

ANALYTICAL REPORT

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Laboratory Job ID: 380-15296-1
Client Project/Site: RED-HILL
Sampling Event: RUSH Weekly Red Hill

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

Attn: Mr. Erwin Kawata



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

1. Laboratory is accredited in accordance with TNI 2016 Standards and ISO/IEC 17025:2017.
2. Laboratory certifies that the test results meet all TNI 2016 and ISO/IEC 17025:2017 requirements unless noted under the individual analysis
3. Test results relate only to the sample(s) tested.
4. This report shall not be reproduced except in full, without the written approval of the laboratory.
5. Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below. (DW,Water matrices)



Kathleen Robb
Client Program Manager
10/21/2022 1:17:16 PM





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Definitions/Glossary

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

Job ID: 380-15296-1

Qualifiers

GC/MS Semi VOA

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

GC/MS Semi VOA TICs

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

Subcontract

Qualifier	Qualifier Description
U	This analyte was not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
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: 380-15296-1

Job ID: 380-15296-1

Laboratory: Eurofins Eaton Monrovia

Narrative

**Job Narrative
380-15296-1**

Comments

No additional comments.

Receipt

The samples were received on 8/9/2022 10:30 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 4.2° C, 5.1° C and 5.7° C.

GC/MS Semi VOA

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 Gas (Purgeable) LL (EAL): These methods were subcontracted to EMAX Laboratories Inc. The subcontract laboratory certifications are different from that of the facility issuing the final report.

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



Detection Summary

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

Job ID: 380-15296-1

Client Sample ID: AIEA GULCH WELLS PUMP 1 **Lab Sample ID: 380-15296-1**

No Detections.

Client Sample ID: AIEA GULCH WELLS PUMP 2 **Lab Sample ID: 380-15296-2**

No Detections.

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) **Lab Sample ID: 380-15296-3**

No Detections.

Client Sample ID: TB AIEA GULCH WELLS PUMP 2 **Lab Sample ID: 380-15296-5**

No Detections.

Client Sample ID: TB AIEA WELLS PUMPS 1&2 (260) **Lab Sample ID: 380-15296-6**

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: 380-15296-1

Client Sample ID: AIEA GULCH WELLS PUMP 1

Lab Sample ID: 380-15296-1

Date Collected: 08/08/22 10:02

Matrix: Drinking Water

Date Received: 08/09/22 10:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:39	1
2,4'-DDE	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:39	1
2,4'-DDT	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:39	1
2,4-Dinitrotoluene	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:39	1
2,6-Dinitrotoluene	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:39	1
4,4'-DDD	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:39	1
4,4'-DDE	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:39	1
4,4'-DDT	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:39	1
Acenaphthene	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:39	1
Acenaphthylene	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:39	1
Acetochlor	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:39	1
Alachlor	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:39	1
alpha-BHC	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:39	1
alpha-Chlordane	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:39	1
Anthracene	ND		0.020	ug/L		08/15/22 10:02	08/24/22 11:39	1
Atrazine	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:39	1
Benz(a)anthracene	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:39	1
Benzo[a]pyrene	ND		0.020	ug/L		08/15/22 10:02	08/24/22 11:39	1
Benzo[b]fluoranthene	ND		0.020	ug/L		08/15/22 10:02	08/24/22 11:39	1
Benzo[g,h,i]perylene	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:39	1
Benzo[k]fluoranthene	ND		0.020	ug/L		08/15/22 10:02	08/24/22 11:39	1
beta-BHC	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:39	1
Bromacil	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:39	1
Butachlor	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:39	1
Butylbenzylphthalate	ND		0.49	ug/L		08/15/22 10:02	08/24/22 11:39	1
Caffeine	ND	*1	0.049	ug/L		08/15/22 10:02	08/24/22 11:39	1
Chlorobenzilate	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:39	1
Chloroneb	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:39	1
Chlorothalonil (Draconil, Bravo)	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:39	1
Chlorpyrifos	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:39	1
Chrysene	ND		0.020	ug/L		08/15/22 10:02	08/24/22 11:39	1
delta-BHC	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:39	1
Di(2-ethylhexyl)adipate	ND		0.59	ug/L		08/15/22 10:02	08/24/22 11:39	1
Bis(2-ethylhexyl) phthalate	ND		0.59	ug/L		08/15/22 10:02	08/24/22 11:39	1
Diazinon (Qualitative)	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:39	1
Dibenz(a,h)anthracene	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:39	1
Diclorvos (DDVP)	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:39	1
Dieldrin	ND		0.20	ug/L		08/15/22 10:02	08/24/22 11:39	1
Diethylphthalate	ND		0.49	ug/L		08/15/22 10:02	08/24/22 11:39	1
Dimethoate	ND	*1	0.099	ug/L		08/15/22 10:02	08/24/22 11:39	1
Dimethylphthalate	ND		0.49	ug/L		08/15/22 10:02	08/24/22 11:39	1
Di-n-butyl phthalate	ND		0.99	ug/L		08/15/22 10:02	08/24/22 11:39	1
Di-n-octyl phthalate	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:39	1
Endosulfan I (Alpha)	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:39	1
Endosulfan II (Beta)	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:39	1
Endosulfan sulfate	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:39	1
Endrin	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:39	1
Endrin aldehyde	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:39	1
EPTC	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:39	1

Eurofins Eaton Monrovia

Client Sample Results

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

Job ID: 380-15296-1

Client Sample ID: AIEA GULCH WELLS PUMP 1

Lab Sample ID: 380-15296-1

Date Collected: 08/08/22 10:02

Matrix: Drinking Water

Date Received: 08/09/22 10:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:39	1
Fluorene	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:39	1
gamma-Chlordane	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:39	1
Heptachlor	ND		0.039	ug/L		08/15/22 10:02	08/24/22 11:39	1
Heptachlor epoxide (isomer B)	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:39	1
Hexachlorobenzene	ND	^3+	0.049	ug/L		08/15/22 10:02	08/24/22 11:39	1
Hexachlorocyclopentadiene	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:39	1
Indeno[1,2,3-cd]pyrene	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:39	1
Isophorone	ND		0.49	ug/L		08/15/22 10:02	08/24/22 11:39	1
Lindane	ND		0.039	ug/L		08/15/22 10:02	08/24/22 11:39	1
Malathion	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:39	1
Methoxychlor	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:39	1
Metolachlor	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:39	1
Metribuzin	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:39	1
Molinate	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:39	1
Naphthalene	ND		0.30	ug/L		08/15/22 10:02	08/24/22 11:39	1
Parathion	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:39	1
Pendimethalin (Penoxaline)	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:39	1
Total Permethrin (mixed isomers)	ND		0.20	ug/L		08/15/22 10:02	08/24/22 11:39	1
Phenanthrene	ND		0.039	ug/L		08/15/22 10:02	08/24/22 11:39	1
Propachlor	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:39	1
Pyrene	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:39	1
Simazine	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:39	1
Terbacil	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:39	1
Terbutylazine	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:39	1
Thiobencarb	ND		0.20	ug/L		08/15/22 10:02	08/24/22 11:39	1
trans-Nonachlor	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:39	1
Trifluralin	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:39	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L				08/15/22 10:02	08/24/22 11:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	95		70 - 130	08/15/22 10:02	08/24/22 11:39	1
Triphenylphosphate	96		70 - 130	08/15/22 10:02	08/24/22 11:39	1
Perylene-d12	99		70 - 130	08/15/22 10:02	08/24/22 11:39	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		08/11/22 00:00	08/14/22 10:07	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 10:07	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 10:07	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 10:07	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 10:07	1
Acenaphthene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 10:07	1
Acenaphthylene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 10:07	1
Anthracene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 10:07	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 10:07	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 10:07	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 10:07	1

Eurofins Eaton Monrovia

Client Sample Results

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

Job ID: 380-15296-1

Client Sample ID: AIEA GULCH WELLS PUMP 1

Lab Sample ID: 380-15296-1

Date Collected: 08/08/22 10:02

Matrix: Drinking Water

Date Received: 08/09/22 10:30

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
Benzo[e]pyrene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 10:07	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 10:07	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 10:07	1
Biphenyl	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 10:07	1
Chrysene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 10:07	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 10:07	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 10:07	1
Dibenzothiophene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 10:07	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		08/11/22 00:00	08/14/22 10:07	1
Fluoranthene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 10:07	1
Fluorene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 10:07	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 10:07	1
Naphthalene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 10:07	1
Perylene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 10:07	1
Phenanthrene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 10:07	1
Pyrene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 10:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
(d10-Acenaphthene)	80		45 - 118	08/11/22 00:00	08/14/22 10:07	1
(d10-Phenanthrene)	82		56 - 123	08/11/22 00:00	08/14/22 10:07	1
(d12-Chrysene)	71		36 - 142	08/11/22 00:00	08/14/22 10:07	1
(d12-Perylene)	72		36 - 161	08/11/22 00:00	08/14/22 10:07	1
(d8-Naphthalene)	76		20 - 112	08/11/22 00:00	08/14/22 10:07	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	0.026		mg/L			08/13/22 08:37	1
MOTOR OIL	ND	U	0.052		mg/L			08/13/22 08:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOBENZENE	65		60 - 130		08/13/22 08:37	1
HEXACOSANE	82		60 - 130		08/13/22 08:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			08/11/22 18:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE	84		60 - 140		08/11/22 18:28	1

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-15296-2

Date Collected: 08/08/22 10:29

Matrix: Drinking Water

Date Received: 08/09/22 10:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	ND		0.098	ug/L		08/15/22 10:02	08/24/22 12:00	1
2,4'-DDE	ND		0.098	ug/L		08/15/22 10:02	08/24/22 12:00	1
2,4'-DDT	ND		0.098	ug/L		08/15/22 10:02	08/24/22 12:00	1
2,4-Dinitrotoluene	ND		0.098	ug/L		08/15/22 10:02	08/24/22 12:00	1
2,6-Dinitrotoluene	ND		0.098	ug/L		08/15/22 10:02	08/24/22 12:00	1

Eurofins Eaton Monrovia

Client Sample Results

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

Job ID: 380-15296-1

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-15296-2

Date Collected: 08/08/22 10:29

Matrix: Drinking Water

Date Received: 08/09/22 10:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.098	ug/L		08/15/22 10:02	08/24/22 12:00	1
4,4'-DDE	ND		0.098	ug/L		08/15/22 10:02	08/24/22 12:00	1
4,4'-DDT	ND		0.098	ug/L		08/15/22 10:02	08/24/22 12:00	1
Acenaphthene	ND		0.098	ug/L		08/15/22 10:02	08/24/22 12:00	1
Acenaphthylene	ND		0.098	ug/L		08/15/22 10:02	08/24/22 12:00	1
Acetochlor	ND		0.098	ug/L		08/15/22 10:02	08/24/22 12:00	1
Alachlor	ND		0.049	ug/L		08/15/22 10:02	08/24/22 12:00	1
alpha-BHC	ND		0.098	ug/L		08/15/22 10:02	08/24/22 12:00	1
alpha-Chlordane	ND		0.049	ug/L		08/15/22 10:02	08/24/22 12:00	1
Anthracene	ND		0.020	ug/L		08/15/22 10:02	08/24/22 12:00	1
Atrazine	ND		0.049	ug/L		08/15/22 10:02	08/24/22 12:00	1
Benz(a)anthracene	ND		0.049	ug/L		08/15/22 10:02	08/24/22 12:00	1
Benzo[a]pyrene	ND		0.020	ug/L		08/15/22 10:02	08/24/22 12:00	1
Benzo[b]fluoranthene	ND		0.020	ug/L		08/15/22 10:02	08/24/22 12:00	1
Benzo[g,h,i]perylene	ND		0.049	ug/L		08/15/22 10:02	08/24/22 12:00	1
Benzo[k]fluoranthene	ND		0.020	ug/L		08/15/22 10:02	08/24/22 12:00	1
beta-BHC	ND		0.098	ug/L		08/15/22 10:02	08/24/22 12:00	1
Bromacil	ND		0.098	ug/L		08/15/22 10:02	08/24/22 12:00	1
Butachlor	ND		0.049	ug/L		08/15/22 10:02	08/24/22 12:00	1
Butylbenzylphthalate	ND		0.49	ug/L		08/15/22 10:02	08/24/22 12:00	1
Caffeine	ND	*1	0.049	ug/L		08/15/22 10:02	08/24/22 12:00	1
Chlorobenzilate	ND		0.098	ug/L		08/15/22 10:02	08/24/22 12:00	1
Chloroneb	ND		0.098	ug/L		08/15/22 10:02	08/24/22 12:00	1
Chlorothalonil (Draconil, Bravo)	ND		0.098	ug/L		08/15/22 10:02	08/24/22 12:00	1
Chlorpyrifos	ND		0.049	ug/L		08/15/22 10:02	08/24/22 12:00	1
Chrysene	ND		0.020	ug/L		08/15/22 10:02	08/24/22 12:00	1
delta-BHC	ND		0.098	ug/L		08/15/22 10:02	08/24/22 12:00	1
Di(2-ethylhexyl)adipate	ND		0.59	ug/L		08/15/22 10:02	08/24/22 12:00	1
Bis(2-ethylhexyl) phthalate	ND		0.59	ug/L		08/15/22 10:02	08/24/22 12:00	1
Diazinon (Qualitative)	ND		0.098	ug/L		08/15/22 10:02	08/24/22 12:00	1
Dibenz(a,h)anthracene	ND		0.049	ug/L		08/15/22 10:02	08/24/22 12:00	1
Diclorvos (DDVP)	ND		0.049	ug/L		08/15/22 10:02	08/24/22 12:00	1
Dieldrin	ND		0.20	ug/L		08/15/22 10:02	08/24/22 12:00	1
Diethylphthalate	ND		0.49	ug/L		08/15/22 10:02	08/24/22 12:00	1
Dimethoate	ND	*1	0.098	ug/L		08/15/22 10:02	08/24/22 12:00	1
Dimethylphthalate	ND		0.49	ug/L		08/15/22 10:02	08/24/22 12:00	1
Di-n-butyl phthalate	ND		0.98	ug/L		08/15/22 10:02	08/24/22 12:00	1
Di-n-octyl phthalate	ND		0.098	ug/L		08/15/22 10:02	08/24/22 12:00	1
Endosulfan I (Alpha)	ND		0.098	ug/L		08/15/22 10:02	08/24/22 12:00	1
Endosulfan II (Beta)	ND		0.098	ug/L		08/15/22 10:02	08/24/22 12:00	1
Endosulfan sulfate	ND		0.098	ug/L		08/15/22 10:02	08/24/22 12:00	1
Endrin	ND		0.098	ug/L		08/15/22 10:02	08/24/22 12:00	1
Endrin aldehyde	ND		0.098	ug/L		08/15/22 10:02	08/24/22 12:00	1
EPTC	ND		0.098	ug/L		08/15/22 10:02	08/24/22 12:00	1
Fluoranthene	ND		0.098	ug/L		08/15/22 10:02	08/24/22 12:00	1
Fluorene	ND		0.049	ug/L		08/15/22 10:02	08/24/22 12:00	1
gamma-Chlordane	ND		0.049	ug/L		08/15/22 10:02	08/24/22 12:00	1
Heptachlor	ND		0.039	ug/L		08/15/22 10:02	08/24/22 12:00	1
Heptachlor epoxide (isomer B)	ND		0.049	ug/L		08/15/22 10:02	08/24/22 12:00	1

Eurofins Eaton Monrovia

Client Sample Results

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

Job ID: 380-15296-1

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-15296-2

Date Collected: 08/08/22 10:29

Matrix: Drinking Water

Date Received: 08/09/22 10:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobenzene	ND	^3+	0.049	ug/L		08/15/22 10:02	08/24/22 12:00	1
Hexachlorocyclopentadiene	ND		0.049	ug/L		08/15/22 10:02	08/24/22 12:00	1
Indeno[1,2,3-cd]pyrene	ND		0.049	ug/L		08/15/22 10:02	08/24/22 12:00	1
Isophorone	ND		0.49	ug/L		08/15/22 10:02	08/24/22 12:00	1
Lindane	ND		0.039	ug/L		08/15/22 10:02	08/24/22 12:00	1
Malathion	ND		0.098	ug/L		08/15/22 10:02	08/24/22 12:00	1
Methoxychlor	ND		0.098	ug/L		08/15/22 10:02	08/24/22 12:00	1
Metolachlor	ND		0.049	ug/L		08/15/22 10:02	08/24/22 12:00	1
Metribuzin	ND		0.049	ug/L		08/15/22 10:02	08/24/22 12:00	1
Molinate	ND		0.098	ug/L		08/15/22 10:02	08/24/22 12:00	1
Naphthalene	ND		0.29	ug/L		08/15/22 10:02	08/24/22 12:00	1
Parathion	ND		0.098	ug/L		08/15/22 10:02	08/24/22 12:00	1
Pendimethalin (Penoxaline)	ND		0.098	ug/L		08/15/22 10:02	08/24/22 12:00	1
Total Permethrin (mixed isomers)	ND		0.20	ug/L		08/15/22 10:02	08/24/22 12:00	1
Phenanthrene	ND		0.039	ug/L		08/15/22 10:02	08/24/22 12:00	1
Propachlor	ND		0.049	ug/L		08/15/22 10:02	08/24/22 12:00	1
Pyrene	ND		0.049	ug/L		08/15/22 10:02	08/24/22 12:00	1
Simazine	ND		0.049	ug/L		08/15/22 10:02	08/24/22 12:00	1
Terbacil	ND		0.098	ug/L		08/15/22 10:02	08/24/22 12:00	1
Terbutylazine	ND		0.098	ug/L		08/15/22 10:02	08/24/22 12:00	1
Thiobencarb	ND		0.20	ug/L		08/15/22 10:02	08/24/22 12:00	1
trans-Nonachlor	ND		0.049	ug/L		08/15/22 10:02	08/24/22 12:00	1
Trifluralin	ND		0.098	ug/L		08/15/22 10:02	08/24/22 12:00	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	0.55	T J	ug/L		2.67		08/15/22 10:02	08/24/22 12:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	96		70 - 130	08/15/22 10:02	08/24/22 12:00	1
Triphenylphosphate	99		70 - 130	08/15/22 10:02	08/24/22 12:00	1
Perylene-d12	102		70 - 130	08/15/22 10:02	08/24/22 12:00	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		08/11/22 00:00	08/14/22 11:51	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 11:51	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 11:51	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 11:51	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 11:51	1
Acenaphthene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 11:51	1
Acenaphthylene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 11:51	1
Anthracene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 11:51	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 11:51	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 11:51	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 11:51	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 11:51	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 11:51	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 11:51	1
Biphenyl	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 11:51	1
Chrysene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 11:51	1

Eurofins Eaton Monrovia

Client Sample Results

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

Job ID: 380-15296-1

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-15296-2

Date Collected: 08/08/22 10:29

Matrix: Drinking Water

Date Received: 08/09/22 10:30

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
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 11:51	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 11:51	1
Dibenzothiophene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 11:51	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		08/11/22 00:00	08/14/22 11:51	1
Fluoranthene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 11:51	1
Fluorene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 11:51	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 11:51	1
Naphthalene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 11:51	1
Perylene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 11:51	1
Phenanthrene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 11:51	1
Pyrene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 11:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
(d10-Acenaphthene)	86		45 - 118	08/11/22 00:00	08/14/22 11:51	1
(d10-Phenanthrene)	90		56 - 123	08/11/22 00:00	08/14/22 11:51	1
(d12-Chrysene)	82		36 - 142	08/11/22 00:00	08/14/22 11:51	1
(d12-Perylene)	81		36 - 161	08/11/22 00:00	08/14/22 11:51	1
(d8-Naphthalene)	79		20 - 112	08/11/22 00:00	08/14/22 11:51	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			08/13/22 08:56	1
MOTOR OIL	ND	U	0.055		mg/L			08/13/22 08:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOBENZENE	68		60 - 130		08/13/22 08:56	1
HEXACOSANE	82		60 - 130		08/13/22 08:56	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			08/11/22 17:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE	86		60 - 140		08/11/22 17:52	1

Client Sample ID: AIEA WELLS PUMPS 1&2 (260)

Lab Sample ID: 380-15296-3

Date Collected: 08/08/22 09:31

Matrix: Drinking Water

Date Received: 08/09/22 10:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	ND		0.099	ug/L		08/15/22 10:02	08/24/22 12:20	1
2,4'-DDE	ND		0.099	ug/L		08/15/22 10:02	08/24/22 12:20	1
2,4'-DDT	ND		0.099	ug/L		08/15/22 10:02	08/24/22 12:20	1
2,4-Dinitrotoluene	ND		0.099	ug/L		08/15/22 10:02	08/24/22 12:20	1
2,6-Dinitrotoluene	ND		0.099	ug/L		08/15/22 10:02	08/24/22 12:20	1
4,4'-DDD	ND		0.099	ug/L		08/15/22 10:02	08/24/22 12:20	1
4,4'-DDE	ND		0.099	ug/L		08/15/22 10:02	08/24/22 12:20	1
4,4'-DDT	ND		0.099	ug/L		08/15/22 10:02	08/24/22 12:20	1
Acenaphthene	ND		0.099	ug/L		08/15/22 10:02	08/24/22 12:20	1
Acenaphthylene	ND		0.099	ug/L		08/15/22 10:02	08/24/22 12:20	1

Eurofins Eaton Monrovia

Client Sample Results

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

Job ID: 380-15296-1

Client Sample ID: AIEA WELLS PUMPS 1&2 (260)

Lab Sample ID: 380-15296-3

Date Collected: 08/08/22 09:31

Matrix: Drinking Water

Date Received: 08/09/22 10:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetochlor	ND		0.099	ug/L		08/15/22 10:02	08/24/22 12:20	1
Alachlor	ND		0.049	ug/L		08/15/22 10:02	08/24/22 12:20	1
alpha-BHC	ND		0.099	ug/L		08/15/22 10:02	08/24/22 12:20	1
alpha-Chlordane	ND		0.049	ug/L		08/15/22 10:02	08/24/22 12:20	1
Anthracene	ND		0.020	ug/L		08/15/22 10:02	08/24/22 12:20	1
Atrazine	ND		0.049	ug/L		08/15/22 10:02	08/24/22 12:20	1
Benz(a)anthracene	ND		0.049	ug/L		08/15/22 10:02	08/24/22 12:20	1
Benzo[a]pyrene	ND		0.020	ug/L		08/15/22 10:02	08/24/22 12:20	1
Benzo[b]fluoranthene	ND		0.020	ug/L		08/15/22 10:02	08/24/22 12:20	1
Benzo[g,h,i]perylene	ND		0.049	ug/L		08/15/22 10:02	08/24/22 12:20	1
Benzo[k]fluoranthene	ND		0.020	ug/L		08/15/22 10:02	08/24/22 12:20	1
beta-BHC	ND		0.099	ug/L		08/15/22 10:02	08/24/22 12:20	1
Bromacil	ND		0.099	ug/L		08/15/22 10:02	08/24/22 12:20	1
Butachlor	ND		0.049	ug/L		08/15/22 10:02	08/24/22 12:20	1
Butylbenzylphthalate	ND		0.49	ug/L		08/15/22 10:02	08/24/22 12:20	1
Caffeine	ND	*1	0.049	ug/L		08/15/22 10:02	08/24/22 12:20	1
Chlorobenzilate	ND		0.099	ug/L		08/15/22 10:02	08/24/22 12:20	1
Chloroneb	ND		0.099	ug/L		08/15/22 10:02	08/24/22 12:20	1
Chlorothalonil (Draconil, Bravo)	ND		0.099	ug/L		08/15/22 10:02	08/24/22 12:20	1
Chlorpyrifos	ND		0.049	ug/L		08/15/22 10:02	08/24/22 12:20	1
Chrysene	ND		0.020	ug/L		08/15/22 10:02	08/24/22 12:20	1
delta-BHC	ND		0.099	ug/L		08/15/22 10:02	08/24/22 12:20	1
Di(2-ethylhexyl)adipate	ND		0.59	ug/L		08/15/22 10:02	08/24/22 12:20	1
Bis(2-ethylhexyl) phthalate	ND		0.59	ug/L		08/15/22 10:02	08/24/22 12:20	1
Diazinon (Qualitative)	ND		0.099	ug/L		08/15/22 10:02	08/24/22 12:20	1
Dibenz(a,h)anthracene	ND		0.049	ug/L		08/15/22 10:02	08/24/22 12:20	1
Diclorvos (DDVP)	ND		0.049	ug/L		08/15/22 10:02	08/24/22 12:20	1
Dieldrin	ND		0.20	ug/L		08/15/22 10:02	08/24/22 12:20	1
Diethylphthalate	ND		0.49	ug/L		08/15/22 10:02	08/24/22 12:20	1
Dimethoate	ND	*1	0.099	ug/L		08/15/22 10:02	08/24/22 12:20	1
Dimethylphthalate	ND		0.49	ug/L		08/15/22 10:02	08/24/22 12:20	1
Di-n-butyl phthalate	ND		0.99	ug/L		08/15/22 10:02	08/24/22 12:20	1
Di-n-octyl phthalate	ND		0.099	ug/L		08/15/22 10:02	08/24/22 12:20	1
Endosulfan I (Alpha)	ND		0.099	ug/L		08/15/22 10:02	08/24/22 12:20	1
Endosulfan II (Beta)	ND		0.099	ug/L		08/15/22 10:02	08/24/22 12:20	1
Endosulfan sulfate	ND		0.099	ug/L		08/15/22 10:02	08/24/22 12:20	1
Endrin	ND		0.099	ug/L		08/15/22 10:02	08/24/22 12:20	1
Endrin aldehyde	ND		0.099	ug/L		08/15/22 10:02	08/24/22 12:20	1
EPTC	ND		0.099	ug/L		08/15/22 10:02	08/24/22 12:20	1
Fluoranthene	ND		0.099	ug/L		08/15/22 10:02	08/24/22 12:20	1
Fluorene	ND		0.049	ug/L		08/15/22 10:02	08/24/22 12:20	1
gamma-Chlordane	ND		0.049	ug/L		08/15/22 10:02	08/24/22 12:20	1
Heptachlor	ND		0.039	ug/L		08/15/22 10:02	08/24/22 12:20	1
Heptachlor epoxide (isomer B)	ND		0.049	ug/L		08/15/22 10:02	08/24/22 12:20	1
Hexachlorobenzene	ND	^3+	0.049	ug/L		08/15/22 10:02	08/24/22 12:20	1
Hexachlorocyclopentadiene	ND		0.049	ug/L		08/15/22 10:02	08/24/22 12:20	1
Indeno[1,2,3-cd]pyrene	ND		0.049	ug/L		08/15/22 10:02	08/24/22 12:20	1
Isophorone	ND		0.49	ug/L		08/15/22 10:02	08/24/22 12:20	1
Lindane	ND		0.039	ug/L		08/15/22 10:02	08/24/22 12:20	1

Eurofins Eaton Monrovia

Client Sample Results

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

Job ID: 380-15296-1

Client Sample ID: AIEA WELLS PUMPS 1&2 (260)

Lab Sample ID: 380-15296-3

Date Collected: 08/08/22 09:31

Matrix: Drinking Water

Date Received: 08/09/22 10:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Malathion	ND		0.099	ug/L		08/15/22 10:02	08/24/22 12:20	1
Methoxychlor	ND		0.099	ug/L		08/15/22 10:02	08/24/22 12:20	1
Metolachlor	ND		0.049	ug/L		08/15/22 10:02	08/24/22 12:20	1
Metribuzin	ND		0.049	ug/L		08/15/22 10:02	08/24/22 12:20	1
Molinate	ND		0.099	ug/L		08/15/22 10:02	08/24/22 12:20	1
Naphthalene	ND		0.30	ug/L		08/15/22 10:02	08/24/22 12:20	1
Parathion	ND		0.099	ug/L		08/15/22 10:02	08/24/22 12:20	1
Pendimethalin (Penoxaline)	ND		0.099	ug/L		08/15/22 10:02	08/24/22 12:20	1
Total Permethrin (mixed isomers)	ND		0.20	ug/L		08/15/22 10:02	08/24/22 12:20	1
Phenanthrene	ND		0.039	ug/L		08/15/22 10:02	08/24/22 12:20	1
Propachlor	ND		0.049	ug/L		08/15/22 10:02	08/24/22 12:20	1
Pyrene	ND		0.049	ug/L		08/15/22 10:02	08/24/22 12:20	1
Simazine	ND		0.049	ug/L		08/15/22 10:02	08/24/22 12:20	1
Terbacil	ND		0.099	ug/L		08/15/22 10:02	08/24/22 12:20	1
Terbutylazine	ND		0.099	ug/L		08/15/22 10:02	08/24/22 12:20	1
Thiobencarb	ND		0.20	ug/L		08/15/22 10:02	08/24/22 12:20	1
trans-Nonachlor	ND		0.049	ug/L		08/15/22 10:02	08/24/22 12:20	1
Trifluralin	ND		0.099	ug/L		08/15/22 10:02	08/24/22 12:20	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L				08/15/22 10:02	08/24/22 12:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	96		70 - 130	08/15/22 10:02	08/24/22 12:20	1
Triphenylphosphate	98		70 - 130	08/15/22 10:02	08/24/22 12:20	1
Perylene-d12	101		70 - 130	08/15/22 10:02	08/24/22 12:20	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		08/11/22 00:00	08/14/22 13:35	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 13:35	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 13:35	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 13:35	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 13:35	1
Acenaphthene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 13:35	1
Acenaphthylene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 13:35	1
Anthracene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 13:35	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 13:35	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 13:35	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 13:35	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 13:35	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 13:35	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 13:35	1
Biphenyl	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 13:35	1
Chrysene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 13:35	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 13:35	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 13:35	1
Dibenzothiophene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 13:35	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		08/11/22 00:00	08/14/22 13:35	1
Fluoranthene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 13:35	1

Eurofins Eaton Monrovia

Client Sample Results

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

Job ID: 380-15296-1

Client Sample ID: AIEA WELLS PUMPS 1&2 (260)

Lab Sample ID: 380-15296-3

Date Collected: 08/08/22 09:31

Matrix: Drinking Water

Date Received: 08/09/22 10:30

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
Fluorene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 13:35	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 13:35	1
Naphthalene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 13:35	1
Perylene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 13:35	1
Phenanthrene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 13:35	1
Pyrene	ND		0.005	0.001	µg/L		08/11/22 00:00	08/14/22 13:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
(d10-Acenaphthene)	60		45 - 118	08/11/22 00:00	08/14/22 13:35	1
(d10-Phenanthrene)	64		56 - 123	08/11/22 00:00	08/14/22 13:35	1
(d12-Chrysene)	72		36 - 142	08/11/22 00:00	08/14/22 13:35	1
(d12-Perylene)	75		36 - 161	08/11/22 00:00	08/14/22 13:35	1
(d8-Naphthalene)	56		20 - 112	08/11/22 00:00	08/14/22 13:35	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			08/13/22 09:14	1
MOTOR OIL	ND	U	0.054		mg/L			08/13/22 09:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOBENZENE	60		60 - 130		08/13/22 09:14	1
HEXACOSANE	72		60 - 130		08/13/22 09:14	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			08/11/22 17:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE	88		60 - 140		08/11/22 17:16	1

Client Sample ID: TB AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-15296-5

Date Collected: 08/08/22 10:29

Matrix: Drinking Water

Date Received: 08/09/22 10:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			08/11/22 16:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE	89		60 - 140		08/11/22 16:39	1

Client Sample ID: TB AIEA WELLS PUMPS 1&2 (260)

Lab Sample ID: 380-15296-6

Date Collected: 08/08/22 09:31

Matrix: Drinking Water

Date Received: 08/09/22 10:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			08/11/22 16:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE	88		60 - 140		08/11/22 16:03	1

Eurofins Eaton Monrovia

Action Limit Summary

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

Job ID: 380-15296-1

Client Sample ID: AIEA GULCH WELLS PUMP 1

Lab Sample ID: 380-15296-1

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL	RL	Method	Prep Type
				Limit			
Alachlor	ND		ug/L	2	0.049	525.2	Total/NA
Atrazine	ND		ug/L	3	0.049	525.2	Total/NA
Benzo[a]pyrene	ND		ug/L	0.2	0.020	525.2	Total/NA
Di(2-ethylhexyl)adipate	ND		ug/L	400	0.59	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	ND		ug/L	6	0.59	525.2	Total/NA
Endrin	ND		ug/L	2	0.099	525.2	Total/NA
Heptachlor	ND		ug/L	0.4	0.039	525.2	Total/NA
Heptachlor epoxide (isomer B)	ND		ug/L	0.2	0.049	525.2	Total/NA
Hexachlorobenzene	ND	^3+	ug/L	1	0.049	525.2	Total/NA
Hexachlorocyclopentadiene	ND		ug/L	50	0.049	525.2	Total/NA
Lindane	ND		ug/L	0.2	0.039	525.2	Total/NA
Methoxychlor	ND		ug/L	40	0.099	525.2	Total/NA
Simazine	ND		ug/L	4	0.049	525.2	Total/NA

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-15296-2

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	EPAMCL	RL	Method	Prep Type
				Limit			
Alachlor	ND		ug/L	2	0.049	525.2	Total/NA
Atrazine	ND		ug/L	3	0.049	525.2	Total/NA
Benzo[a]pyrene	ND		ug/L	0.2	0.020	525.2	Total/NA
Di(2-ethylhexyl)adipate	ND		ug/L	400	0.59	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	ND		ug/L	6	0.59	525.2	Total/NA
Endrin	ND		ug/L	2	0.098	525.2	Total/NA
Heptachlor	ND		ug/L	0.4	0.039	525.2	Total/NA
Heptachlor epoxide (isomer B)	ND		ug/L	0.2	0.049	525.2	Total/NA
Hexachlorobenzene	ND	^3+	ug/L	1	0.049	525.2	Total/NA
Hexachlorocyclopentadiene	ND		ug/L	50	0.049	525.2	Total/NA
Lindane	ND		ug/L	0.2	0.039	525.2	Total/NA
Methoxychlor	ND		ug/L	40	0.098	525.2	Total/NA
Simazine	ND		ug/L	4	0.049	525.2	Total/NA

Client Sample ID: AIEA WELLS PUMPS 1&2 (260)

Lab Sample ID: 380-15296-3

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	EPAMCL	RL	Method	Prep Type
				Limit			
Alachlor	ND		ug/L	2	0.049	525.2	Total/NA
Atrazine	ND		ug/L	3	0.049	525.2	Total/NA
Benzo[a]pyrene	ND		ug/L	0.2	0.020	525.2	Total/NA
Di(2-ethylhexyl)adipate	ND		ug/L	400	0.59	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	ND		ug/L	6	0.59	525.2	Total/NA
Endrin	ND		ug/L	2	0.099	525.2	Total/NA
Heptachlor	ND		ug/L	0.4	0.039	525.2	Total/NA
Heptachlor epoxide (isomer B)	ND		ug/L	0.2	0.049	525.2	Total/NA

Eurofins Eaton Monrovia

Action Limit Summary

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

Job ID: 380-15296-1

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) (Continued)

Lab Sample ID: 380-15296-3

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	EPAMCL	RL	Method	Prep Type
				Limit			
Hexachlorobenzene	ND	^3+	ug/L	1	0.049	525.2	Total/NA
Hexachlorocyclopentadiene	ND		ug/L	50	0.049	525.2	Total/NA
Lindane	ND		ug/L	0.2	0.039	525.2	Total/NA
Methoxychlor	ND		ug/L	40	0.099	525.2	Total/NA
Simazine	ND		ug/L	4	0.049	525.2	Total/NA

Surrogate Summary

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

Job ID: 380-15296-1

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

Matrix: Drinking Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		2NMX (70-130)	TPP (70-130)	PRY (70-130)
380-15296-1	AIEA GULCH WELLS PUMP 1	95	96	99
380-15296-2	AIEA GULCH WELLS PUMP 2	96	99	102
380-15296-3	AIEA WELLS PUMPS 1&2 (260)	96	98	101

Surrogate Legend

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

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)
380-15287-J-1-A DU	Duplicate	94	99	101
380-16172-E-1-A MS	Matrix Spike	97	102	98
LCS 380-13248/3-A	Lab Control Sample	97	97	100
LCS 380-13248/4-A	Lab Control Sample Dup	97	99	100
MB 380-13248/1-A	Method Blank	96	99	101
MRL 380-13248/2-A	Lab Control Sample	97	98	102

Surrogate Legend

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

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

Matrix: Drinking Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)				
		Acenaphtl (45-118)	Phenanth (56-123)	CRY (36-142)	NPT (20-112)	PRY (36-161)
380-15296-1	AIEA GULCH WELLS PUMP 1	80	82	71	76	72
380-15296-2	AIEA GULCH WELLS PUMP 2	86	90	82	79	81
380-15296-3	AIEA WELLS PUMPS 1&2 (260)	60	64	72	56	75

Surrogate Legend

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

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 (65-113)	Phenanth (80-111)	CRY (60-139)	NPT (44-119)	PRY (36-161)
99018-B1	Method Blank	90	92	92	86	93
99018-BS1	Lab Control Sample	92	95	88	85	98

Eurofins Eaton Monrovia

Surrogate Summary

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

Job ID: 380-15296-1

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

Matrix: water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)				
		Acenaphtl (65-113)	Phenanth (80-111)	CRY (60-139)	NPT (44-119)	PRY (36-161)
99018-BS2	Lab Control Sample Dup	89	95	89	82	97

Surrogate Legend

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

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

Matrix: Drinking Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BB (60-130)	XACOSAI (60-130)
380-15296-1	AIEA GULCH WELLS PUMP 1	65	82
380-15296-2	AIEA GULCH WELLS PUMP 2	68	82
380-15296-3	AIEA WELLS PUMPS 1&2 (260)	60	72

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)
22DSH019WB	Method Blank		

Surrogate Legend

BB = BROMOBENZENE
 HEXACOSANE = HEXACOSANE

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

Matrix: WATER

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BB (60-130)	XACOSAI (60-130)
22DSH019WC	LCD	72	104
22DSH019WL	Lab Control Sample	80	94

Surrogate Legend

BB = BROMOBENZENE
 HEXACOSANE = HEXACOSANE

Surrogate Summary

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

Job ID: 380-15296-1

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

Matrix: Drinking Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (60-140)
380-15296-1	AIEA GULCH WELLS PUMP 1	84
380-15296-2	AIEA GULCH WELLS PUMP 2	86
380-15296-3	AIEA WELLS PUMPS 1&2 (260)	88
380-15296-5	TB AIEA GULCH WELLS PUMP 2	89
380-15296-6	TB AIEA WELLS PUMPS 1&2 (260)	88

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
22VG39H04B	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)
22VG39H04C	LCD	111
22VG39H04L	Lab Control Sample	110

Surrogate Legend

BFB = BROMOFLUOROBENZENE

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

Matrix: WATER

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (60-140)
22H117-01M	Matrix Spike	116
22H117-01S	Matrix Spike Duplicate	117

Surrogate Legend

BFB = BROMOFLUOROBENZENE

QC Sample Results

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

Job ID: 380-15296-1

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

Lab Sample ID: MB 380-13248/1-A
Matrix: Water
Analysis Batch: 14688

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 13248

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:19	1
2,4'-DDE	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:19	1
2,4'-DDT	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:19	1
2,4-Dinitrotoluene	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:19	1
2,6-Dinitrotoluene	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:19	1
4,4'-DDD	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:19	1
4,4'-DDE	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:19	1
4,4'-DDT	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:19	1
Acenaphthene	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:19	1
Acenaphthylene	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:19	1
Acetochlor	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:19	1
Alachlor	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:19	1
alpha-BHC	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:19	1
alpha-Chlordane	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:19	1
Anthracene	ND		0.020	ug/L		08/15/22 10:02	08/24/22 11:19	1
Atrazine	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:19	1
Benz(a)anthracene	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:19	1
Benzo[a]pyrene	ND		0.020	ug/L		08/15/22 10:02	08/24/22 11:19	1
Benzo[b]fluoranthene	ND		0.020	ug/L		08/15/22 10:02	08/24/22 11:19	1
Benzo[g,h,i]perylene	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:19	1
Benzo[k]fluoranthene	ND		0.020	ug/L		08/15/22 10:02	08/24/22 11:19	1
beta-BHC	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:19	1
Bromacil	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:19	1
Butachlor	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:19	1
Butylbenzylphthalate	ND		0.49	ug/L		08/15/22 10:02	08/24/22 11:19	1
Caffeine	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:19	1
Chlorobenzilate	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:19	1
Chloroneb	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:19	1
Chlorothalonil (Draconil, Bravo)	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:19	1
Chlorpyrifos	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:19	1
Chrysene	ND		0.020	ug/L		08/15/22 10:02	08/24/22 11:19	1
delta-BHC	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:19	1
Di(2-ethylhexyl)adipate	ND		0.59	ug/L		08/15/22 10:02	08/24/22 11:19	1
Bis(2-ethylhexyl) phthalate	ND		0.59	ug/L		08/15/22 10:02	08/24/22 11:19	1
Diazinon (Qualitative)	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:19	1
Dibenz(a,h)anthracene	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:19	1
Diclorvos (DDVP)	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:19	1
Dieldrin	ND		0.20	ug/L		08/15/22 10:02	08/24/22 11:19	1
Diethylphthalate	ND		0.49	ug/L		08/15/22 10:02	08/24/22 11:19	1
Dimethoate	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:19	1
Dimethylphthalate	ND		0.49	ug/L		08/15/22 10:02	08/24/22 11:19	1
Di-n-butyl phthalate	ND		0.99	ug/L		08/15/22 10:02	08/24/22 11:19	1
Di-n-octyl phthalate	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:19	1
Endosulfan I (Alpha)	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:19	1
Endosulfan II (Beta)	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:19	1
Endosulfan sulfate	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:19	1
Endrin	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:19	1
Endrin aldehyde	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:19	1

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QC Sample Results

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

Job ID: 380-15296-1

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

Lab Sample ID: MB 380-13248/1-A
Matrix: Water
Analysis Batch: 14688

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 13248

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
EPTC	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:19	1
Fluoranthene	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:19	1
Fluorene	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:19	1
gamma-Chlordane	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:19	1
Heptachlor	ND		0.039	ug/L		08/15/22 10:02	08/24/22 11:19	1
Heptachlor epoxide (isomer B)	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:19	1
Hexachlorobenzene	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:19	1
Hexachlorocyclopentadiene	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:19	1
Indeno[1,2,3-cd]pyrene	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:19	1
Isophorone	ND		0.49	ug/L		08/15/22 10:02	08/24/22 11:19	1
Lindane	ND		0.039	ug/L		08/15/22 10:02	08/24/22 11:19	1
Malathion	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:19	1
Methoxychlor	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:19	1
Metolachlor	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:19	1
Metribuzin	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:19	1
Molinate	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:19	1
Naphthalene	ND		0.30	ug/L		08/15/22 10:02	08/24/22 11:19	1
Parathion	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:19	1
Pendimethalin (Penoxaline)	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:19	1
Total Permethrin (mixed isomers)	ND		0.20	ug/L		08/15/22 10:02	08/24/22 11:19	1
Phenanthrene	ND		0.039	ug/L		08/15/22 10:02	08/24/22 11:19	1
Propachlor	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:19	1
Pyrene	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:19	1
Simazine	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:19	1
Terbacil	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:19	1
Terbutylazine	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:19	1
Thiobencarb	ND		0.20	ug/L		08/15/22 10:02	08/24/22 11:19	1
trans-Nonachlor	ND		0.049	ug/L		08/15/22 10:02	08/24/22 11:19	1
Trifluralin	ND		0.099	ug/L		08/15/22 10:02	08/24/22 11:19	1

<i>Tentatively Identified Compound</i>	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Decane	1.43	T J N	ug/L		2.40	124-18-5	08/15/22 10:02	08/24/22 11:19	1
Unknown	0.802	T J	ug/L		2.67		08/15/22 10:02	08/24/22 11:19	1
3-Octadecene, (E)-	0.730	T J N	ug/L		5.14	7206-19-1	08/15/22 10:02	08/24/22 11:19	1
Tetradecanoic acid	0.861	T J N	ug/L		5.81	544-63-8	08/15/22 10:02	08/24/22 11:19	1
Octadecanoic acid	0.671	T J N	ug/L		6.48	57-11-4	08/15/22 10:02	08/24/22 11:19	1
9-Octadecenamamide, (Z)-	1.32	T J N	ug/L		7.46	301-02-0	08/15/22 10:02	08/24/22 11:19	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	96		70 - 130	08/15/22 10:02	08/24/22 11:19	1
Triphenylphosphate	99		70 - 130	08/15/22 10:02	08/24/22 11:19	1
Perylene-d12	101		70 - 130	08/15/22 10:02	08/24/22 11:19	1

QC Sample Results

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

Job ID: 380-15296-1

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

Lab Sample ID: LCS 380-13248/3-A
Matrix: Water
Analysis Batch: 14688

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 13248

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	1.97	1.95		ug/L		99	70 - 130
2,4'-DDE	1.97	1.71		ug/L		87	70 - 130
2,4'-DDT	1.97	1.63		ug/L		83	70 - 130
2,4-Dinitrotoluene	1.97	1.75		ug/L		89	70 - 130
2,6-Dinitrotoluene	1.97	1.69		ug/L		86	70 - 130
4,4'-DDD	1.97	1.69		ug/L		86	70 - 130
4,4'-DDE	1.97	1.68		ug/L		86	70 - 130
4,4'-DDT	1.97	1.71		ug/L		87	70 - 130
Acenaphthene	1.97	1.69		ug/L		86	70 - 130
Acenaphthylene	1.97	1.79		ug/L		91	70 - 130
Acetochlor	1.97	1.79		ug/L		91	70 - 130
Alachlor	1.97	1.73		ug/L		88	70 - 130
alpha-BHC	1.97	1.63		ug/L		83	70 - 130
alpha-Chlordane	1.97	1.64		ug/L		83	70 - 130
Anthracene	1.97	1.72		ug/L		87	70 - 130
Atrazine	1.97	1.90		ug/L		97	70 - 130
Benz(a)anthracene	1.97	1.67		ug/L		85	70 - 130
Benzo[a]pyrene	1.97	1.54		ug/L		78	70 - 130
Benzo[b]fluoranthene	1.97	1.63		ug/L		83	70 - 130
Benzo[g,h,i]perylene	1.97	1.55		ug/L		79	70 - 130
Benzo[k]fluoranthene	1.97	1.59		ug/L		81	70 - 130
beta-BHC	1.97	1.64		ug/L		83	70 - 130
Bromacil	1.97	1.62		ug/L		83	70 - 130
Butachlor	1.97	1.85		ug/L		94	70 - 130
Butylbenzylphthalate	1.97	1.98		ug/L		101	70 - 130
Caffeine	1.97	0.898		ug/L		46	45 - 137
Chlorobenzilate	1.97	1.92		ug/L		98	70 - 130
Chloroneb	1.97	1.67		ug/L		85	70 - 130
Chlorothalonil (Draconil, Bravo)	1.97	2.03		ug/L		103	70 - 130
Chlorpyrifos	1.97	1.81		ug/L		92	70 - 130
Chrysene	1.97	1.43		ug/L		73	70 - 130
delta-BHC	1.97	1.57		ug/L		80	70 - 130
Di(2-ethylhexyl)adipate	1.97	2.07		ug/L		105	70 - 130
Bis(2-ethylhexyl) phthalate	1.97	1.74		ug/L		88	70 - 130
Diazinon (Qualitative)	1.97	1.74		ug/L		88	15 - 132
Dibenz(a,h)anthracene	1.97	1.56		ug/L		79	70 - 130
Diclorvos (DDVP)	1.97	2.03		ug/L		103	70 - 130
Dieldrin	1.97	1.82		ug/L		92	70 - 130
Diethylphthalate	1.97	1.86		ug/L		95	70 - 130
Dimethoate	1.97	1.02		ug/L		52	35 - 100
Dimethylphthalate	1.97	1.90		ug/L		96	70 - 130
Di-n-butyl phthalate	3.93	3.59		ug/L		91	70 - 130
Di-n-octyl phthalate	1.97	1.38		ug/L		70	70 - 130
Endosulfan I (Alpha)	1.97	1.51		ug/L		77	70 - 130
Endosulfan II (Beta)	1.97	1.59		ug/L		81	70 - 130
Endosulfan sulfate	1.97	2.02		ug/L		103	70 - 130
Endrin	1.97	1.72		ug/L		87	70 - 130
Endrin aldehyde	1.97	1.78		ug/L		90	70 - 130

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QC Sample Results

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

Job ID: 380-15296-1

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

Lab Sample ID: LCS 380-13248/3-A
Matrix: Water
Analysis Batch: 14688

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 13248

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
EPTC	1.97	1.96		ug/L		100	70 - 130
Fluoranthene	1.97	1.71		ug/L		87	70 - 130
Fluorene	1.97	1.87		ug/L		95	70 - 130
gamma-Chlordane	1.97	1.67		ug/L		85	70 - 130
Heptachlor	1.97	1.74		ug/L		89	70 - 130
Heptachlor epoxide (isomer B)	1.97	1.77		ug/L		90	70 - 130
Hexachlorobenzene	1.97	1.75		ug/L		89	70 - 130
Hexachlorocyclopentadiene	1.97	1.73		ug/L		88	70 - 130
Indeno[1,2,3-cd]pyrene	1.97	1.63		ug/L		83	70 - 130
Isophorone	1.97	1.78		ug/L		90	70 - 130
Lindane	1.97	1.62		ug/L		82	70 - 130
Malathion	1.97	1.87		ug/L		95	70 - 130
Methoxychlor	1.97	1.76		ug/L		90	70 - 130
Metolachlor	1.97	1.72		ug/L		87	70 - 130
Metribuzin	1.97	1.63		ug/L		83	70 - 130
Molinate	1.97	2.02		ug/L		103	70 - 130
Naphthalene	1.97	1.86		ug/L		94	70 - 130
Parathion	1.97	2.06		ug/L		105	70 - 130
Pendimethalin (Penoxaline)	1.97	2.10		ug/L		107	70 - 130
Phenanthrene	1.97	1.72		ug/L		87	70 - 130
Propachlor	1.97	2.04		ug/L		104	70 - 130
Pyrene	1.97	1.76		ug/L		90	70 - 130
Simazine	1.97	1.88		ug/L		96	70 - 130
Terbacil	1.97	1.85		ug/L		94	70 - 130
Terbutylazine	1.97	1.82		ug/L		93	70 - 130
Thiobencarb	1.97	1.85		ug/L		94	70 - 130
trans-Nonachlor	1.97	1.63		ug/L		83	70 - 130
Trifluralin	1.97	2.21		ug/L		113	70 - 130

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

Lab Sample ID: LCSD 380-13248/4-A
Matrix: Water
Analysis Batch: 14688

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 13248

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,4'-DDD	1.97	2.01		ug/L		102	70 - 130	3	20
2,4'-DDE	1.97	1.81		ug/L		92	70 - 130	5	20
2,4'-DDT	1.97	1.74		ug/L		88	70 - 130	7	20
2,4-Dinitrotoluene	1.97	1.96		ug/L		99	70 - 130	11	20
2,6-Dinitrotoluene	1.97	1.89		ug/L		96	70 - 130	12	20
4,4'-DDD	1.97	1.77		ug/L		90	70 - 130	5	20
4,4'-DDE	1.97	1.80		ug/L		91	70 - 130	7	20
4,4'-DDT	1.97	1.80		ug/L		91	70 - 130	5	20
Acenaphthene	1.97	1.71		ug/L		87	70 - 130	1	20

Eurofins Eaton Monrovia

QC Sample Results

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

Job ID: 380-15296-1

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

Lab Sample ID: LCSD 380-13248/4-A
Matrix: Water
Analysis Batch: 14688

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 13248

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	RPD Limit
							Limits	RPD		
Acenaphthylene	1.97	1.84		ug/L		93	70 - 130	3	20	
Acetochlor	1.97	1.87		ug/L		95	70 - 130	5	20	
Alachlor	1.97	1.78		ug/L		90	70 - 130	3	20	
alpha-BHC	1.97	1.70		ug/L		86	70 - 130	4	20	
alpha-Chlordane	1.97	1.73		ug/L		88	70 - 130	6	20	
Anthracene	1.97	1.77		ug/L		90	70 - 130	3	20	
Atrazine	1.97	2.00		ug/L		101	70 - 130	5	20	
Benz(a)anthracene	1.97	1.78		ug/L		90	70 - 130	6	20	
Benzo[a]pyrene	1.97	1.63		ug/L		83	70 - 130	6	20	
Benzo[b]fluoranthene	1.97	1.72		ug/L		87	70 - 130	6	20	
Benzo[g,h,i]perylene	1.97	1.65		ug/L		84	70 - 130	6	20	
Benzo[k]fluoranthene	1.97	1.71		ug/L		87	70 - 130	7	20	
beta-BHC	1.97	1.73		ug/L		88	70 - 130	5	20	
Bromacil	1.97	1.83		ug/L		93	70 - 130	12	20	
Butachlor	1.97	1.92		ug/L		97	70 - 130	4	20	
Butylbenzylphthalate	1.97	2.05		ug/L		104	70 - 130	4	20	
Caffeine	1.97	1.65	*1	ug/L		84	45 - 137	59	20	
Chlorobenzilate	1.97	2.00		ug/L		102	70 - 130	4	20	
Chloroneb	1.97	1.77		ug/L		90	70 - 130	6	20	
Chlorothalonil (Draconil, Bravo)	1.97	2.04		ug/L		104	70 - 130	1	20	
Chlorpyrifos	1.97	1.83		ug/L		93	70 - 130	1	20	
Chrysene	1.97	1.51		ug/L		76	70 - 130	5	20	
delta-BHC	1.97	1.64		ug/L		83	70 - 130	5	20	
Di(2-ethylhexyl)adipate	1.97	2.25		ug/L		114	70 - 130	8	20	
Bis(2-ethylhexyl) phthalate	1.97	1.86		ug/L		94	70 - 130	7	20	
Diazinon (Qualitative)	1.97	1.86		ug/L		94	15 - 132	7	20	
Dibenz(a,h)anthracene	1.97	1.70		ug/L		86	70 - 130	9	20	
Diclorvos (DDVP)	1.97	2.21		ug/L		112	70 - 130	8	20	
Dieldrin	1.97	1.90		ug/L		96	70 - 130	5	20	
Diethylphthalate	1.97	1.93		ug/L		98	70 - 130	4	20	
Dimethoate	1.97	1.71	*1	ug/L		87	35 - 100	51	20	
Dimethylphthalate	1.97	1.95		ug/L		99	70 - 130	3	20	
Di-n-butyl phthalate	3.94	3.69		ug/L		93	70 - 130	3	20	
Di-n-octyl phthalate	1.97	1.56		ug/L		79	70 - 130	12	20	
Endosulfan I (Alpha)	1.97	1.56		ug/L		79	70 - 130	3	20	
Endosulfan II (Beta)	1.97	1.70		ug/L		86	70 - 130	6	20	
Endosulfan sulfate	1.97	2.11		ug/L		107	70 - 130	5	20	
Endrin	1.97	1.81		ug/L		92	70 - 130	5	20	
Endrin aldehyde	1.97	1.86		ug/L		94	70 - 130	5	20	
EPTC	1.97	2.06		ug/L		104	70 - 130	5	20	
Fluoranthene	1.97	1.77		ug/L		90	70 - 130	4	20	
Fluorene	1.97	1.92		ug/L		97	70 - 130	3	20	
gamma-Chlordane	1.97	1.73		ug/L		88	70 - 130	3	20	
Heptachlor	1.97	1.87		ug/L		95	70 - 130	7	20	
Heptachlor epoxide (isomer B)	1.97	1.85		ug/L		94	70 - 130	5	20	
Hexachlorobenzene	1.97	1.84		ug/L		93	70 - 130	5	20	
Hexachlorocyclopentadiene	1.97	1.87		ug/L		95	70 - 130	8	20	
Indeno[1,2,3-cd]pyrene	1.97	1.71		ug/L		87	70 - 130	5	20	
Isophorone	1.97	1.86		ug/L		94	70 - 130	4	20	

Eurofins Eaton Monrovia

QC Sample Results

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

Job ID: 380-15296-1

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

Lab Sample ID: LCSD 380-13248/4-A
Matrix: Water
Analysis Batch: 14688

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 13248

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Lindane	1.97	1.70		ug/L		86	70 - 130	5	20
Malathion	1.97	1.94		ug/L		99	70 - 130	4	20
Methoxychlor	1.97	1.84		ug/L		93	70 - 130	4	20
Metolachlor	1.97	1.79		ug/L		91	70 - 130	4	20
Metribuzin	1.97	1.94		ug/L		98	70 - 130	17	20
Molinate	1.97	2.13		ug/L		108	70 - 130	5	20
Naphthalene	1.97	1.93		ug/L		98	70 - 130	4	20
Parathion	1.97	2.14		ug/L		108	70 - 130	4	20
Pendimethalin (Penoxaline)	1.97	2.15		ug/L		109	70 - 130	2	20
Phenanthrene	1.97	1.81		ug/L		92	70 - 130	5	20
Propachlor	1.97	2.17		ug/L		110	70 - 130	6	20
Pyrene	1.97	1.81		ug/L		92	70 - 130	2	20
Simazine	1.97	2.08		ug/L		106	70 - 130	10	20
Terbacil	1.97	2.15		ug/L		109	70 - 130	15	20
Terbutylazine	1.97	1.86		ug/L		95	70 - 130	2	20
Thiobencarb	1.97	1.92		ug/L		97	70 - 130	4	20
trans-Nonachlor	1.97	1.74		ug/L		88	70 - 130	7	20
Trifluralin	1.97	2.28		ug/L		116	70 - 130	3	20

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
2-Nitro-m-xylene	97		70 - 130
Triphenylphosphate	99		70 - 130
Perylene-d12	100		70 - 130

Lab Sample ID: MRL 380-13248/2-A
Matrix: Water
Analysis Batch: 14688

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 13248

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	0.0987	0.111		ug/L		113	50 - 150
2,4'-DDE	0.0987	0.0781	J	ug/L		79	50 - 150
2,4'-DDT	0.0987	0.0713	J	ug/L		72	50 - 150
2,4-Dinitrotoluene	0.0987	0.120		ug/L		122	50 - 150
2,6-Dinitrotoluene	0.0987	0.103		ug/L		105	50 - 150
4,4'-DDD	0.0987	0.0762	J	ug/L		77	50 - 150
4,4'-DDE	0.0987	0.136		ug/L		138	50 - 150
4,4'-DDT	0.0987	0.0721	J	ug/L		73	50 - 150
Acenaphthene	0.0987	0.0898	J	ug/L		91	50 - 150
Acenaphthylene	0.0987	0.0813	J	ug/L		82	50 - 150
Acetochlor	0.0494	0.0391	J	ug/L		79	50 - 150
Alachlor	0.0494	0.0514		ug/L		104	50 - 150
alpha-BHC	0.0987	0.0939	J	ug/L		95	50 - 150
alpha-Chlordane	0.0494	0.0438	J	ug/L		89	50 - 150
Anthracene	0.0197	0.0192	J	ug/L		97	50 - 150
Atrazine	0.0494	ND		ug/L		82	50 - 150
Benz(a)anthracene	0.0494	0.0385	J	ug/L		78	50 - 150
Benzo[a]pyrene	0.0197	0.0134	J	ug/L		68	50 - 150
Benzo[b]fluoranthene	0.0197	0.0151	J	ug/L		77	50 - 150

Eurofins Eaton Monrovia

QC Sample Results

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

Job ID: 380-15296-1

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

Lab Sample ID: MRL 380-13248/2-A
Matrix: Water
Analysis Batch: 14688

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 13248

Analyte	Spike Added	MRL	MRL	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Benzo[g,h,i]perylene	0.0494	0.0365	J	ug/L		74	50 - 150
Benzo[k]fluoranthene	0.0197	ND		ug/L		77	50 - 150
beta-BHC	0.0987	0.0930	J	ug/L		94	50 - 150
Bromacil	0.0987	0.0835	J	ug/L		85	50 - 150
Butachlor	0.0494	0.0506		ug/L		103	50 - 150
Butylbenzylphthalate	0.148	0.158	J	ug/L		107	50 - 150
Caffeine	0.0494	0.0313	J	ug/L		63	50 - 150
Chlorobenzilate	0.0987	0.0962	J	ug/L		97	50 - 150
Chloroneb	0.0987	0.0835	J	ug/L		85	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0987	0.0839	J	ug/L		85	50 - 150
Chlorpyrifos	0.0494	0.0416	J	ug/L		84	50 - 150
Chrysene	0.0197	0.0151	J	ug/L		76	50 - 150
delta-BHC	0.0987	0.0901	J	ug/L		91	50 - 150
Di(2-ethylhexyl)adipate	0.296	0.322	J	ug/L		109	50 - 150
Bis(2-ethylhexyl) phthalate	0.592	0.576	J	ug/L		97	50 - 150
Diazinon (Qualitative)	0.0987	0.0935	J	ug/L		95	15 - 132
Dibenz(a,h)anthracene	0.0494	0.0350	J	ug/L		71	50 - 150
Diclorvos (DDVP)	0.0494	0.0528		ug/L		107	50 - 150
Dieldrin	0.0987	0.114	J	ug/L		115	50 - 150
Diethylphthalate	0.148	0.155	J	ug/L		105	50 - 150
Dimethoate	0.0987	0.0832	J	ug/L		84	35 - 100
Dimethylphthalate	0.296	0.287	J	ug/L		97	50 - 150
Di-n-butyl phthalate	0.296	0.260	J	ug/L		88	49 - 243
Di-n-octyl phthalate	0.0987	0.0941	J	ug/L		95	50 - 150
Endosulfan I (Alpha)	0.0987	0.0814	J	ug/L		82	50 - 150
Endosulfan II (Beta)	0.0987	0.0980	J	ug/L		99	50 - 150
Endosulfan sulfate	0.0987	0.0946	J	ug/L		96	50 - 150
Endrin	0.0987	0.110		ug/L		111	50 - 150
Endrin aldehyde	0.0987	ND		ug/L		84	50 - 150
EPTC	0.0987	0.0908	J	ug/L		92	50 - 150
Fluoranthene	0.0494	0.0435	J	ug/L		88	50 - 150
Fluorene	0.0494	0.0498		ug/L		101	50 - 150
gamma-Chlordane	0.0494	0.0399	J	ug/L		81	50 - 150
Heptachlor	0.0395	0.0348	J	ug/L		88	50 - 150
Heptachlor epoxide (isomer B)	0.0494	0.0450	J	ug/L		91	50 - 150
Hexachlorobenzene	0.0494	0.0814	^3+	ug/L		165	50 - 150
Hexachlorocyclopentadiene	0.0494	ND		ug/L		73	50 - 150
Indeno[1,2,3-cd]pyrene	0.0494	0.0356	J	ug/L		72	50 - 150
Isophorone	0.0987	0.0843	J	ug/L		85	50 - 150
Lindane	0.0494	0.0345	J	ug/L		70	50 - 150
Malathion	0.0987	0.0861	J	ug/L		87	50 - 150
Methoxychlor	0.0987	0.0736	J	ug/L		75	50 - 150
Metolachlor	0.0494	0.0474	J	ug/L		96	50 - 150
Metribuzin	0.0494	0.0352	J	ug/L		71	50 - 150
Molinate	0.0987	0.101		ug/L		103	50 - 150
Naphthalene	0.0987	0.0952	J	ug/L		96	50 - 150
Parathion	0.0987	0.134		ug/L		136	50 - 150
Pendimethalin (Penoxaline)	0.0987	0.0775	J	ug/L		78	50 - 150
Phenanthrene	0.0197	0.0225	J	ug/L		114	50 - 150

Eurofins Eaton Monrovia

QC Sample Results

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

Job ID: 380-15296-1

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

Lab Sample ID: MRL 380-13248/2-A
Matrix: Water
Analysis Batch: 14688

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 13248

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Propachlor	0.0494	0.0493		ug/L		100	50 - 150
Pyrene	0.0494	0.0425	J	ug/L		86	50 - 150
Simazine	0.0494	0.0539		ug/L		109	50 - 150
Terbacil	0.0987	0.0924	J	ug/L		94	50 - 150
Terbutylazine	0.0987	0.0791	J	ug/L		80	50 - 150
Thiobencarb	0.0987	0.102	J	ug/L		104	50 - 150
trans-Nonachlor	0.0494	0.0334	J	ug/L		68	50 - 150
Trifluralin	0.0987	0.0864	J	ug/L		87	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
2-Nitro-m-xylene	97		70 - 130
Triphenylphosphate	98		70 - 130
Perylene-d12	102		70 - 130

Lab Sample ID: 380-16172-E-1-A MS
Matrix: Water
Analysis Batch: 14688

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 13248

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	ND		1.99	2.05		ug/L		103	70 - 130
2,4'-DDE	ND		1.99	1.83		ug/L		92	70 - 130
2,4'-DDT	ND		1.99	1.74		ug/L		88	70 - 130
2,4-Dinitrotoluene	ND		1.99	1.99		ug/L		100	70 - 130
2,6-Dinitrotoluene	ND		1.99	1.96		ug/L		98	70 - 130
4,4'-DDD	ND		1.99	1.82		ug/L		92	70 - 130
4,4'-DDE	ND		1.99	1.81		ug/L		91	70 - 130
4,4'-DDT	ND		1.99	1.85		ug/L		93	70 - 130
Acenaphthene	ND		1.99	1.78		ug/L		89	70 - 130
Acenaphthylene	ND		1.99	1.89		ug/L		95	70 - 130
Acetochlor	ND		1.99	1.96		ug/L		99	70 - 130
Alachlor	ND		1.99	1.79		ug/L		90	70 - 130
alpha-BHC	ND		1.99	1.77		ug/L		89	70 - 130
alpha-Chlordane	ND		1.99	1.78		ug/L		90	70 - 130
Anthracene	ND	F1	1.99	0.902	F1	ug/L		45	70 - 130
Atrazine	ND		1.99	2.04		ug/L		103	70 - 130
Benz(a)anthracene	ND		1.99	1.64		ug/L		83	70 - 130
Benzo[a]pyrene	ND	F1	1.99	1.27	F1	ug/L		64	70 - 130
Benzo[b]fluoranthene	ND		1.99	1.76		ug/L		88	70 - 130
Benzo[g,h,i]perylene	ND		1.99	1.70		ug/L		86	70 - 130
Benzo[k]fluoranthene	ND		1.99	1.77		ug/L		89	70 - 130
beta-BHC	ND		1.99	1.76		ug/L		88	70 - 130
Bromacil	ND		1.99	1.89		ug/L		95	70 - 130
Butachlor	ND		1.99	1.93		ug/L		97	70 - 130
Butylbenzylphthalate	ND		1.99	2.08		ug/L		105	70 - 130
Caffeine	ND	*1	1.99	1.78		ug/L		90	46 - 144
Chlorobenzilate	ND		1.99	2.04		ug/L		102	70 - 130
Chloroneb	ND		1.99	1.86		ug/L		93	70 - 130
Chlorothalonil (Draconil, Bravo)	ND		1.99	2.10		ug/L		106	70 - 130

QC Sample Results

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

Job ID: 380-15296-1

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

Lab Sample ID: 380-16172-E-1-A MS
Matrix: Water
Analysis Batch: 14688

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 13248

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier	Added	Result	Qualifier				
Chlorpyrifos	ND		1.99	1.91		ug/L		96	70 - 130
Chrysene	ND		1.99	1.55		ug/L		78	70 - 130
delta-BHC	ND		1.99	1.69		ug/L		85	70 - 130
Di(2-ethylhexyl)adipate	ND		1.99	2.20		ug/L		111	70 - 130
Bis(2-ethylhexyl) phthalate	ND		1.99	1.81		ug/L		91	70 - 130
Diazinon (Qualitative)	ND		1.99	1.99		ug/L		100	15 - 132
Dibenz(a,h)anthracene	ND		1.99	1.74		ug/L		88	70 - 130
Diclorvos (DDVP)	ND		1.99	2.29		ug/L		115	70 - 130
Dieldrin	ND		1.99	1.94		ug/L		98	70 - 130
Diethylphthalate	ND		1.99	1.96		ug/L		99	70 - 130
Dimethoate	ND	*1	1.99	1.94		ug/L		98	34 - 111
Dimethylphthalate	ND		1.99	1.95		ug/L		98	70 - 130
Di-n-butyl phthalate	ND		3.98	3.84		ug/L		96	70 - 130
Di-n-octyl phthalate	ND		1.99	1.43		ug/L		72	70 - 130
Endosulfan I (Alpha)	ND		1.99	1.64		ug/L		82	70 - 130
Endosulfan II (Beta)	ND		1.99	1.76		ug/L		89	70 - 130
Endosulfan sulfate	ND		1.99	2.18		ug/L		109	70 - 130
Endrin	ND		1.99	1.84		ug/L		92	70 - 130
Endrin aldehyde	ND		1.99	1.95		ug/L		98	70 - 130
EPTC	ND		1.99	2.13		ug/L		107	70 - 130
Fluoranthene	ND		1.99	1.82		ug/L		91	70 - 130
Fluorene	ND		1.99	1.99		ug/L		100	70 - 130
gamma-Chlordane	ND		1.99	1.78		ug/L		89	70 - 130
Heptachlor	ND		1.99	1.89		ug/L		95	70 - 130
Heptachlor epoxide (isomer B)	ND		1.99	1.92		ug/L		97	70 - 130
Hexachlorobenzene	ND	^3+	1.99	1.89		ug/L		95	70 - 130
Hexachlorocyclopentadiene	ND		1.99	1.92		ug/L		96	70 - 130
Indeno[1,2,3-cd]pyrene	ND		1.99	1.76		ug/L		88	70 - 130
Isophorone	ND		1.99	1.89		ug/L		95	70 - 130
Lindane	ND		1.99	1.75		ug/L		88	70 - 130
Malathion	ND		1.99	1.99		ug/L		100	70 - 130
Methoxychlor	ND		1.99	1.94		ug/L		97	70 - 130
Metolachlor	ND		1.99	1.84		ug/L		93	70 - 130
Metribuzin	ND		1.99	1.98		ug/L		99	70 - 130
Molinate	ND		1.99	2.22		ug/L		112	70 - 130
Naphthalene	ND		1.99	1.98		ug/L		99	70 - 130
Parathion	ND		1.99	2.19		ug/L		110	70 - 130
Pendimethalin (Penoxaline)	ND		1.99	2.24		ug/L		113	70 - 130
Phenanthrene	ND		1.99	1.83		ug/L		92	70 - 130
Propachlor	ND		1.99	2.24		ug/L		113	70 - 130
Pyrene	ND		1.99	1.86		ug/L		93	70 - 130
Simazine	ND		1.99	2.21		ug/L		111	70 - 130
Terbacil	ND		1.99	2.20		ug/L		110	70 - 130
Terbutylazine	ND		1.99	1.95		ug/L		98	70 - 130
Thiobencarb	ND		1.99	1.96		ug/L		99	70 - 130
trans-Nonachlor	ND		1.99	1.81		ug/L		91	70 - 130
Trifluralin	ND		1.99	2.46		ug/L		123	70 - 130

QC Sample Results

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

Job ID: 380-15296-1

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

Lab Sample ID: 380-16172-E-1-A MS
Matrix: Water
Analysis Batch: 14688

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 13248

<i>Surrogate</i>	<i>%Recovery</i>	<i>MS MS Qualifier</i>	<i>Limits</i>
2-Nitro-m-xylene	97		70 - 130
Triphenylphosphate	102		70 - 130
Perylene-d12	98		70 - 130

Lab Sample ID: 380-15287-J-1-A DU
Matrix: Water
Analysis Batch: 14688

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 13248

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
2,4'-DDD	ND		ND		ug/L		NC	20
2,4'-DDE	ND		ND		ug/L		NC	20
2,4'-DDT	ND		ND		ug/L		NC	20
2,4-Dinitrotoluene	ND		ND		ug/L		NC	20
2,6-Dinitrotoluene	ND		ND		ug/L		NC	20
4,4'-DDD	ND		ND		ug/L		NC	20
4,4'-DDE	ND		ND		ug/L		NC	20
4,4'-DDT	ND		ND		ug/L		NC	20
Acenaphthene	ND		ND		ug/L		NC	20
Acenaphthylene	ND		ND		ug/L		NC	20
Acetochlor	ND		ND		ug/L		NC	20
Alachlor	ND		ND		ug/L		NC	20
alpha-BHC	ND		ND		ug/L		NC	20
alpha-Chlordane	ND		ND		ug/L		NC	20
Anthracene	ND		ND		ug/L		NC	20
Atrazine	ND		ND		ug/L		NC	20
Benz(a)anthracene	ND		ND		ug/L		NC	20
Benzo[a]pyrene	ND		ND		ug/L		NC	20
Benzo[b]fluoranthene	ND		ND		ug/L		NC	20
Benzo[g,h,i]perylene	ND		ND		ug/L		NC	20
Benzo[k]fluoranthene	ND		ND		ug/L		NC	20
beta-BHC	ND		ND		ug/L		NC	20
Bromacil	ND		ND		ug/L		NC	20
Butachlor	ND		ND		ug/L		NC	20
Butylbenzylphthalate	ND		ND		ug/L		NC	20
Caffeine	ND	*1	ND	*1	ug/L		NC	20
Chlorobenzilate	ND		ND		ug/L		NC	20
Chloroneb	ND		ND		ug/L		NC	20
Chlorothalonil (Draconil, Bravo)	ND		ND		ug/L		NC	20
Chlorpyrifos	ND		ND		ug/L		NC	20
Chrysene	ND		ND		ug/L		NC	20
delta-BHC	ND		ND		ug/L		NC	20
Di(2-ethylhexyl)adipate	ND		ND		ug/L		NC	20
Bis(2-ethylhexyl) phthalate	ND		ND		ug/L		NC	20
Diazinon (Qualitative)	ND		ND		ug/L		NC	20
Dibenz(a,h)anthracene	ND		ND		ug/L		NC	20
Diclorvos (DDVP)	ND		ND		ug/L		NC	20
Dieldrin	ND		ND		ug/L		NC	20
Diethylphthalate	ND		ND		ug/L		NC	20

Eurofins Eaton Monrovia

QC Sample Results

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

Job ID: 380-15296-1

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

Lab Sample ID: 380-15287-J-1-A DU
Matrix: Water
Analysis Batch: 14688

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 13248

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Dimethoate	ND	*1	ND	*1	ug/L		NC	20
Dimethylphthalate	ND		ND		ug/L		NC	20
Di-n-butyl phthalate	ND		ND		ug/L		NC	20
Di-n-octyl phthalate	ND		ND		ug/L		NC	20
Endosulfan I (Alpha)	ND		ND		ug/L		NC	20
Endosulfan II (Beta)	ND		ND		ug/L		NC	20
Endosulfan sulfate	ND		ND		ug/L		NC	20
Endrin	ND		ND		ug/L		NC	20
Endrin aldehyde	ND		ND		ug/L		NC	20
EPTC	ND		ND		ug/L		NC	20
Fluoranthene	ND		ND		ug/L		NC	20
Fluorene	ND		ND		ug/L		NC	20
gamma-Chlordane	ND		ND		ug/L		NC	20
Heptachlor	ND		ND		ug/L		NC	20
Heptachlor epoxide (isomer B)	ND		ND		ug/L		NC	20
Hexachlorobenzene	ND	^3+	ND		ug/L		NC	20
Hexachlorocyclopentadiene	ND		ND		ug/L		NC	20
Indeno[1,2,3-cd]pyrene	ND		ND		ug/L		NC	20
Isophorone	ND		ND		ug/L		NC	20
Lindane	ND		ND		ug/L		NC	20
Malathion	ND		ND		ug/L		NC	20
Methoxychlor	ND		ND		ug/L		NC	20
Metolachlor	ND		ND		ug/L		NC	20
Metribuzin	ND		ND		ug/L		NC	20
Molinate	ND		ND		ug/L		NC	20
Naphthalene	ND		ND		ug/L		NC	20
Parathion	ND		ND		ug/L		NC	20
Pendimethalin (Penoxaline)	ND		ND		ug/L		NC	20
Total Permethrin (mixed isomers)	ND		ND		ug/L		NC	20
Phenanthrene	ND		ND		ug/L		NC	20
Propachlor	ND		ND		ug/L		NC	20
Pyrene	ND		ND		ug/L		NC	20
Simazine	ND		ND		ug/L		NC	20
Terbacil	ND		ND		ug/L		NC	20
Terbutylazine	ND		ND		ug/L		NC	20
Thiobencarb	ND		ND		ug/L		NC	20
trans-Nonachlor	ND		ND		ug/L		NC	20
Trifluralin	ND		ND		ug/L		NC	20

Surrogate	DU DU		Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	94		70 - 130
Triphenylphosphate	99		70 - 130
Perylene-d12	101		70 - 130

QC Sample Results

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

Job ID: 380-15296-1

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

Lab Sample ID: 99018-B1
Matrix: water
Analysis Batch: O-38082

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: O-38082_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.005	0.001	µg/L		08/08/22 00:00	08/13/22 16:48	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		08/08/22 00:00	08/13/22 16:48	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		08/08/22 00:00	08/13/22 16:48	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		08/08/22 00:00	08/13/22 16:48	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		08/08/22 00:00	08/13/22 16:48	1
Acenaphthene	ND		0.005	0.001	µg/L		08/08/22 00:00	08/13/22 16:48	1
Acenaphthylene	ND		0.005	0.001	µg/L		08/08/22 00:00	08/13/22 16:48	1
Anthracene	ND		0.005	0.001	µg/L		08/08/22 00:00	08/13/22 16:48	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		08/08/22 00:00	08/13/22 16:48	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		08/08/22 00:00	08/13/22 16:48	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		08/08/22 00:00	08/13/22 16:48	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		08/08/22 00:00	08/13/22 16:48	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		08/08/22 00:00	08/13/22 16:48	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		08/08/22 00:00	08/13/22 16:48	1
Biphenyl	ND		0.005	0.001	µg/L		08/08/22 00:00	08/13/22 16:48	1
Chrysene	ND		0.005	0.001	µg/L		08/08/22 00:00	08/13/22 16:48	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		08/08/22 00:00	08/13/22 16:48	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		08/08/22 00:00	08/13/22 16:48	1
Dibenzothiophene	ND		0.005	0.001	µg/L		08/08/22 00:00	08/13/22 16:48	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		08/08/22 00:00	08/13/22 16:48	1
Fluoranthene	ND		0.005	0.001	µg/L		08/08/22 00:00	08/13/22 16:48	1
Fluorene	ND		0.005	0.001	µg/L		08/08/22 00:00	08/13/22 16:48	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		08/08/22 00:00	08/13/22 16:48	1
Naphthalene	ND		0.005	0.001	µg/L		08/08/22 00:00	08/13/22 16:48	1
Perylene	ND		0.005	0.001	µg/L		08/08/22 00:00	08/13/22 16:48	1
Phenanthrene	ND		0.005	0.001	µg/L		08/08/22 00:00	08/13/22 16:48	1
Pyrene	ND		0.005	0.001	µg/L		08/08/22 00:00	08/13/22 16:48	1

Surrogate	Blank %Recovery	Blank Qualifier	Limits	Prepared	Analyzed	Dil Fac
(d10-Acenaphthene)	90		65 - 113	08/08/22 00:00	08/13/22 16:48	1
(d10-Phenanthrene)	92		80 - 111	08/08/22 00:00	08/13/22 16:48	1
(d12-Chrysene)	92		60 - 139	08/08/22 00:00	08/13/22 16:48	1
(d12-Perylene)	93		36 - 161	08/08/22 00:00	08/13/22 16:48	1
(d8-Naphthalene)	86		44 - 119	08/08/22 00:00	08/13/22 16:48	1

Lab Sample ID: 99018-BS1
Matrix: water
Analysis Batch: O-38082

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-38082_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	0.5	0.444		µg/L		89	49 - 117
1-Methylphenanthrene	0.5	0.528		µg/L		106	66 - 127
2,3,5-Trimethylnaphthalene	0.5	0.455		µg/L		91	57 - 120
2,6-Dimethylnaphthalene	0.5	0.447		µg/L		89	54 - 117
2-Methylnaphthalene	0.5	0.446		µg/L		89	47 - 130
Acenaphthene	0.5	0.442		µg/L		88	53 - 131
Acenaphthylene	0.5	0.453		µg/L		91	43 - 140
Anthracene	0.5	0.442		µg/L		88	58 - 135

Eurofins Eaton Monrovia

QC Sample Results

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

Job ID: 380-15296-1

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

Lab Sample ID: 99018-BS1
Matrix: water
Analysis Batch: O-38082

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-38082_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benz[a]anthracene	0.5	0.503		µg/L		101	55 - 145
Benzo[a]pyrene	0.5	0.427		µg/L		85	51 - 143
Benzo[b]fluoranthene	0.5	0.622		µg/L		124	46 - 165
Benzo[e]pyrene	0.5	0.543		µg/L		109	42 - 152
Benzo[g,h,i]perylene	0.5	0.46		µg/L		92	63 - 133
Benzo[k]fluoranthene	0.5	0.518		µg/L		104	56 - 145
Biphenyl	0.5	0.445		µg/L		89	56 - 119
Chrysene	0.5	0.455		µg/L		91	56 - 141
Dibenz[a,h]anthracene	0.5	0.638		µg/L		128	55 - 150
Dibenzo[a,l]pyrene	0.5	0.492		µg/L		98	50 - 150
Dibenzothiophene	0.5	0.469		µg/L		94	75 - 113
Disalicylidenepropanediamine	50	34.6		µg/L		69	50 - 150
Fluoranthene	0.5	0.53		µg/L		106	60 - 146
Fluorene	0.5	0.492		µg/L		98	58 - 131
Indeno[1,2,3-cd]pyrene	0.5	0.67		µg/L		134	50 - 151
Naphthalene	0.5	0.433		µg/L		87	41 - 126
Perylene	0.5	0.513		µg/L		103	48 - 141
Phenanthrene	0.5	0.46		µg/L		92	67 - 127
Pyrene	0.5	0.538		µg/L		108	54 - 156

Surrogate	LCS %Recovery	LCS Qualifier	Limits
(d10-Acenaphthene)	92		65 - 113
(d10-Phenanthrene)	95		80 - 111
(d12-Chrysene)	88		60 - 139
(d12-Perylene)	98		36 - 161
(d8-Naphthalene)	85		44 - 119

Lab Sample ID: 99018-BS2
Matrix: water
Analysis Batch: O-38082

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: O-38082_P

Analyte	Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	0.5	0.437		µg/L		87	49 - 117	2	30
1-Methylphenanthrene	0.5	0.537		µg/L		107	66 - 127	1	30
2,3,5-Trimethylnaphthalene	0.5	0.438		µg/L		88	57 - 120	3	30
2,6-Dimethylnaphthalene	0.5	0.439		µg/L		88	54 - 117	1	30
2-Methylnaphthalene	0.5	0.442		µg/L		88	47 - 130	1	30
Acenaphthene	0.5	0.429		µg/L		86	53 - 131	2	30
Acenaphthylene	0.5	0.447		µg/L		89	43 - 140	2	30
Anthracene	0.5	0.449		µg/L		90	58 - 135	2	30
Benz[a]anthracene	0.5	0.501		µg/L		100	55 - 145	1	30
Benzo[a]pyrene	0.5	0.422		µg/L		84	51 - 143	1	30
Benzo[b]fluoranthene	0.5	0.621		µg/L		124	46 - 165	0	30
Benzo[e]pyrene	0.5	0.541		µg/L		108	42 - 152	1	30
Benzo[g,h,i]perylene	0.5	0.457		µg/L		91	63 - 133	1	30
Benzo[k]fluoranthene	0.5	0.51		µg/L		102	56 - 145	2	30
Biphenyl	0.5	0.431		µg/L		86	56 - 119	3	30
Chrysene	0.5	0.451		µg/L		90	56 - 141	1	30

Eurofins Eaton Monrovia

QC Sample Results

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

Job ID: 380-15296-1

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

Lab Sample ID: 99018-BS2
Matrix: water
Analysis Batch: O-38082

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: O-38082_P

Analyte	Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
Dibenz[a,h]anthracene	0.5	0.642		µg/L		128	55 - 150	0	30	
Dibenzo[a,i]pyrene	0.5	0.52		µg/L		104	50 - 150	6	30	
Dibenzothiophene	0.5	0.473		µg/L		95	75 - 113	1	30	
Disalicylidenepropanediamine	50	36.7		µg/L		73	50 - 150	6	30	
Fluoranthene	0.5	0.546		µg/L		109	60 - 146	3	30	
Fluorene	0.5	0.481		µg/L		96	58 - 131	2	30	
Indeno[1,2,3-cd]pyrene	0.5	0.679		µg/L		136	50 - 151	1	30	
Naphthalene	0.5	0.413		µg/L		83	41 - 126	5	30	
Perylene	0.5	0.5		µg/L		100	48 - 141	3	30	
Phenanthrene	0.5	0.464		µg/L		93	67 - 127	1	30	
Pyrene	0.5	0.552		µg/L		110	54 - 156	2	30	

Surrogate	LCS DUP		Limits
	%Recovery	Qualifier	
(d10-Acenaphthene)	89		65 - 113
(d10-Phenanthrene)	95		80 - 111
(d12-Chrysene)	89		60 - 139
(d12-Perylene)	97		36 - 161
(d8-Naphthalene)	82		44 - 119

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

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

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
DIESEL	ND	U	0.025		mg/L			08/13/22 04:57	1
MOTOR OIL	ND	U	0.05		mg/L			08/13/22 04:57	1

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

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

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	
							Limits	RPD
DIESEL	2.5	2.51		mg/L		100	50 - 130	

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

QC Sample Results

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

Job ID: 380-15296-1

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

Lab Sample ID: 22VG39H04B
Matrix: WATER
Analysis Batch: 22VG39H04

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			08/11/22 14:14	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE								08/11/22 14:14	1

Lab Sample ID: 22VG39H04L
Matrix: WATER
Analysis Batch: 22VG39H04

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
GASOLINE	0.5	0.431		mg/L		86	60 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
BROMOFLUOROBENZENE	110		70 - 130				

Lab Sample ID: 22H117-01M
Matrix: WATER
Analysis Batch: 22VG39H04

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
GASOLINE	ND		0.5	0.491		mg/L		98	50 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
BROMOFLUOROBENZENE	116		60 - 140						

Lab Sample ID: 22H117-01S
Matrix: WATER
Analysis Batch: 22VG39H04

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
GASOLINE	ND		0.5	0.468		mg/L		94	50 - 130	5	30
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
BROMOFLUOROBENZENE	117		60 - 140								

QC Association Summary

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

Job ID: 380-15296-1

GC/MS Semi VOA

Prep Batch: 13248

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-15296-1	AIEA GULCH WELLS PUMP 1	Total/NA	Drinking Water	525.2	
380-15296-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	525.2	
380-15296-3	AIEA WELLS PUMPS 1&2 (260)	Total/NA	Drinking Water	525.2	
MB 380-13248/1-A	Method Blank	Total/NA	Water	525.2	
LCS 380-13248/3-A	Lab Control Sample	Total/NA	Water	525.2	
LCSD 380-13248/4-A	Lab Control Sample Dup	Total/NA	Water	525.2	
MRL 380-13248/2-A	Lab Control Sample	Total/NA	Water	525.2	
380-16172-E-1-A MS	Matrix Spike	Total/NA	Water	525.2	
380-15287-J-1-A DU	Duplicate	Total/NA	Water	525.2	

Analysis Batch: 14688

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-15296-1	AIEA GULCH WELLS PUMP 1	Total/NA	Drinking Water	525.2	13248
380-15296-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	525.2	13248
380-15296-3	AIEA WELLS PUMPS 1&2 (260)	Total/NA	Drinking Water	525.2	13248
MB 380-13248/1-A	Method Blank	Total/NA	Water	525.2	13248
LCS 380-13248/3-A	Lab Control Sample	Total/NA	Water	525.2	13248
LCSD 380-13248/4-A	Lab Control Sample Dup	Total/NA	Water	525.2	13248
MRL 380-13248/2-A	Lab Control Sample	Total/NA	Water	525.2	13248
380-16172-E-1-A MS	Matrix Spike	Total/NA	Water	525.2	13248
380-15287-J-1-A DU	Duplicate	Total/NA	Water	525.2	13248

Subcontract

Analysis Batch: O-38082

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-15296-1	AIEA GULCH WELLS PUMP 1	Total/NA	Drinking Water	625 PAH Physis LL (EAL) + TICs	O-38082_P
380-15296-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	625 PAH Physis LL (EAL) + TICs	O-38082_P
380-15296-3	AIEA WELLS PUMPS 1&2 (260)	Total/NA	Drinking Water	625 PAH Physis LL (EAL) + TICs	O-38082_P
99018-B1	Method Blank	Total/NA	water	625 PAH Physis LL (EAL) + TICs	O-38082_P
99018-BS1	Lab Control Sample	Total/NA	water	625 PAH Physis LL (EAL) + TICs	O-38082_P
99018-BS2	Lab Control Sample Dup	Total/NA	water	625 PAH Physis LL (EAL) + TICs	O-38082_P

Analysis Batch: 22DSH019W

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-15296-1	AIEA GULCH WELLS PUMP 1	Total/NA	Drinking Water	8015 Diesel LL (EAL) and Motor Oil	
380-15296-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	8015 Diesel LL (EAL) and Motor Oil	
380-15296-3	AIEA WELLS PUMPS 1&2 (260)	Total/NA	Drinking Water	8015 Diesel LL (EAL) and Motor Oil	
22DSH019WB	Method Blank	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: 380-15296-1

Subcontract (Continued)

Analysis Batch: 22DSH019W (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
22DSH019WL	Lab Control Sample	Total/NA	WATER	8015 Diesel LL (EAL) and Motor Oil	

Analysis Batch: 22VG39H04

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-15296-1	AIEA GULCH WELLS PUMP 1	Total/NA	Drinking Water	8015 Gas (Purgeable) LL (EAL)	
380-15296-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	8015 Gas (Purgeable) LL (EAL)	
380-15296-3	AIEA WELLS PUMPS 1&2 (260)	Total/NA	Drinking Water	8015 Gas (Purgeable) LL (EAL)	
380-15296-5	TB AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	8015 Gas (Purgeable) LL (EAL)	
380-15296-6	TB AIEA WELLS PUMPS 1&2 (260)	Total/NA	Drinking Water	8015 Gas (Purgeable) LL (EAL)	
22VG39H04B	Method Blank	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	
22VG39H04L	Lab Control Sample	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	
22H117-01M	Matrix Spike	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	
22H117-01S	Matrix Spike Duplicate	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	

Prep Batch: O-38082_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-15296-1	AIEA GULCH WELLS PUMP 1	Total/NA	Drinking Water	EPA_625	
380-15296-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	EPA_625	
380-15296-3	AIEA WELLS PUMPS 1&2 (260)	Total/NA	Drinking Water	EPA_625	
99018-B1	Method Blank	Total/NA	water	EPA_625	
99018-BS1	Lab Control Sample	Total/NA	water	EPA_625	
99018-BS2	Lab Control Sample Dup	Total/NA	water	EPA_625	

Lab Chronicle

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

Job ID: 380-15296-1

Client Sample ID: AIEA GULCH WELLS PUMP 1

Lab Sample ID: 380-15296-1

Date Collected: 08/08/22 10:02

Matrix: Drinking Water

Date Received: 08/09/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			13248	OTM3	EA MON	08/15/22 10:02
Total/NA	Analysis	525.2		1	14688	UPAC	EA MON	08/24/22 11:39
Total/NA	Prep	EPA_625		1	O-38082_P			08/11/22 00:00
Total/NA	Analysis	625 PAH Physis LL (EAL) + TICs		1	O-38082	YC		08/14/22 10:07
Total/NA	Analysis	8015 Diesel LL (EAL) and Motor Oil		1	22DSH019W	SDees		08/13/22 08:37
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	22VG39H04	SCerva		08/11/22 18:28

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-15296-2

Date Collected: 08/08/22 10:29

Matrix: Drinking Water

Date Received: 08/09/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			13248	OTM3	EA MON	08/15/22 10:02
Total/NA	Analysis	525.2		1	14688	UPAC	EA MON	08/24/22 12:00
Total/NA	Prep	EPA_625		1	O-38082_P			08/11/22 00:00
Total/NA	Analysis	625 PAH Physis LL (EAL) + TICs		1	O-38082	YC		08/14/22 11:51
Total/NA	Analysis	8015 Diesel LL (EAL) and Motor Oil		1	22DSH019W	SDees		08/13/22 08:56
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	22VG39H04	SCerva		08/11/22 17:52

Client Sample ID: AIEA WELLS PUMPS 1&2 (260)

Lab Sample ID: 380-15296-3

Date Collected: 08/08/22 09:31

Matrix: Drinking Water

Date Received: 08/09/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			13248	OTM3	EA MON	08/15/22 10:02
Total/NA	Analysis	525.2		1	14688	UPAC	EA MON	08/24/22 12:20
Total/NA	Prep	EPA_625		1	O-38082_P			08/11/22 00:00
Total/NA	Analysis	625 PAH Physis LL (EAL) + TICs		1	O-38082	YC		08/14/22 13:35
Total/NA	Analysis	8015 Diesel LL (EAL) and Motor Oil		1	22DSH019W	SDees		08/13/22 09:14
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	22VG39H04	SCerva		08/11/22 17:16

Client Sample ID: TB AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-15296-5

Date Collected: 08/08/22 10:29

Matrix: Drinking Water

Date Received: 08/09/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	22VG39H04	SCerva		08/11/22 16:39

Eurofins Eaton Monrovia

Lab Chronicle

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

Job ID: 380-15296-1

Client Sample ID: TB AIEA WELLS PUMPS 1&2 (260)

Lab Sample ID: 380-15296-6

Date Collected: 08/08/22 09:31

Matrix: Drinking Water

Date Received: 08/09/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	22VG39H04	SCerva		08/11/22 16:03

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



Accreditation/Certification Summary

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

Job ID: 380-15296-1

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
525.2	525.2	Drinking Water	2,4'-DDD
525.2	525.2	Drinking Water	2,4'-DDE
525.2	525.2	Drinking Water	2,4'-DDT
525.2	525.2	Drinking Water	2,4-Dinitrotoluene
525.2	525.2	Drinking Water	2,6-Dinitrotoluene
525.2	525.2	Drinking Water	4,4'-DDD
525.2	525.2	Drinking Water	4,4'-DDE
525.2	525.2	Drinking Water	4,4'-DDT
525.2	525.2	Drinking Water	Acenaphthene
525.2	525.2	Drinking Water	Acenaphthylene
525.2	525.2	Drinking Water	Acetochlor
525.2	525.2	Drinking Water	alpha-BHC
525.2	525.2	Drinking Water	alpha-Chlordane
525.2	525.2	Drinking Water	Anthracene
525.2	525.2	Drinking Water	Benz(a)anthracene
525.2	525.2	Drinking Water	Benzo[b]fluoranthene
525.2	525.2	Drinking Water	Benzo[g,h,i]perylene
525.2	525.2	Drinking Water	Benzo[k]fluoranthene
525.2	525.2	Drinking Water	beta-BHC
525.2	525.2	Drinking Water	Bromacil
525.2	525.2	Drinking Water	Butylbenzylphthalate
525.2	525.2	Drinking Water	Caffeine
525.2	525.2	Drinking Water	Chlorobenzilate
525.2	525.2	Drinking Water	Chloroneb
525.2	525.2	Drinking Water	Chlorothalonil (Draconil, Bravo)
525.2	525.2	Drinking Water	Chlorpyrifos
525.2	525.2	Drinking Water	Chrysene
525.2	525.2	Drinking Water	delta-BHC
525.2	525.2	Drinking Water	Diazinon (Qualitative)
525.2	525.2	Drinking Water	Dibenz(a,h)anthracene
525.2	525.2	Drinking Water	Diclorvos (DDVP)
525.2	525.2	Drinking Water	Diethylphthalate
525.2	525.2	Drinking Water	Dimethoate
525.2	525.2	Drinking Water	Dimethylphthalate
525.2	525.2	Drinking Water	Di-n-butyl phthalate
525.2	525.2	Drinking Water	Di-n-octyl phthalate
525.2	525.2	Drinking Water	Endosulfan I (Alpha)
525.2	525.2	Drinking Water	Endosulfan II (Beta)
525.2	525.2	Drinking Water	Endosulfan sulfate
525.2	525.2	Drinking Water	Endrin aldehyde
525.2	525.2	Drinking Water	EPTC
525.2	525.2	Drinking Water	Fluoranthene
525.2	525.2	Drinking Water	Fluorene
525.2	525.2	Drinking Water	gamma-Chlordane
525.2	525.2	Drinking Water	Indeno[1,2,3-cd]pyrene

Accreditation/Certification Summary

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

Job ID: 380-15296-1

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	Drinking Water	Isophorone
525.2	525.2	Drinking Water	Malathion
525.2	525.2	Drinking Water	Molinate
525.2	525.2	Drinking Water	Naphthalene
525.2	525.2	Drinking Water	Parathion
525.2	525.2	Drinking Water	Pendimethalin (Penoxaline)
525.2	525.2	Drinking Water	Phenanthrene
525.2	525.2	Drinking Water	Pyrene
525.2	525.2	Drinking Water	Terbacil
525.2	525.2	Drinking Water	Terbutylazine
525.2	525.2	Drinking Water	Thiobencarb
525.2	525.2	Drinking Water	Total Permethrin (mixed isomers)
525.2	525.2	Drinking Water	trans-Nonachlor
525.2	525.2	Drinking Water	Trifluralin

Method Summary

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

Job ID: 380-15296-1

Method	Method Description	Protocol	Laboratory
525.2	Semivolatile Organic Compounds (GC/MS)	EPA	EA MON
625	EPA 625 Base/Neutral and Acid Organics i	EPA	
8015	8015 - TPH DRO/ORO	EPA	
8015B	SW846 8015B Gasoline Range Organics	SW846	
525.2	Extraction of Semivolatile Compounds	EPA	EA MON

Protocol References:

EPA = US Environmental Protection Agency

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



Sample Summary

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

Job ID: 380-15296-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-15296-1	AIEA GULCH WELLS PUMP 1	Drinking Water	08/08/22 10:02	08/09/22 10:30
380-15296-2	AIEA GULCH WELLS PUMP 2	Drinking Water	08/08/22 10:29	08/09/22 10:30
380-15296-3	AIEA WELLS PUMPS 1&2 (260)	Drinking Water	08/08/22 09:31	08/09/22 10:30
380-15296-5	TB AIEA GULCH WELLS PUMP 2	Drinking Water	08/08/22 10:29	08/09/22 10:30
380-15296-6	TB AIEA WELLS PUMPS 1&2 (260)	Drinking Water	08/08/22 09:31	08/09/22 10:30

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

Date: 08-31-2022
EMAX Batch No.: 22H117

Attn: Jackie Contreras

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

Subject: Laboratory Report
Project: 380-15296

Enclosed is the Laboratory report for samples received on 08/10/22.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
380-15296-1	H117-01	08/08/22	WATER	TPH GASOLINE TPH DIESEL & MOTOR OIL
380-15296-2	H117-02	08/08/22	WATER	TPH GASOLINE TPH DIESEL & MOTOR OIL
380-15296-3	H117-03	08/08/22	WATER	TPH GASOLINE TPH DIESEL & MOTOR OIL
380-15296-4	H117-04	08/08/22	WATER	TPH GASOLINE
380-15296-5	H117-05	08/08/22	WATER	TPH GASOLINE

The results are summarized on the following pages.

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

Sincerely yours,

Caspar J. Pang
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



22H17



Environment Testing
 America

Client Information (Sub Contract Lab)

Client Contact: Frank, Debbie L
 Shipping/Receiving: Debbie.Frank@eurofins.com
 Company: EMAX Laboratories Inc
 Address: 3051 Fujita Street,
 City: Torrance
 State, Zip: CA, 90505
 Phone: PO #:
 Email: WO #:
 Project Name: RED-HILL
 Project #: 38001111
 Site: SSO-W#:
 Honolulu BWS Sites

Sampler: Frank, Debbie L
 Phone: Debbie.Frank@eurofins.com
 E-Mail: Debbie.Frank@eurofins.com
 State - Hawaii
 Accreditations Required (See note):

Carrier Tracking No(s):
 State of Origin: Hawaii

COC No.: 380-16800-1
 Page: Page 1 of 1
 Job #: 380-15296-1

Due Date Requested: 8/23/2022
 TAT Requested (days):

Analysis Requested

Field Filtered Sample (Yes or No)
 Perform MS/MS (Yes or No)
 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

Preservation Codes:
 A - HCL
 B - NaOH
 C - Zn Acetate
 D - Nitric Acid
 E - NaHSO4
 F - MeOH
 G - Amnol
 H - Ascorbic Acid
 I - Ice
 J - DI Water
 K - EDTA
 L - EDTA
 M - Hexane
 N - None
 O - AsNaO2
 P - Na2O4S
 Q - Na2SO3
 R - Na2S2O3
 S - H2SO4
 T - TSP Decacalytrate
 U - Acetone
 V - MCAA
 W - pH 4-5
 Y - Trizma
 Z - other (specify)
 Other:

Sample Identification - Client ID (Lab ID)

Sample ID	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	MATRIX (W=water, S=solid, O=water/oil, BT=Tris, A=AI)	Field Filtered Sample (Yes or No)	Perform MS/MS (Yes or No)	Substrates	Total Number of Containers	Special Instructions/Note:
1 AIEA GULCH WELLS PUMP 1 (331-201-TP071) (380-15296-1)	8/8/22	10:02	Hawaiian	Water	X	X		6	See Attached Instructions
2 AIEA GULCH WELLS PUMP 2 (331-202-TP072) (380-15296-2)	8/8/22	10:29	Hawaiian	Water	X	X		5	See Attached Instructions
3 AIEA WELLS PUMPS 1&2 (260) (331-203-TP400) (380-15296-3)	8/8/22	09:31	Hawaiian	Water	X	X		6	See Attached Instructions
4 TB AIEA GULCH WELLS PUMP 2 (331-202-TP072) (380-15296)	8/8/22	10:29	Hawaiian	Water	X	X		6	See Attached Instructions
5 TB AIEA WELLS PUMPS 1&2 (260) (331-203-TP400) (380-15296)	8/8/22	09:31	Hawaiian	Water	X	X		6	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/substrate being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other/instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to Eurofins Eaton Analytical, LLC.

Possible Hazard Identification

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

Empty Kit Relinquished by: [Signature]
 Date/Time: 8/10/22 12:30
 Company: EGA

Relinquished by: [Signature]
 Date/Time: 8/10/22 12:30
 Company: EGA

Relinquished by: [Signature]
 Date/Time: 8/10/22 12:30
 Company: EGA

Custody Seals Intact: Custody Seal No.:
 REPORT ID: 22H17
 Cooler Temperature(s) °C and Other Remarks: 1.2
 Page 2 of 27



Type of Delivery <input type="checkbox"/> Fedex <input type="checkbox"/> UPS <input type="checkbox"/> GSO <input type="checkbox"/> Others <input type="checkbox"/> EMAX Courier <input checked="" type="checkbox"/> Client Delivery	Airbill / Tracking Number	ECN <u>22H117</u> Recipient <u>Man Ramos</u> Date <u>8/10/22</u> Time <u>1230</u>
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COC INSPECTION

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

PACKAGING INSPECTION

Container	<input checked="" type="checkbox"/> Cooler	<input type="checkbox"/> Box	<input type="checkbox"/> Other
Condition	<input type="checkbox"/> Custody Seal	<input type="checkbox"/> Intact	<input type="checkbox"/> Damaged
Packaging	<input checked="" type="checkbox"/> Bubble Pack	<input type="checkbox"/> Styrofoam	<input type="checkbox"/> Popcorn
Temperatures (Cool, ≤6 °C but not frozen)	<input checked="" type="checkbox"/> Cooler 1 <u>1.2</u> °C	<input type="checkbox"/> Cooler 2 _____ °C	<input type="checkbox"/> Cooler 3 _____ °C
	<input type="checkbox"/> Cooler 6 _____ °C	<input type="checkbox"/> Cooler 7 _____ °C	<input type="checkbox"/> Cooler 8 _____ °C
Thermometer:	A - S/N _____	B - S/N <u>210760237</u>	C - S/N _____
			<input checked="" type="checkbox"/> Sufficient <input type="checkbox"/> _____
			<input type="checkbox"/> Cooler 4 _____ °C <input type="checkbox"/> Cooler 5 _____ °C
			<input type="checkbox"/> Cooler 9 _____ °C <input type="checkbox"/> Cooler 10 _____ °C

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

DISCREPANCIES

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
<u>45</u>	<u>19120</u>	<u>D7</u>	<u>Date is 8/3/22. (has 2 dates)</u>	<u>A-1</u>
<i>[Large handwritten scribble]</i>				

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

NOTES/OBSERVATIONS:

SAMPLE MATRIX IS DRINKING WATER? YES NO

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

REVIEWS:

Sample Labeling <u>Howin Zamora</u>	SRF <u>[Signature]</u>	PM <u>[Signature]</u>
Date <u>8/10/22</u>	Date <u>8/10/22</u>	Date <u>8/11/22</u>

REPORT ID: 22H117

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

380-15296

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

SDG#: 22H117



CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-15296

SDG : 22H117

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

A total of five(5) water samples were received on 08/10/22 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. VG39H04B - 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. VG39H04L/VG39H04C 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 H117-01M/H117-01S. 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 : 380-15296
 SDG NO. : 22H117
 Instrument ID : GCT039

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
									WATER
MBLK1W	VG39H04B	1	NA	08/11/2214:14	08/11/2214:14	EH11005A	EH11004A	22VG39H04	Method Blank
LCS1W	VG39H04L	1	NA	08/11/2214:50	08/11/2214:50	EH11006A	EH11004A	22VG39H04	Lab Control Sample (LCS)
LCD1W	VG39H04C	1	NA	08/11/2215:27	08/11/2215:27	EH11007A	EH11004A	22VG39H04	LCS Duplicate
380-15296-5	H117-05	1	NA	08/11/2216:03	08/11/2216:03	EH11008A	EH11004A	22VG39H04	Field Sample
380-15296-4	H117-04	1	NA	08/11/2216:39	08/11/2216:39	EH11009A	EH11004A	22VG39H04	Field Sample
380-15296-3	H117-03	1	NA	08/11/2217:16	08/11/2217:16	EH11010A	EH11004A	22VG39H04	Field Sample
380-15296-2	H117-02	1	NA	08/11/2217:52	08/11/2217:52	EH11011A	EH11004A	22VG39H04	Field Sample
380-15296-1	H117-01	1	NA	08/11/2218:28	08/11/2218:28	EH11012A	EH11004A	22VG39H04	Field Sample
380-15296-1MS	H117-01M	1	NA	08/11/2219:04	08/11/2219:04	EH11013A	EH11004A	22VG39H04	Matrix Spike Sample (MS)
380-15296-1MSD	H117-01S	1	NA	08/11/2219:40	08/11/2219:40	EH11014A	EH11004A	22VG39H04	MS Duplicate (MSD)

FN - Filename
 % Moist - Percent Moisture



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SAMPLE RESULTS

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

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 08/08/22 10:02
Project     : 380-15296                   Date Received: 08/10/22
Batch No.   : 22H117                       Date Extracted: 08/11/22 18:28
Sample ID   : 380-15296-1                 Date Analyzed: 08/11/22 18:28
Lab Samp ID: H117-01                       Dilution Factor: 1
Lab File ID: EH11012A                       Matrix: WATER
Ext Btch ID: 22VG39H04                     % Moisture: NA
Calib. Ref.: EH11004A                     Instrument ID: 39
=====

```

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

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0338	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

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

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 08/08/22 10:29
Project     : 380-15296                   Date Received: 08/10/22
Batch No.   : 22H117                       Date Extracted: 08/11/22 17:52
Sample ID   : 380-15296-2                 Date Analyzed: 08/11/22 17:52
Lab Samp ID: H117-02                       Dilution Factor: 1
Lab File ID: EH11011A                       Matrix: WATER
Ext Btch ID: 22VG39H04                       % Moisture: NA
Calib. Ref.: EH11004A                       Instrument ID: 39
=====

```

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

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0345	0.0400	86	60-140

Notes:

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

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

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

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 08/08/22 09:31
Project     : 380-15296                   Date Received: 08/10/22
Batch No.   : 22H117                       Date Extracted: 08/11/22 17:16
Sample ID   : 380-15296-3                 Date Analyzed: 08/11/22 17:16
Lab Samp ID : H117-03                      Dilution Factor: 1
Lab File ID : EH11010A                     Matrix: WATER
Ext Btch ID : 22VG39H04                   % Moisture: NA
Calib. Ref.: EH11004A                     Instrument ID: 39
=====

```

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

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0354	0.0400	88	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: 08/08/22 10:29
Project : 380-15296 Date Received: 08/10/22
Batch No. : 22H117 Date Extracted: 08/11/22 16:39
Sample ID : 380-15296-4 Date Analyzed: 08/11/22 16:39
Lab Samp ID: H117-04 Dilution Factor: 1
Lab File ID: EH11009A Matrix: WATER
Ext Btch ID: 22VG39H04 % Moisture: NA
Calib. Ref.: EH11004A Instrument ID: 39
=====

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

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0355	0.0400	89	60-140

=====

Notes:

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

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

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

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 08/08/22 09:31
Project     : 380-15296                   Date Received: 08/10/22
Batch No.   : 22H117                       Date Extracted: 08/11/22 16:03
Sample ID   : 380-15296-5                 Date Analyzed: 08/11/22 16:03
Lab Samp ID: H117-05                       Dilution Factor: 1
Lab File ID: EH11008A                       Matrix: WATER
Ext Btch ID: 22VG39H04                       % Moisture: NA
Calib. Ref.: EH11004A                       Instrument ID: 39
=====

```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
GASOLINE	ND	0.020	0.010	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0352	0.0400	88	60-140

Notes:

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

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

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QC SUMMARIES

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

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 08/11/22 14:14
Project     : 380-15296                   Date Received: 08/11/22
Batch No.   : 22H117                       Date Extracted: 08/11/22 14:14
Sample ID   : MBLK1W                       Date Analyzed: 08/11/22 14:14
Lab Samp ID: VG39H04B                     Dilution Factor: 1
Lab File ID: EH11005A                     Matrix: WATER
Ext Btch ID: 22VG39H04                   % Moisture: NA
Calib. Ref.: EH11004A                     Instrument ID: 39
=====

```

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

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0349	0.0400	87	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 : 380-15296
BATCH NO. : 22H117
METHOD : 50308/8015B

MATRIX : WATER		% MOISTURE:NA
DILUTION FACTOR: 1	1	1
SAMPLE ID : MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID : VG39H04B	VG39H04L	VG39H04C
LAB FILE ID : EH11005A	EH11006A	EH11007A
DATE PREPARED : 08/11/22 14:14	08/11/22 14:50	08/11/22 15:27
DATE ANALYZED : 08/11/22 14:14	08/11/22 14:50	08/11/22 15:27
PREP BATCH : 22VG39H04	22VG39H04	22VG39H04
CALIBRATION REF: EH11004A	EH11004A	EH11004A

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	0.431	86	0.500	0.438	88	2	60-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0439	110	0.0400	0.0442	111	70-130

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

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-15296
BATCH NO. : 22H117
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: 380-15296-1	380-15296-1MS	380-15296-1MSD
LAB SAMPLE ID	: H117-01	H117-01M	H117-01S
LAB FILE ID	: EH11012A	EH11013A	EH11014A
DATE PREPARED	: 08/11/22 18:28	08/11/22 19:04	08/11/22 19:40
DATE ANALYZED	: 08/11/22 18:28	08/11/22 19:04	08/11/22 19:40
PREP BATCH	: 22VG39H04	22VG39H04	22VG39H04
CALIBRATION REF:	EH11004A	EH11004A	EH11004A

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	0.491	98	0.500	0.468	94	5	50-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0462	116	0.0400	0.0467	117	60-140

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

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-15296

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 22H117



CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-15296

SDG : 22H117

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

A total of three(3) water samples were received on 08/10/22 to be analyzed for Total Petroleum Hydrocarbons by Extraction in accordance with Method 3520C/8015B and project specific requirements.

Holding Time

Samples were analyzed within the prescribed holding time.

Calibration

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

Method Blank

Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. DSH019WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample

Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. DSH019WL/DSH019WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample

No matrix QC sample was provided on this SDG.

Surrogate

Surrogates were added on QC and field samples. For this SDG, 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 with the exception of those that were discussed within the associated QC parameter.

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SAMPLE RESULTS

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 08/08/22 10:02
Project     : 380-15296                   Date Received: 08/10/22
Batch No.   : 22H117                      Date Extracted: 08/11/22 13:30
Sample ID   : 380-15296-1                 Date Analyzed: 08/13/22 08:37
Lab Samp ID: 22H117-01                   Dilution Factor: 1
Lab File ID: LH12056A                     Matrix: WATER
Ext Btch ID: 22DSH019W                    % Moisture: NA
Calib. Ref.: LH12038A                     Instrument ID: D5
=====

```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)		
Diesel	ND	0.026	0.013		
Motor Oil	ND	0.052	0.026		
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT	
Bromobenzene	0.343	0.525	65	60-130	
Hexacosane	0.107	0.131	82	60-130	

Notes:

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

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount : 950ml Final Volume : 5ml
Prepared by : DLi Analyzed by : SDeeso

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 08/08/22 10:29
Project    : 380-15296                   Date Received: 08/10/22
Batch No.  : 22H117                       Date Extracted: 08/11/22 13:30
Sample ID  : 380-15296-2                 Date Analyzed: 08/13/22 08:56
Lab Samp ID: 22H117-02                   Dilution Factor: 1
Lab File ID: LH12057A                     Matrix: WATER
Ext Btch ID: 22DSH019W                    % Moisture: NA
Calib. Ref.: LH12038A                     Instrument ID: D5
=====

```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
Diesel	ND	0.027	0.014	
Motor Oil	ND	0.055	0.027	
SURROGATE PARAMETERS				
	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.368	0.545	68	60-130
Hexacosane	0.112	0.136	82	60-130

Notes:
Parameter H-C Range
Diesel C10-C24
Motor Oil C24-C36
Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.
Sample Amount : 920ml Final Volume : 5ml
Prepared by : DLi Analyzed by : SDeeso

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 08/08/22 09:31
Project    : 380-15296                   Date Received: 08/10/22
Batch No.  : 22H117                       Date Extracted: 08/11/22 13:30
Sample ID  : 380-15296-3                 Date Analyzed: 08/13/22 09:14
Lab Samp ID: 22H117-03                   Dilution Factor: 1
Lab File ID: LH12058A                     Matrix: WATER
Ext Btch ID: 22DSH019W                   % Moisture: NA
Calib. Ref.: LH12038A                   Instrument ID: D5
=====

```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
Diesel	ND	0.027	0.014	
Motor Oil	ND	0.054	0.027	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.323	0.540	60	60-130
Hexacosane	0.0972	0.135	72	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 : 930ml Final Volume : 5ml
Prepared by : DLi Analyzed by : SDeeso

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QC SUMMARIES

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

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=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 08/11/22 13:30
Project     : 380-15296                   Date Received: 08/11/22
Batch No.   : 22H117                       Date Extracted: 08/11/22 13:30
Sample ID   : MBLK1W                       Date Analyzed: 08/13/22 04:57
Lab Samp ID: DSH019WB                     Dilution Factor: 1
Lab File ID: LH12044A                     Matrix: WATER
Ext Btch ID: 22DSH019W                   % Moisture: NA
Calib. Ref.: LH12038A                     Instrument ID: D5
=====

```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
Diesel	ND	0.025	0.012	
Motor Oil	ND	0.050	0.025	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.320	0.500	64	60-130
Hexacosane	0.0974	0.125	78	60-130

Notes:

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

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

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

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-15296
BATCH NO. : 22H117
METHOD : 3520C/8015B

MATRIX : WATER % MOISTURE:NA
DILUTION FACTOR: 1 1
SAMPLE ID : MBLK1W LCS1W LCD1W
LAB SAMPLE ID : DSH019WB DSH019WL DSH019WC
LAB FILE ID : LH12044A LH12045A LH12046A
DATE PREPARED : 08/11/22 13:30 08/11/22 13:30 08/11/22 13:30
DATE ANALYZED : 08/13/22 04:57 08/13/22 05:15 08/13/22 05:33
PREP BATCH : 22DSH019W 22DSH019W 22DSH019W
CALIBRATION REF: LH12038A LH12038A LH12038A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Diesel	ND	2.50	2.51	100	2.50	2.41	96	4	50-130	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromobenzene	0.500	0.399	80	0.500	0.359	72	60-130
Hexacosane	0.125	0.118	94	0.125	0.130	104	60-130

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

August 17, 2022

Debbie Frank
 Eurofins Eaton Analytical
 750 Royal Oaks Drive
 Suite 100
 Monrovia, CA 91016-

Project Name: RED-HILL Project # 38001111 Job # 380-15296-1
 Physis Project ID: 1407003-268

Dear Debbie,


Enclosed are the analytical results for samples submitted to PHYSIS Environmental Laboratories, Inc. (PHYSIS) on 8/10/2022. A total of 3 samples were received for analysis in accordance with the attached chain of custody (COC). Per the COC, the samples were analyzed for:

Organics
Polynuclear Aromatic Hydrocarbons by EPA 625.1
Disalicylideneopropanediamine by EPA 625.1
Dibenzo [a,l] Pyrene w/ PAHs 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: 1407003-268

RED-HILL Project # 38001111 Job # 380-15296-1

Total Samples: 3

PHYSIS ID	Sample ID	Description	Date	Time	Matrix	Sample Type
99019	AIEA GULCH WELLS PUMP 331-201-TP071	(380-15296-1)	8/8/2022	10:02	Samplewater	Not Specified
99020	AIEA GULCH WELLS PUMP 331-202-TP072	(380-15296-2)	8/8/2022	10:29	Samplewater	Not Specified
99021	AIEA WELLS PUMP 1&2 (260331-203-TP400)	(380-15296-1)	8/8/2022	9:31	Samplewater	Not Specified



ABBREVIATIONS and ACRONYMS

QM	Quality Manual
QA	Quality Assurance
QC	Quality Control
MDL	method detection limit
RL	reporting limit
R1	project sample
R2	project sample replicate
MS1	matrix spike
MS2	matrix spike replicate
B1	procedural blank
B2	procedural blank replicate
BS1	blank spike
BS2	blank spike replicate
LCS1	laboratory control spike
LCS2	laboratory control spike replicate
LCM1	laboratory control material
LCM2	laboratory control material replicate
CRM1	certified reference material
CRM2	certified reference material replicate
RPD	relative percent difference
LMW	low molecular weight
HMW	high molecular weight

QUALITY ASSURANCE SUMMARY

LABORATORY BATCH: Physis' QM defines a laboratory batch as a group of 20 or fewer project samples of similar matrix, processed together under the same conditions and with the same reagents. QC samples are associated with each batch and were used to assess the validity of the sample analyses.

PROCEDURAL BLANK: Laboratory contamination introduced during method use is assessed through the preparation and analysis of procedural blanks is provided at a minimum frequency of one per batch.

ACCURACY: Accuracy of analytical measurements is the degree of closeness based on percent recovery calculations between measured values and the actual or true value and includes a combination of reproducibility error and systematic bias due to sampling and analytical operations. Accuracy of the project data was indicated by analysis of MS, BS, LCS, LCM, CRM, and/or surrogate spikes on a minimum frequency of one per batch. Physis' QM requires that 95% of the target compounds greater than 10 times the MDL be within the specified acceptance limits.

PRECISION: Precision is the agreement among a set of replicate measurements without assumption of knowledge of the true value and is based on RPD calculations between repeated values. Precision of the project data was determined by analysis of replicate MS₁/MS₂, BS₁/BS₂, LCS₁/LCS₂, LCM₁/LCM₂, CRM₁/CRM₂, surrogate spikes and/or replicate project sample analysis (R₁/R₂) on a minimum frequency of one per batch. Physis' QM requires that for 95% of the compounds greater than 10 times the MDL, the percent RPD should be within the specified acceptance range.

BLANK SPIKES: BS is the introduction of a known concentration of analyte into the procedural blank. BS demonstrates performance of the preparation and analytical methods on a clean matrix void of potential matrix related interferences. The BS is performed in laboratory deionized water, making these recoveries a better indicator of the efficiency of the laboratory method per se.

MATRIX SPIKES: MS is the introduction of a known concentration of analyte into a sample. MS samples demonstrate the effect a particular project sample matrix has on the accuracy of a measurement. Individually, MS samples also indicate the bias of analytical measurements due to chemical interferences inherent in the in the specific project sample spiked. Intrinsic target analyte concentration in the specific project sample can also significantly impact MS recovery.

CERTIFIED REFERENCE MATERIALS: CRMs are materials of various matrices for which analytical information has been determined and certified by a recognized authority. These are used to provide a quantitative assessment of the accuracy of an analytical method. CRMs provide evidence that the laboratory preparation and analysis produces results that are comparable to those obtained by an independent organization.

LABORATORY CONTROL MATERIAL: LCM is provided because a suitable natural seawater CRM is not available and can be used to indicate accuracy of the method. Physis' internal LCM is seawater collected at ~800 meters in the Southern California San Pedro Basin and can be used as a reference for background concentrations in clean, natural seawater for comparison to project samples.

LABORATORY CONTROL SPIKES: LCS is the introduction of a known concentration of analyte into Physis' LCM. LCS samples were employed to assess the effect the seawater matrix has on the accuracy of a measurement. LCS also indicate the bias of this method due to chemical interferences inherent in the in the seawater matrix. Intrinsic LCM concentration can also significantly impact LCS recovery.

SURROGATES: A surrogate is a pure analyte unlikely to be found in any project sample, behaves similarly to

the target analyte and most often used with organic analytical procedures. Surrogates are added in known concentration to all samples and are measured to indicate overall efficiency of the method including processing and analyses.

HOLDING TIME: Method recommended holding times are the length of time a project sample can be stored under specific conditions after collection and prior to analysis without significantly affecting the analyte's concentration. Holding times can be extended if preservation techniques are employed to reduce biodegradation, volatilization, oxidation, sorption, precipitation, and other physical and chemical processes.

SAMPLE STORAGE/RETENTION: In order to maintain chemical integrity prior to analysis, all samples submitted to Physis are refrigerated (liquids) or frozen (solids) upon receipt unless otherwise recommended by applicable methods. Solid samples are retained for 1 year from collection while liquid samples are retained until method recommended holding times elapse.

TOTAL/DISSOLVED FRACTION: In some instances, the results for the dissolved fraction may be higher than the total fraction for a particular analyte (e.g. trace metals). This is typically caused by the analytical variation for each result and indicates that the target analyte is primarily in the dissolved phase, within the sample.

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PHYSIS QUALIFIER CODES

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

CASE NARRATIVE

QUALIFIER NOTES

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

ND

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

BIANALYTICALS

REPORT

TERRA AURA
ENVIRONMENTAL LABORATORIES, INC.

Innovative Solutions for Nature

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Base/Neutral Extractable Compounds

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 99019-R1 AIEA GULCH WELLS PUMP 1 331-201 Matrix: Samplewater											
Disalicylideneprapanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38082	11-Aug-22	14-Aug-22
Sample ID: 99020-R1 AIEA GULCH WELLS PUMP 2 331-20 Matrix: Samplewater											
Disalicylideneprapanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38082	11-Aug-22	14-Aug-22
Sample ID: 99021-R1 AIEA WELLS PUMP 1&2 (260) 331-2 Matrix: Samplewater											
Disalicylideneprapanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38082	11-Aug-22	14-Aug-22

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 99019-R1	AIEA GULCH WELLS PUMP 1 331-201Matrix: Samplewater						Sampled: 08-Aug-22 10:02		Received:	10-Aug-22	
(d10-Acenaphthene)	EPA 625.1	% Recovery	80	1			Total		O-38082	11-Aug-22	14-Aug-22
(d10-Phenanthrene)	EPA 625.1	% Recovery	82	1			Total		O-38082	11-Aug-22	14-Aug-22
(d12-Chrysene)	EPA 625.1	% Recovery	71	1			Total		O-38082	11-Aug-22	14-Aug-22
(d12-Perylene)	EPA 625.1	% Recovery	72	1			Total		O-38082	11-Aug-22	14-Aug-22
(d8-Naphthalene)	EPA 625.1	% Recovery	76	1			Total		O-38082	11-Aug-22	14-Aug-22
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Benzo[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Benzo[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Benzo[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Dibenz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Dibenzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Dibenzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-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-38082	11-Aug-22	14-Aug-22
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22



Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 99020-R1	AIEA GULCH WELLS PUMP 2 331-20 Matrix: Samplewater						Sampled: 08-Aug-22 10:29		Received:	10-Aug-22	
(d10-Acenaphthene)	EPA 625.1	% Recovery	86	1			Total		O-38082	11-Aug-22	14-Aug-22
(d10-Phenanthrene)	EPA 625.1	% Recovery	90	1			Total		O-38082	11-Aug-22	14-Aug-22
(d12-Chrysene)	EPA 625.1	% Recovery	82	1			Total		O-38082	11-Aug-22	14-Aug-22
(d12-Perylene)	EPA 625.1	% Recovery	81	1			Total		O-38082	11-Aug-22	14-Aug-22
(d8-Naphthalene)	EPA 625.1	% Recovery	79	1			Total		O-38082	11-Aug-22	14-Aug-22
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Benzo[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Benzo[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Benzo[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Dibenz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Dibenzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Dibenzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-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-38082	11-Aug-22	14-Aug-22
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22



Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 99021-R1	AIEA WELLS PUMP 1&2 (260) 331-2 Matrix: Samplewater						Sampled: 08-Aug-22 9:31		Received: 10-Aug-22		
(d10-Acenaphthene)	EPA 625.1	% Recovery	60	1			Total		O-38082	11-Aug-22	14-Aug-22
(d10-Phenanthrene)	EPA 625.1	% Recovery	64	1			Total		O-38082	11-Aug-22	14-Aug-22
(d12-Chrysene)	EPA 625.1	% Recovery	72	1			Total		O-38082	11-Aug-22	14-Aug-22
(d12-Perylene)	EPA 625.1	% Recovery	75	1			Total		O-38082	11-Aug-22	14-Aug-22
(d8-Naphthalene)	EPA 625.1	% Recovery	56	1			Total		O-38082	11-Aug-22	14-Aug-22
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Benzo[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Benzo[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Benzo[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Dibenz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Dibenzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Dibenzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-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-38082	11-Aug-22	14-Aug-22
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38082	11-Aug-22	14-Aug-22

QUALITY CONTROL REPORT

TERRA ENVIRONMENTAL LABORATORIES, INC. AURA

Innovative Solutions for Nature

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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: 99018-B1		QAQC Procedural Blank			Matrix: BlankMatrix			Sampled:		Received:			
		Method: EPA 625.1			Batch ID: O-38082			Prepared: 08-Aug-22		Analyzed: 13-Aug-22			
Disalicylideneopropanediamine	Total	ND	1	0.05	0.1	µg/L							
Sample ID: 99018-BS1		QAQC Procedural Blank			Matrix: BlankMatrix			Sampled:		Received:			
		Method: EPA 625.1			Batch ID: O-38082			Prepared: 08-Aug-22		Analyzed: 13-Aug-22			
Disalicylideneopropanediamine	Total	34.6	1	0.05	0.1	µg/L	50	0	69	50 - 150%	PASS		
Sample ID: 99018-BS2		QAQC Procedural Blank			Matrix: BlankMatrix			Sampled:		Received:			
		Method: EPA 625.1			Batch ID: O-38082			Prepared: 08-Aug-22		Analyzed: 13-Aug-22			
Disalicylideneopropanediamine	Total	36.7	1	0.05	0.1	µg/L	50	0	73	50 - 150%	PASS	6	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: 99018-B1		QAQC Procedural Blank			Matrix: BlankMatrix		Sampled:		Received:		
		Method: EPA 625.1				Batch ID: O-38082	Prepared: o8-Aug-22		Analyzed: 13-Aug-22		
(d10-Acenaphthene)	Total	90	1			% Recovery	100	90	65 - 113%	PASS	
(d10-Phenanthrene)	Total	92	1			% Recovery	100	92	80 - 111%	PASS	
(d12-Chrysene)	Total	92	1			% Recovery	100	92	60 - 139%	PASS	
(d12-Perylene)	Total	93	1			% Recovery	100	93	36 - 161%	PASS	
(d8-Naphthalene)	Total	86	1			% Recovery	100	86	44 - 119%	PASS	
1-Methylnaphthalene	Total	ND	1	0.001	0.005						µg/L
1-Methylphenanthrene	Total	ND	1	0.001	0.005						µg/L
2,3,5-Trimethylnaphthalene	Total	ND	1	0.001	0.005						µg/L
2,6-Dimethylnaphthalene	Total	ND	1	0.001	0.005						µg/L
2-Methylnaphthalene	Total	ND	1	0.001	0.005						µg/L
Acenaphthene	Total	ND	1	0.001	0.005						µg/L
Acenaphthylene	Total	ND	1	0.001	0.005						µg/L
Anthracene	Total	ND	1	0.001	0.005						µg/L
Benz[a]anthracene	Total	ND	1	0.001	0.005						µg/L
Benzo[a]pyrene	Total	ND	1	0.001	0.005						µg/L
Benzo[b]fluoranthene	Total	ND	1	0.001	0.005						µg/L
Benzo[e]pyrene	Total	ND	1	0.001	0.005						µg/L
Benzo[g,h,i]perylene	Total	ND	1	0.001	0.005						µg/L
Benzo[k]fluoranthene	Total	ND	1	0.001	0.005						µg/L
Biphenyl	Total	ND	1	0.001	0.005						µg/L
Chrysene	Total	ND	1	0.001	0.005						µg/L
Dibenz[a,h]anthracene	Total	ND	1	0.001	0.005						µg/L
Dibenzo[a,l]pyrene	Total	ND	1	0.001	0.005						µg/L
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 CODEc	
							LEVEL	RESULT	% LIMITS	% LIMITS		
Sample ID: 99018-BS1		QAQC Procedural Blank			Matrix: BlankMatrix			Sampled:		Received:		
Method: EPA 625.1		Batch ID: O-38082			Prepared: o8-Aug-22		Analyzed: 13-Aug-22					
(d10-Acenaphthene)	Total	92	1			% Recovery	100	0	92	65 - 113%	PASS	
(d10-Phenanthrene)	Total	95	1			% Recovery	100	0	95	80 - 111%	PASS	
(d12-Chrysene)	Total	88	1			% Recovery	100	0	88	60 - 139%	PASS	
(d12-Perylene)	Total	98	1			% Recovery	100	0	98	36 - 161%	PASS	
(d8-Naphthalene)	Total	85	1			% Recovery	100	0	85	44 - 119%	PASS	
1-Methylnaphthalene	Total	0.444	1	0.001	0.005	µg/L	0.5	0	89	49 - 117%	PASS	
1-Methylphenanthrene	Total	0.528	1	0.001	0.005	µg/L	0.5	0	106	66 - 127%	PASS	
2,3,5-Trimethylnaphthalene	Total	0.455	1	0.001	0.005	µg/L	0.5	0	91	57 - 120%	PASS	
2,6-Dimethylnaphthalene	Total	0.447	1	0.001	0.005	µg/L	0.5	0	89	54 - 117%	PASS	
2-Methylnaphthalene	Total	0.446	1	0.001	0.005	µg/L	0.5	0	89	47 - 130%	PASS	
Acenaphthene	Total	0.442	1	0.001	0.005	µg/L	0.5	0	88	53 - 131%	PASS	
Acenaphthylene	Total	0.453	1	0.001	0.005	µg/L	0.5	0	91	43 - 140%	PASS	
Anthracene	Total	0.442	1	0.001	0.005	µg/L	0.5	0	88	58 - 135%	PASS	
Benz[a]anthracene	Total	0.503	1	0.001	0.005	µg/L	0.5	0	101	55 - 145%	PASS	
Benzo[a]pyrene	Total	0.427	1	0.001	0.005	µg/L	0.5	0	85	51 - 143%	PASS	
Benzo[b]fluoranthene	Total	0.622	1	0.001	0.005	µg/L	0.5	0	124	46 - 165%	PASS	
Benzo[e]pyrene	Total	0.543	1	0.001	0.005	µg/L	0.5	0	109	42 - 152%	PASS	
Benzo[g,h,i]perylene	Total	0.46	1	0.001	0.005	µg/L	0.5	0	92	63 - 133%	PASS	
Benzo[k]fluoranthene	Total	0.518	1	0.001	0.005	µg/L	0.5	0	104	56 - 145%	PASS	
Biphenyl	Total	0.445	1	0.001	0.005	µg/L	0.5	0	89	56 - 119%	PASS	
Chrysene	Total	0.455	1	0.001	0.005	µg/L	0.5	0	91	56 - 141%	PASS	
Dibenz[a,h]anthracene	Total	0.638	1	0.001	0.005	µg/L	0.5	0	128	55 - 150%	PASS	
Dibenzo[a,l]pyrene	Total	0.492	1	0.001	0.005	µg/L	0.5	0	98	50 - 150%	PASS	
Dibenzothiophene	Total	0.469	1	0.001	0.005	µg/L	0.5	0	94	75 - 113%	PASS	

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	0.53	1	0.001	0.005	µg/L	0.5	0	106	60 - 146%	PASS	
Fluorene	Total	0.492	1	0.001	0.005	µg/L	0.5	0	98	58 - 131%	PASS	
Indeno[1,2,3-cd]pyrene	Total	0.67	1	0.001	0.005	µg/L	0.5	0	134	50 - 151%	PASS	
Naphthalene	Total	0.433	1	0.001	0.005	µg/L	0.5	0	87	41 - 126%	PASS	
Perylene	Total	0.513	1	0.001	0.005	µg/L	0.5	0	103	48 - 141%	PASS	
Phenanthrene	Total	0.46	1	0.001	0.005	µg/L	0.5	0	92	67 - 127%	PASS	
Pyrene	Total	0.538	1	0.001	0.005	µg/L	0.5	0	108	54 - 156%	PASS	

Polynuclear Aromatic Hydrocarbons

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY		PRECISION		QA CODEc	
									%	LIMITS	%	LIMITS		
Sample ID: 99018-BS2		QAQC Procedural Blank			Matrix: BlankMatrix			Sampled:		Received:				
		Method: EPA 625.1			Batch ID: O-38082			Prepared: 08-Aug-22		Analyzed: 13-Aug-22				
(d10-Acenaphthene)	Total	89	1			% Recovery	100	0	89	65 - 113%	PASS	3	30	PASS
(d10-Phenanthrene)	Total	95	1			% Recovery	100	0	95	80 - 111%	PASS	0	30	PASS
(d12-Chrysene)	Total	89	1			% Recovery	100	0	89	60 - 139%	PASS	1	30	PASS
(d12-Perylene)	Total	97	1			% Recovery	100	0	97	36 - 161%	PASS	1	30	PASS
(d8-Naphthalene)	Total	82	1			% Recovery	100	0	82	44 - 119%	PASS	4	30	PASS
1-Methylnaphthalene	Total	0.437	1	0.001	0.005	µg/L	0.5	0	87	49 - 117%	PASS	2	30	PASS
1-Methylphenanthrene	Total	0.537	1	0.001	0.005	µg/L	0.5	0	107	66 - 127%	PASS	1	30	PASS
2,3,5-Trimethylnaphthalene	Total	0.438	1	0.001	0.005	µg/L	0.5	0	88	57 - 120%	PASS	3	30	PASS
2,6-Dimethylnaphthalene	Total	0.439	1	0.001	0.005	µg/L	0.5	0	88	54 - 117%	PASS	1	30	PASS
2-Methylnaphthalene	Total	0.442	1	0.001	0.005	µg/L	0.5	0	88	47 - 130%	PASS	1	30	PASS
Acenaphthene	Total	0.429	1	0.001	0.005	µg/L	0.5	0	86	53 - 131%	PASS	2	30	PASS
Acenaphthylene	Total	0.447	1	0.001	0.005	µg/L	0.5	0	89	43 - 140%	PASS	2	30	PASS
Anthracene	Total	0.449	1	0.001	0.005	µg/L	0.5	0	90	58 - 135%	PASS	2	30	PASS
Benz[a]anthracene	Total	0.501	1	0.001	0.005	µg/L	0.5	0	100	55 - 145%	PASS	1	30	PASS
Benzo[a]pyrene	Total	0.422	1	0.001	0.005	µg/L	0.5	0	84	51 - 143%	PASS	1	30	PASS
Benzo[b]fluoranthene	Total	0.621	1	0.001	0.005	µg/L	0.5	0	124	46 - 165%	PASS	0	30	PASS
Benzo[e]pyrene	Total	0.541	1	0.001	0.005	µg/L	0.5	0	108	42 - 152%	PASS	1	30	PASS
Benzo[g,h,i]perylene	Total	0.457	1	0.001	0.005	µg/L	0.5	0	91	63 - 133%	PASS	1	30	PASS
Benzo[k]fluoranthene	Total	0.51	1	0.001	0.005	µg/L	0.5	0	102	56 - 145%	PASS	2	30	PASS
Biphenyl	Total	0.431	1	0.001	0.005	µg/L	0.5	0	86	56 - 119%	PASS	3	30	PASS
Chrysene	Total	0.451	1	0.001	0.005	µg/L	0.5	0	90	56 - 141%	PASS	1	30	PASS
Dibenz[a,h]anthracene	Total	0.642	1	0.001	0.005	µg/L	0.5	0	128	55 - 150%	PASS	0	30	PASS
Dibenzo[a,l]pyrene	Total	0.52	1	0.001	0.005	µg/L	0.5	0	104	50 - 150%	PASS	6	30	PASS
Dibenzothiophene	Total	0.473	1	0.001	0.005	µg/L	0.5	0	95	75 - 113%	PASS	1	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		
Fluoranthene	Total	0.546	1	0.001	0.005	µg/L	0.5	0	109	60 - 146%	PASS	3	30	PASS
Fluorene	Total	0.481	1	0.001	0.005	µg/L	0.5	0	96	58 - 131%	PASS	2	30	PASS
Indeno[1,2,3-cd]pyrene	Total	0.679	1	0.001	0.005	µg/L	0.5	0	136	50 - 151%	PASS	1	30	PASS
Naphthalene	Total	0.413	1	0.001	0.005	µg/L	0.5	0	83	41 - 126%	PASS	5	30	PASS
Perylene	Total	0.5	1	0.001	0.005	µg/L	0.5	0	100	48 - 141%	PASS	3	30	PASS
Phenanthrene	Total	0.464	1	0.001	0.005	µg/L	0.5	0	93	67 - 127%	PASS	1	30	PASS
Pyrene	Total	0.552	1	0.001	0.005	µg/L	0.5	0	110	54 - 156%	PASS	2	30	PASS

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PHYSICS

TENTATIVELY

IDENTIFIED COMPOUNDS

ENVIRONMENTAL LABORATORIES, INC.

Innovative Solutions for Nature

Sample ID: 99019

RT	Area Pct	Concentration (ng/L)	Library/ID	Cas Number	Match Qual
32.6278	8.5267	1111	Anthracene-D10	1517-22-2	96
14.9650	1.5635	204	Cyclohexane, 1,2,4,5-tetraethyl-, (1.alpha.,2.alpha.,4.alpha.,5.alpha.)-	61142-24-3	84
43.1555	1.5625	204	Terephthalic acid, isobutyl butyl ester	1000323-56-2	93

Concentration estimated using the response for Anthracene-d10

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Sample ID: 99020

RT	Area Pct	Concentration (ng/L)	Library/ID	Cas Number	Match Qual
32.6274	6.7439	1111	Anthracene-D10-	1719-06-8	96
14.9638	1.6960	279	3-Hexene, 3-ethyl-2,5-dimethyl-	62338-08-3	83
43.1581	1.6630	274	Terephthalic acid, isobutyl butyl ester	1000323-56-2	94
14.8039	0.8527	140	Cyclohexane, 1,2,4,5-tetraethyl-, (1.alpha.,2.alpha.,4.alpha.,5.alpha.)-	61142-24-3	85
64.5524	0.7614	125	1,4-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	6422-86-2	96
15.6843	0.7199	119	3-Octene, 2,2-dimethyl-	86869-76-3	82
10.0204	0.6083	100	Cyclopropane, 1,1,2,3-tetramethyl-	74752-93-5	87

Concentration estimated using the response for Anthracene-d10

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Sample ID: 99021

RT	Area Pct	Concentration (ng/L)	Library/ID	Cas Number	Match Qual
32.6281	7.1993	1111	Anthracene-D10-	1719-06-8	96
43.1582	1.6093	248	Terephthalic acid, isobutyl butyl ester	1000323-56-2	94
14.9641	1.6050	248	Cyclohexane, 1,2,4,5-tetraethyl-, (1.alpha.,2.alpha.,4.alpha.,5.alpha.)-	61142-24-3	85
10.0204	1.0291	159	Cyclopropane, 1,1,2,3-tetramethyl-	74752-93-5	88
10.4530	0.7817	121	1-Octanol, 2-butyl-	735273	88

Concentration estimated using the response for Anthracene-d10

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Sample ID: Lab Blank Batch O-38082

RT	Area Pct	Concentration (ng/L)	Library/ID	Cas Number	Match Qual
32.6327	3.4871	1111	Anthracene-D10-	1719-06-8	97
10.7546	3.7523	1196	Benzaldehyde, 2-hydroxy-	90-02-8	98
60.7614	3.4189	1089	N,N'-Bis(salicylidene)-1,3-propanediamine	120-70-7	97
19.8094	1.1001	351	Phenol, 2,6-bis(1,1-dimethylethyl)-	128-39-2	99
15.3255	1.0310	329	Phenol, p-tert-butyl-	98-54-4	96
14.9648	0.7197	229	Cyclohexane, 1,2,4,5-tetraethyl-, (1.alpha.,2.alpha.,4.alpha.,5.alpha.)-	61142-24-3	85
64.5556	0.5382	172	1,4-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	6422-86-2	97
10.0206	0.4824	154	Cyclopropane, 1,1,2,3-tetramethyl-	74752-93-5	89

Concentration estimated using the response for Anthracene-d10



PERFORMANCE CHAIN OF CUSTODY

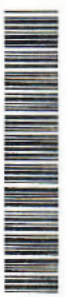
TERRA ENVIRONMENTAL LABORATORIES, INC. AURA

Innovative Solutions for Nature

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Monrovia, CA (Suite 100)
 750 Royal Oaks Drive Suite 100
 Monrovia, CA 91016
 Phone: 626-396-1100

Chain of Custody Record



Client Information (Sub Contract Lab)

Client Contact: **Frank, Debbie L** Lab Pk.: **Debbie L**

Shipping/Receiving: **Debbie.Frank@eurofins.com** E-Mail: **Debbie.Frank@eurofins.com**

Company: **Physis Environmental Laboratories** State of Origin: **Hawaii**

Address: **1904 Wright Circle,** Accreditations Required (See note): **State - Hawaii**

City: **Anaheim** Due Date Requested: **8/23/2022**

State, Zip: **CA, 92806** TAT Requested (days):

Phone: **PO #:**

Email: **WO #:**

Project Name: **RED-HILL** Project #: **38001111**

Site: **Honolulu BWS Sites** SSOV#:

Analysis Requested

Field Filtered Sample (Yes or No)

Perform MS/MSD (Yes or No)

SUB (626 PAH Physis LL (EAL) + TICs) / Physis LL (EAL) + TICs

COCC No: **390-16801_1**

Page: **Page 1 of 1**

Job #: **390-15296-1**

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	MATRIX (Water, Seawater, Oil, BT-Tissue, Acid)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested	Total Number of Containers	Special Instructions/Note:
AIEA GULCH WELLS PUMP 1 (331-201-T-P071) (380-15296-1)	8/8/22	10:02	Water	Water	X	X		4	See Attached Instructions
AIEA GULCH WELLS PUMP 2 (331-202-T-P072) (380-15296-2)	8/8/22	10:29	Water	Water	X	X		4	See Attached Instructions
AIEA WELLS PUMPS 1&2 (260) (331-203-TP400) (380-15296-3)	8/8/22	09:31	Water	Water	X	X		4	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/matrix being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to Eurofins Eaton Analytical, LLC.

Possible Hazard Identification

Unconfirmed

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

Empty Kit Relinquished by: **Date: 8/10/22 1419** Company: **Company**

Relinquished by: **Date/Time: 8/10/22 1419** Company: **Company**

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

Custody Seals Intact: **Δ Yes Δ No** Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

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

Return To Client Disposal By Lab Archive For **Months**

Special Instructions/OC Requirements:

Method of Shipment:

Received by: **Received by: [Signature]** Date/Time: **8/10/22 1419** Company: **Company**

Received by: **Received by: [Signature]** Date/Time: **8/10/22 1419** Company: **Company**

Project Iteration ID: 1407003-268
 Client Name: Eurofins Eaton Analytical
 Project Name: RED-HILL Project # 38001111
 Job # 380-15296-1
 COC Page Number: 2 of 2
 Bottle Label Color: NA

Sample Receipt Summary

Receiving Info

1. Initials Received By: RGH
2. Date Received: 8/10/22
3. Time Received: 1419
4. Client Name: Eurofins
5. Courier Information: (Please circle)
 - Client
 - UPS
 - Area Fast
 - DRS
 - FedEx
 - GSO/GLS
 - Ontrac
 - PAMS
 - PHYSIS Driver:
 - i. Start Time: _____
 - ii. End Time: _____
 - iii. Total Mileage: _____
 - iv. Number of Pickups: _____
6. Container Information: (Please put the # of containers or circle none)
 - Cooler
 - Styrofoam Cooler
 - Boxes
 - None
 - Carboy(s)
 - Carboy Trash Can(s)
 - Carboy Cap(s)
 - Other _____
7. What type of ice was used: (Please circle any that apply)
 - Wet Ice
 - Blue Ice
 - Dry Ice
 - Water
 - None
8. Randomly Selected Samples Temperature (°C): 0.8 Used I/R Thermometer # 1-2

Inspection Info

1. Initials Inspected By: RGH

Sample Integrity Upon Receipt:

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


Notes:

Monrovia, CA (Suite 100)

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

Chain of Custody Record

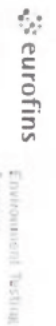


Client Information		Sampler: L. BAILEY	Lab PM: Frank, Debbie L	Carrier Tracking No(s)	COC No: 380-9748-2757.1						
Client Contact: Dr. Ron Fenstemacher		Phone: 1-808-748-5840	E-Mail: Debbie.Frank@et.eurofinsus.com	State of Origin	Page: Page 1 of 3						
Company: City & County of Honolulu		PWSID:	Analysis Requested		Job #						
Address: 630 South Beretania Street Chemistry Lab		Due Date Requested:			 380-15296 COC	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):	SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL) SUBCONTRACT - 8015 Diesel LL (EAL) and Motor Oil 525.2_PREC - (MOD) 525plus Plus TICs SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)								
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/HBWS Sites Event Desc: RUSH Weekly 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 Filtered SD ()	Special Instructions/Note:			
				Preservation Code:		R	R	RA	RA		
AIEA GULCH WELLS PUMP 1 (331-201-TP071)		08/08/2022	1002	G	Water		X	X	X	X	
AIEA GULCH WELLS PUMP 2 (331-202-TP072)		8/08/2022	1029	G	Water		X	X	X	X	
AIEA WELLS PUMPS1&2(260)331-203-TP400		8/8/2022	0931	G	Water		X	X	X	X	1 OUT OF 2 8015 GAS TB ARRIVED BPL/KEN - GR 08/09/22
HALAWA SHAFT (331-241-TP401)					Water						
HALAWA WELLS UNITS1&2(331-206-TP065)					Water						
MOANALUA WELLS (331-223-TP202)					Water						
AIEA GULCH WELLS PUMP 1 (331-201-TP071)					Water						
AIEA GULCH WELLS PUMP 2 (331-202-TP072)					Water						
AIEA WELLS PUMPS1&2(260)331-203-TP400					Water						
HALAWA SHAFT (331-241-TP401)					Water						
HALAWA WELLS UNITS1&2(331-206-TP065)					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: L. BAILEY		Date/Time: 08-08-2022 1400		Company: HBWS		Received by: G. REITNER		Date/Time: 08/19/2022 10:50		Company: EEA	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:		Company:	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:		Company:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:							

Monrovia, CA (Suite 100)

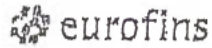
750 Royal Oaks Drive Suite 100
 Monrovia, CA 91016
 Phone: 626-386-1100

Chain of Custody Record



Client Information		Sampler: L. BAILEY	Lab PM: Frank, Debbie L	Carrier Tracking No(s):	COC No: 380-9748-2757.3
Client Contact: Dr. Ron Fenstermacher		Phone: 1.808.748.8840	E-Mail: Debbie.Frank@et.eurofins.com	State of Origin:	Page 3 of 3
Company: City & County of Honolulu		Due Date Requested:	PWSID:	Analysis Requested	
Address: 630 South Beretania Street Chemistry Lab		TAT Requested (days):	SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs		
City: Honolulu		Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)		
State Zip: HI, 96843		PO #: C20525101 exp 05312023	SUBCONTRACT - 8015 Diesel LL (EAL) and Motor Oil		
Phone: 808-748-5091(Tel)		WC #:	525.2_PREC - (MOD) 525plus Plus TICs		
Email: RENNSTEMACHER@hbws.org		Project #: 38001111	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)		
Project Name: RED-HILL/HBWS Sites Event Desc: RUSH Weekly Red Hill		SSCOM#:	Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/>		
Site: Hawaii			Perform Analysis (Yes or No) <input checked="" type="checkbox"/>		
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (We=Water, S=solid, O=sewage/sludge, BI=biological, A=Air)
HALAWA WELLS UNITS1&2(331-206-TP065)					Water
MOANALUA WELLS (331-223-TP202)					Water
TB AIEA GULCH WELLS PUMP1 331-201-TP071		08/08/2022	1002	G	Water
TB AIEA GULCH WELLS PUMP2 331-202-TP07		08/08/2022	1029	G	Water
TB AIEA WELLS PUMPS1&2(260)331-203-TP400		08/08/2022	0931	G	Water
TB HALAWA SHAFT (331-241-TP401)					Water
TB HALAWA WELLS UNITS1&2(331-206-TP065)					Water
TB MOANALUA WELLS (331-223-TP202)					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: [Redacted]		Date:	Time:	Method of Shipment:	
Relinquished by: [Redacted]		Date/Time: 08-08-2022	Time: 1400	Received by: [Signature] G. PETERER	
Relinquished by: [Redacted]		Date/Time:	Company: HBWS	Received by: [Signature]	
Relinquished by:		Date/Time:	Company:	Received by:	
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:	

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Eaton Analytical

INTERNAL CHAIN OF CUSTODY RECORD

EEA Folder Number:

SAMPLE TEMP RECEIVED:

Note: If sampler was 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 = 4.5 °C) (Corr. Factor -0.3 °C) (Final = 4.2 °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, ≤ 8°C, not frozen (NELAP) (if received after 24 hrs of sample collection)
- 2) Microbiology, Distribution: < 10°C, not frozen (can be ≥ 10°C if received on ice the same day as sample collection, within 8 hours)
- 3) Microbiology, Surface Water: < 10°C (if received after 2 hours of sample collection)

If out of temperature range for both Chemistry and Microbiology samples and temperature does not confirm, then measure the temperature of each quadrant and record each temperature of the quadrant

1 = (Observation = _____ °C) (Corr. Factor _____ °C) (Final = _____ °C)	2 = (Observation = _____ °C) (Corr. Factor _____ °C) (Final = _____ °C)
3 = (Observation = _____ °C) (Corr. Factor _____ °C) (Final = _____ °C)	4 = (Observation = _____ °C) (Corr. Factor _____ °C) (Final = _____ °C)

4 Dioxin (1813 or 2,3,7,8 TCDD): must be between 0-4 °C, not frozen (if received after 24 hrs of sample collection)

5) pH Check. Manufacturer: _____ Lot Number: _____ pH strip type: 0 - 14 or _____ Expiration Date _____ Results: _____

6) Chlorine check. Manufacturer: Sansafe. Lot No.: _____ Expiration Date: _____ Results _____

7) VOA and Radon Headspace: No Samples with Headspace: Samples with Headspace (see below):

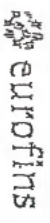
Headspace Documentation (use additional VOC and Radon Internal COFC for additional bottles)

Exempt from headspace concerns: Methods 816.4, HAA(8281, 862), 806, 8PME, @CH, 832LCMS, 858, 838, Anatoxin, LCMS methods using 40 ml vials, International Olanter

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	08/09/2022	10:30
SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
		Eurofins Eaton Analytical		



Environ Analytical

INTERNAL CHAIN OF CUSTODY RECORD

SAMPLE TEMP RECEIVED:

Note if sampler size out of temperature range, let the ASMR know, ASMR will determine whether to proceed with analysis or not.
 SAMPLES RECD DAY OF COLLECTION? Yes / No

EEA Folder Number: _____

IR Gun ID = 549A (Observation = 5.4 °C) (Corr. Factor = -0.3 °C) (Final = 5.1 °C)

TYPE OFFICE: 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, 5.0 °C, not frozen (NELAP) (if received after 24 hrs of sample collection, within 8 hours)

2) Microbiology, Distribution: < 10 °C, not frozen (can be ≥ 10 °C if received on ice the same day as sample collection, within 8 hours)

3) Microbiology, Surface Water: < 10 °C (if received after 2 hours of sample collection)

If out of temperature range for both Chemistry and Microbiology samples and temperature does not confirm, then measure the temperature of each quadrant and record each temperature of the quadrant.

1 = Observations	°C (our/Field)	°C (Final)	2 = Observations	°C (our/Field)	°C (Final)
3 = Observations	°C (our/Field)	°C (Final)	4 = Observations	°C (our/Field)	°C (Final)

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: Sansate. Lot No.: _____ Expiration Date: _____ Results: _____

7) VOA and Radon No Samples with Headspace: _____ Samples with Headspace (see below): _____

Headspace Documentation (use additional VOA and Radon Internal COFC for additional bottles)
 Exempt from headspace concerns: Methods 815.4, HAA(8251,822), 306, 37ME, 307H, 332L0M5, 333, 339, Anatoxin, LCMS methods using 40 ml vials, International oilcanes

Samp ID	Bottle #	Nonal/d	> 50mm	Test	Samp ID	Bottle #	Nonal/d	> 50mm	Test	Samp ID	Bottle #	Nonal/d	> 50mm	Test

Note Sample IDs which have dissimilar headspace (i.e. potential sampling errors): _____

RECEIVED BY: _____	SIGNATURE: _____	PRINT NAME: _____	COMPANY/TITLE: _____	DATE: _____	TIME: _____
_____	_____	_____	Eurofins Eaton Analytical	08/09/2022	10:30
_____	_____	_____	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 ASMR know. ASMR will determine whether to proceed with analysis or not.

SAMPLES REC'D DAY OF COLLECTION? Yes / No

IR Gun ID = 649A (Observation = 6.0 °C) (Corr. Factor -0.3 °C) (Final = 5.7 °C)

TYPE OF ICE: Real _____ Synthetic No Ice _____ CONDITION OF ICE: Frozen _____ Partially Frozen Thawed _____ N/A _____

METHOD OF SHIPMENT: PloK-Up / Walk-in / FedEx / UPS / DHL / Area Fast / Top Line / Other: _____

Compliance Acceptance Criteria:

- 1) Chemistry: >0, ≤ 8°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 VOC and Radon Internal COFC for additional bottles)

Exempl from headspace concerns: Methods 815.4, HAA (8281, 832), 806, 8PME, @CH, 832LCMS, 886, 838, Anatoxin, LCMS methods using 40 ml vials, International clients:

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 G. REITNER	COMPANY/TITLE Eurofins Eaton Analytical	DATE 08/09/2022	TIME 10:30
SIGNATURE 	PRINT NAME	COMPANY/TITLE Eurofins Eaton Analytical	DATE	TIME

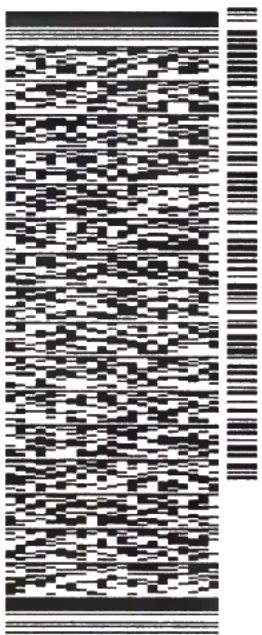
ORIGIN ID:HIKA (808) 748-5840
 BWS CHEM LAB
 HONOLULU BOARD OF WATER SUPPLY
 630 S. BERETANIA ST.
 CHEMICAL LABORATORY
 HONOLULU, HI 96843
 UNITED STATES US

SHIP DATE: 08AUG22
 ACTWTGT: 56.00 LB
 CAD: 100205419/NET4490
 BILL RECIPIENT

TO **BROOKS**

EUROFINS EATON ANALYTICAL, INC
750 ROYAL OAKS DR
SUITE 100
MONROVIA CA 91016
 REF (626) 386-1178
 NV

FO DEPT



581J2/F39D/FE4A

1 of 3

TRK# 7776 0593 2936
 0201
 ## MASTER ##

TUE - 09 AUG 10:30A
 PRIORITY OVERNIGHT

WZ WHPA

91016
 CA-US BUR



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ORIGIN ID:HIKA (808) 748-5840
 BWS CHEM LAB
 HONOLULU BOARD OF WATER SUPPLY
 630 S. BERETANIA ST
 CHEMICAL LABORATORY
 HONOLULU, HI 96843
 UNITED STATES US

SHIP DATE: 08AUG22
 ACTWGT: 56.00 LB
 CAD: 100205419/NET4490
 BILL RECIPIENT

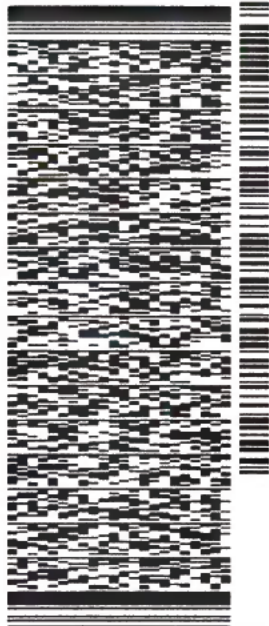
TO **BROOKS**

EUROFINS EATON ANALYTICAL, INC
750 ROYAL OAKS DR
SUITE 100

MONROVIA CA 91016

(626) 386-1178 REF
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DEPT



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TUE - 09 AUG 10:30A
 PRIORITY OVERNIGHT

2 of 3

MPS# 7776 0593 3211
 0263
 MSIF# 7776 0593 2936

0201

WZ WHPA

91016
 CA-US BUR



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ORIGIN ID:HKA (808) 748-5840
BMS CHEM LAB
HONOLULU BOARD OF WATER SUPPLY
630 S. BERETANIA ST.
CHEMICAL LABORATORY
HONOLULU, HI 96843
UNITED STATES US

SHIP DATE: 08AUG22
ACTWGT: 56.00 LB
CAD: 100205419/NET/4490

BILL RECIPIENT

TO **BROOKS**

EUROFINS EATON ANALYTICAL, INC
750 ROYAL OAKS DR
SUITE 100

MONROVIA CA 91016

(626) 386-1178
INV REF

DEPT



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3 of 3

MPS# **7776 0593 2969**
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Mstr# **7776 0593 2936**

0201

TUE - 09 AUG 10:30A
PRIORITY OVERNIGHT

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Bottle Order Information

Bottle Order: RUSH RED-HILL WEEKLY
 Bottle Order #: 2757
 Request From Client: 7/27/2022
 Date Order Posted: 7/20/2022 11:12:54AM
 Order Status: In Process
 Prepared By: Davis Haley
Deliver By Date: 8/1/2022 11:59:00PM
 Lab Project Number: 38001111
 PWSID: HI0000331

Order Completion Information

Creator: Davis Haley
 Filled by:
 Sent Date:
 Sent Via:
 Tracking #:

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #
6	4	24	Amber Glass 1 liter - Sodium Thiosulfate	Sodium Thiosulfate	SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs	Water	Normal	625 PAH + MS/MSD Volume	
6	4	24	Voa Vial 40ml - SodiumThio w/HCl-dropper	Sodium Thiosulfate	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	Water	Normal		
6	2	12	Amber Glass 1 L - NaThiosulfate 8mL HCL	Sodium Thiosulfate/Hydrochloric Acid	SUBCONTRACT - 8015 Diesel LL (EAL) and Motor Oil	Water	Normal		
6	2	12	Amber Glass 1 Liter- Sodium Sulfite/HCl	Sodium Sulfite w/HCl	525.2_PREC - (MOD) 525plus Plus TICs	Water	Normal		
6	2	12	VOA Vial 40mL - NaThiosulfate/HCL	Sodium Thiosulfate/Hydrochloric Acid	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	Water	Trip Blank		

Total Bottle Summary		
Bottle Type Description	Preservative	Bottle Count
Amber Glass 1 L - NaThiosulfate 8mL HCL	Sodium Thiosulfate/Hydrochloric Acid	12
Amber Glass 1 liter - Sodium Thiosulfate	Sodium Thiosulfate	24
Amber Glass 1 Liter- Sodium Sulfite/HCl	Sodium Sulfite w/HCl	12
VOA Vial 40mL - NaThiosulfate/HCL	Sodium Thiosulfate/Hydrochloric Acid	12
Voa Vial 40ml - SodiumThio w/HCl-dropper	Sodium Thiosulfate	24
Total Bottles:		84

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

Notes to Field Staff:



Scan QR code for field sampler instructions

SAMPLER FOLLOW 2 STAGE FIELD PRESERVATION FOR 8015 and 525.2

Health and Safety Notes:

Preservative	Comment
Sodium Sulfite w/HCl	CAUTION! CONTAINS SODIUM SULFITE. Harmful if inhaled. Use adequate ventilation. Avoid skin and eye contact. If contact is made, FLUSH IMMEDIATELY with water.
Sodium Thiosulfate	CAUTION! CONTAINS 10% SODIUM THIOSULFATE. Harmful if inhaled. Use adequate ventilation. Avoid skin and eye contact. If contact is made, FLUSH IMMEDIATELY with water.
Sodium Thiosulfate/Hydrochloric Acid	CAUTION! CONTAINS 10% SODIUM THIOSULFATE. Harmful if inhaled. Use adequate ventilation. Avoid skin and eye contact. If contact is made, FLUSH IMMEDIATELY with water. Contains 13.3% Monochloroacetic Acid. Avoid skin and eye contact. If contact is made, FLUSH IMMEDIATELY with water. CAUTION! CONTAINS 1:1 HYDROCHLORIC ACID. Avoid skin and eye contact. If contact is made, FLUSH IMMEDIATELY with water.

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Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:
Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:

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

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-15296-1

Login Number: 15296
List Number: 1
Creator: Gerfen, Chris

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	

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