802-BS1 | | QAQC Procedural Blank | | | Matrix: BlankMatrix | | | Sampled: | | Received: | | |
| Method: EPA 625.1 | | Batch ID: O-40006 | | | Prepared: 18-Oct-22 | | Analyzed: 13-Nov-22 | | | | | |
| (2,4,6-Tribromophenol) | Total | 79 | 1 | | | % Recovery | 100 | 0 | 79 | 30 - 130% | PASS | |
| (d5-Phenol) | Total | 78 | 1 | | | % Recovery | 100 | 0 | 78 | 0 - 130% | PASS | |
| 2,4,5-Trichlorophenol | Total | 0.756 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 76 | 30 - 130% | PASS | |
| 2,4,6-Trichlorophenol | Total | 0.778 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 78 | 56 - 118% | PASS | |
| 2,4-Dichlorophenol | Total | 0.787 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 79 | 51 - 117% | PASS | |
| 2,4-Dinitrophenol | Total | 0.495 | 1 | 0.1 | 0.2 | µg/L | 1 | 0 | 50 | 0 - 152% | PASS | |
| 2,6-Dichlorophenol | Total | 0.783 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 78 | 30 - 130% | PASS | |
| 2,6-Di-tert-butyl-4-methylphenol | Total | 0.626 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 63 | 50 - 150% | PASS | |
| 2,6-Di-tert-butylphenol | Total | 0.688 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 69 | 50 - 150% | PASS | |
| 2-Chlorophenol | Total | 0.794 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 79 | 41 - 110% | PASS | |
| 2-Methyl-4,6-dinitrophenol | Total | 0.706 | 1 | 0.1 | 0.2 | µg/L | 1 | 0 | 71 | 0 - 141% | PASS | |
| 2-Methylphenol | Total | 0.898 | 1 | 0.1 | 0.2 | µg/L | 1 | 0 | 90 | 40 - 117% | PASS | |
| 2-Nitrophenol | Total | 0.591 | 1 | 0.1 | 0.2 | µg/L | 1 | 0 | 59 | 40 - 117% | PASS | |
| 3+4-Methylphenol | Total | 0.804 | 1 | 0.1 | 0.2 | µg/L | 1 | 0 | 80 | 0 - 130% | PASS | |
| 4-Chloro-3-methylphenol | Total | 0.716 | 1 | 0.1 | 0.2 | µg/L | 1 | 0 | 72 | 51 - 128% | PASS | |
| 4-Nitrophenol | Total | 0.423 | 1 | 0.1 | 0.2 | µg/L | 1 | 0 | 42 | 10 - 164% | PASS | |
| 6-tert-butyl-2,4-dimethylphenol | Total | 0.68 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 68 | 50 - 150% | PASS | |
| Benzyl Alcohol | Total | 0.816 | 1 | 0.1 | 0.2 | µg/L | 1 | 0 | 82 | 43 - 148% | PASS | |
| Pentachlorophenol | Total | 0.525 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 52 | 36 - 111% | PASS | |
| Phenol | Total | 0.779 | 1 | 0.1 | 0.2 | µg/L | 1 | 0 | 78 | 29 - 114% | PASS | |
| p-tert-Butylphenol | Total | 0.798 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 80 | 50 - 150% | PASS | |

Acid Extractable Compounds

QUALITY CONTROL REPORT

| ANALYTE | FRACTION | RESULT | DF | MDL | RL | UNITS | SPIKE | SOURCE | ACCURACY | | PRECISION | | QA CODEc | | |
|----------------------------------|----------|------------------------------|----|------|----------------------------|-------|------------|---------------------|----------|--------|---------------------|--------|----------|----|------|
| | | | | | | | LEVEL | RESULT | % | LIMITS | % | LIMITS | | | |
| Sample ID: 100802-BS2 | | QAQC Procedural Blank | | | Matrix: BlankMatrix | | | Sampled: | | | Received: | | | | |
| | | Method: EPA 625.1 | | | Batch ID: O-40006 | | | Prepared: 18-Oct-22 | | | Analyzed: 13-Nov-22 | | | | |
| (2,4,6-Tribromophenol) | Total | 77 | 1 | | | | % Recovery | 100 | 0 | 77 | 30 - 130% | PASS | 3 | 30 | PASS |
| (d5-Phenol) | Total | 60 | 1 | | | | % Recovery | 100 | 0 | 60 | 0 - 130% | PASS | 26 | 30 | PASS |
| 2,4,5-Trichlorophenol | Total | 0.64 | 1 | 0.05 | 0.1 | µg/L | | 1 | 0 | 64 | 30 - 130% | PASS | 17 | 30 | PASS |
| 2,4,6-Trichlorophenol | Total | 0.703 | 1 | 0.05 | 0.1 | µg/L | | 1 | 0 | 70 | 56 - 118% | PASS | 11 | 30 | PASS |
| 2,4-Dichlorophenol | Total | 0.649 | 1 | 0.05 | 0.1 | µg/L | | 1 | 0 | 65 | 51 - 117% | PASS | 19 | 30 | PASS |
| 2,4-Dinitrophenol | Total | 0.533 | 1 | 0.1 | 0.2 | µg/L | | 1 | 0 | 53 | 0 - 152% | PASS | 6 | 30 | PASS |
| 2,6-Dichlorophenol | Total | 0.676 | 1 | 0.05 | 0.1 | µg/L | | 1 | 0 | 68 | 30 - 130% | PASS | 14 | 30 | PASS |
| 2,6-Di-tert-butyl-4-methylphenol | Total | 0.513 | 1 | 0.05 | 0.1 | µg/L | | 1 | 0 | 51 | 50 - 150% | PASS | 21 | 30 | PASS |
| 2,6-Di-tert-butylphenol | Total | 0.598 | 1 | 0.05 | 0.1 | µg/L | | 1 | 0 | 60 | 50 - 150% | PASS | 14 | 30 | PASS |
| 2-Chlorophenol | Total | 0.629 | 1 | 0.05 | 0.1 | µg/L | | 1 | 0 | 63 | 41 - 110% | PASS | 23 | 30 | PASS |
| 2-Methyl-4,6-dinitrophenol | Total | 0.743 | 1 | 0.1 | 0.2 | µg/L | | 1 | 0 | 74 | 0 - 141% | PASS | 4 | 30 | PASS |
| 2-Methylphenol | Total | 0.769 | 1 | 0.1 | 0.2 | µg/L | | 1 | 0 | 77 | 40 - 117% | PASS | 16 | 30 | PASS |
| 2-Nitrophenol | Total | 0.528 | 1 | 0.1 | 0.2 | µg/L | | 1 | 0 | 53 | 40 - 117% | PASS | 11 | 30 | PASS |
| 3+4-Methylphenol | Total | 0.642 | 1 | 0.1 | 0.2 | µg/L | | 1 | 0 | 64 | 0 - 130% | PASS | 22 | 30 | PASS |
| 4-Chloro-3-methylphenol | Total | 0.673 | 1 | 0.1 | 0.2 | µg/L | | 1 | 0 | 67 | 51 - 128% | PASS | 7 | 30 | PASS |
| 4-Nitrophenol | Total | 0.375 | 1 | 0.1 | 0.2 | µg/L | | 1 | 0 | 38 | 10 - 164% | PASS | 10 | 30 | PASS |
| 6-tert-butyl-2,4-dimethylphenol | Total | 0.671 | 1 | 0.05 | 0.1 | µg/L | | 1 | 0 | 67 | 50 - 150% | PASS | 1 | 30 | PASS |
| Benzyl Alcohol | Total | 0.625 | 1 | 0.1 | 0.2 | µg/L | | 1 | 0 | 62 | 43 - 148% | PASS | 28 | 30 | PASS |
| Pentachlorophenol | Total | 0.563 | 1 | 0.05 | 0.1 | µg/L | | 1 | 0 | 56 | 36 - 111% | PASS | 7 | 30 | PASS |
| Phenol | Total | 0.59 | 1 | 0.1 | 0.2 | µg/L | | 1 | 0 | 59 | 29 - 114% | PASS | 28 | 30 | PASS |
| p-tert-Butylphenol | Total | 0.718 | 1 | 0.05 | 0.1 | µg/L | | 1 | 0 | 72 | 50 - 150% | PASS | 11 | 30 | PASS |

Base/Neutral Extractable Compounds

QUALITY CONTROL REPORT

| ANALYTE | FRACTION | RESULT | DF | MDL | RL | UNITS | SPIKE | SOURCE | ACCURACY | PRECISION | QA CODE |
|------------------------------|----------|------------------------------|----|------|----------------------------|-------|---------------------|--------|---------------------|-----------|---------|
| | | | | | | | LEVEL | RESULT | % | LIMITS | % |
| Sample ID: 100802-B1 | | QAQC Procedural Blank | | | Matrix: BlankMatrix | | Sampled: | | Received: | | |
| | | Method: EPA 625.1 | | | Batch ID: O-40006 | | Prepared: 18-Oct-22 | | Analyzed: 13-Nov-22 | | |
| 2-Chloronaphthalene | Total | ND | 1 | 0.05 | 0.1 | µg/L | | | | | |
| 2-Nitroaniline | Total | ND | 1 | 0.05 | 0.1 | µg/L | | | | | |
| 3-Nitroaniline | Total | ND | 1 | 0.05 | 0.1 | µg/L | | | | | |
| 4-Bromophenylphenyl ether | Total | ND | 1 | 0.05 | 0.1 | µg/L | | | | | |
| 4-Chloroaniline | Total | ND | 1 | 0.05 | 0.1 | µg/L | | | | | |
| 4-Chlorophenylphenyl ether | Total | ND | 1 | 0.05 | 0.1 | µg/L | | | | | |
| 4-Nitroaniline | Total | ND | 1 | 0.05 | 0.1 | µg/L | | | | | |
| Aniline | Total | ND | 1 | 0.05 | 0.1 | µg/L | | | | | |
| Benzidine | Total | ND | 1 | 0.05 | 0.1 | µg/L | | | | | |
| Bis(2-Chloroethoxy) methane | Total | ND | 1 | 0.05 | 0.1 | µg/L | | | | | |
| Bis(2-Chloroethyl) ether | Total | ND | 1 | 0.05 | 0.1 | µg/L | | | | | |
| Bis(2-Chloroisopropyl) ether | Total | ND | 1 | 0.05 | 0.1 | µg/L | | | | | |
| Dibenzofuran | Total | ND | 1 | 0.05 | 0.1 | µg/L | | | | | |
| Disalicylideneprapanediamin | Total | ND | 1 | 0.05 | 0.1 | µg/L | | | | | |
| Hexachloroethane | Total | ND | 1 | 0.05 | 0.1 | µg/L | | | | | |
| Nitrobenzene | Total | ND | 1 | 0.05 | 0.1 | µg/L | | | | | |
| N-Nitrosodi-n-propylamine | Total | ND | 1 | 0.05 | 0.1 | µg/L | | | | | |
| N-Nitrosodiphenylamine | Total | ND | 1 | 0.05 | 0.1 | µg/L | | | | | |

Base/Neutral Extractable Compounds

QUALITY CONTROL REPORT

| ANALYTE | FRACTION | RESULT | DF | MDL | RL | UNITS | SPIKE LEVEL | SOURCE RESULT | ACCURACY | | PRECISION | | QA CODEc |
|------------------------------|----------|------------------------------|----|------|----------------------------|-------|---------------------|-----------------|----------|------------------|-----------|--------|----------|
| | | | | | | | | | % | LIMITS | % | LIMITS | |
| Sample ID: 100802-BS1 | | QAQC Procedural Blank | | | Matrix: BlankMatrix | | | Sampled: | | Received: | | | |
| Method: EPA 625.1 | | Batch ID: O-40006 | | | Prepared: 18-Oct-22 | | Analyzed: 13-Nov-22 | | | | | | |
| 2-Chloronaphthalene | Total | 0.827 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 83 | 53 - 130% | PASS | | |
| 2-Nitroaniline | Total | 0.824 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 82 | 69 - 114% | PASS | | |
| 3-Nitroaniline | Total | 0.735 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 74 | 23 - 137% | PASS | | |
| 4-Bromophenylphenyl ether | Total | 0.931 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 93 | 61 - 132% | PASS | | |
| 4-Chloroaniline | Total | 1.18 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 118 | 50 - 150% | PASS | | |
| 4-Chlorophenylphenyl ether | Total | 0.921 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 92 | 63 - 130% | PASS | | |
| 4-Nitroaniline | Total | 1.06 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 106 | 10 - 159% | PASS | | |
| Aniline | Total | 1.06 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 106 | 50 - 150% | PASS | | |
| Bis(2-Chloroethoxy) methane | Total | 0.875 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 88 | 66 - 122% | PASS | | |
| Bis(2-Chloroethyl) ether | Total | 0.802 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 80 | 43 - 127% | PASS | | |
| Bis(2-Chloroisopropyl) ether | Total | 1.63 | 1 | 0.05 | 0.1 | µg/L | 2 | 0 | 81 | 49 - 128% | PASS | | |
| Dibenzofuran | Total | 0.89 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 89 | 50 - 150% | PASS | | |
| Disalicylidenepropanediamin | Total | 20.7 | 1 | 0.05 | 0.1 | µg/L | 25 | 0 | 83 | 50 - 150% | PASS | | |
| Hexachloroethane | Total | 0.928 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 93 | 27 - 130% | PASS | | |
| Nitrobenzene | Total | 0.845 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 85 | 54 - 111% | PASS | | |
| N-Nitrosodi-n-propylamine | Total | 0.775 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 77 | 61 - 152% | PASS | | |
| N-Nitrosodiphenylamine | Total | 0.81 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 81 | 49 - 142% | PASS | | |

Base/Neutral Extractable Compounds

QUALITY CONTROL REPORT

| ANALYTE | FRACTION | RESULT | DF | MDL | RL | UNITS | SPIKE LEVEL | SOURCE RESULT | ACCURACY | | PRECISION | | QA CODEc | |
|------------------------------|----------|------------------------------|----|------|----------------------------|-------|-------------|---------------------|----------|---------------------|-----------|--------|----------|------|
| | | | | | | | | | % | LIMITS | % | LIMITS | | |
| Sample ID: 100802-BS2 | | QAQC Procedural Blank | | | Matrix: BlankMatrix | | | Sampled: | | Received: | | | | |
| | | Method: EPA 625.1 | | | Batch ID: O-40006 | | | Prepared: 18-Oct-22 | | Analyzed: 13-Nov-22 | | | | |
| 2-Chloronaphthalene | Total | 0.774 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 77 | 53 - 130% | PASS | 8 | 30 | PASS |
| 2-Nitroaniline | Total | 0.815 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 81 | 69 - 114% | PASS | 0 | 30 | PASS |
| 3-Nitroaniline | Total | 0.63 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 63 | 23 - 137% | PASS | 16 | 30 | PASS |
| 4-Bromophenylphenyl ether | Total | 0.917 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 92 | 61 - 132% | PASS | 1 | 30 | PASS |
| 4-Chloroaniline | Total | 0.989 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 99 | 50 - 150% | PASS | 18 | 30 | PASS |
| 4-Chlorophenylphenyl ether | Total | 0.788 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 79 | 63 - 130% | PASS | 15 | 30 | PASS |
| 4-Nitroaniline | Total | 1.06 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 106 | 10 - 159% | PASS | 0 | 30 | PASS |
| Aniline | Total | 0.889 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 89 | 50 - 150% | PASS | 17 | 30 | PASS |
| Bis(2-Chloroethoxy) methane | Total | 0.723 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 72 | 66 - 122% | PASS | 20 | 30 | PASS |
| Bis(2-Chloroethyl) ether | Total | 0.611 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 61 | 43 - 127% | PASS | 27 | 30 | PASS |
| Bis(2-Chloroisopropyl) ether | Total | 1.24 | 1 | 0.05 | 0.1 | µg/L | 2 | 0 | 62 | 49 - 128% | PASS | 28 | 30 | PASS |
| Dibenzofuran | Total | 0.689 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 69 | 50 - 150% | PASS | 25 | 30 | PASS |
| Disalicylidenepropanediamin | Total | 24 | 1 | 0.05 | 0.1 | µg/L | 25 | 0 | 96 | 50 - 150% | PASS | 15 | 30 | PASS |
| Hexachloroethane | Total | 0.715 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 71 | 27 - 130% | PASS | 25 | 30 | PASS |
| Nitrobenzene | Total | 0.656 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 66 | 54 - 111% | PASS | 24 | 30 | PASS |
| N-Nitrosodi-n-propylamine | Total | 0.662 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 66 | 61 - 152% | PASS | 17 | 30 | PASS |
| N-Nitrosodiphenylamine | Total | 0.775 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 77 | 49 - 142% | PASS | 4 | 30 | PASS |

Polynuclear Aromatic Hydrocarbons

QUALITY CONTROL REPORT

| ANALYTE | FRACTION | RESULT | DF | MDL | RL | UNITS | SPIKE | SOURCE | ACCURACY | PRECISION | QA CODE |
|-----------------------------|-------------------|------------------------------|----|-------|----------------------------|-------------------|---------------------|---------------------|------------------|-----------|---------|
| | | | | | | | LEVEL | RESULT | % LIMITS | % LIMITS | |
| Sample ID: 100802-B1 | | QAQC Procedural Blank | | | Matrix: BlankMatrix | | Sampled: | | Received: | | |
| | Method: EPA 625.1 | | | | | Batch ID: O-40006 | Prepared: 18-Oct-22 | Analyzed: 13-Nov-22 | | | |
| (d10-Acenaphthene) | Total | 92 | 1 | | | % Recovery | 100 | 92 | 27 - 133% | PASS | |
| (d10-Phenanthrene) | Total | 92 | 1 | | | % Recovery | 100 | 92 | 43 - 129% | PASS | |
| (d12-Chrysene) | Total | 82 | 1 | | | % Recovery | 100 | 82 | 52 - 144% | PASS | |
| (d12-Perylene) | Total | 84 | 1 | | | % Recovery | 100 | 84 | 36 - 161% | PASS | |
| (d8-Naphthalene) | Total | 91 | 1 | | | % Recovery | 100 | 91 | 25 - 125% | PASS | |
| 1-Methylnaphthalene | Total | ND | 1 | 0.001 | 0.005 | µg/L | | | | | |
| 1-Methylphenanthrene | Total | ND | 1 | 0.001 | 0.005 | µg/L | | | | | |
| 2,3,5-Trimethylnaphthalene | Total | ND | 1 | 0.001 | 0.005 | µg/L | | | | | |
| 2,6-Dimethylnaphthalene | Total | ND | 1 | 0.001 | 0.005 | µg/L | | | | | |
| 2-Methylnaphthalene | Total | ND | 1 | 0.001 | 0.005 | µg/L | | | | | |
| Acenaphthene | Total | ND | 1 | 0.001 | 0.005 | µg/L | | | | | |
| Acenaphthylene | Total | ND | 1 | 0.001 | 0.005 | µg/L | | | | | |
| Anthracene | Total | ND | 1 | 0.001 | 0.005 | µg/L | | | | | |
| Benz[a]anthracene | Total | ND | 1 | 0.001 | 0.005 | µg/L | | | | | |
| Benzo[a]pyrene | Total | ND | 1 | 0.001 | 0.005 | µg/L | | | | | |
| Benzo[b]fluoranthene | Total | ND | 1 | 0.001 | 0.005 | µg/L | | | | | |
| Benzo[e]pyrene | Total | ND | 1 | 0.001 | 0.005 | µg/L | | | | | |
| Benzo[g,h,i]perylene | Total | ND | 1 | 0.001 | 0.005 | µg/L | | | | | |
| Benzo[k]fluoranthene | Total | ND | 1 | 0.001 | 0.005 | µg/L | | | | | |
| Biphenyl | Total | ND | 1 | 0.001 | 0.005 | µg/L | | | | | |
| Chrysene | Total | ND | 1 | 0.001 | 0.005 | µg/L | | | | | |
| Dibenz[a,h]anthracene | Total | ND | 1 | 0.001 | 0.005 | µg/L | | | | | |
| Dibenzo[a,l]pyrene | Total | ND | 1 | 0.001 | 0.005 | µg/L | | | | | |
| Dibenzothiophene | Total | ND | 1 | 0.001 | 0.005 | µg/L | | | | | |

Polynuclear Aromatic Hydrocarbons

QUALITY CONTROL REPORT

| ANALYTE | FRACTION | RESULT | DF | MDL | RL | UNITS | SPIKE | SOURCE | ACCURACY | | PRECISION | | QA CODE _c |
|------------------------|----------|--------|----|-------|-------|-------|-------|--------|----------|--------|-----------|--------|----------------------|
| | | | | | | | LEVEL | RESULT | % | LIMITS | % | LIMITS | |
| Fluoranthene | Total | ND | 1 | 0.001 | 0.005 | µg/L | | | | | | | |
| Fluorene | Total | ND | 1 | 0.001 | 0.005 | µg/L | | | | | | | |
| Indeno[1,2,3-cd]pyrene | Total | ND | 1 | 0.001 | 0.005 | µg/L | | | | | | | |
| Naphthalene | Total | ND | 1 | 0.001 | 0.005 | µg/L | | | | | | | |
| Perylene | Total | ND | 1 | 0.001 | 0.005 | µg/L | | | | | | | |
| Phenanthrene | Total | ND | 1 | 0.001 | 0.005 | µg/L | | | | | | | |
| Pyrene | Total | ND | 1 | 0.001 | 0.005 | µg/L | | | | | | | |



Polynuclear Aromatic Hydrocarbons

QUALITY CONTROL REPORT

| ANALYTE | FRACTION | RESULT | DF | MDL | RL | UNITS | SPIKE | SOURCE | ACCURACY | PRECISION | QA CODE _c | |
|------------------------------|----------|------------------------------|----|-------|----------------------------|------------|---------------------|-----------------|----------|------------------|----------------------|--------|
| | | | | | | | LEVEL | RESULT | % | LIMITS | % | LIMITS |
| Sample ID: 100802-BS1 | | QAQC Procedural Blank | | | Matrix: BlankMatrix | | | Sampled: | | Received: | | |
| Method: EPA 625.1 | | Batch ID: O-40006 | | | Prepared: 18-Oct-22 | | Analyzed: 13-Nov-22 | | | | | |
| (d10-Acenaphthene) | Total | 85 | 1 | | | % Recovery | 100 | 0 | 85 | 27 - 133% | PASS | |
| (d10-Phenanthrene) | Total | 91 | 1 | | | % Recovery | 100 | 0 | 91 | 43 - 129% | PASS | |
| (d12-Chrysene) | Total | 91 | 1 | | | % Recovery | 100 | 0 | 91 | 52 - 144% | PASS | |
| (d12-Perylene) | Total | 92 | 1 | | | % Recovery | 100 | 0 | 92 | 36 - 161% | PASS | |
| (d8-Naphthalene) | Total | 78 | 1 | | | % Recovery | 100 | 0 | 78 | 25 - 125% | PASS | |
| 1-Methylnaphthalene | Total | 0.404 | 1 | 0.001 | 0.005 | µg/L | 0.5 | 0 | 81 | 31 - 128% | PASS | |
| 1-Methylphenanthrene | Total | 0.46 | 1 | 0.001 | 0.005 | µg/L | 0.5 | 0 | 92 | 66 - 127% | PASS | |
| 2,3,5-Trimethylnaphthalene | Total | 0.425 | 1 | 0.001 | 0.005 | µg/L | 0.5 | 0 | 85 | 55 - 122% | PASS | |
| 2,6-Dimethylnaphthalene | Total | 0.416 | 1 | 0.001 | 0.005 | µg/L | 0.5 | 0 | 83 | 48 - 120% | PASS | |
| 2-Methylnaphthalene | Total | 1.29 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 86 | 47 - 130% | PASS | |
| Acenaphthene | Total | 1.34 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 89 | 53 - 131% | PASS | |
| Acenaphthylene | Total | 1.37 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 91 | 43 - 140% | PASS | |
| Anthracene | Total | 1.47 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 98 | 58 - 135% | PASS | |
| Benz[a]anthracene | Total | 1.53 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 102 | 55 - 145% | PASS | |
| Benzo[a]pyrene | Total | 1.45 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 97 | 51 - 143% | PASS | |
| Benzo[b]fluoranthene | Total | 1.51 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 101 | 46 - 165% | PASS | |
| Benzo[e]pyrene | Total | 0.469 | 1 | 0.001 | 0.005 | µg/L | 0.5 | 0 | 94 | 42 - 152% | PASS | |
| Benzo[g,h,i]perylene | Total | 1.54 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 103 | 63 - 133% | PASS | |
| Benzo[k]fluoranthene | Total | 1.41 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 94 | 56 - 145% | PASS | |
| Biphenyl | Total | 0.434 | 1 | 0.001 | 0.005 | µg/L | 0.5 | 0 | 87 | 56 - 119% | PASS | |
| Chrysene | Total | 1.46 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 97 | 56 - 141% | PASS | |
| Dibenz[a,h]anthracene | Total | 1.53 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 102 | 55 - 150% | PASS | |
| Dibenzo[a,l]pyrene | Total | 0.171 | 1 | 0.001 | 0.005 | µg/L | 0.25 | 0 | 68 | 50 - 150% | PASS | |
| Dibenzothiophene | Total | 0.457 | 1 | 0.001 | 0.005 | µg/L | 0.5 | 0 | 91 | 75 - 113% | PASS | |

Polynuclear Aromatic Hydrocarbons

QUALITY CONTROL REPORT

| ANALYTE | FRACTION | RESULT | DF | MDL | RL | UNITS | SPIKE | SOURCE | ACCURACY | | PRECISION | | QA CODE _c |
|------------------------|----------|--------|----|-------|-------|-------|-------|--------|----------|-----------|-----------|--------|----------------------|
| | | | | | | | LEVEL | RESULT | % | LIMITS | % | LIMITS | |
| Fluoranthene | Total | 1.59 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 106 | 60 - 146% | PASS | | |
| Fluorene | Total | 1.42 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 95 | 58 - 131% | PASS | | |
| Indeno[1,2,3-cd]pyrene | Total | 1.59 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 106 | 50 - 151% | PASS | | |
| Naphthalene | Total | 1.23 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 82 | 41 - 126% | PASS | | |
| Perylene | Total | 0.476 | 1 | 0.001 | 0.005 | µg/L | 0.5 | 0 | 95 | 48 - 141% | PASS | | |
| Phenanthrene | Total | 1.45 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 97 | 67 - 127% | PASS | | |
| Pyrene | Total | 1.6 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 107 | 54 - 156% | PASS | | |

Polynuclear Aromatic Hydrocarbons

QUALITY CONTROL REPORT

| ANALYTE | FRACTION | RESULT | DF | MDL | RL | UNITS | SPIKE | SOURCE | ACCURACY | | PRECISION | | QA CODEc | |
|------------------------------|----------|------------------------------|----|-------|----------------------------|------------|-------|---------------------|----------|-----------|---------------------|--------|----------|------|
| | | | | | | | LEVEL | RESULT | % | LIMITS | % | LIMITS | | |
| Sample ID: 100802-BS2 | | QAQC Procedural Blank | | | Matrix: BlankMatrix | | | Sampled: | | | Received: | | | |
| | | Method: EPA 625.1 | | | Batch ID: O-40006 | | | Prepared: 18-Oct-22 | | | Analyzed: 13-Nov-22 | | | |
| (d10-Acenaphthene) | Total | 71 | 1 | | | % Recovery | 100 | 0 | 71 | 27 - 133% | PASS | 18 | 30 | PASS |
| (d10-Phenanthrene) | Total | 93 | 1 | | | % Recovery | 100 | 0 | 93 | 43 - 129% | PASS | 2 | 30 | PASS |
| (d12-Chrysene) | Total | 93 | 1 | | | % Recovery | 100 | 0 | 93 | 52 - 144% | PASS | 2 | 30 | PASS |
| (d12-Perylene) | Total | 97 | 1 | | | % Recovery | 100 | 0 | 97 | 36 - 161% | PASS | 5 | 30 | PASS |
| (d8-Naphthalene) | Total | 68 | 1 | | | % Recovery | 100 | 0 | 68 | 25 - 125% | PASS | 14 | 30 | PASS |
| 1-Methylnaphthalene | Total | 0.383 | 1 | 0.001 | 0.005 | µg/L | 0.5 | 0 | 77 | 31 - 128% | PASS | 5 | 30 | PASS |
| 1-Methylphenanthrene | Total | 0.465 | 1 | 0.001 | 0.005 | µg/L | 0.5 | 0 | 93 | 66 - 127% | PASS | 1 | 30 | PASS |
| 2,3,5-Trimethylnaphthalene | Total | 0.366 | 1 | 0.001 | 0.005 | µg/L | 0.5 | 0 | 73 | 55 - 122% | PASS | 15 | 30 | PASS |
| 2,6-Dimethylnaphthalene | Total | 0.399 | 1 | 0.001 | 0.005 | µg/L | 0.5 | 0 | 80 | 48 - 120% | PASS | 4 | 30 | PASS |
| 2-Methylnaphthalene | Total | 1.15 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 77 | 47 - 130% | PASS | 11 | 30 | PASS |
| Acenaphthene | Total | 1.13 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 75 | 53 - 131% | PASS | 17 | 30 | PASS |
| Acenaphthylene | Total | 1.17 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 78 | 43 - 140% | PASS | 15 | 30 | PASS |
| Anthracene | Total | 1.52 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 101 | 58 - 135% | PASS | 3 | 30 | PASS |
| Benz[a]anthracene | Total | 1.55 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 103 | 55 - 145% | PASS | 1 | 30 | PASS |
| Benzo[a]pyrene | Total | 1.53 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 102 | 51 - 143% | PASS | 5 | 30 | PASS |
| Benzo[b]fluoranthene | Total | 1.53 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 102 | 46 - 165% | PASS | 1 | 30 | PASS |
| Benzo[e]pyrene | Total | 0.487 | 1 | 0.001 | 0.005 | µg/L | 0.5 | 0 | 97 | 42 - 152% | PASS | 3 | 30 | PASS |
| Benzo[g,h,i]perylene | Total | 1.57 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 105 | 63 - 133% | PASS | 2 | 30 | PASS |
| Benzo[k]fluoranthene | Total | 1.42 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 95 | 56 - 145% | PASS | 1 | 30 | PASS |
| Biphenyl | Total | 0.418 | 1 | 0.001 | 0.005 | µg/L | 0.5 | 0 | 84 | 56 - 119% | PASS | 4 | 30 | PASS |
| Chrysene | Total | 1.46 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 97 | 56 - 141% | PASS | 0 | 30 | PASS |
| Dibenz[a,h]anthracene | Total | 1.58 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 105 | 55 - 150% | PASS | 3 | 30 | PASS |
| Dibenzo[a,l]pyrene | Total | 0.185 | 1 | 0.001 | 0.005 | µg/L | 0.25 | 0 | 74 | 50 - 150% | PASS | 8 | 30 | PASS |
| Dibenzothiophene | Total | 0.478 | 1 | 0.001 | 0.005 | µg/L | 0.5 | 0 | 96 | 75 - 113% | PASS | 5 | 30 | PASS |

Polynuclear Aromatic Hydrocarbons

QUALITY CONTROL REPORT

| ANALYTE | FRACTION | RESULT | DF | MDL | RL | UNITS | SPIKE | SOURCE | ACCURACY | | PRECISION | | QA CODE _c | |
|------------------------|----------|--------|----|-------|-------|-------|-------|--------|----------|-----------|-----------|--------|----------------------|------|
| | | | | | | | LEVEL | RESULT | % | LIMITS | % | LIMITS | | |
| Fluoranthene | Total | 1.63 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 109 | 60 - 146% | PASS | 3 | 30 | PASS |
| Fluorene | Total | 1.25 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 83 | 58 - 131% | PASS | 13 | 30 | PASS |
| Indeno[1,2,3-cd]pyrene | Total | 1.67 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 111 | 50 - 151% | PASS | 5 | 30 | PASS |
| Naphthalene | Total | 1.06 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 71 | 41 - 126% | PASS | 14 | 30 | PASS |
| Perylene | Total | 0.505 | 1 | 0.001 | 0.005 | µg/L | 0.5 | 0 | 101 | 48 - 141% | PASS | 6 | 30 | PASS |
| Phenanthrene | Total | 1.48 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 99 | 67 - 127% | PASS | 2 | 30 | PASS |
| Pyrene | Total | 1.6 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 107 | 54 - 156% | PASS | 0 | 30 | PASS |

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PHYSICS

TENTATIVELY

IDENTIFIED COMPOUNDS

ENVIRONMENTAL LABORATORIES, INC.

Innovative Solutions for Nature

Sample ID: 100803

| RT | Area Pct | Concentration (ng/L) | Library/ID | Cas Number | Match Qual |
|---------|----------|----------------------|----------------------------------|------------|------------|
| 32.2502 | 6.8259 | 1111 | Anthracene-D10 | 1517-22-2 | 96 |
| 29.2509 | 3.9930 | 650 | Benzoic acid, 2-ethylhexyl ester | 5444-75-7 | 99 |
| 41.3223 | 0.7973 | 130 | Cyclic octaatomic sulfur | 10544-50-0 | 97 |

Concentration estimated using the response for Anthracene-d10

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Sample ID: Lab Blank B1_40006

| RT | Area Pct | Concentration (ng/L) | Library/ID | Cas Number | Match Qual |
|--|----------|----------------------|-----------------|------------|------------|
| 32.2467 | 6.6606 | 1111 | Anthracene-D10- | 1517-22-2 | 96 |
| No TICs met the search criteria in this sample | | | | | |

Concentration estimated using the response for Anthracene-d10

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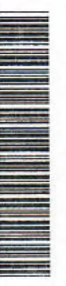
PERFORMANCE CHAIN OF CUSTODY

TERRA ENVIRONMENTAL LABORATORIES, INC. AURA

Innovative Solutions for Nature

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Chain of Custody Record



Monrovia, CA (Suite 100)
750 Royal Oaks Drive Suite 100
Monrovia, CA 91016
Phone: 626-386-1100

Client Information (Sub Contract Lab)

Client Contact: Shipping/Receiving
Company: Physis Environmental Laboratories
Address: 1904 Wright Circle,
City: Anaheim
State, Zip: CA, 92806
Phone:
Email:
Project Name: RED-HILL
Project #: 38001111
SSOM#:
Site: Honolulu BWS Sites

Lab PM: Arada, Rachelle
Email: Rachelle.Arada@et.eurofins.com
State of Origin: Hawaii
Carrier Tracking No(s):
GCC No: 380-24160-1
Page: Page 1 of 1
Job #: 380-24009-1
Preservation Codes:
A - HCL
B - NiOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4.5
Y - Trizma
Z - other (specify)

Due Date Requested: 10/26/2022
TAT Requested (days):
Analysis Requested:
Field Filtered Sample (Yes or No)
Perform MS/MSD (Yes or No)
SUB (625 PAH Physis LL (EAL) + TICs) / 625 PAH Physis LL (EAL) + TICs
SUB (625 Base Neutral LL (EAL) Physis) / 625 Base Neutral LL (EAL) Physis
SUB (625 Acid LL (EAL) Physis) / 625 Acid LL (EAL) Physis

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (Water, Seawater, Stormwater, etc.) | Preservation Code: | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | Total Number of containers | Special Instructions/Note: |
|--|-------------|-------------|------------------------------|--|--------------------|-----------------------------------|----------------------------|----------------------------|----------------------------|
| HALAWA WELLS UNITS 1 (331-023) (380-24009-1) | 10/1/22 | 10:12 | | Water | | | X X X | 6 | See Attached Instructions |

Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC please the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Eaton Analytical, LLC.

Possible Hazard Identification
Unconfirmed
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2
Special Instructions/QC Requirements:
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Empty Kit Relinquished by: _____ Date: _____ Time: _____ Method of Shipment: _____

Relinquished by: *MS* Date/Time: *10/13/22 13:10* Company: *CEAS* Received by: *ALLA* Date/Time: *10/13/22 13:10* Company: *Physis*

Relinquished by: _____ Date/Time: _____ Company: _____ Received by: _____ Date/Time: _____ Company: _____

Custody Seals Intact: Yes No Custody Seal No.: _____ Cooler Temperature(s) °C and Other Remarks: _____

Project Iteration ID: 1407003-319
 Client Name: Eurofins Eaton Analytical
 Project Name: RED-HILL Project # 38001111 Job # 380-24009-1
 COC Page Number: 2 of 2
 Bottle Label Color: NA

Sample Receipt Summary

Receiving Info

1. Initials Received By: RGH
2. Date Received: 10/13/22
3. Time Received: 1310
4. Client Name: Eurofins
5. Courier Information: (Please circle)
 - Client
 - UPS
 - Area Fast
 - DRS
 - FedEx
 - GSO/GLS
 - Ontrac
 - PAMS
 - PHYSIS Driver:
 - i. Start Time: _____
 - ii. End Time: _____
 - iii. Total Mileage: _____
 - iv. Number of Pickups: _____
6. Container Information: (Please put the # of containers or circle none)
 - 2 Cooler
 - Styrofoam Cooler
 - Boxes
 - None
 - Carboy(s)
 - Carboy Trash Can(s)
 - Carboy Cap(s)
 - Other _____
7. What type of ice was used: (Please circle any that apply)
 - Wet Ice
 - Blue Ice
 - Dry Ice
 - Water
 - None
8. Randomly Selected Samples Temperature (°C): 5.3
 Used I/R Thermometer # 1-2

Inspection Info

1. Initials Inspected By: RGH

Sample Integrity Upon Receipt:

1. COC(s) included and completely filled out..... Yes / No
2. All sample containers arrived intact..... Yes / No
3. All samples listed on COC(s) are present..... Yes / No
4. Information on containers consistent with information on COC(s)..... Yes / No
5. Correct containers and volume for all analyses indicated..... Yes / No
6. All samples received within method holding time..... Yes / No
7. Correct preservation used for all analyses indicated..... Yes / No
8. Name of sampler included on COC(s)..... Yes / No

Notes:



Chain of Custody Record

| | | | | | | |
|--|-------------------|--|---|---|--|-----------------------------------|
| Client Information | | Sampler: | Lab PM: | Carrier Tracking No(s): | COC No: | |
| Client Contact: Dr. Ron Fenstemacher | | Phone: | Arada, Rachelle | | 380-15739-1845.1 | |
| Company: City & County of Honolulu | | PWSID: | E-Mail: Rachelle.Arada@et.eurofinsus.com | State of Origin: | Page: <i>1 of 2</i> Page 1 of 2 | |
| Address: 630 South Beretania Street Chemistry Lab | | Analysis Requested | | | Job #: | |
| City: Honolulu | | | | | | |
| State, Zip: HI, 96843 | | Due Date Requested: | | Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Y - Trizma Z - other (specify) | | |
| Phone: 808-748-5091(Tel) | | TAT Requested (days): | | | | |
| Email: RFENSTEMACHER@hbws.org | | Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No | | | | |
| Project Name: RED-HILL | | PO#: C20525101 exp 05312023 | | | | |
| Site: Hawaii | | WO#: | | Other: Total Number of Containers | | |
| | | Project #: 38001111 | | | | |
| | | SSOW#: | | | | |
| Sample Identification | | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=soil, BT=Tissue, A=Air) | Special Instructions/Note: |
| | | | | | | |
| | | | | | | |
| AIEA GULCH WELLS PUMP 1 (331-201-TP071) | | | | | Water | |
| AIEA GULCH WELLS PUMP 2 (331-202-TP072) | | | | | Water | |
| AIEA WELLS P (260) (331-00-WL10) | | | | | Water | |
| HALAWA WELLS UNITS 1 & 2 (331-206-TP065) | | 2022-10-11 | 1012 | G | Water | |
| MOANALUA WELLS (331-223-TP202) | | | | | Water | |
| HALAWA SHAFT VIEW POOL (331-241-TP401) | | | | | Water | |
| KAAMILO WELLS (331-261-TP068) | | | | | Water | |
| TB: AIEA GULCH WELLS PUMP 1 | | | | | Water | |
| TB: AIEA GULCH WELLS PUMP 2 | | | | | Water | |
| TB: AIEA WELLS PUMPS 1&2 (260) | | | | | Water | |
| TB: HALAWA WELLS UNITS 1 & 2 | | 2022-10-11 | | | Water | |
| Possible Hazard Identification | | Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) | | | | |
| <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological | | <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months | | | | |
| Deliverable Requested: I, II, III, IV, Other (specify) | | Special Instructions/QC Requirements: | | | | |
| Empty Kit Relinquished by: | | Date: | Time: | Method of Shipment: | | |
| Relinquished by: | | Date/Time: 2022-10-11 1200 | Company: BWS | Received by: <i>Chris Brack</i> | Date/Time: 10-12-22 1000 | |
| Relinquished by: | | Date/Time: | Company: | Received by: | Date/Time: | |
| Relinquished by: | | Date/Time: | Company: | Received by: | Date/Time: | |
| Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: | | | | |



Chain of Custody Record

| | | | | | | | | | |
|--|--|--|--|--|--|--|--|---|--|
| Client Information | | Sampler: | | Lab PM: | | Carrier Tracking No(s): | | COC No: | |
| Client Contact: Dr. Ron Fenstemacher | | Phone: | | Arada, Rachelle | | E-Mail: Rachelle.Arada@et.eurofinsus.com | | State of Origin: | |
| Company: City & County of Honolulu | | PWSID: | | Analysis Requested | | Job #: | | Page 2 of 3 <i>2 of 2</i> | |
| Address: 630 South Beretania Street Chemistry Lab | | Due Date Requested: | | SUBCONTRACT - 8015 Ethanol | | SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs | | SUBCONTRACT - 625 Base Neutral LL (EAL) Physis | |
| City: Honolulu | | TAT Requested (days): | | SUBCONTRACT - 625 Acid LL (EAL) Physis | | 624.3_SIML_PRC - Low Level TCP/ED/BDBCP | | SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL) | |
| State, Zip: HI, 96843 | | Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No | | 604.1_PRC - Local Method | | 524.2 - P. 05 - PRC 524.2 - SIML_PRC | | Preservation Codes: | |
| Phone: 808-748-5091(Tel) | | PO #: C20525101 exp 05312023 | | Field Filtered Sample (Yes or No) | | Total Number of Containers | | A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA | |
| Email: RFENSTEMACHER@hbws.org | | WO #: | | SUBCONTRACT - 8015 Ethanol | | SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs | | M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify) | |
| Project Name: RED-HILL | | Project #: 38001111 | | SUBCONTRACT - 625 Base Neutral LL (EAL) Physis | | SUBCONTRACT - 625 Acid LL (EAL) Physis | | Other: | |
| Site: Hawaii | | SSOW#: | | 624.3_SIML_PRC - Low Level TCP/ED/BDBCP | | SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL) | | | |
| Sample Identification | | Sample Date | | Sample Time | | Sample Type (C=comp, G=grab) | | Matrix (W=water, S=solid, O=waste/soil, BT=Tissue, A=Air) | |
| | | | | | | | | Preservation Code: | |
| AIEA GULCH WELLS PUMP 1 (331-201-TP071) | | | | | | | | Water | |
| AIEA GULCH WELLS PUMP 2 (331-202-TP072) | | | | | | | | Water | |
| AIEA WELLS P (266) (331-00 - WL10) | | | | | | | | Water | |
| HALAWA WELLS UNITS 1 & 2 (331-206-TP066) | | 331-023 | | 2022-10-10 | | 1012 | | G | |
| MOANALUA WELLS (331-223-TP202) | | | | | | | | Water | |
| HALAWA SHAFT VIEW POOL (331-244-TP404) | | | | | | | | Water | |
| KAAMILO WELLS (331-264-TP008) | | | | | | | | Water | |
| TB: AIEA GULCH WELLS PUMP 1 | | | | | | | | Water | |
| TB: AIEA GULCH WELLS PUMP 2 | | | | | | | | Water | |
| TB: AIEA WELLS PUMPS 1&2 (266) | | | | | | | | Water | |
| TB: HALAWA WELLS UNITS 1 & 2 | | | | | | | | Water | |
| Possible Hazard Identification | | <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological | | Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) | | <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months | | Special Instructions/QC Requirements: | |
| Deliverable Requested: I, II, III, IV, Other (specify) | | | | | | | | | |
| Empty Kit Relinquished by: | | Date: | | Time: | | Method of Shipment: | | | |
| Relinquished by: <i>Lesti Caanai</i> | | Date/Time: 2022-10-11 12:00 | | Company: BWS | | Received by: <i>Chris Breen</i> | | Date/Time: 10-12-22 1000 | |
| Relinquished by: | | Date/Time: | | Company: | | Received by: | | Date/Time: | |
| Relinquished by: | | Date/Time: | | Company: | | Received by: | | Date/Time: | |
| Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No | | Custody Seal No.: | | | | Cooler Temperature(s) °C and Other Remarks: | | | |

Bottle Order Information

Bottle Order: RED-HILL - Quarterly
 Bottle Order #: 1845
 Request From Client: 9/14/2022
 Date Order Posted: 6/23/2022 7:29:27AM
 Order Status: Ready To Process
 Prepared By: Davis Haley
 Deliver By Date: 9/23/2022 11:59:00PM
 Lab Project Number: 38001111
 PWSID: HI00000331-201-TP071, HI00000331-202-TP072, HI00000

Order Completion Information

Creator: Michelle Do
 Filled by:
 Sent Date:
 Sent Via:
 Tracking #:

| Sets | Bottles/Set | Qty | Bottle Type Description | Preservative | Method | Matrix | Sample Type | Comments | Lot # |
|------|-------------|-----|--|-------------------------------------|---|--------|-------------|----------|-------|
| 7 | 6 | 42 | Voa Vial 40ml Amber - Sodium thiosulfate | Sodium Thiosulfate | 504.1_PREC - Local Method | Water | Normal | | |
| | | | | | 505_LL_PREC - (MOD) ML505 +505-EAL Aldrin Dieldrin Tox | Water | Normal | | |
| 7 | 1 | 7 | Plastic 250ml - unpreserved | None | 2320B - (MOD) Total Alkalinity | Water | Normal | | |
| | | | | | SM4500_H+ - Local Method | Water | Normal | | |
| | | | | | 2510B - Conductivity | Water | Normal | | |
| 7 | 1 | 7 | Plastic 500ml - with Nitric Acid | Nitric Acid | 200.8 - Metals, Priority Pollutant by 200.8 | Water | Normal | | |
| | | | | | 200.7 - (MOD) Custom | Water | Normal | | |
| 7 | 1 | 7 | Plastic 500ml - unpreserved | None | 2540C_Calcd - Total Dissolved Solids (TDS) | Water | Normal | | |
| 7 | 1 | 7 | Plastic 250ml - with Zinc Acetate & NaOH | Zinc Acetate and Sodium Hydroxide | SM4500_S2_D - Sulfide, Total | Water | Normal | | |
| 7 | 6 | 42 | Voa Vial 40ml Amber - Ascor. Acid & HCL | Ascorbic Acid and Hydrochloric Acid | 524.2_Pres_PREC - VOASDWA plus TICs + Acetone | Water | Normal | | |
| | | | | | 524.2_SIM_PREC - TBA by 524.2 SIM | Water | Normal | | |
| 7 | 3 | 21 | Amber Glass 1 Liter- Sodium Sulfite/HCl | Sodium Sulfite w/HCl | 525.2_PREC - 525plus Plus TICs | Water | Normal | | |
| 7 | 2 | 14 | Plastic 125mL - unpreserved | None | 300_OF_28D_B - Bromide | Water | Normal | | |
| | | | | | 4500_F_C - Fluoride | Water | Normal | | |
| | | | | | 300_OF_28D_PREC - Chloride and Sulfate | Water | Normal | | |
| | | | | | 300_OF_48H_PREC - Nitrite, Nitrate, and Nitrite+Nitrate | Water | Normal | | |
| 7 | 1 | 7 | Plastic 250ml - with Nitric Acid | Nitric Acid | 245.1 - Local Method | Water | Normal | | |

Please notify your PM immediately if an error is found in shipment. When returning samples, please return all provided QC samples.

| | | | | | | | | | |
|---|---|----|---|--|---|-------|------------|--|--|
| 7 | 2 | 14 | Amber Glass 1 L - NaThiosulfate 8mL HCL | Sodium Thiosulfate/H ydrochloric Acid | SUBCONTRACT - 8015 Jet Fuel 8 (JP8) | Water | Normal | | |
| 7 | 2 | 14 | Amber Glass 1 L - NaThiosulfate 8mL HCL | Sodium Thiosulfate/H ydrochloric Acid | SUBCONTRACT - 8015 Jet Fuel 5 (JP5) | Water | Normal | | |
| 7 | 2 | 14 | Amber Glass 1 L - NaThiosulfate 8mL HCL | Sodium Thiosulfate/H ydrochloric Acid | SUBCONTRACT - 8015 Diesel LL (EAL) and Motor Oil | Water | Normal | | |
| 7 | 3 | 21 | Voa Vial 40ml - SodiumThio w/HCl-dropper | Sodium Thiosulfate | SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL) | Water | Normal | | |
| 7 | 3 | 21 | Voa Vial 40ml Amber - Sodium thiosulfate | Sodium Thiosulfate | SUBCONTRACT - 8015 Ethanol | Water | Normal | | |
| 7 | 2 | 14 | Amber Glass 1 liter - Sodium Thiosulfate | Sodium Thiosulfate | SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs | Water | Normal | | |
| 7 | 2 | 14 | Amber Glass 1 liter - Sodium Thiosulfate | Sodium Thiosulfate | SUBCONTRACT - 625 Base Neutral LL (EAL) Physis | Water | Normal | | |
| 7 | 2 | 14 | Amber Glass 1 liter - Sodium Thiosulfate | Sodium Thiosulfate | SUBCONTRACT - 625 Acid LL (EAL) Physis | Water | Normal | | |
| 7 | 3 | 21 | Voa Vial 40ml Amber - Ascorbic & Maleic | Ascorbic Acid/Maleic | 524.3_SIM_PREC - Low Level TCP/EDB/DBCP | Water | Normal | | |
| 7 | 2 | 14 | VOA Vial 40mL - NaThiosulfate/HCL | Sodium Thiosulfate/H ydrochloric Acid | SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL) | Water | Trip Blank | | |
| 7 | 6 | 42 | Voa Vial 40ml Amber - Ascor. Acid & HCL | Ascorbic Acid and Hydrochloric Acid | 524.2_Pres_PREC - VOASDWA plus TICs + Acetone | Water | Trip Blank | | |
| | | | | | 524.2_SIM_PREC - TBA by 524.2 SIM | Water | Trip Blank | | |
| 7 | 3 | 21 | Voa Vial 40ml Amber - Sodium thiosulfate | Sodium Thiosulfate | 504.1_PREC - Local Method | Water | Trip Blank | | |
| 7 | 2 | 14 | Voa Vial 40ml Amber - Ascorbic & Maleic | Ascorbic Acid/Maleic | 524.3_SIM_PREC - Low Level TCP/EDB/DBCP | Water | Trip Blank | | |

Please notify your PM immediately if an error is found in shipment. When returning samples, please return all provided QC samples.

Notes to Field Staff:



Scan QR code for field sampler instructions

SAMPLER FOLLOW 2 STAGE FIELD PRESERVATION FOR 625, 8015, 524.2, and 525.2

FOLLOW 2 STAGE FIELD PRESERVATION FOR 8015, 525.2, 524.2

USE ALTERNATE SAMPLING POINTS FOR:

(331-203-TP400) AIEA WELLS PUMPS 1&2 (260)
 AIEA WELLS P_ (260)-331-00_-WL10_ UPDATE
 BLANKS WITH APPROPRIATE SAMPLE POINT
 DESCRIPTORS. USE FULL CORRECT ID ON CHAIN OF
 CUSTODY

AIEA WELLS P1 (260)-331-003-WL102

AIEA WELLS P2 (260)-331-004-WL103

(331-241-TP401) HALAWA SHAFT

Halawa Shaft Viewing Pool

Health and Safety Notes:

| Preservative | Comment |
|--------------------------------------|---|
| Ascorbic Acid and Hydrochloric Acid | Contains 25mg/ml Ascorbic Acid. May cause mild irritation to skin and eyes. CAUTION! CONTAINS 1:1 HYDROCHLORIC ACID. Avoid skin and eye contact. If contact made, FLUSH IMMEDIATELY with water. |
| Ascorbic Acid/Maleic | CAUTION! May cause eye, skin, and respiratory tract irritation |
| Nitric Acid | CAUTION! STRONG OXIDIZER! CONTAINS 1:1 NITRIC ACID. Avoid skin and eye contact. If contact is made, FLUSH IMMEDIATELY with water. |
| Sodium Sulfite w/HCl | CAUTION! CONTAINS SODIUM SULFITE. Harmful if inhaled. Use adequate ventilation. Avoid skin and eye contact. If contact is made, FLUSH IMMEDIATELY with water. |
| Sodium Thiosulfate | CAUTION! CONTAINS 10% SODIUM THIOSULFATE. Harmful if inhaled. Use adequate ventilation. Avoid skin and eye contact. If contact is made, FLUSH IMMEDIATELY with water. |
| Sodium Thiosulfate/Hydrochloric Acid | CAUTION! CONTAINS 10% SODIUM THIOSULFATE. Harmful if inhaled. Use adequate ventilation. Avoid skin and eye contact. If contact is made, FLUSH IMMEDIATELY with water. Contains 13.3% Monochloroacetic Acid. Avoid skin and eye contact. If contact is made, FLUSH IMMEDIATELY with water. |
| Zinc Acetate and Sodium Hydroxide | CAUTION! CONTAINS 1:1 HYDROCHLORIC ACID. Avoid skin and eye contact. If contact made, FLUSH IMMEDIATELY with water. Contains 2N Zinc Acetate. Avoid skin and eye contact. If contact is made, FLUSH IMMEDIATELY with water. CAUTION! STRONG CAUSTIC! CONTAINS SODIUM HYDROXIDE PELLETS. Avoid skin and eye contact. If contact is made, FLUSH IMMEDIATELY with water. |

| | | | | | | |
|-----------------|---------|----------|------|--------------------|---------|--------|
| Relinquished By | Company | Date | Time | Received By | Company | Seal#: |
| | | 10/12/22 | 1000 | <i>[Signature]</i> | EEA | Seal#: |
| Relinquished By | Company | Date | Time | Received By | Company | Seal#: |
| | | | | | | Seal#: |

Please notify your PM immediately if an error is found in shipment. When returning samples, please return all provided QC samples.



ORIGIN ID:HIKA (808) 748-5840
BWS CHEMLAB
HONOLULU BOARD OF WATER SUPPLY
630 S. BERETANIA ST.
CHEMICAL LABORATORY
HONOLULU HI 96843
UNITED STATES US

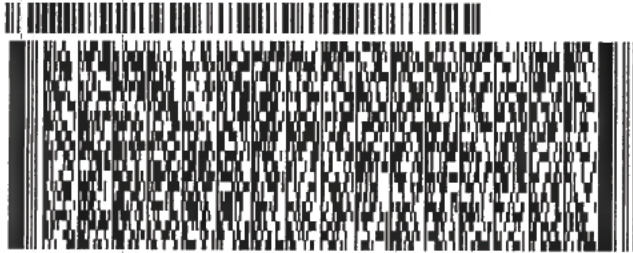
SHIP DATE: 11OCT22
ACTWGT: 75.00 LB
CAD: 100205419/NET4530

BILL RECIPIENT

TO C CHUCK
EUROFINS EATON ANALYTICAL, INC
750 ROYAL OAKS DR
SUITE 100
MONROVIA CA 91016

581J1AC5FFE2D

(626) 386-1178 REF:
INV: PO: DEPT:

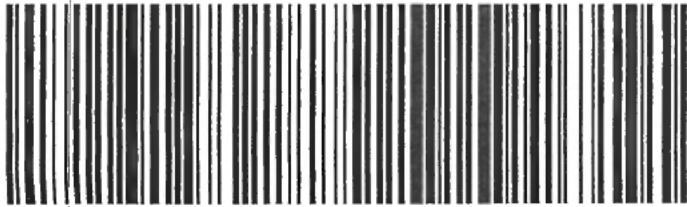


WED - 12 OCT 10:30A
PRIORITY OVERNIGHT

TRK# 7701 7719 7634
0201

WZ WHPA

91016
CA-US BUR



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BWS CHEMLAB
HONOLULU BOARD OF WATER SUPPLY
630 S. BERETANIA ST.
CHEMICAL LABORATORY
HONOLULU, HI 96843
UNITED STATES US

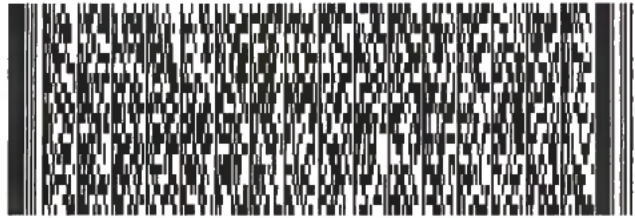
SHIP DATE: 11OCT22
ACTWGT: 75.00 LB
CAD: 100205419/INET4530

BILL RECIPIENT

581.J1/AC5FFE2D

TO **C CHUCK**
EUROFINS EATON ANALYTICAL, INC
750 ROYAL OAKS DR
SUITE 100
MONROVIA CA 91016

(626) 386-1178 REF:
INV:
PO: DEPT:

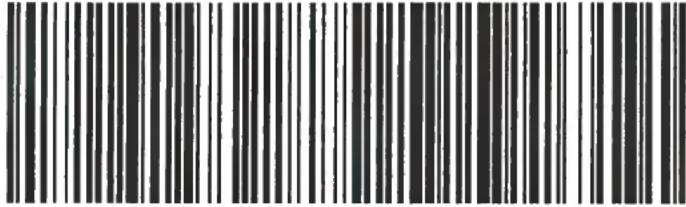


WED - 12 OCT 10:30A
PRIORITY OVERNIGHT

TRK# 7701 7719 7634
0201

WZ WHPA

91016
CA-US BUR



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630 S. BERETANIA ST.
CHEMICAL LABORATORY
HONOLULU, HI 96843
UNITED STATES US

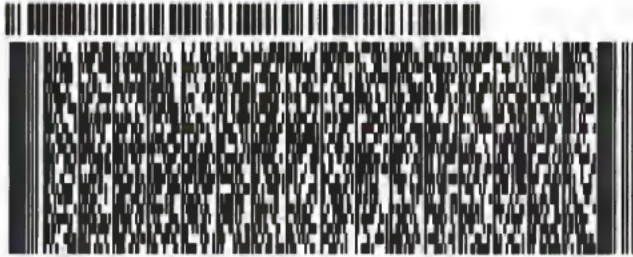
SHIP DATE: 11OCT22
ACTWGT: 75.00 LB
CAD: 100205419/NET4530

BILL RECIPIENT

TO **C CHUCK**
EUROFINS EATON ANALYTICAL, INC
750 ROYAL OAKS DR
SUITE 100
MONROVIA CA 91016

581 J1 IAC5F FEZD

(626) 386-1178 REF:
INV. PO. DEPT:

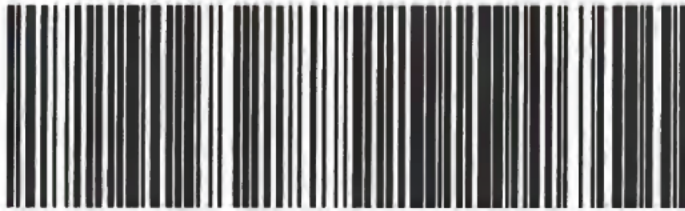


WED - 12 OCT 10:30A
PRIORITY OVERNIGHT

TRK# 7701 7719 7634
0201

WZ WHPA

91016
CA-US BUR



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Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.



INTERNAL CHAIN OF CUSTODY RECORD

EEA Folder Number: _____

SAMPLE TEMP RECEIVED:

Note: If samples are out of temperature range, let the ASMs know. ASMs will determine whether to proceed with analysis or not.

SAMPLES REC'D DAY OF COLLECTION? Yes / No

IR Gun ID = 401 (Observation = 0.6 °C) (Corr. Factor = -0.1 °C) (Final = 0.5 °C)

TYPE OF ICE: Real _____ Synthetic X No Ice _____ CONDITION OF ICE: Frozen X Partially Frozen _____ Thawed _____ N/A _____

METHOD OF SHIPMENT: Pick-Up / Walk-In / FedEx / UPS / DHL / Area Fast / Top Line / Other: _____

Compliance Acceptance Criteria:

- 1) Chemistry: >0, ≤6°C, not frozen (NELAP) (if received after 24 hrs of sample collection)
- 2) Microbiology, Distribution: < 10°C, not frozen (can be ≥10°C if received on ice the same day as sample collection, within 8 hours)
- 3) Microbiology, Surface Water: < 10°C (if received after 2 hours of sample collection)

If out of temperature range for both Chemistry and Microbiology samples and temperature does not confirm, then measure the temperature of each quadrant and record each temperature of the quadrants

| | |
|---|---|
| 1 = (Observation = _____ °C) (Corr. Factor = _____ °C) (Final = _____ °C) | 2 = (Observation = _____ °C) (Corr. Factor = _____ °C) (Final = _____ °C) |
| 3 = (Observation = _____ °C) (Corr. Factor = _____ °C) (Final = _____ °C) | 4 = (Observation = _____ °C) (Corr. Factor = _____ °C) (Final = _____ °C) |

4 Dioxin (1813 or 2,3,7,8 TCDD): must be between 0-4 °C, not frozen (if received after 24 hrs of sample collection)

5) pH Check, Manufacturer: _____ Lot Number: _____ pH strip type: 0 - 14 or _____ Expiration Date _____ Results: _____

6) Chlorine check, Manufacturer: Sansafe, Lot No.: _____ Expiration Date: _____ Results _____

7) VOA and Radon Headspace:

No Samples with Headspace:

Samples with Headspace (see below):

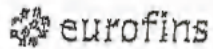
Headspace Documentation (use additional VOC and Radon Internal COFC for additional bottles)

Exempt from headspace concerns: Methods 816.4, HAA(8251, 862), 506, 8PME, @CH, 532LCMS, 558, 538, Anatoxin, LCMS methods using 40 ml vials, International clients:

| Samp ID | Bottle # | None/<8 mm | >8mm | Test | Samp ID | Bottle # | None/<8 mm | >8mm | Test | Samp ID | Bottle # | None/<8 mm | >8mm | Test | Samp ID | Bottle # | None/<8 mm | >8mm | Test | |
|---------|----------|------------|------|------|---------|----------|------------|------|------|---------|----------|------------|------|------|---------|----------|------------|------|------|--|
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Note Sample IDs which have dissimilar headspace (i.e. potential sampling errors): _____

| SIGNATURE | PRINT NAME | COMPANY/TITLE | DATE | TIME |
|---------------------|---------------------|----------------------------------|-------------------|--------------|
| <u>Chris Broach</u> | <u>Chris Broach</u> | <u>Euroline Eaton Analytical</u> | <u>10-12-22</u> | <u>1000</u> |
| SIGNATURE | PRINT NAME | COMPANY/TITLE | DATE | TIME |
| <u>[Signature]</u> | <u>G. REITNER</u> | <u>Euroline Eaton Analytical</u> | <u>10/12/2022</u> | <u>13:42</u> |



Eaton Analytical

INTERNAL CHAIN OF CUSTODY RECORD

EEA Folder Number: _____

SAMPLE TEMP RECEIVED:

Notes: If samples are out of temperature range, let the ASMs know, ASMs will determine whether to proceed with analysis or not.

SAMPLES REC'D DAY OF COLLECTION? Yes / No

IR Gun ID = 750 A (Observation = 25 °C) (Corr. Factor -0.1 °C) (Final = 2.4 °C)

TYPE OF ICE: Real _____ Synthetic No Ice _____ CONDITION OF ICE: Frozen Partially Frozen _____ Thawed _____ N/A _____

METHOD OF SHIPMENT: Pick-Up / Walk-in / FedEx UPS / DHL / Area Fast / Top Line / Other: _____

Compliance Acceptance Criteria: 7701 7719 7634

- 1) Chemistry: >0, ≤ 8 °C, not frozen (NELAP) (if received after 24 hrs of sample collection)
- 2) Microbiology, Distribution: < 10 °C, not frozen (can be ≥ 10 °C if received on ice the same day as sample collection, within 8 hours)
- 3) Microbiology, Surface Water: < 10 °C (if received after 2 hours of sample collection)

If out of temperature range for both Chemistry and Microbiology samples and temperature does not confirm, then measure the temperature of each quadrant and record each temperature of the quadrants

| | |
|---|---|
| 1 = (Observation = _____ °C) (Corr. Factor _____ °C) (Final = _____ °C) | 2 = (Observation = _____ °C) (Corr. Factor _____ °C) (Final = _____ °C) |
| 3 = (Observation = _____ °C) (Corr. Factor _____ °C) (Final = _____ °C) | 4 = (Observation = _____ °C) (Corr. Factor _____ °C) (Final = _____ °C) |

4 Dioxin (1613 or 2,3,7,8 TCDD): must be between 0-4 °C, not frozen (if received after 24 hrs of sample collection)

5) pH Check, Manufacturer: _____ Lot Number: _____ pH strip type: 0 - 14 or _____ Expiration Date _____ Results: _____

6) Chlorine check, Manufacturer: Sansafe. Lot No.: _____ Expiration Date: _____ Results: _____

7) VOA and Radon Headspace: No Samples with Headspace: Samples with Headspace (see below):

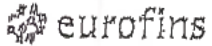
Headspace Documentation (use additional VOG and Radon Internal COFC for additional bottles)

Exempt from headspace concerns: Methods 816.4, HAA(8261,862), 806, 8PME, @CH, 832LCMS, 858, 838, Anatoxin, LCMS methods using 40 ml vials, International clients:

| Samp ID | Bottle # | None/<8 mm | >8mm | Test | Samp ID | Bottle # | None/<8 mm | >8mm | Test | Samp ID | Bottle # | None/<8 mm | >8mm | Test | Samp ID | Bottle # | None/<8 mm | >8mm | Test | |
|---------|----------|------------|------|------|---------|----------|------------|------|------|---------|----------|------------|------|------|---------|----------|------------|------|------|--|
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Note Sample IDs which have dissimilar headspace (i.e. potential sampling errors): _____

| SIGNATURE | PRINT NAME | COMPANY/TITLE | DATE | TIME |
|-----------|---------------------|---------------------------|-------------------|--------------|
| | <u>Samuel D. In</u> | Eurofins Eaton Analytical | <u>10/12/22</u> | <u>1000</u> |
| SIGNATURE | PRINT NAME | COMPANY/TITLE | DATE | TIME |
| | <u>G. REITNER</u> | Eurofins Eaton Analytical | <u>10/12/2022</u> | <u>13:42</u> |



Eaton Analytical

INTERNAL CHAIN OF CUSTODY RECORD

EEA Folder Number: _____

SAMPLE TEMP RECEIVED:

Notes: If sampler is out of temperature range, let the ASMs know. ASMs will determine whether to proceed with analysis or not.

SAMPLES REC'D DAY OF COLLECTION? Yes / No

IR Gun ID = 630 (Observation = 4.8 °C) (Corr. Factor -0.1 °C) (Final = 4.7 °C)

TYPE OF ICE: Real _____ Synthetic No Ice _____ CONDITION OF ICE: Frozen Partially Frozen _____ Thawed _____ N/A _____

METHOD OF SHIPMENT: Pick-Up / Walk-In / FedEx / UPS / DHL / Area Fast / Top Line / Other: _____

Compliance Acceptance Criteria:

- 1) Chemistry: >0, ≤ 6°C, not frozen (NELAP) (if received after 24 hrs of sample collection)
- 2) Microbiology, Distribution: < 10°C, not frozen (can be ≥ 10°C if received on ice the same day as sample collection, within 8 hours)
- 3) Microbiology, Surface Water: < 10°C (if received after 2 hours of sample collection)

If out of temperature range for both Chemistry and Microbiology samples and temperature does not confirm, then measure the temperature of each quadrant and record each temperature of the quadrant

| | |
|---|---|
| 1 = (Observation = _____ °C) (Corr. Factor _____ °C) (Final = _____ °C) | 2 = (Observation = _____ °C) (Corr. Factor _____ °C) (Final = _____ °C) |
| 3 = (Observation = _____ °C) (Corr. Factor _____ °C) (Final = _____ °C) | 4 = (Observation = _____ °C) (Corr. Factor _____ °C) (Final = _____ °C) |

4 Dioxin (1613 or 2,3,7,8 TCDD): must be between 0-4 °C, not frozen (if received after 24 hrs of sample collection)

5) pH Check, Manufacturer: _____ Lot Number: _____ pH strip type: 0 - 14 or _____ Expiration Date _____ Results: _____

6) Chlorine check, Manufacturer: Sansafe, Lot No.: _____ Expiration Date: _____ Results: _____

7) VOA and Radon Headspace: No Samples with Headspace: Samples with Headspace (see below): *N/A: all less than 8 mm M.E.*

Headspace Documentation (use additional VOC and Radon Internal COFC for additional bottles)

Exempt from headspace concerns: Methods 815.4, HAA(8281,882), 805, SPME, @OH, 832LCMS, 858, 838, Anatoxin, LCMS methods using 40 ml vials, International clients:

| Samp ID | Bottle # | None/<8 mm | >8mm | Test | Samp ID | Bottle # | None/<8 mm | >8mm | Test | Samp ID | Bottle # | None/<8 mm | >8mm | Test | Samp ID | Bottle # | None/<8 mm | >8mm | Test | |
|---------|----------|------------|------|------|---------|----------|------------|------|------|---------|----------|------------|------|------|---------|----------|------------|------|------|--|
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Note Sample IDs which have dissimilar headspace (i.e. potential sampling errors): _____

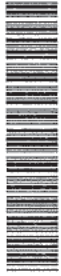
| | | | | | | | | | |
|--|-----------|-------------------------------|------------|---|---------------|-------------------------|------|--------------------|------|
| RECEIVED BY: <u>[Signature]</u> | SIGNATURE | PRINT NAME: <u>Ryan Scrum</u> | PRINT NAME | COMPANY/TITLE: <u>Eurofins Eaton Analytical</u> | COMPANY/TITLE | DATE: <u>10/12/22</u> | DATE | TIME: <u>1000</u> | TIME |
| SAMPLES CHECKED AGAINST COC BY: <u>[Signature]</u> | SIGNATURE | PRINT NAME: <u>G. REITNER</u> | PRINT NAME | COMPANY/TITLE: <u>Eurofins Eaton Analytical</u> | COMPANY/TITLE | DATE: <u>10/12/2022</u> | DATE | TIME: <u>13:42</u> | TIME |

Monrovia, CA (Suite 100)
 750 Royal Oaks Drive Suite 100
 Monrovia, CA 91016
 Phone: 626-386-1100

Chain of Custody Record



Environment Testing
 America



| | | | | | | | |
|--|--|--|--|--|--|---|--|
| Client Information (Sub Contract Lab) | | Lab PM Arada Rachelle | | Carrier Tracking No(s) | | COC No: 380-24009-1 | |
| Client Contact: Shipping/Receiving | | E-Mail: Rachelle.Arada@et.eurofins.com | | State of Origin Hawaii | | Page: Page 1 of 1 | |
| Company: Eurofins Environment Testing Southwest, | | Address: 2841 Dow Avenue Suite 100 Tustin State Zip: CA, 92780 | | Accreditations Required (see note) State - Hawaii | | Job #: 380-24009-1 | |
| Phone: 714-895-5494(Tel) | | City: Tustin | | Due Date Requested: 11/1/2022 | | Preservation Codes M - Hexane N - None O - AsN8O2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify) | |
| Email: | | TAT Requested (days) | | Field Filtered Sample (Yes or No) | | Total Number of containers | |
| Project #: RED-HILL | | PO #: | | Perform MS/MSD (Yes or No) | | Special Instructions/Note: | |
| Site: Honolulu BWS Sites | | WO #: | | 245-1/245-1 Prep | | 1 | |
| Sample Identification - Client ID (Lab ID) | | Sample Date | | Field Filtered Sample (Yes or No) | | Special Instructions/Note: | |
| HALAWA WELLS UNITS 1 (331-023) (380-24009-1) | | 10/11/22 | | X | | 1 | |
| Sample Type (C=Comp, G=grab) | | Sample Time | | Field Filtered Sample (Yes or No) | | Special Instructions/Note: | |
| Matrix (W=water, S=solid, O=organic, S=Inert, A=Air) | | 10:12 Hawaiian | | X | | 1 | |
| Sample Date | | Sample Time | | Field Filtered Sample (Yes or No) | | Special Instructions/Note: | |
| 10/11/22 | | 10:12 Hawaiian | | X | | 1 | |
| Sample Date | | Sample Time | | Field Filtered Sample (Yes or No) | | Special Instructions/Note: | |
| 10/11/22 | | 10:12 Hawaiian | | X | | 1 | |

Note: Since laboratory accreditations are subject to change Eurofins Eaton Analytical LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis, the samples must be shipped back to the Eurofins Eaton Analytical LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to Eurofins Eaton Analytical LLC.

Possible Hazard Identification
 Return To Client Disposal By Lab Archive For _____ Months

Unconfirmed
 Deliverable Requested I, II, III, IV, Other (specify) _____
 Primary Deliverable Rank: 2

Empty Kit Relinquished by: _____
 Relinquished by: *SM* Date: 10/13/22 Company: *EEA*
 Relinquished by: _____ Date: 11/30/22 Company: *EEA*
 Relinquished by: _____ Date: _____ Company: _____

Custody Seals Intact: _____
 Δ Yes Δ No

Cooler Temperature(s) °C and Other Remarks: 12/1.0, 16/1.4, 21.1



Monrovia, CA (Suite 100)

750 Royal Oaks Drive Suite 100
 Monrovia, CA 91016
 Phone: 626-386-1100

Chain of Custody Record



Environment Testing
 America

| | | | | | | | | | | |
|--|-------------------------------------|---|--------------------------------|-------------------------------------|---|-----------------------------------|----------------------------|----------------------------|--|----------|
| Client Information (Sub Contract Lab) | | Sampler: | Arada, Rachelle | Lab P/N: | | Carrier Tracking No(s): | | COC No: | 390-24093-1 | |
| Client Contact: | | Phone: | Rachelle.Arada@et.eurofins.com | E-Mail: | | State of Origin: | Hawaii | Page: | Page 1 of 1 | |
| Shipping/Receiving: | | Company: | Eurofins Eaton Analytical | Accreditations Required (See note): | State - Hawaii | Job #: | 390-24093-1 | Preservation Codes: | A - HCL B - NaOH M - Hexane N - None O - AsH ₂ O P - Na ₂ OAS Q - Na ₂ SO ₃ R - Na ₂ SO ₃ S - H ₂ SO ₄ T - TSP Dodecylalate U - Acetone V - MCAA W - pH 4.5 X - EDTA Y - Trizma Z - other (specify) | |
| Address: | 110 S Hill Street, | Due Date Requested: | 11/1/2022 | Analysis Requested | | | | | | |
| City: | South Bend | TAT Requested (days): | | | | | | | | |
| State, Zip: | IN, 46617 | PO #: | | | | | | | | |
| Phone: | 574-233-4777(Tel) 574-233-8207(Fax) | WC #: | | | | | | | | |
| Email: | | Project #: | 38001111 | | | | | | | |
| Project Name: | RED-HILL | SSOWN#: | | | | | | | | |
| Site: | Honolulu BWS Sites | | | | | | | | | |
| Sample Identification - Client ID (Lab ID) | | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (Water, Sediment, Organic, etc.) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | Total Number of Containers | Special Instructions/Note: | |
| HALAWA WELLS UNITS 1 (331-023) (380-24009-1) | | 10/11/22 | 10:12 | Water | Water | X | X | 3 | | |
| TB: HALAWA WELLS UNITS 1 (380-24009-2) | | 10/11/22 | 10:12 | Water | Water | X | X | 2 | | |
| <p>Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/matrix being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Eaton Analytical, LLC</p> | | | | | | | | | | |
| Possible Hazard Identification | | | | | | | | | | |
| Deliverable Requested: I, II, III, IV, Other (specify) | | | | | Primary Deliverable Rank: 2 | | | | | |
| <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months | | | | | | | | | | |
| Empty Kit Relinquished by: | | Date: | | | | | | | | |
| Relinquished by: | | Date/Time: | 10-13-22 | 8:45 | Company: | EEA | Received by: | Phung Parkhig | Date/Time: | 10/14/22 |
| Relinquished by: | | Date/Time: | | | Company: | | Received by: | | Date/Time: | |
| Relinquished by: | | Date/Time: | | | Company: | | Received by: | | Date/Time: | |
| Custody Seal Label: | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: | | | | | | | | |
| A Yes A No | | A Yes A No | | | | | | | | |

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-24009-1

Login Number: 24009

List Number: 1

Creator: Elyas, Matthew

List Source: Eurofins Eaton Monrovia

| Question | Answer | Comment |
|--|--------|---------|
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Samples do not require splitting or compositing. | True | |
| Container provided by EEA | True | |

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-24009-1

Login Number: 24009
List Number: 2
Creator: Ornelas, Olga

List Source: Eurofins Calscience
List Creation: 10/13/22 04:57 PM

| Question | Answer | Comment |
|--|--------|------------------------------------|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | N/A | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | Not Present |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | N/A | Received project as a subcontract. |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | N/A | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |