eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 2/10/2023 7:21:35 PM

JOB DESCRIPTION

RED-HILL
RUSH Weekly Red Hill

JOB NUMBER

380-26796-1

Eurofins Eaton Monrovia
750 Royal Oaks Drive
Suite 100
Monrovia CA 91016

See page two for job notes and contact information.

Job Notes

Laboratory certifies that the test results meet all TNI 2016 and ISO/IEC 17025:2017 requirements unless noted under the individual analysis.

Following the cover page are State Certification List, ISO 17025 Accredited Method List, Acknowledgement of Samples Received, Comments, Hits Report,Data Report, QC Summary, QC Report and Regulatory Forms, as applicable.

Test results relate only to the sample(s) tested.

Test results apply to the sample(s) as received, unless otherwise noted in the comments report (ISO/IEC 17025:2017).

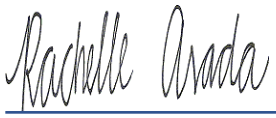
This report shall not be reproduced except in full, without the written approval of the laboratory.

This report includes ISO/IEC 17025 and non-ISO 17025 accredited methods.

Compliance Statement

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

Authorization



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Authorized for release by
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Table of Contents

Definitions/Glossary

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

Job ID: 380-26796-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
^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: 380-26796-1

Laboratory: Eurofins Eaton Monrovia

Narrative

Job Narrative
380-26796-1

Comments
No additional comments.

Receipt
The samples were received on 11/2/2022 9:30 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.5º C and 1.9º C.

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

Subcontract non-Sister
See attached subcontract report.

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

Subcontract Work
Methods 8015 Gas (Purgeable) LL (EAL), 8015 LL DRO/MRO: 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: 380-26796-1

Client Sample ID: HALAWA WELLS UNITS 1 & 2 — Lab Sample ID: 380-26796-1

No Detections.

Client Sample ID: TB: HALAWA WELLS UNITS 1&2 — Lab Sample ID: 380-26796-2

No Detections.

This Detection Summary does not include radiochemical test results.

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

Job ID: 380-26796-1

Client Sample ID: HALAWA WELLS UNITS 1 & 2
Date Collected: 11/01/22 09:44
Date Received: 11/02/22 09:30

Lab Sample ID: 380-26796-1
Matrix: Drinking Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.099		ug/L		11/04/22 09:12	11/07/22 17:14	1
2,4'-DDD	ND		0.099		ug/L		11/04/22 09:12	11/07/22 17:14	1
2,4'-DDE	ND		0.099		ug/L		11/04/22 09:12	11/07/22 17:14	1
2,4'-DDT	ND		0.099		ug/L		11/04/22 09:12	11/07/22 17:14	1
2,4-Dinitrotoluene	ND	^3+	0.099		ug/L		11/04/22 09:12	11/07/22 17:14	1
2,6-Dinitrotoluene	ND		0.099		ug/L		11/04/22 09:12	11/07/22 17:14	1
2-Methylnaphthalene	ND		0.099		ug/L		11/04/22 09:12	11/07/22 17:14	1
4,4'-DDD	ND		0.099		ug/L		11/04/22 09:12	11/07/22 17:14	1
4,4'-DDE	ND		0.099		ug/L		11/04/22 09:12	11/07/22 17:14	1
4,4'-DDT	ND		0.099		ug/L		11/04/22 09:12	11/07/22 17:14	1
Acenaphthene	ND		0.099		ug/L		11/04/22 09:12	11/07/22 17:14	1
Acenaphthylene	ND		0.099		ug/L		11/04/22 09:12	11/07/22 17:14	1
Acetochlor	ND		0.099		ug/L		11/04/22 09:12	11/07/22 17:14	1
Alachlor	ND		0.049		ug/L		11/04/22 09:12	11/07/22 17:14	1
alpha-BHC	ND		0.099		ug/L		11/04/22 09:12	11/07/22 17:14	1
alpha-Chlordane	ND		0.049		ug/L		11/04/22 09:12	11/07/22 17:14	1
Anthracene	ND		0.020		ug/L		11/04/22 09:12	11/07/22 17:14	1
Atrazine	ND		0.049		ug/L		11/04/22 09:12	11/07/22 17:14	1
Benz(a)anthracene	ND		0.049		ug/L		11/04/22 09:12	11/07/22 17:14	1
Benzo[a]pyrene	ND		0.020		ug/L		11/04/22 09:12	11/07/22 17:14	1
Benzo[b]fluoranthene	ND		0.020		ug/L		11/04/22 09:12	11/07/22 17:14	1
Benzo[g,h,i]perylene	ND		0.049		ug/L		11/04/22 09:12	11/07/22 17:14	1
Benzo[k]fluoranthene	ND		0.020		ug/L		11/04/22 09:12	11/07/22 17:14	1
beta-BHC	ND		0.099		ug/L		11/04/22 09:12	11/07/22 17:14	1
Bis(2-ethylhexyl) phthalate	ND		0.59		ug/L		11/04/22 09:12	11/07/22 17:14	1
Bromacil	ND	^3+	0.099		ug/L		11/04/22 09:12	11/07/22 17:14	1
Butachlor	ND	*+	0.049		ug/L		11/04/22 09:12	11/07/22 17:14	1
Butylbenzylphthalate	ND		0.49		ug/L		11/04/22 09:12	11/07/22 17:14	1
Chlorobenzilate	ND	*+ ^3+	0.099		ug/L		11/04/22 09:12	11/07/22 17:14	1
Chloroneb	ND		0.099		ug/L		11/04/22 09:12	11/07/22 17:14	1
Chlorothalonil (Draconil, Bravo)	ND	^3+	0.099		ug/L		11/04/22 09:12	11/07/22 17:14	1
Chlorpyrifos	ND		0.049		ug/L		11/04/22 09:12	11/07/22 17:14	1
Chrysene	ND		0.020		ug/L		11/04/22 09:12	11/07/22 17:14	1
delta-BHC	ND	^3+	0.099		ug/L		11/04/22 09:12	11/07/22 17:14	1
Di(2-ethylhexyl)adipate	ND		0.59		ug/L		11/04/22 09:12	11/07/22 17:14	1
Dibenz(a,h)anthracene	ND	*+	0.049		ug/L		11/04/22 09:12	11/07/22 17:14	1
Diclorvos (DDVP)	ND		0.049		ug/L		11/04/22 09:12	11/07/22 17:14	1
Dieldrin	ND		0.20		ug/L		11/04/22 09:12	11/07/22 17:14	1
Diethylphthalate	ND		0.49		ug/L		11/04/22 09:12	11/07/22 17:14	1
Dimethylphthalate	ND		0.49		ug/L		11/04/22 09:12	11/07/22 17:14	1
Di-n-butyl phthalate	ND		0.99		ug/L		11/04/22 09:12	11/07/22 17:14	1
Di-n-octyl phthalate	ND		0.099		ug/L		11/04/22 09:12	11/07/22 17:14	1
Endosulfan I (Alpha)	ND		0.099		ug/L		11/04/22 09:12	11/07/22 17:14	1
Endosulfan II (Beta)	ND		0.099		ug/L		11/04/22 09:12	11/07/22 17:14	1
Endosulfan sulfate	ND	^3+	0.099		ug/L		11/04/22 09:12	11/07/22 17:14	1
Endrin	ND	*+	0.099		ug/L		11/04/22 09:12	11/07/22 17:14	1
Endrin aldehyde	ND		0.099		ug/L		11/04/22 09:12	11/07/22 17:14	1
EPTC	ND		0.099		ug/L		11/04/22 09:12	11/07/22 17:14	1
Fluoranthene	ND		0.099		ug/L		11/04/22 09:12	11/07/22 17:14	1

Client Sample ID: HALAWA WELLS UNITS 1 & 2
Date Collected: 11/01/22 09:44
Date Received: 11/02/22 09:30

Lab Sample ID: 380-26796-1
Matrix: Drinking Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	ND		0.049		ug/L		11/04/22 09:12	11/07/22 17:14	1
gamma-Chlordane	ND		0.049		ug/L		11/04/22 09:12	11/07/22 17:14	1
Heptachlor	ND	^3+	0.039		ug/L		11/04/22 09:12	11/07/22 17:14	1
Heptachlor epoxide (isomer B)	ND		0.049		ug/L		11/04/22 09:12	11/07/22 17:14	1
Hexachlorobenzene	ND		0.049		ug/L		11/04/22 09:12	11/07/22 17:14	1
Hexachlorocyclopentadiene	ND		0.049		ug/L		11/04/22 09:12	11/07/22 17:14	1
Indeno[1,2,3-cd]pyrene	ND		0.049		ug/L		11/04/22 09:12	11/07/22 17:14	1
Isophorone	ND		0.49		ug/L		11/04/22 09:12	11/07/22 17:14	1
Lindane	ND		0.039		ug/L		11/04/22 09:12	11/07/22 17:14	1
Malathion	ND	^3+	0.099		ug/L		11/04/22 09:12	11/07/22 17:14	1
Methoxychlor	ND		0.099		ug/L		11/04/22 09:12	11/07/22 17:14	1
Metolachlor	ND	*+	0.049		ug/L		11/04/22 09:12	11/07/22 17:14	1
Metribuzin	ND	^3+	0.049		ug/L		11/04/22 09:12	11/07/22 17:14	1
Molinate	ND		0.099		ug/L		11/04/22 09:12	11/07/22 17:14	1
Naphthalene	ND		0.30		ug/L		11/04/22 09:12	11/07/22 17:14	1
Parathion	ND	*+ ^3+	0.099		ug/L		11/04/22 09:12	11/07/22 17:14	1
Pendimethalin (Penoxaline)	ND	^3+	0.099		ug/L		11/04/22 09:12	11/07/22 17:14	1
Phenanthrene	ND		0.039		ug/L		11/04/22 09:12	11/07/22 17:14	1
Propachlor	ND		0.049		ug/L		11/04/22 09:12	11/07/22 17:14	1
Pyrene	ND		0.049		ug/L		11/04/22 09:12	11/07/22 17:14	1
Simazine	ND		0.049		ug/L		11/04/22 09:12	11/07/22 17:14	1
Terbacil	ND	*+ ^3+	0.099		ug/L		11/04/22 09:12	11/07/22 17:14	1
Terbuthylazine	ND		0.099		ug/L		11/04/22 09:12	11/07/22 17:14	1
Thiobencarb	ND		0.20		ug/L		11/04/22 09:12	11/07/22 17:14	1
Total Permethrin (mixed isomers)	ND		0.20		ug/L		11/04/22 09:12	11/07/22 17:14	1
trans-Nonachlor	ND		0.049		ug/L		11/04/22 09:12	11/07/22 17:14	1
Trifluralin	ND		0.099		ug/L		11/04/22 09:12	11/07/22 17:14	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1,3-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	*0.53*	*T J N*	*ug/L*		*10.11*	*137-89-3*	*11/04/22 09:12*	*11/07/22 17:14*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*108*		*70 - 130*	*11/04/22 09:12*	*11/07/22 17:14*	*1*
Perylene-d12	*93*		*70 - 130*	*11/04/22 09:12*	*11/07/22 17:14*	*1*
Triphenylphosphate	*104*		*70 - 130*	*11/04/22 09:12*	*11/07/22 17:14*	*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		11/08/22 00:00	11/18/22 20:57	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 20:57	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 20:57	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 20:57	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 20:57	1
Acenaphthene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 20:57	1
Acenaphthylene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 20:57	1
Anthracene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 20:57	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 20:57	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 20:57	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 20:57	1

Client Sample ID: HALAWA WELLS UNITS 1 & 2

Lab Sample ID: 380-26796-1

Date Collected: 11/01/22 09:44

Matrix: Drinking Water

Date Received: 11/02/22 09:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[e]pyrene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 20:57	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 20:57	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 20:57	1
Biphenyl	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 20:57	1
Chrysene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 20:57	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 20:57	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 20:57	1
Dibenzothiophene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 20:57	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		11/08/22 00:00	11/18/22 20:57	1
Fluoranthene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 20:57	1
Fluorene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 20:57	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 20:57	1
Naphthalene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 20:57	1
Perylene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 20:57	1
Phenanthrene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 20:57	1
Pyrene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 20:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
(d10-Acenaphthene)	*61*		*45 - 118*	*11/08/22 00:00*	*11/18/22 20:57*	*1*
(d10-Phenanthrene)	*85*		*56 - 123*	*11/08/22 00:00*	*11/18/22 20:57*	*1*
(d12-Chrysene)	*79*		*36 - 142*	*11/08/22 00:00*	*11/18/22 20:57*	*1*
(d12-Perylene)	*73*		*36 - 161*	*11/08/22 00:00*	*11/18/22 20:57*	*1*
(d8-Naphthalene)	*73*		*20 - 112*	*11/08/22 00:00*	*11/18/22 20:57*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.020		mg/L			11/04/22 18:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE	*84*		*60 - 140*		*11/04/22 18:51*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DIESEL	ND	U	0.025		mg/L			11/11/22 19:22	1
JP5	ND	U	0.049		mg/L			11/11/22 19:22	1
JP8	ND	U	0.049		mg/L			11/11/22 19:22	1
MOTOR OIL	ND	U	0.049		mg/L			11/11/22 19:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOBENZENE	*97*		*60 - 130*		*11/11/22 19:22*	*1*
HEXACOSANE	*98*		*60 - 130*		*11/11/22 19:22*	*1*

Client Sample ID: TB: HALAWA WELLS UNITS 1&2

Lab Sample ID: 380-26796-2

Date Collected: 11/01/22 09:44

Matrix: Water

Date Received: 11/02/22 09:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.020		mg/L			11/04/22 19:28	1

Client Sample Results

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

Job ID: 380-26796-1

Client Sample ID: TB: HALAWA WELLS UNITS 1&2

Date Collected: 11/01/22 09:44
Date Received: 11/02/22 09:30

Lab Sample ID: 380-26796-2

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE	82		60 - 140		11/04/22 19:28	1

Action Limit Summary

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

Job ID: 380-26796-1

Client Sample ID: HALAWA WELLS UNITS 1 & 2

Lab Sample ID: 380-26796-1

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	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
Bis(2-ethylhexyl) phthalate	ND		ug/L	6	0.59	525.2	Total/NA
Di(2-ethylhexyl)adipate	ND		ug/L	400	0.59	525.2	Total/NA
Endrin	ND	*+	ug/L	2	0.099	525.2	Total/NA
Heptachlor	ND	^3+	ug/L	0.4	0.039	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	0.039	525.2	Total/NA
Methoxychlor	ND		ug/L	40	0.099	525.2	Total/NA
Simazine	ND		ug/L	4	0.049	525.2	Total/NA

Surrogate Summary

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

Job ID: 380-26796-1

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

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

		Percent Surrogate Recovery (Acceptance Limits)		
		2NMX	PRY	TPP
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
380-26796-1	HALAWA WELLS UNITS 1 & 2	108	93	104

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)		
		2NMX	PRY	TPP
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
380-26797-B-1-A MS	Matrix Spike	104	93	105
380-26798-J-1-A DU	Duplicate	108	91	114
LCS 380-23204/3-A	Lab Control Sample	105	89	102
LCSD 380-23204/4-A	Lab Control Sample Dup	102	89	107
MB 380-23204/1-A	Method Blank	108	89	105
MRL 380-23204/2-A	Lab Control Sample	110	88	104

Surrogate Legend

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

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

Matrix: BlankMatrix — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)				
		Acenapht	Phenanth	CRY	NPT	PRY
Lab Sample ID	Client Sample ID	(27-133)	(43-129)	(52-144)	(25-125)	(36-161)
101293-B1	Method Blank	68	81	67	82	80
101293-BS1	Lab Control Sample	58	79	74	49	66
101293-BS2	Lab Control Sample Dup	68	82	76	48	83

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: 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)
380-26796-1	HALAWA WELLS UNITS 1 & 2	61	85	79	73	73

Surrogate Legend

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

Surrogate Summary

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

Job ID: 380-26796-1

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

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)
380-26796-1	HALAWA WELLS UNITS 1 & 2	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	(60-140)
380-26796-2	TB: HALAWA WELLS UNITS 1&	82

Surrogate Legend
BFB = BROMOFLUOROBENZENE

Method: 8015 LL DRO/MRO - 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)
380-26796-1	HALAWA WELLS UNITS 1 & 2	97	98

Surrogate Legend
BB = BROMOBENZENE
HEXACOSANE = HEXACOSANE

Method: WATER - 11/01/22 09:44

Matrix: EMAX — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		/04/22 19:	/04/22 19:
Lab Sample ID	Client Sample ID		82-0.0400
380-26796	380-26796	NA	NA

Surrogate Legend
11/04/22 19:28 = 11/04/22 19:28

Method: WATER - 11/01/22 09:44

Matrix: EMAX — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		/11/22 19:	/11/22 19:	/11/22 19:
Lab Sample ID	Client Sample ID			(97-0.490)
380-26796	380-26796	NA	NA	NA

Surrogate Legend
11/11/22 19:22 = 11/11/22 19:22

Surrogate Summary

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

Job ID: 380-26796-1

Method: WATER - 11/01/22 09:44

Matrix: EMAX

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)									
		/04/22 18:	/04/22 18:								
Lab Sample ID	**Client Sample ID**		84-0.0400								
380-26796	380-26796	NA	NA								

Surrogate Legend

11/04/22 18:51 = 11/04/22 18:51

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

Lab Sample ID: MB 380-23204/1-A
Matrix: Water
Analysis Batch: 23456

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23204

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.10		ug/L		11/04/22 09:12	11/07/22 14:12	1
2,4'-DDD	ND		0.10		ug/L		11/04/22 09:12	11/07/22 14:12	1
2,4'-DDE	ND		0.10		ug/L		11/04/22 09:12	11/07/22 14:12	1
2,4'-DDT	ND		0.10		ug/L		11/04/22 09:12	11/07/22 14:12	1
2,4-Dinitrotoluene	ND		0.10		ug/L		11/04/22 09:12	11/07/22 14:12	1
2,6-Dinitrotoluene	ND		0.10		ug/L		11/04/22 09:12	11/07/22 14:12	1
2-Methylnaphthalene	ND		0.10		ug/L		11/04/22 09:12	11/07/22 14:12	1
4,4'-DDD	ND		0.10		ug/L		11/04/22 09:12	11/07/22 14:12	1
4,4'-DDE	ND		0.10		ug/L		11/04/22 09:12	11/07/22 14:12	1
4,4'-DDT	ND		0.10		ug/L		11/04/22 09:12	11/07/22 14:12	1
Acenaphthene	ND		0.10		ug/L		11/04/22 09:12	11/07/22 14:12	1
Acenaphthylene	ND		0.10		ug/L		11/04/22 09:12	11/07/22 14:12	1
Acetochlor	ND		0.10		ug/L		11/04/22 09:12	11/07/22 14:12	1
Alachlor	ND		0.050		ug/L		11/04/22 09:12	11/07/22 14:12	1
alpha-BHC	ND		0.10		ug/L		11/04/22 09:12	11/07/22 14:12	1
alpha-Chlordane	ND		0.050		ug/L		11/04/22 09:12	11/07/22 14:12	1
Anthracene	ND		0.020		ug/L		11/04/22 09:12	11/07/22 14:12	1
Atrazine	ND		0.050		ug/L		11/04/22 09:12	11/07/22 14:12	1
Benz(a)anthracene	ND		0.050		ug/L		11/04/22 09:12	11/07/22 14:12	1
Benzo[a]pyrene	ND		0.020		ug/L		11/04/22 09:12	11/07/22 14:12	1
Benzo[b]fluoranthene	ND		0.020		ug/L		11/04/22 09:12	11/07/22 14:12	1
Benzo[g,h,i]perylene	ND		0.050		ug/L		11/04/22 09:12	11/07/22 14:12	1
Benzo[k]fluoranthene	ND		0.020		ug/L		11/04/22 09:12	11/07/22 14:12	1
beta-BHC	ND		0.10		ug/L		11/04/22 09:12	11/07/22 14:12	1
Bis(2-ethylhexyl) phthalate	ND		0.60		ug/L		11/04/22 09:12	11/07/22 14:12	1
Bromacil	ND		0.10		ug/L		11/04/22 09:12	11/07/22 14:12	1
Butachlor	ND		0.050		ug/L		11/04/22 09:12	11/07/22 14:12	1
Butylbenzylphthalate	ND		0.50		ug/L		11/04/22 09:12	11/07/22 14:12	1
Chlorobenzilate	ND		0.10		ug/L		11/04/22 09:12	11/07/22 14:12	1
Chloroneb	ND		0.10		ug/L		11/04/22 09:12	11/07/22 14:12	1
Chlorothalonil (Draconil, Bravo)	ND		0.10		ug/L		11/04/22 09:12	11/07/22 14:12	1
Chlorpyrifos	ND		0.050		ug/L		11/04/22 09:12	11/07/22 14:12	1
Chrysene	ND		0.020		ug/L		11/04/22 09:12	11/07/22 14:12	1
delta-BHC	ND		0.10		ug/L		11/04/22 09:12	11/07/22 14:12	1
Di(2-ethylhexyl)adipate	ND		0.60		ug/L		11/04/22 09:12	11/07/22 14:12	1
Dibenz(a,h)anthracene	ND		0.050		ug/L		11/04/22 09:12	11/07/22 14:12	1
Diclorvos (DDVP)	ND		0.050		ug/L		11/04/22 09:12	11/07/22 14:12	1
Dieldrin	ND		0.20		ug/L		11/04/22 09:12	11/07/22 14:12	1
Diethylphthalate	ND		0.50		ug/L		11/04/22 09:12	11/07/22 14:12	1
Dimethylphthalate	ND		0.50		ug/L		11/04/22 09:12	11/07/22 14:12	1
Di-n-butyl phthalate	ND		1.0		ug/L		11/04/22 09:12	11/07/22 14:12	1
Di-n-octyl phthalate	ND		0.10		ug/L		11/04/22 09:12	11/07/22 14:12	1
Endosulfan I (Alpha)	ND		0.10		ug/L		11/04/22 09:12	11/07/22 14:12	1
Endosulfan II (Beta)	ND		0.10		ug/L		11/04/22 09:12	11/07/22 14:12	1
Endosulfan sulfate	ND		0.10		ug/L		11/04/22 09:12	11/07/22 14:12	1
Endrin	ND		0.10		ug/L		11/04/22 09:12	11/07/22 14:12	1
Endrin aldehyde	ND		0.10		ug/L		11/04/22 09:12	11/07/22 14:12	1
EPTC	ND		0.10		ug/L		11/04/22 09:12	11/07/22 14:12	1

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

Lab Sample ID: MB 380-23204/1-A
Matrix: Water
Analysis Batch: 23456

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 23204

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	ND		0.10		ug/L		11/04/22 09:12	11/07/22 14:12	1
Fluorene	ND		0.050		ug/L		11/04/22 09:12	11/07/22 14:12	1
gamma-Chlordane	ND		0.050		ug/L		11/04/22 09:12	11/07/22 14:12	1
Heptachlor	ND		0.040		ug/L		11/04/22 09:12	11/07/22 14:12	1
Heptachlor epoxide (isomer B)	ND		0.050		ug/L		11/04/22 09:12	11/07/22 14:12	1
Hexachlorobenzene	ND		0.050		ug/L		11/04/22 09:12	11/07/22 14:12	1
Hexachlorocyclopentadiene	ND		0.050		ug/L		11/04/22 09:12	11/07/22 14:12	1
Indeno[1,2,3-cd]pyrene	ND		0.050		ug/L		11/04/22 09:12	11/07/22 14:12	1
Isophorone	ND		0.50		ug/L		11/04/22 09:12	11/07/22 14:12	1
Lindane	ND		0.040		ug/L		11/04/22 09:12	11/07/22 14:12	1
Malathion	ND		0.10		ug/L		11/04/22 09:12	11/07/22 14:12	1
Methoxychlor	ND		0.10		ug/L		11/04/22 09:12	11/07/22 14:12	1
Metolachlor	ND		0.050		ug/L		11/04/22 09:12	11/07/22 14:12	1
Metribuzin	ND		0.050		ug/L		11/04/22 09:12	11/07/22 14:12	1
Molinate	ND		0.10		ug/L		11/04/22 09:12	11/07/22 14:12	1
Naphthalene	ND		0.30		ug/L		11/04/22 09:12	11/07/22 14:12	1
Parathion	ND		0.10		ug/L		11/04/22 09:12	11/07/22 14:12	1
Pendimethalin (Penoxaline)	ND		0.10		ug/L		11/04/22 09:12	11/07/22 14:12	1
Phenanthrene	ND		0.040		ug/L		11/04/22 09:12	11/07/22 14:12	1
Propachlor	ND		0.050		ug/L		11/04/22 09:12	11/07/22 14:12	1
Pyrene	ND		0.050		ug/L		11/04/22 09:12	11/07/22 14:12	1
Simazine	ND		0.050		ug/L		11/04/22 09:12	11/07/22 14:12	1
Terbacil	ND		0.10		ug/L		11/04/22 09:12	11/07/22 14:12	1
Terbuthylazine	ND		0.10		ug/L		11/04/22 09:12	11/07/22 14:12	1
Thiobencarb	ND		0.20		ug/L		11/04/22 09:12	11/07/22 14:12	1
Total Permethrin (mixed isomers)	ND		0.20		ug/L		11/04/22 09:12	11/07/22 14:12	1
trans-Nonachlor	ND		0.050		ug/L		11/04/22 09:12	11/07/22 14:12	1
Trifluralin	ND		0.10		ug/L		11/04/22 09:12	11/07/22 14:12	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*0.746*	*T J*	*ug/L*		*2.29*		*11/04/22 09:12*	*11/07/22 14:12*	*1*
Cyclohexane, 1-methyl-2-propyl-	*0.654*	*T J N*	*ug/L*		*2.37*	*4291-79-6*	*11/04/22 09:12*	*11/07/22 14:12*	*1*
Unknown	*2.36*	*T J*	*ug/L*		*2.44*		*11/04/22 09:12*	*11/07/22 14:12*	*1*
n-Hexadecanoic acid	*1.98*	*T J N*	*ug/L*		*5.92*	*57-10-3*	*11/04/22 09:12*	*11/07/22 14:12*	*1*
Octadecanoic acid	*2.84*	*T J N*	*ug/L*		*6.63*	*57-11-4*	*11/04/22 09:12*	*11/07/22 14:12*	*1*
1-Pentadecanethiol	*0.591*	*T J N*	*ug/L*		*7.19*	*25276-70-4*	*11/04/22 09:12*	*11/07/22 14:12*	*1*
9-Octadecenamide, (Z)-	*0.558*	*T J N*	*ug/L*		*7.67*	*301-02-0*	*11/04/22 09:12*	*11/07/22 14:12*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*108*		*70 - 130*	*11/04/22 09:12*	*11/07/22 14:12*	*1*
Perylene-d12	*89*		*70 - 130*	*11/04/22 09:12*	*11/07/22 14:12*	*1*
Triphenylphosphate	*105*		*70 - 130*	*11/04/22 09:12*	*11/07/22 14:12*	*1*

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

Lab Sample ID: LCS 380-23204/3-A
Matrix: Water
Analysis Batch: 23456

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23204

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	1.99	2.23		ug/L		112	70 - 130
2,4'-DDD	1.99	2.07		ug/L		104	70 - 130
2,4'-DDE	1.99	2.08		ug/L		105	70 - 130
2,4'-DDT	1.99	2.45		ug/L		123	70 - 130
2,4-Dinitrotoluene	1.99	2.43		ug/L		122	70 - 130
2,6-Dinitrotoluene	1.99	2.38		ug/L		120	70 - 130
2-Methylnaphthalene	1.99	2.26		ug/L		114	70 - 130
4,4'-DDD	1.99	2.28		ug/L		115	70 - 130
4,4'-DDE	1.99	1.99		ug/L		100	70 - 130
4,4'-DDT	1.99	2.36		ug/L		119	70 - 130
Acenaphthene	1.99	2.12		ug/L		107	70 - 130
Acenaphthylene	1.99	2.10		ug/L		106	70 - 130
Acetochlor	1.99	2.33		ug/L		117	70 - 130
Alachlor	1.99	2.31		ug/L		116	70 - 130
alpha-BHC	1.99	2.16		ug/L		109	70 - 130
alpha-Chlordane	1.99	2.07		ug/L		104	70 - 130
Anthracene	1.99	2.12		ug/L		107	70 - 130
Atrazine	1.99	2.27		ug/L		115	70 - 130
Benz(a)anthracene	1.99	2.24		ug/L		113	70 - 130
Benzo[a]pyrene	1.99	2.20		ug/L		111	70 - 130
Benzo[b]fluoranthene	1.99	2.42		ug/L		122	70 - 130
Benzo[g,h,i]perylene	1.99	2.48		ug/L		125	70 - 130
Benzo[k]fluoranthene	1.99	2.20		ug/L		111	70 - 130
beta-BHC	1.99	2.20		ug/L		111	70 - 130
Bis(2-ethylhexyl) phthalate	1.99	2.21		ug/L		111	70 - 130
Bromacil	1.99	2.53		ug/L		127	70 - 130
Butachlor	1.99	2.62	*+	ug/L		132	70 - 130
Butylbenzylphthalate	1.99	2.49		ug/L		126	70 - 130
Chlorobenzilate	1.99	2.52		ug/L		127	70 - 130
Chloroneb	1.99	2.12		ug/L		107	70 - 130
Chlorothalonil (Draconil, Bravo)	1.99	2.09		ug/L		105	70 - 130
Chlorpyrifos	1.99	2.33		ug/L		118	70 - 130
Chrysene	1.99	2.26		ug/L		114	70 - 130
delta-BHC	1.99	2.31		ug/L		116	70 - 130
Di(2-ethylhexyl)adipate	1.99	2.40		ug/L		121	70 - 130
Dibenz(a,h)anthracene	1.99	2.57		ug/L		129	70 - 130
Diclorvos (DDVP)	1.99	2.56		ug/L		129	70 - 130
Dieldrin	1.99	2.05		ug/L		104	70 - 130
Diethylphthalate	1.99	2.23		ug/L		112	70 - 130
Dimethylphthalate	1.99	2.17		ug/L		109	70 - 130
Di-n-butyl phthalate	3.97	4.23		ug/L		106	70 - 130
Di-n-octyl phthalate	1.99	1.89		ug/L		95	70 - 130
Endosulfan I (Alpha)	1.99	2.12		ug/L		107	70 - 130
Endosulfan II (Beta)	1.99	2.29		ug/L		115	70 - 130
Endosulfan sulfate	1.99	2.13		ug/L		107	70 - 130
Endrin	1.99	2.47		ug/L		124	70 - 130
Endrin aldehyde	1.99	1.90		ug/L		96	70 - 130
EPTC	1.99	2.46		ug/L		124	70 - 130

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

Lab Sample ID: LCS 380-23204/3-A
Matrix: Water
Analysis Batch: 23456

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23204

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoranthene	1.99	2.24		ug/L		113	70 - 130
Fluorene	1.99	2.27		ug/L		115	70 - 130
gamma-Chlordane	1.99	2.09		ug/L		105	70 - 130
Heptachlor	1.99	2.38		ug/L		120	70 - 130
Heptachlor epoxide (isomer B)	1.99	2.23		ug/L		112	70 - 130
Hexachlorobenzene	1.99	2.11		ug/L		106	70 - 130
Hexachlorocyclopentadiene	1.99	2.40		ug/L		121	70 - 130
Indeno[1,2,3-cd]pyrene	1.99	2.52		ug/L		127	70 - 130
Isophorone	1.99	2.22		ug/L		112	70 - 130
Lindane	1.99	2.24		ug/L		113	70 - 130
Malathion	1.99	2.25		ug/L		113	70 - 130
Methoxychlor	1.99	2.51		ug/L		127	70 - 130
Metolachlor	1.99	2.54		ug/L		128	70 - 130
Metribuzin	1.99	1.95		ug/L		98	70 - 130
Molinate	1.99	2.31		ug/L		116	70 - 130
Naphthalene	1.99	2.13		ug/L		107	70 - 130
Parathion	1.99	2.79	*+	ug/L		141	70 - 130
Pendimethalin (Penoxaline)	1.99	2.38		ug/L		120	70 - 130
Phenanthrene	1.99	2.17		ug/L		109	70 - 130
Propachlor	1.99	2.37		ug/L		119	70 - 130
Pyrene	1.99	2.24		ug/L		113	70 - 130
Simazine	1.99	2.42		ug/L		122	70 - 130
Terbacil	1.99	2.54		ug/L		128	70 - 130
Terbuthylazine	1.99	2.35		ug/L		118	70 - 130
Thiobencarb	1.99	2.38		ug/L		120	70 - 130
trans-Nonachlor	1.99	2.05		ug/L		103	70 - 130
Trifluralin	1.99	2.13		ug/L		107	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Nitro-m-xylene	*105*		*70 - 130*
Perylene-d12	*89*		*70 - 130*
Triphenylphosphate	*102*		*70 - 130*

Lab Sample ID: LCSD 380-23204/4-A
Matrix: Water
Analysis Batch: 23456

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 23204

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	1.99	2.19		ug/L		110	70 - 130	2	20
2,4'-DDD	1.99	2.08		ug/L		105	70 - 130	0	20
2,4'-DDE	1.99	2.09		ug/L		105	70 - 130	1	20
2,4'-DDT	1.99	2.52		ug/L		127	70 - 130	3	20
2,4-Dinitrotoluene	1.99	2.40		ug/L		121	70 - 130	1	20
2,6-Dinitrotoluene	1.99	2.35		ug/L		118	70 - 130	1	20
2-Methylnaphthalene	1.99	2.20		ug/L		111	70 - 130	3	20
4,4'-DDD	1.99	2.33		ug/L		117	70 - 130	2	20
4,4'-DDE	1.99	2.03		ug/L		102	70 - 130	2	20
4,4'-DDT	1.99	2.42		ug/L		122	70 - 130	3	20

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

Lab Sample ID: LCSD 380-23204/4-A
Matrix: Water
Analysis Batch: 23456

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 23204

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acenaphthene			1.99	2.10		ug/L		106	70 - 130	1	20
Acenaphthylene			1.99	2.09		ug/L		105	70 - 130	1	20
Acetochlor			1.99	2.43		ug/L		122	70 - 130	4	20
Alachlor			1.99	2.37		ug/L		119	70 - 130	3	20
alpha-BHC			1.99	2.23		ug/L		112	70 - 130	3	20
alpha-Chlordane			1.99	2.12		ug/L		107	70 - 130	2	20
Anthracene			1.99	2.14		ug/L		108	70 - 130	1	20
Atrazine			1.99	2.34		ug/L		118	70 - 130	3	20
Benz(a)anthracene			1.99	2.30		ug/L		116	70 - 130	3	20
Benzo[a]pyrene			1.99	2.19		ug/L		110	70 - 130	0	20
Benzo[b]fluoranthene			1.99	2.38		ug/L		120	70 - 130	2	20
Benzo[g,h,i]perylene			1.99	2.50		ug/L		126	70 - 130	1	20
Benzo[k]fluoranthene			1.99	2.27		ug/L		114	70 - 130	4	20
beta-BHC			1.99	2.25		ug/L		113	70 - 130	2	20
Bis(2-ethylhexyl) phthalate			1.99	2.31		ug/L		116	70 - 130	4	20
Bromacil			1.99	2.48		ug/L		125	70 - 130	2	20
Butachlor			1.99	2.69	*+	ug/L		135	70 - 130	3	20
Butylbenzylphthalate			1.99	2.56		ug/L		129	70 - 130	3	20
Chlorobenzilate			1.99	2.62	*+	ug/L		132	70 - 130	4	20
Chloroneb			1.99	2.18		ug/L		110	70 - 130	3	20
Chlorothalonil (Draconil, Bravo)			1.99	2.15		ug/L		108	70 - 130	3	20
Chlorpyrifos			1.99	2.37		ug/L		119	70 - 130	2	20
Chrysene			1.99	2.27		ug/L		114	70 - 130	1	20
delta-BHC			1.99	2.36		ug/L		119	70 - 130	2	20
Di(2-ethylhexyl)adipate			1.99	2.48		ug/L		125	70 - 130	4	20
Dibenz(a,h)anthracene			1.99	2.62	*+	ug/L		132	70 - 130	2	20
Diclorvos (DDVP)			1.99	2.42		ug/L		122	70 - 130	6	20
Dieldrin			1.99	2.13		ug/L		107	70 - 130	4	20
Diethylphthalate			1.99	2.30		ug/L		116	70 - 130	3	20
Dimethylphthalate			1.99	2.27		ug/L		114	70 - 130	5	20
Di-n-butyl phthalate			3.97	4.37		ug/L		110	70 - 130	3	20
Di-n-octyl phthalate			1.99	1.99		ug/L		100	70 - 130	5	20
Endosulfan I (Alpha)			1.99	2.17		ug/L		109	70 - 130	2	20
Endosulfan II (Beta)			1.99	2.35		ug/L		118	70 - 130	2	20
Endosulfan sulfate			1.99	2.18		ug/L		110	70 - 130	3	20
Endrin			1.99	2.59	*+	ug/L		131	70 - 130	5	20
Endrin aldehyde			1.99	1.96		ug/L		99	70 - 130	3	20
EPTC			1.99	2.31		ug/L		116	70 - 130	6	20
Fluoranthene			1.99	2.28		ug/L		115	70 - 130	2	20
Fluorene			1.99	2.28		ug/L		115	70 - 130	0	20
gamma-Chlordane			1.99	2.09		ug/L		105	70 - 130	0	20
Heptachlor			1.99	2.41		ug/L		121	70 - 130	1	20
Heptachlor epoxide (isomer B)			1.99	2.28		ug/L		115	70 - 130	2	20
Hexachlorobenzene			1.99	2.16		ug/L		109	70 - 130	2	20
Hexachlorocyclopentadiene			1.99	2.25		ug/L		113	70 - 130	7	20
Indeno[1,2,3-cd]pyrene			1.99	2.52		ug/L		127	70 - 130	0	20
Isophorone			1.99	2.15		ug/L		108	70 - 130	3	20
Lindane			1.99	2.28		ug/L		115	70 - 130	2	20
Malathion			1.99	2.32		ug/L		117	70 - 130	3	20

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

Lab Sample ID: LCSD 380-23204/4-A
Matrix: Water
Analysis Batch: 23456

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 23204

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methoxychlor			1.99	2.54		ug/L		128	70 - 130	1	20
Metolachlor			1.99	2.61	*+	ug/L		132	70 - 130	3	20
Metribuzin			1.99	2.03		ug/L		102	70 - 130	4	20
Molinate			1.99	2.34		ug/L		118	70 - 130	1	20
Naphthalene			1.99	2.08		ug/L		105	70 - 130	2	20
Parathion			1.99	2.83	*+	ug/L		142	70 - 130	1	20
Pendimethalin (Penoxaline)			1.99	2.43		ug/L		122	70 - 130	2	20
Phenanthrene			1.99	2.17		ug/L		109	70 - 130	0	20
Propachlor			1.99	2.43		ug/L		122	70 - 130	2	20
Pyrene			1.99	2.27		ug/L		114	70 - 130	1	20
Simazine			1.99	2.46		ug/L		124	70 - 130	2	20
Terbacil			1.99	2.59	*+	ug/L		131	70 - 130	2	20
Terbuthylazine			1.99	2.40		ug/L		121	70 - 130	2	20
Thiobencarb			1.99	2.40		ug/L		121	70 - 130	1	20
trans-Nonachlor			1.99	2.10		ug/L		106	70 - 130	3	20
Trifluralin			1.99	2.15		ug/L		108	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Nitro-m-xylene	*102*		*70 - 130*
Perylene-d12	*89*		*70 - 130*
Triphenylphosphate	*107*		*70 - 130*

Lab Sample ID: MRL 380-23204/2-A
Matrix: Water
Analysis Batch: 23456

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23204

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene			0.0996	0.123		ug/L		124	50 - 150
2,4'-DDD			0.0996	0.139		ug/L		140	50 - 150
2,4'-DDE			0.0996	0.111		ug/L		112	50 - 150
2,4'-DDT			0.0996	0.110		ug/L		110	50 - 150
2,4-Dinitrotoluene			0.0996	0.159	^3+	ug/L		160	50 - 150
2,6-Dinitrotoluene			0.0996	0.142		ug/L		142	50 - 150
2-Methylnaphthalene			0.0996	0.117		ug/L		117	50 - 150
4,4'-DDD			0.0996	0.114		ug/L		115	50 - 150
4,4'-DDE			0.0996	0.107		ug/L		107	50 - 150
4,4'-DDT			0.0996	0.140		ug/L		140	50 - 150
Acenaphthene			0.0996	0.108		ug/L		109	50 - 150
Acenaphthylene			0.0996	0.0948	J	ug/L		95	50 - 150
Acetochlor			0.0498	0.0589	J	ug/L		118	50 - 150
Alachlor			0.0498	0.0622		ug/L		125	50 - 150
alpha-BHC			0.0996	0.108		ug/L		109	50 - 150
alpha-Chlordane			0.0249	ND		ug/L		90	50 - 150
Anthracene			0.0199	0.0199	J	ug/L		100	50 - 150
Atrazine			0.0498	0.0553		ug/L		111	50 - 150
Benz(a)anthracene			0.0498	0.0502		ug/L		101	50 - 150
Benzo[a]pyrene			0.0199	0.0194	J	ug/L		98	50 - 150
Benzo[b]fluoranthene			0.0199	0.0238		ug/L		120	50 - 150

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

Lab Sample ID: MRL 380-23204/2-A
Matrix: Water
Analysis Batch: 23456

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23204

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Benzo[g,h,i]perylene	0.0498	0.0569		ug/L		114	50 - 150
Benzo[k]fluoranthene	0.0199	0.0202		ug/L		101	50 - 150
beta-BHC	0.0996	0.118		ug/L		118	50 - 150
Bis(2-ethylhexyl) phthalate	0.597	0.804		ug/L		135	50 - 150
Bromacil	0.0996	0.163	^3+	ug/L		164	50 - 150
Butachlor	0.0498	0.0702		ug/L		141	50 - 150
Butylbenzylphthalate	0.149	0.202	J	ug/L		135	50 - 150
Chlorobenzilate	0.0996	0.159	^3+	ug/L		160	50 - 150
Chloroneb	0.0996	0.111		ug/L		111	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0996	0.170	^3+	ug/L		170	50 - 150
Chlorpyrifos	0.0498	0.0546		ug/L		110	50 - 150
Chrysene	0.0199	0.0219		ug/L		110	50 - 150
delta-BHC	0.0996	0.151	^3+	ug/L		151	50 - 150
Di(2-ethylhexyl)adipate	0.299	0.369	J	ug/L		123	50 - 150
Dibenz(a,h)anthracene	0.0498	0.0534		ug/L		107	50 - 150
Diclorvos (DDVP)	0.0498	0.0549		ug/L		110	50 - 150
Dieldrin	0.0996	0.134	J	ug/L		135	50 - 150
Diethylphthalate	0.149	0.193	J	ug/L		129	50 - 150
Dimethylphthalate	0.299	0.318	J	ug/L		106	50 - 150
Di-n-butyl phthalate	0.299	0.453	J	ug/L		152	49 - 243
Di-n-octyl phthalate	0.0996	0.126		ug/L		126	50 - 150
Endosulfan I (Alpha)	0.0996	0.0869	J	ug/L		87	50 - 150
Endosulfan II (Beta)	0.0996	0.140		ug/L		141	50 - 150
Endosulfan sulfate	0.0996	0.153	^3+	ug/L		153	50 - 150
Endrin	0.0996	0.109		ug/L		110	50 - 150
Endrin aldehyde	0.0996	0.124		ug/L		125	50 - 150
EPTC	0.0996	0.0961	J	ug/L		97	50 - 150
Fluoranthene	0.0498	0.0556	J	ug/L		112	50 - 150
Fluorene	0.0498	0.0590		ug/L		119	50 - 150
gamma-Chlordane	0.0249	0.0237	J	ug/L		95	50 - 150
Heptachlor	0.0398	0.0692	^3+	ug/L		174	50 - 150
Heptachlor epoxide (isomer B)	0.0498	0.0473	J	ug/L		95	50 - 150
Hexachlorobenzene	0.0498	ND		ug/L		81	50 - 150
Hexachlorocyclopentadiene	0.0498	0.0588		ug/L		118	50 - 150
Indeno[1,2,3-cd]pyrene	0.0498	0.0502		ug/L		101	50 - 150
Isophorone	0.0996	0.114	J	ug/L		114	50 - 150
Lindane	0.0398	0.0466		ug/L		117	50 - 150
Malathion	0.0996	0.152	^3+	ug/L		153	50 - 150
Methoxychlor	0.0996	0.127		ug/L		128	50 - 150
Metolachlor	0.0498	0.0652		ug/L		131	50 - 150
Metribuzin	0.0498	0.0891	^3+	ug/L		179	50 - 150
Molinate	0.0996	0.106		ug/L		107	50 - 150
Naphthalene	0.0996	0.113	J	ug/L		113	50 - 150
Parathion	0.0996	0.203	^3+	ug/L		204	50 - 150
Pendimethalin (Penoxaline)	0.0996	0.168	^3+	ug/L		169	50 - 150
Phenanthrene	0.0199	0.0246	J	ug/L		124	50 - 150
Propachlor	0.0498	0.0537		ug/L		108	50 - 150
Pyrene	0.0498	0.0543		ug/L		109	50 - 150
Simazine	0.0498	0.0624		ug/L		125	50 - 150

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

Lab Sample ID: MRL 380-23204/2-A
Matrix: Water
Analysis Batch: 23456

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 23204

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
Terbacil			0.0996	0.152	^3+	ug/L		152	50 - 150		
Terbuthylazine			0.0996	0.114		ug/L		114	50 - 150		
Thiobencarb			0.0996	0.131	J	ug/L		131	50 - 150		
trans-Nonachlor			0.0249	ND		ug/L		90	50 - 150		
Trifluralin			0.0996	0.148		ug/L		148	50 - 150		

Surrogate	*MRL %Recovery*	*MRL Qualifier*	*Limits*
2-Nitro-m-xylene	*110*		*70 - 130*
Perylene-d12	*88*		*70 - 130*
Triphenylphosphate	*104*		*70 - 130*

Lab Sample ID: 380-26797-B-1-A MS
Matrix: Water
Analysis Batch: 23456

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 23204

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
1-Methylnaphthalene	ND		2.10	2.32		ug/L		110	70 - 130		
2,4'-DDD	ND		2.10	2.14		ug/L		102	70 - 130		
2,4'-DDE	ND		2.10	2.18		ug/L		104	70 - 130		
2,4'-DDT	ND		2.10	2.59		ug/L		123	70 - 130		
2,4-Dinitrotoluene	ND	F1 ^3+	2.10	2.95	F1	ug/L		140	70 - 130		
2,6-Dinitrotoluene	ND	F1	2.10	2.85	F1	ug/L		135	70 - 130		
2-Methylnaphthalene	ND		2.10	2.37		ug/L		112	70 - 130		
4,4'-DDD	ND		2.10	2.38		ug/L		113	70 - 130		
4,4'-DDE	ND		2.10	2.11		ug/L		100	70 - 130		
4,4'-DDT	ND		2.10	2.50		ug/L		119	70 - 130		
Acenaphthene	ND		2.10	2.22		ug/L		106	70 - 130		
Acenaphthylene	ND		2.10	2.27		ug/L		108	70 - 130		
Acetochlor	ND		2.10	2.47		ug/L		118	70 - 130		
Alachlor	ND		2.10	2.45		ug/L		116	70 - 130		
alpha-BHC	ND		2.10	2.36		ug/L		112	70 - 130		
alpha-Chlordane	ND		2.10	2.21		ug/L		105	70 - 130		
Anthracene	ND		2.10	2.08		ug/L		99	70 - 130		
Atrazine	ND		2.10	2.51		ug/L		119	70 - 130		
Benz(a)anthracene	ND		2.10	2.34		ug/L		111	70 - 130		
Benzo[a]pyrene	ND		2.10	2.30		ug/L		109	70 - 130		
Benzo[b]fluoranthene	ND		2.10	2.49		ug/L		119	70 - 130		
Benzo[g,h,i]perylene	ND		2.10	2.66		ug/L		126	70 - 130		
Benzo[k]fluoranthene	ND		2.10	2.42		ug/L		115	70 - 130		
beta-BHC	ND		2.10	2.37		ug/L		113	70 - 130		
Bis(2-ethylhexyl) phthalate	ND		2.10	2.41		ug/L		115	70 - 130		
Bromacil	ND	F1 ^3+	2.10	2.91	F1	ug/L		138	70 - 130		
Butachlor	ND	*+ F1	2.10	2.79	F1	ug/L		133	70 - 130		
Butylbenzylphthalate	ND		2.10	2.63		ug/L		125	70 - 130		
Chlorobenzilate	ND	*+ ^3+	2.10	2.68		ug/L		128	70 - 130		
Chloroneb	ND		2.10	2.26		ug/L		108	70 - 130		
Chlorothalonil (Draconil, Bravo)	ND	^3+	2.10	2.22		ug/L		106	70 - 130		
Chlorpyrifos	ND		2.10	2.41		ug/L		115	70 - 130		

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

Lab Sample ID: 380-26797-B-1-A MS
Matrix: Water
Analysis Batch: 23456

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 23204

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chrysene	ND		2.10	2.36		ug/L		112	70 - 130
delta-BHC	ND	^3+	2.10	2.43		ug/L		115	70 - 130
Di(2-ethylhexyl)adipate	ND		2.10	2.55		ug/L		121	70 - 130
Dibenz(a,h)anthracene	ND	*+ F1	2.10	2.78	F1	ug/L		132	70 - 130
Diclorvos (DDVP)	ND		2.10	2.74		ug/L		130	70 - 130
Dieldrin	ND		2.10	2.19		ug/L		104	70 - 130
Diethylphthalate	ND		2.10	2.45		ug/L		117	70 - 130
Dimethylphthalate	ND		2.10	2.41		ug/L		115	70 - 130
Di-n-butyl phthalate	ND		4.21	4.50		ug/L		107	70 - 130
Di-n-octyl phthalate	ND		2.10	2.05		ug/L		98	70 - 130
Endosulfan I (Alpha)	ND		2.10	2.26		ug/L		107	70 - 130
Endosulfan II (Beta)	ND		2.10	2.40		ug/L		114	70 - 130
Endosulfan sulfate	ND	^3+	2.10	2.25		ug/L		107	70 - 130
Endrin	ND	*+	2.10	2.60		ug/L		123	70 - 130
Endrin aldehyde	ND		2.10	1.78		ug/L		84	70 - 130
EPTC	ND		2.10	2.58		ug/L		123	70 - 130
Fluoranthene	ND		2.10	2.35		ug/L		112	70 - 130
Fluorene	ND		2.10	2.42		ug/L		115	70 - 130
gamma-Chlordane	ND		2.10	2.20		ug/L		105	70 - 130
Heptachlor	ND	^3+	2.10	2.45		ug/L		117	70 - 130
Heptachlor epoxide (isomer B)	ND		2.10	2.35		ug/L		112	70 - 130
Hexachlorobenzene	ND		2.10	2.29		ug/L		109	70 - 130
Hexachlorocyclopentadiene	ND		2.10	2.36		ug/L		112	70 - 130
Indeno[1,2,3-cd]pyrene	ND		2.10	2.73		ug/L		130	70 - 130
Isophorone	ND		2.10	2.33		ug/L		111	70 - 130
Lindane	ND		2.10	2.44		ug/L		116	70 - 130
Malathion	ND	^3+	2.10	2.39		ug/L		113	70 - 130
Methoxychlor	ND		2.10	2.66		ug/L		127	70 - 130
Metolachlor	ND	*+	2.10	2.71		ug/L		129	70 - 130
Metribuzin	ND	^3+	2.10	2.20		ug/L		105	70 - 130
Molinate	ND		2.10	2.49		ug/L		119	70 - 130
Naphthalene	ND		2.10	2.22		ug/L		106	70 - 130
Parathion	ND	*+ F1 ^3+	2.10	3.03	F1	ug/L		144	70 - 130
Pendimethalin (Penoxaline)	ND	^3+	2.10	2.55		ug/L		121	70 - 130
Phenanthrene	ND		2.10	2.26		ug/L		107	70 - 130
Propachlor	ND		2.10	2.61		ug/L		124	70 - 130
Pyrene	ND		2.10	2.34		ug/L		111	70 - 130
Simazine	ND		2.10	2.73		ug/L		130	70 - 130
Terbacil	ND	*+ F1 ^3+	2.10	2.86	F1	ug/L		136	70 - 130
Terbuthylazine	ND		2.10	2.54		ug/L		121	70 - 130
Thiobencarb	ND		2.10	2.50		ug/L		119	70 - 130
trans-Nonachlor	ND		2.10	2.17		ug/L		103	70 - 130
Trifluralin	ND		2.10	2.32		ug/L		110	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Nitro-m-xylene	*104*		*70 - 130*
Perylene-d12	*93*		*70 - 130*
Triphenylphosphate	*105*		*70 - 130*

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

Lab Sample ID: 380-26798-J-1-A DU
Matrix: Water
Analysis Batch: 23456

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 23204

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
1-Methylnaphthalene	ND		ND		ug/L		NC	20
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	^3+	ND		ug/L		NC	20
2,6-Dinitrotoluene	ND		ND		ug/L		NC	20
2-Methylnaphthalene	ND		ND		ug/L		NC	20
4,4'-DDD	ND		ND		ug/L		NC	20
4,4'-DDE	ND		ND		ug/L		NC	20
4,4'-DDT	ND		ND		ug/L		NC	20
Acenaphthene	ND		ND		ug/L		NC	20
Acenaphthylene	ND		ND		ug/L		NC	20
Acetochlor	ND		ND		ug/L		NC	20
Alachlor	ND		ND		ug/L		NC	20
alpha-BHC	ND		ND		ug/L		NC	20
alpha-Chlordane	ND		ND		ug/L		NC	20
Anthracene	ND		ND		ug/L		NC	20
Atrazine	ND		ND		ug/L		NC	20
Benz(a)anthracene	ND		ND		ug/L		NC	20
Benzo[a]pyrene	ND		ND		ug/L		NC	20
Benzo[b]fluoranthene	ND		ND		ug/L		NC	20
Benzo[g,h,i]perylene	ND		ND		ug/L		NC	20
Benzo[k]fluoranthene	ND		ND		ug/L		NC	20
beta-BHC	ND		ND		ug/L		NC	20
Bis(2-ethylhexyl) phthalate	ND		ND		ug/L		NC	20
Bromacil	ND	^3+	ND		ug/L		NC	20
Butachlor	ND	*+	ND	*+	ug/L		NC	20
Butylbenzylphthalate	ND		ND		ug/L		NC	20
Chlorobenzilate	ND	*+ ^3+	ND	*+	ug/L		NC	20
Chloroneb	ND		ND		ug/L		NC	20
Chlorothalonil (Draconil, Bravo)	ND	^3+	ND		ug/L		NC	20
Chlorpyrifos	ND		ND		ug/L		NC	20
Chrysene	ND		ND		ug/L		NC	20
delta-BHC	ND	^3+	ND		ug/L		NC	20
Di(2-ethylhexyl)adipate	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
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	^3+	ND		ug/L		NC	20
Endrin	ND	*+	ND	*+	ug/L		NC	20
Endrin aldehyde	ND		ND		ug/L		NC	20
EPTC	ND		ND		ug/L		NC	20

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

Lab Sample ID: 380-26798-J-1-A DU
Matrix: Water
Analysis Batch: 23456

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 23204

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
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	^3+		ND		ug/L				NC	20
Methoxychlor	ND			ND		ug/L				NC	20
Metolachlor	ND	*+		ND	*+	ug/L				NC	20
Metribuzin	ND	^3+		ND		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	^3+		ND		ug/L				NC	20
Phenanthrene	ND			ND		ug/L				NC	20
Propachlor	ND			ND		ug/L				NC	20
Pyrene	ND			ND		ug/L				NC	20
Simazine	ND			ND		ug/L				NC	20
Terbacil	ND	*+ ^3+		ND	*+	ug/L				NC	20
Terbuthylazine	ND			ND		ug/L				NC	20
Thiobencarb	ND			ND		ug/L				NC	20
Total Permethrin (mixed isomers)	ND			ND		ug/L				NC	20
trans-Nonachlor	ND			ND		ug/L				NC	20
Trifluralin	ND			ND		ug/L				NC	20

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
2-Nitro-m-xylene	*108*		*70 - 130*
Perylene-d12	*91*		*70 - 130*
Triphenylphosphate	*114*		*70 - 130*

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

Lab Sample ID: 101293-B1
Matrix: BlankMatrix
Analysis Batch: O-40014

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: O-40014_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 15:46	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 15:46	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 15:46	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 15:46	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 15:46	1
Acenaphthene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 15:46	1
Acenaphthylene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 15:46	1
Anthracene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 15:46	1

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

Lab Sample ID: 101293-B1
Matrix: BlankMatrix
Analysis Batch: O-40014

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: O-40014_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benz[a]anthracene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 15:46	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 15:46	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 15:46	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 15:46	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 15:46	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 15:46	1
Biphenyl	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 15:46	1
Chrysene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 15:46	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 15:46	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 15:46	1
Dibenzothiophene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 15:46	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		11/08/22 00:00	11/18/22 15:46	1
Fluoranthene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 15:46	1
Fluorene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 15:46	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 15:46	1
Naphthalene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 15:46	1
Perylene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 15:46	1
Phenanthrene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 15:46	1
Pyrene	ND		0.005	0.001	µg/L		11/08/22 00:00	11/18/22 15:46	1

Surrogate	*Blank %Recovery*	*Blank Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
(d10-Acenaphthene)	*68*		*27 - 133*	*11/08/22 00:00*	*11/18/22 15:46*	*1*
(d10-Phenanthrene)	*81*		*43 - 129*	*11/08/22 00:00*	*11/18/22 15:46*	*1*
(d12-Chrysene)	*67*		*52 - 144*	*11/08/22 00:00*	*11/18/22 15:46*	*1*
(d12-Perylene)	*80*		*36 - 161*	*11/08/22 00:00*	*11/18/22 15:46*	*1*
(d8-Naphthalene)	*82*		*25 - 125*	*11/08/22 00:00*	*11/18/22 15:46*	*1*

Lab Sample ID: 101293-BS1
Matrix: BlankMatrix
Analysis Batch: O-40014

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-40014_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	0.5	0.22		µg/L		44	31 - 128
1-Methylphenanthrene	0.5	0.388		µg/L		78	66 - 127
2,3,5-Trimethylnaphthalene	0.5	0.316		µg/L		63	55 - 122
2,6-Dimethylnaphthalene	0.5	0.436		µg/L		87	48 - 120
2-Methylnaphthalene	0.5	0.39		µg/L		78	47 - 130
Acenaphthene	0.5	0.29		µg/L		58	53 - 131
Acenaphthylene	0.5	0.391		µg/L		78	43 - 140
Anthracene	0.5	0.402		µg/L		80	58 - 135
Benz[a]anthracene	0.5	0.407		µg/L		81	55 - 145
Benzo[a]pyrene	0.5	0.374		µg/L		75	51 - 143
Benzo[b]fluoranthene	0.5	0.462		µg/L		92	46 - 165
Benzo[e]pyrene	0.5	0.436		µg/L		87	42 - 152
Benzo[g,h,i]perylene	0.5	0.407		µg/L		81	63 - 133
Benzo[k]fluoranthene	0.5	0.448		µg/L		90	56 - 145
Biphenyl	0.5	0.505		µg/L		101	56 - 119
Chrysene	0.5	0.351		µg/L		70	56 - 141

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

Lab Sample ID: 101293-BS1
Matrix: BlankMatrix
Analysis Batch: O-40014

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-40014_P

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Dibenz[a,h]anthracene			0.5	0.5		µg/L		100	55 - 150		
Dibenzo[a,l]pyrene			0.25	0.184		µg/L		74	50 - 150		
Dibenzothiophene			0.5	0.397		µg/L		79	75 - 113		
Disalicylidenepropanediamine			20	19.5		µg/L		98	50 - 150		
Fluoranthene			0.5	0.39		µg/L		78	60 - 146		
Fluorene			0.5	0.363		µg/L		73	58 - 131		
Indeno[1,2,3-cd]pyrene			0.5	0.533		µg/L		107	50 - 151		
Naphthalene			0.5	0.265		µg/L		53	41 - 126		
Perylene			0.5	0.431		µg/L		86	48 - 141		
Phenanthrene			0.5	0.411		µg/L		82	67 - 127		
Pyrene			0.5	0.379		µg/L		76	54 - 156		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
(d10-Acenaphthene)	*58*		*27 - 133*
(d10-Phenanthrene)	*79*		*43 - 129*
(d12-Chrysene)	*74*		*52 - 144*
(d12-Perylene)	*66*		*36 - 161*
(d8-Naphthalene)	*49*		*25 - 125*

Lab Sample ID: 101293-BS2
Matrix: BlankMatrix
Analysis Batch: O-40014

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: O-40014_P

Analyte			Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene			0.5	0.183		µg/L		37	31 - 128	17	30
1-Methylphenanthrene			0.5	0.456		µg/L		91	66 - 127	15	30
2,3,5-Trimethylnaphthalene			0.5	0.337		µg/L		67	55 - 122	6	30
2,6-Dimethylnaphthalene			0.5	0.343		µg/L		69	48 - 120	23	30
2-Methylnaphthalene			0.5	0.351		µg/L		70	47 - 130	11	30
Acenaphthene			0.5	0.343		µg/L		69	53 - 131	17	30
Acenaphthylene			0.5	0.426		µg/L		85	43 - 140	9	30
Anthracene			0.5	0.402		µg/L		80	58 - 135	0	30
Benz[a]anthracene			0.5	0.396		µg/L		79	55 - 145	2	30
Benzo[a]pyrene			0.5	0.377		µg/L		75	51 - 143	0	30
Benzo[b]fluoranthene			0.5	0.528		µg/L		106	46 - 165	14	30
Benzo[e]pyrene			0.5	0.487		µg/L		97	42 - 152	11	30
Benzo[g,h,i]perylene			0.5	0.41		µg/L		82	63 - 133	1	30
Benzo[k]fluoranthene			0.5	0.497		µg/L		99	56 - 145	10	30
Biphenyl			0.5	0.389		µg/L		78	56 - 119	26	30
Chrysene			0.5	0.326		µg/L		65	56 - 141	7	30
Dibenz[a,h]anthracene			0.5	0.538		µg/L		108	55 - 150	8	30
Dibenzo[a,l]pyrene			0.25	0.195		µg/L		78	50 - 150	5	30
Dibenzothiophene			0.5	0.417		µg/L		83	75 - 113	5	30
Disalicylidenepropanediamine			20	18.3		µg/L		91	50 - 150	6	30
Fluoranthene			0.5	0.466		µg/L		93	60 - 146	18	30
Fluorene			0.5	0.361		µg/L		72	58 - 131	1	30
Indeno[1,2,3-cd]pyrene			0.5	0.512		µg/L		102	50 - 151	5	30
Naphthalene			0.5	0.282		µg/L		56	41 - 126	6	30

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

Lab Sample ID: 101293-BS2
Matrix: BlankMatrix
Analysis Batch: O-40014

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: O-40014_P

Analyte			Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perylene			0.5	0.45		µg/L		90	48 - 141	5	30
Phenanthrene			0.5	0.412		µg/L		82	67 - 127	0	30
Pyrene			0.5	0.461		µg/L		92	54 - 156	19	30

Surrogate	*LCS DUP %Recovery*	*LCS DUP Qualifier*	*Limits*
(d10-Acenaphthene)	*68*		*27 - 133*
(d10-Phenanthrene)	*82*		*43 - 129*
(d12-Chrysene)	*76*		*52 - 144*
(d12-Perylene)	*83*		*36 - 161*
(d8-Naphthalene)	*48*		*25 - 125*

GC/MS Semi VOA

Prep Batch: 23204

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-26796-1	HALAWA WELLS UNITS 1 & 2	Total/NA	Drinking Water	525.2	
MB 380-23204/1-A	Method Blank	Total/NA	Water	525.2	
LCS 380-23204/3-A	Lab Control Sample	Total/NA	Water	525.2	
LCSD 380-23204/4-A	Lab Control Sample Dup	Total/NA	Water	525.2	
MRL 380-23204/2-A	Lab Control Sample	Total/NA	Water	525.2	
380-26797-B-1-A MS	Matrix Spike	Total/NA	Water	525.2	
380-26798-J-1-A DU	Duplicate	Total/NA	Water	525.2	

Analysis Batch: 23456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-26796-1	HALAWA WELLS UNITS 1 & 2	Total/NA	Drinking Water	525.2	23204
MB 380-23204/1-A	Method Blank	Total/NA	Water	525.2	23204
LCS 380-23204/3-A	Lab Control Sample	Total/NA	Water	525.2	23204
LCSD 380-23204/4-A	Lab Control Sample Dup	Total/NA	Water	525.2	23204
MRL 380-23204/2-A	Lab Control Sample	Total/NA	Water	525.2	23204
380-26797-B-1-A MS	Matrix Spike	Total/NA	Water	525.2	23204
380-26798-J-1-A DU	Duplicate	Total/NA	Water	525.2	23204

Subcontract

Analysis Batch: O-40014

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-26796-1	HALAWA WELLS UNITS 1 & 2	Total/NA	Drinking Water	625 PAH Physis LL (EAL) + TICs	O-40014_P
101293-B1	Method Blank	Total/NA	BlankMatrix	625 PAH Physis LL (EAL) + TICs	O-40014_P
101293-BS1	Lab Control Sample	Total/NA	BlankMatrix	625 PAH Physis LL (EAL) + TICs	O-40014_P
101293-BS2	Lab Control Sample Dup	Total/NA	BlankMatrix	625 PAH Physis LL (EAL) + TICs	O-40014_P

Analysis Batch: 22DSK016W

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-26796-1	HALAWA WELLS UNITS 1 & 2	Total/NA	Drinking Water	8015 LL DRO/MRO	

Analysis Batch: 22VGH7K04

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-26796-1	HALAWA WELLS UNITS 1 & 2	Total/NA	Drinking Water	8015 Gas (Purgeable) LL (EAL)	
380-26796-2	TB: HALAWA WELLS UNITS 1&2	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	

Prep Batch: O-40014_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-26796-1	HALAWA WELLS UNITS 1 & 2	Total/NA	Drinking Water	EPA_625	
101293-B1	Method Blank	Total/NA	BlankMatrix	EPA_625	
101293-BS1	Lab Control Sample	Total/NA	BlankMatrix	EPA_625	
101293-BS2	Lab Control Sample Dup	Total/NA	BlankMatrix	EPA_625	

Lab Chronicle

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

Job ID: 380-26796-1

Client Sample ID: HALAWA WELLS UNITS 1 & 2

Lab Sample ID: 380-26796-1

Date Collected: 11/01/22 09:44

Matrix: Drinking Water

Date Received: 11/02/22 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			23204	OTM3	EA MON	11/04/22 09:12
Total/NA	Analysis	525.2		1	23456	Q8LA	EA MON	11/07/22 17:14
Total/NA	Prep	EPA_625		1	O-40014_P			11/08/22 00:00
Total/NA	Analysis	625 PAH Physis LL (EAL) + TICs		1	O-40014	YC		11/18/22 20:57
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	22VGH7K04	SCerva		11/04/22 18:51
Total/NA	Analysis	8015 LL DRO/MRO		1	22DSK016W	SDees		11/11/22 19:22

Client Sample ID: TB: HALAWA WELLS UNITS 1&2

Lab Sample ID: 380-26796-2

Date Collected: 11/01/22 09:44

Matrix: Water

Date Received: 11/02/22 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	22VGH7K04	SCerva		11/04/22 19:28

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: 380-26796-1

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	01-08-23

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

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	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: 380-26796-1

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: 380-26796-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-26796-1	HALAWA WELLS UNITS 1 & 2	Drinking Water	11/01/22 09:44	11/02/22 09:30
380-26796-2	TB: HALAWA WELLS UNITS 1&2	Water	11/01/22 09:44	11/02/22 09:30

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

Date: 11-28-2022
EMAX Batch No.: 22K045

Attn: Jackie Contreras

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

Subject: Laboratory Report
Project: 380-26796

Enclosed is the Laboratory report for samples received on 11/03/22.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
380-26796-1	K045-01	11/01/22	WATER	TPH GASOLINE
				TPH
380-26796-2	K045-02	11/01/22	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

22K045

Chain of Custody Record

eurofins | Environment Testing

2/10/2023

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arada, Rachelle	Carrier Tracking No(s):	COC No: 380-27309.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Rachelle.Arada@et.eurofinsus.com	State of Origin: Hawaii	Page: Page 1 of 1
Company: EMAX Laboratories Inc		Accreditations Required (See note): State - Hawaii		Job #: 380-26796-1
Address: 3051 Fujita Street, ,	Due Date Requested: 11/16/2022			
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 LL DRO/MRO)/ 8015 LL DRO/MRO										Total Number of containers	Special Instructions/Note:
				Preservation Code:																
1	HALAWA WELLS UNITS 1 & 2 (380-26796-1)	11/1/22	09:44 Hawaiian		Water			X	X										6	See Attached Instructions
2	TB: HALAWA WELLS UNITS 1&2 (380-26796-2)	11/1/22	09:44 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 are 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					11-3-22 16 —	EEA
2		11-3-22 1730			11/3/22 17:30	EMAX
3						

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.9

Ver: 06/08/2021

SAMPLE RECEIPT FORM 1

EMAX LABORATORIES, INC.

Type of Delivery	Airbill / Tracking Number	ECN 22K045
☐ Fedex ☐ UPS ☐ GSO ☐ Others		Recipient Maria Rivera
☐ EMAX Courier ☑ Client Delivery		Date 11/3/22 Time 1730

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	☑ Cooler 1 1.9 °C	☐ Cooler 2 _____ °C	☐ Cooler 3 _____ °C	☐ Cooler 4 _____ °C	☐ Cooler 5 _____ °C
(Cool, ≤6 °C but not frozen)	☐ 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
1	4	D22	label is missing, no sample ID.	R8
2	7, 8 J2 11/8/22			
2	7, 8	D23	1st date and time 10/27/22 1115 2nd date and time 11/1/22 944	R1

11/4/22

MB 11/8/22

☐ 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
D1	Analysis is not indicated in _____
D2	Analysis mismatch COC vs label
D3	Sample ID mismatch COC vs label
D4	Sample ID is not indicated in _____
D5	Container -[improper] [leaking] [broken]
D6	Date/Time is not indicated in _____
D7	Date/Time mismatch COC vs label
D8	Sample listed in COC is not received
D9	Sample received is not listed in COC
D10	No initial/date on corrections in COC/label
D11	Container count mismatch COC vs received
D12	Container size mismatch COC vs received

Code	Description-Sample Management
D13	Out of Holding Time
D14	Bubble is >6mm
D15	No trip blank in cooler
D16	Preservation not indicated in _____
D17	Preservation mismatch COC vs label
D18	Insufficient chemical preservative
D19	Insufficient Sample
D20	No filtration info for dissolved analysis
D21	No sample for moisture determination
D22	Missing label
D23	2 dates; times
D24	

Code	Description-Sample Management
R1	Proceed as indicated in ☒ COC ☐ Label
R2	Refer to attached instruction
R3	Cancel the analysis
R4	Use vial with smallest bubble first
R5	Log-in with latest sampling date and time+1 min
R6	Adjust pH as necessary
R7	Filter and preserved as necessary
R8	Informed Client
R9	
R10	
R11	
R12	

REVIEWS:

Sample Labeling Shawn Zamora Date 11/4/22 11/4/22

SRF Date 11/4/22

PM MB Date 11/8/22

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

380-26796

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

SDG#: 22K045

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-26796

SDG : 22K045

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

A total of two(2) water samples were received on 11/03/22 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.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. VGH7K04B - 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. VGH7K04L/VGH7K04C 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 K043-01M/K043-01S. 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 : 380-26796

SDG NO. : 22K045
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	VGH7K04B	1	NA	11/04/2213:23	11/04/2213:23	AK04005A	AK04004A	22VGH7K04	Method Blank
LCS1W	VGH7K04L	1	NA	11/04/2213:59	11/04/2213:59	AK04006A	AK04004A	22VGH7K04	Lab Control Sample (LCS)
LCD1W	VGH7K04C	1	NA	11/04/2214:36	11/04/2214:36	AK04007A	AK04004A	22VGH7K04	LCS Duplicate
380-26796-1	K045-01	1	NA	11/04/2218:51	11/04/2218:51	AK04014A	AK04004A	22VGH7K04	Field Sample
380-26796-2	K045-02	1	NA	11/04/2219:28	11/04/2219:28	AK04015A	AK04004A	22VGH7K04	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:	11/01/22 09:44
Project	: 380-26796	Date Received:	11/03/22
Batch No.	: 22K045	Date Extracted:	11/04/22 18:51
Sample ID	: 380-26796-1	Date Analyzed:	11/04/22 18:51
Lab Samp ID:	K045-01	Dilution Factor:	1
Lab File ID:	AK04014A	Matrix:	WATER
Ext Btch ID:	22VGH7K04	% Moisture:	NA
Calib. Ref.:	AK04004A	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	0.0337	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:	11/01/22 09:44
Project	: 380-26796	Date Received:	11/03/22
Batch No.	: 22K045	Date Extracted:	11/04/22 19:28
Sample ID	: 380-26796-2	Date Analyzed:	11/04/22 19:28
Lab Samp ID:	K045-02	Dilution Factor:	1
Lab File ID:	AK04015A	Matrix:	WATER
Ext Btch ID:	22VGH7K04	% Moisture:	NA
Calib. Ref.:	AK04004A	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	0.0330	0.0400	82	60-140

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume	: 5ml
Prepared by	: SCerva	Analyzed by	: SCerva

QC SUMMARIES

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

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	11/04/22 13:23
Project	: 380-26796	Date Received:	11/04/22
Batch No.	: 22K045	Date Extracted:	11/04/22 13:23
Sample ID	: MBLK1W	Date Analyzed:	11/04/22 13:23
Lab Samp ID:	VGH7K04B	Dilution Factor:	1
Lab File ID:	AK04005A	Matrix:	WATER
Ext Btch ID:	22VGH7K04	% Moisture:	NA
Calib. Ref.:	AK04004A	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	0.0340	0.0400	85	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 : 380-26796
BATCH NO. : 22K045
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	: VGH7K04B	VGH7K04L	VGH7K04C
LAB FILE ID	: AK04005A	AK04006A	AK04007A
DATE PREPARED	: 11/04/22 13:23	11/04/22 13:59	11/04/22 14:36
DATE ANALYZED	: 11/04/22 13:23	11/04/22 13:59	11/04/22 14:36
PREP BATCH	: 22VGH7K04	22VGH7K04	22VGH7K04
CALIBRATION REF	: AK04004A	AK04004A	AK04004A

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	0.474	95	0.500	0.460	92	3	60-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0469	117	0.0400	0.0463	116	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 : 380-26797
BATCH NO. : 22K043
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: 380-26797-1	380-26797-1MS	380-26797-1MSD
LAB SAMPLE ID	: K043-01	K043-01M	K043-01S
LAB FILE ID	: AK04008A	AK04009A	AK04010A
DATE PREPARED	: 11/04/22 15:13	11/04/22 15:49	11/04/22 16:26
DATE ANALYZED	: 11/04/22 15:13	11/04/22 15:49	11/04/22 16:26
PREP BATCH	: 22VGH7K04	22VGH7K04	22VGH7K04
CALIBRATION REF	: AK04004A	AK04004A	AK04004A

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	0.473	95	0.500	0.482	96	2	50-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0478	120	0.0400	0.0469	117	60-140

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

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-26796

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 22K045

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-26796

SDG : 22K045

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 11/03/22 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.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. DSK016WB - 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. DSK016WL/DSK016WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

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

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

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-26796

SDG : 22K045

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 11/03/22 to be analyzed for Petroleum Hydrocarbons by Extraction in accordance with Method 3520C/8015B and project specific requirements.

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

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

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. DSK016WB - 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. J8K016WL/J8K016WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

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

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

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-26796

SDG : 22K045

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 11/03/22 to be analyzed for Petroleum Hydrocarbons by Extraction in accordance with Method 3520C/8015B and project specific requirements.

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

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

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. DSK016WB - 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. J5K016WL/J5K016WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

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

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

LAB CHRONICLE
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL
Project : 380-26796

SDG NO. : 22K045
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
MBLK1W	DSK016WB	1	NA	11/11/2215:40	11/10/2216:45	LK10064A	LK10055A	22DSK016W	Method Blank
LCS1W	DSK016WL	1	NA	11/11/2215:59	11/10/2216:45	LK10065A	LK10055A	22DSK016W	Lab Control Sample (LCS)
LCD1W	DSK016WC	1	NA	11/11/2216:17	11/10/2216:45	LK10066A	LK10055A	22DSK016W	LCS Duplicate
380-26796-1	K045-01	1	NA	11/11/2219:22	11/10/2216:45	LK10076A	LK10055A	22DSK016W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL
Project : 380-26796

SDG NO. : 22K045
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
MBLK1W	DSK016WB	1	NA	11/11/2215:40	11/10/2216:45	LK10064A	LK10056A	22DSK016W	Method Blank
LCS1W	J5K016WL	1	NA	11/11/2216:36	11/10/2216:45	LK10067A	LK10056A	22DSK016W	Lab Control Sample (LCS)
LCD1W	J5K016WC	1	NA	11/11/2216:54	11/10/2216:45	LK10068A	LK10056A	22DSK016W	LCS Duplicate
380-26796-1	K045-01	1	NA	11/11/2219:22	11/10/2216:45	LK10076A	LK10056A	22DSK016W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL
Project : 380-26796

SDG NO. : 22K045
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
MBLK1W	DSK016WB	1	NA	11/11/2215:40	11/10/2216:45	LK10064A	LK10057A	22DSK016W	Method Blank
LCS1W	J8K016WL	1	NA	11/11/2217:12	11/10/2216:45	LK10069A	LK10057A	22DSK016W	Lab Control Sample (LCS)
LCD1W	J8K016WC	1	NA	11/11/2217:31	11/10/2216:45	LK10070A	LK10057A	22DSK016W	LCS Duplicate
380-26796-1	K045-01	1	NA	11/11/2219:22	11/10/2216:45	LK10076A	LK10057A	22DSK016W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	11/01/22 09:44
Project	: 380-26796	Date Received:	11/03/22
Batch No.	: 22K045	Date Extracted:	11/10/22 16:45
Sample ID	: 380-26796-1	Date Analyzed:	11/11/22 19:22
Lab Samp ID:	22K045-01	Dilution Factor:	1
Lab File ID:	LK10076A	Matrix:	WATER
Ext Btch ID:	22DSK016W	% Moisture:	NA
Calib. Ref.:	LK10055A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Diesel	ND	0.025	0.012
Motor Oil	ND	0.049	0.025

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.473	0.490	97	60-130
Hexacosane	0.120	0.123	98	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	: 1020ml	Final Volume	: 5ml
Prepared by	: POreto	Analyzed by	: SDeeso

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	11/01/22 09:44
Project	: 380-26796	Date Received:	11/03/22
Batch No.	: 22K045	Date Extracted:	11/10/22 16:45
Sample ID	: 380-26796-1	Date Analyzed:	11/11/22 19:22
Lab Samp ID:	22K045-01	Dilution Factor:	1
Lab File ID:	LK10076A	Matrix:	WATER
Ext Btch ID:	22DSK016W	% Moisture:	NA
Calib. Ref.:	LK10056A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
JP5	ND	0.049	0.025

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.473	0.490	97	60-130
Hexacosane	0.120	0.123	98	60-130

Notes:
RL : Reporting Limit
Parameter H-C Range
JP5 C8-C18
Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.
Sample Amount : 1020ml Final Volume : 5ml
Prepared by : POreto Analyzed by : SDeeso

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	11/01/22 09:44
Project	: 380-26796	Date Received:	11/03/22
Batch No.	: 22K045	Date Extracted:	11/10/22 16:45
Sample ID	: 380-26796-1	Date Analyzed:	11/11/22 19:22
Lab Samp ID:	22K045-01	Dilution Factor:	1
Lab File ID:	LK10076A	Matrix:	WATER
Ext Btch ID:	22DSK016W	% Moisture:	NA
Calib. Ref.:	LK10057A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
JP8	ND	0.049	0.025

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.473	0.490	97	60-130
Hexacosane	0.120	0.123	98	60-130

Notes:
RL : Reporting Limit

Parameter	H-C Range
JP8	C8-C18

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.
Sample Amount : 1020ml Final Volume : 5ml
Prepared by : POreto Analyzed by : SDeeso

QC SUMMARIES

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	11/10/22 16:45
Project	: 380-26796	Date Received:	11/10/22
Batch No.	: 22K045	Date Extracted:	11/10/22 16:45
Sample ID	: MBLK1W	Date Analyzed:	11/11/22 15:40
Lab Samp ID:	DSK016WB	Dilution Factor:	1
Lab File ID:	LK10064A	Matrix:	WATER
Ext Btch ID:	22DSK016W	% Moisture:	NA
Calib. Ref.:	LK10055A	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	0.511	0.500	102	60-130
Hexacosane	0.131	0.125	105	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	: POreto	Analyzed by :	SDeeso

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-26796
BATCH NO. : 22K045
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	: DSK016WB	DSK016WL	DSK016WC
LAB FILE ID	: LK10064A	LK10065A	LK10066A
DATE PREPARED	: 11/10/22 16:45	11/10/22 16:45	11/10/22 16:45
DATE ANALYZED	: 11/11/22 15:40	11/11/22 15:59	11/11/22 16:17
PREP BATCH	: 22DSK016W	22DSK016W	22DSK016W
CALIBRATION REF	: LK10055A	LK10055A	LK10055A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Diesel	ND	2.50	2.74	110	2.50	2.65	106	3	50-130	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromobenzene	0.500	0.507	101	0.500	0.507	101	60-130
Hexacosane	0.125	0.131	105	0.125	0.129	103	60-130

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

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	11/10/22 16:45
Project	: 380-26796	Date Received:	11/10/22
Batch No.	: 22K045	Date Extracted:	11/10/22 16:45
Sample ID	: MBLK1W	Date Analyzed:	11/11/22 15:40
Lab Samp ID:	DSK016WB	Dilution Factor:	1
Lab File ID:	LK10064A	Matrix:	WATER
Ext Btch ID:	22DSK016W	% Moisture:	NA
Calib. Ref.:	LK10056A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
JP5	ND	0.050	0.025

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.511	0.500	102	60-130
Hexacosane	0.131	0.125	105	60-130

Notes:
RL : Reporting Limit
Parameter H-C Range
JP5 C8-C18
Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.
Sample Amount : 1000ml Final Volume : 5ml
Prepared by : POreto Analyzed by : SDeeso

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-26796
BATCH NO. : 22K045
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	: DSK016WB	J5K016WL	J5K016WC
LAB FILE ID	: LK10064A	LK10067A	LK10068A
DATE PREPARED	: 11/10/22 16:45	11/10/22 16:45	11/10/22 16:45
DATE ANALYZED	: 11/11/22 15:40	11/11/22 16:36	11/11/22 16:54
PREP BATCH	: 22DSK016W	22DSK016W	22DSK016W
CALIBRATION REF	: LK10056A	LK10056A	LK10056A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
JP5	ND	2.50	2.82	113	2.50	2.57	103	9	30-160	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromobenzene	0.500	0.494	99	0.500	0.483	97	60-130
Hexacosane	0.125	0.133	106	0.125	0.118	94	60-130

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

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	11/10/22 16:45
Project	: 380-26796	Date Received:	11/10/22
Batch No.	: 22K045	Date Extracted:	11/10/22 16:45
Sample ID	: MBLK1W	Date Analyzed:	11/11/22 15:40
Lab Samp ID:	DSK016WB	Dilution Factor:	1
Lab File ID:	LK10064A	Matrix:	WATER
Ext Btch ID:	22DSK016W	% Moisture:	NA
Calib. Ref.:	LK10057A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
JP8	ND	0.050	0.025

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.511	0.500	102	60-130
Hexacosane	0.131	0.125	105	60-130

Notes:
RL : Reporting Limit

Parameter	H-C Range
JP8	C8-C18

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.
Sample Amount : 1000ml Final Volume : 5ml
Prepared by : POreto Analyzed by : SDeeso

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-26796
BATCH NO. : 22K045
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	: DSK016WB	J8K016WL	J8K016WC
LAB FILE ID	: LK10064A	LK10069A	LK10070A
DATE PREPARED	: 11/10/22 16:45	11/10/22 16:45	11/10/22 16:45
DATE ANALYZED	: 11/11/22 15:40	11/11/22 17:12	11/11/22 17:31
PREP BATCH	: 22DSK016W	22DSK016W	22DSK016W
CALIBRATION REF	: LK10057A	LK10057A	LK10057A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
JP8	ND	2.50	2.98	119	2.50	2.84	114	5	30-160	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromobenzene	0.500	0.477	95	0.500	0.467	93	60-130
Hexacosane	0.125	0.131	105	0.125	0.110	88	60-130

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

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature

November 29, 2022

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

Project Name: RED-HILL Project # 38001111 Job # 380-26796-1
Physis Project ID: 1407003-333

Dear Debbie,

Enclosed are the analytical results for the sample submitted to PHYSIS Environmental Laboratories, Inc. (PHYSIS) on 11/3/2022. 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: 1407003-333

RED-HILL Project # 38001111 Job # 380-26796-1

Total Samples: 1

PHYSIS ID	Sample ID	Description	Date	Time	Matrix	Sample Type
101294	HALAWA WELLS UNITS 1 & 2	380-26796-1	11/1/2022	9:44	Samplewater	Not Specified

1904 E. Wright Circle Anaheim, CA 92806 (714) 602-5320 fax (714) 602-5321 www.physislabs.com CA ELAP #2769

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.

1904 E. Wright Circle Anaheim, CA 92806 (714) 602-5320 fax (714) 602-5321 www.physislabs.com CA ELAP #2769

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: 1407003-333
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-26796-1

Base/Neutral Extractable Compounds

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 101294-R1	**HALAWA WELLS UNITS 1 & 2 380-2**	**Matrix: Samplewater**					**Sampled: 01-Nov-22**			**Received: 03-Nov-22**	
Disalicylidenepropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-40014	08-Nov-22	18-Nov-22

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 101294-R1	**HALAWA WELLS UNITS 1 & 2 380-2**	**Matrix: Samplewater**					**Sampled: 01-Nov-22**			**Received: 03-Nov-22**	
(d10-Acenaphthene)	EPA 625.1	% Recovery	61	1			Total		O-40014	08-Nov-22	18-Nov-22
(d10-Phenanthrene)	EPA 625.1	% Recovery	85	1			Total		O-40014	08-Nov-22	18-Nov-22
(d12-Chrysene)	EPA 625.1	% Recovery	79	1			Total		O-40014	08-Nov-22	18-Nov-22
(d12-Perylene)	EPA 625.1	% Recovery	73	1			Total		O-40014	08-Nov-22	18-Nov-22
(d8-Naphthalene)	EPA 625.1	% Recovery	73	1			Total		O-40014	08-Nov-22	18-Nov-22
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40014	08-Nov-22	18-Nov-22
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40014	08-Nov-22	18-Nov-22
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40014	08-Nov-22	18-Nov-22
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40014	08-Nov-22	18-Nov-22
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40014	08-Nov-22	18-Nov-22
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40014	08-Nov-22	18-Nov-22
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40014	08-Nov-22	18-Nov-22
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40014	08-Nov-22	18-Nov-22
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40014	08-Nov-22	18-Nov-22
Benzo[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40014	08-Nov-22	18-Nov-22
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40014	08-Nov-22	18-Nov-22
Benzo[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40014	08-Nov-22	18-Nov-22
Benzo[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40014	08-Nov-22	18-Nov-22
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40014	08-Nov-22	18-Nov-22
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40014	08-Nov-22	18-Nov-22
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40014	08-Nov-22	18-Nov-22
Dibenz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40014	08-Nov-22	18-Nov-22
Dibenzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40014	08-Nov-22	18-Nov-22
Dibenzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40014	08-Nov-22	18-Nov-22

PHYSIS Project ID: 1407003-333
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-26796-1

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-40014	08-Nov-22	18-Nov-22
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40014	08-Nov-22	18-Nov-22
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40014	08-Nov-22	18-Nov-22
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40014	08-Nov-22	18-Nov-22
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40014	08-Nov-22	18-Nov-22
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40014	08-Nov-22	18-Nov-22
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40014	08-Nov-22	18-Nov-22

QUALITY CONTROL REPORT

ENVIRONMENTAL LABORATORIES, INC.

Innovative Solutions for Nature

PHYSIS Project ID: 1407003-333
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-26796-1

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: 101293-B1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**			**Received:**			
		Method: EPA 625.1				Batch ID: O-40014		Prepared: 08-Nov-22			Analyzed: 18-Nov-22			
Disalicylidenepropanediamin	Total	ND	1	0.05	0.1	µg/L								
Sample ID: 101293-BS1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**			**Received:**			
		Method: EPA 625.1				Batch ID: O-40014		Prepared: 08-Nov-22			Analyzed: 18-Nov-22			
Disalicylidenepropanediamin	Total	19.5	1	0.05	0.1	µg/L	20	0	98	50 - 150% PASS				
Sample ID: 101293-BS2	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**			**Received:**			
		Method: EPA 625.1				Batch ID: O-40014		Prepared: 08-Nov-22			Analyzed: 18-Nov-22			
Disalicylidenepropanediamin	Total	18.3	1	0.05	0.1	µg/L	20	0	91	50 - 150% PASS		6	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: 101293-B1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**				**Received:**	
	Method: EPA 625.1					Batch ID: O-40014		Prepared: 08-Nov-22				Analyzed: 18-Nov-22	
(d10-Acenaphthene)	Total	68	1			% Recovery	100	68	27 - 133%	PASS			
(d10-Phenanthrene)	Total	81	1			% Recovery	100	81	43 - 129%	PASS			
(d12-Chrysene)	Total	67	1			% Recovery	100	67	52 - 144%	PASS			
(d12-Perylene)	Total	80	1			% Recovery	100	80	36 - 161%	PASS			
(d8-Naphthalene)	Total	82	1			% Recovery	100	82	25 - 125%	PASS			
1-Methylnaphthalene	Total	ND	1	0.001	0.005	µg/L							
1-Methylphenanthrene	Total	ND	1	0.001	0.005	µg/L							
2,3,5-Trimethylnaphthalene	Total	ND	1	0.001	0.005	µg/L							
2,6-Dimethylnaphthalene	Total	ND	1	0.001	0.005	µg/L							
2-Methylnaphthalene	Total	ND	1	0.001	0.005	µg/L							
Acenaphthene	Total	ND	1	0.001	0.005	µg/L							
Acenaphthylene	Total	ND	1	0.001	0.005	µg/L							
Anthracene	Total	ND	1	0.001	0.005	µg/L							
Benz[a]anthracene	Total	ND	1	0.001	0.005	µg/L							
Benzo[a]pyrene	Total	ND	1	0.001	0.005	µg/L							
Benzo[b]fluoranthene	Total	ND	1	0.001	0.005	µg/L							
Benzo[e]pyrene	Total	ND	1	0.001	0.005	µg/L							
Benzo[g,h,i]perylene	Total	ND	1	0.001	0.005	µg/L							
Benzo[k]fluoranthene	Total	ND	1	0.001	0.005	µg/L							
Biphenyl	Total	ND	1	0.001	0.005	µg/L							
Chrysene	Total	ND	1	0.001	0.005	µg/L							
Dibenz[a,h]anthracene	Total	ND	1	0.001	0.005	µg/L							
Dibenzo[a,l]pyrene	Total	ND	1	0.001	0.005	µg/L							
Dibenzothiophene	Total	ND	1	0.001	0.005	µg/L							

PHYSIS Project ID: 1407003-333
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-26796-1

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
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: 101293-BS1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**				**Received:**	
	Method: EPA 625.1					Batch ID: O-40014		Prepared: 08-Nov-22				Analyzed: 18-Nov-22	
(d10-Acenaphthene)	Total	58	1			% Recovery	100	0	58	27 - 133%	PASS		
(d10-Phenanthrene)	Total	79	1			% Recovery	100	0	79	43 - 129%	PASS		
(d12-Chrysene)	Total	74	1			% Recovery	100	0	74	52 - 144%	PASS		
(d12-Perylene)	Total	66	1			% Recovery	100	0	66	36 - 161%	PASS		
(d8-Naphthalene)	Total	49	1			% Recovery	100	0	49	25 - 125%	PASS		
1-Methylnaphthalene	Total	0.22	1	0.001	0.005	µg/L	0.5	0	44	31 - 128%	PASS		
1-Methylphenanthrene	Total	0.388	1	0.001	0.005	µg/L	0.5	0	78	66 - 127%	PASS		
2,3,5-Trimethylnaphthalene	Total	0.316	1	0.001	0.005	µg/L	0.5	0	63	55 - 122%	PASS		
2,6-Dimethylnaphthalene	Total	0.436	1	0.001	0.005	µg/L	0.5	0	87	48 - 120%	PASS		
2-Methylnaphthalene	Total	0.39	1	0.001	0.005	µg/L	0.5	0	78	47 - 130%	PASS		
Acenaphthene	Total	0.29	1	0.001	0.005	µg/L	0.5	0	58	53 - 131%	PASS		
Acenaphthylene	Total	0.391	1	0.001	0.005	µg/L	0.5	0	78	43 - 140%	PASS		
Anthracene	Total	0.402	1	0.001	0.005	µg/L	0.5	0	80	58 - 135%	PASS		
Benz[a]anthracene	Total	0.407	1	0.001	0.005	µg/L	0.5	0	81	55 - 145%	PASS		
Benzo[a]pyrene	Total	0.374	1	0.001	0.005	µg/L	0.5	0	75	51 - 143%	PASS		
Benzo[b]fluoranthene	Total	0.462	1	0.001	0.005	µg/L	0.5	0	92	46 - 165%	PASS		
Benzo[e]pyrene	Total	0.436	1	0.001	0.005	µg/L	0.5	0	87	42 - 152%	PASS		
Benzo[g,h,i]perylene	Total	0.407	1	0.001	0.005	µg/L	0.5	0	81	63 - 133%	PASS		
Benzo[k]fluoranthene	Total	0.448	1	0.001	0.005	µg/L	0.5	0	90	56 - 145%	PASS		
Biphenyl	Total	0.505	1	0.001	0.005	µg/L	0.5	0	101	56 - 119%	PASS		
Chrysene	Total	0.351	1	0.001	0.005	µg/L	0.5	0	70	56 - 141%	PASS		
Dibenz[a,h]anthracene	Total	0.5	1	0.001	0.005	µg/L	0.5	0	100	55 - 150%	PASS		
Dibenzo[a,l]pyrene	Total	0.184	1	0.001	0.005	µg/L	0.25	0	74	50 - 150%	PASS		
Dibenzothiophene	Total	0.397	1	0.001	0.005	µg/L	0.5	0	79	75 - 113%	PASS		

PHYSIS Project ID: 1407003-333
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-26796-1

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
Fluoranthene	Total	0.39	1	0.001	0.005	µg/L	0.5	0	78	60 - 146%	PASS			
Fluorene	Total	0.363	1	0.001	0.005	µg/L	0.5	0	73	58 - 131%	PASS			
Indeno[1,2,3-cd]pyrene	Total	0.533	1	0.001	0.005	µg/L	0.5	0	107	50 - 151%	PASS			
Naphthalene	Total	0.265	1	0.001	0.005	µg/L	0.5	0	53	41 - 126%	PASS			
Perylene	Total	0.431	1	0.001	0.005	µg/L	0.5	0	86	48 - 141%	PASS			
Phenanthrene	Total	0.411	1	0.001	0.005	µg/L	0.5	0	82	67 - 127%	PASS			
Pyrene	Total	0.379	1	0.001	0.005	µg/L	0.5	0	76	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: 101293-BS2	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**				**Received:**		
		Method: EPA 625.1				Batch ID: O-40014		Prepared: 08-Nov-22				Analyzed: 18-Nov-22		
(d10-Acenaphthene)	Total	68	1			% Recovery	100	0	68	27 - 133%	PASS	16	30	PASS
(d10-Phenanthrene)	Total	82	1			% Recovery	100	0	82	43 - 129%	PASS	4	30	PASS
(d12-Chrysene)	Total	76	1			% Recovery	100	0	76	52 - 144%	PASS	3	30	PASS
(d12-Perylene)	Total	83	1			% Recovery	100	0	83	36 - 161%	PASS	23	30	PASS
(d8-Naphthalene)	Total	48	1			% Recovery	100	0	48	25 - 125%	PASS	2	30	PASS
1-Methylnaphthalene	Total	0.183	1	0.001	0.005	µg/L	0.5	0	37	31 - 128%	PASS	17	30	PASS
1-Methylphenanthrene	Total	0.456	1	0.001	0.005	µg/L	0.5	0	91	66 - 127%	PASS	15	30	PASS
2,3,5-Trimethylnaphthalene	Total	0.337	1	0.001	0.005	µg/L	0.5	0	67	55 - 122%	PASS	6	30	PASS
2,6-Dimethylnaphthalene	Total	0.343	1	0.001	0.005	µg/L	0.5	0	69	48 - 120%	PASS	23	30	PASS
2-Methylnaphthalene	Total	0.351	1	0.001	0.005	µg/L	0.5	0	70	47 - 130%	PASS	11	30	PASS
Acenaphthene	Total	0.343	1	0.001	0.005	µg/L	0.5	0	69	53 - 131%	PASS	17	30	PASS
Acenaphthylene	Total	0.426	1	0.001	0.005	µg/L	0.5	0	85	43 - 140%	PASS	9	30	PASS
Anthracene	Total	0.402	1	0.001	0.005	µg/L	0.5	0	80	58 - 135%	PASS	0	30	PASS
Benz[a]anthracene	Total	0.396	1	0.001	0.005	µg/L	0.5	0	79	55 - 145%	PASS	2	30	PASS
Benzo[a]pyrene	Total	0.377	1	0.001	0.005	µg/L	0.5	0	75	51 - 143%	PASS	0	30	PASS
Benzo[b]fluoranthene	Total	0.528	1	0.001	0.005	µg/L	0.5	0	106	46 - 165%	PASS	14	30	PASS
Benzo[e]pyrene	Total	0.487	1	0.001	0.005	µg/L	0.5	0	97	42 - 152%	PASS	11	30	PASS
Benzo[g,h,i]perylene	Total	0.41	1	0.001	0.005	µg/L	0.5	0	82	63 - 133%	PASS	1	30	PASS
Benzo[k]fluoranthene	Total	0.497	1	0.001	0.005	µg/L	0.5	0	99	56 - 145%	PASS	10	30	PASS
Biphenyl	Total	0.389	1	0.001	0.005	µg/L	0.5	0	78	56 - 119%	PASS	26	30	PASS
Chrysene	Total	0.326	1	0.001	0.005	µg/L	0.5	0	65	56 - 141%	PASS	7	30	PASS
Dibenz[a,h]anthracene	Total	0.538	1	0.001	0.005	µg/L	0.5	0	108	55 - 150%	PASS	8	30	PASS
Dibenzo[a,l]pyrene	Total	0.195	1	0.001	0.005	µg/L	0.25	0	78	50 - 150%	PASS	5	30	PASS
Dibenzothiophene	Total	0.417	1	0.001	0.005	µg/L	0.5	0	83	75 - 113%	PASS	5	30	PASS

PHYSIS Project ID: 1407003-333
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-26796-1

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
Fluoranthene	Total	0.466	1	0.001	0.005	µg/L	0.5	0	93	60 - 146%	PASS	18	30 PASS	
Fluorene	Total	0.361	1	0.001	0.005	µg/L	0.5	0	72	58 - 131%	PASS	1	30 PASS	
Indeno[1,2,3-cd]pyrene	Total	0.512	1	0.001	0.005	µg/L	0.5	0	102	50 - 151%	PASS	5	30 PASS	
Naphthalene	Total	0.282	1	0.001	0.005	µg/L	0.5	0	56	41 - 126%	PASS	6	30 PASS	
Perylene	Total	0.45	1	0.001	0.005	µg/L	0.5	0	90	48 - 141%	PASS	5	30 PASS	
Phenanthrene	Total	0.412	1	0.001	0.005	µg/L	0.5	0	82	67 - 127%	PASS	0	30 PASS	
Pyrene	Total	0.461	1	0.001	0.005	µg/L	0.5	0	92	54 - 156%	PASS	19	30 PASS	

TENTATIVELY IDENTIFIED COMPOUNDS

Sample ID: 101294

RT	Area Pct	Concentration (ng/L)	Library/ID	Cas Number	Match Qual
32.2403	6.4395	1111	Anthracene-D10	1517-22-2	96
29.2419	4.0546	700	Benzoic acid, 2-ethylhexyl ester	5444-75-7	98

Concentration estimated using the response for Anthracene-d10

Sample ID: Lab Blank Batch O-40014

RT	Area Pct	Concentration (ng/L)	Library/ID	Cas Number	Match Qual
32.2441	9.6222	1111	Anthracene-D10	1517-22-2	97
29.2435	6.1768	713	Benzoic acid, 2-ethylhexyl ester	5444-75-7	98

Concentration estimated using the response for Anthracene-d1(

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

2/10/2023

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arada, Rachelle	Carrier Tracking No(s):	COC No: 380-27310.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Rachelle.Arada@et.eurofinsus.com	State of Origin: Hawaii	Page: Page 1 of 1
Company: Physis Environmental Laboratories		Accreditations Required (See note): State - Hawaii		Job #: 380-26796-1
Address: 1904 Wright Circle, ,	Due Date Requested: 11/16/2022			
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, 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 (625 PAH Physis LL (EAL) + TICs)/ 625 PAH Physis LL (EAL) + TICs	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
HALAWA WELLS UNITS 1 & 2 (380-26796-1)	11/1/22	09:44 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 *Unconfirmed*	***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) 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: 11-3-22 16	Company
Relinquished by:	Date/Time: 11-3-22 15:35	Company	Received by: CEASAR NWADIWE	Date/Time: 11-3-22 18:35	Company PHYSIS LABS
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

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature

Sample Receipt Summary

Project Iteration ID: 1407003-333
Client Name: Eurofins Eaton Analytical
Project Name: RED-HILL Project # 38001111 Job # 380-26796-1
COC Page Number: 2 of 2
Bottle Label Color: NA

Receiving Info

1. Initials Received By: CN
2. Date Received: 11-3-22
3. Time Received: 1835
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): ~~2.5~~ CN 2.5 Used I/R Thermometer # ____

Inspection Info

1. Initials Inspected By: RGH

Sample Integrity Upon Receipt:

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

Notes:

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: BAILEY	Lab PM: Arada, Rachelle	Carrier Tracking No(s):	COC No: 380-9761-2757.1
Client Contact: Dr. Ron Fenstemacher	Phone: 1-808-748-5840	E-Mail: Rachelle.Arada@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:

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				Water									
AIEA GULCH WELLS PUMP 2				Water									
AIEA WELLS PUMPS 1&2 (260)				Water									
HALAWA SHAFT				Water									
HALAWA WELLS UNITS 1&2	Nov.01,2022	0944	G	Water			X	X	X	X	X		
MOANALUA WELLS				Water									
AIEA GULCH WELLS PUMP 1				Water									
AIEA GULCH WELLS PUMP 2				Water									
AIEA WELLS PUMPS 1&2 (260)				Water									
HALAWA SHAFT				Water									
HALAWA WELLS UNITS 1&2				Water									

380-26796 COC

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: FED EX #1 7703 7355 4106 #2 7703 7355 4481

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
BAILEY	Nov.01,2022 1400	HBWS	G.REITNER	11/02/2022 09:30	EEA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
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: (751A) #1 OF 2 - 2.1°-1.9° / #2 OF 2 -0.7°-0.5° (GEL FROZEN #1 GEL FROZEN #2)

Monrovia, CA (Suite 100)
7[illegible] Royal Oaks Drive Suite 100
Monrovia, CA 91016
Phone: 626-386-1100

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: BAILEY	Lab PM: Arada, Rachelle	Carrier Tracking No(s):	COC No: 380-9761-2757.3
Client Contact: Dr. Ron Fenstemacher	Phone: 1-808-748-5840	E-Mail: Rachelle.Arada@et.eurofinsus.com	State of Origin:	Page: Page 3 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:

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:		X	X	R	R	RA		RA	X	
HALAWA WELLS UNITS 1&2				Water									
MOANALUA WELLS				Water									
TB AIEA GULCH WELLS PUMP1				Water									
TB AIEA GULCH WELLS PUMP2				Water									
TB AIEA WELLS PUMPS 1&2 (260)				Water									
TB HALAWA SHAFT				Water									
TB HALAWA WELLS UNITS 1&2	NOV 01,2022	0944		Water							X		
TB MOANALUA WELLS				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:

#1 7703 7355 4106

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: FED EX #2 7703 7355 4481

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
BAILEY	NOV. 01, 2022 1400	HBWS	B. PETTNER	11/02/2022 09:30	EEA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
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: (75IA) #1 of 2 2.1°-1.9° / #2 of 2 0.7°-0.5° (GEL FROZEN #1) (GEL FROZEN #2)

Ver: 06/08/2021

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:	Lab PM: Arada, Rachelle	Carrier Tracking No(s):	COC No: 380-9761-2757.2
Client Contact: Dr. Ron Fenstemacher	Phone:	E-Mail: Rachelle.Arada@et.eurofinsus.com	State of Origin:	Page: Page 2 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:

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 Physls 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		
MOANALUA WELLS				Water									
AIEA GULCH WELLS PUMP 1				Water									
AIEA GULCH WELLS PUMP 2				Water									
AIEA WELLS PUMPS 1&2 (260)				Water									
HALAWA SHAFT				Water									
HALAWA WELLS UNITS 1&2				Water									
MOANALUA WELLS				Water									
AIEA GULCH WELLS PUMP 1				Water									
AIEA GULCH WELLS PUMP 2				Water									
AIEA WELLS PUMPS 1&2 (260)				Water									
HALAWA SHAFT				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:

#1 7703 7355 4106
FED EX #2 7703 7355 4481

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
			G PEITNER	11/02/2022 09:30	EEA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
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: (751A #1 OP2 - 2.1°-1.9° / #2 OP2 0.7°-0.5° (GEL FROZEN #1 GEL FROZEN #2)

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-26796-1

Login Number: 26796
List Number: 1
Creator: Castro, Heidi

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	