

# ANALYTICAL REPORT

## PREPARED FOR

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

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## JOB DESCRIPTION

RED-HILL

## JOB NUMBER

380-66857-2

# Eurofins Eaton Analytical Pomona

## Job Notes

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

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

## Compliance Statement

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

## Authorization



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



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# Definitions/Glossary

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

Job ID: 380-66857-2

## Qualifiers

### Subcontract

Qualifier	Qualifier Description
U	This analyte was not detected.

## Glossary

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



# Case Narrative

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

Job ID: 380-66857-2

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## Job ID: 380-66857-2

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### Laboratory: Eurofins Eaton Analytical Pomona

#### Narrative

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#### Job Narrative 380-66857-2

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

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

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

#### Receipt

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

#### Subcontract Work

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

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

# Detection Summary

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

Job ID: 380-66857-2

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**Client Sample ID: MOANALUA WELLS**

**Lab Sample ID: 380-66857-1**

No Detections.

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**Client Sample ID: TB MOANALUA WELLS**

**Lab Sample ID: 380-66857-2**

No Detections.

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

This Detection Summary does not include radiochemical test results.

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# Client Sample Results

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

Job ID: 380-66857-2

**Client Sample ID: MOANALUA WELLS**

**Lab Sample ID: 380-66857-1**

Date Collected: 10/10/23 12:00

Matrix: Drinking Water

Date Received: 10/12/23 10:33

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 05:15	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 05:15	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 05:15	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 05:15	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 05:15	1
Acenaphthene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 05:15	1
Acenaphthylene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 05:15	1
Anthracene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 05:15	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 05:15	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 05:15	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 05:15	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 05:15	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 05:15	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 05:15	1
Biphenyl	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 05:15	1
Chrysene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 05:15	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 05:15	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 05:15	1
Dibenzothiophene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 05:15	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		10/17/23 00:00	11/11/23 05:15	1
Fluoranthene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 05:15	1
Fluorene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 05:15	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 05:15	1
Naphthalene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 05:15	1
Perylene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 05:15	1
Phenanthrene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 05:15	1
Pyrene	ND		0.005	0.001	µg/L		10/17/23 00:00	11/11/23 05:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
(d10-Acenaphthene)	40		27 - 133	10/17/23 00:00	11/11/23 05:15	1
(d10-Phenanthrene)	43		43 - 129	10/17/23 00:00	11/11/23 05:15	1
(d12-Chrysene)	88		52 - 144	10/17/23 00:00	11/11/23 05:15	1
(d12-Perylene)	89		36 - 161	10/17/23 00:00	11/11/23 05:15	1
(d8-Naphthalene)	41		25 - 125	10/17/23 00:00	11/11/23 05:15	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			10/16/23 17:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE	82		60 - 140		10/16/23 17:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DIESEL	ND	U	0.028		mg/L			10/23/23 14:43	1
JP5	ND	U	0.056		mg/L			10/23/23 14:43	1
JP8	ND	U	0.056		mg/L			10/23/23 14:43	1
MOTOR OIL	ND	U	0.056		mg/L			10/23/23 14:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOBENZENE	68		60 - 130		10/23/23 14:43	1

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# Client Sample Results

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

Job ID: 380-66857-2

## Client Sample ID: MOANALUA WELLS

Lab Sample ID: 380-66857-1

Date Collected: 10/10/23 12:00

Matrix: Drinking Water

Date Received: 10/12/23 10:33

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
HEXACOSANE	86		60 - 130		10/23/23 14:43	1

## Client Sample ID: TB MOANALUA WELLS

Lab Sample ID: 380-66857-2

Date Collected: 10/10/23 12:00

Matrix: Water

Date Received: 10/12/23 10:33

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			10/16/23 19:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE	82		60 - 140		10/16/23 19:16	1

# Surrogate Summary

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

Job ID: 380-66857-2

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

Matrix: BlankMatrix

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)				
		Acenaphtl (27-133)	Phenanth (43-129)	CRY (52-144)	NPT (25-125)	PRY (36-161)
112020-B1	Method Blank	103	98	95	107	93
112020-BS1	Lab Control Sample	103	101	99	104	96
112020-BS2	Lab Control Sample Dup	99	100	100	95	96

### Surrogate Legend

(d10-Acenaphthene) = (d10-Acenaphthene)

(d10-Phenanthrene) = (d10-Phenanthrene)

CRY = (d12-Chrysene)

NPT = (d8-Naphthalene)

PRY = (d12-Perylene)

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

Matrix: Drinking Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)				
		Acenaphtl (27-133)	Phenanth (43-129)	CRY (52-144)	NPT (25-125)	PRY (36-161)
380-66857-1	MOANALUA WELLS	40	43	88	41	89

### Surrogate Legend

(d10-Acenaphthene) = (d10-Acenaphthene)

(d10-Phenanthrene) = (d10-Phenanthrene)

CRY = (d12-Chrysene)

NPT = (d8-Naphthalene)

PRY = (d12-Perylene)

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

Matrix: Drinking Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		BFB (60-140)
380-66857-1	MOANALUA WELLS	82

### Surrogate Legend

BFB = BROMOFLUOROBENZENE

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		BFB (60-140)
380-66857-2	TB MOANALUA WELLS	82

### Surrogate Legend

BFB = BROMOFLUOROBENZENE

# Surrogate Summary

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

Job ID: 380-66857-2

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

Matrix: WATER

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (60-140)
23J145-01M	Matrix Spike	101
23J145-01S	Matrix Spike Duplicate	104

**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)

Lab Sample ID	Client Sample ID	BFB
23VG39J11B	Method Blank	

**Surrogate Legend**

BFB = BROMOFLUOROBENZENE

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

Matrix: WATER

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (70-130)
23VG39J11C	LCD	101
23VG39J11L	Lab Control Sample	98

**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)

Lab Sample ID	Client Sample ID	BB (60-130)	XACOSAI (60-130)
380-66857-1	MOANALUA WELLS	68	86

**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)

Lab Sample ID	Client Sample ID	BB	XACOSAI
23DSJ024WB	Method Blank		

**Surrogate Legend**

BB = BROMOBENZENE

HEXACOSANE = HEXACOSANE

# Surrogate Summary

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

Job ID: 380-66857-2

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

**Matrix: WATER**

**Prep Type: Total/NA**

## Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BB (60-130)	HEXACOSANE (60-130)
23DSJ024WL	Lab Control Sample	70	89
23J5J024WL	Lab Control Sample	75	88
23J8J024WL	Lab Control Sample	95	89

### Surrogate Legend

BB = BROMOBENZENE  
HEXACOSANE = HEXACOSANE

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

# QC Sample Results

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

Job ID: 380-66857-2

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

**Lab Sample ID: 112020-B1**  
**Matrix: BlankMatrix**  
**Analysis Batch: O-42138**

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

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

**Lab Sample ID: 112020-BS1**  
**Matrix: BlankMatrix**  
**Analysis Batch: O-42138**

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

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

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# QC Sample Results

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

Job ID: 380-66857-2

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

**Lab Sample ID: 112020-BS1**  
**Matrix: BlankMatrix**  
**Analysis Batch: O-42138**

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

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

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

**Lab Sample ID: 112020-BS2**  
**Matrix: BlankMatrix**  
**Analysis Batch: O-42138**

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

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

Eurofins Eaton Analytical Pomona

# QC Sample Results

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

Job ID: 380-66857-2

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

**Lab Sample ID: 112020-BS2**  
**Matrix: BlankMatrix**  
**Analysis Batch: O-42138**

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

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

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

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

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

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

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

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

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

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

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

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

**Lab Sample ID: 23J145-01M**  
**Matrix: WATER**  
**Analysis Batch: 23VG39J11**

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
GASOLINE	ND		0.5	0.453		mg/L		91	50 - 130

Eurofins Eaton Analytical Pomona

# QC Sample Results

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

Job ID: 380-66857-2

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

**Lab Sample ID: 23J145-01M**  
**Matrix: WATER**  
**Analysis Batch: 23VG39J11**

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

<i>Surrogate</i>	<i>%Recovery</i>	<i>MS MS Qualifier</i>	<i>Limits</i>
BROMOFLUOROBENZENE	101		60 - 140

**Lab Sample ID: 23J145-01S**  
**Matrix: WATER**  
**Analysis Batch: 23VG39J11**

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

<i>Analyte</i>	<i>Sample Result</i>	<i>Sample Qualifier</i>	<i>Spike Added</i>	<i>MSD Result</i>	<i>MSD Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec Limits</i>	<i>RPD</i>	<i>RPD Limit</i>
GASOLINE	ND		0.5	0.483		mg/L		97	50 - 130	6	30

<i>Surrogate</i>	<i>%Recovery</i>	<i>MSD MSD Qualifier</i>	<i>Limits</i>
BROMOFLUOROBENZENE	104		60 - 140

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

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

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

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

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

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

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

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

<i>Surrogate</i>	<i>%Recovery</i>	<i>LCS LCS Qualifier</i>	<i>Limits</i>
BROMOBENZENE	70		60 - 130
HEXACOSANE	89		60 - 130

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

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

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

# QC Sample Results

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

Job ID: 380-66857-2

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

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

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

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

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

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

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

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

# QC Association Summary

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

Job ID: 380-66857-2

## Subcontract

### Analysis Batch: O-42138

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-66857-1	MOANALUA WELLS	Total/NA	Drinking Water	625 PAH Physis LL (EAL) + TICs	O-42138_P
112020-B1	Method Blank	Total/NA	BlankMatrix	625 PAH Physis LL (EAL) + TICs	O-42138_P
112020-BS1	Lab Control Sample	Total/NA	BlankMatrix	625 PAH Physis LL (EAL) + TICs	O-42138_P
112020-BS2	Lab Control Sample Dup	Total/NA	BlankMatrix	625 PAH Physis LL (EAL) + TICs	O-42138_P

### Analysis Batch: 23DSJ024W

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-66857-1	MOANALUA WELLS	Total/NA	Drinking Water	8015 LL DRO/MRO/JP5/J P8	
23DSJ024WB	Method Blank	Total/NA	WATER	8015 LL DRO/MRO/JP5/J P8	
23DSJ024WL	Lab Control Sample	Total/NA	WATER	8015 LL DRO/MRO/JP5/J P8	
23J5J024WL	Lab Control Sample	Total/NA	WATER	8015 LL DRO/MRO/JP5/J P8	
23J8J024WL	Lab Control Sample	Total/NA	WATER	8015 LL DRO/MRO/JP5/J P8	

### Analysis Batch: 23VG39J11

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-66857-1	MOANALUA WELLS	Total/NA	Drinking Water	8015 Gas (Purgeable) LL (EAL)	
380-66857-2	TB MOANALUA WELLS	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
23VG39J11B	Method Blank	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	
23VG39J11L	Lab Control Sample	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	
23J145-01M	Matrix Spike	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	
23J145-01S	Matrix Spike Duplicate	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	

### Prep Batch: O-42138\_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-66857-1	MOANALUA WELLS	Total/NA	Drinking Water	EPA_625	
112020-B1	Method Blank	Total/NA	BlankMatrix	EPA_625	
112020-BS1	Lab Control Sample	Total/NA	BlankMatrix	EPA_625	
112020-BS2	Lab Control Sample Dup	Total/NA	BlankMatrix	EPA_625	

# Lab Chronicle

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

Job ID: 380-66857-2

## Client Sample ID: MOANALUA WELLS

Lab Sample ID: 380-66857-1

Date Collected: 10/10/23 12:00

Matrix: Drinking Water

Date Received: 10/12/23 10:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA_625		1	O-42138_P			10/17/23 00:00
Total/NA	Analysis	625 PAH Physis LL (EAL) + TICs		1	O-42138	YC		11/11/23 05:15
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	23VG39J11	SCerva		10/16/23 17:21
Total/NA	Analysis	8015 LL DRO/MRO/JP5/JP8		1	23DSJ024W	SDees		10/23/23 14:43

## Client Sample ID: TB MOANALUA WELLS

Lab Sample ID: 380-66857-2

Date Collected: 10/10/23 12:00

Matrix: Water

Date Received: 10/12/23 10:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	23VG39J11	SCerva		10/16/23 19:16

**Laboratory References:**

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



# Method Summary

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

Job ID: 380-66857-2

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

**Protocol References:**

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

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



# Sample Summary

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

Job ID: 380-66857-2

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<u>Lab Sample ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Collected</u>	<u>Received</u>
380-66857-1	MOANALUA WELLS	Drinking Water	10/10/23 12:00	10/12/23 10:33
380-66857-2	TB MOANALUA WELLS	Water	10/10/23 12:00	10/12/23 10:33

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14

15





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

Date: 11-01-2023  
EMAX Batch No.: 23J145

Attn: Jackie Contreras

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

Subject: Laboratory Report  
Project: 380-66857

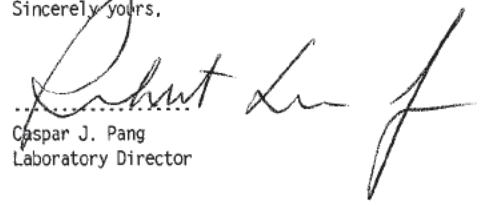
Enclosed is the Laboratory report for samples received on 10/13/23.  
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
380-66857-1	J145-01	10/10/23	WATER	TPH GASOLINE TPH
380-66857-2	J145-02	10/10/23	WATER	TPH GASOLINE
380-66857-1MS	J145-01M	10/10/23	WATER	TPH GASOLINE
380-66857-1MSD	J145-01S	10/10/23	WATER	TPH GASOLINE

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

  
Caspar J. Pang  
Laboratory Director

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

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



**Client Information (Sub Contract Lab)**

Client Contact: \_\_\_\_\_ Phone: \_\_\_\_\_ Lab PM: Arada, Rachelle  
 Shipping/Receiving: \_\_\_\_\_ E-Mail: Rachelle.Arada@et.eurofins.com  
 Company: EMAX Laboratories Inc State: Hawaii  
 Accreditations Required (See note): \_\_\_\_\_

Address: 3051 Fujita Street, Due Date Requested: 10/24/2023  
 City: Torrance TAT Requested (days):  
 State Zip: CA, 90505  
 Phone: \_\_\_\_\_ PO #: \_\_\_\_\_  
 Email: \_\_\_\_\_ WOC #: \_\_\_\_\_  
 Project Name: RED-HILL Project #: 38001111  
 Site: Honolulu BWS Sites SSONW#: \_\_\_\_\_

Sample ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Seawater, Urine, etc.)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested	Total Number of containers	Special Instructions/Note:
MOANALUA WELLS (380-66857-1)	10/10/23	12:00	Hawaiian	Water	X	X	SUB (8015 Gas (Purgeable) LL (EAL)) / 8015 Gas (Purgeable) LL (EAL) SUB (8015 LL DRO/MRO/JP5/JP8) / 8015 LL DRO/MRO/JP5/JP8	6	See Attached Instructions
MOANALUA WELLS (380-66857-2)	10/10/23	12:00	Hawaiian	Water	X	X		2	See Attached Instructions

**Preservation Codes:**  
 A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Ammonia, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2OAS, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecylsulfate, U - Acetone, V - MCAA, W - PH 4.5, Y - Triana, Z - other (specify) \_\_\_\_\_

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

**Unconfirmed Deliverable Requested:** I, II, III, IV, Other (specify) \_\_\_\_\_ Primary Deliverable Rank: 2

**Empty Kit Relinquished by:** \_\_\_\_\_ Date: \_\_\_\_\_

**Relinquished by:** \_\_\_\_\_ Date/Time: 10/13/23 1045 Company: EAT Date/Time: 10/13/23 10:45 Company: EAT

**Relinquished by:** \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_

**Relinquished by:** \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_

**Custody Seals Intact:** A Yes Δ No Custody Seal No.: \_\_\_\_\_ Cooler Temperature(s) °C and Other Remarks: 11/0.9 \*CFI-0.2

**REPORT ID:** 23J145



Type of Delivery <input type="checkbox"/> Fedex <input type="checkbox"/> UPS <input type="checkbox"/> GSO <input type="checkbox"/> Others <input checked="" type="checkbox"/> EMAX Courier <input type="checkbox"/> Client Delivery	Airbill / Tracking Number	ECN <u>23J145</u> Recipient <u>Cecilia Chavez</u> Date <u>10/13/23</u> Time <u>19:45</u>
---	---------------------------	--

**COC INSPECTION**

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

**PACKAGING INSPECTION**

Container	<input checked="" type="checkbox"/> Cooler	<input type="checkbox"/> Box	<input type="checkbox"/> Other
Condition	<input type="checkbox"/> Custody Seal	<input type="checkbox"/> Intact	<input type="checkbox"/> Damaged
Packaging	<input checked="" type="checkbox"/> Bubble Pack	<input type="checkbox"/> Styrofoam	<input type="checkbox"/> Popcorn
Temperatures (Cool, ≤6 °C but not frozen)	<input checked="" type="checkbox"/> Cooler 1 <u>11/0.9</u> °C	<input type="checkbox"/> Cooler 2 _____ °C	<input type="checkbox"/> Cooler 3 _____ °C
Thermometer: <u>-0.2</u>	<input type="checkbox"/> Cooler 6 _____ °C	<input type="checkbox"/> Cooler 7 _____ °C	<input type="checkbox"/> Cooler 8 _____ °C
	A - S/N <u>221852768</u>	B - S/N <u>221925379</u>	C - S/N <u>230044897</u>
			D - S/N <u>216760237</u>

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

**DISCREPANCIES**

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
<u>1</u>	<u>516</u>	<u>D1</u>	<u>JPS/JPS not on label</u>	<u>R1</u>
<u>2</u>	<u>718</u>	<u>D22</u>	<u>2nd date reads: 10/3/23</u>	<u>↓</u>
<u>10/13/23</u>				

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

MB 10/17/23

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

**LEGEND:**

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

Sample Labeling <u>maria pineda</u>	SRF <u>[Signature]</u>	PM <u>MB</u>
Date <u>10/13/23</u>	Date <u>10/13/23</u>	Date <u>10/17/23</u>

REPORT ID: 23J145



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

**DATES**

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

**ACRONYMS AND ABBREVIATIONS:**

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

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

**DATA QUALIFIERS:**

**REPORTING CONVENTIONS**

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-66857

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

SDG#: 23J145

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CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-66857

SDG : 23J145

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

A total of two(2) water samples were received on 10/13/23 to be analyzed for Total Petroleum Hydrocarbons by Purge And Trap in accordance with Method 5030B/8015B and project specific requirements.

Holding Time

Samples were analyzed within the prescribed holding time.

Calibration

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

Method Blank

Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. VG39J11B - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample

Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. VG39J11L/VG39J11C were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample

Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Gasoline was within MS QC limits in J145-01M/J145-01S. Refer to Matrix QC summary form for details.

Surrogate

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

Sample Analysis

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



LAB CHRONICLE  
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client : EUROFINS EATON ANALYTICAL  
Project : 380-66857

SDG NO. : 23J145  
Instrument ID : GCT039

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
									WATER
MBLKIW	VG39J11B	1	NA	10/16/2315:26	10/16/2315:26	EJ16005A	EJ16004A	23VG39J11	Method Blank
LCSIW	VG39J11L	1	NA	10/16/2316:05	10/16/2316:05	EJ16006A	EJ16004A	23VG39J11	Lab Control Sample (LCS)
LCDIW	VG39J11C	1	NA	10/16/2316:43	10/16/2316:43	EJ16007A	EJ16004A	23VG39J11	LCS Duplicate
380-66857-1	J145-01	1	NA	10/16/2317:21	10/16/2317:21	EJ16008A	EJ16004A	23VG39J11	Field Sample
380-66857-1MS	J145-01M	1	NA	10/16/2317:59	10/16/2317:59	EJ16009A	EJ16004A	23VG39J11	Matrix Spike Sample (MS)
380-66857-1MSD	J145-01S	1	NA	10/16/2318:38	10/16/2318:38	EJ16010A	EJ16004A	23VG39J11	MS Duplicate (MSD)
380-66857-2	J145-02	1	NA	10/16/2319:16	10/16/2319:16	EJ16011A	EJ16004A	23VG39J11	Field Sample

FN - Filename  
% Moist - Percent Moisture



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# SAMPLE RESULTS



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

Client : EUROFINS EATON ANALYTICAL Date Collected: 10/10/23 12:00  
Project : 380-66857 Date Received: 10/13/23  
Batch No. : 23J145 Date Extracted: 10/16/23 17:21  
Sample ID : 380-66857-1 Date Analyzed: 10/16/23 17:21  
Lab Samp ID: J145-01 Dilution Factor: 1  
Lab File ID: EJ16008A Matrix: WATER  
Ext Btch ID: 23VG39J11 % Moisture: NA  
Calib. Ref.: EJ16004A Instrument ID: 39

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
GASOLINE	ND	0.020	0.010	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0326	0.0400	82	60-140

Notes:

Parameter H-C Range  
Gasoline C6-C10

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

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

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

=====  
Client : EUROFINS EATON ANALYTICAL Date Collected: 10/10/23 12:00  
Project : 380-66857 Date Received: 10/13/23  
Batch No. : 23J145 Date Extracted: 10/16/23 19:16  
Sample ID : 380-66857-2 Date Analyzed: 10/16/23 19:16  
Lab Samp ID: J145-02 Dilution Factor: 1  
Lab File ID: EJ16011A Matrix: WATER  
Ext Btch ID: 23VG39J11 % Moisture: NA  
Calib. Ref.: EJ16004A Instrument ID: 39  
=====

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
-----	-----	-----	-----	
GASOLINE	ND	0.020	0.010	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
-----	-----	-----	-----	-----
Bromofluorobenzene	0.0328	0.0400	82	60-140

Notes:

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

Detection limits are reported relative to sample result significant figures.

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

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# QC SUMMARIES

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

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=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/16/23 15:26
Project    : 380-66857                   Date Received: 10/16/23
Batch No.  : 23J145                       Date Extracted: 10/16/23 15:26
Sample ID  : MBLK1W                       Date Analyzed: 10/16/23 15:26
Lab Samp ID: VG39J11B                     Dilution Factor: 1
Lab File ID: EJ16005A                     Matrix: WATER
Ext Btch ID: 23VG39J11                   % Moisture: NA
Calib. Ref.: EJ16004A                    Instrument ID: 39
=====

```

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

Notes:

Parameter H-C Range

Gasoline C6-C10

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount : 5ml

Final Volume : 5ml

Prepared by : SCerva

Analyzed by : SCerva

EMAX QUALITY CONTROL DATA  
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL  
PROJECT : 380-66857  
BATCH NO. : 23J145  
METHOD : 5030B/8015B

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

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Gasoline	ND	0.500	0.429	86	0.500	0.458	92	7	60-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0391	98	0.0400	0.0405	101	70-130

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

EMAX QUALITY CONTROL DATA  
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL  
PROJECT : 380-66857  
BATCH NO. : 23J145  
METHOD : 5030B/8015B

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

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Gasoline	ND	0.500	0.453	91	0.500	0.483	97	6	50-130	30

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

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

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-66857

METHOD 3520C/8015B  
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 23J145

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CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-66857

SDG : 23J145

METHOD 3520C/8015B  
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 10/13/23 to be analyzed for Total Petroleum Hydrocarbons by Extraction in accordance with Method 3520C/8015B and project specific requirements.

Holding Time

The sample was analyzed within the prescribed holding time.

Calibration

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

Method Blank

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

Lab Control Sample

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

Matrix QC Sample

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

Surrogate

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

Sample Analysis

The sample was 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: 380-66857

SDG : 23J145

METHOD 3520C/8015B  
PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 10/13/23 to be analyzed for Petroleum Hydrocarbons by Extraction in accordance with Method 3520C/8015B and project specific requirements.

Holding Time

The sample was analyzed within the prescribed holding time.

Calibration

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

Method Blank

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

Lab Control Sample

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

Matrix QC Sample

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

Surrogate

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

Sample Analysis

The sample was 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: 380-66857

SDG : 23J145

METHOD 3520C/8015B  
PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 10/13/23 to be analyzed for Petroleum Hydrocarbons by Extraction in accordance with Method 3520C/8015B and project specific requirements.

Holding Time

The sample was analyzed within the prescribed holding time.

Calibration

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

Method Blank

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

Lab Control Sample

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

Matrix QC Sample

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

Surrogate

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

Sample Analysis

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



LAB CHRONICLE  
PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL  
Project : 380-66857

SDG NO. : 23J145  
Instrument ID : D5

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	DSJ024WB	1	NA	10/23/2313:28	10/19/2315:00	LJ23010A	LJ23004A	23DSJ024W	Method Blank
LCS1W	J5J024WL	1	NA	10/23/2314:06	10/19/2315:00	LJ23012A	LJ23004A	23DSJ024W	Lab Control Sample (LCS)
380-66857-1	J145-01	1	NA	10/23/2314:43	10/19/2315:00	LJ23014A	LJ23004A	23DSJ024W	Field Sample

FN - Filename  
% Moist - Percent Moisture





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# SAMPLE RESULTS

METHOD 3520C/8015B  
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

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=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/10/23 12:00
Project    : 380-66857                   Date Received: 10/13/23
Batch No.  : 23J145                       Date Extracted: 10/19/23 15:00
Sample ID  : 380-66857-1                 Date Analyzed: 10/23/23 14:43
Lab Samp ID: 23J145-01                   Dilution Factor: 1
Lab File ID: LJ23014A                     Matrix: WATER
Ext Btch ID: 23DSJ024W                   % Moisture: NA
Calib. Ref.: LJ23003A                     Instrument ID: D5
=====

```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)		
Diesel	ND	0.028	0.014		
Motor Oil	ND	0.056	0.028		
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT	
Bromobenzene	0.380	0.560	68	60-130	
Hexacosane	0.121	0.140	86	60-130	

Notes:

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

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

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

METHOD 3520C/8015B  
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/10/23 12:00
Project    : 380-66857                   Date Received: 10/13/23
Batch No.  : 23J145                       Date Extracted: 10/19/23 15:00
Sample ID  : 380-66857-1                 Date Analyzed: 10/23/23 14:43
Lab Samp ID: 23J145-01                   Dilution Factor: 1
Lab File ID: LJ23014A                     Matrix: WATER
Ext Btch ID: 23DSJ024W                   % Moisture: NA
Calib. Ref.: LJ23004A                     Instrument ID: D5
=====
    
```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
JP5	ND	0.056	0.028	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.380	0.560	68	60-130
Hexacosane	0.121	0.140	86	60-130

Notes:

RL : Reporting Limit

Parameter H-C Range

JP5 C8-C18

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount : 890ml

Final Volume : 5ml

Prepared by : RGalan

Analyzed by : SDeeso



METHOD 3520C/8015B  
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/10/23 12:00
Project    : 380-66857                   Date Received: 10/13/23
Batch No.  : 23J145                       Date Extracted: 10/19/23 15:00
Sample ID  : 380-66857-1                 Date Analyzed: 10/23/23 14:43
Lab Samp ID: 23J145-01                   Dilution Factor: 1
Lab File ID: LJ23014A                     Matrix: WATER
Ext Btch ID: 23DSJ024W                   % Moisture: NA
Calib. Ref.: LJ23005A                     Instrument ID: D5
=====
    
```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
JP8	ND	0.056	0.028	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.380	0.560	68	60-130
Hexacosane	0.121	0.140	86	60-130

Notes:

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

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

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

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# QC SUMMARIES

METHOD 3520C/8015B  
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/19/23 15:00
Project     : 380-66857                  Date Received: 10/19/23
Batch No.   : 23J145                     Date Extracted: 10/19/23 15:00
Sample ID   : MBLK1W                     Date Analyzed: 10/23/23 13:28
Lab Samp ID: DSJ024WB                    Dilution Factor: 1
Lab File ID: LJ23010A                     Matrix: WATER
Ext Btch ID: 23DSJ024W                    % Moisture: NA
Calib. Ref.: LJ23003A                     Instrument ID: D5
=====

```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
Diesel	ND	0.025	0.012	
Motor Oil	ND	0.050	0.025	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.341	0.500	68	60-130
Hexacosane	0.108	0.125	86	60-130

Notes:

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

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount : 1000ml                      Final Volume : 5ml  
Prepared by    : RGalan                              Analyzed by : SDeeso

EMAX QUALITY CONTROL DATA  
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL  
PROJECT : 380-66857  
BATCH NO. : 23J145  
METHOD : 3520C/8015B

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

ACCESSION:

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

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

MB: Method Blank sample LCS: Lab Control Sample

METHOD 3520C/8015B  
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/19/23 15:00
Project     : 380-66857                   Date Received: 10/19/23
Batch No.   : 23J145                       Date Extracted: 10/19/23 15:00
Sample ID   : MBLK1W                       Date Analyzed: 10/23/23 13:28
Lab Samp ID: DSJ024WB                       Dilution Factor: 1
Lab File ID: LJ23010A                       Matrix: WATER
Ext Btch ID: 23DSJ024W                       % Moisture: NA
Calib. Ref.: LJ23004A                       Instrument ID: D5
=====
    
```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
JP5	ND	0.050	0.025	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.341	0.500	68	60-130
Hexacosane	0.108	0.125	86	60-130

Notes:

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

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount : 1000ml                      Final Volume : 5ml  
 Prepared by : RGalan                        Analyzed by : SDeeso

EMAX QUALITY CONTROL DATA  
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL  
PROJECT : 380-66857  
BATCH NO. : 23J145  
METHOD : 3520C/8015B

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

ACCESSION:

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

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

MB: Method Blank sample LCS: Lab Control Sample

METHOD 3520C/8015B  
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/19/23 15:00
Project    : 380-66857                   Date Received: 10/19/23
Batch No.  : 23J145                       Date Extracted: 10/19/23 15:00
Sample ID  : MBLK1W                       Date Analyzed: 10/23/23 13:28
Lab Samp ID: DSJ024WB                     Dilution Factor: 1
Lab File ID: LJ23010A                     Matrix: WATER
Ext Btch ID: 23DSJ024W                    % Moisture: NA
Calib. Ref.: LJ23005A                     Instrument ID: D5
=====
  
```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
JP8	ND	0.050	0.025	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.341	0.500	68	60-130
Hexacosane	0.108	0.125	86	60-130

Notes:

RL : Reporting Limit

Parameter H-C Range

JP8 C8-C18

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount : 1000ml

Final Volume : 5ml

Prepared by : RGalan

Analyzed by : SDeeso

EMAX QUALITY CONTROL DATA  
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL  
PROJECT : 380-66857  
BATCH NO. : 23J145  
METHOD : 3520C/8015B

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

ACCESSION:

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

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

MB: Method Blank sample LCS: Lab Control Sample



EMAX QUALITY CONTROL DATA  
MS/MSD ANALYSIS

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

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

ACCESSION:

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

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

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

EMAX QUALITY CONTROL DATA  
MS/MSD ANALYSIS

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

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

ACCESSION:

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

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

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

EMAX QUALITY CONTROL DATA  
MS/MSD ANALYSIS

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

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

ACCESSION:

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

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

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

November 16, 2023

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

Project Name: RED-HILL Project # 38001111 Job # 380-66857-1  
 Physis Project ID: 1407003-453

Dear Rachelle,

Enclosed are the analytical results for the sample submitted to PHYSIS Environmental Laboratories, Inc. (PHYSIS) on 10/13/2023. A total of 1 sample was received for analysis in accordance with the attached chain of custody (COC). Per the COC, the sample was analyzed for:

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

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

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

Regards,

*misty mercier*

Misty Mercier  
 714 602-5320  
 Extension 202  
 mistymercier@physislabs.com



## PROJECT SAMPLE LIST

Eurofins Eaton Analytical

PHYSIS Project ID: 1407003-453

RED-HILL Project # 38001111 Job # 380-66857-1

Total Samples: 1

PHYSIS ID	Sample ID	Description	Date	Time	Matrix	Sample Type
112021	MOANALUA WELLS	380-66857-1	10/10/202	12:00	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 MS<sub>1</sub>/MS<sub>2</sub>, BS<sub>1</sub>/BS<sub>2</sub>, LCS<sub>1</sub>/LCS<sub>2</sub>, LCM<sub>1</sub>/LCM<sub>2</sub>, CRM<sub>1</sub>/CRM<sub>2</sub>, surrogate spikes and/or replicate project sample analysis (R<sub>1</sub>/R<sub>2</sub>) on a minimum frequency of one per batch. Physis' QM requires that for 95% of the compounds greater than 10 times the MDL, the percent RPD should be within the specified acceptance range.

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

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

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

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

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

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

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

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

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

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

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## PHYSIS QUALIFIER CODES

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

---

## CASE NARRATIVE

### QUALIFIER NOTES

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

#### **ND**

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

# BIANALYTICALS

# REPORT

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## Base/Neutral Extractable Compounds

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
<b>Sample ID: 112021-R1</b>	<b>MOANALUA WELLS 380-66857-1</b>		<b>Matrix: Samplewater</b>				<b>Sampled: 10-Oct-23 12:00</b>			<b>Received: 13-Oct-23</b>	
Disalicylidenepropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-42138	17-Oct-23	11-Nov-23



## Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
<b>Sample ID: 112021-R1</b>			<b>MOANALUA WELLS 380-66857-1</b>			<b>Matrix: Samplewater</b>			<b>Sampled: 10-Oct-23 12:00</b>		<b>Received: 13-Oct-23</b>
(d10-Acenaphthene)	EPA 625.1	% Recovery	40	1			Total		O-42138	17-Oct-23	11-Nov-23
(d10-Phenanthrene)	EPA 625.1	% Recovery	43	1			Total		O-42138	17-Oct-23	11-Nov-23
(d12-Chrysene)	EPA 625.1	% Recovery	88	1			Total		O-42138	17-Oct-23	11-Nov-23
(d12-Perylene)	EPA 625.1	% Recovery	89	1			Total		O-42138	17-Oct-23	11-Nov-23
(d8-Naphthalene)	EPA 625.1	% Recovery	41	1			Total		O-42138	17-Oct-23	11-Nov-23
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
Benzo[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
Benzo[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
Benzo[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
D benz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
D benzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
D benzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23

## Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42138	17-Oct-23	11-Nov-23



# QUALITY CONTROL REPORT

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## Base/Neutral Extractable Compounds

## QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE SOURCE		ACCURACY		PRECISION		QA CODEc
							LEVEL	RESULT	%	LIMITS	%	LIMITS	
<b>Sample ID: 112020-B1</b>		<b>QAQC Procedural Blank</b>			<b>Matrix: BlankMatrix</b>			<b>Sampled:</b>		<b>Received:</b>			
		Method: EPA 625.1			Batch ID: O-42138			Prepared: 17-Oct-23		Analyzed: 11-Nov-23			
Disalicylideneprapanediamin	Total	ND	1	0.05	0.1	µg/L							
<b>Sample ID: 112020-BS1</b>		<b>QAQC Procedural Blank</b>			<b>Matrix: BlankMatrix</b>			<b>Sampled:</b>		<b>Received:</b>			
		Method: EPA 625.1			Batch ID: O-42138			Prepared: 17-Oct-23		Analyzed: 11-Nov-23			
Disalicylideneprapanediamin	Total	28.6	1	0.05	0.1	µg/L	50	0	57	50 - 150%	PASS		
<b>Sample ID: 112020-BS2</b>		<b>QAQC Procedural Blank</b>			<b>Matrix: BlankMatrix</b>			<b>Sampled:</b>		<b>Received:</b>			
		Method: EPA 625.1			Batch ID: O-42138			Prepared: 17-Oct-23		Analyzed: 11-Nov-23			
Disalicylideneprapanediamin	Total	33.3	1	0.05	0.1	µg/L	50	0	67	50 - 150%	PASS	16	30 PASS



## Polynuclear Aromatic Hydrocarbons

## QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY	PRECISION	QA CODEc	
							LEVEL	RESULT	% LIMITS	% LIMITS		
<b>Sample ID: 112020-B1</b>		<b>QAQC Procedural Blank</b>			<b>Matrix: BlankMatrix</b>			<b>Sampled:</b>		<b>Received:</b>		
		Method: EPA 625.1			Batch ID: O-42138			Prepared: 17-Oct-23		Analyzed: 11-Nov-23		
(d10-Acenaphthene)	Total	103	1				% Recovery	100	103	27 - 133%	PASS	
(d10-Phenanthrene)	Total	98	1				% Recovery	100	98	43 - 129%	PASS	
(d12-Chrysene)	Total	95	1				% Recovery	100	95	52 - 144%	PASS	
(d12-Perylene)	Total	93	1				% Recovery	100	93	36 - 161%	PASS	
(d8-Naphthalene)	Total	107	1				% Recovery	100	107	25 - 125%	PASS	
1-Methylnaphthalene	Total	ND	1	0.001	0.005	µg/L						
1-Methylphenanthrene	Total	ND	1	0.001	0.005	µg/L						
2,3,5-Trimethylnaphthalene	Total	ND	1	0.001	0.005	µg/L						
2,6-Dimethylnaphthalene	Total	ND	1	0.001	0.005	µg/L						
2-Methylnaphthalene	Total	ND	1	0.001	0.005	µg/L						
Acenaphthene	Total	ND	1	0.001	0.005	µg/L						
Acenaphthylene	Total	ND	1	0.001	0.005	µg/L						
Anthracene	Total	ND	1	0.001	0.005	µg/L						
Benz[a]anthracene	Total	ND	1	0.001	0.005	µg/L						
Benzo[a]pyrene	Total	ND	1	0.001	0.005	µg/L						
Benzo[b]fluoranthene	Total	ND	1	0.001	0.005	µg/L						
Benzo[e]pyrene	Total	ND	1	0.001	0.005	µg/L						
Benzo[g,h,i]perylene	Total	ND	1	0.001	0.005	µg/L						
Benzo[k]fluoranthene	Total	ND	1	0.001	0.005	µg/L						
Biphenyl	Total	ND	1	0.001	0.005	µg/L						
Chrysene	Total	ND	1	0.001	0.005	µg/L						
Dibenz[a,h]anthracene	Total	ND	1	0.001	0.005	µg/L						
Dibenzo[a,l]pyrene	Total	ND	1	0.001	0.005	µg/L						
Dibenzothiophene	Total	ND	1	0.001	0.005	µg/L						

## Polynuclear Aromatic Hydrocarbons

## QUALITY CONTROL REPORT

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



**Polynuclear Aromatic Hydrocarbons**

**QUALITY CONTROL REPORT**

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY	PRECISION	QA CODE	
							LEVEL	RESULT	%	LIMITS	%	LIMITS
<b>Sample ID: 112020-BS1</b>		<b>QAQC Procedural Blank</b>			<b>Matrix: BlankMatrix</b>			<b>Sampled:</b>		<b>Received:</b>		
Method: EPA 625.1		Batch ID: O-42138			Prepared: 17-Oct-23		Analyzed: 11-Nov-23					
(d10-Acenaphthene)	Total	103	1			% Recovery	100	0	103	27 - 133%	PASS	
(d10-Phenanthrene)	Total	101	1			% Recovery	100	0	101	43 - 129%	PASS	
(d12-Chrysene)	Total	99	1			% Recovery	100	0	99	52 - 144%	PASS	
(d12-Perylene)	Total	96	1			% Recovery	100	0	96	36 - 161%	PASS	
(d8-Naphthalene)	Total	104	1			% Recovery	100	0	104	25 - 125%	PASS	
1-Methylnaphthalene	Total	0.48	1	0.001	0.005	µg/L	0.5	0	96	31 - 128%	PASS	
1-Methylphenanthrene	Total	0.481	1	0.001	0.005	µg/L	0.5	0	96	66 - 127%	PASS	
2,3,5-Trimethylnaphthalene	Total	0.482	1	0.001	0.005	µg/L	0.5	0	96	55 - 122%	PASS	
2,6-Dimethylnaphthalene	Total	0.478	1	0.001	0.005	µg/L	0.5	0	96	48 - 120%	PASS	
2-Methylnaphthalene	Total	0.487	1	0.001	0.005	µg/L	0.5	0	97	47 - 130%	PASS	
Acenaphthene	Total	0.492	1	0.001	0.005	µg/L	0.5	0	98	53 - 131%	PASS	
Acenaphthylene	Total	0.484	1	0.001	0.005	µg/L	0.5	0	97	43 - 140%	PASS	
Anthracene	Total	0.46	1	0.001	0.005	µg/L	0.5	0	92	58 - 135%	PASS	
Benz[a]anthracene	Total	0.477	1	0.001	0.005	µg/L	0.5	0	95	55 - 145%	PASS	
Benzo[a]pyrene	Total	0.461	1	0.001	0.005	µg/L	0.5	0	92	51 - 143%	PASS	
Benzo[b]fluoranthene	Total	0.429	1	0.001	0.005	µg/L	0.5	0	86	46 - 165%	PASS	
Benzo[e]pyrene	Total	0.463	1	0.001	0.005	µg/L	0.5	0	93	42 - 152%	PASS	
Benzo[g,h,i]perylene	Total	0.469	1	0.001	0.005	µg/L	0.5	0	94	63 - 133%	PASS	
Benzo[k]fluoranthene	Total	0.472	1	0.001	0.005	µg/L	0.5	0	94	56 - 145%	PASS	
Biphenyl	Total	0.49	1	0.001	0.005	µg/L	0.5	0	98	56 - 119%	PASS	
Chrysene	Total	0.475	1	0.001	0.005	µg/L	0.5	0	95	56 - 141%	PASS	
Dibenz[a,h]anthracene	Total	0.415	1	0.001	0.005	µg/L	0.5	0	83	55 - 150%	PASS	
Dibenzo[a,l]pyrene	Total	0.628	1	0.001	0.005	µg/L	0.5	0	126	50 - 150%	PASS	
Dibenzothiophene	Total	0.481	1	0.001	0.005	µg/L	0.5	0	96	46 - 126%	PASS	

## Polynuclear Aromatic Hydrocarbons

## QUALITY CONTROL REPORT

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



## Polynuclear Aromatic Hydrocarbons

## QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY		PRECISION		QA CODEc		
							LEVEL	RESULT	%	LIMITS	%	LIMITS			
<b>Sample ID: 112020-BS2</b>		<b>QAQC Procedural Blank</b>			<b>Matrix: BlankMatrix</b>			<b>Sampled:</b>			<b>Received:</b>				
		Method: EPA 625.1			Batch ID: O-42138			Prepared: 17-Oct-23			Analyzed: 11-Nov-23				
(d10-Acenaphthene)	Total	99	1				% Recovery	100	0	99	27 - 133%	PASS	4	30	PASS
(d10-Phenanthrene)	Total	100	1				% Recovery	100	0	100	43 - 129%	PASS	1	30	PASS
(d12-Chrysene)	Total	100	1				% Recovery	100	0	100	52 - 144%	PASS	1	30	PASS
(d12-Perylene)	Total	96	1				% Recovery	100	0	96	36 - 161%	PASS	0	30	PASS
(d8-Naphthalene)	Total	95	1				% Recovery	100	0	95	25 - 125%	PASS	9	30	PASS
1-Methylnaphthalene	Total	0.466	1	0.001	0.005	µg/L		0.5	0	93	31 - 128%	PASS	3	30	PASS
1-Methylphenanthrene	Total	0.486	1	0.001	0.005	µg/L		0.5	0	97	66 - 127%	PASS	1	30	PASS
2,3,5-Trimethylnaphthalene	Total	0.479	1	0.001	0.005	µg/L		0.5	0	96	55 - 122%	PASS	0	30	PASS
2,6-Dimethylnaphthalene	Total	0.462	1	0.001	0.005	µg/L		0.5	0	92	48 - 120%	PASS	4	30	PASS
2-Methylnaphthalene	Total	0.465	1	0.001	0.005	µg/L		0.5	0	93	47 - 130%	PASS	4	30	PASS
Acenaphthene	Total	0.484	1	0.001	0.005	µg/L		0.5	0	97	53 - 131%	PASS	1	30	PASS
Acenaphthylene	Total	0.472	1	0.001	0.005	µg/L		0.5	0	94	43 - 140%	PASS	3	30	PASS
Anthracene	Total	0.473	1	0.001	0.005	µg/L		0.5	0	95	58 - 135%	PASS	3	30	PASS
Benz[a]anthracene	Total	0.492	1	0.001	0.005	µg/L		0.5	0	98	55 - 145%	PASS	3	30	PASS
Benzo[a]pyrene	Total	0.476	1	0.001	0.005	µg/L		0.5	0	95	51 - 143%	PASS	3	30	PASS
Benzo[b]fluoranthene	Total	0.447	1	0.001	0.005	µg/L		0.5	0	89	46 - 165%	PASS	3	30	PASS
Benzo[e]pyrene	Total	0.458	1	0.001	0.005	µg/L		0.5	0	92	42 - 152%	PASS	1	30	PASS
Benzo[g,h,i]perylene	Total	0.453	1	0.001	0.005	µg/L		0.5	0	91	63 - 133%	PASS	3	30	PASS
Benzo[k]fluoranthene	Total	0.491	1	0.001	0.005	µg/L		0.5	0	98	56 - 145%	PASS	4	30	PASS
Biphenyl	Total	0.474	1	0.001	0.005	µg/L		0.5	0	95	56 - 119%	PASS	3	30	PASS
Chrysene	Total	0.441	1	0.001	0.005	µg/L		0.5	0	88	56 - 141%	PASS	8	30	PASS
Dibenz[a,h]anthracene	Total	0.431	1	0.001	0.005	µg/L		0.5	0	86	55 - 150%	PASS	4	30	PASS
Dibenzo[a,l]pyrene	Total	0.64	1	0.001	0.005	µg/L		0.5	0	128	50 - 150%	PASS	2	30	PASS
Dibenzothiophene	Total	0.489	1	0.001	0.005	µg/L		0.5	0	98	46 - 126%	PASS	2	30	PASS

## Polynuclear Aromatic Hydrocarbons

## QUALITY CONTROL REPORT

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

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# PHYSIS

**TENTATIVELY  
IDENTIFIED COMPOUNDS**

ENVIRONMENTAL LABORATORIES, INC.  
*Innovative Solutions for Nature*

Sample ID: 112021

Retention Time	Area (% of total)	Concentration (ng/L)	Library/ID	Cas Number	Match Quality (%)
35.3755	3.9163	1111	Anthracene-D10-	1517-22-2	96
10.4220	14.0245	3979	Cyclohexane, 1-methyl-2-propyl-	4291-79-6	95
10.3622	8.9763	2547	Octane, 3-methyl-6-methylene-	74630-07-2	90
10.1846	4.2251	1199	2,3,3-Trimethyl-1-hexene	1000113-52-1	86
10.6057	2.5858	734	Oxalic acid, cyclohexyl pentyl ester	1000309-30-6	88
10.1562	2.5508	724	1H-Tetrazole	288-94-8	87
10.4737	1.8479	524	Octane, 3-methyl-6-methylene-	74630-07-2	89
10.3039	1.4230	404	Sulfurous acid, di(cyclohexylmethyl) ester	1010309-22-7	89
10.4196	1.0785	306	N-Methylallylamine	627-37-2	90
10.1087	0.8471	240	1-Hexene, 4,5-dimethyl-	16106-59-5	89
16.5916	0.5864	166	1,7-Dimethyl-4-(1-methylethyl)cyclodecane	645-10-3	84
10.9793	0.4065	115	3,3-Diethoxy-1-propyne	10160-87-9	85
10.2485	0.3529	100	Hydroperoxide, 1-ethylbutyl	24254-56-6	83

Concentration estimated using the response for Anthracene-d10



Sample ID: Lab Blank B1\_42138

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

Concentration estimated using the response for Anthracene-d10

# PERFORMANCE CHAIN OF CUSTODY

TERRA ENVIRONMENTAL LABORATORIES, INC. AURA

*Innovative Solutions for Nature*

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Project Iteration ID: 1407003-453  
 Client Name: Eurofins Eaton Analytical  
 Project Name: RED-HILL Project # 38001111 Job # 380-66857-1  
 COC Page Number: 2 of 2  
 Bottle Label Color: NA

## Sample Receipt Summary

### Receiving Info

1. Initials Received By: MN
2. Date Received: 10/13/23
3. Time Received: 1156
4. Client Name: Eurofins
5. Courier Information: (Please circle)
 

<input checked="" type="radio"/> <b>OnTrac</b>	<input type="radio"/> UPS	<input type="radio"/> Area Fast	<input type="radio"/> DRS
<input type="radio"/> FedEx	<input type="radio"/> GSO/GLS	<input type="radio"/> Ontrac	<input type="radio"/> PAMS
6. PHYSIS Driver:
 

i. Start Time: _____	iii. Total Mileage: _____
ii. End Time: _____	iv. Number of Pickups: _____
7. Container Information: (Please put the # of containers or circle none)
 

<input checked="" type="checkbox"/> Cooler	<input type="checkbox"/> Styrofoam Cooler	<input type="checkbox"/> Boxes	<input type="checkbox"/> None
<input type="checkbox"/> Carboy(s)	<input type="checkbox"/> Carboy Trash Can(s)	<input type="checkbox"/> Carboy Cap(s)	<input type="checkbox"/> Other _____
8. What type of ice was used: (Please circle any that apply)
 

<input checked="" type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice	<input type="checkbox"/> Water	<input type="checkbox"/> None
--	----------------------------------	--------------------------------	-------------------------------
9. Randomly Selected Samples Temperature (°C): 1.1  
 Used I/R Thermometer # 1-2

### Inspection Info

1. Initials Inspected By: RGH

### Sample Integrity Upon Receipt

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

Notes:

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

# Chain of Custody Record



<b>Client Information</b> Client Contact: Dr. Ron Fenstermacher Company: PWSID City and County of Honolulu Address: 630 South Beretania St. Chemistry Lab City: Honolulu State, Zip: Hawaii 96843 Phone: 808-748-5841 Email: RFENSTERMACHER@hbws.org Project Name: RED HILL/HBWS Sites Event Desc: RUSH Weekly Red Hill Site: Hawaii		Lab PM: Arada, Rachelle E-Mail: Rachelle.Arada@et.eurofins.com State of Origin: HI Camer Tracking No(s): COC No: Page: Page 1 of 1 Job #:	
<b>Due Date Requested:</b> TAT Requested (days): Standard Compliance Project: Δ Yes Δ No PO #: C20525101 exp 05312023 WO #: Project #: 38001111 SSONW#:		<b>Analysis Requested</b> SUBCONTRACT - 625 PAH Physis LL (EAL) + TICS SUBCONTRACT - 6015 Diesel LL (EAL) and Motor Oil SUBCONTRACT - (MOD) 525 plus Plus TICS SUBCONTRACT - 6015 Gas (Purgeable) LL (EAL) Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Total Number of Containers:	
<b>Sample Identification</b> HALAWA WELLS PUMP MOANALUA WELLS TB HALAWA WELLS PUMP TB MOANALUA WELLS		Matrix (W=water, S=sediment, O=soil, G=grab, T=tissue, A=air) Sample Type (C=Comp, G=grab) Sample Time Sample Date Preservation Code: W G G G G W W W W	
<b>Possible Hazard Identification</b> <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested I, II, III, IV, Other (specify)		<b>Sample Disposal (4 fee max)</b> <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months samples are retained longer than 1 month 360-66857 COC	
Empty Kit Relinquished by Relinquished Relinquished Relinquished by		Method of Shipment: FED EX (S) 7337 1009 7457 Date/Time: 10/11/2023 10:33 Date/Time: 10/12/2023 10:33 Date/Time: Received by: G. RETNER Received by: Received by:	
Relinquished Relinquished Relinquished by		Company: HBWS Company: Company:	
Relinquished Relinquished by		Cooler Temperature(s) °C and Other Remarks: (751A) 0.1-0.7-0.5-0.1-0.4-0.3-10.0-1.3-9.	



**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

<b>Client Information</b> Client Contact: Dr. Ron Fenstemacher Company: City and County of Honolulu Address: 630 South Beretania St. Chemistry Lab City: Honolulu State, Zip: Hawaii 96843 Phone: 808-748-5841 Email: RFENSTEMACHER@hbws.org Project Name: RED HILL/HBWS Sites Event Desc. RUSH Weekly Red Hill Site: Hawaii		Lab PM: Arada, Rachelle E-Mail: Rachelle.Arada@et.eurofins.com Camer Tracking No(s): State of Origin: HI Page: Page 1 of 1 Job #:	
Due Date Requested: TAT Requested (days): Standard Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No PO #: C20525101 exp 05312023 WO #: Project #: 38001111 SSOM#:		<b>Analysis Requested</b> Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> 637.1_DW_PREC - 637.1 Full List <input checked="" type="checkbox"/> 633 - All Analytes <input checked="" type="checkbox"/> Total Number of Containers: <input checked="" type="checkbox"/>	
<b>Sample Identification</b> Sample Date: 10/10/23 Sample Time: 11:00 Sample Type (C=Comp, G=Grab): G Matrix (W=water, S=solid, O=water/oil, BT=TISSUE, A=AIR): W		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - H2SO4 F - MeOH G - Antichlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - NCA W - pH 4.5 Y - Iznria Z - other (specify)	
<b>Possible Hazard Identification</b> <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)		<b>Sample Disposal</b> (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Special Instructions/QC Requirements:	
Empty Kit Relinquished by: Ryan WREED Date/Time: 10/11/23 12:00 Company: HBWS		Relinquished by: G. REITNER Date/Time: 10/12/2023 10:33 Company:	
Relinquished by:		Relinquished by:	
Relinquished by:		Relinquished by:	
Cooler Temperature(s) °C and Other Remarks: (75)A (62) F (50) S (41) 07 (30) 5 (21) 04 (13) 40 (01) 29			



# Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-66857-2

**Login Number: 66857**  
**List Number: 1**  
**Creator: Elyas, Matthew**

**List Source: Eurofins Eaton Analytical Pomona**

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

