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 12/12/2023 3:34:00 PM

JOB DESCRIPTION

RED-HILL

JOB NUMBER

380-67495-2

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

See page two for job notes and contact information.

Job Notes

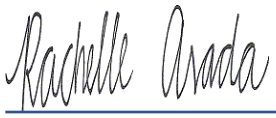
This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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: 380-67495-2

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

Job ID: 380-67495-2

Laboratory: Eurofins Eaton Analytical Pomona

Narrative

Job Narrative
380-67495-2

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 10/18/2023 10:20 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 0.7°C, 2.5°C and 5.4°C

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

Method 625 PAH Physis LL (EAL) + TICs: This method was subcontracted to Physis Environmental Laboratories. The subcontract laboratory certification is different from that of the facility issuing the final report. The subcontract report is appended in its entirety.

Detection Summary

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

Job ID: 380-67495-2

Client Sample ID: MOANALUA WELLS — Lab Sample ID: 380-67495-1

No Detections.

Client Sample ID: AIEA GULCH WELLS PUMP 2 — Lab Sample ID: 380-67495-2

No Detections.

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2 — Lab Sample ID: 380-67495-3

No Detections.

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1 — Lab Sample ID: 380-67495-4

No Detections.

Client Sample ID: TB MOANALUA WELLS — Lab Sample ID: 380-67495-5

No Detections.

Client Sample ID: TB AIEA GULCH WELLS PUMP 2 — Lab Sample ID: 380-67495-6

No Detections.

Client Sample ID: TB AIEA WELLS PUMPS 1&2 (260) P2 — Lab Sample ID: 380-67495-7

No Detections.

Client Sample ID: TB HALAWA WELLS UNITS 1 & 2 P1 — Lab Sample ID: 380-67495-8

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: MOANALUA WELLS
Date Collected: 10/16/23 09:39
Date Received: 10/18/23 10:20

Lab Sample ID: 380-67495-1
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		10/19/23 00:00	11/17/23 10:07	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 10:07	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 10:07	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 10:07	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 10:07	1
Acenaphthene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 10:07	1
Acenaphthylene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 10:07	1
Anthracene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 10:07	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 10:07	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 10:07	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 10:07	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 10:07	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 10:07	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 10:07	1
Biphenyl	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 10:07	1
Chrysene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 10:07	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 10:07	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 10:07	1
Dibenzothiophene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 10:07	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		10/19/23 00:00	11/17/23 10:07	1
Fluoranthene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 10:07	1
Fluorene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 10:07	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 10:07	1
Naphthalene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 10:07	1
Perylene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 10:07	1
Phenanthrene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 10:07	1
Pyrene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 10:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
(d10-Acenaphthene)	*38*		*27 - 133*	*10/19/23 00:00*	*11/17/23 10:07*	*1*
(d10-Phenanthrene)	*43*		*43 - 129*	*10/19/23 00:00*	*11/17/23 10:07*	*1*
(d12-Chrysene)	*72*		*52 - 144*	*10/19/23 00:00*	*11/17/23 10:07*	*1*
(d12-Perylene)	*77*		*36 - 161*	*10/19/23 00:00*	*11/17/23 10:07*	*1*
(d8-Naphthalene)	*38*		*25 - 125*	*10/19/23 00:00*	*11/17/23 10:07*	*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			10/19/23 23:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE	*89*		*60 - 140*		*10/19/23 23:04*	*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			10/27/23 20:35	1
JP5	ND	U	0.053		mg/L			10/27/23 20:35	1
JP8	ND	U	0.053		mg/L			10/27/23 20:35	1
MOTOR OIL	ND	U	0.053		mg/L			10/27/23 20:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOBENZENE	*70*		*60 - 130*		*10/27/23 20:35*	*1*

Client Sample ID: MOANALUA WELLS

Lab Sample ID: 380-67495-1
Matrix: Drinking Water
Date Collected: 10/16/23 09:39
Date Received: 10/18/23 10:20

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
HEXACOSANE	*88*		*60 - 130*		*10/27/23 20:35*	*1*

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-67495-2
Matrix: Drinking Water
Date Collected: 10/16/23 10:36
Date Received: 10/18/23 10:20

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		10/19/23 00:00	11/17/23 11:53	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 11:53	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 11:53	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 11:53	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 11:53	1
Acenaphthene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 11:53	1
Acenaphthylene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 11:53	1
Anthracene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 11:53	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 11:53	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 11:53	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 11:53	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 11:53	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 11:53	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 11:53	1
Biphenyl	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 11:53	1
Chrysene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 11:53	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 11:53	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 11:53	1
Dibenzothiophene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 11:53	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		10/19/23 00:00	11/17/23 11:53	1
Fluoranthene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 11:53	1
Fluorene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 11:53	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 11:53	1
Naphthalene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 11:53	1
Perylene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 11:53	1
Phenanthrene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 11:53	1
Pyrene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 11:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
(d10-Acenaphthene)	*46*		*27 - 133*	*10/19/23 00:00*	*11/17/23 11:53*	*1*
(d10-Phenanthrene)	*47*		*43 - 129*	*10/19/23 00:00*	*11/17/23 11:53*	*1*
(d12-Chrysene)	*73*		*52 - 144*	*10/19/23 00:00*	*11/17/23 11:53*	*1*
(d12-Perylene)	*82*		*36 - 161*	*10/19/23 00:00*	*11/17/23 11:53*	*1*
(d8-Naphthalene)	*46*		*25 - 125*	*10/19/23 00:00*	*11/17/23 11:53*	*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			10/19/23 23:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE	*89*		*60 - 140*		*10/19/23 23:43*	*1*

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-67495-2
Date Collected: 10/16/23 10:36
Matrix: Drinking Water
Date Received: 10/18/23 10:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DIESEL	ND	U	0.03		mg/L			10/27/23 20:54	1
JP5	ND	U	0.059		mg/L			10/27/23 20:54	1
JP8	ND	U	0.059		mg/L			10/27/23 20:54	1
MOTOR OIL	ND	U	0.059		mg/L			10/27/23 20:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOBENZENE	*71*		*60 - 130*		*10/27/23 20:54*	*1*
HEXACOSANE	*94*		*60 - 130*		*10/27/23 20:54*	*1*

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

Lab Sample ID: 380-67495-3
Date Collected: 10/16/23 11:05
Matrix: Drinking Water
Date Received: 10/18/23 10:20

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		10/19/23 00:00	11/17/23 13:38	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 13:38	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 13:38	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 13:38	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 13:38	1
Acenaphthene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 13:38	1
Acenaphthylene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 13:38	1
Anthracene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 13:38	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 13:38	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 13:38	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 13:38	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 13:38	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 13:38	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 13:38	1
Biphenyl	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 13:38	1
Chrysene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 13:38	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 13:38	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 13:38	1
Dibenzothiophene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 13:38	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		10/19/23 00:00	11/17/23 13:38	1
Fluoranthene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 13:38	1
Fluorene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 13:38	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 13:38	1
Naphthalene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 13:38	1
Perylene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 13:38	1
Phenanthrene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 13:38	1
Pyrene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 13:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
(d10-Acenaphthene)	*46*		*27 - 133*	*10/19/23 00:00*	*11/17/23 13:38*	*1*
(d10-Phenanthrene)	*49*		*43 - 129*	*10/19/23 00:00*	*11/17/23 13:38*	*1*
(d12-Chrysene)	*74*		*52 - 144*	*10/19/23 00:00*	*11/17/23 13:38*	*1*
(d12-Perylene)	*82*		*36 - 161*	*10/19/23 00:00*	*11/17/23 13:38*	*1*
(d8-Naphthalene)	*46*		*25 - 125*	*10/19/23 00:00*	*11/17/23 13:38*	*1*

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

Job ID: 380-67495-2

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

Lab Sample ID: 380-67495-3
Date Collected: 10/16/23 11:05
Matrix: Drinking Water
Date Received: 10/18/23 10:20

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			10/20/23 00:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE	*91*		*60 - 140*		*10/20/23 00:23*	*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	0.028		mg/L			10/27/23 21:12	1
JP5	ND	U	0.056		mg/L			10/27/23 21:12	1
JP8	ND	U	0.056		mg/L			10/27/23 21:12	1
MOTOR OIL	ND	U	0.056		mg/L			10/27/23 21:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOBENZENE	*68*		*60 - 130*		*10/27/23 21:12*	*1*
HEXACOSANE	*92*		*60 - 130*		*10/27/23 21:12*	*1*

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1

Lab Sample ID: 380-67495-4
Date Collected: 10/16/23 10:07
Matrix: Drinking Water
Date Received: 10/18/23 10:20

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		10/19/23 00:00	11/17/23 15:23	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 15:23	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 15:23	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 15:23	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 15:23	1
Acenaphthene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 15:23	1
Acenaphthylene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 15:23	1
Anthracene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 15:23	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 15:23	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 15:23	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 15:23	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 15:23	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 15:23	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 15:23	1
Biphenyl	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 15:23	1
Chrysene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 15:23	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 15:23	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 15:23	1
Dibenzothiophene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 15:23	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		10/19/23 00:00	11/17/23 15:23	1
Fluoranthene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 15:23	1
Fluorene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 15:23	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 15:23	1
Naphthalene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 15:23	1
Perylene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 15:23	1
Phenanthrene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 15:23	1
Pyrene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/17/23 15:23	1

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1

Lab Sample ID: 380-67495-4

Date Collected: 10/16/23 10:07

Matrix: Drinking Water

Date Received: 10/18/23 10:20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
(d10-Acenaphthene)	*47*		*27 - 133*	*10/19/23 00:00*	*11/17/23 15:23*	*1*
(d10-Phenanthrene)	*49*		*43 - 129*	*10/19/23 00:00*	*11/17/23 15:23*	*1*
(d12-Chrysene)	*74*		*52 - 144*	*10/19/23 00:00*	*11/17/23 15:23*	*1*
(d12-Perylene)	*81*		*36 - 161*	*10/19/23 00:00*	*11/17/23 15:23*	*1*
(d8-Naphthalene)	*47*		*25 - 125*	*10/19/23 00:00*	*11/17/23 15:23*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			10/20/23 01:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE	*93*		*60 - 140*		*10/20/23 01:03*	*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	0.028		mg/L			10/27/23 21:31	1
JP5	ND	U	0.056		mg/L			10/27/23 21:31	1
JP8	ND	U	0.056		mg/L			10/27/23 21:31	1
MOTOR OIL	ND	U	0.056		mg/L			10/27/23 21:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOBENZENE	*66*		*60 - 130*		*10/27/23 21:31*	*1*
HEXACOSANE	*85*		*60 - 130*		*10/27/23 21:31*	*1*

Client Sample ID: TB MOANALUA WELLS

Lab Sample ID: 380-67495-5

Date Collected: 10/16/23 09:39

Matrix: Water

Date Received: 10/18/23 10:20

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			10/20/23 01:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE	*97*		*60 - 140*		*10/20/23 01:42*	*1*

Client Sample ID: TB AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-67495-6

Date Collected: 10/16/23 10:36

Matrix: Water

Date Received: 10/18/23 10:20

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			10/20/23 02:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE	*87*		*60 - 140*		*10/20/23 02:21*	*1*

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

Lab Sample ID: 380-67495-7

Date Collected: 10/16/23 11:05

Matrix: Water

Date Received: 10/18/23 10:20

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			10/20/23 03:01	1

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

Job ID: 380-67495-2

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

Lab Sample ID: 380-67495-7

Date Collected: 10/16/23 11:05
Matrix: Water
Date Received: 10/18/23 10:20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE	*92*		*60 - 140*		*10/20/23 03:01*	*1*

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

Lab Sample ID: 380-67495-8

Date Collected: 10/16/23 10:07
Matrix: Water
Date Received: 10/18/23 10:20

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			10/20/23 03:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE	*93*		*60 - 140*		*10/20/23 03:40*	*1*

Surrogate Summary

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

Job ID: 380-67495-2

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)
112121-B1	Method Blank	88	93	80	90	85
112121-BS1	Lab Control Sample	91	95	85	95	86
112121-BS2	Lab Control Sample Dup	89	97	87	90	90

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)
380-67495-1	MOANALUA WELLS	38	43	72	38	77
380-67495-2	AIEA GULCH WELLS PUMP 2	46	47	73	46	82
380-67495-3	AIEA WELLS PUMPS 1&2 (260) P2	46	49	74	46	82
380-67495-4	HALAWA WELLS UNITS 1 & 2 P1	47	49	74	47	81

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)
380-67495-1	MOANALUA WELLS	89
380-67495-2	AIEA GULCH WELLS PUMP 2	89
380-67495-3	AIEA WELLS PUMPS 1&2 (260) P2	91
380-67495-4	HALAWA WELLS UNITS 1 & 2 P1	93

Surrogate Legend

BFB = BROMOFLUOROBENZENE

Surrogate Summary

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

Job ID: 380-67495-2

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)
380-67495-5	TB MOANALUA WELLS	97
380-67495-6	TB AIEA GULCH WELLS PUMP 2	87
380-67495-7	TB AIEA WELLS PUMPS 1&2 (260) P2	92
380-67495-8	TB HALAWA WELLS UNITS 1 & 2 P1	93

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	
23VGH7J05B	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)
23VGH7J05C	LCD	106
23VGH7J05L	Lab Control Sample	101

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)
380-67495-1	MOANALUA WELLS	70	88
380-67495-2	AIEA GULCH WELLS PUMP 2	71	94
380-67495-3	AIEA WELLS PUMPS 1&2 (260) P2	68	92
380-67495-4	HALAWA WELLS UNITS 1 & 2 P1	66	85

Surrogate Legend

BB = BROMOBENZENE

HEXACOSANE = HEXACOSANE

Surrogate Summary

Client: City & County of Honolulu
Job ID: 380-67495-2
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		
23DSJ033WB	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)
23DSJ033WC	LCD	75	103
23DSJ033WL	Lab Control Sample	70	98
23J5J033WC	LCD	73	90
23J5J033WL	Lab Control Sample	77	97
23J8J033WC	LCD	87	94
23J8J033WL	Lab Control Sample	90	99

Surrogate Legend

BB = BROMOBENZENE

HEXACOSANE = HEXACOSANE

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

Lab Sample ID: 112121-B1
Matrix: BlankMatrix
Analysis Batch: O-42148

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: O-42148_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/16/23 14:50	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/16/23 14:50	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/16/23 14:50	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/16/23 14:50	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/16/23 14:50	1
Acenaphthene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/16/23 14:50	1
Acenaphthylene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/16/23 14:50	1
Anthracene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/16/23 14:50	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/16/23 14:50	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/16/23 14:50	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/16/23 14:50	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/16/23 14:50	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/16/23 14:50	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/16/23 14:50	1
Biphenyl	ND		0.005	0.001	µg/L		10/19/23 00:00	11/16/23 14:50	1
Chrysene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/16/23 14:50	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/16/23 14:50	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/16/23 14:50	1
Dibenzothiophene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/16/23 14:50	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		10/19/23 00:00	11/16/23 14:50	1
Fluoranthene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/16/23 14:50	1
Fluorene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/16/23 14:50	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/16/23 14:50	1
Naphthalene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/16/23 14:50	1
Perylene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/16/23 14:50	1
Phenanthrene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/16/23 14:50	1
Pyrene	ND		0.005	0.001	µg/L		10/19/23 00:00	11/16/23 14:50	1

Surrogate	*Blank %Recovery*	*Blank Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
(d10-Acenaphthene)	*88*		*27 - 133*	*10/19/23 00:00*	*11/16/23 14:50*	*1*
(d10-Phenanthrene)	*93*		*43 - 129*	*10/19/23 00:00*	*11/16/23 14:50*	*1*
(d12-Chrysene)	*80*		*52 - 144*	*10/19/23 00:00*	*11/16/23 14:50*	*1*
(d12-Perylene)	*85*		*36 - 161*	*10/19/23 00:00*	*11/16/23 14:50*	*1*
(d8-Naphthalene)	*90*		*25 - 125*	*10/19/23 00:00*	*11/16/23 14:50*	*1*

Lab Sample ID: 112121-BS1
Matrix: BlankMatrix
Analysis Batch: O-42148

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-42148_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	0.5	0.438		µg/L		88	31 - 128
1-Methylphenanthrene	0.5	0.479		µg/L		96	66 - 127
2,3,5-Trimethylnaphthalene	0.5	0.451		µg/L		90	55 - 122
2,6-Dimethylnaphthalene	0.5	0.428		µg/L		86	48 - 120
2-Methylnaphthalene	0.5	0.445		µg/L		89	47 - 130
Acenaphthene	0.5	0.442		µg/L		88	53 - 131
Acenaphthylene	0.5	0.449		µg/L		90	43 - 140
Anthracene	0.5	0.463		µg/L		93	58 - 135

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

Lab Sample ID: 112121-BS1
Matrix: BlankMatrix
Analysis Batch: O-42148

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-42148_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benz[a]anthracene	0.5	0.44		µg/L		88	55 - 145
Benzo[a]pyrene	0.5	0.44		µg/L		88	51 - 143
Benzo[b]fluoranthene	0.5	0.49		µg/L		98	46 - 165
Benzo[e]pyrene	0.5	0.462		µg/L		92	42 - 152
Benzo[g,h,i]perylene	0.5	0.448		µg/L		90	63 - 133
Benzo[k]fluoranthene	0.5	0.414		µg/L		83	56 - 145
Biphenyl	0.5	0.432		µg/L		86	56 - 119
Chrysene	0.5	0.399		µg/L		80	56 - 141
Dibenz[a,h]anthracene	0.5	0.68		µg/L		136	55 - 150
Dibenzo[a,l]pyrene	0.5	0.68		µg/L		136	50 - 150
Dibenzothiophene	0.5	0.461		µg/L		92	46 - 126
Disalicylidenepropanediamine	50	28.8		µg/L		58	50 - 150
Fluoranthene	0.5	0.496		µg/L		99	60 - 146
Fluorene	0.5	0.439		µg/L		88	58 - 131
Indeno[1,2,3-cd]pyrene	0.5	0.727		µg/L		145	50 - 151
Naphthalene	0.5	0.454		µg/L		91	41 - 126
Perylene	0.5	0.442		µg/L		88	48 - 141
Phenanthrene	0.5	0.46		µg/L		92	67 - 127
Pyrene	0.5	0.505		µg/L		101	54 - 156

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
(d10-Acenaphthene)	*91*		*27 - 133*
(d10-Phenanthrene)	*95*		*43 - 129*
(d12-Chrysene)	*85*		*52 - 144*
(d12-Perylene)	*86*		*36 - 161*
(d8-Naphthalene)	*95*		*25 - 125*

Lab Sample ID: 112121-BS2
Matrix: BlankMatrix
Analysis Batch: O-42148

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: O-42148_P

Analyte	Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	0.5	0.431		µg/L		86	31 - 128	2	30
1-Methylphenanthrene	0.5	0.489		µg/L		98	66 - 127	2	30
2,3,5-Trimethylnaphthalene	0.5	0.448		µg/L		90	55 - 122	0	30
2,6-Dimethylnaphthalene	0.5	0.435		µg/L		87	48 - 120	1	30
2-Methylnaphthalene	0.5	0.434		µg/L		87	47 - 130	2	30
Acenaphthene	0.5	0.431		µg/L		86	53 - 131	2	30
Acenaphthylene	0.5	0.442		µg/L		88	43 - 140	2	30
Anthracene	0.5	0.463		µg/L		93	58 - 135	0	30
Benz[a]anthracene	0.5	0.447		µg/L		89	55 - 145	1	30
Benzo[a]pyrene	0.5	0.429		µg/L		86	51 - 143	2	30
Benzo[b]fluoranthene	0.5	0.503		µg/L		101	46 - 165	3	30
Benzo[e]pyrene	0.5	0.471		µg/L		94	42 - 152	2	30
Benzo[g,h,i]perylene	0.5	0.464		µg/L		93	63 - 133	3	30
Benzo[k]fluoranthene	0.5	0.4		µg/L		80	56 - 145	4	30
Biphenyl	0.5	0.424		µg/L		85	56 - 119	1	30
Chrysene	0.5	0.407		µg/L		81	56 - 141	1	30

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

Lab Sample ID: 112121-BS2
Matrix: BlankMatrix
Analysis Batch: O-42148

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: O-42148_P

Analyte			Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dibenz[a,h]anthracene			0.5	0.703		µg/L		141	55 - 150	4	30
Dibenzo[a,l]pyrene			0.5	0.703		µg/L		141	50 - 150	4	30
Dibenzothiophene			0.5	0.46		µg/L		92	46 - 126	0	30
Disalicylidenepropanediamine			50	34.1		µg/L		68	50 - 150	16	30
Fluoranthene			0.5	0.509		µg/L		102	60 - 146	3	30
Fluorene			0.5	0.443		µg/L		89	58 - 131	1	30
Indeno[1,2,3-cd]pyrene			0.5	0.745		µg/L		149	50 - 151	3	30
Naphthalene			0.5	0.441		µg/L		88	41 - 126	3	30
Perylene			0.5	0.458		µg/L		92	48 - 141	4	30
Phenanthrene			0.5	0.459		µg/L		92	67 - 127	0	30
Pyrene			0.5	0.52		µg/L		104	54 - 156	3	30

Surrogate	*LCS DUP %Recovery*	*LCS DUP Qualifier*	*Limits*
(d10-Acenaphthene)	*89*		*27 - 133*
(d10-Phenanthrene)	*97*		*43 - 129*
(d12-Chrysene)	*87*		*52 - 144*
(d12-Perylene)	*90*		*36 - 161*
(d8-Naphthalene)	*90*		*25 - 125*

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

Lab Sample ID: 23VGH7J05B
Matrix: WATER
Analysis Batch: 23VGH7J05

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			10/19/23 15:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE					*10/19/23 15:46*	*1*

Lab Sample ID: 23VGH7J05L
Matrix: WATER
Analysis Batch: 23VGH7J05

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	0.425		mg/L		85	60 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
BROMOFLUOROBENZENE	*101*		*70 - 130*

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

Lab Sample ID: 23DSJ033WB
Matrix: WATER
Analysis Batch: 23DSJ033W

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			10/27/23 17:28	1
JP5	ND	U	0.05		mg/L			10/27/23 17:28	1
JP8	ND	U	0.05		mg/L			10/27/23 17:28	1
MOTOR OIL	ND	U	0.05		mg/L			10/27/23 17:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOBENZENE					*10/27/23 17:28*	*1*
HEXACOSANE					*10/27/23 17:28*	*1*

Lab Sample ID: 23DSJ033WL
Matrix: WATER
Analysis Batch: 23DSJ033W

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	*70*		*60 - 130*
HEXACOSANE	*98*		*60 - 130*

Lab Sample ID: 23J5J033WL
Matrix: WATER
Analysis Batch: 23DSJ033W

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	1.75		mg/L		70	30 - 160		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
BROMOBENZENE	*77*		*60 - 130*
HEXACOSANE	*97*		*60 - 130*

Lab Sample ID: 23J8J033WL
Matrix: WATER
Analysis Batch: 23DSJ033W

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	1.94		mg/L		78	30 - 160		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
BROMOBENZENE	*90*		*60 - 130*
HEXACOSANE	*99*		*60 - 130*

Subcontract

Analysis Batch: O-42148

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-67495-1	MOANALUA WELLS	Total/NA	Drinking Water	625 PAH Physis LL (EAL) + TICs	O-42148_P
380-67495-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	625 PAH Physis LL (EAL) + TICs	O-42148_P
380-67495-3	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	625 PAH Physis LL (EAL) + TICs	O-42148_P
380-67495-4	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Drinking Water	625 PAH Physis LL (EAL) + TICs	O-42148_P
112121-B1	Method Blank	Total/NA	BlankMatrix	625 PAH Physis LL (EAL) + TICs	O-42148_P
112121-BS1	Lab Control Sample	Total/NA	BlankMatrix	625 PAH Physis LL (EAL) + TICs	O-42148_P
112121-BS2	Lab Control Sample Dup	Total/NA	BlankMatrix	625 PAH Physis LL (EAL) + TICs	O-42148_P

Analysis Batch: 23DSJ033W

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-67495-1	MOANALUA WELLS	Total/NA	Drinking Water	8015 LL DRO/MRO/JP5/JP8	
380-67495-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	8015 LL DRO/MRO/JP5/JP8	
380-67495-3	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	8015 LL DRO/MRO/JP5/JP8	
380-67495-4	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Drinking Water	8015 LL DRO/MRO/JP5/JP8	
23DSJ033WB	Method Blank	Total/NA	WATER	8015 LL DRO/MRO/JP5/JP8	
23DSJ033WL	Lab Control Sample	Total/NA	WATER	8015 LL DRO/MRO/JP5/JP8	
23J5J033WL	Lab Control Sample	Total/NA	WATER	8015 LL DRO/MRO/JP5/JP8	
23J8J033WL	Lab Control Sample	Total/NA	WATER	8015 LL DRO/MRO/JP5/JP8	

Analysis Batch: 23VGH7J05

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-67495-1	MOANALUA WELLS	Total/NA	Drinking Water	8015 Gas (Purgeable) LL (EAL)	
380-67495-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	8015 Gas (Purgeable) LL (EAL)	
380-67495-3	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	8015 Gas (Purgeable) LL (EAL)	
380-67495-4	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Drinking Water	8015 Gas (Purgeable) LL (EAL)	

Subcontract (Continued)

Analysis Batch: 23VGH7J05 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-67495-5	TB MOANALUA WELLS	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
380-67495-6	TB AIEA GULCH WELLS PUMP 2	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
380-67495-7	TB AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
380-67495-8	TB HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
23VGH7J05B	Method Blank	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	
23VGH7J05L	Lab Control Sample	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	

Prep Batch: O-42148_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-67495-1	MOANALUA WELLS	Total/NA	Drinking Water	EPA_625	
380-67495-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	EPA_625	
380-67495-3	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	EPA_625	
380-67495-4	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Drinking Water	EPA_625	
112121-B1	Method Blank	Total/NA	BlankMatrix	EPA_625	
112121-BS1	Lab Control Sample	Total/NA	BlankMatrix	EPA_625	
112121-BS2	Lab Control Sample Dup	Total/NA	BlankMatrix	EPA_625	

Lab Chronicle

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

Job ID: 380-67495-2

Client Sample ID: MOANALUA WELLS
Date Collected: 10/16/23 09:39
Date Received: 10/18/23 10:20

Lab Sample ID: 380-67495-1
Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA_625		1	O-42148_P			10/19/23 00:00
Total/NA	Analysis	625 PAH Physis LL (EAL) + TICs		1	O-42148	YC		11/17/23 10:07
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	23VGH7J05	SCerva		10/19/23 23:04
Total/NA	Analysis	8015 LL DRO/MRO/JP5/JP8		1	23DSJ033W	SDees		10/27/23 20:35

Client Sample ID: AIEA GULCH WELLS PUMP 2
Date Collected: 10/16/23 10:36
Date Received: 10/18/23 10:20

Lab Sample ID: 380-67495-2
Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA_625		1	O-42148_P			10/19/23 00:00
Total/NA	Analysis	625 PAH Physis LL (EAL) + TICs		1	O-42148	YC		11/17/23 11:53
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	23VGH7J05	SCerva		10/19/23 23:43
Total/NA	Analysis	8015 LL DRO/MRO/JP5/JP8		1	23DSJ033W	SDees		10/27/23 20:54

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2
Date Collected: 10/16/23 11:05
Date Received: 10/18/23 10:20

Lab Sample ID: 380-67495-3
Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA_625		1	O-42148_P			10/19/23 00:00
Total/NA	Analysis	625 PAH Physis LL (EAL) + TICs		1	O-42148	YC		11/17/23 13:38
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	23VGH7J05	SCerva		10/20/23 00:23
Total/NA	Analysis	8015 LL DRO/MRO/JP5/JP8		1	23DSJ033W	SDees		10/27/23 21:12

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1
Date Collected: 10/16/23 10:07
Date Received: 10/18/23 10:20

Lab Sample ID: 380-67495-4
Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA_625		1	O-42148_P			10/19/23 00:00
Total/NA	Analysis	625 PAH Physis LL (EAL) + TICs		1	O-42148	YC		11/17/23 15:23
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	23VGH7J05	SCerva		10/20/23 01:03
Total/NA	Analysis	8015 LL DRO/MRO/JP5/JP8		1	23DSJ033W	SDees		10/27/23 21:31

Lab Chronicle

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

Job ID: 380-67495-2

Client Sample ID: TB MOANALUA WELLS
Lab Sample ID: 380-67495-5
Date Collected: 10/16/23 09:39
Matrix: Water
Date Received: 10/18/23 10:20

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	23VGH7J05	SCerva		10/20/23 01:42

Client Sample ID: TB AIEA GULCH WELLS PUMP 2
Lab Sample ID: 380-67495-6
Date Collected: 10/16/23 10:36
Matrix: Water
Date Received: 10/18/23 10:20

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	23VGH7J05	SCerva		10/20/23 02:21

Client Sample ID: TB AIEA WELLS PUMPS 1&2 (260) P2
Lab Sample ID: 380-67495-7
Date Collected: 10/16/23 11:05
Matrix: Water
Date Received: 10/18/23 10:20

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	23VGH7J05	SCerva		10/20/23 03:01

Client Sample ID: TB HALAWA WELLS UNITS 1 & 2 P1
Lab Sample ID: 380-67495-8
Date Collected: 10/16/23 10:07
Matrix: Water
Date Received: 10/18/23 10:20

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	23VGH7J05	SCerva		10/20/23 03:40

Laboratory References:

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

Method Summary

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

Job ID: 380-67495-2

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: 380-67495-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-67495-1	MOANALUA WELLS	Drinking Water	10/16/23 09:39	10/18/23 10:20
380-67495-2	AIEA GULCH WELLS PUMP 2	Drinking Water	10/16/23 10:36	10/18/23 10:20
380-67495-3	AIEA WELLS PUMPS 1&2 (260) P2	Drinking Water	10/16/23 11:05	10/18/23 10:20
380-67495-4	HALAWA WELLS UNITS 1 & 2 P1	Drinking Water	10/16/23 10:07	10/18/23 10:20
380-67495-5	TB MOANALUA WELLS	Water	10/16/23 09:39	10/18/23 10:20
380-67495-6	TB AIEA GULCH WELLS PUMP 2	Water	10/16/23 10:36	10/18/23 10:20
380-67495-7	TB AIEA WELLS PUMPS 1&2 (260) P2	Water	10/16/23 11:05	10/18/23 10:20
380-67495-8	TB HALAWA WELLS UNITS 1 & 2 P1	Water	10/16/23 10:07	10/18/23 10:20

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

Date: 11-03-2023
EMAX Batch No.: 23J187

Attn: Jackie Contreras

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

Subject: Laboratory Report
Project: 380-67495

Enclosed is the Laboratory report for samples received on 10/19/23.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
380-67495-1	J187-01	10/16/23	WATER	TPH GASOLINE TPH
380-67495-2	J187-02	10/16/23	WATER	TPH GASOLINE TPH
380-67495-3	J187-03	10/16/23	WATER	TPH GASOLINE TPH
380-67495-4	J187-04	10/16/23	WATER	TPH GASOLINE TPH
380-67495-5	J187-05	10/16/23	WATER	TPH GASOLINE
380-67495-6	J187-06	10/16/23	WATER	TPH GASOLINE
380-67495-7	J187-07	10/16/23	WATER	TPH GASOLINE
380-67495-8	J187-08	10/16/23	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,

For CP

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

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

Chain of Custody Record

23J187

eurofins | Environment Testing

12/12/2023

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arada, Rachelle	Carrier Tracking No(s):	COC No: 380-85797.1
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 #: 380-67495-1
Address: 3051 Fujita Street, ,	Due Date Requested: 10/30/2023			
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 Gas (Purgeable) LL (EAL))/ 8015 Gas (Purgeable) LL (EAL)	SUB (8015 LL DRO/MRO/JP5/JP8)/ 8015 LL DRO/MRO/JP5/JP8	Total Number of containers	Special Instructions/Note:
				Preservation Code:							
1	MOANALUA WELLS (380-67495-1)	10/16/23	09:39 Hawaiian		Water			X	X	6	See Attached Instructions
2	AIEA GULCH WELLS PUMP 2 (380-67495-2)	10/16/23	10:36 Hawaiian		Water			X	X	6	See Attached Instructions
3	AIEA WELLS PUMPS 1&2 (260) P2 (380-67495-3)	10/16/23	11:05 Hawaiian		Water			X	X	6	See Attached Instructions
4	HALAWA WELLS UNITS 1 & 2 P1 (380-67495-4)	10/16/23	10:07 Hawaiian		Water			X	X	6	See Attached Instructions
5	TB MOANALUA WELLS (380-67495-5)	10/16/23	09:39 Hawaiian		Water			X		2	See Attached Instructions
6	TB AIEA GULCH WELLS PUMP 2 (380-67495-6)	10/16/23	10:36 Hawaiian		Water			X		2	See Attached Instructions
7	TB AIEA WELLS PUMPS 1&2 (260) P2 (380-67495-7)	10/16/23	11:05 Hawaiian		Water			X		2	See Attached Instructions
8	TB HALAWA WELLS UNITS 1 & 2 P1 (380-67495-8)	10/16/23	10:07 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		10/19/23 1019	CEA		10/19/23 10:19	Emax
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: 3.4/3.2 CF=-0.2

REFERENCE: EMAX-SM02 Rev. 12

SAMPLE RECEIPT FORM 1

EMAX LABORATORIES, INC.

Type of Delivery	Airbill / Tracking Number	ECN 23J187
☐ Fedex ☐ UPS ☐ GSO ☐ Others		Recipient Jhowin Zamora
☐ EMAX Courier ☑ Client Delivery		Date 10/19/23 Time 10:19

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	correction factor: -0.2 ☐ Custody Seal	☐ Intact	☐ Damaged		
Packaging	☑ Bubble Pack	☐ Styrofoam	☐ Popcorn	☐ Sufficient	☐ _____
Temperatures (Cool, ≤6 °C but not frozen)	☑ Cooler 3.4/3.2 °C	☐ Cooler 2 _____ °C	☐ Cooler 3 _____ °C	☐ Cooler 4 _____ °C	☐ Cooler 5 _____ °C
	☐ Cooler 6 _____ °C	☐ Cooler 7 _____ °C	☐ Cooler 8 _____ °C	☐ Cooler 9 _____ °C	☐ Cooler 10 _____ °C
Thermometer:	*A - S/N* 221852708	*B - S/N* 221925379	(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
01,7	27,30	D7	second handwritten ~~date~~ date: 10/10/23 (NM 10/19)	R1

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

CW 10/19/23 MB 10/19/23

NOTES/OBSERVATIONS:

SAMPLE MATRIX IS DRINKING WATER? ☐ YES ☐ NO

LEGEND:

☐ Continue to next page.

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

REVIEWS:

Sample Labeling Nahdeen Nacang Date 10/19/23 10/19/23

SRF Date 10/19/23

PM MB Date 10/19/23

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

380-67495

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

SDG#: 23J187

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-67495

SDG : 23J187

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

A total of eight(8) water samples were received on 10/19/23 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. VGH7J05B - 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. VGH7J05L/VGH7J05C 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 J167-01M/J167-01S. 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 : 380-67495

SDG NO. : 23J187
Instrument ID : H7

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	VGH7J05B	1	NA	10/19/2315:46	10/19/2315:46	AJ19005A	AJ19004A	23VGH7J05	Method Blank
LCS1W	VGH7J05L	1	NA	10/19/2316:27	10/19/2316:27	AJ19006A	AJ19004A	23VGH7J05	Lab Control Sample (LCS)
LCD1W	VGH7J05C	1	NA	10/19/2317:07	10/19/2317:07	AJ19007A	AJ19004A	23VGH7J05	LCS Duplicate
380-67495-1	J187-01	1	NA	10/19/2323:04	10/19/2323:04	AJ19016A	AJ19015A	23VGH7J05	Field Sample
380-67495-2	J187-02	1	NA	10/19/2323:43	10/19/2323:43	AJ19017A	AJ19015A	23VGH7J05	Field Sample
380-67495-3	J187-03	1	NA	10/20/2300:23	10/20/2300:23	AJ19018A	AJ19015A	23VGH7J05	Field Sample
380-67495-4	J187-04	1	NA	10/20/2301:03	10/20/2301:03	AJ19019A	AJ19015A	23VGH7J05	Field Sample
380-67495-5	J187-05	1	NA	10/20/2301:42	10/20/2301:42	AJ19020A	AJ19015A	23VGH7J05	Field Sample
380-67495-6	J187-06	1	NA	10/20/2302:21	10/20/2302:21	AJ19021A	AJ19015A	23VGH7J05	Field Sample
380-67495-7	J187-07	1	NA	10/20/2303:01	10/20/2303:01	AJ19022A	AJ19015A	23VGH7J05	Field Sample
380-67495-8	J187-08	1	NA	10/20/2303:40	10/20/2303:40	AJ19023A	AJ19015A	23VGH7J05	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:	10/16/23 09:39
Project	: 380-67495	Date Received:	10/19/23
Batch No.	: 23J187	Date Extracted:	10/19/23 23:04
Sample ID	: 380-67495-1	Date Analyzed:	10/19/23 23:04
Lab Samp ID:	J187-01	Dilution Factor:	1
Lab File ID:	AJ19016A	Matrix:	WATER
Ext Btch ID:	23VGH7J05	% Moisture:	NA
Calib. Ref.:	AJ19015A	Instrument ID:	H7

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

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0354	0.0400	89	60-140

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

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

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

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/16/23 10:36
Project	: 380-67495	Date Received:	10/19/23
Batch No.	: 23J187	Date Extracted:	10/19/23 23:43
Sample ID	: 380-67495-2	Date Analyzed:	10/19/23 23:43
Lab Samp ID:	J187-02	Dilution Factor:	1
Lab File ID:	AJ19017A	Matrix:	WATER
Ext Btch ID:	23VGH7J05	% Moisture:	NA
Calib. Ref.:	AJ19015A	Instrument ID:	H7

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
GASOLINE	ND	0.020	0.010	
SURROGATE PARAMETERS	**RESULT**	**SPK_AMT**	**%RECOVERY**	**QC LIMIT**
Bromofluorobenzene	0.0355	0.0400	89	60-140

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

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

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

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/16/23 11:05
Project	: 380-67495	Date Received:	10/19/23
Batch No.	: 23J187	Date Extracted:	10/20/23 00:23
Sample ID	: 380-67495-3	Date Analyzed:	10/20/23 00:23
Lab Samp ID:	J187-03	Dilution Factor:	1
Lab File ID:	AJ19018A	Matrix:	WATER
Ext Btch ID:	23VGH7J05	% Moisture:	NA
Calib. Ref.:	AJ19015A	Instrument ID:	H7

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
GASOLINE	ND	0.020	0.010	
SURROGATE PARAMETERS	**RESULT**	**SPK_AMT**	**%RECOVERY**	**QC LIMIT**
Bromofluorobenzene	0.0364	0.0400	91	60-140

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

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

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

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/16/23 10:07
Project	: 380-67495	Date Received:	10/19/23
Batch No.	: 23J187	Date Extracted:	10/20/23 01:03
Sample ID	: 380-67495-4	Date Analyzed:	10/20/23 01:03
Lab Samp ID:	J187-04	Dilution Factor:	1
Lab File ID:	AJ19019A	Matrix:	WATER
Ext Btch ID:	23VGH7J05	% Moisture:	NA
Calib. Ref.:	AJ19015A	Instrument ID:	H7

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
GASOLINE	ND	0.020	0.010	
SURROGATE PARAMETERS	**RESULT**	**SPK_AMT**	**%RECOVERY**	**QC LIMIT**
Bromofluorobenzene	0.0374	0.0400	93	60-140

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

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

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

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/16/23 09:39
Project	: 380-67495	Date Received:	10/19/23
Batch No.	: 23J187	Date Extracted:	10/20/23 01:42
Sample ID	: 380-67495-5	Date Analyzed:	10/20/23 01:42
Lab Samp ID:	J187-05	Dilution Factor:	1
Lab File ID:	AJ19020A	Matrix:	WATER
Ext Btch ID:	23VGH7J05	% Moisture:	NA
Calib. Ref.:	AJ19015A	Instrument ID:	H7

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

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0387	0.0400	97	60-140

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

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

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

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/16/23 10:36
Project	: 380-67495	Date Received:	10/19/23
Batch No.	: 23J187	Date Extracted:	10/20/23 02:21
Sample ID	: 380-67495-6	Date Analyzed:	10/20/23 02:21
Lab Samp ID:	J187-06	Dilution Factor:	1
Lab File ID:	AJ19021A	Matrix:	WATER
Ext Btch ID:	23VGH7J05	% Moisture:	NA
Calib. Ref.:	AJ19015A	Instrument ID:	H7

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

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0347	0.0400	87	60-140

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

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

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

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/16/23 11:05
Project	: 380-67495	Date Received:	10/19/23
Batch No.	: 23J187	Date Extracted:	10/20/23 03:01
Sample ID	: 380-67495-7	Date Analyzed:	10/20/23 03:01
Lab Samp ID:	J187-07	Dilution Factor:	1
Lab File ID:	AJ19022A	Matrix:	WATER
Ext Btch ID:	23VGH7J05	% Moisture:	NA
Calib. Ref.:	AJ19015A	Instrument ID:	H7

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

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0370	0.0400	92	60-140

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

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

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

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/16/23 10:07
Project	: 380-67495	Date Received:	10/19/23
Batch No.	: 23J187	Date Extracted:	10/20/23 03:40
Sample ID	: 380-67495-8	Date Analyzed:	10/20/23 03:40
Lab Samp ID:	J187-08	Dilution Factor:	1
Lab File ID:	AJ19023A	Matrix:	WATER
Ext Btch ID:	23VGH7J05	% Moisture:	NA
Calib. Ref.:	AJ19015A	Instrument ID:	H7

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

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0372	0.0400	93	60-140

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

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

QC SUMMARIES

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

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/19/23 15:46
Project	: 380-67495	Date Received:	10/19/23
Batch No.	: 23J187	Date Extracted:	10/19/23 15:46
Sample ID	: MBLK1W	Date Analyzed:	10/19/23 15:46
Lab Samp ID:	VGH7J05B	Dilution Factor:	1
Lab File ID:	AJ19005A	Matrix:	WATER
Ext Btch ID:	23VGH7J05	% Moisture:	NA
Calib. Ref.:	AJ19004A	Instrument ID:	H7

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

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0356	0.0400	89	60-140

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

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

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-67495
BATCH NO. : 23J187
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	: VGH7J05B	VGH7J05L	VGH7J05C
LAB FILE ID	: AJ19005A	AJ19006A	AJ19007A
DATE PREPARED	: 10/19/23 15:46	10/19/23 16:27	10/19/23 17:07
DATE ANALYZED	: 10/19/23 15:46	10/19/23 16:27	10/19/23 17:07
PREP BATCH	: 23VGH7J05	23VGH7J05	23VGH7J05
CALIBRATION REF	: AJ19004A	AJ19004A	AJ19004A

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	0.425	85	0.500	0.444	89	4	60-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0403	101	0.0400	0.0422	106	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 : 380-67917
BATCH NO. : 23J167
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: 380-67917-1	380-67917-1MS	380-67917-1MSD
LAB SAMPLE ID	: J167-01	J167-01M	J167-01S
LAB FILE ID	: AJ19008A	AJ19009A	AJ19010A
DATE PREPARED	: 10/19/23 17:48	10/19/23 18:27	10/19/23 19:07
DATE ANALYZED	: 10/19/23 17:48	10/19/23 18:27	10/19/23 19:07
PREP BATCH	: 23VGH7J05	23VGH7J05	23VGH7J05
CALIBRATION REF	: AJ19004A	AJ19004A	AJ19004A

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	0.431	86	0.500	0.518	104	18	50-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0429	107	0.0400	0.0473	118	60-140

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

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-67495

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 23J187

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-67495

SDG : 23J187

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

A total of four(4) water samples were received on 10/19/23 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. DSJ033WB - 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. DSJ033WL/DSJ033WC were within LCS limits. Refer to LCS summary form for details.

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

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

Sample Analysis
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: 380-67495

SDG : 23J187

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

A total of four(4) water samples were received on 10/19/23 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. DSJ033WB - 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. J5J033WL/J5J033WC were within LCS limits. Refer to LCS summary form for details.

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

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

Sample Analysis
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: 380-67495

SDG : 23J187

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

A total of four(4) water samples were received on 10/19/23 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. DSJ033WB - 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. J8J033WL/J8J033WC were within LCS limits. Refer to LCS summary form for details.

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

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

Sample Analysis
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 : 380-67495

SDG NO. : 23J187
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	DSJ033WB	1	NA	10/27/2317:28	10/26/2313:30	LJ26090A	LJ26076A	23DSJ033W	Method Blank
LCS1W	DSJ033WL	1	NA	10/27/2317:47	10/26/2313:30	LJ26091A	LJ26076A	23DSJ033W	Lab Control Sample (LCS)
LCD1W	DSJ033WC	1	NA	10/27/2318:06	10/26/2313:30	LJ26092A	LJ26076A	23DSJ033W	LCS Duplicate
380-67495-1	J187-01	1	NA	10/27/2320:35	10/26/2313:30	LJ26100A	LJ26097A	23DSJ033W	Field Sample
380-67495-2	J187-02	1	NA	10/27/2320:54	10/26/2313:30	LJ26101A	LJ26097A	23DSJ033W	Field Sample
380-67495-3	J187-03	1	NA	10/27/2321:12	10/26/2313:30	LJ26102A	LJ26097A	23DSJ033W	Field Sample
380-67495-4	J187-04	1	NA	10/27/2321:31	10/26/2313:30	LJ26103A	LJ26097A	23DSJ033W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL
Project : 380-67495

SDG NO. : 23J187
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	DSJ033WB	1	NA	10/27/2317:28	10/26/2313:30	LJ26090A	LJ26077A	23DSJ033W	Method Blank
LCS1W	J5J033WL	1	NA	10/27/2318:24	10/26/2313:30	LJ26093A	LJ26077A	23DSJ033W	Lab Control Sample (LCS)
LCD1W	J5J033WC	1	NA	10/27/2318:43	10/26/2313:30	LJ26094A	LJ26077A	23DSJ033W	LCS Duplicate
380-67495-1	J187-01	1	NA	10/27/2320:35	10/26/2313:30	LJ26100A	LJ26098A	23DSJ033W	Field Sample
380-67495-2	J187-02	1	NA	10/27/2320:54	10/26/2313:30	LJ26101A	LJ26098A	23DSJ033W	Field Sample
380-67495-3	J187-03	1	NA	10/27/2321:12	10/26/2313:30	LJ26102A	LJ26098A	23DSJ033W	Field Sample
380-67495-4	J187-04	1	NA	10/27/2321:31	10/26/2313:30	LJ26103A	LJ26098A	23DSJ033W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL
Project : 380-67495

SDG NO. : 23J187
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	DSJ033WB	1	NA	10/27/2317:28	10/26/2313:30	LJ26090A	LJ26078A	23DSJ033W	Method Blank
LCS1W	J8J033WL	1	NA	10/27/2319:02	10/26/2313:30	LJ26095A	LJ26078A	23DSJ033W	Lab Control Sample (LCS)
LCD1W	J8J033WC	1	NA	10/27/2319:20	10/26/2313:30	LJ26096A	LJ26078A	23DSJ033W	LCS Duplicate
380-67495-1	J187-01	1	NA	10/27/2320:35	10/26/2313:30	LJ26100A	LJ26099A	23DSJ033W	Field Sample
380-67495-2	J187-02	1	NA	10/27/2320:54	10/26/2313:30	LJ26101A	LJ26099A	23DSJ033W	Field Sample
380-67495-3	J187-03	1	NA	10/27/2321:12	10/26/2313:30	LJ26102A	LJ26099A	23DSJ033W	Field Sample
380-67495-4	J187-04	1	NA	10/27/2321:31	10/26/2313:30	LJ26103A	LJ26099A	23DSJ033W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/16/23 09:39
Project	: 380-67495	Date Received:	10/19/23
Batch No.	: 23J187	Date Extracted:	10/26/23 13:30
Sample ID	: 380-67495-1	Date Analyzed:	10/27/23 20:35
Lab Samp ID:	23J187-01	Dilution Factor:	1
Lab File ID:	LJ26100A	Matrix:	WATER
Ext Btch ID:	23DSJ033W	% Moisture:	NA
Calib. Ref.:	LJ26097A	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	0.371	0.530	70	60-130
Hexacosane	0.116	0.132	88	60-130

Notes:

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

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

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

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/16/23 09:39
Project	: 380-67495	Date Received:	10/19/23
Batch No.	: 23J187	Date Extracted:	10/26/23 13:30
Sample ID	: 380-67495-1	Date Analyzed:	10/27/23 20:35
Lab Samp ID:	23J187-01	Dilution Factor:	1
Lab File ID:	LJ26100A	Matrix:	WATER
Ext Btch ID:	23DSJ033W	% Moisture:	NA
Calib. Ref.:	LJ26098A	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	0.371	0.530	70	60-130
Hexacosane	0.116	0.132	88	60-130

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

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

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/16/23 09:39
Project	: 380-67495	Date Received:	10/19/23
Batch No.	: 23J187	Date Extracted:	10/26/23 13:30
Sample ID	: 380-67495-1	Date Analyzed:	10/27/23 20:35
Lab Samp ID:	23J187-01	Dilution Factor:	1
Lab File ID:	LJ26100A	Matrix:	WATER
Ext Btch ID:	23DSJ033W	% Moisture:	NA
Calib. Ref.:	LJ26099A	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	0.371	0.530	70	60-130
Hexacosane	0.116	0.132	88	60-130

Notes:
RL : Reporting Limit
Parameter H-C Range
JP8 C8-C18
Reported ND at RL quantitated per pattern recognition.

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

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/16/23 10:36
Project	: 380-67495	Date Received:	10/19/23
Batch No.	: 23J187	Date Extracted:	10/26/23 13:30
Sample ID	: 380-67495-2	Date Analyzed:	10/27/23 20:54
Lab Samp ID:	23J187-02	Dilution Factor:	1
Lab File ID:	LJ26101A	Matrix:	WATER
Ext Btch ID:	23DSJ033W	% Moisture:	NA
Calib. Ref.:	LJ26097A	Instrument ID:	D5

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

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.424	0.595	71	60-130
Hexacosane	0.140	0.149	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	: 840ml	Final Volume	: 5ml
Prepared by	: RGalan	Analyzed by	: SDeeso

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/16/23 10:36
Project	: 380-67495	Date Received:	10/19/23
Batch No.	: 23J187	Date Extracted:	10/26/23 13:30
Sample ID	: 380-67495-2	Date Analyzed:	10/27/23 20:54
Lab Samp ID:	23J187-02	Dilution Factor:	1
Lab File ID:	LJ26101A	Matrix:	WATER
Ext Btch ID:	23DSJ033W	% Moisture:	NA
Calib. Ref.:	LJ26098A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
JP5	ND	0.059	0.030	
SURROGATE PARAMETERS	**RESULT**	**SPK_AMT**	**%RECOVERY**	**QC LIMIT**
Bromobenzene	0.424	0.595	71	60-130
Hexacosane	0.140	0.149	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 : 840ml Final Volume : 5ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/16/23 10:36
Project	: 380-67495	Date Received:	10/19/23
Batch No.	: 23J187	Date Extracted:	10/26/23 13:30
Sample ID	: 380-67495-2	Date Analyzed:	10/27/23 20:54
Lab Samp ID:	23J187-02	Dilution Factor:	1
Lab File ID:	LJ26101A	Matrix:	WATER
Ext Btch ID:	23DSJ033W	% Moisture:	NA
Calib. Ref.:	LJ26099A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
JP8	ND	0.059	0.030	
SURROGATE PARAMETERS	**RESULT**	**SPK_AMT**	**%RECOVERY**	**QC LIMIT**
Bromobenzene	0.424	0.595	71	60-130
Hexacosane	0.140	0.149	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 : 840ml Final Volume : 5ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/16/23 11:05
Project	: 380-67495	Date Received:	10/19/23
Batch No.	: 23J187	Date Extracted:	10/26/23 13:30
Sample ID	: 380-67495-3	Date Analyzed:	10/27/23 21:12
Lab Samp ID:	23J187-03	Dilution Factor:	1
Lab File ID:	LJ26102A	Matrix:	WATER
Ext Btch ID:	23DSJ033W	% Moisture:	NA
Calib. Ref.:	LJ26097A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Diesel	ND	0.028	0.014
Motor Oil	ND	0.056	0.028

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.380	0.555	68	60-130
Hexacosane	0.127	0.139	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	: 900ml	Final Volume	: 5ml
Prepared by	: RGalan	Analyzed by	: SDeeso

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/16/23 11:05
Project	: 380-67495	Date Received:	10/19/23
Batch No.	: 23J187	Date Extracted:	10/26/23 13:30
Sample ID	: 380-67495-3	Date Analyzed:	10/27/23 21:12
Lab Samp ID:	23J187-03	Dilution Factor:	1
Lab File ID:	LJ26102A	Matrix:	WATER
Ext Btch ID:	23DSJ033W	% Moisture:	NA
Calib. Ref.:	LJ26098A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
JP5	ND	0.056	0.028

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.380	0.555	68	60-130
Hexacosane	0.127	0.139	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 : 900ml Final Volume : 5ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/16/23 11:05
Project	: 380-67495	Date Received:	10/19/23
Batch No.	: 23J187	Date Extracted:	10/26/23 13:30
Sample ID	: 380-67495-3	Date Analyzed:	10/27/23 21:12
Lab Samp ID:	23J187-03	Dilution Factor:	1
Lab File ID:	LJ26102A	Matrix:	WATER
Ext Btch ID:	23DSJ033W	% Moisture:	NA
Calib. Ref.:	LJ26099A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
JP8	ND	0.056	0.028

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.380	0.555	68	60-130
Hexacosane	0.127	0.139	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 : 900ml Final Volume : 5ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/16/23 10:07
Project	: 380-67495	Date Received:	10/19/23
Batch No.	: 23J187	Date Extracted:	10/26/23 13:30
Sample ID	: 380-67495-4	Date Analyzed:	10/27/23 21:31
Lab Samp ID:	23J187-04	Dilution Factor:	1
Lab File ID:	LJ26103A	Matrix:	WATER
Ext Btch ID:	23DSJ033W	% Moisture:	NA
Calib. Ref.:	LJ26097A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Diesel	ND	0.028	0.014
Motor Oil	ND	0.056	0.028

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.369	0.560	66	60-130
Hexacosane	0.119	0.140	85	60-130

Notes:

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

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 890ml	Final Volume	: 5ml
Prepared by	: RGalan	Analyzed by	: SDeeso

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/16/23 10:07
Project	: 380-67495	Date Received:	10/19/23
Batch No.	: 23J187	Date Extracted:	10/26/23 13:30
Sample ID	: 380-67495-4	Date Analyzed:	10/27/23 21:31
Lab Samp ID:	23J187-04	Dilution Factor:	1
Lab File ID:	LJ26103A	Matrix:	WATER
Ext Btch ID:	23DSJ033W	% Moisture:	NA
Calib. Ref.:	LJ26098A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
JP5	ND	0.056	0.028	
SURROGATE PARAMETERS	**RESULT**	**SPK_AMT**	**%RECOVERY**	**QC LIMIT**
Bromobenzene	0.369	0.560	66	60-130
Hexacosane	0.119	0.140	85	60-130

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

Detection limits are reported relative to sample result significant figures.
Sample Amount : 890ml Final Volume : 5ml
Prepared by : RGalan Analyzed by : SDeeso

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/16/23 10:07
Project	: 380-67495	Date Received:	10/19/23
Batch No.	: 23J187	Date Extracted:	10/26/23 13:30
Sample ID	: 380-67495-4	Date Analyzed:	10/27/23 21:31
Lab Samp ID:	23J187-04	Dilution Factor:	1
Lab File ID:	LJ26103A	Matrix:	WATER
Ext Btch ID:	23DSJ033W	% Moisture:	NA
Calib. Ref.:	LJ26099A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
JP8	ND	0.056	0.028

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.369	0.560	66	60-130
Hexacosane	0.119	0.140	85	60-130

Notes:
RL : Reporting Limit
Parameter H-C Range
JP8 C8-C18
Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.
Sample Amount : 890ml 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:	10/26/23 13:30
Project	: 380-67495	Date Received:	10/26/23
Batch No.	: 23J187	Date Extracted:	10/26/23 13:30
Sample ID	: MBLK1W	Date Analyzed:	10/27/23 17:28
Lab Samp ID:	DSJ033WB	Dilution Factor:	1
Lab File ID:	LJ26090A	Matrix:	WATER
Ext Btch ID:	23DSJ033W	% Moisture:	NA
Calib. Ref.:	LJ26076A	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	0.323	0.500	65	60-130
Hexacosane	0.105	0.125	84	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 : 380-67495
BATCH NO. : 23J187
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	: DSJ033WB	DSJ033WL	DSJ033WC
LAB FILE ID	: LJ26090A	LJ26091A	LJ26092A
DATE PREPARED	: 10/26/23 13:30	10/26/23 13:30	10/26/23 13:30
DATE ANALYZED	: 10/27/23 17:28	10/27/23 17:47	10/27/23 18:06
PREP BATCH	: 23DSJ033W	23DSJ033W	23DSJ033W
CALIBRATION REF	: LJ26076A	LJ26076A	LJ26076A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Diesel	ND	2.50	2.09	84	2.50	2.29	92	9	50-130	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromobenzene	0.500	0.351	70	0.500	0.376	75	60-130
Hexacosane	0.125	0.122	98	0.125	0.129	103	60-130

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

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/26/23 13:30
Project	: 380-67495	Date Received:	10/26/23
Batch No.	: 23J187	Date Extracted:	10/26/23 13:30
Sample ID	: MBLK1W	Date Analyzed:	10/27/23 17:28
Lab Samp ID:	DSJ033WB	Dilution Factor:	1
Lab File ID:	LJ26090A	Matrix:	WATER
Ext Btch ID:	23DSJ033W	% Moisture:	NA
Calib. Ref.:	LJ26077A	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	0.323	0.500	65	60-130
Hexacosane	0.105	0.125	84	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 : 380-67495
BATCH NO. : 23J187
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	: DSJ033WB	J5J033WL	J5J033WC
LAB FILE ID	: LJ26090A	LJ26093A	LJ26094A
DATE PREPARED	: 10/26/23 13:30	10/26/23 13:30	10/26/23 13:30
DATE ANALYZED	: 10/27/23 17:28	10/27/23 18:24	10/27/23 18:43
PREP BATCH	: 23DSJ033W	23DSJ033W	23DSJ033W
CALIBRATION REF	: LJ26077A	LJ26077A	LJ26077A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
JP5	ND	2.50	1.75	70	2.50	1.75	70	0	30-160	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromobenzene	0.500	0.387	77	0.500	0.366	73	60-130
Hexacosane	0.125	0.121	97	0.125	0.113	90	60-130

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

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/26/23 13:30
Project	: 380-67495	Date Received:	10/26/23
Batch No.	: 23J187	Date Extracted:	10/26/23 13:30
Sample ID	: MBLK1W	Date Analyzed:	10/27/23 17:28
Lab Samp ID:	DSJ033WB	Dilution Factor:	1
Lab File ID:	LJ26090A	Matrix:	WATER
Ext Btch ID:	23DSJ033W	% Moisture:	NA
Calib. Ref.:	LJ26078A	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	0.323	0.500	65	60-130
Hexacosane	0.105	0.125	84	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 : 380-67495
BATCH NO. : 23J187
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	: DSJ033WB	J8J033WL	J8J033WC
LAB FILE ID	: LJ26090A	LJ26095A	LJ26096A
DATE PREPARED	: 10/26/23 13:30	10/26/23 13:30	10/26/23 13:30
DATE ANALYZED	: 10/27/23 17:28	10/27/23 19:02	10/27/23 19:20
PREP BATCH	: 23DSJ033W	23DSJ033W	23DSJ033W
CALIBRATION REF	: LJ26078A	LJ26078A	LJ26078A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
JP8	ND	2.50	1.94	78	2.50	1.98	79	2	30-160	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromobenzene	0.500	0.451	90	0.500	0.435	87	60-130
Hexacosane	0.125	0.124	99	0.125	0.118	94	60-130

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

November 22, 2023

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

Project Name: RED-HILL Project # 38001111 Job # 380-67495-1
Physis Project ID: 1407003-457

Dear Rachelle,

Enclosed are the analytical results for samples submitted to PHYSIS Environmental Laboratories, Inc. (PHYSIS) on 10/19/2023. 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,

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

PROJECT SAMPLE LIST

Eurofins Eaton Analytical

PHYSIS Project ID: 1407003-457

RED-HILL Project # 38001111 Job # 380-67495-1

Total Samples: 4

PHYSIS ID	Sample ID	Description	Date	Time	Matrix	Sample Type
112122	MOANALUA WELLS	380-67495-1	10/16/2023	9:39	Samplewater	Not Specified
112123	AIEA GULCH WELLS PUMP 2	380-67495-2	10/16/2023	10:36	Samplewater	Not Specified
112124	AIEA WELLS PUMPS 1&2 (260) P2	380-67495-3	10/16/2023	11:05	Samplewater	Not Specified
112125	HALAWA WELLS UNITS 1 & 2 P1	380-67495-4	10/16/2023	10:07	Samplewater	Not Specified

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

ABBREVIATIONS and ACRONYMS

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

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QUALITY ASSURANCE SUMMARY

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

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

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

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

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

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

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

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

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

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SURROGATES: A surrogate is a pure analyte unlikely to be found in any project sample, behaves similarly to the target analyte and most often used with organic analytical procedures. Surrogates are added in known concentration to all samples and are measured to indicate overall efficiency of the method including processing and analyses.

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

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

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

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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: 1407003-457
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-67495-1

Base/Neutral Extractable Compounds

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 112122-R1	**MOANALUA WELLS 380-67495-1**	**Matrix:**	**Samplewater**				**Sampled:**	**16-Oct-23 9:39**		**Received:**	**19-Oct-23**
Disalicylidenepropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42148	19-Oct-23	17-Nov-23
Sample ID: 112123-R1	**AIEA GULCH WELLS PUMP 2 380-6**	**Matrix:**	**Samplewater**				**Sampled:**	**16-Oct-23 10:36**		**Received:**	**19-Oct-23**
Disalicylidenepropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42148	19-Oct-23	17-Nov-23
Sample ID: 112124-R1	**AIEA WELLS PUMPS 1&2 (260) P2 3**	**Matrix:**	**Samplewater**				**Sampled:**	**16-Oct-23 11:05**		**Received:**	**19-Oct-23**
Disalicylidenepropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42148	19-Oct-23	17-Nov-23
Sample ID: 112125-R1	**HALAWA WELLS UNITS 1 & 2 P1 38**	**Matrix:**	**Samplewater**				**Sampled:**	**16-Oct-23 10:07**		**Received:**	**19-Oct-23**
Disalicylidenepropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42148	19-Oct-23	17-Nov-23

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 112122-R1	**MOANALUA WELLS 380-67495-1**	**Matrix: Samplewater**					**Sampled:**	**16-Oct-23**	**9:39**	**Received:**	**19-Oct-23**
(d10-Acenaphthene)	EPA 625.1	% Recovery	38	1			Total		O-42148	19-Oct-23	17-Nov-23
(d10-Phenanthrene)	EPA 625.1	% Recovery	43	1			Total		O-42148	19-Oct-23	17-Nov-23
(d12-Chrysene)	EPA 625.1	% Recovery	72	1			Total		O-42148	19-Oct-23	17-Nov-23
(d12-Perylene)	EPA 625.1	% Recovery	77	1			Total		O-42148	19-Oct-23	17-Nov-23
(d8-Naphthalene)	EPA 625.1	% Recovery	38	1			Total		O-42148	19-Oct-23	17-Nov-23
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Benzo[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Benzo[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Benzo[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Dibenz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Dibenzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Dibenzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-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-42148	19-Oct-23	17-Nov-23
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 112123-R1	**AIEA GULCH WELLS PUMP 2 380-6**	**Matrix: Samplewater**					**Sampled:**	**16-Oct-23 10:36**		**Received:**	**19-Oct-23**
(d10-Acenaphthene)	EPA 625.1	% Recovery	46	1			Total		O-42148	19-Oct-23	17-Nov-23
(d10-Phenanthrene)	EPA 625.1	% Recovery	47	1			Total		O-42148	19-Oct-23	17-Nov-23
(d12-Chrysene)	EPA 625.1	% Recovery	73	1			Total		O-42148	19-Oct-23	17-Nov-23
(d12-Perylene)	EPA 625.1	% Recovery	82	1			Total		O-42148	19-Oct-23	17-Nov-23
(d8-Naphthalene)	EPA 625.1	% Recovery	46	1			Total		O-42148	19-Oct-23	17-Nov-23
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Benzo[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Benzo[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Benzo[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Dibenz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Dibenzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Dibenzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23

PHYSIS Project ID: 1407003-457
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-67495-1

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-42148	19-Oct-23	17-Nov-23
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 112124-R1	**AIEA WELLS PUMPS 1&2 (260) P2 3 Matrix: Samplewater**						**Sampled:**	**16-Oct-23 11:05**		**Received:**	**19-Oct-23**
(d10-Acenaphthene)	EPA 625.1	% Recovery	46	1			Total		O-42148	19-Oct-23	17-Nov-23
(d10-Phenanthrene)	EPA 625.1	% Recovery	49	1			Total		O-42148	19-Oct-23	17-Nov-23
(d12-Chrysene)	EPA 625.1	% Recovery	74	1			Total		O-42148	19-Oct-23	17-Nov-23
(d12-Perylene)	EPA 625.1	% Recovery	82	1			Total		O-42148	19-Oct-23	17-Nov-23
(d8-Naphthalene)	EPA 625.1	% Recovery	46	1			Total		O-42148	19-Oct-23	17-Nov-23
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Benzo[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Benzo[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Benzo[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Dibenz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Dibenzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Dibenzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-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-42148	19-Oct-23	17-Nov-23
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 112125-R1	**HALAWA WELLS UNITS 1 & 2 P1 38**	**Matrix: Samplewater**					**Sampled:**	**16-Oct-23 10:07**		**Received:**	**19-Oct-23**
(d10-Acenaphthene)	EPA 625.1	% Recovery	47	1			Total		O-42148	19-Oct-23	17-Nov-23
(d10-Phenanthrene)	EPA 625.1	% Recovery	49	1			Total		O-42148	19-Oct-23	17-Nov-23
(d12-Chrysene)	EPA 625.1	% Recovery	74	1			Total		O-42148	19-Oct-23	17-Nov-23
(d12-Perylene)	EPA 625.1	% Recovery	81	1			Total		O-42148	19-Oct-23	17-Nov-23
(d8-Naphthalene)	EPA 625.1	% Recovery	47	1			Total		O-42148	19-Oct-23	17-Nov-23
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Benzo[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Benzo[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Benzo[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Dibenz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Dibenzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Dibenzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23

PHYSIS Project ID: 1407003-457
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-67495-1

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-42148	19-Oct-23	17-Nov-23
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42148	19-Oct-23	17-Nov-23

QUALITY CONTROL REPORT

ENVIRONMENTAL LABORATORIES, INC.

Innovative Solutions for Nature

Base/Neutral Extractable Compounds QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODEc
Sample ID: 112121-B1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**	**Sampled:**						**Received:**		
		Method: EPA 625.1				Batch ID: O-42148		Prepared: 19-Oct-23					Analyzed: 16-Nov-23		
Disalicylidenepropanediamine	Total	ND	1	0.05	0.1	µg/L									
Sample ID: 112121-BS1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**	**Sampled:**						**Received:**		
		Method: EPA 625.1				Batch ID: O-42148		Prepared: 19-Oct-23					Analyzed: 16-Nov-23		
Disalicylidenepropanediamine	Total	28.8	1	0.05	0.1	µg/L	50	0	58	50 - 150%	PASS				
Sample ID: 112121-BS2	**QAQC Procedural Blank**					**Matrix: BlankMatrix**	**Sampled:**						**Received:**		
		Method: EPA 625.1				Batch ID: O-42148		Prepared: 19-Oct-23					Analyzed: 16-Nov-23		
Disalicylidenepropanediamine	Total	34.1	1	0.05	0.1	µg/L	50	0	68	50 - 150%	PASS	16	30	PASS	

PHYSIS Project ID: 1407003-457
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-67495-1

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
Sample ID: 112121-B1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**	**Sampled:**					**Received:**	
	Method: EPA 625.1					Batch ID: O-42148		Prepared: 19-Oct-23				Analyzed: 16-Nov-23	
(d10-Acenaphthene)	Total	88	1			% Recovery	100	88	27 - 133%	PASS			
(d10-Phenanthrene)	Total	93	1			% Recovery	100	93	43 - 129%	PASS			
(d12-Chrysene)	Total	80	1			% Recovery	100	80	52 - 144%	PASS			
(d12-Perylene)	Total	85	1			% Recovery	100	85	36 - 161%	PASS			
(d8-Naphthalene)	Total	90	1			% Recovery	100	90	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							

PHYSIS Project ID: 1407003-457
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-67495-1

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

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

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODEc
Sample ID: 112121-BS1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**				**Received:**	
	Method: EPA 625.1					Batch ID: O-42148		Prepared: 19-Oct-23				Analyzed: 16-Nov-23	
(d10-Acenaphthene)	Total	91	1			% Recovery	100	0	91	27 - 133%	PASS		
(d10-Phenanthrene)	Total	95	1			% Recovery	100	0	95	43 - 129%	PASS		
(d12-Chrysene)	Total	85	1			% Recovery	100	0	85	52 - 144%	PASS		
(d12-Perylene)	Total	86	1			% Recovery	100	0	86	36 - 161%	PASS		
(d8-Naphthalene)	Total	95	1			% Recovery	100	0	95	25 - 125%	PASS		
1-Methylnaphthalene	Total	0.438	1	0.001	0.005	µg/L	0.5	0	88	31 - 128%	PASS		
1-Methylphenanthrene	Total	0.479	1	0.001	0.005	µg/L	0.5	0	96	66 - 127%	PASS		
2,3,5-Trimethylnaphthalene	Total	0.451	1	0.001	0.005	µg/L	0.5	0	90	55 - 122%	PASS		
2,6-Dimethylnaphthalene	Total	0.428	1	0.001	0.005	µg/L	0.5	0	86	48 - 120%	PASS		
2-Methylnaphthalene	Total	0.445	1	0.001	0.005	µg/L	0.5	0	89	47 - 130%	PASS		
Acenaphthene	Total	0.442	1	0.001	0.005	µg/L	0.5	0	88	53 - 131%	PASS		
Acenaphthylene	Total	0.449	1	0.001	0.005	µg/L	0.5	0	90	43 - 140%	PASS		
Anthracene	Total	0.463	1	0.001	0.005	µg/L	0.5	0	93	58 - 135%	PASS		
Benz[a]anthracene	Total	0.44	1	0.001	0.005	µg/L	0.5	0	88	55 - 145%	PASS		
Benzo[a]pyrene	Total	0.44	1	0.001	0.005	µg/L	0.5	0	88	51 - 143%	PASS		
Benzo[b]fluoranthene	Total	0.49	1	0.001	0.005	µg/L	0.5	0	98	46 - 165%	PASS		
Benzo[e]pyrene	Total	0.462	1	0.001	0.005	µg/L	0.5	0	92	42 - 152%	PASS		
Benzo[g,h,i]perylene	Total	0.448	1	0.001	0.005	µg/L	0.5	0	90	63 - 133%	PASS		
Benzo[k]fluoranthene	Total	0.414	1	0.001	0.005	µg/L	0.5	0	83	56 - 145%	PASS		
Biphenyl	Total	0.432	1	0.001	0.005	µg/L	0.5	0	86	56 - 119%	PASS		
Chrysene	Total	0.399	1	0.001	0.005	µg/L	0.5	0	80	56 - 141%	PASS		
Dibenz[a,h]anthracene	Total	0.68	1	0.001	0.005	µg/L	0.5	0	136	55 - 150%	PASS		
Dibenzo[a,l]pyrene	Total	0.68	1	0.001	0.005	µg/L	0.5	0	136	50 - 150%	PASS		

PHYSIS Project ID: 1407003-457
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-67495-1

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODEc
Dibenzothiophene	Total	0.461	1	0.001	0.005	µg/L	0.5	0	92	46 - 126%	PASS			
Fluoranthene	Total	0.496	1	0.001	0.005	µg/L	0.5	0	99	60 - 146%	PASS			
Fluorene	Total	0.439	1	0.001	0.005	µg/L	0.5	0	88	58 - 131%	PASS			
Indeno[1,2,3-cd]pyrene	Total	0.727	1	0.001	0.005	µg/L	0.5	0	145	50 - 151%	PASS			
Naphthalene	Total	0.454	1	0.001	0.005	µg/L	0.5	0	91	41 - 126%	PASS			
Perylene	Total	0.442	1	0.001	0.005	µg/L	0.5	0	88	48 - 141%	PASS			
Phenanthrene	Total	0.46	1	0.001	0.005	µg/L	0.5	0	92	67 - 127%	PASS			
Pyrene	Total	0.505	1	0.001	0.005	µg/L	0.5	0	101	54 - 156%	PASS			

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODEc
Sample ID: 112121-BS2	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**				**Received:**		
	Method: EPA 625.1					Batch ID: O-42148		Prepared: 19-Oct-23				Analyzed: 16-Nov-23		
(d10-Acenaphthene)	Total	89	1			% Recovery	100	0	89	27 - 133%	PASS	2	30 PASS	
(d10-Phenanthrene)	Total	97	1			% Recovery	100	0	97	43 - 129%	PASS	2	30 PASS	
(d12-Chrysene)	Total	87	1			% Recovery	100	0	87	52 - 144%	PASS	2	30 PASS	
(d12-Perylene)	Total	90	1			% Recovery	100	0	90	36 - 161%	PASS	5	30 PASS	
(d8-Naphthalene)	Total	90	1			% Recovery	100	0	90	25 - 125%	PASS	5	30 PASS	
1-Methylnaphthalene	Total	0.431	1	0.001	0.005	µg/L	0.5	0	86	31 - 128%	PASS	2	30 PASS	
1-Methylphenanthrene	Total	0.489	1	0.001	0.005	µg/L	0.5	0	98	66 - 127%	PASS	2	30 PASS	
2,3,5-Trimethylnaphthalene	Total	0.448	1	0.001	0.005	µg/L	0.5	0	90	55 - 122%	PASS	0	30 PASS	
2,6-Dimethylnaphthalene	Total	0.435	1	0.001	0.005	µg/L	0.5	0	87	48 - 120%	PASS	1	30 PASS	
2-Methylnaphthalene	Total	0.434	1	0.001	0.005	µg/L	0.5	0	87	47 - 130%	PASS	2	30 PASS	
Acenaphthene	Total	0.431	1	0.001	0.005	µg/L	0.5	0	86	53 - 131%	PASS	2	30 PASS	
Acenaphthylene	Total	0.442	1	0.001	0.005	µg/L	0.5	0	88	43 - 140%	PASS	2	30 PASS	
Anthracene	Total	0.463	1	0.001	0.005	µg/L	0.5	0	93	58 - 135%	PASS	0	30 PASS	
Benz[a]anthracene	Total	0.447	1	0.001	0.005	µg/L	0.5	0	89	55 - 145%	PASS	1	30 PASS	
Benzo[a]pyrene	Total	0.429	1	0.001	0.005	µg/L	0.5	0	86	51 - 143%	PASS	2	30 PASS	
Benzo[b]fluoranthene	Total	0.503	1	0.001	0.005	µg/L	0.5	0	101	46 - 165%	PASS	3	30 PASS	
Benzo[e]pyrene	Total	0.471	1	0.001	0.005	µg/L	0.5	0	94	42 - 152%	PASS	2	30 PASS	
Benzo[g,h,i]perylene	Total	0.464	1	0.001	0.005	µg/L	0.5	0	93	63 - 133%	PASS	3	30 PASS	
Benzo[k]fluoranthene	Total	0.4	1	0.001	0.005	µg/L	0.5	0	80	56 - 145%	PASS	4	30 PASS	
Biphenyl	Total	0.424	1	0.001	0.005	µg/L	0.5	0	85	56 - 119%	PASS	1	30 PASS	
Chrysene	Total	0.407	1	0.001	0.005	µg/L	0.5	0	81	56 - 141%	PASS	1	30 PASS	
Dibenz[a,h]anthracene	Total	0.703	1	0.001	0.005	µg/L	0.5	0	141	55 - 150%	PASS	4	30 PASS	
Dibenzo[a,l]pyrene	Total	0.703	1	0.001	0.005	µg/L	0.5	0	141	50 - 150%	PASS	4	30 PASS	

PHYSIS Project ID: 1407003-457
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-67495-1

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODEc
Dibenzothiophene	Total	0.46	1	0.001	0.005	µg/L	0.5	0	92	46 - 126%	PASS	0	30	PASS	
Fluoranthene	Total	0.509	1	0.001	0.005	µg/L	0.5	0	102	60 - 146%	PASS	3	30	PASS	
Fluorene	Total	0.443	1	0.001	0.005	µg/L	0.5	0	89	58 - 131%	PASS	1	30	PASS	
Indeno[1,2,3-cd]pyrene	Total	0.745	1	0.001	0.005	µg/L	0.5	0	149	50 - 151%	PASS	3	30	PASS	
Naphthalene	Total	0.441	1	0.001	0.005	µg/L	0.5	0	88	41 - 126%	PASS	3	30	PASS	
Perylene	Total	0.458	1	0.001	0.005	µg/L	0.5	0	92	48 - 141%	PASS	4	30	PASS	
Phenanthrene	Total	0.459	1	0.001	0.005	µg/L	0.5	0	92	67 - 127%	PASS	0	30	PASS	
Pyrene	Total	0.52	1	0.001	0.005	µg/L	0.5	0	104	54 - 156%	PASS	3	30	PASS	

TENTATIVELY IDENTIFIED COMPOUNDS

Sample ID: Lab Blank B1_42148

Retention Time	Area (% of total)	Concentration (ng/L)	Library/ID	Cas Number	Match Quality (%)
35.3913	5.0825	1111	Antracene-D10	1517-22-2	96
10.6045	2.4869	544	Cyclobutanecarboxylic acid, 2-propenyl ester	1000282-60-3	88

Concentration estimated using the response for Anthracene-d10

Sample ID: 112122

Retention Time	Area (% of total)	Concentration (ng/L)	Library/ID	Cas Number	Match Quality (%)
35.3849	3.0939	1111	Anthracene-D10-	1719-06-8	97
10.4203	18.5915	6677	Cyclohexane, 1-methyl-2-propyl-	4291-79-6	95
10.3605	11.6440	4182	Octane, 3-methyl-6-methylene-	74630-07-2	90
10.1792	5.5607	1997	2,3,3-Trimethyl-1-hexene	1000113-52-1	87
10.1525	3.3961	1220	1H-Tetrazole	288-94-8	89
10.4713	2.5589	919	Octane, 3-methyl-6-methylene-	74630-07-2	88
10.6016	1.4147	508	Cyclopropane, 2-bromo-1,1,3-trimethyl-	36617-00-2	91
10.1060	1.2149	436	1-Hexene, 4,5-dimethyl-	16106-59-5	88
10.0427	1.0993	395	2-Pyrazoline, 1-isobutyl-3-methyl-	26964-53-4	83
10.4143	0.8864	318	1H-Tetrazole	288-94-8	98
16.5941	0.7886	283	Cyclohexane, 1,2,4,5-tetraethyl-, (1.alpha.,2.alpha.,4.alpha.,5.alpha.)-	61142-24-3	86
45.8795	0.5134	184	Terephthalic acid, isobutyl butyl ester	1000323-56-2	94
67.3407	0.4440	159	1,4-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	6422-86-2	93
16.4160	0.3953	142	Cyclohexane, 1,2,4,5-tetraethyl-, (1.alpha.,2.alpha.,4.alpha.,5.alpha.)-	61142-24-3	86

Concentration estimated using the response for Anthracene-d10

Sample ID: 112123

Retention Time	Area (% of total)	Concentration (ng/L)	Library/ID	Cas Number	Match Quality (%)
35.3869	3.3178	1111	Anthracene-D10-	1719-06-8	98
10.4196	17.3131	5798	Cyclohexane, 1-methyl-2-propyl-	4291-79-6	95
10.3599	11.7055	3920	Octane, 3-methyl-6-methylene-	74630-07-2	90
10.1790	5.5967	1874	2,3,3-Trimethyl-1-hexene	1000113-52-1	88
10.1518	3.3480	1121	1H-Tetrazole	288-94-8	88
10.4707	2.5785	864	Octane, 3-methyl-6-methylene-	74630-07-2	88
10.6015	1.7819	597	Cyclopropane, 2-bromo-1,1,3-trimethyl-	36617-00-2	90
10.1055	1.2196	408	1-Hexene, 4,5-dimethyl-	16106-59-5	88
10.0426	1.1008	369	2-Pyrazoline, 1-isobutyl-3-methyl-	26964-53-4	83
10.4138	0.8972	300	1H-Tetrazole	288-94-8	98
16.5918	0.7619	255	Cyclohexane, 1,2,4,5-tetraethyl-, (1.alpha.,2.alpha.,4.alpha.,5.alpha.)-	61142-24-3	86
45.8780	0.5455	183	Terephthalic acid, isobutyl butyl ester	1000323-56-2	94
67.3414	0.4742	159	1,4-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	6422-86-2	96
32.1527	0.3177	106	Benzoic acid, 2-ethylhexyl ester	5444-75-7	98

Concentration estimated using the response for Anthracene-d10

Sample ID: 112124

Retention Time	Area (% of total)	Concentration (ng/L)	Library/ID	Cas Number	Match Quality (%)
35.3857	3.2581	1111	Anthracene-D10-	1719-06-8	98
10.4199	17.4987	5968	Cyclohexane, 1-methyl-2-propyl-	4291-79-6	95
10.3603	10.5617	3602	Octane, 3-methyl-6-methylene-	74630-07-2	89
10.1798	5.4516	1859	2,3,3-Trimethyl-1-hexene	1000113-52-1	86
10.1532	3.0190	1030	1H-Tetrazole	288-94-8	89
10.4711	2.2956	783	Octane, 3-methyl-6-methylene-	74630-07-2	88
10.3004	2.0246	690	Sulfurous acid, di(cyclohexylmethyl) ester	1010309-22-7	86
10.6022	1.6667	568	Cyclopropane, 2-bromo-1,1,3-trimethyl-	36617-00-2	90
10.0438	1.3841	472	2-Pyrazoline, 1-isobutyl-3-methyl-	26964-53-4	83
10.4148	0.8174	279	1H-Tetrazole	288-94-8	98
10.1064	0.7856	268	Pentane, 2-bromo-	107-81-3	82
16.5927	0.7282	248	Cyclohexane, 1,2,4,5-tetraethyl-, (1.alpha.,2.alpha.,4.alpha.,5.alpha.)-	61142-24-3	86
10.0088	0.6295	215	1-(1,3-Dimethyl-1H-pyrazol-4-yl)ethanone	52773-23-6	80
67.3471	0.5777	197	1,3-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	137-89-3	97
45.8762	0.4843	165	Terephthalic acid, isobutyl butyl ester	1000323-56-2	95
16.4168	0.3458	118	3-Hexene, 3-ethyl-2,5-dimethyl-	62338-08-3	85

Concentration estimated using the response for Anthracene-d10

Sample ID: 112125

Retention Time	Area (% of total)	Concentration (ng/L)	Library/ID	Cas Number	Match Quality (%)
35.3848	3.4559	1111	Anthracene-D10-	1719-06-8	98
10.4179	17.2844	5557	Cyclohexane, 1-methyl-2-propyl-	4291-79-6	95
10.3596	10.8586	3491	Octane, 3-methyl-6-methylene-	74630-07-2	90
10.1790	4.4307	1425	2,3,3-Trimethyl-1-hexene	1000113-52-1	87
10.1511	3.0076	967	Pyrrolidine	123-75-1	87
10.6015	1.5297	492	Cyclopropane, 2-bromo-1,1,3-trimethyl-	36617-00-2	92
10.1054	1.1238	361	1-Hexene, 4,5-dimethyl-	16106-59-5	88
10.0076	0.8410	270	1-(1,3-Dimethyl-1H-pyrazol-4-yl)ethanone	52773-23-6	82
10.4136	0.8389	270	1H-Tetrazole	288-94-8	98
16.5937	0.6902	222	Cyclohexane, 1,2,4,5-tetraethyl-, (1.alpha.,2.alpha.,4.alpha.,5.alpha.)-	61142-24-3	86
45.8780	0.4912	158	Terephthalic acid, isobutyl butyl ester	1000323-56-2	95
67.3397	0.4456	143	1,4-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	6422-86-2	97
16.4177	0.3565	115	3-Hexene, 3-ethyl-2,5-dimethyl-	62338-08-3	86
32.1515	0.3064	99	Benzoic acid, 2-ethylhexyl ester	5444-75-7	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

12/12/2023

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arada, Rachelle	Carrier Tracking No(s):	COC No: 380-85799.1
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 #: 380-67495-1
Address: 1904 Wright Circle, ,	Due Date Requested: 10/30/2023			
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:

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 (380-67495-1)	10/16/23	09:39 Hawaiian		Water			X	2	See Attached Instructions
AIEA GULCH WELLS PUMP 2 (380-67495-2)	10/16/23	10:36 Hawaiian		Water			X	2	See Attached Instructions
AIEA WELLS PUMPS 1&2 (260) P2 (380-67495-3)	10/16/23	11:05 Hawaiian		Water			X	2	See Attached Instructions
HALAWA WELLS UNITS 1 & 2 P1 (380-67495-4)	10/16/23	10:07 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
1	[signature]	10/19/23 1115	ERA	Sierra Whitacre	10/19/23 1115	Physis
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver: 06/08/2021

PHYSIS
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature

PHYSIS
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature

Project Iteration ID: 1407003-457
Client Name: Eurofins Eaton Analytical
Project Name: RED-HILL Project # 38001111 Job # 380-67495-1
COC Page Number: 2 of 2
Bottle Label Color: NA

Sample Receipt Summary

Receiving Info

1. Initials Received By: RW
2. Date Received: 10/19/23
3. Time Received: 1115
4. Client Name: Eurofins
5. Courier Information: (Please circle)
   - (Client) • UPS • Area Fast • DRS
   - FedEx • GSO/GLS • Ontrac • PAMS
   - PHYSIS Driver:
     - i. Start Time:_____ iii. Total Mileage: _____
     - ii. End Time:_____ iv. Number of Pickups:_____
6. Container Information: (Please put the # of containers or circle none)
   - 1 Cooler • ___ Styrofoam Cooler • ____ Boxes • None
   - ___ Carboy(s) • ___Carboy Trash Can(s) • ____ Carboy Cap(s) • Other _____
7. What type of ice was used: (Please circle any that apply)
   - (Wet Ice) • Blue Ice • Dry Ice • Water • None
8. Randomly Selected Samples Temperature (°C): 4.3°C Used I/R Thermometer # I-2

Inspection Info

1. Initials Inspected By: RCH

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 1 of 2
Company: City & County of Honolulu	PWSID:	Analysis Requested		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#:			

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

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs	SUBCONTRACT - 8015 Gas (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	16-Oct-2023	0939	G	Water			2		2	2	4											
AIEA GULCH WELLS PUMP2	16-Oct-2023	1036	G	Water			2		2	2	4											
AIEA WELLS PUMPS 1&2 (260) P2	16-Oct-2023	1105	G	Water			2		2	2	4											
HALAWA WELLS UNITS 1&2 P1	16-Oct-2023	1007	G	Water			2		2	2	4											
TB MOANALUA WELLS	16-Oct-2023	0939		Water							2											
TB AIEA GULCH WELLS PUMP2	16-Oct-2023	1036		Water							2											
TB AIEA WELLS PUMPS 1&2 (260)	16-Oct-2023	1105		Water							2											
TB HALAWA WELLS UNITS 1&2	16-Oct-2023	1007		Water							2											

380-67495 COC

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

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

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

Special Instructions/QC Requirements: FEDEX ① 7737 7388 1461 ② 7737 7388 1472

Empty Kit Relinquished by	Date	Time	Method of Shipment: ③ 7737 7388 1483

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
		HBWS	G.PEITNER	10/18/2023 10 20	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) GEL - FROZEN ① 2.6° 0.1°-2.5° ② 5.5° 0.1°-5.4° ③ 0.8°-0.1 -0.7°

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

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 #:			
Project Name: RED-HILL/HBWS sites Event Desc. RUSH Weekly Red Hill	Project #: 38001111			
Site:	SSOW#:			

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	16-Oct-2023	0939	G	Water								3	3		
AIEA GULCH WELLS PUMP2	16-Oct-2023	1036	G	Water								3	3		
AIEA WELLS PUMPS 1&2 (260) P2	16-Oct-2023	1105	G	Water								3	3		
HALAWA WELLS UNITS 1&2 P1	16-Oct-2023	1057	G	Water								3	3		
FB MOANALUA WELLS	16-Oct-2023	0939		Water								1	1		
FB AIEA GULCH WELLS PUMP2	16-Oct-2023	1036		Water								1	1		
FB AIEA WELLS PUMPS 1&2 (260)	16-Oct-2023	1105		Water								1	1		
FB HALAWA WELLS UNITS 1&2	16-Oct-2023	1057		Water								1	1		

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

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

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

Special Instructions/QC Requirements
① 7737 7388 1461
② 7737 7388 1472

Empty Kit Relinquished by	Date	Time	Method of Shipment: FED EX ③ 7737 7388 1483

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
		HBWS	E REITNER	10/18/2023 10:20	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
(757A) GEL FROZEN ① 2.6 0.0=2.5 ② 5.5-0.1=5.4 ③ 0.8-0.1=0.7

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-67495-2

Login Number: 67495
List Number: 1
Creator: Elyas, Matthew

List Source: Eurofins Eaton Analytical Pomona

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