

ANALYTICAL REPORT

PREPARED FOR

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

Generated 11/22/2022 9:30:57 PM

JOB DESCRIPTION

RED-HILL
RUSH Weekly Red Hill

JOB NUMBER

380-23442-1



Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	5
Detection Summary	6
Client Sample Results	7
Action Limit Summary	17
Surrogate Summary	20
QC Sample Results	24
QC Association Summary	67
Lab Chronicle	73
Certification Summary	75
Method Summary	77
Sample Summary	78
Subcontract Data	79
Chain of Custody	154
Receipt Checklists	166
Appendix	168

Definitions/Glossary

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

Job ID: 380-23442-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS VOA TICs

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

GC/MS Semi VOA

Qualifier	Qualifier Description
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
T	Result is a tentatively identified compound (TIC) and an estimated value.

GC Semi VOA

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

HPLC/IC

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

Metals

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

General Chemistry

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

Subcontract

Qualifier	Qualifier Description
U	This analyte was not detected.

Glossary

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

Eurofins Eaton Monrovia

Definitions/Glossary

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

Job ID: 380-23442-1

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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: 380-23442-1

Job ID: 380-23442-1

Laboratory: Eurofins Eaton Monrovia

Narrative

Job Narrative
380-23442-1

Comments

No additional comments.

Receipt

The samples were received on 10/7/2022 10:15 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 2.7° C and 5.2° C.

GC/MS VOA

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

GC/MS Semi VOA

Method 525.2: The DUP sample was spiked with MS standard. LCS and LCSD is used for Batch precision. Preparation batch 380-20295 and analytical batch 380-20427

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

HPLC/IC

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

GC Semi VOA

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

Metals

Method 200.8: The continuing calibration blank (CCB) for analytical batch 380-20566 contained Silver above the reporting limit (RL). All reported samples associated with this CCB were either ND for this analyte or contained this analyte at a concentration greater than 10X the value found in the CCB; therefore, re-analysis of samples was not performed.

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

General Chemistry

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

Subcontract non-Sister

See attached subcontract report.

Organic Prep

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

Subcontract Work

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

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

Detection Summary

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

Job ID: 380-23442-1

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

Lab Sample ID: 380-23442-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Bromoform	0.56		0.50	ug/L	1		524.2	Total/NA
Dieldrin	0.020		0.0020	ug/L	1		505	Total/NA
Bromide	240		5.0	ug/L	1		300.0	Total/NA
Chloride	90		2.5	mg/L	5		300.0	Total/NA
Nitrate as N	0.57		0.25	mg/L	5		300.0	Total/NA
Nitrate Nitrite as N	0.57		0.25	mg/L	5		300.0	Total/NA
Sulfate	14		1.3	mg/L	5		300.0	Total/NA
Calcium	20		1.0	mg/L	1		200.7 Rev 4.4	Total/NA
Magnesium	16		0.10	mg/L	1		200.7 Rev 4.4	Total/NA
Potassium	1.9		1.0	mg/L	1		200.7 Rev 4.4	Total/NA
Sodium	33		1.0	mg/L	1		200.7 Rev 4.4	Total/NA
Chromium	1.4		1.0	ug/L	1		200.8	Total
Copper	7.3		2.0	ug/L	1		200.8	Total Recoverable
Alkalinity	54		2.0	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	54		2.0	mg/L	1		SM 2320B	Total/NA
Specific Conductance	420		2.0	umhos/cm	1		SM 2510B	Total/NA
Total Dissolved Solids	290		20	mg/L	1		SM 2540C	Total/NA
pH	7.7	HF		SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: TB: MOANALUA WELLS

Lab Sample ID: 380-23442-2

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: 380-23442-1

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

Lab Sample ID: 380-23442-1

Date Collected: 10/06/22 10:32

Matrix: Water

Date Received: 10/07/22 13:07

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tertiary Butyl Alcohol (TBA)	ND		2.0	ug/L			10/07/22 19:21	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		70 - 130				10/07/22 19:21	1
4-Bromofluorobenzene (Surr)	96		70 - 130				10/07/22 19:21	1
1,2-Dichloroethane-d4 (Surr)	112		70 - 130				10/07/22 19:21	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	ug/L			10/11/22 01:35	1
1,1,1-Trichloroethane	ND		0.50	ug/L			10/11/22 01:35	1
1,1,2,2-Tetrachloroethane	ND		0.50	ug/L			10/11/22 01:35	1
1,1,2-Trichloroethane	ND		0.50	ug/L			10/11/22 01:35	1
1,1-Dichloroethane	ND		0.50	ug/L			10/11/22 01:35	1
1,1-Dichloroethylene	ND		0.50	ug/L			10/11/22 01:35	1
1,1-Dichloropropene	ND		0.50	ug/L			10/11/22 01:35	1
1,2,3-Trichlorobenzene	ND		0.50	ug/L			10/11/22 01:35	1
1,2,3-Trichloropropane	ND		0.50	ug/L			10/11/22 01:35	1
1,2,4-Trichlorobenzene	ND		0.50	ug/L			10/11/22 01:35	1
1,2,4-Trimethylbenzene	ND		0.50	ug/L			10/11/22 01:35	1
1,2-Dichloroethane	ND		0.50	ug/L			10/11/22 01:35	1
1,2-Dichloropropane	ND		0.50	ug/L			10/11/22 01:35	1
1,3,5-Trimethylbenzene	ND		0.50	ug/L			10/11/22 01:35	1
1,3-Dichloropropane	ND		0.50	ug/L			10/11/22 01:35	1
2,2-Dichloropropane	ND		0.50	ug/L			10/11/22 01:35	1
2-Butanone (MEK)	ND		5.0	ug/L			10/11/22 01:35	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	ug/L			10/11/22 01:35	1
Acetone	ND		500	ug/L			10/11/22 01:35	1
Benzene	ND		0.50	ug/L			10/11/22 01:35	1
Bromobenzene	ND		0.50	ug/L			10/11/22 01:35	1
Bromochloromethane	ND		0.50	ug/L			10/11/22 01:35	1
Bromodichloromethane	ND		0.50	ug/L			10/11/22 01:35	1
Bromoform	0.56		0.50	ug/L			10/11/22 01:35	1
Bromomethane (Methyl Bromide)	ND		0.50	ug/L			10/11/22 01:35	1
Carbon disulfide	ND		0.50	ug/L			10/11/22 01:35	1
Carbon tetrachloride	ND		0.50	ug/L			10/11/22 01:35	1
Chlorobenzene	ND		0.50	ug/L			10/11/22 01:35	1
Chlorodibromomethane	ND		0.50	ug/L			10/11/22 01:35	1
Chloroethane	ND		0.50	ug/L			10/11/22 01:35	1
Chloroform (Trichloromethane)	ND		0.50	ug/L			10/11/22 01:35	1
Dichloromethane	ND		0.50	ug/L			10/11/22 01:35	1
cis-1,2-Dichloroethylene	ND	*1	0.50	ug/L			10/11/22 01:35	1
cis-1,3-Dichloropropene	ND		0.50	ug/L			10/11/22 01:35	1
Dibromomethane	ND		0.50	ug/L			10/11/22 01:35	1
Dichlorodifluoromethane	ND		0.50	ug/L			10/11/22 01:35	1
Ethylbenzene	ND		0.50	ug/L			10/11/22 01:35	1
Hexachlorobutadiene	ND		0.50	ug/L			10/11/22 01:35	1
Isopropylbenzene	ND		0.50	ug/L			10/11/22 01:35	1
m,p-Xylenes	ND		0.50	ug/L			10/11/22 01:35	1
m-Dichlorobenzene (1,3-DCB)	ND		0.50	ug/L			10/11/22 01:35	1

Eurofins Eaton Monrovia

Client Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: 380-23442-1

Date Collected: 10/06/22 10:32

Matrix: Water

Date Received: 10/07/22 13:07

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl-tert-butyl Ether (MTBE)	ND		0.50	ug/L			10/11/22 01:35	1
Naphthalene	ND		0.50	ug/L			10/11/22 01:35	1
n-Butylbenzene	ND		0.50	ug/L			10/11/22 01:35	1
N-Propylbenzene	ND		0.50	ug/L			10/11/22 01:35	1
o-Dichlorobenzene (1,2-DCB)	ND		0.50	ug/L			10/11/22 01:35	1
o-Chlorotoluene	ND		0.50	ug/L			10/11/22 01:35	1
o-Xylene	ND		0.50	ug/L			10/11/22 01:35	1
p-Chlorotoluene	ND		0.50	ug/L			10/11/22 01:35	1
p-Dichlorobenzene (1,4-DCB)	ND		0.50	ug/L			10/11/22 01:35	1
p-Isopropyltoluene	ND		0.50	ug/L			10/11/22 01:35	1
sec-Butylbenzene	ND		0.50	ug/L			10/11/22 01:35	1
Styrene	ND		0.50	ug/L			10/11/22 01:35	1
Tert-amyl methyl ether	ND		3.0	ug/L			10/11/22 01:35	1
Tert-butyl ethyl ether	ND		3.0	ug/L			10/11/22 01:35	1
tert-Butylbenzene	ND		0.50	ug/L			10/11/22 01:35	1
Tetrachloroethene (PCE)	ND		0.50	ug/L			10/11/22 01:35	1
Toluene	ND		0.50	ug/L			10/11/22 01:35	1
1,3-Dichloropropene, Total	ND		0.50	ug/L			10/11/22 01:35	1
Xylenes, Total	ND		0.50	ug/L			10/11/22 01:35	1
trans-1,2-Dichloroethylene	ND		0.50	ug/L			10/11/22 01:35	1
trans-1,3-Dichloropropene	ND		0.50	ug/L			10/11/22 01:35	1
Trichloroethylene (TCE)	ND		0.50	ug/L			10/11/22 01:35	1
Trichlorofluoromethane (Freon 11)	ND		0.50	ug/L			10/11/22 01:35	1
Vinyl Chloride (VC)	ND		0.30	ug/L			10/11/22 01:35	1
Trichlorotrifluoroethane	ND		0.50	ug/L			10/11/22 01:35	1
Bromoethane	ND		0.50	ug/L			10/11/22 01:35	1
Chloromethane (methyl chloride)	ND		0.50	ug/L			10/11/22 01:35	1
Diisopropyl ether	ND		3.0	ug/L			10/11/22 01:35	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	22	T J	ug/L		0.99			10/11/22 01:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		70 - 130		10/11/22 01:35	1
4-Bromofluorobenzene (Surr)	95		70 - 130		10/11/22 01:35	1
Toluene-d8 (Surr)	85		70 - 130		10/11/22 01:35	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		10/11/22 09:24	10/12/22 20:11	1
2,4'-DDE	ND		0.098	ug/L		10/11/22 09:24	10/12/22 20:11	1
2,4'-DDT	ND		0.098	ug/L		10/11/22 09:24	10/12/22 20:11	1
2,4-Dinitrotoluene	ND		0.098	ug/L		10/11/22 09:24	10/12/22 20:11	1
2,6-Dinitrotoluene	ND		0.098	ug/L		10/11/22 09:24	10/12/22 20:11	1
4,4'-DDD	ND		0.098	ug/L		10/11/22 09:24	10/12/22 20:11	1
4,4'-DDE	ND		0.098	ug/L		10/11/22 09:24	10/12/22 20:11	1
4,4'-DDT	ND		0.098	ug/L		10/11/22 09:24	10/12/22 20:11	1
Acenaphthene	ND		0.098	ug/L		10/11/22 09:24	10/12/22 20:11	1
Acenaphthylene	ND		0.098	ug/L		10/11/22 09:24	10/12/22 20:11	1
Acetochlor	ND		0.098	ug/L		10/11/22 09:24	10/12/22 20:11	1

Eurofins Eaton Monrovia

Client Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: 380-23442-1

Date Collected: 10/06/22 10:32

Matrix: Water

Date Received: 10/07/22 13:07

PWSID Number: HI0000331

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		10/11/22 09:24	10/12/22 20:11	1
alpha-BHC	ND		0.098	ug/L		10/11/22 09:24	10/12/22 20:11	1
alpha-Chlordane	ND		0.049	ug/L		10/11/22 09:24	10/12/22 20:11	1
Anthracene	ND		0.020	ug/L		10/11/22 09:24	10/12/22 20:11	1
Atrazine	ND		0.049	ug/L		10/11/22 09:24	10/12/22 20:11	1
Benz(a)anthracene	ND		0.049	ug/L		10/11/22 09:24	10/12/22 20:11	1
Benzo[a]pyrene	ND		0.020	ug/L		10/11/22 09:24	10/12/22 20:11	1
Benzo[b]fluoranthene	ND		0.020	ug/L		10/11/22 09:24	10/12/22 20:11	1
Benzo[g,h,i]perylene	ND		0.049	ug/L		10/11/22 09:24	10/12/22 20:11	1
Benzo[k]fluoranthene	ND		0.020	ug/L		10/11/22 09:24	10/12/22 20:11	1
beta-BHC	ND		0.098	ug/L		10/11/22 09:24	10/12/22 20:11	1
Bromacil	ND		0.098	ug/L		10/11/22 09:24	10/12/22 20:11	1
Butachlor	ND		0.049	ug/L		10/11/22 09:24	10/12/22 20:11	1
Butylbenzylphthalate	ND		0.49	ug/L		10/11/22 09:24	10/12/22 20:11	1
Caffeine	ND		0.049	ug/L		10/11/22 09:24	10/12/22 20:11	1
Chlorobenzilate	ND		0.098	ug/L		10/11/22 09:24	10/12/22 20:11	1
Chloroneb	ND		0.098	ug/L		10/11/22 09:24	10/12/22 20:11	1
Chlorothalonil (Draconil, Bravo)	ND		0.098	ug/L		10/11/22 09:24	10/12/22 20:11	1
Chlorpyrifos	ND		0.049	ug/L		10/11/22 09:24	10/12/22 20:11	1
Chrysene	ND		0.020	ug/L		10/11/22 09:24	10/12/22 20:11	1
delta-BHC	ND		0.098	ug/L		10/11/22 09:24	10/12/22 20:11	1
Di(2-ethylhexyl)adipate	ND		0.59	ug/L		10/11/22 09:24	10/12/22 20:11	1
Bis(2-ethylhexyl) phthalate	ND		0.59	ug/L		10/11/22 09:24	10/12/22 20:11	1
Diazinon (Qualitative)	ND		0.098	ug/L		10/11/22 09:24	10/12/22 20:11	1
Dibenz(a,h)anthracene	ND		0.049	ug/L		10/11/22 09:24	10/12/22 20:11	1
Diclorvos (DDVP)	ND		0.049	ug/L		10/11/22 09:24	10/12/22 20:11	1
Dieldrin	ND		0.20	ug/L		10/11/22 09:24	10/12/22 20:11	1
Diethylphthalate	ND		0.49	ug/L		10/11/22 09:24	10/12/22 20:11	1
Dimethoate	ND		0.098	ug/L		10/11/22 09:24	10/12/22 20:11	1
Dimethylphthalate	ND		0.49	ug/L		10/11/22 09:24	10/12/22 20:11	1
Di-n-butyl phthalate	ND		0.98	ug/L		10/11/22 09:24	10/12/22 20:11	1
Di-n-octyl phthalate	ND		0.098	ug/L		10/11/22 09:24	10/12/22 20:11	1
Endosulfan I (Alpha)	ND		0.098	ug/L		10/11/22 09:24	10/12/22 20:11	1
Endosulfan II (Beta)	ND		0.098	ug/L		10/11/22 09:24	10/12/22 20:11	1
Endosulfan sulfate	ND		0.098	ug/L		10/11/22 09:24	10/12/22 20:11	1
Endrin	ND		0.098	ug/L		10/11/22 09:24	10/12/22 20:11	1
Endrin aldehyde	ND		0.098	ug/L		10/11/22 09:24	10/12/22 20:11	1
EPTC	ND		0.098	ug/L		10/11/22 09:24	10/12/22 20:11	1
Fluoranthene	ND		0.098	ug/L		10/11/22 09:24	10/12/22 20:11	1
Fluorene	ND		0.049	ug/L		10/11/22 09:24	10/12/22 20:11	1
gamma-Chlordane	ND		0.049	ug/L		10/11/22 09:24	10/12/22 20:11	1
Heptachlor	ND		0.039	ug/L		10/11/22 09:24	10/12/22 20:11	1
Heptachlor epoxide (isomer B)	ND		0.049	ug/L		10/11/22 09:24	10/12/22 20:11	1
Hexachlorobenzene	ND		0.049	ug/L		10/11/22 09:24	10/12/22 20:11	1
Hexachlorocyclopentadiene	ND		0.049	ug/L		10/11/22 09:24	10/12/22 20:11	1
Indeno[1,2,3-cd]pyrene	ND		0.049	ug/L		10/11/22 09:24	10/12/22 20:11	1
Isophorone	ND		0.49	ug/L		10/11/22 09:24	10/12/22 20:11	1
Lindane	ND		0.039	ug/L		10/11/22 09:24	10/12/22 20:11	1
Malathion	ND		0.098	ug/L		10/11/22 09:24	10/12/22 20:11	1

Eurofins Eaton Monrovia

Client Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: 380-23442-1

Date Collected: 10/06/22 10:32

Matrix: Water

Date Received: 10/07/22 13:07

PWSID Number: HI0000331

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		10/11/22 09:24	10/12/22 20:11	1
Metolachlor	ND		0.049	ug/L		10/11/22 09:24	10/12/22 20:11	1
Metribuzin	ND		0.049	ug/L		10/11/22 09:24	10/12/22 20:11	1
Molinate	ND		0.098	ug/L		10/11/22 09:24	10/12/22 20:11	1
Naphthalene	ND		0.29	ug/L		10/11/22 09:24	10/12/22 20:11	1
Parathion	ND		0.098	ug/L		10/11/22 09:24	10/12/22 20:11	1
Pendimethalin (Penoxaline)	ND		0.098	ug/L		10/11/22 09:24	10/12/22 20:11	1
Total Permethrin (mixed isomers)	ND		0.20	ug/L		10/11/22 09:24	10/12/22 20:11	1
Phenanthrene	ND		0.039	ug/L		10/11/22 09:24	10/12/22 20:11	1
Propachlor	ND		0.049	ug/L		10/11/22 09:24	10/12/22 20:11	1
Pyrene	ND		0.049	ug/L		10/11/22 09:24	10/12/22 20:11	1
Simazine	ND		0.049	ug/L		10/11/22 09:24	10/12/22 20:11	1
Terbacil	ND		0.098	ug/L		10/11/22 09:24	10/12/22 20:11	1
Terbutylazine	ND		0.098	ug/L		10/11/22 09:24	10/12/22 20:11	1
Thiobencarb	ND		0.20	ug/L		10/11/22 09:24	10/12/22 20:11	1
trans-Nonachlor	ND		0.049	ug/L		10/11/22 09:24	10/12/22 20:11	1
Trifluralin	ND		0.098	ug/L		10/11/22 09:24	10/12/22 20:11	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L				10/11/22 09:24	10/12/22 20:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	97		70 - 130	10/11/22 09:24	10/12/22 20:11	1
Triphenylphosphate	109		70 - 130	10/11/22 09:24	10/12/22 20:11	1
Perylene-d12	100		70 - 130	10/11/22 09:24	10/12/22 20:11	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		0.041	ug/L		10/13/22 14:08	10/14/22 04:42	1
1,2-Dibromo-3-Chloropropane	ND		0.010	ug/L		10/13/22 14:08	10/14/22 04:42	1
1,2-Dibromoethane	ND		0.010	ug/L		10/13/22 14:08	10/14/22 04:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane (Surr)	102		60 - 140	10/13/22 14:08	10/14/22 04:42	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0020	ug/L		10/11/22 15:15	10/11/22 20:33	1
Dieldrin	0.020		0.0020	ug/L		10/11/22 15:15	10/11/22 20:33	1
Toxaphene	ND		0.10	ug/L		10/11/22 15:15	10/11/22 20:33	1
Alachlor	ND		0.10	ug/L		10/11/22 15:15	10/11/22 20:33	1
Chlordane (n.o.s.)	ND		0.10	ug/L		10/11/22 15:15	10/11/22 20:33	1
Endrin	ND		0.010	ug/L		10/11/22 15:15	10/11/22 20:33	1
Heptachlor	ND		0.010	ug/L		10/11/22 15:15	10/11/22 20:33	1
Heptachlor epoxide	ND		0.010	ug/L		10/11/22 15:15	10/11/22 20:33	1
gamma-BHC (Lindane)	ND		0.010	ug/L		10/11/22 15:15	10/11/22 20:33	1
Methoxychlor	ND		0.050	ug/L		10/11/22 15:15	10/11/22 20:33	1
PCB-1016	ND		0.071	ug/L		10/11/22 15:15	10/11/22 20:33	1
PCB-1221	ND		0.10	ug/L		10/11/22 15:15	10/11/22 20:33	1
PCB-1232	ND		0.10	ug/L		10/11/22 15:15	10/11/22 20:33	1
PCB-1242	ND		0.10	ug/L		10/11/22 15:15	10/11/22 20:33	1

Eurofins Eaton Monrovia

Client Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: 380-23442-1

Date Collected: 10/06/22 10:32

Matrix: Water

Date Received: 10/07/22 13:07

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1248	ND		0.10	ug/L		10/11/22 15:15	10/11/22 20:33	1
PCB-1254	ND		0.10	ug/L		10/11/22 15:15	10/11/22 20:33	1
PCB-1260	ND		0.071	ug/L		10/11/22 15:15	10/11/22 20:33	1
Polychlorinated biphenyls, Total	ND		0.10	ug/L		10/11/22 15:15	10/11/22 20:33	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	93		70 - 130			10/11/22 15:15	10/11/22 20:33	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	240		5.0	ug/L			10/12/22 19:03	1
Chloride	90		2.5	mg/L			10/08/22 01:46	5
Nitrate as N	0.57		0.25	mg/L			10/08/22 01:46	5
Nitrate Nitrite as N	0.57		0.25	mg/L			10/08/22 01:46	5
Sulfate	14		1.3	mg/L			10/08/22 01:46	5
Nitrite as N	ND		0.25	mg/L			10/08/22 01:46	5

Method: EPA 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	20		1.0	mg/L			10/11/22 00:47	1
Magnesium	16		0.10	mg/L			10/11/22 00:47	1
Potassium	1.9		1.0	mg/L			10/11/22 00:47	1
Sodium	33		1.0	mg/L			10/11/22 00:47	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	ug/L		10/11/22 10:07	10/12/22 13:48	1
Arsenic	ND		1.0	ug/L		10/11/22 10:07	10/12/22 13:48	1
Beryllium	ND		1.0	ug/L		10/11/22 10:07	10/12/22 13:48	1
Cadmium	ND		0.50	ug/L		10/11/22 10:07	10/12/22 13:48	1
Chromium	1.4		1.0	ug/L		10/11/22 10:07	10/12/22 13:48	1
Copper	7.3		2.0	ug/L		10/11/22 10:07	10/12/22 13:48	1
Lead	ND		0.50	ug/L		10/11/22 10:07	10/12/22 13:48	1
Nickel	ND		5.0	ug/L		10/11/22 10:07	10/12/22 13:48	1
Selenium	ND		5.0	ug/L		10/11/22 10:07	10/12/22 13:48	1
Silver	ND	^2	0.50	ug/L		10/11/22 10:07	10/12/22 13:48	1
Thallium	ND		1.0	ug/L		10/11/22 10:07	10/12/22 13:48	1
Zinc	ND		20	ug/L		10/11/22 10:07	10/12/22 13:48	1

Method: EPA 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	mg/L		10/28/22 04:59	10/28/22 11:02	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity (SM 2320B)	54		2.0	mg/L			10/12/22 15:04	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	54		2.0	mg/L			10/12/22 15:04	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	ND		2.0	mg/L			10/12/22 15:04	1
Specific Conductance (SM 2510B)	420		2.0	umhos/cm			10/12/22 15:04	1

Eurofins Eaton Monrovia

Client Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: 380-23442-1

Date Collected: 10/06/22 10:32

Matrix: Water

Date Received: 10/07/22 13:07

PWSID Number: HI0000331

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	290		20	mg/L			10/07/22 14:40	1
Fluoride (SM 4500 F C)	ND		0.050	mg/L			10/12/22 19:58	1
pH (SM 4500 H+ B)	7.7	HF		SU			10/12/22 15:04	1
Sulfide (SM 4500 S2 D)	ND		0.050	mg/L			10/11/22 14:00	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.005	0.001	µg/L		10/13/22 00:00	10/31/22 06:04	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		10/13/22 00:00	10/31/22 06:04	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		10/13/22 00:00	10/31/22 06:04	1
2,4,5-Trichlorophenol	ND		0.1	0.05	µg/L		10/13/22 00:00	10/31/22 06:04	1
2,4,6-Trichlorophenol	ND		0.1	0.05	µg/L		10/13/22 00:00	10/31/22 06:04	1
2,4-Dichlorophenol	ND		0.1	0.05	µg/L		10/13/22 00:00	10/31/22 06:04	1
2,4-Dinitrophenol	ND		0.2	0.1	µg/L		10/13/22 00:00	10/31/22 06:04	1
2,6-Dichlorophenol	ND		0.1	0.05	µg/L		10/13/22 00:00	10/31/22 06:04	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		10/13/22 00:00	10/31/22 06:04	1
2,6-Di-tert-butyl-4-methylphenol	ND		0.1	0.05	µg/L		10/13/22 00:00	10/31/22 06:04	1
2,6-Di-tert-butylphenol	ND		0.1	0.05	µg/L		10/13/22 00:00	10/31/22 06:04	1
2-Chloronaphthalene	ND		0.1	0.05	µg/L		10/13/22 00:00	10/31/22 06:04	1
2-Chlorophenol	ND		0.1	0.05	µg/L		10/13/22 00:00	10/31/22 06:04	1
2-Methyl-4,6-dinitrophenol	ND		0.2	0.1	µg/L		10/13/22 00:00	10/31/22 06:04	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		10/13/22 00:00	10/31/22 06:04	1
2-Methylphenol	ND		0.2	0.1	µg/L		10/13/22 00:00	10/31/22 06:04	1
2-Nitroaniline	ND		0.1	0.05	µg/L		10/13/22 00:00	10/31/22 06:04	1
2-Nitrophenol	ND		0.2	0.1	µg/L		10/13/22 00:00	10/31/22 06:04	1
3+4-Methylphenol	ND		0.2	0.1	µg/L		10/13/22 00:00	10/31/22 06:04	1
3-Nitroaniline	ND		0.1	0.05	µg/L		10/13/22 00:00	10/31/22 06:04	1
4-Bromophenylphenyl ether	ND		0.1	0.05	µg/L		10/13/22 00:00	10/31/22 06:04	1
4-Chloro-3-methylphenol	ND		0.2	0.1	µg/L		10/13/22 00:00	10/31/22 06:04	1
4-Chloroaniline	ND		0.1	0.05	µg/L		10/13/22 00:00	10/31/22 06:04	1
4-Chlorophenylphenyl ether	ND		0.1	0.05	µg/L		10/13/22 00:00	10/31/22 06:04	1
4-Nitroaniline	ND		0.1	0.05	µg/L		10/13/22 00:00	10/31/22 06:04	1
4-Nitrophenol	ND		0.2	0.1	µg/L		10/13/22 00:00	10/31/22 06:04	1
6-tert-butyl-2,4-dimethylphenol	ND		0.1	0.05	µg/L		10/13/22 00:00	10/31/22 06:04	1
Acenaphthene	ND		0.005	0.001	µg/L		10/13/22 00:00	10/31/22 06:04	1
Acenaphthylene	ND		0.005	0.001	µg/L		10/13/22 00:00	10/31/22 06:04	1
Aniline	ND		0.1	0.05	µg/L		10/13/22 00:00	10/31/22 06:04	1
Anthracene	ND		0.005	0.001	µg/L		10/13/22 00:00	10/31/22 06:04	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		10/13/22 00:00	10/31/22 06:04	1
Benzidine	ND		0.1	0.05	µg/L		10/13/22 00:00	10/31/22 06:04	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		10/13/22 00:00	10/31/22 06:04	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		10/13/22 00:00	10/31/22 06:04	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		10/13/22 00:00	10/31/22 06:04	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		10/13/22 00:00	10/31/22 06:04	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		10/13/22 00:00	10/31/22 06:04	1
Benzoic Acid	ND		0.2	0.1	µg/L		10/13/22 00:00	10/31/22 06:04	1
Benzyl Alcohol	ND		0.2	0.1	µg/L		10/13/22 00:00	10/31/22 06:04	1
Biphenyl	ND		0.005	0.001	µg/L		10/13/22 00:00	10/31/22 06:04	1
Bis(2-Chloroethoxy) methane	ND		0.1	0.05	µg/L		10/13/22 00:00	10/31/22 06:04	1
Bis(2-Chloroethyl) ether	ND		0.1	0.05	µg/L		10/13/22 00:00	10/31/22 06:04	1

Eurofins Eaton Monrovia

Client Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: 380-23442-1

Date Collected: 10/06/22 10:32

Matrix: Water

Date Received: 10/07/22 13:07

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-Chloroisopropyl) ether	ND		0.1	0.05	µg/L		10/13/22 00:00	10/31/22 06:04	1
Chrysene	ND		0.005	0.001	µg/L		10/13/22 00:00	10/31/22 06:04	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		10/13/22 00:00	10/31/22 06:04	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		10/13/22 00:00	10/31/22 06:04	1
Dibenzofuran	ND		0.1	0.05	µg/L		10/13/22 00:00	10/31/22 06:04	1
Dibenzothiophene	ND		0.005	0.001	µg/L		10/13/22 00:00	10/31/22 06:04	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		10/13/22 00:00	10/31/22 06:04	1
Fluoranthene	ND		0.005	0.001	µg/L		10/13/22 00:00	10/31/22 06:04	1
Fluorene	ND		0.005	0.001	µg/L		10/13/22 00:00	10/31/22 06:04	1
Hexachloroethane	ND		0.1	0.05	µg/L		10/13/22 00:00	10/31/22 06:04	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		10/13/22 00:00	10/31/22 06:04	1
Naphthalene	ND		0.005	0.001	µg/L		10/13/22 00:00	10/31/22 06:04	1
Nitrobenzene	ND		0.1	0.05	µg/L		10/13/22 00:00	10/31/22 06:04	1
N-Nitrosodi-n-propylamine	ND		0.1	0.05	µg/L		10/13/22 00:00	10/31/22 06:04	1
N-Nitrosodiphenylamine	ND		0.1	0.05	µg/L		10/13/22 00:00	10/31/22 06:04	1
Pentachlorophenol	ND		0.1	0.05	µg/L		10/13/22 00:00	10/31/22 06:04	1
Perylene	ND		0.005	0.001	µg/L		10/13/22 00:00	10/31/22 06:04	1
Phenanthrene	ND		0.005	0.001	µg/L		10/13/22 00:00	10/31/22 06:04	1
Phenol	ND		0.2	0.1	µg/L		10/13/22 00:00	10/31/22 06:04	1
p-tert-Butylphenol	ND		0.1	0.05	µg/L		10/13/22 00:00	10/31/22 06:04	1
Pyrene	ND		0.005	0.001	µg/L		10/13/22 00:00	10/31/22 06:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
(2,4,6-Tribromophenol)	62		31 - 143	10/13/22 00:00	10/31/22 06:04	1
(d10-Acenaphthene)	87		45 - 118	10/13/22 00:00	10/31/22 06:04	1
(d10-Phenanthrene)	95		56 - 123	10/13/22 00:00	10/31/22 06:04	1
(d12-Chrysene)	100		36 - 142	10/13/22 00:00	10/31/22 06:04	1
(d12-Perylene)	80		36 - 161	10/13/22 00:00	10/31/22 06:04	1
(d5-Phenol)	16		0 - 85	10/13/22 00:00	10/31/22 06:04	1
(d8-Naphthalene)	72		20 - 112	10/13/22 00:00	10/31/22 06:04	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DIESEL	ND	U	0.027		mg/L			10/20/22 17:08	1
JP5	ND	U	0.055		mg/L			10/20/22 17:08	1
JP8	ND	U	0.055		mg/L			10/20/22 17:08	1
MOTOR OIL	ND	U	0.055		mg/L			10/20/22 17:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOBENZENE	104		60 - 130		10/20/22 17:08	1
HEXACOSANE	94		60 - 130		10/20/22 17:08	1

Method: 8015 Ethanol - SW846 8015B Gasoline Range Organics

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
ETHANOL	ND	U	2000		ug/L			10/12/22 16:24	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.020		mg/L			10/11/22 14:45	1

Client Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: 380-23442-1

Date Collected: 10/06/22 10:32

Matrix: Water

Date Received: 10/07/22 13:07

PWSID Number: HI0000331

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE	79		60 - 140		10/11/22 14:45	1

Client Sample ID: TB: MOANALUA WELLS

Lab Sample ID: 380-23442-2

Date Collected: 10/06/22 10:32

Matrix: Water

Date Received: 10/07/22 10:15

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tertiary Butyl Alcohol (TBA)	ND		2.0	ug/L			10/07/22 19:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		70 - 130		10/07/22 19:44	1
4-Bromofluorobenzene (Surr)	97		70 - 130		10/07/22 19:44	1
1,2-Dichloroethane-d4 (Surr)	115		70 - 130		10/07/22 19:44	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	ug/L			10/11/22 02:43	1
1,1,1-Trichloroethane	ND		0.50	ug/L			10/11/22 02:43	1
1,1,2,2-Tetrachloroethane	ND		0.50	ug/L			10/11/22 02:43	1
1,1,2-Trichloroethane	ND		0.50	ug/L			10/11/22 02:43	1
1,1-Dichloroethane	ND		0.50	ug/L			10/11/22 02:43	1
1,1-Dichloroethylene	ND		0.50	ug/L			10/11/22 02:43	1
1,1-Dichloropropene	ND		0.50	ug/L			10/11/22 02:43	1
1,2,3-Trichlorobenzene	ND		0.50	ug/L			10/11/22 02:43	1
1,2,3-Trichloropropane	ND		0.50	ug/L			10/11/22 02:43	1
1,2,4-Trichlorobenzene	ND		0.50	ug/L			10/11/22 02:43	1
1,2,4-Trimethylbenzene	ND		0.50	ug/L			10/11/22 02:43	1
1,2-Dichloroethane	ND		0.50	ug/L			10/11/22 02:43	1
1,2-Dichloropropane	ND		0.50	ug/L			10/11/22 02:43	1
1,3,5-Trimethylbenzene	ND		0.50	ug/L			10/11/22 02:43	1
1,3-Dichloropropane	ND		0.50	ug/L			10/11/22 02:43	1
2,2-Dichloropropane	ND		0.50	ug/L			10/11/22 02:43	1
2-Butanone (MEK)	ND		5.0	ug/L			10/11/22 02:43	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	ug/L			10/11/22 02:43	1
Acetone	ND		500	ug/L			10/11/22 02:43	1
Benzene	ND		0.50	ug/L			10/11/22 02:43	1
Bromobenzene	ND		0.50	ug/L			10/11/22 02:43	1
Bromochloromethane	ND		0.50	ug/L			10/11/22 02:43	1
Bromodichloromethane	ND		0.50	ug/L			10/11/22 02:43	1
Bromoform	ND		0.50	ug/L			10/11/22 02:43	1
Bromomethane (Methyl Bromide)	ND		0.50	ug/L			10/11/22 02:43	1
Carbon disulfide	ND		0.50	ug/L			10/11/22 02:43	1
Carbon tetrachloride	ND		0.50	ug/L			10/11/22 02:43	1
Chlorobenzene	ND		0.50	ug/L			10/11/22 02:43	1
Chlorodibromomethane	ND		0.50	ug/L			10/11/22 02:43	1
Chloroethane	ND		0.50	ug/L			10/11/22 02:43	1
Chloroform (Trichloromethane)	ND		0.50	ug/L			10/11/22 02:43	1
Dichloromethane	ND		0.50	ug/L			10/11/22 02:43	1
cis-1,2-Dichloroethylene	ND	*1	0.50	ug/L			10/11/22 02:43	1
cis-1,3-Dichloropropene	ND		0.50	ug/L			10/11/22 02:43	1

Eurofins Eaton Monrovia

Client Sample Results

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

Job ID: 380-23442-1

Client Sample ID: TB: MOANALUA WELLS

Lab Sample ID: 380-23442-2

Date Collected: 10/06/22 10:32

Matrix: Water

Date Received: 10/07/22 10:15

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromomethane	ND		0.50	ug/L			10/11/22 02:43	1
Dichlorodifluoromethane	ND		0.50	ug/L			10/11/22 02:43	1
Ethylbenzene	ND		0.50	ug/L			10/11/22 02:43	1
Hexachlorobutadiene	ND		0.50	ug/L			10/11/22 02:43	1
Isopropylbenzene	ND		0.50	ug/L			10/11/22 02:43	1
m,p-Xylenes	ND		0.50	ug/L			10/11/22 02:43	1
m-Dichlorobenzene (1,3-DCB)	ND		0.50	ug/L			10/11/22 02:43	1
Methyl-tert-butyl Ether (MTBE)	ND		0.50	ug/L			10/11/22 02:43	1
Naphthalene	ND		0.50	ug/L			10/11/22 02:43	1
n-Butylbenzene	ND		0.50	ug/L			10/11/22 02:43	1
N-Propylbenzene	ND		0.50	ug/L			10/11/22 02:43	1
o-Dichlorobenzene (1,2-DCB)	ND		0.50	ug/L			10/11/22 02:43	1
o-Chlorotoluene	ND		0.50	ug/L			10/11/22 02:43	1
o-Xylene	ND		0.50	ug/L			10/11/22 02:43	1
p-Chlorotoluene	ND		0.50	ug/L			10/11/22 02:43	1
p-Dichlorobenzene (1,4-DCB)	ND		0.50	ug/L			10/11/22 02:43	1
p-Isopropyltoluene	ND		0.50	ug/L			10/11/22 02:43	1
sec-Butylbenzene	ND		0.50	ug/L			10/11/22 02:43	1
Styrene	ND		0.50	ug/L			10/11/22 02:43	1
Tert-amyl methyl ether	ND		3.0	ug/L			10/11/22 02:43	1
Tert-butyl ethyl ether	ND		3.0	ug/L			10/11/22 02:43	1
tert-Butylbenzene	ND		0.50	ug/L			10/11/22 02:43	1
Tetrachloroethene (PCE)	ND		0.50	ug/L			10/11/22 02:43	1
Toluene	ND		0.50	ug/L			10/11/22 02:43	1
1,3-Dichloropropene, Total	ND		0.50	ug/L			10/11/22 02:43	1
Xylenes, Total	ND		0.50	ug/L			10/11/22 02:43	1
trans-1,2-Dichloroethylene	ND		0.50	ug/L			10/11/22 02:43	1
trans-1,3-Dichloropropene	ND		0.50	ug/L			10/11/22 02:43	1
Trichloroethylene (TCE)	ND		0.50	ug/L			10/11/22 02:43	1
Trichlorofluoromethane (Freon 11)	ND		0.50	ug/L			10/11/22 02:43	1
Vinyl Chloride (VC)	ND		0.30	ug/L			10/11/22 02:43	1
Trichlorotrifluoroethane	ND		0.50	ug/L			10/11/22 02:43	1
Bromoethane	ND		0.50	ug/L			10/11/22 02:43	1
Chloromethane (methyl chloride)	ND		0.50	ug/L			10/11/22 02:43	1
Diisopropyl ether	ND		3.0	ug/L			10/11/22 02:43	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	9.8	T J	ug/L		0.98			10/11/22 02:43	1
Unknown	3.1	T J	ug/L		1.43			10/11/22 02:43	1
Furfural	6.3	T J N	ug/L		9.77	98-01-1		10/11/22 02:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		70 - 130		10/11/22 02:43	1
4-Bromofluorobenzene (Surr)	103		70 - 130		10/11/22 02:43	1
Toluene-d8 (Surr)	84		70 - 130		10/11/22 02:43	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		0.041	ug/L		10/13/22 14:08	10/14/22 05:17	1
1,2-Dibromo-3-Chloropropane	ND		0.010	ug/L		10/13/22 14:08	10/14/22 05:17	1

Eurofins Eaton Monrovia

Client Sample Results

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

Job ID: 380-23442-1

Client Sample ID: TB: MOANALUA WELLS

Lab Sample ID: 380-23442-2

Date Collected: 10/06/22 10:32

Matrix: Water

Date Received: 10/07/22 10:15

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane	ND		0.010	ug/L		10/13/22 14:08	10/14/22 05:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane (Surr)	96		60 - 140	10/13/22 14:08	10/14/22 05:17	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0020	ug/L		10/11/22 15:15	10/11/22 21:38	1
Dieldrin	ND		0.0020	ug/L		10/11/22 15:15	10/11/22 21:38	1
Toxaphene	ND		0.10	ug/L		10/11/22 15:15	10/11/22 21:38	1
Alachlor	ND		0.10	ug/L		10/11/22 15:15	10/11/22 21:38	1
Chlordane (n.o.s.)	ND		0.10	ug/L		10/11/22 15:15	10/11/22 21:38	1
Endrin	ND		0.010	ug/L		10/11/22 15:15	10/11/22 21:38	1
Heptachlor	ND		0.010	ug/L		10/11/22 15:15	10/11/22 21:38	1
Heptachlor epoxide	ND		0.010	ug/L		10/11/22 15:15	10/11/22 21:38	1
gamma-BHC (Lindane)	ND		0.010	ug/L		10/11/22 15:15	10/11/22 21:38	1
Methoxychlor	ND		0.051	ug/L		10/11/22 15:15	10/11/22 21:38	1
PCB-1016	ND		0.071	ug/L		10/11/22 15:15	10/11/22 21:38	1
PCB-1221	ND		0.10	ug/L		10/11/22 15:15	10/11/22 21:38	1
PCB-1232	ND		0.10	ug/L		10/11/22 15:15	10/11/22 21:38	1
PCB-1242	ND		0.10	ug/L		10/11/22 15:15	10/11/22 21:38	1
PCB-1248	ND		0.10	ug/L		10/11/22 15:15	10/11/22 21:38	1
PCB-1254	ND		0.10	ug/L		10/11/22 15:15	10/11/22 21:38	1
PCB-1260	ND		0.071	ug/L		10/11/22 15:15	10/11/22 21:38	1
Polychlorinated biphenyls, Total	ND		0.10	ug/L		10/11/22 15:15	10/11/22 21:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	98		70 - 130	10/11/22 15:15	10/11/22 21:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.020		mg/L			10/11/22 16:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE	80		60 - 140		10/11/22 16:29	1

Action Limit Summary

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

Job ID: 380-23442-1

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

Lab Sample ID: 380-23442-1

PWSID Number: HI0000331

Compliance Check

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

Analyte	Result	Qualifier	Unit	Limit	EPAMCLS Limit	HI Org Limit	EPAMCL 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		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	*1	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
Di(2-ethylhexyl)adipate	ND		ug/L	400				525.2	Total/NA
Bis(2-ethylhexyl) phthalate	ND		ug/L	6				525.2	Total/NA
Endrin	ND		ug/L	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		ug/L	1				525.2	Total/NA
Hexachlorocyclopentadiene	ND		ug/L	50				525.2	Total/NA
Lindane	ND		ug/L	0.2				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-Dibromo-3-Chloropropane	ND		ug/L	0.2				504.1	Total/NA
1,2-Dibromoethane	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	ND		ug/L	0.2				505	Total/NA
gamma-BHC (Lindane)	ND		ug/L	0.2				505	Total/NA
Methoxychlor	ND		ug/L	40				505	Total/NA

Eurofins Eaton Monrovia

Action Limit Summary

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

Job ID: 380-23442-1

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

Lab Sample ID: 380-23442-1

PWSID Number: HI0000331

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCLS		HI Org	EPAMCL	Method	Prep Type
				Limit	Limit	Limit	Limit		
Polychlorinated biphenyls, Total	ND		ug/L	0.5				505	Total/NA
Chloride	90		mg/L		250			300.0	Total/NA
Nitrate as N	0.57		mg/L	10				300.0	Total/NA
Nitrate Nitrite as N	0.57		mg/L	10				300.0	Total/NA
Sulfate	14		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	290		mg/L		500			SM 2540C	Total/NA
Fluoride	ND		mg/L	4	2			SM 4500 F C	Total/NA

Client Sample ID: TB: MOANALUA WELLS

Lab Sample ID: 380-23442-2

Compliance Check

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

Analyte	Result	Qualifier	Unit	HI Org	EPAMCL	RL	Method	Prep Type
				Limit	Limit			
1,1,1-Trichloroethane	ND		ug/L	200.0	200	0.50	524.2	Total/NA
1,1,2-Trichloroethane	ND		ug/L	5.000	5	0.50	524.2	Total/NA
1,1-Dichloroethylene	ND		ug/L	7.000	7	0.50	524.2	Total/NA
1,2,3-Trichloropropane	ND		ug/L	0.6000		0.50	524.2	Total/NA
1,2,4-Trichlorobenzene	ND		ug/L	70.00	70	0.50	524.2	Total/NA
1,2-Dichloroethane	ND		ug/L	5.000	5	0.50	524.2	Total/NA
1,2-Dichloropropane	ND		ug/L	5.000	5	0.50	524.2	Total/NA
Benzene	ND		ug/L	5.000	5	0.50	524.2	Total/NA
Carbon tetrachloride	ND		ug/L	5.000	5	0.50	524.2	Total/NA
Chlorobenzene	ND		ug/L	100.0	100	0.50	524.2	Total/NA
Dichloromethane	ND		ug/L	5.000	5	0.50	524.2	Total/NA
cis-1,2-Dichloroethylene	ND	*1	ug/L	70.00	70	0.50	524.2	Total/NA
Ethylbenzene	ND		ug/L	700.0	700	0.50	524.2	Total/NA
o-Dichlorobenzene (1,2-DCB)	ND		ug/L	600.0	600	0.50	524.2	Total/NA
p-Dichlorobenzene (1,4-DCB)	ND		ug/L	75.000	75	0.50	524.2	Total/NA
Styrene	ND		ug/L	100.0	100	0.50	524.2	Total/NA
Tetrachloroethene (PCE)	ND		ug/L	5.000	5	0.50	524.2	Total/NA
Toluene	ND		ug/L	1000	1000	0.50	524.2	Total/NA
Xylenes, Total	ND		ug/L	10000	10000	0.50	524.2	Total/NA
trans-1,2-Dichloroethylene	ND		ug/L	100.0	100	0.50	524.2	Total/NA
Trichloroethylene (TCE)	ND		ug/L	5.000	5	0.50	524.2	Total/NA
Vinyl Chloride (VC)	ND		ug/L	2.000	2	0.30	524.2	Total/NA
1,2,3-Trichloropropane	ND		ug/L	0.6000		0.041	504.1	Total/NA
1,2-Dibromo-3-Chloropropane	ND		ug/L			0.010	504.1	Total/NA
1,2-Dibromoethane	ND		ug/L			0.010	504.1	Total/NA
Toxaphene	ND		ug/L			0.10	505	Total/NA
Alachlor	ND		ug/L			0.10	505	Total/NA
Endrin	ND		ug/L			0.010	505	Total/NA
Heptachlor	ND		ug/L			0.010	505	Total/NA

Eurofins Eaton Monrovia

Action Limit Summary

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

Job ID: 380-23442-1

Client Sample ID: TB: MOANALUA WELLS (Continued)

Lab Sample ID: 380-23442-2

Compliance Check

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

Analyte	Result	Qualifier	Unit	HI Org Limit	EPAMCL Limit	RL	Method	Prep Type
Heptachlor epoxide	ND		ug/L			0.010	505	Total/NA
gamma-BHC (Lindane)	ND		ug/L			0.010	505	Total/NA
Methoxychlor	ND		ug/L			0.051	505	Total/NA
Polychlorinated biphenyls, Total	ND		ug/L			0.10	505	Total/NA

Surrogate Summary

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

Job ID: 380-23442-1

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)
380-23442-1	MOANALUA WELLS (331-223-T	97	96	112
380-23442-2	TB: MOANALUA WELLS	97	97	115
LCS 380-20018/2	Lab Control Sample	101	95	108
LCS 380-20018/3	Lab Control Sample Dup	99	93	111
MB 380-20018/5	Method Blank	101	95	114

Surrogate Legend

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DCA = 1,2-Dichloroethane-d4 (Surr)

Method: 524.2 - Volatile Organic Compounds (GC/MS 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 380-20018/4	Lab Control Sample	100	95	111

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)
380-23442-1	MOANALUA WELLS (331-223-T	108	95	85
380-23442-2	TB: MOANALUA WELLS	104	103	84
LCS 380-20208/11	Lab Control Sample	99	99	100
LCS 380-20208/12	Lab Control Sample Dup	97	101	102
MB 380-20208/15	Method Blank	106	95	85
MRL 380-20208/14	Lab Control Sample	103	104	88

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)	TPP (70-130)	PRY (70-130)
380-23266-C-1-B MS	Matrix Spike	95	113	101
380-23442-1	MOANALUA WELLS (331-223-TP202)	97	109	100
380-23289-BU-1-A MS	Matrix Spike	98	113	102
LCS 380-20295/3-A	Lab Control Sample	97	115	101

Eurofins Eaton Monrovia

Surrogate Summary

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

Job ID: 380-23442-1

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)	TPP (70-130)	PRY (70-130)
LCSD 380-20295/4-A	Lab Control Sample Dup	96	111	99
MB 380-20295/1-A	Method Blank	98	104	94
MRL 380-20295/2-A	Lab Control Sample	97	103	100

Surrogate Legend

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

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		DBPP2 (60-140)
380-22826-A-2-A DU	Duplicate	97
380-22826-B-1-A MS	Matrix Spike	100
380-23442-1	MOANALUA WELLS (331-223-TP202)	102
380-23442-2	TB: MOANALUA WELLS	96
LCS 380-20612/3-A	Lab Control Sample	92
MBL 380-20612/4-A	Method Blank	93
MRL 380-20612/1-A	Lab Control Sample	92
MRL 380-20612/2-A	Lab Control Sample	94

Surrogate Legend

DBPP = 1,2-Dibromopropane (Surr)

Method: 505 - Organochlorine Pesticides/PCBs (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		TCX1 (70-130)
380-23416-C-1-A MS	Matrix Spike	96
380-23416-D-1-A MS	Matrix Spike	99
380-23442-1	MOANALUA WELLS (331-223-TP202)	93
380-23442-1 MS	MOANALUA WELLS (331-223-TP202)	98
380-23442-1 MS	MOANALUA WELLS (331-223-TP202)	90
380-23442-2	TB: MOANALUA WELLS	98
MB 380-20411/7-A	Method Blank	111
MRL 380-20411/2-A	Lab Control Sample	107
MRL 380-20411/3-A	Lab Control Sample	101
MRL 380-20411/4-A	Lab Control Sample	96
MRL 380-20411/5-A	Lab Control Sample	106
MRL 380-20411/6-A	Lab Control Sample	100

Surrogate Legend

TCX = Tetrachloro-m-xylene

Surrogate Summary

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

Job ID: 380-23442-1

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

Matrix: BlankMatrix

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)						
		Acenaphtl (27-133)	Phenanth (43-129)	CRY (52-144)	NPT (25-125)	PHL (0-130)	PRY (36-161)	TBP (30-130)
100732-B1	Method Blank	83	90	84	73	40	80	56
100732-BS1	Lab Control Sample	83	93	97	76	33	84	55
100732-BS2	Lab Control Sample Dup	92	98	103	74	35	87	61

Surrogate Legend

(d10-Acenaphthene) = (d10-Acenaphthene)

(d10-Phenanthrene) = (d10-Phenanthrene)

CRY = (d12-Chrysene)

NPT = (d8-Naphthalene)

PHL = (d5-Phenol)

PRY = (d12-Perylene)

TBP = (2,4,6-Tribromophenol)

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)						
		Acenaphtl (45-118)	Phenanth (56-123)	CRY (36-142)	NPT (20-112)	PHL (0-85)	PRY (36-161)	TBP (31-143)
380-23442-1	MOANALUA WELLS (331-223-T	87	95	100	72	16	80	62

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
22DSJ041WB	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)
22DSJ041WL	Lab Control Sample	100	102
22J5J041WL	Lab Control Sample	100	102
22J8J041WL	Lab Control Sample	86	91

Surrogate Legend

Eurofins Eaton Monrovia

Surrogate Summary

Client: City & County of Honolulu
Project/Site: RED-HILL
BB = BROMOBENZENE
HEXACOSANE = HEXACOSANE

Job ID: 380-23442-1

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)
380-23442-1	MOANALUA WELLS (331-223-T	104	94

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)
22J124-01M	Matrix Spike	93
22J124-01S	Matrix Spike Duplicate	104

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
22VGH7J03B	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)
22VGH7J03C	LCD	110
22VGH7J03L	Lab Control Sample	106

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)
380-23442-1	MOANALUA WELLS (331-223-T	79
380-23442-2	TB: MOANALUA WELLS	80

Surrogate Legend

BFB = BROMOFLUOROBENZENE

Eurofins Eaton Monrovia

QC Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: MB 380-20208/15
Matrix: Water
Analysis Batch: 20208

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	ug/L			10/10/22 20:59	1
1,1,1-Trichloroethane	ND		0.50	ug/L			10/10/22 20:59	1
1,1,2,2-Tetrachloroethane	ND		0.50	ug/L			10/10/22 20:59	1
1,1,2-Trichloroethane	ND		0.50	ug/L			10/10/22 20:59	1
1,1-Dichloroethane	ND		0.50	ug/L			10/10/22 20:59	1
1,1-Dichlorethylene	ND		0.50	ug/L			10/10/22 20:59	1
1,1-Dichloropropene	ND		0.50	ug/L			10/10/22 20:59	1
1,2,3-Trichlorobenzene	ND		0.50	ug/L			10/10/22 20:59	1
1,2,3-Trichloropropane	ND		0.50	ug/L			10/10/22 20:59	1
1,2,4-Trichlorobenzene	ND		0.50	ug/L			10/10/22 20:59	1
1,2,4-Trimethylbenzene	ND		0.50	ug/L			10/10/22 20:59	1
1,2-Dichloroethane	ND		0.50	ug/L			10/10/22 20:59	1
1,2-Dichloropropane	ND		0.50	ug/L			10/10/22 20:59	1
1,3,5-Trimethylbenzene	ND		0.50	ug/L			10/10/22 20:59	1
1,3-Dichloropropane	ND		0.50	ug/L			10/10/22 20:59	1
2,2-Dichloropropane	ND		0.50	ug/L			10/10/22 20:59	1
2-Butanone (MEK)	ND		5.0	ug/L			10/10/22 20:59	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	ug/L			10/10/22 20:59	1
Acetone	ND		500	ug/L			10/10/22 20:59	1
Benzene	ND		0.50	ug/L			10/10/22 20:59	1
Bromobenzene	ND		0.50	ug/L			10/10/22 20:59	1
Bromochloromethane	ND		0.50	ug/L			10/10/22 20:59	1
Bromodichloromethane	ND		0.50	ug/L			10/10/22 20:59	1
Bromoform	ND		0.50	ug/L			10/10/22 20:59	1
Bromomethane (Methyl Bromide)	ND		0.50	ug/L			10/10/22 20:59	1
Carbon disulfide	ND		0.50	ug/L			10/10/22 20:59	1
Carbon tetrachloride	ND		0.50	ug/L			10/10/22 20:59	1
Chlorobenzene	ND		0.50	ug/L			10/10/22 20:59	1
Chlorodibromomethane	ND		0.50	ug/L			10/10/22 20:59	1
Chloroethane	ND		0.50	ug/L			10/10/22 20:59	1
Chloroform (Trichloromethane)	ND		0.50	ug/L			10/10/22 20:59	1
Dichloromethane	ND		0.50	ug/L			10/10/22 20:59	1
cis-1,2-Dichloroethylene	ND		0.50	ug/L			10/10/22 20:59	1
cis-1,3-Dichloropropene	ND		0.50	ug/L			10/10/22 20:59	1
Dibromomethane	ND		0.50	ug/L			10/10/22 20:59	1
Dichlorodifluoromethane	ND		0.50	ug/L			10/10/22 20:59	1
Ethylbenzene	ND		0.50	ug/L			10/10/22 20:59	1
Hexachlorobutadiene	ND		0.50	ug/L			10/10/22 20:59	1
Isopropylbenzene	ND		0.50	ug/L			10/10/22 20:59	1
m,p-Xylenes	ND		0.50	ug/L			10/10/22 20:59	1
m-Dichlorobenzene (1,3-DCB)	ND		0.50	ug/L			10/10/22 20:59	1
Methyl-tert-butyl Ether (MTBE)	ND		0.50	ug/L			10/10/22 20:59	1
Naphthalene	ND		0.50	ug/L			10/10/22 20:59	1
n-Butylbenzene	ND		0.50	ug/L			10/10/22 20:59	1
N-Propylbenzene	ND		0.50	ug/L			10/10/22 20:59	1
o-Dichlorobenzene (1,2-DCB)	ND		0.50	ug/L			10/10/22 20:59	1
o-Chlorotoluene	ND		0.50	ug/L			10/10/22 20:59	1
o-Xylene	ND		0.50	ug/L			10/10/22 20:59	1

Eurofins Eaton Monrovia

QC Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: MB 380-20208/15
Matrix: Water
Analysis Batch: 20208

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
p-Chlorotoluene	ND		0.50	ug/L			10/10/22 20:59	1
p-Dichlorobenzene (1,4-DCB)	ND		0.50	ug/L			10/10/22 20:59	1
p-Isopropyltoluene	ND		0.50	ug/L			10/10/22 20:59	1
sec-Butylbenzene	ND		0.50	ug/L			10/10/22 20:59	1
Styrene	ND		0.50	ug/L			10/10/22 20:59	1
Tert-amyl methyl ether	ND		3.0	ug/L			10/10/22 20:59	1
Tert-butyl ethyl ether	ND		3.0	ug/L			10/10/22 20:59	1
tert-Butylbenzene	ND		0.50	ug/L			10/10/22 20:59	1
Tetrachloroethene (PCE)	ND		0.50	ug/L			10/10/22 20:59	1
Toluene	ND		0.50	ug/L			10/10/22 20:59	1
1,3-Dichloropropene, Total	ND		0.50	ug/L			10/10/22 20:59	1
Xylenes, Total	ND		0.50	ug/L			10/10/22 20:59	1
trans-1,2-Dichloroethylene	ND		0.50	ug/L			10/10/22 20:59	1
trans-1,3-Dichloropropene	ND		0.50	ug/L			10/10/22 20:59	1
Trichloroethylene (TCE)	ND		0.50	ug/L			10/10/22 20:59	1
Trichlorofluoromethane (Freon 11)	ND		0.50	ug/L			10/10/22 20:59	1
Vinyl Chloride (VC)	ND		0.30	ug/L			10/10/22 20:59	1
Trichlorotrifluoroethane	ND		0.50	ug/L			10/10/22 20:59	1
Bromoethane	ND		0.50	ug/L			10/10/22 20:59	1
Chloromethane (methyl chloride)	ND		0.50	ug/L			10/10/22 20:59	1
Diisopropyl ether	ND		3.0	ug/L			10/10/22 20:59	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					10/10/22 20:59	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		70 - 130		10/10/22 20:59	1
4-Bromofluorobenzene (Surr)	95		70 - 130		10/10/22 20:59	1
Toluene-d8 (Surr)	85		70 - 130		10/10/22 20:59	1

Lab Sample ID: LCS 380-20208/11
Matrix: Water
Analysis Batch: 20208

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	5.19		ug/L		104	70 - 130
1,1,1-Trichloroethane	5.00	5.17		ug/L		103	70 - 130
1,1,1,2,2-Tetrachloroethane	5.00	5.29		ug/L		106	70 - 130
1,1,2-Trichloroethane	5.00	5.15		ug/L		103	70 - 130
1,1-Dichloroethane	5.00	5.06		ug/L		101	70 - 130
1,1-Dichloroethylene	5.00	5.16		ug/L		103	70 - 130
1,1-Dichloropropene	5.00	5.42		ug/L		108	70 - 130
1,2,3-Trichlorobenzene	5.00	5.74		ug/L		115	70 - 130
1,2,3-Trichloropropane	5.00	5.23		ug/L		105	70 - 130
1,2,4-Trichlorobenzene	5.00	5.32		ug/L		106	70 - 130
1,2,4-Trimethylbenzene	5.00	5.88		ug/L		118	70 - 130
1,2-Dichloroethane	5.00	5.22		ug/L		104	70 - 130
1,2-Dichloropropane	5.00	5.23		ug/L		105	70 - 130

Eurofins Eaton Monrovia

QC Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: LCS 380-20208/11
Matrix: Water
Analysis Batch: 20208

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-Trimethylbenzene	5.00	5.88		ug/L		118	70 - 130
1,3-Dichloropropane	5.00	5.03		ug/L		101	70 - 130
2,2-Dichloropropane	5.00	5.38		ug/L		108	70 - 130
2-Butanone (MEK)	50.0	56.1		ug/L		112	70 - 130
4-Methyl-2-pentanone (MIBK)	50.0	56.4		ug/L		113	70 - 130
Acetone	50.0	52.8	J	ug/L		106	70 - 130
Benzene	5.00	5.34		ug/L		107	70 - 130
Bromobenzene	5.00	5.56		ug/L		111	70 - 130
Bromochloromethane	5.00	5.02		ug/L		100	70 - 130
Bromodichloromethane	5.00	5.07		ug/L		101	70 - 130
Bromoform	5.00	4.82		ug/L		96	70 - 130
Bromomethane (Methyl Bromide)	5.00	5.19		ug/L		104	70 - 130
Carbon disulfide	5.00	5.38		ug/L		108	70 - 130
Carbon tetrachloride	5.00	5.24		ug/L		105	70 - 130
Chlorobenzene	5.00	5.35		ug/L		107	70 - 130
Chlorodibromomethane	5.00	5.15		ug/L		103	70 - 130
Dichloromethane	5.00	5.28		ug/L		106	70 - 130
cis-1,3-Dichloropropene	5.00	4.91		ug/L		98	70 - 130
Ethylbenzene	5.00	5.53		ug/L		111	70 - 130
Hexachlorobutadiene	5.00	5.92		ug/L		118	70 - 130
Isopropylbenzene	5.00	5.62		ug/L		112	70 - 130
m,p-Xylenes	10.0	11.9		ug/L		119	70 - 130
m-Dichlorobenzene (1,3-DCB)	5.00	5.57		ug/L		111	70 - 130
Methyl-tert-butyl Ether (MTBE)	5.00	5.05		ug/L		101	70 - 130
Naphthalene	5.00	5.39		ug/L		108	70 - 130
n-Butylbenzene	5.00	5.75		ug/L		115	70 - 130
N-Propylbenzene	5.00	5.81		ug/L		116	70 - 130
o-Dichlorobenzene (1,2-DCB)	5.00	5.44		ug/L		109	70 - 130
o-Chlorotoluene	5.00	5.85		ug/L		117	70 - 130
o-Xylene	5.00	5.54		ug/L		111	70 - 130
p-Chlorotoluene	5.00	6.00		ug/L		120	70 - 130
p-Dichlorobenzene (1,4-DCB)	5.00	5.74		ug/L		115	70 - 130
p-Isopropyltoluene	5.00	6.03		ug/L		121	70 - 130
sec-Butylbenzene	5.00	5.99		ug/L		120	70 - 130
Styrene	5.00	5.72		ug/L		114	70 - 130
Tert-amyl methyl ether	5.00	5.36		ug/L		107	70 - 130
Tert-butyl ethyl ether	5.00	5.19		ug/L		104	70 - 130
tert-Butylbenzene	5.00	5.75		ug/L		115	70 - 130
Tetrachloroethene (PCE)	5.00	5.24		ug/L		105	70 - 130
Toluene	5.00	5.58		ug/L		112	70 - 130
1,3-Dichloropropene, Total	10.0	9.67		ug/L		97	70 - 130
Xylenes, Total	15.0	17.4		ug/L		116	70 - 130
trans-1,2-Dichloroethylene	5.00	5.25		ug/L		105	70 - 130
trans-1,3-Dichloropropene	5.00	4.76		ug/L		95	70 - 130
Trichloroethylene (TCE)	5.00	5.17		ug/L		103	70 - 130
Trichlorofluoromethane (Freon 11)	5.00	5.55		ug/L		111	70 - 130
Vinyl Chloride (VC)	5.00	5.30		ug/L		106	70 - 130
Trichlorotrifluoroethane	5.00	5.71		ug/L		114	70 - 130

Eurofins Eaton Monrovia

QC Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: LCS 380-20208/11
Matrix: Water
Analysis Batch: 20208

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	5.22		ug/L		104	70 - 130
Diisopropyl ether	5.00	5.22		ug/L		104	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		70 - 130
4-Bromofluorobenzene (Surr)	99		70 - 130
Toluene-d8 (Surr)	100		70 - 130

Lab Sample ID: LCSD 380-20208/12
Matrix: Water
Analysis Batch: 20208

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	4.96		ug/L		99	70 - 130	5	20
1,1,1-Trichloroethane	5.00	4.63		ug/L		93	70 - 130	11	20
1,1,2,2-Tetrachloroethane	5.00	5.13		ug/L		103	70 - 130	3	20
1,1,2-Trichloroethane	5.00	4.91		ug/L		98	70 - 130	5	20
1,1-Dichloroethane	5.00	4.78		ug/L		96	70 - 130	6	20
1,1-Dichlorethylene	5.00	4.75		ug/L		95	70 - 130	8	20
1,1-Dichloropropene	5.00	4.97		ug/L		99	70 - 130	9	20
1,2,3-Trichlorobenzene	5.00	5.37		ug/L		107	70 - 130	7	20
1,2,3-Trichloropropane	5.00	5.28		ug/L		106	70 - 130	1	20
1,2,4-Trichlorobenzene	5.00	5.01		ug/L		100	70 - 130	6	20
1,2,4-Trimethylbenzene	5.00	5.49		ug/L		110	70 - 130	7	20
1,2-Dichloroethane	5.00	4.85		ug/L		97	70 - 130	8	20
1,2-Dichloropropane	5.00	5.02		ug/L		100	70 - 130	4	20
1,3,5-Trimethylbenzene	5.00	5.24		ug/L		105	70 - 130	12	20
1,3-Dichloropropane	5.00	4.85		ug/L		97	70 - 130	4	20
2,2-Dichloropropane	5.00	4.42		ug/L		88	70 - 130	20	20
2-Butanone (MEK)	50.0	48.7		ug/L		97	70 - 130	14	20
4-Methyl-2-pentanone (MIBK)	50.0	54.5		ug/L		109	70 - 130	3	20
Acetone	50.0	51.9	J	ug/L		104	70 - 130	2	20
Benzene	5.00	5.11		ug/L		102	70 - 130	4	20
Bromobenzene	5.00	5.30		ug/L		106	70 - 130	5	20
Bromochloromethane	5.00	4.79		ug/L		96	70 - 130	5	20
Bromodichloromethane	5.00	4.81		ug/L		96	70 - 130	5	20
Bromoform	5.00	4.95		ug/L		99	70 - 130	3	20
Bromomethane (Methyl Bromide)	5.00	4.76		ug/L		95	70 - 130	9	20
Carbon disulfide	5.00	4.94		ug/L		99	70 - 130	8	20
Carbon tetrachloride	5.00	4.93		ug/L		99	70 - 130	6	20
Chlorobenzene	5.00	4.95		ug/L		99	70 - 130	8	20
Chlorodibromomethane	5.00	4.77		ug/L		95	70 - 130	8	20
Dichloromethane	5.00	4.80		ug/L		96	70 - 130	9	20
cis-1,3-Dichloropropene	5.00	4.60		ug/L		92	70 - 130	7	20
Ethylbenzene	5.00	5.03		ug/L		101	70 - 130	9	20
Hexachlorobutadiene	5.00	5.34		ug/L		107	70 - 130	10	20
Isopropylbenzene	5.00	5.32		ug/L		106	70 - 130	6	20
m,p-Xylenes	10.0	10.8		ug/L		108	70 - 130	10	20

Eurofins Eaton Monrovia

QC Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: LCSD 380-20208/12
Matrix: Water
Analysis Batch: 20208

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
m-Dichlorobenzene (1,3-DCB)	5.00	5.35		ug/L		107	70 - 130	4	20
Methyl-tert-butyl Ether (MTBE)	5.00	4.87		ug/L		97	70 - 130	4	20
Naphthalene	5.00	5.06		ug/L		101	70 - 130	6	20
n-Butylbenzene	5.00	5.34		ug/L		107	70 - 130	7	20
N-Propylbenzene	5.00	5.29		ug/L		106	70 - 130	9	20
o-Dichlorobenzene (1,2-DCB)	5.00	5.25		ug/L		105	70 - 130	3	20
o-Chlorotoluene	5.00	5.40		ug/L		108	70 - 130	8	20
o-Xylene	5.00	5.06		ug/L		101	70 - 130	9	20
p-Chlorotoluene	5.00	5.42		ug/L		108	70 - 130	10	20
p-Dichlorobenzene (1,4-DCB)	5.00	5.61		ug/L		112	70 - 130	2	20
p-Isopropyltoluene	5.00	5.62		ug/L		112	70 - 130	7	20
sec-Butylbenzene	5.00	5.67		ug/L		113	70 - 130	5	20
Styrene	5.00	5.00		ug/L		100	70 - 130	14	20
Tert-amyl methyl ether	5.00	4.86		ug/L		97	70 - 130	10	20
Tert-butyl ethyl ether	5.00	4.91		ug/L		98	70 - 130	5	20
tert-Butylbenzene	5.00	5.50		ug/L		110	70 - 130	4	20
Tetrachloroethene (PCE)	5.00	4.71		ug/L		94	70 - 130	11	20
Toluene	5.00	5.17		ug/L		103	70 - 130	8	20
1,3-Dichloropropene, Total	10.0	9.06		ug/L		91	70 - 130	7	20
Xylenes, Total	15.0	15.9		ug/L		106	70 - 130	9	20
trans-1,2-Dichloroethylene	5.00	4.77		ug/L		95	70 - 130	9	20
trans-1,3-Dichloropropene	5.00	4.46		ug/L		89	70 - 130	7	20
Trichloroethylene (TCE)	5.00	4.88		ug/L		98	70 - 130	6	20
Trichlorofluoromethane (Freon 11)	5.00	5.20		ug/L		104	70 - 130	6	20
Vinyl Chloride (VC)	5.00	4.32		ug/L		86	70 - 130	20	20
Trichlorotrifluoroethane	5.00	4.92		ug/L		98	70 - 130	15	20
Bromoethane	5.00	4.60		ug/L		92	70 - 130	13	20
Diisopropyl ether	5.00	4.91		ug/L		98	70 - 130	6	20

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	97		70 - 130
4-Bromofluorobenzene (Surr)	101		70 - 130
Toluene-d8 (Surr)	102		70 - 130

Lab Sample ID: MRL 380-20208/14
Matrix: Water
Analysis Batch: 20208

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	0.482	J	ug/L		96	50 - 150
1,1,1-Trichloroethane	0.500	0.513		ug/L		103	50 - 150
1,1,1,2,2-Tetrachloroethane	0.500	0.538		ug/L		108	50 - 150
1,1,2-Trichloroethane	0.500	0.520		ug/L		104	50 - 150
1,1-Dichloroethane	0.500	0.544		ug/L		109	50 - 150
1,1-Dichloroethylene	0.500	0.489	J	ug/L		98	50 - 150
1,1-Dichloropropene	0.500	0.528		ug/L		106	50 - 150
1,2,3-Trichlorobenzene	0.500	0.582		ug/L		116	50 - 150
1,2,3-Trichloropropane	0.500	0.569		ug/L		114	50 - 150

Eurofins Eaton Monrovia

QC Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: MRL 380-20208/14
Matrix: Water
Analysis Batch: 20208

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1,2,4-Trichlorobenzene	0.500	0.509		ug/L		102	50 - 150
1,2,4-Trimethylbenzene	0.500	0.354	J	ug/L		71	50 - 150
1,2-Dichloroethane	0.500	0.518		ug/L		104	50 - 150
1,2-Dichloropropane	0.500	0.518		ug/L		104	50 - 150
1,3,5-Trimethylbenzene	0.500	0.365	J	ug/L		73	50 - 150
1,3-Dichloropropane	0.500	0.499	J	ug/L		100	50 - 150
2,2-Dichloropropane	0.500	0.417	J	ug/L		83	50 - 150
2-Butanone (MEK)	5.00	3.91	J	ug/L		78	50 - 150
4-Methyl-2-pentanone (MIBK)	5.00	4.22	J	ug/L		84	50 - 150
Acetone	5.00	4.63	J	ug/L		93	50 - 150
Benzene	0.500	0.502		ug/L		100	50 - 150
Bromobenzene	0.500	0.497	J	ug/L		99	50 - 150
Bromochloromethane	0.500	0.488	J	ug/L		98	50 - 150
Bromodichloromethane	0.500	0.480	J	ug/L		96	50 - 150
Bromoform	0.500	0.505		ug/L		101	50 - 150
Bromomethane (Methyl Bromide)	0.500	0.526		ug/L		105	50 - 150
Carbon disulfide	0.500	0.458	J	ug/L		92	50 - 150
Carbon tetrachloride	0.500	0.497	J	ug/L		99	50 - 150
Chlorobenzene	0.500	0.445	J	ug/L		89	50 - 150
Chlorodibromomethane	0.500	0.445	J	ug/L		89	50 - 150
Dichloromethane	0.500	0.593		ug/L		119	50 - 150
cis-1,3-Dichloropropene	0.500	0.382	J	ug/L		76	50 - 150
Ethylbenzene	0.500	0.412	J	ug/L		82	50 - 150
Hexachlorobutadiene	0.500	0.622		ug/L		124	50 - 150
Isopropylbenzene	0.500	0.428	J	ug/L		86	50 - 150
m,p-Xylenes	1.00	0.767		ug/L		77	50 - 150
m-Dichlorobenzene (1,3-DCB)	0.500	0.505		ug/L		101	50 - 150
Methyl-tert-butyl Ether (MTBE)	0.500	0.526		ug/L		105	50 - 150
Naphthalene	0.500	0.459	J	ug/L		92	50 - 150
n-Butylbenzene	0.500	0.407	J	ug/L		81	50 - 150
N-Propylbenzene	0.500	0.414	J	ug/L		83	50 - 150
o-Dichlorobenzene (1,2-DCB)	0.500	0.514		ug/L		103	50 - 150
o-Chlorotoluene	0.500	0.477	J	ug/L		95	50 - 150
o-Xylene	0.500	0.382	J	ug/L		76	50 - 150
p-Chlorotoluene	0.500	0.420	J	ug/L		84	50 - 150
p-Dichlorobenzene (1,4-DCB)	0.500	0.530		ug/L		106	50 - 150
p-Isopropyltoluene	0.500	0.419	J	ug/L		84	50 - 150
sec-Butylbenzene	0.500	0.429	J	ug/L		86	50 - 150
Styrene	0.500	0.310	J	ug/L		62	50 - 150
Tert-amyl methyl ether	0.500	0.460	J	ug/L		92	50 - 150
Tert-butyl ethyl ether	0.500	0.474	J	ug/L		95	50 - 150
tert-Butylbenzene	0.500	0.455	J	ug/L		91	50 - 150
Tetrachloroethene (PCE)	0.500	0.524		ug/L		105	50 - 150
Toluene	0.500	0.506		ug/L		101	50 - 150
1,3-Dichloropropene, Total	1.00	0.748		ug/L		75	50 - 150
Xylenes, Total	1.50	1.15		ug/L		77	50 - 150
trans-1,2-Dichloroethylene	0.500	0.515		ug/L		103	50 - 150
trans-1,3-Dichloropropene	0.500	0.366	J	ug/L		73	50 - 150
Trichloroethylene (TCE)	0.500	0.506		ug/L		101	50 - 150

Eurofins Eaton Monrovia

QC Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: MRL 380-20208/14
Matrix: Water
Analysis Batch: 20208

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Trichlorofluoromethane (Freon 11)	0.500	0.449	J	ug/L		90	50 - 150
Vinyl Chloride (VC)	0.500	0.364		ug/L		73	50 - 150
Trichlorotrifluoroethane	0.500	0.382	J	ug/L		76	50 - 150
Bromoethane	0.500	0.435	J	ug/L		87	50 - 150
Diisopropyl ether	0.500	0.502	J	ug/L		100	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	103		70 - 130
4-Bromofluorobenzene (Surr)	104		70 - 130
Toluene-d8 (Surr)	88		70 - 130

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

Lab Sample ID: MB 380-20018/5
Matrix: Water
Analysis Batch: 20018

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tertiary Butyl Alcohol (TBA)	ND		2.0	ug/L			10/07/22 16:21	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		70 - 130		10/07/22 16:21	1
4-Bromofluorobenzene (Surr)	95		70 - 130		10/07/22 16:21	1
1,2-Dichloroethane-d4 (Surr)	114		70 - 130		10/07/22 16:21	1

Lab Sample ID: LCS 380-20018/2
Matrix: Water
Analysis Batch: 20018

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Tertiary Butyl Alcohol (TBA)	5.00	6.38		ug/L		128	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	101		70 - 130
4-Bromofluorobenzene (Surr)	95		70 - 130
1,2-Dichloroethane-d4 (Surr)	108		70 - 130

Lab Sample ID: LCSD 380-20018/3
Matrix: Water
Analysis Batch: 20018

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Tertiary Butyl Alcohol (TBA)	5.00	5.37		ug/L		107	70 - 130	17	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	99		70 - 130
4-Bromofluorobenzene (Surr)	93		70 - 130

Eurofins Eaton Monrovia

QC Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: LCSD 380-20018/3
Matrix: Water
Analysis Batch: 20018

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

Surrogate	LCS D %Recovery	LCS D Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	111		70 - 130

Lab Sample ID: MRL 380-20018/4
Matrix: Water
Analysis Batch: 20018

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	2.43		ug/L		121	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
Toluene-d8 (Surr)	100		50 - 150
4-Bromofluorobenzene (Surr)	95		50 - 150
1,2-Dichloroethane-d4 (Surr)	111		50 - 150

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

Lab Sample ID: MB 380-20295/1-A
Matrix: Water
Analysis Batch: 20427

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 20295

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	ND		0.097	ug/L		10/11/22 09:24	10/12/22 17:50	1
2,4'-DDE	ND		0.097	ug/L		10/11/22 09:24	10/12/22 17:50	1
2,4'-DDT	ND		0.097	ug/L		10/11/22 09:24	10/12/22 17:50	1
2,4-Dinitrotoluene	ND		0.097	ug/L		10/11/22 09:24	10/12/22 17:50	1
2,6-Dinitrotoluene	ND		0.097	ug/L		10/11/22 09:24	10/12/22 17:50	1
4,4'-DDD	ND		0.097	ug/L		10/11/22 09:24	10/12/22 17:50	1
4,4'-DDE	ND		0.097	ug/L		10/11/22 09:24	10/12/22 17:50	1
4,4'-DDT	ND		0.097	ug/L		10/11/22 09:24	10/12/22 17:50	1
Acenaphthene	ND		0.097	ug/L		10/11/22 09:24	10/12/22 17:50	1
Acenaphthylene	ND		0.097	ug/L		10/11/22 09:24	10/12/22 17:50	1
Acetochlor	ND		0.097	ug/L		10/11/22 09:24	10/12/22 17:50	1
Alachlor	ND		0.049	ug/L		10/11/22 09:24	10/12/22 17:50	1
alpha-BHC	ND		0.097	ug/L		10/11/22 09:24	10/12/22 17:50	1
alpha-Chlordane	ND		0.049	ug/L		10/11/22 09:24	10/12/22 17:50	1
Anthracene	ND		0.019	ug/L		10/11/22 09:24	10/12/22 17:50	1
Atrazine	ND		0.049	ug/L		10/11/22 09:24	10/12/22 17:50	1
Benz(a)anthracene	ND		0.049	ug/L		10/11/22 09:24	10/12/22 17:50	1
Benzo[a]pyrene	ND		0.019	ug/L		10/11/22 09:24	10/12/22 17:50	1
Benzo[b]fluoranthene	ND		0.019	ug/L		10/11/22 09:24	10/12/22 17:50	1
Benzo[g,h,i]perylene	ND		0.049	ug/L		10/11/22 09:24	10/12/22 17:50	1
Benzo[k]fluoranthene	ND		0.019	ug/L		10/11/22 09:24	10/12/22 17:50	1
beta-BHC	ND		0.097	ug/L		10/11/22 09:24	10/12/22 17:50	1
Bromacil	ND		0.097	ug/L		10/11/22 09:24	10/12/22 17:50	1
Butachlor	ND		0.049	ug/L		10/11/22 09:24	10/12/22 17:50	1
Butylbenzylphthalate	ND		0.49	ug/L		10/11/22 09:24	10/12/22 17:50	1
Caffeine	ND		0.049	ug/L		10/11/22 09:24	10/12/22 17:50	1
Chlorobenzilate	ND		0.097	ug/L		10/11/22 09:24	10/12/22 17:50	1

Eurofins Eaton Monrovia

QC Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: MB 380-20295/1-A
Matrix: Water
Analysis Batch: 20427

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 20295

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroneb	ND		0.097	ug/L		10/11/22 09:24	10/12/22 17:50	1
Chlorothalonil (Draconil, Bravo)	ND		0.097	ug/L		10/11/22 09:24	10/12/22 17:50	1
Chlorpyrifos	ND		0.049	ug/L		10/11/22 09:24	10/12/22 17:50	1
Chrysene	ND		0.019	ug/L		10/11/22 09:24	10/12/22 17:50	1
delta-BHC	ND		0.097	ug/L		10/11/22 09:24	10/12/22 17:50	1
Di(2-ethylhexyl)adipate	ND		0.58	ug/L		10/11/22 09:24	10/12/22 17:50	1
Bis(2-ethylhexyl) phthalate	ND		0.58	ug/L		10/11/22 09:24	10/12/22 17:50	1
Diazinon (Qualitative)	ND		0.097	ug/L		10/11/22 09:24	10/12/22 17:50	1
Dibenz(a,h)anthracene	ND		0.049	ug/L		10/11/22 09:24	10/12/22 17:50	1
Diclorvos (DDVP)	ND		0.049	ug/L		10/11/22 09:24	10/12/22 17:50	1
Dieldrin	ND		0.19	ug/L		10/11/22 09:24	10/12/22 17:50	1
Diethylphthalate	ND		0.49	ug/L		10/11/22 09:24	10/12/22 17:50	1
Dimethoate	ND		0.097	ug/L		10/11/22 09:24	10/12/22 17:50	1
Dimethylphthalate	ND		0.49	ug/L		10/11/22 09:24	10/12/22 17:50	1
Di-n-butyl phthalate	ND		0.97	ug/L		10/11/22 09:24	10/12/22 17:50	1
Di-n-octyl phthalate	ND		0.097	ug/L		10/11/22 09:24	10/12/22 17:50	1
Endosulfan I (Alpha)	ND		0.097	ug/L		10/11/22 09:24	10/12/22 17:50	1
Endosulfan II (Beta)	ND		0.097	ug/L		10/11/22 09:24	10/12/22 17:50	1
Endosulfan sulfate	ND		0.097	ug/L		10/11/22 09:24	10/12/22 17:50	1
Endrin	ND		0.097	ug/L		10/11/22 09:24	10/12/22 17:50	1
Endrin aldehyde	ND		0.097	ug/L		10/11/22 09:24	10/12/22 17:50	1
EPTC	ND		0.097	ug/L		10/11/22 09:24	10/12/22 17:50	1
Fluoranthene	ND		0.097	ug/L		10/11/22 09:24	10/12/22 17:50	1
Fluorene	ND		0.049	ug/L		10/11/22 09:24	10/12/22 17:50	1
gamma-Chlordane	ND		0.049	ug/L		10/11/22 09:24	10/12/22 17:50	1
Heptachlor	ND		0.039	ug/L		10/11/22 09:24	10/12/22 17:50	1
Heptachlor epoxide (isomer B)	ND		0.049	ug/L		10/11/22 09:24	10/12/22 17:50	1
Hexachlorobenzene	ND		0.049	ug/L		10/11/22 09:24	10/12/22 17:50	1
Hexachlorocyclopentadiene	ND		0.049	ug/L		10/11/22 09:24	10/12/22 17:50	1
Indeno[1,2,3-cd]pyrene	ND		0.049	ug/L		10/11/22 09:24	10/12/22 17:50	1
Isophorone	ND		0.49	ug/L		10/11/22 09:24	10/12/22 17:50	1
Lindane	ND		0.039	ug/L		10/11/22 09:24	10/12/22 17:50	1
Malathion	ND		0.097	ug/L		10/11/22 09:24	10/12/22 17:50	1
Methoxychlor	ND		0.097	ug/L		10/11/22 09:24	10/12/22 17:50	1
Metolachlor	ND		0.049	ug/L		10/11/22 09:24	10/12/22 17:50	1
Metribuzin	ND		0.049	ug/L		10/11/22 09:24	10/12/22 17:50	1
Molinate	ND		0.097	ug/L		10/11/22 09:24	10/12/22 17:50	1
Naphthalene	ND		0.29	ug/L		10/11/22 09:24	10/12/22 17:50	1
Parathion	ND		0.097	ug/L		10/11/22 09:24	10/12/22 17:50	1
Pendimethalin (Penoxaline)	ND		0.097	ug/L		10/11/22 09:24	10/12/22 17:50	1
Total Permethrin (mixed isomers)	ND		0.19	ug/L		10/11/22 09:24	10/12/22 17:50	1
Phenanthrene	ND		0.039	ug/L		10/11/22 09:24	10/12/22 17:50	1
Propachlor	ND		0.049	ug/L		10/11/22 09:24	10/12/22 17:50	1
Pyrene	ND		0.049	ug/L		10/11/22 09:24	10/12/22 17:50	1
Simazine	ND		0.049	ug/L		10/11/22 09:24	10/12/22 17:50	1
Terbacil	ND		0.097	ug/L		10/11/22 09:24	10/12/22 17:50	1
Terbutylazine	ND		0.097	ug/L		10/11/22 09:24	10/12/22 17:50	1
Thiobencarb	ND		0.19	ug/L		10/11/22 09:24	10/12/22 17:50	1
trans-Nonachlor	ND		0.049	ug/L		10/11/22 09:24	10/12/22 17:50	1

Eurofins Eaton Monrovia

QC Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: MB 380-20295/1-A
Matrix: Water
Analysis Batch: 20427

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 20295

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Trifluralin	ND		0.097	ug/L		10/11/22 09:24	10/12/22 17:50	1	
<i>Tentatively Identified Compound</i>	<i>Est. Result</i>	<i>Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>RT</i>	<i>CAS No.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Unknown	0.523	T J	ug/L		3.29		10/11/22 09:24	10/12/22 17:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	98		70 - 130				10/11/22 09:24	10/12/22 17:50	1
Triphenylphosphate	104		70 - 130				10/11/22 09:24	10/12/22 17:50	1
Perylene-d12	94		70 - 130				10/11/22 09:24	10/12/22 17:50	1

Lab Sample ID: LCS 380-20295/3-A
Matrix: Water
Analysis Batch: 20427

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 20295

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	1.94	1.86		ug/L		96	70 - 130
2,4'-DDE	1.94	1.92		ug/L		99	70 - 130
2,4'-DDT	1.94	1.95		ug/L		100	70 - 130
2,4-Dinitrotoluene	1.94	1.61		ug/L		83	70 - 130
2,6-Dinitrotoluene	1.94	1.84		ug/L		95	70 - 130
4,4'-DDD	1.94	2.03		ug/L		104	70 - 130
4,4'-DDE	1.94	2.06		ug/L		106	70 - 130
4,4'-DDT	1.94	1.92		ug/L		99	70 - 130
Acenaphthene	1.94	1.75		ug/L		90	70 - 130
Acenaphthylene	1.94	1.76		ug/L		90	70 - 130
Acetochlor	1.94	1.98		ug/L		102	70 - 130
Alachlor	1.94	1.92		ug/L		99	70 - 130
alpha-BHC	1.94	2.01		ug/L		103	70 - 130
alpha-Chlordane	1.94	1.87		ug/L		96	70 - 130
Anthracene	1.94	1.79		ug/L		92	70 - 130
Atrazine	1.94	2.13		ug/L		110	70 - 130
Benz(a)anthracene	1.94	2.10		ug/L		108	70 - 130
Benzo[a]pyrene	1.94	2.07		ug/L		107	70 - 130
Benzo[b]fluoranthene	1.94	2.02		ug/L		104	70 - 130
Benzo[g,h,i]perylene	1.94	2.01		ug/L		104	70 - 130
Benzo[k]fluoranthene	1.94	2.08		ug/L		107	70 - 130
beta-BHC	1.94	2.08		ug/L		107	70 - 130
Bromacil	1.94	2.01		ug/L		103	70 - 130
Butachlor	1.94	2.04		ug/L		105	70 - 130
Butylbenzylphthalate	1.94	1.93		ug/L		99	70 - 130
Caffeine	1.94	1.68		ug/L		86	45 - 137
Chlorobenzilate	1.94	2.05		ug/L		105	70 - 130
Chloroneb	1.94	1.88		ug/L		97	70 - 130
Chlorothalonil (Draconil, Bravo)	1.94	1.91		ug/L		98	70 - 130
Chlorpyrifos	1.94	1.97		ug/L		101	70 - 130
Chrysene	1.94	1.81		ug/L		93	70 - 130
delta-BHC	1.94	1.90		ug/L		97	70 - 130
Di(2-ethylhexyl)adipate	1.94	2.30		ug/L		118	70 - 130

Eurofins Eaton Monrovia

QC Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: LCS 380-20295/3-A
Matrix: Water
Analysis Batch: 20427

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 20295

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bis(2-ethylhexyl) phthalate	1.94	2.00		ug/L		103	70 - 130
Diazinon (Qualitative)	1.94	1.90		ug/L		98	15 - 132
Dibenz(a,h)anthracene	1.94	1.78		ug/L		92	70 - 130
Diclorvos (DDVP)	1.94	2.03		ug/L		104	70 - 130
Dieldrin	1.94	1.94		ug/L		100	70 - 130
Diethylphthalate	1.94	2.04		ug/L		105	70 - 130
Dimethoate	1.94	1.08		ug/L		56	35 - 100
Dimethylphthalate	1.94	2.01		ug/L		103	70 - 130
Di-n-butyl phthalate	3.89	4.21		ug/L		108	70 - 130
Di-n-octyl phthalate	1.94	1.81		ug/L		93	70 - 130
Endosulfan I (Alpha)	1.94	1.78		ug/L		91	70 - 130
Endosulfan II (Beta)	1.94	1.94		ug/L		100	70 - 130
Endosulfan sulfate	1.94	2.10		ug/L		108	70 - 130
Endrin	1.94	2.12		ug/L		109	70 - 130
Endrin aldehyde	1.94	1.91		ug/L		98	70 - 130
EPTC	1.94	1.88		ug/L		97	70 - 130
Fluoranthene	1.94	1.96		ug/L		101	70 - 130
Fluorene	1.94	1.89		ug/L		97	70 - 130
gamma-Chlordane	1.94	1.99		ug/L		103	70 - 130
Heptachlor	1.94	1.94		ug/L		100	70 - 130
Heptachlor epoxide (isomer B)	1.94	2.06		ug/L		106	70 - 130
Hexachlorobenzene	1.94	1.82		ug/L		93	70 - 130
Hexachlorocyclopentadiene	1.94	1.94		ug/L		100	70 - 130
Indeno[1,2,3-cd]pyrene	1.94	1.91		ug/L		98	70 - 130
Isophorone	1.94	1.97		ug/L		101	70 - 130
Lindane	1.94	1.98		ug/L		102	70 - 130
Malathion	1.94	1.91		ug/L		98	70 - 130
Methoxychlor	1.94	2.08		ug/L		107	70 - 130
Metolachlor	1.94	1.99		ug/L		102	70 - 130
Metribuzin	1.94	1.78		ug/L		91	70 - 130
Molinate	1.94	1.96		ug/L		101	70 - 130
Naphthalene	1.94	1.64		ug/L		84	70 - 130
Parathion	1.94	2.07		ug/L		106	70 - 130
Pendimethalin (Penoxaline)	1.94	1.90		ug/L		98	70 - 130
Phenanthrene	1.94	1.72		ug/L		89	70 - 130
Propachlor	1.94	2.07		ug/L		106	70 - 130
Pyrene	1.94	1.99		ug/L		102	70 - 130
Simazine	1.94	2.21		ug/L		114	70 - 130
Terbacil	1.94	1.94		ug/L		100	70 - 130
Terbutylazine	1.94	2.11		ug/L		109	70 - 130
Thiobencarb	1.94	1.99		ug/L		102	70 - 130
trans-Nonachlor	1.94	1.95		ug/L		101	70 - 130
Trifluralin	1.94	1.87		ug/L		96	70 - 130

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	97		70 - 130
Triphenylphosphate	115		70 - 130
Perylene-d12	101		70 - 130

QC Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: LCSD 380-20295/4-A
Matrix: Water
Analysis Batch: 20427

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 20295

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
2,4'-DDD	1.95	1.86		ug/L		95	70 - 130	0	20	
2,4'-DDE	1.95	1.92		ug/L		98	70 - 130	0	20	
2,4'-DDT	1.95	1.89		ug/L		97	70 - 130	3	20	
2,4-Dinitrotoluene	1.95	1.54		ug/L		79	70 - 130	4	20	
2,6-Dinitrotoluene	1.95	1.76		ug/L		90	70 - 130	4	20	
4,4'-DDD	1.95	1.99		ug/L		102	70 - 130	2	20	
4,4'-DDE	1.95	2.06		ug/L		106	70 - 130	0	20	
4,4'-DDT	1.95	1.86		ug/L		95	70 - 130	3	20	
Acenaphthene	1.95	1.79		ug/L		91	70 - 130	2	20	
Acenaphthylene	1.95	1.76		ug/L		90	70 - 130	0	20	
Acetochlor	1.95	1.98		ug/L		101	70 - 130	0	20	
Alachlor	1.95	1.99		ug/L		102	70 - 130	4	20	
alpha-BHC	1.95	2.01		ug/L		103	70 - 130	0	20	
alpha-Chlordane	1.95	1.87		ug/L		96	70 - 130	0	20	
Anthracene	1.95	1.72		ug/L		88	70 - 130	4	20	
Atrazine	1.95	2.16		ug/L		111	70 - 130	1	20	
Benz(a)anthracene	1.95	2.03		ug/L		104	70 - 130	3	20	
Benzo[a]pyrene	1.95	2.03		ug/L		104	70 - 130	2	20	
Benzo[b]fluoranthene	1.95	2.06		ug/L		106	70 - 130	2	20	
Benzo[g,h,i]perylene	1.95	2.06		ug/L		105	70 - 130	2	20	
Benzo[k]fluoranthene	1.95	2.04		ug/L		104	70 - 130	2	20	
beta-BHC	1.95	2.04		ug/L		105	70 - 130	2	20	
Bromacil	1.95	1.95		ug/L		100	70 - 130	3	20	
Butachlor	1.95	2.01		ug/L		103	70 - 130	1	20	
Butylbenzylphthalate	1.95	1.87		ug/L		96	70 - 130	3	20	
Caffeine	1.95	1.59		ug/L		81	45 - 137	5	20	
Chlorobenzilate	1.95	1.86		ug/L		95	70 - 130	10	20	
Chloroneb	1.95	1.95		ug/L		100	70 - 130	3	20	
Chlorothalonil (Draconil, Bravo)	1.95	1.86		ug/L		95	70 - 130	3	20	
Chlorpyrifos	1.95	1.92		ug/L		98	70 - 130	3	20	
Chrysene	1.95	1.86		ug/L		95	70 - 130	3	20	
delta-BHC	1.95	1.87		ug/L		96	70 - 130	1	20	
Di(2-ethylhexyl)adipate	1.95	2.29		ug/L		117	70 - 130	0	20	
Bis(2-ethylhexyl) phthalate	1.95	2.11		ug/L		108	70 - 130	5	20	
Diazinon (Qualitative)	1.95	1.94		ug/L		99	15 - 132	2	20	
Dibenz(a,h)anthracene	1.95	1.83		ug/L		94	70 - 130	3	20	
Diclorvos (DDVP)	1.95	2.06		ug/L		106	70 - 130	2	20	
Dieldrin	1.95	1.97		ug/L		101	70 - 130	2	20	
Diethylphthalate	1.95	2.03		ug/L		104	70 - 130	0	20	
Dimethoate	1.95	1.03		ug/L		53	35 - 100	5	20	
Dimethylphthalate	1.95	2.06		ug/L		106	70 - 130	3	20	
Di-n-butyl phthalate	3.91	4.18		ug/L		107	70 - 130	1	20	
Di-n-octyl phthalate	1.95	1.94		ug/L		99	70 - 130	7	20	
Endosulfan I (Alpha)	1.95	1.79		ug/L		92	70 - 130	1	20	
Endosulfan II (Beta)	1.95	1.92		ug/L		98	70 - 130	1	20	
Endosulfan sulfate	1.95	2.12		ug/L		109	70 - 130	1	20	
Endrin	1.95	2.08		ug/L		106	70 - 130	2	20	
Endrin aldehyde	1.95	1.81		ug/L		93	70 - 130	6	20	

Eurofins Eaton Monrovia

QC Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: LCSD 380-20295/4-A
Matrix: Water
Analysis Batch: 20427

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 20295

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
EPTC	1.95	1.89		ug/L		97	70 - 130	1	20
Fluoranthene	1.95	1.89		ug/L		97	70 - 130	4	20
Fluorene	1.95	1.93		ug/L		99	70 - 130	2	20
gamma-Chlordane	1.95	1.97		ug/L		101	70 - 130	1	20
Heptachlor	1.95	1.91		ug/L		98	70 - 130	2	20
Heptachlor epoxide (isomer B)	1.95	2.05		ug/L		105	70 - 130	0	20
Hexachlorobenzene	1.95	1.84		ug/L		94	70 - 130	1	20
Hexachlorocyclopentadiene	1.95	1.90		ug/L		97	70 - 130	2	20
Indeno[1,2,3-cd]pyrene	1.95	1.95		ug/L		100	70 - 130	2	20
Isophorone	1.95	2.05		ug/L		105	70 - 130	4	20
Lindane	1.95	2.01		ug/L		103	70 - 130	1	20
Malathion	1.95	1.94		ug/L		99	70 - 130	1	20
Methoxychlor	1.95	2.10		ug/L		108	70 - 130	1	20
Metolachlor	1.95	2.02		ug/L		103	70 - 130	1	20
Metribuzin	1.95	1.55		ug/L		80	70 - 130	13	20
Molinate	1.95	1.99		ug/L		102	70 - 130	1	20
Naphthalene	1.95	1.67		ug/L		86	70 - 130	2	20
Parathion	1.95	1.99		ug/L		102	70 - 130	4	20
Pendimethalin (Penoxaline)	1.95	1.84		ug/L		94	70 - 130	3	20
Phenanthrene	1.95	1.72		ug/L		88	70 - 130	0	20
Propachlor	1.95	2.09		ug/L		107	70 - 130	1	20
Pyrene	1.95	1.94		ug/L		99	70 - 130	3	20
Simazine	1.95	2.19		ug/L		112	70 - 130	1	20
Terbacil	1.95	2.00		ug/L		102	70 - 130	3	20
Terbutylazine	1.95	2.13		ug/L		109	70 - 130	1	20
Thiobencarb	1.95	1.98		ug/L		101	70 - 130	0	20
trans-Nonachlor	1.95	2.00		ug/L		102	70 - 130	2	20
Trifluralin	1.95	1.90		ug/L		97	70 - 130	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
2-Nitro-m-xylene	96		70 - 130
Triphenylphosphate	111		70 - 130
Perylene-d12	99		70 - 130

Lab Sample ID: MRL 380-20295/2-A
Matrix: Water
Analysis Batch: 20427

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 20295

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	0.0974	0.127		ug/L		130	50 - 150
2,4'-DDE	0.0974	0.0984		ug/L		101	50 - 150
2,4'-DDT	0.0974	0.117		ug/L		120	50 - 150
2,4-Dinitrotoluene	0.0974	0.131		ug/L		134	50 - 150
2,6-Dinitrotoluene	0.0974	0.0843	J	ug/L		87	50 - 150
4,4'-DDD	0.0974	0.0963	J	ug/L		99	50 - 150
4,4'-DDE	0.0974	0.101		ug/L		104	50 - 150
4,4'-DDT	0.0974	0.110		ug/L		113	50 - 150
Acenaphthene	0.0974	0.0861	J	ug/L		88	50 - 150

Eurofins Eaton Monrovia

QC Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: MRL 380-20295/2-A
Matrix: Water
Analysis Batch: 20427

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 20295

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthylene	0.0974	0.0756	J	ug/L		78	50 - 150
Acetochlor	0.0487	0.0405	J	ug/L		83	50 - 150
Alachlor	0.0487	0.0508		ug/L		104	50 - 150
alpha-BHC	0.0974	0.104		ug/L		107	50 - 150
alpha-Chlordane	0.0487	0.0519		ug/L		106	50 - 150
Anthracene	0.0195	ND		ug/L		96	50 - 150
Atrazine	0.0487	0.0479	J	ug/L		98	50 - 150
Benz(a)anthracene	0.0487	0.0484	J	ug/L		99	50 - 150
Benzo[a]pyrene	0.0195	0.0216		ug/L		111	50 - 150
Benzo[b]fluoranthene	0.0195	0.0191		ug/L		98	50 - 150
Benzo[g,h,i]perylene	0.0487	0.0457	J	ug/L		94	50 - 150
Benzo[k]fluoranthene	0.0195	0.0196		ug/L		100	50 - 150
beta-BHC	0.0974	0.0977		ug/L		100	50 - 150
Bromacil	0.0974	0.127		ug/L		131	50 - 150
Butachlor	0.0487	0.0679		ug/L		139	50 - 150
Butylbenzylphthalate	0.146	0.162	J	ug/L		111	50 - 150
Caffeine	0.0487	0.0383	J	ug/L		79	50 - 150
Chlorobenzilate	0.0974	0.146		ug/L		149	50 - 150
Chloroneb	0.0974	0.113		ug/L		116	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0974	0.115		ug/L		118	50 - 150
Chlorpyrifos	0.0487	0.0494		ug/L		101	50 - 150
Chrysene	0.0195	0.0208		ug/L		107	50 - 150
delta-BHC	0.0974	0.104		ug/L		107	50 - 150
Di(2-ethylhexyl)adipate	0.292	0.321	J	ug/L		110	50 - 150
Bis(2-ethylhexyl) phthalate	0.585	0.630		ug/L		108	50 - 150
Diazinon (Qualitative)	0.0974	0.0895	J	ug/L		92	15 - 132
Dibenz(a,h)anthracene	0.0487	0.0590		ug/L		121	50 - 150
Diclorvos (DDVP)	0.0487	0.0457	J	ug/L		94	50 - 150
Dieldrin	0.0974	0.112	J	ug/L		115	50 - 150
Diethylphthalate	0.146	0.171	J	ug/L		117	50 - 150
Dimethoate	0.0974	0.0508	J	ug/L		52	35 - 100
Dimethylphthalate	0.292	0.283	J	ug/L		97	50 - 150
Di-n-butyl phthalate	0.292	0.388	J	ug/L		133	49 - 243
Di-n-octyl phthalate	0.0974	0.126		ug/L		129	50 - 150
Endosulfan I (Alpha)	0.0974	0.0956	J	ug/L		98	50 - 150
Endosulfan II (Beta)	0.0974	0.105		ug/L		108	50 - 150
Endosulfan sulfate	0.0974	0.0916	J	ug/L		94	50 - 150
Endrin	0.0974	0.128		ug/L		132	50 - 150
Endrin aldehyde	0.0974	0.123		ug/L		127	50 - 150
EPTC	0.0974	0.0940	J	ug/L		97	50 - 150
Fluoranthene	0.0487	0.0459	J	ug/L		94	50 - 150
Fluorene	0.0487	ND		ug/L		93	50 - 150
gamma-Chlordane	0.0487	0.0478	J	ug/L		98	50 - 150
Heptachlor	0.0390	0.0539		ug/L		138	50 - 150
Heptachlor epoxide (isomer B)	0.0487	0.0499		ug/L		102	50 - 150
Hexachlorobenzene	0.0487	0.0592		ug/L		121	50 - 150
Hexachlorocyclopentadiene	0.0487	0.0433	J	ug/L		89	50 - 150
Indeno[1,2,3-cd]pyrene	0.0487	0.0415	J	ug/L		85	50 - 150
Isophorone	0.0974	0.0965	J	ug/L		99	50 - 150

Eurofins Eaton Monrovia

QC Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: MRL 380-20295/2-A
Matrix: Water
Analysis Batch: 20427

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 20295

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Lindane	0.0487	0.0425		ug/L		87	50 - 150
Malathion	0.0974	0.104		ug/L		107	50 - 150
Methoxychlor	0.0974	0.0931	J	ug/L		96	50 - 150
Metolachlor	0.0487	0.0519		ug/L		107	50 - 150
Metribuzin	0.0487	0.0562		ug/L		115	50 - 150
Molinate	0.0974	0.0972		ug/L		100	50 - 150
Naphthalene	0.0974	0.0862	J	ug/L		88	50 - 150
Parathion	0.0974	0.0943	J	ug/L		97	50 - 150
Pendimethalin (Penoxaline)	0.0974	0.114		ug/L		117	50 - 150
Phenanthrene	0.0195	0.0189	J	ug/L		97	50 - 150
Propachlor	0.0487	0.0500		ug/L		103	50 - 150
Pyrene	0.0487	0.0521		ug/L		107	50 - 150
Simazine	0.0487	0.0489	J	ug/L		100	50 - 150
Terbacil	0.0974	0.102		ug/L		104	50 - 150
Terbutylazine	0.0974	0.0968	J	ug/L		99	50 - 150
Thiobencarb	0.0974	0.113	J	ug/L		117	50 - 150
trans-Nonachlor	0.0487	0.0544		ug/L		112	50 - 150
Trifluralin	0.0974	0.112		ug/L		114	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
2-Nitro-m-xylene	97		70 - 130
Triphenylphosphate	103		70 - 130
Perylene-d12	100		70 - 130

Lab Sample ID: 380-23266-C-1-B MS
Matrix: Water
Analysis Batch: 20427

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 20295

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	ND		1.96	1.88		ug/L		96	70 - 130
2,4'-DDE	ND		1.96	1.92		ug/L		98	70 - 130
2,4'-DDT	ND		1.96	1.91		ug/L		97	70 - 130
2,4-Dinitrotoluene	ND		1.96	1.58		ug/L		80	70 - 130
2,6-Dinitrotoluene	ND		1.96	1.84		ug/L		94	70 - 130
4,4'-DDD	ND		1.96	2.01		ug/L		103	70 - 130
4,4'-DDE	ND		1.96	2.07		ug/L		106	70 - 130
4,4'-DDT	ND		1.96	1.91		ug/L		97	70 - 130
Acenaphthene	ND		1.96	1.76		ug/L		90	70 - 130
Acenaphthylene	ND		1.96	1.81		ug/L		93	70 - 130
Acetochlor	ND		1.96	1.99		ug/L		102	70 - 130
Alachlor	ND		1.96	1.97		ug/L		100	70 - 130
alpha-BHC	ND		1.96	1.96		ug/L		100	70 - 130
alpha-Chlordane	ND		1.96	1.91		ug/L		97	70 - 130
Anthracene	ND		1.96	1.63		ug/L		83	70 - 130
Atrazine	ND		1.96	2.09		ug/L		106	70 - 130
Benz(a)anthracene	ND		1.96	2.05		ug/L		104	70 - 130
Benzo[a]pyrene	ND		1.96	2.03		ug/L		104	70 - 130
Benzo[b]fluoranthene	ND		1.96	2.12		ug/L		108	70 - 130

Eurofins Eaton Monrovia

QC Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: 380-23266-C-1-B MS
Matrix: Water
Analysis Batch: 20427

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 20295

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier	Added	Result	Qualifier				
Benzo[g,h,i]perylene	ND		1.96	1.95		ug/L		99	70 - 130
Benzo[k]fluoranthene	ND		1.96	2.15		ug/L		110	70 - 130
beta-BHC	ND		1.96	1.96		ug/L		100	70 - 130
Bromacil	ND		1.96	2.03		ug/L		103	70 - 130
Butachlor	ND		1.96	2.02		ug/L		103	70 - 130
Butylbenzylphthalate	ND		1.96	1.88		ug/L		96	70 - 130
Caffeine	ND		1.96	1.78		ug/L		91	46 - 144
Chlorobenzilate	ND		1.96	2.00		ug/L		102	70 - 130
Chloroneb	ND		1.96	1.92		ug/L		98	70 - 130
Chlorothalonil (Draconil, Bravo)	ND		1.96	1.89		ug/L		96	70 - 130
Chlorpyrifos	ND		1.96	1.98		ug/L		101	70 - 130
Chrysene	ND		1.96	1.85		ug/L		94	70 - 130
delta-BHC	ND		1.96	1.85		ug/L		94	70 - 130
Di(2-ethylhexyl)adipate	ND		1.96	2.25		ug/L		115	70 - 130
Bis(2-ethylhexyl) phthalate	ND		1.96	2.10		ug/L		107	70 - 130
Diazinon (Qualitative)	ND		1.96	1.89		ug/L		97	15 - 132
Dibenz(a,h)anthracene	ND		1.96	1.76		ug/L		90	70 - 130
Diclorvos (DDVP)	ND		1.96	1.96		ug/L		100	70 - 130
Dieldrin	ND		1.96	1.98		ug/L		101	70 - 130
Diethylphthalate	ND		1.96	2.00		ug/L		102	70 - 130
Dimethoate	ND		1.96	1.13		ug/L		58	34 - 111
Dimethylphthalate	ND		1.96	1.99		ug/L		102	70 - 130
Di-n-butyl phthalate	ND		3.92	4.16		ug/L		106	70 - 130
Di-n-octyl phthalate	ND		1.96	2.02		ug/L		103	70 - 130
Endosulfan I (Alpha)	ND		1.96	1.83		ug/L		94	70 - 130
Endosulfan II (Beta)	ND		1.96	1.90		ug/L		97	70 - 130
Endosulfan sulfate	ND		1.96	2.12		ug/L		108	70 - 130
Endrin	ND		1.96	2.35		ug/L		120	70 - 130
Endrin aldehyde	ND		1.96	1.81		ug/L		92	70 - 130
EPTC	ND		1.96	1.96		ug/L		100	70 - 130
Fluoranthene	ND		1.96	1.92		ug/L		98	70 - 130
Fluorene	ND		1.96	1.90		ug/L		97	70 - 130
gamma-Chlordane	ND		1.96	2.03		ug/L		103	70 - 130
Heptachlor	ND		1.96	1.94		ug/L		99	70 - 130
Heptachlor epoxide (isomer B)	ND		1.96	2.11		ug/L		107	70 - 130
Hexachlorobenzene	ND		1.96	1.80		ug/L		92	70 - 130
Hexachlorocyclopentadiene	ND		1.96	1.93		ug/L		98	70 - 130
Indeno[1,2,3-cd]pyrene	ND		1.96	1.91		ug/L		97	70 - 130
Isophorone	ND		1.96	2.00		ug/L		102	70 - 130
Lindane	ND		1.96	1.92		ug/L		98	70 - 130
Malathion	ND		1.96	1.93		ug/L		99	70 - 130
Methoxychlor	ND		1.96	2.13		ug/L		108	70 - 130
Metolachlor	ND		1.96	2.00		ug/L		102	70 - 130
Metribuzin	ND		1.96	1.61		ug/L		82	70 - 130
Molinate	ND		1.96	1.93		ug/L		99	70 - 130
Naphthalene	ND		1.96	1.64		ug/L		84	70 - 130
Parathion	ND		1.96	2.05		ug/L		105	70 - 130
Pendimethalin (Penoxaline)	ND		1.96	1.89		ug/L		96	70 - 130
Phenanthrene	ND		1.96	1.76		ug/L		90	70 - 130

Eurofins Eaton Monrovia

QC Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: 380-23266-C-1-B MS
Matrix: Water
Analysis Batch: 20427

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 20295

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier	Added	Result	Qualifier				
Propachlor	ND		1.96	2.04		ug/L		104	70 - 130
Pyrene	ND		1.96	2.00		ug/L		102	70 - 130
Simazine	ND		1.96	2.14		ug/L		109	70 - 130
Terbacil	ND		1.96	1.98		ug/L		101	70 - 130
Terbutylazine	ND		1.96	2.06		ug/L		105	70 - 130
Thiobencarb	ND		1.96	2.01		ug/L		102	70 - 130
trans-Nonachlor	ND		1.96	2.00		ug/L		102	70 - 130
Trifluralin	ND		1.96	1.86		ug/L		95	70 - 130
		<i>MS</i>	<i>MS</i>						
Surrogate		%Recovery	Qualifier	Limits					
2-Nitro-m-xylene		95		70 - 130					
Triphenylphosphate		113		70 - 130					
Perylene-d12		101		70 - 130					

Lab Sample ID: 380-23289-BU-1-A MS
Matrix: Water
Analysis Batch: 20427

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 20295

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier	Added	Result	Qualifier				
2,4'-DDD	ND		1.95	1.88		ug/L		96	70 - 130
2,4'-DDE	ND		1.95	2.00		ug/L		102	70 - 130
2,4'-DDT	ND		1.95	1.94		ug/L		99	70 - 130
2,4-Dinitrotoluene	ND		1.95	1.39		ug/L		71	70 - 130
2,6-Dinitrotoluene	ND		1.95	1.53		ug/L		78	70 - 130
4,4'-DDD	ND		1.95	2.06		ug/L		106	70 - 130
4,4'-DDE	ND		1.95	2.14		ug/L		110	70 - 130
4,4'-DDT	ND		1.95	1.93		ug/L		99	70 - 130
Acenaphthene	ND		1.95	1.79		ug/L		92	70 - 130
Acenaphthylene	ND		1.95	1.84		ug/L		94	70 - 130
Acetochlor	ND		1.95	2.09		ug/L		107	70 - 130
Alachlor	ND		1.95	1.99		ug/L		102	70 - 130
alpha-BHC	ND		1.95	2.03		ug/L		104	70 - 130
alpha-Chlordane	ND		1.95	1.97		ug/L		101	70 - 130
Anthracene	ND		1.95	1.53		ug/L		78	70 - 130
Atrazine	ND		1.95	2.21		ug/L		113	70 - 130
Benz(a)anthracene	ND		1.95	2.09		ug/L		107	70 - 130
Benzo[a]pyrene	ND		1.95	2.04		ug/L		104	70 - 130
Benzo[b]fluoranthene	ND		1.95	2.12		ug/L		109	70 - 130
Benzo[g,h,i]perylene	ND		1.95	2.07		ug/L		106	70 - 130
Benzo[k]fluoranthene	ND		1.95	2.08		ug/L		106	70 - 130
beta-BHC	ND		1.95	2.04		ug/L		105	70 - 130
Bromacil	ND		1.95	2.16		ug/L		111	70 - 130
Butachlor	ND		1.95	2.11		ug/L		108	70 - 130
Butylbenzylphthalate	ND		1.95	1.88		ug/L		96	70 - 130
Caffeine	ND		1.95	1.47		ug/L		75	46 - 144
Chlorobenzilate	ND		1.95	1.90		ug/L		97	70 - 130
Chloroneb	ND		1.95	1.91		ug/L		98	70 - 130
Chlorothalonil (Draconil, Bravo)	ND		1.95	1.96		ug/L		101	70 - 130

Eurofins Eaton Monrovia

QC Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: 380-23289-BU-1-A MS
Matrix: Water
Analysis Batch: 20427

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 20295

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec
	Result	Qualifier	Added	Result	Qualifier				Limits
Chlorpyrifos	ND		1.95	2.03		ug/L		104	70 - 130
Chrysene	ND		1.95	1.88		ug/L		96	70 - 130
delta-BHC	ND		1.95	1.88		ug/L		96	70 - 130
Di(2-ethylhexyl)adipate	ND		1.95	2.27		ug/L		117	70 - 130
Bis(2-ethylhexyl) phthalate	ND		1.95	2.36		ug/L		121	70 - 130
Diazinon (Qualitative)	ND		1.95	1.97		ug/L		101	15 - 132
Dibenz(a,h)anthracene	ND		1.95	1.86		ug/L		96	70 - 130
Diclorvos (DDVP)	ND		1.95	1.98		ug/L		101	70 - 130
Dieldrin	ND		1.95	1.99		ug/L		102	70 - 130
Diethylphthalate	ND		1.95	2.05		ug/L		105	70 - 130
Dimethoate	ND		1.95	0.956		ug/L		49	34 - 111
Dimethylphthalate	ND		1.95	2.08		ug/L		106	70 - 130
Di-n-butyl phthalate	ND		3.90	4.07		ug/L		104	70 - 130
Di-n-octyl phthalate	ND		1.95	1.95		ug/L		100	70 - 130
Endosulfan I (Alpha)	ND		1.95	1.82		ug/L		93	70 - 130
Endosulfan II (Beta)	ND		1.95	1.86		ug/L		95	70 - 130
Endosulfan sulfate	ND		1.95	2.18		ug/L		112	70 - 130
Endrin	ND		1.95	1.93		ug/L		99	70 - 130
Endrin aldehyde	ND		1.95	1.70		ug/L		87	70 - 130
EPTC	ND		1.95	1.93		ug/L		99	70 - 130
Fluoranthene	ND		1.95	2.00		ug/L		102	70 - 130
Fluorene	ND		1.95	1.92		ug/L		98	70 - 130
gamma-Chlordane	ND		1.95	2.08		ug/L		107	70 - 130
Heptachlor	ND		1.95	1.92		ug/L		98	70 - 130
Heptachlor epoxide (isomer B)	ND		1.95	2.16		ug/L		111	70 - 130
Hexachlorobenzene	ND		1.95	1.83		ug/L		94	70 - 130
Hexachlorocyclopentadiene	ND		1.95	2.01		ug/L		103	70 - 130
Indeno[1,2,3-cd]pyrene	ND		1.95	2.02		ug/L		104	70 - 130
Isophorone	ND		1.95	2.03		ug/L		104	70 - 130
Lindane	ND		1.95	1.99		ug/L		102	70 - 130
Malathion	ND		1.95	2.01		ug/L		103	70 - 130
Methoxychlor	ND		1.95	2.17		ug/L		111	70 - 130
Metolachlor	ND		1.95	2.12		ug/L		108	70 - 130
Metribuzin	ND		1.95	1.56		ug/L		80	70 - 130
Molinate	ND		1.95	2.02		ug/L		104	70 - 130
Naphthalene	ND		1.95	1.63		ug/L		84	70 - 130
Parathion	ND		1.95	2.11		ug/L		108	70 - 130
Pendimethalin (Penoxaline)	ND		1.95	2.04		ug/L		105	70 - 130
Phenanthrene	ND		1.95	1.77		ug/L		91	70 - 130
Propachlor	ND		1.95	2.15		ug/L		110	70 - 130
Pyrene	ND		1.95	2.04		ug/L		105	70 - 130
Simazine	ND		1.95	2.27		ug/L		116	70 - 130
Terbacil	ND		1.95	2.10		ug/L		108	70 - 130
Terbutylazine	ND		1.95	2.18		ug/L		112	70 - 130
Thiobencarb	ND		1.95	2.08		ug/L		107	70 - 130
trans-Nonachlor	ND		1.95	1.98		ug/L		102	70 - 130
Trifluralin	ND		1.95	1.91		ug/L		98	70 - 130

QC Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: 380-23289-BU-1-A MS
Matrix: Water
Analysis Batch: 20427

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 20295

Surrogate	MS %Recovery	MS Qualifier	Limits
2-Nitro-m-xylene	98		70 - 130
Triphenylphosphate	113		70 - 130
Perylene-d12	102		70 - 130

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

Lab Sample ID: MBL 380-20612/4-A
Matrix: Water
Analysis Batch: 20737

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 20612

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		0.040	ug/L		10/13/22 14:08	10/13/22 18:13	1
1,2-Dibromo-3-Chloropropane	ND		0.010	ug/L		10/13/22 14:08	10/13/22 18:13	1
1,2-Dibromoethane	ND		0.010	ug/L		10/13/22 14:08	10/13/22 18:13	1

Surrogate	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane (Surr)	93		60 - 140	10/13/22 14:08	10/13/22 18:13	1

Lab Sample ID: LCS 380-20612/3-A
Matrix: Water
Analysis Batch: 20737

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 20612

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3-Trichloropropane	0.200	0.181		ug/L		91	70 - 130
1,2-Dibromo-3-Chloropropane	0.200	0.169		ug/L		85	70 - 130
1,2-Dibromoethane	0.200	0.185		ug/L		93	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dibromopropane (Surr)	92		60 - 140

Lab Sample ID: MRL 380-20612/1-A
Matrix: Water
Analysis Batch: 20737

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 20612

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3-Trichloropropane	0.0400	0.0242	J	ug/L		60	60 - 140

Surrogate	MRL %Recovery	MRL Qualifier	Limits
1,2-Dibromopropane (Surr)	92		60 - 140

Lab Sample ID: MRL 380-20612/2-A
Matrix: Water
Analysis Batch: 20737

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 20612

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3-Trichloropropane	0.0500	0.0332	J	ug/L		66	60 - 140
1,2-Dibromo-3-Chloropropane	0.0100	0.0116		ug/L		116	60 - 140
1,2-Dibromoethane	0.0100	0.00714	J	ug/L		71	60 - 140

Eurofins Eaton Monrovia

QC Sample Results

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

Job ID: 380-23442-1

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

<i>Surrogate</i>	<i>%Recovery</i>	<i>MRL MRL Qualifier</i>	<i>Limits</i>
1,2-Dibromopropane (Surr)	94		60 - 140

Lab Sample ID: 380-22826-B-1-A MS
Matrix: Water
Analysis Batch: 20737

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 20612

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3-Trichloropropane	ND		1.27	1.26		ug/L		99	65 - 135
1,2-Dibromo-3-Chloropropane	ND		0.254	0.236		ug/L		93	65 - 135
1,2-Dibromoethane	ND		0.254	0.248		ug/L		98	65 - 135

<i>Surrogate</i>	<i>%Recovery</i>	<i>MS MS Qualifier</i>	<i>Limits</i>
1,2-Dibromopropane (Surr)	100		60 - 140

Lab Sample ID: 380-22826-A-2-A DU
Matrix: Water
Analysis Batch: 20737

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 20612

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

<i>Surrogate</i>	<i>%Recovery</i>	<i>DU DU Qualifier</i>	<i>Limits</i>
1,2-Dibromopropane (Surr)	97		60 - 140

Method: 505 - Organochlorine Pesticides/PCBs (GC)

Lab Sample ID: MB 380-20411/7-A
Matrix: Water
Analysis Batch: 20462

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 20411

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0020	ug/L		10/11/22 15:15	10/11/22 20:11	1
Dieldrin	ND		0.0020	ug/L		10/11/22 15:15	10/11/22 20:11	1
Toxaphene	ND		0.10	ug/L		10/11/22 15:15	10/11/22 20:11	1
Alachlor	ND		0.10	ug/L		10/11/22 15:15	10/11/22 20:11	1
Chlordane (n.o.s.)	ND		0.10	ug/L		10/11/22 15:15	10/11/22 20:11	1
Endrin	ND		0.010	ug/L		10/11/22 15:15	10/11/22 20:11	1
Heptachlor	ND		0.010	ug/L		10/11/22 15:15	10/11/22 20:11	1
Heptachlor epoxide	ND		0.010	ug/L		10/11/22 15:15	10/11/22 20:11	1
gamma-BHC (Lindane)	ND		0.010	ug/L		10/11/22 15:15	10/11/22 20:11	1
Methoxychlor	ND		0.050	ug/L		10/11/22 15:15	10/11/22 20:11	1
PCB-1016	ND		0.070	ug/L		10/11/22 15:15	10/11/22 20:11	1
PCB-1221	ND		0.10	ug/L		10/11/22 15:15	10/11/22 20:11	1
PCB-1232	ND		0.10	ug/L		10/11/22 15:15	10/11/22 20:11	1
PCB-1242	ND		0.10	ug/L		10/11/22 15:15	10/11/22 20:11	1
PCB-1248	ND		0.10	ug/L		10/11/22 15:15	10/11/22 20:11	1
PCB-1254	ND		0.10	ug/L		10/11/22 15:15	10/11/22 20:11	1
PCB-1260	ND		0.070	ug/L		10/11/22 15:15	10/11/22 20:11	1
Polychlorinated biphenyls, Total	ND		0.10	ug/L		10/11/22 15:15	10/11/22 20:11	1

Eurofins Eaton Monrovia

QC Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: MB 380-20411/7-A
Matrix: Water
Analysis Batch: 20462

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 20411

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Tetrachloro-m-xylene	111		70 - 130	10/11/22 15:15	10/11/22 20:11	1

Lab Sample ID: MRL 380-20411/2-A
Matrix: Water
Analysis Batch: 20462

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 20411

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits	
Aldrin	0.00200	ND		ug/L		75	50 - 150	
Dieldrin	0.00200	ND		ug/L		88	50 - 150	

Surrogate	MRL MRL		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	107		70 - 130

Lab Sample ID: MRL 380-20411/3-A
Matrix: Water
Analysis Batch: 20462

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 20411

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits	
Aldrin	0.0100	0.00698		ug/L		70	50 - 150	
Dieldrin	0.0100	0.00765		ug/L		77	50 - 150	
Alachlor	0.100	0.122		ug/L		122	50 - 150	
Endrin	0.0100	0.0120		ug/L		120	50 - 150	
Heptachlor	0.0100	0.0122		ug/L		122	50 - 150	
Heptachlor epoxide	0.0100	0.0121		ug/L		121	50 - 150	
gamma-BHC (Lindane)	0.0100	0.0126		ug/L		126	50 - 150	
Methoxychlor	0.0500	0.0658		ug/L		132	50 - 150	

Surrogate	MRL MRL		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	101		70 - 130

Lab Sample ID: MRL 380-20411/4-A
Matrix: Water
Analysis Batch: 20462

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 20411

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits	
Toxaphene	0.100	0.0834	J	ug/L		83	50 - 150	

Surrogate	MRL MRL		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	96		70 - 130

Lab Sample ID: MRL 380-20411/5-A
Matrix: Water
Analysis Batch: 20462

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 20411

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits	
Toxaphene	0.500	0.506		ug/L		101	50 - 150	

Eurofins Eaton Monrovia

QC Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: MRL 380-20411/5-A
Matrix: Water
Analysis Batch: 20462

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 20411

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

Lab Sample ID: MRL 380-20411/6-A
Matrix: Water
Analysis Batch: 20462

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 20411

<i>Analyte</i>	<i>Spike Added</i>	<i>MRL Result</i>	<i>MRL Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec Limits</i>
Chlordane (n.o.s.)	0.100	0.0821	J	ug/L		82	50 - 150

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

Lab Sample ID: 380-23416-C-1-A MS
Matrix: Water
Analysis Batch: 20462

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 20411

<i>Analyte</i>	<i>Sample Result</i>	<i>Sample Qualifier</i>	<i>Spike Added</i>	<i>MS Result</i>	<i>MS Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec Limits</i>
Aldrin	ND		0.100	0.0830		ug/L		83	65 - 135
Dieldrin	ND		0.100	0.0836		ug/L		83	65 - 135
Alachlor	ND		1.00	0.830		ug/L		83	65 - 135
Endrin	ND		0.100	0.0817		ug/L		81	65 - 135
Heptachlor	ND		0.100	0.0804		ug/L		80	65 - 135
Heptachlor epoxide	ND		0.100	0.0828		ug/L		83	65 - 135
gamma-BHC (Lindane)	ND		0.100	0.0854		ug/L		85	65 - 135
Methoxychlor	ND		0.501	0.383		ug/L		76	65 - 135

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

Lab Sample ID: 380-23416-D-1-A MS
Matrix: Water
Analysis Batch: 20462

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 20411

<i>Analyte</i>	<i>Sample Result</i>	<i>Sample Qualifier</i>	<i>Spike Added</i>	<i>MS Result</i>	<i>MS Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec Limits</i>
Chlordane (n.o.s.)	ND		0.504	0.461		ug/L		91	65 - 135

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

Lab Sample ID: 380-23442-1 MS
Matrix: Water
Analysis Batch: 20462

Client Sample ID: MOANALUA WELLS (331-223-TP202)
Prep Type: Total/NA
Prep Batch: 20411

<i>Analyte</i>	<i>Sample Result</i>	<i>Sample Qualifier</i>	<i>Spike Added</i>	<i>MS Result</i>	<i>MS Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec Limits</i>
Aldrin	ND		0.0197	0.0142		ug/L		72	65 - 135
Dieldrin	0.020		0.0197	0.0341		ug/L		73	65 - 135
Alachlor	ND		0.197	0.193		ug/L		98	65 - 135
Endrin	ND		0.0197	0.0190		ug/L		97	65 - 135

Eurofins Eaton Monrovia

QC Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: 380-23442-1 MS
Matrix: Water
Analysis Batch: 20462

Client Sample ID: MOANALUA WELLS (331-223-TP202)
Prep Type: Total/NA
Prep Batch: 20411

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec
	Result	Qualifier	Added	Result	Qualifier				
Heptachlor	ND		0.0197	0.0192		ug/L		97	65 - 135
Heptachlor epoxide	ND		0.0197	0.0214		ug/L		72	65 - 135
gamma-BHC (Lindane)	ND		0.0197	0.0195		ug/L		99	65 - 135
Methoxychlor	ND		0.0983	0.101		ug/L		103	65 - 135
MS MS									
Surrogate	%Recovery		Qualifier	Limits					
Tetrachloro-m-xylene	98			70 - 130					

Lab Sample ID: 380-23442-1 MS
Matrix: Water
Analysis Batch: 20462

Client Sample ID: MOANALUA WELLS (331-223-TP202)
Prep Type: Total/NA
Prep Batch: 20411

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec
	Result	Qualifier	Added	Result	Qualifier				
Toxaphene	ND		2.52	2.42		ug/L		96	65 - 135
MS MS									
Surrogate	%Recovery		Qualifier	Limits					
Tetrachloro-m-xylene	90			70 - 130					

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 380-20067/41
Matrix: Water
Analysis Batch: 20067

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

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil	Fac
	Result	Qualifier							
Nitrate as N	ND		0.050	mg/L			10/07/22 22:19		1
Nitrate Nitrite as N	ND		0.050	mg/L			10/07/22 22:19		1
Nitrite as N	ND		0.050	mg/L			10/07/22 22:19		1

Lab Sample ID: LCS 380-20067/44
Matrix: Water
Analysis Batch: 20067

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

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec
		Added	Result				
Nitrate as N	2.50	2.56		mg/L		102	90 - 110
Nitrate Nitrite as N	3.50	3.57		mg/L		102	90 - 110
Nitrite as N	1.00	1.01		mg/L		101	90 - 110

Lab Sample ID: LCSD 380-20067/45
Matrix: Water
Analysis Batch: 20067

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

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec	RPD	RPD
		Added	Result						
Nitrate as N	2.50	2.58		mg/L		103	90 - 110	1	20
Nitrate Nitrite as N	3.50	3.58		mg/L		102	90 - 110	0	20
Nitrite as N	1.00	1.00		mg/L		100	90 - 110	0	20

QC Sample Results

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

Job ID: 380-23442-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MRL 380-20067/42
Matrix: Water
Analysis Batch: 20067

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	0.0100	J	mg/L		80	50 - 150
Nitrate Nitrite as N	0.0250	0.0187	J	mg/L		75	50 - 150
Nitrite as N	0.0125	0.00871	J	mg/L		70	50 - 150

Lab Sample ID: MRL 380-20067/43
Matrix: Water
Analysis Batch: 20067

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	0.0437	J	mg/L		87	50 - 150
Nitrate Nitrite as N	0.100	0.0895		mg/L		90	50 - 150
Nitrite as N	0.0500	0.0458	J	mg/L		92	50 - 150

Lab Sample ID: 380-23446-A-1 MS
Matrix: Water
Analysis Batch: 20067

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	ND		6.25	7.04		mg/L		110	80 - 120
Nitrate Nitrite as N	ND		8.75	9.31		mg/L		106	80 - 120
Nitrite as N	ND		2.50	2.27		mg/L		91	80 - 120

Lab Sample ID: 380-23446-A-1 MSD
Matrix: Water
Analysis Batch: 20067

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate as N	ND		6.25	6.84		mg/L		107	80 - 120	3	20
Nitrate Nitrite as N	ND		8.75	9.11		mg/L		104	80 - 120	2	20
Nitrite as N	ND		2.50	2.27		mg/L		91	80 - 120	0	20

Lab Sample ID: MB 380-20068/41
Matrix: Water
Analysis Batch: 20068

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	mg/L			10/07/22 22:19	1
Sulfate	ND		0.25	mg/L			10/07/22 22:19	1

Lab Sample ID: LCS 380-20068/44
Matrix: Water
Analysis Batch: 20068

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	25.0	26.5		mg/L		106	90 - 110
Sulfate	50.0	51.4		mg/L		103	90 - 110

QC Sample Results

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

Job ID: 380-23442-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 380-20068/45
Matrix: Water
Analysis Batch: 20068

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	25.0	26.6		mg/L		106	90 - 110	0	20
Sulfate	50.0	51.9		mg/L		104	90 - 110	1	20

Lab Sample ID: MRL 380-20068/42
Matrix: Water
Analysis Batch: 20068

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	0.125	0.134	J	mg/L		107	50 - 150
Sulfate	0.250	0.246	J	mg/L		98	50 - 150

Lab Sample ID: MRL 380-20068/43
Matrix: Water
Analysis Batch: 20068

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	0.466	J	mg/L		93	50 - 150
Sulfate	1.00	0.935		mg/L		93	50 - 150

Lab Sample ID: 380-23446-A-1 MS
Matrix: Water
Analysis Batch: 20068

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	120		62.5	181		mg/L		103	80 - 120
Sulfate	230		125	361		mg/L		107	80 - 120

Lab Sample ID: 380-23446-A-1 MSD
Matrix: Water
Analysis Batch: 20068

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	120		62.5	181		mg/L		103	80 - 120	0	20
Sulfate	230		125	363		mg/L		109	80 - 120	0	20

Lab Sample ID: MB 380-20502/4
Matrix: Water
Analysis Batch: 20502

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		5.0	ug/L			10/12/22 15:59	1

Lab Sample ID: LCS 380-20502/5
Matrix: Water
Analysis Batch: 20502

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

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

QC Sample Results

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

Job ID: 380-23442-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 380-20502/6
Matrix: Water
Analysis Batch: 20502

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

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

Lab Sample ID: MRL 380-20502/3
Matrix: Water
Analysis Batch: 20502

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	4.92	J	ug/L		98	75 - 125

Lab Sample ID: 380-23713-AD-1 MS
Matrix: Water
Analysis Batch: 20502

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	33		50.0	82.5		ug/L		99	80 - 120

Lab Sample ID: 380-23713-AD-1 MSD
Matrix: Water
Analysis Batch: 20502

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	33		50.0	83.0		ug/L		100	80 - 120	1	20

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 380-20289/116
Matrix: Water
Analysis Batch: 20289

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	ND		1.0	mg/L			10/11/22 00:35	1
Magnesium	ND		0.10	mg/L			10/11/22 00:35	1
Potassium	ND		1.0	mg/L			10/11/22 00:35	1
Sodium	ND		1.0	mg/L			10/11/22 00:35	1

Lab Sample ID: LCS 380-20289/118
Matrix: Water
Analysis Batch: 20289

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	50.0	51.6		mg/L		103	85 - 115
Magnesium	20.0	20.5		mg/L		102	85 - 115
Potassium	20.0	20.2		mg/L		101	85 - 115
Sodium	50.0	50.6		mg/L		101	85 - 115

QC Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: LCSD 380-20289/119
Matrix: Water
Analysis Batch: 20289

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	52.0		mg/L		104	85 - 115	1	20
Magnesium	20.0	20.5		mg/L		102	85 - 115	0	20
Potassium	20.0	20.2		mg/L		101	85 - 115	0	20
Sodium	50.0	50.7		mg/L		101	85 - 115	0	20

Lab Sample ID: LLCS 380-20289/117
Matrix: Water
Analysis Batch: 20289

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	1.02		mg/L		102	50 - 150
Magnesium	0.100	0.0979	J	mg/L		98	50 - 150
Potassium	1.00	0.589	J	mg/L		59	50 - 150
Sodium	1.00	1.15		mg/L		115	50 - 150

Lab Sample ID: 380-23289-AC-1 MS
Matrix: Water
Analysis Batch: 20289

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	50		50.0	98.7		mg/L		96	70 - 130
Magnesium	10		20.0	30.1		mg/L		100	70 - 130
Potassium	1.4		20.0	23.0		mg/L		108	70 - 130
Sodium	49		50.0	95.8		mg/L		94	70 - 130

Lab Sample ID: 380-23289-AC-1 MSD
Matrix: Water
Analysis Batch: 20289

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	50		50.0	99.4		mg/L		98	70 - 130	1	20
Magnesium	10		20.0	30.2		mg/L		101	70 - 130	0	20
Potassium	1.4		20.0	23.1		mg/L		109	70 - 130	1	20
Sodium	49		50.0	96.0		mg/L		94	70 - 130	0	20

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 380-20297/1-A
Matrix: Water
Analysis Batch: 20566

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 20297

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	ug/L		10/11/22 10:07	10/12/22 13:37	1
Arsenic	ND		1.0	ug/L		10/11/22 10:07	10/12/22 13:37	1
Beryllium	ND		1.0	ug/L		10/11/22 10:07	10/12/22 13:37	1
Cadmium	ND		0.50	ug/L		10/11/22 10:07	10/12/22 13:37	1
Chromium	ND		1.0	ug/L		10/11/22 10:07	10/12/22 13:37	1
Copper	ND		2.0	ug/L		10/11/22 10:07	10/12/22 13:37	1
Lead	ND		0.50	ug/L		10/11/22 10:07	10/12/22 13:37	1
Nickel	ND		5.0	ug/L		10/11/22 10:07	10/12/22 13:37	1

Eurofins Eaton Monrovia

QC Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: MB 380-20297/1-A
Matrix: Water
Analysis Batch: 20566

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 20297

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	ND		5.0	ug/L		10/11/22 10:07	10/12/22 13:37	1
Silver	ND		0.50	ug/L		10/11/22 10:07	10/12/22 13:37	1
Thallium	ND		1.0	ug/L		10/11/22 10:07	10/12/22 13:37	1
Zinc	ND		20	ug/L		10/11/22 10:07	10/12/22 13:37	1

Lab Sample ID: LCS 380-20297/3-A
Matrix: Water
Analysis Batch: 20566

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 20297

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	50.0	52.3		ug/L		105	85 - 115
Arsenic	50.0	51.0		ug/L		102	85 - 115
Beryllium	25.0	25.6		ug/L		102	85 - 115
Cadmium	25.0	26.0		ug/L		104	85 - 115
Chromium	50.0	51.8		ug/L		104	85 - 115
Copper	50.0	53.5		ug/L		107	85 - 115
Lead	50.0	52.8		ug/L		106	85 - 115
Nickel	50.0	50.8		ug/L		102	85 - 115
Selenium	50.0	52.6		ug/L		105	85 - 115
Silver	25.0	22.7		ug/L		91	85 - 115
Thallium	50.0	52.0		ug/L		104	85 - 115
Zinc	50.0	51.8		ug/L		104	85 - 115

Lab Sample ID: LCSD 380-20297/4-A
Matrix: Water
Analysis Batch: 20566

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 20297

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	50.0	52.0		ug/L		104	85 - 115	1	20
Arsenic	50.0	51.6		ug/L		103	85 - 115	1	20
Beryllium	25.0	25.9		ug/L		104	85 - 115	1	20
Cadmium	25.0	25.9		ug/L		104	85 - 115	0	20
Chromium	50.0	51.9		ug/L		104	85 - 115	0	20
Copper	50.0	54.7		ug/L		109	85 - 115	2	20
Lead	50.0	52.3		ug/L		105	85 - 115	1	20
Nickel	50.0	51.6		ug/L		103	85 - 115	1	20
Selenium	50.0	53.4		ug/L		107	85 - 115	2	20
Silver	25.0	23.6		ug/L		95	85 - 115	4	20
Thallium	50.0	51.7		ug/L		103	85 - 115	1	20
Zinc	50.0	52.4		ug/L		105	85 - 115	1	20

Lab Sample ID: LLCS 380-20297/2-A
Matrix: Water
Analysis Batch: 20566

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 20297

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	1.00	0.983	J	ug/L		98	50 - 150
Arsenic	1.00	1.03		ug/L		103	50 - 150
Beryllium	1.00	0.985	J	ug/L		99	50 - 150

Eurofins Eaton Monrovia

QC Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: LLCS 380-20297/2-A
Matrix: Water
Analysis Batch: 20566

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 20297

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Cadmium	0.500	0.495	J	ug/L		99	50 - 150
Chromium	1.00	0.919	J	ug/L		92	50 - 150
Copper	2.00	1.98	J	ug/L		99	50 - 150
Lead	0.500	0.492	J	ug/L		98	50 - 150
Nickel	5.00	4.83	J	ug/L		97	50 - 150
Selenium	5.00	5.00		ug/L		100	50 - 150
Silver	0.500	0.441	J	ug/L		88	50 - 150
Thallium	1.00	0.983	J	ug/L		98	50 - 150
Zinc	20.0	20.2		ug/L		101	50 - 150

Lab Sample ID: 380-23442-1 MS
Matrix: Water
Analysis Batch: 20566

Client Sample ID: MOANALUA WELLS (331-223-TP202)
Prep Type: Total Recoverable
Prep Batch: 20297

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	ND		50.0	52.7		ug/L		105	70 - 130
Arsenic	ND		50.0	52.0		ug/L		104	70 - 130
Beryllium	ND		25.0	26.5		ug/L		106	70 - 130
Cadmium	ND		25.0	25.5		ug/L		102	70 - 130
Chromium	1.4		50.0	52.9		ug/L		103	70 - 130
Copper	7.3		50.0	58.5		ug/L		102	70 - 130
Lead	ND		50.0	50.4		ug/L		101	70 - 130
Nickel	ND		50.0	49.1		ug/L		98	70 - 130
Selenium	ND		50.0	53.4		ug/L		107	70 - 130
Silver	ND	^2	25.0	21.5		ug/L		86	70 - 130
Thallium	ND		50.0	49.7		ug/L		99	70 - 130
Zinc	ND		50.0	52.7		ug/L		105	70 - 130

Lab Sample ID: 380-23442-1 MSD
Matrix: Water
Analysis Batch: 20566

Client Sample ID: MOANALUA WELLS (331-223-TP202)
Prep Type: Total Recoverable
Prep Batch: 20297

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	ND		50.0	52.1		ug/L		104	70 - 130	1	20
Arsenic	ND		50.0	51.2		ug/L		102	70 - 130	2	20
Beryllium	ND		25.0	26.0		ug/L		104	70 - 130	2	20
Cadmium	ND		25.0	25.1		ug/L		101	70 - 130	1	20
Chromium	1.4		50.0	52.1		ug/L		102	70 - 130	1	20
Copper	7.3		50.0	56.5		ug/L		98	70 - 130	3	20
Lead	ND		50.0	49.4		ug/L		99	70 - 130	2	20
Nickel	ND		50.0	48.7		ug/L		97	70 - 130	1	20
Selenium	ND		50.0	52.7		ug/L		105	70 - 130	1	20
Silver	ND	^2	25.0	21.0		ug/L		84	70 - 130	2	20
Thallium	ND		50.0	48.9		ug/L		98	70 - 130	2	20
Zinc	ND		50.0	51.9		ug/L		104	70 - 130	1	20

QC Sample Results

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

Job ID: 380-23442-1

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 570-276644/1-A
Matrix: Water
Analysis Batch: 276920

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 276644

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	mg/L		10/28/22 04:59	10/28/22 10:38	1

Lab Sample ID: LCS 570-276644/2-A
Matrix: Water
Analysis Batch: 276920

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 276644

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00800	0.00756		mg/L		94	85 - 115

Lab Sample ID: LCSD 570-276644/3-A
Matrix: Water
Analysis Batch: 276920

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 276644

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	0.00800	0.00753		mg/L		94	85 - 115	0	10

Lab Sample ID: 570-114748-I-1-D MS
Matrix: Water
Analysis Batch: 276920

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 276644

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	ND		0.00800	0.00789		mg/L		99	85 - 115

Lab Sample ID: 570-114748-I-1-E MSD
Matrix: Water
Analysis Batch: 276920

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 276644

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	ND		0.00800	0.00802		mg/L		100	85 - 115	2	10

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 380-20616/7
Matrix: Water
Analysis Batch: 20616

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	ND		2.0	mg/L			10/12/22 14:42	1
Bicarbonate Alkalinity as CaCO3	ND		2.0	mg/L			10/12/22 14:42	1
Carbonate Alkalinity as CaCO3	ND		2.0	mg/L			10/12/22 14:42	1

Lab Sample ID: LCS 380-20616/5
Matrix: Water
Analysis Batch: 20616

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	100	98.6		mg/L		99	90 - 110

QC Sample Results

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

Job ID: 380-23442-1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: LCSD 380-20616/22
Matrix: Water
Analysis Batch: 20616

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
Alkalinity	100	98.0		mg/L		98	90 - 110	1	20

Lab Sample ID: LLCS 380-20616/6
Matrix: Water
Analysis Batch: 20616

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

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity	20.0	21.1		mg/L		105	90 - 110		

Lab Sample ID: MRL 380-20616/8
Matrix: Water
Analysis Batch: 20616

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity	2.00	2.03		mg/L		102	50 - 150		

Lab Sample ID: 380-23442-1 MS
Matrix: Water
Analysis Batch: 20616

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity	54		200	152	F1	mg/L		49	80 - 120		

Lab Sample ID: 380-23442-1 MSD
Matrix: Water
Analysis Batch: 20616

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity	54		200	152		mg/L					

Lab Sample ID: 380-23442-1 DU
Matrix: Water
Analysis Batch: 20616

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

Analyte	Sample Result	Sample Qualifier	Spike Added	DU Result	DU Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity	54		200	54.0		mg/L				0	20
Bicarbonate Alkalinity as CaCO3	54		200	54.0		mg/L				0	20
Carbonate Alkalinity as CaCO3	ND		200	ND		mg/L				NC	20

Method: SM 2510B - Conductivity, Specific Conductance

Lab Sample ID: MB 380-20617/7
Matrix: Water
Analysis Batch: 20617

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	ND		2.0	umhos/cm			10/12/22 14:42	1

QC Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: LCS 380-20617/10
Matrix: Water
Analysis Batch: 20617

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

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

Lab Sample ID: LCSD 380-20617/22
Matrix: Water
Analysis Batch: 20617

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	991		umhos/cm		99	90 - 110	1	10

Lab Sample ID: MRL 380-20617/8
Matrix: Water
Analysis Batch: 20617

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

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

Lab Sample ID: 380-23442-1 DU
Matrix: Water
Analysis Batch: 20617

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

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Specific Conductance	420		420		umhos/cm		0	20

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

Lab Sample ID: MB 380-20029/1
Matrix: Water
Analysis Batch: 20029

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	mg/L			10/07/22 14:40	1

Lab Sample ID: HLCS 380-20029/5
Matrix: Water
Analysis Batch: 20029

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	688		mg/L		98	80 - 114

Lab Sample ID: LCS 380-20029/4
Matrix: Water
Analysis Batch: 20029

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	170		mg/L		97	80 - 114

QC Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: MRL 380-20029/2
Matrix: Water
Analysis Batch: 20029

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	10.0	8.00	J	mg/L		80	50 - 150

Lab Sample ID: MRL 380-20029/3
Matrix: Water
Analysis Batch: 20029

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

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

Lab Sample ID: 380-23289-AI-1 DU
Matrix: Water
Analysis Batch: 20029

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	380		364		mg/L		3	10

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 380-20623/40
Matrix: Water
Analysis Batch: 20623

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.050	mg/L			10/12/22 18:14	1

Lab Sample ID: MB 380-20623/6
Matrix: Water
Analysis Batch: 20623

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.050	mg/L			10/12/22 15:55	1

Lab Sample ID: LCS 380-20623/42
Matrix: Water
Analysis Batch: 20623

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

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

Lab Sample ID: LCSD 380-20623/43
Matrix: Water
Analysis Batch: 20623

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	0.994		mg/L		99	90 - 110	2	10

QC Sample Results

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

Job ID: 380-23442-1

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: MRL 380-20623/41
Matrix: Water
Analysis Batch: 20623

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	0.0443	J	mg/L		89	50 - 150

Lab Sample ID: MRL 380-20623/7
Matrix: Water
Analysis Batch: 20623

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	0.0464	J	mg/L		93	50 - 150

Lab Sample ID: 380-23614-Z-1 MS
Matrix: Water
Analysis Batch: 20623

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	1.12		mg/L		112	80 - 120

Lab Sample ID: 380-23614-Z-1 MSD
Matrix: Water
Analysis Batch: 20623

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	1.10		mg/L		110	80 - 120	1	20

Method: SM 4500 H+ B - pH

Lab Sample ID: MB 380-20618/9
Matrix: Water
Analysis Batch: 20618

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	5.8			SU			10/12/22 14:42	1

Lab Sample ID: LCS 380-20618/10
Matrix: Water
Analysis Batch: 20618

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: 380-23442-1 DU
Matrix: Water
Analysis Batch: 20618

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

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	7.7	HF	7.7		SU		0.1	2

QC Sample Results

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

Job ID: 380-23442-1

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 380-20325/1
Matrix: Water
Analysis Batch: 20325

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		0.050	mg/L			10/11/22 14:00	1

Lab Sample ID: LCS 380-20325/4
Matrix: Water
Analysis Batch: 20325

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	0.250	0.241		mg/L		96	90 - 110

Lab Sample ID: LCSD 380-20325/16
Matrix: Water
Analysis Batch: 20325

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfide	0.250	0.253		mg/L		101	90 - 110	5	20

Lab Sample ID: MRL 380-20325/15
Matrix: Water
Analysis Batch: 20325

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

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

Lab Sample ID: MRL 380-20325/2
Matrix: Water
Analysis Batch: 20325

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	0.0500	0.0550		mg/L		110	50 - 150

Lab Sample ID: 380-23445-T-2 MS
Matrix: Water
Analysis Batch: 20325

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	ND		0.250	0.261		mg/L		104	80 - 120

Lab Sample ID: 380-23445-T-2 MSD
Matrix: Water
Analysis Batch: 20325

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfide	ND		0.250	0.262		mg/L		105	80 - 120	0	20

QC Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: 100732-B1
Matrix: BlankMatrix
Analysis Batch: O-40004

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: O-40004_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.005	0.001	µg/L		10/10/22 00:00	10/30/22 21:27	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		10/10/22 00:00	10/30/22 21:27	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		10/10/22 00:00	10/30/22 21:27	1
2,4,5-Trichlorophenol	ND		0.1	0.05	µg/L		10/10/22 00:00	10/30/22 21:27	1
2,4,6-Trichlorophenol	ND		0.1	0.05	µg/L		10/10/22 00:00	10/30/22 21:27	1
2,4-Dichlorophenol	ND		0.1	0.05	µg/L		10/10/22 00:00	10/30/22 21:27	1
2,4-Dinitrophenol	ND		0.2	0.1	µg/L		10/10/22 00:00	10/30/22 21:27	1
2,6-Dichlorophenol	ND		0.1	0.05	µg/L		10/10/22 00:00	10/30/22 21:27	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		10/10/22 00:00	10/30/22 21:27	1
2,6-Di-tert-butyl-4-methylphenol	ND		0.1	0.05	µg/L		10/10/22 00:00	10/30/22 21:27	1
2,6-Di-tert-butylphenol	ND		0.1	0.05	µg/L		10/10/22 00:00	10/30/22 21:27	1
2-Chloronaphthalene	ND		0.1	0.05	µg/L		10/10/22 00:00	10/30/22 21:27	1
2-Chlorophenol	ND		0.1	0.05	µg/L		10/10/22 00:00	10/30/22 21:27	1
2-Methyl-4,6-dinitrophenol	ND		0.2	0.1	µg/L		10/10/22 00:00	10/30/22 21:27	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		10/10/22 00:00	10/30/22 21:27	1
2-Methylphenol	ND		0.2	0.1	µg/L		10/10/22 00:00	10/30/22 21:27	1
2-Nitroaniline	ND		0.1	0.05	µg/L		10/10/22 00:00	10/30/22 21:27	1
2-Nitrophenol	ND		0.2	0.1	µg/L		10/10/22 00:00	10/30/22 21:27	1
3+4-Methylphenol	ND		0.2	0.1	µg/L		10/10/22 00:00	10/30/22 21:27	1
3-Nitroaniline	ND		0.1	0.05	µg/L		10/10/22 00:00	10/30/22 21:27	1
4-Bromophenylphenyl ether	ND		0.1	0.05	µg/L		10/10/22 00:00	10/30/22 21:27	1
4-Chloro-3-methylphenol	ND		0.2	0.1	µg/L		10/10/22 00:00	10/30/22 21:27	1
4-Chloroaniline	ND		0.1	0.05	µg/L		10/10/22 00:00	10/30/22 21:27	1
4-Chlorophenylphenyl ether	ND		0.1	0.05	µg/L		10/10/22 00:00	10/30/22 21:27	1
4-Nitroaniline	ND		0.1	0.05	µg/L		10/10/22 00:00	10/30/22 21:27	1
4-Nitrophenol	ND		0.2	0.1	µg/L		10/10/22 00:00	10/30/22 21:27	1
6-tert-butyl-2,4-dimethylphenol	ND		0.1	0.05	µg/L		10/10/22 00:00	10/30/22 21:27	1
Acenaphthene	ND		0.005	0.001	µg/L		10/10/22 00:00	10/30/22 21:27	1
Acenaphthylene	ND		0.005	0.001	µg/L		10/10/22 00:00	10/30/22 21:27	1
Aniline	ND		0.1	0.05	µg/L		10/10/22 00:00	10/30/22 21:27	1
Anthracene	ND		0.005	0.001	µg/L		10/10/22 00:00	10/30/22 21:27	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		10/10/22 00:00	10/30/22 21:27	1
Benzidine	ND		0.1	0.05	µg/L		10/10/22 00:00	10/30/22 21:27	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		10/10/22 00:00	10/30/22 21:27	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		10/10/22 00:00	10/30/22 21:27	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		10/10/22 00:00	10/30/22 21:27	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		10/10/22 00:00	10/30/22 21:27	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		10/10/22 00:00	10/30/22 21:27	1
Benzoic Acid	ND		0.2	0.1	µg/L		10/10/22 00:00	10/30/22 21:27	1
Benzyl Alcohol	ND		0.2	0.1	µg/L		10/10/22 00:00	10/30/22 21:27	1
Biphenyl	ND		0.005	0.001	µg/L		10/10/22 00:00	10/30/22 21:27	1
Bis(2-Chloroethoxy) methane	ND		0.1	0.05	µg/L		10/10/22 00:00	10/30/22 21:27	1
Bis(2-Chloroethyl) ether	ND		0.1	0.05	µg/L		10/10/22 00:00	10/30/22 21:27	1
Bis(2-Chloroisopropyl) ether	ND		0.1	0.05	µg/L		10/10/22 00:00	10/30/22 21:27	1
Chrysene	ND		0.005	0.001	µg/L		10/10/22 00:00	10/30/22 21:27	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		10/10/22 00:00	10/30/22 21:27	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		10/10/22 00:00	10/30/22 21:27	1
Dibenzofuran	ND		0.1	0.05	µg/L		10/10/22 00:00	10/30/22 21:27	1

Eurofins Eaton Monrovia

QC Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: 100732-B1
Matrix: BlankMatrix
Analysis Batch: O-40004

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: O-40004_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenzothiophene	ND		0.005	0.001	µg/L		10/10/22 00:00	10/30/22 21:27	1
DisalicylidenePROPANEDIAMINE	ND		0.1	0.05	µg/L		10/10/22 00:00	10/30/22 21:27	1
Fluoranthene	ND		0.005	0.001	µg/L		10/10/22 00:00	10/30/22 21:27	1
Fluorene	ND		0.005	0.001	µg/L		10/10/22 00:00	10/30/22 21:27	1
Hexachloroethane	ND		0.1	0.05	µg/L		10/10/22 00:00	10/30/22 21:27	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		10/10/22 00:00	10/30/22 21:27	1
Naphthalene	ND		0.005	0.001	µg/L		10/10/22 00:00	10/30/22 21:27	1
Nitrobenzene	ND		0.1	0.05	µg/L		10/10/22 00:00	10/30/22 21:27	1
N-Nitrosodi-n-propylamine	ND		0.1	0.05	µg/L		10/10/22 00:00	10/30/22 21:27	1
N-Nitrosodiphenylamine	ND		0.1	0.05	µg/L		10/10/22 00:00	10/30/22 21:27	1
Pentachlorophenol	ND		0.1	0.05	µg/L		10/10/22 00:00	10/30/22 21:27	1
Perylene	ND		0.005	0.001	µg/L		10/10/22 00:00	10/30/22 21:27	1
Phenanthrene	ND		0.005	0.001	µg/L		10/10/22 00:00	10/30/22 21:27	1
Phenol	ND		0.2	0.1	µg/L		10/10/22 00:00	10/30/22 21:27	1
p-tert-Butylphenol	ND		0.1	0.05	µg/L		10/10/22 00:00	10/30/22 21:27	1
Pyrene	ND		0.005	0.001	µg/L		10/10/22 00:00	10/30/22 21:27	1

Surrogate	Blank %Recovery	Blank Qualifier	Limits	Prepared	Analyzed	Dil Fac
(2,4,6-Tribromophenol)	56		30 - 130	10/10/22 00:00	10/30/22 21:27	1
(d10-Acenaphthene)	83		27 - 133	10/10/22 00:00	10/30/22 21:27	1
(d10-Phenanthrene)	90		43 - 129	10/10/22 00:00	10/30/22 21:27	1
(d12-Chrysene)	84		52 - 144	10/10/22 00:00	10/30/22 21:27	1
(d12-Perylene)	80		36 - 161	10/10/22 00:00	10/30/22 21:27	1
(d5-Phenol)	40		0 - 130	10/10/22 00:00	10/30/22 21:27	1
(d8-Naphthalene)	73		25 - 125	10/10/22 00:00	10/30/22 21:27	1

Lab Sample ID: 100732-BS1
Matrix: BlankMatrix
Analysis Batch: O-40004

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-40004_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	0.5	0.403		µg/L		81	31 - 128
1-Methylphenanthrene	0.5	0.402		µg/L		80	66 - 127
2,3,5-Trimethylnaphthalene	0.5	0.441		µg/L		88	55 - 122
2,4,5-Trichlorophenol	1	0.772		µg/L		77	30 - 130
2,4,6-Trichlorophenol	1	0.876		µg/L		88	30 - 130
2,4-Dichlorophenol	1	0.88		µg/L		88	51 - 117
2,4-Dinitrophenol	1	0.71		µg/L		71	0 - 152
2,6-Dichlorophenol	1	0.928		µg/L		93	30 - 130
2,6-Dimethylnaphthalene	0.5	0.455		µg/L		91	48 - 120
2,6-Di-tert-butyl-4-methylphenol	1	0.638		µg/L		64	50 - 150
2,6-Di-tert-butylphenol	1	0.642		µg/L		64	50 - 150
2-Chloronaphthalene	1	0.845		µg/L		85	53 - 130
2-Chlorophenol	1	0.677		µg/L		68	41 - 120
2-Methyl-4,6-dinitrophenol	1	0.777		µg/L		78	0 - 141
2-Methylnaphthalene	1.5	1.16		µg/L		77	47 - 130
2-Methylphenol	1	0.773		µg/L		77	40 - 117
2-Nitroaniline	1	0.881		µg/L		88	69 - 114

Eurofins Eaton Monrovia

QC Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: 100732-BS1
Matrix: BlankMatrix
Analysis Batch: O-40004

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-40004_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2-Nitrophenol	1	0.611		µg/L		61	40 - 117
3+4-Methylphenol	1	0.864		µg/L		86	0 - 130
3-Nitroaniline	1	0.92		µg/L		92	23 - 137
4-Bromophenylphenyl ether	1	0.864		µg/L		86	61 - 132
4-Chloro-3-methylphenol	1	0.864		µg/L		86	51 - 128
4-Chloroaniline	1	1.2		µg/L		120	50 - 150
4-Chlorophenylphenyl ether	1	0.853		µg/L		85	63 - 130
4-Nitroaniline	1	0.97		µg/L		97	10 - 159
4-Nitrophenol	1	0.47		µg/L		47	10 - 164
6-tert-butyl-2,4-dimethylphenol	1	0.736		µg/L		74	50 - 150
Acenaphthene	1.5	1.49		µg/L		99	53 - 131
Acenaphthylene	1.5	1.53		µg/L		102	43 - 140
Aniline	1	0.613		µg/L		61	50 - 150
Anthracene	1.5	1.52		µg/L		101	58 - 135
Benz[a]anthracene	1.5	1.52		µg/L		101	55 - 145
Benzo[a]pyrene	1.5	1.4		µg/L		93	51 - 143
Benzo[b]fluoranthene	1.5	1.41		µg/L		94	46 - 165
Benzo[e]pyrene	0.5	0.468		µg/L		94	42 - 152
Benzo[g,h,i]perylene	1.5	1.48		µg/L		99	63 - 133
Benzo[k]fluoranthene	1.5	1.5		µg/L		100	56 - 145
Benzoic Acid	1	0.407		µg/L		41	2 - 145
Benzyl Alcohol	1	0.821		µg/L		82	43 - 148
Biphenyl	0.5	0.461		µg/L		92	56 - 119
Bis(2-Chloroethoxy) methane	1	0.94		µg/L		94	66 - 122
Bis(2-Chloroethyl) ether	1	0.727		µg/L		73	43 - 127
Bis(2-Chloroisopropyl) ether	1	1.06		µg/L		106	49 - 128
Chrysene	1.5	1.51		µg/L		101	56 - 141
Dibenz[a,h]anthracene	1.5	1.39		µg/L		93	55 - 150
Dibenzo[a,l]pyrene	0.5	0.393		µg/L		79	50 - 150
Dibenzofuran	1	0.731		µg/L		73	50 - 150
Dibenzothiophene	0.5	0.477		µg/L		95	75 - 113
Disalicylidenepropanediamine	50	30.8		µg/L		62	50 - 150
Fluoranthene	1.5	0.901		µg/L		60	60 - 146
Fluorene	1.5	1.55		µg/L		103	58 - 131
Hexachloroethane	1	0.79		µg/L		79	27 - 130
Indeno[1,2,3-cd]pyrene	1.5	1.39		µg/L		93	50 - 151
Naphthalene	1.5	1.07		µg/L		71	41 - 126
Nitrobenzene	1	0.891		µg/L		89	54 - 111
N-Nitrosodi-n-propylamine	1	0.955		µg/L		95	61 - 152
N-Nitrosodiphenylamine	1	0.789		µg/L		79	49 - 142
Pentachlorophenol	1	0.613		µg/L		61	36 - 111
Perylene	0.5	0.407		µg/L		81	48 - 141
Phenanthrene	1.5	1.53		µg/L		102	67 - 127
Phenol	1	0.626		µg/L		63	29 - 114
p-tert-Butylphenol	1	1.13		µg/L		113	50 - 150
Pyrene	1.5	0.897		µg/L		60	54 - 156

QC Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: 100732-BS1
Matrix: BlankMatrix
Analysis Batch: O-40004

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-40004_P

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
(2,4,6-Tribromophenol)	55		30 - 130
(d10-Acenaphthene)	83		27 - 133
(d10-Phenanthrene)	93		43 - 129
(d12-Chrysene)	97		52 - 144
(d12-Perylene)	84		36 - 161
(d5-Phenol)	33		0 - 130
(d8-Naphthalene)	76		25 - 125

Lab Sample ID: 100732-BS2
Matrix: BlankMatrix
Analysis Batch: O-40004

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: O-40004_P

Analyte	Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec		RPD	
							Limits	RPD	Limit	
1-Methylnaphthalene	0.5	0.395		µg/L		79	31 - 128	2	30	
1-Methylphenanthrene	0.5	0.411		µg/L		82	66 - 127	2	30	
2,3,5-Trimethylnaphthalene	0.5	0.476		µg/L		95	55 - 122	8	30	
2,4,5-Trichlorophenol	1	0.943		µg/L		94	30 - 130	20	30	
2,4,6-Trichlorophenol	1	0.978		µg/L		98	30 - 130	11	30	
2,4-Dichlorophenol	1	0.963		µg/L		96	51 - 117	9	30	
2,4-Dinitrophenol	1	0.757		µg/L		76	0 - 152	7	30	
2,6-Dichlorophenol	1	1.03		µg/L		103	30 - 130	10	30	
2,6-Dimethylnaphthalene	0.5	0.505		µg/L		101	48 - 120	10	30	
2,6-Di-tert-butyl-4-methylphenol	1	0.705		µg/L		70	50 - 150	9	30	
2,6-Di-tert-butylphenol	1	0.739		µg/L		74	50 - 150	14	30	
2-Chloronaphthalene	1	1.01		µg/L		101	53 - 130	18	30	
2-Chlorophenol	1	0.754		µg/L		75	41 - 120	10	30	
2-Methyl-4,6-dinitrophenol	1	0.882		µg/L		88	0 - 141	12	30	
2-Methylnaphthalene	1.5	1.13		µg/L		75	47 - 130	3	30	
2-Methylphenol	1	0.885		µg/L		88	40 - 117	13	30	
2-Nitroaniline	1	1.12		µg/L		112	69 - 114	24	30	
2-Nitrophenol	1	0.79		µg/L		79	40 - 117	26	30	
3+4-Methylphenol	1	0.867		µg/L		87	0 - 130	1	30	
3-Nitroaniline	1	1.16		µg/L		116	23 - 137	23	30	
4-Bromophenylphenyl ether	1	0.988		µg/L		99	61 - 132	14	30	
4-Chloro-3-methylphenol	1	0.98		µg/L		98	51 - 128	13	30	
4-Chloroaniline	1	1.25		µg/L		125	50 - 150	4	30	
4-Chlorophenylphenyl ether	1	0.996		µg/L		100	63 - 130	16	30	
4-Nitroaniline	1	1.29		µg/L		129	10 - 159	28	30	
4-Nitrophenol	1	0.553		µg/L		55	10 - 164	16	30	
6-tert-butyl-2,4-dimethylphenol	1	0.786		µg/L		79	50 - 150	7	30	
Acenaphthene	1.5	1.62		µg/L		108	53 - 131	9	30	
Acenaphthylene	1.5	1.63		µg/L		109	43 - 140	7	30	
Aniline	1	0.727		µg/L		73	50 - 150	18	30	
Anthracene	1.5	1.58		µg/L		105	58 - 135	4	30	
Benz[a]anthracene	1.5	1.61		µg/L		107	55 - 145	6	30	
Benzo[a]pyrene	1.5	1.4		µg/L		93	51 - 143	0	30	
Benzo[b]fluoranthene	1.5	1.49		µg/L		99	46 - 165	5	30	
Benzo[e]pyrene	0.5	0.486		µg/L		97	42 - 152	3	30	

Eurofins Eaton Monrovia

QC Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: 100732-BS2
Matrix: BlankMatrix
Analysis Batch: O-40004

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: O-40004_P

Analyte	Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
Benzo[g,h,i]perylene	1.5	1.53		µg/L		102	63 - 133	3	30	
Benzo[k]fluoranthene	1.5	1.57		µg/L		105	56 - 145	5	30	
Benzoic Acid	1	0.441		µg/L		44	2 - 145	7	30	
Benzyl Alcohol	1	0.794		µg/L		79	43 - 148	4	30	
Biphenyl	0.5	0.495		µg/L		99	56 - 119	7	30	
Bis(2-Chloroethoxy) methane	1	0.997		µg/L		100	66 - 122	6	30	
Bis(2-Chloroethyl) ether	1	0.79		µg/L		79	43 - 127	8	30	
Bis(2-Chloroisopropyl) ether	1	0.969		µg/L		97	49 - 128	9	30	
Chrysene	1.5	1.57		µg/L		105	56 - 141	4	30	
Dibenz[a,h]anthracene	1.5	1.43		µg/L		95	55 - 150	2	30	
Dibenzo[a,l]pyrene	0.5	0.396		µg/L		79	50 - 150	0	30	
Dibenzofuran	1	0.884		µg/L		88	50 - 150	19	30	
Dibenzothiophene	0.5	0.506		µg/L		101	75 - 113	6	30	
Disalicylidenepropanediamine	50	38.4		µg/L		77	50 - 150	22	30	
Fluoranthene	1.5	0.98		µg/L		65	60 - 146	8	30	
Fluorene	1.5	1.71		µg/L		114	58 - 131	10	30	
Hexachloroethane	1	0.77		µg/L		77	27 - 130	3	30	
Indeno[1,2,3-cd]pyrene	1.5	1.44		µg/L		96	50 - 151	3	30	
Naphthalene	1.5	1		µg/L		67	41 - 126	6	30	
Nitrobenzene	1	0.884		µg/L		88	54 - 111	1	30	
N-Nitrosodi-n-propylamine	1	0.979		µg/L		98	61 - 152	2	30	
N-Nitrosodiphenylamine	1	0.983		µg/L		98	49 - 142	21	30	
Pentachlorophenol	1	0.738		µg/L		74	36 - 111	19	30	
Perylene	0.5	0.407		µg/L		81	48 - 141	0	30	
Phenanthrene	1.5	1.62		µg/L		108	67 - 127	6	30	
Phenol	1	0.706		µg/L		71	29 - 114	12	30	
p-tert-Butylphenol	1	1.12		µg/L		112	50 - 150	1	30	
Pyrene	1.5	0.872		µg/L		58	54 - 156	3	30	

Surrogate	LCS DUP		Limits
	%Recovery	Qualifier	
(2,4,6-Tribromophenol)	61		30 - 130
(d10-Acenaphthene)	92		27 - 133
(d10-Phenanthrene)	98		43 - 129
(d12-Chrysene)	103		52 - 144
(d12-Perylene)	87		36 - 161
(d5-Phenol)	35		0 - 130
(d8-Naphthalene)	74		25 - 125

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

Lab Sample ID: 22DSJ041WB
Matrix: WATER
Analysis Batch: 22DSJ041W

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
DIESEL	ND	U	0.025		mg/L			10/20/22 15:54	1
JP5	ND	U	0.050		mg/L			10/20/22 15:54	1
JP8	ND	U	0.050		mg/L			10/20/22 15:54	1
MOTOR OIL	ND	U	0.050		mg/L			10/20/22 15:54	1

Eurofins Eaton Monrovia

QC Sample Results

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

Job ID: 380-23442-1

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

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOBENZENE					10/20/22 15:54	1
HEXACOSANE					10/20/22 15:54	1

Lab Sample ID: 22DSJ041WL
Matrix: WATER
Analysis Batch: 22DSJ041W

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
DIESEL	2.50	2.33		mg/L		93	50 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
BROMOBENZENE	100		60 - 130
HEXACOSANE	102		60 - 130

Lab Sample ID: 22J5J041WL
Matrix: WATER
Analysis Batch: 22DSJ041W

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
JP5	2.50	2.05		mg/L		82	30 - 160

Surrogate	LCS %Recovery	LCS Qualifier	Limits
BROMOBENZENE	100		60 - 130
HEXACOSANE	102		60 - 130

Lab Sample ID: 22J8J041WL
Matrix: WATER
Analysis Batch: 22DSJ041W

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
JP8	2.50	2.33		mg/L		93	30 - 160

Surrogate	LCS %Recovery	LCS Qualifier	Limits
BROMOBENZENE	86		60 - 130
HEXACOSANE	91		60 - 130

Method: 8015 Ethanol - SW846 8015B Gasoline Range Organics

Lab Sample ID: 22MEJ002WB
Matrix: WATER
Analysis Batch: 22MEJ002W

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
ETHANOL	ND	U	2000		ug/L			10/12/22 14:52	1

Lab Sample ID: 22MEJ002WL
Matrix: WATER
Analysis Batch: 22MEJ002W

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
ETHANOL	10000	10700		ug/L		107	60 - 130

Eurofins Eaton Monrovia

QC Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: 22J124-01M
Matrix: WATER
Analysis Batch: 22MEJ002W

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	11600		ug/L		116	60 - 130

Lab Sample ID: 22J124-01S
Matrix: WATER
Analysis Batch: 22MEJ002W

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	11400		ug/L		114	60 - 130	2	30

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

Lab Sample ID: 22VGH7J03B
Matrix: WATER
Analysis Batch: 22VGH7J03

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.020		mg/L			10/11/22 12:28	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE					10/11/22 12:28	1

Lab Sample ID: 22VGH7J03L
Matrix: WATER
Analysis Batch: 22VGH7J03

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
GASOLINE	0.500	0.439		mg/L		88	60 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
BROMOFLUOROBENZENE	106		70 - 130

Lab Sample ID: 22J124-01M
Matrix: WATER
Analysis Batch: 22VGH7J03

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
GASOLINE	ND		0.500	0.391		mg/L		78	50 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
BROMOFLUOROBENZENE	93		60 - 140

Lab Sample ID: 22J124-01S
Matrix: WATER
Analysis Batch: 22VGH7J03

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
GASOLINE	ND		0.500	0.436		mg/L		87	50 - 130	11	30

Eurofins Eaton Monrovia

QC Sample Results

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

Job ID: 380-23442-1

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

Lab Sample ID: 22J124-01S
Matrix: WATER
Analysis Batch: 22VGH7J03

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

<i>Surrogate</i>	<i>%Recovery</i>	<i>MSD MSD Qualifier</i>	<i>Limits</i>
BROMOFLUOROBENZENE	104		60 - 140

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18

QC Association Summary

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

Job ID: 380-23442-1

GC/MS VOA

Analysis Batch: 20018

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-23442-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Water	524.2	
380-23442-2	TB: MOANALUA WELLS	Total/NA	Water	524.2	
MB 380-20018/5	Method Blank	Total/NA	Water	524.2	
LCS 380-20018/2	Lab Control Sample	Total/NA	Water	524.2	
LCSD 380-20018/3	Lab Control Sample Dup	Total/NA	Water	524.2	
MRL 380-20018/4	Lab Control Sample	Total/NA	Water	524.2	

Analysis Batch: 20208

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-23442-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Water	524.2	
380-23442-2	TB: MOANALUA WELLS	Total/NA	Water	524.2	
MB 380-20208/15	Method Blank	Total/NA	Water	524.2	
LCS 380-20208/11	Lab Control Sample	Total/NA	Water	524.2	
LCSD 380-20208/12	Lab Control Sample Dup	Total/NA	Water	524.2	
MRL 380-20208/14	Lab Control Sample	Total/NA	Water	524.2	

GC/MS Semi VOA

Prep Batch: 20295

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-23442-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Water	525.2	
MB 380-20295/1-A	Method Blank	Total/NA	Water	525.2	
LCS 380-20295/3-A	Lab Control Sample	Total/NA	Water	525.2	
LCSD 380-20295/4-A	Lab Control Sample Dup	Total/NA	Water	525.2	
MRL 380-20295/2-A	Lab Control Sample	Total/NA	Water	525.2	
380-23266-C-1-B MS	Matrix Spike	Total/NA	Water	525.2	
380-23289-BU-1-A MS	Matrix Spike	Total/NA	Water	525.2	

Analysis Batch: 20427

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-23442-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Water	525.2	20295
MB 380-20295/1-A	Method Blank	Total/NA	Water	525.2	20295
LCS 380-20295/3-A	Lab Control Sample	Total/NA	Water	525.2	20295
LCSD 380-20295/4-A	Lab Control Sample Dup	Total/NA	Water	525.2	20295
MRL 380-20295/2-A	Lab Control Sample	Total/NA	Water	525.2	20295
380-23266-C-1-B MS	Matrix Spike	Total/NA	Water	525.2	20295
380-23289-BU-1-A MS	Matrix Spike	Total/NA	Water	525.2	20295

GC Semi VOA

Prep Batch: 20411

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-23442-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Water	505	
380-23442-2	TB: MOANALUA WELLS	Total/NA	Water	505	
MB 380-20411/7-A	Method Blank	Total/NA	Water	505	
MRL 380-20411/2-A	Lab Control Sample	Total/NA	Water	505	
MRL 380-20411/3-A	Lab Control Sample	Total/NA	Water	505	
MRL 380-20411/4-A	Lab Control Sample	Total/NA	Water	505	
MRL 380-20411/5-A	Lab Control Sample	Total/NA	Water	505	
MRL 380-20411/6-A	Lab Control Sample	Total/NA	Water	505	
380-23416-C-1-A MS	Matrix Spike	Total/NA	Water	505	
380-23416-D-1-A MS	Matrix Spike	Total/NA	Water	505	

Eurofins Eaton Monrovia

QC Association Summary

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

Job ID: 380-23442-1

GC Semi VOA (Continued)

Prep Batch: 20411 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-23442-1 MS	MOANALUA WELLS (331-223-TP202)	Total/NA	Water	505	
380-23442-1 MS	MOANALUA WELLS (331-223-TP202)	Total/NA	Water	505	

Analysis Batch: 20462

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-23442-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Water	505	20411
380-23442-2	TB: MOANALUA WELLS	Total/NA	Water	505	20411
MB 380-20411/7-A	Method Blank	Total/NA	Water	505	20411
MRL 380-20411/2-A	Lab Control Sample	Total/NA	Water	505	20411
MRL 380-20411/3-A	Lab Control Sample	Total/NA	Water	505	20411
MRL 380-20411/4-A	Lab Control Sample	Total/NA	Water	505	20411
MRL 380-20411/5-A	Lab Control Sample	Total/NA	Water	505	20411
MRL 380-20411/6-A	Lab Control Sample	Total/NA	Water	505	20411
380-23416-C-1-A MS	Matrix Spike	Total/NA	Water	505	20411
380-23416-D-1-A MS	Matrix Spike	Total/NA	Water	505	20411
380-23442-1 MS	MOANALUA WELLS (331-223-TP202)	Total/NA	Water	505	20411
380-23442-1 MS	MOANALUA WELLS (331-223-TP202)	Total/NA	Water	505	20411

Prep Batch: 20612

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-23442-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Water	504.1	
380-23442-2	TB: MOANALUA WELLS	Total/NA	Water	504.1	
MBL 380-20612/4-A	Method Blank	Total/NA	Water	504.1	
LCS 380-20612/3-A	Lab Control Sample	Total/NA	Water	504.1	
MRL 380-20612/1-A	Lab Control Sample	Total/NA	Water	504.1	
MRL 380-20612/2-A	Lab Control Sample	Total/NA	Water	504.1	
380-22826-B-1-A MS	Matrix Spike	Total/NA	Water	504.1	
380-22826-A-2-A DU	Duplicate	Total/NA	Water	504.1	

Analysis Batch: 20737

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-23442-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Water	504.1	20612
380-23442-2	TB: MOANALUA WELLS	Total/NA	Water	504.1	20612
MBL 380-20612/4-A	Method Blank	Total/NA	Water	504.1	20612
LCS 380-20612/3-A	Lab Control Sample	Total/NA	Water	504.1	20612
MRL 380-20612/1-A	Lab Control Sample	Total/NA	Water	504.1	20612
MRL 380-20612/2-A	Lab Control Sample	Total/NA	Water	504.1	20612
380-22826-B-1-A MS	Matrix Spike	Total/NA	Water	504.1	20612
380-22826-A-2-A DU	Duplicate	Total/NA	Water	504.1	20612

HPLC/IC

Analysis Batch: 20067

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-23442-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Water	300.0	
MB 380-20067/41	Method Blank	Total/NA	Water	300.0	
LCS 380-20067/44	Lab Control Sample	Total/NA	Water	300.0	
LCSD 380-20067/45	Lab Control Sample Dup	Total/NA	Water	300.0	
MRL 380-20067/42	Lab Control Sample	Total/NA	Water	300.0	
MRL 380-20067/43	Lab Control Sample	Total/NA	Water	300.0	
380-23446-A-1 MS	Matrix Spike	Total/NA	Water	300.0	

Eurofins Eaton Monrovia

QC Association Summary

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

Job ID: 380-23442-1

HPLC/IC (Continued)

Analysis Batch: 20067 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-23446-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Analysis Batch: 20068

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-23442-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Water	300.0	
MB 380-20068/41	Method Blank	Total/NA	Water	300.0	
LCS 380-20068/44	Lab Control Sample	Total/NA	Water	300.0	
LCSD 380-20068/45	Lab Control Sample Dup	Total/NA	Water	300.0	
MRL 380-20068/42	Lab Control Sample	Total/NA	Water	300.0	
MRL 380-20068/43	Lab Control Sample	Total/NA	Water	300.0	
380-23446-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
380-23446-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Analysis Batch: 20502

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-23442-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Water	300.0	
MB 380-20502/4	Method Blank	Total/NA	Water	300.0	
LCS 380-20502/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 380-20502/6	Lab Control Sample Dup	Total/NA	Water	300.0	
MRL 380-20502/3	Lab Control Sample	Total/NA	Water	300.0	
380-23713-AD-1 MS	Matrix Spike	Total/NA	Water	300.0	
380-23713-AD-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Metals

Analysis Batch: 20289

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-23442-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Water	200.7 Rev 4.4	
MB 380-20289/116	Method Blank	Total/NA	Water	200.7 Rev 4.4	
LCS 380-20289/118	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	
LCSD 380-20289/119	Lab Control Sample Dup	Total/NA	Water	200.7 Rev 4.4	
LLCS 380-20289/117	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	
380-23289-AC-1 MS	Matrix Spike	Total/NA	Water	200.7 Rev 4.4	
380-23289-AC-1 MSD	Matrix Spike Duplicate	Total/NA	Water	200.7 Rev 4.4	

Prep Batch: 20297

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-23442-1	MOANALUA WELLS (331-223-TP202)	Total Recoverable	Water	200.8	
MB 380-20297/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 380-20297/3-A	Lab Control Sample	Total Recoverable	Water	200.8	
LCSD 380-20297/4-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	
LLCS 380-20297/2-A	Lab Control Sample	Total Recoverable	Water	200.8	
380-23442-1 MS	MOANALUA WELLS (331-223-TP202)	Total Recoverable	Water	200.8	
380-23442-1 MSD	MOANALUA WELLS (331-223-TP202)	Total Recoverable	Water	200.8	

Analysis Batch: 20566

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-23442-1	MOANALUA WELLS (331-223-TP202)	Total Recoverable	Water	200.8	20297
MB 380-20297/1-A	Method Blank	Total Recoverable	Water	200.8	20297
LCS 380-20297/3-A	Lab Control Sample	Total Recoverable	Water	200.8	20297
LCSD 380-20297/4-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	20297

Eurofins Eaton Monrovia

QC Association Summary

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

Job ID: 380-23442-1

Metals (Continued)

Analysis Batch: 20566 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LLCS 380-20297/2-A	Lab Control Sample	Total Recoverable	Water	200.8	20297
380-23442-1 MS	MOANALUA WELLS (331-223-TP202)	Total Recoverable	Water	200.8	20297
380-23442-1 MSD	MOANALUA WELLS (331-223-TP202)	Total Recoverable	Water	200.8	20297

Prep Batch: 276644

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-23442-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Water	245.1	
MB 570-276644/1-A	Method Blank	Total/NA	Water	245.1	
LCS 570-276644/2-A	Lab Control Sample	Total/NA	Water	245.1	
LCSD 570-276644/3-A	Lab Control Sample Dup	Total/NA	Water	245.1	
570-114748-I-1-D MS	Matrix Spike	Total/NA	Water	245.1	
570-114748-I-1-E MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	

Analysis Batch: 276920

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-23442-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Water	245.1	276644
MB 570-276644/1-A	Method Blank	Total/NA	Water	245.1	276644
LCS 570-276644/2-A	Lab Control Sample	Total/NA	Water	245.1	276644
LCSD 570-276644/3-A	Lab Control Sample Dup	Total/NA	Water	245.1	276644
570-114748-I-1-D MS	Matrix Spike	Total/NA	Water	245.1	276644
570-114748-I-1-E MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	276644

General Chemistry

Analysis Batch: 20029

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-23442-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Water	SM 2540C	
MB 380-20029/1	Method Blank	Total/NA	Water	SM 2540C	
HLCS 380-20029/5	Lab Control Sample	Total/NA	Water	SM 2540C	
LCS 380-20029/4	Lab Control Sample	Total/NA	Water	SM 2540C	
MRL 380-20029/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MRL 380-20029/3	Lab Control Sample	Total/NA	Water	SM 2540C	
380-23289-AI-1 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 20325

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-23442-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Water	SM 4500 S2 D	
MB 380-20325/1	Method Blank	Total/NA	Water	SM 4500 S2 D	
LCS 380-20325/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
LCSD 380-20325/16	Lab Control Sample Dup	Total/NA	Water	SM 4500 S2 D	
MRL 380-20325/15	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MRL 380-20325/2	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
380-23445-T-2 MS	Matrix Spike	Total/NA	Water	SM 4500 S2 D	
380-23445-T-2 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 20616

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-23442-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Water	SM 2320B	
MB 380-20616/7	Method Blank	Total/NA	Water	SM 2320B	
LCS 380-20616/5	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 380-20616/22	Lab Control Sample Dup	Total/NA	Water	SM 2320B	

Eurofins Eaton Monrovia

QC Association Summary

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

Job ID: 380-23442-1

General Chemistry (Continued)

Analysis Batch: 20616 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LLCS 380-20616/6	Lab Control Sample	Total/NA	Water	SM 2320B	
MRL 380-20616/8	Lab Control Sample	Total/NA	Water	SM 2320B	
380-23442-1 MS	MOANALUA WELLS (331-223-TP202)	Total/NA	Water	SM 2320B	
380-23442-1 MSD	MOANALUA WELLS (331-223-TP202)	Total/NA	Water	SM 2320B	
380-23442-1 DU	MOANALUA WELLS (331-223-TP202)	Total/NA	Water	SM 2320B	

Analysis Batch: 20617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-23442-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Water	SM 2510B	
MB 380-20617/7	Method Blank	Total/NA	Water	SM 2510B	
LCS 380-20617/10	Lab Control Sample	Total/NA	Water	SM 2510B	
LCSD 380-20617/22	Lab Control Sample Dup	Total/NA	Water	SM 2510B	
MRL 380-20617/8	Lab Control Sample	Total/NA	Water	SM 2510B	
380-23442-1 DU	MOANALUA WELLS (331-223-TP202)	Total/NA	Water	SM 2510B	

Analysis Batch: 20618

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-23442-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Water	SM 4500 H+ B	
MB 380-20618/9	Method Blank	Total/NA	Water	SM 4500 H+ B	
LCS 380-20618/10	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
LCSD 380-20618/23	Lab Control Sample Dup	Total/NA	Water	SM 4500 H+ B	
380-23442-1 DU	MOANALUA WELLS (331-223-TP202)	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 20623

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-23442-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Water	SM 4500 F C	
MB 380-20623/40	Method Blank	Total/NA	Water	SM 4500 F C	
MB 380-20623/6	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 380-20623/42	Lab Control Sample	Total/NA	Water	SM 4500 F C	
LCSD 380-20623/43	Lab Control Sample Dup	Total/NA	Water	SM 4500 F C	
MRL 380-20623/41	Lab Control Sample	Total/NA	Water	SM 4500 F C	
MRL 380-20623/7	Lab Control Sample	Total/NA	Water	SM 4500 F C	
380-23614-Z-1 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
380-23614-Z-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	

Subcontract

Analysis Batch: O-40004

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-23442-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Water	625 PAH Physis LL (EAL) + TICs	O-40004_P
100732-B1	Method Blank	Total/NA	BlankMatrix	625 PAH Physis LL (EAL) + TICs	O-40004_P
100732-BS1	Lab Control Sample	Total/NA	BlankMatrix	625 PAH Physis LL (EAL) + TICs	O-40004_P
100732-BS2	Lab Control Sample Dup	Total/NA	BlankMatrix	625 PAH Physis LL (EAL) + TICs	O-40004_P

Analysis Batch: 22DSJ041W

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-23442-1	MOANALUA WELLS (331-223-TP202)	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: 380-23442-1

Subcontract (Continued)

Analysis Batch: 22DSJ041W (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
22DSJ041WB	Method Blank	Total/NA	WATER	8015 Diesel LL (EAL) and Motor Oil	
22DSJ041WL	Lab Control Sample	Total/NA	WATER	8015 Diesel LL (EAL) and Motor Oil	
22J5J041WL	Lab Control Sample	Total/NA	WATER	8015 Diesel LL (EAL) and Motor Oil	
22J8J041WL	Lab Control Sample	Total/NA	WATER	8015 Diesel LL (EAL) and Motor Oil	

Analysis Batch: 22MEJ002W

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-23442-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Water	8015 Ethanol	
22MEJ002WB	Method Blank	Total/NA	WATER	8015 Ethanol	
22MEJ002WL	Lab Control Sample	Total/NA	WATER	8015 Ethanol	
22J124-01M	Matrix Spike	Total/NA	WATER	8015 Ethanol	
22J124-01S	Matrix Spike Duplicate	Total/NA	WATER	8015 Ethanol	

Analysis Batch: 22VGH7J03

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-23442-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
380-23442-2	TB: MOANALUA WELLS	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
22VGH7J03B	Method Blank	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	
22VGH7J03L	Lab Control Sample	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	
22J124-01M	Matrix Spike	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	
22J124-01S	Matrix Spike Duplicate	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	

Prep Batch: O-40004_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-23442-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Water	EPA_625	
100732-B1	Method Blank	Total/NA	BlankMatrix	EPA_625	
100732-BS1	Lab Control Sample	Total/NA	BlankMatrix	EPA_625	
100732-BS2	Lab Control Sample Dup	Total/NA	BlankMatrix	EPA_625	

Lab Chronicle

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

Job ID: 380-23442-1

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

Lab Sample ID: 380-23442-1

Date Collected: 10/06/22 10:32

Matrix: Water

Date Received: 10/07/22 13:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	524.2		1	20208	AAE8	EA MON	10/11/22 01:35
Total/NA	Analysis	524.2		1	20018	P3EE	EA MON	10/07/22 19:21
Total/NA	Prep	525.2			20295	GY8Q	EA MON	10/11/22 09:24
Total/NA	Analysis	525.2		1	20427	Q8LA	EA MON	10/12/22 20:11
Total/NA	Prep	504.1			20612	K9GY	EA MON	10/13/22 14:08 - 10/13/22 15:03 ¹
Total/NA	Analysis	504.1		1	20737	K9GY	EA MON	10/14/22 04:42
Total/NA	Prep	505			20411	DR5R	EA MON	10/11/22 15:15 - 10/11/22 16:45 ¹
Total/NA	Analysis	505		1	20462	YNB8	EA MON	10/11/22 20:33
Total/NA	Analysis	300.0		5	20067	LM8C	EA MON	10/08/22 01:46
Total/NA	Analysis	300.0		5	20068	LM8C	EA MON	10/08/22 01:46
Total/NA	Analysis	300.0		1	20502	UNJR	EA MON	10/12/22 19:03
Total/NA	Analysis	200.7 Rev 4.4		1	20289	T8RV	EA MON	10/11/22 00:47
Total Recoverable	Prep	200.8			20297	NQM8	EA MON	10/11/22 10:07
Total Recoverable	Analysis	200.8		1	20566	DHX7	EA MON	10/12/22 13:48
Total/NA	Prep	245.1			276644	JP8N	EET CAL 4	10/28/22 04:59
Total/NA	Analysis	245.1		1	276920	UWCT	EET CAL 4	10/28/22 11:02
Total/NA	Analysis	SM 2320B		1	20616	ZYV7	EA MON	10/12/22 15:04
Total/NA	Analysis	SM 2510B		1	20617	ZYV7	EA MON	10/12/22 15:04
Total/NA	Analysis	SM 2540C		1	20029	XLG4	EA MON	10/07/22 14:40
Total/NA	Analysis	SM 4500 F C		1	20623	ZYV7	EA MON	10/12/22 19:58
Total/NA	Analysis	SM 4500 H+ B		1	20618	ZYV7	EA MON	10/12/22 15:04
Total/NA	Analysis	SM 4500 S2 D		1	20325	PK4Q	EA MON	10/11/22 14:00
Total/NA	Prep	EPA_625		1	O-40004_P			10/13/22 00:00
Total/NA	Analysis	625 PAH Physis LL (EAL) + TICs		1	O-40004	YC		10/31/22 06:04
Total/NA	Analysis	8015 Diesel LL (EAL) and Motor Oil		1	22DSJ041W	SDees		10/20/22 17:08
Total/NA	Analysis	8015 Ethanol		1	22MEJ002W	ASitu		10/12/22 16:24
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	22VGH7J03	SCerva		10/11/22 14:45

Client Sample ID: TB: MOANALUA WELLS

Lab Sample ID: 380-23442-2

Date Collected: 10/06/22 10:32

Matrix: Water

Date Received: 10/07/22 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	524.2		1	20208	AAE8	EA MON	10/11/22 02:43
Total/NA	Analysis	524.2		1	20018	P3EE	EA MON	10/07/22 19:44
Total/NA	Prep	504.1			20612	K9GY	EA MON	10/13/22 14:08 - 10/13/22 15:03 ¹
Total/NA	Analysis	504.1		1	20737	K9GY	EA MON	10/14/22 05:17
Total/NA	Prep	505			20411	DR5R	EA MON	10/11/22 15:15 - 10/11/22 16:45 ¹
Total/NA	Analysis	505		1	20462	YNB8	EA MON	10/11/22 21:38
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	22VGH7J03	SCerva		10/11/22 16:29

Eurofins Eaton Monrovia

Lab Chronicle

Client: City & County of Honolulu

Job ID: 380-23442-1

Project/Site: RED-HILL

¹ 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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18

Accreditation/Certification Summary

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

Job ID: 380-23442-1

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	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	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
525.2	525.2	Water	Di-n-butyl phthalate
525.2	525.2	Water	Di-n-octyl phthalate

Accreditation/Certification Summary

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

Job ID: 380-23442-1

Laboratory: Eurofins Eaton Monrovia (Continued)

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

Authority	Program	Identification Number	Expiration Date
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
525.2	525.2	Water	Endosulfan 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 ₃
SM 2320B		Water	Carbonate Alkalinity as CaCO ₃
SM 4500 S2 D		Water	Sulfide

Laboratory: Eurofins Calscience

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

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

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

Method Summary

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

Job ID: 380-23442-1

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

Protocol References:

EPA = US Environmental Protection Agency

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

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

None = None

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

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

Laboratory References:

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

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

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

Sample Summary

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

Job ID: 380-23442-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
380-23442-1	MOANALUA WELLS (331-223-TP202)	Water	10/06/22 10:32	10/07/22 13:07	HI0000331
380-23442-2	TB: MOANALUA WELLS	Water	10/06/22 10:32	10/07/22 10:15	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18



Date: 11-07-2022
EMAX Batch No.: 22J124

Attn: Jackie Contreras

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

Subject: Laboratory Report
Project: 380-23442

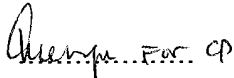
Enclosed is the Laboratory report for samples received on 10/10/22.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
380-23442-1	J124-01	10/06/22	WATER	TPH GASOLINE TPH ETHANOL
380-23442-2	J124-02	10/06/22	WATER	TPH GASOLINE
380-23442-1MS	J124-01M	10/06/22	WATER	TPH GASOLINE ETHANOL
380-23442-1MSD	J124-01S	10/06/22	WATER	TPH GASOLINE ETHANOL

The results are summarized on the following pages.

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

Sincerely yours,


Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

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

NELAP Accredited Certificate Number CA002912022-22
ANAB Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing
California ELAP Accredited Certificate Number 2672

Chain of Custody Record



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

Client Information (Sub Contract Lab)

Client Contact: Shipping/Receiving
Company: EMAX Laboratories Inc
Address: 3051 Fujita Street, Torrance, CA, 90505
City: Torrance
State, Zip: CA, 90505
Phone: PO #:
Email: WO #:
Project Name: RED-HILL
Project #: 38001111
Site: Honolulu BWS Sites
SSOW#:
Sampler: Arada, Rachelle
Lab PM: Rachelle Arada@et.eurofins.com
E-Mail: Rachelle Arada@et.eurofins.com
Accreditations Required (See note): State - Hawaii
Carrier Tracking No(s):
State of Origin: Hawaii
COC No.: 380-23442-1
Page: Page 1 of 1
Job #: 380-23442-1

Due Date Requested: 10/21/2022
TAT Requested (days):
Analysis Requested:
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)
SUB (8015 Jet Fuel 8 (JP8))/ 8015 Jet Fuel 8 (JP8)
SUB (8015 Ethanol)/ 8015 Ethanol
Preservation Codes:
A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Anchoir
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4.5
Y - Trizma
Z - other (specify)

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Seawater, O-waste/eff, BT-Tissue, Ash)	Field Filtered Sample (Yes or No)						Perform MS/MSD (Yes or No)						Total Number of Containers	Special Instructions/Note
					Retention Code	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)	SUB (8015 Jet Fuel 8 (JP8))/ 8015 Jet Fuel 8 (JP8)	SUB (8015 Ethanol)/ 8015 Ethanol	Retention Code	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)	SUB (8015 Jet Fuel 8 (JP8))/ 8015 Jet Fuel 8 (JP8)	SUB (8015 Ethanol)/ 8015 Ethanol		
MOANALUA WELLS (331-223-T P202) (380-23442-1)	10/6/22	10:32	Water	Water		X	X	X	X	X						See Attached Instructions		
TB: MOANALUA WELLS (380-23442-2)	10/6/22	10:32	Water	Water		X										See Attached Instructions		

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

Possible Hazard Identification
Unconfirmed

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

Special Instructions/QC Requirements:

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client
 Disposal By Lab
 Archive For _____ Months

Empty Kit Relinquished by: _____ Date: _____

Relinquished by: *MSR* Date/Time: 10/18/22 1510 Company: *REX*

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

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

Custody Seals Intact: _____ Custody Seal No.: _____ Cooler Temperature(s) °C and Other Remarks: *TCM015113*

REPORT ID: 22J124



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>22J124</u> Recipient <u>Richard Beauvil</u> Date <u>10/10/22</u> Time <u>15:15</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 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)	<input type="checkbox"/> High concentrations expected	<input type="checkbox"/> From Superfund Site	<input type="checkbox"/> Rad screening required		

Note: _____

PACKAGING INSPECTION

Container	<input checked="" type="checkbox"/> Cooler	<input type="checkbox"/> Box	<input type="checkbox"/> Other
Condition <i>*correction factor</i>	<input type="checkbox"/> Custody Seal	<input type="checkbox"/> Intact	<input type="checkbox"/> Damaged
Packaging	<input checked="" type="checkbox"/> Bubble Pack	<input type="checkbox"/> Styrofoam	<input type="checkbox"/> Popcorn
Temperatures	<input checked="" type="checkbox"/> Cooler 1 <u>11.5/1.3</u> °C	<input type="checkbox"/> Cooler 2 _____ °C	<input type="checkbox"/> Cooler 3 _____ °C
(Cool, ≤6 °C but not frozen)	<input type="checkbox"/> Cooler 6 _____ °C	<input type="checkbox"/> Cooler 7 _____ °C	<input type="checkbox"/> Cooler 8 _____ °C
Thermometer:	A - S/N _____	<u>B - S/N 210740237</u>	C - S/N _____
			D - S/N <u>210740272</u>

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

Note: _____

DISCREPANCIES

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
<u>2</u>	<u>13,4</u>	<u>D22</u>	<u>2nd date reads 09/21/22</u>	<u>R1</u>

pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time. NS 10/11/22

NOTES/OBSERVATIONS:

SAMPLE MATRIX IS DRINKING WATER? YES NO

LEGEND:

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

REVIEWS:

Sample Labeling <u>maria jo celyne</u> <u>Rivera Colls-Paredes</u>	SRF <u>pm</u>	PM <u>NS</u>
Date <u>10/10/22</u> <u>10/10/22</u>	Date <u>10/11/22</u>	Date <u>10/11/22</u>

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range or estimated value.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

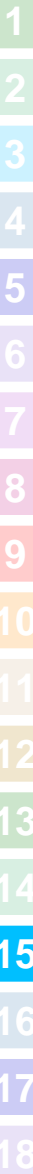
LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-23442

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

SDG#: 22J124



CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-23442

SDG : 22J124

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

A total of two(2) water samples were received on 10/10/22 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. VGH7J03B - 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. VGH7J03L/VGH7J03C 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 J124-01M/J124-01S. Refer to Matrix QC summary form for details.

Surrogate

Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis

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

LAB CHRONICLE
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

```

=====
Client : EUROFINS EATON ANALYTICAL
Project : 380-23442
=====
SDG NO. : 22J124
Instrument ID : H7
=====

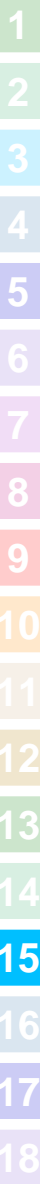
```

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
									WATER
MBLK1W	VG7J03B	1	NA	10/11/2212:28	10/11/2212:28	AJ11005A	AJ11004A	22VGH7J03	Method Blank
LCS1W	VG7J03L	1	NA	10/11/2213:02	10/11/2213:02	AJ11006A	AJ11004A	22VGH7J03	Lab Control Sample (LCS)
LCD1W	VG7J03C	1	NA	10/11/2213:37	10/11/2213:37	AJ11007A	AJ11004A	22VGH7J03	LCS Duplicate
380-23442-1	J124-01	1	NA	10/11/2214:45	10/11/2214:45	AJ11009A	AJ11004A	22VGH7J03	Field Sample
380-23442-1MS	J124-01M	1	NA	10/11/2215:20	10/11/2215:20	AJ11010A	AJ11004A	22VGH7J03	Matrix Spike Sample (MS)
380-23442-1MSD	J124-01S	1	NA	10/11/2215:54	10/11/2215:54	AJ11011A	AJ11004A	22VGH7J03	MS Duplicate (MSD)
380-23442-2	J124-02	1	NA	10/11/2216:29	10/11/2216:29	AJ11012A	AJ11004A	22VGH7J03	Field Sample

```

FN - Filename
% Moist - Percent Moisture

```



1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18

SAMPLE RESULTS

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

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/06/22 10:32
Project     : 380-23442                   Date Received: 10/10/22
Batch No.   : 22J124                       Date Extracted: 10/11/22 14:45
Sample ID   : 380-23442-1                 Date Analyzed: 10/11/22 14:45
Lab Samp ID: J124-01                       Dilution Factor: 1
Lab File ID: AJ11009A                       Matrix: WATER
Ext Btch ID: 22VGH7J03                     % Moisture: NA
Calib. Ref.: AJ11004A                     Instrument ID: H7
=====

```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
GASOLINE	ND	0.020	0.010

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0316	0.0400	79	60-140

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

Detection limits are reported relative to sample result significant figures.
Sample Amount : 5ml Final Volume : 5ml
Prepared by : SCerva Analyzed by : SCerva

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

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/06/22 10:32
Project     : 380-23442                   Date Received: 10/10/22
Batch No.   : 22J124                       Date Extracted: 10/11/22 16:29
Sample ID   : 380-23442-2                 Date Analyzed: 10/11/22 16:29
Lab Samp ID : J124-02                      Dilution Factor: 1
Lab File ID : AJ11012A                     Matrix: WATER
Ext Btch ID : 22VGH7J03                    % Moisture: NA
Calib. Ref.: AJ11004A                      Instrument ID: H7
=====

```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
GASOLINE	ND	0.020	0.010	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0321	0.0400	80	60-140

Notes:

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

Detection limits are reported relative to sample result significant figures.
Sample Amount : 5ml Final Volume : 5ml
Prepared by : SCerva Analyzed by : SCerva

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18

QC SUMMARIES

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

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/11/22 12:28
Project     : 380-23442                   Date Received: 10/11/22
Batch No.   : 22J124                       Date Extracted: 10/11/22 12:28
Sample ID   : MBLK1W                       Date Analyzed: 10/11/22 12:28
Lab Samp ID: VGH7J03B                     Dilution Factor: 1
Lab File ID: AJ11005A                     Matrix: WATER
Ext Btch ID: 22VGH7J03                   % Moisture: NA
Calib. Ref.: AJ11004A                     Instrument ID: H7
=====

```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
GASOLINE	ND	0.020	0.010

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0338	0.0400	84	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 : 380-23442
BATCH NO. : 22J124
METHOD : 5030B/8015B

```

=====
MATRIX      : WATER                               % MOISTURE:NA
DILUTION FACTOR: 1                               1
SAMPLE ID   : MBLK1W                             LCS1W
LAB SAMPLE ID : VGH7J03B                         VGH7J03L
LAB FILE ID  : AJ11005A                         AJ11006A
DATE PREPARED : 10/11/22 12:28                 10/11/22 13:02
DATE ANALYZED : 10/11/22 12:28                 10/11/22 13:37
PREP BATCH   : 22VGH7J03                       22VGH7J03
CALIBRATION REF: AJ11004A                      AJ11004A
    
```

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	0.439	88	0.500	0.466	93	6	60-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0424	106	0.0400	0.0438	110	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 : 380-23442
BATCH NO. : 22J124
METHOD : 5030B/8015B

```

=====
MATRIX      : WATER                               % MOISTURE:NA
DILUTION FACTOR: 1                               1
SAMPLE ID   : 380-23442-1                       380-23442-1MS
LAB SAMPLE ID : J124-01                         J124-01S
LAB FILE ID  : AJ11009A                        AJ11010A
DATE PREPARED : 10/11/22 14:45                 10/11/22 15:20
DATE ANALYZED : 10/11/22 14:45                 10/11/22 15:54
PREP BATCH   : 22VGH7J03                       22VGH7J03
CALIBRATION REF: AJ11004A                      AJ11004A
  
```

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	0.391	78	0.500	0.436	87	11	50-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0371	93	0.0400	0.0416	104	60-140

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

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-23442

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 22J124



CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-23442

SDG : 22J124

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 10/10/22 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. DSJ041WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample

Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) LCS was analyzed. Percent recovery for Diesel was within LCS QC limits in DSJ041WL. Refer to LCS summary form for details.

Matrix QC Sample

Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Diesel was within MS QC limits in 22J199-01M/22J199-01S. Refer to Matrix QC summary form for details.

Surrogate

Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis

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

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-23442

SDG : 22J124

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 10/10/22 to be analyzed for Petroleum Hydrocarbons by Extraction in accordance with Method 3520C/8015B and project specific requirements.

Holding Time

The sample was analyzed within the prescribed holding time.

Calibration

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

Method Blank

Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. DSJ041WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample

Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) LCS was analyzed. Percent recovery for JP5 was within LCS QC limits in J5J041WL. Refer to LCS summary form for details.

Matrix QC Sample

Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. JP5 was within MS QC limits in 22J199-01M/22J199-01S. Refer to Matrix QC summary form for details.

Surrogate

Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis

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

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-23442

SDG : 22J124

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 10/10/22 to be analyzed for Petroleum Hydrocarbons by Extraction in accordance with Method 3520C/8015B and project specific requirements.

Holding Time

The sample was analyzed within the prescribed holding time.

Calibration

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

Method Blank

Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. DSJ041WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample

Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) LCS was analyzed. Percent recovery for JP8 was within LCS QC limits in J8J041WL. Refer to LCS summary form for details.

Matrix QC Sample

Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. JP8 was within MS QC limits in 22J199-01M/22J199-01S. Refer to Matrix QC summary form for details.

Surrogate

Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis

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

LAB CHRONICLE
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client : EUROFINS EATON ANALYTICAL
Project : 380-23442
=====
SDG NO. : 22J124
Instrument ID : D5
=====

```

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	DSJ041WB	1	NA	10/20/2215:54	10/18/2214:00	LJ20020A	LJ20010A	22DSJ041W	Method Blank
LCS1W	DSJ041WL	1	NA	10/20/2216:12	10/18/2214:00	LJ20021A	LJ20010A	22DSJ041W	Lab Control Sample (LCS)
380-23442-1	J124-01	1	NA	10/20/2217:08	10/18/2214:00	LJ20024A	LJ20010A	22DSJ041W	Field Sample

FN - Filename
% Moist - Percent Moisture



LAB CHRONICLE
PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL
Project : 380-23442

SDG NO. : 22J124
Instrument ID : D5

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
380-23442-1	DSJ041WB	1	NA	10/20/2215:54	10/18/2214:00	LJ20020A	LJ20011A	22DSJ041W	Method Blank
	J5J041WL	1	NA	10/20/2216:31	10/18/2214:00	LJ20022A	LJ20011A	22DSJ041W	Lab Control Sample (LCS)
	J124-01	1	NA	10/20/2217:08	10/18/2214:00	LJ20024A	LJ20011A	22DSJ041W	Field Sample

FN - Filename
% Moist - Percent Moisture



LAB CHRONICLE
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client   : EUROFINS EATON ANALYTICAL
Project  : 380-23442
=====
SDG NO. : 22J124
Instrument ID : D5
=====
    
```

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Prep. Data FN	Notes
MBLK1W	DSJ041WB	1	NA	10/20/2215:54	10/18/2214:00	LJ20020A	LJ20012A	22DSJ041W Method Blank
LCS1W	J8J041WL	1	NA	10/20/2216:49	10/18/2214:00	LJ20023A	LJ20012A	22DSJ041W Lab Control Sample (LCS)
380-23442-1	J124-01	1	NA	10/20/2217:08	10/18/2214:00	LJ20024A	LJ20012A	22DSJ041W Field Sample

FN - Filename
 % Moist - Percent Moisture



- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18

SAMPLE RESULTS

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/06/22 10:32
Project     : 380-23442                   Date Received: 10/10/22
Batch No.   : 22J124                       Date Extracted: 10/18/22 14:00
Sample ID   : 380-23442-1                 Date Analyzed: 10/20/22 17:08
Lab Samp ID: 22J124-01                     Dilution Factor: 1
Lab File ID: LJ20024A                       Matrix: WATER
Ext Btch ID: 22DSJ041W                     % Moisture: NA
Calib. Ref.: LJ20010A                       Instrument ID: D5
=====
  
```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Diesel	ND	0.027	0.014
Motor Oil	ND	0.055	0.027

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.567	0.545	104	60-130
Hexacosane	0.129	0.136	94	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 : 920ml Final Volume : 5ml
Prepared by : DLi Analyzed by : SDeeso

METHOD 3520C/8015B
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL      Date Collected: 10/06/22 10:32
Project     : 380-23442                      Date Received: 10/10/22
Batch No.   : 22J124                         Date Extracted: 10/18/22 14:00
Sample ID   : 380-23442-1                   Date Analyzed: 10/20/22 17:08
Lab Samp ID: 22J124-01                       Dilution Factor: 1
Lab File ID: LJ20024A                        Matrix: WATER
Ext Btch ID: 22DSJ041W                       % Moisture: NA
Calib. Ref.: LJ20011A                        Instrument ID: D5
=====
  
```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
JP5	ND	0.055	0.027

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.567	0.545	104	60-130
Hexacosane	0.129	0.136	94	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 : 920ml Final Volume : 5ml
 Prepared by : DLi Analyzed by : SDeeso

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

=====
Client : EUROFINs EATON ANALYTICAL Date Collected: 10/06/22 10:32
Project : 380-23442 Date Received: 10/10/22
Batch No. : 22J124 Date Extracted: 10/18/22 14:00
Sample ID : 380-23442-1 Date Analyzed: 10/20/22 17:08
Lab Samp ID: 22J124-01 Dilution Factor: 1
Lab File ID: LJ20024A Matrix: WATER
Ext Btch ID: 22DSJ041W % Moisture: NA
Calib. Ref.: LJ20012A Instrument ID: D5
=====

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
JP8	ND	0.055	0.027	

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.567	0.545	104	60-130
Hexacosane	0.129	0.136	94	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 : 920ml Final Volume : 5ml
Prepared by : DLi Analyzed by : SDeeso

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18

QC SUMMARIES

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL    Date Collected: 10/18/22 14:00
Project     : 380-23442                    Date Received: 10/18/22
Batch No.   : 22J124                       Date Extracted: 10/18/22 14:00
Sample ID   : MBLK1W                       Date Analyzed: 10/20/22 15:54
Lab Samp ID: DSJ041WB                      Dilution Factor: 1
Lab File ID: LJ20020A                      Matrix: WATER
Ext Btch ID: 22DSJ041W                    % Moisture: NA
Calib. Ref.: LJ20010A                     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	0.488	0.500	98	60-130
Hexacosane	0.135	0.125	108	60-130

Notes:

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

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

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

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-23442
BATCH NO. : 22J124
METHOD : 3520C/8015B

MATRIX : WATER % MOISTURE:NA
DILUTION FACTOR: 1 1
SAMPLE ID : MBLK1W LCS1W
LAB SAMPLE ID : DSJ041WB DSJ041WL
LAB FILE ID : LJ20020A LJ20021A
DATE PREPARED : 10/18/22 14:00 10/18/22 14:00
DATE ANALYZED : 10/20/22 15:54 10/20/22 16:12
PREP BATCH : 22DSJ041W 22DSJ041W
CALIBRATION REF: LJ20010A LJ20010A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Diesel	ND	2.50	2.33	93	50-130

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Bromobenzene	0.500	0.500	100	60-130
Hexacosane	0.125	0.128	102	60-130

MB: Method Blank sample LCS: Lab Control Sample

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-24383
BATCH NO. : 22J199
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: 380-24383-1	380-24383-1MS	380-24383-1MSD
LAB SAMPLE ID	: 22J199-01	22J199-01M	22J199-01S
LAB FILE ID	: LJ20025A	LJ20026A	LJ20027A
DATE PREPARED	: 10/18/22 14:00	10/18/22 14:00	10/18/22 14:00
DATE ANALYZED	: 10/20/22 17:26	10/20/22 17:45	10/20/22 18:03
PREP BATCH	: 22DSJ041W	22DSJ041W	22DSJ041W
CALIBRATION REF:	LJ20010A	LJ20010A	LJ20010A

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Diesel	ND	2.80	2.83	101	2.70	2.89	107	2	50-130	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.560	0.574	103	0.540	0.441	82	60-130
Hexacosane	0.140	0.145	104	0.135	0.152	113	60-130

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

METHOD 3520C/8015B
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/18/22 14:00
Project     : 380-23442                   Date Received: 10/18/22
Batch No.   : 22J124                       Date Extracted: 10/18/22 14:00
Sample ID   : MBLK1W                       Date Analyzed: 10/20/22 15:54
Lab Samp ID : DSJ041WB                     Dilution Factor: 1
Lab File ID : LJ20020A                     Matrix: WATER
Ext Btch ID : 22DSJ041W                   % Moisture: NA
Calib. Ref.: LJ20011A                     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	0.488	0.500	98	60-130
Hexacosane	0.135	0.125	108	60-130

Notes:

RL : Reporting Limit
 Parameter H-C Range
 JP5 C8-C18
 Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.
 Sample Amount : 1000ml Final Volume : 5ml
 Prepared by : DLi Analyzed by : SDeeso

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-23442
BATCH NO. : 22J124
METHOD : 3520C/8015B

=====

MATRIX	: WATER	% MOISTURE:NA
DILUTION FACTOR:	1	1
SAMPLE ID	: MBLK1W	LCS1W
LAB SAMPLE ID	: DSJ041WB	J5J041WL
LAB FILE ID	: LJ20020A	LJ20022A
DATE PREPARED	: 10/18/22 14:00	10/18/22 14:00
DATE ANALYZED	: 10/20/22 15:54	10/20/22 16:31
PREP BATCH	: 22DSJ041W	22DSJ041W
CALIBRATION REF:	LJ20011A	LJ20011A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
JP5	ND	2.50	2.05	82	30-160

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Bromobenzene	0.500	0.499	100	60-130
Hexacosane	0.125	0.127	102	60-130

MB: Method Blank sample LCS: Lab Control Sample

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-24383
BATCH NO. : 22J199
METHOD : 3520C/8015B

```

=====
MATRIX      : WATER                               % MOISTURE:NA
DILUTION FACTOR: 1                               1
SAMPLE ID   : 380-24383-1                         380-24383-1MSD
LAB SAMPLE ID : 22J199-01                         22J199-01S
LAB FILE ID  : LJ20025A                           LJ20029A
DATE PREPARED : 10/18/22 14:00                   10/18/22 14:00
DATE ANALYZED : 10/20/22 17:26                   10/20/22 18:41
PREP BATCH   : 22DSJ041W                         22DSJ041W
CALIBRATION REF: LJ20011A                       LJ20011A
  
```

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
JP5	ND	2.55	2.34	92	2.72	2.61	96	11	30-160	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.510	0.453	89	0.545	0.462	85	60-130
Hexacosane	0.127	0.122	96	0.136	0.137	101	60-130

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

METHOD 3520C/8015B
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL      Date Collected: 10/18/22 14:00
Project     : 380-23442                      Date Received: 10/18/22
Batch No.   : 22J124                          Date Extracted: 10/18/22 14:00
Sample ID   : MBLK1W                           Date Analyzed: 10/20/22 15:54
Lab Samp ID : DSJ041WB                         Dilution Factor: 1
Lab File ID : LJ20020A                          Matrix: WATER
Ext Btch ID : 22DSJ041W                        % Moisture: NA
Calib. Ref.: LJ20012A                          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	0.488	0.500	98	60-130
Hexacosane	0.135	0.125	108	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 : 380-23442
BATCH NO. : 22J124
METHOD : 3520C/8015B

=====

MATRIX : WATER % MOISTURE:NA
DILUTION FACTOR: 1 1
SAMPLE ID : MBLK1W LCS1W
LAB SAMPLE ID : DSJ041WB J8J041WL
LAB FILE ID : LJ20020A LJ20023A
DATE PREPARED : 10/18/22 14:00 10/18/22 14:00
DATE ANALYZED : 10/20/22 15:54 10/20/22 16:49
PREP BATCH : 22DSJ041W 22DSJ041W
CALIBRATION REF: LJ20012A LJ20012A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
JP8	ND	2.50	2.33	93	30-160

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Bromobenzene	0.500	0.428	86	60-130
Hexacosane	0.125	0.114	91	60-130

=====

MB: Method Blank sample LCS: Lab Control Sample

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-24383
BATCH NO. : 22J199
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: 380-24383-1	380-24383-1MS	380-24383-1MSD
LAB SAMPLE ID	: 22J199-01	22J199-01M	22J199-01S
LAB FILE ID	: LJ20025A	LJ20030A	LJ20031A
DATE PREPARED	: 10/18/22 14:00	10/18/22 14:00	10/18/22 14:00
DATE ANALYZED	: 10/20/22 17:26	10/20/22 18:59	10/20/22 19:18
PREP BATCH	: 22DSJ041W	22DSJ041W	22DSJ041W
CALIBRATION REF:	LJ20012A	LJ20012A	LJ20012A

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
JP8	ND	2.70	2.53	94	2.85	2.64	93	4	30-160	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.540	0.555	103	0.570	0.496	87	60-130
Hexacosane	0.135	0.120	89	0.142	0.137	96	60-130

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

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-23442

METHOD SW8015C
ALCOHOLS BY GC

SDG#: 22J124



CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-23442

SDG : 22J124

METHOD SW8015C
ALCOHOLS BY GC

One(1) water sample was received on 10/10/22 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. MEJ002WB - 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. MEJ002WL/MEJ002WC 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 J124-01M/J124-01S. Refer to Matrix QC summary form for details.

Sample Analysis

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

LAB CHRONICLE
ALCOHOLS BY GC

Client : EUROFINS EATON ANALYTICAL
Project : 380-23442

SDG NO. : 22J124
Instrument ID : GCT050

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
	WATER								
MBLK1W	MEJ002WB	1	NA	10/12/2214:52	NA	TJ12004A	TJ12002A	MEJ002W	Method Blank
LCS1W	MEJ002WL	1	NA	10/12/2215:06	NA	TJ12005A	TJ12002A	MEJ002W	Lab Control Sample (LCS)
LCD1W	MEJ002WC	1	NA	10/12/2215:19	NA	TJ12006A	TJ12002A	MEJ002W	LCS Duplicate
380-23442-1	J124-01	1	NA	10/12/2216:24	NA	TJ12007A	TJ12002A	MEJ002W	Field Sample
380-23442-1MS	J124-01M	1	NA	10/12/2216:39	NA	TJ12008A	TJ12002A	MEJ002W	Matrix Spike Sample (MS)
380-23442-1MSD	J124-01S	1	NA	10/12/2216:53	NA	TJ12009A	TJ12002A	MEJ002W	MS Duplicate (MSD)

FN - Filename
% Moist - Percent Moisture



- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18

SAMPLE RESULTS

METHOD SW8015C
ALCOHOLS BY GC

```

=====
Client      : EUROFINS EATON ANALYTICAL      Date Collected: 10/06/22
Project    : 380-23442                      Date Received: 10/10/22
Batch No.  : 22J124                          Date Extracted: NA
Sample ID: 380-23442-1                      Date Analyzed: 10/12/22 16:24
Lab Samp ID: J124-01                        Dilution Factor: 1
Lab File ID: TJ12007A                      Matrix          : WATER
Ext Btch ID: MEJ002W                       % Moisture      : NA
Calib. Ref.: TJ12002A                      Instrument ID   : GCT050
=====
  
```

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

RL : Reporting Limit



1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18

QC SUMMARIES

METHOD SW8015C
ALCOHOLS BY GC

```

=====
Client      : EUROFINS EATON ANALYTICAL      Date Collected: NA
Project     : 380-23442                      Date Received: NA
Batch No.   : 22J124                         Date Extracted: NA
Sample ID:  MBLK1W                           Date Analyzed: 10/12/22 14:52
Lab Samp ID: MEJ002WB                       Dilution Factor: 1
Lab File ID: TJ12004A                       Matrix          : WATER
Ext Btch ID: MEJ002W                         % Moisture      : NA
Calib. Ref.: TJ12002A                       Instrument ID   : GCT050
=====
  
```

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

RL : Reporting Limit



EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 380-23442
BATCH NO.: 22J124
METHOD: METHOD SW8015C

=====

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1 1
SAMPLE ID: MBLK1W
LAB SAMP ID: MEJ002WB MEJ002WL MEJ002WC
LAB FILE ID: TJ12004A TJ12005A TJ12006A
DATE EXTRACTED: NA NA NA DATE COLLECTED: NA
DATE ANALYZED: 10/12/2214:52 10/12/2215:06 10/12/2215:19 DATE RECEIVED: NA
PREP. BATCH: MEJ002W MEJ002W MEJ002W
CALIB. REF: TJ12002A TJ12002A TJ12002A

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	10700	107	10000	11000	110	3	60-130	30

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 380-23442
BATCH NO.: 22J124
METHOD: METHOD SW8015C

=====

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1 1
SAMPLE ID: 380-23442-1
LAB SAMP ID: J124-01 J124-01M J124-01S
LAB FILE ID: TJ12007A TJ12008A TJ12009A
DATE EXTRACTED: NA NA NA DATE COLLECTED: 10/06/22
DATE ANALYZED: 10/12/2216:24 10/12/2216:39 10/12/2216:53 DATE RECEIVED: 10/10/22
PREP. BATCH: MEJ002W MEJ002W MEJ002W
CALIB. REF: TJ12002A TJ12002A TJ12002A

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	11600	116	10000	11400	114	2	60-130	30

November 08, 2022

Debbie Frank
 Eurofins Eaton Analytical
 750 Royal Oaks Drive
 Suite 100
 Monrovia, CA 91016-

Project Name: RED-HILL Project # 38001111 Job # 380-23442-1
 Physis Project ID: 1407003-312

Dear Debbie,

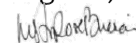
Enclosed are the analytical results for the sample submitted to PHYSIS Environmental Laboratories, Inc. (PHYSIS) on 10/10/2022. A total of 1 sample was received for analysis in accordance with the attached chain of custody (COC). Per the COC, the sample was analyzed for:

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: 1407003-312

RED-HILL Project # 38001111 Job # 380-23442-1

Total Samples: 1

PHYSIS ID	Sample ID	Description	Date	Time	Matrix	Sample Type
100733	MOANALUA WELLS	331-223-TP202 (380-23442-1)	10/6/2022	10:32	Samplewater	Not Specified

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18

ABBREVIATIONS and ACRONYMS

QM	Quality Manual
QA	Quality Assurance
QC	Quality Control
MDL	method detection limit
RL	reporting limit
R1	project sample
R2	project sample replicate
MS1	matrix spike
MS2	matrix spike replicate
B1	procedural blank
B2	procedural blank replicate
BS1	blank spike
BS2	blank spike replicate
LCS1	laboratory control spike
LCS2	laboratory control spike replicate
LCM1	laboratory control material
LCM2	laboratory control material replicate
CRM1	certified reference material
CRM2	certified reference material replicate
RPD	relative percent difference
LMW	low molecular weight
HMW	high molecular weight

QUALITY ASSURANCE SUMMARY

LABORATORY BATCH: Physis' QM defines a laboratory batch as a group of 20 or fewer project samples of similar matrix, processed together under the same conditions and with the same reagents. QC samples are associated with each batch and were used to assess the validity of the sample analyses.

PROCEDURAL BLANK: Laboratory contamination introduced during method use is assessed through the preparation and analysis of procedural blanks is provided at a minimum frequency of one per batch.

ACCURACY: Accuracy of analytical measurements is the degree of closeness based on percent recovery calculations between measured values and the actual or true value and includes a combination of reproducibility error and systematic bias due to sampling and analytical operations. Accuracy of the project data was indicated by analysis of MS, BS, LCS, LCM, CRM, and/or surrogate spikes on a minimum frequency of one per batch. Physis' QM requires that 95% of the target compounds greater than 10 times the MDL be within the specified acceptance limits.

PRECISION: Precision is the agreement among a set of replicate measurements without assumption of knowledge of the true value and is based on RPD calculations between repeated values. Precision of the project data was determined by analysis of replicate MS₁/MS₂, BS₁/BS₂, LCS₁/LCS₂, LCM₁/LCM₂, CRM₁/CRM₂, surrogate spikes and/or replicate project sample analysis (R₁/R₂) on a minimum frequency of one per batch. Physis' QM requires that for 95% of the compounds greater than 10 times the MDL, the percent RPD should be within the specified acceptance range.

BLANK SPIKES: BS is the introduction of a known concentration of analyte into the procedural blank. BS demonstrates performance of the preparation and analytical methods on a clean matrix void of potential matrix related interferences. The BS is performed in laboratory deionized water, making these recoveries a better indicator of the efficiency of the laboratory method per se.

MATRIX SPIKES: MS is the introduction of a known concentration of analyte into a sample. MS samples demonstrate the effect a particular project sample matrix has on the accuracy of a measurement. Individually, MS samples also indicate the bias of analytical measurements due to chemical interferences inherent in the in the specific project sample spiked. Intrinsic target analyte concentration in the specific project sample can also significantly impact MS recovery.

CERTIFIED REFERENCE MATERIALS: CRMs are materials of various matrices for which analytical information has been determined and certified by a recognized authority. These are used to provide a quantitative assessment of the accuracy of an analytical method. CRMs provide evidence that the laboratory preparation and analysis produces results that are comparable to those obtained by an independent organization.

LABORATORY CONTROL MATERIAL: LCM is provided because a suitable natural seawater CRM is not available and can be used to indicate accuracy of the method. Physis' internal LCM is seawater collected at ~800 meters in the Southern California San Pedro Basin and can be used as a reference for background concentrations in clean, natural seawater for comparison to project samples.

LABORATORY CONTROL SPIKES: LCS is the introduction of a known concentration of analyte into Physis' LCM. LCS samples were employed to assess the effect the seawater matrix has on the accuracy of a measurement. LCS also indicate the bias of this method due to chemical interferences inherent in the in the seawater matrix. Intrinsic LCM concentration can also significantly impact LCS recovery.

SURROGATES: A surrogate is a pure analyte unlikely to be found in any project sample, behaves similarly to

the target analyte and most often used with organic analytical procedures. Surrogates are added in known concentration to all samples and are measured to indicate overall efficiency of the method including processing and analyses.

HOLDING TIME: Method recommended holding times are the length of time a project sample can be stored under specific conditions after collection and prior to analysis without significantly affecting the analyte's concentration. Holding times can be extended if preservation techniques are employed to reduce biodegradation, volatilization, oxidation, sorption, precipitation, and other physical and chemical processes.

SAMPLE STORAGE/RETENTION: In order to maintain chemical integrity prior to analysis, all samples submitted to Physis are refrigerated (liquids) or frozen (solids) upon receipt unless otherwise recommended by applicable methods. Solid samples are retained for 1 year from collection while liquid samples are retained until method recommended holding times elapse.

TOTAL/DISSOLVED FRACTION: In some instances, the results for the dissolved fraction may be higher than the total fraction for a particular analyte (e.g. trace metals). This is typically caused by the analytical variation for each result and indicates that the target analyte is primarily in the dissolved phase, within the sample.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18

PHYSIS QUALIFIER CODES

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

CASE NARRATIVE

QUALIFIER NOTES

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

ND

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

ANALYTICAL REPORT

TERRA AURA ENVIRONMENTAL LABORATORIES, INC.

Innovative Solutions for Nature

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18

Acid Extractable Compounds

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 100733-R1	MOANALUA WELLS 331-223-TP202		Matrix: Samplewater					Sampled: 06-Oct-22 10:32		Received: 10-Oct-22	
(2,4,6-Tribromophenol)	EPA 625.1	% Recovery	62	1			Total		O-40004	13-Oct-22	31-Oct-22
(d5-Phenol)	EPA 625.1	% Recovery	16	1			Total		O-40004	13-Oct-22	31-Oct-22
2,4,5-Trichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-40004	13-Oct-22	31-Oct-22
2,4,6-Trichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-40004	13-Oct-22	31-Oct-22
2,4-Dichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-40004	13-Oct-22	31-Oct-22
2,4-Dinitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-40004	13-Oct-22	31-Oct-22
2,6-Dichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-40004	13-Oct-22	31-Oct-22
2,6-Di-tert-butyl-4-methylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-40004	13-Oct-22	31-Oct-22
2,6-Di-tert-butylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-40004	13-Oct-22	31-Oct-22
2-Chlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-40004	13-Oct-22	31-Oct-22
2-Methyl-4,6-dinitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-40004	13-Oct-22	31-Oct-22
2-Methylphenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-40004	13-Oct-22	31-Oct-22
2-Nitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-40004	13-Oct-22	31-Oct-22
3+4-Methylphenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-40004	13-Oct-22	31-Oct-22
4-Chloro-3-methylphenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-40004	13-Oct-22	31-Oct-22
4-Nitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-40004	13-Oct-22	31-Oct-22
6-tert-butyl-2,4-dimethylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-40004	13-Oct-22	31-Oct-22
Benzoic Acid	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-40004	13-Oct-22	31-Oct-22
Benzyl Alcohol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-40004	13-Oct-22	31-Oct-22
Pentachlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-40004	13-Oct-22	31-Oct-22
Phenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-40004	13-Oct-22	31-Oct-22
p-tert-Butylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-40004	13-Oct-22	31-Oct-22

Base/Neutral Extractable Compounds

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 100733-R1	MOANALUA WELLS 331-223-TP202		Matrix: Samplewater					Sampled: 06-Oct-22 10:32		Received: 10-Oct-22	
2-Chloronaphthalene	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-40004	13-Oct-22	31-Oct-22
2-Nitroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-40004	13-Oct-22	31-Oct-22
3-Nitroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-40004	13-Oct-22	31-Oct-22
4-Bromophenylphenyl ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-40004	13-Oct-22	31-Oct-22
4-Chloroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-40004	13-Oct-22	31-Oct-22
4-Chlorophenylphenyl ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-40004	13-Oct-22	31-Oct-22
4-Nitroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-40004	13-Oct-22	31-Oct-22
Aniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-40004	13-Oct-22	31-Oct-22
Benzidine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-40004	13-Oct-22	31-Oct-22
Bis(2-Chloroethoxy) methane	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-40004	13-Oct-22	31-Oct-22
Bis(2-Chloroethyl) ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-40004	13-Oct-22	31-Oct-22
Bis(2-Chloroisopropyl) ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-40004	13-Oct-22	31-Oct-22
Dibenzofuran	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-40004	13-Oct-22	31-Oct-22
Disalicylidenepropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-40004	13-Oct-22	31-Oct-22
Hexachloroethane	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-40004	13-Oct-22	31-Oct-22
Nitrobenzene	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-40004	13-Oct-22	31-Oct-22
N-Nitrosodi-n-propylamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-40004	13-Oct-22	31-Oct-22
N-Nitrosodiphenylamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-40004	13-Oct-22	31-Oct-22

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 100733-R1	MOANALUA WELLS 331-223-TP202 Matrix: Samplewater						Sampled: 06-Oct-22 10:32		Received: 10-Oct-22		
(d10-Acenaphthene)	EPA 625.1	% Recovery	87	1			Total		O-40004	13-Oct-22	31-Oct-22
(d10-Phenanthrene)	EPA 625.1	% Recovery	95	1			Total		O-40004	13-Oct-22	31-Oct-22
(d12-Chrysene)	EPA 625.1	% Recovery	100	1			Total		O-40004	13-Oct-22	31-Oct-22
(d12-Perylene)	EPA 625.1	% Recovery	80	1			Total		O-40004	13-Oct-22	31-Oct-22
(d8-Naphthalene)	EPA 625.1	% Recovery	72	1			Total		O-40004	13-Oct-22	31-Oct-22
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40004	13-Oct-22	31-Oct-22
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40004	13-Oct-22	31-Oct-22
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40004	13-Oct-22	31-Oct-22
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40004	13-Oct-22	31-Oct-22
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40004	13-Oct-22	31-Oct-22
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40004	13-Oct-22	31-Oct-22
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40004	13-Oct-22	31-Oct-22
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40004	13-Oct-22	31-Oct-22
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40004	13-Oct-22	31-Oct-22
Benzo[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40004	13-Oct-22	31-Oct-22
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40004	13-Oct-22	31-Oct-22
Benzo[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40004	13-Oct-22	31-Oct-22
Benzo[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40004	13-Oct-22	31-Oct-22
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40004	13-Oct-22	31-Oct-22
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40004	13-Oct-22	31-Oct-22
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40004	13-Oct-22	31-Oct-22
Dibenz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40004	13-Oct-22	31-Oct-22
Dibenzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40004	13-Oct-22	31-Oct-22
Dibenzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40004	13-Oct-22	31-Oct-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-40004	13-Oct-22	31-Oct-22
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40004	13-Oct-22	31-Oct-22
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40004	13-Oct-22	31-Oct-22
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40004	13-Oct-22	31-Oct-22
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40004	13-Oct-22	31-Oct-22
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40004	13-Oct-22	31-Oct-22
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40004	13-Oct-22	31-Oct-22



QUALITY CONTROL REPORT

TERRA ENVIRONMENTAL LABORATORIES, INC. AURA

Innovative Solutions for Nature

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18

Acid Extractable Compounds

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY	PRECISION	QA CODE	
							LEVEL	RESULT	% LIMITS	% LIMITS		
Sample ID: 100732-B1		QAQC Procedural Blank			Matrix: BlankMatrix			Sampled:		Received:		
		Method: EPA 625.1			Batch ID: O-40004			Prepared: 10-Oct-22		Analyzed: 30-Oct-22		
(2,4,6-Tribromophenol)	Total	56	1				% Recovery	100	56	30 - 130%	PASS	
(d5-Phenol)	Total	40	1				% Recovery	100	40	0 - 130%	PASS	
2,4,5-Trichlorophenol	Total	ND	1	0.05	0.1	µg/L						
2,4,6-Trichlorophenol	Total	ND	1	0.05	0.1	µg/L						
2,4-Dichlorophenol	Total	ND	1	0.05	0.1	µg/L						
2,4-Dinitrophenol	Total	ND	1	0.1	0.2	µg/L						
2,6-Dichlorophenol	Total	ND	1	0.05	0.1	µg/L						
2,6-Di-tert-butyl-4-methylphenol	Total	ND	1	0.05	0.1	µg/L						
2,6-Di-tert-butylphenol	Total	ND	1	0.05	0.1	µg/L						
2-Chlorophenol	Total	ND	1	0.05	0.1	µg/L						
2-Methyl-4,6-dinitrophenol	Total	ND	1	0.1	0.2	µg/L						
2-Methylphenol	Total	ND	1	0.1	0.2	µg/L						
2-Nitrophenol	Total	ND	1	0.1	0.2	µg/L						
3+4-Methylphenol	Total	ND	1	0.1	0.2	µg/L						
4-Chloro-3-methylphenol	Total	ND	1	0.1	0.2	µg/L						
4-Nitrophenol	Total	ND	1	0.1	0.2	µg/L						
6-tert-butyl-2,4-dimethylphenol	Total	ND	1	0.05	0.1	µg/L						
Benzoic Acid	Total	ND	1	0.1	0.2	µg/L						
Benzyl Alcohol	Total	ND	1	0.1	0.2	µg/L						
Pentachlorophenol	Total	ND	1	0.05	0.1	µg/L						
Phenol	Total	ND	1	0.1	0.2	µg/L						
p-tert-Butylphenol	Total	ND	1	0.05	0.1	µg/L						

Acid Extractable Compounds

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY		PRECISION	QA CODE
							LEVEL	RESULT	%	LIMITS	%	LIMITS
Sample ID: 100732-BS1		QAQC Procedural Blank			Matrix: BlankMatrix			Sampled:		Received:		
Method: EPA 625.1		Batch ID: O-40004			Prepared: 10-Oct-22		Analyzed: 30-Oct-22					
(2,4,6-Tribromophenol)	Total	55	1			% Recovery	100	0	55	30 - 130%	PASS	
(d5-Phenol)	Total	33	1			% Recovery	100	0	33	0 - 130%	PASS	
2,4,5-Trichlorophenol	Total	0.772	1	0.05	0.1	µg/L	1	0	77	30 - 130%	PASS	
2,4,6-Trichlorophenol	Total	0.876	1	0.05	0.1	µg/L	1	0	88	56 - 118%	PASS	
2,4-Dichlorophenol	Total	0.88	1	0.05	0.1	µg/L	1	0	88	51 - 117%	PASS	
2,4-Dinitrophenol	Total	0.71	1	0.1	0.2	µg/L	1	0	71	0 - 152%	PASS	
2,6-Dichlorophenol	Total	0.928	1	0.05	0.1	µg/L	1	0	93	30 - 130%	PASS	
2,6-Di-tert-butyl-4-methylphenol	Total	0.638	1	0.05	0.1	µg/L	1	0	64	50 - 150%	PASS	
2,6-Di-tert-butylphenol	Total	0.642	1	0.05	0.1	µg/L	1	0	64	50 - 150%	PASS	
2-Chlorophenol	Total	0.677	1	0.05	0.1	µg/L	1	0	68	41 - 110%	PASS	
2-Methyl-4,6-dinitrophenol	Total	0.777	1	0.1	0.2	µg/L	1	0	78	0 - 141%	PASS	
2-Methylphenol	Total	0.773	1	0.1	0.2	µg/L	1	0	77	40 - 117%	PASS	
2-Nitrophenol	Total	0.611	1	0.1	0.2	µg/L	1	0	61	40 - 117%	PASS	
3+4-Methylphenol	Total	0.864	1	0.1	0.2	µg/L	1	0	86	0 - 130%	PASS	
4-Chloro-3-methylphenol	Total	0.864	1	0.1	0.2	µg/L	1	0	86	51 - 128%	PASS	
4-Nitrophenol	Total	0.47	1	0.1	0.2	µg/L	1	0	47	10 - 164%	PASS	
6-tert-butyl-2,4-dimethylphenol	Total	0.736	1	0.05	0.1	µg/L	1	0	74	50 - 150%	PASS	
Benzoic Acid	Total	0.407	1	0.1	0.2	µg/L	1	0	41	2 - 145%	PASS	
Benzyl Alcohol	Total	0.821	1	0.1	0.2	µg/L	1	0	82	43 - 148%	PASS	
Pentachlorophenol	Total	0.613	1	0.05	0.1	µg/L	1	0	61	36 - 111%	PASS	
Phenol	Total	0.626	1	0.1	0.2	µg/L	1	0	63	29 - 114%	PASS	
p-tert-Butylphenol	Total	1.13	1	0.05	0.1	µg/L	1	0	113	50 - 150%	PASS	

Acid Extractable Compounds

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY		PRECISION		QA CODE	
							LEVEL	RESULT	%	LIMITS	%	LIMITS		
Sample ID: 100732-BS2		QAQC Procedural Blank			Matrix: BlankMatrix			Sampled:			Received:			
Method: EPA 625.1		Batch ID: O-40004			Prepared: 10-Oct-22			Analyzed: 31-Oct-22						
(2,4,6-Tribromophenol)	Total	61	1			% Recovery	100	0	61	30 - 130%	PASS	10	30	PASS
(d5-Phenol)	Total	35	1			% Recovery	100	0	35	0 - 130%	PASS	6	30	PASS
2,4,5-Trichlorophenol	Total	0.943	1	0.05	0.1	µg/L	1	0	94	30 - 130%	PASS	20	30	PASS
2,4,6-Trichlorophenol	Total	0.978	1	0.05	0.1	µg/L	1	0	98	56 - 118%	PASS	11	30	PASS
2,4-Dichlorophenol	Total	0.963	1	0.05	0.1	µg/L	1	0	96	51 - 117%	PASS	9	30	PASS
2,4-Dinitrophenol	Total	0.757	1	0.1	0.2	µg/L	1	0	76	0 - 152%	PASS	7	30	PASS
2,6-Dichlorophenol	Total	1.03	1	0.05	0.1	µg/L	1	0	103	30 - 130%	PASS	10	30	PASS
2,6-Di-tert-butyl-4-methylphenol	Total	0.705	1	0.05	0.1	µg/L	1	0	70	50 - 150%	PASS	9	30	PASS
2,6-Di-tert-butylphenol	Total	0.739	1	0.05	0.1	µg/L	1	0	74	50 - 150%	PASS	14	30	PASS
2-Chlorophenol	Total	0.754	1	0.05	0.1	µg/L	1	0	75	41 - 110%	PASS	10	30	PASS
2-Methyl-4,6-dinitrophenol	Total	0.882	1	0.1	0.2	µg/L	1	0	88	0 - 141%	PASS	12	30	PASS
2-Methylphenol	Total	0.885	1	0.1	0.2	µg/L	1	0	88	40 - 117%	PASS	13	30	PASS
2-Nitrophenol	Total	0.79	1	0.1	0.2	µg/L	1	0	79	40 - 117%	PASS	26	30	PASS
3+4-Methylphenol	Total	0.867	1	0.1	0.2	µg/L	1	0	87	0 - 130%	PASS	1	30	PASS
4-Chloro-3-methylphenol	Total	0.98	1	0.1	0.2	µg/L	1	0	98	51 - 128%	PASS	13	30	PASS
4-Nitrophenol	Total	0.553	1	0.1	0.2	µg/L	1	0	55	10 - 164%	PASS	16	30	PASS
6-tert-butyl-2,4-dimethylphenol	Total	0.786	1	0.05	0.1	µg/L	1	0	79	50 - 150%	PASS	7	30	PASS
Benzoic Acid	Total	0.441	1	0.1	0.2	µg/L	1	0	44	2 - 145%	PASS	7	30	PASS
Benzyl Alcohol	Total	0.794	1	0.1	0.2	µg/L	1	0	79	43 - 148%	PASS	4	30	PASS
Pentachlorophenol	Total	0.738	1	0.05	0.1	µg/L	1	0	74	36 - 111%	PASS	19	30	PASS
Phenol	Total	0.706	1	0.1	0.2	µg/L	1	0	71	29 - 114%	PASS	12	30	PASS
p-tert-Butylphenol	Total	1.12	1	0.05	0.1	µg/L	1	0	112	50 - 150%	PASS	1	30	PASS

Base/Neutral Extractable Compounds

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY	PRECISION	QA CODE
							LEVEL	RESULT	%	LIMITS	%
Sample ID: 100732-B1		QAQC Procedural Blank			Matrix: BlankMatrix		Sampled:		Received:		
		Method: EPA 625.1			Batch ID: O-40004		Prepared: 10-Oct-22		Analyzed: 30-Oct-22		
2-Chloronaphthalene	Total	ND	1	0.05	0.1	µg/L					
2-Nitroaniline	Total	ND	1	0.05	0.1	µg/L					
3-Nitroaniline	Total	ND	1	0.05	0.1	µg/L					
4-Bromophenylphenyl ether	Total	ND	1	0.05	0.1	µg/L					
4-Chloroaniline	Total	ND	1	0.05	0.1	µg/L					
4-Chlorophenylphenyl ether	Total	ND	1	0.05	0.1	µg/L					
4-Nitroaniline	Total	ND	1	0.05	0.1	µg/L					
Aniline	Total	ND	1	0.05	0.1	µg/L					
Benzidine	Total	ND	1	0.05	0.1	µg/L					
Bis(2-Chloroethoxy) methane	Total	ND	1	0.05	0.1	µg/L					
Bis(2-Chloroethyl) ether	Total	ND	1	0.05	0.1	µg/L					
Bis(2-Chloroisopropyl) ether	Total	ND	1	0.05	0.1	µg/L					
Dibenzofuran	Total	ND	1	0.05	0.1	µg/L					
Disalicylideneprapanediamin	Total	ND	1	0.05	0.1	µg/L					
Hexachloroethane	Total	ND	1	0.05	0.1	µg/L					
Nitrobenzene	Total	ND	1	0.05	0.1	µg/L					
N-Nitrosodi-n-propylamine	Total	ND	1	0.05	0.1	µg/L					
N-Nitrosodiphenylamine	Total	ND	1	0.05	0.1	µg/L					

Base/Neutral Extractable Compounds

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY		PRECISION	QA CODEc
							LEVEL	RESULT	%	LIMITS	%	LIMITS
Sample ID: 100732-BS1		QAQC Procedural Blank			Matrix: BlankMatrix			Sampled:		Received:		
Method: EPA 625.1		Batch ID: O-40004			Prepared: 10-Oct-22		Analyzed: 30-Oct-22					
2-Chloronaphthalene	Total	0.845	1	0.05	0.1	µg/L	1	0	85	53 - 130%	PASS	
2-Nitroaniline	Total	0.881	1	0.05	0.1	µg/L	1	0	88	69 - 114%	PASS	
3-Nitroaniline	Total	0.92	1	0.05	0.1	µg/L	1	0	92	23 - 137%	PASS	
4-Bromophenylphenyl ether	Total	0.864	1	0.05	0.1	µg/L	1	0	86	61 - 132%	PASS	
4-Chloroaniline	Total	1.2	1	0.05	0.1	µg/L	1	0	120	50 - 150%	PASS	
4-Chlorophenylphenyl ether	Total	0.853	1	0.05	0.1	µg/L	1	0	85	63 - 130%	PASS	
4-Nitroaniline	Total	0.97	1	0.05	0.1	µg/L	1	0	97	10 - 159%	PASS	
Aniline	Total	0.613	1	0.05	0.1	µg/L	1	0	61	50 - 150%	PASS	
Bis(2-Chloroethoxy) methane	Total	0.94	1	0.05	0.1	µg/L	1	0	94	66 - 122%	PASS	
Bis(2-Chloroethyl) ether	Total	0.727	1	0.05	0.1	µg/L	1	0	73	43 - 127%	PASS	
Bis(2-Chloroisopropyl) ether	Total	1.06	1	0.05	0.1	µg/L	1	0	106	49 - 128%	PASS	
Dibenzofuran	Total	0.731	1	0.05	0.1	µg/L	1	0	73	50 - 150%	PASS	
Disalicylidenepropanediamin	Total	30.8	1	0.05	0.1	µg/L	50	0	62	50 - 150%	PASS	
Hexachloroethane	Total	0.79	1	0.05	0.1	µg/L	1	0	79	27 - 130%	PASS	
Nitrobenzene	Total	0.891	1	0.05	0.1	µg/L	1	0	89	54 - 111%	PASS	
N-Nitrosodi-n-propylamine	Total	0.955	1	0.05	0.1	µg/L	1	0	95	61 - 152%	PASS	
N-Nitrosodiphenylamine	Total	0.789	1	0.05	0.1	µg/L	1	0	79	49 - 142%	PASS	

Base/Neutral Extractable Compounds

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY		PRECISION		QA CODEc	
									%	LIMITS	%	LIMITS		
Sample ID: 100732-BS2		QAQC Procedural Blank			Matrix: BlankMatrix			Sampled:		Received:				
		Method: EPA 625.1			Batch ID: O-40004			Prepared: 10-Oct-22		Analyzed: 31-Oct-22				
2-Chloronaphthalene	Total	1.01	1	0.05	0.1	µg/L	1	0	101	53 - 130%	PASS	18	30	PASS
2-Nitroaniline	Total	1.12	1	0.05	0.1	µg/L	1	0	112	69 - 114%	PASS	24	30	PASS
3-Nitroaniline	Total	1.16	1	0.05	0.1	µg/L	1	0	116	23 - 137%	PASS	23	30	PASS
4-Bromophenylphenyl ether	Total	0.988	1	0.05	0.1	µg/L	1	0	99	61 - 132%	PASS	14	30	PASS
4-Chloroaniline	Total	1.25	1	0.05	0.1	µg/L	1	0	125	50 - 150%	PASS	4	30	PASS
4-Chlorophenylphenyl ether	Total	0.996	1	0.05	0.1	µg/L	1	0	100	63 - 130%	PASS	16	30	PASS
4-Nitroaniline	Total	1.29	1	0.05	0.1	µg/L	1	0	129	10 - 159%	PASS	28	30	PASS
Aniline	Total	0.727	1	0.05	0.1	µg/L	1	0	73	50 - 150%	PASS	18	30	PASS
Bis(2-Chloroethoxy) methane	Total	0.997	1	0.05	0.1	µg/L	1	0	100	66 - 122%	PASS	6	30	PASS
Bis(2-Chloroethyl) ether	Total	0.79	1	0.05	0.1	µg/L	1	0	79	43 - 127%	PASS	8	30	PASS
Bis(2-Chloroisopropyl) ether	Total	0.969	1	0.05	0.1	µg/L	1	0	97	49 - 128%	PASS	9	30	PASS
Dibenzofuran	Total	0.884	1	0.05	0.1	µg/L	1	0	88	50 - 150%	PASS	19	30	PASS
Disalicylidenepropanediamin	Total	38.4	1	0.05	0.1	µg/L	50	0	77	50 - 150%	PASS	22	30	PASS
Hexachloroethane	Total	0.77	1	0.05	0.1	µg/L	1	0	77	27 - 130%	PASS	3	30	PASS
Nitrobenzene	Total	0.884	1	0.05	0.1	µg/L	1	0	88	54 - 111%	PASS	1	30	PASS
N-Nitrosodi-n-propylamine	Total	0.979	1	0.05	0.1	µg/L	1	0	98	61 - 152%	PASS	2	30	PASS
N-Nitrosodiphenylamine	Total	0.983	1	0.05	0.1	µg/L	1	0	98	49 - 142%	PASS	21	30	PASS

Polynuclear Aromatic Hydrocarbons

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY	PRECISION	QA CODEc
							LEVEL	RESULT	% LIMITS	% LIMITS	
Sample ID: 100732-B1		QAQC Procedural Blank			Matrix: BlankMatrix		Sampled:		Received:		
	Method: EPA 625.1					Batch ID: O-40004	Prepared: 10-Oct-22	Analyzed: 30-Oct-22			
(d10-Acenaphthene)	Total	83	1			% Recovery	100	83	27 - 133%	PASS	
(d10-Phenanthrene)	Total	90	1			% Recovery	100	90	43 - 129%	PASS	
(d12-Chrysene)	Total	84	1			% Recovery	100	84	52 - 144%	PASS	
(d12-Perylene)	Total	80	1			% Recovery	100	80	36 - 161%	PASS	
(d8-Naphthalene)	Total	73	1			% Recovery	100	73	25 - 125%	PASS	
1-Methylnaphthalene	Total	ND	1	0.001	0.005	µg/L					
1-Methylphenanthrene	Total	ND	1	0.001	0.005	µg/L					
2,3,5-Trimethylnaphthalene	Total	ND	1	0.001	0.005	µg/L					
2,6-Dimethylnaphthalene	Total	ND	1	0.001	0.005	µg/L					
2-Methylnaphthalene	Total	ND	1	0.001	0.005	µg/L					
Acenaphthene	Total	ND	1	0.001	0.005	µg/L					
Acenaphthylene	Total	ND	1	0.001	0.005	µg/L					
Anthracene	Total	ND	1	0.001	0.005	µg/L					
Benz[a]anthracene	Total	ND	1	0.001	0.005	µg/L					
Benzo[a]pyrene	Total	ND	1	0.001	0.005	µg/L					
Benzo[b]fluoranthene	Total	ND	1	0.001	0.005	µg/L					
Benzo[e]pyrene	Total	ND	1	0.001	0.005	µg/L					
Benzo[g,h,i]perylene	Total	ND	1	0.001	0.005	µg/L					
Benzo[k]fluoranthene	Total	ND	1	0.001	0.005	µg/L					
Biphenyl	Total	ND	1	0.001	0.005	µg/L					
Chrysene	Total	ND	1	0.001	0.005	µg/L					
Dibenz[a,h]anthracene	Total	ND	1	0.001	0.005	µg/L					
Dibenzo[a,l]pyrene	Total	ND	1	0.001	0.005	µg/L					
Dibenzothiophene	Total	ND	1	0.001	0.005	µg/L					

Polynuclear Aromatic Hydrocarbons

QUALITY CONTROL REPORT

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



Polynuclear Aromatic Hydrocarbons

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY	PRECISION	QA CODE	
							LEVEL	RESULT	%	LIMITS	%	LIMITS
Sample ID: 100732-BS1		QAQC Procedural Blank			Matrix: BlankMatrix			Sampled:		Received:		
Method: EPA 625.1		Batch ID: O-40004			Prepared: 10-Oct-22		Analyzed: 30-Oct-22					
(d10-Acenaphthene)	Total	83	1			% Recovery	100	0	83	27 - 133%	PASS	
(d10-Phenanthrene)	Total	93	1			% Recovery	100	0	93	43 - 129%	PASS	
(d12-Chrysene)	Total	97	1			% Recovery	100	0	97	52 - 144%	PASS	
(d12-Perylene)	Total	84	1			% Recovery	100	0	84	36 - 161%	PASS	
(d8-Naphthalene)	Total	76	1			% Recovery	100	0	76	25 - 125%	PASS	
1-Methylnaphthalene	Total	0.403	1	0.001	0.005	µg/L	0.5	0	81	31 - 128%	PASS	
1-Methylphenanthrene	Total	0.402	1	0.001	0.005	µg/L	0.5	0	80	66 - 127%	PASS	
2,3,5-Trimethylnaphthalene	Total	0.441	1	0.001	0.005	µg/L	0.5	0	88	55 - 122%	PASS	
2,6-Dimethylnaphthalene	Total	0.455	1	0.001	0.005	µg/L	0.5	0	91	48 - 120%	PASS	
2-Methylnaphthalene	Total	1.16	1	0.001	0.005	µg/L	1.5	0	77	47 - 130%	PASS	
Acenaphthene	Total	1.49	1	0.001	0.005	µg/L	1.5	0	99	53 - 131%	PASS	
Acenaphthylene	Total	1.53	1	0.001	0.005	µg/L	1.5	0	102	43 - 140%	PASS	
Anthracene	Total	1.52	1	0.001	0.005	µg/L	1.5	0	101	58 - 135%	PASS	
Benz[a]anthracene	Total	1.52	1	0.001	0.005	µg/L	1.5	0	101	55 - 145%	PASS	
Benzo[a]pyrene	Total	1.4	1	0.001	0.005	µg/L	1.5	0	93	51 - 143%	PASS	
Benzo[b]fluoranthene	Total	1.41	1	0.001	0.005	µg/L	1.5	0	94	46 - 165%	PASS	
Benzo[e]pyrene	Total	0.468	1	0.001	0.005	µg/L	0.5	0	94	42 - 152%	PASS	
Benzo[g,h,i]perylene	Total	1.48	1	0.001	0.005	µg/L	1.5	0	99	63 - 133%	PASS	
Benzo[k]fluoranthene	Total	1.5	1	0.001	0.005	µg/L	1.5	0	100	56 - 145%	PASS	
Biphenyl	Total	0.461	1	0.001	0.005	µg/L	0.5	0	92	56 - 119%	PASS	
Chrysene	Total	1.51	1	0.001	0.005	µg/L	1.5	0	101	56 - 141%	PASS	
Dibenz[a,h]anthracene	Total	1.39	1	0.001	0.005	µg/L	1.5	0	93	55 - 150%	PASS	
Dibenzo[a,l]pyrene	Total	0.393	1	0.001	0.005	µg/L	0.5	0	79	50 - 150%	PASS	
Dibenzothiophene	Total	0.477	1	0.001	0.005	µg/L	0.5	0	95	75 - 113%	PASS	

Polynuclear Aromatic Hydrocarbons

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY		PRECISION		QA CODE _c
							LEVEL	RESULT	%	LIMITS	%	LIMITS	
Fluoranthene	Total	0.901	1	0.001	0.005	µg/L	1.5	0	60	60 - 146%	PASS		
Fluorene	Total	1.55	1	0.001	0.005	µg/L	1.5	0	103	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	1.07	1	0.001	0.005	µg/L	1.5	0	71	41 - 126%	PASS		
Perylene	Total	0.407	1	0.001	0.005	µg/L	0.5	0	81	48 - 141%	PASS		
Phenanthrene	Total	1.53	1	0.001	0.005	µg/L	1.5	0	102	67 - 127%	PASS		
Pyrene	Total	0.897	1	0.001	0.005	µg/L	1.5	0	60	54 - 156%	PASS		

Polynuclear Aromatic Hydrocarbons

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY		PRECISION		QA CODE	
							LEVEL	RESULT	%	LIMITS	%	LIMITS		
Sample ID: 100732-BS2		QAQC Procedural Blank			Matrix: BlankMatrix			Sampled:			Received:			
Method: EPA 625.1		Batch ID: O-40004			Prepared: 10-Oct-22			Analyzed: 31-Oct-22						
(d10-Acenaphthene)	Total	92	1			% Recovery	100	0	92	27 - 133%	PASS	10	30	PASS
(d10-Phenanthrene)	Total	98	1			% Recovery	100	0	98	43 - 129%	PASS	5	30	PASS
(d12-Chrysene)	Total	103	1			% Recovery	100	0	103	52 - 144%	PASS	6	30	PASS
(d12-Perylene)	Total	87	1			% Recovery	100	0	87	36 - 161%	PASS	4	30	PASS
(d8-Naphthalene)	Total	74	1			% Recovery	100	0	74	25 - 125%	PASS	3	30	PASS
1-Methylnaphthalene	Total	0.395	1	0.001	0.005	µg/L	0.5	0	79	31 - 128%	PASS	2	30	PASS
1-Methylphenanthrene	Total	0.411	1	0.001	0.005	µg/L	0.5	0	82	66 - 127%	PASS	2	30	PASS
2,3,5-Trimethylnaphthalene	Total	0.476	1	0.001	0.005	µg/L	0.5	0	95	55 - 122%	PASS	8	30	PASS
2,6-Dimethylnaphthalene	Total	0.505	1	0.001	0.005	µg/L	0.5	0	101	48 - 120%	PASS	10	30	PASS
2-Methylnaphthalene	Total	1.13	1	0.001	0.005	µg/L	1.5	0	75	47 - 130%	PASS	3	30	PASS
Acenaphthene	Total	1.62	1	0.001	0.005	µg/L	1.5	0	108	53 - 131%	PASS	9	30	PASS
Acenaphthylene	Total	1.63	1	0.001	0.005	µg/L	1.5	0	109	43 - 140%	PASS	7	30	PASS
Anthracene	Total	1.58	1	0.001	0.005	µg/L	1.5	0	105	58 - 135%	PASS	4	30	PASS
Benz[a]anthracene	Total	1.61	1	0.001	0.005	µg/L	1.5	0	107	55 - 145%	PASS	6	30	PASS
Benzo[a]pyrene	Total	1.4	1	0.001	0.005	µg/L	1.5	0	93	51 - 143%	PASS	0	30	PASS
Benzo[b]fluoranthene	Total	1.49	1	0.001	0.005	µg/L	1.5	0	99	46 - 165%	PASS	5	30	PASS
Benzo[e]pyrene	Total	0.486	1	0.001	0.005	µg/L	0.5	0	97	42 - 152%	PASS	3	30	PASS
Benzo[g,h,i]perylene	Total	1.53	1	0.001	0.005	µg/L	1.5	0	102	63 - 133%	PASS	3	30	PASS
Benzo[k]fluoranthene	Total	1.57	1	0.001	0.005	µg/L	1.5	0	105	56 - 145%	PASS	5	30	PASS
Biphenyl	Total	0.495	1	0.001	0.005	µg/L	0.5	0	99	56 - 119%	PASS	7	30	PASS
Chrysene	Total	1.57	1	0.001	0.005	µg/L	1.5	0	105	56 - 141%	PASS	4	30	PASS
Dibenz[a,h]anthracene	Total	1.43	1	0.001	0.005	µg/L	1.5	0	95	55 - 150%	PASS	2	30	PASS
Dibenzo[a,l]pyrene	Total	0.396	1	0.001	0.005	µg/L	0.5	0	79	50 - 150%	PASS	0	30	PASS
Dibenzothiophene	Total	0.506	1	0.001	0.005	µg/L	0.5	0	101	75 - 113%	PASS	6	30	PASS

Polynuclear Aromatic Hydrocarbons

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY		PRECISION		QA CODE _c	
							LEVEL	RESULT	%	LIMITS	%	LIMITS		
Fluoranthene	Total	0.98	1	0.001	0.005	µg/L	1.5	0	65	60 - 146%	PASS	8	30	PASS
Fluorene	Total	1.71	1	0.001	0.005	µg/L	1.5	0	114	58 - 131%	PASS	10	30	PASS
Indeno[1,2,3-cd]pyrene	Total	1.44	1	0.001	0.005	µg/L	1.5	0	96	50 - 151%	PASS	3	30	PASS
Naphthalene	Total	1	1	0.001	0.005	µg/L	1.5	0	67	41 - 126%	PASS	6	30	PASS
Perylene	Total	0.407	1	0.001	0.005	µg/L	0.5	0	81	48 - 141%	PASS	0	30	PASS
Phenanthrene	Total	1.62	1	0.001	0.005	µg/L	1.5	0	108	67 - 127%	PASS	6	30	PASS
Pyrene	Total	0.872	1	0.001	0.005	µg/L	1.5	0	58	54 - 156%	PASS	3	30	PASS

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18

PHYSIS

TENTATIVELY

IDENTIFIED COMPOUNDS

ENVIRONMENTAL LABORATORIES, INC.

Innovative Solutions for Nature

Sample ID: 100733

RT	Area Pct	Concentration (ng/L)	Library/ID	Cas Number	Match Qual
32.3422	6.0561	1111	Anthracene-D10-	1719-06-8	97
29.3395	1.7027	312	Benzoic acid, 2-ethylhexyl ester	5444-75-7	98

Concentration estimated using the response for Anthracene-d10

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18

Sample ID: Lab Blank B1_40004

RT	Area Pct	Concentration (ng/L)	Library/ID	Cas Number	Match Qual
32.3414	5.3504	1111	Anthracene-D10-	1719-06-8	97
29.3392	1.0099	210	Benzoic acid, 2-ethylhexyl ester	5444-75-7	99

Concentration estimated using the response for Anthracene-d10

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18

PERFORMANCE CHAIN OF CUSTODY

TERRA ENVIRONMENTAL LABORATORIES, INC. AURA

Innovative Solutions for Nature

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18



Sample Receipt Summary

Project Iteration ID: 1407003-312
 Client Name: Eurofins Eaton Analytical
 Project Name: RED-HILL Project # 38001111 Job # 380-23442-1
 COC Page Number: 2 of 2
 Bottle Label Color: NA

Receiving Info

1. Initials Received By: yk
 2. Date Received: 10/10/10
 3. Time Received: 1115
 4. Client Name: Eurofins

5. Courier Information: (Please circle)
 • Client
 • UPS
 • FedEx
 • PHYSIS Driver
6. Container Information: (Please put the # of containers or circle none)
 • 1 Cooler
 • Styrofoam Cooler
 • Boxes
 • None
7. What type of ice was used: (Please circle any that apply)
 • Wet Ice
 • Blue Ice
 • Dry Ice
8. Randomly Selected Samples Temperature (C): 9.8
 • Water
 • None

iii. Total Mileage: _____
 iv. Number of Pickups: _____
 • Other _____
 • None

Inspection Info

1. Initials Inspected By: RKA

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:

See temp,

Monrovia, CA (Suite 100)

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

Chain of Custody Record



Environment Testing
 America

Client Information		Sampler: BAILEY	Lab PM: Arada, Rachele	Carrier Tracking No(s):	COC No: 380-15739-1845.1																																																										
Client Contact: Dr. Ron Fenstermacher		Phone: 1-808-748-5840	E-Mail: Rachele.Arada@et.eurofinsus.com	State of Origin:	Page: Page 1 of 3																																																										
Company: City & County of Honolulu		PWSID:	Analysis Requested																																																												
Address: 630 South Beretania Street Chemistry Lab		Due Date Requested:	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">Field Filtered Sample (Yes or No)</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">Performs SIMS (Yes or No)</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">504.1_PREC, 505_LL_PREC</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">2320B, 2510B, SIM4500_H+</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">200.7, 200.8</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">2540C_Calcd - Total Dissolved Solids (TDS)</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">SIM4500_S2_D - Sulfide, Total</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">524.2_Pres_PREC, 524.2_SIM_PREC</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">525.2_PREC - 525plus Plus TICs</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">300_OF_28D_B, 300_OF_28D_PREC, 300_OF_48H_PREC, 4500_F_C</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">245.1 - Local Method</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">SUBCONTRACT - 8015 Jet Fuel 8 (JP8)</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">SUBCONTRACT - 8015 Jet Fuel 5 (JP5)</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">SUBCONTRACT - 8015 Diesel LL (EAL) and Motor Oil</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)</td> <td style="writing-mode: vertical-rl; transform: rotate(180deg);">Total Number of Containers</td> </tr> </table>			Field Filtered Sample (Yes or No)	Performs SIMS (Yes or No)	504.1_PREC, 505_LL_PREC	2320B, 2510B, SIM4500_H+	200.7, 200.8	2540C_Calcd - Total Dissolved Solids (TDS)	SIM4500_S2_D - Sulfide, Total	524.2_Pres_PREC, 524.2_SIM_PREC	525.2_PREC - 525plus Plus TICs	300_OF_28D_B, 300_OF_28D_PREC, 300_OF_48H_PREC, 4500_F_C	245.1 - Local Method	SUBCONTRACT - 8015 Jet Fuel 8 (JP8)	SUBCONTRACT - 8015 Jet Fuel 5 (JP5)	SUBCONTRACT - 8015 Diesel LL (EAL) and Motor Oil	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	Total Number of Containers																																										
Field Filtered Sample (Yes or No)	Performs SIMS (Yes or No)	504.1_PREC, 505_LL_PREC				2320B, 2510B, SIM4500_H+	200.7, 200.8	2540C_Calcd - Total Dissolved Solids (TDS)	SIM4500_S2_D - Sulfide, Total	524.2_Pres_PREC, 524.2_SIM_PREC	525.2_PREC - 525plus Plus TICs	300_OF_28D_B, 300_OF_28D_PREC, 300_OF_48H_PREC, 4500_F_C	245.1 - Local Method	SUBCONTRACT - 8015 Jet Fuel 8 (JP8)	SUBCONTRACT - 8015 Jet Fuel 5 (JP5)	SUBCONTRACT - 8015 Diesel LL (EAL) and Motor Oil	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	Total Number of Containers																																													
City: Honolulu		TAT Requested (days):																																																													
State, Zip: HI, 96843		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No																																																													
Phone: 808-748-5091(Tel)		PO #: C20525101 exp 05312023																																																													
Email: RFENSTERMACHER@hbws.org		WO #:																																																													
Project Name: RED-HILL		Project #: 38001111	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td colspan="2">Preservation Codes:</td> </tr> <tr> <td style="width:50%;"> 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 </td> <td style="width:50%;"> M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify) </td> </tr> <tr> <td colspan="2">Other:</td> </tr> </table>			Preservation Codes:		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA	M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)	Other:																																																					
Preservation Codes:																																																															
A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA	M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)																																																														
Other:																																																															
Site: Hawaii		SSOW#:	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:10%;"></td> <td style="width:10%;"></td> <td style="width:10%;"></td> <td style="width:10%;"></td> <td style="width:10%;"></td> <td style="width:10%;"></td> <td style="width:10%;"></td> <td style="width:10%;"></td> <td style="width:10%;"></td> <td style="width:10%;"></td> <td style="width:10%;"></td> <td style="width:10%;"></td> <td style="width:10%;"></td> <td style="width:10%;"></td> <td style="width:10%;"></td> <td style="width:10%;"></td> </tr> <tr> <td style="text-align: center;">Sample Identification</td> <td style="text-align: center;">Sample Date</td> <td style="text-align: center;">Sample Time</td> <td style="text-align: center;">Sample Type (C=comp, G=grab)</td> <td style="text-align: center;">Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)</td> <td style="text-align: center;">Field Filtered Sample (Yes or No)</td> <td style="text-align: center;">Performs SIMS (Yes or No)</td> <td style="text-align: center;">504.1_PREC, 505_LL_PREC</td> <td style="text-align: center;">2320B, 2510B, SIM4500_H+</td> <td style="text-align: center;">200.7, 200.8</td> <td style="text-align: center;">2540C_Calcd - Total Dissolved Solids (TDS)</td> <td style="text-align: center;">SIM4500_S2_D - Sulfide, Total</td> <td style="text-align: center;">524.2_Pres_PREC, 524.2_SIM_PREC</td> <td style="text-align: center;">525.2_PREC - 525plus Plus TICs</td> <td style="text-align: center;">300_OF_28D_B, 300_OF_28D_PREC, 300_OF_48H_PREC, 4500_F_C</td> <td style="text-align: center;">245.1 - Local Method</td> <td style="text-align: center;">SUBCONTRACT - 8015 Jet Fuel 8 (JP8)</td> <td style="text-align: center;">SUBCONTRACT - 8015 Jet Fuel 5 (JP5)</td> <td style="text-align: center;">SUBCONTRACT - 8015 Diesel LL (EAL) and Motor Oil</td> <td style="text-align: center;">SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)</td> <td style="text-align: center;">Total Number of Containers</td> </tr> <tr> <td colspan="21" style="text-align: center;">Special Instructions/Note:</td> </tr> </table>																			Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Performs SIMS (Yes or No)	504.1_PREC, 505_LL_PREC	2320B, 2510B, SIM4500_H+	200.7, 200.8	2540C_Calcd - Total Dissolved Solids (TDS)	SIM4500_S2_D - Sulfide, Total	524.2_Pres_PREC, 524.2_SIM_PREC	525.2_PREC - 525plus Plus TICs	300_OF_28D_B, 300_OF_28D_PREC, 300_OF_48H_PREC, 4500_F_C	245.1 - Local Method	SUBCONTRACT - 8015 Jet Fuel 8 (JP8)	SUBCONTRACT - 8015 Jet Fuel 5 (JP5)	SUBCONTRACT - 8015 Diesel LL (EAL) and Motor Oil	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	Total Number of Containers	Special Instructions/Note:																				
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Performs SIMS (Yes or No)	504.1_PREC, 505_LL_PREC	2320B, 2510B, SIM4500_H+	200.7, 200.8	2540C_Calcd - Total Dissolved Solids (TDS)	SIM4500_S2_D - Sulfide, Total	524.2_Pres_PREC, 524.2_SIM_PREC	525.2_PREC - 525plus Plus TICs	300_OF_28D_B, 300_OF_28D_PREC, 300_OF_48H_PREC, 4500_F_C	245.1 - Local Method	SUBCONTRACT - 8015 Jet Fuel 8 (JP8)	SUBCONTRACT - 8015 Jet Fuel 5 (JP5)	SUBCONTRACT - 8015 Diesel LL (EAL) and Motor Oil	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	Total Number of Containers																																											
Special Instructions/Note:																																																															
AIEA GULCH WELLS PUMP 1 (331-201-TP071)				Water																																																											
AIEA GULCH WELLS PUMP 2 (331-202-TP072)				Water																																																											
AIEA WELLS P___(260) (331-00___-WL10___)				Water																																																											
HALAWA WELLS UNITS 1 & 2 (331-206-TP065)				Water																																																											
MOANALUA WELLS (331-223-TP202)		Oct. 06, 2022	1032	G	Water																																																										
HALAWA SHAFT VIEW POOL (331-241-TP401)				Water																																																											
KAAMILO WELLS (331-261-TP008)				Water																																																											
TB: AIEA GULCH WELLS PUMP 1				Water																																																											
TB: AIEA GULCH WELLS PUMP 2				Water																																																											
TB: AIEA WELLS PUMPS1&2(260)				Water																																																											
TB: HALAWA WELLS UNITS 1 & 2				Water																																																											



380-23442 COC

Possible Hazard Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:	
Empty Kit Relinquished by:		Date:	Time:
Relinquished by: BAILEY	Date/Time: Oct. 06, 2022 1400	Company: HBWS	Received by: G. REITNER
Relinquished by:	Date/Time:	Company:	Received by:
Relinquished by:	Date/Time:	Company:	Received by:
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:	

Monrovia, CA (Suite 100)

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

Chain of Custody Record



Client Information	Sampler: 161226 R. H. ISHICAWA BAILEY	Lab PM: Arada, Rachele	Carrier Tracking No(s):	COC No: 380-15739-1845.3
Client Contact: Dr. Ron Fenstemacher	Phone: 1-800-748-5840	E-Mail: Rachele.Arada@et.eurofinsus.com	State of Origin:	Page: Page 3 of 3

Company: City & County of Honolulu	PWSID:	Analysis Requested				Job #:
Address: 630 South Beretania Street Chemistry Lab	Due Date Requested:	Field Filtered Sample (Yes or No) 504.1_PREC, 505_LL_PREC 2320B, 2510B, SM4500_H+ 200.7, 200.8 2540C_Calcd - Total Dissolved Solids (TDS) SM4500_S2_D - Sulfide, Total 524.2_Pres_PREC, 524.2_SIM_PREC 525.2_PREC - 525plus Plus TICs 300_OF_28D_B, 300_OF_28D_PREC, 300_OF_48H_PREC, 4500_F_C 245.1 - Local Method SUBCONTRACT - 8015 Jet Fuel 8 (JP8) SUBCONTRACT - 8015 Jet Fuel 5 (JP5) SUBCONTRACT - 8015 Diesel LL (EAL) and Motor Oil SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	Preservation Codes:		Total Number of containers	
City: Honolulu	TAT Requested (days):		A - HCL	M - Hexane		
State, Zip: HI, 96843	Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No		B - NaOH	N - None		
Phone: 808-748-5091(Tel)	PO #: C20525101 exp 05312023		C - Zn Acetate	O - AsNaO2		
Email: RFENSTEMACHER@hbws.org	WO #:		D - Nitric Acid	P - Na2O4S		
Project Name: RED-HILL	Project #: 38001111	E - NaHSO4	Q - Na2SO3			
Site: Hawaii	SSOW#:	F - MeOH	R - Na2S2O3			
		G - Amchlor	S - H2SO4			
		H - Ascorbic Acid	T - TSP Dodecahydrate			
		I - Ice	U - Acetone			
		J - DI Water	V - MCAA			
		K - EDTA	W - pH 4-5			
		L - EDA	Y - Trizma			
			Z - other (specify)			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	504.1_PREC, 505_LL_PREC	2320B, 2510B, SM4500_H+	200.7, 200.8	2540C_Calcd - Total Dissolved Solids (TDS)	SM4500_S2_D - Sulfide, Total	524.2_Pres_PREC, 524.2_SIM_PREC	525.2_PREC - 525plus Plus TICs	300_OF_28D_B, 300_OF_28D_PREC, 300_OF_48H_PREC, 4500_F_C	245.1 - Local Method	SUBCONTRACT - 8015 Jet Fuel 8 (JP8)	SUBCONTRACT - 8015 Jet Fuel 5 (JP5)	SUBCONTRACT - 8015 Diesel LL (EAL) and Motor Oil	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	Special Instructions/Note:	
TB: MOANALUA WELLS	05.06.2022	1032		Water	X	X														
TB: HALAWA SHAFT VIEW POOL				Water																
TB: KAAMILO WELLS				Water																

Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:
--------------------------------------------------------	---------------------------------------

Empty Kit Relinquished by: RW BAILEY	Date: 05/06/2022	Time: 1000	Company: HBWS	Received by: G. REITNER	Date/Time: 10/07/2022 10:15	Company: ETA
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:	
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:	

Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:
--------------------------------------------------------------------------------	-------------------	---------------------------------------------

Monrovia, CA (Suite 100)

750 Royal Oaks Drive Suite 100

Monrovia, CA 91016

Phone: 626-386-1100

Chain of Custody Record



Environment Testing America

Client Information		Sampler: BAILEY	Lab PM: Arada, Rachele	Carrier Tracking No(s):	COC No: 380-15739-1845.4									
Client Contact: Dr. Ron Fenstemacher		Phone: 1-808-748-5840	E-Mail: Rachele.Arada@et.eurofinsus.com	State of Origin:	Page: Page 4 of 3									
Company: City & County of Honolulu			PWSID:	Analysis Requested										
Address: 630 South Beretania Street Chemistry Lab		Due Date Requested:		Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Y - Trizma Z - other (specify)										
City: Honolulu		TAT Requested (days):												
State, Zip: HI, 96843		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No												
Phone: 808-748-5091 (Tel)		PO #: C20525101 exp 05312023												
Email: RFENSTEMACHER@hbws.org		WO #:												
Project Name: RED-HILL		Project #: 38001111		Total Number of containers										
Site: Hawaii		SSOW#:												
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Field Form (S/SIM) (Yes or No)	SUBCONTRACT - 8015 Ethanol	SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs	SUBCONTRACT - 625 Base Neutral LL (EAL) Physis	SUBCONTRACT - 625 Acid LL (EAL) Physis	524.3 SIM_PREC - Low Level TCP/EDB/DBCP	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	504.1_PREC - Local Method	Other:
			Preservation Code:				R	R	R	R		RA	R	
TB: MOANALUA WELLS	7/6/06/2022	1052		Water								X		
TB: HALAWA SHAFT VIEW POOL				Water										
TB: KAAMILO WELLS				Water										
Possible Hazard Identification					Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)									
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological					<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months									
Deliverable Requested: I, II, III, IV, Other (specify)					Special Instructions/QC Requirements:									
Empty Kit Relinquished by:			Date:	Time:	Method of Shipment:									
Relinquished by: BAILEY		Date/Time: 06/06/2022 1400	Company: HBWS	Received by: A/D G. REITNER		Date/Time: 10/07/2022 10:15	Company: EOA							
Relinquished by:		Date/Time:	Company:	Received by:		Date/Time:	Company:							
Relinquished by:		Date/Time:	Company:	Received by:		Date/Time:	Company:							
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:												

ORIGIN ID:HIKA (808) 748-5840
BWS CHEMLAB
HONOLULU BOARD OF WATER SUPPLY
630 S. BERETANIA ST.
CHEMICAL LABORATORY
HONOLULU, HI 96843
UNITED STATES US

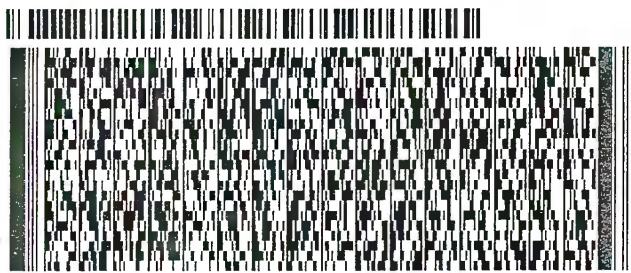
SHIP DATE: 06OCT22
ACTWGT: 57.00 LB
CAD: 100205419/NET4530

BILL RECIPIENT

TO **M. A. VASQUEZ**
EUROFINS EATON ANALYTICAL, INC
750 ROYAL OAKS DR
SUITE 100
MONROVIA CA 91016

(626) 386-1178 REF:
INV DEPT:
PO.

581 J11AC5FFE2D

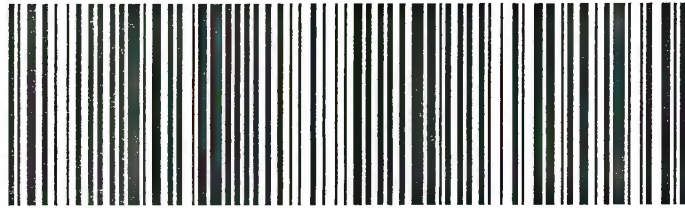


FRI - 07 OCT 10:30A
PRIORITY OVERNIGHT

1 of 2
TRK# 7701 3949 2526
0201
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, available on fedex.com. FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.



ORIGIN ID:HIKA (808) 748-5840
BWS CHEMLAB
HONOLULU BOARD OF WATER SUPPLY
630 S. BERETANIA ST.
CHEMICAL LABORATORY
HONOLULU, HI 96843
UNITED STATES US

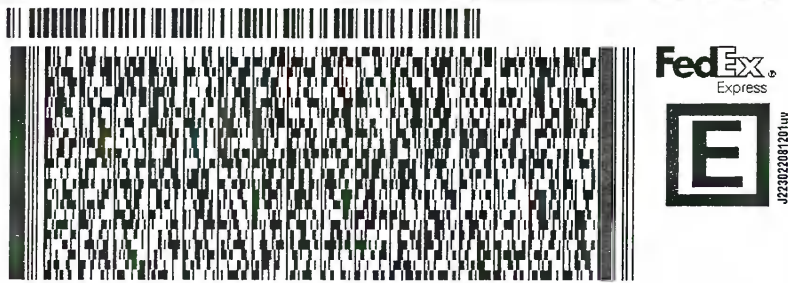
SHIP DATE: 06OCT22
ACTWGT: 57.00 LB
CAD: 100205419/INET4530

BILL RECIPIENT

TO **M. A. VASQUEZ**
EUROFINS EATON ANALYTICAL, INC
750 ROYAL OAKS DR
SUITE 100
MONROVIA CA 91016

(626) 386-1178 REF:
INV. PO: DEPT:

581J11AC5FFE2D



FRI - 07 OCT 10:30A
PRIORITY OVERNIGHT

2 of 2
MPS# 7701 3949 0913
0263
Mstr# 7701 3949 2526 0201

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, available on fedex.com. FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.



Bottle Order Information

Bottle Order: RED-HILL - Quarterly
 Bottle Order #: 1845
 Request From Client: 9/14/2022
 Date Order Posted: 6/23/2022 7:29:27AM
 Order Status: Ready To Process
 Prepared By: Davis Haley
 Deliver By Date: 9/23/2022 11:59:00PM
 Lab Project Number: 38001111
 PWSID: HI00000331-201-TP071, HI00000331-202-TP072, HI00000

Order Completion Information

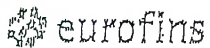
Creator: Michelle Do
 Filled by:
 Sent Date:
 Sent Via:
 Tracking #:

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #
7	6	42	Voa Vial 40ml Amber - Sodium thiosulfate	Sodium Thiosulfate	504.1_PREC - Local Method	Water	Normal		
					505_LL_PREC - (MOD) ML505 +505-EAL Aldrin Dieldrin Tox	Water	Normal		
7	1	7	Plastic 250ml - unpreserved	None	2320B - (MOD) Total Alkalinity	Water	Normal		
					SM4500_H+ - Local Method	Water	Normal		
					2510B - Conductivity	Water	Normal		
7	1	7	Plastic 500ml - with Nitric Acid	Nitric Acid	200.8 - Metals, Priority Pollutant by 200.8	Water	Normal		
					200.7 - (MOD) Custom	Water	Normal		
7	1	7	Plastic 500ml - unpreserved	None	2540C_Calcd - Total Dissolved Solids (TDS)	Water	Normal		
7	1	7	Plastic 250ml - with Zinc Acetate & NaOH	Zinc Acetate and Sodium Hydroxide	SM4500_S2_D - Sulfide, Total	Water	Normal		
7	6	42	Voa Vial 40ml Amber - Ascor. Acid & HCL	Ascorbic Acid and Hydrochloric Acid	524.2_Pres_PREC - VOASDWA plus TICs + Acetone	Water	Normal		
					524.2_SIM_PREC - TBA by 524.2 SIM	Water	Normal		
7	3	21	Amber Glass 1 Liter- Sodium Sulfite/HCl	Sodium Sulfite w/HCl	525.2_PREC - 525plus Plus TICs	Water	Normal		
7	2	14	Plastic 125mL - unpreserved	None	300_OF_28D_B - Bromide	Water	Normal		
					4500_F_C - Fluoride	Water	Normal		
					300_OF_28D_PREC - Chloride and Sulfate	Water	Normal		
					300_OF_48H_PREC - Nitrite, Nitrate, and Nitrite+Nitrate	Water	Normal		
7	1	7	Plastic 250ml - with Nitric Acid	Nitric Acid	245.1 - Local Method	Water	Normal		

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

7	2	14	Amber Glass 1 L - NaThiosulfate 8mL HCL	Sodium Thiosulfate/H ydrochloric Acid	SUBCONTRACT - 8015 Jet Fuel 8 (JP8)	Water	Normal		
7	2	14	Amber Glass 1 L - NaThiosulfate 8mL HCL	Sodium Thiosulfate/H ydrochloric Acid	SUBCONTRACT - 8015 Jet Fuel 5 (JP5)	Water	Normal		
7	2	14	Amber Glass 1 L - NaThiosulfate 8mL HCL	Sodium Thiosulfate/H ydrochloric Acid	SUBCONTRACT - 8015 Diesel LL (EAL) and Motor Oil	Water	Normal		
7	3	21	Voa Vial 40ml - SodiumThio w/HCl-dropper	Sodium Thiosulfate	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	Water	Normal		
7	3	21	Voa Vial 40ml Amber - Sodium thiosulfate	Sodium Thiosulfate	SUBCONTRACT - 8015 Ethanol	Water	Normal		
7	2	14	Amber Glass 1 liter - Sodium Thiosulfate	Sodium Thiosulfate	SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs	Water	Normal		
7	2	14	Amber Glass 1 liter - Sodium Thiosulfate	Sodium Thiosulfate	SUBCONTRACT - 625 Base Neutral LL (EAL) Physis	Water	Normal		
7	2	14	Amber Glass 1 liter - Sodium Thiosulfate	Sodium Thiosulfate	SUBCONTRACT - 625 Acid LL (EAL) Physis	Water	Normal		
7	3	21	Voa Vial 40ml Amber - Ascorbic & Maleic	Ascorbic Acid/Maleic	524.3_SIM_PREC - Low Level TCP/EDB/DBCP	Water	Normal		
7	2	14	VOA Vial 40mL - NaThiosulfate/HCL	Sodium Thiosulfate/H ydrochloric Acid	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	Water	Trip Blank		
7	6	42	Voa Vial 40ml Amber - Ascor. Acid & HCL	Ascorbic Acid and Hydrochloric Acid	524.2_Pres_PREC - VOASDWA plus TICs + Acetone	Water	Trip Blank		
					524.2_SIM_PREC - TBA by 524.2 SIM	Water	Trip Blank		
7	3	21	Voa Vial 40ml Amber - Sodium thiosulfate	Sodium Thiosulfate	504.1_PREC - Local Method	Water	Trip Blank		
7	2	14	Voa Vial 40ml Amber - Ascorbic & Maleic	Ascorbic Acid/Maleic	524.3_SIM_PREC - Low Level TCP/EDB/DBCP	Water	Trip Blank		

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



Eaton Analytical

INTERNAL CHAIN OF CUSTODY RECORD

EEA Folder Number: _____

SAMPLE TEMP RECEIVED:

Note: If samples are out of temperature range, let the ASMs know, ASMs will determine whether to proceed with analysis or not.

SAMPLES REC'D DAY OF COLLECTION? Yes / No

IR Gun ID = 649A (Observation = 5.5 °C) (Corr. Factor -0.3 °C) (Final = 5.2 °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 quadrants

1 = (Observation = _____ °C) (Corr. Factor _____ °C) (Final = _____ °C)	2 = (Observation = _____ °C) (Corr. Factor _____ °C) (Final = _____ °C)
3 = (Observation = _____ °C) (Corr. Factor _____ °C) (Final = _____ °C)	4 = (Observation = _____ °C) (Corr. Factor _____ °C) (Final = _____ °C)

4 Dioxin (1613 or 2,3,7,8 TCDD): must be between 0-4 °C, not frozen (If received after 24 hrs of sample collection)

5) pH Check. Manufacturer: _____ Lot Number: _____ pH strip type: 0 - 14 or _____ Expiration Date _____ Results: _____

6) Chlorine check. Manufacturer: Sansafe. Lot No.: _____ Expiration Date: _____ Results: _____

7) VOA and Radon Headspace:

No Samples with Headspace:

Samples with Headspace (see below):

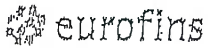
Headspace Documentation (use additional VOA and Radon Internal COFC for additional bottles)

Example from headspace concerns: Methods 816.4, HAA(8281,882), 808, 8PM6, @CH, 832LCMS, 858, 858, Anatoxin, LCMS methods using 40 ml vials, International standards

Samp ID	Bottle #	None/<8 mm	>8mm	Test	Samp ID	Bottle #	None/<8 mm	>8mm	Test	Samp ID	Bottle #	None/<8 mm	>8mm	Test	Samp ID	Bottle #	None/<8 mm	>8mm	Test	

Note Sample IDs which have dissimilar headspace (i.e. potential sampling errors): _____

SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
	G. REITNER	Eurofins Eaton Analytical	10/07/2022	10:15
SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
SAMPLES CHECKED AGAINST COC BY:		Eurofins Eaton Analytical		



Eaton Analytical

INTERNAL CHAIN OF CUSTODY RECORD

EEA Folder Number: _____

SAMPLE TEMP RECEIVED:

Note: If sampler is out of temperature range, let the ASM's know. ASM's will determine whether to proceed with analysis or not.

SAMPLES REC'D DAY OF COLLECTION? Yes / No

IR Gun ID = 649A (Observation = 3.0 °C) (Corr. Factor -0.3 °C) (Final = 2.7 °C)

TYPE OF ICE: Real Synthetic No Ice CONDITION OF ICE: Frozen Partially Frozen Thawed N/A

METHOD OF SHIPMENT: Pick-Up / Walk-In / FedEx / UPS / DHL / Area Fast / Top Line / Other: _____

Compliance Acceptance Criteria:

- 1) Chemistry: >0, ≤6°C, not frozen (NELAP) (if received after 24 hrs of sample collection)
- 2) Microbiology, Distribution: < 10°C, not frozen (can be ≥10°C if received on ice the same day as sample collection, within 8 hours)
- 3) Microbiology, Surface Water: < 10°C (if received after 2 hours of sample collection)

If out of temperature range for both Chemistry and Microbiology samples and temperature does not confirm, then measure the temperature of each quadrant and record each temperature of the quadrants

1 = (Observation = _____ °C) (Corr. Factor _____ °C) (Final = _____ °C)	2 = (Observation = _____ °C) (Corr. Factor _____ °C) (Final = _____ °C)
3 = (Observation = _____ °C) (Corr. Factor _____ °C) (Final = _____ °C)	4 = (Observation = _____ °C) (Corr. Factor _____ °C) (Final = _____ °C)

4 Dioxin (1813 or 2,3,7,8 TCDD): must be between 0-4 °C, not frozen (if received after 24 hrs of sample collection)

5) pH Check, Manufacturer: _____ Lot Number: _____ pH strip type: 0 - 14 or _____ Expiration Date _____ Results: _____

6) Chlorine check, Manufacturer: Sansafe, Lot No.: _____ Expiration Date: _____ Results: _____

7) VOA and Radon Headspace: No Samples with Headspace: Samples with Headspace (see below):

Headspace Documentation (use additional VOA and Radon Internal COFC for additional bottles)

Example from headspace concerns: Methods 816.4, HAA(8251,852), 506, BPME, @CH, 832LCMS, 856, 838, Anatoxin, LCMS methods using 40 ml Vials, International Ollants;

Samp ID	Bottle #	None/<8 mm	>8mm	Test	Samp ID	Bottle #	None/<8 mm	>8mm	Test	Samp ID	Bottle #	None/<8 mm	>8mm	Test	Samp ID	Bottle #	None/<8 mm	>8mm	Test	

Note Sample IDs which have, dissimilar headspace (i.e. potential sampling errors): _____

SIGNATURE		PRINT NAME		COMPANY/TITLE		DATE		TIME	
		G. REITNER		Eurofins Eaton Analytical		10/07/2022		10:15	
SIGNATURE		PRINT NAME		COMPANY/TITLE		DATE		TIME	
SAMPLES CHECKED AGAINST OOO BY:				Eurofins Eaton Analytical					

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-23442-1

Login Number: 23442
List Number: 1
Creator: Elyas, Matthew

List Source: Eurofins Eaton Monrovia

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



Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-23442-1

Login Number: 23442
List Number: 2
Creator: Ornelas, Olga

List Source: Eurofins Calscience
List Creation: 10/10/22 03:21 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	

Eurofins Eaton Monrovia

Job Notes

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

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

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

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

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

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

Compliance Statement

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

Authorization



Generated
11/22/2022 9:30:57 PM

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