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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Erwin Kawata
City & County of Honolulu
630 South Beretania Street
Public Service Bldg. Room 310
Honolulu, Hawaii 96843

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JOB DESCRIPTION

RED-HILL

JOB NUMBER

380-44256-1

Eurofins Eaton Analytical Pomona

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Eaton Analytical, LLC Project Manager.

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
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Definitions/Glossary

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

Job ID: 380-44256-1

Qualifiers

GC/MS VOA

| Qualifier | Qualifier Description |
|-----------|--|
| *+ | LCS and/or LCSD is outside acceptance limits, high biased. |
| ^3- | Reporting Limit Check Standard is outside acceptance limits, low biased. |
| ^3+ | Reporting Limit Check Standard is outside acceptance limits, high biased. |
| 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 |
|-----------|---|
| ^3+ | Reporting Limit Check Standard is outside acceptance limits, high biased. |
| B | Analyte was found in the associated method blank. |
| 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 |
|-----------|--|
| *- | LCS and/or LCSD is outside acceptance limits, low biased. |
| *+ | LCS and/or LCSD is outside acceptance limits, high biased. |
| B | Analyte was found in the associated method blank. |
| 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 |
|-----------|--|
| *3 | ISTD response or retention time outside acceptable limits. |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

HPLC/IC

| Qualifier | Qualifier Description |
|-----------|--|
| ^2 | Cal bration Blank (ICB and/or CCB) is outside acceptance limits. |
| E | Result exceeded calibration range. |
| 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. |

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 |
|-----------|--|
| ^2 | Cal bration Blank (ICB and/or CCB) is outside acceptance limits. |
| 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 |

Definitions/Glossary

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

Job ID: 380-44256-1

Glossary (Continued)

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|----------------|---|
| 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) |
| 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: 380-44256-1

Job ID: 380-44256-1

Laboratory: Eurofins Eaton Analytical Pomona

Narrative

Job Narrative 380-44256-1

Comments

No additional comments.

Receipt

The samples were received on 4/19/2023 10:15 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 8 coolers at receipt time were 2.2° C, 3.6° C, 3.9° C, 3.9° C, 4.8° C, 4.9° C, 5.4° C and 5.6° C.

Receipt Exceptions

Method Subcontract: One or more containers for the following sample was received broken or leaking: HALAWA WELLS UNITS 1 (380-44256-1). 1 of 3 VOA VIAL 40ml - sodiumthio w/HCL-dropper received broken.

Method 504.1: One or more containers for the following sample was received broken or leaking: HALAWA WELLS UNITS 1 (380-44256-1). 1 of 3 accidentally broken in lab.

Methods 245.1, 505: The following sample was listed on the Chain of Custody (COC); however, no sample was received: HALAWA WELLS UNITS 1 (380-44256-1).

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 LL: The low level laboratory control sample (LLCS) for preparation batch 810-57414 and analytical batch 810-57529 recovered outside control limits (50-150%) for the following analytes: Alachlor @ 162%, Di (2-ethylhexyl)phthalate @ 598%, Bromacil @ 189%, Butachlor @ 167%, Butylbenzylphthalate @ 277%, Chlorobenzilate @ 178%, Chlorothalonil @ 152%, Di(2-ethylhexyl)adipate @ 173%, Diethylphthalate @ 187%, Dimethylphthalate @ 192%, Di-n-butyl phthalate @ 1367%, Di-n-octyl phthalate @ 224%, Isophorone @ 251%, Pendimethalin @ 270%, Simazine @ 211%, Terbacil @ 242%, and Trifluralin @ 159%. The spike amount is 20% or less of the respective reporting limits. These analytes were biased high in the LLCS and were not detected in the associated samples; therefore, the data have been reported.

Method 525.2 LL: The method blank associated with preparation batch 810-57414 and analytical batch 810-57529 contained Di-n-butyl phthalate @ 0.186 ug/L, greater than one-third the reporting limit (RL - 0.1 ug/L). The result for this analyte was less than the reporting limit in the associated samples.

Method 525.2 LL: The low level laboratory control sample (LLCS) for preparation batch 810-57414 and analytical batch 810-57529 recovered outside control limits (50-150%) for the following analytes: Chloroneb @ 0%, Endosulfan I @ 0%, Endosulfan II @ 0%, Ethyl Parathion @ 0%, and Malathion @ 0%. The spike amount is 20% or less of the respective reporting limits. These analytes were not detected in the LLCS and were not detected in the associated samples.

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

HPLC/IC

Method 300.0: Due to the high concentration of Chloride, the matrix spike / matrix spike duplicate (MS/MSD) for analytical batch 380-37378 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

Method 300.0: The continuing calibration blank (CCB) for analytical batch 380-37378 contained Sulfate above the method detection limit (MDL), but below the reporting limit (RL). 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.

Method 300.0: Due to the high concentration of Sulfate, the matrix spike / matrix spike duplicate (MS/MSD) for analytical batch 380-37378 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

Case Narrative

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

Job ID: 380-44256-1

Job ID: 380-44256-1 (Continued)

Laboratory: Eurofins Eaton Analytical Pomona (Continued)

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

GC Semi VOA

Method 505: Internal standard (ISTD) response at 266% for the following sample was outside acceptance limits of 50-150%: HALAWA WELLS UNITS 1 (380-44256-1). The hexane extraction solution(505 Ext Soln_00051) used to extract this prep batch was spiked with an Internal standard concentration of 0.0084 ug/L instead of the target 0.0035 ug/L. The analyte targets in all QC quantitated correctly and within range when adjusted for the corrected IS amount however the ISTD amount failed high against the previous ISTD calibration. An internal standard is not required by the EPA 505 method. Sample results are not affected. Samples are out of hold time and cannot be re-extracted.

Method 505: Internal standard (ISTD) response at 243% for the following sample was outside of acceptance limits of 50-150% : (LLCS 810-57403/2-A). The hexane extraction solution(505 Ext Soln_00051) used to extract this prep batch was spiked with an Internal standard concentration of 0.0084 ug/L instead of the target 0.0035 ug/L. The analyte targets in all QC quantitated correctly and within range when adjusted for the corrected IS amount however the ISTD amount failed high against the previous ISTD calibration. An internal standard is not required by the EPA 505 method. Sample results are not affected. Samples are out of hold time and cannot be re-extracted.

Method 505: Internal standard (ISTD) response at 246% for the following sample was outside of acceptance limits of 50-150%: (LLCS 810-57403/3-A). The hexane extraction solution(505 Ext Soln_00051) used to extract this prep batch was spiked with an Internal standard concentration of 0.0084 ug/L instead of the target 0.0035 ug/L. The analyte targets in all QC quantitated correctly and within range when adjusted for the corrected IS amount however the ISTD amount failed high against the previous ISTD calibration. An internal standard is not required by the EPA 505 method. Sample results are not affected. Samples are out of hold time and cannot be re-extracted.

Method 505: Internal standard (ISTD) response at 242% for the following sample was outside of acceptance limits of 50-150%: (CCV 810-57403/4-A). The hexane extraction solution(505 Ext Soln_00051) used to extract this prep batch was spiked with an Internal standard concentration of 0.0084 ug/L instead of the target 0.0035 ug/L. The analyte targets in all QC quantitated correctly and within range when adjusted for the corrected IS amount however the ISTD amount failed high against the previous ISTD calibration. An internal standard is not required by the EPA 505 method. Sample results are not affected. Samples are out of hold time and cannot be re-extracted.

Method 505: Internal standard (ISTD) response at 245% for the following sample was outside of acceptance limits of 50-150%: (MB 810-57403/1-A). The hexane extraction solution(505 Ext Soln_00051) used to extract this prep batch was spiked with an Internal standard concentration of 0.0084 ug/L instead of the target 0.0035 ug/L. The analyte targets in all QC quantitated correctly and within range when adjusted for the corrected IS amount however the ISTD amount failed high against the previous ISTD calibration. An internal standard is not required by the EPA 505 method. Sample results are not affected. Samples are out of hold time and cannot be re-extracted.

Method 505: Internal standard (ISTD) response at 258% for the following sample was outside acceptance limits of 50-150%: (CCV 810-57403/5-A). The hexane extraction solution(505 Ext Soln_00051) used to extract this prep batch was spiked with an Internal standard concentration of 0.0084 ug/L instead of the target 0.0035 ug/L. The analyte targets in all QC quantitated correctly and within range when adjusted for the corrected IS amount however the ISTD amount failed high against the previous ISTD calibration. An internal standard is not required by the EPA 505 method. Sample results are not affected. Samples are out of hold time and cannot be re-extracted.

Method 505: Internal standard (ISTD) response at 248% for the following sample was outside acceptance limits of 50-150%: (CCV 810-57403/6-A). The hexane extraction solution(505 Ext Soln_00051) used to extract this prep batch was spiked with an Internal standard concentration of 0.0084 ug/L instead of the target 0.0035 ug/L. The analyte targets in all QC quantitated correctly and within range when adjusted for the corrected IS amount however the ISTD amount failed high against the previous ISTD calibration. An internal standard is not required by the EPA 505 method. Sample results are not affected. Samples are out of hold time and cannot be re-extracted.

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

Metals

Method 200.8: The continuing calibration blank (CCB) for analytical batch 380-37574 contained Silver above the reporting limit (RL). 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.

Case Narrative

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

Job ID: 380-44256-1

Job ID: 380-44256-1 (Continued)

Laboratory: Eurofins Eaton Analytical Pomona (Continued)

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 Ethanol, 8015 Gas (Purgeable) LL (EAL), 8015 LL DRO/MRO/JP5/JP8: These methods were subcontracted to EMAX Laboratories Inc. The subcontract laboratory certifications are different from that of the facility issuing the final report.

Method 625 Acid/Base/PAH + TICs: This method was subcontracted to Physis Environmental Laboratories. The subcontract laboratory certification is different from that of the facility issuing the final report.

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Detection Summary

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

Job ID: 380-44256-1

Client Sample ID: HALAWA WELLS UNITS 1

Lab Sample ID: 380-44256-1

| Analyte | Result | Qualifier | RL | Unit | Dil Fac | D | Method | Prep Type |
|---------------------------------|---------|-----------|--------|------------|---------|---|--------------------------------|-------------------|
| Dieldrin | 0.036 | | 0.0097 | ug/L | 1 | | 525.2 LL | Total/NA |
| Chlordane (technical) | 0.20 | *3 | 0.10 | ug/L | 1 | | 505 | Total/NA |
| Bromide | 730 | | 25 | ug/L | 5 | | 300.0 | Total/NA |
| Chloride | 200 | | 2.5 | mg/L | 5 | | 300.0 | Total/NA |
| Nitrate as N | 1.7 | | 0.25 | mg/L | 5 | | 300.0 | Total/NA |
| Sulfate | 44 | ^2 | 1.3 | mg/L | 5 | | 300.0 | Total/NA |
| Calcium | 38 | | 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 | 4.1 | | 1.0 | mg/L | 1 | | 200.7 Rev 4.4 | Total/NA |
| Sodium | 73 | | 1.0 | mg/L | 1 | | 200.7 Rev 4.4 | Total/NA |
| Chromium | 2.1 | | 1.0 | ug/L | 1 | | 200.8 | Total Recoverable |
| A kalinity | 65 | | 2.0 | mg/L | 1 | | SM 2320B | Total/NA |
| Bicarbonate Alkalinity as CaCO3 | 65 | ^2 | 2.0 | mg/L | 1 | | SM 2320B | Total/NA |
| Specific Conductance | 860 | | 2.0 | umhos/cm | 1 | | SM 2510B | Total/NA |
| Total Dissolved Solids | 500 | | 20 | mg/L | 1 | | SM 2540C | Total/NA |
| pH | 7.8 | HF | | SU | 1 | | SM 4500 H+ B | Total/NA |
| Benzoic Acid | 0.414 | | 0.2 | 0.1 ug/L | 1 | | 625 Acid/Base/PAH + TICs | Total/NA |
| Naphthalene | 0.00525 | | 0.005 | 0.001 ug/L | 1 | | 625 Acid/Base/PAH + TICs | Total/NA |

Client Sample ID: TB: HALAWA WELLS UNITS 1

Lab Sample ID: 380-44256-2

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-44256-1

Client Sample ID: HALAWA WELLS UNITS 1

Lab Sample ID: 380-44256-1

Date Collected: 04/18/23 10:15

Matrix: Drinking Water

Date Received: 04/19/23 10:15

Method: EPA-DW 524.2 - Total Trihalomethanes

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|--------|-----------|------|------|---|----------|----------------|---------|
| Trihalomethanes, Total | ND | | 0.50 | ug/L | | | 04/28/23 12:50 | 1 |

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 | | | 04/27/23 18:30 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| Toluene-d8 (Surr) | 97 | | 70 - 130 | | 04/27/23 18:30 | 1 |
| 4-Bromofluorobenzene (Surr) | 107 | | 70 - 130 | | 04/27/23 18:30 | 1 |
| 1,2-Dichloroethane-d4 (Surr) | 102 | | 70 - 130 | | 04/27/23 18:30 | 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 | | | 04/26/23 13:55 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| 1,1,1,2,2-Tetrachloroethane | ND | *+ | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| 1,1,1,2-Trichloroethane | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| 1,1-Dichloroethylene | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| 1,1-Dichloroethane | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| 1,2,3-Trichloropropane | ND | *+ | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| 1,2,4-Trimethy benzene | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| 1,3,5-Trimethy benzene | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| 1,3-Dichloropropene, Total | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| 2-Butanone (MEK) | ND | | 5.0 | ug/L | | | 04/26/23 13:55 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 5.0 | ug/L | | | 04/26/23 13:55 | 1 |
| Acetone | ND | ^3+ *+ | 500 | ug/L | | | 04/26/23 13:55 | 1 |
| Benzene | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| Bromobenzene | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| Bromochloromethane | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| Bromodichloromethane | ND | *+ | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| Bromoethane | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| Bromoform | ND | *+ | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| Bromomethane (Methyl Bromide) | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| Carbon disulfide | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| Carbon tetrachloride | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| Chlorobenzene | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| Chlorodibromomethane | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| Chloroethane | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| Chloroform (Trichloromethane) | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| Chloromethane (methyl chloride) | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| cis-1,2-Dichloroethylene | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| Dibromomethane | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-44256-1

Client Sample ID: HALAWA WELLS UNITS 1

Lab Sample ID: 380-44256-1

Date Collected: 04/18/23 10:15

Matrix: Drinking Water

Date Received: 04/19/23 10:15

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------------------------------|--------|-----------|------|------|---|----------|----------------|---------|
| Dichlorodifluoromethane | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| Dichloromethane | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| Diisopropyl ether | ND | | 3.0 | ug/L | | | 04/26/23 13:55 | 1 |
| Ethylbenzene | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| Isopropyl benzene | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| m,p-Xylenes | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| m-Dichlorobenzene (1,3-DCB) | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| Methyl-tert-butyl Ether (MTBE) | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| Naphthalene | ND | ^3- | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| n-Butylbenzene | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| N-Propylbenzene | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| o-Chlorotoluene | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| o-Dichlorobenzene (1,2-DCB) | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| o-Xylene | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| p-Chlorotoluene | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| p-Dichlorobenzene (1,4-DCB) | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| p-Isopropyltoluene | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| sec-Butylbenzene | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| Styrene | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| Tert-amyl methyl ether | ND | | 3.0 | ug/L | | | 04/26/23 13:55 | 1 |
| Tert-butyl ethyl ether | ND | | 3.0 | ug/L | | | 04/26/23 13:55 | 1 |
| tert-Butylbenzene | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| Tetrachloroethene (PCE) | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| Toluene | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| trans-1,2-Dichloroethylene | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| Trichloroethylene (TCE) | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| Trichlorofluoromethane (Freon 11) | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| Trichlorotrifluoroethane | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |
| Vinyl Chloride (VC) | ND | | 0.30 | ug/L | | | 04/26/23 13:55 | 1 |
| Xylenes, Total | ND | | 0.50 | ug/L | | | 04/26/23 13:55 | 1 |

| Tentatively Identified Compound | Est. Result | Qualifier | Unit | D | RT | CAS No. | Prepared | Analyzed | Dil Fac |
|---------------------------------|-------------|-----------|------|---|----|---------|----------|----------------|---------|
| Tentatively Identified Compound | None | | ug/L | | | N/A | | 04/26/23 13:55 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 104 | | 70 - 130 | | 04/26/23 13:55 | 1 |
| 4-Bromofluorobenzene (Surr) | 107 | | 70 - 130 | | 04/26/23 13:55 | 1 |
| Toluene-d8 (Surr) | 90 | | 70 - 130 | | 04/26/23 13:55 | 1 |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------|--------------|-----------|--------|------|---|----------------|----------------|---------|
| Alachlor | ND | *+ | 0.049 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Benzo[a]anthracene | ND | | 0.049 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Aldrin | ND | | 0.0097 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Benzo[b]fluoranthene | ND | | 0.019 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Benzo[k]fluoranthene | ND | | 0.019 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Dieldrin | 0.036 | | 0.0097 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Benzo[a]pyrene | ND | | 0.019 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-44256-1

Client Sample ID: HALAWA WELLS UNITS 1

Lab Sample ID: 380-44256-1

Date Collected: 04/18/23 10:15

Matrix: Drinking Water

Date Received: 04/19/23 10:15

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------------|--------|-----------|--------|------|---|----------------|----------------|---------|
| Endrin | ND | | 0.0097 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Benzo[g,h,i]perylene | ND | | 0.049 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Heptachlor | ND | | 0.0097 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Butylbenzylphthalate | ND | *+ | 0.49 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Heptachlor epoxide | ND | | 0.0097 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Methoxychlor | ND | | 0.049 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| gamma-BHC (Lindane) | ND | | 0.0097 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Acenaphthylene | ND | | 0.097 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Atrazine | ND | | 0.049 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Chlorobenzilate | ND | *+ | 0.097 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| trans-Nonachlor | ND | | 0.049 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| alpha-Chlordane | ND | | 0.049 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| gamma-Chlordane | ND | | 0.049 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Butachlor | ND | *+ | 0.049 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Bromacil | ND | *+ | 0.097 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Chlorothalonil | ND | *+ | 0.097 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Chlorpyrifos | ND | | 0.049 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| 4,4'-DDD | ND | | 0.097 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| 4,4'-DDT | ND | | 0.097 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Di-n-butyl phthalate | ND | *+ B | 0.097 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Dichlorvos | ND | | 0.049 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Diethylphthalate | ND | *+ | 0.49 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Di(2-ethylhexyl)adipate | ND | *+ | 0.58 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Di (2-ethylhexyl)phthalate | ND | *+ | 0.58 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Dimethylphthalate | ND | *+ | 0.49 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Endosulfan I | ND | *- | 0.097 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Endosulfan II | ND | *- | 0.097 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Endosulfan sulfate | ND | | 0.097 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Endrin aldehyde | ND | | 0.097 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Hexachlorobenzene | ND | | 0.049 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| alpha-BHC | ND | | 0.097 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| beta-BHC | ND | | 0.097 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| delta-BHC | ND | | 0.097 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Hexachlorocyclopentadiene | ND | | 0.049 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.049 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Isophorone | ND | *+ | 0.097 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Metolachlor | ND | | 0.049 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Molinate | ND | | 0.097 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Propachlor | ND | | 0.049 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Simazine | ND | *+ | 0.049 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Terbacil | ND | *+ | 0.097 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Trifluralin | ND | *+ | 0.097 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Chloroneb | ND | *- | 0.097 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Fluoranthene | ND | | 0.097 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Thiobencarb | ND | | 0.097 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Parathion | ND | *- | 0.097 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Di-n-octyl phthalate | ND | *+ | 0.097 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Malathion | ND | *- | 0.097 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |
| Pendimethalin | ND | *+ | 0.097 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 |

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-44256-1

Client Sample ID: HALAWA WELLS UNITS 1

Lab Sample ID: 380-44256-1

Date Collected: 04/18/23 10:15

Matrix: Drinking Water

Date Received: 04/19/23 10:15

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac | |
|--|--------------------|------------------|-----------------|----------|-----------|-----------------------|-----------------------|-----------------------|----------------|
| Terbutylazine | ND | | 0.097 | ug/L | | 05/02/23 08:16 | 05/03/23 00:17 | 1 | |
| <i>Tentatively Identified Compound</i> | <i>Est. Result</i> | <i>Qualifier</i> | <i>Unit</i> | <i>D</i> | <i>RT</i> | <i>CAS No.</i> | <i>Prepared</i> | <i>Analyzed</i> | <i>Dil Fac</i> |
| <i>Tentatively Identified Compound</i> | <i>None</i> | | <i>ug/L</i> | | | <i>N/A</i> | <i>05/02/23 08:16</i> | <i>05/03/23 00:17</i> | <i>1</i> |
| <i>Surrogate</i> | <i>%Recovery</i> | <i>Qualifier</i> | <i>Limits</i> | | | <i>Prepared</i> | <i>Analyzed</i> | <i>Dil Fac</i> | |
| <i>2-Nitro-m-xylene (Surr)</i> | <i>104</i> | | <i>70 - 130</i> | | | <i>05/02/23 08:16</i> | <i>05/03/23 00:17</i> | <i>1</i> | |
| <i>Perylene-d12 (Surr)</i> | <i>95</i> | | <i>70 - 130</i> | | | <i>05/02/23 08:16</i> | <i>05/03/23 00:17</i> | <i>1</i> | |
| <i>Triphenylphosphate (Surr)</i> | <i>105</i> | | <i>70 - 130</i> | | | <i>05/02/23 08:16</i> | <i>05/03/23 00:17</i> | <i>1</i> | |

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 | | 04/25/23 13:05 | 04/26/23 04:14 | 1 |
| 1,2-D bromo-3-Chloropropane | ND | | 0.010 | ug/L | | 04/25/23 13:05 | 04/26/23 04:14 | 1 |
| 1,2-D bromoethane | ND | | 0.010 | ug/L | | 04/25/23 13:05 | 04/26/23 04:14 | 1 |
| <i>Surrogate</i> | <i>%Recovery</i> | <i>Qualifier</i> | <i>Limits</i> | | | <i>Prepared</i> | <i>Analyzed</i> | <i>Dil Fac</i> |
| <i>1,2-Dibromopropane (Surr)</i> | <i>90</i> | | <i>60 - 140</i> | | | <i>04/25/23 13:05</i> | <i>04/26/23 04:14</i> | <i>1</i> |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------------------|-------------|-----------|-------|------|---|----------------|----------------|---------|
| PCB-1016 | ND | *3 | 0.080 | ug/L | | 05/02/23 09:25 | 05/03/23 07:00 | 1 |
| PCB-1221 | ND | *3 | 0.10 | ug/L | | 05/02/23 09:25 | 05/03/23 07:00 | 1 |
| PCB-1232 | ND | *3 | 0.10 | ug/L | | 05/02/23 09:25 | 05/03/23 07:00 | 1 |
| PCB-1242 | ND | *3 | 0.10 | ug/L | | 05/02/23 09:25 | 05/03/23 07:00 | 1 |
| PCB-1248 | ND | *3 | 0.10 | ug/L | | 05/02/23 09:25 | 05/03/23 07:00 | 1 |
| PCB-1254 | ND | *3 | 0.10 | ug/L | | 05/02/23 09:25 | 05/03/23 07:00 | 1 |
| PCB-1260 | ND | *3 | 0.10 | ug/L | | 05/02/23 09:25 | 05/03/23 07:00 | 1 |
| Chlordane (technical) | 0.20 | *3 | 0.10 | ug/L | | 05/02/23 09:25 | 05/03/23 07:00 | 1 |
| Toxaphene | ND | *3 | 0.50 | ug/L | | 05/02/23 09:25 | 05/03/23 07:00 | 1 |
| Total PCBs as DCB (Qualitative) | ND | | 0.10 | ug/L | | 05/02/23 09:25 | 05/03/23 07:00 | 1 |
| Polychlorinated biphenyls, Total | ND | | 0.10 | ug/L | | 05/02/23 09:25 | 05/03/23 07:00 | 1 |

Method: EPA 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------------|------------|-----------|------|------|---|----------|----------------|---------|
| Bromide | 730 | | 25 | ug/L | | | 04/24/23 21:47 | 5 |
| Chloride | 200 | | 2.5 | mg/L | | | 04/20/23 00:14 | 5 |
| Nitrate as N | 1.7 | | 0.25 | mg/L | | | 04/20/23 00:14 | 5 |
| Nitrite as N | ND | | 0.25 | mg/L | | | 04/20/23 00:14 | 5 |
| Sulfate | 44 | ^2 | 1.3 | mg/L | | | 04/20/23 00:14 | 5 |

Method: EPA 200.7 Rev 4.4 - Metals (ICP)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------|------------|-----------|------|------|---|----------|----------------|---------|
| Calcium | 38 | | 1.0 | mg/L | | | 04/21/23 11:00 | 1 |
| Magnesium | 34 | | 0.10 | mg/L | | | 04/21/23 11:00 | 1 |
| Potassium | 4.1 | | 1.0 | mg/L | | | 04/21/23 11:00 | 1 |
| Sodium | 73 | | 1.0 | mg/L | | | 04/21/23 11:00 | 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 | | 04/20/23 12:18 | 04/20/23 19:41 | 1 |

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-44256-1

Client Sample ID: HALAWA WELLS UNITS 1

Lab Sample ID: 380-44256-1

Date Collected: 04/18/23 10:15

Matrix: Drinking Water

Date Received: 04/19/23 10:15

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------------|------------|-----------|------|------|---|----------------|----------------|---------|
| Arsenic | ND | | 1.0 | ug/L | | 04/20/23 12:18 | 04/20/23 19:41 | 1 |
| Beryllium | ND | | 1.0 | ug/L | | 04/20/23 12:18 | 04/20/23 19:41 | 1 |
| Cadmium | ND | | 0.50 | ug/L | | 04/20/23 12:18 | 04/20/23 19:41 | 1 |
| Chromium | 2.1 | | 1.0 | ug/L | | 04/20/23 12:18 | 04/20/23 19:41 | 1 |
| Copper | ND | | 2.0 | ug/L | | 04/20/23 12:18 | 04/20/23 19:41 | 1 |
| Lead | ND | | 0.50 | ug/L | | 04/20/23 12:18 | 04/20/23 19:41 | 1 |
| Nickel | ND | | 5.0 | ug/L | | 04/20/23 12:18 | 04/20/23 19:41 | 1 |
| Selenium | ND | | 5.0 | ug/L | | 04/20/23 12:18 | 04/20/23 19:41 | 1 |
| Silver | ND | ^2 | 0.50 | ug/L | | 04/20/23 12:18 | 04/20/23 19:41 | 1 |
| Thallium | ND | | 1.0 | ug/L | | 04/20/23 12:18 | 04/20/23 19:41 | 1 |
| Zinc | ND | | 20 | ug/L | | 04/20/23 12:18 | 04/20/23 19:41 | 1 |

Method: EPA 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|--------|-----------|------|------|---|----------------|----------------|---------|
| Mercury | ND | | 0.10 | ug/L | | 04/26/23 18:55 | 04/26/23 23:11 | 1 |

General Chemistry

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|------------|-----------|-------|----------|---|----------|----------------|---------|
| Alkalinity (SM 2320B) | 65 | | 2.0 | mg/L | | | 04/24/23 22:08 | 1 |
| Bicarbonate Alkalinity as CaCO3 (SM 2320B) | 65 | ^2 | 2.0 | mg/L | | | 04/24/23 22:08 | 1 |
| Carbonate Alkalinity as CaCO3 (SM 2320B) | ND | | 2.0 | mg/L | | | 04/24/23 22:08 | 1 |
| Specific Conductance (SM 2510B) | 860 | | 2.0 | umhos/cm | | | 04/24/23 22:08 | 1 |
| Total Dissolved Solids (SM 2540C) | 500 | | 20 | mg/L | | | 04/20/23 22:26 | 1 |
| Fluoride (SM 4500 F C) | ND | | 0.050 | mg/L | | | 04/24/23 16:26 | 1 |
| pH (SM 4500 H+ B) | 7.8 | HF | | SU | | | 04/24/23 22:08 | 1 |
| Sulfide (SM 4500 S2 D) | ND | | 0.050 | mg/L | | | 04/21/23 14:25 | 1 |

Method: 625 Acid/Base/PAH + 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 | | 04/20/23 00:00 | 05/05/23 09:26 | 1 |
| 1-Methylphenanthrene | ND | | 0.005 | 0.001 | µg/L | | 04/20/23 00:00 | 05/05/23 09:26 | 1 |
| 2,3,5-Trimethylnaphthalene | ND | | 0.005 | 0.001 | µg/L | | 04/20/23 00:00 | 05/05/23 09:26 | 1 |
| 2,4,5-Trichlorophenol | ND | | 0.1 | 0.05 | µg/L | | 04/20/23 00:00 | 05/11/23 17:42 | 1 |
| 2,4,6-Trichlorophenol | ND | | 0.1 | 0.05 | µg/L | | 04/20/23 00:00 | 05/11/23 17:42 | 1 |
| 2,4-Dichlorophenol | ND | | 0.1 | 0.05 | µg/L | | 04/20/23 00:00 | 05/11/23 17:42 | 1 |
| 2,4-Dinitrophenol | ND | | 0.2 | 0.1 | µg/L | | 04/20/23 00:00 | 05/11/23 17:42 | 1 |
| 2,6-Dichlorophenol | ND | | 0.1 | 0.05 | µg/L | | 04/20/23 00:00 | 05/11/23 17:42 | 1 |
| 2,6-Dimethylnaphthalene | ND | | 0.005 | 0.001 | µg/L | | 04/20/23 00:00 | 05/05/23 09:26 | 1 |
| 2,6-Di-tert-butyl-4-methylphenol | ND | | 0.1 | 0.05 | µg/L | | 04/20/23 00:00 | 05/05/23 09:26 | 1 |
| 2,6-Di-tert-butylphenol | ND | | 0.1 | 0.05 | µg/L | | 04/20/23 00:00 | 05/05/23 09:26 | 1 |
| 2-Chloronaphthalene | ND | | 0.1 | 0.05 | µg/L | | 04/20/23 00:00 | 05/11/23 17:42 | 1 |
| 2-Chlorophenol | ND | | 0.1 | 0.05 | µg/L | | 04/20/23 00:00 | 05/11/23 17:42 | 1 |
| 2-Methyl-4,6-dinitrophenol | ND | | 0.2 | 0.1 | µg/L | | 04/20/23 00:00 | 05/11/23 17:42 | 1 |
| 2-Methylnaphthalene | ND | | 0.005 | 0.001 | µg/L | | 04/20/23 00:00 | 05/05/23 09:26 | 1 |
| 2-Methylphenol | ND | | 0.2 | 0.1 | µg/L | | 04/20/23 00:00 | 05/11/23 17:42 | 1 |
| 2-Nitroaniline | ND | | 0.1 | 0.05 | µg/L | | 04/20/23 00:00 | 05/11/23 17:42 | 1 |
| 2-Nitrophenol | ND | | 0.2 | 0.1 | µg/L | | 04/20/23 00:00 | 05/11/23 17:42 | 1 |
| 3+4-Methylphenol | ND | | 0.2 | 0.1 | µg/L | | 04/20/23 00:00 | 05/11/23 17:42 | 1 |
| 3-Nitroaniline | ND | | 0.1 | 0.05 | µg/L | | 04/20/23 00:00 | 05/11/23 17:42 | 1 |

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-44256-1

Client Sample ID: HALAWA WELLS UNITS 1

Lab Sample ID: 380-44256-1

Date Collected: 04/18/23 10:15

Matrix: Drinking Water

Date Received: 04/19/23 10:15

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------------------------|----------------|-----------|----------|-------|------|---|----------------|----------------|---------|
| 4-Bromophenylphenyl ether | ND | | 0.1 | 0.05 | µg/L | | 04/20/23 00:00 | 05/11/23 17:42 | 1 |
| 4-Chloro-3-methylphenol | ND | | 0.2 | 0.1 | µg/L | | 04/20/23 00:00 | 05/11/23 17:42 | 1 |
| 4-Chloroaniline | ND | | 0.1 | 0.05 | µg/L | | 04/20/23 00:00 | 05/11/23 17:42 | 1 |
| 4-Chlorophenylphenyl ether | ND | | 0.1 | 0.05 | µg/L | | 04/20/23 00:00 | 05/11/23 17:42 | 1 |
| 4-Nitroaniline | ND | | 0.1 | 0.05 | µg/L | | 04/20/23 00:00 | 05/11/23 17:42 | 1 |
| 4-Nitrophenol | ND | | 0.2 | 0.1 | µg/L | | 04/20/23 00:00 | 05/11/23 17:42 | 1 |
| 6-tert-butyl-2,4-dimethylphenol | ND | | 0.1 | 0.05 | µg/L | | 04/20/23 00:00 | 05/05/23 09:26 | 1 |
| Acenaphthene | ND | | 0.005 | 0.001 | µg/L | | 04/20/23 00:00 | 05/05/23 09:26 | 1 |
| Acenaphthylene | ND | | 0.005 | 0.001 | µg/L | | 04/20/23 00:00 | 05/05/23 09:26 | 1 |
| Aniline | ND | | 0.1 | 0.05 | µg/L | | 04/20/23 00:00 | 05/11/23 17:42 | 1 |
| Anthracene | ND | | 0.005 | 0.001 | µg/L | | 04/20/23 00:00 | 05/05/23 09:26 | 1 |
| Benz[a]anthracene | ND | | 0.005 | 0.001 | µg/L | | 04/20/23 00:00 | 05/05/23 09:26 | 1 |
| Benzidine | ND | | 0.1 | 0.05 | µg/L | | 04/20/23 00:00 | 05/11/23 17:42 | 1 |
| Benzo[a]pyrene | ND | | 0.005 | 0.001 | µg/L | | 04/20/23 00:00 | 05/05/23 09:26 | 1 |
| Benzo[b]fluoranthene | ND | | 0.005 | 0.001 | µg/L | | 04/20/23 00:00 | 05/05/23 09:26 | 1 |
| Benzo[e]pyrene | ND | | 0.005 | 0.001 | µg/L | | 04/20/23 00:00 | 05/05/23 09:26 | 1 |
| Benzo[g,h,i]perylene | ND | | 0.005 | 0.001 | µg/L | | 04/20/23 00:00 | 05/05/23 09:26 | 1 |
| Benzo[k]fluoranthene | ND | | 0.005 | 0.001 | µg/L | | 04/20/23 00:00 | 05/05/23 09:26 | 1 |
| Benzoic Acid | 0.414 | | 0.2 | 0.1 | µg/L | | 04/20/23 00:00 | 05/11/23 17:42 | 1 |
| Benzyl Alcohol | ND | | 0.2 | 0.1 | µg/L | | 04/20/23 00:00 | 05/11/23 17:42 | 1 |
| Biphenyl | ND | | 0.005 | 0.001 | µg/L | | 04/20/23 00:00 | 05/05/23 09:26 | 1 |
| Bis(2-Chloroethoxy) methane | ND | | 0.1 | 0.05 | µg/L | | 04/20/23 00:00 | 05/11/23 17:42 | 1 |
| Bis(2-Chloroethyl) ether | ND | | 0.1 | 0.05 | µg/L | | 04/20/23 00:00 | 05/11/23 17:42 | 1 |
| Bis(2-Chloroisopropyl) ether | ND | | 0.1 | 0.05 | µg/L | | 04/20/23 00:00 | 05/11/23 17:42 | 1 |
| Chrysene | ND | | 0.005 | 0.001 | µg/L | | 04/20/23 00:00 | 05/05/23 09:26 | 1 |
| Dibenz[a,h]anthracene | ND | | 0.005 | 0.001 | µg/L | | 04/20/23 00:00 | 05/05/23 09:26 | 1 |
| Dibenzo[a,l]pyrene | ND | | 0.005 | 0.001 | µg/L | | 04/20/23 00:00 | 05/05/23 09:26 | 1 |
| Dibenzofuran | ND | | 0.1 | 0.05 | µg/L | | 04/20/23 00:00 | 05/11/23 17:42 | 1 |
| Dibenzothiophene | ND | | 0.005 | 0.001 | µg/L | | 04/20/23 00:00 | 05/05/23 09:26 | 1 |
| Disalicylidenepropanediamine | ND | | 0.1 | 0.05 | µg/L | | 04/20/23 00:00 | 05/05/23 09:26 | 1 |
| Fluoranthene | ND | | 0.005 | 0.001 | µg/L | | 04/20/23 00:00 | 05/05/23 09:26 | 1 |
| Fluorene | ND | | 0.005 | 0.001 | µg/L | | 04/20/23 00:00 | 05/05/23 09:26 | 1 |
| Hexachloroethane | ND | | 0.1 | 0.05 | µg/L | | 04/20/23 00:00 | 05/11/23 17:42 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.005 | 0.001 | µg/L | | 04/20/23 00:00 | 05/05/23 09:26 | 1 |
| Naphthalene | 0.00525 | | 0.005 | 0.001 | µg/L | | 04/20/23 00:00 | 05/05/23 09:26 | 1 |
| Nitrobenzene | ND | | 0.1 | 0.05 | µg/L | | 04/20/23 00:00 | 05/11/23 17:42 | 1 |
| N-Nitrosodi-n-propylamine | ND | | 0.1 | 0.05 | µg/L | | 04/20/23 00:00 | 05/11/23 17:42 | 1 |
| N-Nitrosodiphenylamine | ND | | 0.1 | 0.05 | µg/L | | 04/20/23 00:00 | 05/11/23 17:42 | 1 |
| Pentachlorophenol | ND | | 0.1 | 0.05 | µg/L | | 04/20/23 00:00 | 05/11/23 17:42 | 1 |
| Perylene | ND | | 0.005 | 0.001 | µg/L | | 04/20/23 00:00 | 05/05/23 09:26 | 1 |
| Phenanthrene | ND | | 0.005 | 0.001 | µg/L | | 04/20/23 00:00 | 05/05/23 09:26 | 1 |
| Phenol | ND | | 0.2 | 0.1 | µg/L | | 04/20/23 00:00 | 05/11/23 17:42 | 1 |
| p-tert-Butylphenol | ND | | 0.1 | 0.05 | µg/L | | 04/20/23 00:00 | 05/05/23 09:26 | 1 |
| Pyrene | ND | | 0.005 | 0.001 | µg/L | | 04/20/23 00:00 | 05/05/23 09:26 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| (2,4,6-Tribromophenol) | 48 | | 31 - 143 | | | | 04/20/23 00:00 | 05/11/23 17:42 | 1 |
| (d10-Acenaphthene) | 113 | | 27 - 133 | | | | 04/20/23 00:00 | 05/05/23 09:26 | 1 |
| (d10-Phenanthrene) | 72 | | 43 - 129 | | | | 04/20/23 00:00 | 05/05/23 09:26 | 1 |
| (d12-Chrysene) | 62 | | 52 - 144 | | | | 04/20/23 00:00 | 05/05/23 09:26 | 1 |

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-44256-1

Client Sample ID: HALAWA WELLS UNITS 1

Lab Sample ID: 380-44256-1

Date Collected: 04/18/23 10:15

Matrix: Drinking Water

Date Received: 04/19/23 10:15

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

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------|-----------|-----------|----------|----------------|----------------|---------|
| (d12-Perylene) | 73 | | 36 - 161 | 04/20/23 00:00 | 05/05/23 09:26 | 1 |
| (d5-Phenol) | 17 | | 0 - 85 | 04/20/23 00:00 | 05/11/23 17:42 | 1 |
| (d8-Naphthalene) | 82 | | 25 - 125 | 04/20/23 00:00 | 05/05/23 09:26 | 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 | | | 04/21/23 14:00 | 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 | | | 04/21/23 15:02 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|--------------------|-----------|-----------|----------|----------|----------------|---------|
| BROMOFLUOROBENZENE | 89 | | 60 - 140 | | 04/21/23 15:02 | 1 |

Method: 8015 LL DRO/MRO/JP5/JP8 - 8015 - TPH DRO/ORO

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------|--------|-----------|-------|-----|------|---|----------|----------------|---------|
| DIESEL | ND | U | 0.027 | | mg/L | | | 04/28/23 16:57 | 1 |
| JP5 | ND | U | 0.053 | | mg/L | | | 04/28/23 16:57 | 1 |
| JP8 | ND | U | 0.053 | | mg/L | | | 04/28/23 16:57 | 1 |
| MOTOR OIL | ND | U | 0.053 | | mg/L | | | 04/28/23 16:57 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|--------------|-----------|-----------|----------|----------|----------------|---------|
| BROMOBENZENE | 65 | | 60 - 130 | | 04/28/23 16:57 | 1 |
| HEXACOSANE | 82 | | 60 - 130 | | 04/28/23 16:57 | 1 |

Client Sample ID: TB: HALAWA WELLS UNITS 1

Lab Sample ID: 380-44256-2

Date Collected: 04/18/23 10:15

Matrix: Water

Date Received: 04/19/23 10:15

Method: EPA-DW 524.2 - Total Trihalomethanes

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|--------|-----------|------|------|---|----------|----------------|---------|
| Trihalomethanes, Total | ND | | 0.50 | ug/L | | | 04/28/23 12:50 | 1 |

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 | | | 04/27/23 18:53 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| Toluene-d8 (Surr) | 98 | | 70 - 130 | | 04/27/23 18:53 | 1 |
| 4-Bromofluorobenzene (Surr) | 101 | | 70 - 130 | | 04/27/23 18:53 | 1 |
| 1,2-Dichloroethane-d4 (Surr) | 105 | | 70 - 130 | | 04/27/23 18:53 | 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 | | | 04/26/23 14:16 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| 1,1,1,2,2-Tetrachloroethane | ND | *+ | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| 1,1-Dichloroethane | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| 1,1-Dichlorethylene | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-44256-1

Client Sample ID: TB: HALAWA WELLS UNITS 1

Lab Sample ID: 380-44256-2

Date Collected: 04/18/23 10:15

Matrix: Water

Date Received: 04/19/23 10:15

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|--------------------------------|--------|-----------|------|------|---|----------|----------------|---------|
| 1,1-Dichloropropene | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| 1,2,3-Trichloropropane | ND | *+ | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| 1,2,4-Trimethy benzene | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| 1,3,5-Trimethy benzene | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| 2-Butanone (MEK) | ND | | 5.0 | ug/L | | | 04/26/23 14:16 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 5.0 | ug/L | | | 04/26/23 14:16 | 1 |
| Acetone | ND | ^3+ *+ | 500 | ug/L | | | 04/26/23 14:16 | 1 |
| Benzene | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| Bromobenzene | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| Bromochloromethane | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| Bromodichloromethane | ND | *+ | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| Bromoform | ND | *+ | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| Bromomethane (Methyl Bromide) | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| Carbon disulfide | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| Carbon tetrachloride | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| Chlorobenzene | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| Chlorodibromomethane | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| Chloroethane | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| Chloroform (Trichloromethane) | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| Dichloromethane | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| cis-1,2-Dichloroethylene | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| Dibromomethane | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| Dichlorodifluoromethane | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| Ethylbenzene | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| Isopropy benzene | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| m,p-Xylenes | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| m-Dichlorobenzene (1,3-DCB) | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| Methyl-tert-butyl Ether (MTBE) | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| Naphthalene | ND | ^3- | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| n-Butylbenzene | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| N-Propylbenzene | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| o-Dichlorobenzene (1,2-DCB) | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| o-Chlorotoluene | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| o-Xylene | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| p-Chlorotoluene | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| p-Dichlorobenzene (1,4-DCB) | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| p-Isopropyltoluene | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| sec-Butylbenzene | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| Styrene | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| Tert-amyl methyl ether | ND | | 3.0 | ug/L | | | 04/26/23 14:16 | 1 |
| Tert-butyl ethyl ether | ND | | 3.0 | ug/L | | | 04/26/23 14:16 | 1 |

Client Sample Results

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

Job ID: 380-44256-1

Client Sample ID: TB: HALAWA WELLS UNITS 1

Lab Sample ID: 380-44256-2

Date Collected: 04/18/23 10:15

Matrix: Water

Date Received: 04/19/23 10:15

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------------------------------|--------|-----------|------|------|---|----------|----------------|---------|
| tert-Butylbenzene | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| Tetrachloroethene (PCE) | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| Toluene | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| 1,3-Dichloropropene, Total | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| Xylenes, Total | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| trans-1,2-Dichloroethylene | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| Trichloroethylene (TCE) | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| Trichlorofluoromethane (Freon 11) | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| Vinyl Chloride (VC) | ND | | 0.30 | ug/L | | | 04/26/23 14:16 | 1 |
| Trichlorotrifluoroethane | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| Bromoethane | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| Chloromethane (methyl chloride) | ND | | 0.50 | ug/L | | | 04/26/23 14:16 | 1 |
| Diisopropyl ether | ND | | 3.0 | ug/L | | | 04/26/23 14:16 | 1 |

| Tentatively Identified Compound | Est. Result | Qualifier | Unit | D | RT | CAS No. | Prepared | Analyzed | Dil Fac |
|---------------------------------|-------------|-----------|------|---|-------|----------|----------|----------------|---------|
| Acetaldehyde | 2.3 | T J N | ug/L | | 1.63 | 75-07-0 | | 04/26/23 14:16 | 1 |
| Tetrahydrofuran | 16 | ^3+ B | ug/L | | 5.76 | 109-99-9 | | 04/26/23 14:16 | 1 |
| Furfural | 1.6 | T J N | ug/L | | 10.18 | 98-01-1 | | 04/26/23 14:16 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 103 | | 70 - 130 | | 04/26/23 14:16 | 1 |
| 4-Bromofluorobenzene (Surr) | 107 | | 70 - 130 | | 04/26/23 14:16 | 1 |
| Toluene-d8 (Surr) | 91 | | 70 - 130 | | 04/26/23 14:16 | 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 | | 04/25/23 13:05 | 04/26/23 04:55 | 1 |
| 1,2-D bromo-3-Chloropropane | ND | | 0.010 | ug/L | | 04/25/23 13:05 | 04/26/23 04:55 | 1 |
| 1,2-D bromoethane | ND | | 0.010 | ug/L | | 04/25/23 13:05 | 04/26/23 04:55 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---------------------------|-----------|-----------|----------|----------------|----------------|---------|
| 1,2-Dibromopropane (Surr) | 96 | | 60 - 140 | 04/25/23 13:05 | 04/26/23 04:55 | 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 | | | 04/21/23 16:51 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|--------------------|-----------|-----------|----------|----------|----------------|---------|
| BROMOFLUOROBENZENE | 92 | | 60 - 140 | | 04/21/23 16:51 | 1 |

Action Limit Summary

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

Job ID: 380-44256-1

Client Sample ID: HALAWA WELLS UNITS 1

Lab Sample ID: 380-44256-1

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 | HI Org | EPAMCL | EPAMCL | Method | Prep Type |
|----------------------------------|--------|-----------|------|--------|--------|------------|----------|-----------|
| | | | | Limit | Limit | S Limit | | |
| Trihalomethanes, Total | ND | | ug/L | | 80 | | 524.2 | Total/NA |
| 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 |
| cis-1,2-Dichloroethylene | ND | | ug/L | 70.00 | 70 | | 524.2 | Total/NA |
| Dichloromethane | ND | | ug/L | 5.000 | 5 | | 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 |
| 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 |
| Xylenes, Total | ND | | ug/L | 10000 | 10000 | | 524.2 | Total/NA |
| Alachlor | ND | *+ | ug/L | | 2 | | 525.2 LL | Total/NA |
| Benzo[a]pyrene | ND | | ug/L | | 0.2 | | 525.2 LL | Total/NA |
| Endrin | ND | | ug/L | | 2 | | 525.2 LL | Total/NA |
| Heptachlor | ND | | ug/L | | 0.4 | | 525.2 LL | Total/NA |
| Heptachlor epoxide | ND | | ug/L | | 0.2 | | 525.2 LL | Total/NA |
| Methoxychlor | ND | | ug/L | | 40 | | 525.2 LL | Total/NA |
| gamma-BHC (Lindane) | ND | | ug/L | | 0.2 | | 525.2 LL | Total/NA |
| Atrazine | ND | | ug/L | | 3 | | 525.2 LL | Total/NA |
| Di(2-ethylhexyl)adipate | ND | *+ | ug/L | | 400 | | 525.2 LL | Total/NA |
| Di (2-ethylhexyl)phthalate | ND | *+ | ug/L | | 6 | | 525.2 LL | Total/NA |
| Hexachlorobenzene | ND | | ug/L | | 1 | | 525.2 LL | Total/NA |
| Hexachlorocyclopentadiene | ND | | ug/L | | 50 | | 525.2 LL | Total/NA |
| Simazine | ND | *+ | ug/L | | 4 | | 525.2 LL | Total/NA |
| 1,2,3-Trichloropropane | ND | | ug/L | 0.6000 | | | 504.1 | Total/NA |
| 1,2-D bromo-3-Chloropropane | ND | | ug/L | | 0.2 | | 504.1 | Total/NA |
| 1,2-D bromoethane | ND | | ug/L | | 0.05 | | 504.1 | Total/NA |
| Chlordane (technical) | 0.20 | *3 | ug/L | | 2 | | 505 | Total/NA |
| Toxaphene | ND | *3 | ug/L | | 3 | | 505 | Total/NA |
| Polychlorinated biphenyls, Total | ND | | ug/L | | 0.5 | | 505 | Total/NA |
| Chloride | 200 | | mg/L | | | 250 | 300.0 | Total/NA |
| Nitrate as N | 1.7 | | mg/L | | 10 | | 300.0 | Total/NA |
| Nitrite as N | ND | | mg/L | | 1 | | 300.0 | Total/NA |
| Sulfate | 44 | ^2 | mg/L | | | 250 | 300.0 | Total/NA |
| Mercury | ND | | ug/L | | 2 | | 245.1 | Total/NA |
| Total Dissolved Solids | 500 | | mg/L | | | 500 | SM 2540C | Total/NA |

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Action Limit Summary

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

Job ID: 380-44256-1

Client Sample ID: HALAWA WELLS UNITS 1 (Continued)

Lab Sample ID: 380-44256-1

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 | HI Org Limit | EPAMCL Limit | EPAMCL S Limit | Method | Prep Type |
|----------|--------|-----------|------|--------------|--------------|----------------|-------------|-----------|
| Fluoride | ND | | mg/L | | 4 | 2 | SM 4500 F C | Total/NA |

Client Sample ID: TB: HALAWA WELLS UNITS 1

Lab Sample ID: 380-44256-2

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 |
|-----------------------------|--------|-----------|------|--------------|--------------|-------|--------|-----------|
| Trihalomethanes, Total | ND | | ug/L | | 80 | 0.50 | 524.2 | Total/NA |
| 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 | | 0.040 | 504.1 | Total/NA |
| 1,2-D bromo-3-Chloropropane | ND | | ug/L | | 0.2 | 0.010 | 504.1 | Total/NA |
| 1,2-D bromoethane | ND | | ug/L | | 0.05 | 0.010 | 504.1 | Total/NA |

Surrogate Summary

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

Job ID: 380-44256-1

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

Matrix: Drinking 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) |
| 380-44256-1 | HALAWA WELLS UNITS 1 | 97 | 107 | 102 |

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 (70-130) | BFB (70-130) | DCA (70-130) |
| 380-44256-2 | TB: HALAWA WELLS UNITS 1 | 98 | 101 | 105 |
| LCS 380-38220/2 | Lab Control Sample | 98 | 96 | 102 |
| LCS 380-38220/3 | Lab Control Sample Dup | 99 | 100 | 101 |
| MB 380-38220/5 | Method Blank | 99 | 93 | 105 |

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 380-38220/4 | Lab Control Sample | 98 | 97 | 104 |

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: Drinking 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) |
| 380-44256-1 | HALAWA WELLS UNITS 1 | 104 | 107 | 90 |

Surrogate Legend

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

Surrogate Summary

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

Job ID: 380-44256-1

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) |
| 380-44256-2 | TB: HALAWA WELLS UNITS 1 | 103 | 107 | 91 |
| LCS 380-38074/3 | Lab Control Sample | 101 | 102 | 102 |
| LCSD 380-38074/4 | Lab Control Sample Dup | 98 | 101 | 100 |
| MB 380-38074/8 | Method Blank | 104 | 109 | 97 |
| MRL 380-38074/6 | Lab Control Sample | 106 | 103 | 97 |
| MRL 380-38074/7 | Lab Control Sample | 105 | 106 | 98 |

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

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

Matrix: Drinking 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) |
| 380-44256-1 | HALAWA WELLS UNITS 1 | 104 | 95 | 105 |

Surrogate Legend
2NMX = 2-Nitro-m-xylene (Surr)
PRY = Perylene-d12 (Surr)
TPP = Triphenylphosphate (Surr)

Method: 525.2 LL - 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) |
| 810-61248-O-5-A MS | Matrix Spike | 103 | 103 | 117 |
| 860-47346-B-1-A DU | Duplicate | 98 | 100 | 111 |
| LCS 810-57414/3-A | Lab Control Sample | 104 | 103 | 108 |
| LLCS 810-57237/3-A | Lab Control Sample | 98 | 100 | 107 |
| LLCS 810-57414/2-A | Lab Control Sample | 99 | 95 | 103 |
| MB 810-57414/1-A | Method Blank | 102 | 101 | 109 |

Surrogate Legend
2NMX = 2-Nitro-m-xylene (Surr)
PRY = Perylene-d12 (Surr)
TPP = Triphenylphosphate (Surr)

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

Matrix: Drinking Water

Prep Type: Total/NA

| Lab Sample ID | Client Sample ID | Percent Surrogate Recovery (Acceptance Limits) |
|---------------|----------------------|--|
| | | DBPP1 (60-140) |
| 380-44256-1 | HALAWA WELLS UNITS 1 | 90 |

Surrogate Legend
DBPP = 1,2-D bromopropane (Surr)

Surrogate Summary

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

Job ID: 380-44256-1

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

| Lab Sample ID | Client Sample ID | DBPP1 (60-140) |
|--------------------|--------------------------|-------------------|
| 380-44167-T-1-A MS | Matrix Spike | 107 |
| 380-44182-I-1-A DU | Duplicate | 93 |
| 380-44256-2 | TB: HALAWA WELLS UNITS 1 | 96 |
| LCS 380-37791/3-A | Lab Control Sample | 97 |
| MBL 380-37791/4-A | Method Blank | 103 |
| MRL 380-37791/1-A | Lab Control Sample | 99 |
| MRL 380-37791/2-A | Lab Control Sample | 108 |

Surrogate Legend

DBPP = 1,2-D bromopropane (Surr)

Method: 625 Acid/Base/PAH + TICs - EPA 625 Base/Neutral and Acid Organics i

Matrix: BlankMatrix

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

| Lab Sample ID | Client Sample ID | PHL (0-130) | TBP (30-130) |
|---------------|------------------------|----------------|-----------------|
| 105218-B1 | Method Blank | 57 | 50 |
| 105218-BS1 | Lab Control Sample | 58 | 54 |
| 105218-BS2 | Lab Control Sample Dup | 64 | 54 |

Surrogate Legend

PHL = (d5-Phenol)

TBP = (2,4,6-Tribromophenol)

Method: 625 Acid/Base/PAH + TICs - EPA 625 Base/Neutral and Acid Organics i

Matrix: BlankMatrix

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

| Lab Sample ID | Client Sample ID | Acenaphtl (27-133) | Phenanth (43-129) | CRY (52-144) | NPT (25-125) | PRY (36-161) |
|---------------|------------------------|-----------------------|----------------------|-----------------|-----------------|-----------------|
| 105218-B1 | Method Blank | 73 | 76 | 65 | 54 | 82 |
| 105218-BS1 | Lab Control Sample | 54 | 71 | 63 | 53 | 81 |
| 105218-BS2 | Lab Control Sample Dup | 73 | 76 | 68 | 62 | 77 |

Surrogate Legend

(d10-Acenaphthene) = (d10-Acenaphthene)

(d10-Phenanthrene) = (d10-Phenanthrene)

CRY = (d12-Chrysene)

NPT = (d8-Naphthalene)

PRY = (d12-Perylene)

Method: 625 Acid/Base/PAH + TICs - EPA 625 Base/Neutral and Acid Organics i

Matrix: Drinking Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

| Lab Sample ID | Client Sample ID | PHL (0-85) | TBP (31-143) |
|---------------|----------------------|---------------|-----------------|
| 380-44256-1 | HALAWA WELLS UNITS 1 | 17 | 48 |

Surrogate Legend

PHL = (d5-Phenol)

TBP = (2,4,6-Tribromophenol)

Surrogate Summary

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

Job ID: 380-44256-1

Method: 625 Acid/Base/PAH + TICs - EPA 625 Base/Neutral and Acid Organics i

Matrix: Drinking Water

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) | PRY (36-161) |
| 380-44256-1 | HALAWA WELLS UNITS 1 | 113 | 72 | 62 | 82 | 73 |

Surrogate Legend
 (d10-Acenaphthene) = (d10-Acenaphthene)
 (d10-Phenanthrene) = (d10-Phenanthrene)
 CRY = (d12-Chrysene)
 NPT = (d8-Naphthalene)
 PRY = (d12-Perylene)

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

Matrix: Drinking Water

Prep Type: Total/NA

| Lab Sample ID | Client Sample ID | Percent Surrogate Recovery (Acceptance Limits) |
|---------------|----------------------|--|
| | | BFB (60-140) |
| 380-44256-1 | HALAWA WELLS UNITS 1 | 89 |

Surrogate Legend
 BFB = BROMOFLUOROBENZENE

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

Matrix: Water

Prep Type: Total/NA

| Lab Sample ID | Client Sample ID | Percent Surrogate Recovery (Acceptance Limits) |
|---------------|--------------------------|--|
| | | BFB (60-140) |
| 380-44256-2 | TB: HALAWA WELLS UNITS 1 | 92 |

Surrogate Legend
 BFB = BROMOFLUOROBENZENE

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

Matrix: WATER

Prep Type: Total/NA

| Lab Sample ID | Client Sample ID | Percent Surrogate Recovery (Acceptance Limits) |
|---------------|------------------------|--|
| | | BFB (60-140) |
| 23D232-01M | Matrix Spike | 114 |
| 23D232-01S | Matrix Spike Duplicate | 114 |

Surrogate Legend
 BFB = BROMOFLUOROBENZENE

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

Matrix: WATER

Prep Type: Total/NA

| Lab Sample ID | Client Sample ID | Percent Surrogate Recovery (Acceptance Limits) |
|---------------|------------------|--|
| | | BFB |
| 23VG39D11B | Method Blank | |

Surrogate Legend
 BFB = BROMOFLUOROBENZENE

Surrogate Summary

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

Job ID: 380-44256-1

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) |
|---------------|--------------------|-----------------|
| 23VG39D11C | LCD | 111 |
| 23VG39D11L | Lab Control Sample | 109 |

Surrogate Legend

BFB = BROMOFLUOROBENZENE

Method: 8015 LL DRO/MRO/JP5/JP8 - 8015 - TPH DRO/ORO

Matrix: Drinking Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

| Lab Sample ID | Client Sample ID | BB (60-130) | XACOSAI (60-130) |
|---------------|----------------------|----------------|---------------------|
| 380-44256-1 | HALAWA WELLS UNITS 1 | 65 | 82 |

Surrogate Legend

BB = BROMOBENZENE

HEXACOSANE = HEXACOSANE

Method: 8015 LL DRO/MRO/JP5/JP8 - 8015 - TPH DRO/ORO

Matrix: WATER

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

| Lab Sample ID | Client Sample ID | BB (60-130) | XACOSAI (60-130) |
|---------------|------------------------|----------------|---------------------|
| 23D232-01M | Matrix Spike | 70 | 95 |
| 23D232-01M | Matrix Spike | 86 | 83 |
| 23D232-01S | Matrix Spike Duplicate | 74 | 90 |
| 23D232-01S | Matrix Spike Duplicate | 86 | 83 |
| 23DSD033WL | Lab Control Sample | 66 | 90 |
| 23J5D033WL | Lab Control Sample | 72 | 79 |
| 23J8D033WL | Lab Control Sample | 97 | 80 |

Surrogate Legend

BB = BROMOBENZENE

HEXACOSANE = HEXACOSANE

Method: 8015 LL DRO/MRO/JP5/JP8 - 8015 - TPH DRO/ORO

Matrix: WATER

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

| Lab Sample ID | Client Sample ID | BB | XACOSAI |
|---------------|------------------|----|---------|
| 23DSD033WB | Method Blank | | |

Surrogate Legend

BB = BROMOBENZENE

HEXACOSANE = HEXACOSANE

QC Sample Results

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

Job ID: 380-44256-1

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

Lab Sample ID: MB 380-38074/8
Matrix: Water
Analysis Batch: 38074

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 | | | 04/26/23 13:29 | 1 |
| 1,1,1-Trichloroethane | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| 1,1,2-Trichloroethane | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| 1,1-Dichloroethane | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| 1,1-Dichlorethylene | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| 1,1-Dichloropropene | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| 1,2,3-Trichlorobenzene | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| 1,2,3-Trichloropropane | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| 1,2,4-Trimethy benzene | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| 1,2-Dichloroethane | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| 1,2-Dichloropropane | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| 1,3,5-Trimethy benzene | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| 1,3-Dichloropropane | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| 2,2-Dichloropropane | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| 2-Butanone (MEK) | ND | | 5.0 | ug/L | | | 04/26/23 13:29 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 5.0 | ug/L | | | 04/26/23 13:29 | 1 |
| Acetone | ND | | 500 | ug/L | | | 04/26/23 13:29 | 1 |
| Benzene | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| Bromobenzene | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| Bromochloromethane | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| Bromodichloromethane | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| Bromoform | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| Bromomethane (Methyl Bromide) | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| Carbon disulfide | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| Carbon tetrachloride | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| Chlorobenzene | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| Chlorodibromomethane | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| Chloroethane | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| Chloroform (Trichloromethane) | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| cis-1,2-Dichloroethylene | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| cis-1,3-Dichloropropene | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| Dibromomethane | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| Dichlorodifluoromethane | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| Dichloromethane | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| Ethylbenzene | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| Hexachlorobutadiene | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| Isopropy benzene | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| m,p-Xylenes | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| m-Dichlorobenzene (1,3-DCB) | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| Methyl-tert-butyl Ether (MTBE) | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| Naphthalene | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| n-Butylbenzene | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| N-Propylbenzene | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| o-Chlorotoluene | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| o-Dichlorobenzene (1,2-DCB) | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| o-Xylene | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-44256-1

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

Lab Sample ID: MB 380-38074/8
Matrix: Water
Analysis Batch: 38074

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 | | | 04/26/23 13:29 | 1 |
| p-Dichlorobenzene (1,4-DCB) | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| p-Isopropyltoluene | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| sec-Butylbenzene | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| Styrene | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| Tert-amyl methyl ether | ND | | 3.0 | ug/L | | | 04/26/23 13:29 | 1 |
| 1,3-Dichloropropene, Total | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| Tert-butyl ethyl ether | ND | | 3.0 | ug/L | | | 04/26/23 13:29 | 1 |
| tert-Butylbenzene | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| Tetrachloroethene (PCE) | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| Toluene | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| trans-1,2-Dichloroethylene | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| trans-1,3-Dichloropropene | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| Trichloroethylene (TCE) | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| Bromoethane | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| Trichlorofluoromethane (Freon 11) | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| Chloromethane (methyl chloride) | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| Trichlorotrifluoroethane | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |
| Diisopropyl ether | ND | | 3.0 | ug/L | | | 04/26/23 13:29 | 1 |
| Vinyl Chloride (VC) | ND | | 0.30 | ug/L | | | 04/26/23 13:29 | 1 |
| Xylenes, Total | ND | | 0.50 | ug/L | | | 04/26/23 13:29 | 1 |

| Tentatively Identified Compound | MB Est. Result | MB Qualifier | Unit | D | RT | CAS No. | Prepared | Analyzed | Dil Fac |
|---------------------------------|----------------|--------------|------|---|------|----------|----------|----------------|---------|
| Tetrahydrofuran | 5.77 | B | ug/L | | 5.76 | 109-99-9 | | 04/26/23 13:29 | 1 |
| Tentatively Identified Compound | None | | ug/L | | | N/A | | 04/26/23 13:29 | 1 |

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|--------------|--------------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 104 | | 70 - 130 | | 04/26/23 13:29 | 1 |
| 4-Bromofluorobenzene (Surr) | 109 | | 70 - 130 | | 04/26/23 13:29 | 1 |
| Toluene-d8 (Surr) | 97 | | 70 - 130 | | 04/26/23 13:29 | 1 |

Lab Sample ID: LCS 380-38074/3
Matrix: Water
Analysis Batch: 38074

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 | 6.38 | | ug/L | | 128 | 70 - 130 |
| 1,1,1-Trichloroethane | 5.00 | 4.98 | | ug/L | | 100 | 70 - 130 |
| 1,1,2,2-Tetrachloroethane | 5.00 | 6.37 | | ug/L | | 127 | 70 - 130 |
| 1,1,2-Trichloroethane | 5.00 | 5.75 | | ug/L | | 115 | 70 - 130 |
| 1,1-Dichloroethane | 5.00 | 5.38 | | ug/L | | 108 | 70 - 130 |
| 1,1-Dichlorethylene | 5.00 | 5.22 | | ug/L | | 104 | 70 - 130 |
| 1,1-Dichloropropene | 5.00 | 5.09 | | ug/L | | 102 | 70 - 130 |
| 1,2,3-Trichlorobenzene | 5.00 | 5.48 | | ug/L | | 110 | 70 - 130 |
| 1,2,3-Trichloropropane | 5.00 | 6.05 | | ug/L | | 121 | 70 - 130 |
| 1,2,4-Trichlorobenzene | 5.00 | 5.33 | | ug/L | | 107 | 70 - 130 |
| 1,2,4-Trimethy benzene | 5.00 | 5.65 | | ug/L | | 113 | 70 - 130 |
| 1,2-Dichloroethane | 5.00 | 5.35 | | ug/L | | 107 | 70 - 130 |

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QC Sample Results

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

Job ID: 380-44256-1

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

Lab Sample ID: LCS 380-38074/3
Matrix: Water
Analysis Batch: 38074

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

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|-----------------------------------|----------------|---------------|------------------|------|---|------|----------------|
| 1,2-Dichloropropane | 5.00 | 5.11 | | ug/L | | 102 | 70 - 130 |
| 1,3,5-Trimethy benzene | 5.00 | 5.78 | | ug/L | | 116 | 70 - 130 |
| 1,3-Dichloropropane | 5.00 | 5.65 | | ug/L | | 113 | 70 - 130 |
| 2,2-Dichloropropane | 5.00 | 4.78 | | ug/L | | 96 | 70 - 130 |
| 2-Butanone (MEK) | 50.0 | 52.8 | | ug/L | | 106 | 70 - 130 |
| 4-Methyl-2-pentanone (MIBK) | 50.0 | 55.1 | | ug/L | | 110 | 70 - 130 |
| Acetone | 50.0 | 60.9 | J | ug/L | | 122 | 70 - 130 |
| Benzene | 5.00 | 5.24 | | ug/L | | 105 | 70 - 130 |
| Bromobenzene | 5.00 | 5.57 | | ug/L | | 111 | 70 - 130 |
| Bromochloromethane | 5.00 | 5.27 | | ug/L | | 105 | 70 - 130 |
| Bromodichloromethane | 5.00 | 5.88 | | ug/L | | 118 | 70 - 130 |
| Bromoform | 5.00 | 6.44 | | ug/L | | 129 | 70 - 130 |
| Bromomethane (Methyl Bromide) | 5.00 | 5.15 | | ug/L | | 103 | 70 - 130 |
| Carbon disulfide | 5.00 | 6.19 | | ug/L | | 124 | 70 - 130 |
| Carbon tetrachloride | 5.00 | 5.70 | | ug/L | | 114 | 70 - 130 |
| Chlorobenzene | 5.00 | 5.47 | | ug/L | | 109 | 70 - 130 |
| Chlorodibromomethane | 5.00 | 6.13 | | ug/L | | 123 | 70 - 130 |
| cis-1,3-Dichloropropene | 5.00 | 5.37 | | ug/L | | 107 | 70 - 130 |
| Dichloromethane | 5.00 | 5.55 | | ug/L | | 111 | 70 - 130 |
| Ethylbenzene | 5.00 | 5.39 | | ug/L | | 108 | 70 - 130 |
| Hexachlorobutadiene | 5.00 | 5.25 | | ug/L | | 105 | 70 - 130 |
| Isopropyl benzene | 5.00 | 5.70 | | ug/L | | 114 | 70 - 130 |
| m,p-Xylenes | 10.0 | 11.2 | | ug/L | | 112 | 70 - 130 |
| m-Dichlorobenzene (1,3-DCB) | 5.00 | 5.90 | | ug/L | | 118 | 70 - 130 |
| Methyl-tert-butyl Ether (MTBE) | 5.00 | 5.19 | | ug/L | | 104 | 70 - 130 |
| Naphthalene | 5.00 | 5.22 | | ug/L | | 104 | 70 - 130 |
| n-Butylbenzene | 5.00 | 5.24 | | ug/L | | 105 | 70 - 130 |
| N-Propylbenzene | 5.00 | 5.32 | | ug/L | | 106 | 70 - 130 |
| o-Chlorotoluene | 5.00 | 5.97 | | ug/L | | 119 | 70 - 130 |
| o-Dichlorobenzene (1,2-DCB) | 5.00 | 5.45 | | ug/L | | 109 | 70 - 130 |
| o-Xylene | 5.00 | 5.33 | | ug/L | | 107 | 70 - 130 |
| p-Chlorotoluene | 5.00 | 5.52 | | ug/L | | 110 | 70 - 130 |
| p-Dichlorobenzene (1,4-DCB) | 5.00 | 5.92 | | ug/L | | 118 | 70 - 130 |
| p-Isopropyltoluene | 5.00 | 5.73 | | ug/L | | 115 | 70 - 130 |
| sec-Butylbenzene | 5.00 | 5.86 | | ug/L | | 117 | 70 - 130 |
| Styrene | 5.00 | 5.61 | | ug/L | | 112 | 70 - 130 |
| Tert-amyl methyl ether | 5.00 | 4.57 | | ug/L | | 91 | 70 - 130 |
| 1,3-Dichloropropene, Total | 10.0 | 10.6 | | ug/L | | 106 | 70 - 130 |
| Tert-butyl ethyl ether | 5.00 | 5.00 | | ug/L | | 100 | 70 - 130 |
| tert-Butylbenzene | 5.00 | 5.62 | | ug/L | | 112 | 70 - 130 |
| Tetrachloroethene (PCE) | 5.00 | 5.37 | | ug/L | | 107 | 70 - 130 |
| Toluene | 5.00 | 5.33 | | ug/L | | 107 | 70 - 130 |
| trans-1,2-Dichloroethylene | 5.00 | 5.25 | | ug/L | | 105 | 70 - 130 |
| trans-1,3-Dichloropropene | 5.00 | 5.18 | | ug/L | | 104 | 70 - 130 |
| Trichloroethylene (TCE) | 5.00 | 5.18 | | ug/L | | 104 | 70 - 130 |
| Bromoethane | 5.00 | 5.49 | | ug/L | | 110 | 70 - 130 |
| Trichlorofluoromethane (Freon 11) | 5.00 | 5.53 | | ug/L | | 111 | 70 - 130 |
| Trichlorotrifluoroethane | 5.00 | 4.92 | | ug/L | | 98 | 70 - 130 |

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QC Sample Results

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

Job ID: 380-44256-1

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

Lab Sample ID: LCS 380-38074/3
Matrix: Water
Analysis Batch: 38074

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

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---------------------|-------------|------------|---------------|------|---|------|-------------|
| Diisopropyl ether | 5.00 | 5.54 | | ug/L | | 111 | 70 - 130 |
| Vinyl Chloride (VC) | 5.00 | 5.38 | | ug/L | | 108 | 70 - 130 |
| Xylenes, Total | 15.0 | 16.5 | | ug/L | | 110 | 70 - 130 |

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

Lab Sample ID: LCSD 380-38074/4
Matrix: Water
Analysis Batch: 38074

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 | 6.94 | *+ | ug/L | | 139 | 70 - 130 | 8 | 20 |
| 1,1,1-Trichloroethane | 5.00 | 5.32 | | ug/L | | 106 | 70 - 130 | 7 | 20 |
| 1,1,2,2-Tetrachloroethane | 5.00 | 6.59 | *+ | ug/L | | 132 | 70 - 130 | 3 | 20 |
| 1,1,2-Trichloroethane | 5.00 | 6.11 | | ug/L | | 122 | 70 - 130 | 6 | 20 |
| 1,1-Dichloroethane | 5.00 | 5.80 | | ug/L | | 116 | 70 - 130 | 8 | 20 |
| 1,1-Dichlorethylene | 5.00 | 5.12 | | ug/L | | 102 | 70 - 130 | 2 | 20 |
| 1,1-Dichloropropene | 5.00 | 5.64 | | ug/L | | 113 | 70 - 130 | 10 | 20 |
| 1,2,3-Trichlorobenzene | 5.00 | 5.88 | | ug/L | | 118 | 70 - 130 | 7 | 20 |
| 1,2,3-Trichloropropane | 5.00 | 6.67 | *+ | ug/L | | 133 | 70 - 130 | 10 | 20 |
| 1,2,4-Trichlorobenzene | 5.00 | 5.73 | | ug/L | | 115 | 70 - 130 | 7 | 20 |
| 1,2,4-Trimethy benzene | 5.00 | 6.06 | | ug/L | | 121 | 70 - 130 | 7 | 20 |
| 1,2-Dichloroethane | 5.00 | 5.60 | | ug/L | | 112 | 70 - 130 | 5 | 20 |
| 1,2-Dichloropropane | 5.00 | 5.60 | | ug/L | | 112 | 70 - 130 | 9 | 20 |
| 1,3,5-Trimethy benzene | 5.00 | 6.12 | | ug/L | | 122 | 70 - 130 | 6 | 20 |
| 1,3-Dichloropropane | 5.00 | 6.03 | | ug/L | | 121 | 70 - 130 | 7 | 20 |
| 2,2-Dichloropropane | 5.00 | 4.94 | | ug/L | | 99 | 70 - 130 | 3 | 20 |
| 2-Butanone (MEK) | 50.0 | 56.2 | | ug/L | | 112 | 70 - 130 | 6 | 20 |
| 4-Methyl-2-pentanone (MIBK) | 50.0 | 59.3 | | ug/L | | 119 | 70 - 130 | 7 | 20 |
| Acetone | 50.0 | 68.7 | J *+ | ug/L | | 137 | 70 - 130 | 12 | 20 |
| Benzene | 5.00 | 5.67 | | ug/L | | 113 | 70 - 130 | 8 | 20 |
| Bromobenzene | 5.00 | 5.94 | | ug/L | | 119 | 70 - 130 | 6 | 20 |
| Bromochloromethane | 5.00 | 5.92 | | ug/L | | 118 | 70 - 130 | 12 | 20 |
| Bromodichloromethane | 5.00 | 6.58 | *+ | ug/L | | 132 | 70 - 130 | 11 | 20 |
| Bromoform | 5.00 | 6.61 | *+ | ug/L | | 132 | 70 - 130 | 3 | 20 |
| Bromomethane (Methyl Bromide) | 5.00 | 5.64 | | ug/L | | 113 | 70 - 130 | 9 | 20 |
| Carbon disulfide | 5.00 | 6.51 | | ug/L | | 130 | 70 - 130 | 5 | 20 |
| Carbon tetrachloride | 5.00 | 6.20 | | ug/L | | 124 | 70 - 130 | 8 | 20 |
| Chlorobenzene | 5.00 | 5.97 | | ug/L | | 119 | 70 - 130 | 9 | 20 |
| Chlorodibromomethane | 5.00 | 6.47 | | ug/L | | 129 | 70 - 130 | 5 | 20 |
| cis-1,3-Dichloropropene | 5.00 | 5.79 | | ug/L | | 116 | 70 - 130 | 7 | 20 |
| Dichloromethane | 5.00 | 5.60 | | ug/L | | 112 | 70 - 130 | 1 | 20 |
| Ethylbenzene | 5.00 | 5.87 | | ug/L | | 117 | 70 - 130 | 9 | 20 |
| Hexachlorobutadiene | 5.00 | 5.80 | | ug/L | | 116 | 70 - 130 | 10 | 20 |
| Isopropy benzene | 5.00 | 6.02 | | ug/L | | 120 | 70 - 130 | 5 | 20 |

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QC Sample Results

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

Job ID: 380-44256-1

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

Lab Sample ID: LCSD 380-38074/4
Matrix: Water
Analysis Batch: 38074

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,p-Xylenes | 10.0 | 12.2 | | ug/L | | 122 | 70 - 130 | 8 | 20 |
| m-Dichlorobenzene (1,3-DCB) | 5.00 | 6.20 | | ug/L | | 124 | 70 - 130 | 5 | 20 |
| Methyl-tert-butyl Ether (MTBE) | 5.00 | 5.58 | | ug/L | | 112 | 70 - 130 | 7 | 20 |
| Naphthalene | 5.00 | 5.70 | | ug/L | | 114 | 70 - 130 | 9 | 20 |
| n-Butylbenzene | 5.00 | 5.79 | | ug/L | | 116 | 70 - 130 | 10 | 20 |
| N-Propylbenzene | 5.00 | 5.77 | | ug/L | | 115 | 70 - 130 | 8 | 20 |
| o-Chlorotoluene | 5.00 | 6.26 | | ug/L | | 125 | 70 - 130 | 5 | 20 |
| o-Dichlorobenzene (1,2-DCB) | 5.00 | 5.95 | | ug/L | | 119 | 70 - 130 | 9 | 20 |
| o-Xylene | 5.00 | 5.81 | | ug/L | | 116 | 70 - 130 | 9 | 20 |
| p-Chlorotoluene | 5.00 | 6.09 | | ug/L | | 122 | 70 - 130 | 10 | 20 |
| p-Dichlorobenzene (1,4-DCB) | 5.00 | 6.20 | | ug/L | | 124 | 70 - 130 | 5 | 20 |
| p-Isopropyltoluene | 5.00 | 6.09 | | ug/L | | 122 | 70 - 130 | 6 | 20 |
| sec-Butylbenzene | 5.00 | 6.24 | | ug/L | | 125 | 70 - 130 | 6 | 20 |
| Styrene | 5.00 | 5.96 | | ug/L | | 119 | 70 - 130 | 6 | 20 |
| Tert-amyl methyl ether | 5.00 | 4.92 | | ug/L | | 98 | 70 - 130 | 7 | 20 |
| 1,3-Dichloropropene, Total | 10.0 | 11.3 | | ug/L | | 113 | 70 - 130 | 7 | 20 |
| Tert-butyl ethyl ether | 5.00 | 5.28 | | ug/L | | 106 | 70 - 130 | 6 | 20 |
| tert-Butylbenzene | 5.00 | 5.93 | | ug/L | | 119 | 70 - 130 | 5 | 20 |
| Tetrachloroethene (PCE) | 5.00 | 5.88 | | ug/L | | 118 | 70 - 130 | 9 | 20 |
| Toluene | 5.00 | 5.75 | | ug/L | | 115 | 70 - 130 | 8 | 20 |
| trans-1,2-Dichloroethylene | 5.00 | 5.61 | | ug/L | | 112 | 70 - 130 | 7 | 20 |
| trans-1,3-Dichloropropene | 5.00 | 5.49 | | ug/L | | 110 | 70 - 130 | 6 | 20 |
| Trichloroethylene (TCE) | 5.00 | 5.53 | | ug/L | | 111 | 70 - 130 | 6 | 20 |
| Bromoethane | 5.00 | 5.52 | | ug/L | | 110 | 70 - 130 | 1 | 20 |
| Trichlorofluoromethane (Freon 11) | 5.00 | 6.10 | | ug/L | | 122 | 70 - 130 | 10 | 20 |
| Trichlorotrifluoroethane | 5.00 | 5.32 | | ug/L | | 106 | 70 - 130 | 8 | 20 |
| Diisopropyl ether | 5.00 | 6.02 | | ug/L | | 120 | 70 - 130 | 8 | 20 |
| Vinyl Chloride (VC) | 5.00 | 5.82 | | ug/L | | 116 | 70 - 130 | 8 | 20 |
| Xylenes, Total | 15.0 | 18.0 | | ug/L | | 120 | 70 - 130 | 8 | 20 |

| Surrogate | LCSD %Recovery | LCSD Qualifier | LCSD Limits |
|------------------------------|----------------|----------------|-------------|
| 1,2-Dichloroethane-d4 (Surr) | 98 | | 70 - 130 |
| 4-Bromofluorobenzene (Surr) | 101 | | 70 - 130 |
| Toluene-d8 (Surr) | 100 | | 70 - 130 |

Lab Sample ID: MRL 380-38074/6
Matrix: Water
Analysis Batch: 38074

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 | 0.520 | | ug/L | | 104 | 50 - 150 |
| Vinyl Chloride (VC) | 0.250 | 0.315 | | ug/L | | 126 | 50 - 150 |

| Surrogate | MRL %Recovery | MRL Qualifier | MRL Limits |
|------------------------------|---------------|---------------|------------|
| 1,2-Dichloroethane-d4 (Surr) | 106 | | 70 - 130 |
| 4-Bromofluorobenzene (Surr) | 103 | | 70 - 130 |
| Toluene-d8 (Surr) | 97 | | 70 - 130 |

QC Sample Results

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

Job ID: 380-44256-1

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

Lab Sample ID: MRL 380-38074/7

Matrix: Water

Analysis Batch: 38074

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 | 0.558 | | ug/L | | 112 | 50 - 150 |
| 1,1,1-Trichloroethane | 0.500 | 0.505 | | ug/L | | 101 | 50 - 150 |
| 1,1,2,2-Tetrachloroethane | 0.500 | 0.676 | | ug/L | | 135 | 50 - 150 |
| 1,1,2-Trichloroethane | 0.500 | 0.581 | | ug/L | | 116 | 50 - 150 |
| 1,1-Dichloroethane | 0.500 | 0.609 | | ug/L | | 122 | 50 - 150 |
| 1,1-Dichlorethylene | 0.500 | 0.515 | | ug/L | | 103 | 50 - 150 |
| 1,1-Dichloropropene | 0.500 | 0.528 | | ug/L | | 106 | 50 - 150 |
| 1,2,3-Trichlorobenzene | 0.500 | 0.569 | | ug/L | | 114 | 50 - 150 |
| 1,2,3-Trichloropropane | 0.500 | 0.642 | | ug/L | | 128 | 50 - 150 |
| 1,2,4-Trichlorobenzene | 0.500 | 0.533 | | ug/L | | 107 | 50 - 150 |
| 1,2,4-Trimethy benzene | 0.500 | 0.511 | | ug/L | | 102 | 50 - 150 |
| 1,2-Dichloroethane | 0.500 | 0.582 | | ug/L | | 116 | 50 - 150 |
| 1,2-Dichloropropane | 0.500 | 0.579 | | ug/L | | 116 | 50 - 150 |
| 1,3,5-Trimethy benzene | 0.500 | 0.516 | | ug/L | | 103 | 50 - 150 |
| 1,3-Dichloropropane | 0.500 | 0.541 | | ug/L | | 108 | 50 - 150 |
| 2,2-Dichloropropane | 0.500 | 0.507 | | ug/L | | 101 | 50 - 150 |
| 2-Butanone (MEK) | 5.00 | 7.52 | | ug/L | | 150 | 50 - 150 |
| 4-Methyl-2-pentanone (MIBK) | 5.00 | 4.95 | J | ug/L | | 99 | 50 - 150 |
| Acetone | 5.00 | 9.38 | J ^3+ | ug/L | | 188 | 50 - 150 |
| Benzene | 0.500 | 0.559 | | ug/L | | 112 | 50 - 150 |
| Bromobenzene | 0.500 | 0.584 | | ug/L | | 117 | 50 - 150 |
| Bromochloromethane | 0.500 | 0.603 | | ug/L | | 121 | 50 - 150 |
| Bromodichloromethane | 0.500 | 0.610 | | ug/L | | 122 | 50 - 150 |
| Bromoform | 0.500 | 0.589 | | ug/L | | 118 | 50 - 150 |
| Bromomethane (Methyl Bromide) | 0.500 | 0.567 | | ug/L | | 113 | 50 - 150 |
| Carbon disulfide | 0.500 | 0.600 | | ug/L | | 120 | 50 - 150 |
| Carbon tetrachloride | 0.500 | 0.535 | | ug/L | | 107 | 50 - 150 |
| Chlorobenzene | 0.500 | 0.575 | | ug/L | | 115 | 50 - 150 |
| Chlorodibromomethane | 0.500 | 0.714 | | ug/L | | 143 | 50 - 150 |
| cis-1,3-Dichloropropene | 0.500 | 0.512 | | ug/L | | 102 | 50 - 150 |
| Dichloromethane | 0.500 | 0.630 | | ug/L | | 126 | 50 - 150 |
| Ethylbenzene | 0.500 | 0.495 | J | ug/L | | 99 | 50 - 150 |
| Hexachlorobutadiene | 0.500 | 0.556 | | ug/L | | 111 | 50 - 150 |
| Isopropyl benzene | 0.500 | 0.533 | | ug/L | | 107 | 50 - 150 |
| m,p-Xylenes | 1.00 | 0.986 | | ug/L | | 99 | 50 - 150 |
| m-Dichlorobenzene (1,3-DCB) | 0.500 | 0.617 | | ug/L | | 123 | 50 - 150 |
| Methyl-tert-butyl Ether (MTBE) | 0.500 | 0.553 | | ug/L | | 111 | 50 - 150 |
| Naphthalene | 0.500 | ND | ^3- | ug/L | | 0 | 50 - 150 |
| n-Butylbenzene | 0.500 | 0.508 | | ug/L | | 102 | 50 - 150 |
| N-Propylbenzene | 0.500 | 0.500 | | ug/L | | 100 | 50 - 150 |
| o-Chlorotoluene | 0.500 | 0.599 | | ug/L | | 120 | 50 - 150 |
| o-Dichlorobenzene (1,2-DCB) | 0.500 | 0.579 | | ug/L | | 116 | 50 - 150 |
| o-Xylene | 0.500 | 0.479 | J | ug/L | | 96 | 50 - 150 |
| p-Chlorotoluene | 0.500 | 0.476 | J | ug/L | | 95 | 50 - 150 |
| p-Dichlorobenzene (1,4-DCB) | 0.500 | 0.591 | | ug/L | | 118 | 50 - 150 |
| p-Isopropyltoluene | 0.500 | 0.495 | J | ug/L | | 99 | 50 - 150 |
| sec-Butylbenzene | 0.500 | 0.519 | | ug/L | | 104 | 50 - 150 |
| Styrene | 0.500 | 0.482 | J | ug/L | | 96 | 50 - 150 |

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-44256-1

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

Lab Sample ID: MRL 380-38074/7
Matrix: Water
Analysis Batch: 38074

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 | 0.496 | J | ug/L | | 99 | 50 - 150 |
| 1,3-Dichloropropene, Total | 1.00 | 1.10 | | ug/L | | 110 | 50 - 150 |
| Tert-butyl ethyl ether | 0.500 | 0.541 | J | ug/L | | 108 | 50 - 150 |
| tert-Butylbenzene | 0.500 | 0.518 | | ug/L | | 104 | 50 - 150 |
| Tetrachloroethene (PCE) | 0.500 | 0.587 | | ug/L | | 117 | 50 - 150 |
| Toluene | 0.500 | 0.551 | | ug/L | | 110 | 50 - 150 |
| trans-1,2-Dichloroethylene | 0.500 | 0.652 | | ug/L | | 130 | 50 - 150 |
| trans-1,3-Dichloropropene | 0.500 | 0.592 | | ug/L | | 118 | 50 - 150 |
| Trichloroethylene (TCE) | 0.500 | 0.566 | | ug/L | | 113 | 50 - 150 |
| Bromoethane | 0.500 | 0.605 | | ug/L | | 121 | 50 - 150 |
| Trichlorofluoromethane (Freon 11) | 0.500 | 0.542 | | ug/L | | 108 | 50 - 150 |
| Trichlorotrifluoroethane | 0.500 | 0.594 | | ug/L | | 119 | 50 - 150 |
| Diisopropyl ether | 0.500 | 0.674 | J | ug/L | | 135 | 50 - 150 |
| Vinyl Chloride (VC) | 0.500 | 0.519 | | ug/L | | 104 | 50 - 150 |
| Xylenes, Total | 1.50 | 1.46 | | ug/L | | 98 | 50 - 150 |

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

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

Lab Sample ID: MB 380-38220/5
Matrix: Water
Analysis Batch: 38220

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 | | | 04/27/23 17:20 | 1 |

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|--------------|--------------|----------|----------|----------------|---------|
| Toluene-d8 (Surr) | 99 | | 70 - 130 | | 04/27/23 17:20 | 1 |
| 4-Bromofluorobenzene (Surr) | 93 | | 70 - 130 | | 04/27/23 17:20 | 1 |
| 1,2-Dichloroethane-d4 (Surr) | 105 | | 70 - 130 | | 04/27/23 17:20 | 1 |

Lab Sample ID: LCS 380-38220/2
Matrix: Water
Analysis Batch: 38220

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 | 6.25 | | ug/L | | 125 | 70 - 130 |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|------------------------------|---------------|---------------|----------|
| Toluene-d8 (Surr) | 98 | | 70 - 130 |
| 4-Bromofluorobenzene (Surr) | 96 | | 70 - 130 |
| 1,2-Dichloroethane-d4 (Surr) | 102 | | 70 - 130 |

QC Sample Results

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

Job ID: 380-44256-1

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

Lab Sample ID: LCSD 380-38220/3
Matrix: Water
Analysis Batch: 38220

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 | 6.11 | | ug/L | | 122 | 70 - 130 | 2 | 20 |
| LCSD LCSD | | | | | | | | | |
| Surrogate | %Recovery | Qualifier | Limits | | | | | | |
| Toluene-d8 (Surr) | 99 | | 70 - 130 | | | | | | |
| 4-Bromofluorobenzene (Surr) | 100 | | 70 - 130 | | | | | | |
| 1,2-Dichloroethane-d4 (Surr) | 101 | | 70 - 130 | | | | | | |

Lab Sample ID: MRL 380-38220/4
Matrix: Water
Analysis Batch: 38220

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 | 2.29 | | ug/L | | 115 | 50 - 150 | | |
| MRL MRL | | | | | | | | | |
| Surrogate | %Recovery | Qualifier | Limits | | | | | | |
| Toluene-d8 (Surr) | 98 | | 50 - 150 | | | | | | |
| 4-Bromofluorobenzene (Surr) | 97 | | 50 - 150 | | | | | | |
| 1,2-Dichloroethane-d4 (Surr) | 104 | | 50 - 150 | | | | | | |

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

Lab Sample ID: LLCS 810-57237/3-A
Matrix: Water
Analysis Batch: 57529

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57237

| Analyte | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|----------------------------|------------------|------------------|----------------|------|---|------|-------------|--|--|
| Atachlor | 0.0976 | 0.0932 | | ug/L | | 96 | 50 - 150 | | |
| Aldrin | 0.0683 | 0.0586 | | ug/L | | 86 | 50 - 150 | | |
| Dieldrin | 0.0195 | 0.0282 | | ug/L | | 144 | 50 - 150 | | |
| Endrin | 0.00976 | 0.0108 | | ug/L | | 110 | 50 - 150 | | |
| Heptachlor | 0.00976 | 0.0137 | | ug/L | | 140 | 50 - 150 | | |
| Heptachlor epoxide | 0.00976 | 0.00999 | | ug/L | | 102 | 50 - 150 | | |
| Methoxychlor | 0.0976 | 0.0701 | | ug/L | | 72 | 50 - 150 | | |
| gamma-BHC (Lindane) | 0.0195 | 0.0213 | | ug/L | | 109 | 50 - 150 | | |
| Butachlor | 0.0976 | 0.0888 | | ug/L | | 91 | 50 - 150 | | |
| Di(2-ethylhexyl)adipate | 0.585 | 0.534 | J | ug/L | | 91 | 50 - 150 | | |
| Di (2-ethylhexyl)phthalate | 0.585 | 0.683 | | ug/L | | 117 | 50 - 150 | | |
| Hexachlorobenzene | 0.0976 | 0.0882 | | ug/L | | 90 | 50 - 150 | | |
| Hexachlorocyclopentadiene | 0.0976 | 0.0612 | | ug/L | | 63 | 50 - 150 | | |
| Metolachlor | 0.0976 | 0.0937 | | ug/L | | 96 | 50 - 150 | | |
| Propachlor | 0.0976 | 0.0847 | | ug/L | | 87 | 50 - 150 | | |
| Simazine | 0.0683 | 0.0679 | | ug/L | | 99 | 50 - 150 | | |
| LLCS LLCS | | | | | | | | | |
| Surrogate | %Recovery | Qualifier | Limits | | | | | | |
| 2-Nitro-m-xylene (Surr) | 98 | | 70 - 130 | | | | | | |
| Perylene-d12 (Surr) | 100 | | 70 - 130 | | | | | | |
| Triphenylphosphate (Surr) | 107 | | 70 - 130 | | | | | | |

QC Sample Results

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

Job ID: 380-44256-1

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

Lab Sample ID: MB 810-57414/1-A
Matrix: Water
Analysis Batch: 57529

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57414

| Analyte | MB Result | MB Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------------|-----------|--------------|-------|------|---|----------------|----------------|---------|
| Alachlor | ND | | 0.050 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Benzo[a]anthracene | ND | | 0.050 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Aldrin | ND | | 0.010 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Benzo[b]fluoranthene | ND | | 0.020 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Benzo[k]fluoranthene | ND | | 0.020 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Dieldrin | ND | | 0.010 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Benzo[a]pyrene | ND | | 0.020 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Endrin | ND | | 0.010 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Benzo[g,h,i]perylene | ND | | 0.050 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Heptachlor | ND | | 0.010 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Butylbenzylphthalate | ND | | 0.50 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Heptachlor epoxide | ND | | 0.010 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Methoxychlor | ND | | 0.050 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| gamma-BHC (Lindane) | ND | | 0.010 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Acenaphthylene | ND | | 0.10 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Atrazine | ND | | 0.050 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Chlorobenzilate | ND | | 0.10 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| trans-Nonachlor | ND | | 0.050 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| alpha-Chlordane | ND | | 0.050 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| gamma-Chlordane | ND | | 0.050 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Butachlor | ND | | 0.050 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Bromacil | ND | | 0.10 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Chlorothalonil | ND | | 0.10 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Chlorpyrifos | ND | | 0.050 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| 4,4'-DDD | ND | | 0.10 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| 4,4'-DDT | ND | | 0.10 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Di-n-butyl phthalate | 0.186 | B | 0.10 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Dichlorvos | ND | | 0.050 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Diethylphthalate | ND | | 0.50 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Di(2-ethylhexyl)adipate | ND | | 0.60 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Di (2-ethylhexyl)phthalate | ND | | 0.60 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Dimethylphthalate | ND | | 0.50 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Endosulfan I | ND | | 0.10 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Endosulfan II | ND | | 0.10 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Endosulfan sulfate | ND | | 0.10 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Endrin aldehyde | ND | | 0.10 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Hexachlorobenzene | ND | | 0.050 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| alpha-BHC | ND | | 0.10 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| beta-BHC | ND | | 0.10 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| delta-BHC | ND | | 0.10 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Hexachlorocyclopentadiene | ND | | 0.050 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.050 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Isophorone | ND | | 0.10 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Metolachlor | ND | | 0.050 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Molinate | ND | | 0.10 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Propachlor | ND | | 0.050 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Simazine | ND | | 0.050 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Terbacil | ND | | 0.10 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-44256-1

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

Lab Sample ID: MB 810-57414/1-A
Matrix: Water
Analysis Batch: 57529

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57414

| Analyte | MB Result | MB Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------|-----------|--------------|------|------|---|----------------|----------------|---------|
| Trifluralin | ND | | 0.10 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Chloroneb | ND | | 0.10 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Fluoranthene | ND | | 0.10 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Thiobencarb | ND | | 0.10 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Parathion | ND | | 0.10 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Di-n-octyl phthalate | ND | | 0.10 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Malathion | ND | | 0.10 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Pendimethalin | ND | | 0.10 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Terbuthylazine | ND | | 0.10 | ug/L | | 05/02/23 08:16 | 05/02/23 23:52 | 1 |

| Tentatively Identified Compound | MB Est. Result | MB Qualifier | Unit | D | RT | CAS No. | Prepared | Analyzed | Dil Fac |
|---------------------------------|----------------|--------------|------|---|-------|----------|----------------|----------------|---------|
| Unknown | 0.650 | T J | ug/L | | 3.30 | N/A | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Heptadecane | 2.82 | T J N | ug/L | | 3.95 | 629-78-7 | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Unknown | 1.59 | T J | ug/L | | 15.44 | N/A | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| 9-Octadecenamide, (Z)- | 0.675 | T J N | ug/L | | 16.57 | 301-02-0 | 05/02/23 08:16 | 05/02/23 23:52 | 1 |

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---------------------------|--------------|--------------|----------|----------------|----------------|---------|
| 2-Nitro-m-xylene (Surr) | 102 | | 70 - 130 | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Perylene-d12 (Surr) | 101 | | 70 - 130 | 05/02/23 08:16 | 05/02/23 23:52 | 1 |
| Triphenylphosphate (Surr) | 109 | | 70 - 130 | 05/02/23 08:16 | 05/02/23 23:52 | 1 |

Lab Sample ID: LCS 810-57414/3-A
Matrix: Water
Analysis Batch: 57529

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57414

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|-------------------------|-------------|------------|---------------|------|---|------|-------------|
| Alachlor | 1.95 | 2.11 | | ug/L | | 108 | 70 - 130 |
| Aldrin | 1.95 | 1.92 | | ug/L | | 98 | 70 - 130 |
| Dieldrin | 1.95 | 2.04 | | ug/L | | 105 | 70 - 130 |
| Endrin | 1.95 | 2.14 | | ug/L | | 110 | 70 - 130 |
| Heptachlor | 1.95 | 1.98 | | ug/L | | 101 | 70 - 130 |
| Heptachlor epoxide | 1.95 | 2.18 | | ug/L | | 112 | 70 - 130 |
| Methoxychlor | 1.95 | 1.96 | | ug/L | | 100 | 70 - 130 |
| gamma-BHC (Lindane) | 1.95 | 2.09 | | ug/L | | 107 | 70 - 130 |
| Chlorobenzilate | 1.95 | 2.00 | | ug/L | | 103 | 70 - 130 |
| trans-Nonachlor | 1.95 | 2.00 | | ug/L | | 102 | 70 - 130 |
| alpha-Chlordane | 1.95 | 2.05 | | ug/L | | 105 | 70 - 130 |
| gamma-Chlordane | 1.95 | 2.20 | | ug/L | | 113 | 70 - 130 |
| Butachlor | 1.95 | 2.23 | | ug/L | | 114 | 70 - 130 |
| Bromacil | 1.95 | 1.92 | | ug/L | | 98 | 70 - 130 |
| Chlorothalonil | 1.95 | 2.19 | | ug/L | | 112 | 70 - 130 |
| Chlorpyrifos | 1.95 | 1.95 | | ug/L | | 100 | 70 - 130 |
| 4,4'-DDD | 1.95 | 2.04 | | ug/L | | 104 | 70 - 130 |
| 4,4'-DDT | 1.95 | 2.11 | | ug/L | | 108 | 70 - 130 |
| Di-n-butyl phthalate | 1.95 | 2.21 | | ug/L | | 113 | 70 - 130 |
| Dichlorvos | 1.95 | 1.90 | | ug/L | | 97 | 70 - 130 |
| Diethylphthalate | 1.95 | 2.12 | | ug/L | | 109 | 70 - 130 |
| Di(2-ethylhexyl)adipate | 1.95 | 1.90 | | ug/L | | 97 | 70 - 130 |

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-44256-1

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

Lab Sample ID: LCS 810-57414/3-A
Matrix: Water
Analysis Batch: 57529

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57414

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|----------------------------|-------------|------------|---------------|------|---|------|-------------|
| Di (2-ethylhexyl)phthalate | 1.95 | 1.87 | | ug/L | | 95 | 70 - 130 |
| Dimethylphthalate | 1.95 | 1.98 | | ug/L | | 101 | 70 - 130 |
| Endosulfan I | 1.95 | 1.91 | | ug/L | | 98 | 70 - 130 |
| Endosulfan II | 1.95 | 2.00 | | ug/L | | 102 | 70 - 130 |
| Endosulfan sulfate | 1.95 | 2.10 | | ug/L | | 108 | 70 - 130 |
| Endrin aldehyde | 1.95 | 1.82 | | ug/L | | 93 | 64 - 125 |
| Hexachlorobenzene | 1.95 | 2.02 | | ug/L | | 104 | 70 - 130 |
| alpha-BHC | 1.95 | 1.97 | | ug/L | | 101 | 70 - 130 |
| beta-BHC | 1.95 | 1.98 | | ug/L | | 101 | 70 - 130 |
| delta-BHC | 1.95 | 1.93 | | ug/L | | 98 | 70 - 130 |
| Hexachlorocyclopentadiene | 1.95 | 1.69 | | ug/L | | 86 | 70 - 130 |
| Indeno[1,2,3-cd]pyrene | 1.95 | 2.03 | | ug/L | | 104 | 70 - 130 |
| Isophorone | 1.95 | 2.01 | | ug/L | | 103 | 70 - 130 |
| Metolachlor | 1.95 | 2.18 | | ug/L | | 112 | 70 - 130 |
| Molinate | 1.95 | 2.02 | | ug/L | | 103 | 70 - 130 |
| Propachlor | 1.95 | 2.07 | | ug/L | | 106 | 70 - 130 |
| Simazine | 1.95 | 1.97 | | ug/L | | 101 | 70 - 130 |
| Terbacil | 1.95 | 1.86 | | ug/L | | 95 | 70 - 130 |
| Trifluralin | 1.95 | 2.19 | | ug/L | | 112 | 70 - 130 |
| Chloroneb | 1.95 | 2.31 | | ug/L | | 118 | 70 - 130 |
| Fluoranthene | 1.95 | 2.29 | | ug/L | | 117 | 70 - 130 |
| Thiobencarb | 1.95 | 2.13 | | ug/L | | 109 | 70 - 130 |
| Parathion | 1.95 | 2.06 | | ug/L | | 105 | 80 - 134 |
| Di-n-octyl phthalate | 1.95 | 1.80 | | ug/L | | 92 | 60 - 122 |
| Malathion | 1.95 | 2.04 | | ug/L | | 104 | 80 - 134 |
| Pendimethalin | 1.95 | 2.13 | | ug/L | | 109 | 65 - 122 |
| Terbutylazine | 1.95 | 2.12 | | ug/L | | 108 | 70 - 130 |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---------------------------|---------------|---------------|----------|
| 2-Nitro-m-xylene (Surr) | 104 | | 70 - 130 |
| Perylene-d12 (Surr) | 103 | | 70 - 130 |
| Triphenylphosphate (Surr) | 108 | | 70 - 130 |

Lab Sample ID: LLCS 810-57414/2-A
Matrix: Water
Analysis Batch: 57529

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57414

| Analyte | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---------------------|-------------|-------------|----------------|------|---|------|-------------|
| Alachlor | 0.00990 | 0.0161 | J *+ | ug/L | | 162 | 50 - 150 |
| Aldrin | 0.00990 | 0.0112 | | ug/L | | 113 | 50 - 150 |
| Dieldrin | 0.00990 | 0.0133 | | ug/L | | 135 | 50 - 150 |
| Endrin | 0.00990 | 0.0117 | | ug/L | | 118 | 50 - 150 |
| Heptachlor | 0.00990 | 0.0143 | | ug/L | | 145 | 50 - 150 |
| Heptachlor epoxide | 0.00990 | 0.00956 | J | ug/L | | 97 | 50 - 150 |
| Methoxychlor | 0.00990 | 0.0136 | J | ug/L | | 137 | 50 - 150 |
| gamma-BHC (Lindane) | 0.00990 | 0.0112 | | ug/L | | 113 | 50 - 150 |
| Chlorobenzilate | 0.00990 | ND | *+ | ug/L | | 178 | 50 - 150 |
| trans-Nonachlor | 0.00990 | ND | | ug/L | | 104 | 50 - 150 |

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QC Sample Results

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

Job ID: 380-44256-1

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

Lab Sample ID: LLCS 810-57414/2-A
Matrix: Water
Analysis Batch: 57529

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57414

| Analyte | Spike Added | LLCS | LLCS | Unit | D | %Rec | %Rec Limits |
|----------------------------|-------------|--------|-----------|------|---|------|-------------|
| | | Result | Qualifier | | | | |
| alpha-Chlordane | 0.00990 | ND | | ug/L | | 97 | 50 - 150 |
| gamma-Chlordane | 0.00990 | ND | | ug/L | | 113 | 50 - 150 |
| Butachlor | 0.00990 | ND | *+ | ug/L | | 167 | 50 - 150 |
| Bromacil | 0.00990 | ND | *+ | ug/L | | 189 | 50 - 150 |
| Chlorothalonil | 0.00990 | ND | *+ | ug/L | | 152 | 50 - 150 |
| Chlorpyrifos | 0.00990 | ND | | ug/L | | 118 | 50 - 150 |
| 4,4'-DDD | 0.00990 | ND | | ug/L | | 99 | 50 - 150 |
| 4,4'-DDT | 0.00990 | ND | | ug/L | | 136 | 50 - 150 |
| Di-n-butyl phthalate | 0.00990 | 0.135 | *+ | ug/L | | 1367 | 50 - 150 |
| Dichlorvos | 0.00990 | 0.0119 | J | ug/L | | 120 | 50 - 150 |
| Diethylphthalate | 0.00990 | ND | *+ | ug/L | | 187 | 50 - 150 |
| Di(2-ethylhexyl)adipate | 0.00990 | ND | *+ | ug/L | | 173 | 50 - 150 |
| Di (2-ethylhexyl)phthalate | 0.00990 | ND | *+ | ug/L | | 598 | 50 - 150 |
| Dimethylphthalate | 0.00990 | ND | *+ | ug/L | | 192 | 50 - 150 |
| Endosulfan I | 0.00990 | ND | *- | ug/L | | 0 | 50 - 150 |
| Endosulfan II | 0.00990 | ND | *- | ug/L | | 0 | 50 - 150 |
| Endosulfan sulfate | 0.00990 | ND | | ug/L | | 138 | 50 - 150 |
| Endrin aldehyde | 0.00990 | ND | | ug/L | | 147 | 50 - 150 |
| Hexachlorobenzene | 0.00990 | 0.0104 | J | ug/L | | 105 | 50 - 150 |
| alpha-BHC | 0.00990 | 0.0144 | J | ug/L | | 146 | 50 - 150 |
| beta-BHC | 0.00990 | ND | | ug/L | | 86 | 50 - 150 |
| delta-BHC | 0.00990 | 0.0113 | J | ug/L | | 114 | 50 - 150 |
| Hexachlorocyclopentadiene | 0.00990 | ND | | ug/L | | 76 | 50 - 150 |
| Indeno[1,2,3-cd]pyrene | 0.00990 | ND | | ug/L | | 100 | 50 - 150 |
| Isophorone | 0.00990 | 0.0248 | J *+ | ug/L | | 251 | 50 - 150 |
| Metolachlor | 0.00990 | 0.0143 | J | ug/L | | 145 | 50 - 150 |
| Molinate | 0.00990 | ND | | ug/L | | 115 | 50 - 150 |
| Propachlor | 0.00990 | 0.0116 | J | ug/L | | 117 | 50 - 150 |
| Simazine | 0.00990 | ND | *+ | ug/L | | 211 | 50 - 150 |
| Terbacil | 0.00990 | 0.0240 | J *+ | ug/L | | 242 | 50 - 150 |
| Trifluralin | 0.00990 | ND | *+ | ug/L | | 159 | 50 - 150 |
| Chloroneb | 0.00990 | ND | *- | ug/L | | 0 | 50 - 150 |
| Fluoranthene | 0.00990 | 0.0114 | J | ug/L | | 115 | 50 - 150 |
| Thiobencarb | 0.00990 | 0.0115 | J | ug/L | | 116 | 50 - 150 |
| Parathion | 0.00990 | ND | *- | ug/L | | 0 | 50 - 150 |
| Di-n-octyl phthalate | 0.00990 | 0.0222 | J *+ | ug/L | | 224 | 50 - 150 |
| Malathion | 0.00990 | ND | *- | ug/L | | 0 | 50 - 150 |
| Pendimethalin | 0.00990 | 0.0267 | J *+ | ug/L | | 270 | 50 - 150 |
| Terbutylazine | 0.00990 | 0.0116 | J | ug/L | | 117 | 50 - 150 |

| Surrogate | LLCS LLCS | | Limits |
|---------------------------|-----------|-----------|----------|
| | %Recovery | Qualifier | |
| 2-Nitro-m-xylene (Surr) | 99 | | 70 - 130 |
| Perylene-d12 (Surr) | 95 | | 70 - 130 |
| Triphenylphosphate (Surr) | 103 | | 70 - 130 |

QC Sample Results

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

Job ID: 380-44256-1

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

Lab Sample ID: 810-61248-O-5-A MS

Matrix: Water

Analysis Batch: 57529

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 57414

| Analyte | Sample | Sample | Spike | MS | MS | Unit | D | %Rec | %Rec Limits |
|----------------------------|--------|-----------|-------|--------|-----------|------|---|------|----------------|
| | Result | Qualifier | Added | Result | Qualifier | | | | |
| Alachlor | ND | | 1.95 | 2.26 | | ug/L | | 116 | 70 - 130 |
| Aldrin | ND | | 1.95 | 1.94 | | ug/L | | 100 | 70 - 130 |
| Dieldrin | ND | | 1.95 | 2.06 | | ug/L | | 106 | 70 - 130 |
| Endrin | ND | | 1.95 | 2.10 | | ug/L | | 108 | 70 - 130 |
| Heptachlor | ND | | 1.95 | 2.04 | | ug/L | | 105 | 70 - 130 |
| Heptachlor epoxide | ND | | 1.95 | 2.25 | | ug/L | | 116 | 70 - 130 |
| Methoxychlor | ND | | 1.95 | 2.05 | | ug/L | | 106 | 70 - 130 |
| gamma-BHC (Lindane) | ND | | 1.95 | 2.15 | | ug/L | | 111 | 70 - 130 |
| Chlorobenzilate | ND | | 1.95 | 2.06 | | ug/L | | 106 | 70 - 130 |
| trans-Nonachlor | ND | | 1.95 | 2.17 | | ug/L | | 112 | 70 - 130 |
| alpha-Chlordane | ND | | 1.95 | 2.16 | | ug/L | | 111 | 70 - 130 |
| gamma-Chlordane | ND | | 1.95 | 2.28 | | ug/L | | 117 | 70 - 130 |
| Butachlor | ND | | 1.95 | 2.33 | | ug/L | | 120 | 70 - 130 |
| Bromacil | ND | | 1.95 | 2.19 | | ug/L | | 112 | 70 - 130 |
| Chlorothalonil | ND | | 1.95 | 2.07 | | ug/L | | 106 | 70 - 130 |
| Chlorpyrifos | ND | | 1.95 | 2.03 | | ug/L | | 105 | 70 - 130 |
| 4,4'-DDD | ND | | 1.95 | 2.08 | | ug/L | | 107 | 70 - 130 |
| 4,4'-DDT | ND | | 1.95 | 2.13 | | ug/L | | 109 | 70 - 130 |
| Di-n-butyl phthalate | ND | B | 1.95 | 2.26 | | ug/L | | 116 | 70 - 130 |
| Dichlorvos | ND | | 1.95 | 1.98 | | ug/L | | 102 | 70 - 130 |
| Diethylphthalate | ND | | 1.95 | 2.10 | | ug/L | | 108 | 70 - 130 |
| Di(2-ethylhexyl)adipate | ND | | 1.95 | 1.97 | | ug/L | | 101 | 70 - 130 |
| Di (2-ethylhexyl)phthalate | ND | | 1.95 | 1.88 | | ug/L | | 96 | 70 - 130 |
| Dimethylphthalate | ND | | 1.95 | 2.07 | | ug/L | | 106 | 70 - 130 |
| Endosulfan I | ND | | 1.95 | 2.06 | | ug/L | | 106 | 70 - 130 |
| Endosulfan II | ND | | 1.95 | 2.03 | | ug/L | | 104 | 70 - 130 |
| Endosulfan sulfate | ND | | 1.95 | 2.25 | | ug/L | | 116 | 70 - 130 |
| Endrin aldehyde | ND | | 1.95 | 1.74 | | ug/L | | 89 | 64 - 125 |
| Hexachlorobenzene | ND | | 1.95 | 2.03 | | ug/L | | 104 | 70 - 130 |
| alpha-BHC | ND | | 1.95 | 2.02 | | ug/L | | 104 | 70 - 130 |
| beta-BHC | ND | | 1.95 | 2.02 | | ug/L | | 104 | 70 - 130 |
| delta-BHC | ND | | 1.95 | 1.91 | | ug/L | | 98 | 70 - 130 |
| Hexachlorocyclopentadiene | ND | | 1.95 | 1.67 | | ug/L | | 86 | 70 - 130 |
| Indeno[1,2,3-cd]pyrene | ND | | 1.95 | 2.03 | | ug/L | | 104 | 70 - 130 |
| Isophorone | ND | | 1.95 | 1.96 | | ug/L | | 101 | 70 - 130 |
| Metolachlor | ND | | 1.95 | 2.26 | | ug/L | | 116 | 70 - 130 |
| Molinate | ND | | 1.95 | 2.04 | | ug/L | | 105 | 70 - 130 |
| Propachlor | ND | | 1.95 | 2.09 | | ug/L | | 108 | 70 - 130 |
| Simazine | ND | | 1.95 | 2.08 | | ug/L | | 107 | 70 - 130 |
| Terbacil | ND | | 1.95 | 1.95 | | ug/L | | 100 | 70 - 130 |
| Trifluralin | ND | | 1.95 | 2.17 | | ug/L | | 112 | 70 - 130 |
| Chloroneb | ND | | 1.95 | 2.27 | | ug/L | | 116 | 70 - 130 |
| Fluoranthene | ND | | 1.95 | 2.30 | | ug/L | | 118 | 70 - 130 |
| Thiobencarb | ND | | 1.95 | 2.19 | | ug/L | | 113 | 70 - 130 |
| Parathion | ND | | 1.95 | 2.11 | | ug/L | | 109 | 80 - 134 |
| Di-n-octyl phthalate | ND | | 1.95 | 1.87 | | ug/L | | 96 | 60 - 122 |
| Malathion | ND | | 1.95 | 2.11 | | ug/L | | 108 | 80 - 134 |
| Pendimethalin | ND | | 1.95 | 2.28 | | ug/L | | 117 | 65 - 122 |

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QC Sample Results

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

Job ID: 380-44256-1

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

Lab Sample ID: 810-61248-O-5-A MS
Matrix: Water
Analysis Batch: 57529

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 57414

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---------------------------|---------------|------------------|-------------|-----------|--------------|------|---|------|-------------|
| Terbutylazine | ND | | 1.95 | 2.22 | | ug/L | | 114 | 70 - 130 |
| Surrogate | | | | | | | | | |
| | MS %Recovery | MS Qualifier | Limits | | | | | | |
| 2-Nitro-m-xylene (Surr) | 103 | | 70 - 130 | | | | | | |
| Perylene-d12 (Surr) | 103 | | 70 - 130 | | | | | | |
| Triphenylphosphate (Surr) | 117 | | 70 - 130 | | | | | | |

Lab Sample ID: 860-47346-B-1-A DU
Matrix: Water
Analysis Batch: 57529

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 57414

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|----------------------------|---------------|------------------|-----------|--------------|------|---|-----|-----------|
| Alachlor | ND | | ND | | ug/L | | NC | 15 |
| Benzo[a]anthracene | ND | | ND | | ug/L | | NC | 14 |
| Aldrin | ND | | ND | | ug/L | | NC | 18 |
| Benzo[b]fluoranthene | ND | | ND | | ug/L | | NC | 20 |
| Benzo[k]fluoranthene | ND | | ND | | ug/L | | NC | 20 |
| Dieldrin | ND | | ND | | ug/L | | NC | 19 |
| Benzo[a]pyrene | ND | | ND | | ug/L | | NC | 26 |
| Endrin | ND | | ND | | ug/L | | NC | 18 |
| Benzo[g,h,i]perylene | ND | | ND | | ug/L | | NC | 14 |
| Heptachlor | ND | | ND | | ug/L | | NC | 15 |
| Butylbenzylphthalate | ND | | ND | | ug/L | | NC | 23 |
| Heptachlor epoxide | ND | | ND | | ug/L | | NC | 14 |
| Methoxychlor | ND | | ND | | ug/L | | NC | 14 |
| gamma-BHC (Lindane) | ND | | ND | | ug/L | | NC | 13 |
| Acenaphthylene | ND | | ND | | ug/L | | NC | 34 |
| Atrazine | ND | | ND | | ug/L | | NC | 17 |
| Chlorobenzilate | ND | | ND | | ug/L | | NC | 30 |
| trans-Nonachlor | ND | | ND | | ug/L | | NC | 17 |
| alpha-Chlordane | ND | | ND | | ug/L | | NC | 15 |
| gamma-Chlordane | ND | | ND | | ug/L | | NC | 16 |
| Butachlor | ND | | ND | | ug/L | | NC | 15 |
| Bromacil | ND | | ND | | ug/L | | NC | 20 |
| Chlorothalonil | ND | | ND | | ug/L | | NC | 15 |
| Chlorpyrifos | ND | | ND | | ug/L | | NC | 30 |
| 4,4'-DDD | ND | | ND | | ug/L | | NC | 17 |
| 4,4'-DDT | ND | | ND | | ug/L | | NC | 19 |
| Di-n-butyl phthalate | ND | B | ND | B | ug/L | | NC | 20 |
| Dichlorvos | ND | | ND | | ug/L | | NC | 30 |
| Diethylphthalate | ND | | ND | | ug/L | | NC | 21 |
| Di(2-ethylhexyl)adipate | ND | | ND | | ug/L | | NC | 16 |
| Di (2-ethylhexyl)phthalate | ND | | ND | | ug/L | | NC | 18 |
| Dimethylphthalate | ND | | ND | | ug/L | | NC | 20 |
| Endosulfan I | ND | | ND | | ug/L | | NC | 30 |
| Endosulfan II | ND | | ND | | ug/L | | NC | 30 |
| Endosulfan sulfate | ND | | ND | | ug/L | | NC | 30 |
| Endrin aldehyde | ND | | ND | | ug/L | | NC | 30 |

QC Sample Results

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

Job ID: 380-44256-1

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

Lab Sample ID: 860-47346-B-1-A DU
Matrix: Water
Analysis Batch: 57529

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 57414

| Analyte | Sample | Sample | DU | DU | Unit | D | RPD | Limit |
|---------------------------|--------|-----------|--------|-----------|------|---|-----|-------|
| | Result | Qualifier | Result | Qualifier | | | | |
| Hexachlorobenzene | ND | | ND | | ug/L | | NC | 14 |
| alpha-BHC | ND | | ND | | ug/L | | NC | 30 |
| beta-BHC | ND | | ND | | ug/L | | NC | 30 |
| delta-BHC | ND | | ND | | ug/L | | NC | 30 |
| Hexachlorocyclopentadiene | ND | | ND | | ug/L | | NC | 29 |
| Indeno[1,2,3-cd]pyrene | ND | | ND | | ug/L | | NC | 25 |
| Isophorone | ND | | ND | | ug/L | | NC | 44 |
| Metolachlor | ND | | ND | | ug/L | | NC | 14 |
| Molinate | ND | | ND | | ug/L | | NC | 16 |
| Propachlor | ND | | ND | | ug/L | | NC | 12 |
| Simazine | ND | | ND | | ug/L | | NC | 21 |
| Terbacil | ND | | ND | | ug/L | | NC | 22 |
| Trifluralin | ND | | ND | | ug/L | | NC | 19 |
| Chloroneb | ND | | ND | | ug/L | | NC | 30 |
| Fluoranthene | ND | | ND | | ug/L | | NC | 13 |
| Thiobencarb | ND | | ND | | ug/L | | NC | 11 |
| Parathion | ND | | ND | | ug/L | | NC | 20 |
| Di-n-octyl phthalate | ND | | ND | | ug/L | | NC | 20 |
| Malathion | ND | | ND | | ug/L | | NC | 20 |
| Pendimethalin | ND | | ND | | ug/L | | NC | 30 |
| Terbutylazine | ND | | ND | | ug/L | | NC | 30 |

| Surrogate | DU | DU | Limits |
|---------------------------|-----------|-----------|----------|
| | %Recovery | Qualifier | |
| 2-Nitro-m-xylene (Surr) | 98 | | 70 - 130 |
| Perylene-d12 (Surr) | 100 | | 70 - 130 |
| Triphenylphosphate (Surr) | 111 | | 70 - 130 |

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

Lab Sample ID: MBL 380-37791/4-A
Matrix: Water
Analysis Batch: 38045

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 37791

| Analyte | MBL | MBL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------------------------|--------|-----------|-------|------|---|----------------|----------------|---------|
| | Result | Qualifier | | | | | | |
| 1,2,3-Trichloropropane | ND | | 0.040 | ug/L | | 04/25/23 13:05 | 04/25/23 18:05 | 1 |
| 1,2-D bromo-3-Chloropropane | ND | | 0.010 | ug/L | | 04/25/23 13:05 | 04/25/23 18:05 | 1 |
| 1,2-D bromoethane | ND | | 0.010 | ug/L | | 04/25/23 13:05 | 04/25/23 18:05 | 1 |

| Surrogate | MBL | MBL | Limits | Prepared | Analyzed | Dil Fac |
|---------------------------|-----------|-----------|----------|----------------|----------------|---------|
| | %Recovery | Qualifier | | | | |
| 1,2-Dibromopropane (Surr) | 103 | | 60 - 140 | 04/25/23 13:05 | 04/25/23 18:05 | 1 |

Lab Sample ID: LCS 380-37791/3-A
Matrix: Water
Analysis Batch: 38045

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 37791

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|-----------------------------|-------------|------------|---------------|------|---|------|-------------|
| | | | | | | | |
| 1,2-D bromo-3-Chloropropane | 0.200 | 0.191 | | ug/L | | 95 | 70 - 130 |

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QC Sample Results

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

Job ID: 380-44256-1

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

Lab Sample ID: LCS 380-37791/3-A
Matrix: Water
Analysis Batch: 38045

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 37791

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---------------------------|-------------|----------------------|----------------------|------|---|------|---------------|
| 1,2-D bromoethane | 0.200 | 0.197 | | ug/L | | 99 | 70 - 130 |
| Surrogate | | LCS %Recovery | LCS Qualifier | | | | Limits |
| 1,2-Dibromopropane (Surr) | | 97 | | | | | 60 - 140 |

Lab Sample ID: MRL 380-37791/1-A
Matrix: Water
Analysis Batch: 38045

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 37791

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec Limits |
|---------------------------|-------------|----------------------|----------------------|------|---|------|---------------|
| 1,2,3-Trichloropropane | 0.0400 | 0.0520 | | ug/L | | 130 | 60 - 140 |
| Surrogate | | MRL %Recovery | MRL Qualifier | | | | Limits |
| 1,2-Dibromopropane (Surr) | | 99 | | | | | 60 - 140 |

Lab Sample ID: MRL 380-37791/2-A
Matrix: Water
Analysis Batch: 38045

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 37791

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec Limits |
|-----------------------------|-------------|----------------------|----------------------|------|---|------|---------------|
| 1,2,3-Trichloropropane | 0.0500 | 0.0612 | | ug/L | | 122 | 60 - 140 |
| 1,2-D bromo-3-Chloropropane | 0.0100 | 0.0117 | | ug/L | | 117 | 60 - 140 |
| 1,2-D bromoethane | 0.0100 | 0.00859 | J | ug/L | | 86 | 60 - 140 |
| Surrogate | | MRL %Recovery | MRL Qualifier | | | | Limits |
| 1,2-Dibromopropane (Surr) | | 108 | | | | | 60 - 140 |

Lab Sample ID: 380-44167-T-1-A MS
Matrix: Water
Analysis Batch: 38045

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 37791

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|-----------------------------|---------------|---------------------|-------------|---------------------|--------------|------|---|------|---------------|
| 1,2,3-Trichloropropane | ND | | 1.24 | 1.37 | | ug/L | | 110 | 65 - 135 |
| 1,2-D bromo-3-Chloropropane | ND | | 0.248 | 0.252 | | ug/L | | 102 | 65 - 135 |
| 1,2-D bromoethane | ND | | 0.248 | 0.251 | | ug/L | | 101 | 65 - 135 |
| Surrogate | | MS %Recovery | | MS Qualifier | | | | | Limits |
| 1,2-Dibromopropane (Surr) | | 107 | | | | | | | 60 - 140 |

Lab Sample ID: 380-44182-I-1-A DU
Matrix: Water
Analysis Batch: 38045

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 37791

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | Limit |
|-----------------------------|---------------|------------------|-----------|--------------|------|---|-----|-------|
| 1,2,3-Trichloropropane | ND | | ND | | ug/L | | NC | 20 |
| 1,2-D bromo-3-Chloropropane | ND | | ND | | ug/L | | NC | 20 |
| 1,2-D bromoethane | ND | | ND | | ug/L | | NC | 20 |

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QC Sample Results

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

Job ID: 380-44256-1

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

Lab Sample ID: 380-44182-I-1-A DU
Matrix: Water
Analysis Batch: 38045

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 37791

| Surrogate | %Recovery | DU DU Qualifier | Limits |
|---------------------------|-----------|--------------------|----------|
| 1,2-Dibromopropane (Surr) | 93 | | 60 - 140 |

Method: 505 - Organochlorine Pesticides/PCBs (GC)

Lab Sample ID: MB 810-57403/1-A
Matrix: Water
Analysis Batch: 57488

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57403

| Analyte | MB MB Result Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------------------|---------------------------|-------|------|---|----------------|----------------|---------|
| PCB-1016 | ND *3 | 0.080 | ug/L | | 05/02/23 09:25 | 05/03/23 04:28 | 1 |
| PCB-1221 | ND *3 | 0.10 | ug/L | | 05/02/23 09:25 | 05/03/23 04:28 | 1 |
| PCB-1232 | ND *3 | 0.10 | ug/L | | 05/02/23 09:25 | 05/03/23 04:28 | 1 |
| PCB-1242 | ND *3 | 0.10 | ug/L | | 05/02/23 09:25 | 05/03/23 04:28 | 1 |
| PCB-1248 | ND *3 | 0.10 | ug/L | | 05/02/23 09:25 | 05/03/23 04:28 | 1 |
| PCB-1254 | ND *3 | 0.10 | ug/L | | 05/02/23 09:25 | 05/03/23 04:28 | 1 |
| PCB-1260 | ND *3 | 0.10 | ug/L | | 05/02/23 09:25 | 05/03/23 04:28 | 1 |
| Chlordane (technical) | ND *3 | 0.10 | ug/L | | 05/02/23 09:25 | 05/03/23 04:28 | 1 |
| Toxaphene | ND *3 | 0.50 | ug/L | | 05/02/23 09:25 | 05/03/23 04:28 | 1 |
| Total PCBs as DCB (Qualitative) | ND | 0.10 | ug/L | | 05/02/23 09:25 | 05/03/23 04:28 | 1 |
| Polychlorinated biphenyls, Total | ND | 0.10 | ug/L | | 05/02/23 09:25 | 05/03/23 04:28 | 1 |

Lab Sample ID: LLCS 810-57403/2-A
Matrix: Water
Analysis Batch: 57488

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57403

| Analyte | Spike Added | LLCS LLCS Result Qualifier | Unit | D | %Rec | %Rec Limits |
|-----------------------|-------------|-------------------------------|------|---|------|----------------|
| Chlordane (technical) | 0.100 | 0.0836 J *3 | ug/L | | 84 | 50 - 150 |

Lab Sample ID: LLCS 810-57403/3-A
Matrix: Water
Analysis Batch: 57488

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57403

| Analyte | Spike Added | LLCS LLCS Result Qualifier | Unit | D | %Rec | %Rec Limits |
|-----------|-------------|-------------------------------|------|---|------|----------------|
| Toxaphene | 0.500 | 0.367 J *3 | ug/L | | 73 | 50 - 150 |

Lab Sample ID: 810-60588-I-3-A MS
Matrix: Water
Analysis Batch: 57488

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 57403

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS MS Result Qualifier | Unit | D | %Rec | %Rec Limits |
|-----------|---------------|------------------|-------------|---------------------------|------|---|------|----------------|
| Toxaphene | ND | *3 | 3.00 | 2.17 *3 | ug/L | | 72 | 65 - 135 |

Lab Sample ID: 810-60588-J-1-A MS
Matrix: Water
Analysis Batch: 57488

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 57403

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS MS Result Qualifier | Unit | D | %Rec | %Rec Limits |
|-----------------------|---------------|------------------|-------------|---------------------------|------|---|------|----------------|
| Chlordane (technical) | ND | *3 | 1.00 | 0.905 *3 | ug/L | | 90 | 65 - 135 |

QC Sample Results

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

Job ID: 380-44256-1

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

Lab Sample ID: 810-60433-K-1-A DU
Matrix: Water
Analysis Batch: 57488

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 57403

| Analyte | Sample | Sample | DU | DU | Unit | D | RPD | Limit |
|----------------------------------|--------|-----------|--------|-----------|------|---|-----|-------|
| | Result | Qualifier | Result | Qualifier | | | | |
| PCB-1016 | ND | *3 | ND | *3 | ug/L | | NC | 30 |
| PCB-1221 | ND | *3 | ND | *3 | ug/L | | NC | 30 |
| PCB-1232 | ND | *3 | ND | *3 | ug/L | | NC | 30 |
| PCB-1242 | ND | *3 | ND | *3 | ug/L | | NC | 30 |
| PCB-1248 | ND | *3 | ND | *3 | ug/L | | NC | 30 |
| PCB-1254 | ND | *3 | ND | *3 | ug/L | | NC | 30 |
| PCB-1260 | ND | *3 | ND | *3 | ug/L | | NC | 30 |
| Chlordane (technical) | ND | *3 | ND | *3 | ug/L | | NC | 30 |
| Toxaphene | ND | *3 | ND | *3 | ug/L | | NC | 30 |
| Total PCBs as DCB (Qualitative) | ND | | ND | | ug/L | | NC | |
| Polychlorinated biphenyls, Total | ND | | ND | | ug/L | | NC | |

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 380-37377/4
Matrix: Water
Analysis Batch: 37377

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 | | | 04/19/23 10:09 | 1 |
| Nitrite as N | ND | | 0.050 | mg/L | | | 04/19/23 10:09 | 1 |

Lab Sample ID: LCS 380-37377/7
Matrix: Water
Analysis Batch: 37377

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

| Analyte | Spike Added | LCS | LCS | Unit | D | %Rec | %Rec Limits |
|--------------|-------------|--------|-----------|------|---|------|-------------|
| | | Result | Qualifier | | | | |
| Nitrate as N | 2.50 | 2.51 | | mg/L | | 100 | 90 - 110 |
| Nitrite as N | 1.00 | 0.999 | | mg/L | | 100 | 90 - 110 |

Lab Sample ID: LCSD 380-37377/8
Matrix: Water
Analysis Batch: 37377

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

| Analyte | Spike Added | LCSD | LCSD | Unit | D | %Rec | %Rec Limits | RPD | Limit |
|--------------|-------------|--------|-----------|------|---|------|-------------|-----|-------|
| | | Result | Qualifier | | | | | | |
| Nitrate as N | 2.50 | 2.53 | | mg/L | | 101 | 90 - 110 | 1 | 20 |
| Nitrite as N | 1.00 | 1.01 | | mg/L | | 101 | 90 - 110 | 1 | 20 |

Lab Sample ID: MRL 380-37377/6
Matrix: Water
Analysis Batch: 37377

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

| Analyte | Spike Added | MRL | MRL | Unit | D | %Rec | %Rec Limits |
|--------------|-------------|--------|-----------|------|---|------|-------------|
| | | Result | Qualifier | | | | |
| Nitrate as N | 0.0500 | 0.0450 | J | mg/L | | 90 | 50 - 150 |
| Nitrite as N | 0.0500 | 0.0499 | J | mg/L | | 100 | 50 - 150 |

QC Sample Results

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

Job ID: 380-44256-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 380-44174-A-1 MS
Matrix: Water
Analysis Batch: 37377

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 | 4.2 | | 6.25 | 10.6 | | mg/L | | 102 | 80 - 120 |
| Nitrite as N | ND | | 2.50 | 2.09 | | mg/L | | 84 | 80 - 120 |

Lab Sample ID: 380-44174-A-1 MSD
Matrix: Water
Analysis Batch: 37377

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 | 4.2 | | 6.25 | 10.6 | | mg/L | | 102 | 80 - 120 | 0 | 20 |
| Nitrite as N | ND | | 2.50 | 2.09 | | mg/L | | 84 | 80 - 120 | 0 | 20 |

Lab Sample ID: MB 380-37378/4
Matrix: Water
Analysis Batch: 37378

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 | | | 04/19/23 10:09 | 1 |
| Sulfate | ND | | 0.25 | mg/L | | | 04/19/23 10:09 | 1 |

Lab Sample ID: LCS 380-37378/7
Matrix: Water
Analysis Batch: 37378

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 | 25.6 | | mg/L | | 102 | 90 - 110 |
| Sulfate | 50.0 | 51.4 | | mg/L | | 103 | 90 - 110 |

Lab Sample ID: LCSD 380-37378/8
Matrix: Water
Analysis Batch: 37378

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 | 25.9 | | mg/L | | 103 | 90 - 110 | 1 | 20 |
| Sulfate | 50.0 | 52.0 | | mg/L | | 104 | 90 - 110 | 1 | 20 |

Lab Sample ID: MRL 380-37378/5
Matrix: Water
Analysis Batch: 37378

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 | 0.134 | J | mg/L | | 107 | 50 - 150 |
| Sulfate | 0.250 | 0.248 | J | mg/L | | 99 | 50 - 150 |

Lab Sample ID: MRL 380-37378/6
Matrix: Water
Analysis Batch: 37378

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 | 0.450 | J | mg/L | | 90 | 50 - 150 |
| Sulfate | 1.00 | 0.947 | | mg/L | | 95 | 50 - 150 |

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QC Sample Results

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

Job ID: 380-44256-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 380-44174-A-1 MS
Matrix: Water
Analysis Batch: 37378

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 | 210 | F1 | 62.5 | 256 | E F1 | mg/L | | 79 | 80 - 120 |
| Sulfate | 190 | | 125 | 317 | | mg/L | | 103 | 80 - 120 |

Lab Sample ID: 380-44174-A-1 MSD
Matrix: Water
Analysis Batch: 37378

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 | 210 | F1 | 62.5 | 257 | E | mg/L | | 81 | 80 - 120 | 0 | 20 |
| Sulfate | 190 | | 125 | 318 | | mg/L | | 104 | 80 - 120 | 0 | 20 |

Lab Sample ID: MB 380-37469/4
Matrix: Water
Analysis Batch: 37469

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 | | | 04/20/23 14:59 | 1 |

Lab Sample ID: LCS 380-37469/5
Matrix: Water
Analysis Batch: 37469

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

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---------|-------------|------------|---------------|------|---|------|-------------|
| Bromide | 100 | 99.7 | | ug/L | | 100 | 90 - 110 |

Lab Sample ID: LCSD 380-37469/6
Matrix: Water
Analysis Batch: 37469

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 | 100 | | ug/L | | 100 | 90 - 110 | 0 | 10 |

Lab Sample ID: MRL 380-37469/3
Matrix: Water
Analysis Batch: 37469

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 | 5.63 | | ug/L | | 113 | 75 - 125 |

Lab Sample ID: 380-43629-I-1 MS
Matrix: Water
Analysis Batch: 37469

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 | 200 | | 50.0 | 242 | | ug/L | | 91 | 80 - 120 |

QC Sample Results

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

Job ID: 380-44256-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 380-43629-I-1 MSD
Matrix: Water
Analysis Batch: 37469

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 | 200 | | 50.0 | 243 | | ug/L | | 94 | 80 - 120 | 0 | 20 |

Lab Sample ID: MB 380-37822/4
Matrix: Water
Analysis Batch: 37822

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 | | | 04/24/23 18:05 | 1 |

Lab Sample ID: LCS 380-37822/6
Matrix: Water
Analysis Batch: 37822

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

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---------|-------------|------------|---------------|------|---|------|-------------|
| Bromide | 100 | 102 | | ug/L | | 102 | 90 - 110 |

Lab Sample ID: LCSD 380-37822/7
Matrix: Water
Analysis Batch: 37822

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 | 0 | 10 |

Lab Sample ID: MRL 380-37822/5
Matrix: Water
Analysis Batch: 37822

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 | 4.79 | J | ug/L | | 96 | 75 - 125 |

Lab Sample ID: 380-44437-Q-1 MS
Matrix: Water
Analysis Batch: 37822

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 | 110 | | 50.0 | 162 | | ug/L | | 99 | 80 - 120 |

Lab Sample ID: 380-44437-Q-1 MSD
Matrix: Water
Analysis Batch: 37822

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 | 110 | | 50.0 | 162 | | ug/L | | 97 | 80 - 120 | 0 | 20 |

QC Sample Results

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

Job ID: 380-44256-1

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 380-37592/16
Matrix: Water
Analysis Batch: 37592

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 | | | 04/21/23 10:57 | 1 |
| Magnesium | ND | | 0.10 | mg/L | | | 04/21/23 10:57 | 1 |
| Potassium | ND | | 1.0 | mg/L | | | 04/21/23 10:57 | 1 |
| Sodium | ND | | 1.0 | mg/L | | | 04/21/23 10:57 | 1 |

Lab Sample ID: LCS 380-37592/18
Matrix: Water
Analysis Batch: 37592

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 | 51.3 | | mg/L | | 103 | 85 - 115 |
| Magnesium | 20.0 | 20.2 | | mg/L | | 101 | 85 - 115 |
| Potassium | 20.0 | 20.3 | | mg/L | | 102 | 85 - 115 |
| Sodium | 50.0 | 50.1 | | mg/L | | 100 | 85 - 115 |

Lab Sample ID: LCSD 380-37592/19
Matrix: Water
Analysis Batch: 37592

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 | 51.1 | | mg/L | | 102 | 85 - 115 | 1 | 20 |
| Magnesium | 20.0 | 20.0 | | mg/L | | 100 | 85 - 115 | 1 | 20 |
| Potassium | 20.0 | 20.2 | | mg/L | | 101 | 85 - 115 | 0 | 20 |
| Sodium | 50.0 | 49.8 | | mg/L | | 100 | 85 - 115 | 1 | 20 |

Lab Sample ID: LLCS 380-37592/17
Matrix: Water
Analysis Batch: 37592

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 | 1.05 | | mg/L | | 105 | 50 - 150 |
| Magnesium | 0.100 | 0.0985 | J | mg/L | | 98 | 50 - 150 |
| Potassium | 1.00 | 0.708 | J | mg/L | | 71 | 50 - 150 |
| Sodium | 1.00 | 1.00 | | mg/L | | 100 | 50 - 150 |

Lab Sample ID: 380-44256-1 MS
Matrix: Drinking Water
Analysis Batch: 37592

Client Sample ID: HALAWA WELLS UNITS 1
Prep Type: Total/NA

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|-----------|---------------|------------------|-------------|-----------|--------------|------|---|------|-------------|
| Calcium | 38 | | 50.0 | 86.3 | | mg/L | | 97 | 70 - 130 |
| Magnesium | 34 | | 20.0 | 52.4 | | mg/L | | 92 | 70 - 130 |
| Potassium | 4.1 | | 20.0 | 26.0 | | mg/L | | 109 | 70 - 130 |
| Sodium | 73 | | 50.0 | 117 | | mg/L | | 88 | 70 - 130 |

QC Sample Results

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

Job ID: 380-44256-1

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

Lab Sample ID: 380-44256-1 MSD
Matrix: Drinking Water
Analysis Batch: 37592

Client Sample ID: HALAWA WELLS UNITS 1
Prep Type: Total/NA

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|-----------|---------------|------------------|-------------|------------|---------------|------|---|------|-------------|-----|-----------|
| Calcium | 38 | | 50.0 | 85.2 | | mg/L | | 95 | 70 - 130 | 1 | 20 |
| Magnesium | 34 | | 20.0 | 52.2 | | mg/L | | 91 | 70 - 130 | 0 | 20 |
| Potassium | 4.1 | | 20.0 | 25.8 | | mg/L | | 108 | 70 - 130 | 1 | 20 |
| Sodium | 73 | | 50.0 | 116 | | mg/L | | 87 | 70 - 130 | 1 | 20 |

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 380-38079/22
Matrix: Water
Analysis Batch: 38079

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

| Analyte | MB Result | MB Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------|-----------|--------------|------|------|---|----------|----------------|---------|
| Antimony | ND | | 1.0 | ug/L | | | 04/20/23 17:56 | 1 |
| Arsenic | ND | | 1.0 | ug/L | | | 04/20/23 17:56 | 1 |
| Beryllium | ND | | 1.0 | ug/L | | | 04/20/23 17:56 | 1 |
| Cadmium | ND | | 0.50 | ug/L | | | 04/20/23 17:56 | 1 |
| Chromium | ND | | 1.0 | ug/L | | | 04/20/23 17:56 | 1 |
| Copper | ND | | 2.0 | ug/L | | | 04/20/23 17:56 | 1 |
| Lead | ND | | 0.50 | ug/L | | | 04/20/23 17:56 | 1 |
| Nickel | ND | | 5.0 | ug/L | | | 04/20/23 17:56 | 1 |
| Selenium | ND | | 5.0 | ug/L | | | 04/20/23 17:56 | 1 |
| Thallium | ND | | 1.0 | ug/L | | | 04/20/23 17:56 | 1 |
| Zinc | ND | | 20 | ug/L | | | 04/20/23 17:56 | 1 |

Lab Sample ID: LLCS 380-38079/21
Matrix: Water
Analysis Batch: 38079

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

| Analyte | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec Limits |
|----------|-------------|-------------|----------------|------|---|------|-------------|
| Chromium | 4.00 | 4.02 | | ug/L | | 101 | 50 - 150 |
| Selenium | 2.00 | 2.09 | J | ug/L | | 105 | 50 - 150 |

Lab Sample ID: MB 380-37417/1-A
Matrix: Water
Analysis Batch: 37574

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 37417

| Analyte | MB Result | MB Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------|-----------|--------------|------|------|---|----------------|----------------|---------|
| Antimony | ND | | 1.0 | ug/L | | 04/20/23 12:18 | 04/20/23 19:09 | 1 |
| Antimony | ND | | 1.0 | ug/L | | 04/20/23 12:18 | 04/20/23 19:09 | 1 |
| Arsenic | ND | | 1.0 | ug/L | | 04/20/23 12:18 | 04/20/23 19:09 | 1 |
| Arsenic | ND | | 1.0 | ug/L | | 04/20/23 12:18 | 04/20/23 19:09 | 1 |
| Beryllium | ND | | 1.0 | ug/L | | 04/20/23 12:18 | 04/20/23 19:09 | 1 |
| Beryllium | ND | | 1.0 | ug/L | | 04/20/23 12:18 | 04/20/23 19:09 | 1 |
| Cadmium | ND | | 0.50 | ug/L | | 04/20/23 12:18 | 04/20/23 19:09 | 1 |
| Cadmium | ND | | 0.50 | ug/L | | 04/20/23 12:18 | 04/20/23 19:09 | 1 |
| Chromium | ND | | 1.0 | ug/L | | 04/20/23 12:18 | 04/20/23 19:09 | 1 |
| Chromium | ND | | 1.0 | ug/L | | 04/20/23 12:18 | 04/20/23 19:09 | 1 |
| Copper | ND | | 2.0 | ug/L | | 04/20/23 12:18 | 04/20/23 19:09 | 1 |
| Copper | ND | | 2.0 | ug/L | | 04/20/23 12:18 | 04/20/23 19:09 | 1 |

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QC Sample Results

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

Job ID: 380-44256-1

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

Lab Sample ID: MB 380-37417/1-A
Matrix: Water
Analysis Batch: 37574

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 37417

| Analyte | MB Result | MB Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|-----------|--------------|------|------|---|----------------|----------------|---------|
| Lead | ND | | 0.50 | ug/L | | 04/20/23 12:18 | 04/20/23 19:09 | 1 |
| Lead | ND | | 0.50 | ug/L | | 04/20/23 12:18 | 04/20/23 19:09 | 1 |
| Nickel | ND | | 5.0 | ug/L | | 04/20/23 12:18 | 04/20/23 19:09 | 1 |
| Nickel | ND | | 5.0 | ug/L | | 04/20/23 12:18 | 04/20/23 19:09 | 1 |
| Selenium | ND | | 5.0 | ug/L | | 04/20/23 12:18 | 04/20/23 19:09 | 1 |
| Selenium | ND | | 5.0 | ug/L | | 04/20/23 12:18 | 04/20/23 19:09 | 1 |
| Silver | ND | | 0.50 | ug/L | | 04/20/23 12:18 | 04/20/23 19:09 | 1 |
| Thallium | ND | | 1.0 | ug/L | | 04/20/23 12:18 | 04/20/23 19:09 | 1 |
| Thallium | ND | | 1.0 | ug/L | | 04/20/23 12:18 | 04/20/23 19:09 | 1 |
| Zinc | ND | | 20 | ug/L | | 04/20/23 12:18 | 04/20/23 19:09 | 1 |
| Zinc | ND | | 20 | ug/L | | 04/20/23 12:18 | 04/20/23 19:09 | 1 |

Lab Sample ID: LCS 380-37417/3-A
Matrix: Water
Analysis Batch: 37574

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 37417

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|-----------|-------------|------------|---------------|------|---|------|-------------|
| Antimony | 50.0 | 50.5 | | ug/L | | 101 | 85 - 115 |
| Antimony | 50.0 | 50.5 | | ug/L | | 101 | 85 - 115 |
| Arsenic | 50.0 | 52.8 | | ug/L | | 106 | 85 - 115 |
| Arsenic | 50.0 | 52.8 | | ug/L | | 106 | 85 - 115 |
| Beryllium | 25.0 | 25.0 | | ug/L | | 100 | 85 - 115 |
| Beryllium | 25.0 | 25.0 | | ug/L | | 100 | 85 - 115 |
| Cadmium | 25.0 | 25.3 | | ug/L | | 101 | 85 - 115 |
| Cadmium | 25.0 | 25.3 | | ug/L | | 101 | 85 - 115 |
| Chromium | 50.0 | 50.2 | | ug/L | | 100 | 85 - 115 |
| Chromium | 50.0 | 50.2 | | ug/L | | 100 | 85 - 115 |
| Copper | 50.0 | 51.8 | | ug/L | | 104 | 85 - 115 |
| Copper | 50.0 | 51.8 | | ug/L | | 104 | 85 - 115 |
| Lead | 50.0 | 50.8 | | ug/L | | 102 | 85 - 115 |
| Lead | 50.0 | 50.8 | | ug/L | | 102 | 85 - 115 |
| Nickel | 50.0 | 50.3 | | ug/L | | 101 | 85 - 115 |
| Nickel | 50.0 | 50.3 | | ug/L | | 101 | 85 - 115 |
| Selenium | 50.0 | 51.2 | | ug/L | | 102 | 85 - 115 |
| Selenium | 50.0 | 51.2 | | ug/L | | 102 | 85 - 115 |
| Silver | 25.0 | 25.1 | | ug/L | | 100 | 85 - 115 |
| Thallium | 50.0 | 50.1 | | ug/L | | 100 | 85 - 115 |
| Thallium | 50.0 | 50.1 | | ug/L | | 100 | 85 - 115 |
| Zinc | 50.0 | 50.4 | | ug/L | | 101 | 85 - 115 |
| Zinc | 50.0 | 50.4 | | ug/L | | 101 | 85 - 115 |

Lab Sample ID: LCSD 380-37417/4-A
Matrix: Water
Analysis Batch: 37574

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 37417

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|----------|-------------|-------------|----------------|------|---|------|-------------|-----|-----------|
| Antimony | 50.0 | 50.8 | | ug/L | | 102 | 85 - 115 | 1 | 20 |
| Antimony | 50.0 | 50.8 | | ug/L | | 102 | 85 - 115 | 1 | 20 |
| Arsenic | 50.0 | 53.6 | | ug/L | | 107 | 85 - 115 | 2 | 20 |

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-44256-1

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

Lab Sample ID: LCSD 380-37417/4-A
Matrix: Water
Analysis Batch: 38079

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 37417

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|-----------|-------------|-------------|----------------|------|---|------|-------------|-----|-----------|
| Arsenic | 50.0 | 53.6 | | ug/L | | 107 | 85 - 115 | 2 | 20 |
| Beryllium | 25.0 | 25.5 | | ug/L | | 102 | 85 - 115 | 2 | 20 |
| Beryllium | 25.0 | 25.5 | | ug/L | | 102 | 85 - 115 | 2 | 20 |
| Cadmium | 25.0 | 25.7 | | ug/L | | 103 | 85 - 115 | 1 | 20 |
| Cadmium | 25.0 | 25.7 | | ug/L | | 103 | 85 - 115 | 1 | 20 |
| Chromium | 50.0 | 51.3 | | ug/L | | 103 | 85 - 115 | 2 | 20 |
| Chromium | 50.0 | 51.3 | | ug/L | | 103 | 85 - 115 | 2 | 20 |
| Copper | 50.0 | 52.3 | | ug/L | | 105 | 85 - 115 | 1 | 20 |
| Copper | 50.0 | 52.3 | | ug/L | | 105 | 85 - 115 | 1 | 20 |
| Lead | 50.0 | 51.4 | | ug/L | | 103 | 85 - 115 | 1 | 20 |
| Lead | 50.0 | 51.4 | | ug/L | | 103 | 85 - 115 | 1 | 20 |
| Nickel | 50.0 | 51.1 | | ug/L | | 102 | 85 - 115 | 2 | 20 |
| Nickel | 50.0 | 51.1 | | ug/L | | 102 | 85 - 115 | 2 | 20 |
| Selenium | 50.0 | 52.3 | | ug/L | | 105 | 85 - 115 | 2 | 20 |
| Selenium | 50.0 | 52.3 | | ug/L | | 105 | 85 - 115 | 2 | 20 |
| Silver | 25.0 | 25.8 | | ug/L | | 103 | 85 - 115 | 3 | 20 |
| Thallium | 50.0 | 51.3 | | ug/L | | 103 | 85 - 115 | 2 | 20 |
| Thallium | 50.0 | 51.3 | | ug/L | | 103 | 85 - 115 | 2 | 20 |
| Zinc | 50.0 | 50.5 | | ug/L | | 101 | 85 - 115 | 0 | 20 |
| Zinc | 50.0 | 50.5 | | ug/L | | 101 | 85 - 115 | 0 | 20 |

Lab Sample ID: LLCS 380-37417/2-A
Matrix: Water
Analysis Batch: 37574

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 37417

| Analyte | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|-----------|-------------|-------------|----------------|------|---|------|-------------|-----|-----------|
| Antimony | 1.00 | 0.998 | J | ug/L | | 100 | 50 - 150 | | |
| Antimony | 1.00 | 0.998 | J | ug/L | | 100 | 50 - 150 | | |
| Arsenic | 1.00 | 0.953 | J | ug/L | | 95 | 50 - 150 | | |
| Arsenic | 1.00 | 0.953 | J | ug/L | | 95 | 50 - 150 | | |
| Beryllium | 1.00 | 1.01 | | ug/L | | 101 | 50 - 150 | | |
| Beryllium | 1.00 | 1.01 | | ug/L | | 101 | 50 - 150 | | |
| Cadmium | 0.500 | 0.509 | | ug/L | | 102 | 50 - 150 | | |
| Cadmium | 0.500 | 0.509 | | ug/L | | 102 | 50 - 150 | | |
| Chromium | 1.00 | 0.920 | J | ug/L | | 92 | 50 - 150 | | |
| Chromium | 1.00 | 0.920 | J | ug/L | | 92 | 50 - 150 | | |
| Copper | 2.00 | 2.09 | | ug/L | | 104 | 50 - 150 | | |
| Copper | 2.00 | 2.09 | | ug/L | | 104 | 50 - 150 | | |
| Lead | 0.500 | 0.500 | | ug/L | | 100 | 50 - 150 | | |
| Lead | 0.500 | 0.500 | | ug/L | | 100 | 50 - 150 | | |
| Nickel | 5.00 | 5.07 | | ug/L | | 101 | 50 - 150 | | |
| Nickel | 5.00 | 5.07 | | ug/L | | 101 | 50 - 150 | | |
| Selenium | 5.00 | 5.13 | | ug/L | | 103 | 50 - 150 | | |
| Selenium | 5.00 | 5.13 | | ug/L | | 103 | 50 - 150 | | |
| Silver | 0.500 | 0.366 | J | ug/L | | 73 | 50 - 150 | | |
| Silver | 0.500 | 0.366 | J | ug/L | | 73 | 50 - 150 | | |
| Thallium | 1.00 | 0.974 | J | ug/L | | 97 | 50 - 150 | | |
| Thallium | 1.00 | 0.974 | J | ug/L | | 97 | 50 - 150 | | |
| Zinc | 20.0 | 20.1 | | ug/L | | 100 | 50 - 150 | | |

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-44256-1

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

Lab Sample ID: LLCS 380-37417/2-A
Matrix: Water
Analysis Batch: 38079

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 37417

| Analyte | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---------|-------------|-------------|----------------|------|---|------|-------------|
| Zinc | 20.0 | 20.1 | | ug/L | | 100 | 50 - 150 |

Lab Sample ID: 380-44178-AA-1-B MS
Matrix: Water
Analysis Batch: 37574

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 37417

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|-----------|---------------|------------------|-------------|-----------|--------------|------|---|------|-------------|
| Antimony | ND | | 50.0 | 50.8 | | ug/L | | 102 | 70 - 130 |
| Antimony | ND | | 50.0 | 50.8 | | ug/L | | 102 | 70 - 130 |
| Arsenic | ND | | 50.0 | 53.9 | | ug/L | | 108 | 70 - 130 |
| Arsenic | ND | | 50.0 | 53.9 | | ug/L | | 108 | 70 - 130 |
| Beryllium | ND | | 25.0 | 25.6 | | ug/L | | 103 | 70 - 130 |
| Beryllium | ND | | 25.0 | 25.6 | | ug/L | | 103 | 70 - 130 |
| Cadmium | ND | | 25.0 | 25.6 | | ug/L | | 102 | 70 - 130 |
| Cadmium | ND | | 25.0 | 25.6 | | ug/L | | 102 | 70 - 130 |
| Chromium | ND | | 50.0 | 50.3 | | ug/L | | 101 | 70 - 130 |
| Chromium | ND | | 50.0 | 50.3 | | ug/L | | 101 | 70 - 130 |
| Copper | ND | | 50.0 | 50.9 | | ug/L | | 102 | 70 - 130 |
| Copper | ND | | 50.0 | 50.9 | | ug/L | | 102 | 70 - 130 |
| Lead | ND | | 50.0 | 50.3 | | ug/L | | 101 | 70 - 130 |
| Lead | ND | | 50.0 | 50.3 | | ug/L | | 101 | 70 - 130 |
| Nickel | ND | | 50.0 | 50.0 | | ug/L | | 100 | 70 - 130 |
| Nickel | ND | | 50.0 | 50.0 | | ug/L | | 100 | 70 - 130 |
| Selenium | ND | | 50.0 | 52.4 | | ug/L | | 105 | 70 - 130 |
| Selenium | ND | | 50.0 | 52.4 | | ug/L | | 105 | 70 - 130 |
| Silver | ND | ^5- | 25.0 | 24.6 | | ug/L | | 97 | 70 - 130 |
| Thallium | ND | | 50.0 | 49.6 | | ug/L | | 99 | 70 - 130 |
| Thallium | ND | | 50.0 | 49.6 | | ug/L | | 99 | 70 - 130 |
| Zinc | ND | | 50.0 | 50.9 | | ug/L | | 102 | 70 - 130 |
| Zinc | ND | | 50.0 | 50.9 | | ug/L | | 102 | 70 - 130 |

Lab Sample ID: 380-44178-AA-1-C MSD
Matrix: Water
Analysis Batch: 37574

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 37417

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|-----------|---------------|------------------|-------------|------------|---------------|------|---|------|-------------|-----|-----------|
| Antimony | ND | | 50.0 | 49.7 | | ug/L | | 99 | 70 - 130 | 2 | 20 |
| Antimony | ND | | 50.0 | 49.7 | | ug/L | | 99 | 70 - 130 | 2 | 20 |
| Arsenic | ND | | 50.0 | 54.5 | | ug/L | | 109 | 70 - 130 | 1 | 20 |
| Arsenic | ND | | 50.0 | 54.5 | | ug/L | | 109 | 70 - 130 | 1 | 20 |
| Beryllium | ND | | 25.0 | 25.9 | | ug/L | | 104 | 70 - 130 | 1 | 20 |
| Beryllium | ND | | 25.0 | 25.9 | | ug/L | | 104 | 70 - 130 | 1 | 20 |
| Cadmium | ND | | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 | 3 | 20 |
| Cadmium | ND | | 25.0 | 24.8 | | ug/L | | 99 | 70 - 130 | 3 | 20 |
| Chromium | ND | | 50.0 | 50.8 | | ug/L | | 102 | 70 - 130 | 1 | 20 |
| Chromium | ND | | 50.0 | 50.8 | | ug/L | | 102 | 70 - 130 | 1 | 20 |
| Copper | ND | | 50.0 | 50.9 | | ug/L | | 102 | 70 - 130 | 0 | 20 |
| Copper | ND | | 50.0 | 50.9 | | ug/L | | 102 | 70 - 130 | 0 | 20 |
| Lead | ND | | 50.0 | 50.1 | | ug/L | | 100 | 70 - 130 | 0 | 20 |

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-44256-1

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

Lab Sample ID: 380-44178-AA-1-C MSD
Matrix: Water
Analysis Batch: 38079

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 37417

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|----------|---------------|------------------|-------------|------------|---------------|------|---|------|-------------|-----|-----------|
| Lead | ND | | 50.0 | 50.1 | | ug/L | | 100 | 70 - 130 | 0 | 20 |
| Nickel | ND | | 50.0 | 50.2 | | ug/L | | 100 | 70 - 130 | 0 | 20 |
| Nickel | ND | | 50.0 | 50.2 | | ug/L | | 100 | 70 - 130 | 0 | 20 |
| Selenium | ND | | 50.0 | 53.0 | | ug/L | | 106 | 70 - 130 | 1 | 20 |
| Selenium | ND | | 50.0 | 53.0 | | ug/L | | 106 | 70 - 130 | 1 | 20 |
| Silver | ND | ^5- | 25.0 | 24.1 | | ug/L | | 95 | 70 - 130 | 2 | 20 |
| Thallium | ND | | 50.0 | 50.3 | | ug/L | | 101 | 70 - 130 | 1 | 20 |
| Thallium | ND | | 50.0 | 50.3 | | ug/L | | 101 | 70 - 130 | 1 | 20 |
| Zinc | ND | | 50.0 | 51.2 | | ug/L | | 102 | 70 - 130 | 1 | 20 |
| Zinc | ND | | 50.0 | 51.2 | | ug/L | | 102 | 70 - 130 | 1 | 20 |

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 810-56865/1-A
Matrix: Water
Analysis Batch: 56889

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 56865

| Analyte | MB Result | MB Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|-----------|--------------|------|------|---|----------------|----------------|---------|
| Mercury | ND | | 0.10 | ug/L | | 04/26/23 18:55 | 04/26/23 22:41 | 1 |

Lab Sample ID: LCS 810-56865/3-A
Matrix: Water
Analysis Batch: 56889

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 56865

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---------|-------------|------------|---------------|------|---|------|-------------|
| Mercury | 1.00 | 0.987 | | ug/L | | 99 | 85 - 115 |

Lab Sample ID: LLCS 810-56865/2-A
Matrix: Water
Analysis Batch: 56889

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 56865

| Analyte | Spike Added | LLCS Result | LLCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---------|-------------|-------------|----------------|------|---|------|-------------|
| Mercury | 0.100 | ND | | ug/L | | 82 | 50 - 150 |

Lab Sample ID: 810-60803-B-1-B MS
Matrix: Water
Analysis Batch: 56889

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 56865

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---------|---------------|------------------|-------------|-----------|--------------|------|---|------|-------------|
| Mercury | ND | | 1.00 | 0.990 | | ug/L | | 99 | 70 - 130 |

Lab Sample ID: 810-60803-B-1-C MSD
Matrix: Water
Analysis Batch: 56889

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 56865

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---------|---------------|------------------|-------------|------------|---------------|------|---|------|-------------|-----|-----------|
| Mercury | ND | | 1.00 | 0.966 | | ug/L | | 97 | 70 - 130 | 3 | 20 |

QC Sample Results

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

Job ID: 380-44256-1

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 380-37854/1
Matrix: Water
Analysis Batch: 37854

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 | | | 04/24/23 19:06 | 1 |
| Bicarbonate Alkalinity as CaCO3 | ND | | 2.0 | mg/L | | | 04/24/23 19:06 | 1 |
| Carbonate Alkalinity as CaCO3 | ND | | 2.0 | mg/L | | | 04/24/23 19:06 | 1 |

Lab Sample ID: LCS 380-37854/3
Matrix: Water
Analysis Batch: 37854

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 | 98.2 | | mg/L | | 98 | 90 - 110 |

Lab Sample ID: LCSD 380-37854/18
Matrix: Water
Analysis Batch: 37854

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 |
|------------|-------------|-------------|----------------|------|---|------|-------------|-----|-----------|
| A kalinity | 100 | 97.7 | | mg/L | | 98 | 90 - 110 | 1 | 20 |

Lab Sample ID: LLCS 380-37854/4
Matrix: Water
Analysis Batch: 37854

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 | 21.2 | | mg/L | | 106 | 90 - 110 |

Lab Sample ID: MRL 380-37854/2
Matrix: Water
Analysis Batch: 37854

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 | 1.65 | J | mg/L | | 83 | 50 - 150 |

Lab Sample ID: 380-44440-F-5 MS
Matrix: Water
Analysis Batch: 37854

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 | 170 | | 100 | 255 | | mg/L | | 81 | 80 - 120 |

Lab Sample ID: 380-44440-F-5 MSD
Matrix: Water
Analysis Batch: 37854

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 | 170 | | 100 | 255 | | mg/L | | 82 | 80 - 120 | 0 | 20 |

QC Sample Results

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

Job ID: 380-44256-1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: 380-44440-F-5 DU
Matrix: Water
Analysis Batch: 37854

Client Sample ID: Duplicate
Prep Type: Total/NA

| Analyte | Sample | Sample | DU | DU | Unit | D | RPD | RPD | Limit |
|---------------------------------|--------|-----------|--------|-----------|------|---|-----|-----|-------|
| | Result | Qualifier | Result | Qualifier | | | | | |
| Alkalinity | 170 | | 173 | | mg/L | | 0.4 | | 20 |
| Bicarbonate Alkalinity as CaCO3 | 170 | ^2 | 173 | | mg/L | | 0.4 | | 20 |
| Carbonate Alkalinity as CaCO3 | ND | | ND | | mg/L | | NC | | 20 |

Method: SM 2510B - Conductivity, Specific Conductance

Lab Sample ID: MB 380-37857/2
Matrix: Water
Analysis Batch: 37857

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

| Analyte | MB | MB | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------|--------|-----------|-----|----------|---|----------|----------------|---------|
| | Result | Qualifier | | | | | | |
| Specific Conductance | ND | | 2.0 | umhos/cm | | | 04/24/23 19:06 | 1 |

Lab Sample ID: LCS 380-37857/4
Matrix: Water
Analysis Batch: 37857

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

| Analyte | Spike Added | LCS | LCS | Unit | D | %Rec | %Rec Limits | RPD | Limit |
|----------------------|-------------|--------|-----------|----------|---|------|-------------|-----|-------|
| | | Result | Qualifier | | | | | | |
| Specific Conductance | 1000 | 990 | | umhos/cm | | 99 | 90 - 110 | | |

Lab Sample ID: LCSD 380-37857/16
Matrix: Water
Analysis Batch: 37857

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

| Analyte | Spike Added | LCSD | LCSD | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|----------------------|-------------|--------|-----------|----------|---|------|-------------|-----|-----------|
| | | Result | Qualifier | | | | | | |
| Specific Conductance | 1000 | 984 | | umhos/cm | | 98 | 90 - 110 | 1 | 10 |

Lab Sample ID: MRL 380-37857/3
Matrix: Water
Analysis Batch: 37857

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

| Analyte | Spike Added | MRL | MRL | Unit | D | %Rec | %Rec Limits | RPD | Limit |
|----------------------|-------------|--------|-----------|----------|---|------|-------------|-----|-------|
| | | Result | Qualifier | | | | | | |
| Specific Conductance | 2.00 | 1.80 | J | umhos/cm | | 90 | 50 - 150 | | |

Lab Sample ID: 380-44440-F-5 DU
Matrix: Water
Analysis Batch: 37857

Client Sample ID: Duplicate
Prep Type: Total/NA

| Analyte | Sample | Sample | DU | DU | Unit | D | RPD | RPD | Limit |
|----------------------|--------|-----------|--------|-----------|----------|---|-----|-----|-------|
| | Result | Qualifier | Result | Qualifier | | | | | |
| Specific Conductance | 750 | | 749 | | umhos/cm | | 0.1 | | 20 |

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

Lab Sample ID: MB 380-37508/1
Matrix: Water
Analysis Batch: 37508

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

| Analyte | MB | MB | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|--------|-----------|----|------|---|----------|----------------|---------|
| | Result | Qualifier | | | | | | |
| Total Dissolved Solids | ND | | 10 | mg/L | | | 04/20/23 22:26 | 1 |

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-44256-1

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

Lab Sample ID: HLCS 380-37508/5
Matrix: Water
Analysis Batch: 37508

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 | 668 | | mg/L | | 95 | 80 - 114 |

Lab Sample ID: LCS 380-37508/4
Matrix: Water
Analysis Batch: 37508

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 | 174 | | mg/L | | 99 | 80 - 114 |

Lab Sample ID: MRL 380-37508/2
Matrix: Water
Analysis Batch: 37508

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 | 12.0 | | mg/L | | 120 | 50 - 150 |

Lab Sample ID: MRL 380-37508/3
Matrix: Water
Analysis Batch: 37508

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 | 12.0 | | mg/L | | 120 | 50 - 150 |

Lab Sample ID: 380-44443-C-5 DU
Matrix: Water
Analysis Batch: 37508

Client Sample ID: Duplicate
Prep Type: Total/NA

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|------------------------|---------------|------------------|-----------|--------------|------|---|-----|-----------|
| Total Dissolved Solids | 640 | | 628 | | mg/L | | 2 | 10 |

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 380-37852/6
Matrix: Water
Analysis Batch: 37852

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 | | | 04/24/23 15:29 | 1 |

Lab Sample ID: LCS 380-37852/8
Matrix: Water
Analysis Batch: 37852

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 | 0.999 | | mg/L | | 100 | 90 - 110 |

QC Sample Results

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

Job ID: 380-44256-1

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: LCSD 380-37852/9
Matrix: Water
Analysis Batch: 37852

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 | 1.00 | | mg/L | | 100 | 90 - 110 | 1 | 10 |

Lab Sample ID: MRL 380-37852/7
Matrix: Water
Analysis Batch: 37852

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

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|----------|-------------|------------|---------------|------|---|------|-------------|-----|-----------|
| Fluoride | 0.0500 | 0.0475 | J | mg/L | | 95 | 50 - 150 | | |

Lab Sample ID: 380-44044-A-1 MS
Matrix: Water
Analysis Batch: 37852

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 | RPD | RPD Limit |
|----------|---------------|------------------|-------------|-----------|--------------|------|---|------|-------------|-----|-----------|
| Fluoride | 0.065 | | 1.00 | 1.08 | | mg/L | | 101 | 80 - 120 | | |

Lab Sample ID: 380-44044-A-1 MSD
Matrix: Water
Analysis Batch: 37852

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 | 0.065 | | 1.00 | 1.04 | | mg/L | | 98 | 80 - 120 | 3 | 20 |

Method: SM 4500 H+ B - pH

Lab Sample ID: MB 380-37859/4
Matrix: Water
Analysis Batch: 37859

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

| Analyte | MB Result | MB Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|-----------|--------------|----|------|---|----------|----------------|---------|
| pH | 5.7 | | | SU | | | 04/24/23 19:06 | 1 |

Lab Sample ID: LCS 380-37859/5
Matrix: Water
Analysis Batch: 37859

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

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

Lab Sample ID: LCSD 380-37859/17
Matrix: Water
Analysis Batch: 37859

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 |

QC Sample Results

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

Job ID: 380-44256-1

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

Lab Sample ID: 380-44440-F-5 DU
Matrix: Water
Analysis Batch: 37859

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 380-37601/1
Matrix: Water
Analysis Batch: 37601

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 | | | 04/21/23 14:25 | 1 |

Lab Sample ID: LCS 380-37601/4
Matrix: Water
Analysis Batch: 37601

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 | 0.240 | | mg/L | | 96 | 90 - 110 |

Lab Sample ID: LCSD 380-37601/11
Matrix: Water
Analysis Batch: 37601

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 | 0.254 | | mg/L | | 102 | 90 - 110 | 6 | 20 |

Lab Sample ID: MRL 380-37601/10
Matrix: Water
Analysis Batch: 37601

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 | 0.0570 | | mg/L | | 114 | 50 - 150 |

Lab Sample ID: MRL 380-37601/2
Matrix: Water
Analysis Batch: 37601

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 | 0.0610 | | mg/L | | 122 | 50 - 150 |

Lab Sample ID: 380-44261-J-1 MS
Matrix: Water
Analysis Batch: 37601

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 | 0.115 | F1 | mg/L | | 46 | 80 - 120 |

QC Sample Results

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

Job ID: 380-44256-1

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

Lab Sample ID: 380-44261-J-1 MSD
Matrix: Water
Analysis Batch: 37601

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 | 0.116 | F1 | mg/L | | 46 | 80 - 120 | 1 | 20 |

Method: 625 Acid/Base/PAH + TICs - EPA 625 Base/Neutral and Acid Organics i

Lab Sample ID: 105218-B1
Matrix: BlankMatrix
Analysis Batch: O-41042

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: O-41042_P

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------------------|--------------|-----------------|-------|-------|------|---|----------------|----------------|---------|
| 1-Methylnaphthalene | ND | | 0.005 | 0.001 | µg/L | | 04/13/23 00:00 | 05/05/23 00:47 | 1 |
| 1-Methylphenanthrene | ND | | 0.005 | 0.001 | µg/L | | 04/13/23 00:00 | 05/05/23 00:47 | 1 |
| 2,3,5-Trimethylnaphthalene | ND | | 0.005 | 0.001 | µg/L | | 04/13/23 00:00 | 05/05/23 00:47 | 1 |
| 2,6-Dimethylnaphthalene | ND | | 0.005 | 0.001 | µg/L | | 04/13/23 00:00 | 05/05/23 00:47 | 1 |
| 2,6-Di-tert-butyl-4-methylphenol | ND | | 0.1 | 0.05 | µg/L | | 04/13/23 00:00 | 05/05/23 00:47 | 1 |
| 2,6-Di-tert-butylphenol | ND | | 0.1 | 0.05 | µg/L | | 04/13/23 00:00 | 05/05/23 00:47 | 1 |
| 2-Methylnaphthalene | ND | | 0.005 | 0.001 | µg/L | | 04/13/23 00:00 | 05/05/23 00:47 | 1 |
| 6-tert-butyl-2,4-dimethylphenol | ND | | 0.1 | 0.05 | µg/L | | 04/13/23 00:00 | 05/05/23 00:47 | 1 |
| Acenaphthene | ND | | 0.005 | 0.001 | µg/L | | 04/13/23 00:00 | 05/05/23 00:47 | 1 |
| Acenaphthylene | ND | | 0.005 | 0.001 | µg/L | | 04/13/23 00:00 | 05/05/23 00:47 | 1 |
| Anthracene | ND | | 0.005 | 0.001 | µg/L | | 04/13/23 00:00 | 05/05/23 00:47 | 1 |
| Benz[a]anthracene | ND | | 0.005 | 0.001 | µg/L | | 04/13/23 00:00 | 05/05/23 00:47 | 1 |
| Benzo[a]pyrene | ND | | 0.005 | 0.001 | µg/L | | 04/13/23 00:00 | 05/05/23 00:47 | 1 |
| Benzo[b]fluoranthene | ND | | 0.005 | 0.001 | µg/L | | 04/13/23 00:00 | 05/05/23 00:47 | 1 |
| Benzo[e]pyrene | ND | | 0.005 | 0.001 | µg/L | | 04/13/23 00:00 | 05/05/23 00:47 | 1 |
| Benzo[g,h,i]perylene | ND | | 0.005 | 0.001 | µg/L | | 04/13/23 00:00 | 05/05/23 00:47 | 1 |
| Benzo[k]fluoranthene | ND | | 0.005 | 0.001 | µg/L | | 04/13/23 00:00 | 05/05/23 00:47 | 1 |
| Biphenyl | ND | | 0.005 | 0.001 | µg/L | | 04/13/23 00:00 | 05/05/23 00:47 | 1 |
| Chrysene | ND | | 0.005 | 0.001 | µg/L | | 04/13/23 00:00 | 05/05/23 00:47 | 1 |
| Dibenz[a,h]anthracene | ND | | 0.005 | 0.001 | µg/L | | 04/13/23 00:00 | 05/05/23 00:47 | 1 |
| Dibenzo[a,l]pyrene | ND | | 0.005 | 0.001 | µg/L | | 04/13/23 00:00 | 05/05/23 00:47 | 1 |
| Dibenzothiophene | ND | | 0.005 | 0.001 | µg/L | | 04/13/23 00:00 | 05/05/23 00:47 | 1 |
| Disalicylidenepropanediamine | ND | | 0.1 | 0.05 | µg/L | | 04/13/23 00:00 | 05/05/23 00:47 | 1 |
| Fluoranthene | ND | | 0.005 | 0.001 | µg/L | | 04/13/23 00:00 | 05/05/23 00:47 | 1 |
| Fluorene | ND | | 0.005 | 0.001 | µg/L | | 04/13/23 00:00 | 05/05/23 00:47 | 1 |
| Indeno[1,2,3-cd]pyrene | ND | | 0.005 | 0.001 | µg/L | | 04/13/23 00:00 | 05/05/23 00:47 | 1 |
| Naphthalene | ND | | 0.005 | 0.001 | µg/L | | 04/13/23 00:00 | 05/05/23 00:47 | 1 |
| Perylene | ND | | 0.005 | 0.001 | µg/L | | 04/13/23 00:00 | 05/05/23 00:47 | 1 |
| Phenanthrene | ND | | 0.005 | 0.001 | µg/L | | 04/13/23 00:00 | 05/05/23 00:47 | 1 |
| p-tert-Butylphenol | ND | | 0.1 | 0.05 | µg/L | | 04/13/23 00:00 | 05/05/23 00:47 | 1 |
| Pyrene | ND | | 0.005 | 0.001 | µg/L | | 04/13/23 00:00 | 05/05/23 00:47 | 1 |

| Surrogate | Blank %Recovery | Blank Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|--------------------|-----------------|-----------------|----------|----------------|----------------|---------|
| (d10-Acenaphthene) | 73 | | 27 - 133 | 04/13/23 00:00 | 05/05/23 00:47 | 1 |
| (d10-Phenanthrene) | 76 | | 43 - 129 | 04/13/23 00:00 | 05/05/23 00:47 | 1 |
| (d12-Chrysene) | 65 | | 52 - 144 | 04/13/23 00:00 | 05/05/23 00:47 | 1 |
| (d12-Perylene) | 82 | | 36 - 161 | 04/13/23 00:00 | 05/05/23 00:47 | 1 |
| (d8-Naphthalene) | 54 | | 25 - 125 | 04/13/23 00:00 | 05/05/23 00:47 | 1 |

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-44256-1

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

Lab Sample ID: 105218-B1
Matrix: BlankMatrix
Analysis Batch: O-41042

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: O-41042_P

| Analyte | Blank Result | Blank Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------------|--------------|-----------------|-----|------|------|---|----------------|----------------|---------|
| 2,4,5-Trichlorophenol | ND | | 0.1 | 0.05 | µg/L | | 04/13/23 00:00 | 05/11/23 08:58 | 1 |
| 2,4,6-Trichlorophenol | ND | | 0.1 | 0.05 | µg/L | | 04/13/23 00:00 | 05/11/23 08:58 | 1 |
| 2,4-Dichlorophenol | ND | | 0.1 | 0.05 | µg/L | | 04/13/23 00:00 | 05/11/23 08:58 | 1 |
| 2,4-Dinitrophenol | ND | | 0.2 | 0.1 | µg/L | | 04/13/23 00:00 | 05/11/23 08:58 | 1 |
| 2,6-Dichlorophenol | ND | | 0.1 | 0.05 | µg/L | | 04/13/23 00:00 | 05/11/23 08:58 | 1 |
| 2-Chloronaphthalene | ND | | 0.1 | 0.05 | µg/L | | 04/13/23 00:00 | 05/11/23 08:58 | 1 |
| 2-Chlorophenol | ND | | 0.1 | 0.05 | µg/L | | 04/13/23 00:00 | 05/11/23 08:58 | 1 |
| 2-Methyl-4,6-dinitrophenol | ND | | 0.2 | 0.1 | µg/L | | 04/13/23 00:00 | 05/11/23 08:58 | 1 |
| 2-Methylphenol | ND | | 0.2 | 0.1 | µg/L | | 04/13/23 00:00 | 05/11/23 08:58 | 1 |
| 2-Nitroaniline | ND | | 0.1 | 0.05 | µg/L | | 04/13/23 00:00 | 05/11/23 08:58 | 1 |
| 2-Nitrophenol | ND | | 0.2 | 0.1 | µg/L | | 04/13/23 00:00 | 05/11/23 08:58 | 1 |
| 3+4-Methylphenol | ND | | 0.2 | 0.1 | µg/L | | 04/13/23 00:00 | 05/11/23 08:58 | 1 |
| 3-Nitroaniline | ND | | 0.1 | 0.05 | µg/L | | 04/13/23 00:00 | 05/11/23 08:58 | 1 |
| 4-Bromophenylphenyl ether | ND | | 0.1 | 0.05 | µg/L | | 04/13/23 00:00 | 05/11/23 08:58 | 1 |
| 4-Chloro-3-methylphenol | ND | | 0.2 | 0.1 | µg/L | | 04/13/23 00:00 | 05/11/23 08:58 | 1 |
| 4-Chloroaniline | ND | | 0.1 | 0.05 | µg/L | | 04/13/23 00:00 | 05/11/23 08:58 | 1 |
| 4-Chlorophenylphenyl ether | ND | | 0.1 | 0.05 | µg/L | | 04/13/23 00:00 | 05/11/23 08:58 | 1 |
| 4-Nitroaniline | ND | | 0.1 | 0.05 | µg/L | | 04/13/23 00:00 | 05/11/23 08:58 | 1 |
| 4-Nitrophenol | ND | | 0.2 | 0.1 | µg/L | | 04/13/23 00:00 | 05/11/23 08:58 | 1 |
| Aniline | ND | | 0.1 | 0.05 | µg/L | | 04/13/23 00:00 | 05/11/23 08:58 | 1 |
| Benzidine | ND | | 0.1 | 0.05 | µg/L | | 04/13/23 00:00 | 05/11/23 08:58 | 1 |
| Benzoic Acid | ND | | 0.2 | 0.1 | µg/L | | 04/13/23 00:00 | 05/11/23 08:58 | 1 |
| Benzyl Alcohol | ND | | 0.2 | 0.1 | µg/L | | 04/13/23 00:00 | 05/11/23 08:58 | 1 |
| Bis(2-Chloroethoxy) methane | ND | | 0.1 | 0.05 | µg/L | | 04/13/23 00:00 | 05/11/23 08:58 | 1 |
| Bis(2-Chloroethyl) ether | ND | | 0.1 | 0.05 | µg/L | | 04/13/23 00:00 | 05/11/23 08:58 | 1 |
| Bis(2-Chloroisopropyl) ether | ND | | 0.1 | 0.05 | µg/L | | 04/13/23 00:00 | 05/11/23 08:58 | 1 |
| Dibenzofuran | ND | | 0.1 | 0.05 | µg/L | | 04/13/23 00:00 | 05/11/23 08:58 | 1 |
| Hexachloroethane | ND | | 0.1 | 0.05 | µg/L | | 04/13/23 00:00 | 05/11/23 08:58 | 1 |
| Nitrobenzene | ND | | 0.1 | 0.05 | µg/L | | 04/13/23 00:00 | 05/11/23 08:58 | 1 |
| N-Nitrosodi-n-propylamine | ND | | 0.1 | 0.05 | µg/L | | 04/13/23 00:00 | 05/11/23 08:58 | 1 |
| N-Nitrosodiphenylamine | ND | | 0.1 | 0.05 | µg/L | | 04/13/23 00:00 | 05/11/23 08:58 | 1 |
| Pentachlorophenol | ND | | 0.1 | 0.05 | µg/L | | 04/13/23 00:00 | 05/11/23 08:58 | 1 |
| Phenol | ND | | 0.2 | 0.1 | µg/L | | 04/13/23 00:00 | 05/11/23 08:58 | 1 |

| Surrogate | Blank %Recovery | Blank Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------------|-----------------|-----------------|----------|----------------|----------------|---------|
| (2,4,6-Tribromophenol) | 50 | | 30 - 130 | 04/13/23 00:00 | 05/11/23 08:58 | 1 |
| (d5-Phenol) | 57 | | 0 - 130 | 04/13/23 00:00 | 05/11/23 08:58 | 1 |

Lab Sample ID: 105218-BS1
Matrix: BlankMatrix
Analysis Batch: O-41042

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-41042_P

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|----------------------------------|-------------|------------|---------------|------|---|------|-------------|
| 1-Methylnaphthalene | 0.5 | 0.29 | | µg/L | | 58 | 31 - 128 |
| 1-Methylphenanthrene | 0.5 | 0.374 | | µg/L | | 75 | 66 - 127 |
| 2,3,5-Trimethylnaphthalene | 0.5 | 0.344 | | µg/L | | 69 | 55 - 122 |
| 2,6-Dimethylnaphthalene | 0.5 | 0.301 | | µg/L | | 60 | 48 - 120 |
| 2,6-Di-tert-butyl-4-methylphenol | 1 | 0.58 | | µg/L | | 58 | 50 - 150 |

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-44256-1

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

Lab Sample ID: 105218-BS1
Matrix: BlankMatrix
Analysis Batch: O-41042

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-41042_P

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---------------------------------|-------------|------------|---------------|------|---|------|-------------|
| 2,6-Di-tert-butylphenol | 1 | 0.558 | | µg/L | | 56 | 50 - 150 |
| 2-Methylnaphthalene | 1.5 | 0.728 | | µg/L | | 49 | 47 - 130 |
| 6-tert-butyl-2,4-dimethylphenol | 1 | 0.508 | | µg/L | | 51 | 50 - 150 |
| Acenaphthene | 1.5 | 1.03 | | µg/L | | 69 | 53 - 131 |
| Acenaphthylene | 1.5 | 0.941 | | µg/L | | 63 | 43 - 140 |
| Anthracene | 1.5 | 1.23 | | µg/L | | 82 | 58 - 135 |
| Benz[a]anthracene | 1.5 | 0.994 | | µg/L | | 66 | 55 - 145 |
| Benzo[a]pyrene | 1.5 | 1.27 | | µg/L | | 85 | 51 - 143 |
| Benzo[b]fluoranthene | 1.5 | 1.25 | | µg/L | | 83 | 46 - 165 |
| Benzo[e]pyrene | 0.5 | 0.355 | | µg/L | | 71 | 42 - 152 |
| Benzo[g,h,i]perylene | 1.5 | 1.35 | | µg/L | | 90 | 63 - 133 |
| Benzo[k]fluoranthene | 1.5 | 1.38 | | µg/L | | 92 | 56 - 145 |
| Biphenyl | 0.5 | 0.285 | | µg/L | | 57 | 56 - 119 |
| Chrysene | 1.5 | 1.02 | | µg/L | | 68 | 56 - 141 |
| Dibenz[a,h]anthracene | 1.5 | 1.58 | | µg/L | | 105 | 55 - 150 |
| Dibenzo[a,l]pyrene | 0.5 | 0.248 | | µg/L | | 50 | 50 - 150 |
| Dibenzothiophene | 0.5 | 0.38 | | µg/L | | 76 | 46 - 126 |
| Disalicylidenepropanediamine | 50 | 40.4 | | µg/L | | 81 | 50 - 150 |
| Fluoranthene | 1.5 | 1.48 | | µg/L | | 99 | 60 - 146 |
| Fluorene | 1.5 | 1.04 | | µg/L | | 69 | 58 - 131 |
| Indeno[1,2,3-cd]pyrene | 1.5 | 1.41 | | µg/L | | 94 | 50 - 151 |
| Naphthalene | 1.5 | 0.706 | | µg/L | | 47 | 41 - 126 |
| Perylene | 0.5 | 0.4 | | µg/L | | 80 | 48 - 141 |
| Phenanthrene | 1.5 | 1.21 | | µg/L | | 81 | 67 - 127 |
| p-tert-Butylphenol | 1 | 0.816 | | µg/L | | 82 | 50 - 150 |
| Pyrene | 1.5 | 1.52 | | µg/L | | 101 | 54 - 156 |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|--------------------|---------------|---------------|----------|
| (d10-Acenaphthene) | 54 | | 27 - 133 |
| (d10-Phenanthrene) | 71 | | 43 - 129 |
| (d12-Chrysene) | 63 | | 52 - 144 |
| (d12-Perylene) | 81 | | 36 - 161 |
| (d8-Naphthalene) | 53 | | 25 - 125 |

Lab Sample ID: 105218-BS1
Matrix: BlankMatrix
Analysis Batch: O-41042

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-41042_P

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|----------------------------|-------------|------------|---------------|------|---|------|-------------|
| 2,4,5-Trichlorophenol | 1 | 0.928 | | µg/L | | 93 | 30 - 130 |
| 2,4,6-Trichlorophenol | 1 | 0.914 | | µg/L | | 91 | 30 - 130 |
| 2,4-Dichlorophenol | 1 | 0.77 | | µg/L | | 77 | 51 - 117 |
| 2,4-Dinitrophenol | 1 | 1.07 | | µg/L | | 107 | 0 - 152 |
| 2,6-Dichlorophenol | 1 | 0.405 | | µg/L | | 41 | 30 - 130 |
| 2-Chloronaphthalene | 1 | 0.79 | | µg/L | | 79 | 53 - 130 |
| 2-Chlorophenol | 1 | 0.657 | | µg/L | | 66 | 41 - 120 |
| 2-Methyl-4,6-dinitrophenol | 1 | 0.999 | | µg/L | | 100 | 0 - 141 |
| 2-Methylphenol | 1 | 0.641 | | µg/L | | 64 | 40 - 117 |

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-44256-1

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

Lab Sample ID: 105218-BS1
Matrix: BlankMatrix
Analysis Batch: O-41042

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-41042_P

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|------------------------------|-------------|------------|---------------|------|---|------|-------------|
| 2-Nitroaniline | 1 | 0.968 | | µg/L | | 97 | 69 - 114 |
| 2-Nitrophenol | 1 | 0.699 | | µg/L | | 70 | 40 - 117 |
| 3+4-Methylphenol | 1 | 0.81 | | µg/L | | 81 | 0 - 130 |
| 3-Nitroaniline | 1 | 0.978 | | µg/L | | 98 | 23 - 137 |
| 4-Bromophenylphenyl ether | 1 | 0.53 | | µg/L | | 53 | 61 - 132 |
| 4-Chloro-3-methylphenol | 1 | 0.862 | | µg/L | | 86 | 51 - 128 |
| 4-Chloroaniline | 1 | 0.512 | | µg/L | | 51 | 50 - 150 |
| 4-Chlorophenylphenyl ether | 1 | 0.848 | | µg/L | | 85 | 63 - 130 |
| 4-Nitroaniline | 1 | 0.99 | | µg/L | | 99 | 10 - 159 |
| 4-Nitrophenol | 1 | 0.817 | | µg/L | | 82 | 10 - 164 |
| Aniline | 1 | 0.726 | | µg/L | | 73 | 50 - 150 |
| Benzidine | 1 | 0 | | µg/L | | 0 | 0 - 125 |
| Benzoic Acid | 1 | 1.01 | | µg/L | | 101 | 2 - 145 |
| Benzyl Alcohol | 1 | 0.79 | | µg/L | | 79 | 43 - 148 |
| Bis(2-Chloroethoxy) methane | 1 | 0.806 | | µg/L | | 81 | 66 - 122 |
| Bis(2-Chloroethyl) ether | 1 | 0.59 | | µg/L | | 59 | 43 - 127 |
| Bis(2-Chloroisopropyl) ether | 1 | 0.916 | | µg/L | | 92 | 49 - 128 |
| Dibenzofuran | 1 | 0.837 | | µg/L | | 84 | 50 - 150 |
| Hexachloroethane | 1 | 0.628 | | µg/L | | 63 | 27 - 130 |
| Nitrobenzene | 1 | 0.734 | | µg/L | | 73 | 54 - 111 |
| N-Nitrosodi-n-propylamine | 1 | 0.846 | | µg/L | | 85 | 61 - 152 |
| N-Nitrosodiphenylamine | 1 | 0.927 | | µg/L | | 93 | 49 - 142 |
| Pentachlorophenol | 1 | 0.954 | | µg/L | | 95 | 36 - 111 |
| Phenol | 1 | 0.575 | | µg/L | | 57 | 29 - 114 |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|------------------------|---------------|---------------|----------|
| (2,4,6-Tribromophenol) | 54 | | 30 - 130 |
| (d5-Phenol) | 58 | | 0 - 130 |

Lab Sample ID: 105218-BS2
Matrix: BlankMatrix
Analysis Batch: O-41042

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: O-41042_P

| Analyte | Spike Added | LCS DUP Result | LCS DUP Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|----------------------------------|-------------|----------------|-------------------|------|---|------|-------------|-----|-----------|
| 1-Methylnaphthalene | 0.5 | 0.376 | | µg/L | | 75 | 31 - 128 | 26 | 30 |
| 1-Methylphenanthrene | 0.5 | 0.387 | | µg/L | | 77 | 66 - 127 | 3 | 30 |
| 2,3,5-Trimethylnaphthalene | 0.5 | 0.374 | | µg/L | | 75 | 55 - 122 | 8 | 30 |
| 2,6-Dimethylnaphthalene | 0.5 | 0.337 | | µg/L | | 67 | 48 - 120 | 11 | 30 |
| 2,6-Di-tert-butyl-4-methylphenol | 1 | 0.585 | | µg/L | | 59 | 50 - 150 | 2 | 30 |
| 2,6-Di-tert-butylphenol | 1 | 0.588 | | µg/L | | 59 | 50 - 150 | 5 | 30 |
| 2-Methylnaphthalene | 1.5 | 0.93 | | µg/L | | 62 | 47 - 130 | 23 | 30 |
| 6-tert-butyl-2,4-dimethylphenol | 1 | 0.566 | | µg/L | | 57 | 50 - 150 | 11 | 30 |
| Acenaphthene | 1.5 | 1.21 | | µg/L | | 81 | 53 - 131 | 16 | 30 |
| Acenaphthylene | 1.5 | 1.22 | | µg/L | | 81 | 43 - 140 | 25 | 30 |
| Anthracene | 1.5 | 1.24 | | µg/L | | 83 | 58 - 135 | 1 | 30 |
| Benz[a]anthracene | 1.5 | 1.05 | | µg/L | | 70 | 55 - 145 | 6 | 30 |
| Benzo[a]pyrene | 1.5 | 1.28 | | µg/L | | 85 | 51 - 143 | 0 | 30 |
| Benzo[b]fluoranthene | 1.5 | 1.32 | | µg/L | | 88 | 46 - 165 | 6 | 30 |

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-44256-1

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

Lab Sample ID: 105218-BS2
Matrix: BlankMatrix
Analysis Batch: O-41042

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: O-41042_P

| Analyte | Spike Added | LCS DUP Result | LCS DUP Qualifier | Unit | D | %Rec | %Rec | | RPD | Limit |
|------------------------------|-------------|----------------|-------------------|------|---|------|----------|-----|-----|-------|
| | | | | | | | Limits | RPD | | |
| Benzo[e]pyrene | 0.5 | 0.364 | | µg/L | | 73 | 42 - 152 | 3 | 30 | |
| Benzo[g,h,i]perylene | 1.5 | 1.37 | | µg/L | | 91 | 63 - 133 | 1 | 30 | |
| Benzo[k]fluoranthene | 1.5 | 1.33 | | µg/L | | 89 | 56 - 145 | 3 | 30 | |
| Biphenyl | 0.5 | 0.271 | | µg/L | | 54 | 56 - 119 | 5 | 30 | |
| Chrysene | 1.5 | 1.11 | | µg/L | | 74 | 56 - 141 | 8 | 30 | |
| Dibenz[a,h]anthracene | 1.5 | 1.79 | | µg/L | | 119 | 55 - 150 | 12 | 30 | |
| Dibenzo[a,l]pyrene | 0.5 | 0.293 | | µg/L | | 59 | 50 - 150 | 17 | 30 | |
| Dibenzothiophene | 0.5 | 0.388 | | µg/L | | 78 | 46 - 126 | 3 | 30 | |
| Disalicylidenepropanediamine | 50 | 44.8 | | µg/L | | 90 | 50 - 150 | 11 | 30 | |
| Fluoranthene | 1.5 | 1.43 | | µg/L | | 95 | 60 - 146 | 4 | 30 | |
| Fluorene | 1.5 | 1.25 | | µg/L | | 83 | 58 - 131 | 18 | 30 | |
| Indeno[1,2,3-cd]pyrene | 1.5 | 1.53 | | µg/L | | 102 | 50 - 151 | 8 | 30 | |
| Naphthalene | 1.5 | 0.91 | | µg/L | | 61 | 41 - 126 | 26 | 30 | |
| Perylene | 0.5 | 0.346 | | µg/L | | 69 | 48 - 141 | 15 | 30 | |
| Phenanthrene | 1.5 | 1.19 | | µg/L | | 79 | 67 - 127 | 2 | 30 | |
| p-tert-Butylphenol | 1 | 1.04 | | µg/L | | 104 | 50 - 150 | 8 | 30 | |
| Pyrene | 1.5 | 1.39 | | µg/L | | 93 | 54 - 156 | 8 | 30 | |

| Surrogate | LCS DUP | | Limits |
|--------------------|-----------|-----------|----------|
| | %Recovery | Qualifier | |
| (d10-Acenaphthene) | 73 | | 27 - 133 |
| (d10-Phenanthrene) | 76 | | 43 - 129 |
| (d12-Chrysene) | 68 | | 52 - 144 |
| (d12-Perylene) | 77 | | 36 - 161 |
| (d8-Naphthalene) | 62 | | 25 - 125 |

Lab Sample ID: 105218-BS2
Matrix: BlankMatrix
Analysis Batch: O-41042

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: O-41042_P

| Analyte | Spike Added | LCS DUP Result | LCS DUP Qualifier | Unit | D | %Rec | %Rec | | RPD | Limit |
|----------------------------|-------------|----------------|-------------------|------|---|------|----------|-----|-----|-------|
| | | | | | | | Limits | RPD | | |
| 2,4,5-Trichlorophenol | 1 | 0.891 | | µg/L | | 89 | 30 - 130 | 4 | 30 | |
| 2,4,6-Trichlorophenol | 1 | 0.929 | | µg/L | | 93 | 30 - 130 | 2 | 30 | |
| 2,4-Dichlorophenol | 1 | 0.871 | | µg/L | | 87 | 51 - 117 | 12 | 30 | |
| 2,4-Dinitrophenol | 1 | 0.955 | | µg/L | | 95 | 0 - 152 | 11 | 30 | |
| 2,6-Dichlorophenol | 1 | 0.427 | | µg/L | | 43 | 30 - 130 | 7 | 30 | |
| 2-Chloronaphthalene | 1 | 0.831 | | µg/L | | 83 | 53 - 130 | 5 | 30 | |
| 2-Chlorophenol | 1 | 0.715 | | µg/L | | 71 | 41 - 120 | 9 | 30 | |
| 2-Methyl-4,6-dinitrophenol | 1 | 0.941 | | µg/L | | 94 | 0 - 141 | 6 | 30 | |
| 2-Methylphenol | 1 | 0.718 | | µg/L | | 72 | 40 - 117 | 12 | 30 | |
| 2-Nitroaniline | 1 | 1.02 | | µg/L | | 102 | 69 - 114 | 5 | 30 | |
| 2-Nitrophenol | 1 | 0.786 | | µg/L | | 79 | 40 - 117 | 12 | 30 | |
| 3+4-Methylphenol | 1 | 0.898 | | µg/L | | 90 | 0 - 130 | 11 | 30 | |
| 3-Nitroaniline | 1 | 1.03 | | µg/L | | 103 | 23 - 137 | 5 | 30 | |
| 4-Bromophenylphenyl ether | 1 | 0.532 | | µg/L | | 53 | 61 - 132 | 0 | 30 | |
| 4-Chloro-3-methylphenol | 1 | 0.911 | | µg/L | | 91 | 51 - 128 | 6 | 30 | |
| 4-Chloroaniline | 1 | 0.675 | | µg/L | | 68 | 50 - 150 | 29 | 30 | |
| 4-Chlorophenylphenyl ether | 1 | 0.873 | | µg/L | | 87 | 63 - 130 | 2 | 30 | |
| 4-Nitroaniline | 1 | 1.02 | | µg/L | | 102 | 10 - 159 | 3 | 30 | |

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-44256-1

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

Lab Sample ID: 105218-BS2
Matrix: BlankMatrix
Analysis Batch: O-41042

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: O-41042_P

| Analyte | Spike Added | LCS DUP Result | LCS DUP Qualifier | Unit | D | %Rec | %Rec | | RPD | Limit |
|------------------------------|-------------|----------------|-------------------|------|---|------|----------|-----|-----|-------|
| | | | | | | | Limits | RPD | | |
| 4-Nitrophenol | 1 | 0.846 | | µg/L | | 85 | 10 - 164 | 4 | 30 | |
| Aniline | 1 | 0.792 | | µg/L | | 79 | 50 - 150 | 8 | 30 | |
| Benzidine | 1 | 0 | | µg/L | | 0 | 0 - 125 | 0 | 30 | |
| Benzoic Acid | 1 | 0.919 | | µg/L | | 92 | 2 - 145 | 9 | 30 | |
| Benzyl Alcohol | 1 | 0.912 | | µg/L | | 91 | 43 - 148 | 14 | 30 | |
| Bis(2-Chloroethoxy) methane | 1 | 0.894 | | µg/L | | 89 | 66 - 122 | 9 | 30 | |
| Bis(2-Chloroethyl) ether | 1 | 0.649 | | µg/L | | 65 | 43 - 127 | 10 | 30 | |
| Bis(2-Chloroisopropyl) ether | 1 | 0.854 | | µg/L | | 85 | 49 - 128 | 8 | 30 | |
| Dibenzofuran | 1 | 0.878 | | µg/L | | 88 | 50 - 150 | 5 | 30 | |
| Hexachloroethane | 1 | 0.654 | | µg/L | | 65 | 27 - 130 | 3 | 30 | |
| Nitrobenzene | 1 | 0.808 | | µg/L | | 81 | 54 - 111 | 10 | 30 | |
| N-Nitrosodi-n-propylamine | 1 | 0.925 | | µg/L | | 93 | 61 - 152 | 8 | 30 | |
| N-Nitrosodiphenylamine | 1 | 0.948 | | µg/L | | 95 | 49 - 142 | 2 | 30 | |
| Pentachlorophenol | 1 | 0.858 | | µg/L | | 86 | 36 - 111 | 10 | 30 | |
| Phenol | 1 | 0.635 | | µg/L | | 63 | 29 - 114 | 10 | 30 | |

| Surrogate | LCS DUP %Recovery | LCS DUP Qualifier | Limits |
|------------------------|-------------------|-------------------|----------|
| (2,4,6-Tribromophenol) | 54 | | 30 - 130 |
| (d5-Phenol) | 64 | | 0 - 130 |

Method: 8015 Ethanol - SW846 8015B Gasoline Range Organics

Lab Sample ID: 23MED004WB
Matrix: WATER
Analysis Batch: 23MED004W

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

| Analyte | MB MB | | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|--------|-----------|------|-----|------|---|----------|----------------|---------|
| | Result | Qualifier | | | | | | | |
| ETHANOL | ND | U | 2000 | | ug/L | | | 04/21/23 13:13 | 1 |

Lab Sample ID: 23MED004WL
Matrix: WATER
Analysis Batch: 23MED004W

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

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec | |
|---------|-------------|------------|---------------|------|---|------|----------|-----|
| | | | | | | | Limits | RPD |
| ETHANOL | 10000 | 9310 | | ug/L | | 93 | 60 - 130 | |

Lab Sample ID: 23D232-01M
Matrix: WATER
Analysis Batch: 23MED004W

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 | RPD |
| ETHANOL | ND | | 10000 | 10300 | | ug/L | | 103 | 60 - 130 | |

Lab Sample ID: 23D232-01S
Matrix: WATER
Analysis Batch: 23MED004W

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 | | RPD | Limit |
|---------|---------------|------------------|-------------|------------|---------------|------|---|------|----------|-----|-----|-------|
| | | | | | | | | | Limits | RPD | | |
| ETHANOL | ND | | 10000 | 9860 | | ug/L | | 99 | 60 - 130 | 4 | 30 | |

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-44256-1

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

Lab Sample ID: 23VG39D11B
Matrix: WATER
Analysis Batch: 23VG39D11

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 | | | 04/21/23 13:13 | 1 |
| Surrogate | MB %Recovery | MB Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| BROMOFLUOROBENZENE | | | | | | | | 04/21/23 13:13 | 1 |

Lab Sample ID: 23VG39D11L
Matrix: WATER
Analysis Batch: 23VG39D11

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 | 109 | | 70 - 130 | | | | |

Lab Sample ID: 23D232-01M
Matrix: WATER
Analysis Batch: 23VG39D11

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 |
|--------------------|------------------|---------------------|----------------|--------------|-----------------|------|---|------|----------------|
| GASOLINE | ND | | 0.500 | 0.489 | | mg/L | | 98 | 50 - 130 |
| Surrogate | MS %Recovery | MS Qualifier | Limits | | | | | | |
| BROMOFLUOROBENZENE | 114 | | 60 - 140 | | | | | | |

Lab Sample ID: 23D232-01S
Matrix: WATER
Analysis Batch: 23VG39D11

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 | Limit |
|--------------------|------------------|---------------------|----------------|---------------|------------------|------|---|------|----------------|-----|-------|
| GASOLINE | ND | | 0.500 | 0.504 | | mg/L | | 101 | 50 - 130 | 3 | 30 |
| Surrogate | MSD %Recovery | MSD Qualifier | Limits | | | | | | | | |
| BROMOFLUOROBENZENE | 114 | | 60 - 140 | | | | | | | | |

Method: 8015 LL DRO/MRO/JP5/JP8 - 8015 - TPH DRO/ORO

Lab Sample ID: 23DSD033WB
Matrix: WATER
Analysis Batch: 23DSD033W

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 | | | 04/28/23 15:42 | 1 |
| JP5 | ND | U | 0.050 | | mg/L | | | 04/28/23 15:42 | 1 |
| JP8 | ND | U | 0.050 | | mg/L | | | 04/28/23 15:42 | 1 |
| MOTOR OIL | ND | U | 0.050 | | mg/L | | | 04/28/23 15:42 | 1 |

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-44256-1

Method: 8015 LL DRO/MRO/JP5/JP8 - 8015 - TPH DRO/ORO (Continued)

Lab Sample ID: 23DSD033WB
Matrix: WATER
Analysis Batch: 23DSD033W

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

| Surrogate | MB MB | | Limits | Prepared | Analyzed | Dil Fac |
|--------------|-----------|-----------|--------|----------|----------------|---------|
| | %Recovery | Qualifier | | | | |
| BROMOBENZENE | | | | | 04/28/23 15:42 | 1 |
| HEXACOSANE | | | | | 04/28/23 15:42 | 1 |

Lab Sample ID: 23DSD033WL
Matrix: WATER
Analysis Batch: 23DSD033W

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 | 2.26 | | mg/L | | 90 | 50 - 130 |

| Surrogate | LCS LCS | | Limits |
|--------------|-----------|-----------|----------|
| | %Recovery | Qualifier | |
| BROMOBENZENE | 66 | | 60 - 130 |
| HEXACOSANE | 90 | | 60 - 130 |

Lab Sample ID: 23J5D033WL
Matrix: WATER
Analysis Batch: 23DSD033W

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 | 2.23 | | mg/L | | 89 | 30 - 160 |

| Surrogate | LCS LCS | | Limits |
|--------------|-----------|-----------|----------|
| | %Recovery | Qualifier | |
| BROMOBENZENE | 72 | | 60 - 130 |
| HEXACOSANE | 79 | | 60 - 130 |

Lab Sample ID: 23J8D033WL
Matrix: WATER
Analysis Batch: 23DSD033W

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 | 2.65 | | mg/L | | 106 | 30 - 160 |

| Surrogate | LCS LCS | | Limits |
|--------------|-----------|-----------|----------|
| | %Recovery | Qualifier | |
| BROMOBENZENE | 97 | | 60 - 130 |
| HEXACOSANE | 80 | | 60 - 130 |

Lab Sample ID: 23D232-01M
Matrix: WATER
Analysis Batch: 23DSD033W

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 |
|---------|---------------|------------------|-------------|-----------|--------------|------|---|------|-------------|
| DIESEL | ND | | 2.72 | 2.39 | | mg/L | | 88 | 50 - 130 |

| Surrogate | MS MS | | Limits |
|--------------|-----------|-----------|----------|
| | %Recovery | Qualifier | |
| BROMOBENZENE | 70 | | 60 - 130 |
| HEXACOSANE | 95 | | 60 - 130 |

QC Sample Results

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

Job ID: 380-44256-1

Method: 8015 LL DRO/MRO/JP5/JP8 - 8015 - TPH DRO/ORO (Continued)

Lab Sample ID: 23D232-01M
Matrix: WATER
Analysis Batch: 23DSD033W

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 | |
|------------------|------------------|---------------------|------------------|-----------|--------------|------|---|------|-------------|--|
| JP5 | ND | | 2.58 | 2.91 | | mg/L | | 113 | 30 - 160 | |
| Surrogate | %Recovery | MS Qualifier | MS Limits | | | | | | | |
| BROMOBENZENE | 86 | | 60 - 130 | | | | | | | |
| HEXACOSANE | 83 | | 60 - 130 | | | | | | | |

Lab Sample ID: 23D232-01S
Matrix: WATER
Analysis Batch: 23DSD033W

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 |
|------------------|------------------|----------------------|-------------------|------------|---------------|------|---|------|-------------|-----|-----------|
| DIESEL | ND | | 2.62 | 2.45 | | mg/L | | 93 | 50 - 130 | 2 | 30 |
| Surrogate | %Recovery | MSD Qualifier | MSD Limits | | | | | | | | |
| BROMOBENZENE | 74 | | 60 - 130 | | | | | | | | |
| HEXACOSANE | 90 | | 60 - 130 | | | | | | | | |

Lab Sample ID: 23D232-01S
Matrix: WATER
Analysis Batch: 23DSD033W

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 |
|------------------|------------------|----------------------|-------------------|------------|---------------|------|---|------|-------------|-----|-----------|
| JP5 | ND | | 2.53 | 2.92 | | mg/L | | 116 | 30 - 160 | 0 | 30 |
| Surrogate | %Recovery | MSD Qualifier | MSD Limits | | | | | | | | |
| BROMOBENZENE | 86 | | 60 - 130 | | | | | | | | |
| HEXACOSANE | 83 | | 60 - 130 | | | | | | | | |

QC Association Summary

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

Job ID: 380-44256-1

GC/MS VOA

Analysis Batch: 38074

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|------------------|--------------------------|-----------|----------------|--------|------------|
| 380-44256-1 | HALAWA WELLS UNITS 1 | Total/NA | Drinking Water | 524.2 | |
| 380-44256-2 | TB: HALAWA WELLS UNITS 1 | Total/NA | Water | 524.2 | |
| MB 380-38074/8 | Method Blank | Total/NA | Water | 524.2 | |
| LCS 380-38074/3 | Lab Control Sample | Total/NA | Water | 524.2 | |
| LCSD 380-38074/4 | Lab Control Sample Dup | Total/NA | Water | 524.2 | |
| MRL 380-38074/6 | Lab Control Sample | Total/NA | Water | 524.2 | |
| MRL 380-38074/7 | Lab Control Sample | Total/NA | Water | 524.2 | |

Analysis Batch: 38220

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|------------------|--------------------------|-----------|----------------|--------|------------|
| 380-44256-1 | HALAWA WELLS UNITS 1 | Total/NA | Drinking Water | 524.2 | |
| 380-44256-2 | TB: HALAWA WELLS UNITS 1 | Total/NA | Water | 524.2 | |
| MB 380-38220/5 | Method Blank | Total/NA | Water | 524.2 | |
| LCS 380-38220/2 | Lab Control Sample | Total/NA | Water | 524.2 | |
| LCSD 380-38220/3 | Lab Control Sample Dup | Total/NA | Water | 524.2 | |
| MRL 380-38220/4 | Lab Control Sample | Total/NA | Water | 524.2 | |

Analysis Batch: 38317

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------|--------------------------|-----------|----------------|--------|------------|
| 380-44256-1 | HALAWA WELLS UNITS 1 | Total/NA | Drinking Water | 524.2 | |
| 380-44256-2 | TB: HALAWA WELLS UNITS 1 | Total/NA | Water | 524.2 | |

GC/MS Semi VOA

Prep Batch: 57237

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| LLCS 810-57237/3-A | Lab Control Sample | Total/NA | Water | 525.2 | |

Prep Batch: 57414

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|----------------------|-----------|----------------|--------|------------|
| 380-44256-1 | HALAWA WELLS UNITS 1 | Total/NA | Drinking Water | 525.2 | |
| MB 810-57414/1-A | Method Blank | Total/NA | Water | 525.2 | |
| LCS 810-57414/3-A | Lab Control Sample | Total/NA | Water | 525.2 | |
| LLCS 810-57414/2-A | Lab Control Sample | Total/NA | Water | 525.2 | |
| 810-61248-O-5-A MS | Matrix Spike | Total/NA | Water | 525.2 | |
| 860-47346-B-1-A DU | Duplicate | Total/NA | Water | 525.2 | |

Analysis Batch: 57529

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|----------------------|-----------|----------------|----------|------------|
| 380-44256-1 | HALAWA WELLS UNITS 1 | Total/NA | Drinking Water | 525.2 LL | 57414 |
| MB 810-57414/1-A | Method Blank | Total/NA | Water | 525.2 LL | 57414 |
| LCS 810-57414/3-A | Lab Control Sample | Total/NA | Water | 525.2 LL | 57414 |
| LLCS 810-57237/3-A | Lab Control Sample | Total/NA | Water | 525.2 LL | 57237 |
| LLCS 810-57414/2-A | Lab Control Sample | Total/NA | Water | 525.2 LL | 57414 |
| 810-61248-O-5-A MS | Matrix Spike | Total/NA | Water | 525.2 LL | 57414 |
| 860-47346-B-1-A DU | Duplicate | Total/NA | Water | 525.2 LL | 57414 |

GC Semi VOA

Prep Batch: 37791

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------|----------------------|-----------|----------------|--------|------------|
| 380-44256-1 | HALAWA WELLS UNITS 1 | Total/NA | Drinking Water | 504.1 | |

Eurofins Eaton Analytical Pomona

QC Association Summary

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

Job ID: 380-44256-1

GC Semi VOA (Continued)

Prep Batch: 37791 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------------|-----------|--------|--------|------------|
| 380-44256-2 | TB: HALAWA WELLS UNITS 1 | Total/NA | Water | 504.1 | |
| MBL 380-37791/4-A | Method Blank | Total/NA | Water | 504.1 | |
| LCS 380-37791/3-A | Lab Control Sample | Total/NA | Water | 504.1 | |
| MRL 380-37791/1-A | Lab Control Sample | Total/NA | Water | 504.1 | |
| MRL 380-37791/2-A | Lab Control Sample | Total/NA | Water | 504.1 | |
| 380-44167-T-1-A MS | Matrix Spike | Total/NA | Water | 504.1 | |
| 380-44182-I-1-A DU | Duplicate | Total/NA | Water | 504.1 | |

Analysis Batch: 38045

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------------|-----------|----------------|--------|------------|
| 380-44256-1 | HALAWA WELLS UNITS 1 | Total/NA | Drinking Water | 504.1 | 37791 |
| 380-44256-2 | TB: HALAWA WELLS UNITS 1 | Total/NA | Water | 504.1 | 37791 |
| MBL 380-37791/4-A | Method Blank | Total/NA | Water | 504.1 | 37791 |
| LCS 380-37791/3-A | Lab Control Sample | Total/NA | Water | 504.1 | 37791 |
| MRL 380-37791/1-A | Lab Control Sample | Total/NA | Water | 504.1 | 37791 |
| MRL 380-37791/2-A | Lab Control Sample | Total/NA | Water | 504.1 | 37791 |
| 380-44167-T-1-A MS | Matrix Spike | Total/NA | Water | 504.1 | 37791 |
| 380-44182-I-1-A DU | Duplicate | Total/NA | Water | 504.1 | 37791 |

Prep Batch: 57403

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|----------------------|-----------|----------------|--------|------------|
| 380-44256-1 | HALAWA WELLS UNITS 1 | Total/NA | Drinking Water | 505 | |
| MB 810-57403/1-A | Method Blank | Total/NA | Water | 505 | |
| LLCS 810-57403/2-A | Lab Control Sample | Total/NA | Water | 505 | |
| LLCS 810-57403/3-A | Lab Control Sample | Total/NA | Water | 505 | |
| 810-60588-I-3-A MS | Matrix Spike | Total/NA | Water | 505 | |
| 810-60588-J-1-A MS | Matrix Spike | Total/NA | Water | 505 | |
| 810-60433-K-1-A DU | Duplicate | Total/NA | Water | 505 | |

Analysis Batch: 57488

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|----------------------|-----------|----------------|--------|------------|
| 380-44256-1 | HALAWA WELLS UNITS 1 | Total/NA | Drinking Water | 505 | 57403 |
| MB 810-57403/1-A | Method Blank | Total/NA | Water | 505 | 57403 |
| LLCS 810-57403/2-A | Lab Control Sample | Total/NA | Water | 505 | 57403 |
| LLCS 810-57403/3-A | Lab Control Sample | Total/NA | Water | 505 | 57403 |
| 810-60588-I-3-A MS | Matrix Spike | Total/NA | Water | 505 | 57403 |
| 810-60588-J-1-A MS | Matrix Spike | Total/NA | Water | 505 | 57403 |
| 810-60433-K-1-A DU | Duplicate | Total/NA | Water | 505 | 57403 |

HPLC/IC

Analysis Batch: 37377

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|-------------------|------------------------|-----------|----------------|--------|------------|
| 380-44256-1 | HALAWA WELLS UNITS 1 | Total/NA | Drinking Water | 300.0 | |
| MB 380-37377/4 | Method Blank | Total/NA | Water | 300.0 | |
| LCS 380-37377/7 | Lab Control Sample | Total/NA | Water | 300.0 | |
| LCSD 380-37377/8 | Lab Control Sample Dup | Total/NA | Water | 300.0 | |
| MRL 380-37377/6 | Lab Control Sample | Total/NA | Water | 300.0 | |
| 380-44174-A-1 MS | Matrix Spike | Total/NA | Water | 300.0 | |
| 380-44174-A-1 MSD | Matrix Spike Duplicate | Total/NA | Water | 300.0 | |

QC Association Summary

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

Job ID: 380-44256-1

HPLC/IC

Analysis Batch: 37378

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|-------------------|------------------------|-----------|----------------|--------|------------|
| 380-44256-1 | HALAWA WELLS UNITS 1 | Total/NA | Drinking Water | 300.0 | |
| MB 380-37378/4 | Method Blank | Total/NA | Water | 300.0 | |
| LCS 380-37378/7 | Lab Control Sample | Total/NA | Water | 300.0 | |
| LCSD 380-37378/8 | Lab Control Sample Dup | Total/NA | Water | 300.0 | |
| MRL 380-37378/5 | Lab Control Sample | Total/NA | Water | 300.0 | |
| MRL 380-37378/6 | Lab Control Sample | Total/NA | Water | 300.0 | |
| 380-44174-A-1 MS | Matrix Spike | Total/NA | Water | 300.0 | |
| 380-44174-A-1 MSD | Matrix Spike Duplicate | Total/NA | Water | 300.0 | |

Analysis Batch: 37469

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|-------------------|------------------------|-----------|--------|--------|------------|
| MB 380-37469/4 | Method Blank | Total/NA | Water | 300.0 | |
| LCS 380-37469/5 | Lab Control Sample | Total/NA | Water | 300.0 | |
| LCSD 380-37469/6 | Lab Control Sample Dup | Total/NA | Water | 300.0 | |
| MRL 380-37469/3 | Lab Control Sample | Total/NA | Water | 300.0 | |
| 380-43629-I-1 MS | Matrix Spike | Total/NA | Water | 300.0 | |
| 380-43629-I-1 MSD | Matrix Spike Duplicate | Total/NA | Water | 300.0 | |

Analysis Batch: 37822

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|-------------------|------------------------|-----------|----------------|--------|------------|
| 380-44256-1 | HALAWA WELLS UNITS 1 | Total/NA | Drinking Water | 300.0 | |
| MB 380-37822/4 | Method Blank | Total/NA | Water | 300.0 | |
| LCS 380-37822/6 | Lab Control Sample | Total/NA | Water | 300.0 | |
| LCSD 380-37822/7 | Lab Control Sample Dup | Total/NA | Water | 300.0 | |
| MRL 380-37822/5 | Lab Control Sample | Total/NA | Water | 300.0 | |
| 380-44437-Q-1 MS | Matrix Spike | Total/NA | Water | 300.0 | |
| 380-44437-Q-1 MSD | Matrix Spike Duplicate | Total/NA | Water | 300.0 | |

Metals

Prep Batch: 37417

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|----------------------|------------------------|-------------------|----------------|--------|------------|
| 380-44256-1 | HALAWA WELLS UNITS 1 | Total Recoverable | Drinking Water | 200.8 | |
| MB 380-37417/1-A | Method Blank | Total Recoverable | Water | 200.8 | |
| LCS 380-37417/3-A | Lab Control Sample | Total Recoverable | Water | 200.8 | |
| LCSD 380-37417/4-A | Lab Control Sample Dup | Total Recoverable | Water | 200.8 | |
| LLCS 380-37417/2-A | Lab Control Sample | Total Recoverable | Water | 200.8 | |
| 380-44178-AA-1-B MS | Matrix Spike | Total Recoverable | Water | 200.8 | |
| 380-44178-AA-1-C MSD | Matrix Spike Duplicate | Total Recoverable | Water | 200.8 | |

Analysis Batch: 37574

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|----------------------|------------------------|-------------------|----------------|--------|------------|
| 380-44256-1 | HALAWA WELLS UNITS 1 | Total Recoverable | Drinking Water | 200.8 | 37417 |
| MB 380-37417/1-A | Method Blank | Total Recoverable | Water | 200.8 | 37417 |
| LCS 380-37417/3-A | Lab Control Sample | Total Recoverable | Water | 200.8 | 37417 |
| LCSD 380-37417/4-A | Lab Control Sample Dup | Total Recoverable | Water | 200.8 | 37417 |
| LLCS 380-37417/2-A | Lab Control Sample | Total Recoverable | Water | 200.8 | 37417 |
| 380-44178-AA-1-B MS | Matrix Spike | Total Recoverable | Water | 200.8 | 37417 |
| 380-44178-AA-1-C MSD | Matrix Spike Duplicate | Total Recoverable | Water | 200.8 | 37417 |

QC Association Summary

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

Job ID: 380-44256-1

Metals

Analysis Batch: 37592

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|-------------------|------------------------|-----------|----------------|---------------|------------|
| 380-44256-1 | HALAWA WELLS UNITS 1 | Total/NA | Drinking Water | 200.7 Rev 4.4 | |
| MB 380-37592/16 | Method Blank | Total/NA | Water | 200.7 Rev 4.4 | |
| LCS 380-37592/18 | Lab Control Sample | Total/NA | Water | 200.7 Rev 4.4 | |
| LCSD 380-37592/19 | Lab Control Sample Dup | Total/NA | Water | 200.7 Rev 4.4 | |
| LLCS 380-37592/17 | Lab Control Sample | Total/NA | Water | 200.7 Rev 4.4 | |
| 380-44256-1 MS | HALAWA WELLS UNITS 1 | Total/NA | Drinking Water | 200.7 Rev 4.4 | |
| 380-44256-1 MSD | HALAWA WELLS UNITS 1 | Total/NA | Drinking Water | 200.7 Rev 4.4 | |

Analysis Batch: 38079

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|----------------------|------------------------|-------------------|--------|--------|------------|
| MB 380-37417/1-A | Method Blank | Total Recoverable | Water | 200.8 | 37417 |
| MB 380-38079/22 | Method Blank | Total/NA | Water | 200.8 | |
| LCS 380-37417/3-A | Lab Control Sample | Total Recoverable | Water | 200.8 | 37417 |
| LCSD 380-37417/4-A | Lab Control Sample Dup | Total Recoverable | Water | 200.8 | 37417 |
| LLCS 380-37417/2-A | Lab Control Sample | Total Recoverable | Water | 200.8 | 37417 |
| LLCS 380-38079/21 | Lab Control Sample | Total/NA | Water | 200.8 | |
| 380-44178-AA-1-B MS | Matrix Spike | Total Recoverable | Water | 200.8 | 37417 |
| 380-44178-AA-1-C MSD | Matrix Spike Duplicate | Total Recoverable | Water | 200.8 | 37417 |

Prep Batch: 56865

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------------|------------------------|-----------|----------------|--------|------------|
| 380-44256-1 | HALAWA WELLS UNITS 1 | Total/NA | Drinking Water | 245.1 | |
| MB 810-56865/1-A | Method Blank | Total/NA | Water | 245.1 | |
| LCS 810-56865/3-A | Lab Control Sample | Total/NA | Water | 245.1 | |
| LLCS 810-56865/2-A | Lab Control Sample | Total/NA | Water | 245.1 | |
| 810-60803-B-1-B MS | Matrix Spike | Total/NA | Water | 245.1 | |
| 810-60803-B-1-C MSD | Matrix Spike Duplicate | Total/NA | Water | 245.1 | |

Analysis Batch: 56889

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------------|------------------------|-----------|----------------|--------|------------|
| 380-44256-1 | HALAWA WELLS UNITS 1 | Total/NA | Drinking Water | 245.1 | 56865 |
| MB 810-56865/1-A | Method Blank | Total/NA | Water | 245.1 | 56865 |
| LCS 810-56865/3-A | Lab Control Sample | Total/NA | Water | 245.1 | 56865 |
| LLCS 810-56865/2-A | Lab Control Sample | Total/NA | Water | 245.1 | 56865 |
| 810-60803-B-1-B MS | Matrix Spike | Total/NA | Water | 245.1 | 56865 |
| 810-60803-B-1-C MSD | Matrix Spike Duplicate | Total/NA | Water | 245.1 | 56865 |

General Chemistry

Analysis Batch: 37508

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|------------------|----------------------|-----------|----------------|----------|------------|
| 380-44256-1 | HALAWA WELLS UNITS 1 | Total/NA | Drinking Water | SM 2540C | |
| MB 380-37508/1 | Method Blank | Total/NA | Water | SM 2540C | |
| HLCS 380-37508/5 | Lab Control Sample | Total/NA | Water | SM 2540C | |
| LCS 380-37508/4 | Lab Control Sample | Total/NA | Water | SM 2540C | |
| MRL 380-37508/2 | Lab Control Sample | Total/NA | Water | SM 2540C | |
| MRL 380-37508/3 | Lab Control Sample | Total/NA | Water | SM 2540C | |
| 380-44443-C-5 DU | Duplicate | Total/NA | Water | SM 2540C | |

QC Association Summary

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

Job ID: 380-44256-1

General Chemistry

Analysis Batch: 37601

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|-------------------|------------------------|-----------|----------------|--------------|------------|
| 380-44256-1 | HALAWA WELLS UNITS 1 | Total/NA | Drinking Water | SM 4500 S2 D | |
| MB 380-37601/1 | Method Blank | Total/NA | Water | SM 4500 S2 D | |
| LCS 380-37601/4 | Lab Control Sample | Total/NA | Water | SM 4500 S2 D | |
| LCSD 380-37601/11 | Lab Control Sample Dup | Total/NA | Water | SM 4500 S2 D | |
| MRL 380-37601/10 | Lab Control Sample | Total/NA | Water | SM 4500 S2 D | |
| MRL 380-37601/2 | Lab Control Sample | Total/NA | Water | SM 4500 S2 D | |
| 380-44261-J-1 MS | Matrix Spike | Total/NA | Water | SM 4500 S2 D | |
| 380-44261-J-1 MSD | Matrix Spike Duplicate | Total/NA | Water | SM 4500 S2 D | |

Analysis Batch: 37852

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|-------------------|------------------------|-----------|----------------|-------------|------------|
| 380-44256-1 | HALAWA WELLS UNITS 1 | Total/NA | Drinking Water | SM 4500 F C | |
| MB 380-37852/6 | Method Blank | Total/NA | Water | SM 4500 F C | |
| LCS 380-37852/8 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |
| LCSD 380-37852/9 | Lab Control Sample Dup | Total/NA | Water | SM 4500 F C | |
| MRL 380-37852/7 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |
| 380-44044-A-1 MS | Matrix Spike | Total/NA | Water | SM 4500 F C | |
| 380-44044-A-1 MSD | Matrix Spike Duplicate | Total/NA | Water | SM 4500 F C | |

Analysis Batch: 37854

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|-------------------|------------------------|-----------|----------------|----------|------------|
| 380-44256-1 | HALAWA WELLS UNITS 1 | Total/NA | Drinking Water | SM 2320B | |
| MB 380-37854/1 | Method Blank | Total/NA | Water | SM 2320B | |
| LCS 380-37854/3 | Lab Control Sample | Total/NA | Water | SM 2320B | |
| LCSD 380-37854/18 | Lab Control Sample Dup | Total/NA | Water | SM 2320B | |
| LLCS 380-37854/4 | Lab Control Sample | Total/NA | Water | SM 2320B | |
| MRL 380-37854/2 | Lab Control Sample | Total/NA | Water | SM 2320B | |
| 380-44440-F-5 MS | Matrix Spike | Total/NA | Water | SM 2320B | |
| 380-44440-F-5 MSD | Matrix Spike Duplicate | Total/NA | Water | SM 2320B | |
| 380-44440-F-5 DU | Duplicate | Total/NA | Water | SM 2320B | |

Analysis Batch: 37857

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|-------------------|------------------------|-----------|----------------|----------|------------|
| 380-44256-1 | HALAWA WELLS UNITS 1 | Total/NA | Drinking Water | SM 2510B | |
| MB 380-37857/2 | Method Blank | Total/NA | Water | SM 2510B | |
| LCS 380-37857/4 | Lab Control Sample | Total/NA | Water | SM 2510B | |
| LCSD 380-37857/16 | Lab Control Sample Dup | Total/NA | Water | SM 2510B | |
| MRL 380-37857/3 | Lab Control Sample | Total/NA | Water | SM 2510B | |
| 380-44440-F-5 DU | Duplicate | Total/NA | Water | SM 2510B | |

Analysis Batch: 37859

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|-------------------|------------------------|-----------|----------------|--------------|------------|
| 380-44256-1 | HALAWA WELLS UNITS 1 | Total/NA | Drinking Water | SM 4500 H+ B | |
| MB 380-37859/4 | Method Blank | Total/NA | Water | SM 4500 H+ B | |
| LCS 380-37859/5 | Lab Control Sample | Total/NA | Water | SM 4500 H+ B | |
| LCSD 380-37859/17 | Lab Control Sample Dup | Total/NA | Water | SM 4500 H+ B | |
| 380-44440-F-5 DU | Duplicate | Total/NA | Water | SM 4500 H+ B | |

QC Association Summary

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

Job ID: 380-44256-1

Subcontract

Analysis Batch: O-41042

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------|------------------------|-----------|----------------|--------------------------------|------------|
| 380-44256-1 | HALAWA WELLS UNITS 1 | Total/NA | Drinking Water | 625 Acid/Base/PAH + TICs | O-41042_P |
| 380-44256-1 | HALAWA WELLS UNITS 1 | Total/NA | Drinking Water | 625 Acid/Base/PAH + TICs | O-41042_P |
| 105218-B1 | Method Blank | Total/NA | BlankMatrix | 625 Acid/Base/PAH + TICs | O-41042_P |
| 105218-B1 | Method Blank | Total/NA | BlankMatrix | 625 Acid/Base/PAH + TICs | O-41042_P |
| 105218-BS1 | Lab Control Sample | Total/NA | BlankMatrix | 625 Acid/Base/PAH + TICs | O-41042_P |
| 105218-BS1 | Lab Control Sample | Total/NA | BlankMatrix | 625 Acid/Base/PAH + TICs | O-41042_P |
| 105218-BS2 | Lab Control Sample Dup | Total/NA | BlankMatrix | 625 Acid/Base/PAH + TICs | O-41042_P |
| 105218-BS2 | Lab Control Sample Dup | Total/NA | BlankMatrix | 625 Acid/Base/PAH + TICs | O-41042_P |

Analysis Batch: 23DSD033W

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------|------------------------|-----------|----------------|--------------------------------|------------|
| 380-44256-1 | HALAWA WELLS UNITS 1 | Total/NA | Drinking Water | 8015 LL DRO/MRO/JP5/J P8 | |
| 23DSD033WB | Method Blank | Total/NA | WATER | 8015 LL DRO/MRO/JP5/J P8 | |
| 23DSD033WL | Lab Control Sample | Total/NA | WATER | 8015 LL DRO/MRO/JP5/J P8 | |
| 23J5D033WL | Lab Control Sample | Total/NA | WATER | 8015 LL DRO/MRO/JP5/J P8 | |
| 23J8D033WL | Lab Control Sample | Total/NA | WATER | 8015 LL DRO/MRO/JP5/J P8 | |
| 23D232-01M | Matrix Spike | Total/NA | WATER | 8015 LL DRO/MRO/JP5/J P8 | |
| 23D232-01M | Matrix Spike | Total/NA | WATER | 8015 LL DRO/MRO/JP5/J P8 | |
| 23D232-01S | Matrix Spike Duplicate | Total/NA | WATER | 8015 LL DRO/MRO/JP5/J P8 | |
| 23D232-01S | Matrix Spike Duplicate | Total/NA | WATER | 8015 LL DRO/MRO/JP5/J P8 | |

Analysis Batch: 23MED004W

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------|----------------------|-----------|----------------|--------------|------------|
| 380-44256-1 | HALAWA WELLS UNITS 1 | Total/NA | Drinking Water | 8015 Ethanol | |

Eurofins Eaton Analytical Pomona

QC Association Summary

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

Job ID: 380-44256-1

Subcontract (Continued)

Analysis Batch: 23MED004W (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------|------------------------|-----------|--------|--------------|------------|
| 23MED004WB | Method Blank | Total/NA | WATER | 8015 Ethanol | |
| 23MED004WL | Lab Control Sample | Total/NA | WATER | 8015 Ethanol | |
| 23D232-01M | Matrix Spike | Total/NA | WATER | 8015 Ethanol | |
| 23D232-01S | Matrix Spike Duplicate | Total/NA | WATER | 8015 Ethanol | |

Analysis Batch: 23VG39D11

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------|--------------------------|-----------|----------------|-------------------------------------|------------|
| 380-44256-1 | HALAWA WELLS UNITS 1 | Total/NA | Drinking Water | 8015 Gas (Purgeable) LL (EAL) | |
| 380-44256-2 | TB: HALAWA WELLS UNITS 1 | Total/NA | Water | 8015 Gas (Purgeable) LL (EAL) | |
| 23VG39D11B | Method Blank | Total/NA | WATER | 8015 Gas (Purgeable) LL (EAL) | |
| 23VG39D11L | Lab Control Sample | Total/NA | WATER | 8015 Gas (Purgeable) LL (EAL) | |
| 23D232-01M | Matrix Spike | Total/NA | WATER | 8015 Gas (Purgeable) LL (EAL) | |
| 23D232-01S | Matrix Spike Duplicate | Total/NA | WATER | 8015 Gas (Purgeable) LL (EAL) | |

Prep Batch: O-41042_P

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------|------------------------|-----------|----------------|---------|------------|
| 380-44256-1 | HALAWA WELLS UNITS 1 | Total/NA | Drinking Water | EPA_625 | |
| 380-44256-1 | HALAWA WELLS UNITS 1 | Total/NA | Drinking Water | EPA_625 | |
| 105218-B1 | Method Blank | Total/NA | BlankMatrix | EPA_625 | |
| 105218-B1 | Method Blank | Total/NA | BlankMatrix | EPA_625 | |
| 105218-BS1 | Lab Control Sample | Total/NA | BlankMatrix | EPA_625 | |
| 105218-BS1 | Lab Control Sample | Total/NA | BlankMatrix | EPA_625 | |
| 105218-BS2 | Lab Control Sample Dup | Total/NA | BlankMatrix | EPA_625 | |
| 105218-BS2 | Lab Control Sample Dup | Total/NA | BlankMatrix | EPA_625 | |

Lab Chronicle

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

Job ID: 380-44256-1

Client Sample ID: HALAWA WELLS UNITS 1

Lab Sample ID: 380-44256-1

Date Collected: 04/18/23 10:15

Matrix: Drinking Water

Date Received: 04/19/23 10:15

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-------------------|------------|-------------------------------|-----|-----------------|--------------|---------|--------|--|
| Total/NA | Analysis | 524.2 | | 1 | 38074 | UKCP | EA POM | 04/26/23 13:55 |
| Total/NA | Analysis | 524.2 | | 1 | 38317 | N1R | EA POM | 04/28/23 12:50 |
| Total/NA | Analysis | 524.2 | | 1 | 38220 | Q6AD | EA POM | 04/27/23 18:30 |
| Total/NA | Prep | 525.2 | | | 57414 | SC | EA SB | 05/02/23 08:16 |
| Total/NA | Analysis | 525.2 LL | | 1 | 57529 | BC | EA SB | 05/03/23 00:17 |
| Total/NA | Prep | 504.1 | | | 37791 | K9GY | EA POM | 04/25/23 13:05 - 04/25/23 14:11 ¹ |
| Total/NA | Analysis | 504.1 | | 1 | 38045 | K9GY | EA POM | 04/26/23 04:14 |
| Total/NA | Prep | 505 | | | 57403 | EZ | EA SB | 05/02/23 09:25 - 05/02/23 15:39 ¹ |
| Total/NA | Analysis | 505 | | 1 | 57488 | JV | EA SB | 05/03/23 07:00 |
| Total/NA | Analysis | 300.0 | | 5 | 37377 | VB9B | EA POM | 04/20/23 00:14 |
| Total/NA | Analysis | 300.0 | | 5 | 37378 | VB9B | EA POM | 04/20/23 00:14 |
| Total/NA | Analysis | 300.0 | | 5 | 37822 | UNJR | EA POM | 04/24/23 21:47 |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 37592 | J9ZD | EA POM | 04/21/23 11:00 |
| Total Recoverable | Prep | 200.8 | | | 37417 | Z45W | EA POM | 04/20/23 12:18 |
| Total Recoverable | Analysis | 200.8 | | 1 | 37574 | AAE8 | EA POM | 04/20/23 19:41 |
| Total/NA | Prep | 245.1 | | | 56865 | AC | EA SB | 04/26/23 18:55 |
| Total/NA | Analysis | 245.1 | | 1 | 56889 | AC | EA SB | 04/26/23 23:11 |
| Total/NA | Analysis | SM 2320B | | 1 | 37854 | D5MQ | EA POM | 04/24/23 22:08 |
| Total/NA | Analysis | SM 2510B | | 1 | 37857 | D5MQ | EA POM | 04/24/23 22:08 |
| Total/NA | Analysis | SM 2540C | | 1 | 37508 | XLG4 | EA POM | 04/20/23 22:26 |
| Total/NA | Analysis | SM 4500 F C | | 1 | 37852 | D5MQ | EA POM | 04/24/23 16:26 |
| Total/NA | Analysis | SM 4500 H+ B | | 1 | 37859 | D5MQ | EA POM | 04/24/23 22:08 |
| Total/NA | Analysis | SM 4500 S2 D | | 1 | 37601 | MH2L | EA POM | 04/21/23 14:25 |
| Total/NA | Prep | EPA_625 | | 1 | O-41042_P | | | 04/20/23 00:00 |
| Total/NA | Analysis | 625 Acid/Base/PAH + TICs | | 1 | O-41042 | YC | | 05/05/23 09:26 |
| Total/NA | Prep | EPA_625 | | 1 | O-41042_P | | | 04/20/23 00:00 |
| Total/NA | Analysis | 625 Acid/Base/PAH + TICs | | 1 | O-41042 | YC | | 05/11/23 17:42 |
| Total/NA | Analysis | 8015 Ethanol | | 1 | 23MED004W | ASitu | | 04/21/23 14:00 |
| Total/NA | Analysis | 8015 Gas (Purgeable) LL (EAL) | | 1 | 23VG39D11 | SCerva | | 04/21/23 15:02 |
| Total/NA | Analysis | 8015 LL DRO/MRO/JP5/JP8 | | 1 | 23DSD033W | SDees | | 04/28/23 16:57 |

Client Sample ID: TB: HALAWA WELLS UNITS 1

Lab Sample ID: 380-44256-2

Date Collected: 04/18/23 10:15

Matrix: Water

Date Received: 04/19/23 10:15

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|--------|----------------------|
| Total/NA | Analysis | 524.2 | | 1 | 38074 | UKCP | EA POM | 04/26/23 14:16 |
| Total/NA | Analysis | 524.2 | | 1 | 38317 | N1R | EA POM | 04/28/23 12:50 |
| Total/NA | Analysis | 524.2 | | 1 | 38220 | Q6AD | EA POM | 04/27/23 18:53 |

Eurofins Eaton Analytical Pomona

Lab Chronicle

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

Job ID: 380-44256-1

Client Sample ID: TB: HALAWA WELLS UNITS 1

Lab Sample ID: 380-44256-2

Date Collected: 04/18/23 10:15

Matrix: Water

Date Received: 04/19/23 10:15

| <u>Prep Type</u> | <u>Batch Type</u> | <u>Batch Method</u> | <u>Run</u> | <u>Dilution Factor</u> | <u>Batch Number</u> | <u>Analyst</u> | <u>Lab</u> | <u>Prepared or Analyzed</u> |
|------------------|-------------------|----------------------------------|------------|------------------------|---------------------|----------------|------------|--|
| Total/NA | Prep | 504.1 | | | 37791 | K9GY | EA POM | 04/25/23 13:05 - 04/25/23 14:11 ¹ |
| Total/NA | Analysis | 504.1 | | 1 | 38045 | K9GY | EA POM | 04/26/23 04:55 |
| Total/NA | Analysis | 8015 Gas (Purgeable) LL (EAL) | | 1 | 23VG39D11 | SCerva | | 04/21/23 16:51 |

¹ This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

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

EA POM = Eurofins Eaton Analytical Pomona, 941 Corporate Center Drive, Pomona, CA 91768-2642, TEL (626)386-1100

EA SB = Eurofins Eaton Analytical South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777

Accreditation/Certification Summary

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

Job ID: 380-44256-1

Laboratory: Eurofins Eaton Analytical Pomona

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

| Authority | Program | Identification Number | Expiration Date |
|-----------|---------|-----------------------|-----------------|
| Hawaii | State | CA00006 | 02-29-24 |

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 |
|-----------------|-------------|----------------|---------------------------------|
| 200.7 Rev 4.4 | | Drinking Water | Calcium |
| 200.7 Rev 4.4 | | Drinking Water | Magnesium |
| 200.7 Rev 4.4 | | Drinking Water | Potassium |
| 200.7 Rev 4.4 | | Drinking Water | Sodium |
| 300.0 | | Drinking Water | Bromide |
| 300.0 | | Drinking Water | Nitrite as N |
| 524.2 | | Drinking Water | 1,1,1,2-Tetrachloroethane |
| 524.2 | | Drinking Water | 1,1,2,2-Tetrachloroethane |
| 524.2 | | Drinking Water | 1,1-Dichloroethane |
| 524.2 | | Drinking Water | 1,1-Dichloropropene |
| 524.2 | | Drinking Water | 1,2,3-Trichlorobenzene |
| 524.2 | | Drinking Water | 1,2,3-Trichloropropane |
| 524.2 | | Drinking Water | 1,2,4-Trimethy benzene |
| 524.2 | | Drinking Water | 1,3,5-Trimethy benzene |
| 524.2 | | Drinking Water | 1,3-Dichloropropane |
| 524.2 | | Drinking Water | 1,3-Dichloropropene, Total |
| 524.2 | | Drinking Water | 2,2-Dichloropropane |
| 524.2 | | Drinking Water | 2-Butanone (MEK) |
| 524.2 | | Drinking Water | 4-Methyl-2-pentanone (MIBK) |
| 524.2 | | Drinking Water | Acetone |
| 524.2 | | Drinking Water | Bromobenzene |
| 524.2 | | Drinking Water | Bromochloromethane |
| 524.2 | | Drinking Water | Bromodichloromethane |
| 524.2 | | Drinking Water | Bromoethane |
| 524.2 | | Drinking Water | Bromoform |
| 524.2 | | Drinking Water | Bromomethane (Methyl Bromide) |
| 524.2 | | Drinking Water | Carbon disulfide |
| 524.2 | | Drinking Water | Chlorodibromomethane |
| 524.2 | | Drinking Water | Chloroethane |
| 524.2 | | Drinking Water | Chloroform (Trichloromethane) |
| 524.2 | | Drinking Water | Chloromethane (methyl chloride) |
| 524.2 | | Drinking Water | cis-1,3-Dichloropropene |
| 524.2 | | Drinking Water | Dibromomethane |
| 524.2 | | Drinking Water | Dichlorodifluoromethane |
| 524.2 | | Drinking Water | Diisopropyl ether |
| 524.2 | | Drinking Water | Hexachlorobutadiene |
| 524.2 | | Drinking Water | Isopropy benzene |
| 524.2 | | Drinking Water | m,p-Xylenes |
| 524.2 | | Drinking Water | m-Dichlorobenzene (1,3-DCB) |
| 524.2 | | Drinking Water | Naphthalene |
| 524.2 | | Drinking Water | n-Butylbenzene |
| 524.2 | | Drinking Water | N-Propylbenzene |
| 524.2 | | Drinking Water | o-Chlorotoluene |
| 524.2 | | Drinking Water | o-Xylene |
| 524.2 | | Drinking Water | p-Chlorotoluene |

Accreditation/Certification Summary

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

Job ID: 380-44256-1

Laboratory: Eurofins Eaton Analytical Pomona (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 |
| 524.2 | | Drinking Water | p-Isopropyltoluene |
| 524.2 | | Drinking Water | sec-Butylbenzene |
| 524.2 | | Drinking Water | tert-Butylbenzene |
| 524.2 | | Drinking Water | Tertiary Butyl Alcohol (TBA) |
| 524.2 | | Drinking Water | trans-1,3-Dichloropropene |
| 524.2 | | Water | 1,1,1,2-Tetrachloroethane |
| 524.2 | | Water | 1,1,2,2-Tetrachloroethane |
| 524.2 | | Water | 1,1-Dichloroethane |
| 524.2 | | Water | 1,1-Dichloropropene |
| 524.2 | | Water | 1,2,3-Trichlorobenzene |
| 524.2 | | Water | 1,2,3-Trichloropropane |
| 524.2 | | Water | 1,2,4-Trimethy benzene |
| 524.2 | | Water | 1,3,5-Trimethy benzene |
| 524.2 | | Water | 1,3-Dichloropropane |
| 524.2 | | Water | 1,3-Dichloropropene, Total |
| 524.2 | | Water | 2,2-Dichloropropane |
| 524.2 | | Water | 2-Butanone (MEK) |
| 524.2 | | Water | 4-Methyl-2-pentanone (MIBK) |
| 524.2 | | Water | Acetone |
| 524.2 | | Water | Bromobenzene |
| 524.2 | | Water | Bromochloromethane |
| 524.2 | | Water | Bromodichloromethane |
| 524.2 | | Water | Bromoethane |
| 524.2 | | Water | Bromoform |
| 524.2 | | Water | Bromomethane (Methyl Bromide) |
| 524.2 | | Water | Carbon disulfide |
| 524.2 | | Water | Chlorodibromomethane |
| 524.2 | | Water | Chloroethane |
| 524.2 | | Water | Chloroform (Trichloromethane) |
| 524.2 | | Water | Chloromethane (methyl chloride) |
| 524.2 | | Water | cis-1,3-Dichloropropene |
| 524.2 | | Water | Dibromomethane |
| 524.2 | | Water | Dichlorodifluoromethane |
| 524.2 | | Water | Diisopropyl ether |
| 524.2 | | Water | Hexachlorobutadiene |
| 524.2 | | Water | Isopropy benzene |
| 524.2 | | Water | m,p-Xylenes |
| 524.2 | | Water | m-Dichlorobenzene (1,3-DCB) |
| 524.2 | | Water | Naphthalene |
| 524.2 | | Water | n-Butylbenzene |
| 524.2 | | Water | N-Propylbenzene |
| 524.2 | | Water | o-Chlorotoluene |
| 524.2 | | Water | o-Xylene |
| 524.2 | | Water | p-Chlorotoluene |
| 524.2 | | Water | p-Isopropyltoluene |
| 524.2 | | Water | sec-Butylbenzene |
| 524.2 | | Water | tert-Butylbenzene |

Accreditation/Certification Summary

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

Job ID: 380-44256-1

Laboratory: Eurofins Eaton Analytical Pomona (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 |
| 524.2 | | Water | Tertiary Butyl Alcohol (TBA) |
| 524.2 | | Water | trans-1,3-Dichloropropene |
| SM 4500 F C | | Drinking Water | Fluoride |
| SM 4500 S2 D | | Drinking Water | Sulfide |

Laboratory: Eurofins Eaton Analytical South Bend

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

| Authority | Program | Identification Number | Expiration Date |
|-----------------------------------|---------------|-----------------------|-----------------|
| A2LA | ISO/IEC 17025 | 5794.01 | 07-31-24 |
| Alabama | State | 40700 | 06-30-23 |
| Alaska | State | IN00035 | 06-30-23 |
| Arizona | State | AZ0432 | 07-25-23 |
| Arkansas (DW) | State | EPA IN00035 | 06-30-23 |
| California | State | 2920 | 06-30-23 |
| Colorado | State | IN00035 | 02-29-24 |
| Connecticut | State | PH-0132 | 03-31-22 * |
| Delaware (DW) | State | IN00035 | 06-30-23 |
| Florida | NELAP | E87775 | 06-30-23 |
| Georgia (DW) | State | 929 | 06-30-23 |
| Hawaii | State | IN035 | 06-30-23 |
| Idaho (DW) | State | IN00035 | 12-31-23 |
| IL Dept. of Public Health (Micro) | State | 17767 | 06-30-23 |
| Illinois | NELAP | 200001 | 09-30-23 |
| Indiana | State | C-71-01 | 12-31-25 |
| Indiana (Micro) | State | M-76-07 | 12-31-25 |
| Iowa | State | IA Lab #098 | 11-01-23 |
| Kansas | NELAP | E-10233 | 10-31-23 |
| Kentucky (DW) | State | KY90056 | 12-31-23 |
| Louisiana (DW) | State | LA014 | 12-31-23 |
| Maine | State | IN00035 | 05-01-25 |
| Maryland | State | 209 | 05-18-23 |
| Massachusetts | State | M-IN035 | 06-30-23 |
| MI - RadChem Recognition | State | 9926 | 06-30-23 |
| Michigan | State | 9926 | 06-30-23 |
| Minnesota | NELAP | 1989807 | 12-31-23 |
| Mississippi | State | IN00035 | 06-30-23 |
| Missouri | State | 880 | 09-30-24 |
| Montana (DW) | State | CERT0026 | 01-02-24 |
| Nebraska | State | NE-OS-05-04 | 06-30-23 |
| Nevada | State | IN000352021-2 | 07-31-23 |
| New Hampshire | NELAP | 2124 | 11-05-23 |
| New Jersey | NELAP | IN598 | 06-30-23 |
| New Mexico | State | IN00035 | 06-30-23 |
| New York | NELAP | 11398 | 04-01-24 |
| North Carolina (DW) | State | 18700 | 07-31-23 |
| North Dakota | State | R-035 | 06-30-23 |

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

Accreditation/Certification Summary

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

Job ID: 380-44256-1

Laboratory: Eurofins Eaton Analytical South Bend (Continued)

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

| Authority | Program | Identification Number | Expiration Date |
|--------------------|---------------------|-----------------------|-----------------|
| Ohio | State | 87775 | 06-30-23 |
| Oklahoma | NELAP | D9508 | 08-31-23 |
| Oregon | NELAP | 4156 | 09-16-23 |
| Pennsylvania | NELAP | 68-00466 | 04-30-24 |
| Puerto Rico | State | IN00035 | 04-01-24 |
| Rhode Island | State | LAO00343 | 12-30-23 |
| South Carolina | State | 95005001 | 06-30-23 |
| South Dakota (DW) | State | IN00035 | 06-30-23 |
| Tennessee | State | TN02973 | 06-30-23 |
| Texas | NELAP | T104704187-22-16 | 12-31-23 |
| Texas | TCEQ Water Supply | TX207 | 06-30-23 |
| USEPA Reg X SDWA | US Federal Programs | IN00035 | 08-24-24 |
| USEPA UCMR 5 | US Federal Programs | IN00035 | 12-31-25 |
| Utah | NELAP | IN00035 | 07-31-23 |
| Vermont | State | VT-8775 | 11-15-23 |
| Virginia | NELAP | 460275 | 03-14-24 |
| Washington | State | C837 | 01-01-24 |
| West Virginia (DW) | State | 9927 C | 12-31-23 |
| Wisconsin | State | 999766900 | 08-31-23 |
| Wisconsin (Micro) | State | 10121 | 12-31-22 * |
| Wyoming | State | 8TMS-L | 06-30-23 |

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



Method Summary

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

Job ID: 380-44256-1

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

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 POM = Eurofins Eaton Analytical Pomona, 941 Corporate Center Drive, Pomona, CA 91768-2642, TEL (626)386-1100

EA SB = Eurofins Eaton Analytical South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777

Sample Summary

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

Job ID: 380-44256-1

| <u>Lab Sample ID</u> | <u>Client Sample ID</u> | <u>Matrix</u> | <u>Collected</u> | <u>Received</u> |
|----------------------|--------------------------|----------------|------------------|-----------------|
| 380-44256-1 | HALAWA WELLS UNITS 1 | Drinking Water | 04/18/23 10:15 | 04/19/23 10:15 |
| 380-44256-2 | TB: HALAWA WELLS UNITS 1 | Water | 04/18/23 10:15 | 04/19/23 10:15 |

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17



Date: 06-28-2023
EMAX Batch No.: 23D232

Attn: Jackie Contreras

Eurofins Eaton Analytical
750 Royal Oaks Dr., Suite 100
Monrovia, CA 91016-3629

Subject: Laboratory Report
Project: 380-44256

Enclosed is the Laboratory report for samples received on 04/20/23.
The data reported relate only to samples listed below :

| Sample ID | Control # | Col Date | Matrix | Analysis |
|----------------|-----------|----------|--------|---|
| 380-44256-1 | D232-01 | 04/18/23 | WATER | TPH GASOLINE TPH ETHANOL |
| 380-44256-2 | D232-02 | 04/18/23 | WATER | TPH GASOLINE |
| 380-44256-1MS | D232-01M | 04/18/23 | WATER | TPH GASOLINE TPH DIESEL TPH JP-5 ETHANOL |
| 380-44256-1MSD | D232-01S | 04/18/23 | WATER | TPH GASOLINE TPH DIESEL TPH JP-5 ETHANOL |

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Caspar J. Pang
Caspar 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 CA002912022-24
ANAB Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing
California ELAP Accredited Certificate Number 2672



| | | | | | | | |
|--|--|---|--|---|--|--|--------------------|
| Client Information (Sub Contract Lab) | | Sampler: | Lab PM: | Carrier Tracking No(s): | | COC No: | |
| Client Contact: Shipping/Receiving | | Arada, Rachelle | Arada, Rachelle | State of Origin: Hawaii | | 380-49048.1 | |
| Company: EMAX Laboratories Inc | | E-Mail: Rachelle.Arada@et.eurofins.com | E-Mail: Rachelle.Arada@et.eurofins.com | Job #: | | Page 1 of 1 | |
| Address: 3051 Fujita Street, City: Torrance State, Zip: CA, 90505 Phone: | | Accreditations Required (See note): State - Hawaii | State - Hawaii | Job #: | | 380-44256-1 | |
| Email: Project #: RED-HILL Site: Honolulu BWS Sites | | Due Date Requested: 5/3/2023 | Analysis Requested | Preservation Codes: 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 Other: | | M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify) | |
| TAT Requested (days): | | PO #: | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | SUB (8015 Gas (Purgeable) LL (EAL)) / 8015 Gas | SUB (8015 LL DROM/RO/PS/JP8) / 8015 LL | DROM/RO/PS/JP8 |
| WO #: | | Project #: 38001111 SSOW#: | Matrix (W=water, S=solid, O=wash/oil, BT=Trace, A=As) | Sample Type (C=Comp, G=grab) | Sample Time | Sample Date | Preservation Code: |
| Sample Identification - Client ID (Lab ID) | | Sample Date | Sample Time | Sample Type | Sample Date | Sample Time | Preservation Code: |
| HALAWA WELLS UNITS 1 (380-44256-1) | | 4/18/23 | 10:15 Hawaiian | Water | 4/18/23 | 10:15 Hawaiian | Water |
| TB: HALAWA WELLS UNITS 1 (380-44256-2) | | 4/18/23 | 10:15 Hawaiian | Water | 4/18/23 | 10:15 Hawaiian | Water |
| Total Number of Containers | | 11 | See Attached Instructions | Special Instructions/Note: | | | |
| See Attached Instructions | | 2 | See Attached Instructions | | | | |

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 analysts/methods/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.

Possible Hazard Identification
 Unconfirmed
 Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:
 Return To Client Disposal By Lab Archive For _____ Months

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

| | | | | | |
|--------------------|------------|----------|--------------------|------------|----------|
| Relinquished by: | Date/Time: | Company: | Received by: | Date/Time: | Company: |
| <i>[Signature]</i> | 4/18/23 | EMAX | <i>[Signature]</i> | 1055 | EMAX |
| Relinquished by: | Date/Time: | Company: | Received by: | Date/Time: | Company: |
| | | | | | |

Relinquished by: _____ Date/Time: _____ Company: _____

Relinquished by: _____ Date/Time: _____ Company: _____

Relinquished by: _____ Date/Time: _____ Company: _____

Cooler Temperature(s) °C and Other Remarks: 6.9/0.7 (CF-0.2) Page 2 of 44
 Ver: 06/08/2021





| | | |
|--|---------------------------|--|
| 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>23D232</u> Recipient <u>Jhwin Zamora</u> Date <u>04/20/23</u> Time <u>10:55</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 checked="" type="checkbox"/> Address | <input checked="" 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"/> TAT |
| Safety Issues (if any) Note: | <input type="checkbox"/> High concentrations expected | <input type="checkbox"/> From Superfund Site | <input type="checkbox"/> Rad screening required | | |

PACKAGING INSPECTION

| | | | |
|---|---|---|---|
| Container | <input checked="" type="checkbox"/> Cooler | <input type="checkbox"/> Box | <input type="checkbox"/> Other |
| Condition <u>correction</u> | <input type="checkbox"/> Custody Seal | <input type="checkbox"/> Intact | <input type="checkbox"/> Damaged |
| Packaging <u>factor: -0.2</u> | <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 <u>10.9/0.7</u> °C | <input type="checkbox"/> Cooler 2 _____°C | <input type="checkbox"/> Cooler 3 _____°C |
| Thermometer: | <input type="checkbox"/> Cooler 6 _____°C | <input type="checkbox"/> Cooler 7 _____°C | <input type="checkbox"/> Cooler 8 _____°C |
| | <u>A-S/N 21052760</u> | <u>B-S/N 210760237</u> | <u>C-S/N _____</u> |
| | | | <u>D-S/N _____</u> |

Comments: Temperature is out of range. PM was informed IMMEDIATELY.
 Note:

DISCREPANCIES

| LabSampleID | LabSampleContainerID | Code | ClientSample Label ID / Information | Corrective Action |
|---|----------------------|------|-------------------------------------|-------------------|
| 1 | 1,3,6 | D10 | | R8 |
| 2 | 12 | D22 | 2nd Date reads: 2/28/23 | R1 |
| <i>(Large diagonal scribble across the table)</i> | | | | |

pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time. AS 4/21/23

NOTES/OBSERVATIONS:
 SAMPLE MATRIX IS DRINKING WATER? YES NO

- LEGEND:**
- | | | |
|--|---|---|
| Code Description-Sample Management | Code Description-Sample Management | Code Description-Sample Management |
| D1 Analysis is not indicated in _____ | D13 Out of Holding Time | R1 Proceed as indicated in <input checked="" type="checkbox"/> COC <input type="checkbox"/> Label |
| D2 Analysis mismatch COC vs label | D14 Bubble is >6mm | R2 Refer to attached instruction |
| D3 Sample ID mismatch COC vs label | D15 No trip blank in cooler | R3 Cancel the analysis |
| D4 Sample ID is not indicated in _____ | D16 Preservation not indicated in _____ | R4 Use vial with smallest bubble first |
| D5 Container -[improper] [leaking] [broken] | D17 Preservation mismatch COC vs label | R5 Log-in with latest sampling date and time+1 min |
| D6 Date/Time is not indicated in _____ | D18 Insufficient chemical preservative | R6 Adjust pH as necessary |
| D7 Date/Time mismatch COC vs label | D19 Insufficient Sample | R7 Filter and preserved as necessary |
| D8 Sample listed in COC is not received | D20 No filtration info for dissolved analysis | R8 _____ |
| D9 Sample received is not listed in COC | D21 No sample for moisture determination | R9 _____ |
| <u>D10</u> No initial/date on corrections in COC/label | <u>D22</u> 2nd Date on label is incorrect | R10 _____ |
| D11 Container count mismatch COC vs received | D23 _____ | R11 _____ |
| D12 Container size mismatch COC vs received | D24 _____ | R12 _____ |

REVIEWS:

| | | |
|-------------------------------------|---------------------|---------------------|
| Sample Labeling <u>Maria Rivera</u> | SRF <u>Quinn</u> | PM <u>AS</u> |
| Date <u>04/20/23</u> | Date <u>4/20/23</u> | Date <u>4/21/23</u> |

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

380-44256

METHOD 5030B/8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

SDG#: 23D232



CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-44256

SDG : 23D232

METHOD 5030B/8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

A total of two(2) water samples were received on 04/20/23 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. VG39D11B - 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. VG39D11L/VG39D11C 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 D232-01M/D232-01S. 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 : 380-44256

SDG NO. : 23D232
 Instrument ID : GCT039

| Client Sample ID | Laboratory Sample ID | Dilution Factor | % Moist | Analysis DateTime | WATER | | Extraction DateTime | Sample Data FN | Calibration Data FN | Prep. Batch | Notes |
|------------------|----------------------|-----------------|---------|-------------------|---------|-------------------|---------------------|----------------|---------------------|-------------|--------------------------|
| | | | | | % Moist | Analysis DateTime | | | | | |
| MBLK1W | VG39D11B | 1 | NA | 04/21/2313:13 | | | 04/21/2313:13 | ED21005A | ED21004A | 23VG39D11 | Method Blank |
| LCS1W | VG39D11L | 1 | NA | 04/21/2313:49 | | | 04/21/2313:49 | ED21006A | ED21004A | 23VG39D11 | Lab Control Sample (LCS) |
| LCD1W | VG39D11C | 1 | NA | 04/21/2314:25 | | | 04/21/2314:25 | ED21007A | ED21004A | 23VG39D11 | LCS Duplicate |
| 380-44256-1 | D232-01 | 1 | NA | 04/21/2315:02 | | | 04/21/2315:02 | ED21008A | ED21004A | 23VG39D11 | Field Sample |
| 380-44256-1MS | D232-01M | 1 | NA | 04/21/2315:38 | | | 04/21/2315:38 | ED21009A | ED21004A | 23VG39D11 | Matrix Spike Sample (MS) |
| 380-44256-1MSD | D232-01S | 1 | NA | 04/21/2316:14 | | | 04/21/2316:14 | ED21010A | ED21004A | 23VG39D11 | MS Duplicate (MSD) |
| 380-44256-2 | D232-02 | 1 | NA | 04/21/2316:51 | | | 04/21/2316:51 | ED21011A | ED21004A | 23VG39D11 | Field Sample |

FN - Filename
 % Moist - Percent Moisture



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SAMPLE RESULTS

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QC SUMMARIES

METHOD 5030B/8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

| | |
|------------------------------------|--------------------------------|
| Client : EUROFINS EATON ANALYTICAL | Date Collected: 04/21/23 13:13 |
| Project : 380-44256 | Date Received: 04/21/23 |
| Batch No. : 23D232 | Date Extracted: 04/21/23 13:13 |
| Sample ID : MBLK1W | Date Analyzed: 04/21/23 13:13 |
| Lab Samp ID: VG39D11B | Dilution Factor: 1 |
| Lab File ID: ED21005A | Matrix: WATER |
| Ext Btch ID: 23VG39D11 | % Moisture: NA |
| Calib. Ref.: ED21004A | Instrument ID: 39 |

| 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 | 0.0362 | 0.0400 | 91 | 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 : 380-44256
BATCH NO. : 23D232
METHOD : 5030B/8015B

| | | | |
|------------------|------------------|----------------|----------------|
| MATRIX | : WATER | | % MOISTURE:NA |
| DILUTION FACTOR: | 1 | 1 | 1 |
| SAMPLE ID | : MBLK1W | LCS1W | LCD1W |
| LAB SAMPLE ID | : VG39D11B | VG39D11L | VG39D11C |
| LAB FILE ID | : ED21005A | ED21006A | ED21007A |
| DATE PREPARED | : 04/21/23 13:13 | 04/21/23 13:49 | 04/21/23 14:25 |
| DATE ANALYZED | : 04/21/23 13:13 | 04/21/23 13:49 | 04/21/23 14:25 |
| PREP BATCH | : 23VG39D11 | 23VG39D11 | 23VG39D11 |
| CALIBRATION REF: | ED21004A | ED21004A | ED21004A |

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 | 0.466 | 93 | 9 | 60-130 | 30 |

| SURROGATE PARAMETER | SpikeAmt (mg/L) | LCSResult (mg/L) | LCSRec (%) | SpikeAmt (mg/L) | LCDResult (mg/L) | LCDRec (%) | QCLimit (%) |
|---------------------|--------------------|---------------------|---------------|--------------------|---------------------|---------------|----------------|
| Bromofluorobenzene | 0.0400 | 0.0434 | 109 | 0.0400 | 0.0445 | 111 | 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 : 380-44256
BATCH NO. : 23D232
METHOD : 5030B/8015B

| | | | |
|------------------|------------------|----------------|----------------|
| MATRIX | : WATER | | % MOISTURE:NA |
| DILUTION FACTOR: | 1 | 1 | 1 |
| SAMPLE ID | : 380-44256-1 | 380-44256-1MS | 380-44256-1MSD |
| LAB SAMPLE ID | : D232-01 | D232-01M | D232-01S |
| LAB FILE ID | : ED21008A | ED21009A | ED21010A |
| DATE PREPARED | : 04/21/23 15:02 | 04/21/23 15:38 | 04/21/23 16:14 |
| DATE ANALYZED | : 04/21/23 15:02 | 04/21/23 15:38 | 04/21/23 16:14 |
| PREP BATCH | : 23VG39D11 | 23VG39D11 | 23VG39D11 |
| CALIBRATION REF: | ED21004A | ED21004A | ED21004A |

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 | 0.489 | 98 | 0.500 | 0.504 | 101 | 3 | 50-130 | 30 |

| SURROGATE PARAMETER | SpikeAmt (mg/L) | MSResult (mg/L) | MSRec (%) | SpikeAmt (mg/L) | MSDResult (mg/L) | MSDRec (%) | QCLimit (%) |
|---------------------|--------------------|--------------------|--------------|--------------------|---------------------|---------------|----------------|
| Bromofluorobenzene | 0.0400 | 0.0455 | 114 | 0.0400 | 0.0457 | 114 | 60-140 |

PS: Parent Sample MS: Matrix Spike MSD: Matrix Spike Duplicate

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-44256

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 23D232



CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-44256

SDG : 23D232

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 04/20/23 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. DSD033WB - 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 DSD033WL. 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 23D232-01M/23D232-01S. 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: 380-44256

SDG : 23D232

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 04/20/23 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. DSD033WB - 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 J5D033WL. 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 23D232-01M/23D232-01S. 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: 380-44256

SDG : 23D232

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 04/20/23 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. DSD033WB - 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 J8D033WL. 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 23D234-01M/23D234-01S. 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.

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SAMPLE RESULTS

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 04/18/23 10:15
Project    : 380-44256                   Date Received: 04/20/23
Batch No.  : 23D232                       Date Extracted: 04/27/23 14:30
Sample ID  : 380-44256-1                 Date Analyzed: 04/28/23 16:57
Lab Samp ID: 23D232-01                   Dilution Factor: 1
Lab File ID: LD28013A                    Matrix: WATER
Ext Btch ID: 23DSD033W                   % Moisture: NA
Calib. Ref.: LD28003A                    Instrument ID: D5
=====

```

| PARAMETERS | RESULTS (mg/L) | RL (mg/L) | MDL (mg/L) | |
|----------------------|-------------------|--------------|---------------|----------|
| ----- | ----- | ----- | ----- | |
| Diesel | ND | 0.027 | 0.013 | |
| Motor Oil | ND | 0.053 | 0.027 | |
| | | | | |
| SURROGATE PARAMETERS | RESULT | SPK_AMT | %RECOVERY | QC LIMIT |
| ----- | ----- | ----- | ----- | ----- |
| Bromobenzene | 0.346 | 0.530 | 65 | 60-130 |
| Hexacosane | 0.109 | 0.132 | 82 | 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   : 940ml                      Final Volume : 5ml
Prepared by    : JMuert                       Analyzed by  : SDeeso

```


METHOD 3520C/8015B
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 04/18/23 10:15
Project     : 380-44256                  Date Received: 04/20/23
Batch No.   : 23D232                    Date Extracted: 04/27/23 14:30
Sample ID   : 380-44256-1              Date Analyzed: 04/28/23 16:57
Lab Samp ID: 23D232-01                 Dilution Factor: 1
Lab File ID: LD28013A                  Matrix: WATER
Ext Btch ID: 23DSD033W                % Moisture: NA
Calib. Ref.: LD28004A                 Instrument ID: D5
=====
  
```

| PARAMETERS | RESULTS (mg/L) | RL (mg/L) | MDL (mg/L) | |
|----------------------|-------------------|--------------|---------------|----------|
| JP5 | ND | 0.053 | 0.027 | |
| SURROGATE PARAMETERS | RESULT | SPK_AMT | %RECOVERY | QC LIMIT |
| Bromobenzene | 0.346 | 0.530 | 65 | 60-130 |
| Hexacosane | 0.109 | 0.132 | 82 | 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 : 940ml

Final Volume : 5ml

Prepared by : JMuert

Analyzed by : SDeeso

METHOD 3520C/8015B
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 04/18/23 10:15
Project    : 380-44256                   Date Received: 04/20/23
Batch No.  : 23D232                       Date Extracted: 04/27/23 14:30
Sample ID  : 380-44256-1                 Date Analyzed: 04/28/23 16:57
Lab Samp ID: 23D232-01                   Dilution Factor: 1
Lab File ID: LD28013A                     Matrix: WATER
Ext Btch ID: 23DSD033W                    % Moisture: NA
Calib. Ref.: LD28005A                     Instrument ID: D5
=====
  
```

| PARAMETERS | RESULTS (mg/L) | RL (mg/L) | MDL (mg/L) | |
|----------------------|-------------------|--------------|---------------|----------|
| JP8 | ND | 0.053 | 0.027 | |
| SURROGATE PARAMETERS | RESULT | SPK_AMT | %RECOVERY | QC LIMIT |
| Bromobenzene | 0.346 | 0.530 | 65 | 60-130 |
| Hexacosane | 0.109 | 0.132 | 82 | 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 : 940ml Final Volume : 5ml
 Prepared by : JMuert Analyzed by : SDeeso

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QC SUMMARIES

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

| | |
|------------------------------------|--------------------------------|
| Client : EUROFINS EATON ANALYTICAL | Date Collected: 04/27/23 14:30 |
| Project : 380-44256 | Date Received: 04/27/23 |
| Batch No. : 23D232 | Date Extracted: 04/27/23 14:30 |
| Sample ID : MBLK1W | Date Analyzed: 04/28/23 15:42 |
| Lab Samp ID: DSD033WB | Dilution Factor: 1 |
| Lab File ID: LD28009A | Matrix: WATER |
| Ext Btch ID: 23DSD033W | % Moisture: NA |
| Calib. Ref.: LD28003A | 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 | 0.364 | 0.500 | 73 | 60-130 |
| Hexacosane | 0.106 | 0.125 | 85 | 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 : JMuert | Analyzed by : SDeeso |

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-44256
BATCH NO. : 23D232
METHOD : 3520C/8015B

MATRIX : WATER % MOISTURE:NA
DILUTION FACTOR: 1 1
SAMPLE ID : MBLK1W LCS1W
LAB SAMPLE ID : DSD033WB DSD033WL
LAB FILE ID : LD28009A LD28010A
DATE PREPARED : 04/27/23 14:30 04/27/23 14:30
DATE ANALYZED : 04/28/23 15:42 04/28/23 16:01
PREP BATCH : 23DSD033W 23DSD033W
CALIBRATION REF: LD28003A LD28003A

ACCESSION:

| PARAMETERS | MBResult (mg/L) | SpikeAmt (mg/L) | LCSResult (mg/L) | LCSRec (%) | QCLimit (%) |
|------------|--------------------|--------------------|---------------------|---------------|----------------|
| ----- | ----- | ----- | ----- | ----- | ----- |
| Diesel | ND | 2.50 | 2.26 | 90 | 50-130 |

| SURROGATE PARAMETERS | SpikeAmt (mg/L) | LCSResult (mg/L) | LCSRec (%) | QCLimit (%) |
|----------------------|--------------------|---------------------|---------------|----------------|
| ----- | ----- | ----- | ----- | ----- |
| Bromobenzene | 0.500 | 0.331 | 66 | 60-130 |
| Hexacosane | 0.125 | 0.113 | 90 | 60-130 |

MB: Method Blank sample LCS: Lab Control Sample

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-44256
BATCH NO. : 23D232
METHOD : 3520C/8015B

| | | | |
|------------------|------------------|----------------|----------------|
| MATRIX | : WATER | | % MOISTURE:NA |
| DILUTION FACTOR: | 1 | 1 | 1 |
| SAMPLE ID | : 380-44256-1 | 380-44256-1MS | 380-44256-1MSD |
| LAB SAMPLE ID | : 23D232-01 | 23D232-01M | 23D232-01S |
| LAB FILE ID | : LD28013A | LD28014A | LD28015A |
| DATE PREPARED | : 04/27/23 14:30 | 04/27/23 14:30 | 04/27/23 14:30 |
| DATE ANALYZED | : 04/28/23 16:57 | 04/28/23 17:16 | 04/28/23 17:34 |
| PREP BATCH | : 23DSD033W | 23DSD033W | 23DSD033W |
| CALIBRATION REF: | LD28003A | LD28003A | LD28003A |

ACCESSION:

| PARAMETERS | PSResult (mg/L) | SpikeAmt (mg/L) | MSResult (mg/L) | MSRec (%) | SpikeAmt (mg/L) | MSDResult (mg/L) | MSDRec (%) | RPD (%) | QCLimit (%) | MaxRPD (%) |
|------------|--------------------|--------------------|--------------------|--------------|--------------------|---------------------|---------------|------------|----------------|---------------|
| Diesel | ND | 2.72 | 2.39 | 88 | 2.62 | 2.45 | 93 | 2 | 50-130 | 30 |

| SURROGATE PARAMETERS | SpikeAmt (mg/L) | MSResult (mg/L) | MSRec (%) | SpikeAmt (mg/L) | MSDResult (mg/L) | MSDRec (%) | QCLimit (%) |
|----------------------|--------------------|--------------------|--------------|--------------------|---------------------|---------------|----------------|
| Bromobenzene | 0.545 | 0.379 | 70 | 0.525 | 0.388 | 74 | 60-130 |
| Hexacosane | 0.136 | 0.129 | 95 | 0.131 | 0.118 | 90 | 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: 04/27/23 14:30
Project    : 380-44256                   Date Received: 04/27/23
Batch No.  : 23D232                       Date Extracted: 04/27/23 14:30
Sample ID  : MBLK1W                       Date Analyzed: 04/28/23 15:42
Lab Samp ID: DSD033WB                     Dilution Factor: 1
Lab File ID: LD28009A                     Matrix: WATER
Ext Btch ID: 23DSD033W                   % Moisture: NA
Calib. Ref.: LD28004A                    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 | 0.364 | 0.500 | 73 | 60-130 |
| Hexacosane | 0.106 | 0.125 | 85 | 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 : JMuert Analyzed by : SDeeso

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-44256
BATCH NO. : 23D232
METHOD : 3520C/8015B

MATRIX : WATER % MOISTURE:NA
DILUTION FACTOR: 1 1
SAMPLE ID : MBLK1W LCS1W
LAB SAMPLE ID : DSD033WB J5D033WL
LAB FILE ID : LD28009A LD28011A
DATE PREPARED : 04/27/23 14:30 04/27/23 14:30
DATE ANALYZED : 04/28/23 15:42 04/28/23 16:20
PREP BATCH : 23DSD033W 23DSD033W
CALIBRATION REF: LD28004A LD28004A

ACCESSION:

| PARAMETERS | MBResult (mg/L) | SpikeAmt (mg/L) | LCSResult (mg/L) | LCSRec (%) | QCLimit (%) |
|------------|--------------------|--------------------|---------------------|---------------|----------------|
| JP5 | ND | 2.50 | 2.23 | 89 | 30-160 |

| SURROGATE PARAMETERS | SpikeAmt (mg/L) | LCSResult (mg/L) | LCSRec (%) | QCLimit (%) |
|----------------------|--------------------|---------------------|---------------|----------------|
| Bromobenzene | 0.500 | 0.362 | 72 | 60-130 |
| Hexacosane | 0.125 | 0.0986 | 79 | 60-130 |

MB: Method Blank sample LCS: Lab Control Sample

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-44256
BATCH NO. : 23D232
METHOD : 3520C/8015B

| | | | |
|------------------|------------------|----------------|----------------|
| MATRIX | : WATER | | % MOISTURE:NA |
| DILUTION FACTOR: | 1 | 1 | 1 |
| SAMPLE ID | : 380-44256-1 | 380-44256-1MS | 380-44256-1MSD |
| LAB SAMPLE ID | : 23D232-01 | 23D232-01M | 23D232-01S |
| LAB FILE ID | : LD28013A | LD28016A | LD28017A |
| DATE PREPARED | : 04/27/23 14:30 | 04/27/23 14:30 | 04/27/23 14:30 |
| DATE ANALYZED | : 04/28/23 16:57 | 04/28/23 17:53 | 04/28/23 18:12 |
| PREP BATCH | : 23DSD033W | 23DSD033W | 23DSD033W |
| CALIBRATION REF: | LD28004A | LD28004A | LD28004A |

ACCESSION:

| PARAMETERS | PSResult (mg/L) | SpikeAmt (mg/L) | MSResult (mg/L) | MSRec (%) | SpikeAmt (mg/L) | MSDResult (mg/L) | MSDRec (%) | RPD (%) | QCLimit (%) | MaxRPD (%) |
|------------|--------------------|--------------------|--------------------|--------------|--------------------|---------------------|---------------|------------|----------------|---------------|
| JP5 | ND | 2.58 | 2.91 | 113 | 2.53 | 2.92 | 116 | 0 | 30-160 | 30 |

| SURROGATE PARAMETERS | SpikeAmt (mg/L) | MSResult (mg/L) | MSRec (%) | SpikeAmt (mg/L) | MSDResult (mg/L) | MSDRec (%) | QCLimit (%) |
|----------------------|--------------------|--------------------|--------------|--------------------|---------------------|---------------|----------------|
| Bromobenzene | 0.515 | 0.442 | 86 | 0.505 | 0.436 | 86 | 60-130 |
| Hexacosane | 0.129 | 0.107 | 83 | 0.126 | 0.105 | 83 | 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: 04/27/23 14:30
Project    : 380-44256                   Date Received: 04/27/23
Batch No.  : 23D232                       Date Extracted: 04/27/23 14:30
Sample ID  : MBLK1W                       Date Analyzed: 04/28/23 15:42
Lab Samp ID: DSD033WB                     Dilution Factor: 1
Lab File ID: LD28009A                     Matrix: WATER
Ext Btch ID: 23DSD033W                   % Moisture: NA
Calib. Ref.: LD28005A                    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 | 0.364 | 0.500 | 73 | 60-130 |
| Hexacosane | 0.106 | 0.125 | 85 | 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 : JMuert

Analyzed by : SDeeso

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-44256
BATCH NO. : 23D232
METHOD : 3520C/8015B

MATRIX : WATER % MOISTURE:NA
DILUTION FACTOR: 1 1
SAMPLE ID : MBLK1W LCS1W
LAB SAMPLE ID : DSD033WB J8D033WL
LAB FILE ID : LD28009A LD28012A
DATE PREPARED : 04/27/23 14:30 04/27/23 14:30
DATE ANALYZED : 04/28/23 15:42 04/28/23 16:38
PREP BATCH : 23DSD033W 23DSD033W
CALIBRATION REF: LD28005A LD28005A

ACCESSION:

| PARAMETERS | MBResult (mg/L) | SpikeAmt (mg/L) | LCSResult (mg/L) | LCSRec (%) | QCLimit (%) |
|------------|--------------------|--------------------|---------------------|---------------|----------------|
| JP8 | ND | 2.50 | 2.65 | 106 | 30-160 |

| SURROGATE PARAMETERS | SpikeAmt (mg/L) | LCSResult (mg/L) | LCSRec (%) | QCLimit (%) |
|----------------------|--------------------|---------------------|---------------|----------------|
| Bromobenzene | 0.500 | 0.485 | 97 | 60-130 |
| Hexacosane | 0.125 | 0.100 | 80 | 60-130 |

MB: Method Blank sample LCS: Lab Control Sample

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-44261
BATCH NO. : 23D234
METHOD : 3520C/8015B

| | | | |
|------------------|------------------|----------------|----------------|
| MATRIX | : WATER | | % MOISTURE:NA |
| DILUTION FACTOR: | 1 | 1 | 1 |
| SAMPLE ID | : 380-44261-1 | 380-44261-1MS | 380-44261-1MSD |
| LAB SAMPLE ID | : 23D234-01 | 23D234-01M | 23D234-01S |
| LAB FILE ID | : LD28019A | LD28020A | LD28021A |
| DATE PREPARED | : 04/27/23 14:30 | 04/27/23 14:30 | 04/27/23 14:30 |
| DATE ANALYZED | : 04/28/23 18:49 | 04/28/23 19:07 | 04/28/23 19:26 |
| PREP BATCH | : 23DSD033W | 23DSD033W | 23DSD033W |
| CALIBRATION REF: | LD28005A | LD28005A | LD28005A |

ACCESSION:

| PARAMETERS | PSResult (mg/L) | SpikeAmt (mg/L) | MSResult (mg/L) | MSRec (%) | SpikeAmt (mg/L) | MSDResult (mg/L) | MSDRec (%) | RPD (%) | QCLimit (%) | MaxRPD (%) |
|------------|--------------------|--------------------|--------------------|--------------|--------------------|---------------------|---------------|------------|----------------|---------------|
| JP8 | ND | 2.53 | 2.03 | 80 | 2.58 | 2.65 | 103 | 26 | 30-160 | 30 |

| SURROGATE PARAMETERS | SpikeAmt (mg/L) | MSResult (mg/L) | MSRec (%) | SpikeAmt (mg/L) | MSDResult (mg/L) | MSDRec (%) | QCLimit (%) |
|----------------------|--------------------|--------------------|--------------|--------------------|---------------------|---------------|----------------|
| Bromobenzene | 0.505 | 0.379 | 75 | 0.515 | 0.493 | 96 | 60-130 |
| Hexacosane | 0.126 | 0.117 | 93 | 0.129 | 0.113 | 88 | 60-130 |

PS: Parent Sample MS: Matrix Spike MSD: Matrix Spike Duplicate

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-44256

METHOD SW8015C
ALCOHOLS BY GC

SDG#: 23D232



CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-44256

SDG : 23D232

METHOD SW8015C
ALCOHOLS BY GC

One(1) water sample was received on 04/20/23 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. MED004WB - 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. MED004WL/MED004WC 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. Ethanol was within MS QC limits in D232-01M/D232-01S. 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 : 380-44256

SDG NO. : 23D232
 Instrument ID : GCT050

| Client Sample ID | Laboratory Sample ID | Dilution Factor | % Moist | Analysis DateTime | WATER | Extraction DateTime | Sample Data FN | Calibration Data FN | Prep. Batch | Notes |
|------------------|----------------------|-----------------|---------|-------------------|-------|---------------------|----------------|---------------------|-------------|--------------------------|
| | MED004WB | 1 | NA | 04/21/2313:13 | | NA | TD21004A | TD21002A | MED004W | Method Blank |
| | MED004WL | 1 | NA | 04/21/2313:26 | | NA | TD21005A | TD21002A | MED004W | Lab Control Sample (LCS) |
| | MED004WC | 1 | NA | 04/21/2313:39 | | NA | TD21006A | TD21002A | MED004W | LCS Duplicate |
| 380-44256-1 | D232-01 | 1 | NA | 04/21/2314:00 | | NA | TD21007A | TD21002A | MED004W | Field Sample |
| 380-44256-1MS | D232-01M | 1 | NA | 04/21/2314:16 | | NA | TD21008A | TD21002A | MED004W | Matrix Spike Sample (MS) |
| 380-44256-1MSD | D232-01S | 1 | NA | 04/21/2314:46 | | NA | TD21009A | TD21002A | MED004W | MS Duplicate (MSD) |

FN - Filename
 % Moist - Percent Moisture

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| 16 |
| 17 |

SAMPLE RESULTS

METHOD SW8015C
ALCOHOLS BY GC

| | | | |
|--------------|-----------------------------|------------------|----------------|
| Client | : EUROFINS EATON ANALYTICAL | Date Collected: | 04/18/23 |
| Project | : 380-44256 | Date Received: | 04/20/23 |
| Batch No. | : 23D232 | Date Extracted: | NA |
| Sample ID: | 380-44256-1 | Date Analyzed: | 04/21/23 14:00 |
| Lab Samp ID: | D232-01 | Dilution Factor: | 1 |
| Lab File ID: | TD21007A | Matrix | : WATER |
| Ext Btch ID: | MED004W | % Moisture | : NA |
| Calib. Ref.: | TD21002A | Instrument ID | : GCT050 |

| PARAMETERS | RESULTS (ug/L) | RL (ug/L) | MDL (ug/L) |
|------------|-------------------|--------------|---------------|
| ----- | ----- | ----- | ----- |
| ETHANOL | ND | 2000 | 500 |

RL : Reporting Limit

| |
|----|
| 1 |
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| 10 |
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| 15 |
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| 17 |

QC SUMMARIES

METHOD SW8015C
ALCOHOLS BY GC

| | | | |
|--------------|-----------------------------|------------------|----------------|
| Client | : EUROFINS EATON ANALYTICAL | Date Collected: | NA |
| Project | : 380-44256 | Date Received: | NA |
| Batch No. | : 23D232 | Date Extracted: | NA |
| Sample ID: | MBLK1W | Date Analyzed: | 04/21/23 13:13 |
| Lab Samp ID: | MED004WB | Dilution Factor: | 1 |
| Lab File ID: | TD21004A | Matrix | : WATER |
| Ext Btch ID: | MED004W | % Moisture | : NA |
| Calib. Ref.: | TD21002A | Instrument ID | : GCT050 |

| PARAMETERS | RESULTS (ug/L) | RL (ug/L) | MDL (ug/L) |
|------------|-------------------|--------------|---------------|
| ----- | ----- | ----- | ----- |
| ETHANOL | ND | 2000 | 500 |

RL : Reporting Limit



EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 380-44256
BATCH NO.: 23D232
METHOD: METHOD SW8015C

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1 1
SAMPLE ID: MBLK1W
LAB SAMP ID: MED004WB MED004WL MED004WC
LAB FILE ID: TD21004A TD21005A TD21006A
DATE EXTRACTED: NA NA NA DATE COLLECTED: NA
DATE ANALYZED: 04/21/2313:13 04/21/2313:26 04/21/2313:39 DATE RECEIVED: NA
PREP. BATCH: MED004W MED004W MED004W
CALIB. REF: TD21002A TD21002A TD21002A

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 | 9310 | 93 | 10000 | 10500 | 105 | 12 | 60-130 | 30 |

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 380-44256
BATCH NO.: 23D232
METHOD: METHOD SW8015C

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1 1
SAMPLE ID: 380-44256-1
LAB SAMP ID: D232-01 D232-01M D232-01S
LAB FILE ID: TD21007A TD21008A TD21009A
DATE EXTRACTED: NA NA NA DATE COLLECTED: 04/18/23
DATE ANALYZED: 04/21/2314:00 04/21/2314:16 04/21/2314:46 DATE RECEIVED: 04/20/23
PREP. BATCH: MED004W MED004W MED004W
CALIB. REF: TD21002A TD21002A TD21002A

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 | 9860 | 99 | 4 | 60-130 | 30 |

May 22, 2023

Rachelle Arada
 Eurofins Eaton Analytical
 750 Royal Oaks Drive
 Suite 100
 Monrovia, CA 91016-

Project Name: RED-HILL Project # 38001111 Job # 380-44256-1
 Physis Project ID: 1407003-395

Dear Rachelle,

Enclosed are the analytical results for the sample submitted to PHYSIS Environmental Laboratories, Inc. (PHYSIS) on 4/20/2023. 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,

Rachel Hansen
 714 602-5320
 Extension 203
 rachelhansen@physislabs.com

PROJECT SAMPLE LIST

Eurofins Eaton Analytical

PHYSIS Project ID: 1407003-395

RED-HILL Project # 38001111 Job # 380-44256-1

Total Samples: 1

| PHYSIS ID | Sample ID | Description | Date | Time | Matrix | Sample Type |
|-----------|----------------------|-------------|-----------|-------|-------------|---------------|
| 105219 | HALAWA WELLS UNITS 1 | 380-44256-1 | 4/18/2023 | 10:15 | Samplewater | Not Specified |

- 1
- 2
- 3
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- 14
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- 16
- 17

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.

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: 105219-R1 | HALAWA WELLS UNITS 1380-4425 Matrix: Samplewater | | | | | | Sampled: 18-Apr-23 10:15 | | Received: 20-Apr-23 | | |
| (2,4,6-Tribromophenol) | EPA 625.1 | % Recovery | 48 | 1 | | | Total | | O-41042 | 20-Apr-23 | 11-May-23 |
| (d5-Phenol) | EPA 625.1 | % Recovery | 17 | 1 | | | Total | | O-41042 | 20-Apr-23 | 11-May-23 |
| 2,4,5-Trichlorophenol | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-41042 | 20-Apr-23 | 11-May-23 |
| 2,4,6-Trichlorophenol | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-41042 | 20-Apr-23 | 11-May-23 |
| 2,4-Dichlorophenol | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-41042 | 20-Apr-23 | 11-May-23 |
| 2,4-Dinitrophenol | EPA 625.1 | µg/L | ND | 1 | 0.1 | 0.2 | Total | | O-41042 | 20-Apr-23 | 11-May-23 |
| 2,6-Dichlorophenol | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-41042 | 20-Apr-23 | 11-May-23 |
| 2,6-Di-tert-butyl-4-methylphenol | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-41042 | 20-Apr-23 | 05-May-23 |
| 2,6-Di-tert-butylphenol | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-41042 | 20-Apr-23 | 05-May-23 |
| 2-Chlorophenol | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-41042 | 20-Apr-23 | 11-May-23 |
| 2-Methyl-4,6-dinitrophenol | EPA 625.1 | µg/L | ND | 1 | 0.1 | 0.2 | Total | | O-41042 | 20-Apr-23 | 11-May-23 |
| 2-Methylphenol | EPA 625.1 | µg/L | ND | 1 | 0.1 | 0.2 | Total | | O-41042 | 20-Apr-23 | 11-May-23 |
| 2-Nitrophenol | EPA 625.1 | µg/L | ND | 1 | 0.1 | 0.2 | Total | | O-41042 | 20-Apr-23 | 11-May-23 |
| 3+4-Methylphenol | EPA 625.1 | µg/L | ND | 1 | 0.1 | 0.2 | Total | | O-41042 | 20-Apr-23 | 11-May-23 |
| 4-Chloro-3-methylphenol | EPA 625.1 | µg/L | ND | 1 | 0.1 | 0.2 | Total | | O-41042 | 20-Apr-23 | 11-May-23 |
| 4-Nitrophenol | EPA 625.1 | µg/L | ND | 1 | 0.1 | 0.2 | Total | | O-41042 | 20-Apr-23 | 11-May-23 |
| 6-tert-butyl-2,4-dimethylphenol | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-41042 | 20-Apr-23 | 05-May-23 |
| Benzoic Acid | EPA 625.1 | µg/L | 0.414 | 1 | 0.1 | 0.2 | Total | | O-41042 | 20-Apr-23 | 11-May-23 |
| Benzyl Alcohol | EPA 625.1 | µg/L | ND | 1 | 0.1 | 0.2 | Total | | O-41042 | 20-Apr-23 | 11-May-23 |
| Pentachlorophenol | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-41042 | 20-Apr-23 | 11-May-23 |
| Phenol | EPA 625.1 | µg/L | ND | 1 | 0.1 | 0.2 | Total | | O-41042 | 20-Apr-23 | 11-May-23 |
| p-tert-Butylphenol | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-41042 | 20-Apr-23 | 05-May-23 |

Base/Neutral Extractable Compounds

| ANALYTE | Method | Units | RESULT | DF | MDL | RL | Fraction | QA CODE | Batch ID | Date Processed | Date Analyzed |
|------------------------------|-------------------------------------|-------|----------------------------|----|------|-----|---------------------------------|---------|----------|----------------------------|------------------|
| Sample ID: 105219-R1 | HALAWA WELLS UNITS 1380-4425 | | Matrix: Samplewater | | | | Sampled: 18-Apr-23 10:15 | | | Received: 20-Apr-23 | 20-Apr-23 |
| 2-Chloronaphthalene | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-41042 | 20-Apr-23 | 11-May-23 |
| 2-Nitroaniline | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-41042 | 20-Apr-23 | 11-May-23 |
| 3-Nitroaniline | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-41042 | 20-Apr-23 | 11-May-23 |
| 4-Bromophenylphenyl ether | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-41042 | 20-Apr-23 | 11-May-23 |
| 4-Chloroaniline | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-41042 | 20-Apr-23 | 11-May-23 |
| 4-Chlorophenylphenyl ether | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-41042 | 20-Apr-23 | 11-May-23 |
| 4-Nitroaniline | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-41042 | 20-Apr-23 | 11-May-23 |
| Aniline | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-41042 | 20-Apr-23 | 11-May-23 |
| Benzidine | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-41042 | 20-Apr-23 | 11-May-23 |
| Bis(2-Chloroethoxy) methane | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-41042 | 20-Apr-23 | 11-May-23 |
| Bis(2-Chloroethyl) ether | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-41042 | 20-Apr-23 | 11-May-23 |
| Bis(2-Chloroisopropyl) ether | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-41042 | 20-Apr-23 | 11-May-23 |
| D benzofuran | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-41042 | 20-Apr-23 | 11-May-23 |
| Disalicylidenepropanediamine | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-41042 | 20-Apr-23 | 05-May-23 |
| Hexachloroethane | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-41042 | 20-Apr-23 | 11-May-23 |
| Nitrobenzene | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-41042 | 20-Apr-23 | 11-May-23 |
| N-Nitrosodi-n-propylamine | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-41042 | 20-Apr-23 | 11-May-23 |
| N-Nitrosodiphenylamine | EPA 625.1 | µg/L | ND | 1 | 0.05 | 0.1 | Total | | O-41042 | 20-Apr-23 | 11-May-23 |

Polynuclear Aromatic Hydrocarbons

| ANALYTE | Method | Units | RESULT | DF | MDL | RL | Fraction | QA CODE | Batch ID | Date Processed | Date Analyzed |
|-----------------------------|---|------------|--------|----|-------|-------|---------------------------------|---------|----------------------------|----------------|---------------|
| Sample ID: 105219-R1 | HALAWA WELLS UNITS 1380-4425 Matrix: Samplewater | | | | | | Sampled: 18-Apr-23 10:15 | | Received: 20-Apr-23 | | |
| (d10-Acenaphthene) | EPA 625.1 | % Recovery | 113 | 1 | | | Total | | O-41042 | 20-Apr-23 | 05-May-23 |
| (d10-Phenanthrene) | EPA 625.1 | % Recovery | 72 | 1 | | | Total | | O-41042 | 20-Apr-23 | 05-May-23 |
| (d12-Chrysene) | EPA 625.1 | % Recovery | 62 | 1 | | | Total | | O-41042 | 20-Apr-23 | 05-May-23 |
| (d12-Perylene) | EPA 625.1 | % Recovery | 73 | 1 | | | Total | | O-41042 | 20-Apr-23 | 05-May-23 |
| (d8-Naphthalene) | EPA 625.1 | % Recovery | 82 | 1 | | | Total | | O-41042 | 20-Apr-23 | 05-May-23 |
| 1-Methylnaphthalene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-41042 | 20-Apr-23 | 05-May-23 |
| 1-Methylphenanthrene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-41042 | 20-Apr-23 | 05-May-23 |
| 2,3,5-Trimethylnaphthalene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-41042 | 20-Apr-23 | 05-May-23 |
| 2,6-Dimethylnaphthalene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-41042 | 20-Apr-23 | 05-May-23 |
| 2-Methylnaphthalene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-41042 | 20-Apr-23 | 05-May-23 |
| Acenaphthene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-41042 | 20-Apr-23 | 05-May-23 |
| Acenaphthylene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-41042 | 20-Apr-23 | 05-May-23 |
| Anthracene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-41042 | 20-Apr-23 | 05-May-23 |
| Benz[a]anthracene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-41042 | 20-Apr-23 | 05-May-23 |
| Benzo[a]pyrene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-41042 | 20-Apr-23 | 05-May-23 |
| Benzo[b]fluoranthene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-41042 | 20-Apr-23 | 05-May-23 |
| Benzo[e]pyrene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-41042 | 20-Apr-23 | 05-May-23 |
| Benzo[g,h,i]perylene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-41042 | 20-Apr-23 | 05-May-23 |
| Benzo[k]fluoranthene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-41042 | 20-Apr-23 | 05-May-23 |
| Biphenyl | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-41042 | 20-Apr-23 | 05-May-23 |
| Chrysene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-41042 | 20-Apr-23 | 05-May-23 |
| D benz[a,h]anthracene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-41042 | 20-Apr-23 | 05-May-23 |
| D benzo[a,l]pyrene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-41042 | 20-Apr-23 | 05-May-23 |
| D benzothiophene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-41042 | 20-Apr-23 | 05-May-23 |

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-41042 | 20-Apr-23 | 05-May-23 |
| Fluorene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-41042 | 20-Apr-23 | 05-May-23 |
| Indeno[1,2,3-cd]pyrene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-41042 | 20-Apr-23 | 05-May-23 |
| Naphthalene | EPA 625.1 | µg/L | 0.00525 | 1 | 0.001 | 0.005 | Total | | O-41042 | 20-Apr-23 | 05-May-23 |
| Perylene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-41042 | 20-Apr-23 | 05-May-23 |
| Phenanthrene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-41042 | 20-Apr-23 | 05-May-23 |
| Pyrene | EPA 625.1 | µg/L | ND | 1 | 0.001 | 0.005 | Total | | O-41042 | 20-Apr-23 | 05-May-23 |



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 CODEc |
|----------------------------------|-------------------|------------------------------|----|-------------------|----------------------------|---------------------|-----------------|---------------------|------------------|-----------|----------|
| | | | | | | | LEVEL | RESULT | % | LIMITS | % |
| Sample ID: 105218-B1 | | QAQC Procedural Blank | | | Matrix: BlankMatrix | | Sampled: | | Received: | | |
| | Method: EPA 625.1 | | | Batch ID: O-41042 | | Prepared: 13-Apr-23 | | Analyzed: 11-May-23 | | | |
| (2,4,6-Tr bromophenol) | Total | 50 | 1 | | | % Recovery | 100 | 50 | 30 - 130% | PASS | |
| (d5-Phenol) | Total | 57 | 1 | | | % Recovery | 100 | 57 | 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: 105218-BS1 | | QAQC Procedural Blank | | | Matrix: BlankMatrix | | | Sampled: | | Received: | | |
| Method: EPA 625.1 | | Batch ID: O-41042 | | | Prepared: 13-Apr-23 | | Analyzed: 11-May-23 | | | | | |
| (2,4,6-Tr bromophenol) | Total | 54 | 1 | | | % Recovery | 100 | 0 | 54 | 30 - 130% | PASS | |
| (d5-Phenol) | Total | 58 | 1 | | | % Recovery | 100 | 0 | 58 | 0 - 130% | PASS | |
| 2,4,5-Trichlorophenol | Total | 0.928 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 93 | 30 - 130% | PASS | |
| 2,4,6-Trichlorophenol | Total | 0.914 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 91 | 56 - 118% | PASS | |
| 2,4-Dichlorophenol | Total | 0.77 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 77 | 51 - 117% | PASS | |
| 2,4-Dinitrophenol | Total | 1.07 | 1 | 0.1 | 0.2 | µg/L | 1 | 0 | 107 | 0 - 152% | PASS | |
| 2,6-Dichlorophenol | Total | 0.405 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 41 | 30 - 130% | PASS | |
| 2,6-Di-tert-butyl-4-methylphenol | Total | 0.58 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 58 | 50 - 150% | PASS | |
| 2,6-Di-tert-butylphenol | Total | 0.558 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 56 | 50 - 150% | PASS | |
| 2-Chlorophenol | Total | 0.657 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 66 | 41 - 110% | PASS | |
| 2-Methyl-4,6-dinitrophenol | Total | 0.999 | 1 | 0.1 | 0.2 | µg/L | 1 | 0 | 100 | 0 - 141% | PASS | |
| 2-Methylphenol | Total | 0.641 | 1 | 0.1 | 0.2 | µg/L | 1 | 0 | 64 | 40 - 117% | PASS | |
| 2-Nitrophenol | Total | 0.699 | 1 | 0.1 | 0.2 | µg/L | 1 | 0 | 70 | 40 - 117% | PASS | |
| 3+4-Methylphenol | Total | 0.81 | 1 | 0.1 | 0.2 | µg/L | 1 | 0 | 81 | 0 - 130% | PASS | |
| 4-Chloro-3-methylphenol | Total | 0.862 | 1 | 0.1 | 0.2 | µg/L | 1 | 0 | 86 | 51 - 128% | PASS | |
| 4-Nitrophenol | Total | 0.817 | 1 | 0.1 | 0.2 | µg/L | 1 | 0 | 82 | 10 - 164% | PASS | |
| 6-tert-butyl-2,4-dimethylphenol | Total | 0.508 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 51 | 50 - 150% | PASS | |
| Benzoic Acid | Total | 1.01 | 1 | 0.1 | 0.2 | µg/L | 1 | 0 | 101 | 2 - 145% | PASS | |
| Benzyl Alcohol | Total | 0.79 | 1 | 0.1 | 0.2 | µg/L | 1 | 0 | 79 | 43 - 148% | PASS | |
| Pentachlorophenol | Total | 0.954 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 95 | 36 - 111% | PASS | |
| Phenol | Total | 0.575 | 1 | 0.1 | 0.2 | µg/L | 1 | 0 | 57 | 29 - 114% | PASS | |
| p-tert-Butylphenol | Total | 0.816 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 82 | 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: 105218-BS2 | | QAQC Procedural Blank | | | Matrix: BlankMatrix | | | Sampled: | | | Received: | | | |
| Method: EPA 625.1 | | Batch ID: O-41042 | | | Prepared: 13-Apr-23 | | | Analyzed: 11-May-23 | | | | | | |
| (2,4,6-Tr bromophenol) | Total | 54 | 1 | | | % Recovery | 100 | 0 | 54 | 30 - 130% | PASS | 0 | 30 | PASS |
| (d5-Phenol) | Total | 64 | 1 | | | % Recovery | 100 | 0 | 64 | 0 - 130% | PASS | 10 | 30 | PASS |
| 2,4,5-Trichlorophenol | Total | 0.891 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 89 | 30 - 130% | PASS | 4 | 30 | PASS |
| 2,4,6-Trichlorophenol | Total | 0.929 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 93 | 56 - 118% | PASS | 2 | 30 | PASS |
| 2,4-Dichlorophenol | Total | 0.871 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 87 | 51 - 117% | PASS | 12 | 30 | PASS |
| 2,4-Dinitrophenol | Total | 0.955 | 1 | 0.1 | 0.2 | µg/L | 1 | 0 | 95 | 0 - 152% | PASS | 11 | 30 | PASS |
| 2,6-Dichlorophenol | Total | 0.427 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 43 | 30 - 130% | PASS | 7 | 30 | PASS |
| 2,6-Di-tert-butyl-4-methylphenol | Total | 0.585 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 59 | 50 - 150% | PASS | 2 | 30 | PASS |
| 2,6-Di-tert-butylphenol | Total | 0.588 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 59 | 50 - 150% | PASS | 5 | 30 | PASS |
| 2-Chlorophenol | Total | 0.715 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 71 | 41 - 110% | PASS | 9 | 30 | PASS |
| 2-Methyl-4,6-dinitrophenol | Total | 0.941 | 1 | 0.1 | 0.2 | µg/L | 1 | 0 | 94 | 0 - 141% | PASS | 6 | 30 | PASS |
| 2-Methylphenol | Total | 0.718 | 1 | 0.1 | 0.2 | µg/L | 1 | 0 | 72 | 40 - 117% | PASS | 12 | 30 | PASS |
| 2-Nitrophenol | Total | 0.786 | 1 | 0.1 | 0.2 | µg/L | 1 | 0 | 79 | 40 - 117% | PASS | 12 | 30 | PASS |
| 3+4-Methylphenol | Total | 0.898 | 1 | 0.1 | 0.2 | µg/L | 1 | 0 | 90 | 0 - 130% | PASS | 11 | 30 | PASS |
| 4-Chloro-3-methylphenol | Total | 0.911 | 1 | 0.1 | 0.2 | µg/L | 1 | 0 | 91 | 51 - 128% | PASS | 6 | 30 | PASS |
| 4-Nitrophenol | Total | 0.846 | 1 | 0.1 | 0.2 | µg/L | 1 | 0 | 85 | 10 - 164% | PASS | 4 | 30 | PASS |
| 6-tert-butyl-2,4-dimethylphenol | Total | 0.566 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 57 | 50 - 150% | PASS | 11 | 30 | PASS |
| Benzoic Acid | Total | 0.919 | 1 | 0.1 | 0.2 | µg/L | 1 | 0 | 92 | 2 - 145% | PASS | 9 | 30 | PASS |
| Benzyl Alcohol | Total | 0.912 | 1 | 0.1 | 0.2 | µg/L | 1 | 0 | 91 | 43 - 148% | PASS | 14 | 30 | PASS |
| Pentachlorophenol | Total | 0.858 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 86 | 36 - 111% | PASS | 10 | 30 | PASS |
| Phenol | Total | 0.635 | 1 | 0.1 | 0.2 | µg/L | 1 | 0 | 63 | 29 - 114% | PASS | 10 | 30 | PASS |
| p-tert-Butylphenol | Total | 1.04 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 104 | 50 - 150% | PASS | 8 | 30 | PASS |

Base/Neutral Extractable Compounds

QUALITY CONTROL REPORT

| ANALYTE | FRACTION | RESULT | DF | MDL | RL | UNITS | SPIKE | SOURCE | ACCURACY | PRECISION | QA CODEc |
|------------------------------|----------|------------------------------|----|------|----------------------------|-------|---------------------|--------|---------------------|-----------|----------|
| | | | | | | | LEVEL | RESULT | % | LIMITS | % |
| Sample ID: 105218-B1 | | QAQC Procedural Blank | | | Matrix: BlankMatrix | | Sampled: | | Received: | | |
| | | Method: EPA 625.1 | | | Batch ID: O-41042 | | Prepared: 13-Apr-23 | | Analyzed: 11-May-23 | | |
| 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 | | | | | |
| Disalicylidenepropanediamin | 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: 105218-BS1 | | QAQC Procedural Blank | | | Matrix: BlankMatrix | | | Sampled: | | Received: | | | |
| Method: EPA 625.1 | | Batch ID: O-41042 | | | Prepared: 13-Apr-23 | | Analyzed: 11-May-23 | | | | | | |
| 2-Chloronaphthalene | Total | 0.79 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 79 | 53 - 130% | PASS | | |
| 2-Nitroaniline | Total | 0.968 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 97 | 69 - 114% | PASS | | |
| 3-Nitroaniline | Total | 0.978 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 98 | 23 - 137% | PASS | | |
| 4-Bromophenylphenyl ether | Total | 0.53 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 53 | 61 - 132% | PASS | | |
| 4-Chloroaniline | Total | 0.512 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 51 | 50 - 150% | PASS | | |
| 4-Chlorophenylphenyl ether | Total | 0.848 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 85 | 63 - 130% | PASS | | |
| 4-Nitroaniline | Total | 0.99 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 99 | 10 - 159% | PASS | | |
| Aniline | Total | 0.726 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 73 | 50 - 150% | PASS | | |
| Benzidine | Total | 0 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 0 | 0 - 125% | PASS | | |
| Bis(2-Chloroethoxy) methane | Total | 0.806 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 81 | 66 - 122% | PASS | | |
| Bis(2-Chloroethyl) ether | Total | 0.59 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 59 | 43 - 127% | PASS | | |
| Bis(2-Chloroisopropyl) ether | Total | 0.916 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 92 | 49 - 128% | PASS | | |
| Dibenzofuran | Total | 0.837 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 84 | 50 - 150% | PASS | | |
| Disalicylidenepropanediamin | Total | 40.4 | 1 | 0.05 | 0.1 | µg/L | 50 | 0 | 81 | 50 - 150% | PASS | | |
| Hexachloroethane | Total | 0.628 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 63 | 27 - 130% | PASS | | |
| Nitrobenzene | Total | 0.734 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 73 | 54 - 111% | PASS | | |
| N-Nitrosodi-n-propylamine | Total | 0.846 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 85 | 61 - 152% | PASS | | |
| N-Nitrosodiphenylamine | Total | 0.927 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 93 | 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: 105218-BS2 | | QAQC Procedural Blank | | | Matrix: BlankMatrix | | | Sampled: | | Received: | | | | |
| Method: EPA 625.1 | | Batch ID: O-41042 | | | Prepared: 13-Apr-23 | | Analyzed: 11-May-23 | | | | | | | |
| 2-Chloronaphthalene | Total | 0.831 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 83 | 53 - 130% | PASS | 5 | 30 | PASS |
| 2-Nitroaniline | Total | 1.02 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 102 | 69 - 114% | PASS | 5 | 30 | PASS |
| 3-Nitroaniline | Total | 1.03 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 103 | 23 - 137% | PASS | 5 | 30 | PASS |
| 4-Bromophenylphenyl ether | Total | 0.532 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 53 | 61 - 132% | PASS | 0 | 30 | PASS |
| 4-Chloroaniline | Total | 0.675 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 68 | 50 - 150% | PASS | 29 | 30 | PASS |
| 4-Chlorophenylphenyl ether | Total | 0.873 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 87 | 63 - 130% | PASS | 2 | 30 | PASS |
| 4-Nitroaniline | Total | 1.02 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 102 | 10 - 159% | PASS | 3 | 30 | PASS |
| Aniline | Total | 0.792 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 79 | 50 - 150% | PASS | 8 | 30 | PASS |
| Benzidine | Total | 0 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 0 | 0 - 125% | PASS | 0 | 30 | PASS |
| Bis(2-Chloroethoxy) methane | Total | 0.894 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 89 | 66 - 122% | PASS | 9 | 30 | PASS |
| Bis(2-Chloroethyl) ether | Total | 0.649 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 65 | 43 - 127% | PASS | 10 | 30 | PASS |
| Bis(2-Chloroisopropyl) ether | Total | 0.854 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 85 | 49 - 128% | PASS | 8 | 30 | PASS |
| Dibenzofuran | Total | 0.878 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 88 | 50 - 150% | PASS | 5 | 30 | PASS |
| Disalicylidenepropanediamin | Total | 44.8 | 1 | 0.05 | 0.1 | µg/L | 50 | 0 | 90 | 50 - 150% | PASS | 11 | 30 | PASS |
| Hexachloroethane | Total | 0.654 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 65 | 27 - 130% | PASS | 3 | 30 | PASS |
| Nitrobenzene | Total | 0.808 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 81 | 54 - 111% | PASS | 10 | 30 | PASS |
| N-Nitrosodi-n-propylamine | Total | 0.925 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 93 | 61 - 152% | PASS | 8 | 30 | PASS |
| N-Nitrosodiphenylamine | Total | 0.948 | 1 | 0.05 | 0.1 | µg/L | 1 | 0 | 95 | 49 - 142% | PASS | 2 | 30 | 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: 105218-B1 | | QAQC Procedural Blank | | | Matrix: BlankMatrix | | Sampled: | | Received: | | |
| Method: EPA 625.1 | | Batch ID: O-41042 | | Prepared: 13-Apr-23 | | Analyzed: 05-May-23 | | | | | |
| (d10-Acenaphthene) | Total | 73 | 1 | | | % Recovery | 100 | 73 | 27 - 133% | PASS | |
| (d10-Phenanthrene) | Total | 76 | 1 | | | % Recovery | 100 | 76 | 43 - 129% | PASS | |
| (d12-Chrysene) | Total | 65 | 1 | | | % Recovery | 100 | 65 | 52 - 144% | PASS | |
| (d12-Perylene) | Total | 82 | 1 | | | % Recovery | 100 | 82 | 36 - 161% | PASS | |
| (d8-Naphthalene) | Total | 54 | 1 | | | % Recovery | 100 | 54 | 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 | | | | | |

Polynuclear Aromatic Hydrocarbons

QUALITY CONTROL REPORT

| ANALYTE | FRACTION | RESULT | DF | MDL | RL | UNITS | SPIKE | SOURCE | ACCURACY | | PRECISION | | QA CODEc |
|------------------------|----------|--------|----|-------|-------|-------|-------|--------|----------|--------|-----------|--------|----------|
| | | | | | | | LEVEL | RESULT | % | LIMITS | % | LIMITS | |
| Dibenzothiophene | Total | ND | 1 | 0.001 | 0.005 | µg/L | | | | | | | |
| 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 CODEc |
|------------------------------|----------|------------------------------|----|-------|----------------------------|-------|---------------------|-----------------|----------|------------------|-----------|----------|
| | | | | | | | LEVEL | RESULT | % | LIMITS | % | LIMITS |
| Sample ID: 105218-BS1 | | QAQC Procedural Blank | | | Matrix: BlankMatrix | | | Sampled: | | Received: | | |
| Method: EPA 625.1 | | Batch ID: O-41042 | | | Prepared: 13-Apr-23 | | Analyzed: 05-May-23 | | | | | |
| (d10-Acenaphthene) | Total | 54 | 1 | | | | % Recovery | 100 | 0 | 54 | 27 - 133% | PASS |
| (d10-Phenanthrene) | Total | 71 | 1 | | | | % Recovery | 100 | 0 | 71 | 43 - 129% | PASS |
| (d12-Chrysene) | Total | 63 | 1 | | | | % Recovery | 100 | 0 | 63 | 52 - 144% | PASS |
| (d12-Perylene) | Total | 81 | 1 | | | | % Recovery | 100 | 0 | 81 | 36 - 161% | PASS |
| (d8-Naphthalene) | Total | 53 | 1 | | | | % Recovery | 100 | 0 | 53 | 25 - 125% | PASS |
| 1-Methylnaphthalene | Total | 0.29 | 1 | 0.001 | 0.005 | µg/L | 0.5 | 0 | 58 | 31 - 128% | PASS | |
| 1-Methylphenanthrene | Total | 0.374 | 1 | 0.001 | 0.005 | µg/L | 0.5 | 0 | 75 | 66 - 127% | PASS | |
| 2,3,5-Trimethylnaphthalene | Total | 0.344 | 1 | 0.001 | 0.005 | µg/L | 0.5 | 0 | 69 | 55 - 122% | PASS | |
| 2,6-Dimethylnaphthalene | Total | 0.301 | 1 | 0.001 | 0.005 | µg/L | 0.5 | 0 | 60 | 48 - 120% | PASS | |
| 2-Methylnaphthalene | Total | 0.728 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 49 | 47 - 130% | PASS | |
| Acenaphthene | Total | 1.03 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 69 | 53 - 131% | PASS | |
| Acenaphthylene | Total | 0.941 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 63 | 43 - 140% | PASS | |
| Anthracene | Total | 1.23 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 82 | 58 - 135% | PASS | |
| Benz[a]anthracene | Total | 0.994 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 66 | 55 - 145% | PASS | |
| Benzo[a]pyrene | Total | 1.27 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 85 | 51 - 143% | PASS | |
| Benzo[b]fluoranthene | Total | 1.25 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 83 | 46 - 165% | PASS | |
| Benzo[e]pyrene | Total | 0.355 | 1 | 0.001 | 0.005 | µg/L | 0.5 | 0 | 71 | 42 - 152% | PASS | |
| Benzo[g,h,i]perylene | Total | 1.35 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 90 | 63 - 133% | PASS | |
| Benzo[k]fluoranthene | Total | 1.38 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 92 | 56 - 145% | PASS | |
| Biphenyl | Total | 0.285 | 1 | 0.001 | 0.005 | µg/L | 0.5 | 0 | 57 | 56 - 119% | PASS | |
| Chrysene | Total | 1.02 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 68 | 56 - 141% | PASS | |
| Dibenz[a,h]anthracene | Total | 1.58 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 105 | 55 - 150% | PASS | |
| Dibenzo[a,l]pyrene | Total | 0.248 | 1 | 0.001 | 0.005 | µg/L | 0.5 | 0 | 50 | 50 - 150% | 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 | |
| Dibenzothiophene | Total | 0.38 | 1 | 0.001 | 0.005 | µg/L | 0.5 | 0 | 76 | 46 - 126% | PASS | | |
| Fluoranthene | Total | 1.48 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 99 | 60 - 146% | PASS | | |
| Fluorene | Total | 1.04 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 69 | 58 - 131% | PASS | | |
| Indeno[1,2,3-cd]pyrene | Total | 1.41 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 94 | 50 - 151% | PASS | | |
| Naphthalene | Total | 0.706 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 47 | 41 - 126% | PASS | | |
| Perylene | Total | 0.4 | 1 | 0.001 | 0.005 | µg/L | 0.5 | 0 | 80 | 48 - 141% | PASS | | |
| Phenanthrene | Total | 1.21 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 81 | 67 - 127% | PASS | | |
| Pyrene | Total | 1.52 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 101 | 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: 105218-BS2 | | QAQC Procedural Blank | | | Matrix: BlankMatrix | | | Sampled: | | | Received: | | | |
| Method: EPA 625.1 | | Batch ID: O-41042 | | | Prepared: 13-Apr-23 | | | Analyzed: 05-May-23 | | | | | | |
| (d10-Acenaphthene) | Total | 73 | 1 | | | % Recovery | 100 | 0 | 73 | 27 - 133% | PASS | 30 | 30 | PASS |
| (d10-Phenanthrene) | Total | 76 | 1 | | | % Recovery | 100 | 0 | 76 | 43 - 129% | PASS | 7 | 30 | PASS |
| (d12-Chrysene) | Total | 68 | 1 | | | % Recovery | 100 | 0 | 68 | 52 - 144% | PASS | 8 | 30 | PASS |
| (d12-Perylene) | Total | 77 | 1 | | | % Recovery | 100 | 0 | 77 | 36 - 161% | PASS | 5 | 30 | PASS |
| (d8-Naphthalene) | Total | 62 | 1 | | | % Recovery | 100 | 0 | 62 | 25 - 125% | PASS | 16 | 30 | PASS |
| 1-Methylnaphthalene | Total | 0.376 | 1 | 0.001 | 0.005 | µg/L | 0.5 | 0 | 75 | 31 - 128% | PASS | 26 | 30 | PASS |
| 1-Methylphenanthrene | Total | 0.387 | 1 | 0.001 | 0.005 | µg/L | 0.5 | 0 | 77 | 66 - 127% | PASS | 3 | 30 | PASS |
| 2,3,5-Trimethylnaphthalene | Total | 0.374 | 1 | 0.001 | 0.005 | µg/L | 0.5 | 0 | 75 | 55 - 122% | PASS | 8 | 30 | PASS |
| 2,6-Dimethylnaphthalene | Total | 0.337 | 1 | 0.001 | 0.005 | µg/L | 0.5 | 0 | 67 | 48 - 120% | PASS | 11 | 30 | PASS |
| 2-Methylnaphthalene | Total | 0.93 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 62 | 47 - 130% | PASS | 23 | 30 | PASS |
| Acenaphthene | Total | 1.21 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 81 | 53 - 131% | PASS | 16 | 30 | PASS |
| Acenaphthylene | Total | 1.22 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 81 | 43 - 140% | PASS | 25 | 30 | PASS |
| Anthracene | Total | 1.24 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 83 | 58 - 135% | PASS | 1 | 30 | PASS |
| Benz[a]anthracene | Total | 1.05 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 70 | 55 - 145% | PASS | 6 | 30 | PASS |
| Benzo[a]pyrene | Total | 1.28 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 85 | 51 - 143% | PASS | 0 | 30 | PASS |
| Benzo[b]fluoranthene | Total | 1.32 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 88 | 46 - 165% | PASS | 6 | 30 | PASS |
| Benzo[e]pyrene | Total | 0.364 | 1 | 0.001 | 0.005 | µg/L | 0.5 | 0 | 73 | 42 - 152% | PASS | 3 | 30 | PASS |
| Benzo[g,h,i]perylene | Total | 1.37 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 91 | 63 - 133% | PASS | 1 | 30 | PASS |
| Benzo[k]fluoranthene | Total | 1.33 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 89 | 56 - 145% | PASS | 3 | 30 | PASS |
| Biphenyl | Total | 0.271 | 1 | 0.001 | 0.005 | µg/L | 0.5 | 0 | 54 | 56 - 119% | PASS | 5 | 30 | PASS |
| Chrysene | Total | 1.11 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 74 | 56 - 141% | PASS | 8 | 30 | PASS |
| Dibenz[a,h]anthracene | Total | 1.79 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 119 | 55 - 150% | PASS | 12 | 30 | PASS |
| Dibenzo[a,l]pyrene | Total | 0.293 | 1 | 0.001 | 0.005 | µg/L | 0.5 | 0 | 59 | 50 - 150% | PASS | 17 | 30 | PASS |

Polynuclear Aromatic Hydrocarbons

QUALITY CONTROL REPORT

| ANALYTE | FRACTION | RESULT | DF | MDL | RL | UNITS | SPIKE | SOURCE | ACCURACY | | PRECISION | | QA CODEc | |
|------------------------|----------|--------|----|-------|-------|-------|-------|--------|----------|-----------|-----------|--------|----------|------|
| | | | | | | | LEVEL | RESULT | % | LIMITS | % | LIMITS | | |
| Dibenzothiophene | Total | 0.388 | 1 | 0.001 | 0.005 | µg/L | 0.5 | 0 | 78 | 46 - 126% | PASS | 3 | 30 | PASS |
| Fluoranthene | Total | 1.43 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 95 | 60 - 146% | PASS | 4 | 30 | PASS |
| Fluorene | Total | 1.25 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 83 | 58 - 131% | PASS | 18 | 30 | PASS |
| Indeno[1,2,3-cd]pyrene | Total | 1.53 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 102 | 50 - 151% | PASS | 8 | 30 | PASS |
| Naphthalene | Total | 0.91 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 61 | 41 - 126% | PASS | 26 | 30 | PASS |
| Perylene | Total | 0.346 | 1 | 0.001 | 0.005 | µg/L | 0.5 | 0 | 69 | 48 - 141% | PASS | 15 | 30 | PASS |
| Phenanthrene | Total | 1.19 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 79 | 67 - 127% | PASS | 2 | 30 | PASS |
| Pyrene | Total | 1.39 | 1 | 0.001 | 0.005 | µg/L | 1.5 | 0 | 93 | 54 - 156% | PASS | 8 | 30 | PASS |

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PHYSIS

TENTATIVELY IDENTIFIED COMPOUNDS

ENVIRONMENTAL LABORATORIES, INC.

Innovative Solutions for Nature

Sample ID: Lab Blank B1_41042

| Retention Time | Area (% of total) | Concentration (ng/L) | Library/ID | Cas Number | Match Quality (%) |
|----------------|-------------------|----------------------|----------------------------------|------------|-------------------|
| 35.4715 | 3.0041 | 1111 | Anthracene-D10- | 1719-06-8 | 93 |
| 10.6456 | 2.1463 | 794 | Cyclohexane, nitro- | 1122-60-7 | 90 |
| 32.2400 | 0.8606 | 318 | Benzoic acid, 2-ethylhexyl ester | 5444-75-7 | 86 |
| 10.0226 | 0.3490 | 129 | Propane, 2,2-dimethoxy- | 77-76-9 | 82 |
| 10.0224 | 0.3121 | 115 | Borane, dimethoxy- | 4542-61-4 | 88 |

Concentration estimated using the response for Anthracene-d10

- 1
- 2
- 3
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- 15
- 16
- 17

Sample ID: 105219

| Retention Time | Area (% of total) | Concentration (ng/L) | Library/ID | Cas Number | Match Quality (%) |
|----------------|-------------------|----------------------|--------------------------------------|--------------|-------------------|
| 35.4711 | 4.2488 | 1111 | Anthracene-D10- | 1517-22-2 | 90 |
| 10.6441 | 3.7478 | 980 | Oxalic acid, cyclohexyl propyl ester | 1000309-30-3 | 91 |
| 32.2423 | 0.9864 | 258 | Benzoic acid, 2-ethylhexyl ester | 5444-75-7 | 91 |
| 22.5121 | 0.7472 | 195 | Phthalimide | 85-41-6 | 94 |
| 10.0186 | 0.5069 | 133 | RS-2,3-hexanediol | 82360-67-6 | 89 |
| 10.2807 | 0.4097 | 107 | Hydroperoxide, 1-ethylbutyl | 24254-56-6 | 80 |

Concentration estimated using the response for Anthracene-d10

PERFORMANCE CHAIN OF CUSTODY

TERRA ENVIRONMENTAL LABORATORIES, INC. AURA

Innovative Solutions for Nature

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Eurofins Eaton Analytical Pomona
 941 Corporate Center Drive
 Pomona, CA 91768-2642
 Phone: 626-386-1100

Chain of Custody Record



Environment Testing

| | | | | | | | | |
|--|------------------------------|--|--|--|--|--|-----------------------------------|-----------------------------------|
| Client Information (Sub Contract Lab) | | Sampler: | Lab P#: Arada, Rachelle | Carrier Tracking No(s): | COC No: 380-44256-1 | | | |
| Client Contact: | Phone: | E-Mail: Rachelle.Arada@et.eurofins.com | State of Origin: Hawaii | Page: Page 1 of 1 | | | | |
| Company: Physis Environmental Laboratories | Address: 1904 Wright Circle, | Due Date Requester: 5/3/2023 | Accreditations Required (See note): State - Hawaii | Job #: 380-44256-1 | Preservation Codes: | | | |
| City: Anaheim | State, Zip: CA, 92806 | TAT Requested (days): | | | A - HCl B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amnitor H - Acetic Acid I - Ice J - DI Water K - EDTA L - EDTA M - Hexane N - None O - AsNaO2 P - Na2CO3 Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Titrim Z - other (specify) | | | |
| Phone: | PO #: | WO #: | | | | | | |
| Project Name: RED-HILL | Project #: 38001111 | Site: SSCOW#: | | | | | | |
| Honolulu BWS Sites | | | | | | | | |
| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (Waters, Sealed, Drawback, Br/Thru, AAH) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | Total Number of containers | Special Instructions/Note: |
| HALAWA WELLS UNITS 1 (380-44256-1) | 4/18/23 | 10:15 | Water | Water | X | SUB (625 Acid/Base/PAH + TICs)/ 625 Acid/Base/PAH + TICs | 6 | See Attached Instructions |
| <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, 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 adding to said compliance to Eurofins Eaton Analytical, LLC.</p> | | | | | | | | |
| Possible Hazard Identification | | | | | | | | |
| Unconfirmed | | | | | | | | |
| 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) | | |
| | | | | | | <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months | | |
| Empty Kit Relinquished by: | | Date: | Time: | | Method of Shipment: | | | |
| Relinquished by: <i>[Signature]</i> | | Date/Time: 4/20/23 13:30 | Company: <i>[Signature]</i> | | Received by: <i>[Signature]</i> | | | |
| Relinquished by: | | Date/Time: | Company: | | Received by: | | | |
| Relinquished by: | | Date/Time: | Company: | | Received by: | | | |
| Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No | | Custody Seal No.: | | Cooler Temperature(s) °C and Other Remarks: | | | | |

Project Iteration ID: 1407003-395
 Client Name: Eurofins Eaton Analytical
 Project Name: RED-HILL Project # 38001111 Job # 380-44256-1
 COC Page Number: 2 of 2
 Bottle Label Color: NA

Sample Receipt Summary

Receiving Info

1. Initials Received By: [Signature]
2. Date Received: 4/20/23
3. Time Received: 1230
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)
 - 1 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): 3.1
 Used I/R Thermometer # 1-2

Inspection Info

1. Initials Inspected By: [Signature]

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:

Eurofins Drinking Water Testing Pomona

941 Corporate Center Drive
 Pomona, CA 91768-2642
 Phone: 626-386-1100

Chain of Custody Record

eurofins | Environment Testing

| | | | | | | | | | | | | | | | | | | | | |
|--|--|--|--|---|---|--|-------------------------|-------------------------|----------------------------|--|------------------------------|----------------------------------|--------------------------------|--|----------------------|-------------------------------------|-------------------------------------|--|---|------------------------------|
| Client Information | | Sampler: <i>Losli Coanini</i> | Lab PM: Arada, Rachelle | Carrier Tracking No(s): | COC No: 380-21928-1845.1 | | | | | | | | | | | | | | | |
| Client Contact: Dr. Ron Fenstermacher | | Phone: 808-748-5840 | E-Mail: Rachelle.Arada@et.eurofinsus.com | State of Origin: | Page: Page 1 of 4 | | | | | | | | | | | | | | | |
| Company: City & County of Honolulu | | PWSID: | Analysis Requested | | | | | | | | | | | | | | | | | |
| Address: 630 South Beretania Street Chemistry Lab | | Due Date Requested: | <table border="1"> <tr><td>Field Filtered Samples (Yes or No)</td></tr> <tr><td>504.1_PREC, 505_LL_PREC</td></tr> <tr><td>2320B, 2510B, SM4600_H+</td></tr> <tr><td>200.7, 200.8</td></tr> <tr><td>2540C_Calcd - Total Dissolved Solids (TDS)</td></tr> <tr><td>SM4600_S2_D - Sulfide, Total</td></tr> <tr><td>524.2_Prec_PREC, 524.2_Sulf_PREC</td></tr> <tr><td>525.2_PREC - 625plus Plus TICs</td></tr> <tr><td>300_OF_280_B, 300_OF_280_PREC, 300_OF_480_PREC, 4800_F_C</td></tr> <tr><td>245.1 - Local Method</td></tr> <tr><td>SUBCONTRACT - 8015 Jet Fuel 8 (JF8)</td></tr> <tr><td>SUBCONTRACT - 8015 Jet Fuel 5 (JF5)</td></tr> <tr><td>SUBCONTRACT - 8015 Diesel LL (EAL) and Motor Oil</td></tr> <tr><td>SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)</td></tr> </table> | | | Field Filtered Samples (Yes or No) | 504.1_PREC, 505_LL_PREC | 2320B, 2510B, SM4600_H+ | 200.7, 200.8 | 2540C_Calcd - Total Dissolved Solids (TDS) | SM4600_S2_D - Sulfide, Total | 524.2_Prec_PREC, 524.2_Sulf_PREC | 525.2_PREC - 625plus Plus TICs | 300_OF_280_B, 300_OF_280_PREC, 300_OF_480_PREC, 4800_F_C | 245.1 - Local Method | SUBCONTRACT - 8015 Jet Fuel 8 (JF8) | SUBCONTRACT - 8015 Jet Fuel 5 (JF5) | SUBCONTRACT - 8015 Diesel LL (EAL) and Motor Oil | SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL) | |
| Field Filtered Samples (Yes or No) | | | | | | | | | | | | | | | | | | | | |
| 504.1_PREC, 505_LL_PREC | | | | | | | | | | | | | | | | | | | | |
| 2320B, 2510B, SM4600_H+ | | | | | | | | | | | | | | | | | | | | |
| 200.7, 200.8 | | | | | | | | | | | | | | | | | | | | |
| 2540C_Calcd - Total Dissolved Solids (TDS) | | | | | | | | | | | | | | | | | | | | |
| SM4600_S2_D - Sulfide, Total | | | | | | | | | | | | | | | | | | | | |
| 524.2_Prec_PREC, 524.2_Sulf_PREC | | | | | | | | | | | | | | | | | | | | |
| 525.2_PREC - 625plus Plus TICs | | | | | | | | | | | | | | | | | | | | |
| 300_OF_280_B, 300_OF_280_PREC, 300_OF_480_PREC, 4800_F_C | | | | | | | | | | | | | | | | | | | | |
| 245.1 - Local Method | | | | | | | | | | | | | | | | | | | | |
| SUBCONTRACT - 8015 Jet Fuel 8 (JF8) | | | | | | | | | | | | | | | | | | | | |
| SUBCONTRACT - 8015 Jet Fuel 5 (JF5) | | | | | | | | | | | | | | | | | | | | |
| SUBCONTRACT - 8015 Diesel LL (EAL) and Motor Oil | | | | | | | | | | | | | | | | | | | | |
| SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL) | | | | | | | | | | | | | | | | | | | | |
| City: Honolulu | | TAT Requested (days): | | | | | | | | | | | | | | | | | | |
| State, Zip: HI, 96843 | | Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No | | | | | | | | | | | | | | | | | | |
| Phone: 808-748-5091(Tel) | | PO #: C20525101 exp 05312023 | | | | | | | | | | | | | | | | | | |
| Email: RFENSTEMACHER@hbws.org | | WO #: | | | | | | | | | | | | | | | | | | |
| Project Name: RED-HILL | | Project #: 38001111 | Preservation Codes: 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 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 - Tizma Z - other (specify) | | | | | | | | | | | | | | | | | |
| Site: Hawaii | | SSOW#: | | | | | | | | | | | | | | | | | | |
| Sample Identification | | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Trace, A=Air) | Total Number of Containers | | | Special Instructions/Note: | | | | | | | | | | | |
| | | | | | | R | N | D | N | CB | HA | N | D | RA | RA | RA | R | | | |
| [REDACTED] | | | | | Water | | | | | | | | | | | | | | | #1- 7718 9128 5610 / 3.8-3.6 |
| [REDACTED] | | | | | Water | | | | | | | | | | | | | | | #2- 4945 / 5.6-5.9 |
| [REDACTED] | | | | | Water | | | | | | | | | | | | | | | #3- 5140 / 4.1-3.9 |
| HALAWA WELLS UNITS 1 & 2 U _n + 1 | | 4/18/2023 | 1015 | G | Water | | 6 | 1 | 1 | 1 | 6 | 3 | 2 | 1 | 2 | 2 | 2 | 3 | | #4- 5231 / 5.8-5.6 |
| [REDACTED] | | | | | Water | | | | | | | | | | | | | | | #5- 6000 / 5.1-4.9 |
| [REDACTED] | | | | | Water | | | | | | | | | | | | | | | #6- 6076 / 5.0-4.8 |
| [REDACTED] | | | | | Water | | | | | | | | | | | | | | | #7- 5871 / 2.4-2.2 |
| [REDACTED] | | | | | Water | | | | | | | | | | | | | | | #8- 6477 / 4.1-3.9 |
| [REDACTED] | | | | | Water | | | | | | | | | | | | | | | Temp blank: 0.5°C |
| TB: HALAWA WELLS UNITS 4 & 2 U _n + 1 | | 4/18/2023 | 1015 | G | Water | | | | | | 6 | | | | | | | | | |
| 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: FED EX 8 COOLERS | | | | | | | | | | | | | | | | |
| Relinquished by: [REDACTED] | | Date/Time: 4/18/2023 1300 | Company: BWS | Received by: G. RETNER | | | | | | | | | | | | | | | | |
| Relinquished by: [REDACTED] | | Date/Time: | Company: | Date/Time: 04/19/2023 10:15 | | | | | | | | | | | | | | | | |
| Relinquished by: [REDACTED] | | Date/Time: | Company: | Date/Time: | | | | | | | | | | | | | | | | |
| Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No | | Custody Seal No.: | | Cooler Temperature(s) °C and Other Remarks: (751A) GEL-FROZEN | | | | | | | | | | | | | | | | |



380-44256 COC

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Eurofins Drinking Water Testing Pomona

941 Corporate Center Drive
Pomona, CA 91768-2642
Phone: 626-386-1100

Chain of Custody Record



| | | | | | | | | | | | | | | | |
|--|--|--|--|---|--|--|--|--|--|-----------------------------------|--|-----------------------------------|--|---|--|
| Client Information | | Sampler: <i>Lesli. Carneri</i> | | Lab PM: Arada, Rachelle | | Carrier Tracking No(s): | | COC No: 380-21928-1845.2 | | | | | | | |
| Client Contact: Dr. Ron Fenstermacher | | Phone: <i>808-748-5840</i> | | E-Mail: <i>Rachelle.Arada@et.eurofinsus.com</i> | | State of Origin: | | Page 2 of 4 | | | | | | | |
| Company: City & County of Honolulu | | PWSID: | | Analysis Requested | | | | | | Job #: | | | | | |
| Address: 630 South Beretania Street Chemistry Lab | | Due Date Requested: | | Field Filtered Sample (Yes or No) [X] SUBCONTRACT - 8015 Ethanol SUBCONTRACT - 626 PAH Physals LL (EAL) + TICs SUBCONTRACT - 625 Base Neutral LL (EAL) Physals SUBCONTRACT - 625 Acid LL (EAL) Physals 624.3_SIM_PREC - Low Level TC/PE/DB/BCP SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL) 604.1_PREC - Local Method | | | | | | Preservation Codes: | | | | | |
| City: Honolulu | | TAT Requested (days): | | | | | | | | M - Hexane | | N - None | | | |
| State, Zip: HI, 96843 | | Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No | | | | | | | | O - AsNaO2 | | P - Na2O4S | | | |
| Phone: 808-748-5091(Tel) | | PO #: C20525101 exp 05312023 | | | | | | | | Q - Na2SO3 | | R - Na2S2O3 | | | |
| Email: RFENSTEMACHER@hbws.org | | WO #: | | | | | | | | S - H2SO4 | | T - TSP Dodecahydrate | | | |
| Project Name: RED-HILL | | Project #: 38001111 | | U - Acetone | | V - MCAA | | W - pH4-5 | | | | | | | |
| Site: Hawaii | | SSOW#: | | Y - Trizma | | Z - other (specify) | | Other: | | | | | | | |
| Sample Identification | | Sample Date | | Sample Time | | Sample Type (C=Comp, G=grab) | | Matrix (W=water, G=solid, O=waste/oil, AT=Tissue, AA=Air) | | Total Number of Containers | | Special Instructions/Note: | | | |
| | | | | | | | | | | X | | R R R R RA R | | | |
| | | | | | | | | | | | | Water | | Raining during sampling | |
| | | | | | | | | | | | | Water | | | |
| | | | | | | | | | | | | Water | | | |
| HALAWA WELLS UNITS 1 & 2 Unit 1 | | 4/18/2023 | | 1015 | | G | | Water | | | | 3 2 2 2 3 | | one out of 524.3 was broken, leaving 2 for sampling | |
| | | | | | | | | Water | | | | | | | |
| | | | | | | | | Water | | | | | | | |
| | | | | | | | | Water | | | | | | | |
| | | | | | | | | Water | | | | | | | |
| | | | | | | | | Water | | | | | | Temp blank : 0.5°C | |
| TB: HALAWA WELLS UNITS 1 & 2 Unit 1 | | 4/18/2023 | | 1015 | | G | | Water | | | | 2 2 3 | | | |
| 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: <i>[Signature]</i> | | | | Date/Time: 4/18/2023 1300 | | Company: BWS | | Received by: <i>[Signature]</i> GRETNER | | Date/Time: 04/19/2023 10:15 | | Company: EEA | | | |
| Relinquished by: | | | | Date/Time: | | Company: | | Received by: | | Date/Time: | | Company: | | | |
| Relinquished by: | | | | Date/Time: | | Company: | | Received by: | | Date/Time: | | Company: | | | |
| Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No | | Custody Seal No.: | | Cooler Temperature(s) °C and Other Remarks: (751A) GEL-FROZEN | | | | | | | | | | | |

Ver: 06/08/2021

Eurofins Drinking Water Testing Pomona

941 Corporate Center Drive
Pomona, CA 91768-2642
Phone: 626-386-1100

Chain of Custody Record



Environment Testing

| Client Information | | | | Lab PM: | | Carrier Tracking No(s): | | COC No: | | | | | | | | | | | |
|--|--|-------------------|----------------|--|--|---|---|--|---------------------|----|----|---|---|---|----|----|----|---|---|
| Client Contact: Dr. Ron Fenstermacher | | | | Arada, Rachele | | | | 380-21928-1845.1 | | | | | | | | | | | |
| Company: City & County of Honolulu | | | | E-Mail: Rachele.Arada@et.eurofinsus.com | | State of Origin: | | Page: Page 1 of 4 | | | | | | | | | | | |
| Address: 630 South Beretania Street Chemistry Lab | | | | Due Date Requested: | | Analysis Requested | | Job #: | | | | | | | | | | | |
| City: Honolulu | | | | TAT Requested (days): | | Analysis Requested Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) 504.1_PREC_505_LL_PREC 2320B_2510B_SM4500_H+ 200.7_200.8 2540C_Calcd - Total Dissolved Solids (TDS) SM4500_S2_D - Sulfide, Total 524.2_Pres_PREC, 524.2_SIM_PREC 525.2_PREC - 525plus Plus TICs 300_OF_28D_B_300_OF_28D_PREC, 300_OF_48H_PREC, 4500_F_C 245.1 - Local Method SUBCONTRACT - 8015 Jet Fuel 8 (JP8) SUBCONTRACT - 8015 Jet Fuel 5 (JP5) SUBCONTRACT - 8015 Diesel LL (EAL) and Motor Oil SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL) | | Preservation Codes: | | | | | | | | | | | |
| State, Zip: HI, 96843 | | | | Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No | | | | M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify) | | | | | | | | | | | |
| Phone: 808-748-5091(Tel) | | | | PO #: C20525101 exp 05312023 | | | | Other: | | | | | | | | | | | |
| Email: RFENSTEMACHER@hbws.org | | | | WO #: | | | | | | | | | | | | | | | |
| Project Name: RED-HILL | | | | Project #: 38001111 | | Special Instructions/Note: | | | | | | | | | | | | | |
| Site: Hawaii | | | | SSOW#: | | | | | | | | | | | | | | | |
| Sample Identification | | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | R | N | D | N | CB | HA | | N | D | RA | RA | RA | R | |
| | | | | Preservation Code: | | | | | | | | | | | | | | | |
| [REDACTED] | | | | | Water | | | | | | | | | | | | | | |
| [REDACTED] | | | | | Water | | | | | | | | | | | | | | |
| [REDACTED] LC Y-18-23 | | 4/18/2023 | | G | Water | | | 6 | 1 | | 1 | 1 | 6 | 3 | 2 | 1 | 2 | 2 | 3 |
| HALAWA WELLS UNITS 1 & 2 Un: & 1 | | 4/18/2023 | | G | Water | | | | | | | | | | | | | | |
| [REDACTED] | | | | | Water | | | | | | | | | | | | | | |
| [REDACTED] | | | | | Water | | | | | | | | | | | | | | |
| [REDACTED] | | | | | Water | | | | | | | | | | | | | | |
| [REDACTED] | | | | | Water | | | | | | | | | | | | | | |
| [REDACTED] | | | | | Water | | | | | | | | | | | | | | |
| [REDACTED] | | | | | Water | | | | | | | | | | | | | | |
| [REDACTED] LC Y-18-23 | | 4/18/2023 | | G | Water | | | | | | | | 6 | | | | | | |
| TB: HALAWA WELLS UNITS 1 & 2 Un: & 1 | | 4/18/2023 | | G | 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 | | | | | | | | | | | | | |
| 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: | | | Company: | | | Received by: | | | | | | | | | | |
| | | | 4/18/2023 1300 | | | BWS | | | | | | | | | | | | | |
| Relinquished by: | | | Date/Time: | | | Company: | | | Received by: | | | | | | | | | | |
| Relinquished by: | | | Date/Time: | | | Company: | | | Received by: | | | | | | | | | | |
| Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No | | Custody Seal No.: | | Cooler Temperature(s) °C and Other Remarks: | | | | | | | | | | | | | | | |

Eurofins Drinking Water Testing Pomona

941 Corporate Center Drive
 Pomona, CA 91768-2642
 Phone: 626-386-1100

Chain of Custody Record



| | | | | | | | | | | | | | | | | | |
|--|--|--|-------------|--|--|--|-------------------------------------|----------------------------|--|--|--|---|---|---------------------------|----------------------------|-----------------------------------|--|
| Client Information | | Sampler: <i>Lesli Carroll</i> | | Lab PM: Arada, Rachele | | Carrier Tracking No(s): | | COC No: 380-21928-1845.2 | | | | | | | | | |
| Client Contact: Dr. Ron Fenstemacher | | Phone: <i>808-748-5840</i> | | E-Mail: Rachele.Arada@et.eurofinsus.com | | State of Origin: | | Page: Page 2 of 4 | | | | | | | | | |
| Company: City & County of Honolulu | | PWSID: | | Analysis Requested | | | | | | Job #: | | | | | | | |
| Address: 630 South Beretania Street Chemistry Lab | | Due Date Requested: | | | | | | | | Preservation Codes: | | | | | | | |
| City: Honolulu | | TAT Requested (days): | | Field Filtered Sample (Yes or No) <input type="checkbox"/> Perform MS/MSD (Yes or No) <input type="checkbox"/> SUBCONTRACT - 8015 Ethanol SUBCONTRACT - 825 PAH Physis LL (EAL) + TICs SUBCONTRACT - 825 Base Neutral LL (EAL) Physis SUBCONTRACT - 825 Acid LL (EAL) Physis 824.3_SIM_PREC - Low Level TC/PE/DB/BCP SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL) 804.1_PREC - Local Method | | M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify) | | | | | | | | | | | |
| State, Zip: HI, 96843 | | Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No | | | | | | | | | | | | | | | |
| Phone: 808-748-5091(Tel) | | PO #: C20525101 exp 05312023 | | | | | | | | | | | | | | | |
| Email: RFENSTEMACHER@hbws.org | | WO #: | | | | | | | | | | | | | | | |
| Project Name: RED-HILL | | Project #: 38001111 | | Total Number of containers | | Other: | | | | | | | | | | | |
| Site: Hawaii | | SSOW#: | | | | | | | | | | | | | | | |
| Sample Identification | | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=wastefoil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | SUBCONTRACT - 8015 Ethanol | SUBCONTRACT - 825 PAH Physis LL (EAL) + TICs | SUBCONTRACT - 825 Base Neutral LL (EAL) Physis | SUBCONTRACT - 825 Acid LL (EAL) Physis | 824.3_SIM_PREC - Low Level TC/PE/DB/BCP | SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL) | 804.1_PREC - Local Method | Total Number of containers | Special Instructions/Note: | |
| | | | | | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | R | R | R | R | RA | R | | | | |
| | | | | | Water | | | | | | | | | | | | |
| | | | | | Water | | | | | | | | | | | | |
| | | | | | Water | | | | | | | | | | | | |
| HALAWA WELLS UNITS 1&2 Unit 1 | | 4/18/2023 | | G | Water | | | | 3 | 2 | 2 | 2 | 3 | | | | |
| | | | | | Water | | | | | | | | | | | | |
| | | | | | Water | | | | | | | | | | | | |
| | | | | | Water | | | | | | | | | | | | |
| | | | | | Water | | | | | | | | | | | | |
| | | | | | Water | | | | | | | | | | | | |
| | | | | | Water | | | | | | | | | | | | |
| TB: HALAWA WELLS UNITS 1&2 Unit 1 | | 4/18/2023 | | G | Water | | | | | | | 2 | 2 | 3 | | | |
| 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: <i>4/18/2023 1300</i> | | Company: <i>BWS</i> | | Received by: | | Date/Time: | | Company: | | | | | | | |
| Relinquished by: | | Date/Time: | | Company: | | Received by: | | Date/Time: | | Company: | | | | | | | |
| Relinquished by: | | Date/Time: | | Company: | | Received by: | | Date/Time: | | Company: | | | | | | | |
| 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: 12/14/2022
 Date Order Posted: 6/23/2022 7:29:27AM
 Order Status: Ready To Process
 Prepared By: Davis Haley
Deliver By Date: 3/1/2023 11:59:00PM
 Lab Project Number: 38001111
 PWSID: HI00000331

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 505_LL_PREC - (MOD) ML505 +505-EAL Aldrin Dieldrin Tox | Water Water | Normal Normal | | |
| 7 | 1 | 7 | Plastic 250ml - unpreserved | None | 2320B - (MOD) Total Alkalinity SM4500_H+ - Local Method 2510B - Conductivity | Water Water Water | Normal Normal Normal | | |
| 7 | 1 | 7 | Plastic 500ml - with Nitric Acid | Nitric Acid | 200.8 - Metals, Priority Pollutant by 200.8 200.7 - (MOD) Custom | Water Water | Normal 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 524.2_SIM_PREC - TBA by 524.2 SIM | Water Water | Normal 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 4500_F_C - Fluoride 300_OF_28D_PREC - Chloride and Sulfate 300_OF_48H_PREC - Nitrite, Nitrate, and Nitrite+Nitrate | Water Water Water Water | Normal Normal Normal 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 | 12/15 OF 3 APPROVED BY NEW - CF |
| 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.

Eurofins Eaton Analytical Pomona

941 Corporate Center Drive
 Pomona, CA 91768-2642
 Phone: 626-386-1100

Chain of Custody Record



| | | | | | | | | | | | |
|---|--|------------------------------------|--|---|--|--|--|--|--|---|--|
| Client Information (Sub Contract Lab) | | | | Sampler: | | Lab PM: Arada, Rachele | | Carrier Tracking No(s): | | COC No: 380-49201.1 | |
| Client Contact: Shipping/Receiving | | | | Phone: | | E-Mail: Rachele.Arada@et.eurofinsus.com | | State of Origin: Hawaii | | Page: Page 1 of 1 | |
| Company: Eurofins Eaton Analytical | | | | Accreditations Required (See note): State - Hawaii | | | | Job #: 380-44256-1 | | | |
| Address: 110 S Hill Street, | | Due Date Requested: 5/9/2023 | | Analysis 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) | |
| City: South Bend | | TAT Requested (days): | | | | | | | | | |
| State, Zip: IN, 46617 | | PO #: | | Field Filtered Sample (Yes or No) | | Perform MS/MSD (Yes or No) | | Total Number of containers | | Special Instructions/Note: | |
| Phone: 574-233-4777(Tel) 574-233-8207(Fax) | | WO #: | | 245.1/245.1_Prep Mercury by 245.1 | | 505_PREC/505_Prep Phase II & V | | 525.2_LL_PREC/525.2_Prep (MOD) CA Pest | | | |
| Email: | | Project #: 38001111 | | Sample Type (C=comp, G=grab) | | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | | Preservation Code: | | | |
| Project Name: RED-HILL | | Site: Honolulu BWS Sites | | Sample Date | | Sample Time | | | | | |
| Sample Identification - Client ID (Lab ID) | | Sample Date | | Sample Time | | Sample Type | | Matrix | | Special Instructions/Note: | |
| HALAWA WELLS UNITS 1 (380-44256-1) | | 4/18/23 | | 10:15 Hawaiian | | Water | | | | 2 ✓ | |
| Client Provided Sample Container | | | | | | | | | | | |
| <p><i>Only received 525 bottles SS42223</i></p> <p><i>Notified Rachele Arada via NCM email SS42223</i></p> <p style="text-align: right;"><i>Initial Temp: 1.6</i> <i>Corrected Temp: 1.6</i> <i>IR Sun # 21</i> <i>wet</i></p> | | | | | | | | | | | |
| <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/tests/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 | | | | | | Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) | | | | | |
| Unconfirmed | | | | | | <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) | | | | Primary Deliverable Rank: 2 | | Special Instructions/QC Requirements: | | | | | |
| Empty Kit Relinquished by: | | | | Date: | | Time: | | Method of Shipment: | | | |
| Relinquished by: <i>G. REITNER</i> | | Date/Time: <i>04/21/2023 10:25</i> | | Company: <i>EEA</i> | | Received by: <i>[Signature]</i> | | Date/Time: <i>4-22-23 0845</i> | | Company: <i>EEA</i> | |
| Relinquished by: | | Date/Time: | | Company: | | Received by: | | Date/Time: | | Company: | |
| Relinquished by: | | Date/Time: | | Company: | | Received by: | | Date/Time: | | Company: | |
| Custody Seals Intact: Δ Yes Δ No | | Custody Seal No.: | | Cooler Temperature(s) °C and Other Remarks: | | | | | | | |

Chain of Custody Record



| | | | | | | | | | |
|--|--|--|--|--|--|--|--|---|--|
| Client Information (Sub Contract Lab) | | Sampler: | | Lab PM: | | Carrier Tracking No(s): | | COC No: | |
| Client Contact: Shipping/Receiving | | Phone: | | Arada, Rachelle | | Hawaii | | 380-49044.1 | |
| Company: Eurofins Eaton Analytical | | E-Mail: Rachelle.Arada@eurofins.com | | State of Origin: Hawaii | | Job #: | | Page: Page 1 of 1 | |
| Address: 110 S Hill Street, City: South Bend State, Zip: IN, 46617 Phone: 574-233-4777(Tel) 574-233-8207(Fax) Email: | | Due Date Requested: 5/9/2023 TAT Requested (days): | | Accreditations Required (See note): State - Hawaii | | Preservation Codes: 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 - EDTA Other: | | Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecalhydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify) | |
| Project Name: RED-HILL Site: Honolulu BWS Sites | | PO #: WO #: | | Perform RM/MSD (Yes or No) | | Field Filtered Sample (Yes or No) | | Total Number of Containers | |
| Project #: 38001111 SSOH#: | | Sample Date: 4/18/23 | | 505_PREC/505_Prep Phase II & V 245.1/245.1_Prep Mercury by 245.1 PCB/Toxaphene/Chlordane | | X X | | 4 | |
| Sample Identification - Client ID (Lab ID) | | Sample Time: 10:15 Hawaiian | | Sample Type (C=Comp, G=grab) | | Matrix (Hexane, Benzene, Dioxin/PCB) | | Special Instructions/Note: | |
| HALAWA WELLS UNITS 1 (380-44256-1) | | Preservation Code: Water | | X X | | 5.0 30 wet | | | |

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/tees/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.

Possible Hazard Identification
Unconfirmed
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

| | | |
|-------------------------------------|-------------------|---|
| Empty Kit Relinquished by: | Date: | Method of Shipment: |
| Relinquished by: <i>S. McCoy</i> | 4/20/23 8:08 | |
| Relinquished by: | Date/Time: | Received by: <i>Morgan Thompson</i> |
| Relinquished by: | Date/Time: | Received by: |
| Custody Seals Intact: A Yes A No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: <i>Freight delay</i> |



Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-44256-1

Login Number: 44256
List Number: 1
Creator: Ngo, Theodore

List Source: Eurofins Eaton Analytical Pomona

| 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. | False | Containers recd broken. Sufficient sample in remaining containers for analysis. |
| 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: 380-44256-1

Login Number: 44256
List Number: 2
Creator: Spurgeon, Sheri

List Source: Eurofins Eaton Analytical South Bend
List Creation: 04/22/23 10:46 AM

| 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. | False | Refer to Job Narrative for details. |
| 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 | False | Client provided containers |

