

ANALYTICAL REPORT

PREPARED FOR

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JOB DESCRIPTION

RED-HILL Quarterly
RUSH Weekly Red Hill

JOB NUMBER

380-65252-1

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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Definitions/Glossary

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

Job ID: 380-65252-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
^3+	Reporting Limit Check Standard is outside acceptance limits, high biased
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.

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

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
HF	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.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit

Definitions/Glossary

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

Job ID: 380-65252-1

Glossary (Continued)

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

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 Quarterly

Job ID: 380-65252-1

Job ID: 380-65252-1

Laboratory: Eurofins Eaton Analytical Pomona

Narrative

Job Narrative 380-65252-1

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 10/3/2023 10:35 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 1.8°C, 2.4°C and 3.3°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

Trip Blank sample indicated a detection above the reporting limit (RL) for the following analyte(s): Chloromethane (methyl chloride). Associated field sample had no detection. Per client's requirements, VOC analysis should have a corresponding Trip Blank. Method 524.2 field sample and trip blank data excluded due to the Trip Blank detection.

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

GC/MS Semi VOA

Method 525.2_PREC: The following sample(s) was provided to the laboratory with a different initial volume than that required by the reference method: <commaMerge>. The method requires 1000mL. The amount provided was below this range. The sample was extracted as low volume with a correction factor.

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 380-58427 contained Silver above the reporting limit (RL). All reported samples associated with this CCB were either ND for this analyte or contained this analyte at a concentration greater than 10X the value found in the CCB; therefore, re-analysis of samples was not performed.

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

Case Narrative

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

Job ID: 380-65252-1

Job ID: 380-65252-1 (Continued)

Laboratory: Eurofins Eaton Analytical Pomona (Continued)

General Chemistry

Method 2320B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 380-58461 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.

Method SM4500_S2_D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 380-58171 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference 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.

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Detection Summary

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

Job ID: 380-65252-1

Client Sample ID: MOANALUA WELLS (331-223-TP202)
PWSID Number: HI0000331

Lab Sample ID: 380-65252-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Dieldrin	0.022		0.0098	ug/L	1		505	Total/NA
Bromide	230		5.0	ug/L	1		300.0	Total/NA
Chloride	97		1.0	mg/L	2		300.0	Total/NA
Nitrate as N	0.58		0.10	mg/L	2		300.0	Total/NA
Sulfate	17		0.50	mg/L	2		300.0	Total/NA
Calcium	20		1.0	mg/L	1		200.7 Rev 4.4	Total/NA
Magnesium	19		0.10	mg/L	1		200.7 Rev 4.4	Total/NA
Potassium	2.4		1.0	mg/L	1		200.7 Rev 4.4	Total/NA
Sodium	44		1.0	mg/L	1		200.7 Rev 4.4	Total/NA
Chromium	2.1		1.0	ug/L	1		200.8	Total Recoverable
Copper	6.4		2.0	ug/L	1		200.8	Total Recoverable
Alkalinity	60		2.0	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	60		2.0	mg/L	1		SM 2320B	Total/NA
Specific Conductance	500		2.0	umhos/cm	1		SM 2510B	Total/NA
Total Dissolved Solids	290		20	mg/L	1		SM 2540C	Total/NA
pH	8.1	HF		SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: TRAVEL BLANK

Lab Sample ID: 380-65252-2

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 Quarterly

Job ID: 380-65252-1

Client Sample ID: MOANALUA WELLS (331-223-TP202)

Lab Sample ID: 380-65252-1

Date Collected: 10/02/23 09:31

Matrix: Drinking Water

Date Received: 10/03/23 10:35

PWSID Number: HI0000331

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			10/10/23 15:30	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		70 - 130				10/10/23 15:30	1
4-Bromofluorobenzene (Surr)	93		70 - 130				10/10/23 15:30	1
1,2-Dichloroethane-d4 (Surr)	112		70 - 130				10/10/23 15:30	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		10/04/23 17:22	10/05/23 18:00	1
2,4'-DDE	<0.098		0.098	ug/L		10/04/23 17:22	10/05/23 18:00	1
2,4'-DDT	<0.098		0.098	ug/L		10/04/23 17:22	10/05/23 18:00	1
2,4-Dinitrotoluene	<0.098		0.098	ug/L		10/04/23 17:22	10/05/23 18:00	1
2,6-Dinitrotoluene	<0.098		0.098	ug/L		10/04/23 17:22	10/05/23 18:00	1
4,4'-DDD	<0.098		0.098	ug/L		10/04/23 17:22	10/05/23 18:00	1
4,4'-DDE	<0.098		0.098	ug/L		10/04/23 17:22	10/05/23 18:00	1
4,4'-DDT	<0.098		0.098	ug/L		10/04/23 17:22	10/05/23 18:00	1
Acenaphthene	<0.098		0.098	ug/L		10/04/23 17:22	10/05/23 18:00	1
Acenaphthylene	<0.098		0.098	ug/L		10/04/23 17:22	10/05/23 18:00	1
Acetochlor	<0.098		0.098	ug/L		10/04/23 17:22	10/05/23 18:00	1
Alachlor	<0.049		0.049	ug/L		10/04/23 17:22	10/05/23 18:00	1
alpha-BHC	<0.098		0.098	ug/L		10/04/23 17:22	10/05/23 18:00	1
alpha-Chlordane	<0.049		0.049	ug/L		10/04/23 17:22	10/05/23 18:00	1
Anthracene	<0.020		0.020	ug/L		10/04/23 17:22	10/05/23 18:00	1
Atrazine	<0.049		0.049	ug/L		10/04/23 17:22	10/05/23 18:00	1
Benz(a)anthracene	<0.049		0.049	ug/L		10/04/23 17:22	10/05/23 18:00	1
Benzo[a]pyrene	<0.020		0.020	ug/L		10/04/23 17:22	10/05/23 18:00	1
Benzo[b]fluoranthene	<0.020		0.020	ug/L		10/04/23 17:22	10/05/23 18:00	1
Benzo[g,h,i]perylene	<0.049		0.049	ug/L		10/04/23 17:22	10/05/23 18:00	1
Benzo[k]fluoranthene	<0.020		0.020	ug/L		10/04/23 17:22	10/05/23 18:00	1
beta-BHC	<0.098		0.098	ug/L		10/04/23 17:22	10/05/23 18:00	1
Bis(2-ethylhexyl) phthalate	<0.59		0.59	ug/L		10/04/23 17:22	10/05/23 18:00	1
Bromacil	<0.098		0.098	ug/L		10/04/23 17:22	10/05/23 18:00	1
Butachlor	<0.049		0.049	ug/L		10/04/23 17:22	10/05/23 18:00	1
Butylbenzylphthalate	<0.49		0.49	ug/L		10/04/23 17:22	10/05/23 18:00	1
Chlorobenzilate	<0.098		0.098	ug/L		10/04/23 17:22	10/05/23 18:00	1
Chloroneb	<0.098		0.098	ug/L		10/04/23 17:22	10/05/23 18:00	1
Chlorothalonil (Draconil, Bravo)	<0.098		0.098	ug/L		10/04/23 17:22	10/05/23 18:00	1
Chlorpyrifos	<0.049		0.049	ug/L		10/04/23 17:22	10/05/23 18:00	1
Chrysene	<0.020		0.020	ug/L		10/04/23 17:22	10/05/23 18:00	1
delta-BHC	<0.098		0.098	ug/L		10/04/23 17:22	10/05/23 18:00	1
Di(2-ethylhexyl)adipate	<0.59		0.59	ug/L		10/04/23 17:22	10/05/23 18:00	1
Dibenz(a,h)anthracene	<0.049		0.049	ug/L		10/04/23 17:22	10/05/23 18:00	1
Diclorvos (DDVP)	<0.049	^3+	0.049	ug/L		10/04/23 17:22	10/05/23 18:00	1
Dieldrin	<0.20		0.20	ug/L		10/04/23 17:22	10/05/23 18:00	1
Diethylphthalate	<0.49		0.49	ug/L		10/04/23 17:22	10/05/23 18:00	1
Dimethylphthalate	<0.49		0.49	ug/L		10/04/23 17:22	10/05/23 18:00	1
Di-n-butyl phthalate	<0.98		0.98	ug/L		10/04/23 17:22	10/05/23 18:00	1
Di-n-octyl phthalate	<0.098		0.098	ug/L		10/04/23 17:22	10/05/23 18:00	1
Endosulfan I (Alpha)	<0.098		0.098	ug/L		10/04/23 17:22	10/05/23 18:00	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-65252-1

Client Sample ID: MOANALUA WELLS (331-223-TP202)

Lab Sample ID: 380-65252-1

Date Collected: 10/02/23 09:31

Matrix: Drinking Water

Date Received: 10/03/23 10:35

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Endosulfan II (Beta)	<0.098		0.098	ug/L		10/04/23 17:22	10/05/23 18:00	1
Endosulfan sulfate	<0.098		0.098	ug/L		10/04/23 17:22	10/05/23 18:00	1
Endrin	<0.098		0.098	ug/L		10/04/23 17:22	10/05/23 18:00	1
Endrin aldehyde	<0.098		0.098	ug/L		10/04/23 17:22	10/05/23 18:00	1
EPTC	<0.098		0.098	ug/L		10/04/23 17:22	10/05/23 18:00	1
Fluoranthene	<0.098		0.098	ug/L		10/04/23 17:22	10/05/23 18:00	1
Fluorene	<0.049		0.049	ug/L		10/04/23 17:22	10/05/23 18:00	1
gamma-BHC (Lindane)	<0.039		0.039	ug/L		10/04/23 17:22	10/05/23 18:00	1
gamma-Chlordane	<0.049		0.049	ug/L		10/04/23 17:22	10/05/23 18:00	1
Heptachlor	<0.039		0.039	ug/L		10/04/23 17:22	10/05/23 18:00	1
Heptachlor epoxide (isomer B)	<0.049		0.049	ug/L		10/04/23 17:22	10/05/23 18:00	1
Hexachlorobenzene	<0.049		0.049	ug/L		10/04/23 17:22	10/05/23 18:00	1
Hexachlorocyclopentadiene	<0.049		0.049	ug/L		10/04/23 17:22	10/05/23 18:00	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049	ug/L		10/04/23 17:22	10/05/23 18:00	1
Isophorone	<0.49		0.49	ug/L		10/04/23 17:22	10/05/23 18:00	1
Malathion	<0.098		0.098	ug/L		10/04/23 17:22	10/05/23 18:00	1
Methoxychlor	<0.098		0.098	ug/L		10/04/23 17:22	10/05/23 18:00	1
Metolachlor	<0.049		0.049	ug/L		10/04/23 17:22	10/05/23 18:00	1
Molinate	<0.098		0.098	ug/L		10/04/23 17:22	10/05/23 18:00	1
Naphthalene	<0.29		0.29	ug/L		10/04/23 17:22	10/05/23 18:00	1
Parathion	<0.098		0.098	ug/L		10/04/23 17:22	10/05/23 18:00	1
Pendimethalin (Penoxaline)	<0.098		0.098	ug/L		10/04/23 17:22	10/05/23 18:00	1
Phenanthrene	<0.039		0.039	ug/L		10/04/23 17:22	10/05/23 18:00	1
Propachlor	<0.049		0.049	ug/L		10/04/23 17:22	10/05/23 18:00	1
Pyrene	<0.049		0.049	ug/L		10/04/23 17:22	10/05/23 18:00	1
Simazine	<0.049		0.049	ug/L		10/04/23 17:22	10/05/23 18:00	1
Terbacil	<0.098		0.098	ug/L		10/04/23 17:22	10/05/23 18:00	1
Terbutylazine	<0.098		0.098	ug/L		10/04/23 17:22	10/05/23 18:00	1
Thiobencarb	<0.20		0.20	ug/L		10/04/23 17:22	10/05/23 18:00	1
Total Permethrin (mixed isomers)	<0.20		0.20	ug/L		10/04/23 17:22	10/05/23 18:00	1
trans-Nonachlor	<0.049		0.049	ug/L		10/04/23 17:22	10/05/23 18:00	1
Trifluralin	<0.098		0.098	ug/L		10/04/23 17:22	10/05/23 18:00	1
1-Methylnaphthalene	<0.098		0.098	ug/L		10/04/23 17:22	10/05/23 18:00	1
2-Methylnaphthalene	<0.098		0.098	ug/L		10/04/23 17:22	10/05/23 18:00	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	10/04/23 17:22	10/05/23 18:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	97		70 - 130	10/04/23 17:22	10/05/23 18:00	1
Perylene-d12	104		70 - 130	10/04/23 17:22	10/05/23 18:00	1
Triphenylphosphate	126		70 - 130	10/04/23 17:22	10/05/23 18:00	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	<0.020		0.020	ug/L		10/06/23 11:50	10/07/23 02:06	1
1,2-Dibromo-3-Chloropropane	<0.010		0.010	ug/L		10/06/23 11:50	10/07/23 02:06	1
1,2-Dibromoethane	<0.010		0.010	ug/L		10/06/23 11:50	10/07/23 02:06	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-65252-1

Client Sample ID: MOANALUA WELLS (331-223-TP202)

Lab Sample ID: 380-65252-1

Date Collected: 10/02/23 09:31

Matrix: Drinking Water

Date Received: 10/03/23 10:35

PWSID Number: HI0000331

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane (Surr)	87		60 - 140	10/06/23 11:50	10/07/23 02:06	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	<0.0098		0.0098	ug/L		10/05/23 11:51	10/06/23 05:10	1
Dieldrin	0.022		0.0098	ug/L		10/05/23 11:51	10/06/23 05:10	1
Toxaphene	<0.49		0.49	ug/L		10/05/23 11:51	10/06/23 05:10	1
Alachlor	<0.098		0.098	ug/L		10/05/23 11:51	10/06/23 05:10	1
Chlordane (n.o.s.)	<0.098		0.098	ug/L		10/05/23 11:51	10/06/23 05:10	1
Endrin	<0.0098		0.0098	ug/L		10/05/23 11:51	10/06/23 05:10	1
Heptachlor	<0.0098		0.0098	ug/L		10/05/23 11:51	10/06/23 05:10	1
Heptachlor epoxide	<0.0098		0.0098	ug/L		10/05/23 11:51	10/06/23 05:10	1
gamma-BHC (Lindane)	<0.0098		0.0098	ug/L		10/05/23 11:51	10/06/23 05:10	1
Methoxychlor	<0.049		0.049	ug/L		10/05/23 11:51	10/06/23 05:10	1
PCB-1016	<0.069		0.069	ug/L		10/05/23 11:51	10/06/23 05:10	1
PCB-1221	<0.098		0.098	ug/L		10/05/23 11:51	10/06/23 05:10	1
PCB-1232	<0.098		0.098	ug/L		10/05/23 11:51	10/06/23 05:10	1
PCB-1242	<0.098		0.098	ug/L		10/05/23 11:51	10/06/23 05:10	1
PCB-1248	<0.098		0.098	ug/L		10/05/23 11:51	10/06/23 05:10	1
PCB-1254	<0.098		0.098	ug/L		10/05/23 11:51	10/06/23 05:10	1
PCB-1260	<0.069		0.069	ug/L		10/05/23 11:51	10/06/23 05:10	1
Polychlorinated biphenyls, Total	<0.098		0.098	ug/L		10/05/23 11:51	10/06/23 05:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	93		70 - 130	10/05/23 11:51	10/06/23 05:10	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	230		5.0	ug/L			10/06/23 00:16	1
Chloride	97		1.0	mg/L			10/04/23 14:50	2
Nitrate as N	0.58		0.10	mg/L			10/04/23 10:30	2
Nitrite as N	<0.10		0.10	mg/L			10/04/23 10:30	2
Sulfate	17		0.50	mg/L			10/04/23 10:30	2

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			10/10/23 22:17	1
Magnesium	19		0.10	mg/L			10/10/23 22:17	1
Potassium	2.4		1.0	mg/L			10/10/23 22:17	1
Sodium	44		1.0	mg/L			10/10/23 22:17	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		10/05/23 10:00	10/07/23 14:01	1
Arsenic	<1.0		1.0	ug/L		10/05/23 10:00	10/07/23 14:01	1
Beryllium	<1.0		1.0	ug/L		10/05/23 10:00	10/07/23 14:01	1
Cadmium	<0.50		0.50	ug/L		10/05/23 10:00	10/07/23 14:01	1
Chromium	2.1		1.0	ug/L		10/05/23 10:00	10/07/23 14:01	1
Copper	6.4		2.0	ug/L		10/05/23 10:00	10/07/23 14:01	1
Lead	<0.50		0.50	ug/L		10/05/23 10:00	10/07/23 14:01	1
Nickel	<5.0		5.0	ug/L		10/05/23 10:00	10/07/23 14:01	1

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Client Sample Results

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

Job ID: 380-65252-1

Client Sample ID: MOANALUA WELLS (331-223-TP202)

Lab Sample ID: 380-65252-1

Date Collected: 10/02/23 09:31

Matrix: Drinking Water

Date Received: 10/03/23 10:35

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	<5.0		5.0	ug/L		10/05/23 10:00	10/07/23 14:01	1
Silver	<0.50	^2	0.50	ug/L		10/05/23 10:00	10/07/23 14:01	1
Thallium	<1.0		1.0	ug/L		10/05/23 10:00	10/07/23 14:01	1
Zinc	<20		20	ug/L		10/05/23 10:00	10/07/23 14:01	1

Method: EPA 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.10		0.10	ug/L		10/09/23 13:26	10/09/23 21:42	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity (SM 2320B)	60		2.0	mg/L			10/06/23 19:57	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	60		2.0	mg/L			10/06/23 19:57	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<2.0		2.0	mg/L			10/06/23 19:57	1
Specific Conductance (SM 2510B)	500		2.0	umhos/cm			10/06/23 19:57	1
Total Dissolved Solids (SM 2540C)	290		20	mg/L			10/04/23 15:18	1
Fluoride (SM 4500 F C)	<0.050		0.050	mg/L			10/06/23 19:55	1
pH (SM 4500 H+ B)	8.1	HF		SU			10/06/23 19:57	1
Sulfide (SM 4500 S2 D)	<0.050	F1	0.050	mg/L			10/05/23 14:35	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		10/09/23 00:00	11/08/23 23:56	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 23:56	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 23:56	1
2,4,5-Trichlorophenol	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 23:56	1
2,4,6-Trichlorophenol	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 23:56	1
2,4-Dichlorophenol	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 23:56	1
2,4-Dinitrophenol	ND		0.2	0.1	µg/L		10/09/23 00:00	11/08/23 23:56	1
2,6-Dichlorophenol	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 23:56	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 23:56	1
2,6-Di-tert-butyl-4-methylphenol	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 23:56	1
2,6-Di-tert-butylphenol	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 23:56	1
2-Chloronaphthalene	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 23:56	1
2-Chlorophenol	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 23:56	1
2-Methyl-4,6-dinitrophenol	ND		0.2	0.1	µg/L		10/09/23 00:00	11/08/23 23:56	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 23:56	1
2-Methylphenol	ND		0.2	0.1	µg/L		10/09/23 00:00	11/08/23 23:56	1
2-Nitroaniline	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 23:56	1
2-Nitrophenol	ND		0.2	0.1	µg/L		10/09/23 00:00	11/08/23 23:56	1
3+4-Methylphenol	ND		0.2	0.1	µg/L		10/09/23 00:00	11/08/23 23:56	1
3-Nitroaniline	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 23:56	1
4-Bromophenylphenyl ether	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 23:56	1
4-Chloro-3-methylphenol	ND		0.2	0.1	µg/L		10/09/23 00:00	11/08/23 23:56	1
4-Chloroaniline	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 23:56	1
4-Chlorophenylphenyl ether	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 23:56	1
4-Nitroaniline	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 23:56	1
4-Nitrophenol	ND		0.2	0.1	µg/L		10/09/23 00:00	11/08/23 23:56	1
6-tert-butyl-2,4-dimethylphenol	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 23:56	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-65252-1

Client Sample ID: MOANALUA WELLS (331-223-TP202)

Lab Sample ID: 380-65252-1

Date Collected: 10/02/23 09:31

Matrix: Drinking Water

Date Received: 10/03/23 10:35

PWSID Number: HI0000331

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
Acenaphthene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 23:56	1
Acenaphthylene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 23:56	1
Aniline	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 23:56	1
Anthracene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 23:56	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 23:56	1
Benzidine	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 23:56	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 23:56	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 23:56	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 23:56	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 23:56	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 23:56	1
Benzoic Acid	ND		0.2	0.1	µg/L		10/09/23 00:00	11/08/23 23:56	1
Benzyl Alcohol	ND		0.2	0.1	µg/L		10/09/23 00:00	11/08/23 23:56	1
Biphenyl	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 23:56	1
Bis(2-Chloroethoxy) methane	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 23:56	1
Bis(2-Chloroethyl) ether	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 23:56	1
Bis(2-Chloroisopropyl) ether	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 23:56	1
Chrysene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 23:56	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 23:56	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 23:56	1
Dibenzofuran	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 23:56	1
Dibenzothiophene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 23:56	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 23:56	1
Fluoranthene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 23:56	1
Fluorene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 23:56	1
Hexachloroethane	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 23:56	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 23:56	1
Naphthalene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 23:56	1
Nitrobenzene	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 23:56	1
N-Nitrosodi-n-propylamine	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 23:56	1
N-Nitrosodiphenylamine	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 23:56	1
Pentachlorophenol	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 23:56	1
Perylene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 23:56	1
Phenanthrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 23:56	1
Phenol	ND		0.2	0.1	µg/L		10/09/23 00:00	11/08/23 23:56	1
p-tert-Butylphenol	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 23:56	1
Pyrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 23:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
(2,4,6-Tribromophenol)	90		31 - 143	10/09/23 00:00	11/08/23 23:56	1
(d10-Acenaphthene)	97		27 - 133	10/09/23 00:00	11/08/23 23:56	1
(d10-Phenanthrene)	93		43 - 129	10/09/23 00:00	11/08/23 23:56	1
(d12-Chrysene)	92		52 - 144	10/09/23 00:00	11/08/23 23:56	1
(d12-Perylene)	89		36 - 161	10/09/23 00:00	11/08/23 23:56	1
(d5-Phenol)	55		0 - 85	10/09/23 00:00	11/08/23 23:56	1
(d8-Naphthalene)	93		25 - 125	10/09/23 00:00	11/08/23 23:56	1

Method: 8015 Ethanol - SW846 8015B Gasoline Range Organics

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
ETHANOL	ND	U	2000		ug/L			10/05/23 13:40	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-65252-1

Client Sample ID: MOANALUA WELLS (331-223-TP202)

Lab Sample ID: 380-65252-1

Date Collected: 10/02/23 09:31

Matrix: Drinking Water

Date Received: 10/03/23 10:35

PWSID Number: HI0000331

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			10/05/23 14:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE	86		60 - 140					10/05/23 14:59	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	0.025		mg/L			10/07/23 02:36	1
JP5	ND	U	0.05		mg/L			10/07/23 02:36	1
JP8	ND	U	0.05		mg/L			10/07/23 02:36	1
MOTOR OIL	ND	U	0.05		mg/L			10/07/23 02:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
BROMOBENZENE	74		60 - 130					10/07/23 02:36	1
HEXACOSANE	95		60 - 130					10/07/23 02:36	1

Client Sample ID: TRAVEL BLANK

Lab Sample ID: 380-65252-2

Date Collected: 10/02/23 09:31

Matrix: Water

Date Received: 10/03/23 10:35

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			10/10/23 15:53	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		70 - 130				10/10/23 15:53	1
4-Bromofluorobenzene (Surr)	92		70 - 130				10/10/23 15:53	1
1,2-Dichloroethane-d4 (Surr)	115		70 - 130				10/10/23 15:53	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	<0.020		0.020	ug/L		10/06/23 11:50	10/07/23 04:14	1
1,2-Dibromo-3-Chloropropane	<0.0099		0.0099	ug/L		10/06/23 11:50	10/07/23 04:14	1
1,2-Dibromoethane	<0.0099		0.0099	ug/L		10/06/23 11:50	10/07/23 04:14	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,2-Dibromopropane (Surr)	85		60 - 140			10/06/23 11:50	10/07/23 04:14	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			10/05/23 16:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE	83		60 - 140					10/05/23 16:54	1

Action Limit Summary

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

Job ID: 380-65252-1

Client Sample ID: MOANALUA WELLS (331-223-TP202)

Lab Sample ID: 380-65252-1

PWSID Number: HI0000331

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
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		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	<0.020		ug/L	0.6000			504.1	Total/NA
1,2-Dibromo-3-Chloropropane	<0.010		ug/L		0.2		504.1	Total/NA
1,2-Dibromoethane	<0.010		ug/L		0.05		504.1	Total/NA
Toxaphene	<0.49		ug/L		3		505	Total/NA
Alachlor	<0.098		ug/L		2		505	Total/NA
Endrin	<0.0098		ug/L		2		505	Total/NA
Heptachlor	<0.0098		ug/L		0.4		505	Total/NA
Heptachlor epoxide	<0.0098		ug/L		0.2		505	Total/NA
gamma-BHC (Lindane)	<0.0098		ug/L		0.2		505	Total/NA
Methoxychlor	<0.049		ug/L		40		505	Total/NA
Polychlorinated biphenyls, Total	<0.098		ug/L		0.5		505	Total/NA
Chloride	97		mg/L			250	300.0	Total/NA
Nitrate as N	0.58		mg/L		10		300.0	Total/NA
Nitrite as N	<0.10		mg/L		1		300.0	Total/NA
Sulfate	17		mg/L			250	300.0	Total/NA
Mercury	<0.10		ug/L		2		245.1	Total/NA
Total Dissolved Solids	290		mg/L			500	SM 2540C	Total/NA
Fluoride	<0.050		mg/L		4	2	SM 4500 F C	Total/NA

Client Sample ID: TRAVEL BLANK

Lab Sample ID: 380-65252-2

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
1,2,3-Trichloropropane	<0.020		ug/L	0.6000		0.020	504.1	Total/NA
1,2-Dibromo-3-Chloropropane	<0.0099		ug/L		0.2	0.0099	504.1	Total/NA
1,2-Dibromoethane	<0.0099		ug/L		0.05	0.0099	504.1	Total/NA

Surrogate Summary

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

Job ID: 380-65252-1

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

Matrix: Drinking Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		TOL (70-130)	BFB (70-130)	DCA (70-130)
380-65252-1	MOANALUA WELLS (331-223-T	98	93	112

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

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		TOL (70-130)	BFB (70-130)	DCA (70-130)
380-65252-2	TRAVEL BLANK	98	92	115
LCS 380-58700/2	Lab Control Sample	98	95	114
LCS 380-58700/3	Lab Control Sample Dup	101	99	115
MB 380-58700/5	Method Blank	98	101	112

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 380-58700/4	Lab Control Sample	100	96	115

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

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

Matrix: Drinking Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		2NMX (70-130)	PRY (70-130)	TPP (70-130)
380-65252-1	MOANALUA WELLS (331-223-T	97	104	126

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

Surrogate Summary

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

Job ID: 380-65252-1

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)
380-65247-V-1-A MS	Matrix Spike	91	99	129
380-65250-V-1-A DU	Duplicate	91	98	135 S1+
LCS 380-57966/24-A	Lab Control Sample	97	99	123
LCS 380-57966/25-A	Lab Control Sample Dup	95	101	116
MB 380-57966/21-A	Method Blank	98	96	128
MRL 380-57966/22-A	Lab Control Sample	95	100	113

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

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

Matrix: Drinking Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		DBPP1 (60-140)
380-65252-1	MOANALUA WELLS (331-223-T	87

Surrogate Legend
 DBPP = 1,2-Dibromopropane (Surr)

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		DBPP1 (60-140)
380-65252-2	TRAVEL BLANK	85
380-65332-H-1-A MS	Matrix Spike	86
380-65337-I-1-A DU	Duplicate	89
LCS 380-58189/38-A	Lab Control Sample	85
MBL 380-58189/13-A	Method Blank	86
MRL 380-58189/11-A	Lab Control Sample	91
MRL 380-58189/12-A	Lab Control Sample	84

Surrogate Legend
 DBPP = 1,2-Dibromopropane (Surr)

Method: 505 - Organochlorine Pesticides/PCBs (GC)

Matrix: Drinking Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		TCX1 (70-130)
380-65252-1	MOANALUA WELLS (331-223-T	93

Surrogate Legend
 TCX = Tetrachloro-m-xylene

Surrogate Summary

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

Job ID: 380-65252-1

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)
380-65151-C-1-A MS	Matrix Spike	99
380-65151-D-1-A MS	Matrix Spike	74
380-64160-CU-1-A MS	Matrix Spike	93
380-64160-CV-1-A MS	Matrix Spike	96
MB 380-58057/4-A	Method Blank	90
MRL 380-58057/2-A	Lab Control Sample	99
MRL 380-58057/3-A	Lab Control Sample	90

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	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)
111797-B1	Method Blank	106	95	93	106	109	85	63
111797-BS1	Lab Control Sample	102	92	95	102	114	100	70
111797-BS2	Lab Control Sample Dup	104	97	93	103	113	88	65

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: Drinking Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

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)
380-65252-1	MOANALUA WELLS (331-223-T	97	93	92	93	55	89	90

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)

Surrogate Summary

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

Job ID: 380-65252-1

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

Matrix: Drinking Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (60-140)
380-65252-1	MOANALUA WELLS (331-223-T	86

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)
380-65252-2	TRAVEL BLANK	83

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)
23J032-01M	Matrix Spike	112
23J032-01S	Matrix Spike Duplicate	116

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
23VG39J04B	Method Blank	

Surrogate Legend

BFB = BROMOFLUOROBENZENE

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

Matrix: WATER

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (70-130)
23VG39J04C	LCD	114
23VG39J04L	Lab Control Sample	113

Surrogate Legend

BFB = BROMOFLUOROBENZENE

Surrogate Summary

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

Job ID: 380-65252-1

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

Matrix: Drinking Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BB (60-130)	XACOSAI (60-130)
380-65252-1	MOANALUA WELLS (331-223-T	74	95

Surrogate Legend

BB = BROMOBENZENE
HEXACOSANE = HEXACOSANE

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

Matrix: WATER

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BB (60-130)	XACOSAI (60-130)
23DSJ004WB	Method Blank		

Surrogate Legend

BB = BROMOBENZENE
HEXACOSANE = HEXACOSANE

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

Matrix: WATER

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BB (60-130)	XACOSAI (60-130)
23DSJ004WC	LCD	72	103
23DSJ004WL	Lab Control Sample	61	98
23J5J004WC	LCD	76	99
23J5J004WL	Lab Control Sample	71	94
23J8J004WC	LCD	78	99
23J8J004WL	Lab Control Sample	88	97

Surrogate Legend

BB = BROMOBENZENE
HEXACOSANE = HEXACOSANE

QC Sample Results

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

Job ID: 380-65252-1

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

Lab Sample ID: MB 380-58700/5
Matrix: Water
Analysis Batch: 58700

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			10/10/23 15:07	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		70 - 130				10/10/23 15:07	1
4-Bromofluorobenzene (Surr)	101		70 - 130				10/10/23 15:07	1
1,2-Dichloroethane-d4 (Surr)	112		70 - 130				10/10/23 15:07	1

Lab Sample ID: LCS 380-58700/2
Matrix: Water
Analysis Batch: 58700

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Tertiary Butyl Alcohol (TBA)	5.00	5.17		ug/L		103	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
Toluene-d8 (Surr)	98		70 - 130				
4-Bromofluorobenzene (Surr)	95		70 - 130				
1,2-Dichloroethane-d4 (Surr)	114		70 - 130				

Lab Sample ID: LCSD 380-58700/3
Matrix: Water
Analysis Batch: 58700

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Tertiary Butyl Alcohol (TBA)	5.00	5.58		ug/L		112	70 - 130	8	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
Toluene-d8 (Surr)	101		70 - 130						
4-Bromofluorobenzene (Surr)	99		70 - 130						
1,2-Dichloroethane-d4 (Surr)	115		70 - 130						

Lab Sample ID: MRL 380-58700/4
Matrix: Water
Analysis Batch: 58700

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	2.24		ug/L		112	50 - 150
Surrogate	MRL %Recovery	MRL Qualifier	Limits				
Toluene-d8 (Surr)	100		50 - 150				
4-Bromofluorobenzene (Surr)	96		50 - 150				
1,2-Dichloroethane-d4 (Surr)	115		50 - 150				

QC Sample Results

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

Job ID: 380-65252-1

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

Lab Sample ID: MB 380-57966/21-A
Matrix: Water
Analysis Batch: 58154

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57966

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	<0.099		0.099	ug/L		10/04/23 15:10	10/05/23 16:39	1
2,4'-DDE	<0.099		0.099	ug/L		10/04/23 15:10	10/05/23 16:39	1
2,4'-DDT	<0.099		0.099	ug/L		10/04/23 15:10	10/05/23 16:39	1
2,4-Dinitrotoluene	<0.099		0.099	ug/L		10/04/23 15:10	10/05/23 16:39	1
2,6-Dinitrotoluene	<0.099		0.099	ug/L		10/04/23 15:10	10/05/23 16:39	1
4,4'-DDD	<0.099		0.099	ug/L		10/04/23 15:10	10/05/23 16:39	1
4,4'-DDE	<0.099		0.099	ug/L		10/04/23 15:10	10/05/23 16:39	1
4,4'-DDT	<0.099		0.099	ug/L		10/04/23 15:10	10/05/23 16:39	1
Acenaphthene	<0.099		0.099	ug/L		10/04/23 15:10	10/05/23 16:39	1
Acenaphthylene	<0.099		0.099	ug/L		10/04/23 15:10	10/05/23 16:39	1
Acetochlor	<0.099		0.099	ug/L		10/04/23 15:10	10/05/23 16:39	1
Alachlor	<0.050		0.050	ug/L		10/04/23 15:10	10/05/23 16:39	1
alpha-BHC	<0.099		0.099	ug/L		10/04/23 15:10	10/05/23 16:39	1
alpha-Chlordane	<0.050		0.050	ug/L		10/04/23 15:10	10/05/23 16:39	1
Anthracene	<0.020		0.020	ug/L		10/04/23 15:10	10/05/23 16:39	1
Atrazine	<0.050		0.050	ug/L		10/04/23 15:10	10/05/23 16:39	1
Benz(a)anthracene	<0.050		0.050	ug/L		10/04/23 15:10	10/05/23 16:39	1
Benzo[a]pyrene	<0.020		0.020	ug/L		10/04/23 15:10	10/05/23 16:39	1
Benzo[b]fluoranthene	<0.020		0.020	ug/L		10/04/23 15:10	10/05/23 16:39	1
Benzo[g,h,i]perylene	<0.050		0.050	ug/L		10/04/23 15:10	10/05/23 16:39	1
Benzo[k]fluoranthene	<0.020		0.020	ug/L		10/04/23 15:10	10/05/23 16:39	1
beta-BHC	<0.099		0.099	ug/L		10/04/23 15:10	10/05/23 16:39	1
Bis(2-ethylhexyl) phthalate	<0.60		0.60	ug/L		10/04/23 15:10	10/05/23 16:39	1
Bromacil	<0.099		0.099	ug/L		10/04/23 15:10	10/05/23 16:39	1
Butachlor	<0.050		0.050	ug/L		10/04/23 15:10	10/05/23 16:39	1
Butylbenzylphthalate	<0.50		0.50	ug/L		10/04/23 15:10	10/05/23 16:39	1
Chlorobenzilate	<0.099		0.099	ug/L		10/04/23 15:10	10/05/23 16:39	1
Chloroneb	<0.099		0.099	ug/L		10/04/23 15:10	10/05/23 16:39	1
Chlorothalonil (Draconil, Bravo)	<0.099		0.099	ug/L		10/04/23 15:10	10/05/23 16:39	1
Chlorpyrifos	<0.050		0.050	ug/L		10/04/23 15:10	10/05/23 16:39	1
Chrysene	<0.020		0.020	ug/L		10/04/23 15:10	10/05/23 16:39	1
delta-BHC	<0.099		0.099	ug/L		10/04/23 15:10	10/05/23 16:39	1
Di(2-ethylhexyl)adipate	<0.60		0.60	ug/L		10/04/23 15:10	10/05/23 16:39	1
Dibenz(a,h)anthracene	<0.050		0.050	ug/L		10/04/23 15:10	10/05/23 16:39	1
Diclorvos (DDVP)	<0.050		0.050	ug/L		10/04/23 15:10	10/05/23 16:39	1
Dieldrin	<0.20		0.20	ug/L		10/04/23 15:10	10/05/23 16:39	1
Diethylphthalate	<0.50		0.50	ug/L		10/04/23 15:10	10/05/23 16:39	1
Dimethylphthalate	<0.50		0.50	ug/L		10/04/23 15:10	10/05/23 16:39	1
Di-n-butyl phthalate	<0.99		0.99	ug/L		10/04/23 15:10	10/05/23 16:39	1
Di-n-octyl phthalate	<0.099		0.099	ug/L		10/04/23 15:10	10/05/23 16:39	1
Endosulfan I (Alpha)	<0.099		0.099	ug/L		10/04/23 15:10	10/05/23 16:39	1
Endosulfan II (Beta)	<0.099		0.099	ug/L		10/04/23 15:10	10/05/23 16:39	1
Endosulfan sulfate	<0.099		0.099	ug/L		10/04/23 15:10	10/05/23 16:39	1
Endrin	<0.099		0.099	ug/L		10/04/23 15:10	10/05/23 16:39	1
Endrin aldehyde	<0.099		0.099	ug/L		10/04/23 15:10	10/05/23 16:39	1
EPTC	<0.099		0.099	ug/L		10/04/23 15:10	10/05/23 16:39	1
Fluoranthene	<0.099		0.099	ug/L		10/04/23 15:10	10/05/23 16:39	1
Fluorene	<0.050		0.050	ug/L		10/04/23 15:10	10/05/23 16:39	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-65252-1

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

Lab Sample ID: MB 380-57966/21-A
Matrix: Water
Analysis Batch: 58154

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57966

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
gamma-BHC (Lindane)	<0.040		0.040	ug/L		10/04/23 15:10	10/05/23 16:39	1
gamma-Chlordane	<0.050		0.050	ug/L		10/04/23 15:10	10/05/23 16:39	1
Heptachlor	<0.040		0.040	ug/L		10/04/23 15:10	10/05/23 16:39	1
Heptachlor epoxide (isomer B)	<0.050		0.050	ug/L		10/04/23 15:10	10/05/23 16:39	1
Hexachlorobenzene	<0.050		0.050	ug/L		10/04/23 15:10	10/05/23 16:39	1
Hexachlorocyclopentadiene	<0.050		0.050	ug/L		10/04/23 15:10	10/05/23 16:39	1
Indeno[1,2,3-cd]pyrene	<0.050		0.050	ug/L		10/04/23 15:10	10/05/23 16:39	1
Isophorone	<0.50		0.50	ug/L		10/04/23 15:10	10/05/23 16:39	1
Malathion	<0.099		0.099	ug/L		10/04/23 15:10	10/05/23 16:39	1
Methoxychlor	<0.099		0.099	ug/L		10/04/23 15:10	10/05/23 16:39	1
Metolachlor	<0.050		0.050	ug/L		10/04/23 15:10	10/05/23 16:39	1
Molinate	<0.099		0.099	ug/L		10/04/23 15:10	10/05/23 16:39	1
Naphthalene	<0.30		0.30	ug/L		10/04/23 15:10	10/05/23 16:39	1
Parathion	<0.099		0.099	ug/L		10/04/23 15:10	10/05/23 16:39	1
Pendimethalin (Penoxaline)	<0.099		0.099	ug/L		10/04/23 15:10	10/05/23 16:39	1
Phenanthrene	<0.040		0.040	ug/L		10/04/23 15:10	10/05/23 16:39	1
Propachlor	<0.050		0.050	ug/L		10/04/23 15:10	10/05/23 16:39	1
Pyrene	<0.050		0.050	ug/L		10/04/23 15:10	10/05/23 16:39	1
Simazine	<0.050		0.050	ug/L		10/04/23 15:10	10/05/23 16:39	1
Terbacil	<0.099		0.099	ug/L		10/04/23 15:10	10/05/23 16:39	1
Terbutylazine	<0.099		0.099	ug/L		10/04/23 15:10	10/05/23 16:39	1
Thiobencarb	<0.20		0.20	ug/L		10/04/23 15:10	10/05/23 16:39	1
Total Permethrin (mixed isomers)	<0.20		0.20	ug/L		10/04/23 15:10	10/05/23 16:39	1
trans-Nonachlor	<0.050		0.050	ug/L		10/04/23 15:10	10/05/23 16:39	1
Trifluralin	<0.099		0.099	ug/L		10/04/23 15:10	10/05/23 16:39	1
1-Methylnaphthalene	<0.099		0.099	ug/L		10/04/23 15:10	10/05/23 16:39	1
2-Methylnaphthalene	<0.099		0.099	ug/L		10/04/23 15:10	10/05/23 16:39	1

<i>Tentatively Identified Compound</i>	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
<i>Decane, 5-methyl-</i>	0.627	T J N	ug/L		2.55	13151-35-4	10/04/23 15:10	10/05/23 16:39	1
<i>n-Hexadecanoic acid</i>	0.549	T J N	ug/L		5.80	57-10-3	10/04/23 15:10	10/05/23 16:39	1
<i>1,3-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester</i>	0.874	T J N	ug/L		9.82	137-89-3	10/04/23 15:10	10/05/23 16:39	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>2-Nitro-m-xylene</i>	98		70 - 130	10/04/23 15:10	10/05/23 16:39	1
<i>Perylene-d12</i>	96		70 - 130	10/04/23 15:10	10/05/23 16:39	1
<i>Triphenylphosphate</i>	128		70 - 130	10/04/23 15:10	10/05/23 16:39	1

Lab Sample ID: LCS 380-57966/24-A
Matrix: Water
Analysis Batch: 58154

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57966

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	1.99	2.24		ug/L		113	70 - 130
2,4'-DDE	1.99	2.17		ug/L		109	70 - 130
2,4'-DDT	1.99	2.23		ug/L		112	70 - 130
2,4-Dinitrotoluene	1.99	1.99		ug/L		100	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-65252-1

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

Lab Sample ID: LCS 380-57966/24-A

Matrix: Water

Analysis Batch: 58154

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 57966

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,6-Dinitrotoluene	1.99	1.99		ug/L		100	70 - 130
4,4'-DDD	1.99	2.15		ug/L		108	70 - 130
4,4'-DDE	1.99	2.16		ug/L		109	70 - 130
4,4'-DDT	1.99	2.25		ug/L		113	70 - 130
Acenaphthene	1.99	1.80		ug/L		91	70 - 130
Acenaphthylene	1.99	1.89		ug/L		95	70 - 130
Acetochlor	1.99	2.46		ug/L		123	70 - 130
Alachlor	1.99	2.23		ug/L		112	70 - 130
alpha-BHC	1.99	1.91		ug/L		96	70 - 130
alpha-Chlordane	1.99	2.19		ug/L		110	70 - 130
Anthracene	1.99	1.84		ug/L		93	70 - 130
Atrazine	1.99	2.26		ug/L		114	70 - 130
Benz(a)anthracene	1.99	2.25		ug/L		113	70 - 130
Benzo[a]pyrene	1.99	2.15		ug/L		108	70 - 130
Benzo[b]fluoranthene	1.99	2.13		ug/L		107	70 - 130
Benzo[g,h,i]perylene	1.99	2.10		ug/L		106	70 - 130
Benzo[k]fluoranthene	1.99	2.29		ug/L		115	70 - 130
beta-BHC	1.99	2.08		ug/L		105	70 - 130
Bis(2-ethylhexyl) phthalate	1.99	1.60		ug/L		81	70 - 130
Bromacil	1.99	2.21		ug/L		111	70 - 130
Butachlor	1.99	2.45		ug/L		123	70 - 130
Butylbenzylphthalate	1.99	2.12		ug/L		106	70 - 130
Chlorobenzilate	1.99	2.25		ug/L		113	70 - 130
Chloroneb	1.99	1.95		ug/L		98	70 - 130
Chlorothalonil (Draconil, Bravo)	1.99	2.15		ug/L		108	70 - 130
Chlorpyrifos	1.99	2.31		ug/L		116	70 - 130
Chrysene	1.99	1.94		ug/L		97	70 - 130
delta-BHC	1.99	1.99		ug/L		100	70 - 130
Di(2-ethylhexyl)adipate	1.99	2.02		ug/L		101	70 - 130
Dibenz(a,h)anthracene	1.99	2.22		ug/L		112	70 - 130
Diclorvos (DDVP)	1.99	2.56		ug/L		129	70 - 130
Dieldrin	1.99	2.26		ug/L		114	70 - 130
Diethylphthalate	1.99	1.98		ug/L		100	70 - 130
Dimethylphthalate	1.99	2.04		ug/L		103	70 - 130
Di-n-butyl phthalate	3.98	4.45		ug/L		112	70 - 130
Di-n-octyl phthalate	1.99	1.54		ug/L		78	70 - 130
Endosulfan I (Alpha)	1.99	1.87		ug/L		94	70 - 130
Endosulfan II (Beta)	1.99	2.20		ug/L		111	70 - 130
Endosulfan sulfate	1.99	2.44		ug/L		123	70 - 130
Endrin	1.99	2.39		ug/L		120	70 - 130
Endrin aldehyde	1.99	2.08		ug/L		104	70 - 130
EPTC	1.99	2.09		ug/L		105	70 - 130
Fluoranthene	1.99	2.18		ug/L		110	70 - 130
Fluorene	1.99	2.03		ug/L		102	70 - 130
gamma-BHC (Lindane)	1.99	2.00		ug/L		101	70 - 130
gamma-Chlordane	1.99	2.23		ug/L		112	70 - 130
Heptachlor	1.99	2.07		ug/L		104	70 - 130
Heptachlor epoxide (isomer B)	1.99	2.28		ug/L		115	70 - 130
Hexachlorobenzene	1.99	2.09		ug/L		105	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-65252-1

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

Lab Sample ID: LCS 380-57966/24-A
Matrix: Water
Analysis Batch: 58154

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57966

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexachlorocyclopentadiene	1.99	2.17		ug/L		109	70 - 130
Indeno[1,2,3-cd]pyrene	1.99	2.16		ug/L		109	70 - 130
Isophorone	1.99	2.08		ug/L		105	70 - 130
Malathion	1.99	2.24		ug/L		113	70 - 130
Methoxychlor	1.99	2.07		ug/L		104	70 - 130
Metolachlor	1.99	2.36		ug/L		119	70 - 130
Molinate	1.99	2.20		ug/L		111	70 - 130
Naphthalene	1.99	1.87		ug/L		94	70 - 130
Parathion	1.99	2.52		ug/L		127	70 - 130
Pendimethalin (Penoxaline)	1.99	2.42		ug/L		122	70 - 130
Phenanthrene	1.99	1.81		ug/L		91	70 - 130
Propachlor	1.99	2.00		ug/L		100	70 - 130
Pyrene	1.99	2.20		ug/L		111	70 - 130
Simazine	1.99	2.25		ug/L		113	70 - 130
Terbacil	1.99	2.29		ug/L		115	70 - 130
Terbutylazine	1.99	2.37		ug/L		119	70 - 130
Thiobencarb	1.99	2.14		ug/L		108	70 - 130
trans-Nonachlor	1.99	2.29		ug/L		115	70 - 130
Trifluralin	1.99	2.17		ug/L		109	70 - 130
1-Methylnaphthalene	1.99	1.94		ug/L		98	70 - 130
2-Methylnaphthalene	1.99	1.95		ug/L		98	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Nitro-m-xylene	97		70 - 130
Perylene-d12	99		70 - 130
Triphenylphosphate	123		70 - 130

Lab Sample ID: LCSD 380-57966/25-A
Matrix: Water
Analysis Batch: 58154

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 57966

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,4'-DDD	1.98	2.21		ug/L		111	70 - 130	1	20
2,4'-DDE	1.98	2.17		ug/L		109	70 - 130	0	20
2,4'-DDT	1.98	2.19		ug/L		110	70 - 130	2	20
2,4-Dinitrotoluene	1.98	2.14		ug/L		108	70 - 130	7	20
2,6-Dinitrotoluene	1.98	2.16		ug/L		109	70 - 130	8	20
4,4'-DDD	1.98	2.07		ug/L		104	70 - 130	4	20
4,4'-DDE	1.98	2.13		ug/L		107	70 - 130	1	20
4,4'-DDT	1.98	2.17		ug/L		109	70 - 130	4	20
Acenaphthene	1.98	1.87		ug/L		94	70 - 130	4	20
Acenaphthylene	1.98	1.91		ug/L		96	70 - 130	1	20
Acetochlor	1.98	2.29		ug/L		115	70 - 130	7	20
Alachlor	1.98	2.12		ug/L		107	70 - 130	5	20
alpha-BHC	1.98	1.98		ug/L		100	70 - 130	4	20
alpha-Chlordane	1.98	2.21		ug/L		111	70 - 130	1	20
Anthracene	1.98	1.89		ug/L		95	70 - 130	3	20
Atrazine	1.98	2.25		ug/L		114	70 - 130	0	20

QC Sample Results

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

Job ID: 380-65252-1

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

Lab Sample ID: LCSD 380-57966/25-A
Matrix: Water
Analysis Batch: 58154

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 57966

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
Benz(a)anthracene	1.98	2.18		ug/L		110	70 - 130	3	20	
Benzo[a]pyrene	1.98	2.23		ug/L		112	70 - 130	4	20	
Benzo[b]fluoranthene	1.98	2.17		ug/L		109	70 - 130	2	20	
Benzo[g,h,i]perylene	1.98	2.05		ug/L		103	70 - 130	2	20	
Benzo[k]fluoranthene	1.98	2.26		ug/L		114	70 - 130	1	20	
beta-BHC	1.98	1.97		ug/L		100	70 - 130	5	20	
Bis(2-ethylhexyl) phthalate	1.98	1.61		ug/L		81	70 - 130	0	20	
Bromacil	1.98	2.25		ug/L		113	70 - 130	2	20	
Butachlor	1.98	2.44		ug/L		123	70 - 130	0	20	
Butylbenzylphthalate	1.98	2.03		ug/L		102	70 - 130	4	20	
Chlorobenzilate	1.98	2.17		ug/L		109	70 - 130	4	20	
Chloroneb	1.98	1.90		ug/L		96	70 - 130	2	20	
Chlorothalonil (Draconil, Bravo)	1.98	2.11		ug/L		106	70 - 130	2	20	
Chlorpyrifos	1.98	2.37		ug/L		119	70 - 130	3	20	
Chrysene	1.98	1.95		ug/L		98	70 - 130	1	20	
delta-BHC	1.98	1.83		ug/L		92	70 - 130	8	20	
Di(2-ethylhexyl)adipate	1.98	1.93		ug/L		97	70 - 130	4	20	
Dibenz(a,h)anthracene	1.98	2.18		ug/L		110	70 - 130	2	20	
Diclorvos (DDVP)	1.98	2.57		ug/L		130	70 - 130	1	20	
Dieldrin	1.98	2.29		ug/L		116	70 - 130	1	20	
Diethylphthalate	1.98	2.11		ug/L		106	70 - 130	6	20	
Dimethylphthalate	1.98	2.11		ug/L		106	70 - 130	3	20	
Di-n-butyl phthalate	3.97	4.50		ug/L		113	70 - 130	1	20	
Di-n-octyl phthalate	1.98	1.57		ug/L		79	70 - 130	2	20	
Endosulfan I (Alpha)	1.98	1.83		ug/L		92	70 - 130	2	20	
Endosulfan II (Beta)	1.98	2.15		ug/L		108	70 - 130	2	20	
Endosulfan sulfate	1.98	2.35		ug/L		118	70 - 130	4	20	
Endrin	1.98	2.41		ug/L		121	70 - 130	1	20	
Endrin aldehyde	1.98	2.12		ug/L		107	70 - 130	2	20	
EPTC	1.98	2.05		ug/L		103	70 - 130	2	20	
Fluoranthene	1.98	2.16		ug/L		109	70 - 130	1	20	
Fluorene	1.98	2.07		ug/L		105	70 - 130	2	20	
gamma-BHC (Lindane)	1.98	1.91		ug/L		96	70 - 130	5	20	
gamma-Chlordane	1.98	2.24		ug/L		113	70 - 130	1	20	
Heptachlor	1.98	2.16		ug/L		109	70 - 130	4	20	
Heptachlor epoxide (isomer B)	1.98	2.30		ug/L		116	70 - 130	1	20	
Hexachlorobenzene	1.98	2.14		ug/L		108	70 - 130	3	20	
Hexachlorocyclopentadiene	1.98	2.11		ug/L		106	70 - 130	3	20	
Indeno[1,2,3-cd]pyrene	1.98	2.10		ug/L		106	70 - 130	3	20	
Isophorone	1.98	2.04		ug/L		103	70 - 130	2	20	
Malathion	1.98	2.21		ug/L		111	70 - 130	1	20	
Methoxychlor	1.98	2.05		ug/L		103	70 - 130	1	20	
Metolachlor	1.98	2.31		ug/L		117	70 - 130	2	20	
Molinate	1.98	2.18		ug/L		110	70 - 130	1	20	
Naphthalene	1.98	1.82		ug/L		92	70 - 130	2	20	
Parathion	1.98	2.55		ug/L		129	70 - 130	1	20	
Pendimethalin (Penoxaline)	1.98	2.46		ug/L		124	70 - 130	2	20	
Phenanthrene	1.98	1.86		ug/L		94	70 - 130	3	20	
Propachlor	1.98	2.17		ug/L		110	70 - 130	8	20	

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-65252-1

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

Lab Sample ID: LCSD 380-57966/25-A
Matrix: Water
Analysis Batch: 58154

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 57966

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Pyrene	1.98	2.20		ug/L		111	70 - 130	0	20
Simazine	1.98	2.30		ug/L		116	70 - 130	2	20
Terbacil	1.98	2.26		ug/L		114	70 - 130	2	20
Terbutylazine	1.98	2.34		ug/L		118	70 - 130	1	20
Thiobencarb	1.98	2.24		ug/L		113	70 - 130	5	20
trans-Nonachlor	1.98	2.32		ug/L		117	70 - 130	1	20
Trifluralin	1.98	2.25		ug/L		114	70 - 130	4	20
1-Methylnaphthalene	1.98	1.93		ug/L		97	70 - 130	1	20
2-Methylnaphthalene	1.98	1.91		ug/L		96	70 - 130	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
2-Nitro-m-xylene	95		70 - 130
Perylene-d12	101		70 - 130
Triphenylphosphate	116		70 - 130

Lab Sample ID: MRL 380-57966/22-A
Matrix: Water
Analysis Batch: 58154

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57966

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	0.0995	0.124		ug/L		124	50 - 150
2,4'-DDE	0.0995	0.0981	J	ug/L		99	50 - 150
2,4'-DDT	0.0995	0.107		ug/L		107	50 - 150
2,4-Dinitrotoluene	0.0995	0.115		ug/L		115	50 - 150
2,6-Dinitrotoluene	0.0995	0.122		ug/L		123	50 - 150
4,4'-DDD	0.0995	0.102		ug/L		102	50 - 150
4,4'-DDE	0.0995	0.118		ug/L		118	50 - 150
4,4'-DDT	0.0995	0.114		ug/L		115	50 - 150
Acenaphthene	0.0995	0.0948	J	ug/L		95	50 - 150
Acenaphthylene	0.0995	0.0885	J	ug/L		89	50 - 150
Acetochlor	0.0498	0.0537	J	ug/L		108	50 - 150
Alachlor	0.0498	0.0501		ug/L		101	50 - 150
alpha-BHC	0.0995	0.0956	J	ug/L		96	50 - 150
alpha-Chlordane	0.0249	<0.029		ug/L		104	50 - 150
Anthracene	0.0199	<0.019		ug/L		87	50 - 150
Atrazine	0.0498	0.0668		ug/L		134	50 - 150
Benz(a)anthracene	0.0498	0.0453	J	ug/L		91	50 - 150
Benzo[a]pyrene	0.0199	0.0169	J	ug/L		85	50 - 150
Benzo[b]fluoranthene	0.0199	0.0206		ug/L		103	50 - 150
Benzo[g,h,i]perylene	0.0498	0.0501		ug/L		101	50 - 150
Benzo[k]fluoranthene	0.0199	0.0211		ug/L		106	50 - 150
beta-BHC	0.0995	0.0936	J	ug/L		94	50 - 150
Bis(2-ethylhexyl) phthalate	0.597	0.597	J	ug/L		100	50 - 150
Bromacil	0.0995	0.136		ug/L		137	50 - 150
Butachlor	0.0498	0.0613		ug/L		123	50 - 150
Butylbenzylphthalate	0.149	0.191	J	ug/L		128	50 - 150
Chlorobenzilate	0.0995	0.134		ug/L		135	50 - 150
Chloroneb	0.0995	0.0963	J	ug/L		97	50 - 150

QC Sample Results

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

Job ID: 380-65252-1

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

Lab Sample ID: MRL 380-57966/22-A
Matrix: Water
Analysis Batch: 58154

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57966

Analyte	Spike Added	MRL	MRL	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Chlorothalonil (Draconil, Bravo)	0.0995	0.128		ug/L		128	50 - 150
Chlorpyrifos	0.0498	0.0575		ug/L		116	50 - 150
Chrysene	0.0199	0.0184	J	ug/L		93	50 - 150
delta-BHC	0.0995	0.0952	J	ug/L		96	50 - 150
Di(2-ethylhexyl)adipate	0.299	0.379	J	ug/L		127	50 - 150
Dibenz(a,h)anthracene	0.0498	0.0516		ug/L		104	50 - 150
Diclorvos (DDVP)	0.0498	0.0879	^3+	ug/L		177	50 - 150
Dieldrin	0.0995	0.104	J	ug/L		105	50 - 150
Diethylphthalate	0.149	0.190	J	ug/L		128	50 - 150
Dimethylphthalate	0.299	0.304	J	ug/L		102	50 - 150
Di-n-butyl phthalate	0.299	0.402	J	ug/L		135	49 - 243
Di-n-octyl phthalate	0.0995	0.106		ug/L		107	50 - 150
Endosulfan I (Alpha)	0.0995	0.0952	J	ug/L		96	50 - 150
Endosulfan II (Beta)	0.0995	0.122		ug/L		123	50 - 150
Endosulfan sulfate	0.0995	0.0978	J	ug/L		98	50 - 150
Endrin	0.0995	0.123		ug/L		124	50 - 150
Endrin aldehyde	0.0995	0.141		ug/L		141	50 - 150
EPTC	0.0995	0.105		ug/L		106	50 - 150
Fluoranthene	0.0498	0.0539	J	ug/L		108	50 - 150
Fluorene	0.0498	<0.050		ug/L		100	50 - 150
gamma-BHC (Lindane)	0.0398	0.0396	J	ug/L		99	50 - 150
gamma-Chlordane	0.0249	0.0264	J	ug/L		106	50 - 150
Heptachlor	0.0398	0.0371	J	ug/L		93	50 - 150
Heptachlor epoxide (isomer B)	0.0498	0.0554		ug/L		111	50 - 150
Hexachlorobenzene	0.0498	0.0492	J	ug/L		99	50 - 150
Hexachlorocyclopentadiene	0.0498	0.0432	J	ug/L		87	50 - 150
Indeno[1,2,3-cd]pyrene	0.0498	0.0507		ug/L		102	50 - 150
Isophorone	0.0995	0.107	J	ug/L		107	50 - 150
Malathion	0.0995	0.113		ug/L		114	50 - 150
Methoxychlor	0.0995	0.129		ug/L		129	50 - 150
Metolachlor	0.0498	0.0601		ug/L		121	50 - 150
Molinate	0.0995	0.114		ug/L		115	50 - 150
Naphthalene	0.0995	0.103	J	ug/L		104	50 - 150
Parathion	0.0995	0.134		ug/L		134	50 - 150
Pendimethalin (Penoxaline)	0.0995	0.111		ug/L		111	50 - 150
Phenanthrene	0.0199	0.0217	J	ug/L		109	50 - 150
Propachlor	0.0498	0.0496	J	ug/L		100	50 - 150
Pyrene	0.0498	0.0519		ug/L		104	50 - 150
Simazine	0.0498	0.0552		ug/L		111	50 - 150
Terbacil	0.0995	0.123		ug/L		123	50 - 150
Terbutylazine	0.0995	0.106		ug/L		107	50 - 150
Thiobencarb	0.0995	0.112	J	ug/L		112	50 - 150
trans-Nonachlor	0.0249	<0.026		ug/L		98	50 - 150
Trifluralin	0.0995	0.110		ug/L		111	50 - 150
1-Methylnaphthalene	0.0995	0.107		ug/L		108	50 - 150
2-Methylnaphthalene	0.0995	0.105		ug/L		105	50 - 150

QC Sample Results

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

Job ID: 380-65252-1

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

Lab Sample ID: MRL 380-57966/22-A
Matrix: Water
Analysis Batch: 58154

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57966

Surrogate	MRL %Recovery	MRL Qualifier	Limits
2-Nitro-m-xylene	95		70 - 130
Perylene-d12	100		70 - 130
Triphenylphosphate	113		70 - 130

Lab Sample ID: 380-65247-V-1-A MS
Matrix: Water
Analysis Batch: 58154

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 57966

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	<0.097		1.96	2.11		ug/L		107	70 - 130
2,4'-DDE	<0.097		1.96	2.03		ug/L		104	70 - 130
2,4'-DDT	<0.097		1.96	2.19		ug/L		112	70 - 130
2,4-Dinitrotoluene	<0.097		1.96	2.16		ug/L		110	70 - 130
2,6-Dinitrotoluene	<0.097		1.96	2.13		ug/L		108	70 - 130
4,4'-DDD	<0.097		1.96	2.06		ug/L		105	70 - 130
4,4'-DDE	<0.097		1.96	2.13		ug/L		109	70 - 130
4,4'-DDT	<0.097		1.96	2.24		ug/L		114	70 - 130
Acenaphthene	<0.097		1.96	1.76		ug/L		90	70 - 130
Acenaphthylene	<0.097		1.96	1.97		ug/L		100	70 - 130
Acetochlor	<0.097		1.96	2.19		ug/L		111	70 - 130
Alachlor	<0.049		1.96	2.11		ug/L		108	70 - 130
alpha-BHC	<0.097		1.96	1.81		ug/L		92	70 - 130
alpha-Chlordane	<0.049		1.96	2.25		ug/L		115	70 - 130
Anthracene	<0.019		1.96	1.37		ug/L		70	70 - 130
Atrazine	<0.049		1.96	2.21		ug/L		113	70 - 130
Benz(a)anthracene	<0.049		1.96	2.19		ug/L		112	70 - 130
Benzo[a]pyrene	<0.019		1.96	1.90		ug/L		97	70 - 130
Benzo[b]fluoranthene	<0.019		1.96	2.26		ug/L		115	70 - 130
Benzo[g,h,i]perylene	<0.049		1.96	2.04		ug/L		104	70 - 130
Benzo[k]fluoranthene	<0.019		1.96	2.22		ug/L		113	70 - 130
beta-BHC	<0.097		1.96	1.79		ug/L		91	70 - 130
Bis(2-ethylhexyl) phthalate	<0.58		1.96	1.64		ug/L		84	70 - 130
Bromacil	<0.097		1.96	2.47		ug/L		126	70 - 130
Butachlor	<0.049		1.96	2.29		ug/L		116	70 - 130
Butylbenzylphthalate	<0.49		1.96	1.93		ug/L		98	70 - 130
Chlorobenzilate	<0.097		1.96	1.97		ug/L		100	70 - 130
Chloroneb	<0.097		1.96	1.89		ug/L		96	70 - 130
Chlorothalonil (Draconil, Bravo)	<0.097		1.96	2.03		ug/L		104	70 - 130
Chlorpyrifos	<0.049		1.96	2.23		ug/L		114	70 - 130
Chrysene	<0.019		1.96	1.96		ug/L		100	70 - 130
delta-BHC	<0.097		1.96	1.75		ug/L		89	70 - 130
Di(2-ethylhexyl)adipate	<0.58		1.96	1.96		ug/L		95	70 - 130
Dibenz(a,h)anthracene	<0.049		1.96	2.29		ug/L		117	70 - 130
Diclorvos (DDVP)	<0.049	^3+	1.96	2.51		ug/L		128	70 - 130
Dieldrin	<0.19		1.96	2.06		ug/L		105	70 - 130
Diethylphthalate	<0.49		1.96	2.01		ug/L		102	70 - 130
Dimethylphthalate	<0.49		1.96	1.97		ug/L		100	70 - 130
Di-n-butyl phthalate	<0.97		3.93	4.19		ug/L		104	70 - 130

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QC Sample Results

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

Job ID: 380-65252-1

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

Lab Sample ID: 380-65247-V-1-A MS

Matrix: Water

Analysis Batch: 58154

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 57966

Analyte	Sample	Sample Qualifier	Spike Added	MS	MS	Unit	D	%Rec	%Rec Limits
	Result			Result	Qualifier				
Di-n-octyl phthalate	<0.097		1.96	1.68		ug/L		86	70 - 130
Endosulfan I (Alpha)	<0.097		1.96	1.69		ug/L		86	70 - 130
Endosulfan II (Beta)	<0.097		1.96	1.91		ug/L		98	70 - 130
Endosulfan sulfate	<0.097		1.96	2.26		ug/L		115	70 - 130
Endrin	<0.097		1.96	2.19		ug/L		112	70 - 130
Endrin aldehyde	<0.097		1.96	1.91		ug/L		97	70 - 130
EPTC	<0.097		1.96	2.13		ug/L		109	70 - 130
Fluoranthene	<0.097		1.96	2.19		ug/L		111	70 - 130
Fluorene	<0.049		1.96	2.04		ug/L		104	70 - 130
gamma-BHC (Lindane)	<0.039		1.96	1.84		ug/L		94	70 - 130
gamma-Chlordane	<0.049		1.96	2.35		ug/L		120	70 - 130
Heptachlor	<0.039		1.96	2.02		ug/L		103	70 - 130
Heptachlor epoxide (isomer B)	<0.049		1.96	2.41		ug/L		123	70 - 130
Hexachlorobenzene	<0.049		1.96	2.06		ug/L		105	70 - 130
Hexachlorocyclopentadiene	<0.049		1.96	2.10		ug/L		107	70 - 130
Indeno[1,2,3-cd]pyrene	<0.049		1.96	2.20		ug/L		112	70 - 130
Isophorone	<0.49		1.96	2.09		ug/L		107	70 - 130
Malathion	<0.097		1.96	2.21		ug/L		112	70 - 130
Methoxychlor	<0.097		1.96	2.09		ug/L		106	70 - 130
Metolachlor	<0.049		1.96	2.45		ug/L		125	70 - 130
Molinate	<0.097		1.96	2.17		ug/L		111	70 - 130
Naphthalene	<0.29		1.96	1.77		ug/L		90	70 - 130
Parathion	<0.097	F1	1.96	2.64	F1	ug/L		135	70 - 130
Pendimethalin (Penoxaline)	<0.097		1.96	2.44		ug/L		125	70 - 130
Phenanthrene	<0.039		1.96	1.79		ug/L		91	70 - 130
Propachlor	<0.049		1.96	2.15		ug/L		109	70 - 130
Pyrene	<0.049		1.96	2.14		ug/L		109	70 - 130
Simazine	<0.049		1.96	2.30		ug/L		117	70 - 130
Terbacil	<0.097		1.96	2.47		ug/L		126	70 - 130
Terbutylazine	<0.097		1.96	2.29		ug/L		117	70 - 130
Thiobencarb	<0.19		1.96	2.18		ug/L		111	70 - 130
trans-Nonachlor	<0.049		1.96	2.45		ug/L		125	70 - 130
Trifluralin	<0.097		1.96	2.23		ug/L		114	70 - 130
1-Methylnaphthalene	<0.097		1.96	1.89		ug/L		96	70 - 130
2-Methylnaphthalene	<0.097		1.96	1.91		ug/L		97	70 - 130

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	91		70 - 130
Perylene-d12	99		70 - 130
Triphenylphosphate	129		70 - 130

Lab Sample ID: 380-65250-V-1-A DU

Matrix: Water

Analysis Batch: 58154

Client Sample ID: Duplicate

Prep Type: Total/NA

Prep Batch: 57966

Analyte	Sample	Sample Qualifier	DU	DU	Unit	D	RPD	RPD Limit
	Result		Result	Qualifier				
2,4'-DDD	<0.10		<0.097		ug/L		NC	20
2,4'-DDE	<0.10		<0.097		ug/L		NC	20

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QC Sample Results

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

Job ID: 380-65252-1

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

Lab Sample ID: 380-65250-V-1-A DU
Matrix: Water
Analysis Batch: 58154

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 57966

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
2,4'-DDT	<0.10		<0.097		ug/L		NC	20
2,4-Dinitrotoluene	<0.10		<0.097		ug/L		NC	20
2,6-Dinitrotoluene	<0.10		<0.097		ug/L		NC	20
4,4'-DDD	<0.10		<0.097		ug/L		NC	20
4,4'-DDE	<0.10		<0.097		ug/L		NC	20
4,4'-DDT	<0.10		<0.097		ug/L		NC	20
Acenaphthene	<0.10		<0.097		ug/L		NC	20
Acenaphthylene	<0.10		<0.097		ug/L		NC	20
Acetochlor	<0.10		<0.097		ug/L		NC	20
Alachlor	<0.050		<0.049		ug/L		NC	20
alpha-BHC	<0.10		<0.097		ug/L		NC	20
alpha-Chlordane	<0.050		<0.049		ug/L		NC	20
Anthracene	<0.020		<0.019		ug/L		NC	20
Atrazine	<0.050		<0.049		ug/L		NC	20
Benz(a)anthracene	<0.050		<0.049		ug/L		NC	20
Benzo[a]pyrene	<0.020		<0.019		ug/L		NC	20
Benzo[b]fluoranthene	<0.020		<0.019		ug/L		NC	20
Benzo[g,h,i]perylene	<0.050		<0.049		ug/L		NC	20
Benzo[k]fluoranthene	<0.020		<0.019		ug/L		NC	20
beta-BHC	<0.10		<0.097		ug/L		NC	20
Bis(2-ethylhexyl) phthalate	<0.60		<0.58		ug/L		NC	20
Bromacil	<0.10		<0.097		ug/L		NC	20
Butachlor	<0.050		<0.049		ug/L		NC	20
Butylbenzylphthalate	<0.50		<0.49		ug/L		NC	20
Chlorobenzilate	<0.10		<0.097		ug/L		NC	20
Chloroneb	<0.10		<0.097		ug/L		NC	20
Chlorothalonil (Draconil, Bravo)	<0.10		<0.097		ug/L		NC	20
Chlorpyrifos	<0.050		<0.049		ug/L		NC	20
Chrysene	<0.020		<0.019		ug/L		NC	20
delta-BHC	<0.10		<0.097		ug/L		NC	20
Di(2-ethylhexyl)adipate	<0.60		<0.58		ug/L		NC	20
Dibenz(a,h)anthracene	<0.050		<0.049		ug/L		NC	20
Diclorvos (DDVP)	<0.050	^3+	<0.049		ug/L		NC	20
Dieldrin	<0.20		<0.19		ug/L		NC	20
Diethylphthalate	<0.50		<0.49		ug/L		NC	20
Dimethylphthalate	<0.50		<0.49		ug/L		NC	20
Di-n-butyl phthalate	<1.0		<0.97		ug/L		NC	20
Di-n-octyl phthalate	<0.10		<0.097		ug/L		NC	20
Endosulfan I (Alpha)	<0.10		<0.097		ug/L		NC	20
Endosulfan II (Beta)	<0.10		<0.097		ug/L		NC	20
Endosulfan sulfate	<0.10		<0.097		ug/L		NC	20
Endrin	<0.10		<0.097		ug/L		NC	20
Endrin aldehyde	<0.10		<0.097		ug/L		NC	20
EPTC	<0.10		<0.097		ug/L		NC	20
Fluoranthene	<0.10		<0.097		ug/L		NC	20
Fluorene	<0.050		<0.049		ug/L		NC	20
gamma-BHC (Lindane)	<0.040		<0.039		ug/L		NC	20
gamma-Chlordane	<0.050		<0.049		ug/L		NC	20
Heptachlor	<0.040		<0.039		ug/L		NC	20

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QC Sample Results

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

Job ID: 380-65252-1

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

Lab Sample ID: 380-65250-V-1-A DU
Matrix: Water
Analysis Batch: 58154

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 57966

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Heptachlor epoxide (isomer B)	<0.050		<0.049		ug/L		NC	20
Hexachlorobenzene	<0.050		<0.049		ug/L		NC	20
Hexachlorocyclopentadiene	<0.050		<0.049		ug/L		NC	20
Indeno[1,2,3-cd]pyrene	<0.050		<0.049		ug/L		NC	20
Isophorone	<0.50		<0.49		ug/L		NC	20
Malathion	<0.10		<0.097		ug/L		NC	20
Methoxychlor	<0.10		<0.097		ug/L		NC	20
Metolachlor	<0.050		<0.049		ug/L		NC	20
Molinate	<0.10		<0.097		ug/L		NC	20
Naphthalene	<0.30		<0.29		ug/L		NC	20
Parathion	<0.10		<0.097		ug/L		NC	20
Pendimethalin (Penoxaline)	<0.10		<0.097		ug/L		NC	20
Phenanthrene	<0.040		<0.039		ug/L		NC	20
Propachlor	<0.050		<0.049		ug/L		NC	20
Pyrene	<0.050		<0.049		ug/L		NC	20
Simazine	<0.050		<0.049		ug/L		NC	20
Terbacil	<0.10		<0.097		ug/L		NC	20
Terbutylazine	<0.10		<0.097		ug/L		NC	20
Thiobencarb	<0.20		<0.19		ug/L		NC	20
Total Permethrin (mixed isomers)	<0.20		<0.19		ug/L		NC	20
trans-Nonachlor	<0.050		<0.049		ug/L		NC	20
Trifluralin	<0.10		<0.097		ug/L		NC	20
1-Methylnaphthalene	<0.10		<0.097		ug/L		NC	20
2-Methylnaphthalene	<0.10		<0.097		ug/L		NC	20

Surrogate	DU	DU	Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	91		70 - 130
Perylene-d12	98		70 - 130
Triphenylphosphate	135	S1+	70 - 130

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

Lab Sample ID: MBL 380-58189/13-A
Matrix: Water
Analysis Batch: 58395

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58189

Analyte	MBL	MBL	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
1,2,3-Trichloropropane	<0.0040		0.020	ug/L		10/06/23 11:50	10/06/23 15:56	1
1,2-Dibromo-3-Chloropropane	<0.0020		0.010	ug/L		10/06/23 11:50	10/06/23 15:56	1
1,2-Dibromoethane	<0.0040		0.010	ug/L		10/06/23 11:50	10/06/23 15:56	1

Surrogate	MBL	MBL	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dibromopropane (Surr)	86		60 - 140	10/06/23 11:50	10/06/23 15:56	1

QC Sample Results

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

Job ID: 380-65252-1

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

Lab Sample ID: LCS 380-58189/38-A
Matrix: Water
Analysis Batch: 58395

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58189

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3-Trichloropropane	0.200	0.213		ug/L		107	70 - 130
1,2-Dibromo-3-Chloropropane	0.200	0.180		ug/L		90	70 - 130
1,2-Dibromoethane	0.200	0.197		ug/L		99	70 - 130
Surrogate	%Recovery	LCS Qualifier	Limits				
1,2-Dibromopropane (Surr)	85		60 - 140				

Lab Sample ID: MRL 380-58189/11-A
Matrix: Water
Analysis Batch: 58395

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58189

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3-Trichloropropane	0.0200	0.0183	J	ug/L		92	60 - 140
Surrogate	%Recovery	MRL Qualifier	Limits				
1,2-Dibromopropane (Surr)	91		60 - 140				

Lab Sample ID: MRL 380-58189/12-A
Matrix: Water
Analysis Batch: 58395

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58189

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3-Trichloropropane	0.0500	0.0483		ug/L		97	60 - 140
1,2-Dibromo-3-Chloropropane	0.0100	0.0103		ug/L		103	60 - 140
1,2-Dibromoethane	0.0100	0.00911	J	ug/L		91	60 - 140
Surrogate	%Recovery	MRL Qualifier	Limits				
1,2-Dibromopropane (Surr)	84		60 - 140				

Lab Sample ID: 380-65332-H-1-A MS
Matrix: Water
Analysis Batch: 58395

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 58189

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3-Trichloropropane	<0.020		1.27	1.24		ug/L		98	65 - 135
1,2-Dibromo-3-Chloropropane	<0.010		0.254	0.236		ug/L		93	65 - 135
1,2-Dibromoethane	<0.010		0.254	0.239		ug/L		94	65 - 135
Surrogate	%Recovery	MS Qualifier	Limits						
1,2-Dibromopropane (Surr)	86		60 - 140						

Lab Sample ID: 380-65337-I-1-A DU
Matrix: Water
Analysis Batch: 58395

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 58189

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
1,2,3-Trichloropropane	<0.020		<0.020		ug/L		NC	20

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QC Sample Results

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

Job ID: 380-65252-1

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

Lab Sample ID: 380-65337-I-1-A DU
Matrix: Water
Analysis Batch: 58395

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 58189

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
1,2-Dibromo-3-Chloropropane	<0.010		<0.010		ug/L		NC	20
1,2-Dibromoethane	<0.010		<0.010		ug/L		NC	20

Surrogate	DU	DU	Limits
	%Recovery	Qualifier	
1,2-Dibromopropane (Surr)	89		60 - 140

Method: 505 - Organochlorine Pesticides/PCBs (GC)

Lab Sample ID: MB 380-58057/4-A
Matrix: Water
Analysis Batch: 58390

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58057

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Aldrin	<0.010		0.010	ug/L		10/05/23 11:51	10/06/23 01:16	1
Dieldrin	<0.010		0.010	ug/L		10/05/23 11:51	10/06/23 01:16	1
Toxaphene	<0.50		0.50	ug/L		10/05/23 11:51	10/06/23 01:16	1
Alachlor	<0.10		0.10	ug/L		10/05/23 11:51	10/06/23 01:16	1
Chlordane (n.o.s.)	<0.10		0.10	ug/L		10/05/23 11:51	10/06/23 01:16	1
Endrin	<0.010		0.010	ug/L		10/05/23 11:51	10/06/23 01:16	1
Heptachlor	<0.010		0.010	ug/L		10/05/23 11:51	10/06/23 01:16	1
Heptachlor epoxide	<0.010		0.010	ug/L		10/05/23 11:51	10/06/23 01:16	1
gamma-BHC (Lindane)	<0.010		0.010	ug/L		10/05/23 11:51	10/06/23 01:16	1
Methoxychlor	<0.050		0.050	ug/L		10/05/23 11:51	10/06/23 01:16	1
PCB-1016	<0.070		0.070	ug/L		10/05/23 11:51	10/06/23 01:16	1
PCB-1221	<0.10		0.10	ug/L		10/05/23 11:51	10/06/23 01:16	1
PCB-1232	<0.10		0.10	ug/L		10/05/23 11:51	10/06/23 01:16	1
PCB-1242	<0.10		0.10	ug/L		10/05/23 11:51	10/06/23 01:16	1
PCB-1248	<0.10		0.10	ug/L		10/05/23 11:51	10/06/23 01:16	1
PCB-1254	<0.10		0.10	ug/L		10/05/23 11:51	10/06/23 01:16	1
PCB-1260	<0.070		0.070	ug/L		10/05/23 11:51	10/06/23 01:16	1
Polychlorinated biphenyls, Total	<0.10		0.10	ug/L		10/05/23 11:51	10/06/23 01:16	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Tetrachloro-m-xylene	90		70 - 130	10/05/23 11:51	10/06/23 01:16	1

Lab Sample ID: MRL 380-58057/2-A
Matrix: Water
Analysis Batch: 58390

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58057

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Dieldrin	0.0100	0.0125		ug/L		125	50 - 150
Alachlor	0.100	0.0979	J	ug/L		98	50 - 150
Endrin	0.0100	0.00954	J	ug/L		95	50 - 150
Heptachlor	0.0100	0.00740	J	ug/L		74	50 - 150
Heptachlor epoxide	0.0100	0.0131		ug/L		131	50 - 150
gamma-BHC (Lindane)	0.0100	0.00993	J	ug/L		99	50 - 150
Methoxychlor	0.0500	0.0443	J	ug/L		89	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-65252-1

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

Lab Sample ID: MRL 380-58057/2-A
Matrix: Water
Analysis Batch: 58390

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58057

Surrogate	%Recovery	MRL Qualifier	MRL Limits
Tetrachloro-m-xylene	99		70 - 130

Lab Sample ID: MRL 380-58057/3-A
Matrix: Water
Analysis Batch: 58390

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58057

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Chlordane (n.o.s.)	0.100	0.0965	J	ug/L		96	50 - 150

Surrogate	%Recovery	MRL Qualifier	MRL Limits
Tetrachloro-m-xylene	90		70 - 130

Lab Sample ID: 380-65151-C-1-A MS
Matrix: Water
Analysis Batch: 58390

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 58057

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Aldrin	<0.010		0.0204	0.0197		ug/L		96	65 - 135
Dieldrin	<0.010		0.0204	0.0217		ug/L		106	65 - 135
Alachlor	<0.10		0.204	0.215		ug/L		105	65 - 135
Endrin	<0.010		0.0204	0.0203		ug/L		99	65 - 135
Heptachlor	<0.010		0.0204	0.0186		ug/L		91	65 - 135
Heptachlor epoxide	<0.010		0.0204	0.0216		ug/L		106	65 - 135
gamma-BHC (Lindane)	<0.010		0.0204	0.0198		ug/L		97	65 - 135
Methoxychlor	<0.051		0.102	0.104		ug/L		102	65 - 135

Surrogate	%Recovery	MS Qualifier	MS Limits
Tetrachloro-m-xylene	99		70 - 130

Lab Sample ID: 380-65151-D-1-A MS
Matrix: Water
Analysis Batch: 58390

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 58057

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chlordane (n.o.s.)	<0.10		0.507	0.485		ug/L		96	65 - 135

Surrogate	%Recovery	MS Qualifier	MS Limits
Tetrachloro-m-xylene	74		70 - 130

Lab Sample ID: 380-64160-CU-1-A MS
Matrix: Water
Analysis Batch: 58390

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 58057

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Aldrin	<0.0099		0.102	0.106		ug/L		104	65 - 135
Dieldrin	<0.0099		0.102	0.101		ug/L		99	65 - 135
Alachlor	<0.099		1.02	1.01		ug/L		99	65 - 135
Endrin	<0.0099		0.102	0.0901		ug/L		89	65 - 135

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-65252-1

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

Lab Sample ID: 380-64160-CU-1-A MS
Matrix: Water
Analysis Batch: 58390

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 58057

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec
	Result	Qualifier	Added	Result	Qualifier				
Heptachlor	<0.0099		0.102	0.0965		ug/L		95	65 - 135
Heptachlor epoxide	<0.0099		0.102	0.102		ug/L		100	65 - 135
gamma-BHC (Lindane)	<0.0099		0.102	0.0991		ug/L		97	65 - 135
Methoxychlor	<0.050		0.509	0.444		ug/L		87	65 - 135
		MS	MS						
Surrogate	%Recovery	Qualifier	Limits						
<i>Tetrachloro-m-xylene</i>	93		70 - 130						

Lab Sample ID: 380-64160-CV-1-A MS
Matrix: Water
Analysis Batch: 58390

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 58057

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec
	Result	Qualifier	Added	Result	Qualifier				
Chlordane (n.o.s.)	<0.099		0.497	0.489		ug/L		98	65 - 135
		MS	MS						
Surrogate	%Recovery	Qualifier	Limits						
<i>Tetrachloro-m-xylene</i>	96		70 - 130						

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 380-57889/76
Matrix: Water
Analysis Batch: 57889

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

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil	Fac
	Result	Qualifier							
Chloride	<0.50		0.50	mg/L			10/04/23 11:00		1
Sulfate	<0.25		0.25	mg/L			10/04/23 11:00		1

Lab Sample ID: LCS 380-57889/79
Matrix: Water
Analysis Batch: 57889

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

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec
Chloride	25.0	25.2		mg/L		101	90 - 110
Sulfate	50.0	50.9		mg/L		102	90 - 110

Lab Sample ID: LCSD 380-57889/80
Matrix: Water
Analysis Batch: 57889

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

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec	RPD	RPD
Chloride	25.0	25.0		mg/L		100	90 - 110	1	20
Sulfate	50.0	50.6		mg/L		101	90 - 110	1	20

QC Sample Results

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

Job ID: 380-65252-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MRL 380-57889/77
Matrix: Water
Analysis Batch: 57889

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	0.112	J	mg/L		90	50 - 150
Sulfate	0.250	0.193	J	mg/L		77	50 - 150

Lab Sample ID: MRL 380-57889/78
Matrix: Water
Analysis Batch: 57889

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	0.446	J	mg/L		89	50 - 150
Sulfate	1.00	0.766		mg/L		77	50 - 150

Lab Sample ID: 380-65245-A-1 MS
Matrix: Water
Analysis Batch: 57889

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	11		12.5	24.7		mg/L		110	80 - 120
Sulfate	23		25.0	49.7		mg/L		106	80 - 120

Lab Sample ID: 380-65245-A-1 MSD
Matrix: Water
Analysis Batch: 57889

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Chloride	11		12.5	24.8		mg/L		112	80 - 120	1	20
Sulfate	23		25.0	50.0		mg/L		107	80 - 120	1	20

Lab Sample ID: MB 380-57956/54
Matrix: Water
Analysis Batch: 57956

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	<0.050		0.050	mg/L			10/04/23 06:38	1
Nitrite as N	<0.050		0.050	mg/L			10/04/23 06:38	1

Lab Sample ID: LCS 380-57956/57
Matrix: Water
Analysis Batch: 57956

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	2.56		mg/L		102	90 - 110
Nitrite as N	1.00	1.03		mg/L		103	90 - 110

Lab Sample ID: LCSD 380-57956/58
Matrix: Water
Analysis Batch: 57956

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Nitrate as N	2.50	2.56		mg/L		102	90 - 110	0	20
Nitrite as N	1.00	1.04		mg/L		104	90 - 110	1	20

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-65252-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MRL 380-57956/55
Matrix: Water
Analysis Batch: 57956

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	0.00990	J	mg/L		79	50 - 150
Nitrite as N	0.0125	0.0103	J	mg/L		83	50 - 150

Lab Sample ID: MRL 380-57956/56
Matrix: Water
Analysis Batch: 57956

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	0.0466	J	mg/L		93	50 - 150
Nitrite as N	0.0500	0.0427	J	mg/L		85	50 - 150

Lab Sample ID: 380-65228-A-4 MS
Matrix: Water
Analysis Batch: 57956

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	0.92		2.50	3.52		mg/L		104	80 - 120
Nitrite as N	<0.10		1.00	1.00		mg/L		100	80 - 120

Lab Sample ID: 380-65228-A-4 MSD
Matrix: Water
Analysis Batch: 57956

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate as N	0.92		2.50	3.50		mg/L		103	80 - 120	1	20
Nitrite as N	<0.10		1.00	0.992		mg/L		99	80 - 120	1	20

Lab Sample ID: MB 380-57957/54
Matrix: Water
Analysis Batch: 57957

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			10/04/23 06:38	1
Sulfate	<0.25		0.25	mg/L			10/04/23 06:38	1

Lab Sample ID: LCS 380-57957/57
Matrix: Water
Analysis Batch: 57957

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	25.0	26.5		mg/L		106	90 - 110
Sulfate	50.0	52.5		mg/L		105	90 - 110

Lab Sample ID: LCSD 380-57957/58
Matrix: Water
Analysis Batch: 57957

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	25.0	26.6		mg/L		106	90 - 110	0	20
Sulfate	50.0	52.4		mg/L		105	90 - 110	0	20

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-65252-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MRL 380-57957/55
Matrix: Water
Analysis Batch: 57957

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	0.130	J	mg/L		104	50 - 150
Sulfate	0.250	0.243	J	mg/L		97	50 - 150

Lab Sample ID: MRL 380-57957/56
Matrix: Water
Analysis Batch: 57957

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	0.434	J	mg/L		87	50 - 150
Sulfate	1.00	0.948		mg/L		95	50 - 150

Lab Sample ID: 380-65228-A-4 MS
Matrix: Water
Analysis Batch: 57957

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	53		25.0	78.2		mg/L		103	80 - 120
Sulfate	100		50.0	155		mg/L		105	80 - 120

Lab Sample ID: 380-65228-A-4 MSD
Matrix: Water
Analysis Batch: 57957

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	53		25.0	78.0		mg/L		102	80 - 120	0	20
Sulfate	100		50.0	154		mg/L		104	80 - 120	0	20

Lab Sample ID: MB 380-58028/40
Matrix: Water
Analysis Batch: 58028

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			10/05/23 04:19	1
Sulfate	<0.25		0.25	mg/L			10/05/23 04:19	1

Lab Sample ID: LCS 380-58028/43
Matrix: Water
Analysis Batch: 58028

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	25.4		mg/L		101	90 - 110
Sulfate	50.0	50.9		mg/L		102	90 - 110

Lab Sample ID: LCSD 380-58028/44
Matrix: Water
Analysis Batch: 58028

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	25.4		mg/L		101	90 - 110	0	20
Sulfate	50.0	51.0		mg/L		102	90 - 110	0	20

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-65252-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MRL 380-58028/41
Matrix: Water
Analysis Batch: 58028

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	0.117	J	mg/L		94	50 - 150
Sulfate	0.250	0.191	J	mg/L		77	50 - 150

Lab Sample ID: MRL 380-58028/42
Matrix: Water
Analysis Batch: 58028

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	0.418	J	mg/L		84	50 - 150
Sulfate	1.00	0.761		mg/L		76	50 - 150

Lab Sample ID: 380-65443-F-2 MS
Matrix: Water
Analysis Batch: 58028

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	25		12.5	35.3		mg/L		83	80 - 120
Sulfate	31		25.0	57.6		mg/L		106	80 - 120

Lab Sample ID: 380-65443-F-2 MSD
Matrix: Water
Analysis Batch: 58028

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	25		12.5	35.4		mg/L		83	80 - 120	0	20
Sulfate	31		25.0	57.7		mg/L		107	80 - 120	0	20

Lab Sample ID: MB 380-58029/40
Matrix: Water
Analysis Batch: 58029

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	<0.050		0.050	mg/L			10/05/23 04:19	1
Nitrite as N	<0.050		0.050	mg/L			10/05/23 04:19	1

Lab Sample ID: LCS 380-58029/43
Matrix: Water
Analysis Batch: 58029

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	2.48		mg/L		99	90 - 110
Nitrite as N	1.00	0.987		mg/L		99	90 - 110

Lab Sample ID: LCSD 380-58029/44
Matrix: Water
Analysis Batch: 58029

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	2.48		mg/L		99	90 - 110	0	20
Nitrite as N	1.00	0.987		mg/L		99	90 - 110	0	20

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-65252-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MRL 380-58029/41
Matrix: Water
Analysis Batch: 58029

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	0.00838	J	mg/L		67	50 - 150
Nitrite as N	0.0125	0.00687	J	mg/L		55	50 - 150

Lab Sample ID: MRL 380-58029/42
Matrix: Water
Analysis Batch: 58029

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	0.0389	J	mg/L		78	50 - 150
Nitrite as N	0.0500	0.0376	J	mg/L		75	50 - 150

Lab Sample ID: 380-65443-F-2 MS
Matrix: Water
Analysis Batch: 58029

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	1.3		1.25	2.45		mg/L		96	80 - 120
Nitrite as N	<0.050		0.500	0.453		mg/L		91	80 - 120

Lab Sample ID: 380-65443-F-2 MSD
Matrix: Water
Analysis Batch: 58029

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Nitrate as N	1.3		1.25	2.46		mg/L		96	80 - 120	0	20
Nitrite as N	<0.050		0.500	0.453		mg/L		91	80 - 120	0	20

Lab Sample ID: MB 380-58149/6
Matrix: Water
Analysis Batch: 58149

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			10/05/23 15:28	1

Lab Sample ID: LCS 380-58149/7
Matrix: Water
Analysis Batch: 58149

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

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

Lab Sample ID: LCSD 380-58149/8
Matrix: Water
Analysis Batch: 58149

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Bromide	100	101		ug/L		101	90 - 110	1	10

QC Sample Results

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

Job ID: 380-65252-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MRL 380-58149/5
Matrix: Water
Analysis Batch: 58149

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: 380-65383-A-2 MS
Matrix: Water
Analysis Batch: 58149

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	50.1		ug/L		100	80 - 120

Lab Sample ID: 380-65383-A-2 MSD
Matrix: Water
Analysis Batch: 58149

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	49.7		ug/L		99	80 - 120	1	20

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 380-58925/137
Matrix: Water
Analysis Batch: 58925

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			10/10/23 22:04	1
Magnesium	<0.10		0.10	mg/L			10/10/23 22:04	1
Potassium	<1.0		1.0	mg/L			10/10/23 22:04	1
Sodium	<1.0		1.0	mg/L			10/10/23 22:04	1

Lab Sample ID: LCS 380-58925/139
Matrix: Water
Analysis Batch: 58925

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	54.6		mg/L		109	85 - 115
Magnesium	20.0	21.3		mg/L		107	85 - 115
Potassium	20.0	22.3		mg/L		111	85 - 115
Sodium	50.0	53.7		mg/L		107	85 - 115

Lab Sample ID: LCSD 380-58925/140
Matrix: Water
Analysis Batch: 58925

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	54.8		mg/L		110	85 - 115	0	20
Magnesium	20.0	21.4		mg/L		107	85 - 115	1	20
Potassium	20.0	22.4		mg/L		112	85 - 115	1	20
Sodium	50.0	53.8		mg/L		108	85 - 115	0	20

QC Sample Results

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

Job ID: 380-65252-1

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

Lab Sample ID: LLCS 380-58925/138
Matrix: Water
Analysis Batch: 58925

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	1.06		mg/L		106	50 - 150
Magnesium	0.100	0.0956	J	mg/L		96	50 - 150
Potassium	1.00	0.713	J	mg/L		71	50 - 150
Sodium	1.00	1.15		mg/L		115	50 - 150

Lab Sample ID: 380-65219-A-2 MS
Matrix: Water
Analysis Batch: 58925

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	23		50.0	71.0		mg/L		97	70 - 130
Magnesium	6.9		20.0	26.3		mg/L		97	70 - 130
Potassium	1.4		20.0	23.1		mg/L		108	70 - 130
Sodium	53		50.0	97.5		mg/L		90	70 - 130

Lab Sample ID: 380-65219-A-2 MSD
Matrix: Water
Analysis Batch: 58925

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	23		50.0	72.0		mg/L		99	70 - 130	1	20
Magnesium	6.9		20.0	26.6		mg/L		99	70 - 130	1	20
Potassium	1.4		20.0	23.4		mg/L		110	70 - 130	1	20
Sodium	53		50.0	97.5		mg/L		90	70 - 130	0	20

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 380-58068/1-A
Matrix: Water
Analysis Batch: 58427

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 58068

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		1.0	ug/L		10/05/23 10:00	10/07/23 13:44	1
Arsenic	<1.0		1.0	ug/L		10/05/23 10:00	10/07/23 13:44	1
Beryllium	<1.0		1.0	ug/L		10/05/23 10:00	10/07/23 13:44	1
Cadmium	<0.50		0.50	ug/L		10/05/23 10:00	10/07/23 13:44	1
Chromium	<1.0		1.0	ug/L		10/05/23 10:00	10/07/23 13:44	1
Copper	<2.0		2.0	ug/L		10/05/23 10:00	10/07/23 13:44	1
Lead	<0.50		0.50	ug/L		10/05/23 10:00	10/07/23 13:44	1
Nickel	<5.0		5.0	ug/L		10/05/23 10:00	10/07/23 13:44	1
Selenium	<5.0		5.0	ug/L		10/05/23 10:00	10/07/23 13:44	1
Silver	<0.50		0.50	ug/L		10/05/23 10:00	10/07/23 13:44	1
Thallium	<1.0		1.0	ug/L		10/05/23 10:00	10/07/23 13:44	1
Zinc	<20		20	ug/L		10/05/23 10:00	10/07/23 13:44	1

QC Sample Results

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

Job ID: 380-65252-1

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

Lab Sample ID: LCS 380-58068/3-A
Matrix: Water
Analysis Batch: 58427

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 58068

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	50.0	50.0		ug/L		100	85 - 115
Arsenic	50.0	54.0		ug/L		108	85 - 115
Beryllium	25.0	25.1		ug/L		100	85 - 115
Cadmium	25.0	25.1		ug/L		100	85 - 115
Chromium	50.0	49.3		ug/L		99	85 - 115
Copper	50.0	51.7		ug/L		103	85 - 115
Lead	50.0	51.4		ug/L		103	85 - 115
Nickel	50.0	51.6		ug/L		103	85 - 115
Selenium	50.0	51.5		ug/L		103	85 - 115
Silver	25.0	22.2		ug/L		89	85 - 115
Thallium	50.0	51.3		ug/L		103	85 - 115
Zinc	50.0	51.5		ug/L		103	85 - 115

Lab Sample ID: LCSD 380-58068/4-A
Matrix: Water
Analysis Batch: 58427

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 58068

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	50.0	48.1		ug/L		96	85 - 115	4	20
Arsenic	50.0	54.2		ug/L		108	85 - 115	0	20
Beryllium	25.0	24.8		ug/L		99	85 - 115	1	20
Cadmium	25.0	24.5		ug/L		98	85 - 115	2	20
Chromium	50.0	50.3		ug/L		101	85 - 115	2	20
Copper	50.0	52.2		ug/L		104	85 - 115	1	20
Lead	50.0	51.1		ug/L		102	85 - 115	1	20
Nickel	50.0	51.7		ug/L		103	85 - 115	0	20
Selenium	50.0	52.2		ug/L		104	85 - 115	1	20
Silver	25.0	21.9		ug/L		88	85 - 115	1	20
Thallium	50.0	50.5		ug/L		101	85 - 115	2	20
Zinc	50.0	54.0		ug/L		108	85 - 115	5	20

Lab Sample ID: LLCS 380-58068/2-A
Matrix: Water
Analysis Batch: 58427

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 58068

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	1.00	1.02		ug/L		102	50 - 150
Arsenic	1.00	1.08		ug/L		108	50 - 150
Beryllium	1.00	1.09		ug/L		109	50 - 150
Cadmium	0.500	0.513		ug/L		103	50 - 150
Chromium	1.00	0.900	J	ug/L		90	50 - 150
Copper	2.00	2.10		ug/L		105	50 - 150
Lead	0.500	0.510		ug/L		102	50 - 150
Nickel	5.00	5.14		ug/L		103	50 - 150
Selenium	5.00	5.30		ug/L		106	50 - 150
Silver	0.500	0.464	J	ug/L		93	50 - 150
Thallium	1.00	0.960	J	ug/L		96	50 - 150
Zinc	20.0	21.9		ug/L		110	50 - 150

QC Sample Results

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

Job ID: 380-65252-1

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

Lab Sample ID: 380-65252-1 MS
Matrix: Drinking Water
Analysis Batch: 58427

Client Sample ID: MOANALUA WELLS (331-223-TP202)
Prep Type: Total Recoverable
Prep Batch: 58068

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	<1.0		50.0	49.0		ug/L		98	70 - 130
Arsenic	<1.0		50.0	53.0		ug/L		106	70 - 130
Beryllium	<1.0		25.0	25.7		ug/L		103	70 - 130
Cadmium	<0.50		25.0	23.7		ug/L		95	70 - 130
Chromium	2.1		50.0	48.8		ug/L		93	70 - 130
Copper	6.4		50.0	52.7		ug/L		93	70 - 130
Lead	<0.50		50.0	47.5		ug/L		95	70 - 130
Nickel	<5.0		50.0	46.9		ug/L		94	70 - 130
Selenium	<5.0		50.0	49.4		ug/L		99	70 - 130
Silver	<0.50	^2	25.0	21.0		ug/L		83	70 - 130
Thallium	<1.0		50.0	47.5		ug/L		95	70 - 130
Zinc	<20		50.0	48.0		ug/L		96	70 - 130

Lab Sample ID: 380-65252-1 MSD
Matrix: Drinking Water
Analysis Batch: 58427

Client Sample ID: MOANALUA WELLS (331-223-TP202)
Prep Type: Total Recoverable
Prep Batch: 58068

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	<1.0		50.0	49.7		ug/L		99	70 - 130	1	20
Arsenic	<1.0		50.0	53.8		ug/L		108	70 - 130	2	20
Beryllium	<1.0		25.0	26.1		ug/L		105	70 - 130	2	20
Cadmium	<0.50		25.0	24.3		ug/L		97	70 - 130	2	20
Chromium	2.1		50.0	50.4		ug/L		96	70 - 130	3	20
Copper	6.4		50.0	55.0		ug/L		97	70 - 130	4	20
Lead	<0.50		50.0	47.1		ug/L		94	70 - 130	1	20
Nickel	<5.0		50.0	47.8		ug/L		96	70 - 130	2	20
Selenium	<5.0		50.0	50.0		ug/L		100	70 - 130	1	20
Silver	<0.50	^2	25.0	21.8		ug/L		86	70 - 130	4	20
Thallium	<1.0		50.0	46.9		ug/L		94	70 - 130	1	20
Zinc	<20		50.0	49.0		ug/L		98	70 - 130	2	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 810-76203/1-A
Matrix: Water
Analysis Batch: 76233

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 76203

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.10		0.10	ug/L		10/09/23 13:26	10/09/23 20:54	1

Lab Sample ID: LCS 810-76203/3-A
Matrix: Water
Analysis Batch: 76233

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 76203

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	1.00	0.999		ug/L		100	85 - 115

QC Sample Results

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

Job ID: 380-65252-1

Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: 380-65739-C-1-B MS
Matrix: Water
Analysis Batch: 76233

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 76203

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	<0.10		1.00	1.03		ug/L		103	70 - 130

Lab Sample ID: 380-65739-C-1-C MSD
Matrix: Water
Analysis Batch: 76233

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 76203

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Mercury	<0.10		1.00	1.02		ug/L		102	70 - 130	1	20

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 380-58461/1
Matrix: Water
Analysis Batch: 58461

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			10/06/23 15:02	1
Bicarbonate Alkalinity as CaCO3	<2.0		2.0	mg/L			10/06/23 15:02	1
Carbonate Alkalinity as CaCO3	<2.0		2.0	mg/L			10/06/23 15:02	1

Lab Sample ID: LCS 380-58461/3
Matrix: Water
Analysis Batch: 58461

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

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

Lab Sample ID: LCSD 380-58461/18
Matrix: Water
Analysis Batch: 58461

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Alkalinity	100	97.2		mg/L		97	90 - 110	0	20

Lab Sample ID: LLCS 380-58461/4
Matrix: Water
Analysis Batch: 58461

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

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	20.0	19.3		mg/L		97	90 - 110

Lab Sample ID: MRL 380-58461/2
Matrix: Water
Analysis Batch: 58461

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	2.00	2.31		mg/L		116	50 - 150

QC Sample Results

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

Job ID: 380-65252-1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: 380-65226-X-4 MS
Matrix: Water
Analysis Batch: 58461

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
Alkalinity	270	F1	100	337	F1	mg/L		70	80 - 120

Lab Sample ID: 380-65226-X-4 MSD
Matrix: Water
Analysis Batch: 58461

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
Alkalinity	270	F1	100	330	F1	mg/L		63	80 - 120	2	20

Lab Sample ID: 380-65226-X-4 DU
Matrix: Water
Analysis Batch: 58461

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity	270	F1	267		mg/L		0.3	20
Bicarbonate Alkalinity as CaCO3	270		267		mg/L		0.3	20
Carbonate Alkalinity as CaCO3	<2.0		<2.0		mg/L		NC	20

Method: SM 2510B - Conductivity, Specific Conductance

Lab Sample ID: MB 380-58464/2
Matrix: Water
Analysis Batch: 58464

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			10/06/23 15:02	1

Lab Sample ID: LCS 380-58464/4
Matrix: Water
Analysis Batch: 58464

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

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

Lab Sample ID: LCSD 380-58464/16
Matrix: Water
Analysis Batch: 58464

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	999		umhos/cm		100	90 - 110	1	10

Lab Sample ID: MRL 380-58464/3
Matrix: Water
Analysis Batch: 58464

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	2.10		umhos/cm		105	50 - 150

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QC Sample Results

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

Job ID: 380-65252-1

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

Lab Sample ID: 380-65226-X-4 DU
 Matrix: Water
 Analysis Batch: 58464

Client Sample ID: Duplicate
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Specific Conductance	780		776		umhos/cm		0.09	20

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

Lab Sample ID: MB 380-57984/1
 Matrix: Water
 Analysis Batch: 57984

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			10/04/23 15:18	1

Lab Sample ID: HLCS 380-57984/5
 Matrix: Water
 Analysis Batch: 57984

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	702		mg/L		100	80 - 114

Lab Sample ID: LCS 380-57984/4
 Matrix: Water
 Analysis Batch: 57984

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	162		mg/L		93	80 - 114

Lab Sample ID: MRL 380-57984/2
 Matrix: Water
 Analysis Batch: 57984

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 380-57984/3
 Matrix: Water
 Analysis Batch: 57984

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	8.00	J	mg/L		80	50 - 150

Lab Sample ID: 380-65252-1 DU
 Matrix: Drinking Water
 Analysis Batch: 57984

Client Sample ID: MOANALUA WELLS (331-223-TP202)
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	290		286		mg/L		2	10

QC Sample Results

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

Job ID: 380-65252-1

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 380-58460/10
Matrix: Water
Analysis Batch: 58460

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			10/06/23 16:19	1

Lab Sample ID: MB 380-58460/44
Matrix: Water
Analysis Batch: 58460

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			10/06/23 18:55	1

Lab Sample ID: LCS 380-58460/46
Matrix: Water
Analysis Batch: 58460

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	0.917		mg/L		92	90 - 110

Lab Sample ID: LCSD 380-58460/47
Matrix: Water
Analysis Batch: 58460

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	0.908		mg/L		91	90 - 110	1	10

Lab Sample ID: MRL 380-58460/11
Matrix: Water
Analysis Batch: 58460

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	0.0471	J	mg/L		94	50 - 150

Lab Sample ID: MRL 380-58460/45
Matrix: Water
Analysis Batch: 58460

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	0.0454	J	mg/L		91	50 - 150

Lab Sample ID: 380-65392-O-1 MS
Matrix: Water
Analysis Batch: 58460

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	0.67		1.00	1.61		mg/L		94	80 - 120

Lab Sample ID: 380-65392-O-1 MSD
Matrix: Water
Analysis Batch: 58460

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	0.67		1.00	1.62		mg/L		95	80 - 120	1	20

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QC Sample Results

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

Job ID: 380-65252-1

Method: SM 4500 H+ B - pH

Lab Sample ID: MB 380-58466/4
 Matrix: Water
 Analysis Batch: 58466

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	5.8			SU			10/06/23 15:02	1

Lab Sample ID: LCS 380-58466/5
 Matrix: Water
 Analysis Batch: 58466

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 380-58466/17
 Matrix: Water
 Analysis Batch: 58466

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: 380-65226-X-4 DU
 Matrix: Water
 Analysis Batch: 58466

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		7.9		SU		0.9	2

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 380-58171/1
 Matrix: Water
 Analysis Batch: 58171

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			10/05/23 14:35	1

Lab Sample ID: LCS 380-58171/4
 Matrix: Water
 Analysis Batch: 58171

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	0.227		mg/L		91	90 - 110

Lab Sample ID: LCSD 380-58171/24
 Matrix: Water
 Analysis Batch: 58171

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	0.252		mg/L		101	90 - 110	10	20

QC Sample Results

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

Job ID: 380-65252-1

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

Lab Sample ID: MRL 380-58171/17
Matrix: Water
Analysis Batch: 58171

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	0.0450	J	mg/L		90	50 - 150

Lab Sample ID: MRL 380-58171/2
Matrix: Water
Analysis Batch: 58171

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	0.0440	J	mg/L		88	50 - 150

Lab Sample ID: 380-65252-1 MS
Matrix: Drinking Water
Analysis Batch: 58171

Client Sample ID: MOANALUA WELLS (331-223-TP202)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	<0.050	F1	0.250	0.176	F1	mg/L		70	80 - 120

Lab Sample ID: 380-65252-1 MSD
Matrix: Drinking Water
Analysis Batch: 58171

Client Sample ID: MOANALUA WELLS (331-223-TP202)
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	F1	0.250	0.181	F1	mg/L		72	80 - 120	3	20

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

Lab Sample ID: 111797-B1
Matrix: BlankMatrix
Analysis Batch: O-42134

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: O-42134_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
2,4,5-Trichlorophenol	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 18:39	1
2,4,6-Trichlorophenol	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 18:39	1
2,4-Dichlorophenol	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 18:39	1
2,4-Dinitrophenol	ND		0.2	0.1	µg/L		10/09/23 00:00	11/08/23 18:39	1
2,6-Dichlorophenol	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 18:39	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
2,6-Di-tert-butyl-4-methylphenol	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 18:39	1
2,6-Di-tert-butylphenol	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 18:39	1
2-Chloronaphthalene	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 18:39	1
2-Chlorophenol	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 18:39	1
2-Methyl-4,6-dinitrophenol	ND		0.2	0.1	µg/L		10/09/23 00:00	11/08/23 18:39	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
2-Methylphenol	ND		0.2	0.1	µg/L		10/09/23 00:00	11/08/23 18:39	1
2-Nitroaniline	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 18:39	1
2-Nitrophenol	ND		0.2	0.1	µg/L		10/09/23 00:00	11/08/23 18:39	1
3+4-Methylphenol	ND		0.2	0.1	µg/L		10/09/23 00:00	11/08/23 18:39	1
3-Nitroaniline	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 18:39	1

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QC Sample Results

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

Job ID: 380-65252-1

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

Lab Sample ID: 111797-B1
Matrix: BlankMatrix
Analysis Batch: O-42134

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: O-42134_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Bromophenylphenyl ether	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 18:39	1
4-Chloro-3-methylphenol	ND		0.2	0.1	µg/L		10/09/23 00:00	11/08/23 18:39	1
4-Chloroaniline	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 18:39	1
4-Chlorophenylphenyl ether	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 18:39	1
4-Nitroaniline	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 18:39	1
4-Nitrophenol	ND		0.2	0.1	µg/L		10/09/23 00:00	11/08/23 18:39	1
6-tert-butyl-2,4-dimethylphenol	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 18:39	1
Acenaphthene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Acenaphthylene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Aniline	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 18:39	1
Anthracene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Benzidine	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 18:39	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Benzoic Acid	ND		0.2	0.1	µg/L		10/09/23 00:00	11/08/23 18:39	1
Benzyl Alcohol	ND		0.2	0.1	µg/L		10/09/23 00:00	11/08/23 18:39	1
Biphenyl	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Bis(2-Chloroethoxy) methane	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 18:39	1
Bis(2-Chloroethyl) ether	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 18:39	1
Bis(2-Chloroisopropyl) ether	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 18:39	1
Chrysene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Dibenzo[a,i]pyrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Dibenzofuran	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 18:39	1
Dibenzothiophene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 18:39	1
Fluoranthene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Fluorene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Hexachloroethane	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 18:39	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Naphthalene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Nitrobenzene	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 18:39	1
N-Nitrosodi-n-propylamine	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 18:39	1
N-Nitrosodiphenylamine	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 18:39	1
Pentachlorophenol	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 18:39	1
Perylene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Phenanthrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Phenol	ND		0.2	0.1	µg/L		10/09/23 00:00	11/08/23 18:39	1
p-tert-Butylphenol	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 18:39	1
Pyrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1

Surrogate	Blank %Recovery	Blank Qualifier	Limits	Prepared	Analyzed	Dil Fac
(2,4,6-Tribromophenol)	63		30 - 130	10/09/23 00:00	11/08/23 18:39	1
(d10-Acenaphthene)	106		27 - 133	10/09/23 00:00	11/08/23 18:39	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-65252-1

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

Lab Sample ID: 111797-B1
Matrix: BlankMatrix
Analysis Batch: O-42134

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: O-42134_P

Surrogate	Blank Blank		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
(d10-Phenanthrene)	95		43 - 129	10/09/23 00:00	11/08/23 18:39	1
(d12-Chrysene)	93		52 - 144	10/09/23 00:00	11/08/23 18:39	1
(d12-Perylene)	85		36 - 161	10/09/23 00:00	11/08/23 18:39	1
(d5-Phenol)	109		0 - 130	10/09/23 00:00	11/08/23 18:39	1
(d8-Naphthalene)	106		25 - 125	10/09/23 00:00	11/08/23 18:39	1

Lab Sample ID: 111797-BS1
Matrix: BlankMatrix
Analysis Batch: O-42134

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-42134_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylphenanthrene	0.5	0.438		µg/L		88	66 - 127
2,3,5-Trimethylnaphthalene	0.5	0.47		µg/L		94	55 - 122
2,4,5-Trichlorophenol	1	0.704		µg/L		70	30 - 130
2,4,6-Trichlorophenol	1	0.654		µg/L		65	30 - 130
2,4-Dichlorophenol	1	0.867		µg/L		87	51 - 117
2,4-Dinitrophenol	1	0.0199		µg/L		2	0 - 152
2,6-Dichlorophenol	0.5	0.428		µg/L		86	30 - 130
2,6-Dimethylnaphthalene	0.5	0.471		µg/L		94	48 - 120
2,6-Di-tert-butyl-4-methylphenol	1	0.848		µg/L		85	50 - 150
2,6-Di-tert-butylphenol	1	0.858		µg/L		86	50 - 150
2-Chloronaphthalene	1	0.894		µg/L		89	53 - 130
2-Chlorophenol	1	0.861		µg/L		86	41 - 120
2-Methyl-4,6-dinitrophenol	1	0.759		µg/L		76	0 - 141
2-Methylnaphthalene	1.5	1.55		µg/L		103	47 - 130
2-Methylphenol	1	0.889		µg/L		89	40 - 117
2-Nitroaniline	1	0.982		µg/L		98	69 - 114
2-Nitrophenol	1	0.948		µg/L		95	40 - 117
3+4-Methylphenol	1	0.922		µg/L		92	0 - 130
3-Nitroaniline	1	0.79		µg/L		79	23 - 137
4-Bromophenylphenyl ether	1	0.826		µg/L		83	61 - 132
4-Chloro-3-methylphenol	1	0.989		µg/L		99	51 - 128
4-Chloroaniline	1	0.533		µg/L		53	50 - 150
4-Chlorophenylphenyl ether	1	0.855		µg/L		86	63 - 130
4-Nitroaniline	1	1.05		µg/L		105	10 - 159
4-Nitrophenol	2	2.19		µg/L		110	10 - 164
6-tert-butyl-2,4-dimethylphenol	1	0.952		µg/L		95	50 - 150
Acenaphthene	1.5	1.57		µg/L		105	53 - 131
Acenaphthylene	1.5	1.58		µg/L		105	43 - 140
Aniline	1	0.539		µg/L		54	50 - 150
Anthracene	1.5	1.4		µg/L		93	58 - 135
Benz[a]anthracene	1.5	1.57		µg/L		105	55 - 145
Benzidine	1	0.024		µg/L		2	0 - 125
Benzo[a]pyrene	1.5	1.32		µg/L		88	51 - 143
Benzo[b]fluoranthene	1.5	1.47		µg/L		98	46 - 165
Benzo[e]pyrene	0.5	0.434		µg/L		87	42 - 152
Benzo[g,h,i]perylene	1.5	1.38		µg/L		92	63 - 133

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-65252-1

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

Lab Sample ID: 111797-BS1
Matrix: BlankMatrix
Analysis Batch: O-42134

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-42134_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzo[k]fluoranthene	1.5	1.4		µg/L		93	56 - 145
Benzoic Acid	1	0.132		µg/L		13	2 - 145
Benzyl Alcohol	1	0.915		µg/L		92	43 - 148
Biphenyl	0.5	0.488		µg/L		98	56 - 119
Bis(2-Chloroethoxy) methane	1	1.03		µg/L		103	66 - 122
Bis(2-Chloroethyl) ether	1	0.934		µg/L		93	43 - 127
Bis(2-Chloroisopropyl) ether	1	1.04		µg/L		104	49 - 128
Chrysene	1.5	1.44		µg/L		96	56 - 141
Dibenz[a,h]anthracene	1.5	1.25		µg/L		83	55 - 150
Dibenzo[a,l]pyrene	0.5	0.701		µg/L		140	50 - 150
Dibenzofuran	1	1.05		µg/L		105	50 - 150
Dibenzothiophene	0.5	0.461		µg/L		92	46 - 126
Disalicylidenepropanediamine	10	7.01		µg/L		70	50 - 150
Fluoranthene	1.5	1.44		µg/L		96	60 - 146
Fluorene	1.5	1.5		µg/L		100	58 - 131
Hexachloroethane	1	0.695		µg/L		69	27 - 130
Indeno[1,2,3-cd]pyrene	1.5	1.21		µg/L		81	50 - 151
Naphthalene	1.5	1.55		µg/L		103	41 - 126
Nitrobenzene	1	0.876		µg/L		88	54 - 111
N-Nitrosodi-n-propylamine	1	0.908		µg/L		91	61 - 152
N-Nitrosodiphenylamine	1	0.881		µg/L		88	49 - 142
Pentachlorophenol	1	0.573		µg/L		57	36 - 111
Perylene	0.5	0.477		µg/L		95	48 - 141
Phenanthrene	1.5	1.44		µg/L		96	67 - 127
Phenol	1	0.868		µg/L		87	29 - 114
p-tert-Butylphenol	1	1.33		µg/L		133	50 - 150
Pyrene	1.5	1.44		µg/L		96	54 - 156

Surrogate	LCS %Recovery	LCS Qualifier	Limits
(2,4,6-Tribromophenol)	70		30 - 130
(d10-Acenaphthene)	102		27 - 133
(d10-Phenanthrene)	92		43 - 129
(d12-Chrysene)	95		52 - 144
(d12-Perylene)	100		36 - 161
(d5-Phenol)	114		0 - 130
(d8-Naphthalene)	102		25 - 125

Lab Sample ID: 111797-BS2
Matrix: BlankMatrix
Analysis Batch: O-42134

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: O-42134_P

Analyte	Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	0.5	0.486		µg/L		97	31 - 128	0	30
1-Methylphenanthrene	0.5	0.46		µg/L		92	66 - 127	4	30
2,3,5-Trimethylnaphthalene	0.5	0.485		µg/L		97	55 - 122	3	30
2,4,5-Trichlorophenol	1	0.772		µg/L		77	30 - 130	10	30
2,4,6-Trichlorophenol	1	0.52		µg/L		52	30 - 130	22	30
2,4-Dichlorophenol	1	0.802		µg/L		80	51 - 117	8	30

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-65252-1

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

Lab Sample ID: 111797-BS2
Matrix: BlankMatrix
Analysis Batch: O-42134

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: O-42134_P

Analyte	Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec		RPD	RPD Limit
							Limits	RPD		
2,4-Dinitrophenol	1	0		µg/L		0	0 - 152	181		30
2,6-Dichlorophenol	0.5	0.384		µg/L		77	30 - 130	11		30
2,6-Dimethylnaphthalene	0.5	0.492		µg/L		98	48 - 120	4		30
2,6-Di-tert-butyl-4-methylphenol	1	0.913		µg/L		91	50 - 150	7		30
2,6-Di-tert-butylphenol	1	0.884		µg/L		88	50 - 150	2		30
2-Chloronaphthalene	1	0.923		µg/L		92	53 - 130	3		30
2-Chlorophenol	1	0.844		µg/L		84	41 - 120	2		30
2-Methyl-4,6-dinitrophenol	1	0.685		µg/L		69	0 - 141	11		30
2-Methylnaphthalene	1.5	1.58		µg/L		105	47 - 130	2		30
2-Methylphenol	1	0.895		µg/L		89	40 - 117	1		30
2-Nitroaniline	1	1.06		µg/L		106	69 - 114	8		30
2-Nitrophenol	1	0.949		µg/L		95	40 - 117	0		30
3+4-Methylphenol	1	0.931		µg/L		93	0 - 130	1		30
3-Nitroaniline	1	0.879		µg/L		88	23 - 137	11		30
4-Bromophenylphenyl ether	1	0.869		µg/L		87	61 - 132	5		30
4-Chloro-3-methylphenol	1	1.01		µg/L		101	51 - 128	2		30
4-Chloroaniline	1	0.579		µg/L		58	50 - 150	9		30
4-Chlorophenylphenyl ether	1	0.895		µg/L		89	63 - 130	5		30
4-Nitroaniline	1	1.11		µg/L		111	10 - 159	6		30
4-Nitrophenol	2	2.27		µg/L		113	10 - 164	4		30
6-tert-butyl-2,4-dimethylphenol	1	1.01		µg/L		101	50 - 150	6		30
Acenaphthene	1.5	1.63		µg/L		109	53 - 131	4		30
Acenaphthylene	1.5	1.66		µg/L		111	43 - 140	6		30
Aniline	1	0.602		µg/L		60	50 - 150	11		30
Anthracene	1.5	1.51		µg/L		101	58 - 135	8		30
Benz[a]anthracene	1.5	1.54		µg/L		103	55 - 145	2		30
Benzidine	1	0.0213		µg/L		2	0 - 125	0		30
Benzo[a]pyrene	1.5	1.35		µg/L		90	51 - 143	2		30
Benzo[b]fluoranthene	1.5	1.5		µg/L		100	46 - 165	2		30
Benzo[e]pyrene	0.5	0.444		µg/L		89	42 - 152	2		30
Benzo[g,h,i]perylene	1.5	1.41		µg/L		94	63 - 133	2		30
Benzo[k]fluoranthene	1.5	1.51		µg/L		101	56 - 145	8		30
Benzoic Acid	1	0.157		µg/L		16	2 - 145	21		30
Benzyl Alcohol	1	0.937		µg/L		94	43 - 148	2		30
Biphenyl	0.5	0.497		µg/L		99	56 - 119	1		30
Bis(2-Chloroethoxy) methane	1	1.06		µg/L		106	66 - 122	3		30
Bis(2-Chloroethyl) ether	1	0.913		µg/L		91	43 - 127	2		30
Bis(2-Chloroisopropyl) ether	1	1.03		µg/L		103	49 - 128	1		30
Chrysene	1.5	1.37		µg/L		91	56 - 141	5		30
Dibenz[a,h]anthracene	1.5	1.28		µg/L		85	55 - 150	2		30
Dibenzo[a,l]pyrene	0.5	0.724		µg/L		145	50 - 150	4		30
Dibenzofuran	1	0.959		µg/L		96	50 - 150	9		30
Dibenzothiophene	0.5	0.483		µg/L		97	46 - 126	5		30
Disalicylidenepranediamine	10	9.87		µg/L		99	50 - 150	34		30
Fluoranthene	1.5	1.51		µg/L		101	60 - 146	5		30
Fluorene	1.5	1.59		µg/L		106	58 - 131	6		30
Hexachloroethane	1	0.72		µg/L		72	27 - 130	3		30
Indeno[1,2,3-cd]pyrene	1.5	1.26		µg/L		84	50 - 151	4		30
Naphthalene	1.5	1.57		µg/L		105	41 - 126	2		30

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-65252-1

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

Lab Sample ID: 111797-BS2
Matrix: BlankMatrix
Analysis Batch: O-42134

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: O-42134_P

Analyte	Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
Nitrobenzene	1	0.889		µg/L		89	54 - 111	1	30	
N-Nitrosodi-n-propylamine	1	0.937		µg/L		94	61 - 152	3	30	
N-Nitrosodiphenylamine	1	0.92		µg/L		92	49 - 142	4	30	
Pentachlorophenol	1	0.738		µg/L		74	36 - 111	26	30	
Perylene	0.5	0.474		µg/L		95	48 - 141	0	30	
Phenanthrene	1.5	1.51		µg/L		101	67 - 127	5	30	
Phenol	1	0.873		µg/L		87	29 - 114	0	30	
p-tert-Butylphenol	1	1.38		µg/L		138	50 - 150	4	30	
Pyrene	1.5	1.51		µg/L		101	54 - 156	5	30	

Surrogate	LCS DUP %Recovery	LCS DUP Qualifier	Limits
(2,4,6-Tribromophenol)	65		30 - 130
(d10-Acenaphthene)	104		27 - 133
(d10-Phenanthrene)	97		43 - 129
(d12-Chrysene)	93		52 - 144
(d12-Perylene)	88		36 - 161
(d5-Phenol)	113		0 - 130
(d8-Naphthalene)	103		25 - 125

Method: 8015 Ethanol - SW846 8015B Gasoline Range Organics

Lab Sample ID: 23MEJ001WB
Matrix: WATER
Analysis Batch: 23MEJ001W

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			10/05/23 10:51	1

Lab Sample ID: 23MEJ001WL
Matrix: WATER
Analysis Batch: 23MEJ001W

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	11400		ug/L		114	60 - 130	

Lab Sample ID: 23J032-01M
Matrix: WATER
Analysis Batch: 23MEJ001W

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec	
									Limits	RPD
ETHANOL	ND		10000	10600		ug/L		106	60 - 130	

Lab Sample ID: 23J032-01S
Matrix: WATER
Analysis Batch: 23MEJ001W

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
									Limits	RPD		
ETHANOL	ND		10000	10700		ug/L		107	60 - 130	1	30	

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-65252-1

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

Lab Sample ID: 23VG39J04B
Matrix: WATER
Analysis Batch: 23VG39J04

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			10/05/23 13:03	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE								10/05/23 13:03	1

Lab Sample ID: 23VG39J04L
Matrix: WATER
Analysis Batch: 23VG39J04

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	0.472		mg/L		94	60 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
BROMOFLUOROBENZENE	113		70 - 130				

Lab Sample ID: 23J032-01M
Matrix: WATER
Analysis Batch: 23VG39J04

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	0.425		mg/L		85	50 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
BROMOFLUOROBENZENE	112		60 - 140						

Lab Sample ID: 23J032-01S
Matrix: WATER
Analysis Batch: 23VG39J04

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	0.485		mg/L		97	50 - 130	13	30
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
BROMOFLUOROBENZENE	116		60 - 140								

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

Lab Sample ID: 23DSJ004WB
Matrix: WATER
Analysis Batch: 23DSJ004W

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DIESEL	ND	U	0.025		mg/L			10/06/23 23:12	1
JP5	ND	U	0.05		mg/L			10/06/23 23:12	1
JP8	ND	U	0.05		mg/L			10/06/23 23:12	1
MOTOR OIL	ND	U	0.05		mg/L			10/06/23 23:12	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-65252-1

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

Lab Sample ID: 23DSJ004WB
Matrix: WATER
Analysis Batch: 23DSJ004W

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

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
BROMOBENZENE					10/06/23 23:12	1
HEXACOSANE					10/06/23 23:12	1

Lab Sample ID: 23DSJ004WL
Matrix: WATER
Analysis Batch: 23DSJ004W

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
DIESEL	2.5	2.39		mg/L		96	50 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
BROMOBENZENE	61		60 - 130
HEXACOSANE	98		60 - 130

Lab Sample ID: 23J5J004WL
Matrix: WATER
Analysis Batch: 23DSJ004W

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
JP5	2.5	1.59		mg/L		64	30 - 160

Surrogate	LCS %Recovery	LCS Qualifier	Limits
BROMOBENZENE	71		60 - 130
HEXACOSANE	94		60 - 130

Lab Sample ID: 23J8J004WL
Matrix: WATER
Analysis Batch: 23DSJ004W

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
JP8	2.5	1.87		mg/L		75	30 - 160

Surrogate	LCS %Recovery	LCS Qualifier	Limits
BROMOBENZENE	88		60 - 130
HEXACOSANE	97		60 - 130

QC Association Summary

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

Job ID: 380-65252-1

GC/MS VOA

Analysis Batch: 58700

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65252-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	524.2	
380-65252-2	TRAVEL BLANK	Total/NA	Water	524.2	
MB 380-58700/5	Method Blank	Total/NA	Water	524.2	
LCS 380-58700/2	Lab Control Sample	Total/NA	Water	524.2	
LCSD 380-58700/3	Lab Control Sample Dup	Total/NA	Water	524.2	
MRL 380-58700/4	Lab Control Sample	Total/NA	Water	524.2	

GC/MS Semi VOA

Prep Batch: 57966

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65252-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	525.2	
MB 380-57966/21-A	Method Blank	Total/NA	Water	525.2	
LCS 380-57966/24-A	Lab Control Sample	Total/NA	Water	525.2	
LCSD 380-57966/25-A	Lab Control Sample Dup	Total/NA	Water	525.2	
MRL 380-57966/22-A	Lab Control Sample	Total/NA	Water	525.2	
380-65247-V-1-A MS	Matrix Spike	Total/NA	Water	525.2	
380-65250-V-1-A DU	Duplicate	Total/NA	Water	525.2	

Analysis Batch: 58154

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65252-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	525.2	57966
MB 380-57966/21-A	Method Blank	Total/NA	Water	525.2	57966
LCS 380-57966/24-A	Lab Control Sample	Total/NA	Water	525.2	57966
LCSD 380-57966/25-A	Lab Control Sample Dup	Total/NA	Water	525.2	57966
MRL 380-57966/22-A	Lab Control Sample	Total/NA	Water	525.2	57966
380-65247-V-1-A MS	Matrix Spike	Total/NA	Water	525.2	57966
380-65250-V-1-A DU	Duplicate	Total/NA	Water	525.2	57966

GC Semi VOA

Prep Batch: 58057

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65252-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	505	
MB 380-58057/4-A	Method Blank	Total/NA	Water	505	
MRL 380-58057/2-A	Lab Control Sample	Total/NA	Water	505	
MRL 380-58057/3-A	Lab Control Sample	Total/NA	Water	505	
380-65151-C-1-A MS	Matrix Spike	Total/NA	Water	505	
380-65151-D-1-A MS	Matrix Spike	Total/NA	Water	505	
380-64160-CU-1-A MS	Matrix Spike	Total/NA	Water	505	
380-64160-CV-1-A MS	Matrix Spike	Total/NA	Water	505	

Prep Batch: 58189

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65252-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	504.1	
380-65252-2	TRAVEL BLANK	Total/NA	Water	504.1	
MBL 380-58189/13-A	Method Blank	Total/NA	Water	504.1	
LCS 380-58189/38-A	Lab Control Sample	Total/NA	Water	504.1	
MRL 380-58189/11-A	Lab Control Sample	Total/NA	Water	504.1	
MRL 380-58189/12-A	Lab Control Sample	Total/NA	Water	504.1	
380-65332-H-1-A MS	Matrix Spike	Total/NA	Water	504.1	
380-65337-I-1-A DU	Duplicate	Total/NA	Water	504.1	

Eurofins Eaton Analytical Pomona

QC Association Summary

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

Job ID: 380-65252-1

GC Semi VOA

Analysis Batch: 58390

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65252-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	505	58057
MB 380-58057/4-A	Method Blank	Total/NA	Water	505	58057
MRL 380-58057/2-A	Lab Control Sample	Total/NA	Water	505	58057
MRL 380-58057/3-A	Lab Control Sample	Total/NA	Water	505	58057
380-65151-C-1-A MS	Matrix Spike	Total/NA	Water	505	58057
380-65151-D-1-A MS	Matrix Spike	Total/NA	Water	505	58057
380-64160-CU-1-A MS	Matrix Spike	Total/NA	Water	505	58057
380-64160-CV-1-A MS	Matrix Spike	Total/NA	Water	505	58057

Analysis Batch: 58395

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65252-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	504.1	58189
380-65252-2	TRAVEL BLANK	Total/NA	Water	504.1	58189
MBL 380-58189/13-A	Method Blank	Total/NA	Water	504.1	58189
LCS 380-58189/38-A	Lab Control Sample	Total/NA	Water	504.1	58189
MRL 380-58189/11-A	Lab Control Sample	Total/NA	Water	504.1	58189
MRL 380-58189/12-A	Lab Control Sample	Total/NA	Water	504.1	58189
380-65332-H-1-A MS	Matrix Spike	Total/NA	Water	504.1	58189
380-65337-I-1-A DU	Duplicate	Total/NA	Water	504.1	58189

HPLC/IC

Analysis Batch: 57889

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65252-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	300.0	
MB 380-57889/76	Method Blank	Total/NA	Water	300.0	
LCS 380-57889/79	Lab Control Sample	Total/NA	Water	300.0	
LCSD 380-57889/80	Lab Control Sample Dup	Total/NA	Water	300.0	
MRL 380-57889/77	Lab Control Sample	Total/NA	Water	300.0	
MRL 380-57889/78	Lab Control Sample	Total/NA	Water	300.0	
380-65245-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
380-65245-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Analysis Batch: 57956

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65252-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	300.0	
MB 380-57956/54	Method Blank	Total/NA	Water	300.0	
LCS 380-57956/57	Lab Control Sample	Total/NA	Water	300.0	
LCSD 380-57956/58	Lab Control Sample Dup	Total/NA	Water	300.0	
MRL 380-57956/55	Lab Control Sample	Total/NA	Water	300.0	
MRL 380-57956/56	Lab Control Sample	Total/NA	Water	300.0	
380-65228-A-4 MS	Matrix Spike	Total/NA	Water	300.0	
380-65228-A-4 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Analysis Batch: 57957

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65252-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	300.0	
MB 380-57957/54	Method Blank	Total/NA	Water	300.0	
LCS 380-57957/57	Lab Control Sample	Total/NA	Water	300.0	
LCSD 380-57957/58	Lab Control Sample Dup	Total/NA	Water	300.0	
MRL 380-57957/55	Lab Control Sample	Total/NA	Water	300.0	

QC Association Summary

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

Job ID: 380-65252-1

HPLC/IC (Continued)

Analysis Batch: 57957 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MRL 380-57957/56	Lab Control Sample	Total/NA	Water	300.0	
380-65228-A-4 MS	Matrix Spike	Total/NA	Water	300.0	
380-65228-A-4 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Analysis Batch: 58028

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 380-58028/40	Method Blank	Total/NA	Water	300.0	
LCS 380-58028/43	Lab Control Sample	Total/NA	Water	300.0	
LCSD 380-58028/44	Lab Control Sample Dup	Total/NA	Water	300.0	
MRL 380-58028/41	Lab Control Sample	Total/NA	Water	300.0	
MRL 380-58028/42	Lab Control Sample	Total/NA	Water	300.0	
380-65443-F-2 MS	Matrix Spike	Total/NA	Water	300.0	
380-65443-F-2 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Analysis Batch: 58029

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 380-58029/40	Method Blank	Total/NA	Water	300.0	
LCS 380-58029/43	Lab Control Sample	Total/NA	Water	300.0	
LCSD 380-58029/44	Lab Control Sample Dup	Total/NA	Water	300.0	
MRL 380-58029/41	Lab Control Sample	Total/NA	Water	300.0	
MRL 380-58029/42	Lab Control Sample	Total/NA	Water	300.0	
380-65443-F-2 MS	Matrix Spike	Total/NA	Water	300.0	
380-65443-F-2 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Analysis Batch: 58149

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65252-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	300.0	
MB 380-58149/6	Method Blank	Total/NA	Water	300.0	
LCS 380-58149/7	Lab Control Sample	Total/NA	Water	300.0	
LCSD 380-58149/8	Lab Control Sample Dup	Total/NA	Water	300.0	
MRL 380-58149/5	Lab Control Sample	Total/NA	Water	300.0	
380-65383-A-2 MS	Matrix Spike	Total/NA	Water	300.0	
380-65383-A-2 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Metals

Prep Batch: 58068

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65252-1	MOANALUA WELLS (331-223-TP202)	Total Recoverable	Drinking Water	200.8	
MB 380-58068/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 380-58068/3-A	Lab Control Sample	Total Recoverable	Water	200.8	
LCSD 380-58068/4-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	
LLCS 380-58068/2-A	Lab Control Sample	Total Recoverable	Water	200.8	
380-65252-1 MS	MOANALUA WELLS (331-223-TP202)	Total Recoverable	Drinking Water	200.8	
380-65252-1 MSD	MOANALUA WELLS (331-223-TP202)	Total Recoverable	Drinking Water	200.8	

Analysis Batch: 58427

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65252-1	MOANALUA WELLS (331-223-TP202)	Total Recoverable	Drinking Water	200.8	58068
MB 380-58068/1-A	Method Blank	Total Recoverable	Water	200.8	58068
LCS 380-58068/3-A	Lab Control Sample	Total Recoverable	Water	200.8	58068

QC Association Summary

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

Job ID: 380-65252-1

Metals (Continued)

Analysis Batch: 58427 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 380-58068/4-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	58068
LLCS 380-58068/2-A	Lab Control Sample	Total Recoverable	Water	200.8	58068
380-65252-1 MS	MOANALUA WELLS (331-223-TP202)	Total Recoverable	Drinking Water	200.8	58068
380-65252-1 MSD	MOANALUA WELLS (331-223-TP202)	Total Recoverable	Drinking Water	200.8	58068

Analysis Batch: 58925

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65252-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	200.7 Rev 4.4	
MB 380-58925/137	Method Blank	Total/NA	Water	200.7 Rev 4.4	
LCS 380-58925/139	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	
LCSD 380-58925/140	Lab Control Sample Dup	Total/NA	Water	200.7 Rev 4.4	
LLCS 380-58925/138	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	
380-65219-A-2 MS	Matrix Spike	Total/NA	Water	200.7 Rev 4.4	
380-65219-A-2 MSD	Matrix Spike Duplicate	Total/NA	Water	200.7 Rev 4.4	

Prep Batch: 76203

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65252-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	245.1	
MB 810-76203/1-A	Method Blank	Total/NA	Water	245.1	
LCS 810-76203/3-A	Lab Control Sample	Total/NA	Water	245.1	
380-65739-C-1-B MS	Matrix Spike	Total/NA	Water	245.1	
380-65739-C-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	

Analysis Batch: 76233

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65252-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	245.1	76203
MB 810-76203/1-A	Method Blank	Total/NA	Water	245.1	76203
LCS 810-76203/3-A	Lab Control Sample	Total/NA	Water	245.1	76203
380-65739-C-1-B MS	Matrix Spike	Total/NA	Water	245.1	76203
380-65739-C-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	76203

General Chemistry

Analysis Batch: 57984

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65252-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	SM 2540C	
MB 380-57984/1	Method Blank	Total/NA	Water	SM 2540C	
HLCS 380-57984/5	Lab Control Sample	Total/NA	Water	SM 2540C	
LCS 380-57984/4	Lab Control Sample	Total/NA	Water	SM 2540C	
MRL 380-57984/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MRL 380-57984/3	Lab Control Sample	Total/NA	Water	SM 2540C	
380-65252-1 DU	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	SM 2540C	

Analysis Batch: 58171

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65252-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	SM 4500 S2 D	
MB 380-58171/1	Method Blank	Total/NA	Water	SM 4500 S2 D	
LCS 380-58171/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
LCSD 380-58171/24	Lab Control Sample Dup	Total/NA	Water	SM 4500 S2 D	
MRL 380-58171/17	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MRL 380-58171/2	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	

Eurofins Eaton Analytical Pomona

QC Association Summary

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

Job ID: 380-65252-1

General Chemistry (Continued)

Analysis Batch: 58171 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65252-1 MS	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	SM 4500 S2 D	
380-65252-1 MSD	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	SM 4500 S2 D	

Analysis Batch: 58460

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65252-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	SM 4500 F C	
MB 380-58460/10	Method Blank	Total/NA	Water	SM 4500 F C	
MB 380-58460/44	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 380-58460/46	Lab Control Sample	Total/NA	Water	SM 4500 F C	
LCSD 380-58460/47	Lab Control Sample Dup	Total/NA	Water	SM 4500 F C	
MRL 380-58460/11	Lab Control Sample	Total/NA	Water	SM 4500 F C	
MRL 380-58460/45	Lab Control Sample	Total/NA	Water	SM 4500 F C	
380-65392-O-1 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
380-65392-O-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	

Analysis Batch: 58461

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65252-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	SM 2320B	
MB 380-58461/1	Method Blank	Total/NA	Water	SM 2320B	
LCS 380-58461/3	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 380-58461/18	Lab Control Sample Dup	Total/NA	Water	SM 2320B	
LLCS 380-58461/4	Lab Control Sample	Total/NA	Water	SM 2320B	
MRL 380-58461/2	Lab Control Sample	Total/NA	Water	SM 2320B	
380-65226-X-4 MS	Matrix Spike	Total/NA	Water	SM 2320B	
380-65226-X-4 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 2320B	
380-65226-X-4 DU	Duplicate	Total/NA	Water	SM 2320B	

Analysis Batch: 58464

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65252-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	SM 2510B	
MB 380-58464/2	Method Blank	Total/NA	Water	SM 2510B	
LCS 380-58464/4	Lab Control Sample	Total/NA	Water	SM 2510B	
LCSD 380-58464/16	Lab Control Sample Dup	Total/NA	Water	SM 2510B	
MRL 380-58464/3	Lab Control Sample	Total/NA	Water	SM 2510B	
380-65226-X-4 DU	Duplicate	Total/NA	Water	SM 2510B	

Analysis Batch: 58466

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65252-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	SM 4500 H+ B	
MB 380-58466/4	Method Blank	Total/NA	Water	SM 4500 H+ B	
LCS 380-58466/5	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
LCSD 380-58466/17	Lab Control Sample Dup	Total/NA	Water	SM 4500 H+ B	
380-65226-X-4 DU	Duplicate	Total/NA	Water	SM 4500 H+ B	

Subcontract

Analysis Batch: O-42134

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65252-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	625 Acid/Base/PAH + TICs	O-42134_P

Eurofins Eaton Analytical Pomona

QC Association Summary

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

Job ID: 380-65252-1

Subcontract (Continued)

Analysis Batch: O-42134 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
111797-B1	Method Blank	Total/NA	BlankMatrix	625 Acid/Base/PAH + TICs	O-42134_P
111797-BS1	Lab Control Sample	Total/NA	BlankMatrix	625 Acid/Base/PAH + TICs	O-42134_P
111797-BS2	Lab Control Sample Dup	Total/NA	BlankMatrix	625 Acid/Base/PAH + TICs	O-42134_P

Analysis Batch: 23DSJ004W

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65252-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	8015 LL DRO/MRO/JP5/J P8	
23DSJ004WB	Method Blank	Total/NA	WATER	8015 LL DRO/MRO/JP5/J P8	
23DSJ004WL	Lab Control Sample	Total/NA	WATER	8015 LL DRO/MRO/JP5/J P8	
23J5J004WL	Lab Control Sample	Total/NA	WATER	8015 LL DRO/MRO/JP5/J P8	
23J8J004WL	Lab Control Sample	Total/NA	WATER	8015 LL DRO/MRO/JP5/J P8	

Analysis Batch: 23MEJ001W

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65252-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	8015 Ethanol	
23MEJ001WB	Method Blank	Total/NA	WATER	8015 Ethanol	
23MEJ001WL	Lab Control Sample	Total/NA	WATER	8015 Ethanol	
23J032-01M	Matrix Spike	Total/NA	WATER	8015 Ethanol	
23J032-01S	Matrix Spike Duplicate	Total/NA	WATER	8015 Ethanol	

Analysis Batch: 23VG39J04

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65252-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	8015 Gas (Purgeable) LL (EAL)	
380-65252-2	TRAVEL BLANK	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
23VG39J04B	Method Blank	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	
23VG39J04L	Lab Control Sample	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	
23J032-01M	Matrix Spike	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	
23J032-01S	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 Quarterly

Job ID: 380-65252-1

Subcontract

Prep Batch: O-42134_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65252-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	EPA_625	
111797-B1	Method Blank	Total/NA	BlankMatrix	EPA_625	
111797-BS1	Lab Control Sample	Total/NA	BlankMatrix	EPA_625	
111797-BS2	Lab Control Sample Dup	Total/NA	BlankMatrix	EPA_625	

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Lab Chronicle

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

Job ID: 380-65252-1

Client Sample ID: MOANALUA WELLS (331-223-TP202)

Lab Sample ID: 380-65252-1

Date Collected: 10/02/23 09:31

Matrix: Drinking Water

Date Received: 10/03/23 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	524.2		1	58700	P3EE	EA POM	10/10/23 15:30
Total/NA	Prep	525.2			57966	N8NE	EA POM	10/04/23 17:22
Total/NA	Analysis	525.2		1	58154	UPAC	EA POM	10/05/23 18:00
Total/NA	Prep	504.1			58189	LZ8Q	EA POM	10/06/23 11:50 - 10/06/23 13:00 ¹
Total/NA	Analysis	504.1		1	58395	LZ8Q	EA POM	10/07/23 02:06
Total/NA	Prep	505			58057	QBD3	EA POM	10/05/23 11:51 - 10/05/23 13:10 ¹
Total/NA	Analysis	505		1	58390	ULRL	EA POM	10/06/23 05:10
Total/NA	Analysis	300.0		2	57889	VB9B	EA POM	10/04/23 14:50
Total/NA	Analysis	300.0		2	57956	VB9B	EA POM	10/04/23 10:30
Total/NA	Analysis	300.0		2	57957	VB9B	EA POM	10/04/23 10:30
Total/NA	Analysis	300.0		1	58149	UNJR	EA POM	10/06/23 00:16
Total/NA	Analysis	200.7 Rev 4.4		1	58925	T8RV	EA POM	10/10/23 22:17
Total Recoverable	Prep	200.8			58068	Z45W	EA POM	10/05/23 10:00
Total Recoverable	Analysis	200.8		1	58427	AAE8	EA POM	10/07/23 14:01
Total/NA	Prep	245.1			76203	AC	EA SB	10/09/23 13:26
Total/NA	Analysis	245.1		1	76233	AC	EA SB	10/09/23 21:42
Total/NA	Analysis	SM 2320B		1	58461	D5MQ	EA POM	10/06/23 19:57
Total/NA	Analysis	SM 2510B		1	58464	D5MQ	EA POM	10/06/23 19:57
Total/NA	Analysis	SM 2540C		1	57984	UJRF	EA POM	10/04/23 15:18
Total/NA	Analysis	SM 4500 F C		1	58460	D5MQ	EA POM	10/06/23 19:55
Total/NA	Analysis	SM 4500 H+ B		1	58466	D5MQ	EA POM	10/06/23 19:57
Total/NA	Analysis	SM 4500 S2 D		1	58171	MH2L	EA POM	10/05/23 14:35
Total/NA	Prep	EPA_625		1	O-42134_P			10/09/23 00:00
Total/NA	Analysis	625 Acid/Base/PAH + TICs		1	O-42134	YC		11/08/23 23:56
Total/NA	Analysis	8015 Ethanol		1	23MEJ001W	DBaren		10/05/23 13:40
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	23VG39J04	CMpang		10/05/23 14:59
Total/NA	Analysis	8015 LL DRO/MRO/JP5/JP8		1	23DSJ004W	SDees		10/07/23 02:36

Client Sample ID: TRAVEL BLANK

Lab Sample ID: 380-65252-2

Date Collected: 10/02/23 09:31

Matrix: Water

Date Received: 10/03/23 10:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	524.2		1	58700	P3EE	EA POM	10/10/23 15:53
Total/NA	Prep	504.1			58189	LZ8Q	EA POM	10/06/23 11:50 - 10/06/23 13:00 ¹
Total/NA	Analysis	504.1		1	58395	LZ8Q	EA POM	10/07/23 04:14
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	23VG39J04	CMpang		10/05/23 16:54

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 Quarterly

Job ID: 380-65252-1

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 Quarterly

Job ID: 380-65252-1

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	Drinking Water	Polychlorinated biphenyls, Total
524.2		Drinking Water	Tertiary Butyl Alcohol (TBA)
524.2		Water	Tertiary Butyl Alcohol (TBA)
525.2	525.2	Drinking Water	1-Methylnaphthalene
525.2	525.2	Drinking Water	2,4'-DDD
525.2	525.2	Drinking Water	2,4'-DDE
525.2	525.2	Drinking Water	2,4'-DDT
525.2	525.2	Drinking Water	2,4-Dinitrotoluene
525.2	525.2	Drinking Water	2,6-Dinitrotoluene
525.2	525.2	Drinking Water	2-Methylnaphthalene
525.2	525.2	Drinking Water	4,4'-DDD
525.2	525.2	Drinking Water	4,4'-DDE
525.2	525.2	Drinking Water	4,4'-DDT
525.2	525.2	Drinking Water	Acenaphthene
525.2	525.2	Drinking Water	Acenaphthylene
525.2	525.2	Drinking Water	Acetochlor
525.2	525.2	Drinking Water	alpha-BHC
525.2	525.2	Drinking Water	alpha-Chlordane
525.2	525.2	Drinking Water	Anthracene
525.2	525.2	Drinking Water	Benz(a)anthracene
525.2	525.2	Drinking Water	Benzo[b]fluoranthene
525.2	525.2	Drinking Water	Benzo[g,h,i]perylene
525.2	525.2	Drinking Water	Benzo[k]fluoranthene
525.2	525.2	Drinking Water	beta-BHC
525.2	525.2	Drinking Water	Bromacil
525.2	525.2	Drinking Water	Butylbenzylphthalate
525.2	525.2	Drinking Water	Chlorobenzilate
525.2	525.2	Drinking Water	Chloroneb
525.2	525.2	Drinking Water	Chlorothalonil (Draconil, Bravo)
525.2	525.2	Drinking Water	Chlorpyrifos
525.2	525.2	Drinking Water	Chrysene
525.2	525.2	Drinking Water	delta-BHC
525.2	525.2	Drinking Water	Dibenz(a,h)anthracene
525.2	525.2	Drinking Water	Diclorvos (DDVP)
525.2	525.2	Drinking Water	Diethylphthalate
525.2	525.2	Drinking Water	Dimethylphthalate
525.2	525.2	Drinking Water	Di-n-butyl phthalate
525.2	525.2	Drinking Water	Di-n-octyl phthalate
525.2	525.2	Drinking Water	Endosulfan I (Alpha)
525.2	525.2	Drinking Water	Endosulfan II (Beta)
525.2	525.2	Drinking Water	Endosulfan sulfate
525.2	525.2	Drinking Water	Endrin aldehyde
525.2	525.2	Drinking Water	EPTC
525.2	525.2	Drinking Water	Fluoranthene
525.2	525.2	Drinking Water	Fluorene

Accreditation/Certification Summary

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

Job ID: 380-65252-1

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	Drinking Water	gamma-Chlordane
525.2	525.2	Drinking Water	Indeno[1,2,3-cd]pyrene
525.2	525.2	Drinking Water	Isophorone
525.2	525.2	Drinking Water	Malathion
525.2	525.2	Drinking Water	Molinate
525.2	525.2	Drinking Water	Naphthalene
525.2	525.2	Drinking Water	Parathion
525.2	525.2	Drinking Water	Pendimethalin (Penoxaline)
525.2	525.2	Drinking Water	Phenanthrene
525.2	525.2	Drinking Water	Pyrene
525.2	525.2	Drinking Water	Terbacil
525.2	525.2	Drinking Water	Terbutylazine
525.2	525.2	Drinking Water	Thiobencarb
525.2	525.2	Drinking Water	Total Permethrin (mixed isomers)
525.2	525.2	Drinking Water	trans-Nonachlor
525.2	525.2	Drinking Water	Trifluralin
SM 2320B		Drinking Water	Bicarbonate Alkalinity as CaCO ₃
SM 2320B		Drinking Water	Carbonate Alkalinity as CaCO ₃
SM 4500 S2 D		Drinking Water	Sulfide

Laboratory: Eurofins Eaton Analytical South Bend

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

Authority	Program	Identification Number	Expiration Date
A2LA	ISO/IEC 17025	5794.01	07-31-24
Alabama	State	40700	06-30-24
Alaska	State	IN00035	06-30-24
Arizona	State	AZ0432	07-26-24
Arkansas (DW)	State	EPA IN00035	06-30-24
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
Hawaii	State	IN035	06-30-24
Idaho (DW)	State	IN00035	12-31-23
IL Dept. of Public Health (Micro)	State	17767	07-01-24
Illinois	NELAP	200001	09-19-24
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

Accreditation/Certification Summary

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

Job ID: 380-65252-1

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
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	07-31-24
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	06-30-24
Northern Mariana Islands (DW)	State	IN00035	06-30-24
Ohio	State	87775	06-30-24
Oklahoma	NELAP	D9508	08-31-24
Oregon	NELAP	4156	09-16-24
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	07-31-24
Vermont	State	VT-8775	11-14-23
Virginia	NELAP	460275	03-14-24
Washington	State	C837	01-01-24
West Virginia (DW)	State	9927 C	12-31-23
Wisconsin	State	999766900	08-31-24
Wisconsin (Micro)	State	10121	12-31-23
Wyoming	State	8TMS-L	06-30-24

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

Method Summary

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

Job ID: 380-65252-1

Method	Method Description	Protocol	Laboratory
524.2	Volatile Organic Compounds (GC/MS SIM)	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 Quarterly

Job ID: 380-65252-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
380-65252-1	MOANALUA WELLS (331-223-TP202)	Drinking Water	10/02/23 09:31	10/03/23 10:35	HI0000331
380-65252-2	TRAVEL BLANK	Water	10/02/23 09:31	10/03/23 10:35	

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Date: 10-23-2023
EMAX Batch No.: 23J032

Attn: Jackie Contreras

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

Subject: Laboratory Report
Project: 380-65252

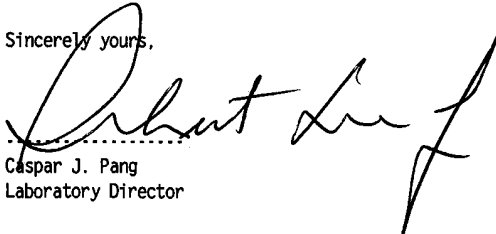
Enclosed is the Laboratory report for samples received on 10/04/23.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
380-65252-1	J032-01	10/02/23	WATER	TPH GASOLINE TPH ETHANOL
380-65252-2	J032-02	10/02/23	WATER	TPH GASOLINE

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.

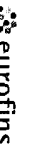
EMAX certifies that results included in this report meets all TNI & DOD requirements unless noted in the Case Narrative.

NELAP Accredited Certificate Number CA002912023-25
ANAB Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing
California ELAP Accredited Certificate Number 2672

23J092

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

Chain of Custody Record



Environment Testing

Client Information (Sub Contract Lab)

Client Contact: **EMAX Laboratories Inc** | Sampler: **Arada, Rachele** | Lab Pk: **Arada, Rachele** | Corner Tracking No(s):

Shipping/Receiving: **EMAX Laboratories Inc** | Phone: **380-821971** | E-Mail: **Rachele.Arada@at.eurofins.com** | State of Origin: **Hawaii**

Address: **3051 Fujita Street, Torrance, CA, 90505** | Due Date Requested: **10/13/2023** | TAT Requested (days): **10/13/2023** | Accreditations Required (See note): **State - Hawaii**

Project Name: **RED-HILL** | Project #: **38001111** | W/O #: **SSOV#:**

Site: **Honolulu BWS Sites**

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Seawater, Other)	Preservation Code	Field Filtered Sample (Yes or No)			Perform MS/MSD (Yes or No)			Total Number of containers	Special Instructions/Note:
						SUB (8015 Ethanol)	SUB (8015 Gas (Purgeable) LL (EAL))	SUB (8015 LL DRO/MRO/JP5/JP8)	SUB (8015 Gas (Purgeable) LL (EAL))	SUB (8015 LL DRO/MRO/JP5/JP8)	SUB (8015 LL DRO/MRO/JP5/JP8)		
MOANALUA WELLS (331-223-TP202) (380-65252-1)	10/21/23	09:31	Water	Water		X	X	X	X	X	X	12	See Attached Instructions
TRAVEL BLANK (380-65252-2)	10/21/23	09:31	Water	Water		X	X	X	X	X	X	2	See Attached Instructions

Analysis Requested

Preservation Codes: A-HCL, B- NaOH, C-Zn Acetate, D-Nitric Acid, E-NaHSO4, F-MeOH, G-Arsenite, H-Ascorbic Acid, I-Ice, J-DI Water, K-EDTA, L-EDA, M-Hexane, N-Nore, O-AsNaO2, P-Na2O4S, Q-Na2SO3, R-Na2S2O3, S-H2SO4, T-TSP Dodecahydrate, U-Acetone, V-MCAA, W-PH 4-5, Y-Trizma, Z-other (specify)

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

Return To Client Disposal By Lab Archive For _____ Months

Special Instructions/QC Requirements:

Deliverable Requested: I, II, III, IV, Other (specify) **Primary Deliverable Rank: 2**

Empty Kit Relinquished by: _____ **Date:** _____

Relinquished by: _____ **Date/Time:** **10/24/23 / 13:47** **Company:** **EMAX**

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

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

Custody Seal Intact: Yes No **Custody Seal No.:** _____

Color Temperature(s) °C and Other Remarks: **44/4.2 CF = -0.2**



Type of Delivery <input type="checkbox"/> UPS <input type="checkbox"/> GSO <input type="checkbox"/> Others		Airbill / Tracking Number	
<input type="checkbox"/> EMAX Counter <input checked="" type="checkbox"/> Client Delivery		ECN 23J032	Recipient Cecilia Chavez
Date 10/04/23		Time 13:47	

COC INSPECTION

Client Name Client PM/FC Sampling Date/Time Analysis Required Preservative (if any) TAT Matrix

Address Counter Signature From Superfund Site High concentrations expected Safety Issues (if any)

Note: _____

PACKAGING INSPECTION

Container Cooler Box Other

Condition Custody Seal Inact Damaged

Packaging Bubble Pack Styrofoam

Temperatures (Cool, 56 °C but not frozen)

Thermometer: Cooler 1 44/42 °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

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

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
1	10	D10	Second date reads: 08/31/23	RS
2	13, 14	D7	08/31/23	RS

pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time.

NOTES/OBSERVATIONS: _____

SAMPLE MATRIX IS DRINKING WATER? YES NO

LEGEND:

Code Description-Sample Management

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 _____

D23 _____

D24 _____

REPORT ID: 23J032

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

Sample Labeling Nacama Nandem

Date 10/04/23

SRF *[Signature]* Date 10/4/23

PM *[Signature]* Date 10/9/23

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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

380-65252

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

SDG#: 23J032



CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-65252

SDG : 23J032

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

A total of two(2) water samples were received on 10/04/23 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. VG39J04B - 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. VG39J04L/VG39J04C 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 J032-01M/J032-01S. 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: 10/02/23 09:31
Project     : 380-65252                      Date Received: 10/04/23
Batch No.   : 23J032                         Date Extracted: 10/05/23 14:59
Sample ID   : 380-65252-1                   Date Analyzed: 10/05/23 14:59
Lab Samp ID: J032-01                        Dilution Factor: 1
Lab File ID: EJ05008A                       Matrix: WATER
Ext Btch ID: 23VG39J04                      % Moisture: NA
Calib. Ref.: EJ05004A                       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	0.0346	0.0400	86	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   : CMpang           Analyzed by   : CMpang

```

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

Client : EUROFINS EATON ANALYTICAL	Date Collected: 10/02/23 09:31
Project : 380-65252	Date Received: 10/04/23
Batch No. : 23J032	Date Extracted: 10/05/23 16:54
Sample ID : 380-65252-2	Date Analyzed: 10/05/23 16:54
Lab Samp ID: J032-02	Dilution Factor: 1
Lab File ID: EJ05011A	Matrix: WATER
Ext Btch ID: 23VG39J04	% Moisture: NA
Calib. Ref.: EJ05004A	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	0.0332	0.0400	83	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 : CMpang

Analyzed by : CMpang

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QC SUMMARIES

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

```

=====
Client      : EUROFINS EATON ANALYTICAL      Date Collected: 10/05/23 13:03
Project     : 380-65252                      Date Received: 10/05/23
Batch No.   : 23J032                          Date Extracted: 10/05/23 13:03
Sample ID   : MBLK1W                           Date Analyzed: 10/05/23 13:03
Lab Samp ID : VG39J04B                         Dilution Factor: 1
Lab File ID : EJ05005A                           Matrix: WATER
Ext Btch ID : 23VG39J04                         % Moisture: NA
Calib. Ref.: EJ05004A                           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	0.0330	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 : CMpang Analyzed by : CMpang

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-65252
BATCH NO. : 23J032
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	: VG39J04B	VG39J04L	VG39J04C
LAB FILE ID	: EJ05005A	EJ05006A	EJ05007A
DATE PREPARED	: 10/05/23 13:03	10/05/23 13:42	10/05/23 14:20
DATE ANALYZED	: 10/05/23 13:03	10/05/23 13:42	10/05/23 14:20
PREP BATCH	: 23VG39J04	23VG39J04	23VG39J04
CALIBRATION REF:	EJ05004A	EJ05004A	EJ05004A

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	0.472	94	0.500	0.485	97	3	60-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QLLimit (%)
Bromofluorobenzene	0.0400	0.0453	113	0.0400	0.0454	114	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 : 380-65252
BATCH NO. : 23J032
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: 380-65252-1	380-65252-1MS	380-65252-1MSD
LAB SAMPLE ID	: J032-01	J032-01M	J032-01S
LAB FILE ID	: EJ05008A	EJ05009A	EJ05010A
DATE PREPARED	: 10/05/23 14:59	10/05/23 15:37	10/05/23 16:16
DATE ANALYZED	: 10/05/23 14:59	10/05/23 15:37	10/05/23 16:16
PREP BATCH	: 23VG39J04	23VG39J04	23VG39J04
CALIBRATION REF:	EJ05004A	EJ05004A	EJ05004A

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QLLimit (%)	MaxRPD (%)
Gasoline	ND	0.500	0.425	85	0.500	0.485	97	13	50-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QLLimit (%)
Bromofluorobenzene	0.0400	0.0446	112	0.0400	0.0462	116	60-140

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

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-65252

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 23J032



CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-65252

SDG : 23J032

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 10/04/23 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. DSJ004WB - 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. DSJ004WL/DSJ004WC 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.

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-65252

SDG : 23J032

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 10/04/23 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. DSJ004WB - 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. J5J004WL/J5J004WC 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.

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-65252

SDG : 23J032

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 10/04/23 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. DSJ004WB - 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. J8J004WL/J8J004WC 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.

LAB CHRONICLE
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL
Project : 380-65252

SDG NO. : 23J032
Instrument ID : D5

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis Date/Time	Extraction Date/Time	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	DSJ004WB	1	NA	10/06/2323:12	10/05/2310:30	LJ05041A	LJ05037A	23DSJ004W	Method Blank
LCS1W	DSJ004WL	1	NA	10/06/2323:30	10/05/2310:30	LJ05042A	LJ05037A	23DSJ004W	Lab Control Sample (LCS)
LCD1W	DSJ004WC	1	NA	10/06/2323:49	10/05/2310:30	LJ05043A	LJ05037A	23DSJ004W	LCS Duplicate
380-65252-1	J032-01	1	NA	10/07/2302:36	10/05/2310:30	LJ05052A	LJ05037A	23DSJ004W	Field Sample

FN - Filename
% Moist - Percent Moisture



LAB CHRONICLE
PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL
Project : 380-65252

SDG NO. : 23J032
Instrument ID : D5

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis Date/Time	Extraction Date/Time	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	DSJ004WB	1	NA	10/06/2323:12	10/05/2310:30	LJ05041A	LJ05038A	23DSJ004W	Method Blank
LCS1W	J5J004WL	1	NA	10/07/2300:07	10/05/2310:30	LJ05044A	LJ05038A	23DSJ004W	Lab Control Sample (LCS)
LCD1W	J5J004WC	1	NA	10/07/2300:26	10/05/2310:30	LJ05045A	LJ05038A	23DSJ004W	LCS Duplicate
380-65252-1	J032-01	1	NA	10/07/2302:36	10/05/2310:30	LJ05052A	LJ05038A	23DSJ004W	Field Sample

FN - Filename
% Moist - Percent Moisture



LAB CHRONICLE
PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL
 Project : 380-65252
 Laboratory Sample ID : DSJ004WB
 SDG NO. : 23J032
 Instrument ID : D5

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
380-65252-1	DSJ004WB	1	NA	10/06/2323:12	10/05/2310:30	LJ05041A	LJ05040A	230SJ004W	Method Blank
	J8J004WL	1	NA	10/07/2300:45	10/05/2310:30	LJ05046A	LJ05040A	230SJ004W	Lab Control Sample (LCS)
	J8J004WC	1	NA	10/07/2301:03	10/05/2310:30	LJ05047A	LJ05040A	230SJ004W	LCS Duplicate
	J032-01	1	NA	10/07/2302:36	10/05/2310:30	LJ05052A	LJ05040A	230SJ004W	Field Sample

FN - Filename
 % Moist - Percent Moisture



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SAMPLE RESULTS

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/02/23 09:31
Project     : 380-65252                   Date Received: 10/04/23
Batch No.   : 23J032                       Date Extracted: 10/05/23 10:30
Sample ID   : 380-65252-1                 Date Analyzed: 10/07/23 02:36
Lab Samp ID: 23J032-01                     Dilution Factor: 1
Lab File ID: LJ05052A                       Matrix: WATER
Ext Btch ID: 23DSJ004W                       % Moisture: NA
Calib. Ref.: LJ05037A                       Instrument ID: D5
=====

```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
Diesel	ND	0.025	0.012	
Motor Oil	ND	0.050	0.025	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.368	0.500	74	60-130
Hexacosane	0.119	0.125	95	60-130

Notes:

```

Parameter      H-C Range
Diesel         C10-C24
Motor Oil      C24-C36

```

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

```

Sample Amount : 1000ml           Final Volume : 5ml
Prepared by   : RGalan           Analyzed by   : SDeeso

```

METHOD 3520C/8015B
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/02/23 09:31
Project     : 380-65252                   Date Received: 10/04/23
Batch No.   : 23J032                       Date Extracted: 10/05/23 10:30
Sample ID   : 380-65252-1                 Date Analyzed: 10/07/23 02:36
Lab Samp ID : 23J032-01                   Dilution Factor: 1
Lab File ID : LJ05052A                     Matrix: WATER
Ext Btch ID : 23DSJ004W                   % Moisture: NA
Calib. Ref.: LJ05038A                     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	0.368	0.500	74	60-130
Hexacosane	0.119	0.125	95	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

METHOD 3520C/8015B
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/02/23 09:31
Project     : 380-65252                 Date Received: 10/04/23
Batch No.   : 23J032                   Date Extracted: 10/05/23 10:30
Sample ID   : 380-65252-1              Date Analyzed: 10/07/23 02:36
Lab Samp ID : 23J032-01                 Dilution Factor: 1
Lab File ID : LJ05052A                  Matrix: WATER
Ext Btch ID : 23DSJ004W                 % Moisture: NA
Calib. Ref. : LJ05040A                  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	0.368	0.500	74	60-130
Hexacosane	0.119	0.125	95	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

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QC SUMMARIES

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL      Date Collected: 10/05/23 10:30
Project     : 380-65252                      Date Received: 10/05/23
Batch No.   : 23J032                         Date Extracted: 10/05/23 10:30
Sample ID   : MBLK1W                         Date Analyzed: 10/06/23 23:12
Lab Samp ID : DSJ004WB                       Dilution Factor: 1
Lab File ID : LJ05041A                       Matrix: WATER
Ext Btch ID : 23DSJ004W                     % Moisture: NA
Calib. Ref.: LJ05037A                       Instrument ID: D5
=====

```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
Diesel	ND	0.025	0.012	
Motor Oil	ND	0.050	0.025	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.342	0.500	68	60-130
Hexacosane	0.115	0.125	92	60-130

Notes:

Parameter H-C Range
Diesel C10-C24
Motor Oil C24-C36

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount : 1000ml Final Volume : 5ml
Prepared by : RGalan Analyzed by : SDeeso

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-65252
BATCH NO. : 23J032
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	: DSJ004WB	DSJ004WL	DSJ004WC
LAB FILE ID	: LJ05041A	LJ05042A	LJ05043A
DATE PREPARED	: 10/05/23 10:30	10/05/23 10:30	10/05/23 10:30
DATE ANALYZED	: 10/06/23 23:12	10/06/23 23:30	10/06/23 23:49
PREP BATCH	: 23DSJ004W	23DSJ004W	23DSJ004W
CALIBRATION REF:	LJ05037A	LJ05037A	LJ05037A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	RPD (%)	QLLimit (%)	MaxRPD (%)
Diesel	ND	2.50	2.39	96	2.50	2.45	98	2	50-130	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QLLimit (%)
Bromobenzene	0.500	0.305	61	0.500	0.359	72	60-130
Hexacosane	0.125	0.122	98	0.125	0.129	103	60-130

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

METHOD 3520C/8015B
 PETROLEUM HYDROCARBONS BY EXTRACTION

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=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/05/23 10:30
Project     : 380-65252                   Date Received: 10/05/23
Batch No.   : 23J032                       Date Extracted: 10/05/23 10:30
Sample ID   : MBLK1W                       Date Analyzed: 10/06/23 23:12
Lab Samp ID: DSJ004WB                       Dilution Factor: 1
Lab File ID: LJ05041A                       Matrix: WATER
Ext Btch ID: 23DSJ004W                       % Moisture: NA
Calib. Ref.: LJ05038A                       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	0.342	0.500	68	60-130
Hexacosane	0.115	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 : 380-65252
BATCH NO. : 23J032
METHOD : 3520C/8015B

MATRIX : WATER % MOISTURE:NA
DILUTION FACTOR: 1 1
SAMPLE ID : MBLK1W LCS1W LCD1W
LAB SAMPLE ID : DSJ004WB J5J004WL J5J004WC
LAB FILE ID : LJ05041A LJ05044A LJ05045A
DATE PREPARED : 10/05/23 10:30 10/05/23 10:30 10/05/23 10:30
DATE ANALYZED : 10/06/23 23:12 10/07/23 00:07 10/07/23 00:26
PREP BATCH : 23DSJ004W 23DSJ004W 23DSJ004W
CALIBRATION REF: LJ05038A LJ05038A LJ05038A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
JP5	ND	2.50	1.59	64	2.50	1.63	65	2	30-160	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromobenzene	0.500	0.357	71	0.500	0.378	76	60-130
Hexacosane	0.125	0.118	94	0.125	0.124	99	60-130

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

METHOD 3520C/8015B
 PETROLEUM HYDROCARBONS BY EXTRACTION

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=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/05/23 10:30
Project     : 380-65252                   Date Received: 10/05/23
Batch No.   : 23J032                       Date Extracted: 10/05/23 10:30
Sample ID   : MBLK1W                       Date Analyzed: 10/06/23 23:12
Lab Samp ID : DSJ004WB                     Dilution Factor: 1
Lab File ID : LJ05041A                     Matrix: WATER
Ext Btch ID : 23DSJ004W                   % Moisture: NA
Calib. Ref.: LJ05040A                     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	0.342	0.500	68	60-130
Hexacosane	0.115	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 : 380-65252
BATCH NO. : 23J032
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	: DSJ004WB	J8J004WL	J8J004WC
LAB FILE ID	: LJ05041A	LJ05046A	LJ05047A
DATE PREPARED	: 10/05/23 10:30	10/05/23 10:30	10/05/23 10:30
DATE ANALYZED	: 10/06/23 23:12	10/07/23 00:45	10/07/23 01:03
PREP BATCH	: 23DSJ004W	23DSJ004W	23DSJ004W
CALIBRATION REF:	LJ05040A	LJ05040A	LJ05040A

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	1.87	75	2.50	1.64	66	13	30-160	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromobenzene	0.500	0.439	88	0.500	0.389	78	60-130
Hexacosane	0.125	0.121	97	0.125	0.124	99	60-130

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

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-65252

METHOD SW8015C
ALCOHOLS BY GC

SDG#: 23J032



CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-65252

SDG : 23J032

METHOD SW8015C
ALCOHOLS BY GC

One(1) water sample was received on 10/04/23 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. MEJ001WB - 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. MEJ001WL/MEJ001WC 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 J032-01M/J032-01S. Refer to Matrix QC summary form for details.

Sample Analysis

The sample was analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
ALCOHOLS BY GC

Client : EUROFINS EATON ANALYTICAL
Project : 380-65252

SDG NO. : 23J032
Instrument ID : GCT050

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes

FN - Filename
% Moist - Percent Moisture

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SAMPLE RESULTS

METHOD SW8015C
ALCOHOLS BY GC

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/02/23
Project	: 380-65252	Date Received:	10/04/23
Batch No.	: 23J032	Date Extracted:	NA
Sample ID:	380-65252-1	Date Analyzed:	10/05/23 13:40
Lab Samp ID:	J032-01	Dilution Factor:	1
Lab File ID:	TJ05011A	Matrix	: WATER
Ext Btch ID:	MEJ001W	% Moisture	: NA
Calib. Ref.:	TJ05010A	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 : 380-65252 Date Received: NA
Batch No. : 23J032 Date Extracted: NA
Sample ID: MBLK1W Date Analyzed: 10/05/23 10:51
Lab Samp ID: MEJ001WB Dilution Factor: 1
Lab File ID: TJ05004A Matrix : WATER
Ext Btch ID: MEJ001W % Moisture : NA
Calib. Ref.: TJ05002A 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: 380-65252
BATCH NO.: 23J032
METHOD: METHOD SW8015C

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1
SAMPLE ID: MBLK1W
LAB SAMP ID: MEJ001WB MEJ001WL MEJ001WC
LAB FILE ID: TJ05004A TJ05005A TJ05006A
DATE EXTRACTED: NA NA NA DATE COLLECTED: NA
DATE ANALYZED: 10/05/2310:51 10/05/2311:08 10/05/2311:29 DATE RECEIVED: NA
PREP. BATCH: MEJ001W MEJ001W MEJ001W
CALIB. REF: TJ05002A TJ05002A TJ05002A

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	11400	114	10000	10500	105	8	60-130	30

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 380-65252
BATCH NO.: 23J032
METHOD: METHOD SW8015C

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1 1
SAMPLE ID: 380-65252-1
LAB SAMP ID: J032-01 J032-01M J032-01S
LAB FILE ID: TJ05011A TJ05012A TJ05013A
DATE EXTRACTED: NA NA NA DATE COLLECTED: 10/02/23
DATE ANALYZED: 10/05/2313:40 10/05/2313:56 10/05/2314:10 DATE RECEIVED: 10/04/23
PREP. BATCH: MEJ001W MEJ001W MEJ001W
CALIB. REF: TJ05010A TJ05010A TJ05010A

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	10600	106	10000	10700	107	1	60-130	30

November 16, 2023

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

Project Name: RED-HILL Project # 38001111 Job # 380-65252-1
 Physis Project ID: 1407003-448

Dear Rachelle,

Enclosed are the analytical results for the sample submitted to PHYSIS Environmental Laboratories, Inc. (PHYSIS) on 10/4/2023. 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,
misty mercier

Misty Mercier
 714 602-5320
 Extension 202
 mistymercier@physislabs.com

PROJECT SAMPLE LIST

Eurofins Eaton Analytical

PHYSIS Project ID: 1407003-448

RED-HILL Project # 38001111 Job # 380-65252-1

Total Samples: 1

PHYSIS ID	Sample ID	Description	Date	Time	Matrix	Sample Type
111798	MOANALUA WELLS	331-223-TP202 (380-65252-1)	10/2/2023	9:31	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.

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PHYSIS QUALIFIER CODES

CODE	DEFINITION
#	see Case Narrative
ND	analyte not detected at or above the MDL
B	analyte was detected in the procedural blank greater than 10 times the MDL
E	analyte concentration exceeds the upper limit of the linear calibration range, reported value is estimated
H	sample received and/or analyzed past the recommended holding time
J	analyte was detected at a concentration below the RL and above the MDL, reported value is estimated
N	insufficient sample, analysis could not be performed
M	analyte was outside the specified accuracy and/or precision acceptance limits due to matrix interference. The associated B/BS were within limits, therefore the sample data was reported without further clarification
SH	analyte concentration in the project sample exceeded the spike concentration, therefore accuracy and/or precision acceptance limits do not apply
SL	analyte results were lower than 10 times the MDL, therefore accuracy and/or precision acceptance limits do not apply
NH	project sample was heterogeneous and sample homogeneity could not be readily achieved using routine laboratory practices, therefore accuracy and/or precision acceptance limits do not apply
Q	analyte was outside the specified QAPP acceptance limits for precision and/or accuracy but within Physis derived acceptance limits, therefore the sample data was reported without further clarification
R	Physis' QM allows for 5% of the target compounds greater than 10 times the MDL to be outside the specified acceptance limits for precision and/or accuracy. This is often due to random error and does not indicate any significant problems with the analysis of these project samples

CASE NARRATIVE

QUALIFIER NOTES

In addition to the use of analyte specific Physis Qualifier Codes where applicable, the following were also noted.

ND

MDL is listed due to report format restrictions; it is not used in reporting. Analytical results reported are ND at the RL.

ANALYTICAL 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: 111798-R1	MOANALUA WELLS 331-223-TP202		Matrix: Samplewater					Sampled: 02-Oct-23 9:31		Received: 04-Oct-23	
(2,4,6-Tribromophenol)	EPA 625.1	% Recovery	90	1			Total		O-42134	09-Oct-23	08-Nov-23
(d5-Phenol)	EPA 625.1	% Recovery	55	1			Total		O-42134	09-Oct-23	08-Nov-23
2,4,5-Trichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42134	09-Oct-23	08-Nov-23
2,4,6-Trichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42134	09-Oct-23	08-Nov-23
2,4-Dichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42134	09-Oct-23	08-Nov-23
2,4-Dinitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-42134	09-Oct-23	08-Nov-23
2,6-Dichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42134	09-Oct-23	08-Nov-23
2,6-Di-tert-butyl-4-methylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42134	09-Oct-23	08-Nov-23
2,6-Di-tert-butylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42134	09-Oct-23	08-Nov-23
2-Chlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42134	09-Oct-23	08-Nov-23
2-Methyl-4,6-dinitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-42134	09-Oct-23	08-Nov-23
2-Methylphenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-42134	09-Oct-23	08-Nov-23
2-Nitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-42134	09-Oct-23	08-Nov-23
3+4-Methylphenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-42134	09-Oct-23	08-Nov-23
4-Chloro-3-methylphenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-42134	09-Oct-23	08-Nov-23
4-Nitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-42134	09-Oct-23	08-Nov-23
6-tert-butyl-2,4-dimethylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42134	09-Oct-23	08-Nov-23
Benzoic Acid	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-42134	09-Oct-23	08-Nov-23
Benzyl Alcohol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-42134	09-Oct-23	08-Nov-23
Pentachlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42134	09-Oct-23	08-Nov-23
Phenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-42134	09-Oct-23	08-Nov-23
p-tert-Butylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42134	09-Oct-23	08-Nov-23

Base/Neutral Extractable Compounds

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 111798-R1	MOANALUA WELLS 331-223-TP202		Matrix: Samplewater				Sampled: 02-Oct-23 9:31			Received: 04-Oct-23	
2-Chloronaphthalene	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42134	09-Oct-23	08-Nov-23
2-Nitroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42134	09-Oct-23	08-Nov-23
3-Nitroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42134	09-Oct-23	08-Nov-23
4-Bromophenylphenyl ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42134	09-Oct-23	08-Nov-23
4-Chloroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42134	09-Oct-23	08-Nov-23
4-Chlorophenylphenyl ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42134	09-Oct-23	08-Nov-23
4-Nitroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42134	09-Oct-23	08-Nov-23
Aniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42134	09-Oct-23	08-Nov-23
Benzidine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42134	09-Oct-23	08-Nov-23
Bis(2-Chloroethoxy) methane	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42134	09-Oct-23	08-Nov-23
Bis(2-Chloroethyl) ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42134	09-Oct-23	08-Nov-23
Bis(2-Chloroisopropyl) ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42134	09-Oct-23	08-Nov-23
Dibenzofuran	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42134	09-Oct-23	08-Nov-23
Disalicylidenepropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42134	09-Oct-23	08-Nov-23
Hexachloroethane	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42134	09-Oct-23	08-Nov-23
Nitrobenzene	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42134	09-Oct-23	08-Nov-23
N-Nitrosodi-n-propylamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42134	09-Oct-23	08-Nov-23
N-Nitrosodiphenylamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42134	09-Oct-23	08-Nov-23

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 111798-R1	MOANALUA WELLS 331-223-TP202 Matrix: Samplewater						Sampled: 02-Oct-23 9:31		Received: 04-Oct-23		
(d10-Acenaphthene)	EPA 625.1	% Recovery	97	1			Total		O-42134	09-Oct-23	08-Nov-23
(d10-Phenanthrene)	EPA 625.1	% Recovery	93	1			Total		O-42134	09-Oct-23	08-Nov-23
(d12-Chrysene)	EPA 625.1	% Recovery	92	1			Total		O-42134	09-Oct-23	08-Nov-23
(d12-Perylene)	EPA 625.1	% Recovery	89	1			Total		O-42134	09-Oct-23	08-Nov-23
(d8-Naphthalene)	EPA 625.1	% Recovery	93	1			Total		O-42134	09-Oct-23	08-Nov-23
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	08-Nov-23
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	08-Nov-23
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	08-Nov-23
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	08-Nov-23
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	08-Nov-23
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	08-Nov-23
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	08-Nov-23
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	08-Nov-23
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	08-Nov-23
Benzo[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	08-Nov-23
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	08-Nov-23
Benzo[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	08-Nov-23
Benzo[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	08-Nov-23
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	08-Nov-23
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	08-Nov-23
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	08-Nov-23
Dibenz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	08-Nov-23
Dibenzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	08-Nov-23
Dibenzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	08-Nov-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-42134	09-Oct-23	08-Nov-23
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	08-Nov-23
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	08-Nov-23
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	08-Nov-23
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	08-Nov-23
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	08-Nov-23
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	08-Nov-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 CODE	
							LEVEL	RESULT	% LIMITS	% LIMITS		
Sample ID: 11797-B1		QAQC Procedural Blank			Matrix: BlankMatrix			Sampled:		Received:		
		Method: EPA 625.1			Batch ID: O-42134			Prepared: 09-Oct-23		Analyzed: 08-Nov-23		
(2,4,6-Tribromophenol)	Total	63	1				% Recovery	100	63	30 - 130%	PASS	
(d5-Phenol)	Total	109	1				% Recovery	100	109	0 - 130%	PASS	
2,4,5-Trichlorophenol	Total	ND	1	0.05	0.1	µg/L						
2,4,6-Trichlorophenol	Total	ND	1	0.05	0.1	µg/L						
2,4-Dichlorophenol	Total	ND	1	0.05	0.1	µg/L						
2,4-Dinitrophenol	Total	ND	1	0.1	0.2	µg/L						
2,6-Dichlorophenol	Total	ND	1	0.05	0.1	µg/L						
2,6-Di-tert-butyl-4-methylphenol	Total	ND	1	0.05	0.1	µg/L						
2,6-Di-tert-butylphenol	Total	ND	1	0.05	0.1	µg/L						
2-Chlorophenol	Total	ND	1	0.05	0.1	µg/L						
2-Methyl-4,6-dinitrophenol	Total	ND	1	0.1	0.2	µg/L						
2-Methylphenol	Total	ND	1	0.1	0.2	µg/L						
2-Nitrophenol	Total	ND	1	0.1	0.2	µg/L						
3+4-Methylphenol	Total	ND	1	0.1	0.2	µg/L						
4-Chloro-3-methylphenol	Total	ND	1	0.1	0.2	µg/L						
4-Nitrophenol	Total	ND	1	0.1	0.2	µg/L						
6-tert-butyl-2,4-dimethylphenol	Total	ND	1	0.05	0.1	µg/L						
Benzoic Acid	Total	ND	1	0.1	0.2	µg/L						
Benzyl Alcohol	Total	ND	1	0.1	0.2	µg/L						
Pentachlorophenol	Total	ND	1	0.05	0.1	µg/L						
Phenol	Total	ND	1	0.1	0.2	µg/L						
p-tert-Butylphenol	Total	ND	1	0.05	0.1	µg/L						

Acid Extractable Compounds

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY		PRECISION	QA CODE
							LEVEL	RESULT	%	LIMITS	%	LIMITS
Sample ID: 111797-BS1		QAQC Procedural Blank			Matrix: BlankMatrix			Sampled:		Received:		
Method: EPA 625.1		Batch ID: O-42134			Prepared: 09-Oct-23		Analyzed: 08-Nov-23					
(2,4,6-Tribromophenol)	Total	70	1			% Recovery	100	0	70	30 - 130%	PASS	
(d5-Phenol)	Total	114	1			% Recovery	100	0	114	0 - 130%	PASS	
2,4,5-Trichlorophenol	Total	0.704	1	0.05	0.1	µg/L	1	0	70	30 - 130%	PASS	
2,4,6-Trichlorophenol	Total	0.654	1	0.05	0.1	µg/L	1	0	65	56 - 118%	PASS	
2,4-Dichlorophenol	Total	0.867	1	0.05	0.1	µg/L	1	0	87	51 - 117%	PASS	
2,4-Dinitrophenol	Total	0.0199	1	0.1	0.2	µg/L	1	0	2	0 - 152%	PASS	
2,6-Dichlorophenol	Total	0.428	1	0.05	0.1	µg/L	0.5	0	86	30 - 130%	PASS	
2,6-Di-tert-butyl-4-methylphenol	Total	0.848	1	0.05	0.1	µg/L	1	0	85	50 - 150%	PASS	
2,6-Di-tert-butylphenol	Total	0.858	1	0.05	0.1	µg/L	1	0	86	50 - 150%	PASS	
2-Chlorophenol	Total	0.861	1	0.05	0.1	µg/L	1	0	86	41 - 110%	PASS	
2-Methyl-4,6-dinitrophenol	Total	0.759	1	0.1	0.2	µg/L	1	0	76	0 - 141%	PASS	
2-Methylphenol	Total	0.889	1	0.1	0.2	µg/L	1	0	89	40 - 117%	PASS	
2-Nitrophenol	Total	0.948	1	0.1	0.2	µg/L	1	0	95	40 - 117%	PASS	
3+4-Methylphenol	Total	0.922	1	0.1	0.2	µg/L	1	0	92	0 - 130%	PASS	
4-Chloro-3-methylphenol	Total	0.989	1	0.1	0.2	µg/L	1	0	99	51 - 128%	PASS	
4-Nitrophenol	Total	2.19	1	0.1	0.2	µg/L	2	0	110	10 - 164%	PASS	
6-tert-butyl-2,4-dimethylphenol	Total	0.952	1	0.05	0.1	µg/L	1	0	95	50 - 150%	PASS	
Benzoic Acid	Total	0.132	1	0.1	0.2	µg/L	1	0	13	2 - 145%	PASS	
Benzyl Alcohol	Total	0.915	1	0.1	0.2	µg/L	1	0	92	43 - 148%	PASS	
Pentachlorophenol	Total	0.573	1	0.05	0.1	µg/L	1	0	57	36 - 111%	PASS	
Phenol	Total	0.868	1	0.1	0.2	µg/L	1	0	87	29 - 114%	PASS	
p-tert-Butylphenol	Total	1.33	1	0.05	0.1	µg/L	1	0	133	50 - 150%	PASS	

Acid Extractable Compounds

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY		PRECISION		QA CODE	
							LEVEL	RESULT	%	LIMITS	%	LIMITS		
Sample ID: 111797-BS2		QAQC Procedural Blank			Matrix: BlankMatrix			Sampled:			Received:			
		Method: EPA 625.1			Batch ID: O-42134			Prepared: 09-Oct-23			Analyzed: 08-Nov-23			
(2,4,6-Tribromophenol)	Total	65	1			% Recovery	100	0	65	30 - 130%	PASS	7	30	PASS
(d5-Phenol)	Total	113	1			% Recovery	100	0	113	0 - 130%	PASS	1	30	PASS
2,4,5-Trichlorophenol	Total	0.772	1	0.05	0.1	µg/L	1	0	77	30 - 130%	PASS	10	30	PASS
2,4,6-Trichlorophenol	Total	0.52	1	0.05	0.1	µg/L	1	0	52	56 - 118%	PASS	22	30	PASS
2,4-Dichlorophenol	Total	0.802	1	0.05	0.1	µg/L	1	0	80	51 - 117%	PASS	8	30	PASS
2,4-Dinitrophenol	Total	0	1	0.1	0.2	µg/L	1	0	0	0 - 152%	PASS	181	30	FAIL R
2,6-Dichlorophenol	Total	0.384	1	0.05	0.1	µg/L	0.5	0	77	30 - 130%	PASS	11	30	PASS
2,6-Di-tert-butyl-4-methylphenol	Total	0.913	1	0.05	0.1	µg/L	1	0	91	50 - 150%	PASS	7	30	PASS
2,6-Di-tert-butylphenol	Total	0.884	1	0.05	0.1	µg/L	1	0	88	50 - 150%	PASS	2	30	PASS
2-Chlorophenol	Total	0.844	1	0.05	0.1	µg/L	1	0	84	41 - 110%	PASS	2	30	PASS
2-Methyl-4,6-dinitrophenol	Total	0.685	1	0.1	0.2	µg/L	1	0	69	0 - 141%	PASS	11	30	PASS
2-Methylphenol	Total	0.895	1	0.1	0.2	µg/L	1	0	89	40 - 117%	PASS	1	30	PASS
2-Nitrophenol	Total	0.949	1	0.1	0.2	µg/L	1	0	95	40 - 117%	PASS	0	30	PASS
3+4-Methylphenol	Total	0.931	1	0.1	0.2	µg/L	1	0	93	0 - 130%	PASS	1	30	PASS
4-Chloro-3-methylphenol	Total	1.01	1	0.1	0.2	µg/L	1	0	101	51 - 128%	PASS	2	30	PASS
4-Nitrophenol	Total	2.27	1	0.1	0.2	µg/L	2	0	113	10 - 164%	PASS	4	30	PASS
6-tert-butyl-2,4-dimethylphenol	Total	1.01	1	0.05	0.1	µg/L	1	0	101	50 - 150%	PASS	6	30	PASS
Benzoic Acid	Total	0.157	1	0.1	0.2	µg/L	1	0	16	2 - 145%	PASS	21	30	PASS
Benzyl Alcohol	Total	0.937	1	0.1	0.2	µg/L	1	0	94	43 - 148%	PASS	2	30	PASS
Pentachlorophenol	Total	0.738	1	0.05	0.1	µg/L	1	0	74	36 - 111%	PASS	26	30	PASS
Phenol	Total	0.873	1	0.1	0.2	µg/L	1	0	87	29 - 114%	PASS	0	30	PASS
p-tert-Butylphenol	Total	1.38	1	0.05	0.1	µg/L	1	0	138	50 - 150%	PASS	4	30	PASS

Base/Neutral Extractable Compounds

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY	PRECISION	QA CODE
							LEVEL	RESULT	%	LIMITS	%
Sample ID: 111797-B1		QAQC Procedural Blank			Matrix: BlankMatrix		Sampled:		Received:		
Method: EPA 625.1		Batch ID: O-42134		Prepared: 09-Oct-23		Analyzed: 08-Nov-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: 111797-BS1		QAQC Procedural Blank			Matrix: BlankMatrix			Sampled:		Received:		
Method: EPA 625.1		Batch ID: O-42134			Prepared: 09-Oct-23		Analyzed: 08-Nov-23					
2-Chloronaphthalene	Total	0.894	1	0.05	0.1	µg/L	1	0	89	53 - 130%	PASS	
2-Nitroaniline	Total	0.982	1	0.05	0.1	µg/L	1	0	98	69 - 114%	PASS	
3-Nitroaniline	Total	0.79	1	0.05	0.1	µg/L	1	0	79	23 - 137%	PASS	
4-Bromophenylphenyl ether	Total	0.826	1	0.05	0.1	µg/L	1	0	83	61 - 132%	PASS	
4-Chloroaniline	Total	0.533	1	0.05	0.1	µg/L	1	0	53	50 - 150%	PASS	
4-Chlorophenylphenyl ether	Total	0.855	1	0.05	0.1	µg/L	1	0	86	63 - 130%	PASS	
4-Nitroaniline	Total	1.05	1	0.05	0.1	µg/L	1	0	105	10 - 159%	PASS	
Aniline	Total	0.539	1	0.05	0.1	µg/L	1	0	54	50 - 150%	PASS	
Benzidine	Total	0.024	1	0.05	0.1	µg/L	1	0	2	0 - 125%	PASS	
Bis(2-Chloroethoxy) methane	Total	1.03	1	0.05	0.1	µg/L	1	0	103	66 - 122%	PASS	
Bis(2-Chloroethyl) ether	Total	0.934	1	0.05	0.1	µg/L	1	0	93	43 - 127%	PASS	
Bis(2-Chloroisopropyl) ether	Total	1.04	1	0.05	0.1	µg/L	1	0	104	49 - 128%	PASS	
Dibenzofuran	Total	1.05	1	0.05	0.1	µg/L	1	0	105	50 - 150%	PASS	
Disalicylidene-propanediamin	Total	7.01	1	0.05	0.1	µg/L	10	0	70	50 - 150%	PASS	
Hexachloroethane	Total	0.695	1	0.05	0.1	µg/L	1	0	69	27 - 130%	PASS	
Nitrobenzene	Total	0.876	1	0.05	0.1	µg/L	1	0	88	54 - 111%	PASS	
N-Nitrosodi-n-propylamine	Total	0.908	1	0.05	0.1	µg/L	1	0	91	61 - 152%	PASS	
N-Nitrosodiphenylamine	Total	0.881	1	0.05	0.1	µg/L	1	0	88	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: 111797-BS2		QAQC Procedural Blank			Matrix: BlankMatrix			Sampled:		Received:				
Method: EPA 625.1		Batch ID: O-42134			Prepared: 09-Oct-23		Analyzed: 08-Nov-23							
2-Chloronaphthalene	Total	0.923	1	0.05	0.1	µg/L	1	0	92	53 - 130%	PASS	3	30	PASS
2-Nitroaniline	Total	1.06	1	0.05	0.1	µg/L	1	0	106	69 - 114%	PASS	8	30	PASS
3-Nitroaniline	Total	0.879	1	0.05	0.1	µg/L	1	0	88	23 - 137%	PASS	11	30	PASS
4-Bromophenylphenyl ether	Total	0.869	1	0.05	0.1	µg/L	1	0	87	61 - 132%	PASS	5	30	PASS
4-Chloroaniline	Total	0.579	1	0.05	0.1	µg/L	1	0	58	50 - 150%	PASS	9	30	PASS
4-Chlorophenylphenyl ether	Total	0.895	1	0.05	0.1	µg/L	1	0	89	63 - 130%	PASS	5	30	PASS
4-Nitroaniline	Total	1.11	1	0.05	0.1	µg/L	1	0	111	10 - 159%	PASS	6	30	PASS
Aniline	Total	0.602	1	0.05	0.1	µg/L	1	0	60	50 - 150%	PASS	11	30	PASS
Benzidine	Total	0.0213	1	0.05	0.1	µg/L	1	0	2	0 - 125%	PASS	0	30	PASS
Bis(2-Chloroethoxy) methane	Total	1.06	1	0.05	0.1	µg/L	1	0	106	66 - 122%	PASS	3	30	PASS
Bis(2-Chloroethyl) ether	Total	0.913	1	0.05	0.1	µg/L	1	0	91	43 - 127%	PASS	2	30	PASS
Bis(2-Chloroisopropyl) ether	Total	1.03	1	0.05	0.1	µg/L	1	0	103	49 - 128%	PASS	1	30	PASS
Dibenzofuran	Total	0.959	1	0.05	0.1	µg/L	1	0	96	50 - 150%	PASS	9	30	PASS
Disalicylidene-propanediamin	Total	9.87	1	0.05	0.1	µg/L	10	0	99	50 - 150%	PASS	34	30	FAIL R
Hexachloroethane	Total	0.72	1	0.05	0.1	µg/L	1	0	72	27 - 130%	PASS	3	30	PASS
Nitrobenzene	Total	0.889	1	0.05	0.1	µg/L	1	0	89	54 - 111%	PASS	1	30	PASS
N-Nitrosodi-n-propylamine	Total	0.937	1	0.05	0.1	µg/L	1	0	94	61 - 152%	PASS	3	30	PASS
N-Nitrosodiphenylamine	Total	0.92	1	0.05	0.1	µg/L	1	0	92	49 - 142%	PASS	4	30	PASS

Polynuclear Aromatic Hydrocarbons

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY	PRECISION	QA CODE
							LEVEL	RESULT	% LIMITS	% LIMITS	
Sample ID: 11797-B1		QAQC Procedural Blank			Matrix: BlankMatrix		Sampled:		Received:		
Method: EPA 625.1		Batch ID: O-42134		Prepared: 09-Oct-23		Analyzed: 08-Nov-23					
(d10-Acenaphthene)	Total	106	1			% Recovery	100	106	27 - 133%	PASS	
(d10-Phenanthrene)	Total	95	1			% Recovery	100	95	43 - 129%	PASS	
(d12-Chrysene)	Total	93	1			% Recovery	100	93	52 - 144%	PASS	
(d12-Perylene)	Total	85	1			% Recovery	100	85	36 - 161%	PASS	
(d8-Naphthalene)	Total	106	1			% Recovery	100	106	25 - 125%	PASS	
1-Methylnaphthalene	Total	ND	1	0.001	0.005	µg/L					
1-Methylphenanthrene	Total	ND	1	0.001	0.005	µg/L					
2,3,5-Trimethylnaphthalene	Total	ND	1	0.001	0.005	µg/L					
2,6-Dimethylnaphthalene	Total	ND	1	0.001	0.005	µg/L					
2-Methylnaphthalene	Total	ND	1	0.001	0.005	µg/L					
Acenaphthene	Total	ND	1	0.001	0.005	µg/L					
Acenaphthylene	Total	ND	1	0.001	0.005	µg/L					
Anthracene	Total	ND	1	0.001	0.005	µg/L					
Benz[a]anthracene	Total	ND	1	0.001	0.005	µg/L					
Benzo[a]pyrene	Total	ND	1	0.001	0.005	µg/L					
Benzo[b]fluoranthene	Total	ND	1	0.001	0.005	µg/L					
Benzo[e]pyrene	Total	ND	1	0.001	0.005	µg/L					
Benzo[g,h,i]perylene	Total	ND	1	0.001	0.005	µg/L					
Benzo[k]fluoranthene	Total	ND	1	0.001	0.005	µg/L					
Biphenyl	Total	ND	1	0.001	0.005	µg/L					
Chrysene	Total	ND	1	0.001	0.005	µg/L					
Dibenz[a,h]anthracene	Total	ND	1	0.001	0.005	µg/L					
Dibenzo[a,l]pyrene	Total	ND	1	0.001	0.005	µg/L					
Dibenzothiophene	Total	ND	1	0.001	0.005	µg/L					

Polynuclear Aromatic Hydrocarbons

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY		PRECISION		QA CODE _c
							LEVEL	RESULT	%	LIMITS	%	LIMITS	
Fluoranthene	Total	ND	1	0.001	0.005	µg/L							
Fluorene	Total	ND	1	0.001	0.005	µg/L							
Indeno[1,2,3-cd]pyrene	Total	ND	1	0.001	0.005	µg/L							
Naphthalene	Total	ND	1	0.001	0.005	µg/L							
Perylene	Total	ND	1	0.001	0.005	µg/L							
Phenanthrene	Total	ND	1	0.001	0.005	µg/L							
Pyrene	Total	ND	1	0.001	0.005	µg/L							



Polynuclear Aromatic Hydrocarbons

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY	PRECISION	QA CODE	
							LEVEL	RESULT	%	LIMITS	%	LIMITS
Sample ID: 111797-BS1		QAQC Procedural Blank			Matrix: BlankMatrix			Sampled:		Received:		
		Method: EPA 625.1			Batch ID: O-42134			Prepared: 09-Oct-23		Analyzed: 08-Nov-23		
(d10-Acenaphthene)	Total	102	1				% Recovery	100	0	102	27 - 133%	PASS
(d10-Phenanthrene)	Total	92	1				% Recovery	100	0	92	43 - 129%	PASS
(d12-Chrysene)	Total	95	1				% Recovery	100	0	95	52 - 144%	PASS
(d12-Perylene)	Total	100	1				% Recovery	100	0	100	36 - 161%	PASS
(d8-Naphthalene)	Total	102	1				% Recovery	100	0	102	25 - 125%	PASS
1-Methylnaphthalene	Total	0.485	1	0.001	0.005	µg/L		0.5	0	97	31 - 128%	PASS
1-Methylphenanthrene	Total	0.438	1	0.001	0.005	µg/L		0.5	0	88	66 - 127%	PASS
2,3,5-Trimethylnaphthalene	Total	0.47	1	0.001	0.005	µg/L		0.5	0	94	55 - 122%	PASS
2,6-Dimethylnaphthalene	Total	0.471	1	0.001	0.005	µg/L		0.5	0	94	48 - 120%	PASS
2-Methylnaphthalene	Total	1.55	1	0.001	0.005	µg/L		1.5	0	103	47 - 130%	PASS
Acenaphthene	Total	1.57	1	0.001	0.005	µg/L		1.5	0	105	53 - 131%	PASS
Acenaphthylene	Total	1.58	1	0.001	0.005	µg/L		1.5	0	105	43 - 140%	PASS
Anthracene	Total	1.4	1	0.001	0.005	µg/L		1.5	0	93	58 - 135%	PASS
Benz[a]anthracene	Total	1.57	1	0.001	0.005	µg/L		1.5	0	105	55 - 145%	PASS
Benzo[a]pyrene	Total	1.32	1	0.001	0.005	µg/L		1.5	0	88	51 - 143%	PASS
Benzo[b]fluoranthene	Total	1.47	1	0.001	0.005	µg/L		1.5	0	98	46 - 165%	PASS
Benzo[e]pyrene	Total	0.434	1	0.001	0.005	µg/L		0.5	0	87	42 - 152%	PASS
Benzo[g,h,i]perylene	Total	1.38	1	0.001	0.005	µg/L		1.5	0	92	63 - 133%	PASS
Benzo[k]fluoranthene	Total	1.4	1	0.001	0.005	µg/L		1.5	0	93	56 - 145%	PASS
Biphenyl	Total	0.488	1	0.001	0.005	µg/L		0.5	0	98	56 - 119%	PASS
Chrysene	Total	1.44	1	0.001	0.005	µg/L		1.5	0	96	56 - 141%	PASS
Dibenz[a,h]anthracene	Total	1.25	1	0.001	0.005	µg/L		1.5	0	83	55 - 150%	PASS
Dibenzo[a,l]pyrene	Total	0.701	1	0.001	0.005	µg/L		0.5	0	140	50 - 150%	PASS
Dibenzothiophene	Total	0.461	1	0.001	0.005	µg/L		0.5	0	92	46 - 126%	PASS

Polynuclear Aromatic Hydrocarbons

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY		PRECISION		QA CODE _c
							LEVEL	RESULT	%	LIMITS	%	LIMITS	
Fluoranthene	Total	1.44	1	0.001	0.005	µg/L	1.5	0	96	60 - 146%	PASS		
Fluorene	Total	1.5	1	0.001	0.005	µg/L	1.5	0	100	58 - 131%	PASS		
Indeno[1,2,3-cd]pyrene	Total	1.21	1	0.001	0.005	µg/L	1.5	0	81	50 - 151%	PASS		
Naphthalene	Total	1.55	1	0.001	0.005	µg/L	1.5	0	103	41 - 126%	PASS		
Perylene	Total	0.477	1	0.001	0.005	µg/L	0.5	0	95	48 - 141%	PASS		
Phenanthrene	Total	1.44	1	0.001	0.005	µg/L	1.5	0	96	67 - 127%	PASS		
Pyrene	Total	1.44	1	0.001	0.005	µg/L	1.5	0	96	54 - 156%	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: 11797-BS2		QAQC Procedural Blank			Matrix: BlankMatrix			Sampled:			Received:			
Method: EPA 625.1		Batch ID: O-42134			Prepared: 09-Oct-23			Analyzed: 08-Nov-23						
(d10-Acenaphthene)	Total	104	1			% Recovery	100	0	104	27 - 133%	PASS	2	30	PASS
(d10-Phenanthrene)	Total	97	1			% Recovery	100	0	97	43 - 129%	PASS	5	30	PASS
(d12-Chrysene)	Total	93	1			% Recovery	100	0	93	52 - 144%	PASS	2	30	PASS
(d12-Perylene)	Total	88	1			% Recovery	100	0	88	36 - 161%	PASS	13	30	PASS
(d8-Naphthalene)	Total	103	1			% Recovery	100	0	103	25 - 125%	PASS	1	30	PASS
1-Methylnaphthalene	Total	0.486	1	0.001	0.005	µg/L	0.5	0	97	31 - 128%	PASS	0	30	PASS
1-Methylphenanthrene	Total	0.46	1	0.001	0.005	µg/L	0.5	0	92	66 - 127%	PASS	4	30	PASS
2,3,5-Trimethylnaphthalene	Total	0.485	1	0.001	0.005	µg/L	0.5	0	97	55 - 122%	PASS	3	30	PASS
2,6-Dimethylnaphthalene	Total	0.492	1	0.001	0.005	µg/L	0.5	0	98	48 - 120%	PASS	4	30	PASS
2-Methylnaphthalene	Total	1.58	1	0.001	0.005	µg/L	1.5	0	105	47 - 130%	PASS	2	30	PASS
Acenaphthene	Total	1.63	1	0.001	0.005	µg/L	1.5	0	109	53 - 131%	PASS	4	30	PASS
Acenaphthylene	Total	1.66	1	0.001	0.005	µg/L	1.5	0	111	43 - 140%	PASS	6	30	PASS
Anthracene	Total	1.51	1	0.001	0.005	µg/L	1.5	0	101	58 - 135%	PASS	8	30	PASS
Benz[a]anthracene	Total	1.54	1	0.001	0.005	µg/L	1.5	0	103	55 - 145%	PASS	2	30	PASS
Benzo[a]pyrene	Total	1.35	1	0.001	0.005	µg/L	1.5	0	90	51 - 143%	PASS	2	30	PASS
Benzo[b]fluoranthene	Total	1.5	1	0.001	0.005	µg/L	1.5	0	100	46 - 165%	PASS	2	30	PASS
Benzo[e]pyrene	Total	0.444	1	0.001	0.005	µg/L	0.5	0	89	42 - 152%	PASS	2	30	PASS
Benzo[g,h,i]perylene	Total	1.41	1	0.001	0.005	µg/L	1.5	0	94	63 - 133%	PASS	2	30	PASS
Benzo[k]fluoranthene	Total	1.51	1	0.001	0.005	µg/L	1.5	0	101	56 - 145%	PASS	8	30	PASS
Biphenyl	Total	0.497	1	0.001	0.005	µg/L	0.5	0	99	56 - 119%	PASS	1	30	PASS
Chrysene	Total	1.37	1	0.001	0.005	µg/L	1.5	0	91	56 - 141%	PASS	5	30	PASS
Dibenz[a,h]anthracene	Total	1.28	1	0.001	0.005	µg/L	1.5	0	85	55 - 150%	PASS	2	30	PASS
Dibenzo[a,l]pyrene	Total	0.724	1	0.001	0.005	µg/L	0.5	0	145	50 - 150%	PASS	4	30	PASS
Dibenzothiophene	Total	0.483	1	0.001	0.005	µg/L	0.5	0	97	46 - 126%	PASS	5	30	PASS

Polynuclear Aromatic Hydrocarbons

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY		PRECISION		QA CODE _c	
							LEVEL	RESULT	%	LIMITS	%	LIMITS		
Fluoranthene	Total	1.51	1	0.001	0.005	µg/L	1.5	0	101	60 - 146%	PASS	5	30	PASS
Fluorene	Total	1.59	1	0.001	0.005	µg/L	1.5	0	106	58 - 131%	PASS	6	30	PASS
Indeno[1,2,3-cd]pyrene	Total	1.26	1	0.001	0.005	µg/L	1.5	0	84	50 - 151%	PASS	4	30	PASS
Naphthalene	Total	1.57	1	0.001	0.005	µg/L	1.5	0	105	41 - 126%	PASS	2	30	PASS
Perylene	Total	0.474	1	0.001	0.005	µg/L	0.5	0	95	48 - 141%	PASS	0	30	PASS
Phenanthrene	Total	1.51	1	0.001	0.005	µg/L	1.5	0	101	67 - 127%	PASS	5	30	PASS
Pyrene	Total	1.51	1	0.001	0.005	µg/L	1.5	0	101	54 - 156%	PASS	5	30	PASS

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PHYSIS

TENTATIVELY

IDENTIFIED COMPOUNDS

ENVIRONMENTAL LABORATORIES, INC.

Innovative Solutions for Nature

Sample ID: Lab Blank B1_42134

Retention Time	Area (% of total)	Concentration (ng/L)	Library/ID	Cas Number	Match Quality (%)
35.3964	6.0784	1111	Anthracene-D10	1517-22-2	96
10.6068	3.6987	676	1,5-Heptadien-4-one, 3,3,6-trimethyl-	546-49-6	87
32.1633	1.1327	207	Benzoic acid, 2-ethylhexyl ester	5444-75-7	99
56.9306	1.0239	187	Hexanedioic acid, bis(2-ethylhexyl) ester	103-23-1	98
29.9720	0.8507	156	Hexanoic acid, 3,5,5-trimethyl-, 2-ethylhexyl ester	1000406-82-2	98

Concentration estimated using the response for Anthracene-d10

Sample ID: 111798

Retention Time	Area (% of total)	Concentration (ng/L)	Library/ID	Cas Number	Match Quality (%)
35.3917	6.1819	1111	Anthracene-D10-	1719-06-8	97
10.6068	3.7978	683	3,3-Diethoxy-1-propyne	10160-87-9	88
10.6068	3.7924	682	1,5-Heptadien-4-one, 3,3,6-trimethyl-	546-49-6	88
10.3690	0.6448	116	Hydroperoxide, 1-methylpentyl	24254-55-5	92

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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Project Iteration ID: 1407003-448
 Client Name: Eurofins Eaton Analytical
 Project Name: RED-HILL Project # 38001111 Job # 380-65252-1
 COC Page Number: 2 of 2
 Bottle Label Color: NA

Sample Receipt Summary

Receiving Info

1. Initials Received By: MIN
2. Date Received: 10/4/23
3. Time Received: 1023
4. Client Name: Eurofins
5. Courier Information: (Please circle)
 - Client
 - UPS
 - Area Fast
 - DRS
 - FedEx
 - GSO/GLS
 - Ontrac
 - PAMS
 - PHYSIS Driver:
 - i. Start Time: _____
 - ii. End Time: _____
 - iii. Total Mileage: _____
 - iv. Number of Pickups: _____
6. Container Information: (Please put the # of containers or circle none)
 - 1 Cooler
 - Styrofoam Cooler
 - Boxes
 - None
 - Carboy(s)
 - Carboy Trash Can(s)
 - Carboy Cap(s)
 - Other _____
7. What type of ice was used: (Please circle any that apply)
 - Wet Ice
 - Blue Ice
 - Dry Ice
 - Water
 - None
8. Randomly Selected Samples Temperature (°C): 1.3
 Used I/R Thermometer # 1-2

Inspection Info

1. Initials Inspected By: [Signature]

Sample Integrity Upon Receipt:

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


Notes:



Monrovia, CA (Suite 100)
 750 Royal Oaks Drive Suite 100
 Monrovia CA 91016
 Phone (626) 386-1100

Chain of Custody Record

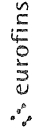
eurofins

Client Information Client Contact: Dr. Ron Fenstermacher Phone: 808-748-5840 City & County of Honolulu Address: 630 South Beretania Street, Chemistry Lab, Honolulu, HI, 96843 State Zip: HI, 96843 Phone: 808-748-5091 (tel) Email: rfenstermacher@hbws.org Project Name: RED-HILL Site:		Lab PM: Arada, Rachelle E-Mail: Rachelle.Arada@et.eurofins.com Carrier Tracking No(s): State of Origin:		COC No: Page: Page 1 of 2 Job #: Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 X - DI Water Y - Trizma Z - other (specify) Other:	
Due Date Requested: TAT Requested (days): Compliance Project: Δ No PO #: C20525101 exp 06312023 WO #:		Analysis Requested 504 1_PREC_505_LL_PREC 2320B_2510B_S44500_H+ 2007_2008 2540C_Calcd - Total dissolved Solids (TDS) S44500_S2_D - Sulfide, Total 524 2_Pres_PREC_524 2_SIM_PREC 525 2_PREC_525plus PLUS TICs 4500_F_C 300_OF_280_B_300_OF_280_PREC_300_OF_48H_PREC 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:	
Sample Identification MOANALUA WELLS Travel Blank		Sample Date: 2-Oct-2023 Sample Time: 0931 Sample Type: G Matrix: Water Preservation Code:		Field Filtered Sample (Yes or No): Perform MS/MSD (Yes or No): R N D N CB HA N D RA RA RA R 6 1 1 1 1 6 3 2 1 2 2 2 3 3 Special Instructions/Note:  380-65252 COC	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested I, II, III, IV, Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Special Instructions/QC Requirements:		Method of Shipment: FEDEX Date/Time: 10/3/2023 10:35 Date/Time:	
Empty Kit Relinquished by: BAILEY Relinquished by: BAILEY Relinquished by:		Date/Time: 02 Oct 2023 1400 Date/Time:		Date/Time: 10/3/2023 10:35 Date/Time:	
Relinquished by: BAILEY Relinquished by:		Date/Time: 02 Oct 2023 1400 Date/Time:		Date/Time: 10/3/2023 10:35 Date/Time:	
Relinquished by:		Date/Time:		Date/Time:	
Cooler Temperature(s) °C and Other Remarks:					



Monrovia, CA (Suite 100)
 750 Royal Oaks Drive Suite 100
 Monrovia CA 91016
 Phone (626) 386-1100

Chain of Custody Record



Page 2 of 2
 Job #

Client Information		Lab PIM		Carrier Tracking Note(s)		COC No
Client Contact: Dr. Ron Fenstermacher Phone: 808-748-5840		Arada Rachelle E-Mail: Rachelle.Arada@et.eurofins.com		State of Origin		Page 2 of 2
Company: City & County of Honolulu		PWSID		Analysis Requested		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 Y - Trizma Z - other (Specify)
Address: 630 South Beretania Street, Chemistry Lab Honolulu State Zip HI, 96843 Phone: 808-748-5091 (tel) Email: rfenstermacher@hbws.org		Due Date Requested TAT Requested (days) Compliance Project Δ No PO # C20525101 exp. 05/31/2023 WO #		SUBCONTRACT - 8015 Ethanol SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs SUBCONTRACT - 625 Base Neutral LL (EAL) Physis SUBCONTRACT - 625 Acid LL (EAL) Physis SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL) 504_1_PREC - Local Method		Total Number of containers X
Project Name: RED-HILL Site		Field Filtered Sample (Yes or No) Performance MS/MSD (Yes or No)		Special Instructions/Note: X		
Sample Identification MOANALUA WELLS		Sample Date 2-Oct-2023	Sample Time 0931	Sample Type (C=Comp, G=grab) G	Matrix (W=water, S=solid, O=wastewater, B=issue, A=air) Water	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant Deliverable Requested I, II, III, IV, Other (specify)		Date 02Oct2023		Date/Time 10/03/2023 10:35		
Empty Kit Relinquished by BAILEY		Date 02Oct2023		Date/Time 10/03/2023 10:35		Method of Shipment: FED EX Months 0736 1057 9709 0736 1057 9710
Relinquished by BAILEY		Date 02Oct2023		Date/Time 10/03/2023 10:35		
Relinquished by BAILEY		Date 02Oct2023		Date/Time 10/03/2023 10:35		Cooler Temperature(s) °C and Other Remarks 10.0, 10.0, 10.0, 10.0, 10.0, 10.0
Relinquished by BAILEY		Date 02Oct2023		Date/Time 10/03/2023 10:35		



Bottle Order Information

Bottle Order: RED-HILL - Quarterly
 Bottle Order #: 1845
 Request From Client: 12/14/2022
 Date Order Posted: 6/23/2022 7:29:27AM
 Order Status: Ready To Process
 Prepared By: Davis Haley
 Deliver By Date: 9/1/2023 11:59:00PM
 Lab Project Number: 38001111
 PWSID: HI00000331

Order Completion Information

Creator: Michelle Do
 Filled by:
 Sent Date:
 Sent Via:
 Tracking #:

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #
5	6	30	Voa Vial 40ml Amber - Sodium thiosulfate	Sodium Thiosulfate	504.1_PREC - Local Method	Water	Normal	/	
5	1	5	Plastic 250ml - unpreserved	None	505_LL_PREC - (MOD) ML505 +505-EAL Aldrin Dieldrin Tox	Water	Normal	/	
5	1	5	Plastic 500ml - with Nitric Acid	Nitric Acid	2320B - (MOD) Total Alkalinity SM4500_H+ - Local Method 2510B - Conductivity	Water	Normal	/	
5	1	5	Plastic 500ml - unpreserved	None	200.8 - Metals, Priority Pollutant by 200.8 200.7 - (MOD) Custom	Water	Normal	/	
5	1	5	Plastic 250ml - with Zinc Acetate & NaOH	Zinc Acetate and Sodium Hydroxide	2540C_Calcd - Total Dissolved Solids (TDS)	Water	Normal	/	
5	6	30	Voa Vial 40ml Amber - Ascor. Acid & HCL	Ascorbic Acid and Hydrochloric Acid	SM4500_S2_D - Sulfide, Total	Water	Normal	/	
5	3	15	Amber Glass 1 Liter- Sodium Sulfite/HCl	Sodium Sulfite w/HCl	524.2_Pres_PREC - VOASDWA plus TICs + Acetone	Water	Normal	/	
5	2	10	Plastic 125mL - unpreserved	None	524.2_SIM_PREC - TBA by 524.2 SIM	Water	Normal	/	
5	1	5	Plastic 250ml - with Nitric Acid	Nitric Acid	525.2_PREC - 525plus Plus TICs	Water	Normal	/	
					300_OF_28D_B - Bromide 4500_F_C - Fluoride 300_OF_28D_PREC - Chloride and Sulfate	Water	Normal	/	
					300_OF_48H_PREC - Nitrite, Nitrate, and Nitrite+Nitrate	Water	Normal	/	
					245.1 - Local Method	Water	Normal	/	

Please notify your PM immediately if an error is found in shipment. When returning samples, please return all provided QC samples.



5	2	10	Amber Glass 1 L - NaThiosulfate 8mL HCL	Sodium Thiosulfate/H hydrochloric Acid	SUBCONTRACT - 8015 Jet Fuel 8 (JP8)	Water	Normal	EM by
5	2	10	Amber Glass 1 L - NaThiosulfate 8mL HCL	Sodium Thiosulfate/H hydrochloric Acid	SUBCONTRACT - 8015 Jet Fuel 5 (JP5)	Water	Normal	EM by
5	2	10	Amber Glass 1 L - NaThiosulfate 8mL HCL	Sodium Thiosulfate/H hydrochloric Acid	SUBCONTRACT - 8015 Diesel LL (EAL) and Motor Oil	Water	Normal	EM by
5	3	15	Voa Vial 40ml - Sodium Thio w/HCl-dropper	Sodium Thiosulfate	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	Water	Normal	EM by
5	3	15	Voa Vial 40ml - unpreserved	None	SUBCONTRACT - 8015 Ethanol	Water	Normal	EM by
5	2	10	Amber Glass 1 liter - Sodium Thiosulfate	Sodium Thiosulfate	SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs	Water	Normal	Phy SIS
5	2	10	Amber Glass 1 liter - Sodium Thiosulfate	Sodium Thiosulfate	SUBCONTRACT - 625 Base Neutral LL (EAL) Physis	Water	Normal	Phy SIS
5	2	10	Amber Glass 1 liter - Sodium Thiosulfate	Sodium Thiosulfate	SUBCONTRACT - 625 Acid LL (EAL) Physis	Water	Normal	Phy SIS
5	2	10	VOA Vial 40mL - NaThiosulfate/HCL	Sodium Thiosulfate/H hydrochloric Acid	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	Water	Trip Blank	EM by
5	6	30	Voa Vial 40ml Amber - Ascor. Acid & HCL	Ascorbic Acid and Hydrochloric Acid	524.2_Pres_PREC - VOASDWA plus TICs + Acetone	Water	Trip Blank	
5	3	15	Voa Vial 40ml Amber - Sodium thiosulfate	Sodium Thiosulfate	524.2_SIM_PREC - TBA by 524.2 SIM	Water	Trip Blank	
5	3	15	Voa Vial 40ml Amber - Sodium thiosulfate	Sodium Thiosulfate	504.1_PREC - Local Method	Water	Trip Blank	

Please notify your PM immediately if an error is found in shipment. When returning samples, please return all provided QC samples.



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

Chain of Custody Record



Client Information (Sub Contract Lab)
 Client Contact: Eurofins Eaton Analytical
 Shipping/Receiving: Eurofins Eaton Analytical
 Address: 110 S Hill Street, Pomona, CA 91768-2642
 Phone: 626-386-1100
 Lab P/N: Arada, Rachelle
 E-Mail: Rachelle.Arada@et.eurofins.com
 State: Hawaii

Analysis Requested
 Due Date Requested: 10/23/2023
 TAT Requested (days):
 Project Name: RED-HILL
 Site: Honolulu BWS Sites
 Project #: 38001111
 SSOV#: 574-233-4777 (Tel) 574-233-8207 (Fax)
 Email: W/O #:
 Carrier Tracking No(s): 380-82190-1
 State of Origin: Hawaii
 Page: Page 1 of 1
 Job #: 380-65252-1
 COC No: 380-82190-1

Sample ID	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Mercur, Squalid, Omastrol, BT-Tissue, Ash)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested	Special Instructions/Note:
MOANALUA WELLS (331-223-TP202) (380-65252-1)	10/2/23	09:31 Hawaiian	Water		X	245.1/245.1_Prep Mercury by 245.1	A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Anchor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AshAcO2 P - Na2OAS Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecylhydrate U - Acetone V - MCAA W - pH 4.5 Y - Trizma Z - other (specify)	
					Total Number of containers		1	

Sample Identification - Client ID (Lab ID)
 MOANALUA WELLS (331-223-TP202) (380-65252-1)
 Sample Date: 10/2/23
 Sample Time: 09:31
 Sample Type: Water
 Matrix: Water

Special Instructions/Note:
 Initial Temp: 1.0
 Delivered Temp: 2.0
 IR Gun #: 28104

Possible Hazard Identification
 Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify)
 Primary Deliverable Rank: 2
 Sample Disposal (A fee may be assessed if samples are retained longer than 7 months)
 Return To Client Disposal By Lab Archive For Months

Empty Kit Relinquished by: Date: _____ Time: _____ Method of Shipment: _____
 Relinquished by: [Signature] Date/Time: 10/4/23 8:35 Company: _____
 Relinquished by: _____ Date/Time: _____ Company: _____

Custody Seals Intact: Yes No
 Custody Seal No.: _____
 Client Provided Sample Container
 Cooler Temperature(s) °C and Other Remarks:
pH Acceptable

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-65252-1

Login Number: 65252

List Number: 1

Creator: Edrosa, Rey

List Source: Eurofins Eaton Analytical Pomona

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

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-65252-1

Login Number: 65252
List Number: 2
Creator: Pehling-Wright, Penny

List Source: Eurofins Eaton Analytical South Bend
List Creation: 10/05/23 01:57 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	False	Client provided containers

