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PREPARED FOR

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

ANALYTICAL REPORT

Generated 9/17/2023 10:22:45 AM

JOB DESCRIPTION

RED-HILL

JOB NUMBER

380-53442-2

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

Eurofins Eaton Analytical Pomona

Job Notes

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

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

Compliance Statement

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

Authorization

Generated 9/17/2023 10:22:45 AM

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

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Definitions/Glossary

Client: City & County of Honolulu

Job ID: 380-53442-2 Project/Site: RED-HILL

Qualifiers

Subcontract

Qualifier **Qualifier Description**

This analyte was not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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¤ Listed under the "D" column to designate that the result is reported on a dry weight basis

Percent Recovery %R **CFL** Contains Free Liquid CFU Colony Forming Unit CNF Contains No Free Liquid

Duplicate Error Ratio (normalized absolute difference) **DER**

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 MLMinimum Level (Dioxin) MPN Most Probable Number Method Quantitation Limit MQL

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**

Relative Error Ratio (Radiochemistry) **RER**

Reporting Limit or Requested Limit (Radiochemistry) RL

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin) **TEQ** Toxicity Equivalent Quotient (Dioxin)

Too Numerous To Count **TNTC**

Eurofins Eaton Analytical Pomona

Case Narrative

Client: City & County of Honolulu

Job ID: 380-53442-2 Project/Site: RED-HILL

Job ID: 380-53442-2

Laboratory: Eurofins Eaton Analytical Pomona

Narrative

Job Narrative 380-53442-2

Comments

No additional comments.

Receipt

The samples were received on 7/6/2023 9:50 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 5 coolers at receipt time were 1.3° C, 1.6° C, 2.1° C, 2.6° C and 3.5° C.

Subcontract non-Sister

See attached subcontract report.

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.

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

Detection Summary

Client: City & County of Honolulu Job ID: 380-53442-2

Project/Site: RED-HILL

Client Sample ID: AIEA GULCH WELLS PUMP 2 Lab Sample ID: 380-53442-1

No Detections

Client Sample ID: AIEA WELLS PUMP 2 (260) Lab Sample ID: 380-53442-2

Analyte	Result Q	ualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[b]fluoranthene	0.00755		0.005	0.001	μg/L	1	_	625 PAH Physis	Total/NA
								LL (EAL) + TICs	

Client Sample ID: TB: AIEA GULCH WELLS PUMP 2 Lab Sample ID: 380-53442-4

No Detections.

Client Sample ID: TB: AIEA WELLS PUMP 2 (260) Lab Sample ID: 380-53442-5

No Detections.

This Detection Summary does not include radiochemical test results.

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Job ID: 380-53442-2

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

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-53442-1 Date Collected: 07/03/23 08:45 **Matrix: Drinking Water**

Date Received: 07/06/23 09:50

1-Methylnaphthalene 1-Methylphenanthrene 2,3,5-Trimethylnaphthalene 2,6-Dimethylnaphthalene 2-Methylnaphthalene 2-Methylnaphthalene Acenaphthene Acenaphthylene Anthracene Benz[a]anthracene Benzo[a]pyrene Benzo[b]fluoranthene Benzo[e]pyrene Benzo[g,h,i]perylene	ND N		0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005	0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001	µg/L µg/L µg/L µg/L µg/L µg/L µg/L		07/07/23 00:00 07/07/23 00:00 07/07/23 00:00 07/07/23 00:00 07/07/23 00:00 07/07/23 00:00 07/07/23 00:00	07/29/23 23:45	1 1 1 1 1 1 1 1 1
2,3,5-Trimethylnaphthalene 2,6-Dimethylnaphthalene 2-Methylnaphthalene Acenaphthene Acenaphthylene Anthracene Benz[a]anthracene Benzo[b]fluoranthene Benzo[g,h,i]perylene	ND N		0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005	0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001	µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L		07/07/23 00:00 07/07/23 00:00 07/07/23 00:00 07/07/23 00:00 07/07/23 00:00 07/07/23 00:00 07/07/23 00:00 07/07/23 00:00 07/07/23 00:00	07/29/23 23:45 07/29/23 23:45 07/29/23 23:45 07/29/23 23:45 07/29/23 23:45 07/29/23 23:45 07/29/23 23:45 07/29/23 23:45	1 1 1 1 1 1
2,6-Dimethylnaphthalene 2-Methylnaphthalene Acenaphthene Acenaphthylene Anthracene Benz[a]anthracene Benzo[a]pyrene Benzo[b]fluoranthene Benzo[g,h,i]perylene	ND N		0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005	0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001	μg/L μg/L μg/L μg/L μg/L μg/L μg/L		07/07/23 00:00 07/07/23 00:00 07/07/23 00:00 07/07/23 00:00 07/07/23 00:00 07/07/23 00:00 07/07/23 00:00 07/07/23 00:00	07/29/23 23:45 07/29/23 23:45 07/29/23 23:45 07/29/23 23:45 07/29/23 23:45 07/29/23 23:45 07/29/23 23:45	1 1 1 1 1
2-Methylnaphthalene Acenaphthene Acenaphthylene Anthracene Benz[a]anthracene Benzo[a]pyrene Benzo[b]fluoranthene Benzo[g]pyrene Benzo[g,h,i]perylene	ND ND ND ND ND ND ND ND		0.005 0.005 0.005 0.005 0.005 0.005 0.005 0.005	0.001 0.001 0.001 0.001 0.001 0.001 0.001	µg/L µg/L µg/L µg/L µg/L µg/L µg/L		07/07/23 00:00 07/07/23 00:00 07/07/23 00:00 07/07/23 00:00 07/07/23 00:00 07/07/23 00:00 07/07/23 00:00	07/29/23 23:45 07/29/23 23:45 07/29/23 23:45 07/29/23 23:45 07/29/23 23:45 07/29/23 23:45	1 1 1 1 1
Acenaphthene Acenaphthylene Anthracene Benz[a]anthracene Benzo[a]pyrene Benzo[b]fluoranthene Benzo[e]pyrene Benzo[g,h,i]perylene	ND ND ND ND ND ND ND		0.005 0.005 0.005 0.005 0.005 0.005 0.005	0.001 0.001 0.001 0.001 0.001 0.001	μg/L μg/L μg/L μg/L μg/L μg/L		07/07/23 00:00 07/07/23 00:00 07/07/23 00:00 07/07/23 00:00 07/07/23 00:00 07/07/23 00:00	07/29/23 23:45 07/29/23 23:45 07/29/23 23:45 07/29/23 23:45 07/29/23 23:45	1 1 1 1
Acenaphthylene Anthracene Benz[a]anthracene Benzo[a]pyrene Benzo[b]fluoranthene Benzo[e]pyrene Benzo[g,h,i]perylene	ND ND ND ND ND ND		0.005 0.005 0.005 0.005 0.005 0.005	0.001 0.001 0.001 0.001 0.001	μg/L μg/L μg/L μg/L μg/L		07/07/23 00:00 07/07/23 00:00 07/07/23 00:00 07/07/23 00:00 07/07/23 00:00	07/29/23 23:45 07/29/23 23:45 07/29/23 23:45 07/29/23 23:45	1 1 1
Anthracene Benz[a]anthracene Benzo[a]pyrene Benzo[b]fluoranthene Benzo[e]pyrene Benzo[g,h,i]perylene	ND ND ND ND ND ND		0.005 0.005 0.005 0.005 0.005 0.005	0.001 0.001 0.001 0.001 0.001	μg/L μg/L μg/L μg/L		07/07/23 00:00 07/07/23 00:00 07/07/23 00:00 07/07/23 00:00	07/29/23 23:45 07/29/23 23:45 07/29/23 23:45	1 1 1
Benz[a]anthracene Benzo[a]pyrene Benzo[b]fluoranthene Benzo[e]pyrene Benzo[g,h,i]perylene	ND ND ND ND ND		0.005 0.005 0.005 0.005 0.005	0.001 0.001 0.001 0.001	μg/L μg/L μg/L		07/07/23 00:00 07/07/23 00:00 07/07/23 00:00	07/29/23 23:45 07/29/23 23:45	1
Benzo[a]pyrene Benzo[b]fluoranthene Benzo[e]pyrene Benzo[g,h,i]perylene	ND ND ND ND ND		0.005 0.005 0.005 0.005	0.001 0.001 0.001	μg/L μg/L		07/07/23 00:00 07/07/23 00:00	07/29/23 23:45	1
Benzo[b]fluoranthene Benzo[e]pyrene Benzo[g,h,i]perylene	ND ND ND ND		0.005 0.005 0.005	0.001 0.001	μg/L		07/07/23 00:00		-
Benzo[e]pyrene Benzo[g,h,i]perylene	ND ND ND		0.005 0.005	0.001	. •			07/29/23 23:45	1
Benzo[g,h,i]perylene	ND ND		0.005		μg/L				
10. 11. 1	ND			0.001			07/07/23 00:00	07/29/23 23:45	1
Danzall/Ifluerenther -			0.005		μg/L		07/07/23 00:00	07/29/23 23:45	1
Benzo[k]fluoranthene	ND		0.000	0.001	μg/L		07/07/23 00:00	07/29/23 23:45	1
Biphenyl			0.005	0.001	μg/L		07/07/23 00:00	07/29/23 23:45	1
Chrysene	ND		0.005	0.001	μg/L		07/07/23 00:00	07/29/23 23:45	1
Dibenz[a,h]anthracene	ND		0.005	0.001	μg/L		07/07/23 00:00	07/29/23 23:45	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	μg/L		07/07/23 00:00	07/29/23 23:45	1
Dibenzothiophene	ND		0.005	0.001	μg/L		07/07/23 00:00	07/29/23 23:45	1
Disalicylidenepropanediamine	ND		0.1	0.05	μg/L		07/07/23 00:00	07/29/23 23:45	1
Fluoranthene	ND		0.005	0.001	μg/L		07/07/23 00:00	07/29/23 23:45	1
Fluorene	ND		0.005	0.001	μg/L		07/07/23 00:00	07/29/23 23:45	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	μg/L		07/07/23 00:00	07/29/23 23:45	1
Naphthalene	ND		0.005	0.001	μg/L		07/07/23 00:00	07/29/23 23:45	1
Perylene	ND		0.005	0.001	μg/L		07/07/23 00:00	07/29/23 23:45	1
Phenanthrene	ND		0.005	0.001	μg/L		07/07/23 00:00	07/29/23 23:45	1
Pyrene	ND		0.005	0.001	μg/L		07/07/23 00:00	07/29/23 23:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
(d10-Acenaphthene)	64		27 - 133				07/07/23 00:00	07/29/23 23:45	1
(d10-Phenanthrene)	98		43 - 129				07/07/23 00:00	07/29/23 23:45	1
(d12-Chrysene)	105		52 - 144				07/07/23 00:00	07/29/23 23:45	1
(d12-Perylene)	83		36 - 161				07/07/23 00:00	07/29/23 23:45	1
(d8-Naphthalene)	80		25 - 125				07/07/23 00:00	07/29/23 23:45	1
Method: 8015 Gas (Purgeabl	e) LL (EAL) -	SW846 80	15B Gasolin	e Range	Organic	S			
Analyte	Result	Qualifier	RL	MDL	Unit	_ D	Prepared	Analyzed	Dil Fac

Method: 8015 Gas (Purgeable)	LL (EAL) -	SW846 80	15B Gasoline	e Range	e Organic	cs			
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			07/07/23 17:04	1
Surrogate	%Recovery	Qualifier	Limits			_	Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE	101		60 - 140					07/07/23 17:04	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DIESEL	ND	U	0.027		mg/L			07/14/23 21:20	1
JP5	ND	U	0.055		mg/L			07/14/23 21:20	1
JP8	ND	U	0.055		mg/L			07/14/23 21:20	1
MOTOR OIL	ND	U	0.055		mg/L			07/14/23 21:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
BROMOBENZENE	66		60 - 130					07/14/23 21:20	1

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Client Sample Results

Client: City & County of Honolulu

Project/Site: RED-HILL

Client Sample ID: AIEA GULCH WELLS PUMP 2

Date Collected: 07/03/23 08:45

Lab Sample ID: 380-53442-1
Matrix: Drinking Water

Job ID: 380-53442-2

Date Received: 07/06/23 09:50

BROMOFLUOROBENZENE

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

 Surrogate
 %Recovery
 Qualifier
 Limits
 Prepared
 Analyzed
 Dil Fac

 HEXACOSANE
 89
 60 - 130
 07/14/23 21:20
 1

Client Sample ID: AIEA WELLS PUMP 2 (260)

Lab Sample ID: 380-53442-2

Date Collected: 07/03/23 09:20 Matrix: Drinking Water Date Received: 07/06/23 09:50

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

Analyte Result Qualifier RL MDL Unit D

Analyte	Result C	Qualifier	RL	MDL	Unit	Ī	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.005	0.001	μg/L		_	07/07/23 00:00	07/30/23 01:33	1
1-Methylphenanthrene	ND		0.005	0.001	μg/L			07/07/23 00:00	07/30/23 01:33	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	μg/L			07/07/23 00:00	07/30/23 01:33	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	μg/L			07/07/23 00:00	07/30/23 01:33	1
2-Methylnaphthalene	ND		0.005	0.001	μg/L			07/07/23 00:00	07/30/23 01:33	1
Acenaphthene	ND		0.005	0.001	μg/L			07/07/23 00:00	07/30/23 01:33	1
Acenaphthylene	ND		0.005	0.001	μg/L			07/07/23 00:00	07/30/23 01:33	1
Anthracene	ND		0.005	0.001	μg/L			07/07/23 00:00	07/30/23 01:33	1
Benz[a]anthracene	ND		0.005	0.001	μg/L			07/07/23 00:00	07/30/23 01:33	1
Benzo[a]pyrene	ND		0.005	0.001	μg/L			07/07/23 00:00	07/30/23 01:33	1
Benzo[b]fluoranthene	0.00755		0.005	0.001	μg/L			07/07/23 00:00	07/30/23 01:33	1
Benzo[e]pyrene	ND		0.005	0.001	μg/L			07/07/23 00:00	07/30/23 01:33	1
Benzo[g,h,i]perylene	ND		0.005	0.001	μg/L			07/07/23 00:00	07/30/23 01:33	1
Benzo[k]fluoranthene	ND		0.005	0.001	μg/L			07/07/23 00:00	07/30/23 01:33	1
Biphenyl	ND		0.005	0.001	μg/L			07/07/23 00:00	07/30/23 01:33	1
Chrysene	ND		0.005	0.001	μg/L			07/07/23 00:00	07/30/23 01:33	1
Dibenz[a,h]anthracene	ND		0.005	0.001	μg/L			07/07/23 00:00	07/30/23 01:33	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	μg/L			07/07/23 00:00	07/30/23 01:33	1
Dibenzothiophene	ND		0.005	0.001	μg/L			07/07/23 00:00	07/30/23 01:33	1
Disalicylidenepropanediamine	ND		0.1	0.05	μg/L			07/07/23 00:00	07/30/23 01:33	1
Fluoranthene	ND		0.005	0.001	μg/L			07/07/23 00:00	07/30/23 01:33	1
Fluorene	ND		0.005	0.001	μg/L			07/07/23 00:00	07/30/23 01:33	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	μg/L			07/07/23 00:00	07/30/23 01:33	1
Naphthalene	ND		0.005	0.001	μg/L			07/07/23 00:00	07/30/23 01:33	1
Perylene	ND		0.005	0.001	μg/L			07/07/23 00:00	07/30/23 01:33	1
Phenanthrene	ND		0.005	0.001	μg/L			07/07/23 00:00	07/30/23 01:33	1
Pyrene	ND		0.005	0.001	μg/L			07/07/23 00:00	07/30/23 01:33	1

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
(d10-Acenaphthene)	54	27 - 133	07/07/23 00:00	07/30/23 01:33	1
(d10-Phenanthrene)	88	43 - 129	07/07/23 00:00	07/30/23 01:33	1
(d12-Chrysene)	94	52 - 144	07/07/23 00:00	07/30/23 01:33	1
(d12-Perylene)	74	36 - 161	07/07/23 00:00	07/30/23 01:33	1
(d8-Naphthalene)	72	25 - 125	07/07/23 00:00	07/30/23 01:33	1

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

100

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			07/07/23 18:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac

60 - 140

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07/07/23 18:57

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Client Sample Results

Client: City & County of Honolulu

Project/Site: RED-HILL

Client Sample ID: AIEA WELLS PUMP 2 (260)

Date Collected: 07/03/23 09:20 Date Received: 07/06/23 09:50 Lab Sample ID: 380-53442-2

Matrix: Drinking Water

Job ID: 380-53442-2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DIESEL	ND	U	0.027		mg/L			07/14/23 21:39	1
JP5	ND	U	0.055		mg/L			07/14/23 21:39	1
JP8	ND	U	0.055		mg/L			07/14/23 21:39	1
MOTOR OIL	ND	U	0.055		mg/L			07/14/23 21:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
BROMOBENZENE	62		60 - 130					07/14/23 21:39	1
HEXACOSANE	90		60 - 130					07/14/23 21:39	1

Lab Sample ID: 380-53442-4 Client Sample ID: TB: AIEA GULCH WELLS PUMP 2 **Matrix: Water**

Date Collected: 07/03/23 08:45

Date Received: 07/06/23 09:50

Method: 8015 Gas (Purgea Analyte		Qualifier	RL	_	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			07/07/23 19:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE	105		60 - 140					07/07/23 19:35	1

Client Sample ID: TB: AIEA WELLS PUMP 2 (260) Lab Sample ID: 380-53442-5 Date Collected: 07/03/23 09:20 **Matrix: Water**

Date Received: 07/06/23 09:50

_ Method: 8015 Gas (Purgeable)	LL (EAL) -	SW846 80	15B Gasolin	e Range	Organio	cs			
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			07/07/23 20:12	1
Surrogate BROMOFLUOROBENZENE	%Recovery	Qualifier	60 - 140			-	Prepared	Analyzed 07/07/23 20:12	Dil Fac

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

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)		
108032-B1	Method Blank	80	108	107	105	96		
108032-BS1	Lab Control Sample	82	102	104	89	92		
108032-BS2	Lab Control Sample Dup	80	96	104	85	94		
Surrogate Legend								

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

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

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

Matrix: Drinking Water Prep Type: Total/NA

			Pe	gate Recovery (Accepta			
		Acenapht	Phenanth	CRY	NPT	PRY	
Lab Sample ID	Client Sample ID	(27-133)	(43-129)	(52-144)	(25-125)	(36-161)	
380-53442-1	AIEA GULCH WELLS PUMP 2	64	98	105	80	83	
380-53442-2	AIEA WELLS PUMP 2 (260)	54	88	94	72	74	

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)	
380-53442-1	AIEA GULCH WELLS PUMP 2	101	
380-53442-2	AIEA WELLS PUMP 2 (260)	100	
Surrogate Legend			

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)	
23VGH7G03C	LCD		
23VGH7G03L	Lab Control Sample	119	
Surrogate Legend			
BFB = BROMOFLU	JOROBENZENE		

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

Matrix: Water Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

RFR Client Sample ID (60-140)Lab Sample ID 380-53442-4 TB: AIEA GULCH WELLS PUMI 105 380-53442-5 TB: AIEA WELLS PUMP 2 (260) 101

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 (60-140)Lab Sample ID Client Sample ID 23G030-01M Matrix Spike 114 23G030-01S Matrix Spike Duplicate 114 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 23VGH7G03B Method Blank

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) XACOSA BB (60-130)(60-130)Lab Sample ID Client Sample ID 380-53442-1 AIEA GULCH WELLS PUMP 2 66 89 380-53442-2 AIEA WELLS PUMP 2 (260) 90 62

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) вв XACOSAI

Lab Sample ID Client Sample ID 23DSG017WB Method Blank

Surrogate Legend

BB = BROMOBENZENE

HEXACOSANE = HEXACOSANE

Eurofins Eaton Analytical Pomona

9/17/2023

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Surrogate Summary

Client: City & County of Honolulu Job ID: 380-53442-2

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)							
		ВВ	XACOSA						
Lab Sample ID	Client Sample ID	(60-130)	(60-130)						
23DSG017WC	LCD	69	88						
23DSG017WL	Lab Control Sample	73	90						
23J5G017WC	LCD	78	93						
23J5G017WL	Lab Control Sample	76	89						
23J8G017WC	LCD	85	86						
23J8G017WL	Lab Control Sample	96	88						
Surrogate Legend									
BB = BROMOBENZ	ZENE								
HEXACOSANE = H	HEXACOSANE								

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Client: City & County of Honolulu Job ID: 380-53442-2

Project/Site: RED-HILL

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

Lab Sample ID: 108032-B1 Client Sample ID: Method Blank Matrix: BlankMatrix Prep Type: Total/NA Analysis Batch: O-41138 Prep Batch: O-41138_P

	Blank	Blank							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.005	0.001	μg/L		07/07/23 00:00	07/29/23 18:19	1
1-Methylphenanthrene	ND		0.005	0.001	μg/L		07/07/23 00:00	07/29/23 18:19	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	μg/L		07/07/23 00:00	07/29/23 18:19	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	μg/L		07/07/23 00:00	07/29/23 18:19	1
2-Methylnaphthalene	ND		0.005	0.001	μg/L		07/07/23 00:00	07/29/23 18:19	1
Acenaphthene	ND		0.005	0.001	μg/L		07/07/23 00:00	07/29/23 18:19	1
Acenaphthylene	ND		0.005	0.001	μg/L		07/07/23 00:00	07/29/23 18:19	1
Anthracene	ND		0.005	0.001	μg/L		07/07/23 00:00	07/29/23 18:19	1
Benz[a]anthracene	ND		0.005	0.001	μg/L		07/07/23 00:00	07/29/23 18:19	1
Benzo[a]pyrene	ND		0.005	0.001	μg/L		07/07/23 00:00	07/29/23 18:19	1
Benzo[b]fluoranthene	ND		0.005	0.001	μg/L		07/07/23 00:00	07/29/23 18:19	1
Benzo[e]pyrene	ND		0.005	0.001	μg/L		07/07/23 00:00	07/29/23 18:19	1
Benzo[g,h,i]perylene	ND		0.005	0.001	μg/L		07/07/23 00:00	07/29/23 18:19	1
Benzo[k]fluoranthene	ND		0.005	0.001	μg/L		07/07/23 00:00	07/29/23 18:19	1
Biphenyl	ND		0.005	0.001	μg/L		07/07/23 00:00	07/29/23 18:19	1
Chrysene	ND		0.005	0.001	μg/L		07/07/23 00:00	07/29/23 18:19	1
Dibenz[a,h]anthracene	ND		0.005	0.001	μg/L		07/07/23 00:00	07/29/23 18:19	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	μg/L		07/07/23 00:00	07/29/23 18:19	1
Dibenzothiophene	ND		0.005	0.001	μg/L		07/07/23 00:00	07/29/23 18:19	1
Disalicylidenepropanediamine	ND		0.1	0.05	μg/L		07/07/23 00:00	07/29/23 18:19	1
Fluoranthene	ND		0.005	0.001	μg/L		07/07/23 00:00	07/29/23 18:19	1
Fluorene	ND		0.005	0.001	μg/L		07/07/23 00:00	07/29/23 18:19	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	μg/L		07/07/23 00:00	07/29/23 18:19	1
Naphthalene	ND		0.005	0.001	μg/L		07/07/23 00:00	07/29/23 18:19	1
Perylene	ND		0.005	0.001	μg/L		07/07/23 00:00	07/29/23 18:19	1
Phenanthrene	ND		0.005	0.001	μg/L		07/07/23 00:00	07/29/23 18:19	1
Pyrene	ND		0.005	0.001	μg/L		07/07/23 00:00	07/29/23 18:19	1

	Blank	Blank				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
(d10-Acenaphthene)	80		27 - 133	07/07/23 00:00	07/29/23 18:19	1
(d10-Phenanthrene)	108		43 - 129	07/07/23 00:00	07/29/23 18:19	1
(d12-Chrysene)	107		52 - 144	07/07/23 00:00	07/29/23 18:19	1
(d12-Perylene)	96		36 - 161	07/07/23 00:00	07/29/23 18:19	1
(d8-Naphthalene)	105		25 - 125	07/07/23 00:00	07/29/23 18:19	1

Lab Sample ID: 108032-BS1 Matrix: BlankMatrix Analysis Batch: O-41138

Client Sample ID: Lab Control Sample Prep Type: Total/NA Prep Batch: O-41138_P

		Spike	LCS	LCS				%Rec	
Analyt	e	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1-Meth	ylnaphthalene	0.5	0.436		μg/L		87	31 - 128	
1-Meth	ylphenanthrene	0.5	0.536		μg/L		107	66 - 127	
2,3,5-T	rimethylnaphthalene	0.5	0.481		μg/L		96	55 - 122	
2,6-Din	nethylnaphthalene	0.5	0.46		μg/L		92	48 - 120	
2-Meth	ylnaphthalene	0.5	0.476		μg/L		95	47 - 130	
Acenap	ohthene	0.5	0.436		μg/L		87	53 - 131	
Acenar	hthylene	0.5	0.496		μg/L		99	43 - 140	
Anthra	cene	0.5	0.459		μg/L		92	58 - 135	

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Job ID: 380-53442-2

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

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

Lab Sample ID: 108032-BS1 **Client Sample ID: Lab Control Sample** Matrix: BlankMatrix **Prep Type: Total/NA Analysis Batch: O-41138** Prep Batch: O-41138_P LCS LCS Spike

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benz[a]anthracene	0.5	0.504		μg/L		101	55 - 145	
Benzo[a]pyrene	0.5	0.444		μg/L		89	51 - 143	
Benzo[b]fluoranthene	0.5	0.51		μg/L		102	46 - 165	
Benzo[e]pyrene	0.5	0.491		μg/L		98	42 - 152	
Benzo[g,h,i]perylene	0.5	0.482		μg/L		96	63 - 133	
Benzo[k]fluoranthene	0.5	0.514		μg/L		103	56 - 145	
Biphenyl	0.5	0.532		μg/L		106	56 - 119	
Chrysene	0.5	0.471		μg/L		94	56 - 141	
Dibenz[a,h]anthracene	0.5	0.482		μg/L		96	55 - 150	
Dibenzo[a,l]pyrene	0.5	0.413		μg/L		83	50 - 150	
Dibenzothiophene	0.5	0.527		μg/L		105	46 - 126	
Disalicylidenepropanediamine	50	28		μg/L		56	50 - 150	
Fluoranthene	0.5	0.608		μg/L		122	60 - 146	
Fluorene	0.5	0.477		μg/L		95	58 - 131	
Indeno[1,2,3-cd]pyrene	0.5	0.467		μg/L		93	50 - 151	
Naphthalene	0.5	0.46		μg/L		92	41 - 126	
Perylene	0.5	0.426		μg/L		85	48 - 141	
Phenanthrene	0.5	0.476		μg/L		95	67 - 127	
Pyrene	0.5	0.57		μg/L		114	54 - 156	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
(d10-Acenaphthene)	82		27 - 133
(d10-Phenanthrene)	102		43 - 129
(d12-Chrysene)	104		52 - 144
(d12-Perylene)	92		36 - 161
(d8-Naphthalene)	89		25 - 125

Lab Sample ID: 108032-BS2 Matrix: BlankMatrix

Analysis Batch: O-41138						Prep Batch: O-41138_P				
	Spike	LCS DUP	LCS DUP				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
1-Methylnaphthalene	0.5	0.424		μg/L		85	31 - 128	2	30	
1-Methylphenanthrene	0.5	0.512		μg/L		102	66 - 127	5	30	
2,3,5-Trimethylnaphthalene	0.5	0.484		μg/L		97	55 - 122	1	30	
2,6-Dimethylnaphthalene	0.5	0.451		μg/L		90	48 - 120	2	30	
2-Methylnaphthalene	0.5	0.462		μg/L		92	47 - 130	3	30	
Acenaphthene	0.5	0.424		μg/L		85	53 - 131	2	30	
Acenaphthylene	0.5	0.482		μg/L		96	43 - 140	3	30	
Anthracene	0.5	0.456		μg/L		91	58 - 135	1	30	
Benz[a]anthracene	0.5	0.521		μg/L		104	55 - 145	3	30	
Benzo[a]pyrene	0.5	0.459		μg/L		92	51 - 143	3	30	
Benzo[b]fluoranthene	0.5	0.523		μg/L		105	46 - 165	3	30	
Benzo[e]pyrene	0.5	0.476		μg/L		95	42 - 152	3	30	
Benzo[g,h,i]perylene	0.5	0.489		μg/L		98	63 - 133	2	30	
Benzo[k]fluoranthene	0.5	0.521		μg/L		104	56 - 145	1	30	
Biphenyl	0.5	0.531		μg/L		106	56 - 119	0	30	
Chrysene	0.5	0.483		μg/L		97	56 - 141	3	30	

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Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

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Client: City & County of Honolulu Job ID: 380-53442-2

Project/Site: RED-HILL

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

Lab Sample ID: 108032-BS2 Client Sample ID: Lab Control Sample Dup Matrix: BlankMatrix Prep Type: Total/NA **Analysis Batch: O-41138** Prep Batch: O-41138_P

S	pike	LCS DUP	LCS DUP				%Rec		RPD
Analyte Ad	ded	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Dibenz[a,h]anthracene	0.5	0.475		μg/L		95	55 - 150	1	30
Dibenzo[a,l]pyrene	0.5	0.416		μg/L		83	50 - 150	0	30
Dibenzothiophene	0.5	0.492		μg/L		98	46 - 126	7	30
Disalicylidenepropanediamine	50	27.2		μg/L		54	50 - 150	4	30
Fluoranthene	0.5	0.596		μg/L		119	60 - 146	2	30
Fluorene	0.5	0.458		μg/L		92	58 - 131	3	30
Indeno[1,2,3-cd]pyrene	0.5	0.461		μg/L		92	50 - 151	1	30
Naphthalene	0.5	0.451		μg/L		90	41 - 126	2	30
Perylene	0.5	0.45		μg/L		90	48 - 141	6	30
Phenanthrene	0.5	0.463		μg/L		93	67 - 127	2	30
Pyrene	0.5	0.557		μg/L		111	54 - 156	3	30

LCS DUP LCS DUP

Surrogate	%Recovery	Qualifier	Limits
(d10-Acenaphthene)	80		27 - 133
(d10-Phenanthrene)	96		43 - 129
(d12-Chrysene)	104		52 - 144
(d12-Perylene)	94		36 - 161
(d8-Naphthalene)	85		25 - 125

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

Lab Sample ID: 23VGH7G03B **Client Sample ID: Method Blank Matrix: WATER** Prep Type: Total/NA

Analysis Batch: 23VGH7G03

	MB	MB								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
GASOLINE	ND	U	0.02		mg/L			07/07/23 15:09	1	
	MB	МВ								
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
BROMOFLUOROBENZENE						_		07/07/23 15:09		

Lab Sample ID: 23VGH7G03L **Client Sample ID: Lab Control Sample Matrix: WATER**

100 100

Analysis Batch: 23VGH7G03

	Spike	LUS	LUS				/onec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
GASOLINE	0.5	0.451		mg/L		90	60 - 130	

Snika

LCS LCS Surrogate %Recovery Qualifier Limits BROMOFLUOROBENZENE 119 70 - 130

Lab Sample ID: 23G030-01M **Client Sample ID: Matrix Spike**

Matrix: WATER

Analysis Batch: 23VGH7G03

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
GASOLINE	ND		0.5	0.421		mg/L		84	50 - 130	

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Prep Type: Total/NA

Job ID: 380-53442-2

Client Sample ID: Matrix Spike Duplicate

%Rec

Prepared

Prepared

%Rec

100

85

%Rec

Limits

50 - 130

Client Sample ID: Method Blank

Analyzed

07/14/23 19:09

07/14/23 19:09

07/14/23 19:09

07/14/23 19:09

Analyzed

07/14/23 19:09

07/14/23 19:09

Prep Type: Total/NA

Prep Type: Total/NA

Client Sample ID: Lab Control Sample

%Rec

Limits

50 - 130

Prep Type: Total/NA

Prep Type: Total/NA

RPD

Client: City & County of Honolulu

Project/Site: RED-HILL

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

Spike

Added

0.5

Lab Sample ID: 23G030-01M **Client Sample ID: Matrix Spike Prep Type: Total/NA**

MSD MSD

0.426

RL

0.025

0.05

0.05

0.05

Limits

Spike

Added

I imits

60 - 130

60 - 130

2.5

Result Qualifier

MDL Unit

mg/L

mg/L

mg/L

mg/L

Unit

mg/L

Unit

mg/L

Matrix: WATER

Analysis Batch: 23VGH7G03

MS MS

Sample Sample

Result Qualifier

ND

ND U

ND U

MB MB

%Recovery Qualifier

%Recovery Qualifier Surrogate Limits BROMOFLUOROBENZENE 114 60 - 140

Lab Sample ID: 23G030-01S

Matrix: WATER

Analysis Batch: 23VGH7G03

Analyte

GASOLINE ND MSD MSD

Surrogate BROMOFLUOROBENZENE %Recovery Qualifier 114

Limits 60 - 140

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

Lab Sample ID: 23DSG017WB

Matrix: WATER

JP5

Analysis Batch: 23DSG017W

MB MB

Analyte Result Qualifier DIESEL П ND

JP8 MOTOR OIL

Surrogate **BROMOBENZENE HEXACOSANE**

Lab Sample ID: 23DSG017WL **Matrix: WATER**

Analysis Batch: 23DSG017W

Analyte

Surrogate

DIESEL

BROMOBENZENE **HEXACOSANE**

Lab Sample ID: 23J5G017WL **Matrix: WATER**

Analysis Batch: 23DSG017W

Spike Analyte JP5

Added

LCS LCS %Recovery Qualifier

73

90

2.5 2.42

LCS LCS Result Qualifier Unit mg/L

LCS LCS

2.5

Result Qualifier

%Rec

Limits 30 - 160

%Rec

Client Sample ID: Lab Control Sample

RPD

Limit

Dil Fac

Dil Fac

QC Sample Results

Client: City & County of Honolulu Job ID: 380-53442-2

Project/Site: RED-HILL

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

Lab Sample ID: 23J5G017WL **Client Sample ID: Lab Control Sample**

Matrix: WATER Prep Type: Total/NA

Analysis Batch: 23DSG017W

LCS LCS %Recovery Qualifier

Surrogate Limits BROMOBENZENE 76 60 - 130 **HEXACOSANE** 89 60 - 130

Lab Sample ID: 23J8G017WL **Client Sample ID: Lab Control Sample**

Matrix: WATER Prep Type: Total/NA

Analysis Batch: 23DSG017W

HEXACOSANE

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit %Rec Limits JP8 2.5 2.92 mg/L 117 30 - 160

60 - 130

LCS LCS Surrogate **%Recovery Qualifier** Limits BROMOBENZENE 96 60 - 130

QC Association Summary

Client: City & County of Honolulu Project/Site: RED-HILL Job ID: 380-53442-2

Subcontract

Analysis Batch: O-41138

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-53442-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	625 PAH Physis	O-41138_P
				LL (EAL) + TICs	
380-53442-2	AIEA WELLS PUMP 2 (260)	Total/NA	Drinking Water	625 PAH Physis	O-41138_P
				LL (EAL) + TICs	
108032-B1	Method Blank	Total/NA	BlankMatrix	625 PAH Physis	O-41138_P
				LL (EAL) + TICs	
108032-BS1	Lab Control Sample	Total/NA	BlankMatrix	625 PAH Physis	O-41138_P
				LL (EAL) + TICs	
108032-BS2	Lab Control Sample Dup	Total/NA	BlankMatrix	625 PAH Physis	O-41138_P
				LL (EAL) + TICs	

Analysis Batch: 23DSG017W

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-53442-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	8015 LL	-
				DRO/MRO/JP5/J	
				P8	
380-53442-2	AIEA WELLS PUMP 2 (260)	Total/NA	Drinking Water	8015 LL	
				DRO/MRO/JP5/J	
				P8	
23DSG017WB	Method Blank	Total/NA	WATER	8015 LL	
				DRO/MRO/JP5/J	
				P8	
23DSG017WL	Lab Control Sample	Total/NA	WATER	8015 LL	
				DRO/MRO/JP5/J	
				P8	
23J5G017WL	Lab Control Sample	Total/NA	WATER	8015 LL	
				DRO/MRO/JP5/J	
				P8	
23J8G017WL	Lab Control Sample	Total/NA	WATER	8015 LL	
				DRO/MRO/JP5/J	
				P8	

Analysis Batch: 23VGH7G03

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-53442-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	8015 Gas	
				(Purgeable) LL	
				(EAL)	
380-53442-2	AIEA WELLS PUMP 2 (260)	Total/NA	Drinking Water	8015 Gas	
				(Purgeable) LL	
				(EAL)	
380-53442-4	TB: AIEA GULCH WELLS PUMP 2	Total/NA	Water	8015 Gas	
				(Purgeable) LL	
000 50440 5	TD AIEANA/ELLO DUMB O (000)	T. (. 1/A.1.A	187.4	(EAL)	
380-53442-5	TB: AIEA WELLS PUMP 2 (260)	Total/NA	Water	8015 Gas	
				(Purgeable) LL	
23VGH7G03B	Method Blank	Total/NA	WATER	(EAL) 8015 Gas	
257 0117 0000	Wethod Blank	TOTAL/THA	WAILK	(Purgeable) LL	
				(EAL)	
23VGH7G03L	Lab Control Sample	Total/NA	WATER	8015 Gas	
				(Purgeable) LL	
				(EAL)	
23G030-01M	Matrix Spike	Total/NA	WATER	8015 Gas	
				(Purgeable) LL	
				(EAL)	
23G030-01S	Matrix Spike Duplicate	Total/NA	WATER	8015 Gas	
				(Purgeable) LL	
_				(EAL)	

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QC Association Summary

lient: City & County of Honolulu Job ID: 380-53442-2

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

Subcontract

Prep Batch: O-41138_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method P	rep Batch
380-53442-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	EPA_625	
380-53442-2	AIEA WELLS PUMP 2 (260)	Total/NA	Drinking Water	EPA_625	
108032-B1	Method Blank	Total/NA	BlankMatrix	EPA_625	
108032-BS1	Lab Control Sample	Total/NA	BlankMatrix	EPA_625	
108032-BS2	Lab Control Sample Dup	Total/NA	BlankMatrix	EPA_625	

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Lab Sample ID: 380-53442-1

Client Sample ID: AIEA GULCH WELLS PUMP 2 Date Collected: 07/03/23 08:45 **Matrix: Drinking Water**

Date Received: 07/06/23 09:50

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	EPA_625		1	O-41138_P			07/07/23 00:00
Total/NA	Analysis	625 PAH Physis LL (EAL) + TICs		1	O-41138	YC		07/29/23 23:45
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	23VGH7G03	SCerva		07/07/23 17:04
Total/NA	Analysis	8015 LL DRO/MRO/JP5/JP8		1	23DSG017W	SDees		07/14/23 21:20

Client Sample ID: AIEA WELLS PUMP 2 (260)

Lab Sample ID: 380-53442-2

Matrix: Drinking Water

Date Collected: 07/03/23 09:20 Date Received: 07/06/23 09:50

	Batch	Batch		Dilution	Batch		Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst Lab	or Analyzed
Total/NA	Prep	EPA_625		1	O-41138_P		07/07/23 00:00
Total/NA	Analysis	625 PAH Physis LL (EAL) + TICs		1	O-41138	YC	07/30/23 01:33
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	23VGH7G03	SCerva	07/07/23 18:57
Total/NA	Analysis	8015 LL DRO/MRO/JP5/JP8		1	23DSG017W	SDees	07/14/23 21:39

Client Sample ID: TB: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-53442-4

Matrix: Water

Date Collected: 07/03/23 08:45 Date Received: 07/06/23 09:50

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	8015 Gas	-	1	23VGH7G03	SCerva		07/07/23 19:35
		(Purgeable) LL (EAL)						

Client Sample ID: TB: AIEA WELLS PUMP 2 (260)

Lab Sample ID: 380-53442-5

Date Collected: 07/03/23 09:20 Date Received: 07/06/23 09:50

Matrix: Water

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	8015 Gas	-	1	23VGH7G03	SCerva		07/07/23 20:12

Laboratory References:

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

Method Summary

Client: City & County of Honolulu

Project/Site: RED-HILL

Job ID: 380-53442-2

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

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Sample Summary

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

Joh ID: 380-53442-2

JUD	ID.	300-33442-2	

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-53442-1	AIEA GULCH WELLS PUMP 2	Drinking Water	07/03/23 08:45	07/06/23 09:50
380-53442-2	AIEA WELLS PUMP 2 (260)	Drinking Water	07/03/23 09:20	07/06/23 09:50
380-53442-4	TB: AIEA GULCH WELLS PUMP 2	Water	07/03/23 08:45	07/06/23 09:50
380-53442-5	TB: AIFA WELLS PLIMP 2 (260)	Water	07/03/23 09:20	07/06/23 09:50



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

Date: 07-28-2023 EMAX Batch No.: 23G030

Attn: Jackie Contreras

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

Subject: Laboratory Report

Project: 380-53442

Enclosed is the Laboratory report for samples received on 07/07/23.

The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis

380-53442-1	G030-01	07/03/23	WATER	TPH GASOLINE TPH
380-53442-2	G030-02	07/03/23	WATER	TPH GASOLINE TPH
380-53442-4	G030-03	07/03/23	WATER	TPH GASOLINE
380-53442-5	G030-04	07/03/23	WATER	TPH GASOLINE
380-53442-1M\$	G030-01M	07/03/23	WATER	TPH GASOLINE
380-53442-1MSD	G030-01S	07/03/23	WATER	TPH GASOLINE

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning

Sincepely yours,

easpar J. Pang Laboratory Director

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

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

NELAP Accredited Certificate Number CA002912022-24 ANAB Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing California ELAP Accredited Certificate Number 2672

💸 eurofins

Chain of Custody Record

Eurofins Eaton Analytical Pomona

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Client Information (Sub Contract Lab)			A	ada, Rachel	0		State of Origin	Page:	01004.1	
Client Contact Chinosion/Becalving	Phone:		T C.	mail: achelle.Aradi	E-waii. Rachelle,Arada@et.eurofinsus.com		Hawaii	Page 15h	Page 1 of 1	
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EMAX Laboratories inc.	Due Date Requested: 7/20/2023				Ana	Analysis Requested	ested	Presi	Preservation Codes: M - Hexane A - HCL	
3051 Fujita Street, , City. City. Torrance	TAT Requested (days):			SI				W O O I	B - NaOH O - ASNAOZ C - Zn Acetate P - Na2O4S D - Nitro Acid Q - Na2SO3	
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Sample Identification - Client ID (Lab ID)	Sample Date	-	· ·	9d 9d 2	ns nd)			1>	Special instructions/Note:	Note:
	$\langle \rangle$	1	Preservation Code	1				_	See Attached Instructions	
AIEA GULCH WELLS PUMP 2 (380-53442-1)	7/3/23	08:45 lawaiian	Water		× ×			0	on Attended Industriance	
	7/3/23	09:20 Hawaiian	Water		×			9	Attached instructions	
	7/3/23	08:45	Water		×			See	See Attached Instructions	
	7/3/23	09:20	Water		×			2 See	See Attached Instructions	
		awallall								
								ALVIE VIVE		
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 not status should be brought to extend the state of Origin listed above for analysis/restshmatrix being analyses, 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 commissioned to analysis/restshmatrix being analyses, the samples must be skipped back to the Eurofins Eaton Analytical, LLC.	nalytical, LLC places the ow tests/matrix being analyzed ations are current to date, n	nership of methor, the samples meturn the signed	od, analyte & accredit ust be shipped back t Chain of Custody atta	ation complianc to the Eurofins E esting to said co	s upon our subcontract aton Analytical, LLC lal mpliance to Eurofins E	laboratories. Thi poratory or other i aton Analytical, L	s sample shipment i nstructions will be p .C.	s forwarded under chai rovided. Any changes t	n-of-custody. If the laboratory to accreditation status should t	does not e brought to
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SAMPLE RECEIPT FORM 1



Type of D	Adivery	Airbill / T	racking Number	ECN 236030	
	Others	7,11,011	8	A COLUMN	Lamora
				Date 07/07/23	Time 10:00
☐ EMAX Courier Client De	livery				
COC INSPECTION					
Client Name	Client PM/FC	□ Sampler Name	Sampling Date/Time	Sample ID	Matrix
Address	Cel # / Fax #	☐ Courier Signature	_	☐ Preservative (if any)	TAT
Safety Issues (if any)	☐ High concentrations expe	cted	Site Rad screening required		
Note:					
				- LOADON COMPANY	
PACKAGING INSPECTI		□ Box	Other		
Container	S Cooler	☐ Intact	□ Damaged		
Condition Correction	☐ Custody Seal	Styrofoam	□ Popcorn	☐ Sufficient	
Packaging factor:	Bubble Pack Cooler 13.8/3.7°C	Cooler 2°C	□ Cooler 3°C	□ Cooler 4"C	Cooler 5°C
Temperatures (Cool, ≤6 °C but not frozen) - 0 ·	***	□ Cooler 7°C	Cooler 8°C	□ Cooler 9 "C	Cooler 10°C
(Cool, So "C but not frozen).	Cooler 6°C	(B-)S/N 14925379	C - S/N	D - S/N	Li Coolei 10
Thermometer:	A - S/N221852768		C = 3//4	D = 5/14	1
Comments: Temperature is	out of range. PM was informe	d IMMEDIATELY.			
Note:					
DISCREPANCIES					
LabSampleID	LabSampleContainerID	Code ClientSam	ple Label ID / Information	Corrective	Action 1
1,2		DI JP5/JP8 1	not an label	RI	
	5,6,11,12	DZZ and Date	reads: 6/26/23	.1/	1
3	. 13-16	Dec mo purc		V	
					7
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		Water complex for pH		minutes from sampling time.	(4))/10/1h
☐ pH holding time requirem	ent for water samples is 15 m	ins. water samples for pri	analysis are received beyond 15	minutes from sampling anie	
NOTES/OBSERVATION	s: X out of III				
SAMPLE MATRIX IS DRINKI					
			_		
				Continue to next p	age.
LEGEND:			Managament	Code Description-Sample Ma	
Code Description- Sample M		Code Description-Sample		RI Proceed as indicated in	
(D1) Analysis is not indicated		D13 Out of Holding Time		R2 Refer to attached instruction	
D2 Analysis mismatch COC	vs label	D14 Bubble is >6mm	Y		•
D3 Sample ID mismatch CC	OC vs label	D15 No trip blank in coo		R3 Cancel the analysis R4 Use vial with smallest bubb	le first
D4 Sample ID is not indicate		D16 Preservation not ind		R5 Log-in with latest sampling	
D5 Container -[improper] [l	eaking] [broken]	D17 Preservation mismat			unto silu turio. I miti
D6 Date/Time is not indicate	ed in	D18 Insufficient chemica	ii preservative	R6 Adjust pH as necessary	
D7 Date/Time mismatch CC	C vs label	D19 Insufficient Sample	Programme 1	R7 Filter and preserved as nece	ssary .
D8 Sample listed in COC is	not received	D20 No filtration info for		R8	
D9 Sample received is not li	sted in COC	D21 No sample for moistu			
D10 No initial/date on correc	tions in COC/label	(D22) ZNO Date	on label is incorrec		
D11 Container count mismate	ch COC vs received	D23		R11	
D12 Container size mismatch	COC vs received	D24	In calcus	R12	
REVIEWS:	Maria Journ		Joselyne		· Ah
Sample Label	ing pivera coliteam	O.	SRF Colicy Ramy		M 700
D	ate 07/07/23 07 07 23	on.	Date 07 07 23	- Da	ite ///2/62
REPORT ID: 23G	030'			Pag	a 3 of 30 '
INEL CINI ID. 200	030	D 20	99 Aglia St., Torrance, CA 9050	I au	C C C D M = 1/20/22

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
В	В	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.

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LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-53442

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

SDG#: 23G030

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CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-53442

SDG : 23G030

METHOD 5030B/8015B

TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

A total of four(4) water samples were received on 07/07/23 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. VGH7G03B - 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. VGH7G03L/VGH7G03C 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 G030-01M/G030-01S. 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.

REPORT ID: 23G030 Page 28 of 90 Page 6 of 39/17/2023

LAB CHRONICLE TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client : EUROFINS EATON ANALYTICAL Project : 380-53442	N ANALYTICAL							SDG NO. : 23G030 Instrument ID : H7
				MAT	WATER			
Client	Laboratory	Dilution	26		LL	Sample	Calibration Prep.	
Sample ID	Sample ID	Factor	Moist	DateTime	DateTime	Data FN	Data FN	Batch Notes
1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	GCOOLION	; ,	N. M.	00.0100/10/10	07/07/2215.00	AC0700EA	AC07002A	OSVCH7603 Mothod Blank
MBLKIW	VGH7G03B	→ ,-	A A	07/07/2315:48	07/07/2315:48	AG07005A	AG07003A	23VGH7603 Lab Control Sample (LCS)
CD1W	VGH7G03C	٠, ١	¥	07/07/2316:26	07/07/2316:26	AG07007A	AG07003A	23VGH7G03 LCS Duplicate
380-53442-1	6030-01	Н	¥	07/07/2317:04	07/07/2317:04	AG07008A	AG07003A	
380-53442-1MS	G030-01M	П	¥	07/07/2317:42	07/07/2317:42	AG07009A	AG07003A	23VGH7G03 Matrix Spike Sample (MS)
380-53442-1MSD	G030-01S	П	M	07/07/2318:19	07/07/2318:19	AG07010A	AG07003A	23VGH7G03 MS Duplicate (MSD)
380-53442-2	G030-02	1	¥	07/07/2318:57	07/07/2318:57	AG07011A	AG07003A	23VGH7G03 Field Sample
380-53442-4	G030-03	1	¥	07/07/2319:35	07/07/2319:35	AG07012A	AG07003A	
380-53442-5	6030-04	1	NA	07/07/2320:12	07/07/2320:12	AG07013A	AG07003A	23VGH7G03 Field Sample
FN - Filename Bab % Moist - Percent Moisture 55								
of Of								
n								

SAMPLE RESULTS

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Client : EUROFINS EATON ANALYTICAL Date Collected: 07/03/23 08:45
Project : 380-53442 Date Received: 07/07/23
Batch No. : 23G030 Date Extracted: 07/07/23 17:04
Sample ID : 380-53442-1 Date Analyzed: 07/07/23 17:04

 Sample ID : 380-53442-1
 Date Analyzed: 07/07/23 17:0

 Lab Samp ID: G030-01
 Dilution Factor: 1

 Lab File ID: AG07008A
 Matrix: WATER

PARAMETERS GASOLINE	RESULTS (mg/L)	RL (mg/L) 	MDL (mg/L) 	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0402	0.0400	101	60-140

Notes:

 $\begin{array}{ll} \mbox{Parameter} & \mbox{H-C Range} \\ \mbox{Gasoline} & \mbox{C6-C10} \end{array}$

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

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Client : EUROFINS EATON ANALYTICAL Date Collected: 07/03/23 09:20 Project : 380-53442 Date Received: 07/07/23 Batch No. : 23G030 Date Extracted: 07/07/23 18:57 Sample ID : 380-53442-2 Date Analyzed: 07/07/23 18:57 Lab Samp ID: G030-02 Dilution Factor: 1 Lab File ID: AG07011A Matrix: WATER

Ext Btch ID: 23VGH7G03 % Moisture: NA Instrument ID: H7 Calib. Ref.: AG07003A

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	0.0399	0.0400	100	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

: EUROFINS EATON ANALYTICAL Date Collected: 07/03/23 08:45 Client

Project : 380-53442 Date Received: 07/07/23

Date Extracted: 07/07/23 19:35 Batch No. : 23G030 Sample ID : 380-53442-4 Date Analyzed: 07/07/23 19:35

Lab Samp ID: G030-03 Dilution Factor: 1

Matrix: WATER Lab File ID: AG07012A Ext Btch ID: 23VGH7G03 % Moisture: NA Instrument ID: H7 Calib. Ref.: AG07003A

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	0.0418	0.0400	105	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.

Final Volume : 5ml Sample Amount : 5ml

Analyzed by : SCerva Prepared by : SCerva

Client : EUROFINS EATON ANALYTICAL Date Collected: 07/03/23 09:20

Project : 380-53442 Date Received: 07/07/23 Batch No. : 23G030 Date Extracted: 07/07/23 20:12

Sample ID : 380-53442-5 Date Analyzed: 07/07/23 20:12 Lab Samp ID: G030-04 Dilution Factor: 1

Lab File ID: AG07013A Matrix: WATER Ext Btch ID: 23VGH7G03 % Moisture: NA Calib. Ref.: AG07003A 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	0.0406	0.0400	101	60 - 140

Notes:

Parameter H-C Range C6-C10 Gasoline

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

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Client	:	EUROFINS EATON ANALYTICAL	Date Collected:	07/07/23 15:09
Project	;	380-53442	Date Received:	07/07/23
Batch No.	:	23G030	Date Extracted:	07/07/23 15:09

Date Analyzed: 07/07/23 15:09 Sample ID : MBLK1W Lab Samp ID: VGH7G03B Dilution Factor: 1

Lab File ID: AG07005A Matrix: WATER Ext Btch ID: 23VGH7G03 % Moisture: NA Calib. Ref.: AG07003A 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	0.0403	0.0400	101	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 Prepared by : SCerva Final Volume : 5ml

Analyzed by : SCerva

EMAX QUALITY CONTROL DATA LAB CONTROL SAMPLE ANALYSIS

CLIENT

: EUROFINS EATON ANALYTICAL

PROJECT BATCH NO. : 380-53442

METHOD

: 23G030 : 5030B/8015B

MATRIX : WATER % MOISTURE:NA

MATRIX : WATER DILUTION FACTOR: 1 1 LCD1W SAMPLE ID : MBLK1W LCS1W LAB SAMPLE ID : VGH7G03B VGH7G03L VGH7G03C LAB FILE ID : AG07005A AG07007A AG07006A DATE PREPARED : 07/07/23 15:09 07/07/23 15:48 07/07/23 16:26 DATE ANALYZED : 07/07/23 15:09 07/07/23 15:48 07/07/23 16:26 PREP BATCH : 23VGH7G03 23VGH7G03 23VGH7G03 CALIBRATION REF: AG07003A AG07003A AG07003A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)		SpikeAmt (mg/L)	LCDResult (mg/L)		RPD (%)	QCLimit (%)	MaxRPD (%)
• • • • • • • • • • • • • • • • • • • •										
Gasoline	ND	0.500	0.451	90	0.500	0.426	85	6	60-130	30

	SpikeAmt	LCSResult	LCSRec	SpikeAmt	LCDResult	LCDRec	QCLimit
SURROGATE PARAMETER	(mg/L)	(mg/L)	(%)	(mg/L)	(mg/L)	(%)	(%)
Bromofluorobenzene	0.0400	0.0474	119	0.0400	0.0443	111	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

: 380-53442

BATCH NO.

: 23G030

METHOD

: 5030B/8015B

: WATER

1

% MOISTURE:NA

DILUTION FACTOR: 1

SAMPLE ID : 380-53442-1

LAB SAMPLE ID : G030-01

380-53442-1MS G030-01M

380-53442-1MSD

LAB FILE ID : AG07008A

AG07009A

G030-01S

DATE PREPARED : 07/07/23 17:04

07/07/23 17:42

07/07/23 18:19 07/07/23 18:19

DATE ANALYZED : 07/07/23 17:04 PREP BATCH : 23VGH7G03

07/07/23 17:42 23VGH7G03

23VGH7G03

CALIBRATION REF: AG07003A

AG07003A

AG07003A

AG07010A

ACCESSION:

PSResult SpikeAmt MSResult MSRec SpikeAmt MSDResult MSDRec RPD QCLimit MaxRPD (mg/L) (mg/L) (mg/L) (%) (mg/L) (mg/L) (%) (%) (%) (%) 0.421 84 0,500 0.426 85 1 50-130 Gasoline ND 0.500 30

	SpikeAmt	MSResult	MSRec	SpikeAmt	MSDResult	MSDRec	QCLimit
SURROGATE PARAMETER	(mg/L)	(mg/L)	(%)	(mg/L)	(mg/L)	(%)	(%)
Bromofluorobenzene	0.0400	0.0457	114	0.0400	0.0455	114	60-140

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

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-53442

METHOD 3520C/8015B TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 23G030

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CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-53442

: 23G030 SDG

METHOD 3520C/8015B

TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

A total of two(2) water samples were received on 07/07/23 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. DSG017WB - 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. DSG017WL/DSG017WC 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. Diesel was within MS QC limits in 23G078-01M/23G078-01S. Refer to Matrix QC summary form for details.

Surrogate

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

Sample Analysis

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

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-53442

SDG : 23G030

METHOD 3520C/8015B PETROLEUM HYDROCARBONS BY EXTRACTION

A total of two(2) water samples were received on 07/07/23 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. DSG017WB - 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. J5G017WL/J5G017WC 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. JP5 was within MS QC limits in 23G078-01M/23G078-01S. Refer to Matrix QC summary form for details.

Surrogate

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

Sample Analysis

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

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-53442

SDG : 23G030

METHOD 3520C/8015B PETROLEUM HYDROCARBONS BY EXTRACTION

A total of two(2) water samples were received on 07/07/23 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. DSG017WB - 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. J8G017WL/J8G017WC 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.

23DSG017W Lab Control Sample (LCS)

23DSG017W Method Blank Notes

> LG14003A LG14003A

LG14009A

07/13/2313:00

Batch

Data FN

Sample Data FN

Extraction DateTime

Analysis DateTime

Moist

Dilution Factor

Laboratory Sample ID

Sample ID

Client

MBLK1W

LCS1W

LCD1W

: EUROFINS EATON ANALYTICAL : 380-53442

Project

Client

WATER

Calibration Prep.

23DSG017W LCS Duplicate 23DSG017W Field Sample 23DSG017W Field Sample

LG14003A LG14003A LG14003A

LG14010A LG14011A LG14016A LG14017A

07/13/2313:00 07/13/2313:00 07/13/2313:00 07/13/2313:00

07/14/2319:09 07/14/2319:28 07/14/2319:47 07/14/2321:20 07/14/2321:39

DSG017WL DSG017WC G030-01 G030-02

380-53442-1 380-53442-2

FN - Filename % Moist - Percent Moisture

DSG017WB

: 23G030 : D5

SDG NO. Instrument ID

LAB CHRONICLE
PETROLEUM HYDROCARBONS BY EXTRACTION

							1e (LCS)				
SDG NO. : 23GU3U Instrument ID : D5				Notes		23DSG017W Method Blank	(Lab Control Samp	/ LCS Duplicate	/ Field Sample	3DSG017W Field Sample	
SDG NO. Instrument			n Prep.	Batch		23DSG017W	23DSG0171	23DSG0171	23DSG017V	23DSG017V	
			Calibration Prep.	Data FN	:	LG14004A	LG14004A	LG14004A	LG14004A	LG14004A	
			Sample	Data FN				LG14013A			
		WATER	Extraction	DateTime		07/13/2313:00	07/13/2313:00	07/13/2313:00	07/13/2313:00	07/13/2313:00	
		MM	Analysis	DateTime		07/14/2319:09	07/14/2320:05	07/14/2320:24	07/14/2321:20	07/14/2321:39	
			2/6	Moist		NA	W	A	A	NA	
			Dilution	Factor		1	+	1	1	1	
EUROFINS EATON ANALYTICAL			Laboratory	Sample ID Factor		DSG017WB	J5G017WL	J5G017WC	6030-01	6030-02	
: EUROFINS E	34400-000			٥	,				12-1	12-2	
Client	Project.		Client	Sample ID		MRI K1W	I CS1W	I CD1W	380-5344	380-53442-2	

23DSG017W Lab Control Sample (LCS) 23DSG017W LCS Duplicate

23DSG017W Method Blank

Notes

Batch

Calibration Prep.

Sample Data FN

Extraction DateTime

Analysis DateTime

Moist

Dilution Factor

Laboratory Sample ID

Sample ID

Client

MBLK1W LCS1W

: EUROFINS EATON ANALYTICAL : 380-53442

Client Project

WATER

23DSG017W Field Sample 23DSG017W Field Sample

LG14005A LG14005A

LG14014A LG14015A LG14016A LG14017A

07/13/2313:00 07/13/2313:00 07/13/2313:00 07/13/2313:00

07/14/2321:01 07/14/2321:20 07/14/2321:39

88888

38G017WL 38G017WC G030-01 G030-02

LCD1W 380-53442-1 380-53442-2

FN · Filename % Moist · Percent Moisture

DSG017WB

LG14005A LG14005A LG14005A Data FN

LG14009A

07/13/2313:00

07/14/2319:09 07/14/2320:43

: 23G030 : D5

SDG NO. Instrument ID

9/17/2023

SAMPLE RESULTS

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METHOD 3520C/8015B TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Date Collected: 07/03/23 08:45 Client : EUROFINS EATON ANALYTICAL

Project Date Received: 07/07/23 : 380-53442 Date Extracted: 07/13/23 13:00 Batch No. : 23G030 Date Analyzed: 07/14/23 21:20 Sample ID : 380-53442-1

Lab Samp ID: 23G030-01 Dilution Factor: 1

Matrix: WATER Lab File ID: LG14016A Ext Btch ID: 23DSG017W % Moisture: NA Instrument ID: D5 Calib. Ref.: LG14003A

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
Diesel	ND	0.027	0.014	
Motor Oil	ND	0.055	0.027	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.362	0.545	66	60-130
Hexacosane	0.122	0.136	89	60-130

Notes:

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

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount : 920ml

Final Volume : 5ml

Prepared by

: RGalan

Analyzed by : SDeeso

METHOD 3520C/8015B PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL Date Collected: 07/03/23 08:45

 Project
 : 380-53442
 Date Received: 07/07/23

 Batch No.
 : 23G030
 Date Extracted: 07/13/23 13:00

 Sample ID
 : 380-53442-1
 Date Analyzed: 07/14/23 21:20

Lab Samp ID: 23G030-01 Dilution Factor: 1
Lab File ID: LG14016A Matrix: WATER
Ext Btch ID: 23DSG017W % Moisture: NA
Calib. Ref.: LG14004A Instrument ID: D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
JP5	ND	0.055	0.027	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene Hexacosane	0.362 0.122	0.545 0.136	66 89	60-130 60-130

Notes:

RL: Reporting Limit
Parameter H-C Range
JP5 C8-C18

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount : 920ml
Prepared by : RGalan

Final Volume : 5ml Analyzed by : SDeeso

REPORT ID: 23G030

METHOD 3520C/8015B PETROLEUM HYDROCARBONS BY EXTRACTION

Date Collected: 07/03/23 08:45 Client : EUROFINS EATON ANALYTICAL

Project : 380-53442 Date Received: 07/07/23 Date Extracted: 07/13/23 13:00 Batch No. : 23G030 Date Analyzed: 07/14/23 21:20 Sample ID : 380-53442-1

Lab Samp ID: 23G030-01 Dilution Factor: 1 Matrix: WATER Lab File ID: LG14016A Ext Btch ID: 23DSG017W % Moisture: NA Instrument ID: D5 Calib. Ref.: LG14005A

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
JP8	ND	0.055	0.027	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene Hexacosane	0.362 0.122	0.545 0.136	66 89	60-130 60-130

Notes:

: Reporting Limit Parameter H-C Range C8-C18

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount : 920m1

Final Volume : 5ml Analyzed by : SDeeso Prepared by : RGalan

METHOD 3520C/8015B TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL Date Collected: 07/03/23 09:20

Project : 380-53442 Date Received: 07/07/23
Batch No. : 23G030 Date Extracted: 07/13/23 13:00
Sample ID : 380-53442-2 Date Analyzed: 07/14/23 21:39
Lab Samp ID: 23G030-02 Dilution Factor: 1

Lab Samp ID: 23G030-02 Dilution Factor: 1
Lab File ID: LG14017A Matrix: WATER
Ext Btch ID: 23DSG017W % Moisture: NA
Calib. Ref.: LG14003A Instrument ID: D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
Diesel	ND	0.027	0.014	
Motor Oil	ND	0.055	0.027	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.337	0.545	62	60-130
Hexacosane	0.122	0.136	90	60-130

Notes:

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

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

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

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METHOD 3520C/8015B PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL Date Collected: 07/03/23 09:20

Project : 380-53442 Date Received: 07/07/23 Batch No. : 23G030 Date Extracted: 07/13/23 13:00 Date Analyzed: 07/14/23 21:39 Sample ID : 380-53442-2

Lab Samp ID: 23G030-02 Dilution Factor: 1 Lab File ID: LG14017A Matrix: WATER

Ext Btch ID: 23DSG017W % Moisture: NA Instrument ID: D5 Calib. Ref.: LG14004A

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
JP5	ND	0.055	0.027	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene Hexacosane	0.337 0.122	0.545 0.136	62 90	60 - 130 60 - 130

Notes:

: 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.

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

Analyzed by : SDeeso

METHOD 3520C/8015B PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL Date Collected: 07/03/23 09:20 Project : 380-53442 Date Received: 07/07/23

Batch No. : 23G030 Date Extracted: 07/13/23 13:00 Sample ID : 380-53442-2 Date Analyzed: 07/14/23 21:39

Lab Samp ID: 23G030-02 Dilution Factor: 1 Lab File ID: LG14017A Matrix: WATER Ext Btch ID: 23DSG017W % Moisture: NA Calib. Ref.: LG14005A Instrument ID: D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
JP8	ND	0.055	0.027	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene Hexacosane	0.337 0.122	0.545 0.136	62 90	60-130 60-130

Notes:

RL: Reporting Limit
Parameter H-C Range
JP8 C8-C18

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount : 920ml

Final Volume : 5ml

Prepared by : RGalan

Analyzed by : SDeeso

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QC SUMMARIES

METHOD 3520C/8015B TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client FUNCTING FATON ANALYTICAL Pate Callegand 07/12/22 12:0

Client : EUROFINS EATON ANALYTICAL Date Collected: 07/13/23 13:00 Project : 380-53442 Date Received: 07/13/23

Lab Samp ID: DSG017WB Dilution Factor: 1

Lab File ID: LG14009A Matrix: WATER
Ext Btch ID: 23DSG017W % Moisture: NA
Calib. Ref.: LG14003A 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	0.373	0.500	75	60-130
Hexacosane	0.114	0.125	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 : 1000ml Final Volume : 5ml

Prepared by : RGalan Analyzed by : SDeeso

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EMAX QUALITY CONTROL DATA LAB CONTROL SAMPLE ANALYSIS

CLIENT

: EUROFINS EATON ANALYTICAL

PROJECT

: 380-53442

BATCH NO.

: 23G030

METHOD

: 3520C/8015B

MAT	D T	V	
1.157	LI	. ^	

: WATER

% MOISTURE:NA

DILUTION FACTOR: 1

SAMPLE ID

: MBLK1W

LCS1W

LCD1W

LAB SAMPLE ID : DSG017WB LAB FILE ID : LG14009A

DSG017WL LG14010A DSG017WC LG14011A

DATE PREPARED : 07/13/23 13:00 DATE ANALYZED : 07/14/23 19:09

07/13/23 13:00 07/14/23 19:28

07/13/23 13:00 07/14/23 19:47

PREP BATCH

: 23DSG017W

23DSG017W

23DSG017W

CALIBRATION REF: LG14003A

LG14003A

LG14003A

ACCESSION:

PARAMETERS	MBResult (mg/L)	(mg/L)	LCSResult (mg/L)	(%)	(mg/L)	LCDResult (mg/L)	LCDRec (%)	RPD (%)	QCLimit (%) 50-130	MaxRPD (%)
Diesel	ND	2.50	2.50	100	2.50	2.32	93	/	50-130	30
		SpikeAmt	LCSResult	LCSRec	SpikeAmt	LCDResult	LCDRec		QCLimit	
SURROGATE PARAMETERS		(mg/L)	(mg/L)	(%)	(mg/L)	(mg/L)	(%)		(%)	
Bromobenzene		0.500	0.366	73	0.500	0.344	69		60-130	
Hexacosane		0.125	0.112	90	0.125	0.110	88		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: 07/13/23 13:00

Project : 380-53442 Date Received: 07/13/23 Batch No. : 23G030 Date Extracted: 07/13/23 13:00 Date Analyzed: 07/14/23 19:09 Sample ID : MBLK1W

Lab Samp ID: DSG017WB Dilution Factor: 1 Lab File ID: LG14009A Matrix: WATER Ext Btch ID: 23DSG017W % Moisture: NA Instrument ID: D5 Calib. Ref.: LG14004A

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 Hexacosane	0.373 0.114	0.500 0.125	75 92	60-130 60-130

Notes:

RL : Reporting Limit H-C Range Parameter 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

Analyzed by : SDeeso Prepared by : RGalan

EMAX QUALITY CONTROL DATA LAB CONTROL SAMPLE ANALYSIS

CLIENT

: EUROFINS EATON ANALYTICAL

PROJECT BATCH NO.

: 380-53442

: 23G030

METHOD

: 3520C/8015B

MATRIX		:	WA
DILUTION	FACTOR	:	1

WATER

SAMPLE ID : MBLK1W

LAB SAMPLE ID : DSG017WB LAB FILE ID : LG14009A DATE PREPARED : 07/13/23 13:00

DATE ANALYZED : 07/14/23 19:09 PREP BATCH : 23DSG017W

CALIBRATION REF: LG14004A

% MOISTURE:NA

LCD1W J5G017WC LG14013A

07/13/23 13:00 07/14/23 20:24 23DSG017W

LG14004A

ACCESSION:

RPD QCLimit MaxRPD MBResult SpikeAmt LCSResult LCSRec SpikeAmt LCDResult LCDRec (%) (%) (%) PARAMETERS (mg/L) (mg/L) (mg/L) (%) (mg/L) (mg/L) (%) 97 2.50 ND 2.50 2.42 2.72 109 12 30-160 30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)		SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromobenzene	0.500	0.379	76	0.500	0.392	78	60-130
Hexacosane	0.125	0.111	89	0.125	0.116	93	60-130

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

LCS1W

J5G017WL

LG14012A

23DSG017W

LG14004A

07/13/23 13:00

07/14/23 20:05

METHOD 3520C/8015B PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL Date Collected: 07/13/23 13:00

 Project
 : 380-53442
 Date Received: 07/13/23

 Batch No.
 : 23G030
 Date Extracted: 07/13/23 13:00

 Sample ID
 : MBLK1W
 Date Analyzed: 07/14/23 19:09

Lab Samp ID: DSG017WB Dilution Factor: 1
Lab File ID: LG14009A Matrix: WATER
Ext Btch ID: 23DSG017W % Moisture: NA
Calib. Ref.: LG14005A 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 Hexacosane	0.373 0.114	0.500 0.125	75 92	60-130 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 Analyzed by : SDeeso 3

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CLIENT

: EUROFINS EATON ANALYTICAL

BATCH NO.

PROJECT : 380-53442 : 23G030

METHOD

: 3520C/8015B

MATRIX : WATER

1

% MOISTURE:NA

DILUTION FACTOR: 1

SAMPLE ID : MBLK1W

LCS1W

LCD1W

LAB SAMPLE ID : DSG017WB LAB FILE ID : LG14009A

J8G017WL LG14014A

LG14005A

J8G017WC LG14015A 07/13/23 13:00

DATE ANALYZED : 07/14/23 19:09 07/14/23 20:43 PREP BATCH : 23DSG017W CALIBRATION REF: LG14005A

DATE PREPARED : 07/13/23 13:00 07/13/23 13:00 23DSG017W

07/14/23 21:01 23DSG017W LG14005A

ACCESSION:

MBResult SpikeAmt LCSResult LCSRec SpikeAmt LCDResult LCDRec RPD QCLimit MaxRPD (%) (mg/L) (mg/L) (mg/L) (mg/L) (mg/L) (%)(%) (%) PARAMETERS ND 2.50 2.92 117 2.50 2.54 102 14 30-160 JP8

SURROGATE PARAMETERS	SpikeAmt	LCSResult	LCSRec	SpikeAmt	LCDResult	LCDRec	QCLimit
	(mg/L)	(mg/L)	(%)	(mg/L)	(mg/L)	(%)	(%)
Bromobenzene	0.500	0.479	96	0.500	0.426	85	60-130
Hexacosane	0.125	0.110	88	0.125	0.108	86	60-130

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

: 380-54001

BATCH NO. METHOD

: 23G078 : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILLITION EACTO	D. 1	1	1

LG14003A

DILUTION FACTOR: 1

SAMPLE ID : 380-54001-1 380-54001-1MS LAB SAMPLE ID : 23G078-01 23G078-01M LAB FILE ID : LG14020A LG14021A DATE PREPARED : 07/13/23 13:00 07/13/23 13:00 DATE ANALYZED : 07/14/23 22:35 07/14/23 22:53 PREP BATCH : 23DSG017W 23DSG017W

380-54001-1MSD 23G078-01S LG14022A 07/13/23 13:00 07/14/23 23:12 23DSG017W

LG14003A

ACCESSION:

CALIBRATION REF: LG14003A

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Diesel	ND	2.70	2.61	97	2.65	2.61	98	0	50 - 130	30
		SpikeAmt	MSResult	MSRec	SpikeAmt	MSDResult	MSDRec		QCLimit	
SURROGATE PARAMETERS		(mg/L)	(mg/L)	(%)	(mg/L)	(mg/L)	(%)		(%)	
Bromobenzene		0.540	0.341	63	0.530	0.338	64		60-130	
Hexacosane		0.135	0.117	87	0.132	0.114	86		60-130	

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

EMAX QUALITY CONTROL DATA MS/MSD ANALYSIS

CLIENT

: EUROFINS EATON ANALYTICAL

PROJECT

: 380-54001

BATCH NO.

: 23G078

METHOD

: 3520C/8015B

LIAT	ED I	1.1
MΑ	ĸ	l X

: WATER

% MOISTURE:NA

DILUTION FACTOR: 1

380-54001-1MS

SAMPLE ID : 380-54001-1

23G078-01M

380-54001-1MSD

LAB SAMPLE ID : 23G078-01 LAB FILE ID : LG14020A

LG14023A

23G078-01S LG14024A

DATE PREPARED : 07/13/23 13:00

07/13/23 13:00

07/13/23 13:00

DATE ANALYZED : 07/14/23 22:35

07/14/23 23:31

07/14/23 23:49

PREP BATCH

: 23DSG017W

23DSG017W

23DSG017W

CALIBRATION REF: LG14004A

LG14004A

LG14004A

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)		•		MSDRec (%)		QCLimit (%)	MaxRPD (%)
JP5	ND	2.50	2.48	99	2.50	2.33	93	6	30-160	30
						aca ce e e e e e e e e e e e e				

	SpikeAmt	MSResult	MSRec	SpikeAmt	MSDResult	MSDRec	QCLimit
SURROGATE PARAMETERS	(mg/L)	(mg/L)	(%)	(mg/L)	(mg/L)	(%)	(%)
Bromobenzene	0.500	0.363	73	0.500	0.325	65	60-130
Hexacosane	0.125	0.105	84	0.125	0.102	82	60 - 130

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



August 01, 2023

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

Project Name: RED-HILL Project # 38001111 Job # 380-53442-1

Physis Project ID: 1407003-412

Dear Rachelle,

Enclosed are the analytical results for samples submitted to PHYSIS Environmental Laboratories, Inc. (PHYSIS) on 7/7/2023. A total of 2 samples were received for analysis in accordance with the attached chain of custody (COC). Per the COC, the samples were analyzed for:

Organics
Polynuclear Aromatic Hydrocarbons by EPA 625.1
Disalicylidenepropanediamine by EPA 625.1
Dibenzo [a,l] Pyrene w/ PAHs by EPA 625.1

Analytical results in this report apply only to samples submitted to PHYSIS in accordance with the COC and are intended to be considered in their entirety.

Please feel free to contact me at any time with any questions. PHYSIS appreciates the opportunity to provide you with our analytical and support services.

Regards,

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



PROJECT SAMPLE LIST

Eurofins Eaton Analytical

PHYSIS Project ID: 1407003-412

Total Samples: 2

RED-HILL Project # 38001111 Job # 380-53442-1

PHYSIS ID	Sample ID	Description	Date	Time	Matrix	Sample Type
108033	AIEA GULCH WELLS PUMP 2	380-53442-1	7/3/2023	8:45	Samplewater	Not Specified
108034	AIEA WELLS PUMP 2 (260)	380-53442-2	7/3/2023	9:20	Samplewater	Not Specified



ABBREVIATIONS and ACRONYMS

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



QUALITY ASSURANCE SUMMARY

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

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

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

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

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

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

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

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

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

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

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

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

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

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



PHYSIS QUALIFIER CODES

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



CASE NARRATIVE

QUALIFIER NOTES

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

ND

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

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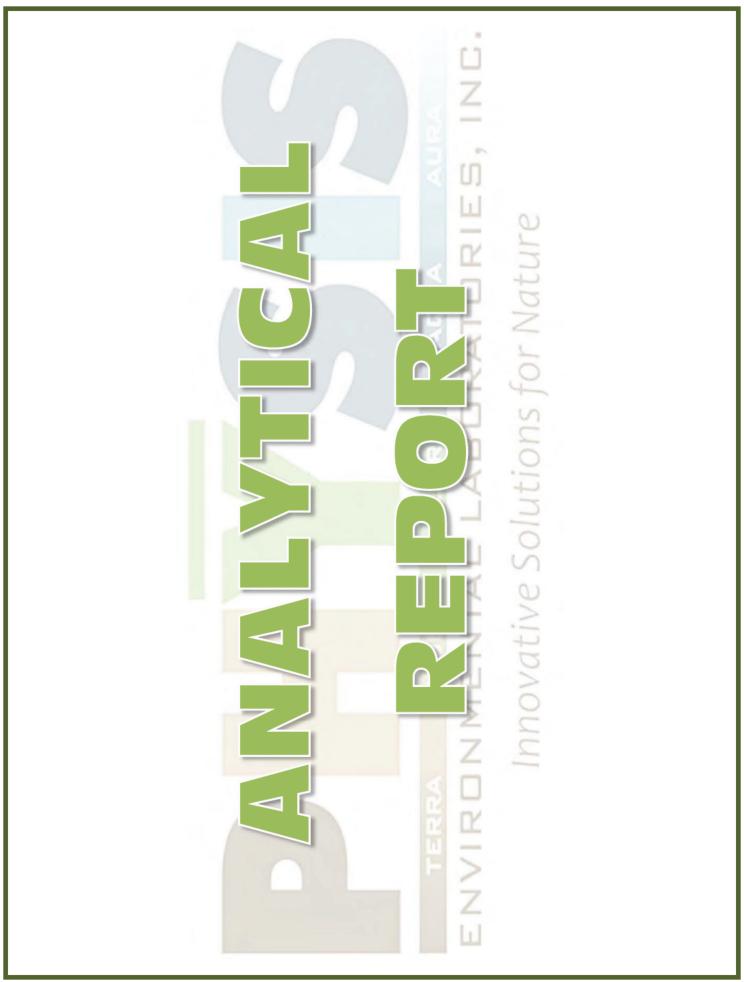
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PHYSIS Project ID: 1407003-412 Client: Eurofins Eaton Analytical

Project: RED-HILL Project # 38001111 Job # 380-53442-1

Innovative Solutions for Nature

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE Batch ID	Date Processed	Date Analyzed
Sample ID: 108033-R1	AIEA GULCH WELLS PU	IMP 2 380-5 N	latrix: Sampl	ewateı	•		Sampled:	03-Jul-23 8:45	Received:	07-Jul-23
(d10-Acenaphthene)	EPA 625.1	% Recovery	64	1			Total	O-41138	07-Jul-23	29-Jul-23
(d10-Phenanthrene)	EPA 625.1	% Recovery	98	1			Total	O-41138	07-Jul-23	29-Jul-23
(d12-Chrysene)	EPA 625.1	% Recovery	105	1			Total	O-41138	07-Jul-23	29-Jul-23
(d12-Perylene)	EPA 625.1	% Recovery	83	1			Total	O-41138	07-Jul-23	29-Jul-23
(d8-Naphthalene)	EPA 625.1	% Recovery	80	1			Total	O-41138	07-Jul-23	29-Jul-23
1-Methylnaphthalene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	O-41138	07-Jul-23	29-Jul-23
1-Methylphenanthrene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	O-41138	07-Jul-23	29-Jul-23
2,3,5-Trimethylnaphthalene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	O-41138	07-Jul-23	29-Jul-23
2,6-Dimethylnaphthalene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	O-41138	07-Jul-23	29-Jul-23
2-Methylnaphthalene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	O-41138	07-Jul-23	29-Jul-23
Acenaphthene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	O-41138	07-Jul-23	29-Jul-23
Acenaphthylene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	O-41138	07-Jul-23	29-Jul-23
Anthracene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	O-41138	07-Jul-23	29-Jul-23
Benz[a]anthracene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	O-41138	07-Jul-23	29-Jul-23
Benzo[a]pyrene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	O-41138	07-Jul-23	29-Jul-23
Benzo[b]fluoranthene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	O-41138	07-Jul-23	29-Jul-23
Benzo[e]pyrene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	O-41138	07-Jul-23	29-Jul-23
Benzo[g,h,i]perylene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	O-41138	07-Jul-23	29-Jul-23
Benzo[k]fluoranthene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	O-41138	07-Jul-23	29-Jul-23
Biphenyl	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	O-41138	07-Jul-23	29-Jul-23
Chrysene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	0-41138	07-Jul-23	29-Jul-23
Dibenz[a,h]anthracene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	O-41138	07-Jul-23	29-Jul-23
Dibenzo[a,l]pyrene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	0-41138	07-Jul-23	29-Jul-23
Dibenzothiophene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	0-41138	07-Jul-23	29-Jul-23

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CA ELAP #2769

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PHYSIS Project ID: 1407003-412 Client: Eurofins Eaton Analytical

Project: RED-HILL Project # 38001111 Job # 380-53442-1

Innovative Solutions for Nature

Polynuclear Aromatic Hydrocarbons											
ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE Batch ID	Date Processed	Date Analyzed	
Disalicylidenepropanediamine	EPA 625.1	μg/L	ND	1	0.05	0.1	Total	O-41138	07-Jul-23	29-Jul-23	
Fluoranthene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	O-41138	07-Jul-23	29-Jul-23	
Fluorene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	0-41138	07-Jul-23	29-Jul-23	
Indeno[1,2,3-cd]pyrene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	O-41138	07-Jul-23	29-Jul-23	
Naphthalene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	0-41138	07-Jul-23	29-Jul-23	
Perylene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	0-41138	07-Jul-23	29-Jul-23	
Phenanthrene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	0-41138	07-Jul-23	29-Jul-23	
Pyrene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	O-41138	07-Jul-23	29-Jul-23	

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PHYSIS Project ID: 1407003-412 Client: Eurofins Eaton Analytical

Project: RED-HILL Project # 38001111 Job # 380-53442-1

Innovative Solutions for Nature

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE Batch ID	Date Processed	Date Analyzed
Sample ID: 108034-R1	AIEA WELLS PUMP 2 (2	260) 380-534 M	atrix: Sample	wateı	•		Sampled:	03-Jul-23 9:20	Received:	07-Jul-23
(d10-Acenaphthene)	EPA 625.1	% Recovery	54	1			Total	O-41138	07-Jul-23	30-Jul-23
(d10-Phenanthrene)	EPA 625.1	% Recovery	88	1			Total	O-41138	07-Jul-23	30-Jul-23
(d12-Chrysene)	EPA 625.1	% Recovery	94	1			Total	O-41138	07-Jul-23	30-Jul-23
(d12-Perylene)	EPA 625.1	% Recovery	74	1			Total	O-41138	07-Jul-23	30-Jul-23
(d8-Naphthalene)	EPA 625.1	% Recovery	72	1			Total	O-41138	07-Jul-23	30-Jul-23
1-Methylnaphthalene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	O-41138	07-Jul-23	30-Jul-23
1-Methylphenanthrene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	0-41138	07-Jul-23	30-Jul-23
2,3,5-Trimethylnaphthalene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	0-41138	07-Jul-23	30-Jul-23
2,6-Dimethylnaphthalene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	0-41138	07-Jul-23	30-Jul-23
2-Methylnaphthalene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	0-41138	07-Jul-23	30-Jul-23
Acenaphthene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	0-41138	07-Jul-23	30-Jul-23
Acenaphthylene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	0-41138	07-Jul-23	30-Jul-23
Anthracene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	0-41138	07-Jul-23	30-Jul-23
Benz[a]anthracene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	0-41138	07-Jul-23	30-Jul-23
Benzo[a]pyrene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	0-41138	07-Jul-23	30-Jul-23
Benzo[b]fluoranthene	EPA 625.1	μg/L	0.00755	1	0.001	0.005	Total	0-41138	07-Jul-23	30-Jul-23
Benzo[e]pyrene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	0-41138	07-Jul-23	30-Jul-23
Benzo[g,h,i]perylene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	O-41138	07-Jul-23	30-Jul-23
Benzo[k]fluoranthene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	O-41138	07-Jul-23	30-Jul-23
Biphenyl	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	O-41138	07-Jul-23	30-Jul-23
Chrysene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	O-41138	07-Jul-23	30-Jul-23
Dibenz[a,h]anthracene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	O-41138	07-Jul-23	30-Jul-23
Dibenzo[a,l]pyrene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	O-41138	07-Jul-23	30-Jul-23
Dibenzothiophene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	O-41138	07-Jul-23	30-Jul-23

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CA ELAP #2769

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Project: RED-HILL Project # 38001111 Job # 380-53442-1

Innovative Solutions for Nature

		Polynu	clear Ar	oma	atic ŀ	lydr	ocarbo	ns		
ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE Batch ID	Date Processed	Date Analyzed
Disalicylidenepropanediamine	EPA 625.1	μg/L	ND	1	0.05	0.1	Total	O-41138	07-Jul-23	30-Jul-23
Fluoranthene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	O-41138	07-Jul-23	30-Jul-23
Fluorene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	0-41138	07-Jul-23	30-Jul-23
Indeno[1,2,3-cd]pyrene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	O-41138	07-Jul-23	30-Jul-23
Naphthalene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	0-41138	07-Jul-23	30-Jul-23
Perylene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	0-41138	07-Jul-23	30-Jul-23
Phenanthrene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	0-41138	07-Jul-23	30-Jul-23
Pyrene	EPA 625.1	μg/L	ND	1	0.001	0.005	Total	O-41138	07-Jul-23	30-Jul-23

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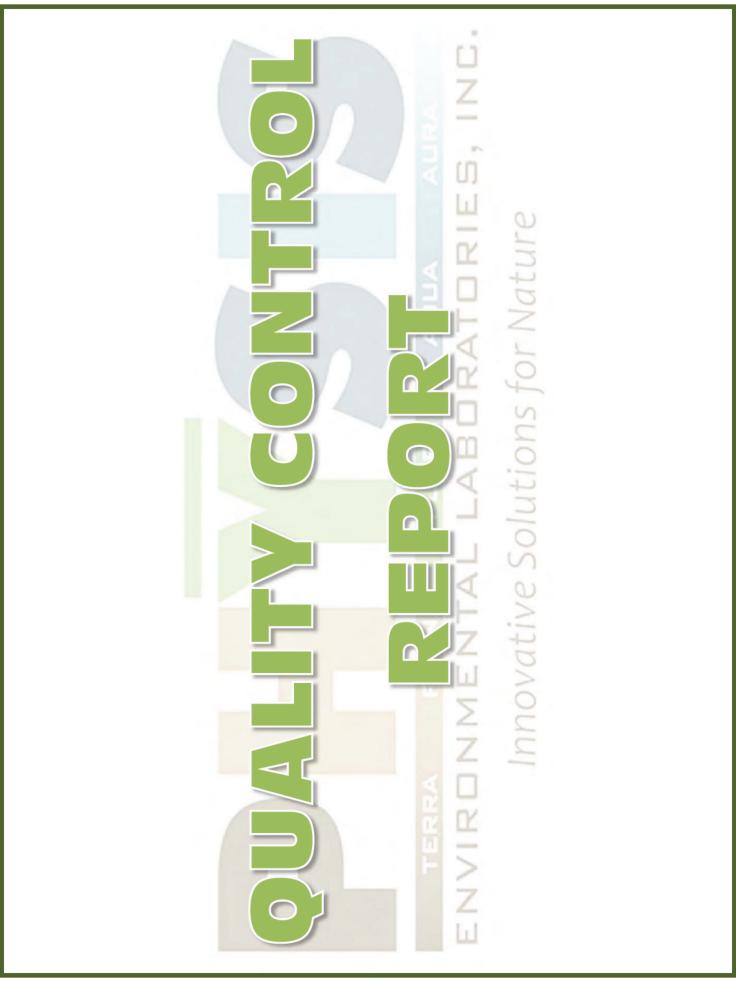
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9/17/2023

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Project: RED-HILL Project # 38001111 Job # 380-53442-1

Innovative Solutions for Nature

Polynuclear Aromatic Hydrocarbons

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE SOURCE	ACCURACY	PRECISION	QA CODEc
							LEVEL RESULT	% LIMITS	% LIMITS	5

Sample ID: 108032	·B1 Q/	AQC Procedural I	Blank			Matrix: Bla	nkMatrix	Sampled:			Received:
	M	ethod: EPA 625.1				Batch ID: O-41	138	Prepared: o	7-Jul-23		Analyzed: 29-Jul-23
(d10-Acenaphthene)	Total	80 1				% Recovery	100	80	27 - 133% P	ASS	
(d10-Phenanthrene)	Total	108 1				% Recovery	100	108	43 - 129% P	ASS	
(d12-Chrysene)	Total	107 1				% Recovery	100	107	52 - 144% P	ASS	
(d12-Perylene)	Total	96 1				% Recovery	100	96	36 - 161% P	ASS	
(d8-Naphthalene)	Total	105 1				% Recovery	100	105	25 - 125% P	ASS	
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					

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Project: RED-HILL Project # 38001111 Job # 380-53442-1

Innovative Solutions for Nature

Poly	nuclear	Aroma	itic	Hydr	QUALITY CONTROL REPORT						RT		
ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE		ACCURACY	PRE	CISION	QA CODEc
							LEVEL	RESULT	%	LIMITS	%	LIMITS	
Dibenzothiophene	Total	ND	1	0.001	0.005	μg/L							
Disalicylidenepropanediamin	Total	ND	1	0.05	0.1	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							

9/17/2023



Project: RED-HILL Project # 38001111 Job # 380-53442-1

Innovative Solutions for Nature

Polynuclear Aromatic Hydrocarbons

QUALITY CONTROL REPORT

	Sample ID: 108032-I	BS1 QAC	QC Procedura	al Blaı	nk		Matrix:	BlankMatrix	Sam	pled:			Received:	
								LEVEL RI	ESULT	%	LIMITS	%	LIMITS	
AN	NALYTE F	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE SO	DURCE	A	CCURACY	PR	ECISION	QA CODEc

Sample ID: 108032	-BS1	QAQC Procedural	Blank			Matrix: Bla	nkMatrix	Sa	ampled:			Received:
		Method: EPA 625.1				Batch ID: O-41	138		Prepared: o	7-Jul-23		Analyzed: 29-Jul-23
(d10-Acenaphthene)	Total	82	1			% Recovery	100	0	82	27 - 133%	PASS	
(d10-Phenanthrene)	Total	102	1			% Recovery	100	0	102	43 - 129%	PASS	
(d12-Chrysene)	Total	104	1			% Recovery	100	0	104	52 - 144%	PASS	
(d12-Perylene)	Total	92	1			% Recovery	100	0	92	36 - 161%	PASS	
(d8-Naphthalene)	Total	89	1			% Recovery	100	0	89	25 - 125%	PASS	
1-Methylnaphthalene	Total	0.436	1	0.001	0.005	μg/L	0.5	0	87	31 - 128%	PASS	
1-Methylphenanthrene	Total	0.536	1	0.001	0.005	μg/L	0.5	0	107	66 - 127%	PASS	
2,3,5-Trimethylnaphthalene	Total	0.481	1	0.001	0.005	μg/L	0.5	0	96	55 - 122%	PASS	
2,6-Dimethylnaphthalene	Total	0.46	1	0.001	0.005	μg/L	0.5	0	92	48 - 120%	PASS	
2-Methylnaphthalene	Total	0.476	1	0.001	0.005	μg/L	0.5	0	95	47 - 130%	PASS	
Acenaphthene	Total	0.436	1	0.001	0.005	μg/L	0.5	0	87	53 - 131%	PASS	
Acenaphthylene	Total	0.496	1	0.001	0.005	μg/L	0.5	0	99	43 - 140%	PASS	
Anthracene	Total	0.459	1	0.001	0.005	μg/L	0.5	0	92	58 - 135%	PASS	
Benz[a]anthracene	Total	0.504	1	0.001	0.005	μg/L	0.5	0	101	55 - 145%	PASS	
Benzo[a]pyrene	Total	0.444	1	0.001	0.005	μg/L	0.5	0	89	51 - 143%	PASS	
Benzo[b]fluoranthene	Total	0.51	1	0.001	0.005	μg/L	0.5	0	102	46 - 165%	PASS	
Benzo[e]pyrene	Total	0.491	1	0.001	0.005	μg/L	0.5	0	98	42 - 152%	PASS	
Benzo[g,h,i]perylene	Total	0.482	1	0.001	0.005	μg/L	0.5	0	96	63 - 133%	PASS	
Benzo[k]fluoranthene	Total	0.514	1	0.001	0.005	μg/L	0.5	0	103	56 - 145%	PASS	
Biphenyl	Total	0.532	1	0.001	0.005	μg/L	0.5	0	106	56 - 119%	PASS	
Chrysene	Total	0.471	1	0.001	0.005	μg/L	0.5	0	94	56 - 141%	PASS	
Dibenz[a,h]anthracene	Total	0.482	1	0.001	0.005	μg/L	0.5	0	96	55 - 150%	PASS	
Dibenzo[a,l]pyrene	Total	0.413	1	0.001	0.005	μg/L	0.5	0	83	50 - 150%	PASS	

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Project: RED-HILL Project # 38001111 Job # 380-53442-1

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QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL UNITS		SPIKE	E SOURCE ACCURACY		CCURACY	PRECISION		QA CODEc
							LEVEL	RESULT	%	LIMITS	%	LIMITS	
Dibenzothiophene	Total	0.527	1	0.001	0.005	μg/L	0.5	0	105	46 - 126% PASS			
Disalicylidenepropanediamin	Total	28	1	0.05	0.1	μg/L	50	0	56	50 - 150% PASS			
Fluoranthene	Total	0.608	1	0.001	0.005	μg/L	0.5	0	122	60 - 146% PASS			
Fluorene	Total	0.477	1	0.001	0.005	μg/L	0.5	0	95	58 - 131% PASS			
Indeno[1,2,3-cd]pyrene	Total	0.467	1	0.001	0.005	μg/L	0.5	0	93	50 - 151% PASS			
Naphthalene	Total	0.46	1	0.001	0.005	μg/L	0.5	0	92	41 - 126% PASS			
Perylene	Total	0.426	1	0.001	0.005	μg/L	0.5	0	85	48 - 141% PASS			
Phenanthrene	Total	0.476	1	0.001	0.005	μg/L	0.5	0	95	67 - 127% PASS			
Pyrene	Total	0.57	1	0.001	0.005	μg/L	0.5	0	114	54 - 156% PASS			

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Project: RED-HILL Project # 38001111 Job # 380-53442-1

Innovative Solutions for Nature

Polynuclear Aromatic Hydrocarbons

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE SOURCE	ACCURACY	PRECIS	SION C	QA CODEc
							LEVEL RESULT	% LIMITS	% LI	MITS	
											$\overline{}$

								LUCE!	70	LIIVIIII		70	Elivii13
Sample ID: 108032	-BS2	QAQC Procedur	al Blank			Matrix: Bla	nkMatrix	Sa	mpled:			F	Received:
		Method: EPA 625.1				Batch ID: O-41	1138	P	repared: o	7-Jul-23			Analyzed: 29-Jul-23
(d10-Acenaphthene)	Total	80	1			% Recovery	100	0	80	27 - 133%	PASS	2	30 PASS
(d10-Phenanthrene)	Total	96	1			% Recovery	100	0	96	43 - 129%	PASS	6	30 PASS
(d12-Chrysene)	Total	104	1			% Recovery	100	0	104	52 - 144%	PASS	0	30 PASS
(d12-Perylene)	Total	94	1			% Recovery	100	0	94	36 - 161%	PASS	2	30 PASS
(d8-Naphthalene)	Total	85	1			% Recovery	100	0	85	25 - 125%	PASS	5	30 PASS
1-Methylnaphthalene	Total	0.424	1	0.001	0.005	μg/L	0.5	0	85	31 - 128%	PASS	2	30 PASS
1-Methylphenanthrene	Total	0.512	1	0.001	0.005	μg/L	0.5	0	102	66 - 127%	PASS	5	30 PASS
2,3,5-Trimethylnaphthalene	Total	0.484	1	0.001	0.005	μg/L	0.5	0	97	55 - 122%	PASS	1	30 PASS
2,6-Dimethylnaphthalene	Total	0.451	1	0.001	0.005	μg/L	0.5	0	90	48 - 120%	PASS	2	30 PASS
2-Methylnaphthalene	Total	0.462	1	0.001	0.005	μg/L	0.5	0	92	47 - 130%	PASS	3	30 PASS
Acenaphthene	Total	0.424	1	0.001	0.005	μg/L	0.5	0	85	53 - 131%	PASS	2	30 PASS
Acenaphthylene	Total	0.482	1	0.001	0.005	μg/L	0.5	0	96	43 - 140%	PASS	3	30 PASS
Anthracene	Total	0.456	1	0.001	0.005	μg/L	0.5	0	91	58 - 135%	PASS	1	30 PASS
Benz[a]anthracene	Total	0.521	1	0.001	0.005	μg/L	0.5	0	104	55 - 145%	PASS	3	30 PASS
Benzo[a]pyrene	Total	0.459	1	0.001	0.005	μg/L	0.5	0	92	51 - 143%	PASS	3	30 PASS
Benzo[b]fluoranthene	Total	0.523	1	0.001	0.005	μg/L	0.5	0	105	46 - 165%	PASS	3	30 PASS
Benzo[e]pyrene	Total	0.476	1	0.001	0.005	μg/L	0.5	0	95	42 - 152%	PASS	3	30 PASS
Benzo[g,h,i]perylene	Total	0.489	1	0.001	0.005	μg/L	0.5	0	98	63 - 133%	PASS	2	30 PASS
Benzo[k]fluoranthene	Total	0.521	1	0.001	0.005	μg/L	0.5	0	104	56 - 145%	PASS	1	30 PASS
Biphenyl	Total	0.531	1	0.001	0.005	μg/L	0.5	0	106	56 - 119%	PASS	0	30 PASS
Chrysene	Total	0.483	1	0.001	0.005	μg/L	0.5	0	97	56 - 141%	PASS	3	30 PASS
Dibenz[a,h]anthracene	Total	0.475	1	0.001	0.005	μg/L	0.5	0	95	55 - 150%	PASS	1	30 PASS
Dibenzo[a,l]pyrene	Total	0.416	1	0.001	0.005	μg/L	0.5	0	83	50 - 150%	PASS	0	30 PASS

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Project: RED-HILL Project # 38001111 Job # 380-53442-1

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main: (714) 602-5320

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	Α	CCURACY	PRI	ECISION QA CODEc
							LEVEL	RESULT	%	LIMITS	%	LIMITS
Dibenzothiophene	Total	0.492	1	0.001	0.005	μg/L	0.5	0	98	46 - 126% PASS	7	30 PASS
Disalicylidenepropanediamin	Total	27.2	1	0.05	0.1	μg/L	50	0	54	50 - 150% PASS	4	30 PASS
Fluoranthene	Total	0.596	1	0.001	0.005	μg/L	0.5	0	119	60 - 146% PASS	2	30 PASS
Fluorene	Total	0.458	1	0.001	0.005	μg/L	0.5	0	92	58 - 131% PASS	3	30 PASS
Indeno[1,2,3-cd]pyrene	Total	0.461	1	0.001	0.005	μg/L	0.5	0	92	50 - 151% PASS	1	30 PASS
Naphthalene	Total	0.451	1	0.001	0.005	μg/L	0.5	0	90	41 - 126% PASS	2	30 PASS
Perylene	Total	0.45	1	0.001	0.005	μg/L	0.5	0	90	48 - 141% PASS	6	30 PASS
Phenanthrene	Total	0.463	1	0.001	0.005	μg/L	0.5	0	93	67 - 127% PASS	2	30 PASS
Pyrene	Total	0.557	1	0.001	0.005	μg/L	0.5	0	111	54 - 156% PASS	3	30 PASS

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Sample ID: 108033

	Area				
Retention	(% of	Concentration			Match Quality
Time	total)	(ng/L)	Library/ID	Cas Number	(%)
34.8402	2.2768	1111	Anthracene-D10	1517-22-2	89
10.3993	10.1473	4952	2-Pentene, 2,4-dimethyl-	625-65-0	91
10.1763	6.7845	3311	Cyclohexane, 1-methyl-2-propyl-	4291-79-6	87
10.1770	4.9035	2393	m-Menthane, (1S,3S)-(+)-	13837-67-7	88
10.1200	2.3680	1156	Octane, 3-methyl-6-methylene-	74630-07-2	86
10.0470	2.1114	1030	Hydroperoxide, 1-ethylbutyl	24254-56-6	87
10.7308	1.5245	744	Cyclohexane, methyl-	108-87-2	88

Concentration estimated using the response for Anthracene-d10

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Sample ID: 108034

	Area				
Retention	(% of	Concentration			Match Quality
Time	total)	(ng/L)	Library/ID	Cas Number	(%)
34.8399	2.4664	1111	Anthracene-D10	1517-22-2	92
10.3998	14.4087	6491	2-Pentene, 2,4-dimethyl-	625-65-0	91
10.1704	5.1251	2309	Hydroperoxide, 1-methylpentyl	24254-55-5	88
10.1770	4.9666	2237	m-Menthane, (1S,3S)-(+)-	13837-67-7	87
10.0469	2.8071	1265	Hydroperoxide, 1-ethylbutyl	24254-56-6	87
10.1201	2.5529	1150	Octane, 3-methyl-6-methylene-	74630-07-2	83
10.7297	1.9022	857	Cyclohexane, methyl-	108-87-2	87
10.8801	0.3607	162	Cyclohexane, nitro-	1122-60-7	85

Concentration estimated using the response for Anthracene-d10

Sample ID: Lab Blank B1_41138

	Area				
Retention	(% of	Concentration			Match Quality
Time	total)	(ng/L)	Library/ID	Cas Number	(%)
34.8456	2.1122	1111	Anthracene-D10	1517-22-2	90
10.4002	9.1209	4798	2-Pentene, 2,4-dimethyl-	625-65-0	90
10.1770	6.2969	3312	m-Menthane, (1S,3S)-(+)-	13837-67-7	89
10.1202	2.3524	1237	Octane, 3-methyl-6-methylene-	74630-07-2	88
10.0480	1.8008	947	Hydroperoxide, 1-ethylbutyl	24254-56-6	82
10.7690	1.2610	663	2-Pentene, 3,4-dimethyl-, (E)-	4914-92-5	84
10.7691	1.1482	604	Cyclohexane, methyl-	108-87-2	84
10.2315	0.4050	213	1-Hexene, 4,5-dimethyl-	16106-59-5	80
10.8834	0.2061	108	Cyclohexane, nitro-	1122-60-7	85

Concentration estimated using the response for Anthracene-d10

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Eurofins Eaton Analytical Pomona 941 Corporate Center Drive Pomona, CA 91768-2842

Chain of Custody Reco

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Phone: 626-386-1100									
Client Information (Sub Contract Lab)	Sampler:			Lab PM: Arada,	Lab PM: Arada, Rachelle	Carrier Tracking No(s):	g No(s):	380-61607.1	
- 1	Phone:			E-Mail:	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#: 380-53442-1	
Address: 1904 Wright Circle,	Due Date Requested: 7/20/2023	ed:			Analysis	Requested		Preservation Codes:	odes: M - Hexane
City:	TAT Requested (days):	ays):			_			A - HCL B - NgOH C - Zn Acetate	N - None O - AsNaO2
State, Zip: CA, 92806					5 PAH	2015		E - NaHSO4	Q - Na2SO3 R - Na2S2O3
Phone:	PO #							G - Amchlor	
Email:	WO#				No)				V - MCAA W - pH 4-5
Project Name: RED-HILL	Project #: 38001111				es or I LL (EA				Y - Trizma Z - other (specify)
Site: Honolulu BWS Sites	SSOW#:				SD (Y Physis			Other:	
		Sample	Sample Type (C=comp,	Matrix (Www.atar, Sweolid,	id Filtered rform MS/N B (625 PAH i sis LL (EAL			tal Number	
Cample Helluncation Chieff D (Fabric)	Valle Date	V.	Preservation Code:	tion Code:	X				
AIEA GULCH WELLS PUMP 2 (380-53442-1)	7/3/23	08:45 Hawaiian		Water	×			2 See Attached Instructions	nstructions
AIEA WELLS PUMP 2 (260) (380-53442-2)	7/3/23	09:20 Hawaiian		Water	×			2 See Attached Instructions	nstructions
Noie: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratorys. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin isted above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC aboratory 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.	Analytical, LLC places the sixtests/matrix being analyz ditations are current to date	ownership of mo ed, the samples , return the sign	ethod, analyte & must be shipp ed Chain of Cu	k accreditation ed back to the istody attesting	compliance upon our subcontract laboratori Eurofins Eaton Analytical, LLC laboratory o to said compliance to Eurofins Eaton Analy	ies. This sample ship r other instructions wil rtical, LLC.	ment is forwarded un	rder chain-of-custody. hanges to accreditatio	If the laboratory does not on status should be brought to
Possible Hazard Identification Unconfirmed					Sample Disposal (A fee may be assessed if samples are retained longer than Return To Client Disposal By Lab Archive For	be assessed if san Disposal By Lab	amples are reta	tained longer than Archive For	n 1 month) Months
Empty Kit Relinquished by:	Date:	Date:			Time:) Method o	Method of Shipment		
Relinquished by Relinquished by	Date/Time:	115	35	Company	Becaried by:		Date/Time:	3 1/35	Company 515
Relinquished by:	Date/Time:			Company	Received by:		Date/Time:		Company
Custody Seals Intact: Custody Seal No.:					Cooler Temperature(s) °C and Oth	and Other Remarks:			Ver: 06/08/2021
									A CT - 001,001,707.T



Sample Receipt Summary



Project Iteration ID: 1407003-412

Client Name:

Eurofins Eaton Analytical

Project Name:

RED-HILL Project # 38001111 Job

380-53442-1

COC Page Number: 2 of 2

eceiving Info	Bottle Label Color: NA
Initials Received By:	
2. Date Received: 7/7/25	
3. Time Received: 1135	
4. Client Name: Elvofis	
5. Courier Information: (Please circle)	
Chient UPS	Area Fast DRS
 FedEx GSO/GLS 	Ontrac PAMS
 PHYSIS Driver: 	
i. Start Time:	iii. Total Mileage:
ii. End Time:	
6. Container Information: (Please put the # of co	
 _2Cooler _ 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): <u>D-9</u> Used I/R Thermometer # 1-2
1. Initials Inspected By: 16 14 mple Integrity Upon Receipt:	
 COC(s) included and completely filled out 	
All sample containers arrived intact	
3. All samples listed on COC(s) are present	
4. Information on containers consistent with info	
5. Correct containers and volume for all analyses	
6. All samples received within method holding ti	
7. Correct preservation used for all analyses indi	
8. Name of sampler included on COC(s)	
	Notes:

P:\Sample Logistics (SL)\SRS

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Monrovia, CA (Suite 100)

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

Chain of Custody Record



Environment Testing

Dr. Ron Fenstermacher Company: City & County of Honolulu Address: 630 South Beretania Street; Chemistry Lab City: Honolulu State, Zip: HI, 96843 Phone: 808-748-5091 (tel) C22 Email: rfenstermacher@hbws.org Project Name: RED-HILL/HBWS sites Event Desc: RUSH Weekly Red Hill Site: Sample Identification Sample Identification AIEA GULCH WELLS PUMP2 AIEA WELLS PUMP 2 (260) FB AIEA GULCH WELLS PUMP2	20525101 exp	ays): ot: A No	PWSID:	E-1	ada, Ri Mail: achelle		a@et	lio			is Re		of Origin:			380-27941-2757.2 Page: ≀ Page 2 of 2 Job #:	
Company: City & County of Honolulu Address: 630 South Beretania Street; Chemistry Lab City: Honolulu State, Zip: HI, 96843 Phone: 808-748-5091 (tel) Email: rfenstemacher@hbws.org Project Name: RED-HILL/HBWS sites Event Desc: RUSH Weekly Red Hill Site: Sample Identification AIEA GULCH WELLS PUMP2 AIEA WELLS PUMP 2 (260) FB AIEA GULCH WELLS PUMP2 FB AIEA GULCH WELLS PUMP2	T Requested (da ompliance Project) #: 20525101 exp 0 #: oject #: 3001111	ays): ot: A No	PWSID:	Re	achelle.			lio			is Re	ques	ted				
City & County of Honolulu Address: 630 South Beretania Street; Chemistry Lab City: TAT Honolulu Tat State, Zip: Con HI, 96843 Con Phone: PO: 808-748-5091 (tel) C2: Email: WO rfenstemacher@hbws.org Project Name: RED-HILL/HBWS sites Event Desc: RUSH Weekly Red Hill 380 Site: SSC Sample Identification Sample Identification AIEA GULCH WELLS PUMP2 7 AIEA WELLS PUMP 2 (260) 7 FB AIEA GULCH WELLS PUMP2 7 The same in the project Name in the project Nam	T Requested (da empliance Project of #: 20525101 exp Of #: oject #: 8001111	ays): ot: A No	PWSID:)+TICs	J.		An	nalys	is Re	ques	ted	Т	Т	J00 #:	
630 South Beretania Street; Chemistry Lab City: Honolulu State, Zip: HI, 96843 Phone: 808-748-5091 (tel) Email: referstermacher@hbws.org Project Name: RED-HILL/HBWS sites Event Desc: RUSH Weekly Red Hill 380 Site: Sample Identification Sample Identification AIEA GULCH WELLS PUMP2 AIEA WELLS PUMP 2 (260) FB AIEA GULCH WELLS PUMP2 7	T Requested (da empliance Project of #: 20525101 exp Of #: oject #: 8001111	ays): ot: A No)+TICs	Ĵ.							\top			
State, Zip: HI, 96843 Phone: Boll-Phone: B	ompliance Project 0 #: 20525101 exp 0 #: c)ject #: 3001111	et: A No			-	1+TICs	1							1 1		Preservation Codes: A - HCL M - Hexane	
HI, 96843 Phone: BOB-748-5091 (tel) Email: fenstemacher@hbws.org Project Name: RED-HILL/HBWS sites Event Desc: RUSH Weekly Red Hill Site: Sample Identification AIEA GULCH WELLS PUMP2 AIEA WELLS PUMP 2 (260) FB AIEA GULCH WELLS PUMP2 7) #: 20525101 exp O #: oject #: 3001111				-11	1		1 2	1 1	그						B - NaOH	
Sample Identification Sample AIEA GULCH WELLS PUMP2 AIEA GULCH WELLS PUMP2 AIEA GULCH WELLS PUMP2 FB AIEA GULCH WELLS PUMP2 7 7 7 7 7 7 7 7 7 7 7 7 7	20525101 exp O#: oject#: 3001111	05312023			7.1		(EAL)	8915 Diesel LL (EAL) and Motor		Gas (Purgeable) LL (EAL)						E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3	3
mail: fenstemacher@hbws.org roject Name: RED-HILL/HBWS sites Event Desc: RUSH Weekly Red Hill stite: Sample Identification AIEA GULCH WELLS PUMP2 AIEA WELLS PUMP 2 (260) FB AIEA GULCH WELLS PUMP2 7 FB AIEA GULCH WELLS PUMP2	O#: oject#: 3001111	00012020						L) an	S	J (e)					2	G - Amchlor S - H2SO4	ecahydrate
Project Name: RED-HILL/HBWS sites Event Desc: RUSH Weekly Red Hill 38/ Site: Sample Identification Sample Identification AIEA GULCH WELLS PUMP2 AIEA WELLS PUMP 2 (260) FB AIEA GULCH WELLS PUMP2 7	3001111				12		gable	Ā	US T	rgeat	_					H - Ascorbic Acid I - Ice U - Acetone V - MCAA	
RED-HILL/HBWS sites Event Desc: RUSH Weekly Red Hill 380 ite: SSC Sample Identification Sample Identification 4 AIEA GULCH WELLS PUMP2 7 AIEA WELLS PUMP 2 (260) 7 FB AIEA GULCH WELLS PUMP2 7	3001111				es or	Phys	P.	Sel LI	Is PL	» (Pu	Full List				55	K - EDTA W - pH 4-5	
AIEA GULCH WELLS PUMP2 AIEA WELLS PUMP 2 (260) FB AIEA GULCH WELLS PUMP2 7	SOW#:				٥	CYes or No)	Gas	5 Die	25plt	Gag	표				contain	L - EDA Z - other (spe	ecify)
AIEA GULCH WELLS PUMP2 AIEA WELLS PUMP 2 (260) FB AIEA GULCH WELLS PUMP2 7					Sample (Ye	Ø .	1.		- (MOD) 525plus PLUS TICs		C - 537.1				of cor	Other:	
AIEA GULCH WELLS PUMP2 7 AIEA WELLS PUMP 2 (260) 7 FB AIEA GULCH WELLS PUMP2 7	Sample Date	Sample Time	Sample Type (C=comp, G=grab) в	Matrix (Wwwater, S=solld, O=waste/oll, T=Tissue, A=/	eld Filte	Perform MS/M	SUBCONTRACT	SUBCONTRACT	525.2_PREC - (A	SUBCONTRACT	537.1_DW_PREC 533 - All Analytes				Total Number	Special Instructions/l	Note:
FB AIEA GULCH WELLS PUMP2 7	><	><	Preservati	on Code	\times	X F	R	RA		RA	YN				\times		
FB AIEA GULCH WELLS PUMP2 7	7/3/2023	0845	6	Water		2	2 4		2	2						#1- 7726 4746 4472	2
FB AIEA GULCH WELLS PUMP2 7, FB AIEA WELLS PUMP 2 (260) 7,	13/2023	0120	G	Water	П	2	4		2	2					3	(752A) 2.8°-0.2° = 2.6	0
FB AIEA GULCH WELLS PUMP2 FB AIEA WELLS PUMP 2 (260)																#2-7726 4746 5582	-
FB AIEA WELLS PUMP 2 (260)	13/2023	0845		Water	Ш		2									(752A) 370-0.20-3.5	5*
	13/2023	0920		Water			2									#3-7726 4746 5/26	
					Ш						_	0				(352A) 1.8°-02"=1.6	2
					Ш							R	1.5			#4-7726 4746 6464	1
					П										1.8	(752A) 1.5°-0.2°-1.3	
					Ħ	\top	\top	\vdash		\neg	\forall	380-5	3442 COC		13	#5-7726 4746 6670	
					Ħ	T										(752A) 2.3" Q.2"=2.1"	
Possible Hazard Identification					5	Samp		-			ay be			ples are	7	ed longer than 1 month)	
Non-Hazard Flammable Skin Irritant Poison E	B Unkn	nown	Radiological		-	Specia		<i>n To</i> ructio			uirem	_	sal By Lab		Arch	ive For Months	
Empty Kit Relinquished by:		Date:			Tim		1	$\overline{}$	1				Method of Si	nipment:	ed e	x 5 coolers 1	
Relinquished by:	ate/Time: 7/	3/2-23	1220 H	ompany IBWS		Re	ge/Jed	by	1	G.P	EITN	ER	C	ate/Time:		Company	P
Relinquished by: Date	ate/Time:		c	ompany		Re	ceived	by:	V		2.11			ate/Time:		Company	
Date linquished by:	ate/Time:		C	ompany		Re	ceived	by:					C	ate/Time:		Company	
Custody Seals Intact: Custody Seal No.: Δ Yes Δ No						Co	oler Te	mperat	ture(s)	°C and	Other F	Remarks	(752)	1 -0	20	COPPECTION 1 BET	STE !

Monrovia, CA (Suite 100)

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

Chain of Custody Record

🔆 eurofins

Environment Testing America

Client Information	Sampler:				ь РМ: rada, Ra	chelle							Carrier Tracking No(s)			COC No: 380-27941-2757	2
Client Contact: Dr. Ron Fenstermacher	Phone: 808-748-5840			E-I	Mail: achelle./			euror	nieue	com		╛	State of Origin:		\neg	Page: Page 2 of 2	
Company:	000-740-3040		PWSID:	110	acriene./	riaua	wet.	curoi							\dashv	Job #:	
City & County of Honolulu						_			A	naly	sis F	Req	uested				
Address: 630 South Beretania Street; Chemistry Lab	Due Date Request	led:														Preservation Cod A - HCL	es: M - Hexane
City: Honolulu	TAT Requested (d	ays):				18		or Oil		7						B - NaOH C - Zn Acetate	N - None O - AsNaO2 P - Na2O4S
State, Zip: HI, 96843	Compliance Proje	ct: A No			-	+ TICs	(EAL)	Mot		Gas (Purgeable) LL (EAL)						D - Nitric Acid E - NaHSO4	Q - Na2SO3 R - Na2S2O3
Phone:	PO #:	- 05040000				(EAL)		-) and	္မ	le) [.L						F - MeOH G - Amchlor	S - H2SO4 T - TSP Dodecahydrate
808-748-5091 (tel) Email:	C20525101 exp	0 05312023			- 8	3	8015 Gas (Purgable) LL	(EAL	IT SU	geap						H - Ascorbic Acid I - Ice	U - Acetone V - MCAA
rfenstemacher@hbws.org Project Name:					No Se		(Puri	el LL	s PLI	(Pur	Full List				ers	J - DI Water K - EDTA	W - pH 4-5
RED-HILL/HBWS sites Event Desc: RUSH Weekly Red Hill	Project #: 38001111				e (Ye	AH	Gas	Dies	25plu		1 Fu				containers	L - EDA	Y - Trizma Z - other (specify)
Site:	SSOW#:				Sample (Yes or No	- 625	- 8015	- 8915 Diesel LL (EAL) and Motor	op) 52	- 8015	- 537.	s			of con	Other:	
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil BT=Tissue, A=	Field Filtered	SUBCONTRACT	SUBCONTRACT	SUBCONTRACT	525.2_PREC - (MOD) 525plus PLUS TICs	SUBCONTRACT	637.1_DW_PREC - 537.1	533 - Ail Analytes			Total Number	Special In	structions/Note:
	><	><	Preserva	tion Code		R	R	RA		RA	Υ	N			X		
AIEA GULCH WELLS PUMP2	7/3/2023		G	Water							3	3				#1- 7726 4741	6 4472
AIEA WELLS PUMP 2 (260)	7/3/2023	0920	Gı	Water							3	3				(752A) 2.8"-	
KAAMILO WELLS	7/3/2023	0945	G	Water	Ш						3	3				12-7726 474	6 5582
																(752A) 3.70-0.	2° 3.5°
FB AIEA GULCH WELLS PUMP2	7/3/2023	0845		Water							1	1				13- 7726 474	
FB AIEA WELLS PUMP 2 (260)	7/3/2023			Water	Ш						1	1				(752A) 1.8°-0.	2021.60
FB KAAMILO WELLS	7/3/2023	0945		Water	Ш						1	1				#4- 7726 474	16 6464
					Ш	\perp	L									(752A) 1.5" O.	20=1.30
																15- 7726 4	746 6670
					Ш	\perp	L									(752A) 2.3°-0	0.2°=2.1°
					Щ												
Possible Hazard Identification Non-Hazard Flammable Skin Irritant □ P	oison B Unkr	nown \square	Radiologica	1	S				a l (A Clien		may b	_	ssessed if sample isposal By Lab			d longer than 1 ive For	month) Months
Deliverable Requested: I, II, III, IV, Other (specify)	- Oliki		Janorogica		Sı						quire				0111		, include
Empty Kit Relinquished by:		Date:			Time		N	$\overline{}$	-				Method of Shipm	ent FED	3 6	x 5 cool	ERST
Relinquished by My	Date/Time: 7/3/202	3 12	20	Company HBWS		Reg		у:	R	G	. RE	TN	Date/	Time:			Company
Relinquished by:	Date/Time:			Company	(eived I	by:	1			-114		Time:			Company
Relinquished by:	Date/Time:			Company		Rece	eived I	oy:				_	Date/	Time:			Company
Custody Seals Intact: Custody Seal No.: Δ Yes Δ No						Cool	ler Ter	nperat	ture(s)	°C an	d Othe	Ren	narks: (75ZA)	-0.20	C	OPPECTION	A GEL- FRIEN
•				Page	89 of	90											Ver: 01/16/2019 9/17/2

Login Sample Receipt Checklist

Client: City & County of Honolulu Job Number: 380-53442-2

Login Number: 53442 List Source: Eurofins Eaton Analytical Pomona

List Number: 1

Creator: Elyas, Matthew

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	

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