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ANALYTICAL REPORT

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

Laboratory Job ID: 380-17084-1
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

Rachelle Arada

Authorized for release by:
10/25/2022 10:43:41 PM

Rachelle Arada, Manager of Project Management
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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)

Rachelle Arada
Manager of Project Management
10/25/2022 10:43:41 PM

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Definitions/Glossary

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

Job ID: 380-17084-1

Qualifiers

GC/MS Semi VOA

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

GC/MS Semi VOA TICs

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

Subcontract

Qualifier	Qualifier Description
U	This analyte was not detected.

Glossary

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

Job ID: 380-17084-1

Laboratory: Eurofins Eaton Monrovia

Narrative

Job Narrative
380-17084-1

Comments
No additional comments.

Receipt
The samples were received on 8/17/2022 11:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 1.4º C, 1.7º C and 5.4º C.

GC/MS Semi VOA
Method 525.2: LCS low for multiple analytes - possible disk issue in extraction department. Samples are past Hold time for re-extraction. Caffeine, Dimethoate and Metribuzin

Method 525.2: The continuing calibration verification (CCV) associated with batch 380-15268 recovered above the upper control limit for Di(2-ethylhexyl)adipate and Dimethoate. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or 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: 380-17084-1

Client Sample ID: MOANALUA WELLS — Lab Sample ID: 380-17084-1

No Detections.

Client Sample ID: TB:MOANALUA WELLS — Lab Sample ID: 380-17084-2

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: MOANALUA WELLS
Date Collected: 08/15/22 11:14
Date Received: 08/17/22 11:00

Lab Sample ID: 380-17084-1
Matrix: Drinking Water

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		08/26/22 09:00	08/29/22 17:23	1
2,4'-DDE	ND		0.099		ug/L		08/26/22 09:00	08/29/22 17:23	1
2,4'-DDT	ND		0.099		ug/L		08/26/22 09:00	08/29/22 17:23	1
2,4-Dinitrotoluene	ND	*1	0.099		ug/L		08/26/22 09:00	08/29/22 17:23	1
2,6-Dinitrotoluene	ND	*1	0.099		ug/L		08/26/22 09:00	08/29/22 17:23	1
4,4'-DDD	ND		0.099		ug/L		08/26/22 09:00	08/29/22 17:23	1
4,4'-DDE	ND		0.099		ug/L		08/26/22 09:00	08/29/22 17:23	1
4,4'-DDT	ND		0.099		ug/L		08/26/22 09:00	08/29/22 17:23	1
Acenaphthene	ND		0.099		ug/L		08/26/22 09:00	08/29/22 17:23	1
Acenaphthylene	ND		0.099		ug/L		08/26/22 09:00	08/29/22 17:23	1
Acetochlor	ND		0.099		ug/L		08/26/22 09:00	08/29/22 17:23	1
Alachlor	ND		0.049		ug/L		08/26/22 09:00	08/29/22 17:23	1
alpha-BHC	ND		0.099		ug/L		08/26/22 09:00	08/29/22 17:23	1
alpha-Chlordane	ND		0.049		ug/L		08/26/22 09:00	08/29/22 17:23	1
Anthracene	ND		0.020		ug/L		08/26/22 09:00	08/29/22 17:23	1
Atrazine	ND		0.049		ug/L		08/26/22 09:00	08/29/22 17:23	1
Benz(a)anthracene	ND		0.049		ug/L		08/26/22 09:00	08/29/22 17:23	1
Benzo[a]pyrene	ND		0.020		ug/L		08/26/22 09:00	08/29/22 17:23	1
Benzo[b]fluoranthene	ND		0.020		ug/L		08/26/22 09:00	08/29/22 17:23	1
Benzo[g,h,i]perylene	ND		0.049		ug/L		08/26/22 09:00	08/29/22 17:23	1
Benzo[k]fluoranthene	ND		0.020		ug/L		08/26/22 09:00	08/29/22 17:23	1
beta-BHC	ND		0.099		ug/L		08/26/22 09:00	08/29/22 17:23	1
Bromacil	ND	*+ *1	0.099		ug/L		08/26/22 09:00	08/29/22 17:23	1
Butachlor	ND		0.049		ug/L		08/26/22 09:00	08/29/22 17:23	1
Butylbenzylphthalate	ND		0.49		ug/L		08/26/22 09:00	08/29/22 17:23	1
Caffeine	ND	*- *1	0.049		ug/L		08/26/22 09:00	08/29/22 17:23	1
Chlorobenzilate	ND	*+	0.099		ug/L		08/26/22 09:00	08/29/22 17:23	1
Chloroneb	ND		0.099		ug/L		08/26/22 09:00	08/29/22 17:23	1
Chlorothalonil (Draconil, Bravo)	ND		0.099		ug/L		08/26/22 09:00	08/29/22 17:23	1
Chlorpyrifos	ND		0.049		ug/L		08/26/22 09:00	08/29/22 17:23	1
Chrysene	ND		0.020		ug/L		08/26/22 09:00	08/29/22 17:23	1
delta-BHC	ND		0.099		ug/L		08/26/22 09:00	08/29/22 17:23	1
Di(2-ethylhexyl)adipate	ND		0.59		ug/L		08/26/22 09:00	08/29/22 17:23	1
Bis(2-ethylhexyl) phthalate	ND		0.59		ug/L		08/26/22 09:00	08/29/22 17:23	1
Diazinon (Qualitative)	ND		0.099		ug/L		08/26/22 09:00	08/29/22 17:23	1
Dibenz(a,h)anthracene	ND		0.049		ug/L		08/26/22 09:00	08/29/22 17:23	1
Diclorvos (DDVP)	ND		0.049		ug/L		08/26/22 09:00	08/29/22 17:23	1
Dieldrin	ND		0.20		ug/L		08/26/22 09:00	08/29/22 17:23	1
Diethylphthalate	ND		0.49		ug/L		08/26/22 09:00	08/29/22 17:23	1
Dimethoate	ND	*- *1	0.099		ug/L		08/26/22 09:00	08/29/22 17:23	1
Dimethylphthalate	ND		0.49		ug/L		08/26/22 09:00	08/29/22 17:23	1
Di-n-butyl phthalate	ND		0.99		ug/L		08/26/22 09:00	08/29/22 17:23	1
Di-n-octyl phthalate	ND		0.099		ug/L		08/26/22 09:00	08/29/22 17:23	1
Endosulfan I (Alpha)	ND		0.099		ug/L		08/26/22 09:00	08/29/22 17:23	1
Endosulfan II (Beta)	ND		0.099		ug/L		08/26/22 09:00	08/29/22 17:23	1
Endosulfan sulfate	ND		0.099		ug/L		08/26/22 09:00	08/29/22 17:23	1
Endrin	ND		0.099		ug/L		08/26/22 09:00	08/29/22 17:23	1
Endrin aldehyde	ND		0.099		ug/L		08/26/22 09:00	08/29/22 17:23	1
EPTC	ND		0.099		ug/L		08/26/22 09:00	08/29/22 17:23	1

Client Sample ID: MOANALUA WELLS

Date Collected: 08/15/22 11:14
Date Received: 08/17/22 11:00

Lab Sample ID: 380-17084-1

Matrix: Drinking Water

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		08/26/22 09:00	08/29/22 17:23	1
Fluorene	ND		0.049		ug/L		08/26/22 09:00	08/29/22 17:23	1
gamma-Chlordane	ND		0.049		ug/L		08/26/22 09:00	08/29/22 17:23	1
Heptachlor	ND	^3+	0.040		ug/L		08/26/22 09:00	08/29/22 17:23	1
Heptachlor epoxide (isomer B)	ND		0.049		ug/L		08/26/22 09:00	08/29/22 17:23	1
Hexachlorobenzene	ND		0.049		ug/L		08/26/22 09:00	08/29/22 17:23	1
Hexachlorocyclopentadiene	ND		0.049		ug/L		08/26/22 09:00	08/29/22 17:23	1
Indeno[1,2,3-cd]pyrene	ND		0.049		ug/L		08/26/22 09:00	08/29/22 17:23	1
Isophorone	ND		0.49		ug/L		08/26/22 09:00	08/29/22 17:23	1
Lindane	ND		0.040		ug/L		08/26/22 09:00	08/29/22 17:23	1
Malathion	ND	*+	0.099		ug/L		08/26/22 09:00	08/29/22 17:23	1
Methoxychlor	ND	^3+	0.099		ug/L		08/26/22 09:00	08/29/22 17:23	1
Metolachlor	ND		0.049		ug/L		08/26/22 09:00	08/29/22 17:23	1
Metribuzin	ND	*- *1	0.049		ug/L		08/26/22 09:00	08/29/22 17:23	1
Molinate	ND		0.099		ug/L		08/26/22 09:00	08/29/22 17:23	1
Naphthalene	ND		0.30		ug/L		08/26/22 09:00	08/29/22 17:23	1
Parathion	ND	^3+	0.099		ug/L		08/26/22 09:00	08/29/22 17:23	1
Pendimethalin (Penoxaline)	ND		0.099		ug/L		08/26/22 09:00	08/29/22 17:23	1
Total Permethrin (mixed isomers)	ND		0.20		ug/L		08/26/22 09:00	08/29/22 17:23	1
Phenanthrene	ND		0.040		ug/L		08/26/22 09:00	08/29/22 17:23	1
Propachlor	ND		0.049		ug/L		08/26/22 09:00	08/29/22 17:23	1
Pyrene	ND		0.049		ug/L		08/26/22 09:00	08/29/22 17:23	1
Simazine	ND	*1	0.049		ug/L		08/26/22 09:00	08/29/22 17:23	1
Terbacil	ND	*1	0.099		ug/L		08/26/22 09:00	08/29/22 17:23	1
Terbuthylazine	ND		0.099		ug/L		08/26/22 09:00	08/29/22 17:23	1
Thiobencarb	ND		0.20		ug/L		08/26/22 09:00	08/29/22 17:23	1
trans-Nonachlor	ND		0.049		ug/L		08/26/22 09:00	08/29/22 17:23	1
Trifluralin	ND		0.099		ug/L		08/26/22 09:00	08/29/22 17:23	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Propanoic acid, 2-methyl-, tert-butyldimethylsilyl ester	*1.6*	*T J N*	*ug/L*		*2.29*	*111864-21-2*	*08/26/22 09:00*	*08/29/22 17:23*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*93*		*70 - 130*	*08/26/22 09:00*	*08/29/22 17:23*	*1*
Triphenylphosphate	*113*		*70 - 130*	*08/26/22 09:00*	*08/29/22 17:23*	*1*
Perylene-d12	*96*		*70 - 130*	*08/26/22 09:00*	*08/29/22 17:23*	*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		08/22/22 00:00	08/30/22 19:51	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 19:51	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 19:51	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 19:51	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 19:51	1
Acenaphthene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 19:51	1
Acenaphthylene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 19:51	1
Anthracene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 19:51	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 19:51	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 19:51	1

Client Sample ID: MOANALUA WELLS

Lab Sample ID: 380-17084-1
Matrix: Drinking Water
Date Collected: 08/15/22 11:14
Date Received: 08/17/22 11:00

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[b]fluoranthene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 19:51	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 19:51	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 19:51	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 19:51	1
Biphenyl	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 19:51	1
Chrysene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 19:51	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 19:51	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 19:51	1
Dibenzothiophene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 19:51	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		08/22/22 00:00	08/30/22 19:51	1
Fluoranthene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 19:51	1
Fluorene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 19:51	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 19:51	1
Naphthalene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 19:51	1
Perylene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 19:51	1
Phenanthrene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 19:51	1
Pyrene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 19:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
(d10-Acenaphthene)	*77*		*45 - 118*	*08/22/22 00:00*	*08/30/22 19:51*	*1*
(d10-Phenanthrene)	*58*		*56 - 123*	*08/22/22 00:00*	*08/30/22 19:51*	*1*
(d12-Chrysene)	*69*		*36 - 142*	*08/22/22 00:00*	*08/30/22 19:51*	*1*
(d12-Perylene)	*67*		*36 - 161*	*08/22/22 00:00*	*08/30/22 19:51*	*1*
(d8-Naphthalene)	*71*		*20 - 112*	*08/22/22 00:00*	*08/30/22 19:51*	*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	0.029		mg/L			08/23/22 00:23	1
MOTOR OIL	ND	U	0.058		mg/L			08/23/22 00:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOBENZENE	*82*		*60 - 130*		*08/23/22 00:23*	*1*
HEXACOSANE	*108*		*60 - 130*		*08/23/22 00:23*	*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			08/23/22 19:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE	*84*		*60 - 140*		*08/23/22 19:33*	*1*

Client Sample ID: TB:MOANALUA WELLS

Lab Sample ID: 380-17084-2
Matrix: Water
Date Collected: 08/15/22 11:14
Date Received: 08/17/22 11:00

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			08/23/22 20:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE	*88*		*60 - 140*		*08/23/22 20:08*	*1*

Action Limit Summary

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

Job ID: 380-17084-1

Client Sample ID: MOANALUA WELLS

Lab Sample ID: 380-17084-1

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 Limit	RL	Method	Prep Type
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	^3+	ug/L	0.4	0.040	525.2	Total/NA
Heptachlor epoxide (isomer B)	ND		ug/L	0.2	0.049	525.2	Total/NA
Hexachlorobenzene	ND		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	0.040	525.2	Total/NA
Methoxychlor	ND	^3+	ug/L	40	0.099	525.2	Total/NA
Simazine	ND	*1	ug/L	4	0.049	525.2	Total/NA

Surrogate Summary

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

Job ID: 380-17084-1

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

Matrix: Drinking Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		2NMX	TPP	PRY
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
380-17084-1	MOANALUA WELLS	93	113	96

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**

		Percent Surrogate Recovery (Acceptance Limits)		
		2NMX	TPP	PRY
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
380-16699-B-1-A MS	Matrix Spike	92	118	98
380-16699-B-2-A DU	Duplicate	95	110	90
LCS 380-15033/3-A	Lab Control Sample	93	114	96
LCSD 380-15033/4-A	Lab Control Sample Dup	91	112	96
MB 380-15033/1-A	Method Blank	93	110	90
MRL 380-15033/2-A	Lab Control Sample	91	111	95

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**

		Percent Surrogate Recovery (Acceptance Limits)				
		Acenapht	Phenanth	CRY	NPT	PRY
Lab Sample ID	Client Sample ID	(45-118)	(56-123)	(36-142)	(20-112)	(36-161)
380-17084-1	MOANALUA WELLS	77	58	69	71	67

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**

		Percent Surrogate Recovery (Acceptance Limits)				
		Acenapht	Phenanth	CRY	NPT	PRY
Lab Sample ID	Client Sample ID	(65-113)	(80-111)	(60-139)	(44-119)	(36-161)
99459-B1	Method Blank	94	93	99	87	91
99459-BS1	Lab Control Sample	107	94	90	108	101
99459-BS2	Lab Control Sample Dup	104	100	93	84	96

Surrogate Legend

(d10-Acenaphthene) = (d10-Acenaphthene)
(d10-Phenanthrene) = (d10-Phenanthrene)

Surrogate Summary

Client: City & County of Honolulu
Job ID: 380-17084-1
Project/Site: RED-HILL

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**

		Percent Surrogate Recovery (Acceptance Limits)	
		BB	XACOSA
Lab Sample ID	Client Sample ID	(60-130)	(60-130)
380-17084-1	MOANALUA WELLS	82	108

Surrogate Legend
BB = BROMOBENZENE
HEXACOSANE = HEXACOSANE

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

Matrix: WATER **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		BB	XACOSA
Lab Sample ID	Client Sample ID		
22DSH034WB	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**

		Percent Surrogate Recovery (Acceptance Limits)	
		BB	XACOSA
Lab Sample ID	Client Sample ID	(60-130)	(60-130)
22DSH034WL	Lab Control Sample	75	93

Surrogate Legend
BB = BROMOBENZENE
HEXACOSANE = HEXACOSANE

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

Matrix: Drinking Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		BFB
Lab Sample ID	Client Sample ID	(60-140)
380-17084-1	MOANALUA WELLS	84

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)
		BFB
Lab Sample ID	Client Sample ID	(70-130)
22VGH7H09C	LCD	118
22VGH7H09L	Lab Control Sample	118

Surrogate Legend

Surrogate Summary

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

Job ID: 380-17084-1

BFB = BROMOFLUOROBENZENE

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)								
		BFB								
Lab Sample ID	Client Sample ID	(60-140)								
380-17084-2	TB:MOANALUA WELLS	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)								
		BFB								
Lab Sample ID	Client Sample ID									
22VGH7H09B	Method Blank									

Surrogate Legend

BFB = BROMOFLUOROBENZENE

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

Lab Sample ID: MB 380-15033/1-A
Matrix: Water
Analysis Batch: 15268

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 15033

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	ND		0.099		ug/L		08/26/22 09:00	08/29/22 12:13	1
2,4'-DDE	ND		0.099		ug/L		08/26/22 09:00	08/29/22 12:13	1
2,4'-DDT	ND		0.099		ug/L		08/26/22 09:00	08/29/22 12:13	1
2,4-Dinitrotoluene	ND		0.099		ug/L		08/26/22 09:00	08/29/22 12:13	1
2,6-Dinitrotoluene	ND		0.099		ug/L		08/26/22 09:00	08/29/22 12:13	1
4,4'-DDD	ND		0.099		ug/L		08/26/22 09:00	08/29/22 12:13	1
4,4'-DDE	ND		0.099		ug/L		08/26/22 09:00	08/29/22 12:13	1
4,4'-DDT	ND		0.099		ug/L		08/26/22 09:00	08/29/22 12:13	1
Acenaphthene	ND		0.099		ug/L		08/26/22 09:00	08/29/22 12:13	1
Acenaphthylene	ND		0.099		ug/L		08/26/22 09:00	08/29/22 12:13	1
Acetochlor	ND		0.099		ug/L		08/26/22 09:00	08/29/22 12:13	1
Alachlor	ND		0.050		ug/L		08/26/22 09:00	08/29/22 12:13	1
alpha-BHC	ND		0.099		ug/L		08/26/22 09:00	08/29/22 12:13	1
alpha-Chlordane	ND		0.050		ug/L		08/26/22 09:00	08/29/22 12:13	1
Anthracene	ND		0.020		ug/L		08/26/22 09:00	08/29/22 12:13	1
Atrazine	ND		0.050		ug/L		08/26/22 09:00	08/29/22 12:13	1
Benz(a)anthracene	ND		0.050		ug/L		08/26/22 09:00	08/29/22 12:13	1
Benzo[a]pyrene	ND		0.020		ug/L		08/26/22 09:00	08/29/22 12:13	1
Benzo[b]fluoranthene	ND		0.020		ug/L		08/26/22 09:00	08/29/22 12:13	1
Benzo[g,h,i]perylene	ND		0.050		ug/L		08/26/22 09:00	08/29/22 12:13	1
Benzo[k]fluoranthene	ND		0.020		ug/L		08/26/22 09:00	08/29/22 12:13	1
beta-BHC	ND		0.099		ug/L		08/26/22 09:00	08/29/22 12:13	1
Bromacil	ND		0.099		ug/L		08/26/22 09:00	08/29/22 12:13	1
Butachlor	ND		0.050		ug/L		08/26/22 09:00	08/29/22 12:13	1
Butylbenzylphthalate	ND		0.50		ug/L		08/26/22 09:00	08/29/22 12:13	1
Caffeine	ND		0.050		ug/L		08/26/22 09:00	08/29/22 12:13	1
Chlorobenzilate	ND		0.099		ug/L		08/26/22 09:00	08/29/22 12:13	1
Chloroneb	ND		0.099		ug/L		08/26/22 09:00	08/29/22 12:13	1
Chlorothalonil (Draconil, Bravo)	ND		0.099		ug/L		08/26/22 09:00	08/29/22 12:13	1
Chlorpyrifos	ND		0.050		ug/L		08/26/22 09:00	08/29/22 12:13	1
Chrysene	ND		0.020		ug/L		08/26/22 09:00	08/29/22 12:13	1
delta-BHC	ND		0.099		ug/L		08/26/22 09:00	08/29/22 12:13	1
Di(2-ethylhexyl)adipate	ND		0.59		ug/L		08/26/22 09:00	08/29/22 12:13	1
Bis(2-ethylhexyl) phthalate	ND		0.59		ug/L		08/26/22 09:00	08/29/22 12:13	1
Diazinon (Qualitative)	ND		0.099		ug/L		08/26/22 09:00	08/29/22 12:13	1
Dibenz(a,h)anthracene	ND		0.050		ug/L		08/26/22 09:00	08/29/22 12:13	1
Diclorvos (DDVP)	ND		0.050		ug/L		08/26/22 09:00	08/29/22 12:13	1
Dieldrin	ND		0.20		ug/L		08/26/22 09:00	08/29/22 12:13	1
Diethylphthalate	ND		0.50		ug/L		08/26/22 09:00	08/29/22 12:13	1
Dimethoate	ND		0.099		ug/L		08/26/22 09:00	08/29/22 12:13	1
Dimethylphthalate	ND		0.50		ug/L		08/26/22 09:00	08/29/22 12:13	1
Di-n-butyl phthalate	ND		0.99		ug/L		08/26/22 09:00	08/29/22 12:13	1
Di-n-octyl phthalate	ND		0.099		ug/L		08/26/22 09:00	08/29/22 12:13	1
Endosulfan I (Alpha)	ND		0.099		ug/L		08/26/22 09:00	08/29/22 12:13	1
Endosulfan II (Beta)	ND		0.099		ug/L		08/26/22 09:00	08/29/22 12:13	1
Endosulfan sulfate	ND		0.099		ug/L		08/26/22 09:00	08/29/22 12:13	1
Endrin	ND		0.099		ug/L		08/26/22 09:00	08/29/22 12:13	1
Endrin aldehyde	ND		0.099		ug/L		08/26/22 09:00	08/29/22 12:13	1

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

Lab Sample ID: MB 380-15033/1-A
Matrix: Water
Analysis Batch: 15268

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 15033

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
EPTC	ND		0.099		ug/L		08/26/22 09:00	08/29/22 12:13	1
Fluoranthene	ND		0.099		ug/L		08/26/22 09:00	08/29/22 12:13	1
Fluorene	ND		0.050		ug/L		08/26/22 09:00	08/29/22 12:13	1
gamma-Chlordane	ND		0.050		ug/L		08/26/22 09:00	08/29/22 12:13	1
Heptachlor	ND		0.040		ug/L		08/26/22 09:00	08/29/22 12:13	1
Heptachlor epoxide (isomer B)	ND		0.050		ug/L		08/26/22 09:00	08/29/22 12:13	1
Hexachlorobenzene	ND		0.050		ug/L		08/26/22 09:00	08/29/22 12:13	1
Hexachlorocyclopentadiene	ND		0.050		ug/L		08/26/22 09:00	08/29/22 12:13	1
Indeno[1,2,3-cd]pyrene	ND		0.050		ug/L		08/26/22 09:00	08/29/22 12:13	1
Isophorone	ND		0.50		ug/L		08/26/22 09:00	08/29/22 12:13	1
Lindane	ND		0.040		ug/L		08/26/22 09:00	08/29/22 12:13	1
Malathion	ND		0.099		ug/L		08/26/22 09:00	08/29/22 12:13	1
Methoxychlor	ND		0.099		ug/L		08/26/22 09:00	08/29/22 12:13	1
Metolachlor	ND		0.050		ug/L		08/26/22 09:00	08/29/22 12:13	1
Metribuzin	ND		0.050		ug/L		08/26/22 09:00	08/29/22 12:13	1
Molinate	ND		0.099		ug/L		08/26/22 09:00	08/29/22 12:13	1
Naphthalene	ND		0.30		ug/L		08/26/22 09:00	08/29/22 12:13	1
Parathion	ND		0.099		ug/L		08/26/22 09:00	08/29/22 12:13	1
Pendimethalin (Penoxaline)	ND		0.099		ug/L		08/26/22 09:00	08/29/22 12:13	1
Total Permethrin (mixed isomers)	ND		0.20		ug/L		08/26/22 09:00	08/29/22 12:13	1
Phenanthrene	ND		0.040		ug/L		08/26/22 09:00	08/29/22 12:13	1
Propachlor	ND		0.050		ug/L		08/26/22 09:00	08/29/22 12:13	1
Pyrene	ND		0.050		ug/L		08/26/22 09:00	08/29/22 12:13	1
Simazine	ND		0.050		ug/L		08/26/22 09:00	08/29/22 12:13	1
Terbacil	ND		0.099		ug/L		08/26/22 09:00	08/29/22 12:13	1
Terbuthylazine	ND		0.099		ug/L		08/26/22 09:00	08/29/22 12:13	1
Thiobencarb	ND		0.20		ug/L		08/26/22 09:00	08/29/22 12:13	1
trans-Nonachlor	ND		0.050		ug/L		08/26/22 09:00	08/29/22 12:13	1
Trifluralin	ND		0.099		ug/L		08/26/22 09:00	08/29/22 12:13	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*08/26/22 09:00*	*08/29/22 12:13*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*93*		*70 - 130*	*08/26/22 09:00*	*08/29/22 12:13*	*1*
Triphenylphosphate	*110*		*70 - 130*	*08/26/22 09:00*	*08/29/22 12:13*	*1*
Perylene-d12	*90*		*70 - 130*	*08/26/22 09:00*	*08/29/22 12:13*	*1*

Lab Sample ID: LCS 380-15033/3-A
Matrix: Water
Analysis Batch: 15268

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 15033

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	1.99	2.23		ug/L		112	70 - 130
2,4'-DDE	1.99	2.19		ug/L		110	70 - 130
2,4'-DDT	1.99	2.53		ug/L		127	70 - 130
2,4-Dinitrotoluene	1.99	1.81		ug/L		91	70 - 130
2,6-Dinitrotoluene	1.99	1.75		ug/L		88	70 - 130

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

Lab Sample ID: LCS 380-15033/3-A
Matrix: Water
Analysis Batch: 15268

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 15033

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
4,4'-DDD	1.99	2.29		ug/L		115	70 - 130
4,4'-DDE	1.99	2.18		ug/L		110	70 - 130
4,4'-DDT	1.99	2.28		ug/L		115	70 - 130
Acenaphthene	1.99	1.96		ug/L		99	70 - 130
Acenaphthylene	1.99	2.05		ug/L		103	70 - 130
Acetochlor	1.99	2.38		ug/L		120	70 - 130
Alachlor	1.99	2.28		ug/L		115	70 - 130
alpha-BHC	1.99	2.12		ug/L		106	70 - 130
alpha-Chlordane	1.99	2.21		ug/L		111	70 - 130
Anthracene	1.99	2.14		ug/L		108	70 - 130
Atrazine	1.99	2.27		ug/L		114	70 - 130
Benz(a)anthracene	1.99	2.25		ug/L		113	70 - 130
Benzo[a]pyrene	1.99	2.22		ug/L		112	70 - 130
Benzo[b]fluoranthene	1.99	2.29		ug/L		115	70 - 130
Benzo[g,h,i]perylene	1.99	2.21		ug/L		111	70 - 130
Benzo[k]fluoranthene	1.99	2.25		ug/L		113	70 - 130
beta-BHC	1.99	2.18		ug/L		110	70 - 130
Bromacil	1.99	1.49		ug/L		75	70 - 130
Butachlor	1.99	2.55		ug/L		128	70 - 130
Butylbenzylphthalate	1.99	2.46		ug/L		124	70 - 130
Caffeine	1.99	0.477	*-	ug/L		24	45 - 137
Chlorobenzilate	1.99	2.62	*+	ug/L		132	70 - 130
Chloroneb	1.99	2.09		ug/L		105	70 - 130
Chlorothalonil (Draconil, Bravo)	1.99	2.34		ug/L		118	70 - 130
Chlorpyrifos	1.99	2.36		ug/L		119	70 - 130
Chrysene	1.99	2.17		ug/L		109	70 - 130
delta-BHC	1.99	2.16		ug/L		109	70 - 130
Di(2-ethylhexyl)adipate	1.99	2.52		ug/L		127	70 - 130
Bis(2-ethylhexyl) phthalate	1.99	2.11		ug/L		106	70 - 130
Diazinon (Qualitative)	1.99	1.75		ug/L		88	15 - 132
Dibenz(a,h)anthracene	1.99	2.30		ug/L		116	70 - 130
Diclorvos (DDVP)	1.99	1.95		ug/L		98	70 - 130
Dieldrin	1.99	2.19		ug/L		110	70 - 130
Diethylphthalate	1.99	2.08		ug/L		104	70 - 130
Dimethoate	1.99	0.595	*-	ug/L		30	35 - 100
Dimethylphthalate	1.99	2.10		ug/L		105	70 - 130
Di-n-butyl phthalate	3.98	4.33		ug/L		109	70 - 130
Di-n-octyl phthalate	1.99	1.82		ug/L		91	70 - 130
Endosulfan I (Alpha)	1.99	2.21		ug/L		111	70 - 130
Endosulfan II (Beta)	1.99	2.22		ug/L		112	70 - 130
Endosulfan sulfate	1.99	2.38		ug/L		120	70 - 130
Endrin	1.99	2.40		ug/L		121	70 - 130
Endrin aldehyde	1.99	2.14		ug/L		107	70 - 130
EPTC	1.99	2.12		ug/L		107	70 - 130
Fluoranthene	1.99	2.27		ug/L		114	70 - 130
Fluorene	1.99	2.14		ug/L		107	70 - 130
gamma-Chlordane	1.99	2.20		ug/L		111	70 - 130
Heptachlor	1.99	2.22		ug/L		112	70 - 130
Heptachlor epoxide (isomer B)	1.99	2.25		ug/L		113	70 - 130

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

Lab Sample ID: LCS 380-15033/3-A
Matrix: Water
Analysis Batch: 15268

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 15033

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexachlorobenzene	1.99	1.95		ug/L		98	70 - 130
Hexachlorocyclopentadiene	1.99	2.13		ug/L		107	70 - 130
Indeno[1,2,3-cd]pyrene	1.99	2.28		ug/L		115	70 - 130
Isophorone	1.99	1.82		ug/L		92	70 - 130
Lindane	1.99	2.15		ug/L		108	70 - 130
Malathion	1.99	2.53		ug/L		127	70 - 130
Methoxychlor	1.99	2.49		ug/L		125	70 - 130
Metolachlor	1.99	2.38		ug/L		120	70 - 130
Metribuzin	1.99	1.28	*-	ug/L		64	70 - 130
Molinate	1.99	2.11		ug/L		106	70 - 130
Naphthalene	1.99	1.77		ug/L		89	70 - 130
Parathion	1.99	2.34		ug/L		118	70 - 130
Pendimethalin (Penoxaline)	1.99	2.40		ug/L		121	70 - 130
Phenanthrene	1.99	2.09		ug/L		105	70 - 130
Propachlor	1.99	2.17		ug/L		109	70 - 130
Pyrene	1.99	2.28		ug/L		115	70 - 130
Simazine	1.99	1.85		ug/L		93	70 - 130
Terbacil	1.99	1.61		ug/L		81	70 - 130
Terbuthylazine	1.99	2.29		ug/L		115	70 - 130
Thiobencarb	1.99	2.06		ug/L		104	70 - 130
trans-Nonachlor	1.99	2.27		ug/L		114	70 - 130
Trifluralin	1.99	2.31		ug/L		116	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Nitro-m-xylene	*93*		*70 - 130*
Triphenylphosphate	*114*		*70 - 130*
Perylene-d12	*96*		*70 - 130*

Lab Sample ID: LCSD 380-15033/4-A
Matrix: Water
Analysis Batch: 15268

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 15033

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,4'-DDD	1.98	2.25		ug/L		114	70 - 130	1	20
2,4'-DDE	1.98	2.19		ug/L		110	70 - 130	0	20
2,4'-DDT	1.98	2.56		ug/L		129	70 - 130	1	20
2,4-Dinitrotoluene	1.98	2.37	*1	ug/L		120	70 - 130	27	20
2,6-Dinitrotoluene	1.98	2.33	*1	ug/L		117	70 - 130	28	20
4,4'-DDD	1.98	2.31		ug/L		116	70 - 130	1	20
4,4'-DDE	1.98	2.21		ug/L		111	70 - 130	1	20
4,4'-DDT	1.98	2.31		ug/L		117	70 - 130	1	20
Acenaphthene	1.98	1.96		ug/L		99	70 - 130	0	20
Acenaphthylene	1.98	2.06		ug/L		104	70 - 130	1	20
Acetochlor	1.98	2.41		ug/L		121	70 - 130	1	20
Alachlor	1.98	2.29		ug/L		115	70 - 130	0	20
alpha-BHC	1.98	2.11		ug/L		106	70 - 130	0	20
alpha-Chlordane	1.98	2.27		ug/L		114	70 - 130	3	20
Anthracene	1.98	2.17		ug/L		109	70 - 130	1	20

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

Lab Sample ID: LCSD 380-15033/4-A
Matrix: Water
Analysis Batch: 15268

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 15033

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Atrazine	1.98	2.32		ug/L		117	70 - 130	2	20
Benz(a)anthracene	1.98	2.26		ug/L		114	70 - 130	0	20
Benzo[a]pyrene	1.98	2.25		ug/L		113	70 - 130	1	20
Benzo[b]fluoranthene	1.98	2.28		ug/L		115	70 - 130	0	20
Benzo[g,h,i]perylene	1.98	2.25		ug/L		114	70 - 130	2	20
Benzo[k]fluoranthene	1.98	2.26		ug/L		114	70 - 130	0	20
beta-BHC	1.98	2.14		ug/L		108	70 - 130	2	20
Bromacil	1.98	2.73	*+ *1	ug/L		138	70 - 130	59	20
Butachlor	1.98	2.55		ug/L		129	70 - 130	0	20
Butylbenzylphthalate	1.98	2.44		ug/L		123	70 - 130	1	20
Caffeine	1.98	1.33	*1	ug/L		67	45 - 137	95	20
Chlorobenzilate	1.98	2.61	*+	ug/L		132	70 - 130	0	20
Chloroneb	1.98	2.12		ug/L		107	70 - 130	1	20
Chlorothalonil (Draconil, Bravo)	1.98	2.34		ug/L		118	70 - 130	0	20
Chlorpyrifos	1.98	2.39		ug/L		120	70 - 130	1	20
Chrysene	1.98	2.16		ug/L		109	70 - 130	1	20
delta-BHC	1.98	2.15		ug/L		108	70 - 130	0	20
Di(2-ethylhexyl)adipate	1.98	2.56		ug/L		129	70 - 130	2	20
Bis(2-ethylhexyl) phthalate	1.98	2.09		ug/L		105	70 - 130	1	20
Diazinon (Qualitative)	1.98	1.79		ug/L		90	15 - 132	2	20
Dibenz(a,h)anthracene	1.98	2.30		ug/L		116	70 - 130	0	20
Diclorvos (DDVP)	1.98	2.13		ug/L		108	70 - 130	9	20
Dieldrin	1.98	2.19		ug/L		111	70 - 130	0	20
Diethylphthalate	1.98	2.09		ug/L		106	70 - 130	1	20
Dimethoate	1.98	1.41	*1	ug/L		71	35 - 100	81	20
Dimethylphthalate	1.98	2.18		ug/L		110	70 - 130	4	20
Di-n-butyl phthalate	3.97	4.30		ug/L		108	70 - 130	1	20
Di-n-octyl phthalate	1.98	1.76		ug/L		89	70 - 130	3	20
Endosulfan I (Alpha)	1.98	2.30		ug/L		116	70 - 130	4	20
Endosulfan II (Beta)	1.98	2.27		ug/L		115	70 - 130	3	20
Endosulfan sulfate	1.98	2.38		ug/L		120	70 - 130	0	20
Endrin	1.98	2.51		ug/L		127	70 - 130	4	20
Endrin aldehyde	1.98	2.20		ug/L		111	70 - 130	3	20
EPTC	1.98	2.10		ug/L		106	70 - 130	1	20
Fluoranthene	1.98	2.29		ug/L		115	70 - 130	1	20
Fluorene	1.98	2.15		ug/L		108	70 - 130	1	20
gamma-Chlordane	1.98	2.26		ug/L		114	70 - 130	3	20
Heptachlor	1.98	2.26		ug/L		114	70 - 130	2	20
Heptachlor epoxide (isomer B)	1.98	2.33		ug/L		117	70 - 130	3	20
Hexachlorobenzene	1.98	1.99		ug/L		101	70 - 130	2	20
Hexachlorocyclopentadiene	1.98	2.19		ug/L		110	70 - 130	3	20
Indeno[1,2,3-cd]pyrene	1.98	2.26		ug/L		114	70 - 130	1	20
Isophorone	1.98	1.88		ug/L		95	70 - 130	3	20
Lindane	1.98	2.18		ug/L		110	70 - 130	1	20
Malathion	1.98	2.61	*+	ug/L		131	70 - 130	3	20
Methoxychlor	1.98	2.50		ug/L		126	70 - 130	1	20
Metolachlor	1.98	2.40		ug/L		121	70 - 130	1	20
Metribuzin	1.98	2.02	*1	ug/L		102	70 - 130	45	20
Molinate	1.98	2.09		ug/L		106	70 - 130	1	20

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

Lab Sample ID: LCSD 380-15033/4-A
Matrix: Water
Analysis Batch: 15268

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 15033

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Naphthalene			1.98	1.77		ug/L		89	70 - 130	0	20
Parathion			1.98	2.33		ug/L		117	70 - 130	0	20
Pendimethalin (Penoxaline)			1.98	2.45		ug/L		123	70 - 130	2	20
Phenanthrene			1.98	2.10		ug/L		106	70 - 130	0	20
Propachlor			1.98	2.19		ug/L		111	70 - 130	1	20
Pyrene			1.98	2.31		ug/L		116	70 - 130	1	20
Simazine			1.98	2.32	*1	ug/L		117	70 - 130	22	20
Terbacil			1.98	2.44	*1	ug/L		123	70 - 130	41	20
Terbuthylazine			1.98	2.28		ug/L		115	70 - 130	1	20
Thiobencarb			1.98	2.07		ug/L		104	70 - 130	0	20
trans-Nonachlor			1.98	2.31		ug/L		116	70 - 130	2	20
Trifluralin			1.98	2.34		ug/L		118	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Nitro-m-xylene	*91*		*70 - 130*
Triphenylphosphate	*112*		*70 - 130*
Perylene-d12	*96*		*70 - 130*

Lab Sample ID: MRL 380-15033/2-A
Matrix: Water
Analysis Batch: 15268

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 15033

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
2,4'-DDD			0.0991	0.139		ug/L		140	50 - 150		
2,4'-DDE			0.0991	0.109		ug/L		110	50 - 150		
2,4'-DDT			0.0991	0.118		ug/L		119	50 - 150		
2,4-Dinitrotoluene			0.0991	0.130		ug/L		132	50 - 150		
2,6-Dinitrotoluene			0.0991	0.104		ug/L		105	50 - 150		
4,4'-DDD			0.0991	0.109		ug/L		110	50 - 150		
4,4'-DDE			0.0991	0.109		ug/L		110	50 - 150		
4,4'-DDT			0.0991	0.141		ug/L		142	50 - 150		
Acenaphthene			0.0991	0.0977	J	ug/L		99	50 - 150		
Acenaphthylene			0.0991	0.0918	J	ug/L		93	50 - 150		
Acetochlor			0.0496	0.0534	J	ug/L		108	50 - 150		
Alachlor			0.0496	0.0561		ug/L		113	50 - 150		
alpha-BHC			0.0991	0.107		ug/L		108	50 - 150		
alpha-Chlordane			0.0496	0.0573		ug/L		116	50 - 150		
Anthracene			0.0198	0.0203		ug/L		102	50 - 150		
Atrazine			0.0496	0.0563		ug/L		114	50 - 150		
Benz(a)anthracene			0.0496	0.0651		ug/L		131	50 - 150		
Benzo[a]pyrene			0.0198	0.0212		ug/L		107	50 - 150		
Benzo[b]fluoranthene			0.0198	0.0243		ug/L		123	50 - 150		
Benzo[g,h,i]perylene			0.0496	0.0529		ug/L		107	50 - 150		
Benzo[k]fluoranthene			0.0198	0.0231		ug/L		116	50 - 150		
beta-BHC			0.0991	0.109		ug/L		110	50 - 150		
Bromacil			0.0991	0.116		ug/L		117	50 - 150		
Butachlor			0.0496	0.0648		ug/L		131	50 - 150		
Butylbenzylphthalate			0.149	0.190	J	ug/L		128	50 - 150		

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

Lab Sample ID: MRL 380-15033/2-A
Matrix: Water
Analysis Batch: 15268

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 15033

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Caffeine	0.0496	0.0270	J	ug/L		55	50 - 150
Chlorobenzilate	0.0991	0.124		ug/L		125	50 - 150
Chloroneb	0.0991	0.106		ug/L		107	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0991	0.110		ug/L		110	50 - 150
Chlorpyrifos	0.0496	0.0532		ug/L		107	50 - 150
Chrysene	0.0198	0.0220		ug/L		111	50 - 150
delta-BHC	0.0991	0.128		ug/L		129	50 - 150
Di(2-ethylhexyl)adipate	0.297	0.383	J	ug/L		129	50 - 150
Bis(2-ethylhexyl) phthalate	0.595	0.702		ug/L		118	50 - 150
Diazinon (Qualitative)	0.0991	0.0910	J	ug/L		92	15 - 132
Dibenz(a,h)anthracene	0.0496	0.0573		ug/L		116	50 - 150
Diclorvos (DDVP)	0.0496	0.0490	J	ug/L		99	50 - 150
Dieldrin	0.0991	0.120	J	ug/L		121	50 - 150
Diethylphthalate	0.149	0.174	J	ug/L		117	50 - 150
Dimethoate	0.0991	0.0703	J	ug/L		71	35 - 100
Dimethylphthalate	0.297	0.314	J	ug/L		105	50 - 150
Di-n-butyl phthalate	0.297	0.350	J	ug/L		118	49 - 243
Di-n-octyl phthalate	0.0991	0.124		ug/L		125	50 - 150
Endosulfan I (Alpha)	0.0991	0.123		ug/L		124	50 - 150
Endosulfan II (Beta)	0.0991	0.119		ug/L		121	50 - 150
Endosulfan sulfate	0.0991	0.112		ug/L		113	50 - 150
Endrin	0.0991	0.144		ug/L		146	50 - 150
Endrin aldehyde	0.0991	0.0985	J	ug/L		99	50 - 150
EPTC	0.0991	0.0991		ug/L		100	50 - 150
Fluoranthene	0.0496	0.0536	J	ug/L		108	50 - 150
Fluorene	0.0496	0.0528		ug/L		107	50 - 150
gamma-Chlordane	0.0496	0.0530		ug/L		107	50 - 150
Heptachlor	0.0396	0.0602	^3+	ug/L		152	50 - 150
Heptachlor epoxide (isomer B)	0.0496	0.0537		ug/L		108	50 - 150
Hexachlorobenzene	0.0496	0.0612		ug/L		124	50 - 150
Hexachlorocyclopentadiene	0.0496	0.0505		ug/L		102	50 - 150
Indeno[1,2,3-cd]pyrene	0.0496	0.0512		ug/L		103	50 - 150
Isophorone	0.0991	0.0774	J	ug/L		78	50 - 150
Lindane	0.0496	0.0432		ug/L		87	50 - 150
Malathion	0.0991	0.111		ug/L		112	50 - 150
Methoxychlor	0.0991	0.150	^3+	ug/L		152	50 - 150
Metolachlor	0.0496	0.0616		ug/L		124	50 - 150
Metribuzin	0.0496	0.0429	J	ug/L		87	50 - 150
Molinate	0.0991	0.112		ug/L		113	50 - 150
Naphthalene	0.0991	0.0938	J	ug/L		95	50 - 150
Parathion	0.0991	0.155	^3+	ug/L		156	50 - 150
Pendimethalin (Penoxaline)	0.0991	0.132		ug/L		133	50 - 150
Phenanthrene	0.0198	0.0233	J	ug/L		118	50 - 150
Propachlor	0.0496	0.0526		ug/L		106	50 - 150
Pyrene	0.0496	0.0549		ug/L		111	50 - 150
Simazine	0.0496	0.0533		ug/L		108	50 - 150
Terbacil	0.0991	0.126		ug/L		128	50 - 150
Terbuthylazine	0.0991	0.106		ug/L		107	50 - 150
Thiobencarb	0.0991	0.110	J	ug/L		111	50 - 150

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

Lab Sample ID: MRL 380-15033/2-A
Matrix: Water
Analysis Batch: 15268

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 15033

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
trans-Nonachlor			0.0496	0.0490	J	ug/L		99	50 - 150		
Trifluralin			0.0991	0.0987	J	ug/L		100	50 - 150		

Surrogate	*MRL %Recovery*	*MRL Qualifier*	*Limits*
2-Nitro-m-xylene	*91*		*70 - 130*
Triphenylphosphate	*111*		*70 - 130*
Perylene-d12	*95*		*70 - 130*

Lab Sample ID: 380-16699-B-1-A MS
Matrix: Water
Analysis Batch: 15268

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 15033

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
2,4'-DDD	ND		1.96	2.31		ug/L		118	70 - 130		
2,4'-DDE	ND		1.96	2.25		ug/L		115	70 - 130		
2,4'-DDT	ND	F1	1.96	2.68	F1	ug/L		137	70 - 130		
2,4-Dinitrotoluene	ND	*1	1.96	2.48		ug/L		127	70 - 130		
2,6-Dinitrotoluene	ND	*1	1.96	2.38		ug/L		121	70 - 130		
4,4'-DDD	ND		1.96	2.42		ug/L		123	70 - 130		
4,4'-DDE	ND		1.96	2.31		ug/L		118	70 - 130		
4,4'-DDT	ND		1.96	2.46		ug/L		126	70 - 130		
Acenaphthene	ND		1.96	1.98		ug/L		101	70 - 130		
Acenaphthylene	ND		1.96	2.09		ug/L		107	70 - 130		
Acetochlor	ND		1.96	2.44		ug/L		124	70 - 130		
Alachlor	ND		1.96	2.29		ug/L		117	70 - 130		
alpha-BHC	ND		1.96	2.18		ug/L		111	70 - 130		
alpha-Chlordane	ND		1.96	2.31		ug/L		118	70 - 130		
Anthracene	ND		1.96	2.19		ug/L		111	70 - 130		
Atrazine	ND		1.96	2.41		ug/L		123	70 - 130		
Benz(a)anthracene	ND		1.96	2.39		ug/L		122	70 - 130		
Benzo[a]pyrene	ND		1.96	2.26		ug/L		115	70 - 130		
Benzo[b]fluoranthene	ND		1.96	2.29		ug/L		116	70 - 130		
Benzo[g,h,i]perylene	ND		1.96	2.31		ug/L		118	70 - 130		
Benzo[k]fluoranthene	ND		1.96	2.26		ug/L		115	70 - 130		
beta-BHC	ND		1.96	2.25		ug/L		115	70 - 130		
Bromacil	ND	*+ *1 F1	1.96	2.87	F1	ug/L		146	70 - 130		
Butachlor	ND	F1	1.96	2.61	F1	ug/L		133	70 - 130		
Butylbenzylphthalate	ND	F1	1.96	2.56	F1	ug/L		131	70 - 130		
Caffeine	ND	*- *1	1.96	1.62		ug/L		83	46 - 144		
Chlorobenzilate	ND	*+ F1	1.96	2.76	F1	ug/L		141	70 - 130		
Chloroneb	ND		1.96	2.15		ug/L		109	70 - 130		
Chlorothalonil (Draconil, Bravo)	ND		1.96	2.42		ug/L		124	70 - 130		
Chlorpyrifos	ND		1.96	2.42		ug/L		123	70 - 130		
Chrysene	ND		1.96	2.15		ug/L		110	70 - 130		
delta-BHC	ND		1.96	2.27		ug/L		116	70 - 130		
Di(2-ethylhexyl)adipate	ND	F1	1.96	2.76	F1	ug/L		141	70 - 130		
Bis(2-ethylhexyl) phthalate	ND		1.96	2.32		ug/L		118	70 - 130		
Diazinon (Qualitative)	ND		1.96	2.03		ug/L		103	15 - 132		

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

Lab Sample ID: 380-16699-B-1-A MS
Matrix: Water
Analysis Batch: 15268

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 15033

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Dibenz(a,h)anthracene	ND		1.96	2.39		ug/L		122	70 - 130
Diclorvos (DDVP)	ND		1.96	2.13		ug/L		108	70 - 130
Dieldrin	ND		1.96	2.32		ug/L		118	70 - 130
Diethylphthalate	ND		1.96	2.15		ug/L		109	70 - 130
Dimethoate	ND	*- *1	1.96	1.69		ug/L		86	34 - 111
Dimethylphthalate	ND		1.96	2.22		ug/L		113	70 - 130
Di-n-butyl phthalate	ND		3.92	4.37		ug/L		111	70 - 130
Di-n-octyl phthalate	ND		1.96	1.92		ug/L		98	70 - 130
Endosulfan I (Alpha)	ND		1.96	2.27		ug/L		116	70 - 130
Endosulfan II (Beta)	ND		1.96	2.34		ug/L		119	70 - 130
Endosulfan sulfate	ND		1.96	2.52		ug/L		128	70 - 130
Endrin	ND		1.96	2.54		ug/L		130	70 - 130
Endrin aldehyde	ND		1.96	2.19		ug/L		112	70 - 130
EPTC	ND		1.96	2.14		ug/L		109	70 - 130
Fluoranthene	ND		1.96	2.32		ug/L		118	70 - 130
Fluorene	ND		1.96	2.18		ug/L		111	70 - 130
gamma-Chlordane	ND		1.96	2.32		ug/L		118	70 - 130
Heptachlor	ND	^3+	1.96	2.25		ug/L		115	70 - 130
Heptachlor epoxide (isomer B)	ND		1.96	2.37		ug/L		121	70 - 130
Hexachlorobenzene	ND		1.96	2.05		ug/L		104	70 - 130
Hexachlorocyclopentadiene	ND		1.96	2.18		ug/L		111	70 - 130
Indeno[1,2,3-cd]pyrene	ND		1.96	2.36		ug/L		120	70 - 130
Isophorone	ND		1.96	1.86		ug/L		95	70 - 130
Lindane	ND		1.96	2.19		ug/L		111	70 - 130
Malathion	ND	*+ F1	1.96	2.67	F1	ug/L		136	70 - 130
Methoxychlor	ND	^3+ F1	1.96	2.63	F1	ug/L		134	70 - 130
Metolachlor	ND		1.96	2.43		ug/L		124	70 - 130
Metribuzin	ND	*- *1	1.96	2.06		ug/L		105	70 - 130
Molinate	ND		1.96	2.13		ug/L		109	70 - 130
Naphthalene	ND		1.96	1.79		ug/L		91	70 - 130
Parathion	ND	^3+	1.96	2.44		ug/L		124	70 - 130
Pendimethalin (Penoxaline)	ND		1.96	2.51		ug/L		128	70 - 130
Phenanthrene	ND		1.96	2.10		ug/L		107	70 - 130
Propachlor	ND		1.96	2.25		ug/L		115	70 - 130
Pyrene	ND		1.96	2.36		ug/L		120	70 - 130
Simazine	ND	*1	1.96	2.38		ug/L		121	70 - 130
Terbacil	ND	*1	1.96	2.47		ug/L		126	70 - 130
Terbuthylazine	ND		1.96	2.38		ug/L		121	70 - 130
Thiobencarb	ND		1.96	2.09		ug/L		107	70 - 130
trans-Nonachlor	ND		1.96	2.36		ug/L		120	70 - 130
Trifluralin	ND		1.96	2.42		ug/L		123	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Nitro-m-xylene	*92*		*70 - 130*
Triphenylphosphate	*118*		*70 - 130*
Perylene-d12	*98*		*70 - 130*

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

Lab Sample ID: 380-16699-B-2-A DU
Matrix: Water
Analysis Batch: 15268

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 15033

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	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	*1		ND	*1	ug/L				NC	20
2,6-Dinitrotoluene	ND	*1		ND	*1	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	*+ *1		ND	*+ *1	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
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

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

Lab Sample ID: 380-16699-B-2-A DU
Matrix: Water
Analysis Batch: 15268

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 15033

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
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	^3+		ND		ug/L				NC	20
Heptachlor epoxide (isomer B)	ND			ND		ug/L				NC	20
Hexachlorobenzene	ND			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	^3+		ND		ug/L				NC	20
Metolachlor	ND			ND		ug/L				NC	20
Metribuzin	ND	*- *1		ND	*- *1	ug/L				NC	20
Molinate	ND			ND		ug/L				NC	20
Naphthalene	ND			ND		ug/L				NC	20
Parathion	ND	^3+		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	*1		ND	*1	ug/L				NC	20
Terbacil	ND	*1		ND	*1	ug/L				NC	20
Terbuthylazine	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 %Recovery*	*DU Qualifier*	*Limits*
2-Nitro-m-xylene	*95*		*70 - 130*
Triphenylphosphate	*110*		*70 - 130*
Perylene-d12	*90*		*70 - 130*

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

Lab Sample ID: 99459-B1
Matrix: water
Analysis Batch: O-38098

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: O-38098_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 14:40	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 14:40	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 14:40	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 14:40	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 14:40	1
Acenaphthene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 14:40	1
Acenaphthylene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 14:40	1

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

Lab Sample ID: 99459-B1
Matrix: water
Analysis Batch: O-38098

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: O-38098_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Anthracene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 14:40	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 14:40	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 14:40	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 14:40	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 14:40	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 14:40	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 14:40	1
Biphenyl	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 14:40	1
Chrysene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 14:40	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 14:40	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 14:40	1
Dibenzothiophene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 14:40	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		08/22/22 00:00	08/30/22 14:40	1
Fluoranthene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 14:40	1
Fluorene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 14:40	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 14:40	1
Naphthalene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 14:40	1
Perylene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 14:40	1
Phenanthrene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 14:40	1
Pyrene	ND		0.005	0.001	µg/L		08/22/22 00:00	08/30/22 14:40	1

Surrogate	*Blank %Recovery*	*Blank Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
(d10-Acenaphthene)	*94*		*65 - 113*	*08/22/22 00:00*	*08/30/22 14:40*	*1*
(d10-Phenanthrene)	*93*		*80 - 111*	*08/22/22 00:00*	*08/30/22 14:40*	*1*
(d12-Chrysene)	*99*		*60 - 139*	*08/22/22 00:00*	*08/30/22 14:40*	*1*
(d12-Perylene)	*91*		*36 - 161*	*08/22/22 00:00*	*08/30/22 14:40*	*1*
(d8-Naphthalene)	*87*		*44 - 119*	*08/22/22 00:00*	*08/30/22 14:40*	*1*

Lab Sample ID: 99459-BS1
Matrix: water
Analysis Batch: O-38098

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-38098_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	0.5	0.569		µg/L		114	49 - 117
1-Methylphenanthrene	0.5	0.488		µg/L		98	66 - 127
2,3,5-Trimethylnaphthalene	0.5	0.502		µg/L		100	57 - 120
2,6-Dimethylnaphthalene	0.5	0.584		µg/L		117	54 - 117
2-Methylnaphthalene	0.5	0.545		µg/L		109	47 - 130
Acenaphthene	0.5	0.597		µg/L		119	53 - 131
Acenaphthylene	0.5	0.561		µg/L		112	43 - 140
Anthracene	0.5	0.425		µg/L		85	58 - 135
Benz[a]anthracene	0.5	0.428		µg/L		86	55 - 145
Benzo[a]pyrene	0.5	0.468		µg/L		94	51 - 143
Benzo[b]fluoranthene	0.5	0.517		µg/L		103	46 - 165
Benzo[e]pyrene	0.5	0.492		µg/L		98	42 - 152
Benzo[g,h,i]perylene	0.5	0.429		µg/L		86	63 - 133
Benzo[k]fluoranthene	0.5	0.495		µg/L		99	56 - 145
Biphenyl	0.5	0.597		µg/L		119	56 - 119

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

Lab Sample ID: 99459-BS1
Matrix: water
Analysis Batch: O-38098

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-38098_P

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chrysene			0.5	0.426		µg/L		85	56 - 141		
Dibenz[a,h]anthracene			0.5	0.526		µg/L		105	55 - 150		
Dibenzo[a,l]pyrene			0.5	0.503		µg/L		101	50 - 150		
Dibenzothiophene			0.5	0.409		µg/L		82	75 - 113		
Disalicylidenepropanediamine			50	39.6		µg/L		79	50 - 150		
Fluoranthene			0.5	0.468		µg/L		94	60 - 146		
Fluorene			0.5	0.517		µg/L		103	58 - 131		
Indeno[1,2,3-cd]pyrene			0.5	0.519		µg/L		104	50 - 151		
Naphthalene			0.5	0.476		µg/L		95	41 - 126		
Perylene			0.5	0.486		µg/L		97	48 - 141		
Phenanthrene			0.5	0.417		µg/L		83	67 - 127		
Pyrene			0.5	0.466		µg/L		93	54 - 156		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
(d10-Acenaphthene)	*107*		*65 - 113*
(d10-Phenanthrene)	*94*		*80 - 111*
(d12-Chrysene)	*90*		*60 - 139*
(d12-Perylene)	*101*		*36 - 161*
(d8-Naphthalene)	*108*		*44 - 119*

Lab Sample ID: 99459-BS2
Matrix: water
Analysis Batch: O-38098

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: O-38098_P

Analyte			Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene			0.5	0.461		µg/L		92	49 - 117	21	30
1-Methylphenanthrene			0.5	0.511		µg/L		102	66 - 127	4	30
2,3,5-Trimethylnaphthalene			0.5	0.492		µg/L		98	57 - 120	2	30
2,6-Dimethylnaphthalene			0.5	0.494		µg/L		99	54 - 117	17	30
2-Methylnaphthalene			0.5	0.432		µg/L		86	47 - 130	24	30
Acenaphthene			0.5	0.494		µg/L		99	53 - 131	18	30
Acenaphthylene			0.5	0.479		µg/L		96	43 - 140	15	30
Anthracene			0.5	0.44		µg/L		88	58 - 135	3	30
Benz[a]anthracene			0.5	0.447		µg/L		89	55 - 145	3	30
Benzo[a]pyrene			0.5	0.448		µg/L		90	51 - 143	4	30
Benzo[b]fluoranthene			0.5	0.493		µg/L		99	46 - 165	4	30
Benzo[e]pyrene			0.5	0.488		µg/L		98	42 - 152	0	30
Benzo[g,h,i]perylene			0.5	0.431		µg/L		86	63 - 133	0	30
Benzo[k]fluoranthene			0.5	0.479		µg/L		96	56 - 145	3	30
Biphenyl			0.5	0.443		µg/L		89	56 - 119	29	30
Chrysene			0.5	0.437		µg/L		87	56 - 141	2	30
Dibenz[a,h]anthracene			0.5	0.516		µg/L		103	55 - 150	2	30
Dibenzo[a,l]pyrene			0.5	0.451		µg/L		90	50 - 150	12	30
Dibenzothiophene			0.5	0.446		µg/L		89	75 - 113	8	30
Disalicylidenepropanediamine			50	43.5		µg/L		87	50 - 150	10	30
Fluoranthene			0.5	0.503		µg/L		101	60 - 146	7	30
Fluorene			0.5	0.485		µg/L		97	58 - 131	6	30
Indeno[1,2,3-cd]pyrene			0.5	0.497		µg/L		99	50 - 151	5	30

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

Lab Sample ID: 99459-BS2
Matrix: water
Analysis Batch: O-38098

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: O-38098_P

Analyte			Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Naphthalene			0.5	0.384		µg/L		77	41 - 126	21	30
Perylene			0.5	0.451		µg/L		90	48 - 141	7	30
Phenanthrene			0.5	0.451		µg/L		90	67 - 127	8	30
Pyrene			0.5	0.504		µg/L		101	54 - 156	8	30

Surrogate	*LCS DUP %Recovery*	*LCS DUP Qualifier*	*Limits*
(d10-Acenaphthene)	*104*		*65 - 113*
(d10-Phenanthrene)	*100*		*80 - 111*
(d12-Chrysene)	*93*		*60 - 139*
(d12-Perylene)	*96*		*36 - 161*
(d8-Naphthalene)	*84*		*44 - 119*

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

Lab Sample ID: 22DSH034WB
Matrix: WATER
Analysis Batch: 22DSH034W

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DIESEL	ND	U	0.025		mg/L			08/22/22 17:35	1
MOTOR OIL	ND	U	0.05		mg/L			08/22/22 17:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOBENZENE					*08/22/22 17:35*	*1*
HEXACOSANE					*08/22/22 17:35*	*1*

Lab Sample ID: 22DSH034WL
Matrix: WATER
Analysis Batch: 22DSH034W

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
DIESEL			2.5	2.11		mg/L		84	50 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
BROMOBENZENE	*75*		*60 - 130*
HEXACOSANE	*93*		*60 - 130*

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

Lab Sample ID: 22VGH7H09B
Matrix: WATER
Analysis Batch: 22VGH7H09

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			08/23/22 13:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE					*08/23/22 13:39*	*1*

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

Lab Sample ID: 22VGH7H09L
Matrix: WATER
Analysis Batch: 22VGH7H09

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	0.464		mg/L		93	60 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
BROMOFLUOROBENZENE	*118*		*70 - 130*

GC/MS Semi VOA

Prep Batch: 15033

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-17084-1	MOANALUA WELLS	Total/NA	Drinking Water	525.2	
MB 380-15033/1-A	Method Blank	Total/NA	Water	525.2	
LCS 380-15033/3-A	Lab Control Sample	Total/NA	Water	525.2	
LCSD 380-15033/4-A	Lab Control Sample Dup	Total/NA	Water	525.2	
MRL 380-15033/2-A	Lab Control Sample	Total/NA	Water	525.2	
380-16699-B-1-A MS	Matrix Spike	Total/NA	Water	525.2	
380-16699-B-2-A DU	Duplicate	Total/NA	Water	525.2	

Analysis Batch: 15268

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-17084-1	MOANALUA WELLS	Total/NA	Drinking Water	525.2	15033
MB 380-15033/1-A	Method Blank	Total/NA	Water	525.2	15033
LCS 380-15033/3-A	Lab Control Sample	Total/NA	Water	525.2	15033
LCSD 380-15033/4-A	Lab Control Sample Dup	Total/NA	Water	525.2	15033
MRL 380-15033/2-A	Lab Control Sample	Total/NA	Water	525.2	15033
380-16699-B-1-A MS	Matrix Spike	Total/NA	Water	525.2	15033
380-16699-B-2-A DU	Duplicate	Total/NA	Water	525.2	15033

Subcontract

Analysis Batch: O-38098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-17084-1	MOANALUA WELLS	Total/NA	Drinking Water	625 PAH Physis LL (EAL) + TICs	O-38098_P
99459-B1	Method Blank	Total/NA	water	625 PAH Physis LL (EAL) + TICs	O-38098_P
99459-BS1	Lab Control Sample	Total/NA	water	625 PAH Physis LL (EAL) + TICs	O-38098_P
99459-BS2	Lab Control Sample Dup	Total/NA	water	625 PAH Physis LL (EAL) + TICs	O-38098_P

Analysis Batch: 22DSH034W

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-17084-1	MOANALUA WELLS	Total/NA	Drinking Water	8015 Diesel LL (EAL) and Motor Oil	
22DSH034WB	Method Blank	Total/NA	WATER	8015 Diesel LL (EAL) and Motor Oil	
22DSH034WL	Lab Control Sample	Total/NA	WATER	8015 Diesel LL (EAL) and Motor Oil	

Analysis Batch: 22VGH7H09

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-17084-1	MOANALUA WELLS	Total/NA	Drinking Water	8015 Gas (Purgeable) LL (EAL)	
380-17084-2	TB:MOANALUA WELLS	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
22VGH7H09B	Method Blank	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	

Subcontract (Continued)

Analysis Batch: 22VGH7H09 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
22VGH7H09L	Lab Control Sample	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	

Prep Batch: O-38098_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-17084-1	MOANALUA WELLS	Total/NA	Drinking Water	EPA_625	
99459-B1	Method Blank	Total/NA	water	EPA_625	
99459-BS1	Lab Control Sample	Total/NA	water	EPA_625	
99459-BS2	Lab Control Sample Dup	Total/NA	water	EPA_625	

Lab Chronicle

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

Job ID: 380-17084-1

Client Sample ID: MOANALUA WELLS

Lab Sample ID: 380-17084-1

Date Collected: 08/15/22 11:14

Matrix: Drinking Water

Date Received: 08/17/22 11:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			15033	OTM3	EA MON	08/26/22 09:00
Total/NA	Analysis	525.2		1	15268	UJC9	EA MON	08/29/22 17:23
Total/NA	Prep	EPA_625		1	O-38098_P			08/22/22 00:00
Total/NA	Analysis	625 PAH Physis LL (EAL) + TICs		1	O-38098	YC		08/30/22 19:51
Total/NA	Analysis	8015 Diesel LL (EAL) and Motor Oil		1	22DSH034W	SDees		08/23/22 00:23
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	22VGH7H09	SCerva		08/23/22 19:33

Client Sample ID: TB:MOANALUA WELLS

Lab Sample ID: 380-17084-2

Date Collected: 08/15/22 11:14

Matrix: Water

Date Received: 08/17/22 11:00

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	22VGH7H09	SCerva		08/23/22 20:08

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: 380-17084-1

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

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	Terbuthylazine
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: 380-17084-1

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: 380-17084-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-17084-1	MOANALUA WELLS	Drinking Water	08/15/22 11:14	08/17/22 11:00
380-17084-2	TB:MOANALUA WELLS	Water	08/15/22 11:14	08/17/22 11:00

EMAX LABORATORIES, INC.
3051 Fujita Street
Torrance, CA 90505
Tel: (310)-618-8889

Date: 09-06-2022
EMAX Batch No.: 22H243

Attn: Jackie Contreras

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

Subject: Laboratory Report
Project: 380-17084

Enclosed is the Laboratory report for samples received on 08/18/22.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
380-17084-1	H243-01	08/15/22	WATER	TPH GASOLINE
				TPH DIESEL & MOTOR OIL
380-17084-2	H243-02	08/15/22	WATER	TPH GASOLINE

The results are summarized on the following pages.

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

Sincerely yours,

Caspar J. Pang
Laboratory Director

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

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

Chain of Custody Record

eurofins | Environment Testing America

22H243

10/25/2022

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Frank, Debbie L	Carrier Tracking No(s):	COC No: 380-18376.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Debbie.Frank@et.eurofinsus.com	State of Origin: Hawaii	Page: Page 1 of 1
Company: EMAX Laboratories Inc		Accreditations Required (See note): State - Hawaii		Job #: 380-17084-1
Address: 3051 Fujita Street, ,	Due Date Requested: 8/31/2022			
City: Torrance	TAT Requested (days):			
State, Zip: CA, 90505				
Phone:	PO #:			
Email:	WO #:			
Project Name: RED-HILL	Project #: 38001111			
Site: Honolulu BWS Sites	SSOW#:			

Analysis Requested

Preservation Codes:

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

Other:

	Sample Identification - Client ID (Lab ID)	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)	Perform MS/MSD (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	Total Number of containers	Special Instructions/Note:
				Preservation Code:							
1	MOANALUA WELLS (331-223-TP202) (380-17084-1)	8/15/22	11:14 Hawaiian		Water			X	X	5	See Attached Instructions
2	TB:MOANALUA WELLS (331-223-TP202) (380-17084-2)	8/15/22	Hawaiian		Water			X		2	See Attached Instructions

Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/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 said complicance to Eurofins Eaton Analytical, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples ar e retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Heidi Castro	8/18/22	EEA			
2	Alex T	8-18-22 1250			08/18/22 17:30	EMAX
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Yes No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: Temp: 3.0

SAMPLE RECEIPT FORM 1

EMAX LABORATORIES, INC.

Type of Delivery	Airbill / Tracking Number	ECN 22H243
☐ Fedex ☐ UPS ☐ GSO ☐ Others		Recipient Jocelyne Solis-Ramos
☐ EMAX Courier ☑ Client Delivery		Date 08/19/22 Time 17:30

COC INSPECTION

☑ Client Name	☑ Client PM/FC	☐ Sampler Name	☑ Sampling Date/Time	☑ Sample ID	☑ Matrix
☑ Address	☐ Tel # / Fax #	☐ Courier Signature	☑ Analysis Required	☐ Preservative (if any)	☑ TAT
Safety Issues (if any)	☐ High concentrations expected	☐ From Superfund Site	☐ Rad screening required		

Note:

PACKAGING INSPECTION

Container	☑ Cooler	☐ Box	☐ Other		
Condition	☐ Custody Seal	☐ Intact	☐ Damaged		
Packaging	☑ Bubble Pack	☐ Styrofoam	☐ Popcorn	☐ Sufficient	☐ _____
Temperatures (Cool, ≤6 °C but not frozen)	☑ Cooler 1 3.0 °C	☐ Cooler 2_____ °C	☐ Cooler 3_____ °C	☐ Cooler 4_____ °C	☐ Cooler 5_____ °C
	☐ Cooler 6_____ °C	☐ Cooler 7_____ °C	☐ Cooler 8_____ °C	☐ Cooler 9_____ °C	☐ Cooler 10_____ °C
Thermometer:	*A - S/N* _____	*B - S/N* 210760237	*C - S/N* _____	*D - S/N* 210760272	

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

Note:

DISCREPANCIES

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
2	7,8	D6	time reads 00:00	R1
2	7,8	D7	two dates on label - 7/29/22 & 8/15/22	

8/15/22

NB 8/23/22

☐ 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:

☐ Continue to next page.

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

REVIEWS:

Sample Labeling Jocelyne Solis-Ramos Date 08/19/22 — 8/15/22

SRF — Date 8/15/22

PM NB Date 8/23/22

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

380-17084

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

SDG#: 22H243

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-17084

SDG : 22H243

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

A total of two(2) water samples were received on 08/18/22 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. VGH7H09B - 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. VGH7H09L/VGH7H09C 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 H242-01M/H242-01S. 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 : 380-17084

SDG NO. : 22H243
Instrument ID : H7

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	VGH7H09B	1	NA	08/23/2213:39	08/23/2213:39	AH23005A	AH23004A	22VGH7H09	Method Blank
LCS1W	VGH7H09L	1	NA	08/23/2214:14	08/23/2214:14	AH23006A	AH23004A	22VGH7H09	Lab Control Sample (LCS)
LCD1W	VGH7H09C	1	NA	08/23/2214:50	08/23/2214:50	AH23007A	AH23004A	22VGH7H09	LCS Duplicate
380-17084-1	H243-01	1	NA	08/23/2219:33	08/23/2219:33	AH23015A	AH23014A	22VGH7H09	Field Sample
380-17084-2	H243-02	1	NA	08/23/2220:08	08/23/2220:08	AH23016A	AH23014A	22VGH7H09	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

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

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	08/15/22 11:14
Project	: 380-17084	Date Received:	08/18/22
Batch No.	: 22H243	Date Extracted:	08/23/22 19:33
Sample ID	: 380-17084-1	Date Analyzed:	08/23/22 19:33
Lab Samp ID:	H243-01	Dilution Factor:	1
Lab File ID:	AH23015A	Matrix:	WATER
Ext Btch ID:	22VGH7H09	% Moisture:	NA
Calib. Ref.:	AH23014A	Instrument ID:	H7

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

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0336	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:	08/15/22 00:00
Project	: 380-17084	Date Received:	08/18/22
Batch No.	: 22H243	Date Extracted:	08/23/22 20:08
Sample ID	: 380-17084-2	Date Analyzed:	08/23/22 20:08
Lab Samp ID:	H243-02	Dilution Factor:	1
Lab File ID:	AH23016A	Matrix:	WATER
Ext Btch ID:	22VGH7H09	% Moisture:	NA
Calib. Ref.:	AH23014A	Instrument ID:	H7

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

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0350	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

QC SUMMARIES

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

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	08/23/22 13:39
Project	: 380-17084	Date Received:	08/23/22
Batch No.	: 22H243	Date Extracted:	08/23/22 13:39
Sample ID	: MBLK1W	Date Analyzed:	08/23/22 13:39
Lab Samp ID	: VGH7H09B	Dilution Factor:	1
Lab File ID	: AH23005A	Matrix:	WATER
Ext Btch ID	: 22VGH7H09	% Moisture:	NA
Calib. Ref.:	AH23004A	Instrument ID:	H7

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

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0375	0.0400	94	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 : 380-17084
BATCH NO. : 22H243
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	: VGH7H09B	VGH7H09L	VGH7H09C
LAB FILE ID	: AH23005A	AH23006A	AH23007A
DATE PREPARED	: 08/23/22 13:39	08/23/22 14:14	08/23/22 14:50
DATE ANALYZED	: 08/23/22 13:39	08/23/22 14:14	08/23/22 14:50
PREP BATCH	: 22VGH7H09	22VGH7H09	22VGH7H09
CALIBRATION REF	: AH23004A	AH23004A	AH23004A

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	0.464	93	0.500	0.503	101	8	60-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0473	118	0.0400	0.0471	118	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 : 380-17089
BATCH NO. : 22H242
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: 380-17089-1	380-17089-1MS	380-17089-1MSD
LAB SAMPLE ID	: H242-01	H242-01M	H242-01S
LAB FILE ID	: AH23010A	AH23011A	AH23012A
DATE PREPARED	: 08/23/22 16:36	08/23/22 17:11	08/23/22 17:47
DATE ANALYZED	: 08/23/22 16:36	08/23/22 17:11	08/23/22 17:47
PREP BATCH	: 22VGH7H09	22VGH7H09	22VGH7H09
CALIBRATION REF	: AH23004A	AH23004A	AH23004A

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	0.432	86	0.500	0.464	93	7	50-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0434	109	0.0400	0.0465	116	60-140

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

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-17084

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 22H243

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-17084

SDG : 22H243

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 08/18/22 to be analyzed for Total Petroleum Hydrocarbons by Extraction in accordance with Method 3520C/8015B and project specific requirements.

Holding Time
The sample was analyzed within the prescribed holding time.

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

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. DSH034WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) LCS was analyzed. Percent recovery for Diesel was within LCS QC limits in DSH034WL. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Diesel was within MS QC limits in 22H180-01M/22H180-01S. Refer to Matrix QC summary form for details.

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

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

LAB CHRONICLE
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL
Project : 380-17084
SDG NO. : 22H243
Instrument ID : D5

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
LCS1W	DSH034WL	1	NA	08/22/2217:16	08/20/2215:00	LH22010A	LH22004A	22DSH034W	Lab Control Sample (LCS)
MBLK1W	DSH034WB	1	NA	08/22/2217:35	08/20/2215:00	LH22011A	LH22004A	22DSH034W	Method Blank
380-17084-1	H243-01	1	NA	08/23/2200:23	08/20/2215:00	LH22033A	LH22024A	22DSH034W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	08/15/22 11:14
Project	: 380-17084	Date Received:	08/18/22
Batch No.	: 22H243	Date Extracted:	08/20/22 15:00
Sample ID	: 380-17084-1	Date Analyzed:	08/23/22 00:23
Lab Samp ID:	22H243-01	Dilution Factor:	1
Lab File ID:	LH22033A	Matrix:	WATER
Ext Btch ID:	22DSH034W	% Moisture:	NA
Calib. Ref.:	LH22024A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Diesel	ND	0.029	0.014
Motor Oil	ND	0.058	0.029

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.471	0.575	82	60-130
Hexacosane	0.155	0.144	108	60-130

Notes:

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

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.
Sample Amount : 870ml Final Volume : 5ml
Prepared by : DLi Analyzed by : SDeeso

QC SUMMARIES

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	08/20/22 15:00
Project	: 380-17084	Date Received:	08/20/22
Batch No.	: 22H243	Date Extracted:	08/20/22 15:00
Sample ID	: MBLK1W	Date Analyzed:	08/22/22 17:35
Lab Samp ID:	DSH034WB	Dilution Factor:	1
Lab File ID:	LH22011A	Matrix:	WATER
Ext Btch ID:	22DSH034W	% Moisture:	NA
Calib. Ref.:	LH22004A	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	0.380	0.500	76	60-130
Hexacosane	0.113	0.125	90	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 : 380-17084
BATCH NO. : 22H243
METHOD : 3520C/8015B

MATRIX	: WATER	% MOISTURE:NA
DILUTION FACTOR	: 1	1
SAMPLE ID	: MBLK1W	LCS1W
LAB SAMPLE ID	: DSH034WB	DSH034WL
LAB FILE ID	: LH22011A	LH22010A
DATE PREPARED	: 08/20/22 15:00	08/20/22 15:00
DATE ANALYZED	: 08/22/22 17:35	08/22/22 17:16
PREP BATCH	: 22DSH034W	22DSH034W
CALIBRATION REF	: LH22004A	LH22004A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Diesel	ND	2.50	2.11	84	50-130

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Bromobenzene	0.500	0.377	75	60-130
Hexacosane	0.125	0.116	93	60-130

MB: Method Blank sample LCS: Lab Control Sample

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-16110
BATCH NO. : 22H180
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: 380-16110-1	380-16110-1MS	380-16110-1MSD
LAB SAMPLE ID	: 22H180-01	22H180-01M	22H180-01S
LAB FILE ID	: LH22015A	LH22016A	LH22017A
DATE PREPARED	: 08/20/22 15:00	08/20/22 15:00	08/20/22 15:00
DATE ANALYZED	: 08/22/22 18:49	08/22/22 19:08	08/22/22 19:26
PREP BATCH	: 22DSH034W	22DSH034W	22DSH034W
CALIBRATION REF	: LH22004A	LH22004A	LH22004A

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Diesel	ND	2.75	2.82	103	2.58	2.32	90	19	50-130	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.550	0.461	84	0.515	0.356	69	60-130
Hexacosane	0.138	0.132	96	0.129	0.118	92	60-130

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

September 06, 2022

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

Project Name: RED-HILL Project # 38001111 Job # 380-17084-1
Physis Project ID: 1407003-276

Dear Debbie,

Enclosed are the analytical results for the sample submitted to PHYSIS Environmental Laboratories, Inc. (PHYSIS) on 8/18/2022. A total of 1 sample was received for analysis in accordance with the attached chain of custody (COC). Per the COC, the sample was analyzed for:

Organics
Polynuclear Aromatic Hydrocarbons by EPA 625.1
Disalicylidenepropanediamine by EPA 625.1
Dibenzo [a,l] Pyrene w/ PAHs by EPA 625.1

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: 1407003-276

RED-HILL Project # 38001111 Job # 380-17084-1

Total Samples: 1

PHYSIS ID	Sample ID	Description	Date	Time	Matrix	Sample Type
99460	MOANALUA WELLS	331-223-TP202 (380-17084-1)	8/15/2022	11:14	Samplewater	Not Specified

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ABBREVIATIONS and ACRONYMS

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

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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

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

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

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

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

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PHYSIS QUALIFIER CODES

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

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CASE NARRATIVE

QUALIFIER NOTES

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

ND

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

ANALYTICAL REPORT

PHYSIS Project ID: 1407003-276
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-17084-1

Base/Neutral Extractable Compounds

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 99460-R1	**MOANALUA WELLS 331-223-TP202**	**Matrix: Samplewater**					**Sampled:**	**15-Aug-22**	**11:14**	**Received:**	**18-Aug-22**
Disalicylidenepropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38098	22-Aug-22	30-Aug-22

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 99460-R1	**MOANALUA WELLS 331-223-TP202**	**Matrix: Samplewater**					**Sampled:**	**15-Aug-22**	**11:14**	**Received:**	**18-Aug-22**
(d10-Acenaphthene)	EPA 625.1	% Recovery	77	1			Total		O-38098	22-Aug-22	30-Aug-22
(d10-Phenanthrene)	EPA 625.1	% Recovery	58	1			Total		O-38098	22-Aug-22	30-Aug-22
(d12-Chrysene)	EPA 625.1	% Recovery	69	1			Total		O-38098	22-Aug-22	30-Aug-22
(d12-Perylene)	EPA 625.1	% Recovery	67	1			Total		O-38098	22-Aug-22	30-Aug-22
(d8-Naphthalene)	EPA 625.1	% Recovery	71	1			Total		O-38098	22-Aug-22	30-Aug-22
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38098	22-Aug-22	30-Aug-22
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38098	22-Aug-22	30-Aug-22
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38098	22-Aug-22	30-Aug-22
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38098	22-Aug-22	30-Aug-22
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38098	22-Aug-22	30-Aug-22
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38098	22-Aug-22	30-Aug-22
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38098	22-Aug-22	30-Aug-22
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38098	22-Aug-22	30-Aug-22
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38098	22-Aug-22	30-Aug-22
Benzo[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38098	22-Aug-22	30-Aug-22
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38098	22-Aug-22	30-Aug-22
Benzo[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38098	22-Aug-22	30-Aug-22
Benzo[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38098	22-Aug-22	30-Aug-22
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38098	22-Aug-22	30-Aug-22
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38098	22-Aug-22	30-Aug-22
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38098	22-Aug-22	30-Aug-22
D benz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38098	22-Aug-22	30-Aug-22
D benzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38098	22-Aug-22	30-Aug-22
D benzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38098	22-Aug-22	30-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-38098	22-Aug-22	30-Aug-22
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38098	22-Aug-22	30-Aug-22
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38098	22-Aug-22	30-Aug-22
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38098	22-Aug-22	30-Aug-22
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38098	22-Aug-22	30-Aug-22
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38098	22-Aug-22	30-Aug-22
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38098	22-Aug-22	30-Aug-22

QUALITY CONTROL REPORT

ENVIRONMENTAL LABORATORIES, INC.

Innovative Solutions for Nature

Base/Neutral Extractable Compounds QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODEc
Sample ID: 99459-B1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**					**Received:**	
		Method: EPA 625.1				Batch ID: O-38098		Prepared: 22-Aug-22					Analyzed: 30-Aug-22	
Disalicylidenepropanediamin	Total	ND	1	0.05	0.1	µg/L								
Sample ID: 99459-BS1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**					**Received:**	
		Method: EPA 625.1				Batch ID: O-38098		Prepared: 22-Aug-22					Analyzed: 30-Aug-22	
Disalicylidenepropanediamin	Total	39.6	1	0.05	0.1	µg/L	50	0	79	50 - 150%	PASS			
Sample ID: 99459-BS2	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**					**Received:**	
		Method: EPA 625.1				Batch ID: O-38098		Prepared: 22-Aug-22					Analyzed: 30-Aug-22	
Disalicylidenepropanediamin	Total	43.5	1	0.05	0.1	µg/L	50	0	87	50 - 150%	PASS	10	30 PASS	

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODEc
Sample ID: 99459-B1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**	**Sampled:**			**Received:**			
		Method: EPA 625.1				Batch ID: O-38098		Prepared: 22-Aug-22		Analyzed: 30-Aug-22			
(d10-Acenaphthene)	Total	94	1			% Recovery	100	94	65 - 113%	PASS			
(d10-Phenanthrene)	Total	93	1			% Recovery	100	93	80 - 111%	PASS			
(d12-Chrysene)	Total	99	1			% Recovery	100	99	60 - 139%	PASS			
(d12-Perylene)	Total	91	1			% Recovery	100	91	36 - 161%	PASS			
(d8-Naphthalene)	Total	87	1			% Recovery	100	87	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							

PHYSIS Project ID: 1407003-276
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-17084-1

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

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

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODEc
Sample ID: 99459-BS1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**				**Received:**	
		Method: EPA 625.1				Batch ID: O-38098		Prepared: 22-Aug-22				Analyzed: 30-Aug-22	
(d10-Acenaphthene)	Total	107	1			% Recovery	100	0	107	65 - 113%	PASS		
(d10-Phenanthrene)	Total	94	1			% Recovery	100	0	94	80 - 111%	PASS		
(d12-Chrysene)	Total	90	1			% Recovery	100	0	90	60 - 139%	PASS		
(d12-Perylene)	Total	101	1			% Recovery	100	0	101	36 - 161%	PASS		
(d8-Naphthalene)	Total	108	1			% Recovery	100	0	108	44 - 119%	PASS		
1-Methylnaphthalene	Total	0.569	1	0.001	0.005	µg/L	0.5	0	114	49 - 117%	PASS		
1-Methylphenanthrene	Total	0.488	1	0.001	0.005	µg/L	0.5	0	98	66 - 127%	PASS		
2,3,5-Trimethylnaphthalene	Total	0.502	1	0.001	0.005	µg/L	0.5	0	100	57 - 120%	PASS		
2,6-Dimethylnaphthalene	Total	0.584	1	0.001	0.005	µg/L	0.5	0	117	54 - 117%	PASS		
2-Methylnaphthalene	Total	0.545	1	0.001	0.005	µg/L	0.5	0	109	47 - 130%	PASS		
Acenaphthene	Total	0.597	1	0.001	0.005	µg/L	0.5	0	119	53 - 131%	PASS		
Acenaphthylene	Total	0.561	1	0.001	0.005	µg/L	0.5	0	112	43 - 140%	PASS		
Anthracene	Total	0.425	1	0.001	0.005	µg/L	0.5	0	85	58 - 135%	PASS		
Benz[a]anthracene	Total	0.428	1	0.001	0.005	µg/L	0.5	0	86	55 - 145%	PASS		
Benzo[a]pyrene	Total	0.468	1	0.001	0.005	µg/L	0.5	0	94	51 - 143%	PASS		
Benzo[b]fluoranthene	Total	0.517	1	0.001	0.005	µg/L	0.5	0	103	46 - 165%	PASS		
Benzo[e]pyrene	Total	0.492	1	0.001	0.005	µg/L	0.5	0	98	42 - 152%	PASS		
Benzo[g,h,i]perylene	Total	0.429	1	0.001	0.005	µg/L	0.5	0	86	63 - 133%	PASS		
Benzo[k]fluoranthene	Total	0.495	1	0.001	0.005	µg/L	0.5	0	99	56 - 145%	PASS		
Biphenyl	Total	0.597	1	0.001	0.005	µg/L	0.5	0	119	56 - 119%	PASS		
Chrysene	Total	0.426	1	0.001	0.005	µg/L	0.5	0	85	56 - 141%	PASS		
Dibenz[a,h]anthracene	Total	0.526	1	0.001	0.005	µg/L	0.5	0	105	55 - 150%	PASS		
Dibenzo[a,l]pyrene	Total	0.503	1	0.001	0.005	µg/L	0.5	0	101	50 - 150%	PASS		

PHYSIS Project ID: 1407003-276
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-17084-1

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODEc
Dibenzothiophene	Total	0.409	1	0.001	0.005	µg/L	0.5	0	82	75 - 113%	PASS			
Fluoranthene	Total	0.468	1	0.001	0.005	µg/L	0.5	0	94	60 - 146%	PASS			
Fluorene	Total	0.517	1	0.001	0.005	µg/L	0.5	0	103	58 - 131%	PASS			
Indeno[1,2,3-cd]pyrene	Total	0.519	1	0.001	0.005	µg/L	0.5	0	104	50 - 151%	PASS			
Naphthalene	Total	0.476	1	0.001	0.005	µg/L	0.5	0	95	41 - 126%	PASS			
Perylene	Total	0.486	1	0.001	0.005	µg/L	0.5	0	97	48 - 141%	PASS			
Phenanthrene	Total	0.417	1	0.001	0.005	µg/L	0.5	0	83	67 - 127%	PASS			
Pyrene	Total	0.466	1	0.001	0.005	µg/L	0.5	0	93	54 - 156%	PASS			

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODEc
Sample ID: 99459-BS2	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**				**Received:**		
		Method: EPA 625.1				Batch ID: O-38098		Prepared: 22-Aug-22				Analyzed: 30-Aug-22		
(d10-Acenaphthene)	Total	104	1			% Recovery	100	0	104	65 - 113%	PASS	3	30	PASS
(d10-Phenanthrene)	Total	100	1			% Recovery	100	0	100	80 - 111%	PASS	6	30	PASS
(d12-Chrysene)	Total	93	1			% Recovery	100	0	93	60 - 139%	PASS	3	30	PASS
(d12-Perylene)	Total	96	1			% Recovery	100	0	96	36 - 161%	PASS	5	30	PASS
(d8-Naphthalene)	Total	84	1			% Recovery	100	0	84	44 - 119%	PASS	25	30	PASS
1-Methylnaphthalene	Total	0.461	1	0.001	0.005	µg/L	0.5	0	92	49 - 117%	PASS	21	30	PASS
1-Methylphenanthrene	Total	0.511	1	0.001	0.005	µg/L	0.5	0	102	66 - 127%	PASS	4	30	PASS
2,3,5-Trimethylnaphthalene	Total	0.492	1	0.001	0.005	µg/L	0.5	0	98	57 - 120%	PASS	2	30	PASS
2,6-Dimethylnaphthalene	Total	0.494	1	0.001	0.005	µg/L	0.5	0	99	54 - 117%	PASS	17	30	PASS
2-Methylnaphthalene	Total	0.432	1	0.001	0.005	µg/L	0.5	0	86	47 - 130%	PASS	24	30	PASS
Acenaphthene	Total	0.494	1	0.001	0.005	µg/L	0.5	0	99	53 - 131%	PASS	18	30	PASS
Acenaphthylene	Total	0.479	1	0.001	0.005	µg/L	0.5	0	96	43 - 140%	PASS	15	30	PASS
Anthracene	Total	0.44	1	0.001	0.005	µg/L	0.5	0	88	58 - 135%	PASS	3	30	PASS
Benz[a]anthracene	Total	0.447	1	0.001	0.005	µg/L	0.5	0	89	55 - 145%	PASS	3	30	PASS
Benzo[a]pyrene	Total	0.448	1	0.001	0.005	µg/L	0.5	0	90	51 - 143%	PASS	4	30	PASS
Benzo[b]fluoranthene	Total	0.493	1	0.001	0.005	µg/L	0.5	0	99	46 - 165%	PASS	4	30	PASS
Benzo[e]pyrene	Total	0.488	1	0.001	0.005	µg/L	0.5	0	98	42 - 152%	PASS	0	30	PASS
Benzo[g,h,i]perylene	Total	0.431	1	0.001	0.005	µg/L	0.5	0	86	63 - 133%	PASS	0	30	PASS
Benzo[k]fluoranthene	Total	0.479	1	0.001	0.005	µg/L	0.5	0	96	56 - 145%	PASS	3	30	PASS
Biphenyl	Total	0.443	1	0.001	0.005	µg/L	0.5	0	89	56 - 119%	PASS	29	30	PASS
Chrysene	Total	0.437	1	0.001	0.005	µg/L	0.5	0	87	56 - 141%	PASS	2	30	PASS
Dibenz[a,h]anthracene	Total	0.516	1	0.001	0.005	µg/L	0.5	0	103	55 - 150%	PASS	2	30	PASS
Dibenzo[a,l]pyrene	Total	0.451	1	0.001	0.005	µg/L	0.5	0	90	50 - 150%	PASS	12	30	PASS

PHYSIS Project ID: 1407003-276
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-17084-1

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODEc
Dibenzothiophene	Total	0.446	1	0.001	0.005	µg/L	0.5	0	89	75 - 113%	PASS	8	30	PASS	
Fluoranthene	Total	0.503	1	0.001	0.005	µg/L	0.5	0	101	60 - 146%	PASS	7	30	PASS	
Fluorene	Total	0.485	1	0.001	0.005	µg/L	0.5	0	97	58 - 131%	PASS	6	30	PASS	
Indeno[1,2,3-cd]pyrene	Total	0.497	1	0.001	0.005	µg/L	0.5	0	99	50 - 151%	PASS	5	30	PASS	
Naphthalene	Total	0.384	1	0.001	0.005	µg/L	0.5	0	77	41 - 126%	PASS	21	30	PASS	
Perylene	Total	0.451	1	0.001	0.005	µg/L	0.5	0	90	48 - 141%	PASS	7	30	PASS	
Phenanthrene	Total	0.451	1	0.001	0.005	µg/L	0.5	0	90	67 - 127%	PASS	8	30	PASS	
Pyrene	Total	0.504	1	0.001	0.005	µg/L	0.5	0	101	54 - 156%	PASS	8	30	PASS	

TENTATIVELY IDENTIFIED COMPOUNDS

Sample ID: 99460

RT	Area Pct	Concentration (ng/L)	Library/ID	Cas Number	Match Qual
32.5329	7.5995	1111	Anthracene-D10-	1719-06-8	97
17.6339	0.8504	124	Propanoic acid, 2-methyl-, 3-hydroxy-2,2,4-trimethylpentyl ester	77-68-9	97
52.4745	0.8351	122	Benzyl butyl phthalate	85-68-7	94
12.6139	0.8094	118	Cyclohexane, (1,2-dimethylbutyl)-	61142-37-8	91
11.7792	0.7059	103	Octane, 4,5-diethyl-	1636-41-5	95

Concentration estimated using the response for Anthracene-d10

Sample ID: Lab Blank Batch O-38098

RT	Area Pct	Concentration (ng/L)	Library/ID	Cas Number	Match Qual
32.5397	7.9071	1111	Anthracene-D10-	1517-22-2	96
11.7799	0.7980	112	Octane, 4,5-diethyl-	1636-41-5	94
12.6179	0.7912	111	Cyclohexane, (1,2-dimethylbutyl)-	61142-37-8	89
12.9766	0.7064	99	Cyclohexane, octyl-	1795-15-9	94

Concentration estimated using the response for Anthracene-d10

CHAIN OF CUSTODY

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

Chain of Custody Record

eurofins | Environment Testing America

10/25/2022

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Frank, Debbie L	Carrier Tracking No(s):	COC No: 380-18377.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Debbie.Frank@et.eurofinsus.com	State of Origin: Hawaii	Page: Page 1 of 1
Company: Physis Environmental Laboratories		Accreditations Required (See note): State - Hawaii		Job #: 380-17084-1
Address: 1904 Wright Circle,	Due Date Requested: 8/31/2022			
City: Anaheim	TAT Requested (days):			
State, Zip: CA, 92806				
Phone:	PO #:			
Email:	WO #:			
Project Name: RED-HILL	Project #: 38001111			
Site: Honolulu BWS Sites	SSOW#:			

Analysis Requested

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

Sample Identification - Client ID (Lab ID)	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)	Perform MS/MSD (Yes or No)	SUB (625 PAH Physis LL (EAL) + TICs)/ 625 PAH Physis LL (EAL) + TICs	Total Number of Containers	Special Instructions/Note:
			Preservation Code:						
MOANALUA WELLS (331-223-TP202) (380-17084-1)	8/15/22	11:14 Hawaiian		Water			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 out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/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 said complicance to Eurofins Eaton Analytical, LLC.

Possible Hazard Identification: Unconfirmed	Sample Disposal (A fee may be assessed if samples ar e retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:
Empty Kit Relinquished by:	Date: Time: Method of Shipment:

Relinquished by: Heidi Castro	Date/Time: 8/18/22	Company: EEA	Received by:	Date/Time: 8/18/22 1840	Company: TAS
Relinquished by: 8-18-22 (1840	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

PHYSIS
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature

PHYSIS

Project Iteration ID: 1407003-276
Client Name: Eurofins Eaton Analytical
Project Name: RED-HILL Project # 38001111
Job # 380-17084-1
COC Page Number: 2 of 2
Bottle Label Color: NA

Sample Receipt Summary

Receiving Info

1. Initials Received By: [illegible]
2. Date Received: 8/18/22
3. Time Received: 1840
4. Client Name: Eurofins
5. ~~Courier Information~~: (Please circle)
   - Client
   - UPS
   - Area Fast
   - DRS
   - FedEx
   - GSO/GLS
   - Ontrac
   - PAMS
   - PHYSIS Driver:
     - i. Start Time:_____
     - ii. End Time:_____
     - iii. Total Mileage:_____
     - iv. Number of Pickups:_____
6. Container Information: (Please put the # of containers or circle none)
   - 1 Cooler
   - __ Styrofoam Cooler
   - ____ Boxes
   - None
   - ___ Carboy(s)
   - __Carboy Trash Can(s)
   - ____ Carboy Cap(s)
   - Other _____
7. What type of ice was used: (Please circle any that apply)
   - Wet Ice
   - Blue Ice
   - Dry Ice
   - Water
   - None
8. Randomly Selected Samples Temperature (°C): 1.6 Used I/R Thermometer # 12

Inspection Info

1. Initials Inspected By: [illegible]

Sample Integrity Upon Receipt:

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

Notes:

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: E. JUAGDAN	Lab PM: Frank, Debbie L	Carrier Tracking No(s):	COC No: 380-9747-2757.1
Client Contact: Dr. Ron Fenstemacher	Phone:	E-Mail: Debbie.Frank@et.eurofinsus.com	State of Origin:	Page: Page 1 of 3
Company: City & County of Honolulu	PWSID:			Job #:
Address: 630 South Beretania Street Chemistry Lab	Due Date Requested:			
City: Honolulu	TAT Requested (days):			
State, Zip: HI, 96843	Compliance Project: Δ Yes Δ 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			
Site: Hawaii	SSOW#:			

Analysis Requested

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

380-17084 COC

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)	Perform MS/MSD (Yes or No)	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)											Total Number of containers	Special Instructions/Note:
			Preservation Code:				R	R	RA		RA												
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																			
MOANALUA WELLS (331-223-TP202)	8/15/22	1114	G	Water			X	X	X	X	X												
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
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ 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:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[redacted]	8/16/22 1200	HBWS	4401	8/17/22 1400	EDD
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

eurofins | Eaton Analytical

INTERNAL CHAIN OF CUSTODY RECORD

EEA Folder Number:

SAMPLE TEMP RECEIVED:

Note: If samples are out of temperature range, let the ASMs know. ASMs will determine whether to proceed with analysis or not.

SAMPLES REC'D DAY OF COLLECTION? Yes / No

IR Gun ID = 401 (Observation= 1.5 °C) (Corr.Factor -0.1 °C) (Final = 1.4 °C)

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

METHOD OF SHIPMENT: Pick-Up / Walk-In / FedEx / UPS / DHL / Area Fast / Top Line / Other: ________

7776 7560 4555

Compliance Acceptance Criteria:

1) Chemistry: >0, ≤6°C, not frozen (NELAP) (if received after 24 hrs of sample collection)

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

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

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

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

4 Dioxin (1613 or 2,3,7,8 TCDD): must be between 0-4 °C, not frozen (if received after 24 hrs of sample collection)

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

6) Chlorine check. Manufacturer: Sensafe. 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 515.4, HAA(6251,552), 505, SPME, @CH, 532LCMS, 558, 536, Anatoxin, LCMS methods using 40 ml vials, International clients:

Samp ID	Bottle #	None/<6 mm	>6mm	Test	Samp ID	Bottle #	None/<6 mm	>6mm	Test	Samp ID	Bottle #	None/<6 mm	>6mm	Test	Samp ID	Bottle #	None/<6 mm	>6mm	Test

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

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RECEIVED BY:	[signature]	Chris Brock	Eurofins Eaton Analytical	8-17-22	1100
SAMPLES CHECKED AGAINST COC BY:	[signature]	G. REITNER	Eurofins Eaton Analytical	08/17/2022	16:43

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INTERNAL CHAIN OF CUSTODY RECORD

EEA Folder Number:

SAMPLE TEMP RECEIVED:
Note: If samples are out of temperature range, let the ASMs know. ASMs will determine whether to proceed with analysis or not.
SAMPLES REC'D DAY OF COLLECTION? Yes / No

IR Gun ID = 631a (Observation= 1.9 °C) (Corr.Factor 0.2 °C) (Final = 1.7 °C)

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

METHOD OF SHIPMENT: Pick-Up / Walk-In / (FedEx) / UPS / DHL / Area Fast / Top Line / Other: ________

7776 7560 4989

Compliance Acceptance Criteria:

1) Chemistry: >0, ≤6°C, not frozen (NELAP) (If received after 24 hrs of sample collection)

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

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

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

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

4 Dioxin (1613 or 2,3,7,8 TCDD): must be between 0-4 °C, not frozen (If received after 24 hrs of sample collection)

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

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

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

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

Exempt from headspace concerns: Methods 515.4, HAA(6251,552), 505, SPME, @CH, 532LCMS, 558, 538, Anatoxin, LCMS methods using 40 ml vials, International clients:

Samp ID	Bottle #	None/<6 mm	>6mm	Test	Samp ID	Bottle #	None/<6 mm	>6mm	Test	Samp ID	Bottle #	None/<6 mm	>6mm	Test	Samp ID	Bottle #	None/<6 mm	>6mm	Test

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

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RECEIVED BY:	[signature]	Andrew Wilson	Eurofins Eaton Analytical	8.17.22	1600
SAMPLES CHECKED AGAINST COC BY:	[signature]	G. REITNER	Eurofins Eaton Analytical	08/17/2022	16:43

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INTERNAL CHAIN OF CUSTODY RECORD

EEA Folder Number:

SAMPLE TEMP RECEIVED:

Note: If samples are out of temperature range, let the ASMs know. ASMs will determine whether to proceed with analysis or not.

SAMPLES REC'D DAY OF COLLECTION? Yes / No

IR Gun ID = 618A (Observation= 5.5 °C) (Corr.Factor -0.1 °C) (Final = 5.4 °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: 7776 7560 4912

1) Chemistry: >0, ≤ 6°C, not frozen (NELAP) (If received after 24 hrs of sample collection)

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

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

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

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

4 Dioxin (1613 or 2,3,7,8 TCDD): must be between 0-4 °C, not frozen (If received after 24 hrs of sample collection)

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

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

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

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

Exempt from headspace concerns: Methods 515.4, HAA(6251,552), 505, SPME, @CH, 532LCMS, 556, 536, Anatoxin, LCMS methods using 40 ml vials, International clients:

Samp ID	Bottle #	None/<6 mm	>6mm	Test	Samp ID	Bottle #	None/<6 mm	>6mm	Test	Samp ID	Bottle #	None/<6 mm	>6mm	Test	Samp ID	Bottle #	None/<6 mm	>6mm	Test

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

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RECEIVED BY:	[signature]	4VD1	Eurofins Eaton Analytical	8/17/22	11:00
SAMPLES CHECKED AGAINST COC BY:	[signature]	G. REITNER	Eurofins Eaton Analytical	8/17/2022	16:43

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Shipping Order Form - Bottle Order

eurofins | Environment Testing America

S380-9749

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

Shipping Order ID: 9749

Ship Via: FedEx

When To Ship: 8/ 8/2022

Due On: 8/8/2022 11:59:00PM

Due After: 8/8/2022 12:00:00 AM

Ship To Information

Project Manager: Debbie Frank
Em: Debbie.Frank@et.eurofinsus.com
Company Name: City & County of Honolulu
Attention: Erwin Kawata
Address 1: 630 South Beretania Street
Address 2: Public Service Bldg. Room 308
Address 3:
City: Honolulu
State: HI
Zip: 96843
Phone #: +1-808-748-5841
Project Ref: RED-HILL
Event Desc: RUSH Weekly Red Hill

Notes to Bottle/Shipping Department

Pack with Gel Ice
Label the cooler under the left hand handle with the ID of the samples that are in the cooler (If more than 1 cooler si used per 1 smaple ID lable cooler with "sample ID x of y)
Pack by Sample ID on the botte Labels (with one full set of tests per sample ID)
Send only medium to large coolers

CALL DEBBIE OR DAVIS IF THERE ARE QUESTIONS.

Shipping Method: **Individual sample per cooler (affixed TALS labels)**

- ☑ Ready to Fill
- ☑ Preprinted COC
- 1 Number of COC Copies
- ☐ Seals on Bottle
- ☐ Seals on Coolers
- ☐ Priority
- ☐ Return Shipment Labels
  - ☐ Prepaid Return
  - Monrovia, CA (Suite 100)
- ☐ Short Hold Times
- ☑ Temperature Control
- ☐ Rush

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

Bottle Order Information

Bottle Order: RUSH RED-HILL WEEKLY
Bottle Order #: 2757
Request From Client: 7/20/2022
Date Order Posted: 7/20/2022 11:12:54AM
Order Status: Ready To Process
Prepared By: Davis Haley
Deliver By Date: ***8/8/2022 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	2	16	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	16	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 Acic	16
Amber Glass 1 liter - Sodium Thiosulfate	Sodium Thiosulfate	16
Amber Glass 1 Liter- Sodium Sulfite/HCl	Sodium Sulfite w/HCl	12
VOA Vial 40mL - NaThiosulfate/HCL	Sodium Thiosulfate/Hydrochloric Acic	12
Voa Vial 40ml - SodiumThio w/HCl-dropper	Sodium Thiosulfate	24
	Total Bottles:	80

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.

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: 380-17084-1

Login Number: 17084
List Number: 1
Creator: Segura, Ryan

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	