

ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Erwin Kawata
City & County of Honolulu
630 South Beretania Street
Public Service Bldg. Room 310
Honolulu, Hawaii 96843

Generated 11/29/2023 9:50:05 PM

JOB DESCRIPTION

RED-HILL

JOB NUMBER

380-66846-2

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



Generated
11/29/2023 9:50:05 PM

Authorized for release by
Rachelle Arada, Project Manager
Rachelle.Arada@et.eurofinsus.com
(626)386-1106



Table of Contents

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Detection Summary	6
Client Sample Results	7
Surrogate Summary	10
QC Sample Results	13
QC Association Summary	17
Lab Chronicle	19
Method Summary	20
Sample Summary	21
Subcontract Data	22
Chain of Custody	89
Receipt Checklists	91

Definitions/Glossary

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

Job ID: 380-66846-2

Qualifiers

Subcontract

Qualifier	Qualifier Description
U	This analyte was not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

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

Job ID: 380-66846-2

Job ID: 380-66846-2

Laboratory: Eurofins Eaton Analytical Pomona

Narrative

Job Narrative 380-66846-2

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 10/12/2023 10:33 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 0.4°C, 0.7°C and 3.9°C

Subcontract Work

Methods 8015 Gas (Purgeable) LL (EAL), 8015 LL DRO/MRO/JP5/JP8: These methods were subcontracted to EMAX Laboratories Inc. The subcontract laboratory certifications are different from that of the facility issuing the final report. The subcontract report is appended in its entirety.

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.

Detection Summary

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

Job ID: 380-66846-2

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2

Lab Sample ID: 380-66846-1

No Detections.

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-66846-2

No Detections.

Client Sample ID: TB AIEA WELLS PUMPS 1&2 (260) P2

Lab Sample ID: 380-66846-3

No Detections.

Client Sample ID: TB AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-66846-4

No Detections.

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

This Detection Summary does not include radiochemical test results.

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-66846-2

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2

Lab Sample ID: 380-66846-1

Date Collected: 10/10/23 10:15

Matrix: Drinking Water

Date Received: 10/12/23 10:33

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 07:00	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 07:00	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 07:00	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 07:00	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 07:00	1
Acenaphthene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 07:00	1
Acenaphthylene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 07:00	1
Anthracene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 07:00	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 07:00	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 07:00	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 07:00	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 07:00	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 07:00	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 07:00	1
Biphenyl	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 07:00	1
Chrysene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 07:00	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 07:00	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 07:00	1
Dibenzothiophene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 07:00	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		10/17/23 00:00	11/11/23 07:00	1
Fluoranthene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 07:00	1
Fluorene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 07:00	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 07:00	1
Naphthalene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 07:00	1
Perylene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 07:00	1
Phenanthrene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 07:00	1
Pyrene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 07:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
(d10-Acenaphthene)	66		27 - 133	10/17/23 00:00	11/11/23 07:00	1
(d10-Phenanthrene)	65		43 - 129	10/17/23 00:00	11/11/23 07:00	1
(d12-Chrysene)	88		52 - 144	10/17/23 00:00	11/11/23 07:00	1
(d12-Perylene)	89		36 - 161	10/17/23 00:00	11/11/23 07:00	1
(d8-Naphthalene)	66		25 - 125	10/17/23 00:00	11/11/23 07:00	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			10/16/23 21:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE	82		60 - 140		10/16/23 21:48	1

Method: 8015 LL DRO/MRO/JP5/JP8 - 8015 - TPH DRO/ORO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DIESEL	ND	U	0.029		mg/L			10/23/23 15:02	1
JP5	ND	U	0.058		mg/L			10/23/23 15:02	1
JP8	ND	U	0.058		mg/L			10/23/23 15:02	1
MOTOR OIL	ND	U	0.058		mg/L			10/23/23 15:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOBENZENE	69		60 - 130		10/23/23 15:02	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-66846-2

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2

Lab Sample ID: 380-66846-1

Date Collected: 10/10/23 10:15

Matrix: Drinking Water

Date Received: 10/12/23 10:33

Method: 8015 LL DRO/MRO/JP5/JP8 - 8015 - TPH DRO/ORO (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
HEXACOSANE	88		60 - 130		10/23/23 15:02	1

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-66846-2

Date Collected: 10/10/23 10:45

Matrix: Drinking Water

Date Received: 10/12/23 10:33

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 08:45	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 08:45	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 08:45	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 08:45	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 08:45	1
Acenaphthene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 08:45	1
Acenaphthylene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 08:45	1
Anthracene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 08:45	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 08:45	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 08:45	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 08:45	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 08:45	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 08:45	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 08:45	1
Biphenyl	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 08:45	1
Chrysene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 08:45	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 08:45	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 08:45	1
Dibenzothiophene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 08:45	1
DisalicylidenePROPANEDIAMINE	ND		0.1	0.05	µg/L		10/17/23 00:00	11/11/23 08:45	1
Fluoranthene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 08:45	1
Fluorene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 08:45	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 08:45	1
Naphthalene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 08:45	1
Perylene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 08:45	1
Phenanthrene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 08:45	1
Pyrene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 08:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
(d10-Acenaphthene)	52		27 - 133	10/17/23 00:00	11/11/23 08:45	1
(d10-Phenanthrene)	54		43 - 129	10/17/23 00:00	11/11/23 08:45	1
(d12-Chrysene)	85		52 - 144	10/17/23 00:00	11/11/23 08:45	1
(d12-Perylene)	85		36 - 161	10/17/23 00:00	11/11/23 08:45	1
(d8-Naphthalene)	54		25 - 125	10/17/23 00:00	11/11/23 08:45	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			10/16/23 22:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE	81		60 - 140		10/16/23 22:27	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-66846-2

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-66846-2

Date Collected: 10/10/23 10:45

Matrix: Drinking Water

Date Received: 10/12/23 10:33

Method: 8015 LL DRO/MRO/JP5/JP8 - 8015 - TPH DRO/ORO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DIESEL	ND	U	0.03		mg/L			10/23/23 15:21	1
JP5	ND	U	0.059		mg/L			10/23/23 15:21	1
JP8	ND	U	0.059		mg/L			10/23/23 15:21	1
MOTOR OIL	ND	U	0.059		mg/L			10/23/23 15:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
BROMOBENZENE	62		60 - 130					10/23/23 15:21	1
HEXACOSANE	85		60 - 130					10/23/23 15:21	1

Client Sample ID: TB AIEA WELLS PUMPS 1&2 (260) P2

Lab Sample ID: 380-66846-3

Date Collected: 10/10/23 10:15

Matrix: Water

Date Received: 10/12/23 10:33

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			10/16/23 23:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE	80		60 - 140					10/16/23 23:05	1

Client Sample ID: TB AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-66846-4

Date Collected: 10/10/23 10:45

Matrix: Water

Date Received: 10/12/23 10:33

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			10/16/23 23:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE	81		60 - 140					10/16/23 23:43	1

Surrogate Summary

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

Job ID: 380-66846-2

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

Matrix: BlankMatrix

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)				
		Acenaphtl (27-133)	Phenanth (43-129)	CRY (52-144)	NPT (25-125)	PRY (36-161)
112022-B1	Method Blank	103	98	95	107	93
112022-BS1	Lab Control Sample	103	101	99	104	96
112022-BS2	Lab Control Sample Dup	99	100	100	95	96

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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)				
		Acenaphtl (27-133)	Phenanth (43-129)	CRY (52-144)	NPT (25-125)	PRY (36-161)
380-66846-1	AIEA WELLS PUMPS 1&2 (260)	66	65	88	66	89
380-66846-2	AIEA GULCH WELLS PUMP 2	52	54	85	54	85

Surrogate Legend
 (d10-Acenaphthene) = (d10-Acenaphthene)
 (d10-Phenanthrene) = (d10-Phenanthrene)
 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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		BFB (60-140)
380-66846-1	AIEA WELLS PUMPS 1&2 (260)	82
380-66846-2	AIEA GULCH WELLS PUMP 2	81

Surrogate Legend
 BFB = BROMOFLUOROBENZENE

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		BFB (60-140)
380-66846-3	TB AIEA WELLS PUMPS 1&2 (2	80
380-66846-4	TB AIEA GULCH WELLS PUMP 2	81

Surrogate Legend
 BFB = BROMOFLUOROBENZENE

Surrogate Summary

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

Job ID: 380-66846-2

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
23VG39J11B	Method Blank

Surrogate Legend

BFB = BROMOFLUOROBENZENE

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

Matrix: WATER

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

BFB

(70-130)

Lab Sample ID	Client Sample ID
23VG39J11C	LCD
23VG39J11L	Lab Control Sample

Surrogate Legend

BFB = BROMOFLUOROBENZENE

Method: 8015 LL DRO/MRO/JP5/JP8 - 8015 - TPH DRO/ORO

Matrix: Drinking Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

BB

XACOSAI

(60-130)

(60-130)

Lab Sample ID	Client Sample ID
380-66846-1	AIEA WELLS PUMPS 1&2 (260)
380-66846-2	AIEA GULCH WELLS PUMP 2

Surrogate Legend

BB = BROMOBENZENE

HEXACOSANE = HEXACOSANE

Method: 8015 LL DRO/MRO/JP5/JP8 - 8015 - TPH DRO/ORO

Matrix: WATER

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

BB

XACOSAI

Lab Sample ID	Client Sample ID
23DSJ024WB	Method Blank

Surrogate Legend

BB = BROMOBENZENE

HEXACOSANE = HEXACOSANE

Method: 8015 LL DRO/MRO/JP5/JP8 - 8015 - TPH DRO/ORO

Matrix: WATER

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

BB

XACOSAI

(60-130)

(60-130)

Lab Sample ID	Client Sample ID
23DSJ024WL	Lab Control Sample
23J5J024WL	Lab Control Sample
23J8J024WL	Lab Control Sample

Surrogate Legend

BB = BROMOBENZENE

Surrogate Summary

Client: City & County of Honolulu

Project/Site: RED-HILL

HEXACOSANE = HEXACOSANE

Job ID: 380-66846-2

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

QC Sample Results

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

Job ID: 380-66846-2

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

Lab Sample ID: 112022-B1
Matrix: BlankMatrix
Analysis Batch: O-42138

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: O-42138_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 00:01	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 00:01	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 00:01	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 00:01	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 00:01	1
Acenaphthene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 00:01	1
Acenaphthylene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 00:01	1
Anthracene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 00:01	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 00:01	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 00:01	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 00:01	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 00:01	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 00:01	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 00:01	1
Biphenyl	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 00:01	1
Chrysene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 00:01	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 00:01	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 00:01	1
Dibenzothiophene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 00:01	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		10/17/23 00:00	11/11/23 00:01	1
Fluoranthene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 00:01	1
Fluorene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 00:01	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 00:01	1
Naphthalene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 00:01	1
Perylene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 00:01	1
Phenanthrene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 00:01	1
Pyrene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 00:01	1
Surrogate	Blank %Recovery	Blank Qualifier	Limits				Prepared	Analyzed	Dil Fac
(d10-Acenaphthene)	103		27 - 133				10/17/23 00:00	11/11/23 00:01	1
(d10-Phenanthrene)	98		43 - 129				10/17/23 00:00	11/11/23 00:01	1
(d12-Chrysene)	95		52 - 144				10/17/23 00:00	11/11/23 00:01	1
(d12-Perylene)	93		36 - 161				10/17/23 00:00	11/11/23 00:01	1
(d8-Naphthalene)	107		25 - 125				10/17/23 00:00	11/11/23 00:01	1

Lab Sample ID: 112022-BS1
Matrix: BlankMatrix
Analysis Batch: O-42138

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-42138_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	0.5	0.48		µg/L		96	31 - 128
1-Methylphenanthrene	0.5	0.481		µg/L		96	66 - 127
2,3,5-Trimethylnaphthalene	0.5	0.482		µg/L		96	55 - 122
2,6-Dimethylnaphthalene	0.5	0.478		µg/L		96	48 - 120
2-Methylnaphthalene	0.5	0.487		µg/L		97	47 - 130
Acenaphthene	0.5	0.492		µg/L		98	53 - 131
Acenaphthylene	0.5	0.484		µg/L		97	43 - 140
Anthracene	0.5	0.46		µg/L		92	58 - 135

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-66846-2

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

Lab Sample ID: 112022-BS1
Matrix: BlankMatrix
Analysis Batch: O-42138

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-42138_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benz[a]anthracene	0.5	0.477		µg/L		95	55 - 145
Benzo[a]pyrene	0.5	0.461		µg/L		92	51 - 143
Benzo[b]fluoranthene	0.5	0.429		µg/L		86	46 - 165
Benzo[e]pyrene	0.5	0.463		µg/L		93	42 - 152
Benzo[g,h,i]perylene	0.5	0.469		µg/L		94	63 - 133
Benzo[k]fluoranthene	0.5	0.472		µg/L		94	56 - 145
Biphenyl	0.5	0.49		µg/L		98	56 - 119
Chrysene	0.5	0.475		µg/L		95	56 - 141
Dibenz[a,h]anthracene	0.5	0.415		µg/L		83	55 - 150
Dibenzo[a,l]pyrene	0.5	0.628		µg/L		126	50 - 150
Dibenzothiophene	0.5	0.481		µg/L		96	46 - 126
Disalicylidenepropanediamine	50	28.6		µg/L		57	50 - 150
Fluoranthene	0.5	0.495		µg/L		99	60 - 146
Fluorene	0.5	0.48		µg/L		96	58 - 131
Indeno[1,2,3-cd]pyrene	0.5	0.433		µg/L		87	50 - 151
Naphthalene	0.5	0.497		µg/L		99	41 - 126
Perylene	0.5	0.459		µg/L		92	48 - 141
Phenanthrene	0.5	0.475		µg/L		95	67 - 127
Pyrene	0.5	0.507		µg/L		101	54 - 156

Surrogate	LCS %Recovery	LCS Qualifier	Limits
(d10-Acenaphthene)	103		27 - 133
(d10-Phenanthrene)	101		43 - 129
(d12-Chrysene)	99		52 - 144
(d12-Perylene)	96		36 - 161
(d8-Naphthalene)	104		25 - 125

Lab Sample ID: 112022-BS2
Matrix: BlankMatrix
Analysis Batch: O-42138

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: O-42138_P

Analyte	Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	0.5	0.466		µg/L		93	31 - 128	3	30
1-Methylphenanthrene	0.5	0.486		µg/L		97	66 - 127	1	30
2,3,5-Trimethylnaphthalene	0.5	0.479		µg/L		96	55 - 122	0	30
2,6-Dimethylnaphthalene	0.5	0.462		µg/L		92	48 - 120	4	30
2-Methylnaphthalene	0.5	0.465		µg/L		93	47 - 130	4	30
Acenaphthene	0.5	0.484		µg/L		97	53 - 131	1	30
Acenaphthylene	0.5	0.472		µg/L		94	43 - 140	3	30
Anthracene	0.5	0.473		µg/L		95	58 - 135	3	30
Benz[a]anthracene	0.5	0.492		µg/L		98	55 - 145	3	30
Benzo[a]pyrene	0.5	0.476		µg/L		95	51 - 143	3	30
Benzo[b]fluoranthene	0.5	0.447		µg/L		89	46 - 165	3	30
Benzo[e]pyrene	0.5	0.458		µg/L		92	42 - 152	1	30
Benzo[g,h,i]perylene	0.5	0.453		µg/L		91	63 - 133	3	30
Benzo[k]fluoranthene	0.5	0.491		µg/L		98	56 - 145	4	30
Biphenyl	0.5	0.474		µg/L		95	56 - 119	3	30
Chrysene	0.5	0.441		µg/L		88	56 - 141	8	30

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-66846-2

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

Lab Sample ID: 112022-BS2
Matrix: BlankMatrix
Analysis Batch: O-42138

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: O-42138_P

Analyte	Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dibenz[a,h]anthracene	0.5	0.431		µg/L		86	55 - 150	4	30
Dibenzo[a,i]pyrene	0.5	0.64		µg/L		128	50 - 150	2	30
Dibenzothiophene	0.5	0.489		µg/L		98	46 - 126	2	30
Disalicylidenepropanediamine	50	33.3		µg/L		67	50 - 150	16	30
Fluoranthene	0.5	0.503		µg/L		101	60 - 146	2	30
Fluorene	0.5	0.478		µg/L		96	58 - 131	0	30
Indeno[1,2,3-cd]pyrene	0.5	0.435		µg/L		87	50 - 151	0	30
Naphthalene	0.5	0.461		µg/L		92	41 - 126	7	30
Perylene	0.5	0.47		µg/L		94	48 - 141	2	30
Phenanthrene	0.5	0.485		µg/L		97	67 - 127	2	30
Pyrene	0.5	0.513		µg/L		103	54 - 156	2	30

Surrogate	LCS DUP %Recovery	LCS DUP Qualifier	Limits
(d10-Acenaphthene)	99		27 - 133
(d10-Phenanthrene)	100		43 - 129
(d12-Chrysene)	100		52 - 144
(d12-Perylene)	96		36 - 161
(d8-Naphthalene)	95		25 - 125

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

Lab Sample ID: 23VG39J11B
Matrix: WATER
Analysis Batch: 23VG39J11

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			10/16/23 15:26	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE					10/16/23 15:26	1

Lab Sample ID: 23VG39J11L
Matrix: WATER
Analysis Batch: 23VG39J11

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
GASOLINE	0.5	0.429		mg/L		86	60 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
BROMOFLUOROBENZENE	98		70 - 130

QC Sample Results

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

Job ID: 380-66846-2

Method: 8015 LL DRO/MRO/JP5/JP8 - 8015 - TPH DRO/ORO

Lab Sample ID: 23DSJ024WB
Matrix: WATER
Analysis Batch: 23DSJ024W

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DIESEL	ND	U	0.025		mg/L			10/23/23 13:28	1
JP5	ND	U	0.05		mg/L			10/23/23 13:28	1
JP8	ND	U	0.05		mg/L			10/23/23 13:28	1
MOTOR OIL	ND	U	0.05		mg/L			10/23/23 13:28	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOBENZENE					10/23/23 13:28	1
HEXACOSANE					10/23/23 13:28	1

Lab Sample ID: 23DSJ024WL
Matrix: WATER
Analysis Batch: 23DSJ024W

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
DIESEL	2.5	2.1		mg/L		84	50 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
BROMOBENZENE	70		60 - 130
HEXACOSANE	89		60 - 130

Lab Sample ID: 23J5J024WL
Matrix: WATER
Analysis Batch: 23DSJ024W

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
JP5	2.5	1.71		mg/L		68	30 - 160

Surrogate	LCS %Recovery	LCS Qualifier	Limits
BROMOBENZENE	75		60 - 130
HEXACOSANE	88		60 - 130

Lab Sample ID: 23J8J024WL
Matrix: WATER
Analysis Batch: 23DSJ024W

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
JP8	2.5	2.3		mg/L		92	30 - 160

Surrogate	LCS %Recovery	LCS Qualifier	Limits
BROMOBENZENE	95		60 - 130
HEXACOSANE	89		60 - 130

QC Association Summary

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

Job ID: 380-66846-2

Subcontract

Analysis Batch: O-42138

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-66846-1	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	625 PAH Physis LL (EAL) + TICs	O-42138_P
380-66846-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	625 PAH Physis LL (EAL) + TICs	O-42138_P
112022-B1	Method Blank	Total/NA	BlankMatrix	625 PAH Physis LL (EAL) + TICs	O-42138_P
112022-BS1	Lab Control Sample	Total/NA	BlankMatrix	625 PAH Physis LL (EAL) + TICs	O-42138_P
112022-BS2	Lab Control Sample Dup	Total/NA	BlankMatrix	625 PAH Physis LL (EAL) + TICs	O-42138_P

Analysis Batch: 23DSJ024W

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-66846-1	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	8015 LL DRO/MRO/JP5/J P8	
380-66846-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	8015 LL DRO/MRO/JP5/J P8	
23DSJ024WB	Method Blank	Total/NA	WATER	8015 LL DRO/MRO/JP5/J P8	
23DSJ024WL	Lab Control Sample	Total/NA	WATER	8015 LL DRO/MRO/JP5/J P8	
23J5J024WL	Lab Control Sample	Total/NA	WATER	8015 LL DRO/MRO/JP5/J P8	
23J8J024WL	Lab Control Sample	Total/NA	WATER	8015 LL DRO/MRO/JP5/J P8	

Analysis Batch: 23VG39J11

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-66846-1	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	8015 Gas (Purgeable) LL (EAL)	
380-66846-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	8015 Gas (Purgeable) LL (EAL)	
380-66846-3	TB AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
380-66846-4	TB AIEA GULCH WELLS PUMP 2	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
23VG39J11B	Method Blank	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	
23VG39J11L	Lab Control Sample	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	

Prep Batch: O-42138_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-66846-1	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	EPA_625	
380-66846-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	EPA_625	

Eurofins Eaton Analytical Pomona

QC Association Summary

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

Job ID: 380-66846-2

Subcontract (Continued)

Prep Batch: O-42138_P (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
112022-B1	Method Blank	Total/NA	BlankMatrix	EPA_625	
112022-BS1	Lab Control Sample	Total/NA	BlankMatrix	EPA_625	
112022-BS2	Lab Control Sample Dup	Total/NA	BlankMatrix	EPA_625	

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

Lab Chronicle

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

Job ID: 380-66846-2

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2

Lab Sample ID: 380-66846-1

Date Collected: 10/10/23 10:15

Matrix: Drinking Water

Date Received: 10/12/23 10:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA_625		1	O-42138_P			10/17/23 00:00
Total/NA	Analysis	625 PAH Physis LL (EAL) + TICs		1	O-42138	YC		11/11/23 07:00
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	23VG39J11	SCerva		10/16/23 21:48
Total/NA	Analysis	8015 LL DRO/MRO/JP5/JP8		1	23DSJ024W	SDees		10/23/23 15:02

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-66846-2

Date Collected: 10/10/23 10:45

Matrix: Drinking Water

Date Received: 10/12/23 10:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA_625		1	O-42138_P			10/17/23 00:00
Total/NA	Analysis	625 PAH Physis LL (EAL) + TICs		1	O-42138	YC		11/11/23 08:45
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	23VG39J11	SCerva		10/16/23 22:27
Total/NA	Analysis	8015 LL DRO/MRO/JP5/JP8		1	23DSJ024W	SDees		10/23/23 15:21

Client Sample ID: TB AIEA WELLS PUMPS 1&2 (260) P2

Lab Sample ID: 380-66846-3

Date Collected: 10/10/23 10:15

Matrix: Water

Date Received: 10/12/23 10:33

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	23VG39J11	SCerva		10/16/23 23:05

Client Sample ID: TB AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-66846-4

Date Collected: 10/10/23 10:45

Matrix: Water

Date Received: 10/12/23 10:33

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	23VG39J11	SCerva		10/16/23 23:43

Laboratory References:

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

Method Summary

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

Job ID: 380-66846-2

Method	Method Description	Protocol	Laboratory
625	EPA 625 Base/Neutral and Acid Organics i	EPA	
8015	8015 - TPH DRO/ORO	EPA	
8015B	SW846 8015B Gasoline Range Organics	SW846	

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



Sample Summary

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

Job ID: 380-66846-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-66846-1	AIEA WELLS PUMPS 1&2 (260) P2	Drinking Water	10/10/23 10:15	10/12/23 10:33
380-66846-2	AIEA GULCH WELLS PUMP 2	Drinking Water	10/10/23 10:45	10/12/23 10:33
380-66846-3	TB AIEA WELLS PUMPS 1&2 (260) P2	Water	10/10/23 10:15	10/12/23 10:33
380-66846-4	TB AIEA GULCH WELLS PUMP 2	Water	10/10/23 10:45	10/12/23 10:33

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15



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

Date: 11-01-2023
EMAX Batch No.: 23J146

Attn: Jackie Contreras

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

Subject: Laboratory Report
Project: 380-66846

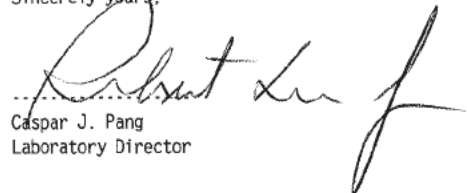
Enclosed is the Laboratory report for samples received on 10/13/23.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
380-66846-1	J146-01	10/10/23	WATER	TPH GASOLINE TPH
380-66846-2	J146-02	10/10/23	WATER	TPH GASOLINE TPH
380-66846-3	J146-03	10/10/23	WATER	TPH GASOLINE
380-66846-4	J146-04	10/10/23	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

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

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

NELAP Accredited Certificate Number CA002912023-25
ANAB Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing
California ELAP Accredited Certificate Number 2672

Chain of Custody Record

235146



Client Information (Sub Contract Lab)

Client Contact: _____ Phone: _____ Lab PM: Arada, Rachelle
 Shipping/Receiving: _____ E-Mail: Rachelle.Arada@et.eurofins.com
 Company: EMAX Laboratories Inc. State: Hawaii
 Address: 3051 Fujita Street, Due Date Requested: 10/24/2023
 City: Torrance TAT Requested (days): _____
 State Zip: CA, 90505
 Phone: _____ PO #: _____
 Email: _____ WOC #: _____
 Project Name: RED-HILL Project #: 38001111
 Site: Honolulu BWS Sites SSOV#: _____

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Seawater, Other)	Preservation Code: (BT=Trisect, A=Al)	Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Analysis Requested	Carrier Tracking No(s)	State of Origin	COC No: 380-94563-1
						Field Filtered	MS/MSD	SUB (8015 LL DRO/MRO/JP5/JP8)/ 8015 LL DRO/MRO/JP5/JP8	SUB (8015 Gas (Purgeable) LL (EAL))/ 8015 Gas (Purgeable) LL (EAL)				
AIEA WELLS PUMPS 1&2 (260) P2 (380-66846-1)	10/10/23	10-15		Water			X	X					Page: 1 of 1
AIEA GULCH WELLS PUMP 2 (380-66846-2)	10/10/23	10:45		Water			X	X					Job #: 380-66846-1
TB AIEA WELLS PUMPS 1&2 (260) (380-66846-3)	10/10/23	10:15		Water			X	X					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 - AsV4O2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecylhydrate, U - Acetone, V - MCAA, W - PH 4-5, Y - Trizma, Z - other (specify)
TB AIEA GULCH WELLS PUMP 2 (380-66846-4)	10/10/23	10:45		Water			X	X					Special Instructions/Note: See Attached Instructions

Unconfirmed

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

Empty Kit Relinquished by: _____ Date: _____

Relinquished by: *Xan* Date/Time: 10/13/23 10:45 Company: *EMAX*

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

Custody Seals Intact: _____ Custody Seal No.: _____

REPORT ID: 23J146

Possible Hazard Identification

Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyze & 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/test/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.

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

Return To Client Disposal By Lab Archive For _____ Months

Special Instructions/QC Requirements: _____

Method of Shipment: _____

Received by: *Arada* Date/Time: 10/19/23 10:45 Company: *EMAX*

Received by: _____ Date/Time: _____ Company: _____

Cooler Temperature(s) °C and Other Remarks: 1.1/6.9 KCF: 0.2



Type of Delivery	Airbill / Tracking Number	ECN <u>23J146</u>
<input type="checkbox"/> Fedex <input type="checkbox"/> UPS <input type="checkbox"/> GSO <input type="checkbox"/> Others		Recipient <u>Cecilia Chavez</u>
<input type="checkbox"/> EMAX Courier <input checked="" type="checkbox"/> Client Delivery		Date <u>10/13/23</u> Time <u>10:45</u>

COC INSPECTION

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

Note: _____

PACKAGING INSPECTION

Container	<input checked="" type="checkbox"/> Cooler	<input type="checkbox"/> Box	<input type="checkbox"/> Other
Condition	<input type="checkbox"/> Custody Seal	<input type="checkbox"/> Intact	<input type="checkbox"/> Damaged
Packaging	<input checked="" type="checkbox"/> Bubble Pack	<input type="checkbox"/> Styrofoam	<input type="checkbox"/> Popcorn
Temperatures (Cool, ≤6 °C but not frozen)	<input checked="" type="checkbox"/> Cooler 1 <u>1.1/16.9</u> °C	<input type="checkbox"/> Cooler 2 _____ °C	<input type="checkbox"/> Cooler 3 _____ °C
	<input type="checkbox"/> Cooler 6 _____ °C	<input type="checkbox"/> Cooler 7 _____ °C	<input type="checkbox"/> Cooler 8 _____ °C
Thermometer:	A - S/N <u>221952708</u>	B - S/N <u>221925379</u>	C - S/N <u>230004897</u>
			D - S/N <u>216760337</u>

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

Note: _____

DISCREPANCIES

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
<u>1, 2</u>	<u>5, 6, 11, 12</u>	<u>D1</u>	<u>JPS/JPS not on label</u>	<u>R1</u>
<u>3-4</u>	<u>13-16</u>	<u>D22</u>	<u>2nd date reads: 10/3/23</u>	<u>↓</u>
<u>10/17/23</u>				

pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time. 10/17/23

NOTES/OBSERVATIONS:
 SAMPLE MATRIX IS DRINKING WATER? YES NO

- LEGEND:**
- | | | |
|--|---|--|
| <p>Code Description-Sample Management</p> <p><u>D1</u> Analysis is not indicated in <u>19061</u></p> <p>D2 Analysis mismatch COC vs label</p> <p>D3 Sample ID mismatch COC vs label</p> <p>D4 Sample ID is not indicated in _____</p> <p>D5 Container -(improper) [leaking] [broken]</p> <p>D6 Date/Time is not indicated in _____</p> <p>D7 Date/Time mismatch COC vs label</p> <p>D8 Sample listed in COC is not received</p> <p>D9 Sample received is not listed in COC</p> <p>D10 No initial/date on corrections in COC/label</p> <p>D11 Container count mismatch COC vs received</p> <p>D12 Container size mismatch COC vs received</p> | <p>Code Description-Sample Management</p> <p>D13 Out of Holding Time</p> <p>D14 Bubble is >6mm</p> <p>D15 No trip blank in cooler</p> <p>D16 Preservation not indicated in _____</p> <p>D17 Preservation mismatch COC vs label</p> <p>D18 Insufficient chemical preservative</p> <p>D19 Insufficient Sample</p> <p>D20 No filtration info for dissolved analysis</p> <p>D21 No sample for moisture determination</p> <p><u>D22</u> <u>2nd date on label is incorrect</u></p> <p>D23 _____</p> <p>D24 _____</p> | <p><input type="checkbox"/> Continue to next page.</p> <p>Code Description-Sample Management</p> <p>R1 Proceed as indicated in <input type="checkbox"/> COC <input type="checkbox"/> Label</p> <p>R2 Refer to attached instruction</p> <p>R3 Cancel the analysis</p> <p>R4 Use vial with smallest bubble first</p> <p>R5 Log-in with latest sampling date and time+1 min</p> <p>R6 Adjust pH as necessary</p> <p>R7 Filter and preserved as necessary</p> <p>R8 _____</p> <p>R9 _____</p> <p>R10 _____</p> <p>R11 _____</p> <p>R12 _____</p> |
|--|---|--|

REVIEWS:

Sample Labeling <u>Maria Rivera</u>	SRF <u>Denise</u>	PM <u>NA</u>
Date <u>10/13/23</u>	Date <u>10/13/23</u>	Date <u>10/17/23</u>



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.

DATES

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

ACRONYMS AND ABBREVIATIONS:

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

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.

DATA QUALIFIERS:

REPORTING CONVENTIONS

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-66846

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

SDG#: 23J146

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-66846

SDG : 23J146

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

A total of four(4) water samples were received on 10/13/23 to be analyzed for Total Petroleum Hydrocarbons by Purge And Trap in accordance with Method 5030B/8015B and project specific requirements.

Holding Time

Samples were analyzed within the prescribed holding time.

Calibration

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

Method Blank

Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. VG39J11B - 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. VG39J11L/VG39J11C 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 J145-01M/J145-01S. 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

SDG NO. : 23J146
Instrument ID : GCT039

Client : EUROFINS EATON ANALYTICAL
Project : 380-66846

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	WATER		Extraction Date/Time	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
				Analysis Date/Time	Analysis Date/Time					
MBLK1W	VG39J11B	1	NA	10/16/2315:26	10/16/2315:26	EJ16005A	EJ16004A	23VG39J11	Method Blank	
LCS1W	VG39J11L	1	NA	10/16/2316:05	10/16/2316:05	EJ16006A	EJ16004A	23VG39J11	Lab Control Sample (LCS)	
LCD1W	VG39J11C	1	NA	10/16/2316:43	10/16/2316:43	EJ16007A	EJ16004A	23VG39J11	LCS Duplicate	
380-66846-1	J146-01	1	NA	10/16/2321:48	10/16/2321:48	EJ16015A	EJ16014A	23VG39J11	Field Sample	
380-66846-2	J146-02	1	NA	10/16/2322:27	10/16/2322:27	EJ16016A	EJ16014A	23VG39J11	Field Sample	
380-66846-3	J146-03	1	NA	10/16/2323:05	10/16/2323:05	EJ16017A	EJ16014A	23VG39J11	Field Sample	
380-66846-4	J146-04	1	NA	10/16/2323:43	10/16/2323:43	EJ16018A	EJ16014A	23VG39J11	Field Sample	

FN - Filename
% Moist - Percent Moisture

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

SAMPLE RESULTS

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

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/10/23 10:15
Project    : 380-66846                   Date Received: 10/13/23
Batch No.  : 23J146                       Date Extracted: 10/16/23 21:48
Sample ID  : 380-66846-1                 Date Analyzed: 10/16/23 21:48
Lab Samp ID: J146-01                     Dilution Factor: 1
Lab File ID: EJ16015A                    Matrix: WATER
Ext Btch ID: 23VG39J11                   % Moisture: NA
Calib. Ref.: EJ16014A                    Instrument ID: 39
=====

```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
-----	-----	-----	-----	
GASOLINE	ND	0.020	0.010	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
-----	-----	-----	-----	-----
Bromofluorobenzene	0.0329	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

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

Client : EUROFINS EATON ANALYTICAL Date Collected: 10/10/23 10:45
Project : 380-66846 Date Received: 10/13/23
Batch No. : 23J146 Date Extracted: 10/16/23 22:27
Sample ID : 380-66846-2 Date Analyzed: 10/16/23 22:27
Lab Samp ID: J146-02 Dilution Factor: 1
Lab File ID: EJ16016A Matrix: WATER
Ext Btch ID: 23VG39J11 % Moisture: NA
Calib. Ref.: EJ16014A Instrument ID: 39

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
GASOLINE	ND	0.020	0.010	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0324	0.0400	81	60-140

Notes:

Parameter H-C Range
Gasoline C6-C10

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

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

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

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/10/23 10:15
Project     : 380-66846                   Date Received: 10/13/23
Batch No.   : 23J146                       Date Extracted: 10/16/23 23:05
Sample ID   : 380-66846-3                 Date Analyzed: 10/16/23 23:05
Lab Samp ID: J146-03                       Dilution Factor: 1
Lab File ID: EJ16017A                      Matrix: WATER
Ext Btch ID: 23VG39J11                    % Moisture: NA
Calib. Ref.: EJ16014A                     Instrument ID: 39
=====

```

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

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0318	0.0400	80	60-140

Notes:

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

Detection limits are reported relative to sample result significant figures.

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

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

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/10/23 10:45
Project    : 380-66846                   Date Received: 10/13/23
Batch No.  : 23J146                       Date Extracted: 10/16/23 23:43
Sample ID  : 380-66846-4                 Date Analyzed: 10/16/23 23:43
Lab Samp ID: J146-04                     Dilution Factor: 1
Lab File ID: EJ16018A                    Matrix: WATER
Ext Btch ID: 23VG39J11                   % Moisture: NA
Calib. Ref.: EJ16014A                    Instrument ID: 39
=====

```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
GASOLINE	ND	0.020	0.010	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0323	0.0400	81	60-140

Notes:

Parameter: H-C Range
Gasoline: C6-C10

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

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

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

QC SUMMARIES

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

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/16/23 15:26
Project    : 380-66846                   Date Received: 10/16/23
Batch No.  : 23J146                       Date Extracted: 10/16/23 15:26
Sample ID  : MBLK1W                       Date Analyzed: 10/16/23 15:26
Lab Samp ID: VG39J11B                    Dilution Factor: 1
Lab File ID: EJ16005A                     Matrix: WATER
Ext Btch ID: 23VG39J11                   % Moisture: NA
Calib. Ref.: EJ16004A                    Instrument ID: 39
=====

```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
GASOLINE	ND	0.020	0.010	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0322	0.0400	80	60-140

Notes:

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

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

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-66846
BATCH NO. : 23J146
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	
SAMPLE ID	: MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	: VG39J11B	VG39J11L	VG39J11C
LAB FILE ID	: EJ16005A	EJ16006A	EJ16007A
DATE PREPARED	: 10/16/23 15:26	10/16/23 16:05	10/16/23 16:43
DATE ANALYZED	: 10/16/23 15:26	10/16/23 16:05	10/16/23 16:43
PREP BATCH	: 23VG39J11	23VG39J11	23VG39J11
CALIBRATION REF:	EJ16004A	EJ16004A	EJ16004A

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	0.429	86	0.500	0.458	92	7	60-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0391	98	0.0400	0.0405	101	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 : 380-66857
BATCH NO. : 23J145
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: 380-66857-1	380-66857-1MS	380-66857-1MSD
LAB SAMPLE ID	: J145-01	J145-01M	J145-01S
LAB FILE ID	: EJ16008A	EJ16009A	EJ16010A
DATE PREPARED	: 10/16/23 17:21	10/16/23 17:59	10/16/23 18:38
DATE ANALYZED	: 10/16/23 17:21	10/16/23 17:59	10/16/23 18:38
PREP BATCH	: 23VG39J11	23VG39J11	23VG39J11
CALIBRATION REF:	EJ16004A	EJ16004A	EJ16004A

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	0.453	91	0.500	0.483	97	6	50-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0403	101	0.0400	0.0416	104	60-140

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

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-66846

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 23J146

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-66846

SDG : 23J146

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

A total of two(2) water samples were received on 10/13/23 to be analyzed for Total Petroleum Hydrocarbons by Extraction in accordance with Method 3520C/8015B and project specific requirements.

Holding Time

Samples were analyzed within the prescribed holding time.

Calibration

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

Method Blank

Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. DSJ024WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample

Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) LCS was analyzed. Percent recovery for Diesel was within LCS QC limits in DSJ024WL. Refer to LCS summary form for details.

Matrix QC Sample

Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Diesel was within MS QC limits in 23J167-01M/23J167-01S. Refer to Matrix QC summary form for details.

Surrogate

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

Sample Analysis

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.

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-66846

SDG : 23J146

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

A total of two(2) water samples were received on 10/13/23 to be analyzed for Petroleum Hydrocarbons by Extraction in accordance with Method 3520C/8015B and project specific requirements.

Holding Time

Samples were analyzed within the prescribed holding time.

Calibration

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

Method Blank

Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. DSJ024WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample

Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) LCS was analyzed. Percent recovery for JP5 was within LCS QC limits in J5J024WL. Refer to LCS summary form for details.

Matrix QC Sample

Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. JP5 was within MS QC limits in 23J167-01M/23J167-01S. Refer to Matrix QC summary form for details.

Surrogate

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

Sample Analysis

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.

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-66846

SDG : 23J146

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

A total of two(2) water samples were received on 10/13/23 to be analyzed for Petroleum Hydrocarbons by Extraction in accordance with Method 3520C/8015B and project specific requirements.

Holding Time

Samples were analyzed within the prescribed holding time.

Calibration

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

Method Blank

Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. DSJ024WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample

Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) LCS was analyzed. Percent recovery for JP8 was within LCS QC limits in J8J024WL. Refer to LCS summary form for details.

Matrix QC Sample

Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. JP8 was within MS QC limits in 23J167-01M/23J167-01S. Refer to Matrix QC summary form for details.

Surrogate

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

Sample Analysis

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
PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL
Project : 380-66846

SDG NO. : 23J146
Instrument ID : D5

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis Date/Time	Extraction Date/Time	Sample Data FN	Calibration Data FN	Prep. Batch	Notes

FN - Filename
% Moist - Percent Moisture

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

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

SAMPLE RESULTS

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/10/23 10:15
Project    : 380-66846                   Date Received: 10/13/23
Batch No.  : 23J146                       Date Extracted: 10/19/23 15:00
Sample ID  : 380-66846-1                 Date Analyzed: 10/23/23 15:02
Lab Samp ID: 23J146-01                   Dilution Factor: 1
Lab File ID: LJ23015A                     Matrix: WATER
Ext Btch ID: 23DSJ024W                    % Moisture: NA
Calib. Ref.: LJ23003A                     Instrument ID: D5
=====

```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
Diesel	ND	0.029	0.014	
Motor Oil	ND	0.058	0.029	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.398	0.575	69	60-130
Hexacosane	0.127	0.144	88	60-130

Notes:

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

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount : 870ml Final Volume : 5ml
Prepared by : RGalán Analyzed by : SDeeso

METHOD 3520C/8015B
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/10/23 10:15
Project     : 380-66846                   Date Received: 10/13/23
Batch No.   : 23J146                       Date Extracted: 10/19/23 15:00
Sample ID   : 380-66846-1                 Date Analyzed: 10/23/23 15:02
Lab Samp ID : 23J146-01                   Dilution Factor: 1
Lab File ID : LJ23015A                     Matrix: WATER
Ext Btch ID : 23DSJ024W                   % Moisture: NA
Calib. Ref.: LJ23004A                     Instrument ID: D5
=====
    
```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
JP5	ND	0.058	0.029	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.398	0.575	69	60-130
Hexacosane	0.127	0.144	88	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 : 870ml Final Volume : 5ml
 Prepared by : RGalán Analyzed by : SDeeso

METHOD 3520C/8015B
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/10/23 10:15
Project    : 380-66846                   Date Received: 10/13/23
Batch No.  : 23J146                       Date Extracted: 10/19/23 15:00
Sample ID  : 380-66846-1                 Date Analyzed: 10/23/23 15:02
Lab Samp ID: 23J146-01                   Dilution Factor: 1
Lab File ID: LJ23015A                     Matrix: WATER
Ext Btch ID: 23DSJ024W                   % Moisture: NA
Calib. Ref.: LJ23005A                    Instrument ID: D5
=====
    
```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
JP8	ND	0.058	0.029	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.398	0.575	69	60-130
Hexacosane	0.127	0.144	88	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 : 870ml Final Volume : 5ml
 Prepared by : RGalan Analyzed by : SDeeso

METHOD 3520C/8015B
 TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL    Date Collected: 10/10/23 10:45
Project     : 380-66846                   Date Received: 10/13/23
Batch No.   : 23J146                      Date Extracted: 10/19/23 15:00
Sample ID   : 380-66846-2                 Date Analyzed: 10/23/23 15:21
Lab Samp ID: 23J146-02                    Dilution Factor: 1
Lab File ID: LJ23016A                     Matrix: WATER
Ext Btch ID: 23DSJ024W                    % Moisture: NA
Calib. Ref.: LJ23003A                     Instrument ID: D5
=====
    
```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Diesel	ND	0.030	0.015
Motor Oil	ND	0.059	0.030

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.370	0.595	62	60-130
Hexacosane	0.126	0.149	85	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 : 840ml Final Volume : 5ml
 Prepared by : RGalan Analyzed by : SDeeso

METHOD 3520C/8015B
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/10/23 10:45
Project    : 380-66846                   Date Received: 10/13/23
Batch No.  : 23J146                       Date Extracted: 10/19/23 15:00
Sample ID  : 380-66846-2                 Date Analyzed: 10/23/23 15:21
Lab Samp ID: 23J146-02                   Dilution Factor: 1
Lab File ID: LJ23016A                    Matrix: WATER
Ext Btch ID: 23DSJ024W                   % Moisture: NA
Calib. Ref.: LJ23004A                    Instrument ID: D5
=====
  
```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
JP5	ND	0.059	0.030	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.370	0.595	62	60-130
Hexacosane	0.126	0.149	85	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 : 840ml Final Volume : 5ml
 Prepared by : RGalan Analyzed by : SDeeso

METHOD 3520C/8015B
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/10/23 10:45
Project     : 380-66846                   Date Received: 10/13/23
Batch No.   : 23J146                       Date Extracted: 10/19/23 15:00
Sample ID   : 380-66846-2                 Date Analyzed: 10/23/23 15:21
Lab Samp ID : 23J146-02                   Dilution Factor: 1
Lab File ID : LJ23016A                     Matrix: WATER
Ext Btch ID : 23DSJ024W                   % Moisture: NA
Calib. Ref.: LJ23005A                     Instrument ID: D5
=====
    
```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
JP8	ND	0.059	0.030	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.370	0.595	62	60-130
Hexacosane	0.126	0.149	85	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 : 840ml Final Volume : 5ml
 Prepared by : RGalan Analyzed by : SDeeso

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

QC SUMMARIES

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL Date Collected: 10/19/23 15:00
Project : 380-66846 Date Received: 10/19/23
Batch No. : 23J146 Date Extracted: 10/19/23 15:00
Sample ID : MBLK1W Date Analyzed: 10/23/23 13:28
Lab Samp ID: DSJ024WB Dilution Factor: 1
Lab File ID: LJ23010A Matrix: WATER
Ext Btch ID: 23DSJ024W % Moisture: NA
Calib. Ref.: LJ23003A 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	0.341	0.500	68	60-130
Hexacosane	0.108	0.125	86	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 : RGalan Analyzed by : SDeeso

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-66846
BATCH NO. : 23J146
METHOD : 3520C/8015B

MATRIX : WATER % MOISTURE:NA
DILUTION FACTOR: 1 1
SAMPLE ID : MBLK1W LCS1W
LAB SAMPLE ID : DSJ024WB DSJ024WL
LAB FILE ID : LJ23010A LJ23011A
DATE PREPARED : 10/19/23 15:00 10/19/23 15:00
DATE ANALYZED : 10/23/23 13:28 10/23/23 13:47
PREP BATCH : 23DSJ024W 23DSJ024W
CALIBRATION REF: LJ23003A LJ23003A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QLLimit (%)
Diesel	ND	2.50	2.10	84	50-130

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QLLimit (%)
Bromobenzene	0.500	0.349	70	60-130
Hexacosane	0.125	0.111	89	60-130

MB: Method Blank sample LCS: Lab Control Sample

METHOD 3520C/8015B
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/19/23 15:00
Project     : 380-66846                   Date Received: 10/19/23
Batch No.   : 23J146                       Date Extracted: 10/19/23 15:00
Sample ID   : MBLK1W                       Date Analyzed: 10/23/23 13:28
Lab Samp ID : DSJ024WB                     Dilution Factor: 1
Lab File ID : LJ23010A                     Matrix: WATER
Ext Btch ID : 23DSJ024W                   % Moisture: NA
Calib. Ref.: LJ23004A                     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	0.341	0.500	68	60-130
Hexacosane	0.108	0.125	86	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 : RGalan Analyzed by : SDeeso

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-66846
BATCH NO. : 23J146
METHOD : 3520C/8015B

MATRIX : WATER % MOISTURE:NA
DILUTION FACTOR: 1 1
SAMPLE ID : MBLK1W LCS1W
LAB SAMPLE ID : DSJ024WB J5J024WL
LAB FILE ID : LJ23010A LJ23012A
DATE PREPARED : 10/19/23 15:00 10/19/23 15:00
DATE ANALYZED : 10/23/23 13:28 10/23/23 14:06
PREP BATCH : 23DSJ024W 23DSJ024W
CALIBRATION REF: LJ23004A LJ23004A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
JP5	ND	2.50	1.71	68	30-160

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Bromobenzene	0.500	0.377	75	60-130
Hexacosane	0.125	0.110	88	60-130

MB: Method Blank sample LCS: Lab Control Sample

METHOD 3520C/8015B
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/19/23 15:00
Project     : 380-66846                   Date Received: 10/19/23
Batch No.   : 23J146                       Date Extracted: 10/19/23 15:00
Sample ID   : MBLK1W                       Date Analyzed: 10/23/23 13:28
Lab Samp ID : DSJ024WB                     Dilution Factor: 1
Lab File ID : LJ23010A                     Matrix: WATER
Ext Btch ID : 23DSJ024W                   % Moisture: NA
Calib. Ref.: LJ23005A                     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	0.341	0.500	68	60-130
Hexacosane	0.108	0.125	86	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 : RGalan Analyzed by : SDeeso

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-66846
BATCH NO. : 23J146
METHOD : 3520C/8015B

MATRIX : WATER % MOISTURE:NA
DILUTION FACTOR: 1 1
SAMPLE ID : MBLK1W LCS1W
LAB SAMPLE ID : DSJ024WB J8J024WL
LAB FILE ID : LJ23010A LJ23013A
DATE PREPARED : 10/19/23 15:00 10/19/23 15:00
DATE ANALYZED : 10/23/23 13:28 10/23/23 14:25
PREP BATCH : 23DSJ024W 23DSJ024W
CALIBRATION REF: LJ23005A LJ23005A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
JP8	ND	2.50	2.30	92	30-160

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Bromobenzene	0.500	0.475	95	60-130
Hexacosane	0.125	0.112	90	60-130

MB: Method Blank sample LCS: Lab Control Sample

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-67917
BATCH NO. : 23J167
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: 380-67917-1	380-67917-1MS	380-67917-1MSD
LAB SAMPLE ID	: 23J167-01	23J167-01M	23J167-01S
LAB FILE ID	: LJ23018A	LJ23027A	LJ23020A
DATE PREPARED	: 10/19/23 15:00	10/19/23 15:00	10/19/23 15:00
DATE ANALYZED	: 10/23/23 16:18	10/23/23 19:06	10/23/23 16:55
PREP BATCH	: 23DSJ024W	23DSJ024W	23DSJ024W
CALIBRATION REF:	LJ23003A	LJ23003A	LJ23003A

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Diesel	ND	2.55	2.19	86	2.70	2.35	87	7	50-130	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.510	0.306	60	0.540	0.430	80	60-130
Hexacosane	0.127	0.125	98	0.135	0.134	99	60-130

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

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-67917
BATCH NO. : 23J167
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: 380-67917-1	380-67917-1MS	380-67917-1MSD
LAB SAMPLE ID	: 23J167-01	23J167-01M	23J167-01S
LAB FILE ID	: LJ23018A	LJ23021A	LJ23022A
DATE PREPARED	: 10/19/23 15:00	10/19/23 15:00	10/19/23 15:00
DATE ANALYZED	: 10/23/23 16:18	10/23/23 17:14	10/23/23 17:33
PREP BATCH	: 23DSJ024W	23DSJ024W	23DSJ024W
CALIBRATION REF:	LJ23004A	LJ23004A	LJ23004A

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
JP5	ND	2.62	1.71	65	2.85	1.88	66	9	30-160	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.525	0.436	83	0.570	0.404	71	60-130
Hexacosane	0.131	0.128	98	0.142	0.114	80	60-130

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

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-67917
BATCH NO. : 23J167
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: 380-67917-1	380-67917-1MS	380-67917-1MSD
LAB SAMPLE ID	: 23J167-01	23J167-01M	23J167-01S
LAB FILE ID	: LJ23018A	LJ23023A	LJ23024A
DATE PREPARED	: 10/19/23 15:00	10/19/23 15:00	10/19/23 15:00
DATE ANALYZED	: 10/23/23 16:18	10/23/23 17:51	10/23/23 18:10
PREP BATCH	: 23DSJ024W	23DSJ024W	23DSJ024W
CALIBRATION REF:	LJ23005A	LJ23005A	LJ23005A

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
JP8	ND	2.90	2.54	88	2.70	2.36	87	7	30-160	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.580	0.576	99	0.540	0.545	101	60-130
Hexacosane	0.145	0.140	97	0.135	0.139	103	60-130

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

November 22, 2023

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

Project Name: RED-HILL Project # 38001111 Job # 380-66846-1
 Physis Project ID: 1407003-454

Dear Rachelle,

Enclosed are the analytical results for samples submitted to PHYSIS Environmental Laboratories, Inc. (PHYSIS) on 10/13/2023. A total of 2 samples were received for analysis in accordance with the attached chain of custody (COC). Per the COC, the samples were analyzed for:

Organics
Polynuclear Aromatic Hydrocarbons by EPA 625.1
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: 1407003-454

RED-HILL Project # 38001111 Job # 380-66846-1

Total Samples: 2

PHYSIS ID	Sample ID	Description	Date	Time	Matrix	Sample Type
112023	AIEA WELLS PUMPS 1&2 (260) P2	380-66846-1	10/10/202	10:15	Samplewater	Not Specified
112024	AIEA GULCH WELLS PUMP 2	380-66846-2	10/10/202	10:45	Samplewater	Not Specified



ABBREVIATIONS and ACRONYMS

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

QUALITY ASSURANCE SUMMARY

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

PHYSIS QUALIFIER CODES

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

CASE NARRATIVE

QUALIFIER NOTES

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

ND

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

BIANALYTICALS

REPORT

TERRA AURA
ENVIRONMENTAL LABORATORIES, INC.

Innovative Solutions for Nature

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

Base/Neutral Extractable Compounds

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 112023-R1 AIEA WELLS PUMPS 1&2 (260) P2 3 Matrix: Samplewater											
Disalicylideneopropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42138	17-Oct-23	11-Nov-23
Sample ID: 112024-R1 AIEA GULCH WELLS PUMP 2 380-6 Matrix: Samplewater											
Disalicylideneopropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42138	17-Oct-23	11-Nov-23



Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 112023-R1	AIEA WELLS PUMPS 1&2 (260) P2 3 Matrix: Samplewater						Sampled: 10-Oct-23 10:15		Received: 13-Oct-23		
(d10-Acenaphthene)	EPA 625.1	% Recovery	66	1			Total		O-42138	17-Oct-23	11-Nov-23
(d10-Phenanthrene)	EPA 625.1	% Recovery	65	1			Total		O-42138	17-Oct-23	11-Nov-23
(d12-Chrysene)	EPA 625.1	% Recovery	88	1			Total		O-42138	17-Oct-23	11-Nov-23
(d12-Perylene)	EPA 625.1	% Recovery	89	1			Total		O-42138	17-Oct-23	11-Nov-23
(d8-Naphthalene)	EPA 625.1	% Recovery	66	1			Total		O-42138	17-Oct-23	11-Nov-23
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
Benzo[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
Benzo[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
Benzo[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
D benz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
D benzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
D benzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23

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-42138	17-Oct-23	11-Nov-23
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23



Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 112024-R1	AIEA GULCH WELLS PUMP 2 380-6 Matrix: Samplewater						Sampled:	10-Oct-23 10:45	Received:	13-Oct-23	
(d10-Acenaphthene)	EPA 625.1	% Recovery	52	1			Total	O-42138	17-Oct-23	11-Nov-23	
(d10-Phenanthrene)	EPA 625.1	% Recovery	54	1			Total	O-42138	17-Oct-23	11-Nov-23	
(d12-Chrysene)	EPA 625.1	% Recovery	85	1			Total	O-42138	17-Oct-23	11-Nov-23	
(d12-Perylene)	EPA 625.1	% Recovery	85	1			Total	O-42138	17-Oct-23	11-Nov-23	
(d8-Naphthalene)	EPA 625.1	% Recovery	54	1			Total	O-42138	17-Oct-23	11-Nov-23	
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-42138	17-Oct-23	11-Nov-23	
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-42138	17-Oct-23	11-Nov-23	
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-42138	17-Oct-23	11-Nov-23	
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-42138	17-Oct-23	11-Nov-23	
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-42138	17-Oct-23	11-Nov-23	
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-42138	17-Oct-23	11-Nov-23	
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-42138	17-Oct-23	11-Nov-23	
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-42138	17-Oct-23	11-Nov-23	
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-42138	17-Oct-23	11-Nov-23	
Benzo[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-42138	17-Oct-23	11-Nov-23	
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-42138	17-Oct-23	11-Nov-23	
Benzo[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-42138	17-Oct-23	11-Nov-23	
Benzo[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-42138	17-Oct-23	11-Nov-23	
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-42138	17-Oct-23	11-Nov-23	
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-42138	17-Oct-23	11-Nov-23	
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-42138	17-Oct-23	11-Nov-23	
D benz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-42138	17-Oct-23	11-Nov-23	
D benzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-42138	17-Oct-23	11-Nov-23	
D benzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-42138	17-Oct-23	11-Nov-23	

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-42138	17-Oct-23	11-Nov-23
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23



QUALITY CONTROL REPORT

TERRA ENVIRONMENTAL LABORATORIES, INC. AURA

Innovative Solutions for Nature

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

Base/Neutral Extractable Compounds

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE SOURCE		ACCURACY		PRECISION		QA CODEc
							LEVEL	RESULT	%	LIMITS	%	LIMITS	
Sample ID: 112022-B1		QAQC Procedural Blank			Matrix: BlankMatrix			Sampled:		Received:			
		Method: EPA 625.1			Batch ID: O-42138			Prepared: 17-Oct-23		Analyzed: 11-Nov-23			
Disalicylideneprapanediamin	Total	ND	1	0.05	0.1	µg/L							
Sample ID: 112022-BS1		QAQC Procedural Blank			Matrix: BlankMatrix			Sampled:		Received:			
		Method: EPA 625.1			Batch ID: O-42138			Prepared: 17-Oct-23		Analyzed: 11-Nov-23			
Disalicylideneprapanediamin	Total	28.6	1	0.05	0.1	µg/L	50	0	57	50 - 150%	PASS		
Sample ID: 112022-BS2		QAQC Procedural Blank			Matrix: BlankMatrix			Sampled:		Received:			
		Method: EPA 625.1			Batch ID: O-42138			Prepared: 17-Oct-23		Analyzed: 11-Nov-23			
Disalicylideneprapanediamin	Total	33.3	1	0.05	0.1	µg/L	50	0	67	50 - 150%	PASS	16	30 PASS

Polynuclear Aromatic Hydrocarbons

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY	PRECISION	QA CODEc	
							LEVEL	RESULT	%	LIMITS	%	LIMITS
Sample ID: 112022-B1		QAQC Procedural Blank			Matrix: BlankMatrix			Sampled:		Received:		
		Method: EPA 625.1			Batch ID: O-42138			Prepared: 17-Oct-23		Analyzed: 11-Nov-23		
(d10-Acenaphthene)	Total	103	1				% Recovery	100	103	27 - 133%	PASS	
(d10-Phenanthrene)	Total	98	1				% Recovery	100	98	43 - 129%	PASS	
(d12-Chrysene)	Total	95	1				% Recovery	100	95	52 - 144%	PASS	
(d12-Perylene)	Total	93	1				% Recovery	100	93	36 - 161%	PASS	
(d8-Naphthalene)	Total	107	1				% Recovery	100	107	25 - 125%	PASS	
1-Methylnaphthalene	Total	ND	1	0.001	0.005	µg/L						
1-Methylphenanthrene	Total	ND	1	0.001	0.005	µg/L						
2,3,5-Trimethylnaphthalene	Total	ND	1	0.001	0.005	µg/L						
2,6-Dimethylnaphthalene	Total	ND	1	0.001	0.005	µg/L						
2-Methylnaphthalene	Total	ND	1	0.001	0.005	µg/L						
Acenaphthene	Total	ND	1	0.001	0.005	µg/L						
Acenaphthylene	Total	ND	1	0.001	0.005	µg/L						
Anthracene	Total	ND	1	0.001	0.005	µg/L						
Benz[a]anthracene	Total	ND	1	0.001	0.005	µg/L						
Benzo[a]pyrene	Total	ND	1	0.001	0.005	µg/L						
Benzo[b]fluoranthene	Total	ND	1	0.001	0.005	µg/L						
Benzo[e]pyrene	Total	ND	1	0.001	0.005	µg/L						
Benzo[g,h,i]perylene	Total	ND	1	0.001	0.005	µg/L						
Benzo[k]fluoranthene	Total	ND	1	0.001	0.005	µg/L						
Biphenyl	Total	ND	1	0.001	0.005	µg/L						
Chrysene	Total	ND	1	0.001	0.005	µg/L						
Dibenz[a,h]anthracene	Total	ND	1	0.001	0.005	µg/L						
Dibenzo[a,l]pyrene	Total	ND	1	0.001	0.005	µg/L						
Dibenzothiophene	Total	ND	1	0.001	0.005	µg/L						



Polynuclear Aromatic Hydrocarbons

QUALITY CONTROL REPORT

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



Polynuclear Aromatic Hydrocarbons

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY	PRECISION	QA CODEc	
							LEVEL	RESULT	% LIMITS	% LIMITS		
Sample ID: 112022-BS1		QAQC Procedural Blank			Matrix: BlankMatrix			Sampled:		Received:		
Method: EPA 625.1		Batch ID: O-42138			Prepared: 17-Oct-23			Analyzed: 11-Nov-23				
(d10-Acenaphthene)	Total	103	1			% Recovery	100	0	103	27 - 133%	PASS	
(d10-Phenanthrene)	Total	101	1			% Recovery	100	0	101	43 - 129%	PASS	
(d12-Chrysene)	Total	99	1			% Recovery	100	0	99	52 - 144%	PASS	
(d12-Perylene)	Total	96	1			% Recovery	100	0	96	36 - 161%	PASS	
(d8-Naphthalene)	Total	104	1			% Recovery	100	0	104	25 - 125%	PASS	
1-Methylnaphthalene	Total	0.48	1	0.001	0.005	µg/L	0.5	0	96	31 - 128%	PASS	
1-Methylphenanthrene	Total	0.481	1	0.001	0.005	µg/L	0.5	0	96	66 - 127%	PASS	
2,3,5-Trimethylnaphthalene	Total	0.482	1	0.001	0.005	µg/L	0.5	0	96	55 - 122%	PASS	
2,6-Dimethylnaphthalene	Total	0.478	1	0.001	0.005	µg/L	0.5	0	96	48 - 120%	PASS	
2-Methylnaphthalene	Total	0.487	1	0.001	0.005	µg/L	0.5	0	97	47 - 130%	PASS	
Acenaphthene	Total	0.492	1	0.001	0.005	µg/L	0.5	0	98	53 - 131%	PASS	
Acenaphthylene	Total	0.484	1	0.001	0.005	µg/L	0.5	0	97	43 - 140%	PASS	
Anthracene	Total	0.46	1	0.001	0.005	µg/L	0.5	0	92	58 - 135%	PASS	
Benz[a]anthracene	Total	0.477	1	0.001	0.005	µg/L	0.5	0	95	55 - 145%	PASS	
Benzo[a]pyrene	Total	0.461	1	0.001	0.005	µg/L	0.5	0	92	51 - 143%	PASS	
Benzo[b]fluoranthene	Total	0.429	1	0.001	0.005	µg/L	0.5	0	86	46 - 165%	PASS	
Benzo[e]pyrene	Total	0.463	1	0.001	0.005	µg/L	0.5	0	93	42 - 152%	PASS	
Benzo[g,h,i]perylene	Total	0.469	1	0.001	0.005	µg/L	0.5	0	94	63 - 133%	PASS	
Benzo[k]fluoranthene	Total	0.472	1	0.001	0.005	µg/L	0.5	0	94	56 - 145%	PASS	
Biphenyl	Total	0.49	1	0.001	0.005	µg/L	0.5	0	98	56 - 119%	PASS	
Chrysene	Total	0.475	1	0.001	0.005	µg/L	0.5	0	95	56 - 141%	PASS	
Dibenz[a,h]anthracene	Total	0.415	1	0.001	0.005	µg/L	0.5	0	83	55 - 150%	PASS	
Dibenzo[a,l]pyrene	Total	0.628	1	0.001	0.005	µg/L	0.5	0	126	50 - 150%	PASS	
Dibenzothiophene	Total	0.481	1	0.001	0.005	µg/L	0.5	0	96	46 - 126%	PASS	

Polynuclear Aromatic Hydrocarbons

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY		PRECISION		QA CODE _c
							LEVEL	RESULT	%	LIMITS	%	LIMITS	
Fluoranthene	Total	0.495	1	0.001	0.005	µg/L	0.5	0	99	60 - 146%	PASS		
Fluorene	Total	0.48	1	0.001	0.005	µg/L	0.5	0	96	58 - 131%	PASS		
Indeno[1,2,3-cd]pyrene	Total	0.433	1	0.001	0.005	µg/L	0.5	0	87	50 - 151%	PASS		
Naphthalene	Total	0.497	1	0.001	0.005	µg/L	0.5	0	99	41 - 126%	PASS		
Perylene	Total	0.459	1	0.001	0.005	µg/L	0.5	0	92	48 - 141%	PASS		
Phenanthrene	Total	0.475	1	0.001	0.005	µg/L	0.5	0	95	67 - 127%	PASS		
Pyrene	Total	0.507	1	0.001	0.005	µg/L	0.5	0	101	54 - 156%	PASS		

Polynuclear Aromatic Hydrocarbons

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY		PRECISION		QA CODE _c		
							LEVEL	RESULT	%	LIMITS	%	LIMITS			
Sample ID: 112022-BS2		QAQC Procedural Blank			Matrix: BlankMatrix			Sampled:			Received:				
		Method: EPA 625.1			Batch ID: O-42138			Prepared: 17-Oct-23			Analyzed: 11-Nov-23				
(d10-Acenaphthene)	Total	99	1				% Recovery	100	0	99	27 - 133%	PASS	4	30	PASS
(d10-Phenanthrene)	Total	100	1				% Recovery	100	0	100	43 - 129%	PASS	1	30	PASS
(d12-Chrysene)	Total	100	1				% Recovery	100	0	100	52 - 144%	PASS	1	30	PASS
(d12-Perylene)	Total	96	1				% Recovery	100	0	96	36 - 161%	PASS	0	30	PASS
(d8-Naphthalene)	Total	95	1				% Recovery	100	0	95	25 - 125%	PASS	9	30	PASS
1-Methylnaphthalene	Total	0.466	1	0.001	0.005	µg/L		0.5	0	93	31 - 128%	PASS	3	30	PASS
1-Methylphenanthrene	Total	0.486	1	0.001	0.005	µg/L		0.5	0	97	66 - 127%	PASS	1	30	PASS
2,3,5-Trimethylnaphthalene	Total	0.479	1	0.001	0.005	µg/L		0.5	0	96	55 - 122%	PASS	0	30	PASS
2,6-Dimethylnaphthalene	Total	0.462	1	0.001	0.005	µg/L		0.5	0	92	48 - 120%	PASS	4	30	PASS
2-Methylnaphthalene	Total	0.465	1	0.001	0.005	µg/L		0.5	0	93	47 - 130%	PASS	4	30	PASS
Acenaphthene	Total	0.484	1	0.001	0.005	µg/L		0.5	0	97	53 - 131%	PASS	1	30	PASS
Acenaphthylene	Total	0.472	1	0.001	0.005	µg/L		0.5	0	94	43 - 140%	PASS	3	30	PASS
Anthracene	Total	0.473	1	0.001	0.005	µg/L		0.5	0	95	58 - 135%	PASS	3	30	PASS
Benz[a]anthracene	Total	0.492	1	0.001	0.005	µg/L		0.5	0	98	55 - 145%	PASS	3	30	PASS
Benzo[a]pyrene	Total	0.476	1	0.001	0.005	µg/L		0.5	0	95	51 - 143%	PASS	3	30	PASS
Benzo[b]fluoranthene	Total	0.447	1	0.001	0.005	µg/L		0.5	0	89	46 - 165%	PASS	3	30	PASS
Benzo[e]pyrene	Total	0.458	1	0.001	0.005	µg/L		0.5	0	92	42 - 152%	PASS	1	30	PASS
Benzo[g,h,i]perylene	Total	0.453	1	0.001	0.005	µg/L		0.5	0	91	63 - 133%	PASS	3	30	PASS
Benzo[k]fluoranthene	Total	0.491	1	0.001	0.005	µg/L		0.5	0	98	56 - 145%	PASS	4	30	PASS
Biphenyl	Total	0.474	1	0.001	0.005	µg/L		0.5	0	95	56 - 119%	PASS	3	30	PASS
Chrysene	Total	0.441	1	0.001	0.005	µg/L		0.5	0	88	56 - 141%	PASS	8	30	PASS
Dibenz[a,h]anthracene	Total	0.431	1	0.001	0.005	µg/L		0.5	0	86	55 - 150%	PASS	4	30	PASS
Dibenzo[a,l]pyrene	Total	0.64	1	0.001	0.005	µg/L		0.5	0	128	50 - 150%	PASS	2	30	PASS
Dibenzothiophene	Total	0.489	1	0.001	0.005	µg/L		0.5	0	98	46 - 126%	PASS	2	30	PASS

Polynuclear Aromatic Hydrocarbons

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY		PRECISION		QA CODE _c	
							LEVEL	RESULT	%	LIMITS	%	LIMITS		
Fluoranthene	Total	0.503	1	0.001	0.005	µg/L	0.5	0	101	60 - 146%	PASS	2	30	PASS
Fluorene	Total	0.478	1	0.001	0.005	µg/L	0.5	0	96	58 - 131%	PASS	0	30	PASS
Indeno[1,2,3-cd]pyrene	Total	0.435	1	0.001	0.005	µg/L	0.5	0	87	50 - 151%	PASS	0	30	PASS
Naphthalene	Total	0.461	1	0.001	0.005	µg/L	0.5	0	92	41 - 126%	PASS	7	30	PASS
Perylene	Total	0.47	1	0.001	0.005	µg/L	0.5	0	94	48 - 141%	PASS	2	30	PASS
Phenanthrene	Total	0.485	1	0.001	0.005	µg/L	0.5	0	97	67 - 127%	PASS	2	30	PASS
Pyrene	Total	0.513	1	0.001	0.005	µg/L	0.5	0	103	54 - 156%	PASS	2	30	PASS

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

PHYSIS

TENTATIVELY IDENTIFIED COMPOUNDS

ENVIRONMENTAL LABORATORIES, INC.

Innovative Solutions for Nature

Sample ID: 112023

Retention Time	Area (% of total)	Concentration (ng/L)	Library/ID	Cas Number	Match Quality (%)
35.3773	3.3331	1111	Anthracene-D10-	1719-06-8	98
10.4202	15.3244	5109	Cyclohexane, 1-methyl-2-propyl-	4291-79-6	95
10.3604	9.9388	3313	Octane, 3-methyl-6-methylene-	74630-07-2	89
10.1798	5.1442	1715	2,3,3-Trimethyl-1-hexene	1000113-52-1	87
10.1530	2.9264	976	1H-Tetrazole	288-94-8	87
10.6032	2.3175	773	Cyclopropane, 2-bromo-1,1,3-trimethyl-	36617-00-2	88
10.3004	1.9894	663	Sulfurous acid, di(cyclohexylmethyl) ester	1010309-22-7	84
10.1064	1.0318	344	1-Hexene, 4,5-dimethyl-	16106-59-5	86
10.4157	0.8499	283	1H-Tetrazole	288-94-8	95
10.0094	0.7396	247	1-(1,3-Dimethyl-1H-pyrazol-4-yl)ethanone	52773-23-6	81
16.5898	0.6806	227	1,7-Dimethyl-4-(1-methylethyl)cyclodecane	645-10-3	85
32.1466	0.5603	187	Benzoic acid, 2-ethylhexyl ester	5444-75-7	98
29.9543	0.4068	136	Hexanoic acid, 3,5,5-trimethyl-, 2-ethylhexyl ester	1000406-82-2	98
10.2466	0.3183	106	Hydroperoxide, 1-ethylbutyl	24254-56-6	83
16.4136	0.3151	105	3-Hexene, 3-ethyl-2,5-dimethyl-	62338-08-3	86
45.8775	0.3128	104	Terephthalic acid, isobutyl butyl ester	1000323-56-2	95

Concentration estimated using the response for Anthracene-d10

Sample ID: 112024

Retention Time	Area (% of total)	Concentration (ng/L)	Library/ID	Cas Number	Match Quality (%)
35.3732	3.0862	1111	Anthracene-D10-	1517-22-2	96
10.4238	13.0943	4714	Cyclohexane, 1-methyl-2-propyl-	4291-79-6	95
10.3632	8.6810	3125	Octane, 3-methyl-6-methylene-	74630-07-2	90
10.1850	3.8874	1400	2,3,3-Trimethyl-1-hexene	1000113-52-1	86
10.1564	2.4860	895	1H-Tetrazole	288-94-8	86
10.6054	2.0990	756	Cyclobutanecarboxylic acid, 2-propenyl ester	1000282-60-3	87
10.4739	1.8214	656	Octane, 3-methyl-6-methylene-	74630-07-2	90
10.3037	1.3941	502	Sulfurous acid, di(cyclohexylmethyl) ester	1010309-22-7	89
10.1088	0.8476	305	1-Hexene, 4,5-dimethyl-	16106-59-5	90
10.4199	0.6720	242	1H-Tetrazole	288-94-8	98
16.5928	0.4936	178	1,7-Dimethyl-4-(1-methylethyl)cyclodecane	645-10-3	86
32.1449	0.4304	155	Benzoic acid, 2-ethylhexyl ester	5444-75-7	98
10.3676	0.3802	137	Thiopivalic acid	55561-02-9	80
10.3676	0.3787	136	2,2-Dimethylpropanoic anhydride	1538-75-6	82
10.3303	0.3363	121	3-Penten-2-one	625-33-2	95
10.9791	0.3320	120	3,3-Diethoxy-1-propyne	10160-87-9	86
29.9529	0.3194	115	Hexanoic acid, 3,5,5-trimethyl-, 2-ethylhexyl ester	1000406-82-2	98

Concentration estimated using the response for Anthracene-d10

Sample ID: Lab Blank B1_42138

Retention Time	Area (% of total)	Concentration (ng/L)	Library/ID	Cas Number	Match Quality (%)
35.3764	5.4986	1111	Anthracene-D10-	1719-06-8	96
10.6063	4.2157	852	Oxalic acid, cyclohexyl pentyl ester	1000309-30-6	88
10.3689	0.7283	147	Hydroperoxide, 1-methylpentyl	24254-55-5	92
32.1466	0.6736	136	Benzoic acid, 2-ethylhexyl ester	5444-75-7	98
10.2485	0.6485	131	Hydroperoxide, 1-ethylbutyl	24254-56-6	90
29.9576	0.5598	113	Hexanoic acid, 3,5,5-trimethyl-, 2-ethylhexyl ester	1000406-82-2	97

Concentration estimated using the response for Anthracene-d10

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

PERFORMANCE CHAIN OF CUSTODY

TERRA ENVIRONMENTAL LABORATORIES, INC. AURA

Innovative Solutions for Nature

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

Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler:	Lab PM:	Carrier Tracking No(s):	COC No:
Client Contact: Shipping/Receiving		Phone:	Arada, Rachelle	State of Origin:	380-84566.1
Company: Physis Environmental Laboratories		E-Mail: Rachelle.Arada@et.eurofins.com		Page:	Page 1 of 1
Address: 1904 Wright Circle,		Accreditations Required (See note): State - Hawaii		Job #:	380-66846-1
City: Anaheim	Due Date Requested: 10/24/2023	Analysis Requested			
State, Zip: CA, 92808	TAT Requested (days):				
Phone:	FO #:	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 Other:			
Email:	WO #:				
Project Name: RED-HILL	Project #: 38001111	Field Filtered Sample (Yes or No)	Perform MSM/SD (Yes or No)	SUB (625 PAH Physis LL (EAL) + TICs) 625 PAH	Physis LL (EAL) + TICs
Site: Honolulu BWS Sites	SSOW#: _____	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Swastil, D=Swastil, G=Grab, H=HAWAIIAN)
Sample Identification - Client ID (Lab ID)		Total Number of Containers			
AIEA WELLS PUMPS 1&2 (260) P2 (380-66846-1)	10/10/23	10:15 Hawaiian	Water	X	2
AIEA GULCH WELLS PUMP 2 (380-66846-2)	10/10/23	10:45 Hawaiian	Water	X	2
<p>Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/matrix being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Eaton Analytical, LLC.</p>					
Possible Hazard Identification					
Unconfirmed					
Deliverable Requested: I, II, III, IV, Other (specify)					
Primary Deliverable Rank: 2					
Special Instructions/QC Requirements:					
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Empty Kit Relinquished by:		Method of Shipment:			
Relinquished by: <i>Jan</i>		Date: _____			
Relinquished by: _____		Received by: <i>Melinda Namy</i>			
Relinquished by: _____		Date/Time: <i>10/13/23 11:52</i>			
Custody Seals Intact: _____		Date/Time: _____			
Custody Seal No.: _____		Date/Time: _____			
Cooler Temperature(s) °C and Other Remarks:		Company: <i>Physis</i>			
Δ Yes Δ No		Company: _____			

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



Sample Receipt Summary

Receiving Info

Project Iteration ID: 1407003-454
 Client Name: Eurofins Eaton Analytical
 Project Name: RED-HILL Project # 38001111 Job # 380-66846-1
 COC Page Number: 2 of 2
 Bottle Label Color: NA

1. Initials Received By: MN

2. Date Received: 10/13/23

3. Time Received: 1156

4. Client Name: Eurofins

5. Courier Information: (Please circle)

- Client
- UPS
- Area Fast
- DRS
- Fedex
- GSO/GLS
- Ontrac
- PAMS
- PHYSIS Driver

i. Start Time: _____
 ii. End Time: _____
 iii. Total Mileage: _____
 iv. Number of Pickups: _____

6. Container Information: (Please put the # of containers or circle none)
 Cooler
 Styrofoam Cooler
 Boxes
 None
 Carboy(s)
 Carboy Trash Can(s)
 Carboy Cap(s)
 Other _____

7. What type of ice was used: (Please circle any that apply)
 Wet Ice
 Blue Ice
 Dry Ice
 None
 8. Randomly Selected Samples Temperature (°C): 1.1
 Used I/R Thermometer # 1-2

Inspection Info

1. Initials Inspected By: RGH

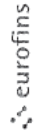
Sample Integrity Upon Receipt:

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



Client Information Client Contact: Dr. Ron Fenstermacher Phone: 808-748-5841 Email: RFENSTERMACHER@hbws.org		Lab PM Arada, Rachelle E-Mail Rachelle.Arada@eurofins.com		Carmer Tracking No(s) State of Origin		COC No Page 1 of 1 Job #	
Company City and County of Honolulu Address: 630 South Beretania St. Chemistry Lab City Honolulu State Zip Hawaii 96843 Phone: 808-748-5841 Email RFENSTERMACHER@hbws.org		PWSID Due Date Requested TAT Requested (days) Compliance Project Δ Yes Δ No PO # C20525101 exp 05312023 WO # Project # 38001111 SSONW#		Analysis Requested 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)		Preservation Codes M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - PH 4.5 Y - Trizma Z - other (specify) Other:	
Project Name RED HILL/HBWS Sites Event Desc. RUSH Weekly Red Hill Site Hawaii		Matrix (W=water, S=solid, O=water/soil, BT=Tissue A=Air)		Total Number of Containers		Special Instructions/Note:	
Sample Identification AIEA WELLS PUMPS 1 & 2 (260) P2 AIEA GULCH WELLS PUMP 2 FB AIEA WELLS PUMPS 1 & 2 (260) P2 FB AIEA GULCH WELLS PUMP 2		Sample Date 10/10/23 1015 10/10/23 1045 10/10/23 1015 10/10/23 1045		Sample Type (C=Comp, G=grab) G G		Field Filtered Sample (Yes or No)	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested I, II, III, IV, Other (specify)		Sample Date 10/10/23 1015 10/10/23 1045 10/10/23 1015 10/10/23 1045		Matrix (W=water, S=solid, O=water/soil, BT=Tissue A=Air)		Special Instructions/Note:	
Empty Kit Relinquished by Relinquished by Relinquished by Relinquished by		Date 10/11/23 1200 Date/Time 10/11/23 1200 Date/Time 10/11/23 1200 Date/Time 10/11/23 1200		Date/Time 10/12/2023 10:33 Date/Time 10/12/2023 10:33 Date/Time 10/12/2023 10:33 Date/Time 10/12/2023 10:33		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Special Instructions/QC Requirements Method of Shipment FedEx 3733 1009 7439 FedEx 3733 1009 7446	
Cooler Temperature(s) °C and Other Remarks 10/11/23 1200		Date/Time 10/11/23 1200 Date/Time 10/11/23 1200 Date/Time 10/11/23 1200		Date/Time 10/12/2023 10:33 Date/Time 10/12/2023 10:33 Date/Time 10/12/2023 10:33 Date/Time 10/12/2023 10:33		Company HBWS Company Company Company	



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

Chain of Custody Record



Client Information		Lab P/N: Arada, Rachelle		Camera Tracking No(s)		COC No									
Client Contact: Dr. Ron Fenstermacher		E-Mail: Rachelle.Arada@eurofins.com		State of Origin		Page 1 of 1									
City and County of Honolulu		PWSID		Job #											
Address: 630 South Beretania St Chemistry Lab		Due Date Requested		Analysis Requested Total Number of Containers: <input checked="" type="checkbox"/>											
City: Honolulu		TAT Requested (days): Standard													
State Zip: Hawaii 96843		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> 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		537 1_DW_PREC - 537 1 Full List											
Site: Hawaii		SSOW#:		Perform MS/MSD (Yes or No)											
Sample Identification AIEA WELLS PUMPS 1 & 2 (260) P2 AIEA GULCH WELLS PUMP 2 FB AIEA WELLS PUMPS 1 & 2 (260) P2 FB AIEA GULCH WELLS PUMP 2		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (Water, Soil, Sediment, Other)		Preservation Code (AT=Tissue, A=Air)		Field Filtered Sample (Yes or No)		533 - All Analytes	
		10/10/23		1015		G		W				<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
		10/10/23		1045		G		W				<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
		10/10/23		1015								<input type="checkbox"/>		<input type="checkbox"/>	
		10/10/23		1045								<input type="checkbox"/>		<input type="checkbox"/>	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Date		Time		Method of Shipment: <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For		Months		Special Instructions/QC Requirements		Special Instructions/Note:			
Deliverable Requested I, II, III, IV, Other (specify)		10/11/23		1200		FED Ex		10 33		10 33					
Empty Kit Relinquished by		Date/Time		Company		Received by		Date/Time		Company					
Relinquished by <i>ly</i>		10/11/23		HBWS		RACHELLE ARADA		10/33		ECAF					
Relinquished by		Date/Time		Company		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					
Cooler Temperature(s) °C and Other Remarks		17.5/16.2 - FROZEN (1) 0.5° 0.1° 0.7-2.0° 0.1° 0.4-1.0° 0.1° -3.9°													



Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-66846-2

Login Number: 66846
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	

