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ANALYTICAL REPORT

PREPARED FOR

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City & County of Honolulu
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Honolulu, Hawaii 96843

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JOB DESCRIPTION

RED-HILL

JOB NUMBER

380-77419-2

Eurofins Eaton Analytical Pomona
941 Corporate Center Drive
Pomona CA 91768-2642

See page two for job notes and contact information.

Eurofins Eaton Analytical Pomona

Job Notes

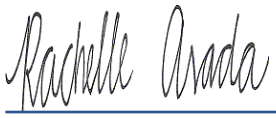
This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Eaton Analytical, LLC Project Manager.

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: 380-77419-2

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 Narrative
380-77419-2

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 1/5/2024 9:20 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.2°C.

Subcontract Work
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. The subcontract report is appended in its entirety.

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

GC Semi VOA
Method 8015B_DRO_LL_CS: Reanalysis of the following sample(s) was performed outside of the analytical holding time: HALAWA WELLS UNIT 1 (380-77419-1). The client was contacted regarding this issue, and the laboratory was instructed to cancel analysis.

Detection Summary

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

Job ID: 380-77419-2

Client Sample ID: HALAWA WELLS UNIT 1 — Lab Sample ID: 380-77419-1

No Detections.

Client Sample ID: TB: HALAWA WELLS UNIT 1 — Lab Sample ID: 380-77419-2

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: HALAWA WELLS UNIT 1

Lab Sample ID: 380-77419-1

Date Collected: 01/03/24 11:11

Matrix: Water

Date Received: 01/05/24 09:20

Method: SW846 8015B GRO LL - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	<10		10		ug/L			01/09/24 16:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*64*		*38 - 134*		*01/09/24 16:25*	*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		01/10/24 00:00	02/09/24 08:49	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 08:49	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 08:49	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 08:49	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 08:49	1
Acenaphthene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 08:49	1
Acenaphthylene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 08:49	1
Anthracene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 08:49	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 08:49	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 08:49	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 08:49	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 08:49	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 08:49	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 08:49	1
Biphenyl	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 08:49	1
Chrysene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 08:49	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 08:49	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 08:49	1
Dibenzothiophene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 08:49	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		01/10/24 00:00	02/09/24 08:49	1
Fluoranthene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 08:49	1
Fluorene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 08:49	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 08:49	1
Naphthalene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 08:49	1
Perylene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 08:49	1
Phenanthrene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 08:49	1
Pyrene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 08:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
(d10-Acenaphthene)	*59*		*27 - 133*	*01/10/24 00:00*	*02/09/24 08:49*	*1*
(d10-Phenanthrene)	*68*		*43 - 129*	*01/10/24 00:00*	*02/09/24 08:49*	*1*
(d12-Chrysene)	*81*		*52 - 144*	*01/10/24 00:00*	*02/09/24 08:49*	*1*
(d12-Perylene)	*106*		*36 - 161*	*01/10/24 00:00*	*02/09/24 08:49*	*1*
(d8-Naphthalene)	*68*		*25 - 125*	*01/10/24 00:00*	*02/09/24 08:49*	*1*

Client Sample ID: TB: HALAWA WELLS UNIT 1

Lab Sample ID: 380-77419-2

Date Collected: 01/03/24 11:11

Matrix: Water

Date Received: 01/05/24 09:20

Method: SW846 8015B GRO LL - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	<10		10		ug/L			01/09/24 18:12	1

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

Job ID: 380-77419-2

Client Sample ID: TB: HALAWA WELLS UNIT 1
Date Collected: 01/03/24 11:11
Date Received: 01/05/24 09:20

Lab Sample ID: 380-77419-2
Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		38 - 134		01/09/24 18:12	1

Surrogate Summary

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

Job ID: 380-77419-2

Method: 8015B GRO LL - Gasoline Range Organics - (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)
		BFB1
Lab Sample ID	Client Sample ID	(38-134)
380-77419-1	HALAWA WELLS UNIT 1	64
380-77419-2	TB: HALAWA WELLS UNIT 1	91
570-166954-E-4 MS	Matrix Spike	104
570-166954-F-4 MSD	Matrix Spike Duplicate	103
LCS 570-399524/4	Lab Control Sample	102
LCSD 570-399524/5	Lab Control Sample Dup	80
MB 570-399524/8	Method Blank	87
MRL 570-399524/7	Lab Control Sample	67

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

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)
114094-B1	Method Blank	71	84	110	73	74
114094-BS1	Lab Control Sample	61	78	114	65	110
114094-BS2	Lab Control Sample Dup	62	77	109	64	94

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)				
		Acenapht	Phenanth	CRY	NPT	PRY
Lab Sample ID	Client Sample ID	(27-133)	(43-129)	(52-144)	(25-125)	(36-161)
380-77419-1	HALAWA WELLS UNIT 1	59	68	81	68	106

Surrogate Legend

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

Method: 8015B GRO LL - Gasoline Range Organics - (GC)

Lab Sample ID: MB 570-399524/8
Matrix: Water
Analysis Batch: 399524

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	<10		10		ug/L			01/09/24 14:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*38 - 134*		*01/09/24 14:03*	*1*

Lab Sample ID: LCS 570-399524/4
Matrix: Water
Analysis Batch: 399524

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (C4-C13)			400	352		ug/L		88	78 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*38 - 134*

Lab Sample ID: LCSD 570-399524/5
Matrix: Water
Analysis Batch: 399524

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (C4-C13)			400	356		ug/L		89	78 - 120	1	10

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*80*		*38 - 134*

Lab Sample ID: MRL 570-399524/7
Matrix: Water
Analysis Batch: 399524

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

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (C4-C13)			10.0	11.4		ug/L		114	50 - 150		

Surrogate	*MRL %Recovery*	*MRL Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*67*		*38 - 134*

Lab Sample ID: 570-166954-E-4 MS
Matrix: Water
Analysis Batch: 399524

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (C4-C13)	<10		400	349		ug/L		87	68 - 122		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*38 - 134*

Method: 8015B GRO LL - Gasoline Range Organics - (GC)

Lab Sample ID: 570-166954-F-4 MSD
Matrix: Water
Analysis Batch: 399524

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (C4-C13)	<10		400	346		ug/L		86	68 - 122	1	18

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*38 - 134*

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

Lab Sample ID: 114094-B1
Matrix: BlankMatrix
Analysis Batch: O-44070

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: O-44070_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 03:37	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 03:37	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 03:37	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 03:37	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 03:37	1
Acenaphthene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 03:37	1
Acenaphthylene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 03:37	1
Anthracene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 03:37	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 03:37	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 03:37	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 03:37	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 03:37	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 03:37	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 03:37	1
Biphenyl	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 03:37	1
Chrysene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 03:37	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 03:37	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 03:37	1
Dibenzothiophene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 03:37	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		01/10/24 00:00	02/09/24 03:37	1
Fluoranthene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 03:37	1
Fluorene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 03:37	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 03:37	1
Naphthalene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 03:37	1
Perylene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 03:37	1
Phenanthrene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 03:37	1
Pyrene	ND		0.005	0.001	µg/L		01/10/24 00:00	02/09/24 03:37	1

Surrogate	*Blank %Recovery*	*Blank Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
(d10-Acenaphthene)	*71*		*27 - 133*	*01/10/24 00:00*	*02/09/24 03:37*	*1*
(d10-Phenanthrene)	*84*		*43 - 129*	*01/10/24 00:00*	*02/09/24 03:37*	*1*
(d12-Chrysene)	*110*		*52 - 144*	*01/10/24 00:00*	*02/09/24 03:37*	*1*
(d12-Perylene)	*74*		*36 - 161*	*01/10/24 00:00*	*02/09/24 03:37*	*1*
(d8-Naphthalene)	*73*		*25 - 125*	*01/10/24 00:00*	*02/09/24 03:37*	*1*

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

Lab Sample ID: 114094-BS1
Matrix: BlankMatrix
Analysis Batch: O-44070

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-44070_P

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1-Methylnaphthalene			0.5	0.31		µg/L		62	31 - 128		
1-Methylphenanthrene			0.5	0.402		µg/L		80	66 - 127		
2,3,5-Trimethylnaphthalene			0.5	0.312		µg/L		62	55 - 122		
2,6-Dimethylnaphthalene			0.5	0.324		µg/L		65	48 - 120		
2-Methylnaphthalene			0.5	0.285		µg/L		57	47 - 130		
Acenaphthene			0.5	0.311		µg/L		62	53 - 131		
Acenaphthylene			0.5	0.294		µg/L		59	43 - 140		
Anthracene			0.5	0.416		µg/L		83	58 - 135		
Benz[a]anthracene			0.5	0.467		µg/L		93	55 - 145		
Benzo[a]pyrene			0.5	0.457		µg/L		91	51 - 143		
Benzo[b]fluoranthene			0.5	0.565		µg/L		113	46 - 165		
Benzo[e]pyrene			0.5	0.411		µg/L		82	42 - 152		
Benzo[g,h,i]perylene			0.5	0.427		µg/L		85	63 - 133		
Benzo[k]fluoranthene			0.5	0.475		µg/L		95	56 - 145		
Biphenyl			0.5	0.369		µg/L		74	56 - 119		
Chrysene			0.5	0.701		µg/L		140	56 - 141		
Dibenz[a,h]anthracene			0.5	0.624		µg/L		125	55 - 150		
Dibenzo[a,l]pyrene			0.5	0.408		µg/L		82	50 - 150		
Dibenzothiophene			0.5	0.338		µg/L		68	46 - 126		
Disalicylidenepropanediamine			50	25		µg/L		50	50 - 150		
Fluoranthene			0.5	0.481		µg/L		96	60 - 146		
Fluorene			0.5	0.389		µg/L		78	58 - 131		
Indeno[1,2,3-cd]pyrene			0.5	0.625		µg/L		125	50 - 151		
Naphthalene			0.5	0.301		µg/L		60	41 - 126		
Perylene			0.5	0.472		µg/L		94	48 - 141		
Phenanthrene			0.5	0.349		µg/L		70	67 - 127		
Pyrene			0.5	0.367		µg/L		73	54 - 156		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
(d10-Acenaphthene)	*61*		*27 - 133*
(d10-Phenanthrene)	*78*		*43 - 129*
(d12-Chrysene)	*114*		*52 - 144*
(d12-Perylene)	*110*		*36 - 161*
(d8-Naphthalene)	*65*		*25 - 125*

Lab Sample ID: 114094-BS2
Matrix: BlankMatrix
Analysis Batch: O-44070

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: O-44070_P

Analyte			Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene			0.5	0.31		µg/L		62	31 - 128	0	30
1-Methylphenanthrene			0.5	0.407		µg/L		81	66 - 127	1	30
2,3,5-Trimethylnaphthalene			0.5	0.328		µg/L		66	55 - 122	6	30
2,6-Dimethylnaphthalene			0.5	0.301		µg/L		60	48 - 120	8	30
2-Methylnaphthalene			0.5	0.268		µg/L		54	47 - 130	5	30
Acenaphthene			0.5	0.285		µg/L		57	53 - 131	8	30
Acenaphthylene			0.5	0.306		µg/L		61	43 - 140	3	30
Anthracene			0.5	0.415		µg/L		83	58 - 135	0	30

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

Lab Sample ID: 114094-BS2
Matrix: BlankMatrix
Analysis Batch: O-44070

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: O-44070_P

Analyte			Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benz[a]anthracene			0.5	0.467		µg/L		93	55 - 145	0	30
Benzo[a]pyrene			0.5	0.492		µg/L		98	51 - 143	7	30
Benzo[b]fluoranthene			0.5	0.57		µg/L		114	46 - 165	1	30
Benzo[e]pyrene			0.5	0.45		µg/L		90	42 - 152	9	30
Benzo[g,h,i]perylene			0.5	0.444		µg/L		89	63 - 133	5	30
Benzo[k]fluoranthene			0.5	0.495		µg/L		99	56 - 145	4	30
Biphenyl			0.5	0.342		µg/L		68	56 - 119	8	30
Chrysene			0.5	0.696		µg/L		139	56 - 141	1	30
Dibenz[a,h]anthracene			0.5	0.638		µg/L		128	55 - 150	2	30
Dibenzo[a,l]pyrene			0.5	0.341		µg/L		68	50 - 150	19	30
Dibenzothiophene			0.5	0.353		µg/L		71	46 - 126	4	30
Disalicylidenepropanediamine			50	25.5		µg/L		51	50 - 150	2	30
Fluoranthene			0.5	0.505		µg/L		101	60 - 146	5	30
Fluorene			0.5	0.386		µg/L		77	58 - 131	1	30
Indeno[1,2,3-cd]pyrene			0.5	0.583		µg/L		117	50 - 151	7	30
Naphthalene			0.5	0.301		µg/L		60	41 - 126	0	30
Perylene			0.5	0.526		µg/L		105	48 - 141	11	30
Phenanthrene			0.5	0.363		µg/L		73	67 - 127	4	30
Pyrene			0.5	0.41		µg/L		82	54 - 156	12	30

Surrogate	*LCS DUP %Recovery*	*LCS DUP Qualifier*	*Limits*
(d10-Acenaphthene)	*62*		*27 - 133*
(d10-Phenanthrene)	*77*		*43 - 129*
(d12-Chrysene)	*109*		*52 - 144*
(d12-Perylene)	*94*		*36 - 161*
(d8-Naphthalene)	*64*		*25 - 125*

QC Association Summary

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

Job ID: 380-77419-2

GC VOA

Analysis Batch: 399524

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-77419-1	HALAWA WELLS UNIT 1	Total/NA	Water	8015B GRO LL	
380-77419-2	TB: HALAWA WELLS UNIT 1	Total/NA	Water	8015B GRO LL	
MB 570-399524/8	Method Blank	Total/NA	Water	8015B GRO LL	
LCS 570-399524/4	Lab Control Sample	Total/NA	Water	8015B GRO LL	
LCSD 570-399524/5	Lab Control Sample Dup	Total/NA	Water	8015B GRO LL	
MRL 570-399524/7	Lab Control Sample	Total/NA	Water	8015B GRO LL	
570-166954-E-4 MS	Matrix Spike	Total/NA	Water	8015B GRO LL	
570-166954-F-4 MSD	Matrix Spike Duplicate	Total/NA	Water	8015B GRO LL	

Subcontract

Analysis Batch: O-44070

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-77419-1	HALAWA WELLS UNIT 1	Total/NA	Water	625 PAH Physis LL (EAL) + TICs	O-44070_P
114094-B1	Method Blank	Total/NA	BlankMatrix	625 PAH Physis LL (EAL) + TICs	O-44070_P
114094-BS1	Lab Control Sample	Total/NA	BlankMatrix	625 PAH Physis LL (EAL) + TICs	O-44070_P
114094-BS2	Lab Control Sample Dup	Total/NA	BlankMatrix	625 PAH Physis LL (EAL) + TICs	O-44070_P

Prep Batch: O-44070_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-77419-1	HALAWA WELLS UNIT 1	Total/NA	Water	EPA_625	
114094-B1	Method Blank	Total/NA	BlankMatrix	EPA_625	
114094-BS1	Lab Control Sample	Total/NA	BlankMatrix	EPA_625	
114094-BS2	Lab Control Sample Dup	Total/NA	BlankMatrix	EPA_625	

Lab Chronicle

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

Job ID: 380-77419-2

Client Sample ID: HALAWA WELLS UNIT 1

Lab Sample ID: 380-77419-1

Date Collected: 01/03/24 11:11

Matrix: Water

Date Received: 01/05/24 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015B GRO LL		1	399524	A9VE	EET CAL 4	01/09/24 16:25
Total/NA	Prep	EPA_625		1	O-44070_P			01/10/24 00:00
Total/NA	Analysis	625 PAH Physis LL (EAL) + TICs		1	O-44070	YC		02/09/24 08:49

Client Sample ID: TB: HALAWA WELLS UNIT 1

Lab Sample ID: 380-77419-2

Date Collected: 01/03/24 11:11

Matrix: Water

Date Received: 01/05/24 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015B GRO LL		1	399524	A9VE	EET CAL 4	01/09/24 18:12

Laboratory References:

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

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

Accreditation/Certification Summary

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

Job ID: 380-77419-2

Laboratory: Eurofins Calscience

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

Authority	Program	Identification Number	Expiration Date
Arizona	State	AZ0830	11-16-24
California	Los Angeles County Sanitation Districts	10109	08-01-24
California	State	3082	07-31-24
Kansas	NELAP	E-10420	08-01-24
Nevada	State	CA00111	07-31-24
Oregon	NELAP	4175	02-02-24
USDA	US Federal Programs	P330-22-00059	06-08-26
Washington	State	C916-18	10-11-24

Method Summary

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

Job ID: 380-77419-2

Method	Method Description	Protocol	Laboratory
8015B GRO LL	Gasoline Range Organics - (GC)	SW846	EET CAL 4
625	EPA 625 Base/Neutral and Acid Organics i	EPA	
5030C	Purge and Trap	SW846	EET CAL 4

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

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

Sample Summary

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

Job ID: 380-77419-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-77419-1	HALAWA WELLS UNIT 1	Water	01/03/24 11:11	01/05/24 09:20
380-77419-2	TB: HALAWA WELLS UNIT 1	Water	01/03/24 11:11	01/05/24 09:20

February 14, 2024

Rachelle Arada
Eurofins Eaton Analytical
750 Royal Oaks Drive
Suite 100
Monrovia, CA 91016-

Project Name: RED-HILL Project # 38001111 Job # 380-77419-1
Physis Project ID: 1407003-468

Dear Rachelle,

Enclosed are the analytical results for the sample submitted to PHYSIS Environmental Laboratories, Inc. (PHYSIS) on 1/8/2024. 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,

Rachel Hansen
714 602-5320
Extension 203
rachelhansen@physislabs.com

PROJECT SAMPLE LIST

Eurofins Eaton Analytical

PHYSIS Project ID: 1407003-468

RED-HILL Project # 38001111 Job # 380-77419-1

Total Samples: 1

PHYSIS ID	Sample ID	Description	Date	Time	Matrix	Sample Type
114095	HALAWA WELLS UNIT 1	380-77419-1	1/3/2024	11:11	Samplewater	Not Specified

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ABBREVIATIONS and ACRONYMS

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

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QUALITY ASSURANCE SUMMARY

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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PHYSIS QUALIFIER CODES

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

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CASE NARRATIVE

QUALIFIER NOTES

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

ND

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

ANALYTICAL REPORT

Base/Neutral Extractable Compounds

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 114095-R1	**HALAWA WELLS UNIT 1 380-77419-**	**Matrix: Samplewater**						**Sampled:**	**03-Jan-24 11:11**	**Received:**	**08-Jan-24**
Disalicylidenepropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-44070	10-Jan-24	09-Feb-24

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 114095-R1	**HALAWA WELLS UNIT 1 380-77419-**	**Matrix: Samplewater**					**Sampled:**	**03-Jan-24**	**11:11**	**Received:**	**08-Jan-24**
(d10-Acenaphthene)	EPA 625.1	% Recovery	59	1			Total		O-44070	10-Jan-24	09-Feb-24
(d10-Phenanthrene)	EPA 625.1	% Recovery	68	1			Total		O-44070	10-Jan-24	09-Feb-24
(d12-Chrysene)	EPA 625.1	% Recovery	81	1			Total		O-44070	10-Jan-24	09-Feb-24
(d12-Perylene)	EPA 625.1	% Recovery	106	1			Total		O-44070	10-Jan-24	09-Feb-24
(d8-Naphthalene)	EPA 625.1	% Recovery	68	1			Total		O-44070	10-Jan-24	09-Feb-24
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-44070	10-Jan-24	09-Feb-24
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-44070	10-Jan-24	09-Feb-24
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-44070	10-Jan-24	09-Feb-24
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-44070	10-Jan-24	09-Feb-24
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-44070	10-Jan-24	09-Feb-24
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-44070	10-Jan-24	09-Feb-24
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-44070	10-Jan-24	09-Feb-24
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-44070	10-Jan-24	09-Feb-24
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-44070	10-Jan-24	09-Feb-24
Benzo[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-44070	10-Jan-24	09-Feb-24
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-44070	10-Jan-24	09-Feb-24
Benzo[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-44070	10-Jan-24	09-Feb-24
Benzo[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-44070	10-Jan-24	09-Feb-24
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-44070	10-Jan-24	09-Feb-24
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-44070	10-Jan-24	09-Feb-24
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-44070	10-Jan-24	09-Feb-24
Dibenz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-44070	10-Jan-24	09-Feb-24
Dibenzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-44070	10-Jan-24	09-Feb-24
Dibenzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-44070	10-Jan-24	09-Feb-24

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-44070	10-Jan-24	09-Feb-24
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-44070	10-Jan-24	09-Feb-24
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-44070	10-Jan-24	09-Feb-24
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-44070	10-Jan-24	09-Feb-24
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-44070	10-Jan-24	09-Feb-24
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-44070	10-Jan-24	09-Feb-24
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-44070	10-Jan-24	09-Feb-24

QUALITY CONTROL REPORT

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: 114094-B1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**			**Received:**			
		Method: EPA 625.1				Batch ID: O-44070		Prepared: 10-Jan-24			Analyzed: 09-Feb-24			
Disalicylidenepropanediamin	Total	ND	1	0.05	0.1	µg/L								
Sample ID: 114094-BS1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**			**Received:**			
		Method: EPA 625.1				Batch ID: O-44070		Prepared: 10-Jan-24			Analyzed: 09-Feb-24			
Disalicylidenepropanediamin	Total	25	1	0.05	0.1	µg/L	50	0	50	50 - 150% PASS				
Sample ID: 114094-BS2	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**			**Received:**			
		Method: EPA 625.1				Batch ID: O-44070		Prepared: 10-Jan-24			Analyzed: 09-Feb-24			
Disalicylidenepropanediamin	Total	25.5	1	0.05	0.1	µg/L	50	0	51	50 - 150% PASS		2	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: 114094-B1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**				**Received:**	
		Method: EPA 625.1				Batch ID: O-44070		Prepared: 10-Jan-24				Analyzed: 09-Feb-24	
(d10-Acenaphthene)	Total	71	1			% Recovery	100	71	27 - 133%	PASS			
(d10-Phenanthrene)	Total	84	1			% Recovery	100	84	43 - 129%	PASS			
(d12-Chrysene)	Total	110	1			% Recovery	100	110	52 - 144%	PASS			
(d12-Perylene)	Total	74	1			% Recovery	100	74	36 - 161%	PASS			
(d8-Naphthalene)	Total	73	1			% Recovery	100	73	25 - 125%	PASS			
1-Methylnaphthalene	Total	ND	1	0.001	0.005	µg/L							
1-Methylphenanthrene	Total	ND	1	0.001	0.005	µg/L							
2,3,5-Trimethylnaphthalene	Total	ND	1	0.001	0.005	µg/L							
2,6-Dimethylnaphthalene	Total	ND	1	0.001	0.005	µg/L							
2-Methylnaphthalene	Total	ND	1	0.001	0.005	µg/L							
Acenaphthene	Total	ND	1	0.001	0.005	µg/L							
Acenaphthylene	Total	ND	1	0.001	0.005	µg/L							
Anthracene	Total	ND	1	0.001	0.005	µg/L							
Benz[a]anthracene	Total	ND	1	0.001	0.005	µg/L							
Benzo[a]pyrene	Total	ND	1	0.001	0.005	µg/L							
Benzo[b]fluoranthene	Total	ND	1	0.001	0.005	µg/L							
Benzo[e]pyrene	Total	ND	1	0.001	0.005	µg/L							
Benzo[g,h,i]perylene	Total	ND	1	0.001	0.005	µg/L							
Benzo[k]fluoranthene	Total	ND	1	0.001	0.005	µg/L							
Biphenyl	Total	ND	1	0.001	0.005	µg/L							
Chrysene	Total	ND	1	0.001	0.005	µg/L							
Dibenz[a,h]anthracene	Total	ND	1	0.001	0.005	µg/L							
Dibenzo[a,l]pyrene	Total	ND	1	0.001	0.005	µg/L							

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

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

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODEc
Sample ID: 114094-BS1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**				**Received:**	
		Method: EPA 625.1				Batch ID: O-44070		Prepared: 10-Jan-24				Analyzed: 09-Feb-24	
(d10-Acenaphthene)	Total	61	1			% Recovery	100	0	61	27 - 133%	PASS		
(d10-Phenanthrene)	Total	78	1			% Recovery	100	0	78	43 - 129%	PASS		
(d12-Chrysene)	Total	114	1			% Recovery	100	0	114	52 - 144%	PASS		
(d12-Perylene)	Total	110	1			% Recovery	100	0	110	36 - 161%	PASS		
(d8-Naphthalene)	Total	65	1			% Recovery	100	0	65	25 - 125%	PASS		
1-Methylnaphthalene	Total	0.31	1	0.001	0.005	µg/L	0.5	0	62	31 - 128%	PASS		
1-Methylphenanthrene	Total	0.402	1	0.001	0.005	µg/L	0.5	0	80	66 - 127%	PASS		
2,3,5-Trimethylnaphthalene	Total	0.312	1	0.001	0.005	µg/L	0.5	0	62	55 - 122%	PASS		
2,6-Dimethylnaphthalene	Total	0.324	1	0.001	0.005	µg/L	0.5	0	65	48 - 120%	PASS		
2-Methylnaphthalene	Total	0.285	1	0.001	0.005	µg/L	0.5	0	57	47 - 130%	PASS		
Acenaphthene	Total	0.311	1	0.001	0.005	µg/L	0.5	0	62	53 - 131%	PASS		
Acenaphthylene	Total	0.294	1	0.001	0.005	µg/L	0.5	0	59	43 - 140%	PASS		
Anthracene	Total	0.416	1	0.001	0.005	µg/L	0.5	0	83	58 - 135%	PASS		
Benz[a]anthracene	Total	0.467	1	0.001	0.005	µg/L	0.5	0	93	55 - 145%	PASS		
Benzo[a]pyrene	Total	0.457	1	0.001	0.005	µg/L	0.5	0	91	51 - 143%	PASS		
Benzo[b]fluoranthene	Total	0.565	1	0.001	0.005	µg/L	0.5	0	113	46 - 165%	PASS		
Benzo[e]pyrene	Total	0.411	1	0.001	0.005	µg/L	0.5	0	82	42 - 152%	PASS		
Benzo[g,h,i]perylene	Total	0.427	1	0.001	0.005	µg/L	0.5	0	85	63 - 133%	PASS		
Benzo[k]fluoranthene	Total	0.475	1	0.001	0.005	µg/L	0.5	0	95	56 - 145%	PASS		
Biphenyl	Total	0.369	1	0.001	0.005	µg/L	0.5	0	74	56 - 119%	PASS		
Chrysene	Total	0.701	1	0.001	0.005	µg/L	0.5	0	140	56 - 141%	PASS		
Dibenz[a,h]anthracene	Total	0.624	1	0.001	0.005	µg/L	0.5	0	125	55 - 150%	PASS		
Dibenzo[a,l]pyrene	Total	0.408	1	0.001	0.005	µg/L	0.5	0	82	50 - 150%	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
Dibenzothiophene	Total	0.338	1	0.001	0.005	µg/L	0.5	0	68	46 - 126%	PASS			
Fluoranthene	Total	0.481	1	0.001	0.005	µg/L	0.5	0	96	60 - 146%	PASS			
Fluorene	Total	0.389	1	0.001	0.005	µg/L	0.5	0	78	58 - 131%	PASS			
Indeno[1,2,3-cd]pyrene	Total	0.625	1	0.001	0.005	µg/L	0.5	0	125	50 - 151%	PASS			
Naphthalene	Total	0.301	1	0.001	0.005	µg/L	0.5	0	60	41 - 126%	PASS			
Perylene	Total	0.472	1	0.001	0.005	µg/L	0.5	0	94	48 - 141%	PASS			
Phenanthrene	Total	0.349	1	0.001	0.005	µg/L	0.5	0	70	67 - 127%	PASS			
Pyrene	Total	0.367	1	0.001	0.005	µg/L	0.5	0	73	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: 114094-BS2	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**				**Received:**		
		Method: EPA 625.1				Batch ID: O-44070		Prepared: 10-Jan-24				Analyzed: 09-Feb-24		
(d10-Acenaphthene)	Total	62	1			% Recovery	100	0	62	27 - 133%	PASS	2	30	PASS
(d10-Phenanthrene)	Total	77	1			% Recovery	100	0	77	43 - 129%	PASS	1	30	PASS
(d12-Chrysene)	Total	109	1			% Recovery	100	0	109	52 - 144%	PASS	4	30	PASS
(d12-Perylene)	Total	94	1			% Recovery	100	0	94	36 - 161%	PASS	16	30	PASS
(d8-Naphthalene)	Total	64	1			% Recovery	100	0	64	25 - 125%	PASS	2	30	PASS
1-Methylnaphthalene	Total	0.31	1	0.001	0.005	µg/L	0.5	0	62	31 - 128%	PASS	0	30	PASS
1-Methylphenanthrene	Total	0.407	1	0.001	0.005	µg/L	0.5	0	81	66 - 127%	PASS	1	30	PASS
2,3,5-Trimethylnaphthalene	Total	0.328	1	0.001	0.005	µg/L	0.5	0	66	55 - 122%	PASS	6	30	PASS
2,6-Dimethylnaphthalene	Total	0.301	1	0.001	0.005	µg/L	0.5	0	60	48 - 120%	PASS	8	30	PASS
2-Methylnaphthalene	Total	0.268	1	0.001	0.005	µg/L	0.5	0	54	47 - 130%	PASS	5	30	PASS
Acenaphthene	Total	0.285	1	0.001	0.005	µg/L	0.5	0	57	53 - 131%	PASS	8	30	PASS
Acenaphthylene	Total	0.306	1	0.001	0.005	µg/L	0.5	0	61	43 - 140%	PASS	3	30	PASS
Anthracene	Total	0.415	1	0.001	0.005	µg/L	0.5	0	83	58 - 135%	PASS	0	30	PASS
Benz[a]anthracene	Total	0.467	1	0.001	0.005	µg/L	0.5	0	93	55 - 145%	PASS	0	30	PASS
Benzo[a]pyrene	Total	0.492	1	0.001	0.005	µg/L	0.5	0	98	51 - 143%	PASS	7	30	PASS
Benzo[b]fluoranthene	Total	0.57	1	0.001	0.005	µg/L	0.5	0	114	46 - 165%	PASS	1	30	PASS
Benzo[e]pyrene	Total	0.45	1	0.001	0.005	µg/L	0.5	0	90	42 - 152%	PASS	9	30	PASS
Benzo[g,h,i]perylene	Total	0.444	1	0.001	0.005	µg/L	0.5	0	89	63 - 133%	PASS	5	30	PASS
Benzo[k]fluoranthene	Total	0.495	1	0.001	0.005	µg/L	0.5	0	99	56 - 145%	PASS	4	30	PASS
Biphenyl	Total	0.342	1	0.001	0.005	µg/L	0.5	0	68	56 - 119%	PASS	8	30	PASS
Chrysene	Total	0.696	1	0.001	0.005	µg/L	0.5	0	139	56 - 141%	PASS	1	30	PASS
Dibenz[a,h]anthracene	Total	0.638	1	0.001	0.005	µg/L	0.5	0	128	55 - 150%	PASS	2	30	PASS
Dibenzo[a,l]pyrene	Total	0.341	1	0.001	0.005	µg/L	0.5	0	68	50 - 150%	PASS	19	30	PASS

PHYSIS Project ID: 1407003-468
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-77419-1

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODEc
Dibenzothiophene	Total	0.353	1	0.001	0.005	µg/L	0.5	0	71	46 - 126%	PASS	4	30	PASS	
Fluoranthene	Total	0.505	1	0.001	0.005	µg/L	0.5	0	101	60 - 146%	PASS	5	30	PASS	
Fluorene	Total	0.386	1	0.001	0.005	µg/L	0.5	0	77	58 - 131%	PASS	1	30	PASS	
Indeno[1,2,3-cd]pyrene	Total	0.583	1	0.001	0.005	µg/L	0.5	0	117	50 - 151%	PASS	7	30	PASS	
Naphthalene	Total	0.301	1	0.001	0.005	µg/L	0.5	0	60	41 - 126%	PASS	0	30	PASS	
Perylene	Total	0.526	1	0.001	0.005	µg/L	0.5	0	105	48 - 141%	PASS	11	30	PASS	
Phenanthrene	Total	0.363	1	0.001	0.005	µg/L	0.5	0	73	67 - 127%	PASS	4	30	PASS	
Pyrene	Total	0.41	1	0.001	0.005	µg/L	0.5	0	82	54 - 156%	PASS	12	30	PASS	

TENTATIVELY IDENTIFIED COMPOUNDS

Sample ID: Lab Blank B1_44070

Retention Time	Area (% of total)	Concentration (ng/L)	Library/ID	Cas Number	Match Quality (%)
32.8524	2.7793	1111	Anthracene-D10	1517-22-2	90
10.1032	3.0688	1227	5-Amino-2-methyl-2H-tetrazole	1553840	88
10.1482	1.6582	663	3-Octene, 4-ethyl-	53966-51-1	83
10.1478	1.4893	595	Cyclobutane, 2-ethyl-1-methyl-3-propyl-	61233-72-5	84
14.8952	0.8675	347	Cyclohexane, 1,2,4,5-tetraethyl-, (1.alpha.,2.alpha.,4.alpha.,5.alpha.)-	61142-24-3	80
10.5417	0.6227	249	4-Decene, 7-methyl-, (E)-	62338-48-1	87
64.0663	0.5695	228	1,4-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	6422-86-2	95
11.8319	0.4622	185	Octane, 4,5-diethyl-	1636-41-5	82
10.8397	0.3584	143	5-Amino-2-methyl-2H-tetrazole	1553840	89
42.9906	0.3112	124	Terephthalic acid, isobutyl butyl ester	1000323-56-2	90
11.8431	0.2980	119	Nonane, 4-ethyl-5-methyl-	1632-71-9	87
11.5958	0.2887	115	Cyclopropane, 2-bromo-1,1,3-trimethyl-	36617-00-2	81
42.9718	0.2830	113	Terephthalic acid, isobutyl butyl ester	1000323-56-2	90
10.7861	0.2703	108	4-Ethyl-4-methyl-1-hexene	90674-67-2	82

Concentration estimated using the response for Anthracene-d10

Sample ID: 114095

Retention Time	Area (% of total)	Concentration (ng/L)	Library/ID	Cas Number	Match Quality (%)
32.4701	1.0055	1111	Anthracene-D10-	1719-06-8	92
11.6066	1.9799	2188	3,3-Dimethylacryloyl chloride	3350-78-5	84
11.0286	1.8761	2073	2-(Chloromethyl)tetrahydropyran	18420-41-2	83
10.7972	1.4087	1557	1,5-Heptadien-4-ol, 3,3,6-trimethyl-	27644-04-8	81
10.7972	1.3987	1546	4-Ethyl-4-methyl-1-hexene	90674-67-2	81
10.5510	0.5968	660	4-Decene, 7-methyl-, (E)-	62338-48-1	83
10.1574	0.2582	285	3-Octene, 4-ethyl-	53966-51-1	83
11.8554	0.2219	245	Octane, 4,5-diethyl-	1636-41-5	80
13.0588	0.1533	169	Cyclohexane, octyl-	1795-15-9	85
10.8599	0.1213	134	2,7-Octanedione	1626-09-1	81

Concentration estimated using the response for Anthracene-d10

CHAIN OF CUSTODY

Eurofins Eaton Analytical Pomona
941 Corporate Center Drive
Pomona, CA 91768-2642
Phone: 626-386-1100

Chain of Custody Record

eurofins | Environment Testing

2/27/2024

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arada, Rachelle	Carrier Tracking No(s):	COC No: 380-98678.1
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 #: 380-77419-1
Address: 1904 Wright Circle, ,	Due Date Requested: 1/17/2024			
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 UNIT 1 (380-77419-1)	1/3/24	11:11 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 our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/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 compliance 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:

	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	1/8/24 1033	ETA	Monga Nom	1/8/24 10 53	PHYSIS
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:

Ver: 06/08/2021

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

PHYSIS
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature

Project Iteration ID: 1407003-468
Client Name: Eurofins Eaton Analytical
Project Name: RED-HILL Project # 38001111 Job # 380-77419-1
COC Page Number: 2 of 2
Bottle Label Color: NA

Sample Receipt Summary

Receiving Info

1. Initials Received By: MN
2. Date Received: 1/8/24
3. Time Received: 1033
4. Client Name: Eurofins
5. Courier Information: (Please circle)
   - (Client) • UPS • Area Fast • DRS
   - FedEx • GSO/GLS • Ontrac • PAMS
   - PHYSIS Driver:
     - i. Start Time:_____ iii. Total Mileage:_____
     - ii. End Time:_____ 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): 0.1 Used I/R Thermometer # 1-2

Inspection Info

1. Initials Inspected By: RGH

Sample Integrity Upon Receipt:

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

Notes:

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

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler	Lab PM: Arada, Rachelle	Carrier Tracking No(s)	COC No
Client Contact: Dr Ron Fenstemacher	Phone: 808-748-5840	E-Mail: Rachelle.Arada@et.eurofinsus.com	State of Origin	Page: Page 1 of 2
Company: City and County of Honolulu	PWSID			Job #:
Address: 630 South Beretania St. Chemistry Lab	Due Date Requested:			
City: Honolulu	TAT Requested (days): Standard			
State, Zip: Hawaii 96843	Compliance Project: Δ Yes Δ No			
Phone: 808-748-5841	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: ammonium acetate

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	625.2_PREC - (MOD) 525 plus Plus TICs	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	537.1_DW_PREC - 537.1 Full List	533 - All Analytes	Total Number of containers	Special Instructions/Note:
			Preservation Code:				R	RA	RA	QA	RA	Y	Z		
HALAWA WELLS UNIT 1	January 3, 2024	1111	G	Water			2		2	2	4				
TB HALAWA WELLS UNIT 1	January 3, 2024	1111		Water							2				Temp blank: 1 °C

380-77419 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: FCS Ex 7746 8 US 7560
Relinquished by: Lesli Laan [redacted]	Date/Time: 1-4-2024 1200	Company: HBWS	Received by: [signature] Date/Time: 01/03/2024 1136 Company: -E HPO
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: 75/A 03°-01°-02° GEL-FROZEN

Ver: 01/16/2019

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:
Client Contact: Dr. Ron Fenstemacher	Phone: 808-748-5840	E-Mail: Rachelle.Arada@et.eurofinsus.com	State of Origin:	Page: Page 2 of 2
Company: City and County of Honolulu	PWSID			Job #:
Address: 630 South Beretania St. Chemistry Lab	Due Date Requested:			
City: Honolulu	TAT Requested (days): Standard			
State, Zip: Hawaii 96843	Compliance Project: Δ Yes Δ No			
Phone: 808-748-5841	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

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) 525 plus Plus TICs	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	537.1_DW_PREC - 537.1 Full List	533 - All Analytes	Total Number of containers	Special Instructions/Note:
			Preservation Code:				R	RA	RA	QA	RA	Y	Z		
HALAWA WELLS UNIT 1	January 3, 2024	1111	G	Water								3	3		
TB: HALAWA WELLS UNIT 1	January 3, 2024	1111		Water								1	1		Temp blank : 1°C

Preservation Codes:

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

Other: ammonium acetate

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 X
Relinquished by: Lesli Laanui	Date/Time: 1-4-2024 1200	Company: HBWS	Received by:	Date/Time:	Company
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) 0.3 - 0.1 - 0.2 - GEL FROZEN

Ver: 01/16 2019

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-77419-2

Login Number: 77419
List Number: 1
Creator: Elyas, Matthew

List Source: Eurofins Eaton Analytical Pomona

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-77419-2

Login Number: 77419
List Number: 2
Creator: Kasianchuk, Ivanna

List Source: Eurofins Calscience
List Creation: 01/05/24 06:06 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	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	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	