eurofins | Environment Testing

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 11/22/2023 7:58:14 PM

JOB DESCRIPTION

RED-HILL

JOB NUMBER

380-65439-2

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

See page two for job notes and contact information.

Job Notes

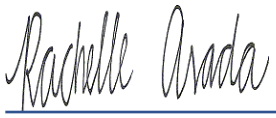
This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

Compliance Statement

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

Authorization



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Authorized for release by
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Table of Contents

Definitions/Glossary

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

Job ID: 380-65439-2

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.
¤	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: 380-65439-2

Job ID: 380-65439-2

Laboratory: Eurofins Eaton Analytical Pomona

Narrative

Job Narrative
380-65439-2

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 10/4/2023 10:40 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 6 coolers at receipt time were 1.0°C, 1.7°C, 1.9°C, 2.3°C, 2.5°C and 5.6°C

Receipt Exceptions
The received containers' labels from the following sites do not match the COC:

AIEA GULCH WELLS P2 sample time per COC: 1202
AIEA GULCH WELLS P2 sample time per label: 1134

AIEA WELLS P2 sample time per COC: 1134
AIEA WELLS P2 sample time per label: 1202

Per client, COC was incorrect, COC was updated with the correct sample time.

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: 380-65439-2

Client Sample ID: MOANALUA WELLS — Lab Sample ID: 380-65439-1

No Detections.

Client Sample ID: AIEA GULCH WELLS PUMP 2 — Lab Sample ID: 380-65439-2

No Detections.

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2 — Lab Sample ID: 380-65439-3

No Detections.

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1 — Lab Sample ID: 380-65439-4

No Detections.

Client Sample ID: TB MOANALUA WELLS — Lab Sample ID: 380-65439-5

No Detections.

Client Sample ID: TB AIEA GULCH WELLS PUMP 2 — Lab Sample ID: 380-65439-6

No Detections.

Client Sample ID: TB AIEA WELLS PUMPS 1&2 (260) P2 — Lab Sample ID: 380-65439-7

No Detections.

Client Sample ID: TB HALAWA WELLS UNITS 1 & 2 P1 — Lab Sample ID: 380-65439-8

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: MOANALUA WELLS

Date Collected: 10/02/23 10:29
Date Received: 10/04/23 10:40

Lab Sample ID: 380-65439-1

Matrix: Drinking Water

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		10/09/23 00:00	11/09/23 01:42	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 01:42	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 01:42	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 01:42	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 01:42	1
Acenaphthene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 01:42	1
Acenaphthylene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 01:42	1
Anthracene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 01:42	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 01:42	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 01:42	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 01:42	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 01:42	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 01:42	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 01:42	1
Biphenyl	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 01:42	1
Chrysene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 01:42	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 01:42	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 01:42	1
Dibenzothiophene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 01:42	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		10/09/23 00:00	11/09/23 01:42	1
Fluoranthene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 01:42	1
Fluorene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 01:42	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 01:42	1
Naphthalene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 01:42	1
Perylene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 01:42	1
Phenanthrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 01:42	1
Pyrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 01:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
(d10-Acenaphthene)	*92*		*27 - 133*	*10/09/23 00:00*	*11/09/23 01:42*	*1*
(d10-Phenanthrene)	*93*		*43 - 129*	*10/09/23 00:00*	*11/09/23 01:42*	*1*
(d12-Chrysene)	*94*		*52 - 144*	*10/09/23 00:00*	*11/09/23 01:42*	*1*
(d12-Perylene)	*89*		*36 - 161*	*10/09/23 00:00*	*11/09/23 01:42*	*1*
(d8-Naphthalene)	*91*		*25 - 125*	*10/09/23 00:00*	*11/09/23 01:42*	*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			10/05/23 20:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE	*83*		*60 - 140*		*10/05/23 20:44*	*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	0.027		mg/L			10/14/23 14:13	1
JP5	ND	U	0.053		mg/L			10/14/23 14:13	1
JP8	ND	U	0.053		mg/L			10/14/23 14:13	1
MOTOR OIL	ND	U	0.053		mg/L			10/14/23 14:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOBENZENE	*75*		*60 - 130*		*10/14/23 14:13*	*1*

Client Sample ID: MOANALUA WELLS

Lab Sample ID: 380-65439-1
Matrix: Drinking Water
Date Collected: 10/02/23 10:29
Date Received: 10/04/23 10:40

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
HEXACOSANE	*98*		*60 - 130*		*10/14/23 14:13*	*1*

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-65439-2
Matrix: Drinking Water
Date Collected: 10/02/23 11:34
Date Received: 10/04/23 10:40

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		10/09/23 00:00	11/09/23 03:28	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 03:28	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 03:28	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 03:28	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 03:28	1
Acenaphthene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 03:28	1
Acenaphthylene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 03:28	1
Anthracene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 03:28	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 03:28	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 03:28	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 03:28	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 03:28	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 03:28	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 03:28	1
Biphenyl	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 03:28	1
Chrysene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 03:28	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 03:28	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 03:28	1
Dibenzothiophene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 03:28	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		10/09/23 00:00	11/09/23 03:28	1
Fluoranthene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 03:28	1
Fluorene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 03:28	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 03:28	1
Naphthalene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 03:28	1
Perylene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 03:28	1
Phenanthrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 03:28	1
Pyrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 03:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
(d10-Acenaphthene)	*95*		*27 - 133*	*10/09/23 00:00*	*11/09/23 03:28*	*1*
(d10-Phenanthrene)	*93*		*43 - 129*	*10/09/23 00:00*	*11/09/23 03:28*	*1*
(d12-Chrysene)	*90*		*52 - 144*	*10/09/23 00:00*	*11/09/23 03:28*	*1*
(d12-Perylene)	*91*		*36 - 161*	*10/09/23 00:00*	*11/09/23 03:28*	*1*
(d8-Naphthalene)	*94*		*25 - 125*	*10/09/23 00:00*	*11/09/23 03:28*	*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			10/05/23 21:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE	*85*		*60 - 140*		*10/05/23 21:22*	*1*

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-65439-2
Date Collected: 10/02/23 11:34
Matrix: Drinking Water
Date Received: 10/04/23 10:40

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	0.027		mg/L			10/14/23 14:32	1
JP5	ND	U	0.055		mg/L			10/14/23 14:32	1
JP8	ND	U	0.055		mg/L			10/14/23 14:32	1
MOTOR OIL	ND	U	0.055		mg/L			10/14/23 14:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOBENZENE	*70*		*60 - 130*		*10/14/23 14:32*	*1*
HEXACOSANE	*92*		*60 - 130*		*10/14/23 14:32*	*1*

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

Lab Sample ID: 380-65439-3
Date Collected: 10/02/23 12:02
Matrix: Drinking Water
Date Received: 10/04/23 10:40

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		10/09/23 00:00	11/09/23 05:13	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 05:13	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 05:13	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 05:13	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 05:13	1
Acenaphthene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 05:13	1
Acenaphthylene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 05:13	1
Anthracene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 05:13	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 05:13	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 05:13	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 05:13	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 05:13	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 05:13	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 05:13	1
Biphenyl	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 05:13	1
Chrysene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 05:13	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 05:13	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 05:13	1
Dibenzothiophene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 05:13	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		10/09/23 00:00	11/09/23 05:13	1
Fluoranthene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 05:13	1
Fluorene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 05:13	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 05:13	1
Naphthalene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 05:13	1
Perylene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 05:13	1
Phenanthrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 05:13	1
Pyrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 05:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
(d10-Acenaphthene)	*96*		*27 - 133*	*10/09/23 00:00*	*11/09/23 05:13*	*1*
(d10-Phenanthrene)	*96*		*43 - 129*	*10/09/23 00:00*	*11/09/23 05:13*	*1*
(d12-Chrysene)	*93*		*52 - 144*	*10/09/23 00:00*	*11/09/23 05:13*	*1*
(d12-Perylene)	*87*		*36 - 161*	*10/09/23 00:00*	*11/09/23 05:13*	*1*
(d8-Naphthalene)	*91*		*25 - 125*	*10/09/23 00:00*	*11/09/23 05:13*	*1*

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

Lab Sample ID: 380-65439-3

Date Collected: 10/02/23 12:02

Matrix: Drinking Water

Date Received: 10/04/23 10:40

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			10/05/23 22:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE	*84*		*60 - 140*		*10/05/23 22:00*	*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	0.026		mg/L			10/14/23 14:51	1
JP5	ND	U	0.052		mg/L			10/14/23 14:51	1
JP8	ND	U	0.052		mg/L			10/14/23 14:51	1
MOTOR OIL	ND	U	0.052		mg/L			10/14/23 14:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOBENZENE	*71*		*60 - 130*		*10/14/23 14:51*	*1*
HEXACOSANE	*95*		*60 - 130*		*10/14/23 14:51*	*1*

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1

Lab Sample ID: 380-65439-4

Date Collected: 10/02/23 10:58

Matrix: Drinking Water

Date Received: 10/04/23 10:40

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		10/09/23 00:00	11/09/23 06:59	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 06:59	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 06:59	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 06:59	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 06:59	1
Acenaphthene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 06:59	1
Acenaphthylene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 06:59	1
Anthracene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 06:59	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 06:59	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 06:59	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 06:59	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 06:59	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 06:59	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 06:59	1
Biphenyl	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 06:59	1
Chrysene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 06:59	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 06:59	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 06:59	1
Dibenzothiophene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 06:59	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		10/09/23 00:00	11/09/23 06:59	1
Fluoranthene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 06:59	1
Fluorene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 06:59	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 06:59	1
Naphthalene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 06:59	1
Perylene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 06:59	1
Phenanthrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 06:59	1
Pyrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/09/23 06:59	1

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1

Lab Sample ID: 380-65439-4

Date Collected: 10/02/23 10:58

Matrix: Drinking Water

Date Received: 10/04/23 10:40

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
(d10-Acenaphthene)	*94*		*27 - 133*	*10/09/23 00:00*	*11/09/23 06:59*	*1*
(d10-Phenanthrene)	*95*		*43 - 129*	*10/09/23 00:00*	*11/09/23 06:59*	*1*
(d12-Chrysene)	*95*		*52 - 144*	*10/09/23 00:00*	*11/09/23 06:59*	*1*
(d12-Perylene)	*96*		*36 - 161*	*10/09/23 00:00*	*11/09/23 06:59*	*1*
(d8-Naphthalene)	*92*		*25 - 125*	*10/09/23 00:00*	*11/09/23 06:59*	*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			10/05/23 22:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE	*82*		*60 - 140*		*10/05/23 22:38*	*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			10/14/23 15:10	1
JP5	ND	U	0.058		mg/L			10/14/23 15:10	1
JP8	ND	U	0.058		mg/L			10/14/23 15:10	1
MOTOR OIL	ND	U	0.058		mg/L			10/14/23 15:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOBENZENE	*70*		*60 - 130*		*10/14/23 15:10*	*1*
HEXACOSANE	*95*		*60 - 130*		*10/14/23 15:10*	*1*

Client Sample ID: TB MOANALUA WELLS

Lab Sample ID: 380-65439-5

Date Collected: 10/02/23 10:29

Matrix: Water

Date Received: 10/04/23 10:40

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			10/05/23 23:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE	*95*		*60 - 140*		*10/05/23 23:17*	*1*

Client Sample ID: TB AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-65439-6

Date Collected: 10/02/23 11:34

Matrix: Water

Date Received: 10/04/23 10:40

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			10/05/23 23:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE	*83*		*60 - 140*		*10/05/23 23:55*	*1*

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

Lab Sample ID: 380-65439-7

Date Collected: 10/02/23 12:02

Matrix: Water

Date Received: 10/04/23 10:40

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			10/06/23 00:33	1

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

Job ID: 380-65439-2

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

Lab Sample ID: 380-65439-7

Date Collected: 10/02/23 12:02
Matrix: Water
Date Received: 10/04/23 10:40

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE	*81*		*60 - 140*		*10/06/23 00:33*	*1*

Client Sample ID: TB HALAWA WELLS UNITS 1 & 2 P1

Lab Sample ID: 380-65439-8

Date Collected: 10/02/23 10:58
Matrix: Water
Date Received: 10/04/23 10:40

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			10/06/23 01:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE	*83*		*60 - 140*		*10/06/23 01:11*	*1*

Surrogate Summary

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

Job ID: 380-65439-2

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

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

		Percent Surrogate Recovery (Acceptance Limits)				
		Acenapht	Phenanth	CRY	NPT	PRY
Lab Sample ID	Client Sample ID	(27-133)	(43-129)	(52-144)	(25-125)	(36-161)
111809-B1	Method Blank	106	95	93	106	85
111809-BS1	Lab Control Sample	102	92	95	102	100
111809-BS2	Lab Control Sample Dup	104	97	93	103	88

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)				
		Acenapht	Phenanth	CRY	NPT	PRY
Lab Sample ID	Client Sample ID	(27-133)	(43-129)	(52-144)	(25-125)	(36-161)
380-65439-1	MOANALUA WELLS	92	93	94	91	89
380-65439-2	AIEA GULCH WELLS PUMP 2	95	93	90	94	91
380-65439-3	AIEA WELLS PUMPS 1&2 (260) P2	96	96	93	91	87
380-65439-4	HALAWA WELLS UNITS 1 & 2 P1	94	95	95	92	96

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**

		Percent Surrogate Recovery (Acceptance Limits)
		BFB
Lab Sample ID	Client Sample ID	(60-140)
380-65439-1	MOANALUA WELLS	83
380-65439-2	AIEA GULCH WELLS PUMP 2	85
380-65439-3	AIEA WELLS PUMPS 1&2 (260) P2	84
380-65439-4	HALAWA WELLS UNITS 1 & 2 P1	82

Surrogate Legend

BFB = BROMOFLUOROBENZENE

Surrogate Summary

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

Job ID: 380-65439-2

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	(60-140)
380-65439-5	TB MOANALUA WELLS	95
380-65439-6	TB AIEA GULCH WELLS PUMP 2	83
380-65439-7	TB AIEA WELLS PUMPS 1&2 (260) P2	81
380-65439-8	TB HALAWA WELLS UNITS 1 & 2 P1	83

Surrogate Legend

BFB = BROMOFLUOROBENZENE

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

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

		Percent Surrogate Recovery (Acceptance Limits)
		BFB
Lab Sample ID	Client Sample ID	
23VG39J04B	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
Lab Sample ID	Client Sample ID	(70-130)
23VG39J04C	LCD	114
23VG39J04L	Lab Control Sample	113

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	XACOSA
Lab Sample ID	Client Sample ID	(60-130)	(60-130)
380-65439-1	MOANALUA WELLS	75	98
380-65439-2	AIEA GULCH WELLS PUMP 2	70	92
380-65439-3	AIEA WELLS PUMPS 1&2 (260) P2	71	95
380-65439-4	HALAWA WELLS UNITS 1 & 2 P1	70	95

Surrogate Legend

BB = BROMOBENZENE

HEXACOSANE = HEXACOSANE

Surrogate Summary

Client: City & County of Honolulu
Job ID: 380-65439-2
Project/Site: RED-HILL

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BB	XACOSA
Lab Sample ID	Client Sample ID		
23DSJ014WB	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	XACOSA
Lab Sample ID	Client Sample ID	(60-130)	(60-130)
23DSJ014WL	Lab Control Sample	68	99
23J5J014WL	Lab Control Sample	66	97
23J8J014WL	Lab Control Sample	90	102

Surrogate Legend

BB = BROMOBENZENE

HEXACOSANE = HEXACOSANE

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

Lab Sample ID: 111809-B1
Matrix: BlankMatrix
Analysis Batch: O-42134

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: O-42134_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Acenaphthene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Acenaphthylene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Anthracene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Biphenyl	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Chrysene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Dibenzothiophene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		10/09/23 00:00	11/08/23 18:39	1
Fluoranthene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Fluorene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Naphthalene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Perylene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Phenanthrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1
Pyrene	ND		0.005	0.001	µg/L		10/09/23 00:00	11/08/23 18:39	1

Surrogate	*Blank %Recovery*	*Blank Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
(d10-Acenaphthene)	*106*		*27 - 133*	*10/09/23 00:00*	*11/08/23 18:39*	*1*
(d10-Phenanthrene)	*95*		*43 - 129*	*10/09/23 00:00*	*11/08/23 18:39*	*1*
(d12-Chrysene)	*93*		*52 - 144*	*10/09/23 00:00*	*11/08/23 18:39*	*1*
(d12-Perylene)	*85*		*36 - 161*	*10/09/23 00:00*	*11/08/23 18:39*	*1*
(d8-Naphthalene)	*106*		*25 - 125*	*10/09/23 00:00*	*11/08/23 18:39*	*1*

Lab Sample ID: 111809-BS1
Matrix: BlankMatrix
Analysis Batch: O-42134

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-42134_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	0.5	0.485		µg/L		97	31 - 128
1-Methylphenanthrene	0.5	0.438		µg/L		88	66 - 127
2,3,5-Trimethylnaphthalene	0.5	0.47		µg/L		94	55 - 122
2,6-Dimethylnaphthalene	0.5	0.471		µg/L		94	48 - 120
2-Methylnaphthalene	1.5	1.55		µg/L		103	47 - 130
Acenaphthene	1.5	1.57		µg/L		105	53 - 131
Acenaphthylene	1.5	1.58		µg/L		105	43 - 140
Anthracene	1.5	1.4		µg/L		93	58 - 135

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

Lab Sample ID: 111809-BS1
Matrix: BlankMatrix
Analysis Batch: O-42134

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-42134_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benz[a]anthracene	1.5	1.57		µg/L		105	55 - 145
Benzo[a]pyrene	1.5	1.32		µg/L		88	51 - 143
Benzo[b]fluoranthene	1.5	1.47		µg/L		98	46 - 165
Benzo[e]pyrene	0.5	0.434		µg/L		87	42 - 152
Benzo[g,h,i]perylene	1.5	1.38		µg/L		92	63 - 133
Benzo[k]fluoranthene	1.5	1.4		µg/L		93	56 - 145
Biphenyl	0.5	0.488		µg/L		98	56 - 119
Chrysene	1.5	1.44		µg/L		96	56 - 141
Dibenz[a,h]anthracene	1.5	1.25		µg/L		83	55 - 150
Dibenzo[a,l]pyrene	0.5	0.701		µg/L		140	50 - 150
Dibenzothiophene	0.5	0.461		µg/L		92	46 - 126
Disalicylidenepropanediamine	10	7.01		µg/L		70	50 - 150
Fluoranthene	1.5	1.44		µg/L		96	60 - 146
Fluorene	1.5	1.5		µg/L		100	58 - 131
Indeno[1,2,3-cd]pyrene	1.5	1.21		µg/L		81	50 - 151
Naphthalene	1.5	1.55		µg/L		103	41 - 126
Perylene	0.5	0.477		µg/L		95	48 - 141
Phenanthrene	1.5	1.44		µg/L		96	67 - 127
Pyrene	1.5	1.44		µg/L		96	54 - 156

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
(d10-Acenaphthene)	*102*		*27 - 133*
(d10-Phenanthrene)	*92*		*43 - 129*
(d12-Chrysene)	*95*		*52 - 144*
(d12-Perylene)	*100*		*36 - 161*
(d8-Naphthalene)	*102*		*25 - 125*

Lab Sample ID: 111809-BS2
Matrix: BlankMatrix
Analysis Batch: O-42134

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: O-42134_P

Analyte	Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	0.5	0.486		µg/L		97	31 - 128	0	30
1-Methylphenanthrene	0.5	0.46		µg/L		92	66 - 127	4	30
2,3,5-Trimethylnaphthalene	0.5	0.485		µg/L		97	55 - 122	3	30
2,6-Dimethylnaphthalene	0.5	0.492		µg/L		98	48 - 120	4	30
2-Methylnaphthalene	1.5	1.58		µg/L		105	47 - 130	2	30
Acenaphthene	1.5	1.63		µg/L		109	53 - 131	4	30
Acenaphthylene	1.5	1.66		µg/L		111	43 - 140	6	30
Anthracene	1.5	1.51		µg/L		101	58 - 135	8	30
Benz[a]anthracene	1.5	1.54		µg/L		103	55 - 145	2	30
Benzo[a]pyrene	1.5	1.35		µg/L		90	51 - 143	2	30
Benzo[b]fluoranthene	1.5	1.5		µg/L		100	46 - 165	2	30
Benzo[e]pyrene	0.5	0.444		µg/L		89	42 - 152	2	30
Benzo[g,h,i]perylene	1.5	1.41		µg/L		94	63 - 133	2	30
Benzo[k]fluoranthene	1.5	1.51		µg/L		101	56 - 145	8	30
Biphenyl	0.5	0.497		µg/L		99	56 - 119	1	30
Chrysene	1.5	1.37		µg/L		91	56 - 141	5	30

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

Lab Sample ID: 111809-BS2
Matrix: BlankMatrix
Analysis Batch: O-42134

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: O-42134_P

Analyte			Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dibenz[a,h]anthracene			1.5	1.28		µg/L		85	55 - 150	2	30
Dibenzo[a,l]pyrene			0.5	0.724		µg/L		145	50 - 150	4	30
Dibenzothiophene			0.5	0.483		µg/L		97	46 - 126	5	30
Disalicylidenepropanediamine			10	9.87		µg/L		99	50 - 150	34	30
Fluoranthene			1.5	1.51		µg/L		101	60 - 146	5	30
Fluorene			1.5	1.59		µg/L		106	58 - 131	6	30
Indeno[1,2,3-cd]pyrene			1.5	1.26		µg/L		84	50 - 151	4	30
Naphthalene			1.5	1.57		µg/L		105	41 - 126	2	30
Perylene			0.5	0.474		µg/L		95	48 - 141	0	30
Phenanthrene			1.5	1.51		µg/L		101	67 - 127	5	30
Pyrene			1.5	1.51		µg/L		101	54 - 156	5	30

Surrogate	*LCS DUP %Recovery*	*LCS DUP Qualifier*	*Limits*
(d10-Acenaphthene)	*104*		*27 - 133*
(d10-Phenanthrene)	*97*		*43 - 129*
(d12-Chrysene)	*93*		*52 - 144*
(d12-Perylene)	*88*		*36 - 161*
(d8-Naphthalene)	*103*		*25 - 125*

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

Lab Sample ID: 23VG39J04B
Matrix: WATER
Analysis Batch: 23VG39J04

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			10/05/23 13:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE					*10/05/23 13:03*	*1*

Lab Sample ID: 23VG39J04L
Matrix: WATER
Analysis Batch: 23VG39J04

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	0.472		mg/L		94	60 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
BROMOFLUOROBENZENE	*113*		*70 - 130*

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

Lab Sample ID: 23DSJ014WB
Matrix: WATER
Analysis Batch: 23DSJ014W

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			10/14/23 10:29	1
JP5	ND	U	0.05		mg/L			10/14/23 10:29	1
JP8	ND	U	0.05		mg/L			10/14/23 10:29	1
MOTOR OIL	ND	U	0.05		mg/L			10/14/23 10:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOBENZENE					*10/14/23 10:29*	*1*
HEXACOSANE					*10/14/23 10:29*	*1*

Lab Sample ID: 23DSJ014WL
Matrix: WATER
Analysis Batch: 23DSJ014W

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	2.09		mg/L		84	50 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
BROMOBENZENE	*68*		*60 - 130*
HEXACOSANE	*99*		*60 - 130*

Lab Sample ID: 23J5J014WL
Matrix: WATER
Analysis Batch: 23DSJ014W

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	1.54		mg/L		62	30 - 160		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
BROMOBENZENE	*66*		*60 - 130*
HEXACOSANE	*97*		*60 - 130*

Lab Sample ID: 23J8J014WL
Matrix: WATER
Analysis Batch: 23DSJ014W

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	1.78		mg/L		71	30 - 160		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
BROMOBENZENE	*90*		*60 - 130*
HEXACOSANE	*102*		*60 - 130*

Subcontract

Analysis Batch: O-42134

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65439-1	MOANALUA WELLS	Total/NA	Drinking Water	625 PAH Physis LL (EAL) + TICs	O-42134_P
380-65439-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	625 PAH Physis LL (EAL) + TICs	O-42134_P
380-65439-3	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	625 PAH Physis LL (EAL) + TICs	O-42134_P
380-65439-4	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Drinking Water	625 PAH Physis LL (EAL) + TICs	O-42134_P
111809-B1	Method Blank	Total/NA	BlankMatrix	625 PAH Physis LL (EAL) + TICs	O-42134_P
111809-BS1	Lab Control Sample	Total/NA	BlankMatrix	625 PAH Physis LL (EAL) + TICs	O-42134_P
111809-BS2	Lab Control Sample Dup	Total/NA	BlankMatrix	625 PAH Physis LL (EAL) + TICs	O-42134_P

Analysis Batch: 23DSJ014W

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65439-1	MOANALUA WELLS	Total/NA	Drinking Water	8015 LL DRO/MRO/JP5/JP8	
380-65439-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	8015 LL DRO/MRO/JP5/JP8	
380-65439-3	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	8015 LL DRO/MRO/JP5/JP8	
380-65439-4	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Drinking Water	8015 LL DRO/MRO/JP5/JP8	
23DSJ014WB	Method Blank	Total/NA	WATER	8015 LL DRO/MRO/JP5/JP8	
23DSJ014WL	Lab Control Sample	Total/NA	WATER	8015 LL DRO/MRO/JP5/JP8	
23J5J014WL	Lab Control Sample	Total/NA	WATER	8015 LL DRO/MRO/JP5/JP8	
23J8J014WL	Lab Control Sample	Total/NA	WATER	8015 LL DRO/MRO/JP5/JP8	

Analysis Batch: 23VG39J04

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65439-1	MOANALUA WELLS	Total/NA	Drinking Water	8015 Gas (Purgeable) LL (EAL)	
380-65439-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	8015 Gas (Purgeable) LL (EAL)	
380-65439-3	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	8015 Gas (Purgeable) LL (EAL)	
380-65439-4	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Drinking Water	8015 Gas (Purgeable) LL (EAL)	

Subcontract (Continued)

Analysis Batch: 23VG39J04 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65439-5	TB MOANALUA WELLS	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
380-65439-6	TB AIEA GULCH WELLS PUMP 2	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
380-65439-7	TB AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
380-65439-8	TB HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
23VG39J04B	Method Blank	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	
23VG39J04L	Lab Control Sample	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	

Prep Batch: O-42134_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65439-1	MOANALUA WELLS	Total/NA	Drinking Water	EPA_625	
380-65439-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	EPA_625	
380-65439-3	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	EPA_625	
380-65439-4	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Drinking Water	EPA_625	
111809-B1	Method Blank	Total/NA	BlankMatrix	EPA_625	
111809-BS1	Lab Control Sample	Total/NA	BlankMatrix	EPA_625	
111809-BS2	Lab Control Sample Dup	Total/NA	BlankMatrix	EPA_625	

Lab Chronicle

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

Job ID: 380-65439-2

Client Sample ID: MOANALUA WELLS
Lab Sample ID: 380-65439-1
Date Collected: 10/02/23 10:29
Matrix: Drinking Water
Date Received: 10/04/23 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA_625		1	O-42134_P			10/09/23 00:00
Total/NA	Analysis	625 PAH Physis LL (EAL) + TICs		1	O-42134	YC		11/09/23 01:42
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	23VG39J04	CMpang		10/05/23 20:44
Total/NA	Analysis	8015 LL DRO/MRO/JP5/JP8		1	23DSJ014W	SDees		10/14/23 14:13

Client Sample ID: AIEA GULCH WELLS PUMP 2
Lab Sample ID: 380-65439-2
Date Collected: 10/02/23 11:34
Matrix: Drinking Water
Date Received: 10/04/23 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA_625		1	O-42134_P			10/09/23 00:00
Total/NA	Analysis	625 PAH Physis LL (EAL) + TICs		1	O-42134	YC		11/09/23 03:28
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	23VG39J04	CMpang		10/05/23 21:22
Total/NA	Analysis	8015 LL DRO/MRO/JP5/JP8		1	23DSJ014W	SDees		10/14/23 14:32

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2
Lab Sample ID: 380-65439-3
Date Collected: 10/02/23 12:02
Matrix: Drinking Water
Date Received: 10/04/23 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA_625		1	O-42134_P			10/09/23 00:00
Total/NA	Analysis	625 PAH Physis LL (EAL) + TICs		1	O-42134	YC		11/09/23 05:13
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	23VG39J04	CMpang		10/05/23 22:00
Total/NA	Analysis	8015 LL DRO/MRO/JP5/JP8		1	23DSJ014W	SDees		10/14/23 14:51

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1
Lab Sample ID: 380-65439-4
Date Collected: 10/02/23 10:58
Matrix: Drinking Water
Date Received: 10/04/23 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA_625		1	O-42134_P			10/09/23 00:00
Total/NA	Analysis	625 PAH Physis LL (EAL) + TICs		1	O-42134	YC		11/09/23 06:59
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	23VG39J04	CMpang		10/05/23 22:38
Total/NA	Analysis	8015 LL DRO/MRO/JP5/JP8		1	23DSJ014W	SDees		10/14/23 15:10

Lab Chronicle

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

Job ID: 380-65439-2

Client Sample ID: TB MOANALUA WELLS
Lab Sample ID: 380-65439-5
Date Collected: 10/02/23 10:29
Matrix: Water
Date Received: 10/04/23 10:40

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	23VG39J04	CMpang		10/05/23 23:17

Client Sample ID: TB AIEA GULCH WELLS PUMP 2
Lab Sample ID: 380-65439-6
Date Collected: 10/02/23 11:34
Matrix: Water
Date Received: 10/04/23 10:40

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	23VG39J04	CMpang		10/05/23 23:55

Client Sample ID: TB AIEA WELLS PUMPS 1&2 (260) P2
Lab Sample ID: 380-65439-7
Date Collected: 10/02/23 12:02
Matrix: Water
Date Received: 10/04/23 10:40

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	23VG39J04	CMpang		10/06/23 00:33

Client Sample ID: TB HALAWA WELLS UNITS 1 & 2 P1
Lab Sample ID: 380-65439-8
Date Collected: 10/02/23 10:58
Matrix: Water
Date Received: 10/04/23 10:40

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	23VG39J04	CMpang		10/06/23 01:11

Laboratory References:

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

Method Summary

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

Job ID: 380-65439-2

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: 380-65439-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-65439-1	MOANALUA WELLS	Drinking Water	10/02/23 10:29	10/04/23 10:40
380-65439-2	AIEA GULCH WELLS PUMP 2	Drinking Water	10/02/23 11:34	10/04/23 10:40
380-65439-3	AIEA WELLS PUMPS 1&2 (260) P2	Drinking Water	10/02/23 12:02	10/04/23 10:40
380-65439-4	HALAWA WELLS UNITS 1 & 2 P1	Drinking Water	10/02/23 10:58	10/04/23 10:40
380-65439-5	TB MOANALUA WELLS	Water	10/02/23 10:29	10/04/23 10:40
380-65439-6	TB AIEA GULCH WELLS PUMP 2	Water	10/02/23 11:34	10/04/23 10:40
380-65439-7	TB AIEA WELLS PUMPS 1&2 (260) P2	Water	10/02/23 12:02	10/04/23 10:40
380-65439-8	TB HALAWA WELLS UNITS 1 & 2 P1	Water	10/02/23 10:58	10/04/23 10:40

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

Date: 10-25-2023
EMAX Batch No.: 23J048

Attn: Jackie Contreras

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

Subject: Laboratory Report
Project: 380-65439

Enclosed is the Laboratory report for samples received on 10/05/23.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
380-65439-1	J048-01	10/02/23	WATER	TPH GASOLINE
				TPH
380-65439-2	J048-02	10/02/23	WATER	TPH GASOLINE
				TPH
380-65439-3	J048-03	10/02/23	WATER	TPH GASOLINE
				TPH
380-65439-4	J048-04	10/02/23	WATER	TPH GASOLINE
				TPH
380-65439-5	J048-05	10/02/23	WATER	TPH GASOLINE
380-65439-6	J048-06	10/02/23	WATER	TPH GASOLINE
380-65439-7	J048-07	10/02/23	WATER	TPH GASOLINE
380-65439-8	J048-08	10/02/23	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

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

23J048

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

Chain of Custody Record

eurofins | Environment Testing

11/22/2023

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arada, Rachelle	Carrier Tracking No(s):	COC No: 380-82578.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Rachelle.Arada@et.eurofinsus.com	State of Origin: Hawaii	Page: Page 1 of 1
Company: EMAX Laboratories Inc		Accreditations Required (See note): State - Hawaii		Job #: 380-65439-1
Address: 3051 Fujita Street, ,	Due Date Requested: 10/16/2023			
City: Torrance	TAT Requested (days):			
State, Zip: CA, 90505				
Phone:	PO #:			
Email:	WO #:			
Project Name: RED-HILL	Project #: 38001111			
Site: Honolulu BWS Sites	SSOW#:			

Analysis Requested

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

	Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (8015 LL DRO/MRO/UP5/UP8)/ 8015 LL DRO/MRO/UP5/UP8	SUB (8015 Gas (Purgeable) LL (EAL))/ 8015 Gas (Purgeable) LL (EAL)	Total Number of containers	Special Instructions/Note:
				Preservation Code:							
1	MOANALUA WELLS (380-65439-1)	10/2/23	10:29 Hawaiian		Water			X	X	6	See Attached Instructions
2	AIEA GULCH WELLS PUMP 2 (380-65439-2)	10/2/23	12:02 Hawaiian		Water			X	X	6	See Attached Instructions
3	AIEA WELLS PUMPS 1&2 (260) P2 (380-65439-3)	10/2/23	11:34 Hawaiian		Water			X	X	6	See Attached Instructions
4	HALAWA WELLS UNITS 1 & 2 P1 (380-65439-4)	10/2/23	10:58 Hawaiian		Water			X	X	6	See Attached Instructions
5	TB MOANALUA WELLS (380-65439-5)	10/2/23	10:29 Hawaiian		Water				X	2	See Attached Instructions
6	TB AIEA GULCH WELLS PUMP 2 (380-65439-6)	10/2/23	12:02 Hawaiian		Water				X	2	See Attached Instructions
7	TB AIEA WELLS PUMPS 1&2 (260) P2 (380-65439-7)	10/2/23	11:34 Hawaiian		Water				X	2	See Attached Instructions
8	TB HALAWA WELLS UNITS 1 & 2 P1 (380-65439-8)	10/2/23	10:58 Hawaiian		Water				X	2	See Attached Instructions

Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Eaton Analytical, LLC.

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

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Xan	10/5/23 1019	EAA			
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: (1) 2.9 / 2.7 (2) 2.0 / 1.8 CF: -0.2

SAMPLE RECEIPT FORM 1

EMAX LABORATORIES, INC.

Type of Delivery	Airbill / Tracking Number	ECN 23J048
☐ Fedex ☐ UPS ☐ GSO ☐ Others		Recipient Jocelyne Derek Shell
☐ EMAX Courier ☑ Client Delivery		Date 10/05/23 Time 1019

COC INSPECTION

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

Note:

PACKAGING INSPECTION

Container	☑ Cooler	☐ Box	☐ Other		
Condition	☐ Custody Seal	☐ Intact	☐ Damaged		
Packaging correction factor: -0.2	☑ Bubble Pack	☐ Styrofoam	☐ Popcorn	☐ Sufficient	☐ _____
Temperatures (Cool, ≤6 °C but not frozen)	☑ Cooler 1 2.9/2.7 °C	☑ Cooler 2 2.0/1.8 °C	☐ Cooler 3 _____ °C	☐ Cooler 4 _____ °C	☐ Cooler 5 _____ °C
	☐ Cooler 6 _____ °C	☐ Cooler 7 _____ °C	☐ Cooler 8 _____ °C	☐ Cooler 9 _____ °C	☐ Cooler 10 _____ °C
Thermometer:	*A - S/N* 221852708	*B - S/N* 229025379	(C) *S/N* 230044897	*D - S/N* 210760237	

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

Note:

DISCREPANCIES

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
1-	1-6,7-	D10		R8
1-4	5,6,11,12,17,18,23,24	D2	JPS/JPB not indicated on label	R1
2,3	7-12,13-18	D7	two times on label: 11:34 & 12:02	
5,7	25,26,29,30	D7	two dates on label: 9/26/23 & 10/2/2023	
6,8	27,28,31,32	D7	two dates on label: 8/31/23 & 10/2/2023	

10/6/23

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

NB 10/6/23

NOTES/OBSERVATIONS:

SAMPLE MATRIX IS DRINKING WATER? ☐ YES ☐ NO

☐ **Continue to next page.**

LEGEND:

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

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

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

REVIEWS:

Sample Labeling Jocelyne Solis-Ramos Date 10/05/23 10/5/23

SRF Date 10/5/23

PM NB Date 10/6/23

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range or estimated value.
*	*	Out of QC limit.

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

ACRONYMS AND ABBREVIATIONS:

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

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-65439

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

SDG#: 23J048

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-65439

SDG : 23J048

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

A total of eight(8) water samples were received on 10/05/23 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. VG39J04B - 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. VG39J04L/VG39J04C 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 J032-01M/J032-01S. Refer to Matrix QC summary form for details.

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

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

LAB CHRONICLE
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client : EUROFINS EATON ANALYTICAL
Project : 380-65439

SDG NO. : 23J048
Instrument ID : GCT039

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	VG39J04B	1	NA	10/05/2313:03	10/05/2313:03	EJ05005A	EJ05004A	23VG39J04	Method Blank
LCS1W	VG39J04L	1	NA	10/05/2313:42	10/05/2313:42	EJ05006A	EJ05004A	23VG39J04	Lab Control Sample (LCS)
LCD1W	VG39J04C	1	NA	10/05/2314:20	10/05/2314:20	EJ05007A	EJ05004A	23VG39J04	LCS Duplicate
380-65439-1	J048-01	1	NA	10/05/2320:44	10/05/2320:44	EJ05017A	EJ05016A	23VG39J04	Field Sample
380-65439-2	J048-02	1	NA	10/05/2321:22	10/05/2321:22	EJ05018A	EJ05016A	23VG39J04	Field Sample
380-65439-3	J048-03	1	NA	10/05/2322:00	10/05/2322:00	EJ05019A	EJ05016A	23VG39J04	Field Sample
380-65439-4	J048-04	1	NA	10/05/2322:38	10/05/2322:38	EJ05020A	EJ05016A	23VG39J04	Field Sample
380-65439-5	J048-05	1	NA	10/05/2323:17	10/05/2323:17	EJ05021A	EJ05016A	23VG39J04	Field Sample
380-65439-6	J048-06	1	NA	10/05/2323:55	10/05/2323:55	EJ05022A	EJ05016A	23VG39J04	Field Sample
380-65439-7	J048-07	1	NA	10/06/2300:33	10/06/2300:33	EJ05023A	EJ05016A	23VG39J04	Field Sample
380-65439-8	J048-08	1	NA	10/06/2301:11	10/06/2301:11	EJ05024A	EJ05016A	23VG39J04	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

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

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/02/23 10:29
Project	: 380-65439	Date Received:	10/05/23
Batch No.	: 23J048	Date Extracted:	10/05/23 20:44
Sample ID	: 380-65439-1	Date Analyzed:	10/05/23 20:44
Lab Samp ID:	J048-01	Dilution Factor:	1
Lab File ID:	EJ05017A	Matrix:	WATER
Ext Btch ID:	23VG39J04	% Moisture:	NA
Calib. Ref.:	EJ05016A	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	0.0331	0.0400	83	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 : CMpang Analyzed by : CMpang

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

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/02/23 12:02
Project	: 380-65439	Date Received:	10/05/23
Batch No.	: 23J048	Date Extracted:	10/05/23 21:22
Sample ID	: 380-65439-2	Date Analyzed:	10/05/23 21:22
Lab Samp ID:	J048-02	Dilution Factor:	1
Lab File ID:	EJ05018A	Matrix:	WATER
Ext Btch ID:	23VG39J04	% Moisture:	NA
Calib. Ref.:	EJ05016A	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	0.0341	0.0400	85	60-140

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

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

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

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/02/23 11:34
Project	: 380-65439	Date Received:	10/05/23
Batch No.	: 23J048	Date Extracted:	10/05/23 22:00
Sample ID	: 380-65439-3	Date Analyzed:	10/05/23 22:00
Lab Samp ID:	J048-03	Dilution Factor:	1
Lab File ID:	EJ05019A	Matrix:	WATER
Ext Btch ID:	23VG39J04	% Moisture:	NA
Calib. Ref.:	EJ05016A	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	0.0336	0.0400	84	60-140

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

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

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

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/02/23 10:58
Project	: 380-65439	Date Received:	10/05/23
Batch No.	: 23J048	Date Extracted:	10/05/23 22:38
Sample ID	: 380-65439-4	Date Analyzed:	10/05/23 22:38
Lab Samp ID:	J048-04	Dilution Factor:	1
Lab File ID:	EJ05020A	Matrix:	WATER
Ext Btch ID:	23VG39J04	% Moisture:	NA
Calib. Ref.:	EJ05016A	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	0.0327	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	: CMpang	Analyzed by :	CMpang

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

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/02/23 10:29
Project	: 380-65439	Date Received:	10/05/23
Batch No.	: 23J048	Date Extracted:	10/05/23 23:17
Sample ID	: 380-65439-5	Date Analyzed:	10/05/23 23:17
Lab Samp ID:	J048-05	Dilution Factor:	1
Lab File ID:	EJ05021A	Matrix:	WATER
Ext Btch ID:	23VG39J04	% Moisture:	NA
Calib. Ref.:	EJ05016A	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	0.0381	0.0400	95	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	: CMpang	Analyzed by	: CMpang

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

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/02/23 12:02
Project	: 380-65439	Date Received:	10/05/23
Batch No.	: 23J048	Date Extracted:	10/05/23 23:55
Sample ID	: 380-65439-6	Date Analyzed:	10/05/23 23:55
Lab Samp ID:	J048-06	Dilution Factor:	1
Lab File ID:	EJ05022A	Matrix:	WATER
Ext Btch ID:	23VG39J04	% Moisture:	NA
Calib. Ref.:	EJ05016A	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	0.0332	0.0400	83	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 : CMpang Analyzed by : CMpang

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

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/02/23 11:34
Project	: 380-65439	Date Received:	10/05/23
Batch No.	: 23J048	Date Extracted:	10/06/23 00:33
Sample ID	: 380-65439-7	Date Analyzed:	10/06/23 00:33
Lab Samp ID:	J048-07	Dilution Factor:	1
Lab File ID:	EJ05023A	Matrix:	WATER
Ext Btch ID:	23VG39J04	% Moisture:	NA
Calib. Ref.:	EJ05016A	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	: CMpang	Analyzed by	: CMpang

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

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/02/23 10:58
Project	: 380-65439	Date Received:	10/05/23
Batch No.	: 23J048	Date Extracted:	10/06/23 01:11
Sample ID	: 380-65439-8	Date Analyzed:	10/06/23 01:11
Lab Samp ID:	J048-08	Dilution Factor:	1
Lab File ID:	EJ05024A	Matrix:	WATER
Ext Btch ID:	23VG39J04	% Moisture:	NA
Calib. Ref.:	EJ05016A	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	0.0334	0.0400	83	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	: CMpang	Analyzed by	: CMpang

QC SUMMARIES

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

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/05/23 13:03
Project	: 380-65439	Date Received:	10/05/23
Batch No.	: 23J048	Date Extracted:	10/05/23 13:03
Sample ID	: MBLK1W	Date Analyzed:	10/05/23 13:03
Lab Samp ID:	VG39J04B	Dilution Factor:	1
Lab File ID:	EJ05005A	Matrix:	WATER
Ext Btch ID:	23VG39J04	% Moisture:	NA
Calib. Ref.:	EJ05004A	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	0.0330	0.0400	82	60-140

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

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

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-65439
BATCH NO. : 23J048
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	: VG39J04B	VG39J04L	VG39J04C
LAB FILE ID	: EJ05005A	EJ05006A	EJ05007A
DATE PREPARED	: 10/05/23 13:03	10/05/23 13:42	10/05/23 14:20
DATE ANALYZED	: 10/05/23 13:03	10/05/23 13:42	10/05/23 14:20
PREP BATCH	: 23VG39J04	23VG39J04	23VG39J04
CALIBRATION REF	: EJ05004A	EJ05004A	EJ05004A

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	0.472	94	0.500	0.485	97	3	60-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0453	113	0.0400	0.0454	114	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 : 380-65252
BATCH NO. : 23J032
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: 380-65252-1	380-65252-1MS	380-65252-1MSD
LAB SAMPLE ID	: J032-01	J032-01M	J032-01S
LAB FILE ID	: EJ05008A	EJ05009A	EJ05010A
DATE PREPARED	: 10/05/23 14:59	10/05/23 15:37	10/05/23 16:16
DATE ANALYZED	: 10/05/23 14:59	10/05/23 15:37	10/05/23 16:16
PREP BATCH	: 23VG39J04	23VG39J04	23VG39J04
CALIBRATION REF	: EJ05004A	EJ05004A	EJ05004A

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	0.425	85	0.500	0.485	97	13	50-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0446	112	0.0400	0.0462	116	60-140

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

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-65439

METHOD 3520C / 8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 23J048

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-65439

SDG : 23J048

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

A total of four(4) water samples were received on 10/05/23 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. DSJ014WB - 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 DSJ014WL. 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 23J047-01M/23J047-01S. 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: 380-65439

SDG : 23J048

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

A total of four(4) water samples were received on 10/05/23 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. DSJ014WB - 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 J5J014WL. 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 23J047-01M/23J047-01S. 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: 380-65439

SDG : 23J048

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

A total of four(4) water samples were received on 10/05/23 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. DSJ014WB - 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 J8J014WL. 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 23J047-02M/23J047-02S. 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
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL
Project : 380-65439

SDG NO. : 23J048
Instrument ID : D5

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	DSJ014WB	1	NA	10/14/2310:29	10/13/2311:30	LJ13037A	LJ13034A	23DSJ014W	Method Blank
LCS1W	DSJ014WL	1	NA	10/14/2310:48	10/13/2311:30	LJ13038A	LJ13034A	23DSJ014W	Lab Control Sample (LCS)
380-65439-1	J048-01	1	NA	10/14/2314:13	10/13/2311:30	LJ13049A	LJ13034A	23DSJ014W	Field Sample
380-65439-2	J048-02	1	NA	10/14/2314:32	10/13/2311:30	LJ13050A	LJ13034A	23DSJ014W	Field Sample
380-65439-3	J048-03	1	NA	10/14/2314:51	10/13/2311:30	LJ13051A	LJ13034A	23DSJ014W	Field Sample
380-65439-4	J048-04	1	NA	10/14/2315:10	10/13/2311:30	LJ13052A	LJ13034A	23DSJ014W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL
Project : 380-65439

SDG NO. : 23J048
Instrument ID : D5

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	DSJ014WB	1	NA	10/14/2310:29	10/13/2311:30	LJ13037A	LJ13035A	23DSJ014W	Method Blank
LCS1W	J5J014WL	1	NA	10/14/2311:06	10/13/2311:30	LJ13039A	LJ13035A	23DSJ014W	Lab Control Sample (LCS)
380-65439-1	J048-01	1	NA	10/14/2314:13	10/13/2311:30	LJ13049A	LJ13035A	23DSJ014W	Field Sample
380-65439-2	J048-02	1	NA	10/14/2314:32	10/13/2311:30	LJ13050A	LJ13035A	23DSJ014W	Field Sample
380-65439-3	J048-03	1	NA	10/14/2314:51	10/13/2311:30	LJ13051A	LJ13035A	23DSJ014W	Field Sample
380-65439-4	J048-04	1	NA	10/14/2315:10	10/13/2311:30	LJ13052A	LJ13035A	23DSJ014W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL
Project : 380-65439

SDG NO. : 23J048
Instrument ID : D5

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	DSJ014WB	1	NA	10/14/2310:29	10/13/2311:30	LJ13037A	LJ13036A	23DSJ014W	Method Blank
LCS1W	J8J014WL	1	NA	10/14/2311:25	10/13/2311:30	LJ13040A	LJ13036A	23DSJ014W	Lab Control Sample (LCS)
380-65439-1	J048-01	1	NA	10/14/2314:13	10/13/2311:30	LJ13049A	LJ13036A	23DSJ014W	Field Sample
380-65439-2	J048-02	1	NA	10/14/2314:32	10/13/2311:30	LJ13050A	LJ13036A	23DSJ014W	Field Sample
380-65439-3	J048-03	1	NA	10/14/2314:51	10/13/2311:30	LJ13051A	LJ13036A	23DSJ014W	Field Sample
380-65439-4	J048-04	1	NA	10/14/2315:10	10/13/2311:30	LJ13052A	LJ13036A	23DSJ014W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/02/23 10:29
Project	: 380-65439	Date Received:	10/05/23
Batch No.	: 23J048	Date Extracted:	10/13/23 11:30
Sample ID	: 380-65439-1	Date Analyzed:	10/14/23 14:13
Lab Samp ID:	23J048-01	Dilution Factor:	1
Lab File ID:	LJ13049A	Matrix:	WATER
Ext Btch ID:	23DSJ014W	% Moisture:	NA
Calib. Ref.:	LJ13034A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Diesel	ND	0.027	0.013
Motor Oil	ND	0.053	0.027

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.400	0.530	75	60-130
Hexacosane	0.130	0.132	98	60-130

Notes:

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

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 940ml	Final Volume	: 5ml
Prepared by	: RGalan	Analyzed by	: SDeeso

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/02/23 10:29
Project	: 380-65439	Date Received:	10/05/23
Batch No.	: 23J048	Date Extracted:	10/13/23 11:30
Sample ID	: 380-65439-1	Date Analyzed:	10/14/23 14:13
Lab Samp ID:	23J048-01	Dilution Factor:	1
Lab File ID:	LJ13049A	Matrix:	WATER
Ext Btch ID:	23DSJ014W	% Moisture:	NA
Calib. Ref.:	LJ13035A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
JP5	ND	0.053	0.027	
SURROGATE PARAMETERS	**RESULT**	**SPK_AMT**	**%RECOVERY**	**QC LIMIT**
Bromobenzene	0.400	0.530	75	60-130
Hexacosane	0.130	0.132	98	60-130

Notes:
RL : Reporting Limit

Parameter	H-C Range
JP5	C8-C18

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.
Sample Amount : 940ml Final Volume : 5ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/02/23 10:29
Project	: 380-65439	Date Received:	10/05/23
Batch No.	: 23J048	Date Extracted:	10/13/23 11:30
Sample ID	: 380-65439-1	Date Analyzed:	10/14/23 14:13
Lab Samp ID:	23J048-01	Dilution Factor:	1
Lab File ID:	LJ13049A	Matrix:	WATER
Ext Btch ID:	23DSJ014W	% Moisture:	NA
Calib. Ref.:	LJ13036A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
JP8	ND	0.053	0.027	
SURROGATE PARAMETERS	**RESULT**	**SPK_AMT**	**%RECOVERY**	**QC LIMIT**
Bromobenzene	0.400	0.530	75	60-130
Hexacosane	0.130	0.132	98	60-130

Notes:
RL : Reporting Limit

Parameter	H-C Range
JP8	C8-C18

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.
Sample Amount : 940ml Final Volume : 5ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/02/23 12:02
Project	: 380-65439	Date Received:	10/05/23
Batch No.	: 23J048	Date Extracted:	10/13/23 11:30
Sample ID	: 380-65439-2	Date Analyzed:	10/14/23 14:32
Lab Samp ID:	23J048-02	Dilution Factor:	1
Lab File ID:	LJ13050A	Matrix:	WATER
Ext Btch ID:	23DSJ014W	% Moisture:	NA
Calib. Ref.:	LJ13034A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Diesel	ND	0.027	0.014
Motor Oil	ND	0.055	0.027

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.380	0.545	70	60-130
Hexacosane	0.125	0.136	92	60-130

Notes:

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

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 920ml	Final Volume	: 5ml
Prepared by	: RGalan	Analyzed by	: SDeeso

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/02/23 12:02
Project	: 380-65439	Date Received:	10/05/23
Batch No.	: 23J048	Date Extracted:	10/13/23 11:30
Sample ID	: 380-65439-2	Date Analyzed:	10/14/23 14:32
Lab Samp ID:	23J048-02	Dilution Factor:	1
Lab File ID:	LJ13050A	Matrix:	WATER
Ext Btch ID:	23DSJ014W	% Moisture:	NA
Calib. Ref.:	LJ13035A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
JP5	ND	0.055	0.027	
SURROGATE PARAMETERS	**RESULT**	**SPK_AMT**	**%RECOVERY**	**QC LIMIT**
Bromobenzene	0.380	0.545	70	60-130
Hexacosane	0.125	0.136	92	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 : 920ml Final Volume : 5ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/02/23 12:02
Project	: 380-65439	Date Received:	10/05/23
Batch No.	: 23J048	Date Extracted:	10/13/23 11:30
Sample ID	: 380-65439-2	Date Analyzed:	10/14/23 14:32
Lab Samp ID:	23J048-02	Dilution Factor:	1
Lab File ID:	LJ13050A	Matrix:	WATER
Ext Btch ID:	23DSJ014W	% Moisture:	NA
Calib. Ref.:	LJ13036A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
JP8	ND	0.055	0.027	
SURROGATE PARAMETERS	**RESULT**	**SPK_AMT**	**%RECOVERY**	**QC LIMIT**
Bromobenzene	0.380	0.545	70	60-130
Hexacosane	0.125	0.136	92	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 : 920ml Final Volume : 5ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/02/23 11:34
Project	: 380-65439	Date Received:	10/05/23
Batch No.	: 23J048	Date Extracted:	10/13/23 11:30
Sample ID	: 380-65439-3	Date Analyzed:	10/14/23 14:51
Lab Samp ID:	23J048-03	Dilution Factor:	1
Lab File ID:	LJ13051A	Matrix:	WATER
Ext Btch ID:	23DSJ014W	% Moisture:	NA
Calib. Ref.:	LJ13034A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Diesel	ND	0.026	0.013
Motor Oil	ND	0.052	0.026

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.371	0.520	71	60-130
Hexacosane	0.123	0.130	95	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	: 960ml	Final Volume	: 5ml
Prepared by	: RGalan	Analyzed by	: SDeeso

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/02/23 11:34
Project	: 380-65439	Date Received:	10/05/23
Batch No.	: 23J048	Date Extracted:	10/13/23 11:30
Sample ID	: 380-65439-3	Date Analyzed:	10/14/23 14:51
Lab Samp ID:	23J048-03	Dilution Factor:	1
Lab File ID:	LJ13051A	Matrix:	WATER
Ext Btch ID:	23DSJ014W	% Moisture:	NA
Calib. Ref.:	LJ13035A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
JP5	ND	0.052	0.026	
SURROGATE PARAMETERS	**RESULT**	**SPK_AMT**	**%RECOVERY**	**QC LIMIT**
Bromobenzene	0.371	0.520	71	60-130
Hexacosane	0.123	0.130	95	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 : 960ml Final Volume : 5ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/02/23 11:34
Project	: 380-65439	Date Received:	10/05/23
Batch No.	: 23J048	Date Extracted:	10/13/23 11:30
Sample ID	: 380-65439-3	Date Analyzed:	10/14/23 14:51
Lab Samp ID:	23J048-03	Dilution Factor:	1
Lab File ID:	LJ13051A	Matrix:	WATER
Ext Btch ID:	23DSJ014W	% Moisture:	NA
Calib. Ref.:	LJ13036A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
JP8	ND	0.052	0.026

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.371	0.520	71	60-130
Hexacosane	0.123	0.130	95	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 : 960ml Final Volume : 5ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/02/23 10:58
Project	: 380-65439	Date Received:	10/05/23
Batch No.	: 23J048	Date Extracted:	10/13/23 11:30
Sample ID	: 380-65439-4	Date Analyzed:	10/14/23 15:10
Lab Samp ID:	23J048-04	Dilution Factor:	1
Lab File ID:	LJ13052A	Matrix:	WATER
Ext Btch ID:	23DSJ014W	% Moisture:	NA
Calib. Ref.:	LJ13034A	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	0.401	0.575	70	60-130
Hexacosane	0.137	0.144	95	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	: RGalan	Analyzed by	: SDeeso

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/02/23 10:58
Project	: 380-65439	Date Received:	10/05/23
Batch No.	: 23J048	Date Extracted:	10/13/23 11:30
Sample ID	: 380-65439-4	Date Analyzed:	10/14/23 15:10
Lab Samp ID:	23J048-04	Dilution Factor:	1
Lab File ID:	LJ13052A	Matrix:	WATER
Ext Btch ID:	23DSJ014W	% Moisture:	NA
Calib. Ref.:	LJ13035A	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	0.401	0.575	70	60-130
Hexacosane	0.137	0.144	95	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 : RGalan Analyzed by : SDeeso

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/02/23 10:58
Project	: 380-65439	Date Received:	10/05/23
Batch No.	: 23J048	Date Extracted:	10/13/23 11:30
Sample ID	: 380-65439-4	Date Analyzed:	10/14/23 15:10
Lab Samp ID:	23J048-04	Dilution Factor:	1
Lab File ID:	LJ13052A	Matrix:	WATER
Ext Btch ID:	23DSJ014W	% Moisture:	NA
Calib. Ref.:	LJ13036A	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	0.401	0.575	70	60-130
Hexacosane	0.137	0.144	95	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

QC SUMMARIES

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/13/23 11:30
Project	: 380-65439	Date Received:	10/13/23
Batch No.	: 23J048	Date Extracted:	10/13/23 11:30
Sample ID	: MBLK1W	Date Analyzed:	10/14/23 10:29
Lab Samp ID:	DSJ014WB	Dilution Factor:	1
Lab File ID:	LJ13037A	Matrix:	WATER
Ext Btch ID:	23DSJ014W	% Moisture:	NA
Calib. Ref.:	LJ13034A	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	0.336	0.500	67	60-130
Hexacosane	0.117	0.125	94	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 : 380-65439
BATCH NO. : 23J048
METHOD : 3520C/8015B

MATRIX	: WATER	% MOISTURE:NA
DILUTION FACTOR	: 1	1
SAMPLE ID	: MBLK1W	LCS1W
LAB SAMPLE ID	: DSJ014WB	DSJ014WL
LAB FILE ID	: LJ13037A	LJ13038A
DATE PREPARED	: 10/13/23 11:30	10/13/23 11:30
DATE ANALYZED	: 10/14/23 10:29	10/14/23 10:48
PREP BATCH	: 23DSJ014W	23DSJ014W
CALIBRATION REF	: LJ13034A	LJ13034A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Diesel	ND	2.50	2.09	84	50-130

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Bromobenzene	0.500	0.339	68	60-130
Hexacosane	0.125	0.124	99	60-130

MB: Method Blank sample LCS: Lab Control Sample

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-65446
BATCH NO. : 23J047
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: 380-65446-1	380-65446-1MS	380-65446-1MSD
LAB SAMPLE ID	: 23J047-01	23J047-01M	23J047-01S
LAB FILE ID	: LJ13041A	LJ13042A	LJ13043A
DATE PREPARED	: 10/13/23 11:30	10/13/23 11:30	10/13/23 11:30
DATE ANALYZED	: 10/14/23 11:44	10/14/23 12:02	10/14/23 12:21
PREP BATCH	: 23DSJ014W	23DSJ014W	23DSJ014W
CALIBRATION REF	: LJ13034A	LJ13034A	LJ13034A

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Diesel	ND	2.88	2.42	84	2.72	2.45	90	1	50-130	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.575	0.352	61	0.545	0.395	72	60-130
Hexacosane	0.144	0.148	103	0.136	0.147	108	60-130

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

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/13/23 11:30
Project	: 380-65439	Date Received:	10/13/23
Batch No.	: 23J048	Date Extracted:	10/13/23 11:30
Sample ID	: MBLK1W	Date Analyzed:	10/14/23 10:29
Lab Samp ID:	DSJ014WB	Dilution Factor:	1
Lab File ID:	LJ13037A	Matrix:	WATER
Ext Btch ID:	23DSJ014W	% Moisture:	NA
Calib. Ref.:	LJ13035A	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	0.336	0.500	67	60-130
Hexacosane	0.117	0.125	94	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 : 380-65439
BATCH NO. : 23J048
METHOD : 3520C/8015B

MATRIX	: WATER	% MOISTURE:NA
DILUTION FACTOR	: 1	1
SAMPLE ID	: MBLK1W	LCS1W
LAB SAMPLE ID	: DSJ014WB	J5J014WL
LAB FILE ID	: LJ13037A	LJ13039A
DATE PREPARED	: 10/13/23 11:30	10/13/23 11:30
DATE ANALYZED	: 10/14/23 10:29	10/14/23 11:06
PREP BATCH	: 23DSJ014W	23DSJ014W
CALIBRATION REF	: LJ13035A	LJ13035A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
JP5	ND	2.50	1.54	62	30-160

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Bromobenzene	0.500	0.330	66	60-130
Hexacosane	0.125	0.121	97	60-130

MB: Method Blank sample LCS: Lab Control Sample

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-65446
BATCH NO. : 23J047
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: 380-65446-1	380-65446-1MS	380-65446-1MSD
LAB SAMPLE ID	: 23J047-01	23J047-01M	23J047-01S
LAB FILE ID	: LJ13041A	LJ13044A	LJ13045A
DATE PREPARED	: 10/13/23 11:30	10/13/23 11:30	10/13/23 11:30
DATE ANALYZED	: 10/14/23 11:44	10/14/23 12:40	10/14/23 12:58
PREP BATCH	: 23DSJ014W	23DSJ014W	23DSJ014W
CALIBRATION REF	: LJ13035A	LJ13035A	LJ13035A

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
JP5	ND	2.70	1.73	64	2.62	2.17	83	23	30-160	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.540	0.352	65	0.525	0.404	77	60-130
Hexacosane	0.135	0.127	94	0.131	0.122	93	60-130

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

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/13/23 11:30
Project	: 380-65439	Date Received:	10/13/23
Batch No.	: 23J048	Date Extracted:	10/13/23 11:30
Sample ID	: MBLK1W	Date Analyzed:	10/14/23 10:29
Lab Samp ID:	DSJ014WB	Dilution Factor:	1
Lab File ID:	LJ13037A	Matrix:	WATER
Ext Btch ID:	23DSJ014W	% Moisture:	NA
Calib. Ref.:	LJ13036A	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	0.336	0.500	67	60-130
Hexacosane	0.117	0.125	94	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 : 380-65439
BATCH NO. : 23J048
METHOD : 3520C/8015B

MATRIX	: WATER	% MOISTURE:NA
DILUTION FACTOR	: 1	1
SAMPLE ID	: MBLK1W	LCS1W
LAB SAMPLE ID	: DSJ014WB	J8J014WL
LAB FILE ID	: LJ13037A	LJ13040A
DATE PREPARED	: 10/13/23 11:30	10/13/23 11:30
DATE ANALYZED	: 10/14/23 10:29	10/14/23 11:25
PREP BATCH	: 23DSJ014W	23DSJ014W
CALIBRATION REF	: LJ13036A	LJ13036A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
JP8	ND	2.50	1.78	71	30-160

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Bromobenzene	0.500	0.452	90	60-130
Hexacosane	0.125	0.127	102	60-130

MB: Method Blank sample LCS: Lab Control Sample

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-65446
BATCH NO. : 23J047
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: 380-65446-2	380-65446-2MS	380-65446-2MSD
LAB SAMPLE ID	: 23J047-02	23J047-02M	23J047-02S
LAB FILE ID	: LJ13046A	LJ13047A	LJ13048A
DATE PREPARED	: 10/13/23 11:30	10/13/23 11:30	10/13/23 11:30
DATE ANALYZED	: 10/14/23 13:17	10/14/23 13:36	10/14/23 13:55
PREP BATCH	: 23DSJ014W	23DSJ014W	23DSJ014W
CALIBRATION REF	: LJ13036A	LJ13036A	LJ13036A

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
JP8	ND	2.75	1.88	68	2.78	2.40	86	24	30-160	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.550	0.393	71	0.555	0.503	91	60-130
Hexacosane	0.138	0.133	97	0.139	0.136	98	60-130

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

November 15, 2023

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

Project Name: RED-HILL Project # 38001111 Job # 380-65439-1
Physis Project ID: 1407003-449

Dear Rachelle,

Enclosed are the analytical results for samples submitted to PHYSIS Environmental Laboratories, Inc. (PHYSIS) on 10/5/2023. A total of 4 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
Misty Mercier
714 602-5320
Extension 202
mistymercier@physislabs.com

PROJECT SAMPLE LIST

Eurofins Eaton Analytical

PHYSIS Project ID: 1407003-449

RED-HILL Project # 38001111 Job # 380-65439-1

Total Samples: 4

PHYSIS ID	Sample ID	Description	Date	Time	Matrix	Sample Type
111810	MOANALUA WELLS	380-65439-1	10/2/2023	10:29	Samplewater	Not Specified
111811	AIEA GULCH WELLS PUMP 2	380-65439-2	10/2/2023	12:02	Samplewater	Not Specified
111812	AIEA WELLS PUMPS 1&2 (260)	380-65439-3	10/2/2023	11:34	Samplewater	Not Specified
111813	HALAWA WELLS UNITS 1 & 2 P1	380-65439-4	10/2/2023	10:58	Samplewater	Not Specified

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ABBREVIATIONS and ACRONYMS

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

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QUALITY ASSURANCE SUMMARY

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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PHYSIS QUALIFIER CODES

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

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CASE NARRATIVE

QUALIFIER NOTES

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

ND

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

ANALYTICAL REPORT

PHYSIS Project ID: 1407003-449
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-65439-1

Base/Neutral Extractable Compounds

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 111810-R1	**MOANALUA WELLS 380-65439-1**		**Matrix: Samplewater**				**Sampled:**	**02-Oct-23 10:29**		**Received:**	**05-Oct-23**
Disalicylidenepropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42134	09-Oct-23	09-Nov-23
Sample ID: 111811-R1	**AIEA GULCH WELLS PUMP 2 380-6**		**Matrix: Samplewater**				**Sampled:**	**02-Oct-23 12:02**		**Received:**	**05-Oct-23**
Disalicylidenepropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42134	09-Oct-23	09-Nov-23
Sample ID: 111812-R1	**AIEA WELLS PUMPS 1&2 (260) 380-**		**Matrix: Samplewater**				**Sampled:**	**02-Oct-23 11:34**		**Received:**	**05-Oct-23**
Disalicylidenepropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42134	09-Oct-23	09-Nov-23
Sample ID: 111813-R1	**HALAWA WELLS UNITS 1 & 2 P1 38**		**Matrix: Samplewater**				**Sampled:**	**02-Oct-23 10:58**		**Received:**	**05-Oct-23**
Disalicylidenepropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42134	09-Oct-23	09-Nov-23

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 111810-R1	**MOANALUA WELLS 380-65439-1**		**Matrix: Samplewater**				**Sampled: 02-Oct-23 10:29**			**Received: 05-Oct-23**	
(d10-Acenaphthene)	EPA 625.1	% Recovery	92	1			Total		O-42134	09-Oct-23	09-Nov-23
(d10-Phenanthrene)	EPA 625.1	% Recovery	93	1			Total		O-42134	09-Oct-23	09-Nov-23
(d12-Chrysene)	EPA 625.1	% Recovery	94	1			Total		O-42134	09-Oct-23	09-Nov-23
(d12-Perylene)	EPA 625.1	% Recovery	89	1			Total		O-42134	09-Oct-23	09-Nov-23
(d8-Naphthalene)	EPA 625.1	% Recovery	91	1			Total		O-42134	09-Oct-23	09-Nov-23
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Benzo[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Benzo[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Benzo[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Dibenz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Dibenzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Dibenzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-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-42134	09-Oct-23	09-Nov-23
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 111811-R1	**AIEA GULCH WELLS PUMP 2 380-6**	**Matrix: Samplewater**					**Sampled:**	**02-Oct-23 12:02**		**Received:**	**05-Oct-23**
(d10-Acenaphthene)	EPA 625.1	% Recovery	95	1			Total		O-42134	09-Oct-23	09-Nov-23
(d10-Phenanthrene)	EPA 625.1	% Recovery	93	1			Total		O-42134	09-Oct-23	09-Nov-23
(d12-Chrysene)	EPA 625.1	% Recovery	90	1			Total		O-42134	09-Oct-23	09-Nov-23
(d12-Perylene)	EPA 625.1	% Recovery	91	1			Total		O-42134	09-Oct-23	09-Nov-23
(d8-Naphthalene)	EPA 625.1	% Recovery	94	1			Total		O-42134	09-Oct-23	09-Nov-23
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Benzo[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Benzo[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Benzo[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Dibenz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Dibenzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Dibenzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-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-42134	09-Oct-23	09-Nov-23
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 111812-R1	**AIEA WELLS PUMPS 1&2 (260) 380-**	**Matrix: Samplewater**					**Sampled: 02-Oct-23 11:34**			**Received: 05-Oct-23**	
(d10-Acenaphthene)	EPA 625.1	% Recovery	96	1			Total		O-42134	09-Oct-23	09-Nov-23
(d10-Phenanthrene)	EPA 625.1	% Recovery	96	1			Total		O-42134	09-Oct-23	09-Nov-23
(d12-Chrysene)	EPA 625.1	% Recovery	93	1			Total		O-42134	09-Oct-23	09-Nov-23
(d12-Perylene)	EPA 625.1	% Recovery	87	1			Total		O-42134	09-Oct-23	09-Nov-23
(d8-Naphthalene)	EPA 625.1	% Recovery	91	1			Total		O-42134	09-Oct-23	09-Nov-23
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Benzo[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Benzo[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Benzo[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Dibenz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Dibenzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Dibenzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23

PHYSIS Project ID: 1407003-449
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-65439-1

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 111813-R1	**HALAWA WELLS UNITS 1 & 2 P1 38**	**Matrix: Samplewater**					**Sampled:**	**02-Oct-23 10:58**		**Received:**	**05-Oct-23**
(d10-Acenaphthene)	EPA 625.1	% Recovery	94	1			Total		O-42134	09-Oct-23	09-Nov-23
(d10-Phenanthrene)	EPA 625.1	% Recovery	95	1			Total		O-42134	09-Oct-23	09-Nov-23
(d12-Chrysene)	EPA 625.1	% Recovery	95	1			Total		O-42134	09-Oct-23	09-Nov-23
(d12-Perylene)	EPA 625.1	% Recovery	96	1			Total		O-42134	09-Oct-23	09-Nov-23
(d8-Naphthalene)	EPA 625.1	% Recovery	92	1			Total		O-42134	09-Oct-23	09-Nov-23
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Benzo[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Benzo[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Benzo[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Dibenz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Dibenzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Dibenzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23

PHYSIS Project ID: 1407003-449
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-65439-1

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42134	09-Oct-23	09-Nov-23

QUALITY CONTROL REPORT

PHYSIS Project ID: 1407003-449
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-65439-1

Base/Neutral Extractable Compounds QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODEc
Sample ID: 111809-B1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**					**Received:**		
		Method: EPA 625.1				Batch ID: O-42134		Prepared: 09-Oct-23					Analyzed: 08-Nov-23		
Disalicylidenepropanediamin	Total	ND	1	0.05	0.1	µg/L									
Sample ID: 111809-BS1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**					**Received:**		
		Method: EPA 625.1				Batch ID: O-42134		Prepared: 09-Oct-23					Analyzed: 08-Nov-23		
Disalicylidenepropanediamin	Total	7.01	1	0.05	0.1	µg/L	10	0	70	50 - 150%	PASS				
Sample ID: 111809-BS2	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**					**Received:**		
		Method: EPA 625.1				Batch ID: O-42134		Prepared: 09-Oct-23					Analyzed: 08-Nov-23		
Disalicylidenepropanediamin	Total	9.87	1	0.05	0.1	µg/L	10	0	99	50 - 150%	PASS	34	30	FAIL	R

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODEc
Sample ID: 111809-B1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**	**Sampled:**					**Received:**	
	Method: EPA 625.1					Batch ID: O-42134		Prepared: 09-Oct-23				Analyzed: 08-Nov-23	
(d10-Acenaphthene)	Total	106	1			% Recovery	100	106	27 - 133%	PASS			
(d10-Phenanthrene)	Total	95	1			% Recovery	100	95	43 - 129%	PASS			
(d12-Chrysene)	Total	93	1			% Recovery	100	93	52 - 144%	PASS			
(d12-Perylene)	Total	85	1			% Recovery	100	85	36 - 161%	PASS			
(d8-Naphthalene)	Total	106	1			% Recovery	100	106	25 - 125%	PASS			
1-Methylnaphthalene	Total	ND	1	0.001	0.005	µg/L							
1-Methylphenanthrene	Total	ND	1	0.001	0.005	µg/L							
2,3,5-Trimethylnaphthalene	Total	ND	1	0.001	0.005	µg/L							
2,6-Dimethylnaphthalene	Total	ND	1	0.001	0.005	µg/L							
2-Methylnaphthalene	Total	ND	1	0.001	0.005	µg/L							
Acenaphthene	Total	ND	1	0.001	0.005	µg/L							
Acenaphthylene	Total	ND	1	0.001	0.005	µg/L							
Anthracene	Total	ND	1	0.001	0.005	µg/L							
Benz[a]anthracene	Total	ND	1	0.001	0.005	µg/L							
Benzo[a]pyrene	Total	ND	1	0.001	0.005	µg/L							
Benzo[b]fluoranthene	Total	ND	1	0.001	0.005	µg/L							
Benzo[e]pyrene	Total	ND	1	0.001	0.005	µg/L							
Benzo[g,h,i]perylene	Total	ND	1	0.001	0.005	µg/L							
Benzo[k]fluoranthene	Total	ND	1	0.001	0.005	µg/L							
Biphenyl	Total	ND	1	0.001	0.005	µg/L							
Chrysene	Total	ND	1	0.001	0.005	µg/L							
Dibenz[a,h]anthracene	Total	ND	1	0.001	0.005	µg/L							
Dibenzo[a,l]pyrene	Total	ND	1	0.001	0.005	µg/L							
Dibenzothiophene	Total	ND	1	0.001	0.005	µg/L							

PHYSIS Project ID: 1407003-449
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-65439-1

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

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

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODEc
Sample ID: 111809-BS1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**				**Received:**	
	Method: EPA 625.1					Batch ID: O-42134		Prepared: 09-Oct-23				Analyzed: 08-Nov-23	
(d10-Acenaphthene)	Total	102	1			% Recovery	100	0	102	27 - 133%	PASS		
(d10-Phenanthrene)	Total	92	1			% Recovery	100	0	92	43 - 129%	PASS		
(d12-Chrysene)	Total	95	1			% Recovery	100	0	95	52 - 144%	PASS		
(d12-Perylene)	Total	100	1			% Recovery	100	0	100	36 - 161%	PASS		
(d8-Naphthalene)	Total	102	1			% Recovery	100	0	102	25 - 125%	PASS		
1-Methylnaphthalene	Total	0.485	1	0.001	0.005	µg/L	0.5	0	97	31 - 128%	PASS		
1-Methylphenanthrene	Total	0.438	1	0.001	0.005	µg/L	0.5	0	88	66 - 127%	PASS		
2,3,5-Trimethylnaphthalene	Total	0.47	1	0.001	0.005	µg/L	0.5	0	94	55 - 122%	PASS		
2,6-Dimethylnaphthalene	Total	0.471	1	0.001	0.005	µg/L	0.5	0	94	48 - 120%	PASS		
2-Methylnaphthalene	Total	1.55	1	0.001	0.005	µg/L	1.5	0	103	47 - 130%	PASS		
Acenaphthene	Total	1.57	1	0.001	0.005	µg/L	1.5	0	105	53 - 131%	PASS		
Acenaphthylene	Total	1.58	1	0.001	0.005	µg/L	1.5	0	105	43 - 140%	PASS		
Anthracene	Total	1.4	1	0.001	0.005	µg/L	1.5	0	93	58 - 135%	PASS		
Benz[a]anthracene	Total	1.57	1	0.001	0.005	µg/L	1.5	0	105	55 - 145%	PASS		
Benzo[a]pyrene	Total	1.32	1	0.001	0.005	µg/L	1.5	0	88	51 - 143%	PASS		
Benzo[b]fluoranthene	Total	1.47	1	0.001	0.005	µg/L	1.5	0	98	46 - 165%	PASS		
Benzo[e]pyrene	Total	0.434	1	0.001	0.005	µg/L	0.5	0	87	42 - 152%	PASS		
Benzo[g,h,i]perylene	Total	1.38	1	0.001	0.005	µg/L	1.5	0	92	63 - 133%	PASS		
Benzo[k]fluoranthene	Total	1.4	1	0.001	0.005	µg/L	1.5	0	93	56 - 145%	PASS		
Biphenyl	Total	0.488	1	0.001	0.005	µg/L	0.5	0	98	56 - 119%	PASS		
Chrysene	Total	1.44	1	0.001	0.005	µg/L	1.5	0	96	56 - 141%	PASS		
Dibenz[a,h]anthracene	Total	1.25	1	0.001	0.005	µg/L	1.5	0	83	55 - 150%	PASS		
Dibenzo[a,l]pyrene	Total	0.701	1	0.001	0.005	µg/L	0.5	0	140	50 - 150%	PASS		
Dibenzothiophene	Total	0.461	1	0.001	0.005	µg/L	0.5	0	92	46 - 126%	PASS		

PHYSIS Project ID: 1407003-449
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-65439-1

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODEc
Fluoranthene	Total	1.44	1	0.001	0.005	µg/L	1.5	0	96	60 - 146%	PASS			
Fluorene	Total	1.5	1	0.001	0.005	µg/L	1.5	0	100	58 - 131%	PASS			
Indeno[1,2,3-cd]pyrene	Total	1.21	1	0.001	0.005	µg/L	1.5	0	81	50 - 151%	PASS			
Naphthalene	Total	1.55	1	0.001	0.005	µg/L	1.5	0	103	41 - 126%	PASS			
Perylene	Total	0.477	1	0.001	0.005	µg/L	0.5	0	95	48 - 141%	PASS			
Phenanthrene	Total	1.44	1	0.001	0.005	µg/L	1.5	0	96	67 - 127%	PASS			
Pyrene	Total	1.44	1	0.001	0.005	µg/L	1.5	0	96	54 - 156%	PASS			

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	
Sample ID: 111809-BS2	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**			**Received:**			
		Method: EPA 625.1				Batch ID: O-42134		Prepared: 09-Oct-23			Analyzed: 08-Nov-23			
(d10-Acenaphthene)	Total	104	1			% Recovery	100	0	104	27 - 133%	PASS	2	30	PASS
(d10-Phenanthrene)	Total	97	1			% Recovery	100	0	97	43 - 129%	PASS	5	30	PASS
(d12-Chrysene)	Total	93	1			% Recovery	100	0	93	52 - 144%	PASS	2	30	PASS
(d12-Perylene)	Total	88	1			% Recovery	100	0	88	36 - 161%	PASS	13	30	PASS
(d8-Naphthalene)	Total	103	1			% Recovery	100	0	103	25 - 125%	PASS	1	30	PASS
1-Methylnaphthalene	Total	0.486	1	0.001	0.005	µg/L	0.5	0	97	31 - 128%	PASS	0	30	PASS
1-Methylphenanthrene	Total	0.46	1	0.001	0.005	µg/L	0.5	0	92	66 - 127%	PASS	4	30	PASS
2,3,5-Trimethylnaphthalene	Total	0.485	1	0.001	0.005	µg/L	0.5	0	97	55 - 122%	PASS	3	30	PASS
2,6-Dimethylnaphthalene	Total	0.492	1	0.001	0.005	µg/L	0.5	0	98	48 - 120%	PASS	4	30	PASS
2-Methylnaphthalene	Total	1.58	1	0.001	0.005	µg/L	1.5	0	105	47 - 130%	PASS	2	30	PASS
Acenaphthene	Total	1.63	1	0.001	0.005	µg/L	1.5	0	109	53 - 131%	PASS	4	30	PASS
Acenaphthylene	Total	1.66	1	0.001	0.005	µg/L	1.5	0	111	43 - 140%	PASS	6	30	PASS
Anthracene	Total	1.51	1	0.001	0.005	µg/L	1.5	0	101	58 - 135%	PASS	8	30	PASS
Benz[a]anthracene	Total	1.54	1	0.001	0.005	µg/L	1.5	0	103	55 - 145%	PASS	2	30	PASS
Benzo[a]pyrene	Total	1.35	1	0.001	0.005	µg/L	1.5	0	90	51 - 143%	PASS	2	30	PASS
Benzo[b]fluoranthene	Total	1.5	1	0.001	0.005	µg/L	1.5	0	100	46 - 165%	PASS	2	30	PASS
Benzo[e]pyrene	Total	0.444	1	0.001	0.005	µg/L	0.5	0	89	42 - 152%	PASS	2	30	PASS
Benzo[g,h,i]perylene	Total	1.41	1	0.001	0.005	µg/L	1.5	0	94	63 - 133%	PASS	2	30	PASS
Benzo[k]fluoranthene	Total	1.51	1	0.001	0.005	µg/L	1.5	0	101	56 - 145%	PASS	8	30	PASS
Biphenyl	Total	0.497	1	0.001	0.005	µg/L	0.5	0	99	56 - 119%	PASS	1	30	PASS
Chrysene	Total	1.37	1	0.001	0.005	µg/L	1.5	0	91	56 - 141%	PASS	5	30	PASS
Dibenz[a,h]anthracene	Total	1.28	1	0.001	0.005	µg/L	1.5	0	85	55 - 150%	PASS	2	30	PASS
Dibenzo[a,l]pyrene	Total	0.724	1	0.001	0.005	µg/L	0.5	0	145	50 - 150%	PASS	4	30	PASS
Dibenzothiophene	Total	0.483	1	0.001	0.005	µg/L	0.5	0	97	46 - 126%	PASS	5	30	PASS

PHYSIS Project ID: 1407003-449
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-65439-1

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODEc
Fluoranthene	Total	1.51	1	0.001	0.005	µg/L	1.5	0	101	60 - 146%	PASS	5	30	PASS	
Fluorene	Total	1.59	1	0.001	0.005	µg/L	1.5	0	106	58 - 131%	PASS	6	30	PASS	
Indeno[1,2,3-cd]pyrene	Total	1.26	1	0.001	0.005	µg/L	1.5	0	84	50 - 151%	PASS	4	30	PASS	
Naphthalene	Total	1.57	1	0.001	0.005	µg/L	1.5	0	105	41 - 126%	PASS	2	30	PASS	
Perylene	Total	0.474	1	0.001	0.005	µg/L	0.5	0	95	48 - 141%	PASS	0	30	PASS	
Phenanthrene	Total	1.51	1	0.001	0.005	µg/L	1.5	0	101	67 - 127%	PASS	5	30	PASS	
Pyrene	Total	1.51	1	0.001	0.005	µg/L	1.5	0	101	54 - 156%	PASS	5	30	PASS	

TENTATIVELY IDENTIFIED COMPOUNDS

Sample ID: 111810

Retention Time	Area (% of total)	Concentration (ng/L)	Library/ID	Cas Number	Match Quality (%)
35.3942	6.0684	1111	Anthracene-D10	1517-22-2	96
10.6099	3.6106	661	Oxalic acid, cyclohexyl ethyl ester	1000309-30-2	93
10.3706	0.6741	123	Hydroperoxide, 1-methylpentyl	24254-55-5	93
32.1603	0.6132	112	Benzoic acid, 2-ethylhexyl ester	5444-75-7	98

Concentration estimated using the response for Anthracene-d10

Sample ID: 111811

Retention Time	Area (% of total)	Concentration (ng/L)	Library/ID	Cas Number	Match Quality (%)
35.3922	5.9554	1111	Anthracene-D10-	1517-22-2	96
10.6099	3.1275	584	4H-1,2,4-Triazole, 4-methyl-	10570-40-8	92
32.1635	0.9173	171	Benzoic acid, 2-ethylhexyl ester	5444-75-7	98
29.9704	0.6633	124	Hexanoic acid, 3,5,5-trimethyl-, 2-ethylhexyl ester	1000406-82-2	97
10.3709	0.6112	114	Hydroperoxide, 1-methylpentyl	24254-55-5	93
10.2498	0.5401	101	Hydroperoxide, 1-ethylbutyl	24254-56-6	91
55.4104	0.5285	99	Benzyl butyl phthalate	85-68-7	96

Concentration estimated using the response for Anthracene-d10

Sample ID: 111812

Retention Time	Area (% of total)	Concentration (ng/L)	Library/ID	Cas Number	Match Quality (%)
35.3911	5.7729	1111	Anthracene-D10-	1719-06-8	96
10.6072	3.4787	670	Oxalic acid, cyclohexyl propyl ester	1000309-30-3	91
32.1622	1.4403	277	Benzoic acid, 2-ethylhexyl ester	5444-75-7	98
29.9711	1.0548	203	Hexanoic acid, 3,5,5-trimethyl-, 2-ethylhexyl ester	1000406-82-2	98
19.6381	0.6899	133	Propanoic acid, 2-methyl-, 3-hydroxy-2,2,4-trimethylpentyl ester	77-68-9	97
10.3699	0.6634	128	Hydroperoxide, 1-methylpentyl	24254-55-5	93
55.4140	0.6088	117	Benzyl butyl phthalate	85-68-7	95
10.2488	0.5855	113	Hydroperoxide, 1-ethylbutyl	24254-56-6	90
19.0463	0.5457	105	2,2,4-Trimethyl-1,3-pentanediol diisobutyrate	6846-50-0	93

Concentration estimated using the response for Anthracene-d10

Sample ID: 111813

Retention Time	Area (% of total)	Concentration (ng/L)	Library/ID	Cas Number	Match Quality (%)
35.3902	5.3587	1111	Anthracene-D10-	1719-06-8	96
10.6085	3.7842	785	1,5-Heptadien-4-one, 3,3,6-trimethyl-	546-49-6	88
10.6085	3.7805	784	Oxalic acid, cyclohexyl pentyl ester	1000309-30-6	88
32.1611	1.1584	240	Benzoic acid, 2-ethylhexyl ester	5444-75-7	98
29.9699	0.8394	174	Hexanoic acid, 3,5,5-trimethyl-, 2-ethylhexyl ester	1000406-82-2	97
10.3704	0.6510	135	Hydroperoxide, 1-methylpentyl	24254-55-5	93
10.2494	0.5638	117	Hydroperoxide, 1-ethylbutyl	24254-56-6	91
19.6381	0.5636	117	Propanoic acid, 2-methyl-, 3-hydroxy-2,2,4-trimethylpentyl ester	77-68-9	97

Concentration estimated using the response for Anthracene-d10

Sample ID: Lab Blank B1_42134

Retention Time	Area (% of total)	Concentration (ng/L)	Library/ID	Cas Number	Match Quality (%)
35.3964	6.0784	1111	Anthracene-D10	1517-22-2	96
10.6068	3.6987	676	1,5-Heptadien-4-one, 3,3,6-trimethyl-	546-49-6	87
32.1633	1.1327	207	Benzoic acid, 2-ethylhexyl ester	5444-75-7	99
56.9306	1.0239	187	Hexanedioic acid, bis(2-ethylhexyl) ester	103-23-1	98
29.9720	0.8507	156	Hexanoic acid, 3,5,5-trimethyl-, 2-ethylhexyl ester	1000406-82-2	98

Concentration estimated using the response for Anthracene-d10

CHAIN OF CUSTODY

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

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arada, Rachelle	Carrier Tracking No(s):	COC No: 380-82582.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Rachelle.Arada@et.eurofinsus.com	State of Origin: Hawaii	Page: Page 1 of 1
Company: Physis Environmental Laboratories		Accreditations Required (See note): State - Hawaii		Job #: 380-65439-1
Address: 1904 Wright Circle, ,	Due Date Requested: 10/16/2023			
City: Anaheim	TAT Requested (days):			
State, Zip: CA, 92806				
Phone:	PO #:			
Email:	WO #:			
Project Name: RED-HILL	Project #: 38001111			
Site: Honolulu BWS Sites	SSOW#:			

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

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (625 PAH Physis LL (EAL) + TICs)/ 625 PAH Physis LL (EAL) + TICs	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MOANALUA WELLS (380-65439-1)	10/2/23	10:29 Hawaiian		Water			X	2	See Attached Instructions
AIEA GULCH WELLS PUMP 2 (380-65439-2)	10/2/23	12:02 Hawaiian		Water			X	2	See Attached Instructions
AIEA WELLS PUMPS 1&2 (260) P2 (380-65439-3)	10/2/23	11:34 Hawaiian		Water			X	2	See Attached Instructions
HALAWA WELLS UNITS 1 & 2 P1 (380-65439-4)	10/2/23	10:58 Hawaiian		Water			X	2	See Attached Instructions

Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Eaton Analytical, LLC.

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

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	10/5/23 1111	EESA		10/5/23 1112	Physis
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver: 06/08/2021

PHYSIS
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature

Sample Receipt Summary

PHYSIS
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature

Project Iteration ID: 1407003-449
Client Name: Eurofins Eaton Analytical
Project Name: RED-HILL Project # 38001111 Job # 380-65439-1
COC Page Number: 2 of 2
Bottle Label Color: NA

Receiving Info

1. Initials Received By: RGH
2. Date Received: 10/5/23
3. Time Received: 1112
4. Client Name: Eurofins
5. Courier Information: (Please circle)
   - (Client) • UPS • Area Fast • DRS
   - FedEx • GSO/GLS • Ontrac • PAMS
   - PHYSIS Driver:
     i. Start Time:_____ iii. Total Mileage: _____
     ii. End Time:_____ iv. Number of Pickups:_____
6. Container Information: (Please put the # of containers or circle none)
   - 2 Cooler • ___ Styrofoam Cooler • ____ Boxes • None
   - ___ Carboy(s) • ___Carboy Trash Can(s) • ____ Carboy Cap(s) • Other _____
7. What type of ice was used: (Please circle any that apply)
   - (Wet Ice) • Blue Ice • Dry Ice • Water • None
8. Randomly Selected Samples Temperature (°C): 0.1 Used I/R Thermometer # 1-2

Inspection Info

1. Initials Inspected By: RJ

Sample Integrity Upon Receipt:

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

Notes:

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

Chain of Custody Record

eurofins

Client Information	Sampler: BAILEY	Lab PM: Arada, Rachelle	Carrier Tracking No(s):	COC No: 380-27941-2757 2
Client Contact: Dr Ron Fenstermacher	Phone: 808-748-5840	E-Mail: Rachelle.Arada@et.eurofinsus.com	State of Origin:	Page: Page 2 of 2
Company: City & County of Honolulu	PWSID:			Job #:
Address: 630 South Beretania Street, Chemistry Lab	Due Date Requested:			
City: Honolulu	TAT Requested (days):			
State, Zip: HI, 96843	Compliance Project: Δ No			
Phone: 808-748-5091 (tel)	PO #: C20525101 exp 05312023			
Email: rfenstemacher@hbws.org	WO #:			
Project Name: RED-HILL/HBWS sites Event Desc. RUSH Weekly Red Hill	Project #: 38001111			
Site:	SSOW#:			

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs	SUBCONTRACT - 8015 Gas (Purgable) LL (EAL)	SUBCONTRACT - 8015 Diesel LL (EAL) and Motor Oil	525.2_PREC - (MOD) 525plus PLUS TICs	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	537.1_DW_PREC - 537.1 Full List	533 - All Analytes	Total Number of containers	Special Instructions/Note:
			Preservation Code:				R	R	RA		RA	Y	N		
MOANALUA WELLS	2-Oct-2023	1029	G	Water								3	3		① 7736 215114 78 - 1.1 - 0.1 = 1.0
AIEA GULCH WELLS PUMP2	2-Oct-2023	1202	G	Water								3	3		② 7736 215114 89 - 2.0 - 0.1 = 1.9
AIEA WELLS PUMPS 1&2 (260) F2	2-Oct-2023	1134	G	Water								3	3		③ 7736 215115 15 - 1.8 - 0.1 = 1.7
HALAWA WELLS UNITS 1&2 J1	2-Oct-2023	1058	G	Water								3	3		④ 7736 215115 26 - 2.6 - 0.1 = 2.5
															⑤ 7736 215115 37 - 5.7 - 0.1 = 5.6
FB MOANALUA WELLS	2-Oct-2023	1529		Water								1	1		⑥ 7736 215115 48 - 2.4 - 0.1 = 2.3
FB AIEA GULCH WELLS PUMP2	2-Oct-2023	1202		Water								1	1		
FB AIEA WELLS PUMPS 1&2 (260)	2-Oct-2023	1134		Water								1	1		
FB HALAWA WELLS UNITS 1&2	2-Oct-2023	1058		Water								1	1		

Preservation Codes

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

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I II III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment: FED EX 6 COOLERS
Relinquished by: BAILEY	Date/Time: 03036.2023 1400	Company: HBWS	Received by: G REITNER
Relinquished by	Date/Time	Company	Received by
Relinquished by	Date/Time	Company	Received by

Date/Time	Company
10/04/2023 10:40	EEAP
Date/Time	Company
Date/Time	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No

Cooler Temperature(s) °C and Other Remarks: (751A) -0.1 - GEL FROZEN

Ver 01/16/2019

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

Chain of Custody Record

eurofins Environment Testing

Client Information	Sampler: BAILEY	Lab PM: Arada, Rachelle	Carrier Tracking No(s):	COC No: 380-27941-2757 2
Client Contact: Dr Ron Fenstermacher	Phone: 808-748-5840	E-Mail: Rachelle.Arada@et.eurofinsus.com	State of Origin:	Page: Page 1 of 2
Company: City & County of Honolulu	PWSID:			Job #:
Address: 630 South Beretania Street; Chemistry Lab	Due Date Requested:			
City: Honolulu	TAT Requested (days):			
State, Zip: HI, 96843	Compliance Project: Δ No			
Phone: 808-748-5091 (tel)	PO #: C20525101 exp 05312023			
Email: rfenstemacher@hbws.org	WO #:			
Project Name: RED-HILL/HBWS sites Event Desc: RUSH Weekly Red Hill	Project #: 38001111			
Site:	SSOW#:			

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs	SUBCONTRACT - 8015 Gas (Purgable) LL (EAL)	SUBCONTRACT - 8015 Diesel LL (EAL) and Motor Oil	525.2_PREC - (MOD) 525plus PLUS TICs	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	537.1_DW_PREC - 537.1 Full List	533 - All Analytes	Total Number of containers	Special Instructions/Note:
			Preservation Code				R	R	RA		RA	Y	N		
MOANALUA WELLS	2-Oct-2023	1029	G	Water			2		2	2	4				① 7736 2151 1478 - 1.1' 0.1' - 1.0'
AIEA GULCH WELLS PUMP2	2-Oct-2023	1202	G	Water			2		2	2	4				② 7736 2151 1489 - 2.0' 0.1' 1.9'
AIEA WELLS PUMPS 1&2 (260) P2	2-Oct-2023	1134	G	Water			2		2	2	4				③ 7736 2151 1515 - 1.8' - 0.1' 1.7'
HALAWA WELLS UNITS 1&2 P1	2-Oct-2023	1058	G	Water			2		2	2	4				④ 7736 2151 1526 - 2.6' 0.1' - 2.5'
															⑤ 7736 2151 1537 - 5.7' 0.1' - 5.6'
															⑥ 7736 2151 1548 - 2.4' - 0.1' 2.3'
TB MOANALUA WELLS	2-Oct-2023	1029		Water							2				
TB AIEA GULCH WELLS PUMP2	2-Oct-2023	1202		Water							2				
TB AIEA WELLS PUMPS 1&2 (260)	2-Oct-2023	1134		Water							2				
TB HALAWA WELLS UNITS 1&2	2-Oct-2023	1058		Water							2				

380-65439 COC

Preservation Codes

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

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment: FED EX 6 COOLERS

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
BAILEY	03Oct.2023 1400	HBWS	G. RETTNER	10/04/2023 10:40	EEAP
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks
		(751A) -0.1° GEL-FROZEN

Ver 01/16/2019

11/22/2023

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

Chain of Custody Record

eurofins

Client Information	Sampler: BAILEY	Lab PM: Arada, Rachelle	Carrier Tracking No(s):	COC No: 380-27941-2757 2
Client Contact: Dr Ron Fenstermacher	Phone: 808-748-5840	E-Mail: Rachelle.Arada@et.eurofinsus.com	State of Origin:	Page: Page 1 of 2
Company: City & County of Honolulu	PWSID:			Job #:
Address: 630 South Beretania Street; Chemistry Lab	Due Date Requested:			
City: Honolulu	TAT Requested (days):			
State, Zip: HI, 96843	Compliance Project: Δ No			
Phone: 808-748-5091 (tel)	PO #: C20525101 exp 05312023			
Email: rfenstemacher@hbws.org	WO #:			
Project Name: RED-HILL/HBWS sites Event Desc: RUSH Weekly Red Hill	Project #: 38001111			
Site:	SSOW#:			

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs	SUBCONTRACT - 8015 Gas (Purgable) LL (EAL)	SUBCONTRACT - 8915 Diesel LL (EAL) and Motor Oil	525.2_PREC - (MOD) 525plus PLUS TICs	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	537.1_DW_PREC - 537.1 Full List	533 - All Analytes	Total Number of containers	Special Instructions/Note:
			Preservation Code				R	R	RA		RA	Y	N		
MOANALUA WELLS	2-Oct-2023	1029	G	Water			2		2	2	4				(1) 7736 215 1478 - 1.1' 0.1' - 1.0'
AIEA GULCH WELLS PUMP2	2-Oct-2023	1202	G	Water			2		2	2	4				(2) 7736 215 1489 - 2.0' 0.1' 1.9'
AIEA WELLS PUMPS 1&2 (260) P2	2-Oct-2023	1134	G	Water			2		2	2	4				(3) 7736 215 1515 - 1.8' 0.1' 1.7'
HALAWA WELLS UNITS 1&2 P1	2-Oct-2023	1058	G	Water			2		2	2	4				(4) 7736 215 1526 - 2.6' 0.1' 2.5'
															(5) 7736 215 1537 - 5.7' 0.1' 5.6'
															(6) 7736 215 1548 - 2.4' 0.1' 2.3'
TB MOANALUA WELLS	2-Oct-2023	1029		Water							2				
TB AIEA GULCH WELLS PUMP2	2-Oct-2023	1202		Water							2				
TB AIEA WELLS PUMPS 1&2 (260)	2-Oct-2023	1134		Water							2				
TB HALAWA WELLS UNITS 1&2	2-Oct-2023	1058		Water							2				

380-65439 COC

Preservation Codes

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

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment: FED EX 6 COOLERS
Relinquished by: BAILEY	Date/Time: 03Oct.2023 1400	Company: HBWS	Received by: G. RETTNER Date/Time: 10/04/2023 10'40 Company: EEAP
Relinquished by	Date/Time	Company	Received by Date/Time Company
Relinquished by	Date/Time	Company	Received by Date/Time Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No | Cooler Temperature(s) °C and Other Remarks: (751A) -0.1° GEL-FROZEN

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

Chain of Custody Record

eurofins

Client Information	Sampler: BAILEY	Lab PM: Arada, Rachelle	Carrier Tracking No(s):	COC No: 380-27941-2757 2
Client Contact: Dr Ron Fenstermacher	Phone: 808-748-5840	E-Mail: Rachelle.Arada@et.eurofinsus.com	State of Origin:	Page: Page 2 of 2
Company: City & County of Honolulu	PWSID:	Analysis Requested		Job #:
Address: 630 South Beretania Street, Chemistry Lab	Due Date Requested:			Preservation Codes: A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Y - Trizma; Z - other (specify); Other:
City: Honolulu	TAT Requested (days):			
State, Zip: HI, 96843	Compliance Project: Δ No			
Phone: 808-748-5091 (tel)	PO #: C20525101 exp 05312023			
Email: rfenstemacher@hbws.org	WO #:			
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Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs	SUBCONTRACT - 8015 Gas (Purgable) LL (EAL)	SUBCONTRACT - 8015 Diesel LL (EAL) and Motor Oil	525.2_PREC - (MOD) 525plus PLUS TICs	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	537.1_DW_PREC - 537.1 Full List	533 - All Analytes	Total Number of containers	Special Instructions/Note:
			Preservation Code				R	R	RA		RA	Y	N		
MOANALUA WELLS	2-Oct-2023	1029	G	Water								3	3		① 7736 215 1478 -1.1 -0.1 = 1.0
AIEA GULCH WELLS PUMP2	2-Oct-2023	1202	G	Water								3	3		② 7736 215 1489 -2.0 -0.1 = 1.9
AIEA WELLS PUMPS 1&2 (260) P2	2-Oct-2023	1134	G	Water								3	3		③ 7736 215 1515 -1.8 -0.1 = 1.7
HALAWA WELLS UNITS 1&2 P1	2-Oct-2023	1058	G	Water								3	3		④ 7736 215 1526 -2.6 -0.1 = 2.5
															⑤ 7736 215 1537 -5.7 -0.1 = 5.6
FB MOANALUA WELLS	2-Oct-2023	1029		Water								1	1		⑥ 7736 215 1548 -2.4 -0.1 = 2.3
FB AIEA GULCH WELLS PUMP2	2-Oct-2023	1202		Water								1	1		
FB AIEA WELLS PUMPS 1&2 (260)	2-Oct-2023	1134		Water								1	1		
FB HALAWA WELLS UNITS 1&2	2-Oct-2023	1058		Water								1	1		

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Relinquished by	Date/Time	Company	Received by	Date/Time	Company
BAILEY	03Oct.2023 1400	HBWS	G REITNER	10/04/2023 10:40	EEAP
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No:

Cooler Temperature(s) °C and Other Remarks: 751A -0.1 -- GEL-FROZEN

Ver 01/16/2019

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-65439-2

Login Number: 65439
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.	False	Sample time discrepancies. Refer to NCM for details.
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	