

## ANALYTICAL REPORT

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Tel: (626)386-1100

Laboratory Job ID: 380-14579-1  
Client Project/Site: RED-HILL

For:  
City & County of Honolulu  
630 South Beretania Street  
Public Service Bldg. Room 308  
Honolulu, Hawaii 96843

Attn: Mr. Erwin Kawata



Authorized for release by:

10/20/2022 5:24:40 PM

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Results relate only to the items tested and the sample(s) as received by the laboratory.

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)



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Kathleen Robb  
Client Program Manager  
10/20/2022 5:24:40 PM





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# Definitions/Glossary

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

Job ID: 380-14579-1

## Qualifiers

### GC/MS VOA

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

### GC/MS VOA TICs

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

### GC/MS Semi VOA

Qualifier	Qualifier Description
^3+	Reporting Limit Check Standard is outside acceptance limits, high biased
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### GC/MS Semi VOA TICs

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

### GC Semi VOA

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

### HPLC/IC

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### Metals

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

### General Chemistry

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

### Subcontract

Qualifier	Qualifier Description
U	This analyte was not detected.

## Glossary

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



# Definitions/Glossary

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

Job ID: 380-14579-1

## Glossary (Continued)

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

LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

# Case Narrative

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

Job ID: 380-14579-1

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## Job ID: 380-14579-1

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### Laboratory: Eurofins Eaton Monrovia

#### Narrative

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#### Job Narrative 380-14579-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 8/4/2022 10:30 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 1.9° C and 3.5° C.

#### GC/MS VOA

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

#### GC/MS Semi VOA

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

#### HPLC/IC

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

#### GC Semi VOA

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

#### Metals

Method 200.8: The continuing calibration blank (CCB) for analytical batch 380-15216 contained Silver above the Method Detection Limit (MDL). All reported samples associated with this CCB were either ND for this analyte or contained this analyte at a concentration greater than 10X the value found in the CCB; therefore, re-analysis of samples was not performed.

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

#### General Chemistry

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

#### Subcontract non-Sister

See attached subcontract report.

#### Organic Prep

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

# Detection Summary

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

Job ID: 380-14579-1

**Client Sample ID: (331-261-TP008) KAAMILO WELLS**

**Lab Sample ID: 380-14579-1**

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Dieldrin	0.041		0.0020	ug/L	1		505	Total/NA
Chlordane (n.o.s.)	0.14		0.10	ug/L	1		505	Total/NA
Heptachlor epoxide	0.010		0.010	ug/L	1		505	Total/NA
Bromide	260		10	ug/L	2		300.0	Total/NA
Chloride	120	*+	2.5	mg/L	5		300.0	Total/NA
Nitrate as N	1.5		0.25	mg/L	5		300.0	Total/NA
Nitrate Nitrite as N	1.5		0.25	mg/L	5		300.0	Total/NA
Sulfate	24	*+	1.3	mg/L	5		300.0	Total/NA
Calcium	21		1.0	mg/L	1		200.7 Rev 4.4	Total/NA
Magnesium	20		0.10	mg/L	1		200.7 Rev 4.4	Total/NA
Potassium	2.8		1.0	mg/L	1		200.7 Rev 4.4	Total/NA
Sodium	58		1.0	mg/L	1		200.7 Rev 4.4	Total/NA
Chromium	1.4		1.0	ug/L	1		200.8	Total
Copper	120		2.0	ug/L	1		200.8	Total
								Recoverable
A kalinity	68		2.0	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	68		2.0	mg/L	1		SM 2320B	Total/NA
Specific Conductance	570		2.0	umhos/cm	1		SM 2510B	Total/NA
Total Dissolved Solids	340		20	mg/L	1		SM 2540C	Total/NA
Fluoride	0.055		0.050	mg/L	1		SM 4500 F C	Total/NA
pH	7.6	HF		SU	1		SM 4500 H+ B	Total/NA

**Client Sample ID: (331-261-TP008) KAAMILO WELLS**

**Lab Sample ID: 380-14579-2**

No Detections.

**Client Sample ID: (331-261-TP008) KAAMILO WELLS**

**Lab Sample ID: 380-14579-5**

No Detections.

**Client Sample ID: (331-261-TP008) KAAMILO WELLS**

**Lab Sample ID: 380-14579-6**

No Detections.

**Client Sample ID: (331-261-TP008) KAAMILO WELLS**

**Lab Sample ID: 380-14579-7**

No Detections.

**Client Sample ID: (331-261-TP008) KAAMILO WELLS**

**Lab Sample ID: 380-14579-8**

No Detections.

**Client Sample ID: (331-261-TP008) KAAMILO WELLS**

**Lab Sample ID: 380-14579-9**

No Detections.

**Client Sample ID: TB:(331-261-TP008) KAAMILO WELLS**

**Lab Sample ID: 380-14579-10**

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Eaton Monrovia

# Client Sample Results

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

Job ID: 380-14579-1

**Client Sample ID: (331-261-TP008) KAAMILO WELLS**

**Lab Sample ID: 380-14579-1**

**Date Collected: 08/03/22 10:34**

**Matrix: Water**

**Date Received: 08/04/22 10:30**

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tertiary Butyl Alcohol (TBA)	ND		2.0	ug/L			08/15/22 22:23	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	94		70 - 130				08/15/22 22:23	1
4-Bromofluorobenzene (Surr)	106		70 - 130				08/15/22 22:23	1
1,2-Dichloroethane-d4 (Surr)	99		70 - 130				08/15/22 22:23	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	ug/L			08/17/22 22:39	1
1,1,1-Trichloroethane	ND		0.50	ug/L			08/17/22 22:39	1
1,1,2,2-Tetrachloroethane	ND		0.50	ug/L			08/17/22 22:39	1
1,1,2-Trichloroethane	ND		0.50	ug/L			08/17/22 22:39	1
1,1-Dichloroethane	ND		0.50	ug/L			08/17/22 22:39	1
1,1-Dichloroethylene	ND		0.50	ug/L			08/17/22 22:39	1
1,1-Dichloropropene	ND		0.50	ug/L			08/17/22 22:39	1
1,2,3-Trichlorobenzene	ND		0.50	ug/L			08/17/22 22:39	1
1,2,3-Trichloropropane	ND		0.50	ug/L			08/17/22 22:39	1
1,2,4-Trichlorobenzene	ND	*1	0.50	ug/L			08/17/22 22:39	1
1,2,4-Trimethy benzene	ND		0.50	ug/L			08/17/22 22:39	1
1,2-Dichloroethane	ND		0.50	ug/L			08/17/22 22:39	1
1,2-Dichloropropane	ND		0.50	ug/L			08/17/22 22:39	1
1,3,5-Trimethy benzene	ND		0.50	ug/L			08/17/22 22:39	1
1,3-Dichloropropane	ND		0.50	ug/L			08/17/22 22:39	1
2,2-Dichloropropane	ND		0.50	ug/L			08/17/22 22:39	1
2-Butanone (MEK)	ND		5.0	ug/L			08/17/22 22:39	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	ug/L			08/17/22 22:39	1
Acetone	ND		500	ug/L			08/17/22 22:39	1
Benzene	ND		0.50	ug/L			08/17/22 22:39	1
Bromobenzene	ND		0.50	ug/L			08/17/22 22:39	1
Bromochloromethane	ND		0.50	ug/L			08/17/22 22:39	1
Bromodichloromethane	ND	^3+	0.50	ug/L			08/17/22 22:39	1
Bromoform	ND	^3+	0.50	ug/L			08/17/22 22:39	1
Bromomethane (Methyl Bromide)	ND		0.50	ug/L			08/17/22 22:39	1
Carbon disulfide	ND	*1	0.50	ug/L			08/17/22 22:39	1
Carbon tetrachloride	ND		0.50	ug/L			08/17/22 22:39	1
Chlorobenzene	ND		0.50	ug/L			08/17/22 22:39	1
Chlorodibromomethane	ND		0.50	ug/L			08/17/22 22:39	1
Chloroethane	ND	*1	0.50	ug/L			08/17/22 22:39	1
Chloroform (Trichloromethane)	ND		0.50	ug/L			08/17/22 22:39	1
Dichloromethane	ND		0.50	ug/L			08/17/22 22:39	1
cis-1,2-Dichloroethylene	ND		0.50	ug/L			08/17/22 22:39	1
cis-1,3-Dichloropropene	ND		0.50	ug/L			08/17/22 22:39	1
Dibromomethane	ND		0.50	ug/L			08/17/22 22:39	1
Dichlorodifluoromethane	ND	*+ *1	0.50	ug/L			08/17/22 22:39	1
Ethylbenzene	ND		0.50	ug/L			08/17/22 22:39	1
Hexachlorobutadiene	ND		0.50	ug/L			08/17/22 22:39	1
Isopropy benzene	ND		0.50	ug/L			08/17/22 22:39	1
m,p-Xylenes	ND		0.50	ug/L			08/17/22 22:39	1
m-Dichlorobenzene (1,3-DCB)	ND		0.50	ug/L			08/17/22 22:39	1

Eurofins Eaton Monrovia

# Client Sample Results

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

Job ID: 380-14579-1

**Client Sample ID: (331-261-TP008) KAAMILO WELLS**

**Lab Sample ID: 380-14579-1**

**Date Collected: 08/03/22 10:34**

**Matrix: Water**

**Date Received: 08/04/22 10:30**

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl-tert-butyl Ether (MTBE)	ND		0.50	ug/L			08/17/22 22:39	1
Naphthalene	ND	*1	0.50	ug/L			08/17/22 22:39	1
n-Butylbenzene	ND		0.50	ug/L			08/17/22 22:39	1
N-Propylbenzene	ND		0.50	ug/L			08/17/22 22:39	1
o-Dichlorobenzene (1,2-DCB)	ND		0.50	ug/L			08/17/22 22:39	1
o-Chlorotoluene	ND		0.50	ug/L			08/17/22 22:39	1
o-Xylene	ND		0.50	ug/L			08/17/22 22:39	1
p-Chlorotoluene	ND		0.50	ug/L			08/17/22 22:39	1
p-Dichlorobenzene (1,4-DCB)	ND		0.50	ug/L			08/17/22 22:39	1
p-Isopropyltoluene	ND		0.50	ug/L			08/17/22 22:39	1
sec-Butylbenzene	ND		0.50	ug/L			08/17/22 22:39	1
Styrene	ND		0.50	ug/L			08/17/22 22:39	1
Tert-amyl methyl ether	ND		3.0	ug/L			08/17/22 22:39	1
Tert-butyl ethyl ether	ND		3.0	ug/L			08/17/22 22:39	1
tert-Butylbenzene	ND		0.50	ug/L			08/17/22 22:39	1
Tetrachloroethene (PCE)	ND		0.50	ug/L			08/17/22 22:39	1
Toluene	ND		0.50	ug/L			08/17/22 22:39	1
1,3-Dichloropropene, Total	ND		0.50	ug/L			08/17/22 22:39	1
Xylenes, Total	ND		0.50	ug/L			08/17/22 22:39	1
trans-1,2-Dichloroethylene	ND		0.50	ug/L			08/17/22 22:39	1
trans-1,3-Dichloropropene	ND		0.50	ug/L			08/17/22 22:39	1
Trichloroethylene (TCE)	ND		0.50	ug/L			08/17/22 22:39	1
Trichlorofluoromethane (Freon 11)	ND		0.50	ug/L			08/17/22 22:39	1
Vinyl Chloride (VC)	ND		0.30	ug/L			08/17/22 22:39	1
Trichlorotrifluoroethane	ND	*+	0.50	ug/L			08/17/22 22:39	1
Bromoethane	ND	*1	0.50	ug/L			08/17/22 22:39	1
Chloromethane (methyl chloride)	ND		0.50	ug/L			08/17/22 22:39	1
Diisopropyl ether	ND		3.0	ug/L			08/17/22 22:39	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	21	T J	ug/L		0.98			08/17/22 22:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		70 - 130		08/17/22 22:39	1
4-Bromofluorobenzene (Surr)	95		70 - 130		08/17/22 22:39	1
Toluene-d8 (Surr)	98		70 - 130		08/17/22 22:39	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	ND		0.098	ug/L		08/12/22 10:08	08/23/22 12:33	1
2,4'-DDE	ND		0.098	ug/L		08/12/22 10:08	08/23/22 12:33	1
2,4'-DDT	ND		0.098	ug/L		08/12/22 10:08	08/23/22 12:33	1
2,4-Dinitrotoluene	ND		0.098	ug/L		08/12/22 10:08	08/23/22 12:33	1
2,6-Dinitrotoluene	ND		0.098	ug/L		08/12/22 10:08	08/23/22 12:33	1
4,4'-DDD	ND		0.098	ug/L		08/12/22 10:08	08/23/22 12:33	1
4,4'-DDE	ND		0.098	ug/L		08/12/22 10:08	08/23/22 12:33	1
4,4'-DDT	ND		0.098	ug/L		08/12/22 10:08	08/23/22 12:33	1
Acenaphthene	ND		0.098	ug/L		08/12/22 10:08	08/23/22 12:33	1
Acenaphthylene	ND		0.098	ug/L		08/12/22 10:08	08/23/22 12:33	1
Acetochlor	ND		0.098	ug/L		08/12/22 10:08	08/23/22 12:33	1

Eurofins Eaton Monrovia

# Client Sample Results

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

Job ID: 380-14579-1

**Client Sample ID: (331-261-TP008) KAAMILO WELLS**

**Lab Sample ID: 380-14579-1**

**Date Collected: 08/03/22 10:34**

**Matrix: Water**

**Date Received: 08/04/22 10:30**

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alachlor	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:33	1
alpha-BHC	ND		0.098	ug/L		08/12/22 10:08	08/23/22 12:33	1
alpha-Chlordane	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:33	1
Anthracene	ND		0.020	ug/L		08/12/22 10:08	08/23/22 12:33	1
Atrazine	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:33	1
Benz(a)anthracene	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:33	1
Benzo[a]pyrene	ND		0.020	ug/L		08/12/22 10:08	08/23/22 12:33	1
Benzo[b]fluoranthene	ND		0.020	ug/L		08/12/22 10:08	08/23/22 12:33	1
Benzo[g,h,i]perylene	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:33	1
Benzo[k]fluoranthene	ND		0.020	ug/L		08/12/22 10:08	08/23/22 12:33	1
beta-BHC	ND		0.098	ug/L		08/12/22 10:08	08/23/22 12:33	1
Bis(2-ethylhexyl) phthalate	ND		0.59	ug/L		08/12/22 10:08	08/23/22 12:33	1
Bromacil	ND		0.098	ug/L		08/12/22 10:08	08/23/22 12:33	1
Butachlor	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:33	1
Butylbenzylphthalate	ND		0.49	ug/L		08/12/22 10:08	08/23/22 12:33	1
Caffeine	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:33	1
Chlorobenzilate	ND		0.098	ug/L		08/12/22 10:08	08/23/22 12:33	1
Chloroneb	ND		0.098	ug/L		08/12/22 10:08	08/23/22 12:33	1
Chlorothalonil (Draconil, Bravo)	ND		0.098	ug/L		08/12/22 10:08	08/23/22 12:33	1
Chlorpyrifos	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:33	1
Chrysene	ND		0.020	ug/L		08/12/22 10:08	08/23/22 12:33	1
delta-BHC	ND		0.098	ug/L		08/12/22 10:08	08/23/22 12:33	1
Di(2-ethylhexyl)adipate	ND		0.59	ug/L		08/12/22 10:08	08/23/22 12:33	1
Diazinon (Qualitative)	ND		0.098	ug/L		08/12/22 10:08	08/23/22 12:33	1
Dibenz(a,h)anthracene	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:33	1
Diclorvos (DDVP)	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:33	1
Dieldrin	ND		0.20	ug/L		08/12/22 10:08	08/23/22 12:33	1
Diethylphthalate	ND		0.49	ug/L		08/12/22 10:08	08/23/22 12:33	1
Dimethoate	ND		0.098	ug/L		08/12/22 10:08	08/23/22 12:33	1
Dimethylphthalate	ND		0.49	ug/L		08/12/22 10:08	08/23/22 12:33	1
Di-n-butyl phthalate	ND		0.98	ug/L		08/12/22 10:08	08/23/22 12:33	1
Di-n-octyl phthalate	ND		0.098	ug/L		08/12/22 10:08	08/23/22 12:33	1
Endosulfan I (Alpha)	ND		0.098	ug/L		08/12/22 10:08	08/23/22 12:33	1
Endosulfan II (Beta)	ND		0.098	ug/L		08/12/22 10:08	08/23/22 12:33	1
Endosulfan sulfate	ND		0.098	ug/L		08/12/22 10:08	08/23/22 12:33	1
Endrin	ND		0.098	ug/L		08/12/22 10:08	08/23/22 12:33	1
Endrin aldehyde	ND		0.098	ug/L		08/12/22 10:08	08/23/22 12:33	1
EPTC	ND		0.098	ug/L		08/12/22 10:08	08/23/22 12:33	1
Fluoranthene	ND		0.098	ug/L		08/12/22 10:08	08/23/22 12:33	1
Fluorene	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:33	1
gamma-BHC (Lindane)	ND		0.039	ug/L		08/12/22 10:08	08/23/22 12:33	1
gamma-Chlordane	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:33	1
Heptachlor	ND		0.039	ug/L		08/12/22 10:08	08/23/22 12:33	1
Heptachlor epoxide (isomer B)	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:33	1
Hexachlorobenzene	ND	^3+	0.049	ug/L		08/12/22 10:08	08/23/22 12:33	1
Hexachlorocyclopentadiene	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:33	1
Indeno[1,2,3-cd]pyrene	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:33	1
Isophorone	ND		0.49	ug/L		08/12/22 10:08	08/23/22 12:33	1
Malathion	ND		0.098	ug/L		08/12/22 10:08	08/23/22 12:33	1

Eurofins Eaton Monrovia

# Client Sample Results

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

Job ID: 380-14579-1

**Client Sample ID: (331-261-TP008) KAAMILO WELLS**

**Lab Sample ID: 380-14579-1**

Date Collected: 08/03/22 10:34

Matrix: Water

Date Received: 08/04/22 10:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methoxychlor	ND		0.098	ug/L		08/12/22 10:08	08/23/22 12:33	1
Metolachlor	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:33	1
Metribuzin	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:33	1
Molinate	ND		0.098	ug/L		08/12/22 10:08	08/23/22 12:33	1
Naphthalene	ND		0.29	ug/L		08/12/22 10:08	08/23/22 12:33	1
Parathion	ND		0.098	ug/L		08/12/22 10:08	08/23/22 12:33	1
Pendimethalin (Penoxaline)	ND		0.098	ug/L		08/12/22 10:08	08/23/22 12:33	1
Phenanthrene	ND		0.039	ug/L		08/12/22 10:08	08/23/22 12:33	1
Propachlor	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:33	1
Pyrene	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:33	1
Simazine	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:33	1
Terbacil	ND		0.098	ug/L		08/12/22 10:08	08/23/22 12:33	1
Terbutylazine	ND		0.098	ug/L		08/12/22 10:08	08/23/22 12:33	1
Thiobencarb	ND		0.20	ug/L		08/12/22 10:08	08/23/22 12:33	1
Total Permethrin (mixed isomers)	ND		0.20	ug/L		08/12/22 10:08	08/23/22 12:33	1
trans-Nonachlor	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:33	1
Trifluralin	ND		0.098	ug/L		08/12/22 10:08	08/23/22 12:33	1
1-Methylnaphthalene	ND		0.098	ug/L		08/12/22 10:08	08/23/22 12:33	1
2-Methylnaphthalene	ND		0.098	ug/L		08/12/22 10:08	08/23/22 12:33	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	0.59	T J	ug/L		2.29		08/12/22 10:08	08/23/22 12:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	95		70 - 130	08/12/22 10:08	08/23/22 12:33	1
Perylene-d12	100		70 - 130	08/12/22 10:08	08/23/22 12:33	1
Triphenylphosphate	98		70 - 130	08/12/22 10:08	08/23/22 12:33	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		0.040	ug/L		08/09/22 09:43	08/09/22 14:40	1
1,2-D bromo-3-Chloropropane	ND		0.010	ug/L		08/09/22 09:43	08/09/22 14:40	1
1,2-D bromoethane	ND		0.010	ug/L		08/09/22 09:43	08/09/22 14:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane (Surr)	93		60 - 140	08/09/22 09:43	08/09/22 14:40	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0020	ug/L		08/09/22 19:54	08/10/22 15:17	1
<b>Dieldrin</b>	<b>0.041</b>		0.0020	ug/L		08/09/22 19:54	08/10/22 15:17	1
Toxaphene	ND		0.10	ug/L		08/09/22 19:54	08/10/22 15:17	1
Alachlor	ND		0.10	ug/L		08/09/22 19:54	08/10/22 15:17	1
<b>Chlordane (n.o.s.)</b>	<b>0.14</b>		0.10	ug/L		08/09/22 19:54	08/10/22 15:17	1
Endrin	ND		0.010	ug/L		08/09/22 19:54	08/10/22 15:17	1
Heptachlor	ND		0.010	ug/L		08/09/22 19:54	08/10/22 15:17	1
<b>Heptachlor epoxide</b>	<b>0.010</b>		0.010	ug/L		08/09/22 19:54	08/10/22 15:17	1
gamma-BHC (Lindane)	ND		0.010	ug/L		08/09/22 19:54	08/10/22 15:17	1
Methoxychlor	ND		0.050	ug/L		08/09/22 19:54	08/10/22 15:17	1
PCB-1016	ND		0.070	ug/L		08/09/22 19:54	08/10/22 15:17	1
PCB-1221	ND		0.10	ug/L		08/09/22 19:54	08/10/22 15:17	1

Eurofins Eaton Monrovia



# Client Sample Results

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

Job ID: 380-14579-1

**Client Sample ID: (331-261-TP008) KAAMILO WELLS**

**Lab Sample ID: 380-14579-1**

Date Collected: 08/03/22 10:34

Matrix: Water

Date Received: 08/04/22 10:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1232	ND		0.10	ug/L		08/09/22 19:54	08/10/22 15:17	1
PCB-1242	ND		0.10	ug/L		08/09/22 19:54	08/10/22 15:17	1
PCB-1248	ND		0.10	ug/L		08/09/22 19:54	08/10/22 15:17	1
PCB-1254	ND		0.10	ug/L		08/09/22 19:54	08/10/22 15:17	1
PCB-1260	ND		0.070	ug/L		08/09/22 19:54	08/10/22 15:17	1
Polychlorinated biphenyls, Total	ND		0.10	ug/L		08/09/22 19:54	08/10/22 15:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	94		70 - 130	08/09/22 19:54	08/10/22 15:17	1

## Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	260		10	ug/L			08/10/22 08:45	2
Chloride	120	*+	2.5	mg/L			08/04/22 19:54	5
Nitrate as N	1.5		0.25	mg/L			08/04/22 19:54	5
Nitrate Nitrite as N	1.5		0.25	mg/L			08/04/22 19:54	5
Sulfate	24	*+	1.3	mg/L			08/04/22 19:54	5
Nitrite as N	ND		0.25	mg/L			08/04/22 19:54	5

## Method: EPA 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	21		1.0	mg/L			08/09/22 18:45	1
Magnesium	20		0.10	mg/L			08/09/22 18:45	1
Potassium	2.8		1.0	mg/L			08/09/22 18:45	1
Sodium	58		1.0	mg/L			08/09/22 18:45	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	ug/L		08/26/22 13:36	08/27/22 19:56	1
Arsenic	ND		1.0	ug/L		08/26/22 13:36	08/27/22 19:56	1
Beryllium	ND		1.0	ug/L		08/26/22 13:36	08/27/22 19:56	1
Cadmium	ND		0.50	ug/L		08/26/22 13:36	08/27/22 19:56	1
Chromium	1.4		1.0	ug/L		08/26/22 13:36	08/27/22 19:56	1
Copper	120		2.0	ug/L		08/26/22 13:36	08/27/22 19:56	1
Lead	ND		0.50	ug/L		08/26/22 13:36	08/27/22 19:56	1
Nickel	ND		5.0	ug/L		08/26/22 13:36	08/27/22 19:56	1
Selenium	ND		5.0	ug/L		08/26/22 13:36	08/27/22 19:56	1
Silver	ND	^2	0.50	ug/L		08/26/22 13:36	08/27/22 19:56	1
Thallium	ND		1.0	ug/L		08/26/22 13:36	08/27/22 19:56	1
Zinc	ND		20	ug/L		08/26/22 13:36	08/27/22 19:56	1

## Method: EPA 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	mg/L		08/09/22 10:22	08/10/22 13:31	1

## General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity (SM 2320B)	68		2.0	mg/L			08/09/22 19:04	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	68		2.0	mg/L			08/09/22 19:04	1



# Client Sample Results

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

Job ID: 380-14579-1

**Client Sample ID: (331-261-TP008) KAAMILO WELLS**

**Lab Sample ID: 380-14579-1**

Date Collected: 08/03/22 10:34

Matrix: Water

Date Received: 08/04/22 10:30

## General Chemistry (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbonate Alkalinity as CaCO3 (SM 2320B)	ND		2.0	mg/L			08/09/22 19:04	1
Specific Conductance (SM 2510B)	570		2.0	umhos/cm			08/09/22 19:04	1
Total Dissolved Solids (SM 2540C)	340		20	mg/L			08/10/22 18:54	1
Fluoride (SM 4500 F C)	0.055		0.050	mg/L			08/09/22 23:53	1
pH (SM 4500 H+ B)	7.6	HF		SU			08/09/22 19:04	1

**Client Sample ID: (331-261-TP008) KAAMILO WELLS**

**Lab Sample ID: 380-14579-2**

Date Collected: 08/03/22 10:34

Matrix: Water

Date Received: 08/04/22 10:30

## Method: 625 Acid LL (EAL) Physis - 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		08/05/22 00:00	09/01/22 06:25	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		08/05/22 00:00	09/01/22 06:25	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		08/05/22 00:00	09/01/22 06:25	1
2,4,5-Trichlorophenol	ND		0.1	0.05	µg/L		08/05/22 00:00	09/01/22 06:25	1
2,4,6-Trichlorophenol	ND		0.1	0.05	µg/L		08/05/22 00:00	09/01/22 06:25	1
2,4-Dichlorophenol	ND		0.1	0.05	µg/L		08/05/22 00:00	09/01/22 06:25	1
2,4-Dinitrophenol	ND		0.2	0.1	µg/L		08/05/22 00:00	09/01/22 06:25	1
2,6-Dichlorophenol	ND		0.1	0.05	µg/L		08/05/22 00:00	09/01/22 06:25	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		08/05/22 00:00	09/01/22 06:25	1
2,6-Di-tert-butyl-4-methylphenol	ND		0.1	0.05	µg/L		08/05/22 00:00	09/01/22 06:25	1
2,6-Di-tert-butylphenol	ND		0.1	0.05	µg/L		08/05/22 00:00	09/01/22 06:25	1
2-Chloronaphthalene	ND		0.1	0.05	µg/L		08/05/22 00:00	09/01/22 06:25	1
2-Chlorophenol	ND		0.1	0.05	µg/L		08/05/22 00:00	09/01/22 06:25	1
2-Methyl-4,6-dinitrophenol	ND		0.2	0.1	µg/L		08/05/22 00:00	09/01/22 06:25	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		08/05/22 00:00	09/01/22 06:25	1
2-Methylphenol	ND		0.2	0.1	µg/L		08/05/22 00:00	09/01/22 06:25	1
2-Nitroaniline	ND		0.1	0.05	µg/L		08/05/22 00:00	09/01/22 06:25	1
2-Nitrophenol	ND		0.2	0.1	µg/L		08/05/22 00:00	09/01/22 06:25	1
3+4-Methylphenol	ND		0.2	0.1	µg/L		08/05/22 00:00	09/01/22 06:25	1
3-Nitroaniline	ND		0.1	0.05	µg/L		08/05/22 00:00	09/01/22 06:25	1
4-Bromophenylphenyl ether	ND		0.1	0.05	µg/L		08/05/22 00:00	09/01/22 06:25	1
4-Chloro-3-methylphenol	ND		0.2	0.1	µg/L		08/05/22 00:00	09/01/22 06:25	1
4-Chloroaniline	ND		0.1	0.05	µg/L		08/05/22 00:00	09/01/22 06:25	1
4-Chlorophenylphenyl ether	ND		0.1	0.05	µg/L		08/05/22 00:00	09/01/22 06:25	1
4-Nitroaniline	ND		0.1	0.05	µg/L		08/05/22 00:00	09/01/22 06:25	1
4-Nitrophenol	ND		0.2	0.1	µg/L		08/05/22 00:00	09/01/22 06:25	1
6-tert-butyl-2,4-dimethylphenol	ND		0.1	0.05	µg/L		08/05/22 00:00	09/01/22 06:25	1
Acenaphthene	ND		0.005	0.001	µg/L		08/05/22 00:00	09/01/22 06:25	1
Acenaphthylene	ND		0.005	0.001	µg/L		08/05/22 00:00	09/01/22 06:25	1
Aniline	ND		0.1	0.05	µg/L		08/05/22 00:00	09/01/22 06:25	1
Anthracene	ND		0.005	0.001	µg/L		08/05/22 00:00	09/01/22 06:25	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		08/05/22 00:00	09/01/22 06:25	1
Benzidine	ND		0.1	0.05	µg/L		08/05/22 00:00	09/01/22 06:25	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		08/05/22 00:00	09/01/22 06:25	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		08/05/22 00:00	09/01/22 06:25	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		08/05/22 00:00	09/01/22 06:25	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		08/05/22 00:00	09/01/22 06:25	1

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# Client Sample Results

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

Job ID: 380-14579-1

**Client Sample ID: (331-261-TP008) KAAMILO WELLS**

**Lab Sample ID: 380-14579-2**

Date Collected: 08/03/22 10:34

Matrix: Water

Date Received: 08/04/22 10:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		08/05/22 00:00	09/01/22 06:25	1
Benzoic Acid	ND		0.2	0.1	µg/L		08/05/22 00:00	09/01/22 06:25	1
Benzyl Alcohol	ND		0.2	0.1	µg/L		08/05/22 00:00	09/01/22 06:25	1
Biphenyl	ND		0.005	0.001	µg/L		08/05/22 00:00	09/01/22 06:25	1
Bis(2-Chloroethoxy) methane	ND		0.1	0.05	µg/L		08/05/22 00:00	09/01/22 06:25	1
Bis(2-Chloroethyl) ether	ND		0.1	0.05	µg/L		08/05/22 00:00	09/01/22 06:25	1
Bis(2-Chloroisopropyl) ether	ND		0.1	0.05	µg/L		08/05/22 00:00	09/01/22 06:25	1
Chrysene	ND		0.005	0.001	µg/L		08/05/22 00:00	09/01/22 06:25	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		08/05/22 00:00	09/01/22 06:25	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		08/05/22 00:00	09/01/22 06:25	1
Dibenzofuran	ND		0.1	0.05	µg/L		08/05/22 00:00	09/01/22 06:25	1
Dibenzothiophene	ND		0.005	0.001	µg/L		08/05/22 00:00	09/01/22 06:25	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		08/05/22 00:00	09/01/22 06:25	1
Fluoranthene	ND		0.005	0.001	µg/L		08/05/22 00:00	09/01/22 06:25	1
Fluorene	ND		0.005	0.001	µg/L		08/05/22 00:00	09/01/22 06:25	1
Hexachloroethane	ND		0.1	0.05	µg/L		08/05/22 00:00	09/01/22 06:25	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		08/05/22 00:00	09/01/22 06:25	1
Naphthalene	ND		0.005	0.001	µg/L		08/05/22 00:00	09/01/22 06:25	1
Nitrobenzene	ND		0.1	0.05	µg/L		08/05/22 00:00	09/01/22 06:25	1
N-Nitrosodi-n-propylamine	ND		0.1	0.05	µg/L		08/05/22 00:00	09/01/22 06:25	1
N-Nitrosodiphenylamine	ND		0.1	0.05	µg/L		08/05/22 00:00	09/01/22 06:25	1
Pentachlorophenol	ND		0.1	0.05	µg/L		08/05/22 00:00	09/01/22 06:25	1
Perylene	ND		0.005	0.001	µg/L		08/05/22 00:00	09/01/22 06:25	1
Phenanthrene	ND		0.005	0.001	µg/L		08/05/22 00:00	09/01/22 06:25	1
Phenol	ND		0.2	0.1	µg/L		08/05/22 00:00	09/01/22 06:25	1
p-tert-Butylphenol	ND		0.1	0.05	µg/L		08/05/22 00:00	09/01/22 06:25	1
Pyrene	ND		0.005	0.001	µg/L		08/05/22 00:00	09/01/22 06:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
(2,4,6-Tribromophenol)	95		31 - 143	08/05/22 00:00	09/01/22 06:25	1
(d10-Acenaphthene)	57		45 - 118	08/05/22 00:00	09/01/22 06:25	1
(d10-Phenanthrene)	61		56 - 123	08/05/22 00:00	09/01/22 06:25	1
(d12-Chrysene)	70		36 - 142	08/05/22 00:00	09/01/22 06:25	1
(d12-Perylene)	64		36 - 161	08/05/22 00:00	09/01/22 06:25	1
(d5-Phenol)	55		0 - 85	08/05/22 00:00	09/01/22 06:25	1
(d8-Naphthalene)	47		20 - 112	08/05/22 00:00	09/01/22 06:25	1

**Client Sample ID: (331-261-TP008) KAAMILO WELLS**

**Lab Sample ID: 380-14579-5**

Date Collected: 08/03/22 10:34

Matrix: Water

Date Received: 08/04/22 10:30

**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			08/05/22 18:46	1

# Client Sample Results

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

Job ID: 380-14579-1

**Client Sample ID: (331-261-TP008) KAAMILO WELLS**

**Lab Sample ID: 380-14579-6**

Date Collected: 08/03/22 10:34

Matrix: Water

Date Received: 08/04/22 10:30

**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			08/09/22 20:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE	92		60 - 140					08/09/22 20:11	1

**Client Sample ID: (331-261-TP008) KAAMILO WELLS**

**Lab Sample ID: 380-14579-7**

Date Collected: 08/03/22 10:34

Matrix: Water

Date Received: 08/04/22 10:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DIESEL	ND	U	0.026		mg/L			08/13/22 07:05	1
MOTOR OIL	ND	U	0.052		mg/L			08/13/22 07:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
BROMOBENZENE	64		60 - 130					08/13/22 07:05	1
HEXACOSANE	87		60 - 130					08/13/22 07:05	1

**Client Sample ID: (331-261-TP008) KAAMILO WELLS**

**Lab Sample ID: 380-14579-8**

Date Collected: 08/03/22 10:34

Matrix: Water

Date Received: 08/04/22 10:30

**Method: 8015 Jet Fuel 5 (JP5) - 8015 - Jet Fuel 5 (JP5)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
JP5	ND	U	0.048		mg/L			08/13/22 07:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
BROMOBENZENE	65		60 - 130					08/13/22 07:24	1
HEXACOSANE	84		60 - 130					08/13/22 07:24	1

**Client Sample ID: (331-261-TP008) KAAMILO WELLS**

**Lab Sample ID: 380-14579-9**

Date Collected: 08/03/22 10:34

Matrix: Water

Date Received: 08/04/22 10:30

**Method: 8015 Jet Fuel 8 (JP8) - 8015 - Jet Fuel 8 (JP8)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
JP8	ND	U	0.047		mg/L			08/13/22 07:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
BROMOBENZENE	62		60 - 130					08/13/22 07:42	1
HEXACOSANE	75		60 - 130					08/13/22 07:42	1

**Client Sample ID: TB:(331-261-TP008) KAAMILO WELLS**

**Lab Sample ID: 380-14579-10**

Date Collected: 08/03/22 10:34

Matrix: Water

Date Received: 08/04/22 10:30

**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			08/09/22 21:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE	88		60 - 140					08/09/22 21:59	1

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# Action Limit Summary

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

Job ID: 380-14579-1

Client Sample ID: (331-261-TP008) KAAMILO WELLS

Lab Sample ID: 380-14579-1

## Compliance Check

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

Analyte	Result	Qualifier	Unit	HI Org Limit	EPAMCL Limit	EPAMCLS Limit	Method	Prep Type
1,1,1-Trichloroethane	ND		ug/L	200.0	200		524.2	Total/NA
1,1,2-Trichloroethane	ND		ug/L	5.000	5		524.2	Total/NA
1,1-Dichloroethylene	ND		ug/L	7.000	7		524.2	Total/NA
1,2,3-Trichloropropane	ND		ug/L	0.6000			524.2	Total/NA
1,2,4-Trichlorobenzene	ND	*1	ug/L	70.00	70		524.2	Total/NA
1,2-Dichloroethane	ND		ug/L	5.000	5		524.2	Total/NA
1,2-Dichloropropane	ND		ug/L	5.000	5		524.2	Total/NA
Benzene	ND		ug/L	5.000	5		524.2	Total/NA
Carbon tetrachloride	ND		ug/L	5.000	5		524.2	Total/NA
Chlorobenzene	ND		ug/L	100.0	100		524.2	Total/NA
Dichloromethane	ND		ug/L	5.000	5		524.2	Total/NA
cis-1,2-Dichloroethylene	ND		ug/L	70.00	70		524.2	Total/NA
Ethylbenzene	ND		ug/L	700.0	700		524.2	Total/NA
o-Dichlorobenzene (1,2-DCB)	ND		ug/L	600.0	600		524.2	Total/NA
p-Dichlorobenzene (1,4-DCB)	ND		ug/L	75.000	75		524.2	Total/NA
Styrene	ND		ug/L	100.0	100		524.2	Total/NA
Tetrachloroethene (PCE)	ND		ug/L	5.000	5		524.2	Total/NA
Toluene	ND		ug/L	1000	1000		524.2	Total/NA
Xylenes, Total	ND		ug/L	10000	10000		524.2	Total/NA
trans-1,2-Dichloroethylene	ND		ug/L	100.0	100		524.2	Total/NA
Trichloroethylene (TCE)	ND		ug/L	5.000	5		524.2	Total/NA
Vinyl Chloride (VC)	ND		ug/L	2.000	2		524.2	Total/NA
Alachlor	ND		ug/L		2		525.2	Total/NA
Atrazine	ND		ug/L		3		525.2	Total/NA
Benzo[a]pyrene	ND		ug/L		0.2		525.2	Total/NA
Bis(2-ethylhexyl) phthalate	ND		ug/L		6		525.2	Total/NA
Di(2-ethylhexyl)adipate	ND		ug/L		400		525.2	Total/NA
Endrin	ND		ug/L		2		525.2	Total/NA
gamma-BHC (Lindane)	ND		ug/L		0.2		525.2	Total/NA
Heptachlor	ND		ug/L		0.4		525.2	Total/NA
Heptachlor epoxide (isomer B)	ND		ug/L		0.2		525.2	Total/NA
Hexachlorobenzene	ND	^3+	ug/L		1		525.2	Total/NA
Hexachlorocyclopentadiene	ND		ug/L		50		525.2	Total/NA
Methoxychlor	ND		ug/L		40		525.2	Total/NA
Simazine	ND		ug/L		4		525.2	Total/NA
1,2,3-Trichloropropane	ND		ug/L	0.6000			504.1	Total/NA
1,2-D bromo-3-Chloropropane	ND		ug/L		0.2		504.1	Total/NA
1,2-D bromoethane	ND		ug/L		0.05		504.1	Total/NA
Toxaphene	ND		ug/L		3		505	Total/NA
Alachlor	ND		ug/L		2		505	Total/NA
Endrin	ND		ug/L		2		505	Total/NA
Heptachlor	ND		ug/L		0.4		505	Total/NA
Heptachlor epoxide	0.010		ug/L		0.2		505	Total/NA
gamma-BHC (Lindane)	ND		ug/L		0.2		505	Total/NA
Methoxychlor	ND		ug/L		40		505	Total/NA
Polychlorinated biphenyls, Total	ND		ug/L		0.5		505	Total/NA
Chloride	120	*+	mg/L			250	300.0	Total/NA
Nitrate as N	1.5		mg/L		10		300.0	Total/NA
Nitrate Nitrite as N	1.5		mg/L		10		300.0	Total/NA

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# Action Limit Summary

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

Job ID: 380-14579-1

**Client Sample ID: (331-261-TP008) KAAMILO WELLS  
(Continued)**

**Lab Sample ID: 380-14579-1**

## Compliance Check

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

Analyte	Result	Qualifier	Unit	HI Org Limit	EPAMCL Limit	EPAMCLS Limit	Method	Prep Type
Sulfate	24	*+	mg/L			250	300.0	Total/NA
Nitrite as N	ND		mg/L		1		300.0	Total/NA
Mercury	ND		mg/L		0.002		245.1	Total/NA
Total Dissolved Solids	340		mg/L			500	SM 2540C	Total/NA
Fluoride	0.055		mg/L		4	2	SM 4500 F C	Total/NA



# Surrogate Summary

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

Job ID: 380-14579-1

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		TOL (70-130)	BFB (70-130)	DCA (70-130)
380-14579-1	(331-261-TP008) KAAMILO WE	94	106	99
LCS 380-13338/2	Lab Control Sample	100	100	95
LCSD 380-13338/3	Lab Control Sample Dup	99	103	96
MB 380-13338/5	Method Blank	98	103	97

**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 380-13338/4	Lab Control Sample	98	101	97

**Surrogate Legend**

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

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		DCA (70-130)	BFB (70-130)	TOL (70-130)
380-14579-1	(331-261-TP008) KAAMILO WE	106	95	98
LCS 380-13731/11	Lab Control Sample	102	103	103
LCSD 380-13731/12	Lab Control Sample Dup	99	96	98
MB 380-13731/15	Method Blank	98	106	93
MRL 380-13731/10	Lab Control Sample	94	97	93
MRL 380-13731/14	Lab Control Sample	105	97	98

**Surrogate Legend**

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

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		2NMX (70-130)	PRY (70-130)	TPP (70-130)
380-14579-1	(331-261-TP008) KAAMILO WE	95	100	98
380-14819-P-1-A DU	Duplicate	95	101	101
380-14826-I-1-A MS	Matrix Spike	95	100	101
LCS 380-13045/3-A	Lab Control Sample	95	103	96
LCSD 380-13045/4-A	Lab Control Sample Dup	96	98	96

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# Surrogate Summary

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

Job ID: 380-14579-1

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		2NMX (70-130)	PRY (70-130)	TPP (70-130)
MB 380-13045/1-A	Method Blank	93	98	99
MRL 380-13045/2-A	Lab Control Sample	95	102	94

**Surrogate Legend**

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

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		DBPP1 (60-140)
380-14579-1	(331-261-TP008) KAAMILO WE	93
380-14813-D-1-A MS	Matrix Spike	99
380-14813-F-2-A DU	Duplicate	101
LCS 380-12252/3-A	Lab Control Sample	100
MB 380-12252/4-A	Method Blank	100
MRL 380-12252/1-A	Lab Control Sample	100
MRL 380-12252/2-A	Lab Control Sample	106

**Surrogate Legend**

DBPP = 1,2-D bromopropane (Surr)

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		TCX1 (70-130)	TCX1 (70-130)
380-14395-C-2-A MS	Matrix Spike	83	83
380-14579-1	(331-261-TP008) KAAMILO WELLS	94	94
380-15399-H-1-A MS	Matrix Spike	107	107
LCS 380-12446/16-A	Lab Control Sample	102	102
LCS 380-12446/23-A	Lab Control Sample	98	98
LCS 380-12446/9-A	Lab Control Sample	105	105
MB 380-12446/28-A	Method Blank	95	95
MRL 380-12446/24-A	Lab Control Sample	101	101
MRL 380-12446/57-A	Lab Control Sample	101	101

**Surrogate Legend**

TCX = Tetrachloro-m-xylene

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

Matrix: water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)						
		Acenaphtl (65-113)	Phenanth (80-111)	CRY (60-139)	NPT (44-119)	PHL (20-121)	PRY (36-161)	TBP (44-159)
98928-B1	Method Blank	93	93	98	86	102	90	80
98928-BS1	Lab Control Sample	98	97	105	87	104	99	79

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# Surrogate Summary

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

Job ID: 380-14579-1

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

Matrix: water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)						
		Acenaphtl (65-113)	Phenanth (80-111)	CRY (60-139)	NPT (44-119)	PHL (20-121)	PRY (36-161)	TBP (44-159)
98928-BS2	Lab Control Sample Dup	97	98	100	84	97	98	80

**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 LL (EAL) Physis - EPA 625 Base/Neutral and Acid Organics i

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)						
		Acenaphtl (45-118)	Phenanth (56-123)	CRY (36-142)	NPT (20-112)	PHL (0-85)	PRY (36-161)	TBP (31-143)
380-14579-2	(331-261-TP008) KAAMILO WE	57	61	70	47	55	64	95

**Surrogate Legend**

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

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

Matrix: WATER

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BB	XACOSAI
22DSH019WB	Method Blank		

**Surrogate Legend**

BB = BROMOBENZENE  
 HEXACOSANE = HEXACOSANE

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

Matrix: WATER

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BB (60-130)	XACOSAI (60-130)
22DSH019WC	LCD	72	104
22DSH019WL	Lab Control Sample	80	94
22J5H019WC	LCD	78	90
22J5H019WL	Lab Control Sample	84	86
22J8H019WC	LCD	86	83
22J8H019WL	Lab Control Sample	96	97



# Surrogate Summary

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

Job ID: 380-14579-1

## Surrogate Legend

BB = BROMOBENZENE  
HEXACOSANE = HEXACOSANE

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

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BB (60-130)	HEXACOSANE (60-130)
380-14579-7	(331-261-TP008) KAAMILO WE	64	87

## Surrogate Legend

BB = BROMOBENZENE  
HEXACOSANE = HEXACOSANE

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

Matrix: WATER

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (60-140)
22H080-02M	Matrix Spike	119
22H080-02S	Matrix Spike Duplicate	119

## 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
22VG39H03B	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)
22VG39H03C	LCD	113
22VG39H03L	Lab Control Sample	110

## 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)
380-14579-6	(331-261-TP008) KAAMILO WE	92
380-14579-10	TB:(331-261-TP008) KAAMILO WELLS	88

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# Surrogate Summary

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

Job ID: 380-14579-1

## Surrogate Legend

BFB = BROMOFLUOROBENZENE

## Method: 8015 Jet Fuel 5 (JP5) - 8015 - Jet Fuel 5 (JP5)

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BB (60-130)	XCOSAI (60-130)
380-14579-8	(331-261-TP008) KAAMILO WE	65	84

## Surrogate Legend

BB = BROMOBENZENE

HEXACOSANE = HEXACOSANE

## Method: 8015 Jet Fuel 8 (JP8) - 8015 - Jet Fuel 8 (JP8)

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BB (60-130)	XCOSAI (60-130)
380-14579-9	(331-261-TP008) KAAMILO WE	62	75

## Surrogate Legend

BB = BROMOBENZENE

HEXACOSANE = HEXACOSANE

# QC Sample Results

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

Job ID: 380-14579-1

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

**Lab Sample ID: MB 380-13731/15**  
**Matrix: Water**  
**Analysis Batch: 13731**

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	ug/L			08/17/22 21:14	1
1,1,1-Trichloroethane	ND		0.50	ug/L			08/17/22 21:14	1
1,1,2,2-Tetrachloroethane	ND		0.50	ug/L			08/17/22 21:14	1
1,1,2-Trichloroethane	ND		0.50	ug/L			08/17/22 21:14	1
1,1-Dichloroethane	ND		0.50	ug/L			08/17/22 21:14	1
1,1-Dichlorethylene	ND		0.50	ug/L			08/17/22 21:14	1
1,1-Dichloropropene	ND		0.50	ug/L			08/17/22 21:14	1
1,2,3-Trichlorobenzene	ND		0.50	ug/L			08/17/22 21:14	1
1,2,3-Trichloropropane	ND		0.50	ug/L			08/17/22 21:14	1
1,2,4-Trichlorobenzene	ND		0.50	ug/L			08/17/22 21:14	1
1,2,4-Trimethy benzene	ND		0.50	ug/L			08/17/22 21:14	1
1,2-Dichloroethane	ND		0.50	ug/L			08/17/22 21:14	1
1,2-Dichloropropane	ND		0.50	ug/L			08/17/22 21:14	1
1,3,5-Trimethy benzene	ND		0.50	ug/L			08/17/22 21:14	1
1,3-Dichloropropane	ND		0.50	ug/L			08/17/22 21:14	1
2,2-Dichloropropane	ND		0.50	ug/L			08/17/22 21:14	1
2-Butanone (MEK)	ND		5.0	ug/L			08/17/22 21:14	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	ug/L			08/17/22 21:14	1
Acetone	ND		500	ug/L			08/17/22 21:14	1
Benzene	ND		0.50	ug/L			08/17/22 21:14	1
Bromobenzene	ND		0.50	ug/L			08/17/22 21:14	1
Bromochloromethane	ND		0.50	ug/L			08/17/22 21:14	1
Bromodichloromethane	ND		0.50	ug/L			08/17/22 21:14	1
Bromoform	ND		0.50	ug/L			08/17/22 21:14	1
Bromomethane (Methyl Bromide)	ND		0.50	ug/L			08/17/22 21:14	1
Carbon disulfide	ND		0.50	ug/L			08/17/22 21:14	1
Carbon tetrachloride	ND		0.50	ug/L			08/17/22 21:14	1
Chlorobenzene	ND		0.50	ug/L			08/17/22 21:14	1
Chlorodibromomethane	ND		0.50	ug/L			08/17/22 21:14	1
Chloroethane	ND		0.50	ug/L			08/17/22 21:14	1
Chloroform (Trichloromethane)	ND		0.50	ug/L			08/17/22 21:14	1
Dichloromethane	ND		0.50	ug/L			08/17/22 21:14	1
cis-1,2-Dichloroethylene	ND		0.50	ug/L			08/17/22 21:14	1
cis-1,3-Dichloropropene	ND		0.50	ug/L			08/17/22 21:14	1
Dibromomethane	ND		0.50	ug/L			08/17/22 21:14	1
Dichlorodifluoromethane	ND		0.50	ug/L			08/17/22 21:14	1
Ethylbenzene	ND		0.50	ug/L			08/17/22 21:14	1
Hexachlorobutadiene	ND		0.50	ug/L			08/17/22 21:14	1
Isopropy benzene	ND		0.50	ug/L			08/17/22 21:14	1
m,p-Xylenes	ND		0.50	ug/L			08/17/22 21:14	1
m-Dichlorobenzene (1,3-DCB)	ND		0.50	ug/L			08/17/22 21:14	1
Methyl-tert-butyl Ether (MTBE)	ND		0.50	ug/L			08/17/22 21:14	1
Naphthalene	ND		0.50	ug/L			08/17/22 21:14	1
n-Butylbenzene	ND		0.50	ug/L			08/17/22 21:14	1
N-Propylbenzene	ND		0.50	ug/L			08/17/22 21:14	1
o-Dichlorobenzene (1,2-DCB)	ND		0.50	ug/L			08/17/22 21:14	1
o-Chlorotoluene	ND		0.50	ug/L			08/17/22 21:14	1
o-Xylene	ND		0.50	ug/L			08/17/22 21:14	1

Eurofins Eaton Monrovia

# QC Sample Results

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

Job ID: 380-14579-1

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

**Lab Sample ID: MB 380-13731/15**  
**Matrix: Water**  
**Analysis Batch: 13731**

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
p-Chlorotoluene	ND		0.50	ug/L			08/17/22 21:14	1
p-Dichlorobenzene (1,4-DCB)	ND		0.50	ug/L			08/17/22 21:14	1
p-Isopropyltoluene	ND		0.50	ug/L			08/17/22 21:14	1
sec-Butylbenzene	ND		0.50	ug/L			08/17/22 21:14	1
Styrene	ND		0.50	ug/L			08/17/22 21:14	1
Tert-amyl methyl ether	ND		3.0	ug/L			08/17/22 21:14	1
Tert-butyl ethyl ether	ND		3.0	ug/L			08/17/22 21:14	1
tert-Butylbenzene	ND		0.50	ug/L			08/17/22 21:14	1
Tetrachloroethene (PCE)	ND		0.50	ug/L			08/17/22 21:14	1
Toluene	ND		0.50	ug/L			08/17/22 21:14	1
1,3-Dichloropropene, Total	ND		0.50	ug/L			08/17/22 21:14	1
Xylenes, Total	ND		0.50	ug/L			08/17/22 21:14	1
trans-1,2-Dichloroethylene	ND		0.50	ug/L			08/17/22 21:14	1
trans-1,3-Dichloropropene	ND		0.50	ug/L			08/17/22 21:14	1
Trichloroethylene (TCE)	ND		0.50	ug/L			08/17/22 21:14	1
Trichlorofluoromethane (Freon 11)	ND		0.50	ug/L			08/17/22 21:14	1
Vinyl Chloride (VC)	ND		0.30	ug/L			08/17/22 21:14	1
Trichlorotrifluoroethane	ND		0.50	ug/L			08/17/22 21:14	1
Bromoethane	ND		0.50	ug/L			08/17/22 21:14	1
Chloromethane (methyl chloride)	ND		0.50	ug/L			08/17/22 21:14	1
Diisopropyl ether	ND		3.0	ug/L			08/17/22 21:14	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					08/17/22 21:14	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		70 - 130		08/17/22 21:14	1
4-Bromofluorobenzene (Surr)	106		70 - 130		08/17/22 21:14	1
Toluene-d8 (Surr)	93		70 - 130		08/17/22 21:14	1

**Lab Sample ID: LCS 380-13731/11**  
**Matrix: Water**  
**Analysis Batch: 13731**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	5.00	5.44		ug/L		109	70 - 130
1,1,1-Trichloroethane	5.00	5.71		ug/L		114	70 - 130
1,1,2,2-Tetrachloroethane	5.00	4.68		ug/L		94	70 - 130
1,1,2-Trichloroethane	5.00	4.75		ug/L		95	70 - 130
1,1-Dichloroethane	5.00	4.76		ug/L		95	70 - 130
1,1-Dichloroethylene	5.00	5.43		ug/L		109	70 - 130
1,1-Dichloropropene	5.00	4.63		ug/L		93	70 - 130
1,2,3-Trichlorobenzene	5.00	5.74		ug/L		115	70 - 130
1,2,3-Trichloropropane	5.00	4.92		ug/L		98	70 - 130
1,2,4-Trichlorobenzene	5.00	5.60		ug/L		112	70 - 130
1,2,4-Trimethyl benzene	5.00	5.11		ug/L		102	70 - 130
1,2-Dichloroethane	5.00	5.04		ug/L		101	70 - 130
1,2-Dichloropropane	5.00	5.01		ug/L		100	70 - 130

Eurofins Eaton Monrovia

# QC Sample Results

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

Job ID: 380-14579-1

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

**Lab Sample ID: LCS 380-13731/11**  
**Matrix: Water**  
**Analysis Batch: 13731**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,3,5-Trimethy benzene	5.00	5.15		ug/L		103	70 - 130
1,3-Dichloropropane	5.00	4.81		ug/L		96	70 - 130
2,2-Dichloropropane	5.00	4.73		ug/L		95	70 - 130
2-Butanone (MEK)	50.0	46.6		ug/L		93	70 - 130
4-Methyl-2-pentanone (MIBK)	50.0	51.6		ug/L		103	70 - 130
Acetone	50.0	53.2	J	ug/L		106	70 - 130
Benzene	5.00	4.84		ug/L		97	70 - 130
Bromobenzene	5.00	4.70		ug/L		94	70 - 130
Bromochloromethane	5.00	5.12		ug/L		102	70 - 130
Bromodichloromethane	5.00	5.41		ug/L		108	70 - 130
Bromoform	5.00	5.08		ug/L		102	70 - 130
Bromomethane (Methyl Bromide)	5.00	4.50		ug/L		90	70 - 130
Carbon disulfide	5.00	5.80		ug/L		116	70 - 130
Carbon tetrachloride	5.00	5.78		ug/L		116	70 - 130
Chlorobenzene	5.00	4.82		ug/L		96	70 - 130
Chlorodibromomethane	5.00	6.04		ug/L		121	70 - 130
Dichloromethane	5.00	4.49		ug/L		90	70 - 130
cis-1,3-Dichloropropene	5.00	5.81		ug/L		116	70 - 130
Ethylbenzene	5.00	5.16		ug/L		103	70 - 130
Hexachlorobutadiene	5.00	5.22		ug/L		104	70 - 130
Isopropyl benzene	5.00	4.90		ug/L		98	70 - 130
m,p-Xylenes	10.0	10.1		ug/L		101	70 - 130
m-Dichlorobenzene (1,3-DCB)	5.00	4.96		ug/L		99	70 - 130
Methyl-tert-butyl Ether (MTBE)	5.00	5.03		ug/L		101	70 - 130
Naphthalene	5.00	5.82		ug/L		116	70 - 130
n-Butylbenzene	5.00	5.86		ug/L		117	70 - 130
N-Propylbenzene	5.00	5.26		ug/L		105	70 - 130
o-Dichlorobenzene (1,2-DCB)	5.00	5.14		ug/L		103	70 - 130
o-Chlorotoluene	5.00	4.94		ug/L		99	70 - 130
o-Xylene	5.00	5.07		ug/L		101	70 - 130
p-Chlorotoluene	5.00	5.16		ug/L		103	70 - 130
p-Dichlorobenzene (1,4-DCB)	5.00	4.94		ug/L		99	70 - 130
p-Isopropyltoluene	5.00	5.44		ug/L		109	70 - 130
sec-Butylbenzene	5.00	5.14		ug/L		103	70 - 130
Styrene	5.00	4.66		ug/L		93	70 - 130
Tert-amyl methyl ether	5.00	4.88		ug/L		98	70 - 130
Tert-butyl ethyl ether	5.00	4.81		ug/L		96	70 - 130
tert-Butylbenzene	5.00	5.04		ug/L		101	70 - 130
Tetrachloroethene (PCE)	5.00	4.88		ug/L		98	70 - 130
Toluene	5.00	4.66		ug/L		93	70 - 130
1,3-Dichloropropene, Total	10.0	11.5		ug/L		115	70 - 130
Xylenes, Total	15.0	15.1		ug/L		101	70 - 130
trans-1,2-Dichloroethylene	5.00	5.08		ug/L		102	70 - 130
trans-1,3-Dichloropropene	5.00	5.68		ug/L		114	70 - 130
Trichloroethylene (TCE)	5.00	4.83		ug/L		97	70 - 130
Trichlorofluoromethane (Freon 11)	5.00	5.92		ug/L		118	70 - 130
Vinyl Chloride (VC)	5.00	5.21		ug/L		104	70 - 130
Trichlorotrifluoroethane	5.00	6.76	*+	ug/L		135	70 - 130

Eurofins Eaton Monrovia

# QC Sample Results

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

Job ID: 380-14579-1

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

**Lab Sample ID: LCS 380-13731/11**  
**Matrix: Water**  
**Analysis Batch: 13731**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromoethane	5.00	5.01		ug/L		100	70 - 130
Diisopropyl ether	5.00	4.74		ug/L		95	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	102		70 - 130
4-Bromofluorobenzene (Surr)	103		70 - 130
Toluene-d8 (Surr)	103		70 - 130

**Lab Sample ID: LCSD 380-13731/12**  
**Matrix: Water**  
**Analysis Batch: 13731**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	5.00	4.68		ug/L		94	70 - 130	15	20
1,1,1-Trichloroethane	5.00	4.69		ug/L		94	70 - 130	20	20
1,1,2,2-Tetrachloroethane	5.00	4.40		ug/L		88	70 - 130	6	20
1,1,2-Trichloroethane	5.00	4.36		ug/L		87	70 - 130	9	20
1,1-Dichloroethane	5.00	4.12		ug/L		82	70 - 130	14	20
1,1-Dichlorethylene	5.00	4.86		ug/L		97	70 - 130	11	20
1,1-Dichloropropene	5.00	3.96		ug/L		79	70 - 130	16	20
1,2,3-Trichlorobenzene	5.00	4.73		ug/L		95	70 - 130	19	20
1,2,3-Trichloropropane	5.00	4.46		ug/L		89	70 - 130	10	20
1,2,4-Trichlorobenzene	5.00	4.46	*1	ug/L		89	70 - 130	23	20
1,2,4-Trimethy benzene	5.00	4.84		ug/L		97	70 - 130	5	20
1,2-Dichloroethane	5.00	4.34		ug/L		87	70 - 130	15	20
1,2-Dichloropropane	5.00	4.22		ug/L		84	70 - 130	17	20
1,3,5-Trimethy benzene	5.00	4.93		ug/L		99	70 - 130	4	20
1,3-Dichloropropane	5.00	4.07		ug/L		81	70 - 130	17	20
2,2-Dichloropropane	5.00	4.19		ug/L		84	70 - 130	12	20
2-Butanone (MEK)	50.0	41.4		ug/L		83	70 - 130	12	20
4-Methyl-2-pentanone (MIBK)	50.0	47.8		ug/L		96	70 - 130	8	20
Acetone	50.0	45.8	J	ug/L		92	70 - 130	15	20
Benzene	5.00	4.27		ug/L		85	70 - 130	12	20
Bromobenzene	5.00	4.59		ug/L		92	70 - 130	2	20
Bromochloromethane	5.00	4.42		ug/L		88	70 - 130	15	20
Bromodichloromethane	5.00	4.77		ug/L		95	70 - 130	13	20
Bromoform	5.00	4.68		ug/L		94	70 - 130	8	20
Bromomethane (Methyl Bromide)	5.00	3.97		ug/L		79	70 - 130	12	20
Carbon disulfide	5.00	4.41	*1	ug/L		88	70 - 130	27	20
Carbon tetrachloride	5.00	5.37		ug/L		107	70 - 130	7	20
Chlorobenzene	5.00	4.20		ug/L		84	70 - 130	14	20
Chlorodibromomethane	5.00	5.24		ug/L		105	70 - 130	14	20
Dichloromethane	5.00	4.12		ug/L		82	70 - 130	9	20
cis-1,3-Dichloropropene	5.00	4.75		ug/L		95	70 - 130	20	20
Ethylbenzene	5.00	4.60		ug/L		92	70 - 130	11	20
Hexachlorobutadiene	5.00	4.44		ug/L		89	70 - 130	16	20
Isopropy benzene	5.00	4.61		ug/L		92	70 - 130	6	20
m,p-Xylenes	10.0	8.99		ug/L		90	70 - 130	11	20

Eurofins Eaton Monrovia

# QC Sample Results

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

Job ID: 380-14579-1

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

**Lab Sample ID: LCSD 380-13731/12**  
**Matrix: Water**  
**Analysis Batch: 13731**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
m-Dichlorobenzene (1,3-DCB)	5.00	4.40		ug/L		88	70 - 130	12	20
Methyl-tert-butyl Ether (MTBE)	5.00	4.40		ug/L		88	70 - 130	13	20
Naphthalene	5.00	4.62	*1	ug/L		92	70 - 130	23	20
n-Butylbenzene	5.00	4.79		ug/L		96	70 - 130	20	20
N-Propylbenzene	5.00	4.71		ug/L		94	70 - 130	11	20
o-Dichlorobenzene (1,2-DCB)	5.00	4.24		ug/L		85	70 - 130	19	20
o-Chlorotoluene	5.00	4.57		ug/L		91	70 - 130	8	20
o-Xylene	5.00	4.46		ug/L		89	70 - 130	13	20
p-Chlorotoluene	5.00	4.51		ug/L		90	70 - 130	13	20
p-Dichlorobenzene (1,4-DCB)	5.00	4.38		ug/L		88	70 - 130	12	20
p-Isopropyltoluene	5.00	4.91		ug/L		98	70 - 130	10	20
sec-Butylbenzene	5.00	4.70		ug/L		94	70 - 130	9	20
Styrene	5.00	4.46		ug/L		89	70 - 130	4	20
Tert-amyl methyl ether	5.00	4.24		ug/L		85	70 - 130	14	20
Tert-butyl ethyl ether	5.00	4.29		ug/L		86	70 - 130	11	20
tert-Butylbenzene	5.00	4.41		ug/L		88	70 - 130	13	20
Tetrachloroethene (PCE)	5.00	4.46		ug/L		89	70 - 130	9	20
Toluene	5.00	4.27		ug/L		85	70 - 130	9	20
1,3-Dichloropropene, Total	10.0	10.0		ug/L		100	70 - 130	13	20
Xylenes, Total	15.0	13.4		ug/L		90	70 - 130	12	20
trans-1,2-Dichloroethylene	5.00	4.60		ug/L		92	70 - 130	10	20
trans-1,3-Dichloropropene	5.00	5.29		ug/L		106	70 - 130	7	20
Trichloroethylene (TCE)	5.00	4.29		ug/L		86	70 - 130	12	20
Trichlorofluoromethane (Freon 11)	5.00	5.77		ug/L		115	70 - 130	3	20
Vinyl Chloride (VC)	5.00	5.35		ug/L		107	70 - 130	3	20
Trichlorotrifluoroethane	5.00	6.17		ug/L		123	70 - 130	9	20
Bromoethane	5.00	4.08	*1	ug/L		82	70 - 130	21	20
Diisopropyl ether	5.00	4.26		ug/L		85	70 - 130	11	20

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	99		70 - 130
4-Bromofluorobenzene (Surr)	96		70 - 130
Toluene-d8 (Surr)	98		70 - 130

**Lab Sample ID: MRL 380-13731/10**  
**Matrix: Water**  
**Analysis Batch: 13731**

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
m,p-Xylenes	0.500	0.701		ug/L		140	50 - 150
Xylenes, Total	0.500	0.701		ug/L		140	50 - 150
Vinyl Chloride (VC)	0.250	0.323		ug/L		129	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	MRL Limits
1,2-Dichloroethane-d4 (Surr)	94		70 - 130
4-Bromofluorobenzene (Surr)	97		70 - 130
Toluene-d8 (Surr)	93		70 - 130

# QC Sample Results

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

Job ID: 380-14579-1

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

**Lab Sample ID: MRL 380-13731/14**  
**Matrix: Water**  
**Analysis Batch: 13731**

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	0.500	0.623		ug/L		125	50 - 150
1,1,1-Trichloroethane	0.500	0.521		ug/L		104	50 - 150
1,1,2,2-Tetrachloroethane	0.500	0.538		ug/L		108	50 - 150
1,1,2-Trichloroethane	0.500	0.470	J	ug/L		94	50 - 150
1,1-Dichloroethane	0.500	0.537		ug/L		107	50 - 150
1,1-Dichlorethylene	0.500	0.549		ug/L		110	50 - 150
1,1-Dichloropropene	0.500	0.522		ug/L		104	50 - 150
1,2,3-Trichlorobenzene	0.500	0.635		ug/L		127	50 - 150
1,2,3-Trichloropropane	0.500	0.611		ug/L		122	50 - 150
1,2,4-Trichlorobenzene	0.500	0.561		ug/L		112	50 - 150
1,2,4-Trimethy benzene	0.500	0.502		ug/L		100	50 - 150
1,2-Dichloroethane	0.500	0.562		ug/L		112	50 - 150
1,2-Dichloropropane	0.500	0.493	J	ug/L		99	50 - 150
1,3,5-Trimethy benzene	0.500	0.482	J	ug/L		96	50 - 150
1,3-Dichloropropane	0.500	0.532		ug/L		106	50 - 150
2,2-Dichloropropane	0.500	0.577		ug/L		115	50 - 150
2-Butanone (MEK)	5.00	5.40		ug/L		108	50 - 150
4-Methyl-2-pentanone (MIBK)	5.00	5.44		ug/L		109	50 - 150
Acetone	5.00	4.45	J	ug/L		89	50 - 150
Benzene	0.500	0.525		ug/L		105	50 - 150
Bromobenzene	0.500	0.549		ug/L		110	50 - 150
Bromochloromethane	0.500	0.451	J	ug/L		90	50 - 150
Bromodichloromethane	0.500	0.766	^3+	ug/L		153	50 - 150
Bromoform	0.500	0.861	^3+	ug/L		172	50 - 150
Bromomethane (Methyl Bromide)	0.500	0.583		ug/L		117	50 - 150
Carbon disulfide	0.500	0.535		ug/L		107	50 - 150
Carbon tetrachloride	0.500	0.502		ug/L		100	50 - 150
Chlorobenzene	0.500	0.491	J	ug/L		98	50 - 150
Chlorodibromomethane	0.500	0.587		ug/L		117	50 - 150
Dichloromethane	0.500	0.566		ug/L		113	50 - 150
cis-1,3-Dichloropropene	0.500	0.522		ug/L		104	50 - 150
Ethylbenzene	0.500	0.468	J	ug/L		94	50 - 150
Hexachlorobutadiene	0.500	0.608		ug/L		122	50 - 150
Isopropyl benzene	0.500	0.546		ug/L		109	50 - 150
m,p-Xylenes	1.00	0.963		ug/L		96	50 - 150
m-Dichlorobenzene (1,3-DCB)	0.500	0.519		ug/L		104	50 - 150
Methyl-tert-butyl Ether (MTBE)	0.500	0.571		ug/L		114	50 - 150
Naphthalene	0.500	0.567		ug/L		113	50 - 150
n-Butylbenzene	0.500	0.505		ug/L		101	50 - 150
N-Propylbenzene	0.500	0.567		ug/L		113	50 - 150
o-Dichlorobenzene (1,2-DCB)	0.500	0.543		ug/L		109	50 - 150
o-Chlorotoluene	0.500	0.553		ug/L		111	50 - 150
o-Xylene	0.500	0.536		ug/L		107	50 - 150
p-Chlorotoluene	0.500	0.493	J	ug/L		99	50 - 150
p-Dichlorobenzene (1,4-DCB)	0.500	0.498	J	ug/L		100	50 - 150
p-Isopropyltoluene	0.500	0.503		ug/L		101	50 - 150
sec-Butylbenzene	0.500	0.479	J	ug/L		96	50 - 150
Styrene	0.500	0.398	J	ug/L		80	50 - 150

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# QC Sample Results

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

Job ID: 380-14579-1

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

**Lab Sample ID: MRL 380-13731/14**  
**Matrix: Water**  
**Analysis Batch: 13731**

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Tert-amyl methyl ether	0.500	0.523	J	ug/L		105	50 - 150
Tert-butyl ethyl ether	0.500	0.494	J	ug/L		99	50 - 150
tert-Butylbenzene	0.500	0.531		ug/L		106	50 - 150
Tetrachloroethene (PCE)	0.500	0.555		ug/L		111	50 - 150
Toluene	0.500	0.451	J	ug/L		90	50 - 150
1,3-Dichloropropene, Total	1.00	1.05		ug/L		105	50 - 150
Xylenes, Total	1.50	1.50		ug/L		100	50 - 150
trans-1,2-Dichloroethylene	0.500	0.571		ug/L		114	50 - 150
trans-1,3-Dichloropropene	0.500	0.531		ug/L		106	50 - 150
Trichloroethylene (TCE)	0.500	0.492	J	ug/L		98	50 - 150
Trichlorofluoromethane (Freon 11)	0.500	0.424	J	ug/L		85	50 - 150
Vinyl Chloride (VC)	0.500	0.554		ug/L		111	50 - 150
Trichlorotrifluoroethane	0.500	0.491	J	ug/L		98	50 - 150
Bromoethane	0.500	0.455	J	ug/L		91	50 - 150
Diisopropyl ether	0.500	0.494	J	ug/L		99	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	105		70 - 130
4-Bromofluorobenzene (Surr)	97		70 - 130
Toluene-d8 (Surr)	98		70 - 130

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

**Lab Sample ID: MB 380-13338/5**  
**Matrix: Water**  
**Analysis Batch: 13338**

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tertiary Butyl Alcohol (TBA)	ND		2.0	ug/L			08/15/22 21:14	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		70 - 130		08/15/22 21:14	1
4-Bromofluorobenzene (Surr)	103		70 - 130		08/15/22 21:14	1
1,2-Dichloroethane-d4 (Surr)	97		70 - 130		08/15/22 21:14	1

**Lab Sample ID: LCS 380-13338/2**  
**Matrix: Water**  
**Analysis Batch: 13338**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Tertiary Butyl Alcohol (TBA)	5.00	4.91		ug/L		98	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	100		70 - 130
4-Bromofluorobenzene (Surr)	100		70 - 130
1,2-Dichloroethane-d4 (Surr)	95		70 - 130

# QC Sample Results

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

Job ID: 380-14579-1

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

**Lab Sample ID: LCSD 380-13338/3**  
**Matrix: Water**  
**Analysis Batch: 13338**

**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	4.83		ug/L		97	70 - 130	2	20
<b>LCSD LCSD</b>									
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
Toluene-d8 (Surr)	99		70 - 130						
4-Bromofluorobenzene (Surr)	103		70 - 130						
1,2-Dichloroethane-d4 (Surr)	96		70 - 130						

**Lab Sample ID: MRL 380-13338/4**  
**Matrix: Water**  
**Analysis Batch: 13338**

**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	2.40		ug/L		120	50 - 150		
<b>MRL MRL</b>									
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
Toluene-d8 (Surr)	98		50 - 150						
4-Bromofluorobenzene (Surr)	101		50 - 150						
1,2-Dichloroethane-d4 (Surr)	97		50 - 150						

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

**Lab Sample ID: MB 380-13045/1-A**  
**Matrix: Water**  
**Analysis Batch: 14453**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 13045**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	ND		0.099	ug/L		08/12/22 10:08	08/23/22 12:13	1
2,4'-DDE	ND		0.099	ug/L		08/12/22 10:08	08/23/22 12:13	1
2,4'-DDT	ND		0.099	ug/L		08/12/22 10:08	08/23/22 12:13	1
2,4-Dinitrotoluene	ND		0.099	ug/L		08/12/22 10:08	08/23/22 12:13	1
2,6-Dinitrotoluene	ND		0.099	ug/L		08/12/22 10:08	08/23/22 12:13	1
4,4'-DDD	ND		0.099	ug/L		08/12/22 10:08	08/23/22 12:13	1
4,4'-DDE	ND		0.099	ug/L		08/12/22 10:08	08/23/22 12:13	1
4,4'-DDT	ND		0.099	ug/L		08/12/22 10:08	08/23/22 12:13	1
Acenaphthene	ND		0.099	ug/L		08/12/22 10:08	08/23/22 12:13	1
Acenaphthylene	ND		0.099	ug/L		08/12/22 10:08	08/23/22 12:13	1
Acetochlor	ND		0.099	ug/L		08/12/22 10:08	08/23/22 12:13	1
Alachlor	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:13	1
alpha-BHC	ND		0.099	ug/L		08/12/22 10:08	08/23/22 12:13	1
alpha-Chlordane	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:13	1
Anthracene	ND		0.020	ug/L		08/12/22 10:08	08/23/22 12:13	1
Atrazine	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:13	1
Benz(a)anthracene	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:13	1
Benzo[a]pyrene	ND		0.020	ug/L		08/12/22 10:08	08/23/22 12:13	1
Benzo[b]fluoranthene	ND		0.020	ug/L		08/12/22 10:08	08/23/22 12:13	1
Benzo[g,h,i]perylene	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:13	1
Benzo[k]fluoranthene	ND		0.020	ug/L		08/12/22 10:08	08/23/22 12:13	1
beta-BHC	ND		0.099	ug/L		08/12/22 10:08	08/23/22 12:13	1

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# QC Sample Results

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

Job ID: 380-14579-1

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

**Lab Sample ID: MB 380-13045/1-A**  
**Matrix: Water**  
**Analysis Batch: 14453**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 13045**

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Bis(2-ethylhexyl) phthalate	ND		0.59	ug/L		08/12/22 10:08	08/23/22 12:13	1
Bromacil	ND		0.099	ug/L		08/12/22 10:08	08/23/22 12:13	1
Butachlor	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:13	1
Butylbenzylphthalate	ND		0.49	ug/L		08/12/22 10:08	08/23/22 12:13	1
Caffeine	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:13	1
Chlorobenzilate	ND		0.099	ug/L		08/12/22 10:08	08/23/22 12:13	1
Chloroneb	ND		0.099	ug/L		08/12/22 10:08	08/23/22 12:13	1
Chlorothalonil (Draconil, Bravo)	ND		0.099	ug/L		08/12/22 10:08	08/23/22 12:13	1
Chlorpyrifos	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:13	1
Chrysene	ND		0.020	ug/L		08/12/22 10:08	08/23/22 12:13	1
delta-BHC	ND		0.099	ug/L		08/12/22 10:08	08/23/22 12:13	1
Di(2-ethylhexyl)adipate	ND		0.59	ug/L		08/12/22 10:08	08/23/22 12:13	1
Diazinon (Qualitative)	ND		0.099	ug/L		08/12/22 10:08	08/23/22 12:13	1
Dibenz(a,h)anthracene	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:13	1
Diclorvos (DDVP)	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:13	1
Dieldrin	ND		0.20	ug/L		08/12/22 10:08	08/23/22 12:13	1
Diethylphthalate	ND		0.49	ug/L		08/12/22 10:08	08/23/22 12:13	1
Dimethoate	ND		0.099	ug/L		08/12/22 10:08	08/23/22 12:13	1
Dimethylphthalate	ND		0.49	ug/L		08/12/22 10:08	08/23/22 12:13	1
Di-n-butyl phthalate	ND		0.99	ug/L		08/12/22 10:08	08/23/22 12:13	1
Di-n-octyl phthalate	ND		0.099	ug/L		08/12/22 10:08	08/23/22 12:13	1
Endosulfan I (Alpha)	ND		0.099	ug/L		08/12/22 10:08	08/23/22 12:13	1
Endosulfan II (Beta)	ND		0.099	ug/L		08/12/22 10:08	08/23/22 12:13	1
Endosulfan sulfate	ND		0.099	ug/L		08/12/22 10:08	08/23/22 12:13	1
Endrin	ND		0.099	ug/L		08/12/22 10:08	08/23/22 12:13	1
Endrin aldehyde	ND		0.099	ug/L		08/12/22 10:08	08/23/22 12:13	1
EPTC	ND		0.099	ug/L		08/12/22 10:08	08/23/22 12:13	1
Fluoranthene	ND		0.099	ug/L		08/12/22 10:08	08/23/22 12:13	1
Fluorene	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:13	1
gamma-BHC (Lindane)	ND		0.039	ug/L		08/12/22 10:08	08/23/22 12:13	1
gamma-Chlordane	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:13	1
Heptachlor	ND		0.039	ug/L		08/12/22 10:08	08/23/22 12:13	1
Heptachlor epoxide (isomer B)	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:13	1
Hexachlorobenzene	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:13	1
Hexachlorocyclopentadiene	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:13	1
Indeno[1,2,3-cd]pyrene	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:13	1
Isophorone	ND		0.49	ug/L		08/12/22 10:08	08/23/22 12:13	1
Malathion	ND		0.099	ug/L		08/12/22 10:08	08/23/22 12:13	1
Methoxychlor	ND		0.099	ug/L		08/12/22 10:08	08/23/22 12:13	1
Metolachlor	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:13	1
Metribuzin	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:13	1
Molinate	ND		0.099	ug/L		08/12/22 10:08	08/23/22 12:13	1
Naphthalene	ND		0.30	ug/L		08/12/22 10:08	08/23/22 12:13	1
Parathion	ND		0.099	ug/L		08/12/22 10:08	08/23/22 12:13	1
Pendimethalin (Penoxaline)	ND		0.099	ug/L		08/12/22 10:08	08/23/22 12:13	1
Phenanthrene	ND		0.039	ug/L		08/12/22 10:08	08/23/22 12:13	1
Propachlor	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:13	1
Pyrene	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:13	1
Simazine	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:13	1

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# QC Sample Results

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

Job ID: 380-14579-1

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

**Lab Sample ID: MB 380-13045/1-A**  
**Matrix: Water**  
**Analysis Batch: 14453**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 13045**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Terbacil	ND		0.099	ug/L		08/12/22 10:08	08/23/22 12:13	1
Terbutylazine	ND		0.099	ug/L		08/12/22 10:08	08/23/22 12:13	1
Thiobencarb	ND		0.20	ug/L		08/12/22 10:08	08/23/22 12:13	1
Total Permethrin (mixed isomers)	ND		0.20	ug/L		08/12/22 10:08	08/23/22 12:13	1
trans-Nonachlor	ND		0.049	ug/L		08/12/22 10:08	08/23/22 12:13	1
Trifluralin	ND		0.099	ug/L		08/12/22 10:08	08/23/22 12:13	1
1-Methylnaphthalene	ND		0.099	ug/L		08/12/22 10:08	08/23/22 12:13	1
2-Methylnaphthalene	ND		0.099	ug/L		08/12/22 10:08	08/23/22 12:13	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Decane	1.66	T J N	ug/L		2.41	124-18-5	08/12/22 10:08	08/23/22 12:13	1
Decane, 3-methyl-	0.590	T J N	ug/L		2.61	13151-34-3	08/12/22 10:08	08/23/22 12:13	1
Tetradecanoic acid	1.18	T J N	ug/L		5.82	544-63-8	08/12/22 10:08	08/23/22 12:13	1
Octadecanoic acid	1.12	T J N	ug/L		6.49	57-11-4	08/12/22 10:08	08/23/22 12:13	1
9-Octadecenamide, (Z)-	1.02	T J N	ug/L		7.47	301-02-0	08/12/22 10:08	08/23/22 12:13	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	93		70 - 130	08/12/22 10:08	08/23/22 12:13	1
Perylene-d12	98		70 - 130	08/12/22 10:08	08/23/22 12:13	1
Triphenylphosphate	99		70 - 130	08/12/22 10:08	08/23/22 12:13	1

**Lab Sample ID: LCS 380-13045/3-A**  
**Matrix: Water**  
**Analysis Batch: 14453**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 13045**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	1.97	2.16		ug/L		110	70 - 130
2,4'-DDE	1.97	1.96		ug/L		99	70 - 130
2,4'-DDT	1.97	1.86		ug/L		95	70 - 130
2,4-Dinitrotoluene	1.97	1.92		ug/L		98	70 - 130
2,6-Dinitrotoluene	1.97	1.89		ug/L		96	70 - 130
4,4'-DDD	1.97	1.93		ug/L		98	70 - 130
4,4'-DDE	1.97	1.91		ug/L		97	70 - 130
4,4'-DDT	1.97	1.90		ug/L		97	70 - 130
Acenaphthene	1.97	1.88		ug/L		95	70 - 130
Acenaphthylene	1.97	1.92		ug/L		98	70 - 130
Acetochlor	1.97	2.01		ug/L		102	70 - 130
Alachlor	1.97	1.92		ug/L		97	70 - 130
alpha-BHC	1.97	1.85		ug/L		94	70 - 130
alpha-Chlordane	1.97	1.94		ug/L		99	70 - 130
Anthracene	1.97	1.89		ug/L		96	70 - 130
Atrazine	1.97	2.11		ug/L		107	70 - 130
Benz(a)anthracene	1.97	1.88		ug/L		96	70 - 130
Benzo[a]pyrene	1.97	1.76		ug/L		89	70 - 130
Benzo[b]fluoranthene	1.97	1.92		ug/L		98	70 - 130
Benzo[g,h,i]perylene	1.97	1.80		ug/L		92	70 - 130
Benzo[k]fluoranthene	1.97	1.89		ug/L		96	70 - 130
beta-BHC	1.97	1.82		ug/L		92	70 - 130

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# QC Sample Results

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

Job ID: 380-14579-1

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

**Lab Sample ID: LCS 380-13045/3-A**  
**Matrix: Water**  
**Analysis Batch: 14453**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 13045**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bis(2-ethylhexyl) phthalate	1.97	1.89		ug/L		96	70 - 130
Bromacil	1.97	1.86		ug/L		95	70 - 130
Butachlor	1.97	2.03		ug/L		103	70 - 130
Butylbenzylphthalate	1.97	2.14		ug/L		109	70 - 130
Caffeine	1.97	1.35		ug/L		69	45 - 137
Chlorobenzilate	1.97	2.07		ug/L		105	70 - 130
Chloroneb	1.97	1.88		ug/L		96	70 - 130
Chlorothalonil (Draconil, Bravo)	1.97	2.22		ug/L		113	70 - 130
Chlorpyrifos	1.97	2.00		ug/L		101	70 - 130
Chrysene	1.97	1.68		ug/L		85	70 - 130
delta-BHC	1.97	1.74		ug/L		89	70 - 130
Di(2-ethylhexyl)adipate	1.97	2.33		ug/L		118	70 - 130
Diazinon (Qualitative)	1.97	1.80		ug/L		92	15 - 132
Dibenz(a,h)anthracene	1.97	1.79		ug/L		91	70 - 130
Diclorvos (DDVP)	1.97	2.24		ug/L		114	70 - 130
Dieldrin	1.97	2.08		ug/L		106	70 - 130
Diethylphthalate	1.97	2.01		ug/L		102	70 - 130
Dimethoate	1.97	1.46		ug/L		74	35 - 100
Dimethylphthalate	1.97	2.05		ug/L		104	70 - 130
Di-n-butyl phthalate	3.94	4.02		ug/L		102	70 - 130
Di-n-octyl phthalate	1.97	1.54		ug/L		78	70 - 130
Endosulfan I (Alpha)	1.97	1.72		ug/L		87	70 - 130
Endosulfan II (Beta)	1.97	1.82		ug/L		92	70 - 130
Endosulfan sulfate	1.97	2.24		ug/L		114	70 - 130
Endrin	1.97	1.91		ug/L		97	70 - 130
Endrin aldehyde	1.97	2.04		ug/L		104	70 - 130
EPTC	1.97	2.23		ug/L		113	70 - 130
Fluoranthene	1.97	1.93		ug/L		98	70 - 130
Fluorene	1.97	2.03		ug/L		103	70 - 130
gamma-BHC (Lindane)	1.97	1.80		ug/L		91	70 - 130
gamma-Chlordane	1.97	1.94		ug/L		98	70 - 130
Heptachlor	1.97	1.94		ug/L		98	70 - 130
Heptachlor epoxide (isomer B)	1.97	2.05		ug/L		104	70 - 130
Hexachlorobenzene	1.97	1.98		ug/L		100	70 - 130
Hexachlorocyclopentadiene	1.97	1.95		ug/L		99	70 - 130
Indeno[1,2,3-cd]pyrene	1.97	1.86		ug/L		94	70 - 130
Isophorone	1.97	1.93		ug/L		98	70 - 130
Malathion	1.97	2.11		ug/L		107	70 - 130
Methoxychlor	1.97	1.97		ug/L		100	70 - 130
Metolachlor	1.97	1.89		ug/L		96	70 - 130
Metribuzin	1.97	1.99		ug/L		101	70 - 130
Molinate	1.97	2.23		ug/L		113	70 - 130
Naphthalene	1.97	2.03		ug/L		103	70 - 130
Parathion	1.97	2.22		ug/L		113	70 - 130
Pendimethalin (Penoxaline)	1.97	2.35		ug/L		119	70 - 130
Phenanthrene	1.97	1.91		ug/L		97	70 - 130
Propachlor	1.97	2.20		ug/L		112	70 - 130
Pyrene	1.97	1.99		ug/L		101	70 - 130
Simazine	1.97	2.17		ug/L		110	70 - 130

Eurofins Eaton Monrovia

# QC Sample Results

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

Job ID: 380-14579-1

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

**Lab Sample ID: LCS 380-13045/3-A**  
**Matrix: Water**  
**Analysis Batch: 14453**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 13045**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Terbacil	1.97	2.16		ug/L		110	70 - 130
Terbutylazine	1.97	1.97		ug/L		100	70 - 130
Thiobencarb	1.97	2.06		ug/L		105	70 - 130
trans-Nonachlor	1.97	1.82		ug/L		92	70 - 130
Trifluralin	1.97	2.45		ug/L		124	70 - 130
1-Methylnaphthalene	1.97	1.98		ug/L		101	70 - 130
2-Methylnaphthalene	1.97	2.02		ug/L		103	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Nitro-m-xylene	95		70 - 130
Perylene-d12	103		70 - 130
Triphenylphosphate	96		70 - 130

**Lab Sample ID: LCSD 380-13045/4-A**  
**Matrix: Water**  
**Analysis Batch: 14453**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 13045**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,4'-DDD	1.97	2.16		ug/L		109	70 - 130	0	20
2,4'-DDE	1.97	1.89		ug/L		96	70 - 130	4	20
2,4'-DDT	1.97	1.86		ug/L		94	70 - 130	0	20
2,4-Dinitrotoluene	1.97	2.01		ug/L		102	70 - 130	5	20
2,6-Dinitrotoluene	1.97	1.94		ug/L		98	70 - 130	2	20
4,4'-DDD	1.97	1.90		ug/L		96	70 - 130	1	20
4,4'-DDE	1.97	1.90		ug/L		96	70 - 130	1	20
4,4'-DDT	1.97	1.87		ug/L		95	70 - 130	2	20
Acenaphthene	1.97	1.87		ug/L		95	70 - 130	0	20
Acenaphthylene	1.97	1.93		ug/L		98	70 - 130	1	20
Acetochlor	1.97	1.97		ug/L		100	70 - 130	2	20
Alachlor	1.97	1.82		ug/L		92	70 - 130	5	20
alpha-BHC	1.97	1.80		ug/L		91	70 - 130	3	20
alpha-Chlordane	1.97	1.85		ug/L		94	70 - 130	5	20
Anthracene	1.97	1.93		ug/L		98	70 - 130	2	20
Atrazine	1.97	2.11		ug/L		107	70 - 130	0	20
Benz(a)anthracene	1.97	1.88		ug/L		95	70 - 130	0	20
Benzo[a]pyrene	1.97	1.71		ug/L		86	70 - 130	3	20
Benzo[b]fluoranthene	1.97	1.86		ug/L		94	70 - 130	3	20
Benzo[g,h,i]perylene	1.97	1.81		ug/L		92	70 - 130	1	20
Benzo[k]fluoranthene	1.97	1.79		ug/L		91	70 - 130	5	20
beta-BHC	1.97	1.78		ug/L		90	70 - 130	2	20
Bis(2-ethylhexyl) phthalate	1.97	1.80		ug/L		91	70 - 130	5	20
Bromacil	1.97	1.92		ug/L		97	70 - 130	3	20
Butachlor	1.97	2.01		ug/L		102	70 - 130	1	20
Butylbenzylphthalate	1.97	2.14		ug/L		109	70 - 130	0	20
Caffeine	1.97	1.53		ug/L		78	45 - 137	12	20
Chlorobenzilate	1.97	2.05		ug/L		104	70 - 130	1	20
Chloroneb	1.97	1.95		ug/L		99	70 - 130	3	20
Chlorothalonil (Draconil, Bravo)	1.97	2.21		ug/L		112	70 - 130	1	20

Eurofins Eaton Monrovia

# QC Sample Results

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

Job ID: 380-14579-1

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

**Lab Sample ID: LCSD 380-13045/4-A**  
**Matrix: Water**  
**Analysis Batch: 14453**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 13045**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	RPD Limit
							Limits	RPD		
Chlorpyrifos	1.97	1.98		ug/L		100	70 - 130	1	20	
Chrysene	1.97	1.66		ug/L		84	70 - 130	1	20	
delta-BHC	1.97	1.73		ug/L		88	70 - 130	1	20	
Di(2-ethylhexyl)adipate	1.97	2.30		ug/L		116	70 - 130	1	20	
Diazinon (Qualitative)	1.97	1.81		ug/L		92	15 - 132	0	20	
Dibenz(a,h)anthracene	1.97	1.79		ug/L		91	70 - 130	0	20	
Diclorvos (DDVP)	1.97	2.24		ug/L		113	70 - 130	0	20	
Dieldrin	1.97	2.04		ug/L		104	70 - 130	2	20	
Diethylphthalate	1.97	2.02		ug/L		102	70 - 130	0	20	
Dimethoate	1.97	1.56		ug/L		79	35 - 100	7	20	
Dimethylphthalate	1.97	2.03		ug/L		103	70 - 130	1	20	
Di-n-butyl phthalate	3.95	4.03		ug/L		102	70 - 130	0	20	
Di-n-octyl phthalate	1.97	1.49		ug/L		75	70 - 130	3	20	
Endosulfan I (Alpha)	1.97	1.70		ug/L		86	70 - 130	1	20	
Endosulfan II (Beta)	1.97	1.83		ug/L		93	70 - 130	0	20	
Endosulfan sulfate	1.97	2.25		ug/L		114	70 - 130	0	20	
Endrin	1.97	2.03		ug/L		103	70 - 130	6	20	
Endrin aldehyde	1.97	1.97		ug/L		100	70 - 130	3	20	
EPTC	1.97	2.22		ug/L		112	70 - 130	0	20	
Fluoranthene	1.97	1.94		ug/L		98	70 - 130	0	20	
Fluorene	1.97	2.08		ug/L		105	70 - 130	3	20	
gamma-BHC (Lindane)	1.97	1.84		ug/L		93	70 - 130	2	20	
gamma-Chlordane	1.97	1.92		ug/L		97	70 - 130	1	20	
Heptachlor	1.97	1.99		ug/L		101	70 - 130	3	20	
Heptachlor epoxide (isomer B)	1.97	2.01		ug/L		102	70 - 130	2	20	
Hexachlorobenzene	1.97	1.96		ug/L		99	70 - 130	1	20	
Hexachlorocyclopentadiene	1.97	1.98		ug/L		100	70 - 130	2	20	
Indeno[1,2,3-cd]pyrene	1.97	1.84		ug/L		93	70 - 130	1	20	
Isophorone	1.97	1.89		ug/L		96	70 - 130	2	20	
Malathion	1.97	2.09		ug/L		106	70 - 130	1	20	
Methoxychlor	1.97	1.96		ug/L		99	70 - 130	1	20	
Metolachlor	1.97	1.90		ug/L		96	70 - 130	1	20	
Metribuzin	1.97	1.95		ug/L		99	70 - 130	2	20	
Molinate	1.97	2.21		ug/L		112	70 - 130	1	20	
Naphthalene	1.97	2.03		ug/L		103	70 - 130	0	20	
Parathion	1.97	2.27		ug/L		115	70 - 130	2	20	
Pendimethalin (Penoxaline)	1.97	2.35		ug/L		119	70 - 130	0	20	
Phenanthrene	1.97	1.94		ug/L		99	70 - 130	2	20	
Propachlor	1.97	2.24		ug/L		113	70 - 130	2	20	
Pyrene	1.97	2.00		ug/L		101	70 - 130	1	20	
Simazine	1.97	2.18		ug/L		110	70 - 130	0	20	
Terbacil	1.97	2.13		ug/L		108	70 - 130	1	20	
Terbutylazine	1.97	1.97		ug/L		100	70 - 130	0	20	
Thiobencarb	1.97	2.05		ug/L		104	70 - 130	1	20	
trans-Nonachlor	1.97	1.85		ug/L		94	70 - 130	2	20	
Trifluralin	1.97	2.44		ug/L		124	70 - 130	0	20	
1-Methylnaphthalene	1.97	2.01		ug/L		102	70 - 130	1	20	
2-Methylnaphthalene	1.97	2.07		ug/L		105	70 - 130	3	20	

Eurofins Eaton Monrovia



# QC Sample Results

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

Job ID: 380-14579-1

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

**Lab Sample ID: LCSD 380-13045/4-A**  
**Matrix: Water**  
**Analysis Batch: 14453**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 13045**

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

**Lab Sample ID: MRL 380-13045/2-A**  
**Matrix: Water**  
**Analysis Batch: 14453**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 13045**

Analyte	Spike Added	MRL	MRL	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
2,4'-DDD	0.0985	0.118		ug/L		120	50 - 150
2,4'-DDE	0.0985	0.0876	J	ug/L		89	50 - 150
2,4'-DDT	0.0985	0.0793	J	ug/L		81	50 - 150
2,4-Dinitrotoluene	0.0985	0.112		ug/L		114	50 - 150
2,6-Dinitrotoluene	0.0985	0.108		ug/L		110	50 - 150
4,4'-DDD	0.0985	0.0825	J	ug/L		84	50 - 150
4,4'-DDE	0.0985	0.144		ug/L		146	50 - 150
4,4'-DDT	0.0985	0.0787	J	ug/L		80	50 - 150
Acenaphthene	0.0985	0.0943	J	ug/L		96	50 - 150
Acenaphthylene	0.0985	0.0856	J	ug/L		87	50 - 150
Acetochlor	0.0492	0.0395	J	ug/L		80	50 - 150
Alachlor	0.0492	0.0525		ug/L		107	50 - 150
alpha-BHC	0.0985	0.107		ug/L		108	50 - 150
alpha-Chlordane	0.0492	0.0461	J	ug/L		94	50 - 150
Anthracene	0.0197	ND		ug/L		93	50 - 150
Atrazine	0.0492	ND		ug/L		92	50 - 150
Benz(a)anthracene	0.0492	0.0402	J	ug/L		82	50 - 150
Benzo[a]pyrene	0.0197	0.0162	J	ug/L		82	50 - 150
Benzo[b]fluoranthene	0.0197	0.0168	J	ug/L		85	50 - 150
Benzo[g,h,i]perylene	0.0492	0.0367	J	ug/L		74	50 - 150
Benzo[k]fluoranthene	0.0197	0.0171	J	ug/L		87	50 - 150
beta-BHC	0.0985	0.0909	J	ug/L		92	50 - 150
Bis(2-ethylhexyl) phthalate	0.591	0.640		ug/L		108	50 - 150
Bromacil	0.0985	0.0904	J	ug/L		92	50 - 150
Butachlor	0.0492	0.0533		ug/L		108	50 - 150
Butylbenzylphthalate	0.148	0.171	J	ug/L		116	50 - 150
Caffeine	0.0492	0.0320	J	ug/L		65	50 - 150
Chlorobenzilate	0.0985	0.101		ug/L		103	50 - 150
Chloroneb	0.0985	0.0908	J	ug/L		92	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0985	0.0972	J	ug/L		99	50 - 150
Chlorpyrifos	0.0492	0.0423	J	ug/L		86	50 - 150
Chrysene	0.0197	0.0166	J	ug/L		84	50 - 150
delta-BHC	0.0985	0.104		ug/L		105	50 - 150
Di(2-ethylhexyl)adipate	0.295	0.362	J	ug/L		123	50 - 150
Diazinon (Qualitative)	0.0985	0.0945	J	ug/L		96	15 - 132
Dibenz(a,h)anthracene	0.0492	0.0360	J	ug/L		73	50 - 150
Diclorvos (DDVP)	0.0492	0.0549		ug/L		112	50 - 150
Dieldrin	0.0985	0.109	J	ug/L		111	50 - 150
Diethylphthalate	0.148	0.161	J	ug/L		109	50 - 150



# QC Sample Results

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

Job ID: 380-14579-1

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

**Lab Sample ID: MRL 380-13045/2-A**  
**Matrix: Water**  
**Analysis Batch: 14453**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 13045**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Dimethoate	0.0985	0.0833	J	ug/L		85	35 - 100
Dimethylphthalate	0.295	0.291	J	ug/L		98	50 - 150
Di-n-butyl phthalate	0.295	0.267	J	ug/L		90	49 - 243
Di-n-octyl phthalate	0.0985	0.0994		ug/L		101	50 - 150
Endosulfan I (Alpha)	0.0985	0.0756	J	ug/L		77	50 - 150
Endosulfan II (Beta)	0.0985	0.117		ug/L		119	50 - 150
Endosulfan sulfate	0.0985	0.0956	J	ug/L		97	50 - 150
Endrin	0.0985	0.116		ug/L		118	50 - 150
Endrin aldehyde	0.0985	0.0931	J	ug/L		95	50 - 150
EPTC	0.0985	0.104		ug/L		106	50 - 150
Fluoranthene	0.0492	0.0444	J	ug/L		90	50 - 150
Fluorene	0.0492	0.0510		ug/L		103	50 - 150
gamma-BHC (Lindane)	0.0492	0.0349	J	ug/L		71	50 - 150
gamma-Chlordane	0.0492	0.0434	J	ug/L		88	50 - 150
Heptachlor	0.0394	0.0449		ug/L		114	50 - 150
Heptachlor epoxide (isomer B)	0.0492	0.0518		ug/L		105	50 - 150
Hexachlorobenzene	0.0492	0.0880	^3+	ug/L		179	50 - 150
Hexachlorocyclopentadiene	0.0492	0.0400	J	ug/L		81	50 - 150
Indeno[1,2,3-cd]pyrene	0.0492	0.0365	J	ug/L		74	50 - 150
Isophorone	0.0985	0.0936	J	ug/L		95	50 - 150
Malathion	0.0985	0.0955	J	ug/L		97	50 - 150
Methoxychlor	0.0985	0.0776	J	ug/L		79	50 - 150
Metolachlor	0.0492	0.0511		ug/L		104	50 - 150
Metribuzin	0.0492	0.0386	J	ug/L		78	50 - 150
Molinate	0.0985	0.106		ug/L		108	50 - 150
Naphthalene	0.0985	0.103	J	ug/L		104	50 - 150
Parathion	0.0985	0.135		ug/L		137	50 - 150
Pendimethalin (Penoxaline)	0.0985	0.0884	J	ug/L		90	50 - 150
Phenanthrene	0.0197	0.0219	J	ug/L		111	50 - 150
Propachlor	0.0492	0.0514		ug/L		104	50 - 150
Pyrene	0.0492	0.0436	J	ug/L		89	50 - 150
Simazine	0.0492	0.0541		ug/L		110	50 - 150
Terbacil	0.0985	0.107		ug/L		109	50 - 150
Terbutylazine	0.0985	0.0837	J	ug/L		85	50 - 150
Thiobencarb	0.0985	0.109	J	ug/L		110	50 - 150
trans-Nonachlor	0.0492	0.0310	J	ug/L		63	50 - 150
Trifluralin	0.0985	0.0945	J	ug/L		96	50 - 150
1-Methylnaphthalene	0.0985	0.109		ug/L		110	50 - 150
2-Methylnaphthalene	0.0985	0.109		ug/L		110	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
2-Nitro-m-xylene	95		70 - 130
Perylene-d12	102		70 - 130
Triphenylphosphate	94		70 - 130

# QC Sample Results

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

Job ID: 380-14579-1

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

**Lab Sample ID: 380-14826-I-1-A MS**

**Matrix: Water**

**Analysis Batch: 14453**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

**Prep Batch: 13045**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	ND		1.98	2.23		ug/L		113	70 - 130
2,4'-DDE	ND		1.98	1.94		ug/L		98	70 - 130
2,4'-DDT	ND		1.98	2.01		ug/L		102	70 - 130
2,4-Dinitrotoluene	ND		1.98	2.00		ug/L		101	70 - 130
2,6-Dinitrotoluene	ND		1.98	2.00		ug/L		101	70 - 130
4,4'-DDD	ND		1.98	2.06		ug/L		104	70 - 130
4,4'-DDE	ND		1.98	1.96		ug/L		99	70 - 130
4,4'-DDT	ND		1.98	2.12		ug/L		107	70 - 130
Acenaphthene	ND		1.98	1.84		ug/L		93	70 - 130
Acenaphthylene	ND		1.98	1.99		ug/L		100	70 - 130
Acetochlor	ND		1.98	2.08		ug/L		105	70 - 130
Alachlor	ND		1.98	1.89		ug/L		96	70 - 130
alpha-BHC	ND		1.98	1.89		ug/L		95	70 - 130
alpha-Chlordane	ND		1.98	1.90		ug/L		96	70 - 130
Anthracene	ND		1.98	1.75		ug/L		88	70 - 130
Atrazine	ND		1.98	2.20		ug/L		111	70 - 130
Benz(a)anthracene	ND		1.98	2.03		ug/L		102	70 - 130
Benzo[a]pyrene	ND		1.98	1.77		ug/L		90	70 - 130
Benzo[b]fluoranthene	ND		1.98	1.99		ug/L		101	70 - 130
Benzo[g,h,i]perylene	ND		1.98	1.83		ug/L		93	70 - 130
Benzo[k]fluoranthene	ND		1.98	1.97		ug/L		100	70 - 130
beta-BHC	ND		1.98	1.85		ug/L		94	70 - 130
Bis(2-ethylhexyl) phthalate	ND		1.98	2.04		ug/L		103	70 - 130
Bromacil	ND		1.98	2.13		ug/L		107	70 - 130
Butachlor	ND		1.98	2.07		ug/L		105	70 - 130
Butylbenzylphthalate	ND		1.98	2.22		ug/L		112	70 - 130
Caffeine	ND		1.98	1.73		ug/L		87	46 - 144
Chlorobenzilate	ND		1.98	2.30		ug/L		116	70 - 130
Chloroneb	ND		1.98	1.92		ug/L		97	70 - 130
Chlorothalonil (Draconil, Bravo)	ND		1.98	2.30		ug/L		116	70 - 130
Chlorpyrifos	ND		1.98	2.05		ug/L		104	70 - 130
Chrysene	ND		1.98	1.75		ug/L		89	70 - 130
delta-BHC	ND		1.98	1.85		ug/L		93	70 - 130
Di(2-ethylhexyl)adipate	ND		1.98	2.49		ug/L		126	70 - 130
Diazinon (Qualitative)	ND		1.98	1.96		ug/L		99	15 - 132
Dibenz(a,h)anthracene	ND		1.98	1.94		ug/L		98	70 - 130
Diclorvos (DDVP)	ND		1.98	2.36		ug/L		119	70 - 130
Dieldrin	ND		1.98	2.10		ug/L		106	70 - 130
Diethylphthalate	ND		1.98	2.05		ug/L		104	70 - 130
Dimethoate	ND		1.98	1.80		ug/L		91	34 - 111
Dimethylphthalate	ND		1.98	2.05		ug/L		103	70 - 130
Di-n-butyl phthalate	ND		3.96	4.14		ug/L		105	70 - 130
Di-n-octyl phthalate	ND		1.98	1.75		ug/L		88	70 - 130
Endosulfan I (Alpha)	ND		1.98	1.75		ug/L		88	70 - 130
Endosulfan II (Beta)	ND		1.98	2.01		ug/L		101	70 - 130
Endosulfan sulfate	ND		1.98	2.35		ug/L		119	70 - 130
Endrin	ND		1.98	1.92		ug/L		97	70 - 130
Endrin aldehyde	ND		1.98	2.02		ug/L		102	70 - 130

Eurofins Eaton Monrovia

# QC Sample Results

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

Job ID: 380-14579-1

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

**Lab Sample ID: 380-14826-I-1-A MS**  
**Matrix: Water**  
**Analysis Batch: 14453**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 13045**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec
	Result	Qualifier	Added	Result	Qualifier				
EPTC	ND		1.98	2.18		ug/L		110	70 - 130
Fluoranthene	ND		1.98	2.00		ug/L		101	70 - 130
Fluorene	ND		1.98	2.08		ug/L		105	70 - 130
gamma-BHC (Lindane)	ND		1.98	1.87		ug/L		94	70 - 130
gamma-Chlordane	ND		1.98	1.96		ug/L		99	70 - 130
Heptachlor	ND		1.98	1.99		ug/L		101	70 - 130
Heptachlor epoxide (isomer B)	ND		1.98	2.12		ug/L		107	70 - 130
Hexachlorobenzene	ND	^3+	1.98	1.96		ug/L		99	70 - 130
Hexachlorocyclopentadiene	ND		1.98	2.01		ug/L		102	70 - 130
Indeno[1,2,3-cd]pyrene	ND		1.98	1.93		ug/L		98	70 - 130
Isophorone	ND		1.98	1.92		ug/L		97	70 - 130
Malathion	ND		1.98	2.17		ug/L		110	70 - 130
Methoxychlor	ND		1.98	2.22		ug/L		112	70 - 130
Metolachlor	ND		1.98	2.10		ug/L		106	70 - 130
Metribuzin	ND		1.98	1.90		ug/L		96	70 - 130
Molinate	ND		1.98	2.29		ug/L		116	70 - 130
Naphthalene	ND		1.98	2.03		ug/L		102	70 - 130
Parathion	ND		1.98	2.44		ug/L		123	70 - 130
Pendimethalin (Penoxaline)	ND		1.98	2.40		ug/L		121	70 - 130
Phenanthrene	ND		1.98	1.94		ug/L		98	70 - 130
Propachlor	ND		1.98	2.33		ug/L		118	70 - 130
Pyrene	ND		1.98	2.07		ug/L		105	70 - 130
Simazine	ND		1.98	2.30		ug/L		116	70 - 130
Terbacil	ND		1.98	2.25		ug/L		114	70 - 130
Terbutylazine	ND		1.98	2.08		ug/L		105	70 - 130
Thiobencarb	ND		1.98	2.10		ug/L		106	70 - 130
trans-Nonachlor	ND		1.98	1.83		ug/L		92	70 - 130
Trifluralin	ND		1.98	2.52		ug/L		127	70 - 130
1-Methylnaphthalene	ND		1.98	2.01		ug/L		101	70 - 130
2-Methylnaphthalene	ND		1.98	2.05		ug/L		103	70 - 130

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	95		70 - 130
Perylene-d12	100		70 - 130
Triphenylphosphate	101		70 - 130

**Lab Sample ID: 380-14819-P-1-A DU**  
**Matrix: Water**  
**Analysis Batch: 14453**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 13045**

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	RPD	Limit
	Result	Qualifier	Result	Qualifier					
2,4'-DDD	ND		ND		ug/L		NC	20	
2,4'-DDE	ND		ND		ug/L		NC	20	
2,4'-DDT	ND		ND		ug/L		NC	20	
2,4-Dinitrotoluene	ND		ND		ug/L		NC	20	
2,6-Dinitrotoluene	ND		ND		ug/L		NC	20	
4,4'-DDD	ND		ND		ug/L		NC	20	
4,4'-DDE	ND		ND		ug/L		NC	20	

Eurofins Eaton Monrovia

# QC Sample Results

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

Job ID: 380-14579-1

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

**Lab Sample ID: 380-14819-P-1-A DU**  
**Matrix: Water**  
**Analysis Batch: 14453**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 13045**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
4,4'-DDT	ND		ND		ug/L		NC	20
Acenaphthene	ND		ND		ug/L		NC	20
Acenaphthylene	ND		ND		ug/L		NC	20
Acetochlor	ND		ND		ug/L		NC	20
Alachlor	ND		ND		ug/L		NC	20
alpha-BHC	ND		ND		ug/L		NC	20
alpha-Chlordane	ND		ND		ug/L		NC	20
Anthracene	ND		ND		ug/L		NC	20
Atrazine	ND		ND		ug/L		NC	20
Benz(a)anthracene	ND		ND		ug/L		NC	20
Benzo[a]pyrene	ND		ND		ug/L		NC	20
Benzo[b]fluoranthene	ND		ND		ug/L		NC	20
Benzo[g,h,i]perylene	ND		ND		ug/L		NC	20
Benzo[k]fluoranthene	ND		ND		ug/L		NC	20
beta-BHC	ND		ND		ug/L		NC	20
Bis(2-ethylhexyl) phthalate	ND		ND		ug/L		NC	20
Bromacil	ND		ND		ug/L		NC	20
Butachlor	ND		ND		ug/L		NC	20
Butylbenzylphthalate	ND		ND		ug/L		NC	20
Caffeine	ND		ND		ug/L		NC	20
Chlorobenzilate	ND		ND		ug/L		NC	20
Chloroneb	ND		ND		ug/L		NC	20
Chlorothalonil (Draconil, Bravo)	ND		ND		ug/L		NC	20
Chlorpyrifos	ND		ND		ug/L		NC	20
Chrysene	ND		ND		ug/L		NC	20
delta-BHC	ND		ND		ug/L		NC	20
Di(2-ethylhexyl)adipate	ND		ND		ug/L		NC	20
Diazinon (Qualitative)	ND		ND		ug/L		NC	20
Dibenz(a,h)anthracene	ND		ND		ug/L		NC	20
Diclorvos (DDVP)	ND		ND		ug/L		NC	20
Dieldrin	ND		ND		ug/L		NC	20
Diethylphthalate	ND		ND		ug/L		NC	20
Dimethoate	ND		ND		ug/L		NC	20
Dimethylphthalate	ND		ND		ug/L		NC	20
Di-n-butyl phthalate	ND		ND		ug/L		NC	20
Di-n-octyl phthalate	ND		ND		ug/L		NC	20
Endosulfan I (Alpha)	ND		ND		ug/L		NC	20
Endosulfan II (Beta)	ND		ND		ug/L		NC	20
Endosulfan sulfate	ND		ND		ug/L		NC	20
Endrin	ND		ND		ug/L		NC	20
Endrin aldehyde	ND		ND		ug/L		NC	20
EPTC	ND		ND		ug/L		NC	20
Fluoranthene	ND		ND		ug/L		NC	20
Fluorene	ND		ND		ug/L		NC	20
gamma-BHC (Lindane)	ND		ND		ug/L		NC	20
gamma-Chlordane	ND		ND		ug/L		NC	20
Heptachlor	ND		ND		ug/L		NC	20
Heptachlor epoxide (isomer B)	ND		ND		ug/L		NC	20
Hexachlorobenzene	ND	^3+	ND		ug/L		NC	20

Eurofins Eaton Monrovia

# QC Sample Results

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

Job ID: 380-14579-1

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

**Lab Sample ID: 380-14819-P-1-A DU**  
**Matrix: Water**  
**Analysis Batch: 14453**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 13045**

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Hexachlorocyclopentadiene	ND		ND		ug/L		NC	20
Indeno[1,2,3-cd]pyrene	ND		ND		ug/L		NC	20
Isophorone	ND		ND		ug/L		NC	20
Malathion	ND		ND		ug/L		NC	20
Methoxychlor	ND		ND		ug/L		NC	20
Metolachlor	ND		ND		ug/L		NC	20
Metribuzin	ND		ND		ug/L		NC	20
Molinate	ND		ND		ug/L		NC	20
Naphthalene	ND		ND		ug/L		NC	20
Parathion	ND		ND		ug/L		NC	20
Pendimethalin (Penoxaline)	ND		ND		ug/L		NC	20
Phenanthrene	ND		ND		ug/L		NC	20
Propachlor	ND		ND		ug/L		NC	20
Pyrene	ND		ND		ug/L		NC	20
Simazine	ND		ND		ug/L		NC	20
Terbacil	ND		ND		ug/L		NC	20
Terbutylazine	ND		ND		ug/L		NC	20
Thiobencarb	ND		ND		ug/L		NC	20
Total Permethrin (mixed isomers)	ND		ND		ug/L		NC	20
trans-Nonachlor	ND		ND		ug/L		NC	20
Trifluralin	ND		ND		ug/L		NC	20
1-Methylnaphthalene	ND		ND		ug/L		NC	20
2-Methylnaphthalene	ND		ND		ug/L		NC	20

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

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

**Lab Sample ID: MB 380-12252/4-A**  
**Matrix: Water**  
**Analysis Batch: 12540**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 12252**

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
1,2,3-Trichloropropane	ND		0.040	ug/L		08/09/22 09:43	08/09/22 14:01	1
1,2-D bromo-3-Chloropropane	ND		0.010	ug/L		08/09/22 09:43	08/09/22 14:01	1
1,2-D bromoethane	ND		0.010	ug/L		08/09/22 09:43	08/09/22 14:01	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dibromopropane (Surr)	100		60 - 140	08/09/22 09:43	08/09/22 14:01	1

# QC Sample Results

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

Job ID: 380-14579-1

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

**Lab Sample ID: LCS 380-12252/3-A**  
**Matrix: Water**  
**Analysis Batch: 12540**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 12252**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1,2,3-Trichloropropane	0.200	0.228		ug/L		114	70 - 130		
1,2-D bromo-3-Chloropropane	0.200	0.166		ug/L		83	70 - 130		
1,2-D bromoethane	0.200	0.182		ug/L		91	70 - 130		
<b>Surrogate</b>	<b>%Recovery</b>	<b>LCS Qualifier</b>	<b>Limits</b>						
1,2-Dibromopropane (Surr)	100		60 - 140						

**Lab Sample ID: MRL 380-12252/1-A**  
**Matrix: Water**  
**Analysis Batch: 12540**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 12252**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
1,2,3-Trichloropropane	0.0400	0.0372	J	ug/L		93	60 - 140		
<b>Surrogate</b>	<b>%Recovery</b>	<b>MRL Qualifier</b>	<b>Limits</b>						
1,2-Dibromopropane (Surr)	100		60 - 140						

**Lab Sample ID: MRL 380-12252/2-A**  
**Matrix: Water**  
**Analysis Batch: 12540**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 12252**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
1,2,3-Trichloropropane	0.0500	0.0566		ug/L		113	60 - 140		
1,2-D bromo-3-Chloropropane	0.0100	0.0100		ug/L		100	60 - 140		
1,2-D bromoethane	0.0100	0.00770	J	ug/L		77	60 - 140		
<b>Surrogate</b>	<b>%Recovery</b>	<b>MRL Qualifier</b>	<b>Limits</b>						
1,2-Dibromopropane (Surr)	106		60 - 140						

**Lab Sample ID: 380-14813-D-1-A MS**  
**Matrix: Water**  
**Analysis Batch: 12540**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 12252**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits	
1,2,3-Trichloropropane	ND		1.28	1.27		ug/L		98	65 - 135	
1,2-D bromo-3-Chloropropane	0.11		0.255	0.324		ug/L		86	65 - 135	
1,2-D bromoethane	ND		0.255	0.218		ug/L		85	65 - 135	
<b>Surrogate</b>	<b>%Recovery</b>	<b>MS Qualifier</b>	<b>Limits</b>							
1,2-Dibromopropane (Surr)	99		60 - 140							

**Lab Sample ID: 380-14813-F-2-A DU**  
**Matrix: Water**  
**Analysis Batch: 12540**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 12252**

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

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# QC Sample Results

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

Job ID: 380-14579-1

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

**Lab Sample ID: 380-14813-F-2-A DU**  
**Matrix: Water**  
**Analysis Batch: 12540**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 12252**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
1,2-D bromo-3-Chloropropane	ND		ND		ug/L		5	20
1,2-D bromoethane	ND		ND		ug/L		NC	20
<b>DU DU</b>								
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>					
1,2-Dibromopropane (Surr)	101		60 - 140					

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

**Lab Sample ID: MB 380-12446/28-A**  
**Matrix: Water**  
**Analysis Batch: 13895**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 12446**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0020	ug/L		08/09/22 19:50	08/10/22 09:26	1
Dieldrin	ND		0.0020	ug/L		08/09/22 19:50	08/10/22 09:26	1
Toxaphene	ND		0.10	ug/L		08/09/22 19:50	08/10/22 09:26	1
Alachlor	ND		0.10	ug/L		08/09/22 19:50	08/10/22 09:26	1
Chlordane (n.o.s.)	ND		0.10	ug/L		08/09/22 19:50	08/10/22 09:26	1
Chlordane (n.o.s.)	ND		0.10	ug/L		08/09/22 19:50	08/10/22 09:26	1
Endrin	ND		0.010	ug/L		08/09/22 19:50	08/10/22 09:26	1
Heptachlor	ND		0.010	ug/L		08/09/22 19:50	08/10/22 09:26	1
Heptachlor epoxide	ND		0.010	ug/L		08/09/22 19:50	08/10/22 09:26	1
gamma-BHC (Lindane)	ND		0.010	ug/L		08/09/22 19:50	08/10/22 09:26	1
Methoxychlor	ND		0.050	ug/L		08/09/22 19:50	08/10/22 09:26	1
PCB-1016	ND		0.070	ug/L		08/09/22 19:50	08/10/22 09:26	1
PCB-1221	ND		0.10	ug/L		08/09/22 19:50	08/10/22 09:26	1
PCB-1232	ND		0.10	ug/L		08/09/22 19:50	08/10/22 09:26	1
PCB-1242	ND		0.10	ug/L		08/09/22 19:50	08/10/22 09:26	1
PCB-1248	ND		0.10	ug/L		08/09/22 19:50	08/10/22 09:26	1
PCB-1254	ND		0.10	ug/L		08/09/22 19:50	08/10/22 09:26	1
PCB-1260	ND		0.070	ug/L		08/09/22 19:50	08/10/22 09:26	1
Polychlorinated biphenyls, Total	ND		0.10	ug/L		08/09/22 19:50	08/10/22 09:26	1
<b>MB MB</b>								
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Tetrachloro-m-xylene	95		70 - 130			08/09/22 19:50	08/10/22 09:26	1
Tetrachloro-m-xylene	95		70 - 130			08/09/22 19:50	08/10/22 09:26	1

**Lab Sample ID: LCS 380-12446/16-A**  
**Matrix: Water**  
**Analysis Batch: 13895**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 12446**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Toxaphene	2.50	2.42		ug/L		97	70 - 130
<b>LCS LCS</b>							
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				
Tetrachloro-m-xylene	102		70 - 130				



# QC Sample Results

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

Job ID: 380-14579-1

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

**Lab Sample ID: LCS 380-12446/23-A**  
**Matrix: Water**  
**Analysis Batch: 13895**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 12446**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Chlordane (n.o.s.)	0.500	0.505		ug/L		101	70 - 130	
Chlordane (n.o.s.)	0.500	0.505		ug/L		101	70 - 130	
<b>LCS LCS</b>								
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>					
Tetrachloro-m-xylene	98		70 - 130					
Tetrachloro-m-xylene	98		70 - 130					

**Lab Sample ID: LCS 380-12446/9-A**  
**Matrix: Water**  
**Analysis Batch: 13895**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 12446**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Aldrin	0.100	0.0972		ug/L		97	70 - 130	
Dieldrin	0.100	0.0945		ug/L		95	70 - 130	
Alachlor	1.00	0.992		ug/L		99	70 - 130	
Endrin	0.100	0.0993		ug/L		99	70 - 130	
Heptachlor	0.100	0.0984		ug/L		98	70 - 130	
Heptachlor epoxide	0.100	0.0931		ug/L		93	70 - 130	
gamma-BHC (Lindane)	0.100	0.0961		ug/L		96	70 - 130	
Methoxychlor	0.500	0.489		ug/L		98	70 - 130	
<b>LCS LCS</b>								
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>					
Tetrachloro-m-xylene	105		70 - 130					

**Lab Sample ID: MRL 380-12446/24-A**  
**Matrix: Water**  
**Analysis Batch: 13895**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 12446**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits	
Aldrin	0.00200	0.00210		ug/L		105	50 - 150	
Dieldrin	0.00200	0.00220		ug/L		110	50 - 150	
<b>MRL MRL</b>								
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>					
Tetrachloro-m-xylene	101		70 - 130					

**Lab Sample ID: MRL 380-12446/57-A**  
**Matrix: Water**  
**Analysis Batch: 13895**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 12446**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits	
Chlordane (n.o.s.)	0.100	0.106		ug/L		106	50 - 150	
Chlordane (n.o.s.)	0.100	0.106		ug/L		106	50 - 150	
<b>MRL MRL</b>								
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>					
Tetrachloro-m-xylene	101		70 - 130					
Tetrachloro-m-xylene	101		70 - 130					

# QC Sample Results

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

Job ID: 380-14579-1

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

**Lab Sample ID: 380-14395-C-2-A MS**  
**Matrix: Water**  
**Analysis Batch: 13895**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 12446**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chlordane (n.o.s.)	ND		0.503	0.423		ug/L		84	65 - 135
Chlordane (n.o.s.)	ND		0.503	0.423		ug/L		84	65 - 135
		<b>MS MS</b>							
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
Tetrachloro-m-xylene	83		70 - 130						
Tetrachloro-m-xylene	83		70 - 130						

**Lab Sample ID: 380-15399-H-1-A MS**  
**Matrix: Water**  
**Analysis Batch: 13895**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 12446**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Toxaphene	ND		2.50	2.76		ug/L		110	65 - 135
		<b>MS MS</b>							
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
Tetrachloro-m-xylene	107		70 - 130						

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 380-12607/4**  
**Matrix: Water**  
**Analysis Batch: 12607**

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		5.0	ug/L			08/09/22 22:37	1

**Lab Sample ID: LCS 380-12607/5**  
**Matrix: Water**  
**Analysis Batch: 12607**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	100	98.2		ug/L		98	90 - 110

**Lab Sample ID: LCSD 380-12607/6**  
**Matrix: Water**  
**Analysis Batch: 12607**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromide	100	97.7		ug/L		98	90 - 110	1	10

**Lab Sample ID: MRL 380-12607/3**  
**Matrix: Water**  
**Analysis Batch: 12607**

**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	4.82	J	ug/L		96	75 - 125

# QC Sample Results

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

Job ID: 380-14579-1

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: 380-14572-A-3 MS**  
**Matrix: Water**  
**Analysis Batch: 12607**

**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	150		50.0	196		ug/L		99	80 - 120

**Lab Sample ID: 380-14572-A-3 MSD**  
**Matrix: Water**  
**Analysis Batch: 12607**

**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	150		50.0	195		ug/L		95	80 - 120	1	

**Lab Sample ID: MB 380-15646/39**  
**Matrix: Water**  
**Analysis Batch: 15646**

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	mg/L			08/04/22 22:54	1
Sulfate	ND		0.25	mg/L			08/04/22 22:54	1

**Lab Sample ID: MB 380-15646/4**  
**Matrix: Water**  
**Analysis Batch: 15646**

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	mg/L			08/04/22 15:23	1
Sulfate	ND		0.25	mg/L			08/04/22 15:23	1

**Lab Sample ID: LCS 380-15646/7**  
**Matrix: Water**  
**Analysis Batch: 15646**

**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	27.5		mg/L		110	90 - 110
Sulfate	50.0	54.2		mg/L		108	90 - 110

**Lab Sample ID: LCSD 380-15646/8**  
**Matrix: Water**  
**Analysis Batch: 15646**

**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	28.5	*+	mg/L		114	90 - 110	3	20
Sulfate	50.0	56.4	*+	mg/L		113	90 - 110	4	20

**Lab Sample ID: MRL 380-15646/40**  
**Matrix: Water**  
**Analysis Batch: 15646**

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	0.250	0.243	J	mg/L		97	50 - 150

# QC Sample Results

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

Job ID: 380-14579-1

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: MRL 380-15646/5**  
**Matrix: Water**  
**Analysis Batch: 15646**

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	0.250	0.258		mg/L		103	50 - 150

**Lab Sample ID: MRL 380-15646/6**  
**Matrix: Water**  
**Analysis Batch: 15646**

**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	0.267		mg/L		53	50 - 150
Sulfate	1.00	0.509		mg/L		51	50 - 150

**Lab Sample ID: 380-14579-1 MS**  
**Matrix: Water**  
**Analysis Batch: 15646**

**Client Sample ID: (331-261-TP008) KAAMILO WELLS**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	120	*+	62.5	192		mg/L		110	80 - 120
Sulfate	24	*+	125	168		mg/L		116	80 - 120

**Lab Sample ID: 380-14579-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 15646**

**Client Sample ID: (331-261-TP008) KAAMILO WELLS**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	120	*+	62.5	191		mg/L		110	80 - 120	0	20
Sulfate	24	*+	125	168		mg/L		115	80 - 120	0	20

**Lab Sample ID: MB 380-15647/39**  
**Matrix: Water**  
**Analysis Batch: 15647**

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.050	mg/L			08/04/22 22:54	1
Nitrate Nitrite as N	ND		0.050	mg/L			08/04/22 22:54	1
Nitrite as N	ND		0.050	mg/L			08/04/22 22:54	1

**Lab Sample ID: MB 380-15647/4**  
**Matrix: Water**  
**Analysis Batch: 15647**

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.050	mg/L			08/04/22 15:23	1
Nitrate Nitrite as N	ND		0.050	mg/L			08/04/22 15:23	1
Nitrite as N	ND		0.050	mg/L			08/04/22 15:23	1

**Lab Sample ID: LCS 380-15647/7**  
**Matrix: Water**  
**Analysis Batch: 15647**

**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	2.65		mg/L		106	90 - 110

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# QC Sample Results

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

Job ID: 380-14579-1

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: LCS 380-15647/7**  
**Matrix: Water**  
**Analysis Batch: 15647**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	3.50	3.63		mg/L		104	90 - 110
Nitrite as N	1.00	0.982		mg/L		98	90 - 110

**Lab Sample ID: LCSD 380-15647/8**  
**Matrix: Water**  
**Analysis Batch: 15647**

**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	2.75		mg/L		110	90 - 110	4	20
Nitrate Nitrite as N	3.50	3.75		mg/L		107	90 - 110	3	20
Nitrite as N	1.00	0.999		mg/L		100	90 - 110	2	20

**Lab Sample ID: MRL 380-15647/40**  
**Matrix: Water**  
**Analysis Batch: 15647**

**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	0.0135		mg/L		108	50 - 150
Nitrate Nitrite as N	0.0250	0.0270		mg/L		108	50 - 150
Nitrite as N	0.0125	0.0135		mg/L		108	50 - 150

**Lab Sample ID: MRL 380-15647/5**  
**Matrix: Water**  
**Analysis Batch: 15647**

**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	0.0140		mg/L		112	50 - 150
Nitrate Nitrite as N	0.0250	0.0270		mg/L		108	50 - 150
Nitrite as N	0.0125	0.0130		mg/L		104	50 - 150

**Lab Sample ID: MRL 380-15647/6**  
**Matrix: Water**  
**Analysis Batch: 15647**

**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	0.0262		mg/L		52	50 - 150
Nitrate Nitrite as N	0.100	0.0532		mg/L		53	50 - 150
Nitrite as N	0.0500	0.0270		mg/L		54	50 - 150

**Lab Sample ID: 380-14579-1 MS**  
**Matrix: Water**  
**Analysis Batch: 15647**

**Client Sample ID: (331-261-TP008) KAAMILO WELLS**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	1.5		6.25	8.36		mg/L		110	80 - 120
Nitrate Nitrite as N	1.5		8.75	10.7		mg/L		105	80 - 120
Nitrite as N	ND		2.50	2.30		mg/L		92	80 - 120

# QC Sample Results

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

Job ID: 380-14579-1

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: 380-14579-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 15647**

**Client Sample ID: (331-261-TP008) KAAMILO WELLS**  
**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	1.5		6.25	8.36		mg/L		110	80 - 120	0	20
Nitrate Nitrite as N	1.5		8.75	10.7		mg/L		105	80 - 120	0	20
Nitrite as N	ND		2.50	2.30		mg/L		92	80 - 120	0	20

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

**Lab Sample ID: MB 380-12438/130**  
**Matrix: Water**  
**Analysis Batch: 12438**

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	ND		1.0	mg/L			08/09/22 18:33	1
Magnesium	ND		0.10	mg/L			08/09/22 18:33	1
Potassium	ND		1.0	mg/L			08/09/22 18:33	1
Sodium	ND		1.0	mg/L			08/09/22 18:33	1

**Lab Sample ID: LCS 380-12438/132**  
**Matrix: Water**  
**Analysis Batch: 12438**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	50.0	50.7		mg/L		101	85 - 115
Magnesium	20.0	20.1		mg/L		101	85 - 115
Potassium	20.0	20.3		mg/L		101	85 - 115
Sodium	50.0	50.4		mg/L		101	85 - 115

**Lab Sample ID: LCSD 380-12438/135**  
**Matrix: Water**  
**Analysis Batch: 12438**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Calcium	50.0	50.6		mg/L		101	85 - 115	0	20
Magnesium	20.0	20.0		mg/L		100	85 - 115	1	20
Potassium	20.0	20.2		mg/L		101	85 - 115	1	20
Sodium	50.0	49.9		mg/L		100	85 - 115	1	20

**Lab Sample ID: LLCS 380-12438/131**  
**Matrix: Water**  
**Analysis Batch: 12438**

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

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	1.00	1.03		mg/L		103	50 - 150
Magnesium	0.100	0.0986	J	mg/L		99	50 - 150
Potassium	1.00	0.675	J	mg/L		68	50 - 150
Sodium	1.00	0.955	J	mg/L		96	50 - 150

# QC Sample Results

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

Job ID: 380-14579-1

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

**Lab Sample ID: 380-14209-K-1 MS**  
**Matrix: Water**  
**Analysis Batch: 12438**

**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	45		50.0	95.6		mg/L		101	70 - 130
Magnesium	30		20.0	49.6		mg/L		101	70 - 130
Potassium	2.7		20.0	25.0		mg/L		112	70 - 130
Sodium	25		50.0	75.8		mg/L		101	70 - 130

**Lab Sample ID: 380-14209-K-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 12438**

**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	45		50.0	95.3		mg/L		101	70 - 130	0	20
Magnesium	30		20.0	49.6		mg/L		101	70 - 130	0	20
Potassium	2.7		20.0	25.0		mg/L		112	70 - 130	0	20
Sodium	25		50.0	75.5		mg/L		101	70 - 130	0	20

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

**Lab Sample ID: MB 380-15091/1-A**  
**Matrix: Water**  
**Analysis Batch: 15216**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 15091**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	ug/L		08/26/22 13:36	08/27/22 19:26	1
Arsenic	ND		1.0	ug/L		08/26/22 13:36	08/27/22 19:26	1
Beryllium	ND		1.0	ug/L		08/26/22 13:36	08/27/22 19:26	1
Cadmium	ND		0.50	ug/L		08/26/22 13:36	08/27/22 19:26	1
Chromium	ND		1.0	ug/L		08/26/22 13:36	08/27/22 19:26	1
Copper	ND		2.0	ug/L		08/26/22 13:36	08/27/22 19:26	1
Lead	ND		0.50	ug/L		08/26/22 13:36	08/27/22 19:26	1
Nickel	ND		5.0	ug/L		08/26/22 13:36	08/27/22 19:26	1
Selenium	ND		5.0	ug/L		08/26/22 13:36	08/27/22 19:26	1
Silver	ND		0.50	ug/L		08/26/22 13:36	08/27/22 19:26	1
Thallium	ND		1.0	ug/L		08/26/22 13:36	08/27/22 19:26	1
Zinc	ND		20	ug/L		08/26/22 13:36	08/27/22 19:26	1

**Lab Sample ID: LCS 380-15091/3-A**  
**Matrix: Water**  
**Analysis Batch: 15216**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 15091**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	50.0	53.5		ug/L		107	85 - 115
Arsenic	50.0	50.5		ug/L		101	85 - 115
Beryllium	25.0	25.4		ug/L		102	85 - 115
Cadmium	25.0	25.9		ug/L		104	85 - 115
Chromium	50.0	50.4		ug/L		101	85 - 115
Copper	50.0	50.6		ug/L		101	85 - 115
Lead	50.0	51.5		ug/L		103	85 - 115
Nickel	50.0	49.0		ug/L		98	85 - 115
Selenium	50.0	50.5		ug/L		101	85 - 115

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# QC Sample Results

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

Job ID: 380-14579-1

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

**Lab Sample ID: LCS 380-15091/3-A**  
**Matrix: Water**  
**Analysis Batch: 15216**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 15091**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Silver	25.0	26.2		ug/L		105	85 - 115
Thallium	50.0	50.4		ug/L		101	85 - 115
Zinc	50.0	52.7		ug/L		105	85 - 115

**Lab Sample ID: LCSD 380-15091/4-A**  
**Matrix: Water**  
**Analysis Batch: 15216**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total Recoverable**  
**Prep Batch: 15091**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	50.0	51.8		ug/L		104	85 - 115	3	20
Arsenic	50.0	50.5		ug/L		101	85 - 115	0	20
Beryllium	25.0	24.8		ug/L		99	85 - 115	2	20
Cadmium	25.0	25.2		ug/L		101	85 - 115	3	20
Chromium	50.0	50.2		ug/L		100	85 - 115	1	20
Copper	50.0	50.8		ug/L		102	85 - 115	0	20
Lead	50.0	51.2		ug/L		102	85 - 115	1	20
Nickel	50.0	48.9		ug/L		98	85 - 115	0	20
Selenium	50.0	50.8		ug/L		102	85 - 115	1	20
Silver	25.0	25.6		ug/L		102	85 - 115	2	20
Thallium	50.0	49.7		ug/L		99	85 - 115	1	20
Zinc	50.0	52.5		ug/L		105	85 - 115	0	20

**Lab Sample ID: LLCS 380-15091/2-A**  
**Matrix: Water**  
**Analysis Batch: 15216**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 15091**

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	1.00	1.19		ug/L		119	50 - 150
Arsenic	1.00	1.21		ug/L		121	50 - 150
Beryllium	1.00	1.18		ug/L		118	50 - 150
Cadmium	0.500	0.616		ug/L		123	50 - 150
Chromium	1.00	1.23		ug/L		123	50 - 150
Copper	2.00	2.44		ug/L		122	50 - 150
Lead	0.500	0.605		ug/L		121	50 - 150
Nickel	5.00	5.30		ug/L		106	50 - 150
Selenium	5.00	5.74		ug/L		115	50 - 150
Silver	0.500	0.529		ug/L		106	50 - 150
Thallium	1.00	1.16		ug/L		116	50 - 150
Zinc	20.0	25.7		ug/L		128	50 - 150

**Lab Sample ID: 380-14076-G-1-B MS**  
**Matrix: Water**  
**Analysis Batch: 15216**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 15091**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	ND		50.0	53.7		ug/L		107	70 - 130
Arsenic	ND		50.0	52.7		ug/L		104	70 - 130
Beryllium	ND		25.0	26.5		ug/L		106	70 - 130
Cadmium	ND		25.0	25.1		ug/L		101	70 - 130

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# QC Sample Results

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

Job ID: 380-14579-1

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

**Lab Sample ID: 380-14076-G-1-B MS**  
**Matrix: Water**  
**Analysis Batch: 15216**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 15091**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chromium	ND		50.0	49.6		ug/L		99	70 - 130
Copper	ND		50.0	47.8		ug/L		95	70 - 130
Lead	ND		50.0	48.5		ug/L		97	70 - 130
Nickel	ND		50.0	47.7		ug/L		95	70 - 130
Selenium	ND		50.0	50.6		ug/L		101	70 - 130
Silver	ND		25.0	24.0		ug/L		95	70 - 130
Thallium	ND		50.0	47.5		ug/L		95	70 - 130
Zinc	ND		50.0	51.0		ug/L		102	70 - 130

**Lab Sample ID: 380-14076-G-1-C MSD**  
**Matrix: Water**  
**Analysis Batch: 15216**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total Recoverable**  
**Prep Batch: 15091**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Antimony	ND		50.0	53.5		ug/L		107	70 - 130	0	20
Arsenic	ND		50.0	52.1		ug/L		103	70 - 130	1	20
Beryllium	ND		25.0	26.8		ug/L		107	70 - 130	1	20
Cadmium	ND		25.0	24.8		ug/L		99	70 - 130	1	20
Chromium	ND		50.0	49.0		ug/L		98	70 - 130	1	20
Copper	ND		50.0	47.1		ug/L		93	70 - 130	2	20
Lead	ND		50.0	48.8		ug/L		98	70 - 130	1	20
Nickel	ND		50.0	47.0		ug/L		94	70 - 130	2	20
Selenium	ND		50.0	50.1		ug/L		100	70 - 130	1	20
Silver	ND		25.0	23.9		ug/L		95	70 - 130	1	20
Thallium	ND		50.0	47.6		ug/L		95	70 - 130	0	20
Zinc	ND		50.0	50.2		ug/L		100	70 - 130	2	20

## Method: 245.1 - Mercury (CVAA)

**Lab Sample ID: MB 570-255443/1-A**  
**Matrix: Water**  
**Analysis Batch: 255902**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 255443**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	mg/L		08/09/22 10:22	08/10/22 12:55	1

**Lab Sample ID: LCS 570-255443/2-A**  
**Matrix: Water**  
**Analysis Batch: 255902**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 255443**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00800	0.00830		mg/L		104	85 - 115

**Lab Sample ID: LCSD 570-255443/3-A**  
**Matrix: Water**  
**Analysis Batch: 255902**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 255443**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Mercury	0.00800	0.00839		mg/L		105	85 - 115	1	10

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# QC Sample Results

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

Job ID: 380-14579-1

## Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: 380-14579-1 MS  
Matrix: Water  
Analysis Batch: 255902

Client Sample ID: (331-261-TP008) KAAMILO WELLS  
Prep Type: Total/NA  
Prep Batch: 255443

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	ND		0.00800	0.00866		mg/L		108	80 - 120

Lab Sample ID: 380-14579-1 MSD  
Matrix: Water  
Analysis Batch: 255902

Client Sample ID: (331-261-TP008) KAAMILO WELLS  
Prep Type: Total/NA  
Prep Batch: 255443

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Mercury	ND		0.00800	0.00855		mg/L		107	80 - 120	1	10

## Method: SM 2320B - Alkalinity

Lab Sample ID: MB 380-12572/7  
Matrix: Water  
Analysis Batch: 12572

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
A kalinity	ND		2.0	mg/L			08/09/22 15:10	1
Bicarbonate Alkalinity as CaCO3	ND		2.0	mg/L			08/09/22 15:10	1
Carbonate Alkalinity as CaCO3	ND		2.0	mg/L			08/09/22 15:10	1

Lab Sample ID: LCS 380-12572/5  
Matrix: Water  
Analysis Batch: 12572

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
A kalinity	100	98.1		mg/L		98	90 - 110

Lab Sample ID: LCSD 380-12572/22  
Matrix: Water  
Analysis Batch: 12572

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
A kalinity	100	98.4		mg/L		98	90 - 110	0	20

Lab Sample ID: LLCS 380-12572/6  
Matrix: Water  
Analysis Batch: 12572

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

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
A kalinity	20.0	20.8		mg/L		104	90 - 110

Lab Sample ID: MRL 380-12572/8  
Matrix: Water  
Analysis Batch: 12572

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
A kalinity	2.00	1.73	J	mg/L		87	50 - 150

# QC Sample Results

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

Job ID: 380-14579-1

## Method: SM 2320B - Alkalinity (Continued)

**Lab Sample ID: 380-13748-E-6 MS**  
**Matrix: Water**  
**Analysis Batch: 12572**

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
A kalinity	140		100	228		mg/L		86	80 - 120

**Lab Sample ID: 380-13748-E-6 MSD**  
**Matrix: Water**  
**Analysis Batch: 12572**

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
A kalinity	140		100	226		mg/L		84	80 - 120	1	20

**Lab Sample ID: 380-13748-E-6 DU**  
**Matrix: Water**  
**Analysis Batch: 12572**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
A kalinity	140		142		mg/L		0.3	20
Bicarbonate Alkalinity as CaCO3	140		142		mg/L		0.3	20
Carbonate Alkalinity as CaCO3	ND		ND		mg/L		NC	20

## Method: SM 2510B - Conductivity, Specific Conductance

**Lab Sample ID: MB 380-12573/7**  
**Matrix: Water**  
**Analysis Batch: 12573**

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	ND		2.0	umhos/cm			08/09/22 15:10	1

**Lab Sample ID: LCS 380-12573/10**  
**Matrix: Water**  
**Analysis Batch: 12573**

**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	996		umhos/cm		100	90 - 110

**Lab Sample ID: LCSD 380-12573/22**  
**Matrix: Water**  
**Analysis Batch: 12573**

**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	985		umhos/cm		99	90 - 110	1	10

**Lab Sample ID: MRL 380-12573/8**  
**Matrix: Water**  
**Analysis Batch: 12573**

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Specific Conductance	2.00	1.10	J	umhos/cm		55	50 - 150

# QC Sample Results

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

Job ID: 380-14579-1

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

**Lab Sample ID: 380-13748-E-6 DU**  
**Matrix: Water**  
**Analysis Batch: 12573**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Specific Conductance	600		596		umhos/cm		0.2	20

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

**Lab Sample ID: MB 380-12659/1**  
**Matrix: Water**  
**Analysis Batch: 12659**

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	mg/L			08/10/22 18:54	1

**Lab Sample ID: HLCS 380-12659/5**  
**Matrix: Water**  
**Analysis Batch: 12659**

**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	708		mg/L		101	80 - 114

**Lab Sample ID: LCS 380-12659/4**  
**Matrix: Water**  
**Analysis Batch: 12659**

**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	182		mg/L		104	80 - 114

**Lab Sample ID: MRL 380-12659/2**  
**Matrix: Water**  
**Analysis Batch: 12659**

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	10.0	13.0		mg/L		130	50 - 150

**Lab Sample ID: MRL 380-12659/3**  
**Matrix: Water**  
**Analysis Batch: 12659**

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	10.0	13.0		mg/L		130	50 - 150

**Lab Sample ID: 380-14579-1 DU**  
**Matrix: Water**  
**Analysis Batch: 12659**

**Client Sample ID: (331-261-TP008) KAAMILO WELLS**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	340		350		mg/L		2	10

# QC Sample Results

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

Job ID: 380-14579-1

## Method: SM 4500 F C - Fluoride

**Lab Sample ID: MB 380-12578/40**  
**Matrix: Water**  
**Analysis Batch: 12578**

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.050	mg/L			08/09/22 21:44	1

**Lab Sample ID: MB 380-12578/6**  
**Matrix: Water**  
**Analysis Batch: 12578**

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.050	mg/L			08/09/22 19:18	1

**Lab Sample ID: LCS 380-12578/42**  
**Matrix: Water**  
**Analysis Batch: 12578**

**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	0.977		mg/L		98	90 - 110

**Lab Sample ID: LCSD 380-12578/43**  
**Matrix: Water**  
**Analysis Batch: 12578**

**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	0.977		mg/L		98	90 - 110	0	10

**Lab Sample ID: MRL 380-12578/41**  
**Matrix: Water**  
**Analysis Batch: 12578**

**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	0.0458	J	mg/L		92	50 - 150

**Lab Sample ID: MRL 380-12578/7**  
**Matrix: Water**  
**Analysis Batch: 12578**

**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	0.0474	J	mg/L		95	50 - 150

**Lab Sample ID: 380-14494-A-11 MS**  
**Matrix: Water**  
**Analysis Batch: 12578**

**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	ND		1.00	0.963		mg/L		93	80 - 120

**Lab Sample ID: 380-14494-A-11 MSD**  
**Matrix: Water**  
**Analysis Batch: 12578**

**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	ND		1.00	0.968		mg/L		94	80 - 120	1	20

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# QC Sample Results

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

Job ID: 380-14579-1

## Method: SM 4500 H+ B - pH

Lab Sample ID: MB 380-12574/9  
Matrix: Water  
Analysis Batch: 12574

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			08/09/22 15:10	1

Lab Sample ID: LCS 380-12574/10  
Matrix: Water  
Analysis Batch: 12574

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 380-12574/23  
Matrix: Water  
Analysis Batch: 12574

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: 380-13748-E-6 DU  
Matrix: Water  
Analysis Batch: 12574

Client Sample ID: Duplicate  
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	8.2		8.2		SU		0.2	2

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

Lab Sample ID: 98928-B1  
Matrix: water  
Analysis Batch: O-38096

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: O-38096\_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.005	0.001	µg/L		08/03/22 00:00	08/31/22 23:31	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		08/03/22 00:00	08/31/22 23:31	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		08/03/22 00:00	08/31/22 23:31	1
2,4,5-Trichlorophenol	ND		0.1	0.05	µg/L		08/03/22 00:00	08/31/22 23:31	1
2,4,6-Trichlorophenol	ND		0.1	0.05	µg/L		08/03/22 00:00	08/31/22 23:31	1
2,4-Dichlorophenol	ND		0.1	0.05	µg/L		08/03/22 00:00	08/31/22 23:31	1
2,4-Dinitrophenol	ND		0.2	0.1	µg/L		08/03/22 00:00	08/31/22 23:31	1
2,6-Dichlorophenol	ND		0.1	0.05	µg/L		08/03/22 00:00	08/31/22 23:31	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		08/03/22 00:00	08/31/22 23:31	1
2,6-Di-tert-butyl-4-methylphenol	ND		0.1	0.05	µg/L		08/03/22 00:00	08/31/22 23:31	1
2,6-Di-tert-butylphenol	ND		0.1	0.05	µg/L		08/03/22 00:00	08/31/22 23:31	1
2-Chloronaphthalene	ND		0.1	0.05	µg/L		08/03/22 00:00	08/31/22 23:31	1
2-Chlorophenol	ND		0.1	0.05	µg/L		08/03/22 00:00	08/31/22 23:31	1
2-Methyl-4,6-dinitrophenol	ND		0.2	0.1	µg/L		08/03/22 00:00	08/31/22 23:31	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		08/03/22 00:00	08/31/22 23:31	1
2-Methylphenol	ND		0.2	0.1	µg/L		08/03/22 00:00	08/31/22 23:31	1
2-Nitroaniline	ND		0.1	0.05	µg/L		08/03/22 00:00	08/31/22 23:31	1
2-Nitrophenol	ND		0.2	0.1	µg/L		08/03/22 00:00	08/31/22 23:31	1
3+4-Methylphenol	ND		0.2	0.1	µg/L		08/03/22 00:00	08/31/22 23:31	1
3-Nitroaniline	ND		0.1	0.05	µg/L		08/03/22 00:00	08/31/22 23:31	1

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# QC Sample Results

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

Job ID: 380-14579-1

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

**Lab Sample ID: 98928-B1**  
**Matrix: water**  
**Analysis Batch: O-38096**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: O-38096\_P**

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Bromophenylphenyl ether	ND		0.1	0.05	µg/L		08/03/22 00:00	08/31/22 23:31	1
4-Chloro-3-methylphenol	ND		0.2	0.1	µg/L		08/03/22 00:00	08/31/22 23:31	1
4-Chloroaniline	ND		0.1	0.05	µg/L		08/03/22 00:00	08/31/22 23:31	1
4-Chlorophenylphenyl ether	ND		0.1	0.05	µg/L		08/03/22 00:00	08/31/22 23:31	1
4-Nitroaniline	ND		0.1	0.05	µg/L		08/03/22 00:00	08/31/22 23:31	1
4-Nitrophenol	ND		0.2	0.1	µg/L		08/03/22 00:00	08/31/22 23:31	1
6-tert-butyl-2,4-dimethylphenol	ND		0.1	0.05	µg/L		08/03/22 00:00	08/31/22 23:31	1
Acenaphthene	ND		0.005	0.001	µg/L		08/03/22 00:00	08/31/22 23:31	1
Acenaphthylene	ND		0.005	0.001	µg/L		08/03/22 00:00	08/31/22 23:31	1
Aniline	ND		0.1	0.05	µg/L		08/03/22 00:00	08/31/22 23:31	1
Anthracene	ND		0.005	0.001	µg/L		08/03/22 00:00	08/31/22 23:31	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		08/03/22 00:00	08/31/22 23:31	1
Benzidine	ND		0.1	0.05	µg/L		08/03/22 00:00	08/31/22 23:31	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		08/03/22 00:00	08/31/22 23:31	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		08/03/22 00:00	08/31/22 23:31	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		08/03/22 00:00	08/31/22 23:31	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		08/03/22 00:00	08/31/22 23:31	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		08/03/22 00:00	08/31/22 23:31	1
Benzoic Acid	ND		0.2	0.1	µg/L		08/03/22 00:00	08/31/22 23:31	1
Benzyl Alcohol	ND		0.2	0.1	µg/L		08/03/22 00:00	08/31/22 23:31	1
Biphenyl	ND		0.005	0.001	µg/L		08/03/22 00:00	08/31/22 23:31	1
Bis(2-Chloroethoxy) methane	ND		0.1	0.05	µg/L		08/03/22 00:00	08/31/22 23:31	1
Bis(2-Chloroethyl) ether	ND		0.1	0.05	µg/L		08/03/22 00:00	08/31/22 23:31	1
Bis(2-Chloroisopropyl) ether	ND		0.1	0.05	µg/L		08/03/22 00:00	08/31/22 23:31	1
Chrysene	ND		0.005	0.001	µg/L		08/03/22 00:00	08/31/22 23:31	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		08/03/22 00:00	08/31/22 23:31	1
Dibenzo[a,i]pyrene	ND		0.005	0.001	µg/L		08/03/22 00:00	08/31/22 23:31	1
Dibenzofuran	ND		0.1	0.05	µg/L		08/03/22 00:00	08/31/22 23:31	1
Dibenzothiophene	ND		0.005	0.001	µg/L		08/03/22 00:00	08/31/22 23:31	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		08/03/22 00:00	08/31/22 23:31	1
Fluoranthene	ND		0.005	0.001	µg/L		08/03/22 00:00	08/31/22 23:31	1
Fluorene	ND		0.005	0.001	µg/L		08/03/22 00:00	08/31/22 23:31	1
Hexachloroethane	ND		0.1	0.05	µg/L		08/03/22 00:00	08/31/22 23:31	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		08/03/22 00:00	08/31/22 23:31	1
Naphthalene	ND		0.005	0.001	µg/L		08/03/22 00:00	08/31/22 23:31	1
Nitrobenzene	ND		0.1	0.05	µg/L		08/03/22 00:00	08/31/22 23:31	1
N-Nitrosodi-n-propylamine	ND		0.1	0.05	µg/L		08/03/22 00:00	08/31/22 23:31	1
N-Nitrosodiphenylamine	ND		0.1	0.05	µg/L		08/03/22 00:00	08/31/22 23:31	1
Pentachlorophenol	ND		0.1	0.05	µg/L		08/03/22 00:00	08/31/22 23:31	1
Perylene	ND		0.005	0.001	µg/L		08/03/22 00:00	08/31/22 23:31	1
Phenanthrene	ND		0.005	0.001	µg/L		08/03/22 00:00	08/31/22 23:31	1
Phenol	ND		0.2	0.1	µg/L		08/03/22 00:00	08/31/22 23:31	1
p-tert-Butylphenol	ND		0.1	0.05	µg/L		08/03/22 00:00	08/31/22 23:31	1
Pyrene	ND		0.005	0.001	µg/L		08/03/22 00:00	08/31/22 23:31	1

Surrogate	Blank %Recovery	Blank Qualifier	Limits	Prepared	Analyzed	Dil Fac
(2,4,6-Tribromophenol)	80		44 - 159	08/03/22 00:00	08/31/22 23:31	1
(d10-Acenaphthene)	93		65 - 113	08/03/22 00:00	08/31/22 23:31	1

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# QC Sample Results

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

Job ID: 380-14579-1

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

**Lab Sample ID: 98928-B1**  
**Matrix: water**  
**Analysis Batch: O-38096**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: O-38096\_P**

Surrogate	Blank		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
(d10-Phenanthrene)	93		80 - 111	08/03/22 00:00	08/31/22 23:31	1
(d12-Chrysene)	98		60 - 139	08/03/22 00:00	08/31/22 23:31	1
(d12-Perylene)	90		36 - 161	08/03/22 00:00	08/31/22 23:31	1
(d5-Phenol)	102		20 - 121	08/03/22 00:00	08/31/22 23:31	1
(d8-Naphthalene)	86		44 - 119	08/03/22 00:00	08/31/22 23:31	1

**Lab Sample ID: 98928-BS1**  
**Matrix: water**  
**Analysis Batch: O-38096**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: O-38096\_P**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylphenanthrene	0.5	0.512		µg/L		102	66 - 127
2,3,5-Trimethylnaphthalene	0.5	0.456		µg/L		91	57 - 120
2,4,5-Trichlorophenol	1	0.871		µg/L		87	57 - 116
2,4,6-Trichlorophenol	1	0.86		µg/L		86	56 - 118
2,4-Dichlorophenol	1	0.84		µg/L		84	51 - 117
2,4-Dinitrophenol	1	0.561		µg/L		56	0 - 152
2,6-Dichlorophenol	1	0.855		µg/L		86	30 - 130
2,6-Dimethylnaphthalene	0.5	0.45		µg/L		90	54 - 117
2,6-Di-tert-butyl-4-methylphenol	1	0.725		µg/L		73	50 - 150
2,6-Di-tert-butylphenol	1	0.773		µg/L		77	50 - 150
2-Chloronaphthalene	1	0.88		µg/L		88	53 - 130
2-Chlorophenol	1	0.77		µg/L		77	41 - 120
2-Methyl-4,6-dinitrophenol	1	0.666		µg/L		67	0 - 141
2-Methylnaphthalene	1.5	1.43		µg/L		95	47 - 130
2-Methylphenol	1	0.82		µg/L		82	40 - 117
2-Nitroaniline	1	0.963		µg/L		96	69 - 114
2-Nitrophenol	1	0.558		µg/L		56	40 - 117
3+4-Methylphenol	1	0.8		µg/L		80	0 - 130
3-Nitroaniline	1	1.16		µg/L		116	23 - 137
4-Bromophenylphenyl ether	1	0.922		µg/L		92	61 - 132
4-Chloro-3-methylphenol	1	0.824		µg/L		82	51 - 128
4-Chloroaniline	1	0.839		µg/L		84	50 - 150
4-Chlorophenylphenyl ether	1	0.93		µg/L		93	63 - 130
4-Nitroaniline	2	2.29		µg/L		114	10 - 159
4-Nitrophenol	1	0.885		µg/L		88	10 - 164
6-tert-butyl-2,4-dimethylphenol	1	0.815		µg/L		81	50 - 150
Acenaphthene	1.5	1.5		µg/L		100	53 - 131
Acenaphthylene	1.5	1.53		µg/L		102	43 - 140
Aniline	0.5	0.531		µg/L		106	50 - 150
Anthracene	1.5	1.4		µg/L		93	58 - 135
Benz[a]anthracene	1.5	1.4		µg/L		93	55 - 145
Benzidine	1	0.0367		µg/L		4	0 - 125
Benzo[a]pyrene	1.5	1.31		µg/L		87	51 - 143
Benzo[b]fluoranthene	1.5	1.42		µg/L		95	46 - 165
Benzo[e]pyrene	0.5	0.486		µg/L		97	42 - 152
Benzo[g,h,i]perylene	1.5	1.51		µg/L		101	63 - 133

Eurofins Eaton Monrovia

# QC Sample Results

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

Job ID: 380-14579-1

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

**Lab Sample ID: 98928-BS1**  
**Matrix: water**  
**Analysis Batch: O-38096**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: O-38096\_P**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzo[k]fluoranthene	1.5	1.34		µg/L		89	56 - 145
Benzoic Acid	1	0.541		µg/L		54	2 - 145
Benzyl Alcohol	1	0.784		µg/L		78	43 - 148
Biphenyl	0.5	0.459		µg/L		92	56 - 119
Bis(2-Chloroethoxy) methane	1	0.903		µg/L		90	66 - 122
Bis(2-Chloroethyl) ether	1	0.667		µg/L		67	43 - 127
Bis(2-Chloroisopropyl) ether	1	1.08		µg/L		108	49 - 128
Chrysene	1.5	1.35		µg/L		90	56 - 141
Dibenz[a,h]anthracene	1.5	1.42		µg/L		95	55 - 150
Dibenzo[a,l]pyrene	0.5	0.485		µg/L		97	50 - 150
Dibenzofuran	1	0.899		µg/L		90	50 - 150
Dibenzothiophene	0.5	0.43		µg/L		86	75 - 113
Disalicylidenepropanediamine	50	36.8		µg/L		74	50 - 150
Fluoranthene	1.5	1.37		µg/L		91	60 - 146
Fluorene	1.5	1.59		µg/L		106	58 - 131
Hexachloroethane	1	0.772		µg/L		77	27 - 130
Indeno[1,2,3-cd]pyrene	1.5	1.39		µg/L		93	50 - 151
Naphthalene	1.5	1.33		µg/L		89	41 - 126
Nitrobenzene	1	0.8		µg/L		80	54 - 111
N-Nitrosodi-n-propylamine	1	0.869		µg/L		87	61 - 152
N-Nitrosodiphenylamine	1	1.01		µg/L		101	49 - 142
Pentachlorophenol	1	0.908		µg/L		91	36 - 111
Perylene	0.5	0.477		µg/L		95	48 - 141
Phenanthrene	1.5	1.43		µg/L		95	67 - 127
Phenol	1	0.674		µg/L		67	29 - 114
p-tert-Butylphenol	1	1.03		µg/L		103	50 - 150
Pyrene	1.5	1.37		µg/L		91	54 - 156

Surrogate	LCS %Recovery	LCS Qualifier	Limits
(2,4,6-Tribromophenol)	79		44 - 159
(d10-Acenaphthene)	98		65 - 113
(d10-Phenanthrene)	97		80 - 111
(d12-Chrysene)	105		60 - 139
(d12-Perylene)	99		36 - 161
(d5-Phenol)	104		20 - 121
(d8-Naphthalene)	87		44 - 119

**Lab Sample ID: 98928-BS2**  
**Matrix: water**  
**Analysis Batch: O-38096**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: O-38096\_P**

Analyte	Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	0.5	0.454		µg/L		91	49 - 117	3	30
1-Methylphenanthrene	0.5	0.518		µg/L		104	66 - 127	2	30
2,3,5-Trimethylnaphthalene	0.5	0.47		µg/L		94	57 - 120	3	30
2,4,5-Trichlorophenol	1	0.883		µg/L		88	57 - 116	1	30
2,4,6-Trichlorophenol	1	0.915		µg/L		92	56 - 118	7	30
2,4-Dichlorophenol	1	0.852		µg/L		85	51 - 117	1	30

Eurofins Eaton Monrovia

# QC Sample Results

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

Job ID: 380-14579-1

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

**Lab Sample ID: 98928-BS2**  
**Matrix: water**  
**Analysis Batch: O-38096**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: O-38096\_P**

Analyte	Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec		RPD	RPD Limit
							Limits	RPD		
2,4-Dinitrophenol	1	0.56		µg/L		56	0 - 152	0	30	
2,6-Dichlorophenol	1	0.834		µg/L		83	30 - 130	4	30	
2,6-Dimethylnaphthalene	0.5	0.471		µg/L		94	54 - 117	4	30	
2,6-Di-tert-butyl-4-methylphenol	1	0.752		µg/L		75	50 - 150	4	30	
2,6-Di-tert-butylphenol	1	0.79		µg/L		79	50 - 150	3	30	
2-Chloronaphthalene	1	0.889		µg/L		89	53 - 130	1	30	
2-Chlorophenol	1	0.729		µg/L		73	41 - 120	5	30	
2-Methyl-4,6-dinitrophenol	1	0.732		µg/L		73	0 - 141	9	30	
2-Methylnaphthalene	1.5	1.45		µg/L		97	47 - 130	2	30	
2-Methylphenol	1	0.808		µg/L		81	40 - 117	1	30	
2-Nitroaniline	1	1.05		µg/L		105	69 - 114	9	30	
2-Nitrophenol	1	0.559		µg/L		56	40 - 117	0	30	
3+4-Methylphenol	1	0.77		µg/L		77	0 - 130	4	30	
3-Nitroaniline	1	1.29		µg/L		129	23 - 137	11	30	
4-Bromophenylphenyl ether	1	0.94		µg/L		94	61 - 132	2	30	
4-Chloro-3-methylphenol	1	0.87		µg/L		87	51 - 128	6	30	
4-Chloroaniline	1	1.01		µg/L		101	50 - 150	18	30	
4-Chlorophenylphenyl ether	1	0.914		µg/L		91	63 - 130	2	30	
4-Nitroaniline	2	2.72		µg/L		136	10 - 159	18	30	
4-Nitrophenol	1	0.98		µg/L		98	10 - 164	11	30	
6-tert-butyl-2,4-dimethylphenol	1	0.856		µg/L		86	50 - 150	5	30	
Acenaphthene	1.5	1.5		µg/L		100	53 - 131	0	30	
Acenaphthylene	1.5	1.53		µg/L		102	43 - 140	0	30	
Aniline	0.5	0.61		µg/L		122	50 - 150	14	30	
Anthracene	1.5	1.4		µg/L		93	58 - 135	0	30	
Benz[a]anthracene	1.5	1.38		µg/L		92	55 - 145	1	30	
Benzidine	1	0.0401		µg/L		4	0 - 125	0	30	
Benzo[a]pyrene	1.5	1.28		µg/L		85	51 - 143	2	30	
Benzo[b]fluoranthene	1.5	1.41		µg/L		94	46 - 165	1	30	
Benzo[e]pyrene	0.5	0.472		µg/L		94	42 - 152	3	30	
Benzo[g,h,i]perylene	1.5	1.5		µg/L		100	63 - 133	1	30	
Benzo[k]fluoranthene	1.5	1.33		µg/L		89	56 - 145	0	30	
Benzoic Acid	1	0.546		µg/L		55	2 - 145	2	30	
Benzyl Alcohol	1	0.76		µg/L		76	43 - 148	3	30	
Biphenyl	0.5	0.474		µg/L		95	56 - 119	3	30	
Bis(2-Chloroethoxy) methane	1	0.884		µg/L		88	66 - 122	2	30	
Bis(2-Chloroethyl) ether	1	0.633		µg/L		63	43 - 127	6	30	
Bis(2-Chloroisopropyl) ether	1	0.976		µg/L		98	49 - 128	10	30	
Chrysene	1.5	1.34		µg/L		89	56 - 141	1	30	
Dibenz[a,h]anthracene	1.5	1.4		µg/L		93	55 - 150	2	30	
Dibenzo[a,l]pyrene	0.5	0.521		µg/L		104	50 - 150	7	30	
Dibenzofuran	1	0.891		µg/L		89	50 - 150	1	30	
Dibenzothiophene	0.5	0.441		µg/L		88	75 - 113	2	30	
Disalicylidenepranediamine	50	44.7		µg/L		89	50 - 150	18	30	
Fluoranthene	1.5	1.38		µg/L		92	60 - 146	1	30	
Fluorene	1.5	1.61		µg/L		107	58 - 131	1	30	
Hexachloroethane	1	0.715		µg/L		71	27 - 130	7	30	
Indeno[1,2,3-cd]pyrene	1.5	1.42		µg/L		95	50 - 151	2	30	
Naphthalene	1.5	1.29		µg/L		86	41 - 126	3	30	

Eurofins Eaton Monrovia

# QC Sample Results

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

Job ID: 380-14579-1

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

**Lab Sample ID: 98928-BS2**  
**Matrix: water**  
**Analysis Batch: O-38096**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: O-38096\_P**

Analyte	Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrobenzene	1	0.757		µg/L		76	54 - 111	5	30
N-Nitrosodi-n-propylamine	1	0.853		µg/L		85	61 - 152	2	30
N-Nitrosodiphenylamine	1	1.03		µg/L		103	49 - 142	2	30
Pentachlorophenol	1	1.04		µg/L		104	36 - 111	13	30
Perylene	0.5	0.479		µg/L		96	48 - 141	1	30
Phenanthrene	1.5	1.44		µg/L		96	67 - 127	1	30
Phenol	1	0.648		µg/L		65	29 - 114	3	30
p-tert-Butylphenol	1	1.07		µg/L		107	50 - 150	4	30
Pyrene	1.5	1.41		µg/L		94	54 - 156	3	30

Surrogate	LCS DUP %Recovery	LCS DUP Qualifier	Limits
(2,4,6-Tribromophenol)	80		44 - 159
(d10-Acenaphthene)	97		65 - 113
(d10-Phenanthrene)	98		80 - 111
(d12-Chrysene)	100		60 - 139
(d12-Perylene)	98		36 - 161
(d5-Phenol)	97		20 - 121
(d8-Naphthalene)	84		44 - 119

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

**Lab Sample ID: 22DSH019WB**  
**Matrix: WATER**  
**Analysis Batch: 22DSH019W**

**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			08/13/22 04:57	1
JP5	ND	U	0.05		mg/L			08/13/22 04:57	1
JP8	ND	U	0.05		mg/L			08/13/22 04:57	1
MOTOR OIL	ND	U	0.05		mg/L			08/13/22 04:57	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOBENZENE					08/13/22 04:57	1
HEXACOSANE					08/13/22 04:57	1

**Lab Sample ID: 22DSH019WL**  
**Matrix: WATER**  
**Analysis Batch: 22DSH019W**

**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	2.51		mg/L		100	50 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
BROMOBENZENE	80		60 - 130
HEXACOSANE	94		60 - 130

# QC Sample Results

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

Job ID: 380-14579-1

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

**Lab Sample ID: 22J5H019WL**  
**Matrix: WATER**  
**Analysis Batch: 22DSH019W**

**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	2.94		mg/L		118	30 - 160
<b>LCS LCS</b>							
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				
BROMOBENZENE	84		60 - 130				
HEXACOSANE	86		60 - 130				

**Lab Sample ID: 22J8H019WL**  
**Matrix: WATER**  
**Analysis Batch: 22DSH019W**

**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	1.93		mg/L		77	30 - 160
<b>LCS LCS</b>							
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				
BROMOBENZENE	96		60 - 130				
HEXACOSANE	97		60 - 130				

## Method: 8015 Ethanol - SW846 8015B Gasoline Range Organics

**Lab Sample ID: 22MEH001WB**  
**Matrix: WATER**  
**Analysis Batch: 22MEH001W**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
ETHANOL	ND	U	2000		ug/L			08/05/22 18:04	1

**Lab Sample ID: 22MEH001WL**  
**Matrix: WATER**  
**Analysis Batch: 22MEH001W**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
ETHANOL	10000	9710		ug/L		97	60 - 130

**Lab Sample ID: 22H080-01M**  
**Matrix: WATER**  
**Analysis Batch: 22MEH001W**

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
ETHANOL	ND		10000	9460		ug/L		95	60 - 130

**Lab Sample ID: 22H080-01S**  
**Matrix: WATER**  
**Analysis Batch: 22MEH001W**

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
ETHANOL	ND		10000	9310		ug/L		93	60 - 130	2	30

# QC Sample Results

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

Job ID: 380-14579-1

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

**Lab Sample ID: 22VG39H03B**  
**Matrix: WATER**  
**Analysis Batch: 22VG39H03**

**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			08/09/22 13:32	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE								08/09/22 13:32	1

**Lab Sample ID: 22VG39H03L**  
**Matrix: WATER**  
**Analysis Batch: 22VG39H03**

**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	0.442		mg/L		88	60 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
BROMOFLUOROBENZENE	110		70 - 130				

**Lab Sample ID: 22H080-02M**  
**Matrix: WATER**  
**Analysis Batch: 22VG39H03**

**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	0.477		mg/L		95	50 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
BROMOFLUOROBENZENE	119		60 - 140						

**Lab Sample ID: 22H080-02S**  
**Matrix: WATER**  
**Analysis Batch: 22VG39H03**

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
GASOLINE	ND		0.5	0.463		mg/L		93	50 - 130	3	30
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
BROMOFLUOROBENZENE	119		60 - 140								



# QC Association Summary

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

Job ID: 380-14579-1

## GC/MS VOA

### Analysis Batch: 13338

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-14579-1	(331-261-TP008) KAAMILO WELLS	Total/NA	Water	524.2	
MB 380-13338/5	Method Blank	Total/NA	Water	524.2	
LCS 380-13338/2	Lab Control Sample	Total/NA	Water	524.2	
LCSD 380-13338/3	Lab Control Sample Dup	Total/NA	Water	524.2	
MRL 380-13338/4	Lab Control Sample	Total/NA	Water	524.2	

### Analysis Batch: 13731

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-14579-1	(331-261-TP008) KAAMILO WELLS	Total/NA	Water	524.2	
MB 380-13731/15	Method Blank	Total/NA	Water	524.2	
LCS 380-13731/11	Lab Control Sample	Total/NA	Water	524.2	
LCSD 380-13731/12	Lab Control Sample Dup	Total/NA	Water	524.2	
MRL 380-13731/10	Lab Control Sample	Total/NA	Water	524.2	
MRL 380-13731/14	Lab Control Sample	Total/NA	Water	524.2	

## GC/MS Semi VOA

### Prep Batch: 13045

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-14579-1	(331-261-TP008) KAAMILO WELLS	Total/NA	Water	525.2	
MB 380-13045/1-A	Method Blank	Total/NA	Water	525.2	
LCS 380-13045/3-A	Lab Control Sample	Total/NA	Water	525.2	
LCSD 380-13045/4-A	Lab Control Sample Dup	Total/NA	Water	525.2	
MRL 380-13045/2-A	Lab Control Sample	Total/NA	Water	525.2	
380-14826-I-1-A MS	Matrix Spike	Total/NA	Water	525.2	
380-14819-P-1-A DU	Duplicate	Total/NA	Water	525.2	

### Analysis Batch: 14453

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-14579-1	(331-261-TP008) KAAMILO WELLS	Total/NA	Water	525.2	13045
MB 380-13045/1-A	Method Blank	Total/NA	Water	525.2	13045
LCS 380-13045/3-A	Lab Control Sample	Total/NA	Water	525.2	13045
LCSD 380-13045/4-A	Lab Control Sample Dup	Total/NA	Water	525.2	13045
MRL 380-13045/2-A	Lab Control Sample	Total/NA	Water	525.2	13045
380-14826-I-1-A MS	Matrix Spike	Total/NA	Water	525.2	13045
380-14819-P-1-A DU	Duplicate	Total/NA	Water	525.2	13045

## GC Semi VOA

### Prep Batch: 12252

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-14579-1	(331-261-TP008) KAAMILO WELLS	Total/NA	Water	504.1	
MB 380-12252/4-A	Method Blank	Total/NA	Water	504.1	
LCS 380-12252/3-A	Lab Control Sample	Total/NA	Water	504.1	
MRL 380-12252/1-A	Lab Control Sample	Total/NA	Water	504.1	
MRL 380-12252/2-A	Lab Control Sample	Total/NA	Water	504.1	
380-14813-D-1-A MS	Matrix Spike	Total/NA	Water	504.1	
380-14813-F-2-A DU	Duplicate	Total/NA	Water	504.1	

### Prep Batch: 12446

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-14579-1	(331-261-TP008) KAAMILO WELLS	Total/NA	Water	505	

Eurofins Eaton Monrovia

# QC Association Summary

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

Job ID: 380-14579-1

## GC Semi VOA (Continued)

### Prep Batch: 12446 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 380-12446/28-A	Method Blank	Total/NA	Water	505	
LCS 380-12446/16-A	Lab Control Sample	Total/NA	Water	505	
LCS 380-12446/23-A	Lab Control Sample	Total/NA	Water	505	
LCS 380-12446/9-A	Lab Control Sample	Total/NA	Water	505	
MRL 380-12446/24-A	Lab Control Sample	Total/NA	Water	505	
MRL 380-12446/57-A	Lab Control Sample	Total/NA	Water	505	
380-14395-C-2-A MS	Matrix Spike	Total/NA	Water	505	
380-15399-H-1-A MS	Matrix Spike	Total/NA	Water	505	

### Analysis Batch: 12540

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-14579-1	(331-261-TP008) KAAMILO WELLS	Total/NA	Water	504.1	12252
MB 380-12252/4-A	Method Blank	Total/NA	Water	504.1	12252
LCS 380-12252/3-A	Lab Control Sample	Total/NA	Water	504.1	12252
MRL 380-12252/1-A	Lab Control Sample	Total/NA	Water	504.1	12252
MRL 380-12252/2-A	Lab Control Sample	Total/NA	Water	504.1	12252
380-14813-D-1-A MS	Matrix Spike	Total/NA	Water	504.1	12252
380-14813-F-2-A DU	Duplicate	Total/NA	Water	504.1	12252

### Analysis Batch: 13895

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-14579-1	(331-261-TP008) KAAMILO WELLS	Total/NA	Water	505	12446
MB 380-12446/28-A	Method Blank	Total/NA	Water	505	12446
LCS 380-12446/16-A	Lab Control Sample	Total/NA	Water	505	12446
LCS 380-12446/23-A	Lab Control Sample	Total/NA	Water	505	12446
LCS 380-12446/9-A	Lab Control Sample	Total/NA	Water	505	12446
MRL 380-12446/24-A	Lab Control Sample	Total/NA	Water	505	12446
MRL 380-12446/57-A	Lab Control Sample	Total/NA	Water	505	12446
380-14395-C-2-A MS	Matrix Spike	Total/NA	Water	505	12446
380-15399-H-1-A MS	Matrix Spike	Total/NA	Water	505	12446

### Analysis Batch: 14196

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-14579-1	(331-261-TP008) KAAMILO WELLS	Total/NA	Water	505	12446
MB 380-12446/28-A	Method Blank	Total/NA	Water	505	12446
LCS 380-12446/23-A	Lab Control Sample	Total/NA	Water	505	12446
MRL 380-12446/57-A	Lab Control Sample	Total/NA	Water	505	12446
380-14395-C-2-A MS	Matrix Spike	Total/NA	Water	505	12446

## HPLC/IC

### Analysis Batch: 12607

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-14579-1	(331-261-TP008) KAAMILO WELLS	Total/NA	Water	300.0	
MB 380-12607/4	Method Blank	Total/NA	Water	300.0	
LCS 380-12607/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 380-12607/6	Lab Control Sample Dup	Total/NA	Water	300.0	
MRL 380-12607/3	Lab Control Sample	Total/NA	Water	300.0	
380-14572-A-3 MS	Matrix Spike	Total/NA	Water	300.0	
380-14572-A-3 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

# QC Association Summary

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

Job ID: 380-14579-1

## HPLC/IC

### Analysis Batch: 15646

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-14579-1	(331-261-TP008) KAAMILO WELLS	Total/NA	Water	300.0	
MB 380-15646/39	Method Blank	Total/NA	Water	300.0	
MB 380-15646/4	Method Blank	Total/NA	Water	300.0	
LCS 380-15646/7	Lab Control Sample	Total/NA	Water	300.0	
LCSD 380-15646/8	Lab Control Sample Dup	Total/NA	Water	300.0	
MRL 380-15646/40	Lab Control Sample	Total/NA	Water	300.0	
MRL 380-15646/5	Lab Control Sample	Total/NA	Water	300.0	
MRL 380-15646/6	Lab Control Sample	Total/NA	Water	300.0	
380-14579-1 MS	(331-261-TP008) KAAMILO WELLS	Total/NA	Water	300.0	
380-14579-1 MSD	(331-261-TP008) KAAMILO WELLS	Total/NA	Water	300.0	

### Analysis Batch: 15647

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-14579-1	(331-261-TP008) KAAMILO WELLS	Total/NA	Water	300.0	
MB 380-15647/39	Method Blank	Total/NA	Water	300.0	
MB 380-15647/4	Method Blank	Total/NA	Water	300.0	
LCS 380-15647/7	Lab Control Sample	Total/NA	Water	300.0	
LCSD 380-15647/8	Lab Control Sample Dup	Total/NA	Water	300.0	
MRL 380-15647/40	Lab Control Sample	Total/NA	Water	300.0	
MRL 380-15647/5	Lab Control Sample	Total/NA	Water	300.0	
MRL 380-15647/6	Lab Control Sample	Total/NA	Water	300.0	
380-14579-1 MS	(331-261-TP008) KAAMILO WELLS	Total/NA	Water	300.0	
380-14579-1 MSD	(331-261-TP008) KAAMILO WELLS	Total/NA	Water	300.0	

## Metals

### Analysis Batch: 12438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-14579-1	(331-261-TP008) KAAMILO WELLS	Total/NA	Water	200.7 Rev 4.4	
MB 380-12438/130	Method Blank	Total/NA	Water	200.7 Rev 4.4	
LCS 380-12438/132	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	
LCSD 380-12438/135	Lab Control Sample Dup	Total/NA	Water	200.7 Rev 4.4	
LLCS 380-12438/131	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	
380-14209-K-1 MS	Matrix Spike	Total/NA	Water	200.7 Rev 4.4	
380-14209-K-1 MSD	Matrix Spike Duplicate	Total/NA	Water	200.7 Rev 4.4	

### Prep Batch: 15091

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-14579-1	(331-261-TP008) KAAMILO WELLS	Total Recoverable	Water	200.8	
MB 380-15091/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 380-15091/3-A	Lab Control Sample	Total Recoverable	Water	200.8	
LCSD 380-15091/4-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	
LLCS 380-15091/2-A	Lab Control Sample	Total Recoverable	Water	200.8	
380-14076-G-1-B MS	Matrix Spike	Total Recoverable	Water	200.8	
380-14076-G-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	200.8	

### Analysis Batch: 15216

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-14579-1	(331-261-TP008) KAAMILO WELLS	Total Recoverable	Water	200.8	15091
MB 380-15091/1-A	Method Blank	Total Recoverable	Water	200.8	15091
LCS 380-15091/3-A	Lab Control Sample	Total Recoverable	Water	200.8	15091

Eurofins Eaton Monrovia

# QC Association Summary

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

Job ID: 380-14579-1

## Metals (Continued)

### Analysis Batch: 15216 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 380-15091/4-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	15091
LLCS 380-15091/2-A	Lab Control Sample	Total Recoverable	Water	200.8	15091
380-14076-G-1-B MS	Matrix Spike	Total Recoverable	Water	200.8	15091
380-14076-G-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	200.8	15091

### Prep Batch: 255443

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-14579-1	(331-261-TP008) KAAMILO WELLS	Total/NA	Water	245.1	
MB 570-255443/1-A	Method Blank	Total/NA	Water	245.1	
LCS 570-255443/2-A	Lab Control Sample	Total/NA	Water	245.1	
LCSD 570-255443/3-A	Lab Control Sample Dup	Total/NA	Water	245.1	
380-14579-1 MS	(331-261-TP008) KAAMILO WELLS	Total/NA	Water	245.1	
380-14579-1 MSD	(331-261-TP008) KAAMILO WELLS	Total/NA	Water	245.1	

### Analysis Batch: 255902

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-14579-1	(331-261-TP008) KAAMILO WELLS	Total/NA	Water	245.1	255443
MB 570-255443/1-A	Method Blank	Total/NA	Water	245.1	255443
LCS 570-255443/2-A	Lab Control Sample	Total/NA	Water	245.1	255443
LCSD 570-255443/3-A	Lab Control Sample Dup	Total/NA	Water	245.1	255443
380-14579-1 MS	(331-261-TP008) KAAMILO WELLS	Total/NA	Water	245.1	255443
380-14579-1 MSD	(331-261-TP008) KAAMILO WELLS	Total/NA	Water	245.1	255443

## General Chemistry

### Analysis Batch: 12572

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-14579-1	(331-261-TP008) KAAMILO WELLS	Total/NA	Water	SM 2320B	
MB 380-12572/7	Method Blank	Total/NA	Water	SM 2320B	
LCS 380-12572/5	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 380-12572/22	Lab Control Sample Dup	Total/NA	Water	SM 2320B	
LLCS 380-12572/6	Lab Control Sample	Total/NA	Water	SM 2320B	
MRL 380-12572/8	Lab Control Sample	Total/NA	Water	SM 2320B	
380-13748-E-6 MS	Matrix Spike	Total/NA	Water	SM 2320B	
380-13748-E-6 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 2320B	
380-13748-E-6 DU	Duplicate	Total/NA	Water	SM 2320B	

### Analysis Batch: 12573

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-14579-1	(331-261-TP008) KAAMILO WELLS	Total/NA	Water	SM 2510B	
MB 380-12573/7	Method Blank	Total/NA	Water	SM 2510B	
LCS 380-12573/10	Lab Control Sample	Total/NA	Water	SM 2510B	
LCSD 380-12573/22	Lab Control Sample Dup	Total/NA	Water	SM 2510B	
MRL 380-12573/8	Lab Control Sample	Total/NA	Water	SM 2510B	
380-13748-E-6 DU	Duplicate	Total/NA	Water	SM 2510B	

### Analysis Batch: 12574

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-14579-1	(331-261-TP008) KAAMILO WELLS	Total/NA	Water	SM 4500 H+ B	
MB 380-12574/9	Method Blank	Total/NA	Water	SM 4500 H+ B	
LCS 380-12574/10	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	

Eurofins Eaton Monrovia

# QC Association Summary

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

Job ID: 380-14579-1

## General Chemistry (Continued)

### Analysis Batch: 12574 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 380-12574/23	Lab Control Sample Dup	Total/NA	Water	SM 4500 H+ B	
380-13748-E-6 DU	Duplicate	Total/NA	Water	SM 4500 H+ B	

### Analysis Batch: 12578

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-14579-1	(331-261-TP008) KAAMILO WELLS	Total/NA	Water	SM 4500 F C	
MB 380-12578/40	Method Blank	Total/NA	Water	SM 4500 F C	
MB 380-12578/6	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 380-12578/42	Lab Control Sample	Total/NA	Water	SM 4500 F C	
LCSD 380-12578/43	Lab Control Sample Dup	Total/NA	Water	SM 4500 F C	
MRL 380-12578/41	Lab Control Sample	Total/NA	Water	SM 4500 F C	
MRL 380-12578/7	Lab Control Sample	Total/NA	Water	SM 4500 F C	
380-14494-A-11 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
380-14494-A-11 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	

### Analysis Batch: 12659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-14579-1	(331-261-TP008) KAAMILO WELLS	Total/NA	Water	SM 2540C	
MB 380-12659/1	Method Blank	Total/NA	Water	SM 2540C	
HLCS 380-12659/5	Lab Control Sample	Total/NA	Water	SM 2540C	
LCS 380-12659/4	Lab Control Sample	Total/NA	Water	SM 2540C	
MRL 380-12659/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MRL 380-12659/3	Lab Control Sample	Total/NA	Water	SM 2540C	
380-14579-1 DU	(331-261-TP008) KAAMILO WELLS	Total/NA	Water	SM 2540C	

## Subcontract

### Analysis Batch: O-38096

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-14579-2	(331-261-TP008) KAAMILO WELLS	Total/NA	Water	625 Acid LL (EAL) Physis	O-38096_P
98928-B1	Method Blank	Total/NA	water	625 Acid LL (EAL) Physis	O-38096_P
98928-BS1	Lab Control Sample	Total/NA	water	625 Acid LL (EAL) Physis	O-38096_P
98928-BS2	Lab Control Sample Dup	Total/NA	water	625 Acid LL (EAL) Physis	O-38096_P

### Analysis Batch: 22DSH019W

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-14579-7	(331-261-TP008) KAAMILO WELLS	Total/NA	Water	8015 Diesel LL (EAL) and Motor Oil	
380-14579-8	(331-261-TP008) KAAMILO WELLS	Total/NA	Water	8015 Jet Fuel 5 (JP5)	
380-14579-9	(331-261-TP008) KAAMILO WELLS	Total/NA	Water	8015 Jet Fuel 8 (JP8)	
22DSH019WB	Method Blank	Total/NA	WATER	8015 Diesel LL (EAL) and Motor Oil	
22DSH019WL	Lab Control Sample	Total/NA	WATER	8015 Diesel LL (EAL) and Motor Oil	

Eurofins Eaton Monrovia

# QC Association Summary

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

Job ID: 380-14579-1

## Subcontract (Continued)

### Analysis Batch: 22DSH019W (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
22J5H019WL	Lab Control Sample	Total/NA	WATER	8015 Diesel LL (EAL) and Motor Oil	
22J8H019WL	Lab Control Sample	Total/NA	WATER	8015 Diesel LL (EAL) and Motor Oil	

### Analysis Batch: 22MEH001W

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-14579-5	(331-261-TP008) KAAMILO WELLS	Total/NA	Water	8015 Ethanol	
22MEH001WB	Method Blank	Total/NA	WATER	8015 Ethanol	
22MEH001WL	Lab Control Sample	Total/NA	WATER	8015 Ethanol	
22H080-01M	Matrix Spike	Total/NA	WATER	8015 Ethanol	
22H080-01S	Matrix Spike Duplicate	Total/NA	WATER	8015 Ethanol	

### Analysis Batch: 22VG39H03

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-14579-6	(331-261-TP008) KAAMILO WELLS	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
380-14579-10	TB:(331-261-TP008) KAAMILO WELLS	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
22VG39H03B	Method Blank	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	
22VG39H03L	Lab Control Sample	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	
22H080-02M	Matrix Spike	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	
22H080-02S	Matrix Spike Duplicate	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	

### Prep Batch: O-38096\_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-14579-2	(331-261-TP008) KAAMILO WELLS	Total/NA	Water	EPA_625	
98928-B1	Method Blank	Total/NA	water	EPA_625	
98928-BS1	Lab Control Sample	Total/NA	water	EPA_625	
98928-BS2	Lab Control Sample Dup	Total/NA	water	EPA_625	

# Lab Chronicle

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

Job ID: 380-14579-1

**Client Sample ID: (331-261-TP008) KAAMILO WELLS**

**Lab Sample ID: 380-14579-1**

**Date Collected: 08/03/22 10:34**

**Matrix: Water**

**Date Received: 08/04/22 10:30**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	524.2		1	13731	P3EE	EA MON	08/17/22 22:39
Total/NA	Analysis	524.2		1	13338	P3EE	EA MON	08/15/22 22:23
Total/NA	Prep	525.2			13045	N8NE	EA MON	08/12/22 10:08
Total/NA	Analysis	525.2		1	14453	UPAC	EA MON	08/23/22 12:33
Total/NA	Prep	504.1			12252	K9GY	EA MON	08/09/22 09:43 - 08/09/22 10:33 <sup>1</sup>
Total/NA	Analysis	504.1		1	12540	K9GY	EA MON	08/09/22 14:40
Total/NA	Prep	505			12446	ULRL	EA MON	08/09/22 19:54 - 08/09/22 22:30 <sup>1</sup>
Total/NA	Analysis	505		1	13895	ULRL	EA MON	08/10/22 15:17
Total/NA	Prep	505			12446	ULRL	EA MON	08/09/22 19:54 - 08/09/22 22:30 <sup>1</sup>
Total/NA	Analysis	505		1	14196	ULRL	EA MON	08/10/22 15:17
Total/NA	Analysis	300.0		5	15646	P6LW	EA MON	08/04/22 19:54
Total/NA	Analysis	300.0		5	15647	GH6R	EA MON	08/04/22 19:54
Total/NA	Analysis	300.0		2	12607	UNJR	EA MON	08/10/22 08:45
Total/NA	Analysis	200.7 Rev 4.4		1	12438	T8RV	EA MON	08/09/22 18:45
Total Recoverable	Prep	200.8			15091	NQM8	EA MON	08/26/22 13:36
Total Recoverable	Analysis	200.8		1	15216	DHX7	EA MON	08/27/22 19:56
Total/NA	Prep	245.1			255443	JP8N	EET CAL 4	08/09/22 10:22
Total/NA	Analysis	245.1		1	255902	C0YH	EET CAL 4	08/10/22 13:31
Total/NA	Analysis	SM 2320B		1	12572	D5MQ	EA MON	08/09/22 19:04
Total/NA	Analysis	SM 2510B		1	12573	D5MQ	EA MON	08/09/22 19:04
Total/NA	Analysis	SM 2540C		1	12659	XLG4	EA MON	08/10/22 18:54
Total/NA	Analysis	SM 4500 F C		1	12578	D5MQ	EA MON	08/09/22 23:53
Total/NA	Analysis	SM 4500 H+ B		1	12574	LQ3M	EA MON	08/09/22 19:04

**Client Sample ID: (331-261-TP008) KAAMILO WELLS**

**Lab Sample ID: 380-14579-2**

**Date Collected: 08/03/22 10:34**

**Matrix: Water**

**Date Received: 08/04/22 10:30**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA_625		1	O-38096_P			08/05/22 00:00
Total/NA	Analysis	625 Acid LL (EAL) Physis		1	O-38096	YC		09/01/22 06:25

**Client Sample ID: (331-261-TP008) KAAMILO WELLS**

**Lab Sample ID: 380-14579-5**

**Date Collected: 08/03/22 10:34**

**Matrix: Water**

**Date Received: 08/04/22 10:30**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015 Ethanol		1	22MEH001W	ASitu		08/05/22 18:46



# Lab Chronicle

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

Job ID: 380-14579-1

**Client Sample ID: (331-261-TP008) KAAMILO WELLS**

**Lab Sample ID: 380-14579-6**

**Date Collected: 08/03/22 10:34**

**Matrix: Water**

**Date Received: 08/04/22 10:30**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	22VG39H03	SCerva		08/09/22 20:11

**Client Sample ID: (331-261-TP008) KAAMILO WELLS**

**Lab Sample ID: 380-14579-7**

**Date Collected: 08/03/22 10:34**

**Matrix: Water**

**Date Received: 08/04/22 10:30**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015 Diesel LL (EAL) and Motor Oil		1	22DSH019W	SDees		08/13/22 07:05

**Client Sample ID: (331-261-TP008) KAAMILO WELLS**

**Lab Sample ID: 380-14579-8**

**Date Collected: 08/03/22 10:34**

**Matrix: Water**

**Date Received: 08/04/22 10:30**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015 Jet Fuel 5 (JP5)		1	22DSH019W	SDees		08/13/22 07:24

**Client Sample ID: (331-261-TP008) KAAMILO WELLS**

**Lab Sample ID: 380-14579-9**

**Date Collected: 08/03/22 10:34**

**Matrix: Water**

**Date Received: 08/04/22 10:30**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015 Jet Fuel 8 (JP8)		1	22DSH019W	SDees		08/13/22 07:42

**Client Sample ID: TB:(331-261-TP008) KAAMILO WELLS**

**Lab Sample ID: 380-14579-10**

**Date Collected: 08/03/22 10:34**

**Matrix: Water**

**Date Received: 08/04/22 10:30**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	22VG39H03	SCerva		08/09/22 21:59

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

### Laboratory References:

- = Physis Environmental Laboratories, 1904 Wright Circle, Anaheim, CA 92806
- EA MON = Eurofins Eaton Monrovia, 750 Royal Oaks Drive, Suite 100, Monrovia, CA 91016, TEL (626)386-1100
- EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494



# Accreditation/Certification Summary

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

Job ID: 380-14579-1

## Laboratory: Eurofins Eaton Monrovia

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

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

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

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

# Accreditation/Certification Summary

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

Job ID: 380-14579-1

## Laboratory: Eurofins Eaton Monrovia (Continued)

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

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

## Laboratory: Eurofins Calscience

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

Authority	Program	Identification Number	Expiration Date
California	Los Angeles County Sanitation Districts	10109	09-30-22
California	SCAQMD LAP	17LA0919	12-01-22
California	State	3082	10-11-22
Nevada	State	CA00111	08-01-23
Oregon	NELAP	4175	02-02-23
USDA	US Federal Programs	P330-20-00034	02-10-23
Washington	State	C916-18	10-12-22

# Method Summary

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

Job ID: 380-14579-1

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

## Protocol References:

EPA = US Environmental Protection Agency

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

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

None = None

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

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

## Laboratory References:

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

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

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

# Sample Summary

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

Job ID: 380-14579-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-14579-1	(331-261-TP008) KAAMILO WELLS	Water	08/03/22 10:34	08/04/22 10:30
380-14579-2	(331-261-TP008) KAAMILO WELLS	Water	08/03/22 10:34	08/04/22 10:30
380-14579-5	(331-261-TP008) KAAMILO WELLS	Water	08/03/22 10:34	08/04/22 10:30
380-14579-6	(331-261-TP008) KAAMILO WELLS	Water	08/03/22 10:34	08/04/22 10:30
380-14579-7	(331-261-TP008) KAAMILO WELLS	Water	08/03/22 10:34	08/04/22 10:30
380-14579-8	(331-261-TP008) KAAMILO WELLS	Water	08/03/22 10:34	08/04/22 10:30
380-14579-9	(331-261-TP008) KAAMILO WELLS	Water	08/03/22 10:34	08/04/22 10:30
380-14579-10	TB:(331-261-TP008) KAAMILO WELLS	Water	08/03/22 10:34	08/04/22 10:30

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

Date: 09-27-2022  
 EMAX Batch No.: 22H080

Attn: Jackie Contreras

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

Subject: Laboratory Report  
 Project: 380-14579

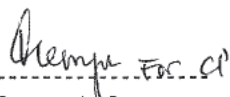
-----  
 Enclosed is the Laboratory report for samples received on 08/05/22.  
 The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
380-14579-5	H080-01	08/03/22	WATER	ETHANOL
380-14579-6	H080-02	08/03/22	WATER	TPH GASOLINE
380-14579-7	H080-03	08/03/22	WATER	TPH DIESEL & MOTOR OIL
380-14579-8	H080-04	08/03/22	WATER	TPH JP-5 TPH JP-8
380-14579-9	H080-05	08/03/22	WATER	TPH JP-5 TPH JP-8
380-14579-10	H080-06	08/03/22	WATER	TPH GASOLINE
380-14579-5MS	H080-01M	08/03/22	WATER	ETHANOL
380-14579-5MSD	H080-01S	08/03/22	WATER	ETHANOL
380-14579-6MS	H080-02M	08/03/22	WATER	TPH GASOLINE
380-14579-6MSD	H080-02S	08/03/22	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 CA002912022-22  
 ANAB Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing  
 California ELAP Accredited Certificate Number 2672

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

22H080

Chain of Custody Record



eurolfins  
 Environment Testing  
 America

**Client Information (Sub Contract Lab)**

Client Contact: EMAX Laboratories Inc  
 Shipping/Receiving: EMAX Laboratories Inc  
 Address: 3051 Fujita Street  
 City: Torrance  
 State, Zip: CA, 90505  
 Phone: [Blank]  
 Email: [Blank]  
 Project Name: RED-HILL  
 Project #: 38001111  
 Site: Honolulu BWS Sites

Sampler: Frank, Debbie L  
 E-Mail: Debbie.Frank@eurolfins.com  
 State of Origin: Hawaii

Due Date Requested: 8/18/2022  
 TAT Requested (day/s): [Blank]

Analysis Requested

Field Filtered Sample (Yes or No)   
 Perform MS/MSU (Yes or No)   
 SUB (8015 Ethanol)/ 8015 Ethanol  
 SUB (8015 Gas (Purgeable) LL (EAL))/ 8015 Gas (Purgeable) LL (EAL)  
 SUB (8015 Diesel LL (EAL) and Motor Oil)/ 8015 Diesel LL (EAL) and Motor Oil  
 SUB (8015 Jet Fuel 5 (JP5))/ 8015 Jet Fuel 5 (JP5)

Carrier Tracking Note: [Blank]

Job #: 390-14579-1  
 Page: 1 of 1  
 Preservation Codes:  
 A - HCL  
 B - NaOH  
 C - Zn Acetate  
 D - Nitric Acid  
 E - NaHSO4  
 F - MeOH  
 G - Amchlor  
 H - Ascorbic Acid  
 I - Ice  
 J - DI Water  
 K - EDTA  
 L - EDA  
 M - Hexane  
 N - None  
 O - As2O3  
 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 Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (O=comp, G=grab)	Matrix (W=water, S=soil, O=water/vol, BT=issue, Ash)	Field Filtered Sample (Yes or No)	Perform MS/MSU (Yes or No)	SUB (8015 Ethanol)/ 8015 Ethanol	SUB (8015 Gas (Purgeable) LL (EAL))/ 8015 Gas (Purgeable) LL (EAL)	SUB (8015 Diesel LL (EAL) and Motor Oil)/ 8015 Diesel LL (EAL) and Motor Oil	SUB (8015 Jet Fuel 5 (JP5))/ 8015 Jet Fuel 5 (JP5)	Total Number of Containers	Special Instructions/Note:
1 (331-261-T-P008) KAAMILLO WELLS (380-14579-5)	8/3/22	10:34	Hawaiian	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	X				4	See Attached Instructions
2 (331-261-T-P008) KAAMILLO WELLS (380-14579-6)	8/3/22	10:34	Hawaiian	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	X				4	See Attached Instructions
3 (331-261-T-P008) KAAMILLO WELLS (380-14579-7)	8/3/22	10:34	Hawaiian	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		X			2	See Attached Instructions
4 (331-261-T-P008) KAAMILLO WELLS (380-14579-8)	8/3/22	10:34	Hawaiian	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			X		2	See Attached Instructions
5 (331-261-T-P008) KAAMILLO WELLS (380-14579-9)	8/3/22	10:34	Hawaiian	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			X		2	See Attached Instructions
6 TB:(331-261-T-P008) KAAMILLO WELLS (380-14579-10)	8/3/22	10:34	Hawaiian	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	X				2	See Attached Instructions

Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyze & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to Eurofins Eaton Analytical, LLC.

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

Empty Kit Relinquished by: [Blank] Date: [Blank] Time: [Blank] Method of Shipment: [Blank]

Relinquished by: [Signature] Date/Time: 8-5-22 16:10 Company: EMAX  
 Received by: [Signature] Date/Time: 8/5/22 16:10 Company: EMAX

Custody Seals Intact: [Blank] Custody Seal No.: [Blank]  
 REPORT ID: 22H080  
 Cooler Temperature(s) °C and Other Remarks: [Blank]





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

Type of Delivery <input type="checkbox"/> Fedex <input type="checkbox"/> UPS <input type="checkbox"/> GSO <input type="checkbox"/> Others <input checked="" type="checkbox"/> EMAX Courier <input checked="" type="checkbox"/> Client Delivery	Airbill / Tracking Number	ECN <u>22H 080</u> Recipient <u>Maria Rivera</u> Date <u>08/05/22</u> Time <u>16:10</u>
--	---------------------------	---

**COC INSPECTION**

<input checked="" type="checkbox"/> Client Name	<input checked="" type="checkbox"/> Client PM/FC	<input type="checkbox"/> Sampler Name	<input checked="" type="checkbox"/> Sampling Date/Time	<input checked="" type="checkbox"/> Sample ID	<input checked="" type="checkbox"/> Matrix
<input checked="" type="checkbox"/> Address	<input checked="" type="checkbox"/> Tel # / Fax #	<input type="checkbox"/> Courier Signature	<input checked="" type="checkbox"/> Analysis Required	<input type="checkbox"/> Preservative (if any)	<input checked="" type="checkbox"/> TAT
Safety Issues (if any) Note: _____	<input type="checkbox"/> High concentrations expected	<input type="checkbox"/> From Superfund Site	<input type="checkbox"/> Rad screening required		

**PACKAGING INSPECTION**

Container	<input checked="" type="checkbox"/> Cooler	<input type="checkbox"/> Box	<input type="checkbox"/> Other
Condition	<input checked="" type="checkbox"/> Custody Seal	<input type="checkbox"/> Intact	<input type="checkbox"/> Damaged
Packaging	<input checked="" type="checkbox"/> Bubble Pack	<input type="checkbox"/> Styrofoam	<input type="checkbox"/> Popcorn
Temperatures (Cool, ≤5 °C but not frozen)	<input checked="" type="checkbox"/> Cooler 1 <u>1.9</u> °C	<input type="checkbox"/> Cooler 2 _____ °C	<input type="checkbox"/> Cooler 3 _____ °C
Thermometer:	<input type="checkbox"/> Cooler 6 _____ °C	<input type="checkbox"/> Cooler 7 _____ °C	<input type="checkbox"/> Cooler 8 _____ °C
	<input type="checkbox"/> Cooler 9 _____ °C	<input type="checkbox"/> Cooler 10 _____ °C	
	A - S/N _____	B - S/N <u>210760237</u>	C - S/N _____
			D - S/N <u>210760272</u>

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

**DISCREPANCIES**

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
<u>6</u>	<u>15</u>	<u>D22</u>	<u>2nd Date reads 7/20/22</u>	<u>R1</u>
<i>[Large handwritten scribble]</i>				

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

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

- LEGEND:**
- |  |  |   |
|--|--|---|
| <p><b>Code Description-Sample Management</b></p> <ul style="list-style-type: none"> <li>D1 Analysis is not indicated in _____</li> <li>D2 Analysis mismatch COC vs label</li> <li>D3 Sample ID mismatch COC vs label</li> <li>D4 Sample ID is not indicated in _____</li> <li>D5 Container -[improper] [leaking] [broken]</li> <li>D6 Date/Time is not indicated in _____</li> <li>D7 Date/Time mismatch COC vs label</li> <li>D8 Sample listed in COC is not received</li> <li>D9 Sample received is not listed in COC</li> <li>D10 No initial/date on corrections in COC/label</li> <li>D11 Container count mismatch COC vs received</li> <li>D12 Container size mismatch COC vs received</li> </ul> | <p><b>Code Description-Sample Management</b></p> <ul style="list-style-type: none"> <li>D13 Out of Holding Time</li> <li>D14 Bubble is &gt;6mm</li> <li>D15 No trip blank in cooler</li> <li>D16 Preservation not indicated in _____</li> <li>D17 Preservation mismatch COC vs label</li> <li>D18 Insufficient chemical preservative</li> <li>D19 Insufficient Sample</li> <li>D20 No filtration info for dissolved analysis</li> <li>D21 No sample for moisture determination</li> <li><u>D22 2nd date on label is incorrect</u></li> <li>D23 _____</li> <li>D24 _____</li> </ul> | <p><input type="checkbox"/> Continue to next page.</p> <p><b>Code Description-Sample Management</b></p> <ul style="list-style-type: none"> <li>R1 Proceed as indicated in <input checked="" type="checkbox"/> COC <input type="checkbox"/> Label</li> <li>R2 Refer to attached instruction</li> <li>R3 Cancel the analysis</li> <li>R4 Use vial with smallest bubble first</li> <li>R5 Log-in with latest sampling date and time+1 min</li> <li>R6 Adjust pH as necessary</li> <li>R7 Filter and preserved as necessary</li> <li>R8 _____</li> <li>R9 _____</li> <li>R10 _____</li> <li>R11 _____</li> <li>R12 _____</li> </ul> |
|--|--|---|

REVIEWS:

Sample Labeling <u>Maria Rivera</u>	SRF <u>[Signature]</u>
Date <u>08/05/22</u>	Date <u>8/5/22</u>

REPORT ID: 22H080

PM PB  
 Date 8/11/22  
 Page 3 of 43  
 10/20/2022

## 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

380-14579

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

SDG#: 22H080



CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-14579

SDG : 22H080

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

A total of two(2) water samples were received on 08/05/22 to be analyzed for Total Petroleum Hydrocarbons by Purge and Trap in accordance with Method 5030B/8015B and project specific requirements.

Holding Time

Samples were analyzed within the prescribed holding time.

Calibration

Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details. MRL was analyzed as required by the project. Refer to MRL summary form for details.

Method Blank

Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. VG39H03B - 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. VG39H03L/VG39H03C 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 H080-02M/H080-02S. 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: 08/03/22 10:34
Project     : 380-14579                 Date Received: 08/05/22
Batch No.   : 22H080                   Date Extracted: 08/09/22 20:11
Sample ID   : 380-14579-6              Date Analyzed: 08/09/22 20:11
Lab Samp ID: H080-02                   Dilution Factor: 1
Lab File ID: EH09016A                 Matrix: WATER
Ext Btch ID: 22VG39H03                % Moisture: NA
Calib. Ref.: EH09015A                 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	0.0367	0.0400	92	60-140

Notes:

Parameter H-C Range  
Gasoline C6-C10  
Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.  
Sample Amount : 5ml Final Volume : 5ml  
Prepared by : SCerva Analyzed by : SCerva



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# QC SUMMARIES

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

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 08/09/22 13:32
Project    : 380-14579                   Date Received: 08/09/22
Batch No.  : 22H080                       Date Extracted: 08/09/22 13:32
Sample ID  : MBLK1W                        Date Analyzed: 08/09/22 13:32
Lab Samp ID: VG39H03B                     Dilution Factor: 1
Lab File ID: EH09005A                     Matrix: WATER
Ext Btch ID: 22VG39H03                    % Moisture: NA
Calib. Ref.: EH09004A                    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	0.0355	0.0400	89	60-140

Notes:

Parameter H-C Range  
Gasoline C6-C10  
Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.  
Sample Amount : 5ml Final Volume : 5ml  
Prepared by : SCerva Analyzed by : SCerva



EMAX QUALITY CONTROL DATA  
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL  
PROJECT : 380-14579  
BATCH NO. : 22H080  
METHOD : 5030B/8015B

MATRIX : WATER		% MOISTURE:NA
DILUTION FACTOR: 1	1	1
SAMPLE ID : MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID : VG39H03B	VG39H03L	VG39H03C
LAB FILE ID : EH09005A	EH09006A	EH09007A
DATE PREPARED : 08/09/22 13:32	08/09/22 14:08	08/09/22 14:44
DATE ANALYZED : 08/09/22 13:32	08/09/22 14:08	08/09/22 14:44
PREP BATCH : 22VG39H03	22VG39H03	22VG39H03
CALIBRATION REF: EH09004A	EH09004A	EH09004A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Gasoline	ND	0.500	0.442	88	0.500	0.454	91	3	60-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0441	110	0.0400	0.0453	113	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 : 380-14579  
BATCH NO. : 22H080  
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE :NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: 380-14579-6	380-14579-6MS	380-14579-6MSD
LAB SAMPLE ID	: H080-02	H080-02M	H080-02S
LAB FILE ID	: EH09016A	EH09017A	EH09018A
DATE PREPARED	: 08/09/22 20:11	08/09/22 20:47	08/09/22 21:23
DATE ANALYZED	: 08/09/22 20:11	08/09/22 20:47	08/09/22 21:23
PREP BATCH	: 22VG39H03	22VG39H03	22VG39H03
CALIBRATION REF:	EH09015A	EH09015A	EH09015A

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Gasoline	ND	0.500	0.477	95	0.500	0.463	93	3	50-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0476	119	0.0400	0.0474	119	60-140

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

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-14579

METHOD 3520C/8015B  
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 22H080



CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-14579

SDG : 22H080

METHOD 3520C/8015B  
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 08/05/22 to be analyzed for Total Petroleum Hydrocarbons by Extraction in accordance with Method 3520C/8015B and project specific requirements.

Holding Time

The sample was analyzed within the prescribed holding time.

Calibration

Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details. MRL was analyzed as required by the project. Refer to MRL summary form for details.

Method Blank

Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. DSH019WB - 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. DSH019WL/DSH019WC 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: 380-14579

SDG : 22H080

METHOD 3520C/8015B  
PETROLEUM HYDROCARBONS BY EXTRACTION

A total of two(2) water samples were received on 08/05/22 to be analyzed for Petroleum Hydrocarbons by Extraction in accordance with Method 3520C/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. DSH019WB - 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. J5H019WL/J5H019WC 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

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.

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-14579

SDG : 22H080

METHOD 3520C/8015B  
PETROLEUM HYDROCARBONS BY EXTRACTION

A total of two(2) water samples were received on 08/05/22 to be analyzed for Petroleum Hydrocarbons by Extraction in accordance with Method 3520C/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. DSH019WB - 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. J8H019WL/J8H019WC 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

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



LAB CHRONICLE  
PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL
Project     : 380-14579
SDG NO.    : 22H080
Instrument ID : D5
=====
  
```

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
									WATER
MBLK1W	DSH019WB	1	NA	08/13/2204:57	08/11/2213:30	LH12044A	LH12039A	22DSH019W	Method Blank
LCS1W	J5H019WL	1	NA	08/13/2205:52	08/11/2213:30	LH12047A	LH12039A	22DSH019W	Lab Control Sample (LCS)
LCD1W	J5H019WC	1	NA	08/13/2206:10	08/11/2213:30	LH12048A	LH12039A	22DSH019W	LCS Duplicate
380-14579-8	H080-04	1	NA	08/13/2207:24	08/11/2213:30	LH12052A	LH12039A	22DSH019W	Field Sample
380-14579-9	H080-05	1	NA	08/13/2207:42	08/11/2213:30	LH12053A	LH12039A	22DSH019W	Field Sample

FN - Filename  
% Moist - Percent Moisture







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# SAMPLE RESULTS



METHOD 3520C/8015B  
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 08/03/22 10:34
Project    : 380-14579                   Date Received: 08/05/22
Batch No.  : 22H080                       Date Extracted: 08/11/22 13:30
Sample ID  : 380-14579-8                 Date Analyzed: 08/13/22 07:24
Lab Samp ID: 22H080-04                   Dilution Factor: 1
Lab File ID: LH12052A                     Matrix: WATER
Ext Btch ID: 22DSH019W                   % Moisture: NA
Calib. Ref.: LH12039A                    Instrument ID: D5
=====
    
```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
JP5	ND	0.048	0.024	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.310	0.475	65	60-130
Hexacosane	0.0992	0.119	84	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 : 1050ml                      Final Volume : 5ml  
 Prepared by : DLi                              Analyzed by : SDeeso

METHOD 3520C/8015B  
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 08/03/22 10:34
Project     : 380-14579                 Date Received: 08/05/22
Batch No.   : 22H080                   Date Extracted: 08/11/22 13:30
Sample ID   : 380-14579-8              Date Analyzed: 08/13/22 07:24
Lab Samp ID: 22H080-04                 Dilution Factor: 1
Lab File ID: LH12052A                  Matrix: WATER
Ext Btch ID: 22DSH019W                 % Moisture: NA
Calib. Ref.: LH12040A                  Instrument ID: D5
=====
  
```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
JP8	ND	0.048	0.024	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.310	0.475	65	60-130
Hexacosane	0.0992	0.119	84	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 : 1050ml Final Volume : 5ml  
 Prepared by : DLi Analyzed by : SDeeso

METHOD 3520C/8015B  
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 08/03/22 10:34
Project    : 380-14579                   Date Received: 08/05/22
Batch No.  : 22H080                       Date Extracted: 08/11/22 13:30
Sample ID  : 380-14579-9                 Date Analyzed: 08/13/22 07:42
Lab Samp ID: 22H080-05                   Dilution Factor: 1
Lab File ID: LH12053A                     Matrix: WATER
Ext Btch ID: 22DSH019W                   % Moisture: NA
Calib. Ref.: LH12039A                     Instrument ID: D5
=====
    
```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
JP5	ND	0.047	0.024	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.290	0.470	62	60-130
Hexacosane	0.0879	0.118	75	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 : 1060mL Final Volume : 5ml  
 Prepared by : DLi Analyzed by : SDeeso

METHOD 3520C/8015B  
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 08/03/22 10:34
Project     : 380-14579                   Date Received: 08/05/22
Batch No.   : 22H080                       Date Extracted: 08/11/22 13:30
Sample ID   : 380-14579-9                 Date Analyzed: 08/13/22 07:42
Lab Samp ID: 22H080-05                     Dilution Factor: 1
Lab File ID: LH12053A                       Matrix: WATER
Ext Btch ID: 22DSH019W                     % Moisture: NA
Calib. Ref.: LH12040A                       Instrument ID: D5
=====
    
```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
JP8	ND	0.047	0.024	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.290	0.470	62	60-130
Hexacosane	0.0879	0.118	75	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 : 1060ml Final Volume : 5ml  
 Prepared by : DLi Analyzed by : SDeeso

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# QC SUMMARIES



METHOD 3520C/8015B  
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 08/11/22 13:30
Project     : 380-14579                   Date Received: 08/11/22
Batch No.   : 22H080                       Date Extracted: 08/11/22 13:30
Sample ID   : MBLK1W                       Date Analyzed: 08/13/22 04:57
Lab Samp ID: DSH019WB                       Dilution Factor: 1
Lab File ID: LH12044A                       Matrix: WATER
Ext Btch ID: 22DSH019W                       % Moisture: NA
Calib. Ref.: LH12038A                       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	0.320	0.500	64	60-130
Hexacosane	0.0974	0.125	78	60-130

Notes:

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

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

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

METHOD 3520C/8015B  
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 08/11/22 13:30
Project    : 380-14579                   Date Received: 08/11/22
Batch No.  : 22H080                       Date Extracted: 08/11/22 13:30
Sample ID  : MBLK1W                       Date Analyzed: 08/13/22 04:57
Lab Samp ID: DSH019WB                     Dilution Factor: 1
Lab File ID: LH12044A                     Matrix: WATER
Ext Btch ID: 22DSH019W                    % Moisture: NA
Calib. Ref.: LH12039A                     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	0.320	0.500	64	60-130
Hexacosane	0.0974	0.125	78	60-130

Notes:

RL : Reporting Limit  
 Parameter H-C Range  
 JP5 C8-C18  
 Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.  
 Sample Amount : 1000ml Final Volume : 5ml  
 Prepared by : DLi Analyzed by : SDeeso

METHOD 3520C/8015B  
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 08/11/22 13:30
Project     : 380-14579                 Date Received: 08/11/22
Batch No.   : 22H080                   Date Extracted: 08/11/22 13:30
Sample ID   : MBLK1W                   Date Analyzed: 08/13/22 04:57
Lab Samp ID: DSH019WB                 Dilution Factor: 1
Lab File ID: LH12044A                 Matrix: WATER
Ext Btch ID: 22DSH019W                % Moisture: NA
Calib. Ref.: LH12040A                 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	0.320	0.500	64	60-130
Hexacosane	0.0974	0.125	78	60-130

Notes:

RL : Reporting Limit  
 Parameter H-C Range  
 JP8 C8-C18  
 Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.  
 Sample Amount : 1000mL Final Volume : 5ml  
 Prepared by : DLi Analyzed by : SDeeso

EMAX QUALITY CONTROL DATA  
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL  
PROJECT : 380-14579  
BATCH NO. : 22H080  
METHOD : 3520C/8015B

MATRIX : WATER % MOISTURE:NA  
DILUTION FACTOR: 1 1  
SAMPLE ID : MBLK1W LCS1W LCD1W  
LAB SAMPLE ID : DSH019WB DSH019WL DSH019WC  
LAB FILE ID : LH12044A LH12045A LH12046A  
DATE PREPARED : 08/11/22 13:30 08/11/22 13:30 08/11/22 13:30  
DATE ANALYZED : 08/13/22 04:57 08/13/22 05:15 08/13/22 05:33  
PREP BATCH : 22DSH019W 22DSH019W 22DSH019W  
CALIBRATION REF: LH12038A LH12038A LH12038A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Diesel	ND	2.50	2.51	100	2.50	2.41	96	4	50-130	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromobenzene	0.500	0.399	80	0.500	0.359	72	60-130
Hexacosane	0.125	0.118	94	0.125	0.130	104	60-130

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

EMAX QUALITY CONTROL DATA  
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL  
PROJECT : 380-14579  
BATCH NO. : 22H080  
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	: DSH019WB	J5H019WL	J5H019WC
LAB FILE ID	: LH12044A	LH12047A	LH12048A
DATE PREPARED	: 08/11/22 13:30	08/11/22 13:30	08/11/22 13:30
DATE ANALYZED	: 08/13/22 04:57	08/13/22 05:52	08/13/22 06:10
PREP BATCH	: 22DSH019W	22DSH019W	22DSH019W
CALIBRATION REF:	LH12039A	LH12039A	LH12039A

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	2.94	118	2.50	2.87	115	2	30-160	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromobenzene	0.500	0.419	84	0.500	0.392	78	60-130
Hexacosane	0.125	0.107	86	0.125	0.113	90	60-130

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

EMAX QUALITY CONTROL DATA  
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL  
PROJECT : 380-14579  
BATCH NO. : 22H080  
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	: DSH019WB	J8H019WL	J8H019WC
LAB FILE ID	: LH12044A	LH12049A	LH12050A
DATE PREPARED	: 08/11/22 13:30	08/11/22 13:30	08/11/22 13:30
DATE ANALYZED	: 08/13/22 04:57	08/13/22 06:29	08/13/22 06:47
PREP BATCH	: 22DSH019W	22DSH019W	22DSH019W
CALIBRATION REF:	LH12040A	LH12040A	LH12040A

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	1.93	77	2.50	2.01	80	4	30-160	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromobenzene	0.500	0.480	96	0.500	0.431	86	60-130
Hexacosane	0.125	0.121	97	0.125	0.104	83	60-130

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

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-14579

METHOD SW8015C  
ALCOHOLS BY GC

SDG#: 22H080

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CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-14579

SDG : 22H080

METHOD SW8015C  
ALCOHOLS BY GC

One(1) water sample was received on 08/05/22 to be analyzed for Alcohols by GC in accordance with Method SW8015C and project specific requirements.

Holding Time

The sample was analyzed within the prescribed holding time.

Calibration

Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details. MRL was analyzed as required by the project. Refer to MRL summary form for details.

Method Blank

Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. MEH001WB - 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. MEH001WL/MEH001WC 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 H080-01M/H080-01S. Refer to Matrix QC summary form for details.

Sample Analysis

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





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# SAMPLE RESULTS

METHOD SW8015C  
ALCOHOLS BY GC

```

=====
Client      : EUROFINS EATON ANALYTICAL      Date Collected: 08/03/22
Project     : 380-14579                      Date Received: 08/05/22
Batch No.   : 22H080                         Date Extracted: NA
Sample ID   : 380-14579-5                   Date Analyzed: 08/05/22 18:46
Lab Samp ID: H080-01                         Dilution Factor: 1
Lab File ID: TH05007A                       Matrix          : WATER
Ext Btch ID: MEH001W                        % Moisture      : NA
Calib. Ref.: TH05002A                       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     : 380-14579                      Date Received: NA
Batch No.   : 22H080                         Date Extracted: NA
Sample ID   : MBLK1W                         Date Analyzed: 08/05/22 18:04
Lab Samp ID: MEH001WB                       Dilution Factor: 1
Lab File ID: TH05004A                       Matrix          : WATER
Ext Btch ID: MEH001W                        % Moisture      : NA
Calib. Ref.: TH05002A                       Instrument ID   : GCT050
=====
```

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

RL : Reporting Limit

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EMAX QUALITY CONTROL DATA  
LCS/LCD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL  
PROJECT: 380-14579  
BATCH NO.: 22H080  
METHOD: METHOD SW8015C

=====

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	MEH001WB	MEH001WL	MEH001WC		
LAB FILE ID:	TH05004A	TH05005A	TH05006A		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	08/05/2218:04	08/05/2218:19	08/05/2218:33	DATE RECEIVED:	NA
PREP. BATCH:	MEH001W	MEH001W	MEH001W		
CALIB. REF:	TH05002A	TH05002A	TH05002A		

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	9710	97	10000	11000	110	12	60-130	30

EMAX QUALITY CONTROL DATA  
MS/MSD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL  
PROJECT: 380-14579  
BATCH NO.: 22H080  
METHOD: METHOD SW8015C

=====

MATRIX: WATER % MOISTURE: NA  
DILUTION FACTOR: 1 1 1  
SAMPLE ID: 380-14579-5  
LAB SAMP ID: H080-01 H080-01M H080-01S  
LAB FILE ID: TH05007A TH05008A TH05009A  
DATE EXTRACTED: NA NA NA DATE COLLECTED: 08/03/22  
DATE ANALYZED: 08/05/2218:46 08/05/2219:00 08/05/2219:14 DATE RECEIVED: 08/05/22  
PREP. BATCH: MEH001W MEH001W MEH001W  
CALIB. REF: TH05002A TH05002A TH05002A

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	9460	95	10000	9310	93	2	60-130	30

September 08, 2022

Debbie Frank  
 Eurofins Eaton Analytical  
 750 Royal Oaks Drive  
 Suite 100  
 Monrovia, CA 91016-

Project Name: RED-HILL Project # 38001111 Job # 380-14579-1  
 Physis Project ID: 1407003-267

Dear Debbie,


Enclosed are the analytical results for the sample submitted to PHYSIS Environmental Laboratories, Inc. (PHYSIS) on 8/5/2022. A total of 1 sample was received for analysis in accordance with the attached chain of custody (COC). Per the COC, the sample was analyzed for:

Organics
Polynuclear Aromatic Hydrocarbons by EPA 625.1
Disalicylidenepropanediamine by EPA 625.1
Dibenzo [a,l] Pyrene w/ PAHs by EPA 625.1
Base/Neutral Extractable Compounds by EPA 625.1
Acid Extractable Compounds w/ PAHs by EPA 625.1
6-tert-Butyl-2,4-dimethylphenol by EPA 625.1
2,6-Di-tert-butylphenol by EPA 625.1
2,6-Di-tert-butyl-4-methylphenol by EPA 625.1
p-tert-Butylphenol by EPA 625.1

Analytical results in this report apply only to samples submitted to PHYSIS in accordance with the COC and are intended to be considered in their entirety.

Please feel free to contact me at any time with any questions. PHYSIS appreciates the opportunity to provide you with our analytical and support services.

Regards,

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



## PROJECT SAMPLE LIST

Eurofins Eaton Analytical

PHYSIS Project ID: 1407003-267

RED-HILL Project # 38001111 Job # 380-14579-1

Total Samples: 1

PHYSIS ID	Sample ID	Description	Date	Time	Matrix	Sample Type
98929	KAAMILO WELLS	331-261-TP008 (380-14579-2)	8/3/2022	10:34	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 MS<sub>1</sub>/MS<sub>2</sub>, BS<sub>1</sub>/BS<sub>2</sub>, LCS<sub>1</sub>/LCS<sub>2</sub>, LCM<sub>1</sub>/LCM<sub>2</sub>, CRM<sub>1</sub>/CRM<sub>2</sub>, surrogate spikes and/or replicate project sample analysis (R<sub>1</sub>/R<sub>2</sub>) 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

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## CASE NARRATIVE

### QUALIFIER NOTES

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

#### **ND**

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

# ANALYTICALS

# REPORT

TERRA AURA  
ENVIRONMENTAL LABORATORIES, INC.

*Innovative Solutions for Nature*

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## Acid Extractable Compounds

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
<b>Sample ID: 98929-R1</b>	<b>KAAMILO WELLS 331-261-TP008 (3 Matrix: Samplewater)</b>						<b>Sampled: 03-Aug-22 10:34</b>		<b>Received:</b>	<b>05-Aug-22</b>	
(2,4,6-Tribromophenol)	EPA 625.1	% Recovery	95	1			Total		O-38096	05-Aug-22	01-Sep-22
(d5-Phenol)	EPA 625.1	% Recovery	55	1			Total		O-38096	05-Aug-22	01-Sep-22
2,4,5-Trichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38096	05-Aug-22	01-Sep-22
2,4,6-Trichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38096	05-Aug-22	01-Sep-22
2,4-Dichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38096	05-Aug-22	01-Sep-22
2,4-Dinitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-38096	05-Aug-22	01-Sep-22
2,6-Dichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38096	05-Aug-22	01-Sep-22
2,6-Di-tert-butyl-4-methylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38096	05-Aug-22	01-Sep-22
2,6-Di-tert-butylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38096	05-Aug-22	01-Sep-22
2-Chlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38096	05-Aug-22	01-Sep-22
2-Methyl-4,6-dinitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-38096	05-Aug-22	01-Sep-22
2-Methylphenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-38096	05-Aug-22	01-Sep-22
2-Nitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-38096	05-Aug-22	01-Sep-22
3+4-Methylphenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-38096	05-Aug-22	01-Sep-22
4-Chloro-3-methylphenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-38096	05-Aug-22	01-Sep-22
4-Nitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-38096	05-Aug-22	01-Sep-22
6-tert-butyl-2,4-dimethylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38096	05-Aug-22	01-Sep-22
Benzoic Acid	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-38096	05-Aug-22	01-Sep-22
Benzyl Alcohol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-38096	05-Aug-22	01-Sep-22
Pentachlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38096	05-Aug-22	01-Sep-22
Phenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-38096	05-Aug-22	01-Sep-22
p-tert-Butylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38096	05-Aug-22	01-Sep-22



## Base/Neutral Extractable Compounds

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
<b>Sample ID: 98929-R1</b>	<b>KAAMILO WELLS 331-261-TP008 (3 Matrix: Samplewater)</b>						<b>Sampled: 03-Aug-22 10:34</b>		<b>Received:</b>	<b>05-Aug-22</b>	
2-Chloronaphthalene	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38096	05-Aug-22	01-Sep-22
2-Nitroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38096	05-Aug-22	01-Sep-22
3-Nitroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38096	05-Aug-22	01-Sep-22
4-Bromophenylphenyl ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38096	05-Aug-22	01-Sep-22
4-Chloroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38096	05-Aug-22	01-Sep-22
4-Chlorophenylphenyl ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38096	05-Aug-22	01-Sep-22
4-Nitroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38096	05-Aug-22	01-Sep-22
Aniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38096	05-Aug-22	01-Sep-22
Benzidine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38096	05-Aug-22	01-Sep-22
Bis(2-Chloroethoxy) methane	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38096	05-Aug-22	01-Sep-22
Bis(2-Chloroethyl) ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38096	05-Aug-22	01-Sep-22
Bis(2-Chloroisopropyl) ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38096	05-Aug-22	01-Sep-22
D benzofuran	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38096	05-Aug-22	01-Sep-22
Disalicylidenepropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38096	05-Aug-22	01-Sep-22
Hexachloroethane	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38096	05-Aug-22	01-Sep-22
Nitrobenzene	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38096	05-Aug-22	01-Sep-22
N-Nitrosodi-n-propylamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38096	05-Aug-22	01-Sep-22
N-Nitrosodiphenylamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38096	05-Aug-22	01-Sep-22

## Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
<b>Sample ID: 98929-R1</b>	<b>KAAMILO WELLS 331-261-TP008 (3 Matrix: Samplewater)</b>						<b>Sampled: 03-Aug-22 10:34</b>		<b>Received:</b>	<b>05-Aug-22</b>	
(d10-Acenaphthene)	EPA 625.1	% Recovery	57	1			Total		O-38096	05-Aug-22	01-Sep-22
(d10-Phenanthrene)	EPA 625.1	% Recovery	61	1			Total		O-38096	05-Aug-22	01-Sep-22
(d12-Chrysene)	EPA 625.1	% Recovery	70	1			Total		O-38096	05-Aug-22	01-Sep-22
(d12-Perylene)	EPA 625.1	% Recovery	64	1			Total		O-38096	05-Aug-22	01-Sep-22
(d8-Naphthalene)	EPA 625.1	% Recovery	47	1			Total		O-38096	05-Aug-22	01-Sep-22
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38096	05-Aug-22	01-Sep-22
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38096	05-Aug-22	01-Sep-22
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38096	05-Aug-22	01-Sep-22
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38096	05-Aug-22	01-Sep-22
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38096	05-Aug-22	01-Sep-22
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38096	05-Aug-22	01-Sep-22
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38096	05-Aug-22	01-Sep-22
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38096	05-Aug-22	01-Sep-22
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38096	05-Aug-22	01-Sep-22
Benzo[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38096	05-Aug-22	01-Sep-22
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38096	05-Aug-22	01-Sep-22
Benzo[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38096	05-Aug-22	01-Sep-22
Benzo[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38096	05-Aug-22	01-Sep-22
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38096	05-Aug-22	01-Sep-22
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38096	05-Aug-22	01-Sep-22
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38096	05-Aug-22	01-Sep-22
D benz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38096	05-Aug-22	01-Sep-22
D benzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38096	05-Aug-22	01-Sep-22
D benzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38096	05-Aug-22	01-Sep-22

### Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38096	05-Aug-22	01-Sep-22
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38096	05-Aug-22	01-Sep-22
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38096	05-Aug-22	01-Sep-22
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38096	05-Aug-22	01-Sep-22
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38096	05-Aug-22	01-Sep-22
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38096	05-Aug-22	01-Sep-22
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38096	05-Aug-22	01-Sep-22



# QUALITY CONTROL REPORT

TERRA ENVIRONMENTAL LABORATORIES, INC. AURA

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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	
<b>Sample ID: 98928-B1</b>		<b>QAQC Procedural Blank</b>			<b>Matrix: BlankMatrix</b>		<b>Sampled:</b>		<b>Received:</b>		
Method: EPA 625.1		Batch ID: O-38096		Prepared: 03-Aug-22		Analyzed: 31-Aug-22					
(2,4,6-Tribromophenol)	Total	80	1			% Recovery	100	80	44 - 159%	PASS	
(d5-Phenol)	Total	102	1			% Recovery	100	102	20 - 121%	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
<b>Sample ID: 98928-BS1</b>		<b>QAQC Procedural Blank</b>			<b>Matrix: BlankMatrix</b>			<b>Sampled:</b>		<b>Received:</b>		
Method: EPA 625.1		Batch ID: O-38096			Prepared: 03-Aug-22		Analyzed: 01-Sep-22					
(2,4,6-Tribromophenol)	Total	79	1			% Recovery	100	0	79	44 - 159%	PASS	
(d5-Phenol)	Total	104	1			% Recovery	100	0	104	20 - 121%	PASS	
2,4,5-Trichlorophenol	Total	0.871	1	0.05	0.1	µg/L	1	0	87	57 - 116%	PASS	
2,4,6-Trichlorophenol	Total	0.86	1	0.05	0.1	µg/L	1	0	86	56 - 118%	PASS	
2,4-Dichlorophenol	Total	0.84	1	0.05	0.1	µg/L	1	0	84	51 - 117%	PASS	
2,4-Dinitrophenol	Total	0.561	1	0.1	0.2	µg/L	1	0	56	0 - 152%	PASS	
2,6-Dichlorophenol	Total	0.855	1	0.05	0.1	µg/L	1	0	86	30 - 130%	PASS	
2,6-Di-tert-butyl-4-methylphenol	Total	0.725	1	0.05	0.1	µg/L	1	0	73	50 - 150%	PASS	
2,6-Di-tert-butylphenol	Total	0.773	1	0.05	0.1	µg/L	1	0	77	50 - 150%	PASS	
2-Chlorophenol	Total	0.77	1	0.05	0.1	µg/L	1	0	77	41 - 110%	PASS	
2-Methyl-4,6-dinitrophenol	Total	0.666	1	0.1	0.2	µg/L	1	0	67	0 - 141%	PASS	
2-Methylphenol	Total	0.82	1	0.1	0.2	µg/L	1	0	82	40 - 117%	PASS	
2-Nitrophenol	Total	0.558	1	0.1	0.2	µg/L	1	0	56	40 - 117%	PASS	
3+4-Methylphenol	Total	0.8	1	0.1	0.2	µg/L	1	0	80	0 - 130%	PASS	
4-Chloro-3-methylphenol	Total	0.824	1	0.1	0.2	µg/L	1	0	82	51 - 128%	PASS	
4-Nitrophenol	Total	0.885	1	0.1	0.2	µg/L	1	0	88	10 - 164%	PASS	
6-tert-butyl-2,4-dimethylphenol	Total	0.815	1	0.05	0.1	µg/L	1	0	81	50 - 150%	PASS	
Benzoic Acid	Total	0.541	1	0.1	0.2	µg/L	1	0	54	2 - 145%	PASS	
Benzyl Alcohol	Total	0.784	1	0.1	0.2	µg/L	1	0	78	43 - 148%	PASS	
Pentachlorophenol	Total	0.908	1	0.05	0.1	µg/L	1	0	91	36 - 111%	PASS	
Phenol	Total	0.674	1	0.1	0.2	µg/L	1	0	67	29 - 114%	PASS	
p-tert-Butylphenol	Total	1.03	1	0.05	0.1	µg/L	1	0	103	50 - 150%	PASS	

## Acid Extractable Compounds

## QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY		PRECISION		QA CODEc		
							LEVEL	RESULT	%	LIMITS	%	LIMITS			
<b>Sample ID: 98928-BS2</b>		<b>QAQC Procedural Blank</b>			<b>Matrix: BlankMatrix</b>			<b>Sampled:</b>			<b>Received:</b>				
		Method: EPA 625.1			Batch ID: O-38096			Prepared: 03-Aug-22			Analyzed: 01-Sep-22				
(2,4,6-Tribromophenol)	Total	80	1				% Recovery	100	0	80	44 - 159%	PASS	1	30	PASS
(d5-Phenol)	Total	97	1				% Recovery	100	0	97	20 - 121%	PASS	7	30	PASS
2,4,5-Trichlorophenol	Total	0.883	1	0.05	0.1	µg/L		1	0	88	57 - 116%	PASS	1	30	PASS
2,4,6-Trichlorophenol	Total	0.915	1	0.05	0.1	µg/L		1	0	92	56 - 118%	PASS	7	30	PASS
2,4-Dichlorophenol	Total	0.852	1	0.05	0.1	µg/L		1	0	85	51 - 117%	PASS	1	30	PASS
2,4-Dinitrophenol	Total	0.56	1	0.1	0.2	µg/L		1	0	56	0 - 152%	PASS	0	30	PASS
2,6-Dichlorophenol	Total	0.834	1	0.05	0.1	µg/L		1	0	83	30 - 130%	PASS	4	30	PASS
2,6-Di-tert-butyl-4-methylphenol	Total	0.752	1	0.05	0.1	µg/L		1	0	75	50 - 150%	PASS	4	30	PASS
2,6-Di-tert-butylphenol	Total	0.79	1	0.05	0.1	µg/L		1	0	79	50 - 150%	PASS	3	30	PASS
2-Chlorophenol	Total	0.729	1	0.05	0.1	µg/L		1	0	73	41 - 110%	PASS	5	30	PASS
2-Methyl-4,6-dinitrophenol	Total	0.732	1	0.1	0.2	µg/L		1	0	73	0 - 141%	PASS	9	30	PASS
2-Methylphenol	Total	0.808	1	0.1	0.2	µg/L		1	0	81	40 - 117%	PASS	1	30	PASS
2-Nitrophenol	Total	0.559	1	0.1	0.2	µg/L		1	0	56	40 - 117%	PASS	0	30	PASS
3+4-Methylphenol	Total	0.77	1	0.1	0.2	µg/L		1	0	77	0 - 130%	PASS	4	30	PASS
4-Chloro-3-methylphenol	Total	0.87	1	0.1	0.2	µg/L		1	0	87	51 - 128%	PASS	6	30	PASS
4-Nitrophenol	Total	0.98	1	0.1	0.2	µg/L		1	0	98	10 - 164%	PASS	11	30	PASS
6-tert-butyl-2,4-dimethylphenol	Total	0.856	1	0.05	0.1	µg/L		1	0	86	50 - 150%	PASS	5	30	PASS
Benzoic Acid	Total	0.546	1	0.1	0.2	µg/L		1	0	55	2 - 145%	PASS	2	30	PASS
Benzyl Alcohol	Total	0.76	1	0.1	0.2	µg/L		1	0	76	43 - 148%	PASS	3	30	PASS
Pentachlorophenol	Total	1.04	1	0.05	0.1	µg/L		1	0	104	36 - 111%	PASS	13	30	PASS
Phenol	Total	0.648	1	0.1	0.2	µg/L		1	0	65	29 - 114%	PASS	3	30	PASS
p-tert-Butylphenol	Total	1.07	1	0.05	0.1	µg/L		1	0	107	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 CODEc
							LEVEL	RESULT	%	LIMITS	%
<b>Sample ID: 98928-B1</b>		<b>QAQC Procedural Blank</b>			<b>Matrix: BlankMatrix</b>		<b>Sampled:</b>		<b>Received:</b>		
Method: EPA 625.1		Batch ID: O-38096		Prepared: 03-Aug-22		Analyzed: 31-Aug-22					
2-Chloronaphthalene	Total	ND	1	0.05	0.1	µg/L					
2-Nitroaniline	Total	ND	1	0.05	0.1	µg/L					
3-Nitroaniline	Total	ND	1	0.05	0.1	µg/L					
4-Bromophenylphenyl ether	Total	ND	1	0.05	0.1	µg/L					
4-Chloroaniline	Total	ND	1	0.05	0.1	µg/L					
4-Chlorophenylphenyl ether	Total	ND	1	0.05	0.1	µg/L					
4-Nitroaniline	Total	ND	1	0.05	0.1	µg/L					
Aniline	Total	ND	1	0.05	0.1	µg/L					
Benzidine	Total	ND	1	0.05	0.1	µg/L					
Bis(2-Chloroethoxy) methane	Total	ND	1	0.05	0.1	µg/L					
Bis(2-Chloroethyl) ether	Total	ND	1	0.05	0.1	µg/L					
Bis(2-Chloroisopropyl) ether	Total	ND	1	0.05	0.1	µg/L					
Dibenzofuran	Total	ND	1	0.05	0.1	µg/L					
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
<b>Sample ID: 98928-BS1</b>		<b>QAQC Procedural Blank</b>			<b>Matrix: BlankMatrix</b>			<b>Sampled:</b>		<b>Received:</b>		
Method: EPA 625.1		Batch ID: O-38096			Prepared: 03-Aug-22		Analyzed: 01-Sep-22					
2-Chloronaphthalene	Total	0.88	1	0.05	0.1	µg/L	1	0	88	53 - 130%	PASS	
2-Nitroaniline	Total	0.963	1	0.05	0.1	µg/L	1	0	96	69 - 114%	PASS	
3-Nitroaniline	Total	1.16	1	0.05	0.1	µg/L	1	0	116	23 - 137%	PASS	
4-Bromophenylphenyl ether	Total	0.922	1	0.05	0.1	µg/L	1	0	92	61 - 132%	PASS	
4-Chloroaniline	Total	0.839	1	0.05	0.1	µg/L	1	0	84	50 - 150%	PASS	
4-Chlorophenylphenyl ether	Total	0.93	1	0.05	0.1	µg/L	1	0	93	63 - 130%	PASS	
4-Nitroaniline	Total	2.29	1	0.05	0.1	µg/L	2	0	114	10 - 159%	PASS	
Aniline	Total	0.531	1	0.05	0.1	µg/L	0.5	0	106	50 - 150%	PASS	
Benzidine	Total	0.0367	1	0.05	0.1	µg/L	1	0	4	0 - 125%	PASS	
Bis(2-Chloroethoxy) methane	Total	0.903	1	0.05	0.1	µg/L	1	0	90	66 - 122%	PASS	
Bis(2-Chloroethyl) ether	Total	0.667	1	0.05	0.1	µg/L	1	0	67	43 - 127%	PASS	
Bis(2-Chloroisopropyl) ether	Total	1.08	1	0.05	0.1	µg/L	1	0	108	49 - 128%	PASS	
Dibenzofuran	Total	0.899	1	0.05	0.1	µg/L	1	0	90	50 - 150%	PASS	
Disalicylidenepropanediamin	Total	36.8	1	0.05	0.1	µg/L	50	0	74	50 - 150%	PASS	
Hexachloroethane	Total	0.772	1	0.05	0.1	µg/L	1	0	77	27 - 130%	PASS	
Nitrobenzene	Total	0.8	1	0.05	0.1	µg/L	1	0	80	54 - 111%	PASS	
N-Nitrosodi-n-propylamine	Total	0.869	1	0.05	0.1	µg/L	1	0	87	61 - 152%	PASS	
N-Nitrosodiphenylamine	Total	1.01	1	0.05	0.1	µg/L	1	0	101	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		
<b>Sample ID: 98928-BS2</b>		<b>QAQC Procedural Blank</b>				<b>Matrix: BlankMatrix</b>			<b>Sampled:</b>		<b>Received:</b>			
		Method: EPA 625.1				Batch ID: O-38096			Prepared: 03-Aug-22		Analyzed: 01-Sep-22			
2-Chloronaphthalene	Total	0.889	1	0.05	0.1	µg/L	1	0	89	53 - 130%	PASS	1	30	PASS
2-Nitroaniline	Total	1.05	1	0.05	0.1	µg/L	1	0	105	69 - 114%	PASS	9	30	PASS
3-Nitroaniline	Total	1.29	1	0.05	0.1	µg/L	1	0	129	23 - 137%	PASS	11	30	PASS
4-Bromophenylphenyl ether	Total	0.94	1	0.05	0.1	µg/L	1	0	94	61 - 132%	PASS	2	30	PASS
4-Chloroaniline	Total	1.01	1	0.05	0.1	µg/L	1	0	101	50 - 150%	PASS	18	30	PASS
4-Chlorophenylphenyl ether	Total	0.914	1	0.05	0.1	µg/L	1	0	91	63 - 130%	PASS	2	30	PASS
4-Nitroaniline	Total	2.72	1	0.05	0.1	µg/L	2	0	136	10 - 159%	PASS	18	30	PASS
Aniline	Total	0.61	1	0.05	0.1	µg/L	0.5	0	122	50 - 150%	PASS	14	30	PASS
Benzidine	Total	0.0401	1	0.05	0.1	µg/L	1	0	4	0 - 125%	PASS	0	30	PASS
Bis(2-Chloroethoxy) methane	Total	0.884	1	0.05	0.1	µg/L	1	0	88	66 - 122%	PASS	2	30	PASS
Bis(2-Chloroethyl) ether	Total	0.633	1	0.05	0.1	µg/L	1	0	63	43 - 127%	PASS	6	30	PASS
Bis(2-Chloroisopropyl) ether	Total	0.976	1	0.05	0.1	µg/L	1	0	98	49 - 128%	PASS	10	30	PASS
Dibenzofuran	Total	0.891	1	0.05	0.1	µg/L	1	0	89	50 - 150%	PASS	1	30	PASS
Disalicylidenepropanediamin	Total	44.7	1	0.05	0.1	µg/L	50	0	89	50 - 150%	PASS	18	30	PASS
Hexachloroethane	Total	0.715	1	0.05	0.1	µg/L	1	0	71	27 - 130%	PASS	7	30	PASS
Nitrobenzene	Total	0.757	1	0.05	0.1	µg/L	1	0	76	54 - 111%	PASS	5	30	PASS
N-Nitrosodi-n-propylamine	Total	0.853	1	0.05	0.1	µg/L	1	0	85	61 - 152%	PASS	2	30	PASS
N-Nitrosodiphenylamine	Total	1.03	1	0.05	0.1	µg/L	1	0	103	49 - 142%	PASS	2	30	PASS

## Polynuclear Aromatic Hydrocarbons

## QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY	PRECISION	QA CODEc
							LEVEL	RESULT	% LIMITS	% LIMITS	
<b>Sample ID: 98928-B1</b>		<b>QAQC Procedural Blank</b>			<b>Matrix: BlankMatrix</b>		<b>Sampled:</b>		<b>Received:</b>		
	Method: EPA 625.1					Batch ID: O-38096	Prepared: 03-Aug-22	Analyzed: 31-Aug-22			
(d10-Acenaphthene)	Total	93	1			% Recovery	100	93	65 - 113%	PASS	
(d10-Phenanthrene)	Total	93	1			% Recovery	100	93	80 - 111%	PASS	
(d12-Chrysene)	Total	98	1			% Recovery	100	98	60 - 139%	PASS	
(d12-Perylene)	Total	90	1			% Recovery	100	90	36 - 161%	PASS	
(d8-Naphthalene)	Total	86	1			% Recovery	100	86	44 - 119%	PASS	
1-Methylnaphthalene	Total	ND	1	0.001	0.005	µg/L					
1-Methylphenanthrene	Total	ND	1	0.001	0.005	µg/L					
2,3,5-Trimethylnaphthalene	Total	ND	1	0.001	0.005	µg/L					
2,6-Dimethylnaphthalene	Total	ND	1	0.001	0.005	µg/L					
2-Methylnaphthalene	Total	ND	1	0.001	0.005	µg/L					
Acenaphthene	Total	ND	1	0.001	0.005	µg/L					
Acenaphthylene	Total	ND	1	0.001	0.005	µg/L					
Anthracene	Total	ND	1	0.001	0.005	µg/L					
Benz[a]anthracene	Total	ND	1	0.001	0.005	µg/L					
Benzo[a]pyrene	Total	ND	1	0.001	0.005	µg/L					
Benzo[b]fluoranthene	Total	ND	1	0.001	0.005	µg/L					
Benzo[e]pyrene	Total	ND	1	0.001	0.005	µg/L					
Benzo[g,h,i]perylene	Total	ND	1	0.001	0.005	µg/L					
Benzo[k]fluoranthene	Total	ND	1	0.001	0.005	µg/L					
Biphenyl	Total	ND	1	0.001	0.005	µg/L					
Chrysene	Total	ND	1	0.001	0.005	µg/L					
Dibenz[a,h]anthracene	Total	ND	1	0.001	0.005	µg/L					
Dibenzo[a,l]pyrene	Total	ND	1	0.001	0.005	µg/L					

## Polynuclear Aromatic Hydrocarbons

## QUALITY CONTROL REPORT

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



## Polynuclear Aromatic Hydrocarbons

## QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY	PRECISION	QA CODE	
							LEVEL	RESULT	% LIMITS	% LIMITS		
<b>Sample ID: 98928-BS1</b>		<b>QAQC Procedural Blank</b>			<b>Matrix: BlankMatrix</b>			<b>Sampled:</b>		<b>Received:</b>		
Method: EPA 625.1		Batch ID: O-38096			Prepared: 03-Aug-22		Analyzed: 01-Sep-22					
(d10-Acenaphthene)	Total	98	1			% Recovery	100	0	98	65 - 113%	PASS	
(d10-Phenanthrene)	Total	97	1			% Recovery	100	0	97	80 - 111%	PASS	
(d12-Chrysene)	Total	105	1			% Recovery	100	0	105	60 - 139%	PASS	
(d12-Perylene)	Total	99	1			% Recovery	100	0	99	36 - 161%	PASS	
(d8-Naphthalene)	Total	87	1			% Recovery	100	0	87	44 - 119%	PASS	
1-Methylnaphthalene	Total	0.439	1	0.001	0.005	µg/L	0.5	0	88	49 - 117%	PASS	
1-Methylphenanthrene	Total	0.512	1	0.001	0.005	µg/L	0.5	0	102	66 - 127%	PASS	
2,3,5-Trimethylnaphthalene	Total	0.456	1	0.001	0.005	µg/L	0.5	0	91	57 - 120%	PASS	
2,6-Dimethylnaphthalene	Total	0.45	1	0.001	0.005	µg/L	0.5	0	90	54 - 117%	PASS	
2-Methylnaphthalene	Total	1.43	1	0.001	0.005	µg/L	1.5	0	95	47 - 130%	PASS	
Acenaphthene	Total	1.5	1	0.001	0.005	µg/L	1.5	0	100	53 - 131%	PASS	
Acenaphthylene	Total	1.53	1	0.001	0.005	µg/L	1.5	0	102	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	1.4	1	0.001	0.005	µg/L	1.5	0	93	55 - 145%	PASS	
Benzo[a]pyrene	Total	1.31	1	0.001	0.005	µg/L	1.5	0	87	51 - 143%	PASS	
Benzo[b]fluoranthene	Total	1.42	1	0.001	0.005	µg/L	1.5	0	95	46 - 165%	PASS	
Benzo[e]pyrene	Total	0.486	1	0.001	0.005	µg/L	0.5	0	97	42 - 152%	PASS	
Benzo[g,h,i]perylene	Total	1.51	1	0.001	0.005	µg/L	1.5	0	101	63 - 133%	PASS	
Benzo[k]fluoranthene	Total	1.34	1	0.001	0.005	µg/L	1.5	0	89	56 - 145%	PASS	
Biphenyl	Total	0.459	1	0.001	0.005	µg/L	0.5	0	92	56 - 119%	PASS	
Chrysene	Total	1.35	1	0.001	0.005	µg/L	1.5	0	90	56 - 141%	PASS	
Dibenz[a,h]anthracene	Total	1.42	1	0.001	0.005	µg/L	1.5	0	95	55 - 150%	PASS	
Dibenzo[a,l]pyrene	Total	0.485	1	0.001	0.005	µg/L	0.5	0	97	50 - 150%	PASS	

## Polynuclear Aromatic Hydrocarbons

## QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY		PRECISION		QA CODE <sub>c</sub>
							LEVEL	RESULT	%	LIMITS	%	LIMITS	
Dibenzothiophene	Total	0.43	1	0.001	0.005	µg/L	0.5	0	86	75 - 113%	PASS		
Fluoranthene	Total	1.37	1	0.001	0.005	µg/L	1.5	0	91	60 - 146%	PASS		
Fluorene	Total	1.59	1	0.001	0.005	µg/L	1.5	0	106	58 - 131%	PASS		
Indeno[1,2,3-cd]pyrene	Total	1.39	1	0.001	0.005	µg/L	1.5	0	93	50 - 151%	PASS		
Naphthalene	Total	1.33	1	0.001	0.005	µg/L	1.5	0	89	41 - 126%	PASS		
Perylene	Total	0.477	1	0.001	0.005	µg/L	0.5	0	95	48 - 141%	PASS		
Phenanthrene	Total	1.43	1	0.001	0.005	µg/L	1.5	0	95	67 - 127%	PASS		
Pyrene	Total	1.37	1	0.001	0.005	µg/L	1.5	0	91	54 - 156%	PASS		



## Polynuclear Aromatic Hydrocarbons

## QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY		PRECISION		QA CODEc	
							LEVEL	RESULT	%	LIMITS	%	LIMITS		
<b>Sample ID: 98928-BS2</b>		<b>QAQC Procedural Blank</b>			<b>Matrix: BlankMatrix</b>			<b>Sampled:</b>			<b>Received:</b>			
		Method: EPA 625.1			Batch ID: O-38096			Prepared: 03-Aug-22			Analyzed: 01-Sep-22			
(d10-Acenaphthene)	Total	97	1			% Recovery	100	0	97	65 - 113%	PASS	1	30	PASS
(d10-Phenanthrene)	Total	98	1			% Recovery	100	0	98	80 - 111%	PASS	1	30	PASS
(d12-Chrysene)	Total	100	1			% Recovery	100	0	100	60 - 139%	PASS	5	30	PASS
(d12-Perylene)	Total	98	1			% Recovery	100	0	98	36 - 161%	PASS	1	30	PASS
(d8-Naphthalene)	Total	84	1			% Recovery	100	0	84	44 - 119%	PASS	4	30	PASS
1-Methylnaphthalene	Total	0.454	1	0.001	0.005	µg/L	0.5	0	91	49 - 117%	PASS	3	30	PASS
1-Methylphenanthrene	Total	0.518	1	0.001	0.005	µg/L	0.5	0	104	66 - 127%	PASS	2	30	PASS
2,3,5-Trimethylnaphthalene	Total	0.47	1	0.001	0.005	µg/L	0.5	0	94	57 - 120%	PASS	3	30	PASS
2,6-Dimethylnaphthalene	Total	0.471	1	0.001	0.005	µg/L	0.5	0	94	54 - 117%	PASS	4	30	PASS
2-Methylnaphthalene	Total	1.45	1	0.001	0.005	µg/L	1.5	0	97	47 - 130%	PASS	2	30	PASS
Acenaphthene	Total	1.5	1	0.001	0.005	µg/L	1.5	0	100	53 - 131%	PASS	0	30	PASS
Acenaphthylene	Total	1.53	1	0.001	0.005	µg/L	1.5	0	102	43 - 140%	PASS	0	30	PASS
Anthracene	Total	1.4	1	0.001	0.005	µg/L	1.5	0	93	58 - 135%	PASS	0	30	PASS
Benz[a]anthracene	Total	1.38	1	0.001	0.005	µg/L	1.5	0	92	55 - 145%	PASS	1	30	PASS
Benzo[a]pyrene	Total	1.28	1	0.001	0.005	µg/L	1.5	0	85	51 - 143%	PASS	2	30	PASS
Benzo[b]fluoranthene	Total	1.41	1	0.001	0.005	µg/L	1.5	0	94	46 - 165%	PASS	1	30	PASS
Benzo[e]pyrene	Total	0.472	1	0.001	0.005	µg/L	0.5	0	94	42 - 152%	PASS	3	30	PASS
Benzo[g,h,i]perylene	Total	1.5	1	0.001	0.005	µg/L	1.5	0	100	63 - 133%	PASS	1	30	PASS
Benzo[k]fluoranthene	Total	1.33	1	0.001	0.005	µg/L	1.5	0	89	56 - 145%	PASS	0	30	PASS
Biphenyl	Total	0.474	1	0.001	0.005	µg/L	0.5	0	95	56 - 119%	PASS	3	30	PASS
Chrysene	Total	1.34	1	0.001	0.005	µg/L	1.5	0	89	56 - 141%	PASS	1	30	PASS
Dibenz[a,h]anthracene	Total	1.4	1	0.001	0.005	µg/L	1.5	0	93	55 - 150%	PASS	2	30	PASS
Dibenzo[a,l]pyrene	Total	0.521	1	0.001	0.005	µg/L	0.5	0	104	50 - 150%	PASS	7	30	PASS

## Polynuclear Aromatic Hydrocarbons

## QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY		PRECISION		QA CODE <sub>c</sub>	
							LEVEL	RESULT	%	LIMITS	%	LIMITS		
Dibenzothiophene	Total	0.441	1	0.001	0.005	µg/L	0.5	0	88	75 - 113%	PASS	2	30	PASS
Fluoranthene	Total	1.38	1	0.001	0.005	µg/L	1.5	0	92	60 - 146%	PASS	1	30	PASS
Fluorene	Total	1.61	1	0.001	0.005	µg/L	1.5	0	107	58 - 131%	PASS	1	30	PASS
Indeno[1,2,3-cd]pyrene	Total	1.42	1	0.001	0.005	µg/L	1.5	0	95	50 - 151%	PASS	2	30	PASS
Naphthalene	Total	1.29	1	0.001	0.005	µg/L	1.5	0	86	41 - 126%	PASS	3	30	PASS
Perylene	Total	0.479	1	0.001	0.005	µg/L	0.5	0	96	48 - 141%	PASS	1	30	PASS
Phenanthrene	Total	1.44	1	0.001	0.005	µg/L	1.5	0	96	67 - 127%	PASS	1	30	PASS
Pyrene	Total	1.41	1	0.001	0.005	µg/L	1.5	0	94	54 - 156%	PASS	3	30	PASS



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**PHYSIS**

**TENTATIVELY**

**IDENTIFIED COMPOUNDS**

ENVIRONMENTAL LABORATORIES, INC.

*Innovative Solutions for Nature*

Sample ID: 98929

RT	Area Pct	Concentration (ng/L)	Library/ID	Cas Number	Match Qual
32.5294	7.5024	1111	Anthracene-D10-	1517-22-2	97
25.2130	0.9270	137	2,2,4-Trimethyl-1,3-pentanediol diisobutyrate	6846-50-0	94
14.9099	0.8143	121	1,7-Dimethyl-4-(1-methylethyl)cyclodecane	645-10-3	87
12.6124	0.7552	112	Cyclohexane, (1,2-dimethylbutyl)-	61142-37-8	93

Concentration estimated using the response for Anthracene-d10

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Sample ID: Lab Blank Batch O-38096

RT	Area Pct	Concentration (ng/L)	Library/ID	Cas Number	Match Qual
32.5340	7.3408	1111	Anthracene-D10-	1517-22-2	97
			No Compounds Met The Search Criteria		

Concentration estimated using the response for Anthracene-d10

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# PERFORMANCE CHAIN OF CUSTODY

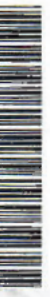
TERRA ENVIRONMENTAL LABORATORIES, INC. AURA

*Innovative Solutions for Nature*

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750 Royal Oaks Drive Suite 100  
 Monrovia, CA 91016  
 Phone: 626-396-1100

Chain of Custody Record



**Client Information (Sub Contract Lab)**  
 Client Contact: \_\_\_\_\_  
 Shipping/Receiving: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_  
 State, Zip: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Email: \_\_\_\_\_  
 Project Name: \_\_\_\_\_  
 Site: \_\_\_\_\_  
 Honolulu BWS Sites

Sampler: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Lab P#: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_  
 Accreditations Required (See note): \_\_\_\_\_  
 State - Hawaii

Date Requested: 8/18/2022  
 TAT Requested (days): \_\_\_\_\_  
 Carrier Tracking No(s): \_\_\_\_\_  
 State of Origin: Hawaii

Analysis Requested  
 SUB (625 Acid LL (EAL) Physis)/ 625 Acid LL (EAL) Physis  
 SUB (625 Base Neutral LL (EAL) Physis)/ 625 Base Neutral LL (EAL) Physis  
 SUB (625 PAH Physis LL (EAL) + TICs)/ 625 PAH Physis LL (EAL) + TICs

Job #: 380-14579-1  
 Page: 1 of 1  
 Preservation Codes:  
 A - HCL  
 B - NaOH  
 C - Zn Acetate  
 D - Nitric Acid  
 E - NaHSO4  
 F - MeOH  
 G - Amchlor  
 H - Ascorbic Acid  
 I - Ice  
 J - DI Water  
 K - EDTA  
 L - EDA  
 M - Hexane  
 N - None  
 O - AsN02  
 P - Na2OAS  
 Q - Na2SO3  
 R - Na2S2O3  
 S - H2SO4  
 T - TSP Dodecahydrate  
 U - Acetone  
 V - MCAA  
 W - pH 4.5  
 Y - Trizma  
 Z - other (specify)

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	MATRIX (W=water, S=solid, O=overseal, BT=biotissue, A=air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total Number of containers	Special Instructions/Note:
(331-261-T-P008) KAAMILO WELLS (380-14579-2)	8/3/22	10:34	Water	Water	X		4	See Attached Instructions
(331-261-T-P008) KAAMILO WELLS (380-14579-3)	8/3/22	10:34	Water	Water		X	2	See Attached Instructions
(331-261-T-P008) KAAMILO WELLS (380-14579-4)	8/3/22	10:34	Water	Water		X	2	See Attached Instructions

Note: Since laboratory accreditations are subject to change, Eurolfins Eaton Analytical, LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analytes/methods being analyzed, the samples must be shipped back to the Eurolfins Eaton Analytical, LLC laboratory or other instructors will be provided. Any changes to accreditation status should be brought to Eurolfins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to Eurolfins Eaton Analytical, LLC.

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

Empty Kit Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Custody Seals Intact: \_\_\_\_\_ Custody Seal No.: \_\_\_\_\_  
 Cooler Temperature(s) °C and Other Remarks: \_\_\_\_\_



Project Iteration ID: 1407003-267  
 Client Name: Eurofins Eaton Analytical  
 Project Name: RED-HILL Project # 38001111  
 Job # 380-14579-1  
 COC Page Number: 2 of 2  
 Bottle Label Color: NA

**Sample Receipt Summary**

**Receiving Info**

1. Initials Received By: [Signature]
2. Date Received: 8/5/22
3. Time Received: 1415
4. Client Name: Eurofins
5. Client Courier Information: (Please circle)
  - Client
  - UPS
  - Area Fast
  - DRS
  - FedEx
  - GSO/GLS
  - Ontrac
  - PAMS
  - PHYSIS Driver:
  - i. Start Time: \_\_\_\_\_
  - ii. End Time: \_\_\_\_\_
  - iii. Total Mileage: \_\_\_\_\_
  - iv. Number of Pickups: \_\_\_\_\_
6. Container Information: (Please put the # of containers or circle none)
  - 2 Cooler
  - Styrofoam Cooler
  - Boxes
  - None
  - Carboy(s)
  - Carboy Trash Can(s)
  - Carboy Cap(s)
  - Other \_\_\_\_\_
7. What type of ice was used: (Please circle any that apply)
  - Wet Ice
  - Blue Ice
  - Dry Ice
  - Water
  - None
8. Randomly Selected Samples Temperature (°C): 2.7 Used I/R Thermometer # 12

**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:**

*This appears to be one sample.*





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

**Chain of Custody Record**



<b>Client Information</b> Client Contact: Dr. Ron Fenstermacher City & County of Honolulu Address: 630 South Beretania Street Chemistry Lab City: Honolulu State/Zip: HI, 96843 Phone: 808-748-5091(Tel) Email: RFENSTERMACHER@hbws.org Project Name: RED-HILL Site: Hawaii		Lab PM: Frank, Debbie L. E-Mail: Debbie.Frank@et.eurofins.com PWSID		Carrier Tracking No(s): 380-8968-2556.2 State of Origin: Page 2 of 2 Job #		COC No: 380-8968-2556.2 Page 2 of 2 Job #	
<b>Due Date Requested:</b> TAT Requested (days): Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No PO #: C20525101 exp 05312023 WO #: Project #: 38001111 SOW#:		<b>Analysis Requested</b> SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL) X SUBCONTRACT - 8015 Diesel LL (EAL) and Motor Oil X SUBCONTRACT - 8015 Jet Fuel 5 (JP5) X SUBCONTRACT - 8015 Jet Fuel 8 (JP8) X Field Filtered Sample (Yes or No) X Total Number of Containers:		<b>Preservation Codes:</b> A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 X - Trizma Y - EDTA Z - other (specify)		<b>Special Instructions/Note:</b>	
<b>Sample Identification</b> (331-261-TP008 ) KAAMILO WELLS Sample Date: AUG 31 2022 1084 Sample Time: 1084 Sample Type (C=comp, G=grab): G Preservation Code: Matrix (W=water, S=solid, O=soil, BT=Tissue, A=Air): Water		SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL) X SUBCONTRACT - 8015 Diesel LL (EAL) and Motor Oil X SUBCONTRACT - 8015 Jet Fuel 5 (JP5) X SUBCONTRACT - 8015 Jet Fuel 8 (JP8) X Field Filtered Sample (Yes or No) X Total Number of Containers:		<b>Special Instructions/Note:</b>			
<b>Possible Hazard Identification</b> <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		<b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b> <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		<b>Special Instructions/QC Requirements:</b>			
<b>Deliverable Requested:</b> I, II, III, IV, Other (specify)		<b>Empty Kit Relinquished by:</b>		<b>Method of Shipment:</b>			
Relinquished by: [Signature] Date: AUG 03, 2022 100 HBWS Company: HBWS		Relinquished by: [Signature] Date: 08/10/2022 10:30 Company: EEA		Relinquished by: [Signature] Date/Time:			
Relinquished by: [Signature] Date/Time:		Relinquished by: [Signature] Date/Time:		Relinquished by: [Signature] Date/Time:			
<b>Custody Seals Intact:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No		<b>Custody Seal No.:</b>		<b>Cooler Temperature(s) °C and Other Remarks:</b>			





**Bottle Order Information**

Bottle Order: RED-HILL  
 Bottle Order #: 2556  
 Request From Client: 7/14/2022  
 Date Order Posted: 7/14/2022 2:00:47PM  
 Order Status: Ready To Process  
 Prepared By: Davis Haley  
**Deliver By Date: 7/21/2022 11:59:00PM**  
 Lab Project Number: 38001111  
 PWSID:

**Order Completion Information**

Creator: Davis Haley  
 Filled by:  
 Sent Date:  
 Sent Via:  
 Tracking #:

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #
1	1	1	Plastic 500ml - with Nitric Acid	Nitric Acid	200.8 - Metals, Priority Pollutant by 200.8	Water	Normal		
					200.7 - (MOD) Custom	Water	Normal		
1	1	1	Plastic 250ml - with Nitric Acid	Nitric Acid	245.1 - Local Method	Water	Normal		
1	6	6	Voa Vial 40ml Amber - Sodium thiosulfate	Sodium Thiosulfate	504.1_PREC - Local Method	Water	Normal		
					505_LL_PREC - (MOD) 505 Local Method	Water	Normal	3 OUT OF 6 SENT UP - EP	
1	2	2	Amber Glass 1 Liter- Sodium Sulfite/HCl	Sodium Sulfite w/HCl	525.2_PREC - (MOD) 525plus Plus TICs	Water	Normal		
1	6	6	Voa Vial 40ml Amber - Ascor. Acid & HCL	Ascorbic Acid and Hydrochloric Acid	524.2_Pres_PREC - VOASDWA plus TICs + Acetone	Water	Normal		
					524.2_SIM_PREC - TBA by 524.2 SIM	Water	Normal		
1	1	1	Plastic 250ml - unpreserved	None	2320B - (MOD) Total Alkalinity SM4500_H+ - Local Method	Water	Normal		
					2510B - Conductivity	Water	Normal		
1	2	2	Plastic 125mL - unpreserved	None	300_OF_28D_B - Bromide	Water	Normal		
					4500_E_C - Fluoride	Water	Normal		
					300_OF_28D_PREC - Chloride and Sulfate	Water	Normal		
					300_OF_48H_PREC - Nitrite, Nitrate and Nitrite+Nitrate	Water	Normal		
1	1	1	Plastic 500ml - unpreserved	None	2540C_Calcd - Total Dissolved Solids (TDS)	Water	Normal		
1	4	4	Amber Glass 1 liter - Sodium Thiosulfate	Sodium Thiosulfate	SUBCONTRACT - 625 Acid LL (EAL) Physis	Water	Normal		
1	2	2	Amber Glass 1 liter - Sodium Thiosulfate	Sodium Thiosulfate	SUBCONTRACT - 625 Base Neutral LL (EAL) Physis	Water	Normal		

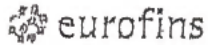
Please notify your PM immediately if an error is found in shipment. When returning samples, please return all provided QC samples.

1	2	2	Amber Glass 1 liter - Sodium Thiosulfate	Sodium Thiosulfate	SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs	Water	Normal		
1	4	4	Voa Vial 40ml Amber - Sodium thiosulfate	Sodium Thiosulfate	SUBCONTRACT - 8015 Ethanol	Water	Normal		
1	4	4	Voa Vial 40ml - SodiumThio w/HCl-dropper	Sodium Thiosulfate	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	Water	Normal		
1	2	2	Amber Glass 1 L - NaThiosulfate 8mL HCL	Sodium Thiosulfate/Hydrochloric Acid	SUBCONTRACT - 8015 Diesel LL (EAL) and Motor Oil	Water	Normal		
1	2	2	Amber Glass 1 L - NaThiosulfate 8mL HCL	Sodium Thiosulfate/Hydrochloric Acid	SUBCONTRACT - 8015 Jet Fuel 5 (JP5)	Water	Normal		
1	2	2	Amber Glass 1 L - NaThiosulfate 8mL HCL	Sodium Thiosulfate/Hydrochloric Acid	SUBCONTRACT - 8015 Jet Fuel 8 (JP8)	Water	Normal		
0	2	0	VOA Vial 40mL - NaThiosulfate/HCL	Sodium Thiosulfate/Hydrochloric Acid	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	Water	Trip Blank		

**Total Bottle Summary**

Bottle Type Description	Preservative	Bottle Count
Amber Glass 1 L - NaThiosulfate 8mL HCL	Sodium Thiosulfate/Hydrochloric Acid	6
Amber Glass 1 liter - Sodium Thiosulfate	Sodium Thiosulfate	8
Amber Glass 1 Liter- Sodium Sulfite/HCl	Sodium Sulfite w/HCl	2
Plastic 125mL - unpreserved	None	2
Plastic 250ml - unpreserved	None	1
Plastic 250ml - with Nitric Acid	Nitric Acid	1
Plastic 500ml - unpreserved	None	1
Plastic 500ml - with Nitric Acid	Nitric Acid	1
VOA Vial 40mL - NaThiosulfate/HCL	Sodium Thiosulfate/Hydrochloric Acid	0
Voa Vial 40ml - SodiumThio w/HCl-dropper	Sodium Thiosulfate	4
Voa Vial 40ml Amber - Ascor. Acid & HCL	Ascorbic Acid and Hydrochloric Acid	6
Voa Vial 40ml Amber - Sodium thiosulfate	Sodium Thiosulfate	10
Total Bottles:		<b>42</b>

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



Eaton Analytical

# INTERNAL CHAIN OF CUSTODY RECORD

EEA Folder Number:

### SAMPLE TEMP RECEIVED:

Notes: If samples are out of temperature range, let the ASMs know. ASMs will determine whether to proceed with analysis or not.

SAMPLES REC'D DAY OF COLLECTION? Yes / No

IR Gun ID = 649A (Observation = 2.2 °C) (Corr. Factor -0.3 °C) (Final = 1.9 °C)

TYPE OF ICE: Real  Synthetic  No Ice  CONDITION OF ICE: Frozen  Partially Frozen  Thawed  N/A

METHOD OF SHIPMENT: Pick-Up / Walk-In / FedEx / UPS / DHL / Area Fast / Top Line / Other: \_\_\_\_\_

### Compliance Acceptance Criteria:

- 1) Chemistry: >0, ≤ 6°C, not frozen (NELAP) (If received after 24 hrs of sample collection)
- 2) Microbiology, Distribution: < 10°C, not frozen (can be ≥ 10°C if received on ice the same day as sample collection, within 8 hours)
- 3) Microbiology, Surface Water: < 10°C (If received after 2 hours of sample collection)

If out of temperature range for both Chemistry and Microbiology samples and temperature does not confirm, then measure the temperature of each quadrant and record each temperature of the quadrant

1 = (Observation = _____ °C) (Corr. Factor _____ °C) (Final = _____ °C)	2 = (Observation = _____ °C) (Corr. Factor _____ °C) (Final = _____ °C)
3 = (Observation = _____ °C) (Corr. Factor _____ °C) (Final = _____ °C)	4 = (Observation = _____ °C) (Corr. Factor _____ °C) (Final = _____ °C)

4 Dioxin (1813 or 2,3,7,8 TCDD): must be between 0-4 °C, not frozen (If received after 24 hrs of sample collection)

5) pH Check. Manufacturer: \_\_\_\_\_ Lot Number: \_\_\_\_\_ pH strip type: 0 - 14 or \_\_\_\_\_ Expiration Date \_\_\_\_\_ Results: \_\_\_\_\_

6) Chlorine check. Manufacturer: Sansafe. Lot No.: \_\_\_\_\_ Expiration Date: \_\_\_\_\_ Results: \_\_\_\_\_

7) VOA and Radon Headspace:  No Samples with Headspace:  Samples with Headspace (see below):

Headspace Documentation (use additional VOC and Radon Internal COFC for additional bottles)

Exempt from headspace concerns: Methods 815.4, HAA(8281,882), 806, SPME, @CH, 832LCMS, 858, 838, Anatoxin, LCMS methods using 40 ml vials, International clients:

Samp ID Bottle #				Samp ID Bottle #				Samp ID Bottle #				Samp ID Bottle #			
None/<8 mm		>8mm		None/<8 mm		>8mm		None/<8 mm		>8mm		None/<8 mm		>8mm	
	Test		Test		Test		Test		Test		Test		Test		Test

Note Sample IDs which have dissimilar headspace (i.e. potential sampling errors): \_\_\_\_\_

RECEIVED BY:	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
		G. REITNER	Eurofins Eaton Analytical	08/04/2022	10:30
SAMPLES CHARGED AGAINST CDO BY:	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
			Eurofins Eaton Analytical		





ORIGIN:HIKA (808) 748-5840  
BWS CHEM/LAB  
HONOLULU BOARD OF WATER SUPPLY  
630 S. BERETANIA ST  
CHEMICAL LABORATORY  
HONOLULU, HI 96843  
UNITED STATES US

SHIP DATE: 03AUG22  
ACTWGT: 56.00 LB  
CAD: 100205419/MNET4490

BILL RECIPIENT

TO **BROOKS**  
**EUROFINS EATON ANALYTICAL, INC**  
**750 ROYAL OAKS DR**  
**SUITE 100**  
**MONROVIA CA 91016**  
(626) 386-1178 REF

581121F3901FE4A

DEFT



J222022041201U

THU - 04 AUG 10:30A  
PRIORITY OVERNIGHT

1 of 2  
TRK# 7775 6920 3972  
## MASTER ##

**WZ WHPA** 91016  
CA-US BUR



**After printing this label:**  
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.  
2. Fold the printed page along the horizontal line.  
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

**Warning:** Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.  
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide. FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.



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

ORIGIN ID: HKA (808) 748-5840  
 BWS CHEMLAB  
 HONOLULU BOARD OF WATER SUPPLY  
 630 S. BERETANIA ST.  
 CHEMICAL LABORATORY  
 HONOLULU, HI 96843  
 UNITED STATES US

SHIP DATE: 03AUG22  
 ACTWGT: 56.00 LB  
 CAD: 100205419MINET4490

BILL RECIPIENT

TO **BROOKS**  
**EUROFINS EATON ANALYTICAL, INC**  
**750 ROYAL OAKS DR**  
**SUITE 100**  
**MONROVIA CA 91016**  
 (626) 386-1178 (REF)

581.2/F39D/FE4A

DEPT



J222022041201us

THU - 04 AUG 10:30A  
 PRIORITY OVERNIGHT

2 of 2  
 MPS# 7775 6920 2895  
 0263  
 Mstr# 7775 6920 3972

0201

91016  
 BUR  
 CA-US

**WZ WHPA**



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2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

**After printing this label:**

# Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-14579-1

**Login Number: 14579**  
**List Number: 1**  
**Creator: Ngo, Theodore**

**List Source: Eurofins Eaton Monrovia**

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





# Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-14579-1

**Login Number: 14579**  
**List Number: 2**  
**Creator: Ornelas, Olga**

**List Source: Eurofins Calscience**  
**List Creation: 08/05/22 06:19 PM**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

