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ANALYTICAL REPORT

PREPARED FOR

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JOB DESCRIPTION

RED-HILL

JOB NUMBER

380-54001-1

Eurofins Eaton Analytical Pomona

Job Notes

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The test results in this report relate only to the samples as received by the laboratory and 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: 380-54001-1

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

GC/MS Semi VOA TICs

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

GC Semi VOA

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

HPLC/IC

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

Metals

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

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.
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.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)

Eurofins Eaton Analytical Pomona

Definitions/Glossary

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

Job ID: 380-54001-1

Glossary (Continued)

Abbreviation **These commonly used abbreviations may or may not be present in this report.**

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

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Case Narrative

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

Job ID: 380-54001-1

Job ID: 380-54001-1

Laboratory: Eurofins Eaton Analytical Pomona

Narrative

Job Narrative 380-54001-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method. Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 7/11/2023 9:30 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 3.1°C, 3.8°C and 3.9°C

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. The subcontract report is appended in its entirety.

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. The subcontract report is appended in its entirety.

GC/MS VOA

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

GC/MS Semi VOA

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

GC Semi VOA

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

HPLC/IC

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 380-47418 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.

General Chemistry

Method 2320B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 380-47205 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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

Detection Summary

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

Job ID: 380-54001-1

Client Sample ID: AIEA WELLS P2 (260)

Lab Sample ID: 380-54001-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Dieldrin	0.011		0.010	ug/L	1		505	Total/NA
Bromide	330		5.0	ug/L	1		300.0	Total/NA
Chloride	95		2.5	mg/L	5		300.0	Total/NA
Nitrate as N	0.83		0.25	mg/L	5		300.0	Total/NA
Sulfate	15		1.3	mg/L	5		300.0	Total/NA
Calcium	20		1.0	mg/L	1		200.7 Rev 4.4	Total/NA
Magnesium	18		0.10	mg/L	1		200.7 Rev 4.4	Total/NA
Potassium	2.3		1.0	mg/L	1		200.7 Rev 4.4	Total/NA
Sodium	40		1.0	mg/L	1		200.7 Rev 4.4	Total/NA
Chromium	2.0		1.0	ug/L	1		200.8	Total Recoverable
A kalinity	59		2.0	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	59		2.0	mg/L	1		SM 2320B	Total/NA
Specific Conductance	460		2.0	umhos/cm	1		SM 2510B	Total/NA
Total Dissolved Solids	280		20	mg/L	1		SM 2540C	Total/NA
pH	8.0	HF		SU	1		SM 4500 H+ B	Total/NA
Benzoic Acid	0.236		0.2	0.1 ug/L	1		625 Acid/Base/PAH + TICs	Total/NA

Client Sample ID: TB: AIEA WELLS P2 (260)

Lab Sample ID: 380-54001-2

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: 380-54001-1

Client Sample ID: AIEA WELLS P2 (260)

Lab Sample ID: 380-54001-1

Date Collected: 07/10/23 09:30

Matrix: Water

Date Received: 07/11/23 09:30

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)	<2.0		2.0	ug/L			07/11/23 20:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		70 - 130		07/11/23 20:04	1
4-Bromofluorobenzene (Surr)	88		70 - 130		07/11/23 20:04	1
1,2-Dichloroethane-d4 (Surr)	108		70 - 130		07/11/23 20:04	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	<0.50		0.50	ug/L			07/15/23 06:44	1
1,1,1-Trichloroethane	<0.50		0.50	ug/L			07/15/23 06:44	1
1,1,2,2-Tetrachloroethane	<0.50		0.50	ug/L			07/15/23 06:44	1
1,1,2-Trichloroethane	<0.50		0.50	ug/L			07/15/23 06:44	1
1,1-Dichloroethylene	<0.50		0.50	ug/L			07/15/23 06:44	1
1,1-Dichloroethane	<0.50		0.50	ug/L			07/15/23 06:44	1
1,1-Dichloropropene	<0.50		0.50	ug/L			07/15/23 06:44	1
1,2,3-Trichlorobenzene	<0.50		0.50	ug/L			07/15/23 06:44	1
1,2,3-Trichloropropane	<0.50		0.50	ug/L			07/15/23 06:44	1
1,2,4-Trichlorobenzene	<0.50		0.50	ug/L			07/15/23 06:44	1
1,2,4-Trimethy benzene	<0.50		0.50	ug/L			07/15/23 06:44	1
1,2-Dichloroethane	<0.50		0.50	ug/L			07/15/23 06:44	1
1,2-Dichloropropane	<0.50		0.50	ug/L			07/15/23 06:44	1
1,3,5-Trimethy benzene	<0.50		0.50	ug/L			07/15/23 06:44	1
1,3-Dichloropropane	<0.50		0.50	ug/L			07/15/23 06:44	1
1,3-Dichloropropene, Total	<0.50		0.50	ug/L			07/15/23 06:44	1
2,2-Dichloropropane	<0.50		0.50	ug/L			07/15/23 06:44	1
2-Butanone (MEK)	<5.0		5.0	ug/L			07/15/23 06:44	1
4-Methyl-2-pentanone (MIBK)	<5.0		5.0	ug/L			07/15/23 06:44	1
Acetone	<500		500	ug/L			07/15/23 06:44	1
Benzene	<0.50		0.50	ug/L			07/15/23 06:44	1
Bromobenzene	<0.50		0.50	ug/L			07/15/23 06:44	1
Bromochloromethane	<0.50		0.50	ug/L			07/15/23 06:44	1
Bromodichloromethane	<0.50		0.50	ug/L			07/15/23 06:44	1
Bromoethane	<0.50		0.50	ug/L			07/15/23 06:44	1
Bromoform	<0.50		0.50	ug/L			07/15/23 06:44	1
Bromomethane (Methyl Bromide)	<0.50		0.50	ug/L			07/15/23 06:44	1
Carbon disulfide	<0.50		0.50	ug/L			07/15/23 06:44	1
Carbon tetrachloride	<0.50		0.50	ug/L			07/15/23 06:44	1
Chlorobenzene	<0.50		0.50	ug/L			07/15/23 06:44	1
Chlorodibromomethane	<0.50		0.50	ug/L			07/15/23 06:44	1
Chloroethane	<0.50		0.50	ug/L			07/15/23 06:44	1
Chloroform (Trichloromethane)	<0.50		0.50	ug/L			07/15/23 06:44	1
Chloromethane (methyl chloride)	<0.50		0.50	ug/L			07/15/23 06:44	1
cis-1,2-Dichloroethylene	<0.50		0.50	ug/L			07/15/23 06:44	1
cis-1,3-Dichloropropene	<0.50		0.50	ug/L			07/15/23 06:44	1
Dibromomethane	<0.50		0.50	ug/L			07/15/23 06:44	1
Dichlorodifluoromethane	<0.50	*+	0.50	ug/L			07/15/23 06:44	1
Dichloromethane	<0.50		0.50	ug/L			07/15/23 06:44	1
Diisopropyl ether	<3.0		3.0	ug/L			07/15/23 06:44	1
Ethylbenzene	<0.50		0.50	ug/L			07/15/23 06:44	1

Client Sample Results

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

Job ID: 380-54001-1

Client Sample ID: AIEA WELLS P2 (260)

Lab Sample ID: 380-54001-1

Date Collected: 07/10/23 09:30

Matrix: Water

Date Received: 07/11/23 09:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobutadiene	<0.50		0.50	ug/L			07/15/23 06:44	1
Isopropyl benzene	<0.50		0.50	ug/L			07/15/23 06:44	1
m,p-Xylenes	<0.50		0.50	ug/L			07/15/23 06:44	1
m-Dichlorobenzene (1,3-DCB)	<0.50		0.50	ug/L			07/15/23 06:44	1
Methyl-tert-butyl Ether (MTBE)	<0.50		0.50	ug/L			07/15/23 06:44	1
Naphthalene	<0.50		0.50	ug/L			07/15/23 06:44	1
n-Butylbenzene	<0.50		0.50	ug/L			07/15/23 06:44	1
N-Propylbenzene	<0.50		0.50	ug/L			07/15/23 06:44	1
o-Chlorotoluene	<0.50		0.50	ug/L			07/15/23 06:44	1
o-Dichlorobenzene (1,2-DCB)	<0.50		0.50	ug/L			07/15/23 06:44	1
o-Xylene	<0.50		0.50	ug/L			07/15/23 06:44	1
p-Chlorotoluene	<0.50		0.50	ug/L			07/15/23 06:44	1
p-Dichlorobenzene (1,4-DCB)	<0.50		0.50	ug/L			07/15/23 06:44	1
p-Isopropyltoluene	<0.50		0.50	ug/L			07/15/23 06:44	1
sec-Butylbenzene	<0.50		0.50	ug/L			07/15/23 06:44	1
Styrene	<0.50		0.50	ug/L			07/15/23 06:44	1
Tert-amyl methyl ether	<3.0		3.0	ug/L			07/15/23 06:44	1
Tert-butyl ethyl ether	<3.0		3.0	ug/L			07/15/23 06:44	1
tert-Butylbenzene	<0.50		0.50	ug/L			07/15/23 06:44	1
Tetrachloroethene (PCE)	<0.50		0.50	ug/L			07/15/23 06:44	1
Toluene	<0.50		0.50	ug/L			07/15/23 06:44	1
trans-1,2-Dichloroethylene	<0.50		0.50	ug/L			07/15/23 06:44	1
trans-1,3-Dichloropropene	<0.50		0.50	ug/L			07/15/23 06:44	1
Trichloroethylene (TCE)	<0.50		0.50	ug/L			07/15/23 06:44	1
Trichlorofluoromethane (Freon 11)	<0.50		0.50	ug/L			07/15/23 06:44	1
Trichlorotrifluoroethane	<0.50	*+	0.50	ug/L			07/15/23 06:44	1
Vinyl Chloride (VC)	<0.30	^3+	0.30	ug/L			07/15/23 06:44	1
Xylenes, Total	<0.50		0.50	ug/L			07/15/23 06:44	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Heptane, 2,2,4,6,6-pentamethyl-	1.1	T J N	ug/L		11.31	13475-82-6		07/15/23 06:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		70 - 130		07/15/23 06:44	1
4-Bromofluorobenzene (Surr)	110		70 - 130		07/15/23 06:44	1
Toluene-d8 (Surr)	93		70 - 130		07/15/23 06:44	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	<0.098		0.098	ug/L		07/12/23 09:00	07/13/23 14:46	1
2,4'-DDE	<0.098		0.098	ug/L		07/12/23 09:00	07/13/23 14:46	1
2,4'-DDT	<0.098		0.098	ug/L		07/12/23 09:00	07/13/23 14:46	1
2,4-Dinitrotoluene	<0.098		0.098	ug/L		07/12/23 09:00	07/13/23 14:46	1
2,6-Dinitrotoluene	<0.098		0.098	ug/L		07/12/23 09:00	07/13/23 14:46	1
4,4'-DDD	<0.098		0.098	ug/L		07/12/23 09:00	07/13/23 14:46	1
4,4'-DDE	<0.098		0.098	ug/L		07/12/23 09:00	07/13/23 14:46	1
4,4'-DDT	<0.098		0.098	ug/L		07/12/23 09:00	07/13/23 14:46	1
Acenaphthene	<0.098		0.098	ug/L		07/12/23 09:00	07/13/23 14:46	1
Acenaphthylene	<0.098		0.098	ug/L		07/12/23 09:00	07/13/23 14:46	1
Acetochlor	<0.098		0.098	ug/L		07/12/23 09:00	07/13/23 14:46	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-54001-1

Client Sample ID: AIEA WELLS P2 (260)

Lab Sample ID: 380-54001-1

Date Collected: 07/10/23 09:30

Matrix: Water

Date Received: 07/11/23 09:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alachlor	<0.049		0.049	ug/L		07/12/23 09:00	07/13/23 14:46	1
alpha-BHC	<0.098		0.098	ug/L		07/12/23 09:00	07/13/23 14:46	1
alpha-Chlordane	<0.049		0.049	ug/L		07/12/23 09:00	07/13/23 14:46	1
Anthracene	<0.020		0.020	ug/L		07/12/23 09:00	07/13/23 14:46	1
Atrazine	<0.049		0.049	ug/L		07/12/23 09:00	07/13/23 14:46	1
Benz(a)anthracene	<0.049		0.049	ug/L		07/12/23 09:00	07/13/23 14:46	1
Benzo[a]pyrene	<0.020		0.020	ug/L		07/12/23 09:00	07/13/23 14:46	1
Benzo[b]fluoranthene	<0.020		0.020	ug/L		07/12/23 09:00	07/13/23 14:46	1
Benzo[g,h,i]perylene	<0.049		0.049	ug/L		07/12/23 09:00	07/13/23 14:46	1
Benzo[k]fluoranthene	<0.020		0.020	ug/L		07/12/23 09:00	07/13/23 14:46	1
beta-BHC	<0.098		0.098	ug/L		07/12/23 09:00	07/13/23 14:46	1
Bis(2-ethylhexyl) phthalate	<0.59		0.59	ug/L		07/12/23 09:00	07/13/23 14:46	1
Bromacil	<0.098	^3+	0.098	ug/L		07/12/23 09:00	07/13/23 14:46	1
Butachlor	<0.049		0.049	ug/L		07/12/23 09:00	07/13/23 14:46	1
Butylbenzylphthalate	<0.49		0.49	ug/L		07/12/23 09:00	07/13/23 14:46	1
Chlorobenzilate	<0.098	^3+ **	0.098	ug/L		07/12/23 09:00	07/13/23 14:46	1
Chloroneb	<0.098		0.098	ug/L		07/12/23 09:00	07/13/23 14:46	1
Chlorothalonil (Draconil, Bravo)	<0.098		0.098	ug/L		07/12/23 09:00	07/13/23 14:46	1
Chlorpyrifos	<0.049		0.049	ug/L		07/12/23 09:00	07/13/23 14:46	1
Chrysene	<0.020		0.020	ug/L		07/12/23 09:00	07/13/23 14:46	1
delta-BHC	<0.098		0.098	ug/L		07/12/23 09:00	07/13/23 14:46	1
Di(2-ethylhexyl)adipate	<0.59		0.59	ug/L		07/12/23 09:00	07/13/23 14:46	1
Dibenz(a,h)anthracene	<0.049		0.049	ug/L		07/12/23 09:00	07/13/23 14:46	1
Diclorvos (DDVP)	<0.049	^3+ **	0.049	ug/L		07/12/23 09:00	07/13/23 14:46	1
Dieldrin	<0.20		0.20	ug/L		07/12/23 09:00	07/13/23 14:46	1
Diethylphthalate	<0.49		0.49	ug/L		07/12/23 09:00	07/13/23 14:46	1
Dimethylphthalate	<0.49		0.49	ug/L		07/12/23 09:00	07/13/23 14:46	1
Di-n-butyl phthalate	<0.98		0.98	ug/L		07/12/23 09:00	07/13/23 14:46	1
Di-n-octyl phthalate	<0.098		0.098	ug/L		07/12/23 09:00	07/13/23 14:46	1
Endosulfan I (Alpha)	<0.098		0.098	ug/L		07/12/23 09:00	07/13/23 14:46	1
Endosulfan II (Beta)	<0.098		0.098	ug/L		07/12/23 09:00	07/13/23 14:46	1
Endosulfan sulfate	<0.098		0.098	ug/L		07/12/23 09:00	07/13/23 14:46	1
Endrin	<0.098		0.098	ug/L		07/12/23 09:00	07/13/23 14:46	1
Endrin aldehyde	<0.098		0.098	ug/L		07/12/23 09:00	07/13/23 14:46	1
EPTC	<0.098		0.098	ug/L		07/12/23 09:00	07/13/23 14:46	1
Fluoranthene	<0.098		0.098	ug/L		07/12/23 09:00	07/13/23 14:46	1
Fluorene	<0.049		0.049	ug/L		07/12/23 09:00	07/13/23 14:46	1
gamma-BHC (Lindane)	<0.039		0.039	ug/L		07/12/23 09:00	07/13/23 14:46	1
gamma-Chlordane	<0.049		0.049	ug/L		07/12/23 09:00	07/13/23 14:46	1
Heptachlor	<0.039		0.039	ug/L		07/12/23 09:00	07/13/23 14:46	1
Heptachlor epoxide (isomer B)	<0.049	*1	0.049	ug/L		07/12/23 09:00	07/13/23 14:46	1
Hexachlorobenzene	<0.049		0.049	ug/L		07/12/23 09:00	07/13/23 14:46	1
Hexachlorocyclopentadiene	<0.049		0.049	ug/L		07/12/23 09:00	07/13/23 14:46	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049	ug/L		07/12/23 09:00	07/13/23 14:46	1
Isophorone	<0.49		0.49	ug/L		07/12/23 09:00	07/13/23 14:46	1
Malathion	<0.098		0.098	ug/L		07/12/23 09:00	07/13/23 14:46	1
Methoxychlor	<0.098		0.098	ug/L		07/12/23 09:00	07/13/23 14:46	1
Metolachlor	<0.049		0.049	ug/L		07/12/23 09:00	07/13/23 14:46	1
Molinate	<0.098		0.098	ug/L		07/12/23 09:00	07/13/23 14:46	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-54001-1

Client Sample ID: AIEA WELLS P2 (260)

Lab Sample ID: 380-54001-1

Date Collected: 07/10/23 09:30

Matrix: Water

Date Received: 07/11/23 09:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	<0.30		0.30	ug/L		07/12/23 09:00	07/13/23 14:46	1
Parathion	<0.098		0.098	ug/L		07/12/23 09:00	07/13/23 14:46	1
Pendimethalin (Penoxaline)	<0.098		0.098	ug/L		07/12/23 09:00	07/13/23 14:46	1
Phenanthrene	<0.039		0.039	ug/L		07/12/23 09:00	07/13/23 14:46	1
Propachlor	<0.049		0.049	ug/L		07/12/23 09:00	07/13/23 14:46	1
Pyrene	<0.049		0.049	ug/L		07/12/23 09:00	07/13/23 14:46	1
Simazine	<0.049		0.049	ug/L		07/12/23 09:00	07/13/23 14:46	1
Terbacil	<0.098		0.098	ug/L		07/12/23 09:00	07/13/23 14:46	1
Terbutylazine	<0.098		0.098	ug/L		07/12/23 09:00	07/13/23 14:46	1
Thiobencarb	<0.20		0.20	ug/L		07/12/23 09:00	07/13/23 14:46	1
Total Permethrin (mixed isomers)	<0.20		0.20	ug/L		07/12/23 09:00	07/13/23 14:46	1
trans-Nonachlor	<0.049		0.049	ug/L		07/12/23 09:00	07/13/23 14:46	1
Trifluralin	<0.098		0.098	ug/L		07/12/23 09:00	07/13/23 14:46	1
1-Methylnaphthalene	<0.098		0.098	ug/L		07/12/23 09:00	07/13/23 14:46	1
2-Methylnaphthalene	<0.098		0.098	ug/L		07/12/23 09:00	07/13/23 14:46	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	07/12/23 09:00	07/13/23 14:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	114		70 - 130	07/12/23 09:00	07/13/23 14:46	1
Perylene-d12	89		70 - 130	07/12/23 09:00	07/13/23 14:46	1
Triphenylphosphate	105		70 - 130	07/12/23 09:00	07/13/23 14:46	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	<0.040		0.040	ug/L		07/12/23 11:55	07/13/23 02:14	1
1,2-D bromo-3-Chloropropane	<0.010		0.010	ug/L		07/12/23 11:55	07/13/23 02:14	1
1,2-D bromoethane	<0.010		0.010	ug/L		07/12/23 11:55	07/13/23 02:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane (Surr)	96		60 - 140	07/12/23 11:55	07/13/23 02:14	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	<0.010		0.010	ug/L		07/13/23 12:24	07/13/23 16:52	1
Dieldrin	0.011		0.010	ug/L		07/13/23 12:24	07/13/23 16:52	1
Toxaphene	<0.50		0.50	ug/L		07/13/23 12:24	07/13/23 16:52	1
Alachlor	<0.10		0.10	ug/L		07/13/23 12:24	07/13/23 16:52	1
Chlordane (n.o.s.)	<0.10		0.10	ug/L		07/13/23 12:24	07/13/23 16:52	1
Endrin	<0.010		0.010	ug/L		07/13/23 12:24	07/13/23 16:52	1
Heptachlor	<0.010		0.010	ug/L		07/13/23 12:24	07/13/23 16:52	1
Heptachlor epoxide	<0.010		0.010	ug/L		07/13/23 12:24	07/13/23 16:52	1
gamma-BHC (Lindane)	<0.010		0.010	ug/L		07/13/23 12:24	07/13/23 16:52	1
Methoxychlor	<0.050		0.050	ug/L		07/13/23 12:24	07/13/23 16:52	1
PCB-1016	<0.070		0.070	ug/L		07/13/23 12:24	07/13/23 16:52	1
PCB-1221	<0.10		0.10	ug/L		07/13/23 12:24	07/13/23 16:52	1
PCB-1232	<0.10		0.10	ug/L		07/13/23 12:24	07/13/23 16:52	1
PCB-1242	<0.10		0.10	ug/L		07/13/23 12:24	07/13/23 16:52	1
PCB-1248	<0.10		0.10	ug/L		07/13/23 12:24	07/13/23 16:52	1
PCB-1254	<0.10		0.10	ug/L		07/13/23 12:24	07/13/23 16:52	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-54001-1

Client Sample ID: AIEA WELLS P2 (260)

Lab Sample ID: 380-54001-1

Date Collected: 07/10/23 09:30

Matrix: Water

Date Received: 07/11/23 09:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1260	<0.070		0.070	ug/L		07/13/23 12:24	07/13/23 16:52	1
Polychlorinated biphenyls, Total	<0.10		0.10	ug/L		07/13/23 12:24	07/13/23 16:52	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	95		70 - 130			07/13/23 12:24	07/13/23 16:52	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	330		5.0	ug/L			07/15/23 01:08	1
Chloride	95		2.5	mg/L			07/11/23 16:17	5
Nitrate as N	0.83		0.25	mg/L			07/11/23 16:17	5
Nitrite as N	<0.25		0.25	mg/L			07/11/23 16:17	5
Sulfate	15		1.3	mg/L			07/11/23 16:17	5

Method: EPA 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	20		1.0	mg/L			07/12/23 14:00	1
Magnesium	18		0.10	mg/L			07/12/23 17:04	1
Potassium	2.3		1.0	mg/L			07/12/23 14:00	1
Sodium	40		1.0	mg/L			07/12/23 14:00	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		1.0	ug/L		07/13/23 09:56	07/14/23 12:56	1
Arsenic	<1.0		1.0	ug/L		07/13/23 09:56	07/14/23 12:56	1
Beryllium	<1.0		1.0	ug/L		07/13/23 09:56	07/14/23 12:56	1
Cadmium	<0.50		0.50	ug/L		07/13/23 09:56	07/14/23 12:56	1
Chromium	2.0		1.0	ug/L		07/13/23 09:56	07/14/23 12:56	1
Copper	<2.0		2.0	ug/L		07/13/23 09:56	07/14/23 12:56	1
Lead	<0.50		0.50	ug/L		07/13/23 09:56	07/14/23 12:56	1
Nickel	<5.0		5.0	ug/L		07/13/23 09:56	07/14/23 12:56	1
Selenium	<5.0		5.0	ug/L		07/13/23 09:56	07/14/23 12:56	1
Silver	<0.50		0.50	ug/L		07/13/23 09:56	07/14/23 12:56	1
Thallium	<1.0		1.0	ug/L		07/13/23 09:56	07/14/23 12:56	1
Zinc	<20		20	ug/L		07/13/23 09:56	07/14/23 12:56	1

Method: EPA 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.10		0.10	ug/L		07/20/23 10:27	07/20/23 18:04	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity (SM 2320B)	59		2.0	mg/L			07/12/23 19:42	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	59		2.0	mg/L			07/12/23 19:42	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<2.0		2.0	mg/L			07/12/23 19:42	1
Specific Conductance (SM 2510B)	460		2.0	umhos/cm			07/12/23 19:42	1
Total Dissolved Solids (SM 2540C)	280		20	mg/L			07/12/23 18:28	1
Fluoride (SM 4500 F C)	<0.050		0.050	mg/L			07/14/23 13:41	1
pH (SM 4500 H+ B)	8.0	HF		SU			07/12/23 19:42	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-54001-1

Client Sample ID: AIEA WELLS P2 (260)

Lab Sample ID: 380-54001-1

Date Collected: 07/10/23 09:30

Matrix: Water

Date Received: 07/11/23 09:30

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide (SM 4500 S2 D)	<0.050		0.050	mg/L			07/14/23 17:28	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		07/14/23 00:00	08/24/23 14:18	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 14:18	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 14:18	1
2,4,5-Trichlorophenol	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 14:18	1
2,4,6-Trichlorophenol	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 14:18	1
2,4-Dichlorophenol	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 14:18	1
2,4-Dinitrophenol	ND		0.2	0.1	µg/L		07/14/23 00:00	08/24/23 14:18	1
2,6-Dichlorophenol	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 14:18	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 14:18	1
2,6-Di-tert-butyl-4-methylphenol	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 14:18	1
2,6-Di-tert-butylphenol	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 14:18	1
2-Chloronaphthalene	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 14:18	1
2-Chlorophenol	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 14:18	1
2-Methyl-4,6-dinitrophenol	ND		0.2	0.1	µg/L		07/14/23 00:00	08/24/23 14:18	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 14:18	1
2-Methylphenol	ND		0.2	0.1	µg/L		07/14/23 00:00	08/24/23 14:18	1
2-Nitroaniline	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 14:18	1
2-Nitrophenol	ND		0.2	0.1	µg/L		07/14/23 00:00	08/24/23 14:18	1
3+4-Methylphenol	ND		0.2	0.1	µg/L		07/14/23 00:00	08/24/23 14:18	1
3-Nitroaniline	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 14:18	1
4-Bromophenylphenyl ether	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 14:18	1
4-Chloro-3-methylphenol	ND		0.2	0.1	µg/L		07/14/23 00:00	08/24/23 14:18	1
4-Chloroaniline	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 14:18	1
4-Chlorophenylphenyl ether	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 14:18	1
4-Nitroaniline	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 14:18	1
4-Nitrophenol	ND		0.2	0.1	µg/L		07/14/23 00:00	08/24/23 14:18	1
6-tert-butyl-2,4-dimethylphenol	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 14:18	1
Acenaphthene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 14:18	1
Acenaphthylene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 14:18	1
Aniline	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 14:18	1
Anthracene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 14:18	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 14:18	1
Benzidine	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 14:18	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 14:18	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 14:18	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 14:18	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 14:18	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 14:18	1
Benzoic Acid	0.236		0.2	0.1	µg/L		07/14/23 00:00	08/24/23 14:18	1
Benzyl Alcohol	ND		0.2	0.1	µg/L		07/14/23 00:00	08/24/23 14:18	1
Biphenyl	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 14:18	1
Bis(2-Chloroethoxy) methane	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 14:18	1
Bis(2-Chloroethyl) ether	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 14:18	1
Bis(2-Chloroisopropyl) ether	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 14:18	1
Chrysene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 14:18	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 14:18	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-54001-1

Client Sample ID: AIEA WELLS P2 (260)

Lab Sample ID: 380-54001-1

Date Collected: 07/10/23 09:30

Matrix: Water

Date Received: 07/11/23 09:30

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
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 14:18	1
Dibenzofuran	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 14:18	1
Dibenzothiophene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 14:18	1
Disalicylidenepranediamine	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 14:18	1
Fluoranthene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 14:18	1
Fluorene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 14:18	1
Hexachloroethane	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 14:18	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 14:18	1
Naphthalene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 14:18	1
Nitrobenzene	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 14:18	1
N-Nitrosodi-n-propylamine	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 14:18	1
N-Nitrosodiphenylamine	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 14:18	1
Pentachlorophenol	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 14:18	1
Perylene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 14:18	1
Phenanthrene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 14:18	1
Phenol	ND		0.2	0.1	µg/L		07/14/23 00:00	08/24/23 14:18	1
p-tert-Butylphenol	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 14:18	1
Pyrene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 14:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
(2,4,6-Tribromophenol)	47		31 - 143	07/14/23 00:00	08/24/23 14:18	1
(d10-Acenaphthene)	102		27 - 133	07/14/23 00:00	08/24/23 14:18	1
(d10-Phenanthrene)	101		43 - 129	07/14/23 00:00	08/24/23 14:18	1
(d12-Chrysene)	98		52 - 144	07/14/23 00:00	08/24/23 14:18	1
(d12-Perylene)	108		36 - 161	07/14/23 00:00	08/24/23 14:18	1
(d5-Phenol)	88		0 - 85	07/14/23 00:00	08/24/23 14:18	1
(d8-Naphthalene)	93		25 - 125	07/14/23 00:00	08/24/23 14:18	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			07/13/23 11:58	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	0.02		mg/L			07/13/23 14:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE	80		60 - 140		07/13/23 14:49	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	0.026		mg/L			07/14/23 22:35	1
JP5	ND	U	0.052		mg/L			07/14/23 22:35	1
JP8	ND	U	0.052		mg/L			07/14/23 22:35	1
MOTOR OIL	ND	U	0.052		mg/L			07/14/23 22:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOBENZENE	63		60 - 130		07/14/23 22:35	1
HEXACOSANE	89		60 - 130		07/14/23 22:35	1

Client Sample Results

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

Job ID: 380-54001-1

Client Sample ID: TB: AIEA WELLS P2 (260)

Lab Sample ID: 380-54001-2

Date Collected: 07/10/23 09:30

Matrix: Water

Date Received: 07/11/23 09:30

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)	<2.0		2.0	ug/L			07/11/23 20:27	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	93		70 - 130				07/11/23 20:27	1
4-Bromofluorobenzene (Surr)	96		70 - 130				07/11/23 20:27	1
1,2-Dichloroethane-d4 (Surr)	108		70 - 130				07/11/23 20:27	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	<0.50		0.50	ug/L			07/15/23 07:06	1
1,1,1-Trichloroethane	<0.50		0.50	ug/L			07/15/23 07:06	1
1,1,2,2-Tetrachloroethane	<0.50		0.50	ug/L			07/15/23 07:06	1
1,1,2-Trichloroethane	<0.50		0.50	ug/L			07/15/23 07:06	1
1,1-Dichloroethane	<0.50		0.50	ug/L			07/15/23 07:06	1
1,1-Dichloroethylene	<0.50		0.50	ug/L			07/15/23 07:06	1
1,1-Dichloropropene	<0.50		0.50	ug/L			07/15/23 07:06	1
1,2,3-Trichlorobenzene	<0.50		0.50	ug/L			07/15/23 07:06	1
1,2,3-Trichloropropane	<0.50		0.50	ug/L			07/15/23 07:06	1
1,2,4-Trichlorobenzene	<0.50		0.50	ug/L			07/15/23 07:06	1
1,2,4-Trimethy benzene	<0.50		0.50	ug/L			07/15/23 07:06	1
1,2-Dichloroethane	<0.50		0.50	ug/L			07/15/23 07:06	1
1,2-Dichloropropane	<0.50		0.50	ug/L			07/15/23 07:06	1
1,3,5-Trimethy benzene	<0.50		0.50	ug/L			07/15/23 07:06	1
1,3-Dichloropropane	<0.50		0.50	ug/L			07/15/23 07:06	1
2,2-Dichloropropane	<0.50		0.50	ug/L			07/15/23 07:06	1
2-Butanone (MEK)	<5.0		5.0	ug/L			07/15/23 07:06	1
4-Methyl-2-pentanone (MIBK)	<5.0		5.0	ug/L			07/15/23 07:06	1
Acetone	<500		500	ug/L			07/15/23 07:06	1
Benzene	<0.50		0.50	ug/L			07/15/23 07:06	1
Bromobenzene	<0.50		0.50	ug/L			07/15/23 07:06	1
Bromochloromethane	<0.50		0.50	ug/L			07/15/23 07:06	1
Bromodichloromethane	<0.50		0.50	ug/L			07/15/23 07:06	1
Bromoform	<0.50		0.50	ug/L			07/15/23 07:06	1
Bromomethane (Methyl Bromide)	<0.50		0.50	ug/L			07/15/23 07:06	1
Carbon disulfide	<0.50		0.50	ug/L			07/15/23 07:06	1
Carbon tetrachloride	<0.50		0.50	ug/L			07/15/23 07:06	1
Chlorobenzene	<0.50		0.50	ug/L			07/15/23 07:06	1
Chlorodibromomethane	<0.50		0.50	ug/L			07/15/23 07:06	1
Chloroethane	<0.50		0.50	ug/L			07/15/23 07:06	1
Chloroform (Trichloromethane)	<0.50		0.50	ug/L			07/15/23 07:06	1
Dichloromethane	<0.50		0.50	ug/L			07/15/23 07:06	1
cis-1,2-Dichloroethylene	<0.50		0.50	ug/L			07/15/23 07:06	1
cis-1,3-Dichloropropene	<0.50		0.50	ug/L			07/15/23 07:06	1
Dibromomethane	<0.50		0.50	ug/L			07/15/23 07:06	1
Dichlorodifluoromethane	<0.50	*+	0.50	ug/L			07/15/23 07:06	1
Ethylbenzene	<0.50		0.50	ug/L			07/15/23 07:06	1
Hexachlorobutadiene	<0.50		0.50	ug/L			07/15/23 07:06	1
Isopropy benzene	<0.50		0.50	ug/L			07/15/23 07:06	1
m,p-Xylenes	<0.50		0.50	ug/L			07/15/23 07:06	1
m-Dichlorobenzene (1,3-DCB)	<0.50		0.50	ug/L			07/15/23 07:06	1

Client Sample Results

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

Job ID: 380-54001-1

Client Sample ID: TB: AIEA WELLS P2 (260)

Lab Sample ID: 380-54001-2

Date Collected: 07/10/23 09:30

Matrix: Water

Date Received: 07/11/23 09:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl-tert-butyl Ether (MTBE)	<0.50		0.50	ug/L			07/15/23 07:06	1
Naphthalene	<0.50		0.50	ug/L			07/15/23 07:06	1
n-Butylbenzene	<0.50		0.50	ug/L			07/15/23 07:06	1
N-Propylbenzene	<0.50		0.50	ug/L			07/15/23 07:06	1
o-Dichlorobenzene (1,2-DCB)	<0.50		0.50	ug/L			07/15/23 07:06	1
o-Chlorotoluene	<0.50		0.50	ug/L			07/15/23 07:06	1
o-Xylene	<0.50		0.50	ug/L			07/15/23 07:06	1
p-Chlorotoluene	<0.50		0.50	ug/L			07/15/23 07:06	1
p-Dichlorobenzene (1,4-DCB)	<0.50		0.50	ug/L			07/15/23 07:06	1
p-Isopropyltoluene	<0.50		0.50	ug/L			07/15/23 07:06	1
sec-Butylbenzene	<0.50		0.50	ug/L			07/15/23 07:06	1
Styrene	<0.50		0.50	ug/L			07/15/23 07:06	1
Tert-amyl methyl ether	<3.0		3.0	ug/L			07/15/23 07:06	1
Tert-butyl ethyl ether	<3.0		3.0	ug/L			07/15/23 07:06	1
tert-Butylbenzene	<0.50		0.50	ug/L			07/15/23 07:06	1
Tetrachloroethene (PCE)	<0.50		0.50	ug/L			07/15/23 07:06	1
Toluene	<0.50		0.50	ug/L			07/15/23 07:06	1
1,3-Dichloropropene, Total	<0.50		0.50	ug/L			07/15/23 07:06	1
Xylenes, Total	<0.50		0.50	ug/L			07/15/23 07:06	1
trans-1,2-Dichloroethylene	<0.50		0.50	ug/L			07/15/23 07:06	1
trans-1,3-Dichloropropene	<0.50		0.50	ug/L			07/15/23 07:06	1
Trichloroethylene (TCE)	<0.50		0.50	ug/L			07/15/23 07:06	1
Trichlorofluoromethane (Freon 11)	<0.50		0.50	ug/L			07/15/23 07:06	1
Vinyl Chloride (VC)	<0.30	^3+	0.30	ug/L			07/15/23 07:06	1
Trichlorotrifluoroethane	<0.50	*+	0.50	ug/L			07/15/23 07:06	1
Bromoethane	<0.50		0.50	ug/L			07/15/23 07:06	1
Chloromethane (methyl chloride)	<0.50		0.50	ug/L			07/15/23 07:06	1
Diisopropyl ether	<3.0		3.0	ug/L			07/15/23 07:06	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Acetaldehyde	31	T J N	ug/L		1.54	75-07-0		07/15/23 07:06	1
Furfural	27	T J N	ug/L		10.01	98-01-1		07/15/23 07:06	1
Heptane, 2,2,4,6,6-pentamethyl-	1.2	T J N	ug/L		11.31	13475-82-6		07/15/23 07:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		70 - 130		07/15/23 07:06	1
4-Bromofluorobenzene (Surr)	111		70 - 130		07/15/23 07:06	1
Toluene-d8 (Surr)	96		70 - 130		07/15/23 07:06	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	<0.040		0.040	ug/L		07/12/23 11:55	07/13/23 02:46	1
1,2-D bromo-3-Chloropropane	<0.0099		0.0099	ug/L		07/12/23 11:55	07/13/23 02:46	1
1,2-D bromoethane	<0.0099		0.0099	ug/L		07/12/23 11:55	07/13/23 02:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane (Surr)	99		60 - 140	07/12/23 11:55	07/13/23 02:46	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	0.02		mg/L			07/13/23 16:41	1

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Client Sample Results

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

Job ID: 380-54001-1

Client Sample ID: TB: AIEA WELLS P2 (260)

Lab Sample ID: 380-54001-2

Date Collected: 07/10/23 09:30

Matrix: Water

Date Received: 07/11/23 09:30

<u>Surrogate</u>	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
BROMOFLUOROBENZENE	82		60 - 140		07/13/23 16:41	1

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

Action Limit Summary

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

Job ID: 380-54001-1

Client Sample ID: AIEA WELLS P2 (260)

Lab Sample ID: 380-54001-1

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		
1,1,1-Trichloroethane	<0.50		ug/L	200.0	200		524.2	Total/NA
1,1,2-Trichloroethane	<0.50		ug/L	5.000	5		524.2	Total/NA
1,1-Dichloroethylene	<0.50		ug/L	7.000	7		524.2	Total/NA
1,2,3-Trichloropropane	<0.50		ug/L	0.6000			524.2	Total/NA
1,2,4-Trichlorobenzene	<0.50		ug/L	70.00	70		524.2	Total/NA
1,2-Dichloroethane	<0.50		ug/L	5.000	5		524.2	Total/NA
1,2-Dichloropropane	<0.50		ug/L	5.000	5		524.2	Total/NA
Benzene	<0.50		ug/L	5.000	5		524.2	Total/NA
Carbon tetrachloride	<0.50		ug/L	5.000	5		524.2	Total/NA
Chlorobenzene	<0.50		ug/L	100.0	100		524.2	Total/NA
cis-1,2-Dichloroethylene	<0.50		ug/L	70.00	70		524.2	Total/NA
Dichloromethane	<0.50		ug/L	5.000	5		524.2	Total/NA
Ethylbenzene	<0.50		ug/L	700.0	700		524.2	Total/NA
o-Dichlorobenzene (1,2-DCB)	<0.50		ug/L	600.0	600		524.2	Total/NA
p-Dichlorobenzene (1,4-DCB)	<0.50		ug/L	75.000	75		524.2	Total/NA
Styrene	<0.50		ug/L	100.0	100		524.2	Total/NA
Tetrachloroethene (PCE)	<0.50		ug/L	5.000	5		524.2	Total/NA
Toluene	<0.50		ug/L	1000	1000		524.2	Total/NA
trans-1,2-Dichloroethylene	<0.50		ug/L	100.0	100		524.2	Total/NA
Trichloroethylene (TCE)	<0.50		ug/L	5.000	5		524.2	Total/NA
Vinyl Chloride (VC)	<0.30	^3+	ug/L	2.000	2		524.2	Total/NA
Xylenes, Total	<0.50		ug/L	10000	10000		524.2	Total/NA
Alachlor	<0.049		ug/L		2		525.2	Total/NA
Atrazine	<0.049		ug/L		3		525.2	Total/NA
Benzo[a]pyrene	<0.020		ug/L		0.2		525.2	Total/NA
Bis(2-ethylhexyl) phthalate	<0.59		ug/L		6		525.2	Total/NA
Di(2-ethylhexyl)adipate	<0.59		ug/L		400		525.2	Total/NA
Endrin	<0.098		ug/L		2		525.2	Total/NA
gamma-BHC (Lindane)	<0.039		ug/L		0.2		525.2	Total/NA
Heptachlor	<0.039		ug/L		0.4		525.2	Total/NA
Heptachlor epoxide (isomer B)	<0.049	*1	ug/L		0.2		525.2	Total/NA
Hexachlorobenzene	<0.049		ug/L		1		525.2	Total/NA
Hexachlorocyclopentadiene	<0.049		ug/L		50		525.2	Total/NA
Methoxychlor	<0.098		ug/L		40		525.2	Total/NA
Simazine	<0.049		ug/L		4		525.2	Total/NA
1,2,3-Trichloropropane	<0.040		ug/L	0.6000			504.1	Total/NA
1,2-D bromo-3-Chloropropane	<0.010		ug/L		0.2		504.1	Total/NA
1,2-D bromoethane	<0.010		ug/L		0.05		504.1	Total/NA
Toxaphene	<0.50		ug/L		3		505	Total/NA
Alachlor	<0.10		ug/L		2		505	Total/NA
Endrin	<0.010		ug/L		2		505	Total/NA
Heptachlor	<0.010		ug/L		0.4		505	Total/NA
Heptachlor epoxide	<0.010		ug/L		0.2		505	Total/NA
gamma-BHC (Lindane)	<0.010		ug/L		0.2		505	Total/NA
Methoxychlor	<0.050		ug/L		40		505	Total/NA
Polychlorinated biphenyls, Total	<0.10		ug/L		0.5		505	Total/NA
Chloride	95		mg/L			250	300.0	Total/NA
Nitrate as N	0.83		mg/L		10		300.0	Total/NA

Eurofins Eaton Analytical Pomona

Action Limit Summary

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

Job ID: 380-54001-1

Client Sample ID: AIEA WELLS P2 (260) (Continued)

Lab Sample ID: 380-54001-1

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
Nitrite as N	<0.25		mg/L		1		300.0	Total/NA
Sulfate	15		mg/L			250	300.0	Total/NA
Mercury	<0.10		ug/L		2		245.1	Total/NA
Total Dissolved Solids	280		mg/L			500	SM 2540C	Total/NA
Fluoride	<0.050		mg/L		4	2	SM 4500 F C	Total/NA

Client Sample ID: TB: AIEA WELLS P2 (260)

Lab Sample ID: 380-54001-2

Compliance Check

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

Analyte	Result	Qualifier	Unit	HI Org Limit	EPAMCL Limit	RL	Method	Prep Type
1,1,1-Trichloroethane	<0.50		ug/L	200.0	200	0.50	524.2	Total/NA
1,1,2-Trichloroethane	<0.50		ug/L	5.000	5	0.50	524.2	Total/NA
1,1-Dichloroethylene	<0.50		ug/L	7.000	7	0.50	524.2	Total/NA
1,2,3-Trichloropropane	<0.50		ug/L	0.6000		0.50	524.2	Total/NA
1,2,4-Trichlorobenzene	<0.50		ug/L	70.00	70	0.50	524.2	Total/NA
1,2-Dichloroethane	<0.50		ug/L	5.000	5	0.50	524.2	Total/NA
1,2-Dichloropropane	<0.50		ug/L	5.000	5	0.50	524.2	Total/NA
Benzene	<0.50		ug/L	5.000	5	0.50	524.2	Total/NA
Carbon tetrachloride	<0.50		ug/L	5.000	5	0.50	524.2	Total/NA
Chlorobenzene	<0.50		ug/L	100.0	100	0.50	524.2	Total/NA
Dichloromethane	<0.50		ug/L	5.000	5	0.50	524.2	Total/NA
cis-1,2-Dichloroethylene	<0.50		ug/L	70.00	70	0.50	524.2	Total/NA
Ethylbenzene	<0.50		ug/L	700.0	700	0.50	524.2	Total/NA
o-Dichlorobenzene (1,2-DCB)	<0.50		ug/L	600.0	600	0.50	524.2	Total/NA
p-Dichlorobenzene (1,4-DCB)	<0.50		ug/L	75.000	75	0.50	524.2	Total/NA
Styrene	<0.50		ug/L	100.0	100	0.50	524.2	Total/NA
Tetrachloroethene (PCE)	<0.50		ug/L	5.000	5	0.50	524.2	Total/NA
Toluene	<0.50		ug/L	1000	1000	0.50	524.2	Total/NA
Xylenes, Total	<0.50		ug/L	10000	10000	0.50	524.2	Total/NA
trans-1,2-Dichloroethylene	<0.50		ug/L	100.0	100	0.50	524.2	Total/NA
Trichloroethylene (TCE)	<0.50		ug/L	5.000	5	0.50	524.2	Total/NA
Vinyl Chloride (VC)	<0.30	^3+	ug/L	2.000	2	0.30	524.2	Total/NA
1,2,3-Trichloropropane	<0.040		ug/L	0.6000		0.040	504.1	Total/NA
1,2-D bromo-3-Chloropropane	<0.0099		ug/L		0.2	0.0099	504.1	Total/NA
1,2-D bromoethane	<0.0099		ug/L		0.05	0.0099	504.1	Total/NA

Surrogate Summary

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

Job ID: 380-54001-1

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		TOL (70-130)	BFB (70-130)	DCA (70-130)
380-54001-1	AIEA WELLS P2 (260)	95	88	108
380-54001-2	TB: AIEA WELLS P2 (260)	93	96	108
LCS 380-47004/2	Lab Control Sample	98	91	103
LCS 380-47004/3	Lab Control Sample Dup	92	96	104
MB 380-47004/5	Method Blank	92	96	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 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 380-47004/4	Lab Control Sample	94	92	99

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

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		DCA (70-130)	BFB (70-130)	TOL (70-130)
380-54001-1	AIEA WELLS P2 (260)	106	110	93
380-54001-2	TB: AIEA WELLS P2 (260)	109	111	96
LCS 380-47476/11	Lab Control Sample	102	95	99
LCS 380-47476/12	Lab Control Sample Dup	101	94	101
MB 380-47476/15	Method Blank	101	102	96
MRL 380-47476/13	Lab Control Sample	103	100	96
MRL 380-47476/14	Lab Control Sample	103	101	98

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

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		2NMX (70-130)	PRY (70-130)	TPP (70-130)
380-53890-H-5-A MS	Matrix Spike	108	101	123
380-54001-1	AIEA WELLS P2 (260)	114	89	105
380-54001-1 DU	AIEA WELLS P2 (260)	109	105	104

Surrogate Summary

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

Job ID: 380-54001-1

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	2NMX (70-130)	PRY (70-130)	TPP (70-130)
LCS 380-46988/3-A	Lab Control Sample	104	94	100
LCS 380-46988/4-A	Lab Control Sample Dup	107	103	112
MB 380-46988/1-A	Method Blank	111	104	110
MRL 380-46988/2-A	Lab Control Sample	110	93	104
Surrogate Legend				
2NMX = 2-Nitro-m-xylene				
PRY = Perylene-d12				
TPP = Triphenylphosphate				

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	DBPP1 (60-140)
380-53751-C-1-A MS	Matrix Spike	101
380-53751-C-2-A DU	Duplicate	102
380-54001-1	AIEA WELLS P2 (260)	96
380-54001-2	TB: AIEA WELLS P2 (260)	99
LCS 380-46999/3-A	Lab Control Sample	101
MBL 380-46999/4-A	Method Blank	100
MRL 380-46999/1-A	Lab Control Sample	97
MRL 380-46999/2-A	Lab Control Sample	99
Surrogate Legend		
DBPP = 1,2-D bromopropane (Surr)		

Method: 505 - Organochlorine Pesticides/PCBs (GC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	TCX1 (70-130)
380-54001-1	AIEA WELLS P2 (260)	95
380-54001-1 MS	AIEA WELLS P2 (260)	96
380-54001-1 MS	AIEA WELLS P2 (260)	96
380-54156-B-1-A MS	Matrix Spike	102
380-54156-C-1-A MS	Matrix Spike	107
MBL 380-47215/4-A	Method Blank	107
MRL 380-47215/2-A	Lab Control Sample	95
MRL 380-47215/3-A	Lab Control Sample	100
Surrogate Legend		
TCX = Tetrachloro-m-xylene		

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)	PHL (0-130)	PRY (36-161)	TBP (30-130)
108196-B1	Method Blank	104	101	97	96	95	102	45

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Surrogate Summary

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

Job ID: 380-54001-1

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

Matrix: BlankMatrix

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)						
		Acenaphtl (27-133)	Phenanth (43-129)	CRY (52-144)	NPT (25-125)	PHL (0-130)	PRY (36-161)	TBP (30-130)
108196-BS1	Lab Control Sample	106	101	98	99	111	104	58
108196-BS2	Lab Control Sample Dup	105	101	99	96	85	106	58

Surrogate Legend

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

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)						
		Acenaphtl (27-133)	Phenanth (43-129)	CRY (52-144)	NPT (25-125)	PHL (0-85)	PRY (36-161)	TBP (31-143)
380-54001-1	AIEA WELLS P2 (260)	102	101	98	93	88	108	47

Surrogate Legend

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

Method: 8015 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)
23G078-01M	Matrix Spike	98
23G078-01S	Matrix Spike Duplicate	95

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
23VG39G06B	Method Blank	

Surrogate Legend

BFB = BROMOFLUOROBENZENE

Surrogate Summary

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

Job ID: 380-54001-1

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)
23VG39G06C	LCD	100
23VG39G06L	Lab Control Sample	101

Surrogate Legend

BFB = BROMOFLUOROBENZENE

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (60-140)
380-54001-1	AIEA WELLS P2 (260)	80
380-54001-2	TB: AIEA WELLS P2 (260)	82

Surrogate Legend

BFB = BROMOFLUOROBENZENE

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)
23DSG017WC	LCD	69	88
23DSG017WL	Lab Control Sample	73	90
23G078-01M	Matrix Spike	63	87
23G078-01M	Matrix Spike	73	84
23G078-01S	Matrix Spike Duplicate	64	86
23G078-01S	Matrix Spike Duplicate	65	82
23J5G017WC	LCD	78	93
23J5G017WL	Lab Control Sample	76	89
23J8G017WC	LCD	85	86
23J8G017WL	Lab Control Sample	96	88

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
23DSG017WB	Method Blank		

Surrogate Legend

BB = BROMOBENZENE

HEXACOSANE = HEXACOSANE

Surrogate Summary

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

Job ID: 380-54001-1

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)	HEXACOSANE (60-130)
380-54001-1	AIEA WELLS P2 (260)	63	89

Surrogate Legend

BB = BROMOBENZENE

HEXACOSANE = HEXACOSANE

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

QC Sample Results

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

Job ID: 380-54001-1

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

Lab Sample ID: MB 380-47476/15
Matrix: Water
Analysis Batch: 47476

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

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
1,1,1,2-Tetrachloroethane	<0.50		0.50	ug/L			07/15/23 01:58	1
1,1,1-Trichloroethane	<0.50		0.50	ug/L			07/15/23 01:58	1
1,1,2,2-Tetrachloroethane	<0.50		0.50	ug/L			07/15/23 01:58	1
1,1,2-Trichloroethane	<0.50		0.50	ug/L			07/15/23 01:58	1
1,1-Dichloroethane	<0.50		0.50	ug/L			07/15/23 01:58	1
1,1-Dichlorethylene	<0.50		0.50	ug/L			07/15/23 01:58	1
1,1-Dichloropropene	<0.50		0.50	ug/L			07/15/23 01:58	1
1,2,3-Trichlorobenzene	<0.50		0.50	ug/L			07/15/23 01:58	1
1,2,3-Trichloropropane	<0.50		0.50	ug/L			07/15/23 01:58	1
1,2,4-Trichlorobenzene	<0.50		0.50	ug/L			07/15/23 01:58	1
1,2,4-Trimethy benzene	<0.50		0.50	ug/L			07/15/23 01:58	1
1,2-Dichloroethane	<0.50		0.50	ug/L			07/15/23 01:58	1
1,2-Dichloropropane	<0.50		0.50	ug/L			07/15/23 01:58	1
1,3,5-Trimethy benzene	<0.50		0.50	ug/L			07/15/23 01:58	1
1,3-Dichloropropane	<0.50		0.50	ug/L			07/15/23 01:58	1
2,2-Dichloropropane	<0.50		0.50	ug/L			07/15/23 01:58	1
2-Butanone (MEK)	<5.0		5.0	ug/L			07/15/23 01:58	1
4-Methyl-2-pentanone (MIBK)	<5.0		5.0	ug/L			07/15/23 01:58	1
Acetone	<500		500	ug/L			07/15/23 01:58	1
Benzene	<0.50		0.50	ug/L			07/15/23 01:58	1
Bromobenzene	<0.50		0.50	ug/L			07/15/23 01:58	1
Bromochloromethane	<0.50		0.50	ug/L			07/15/23 01:58	1
Bromodichloromethane	<0.50		0.50	ug/L			07/15/23 01:58	1
Bromoform	<0.50		0.50	ug/L			07/15/23 01:58	1
Bromomethane (Methyl Bromide)	<0.50		0.50	ug/L			07/15/23 01:58	1
Carbon disulfide	<0.50		0.50	ug/L			07/15/23 01:58	1
Carbon tetrachloride	<0.50		0.50	ug/L			07/15/23 01:58	1
Chlorobenzene	<0.50		0.50	ug/L			07/15/23 01:58	1
Chlorodibromomethane	<0.50		0.50	ug/L			07/15/23 01:58	1
Chloroethane	<0.50		0.50	ug/L			07/15/23 01:58	1
Chloroform (Trichloromethane)	<0.50		0.50	ug/L			07/15/23 01:58	1
cis-1,2-Dichloroethylene	<0.50		0.50	ug/L			07/15/23 01:58	1
cis-1,3-Dichloropropene	<0.50		0.50	ug/L			07/15/23 01:58	1
Dibromomethane	<0.50		0.50	ug/L			07/15/23 01:58	1
Dichlorodifluoromethane	<0.50		0.50	ug/L			07/15/23 01:58	1
Dichloromethane	<0.50		0.50	ug/L			07/15/23 01:58	1
Ethylbenzene	<0.50		0.50	ug/L			07/15/23 01:58	1
Hexachlorobutadiene	<0.50		0.50	ug/L			07/15/23 01:58	1
Isopropy benzene	<0.50		0.50	ug/L			07/15/23 01:58	1
m,p-Xylenes	<0.50		0.50	ug/L			07/15/23 01:58	1
m-Dichlorobenzene (1,3-DCB)	<0.50		0.50	ug/L			07/15/23 01:58	1
Methyl-tert-butyl Ether (MTBE)	<0.50		0.50	ug/L			07/15/23 01:58	1
Naphthalene	<0.50		0.50	ug/L			07/15/23 01:58	1
n-Butylbenzene	<0.50		0.50	ug/L			07/15/23 01:58	1
N-Propylbenzene	<0.50		0.50	ug/L			07/15/23 01:58	1
o-Chlorotoluene	<0.50		0.50	ug/L			07/15/23 01:58	1
o-Dichlorobenzene (1,2-DCB)	<0.50		0.50	ug/L			07/15/23 01:58	1
o-Xylene	<0.50		0.50	ug/L			07/15/23 01:58	1

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QC Sample Results

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

Job ID: 380-54001-1

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

Lab Sample ID: MB 380-47476/15
Matrix: Water
Analysis Batch: 47476

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
p-Chlorotoluene	<0.50		0.50	ug/L			07/15/23 01:58	1
p-Dichlorobenzene (1,4-DCB)	<0.50		0.50	ug/L			07/15/23 01:58	1
p-Isopropyltoluene	<0.50		0.50	ug/L			07/15/23 01:58	1
sec-Butylbenzene	<0.50		0.50	ug/L			07/15/23 01:58	1
Styrene	<0.50		0.50	ug/L			07/15/23 01:58	1
Tert-amyl methyl ether	<3.0		3.0	ug/L			07/15/23 01:58	1
1,3-Dichloropropene, Total	<0.50		0.50	ug/L			07/15/23 01:58	1
Tert-butyl ethyl ether	<3.0		3.0	ug/L			07/15/23 01:58	1
tert-Butylbenzene	<0.50		0.50	ug/L			07/15/23 01:58	1
Tetrachloroethene (PCE)	<0.50		0.50	ug/L			07/15/23 01:58	1
Toluene	<0.50		0.50	ug/L			07/15/23 01:58	1
trans-1,2-Dichloroethylene	<0.50		0.50	ug/L			07/15/23 01:58	1
trans-1,3-Dichloropropene	<0.50		0.50	ug/L			07/15/23 01:58	1
Trichloroethylene (TCE)	<0.50		0.50	ug/L			07/15/23 01:58	1
Bromoethane	<0.50		0.50	ug/L			07/15/23 01:58	1
Trichlorofluoromethane (Freon 11)	<0.50		0.50	ug/L			07/15/23 01:58	1
Chloromethane (methyl chloride)	<0.50		0.50	ug/L			07/15/23 01:58	1
Trichlorotrifluoroethane	<0.50		0.50	ug/L			07/15/23 01:58	1
Diisopropyl ether	<3.0		3.0	ug/L			07/15/23 01:58	1
Vinyl Chloride (VC)	<0.30		0.30	ug/L			07/15/23 01:58	1
Xylenes, Total	<0.50		0.50	ug/L			07/15/23 01:58	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A		07/15/23 01:58	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		70 - 130		07/15/23 01:58	1
4-Bromofluorobenzene (Surr)	102		70 - 130		07/15/23 01:58	1
Toluene-d8 (Surr)	96		70 - 130		07/15/23 01:58	1

Lab Sample ID: LCS 380-47476/11
Matrix: Water
Analysis Batch: 47476

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	5.00	5.62		ug/L		112	70 - 130
1,1,1-Trichloroethane	5.00	5.44		ug/L		109	70 - 130
1,1,1,2,2-Tetrachloroethane	5.00	4.92		ug/L		98	70 - 130
1,1,1,2-Trichloroethane	5.00	4.93		ug/L		99	70 - 130
1,1-Dichloroethane	5.00	5.04		ug/L		101	70 - 130
1,1-Dichloroethylene	5.00	5.72		ug/L		114	70 - 130
1,1-Dichloropropene	5.00	5.30		ug/L		106	70 - 130
1,2,3-Trichlorobenzene	5.00	4.87		ug/L		97	70 - 130
1,2,3-Trichloropropane	5.00	4.73		ug/L		95	70 - 130
1,2,4-Trichlorobenzene	5.00	4.90		ug/L		98	70 - 130
1,2,4-Trimethyl benzene	5.00	4.48		ug/L		90	70 - 130
1,2-Dichloroethane	5.00	4.95		ug/L		99	70 - 130
1,2-Dichloropropane	5.00	5.06		ug/L		101	70 - 130

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QC Sample Results

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

Job ID: 380-54001-1

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

Lab Sample ID: LCS 380-47476/11
Matrix: Water
Analysis Batch: 47476

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,3,5-Trimethy benzene	5.00	4.44		ug/L		89	70 - 130
1,3-Dichloropropane	5.00	4.90		ug/L		98	70 - 130
2,2-Dichloropropane	5.00	5.39		ug/L		108	70 - 130
2-Butanone (MEK)	50.0	53.1		ug/L		106	70 - 130
4-Methyl-2-pentanone (MIBK)	50.0	52.0		ug/L		104	70 - 130
Acetone	50.0	54.8	J	ug/L		110	70 - 130
Benzene	5.00	4.97		ug/L		99	70 - 130
Bromobenzene	5.00	4.47		ug/L		89	70 - 130
Bromochloromethane	5.00	5.40		ug/L		108	70 - 130
Bromodichloromethane	5.00	4.80		ug/L		96	70 - 130
Bromoform	5.00	5.36		ug/L		107	70 - 130
Bromomethane (Methyl Bromide)	5.00	5.62		ug/L		112	70 - 130
Carbon disulfide	5.00	4.48		ug/L		90	70 - 130
Carbon tetrachloride	5.00	5.33		ug/L		107	70 - 130
Chlorobenzene	5.00	4.76		ug/L		95	70 - 130
Chlorodibromomethane	5.00	5.26		ug/L		105	70 - 130
cis-1,3-Dichloropropene	5.00	5.49		ug/L		110	70 - 130
Dichloromethane	5.00	5.82		ug/L		116	70 - 130
Ethylbenzene	5.00	4.72		ug/L		94	70 - 130
Hexachlorobutadiene	5.00	5.22		ug/L		104	70 - 130
Isopropyl benzene	5.00	4.70		ug/L		94	70 - 130
m,p-Xylenes	10.0	9.44		ug/L		94	70 - 130
m-Dichlorobenzene (1,3-DCB)	5.00	4.50		ug/L		90	70 - 130
Methyl-tert-butyl Ether (MTBE)	5.00	5.22		ug/L		104	70 - 130
Naphthalene	5.00	5.18		ug/L		104	70 - 130
n-Butylbenzene	5.00	4.59		ug/L		92	70 - 130
N-Propylbenzene	5.00	4.67		ug/L		93	70 - 130
o-Chlorotoluene	5.00	4.71		ug/L		94	70 - 130
o-Dichlorobenzene (1,2-DCB)	5.00	4.92		ug/L		98	70 - 130
o-Xylene	5.00	4.82		ug/L		96	70 - 130
p-Chlorotoluene	5.00	4.57		ug/L		91	70 - 130
p-Dichlorobenzene (1,4-DCB)	5.00	4.48		ug/L		90	70 - 130
p-Isopropyltoluene	5.00	4.52		ug/L		90	70 - 130
sec-Butylbenzene	5.00	4.58		ug/L		92	70 - 130
Styrene	5.00	4.63		ug/L		93	70 - 130
Tert-amyl methyl ether	5.00	5.09		ug/L		102	70 - 130
1,3-Dichloropropene, Total	10.0	11.4		ug/L		114	70 - 130
Tert-butyl ethyl ether	5.00	5.30		ug/L		106	70 - 130
tert-Butylbenzene	5.00	4.47		ug/L		89	70 - 130
Tetrachloroethene (PCE)	5.00	4.81		ug/L		96	70 - 130
Toluene	5.00	4.71		ug/L		94	70 - 130
trans-1,2-Dichloroethylene	5.00	5.13		ug/L		103	70 - 130
trans-1,3-Dichloropropene	5.00	5.92		ug/L		118	70 - 130
Trichloroethylene (TCE)	5.00	4.93		ug/L		99	70 - 130
Bromoethane	5.00	4.75		ug/L		95	70 - 130
Trichlorofluoromethane (Freon 11)	5.00	5.50		ug/L		110	70 - 130
Trichlorotrifluoroethane	5.00	5.48		ug/L		110	70 - 130
Diisopropyl ether	5.00	4.91		ug/L		98	70 - 130

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QC Sample Results

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

Job ID: 380-54001-1

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

Lab Sample ID: LCS 380-47476/11
Matrix: Water
Analysis Batch: 47476

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Vinyl Chloride (VC)	5.00	5.80		ug/L		116	70 - 130
Xylenes, Total	15.0	14.3		ug/L		95	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	102		70 - 130
4-Bromofluorobenzene (Surr)	95		70 - 130
Toluene-d8 (Surr)	99		70 - 130

Lab Sample ID: LCSD 380-47476/12
Matrix: Water
Analysis Batch: 47476

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	5.00	5.75		ug/L		115	70 - 130	2	20
1,1,1-Trichloroethane	5.00	5.75		ug/L		115	70 - 130	5	20
1,1,2,2-Tetrachloroethane	5.00	5.12		ug/L		102	70 - 130	4	20
1,1,2-Trichloroethane	5.00	5.06		ug/L		101	70 - 130	3	20
1,1-Dichloroethane	5.00	5.26		ug/L		105	70 - 130	4	20
1,1-Dichlorethylene	5.00	6.20		ug/L		124	70 - 130	8	20
1,1-Dichloropropene	5.00	5.50		ug/L		110	70 - 130	4	20
1,2,3-Trichlorobenzene	5.00	5.15		ug/L		103	70 - 130	6	20
1,2,3-Trichloropropane	5.00	4.94		ug/L		99	70 - 130	4	20
1,2,4-Trichlorobenzene	5.00	5.06		ug/L		101	70 - 130	3	20
1,2,4-Trimethy benzene	5.00	4.84		ug/L		97	70 - 130	8	20
1,2-Dichloroethane	5.00	5.20		ug/L		104	70 - 130	5	20
1,2-Dichloropropane	5.00	5.25		ug/L		105	70 - 130	4	20
1,3,5-Trimethy benzene	5.00	4.73		ug/L		95	70 - 130	6	20
1,3-Dichloropropane	5.00	5.01		ug/L		100	70 - 130	2	20
2,2-Dichloropropane	5.00	5.66		ug/L		113	70 - 130	5	20
2-Butanone (MEK)	50.0	54.3		ug/L		109	70 - 130	2	20
4-Methyl-2-pentanone (MIBK)	50.0	52.7		ug/L		105	70 - 130	1	20
Acetone	50.0	55.2	J	ug/L		110	70 - 130	1	20
Benzene	5.00	5.26		ug/L		105	70 - 130	6	20
Bromobenzene	5.00	4.78		ug/L		96	70 - 130	7	20
Bromochloromethane	5.00	5.46		ug/L		109	70 - 130	1	20
Bromodichloromethane	5.00	5.12		ug/L		102	70 - 130	6	20
Bromoform	5.00	5.69		ug/L		114	70 - 130	6	20
Bromomethane (Methyl Bromide)	5.00	5.69		ug/L		114	70 - 130	1	20
Carbon disulfide	5.00	4.93		ug/L		99	70 - 130	10	20
Carbon tetrachloride	5.00	5.43		ug/L		109	70 - 130	2	20
Chlorobenzene	5.00	5.01		ug/L		100	70 - 130	5	20
Chlorodibromomethane	5.00	5.53		ug/L		111	70 - 130	5	20
cis-1,3-Dichloropropene	5.00	5.58		ug/L		112	70 - 130	2	20
Dichloromethane	5.00	6.29		ug/L		126	70 - 130	8	20
Ethylbenzene	5.00	5.05		ug/L		101	70 - 130	7	20
Hexachlorobutadiene	5.00	5.39		ug/L		108	70 - 130	3	20
Isopropy benzene	5.00	4.96		ug/L		99	70 - 130	5	20
m,p-Xylenes	10.0	9.83		ug/L		98	70 - 130	4	20

QC Sample Results

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

Job ID: 380-54001-1

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

Lab Sample ID: LCSD 380-47476/12
Matrix: Water
Analysis Batch: 47476

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
m-Dichlorobenzene (1,3-DCB)	5.00	4.79		ug/L		96	70 - 130	6	20
Methyl-tert-butyl Ether (MTBE)	5.00	5.17		ug/L		103	70 - 130	1	20
Naphthalene	5.00	5.37		ug/L		107	70 - 130	4	20
n-Butylbenzene	5.00	4.89		ug/L		98	70 - 130	6	20
N-Propylbenzene	5.00	4.96		ug/L		99	70 - 130	6	20
o-Chlorotoluene	5.00	5.08		ug/L		102	70 - 130	8	20
o-Dichlorobenzene (1,2-DCB)	5.00	5.18		ug/L		104	70 - 130	5	20
o-Xylene	5.00	5.04		ug/L		101	70 - 130	4	20
p-Chlorotoluene	5.00	4.87		ug/L		97	70 - 130	6	20
p-Dichlorobenzene (1,4-DCB)	5.00	4.69		ug/L		94	70 - 130	5	20
p-Isopropyltoluene	5.00	4.84		ug/L		97	70 - 130	7	20
sec-Butylbenzene	5.00	4.84		ug/L		97	70 - 130	6	20
Styrene	5.00	4.79		ug/L		96	70 - 130	3	20
Tert-amyl methyl ether	5.00	5.16		ug/L		103	70 - 130	1	20
1,3-Dichloropropene, Total	10.0	11.5		ug/L		115	70 - 130	1	20
Tert-butyl ethyl ether	5.00	5.52		ug/L		110	70 - 130	4	20
tert-Butylbenzene	5.00	4.77		ug/L		95	70 - 130	6	20
Tetrachloroethene (PCE)	5.00	5.21		ug/L		104	70 - 130	8	20
Toluene	5.00	4.90		ug/L		98	70 - 130	4	20
trans-1,2-Dichloroethylene	5.00	5.42		ug/L		108	70 - 130	6	20
trans-1,3-Dichloropropene	5.00	5.95		ug/L		119	70 - 130	0	20
Trichloroethylene (TCE)	5.00	5.08		ug/L		102	70 - 130	3	20
Bromoethane	5.00	5.37		ug/L		107	70 - 130	12	20
Trichlorofluoromethane (Freon 11)	5.00	5.75		ug/L		115	70 - 130	4	20
Trichlorotrifluoroethane	5.00	6.59	*+	ug/L		132	70 - 130	19	20
Diisopropyl ether	5.00	5.10		ug/L		102	70 - 130	4	20
Vinyl Chloride (VC)	5.00	5.82	^3+	ug/L		116	70 - 130	0	20
Xylenes, Total	15.0	14.9		ug/L		99	70 - 130	4	20

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	101		70 - 130
4-Bromofluorobenzene (Surr)	94		70 - 130
Toluene-d8 (Surr)	101		70 - 130

Lab Sample ID: MRL 380-47476/13
Matrix: Water
Analysis Batch: 47476

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	0.514		ug/L		103	50 - 150
Vinyl Chloride (VC)	0.250	0.390	^3+	ug/L		156	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	MRL Limits
1,2-Dichloroethane-d4 (Surr)	103		70 - 130
4-Bromofluorobenzene (Surr)	100		70 - 130
Toluene-d8 (Surr)	96		70 - 130

QC Sample Results

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

Job ID: 380-54001-1

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

Lab Sample ID: MRL 380-47476/14
Matrix: Water
Analysis Batch: 47476

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	0.653		ug/L		131	50 - 150
1,1,1-Trichloroethane	0.500	0.504		ug/L		101	50 - 150
1,1,2,2-Tetrachloroethane	0.500	0.505		ug/L		101	50 - 150
1,1,2-Trichloroethane	0.500	0.487	J	ug/L		97	50 - 150
1,1-Dichloroethane	0.500	0.603		ug/L		121	50 - 150
1,1-Dichlorethylene	0.500	0.669		ug/L		134	50 - 150
1,1-Dichloropropene	0.500	0.583		ug/L		117	50 - 150
1,2,3-Trichlorobenzene	0.500	0.591		ug/L		118	50 - 150
1,2,3-Trichloropropane	0.500	0.482	J	ug/L		96	50 - 150
1,2,4-Trichlorobenzene	0.500	0.565		ug/L		113	50 - 150
1,2,4-Trimethy benzene	0.500	0.458	J	ug/L		92	50 - 150
1,2-Dichloroethane	0.500	0.565		ug/L		113	50 - 150
1,2-Dichloropropane	0.500	0.541		ug/L		108	50 - 150
1,3,5-Trimethy benzene	0.500	0.449	J	ug/L		90	50 - 150
1,3-Dichloropropane	0.500	0.525		ug/L		105	50 - 150
2,2-Dichloropropane	0.500	0.568		ug/L		114	50 - 150
2-Butanone (MEK)	5.00	5.88		ug/L		118	50 - 150
4-Methyl-2-pentanone (MIBK)	5.00	5.14		ug/L		103	50 - 150
Acetone	5.00	7.23	J	ug/L		145	50 - 150
Benzene	0.500	0.572		ug/L		114	50 - 150
Bromobenzene	0.500	0.531		ug/L		106	50 - 150
Bromochloromethane	0.500	0.523		ug/L		105	50 - 150
Bromodichloromethane	0.500	0.449	J	ug/L		90	50 - 150
Bromoform	0.500	0.620		ug/L		124	50 - 150
Bromomethane (Methyl Bromide)	0.500	0.543		ug/L		109	50 - 150
Carbon disulfide	0.500	0.626		ug/L		125	50 - 150
Carbon tetrachloride	0.500	0.514		ug/L		103	50 - 150
Chlorobenzene	0.500	0.520		ug/L		104	50 - 150
Chlorodibromomethane	0.500	0.627		ug/L		125	50 - 150
cis-1,3-Dichloropropene	0.500	0.652		ug/L		130	50 - 150
Dichloromethane	0.500	0.739		ug/L		148	50 - 150
Ethylbenzene	0.500	0.481	J	ug/L		96	50 - 150
Hexachlorobutadiene	0.500	0.664		ug/L		133	50 - 150
Isopropyl benzene	0.500	0.515		ug/L		103	50 - 150
m,p-Xylenes	1.00	0.934		ug/L		93	50 - 150
m-Dichlorobenzene (1,3-DCB)	0.500	0.492	J	ug/L		98	50 - 150
Methyl-tert-butyl Ether (MTBE)	0.500	0.588		ug/L		118	50 - 150
Naphthalene	0.500	0.503		ug/L		101	50 - 150
n-Butylbenzene	0.500	0.497	J	ug/L		99	50 - 150
N-Propylbenzene	0.500	0.516		ug/L		103	50 - 150
o-Chlorotoluene	0.500	0.568		ug/L		114	50 - 150
o-Dichlorobenzene (1,2-DCB)	0.500	0.557		ug/L		111	50 - 150
o-Xylene	0.500	0.471	J	ug/L		94	50 - 150
p-Chlorotoluene	0.500	0.485	J	ug/L		97	50 - 150
p-Dichlorobenzene (1,4-DCB)	0.500	0.518		ug/L		104	50 - 150
p-Isopropyltoluene	0.500	0.465	J	ug/L		93	50 - 150
sec-Butylbenzene	0.500	0.484	J	ug/L		97	50 - 150
Styrene	0.500	0.435	J	ug/L		87	50 - 150

QC Sample Results

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

Job ID: 380-54001-1

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

Lab Sample ID: MRL 380-47476/14
Matrix: Water
Analysis Batch: 47476

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	0.508	J	ug/L		102	50 - 150
1,3-Dichloropropene, Total	1.00	1.21		ug/L		121	50 - 150
Tert-butyl ethyl ether	0.500	0.562	J	ug/L		112	50 - 150
tert-Butylbenzene	0.500	0.491	J	ug/L		98	50 - 150
Tetrachloroethene (PCE)	0.500	0.547		ug/L		109	50 - 150
Toluene	0.500	0.646		ug/L		129	50 - 150
trans-1,2-Dichloroethylene	0.500	0.606		ug/L		121	50 - 150
trans-1,3-Dichloropropene	0.500	0.558		ug/L		112	50 - 150
Trichloroethylene (TCE)	0.500	0.506		ug/L		101	50 - 150
Bromoethane	0.500	0.726		ug/L		145	50 - 150
Trichlorofluoromethane (Freon 11)	0.500	0.623		ug/L		125	50 - 150
Trichlorotrifluoroethane	0.500	0.643		ug/L		129	50 - 150
Diisopropyl ether	0.500	0.622	J	ug/L		124	50 - 150
Vinyl Chloride (VC)	0.500	0.617		ug/L		123	50 - 150
Xylenes, Total	1.50	1.41		ug/L		94	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	103		70 - 130
4-Bromofluorobenzene (Surr)	101		70 - 130
Toluene-d8 (Surr)	98		70 - 130

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

Lab Sample ID: MB 380-47004/5
Matrix: Water
Analysis Batch: 47004

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)	<2.0		2.0	ug/L			07/11/23 19:41	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	92		70 - 130		07/11/23 19:41	1
4-Bromofluorobenzene (Surr)	96		70 - 130		07/11/23 19:41	1
1,2-Dichloroethane-d4 (Surr)	104		70 - 130		07/11/23 19:41	1

Lab Sample ID: LCS 380-47004/2
Matrix: Water
Analysis Batch: 47004

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	4.41		ug/L		88	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	98		70 - 130
4-Bromofluorobenzene (Surr)	91		70 - 130
1,2-Dichloroethane-d4 (Surr)	103		70 - 130

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QC Sample Results

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

Job ID: 380-54001-1

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

Lab Sample ID: LCSD 380-47004/3
Matrix: Water
Analysis Batch: 47004

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	3.97		ug/L		79	70 - 130	11	20
LCSD LCSD									
Surrogate	%Recovery	Qualifier	Limits						
Toluene-d8 (Surr)	92		70 - 130						
4-Bromofluorobenzene (Surr)	96		70 - 130						
1,2-Dichloroethane-d4 (Surr)	104		70 - 130						

Lab Sample ID: MRL 380-47004/4
Matrix: Water
Analysis Batch: 47004

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	2.07		ug/L		104	50 - 150		
MRL MRL									
Surrogate	%Recovery	Qualifier	Limits						
Toluene-d8 (Surr)	94		50 - 150						
4-Bromofluorobenzene (Surr)	92		50 - 150						
1,2-Dichloroethane-d4 (Surr)	99		50 - 150						

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

Lab Sample ID: MB 380-46988/1-A
Matrix: Water
Analysis Batch: 47196

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 46988

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	<0.099		0.099	ug/L		07/12/23 09:00	07/13/23 14:06	1
2,4'-DDE	<0.099		0.099	ug/L		07/12/23 09:00	07/13/23 14:06	1
2,4'-DDT	<0.099		0.099	ug/L		07/12/23 09:00	07/13/23 14:06	1
2,4-Dinitrotoluene	<0.099		0.099	ug/L		07/12/23 09:00	07/13/23 14:06	1
2,6-Dinitrotoluene	<0.099		0.099	ug/L		07/12/23 09:00	07/13/23 14:06	1
4,4'-DDD	<0.099		0.099	ug/L		07/12/23 09:00	07/13/23 14:06	1
4,4'-DDE	<0.099		0.099	ug/L		07/12/23 09:00	07/13/23 14:06	1
4,4'-DDT	<0.099		0.099	ug/L		07/12/23 09:00	07/13/23 14:06	1
Acenaphthene	<0.099		0.099	ug/L		07/12/23 09:00	07/13/23 14:06	1
Acenaphthylene	<0.099		0.099	ug/L		07/12/23 09:00	07/13/23 14:06	1
Acetochlor	<0.099		0.099	ug/L		07/12/23 09:00	07/13/23 14:06	1
Alachlor	<0.050		0.050	ug/L		07/12/23 09:00	07/13/23 14:06	1
alpha-BHC	<0.099		0.099	ug/L		07/12/23 09:00	07/13/23 14:06	1
alpha-Chlordane	<0.050		0.050	ug/L		07/12/23 09:00	07/13/23 14:06	1
Anthracene	<0.020		0.020	ug/L		07/12/23 09:00	07/13/23 14:06	1
Atrazine	<0.050		0.050	ug/L		07/12/23 09:00	07/13/23 14:06	1
Benz(a)anthracene	<0.050		0.050	ug/L		07/12/23 09:00	07/13/23 14:06	1
Benzo[a]pyrene	<0.020		0.020	ug/L		07/12/23 09:00	07/13/23 14:06	1
Benzo[b]fluoranthene	<0.020		0.020	ug/L		07/12/23 09:00	07/13/23 14:06	1
Benzo[g,h,i]perylene	<0.050		0.050	ug/L		07/12/23 09:00	07/13/23 14:06	1
Benzo[k]fluoranthene	<0.020		0.020	ug/L		07/12/23 09:00	07/13/23 14:06	1
beta-BHC	<0.099		0.099	ug/L		07/12/23 09:00	07/13/23 14:06	1

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QC Sample Results

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

Job ID: 380-54001-1

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

Lab Sample ID: MB 380-46988/1-A
Matrix: Water
Analysis Batch: 47196

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 46988

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Bis(2-ethylhexyl) phthalate	<0.60		0.60	ug/L		07/12/23 09:00	07/13/23 14:06	1
Bromacil	<0.099		0.099	ug/L		07/12/23 09:00	07/13/23 14:06	1
Butachlor	<0.050		0.050	ug/L		07/12/23 09:00	07/13/23 14:06	1
Butylbenzylphthalate	<0.50		0.50	ug/L		07/12/23 09:00	07/13/23 14:06	1
Chlorobenzilate	<0.099		0.099	ug/L		07/12/23 09:00	07/13/23 14:06	1
Chloroneb	<0.099		0.099	ug/L		07/12/23 09:00	07/13/23 14:06	1
Chlorothalonil (Draconil, Bravo)	<0.099		0.099	ug/L		07/12/23 09:00	07/13/23 14:06	1
Chlorpyrifos	<0.050		0.050	ug/L		07/12/23 09:00	07/13/23 14:06	1
Chrysene	<0.020		0.020	ug/L		07/12/23 09:00	07/13/23 14:06	1
delta-BHC	<0.099		0.099	ug/L		07/12/23 09:00	07/13/23 14:06	1
Di(2-ethylhexyl)adipate	<0.60		0.60	ug/L		07/12/23 09:00	07/13/23 14:06	1
Dibenz(a,h)anthracene	<0.050		0.050	ug/L		07/12/23 09:00	07/13/23 14:06	1
Diclorvos (DDVP)	<0.050		0.050	ug/L		07/12/23 09:00	07/13/23 14:06	1
Dieldrin	<0.20		0.20	ug/L		07/12/23 09:00	07/13/23 14:06	1
Diethylphthalate	<0.50		0.50	ug/L		07/12/23 09:00	07/13/23 14:06	1
Dimethylphthalate	<0.50		0.50	ug/L		07/12/23 09:00	07/13/23 14:06	1
Di-n-butyl phthalate	<0.99		0.99	ug/L		07/12/23 09:00	07/13/23 14:06	1
Di-n-octyl phthalate	<0.099		0.099	ug/L		07/12/23 09:00	07/13/23 14:06	1
Endosulfan I (Alpha)	<0.099		0.099	ug/L		07/12/23 09:00	07/13/23 14:06	1
Endosulfan II (Beta)	<0.099		0.099	ug/L		07/12/23 09:00	07/13/23 14:06	1
Endosulfan sulfate	<0.099		0.099	ug/L		07/12/23 09:00	07/13/23 14:06	1
Endrin	<0.099		0.099	ug/L		07/12/23 09:00	07/13/23 14:06	1
Endrin aldehyde	<0.099		0.099	ug/L		07/12/23 09:00	07/13/23 14:06	1
EPTC	<0.099		0.099	ug/L		07/12/23 09:00	07/13/23 14:06	1
Fluoranthene	<0.099		0.099	ug/L		07/12/23 09:00	07/13/23 14:06	1
Fluorene	<0.050		0.050	ug/L		07/12/23 09:00	07/13/23 14:06	1
gamma-BHC (Lindane)	<0.040		0.040	ug/L		07/12/23 09:00	07/13/23 14:06	1
gamma-Chlordane	<0.050		0.050	ug/L		07/12/23 09:00	07/13/23 14:06	1
Heptachlor	<0.040		0.040	ug/L		07/12/23 09:00	07/13/23 14:06	1
Heptachlor epoxide (isomer B)	<0.050		0.050	ug/L		07/12/23 09:00	07/13/23 14:06	1
Hexachlorobenzene	<0.050		0.050	ug/L		07/12/23 09:00	07/13/23 14:06	1
Hexachlorocyclopentadiene	<0.050		0.050	ug/L		07/12/23 09:00	07/13/23 14:06	1
Indeno[1,2,3-cd]pyrene	<0.050		0.050	ug/L		07/12/23 09:00	07/13/23 14:06	1
Isophorone	<0.50		0.50	ug/L		07/12/23 09:00	07/13/23 14:06	1
Malathion	<0.099		0.099	ug/L		07/12/23 09:00	07/13/23 14:06	1
Methoxychlor	<0.099		0.099	ug/L		07/12/23 09:00	07/13/23 14:06	1
Metolachlor	<0.050		0.050	ug/L		07/12/23 09:00	07/13/23 14:06	1
Molinate	<0.099		0.099	ug/L		07/12/23 09:00	07/13/23 14:06	1
Naphthalene	<0.30		0.30	ug/L		07/12/23 09:00	07/13/23 14:06	1
Parathion	<0.099		0.099	ug/L		07/12/23 09:00	07/13/23 14:06	1
Pendimethalin (Penoxaline)	<0.099		0.099	ug/L		07/12/23 09:00	07/13/23 14:06	1
Phenanthrene	<0.040		0.040	ug/L		07/12/23 09:00	07/13/23 14:06	1
Propachlor	<0.050		0.050	ug/L		07/12/23 09:00	07/13/23 14:06	1
Pyrene	<0.050		0.050	ug/L		07/12/23 09:00	07/13/23 14:06	1
Simazine	<0.050		0.050	ug/L		07/12/23 09:00	07/13/23 14:06	1
Terbacil	<0.099		0.099	ug/L		07/12/23 09:00	07/13/23 14:06	1
Terbutylazine	<0.099		0.099	ug/L		07/12/23 09:00	07/13/23 14:06	1
Thiobencarb	<0.20		0.20	ug/L		07/12/23 09:00	07/13/23 14:06	1
Total Permethrin (mixed isomers)	<0.20		0.20	ug/L		07/12/23 09:00	07/13/23 14:06	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-54001-1

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

Lab Sample ID: MB 380-46988/1-A
Matrix: Water
Analysis Batch: 47196

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 46988

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
trans-Nonachlor	<0.050		0.050	ug/L		07/12/23 09:00	07/13/23 14:06	1
Trifluralin	<0.099		0.099	ug/L		07/12/23 09:00	07/13/23 14:06	1
1-Methylnaphthalene	<0.099		0.099	ug/L		07/12/23 09:00	07/13/23 14:06	1
2-Methylnaphthalene	<0.099		0.099	ug/L		07/12/23 09:00	07/13/23 14:06	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Camphene	0.735	T J N	ug/L		2.27	79-92-5	07/12/23 09:00	07/13/23 14:06	1
Unknown	0.690	T J	ug/L		2.54	N/A	07/12/23 09:00	07/13/23 14:06	1
Unknown	0.614	T J	ug/L		2.70	N/A	07/12/23 09:00	07/13/23 14:06	1
Unknown	0.872	T J	ug/L		3.78	N/A	07/12/23 09:00	07/13/23 14:06	1
Tetradecanoic acid	0.721	T J N	ug/L		5.78	544-63-8	07/12/23 09:00	07/13/23 14:06	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	111		70 - 130	07/12/23 09:00	07/13/23 14:06	1
Perylene-d12	104		70 - 130	07/12/23 09:00	07/13/23 14:06	1
Triphenylphosphate	110		70 - 130	07/12/23 09:00	07/13/23 14:06	1

Lab Sample ID: LCS 380-46988/3-A
Matrix: Water
Analysis Batch: 47196

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 46988

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	1.99	1.87		ug/L		94	70 - 130
2,4'-DDE	1.99	1.77		ug/L		89	70 - 130
2,4'-DDT	1.99	1.98		ug/L		99	70 - 130
2,4-Dinitrotoluene	1.99	1.46		ug/L		74	70 - 130
2,6-Dinitrotoluene	1.99	1.55		ug/L		78	70 - 130
4,4'-DDD	1.99	1.91		ug/L		96	70 - 130
4,4'-DDE	1.99	1.92		ug/L		96	70 - 130
4,4'-DDT	1.99	1.88		ug/L		95	70 - 130
Acenaphthene	1.99	1.74		ug/L		88	70 - 130
Acenaphthylene	1.99	1.67		ug/L		84	70 - 130
Acetochlor	1.99	2.23		ug/L		112	70 - 130
Alachlor	1.99	2.04		ug/L		102	70 - 130
alpha-BHC	1.99	1.90		ug/L		96	70 - 130
alpha-Chlordane	1.99	1.84		ug/L		93	70 - 130
Anthracene	1.99	1.76		ug/L		88	70 - 130
Atrazine	1.99	2.08		ug/L		104	70 - 130
Benz(a)anthracene	1.99	1.88		ug/L		95	70 - 130
Benzo[a]pyrene	1.99	1.95		ug/L		98	70 - 130
Benzo[b]fluoranthene	1.99	2.05		ug/L		103	70 - 130
Benzo[g,h,i]perylene	1.99	1.86		ug/L		94	70 - 130
Benzo[k]fluoranthene	1.99	2.09		ug/L		105	70 - 130
beta-BHC	1.99	1.82		ug/L		92	70 - 130
Bis(2-ethylhexyl) phthalate	1.99	2.23		ug/L		112	70 - 130
Bromacil	1.99	1.92		ug/L		97	70 - 130
Butachlor	1.99	1.97		ug/L		99	70 - 130
Butylbenzylphthalate	1.99	2.10		ug/L		106	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-54001-1

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

Lab Sample ID: LCS 380-46988/3-A

Matrix: Water

Analysis Batch: 47196

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 46988

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chlorobenzilate	1.99	2.33		ug/L		117	70 - 130
Chloroneb	1.99	1.86		ug/L		93	70 - 130
Chlorothalonil (Draconil, Bravo)	1.99	1.97		ug/L		99	70 - 130
Chlorpyrifos	1.99	1.99		ug/L		100	70 - 130
Chrysene	1.99	1.99		ug/L		100	70 - 130
delta-BHC	1.99	1.77		ug/L		89	70 - 130
Di(2-ethylhexyl)adipate	1.99	2.29		ug/L		115	70 - 130
Dibenz(a,h)anthracene	1.99	2.01		ug/L		101	70 - 130
Diclorvos (DDVP)	1.99	2.65	*+	ug/L		133	70 - 130
Dieldrin	1.99	1.85		ug/L		93	70 - 130
Diethylphthalate	1.99	1.90		ug/L		96	70 - 130
Dimethylphthalate	1.99	1.89		ug/L		95	70 - 130
Di-n-butyl phthalate	3.98	3.86		ug/L		97	70 - 130
Di-n-octyl phthalate	1.99	2.01		ug/L		101	70 - 130
Endosulfan I (Alpha)	1.99	1.77		ug/L		89	70 - 130
Endosulfan II (Beta)	1.99	1.94		ug/L		98	70 - 130
Endosulfan sulfate	1.99	1.98		ug/L		100	70 - 130
Endrin	1.99	2.01		ug/L		101	70 - 130
Endrin aldehyde	1.99	2.04		ug/L		102	70 - 130
EPTC	1.99	1.96		ug/L		99	70 - 130
Fluoranthene	1.99	1.83		ug/L		92	70 - 130
Fluorene	1.99	1.91		ug/L		96	70 - 130
gamma-BHC (Lindane)	1.99	1.87		ug/L		94	70 - 130
gamma-Chlordane	1.99	1.83		ug/L		92	70 - 130
Heptachlor	1.99	1.82		ug/L		91	70 - 130
Heptachlor epoxide (isomer B)	1.99	1.86		ug/L		94	70 - 130
Hexachlorobenzene	1.99	1.81		ug/L		91	70 - 130
Hexachlorocyclopentadiene	1.99	1.83		ug/L		92	70 - 130
Indeno[1,2,3-cd]pyrene	1.99	2.08		ug/L		104	70 - 130
Isophorone	1.99	2.37		ug/L		119	70 - 130
Malathion	1.99	2.25		ug/L		113	70 - 130
Methoxychlor	1.99	2.01		ug/L		101	70 - 130
Metolachlor	1.99	2.18		ug/L		110	70 - 130
Molinate	1.99	2.03		ug/L		102	70 - 130
Naphthalene	1.99	1.91		ug/L		96	70 - 130
Parathion	1.99	1.91		ug/L		96	70 - 130
Pendimethalin (Penoxaline)	1.99	1.78		ug/L		90	70 - 130
Phenanthrene	1.99	1.75		ug/L		88	70 - 130
Propachlor	1.99	2.02		ug/L		101	70 - 130
Pyrene	1.99	1.87		ug/L		94	70 - 130
Simazine	1.99	2.09		ug/L		105	70 - 130
Terbacil	1.99	2.06		ug/L		103	70 - 130
Terbutylazine	1.99	2.07		ug/L		104	70 - 130
Thiobencarb	1.99	2.05		ug/L		103	70 - 130
trans-Nonachlor	1.99	1.85		ug/L		93	70 - 130
Trifluralin	1.99	1.82		ug/L		91	70 - 130
1-Methylnaphthalene	1.99	1.90		ug/L		96	70 - 130
2-Methylnaphthalene	1.99	1.93		ug/L		97	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-54001-1

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

Lab Sample ID: LCS 380-46988/3-A
Matrix: Water
Analysis Batch: 47196

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 46988

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Nitro-m-xylene	104		70 - 130
Perylene-d12	94		70 - 130
Triphenylphosphate	100		70 - 130

Lab Sample ID: LCSD 380-46988/4-A
Matrix: Water
Analysis Batch: 47196

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 46988

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,4'-DDD	1.99	2.24		ug/L		112	70 - 130	18	20
2,4'-DDE	1.99	2.16		ug/L		108	70 - 130	20	20
2,4'-DDT	1.99	2.30		ug/L		115	70 - 130	15	20
2,4-Dinitrotoluene	1.99	1.59		ug/L		80	70 - 130	8	20
2,6-Dinitrotoluene	1.99	1.70		ug/L		86	70 - 130	9	20
4,4'-DDD	1.99	2.24		ug/L		112	70 - 130	16	20
4,4'-DDE	1.99	2.30		ug/L		115	70 - 130	18	20
4,4'-DDT	1.99	2.12		ug/L		107	70 - 130	12	20
Acenaphthene	1.99	1.74		ug/L		87	70 - 130	0	20
Acenaphthylene	1.99	1.79		ug/L		90	70 - 130	7	20
Acetochlor	1.99	2.41		ug/L		121	70 - 130	8	20
Alachlor	1.99	2.18		ug/L		109	70 - 130	7	20
alpha-BHC	1.99	1.96		ug/L		98	70 - 130	3	20
alpha-Chlordane	1.99	2.21		ug/L		111	70 - 130	18	20
Anthracene	1.99	1.80		ug/L		90	70 - 130	2	20
Atrazine	1.99	2.23		ug/L		112	70 - 130	7	20
Benz(a)anthracene	1.99	2.17		ug/L		109	70 - 130	14	20
Benzo[a]pyrene	1.99	2.28		ug/L		114	70 - 130	15	20
Benzo[b]fluoranthene	1.99	2.35		ug/L		118	70 - 130	13	20
Benzo[g,h,i]perylene	1.99	1.96		ug/L		98	70 - 130	5	20
Benzo[k]fluoranthene	1.99	2.34		ug/L		117	70 - 130	11	20
beta-BHC	1.99	1.93		ug/L		97	70 - 130	6	20
Bis(2-ethylhexyl) phthalate	1.99	2.25		ug/L		113	70 - 130	1	20
Bromacil	1.99	2.25		ug/L		113	70 - 130	16	20
Butachlor	1.99	2.39		ug/L		120	70 - 130	19	20
Butylbenzylphthalate	1.99	2.38		ug/L		120	70 - 130	13	20
Chlorobenzilate	1.99	2.65	*+	ug/L		133	70 - 130	13	20
Chloroneb	1.99	1.89		ug/L		95	70 - 130	2	20
Chlorothalonil (Draconil, Bravo)	1.99	2.23		ug/L		112	70 - 130	13	20
Chlorpyrifos	1.99	2.22		ug/L		111	70 - 130	11	20
Chrysene	1.99	2.03		ug/L		102	70 - 130	2	20
delta-BHC	1.99	1.93		ug/L		97	70 - 130	9	20
Di(2-ethylhexyl)adipate	1.99	2.57		ug/L		129	70 - 130	11	20
Dibenz(a,h)anthracene	1.99	2.08		ug/L		105	70 - 130	3	20
Diclorvos (DDVP)	1.99	2.80	*+	ug/L		140	70 - 130	5	20
Dieldrin	1.99	2.18		ug/L		110	70 - 130	16	20
Diethylphthalate	1.99	1.98		ug/L		99	70 - 130	4	20
Dimethylphthalate	1.99	2.00		ug/L		100	70 - 130	5	20
Di-n-butyl phthalate	3.98	4.26		ug/L		107	70 - 130	10	20

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-54001-1

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

Lab Sample ID: LCSD 380-46988/4-A
Matrix: Water
Analysis Batch: 47196

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 46988

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Di-n-octyl phthalate	1.99	2.17		ug/L		109	70 - 130	7	20
Endosulfan I (Alpha)	1.99	2.07		ug/L		104	70 - 130	15	20
Endosulfan II (Beta)	1.99	2.18		ug/L		109	70 - 130	11	20
Endosulfan sulfate	1.99	2.16		ug/L		108	70 - 130	8	20
Endrin	1.99	2.14		ug/L		108	70 - 130	7	20
Endrin aldehyde	1.99	2.28		ug/L		114	70 - 130	11	20
EPTC	1.99	2.13		ug/L		107	70 - 130	8	20
Fluoranthene	1.99	2.20		ug/L		110	70 - 130	18	20
Fluorene	1.99	1.89		ug/L		95	70 - 130	1	20
gamma-BHC (Lindane)	1.99	2.01		ug/L		101	70 - 130	7	20
gamma-Chlordane	1.99	2.19		ug/L		110	70 - 130	18	20
Heptachlor	1.99	1.96		ug/L		98	70 - 130	7	20
Heptachlor epoxide (isomer B)	1.99	2.31	*1	ug/L		116	70 - 130	21	20
Hexachlorobenzene	1.99	1.80		ug/L		90	70 - 130	1	20
Hexachlorocyclopentadiene	1.99	2.00		ug/L		100	70 - 130	9	20
Indeno[1,2,3-cd]pyrene	1.99	2.07		ug/L		104	70 - 130	0	20
Isophorone	1.99	2.43		ug/L		122	70 - 130	2	20
Malathion	1.99	2.47		ug/L		124	70 - 130	9	20
Methoxychlor	1.99	2.03		ug/L		102	70 - 130	1	20
Metolachlor	1.99	2.43		ug/L		122	70 - 130	11	20
Molinate	1.99	2.14		ug/L		107	70 - 130	5	20
Naphthalene	1.99	1.97		ug/L		99	70 - 130	3	20
Parathion	1.99	2.20		ug/L		111	70 - 130	14	20
Pendimethalin (Penoxaline)	1.99	2.16		ug/L		109	70 - 130	19	20
Phenanthrene	1.99	1.75		ug/L		88	70 - 130	0	20
Propachlor	1.99	2.18		ug/L		109	70 - 130	8	20
Pyrene	1.99	2.26		ug/L		113	70 - 130	19	20
Simazine	1.99	2.23		ug/L		112	70 - 130	6	20
Terbacil	1.99	2.43		ug/L		122	70 - 130	17	20
Terbutylazine	1.99	2.28		ug/L		115	70 - 130	10	20
Thiobencarb	1.99	2.27		ug/L		114	70 - 130	10	20
trans-Nonachlor	1.99	2.24		ug/L		113	70 - 130	19	20
Trifluralin	1.99	1.97		ug/L		99	70 - 130	8	20
1-Methylnaphthalene	1.99	2.01		ug/L		101	70 - 130	6	20
2-Methylnaphthalene	1.99	2.02		ug/L		101	70 - 130	5	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Nitro-m-xylene	107		70 - 130
Perylene-d12	103		70 - 130
Triphenylphosphate	112		70 - 130

Lab Sample ID: MRL 380-46988/2-A
Matrix: Water
Analysis Batch: 47196

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 46988

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	0.0994	0.136		ug/L		137	50 - 150
2,4'-DDE	0.0994	0.0992		ug/L		100	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-54001-1

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

Lab Sample ID: MRL 380-46988/2-A
Matrix: Water
Analysis Batch: 47196

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 46988

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDT	0.0994	0.104		ug/L		105	50 - 150
2,4-Dinitrotoluene	0.0994	0.0894	J	ug/L		90	50 - 150
2,6-Dinitrotoluene	0.0994	0.0943	J	ug/L		95	50 - 150
4,4'-DDD	0.0994	0.108		ug/L		109	50 - 150
4,4'-DDE	0.0994	0.0955	J	ug/L		96	50 - 150
4,4'-DDT	0.0994	0.127		ug/L		127	50 - 150
Acenaphthene	0.0994	0.0922	J	ug/L		93	50 - 150
Acenaphthylene	0.0994	0.0885	J	ug/L		89	50 - 150
Acetochlor	0.0497	0.0463	J	ug/L		93	50 - 150
Alachlor	0.0497	0.0695		ug/L		140	50 - 150
alpha-BHC	0.0994	0.0988	J	ug/L		99	50 - 150
alpha-Chlordane	0.0249	0.0297	J	ug/L		119	50 - 150
Anthracene	0.0199	<0.019		ug/L		94	50 - 150
Atrazine	0.0497	0.0499	J	ug/L		100	50 - 150
Benz(a)anthracene	0.0497	0.0463	J	ug/L		93	50 - 150
Benzo[a]pyrene	0.0199	0.0167	J	ug/L		84	50 - 150
Benzo[b]fluoranthene	0.0199	0.0213		ug/L		107	50 - 150
Benzo[g,h,i]perylene	0.0497	0.0399	J	ug/L		80	50 - 150
Benzo[k]fluoranthene	0.0199	0.0201		ug/L		101	50 - 150
beta-BHC	0.0994	0.108		ug/L		109	50 - 150
Bis(2-ethylhexyl) phthalate	0.596	0.703		ug/L		118	50 - 150
Bromacil	0.0994	0.176	^3+	ug/L		177	50 - 150
Butachlor	0.0497	0.0629		ug/L		127	50 - 150
Butylbenzylphthalate	0.149	0.156	J	ug/L		105	50 - 150
Chlorobenzilate	0.0994	0.231	^3+	ug/L		233	50 - 150
Chloroneb	0.0994	0.0976	J	ug/L		98	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0994	0.114		ug/L		115	50 - 150
Chlorpyrifos	0.0497	0.0515		ug/L		104	50 - 150
Chrysene	0.0199	0.0240		ug/L		121	50 - 150
delta-BHC	0.0994	0.111		ug/L		112	50 - 150
Di(2-ethylhexyl)adipate	0.298	0.406	J	ug/L		136	50 - 150
Dibenz(a,h)anthracene	0.0497	0.0383	J	ug/L		77	50 - 150
Diclorvos (DDVP)	0.0497	0.0944	^3+	ug/L		190	50 - 150
Dieldrin	0.0994	0.110	J	ug/L		111	50 - 150
Diethylphthalate	0.149	0.149	J	ug/L		100	50 - 150
Dimethylphthalate	0.298	0.307	J	ug/L		103	50 - 150
Di-n-butyl phthalate	0.298	0.394	J	ug/L		132	49 - 243
Di-n-octyl phthalate	0.0994	0.103		ug/L		104	50 - 150
Endosulfan I (Alpha)	0.0994	0.0988	J	ug/L		99	50 - 150
Endosulfan II (Beta)	0.0994	0.105		ug/L		105	50 - 150
Endosulfan sulfate	0.0994	0.0937	J	ug/L		94	50 - 150
Endrin	0.0994	0.139		ug/L		140	50 - 150
Endrin aldehyde	0.0994	0.141		ug/L		142	50 - 150
EPTC	0.0994	0.109		ug/L		109	50 - 150
Fluoranthene	0.0497	0.0529	J	ug/L		106	50 - 150
Fluorene	0.0497	0.0517		ug/L		104	50 - 150
gamma-BHC (Lindane)	0.0398	0.0353	J	ug/L		89	50 - 150
gamma-Chlordane	0.0249	0.0293	J	ug/L		118	50 - 150
Heptachlor	0.0398	0.0475		ug/L		119	50 - 150

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QC Sample Results

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

Job ID: 380-54001-1

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

Lab Sample ID: MRL 380-46988/2-A
Matrix: Water
Analysis Batch: 47196

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 46988

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Heptachlor epoxide (isomer B)	0.0497	0.0543		ug/L		109	50 - 150
Hexachlorobenzene	0.0497	0.0452	J	ug/L		91	50 - 150
Hexachlorocyclopentadiene	0.0497	0.0452	J	ug/L		91	50 - 150
Indeno[1,2,3-cd]pyrene	0.0497	0.0402	J	ug/L		81	50 - 150
Isophorone	0.0994	0.129	J	ug/L		130	50 - 150
Malathion	0.0994	0.109		ug/L		110	50 - 150
Methoxychlor	0.0994	0.0956	J	ug/L		96	50 - 150
Metolachlor	0.0497	0.0579		ug/L		116	50 - 150
Molinate	0.0994	0.112		ug/L		113	50 - 150
Naphthalene	0.0994	0.121	J	ug/L		122	50 - 150
Parathion	0.0994	0.105		ug/L		105	50 - 150
Pendimethalin (Penoxaline)	0.0994	0.116		ug/L		117	50 - 150
Phenanthrene	0.0199	0.0198	J	ug/L		99	50 - 150
Propachlor	0.0497	0.0482	J	ug/L		97	50 - 150
Pyrene	0.0497	0.0525		ug/L		106	50 - 150
Simazine	0.0497	0.0584		ug/L		117	50 - 150
Terbacil	0.0994	0.115		ug/L		115	50 - 150
Terbutylazine	0.0994	0.105		ug/L		105	50 - 150
Thiobencarb	0.0994	0.114	J	ug/L		115	50 - 150
trans-Nonachlor	0.0249	0.0265	J	ug/L		107	50 - 150
Trifluralin	0.0994	0.105		ug/L		105	50 - 150
1-Methylnaphthalene	0.0994	0.118		ug/L		118	50 - 150
2-Methylnaphthalene	0.0994	0.109		ug/L		110	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
2-Nitro-m-xylene	110		70 - 130
Perylene-d12	93		70 - 130
Triphenylphosphate	104		70 - 130

Lab Sample ID: 380-53890-H-5-A MS
Matrix: Water
Analysis Batch: 47196

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 46988

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	<0.098		1.96	2.28		ug/L		116	70 - 130
2,4'-DDE	<0.098		1.96	2.13		ug/L		108	70 - 130
2,4'-DDT	<0.098		1.96	2.40		ug/L		122	70 - 130
2,4-Dinitrotoluene	<0.098		1.96	1.86		ug/L		94	70 - 130
2,6-Dinitrotoluene	<0.098		1.96	1.91		ug/L		97	70 - 130
4,4'-DDD	<0.098		1.96	2.38		ug/L		121	70 - 130
4,4'-DDE	<0.098		1.96	2.23		ug/L		113	70 - 130
4,4'-DDT	<0.098		1.96	2.20		ug/L		112	70 - 130
Acenaphthene	<0.098		1.96	1.79		ug/L		91	70 - 130
Acenaphthylene	<0.098		1.96	1.91		ug/L		97	70 - 130
Acetochlor	<0.098		1.96	2.48		ug/L		126	70 - 130
Alachlor	<0.049		1.96	2.15		ug/L		109	70 - 130
alpha-BHC	<0.098		1.96	2.07		ug/L		105	70 - 130
alpha-Chlordane	<0.049		1.96	2.27		ug/L		116	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-54001-1

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

Lab Sample ID: 380-53890-H-5-A MS
Matrix: Water
Analysis Batch: 47196

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 46988

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier	Added	Result	Qualifier				
Anthracene	<0.020		1.96	1.76		ug/L		90	70 - 130
Atrazine	<0.049		1.96	2.47		ug/L		126	70 - 130
Benz(a)anthracene	<0.049		1.96	2.09		ug/L		106	70 - 130
Benzo[a]pyrene	<0.020		1.96	2.11		ug/L		107	70 - 130
Benzo[b]fluoranthene	<0.020		1.96	2.21		ug/L		113	70 - 130
Benzo[g,h,i]perylene	<0.049		1.96	1.79		ug/L		91	70 - 130
Benzo[k]fluoranthene	<0.020		1.96	2.11		ug/L		107	70 - 130
beta-BHC	<0.098		1.96	2.13		ug/L		108	70 - 130
Bis(2-ethylhexyl) phthalate	<0.59		1.96	2.13		ug/L		108	70 - 130
Bromacil	<0.098	^3+	1.96	2.56		ug/L		126	70 - 130
Butachlor	<0.049		1.96	2.39		ug/L		122	70 - 130
Butylbenzylphthalate	<0.49		1.96	2.50		ug/L		127	70 - 130
Chlorobenzilate	<0.098	F1 ^3+ *+	1.96	2.82	F1	ug/L		144	70 - 130
Chloroneb	<0.098		1.96	1.93		ug/L		98	70 - 130
Chlorothalonil (Draconil, Bravo)	<0.098		1.96	2.26		ug/L		115	70 - 130
Chlorpyrifos	<0.049		1.96	2.29		ug/L		117	70 - 130
Chrysene	<0.020		1.96	2.00		ug/L		102	70 - 130
delta-BHC	<0.098		1.96	1.98		ug/L		101	70 - 130
Di(2-ethylhexyl)adipate	<0.59		1.96	2.46		ug/L		125	70 - 130
Dibenz(a,h)anthracene	<0.049		1.96	1.94		ug/L		99	70 - 130
Diclorvos (DDVP)	<0.049	F1 ^3+ *+	1.96	2.91	F1	ug/L		148	70 - 130
Dieldrin	<0.20		1.96	2.21		ug/L		113	70 - 130
Diethylphthalate	<0.49		1.96	2.08		ug/L		106	70 - 130
Dimethylphthalate	<0.49		1.96	2.14		ug/L		109	70 - 130
Di-n-butyl phthalate	<0.98		3.93	4.36		ug/L		111	70 - 130
Di-n-octyl phthalate	<0.098		1.96	1.90		ug/L		97	70 - 130
Endosulfan I (Alpha)	<0.098		1.96	2.06		ug/L		105	70 - 130
Endosulfan II (Beta)	<0.098		1.96	2.33		ug/L		119	70 - 130
Endosulfan sulfate	<0.098		1.96	2.33		ug/L		119	70 - 130
Endrin	<0.098		1.96	2.23		ug/L		113	70 - 130
Endrin aldehyde	<0.098		1.96	2.07		ug/L		105	70 - 130
EPTC	<0.098		1.96	2.22		ug/L		113	70 - 130
Fluoranthene	<0.098		1.96	2.25		ug/L		115	70 - 130
Fluorene	<0.049		1.96	2.04		ug/L		104	70 - 130
gamma-BHC (Lindane)	<0.039		1.96	2.07		ug/L		105	70 - 130
gamma-Chlordane	<0.049		1.96	2.26		ug/L		115	70 - 130
Heptachlor	<0.039		1.96	1.94		ug/L		99	70 - 130
Heptachlor epoxide (isomer B)	<0.049	*1	1.96	2.32		ug/L		118	70 - 130
Hexachlorobenzene	<0.049		1.96	1.93		ug/L		98	70 - 130
Hexachlorocyclopentadiene	<0.049		1.96	2.14		ug/L		109	70 - 130
Indeno[1,2,3-cd]pyrene	<0.049		1.96	1.91		ug/L		97	70 - 130
Isophorone	<0.49		1.96	2.45		ug/L		125	70 - 130
Malathion	<0.098	F1	1.96	2.58	F1	ug/L		131	70 - 130
Methoxychlor	<0.098		1.96	2.16		ug/L		110	70 - 130
Metolachlor	<0.049		1.96	2.51		ug/L		128	70 - 130
Molinate	<0.098		1.96	2.27		ug/L		116	70 - 130
Naphthalene	<0.29		1.96	2.00		ug/L		102	70 - 130
Parathion	<0.098		1.96	2.28		ug/L		116	70 - 130
Pendimethalin (Penoxaline)	<0.098		1.96	2.20		ug/L		112	70 - 130

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QC Sample Results

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

Job ID: 380-54001-1

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

Lab Sample ID: 380-54001-1 DU
Matrix: Water
Analysis Batch: 47196

Client Sample ID: AIEA WELLS P2 (260)
Prep Type: Total/NA
Prep Batch: 46988

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Chlorobenzilate	<0.098	^3+ *+	<0.098	*+	ug/L		NC	20
Chloroneb	<0.098		<0.098		ug/L		NC	20
Chlorothalonil (Draconil, Bravo)	<0.098		<0.098		ug/L		NC	20
Chlorpyrifos	<0.049		<0.049		ug/L		NC	20
Chrysene	<0.020		<0.020		ug/L		NC	20
delta-BHC	<0.098		<0.098		ug/L		NC	20
Di(2-ethylhexyl)adipate	<0.59		<0.59		ug/L		NC	20
Dibenz(a,h)anthracene	<0.049		<0.049		ug/L		NC	20
Diclorvos (DDVP)	<0.049	^3+ *+	<0.049	*+	ug/L		NC	20
Dieldrin	<0.20		<0.20		ug/L		NC	20
Diethylphthalate	<0.49		<0.49		ug/L		NC	20
Dimethylphthalate	<0.49		<0.49		ug/L		NC	20
Di-n-butyl phthalate	<0.98		<0.98		ug/L		NC	20
Di-n-octyl phthalate	<0.098		<0.098		ug/L		NC	20
Endosulfan I (Alpha)	<0.098		<0.098		ug/L		NC	20
Endosulfan II (Beta)	<0.098		<0.098		ug/L		NC	20
Endosulfan sulfate	<0.098		<0.098		ug/L		NC	20
Endrin	<0.098		<0.098		ug/L		NC	20
Endrin aldehyde	<0.098		<0.098		ug/L		NC	20
EPTC	<0.098		<0.098		ug/L		NC	20
Fluoranthene	<0.098		<0.098		ug/L		NC	20
Fluorene	<0.049		<0.049		ug/L		NC	20
gamma-BHC (Lindane)	<0.039		<0.039		ug/L		NC	20
gamma-Chlordane	<0.049		<0.049		ug/L		NC	20
Heptachlor	<0.039		<0.039		ug/L		NC	20
Heptachlor epoxide (isomer B)	<0.049	*1	<0.049	*1	ug/L		NC	20
Hexachlorobenzene	<0.049		<0.049		ug/L		NC	20
Hexachlorocyclopentadiene	<0.049		<0.049		ug/L		NC	20
Indeno[1,2,3-cd]pyrene	<0.049		<0.049		ug/L		NC	20
Isophorone	<0.49		<0.49		ug/L		NC	20
Malathion	<0.098		<0.098		ug/L		NC	20
Methoxychlor	<0.098		<0.098		ug/L		NC	20
Metolachlor	<0.049		<0.049		ug/L		NC	20
Molinate	<0.098		<0.098		ug/L		NC	20
Naphthalene	<0.30		<0.29		ug/L		NC	20
Parathion	<0.098		<0.098		ug/L		NC	20
Pendimethalin (Penoxaline)	<0.098		<0.098		ug/L		NC	20
Phenanthrene	<0.039		<0.039		ug/L		NC	20
Propachlor	<0.049		<0.049		ug/L		NC	20
Pyrene	<0.049		<0.049		ug/L		NC	20
Simazine	<0.049		<0.049		ug/L		NC	20
Terbacil	<0.098		<0.098		ug/L		NC	20
Terbutylazine	<0.098		<0.098		ug/L		NC	20
Thiobencarb	<0.20		<0.20		ug/L		NC	20
Total Permethrin (mixed isomers)	<0.20		<0.20		ug/L		NC	20
trans-Nonachlor	<0.049		<0.049		ug/L		NC	20
Trifluralin	<0.098		<0.098		ug/L		NC	20
1-Methylnaphthalene	<0.098		<0.098		ug/L		NC	20
2-Methylnaphthalene	<0.098		<0.098		ug/L		NC	20

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QC Sample Results

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

Job ID: 380-54001-1

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

Surrogate	DU DU		Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	109		70 - 130
Perylene-d12	105		70 - 130
Triphenylphosphate	104		70 - 130

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

Lab Sample ID: MBL 380-46999/4-A
Matrix: Water
Analysis Batch: 47186

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 46999

Analyte	MBL MBL		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
1,2,3-Trichloropropane	<0.0040		0.040	ug/L		07/12/23 11:55	07/12/23 15:47	1
1,2-D bromo-3-Chloropropane	<0.0010		0.010	ug/L		07/12/23 11:55	07/12/23 15:47	1
1,2-D bromoethane	<0.0040		0.010	ug/L		07/12/23 11:55	07/12/23 15:47	1

Surrogate	MBL MBL		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dibromopropane (Surr)	100		60 - 140	07/12/23 11:55	07/12/23 15:47	1

Lab Sample ID: LCS 380-46999/3-A
Matrix: Water
Analysis Batch: 47186

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 46999

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
1,2,3-Trichloropropane	0.200	0.206		ug/L		103	70 - 130
1,2-D bromo-3-Chloropropane	0.200	0.194		ug/L		97	70 - 130
1,2-D bromoethane	0.200	0.220		ug/L		110	70 - 130

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dibromopropane (Surr)	101		60 - 140

Lab Sample ID: MRL 380-46999/1-A
Matrix: Water
Analysis Batch: 47186

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 46999

Analyte	Spike Added	MRL MRL		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
1,2,3-Trichloropropane	0.0400	0.0418		ug/L		105	60 - 140

Surrogate	MRL MRL		Limits
	%Recovery	Qualifier	
1,2-Dibromopropane (Surr)	97		60 - 140

Lab Sample ID: MRL 380-46999/2-A
Matrix: Water
Analysis Batch: 47186

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 46999

Analyte	Spike Added	MRL MRL		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
1,2,3-Trichloropropane	0.0500	0.0557		ug/L		111	60 - 140
1,2-D bromo-3-Chloropropane	0.0100	0.0110		ug/L		110	60 - 140
1,2-D bromoethane	0.0100	0.0104		ug/L		104	60 - 140

QC Sample Results

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

Job ID: 380-54001-1

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

Lab Sample ID: MRL 380-46999/2-A
Matrix: Water
Analysis Batch: 47186

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 46999

<i>Surrogate</i>	<i>%Recovery</i>	<i>MRL MRL Qualifier</i>	<i>Limits</i>
1,2-Dibromopropane (Surr)	99		60 - 140

Lab Sample ID: 380-53751-C-1-A MS
Matrix: Water
Analysis Batch: 47186

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 46999

<i>Analyte</i>	<i>Sample Result</i>	<i>Sample Qualifier</i>	<i>Spike Added</i>	<i>MS Result</i>	<i>MS Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>Limits</i>
1,2,3-Trichloropropane	<0.040		1.23	1.22		ug/L		99	65 - 135
1,2-D bromo-3-Chloropropane	<0.010		0.246	0.243		ug/L		99	65 - 135
1,2-D bromoethane	<0.010		0.246	0.246		ug/L		100	65 - 135

<i>Surrogate</i>	<i>%Recovery</i>	<i>MS MS Qualifier</i>	<i>Limits</i>
1,2-Dibromopropane (Surr)	101		60 - 140

Lab Sample ID: 380-53751-C-2-A DU
Matrix: Water
Analysis Batch: 47186

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 46999

<i>Analyte</i>	<i>Sample Result</i>	<i>Sample Qualifier</i>	<i>DU Result</i>	<i>DU Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>RPD</i>	<i>Limit</i>
1,2,3-Trichloropropane	<0.039		<0.039		ug/L		NC	20
1,2-D bromo-3-Chloropropane	<0.0099		<0.0098		ug/L		NC	20
1,2-D bromoethane	<0.0099		<0.0098		ug/L		NC	20

<i>Surrogate</i>	<i>%Recovery</i>	<i>DU DU Qualifier</i>	<i>Limits</i>
1,2-Dibromopropane (Surr)	102		60 - 140

Method: 505 - Organochlorine Pesticides/PCBs (GC)

Lab Sample ID: MBL 380-47215/4-A
Matrix: Water
Analysis Batch: 47548

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 47215

<i>Analyte</i>	<i>MBL Result</i>	<i>MBL Qualifier</i>	<i>RL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Aldrin	<0.0020		0.010	ug/L		07/13/23 12:24	07/13/23 16:30	1
Dieldrin	<0.0050		0.010	ug/L		07/13/23 12:24	07/13/23 16:30	1
Toxaphene	<0.083		0.50	ug/L		07/13/23 12:24	07/13/23 16:30	1
Alachlor	<0.041		0.10	ug/L		07/13/23 12:24	07/13/23 16:30	1
Chlordane (n.o.s.)	<0.032		0.10	ug/L		07/13/23 12:24	07/13/23 16:30	1
Endrin	<0.0050		0.010	ug/L		07/13/23 12:24	07/13/23 16:30	1
Heptachlor	<0.0030		0.010	ug/L		07/13/23 12:24	07/13/23 16:30	1
Heptachlor epoxide	<0.0050		0.010	ug/L		07/13/23 12:24	07/13/23 16:30	1
gamma-BHC (Lindane)	<0.0070		0.010	ug/L		07/13/23 12:24	07/13/23 16:30	1
Methoxychlor	<0.022		0.050	ug/L		07/13/23 12:24	07/13/23 16:30	1
PCB-1016	<0.022		0.070	ug/L		07/13/23 12:24	07/13/23 16:30	1
PCB-1221	<0.079		0.10	ug/L		07/13/23 12:24	07/13/23 16:30	1
PCB-1232	<0.085		0.10	ug/L		07/13/23 12:24	07/13/23 16:30	1
PCB-1242	<0.072		0.10	ug/L		07/13/23 12:24	07/13/23 16:30	1
PCB-1248	<0.023		0.10	ug/L		07/13/23 12:24	07/13/23 16:30	1

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QC Sample Results

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

Job ID: 380-54001-1

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

Lab Sample ID: MBL 380-47215/4-A
Matrix: Water
Analysis Batch: 47548

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 47215

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1254	<0.035		0.10	ug/L		07/13/23 12:24	07/13/23 16:30	1
PCB-1260	<0.033		0.070	ug/L		07/13/23 12:24	07/13/23 16:30	1
Polychlorinated biphenyls, Total	<0.085		0.10	ug/L		07/13/23 12:24	07/13/23 16:30	1
Surrogate	%Recovery	MBL Qualifier	Limits			Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	107		70 - 130			07/13/23 12:24	07/13/23 16:30	1

Lab Sample ID: MRL 380-47215/2-A
Matrix: Water
Analysis Batch: 47548

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 47215

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Aldrin	0.0100	0.0110		ug/L		110	50 - 150
Dieldrin	0.0100	0.0103		ug/L		103	50 - 150
Alachlor	0.100	0.0955	J	ug/L		96	50 - 150
Endrin	0.0100	0.0104		ug/L		104	50 - 150
Heptachlor	0.0100	0.00933	J	ug/L		93	50 - 150
Heptachlor epoxide	0.0100	0.00940	J	ug/L		94	50 - 150
gamma-BHC (Lindane)	0.0100	0.00999	J	ug/L		100	50 - 150
Methoxychlor	0.0500	0.0432	J	ug/L		86	50 - 150
Surrogate	%Recovery	MRL Qualifier	Limits				
Tetrachloro-m-xylene	95		70 - 130				

Lab Sample ID: MRL 380-47215/3-A
Matrix: Water
Analysis Batch: 47548

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 47215

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Toxaphene	0.500	0.451	J	ug/L		90	50 - 150
Surrogate	%Recovery	MRL Qualifier	Limits				
Tetrachloro-m-xylene	100		70 - 130				

Lab Sample ID: 380-54001-1 MS
Matrix: Water
Analysis Batch: 47548

Client Sample ID: AIEA WELLS P2 (260)
Prep Type: Total/NA
Prep Batch: 47215

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Aldrin	<0.010		0.0199	0.0201		ug/L		101	65 - 135
Dieldrin	0.011		0.0199	0.0304		ug/L		96	65 - 135
Alachlor	<0.10		0.199	0.192		ug/L		97	65 - 135
Endrin	<0.010		0.0199	0.0195		ug/L		98	65 - 135
Heptachlor	<0.010		0.0199	0.0177		ug/L		89	65 - 135
Heptachlor epoxide	<0.010		0.0199	0.0213		ug/L		107	65 - 135
gamma-BHC (Lindane)	<0.010		0.0199	0.0192		ug/L		97	65 - 135
Methoxychlor	<0.050		0.0994	0.0813		ug/L		82	65 - 135

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-54001-1

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

Lab Sample ID: 380-54001-1 MS
Matrix: Water
Analysis Batch: 47548

Client Sample ID: AIEA WELLS P2 (260)
Prep Type: Total/NA
Prep Batch: 47215

	<i>MS</i>	<i>MS</i>	
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Tetrachloro-m-xylene	96		70 - 130

Lab Sample ID: 380-54001-1 MS
Matrix: Water
Analysis Batch: 47548

Client Sample ID: AIEA WELLS P2 (260)
Prep Type: Total/NA
Prep Batch: 47215

<i>Analyte</i>	<i>Sample Result</i>	<i>Sample Qualifier</i>	<i>Spike Added</i>	<i>MS Result</i>	<i>MS Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec Limits</i>
Toxaphene	<0.50		2.47	2.27		ug/L		92	65 - 135

	<i>MS</i>	<i>MS</i>	
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Tetrachloro-m-xylene	96		70 - 130

Lab Sample ID: 380-54156-B-1-A MS
Matrix: Water
Analysis Batch: 47548

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 47215

<i>Analyte</i>	<i>Sample Result</i>	<i>Sample Qualifier</i>	<i>Spike Added</i>	<i>MS Result</i>	<i>MS Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec Limits</i>
Aldrin	<0.010		0.101	0.0991		ug/L		99	65 - 135
Dieldrin	<0.010		0.101	0.102		ug/L		101	65 - 135
Alachlor	<0.10		1.01	1.00		ug/L		100	65 - 135
Endrin	<0.010		0.101	0.102		ug/L		102	65 - 135
Heptachlor	<0.010		0.101	0.0975		ug/L		97	65 - 135
Heptachlor epoxide	<0.010		0.101	0.101		ug/L		101	65 - 135
gamma-BHC (Lindane)	<0.010		0.101	0.101		ug/L		100	65 - 135
Methoxychlor	<0.050		0.503	0.483		ug/L		96	65 - 135

	<i>MS</i>	<i>MS</i>	
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Tetrachloro-m-xylene	102		70 - 130

Lab Sample ID: 380-54156-C-1-A MS
Matrix: Water
Analysis Batch: 47548

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 47215

<i>Analyte</i>	<i>Sample Result</i>	<i>Sample Qualifier</i>	<i>Spike Added</i>	<i>MS Result</i>	<i>MS Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec Limits</i>
Toxaphene	<0.50		2.49	2.76		ug/L		111	65 - 135

	<i>MS</i>	<i>MS</i>	
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
Tetrachloro-m-xylene	107		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 380-46941/4
Matrix: Water
Analysis Batch: 46941

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

<i>Analyte</i>	<i>MB Result</i>	<i>MB Qualifier</i>	<i>RL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Nitrate as N	<0.050		0.050	mg/L			07/11/23 11:47	1
Nitrite as N	<0.050		0.050	mg/L			07/11/23 11:47	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-54001-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: LCS 380-46941/7
Matrix: Water
Analysis Batch: 46941

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	2.50	2.42		mg/L		97	90 - 110
Nitrite as N	1.00	0.977		mg/L		98	90 - 110

Lab Sample ID: LCSD 380-46941/8
Matrix: Water
Analysis Batch: 46941

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate as N	2.50	2.41		mg/L		96	90 - 110	1	20
Nitrite as N	1.00	0.967		mg/L		97	90 - 110	1	20

Lab Sample ID: MRL 380-46941/5
Matrix: Water
Analysis Batch: 46941

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	0.0125	0.0117	J	mg/L		94	50 - 150
Nitrite as N	0.0125	0.0127	J	mg/L		101	50 - 150

Lab Sample ID: MRL 380-46941/6
Matrix: Water
Analysis Batch: 46941

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	0.0500	0.0463	J	mg/L		93	50 - 150
Nitrite as N	0.0500	0.0490	J	mg/L		98	50 - 150

Lab Sample ID: 380-54001-1 MS
Matrix: Water
Analysis Batch: 46941

Client Sample ID: AIEA WELLS P2 (260)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	0.83		6.25	6.83		mg/L		96	80 - 120
Nitrite as N	<0.25		2.50	2.28		mg/L		91	80 - 120

Lab Sample ID: 380-54001-1 MSD
Matrix: Water
Analysis Batch: 46941

Client Sample ID: AIEA WELLS P2 (260)
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	0.83		6.25	6.84		mg/L		96	80 - 120	0	20
Nitrite as N	<0.25		2.50	2.29		mg/L		92	80 - 120	1	20

Lab Sample ID: MB 380-46942/4
Matrix: Water
Analysis Batch: 46942

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.50		0.50	mg/L			07/11/23 11:47	1
Sulfate	<0.25		0.25	mg/L			07/11/23 11:47	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-54001-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: LCS 380-46942/7
Matrix: Water
Analysis Batch: 46942

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	25.2		mg/L		101	90 - 110
Sulfate	50.0	50.5		mg/L		101	90 - 110

Lab Sample ID: LCSD 380-46942/8
Matrix: Water
Analysis Batch: 46942

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	25.0		mg/L		100	90 - 110	1	20
Sulfate	50.0	50.1		mg/L		100	90 - 110	1	20

Lab Sample ID: MRL 380-46942/5
Matrix: Water
Analysis Batch: 46942

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	0.124	J	mg/L		99	50 - 150
Sulfate	0.250	0.263		mg/L		105	50 - 150

Lab Sample ID: MRL 380-46942/6
Matrix: Water
Analysis Batch: 46942

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	0.416	J	mg/L		83	50 - 150
Sulfate	1.00	0.933		mg/L		93	50 - 150

Lab Sample ID: 380-54001-1 MS
Matrix: Water
Analysis Batch: 46942

Client Sample ID: AIEA WELLS P2 (260)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	95		62.5	156		mg/L		98	80 - 120
Sulfate	15		125	141		mg/L		101	80 - 120

Lab Sample ID: 380-54001-1 MSD
Matrix: Water
Analysis Batch: 46942

Client Sample ID: AIEA WELLS P2 (260)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	95		62.5	156		mg/L		98	80 - 120	0	20
Sulfate	15		125	141		mg/L		101	80 - 120	0	20

Lab Sample ID: MB 380-47503/4
Matrix: Water
Analysis Batch: 47503

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	<5.0		5.0	ug/L			07/14/23 14:01	1

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QC Sample Results

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

Job ID: 380-54001-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 380-47503/5
Matrix: Water
Analysis Batch: 47503

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	100	96.2		ug/L		96	90 - 110

Lab Sample ID: LCSD 380-47503/6
Matrix: Water
Analysis Batch: 47503

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	95.9		ug/L		96	90 - 110	0	10

Lab Sample ID: MRL 380-47503/3
Matrix: Water
Analysis Batch: 47503

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	4.71	J	ug/L		94	75 - 125

Lab Sample ID: 380-54585-B-2 MS
Matrix: Water
Analysis Batch: 47503

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	<5.0		50.0	44.9		ug/L		88	80 - 120

Lab Sample ID: 380-54585-B-2 MSD
Matrix: Water
Analysis Batch: 47503

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	<5.0		50.0	44.8		ug/L		88	80 - 120	0	20

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 380-47078/18
Matrix: Water
Analysis Batch: 47078

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	<1.0		1.0	mg/L			07/12/23 13:36	1
Magnesium	<0.10		0.10	mg/L			07/12/23 13:36	1
Potassium	<1.0		1.0	mg/L			07/12/23 13:36	1
Sodium	<1.0		1.0	mg/L			07/12/23 13:36	1

Lab Sample ID: LCS 380-47078/20
Matrix: Water
Analysis Batch: 47078

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	50.0	50.2		mg/L		100	85 - 115
Magnesium	20.0	19.9		mg/L		100	85 - 115
Potassium	20.0	19.8		mg/L		99	85 - 115

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-54001-1

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

Lab Sample ID: LCS 380-47078/20
Matrix: Water
Analysis Batch: 47078

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sodium	50.0	49.7		mg/L		99	85 - 115

Lab Sample ID: LCSD 380-47078/21
Matrix: Water
Analysis Batch: 47078

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	2	20
Magnesium	20.0	20.3		mg/L		102	85 - 115	2	20
Potassium	20.0	20.1		mg/L		101	85 - 115	2	20
Sodium	50.0	50.7		mg/L		101	85 - 115	2	20

Lab Sample ID: LLCS 380-47078/19
Matrix: Water
Analysis Batch: 47078

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	1.04		mg/L		104	50 - 150
Potassium	1.00	0.674	J	mg/L		67	50 - 150
Sodium	1.00	1.02		mg/L		102	50 - 150

Lab Sample ID: 380-53989-U-1 MS
Matrix: Water
Analysis Batch: 47078

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	<1.0		50.0	53.0		mg/L		106	70 - 130
Magnesium	<0.10		20.0	21.3		mg/L		106	70 - 130
Potassium	<1.0		20.0	21.3		mg/L		106	70 - 130
Sodium	<1.0		50.0	52.1		mg/L		104	70 - 130

Lab Sample ID: 380-53989-U-1 MSD
Matrix: Water
Analysis Batch: 47078

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Calcium	<1.0		50.0	52.5		mg/L		105	70 - 130	1	20
Magnesium	<0.10		20.0	21.1		mg/L		105	70 - 130	1	20
Potassium	<1.0		20.0	21.0		mg/L		105	70 - 130	1	20
Sodium	<1.0		50.0	51.6		mg/L		103	70 - 130	1	20

Lab Sample ID: MB 380-47114/17
Matrix: Water
Analysis Batch: 47114

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	<1.0		1.0	mg/L			07/12/23 16:49	1
Magnesium	<0.10		0.10	mg/L			07/12/23 16:49	1
Potassium	<1.0		1.0	mg/L			07/12/23 16:49	1
Sodium	<1.0		1.0	mg/L			07/12/23 16:49	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-54001-1

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: LCS 380-47114/19
Matrix: Water
Analysis Batch: 47114

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	49.9		mg/L		100	85 - 115
Magnesium	20.0	19.5		mg/L		97	85 - 115
Potassium	20.0	19.8		mg/L		99	85 - 115
Sodium	50.0	48.6		mg/L		97	85 - 115

Lab Sample ID: LCSD 380-47114/20
Matrix: Water
Analysis Batch: 47114

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	51.8		mg/L		104	85 - 115	4	20
Magnesium	20.0	20.3		mg/L		101	85 - 115	4	20
Potassium	20.0	20.5		mg/L		103	85 - 115	4	20
Sodium	50.0	50.1		mg/L		100	85 - 115	3	20

Lab Sample ID: LLCS 380-47114/18
Matrix: Water
Analysis Batch: 47114

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	1.03		mg/L		103	50 - 150
Magnesium	0.100	0.0970	J	mg/L		97	50 - 150
Potassium	1.00	0.767	J	mg/L		77	50 - 150
Sodium	1.00	1.07		mg/L		107	50 - 150

Lab Sample ID: 380-53989-U-1 MS
Matrix: Water
Analysis Batch: 47114

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	<1.0	F1	50.0	51.8		mg/L		104	70 - 130
Magnesium	<0.10	F1	20.0	20.3		mg/L		102	70 - 130
Potassium	<1.0	F1	20.0	20.8		mg/L		104	70 - 130
Sodium	<1.0	F1	50.0	50.0		mg/L		100	70 - 130

Lab Sample ID: 380-53989-U-1 MSD
Matrix: Water
Analysis Batch: 47114

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Calcium	<1.0	F1	50.0	53.0		mg/L		106	70 - 130	2	20
Magnesium	<0.10	F1	20.0	20.9		mg/L		104	70 - 130	3	20
Potassium	<1.0	F1	20.0	21.4		mg/L		107	70 - 130	3	20
Sodium	<1.0	F1	50.0	51.1		mg/L		102	70 - 130	2	20

QC Sample Results

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

Job ID: 380-54001-1

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 380-47166/1-A
Matrix: Water
Analysis Batch: 47418

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 47166

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		1.0	ug/L		07/13/23 09:56	07/14/23 12:30	1
Arsenic	<1.0		1.0	ug/L		07/13/23 09:56	07/14/23 12:30	1
Beryllium	<1.0		1.0	ug/L		07/13/23 09:56	07/14/23 12:30	1
Cadmium	<0.50		0.50	ug/L		07/13/23 09:56	07/14/23 12:30	1
Chromium	<1.0		1.0	ug/L		07/13/23 09:56	07/14/23 12:30	1
Copper	<2.0		2.0	ug/L		07/13/23 09:56	07/14/23 12:30	1
Lead	<0.50		0.50	ug/L		07/13/23 09:56	07/14/23 12:30	1
Nickel	<5.0		5.0	ug/L		07/13/23 09:56	07/14/23 12:30	1
Selenium	<5.0		5.0	ug/L		07/13/23 09:56	07/14/23 12:30	1
Silver	<0.50		0.50	ug/L		07/13/23 09:56	07/14/23 12:30	1
Thallium	<1.0		1.0	ug/L		07/13/23 09:56	07/14/23 12:30	1
Zinc	<20		20	ug/L		07/13/23 09:56	07/14/23 12:30	1

Lab Sample ID: LCS 380-47166/3-A
Matrix: Water
Analysis Batch: 47418

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 47166

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	50.0	49.1		ug/L		98	85 - 115
Arsenic	50.0	52.2		ug/L		104	85 - 115
Beryllium	25.0	25.0		ug/L		100	85 - 115
Cadmium	25.0	24.5		ug/L		98	85 - 115
Chromium	50.0	49.2		ug/L		98	85 - 115
Copper	50.0	52.1		ug/L		104	85 - 115
Lead	50.0	50.0		ug/L		100	85 - 115
Nickel	50.0	50.9		ug/L		102	85 - 115
Selenium	50.0	51.0		ug/L		102	85 - 115
Silver	25.0	23.7		ug/L		95	85 - 115
Thallium	50.0	50.0		ug/L		100	85 - 115
Zinc	50.0	50.5		ug/L		101	85 - 115

Lab Sample ID: LCSD 380-47166/4-A
Matrix: Water
Analysis Batch: 47418

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 47166

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	50.0	48.4		ug/L		97	85 - 115	2	20
Arsenic	50.0	51.7		ug/L		103	85 - 115	1	20
Beryllium	25.0	24.1		ug/L		97	85 - 115	3	20
Cadmium	25.0	24.3		ug/L		97	85 - 115	1	20
Chromium	50.0	48.8		ug/L		98	85 - 115	1	20
Copper	50.0	52.0		ug/L		104	85 - 115	0	20
Lead	50.0	50.2		ug/L		100	85 - 115	0	20
Nickel	50.0	50.6		ug/L		101	85 - 115	1	20
Selenium	50.0	50.2		ug/L		100	85 - 115	2	20
Silver	25.0	24.1		ug/L		96	85 - 115	2	20
Thallium	50.0	49.8		ug/L		100	85 - 115	1	20
Zinc	50.0	50.5		ug/L		101	85 - 115	0	20

QC Sample Results

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

Job ID: 380-54001-1

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

Lab Sample ID: LLCS 380-47166/2-A
Matrix: Water
Analysis Batch: 47418

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 47166

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	1.00	0.996	J	ug/L		100	50 - 150
Arsenic	1.00	1.00		ug/L		100	50 - 150
Beryllium	1.00	1.00		ug/L		100	50 - 150
Cadmium	0.500	0.497	J	ug/L		99	50 - 150
Chromium	1.00	0.843	J	ug/L		84	50 - 150
Copper	2.00	2.03		ug/L		101	50 - 150
Lead	0.500	0.509		ug/L		102	50 - 150
Nickel	5.00	5.03		ug/L		101	50 - 150
Selenium	5.00	5.06		ug/L		101	50 - 150
Silver	0.500	0.405	J	ug/L		81	50 - 150
Thallium	1.00	1.02		ug/L		102	50 - 150
Zinc	20.0	20.6		ug/L		103	50 - 150

Lab Sample ID: 380-53866-C-1-B MS
Matrix: Water
Analysis Batch: 47418

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 47166

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	13		50.0	62.9		ug/L		100	70 - 130
Arsenic	24		50.0	79.2		ug/L		110	70 - 130
Beryllium	<1.0		25.0	26.9		ug/L		108	70 - 130
Cadmium	<0.50		25.0	24.0		ug/L		96	70 - 130
Chromium	1.2		50.0	49.5		ug/L		97	70 - 130
Copper	<2.0		50.0	48.9		ug/L		95	70 - 130
Lead	0.68		50.0	48.9		ug/L		96	70 - 130
Nickel	<5.0		50.0	49.2		ug/L		95	70 - 130
Selenium	<5.0		50.0	50.9		ug/L		100	70 - 130
Silver	<0.50		25.0	22.8		ug/L		90	70 - 130
Thallium	<1.0		50.0	48.2		ug/L		96	70 - 130
Zinc	44		50.0	93.4		ug/L		99	70 - 130

Lab Sample ID: 380-53866-C-1-C MSD
Matrix: Water
Analysis Batch: 47418

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 47166

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	13		50.0	63.7		ug/L		102	70 - 130	1	20
Arsenic	24		50.0	79.3		ug/L		110	70 - 130	0	20
Beryllium	<1.0		25.0	27.1		ug/L		108	70 - 130	1	20
Cadmium	<0.50		25.0	24.1		ug/L		97	70 - 130	1	20
Chromium	1.2		50.0	49.5		ug/L		97	70 - 130	0	20
Copper	<2.0		50.0	48.0		ug/L		93	70 - 130	2	20
Lead	0.68		50.0	48.2		ug/L		95	70 - 130	1	20
Nickel	<5.0		50.0	49.0		ug/L		94	70 - 130	1	20
Selenium	<5.0		50.0	50.8		ug/L		99	70 - 130	0	20
Silver	<0.50		25.0	23.3		ug/L		92	70 - 130	2	20
Thallium	<1.0		50.0	47.7		ug/L		95	70 - 130	1	20
Zinc	44		50.0	92.7		ug/L		98	70 - 130	1	20

QC Sample Results

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

Job ID: 380-54001-1

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 810-66340/1-A
Matrix: Water
Analysis Batch: 66400

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 66340

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.10		0.10	ug/L		07/20/23 10:27	07/20/23 17:09	1

Lab Sample ID: LCS 810-66340/3-A
Matrix: Water
Analysis Batch: 66400

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 66340

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	1.00	0.957		ug/L		96	85 - 115

Lab Sample ID: LLCS 810-66340/2-A
Matrix: Water
Analysis Batch: 66400

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 66340

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.100	0.0898	J	ug/L		90	50 - 150

Lab Sample ID: 810-69388-A-2-B MS
Matrix: Water
Analysis Batch: 66400

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 66340

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	<0.10		1.00	0.997		ug/L		100	70 - 130

Lab Sample ID: 810-69388-A-2-C MSD
Matrix: Water
Analysis Batch: 66400

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 66340

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	<0.10		1.00	0.990		ug/L		99	70 - 130	1	20

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 380-47205/1
Matrix: Water
Analysis Batch: 47205

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	<2.0		2.0	mg/L			07/12/23 17:34	1
Bicarbonate Alkalinity as CaCO3	<2.0		2.0	mg/L			07/12/23 17:34	1
Carbonate Alkalinity as CaCO3	<2.0		2.0	mg/L			07/12/23 17:34	1

Lab Sample ID: LCS 380-47205/3
Matrix: Water
Analysis Batch: 47205

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	100	101		mg/L		101	90 - 110

QC Sample Results

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

Job ID: 380-54001-1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: LCSD 380-47205/18
Matrix: Water
Analysis Batch: 47205

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	101		mg/L		101	90 - 110	0	20

Lab Sample ID: LLCS 380-47205/4
Matrix: Water
Analysis Batch: 47205

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

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
A kalinity	20.0	19.9		mg/L		100	90 - 110		

Lab Sample ID: MRL 380-47205/2
Matrix: Water
Analysis Batch: 47205

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
A kalinity	2.00	2.18		mg/L		109	50 - 150		

Lab Sample ID: 380-54101-C-1 MS
Matrix: Water
Analysis Batch: 47205

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
A kalinity	180	F1	100	252	F1	mg/L		68	80 - 120		

Lab Sample ID: 380-54101-C-1 MSD
Matrix: Water
Analysis Batch: 47205

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	180	F1	100	245	F1	mg/L		61	80 - 120	3	20

Lab Sample ID: 380-54101-C-1 DU
Matrix: Water
Analysis Batch: 47205

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	DU Result	DU Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
A kalinity	180	F1		184		mg/L				0	20
Bicarbonate Alkalinity as CaCO3	180			184		mg/L				0	20
Carbonate Alkalinity as CaCO3	<2.0			<2.0		mg/L				NC	20

Method: SM 2510B - Conductivity, Specific Conductance

Lab Sample ID: MB 380-47208/2
Matrix: Water
Analysis Batch: 47208

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	<2.0		2.0	umhos/cm			07/12/23 17:34	1

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QC Sample Results

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

Job ID: 380-54001-1

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

Lab Sample ID: LCS 380-47208/4
Matrix: Water
Analysis Batch: 47208

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Specific Conductance	1000	994		umhos/cm		99	90 - 110

Lab Sample ID: LCSD 380-47208/16
Matrix: Water
Analysis Batch: 47208

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Specific Conductance	1000	990		umhos/cm		99	90 - 110	0	10

Lab Sample ID: MRL 380-47208/3
Matrix: Water
Analysis Batch: 47208

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

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

Lab Sample ID: 380-54101-C-1 DU
Matrix: Water
Analysis Batch: 47208

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Specific Conductance	620		620		umhos/cm		0.2	20

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

Lab Sample ID: MB 380-47123/1
Matrix: Water
Analysis Batch: 47123

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	mg/L			07/12/23 18:28	1

Lab Sample ID: HLCS 380-47123/5
Matrix: Water
Analysis Batch: 47123

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	720		mg/L		103	80 - 114

Lab Sample ID: LCS 380-47123/4
Matrix: Water
Analysis Batch: 47123

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	160		mg/L		91	80 - 114

QC Sample Results

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

Job ID: 380-54001-1

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

Lab Sample ID: MRL 380-47123/2
Matrix: Water
Analysis Batch: 47123

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

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

Lab Sample ID: MRL 380-47123/3
Matrix: Water
Analysis Batch: 47123

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	13.0		mg/L		130	50 - 150

Lab Sample ID: 380-53868-H-1 DU
Matrix: Water
Analysis Batch: 47123

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	620		610		mg/L		2	10

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 380-47591/3
Matrix: Water
Analysis Batch: 47591

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.050		0.050	mg/L			07/14/23 11:38	1

Lab Sample ID: LCS 380-47591/5
Matrix: Water
Analysis Batch: 47591

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	0.958		mg/L		96	90 - 110

Lab Sample ID: LCSD 380-47591/6
Matrix: Water
Analysis Batch: 47591

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Fluoride	1.00	0.959		mg/L		96	90 - 110	0	10

Lab Sample ID: MRL 380-47591/4
Matrix: Water
Analysis Batch: 47591

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	0.0500	0.0473	J	mg/L		95	50 - 150

QC Sample Results

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

Job ID: 380-54001-1

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: 380-53868-D-1 MS
Matrix: Water
Analysis Batch: 47591

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	0.34		1.00	1.24		mg/L		90	80 - 120

Lab Sample ID: 380-53868-D-1 MSD
Matrix: Water
Analysis Batch: 47591

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	0.34		1.00	1.24		mg/L		90	80 - 120	0	20

Method: SM 4500 H+ B - pH

Lab Sample ID: MB 380-47210/4
Matrix: Water
Analysis Batch: 47210

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			07/12/23 17:34	1

Lab Sample ID: LCS 380-47210/5
Matrix: Water
Analysis Batch: 47210

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

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

Lab Sample ID: LCSD 380-47210/17
Matrix: Water
Analysis Batch: 47210

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

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

Lab Sample ID: 380-54101-C-1 DU
Matrix: Water
Analysis Batch: 47210

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	8.0		8.0		SU		0.5	2

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 380-47470/1
Matrix: Water
Analysis Batch: 47470

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<0.050		0.050	mg/L			07/14/23 17:28	1

QC Sample Results

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

Job ID: 380-54001-1

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

Lab Sample ID: LCS 380-47470/4
Matrix: Water
Analysis Batch: 47470

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	0.258		mg/L		103	90 - 110

Lab Sample ID: LCSD 380-47470/26
Matrix: Water
Analysis Batch: 47470

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	0.246		mg/L		98	90 - 110	5	20

Lab Sample ID: MRL 380-47470/17
Matrix: Water
Analysis Batch: 47470

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	0.0490	J	mg/L		98	50 - 150

Lab Sample ID: MRL 380-47470/2
Matrix: Water
Analysis Batch: 47470

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	0.0560		mg/L		112	50 - 150

Lab Sample ID: 380-54283-W-3 MS
Matrix: Water
Analysis Batch: 47470

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	<0.050		0.250	0.235		mg/L		94	80 - 120

Lab Sample ID: 380-54283-W-3 MSD
Matrix: Water
Analysis Batch: 47470

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	<0.050		0.250	0.237		mg/L		95	80 - 120	1	20

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

Lab Sample ID: 108196-B1
Matrix: BlankMatrix
Analysis Batch: O-42020

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: O-42020_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 07:29	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 07:29	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 07:29	1
2,4,5-Trichlorophenol	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 07:29	1
2,4,6-Trichlorophenol	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 07:29	1
2,4-Dichlorophenol	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 07:29	1

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QC Sample Results

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

Job ID: 380-54001-1

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

Lab Sample ID: 108196-B1
Matrix: BlankMatrix
Analysis Batch: O-42020

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: O-42020_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrophenol	ND		0.2	0.1	µg/L		07/14/23 00:00	08/24/23 07:29	1
2,6-Dichlorophenol	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 07:29	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 07:29	1
2,6-Di-tert-butyl-4-methylphenol	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 07:29	1
2,6-Di-tert-butylphenol	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 07:29	1
2-Chloronaphthalene	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 07:29	1
2-Chlorophenol	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 07:29	1
2-Methyl-4,6-dinitrophenol	ND		0.2	0.1	µg/L		07/14/23 00:00	08/24/23 07:29	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 07:29	1
2-Methylphenol	ND		0.2	0.1	µg/L		07/14/23 00:00	08/24/23 07:29	1
2-Nitroaniline	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 07:29	1
2-Nitrophenol	ND		0.2	0.1	µg/L		07/14/23 00:00	08/24/23 07:29	1
3+4-Methylphenol	ND		0.2	0.1	µg/L		07/14/23 00:00	08/24/23 07:29	1
3-Nitroaniline	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 07:29	1
4-Bromophenylphenyl ether	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 07:29	1
4-Chloro-3-methylphenol	ND		0.2	0.1	µg/L		07/14/23 00:00	08/24/23 07:29	1
4-Chloroaniline	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 07:29	1
4-Chlorophenylphenyl ether	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 07:29	1
4-Nitroaniline	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 07:29	1
4-Nitrophenol	ND		0.2	0.1	µg/L		07/14/23 00:00	08/24/23 07:29	1
6-tert-butyl-2,4-dimethylphenol	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 07:29	1
Acenaphthene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 07:29	1
Acenaphthylene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 07:29	1
Aniline	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 07:29	1
Anthracene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 07:29	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 07:29	1
Benzidine	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 07:29	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 07:29	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 07:29	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 07:29	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 07:29	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 07:29	1
Benzoic Acid	ND		0.2	0.1	µg/L		07/14/23 00:00	08/24/23 07:29	1
Benzyl Alcohol	ND		0.2	0.1	µg/L		07/14/23 00:00	08/24/23 07:29	1
Biphenyl	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 07:29	1
Bis(2-Chloroethoxy) methane	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 07:29	1
Bis(2-Chloroethyl) ether	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 07:29	1
Bis(2-Chloroisopropyl) ether	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 07:29	1
Chrysene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 07:29	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 07:29	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 07:29	1
Dibenzofuran	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 07:29	1
Dibenzothiophene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 07:29	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 07:29	1
Fluoranthene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 07:29	1
Fluorene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 07:29	1
Hexachloroethane	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 07:29	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 07:29	1
Naphthalene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 07:29	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-54001-1

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

Lab Sample ID: 108196-B1
Matrix: BlankMatrix
Analysis Batch: O-42020

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: O-42020_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrobenzene	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 07:29	1
N-Nitrosodi-n-propylamine	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 07:29	1
N-Nitrosodiphenylamine	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 07:29	1
Pentachlorophenol	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 07:29	1
Perylene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 07:29	1
Phenanthrene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 07:29	1
Phenol	ND		0.2	0.1	µg/L		07/14/23 00:00	08/24/23 07:29	1
p-tert-Butylphenol	ND		0.1	0.05	µg/L		07/14/23 00:00	08/24/23 07:29	1
Pyrene	ND		0.005	0.001	µg/L		07/14/23 00:00	08/24/23 07:29	1

Surrogate	Blank %Recovery	Blank Qualifier	Limits	Prepared	Analyzed	Dil Fac
(2,4,6-Tribromophenol)	45		30 - 130	07/14/23 00:00	08/24/23 07:29	1
(d10-Acenaphthene)	104		27 - 133	07/14/23 00:00	08/24/23 07:29	1
(d10-Phenanthrene)	101		43 - 129	07/14/23 00:00	08/24/23 07:29	1
(d12-Chrysene)	97		52 - 144	07/14/23 00:00	08/24/23 07:29	1
(d12-Perylene)	102		36 - 161	07/14/23 00:00	08/24/23 07:29	1
(d5-Phenol)	95		0 - 130	07/14/23 00:00	08/24/23 07:29	1
(d8-Naphthalene)	96		25 - 125	07/14/23 00:00	08/24/23 07:29	1

Lab Sample ID: 108196-BS1
Matrix: BlankMatrix
Analysis Batch: O-42020

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-42020_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	0.5	0.552		µg/L		110	31 - 128
1-Methylphenanthrene	0.5	0.567		µg/L		113	66 - 127
2,3,5-Trimethylnaphthalene	0.5	0.577		µg/L		115	55 - 122
2,4,5-Trichlorophenol	1	0.745		µg/L		75	30 - 130
2,4,6-Trichlorophenol	1	0.796		µg/L		80	30 - 130
2,4-Dichlorophenol	1	0.76		µg/L		76	51 - 117
2,4-Dinitrophenol	1	0.668		µg/L		67	0 - 152
2,6-Dichlorophenol	0.5	0.378		µg/L		76	30 - 130
2,6-Dimethylnaphthalene	0.5	0.576		µg/L		115	48 - 120
2,6-Di-tert-butyl-4-methylphenol	1	1.03		µg/L		103	50 - 150
2,6-Di-tert-butylphenol	1	0.99		µg/L		99	50 - 150
2-Chloronaphthalene	1	0.823		µg/L		82	53 - 130
2-Chlorophenol	1	0.621		µg/L		62	41 - 120
2-Methyl-4,6-dinitrophenol	1	0.791		µg/L		79	0 - 141
2-Methylnaphthalene	1.5	1.65		µg/L		110	47 - 130
2-Methylphenol	1	0.627		µg/L		63	40 - 117
2-Nitroaniline	1	0.723		µg/L		72	69 - 114
2-Nitrophenol	1	0.608		µg/L		61	40 - 117
3+4-Methylphenol	1	0.648		µg/L		65	0 - 130
3-Nitroaniline	1	0.723		µg/L		72	23 - 137
4-Bromophenylphenyl ether	1	0.926		µg/L		93	61 - 132
4-Chloro-3-methylphenol	1	0.666		µg/L		67	51 - 128
4-Chloroaniline	1	0.674		µg/L		67	50 - 150
4-Chlorophenylphenyl ether	1	0.936		µg/L		94	63 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-54001-1

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

Lab Sample ID: 108196-BS1
Matrix: BlankMatrix
Analysis Batch: O-42020

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-42020_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
4-Nitroaniline	1	0.717		µg/L		72	10 - 159
4-Nitrophenol	1	0.918		µg/L		92	10 - 164
6-tert-butyl-2,4-dimethylphenol	1	0.938		µg/L		94	50 - 150
Acenaphthene	1.5	1.7		µg/L		113	53 - 131
Acenaphthylene	1.5	1.86		µg/L		124	43 - 140
Aniline	1	0.559		µg/L		56	50 - 150
Anthracene	1.5	1.62		µg/L		108	58 - 135
Benz[a]anthracene	1.5	1.68		µg/L		112	55 - 145
Benzidine	1	0.0169		µg/L		2	0 - 125
Benzo[a]pyrene	1.5	1.69		µg/L		113	51 - 143
Benzo[b]fluoranthene	1.5	1.71		µg/L		114	46 - 165
Benzo[e]pyrene	0.5	0.55		µg/L		110	42 - 152
Benzo[g,h,i]perylene	1.5	1.67		µg/L		111	63 - 133
Benzo[k]fluoranthene	1.5	1.64		µg/L		109	56 - 145
Benzoic Acid	1	0.263		µg/L		26	2 - 145
Benzyl Alcohol	1	0.622		µg/L		62	43 - 148
Biphenyl	0.5	0.563		µg/L		113	56 - 119
Bis(2-Chloroethoxy) methane	1	0.665		µg/L		67	66 - 122
Bis(2-Chloroethyl) ether	1	0.581		µg/L		58	43 - 127
Bis(2-Chloroisopropyl) ether	1	0.746		µg/L		75	49 - 128
Chrysene	1.5	1.54		µg/L		103	56 - 141
Dibenz[a,h]anthracene	1.5	1.8		µg/L		120	55 - 150
Dibenzo[a,l]pyrene	0.5	0.466		µg/L		93	50 - 150
Dibenzofuran	1	0.659		µg/L		66	50 - 150
Dibenzothiophene	0.5	0.549		µg/L		110	46 - 126
Disalicylidenepropanediamine	50	41.5		µg/L		83	50 - 150
Fluoranthene	1.5	1.74		µg/L		116	60 - 146
Fluorene	1.5	1.76		µg/L		117	58 - 131
Hexachloroethane	1	0.808		µg/L		81	27 - 130
Indeno[1,2,3-cd]pyrene	1.5	1.77		µg/L		118	50 - 151
Naphthalene	1.5	1.54		µg/L		103	41 - 126
Nitrobenzene	1	0.633		µg/L		63	54 - 111
N-Nitrosodi-n-propylamine	1	0.679		µg/L		68	61 - 152
N-Nitrosodiphenylamine	1	0.967		µg/L		97	49 - 142
Pentachlorophenol	1	0.656		µg/L		66	36 - 111
Perylene	0.5	0.574		µg/L		115	48 - 141
Phenanthrene	1.5	1.6		µg/L		107	67 - 127
Phenol	1	0.547		µg/L		55	29 - 114
p-tert-Butylphenol	1	1.06		µg/L		106	50 - 150
Pyrene	1.5	1.75		µg/L		117	54 - 156

Surrogate	LCS %Recovery	LCS Qualifier	Limits
(2,4,6-Tribromophenol)	58		30 - 130
(d10-Acenaphthene)	106		27 - 133
(d10-Phenanthrene)	101		43 - 129
(d12-Chrysene)	98		52 - 144
(d12-Perylene)	104		36 - 161
(d5-Phenol)	111		0 - 130

QC Sample Results

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

Job ID: 380-54001-1

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

Lab Sample ID: 108196-BS1
Matrix: BlankMatrix
Analysis Batch: O-42020

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-42020_P

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
(d8-Naphthalene)	99		25 - 125

Lab Sample ID: 108196-BS2
Matrix: BlankMatrix
Analysis Batch: O-42020

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: O-42020_P

Analyte	Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec		RPD	
							Limits	RPD	Limit	
1-Methylnaphthalene	0.5	0.55		µg/L		110	31 - 128	0	30	
1-Methylphenanthrene	0.5	0.564		µg/L		113	66 - 127	0	30	
2,3,5-Trimethylnaphthalene	0.5	0.576		µg/L		115	55 - 122	0	30	
2,4,5-Trichlorophenol	1	0.746		µg/L		75	30 - 130	1	30	
2,4,6-Trichlorophenol	1	0.8		µg/L		80	30 - 130	0	30	
2,4-Dichlorophenol	1	0.758		µg/L		76	51 - 117	0	30	
2,4-Dinitrophenol	1	0.669		µg/L		67	0 - 152	0	30	
2,6-Dichlorophenol	0.5	0.376		µg/L		75	30 - 130	1	30	
2,6-Dimethylnaphthalene	0.5	0.568		µg/L		114	48 - 120	1	30	
2,6-Di-tert-butyl-4-methylphenol	1	1.02		µg/L		102	50 - 150	1	30	
2,6-Di-tert-butylphenol	1	0.972		µg/L		97	50 - 150	2	30	
2-Chloronaphthalene	1	0.814		µg/L		81	53 - 130	1	30	
2-Chlorophenol	1	0.604		µg/L		60	41 - 120	3	30	
2-Methyl-4,6-dinitrophenol	1	0.805		µg/L		81	0 - 141	1	30	
2-Methylnaphthalene	1.5	1.64		µg/L		109	47 - 130	1	30	
2-Methylphenol	1	0.607		µg/L		61	40 - 117	3	30	
2-Nitroaniline	1	0.74		µg/L		74	69 - 114	3	30	
2-Nitrophenol	1	0.614		µg/L		61	40 - 117	0	30	
3+4-Methylphenol	1	0.626		µg/L		63	0 - 130	3	30	
3-Nitroaniline	1	0.726		µg/L		73	23 - 137	1	30	
4-Bromophenylphenyl ether	1	0.918		µg/L		92	61 - 132	1	30	
4-Chloro-3-methylphenol	1	0.668		µg/L		67	51 - 128	0	30	
4-Chloroaniline	1	0.655		µg/L		65	50 - 150	2	30	
4-Chlorophenylphenyl ether	1	0.92		µg/L		92	63 - 130	2	30	
4-Nitroaniline	1	0.731		µg/L		73	10 - 159	1	30	
4-Nitrophenol	1	0.918		µg/L		92	10 - 164	0	30	
6-tert-butyl-2,4-dimethylphenol	1	0.942		µg/L		94	50 - 150	0	30	
Acenaphthene	1.5	1.68		µg/L		112	53 - 131	1	30	
Acenaphthylene	1.5	1.84		µg/L		123	43 - 140	1	30	
Aniline	1	0.523		µg/L		52	50 - 150	7	30	
Anthracene	1.5	1.63		µg/L		109	58 - 135	1	30	
Benz[a]anthracene	1.5	1.71		µg/L		114	55 - 145	2	30	
Benzidine	1	0.0178		µg/L		2	0 - 125	0	30	
Benzo[a]pyrene	1.5	1.73		µg/L		115	51 - 143	2	30	
Benzo[b]fluoranthene	1.5	1.73		µg/L		115	46 - 165	1	30	
Benzo[e]pyrene	0.5	0.558		µg/L		112	42 - 152	2	30	
Benzo[g,h,i]perylene	1.5	1.7		µg/L		113	63 - 133	2	30	
Benzo[k]fluoranthene	1.5	1.67		µg/L		111	56 - 145	2	30	
Benzoic Acid	1	0.225		µg/L		22	2 - 145	17	30	
Benzyl Alcohol	1	0.606		µg/L		61	43 - 148	2	30	
Biphenyl	0.5	0.558		µg/L		112	56 - 119	1	30	

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-54001-1

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

Lab Sample ID: 108196-BS2
Matrix: BlankMatrix
Analysis Batch: O-42020

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: O-42020_P

Analyte	Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
Bis(2-Chloroethoxy) methane	1	0.66		µg/L		66	66 - 122	2	30	
Bis(2-Chloroethyl) ether	1	0.545		µg/L		55	43 - 127	7	30	
Bis(2-Chloroisopropyl) ether	1	0.697		µg/L		70	49 - 128	7	30	
Chrysene	1.5	1.55		µg/L		103	56 - 141	0	30	
Dibenz[a,h]anthracene	1.5	1.83		µg/L		122	55 - 150	2	30	
Dibenzo[a,l]pyrene	0.5	0.475		µg/L		95	50 - 150	2	30	
Dibenzofuran	1	0.638		µg/L		64	50 - 150	3	30	
Dibenzothiophene	0.5	0.552		µg/L		110	46 - 126	0	30	
Disalicylidenepropanediamine	50	46.9		µg/L		94	50 - 150	12	30	
Fluoranthene	1.5	1.75		µg/L		117	60 - 146	1	30	
Fluorene	1.5	1.74		µg/L		116	58 - 131	1	30	
Hexachloroethane	1	0.771		µg/L		77	27 - 130	5	30	
Indeno[1,2,3-cd]pyrene	1.5	1.79		µg/L		119	50 - 151	1	30	
Naphthalene	1.5	1.51		µg/L		101	41 - 126	2	30	
Nitrobenzene	1	0.625		µg/L		62	54 - 111	2	30	
N-Nitrosodi-n-propylamine	1	0.671		µg/L		67	61 - 152	1	30	
N-Nitrosodiphenylamine	1	0.97		µg/L		97	49 - 142	0	30	
Pentachlorophenol	1	0.675		µg/L		68	36 - 111	3	30	
Perylene	0.5	0.577		µg/L		115	48 - 141	0	30	
Phenanthrene	1.5	1.6		µg/L		107	67 - 127	0	30	
Phenol	1	0.502		µg/L		50	29 - 114	10	30	
p-tert-Butylphenol	1	1.05		µg/L		105	50 - 150	1	30	
Pyrene	1.5	1.75		µg/L		117	54 - 156	0	30	

Surrogate	LCS DUP		Limits
	%Recovery	Qualifier	
(2,4,6-Tribromophenol)	58		30 - 130
(d10-Acenaphthene)	105		27 - 133
(d10-Phenanthrene)	101		43 - 129
(d12-Chrysene)	99		52 - 144
(d12-Perylene)	106		36 - 161
(d5-Phenol)	85		0 - 130
(d8-Naphthalene)	96		25 - 125

Method: 8015 Ethanol - SW846 8015B Gasoline Range Organics

Lab Sample ID: 23MEG003WB
Matrix: WATER
Analysis Batch: 23MEG003W

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			07/13/23 11:15	1

Lab Sample ID: 23MEG003WL
Matrix: WATER
Analysis Batch: 23MEG003W

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	10300		ug/L		103	60 - 130	

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-54001-1

Method: 8015 Ethanol - SW846 8015B Gasoline Range Organics (Continued)

Lab Sample ID: 23G078-01M
Matrix: WATER
Analysis Batch: 23MEG003W

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
ETHANOL	ND		10000	9130		ug/L		91	60 - 130

Lab Sample ID: 23G078-01S
Matrix: WATER
Analysis Batch: 23MEG003W

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
ETHANOL	ND		10000	8920		ug/L		89	60 - 130	2	30

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

Lab Sample ID: 23VG39G06B
Matrix: WATER
Analysis Batch: 23VG39G06

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	0.02		mg/L			07/13/23 12:59	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE								07/13/23 12:59	1

Lab Sample ID: 23VG39G06L
Matrix: WATER
Analysis Batch: 23VG39G06

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
GASOLINE	0.5	0.455		mg/L		91	60 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
BROMOFLUOROBENZENE	101		70 - 130				

Lab Sample ID: 23G078-01M
Matrix: WATER
Analysis Batch: 23VG39G06

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		0.5	0.435		mg/L		87	50 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
BROMOFLUOROBENZENE	98		60 - 140						

Lab Sample ID: 23G078-01S
Matrix: WATER
Analysis Batch: 23VG39G06

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
GASOLINE	ND		0.5	0.446		mg/L		89	50 - 130	2	30

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-54001-1

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

Lab Sample ID: 23G078-01S
Matrix: WATER
Analysis Batch: 23VG39G06

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

<u>Surrogate</u>	<u>MSD</u>	<u>MSD</u>	<u>Limits</u>
	<u>%Recovery</u>	<u>Qualifier</u>	
BROMOFLUOROBENZENE	95		60 - 140

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

Lab Sample ID: 23DSG017WB
Matrix: WATER
Analysis Batch: 23DSG017W

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

<u>Analyte</u>	<u>MB</u>	<u>MB</u>	<u>RL</u>	<u>MDL</u>	<u>Unit</u>	<u>D</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
	<u>Result</u>	<u>Qualifier</u>							
DIESEL	ND	U	0.025		mg/L			07/14/23 19:09	1
JP5	ND	U	0.05		mg/L			07/14/23 19:09	1
JP8	ND	U	0.05		mg/L			07/14/23 19:09	1
MOTOR OIL	ND	U	0.05		mg/L			07/14/23 19:09	1

<u>Surrogate</u>	<u>MB</u>	<u>MB</u>	<u>Limits</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
	<u>%Recovery</u>	<u>Qualifier</u>				
BROMOBENZENE					07/14/23 19:09	1
HEXACOSANE					07/14/23 19:09	1

Lab Sample ID: 23DSG017WL
Matrix: WATER
Analysis Batch: 23DSG017W

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

<u>Analyte</u>	<u>Spike</u>	<u>LCS</u>	<u>LCS</u>	<u>Unit</u>	<u>D</u>	<u>%Rec</u>	<u>%Rec</u>	<u>Limits</u>
	<u>Added</u>	<u>Result</u>	<u>Qualifier</u>					
DIESEL	2.5	2.5		mg/L		100		50 - 130

<u>Surrogate</u>	<u>LCS</u>	<u>LCS</u>	<u>Limits</u>
	<u>%Recovery</u>	<u>Qualifier</u>	
BROMOBENZENE	73		60 - 130
HEXACOSANE	90		60 - 130

Lab Sample ID: 23J5G017WL
Matrix: WATER
Analysis Batch: 23DSG017W

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

<u>Analyte</u>	<u>Spike</u>	<u>LCS</u>	<u>LCS</u>	<u>Unit</u>	<u>D</u>	<u>%Rec</u>	<u>%Rec</u>	<u>Limits</u>
	<u>Added</u>	<u>Result</u>	<u>Qualifier</u>					
JP5	2.5	2.42		mg/L		97		30 - 160

<u>Surrogate</u>	<u>LCS</u>	<u>LCS</u>	<u>Limits</u>
	<u>%Recovery</u>	<u>Qualifier</u>	
BROMOBENZENE	76		60 - 130
HEXACOSANE	89		60 - 130

Lab Sample ID: 23J8G017WL
Matrix: WATER
Analysis Batch: 23DSG017W

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

<u>Analyte</u>	<u>Spike</u>	<u>LCS</u>	<u>LCS</u>	<u>Unit</u>	<u>D</u>	<u>%Rec</u>	<u>%Rec</u>	<u>Limits</u>
	<u>Added</u>	<u>Result</u>	<u>Qualifier</u>					
JP8	2.5	2.92		mg/L		117		30 - 160

QC Sample Results

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

Job ID: 380-54001-1

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

Lab Sample ID: 23J8G017WL
Matrix: WATER
Analysis Batch: 23DSG017W

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

	LCS	LCS	
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
BROMOBENZENE	96		60 - 130
HEXACOSANE	88		60 - 130

Lab Sample ID: 23G078-01M
Matrix: WATER
Analysis Batch: 23DSG017W

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		2.7	2.61		mg/L		97	50 - 130

	MS	MS	
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
BROMOBENZENE	63		60 - 130
HEXACOSANE	87		60 - 130

Lab Sample ID: 23G078-01M
Matrix: WATER
Analysis Batch: 23DSG017W

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		2.5	2.48		mg/L		99	30 - 160

	MS	MS	
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
BROMOBENZENE	73		60 - 130
HEXACOSANE	84		60 - 130

Lab Sample ID: 23G078-01S
Matrix: WATER
Analysis Batch: 23DSG017W

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		2.65	2.61		mg/L		98	50 - 130	0	30

	MSD	MSD	
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
BROMOBENZENE	64		60 - 130
HEXACOSANE	86		60 - 130

Lab Sample ID: 23G078-01S
Matrix: WATER
Analysis Batch: 23DSG017W

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		2.5	2.33		mg/L		93	30 - 160	6	30

	MSD	MSD	
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
BROMOBENZENE	65		60 - 130
HEXACOSANE	82		60 - 130

QC Association Summary

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

Job ID: 380-54001-1

GC/MS VOA

Analysis Batch: 47004

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-54001-1	AIEA WELLS P2 (260)	Total/NA	Water	524.2	
380-54001-2	TB: AIEA WELLS P2 (260)	Total/NA	Water	524.2	
MB 380-47004/5	Method Blank	Total/NA	Water	524.2	
LCS 380-47004/2	Lab Control Sample	Total/NA	Water	524.2	
LCSD 380-47004/3	Lab Control Sample Dup	Total/NA	Water	524.2	
MRL 380-47004/4	Lab Control Sample	Total/NA	Water	524.2	

Analysis Batch: 47476

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-54001-1	AIEA WELLS P2 (260)	Total/NA	Water	524.2	
380-54001-2	TB: AIEA WELLS P2 (260)	Total/NA	Water	524.2	
MB 380-47476/15	Method Blank	Total/NA	Water	524.2	
LCS 380-47476/11	Lab Control Sample	Total/NA	Water	524.2	
LCSD 380-47476/12	Lab Control Sample Dup	Total/NA	Water	524.2	
MRL 380-47476/13	Lab Control Sample	Total/NA	Water	524.2	
MRL 380-47476/14	Lab Control Sample	Total/NA	Water	524.2	

GC/MS Semi VOA

Prep Batch: 46988

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-54001-1	AIEA WELLS P2 (260)	Total/NA	Water	525.2	
MB 380-46988/1-A	Method Blank	Total/NA	Water	525.2	
LCS 380-46988/3-A	Lab Control Sample	Total/NA	Water	525.2	
LCSD 380-46988/4-A	Lab Control Sample Dup	Total/NA	Water	525.2	
MRL 380-46988/2-A	Lab Control Sample	Total/NA	Water	525.2	
380-53890-H-5-A MS	Matrix Spike	Total/NA	Water	525.2	
380-54001-1 DU	AIEA WELLS P2 (260)	Total/NA	Water	525.2	

Analysis Batch: 47196

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-54001-1	AIEA WELLS P2 (260)	Total/NA	Water	525.2	46988
MB 380-46988/1-A	Method Blank	Total/NA	Water	525.2	46988
LCS 380-46988/3-A	Lab Control Sample	Total/NA	Water	525.2	46988
LCSD 380-46988/4-A	Lab Control Sample Dup	Total/NA	Water	525.2	46988
MRL 380-46988/2-A	Lab Control Sample	Total/NA	Water	525.2	46988
380-53890-H-5-A MS	Matrix Spike	Total/NA	Water	525.2	46988
380-54001-1 DU	AIEA WELLS P2 (260)	Total/NA	Water	525.2	46988

GC Semi VOA

Prep Batch: 46999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-54001-1	AIEA WELLS P2 (260)	Total/NA	Water	504.1	
380-54001-2	TB: AIEA WELLS P2 (260)	Total/NA	Water	504.1	
MBL 380-46999/4-A	Method Blank	Total/NA	Water	504.1	
LCS 380-46999/3-A	Lab Control Sample	Total/NA	Water	504.1	
MRL 380-46999/1-A	Lab Control Sample	Total/NA	Water	504.1	
MRL 380-46999/2-A	Lab Control Sample	Total/NA	Water	504.1	
380-53751-C-1-A MS	Matrix Spike	Total/NA	Water	504.1	
380-53751-C-2-A DU	Duplicate	Total/NA	Water	504.1	

Eurofins Eaton Analytical Pomona

QC Association Summary

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

Job ID: 380-54001-1

GC Semi VOA

Analysis Batch: 47186

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-54001-1	AIEA WELLS P2 (260)	Total/NA	Water	504.1	46999
380-54001-2	TB: AIEA WELLS P2 (260)	Total/NA	Water	504.1	46999
MBL 380-46999/4-A	Method Blank	Total/NA	Water	504.1	46999
LCS 380-46999/3-A	Lab Control Sample	Total/NA	Water	504.1	46999
MRL 380-46999/1-A	Lab Control Sample	Total/NA	Water	504.1	46999
MRL 380-46999/2-A	Lab Control Sample	Total/NA	Water	504.1	46999
380-53751-C-1-A MS	Matrix Spike	Total/NA	Water	504.1	46999
380-53751-C-2-A DU	Duplicate	Total/NA	Water	504.1	46999

Prep Batch: 47215

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-54001-1	AIEA WELLS P2 (260)	Total/NA	Water	505	
MBL 380-47215/4-A	Method Blank	Total/NA	Water	505	
MRL 380-47215/2-A	Lab Control Sample	Total/NA	Water	505	
MRL 380-47215/3-A	Lab Control Sample	Total/NA	Water	505	
380-54001-1 MS	AIEA WELLS P2 (260)	Total/NA	Water	505	
380-54001-1 MS	AIEA WELLS P2 (260)	Total/NA	Water	505	
380-54156-B-1-A MS	Matrix Spike	Total/NA	Water	505	
380-54156-C-1-A MS	Matrix Spike	Total/NA	Water	505	

Analysis Batch: 47548

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-54001-1	AIEA WELLS P2 (260)	Total/NA	Water	505	47215
MBL 380-47215/4-A	Method Blank	Total/NA	Water	505	47215
MRL 380-47215/2-A	Lab Control Sample	Total/NA	Water	505	47215
MRL 380-47215/3-A	Lab Control Sample	Total/NA	Water	505	47215
380-54001-1 MS	AIEA WELLS P2 (260)	Total/NA	Water	505	47215
380-54001-1 MS	AIEA WELLS P2 (260)	Total/NA	Water	505	47215
380-54156-B-1-A MS	Matrix Spike	Total/NA	Water	505	47215
380-54156-C-1-A MS	Matrix Spike	Total/NA	Water	505	47215

HPLC/IC

Analysis Batch: 46941

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-54001-1	AIEA WELLS P2 (260)	Total/NA	Water	300.0	
MB 380-46941/4	Method Blank	Total/NA	Water	300.0	
LCS 380-46941/7	Lab Control Sample	Total/NA	Water	300.0	
LCSD 380-46941/8	Lab Control Sample Dup	Total/NA	Water	300.0	
MRL 380-46941/5	Lab Control Sample	Total/NA	Water	300.0	
MRL 380-46941/6	Lab Control Sample	Total/NA	Water	300.0	
380-54001-1 MS	AIEA WELLS P2 (260)	Total/NA	Water	300.0	
380-54001-1 MSD	AIEA WELLS P2 (260)	Total/NA	Water	300.0	

Analysis Batch: 46942

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-54001-1	AIEA WELLS P2 (260)	Total/NA	Water	300.0	
MB 380-46942/4	Method Blank	Total/NA	Water	300.0	
LCS 380-46942/7	Lab Control Sample	Total/NA	Water	300.0	
LCSD 380-46942/8	Lab Control Sample Dup	Total/NA	Water	300.0	
MRL 380-46942/5	Lab Control Sample	Total/NA	Water	300.0	

Eurofins Eaton Analytical Pomona

QC Association Summary

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

Job ID: 380-54001-1

HPLC/IC (Continued)

Analysis Batch: 46942 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MRL 380-46942/6	Lab Control Sample	Total/NA	Water	300.0	
380-54001-1 MS	AIEA WELLS P2 (260)	Total/NA	Water	300.0	
380-54001-1 MSD	AIEA WELLS P2 (260)	Total/NA	Water	300.0	

Analysis Batch: 47503

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-54001-1	AIEA WELLS P2 (260)	Total/NA	Water	300.0	
MB 380-47503/4	Method Blank	Total/NA	Water	300.0	
LCS 380-47503/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 380-47503/6	Lab Control Sample Dup	Total/NA	Water	300.0	
MRL 380-47503/3	Lab Control Sample	Total/NA	Water	300.0	
380-54585-B-2 MS	Matrix Spike	Total/NA	Water	300.0	
380-54585-B-2 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Metals

Analysis Batch: 47078

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-54001-1	AIEA WELLS P2 (260)	Total/NA	Water	200.7 Rev 4.4	
MB 380-47078/18	Method Blank	Total/NA	Water	200.7 Rev 4.4	
LCS 380-47078/20	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	
LCSD 380-47078/21	Lab Control Sample Dup	Total/NA	Water	200.7 Rev 4.4	
LLCS 380-47078/19	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	
380-53989-U-1 MS	Matrix Spike	Total/NA	Water	200.7 Rev 4.4	
380-53989-U-1 MSD	Matrix Spike Duplicate	Total/NA	Water	200.7 Rev 4.4	

Analysis Batch: 47114

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-54001-1	AIEA WELLS P2 (260)	Total/NA	Water	200.7 Rev 4.4	
MB 380-47114/17	Method Blank	Total/NA	Water	200.7 Rev 4.4	
LCS 380-47114/19	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	
LCSD 380-47114/20	Lab Control Sample Dup	Total/NA	Water	200.7 Rev 4.4	
LLCS 380-47114/18	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	
380-53989-U-1 MS	Matrix Spike	Total/NA	Water	200.7 Rev 4.4	
380-53989-U-1 MSD	Matrix Spike Duplicate	Total/NA	Water	200.7 Rev 4.4	

Prep Batch: 47166

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-54001-1	AIEA WELLS P2 (260)	Total Recoverable	Water	200.8	
MB 380-47166/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 380-47166/3-A	Lab Control Sample	Total Recoverable	Water	200.8	
LCSD 380-47166/4-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	
LLCS 380-47166/2-A	Lab Control Sample	Total Recoverable	Water	200.8	
380-53866-C-1-B MS	Matrix Spike	Total Recoverable	Water	200.8	
380-53866-C-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	200.8	

Analysis Batch: 47418

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-54001-1	AIEA WELLS P2 (260)	Total Recoverable	Water	200.8	47166
MB 380-47166/1-A	Method Blank	Total Recoverable	Water	200.8	47166
LCS 380-47166/3-A	Lab Control Sample	Total Recoverable	Water	200.8	47166

Eurofins Eaton Analytical Pomona

QC Association Summary

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

Job ID: 380-54001-1

Metals (Continued)

Analysis Batch: 47418 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 380-47166/4-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	47166
LLCS 380-47166/2-A	Lab Control Sample	Total Recoverable	Water	200.8	47166
380-53866-C-1-B MS	Matrix Spike	Total Recoverable	Water	200.8	47166
380-53866-C-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	200.8	47166

Prep Batch: 66340

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-54001-1	AIEA WELLS P2 (260)	Total/NA	Water	245.1	
MB 810-66340/1-A	Method Blank	Total/NA	Water	245.1	
LCS 810-66340/3-A	Lab Control Sample	Total/NA	Water	245.1	
LLCS 810-66340/2-A	Lab Control Sample	Total/NA	Water	245.1	
810-69388-A-2-B MS	Matrix Spike	Total/NA	Water	245.1	
810-69388-A-2-C MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	

Analysis Batch: 66400

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-54001-1	AIEA WELLS P2 (260)	Total/NA	Water	245.1	66340
MB 810-66340/1-A	Method Blank	Total/NA	Water	245.1	66340
LCS 810-66340/3-A	Lab Control Sample	Total/NA	Water	245.1	66340
LLCS 810-66340/2-A	Lab Control Sample	Total/NA	Water	245.1	66340
810-69388-A-2-B MS	Matrix Spike	Total/NA	Water	245.1	66340
810-69388-A-2-C MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	66340

General Chemistry

Analysis Batch: 47123

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-54001-1	AIEA WELLS P2 (260)	Total/NA	Water	SM 2540C	
MB 380-47123/1	Method Blank	Total/NA	Water	SM 2540C	
HLCS 380-47123/5	Lab Control Sample	Total/NA	Water	SM 2540C	
LCS 380-47123/4	Lab Control Sample	Total/NA	Water	SM 2540C	
MRL 380-47123/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MRL 380-47123/3	Lab Control Sample	Total/NA	Water	SM 2540C	
380-54114-C-12 MS	Matrix Spike	Total/NA	Water	SM 2540C	
380-53868-H-1 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 47205

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-54001-1	AIEA WELLS P2 (260)	Total/NA	Water	SM 2320B	
MB 380-47205/1	Method Blank	Total/NA	Water	SM 2320B	
LCS 380-47205/3	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 380-47205/18	Lab Control Sample Dup	Total/NA	Water	SM 2320B	
LLCS 380-47205/4	Lab Control Sample	Total/NA	Water	SM 2320B	
MRL 380-47205/2	Lab Control Sample	Total/NA	Water	SM 2320B	
380-54101-C-1 MS	Matrix Spike	Total/NA	Water	SM 2320B	
380-54101-C-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 2320B	
380-54101-C-1 DU	Duplicate	Total/NA	Water	SM 2320B	

Analysis Batch: 47208

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-54001-1	AIEA WELLS P2 (260)	Total/NA	Water	SM 2510B	

Eurofins Eaton Analytical Pomona

QC Association Summary

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

Job ID: 380-54001-1

General Chemistry (Continued)

Analysis Batch: 47208 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 380-47208/2	Method Blank	Total/NA	Water	SM 2510B	
LCS 380-47208/4	Lab Control Sample	Total/NA	Water	SM 2510B	
LCSD 380-47208/16	Lab Control Sample Dup	Total/NA	Water	SM 2510B	
MRL 380-47208/3	Lab Control Sample	Total/NA	Water	SM 2510B	
380-54101-C-1 DU	Duplicate	Total/NA	Water	SM 2510B	

Analysis Batch: 47210

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-54001-1	AIEA WELLS P2 (260)	Total/NA	Water	SM 4500 H+ B	
MB 380-47210/4	Method Blank	Total/NA	Water	SM 4500 H+ B	
LCS 380-47210/5	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
LCSD 380-47210/17	Lab Control Sample Dup	Total/NA	Water	SM 4500 H+ B	
380-54101-C-1 DU	Duplicate	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 47470

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-54001-1	AIEA WELLS P2 (260)	Total/NA	Water	SM 4500 S2 D	
MB 380-47470/1	Method Blank	Total/NA	Water	SM 4500 S2 D	
LCS 380-47470/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
LCSD 380-47470/26	Lab Control Sample Dup	Total/NA	Water	SM 4500 S2 D	
MRL 380-47470/17	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MRL 380-47470/2	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
380-54283-W-3 MS	Matrix Spike	Total/NA	Water	SM 4500 S2 D	
380-54283-W-3 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 47591

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-54001-1	AIEA WELLS P2 (260)	Total/NA	Water	SM 4500 F C	
MB 380-47591/3	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 380-47591/5	Lab Control Sample	Total/NA	Water	SM 4500 F C	
LCSD 380-47591/6	Lab Control Sample Dup	Total/NA	Water	SM 4500 F C	
MRL 380-47591/4	Lab Control Sample	Total/NA	Water	SM 4500 F C	
380-53868-D-1 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
380-53868-D-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	

Subcontract

Analysis Batch: O-42020

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-54001-1	AIEA WELLS P2 (260)	Total/NA	Water	625 Acid/Base/PAH + TICs	O-42020_P
108196-B1	Method Blank	Total/NA	BlankMatrix	625 Acid/Base/PAH + TICs	O-42020_P
108196-BS1	Lab Control Sample	Total/NA	BlankMatrix	625 Acid/Base/PAH + TICs	O-42020_P
108196-BS2	Lab Control Sample Dup	Total/NA	BlankMatrix	625 Acid/Base/PAH + TICs	O-42020_P

Eurofins Eaton Analytical Pomona

QC Association Summary

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

Job ID: 380-54001-1

Subcontract

Analysis Batch: 23DSG017W

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-54001-1	AIEA WELLS P2 (260)	Total/NA	Water	8015 LL DRO/MRO/JP5/J P8	
23DSG017WB	Method Blank	Total/NA	WATER	8015 LL DRO/MRO/JP5/J P8	
23DSG017WL	Lab Control Sample	Total/NA	WATER	8015 LL DRO/MRO/JP5/J P8	
23J5G017WL	Lab Control Sample	Total/NA	WATER	8015 LL DRO/MRO/JP5/J P8	
23J8G017WL	Lab Control Sample	Total/NA	WATER	8015 LL DRO/MRO/JP5/J P8	
23G078-01M	Matrix Spike	Total/NA	WATER	8015 LL DRO/MRO/JP5/J P8	
23G078-01M	Matrix Spike	Total/NA	WATER	8015 LL DRO/MRO/JP5/J P8	
23G078-01S	Matrix Spike Duplicate	Total/NA	WATER	8015 LL DRO/MRO/JP5/J P8	
23G078-01S	Matrix Spike Duplicate	Total/NA	WATER	8015 LL DRO/MRO/JP5/J P8	

Analysis Batch: 23MEG003W

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-54001-1	AIEA WELLS P2 (260)	Total/NA	Water	8015 Ethanol	
23MEG003WB	Method Blank	Total/NA	WATER	8015 Ethanol	
23MEG003WL	Lab Control Sample	Total/NA	WATER	8015 Ethanol	
23G078-01M	Matrix Spike	Total/NA	WATER	8015 Ethanol	
23G078-01S	Matrix Spike Duplicate	Total/NA	WATER	8015 Ethanol	

Analysis Batch: 23VG39G06

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-54001-1	AIEA WELLS P2 (260)	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
380-54001-2	TB: AIEA WELLS P2 (260)	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
23VG39G06B	Method Blank	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	
23VG39G06L	Lab Control Sample	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	
23G078-01M	Matrix Spike	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	
23G078-01S	Matrix Spike Duplicate	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	

Eurofins Eaton Analytical Pomona

QC Association Summary

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

Job ID: 380-54001-1

Subcontract

Prep Batch: O-42020_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-54001-1	AIEA WELLS P2 (260)	Total/NA	Water	EPA_625	
108196-B1	Method Blank	Total/NA	BlankMatrix	EPA_625	
108196-BS1	Lab Control Sample	Total/NA	BlankMatrix	EPA_625	
108196-BS2	Lab Control Sample Dup	Total/NA	BlankMatrix	EPA_625	

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

Lab Chronicle

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

Job ID: 380-54001-1

Client Sample ID: AIEA WELLS P2 (260)

Lab Sample ID: 380-54001-1

Date Collected: 07/10/23 09:30

Matrix: Water

Date Received: 07/11/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	524.2		1	47004	Q6AD	EA POM	07/11/23 20:04
Total/NA	Analysis	524.2		1	47476	N4CJ	EA POM	07/15/23 06:44
Total/NA	Prep	525.2			46988	OTM3	EA POM	07/12/23 09:00
Total/NA	Analysis	525.2		1	47196	Q8LA	EA POM	07/13/23 14:46
Total/NA	Prep	504.1			46999	K9GY	EA POM	07/12/23 11:55 - 07/12/23 12:40 ¹
Total/NA	Analysis	504.1		1	47186	K9GY	EA POM	07/13/23 02:14
Total/NA	Prep	505			47215	DR5R	EA POM	07/13/23 12:24 - 07/13/23 13:20 ¹
Total/NA	Analysis	505		1	47548	ULRL	EA POM	07/13/23 16:52
Total/NA	Analysis	300.0		5	46941	VB9B	EA POM	07/11/23 16:17
Total/NA	Analysis	300.0		5	46942	VB9B	EA POM	07/11/23 16:17
Total/NA	Analysis	300.0		1	47503	UNJR	EA POM	07/15/23 01:08
Total/NA	Analysis	200.7 Rev 4.4		1	47078	J9ZD	EA POM	07/12/23 14:00
Total/NA	Analysis	200.7 Rev 4.4		1	47114	J9ZD	EA POM	07/12/23 17:04
Total Recoverable	Prep	200.8			47166	Z45W	EA POM	07/13/23 09:56
Total Recoverable	Analysis	200.8		1	47418	AAE8	EA POM	07/14/23 12:56
Total/NA	Prep	245.1			66340	AC	EA SB	07/20/23 10:27
Total/NA	Analysis	245.1		1	66400	AC	EA SB	07/20/23 18:04
Total/NA	Analysis	SM 2320B		1	47205	D5MQ	EA POM	07/12/23 19:42
Total/NA	Analysis	SM 2510B		1	47208	D5MQ	EA POM	07/12/23 19:42
Total/NA	Analysis	SM 2540C		1	47123	XLG4	EA POM	07/12/23 18:28
Total/NA	Analysis	SM 4500 F C		1	47591	D5MQ	EA POM	07/14/23 13:41
Total/NA	Analysis	SM 4500 H+ B		1	47210	D5MQ	EA POM	07/12/23 19:42
Total/NA	Analysis	SM 4500 S2 D		1	47470	MH2L	EA POM	07/14/23 17:28
Total/NA	Prep	EPA_625		1	O-42020_P			07/14/23 00:00
Total/NA	Analysis	625 Acid/Base/PAH + TICs		1	O-42020	YC		08/24/23 14:18
Total/NA	Analysis	8015 Ethanol		1	23MEG003W	DBaren		07/13/23 11:58
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	23VG39G06	SCerva		07/13/23 14:49
Total/NA	Analysis	8015 LL DRO/MRO/JP5/JP8		1	23DSG017W	SDees		07/14/23 22:35

Client Sample ID: TB: AIEA WELLS P2 (260)

Lab Sample ID: 380-54001-2

Date Collected: 07/10/23 09:30

Matrix: Water

Date Received: 07/11/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	524.2		1	47004	Q6AD	EA POM	07/11/23 20:27
Total/NA	Analysis	524.2		1	47476	N4CJ	EA POM	07/15/23 07:06
Total/NA	Prep	504.1			46999	K9GY	EA POM	07/12/23 11:55 - 07/12/23 12:40 ¹
Total/NA	Analysis	504.1		1	47186	K9GY	EA POM	07/13/23 02:46
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	23VG39G06	SCerva		07/13/23 16:41

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

Lab Chronicle

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

Job ID: 380-54001-1

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: 380-54001-1

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	01-31-24

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
505	505	Water	Polychlorinated biphenyls, Total
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	Bromoethane
524.2		Water	Bromomethane (Methyl Bromide)
524.2		Water	Carbon disulfide
524.2		Water	Chloroethane
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	Isopropylbenzene
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
524.2		Water	Tertiary Butyl Alcohol (TBA)
524.2		Water	trans-1,3-Dichloropropene
525.2	525.2	Water	1-Methylnaphthalene
525.2	525.2	Water	2,4'-DDD
525.2	525.2	Water	2,4'-DDE
525.2	525.2	Water	2,4'-DDT

Accreditation/Certification Summary

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

Job ID: 380-54001-1

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

Analysis Method	Prep Method	Matrix	Analyte
525.2	525.2	Water	2,4-Dinitrotoluene
525.2	525.2	Water	2,6-Dinitrotoluene
525.2	525.2	Water	2-Methylnaphthalene
525.2	525.2	Water	4,4'-DDD
525.2	525.2	Water	4,4'-DDE
525.2	525.2	Water	4,4'-DDT
525.2	525.2	Water	Acenaphthene
525.2	525.2	Water	Acenaphthylene
525.2	525.2	Water	Acetochlor
525.2	525.2	Water	alpha-BHC
525.2	525.2	Water	alpha-Chlordane
525.2	525.2	Water	Anthracene
525.2	525.2	Water	Benz(a)anthracene
525.2	525.2	Water	Benzo[b]fluoranthene
525.2	525.2	Water	Benzo[g,h,]perylene
525.2	525.2	Water	Benzo[k]fluoranthene
525.2	525.2	Water	beta-BHC
525.2	525.2	Water	Bromacil
525.2	525.2	Water	Butylbenzylphthalate
525.2	525.2	Water	Chlorobenzilate
525.2	525.2	Water	Chloroneb
525.2	525.2	Water	Chlorothalonil (Draconil, Bravo)
525.2	525.2	Water	Chlorpyrifos
525.2	525.2	Water	Chrysene
525.2	525.2	Water	delta-BHC
525.2	525.2	Water	Dibenz(a,h)anthracene
525.2	525.2	Water	Diclorvos (DDVP)
525.2	525.2	Water	Diethylphthalate
525.2	525.2	Water	Dimethylphthalate
525.2	525.2	Water	Di-n-butyl phthalate
525.2	525.2	Water	Di-n-octyl phthalate
525.2	525.2	Water	Endosulfan I (Alpha)
525.2	525.2	Water	Endosulfan II (Beta)
525.2	525.2	Water	Endosulfan sulfate
525.2	525.2	Water	Endrin aldehyde
525.2	525.2	Water	EPTC
525.2	525.2	Water	Fluoranthene
525.2	525.2	Water	Fluorene
525.2	525.2	Water	gamma-Chlordane
525.2	525.2	Water	Indeno[1,2,3-cd]pyrene
525.2	525.2	Water	Isophorone
525.2	525.2	Water	Malathion
525.2	525.2	Water	Molinate
525.2	525.2	Water	Naphthalene
525.2	525.2	Water	Parathion
525.2	525.2	Water	Pendimethalin (Penoxaline)
525.2	525.2	Water	Phenanthrene

Accreditation/Certification Summary

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

Job ID: 380-54001-1

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
525.2	525.2	Water	Pyrene
525.2	525.2	Water	Terbacil
525.2	525.2	Water	Terbutylazine
525.2	525.2	Water	Thiobencarb
525.2	525.2	Water	Total Permethrin (mixed isomers)
525.2	525.2	Water	trans-Nonachlor
525.2	525.2	Water	Trifluralin
SM 2320B		Water	Bicarbonate Alkalinity as CaCO ₃
SM 2320B		Water	Carbonate Alkalinity as CaCO ₃
SM 4500 S2 D		Water	Sulfide

Laboratory: Eurofins 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	08-08-23
Alabama	State	40700	06-30-24
Alaska	State	IN00035	06-30-24
Arizona	State	AZ0432	07-25-23
Arkansas (DW)	State	EPA IN00035	06-30-23 *
California	State	2920	06-30-24
Colorado	State	IN00035	02-29-24
Connecticut	State	PH-0132	03-31-24
Delaware (DW)	State	IN00035	06-30-24
Florida	NELAP	E87775	06-30-24
Georgia (DW)	State	929	06-30-24
Guam	State	23-011R	07-15-24
Idaho (DW)	State	IN00035	12-31-23
IL Dept. of Public Health (Micro)	State	17767	07-01-24
Illinois	NELAP	200001	08-17-23
Indiana	State	C-71-01	12-31-25
Indiana (Micro)	State	M-76-07	12-31-25
Iowa	State	IA Lab #098	10-31-23
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	06-30-24
Massachusetts	State	M-IN035	06-30-24
MI - RadChem Recognition	State	9926	06-30-24
Michigan	State	9926	06-30-24
Minnesota	NELAP	1989807	12-31-23
Mississippi	State	IN00035	06-30-24
Missouri	State	880	09-30-24
Montana (DW)	State	CERT0026	01-02-24
Nebraska	State	NE-OS-05-04	06-30-24
Nevada	State	IN000352024-01	07-31-23

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

Eurofins Eaton Analytical Pomona

Accreditation/Certification Summary

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

Job ID: 380-54001-1

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
New Hampshire	NELAP	2124	11-05-23
New Jersey	NELAP	IN598	06-30-24
New Mexico	State	IN00035	06-30-24
New York	NELAP	11398	04-01-24
North Carolina (DW)	State	18700	07-31-24
North Dakota	State	R-035	09-26-23
Northern Mariana Islands (DW)	State	IN00035	06-30-24
Ohio	State	87775	06-30-24
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	06-30-24
Tennessee	State	TN02973	06-30-24
Texas	NELAP	T104704187-22-16	12-31-23
Texas	TCEQ Water Supply	TX207	06-30-24
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	08-14-23
Wisconsin (Micro)	State	10121	12-31-23
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: 380-54001-1

Method	Method Description	Protocol	Laboratory
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	Semivolatile Organic Compounds (GC/MS)	EPA	EA POM
504.1	EDB, DBCP and 1,2,3-TCP (GC)	EPA-DW2	EA POM
505	Organochlorine Pesticides/PCBs (GC)	EPA	EA POM
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 POM
525.2	Extraction of Semivolatile Compounds	EPA	EA POM
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: 380-54001-1

<u>Lab Sample ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Collected</u>	<u>Received</u>
380-54001-1	AIEA WELLS P2 (260)	Water	07/10/23 09:30	07/11/23 09:30
380-54001-2	TB: AIEA WELLS P2 (260)	Water	07/10/23 09:30	07/11/23 09:30

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3051 Fujita Street
Torrance, CA 90505
Tel: (310)-618-8889

Date: 08-29-2023
EMAX Batch No.: 23G078

Attn: Jackie Contreras

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

Subject: Laboratory Report
Project: 380-54001

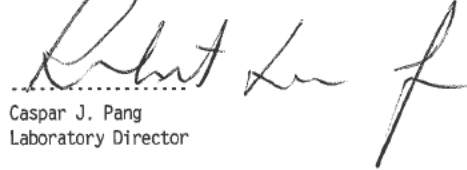
Enclosed is the Laboratory report for samples received on 07/12/23.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
380-54001-1	G078-01	07/10/23	WATER	TPH GASOLINE TPH ETHANOL
380-54001-2	G078-02	07/10/23	WATER	TPH GASOLINE
380-54001-1MS	G078-01M	07/10/23	WATER	TPH GASOLINE TPH DIESEL TPH JP-5 ETHANOL
380-54001-1MSD	G078-01S	07/10/23	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
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



REFERENCE: EMAX-SM02 Rev. 12
SAMPLE RECEIPT FORM 1

ECN 236078	Arb/Tr / Tracking Number	Type of Delivery <input type="checkbox"/> Fedex <input type="checkbox"/> UPS <input type="checkbox"/> GSO <input type="checkbox"/> Others
Recipient: Jovain Zamora	Date: 07/12/23	<input type="checkbox"/> EMAX Courier <input checked="" type="checkbox"/> Client Delivery
Time: 10:49		

COC INSPECTION

Client Name: Client PM/FC
 Address: Tel # / Fax #
 Safety Issues (if any): High concentrations expected From Superfund Site

Sampling Date/Time: Analysis Required Rad screening required
 Sample ID: Preservative (if any) Matrix

Note:

PACKAGING INSPECTION

Container: Cooler Box
 Condition: Correction Custody Seal Intact
 Packaging Factor: Bubble Pack Styrofoam

Temperatures (Cool, 5°C but not frozen): -0.1
 Thermometer: A-S/N 221852708 B-S/N 22185319
 Cooler 1: 5.8/5.7°C Cooler 2: _____°C Cooler 3: _____°C
 Cooler 4: _____°C Cooler 5: _____°C Cooler 6: _____°C Cooler 7: _____°C Cooler 8: _____°C Cooler 9: _____°C Cooler 10: _____°C

Other: Other Damaged Popcorn Sufficient

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

DISCREPANCIES

LabSampleID	2	ClientSample Label ID / Information	6/11/23 - 7 level reads	Corrective Action	RI
LabSampleContainerID	13	Code	D22		

Notes/Observations:
 pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time.
 MS 7/13/23

SAMPLE MATRIX IS DRINKING WATER? YES NO

LEGEND:

D1 Analysis is not indicated in _____
 D2 Analysis mismatch COC vs label
 D3 Sample ID mismatch COC vs label
 D4 Sample ID is not indicated in _____
 D5 Container - [improper] [leaking] [broken]
 D6 Date/Time is not indicated in _____
 D7 Date/Time mismatch COC vs label
 D8 Sample listed in COC is not received
 D9 Sample received is not listed in COC
 D10 No initial/date on corrections in COC/label
 D11 Container count mismatch COC vs received
 D12 Container size mismatch COC vs received

Code Description-Sample Management

D13 Out of Holding Time
 D14 Bubble is >6mm
 D15 No trip blank in cooler
 D16 Preservation not indicated in _____
 D17 Preservation mismatch COC vs label
 D18 Insufficient chemical preservative
 D19 Insufficient Sample
 D20 No filtration info for dissolved analysis
 D21 No sample for moisture determination
 D22 2nd date on label is incorrect

Code Description-Sample Management

R1 Proceed as indicated in COC Label
 R2 Refer to attached instruction
 R3 Cancel the analysis
 R4 Use vial with smallest bubble first
 R5 Log-in with latest sampling date and time + 1 min
 R6 Adjust pH as necessary
 R7 Filter and preserved as necessary
 R8 *Filtered clear*
 R9
 R10
 R11
 R12

REPORT ID: 236078

EMAX Laboratories, Inc. 3051 Fyita St., Torrance, CA 90505

REVIEWERS:
 Maria Jociyne
 Jociyne
 Date: 07/12/23

SRF: Jociyne
 SRF: Jociyne
 Date: 07/12/23

PM: *MS*
 Date: 7/13/23

Page 3 of 43

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

380-54001

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

SDG#: 23G078



CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-54001

SDG : 23G078

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

A total of two(2) water samples were received on 07/12/23 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. VG39G06B - 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. VG39G06L/VG39G06C 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 G078-01M/G078-01S. 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.

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SAMPLE RESULTS

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

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 07/10/23 09:30
Project     : 380-54001                   Date Received: 07/12/23
Batch No.   : 23G078                       Date Extracted: 07/13/23 14:49
Sample ID   : 380-54001-1                 Date Analyzed: 07/13/23 14:49
Lab Samp ID: G078-01                       Dilution Factor: 1
Lab File ID: EG13008A                       Matrix: WATER
Ext Btch ID: 23VG39G06                       % Moisture: NA
Calib. Ref.: EG13004A                       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	0.0321	0.0400	80	60-140
-----	-----	-----	-----	-----

Notes:

Parameter H-C Range

Gasoline C6-C10

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount : 5ml

Final Volume : 5ml

Prepared by : SCerva

Analyzed by : SCerva

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

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 07/10/23 09:30
Project     : 380-54001                   Date Received: 07/12/23
Batch No.   : 23G078                       Date Extracted: 07/13/23 16:41
Sample ID   : 380-54001-2                 Date Analyzed: 07/13/23 16:41
Lab Samp ID: G078-02                       Dilution Factor: 1
Lab File ID: EG13011A                       Matrix: WATER
Ext Btch ID: 23VG39G06                       % Moisture: NA
Calib. Ref.: EG13004A                       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	0.0329	0.0400	82	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

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QC SUMMARIES

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-54001
BATCH NO. : 23G078
METHOD : 5030B/8015B

MATRIX : WATER		% MOISTURE:NA
DILUTION FACTOR: 1	1	1
SAMPLE ID : MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID : VG39G06B	VG39G06L	VG39G06C
LAB FILE ID : EG13005A	EG13006A	EG13007A
DATE PREPARED : 07/13/23 12:59	07/13/23 13:35	07/13/23 14:12
DATE ANALYZED : 07/13/23 12:59	07/13/23 13:35	07/13/23 14:12
PREP BATCH : 23VG39G06	23VG39G06	23VG39G06
CALIBRATION REF: EG13004A	EG13004A	EG13004A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	RPD (%)	QLLimit (%)	MaxRPD (%)
Gasoline	ND	0.500	0.455	91	0.500	0.468	94	3	60-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QLLimit (%)
Bromofluorobenzene	0.0400	0.0405	101	0.0400	0.0399	100	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 : 380-54001
BATCH NO. : 23G078
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: 380-54001-1	380-54001-1MS	380-54001-1MSD
LAB SAMPLE ID	: G078-01	G078-01M	G078-01S
LAB FILE ID	: EG13008A	EG13009A	EG13010A
DATE PREPARED	: 07/13/23 14:49	07/13/23 15:27	07/13/23 16:04
DATE ANALYZED	: 07/13/23 14:49	07/13/23 15:27	07/13/23 16:04
PREP BATCH	: 23VG39G06	23VG39G06	23VG39G06
CALIBRATION REF:	EG13004A	EG13004A	EG13004A

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	0.435	87	0.500	0.446	89	2	50-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0391	98	0.0400	0.0379	95	60-140

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

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-54001

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 23G078



CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-54001

SDG : 23G078

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 07/12/23 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. DSG017WB - 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. DSG017WL/DSG017WC 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. Diesel was within MS QC limits in 23G078-01M/23G078-01S. 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: 380-54001

SDG : 23G078

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 07/12/23 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. DSG017WB - 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. J5G017WL/J5G017WC 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. JP5 was within MS QC limits in 23G078-01M/23G078-01S. 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: 380-54001

SDG : 23G078

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 07/12/23 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. DSG017WB - 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. J8G017WL/J8G017WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample

No matrix QC sample was provided on this SDG.

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

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=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 07/10/23 09:30
Project    : 380-54001                   Date Received: 07/12/23
Batch No.  : 23G078                       Date Extracted: 07/13/23 13:00
Sample ID  : 380-54001-1                 Date Analyzed: 07/14/23 22:35
Lab Samp ID: 23G078-01                   Dilution Factor: 1
Lab File ID: LG14020A                     Matrix: WATER
Ext Btch ID: 23DSG017W                   % Moisture: NA
Calib. Ref.: LG14003A                     Instrument ID: D5
=====

```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
-----	-----	-----	-----	
Diesel	ND	0.026	0.013	
Motor Oil	ND	0.052	0.026	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
-----	-----	-----	-----	-----
Bromobenzene	0.330	0.520	63	60-130
Hexacosane	0.115	0.130	89	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   : 960ml                      Final Volume : 5ml
Prepared by    : RGalan                       Analyzed by  : SDeeso

```

METHOD 3520C/8015B
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 07/10/23 09:30
Project    : 380-54001                   Date Received: 07/12/23
Batch No.  : 23G078                       Date Extracted: 07/13/23 13:00
Sample ID  : 380-54001-1                 Date Analyzed: 07/14/23 22:35
Lab Samp ID: 23G078-01                   Dilution Factor: 1
Lab File ID: LG14020A                     Matrix: WATER
Ext Btch ID: 23DSG017W                   % Moisture: NA
Calib. Ref.: LG14004A                     Instrument ID: D5
=====
    
```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
JP5	ND	0.052	0.026	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.330	0.520	63	60-130
Hexacosane	0.115	0.130	89	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 : 960ml Final Volume : 5ml
 Prepared by : RGalan Analyzed by : SDeeso

METHOD 3520C/8015B
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 07/10/23 09:30
Project     : 380-54001                   Date Received: 07/12/23
Batch No.   : 23G078                       Date Extracted: 07/13/23 13:00
Sample ID   : 380-54001-1                 Date Analyzed: 07/14/23 22:35
Lab Samp ID: 23G078-01                   Dilution Factor: 1
Lab File ID: LG14020A                     Matrix: WATER
Ext Btch ID: 23DSG017W                    % Moisture: NA
Calib. Ref.: LG14005A                     Instrument ID: D5
=====
    
```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
JP8	ND	0.052	0.026	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.330	0.520	63	60-130
Hexacosane	0.115	0.130	89	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 : 960ml

Final Volume : 5ml

Prepared by : RGalan

Analyzed by : SDeeso

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QC SUMMARIES

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-54001
BATCH NO. : 23G078
METHOD : 3520C/8015B

MATRIX : WATER % MOISTURE:NA
DILUTION FACTOR: 1 1
SAMPLE ID : MBLK1W LCS1W LCD1W
LAB SAMPLE ID : DSG017WB DSG017WL DSG017WC
LAB FILE ID : LG14009A LG14010A LG14011A
DATE PREPARED : 07/13/23 13:00 07/13/23 13:00 07/13/23 13:00
DATE ANALYZED : 07/14/23 19:09 07/14/23 19:28 07/14/23 19:47
PREP BATCH : 23DSG017W 23DSG017W 23DSG017W
CALIBRATION REF: LG14003A LG14003A LG14003A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Diesel	ND	2.50	2.50	100	2.50	2.32	93	7	50-130	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromobenzene	0.500	0.366	73	0.500	0.344	69	60-130
Hexacosane	0.125	0.112	90	0.125	0.110	88	60-130

MB: Method Blank sample LCS: Lab Control Sample LCD: Lab Control Sample Duplicate

METHOD 3520C/8015B
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 07/13/23 13:00
Project    : 380-54001                   Date Received: 07/13/23
Batch No.  : 23G078                       Date Extracted: 07/13/23 13:00
Sample ID  : MBLK1W                       Date Analyzed: 07/14/23 19:09
Lab Samp ID: DSG017WB                     Dilution Factor: 1
Lab File ID: LG14009A                     Matrix: WATER
Ext Btch ID: 23DSG017W                   % Moisture: NA
Calib. Ref.: LG14004A                   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	0.373	0.500	75	60-130
Hexacosane	0.114	0.125	92	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 : RGalan Analyzed by : SDeeso

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-54001
BATCH NO. : 23G078
METHOD : 3520C/8015B

MATRIX : WATER % MOISTURE:NA
DILUTION FACTOR: 1 1
SAMPLE ID : MBLK1W LCS1W LCD1W
LAB SAMPLE ID : DSG017WB J5G017WL J5G017WC
LAB FILE ID : LG14009A LG14012A LG14013A
DATE PREPARED : 07/13/23 13:00 07/13/23 13:00 07/13/23 13:00
DATE ANALYZED : 07/14/23 19:09 07/14/23 20:05 07/14/23 20:24
PREP BATCH : 23DSG017W 23DSG017W 23DSG017W
CALIBRATION REF: LG14004A LG14004A LG14004A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	RPD (%)	QLLimit (%)	MaxRPD (%)
JP5	ND	2.50	2.42	97	2.50	2.72	109	12	30-160	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QLLimit (%)
Bromobenzene	0.500	0.379	76	0.500	0.392	78	60-130
Hexacosane	0.125	0.111	89	0.125	0.116	93	60-130

MB: Method Blank sample LCS: Lab Control Sample LCD: Lab Control Sample Duplicate

METHOD 3520C/8015B
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 07/13/23 13:00
Project     : 380-54001                   Date Received: 07/13/23
Batch No.   : 23G078                       Date Extracted: 07/13/23 13:00
Sample ID   : MBLK1W                       Date Analyzed: 07/14/23 19:09
Lab Samp ID : DSG017WB                     Dilution Factor: 1
Lab File ID : LG14009A                     Matrix: WATER
Ext Btch ID : 23DSG017W                   % Moisture: NA
Calib. Ref. : LG14005A                     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	0.373	0.500	75	60-130
Hexacosane	0.114	0.125	92	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 : RGalan Analyzed by : SDeeso

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-54001
BATCH NO. : 23G078
METHOD : 3520C/8015B

MATRIX : WATER % MOISTURE:NA
DILUTION FACTOR: 1 1
SAMPLE ID : MBLK1W LCS1W LCD1W
LAB SAMPLE ID : DSG017WB J8G017WL J8G017WC
LAB FILE ID : LG14009A LG14014A LG14015A
DATE PREPARED : 07/13/23 13:00 07/13/23 13:00 07/13/23 13:00
DATE ANALYZED : 07/14/23 19:09 07/14/23 20:43 07/14/23 21:01
PREP BATCH : 23DSG017W 23DSG017W 23DSG017W
CALIBRATION REF: LG14005A LG14005A LG14005A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
JP8	ND	2.50	2.92	117	2.50	2.54	102	14	30-160	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromobenzene	0.500	0.479	96	0.500	0.426	85	60-130
Hexacosane	0.125	0.110	88	0.125	0.108	86	60-130

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 : 380-54001
BATCH NO. : 23G078
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: 380-54001-1	380-54001-1MS	380-54001-1MSD
LAB SAMPLE ID	: 23G078-01	23G078-01M	23G078-01S
LAB FILE ID	: LG14020A	LG14021A	LG14022A
DATE PREPARED	: 07/13/23 13:00	07/13/23 13:00	07/13/23 13:00
DATE ANALYZED	: 07/14/23 22:35	07/14/23 22:53	07/14/23 23:12
PREP BATCH	: 23DSG017W	23DSG017W	23DSG017W
CALIBRATION REF:	LG14003A	LG14003A	LG14003A

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Diesel	ND	2.70	2.61	97	2.65	2.61	98	0	50-130	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.540	0.341	63	0.530	0.338	64	60-130
Hexacosane	0.135	0.117	87	0.132	0.114	86	60-130

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

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-54001
BATCH NO. : 23G078
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: 380-54001-1	380-54001-1MS	380-54001-1MSD
LAB SAMPLE ID	: 23G078-01	23G078-01M	23G078-01S
LAB FILE ID	: LG14020A	LG14023A	LG14024A
DATE PREPARED	: 07/13/23 13:00	07/13/23 13:00	07/13/23 13:00
DATE ANALYZED	: 07/14/23 22:35	07/14/23 23:31	07/14/23 23:49
PREP BATCH	: 23DSG017W	23DSG017W	23DSG017W
CALIBRATION REF:	LG14004A	LG14004A	LG14004A

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
JP5	ND	2.50	2.48	99	2.50	2.33	93	6	30-160	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.500	0.363	73	0.500	0.325	65	60-130
Hexacosane	0.125	0.105	84	0.125	0.102	82	60-130

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

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-54001

METHOD SW8015C
ALCOHOLS BY GC

SDG#: 23G078

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CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-54001

SDG : 23G078

METHOD SW8015C
ALCOHOLS BY GC

One(1) water sample was received on 07/12/23 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. MEG003WB - 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. MEG003WL/MEG003WC 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 G078-01M/G078-01S. 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.

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SAMPLE RESULTS

METHOD SW8015C
ALCOHOLS BY GC

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	07/10/23
Project	: 380-54001	Date Received:	07/12/23
Batch No.	: 23G078	Date Extracted:	NA
Sample ID:	380-54001-1	Date Analyzed:	07/13/23 11:58
Lab Samp ID:	G078-01	Dilution Factor:	1
Lab File ID:	TG13007A	Matrix	: WATER
Ext Btch ID:	MEG003W	% Moisture	: NA
Calib. Ref.:	TG13002A	Instrument ID	: GCT050

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

RL : Reporting Limit

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QC SUMMARIES

METHOD SW8015C
ALCOHOLS BY GC

Client : EUROFINS EATON ANALYTICAL	Date Collected: NA
Project : 380-54001	Date Received: NA
Batch No. : 23G078	Date Extracted: NA
Sample ID: MBLK1W	Date Analyzed: 07/13/23 11:15
Lab Samp ID: MEG003WB	Dilution Factor: 1
Lab File ID: TG13004A	Matrix : WATER
Ext Btch ID: MEG003W	% Moisture : NA
Calib. Ref.: TG13002A	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: 380-54001
BATCH NO.: 23G078
METHOD: METHOD SW8015C

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1
SAMPLE ID: MBLK1W
LAB SAMP ID: MEG003WB MEG003WL MEG003WC
LAB FILE ID: TG13004A TG13005A TG13006A
DATE EXTRACTED: NA NA NA DATE COLLECTED: NA
DATE ANALYZED: 07/13/2311:15 07/13/2311:29 07/13/2311:44 DATE RECEIVED: NA
PREP. BATCH: MEG003W MEG003W MEG003W
CALIB. REF: TG13002A TG13002A TG13002A

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	10300	103	10000	9630	96	7	60-130	30

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 380-54001
BATCH NO.: 23G078
METHOD: METHOD SW8015C

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1 1
SAMPLE ID: 380-54001-1
LAB SAMP ID: G078-01 G078-01M G078-01S
LAB FILE ID: TG13007A TG13008A TG13009A
DATE EXTRACTED: NA NA NA DATE COLLECTED: 07/10/23
DATE ANALYZED: 07/13/2311:58 07/13/2312:12 07/13/2312:28 DATE RECEIVED: 07/12/23
PREP. BATCH: MEG003W MEG003W MEG003W
CALIB. REF: TG13002A TG13002A TG13002A

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	9130	91	10000	8920	89	2	60-130	30

September 07, 2023

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

Project Name: RED-HILL Project # 380001111 Job # 380-54001-1
 Physis Project ID: 1407003-414

Dear Rachelle,

Enclosed are the analytical results for the sample submitted to PHYSIS Environmental Laboratories, Inc. (PHYSIS) on 7/12/2023. 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: 1407003-414

RED-HILL Project # 380001111 Job # 380-54001-1

Total Samples: 1

PHYSIS ID	Sample ID	Description	Date	Time	Matrix	Sample Type
108197	AIEA WELLS P2 (260)	380-54001-1	7/10/2023	9:30	Samplewater	Not Specified

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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.

ANALYTICALS

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: 108197-R1	AIEA WELLS P2 (260)	380-54001-1	Matrix: Samplewater				Sampled:	10-Jul-23	9:30	Received:	12-Jul-23
(2,4,6-Tr bromophenol)	EPA 625.1	% Recovery	47	1			Total		O-42020	14-Jul-23	24-Aug-23
(d5-Phenol)	EPA 625.1	% Recovery	88	1			Total		O-42020	14-Jul-23	24-Aug-23
2,4,5-Trichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42020	14-Jul-23	24-Aug-23
2,4,6-Trichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42020	14-Jul-23	24-Aug-23
2,4-Dichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42020	14-Jul-23	24-Aug-23
2,4-Dinitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-42020	14-Jul-23	24-Aug-23
2,6-Dichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42020	14-Jul-23	24-Aug-23
2,6-Di-tert-butyl-4-methylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42020	14-Jul-23	24-Aug-23
2,6-Di-tert-butylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42020	14-Jul-23	24-Aug-23
2-Chlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42020	14-Jul-23	24-Aug-23
2-Methyl-4,6-dinitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-42020	14-Jul-23	24-Aug-23
2-Methylphenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-42020	14-Jul-23	24-Aug-23
2-Nitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-42020	14-Jul-23	24-Aug-23
3+4-Methylphenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-42020	14-Jul-23	24-Aug-23
4-Chloro-3-methylphenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-42020	14-Jul-23	24-Aug-23
4-Nitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-42020	14-Jul-23	24-Aug-23
6-tert-butyl-2,4-dimethylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42020	14-Jul-23	24-Aug-23
Benzoic Acid	EPA 625.1	µg/L	0.236	1	0.1	0.2	Total		O-42020	14-Jul-23	24-Aug-23
Benzyl Alcohol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-42020	14-Jul-23	24-Aug-23
Pentachlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42020	14-Jul-23	24-Aug-23
Phenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-42020	14-Jul-23	24-Aug-23
p-tert-Butylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42020	14-Jul-23	24-Aug-23

Base/Neutral Extractable Compounds

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 108197-R1	AIEA WELLS P2 (260) 380-54001-1		Matrix: Samplewater				Sampled:	10-Jul-23	9:30	Received:	12-Jul-23
2-Chloronaphthalene	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42020	14-Jul-23	24-Aug-23
2-Nitroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42020	14-Jul-23	24-Aug-23
3-Nitroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42020	14-Jul-23	24-Aug-23
4-Bromophenylphenyl ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42020	14-Jul-23	24-Aug-23
4-Chloroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42020	14-Jul-23	24-Aug-23
4-Chlorophenylphenyl ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42020	14-Jul-23	24-Aug-23
4-Nitroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42020	14-Jul-23	24-Aug-23
Aniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42020	14-Jul-23	24-Aug-23
Benzidine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42020	14-Jul-23	24-Aug-23
Bis(2-Chloroethoxy) methane	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42020	14-Jul-23	24-Aug-23
Bis(2-Chloroethyl) ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42020	14-Jul-23	24-Aug-23
Bis(2-Chloroisopropyl) ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42020	14-Jul-23	24-Aug-23
Dibenzofuran	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42020	14-Jul-23	24-Aug-23
Disalicylidenepropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42020	14-Jul-23	24-Aug-23
Hexachloroethane	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42020	14-Jul-23	24-Aug-23
Nitrobenzene	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42020	14-Jul-23	24-Aug-23
N-Nitrosodi-n-propylamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42020	14-Jul-23	24-Aug-23
N-Nitrosodiphenylamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42020	14-Jul-23	24-Aug-23

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 108197-R1	AIEA WELLS P2 (260)	380-54001-1	Matrix: Samplewater				Sampled:	10-Jul-23	9:30	Received:	12-Jul-23
(d10-Acenaphthene)	EPA 625.1	% Recovery	102	1			Total		O-42020	14-Jul-23	24-Aug-23
(d10-Phenanthrene)	EPA 625.1	% Recovery	101	1			Total		O-42020	14-Jul-23	24-Aug-23
(d12-Chrysene)	EPA 625.1	% Recovery	98	1			Total		O-42020	14-Jul-23	24-Aug-23
(d12-Perylene)	EPA 625.1	% Recovery	108	1			Total		O-42020	14-Jul-23	24-Aug-23
(d8-Naphthalene)	EPA 625.1	% Recovery	93	1			Total		O-42020	14-Jul-23	24-Aug-23
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42020	14-Jul-23	24-Aug-23
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42020	14-Jul-23	24-Aug-23
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42020	14-Jul-23	24-Aug-23
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42020	14-Jul-23	24-Aug-23
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42020	14-Jul-23	24-Aug-23
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42020	14-Jul-23	24-Aug-23
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42020	14-Jul-23	24-Aug-23
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42020	14-Jul-23	24-Aug-23
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42020	14-Jul-23	24-Aug-23
Benzo[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42020	14-Jul-23	24-Aug-23
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42020	14-Jul-23	24-Aug-23
Benzo[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42020	14-Jul-23	24-Aug-23
Benzo[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42020	14-Jul-23	24-Aug-23
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42020	14-Jul-23	24-Aug-23
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42020	14-Jul-23	24-Aug-23
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42020	14-Jul-23	24-Aug-23
Dibenz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42020	14-Jul-23	24-Aug-23
Dibenzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42020	14-Jul-23	24-Aug-23
Dibenzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42020	14-Jul-23	24-Aug-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-42020	14-Jul-23	24-Aug-23
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42020	14-Jul-23	24-Aug-23
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42020	14-Jul-23	24-Aug-23
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42020	14-Jul-23	24-Aug-23
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42020	14-Jul-23	24-Aug-23
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42020	14-Jul-23	24-Aug-23
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42020	14-Jul-23	24-Aug-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	%	LIMITS	
Sample ID: 108196-B1		QAQC Procedural Blank			Matrix: BlankMatrix			Sampled:		Received:			
		Method: EPA 625.1			Batch ID: O-42020			Prepared: 14-Jul-23		Analyzed: 24-Aug-23			
(2,4,6-Tr bromophenol)	Total	45	1				% Recovery	100	45	30 - 130%	PASS		
(d5-Phenol)	Total	95	1				% Recovery	100	95	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 CODEc
							LEVEL	RESULT	%	LIMITS	%	LIMITS
Sample ID: 108196-BS1		QAQC Procedural Blank			Matrix: BlankMatrix			Sampled:		Received:		
Method: EPA 625.1		Batch ID: O-42020			Prepared: 14-Jul-23		Analyzed: 24-Aug-23					
(2,4,6-Tr bromophenol)	Total	58	1			% Recovery	100	0	58	30 - 130%	PASS	
(d5-Phenol)	Total	111	1			% Recovery	100	0	111	0 - 130%	PASS	
2,4,5-Trichlorophenol	Total	0.745	1	0.05	0.1	µg/L	1	0	75	30 - 130%	PASS	
2,4,6-Trichlorophenol	Total	0.796	1	0.05	0.1	µg/L	1	0	80	56 - 118%	PASS	
2,4-Dichlorophenol	Total	0.76	1	0.05	0.1	µg/L	1	0	76	51 - 117%	PASS	
2,4-Dinitrophenol	Total	0.668	1	0.1	0.2	µg/L	1	0	67	0 - 152%	PASS	
2,6-Dichlorophenol	Total	0.378	1	0.05	0.1	µg/L	0.5	0	76	30 - 130%	PASS	
2,6-Di-tert-butyl-4-methylphenol	Total	1.03	1	0.05	0.1	µg/L	1	0	103	50 - 150%	PASS	
2,6-Di-tert-butylphenol	Total	0.99	1	0.05	0.1	µg/L	1	0	99	50 - 150%	PASS	
2-Chlorophenol	Total	0.621	1	0.05	0.1	µg/L	1	0	62	41 - 110%	PASS	
2-Methyl-4,6-dinitrophenol	Total	0.791	1	0.1	0.2	µg/L	1	0	79	0 - 141%	PASS	
2-Methylphenol	Total	0.627	1	0.1	0.2	µg/L	1	0	63	40 - 117%	PASS	
2-Nitrophenol	Total	0.608	1	0.1	0.2	µg/L	1	0	61	40 - 117%	PASS	
3+4-Methylphenol	Total	0.648	1	0.1	0.2	µg/L	1	0	65	0 - 130%	PASS	
4-Chloro-3-methylphenol	Total	0.666	1	0.1	0.2	µg/L	1	0	67	51 - 128%	PASS	
4-Nitrophenol	Total	0.918	1	0.1	0.2	µg/L	1	0	92	10 - 164%	PASS	
6-tert-butyl-2,4-dimethylphenol	Total	0.938	1	0.05	0.1	µg/L	1	0	94	50 - 150%	PASS	
Benzoic Acid	Total	0.263	1	0.1	0.2	µg/L	1	0	26	2 - 145%	PASS	
Benzyl Alcohol	Total	0.622	1	0.1	0.2	µg/L	1	0	62	43 - 148%	PASS	
Pentachlorophenol	Total	0.656	1	0.05	0.1	µg/L	1	0	66	36 - 111%	PASS	
Phenol	Total	0.547	1	0.1	0.2	µg/L	1	0	55	29 - 114%	PASS	
p-tert-Butylphenol	Total	1.06	1	0.05	0.1	µg/L	1	0	106	50 - 150%	PASS	

Acid Extractable Compounds

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY		PRECISION		QA CODEc	
									%	LIMITS	%	LIMITS		
Sample ID: 108196-BS2		QAQC Procedural Blank			Matrix: BlankMatrix			Sampled:		Received:				
Method: EPA 625.1		Batch ID: O-42020			Prepared: 14-Jul-23		Analyzed: 24-Aug-23							
(2,4,6-Tr bromophenol)	Total	58	1			% Recovery	100	0	58	30 - 130%	PASS	0	30	PASS
(d5-Phenol)	Total	85	1			% Recovery	100	0	85	0 - 130%	PASS	27	30	PASS
2,4,5-Trichlorophenol	Total	0.746	1	0.05	0.1	µg/L	1	0	75	30 - 130%	PASS	1	30	PASS
2,4,6-Trichlorophenol	Total	0.8	1	0.05	0.1	µg/L	1	0	80	56 - 118%	PASS	0	30	PASS
2,4-Dichlorophenol	Total	0.758	1	0.05	0.1	µg/L	1	0	76	51 - 117%	PASS	0	30	PASS
2,4-Dinitrophenol	Total	0.669	1	0.1	0.2	µg/L	1	0	67	0 - 152%	PASS	0	30	PASS
2,6-Dichlorophenol	Total	0.376	1	0.05	0.1	µg/L	0.5	0	75	30 - 130%	PASS	1	30	PASS
2,6-Di-tert-butyl-4-methylphenol	Total	1.02	1	0.05	0.1	µg/L	1	0	102	50 - 150%	PASS	1	30	PASS
2,6-Di-tert-butylphenol	Total	0.972	1	0.05	0.1	µg/L	1	0	97	50 - 150%	PASS	2	30	PASS
2-Chlorophenol	Total	0.604	1	0.05	0.1	µg/L	1	0	60	41 - 110%	PASS	3	30	PASS
2-Methyl-4,6-dinitrophenol	Total	0.805	1	0.1	0.2	µg/L	1	0	81	0 - 141%	PASS	1	30	PASS
2-Methylphenol	Total	0.607	1	0.1	0.2	µg/L	1	0	61	40 - 117%	PASS	3	30	PASS
2-Nitrophenol	Total	0.614	1	0.1	0.2	µg/L	1	0	61	40 - 117%	PASS	0	30	PASS
3+4-Methylphenol	Total	0.626	1	0.1	0.2	µg/L	1	0	63	0 - 130%	PASS	3	30	PASS
4-Chloro-3-methylphenol	Total	0.668	1	0.1	0.2	µg/L	1	0	67	51 - 128%	PASS	0	30	PASS
4-Nitrophenol	Total	0.918	1	0.1	0.2	µg/L	1	0	92	10 - 164%	PASS	0	30	PASS
6-tert-butyl-2,4-dimethylphenol	Total	0.942	1	0.05	0.1	µg/L	1	0	94	50 - 150%	PASS	0	30	PASS
Benzoic Acid	Total	0.225	1	0.1	0.2	µg/L	1	0	22	2 - 145%	PASS	17	30	PASS
Benzyl Alcohol	Total	0.606	1	0.1	0.2	µg/L	1	0	61	43 - 148%	PASS	2	30	PASS
Pentachlorophenol	Total	0.675	1	0.05	0.1	µg/L	1	0	68	36 - 111%	PASS	3	30	PASS
Phenol	Total	0.502	1	0.1	0.2	µg/L	1	0	50	29 - 114%	PASS	10	30	PASS
p-tert-Butylphenol	Total	1.05	1	0.05	0.1	µg/L	1	0	105	50 - 150%	PASS	1	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: 108196-B1		QAQC Procedural Blank			Matrix: BlankMatrix		Sampled:		Received:		
Method: EPA 625.1		Batch ID: O-42020		Prepared: 14-Jul-23		Analyzed: 24-Aug-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	SOURCE	ACCURACY		PRECISION	QA CODEc
							LEVEL	RESULT	%	LIMITS	%	LIMITS
Sample ID: 108196-BS1		QAQC Procedural Blank			Matrix: BlankMatrix			Sampled:		Received:		
Method: EPA 625.1		Batch ID: O-42020			Prepared: 14-Jul-23		Analyzed: 24-Aug-23					
2-Chloronaphthalene	Total	0.823	1	0.05	0.1	µg/L	1	0	82	53 - 130%	PASS	
2-Nitroaniline	Total	0.723	1	0.05	0.1	µg/L	1	0	72	69 - 114%	PASS	
3-Nitroaniline	Total	0.723	1	0.05	0.1	µg/L	1	0	72	23 - 137%	PASS	
4-Bromophenylphenyl ether	Total	0.926	1	0.05	0.1	µg/L	1	0	93	61 - 132%	PASS	
4-Chloroaniline	Total	0.674	1	0.05	0.1	µg/L	1	0	67	50 - 150%	PASS	
4-Chlorophenylphenyl ether	Total	0.936	1	0.05	0.1	µg/L	1	0	94	63 - 130%	PASS	
4-Nitroaniline	Total	0.717	1	0.05	0.1	µg/L	1	0	72	10 - 159%	PASS	
Aniline	Total	0.559	1	0.05	0.1	µg/L	1	0	56	50 - 150%	PASS	
Benzidine	Total	0.0169	1	0.05	0.1	µg/L	1	0	2	0 - 125%	PASS	
Bis(2-Chloroethoxy) methane	Total	0.665	1	0.05	0.1	µg/L	1	0	67	66 - 122%	PASS	
Bis(2-Chloroethyl) ether	Total	0.581	1	0.05	0.1	µg/L	1	0	58	43 - 127%	PASS	
Bis(2-Chloroisopropyl) ether	Total	0.746	1	0.05	0.1	µg/L	1	0	75	49 - 128%	PASS	
Dibenzofuran	Total	0.659	1	0.05	0.1	µg/L	1	0	66	50 - 150%	PASS	
Disalicylidenepropanediamin	Total	41.5	1	0.05	0.1	µg/L	50	0	83	50 - 150%	PASS	
Hexachloroethane	Total	0.808	1	0.05	0.1	µg/L	1	0	81	27 - 130%	PASS	
Nitrobenzene	Total	0.633	1	0.05	0.1	µg/L	1	0	63	54 - 111%	PASS	
N-Nitrosodi-n-propylamine	Total	0.679	1	0.05	0.1	µg/L	1	0	68	61 - 152%	PASS	
N-Nitrosodiphenylamine	Total	0.967	1	0.05	0.1	µg/L	1	0	97	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: 108196-BS2		QAQC Procedural Blank			Matrix: BlankMatrix			Sampled:		Received:				
Method: EPA 625.1		Batch ID: O-42020			Prepared: 14-Jul-23		Analyzed: 24-Aug-23							
2-Chloronaphthalene	Total	0.814	1	0.05	0.1	µg/L	1	0	81	53 - 130%	PASS	1	30	PASS
2-Nitroaniline	Total	0.74	1	0.05	0.1	µg/L	1	0	74	69 - 114%	PASS	3	30	PASS
3-Nitroaniline	Total	0.726	1	0.05	0.1	µg/L	1	0	73	23 - 137%	PASS	1	30	PASS
4-Bromophenylphenyl ether	Total	0.918	1	0.05	0.1	µg/L	1	0	92	61 - 132%	PASS	1	30	PASS
4-Chloroaniline	Total	0.655	1	0.05	0.1	µg/L	1	0	65	50 - 150%	PASS	2	30	PASS
4-Chlorophenylphenyl ether	Total	0.92	1	0.05	0.1	µg/L	1	0	92	63 - 130%	PASS	2	30	PASS
4-Nitroaniline	Total	0.731	1	0.05	0.1	µg/L	1	0	73	10 - 159%	PASS	1	30	PASS
Aniline	Total	0.523	1	0.05	0.1	µg/L	1	0	52	50 - 150%	PASS	7	30	PASS
Benzidine	Total	0.0178	1	0.05	0.1	µg/L	1	0	2	0 - 125%	PASS	0	30	PASS
Bis(2-Chloroethoxy) methane	Total	0.66	1	0.05	0.1	µg/L	1	0	66	66 - 122%	PASS	2	30	PASS
Bis(2-Chloroethyl) ether	Total	0.545	1	0.05	0.1	µg/L	1	0	55	43 - 127%	PASS	7	30	PASS
Bis(2-Chloroisopropyl) ether	Total	0.697	1	0.05	0.1	µg/L	1	0	70	49 - 128%	PASS	7	30	PASS
Dibenzofuran	Total	0.638	1	0.05	0.1	µg/L	1	0	64	50 - 150%	PASS	3	30	PASS
Disalicylidenepropanediamin	Total	46.9	1	0.05	0.1	µg/L	50	0	94	50 - 150%	PASS	12	30	PASS
Hexachloroethane	Total	0.771	1	0.05	0.1	µg/L	1	0	77	27 - 130%	PASS	5	30	PASS
Nitrobenzene	Total	0.625	1	0.05	0.1	µg/L	1	0	62	54 - 111%	PASS	2	30	PASS
N-Nitrosodi-n-propylamine	Total	0.671	1	0.05	0.1	µg/L	1	0	67	61 - 152%	PASS	1	30	PASS
N-Nitrosodiphenylamine	Total	0.97	1	0.05	0.1	µg/L	1	0	97	49 - 142%	PASS	0	30	PASS

Polynuclear Aromatic Hydrocarbons

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY	PRECISION	QA CODE	
							LEVEL	RESULT	% LIMITS	% LIMITS		
Sample ID: 108196-B1		QAQC Procedural Blank			Matrix: BlankMatrix			Sampled:		Received:		
		Method: EPA 625.1			Batch ID: O-42020			Prepared: 14-Jul-23		Analyzed: 24-Aug-23		
(d10-Acenaphthene)	Total	104	1			µg/L	% Recovery	100	104	27 - 133%	PASS	
(d10-Phenanthrene)	Total	101	1			µg/L	% Recovery	100	101	43 - 129%	PASS	
(d12-Chrysene)	Total	97	1			µg/L	% Recovery	100	97	52 - 144%	PASS	
(d12-Perylene)	Total	102	1			µg/L	% Recovery	100	102	36 - 161%	PASS	
(d8-Naphthalene)	Total	96	1			µg/L	% Recovery	100	96	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: 108196-BS1		QAQC Procedural Blank			Matrix: BlankMatrix			Sampled:		Received:		
Method: EPA 625.1		Batch ID: O-42020			Prepared: 14-Jul-23		Analyzed: 24-Aug-23					
(d10-Acenaphthene)	Total	106	1			% Recovery	100	0	106	27 - 133%	PASS	
(d10-Phenanthrene)	Total	101	1			% Recovery	100	0	101	43 - 129%	PASS	
(d12-Chrysene)	Total	98	1			% Recovery	100	0	98	52 - 144%	PASS	
(d12-Perylene)	Total	104	1			% Recovery	100	0	104	36 - 161%	PASS	
(d8-Naphthalene)	Total	99	1			% Recovery	100	0	99	25 - 125%	PASS	
1-Methylnaphthalene	Total	0.552	1	0.001	0.005	µg/L	0.5	0	110	31 - 128%	PASS	
1-Methylphenanthrene	Total	0.567	1	0.001	0.005	µg/L	0.5	0	113	66 - 127%	PASS	
2,3,5-Trimethylnaphthalene	Total	0.577	1	0.001	0.005	µg/L	0.5	0	115	55 - 122%	PASS	
2,6-Dimethylnaphthalene	Total	0.576	1	0.001	0.005	µg/L	0.5	0	115	48 - 120%	PASS	
2-Methylnaphthalene	Total	1.65	1	0.001	0.005	µg/L	1.5	0	110	47 - 130%	PASS	
Acenaphthene	Total	1.7	1	0.001	0.005	µg/L	1.5	0	113	53 - 131%	PASS	
Acenaphthylene	Total	1.86	1	0.001	0.005	µg/L	1.5	0	124	43 - 140%	PASS	
Anthracene	Total	1.62	1	0.001	0.005	µg/L	1.5	0	108	58 - 135%	PASS	
Benz[a]anthracene	Total	1.68	1	0.001	0.005	µg/L	1.5	0	112	55 - 145%	PASS	
Benzo[a]pyrene	Total	1.69	1	0.001	0.005	µg/L	1.5	0	113	51 - 143%	PASS	
Benzo[b]fluoranthene	Total	1.71	1	0.001	0.005	µg/L	1.5	0	114	46 - 165%	PASS	
Benzo[e]pyrene	Total	0.55	1	0.001	0.005	µg/L	0.5	0	110	42 - 152%	PASS	
Benzo[g,h,i]perylene	Total	1.67	1	0.001	0.005	µg/L	1.5	0	111	63 - 133%	PASS	
Benzo[k]fluoranthene	Total	1.64	1	0.001	0.005	µg/L	1.5	0	109	56 - 145%	PASS	
Biphenyl	Total	0.563	1	0.001	0.005	µg/L	0.5	0	113	56 - 119%	PASS	
Chrysene	Total	1.54	1	0.001	0.005	µg/L	1.5	0	103	56 - 141%	PASS	
Dibenz[a,h]anthracene	Total	1.8	1	0.001	0.005	µg/L	1.5	0	120	55 - 150%	PASS	
Dibenzo[a,l]pyrene	Total	0.466	1	0.001	0.005	µg/L	0.5	0	93	50 - 150%	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	0.549	1	0.001	0.005	µg/L	0.5	0	110	46 - 126%	PASS		
Fluoranthene	Total	1.74	1	0.001	0.005	µg/L	1.5	0	116	60 - 146%	PASS		
Fluorene	Total	1.76	1	0.001	0.005	µg/L	1.5	0	117	58 - 131%	PASS		
Indeno[1,2,3-cd]pyrene	Total	1.77	1	0.001	0.005	µg/L	1.5	0	118	50 - 151%	PASS		
Naphthalene	Total	1.54	1	0.001	0.005	µg/L	1.5	0	103	41 - 126%	PASS		
Perylene	Total	0.574	1	0.001	0.005	µg/L	0.5	0	115	48 - 141%	PASS		
Phenanthrene	Total	1.6	1	0.001	0.005	µg/L	1.5	0	107	67 - 127%	PASS		
Pyrene	Total	1.75	1	0.001	0.005	µg/L	1.5	0	117	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: 108196-BS2		QAQC Procedural Blank			Matrix: BlankMatrix			Sampled:			Received:			
Method: EPA 625.1		Batch ID: O-42020			Prepared: 14-Jul-23			Analyzed: 24-Aug-23						
(d10-Acenaphthene)	Total	105	1			% Recovery	100	0	105	27 - 133%	PASS	1	30	PASS
(d10-Phenanthrene)	Total	101	1			% Recovery	100	0	101	43 - 129%	PASS	0	30	PASS
(d12-Chrysene)	Total	99	1			% Recovery	100	0	99	52 - 144%	PASS	1	30	PASS
(d12-Perylene)	Total	106	1			% Recovery	100	0	106	36 - 161%	PASS	2	30	PASS
(d8-Naphthalene)	Total	96	1			% Recovery	100	0	96	25 - 125%	PASS	3	30	PASS
1-Methylnaphthalene	Total	0.55	1	0.001	0.005	µg/L	0.5	0	110	31 - 128%	PASS	0	30	PASS
1-Methylphenanthrene	Total	0.564	1	0.001	0.005	µg/L	0.5	0	113	66 - 127%	PASS	0	30	PASS
2,3,5-Trimethylnaphthalene	Total	0.576	1	0.001	0.005	µg/L	0.5	0	115	55 - 122%	PASS	0	30	PASS
2,6-Dimethylnaphthalene	Total	0.568	1	0.001	0.005	µg/L	0.5	0	114	48 - 120%	PASS	1	30	PASS
2-Methylnaphthalene	Total	1.64	1	0.001	0.005	µg/L	1.5	0	109	47 - 130%	PASS	1	30	PASS
Acenaphthene	Total	1.68	1	0.001	0.005	µg/L	1.5	0	112	53 - 131%	PASS	1	30	PASS
Acenaphthylene	Total	1.84	1	0.001	0.005	µg/L	1.5	0	123	43 - 140%	PASS	1	30	PASS
Anthracene	Total	1.63	1	0.001	0.005	µg/L	1.5	0	109	58 - 135%	PASS	1	30	PASS
Benz[a]anthracene	Total	1.71	1	0.001	0.005	µg/L	1.5	0	114	55 - 145%	PASS	2	30	PASS
Benzo[a]pyrene	Total	1.73	1	0.001	0.005	µg/L	1.5	0	115	51 - 143%	PASS	2	30	PASS
Benzo[b]fluoranthene	Total	1.73	1	0.001	0.005	µg/L	1.5	0	115	46 - 165%	PASS	1	30	PASS
Benzo[e]pyrene	Total	0.558	1	0.001	0.005	µg/L	0.5	0	112	42 - 152%	PASS	2	30	PASS
Benzo[g,h,i]perylene	Total	1.7	1	0.001	0.005	µg/L	1.5	0	113	63 - 133%	PASS	2	30	PASS
Benzo[k]fluoranthene	Total	1.67	1	0.001	0.005	µg/L	1.5	0	111	56 - 145%	PASS	2	30	PASS
Biphenyl	Total	0.558	1	0.001	0.005	µg/L	0.5	0	112	56 - 119%	PASS	1	30	PASS
Chrysene	Total	1.55	1	0.001	0.005	µg/L	1.5	0	103	56 - 141%	PASS	0	30	PASS
Dibenz[a,h]anthracene	Total	1.83	1	0.001	0.005	µg/L	1.5	0	122	55 - 150%	PASS	2	30	PASS
Dibenzo[a,l]pyrene	Total	0.475	1	0.001	0.005	µg/L	0.5	0	95	50 - 150%	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		
Dibenzothiophene	Total	0.552	1	0.001	0.005	µg/L	0.5	0	110	46 - 126%	PASS	0	30	PASS
Fluoranthene	Total	1.75	1	0.001	0.005	µg/L	1.5	0	117	60 - 146%	PASS	1	30	PASS
Fluorene	Total	1.74	1	0.001	0.005	µg/L	1.5	0	116	58 - 131%	PASS	1	30	PASS
Indeno[1,2,3-cd]pyrene	Total	1.79	1	0.001	0.005	µg/L	1.5	0	119	50 - 151%	PASS	1	30	PASS
Naphthalene	Total	1.51	1	0.001	0.005	µg/L	1.5	0	101	41 - 126%	PASS	2	30	PASS
Perylene	Total	0.577	1	0.001	0.005	µg/L	0.5	0	115	48 - 141%	PASS	0	30	PASS
Phenanthrene	Total	1.6	1	0.001	0.005	µg/L	1.5	0	107	67 - 127%	PASS	0	30	PASS
Pyrene	Total	1.75	1	0.001	0.005	µg/L	1.5	0	117	54 - 156%	PASS	0	30	PASS

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PHYSIS

TENTATIVELY IDENTIFIED COMPOUNDS

ENVIRONMENTAL LABORATORIES, INC.

Innovative Solutions for Nature

Sample ID: 108197

Retention Time	Area (% of total)	Concentration (ng/L)	Library/ID	Cas Number	Match Quality (%)
34.0616	6.2457	1111	Anthracene-D10-	1719-06-8	95
10.2494	0.9608	171	1,5-Heptadien-4-one, 3,3,6-trimethyl-	546-49-6	88
10.0594	0.9083	162	Cyclohexane, 1-methyl-3-propyl-	4291-80-9	91

Concentration estimated using the response for Anthracene-d10

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Sample ID: Lab Blank B1_42020

Retention Time	Area (% of total)	Concentration (ng/L)	Library/ID	Cas Number	Match Quality (%)
34.0630	6.7389	1111	Anthracene-D10-	1719-06-8	96
10.2496	0.9687	160	1,5-Heptadien-4-one, 3,3,6-trimethyl-	546-49-6	89
26.3579	0.6515	107	Diethyl Phthalate	84-66-2	98

Concentration estimated using the response for Anthracene-d10

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PERFORMANCE CHAIN OF CUSTODY

TERRA ENVIRONMENTAL LABORATORIES, INC. AURA

Innovative Solutions for Nature

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Chain of Custody Record



Client Information (Sub Contract Lab)

Client Contact: **Shipping/Receiving**

Company: **Physis Environmental Laboratories**

Address: **1904 Wright Circle,**

City: **Anaheim**

State, Zip: **CA, 92806**

Phone: _____

Email: _____

Project Name: **RED-HILL**

Project #: **38001111**

Site: **Honolulu BWS Sites**

Sampler: _____
Lab Pk.: **Arada, Rachelle**
E-Mail: **Rachelle.Arada@eurofins.com**
Accreditations Required (See note):
State - **Hawaii**

Carrier Tracking No.: _____
State of Origin: **Hawaii**

COC No.: **380-62454.1**
Page: **Page 1 of 1**

Due Date Requested: **7/25/2023**

TAT Requested (days): _____

Analysis Requested

Field Filtered Sample (Yes or No)

Perform MS/MSD (Yes or No)

SUB (625 Acid/Base/PAH + TICs) / 625 Acid/Base/PAH + TICs

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 - AsH2O2
- P - Na2O4S
- Q - Na2SO3
- R - Na2S2O3
- S - H2SO4
- T - TSP Dodecylhydrate
- U - Acetone
- V - MCAA
- W - pH 4.5
- Y - Trizma
- Z - other (specify)

Sample Identification - Client ID (Lab ID)

AIEA WELLS P2 (260) (380-54001-1)

Sample Date: **7/10/23**

Sample Time: **09:30**

Sample Location: **Hawallan**

Sample Type (C=Comp, G=grab): _____

Matrix (P=Water, S=Soil, O=Organic, A=Asphalt, L=Lubricant, A=Air): _____

Preservation Code: **Water**

Field Filtered Sample (Yes or No)

Perform MS/MSD (Yes or No)

SUB (625 Acid/Base/PAH + TICs) / 625 Acid/Base/PAH + TICs

Preservation Codes: _____

Total Number of containers: **6**

See Attached Instructions

Special Instructions/Note:

Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyte & accreditation compliance upon our subcontracted 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/parameter 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

Unclassified

Deliverable Requested: **I, II, III, IV, Other (specify)**

Primary Deliverable Rank: **2**

Empty Kit Relinquished by: _____

Date: _____

Time: _____

Method of Shipment: _____

Relinquished by: _____

Date/Time: **7/12/23 1347**

Company: **PHYSIS**

Received by: _____

Date/Time: **7/12/23 1347**

Company: **PHYSIS**

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: _____



Project Iteration ID: 1407003-414
 Client Name: Eurofins Eaton Analytical
 Project Name: RED-HILL Project # 380001111
 Job # 380-54001-1
 COC Page Number: 2 of 2
 Bottle Label Color: NA

Sample Receipt Summary

Receiving Info

1. Initials Received By: AG
2. Date Received: 7/12/23
3. Time Received: 1347
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)
 - 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): 4.7
 Used I/R Thermometer # 1

Inspection Info

1. Initials Inspected By: RGH

Sample Integrity Upon Receipt:

1. COC(s) included and completely filled out..... Yes / No
2. All sample containers arrived intact..... Yes / No
3. All samples listed on COC(s) are present..... Yes / No
4. Information on containers consistent with information on COC(s)..... Yes / No
5. Correct containers and volume for all analyses indicated..... Yes / No
6. All samples received within method holding time..... Yes / No
7. Correct preservation used for all analyses indicated..... Yes / No
8. Name of sampler included on COC(s)..... Yes / No

Notes:




Eurofins Eaton Analytical Pomona

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

Chain of Custody Record



Environment Testing

Client Information		Sampler: <u>Bryson Nakamoto</u>	Lab PM: <u>Arada, Rachele</u>	Carrier Tracking No(s):	COC No: <u>380-21929-1845.1</u>																										
Client Contact: <u>Dr. Ron Fenstemacher</u>		Phone: <u>(808) 748-5846</u>	E-Mail: <u>Rachele.Arada@et.eurofins.com</u>	State of Origin:	Page: <u>Page 1 of 2</u>																										
Company: <u>City & County of Honolulu</u>		PWSID:	Analysis Requested																												
Address: <u>630 South Beretania Street Chemistry Lab</u>		Due Date Requested:	<table border="1"> <tr> <td>Field Filtered Sample (Yes or No)</td> <td>604.1_PREC_606_LL_PRC</td> <td>2320B_2510B_SIM4500_H+</td> <td>2607.700.8</td> <td>2650C_Calcd - Total Dissolved Solids (TDS)</td> <td>SIM4500_S2_D - Sulfide, Total</td> <td>524.2_Pres_PREC_524.2_SIM_PRC</td> <td>525.2_PREC - 525plus Plus TICs</td> <td>300_OF_2RD_B_300_OF_2RD_PRC_300_OF_48H_PRC_4500_F C</td> <td>245.1 : Local Method</td> <td>SUBCONTRACT - 8015 Jet Fuel 8 (JP8)</td> <td>SUBCONTRACT - 8015 Jet Fuel 5 (JP5)</td> <td>SUBCONTRACT - 8015 Diesel LL (EAL) and Motor Oil</td> <td>SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)</td> <td>Total Number of containers</td> </tr> </table>			Field Filtered Sample (Yes or No)	604.1_PREC_606_LL_PRC	2320B_2510B_SIM4500_H+	2607.700.8	2650C_Calcd - Total Dissolved Solids (TDS)	SIM4500_S2_D - Sulfide, Total	524.2_Pres_PREC_524.2_SIM_PRC	525.2_PREC - 525plus Plus TICs	300_OF_2RD_B_300_OF_2RD_PRC_300_OF_48H_PRC_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)	Total Number of containers											
Field Filtered Sample (Yes or No)	604.1_PREC_606_LL_PRC	2320B_2510B_SIM4500_H+				2607.700.8	2650C_Calcd - Total Dissolved Solids (TDS)	SIM4500_S2_D - Sulfide, Total	524.2_Pres_PREC_524.2_SIM_PRC	525.2_PREC - 525plus Plus TICs	300_OF_2RD_B_300_OF_2RD_PRC_300_OF_48H_PRC_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)	Total Number of containers														
City: <u>Honolulu</u>		TAT Requested (days):																													
State, Zip: <u>HI, 96843</u>		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No																													
Phone: <u>808-748-5091(Tel)</u>		PO #: <u>C20525101 exp 05312023</u>																													
Email: <u>RFENSTEMACHER@hbws.org</u>		WO #:																													
Project Name: <u>RED-HILL</u>		Project #: <u>38001111</u>	Preservation Codes:																												
Site: <u>Hawaii</u>		SSOW#:	<table border="0"> <tr> <td>A - HCL</td> <td>M - Hexane</td> </tr> <tr> <td>B - NaOH</td> <td>N - None</td> </tr> <tr> <td>C - Zn Acetate</td> <td>O - AsNaO2</td> </tr> <tr> <td>D - Nitric Acid</td> <td>P - Na2O4S</td> </tr> <tr> <td>E - NaHSO4</td> <td>Q - Na2SO3</td> </tr> <tr> <td>F - MeOH</td> <td>R - Na2S2O3</td> </tr> <tr> <td>G - Amchlor</td> <td>S - H2SO4</td> </tr> <tr> <td>H - Ascorbic Acid</td> <td>T - TSP Dodecahydrate</td> </tr> <tr> <td>I - Ice</td> <td>U - Acetone</td> </tr> <tr> <td>J - DI Water</td> <td>V - MCAA</td> </tr> <tr> <td>K - EDTA</td> <td>W - pH 4-5</td> </tr> <tr> <td>L - EDTA</td> <td>Y - Trizma</td> </tr> <tr> <td></td> <td>Z - other (specify)</td> </tr> </table>			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 - EDTA	Y - Trizma		Z - other (specify)
A - HCL	M - Hexane																														
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L - EDTA	Y - Trizma																														
	Z - other (specify)																														
Sample Identification:		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=soil, G=grab)	Preservation Code:	Special Instructions/Note:																								
KAAMILO WELLS:					Water		 380-54001 COC																								
AIEA GULCH WELLS PUMP 2					Water																										
AIEA WELLS P 2 (260) :		<u>7/10/23</u>	<u>0937</u>		Water										<u>6</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>6</u>	<u>3</u>	<u>2</u>	<u>1</u>	<u>2</u>	<u>2</u>	<u>3</u>						
HALAWA WELLS UNITS 1 & 2					Water																										
MOANALUA WELLS					Water																										
TB: KAAMILO WELLS					Water																										
TB: AIEA GULCH WELLS PUMP 2					Water																										
TB: AIEA WELLS PUMPS 1&2(260)		<u>7/10/23</u>			Water										<u>3</u>			<u>6</u>													
TB: HALAWA WELLS UNITS 1 & 2					Water																										
TB: MOANALUA WELLS					Water																										
Possible Hazard Identification				Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)																											
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological				<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For <u>Months</u>																											
Deliverable Requested: I, II, III, IV, Other (specify)				Special Instructions/QC Requirements: <u>#1 - 41° - 0.2° - 3.9° CEL</u> <u>#12 - 40° - 0.2° - 3.8° FPOREN</u>																											
Empty Kit Relinquished by:		Date:	Time:	Method of Shipment: <u>FedEx #3-33-0.2-3.1 (752A)</u>																											
Relinquished by: <u>[Redacted]</u>		Date/Time: <u>7/10/23 1130</u>	Company: <u>HBWS</u>	Received by: <u>[Signature]</u>		Date/Time: <u>07/11/2023 09:30</u>	Company: <u>EEAP</u>																								
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: <u>FedEx #1-772695645202/#2-772695645316/#3-772695645018</u>																											



Ver: 06/08/2021

Eurofins Eaton Analytical Pomona

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

Chain of Custody Record



Environment Testing

Client Information		Sampler: <i>Bryson Nakamoto</i>	Lab PM: Arada, Rachele	Carrier Tracking No(s):	COC No: 380-21929-1845.2			
Client Contact: Dr. Ron Fenstemacher		Phone: <i>(808) 748-5846</i>	E-Mail: Rachele.Arada@et.eurofinsus.com	State of Origin:	Page: Page 2 of 2			
Company: City & County of Honolulu		PWSID:	Analysis Requested					
Address: 630 South Beretania Street Chemistry Lab		Due Date Requested:	SUBCONTRACT - 8015 Ethanol SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs SUBCONTRACT - 625 Base Neutral LL (EAL) Physis SUBCONTRACT - 625 Acid LL (EAL) Physis 624.3_SIM_PREC - Low Level TCP/EDB/DBCP SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL) 804.1_PREC - Local Method					
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 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)					
Site: Hawaii		SSOW#:						
Sample Identification		Sample Date				Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, G=Gas, A=Air)
KAAMILO WELLS					Water			
AIEA GULCH WELLS PUMP 2					Water			
AIEA WELLS P. 2 (260)		<i>7/10/23</i>	<i>0930</i>	<i>G</i>	Water			
HALAWA WELLS UNITS 1 & 2					Water			
MOANALUA WELLS					Water			
TB: KAAMILO WELLS					Water			
TB: AIEA GULCH WELLS PUMP 2					Water			
TB: AIEA WELLS PUMPS1&2(260)		<i>7/10/23</i>			Water			
TB: HALAWA WELLS UNITS 1 & 2					Water			
TB: MOANALUA WELLS					Water			
Possible Hazard Identification			Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological			<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Deliverable Requested: I, II, III, IV, Other (specify)			Special Instructions/QC Requirements: #1- 9926 9564 5202 #2- 7726 9564 5316					
Empty Kit Relinquished by:		Date:	Time:	Method of Shipment: <i>FED EX #3- 7726 9564 5415</i>				
Relinquished by: <i>Bryson Nakamoto</i>	Date/Time: <i>7/10/23 1130</i>	Company: <i>HBWS</i>	Received by: <i>G. REITNER</i>	Date/Time: <i>07/11/2023 09:30</i>	Company: <i>EEAP</i>			
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: <i>FED EX #1- 4.1° 0.2° 3.9° / #2- 4.0° 0.2° 3.8° / #3- 3.3° 0.2° 3.1° (752A) FCL - FROZEN</i>						

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-54001-1

Login Number: 54001
List Number: 1
Creator: Elyas, Matthew

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.	True	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	

- 1
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- 14
- 15
- 16
- 17

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-54001-1

Login Number: 54001
List Number: 2
Creator: DePriest, Kellie

List Source: Eurofins Eaton Analytical South Bend
List Creation: 07/14/23 12:26 PM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	

