

## ANALYTICAL REPORT

Eurofins Eaton Monrovia  
750 Royal Oaks Drive  
Suite 100  
Monrovia, CA 91016  
Tel: (626)386-1100

Laboratory Job ID: 380-11120-1  
Client Project/Site: RED-HILL

For:  
City & County of Honolulu  
630 South Beretania Street  
Public Service Bldg. Room 308  
Honolulu, Hawaii 96843

Attn: Mr. Erwin Kawata



Authorized for release by:

10/20/2022 1:08:18 PM

Kathleen Robb, Client Program Manager  
(949)261-1022

[Kathleen.Robb@et.eurofinsus.com](mailto:Kathleen.Robb@et.eurofinsus.com)

Designee for

Rachelle Arada, Manager of Project Management  
(626)386-1106

[Rachelle.Arada@et.eurofinsus.com](mailto:Rachelle.Arada@et.eurofinsus.com)

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Results relate only to the items tested and the sample(s) as received by the laboratory.

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)



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Kathleen Robb  
Client Program Manager  
10/20/2022 1:08:18 PM

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# Definitions/Glossary

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

Job ID: 380-11120-1

## 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: 380-11120-1

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## Job ID: 380-11120-1

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### Laboratory: Eurofins Eaton Monrovia

#### Narrative

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#### Job Narrative 380-11120-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 7/20/2022 10:10 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.7° C.

#### Subcontract non-Sister

See attached subcontract report.

#### Subcontract Work

Method 8015 Gas (Purgeable) LL (EAL): These methods were subcontracted to EMAX Laboratories Inc. The subcontract laboratory certifications are different from that of the facility issuing the final report. Only TB was run.

Methods 625 Acid LL (EAL) Physis, 625 Base Neutral LL (EAL) Physis, 625 PAH Physis LL (EAL) + TICs: These methods were subcontracted to Physis Environmental Laboratories. The subcontract laboratory certifications are different from that of the facility issuing the final report.



# Detection Summary

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

Job ID: 380-11120-1

**Client Sample ID: HALAWA WELLS P2 (331-024-WL064)**

**Lab Sample ID: 380-11120-1**

No Detections.

**Client Sample ID: TRAVEL BLANK**

**Lab Sample ID: 380-11120-2**

No Detections.

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This Detection Summary does not include radiochemical test results.

Eurofins Eaton Monrovia

# Client Sample Results

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

Job ID: 380-11120-1

**Client Sample ID: HALAWA WELLS P2 (331-024-WL064)**

**Lab Sample ID: 380-11120-1**

Date Collected: 07/19/22 09:50

Matrix: Drinking Water

Date Received: 07/20/22 10:10

**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		07/25/22 00:00	08/01/22 14:16	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 14:16	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 14:16	1
2,4,5-Trichlorophenol	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 14:16	1
2,4,6-Trichlorophenol	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 14:16	1
2,4-Dichlorophenol	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 14:16	1
2,4-Dinitrophenol	ND		0.2	0.1	µg/L		07/25/22 00:00	08/01/22 14:16	1
2,6-Dichlorophenol	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 14:16	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 14:16	1
2,6-Di-tert-butyl-4-methylphenol	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 14:16	1
2,6-Di-tert-butylphenol	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 14:16	1
2-Chloronaphthalene	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 14:16	1
2-Chlorophenol	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 14:16	1
2-Methyl-4,6-dinitrophenol	ND		0.2	0.1	µg/L		07/25/22 00:00	08/01/22 14:16	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 14:16	1
2-Methylphenol	ND		0.2	0.1	µg/L		07/25/22 00:00	08/01/22 14:16	1
2-Nitroaniline	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 14:16	1
2-Nitrophenol	ND		0.2	0.1	µg/L		07/25/22 00:00	08/01/22 14:16	1
3+4-Methylphenol	ND		0.2	0.1	µg/L		07/25/22 00:00	08/01/22 14:16	1
3-Nitroaniline	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 14:16	1
4-Bromophenylphenyl ether	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 14:16	1
4-Chloro-3-methylphenol	ND		0.2	0.1	µg/L		07/25/22 00:00	08/01/22 14:16	1
4-Chloroaniline	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 14:16	1
4-Chlorophenylphenyl ether	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 14:16	1
4-Nitroaniline	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 14:16	1
4-Nitrophenol	ND		0.2	0.1	µg/L		07/25/22 00:00	08/01/22 14:16	1
6-tert-butyl-2,4-dimethylphenol	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 14:16	1
Acenaphthene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 14:16	1
Acenaphthylene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 14:16	1
Aniline	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 14:16	1
Anthracene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 14:16	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 14:16	1
Benzidine	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 14:16	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 14:16	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 14:16	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 14:16	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 14:16	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 14:16	1
Benzoic Acid	ND		0.2	0.1	µg/L		07/25/22 00:00	08/01/22 14:16	1
Benzyl Alcohol	ND		0.2	0.1	µg/L		07/25/22 00:00	08/01/22 14:16	1
Biphenyl	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 14:16	1
Bis(2-Chloroethoxy) methane	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 14:16	1
Bis(2-Chloroethyl) ether	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 14:16	1
Bis(2-Chloroisopropyl) ether	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 14:16	1
Chrysene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 14:16	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 14:16	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 14:16	1
Dibenzofuran	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 14:16	1
Dibenzothiophene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 14:16	1

Eurofins Eaton Monrovia

# Client Sample Results

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

Job ID: 380-11120-1

**Client Sample ID: HALAWA WELLS P2 (331-024-WL064)**

**Lab Sample ID: 380-11120-1**

Date Collected: 07/19/22 09:50

Matrix: Drinking Water

Date Received: 07/20/22 10:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Disalicylidenepranediamine	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 14:16	1
Fluoranthene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 14:16	1
Fluorene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 14:16	1
Hexachloroethane	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 14:16	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 14:16	1
Naphthalene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 14:16	1
Nitrobenzene	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 14:16	1
N-Nitrosodi-n-propylamine	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 14:16	1
N-Nitrosodiphenylamine	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 14:16	1
Pentachlorophenol	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 14:16	1
Perylene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 14:16	1
Phenanthrene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 14:16	1
Phenol	ND		0.2	0.1	µg/L		07/25/22 00:00	08/01/22 14:16	1
p-tert-Butylphenol	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 14:16	1
Pyrene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 14:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
(2,4,6-Tribromophenol)	35		31 - 143				07/25/22 00:00	08/01/22 14:16	1
(d10-Acenaphthene)	88		45 - 118				07/25/22 00:00	08/01/22 14:16	1
(d10-Phenanthrene)	94		56 - 123				07/25/22 00:00	08/01/22 14:16	1
(d12-Chrysene)	108		36 - 142				07/25/22 00:00	08/01/22 14:16	1
(d12-Perylene)	85		36 - 161				07/25/22 00:00	08/01/22 14:16	1
(d5-Phenol)	19		0 - 85				07/25/22 00:00	08/01/22 14:16	1
(d8-Naphthalene)	86		20 - 112				07/25/22 00:00	08/01/22 14:16	1

**Client Sample ID: TRAVEL BLANK**

**Lab Sample ID: 380-11120-2**

Date Collected: 07/19/22 09:50

Matrix: Water

Date Received: 07/20/22 10:10

**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			07/26/22 16:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE	90		60 - 140					07/26/22 16:35	1



# Surrogate Summary

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

Job ID: 380-11120-1

## 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 (45-118)	Phenanth (56-123)	CRY (36-142)	NPT (20-112)	PHL (0-85)	PRY (36-161)	TBP (31-143)
380-11120-1	HALAWA WELLS P2 (331-024-V	88	94	108	86	19	85	35

**Surrogate Legend**

(d10-Acenaphthene) = (d10-Acenaphthene)  
 (d10-Phenanthrene) = (d10-Phenanthrene)  
 CRY = (d12-Chrysene)  
 NPT = (d8-Naphthalene)  
 PHL = (d5-Phenol)  
 PRY = (d12-Perylene)  
 TBP = (2,4,6-Tribromophenol)

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

Matrix: water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)						
		Acenaphtl (65-113)	Phenanth (80-111)	CRY (60-139)	NPT (44-119)	PHL (20-121)	PRY (36-161)	TBP (44-159)
98644-B1	Method Blank	98	97	92	117	119	87	95
98644-BS1	Lab Control Sample	102	98	120	99	113	88	144
98644-BS2	Lab Control Sample Dup	105	106	136	100	112	104	136

**Surrogate Legend**

(d10-Acenaphthene) = (d10-Acenaphthene)  
 (d10-Phenanthrene) = (d10-Phenanthrene)  
 CRY = (d12-Chrysene)  
 NPT = (d8-Naphthalene)  
 PHL = (d5-Phenol)  
 PRY = (d12-Perylene)  
 TBP = (2,4,6-Tribromophenol)

## 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)
380-11120-2	TRAVEL BLANK	90

**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
22VG39G18B	Method Blank	

**Surrogate Legend**

BFB = BROMOFLUOROBENZENE

# Surrogate Summary

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

Job ID: 380-11120-1

**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)
22VG39G18C	LCD	104
22VG39G18L	Lab Control Sample	107

### Surrogate Legend

BFB = BROMOFLUOROBENZENE

- 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: 380-11120-1

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

**Lab Sample ID: 98644-B1**  
**Matrix: water**  
**Analysis Batch: O-38066**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: O-38066\_P**

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
2,4,5-Trichlorophenol	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
2,4,6-Trichlorophenol	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
2,4-Dichlorophenol	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
2,4-Dinitrophenol	ND		0.2	0.1	µg/L		07/25/22 00:00	08/01/22 05:22	1
2,6-Dichlorophenol	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
2,6-Di-tert-butyl-4-methylphenol	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
2,6-Di-tert-butylphenol	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
2-Chloronaphthalene	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
2-Chlorophenol	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
2-Methyl-4,6-dinitrophenol	ND		0.2	0.1	µg/L		07/25/22 00:00	08/01/22 05:22	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
2-Methylphenol	ND		0.2	0.1	µg/L		07/25/22 00:00	08/01/22 05:22	1
2-Nitroaniline	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
2-Nitrophenol	ND		0.2	0.1	µg/L		07/25/22 00:00	08/01/22 05:22	1
3+4-Methylphenol	ND		0.2	0.1	µg/L		07/25/22 00:00	08/01/22 05:22	1
3-Nitroaniline	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
4-Bromophenylphenyl ether	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
4-Chloro-3-methylphenol	ND		0.2	0.1	µg/L		07/25/22 00:00	08/01/22 05:22	1
4-Chloroaniline	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
4-Chlorophenylphenyl ether	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
4-Nitroaniline	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
4-Nitrophenol	ND		0.2	0.1	µg/L		07/25/22 00:00	08/01/22 05:22	1
6-tert-butyl-2,4-dimethylphenol	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
Acenaphthene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
Acenaphthylene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
Aniline	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
Anthracene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
Benzidine	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
Benzoic Acid	ND		0.2	0.1	µg/L		07/25/22 00:00	08/01/22 05:22	1
Benzyl Alcohol	ND		0.2	0.1	µg/L		07/25/22 00:00	08/01/22 05:22	1
Biphenyl	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
Bis(2-Chloroethoxy) methane	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
Bis(2-Chloroethyl) ether	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
Bis(2-Chloroisopropyl) ether	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
Chrysene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
Dibenzofuran	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1

Eurofins Eaton Monrovia

# QC Sample Results

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

Job ID: 380-11120-1

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

**Lab Sample ID: 98644-B1**  
**Matrix: water**  
**Analysis Batch: O-38066**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: O-38066\_P**

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenzothiophene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
DisalicylidenePROPANEDIAMINE	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
Fluoranthene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
Fluorene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
Hexachloroethane	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
Naphthalene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
Nitrobenzene	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
N-Nitrosodi-n-propylamine	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
N-Nitrosodiphenylamine	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
Pentachlorophenol	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
Perylene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
Phenanthrene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
Phenol	ND		0.2	0.1	µg/L		07/25/22 00:00	08/01/22 05:22	1
p-tert-Butylphenol	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
Pyrene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1

Surrogate	Blank %Recovery	Blank Qualifier	Limits	Prepared	Analyzed	Dil Fac
(2,4,6-Tribromophenol)	95		44 - 159	07/25/22 00:00	08/01/22 05:22	1
(d10-Acenaphthene)	98		65 - 113	07/25/22 00:00	08/01/22 05:22	1
(d10-Phenanthrene)	97		80 - 111	07/25/22 00:00	08/01/22 05:22	1
(d12-Chrysene)	92		60 - 139	07/25/22 00:00	08/01/22 05:22	1
(d12-Perylene)	87		36 - 161	07/25/22 00:00	08/01/22 05:22	1
(d5-Phenol)	119		20 - 121	07/25/22 00:00	08/01/22 05:22	1
(d8-Naphthalene)	117		44 - 119	07/25/22 00:00	08/01/22 05:22	1

**Lab Sample ID: 98644-BS1**  
**Matrix: water**  
**Analysis Batch: O-38066**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: O-38066\_P**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	0.5	0.478		µg/L		96	49 - 117
1-Methylphenanthrene	0.5	0.414		µg/L		83	66 - 127
2,3,5-Trimethylnaphthalene	0.5	0.453		µg/L		91	57 - 120
2,4,5-Trichlorophenol	1	0.736		µg/L		74	57 - 116
2,4,6-Trichlorophenol	1	0.667		µg/L		67	56 - 118
2,4-Dichlorophenol	1	0.798		µg/L		80	51 - 117
2,4-Dinitrophenol	0.5	0.522		µg/L		104	0 - 152
2,6-Dichlorophenol	1	0.842		µg/L		84	30 - 130
2,6-Dimethylnaphthalene	0.5	0.463		µg/L		93	54 - 117
2,6-Di-tert-butyl-4-methylphenol	0.5	0.356		µg/L		71	50 - 150
2,6-Di-tert-butylphenol	1	0.501		µg/L		50	50 - 150
2-Chloronaphthalene	1	1.06		µg/L		106	53 - 130
2-Chlorophenol	1	0.896		µg/L		90	41 - 120
2-Methyl-4,6-dinitrophenol	0.5	0.517		µg/L		103	0 - 141
2-Methylnaphthalene	1.5	1.63		µg/L		109	47 - 130
2-Methylphenol	1	0.742		µg/L		74	40 - 117
2-Nitroaniline	1	0.8		µg/L		80	69 - 114

Eurofins Eaton Monrovia

# QC Sample Results

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

Job ID: 380-11120-1

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

**Lab Sample ID: 98644-BS1**  
**Matrix: water**  
**Analysis Batch: O-38066**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: O-38066\_P**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2-Nitrophenol	1	0.569		µg/L		57	40 - 117
3+4-Methylphenol	1	0.922		µg/L		92	0 - 130
3-Nitroaniline	0.5	0.511		µg/L		102	23 - 137
4-Bromophenylphenyl ether	1	0.82		µg/L		82	61 - 132
4-Chloro-3-methylphenol	1	0.683		µg/L		68	51 - 128
4-Chloroaniline	0.5	0.573		µg/L		115	50 - 150
4-Chlorophenylphenyl ether	1	0.99		µg/L		99	63 - 130
4-Nitroaniline	1	0.707		µg/L		71	10 - 159
4-Nitrophenol	1	0.513		µg/L		51	10 - 164
6-tert-butyl-2,4-dimethylphenol	1	0.501		µg/L		50	50 - 150
Acenaphthene	1.5	1.56		µg/L		104	53 - 131
Acenaphthylene	1.5	1.58		µg/L		105	43 - 140
Aniline	0.1000000 01490116	0.106		µg/L		106	50 - 150
Anthracene	1.5	1.6		µg/L		107	58 - 135
Benz[a]anthracene	1.5	1.44		µg/L		96	55 - 145
Benzidine	0.1000000 01490116	0.0243		µg/L		24	0 - 125
Benzo[a]pyrene	1.5	1.85		µg/L		123	51 - 143
Benzo[b]fluoranthene	1.5	1.62		µg/L		108	46 - 165
Benzo[e]pyrene	0.5	0.454		µg/L		91	42 - 152
Benzo[g,h,i]perylene	1.5	1.77		µg/L		118	63 - 133
Benzo[k]fluoranthene	1.5	1.54		µg/L		103	56 - 145
Benzoic Acid	0.5	0.457		µg/L		91	2 - 145
Benzyl Alcohol	1	1.02		µg/L		102	43 - 148
Biphenyl	0.5	0.532		µg/L		106	56 - 119
Bis(2-Chloroethoxy) methane	1	0.91		µg/L		91	66 - 122
Bis(2-Chloroethyl) ether	1	0.898		µg/L		90	43 - 127
Bis(2-Chloroisopropyl) ether	2	1.58		µg/L		79	49 - 128
Chrysene	1.5	1.96		µg/L		131	56 - 141
Dibenz[a,h]anthracene	1.5	1.33		µg/L		89	55 - 150
Dibenzo[a,l]pyrene	0.5	0.372		µg/L		74	50 - 150
Dibenzofuran	1	1.04		µg/L		104	50 - 150
Dibenzothiophene	0.5	0.449		µg/L		90	75 - 113
Disalicylidenepropanediamine	10	9.89		µg/L		99	50 - 150
Fluoranthene	1.5	1.55		µg/L		103	60 - 146
Fluorene	1.5	1.65		µg/L		110	58 - 131
Hexachloroethane	1	1.03		µg/L		103	27 - 130
Indeno[1,2,3-cd]pyrene	1.5	1.3		µg/L		87	50 - 151
Naphthalene	1.5	1.59		µg/L		106	41 - 126
Nitrobenzene	1	0.994		µg/L		99	54 - 111
N-Nitrosodi-n-propylamine	1	0.728		µg/L		73	61 - 152
N-Nitrosodiphenylamine	1	0.869		µg/L		87	49 - 142
Pentachlorophenol	1	0.482		µg/L		48	36 - 111
Perylene	0.5	0.417		µg/L		83	48 - 141
Phenanthrene	1.5	1.62		µg/L		108	67 - 127
Phenol	1	0.904		µg/L		90	29 - 114
p-tert-Butylphenol	1	0.5		µg/L		50	50 - 150
Pyrene	1.5	1.52		µg/L		101	54 - 156

Eurofins Eaton Monrovia

# QC Sample Results

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

Job ID: 380-11120-1

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

**Lab Sample ID: 98644-BS1**  
**Matrix: water**  
**Analysis Batch: O-38066**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: O-38066\_P**

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
(2,4,6-Tribromophenol)	144		44 - 159
(d10-Acenaphthene)	102		65 - 113
(d10-Phenanthrene)	98		80 - 111
(d12-Chrysene)	120		60 - 139
(d12-Perylene)	88		36 - 161
(d5-Phenol)	113		20 - 121
(d8-Naphthalene)	99		44 - 119

**Lab Sample ID: 98644-BS2**  
**Matrix: water**  
**Analysis Batch: O-38066**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: O-38066\_P**

Analyte	Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
1-Methylnaphthalene	0.5	0.48		µg/L		96	49 - 117	0	30	
1-Methylphenanthrene	0.5	0.45		µg/L		90	66 - 127	8	30	
2,3,5-Trimethylnaphthalene	0.5	0.473		µg/L		95	57 - 120	4	30	
2,4,5-Trichlorophenol	1	0.837		µg/L		84	57 - 116	13	30	
2,4,6-Trichlorophenol	1	0.868		µg/L		87	56 - 118	26	30	
2,4-Dichlorophenol	1	0.899		µg/L		90	51 - 117	12	30	
2,4-Dinitrophenol	0.5	0.655		µg/L		131	0 - 152	23	30	
2,6-Dichlorophenol	1	0.962		µg/L		96	30 - 130	13	30	
2,6-Dimethylnaphthalene	0.5	0.486		µg/L		97	54 - 117	4	30	
2,6-Di-tert-butyl-4-methylphenol	0.5	0.437		µg/L		87	50 - 150	20	30	
2,6-Di-tert-butylphenol	1	0.5		µg/L		50	50 - 150	0	30	
2-Chloronaphthalene	1	1.05		µg/L		105	53 - 130	1	30	
2-Chlorophenol	1	0.937		µg/L		94	41 - 120	4	30	
2-Methyl-4,6-dinitrophenol	0.5	0.69		µg/L		138	0 - 141	29	30	
2-Methylnaphthalene	1.5	1.68		µg/L		112	47 - 130	3	30	
2-Methylphenol	1	0.935		µg/L		94	40 - 117	24	30	
2-Nitroaniline	1	0.809		µg/L		81	69 - 114	1	30	
2-Nitrophenol	1	0.741		µg/L		74	40 - 117	26	30	
3+4-Methylphenol	1	0.975		µg/L		98	0 - 130	6	30	
3-Nitroaniline	0.5	0.685		µg/L		137	23 - 137	29	30	
4-Bromophenylphenyl ether	1	0.934		µg/L		93	61 - 132	13	30	
4-Chloro-3-methylphenol	1	0.832		µg/L		83	51 - 128	20	30	
4-Chloroaniline	0.5	0.689		µg/L		138	50 - 150	18	30	
4-Chlorophenylphenyl ether	1	1.03		µg/L		103	63 - 130	4	30	
4-Nitroaniline	1	0.872		µg/L		87	10 - 159	20	30	
4-Nitrophenol	1	0.653		µg/L		65	10 - 164	24	30	
6-tert-butyl-2,4-dimethylphenol	1	0.501		µg/L		50	50 - 150	0	30	
Acenaphthene	1.5	1.62		µg/L		108	53 - 131	4	30	
Acenaphthylene	1.5	1.64		µg/L		109	43 - 140	4	30	
Aniline	0.1000000	0.0968		µg/L		97	50 - 150	9	30	
	01490116									
Anthracene	1.5	1.7		µg/L		113	58 - 135	5	30	
Benz[a]anthracene	1.5	1.68		µg/L		112	55 - 145	15	30	
Benzidine	0.1000000	0.0217		µg/L		22	0 - 125	9	30	
	01490116									
Benzo[a]pyrene	1.5	1.95		µg/L		130	51 - 143	6	30	

Eurofins Eaton Monrovia

# QC Sample Results

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

Job ID: 380-11120-1

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

**Lab Sample ID: 98644-BS2**  
**Matrix: water**  
**Analysis Batch: O-38066**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: O-38066\_P**

Analyte	Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzo[b]fluoranthene	1.5	1.75		µg/L		117	46 - 165	8	30
Benzo[e]pyrene	0.5	0.537		µg/L		107	42 - 152	16	30
Benzo[g,h,i]perylene	1.5	1.95		µg/L		130	63 - 133	10	30
Benzo[k]fluoranthene	1.5	1.61		µg/L		107	56 - 145	4	30
Benzoic Acid	0.5	0.601		µg/L		120	2 - 145	27	30
Benzyl Alcohol	1	0.978		µg/L		98	43 - 148	4	30
Biphenyl	0.5	0.521		µg/L		104	56 - 119	2	30
Bis(2-Chloroethoxy) methane	1	0.97		µg/L		97	66 - 122	6	30
Bis(2-Chloroethyl) ether	1	0.894		µg/L		89	43 - 127	1	30
Bis(2-Chloroisopropyl) ether	2	1.5		µg/L		75	49 - 128	5	30
Chrysene	1.5	2.12		µg/L		141	56 - 141	7	30
Dibenz[a,h]anthracene	1.5	1.56		µg/L		104	55 - 150	16	30
Dibenz[a,l]pyrene	0.5	0.324		µg/L		65	50 - 150	13	30
Dibenzofuran	1	1.06		µg/L		106	50 - 150	2	30
Dibenzothiophene	0.5	0.5		µg/L		100	75 - 113	11	30
Disalicylidenepropanediamine	10	10.2		µg/L		102	50 - 150	3	30
Fluoranthene	1.5	1.74		µg/L		116	60 - 146	12	30
Fluorene	1.5	1.76		µg/L		117	58 - 131	6	30
Hexachloroethane	1	0.938		µg/L		94	27 - 130	9	30
Indeno[1,2,3-cd]pyrene	1.5	1.55		µg/L		103	50 - 151	17	30
Naphthalene	1.5	1.58		µg/L		105	41 - 126	1	30
Nitrobenzene	1	0.965		µg/L		96	54 - 111	3	30
N-Nitrosodi-n-propylamine	1	0.939		µg/L		94	61 - 152	25	30
N-Nitrosodiphenylamine	1	1.03		µg/L		103	49 - 142	17	30
Pentachlorophenol	1	0.638		µg/L		64	36 - 111	29	30
Perylene	0.5	0.482		µg/L		96	48 - 141	15	30
Phenanthrene	1.5	1.75		µg/L		117	67 - 127	8	30
Phenol	1	0.91		µg/L		91	29 - 114	1	30
p-tert-Butylphenol	1	0.567		µg/L		57	50 - 150	13	30
Pyrene	1.5	1.76		µg/L		117	54 - 156	15	30

Surrogate	LCS DUP	LCS DUP	Limits
	%Recovery	Qualifier	
(2,4,6-Tribromophenol)	136		44 - 159
(d10-Acenaphthene)	105		65 - 113
(d10-Phenanthrene)	106		80 - 111
(d12-Chrysene)	136		60 - 139
(d12-Perylene)	104		36 - 161
(d5-Phenol)	112		20 - 121
(d8-Naphthalene)	100		44 - 119

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

**Lab Sample ID: 22VG39G18B**  
**Matrix: WATER**  
**Analysis Batch: 22VG39G18**

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
GASOLINE	ND	U	0.02		mg/L			07/26/22 12:21	1

Eurofins Eaton Monrovia

# QC Sample Results

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

Job ID: 380-11120-1

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

**Lab Sample ID: 22VG39G18B**  
**Matrix: WATER**  
**Analysis Batch: 22VG39G18**

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

<u>Surrogate</u>	<u>MB</u>	<u>MB</u>	<u>Qualifier</u>	<u>Limits</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
BROMOFLUOROBENZENE						07/26/22 12:21	1

**Lab Sample ID: 22VG39G18L**  
**Matrix: WATER**  
**Analysis Batch: 22VG39G18**

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

<u>Analyte</u>	<u>Spike</u>	<u>LCS</u>	<u>LCS</u>	<u>Unit</u>	<u>D</u>	<u>%Rec</u>	<u>%Rec</u>	<u>Limits</u>
	<u>Added</u>	<u>Result</u>	<u>Qualifier</u>				<u>Limits</u>	
GASOLINE	0.5	0.484		mg/L		97	60 - 130	

<u>Surrogate</u>	<u>LCS</u>	<u>LCS</u>	<u>Qualifier</u>	<u>Limits</u>
	<u>%Recovery</u>			
BROMOFLUOROBENZENE	107			70 - 130



# QC Association Summary

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

Job ID: 380-11120-1

## Subcontract

### Analysis Batch: O-38066

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-11120-1	HALAWA WELLS P2 (331-024-WL064)	Total/NA	Drinking Water	625 PAH Physis LL (EAL) + TICs	O-38066_P
98644-B1	Method Blank	Total/NA	water	625 PAH Physis LL (EAL) + TICs	O-38066_P
98644-BS1	Lab Control Sample	Total/NA	water	625 PAH Physis LL (EAL) + TICs	O-38066_P
98644-BS2	Lab Control Sample Dup	Total/NA	water	625 PAH Physis LL (EAL) + TICs	O-38066_P

### Analysis Batch: 22VG39G18

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-11120-2	TRAVEL BLANK	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
22VG39G18B	Method Blank	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	
22VG39G18L	Lab Control Sample	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	

### Prep Batch: O-38066\_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-11120-1	HALAWA WELLS P2 (331-024-WL064)	Total/NA	Drinking Water	EPA_625	
98644-B1	Method Blank	Total/NA	water	EPA_625	
98644-BS1	Lab Control Sample	Total/NA	water	EPA_625	
98644-BS2	Lab Control Sample Dup	Total/NA	water	EPA_625	

# Lab Chronicle

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

Job ID: 380-11120-1

**Client Sample ID: HALAWA WELLS P2 (331-024-WL064)**

**Lab Sample ID: 380-11120-1**

**Date Collected: 07/19/22 09:50**

**Matrix: Drinking Water**

**Date Received: 07/20/22 10:10**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA_625		1	O-38066_P			07/25/22 00:00
Total/NA	Analysis	625 PAH Physis LL (EAL) + TICs		1	O-38066	YC		08/01/22 14:16

**Client Sample ID: TRAVEL BLANK**

**Lab Sample ID: 380-11120-2**

**Date Collected: 07/19/22 09:50**

**Matrix: Water**

**Date Received: 07/20/22 10:10**

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	22VG39G18	SCerva		07/26/22 16:35

**Laboratory References:**

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

# Method Summary

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

Job ID: 380-11120-1

Method	Method Description	Protocol	Laboratory
625	EPA 625 Base/Neutral and Acid Organics i	EPA	
8015	8015 - Jet Fuel 5 (JP5)	EPA	
8015	8015 - Jet Fuel 8 (JP8)	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: 380-11120-1

---

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-11120-1	HALAWA WELLS P2 (331-024-WL064)	Drinking Water	07/19/22 09:50	07/20/22 10:10
380-11120-2	TRAVEL BLANK	Water	07/19/22 09:50	07/20/22 10:10

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

Date: 08-17-2022  
EMAX Batch No.: 22G208

Attn: Jackie Contreras

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

Subject: Laboratory Report  
Project: 380-11120

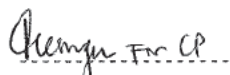
-----  
Enclosed is the Laboratory report for samples received on 07/22/22.  
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
380-11120-1	G208-01	07/19/22	WATER	ETHANOL TPH GASOLINE TPH

The results are summarized on the following pages.

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

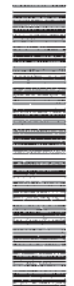
Sincerely yours,

  
-----  
Caspar J. Pang  
Laboratory Director

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

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

NELAP Accredited Certificate Number CA002912022-22  
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: \_\_\_\_\_  
 Shipping/Receiving: \_\_\_\_\_  
 Company: EMAX Laboratories Inc  
 Address: 3051 Fujita Street,  
 Torrance  
 State Zip: CA, 90505  
 Phone: \_\_\_\_\_  
 Email: \_\_\_\_\_  
 Project Name: RED-HILL  
 Site: Honolulu BWS Sites

Sampler: \_\_\_\_\_  
 Lab PM: Frank, Debbie L  
 E-Mail: Debbie.Frank@eurofins.com  
 State of Origin: Hawaii  
 Carrier Tracking Note: \_\_\_\_\_  
 COC No: 380-13746.1  
 Page: 1 of 1  
 Job #: 380-1120-1

Due Date Requested: 8/3/2022  
 TAT Requested (days): \_\_\_\_\_  
 PO #: \_\_\_\_\_  
 WO #: \_\_\_\_\_  
 Project #: 38001111  
 SSON#: \_\_\_\_\_

**Analysis Requested**  
 Field Filtered Sample (Yes or No): \_\_\_\_\_  
 Perform MS/MS (Yes or No): \_\_\_\_\_  
 SUB (8015 Ethanol)/ 8015 Ethanol  
 SUB (8015 Gas (Purgeable) LL (EAL))/ 8015 Gas (Purgeable) LL (EAL)

**Preservation Codes:**  
 A - HOL  
 B - NaOH  
 C - Zn Acetate  
 D - Nitric Acid  
 E - NaHSO4  
 F - MeOH  
 G - Amchlor  
 H - Ascorbic Acid  
 I - Ice  
 J - DI Water  
 K - EDTA  
 L - EDTA  
 M - Hexane  
 N - None  
 O - AsNaO2  
 P - Na2O4S  
 Q - Na2SO3  
 R - Na2S2O3  
 S - H2SO4  
 T - TSP Dodecahydrate  
 U - Acetone  
 V - MCAA  
 W - pH 4.5  
 Y - Trazna  
 Z - other (specify)

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, O-waste/soil, B-Tissue, Ash)	Field Filtered Sample (Yes or No)	Perform MS/MS (Yes or No)	Analysis Requested	Total Number of Containers	Special Instructions/Note
Halawa Wells Pump 2 (380-1120-1)	7/19/22	09:50	Hawaiian	Water	X	X		8	See Attached Instructions

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

Empty Kit Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Relinquished by: *KW* Date/Time: *7/22/22 10:15* Company: *EMAX*  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_

Custody Seals Intact: \_\_\_\_\_ Custody Seal No.: \_\_\_\_\_  
 REPORT ID: 22CG208  
 Cooler Temperature(s) °C and Other Remarks: *5.1/4.9*  
 Page 2 of 43



Type of Delivery <input type="checkbox"/> Fedex <input type="checkbox"/> UPS <input type="checkbox"/> GSO <input type="checkbox"/> Others	Airbill / Tracking Number	ECN 22G208
<input type="checkbox"/> EMAX Courier <input checked="" type="checkbox"/> Client Delivery		Recipient Alan Ramos
		Date 07/22/22 Time 10:15

**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 checked="" type="checkbox"/> Address	<input type="checkbox"/> Tel # / Fax #	<input type="checkbox"/> Courier Signature	<input checked="" type="checkbox"/> Analysis Required	<input type="checkbox"/> Preservative (if any)	<input checked="" type="checkbox"/> TAT
Safety Issues (if any)	<input type="checkbox"/> High concentrations expected	<input type="checkbox"/> From Superfund Site	<input type="checkbox"/> Rad screening required		

Note: \_\_\_\_\_

**PACKAGING INSPECTION**

Container	<input checked="" type="checkbox"/> Cooler	<input type="checkbox"/> Box	<input type="checkbox"/> Other
Condition <i>*correction</i>	<input type="checkbox"/> Custody Seal	<input type="checkbox"/> Intact	<input type="checkbox"/> Damaged
Packaging <i>Factor:</i>	<input checked="" type="checkbox"/> Bubble Pack	<input type="checkbox"/> Styrofoam	<input type="checkbox"/> Popcorn
Temperatures <i>-0.2</i>	<input checked="" type="checkbox"/> Cooler 1 <i>5.1/49C</i>	<input type="checkbox"/> Cooler 2 _____ °C	<input type="checkbox"/> Cooler 3 _____ °C
(Cool, ≤6 °C but not frozen)	<input type="checkbox"/> Cooler 6 _____ °C	<input type="checkbox"/> Cooler 7 _____ °C	<input type="checkbox"/> Cooler 8 _____ °C
Thermometer: <i>A - S/N 210583479</i>	<i>B - S/N 210760237</i>	<i>C - S/N 210271399</i>	<i>D - S/N _____</i>

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

Note: \_\_\_\_\_

**DISCREPANCIES**

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
<i>07/20/22</i>				

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

NOTES/OBSERVATIONS: *Ethanol pres. c/Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>*

SAMPLE MATRIX IS DRINKING WATER?  YES  NO *Four 1L Amber bottles were delivered w/no paper work on 7/20/22 @ 14:45 - Temp - 2.5 - Analysis to be performed. 8015*

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

REVIEWS:

Sample Labeling *Maria Rivera* SRF *Asisten* PM \_\_\_\_\_  
 Date *07/22/22* Date *7/22/22* Date \_\_\_\_\_

## REPORTING CONVENTIONS

### DATA QUALIFIERS:

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

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

### ACRONYMS AND ABBREVIATIONS:

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

### DATES

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



LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-11120

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

SDG#: 22G208

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CASE NARRATIVE

Client : EUROFINs EATON ANALYTICAL

Project: 380-11120

SDG : 22G208

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

One(1) water sample was received on 07/22/22 to be analyzed for Total Petroleum Hydrocarbons by Purge and Trap in accordance with Method 5030B/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. VGH7G04B - 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. VGH7G04L/VGH7G04C 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 G209-01M/G209-01S. 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

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.



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# SAMPLE RESULTS



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# QC SUMMARIES

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

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 07/22/22 14:05
Project     : 380-11120                   Date Received: 07/22/22
Batch No.   : 22G208                       Date Extracted: 07/22/22 14:05
Sample ID   : MBLK1W                       Date Analyzed: 07/22/22 14:05
Lab Samp ID: VGH7G04B                     Dilution Factor: 1
Lab File ID: AG22005A                     Matrix: WATER
Ext Btch ID: 22VGH7G04                   % Moisture: NA
Calib. Ref.: AG22004A                   Instrument ID: H7
=====

```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
GASOLINE	ND	0.020	0.010	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0336	0.0400	84	60-140

Notes:

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

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

EMAX QUALITY CONTROL DATA  
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL  
PROJECT : 380-11120  
BATCH NO. : 22G208  
METHOD : 5030B/8015B

MATRIX : WATER		% MOISTURE:NA
DILUTION FACTOR: 1	1	1
SAMPLE ID : MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID : VGH7G04B	VGH7G04L	VGH7G04C
LAB FILE ID : AG22005A	AG22006A	AG22007A
DATE PREPARED : 07/22/22 14:05	07/22/22 14:40	07/22/22 15:16
DATE ANALYZED : 07/22/22 14:05	07/22/22 14:40	07/22/22 15:16
PREP BATCH : 22VGH7G04	22VGH7G04	22VGH7G04
CALIBRATION REF: AG22004A	AG22004A	AG22004A

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	0.455	91	0.500	0.440	88	3	60-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0438	110	0.0400	0.0446	112	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 : 380-11135  
BATCH NO. : 22G209  
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: 380-11135-1	380-11135-1MS	380-11135-1MSD
LAB SAMPLE ID	: G209-01	G209-01M	G209-01S
LAB FILE ID	: AG22010A	AG22011A	AG22012A
DATE PREPARED	: 07/22/22 17:02	07/22/22 17:38	07/22/22 18:13
DATE ANALYZED	: 07/22/22 17:02	07/22/22 17:38	07/22/22 18:13
PREP BATCH	: 22VGH7G04	22VGH7G04	22VGH7G04
CALIBRATION REF:	AG22004A	AG22004A	AG22004A

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	0.443	89	0.500	0.430	86	3	50-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0442	111	0.0400	0.0428	107	60-140

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

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-11120

METHOD 3520C/8015B  
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 22G208

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CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-11120

SDG : 22G208

METHOD 3520C/8015B  
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 07/22/22 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. DSG026WB - 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 DSG026WL. 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 22G213-01M/22G213-01S. 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: 380-11120

SDG : 22G208

METHOD 3520C/8015B  
PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 07/22/22 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. DSG026WB - 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 J5G026WL. 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 22G213-01M/22G213-01S. 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: 380-11120

SDG : 22G208

METHOD 3520C/8015B  
PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 07/22/22 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. DSG026WB - 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 J8G026WL. 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 22G213-01M/22G213-01S. 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.









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# SAMPLE RESULTS

METHOD 3520C/8015B  
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 07/19/22 09:50
Project    : 380-11120                   Date Received: 07/22/22
Batch No.  : 22G208                       Date Extracted: 07/27/22 11:45
Sample ID  : 380-11120-1                 Date Analyzed: 07/28/22 17:17
Lab Samp ID: 22G208-01                   Dilution Factor: 1
Lab File ID: LG27083A                    Matrix: WATER
Ext Btch ID: 22DSG026W                   % Moisture: NA
Calib. Ref.: LG27073A                    Instrument ID: D5
=====

```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
Diesel	ND	0.026	0.013	
Motor Oil	ND	0.052	0.026	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.378	0.525	72	60-130
Hexacosane	0.112	0.131	85	60-130

Notes:

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

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.  
Sample Amount : 950ml Final Volume : 5ml  
Prepared by : JMuert Analyzed by : SDeeso

METHOD 3520C/8015B  
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 07/19/22 09:50
Project     : 380-11120                   Date Received: 07/22/22
Batch No.   : 22G208                       Date Extracted: 07/27/22 11:45
Sample ID   : 380-11120-1                 Date Analyzed: 07/28/22 17:17
Lab Samp ID: 22G208-01                     Dilution Factor: 1
Lab File ID: LG27083A                       Matrix: WATER
Ext Btch ID: 22DSG026W                     % Moisture: NA
Calib. Ref.: LG27074A                       Instrument ID: D5
=====
    
```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
JP5	ND	0.052	0.026	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.378	0.525	72	60-130
Hexacosane	0.112	0.131	85	60-130

Notes:

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

Detection limits are reported relative to sample result significant figures.

Sample Amount : 950ml                      Final Volume : 5ml  
 Prepared by : JMuert                        Analyzed by : SDeeso

METHOD 3520C/8015B  
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 07/19/22 09:50
Project    : 380-11120                   Date Received: 07/22/22
Batch No.  : 22G208                       Date Extracted: 07/27/22 11:45
Sample ID  : 380-11120-1                 Date Analyzed: 07/28/22 17:17
Lab Samp ID: 22G208-01                   Dilution Factor: 1
Lab File ID: LG27083A                   Matrix: WATER
Ext Btch ID: 22DSG026W                   % Moisture: NA
Calib. Ref.: LG27075A                   Instrument ID: D5
=====
  
```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
JP8	ND	0.052	0.026	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.378	0.525	72	60-130
Hexacosane	0.112	0.131	85	60-130

Notes:

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

Detection limits are reported relative to sample result significant figures.  
 Sample Amount : 950ml Final Volume : 5ml  
 Prepared by : JMuert Analyzed by : SDeeso

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# QC SUMMARIES

METHOD 3520C/8015B  
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 07/27/22 11:45
Project    : 380-11120                   Date Received: 07/27/22
Batch No.  : 22G208                       Date Extracted: 07/27/22 11:45
Sample ID  : MBLK1W                       Date Analyzed: 07/28/22 16:03
Lab Samp ID: DSG026WB                     Dilution Factor: 1
Lab File ID: LG27079A                     Matrix: WATER
Ext Btch ID: 22DSG026W                    % Moisture: NA
Calib. Ref.: LG27073A                     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	0.388	0.500	78	60-130
Hexacosane	0.109	0.125	87	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 : JMuert Analyzed by : SDeeso

EMAX QUALITY CONTROL DATA  
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL  
PROJECT : 380-11120  
BATCH NO. : 22G208  
METHOD : 3520C/8015B

MATRIX : WATER % MOISTURE:NA  
DILUTION FACTOR: 1 1  
SAMPLE ID : MBLK1W LCS1W  
LAB SAMPLE ID : DSG026WB DSG026WL  
LAB FILE ID : LG27079A LG27080A  
DATE PREPARED : 07/27/22 11:45 07/27/22 11:45  
DATE ANALYZED : 07/28/22 16:03 07/28/22 16:22  
PREP BATCH : 22DSG026W 22DSG026W  
CALIBRATION REF: LG27073A LG27073A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Diesel	ND	2.50	2.24	90	50-130

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Bromobenzene	0.500	0.413	83	60-130
Hexacosane	0.125	0.112	90	60-130

MB: Method Blank sample LCS: Lab Control Sample

METHOD 3520C/8015B  
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 07/27/22 11:45
Project     : 380-11120                   Date Received: 07/27/22
Batch No.   : 22G208                       Date Extracted: 07/27/22 11:45
Sample ID   : MBLK1W                       Date Analyzed: 07/28/22 16:03
Lab Samp ID: DSG026WB                      Dilution Factor: 1
Lab File ID: LG27079A                      Matrix: WATER
Ext Btch ID: 22DSG026W                     % Moisture: NA
Calib. Ref.: LG27074A                     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	0.388	0.500	78	60-130
Hexacosane	0.109	0.125	87	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 : JMuert                          Analyzed by : SDeeso



EMAX QUALITY CONTROL DATA  
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL  
PROJECT : 380-11120  
BATCH NO. : 22G208  
METHOD : 3520C/8015B

=====

MATRIX : WATER % MOISTURE:NA  
DILUTION FACTOR: 1 1  
SAMPLE ID : MBLK1W LCS1W  
LAB SAMPLE ID : DSG026WB J5G026WL  
LAB FILE ID : LG27079A LG27081A  
DATE PREPARED : 07/27/22 11:45 07/27/22 11:45  
DATE ANALYZED : 07/28/22 16:03 07/28/22 16:40  
PREP BATCH : 22DSG026W 22DSG026W  
CALIBRATION REF: LG27074A LG27074A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
JP5	ND	2.50	2.03	81	30-160

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Bromobenzene	0.500	0.424	85	60-130
Hexacosane	0.125	0.103	82	60-130

=====

MB: Method Blank sample LCS: Lab Control Sample

METHOD 3520C/8015B  
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 07/27/22 11:45
Project     : 380-11120                   Date Received: 07/27/22
Batch No.   : 22G208                       Date Extracted: 07/27/22 11:45
Sample ID   : MBLK1W                       Date Analyzed: 07/28/22 16:03
Lab Samp ID: DSG026WB                     Dilution Factor: 1
Lab File ID: LG27079A                     Matrix: WATER
Ext Btch ID: 22DSG026W                    % Moisture: NA
Calib. Ref.: LG27075A                     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	0.388	0.500	78	60-130
Hexacosane	0.109	0.125	87	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 : JMuert

Analyzed by : SDeeso

EMAX QUALITY CONTROL DATA  
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL  
PROJECT : 380-11120  
BATCH NO. : 22G208  
METHOD : 3520C/8015B

=====

MATRIX	: WATER	% MOISTURE:NA
DILUTION FACTOR:	1	1
SAMPLE ID	: MBLK1W	LCS1W
LAB SAMPLE ID	: DSG026WB	J8G026WL
LAB FILE ID	: LG27079A	LG27082A
DATE PREPARED	: 07/27/22 11:45	07/27/22 11:45
DATE ANALYZED	: 07/28/22 16:03	07/28/22 16:59
PREP BATCH	: 22DSG026W	22DSG026W
CALIBRATION REF:	LG27075A	LG27075A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
JP8	ND	2.50	2.19	88	30-160

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Bromobenzene	0.500	0.539	108	60-130
Hexacosane	0.125	0.117	94	60-130

MB: Method Blank sample    LCS: Lab Control Sample

EMAX QUALITY CONTROL DATA  
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL  
PROJECT : 380-11192  
BATCH NO. : 22G213  
METHOD : 3520C/8015B

```

=====
MATRIX      : WATER                                     % MOISTURE:NA
DILUTION FACTOR: 1                                   1
SAMPLE ID   : 380-11192-1                             380-11192-1MSD
LAB SAMPLE ID : 22G213-01                             22G213-01S
LAB FILE ID  : LG27084A                               LG27086A
DATE PREPARED : 07/27/22 11:45                       07/27/22 11:45
DATE ANALYZED : 07/28/22 17:36                       07/28/22 18:13
PREP BATCH   : 22DSG026W                             22DSG026W
CALIBRATION REF: LG27073A                             LG27073A
    
```

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Diesel	ND	2.58	2.30	89	2.65	2.62	99	13	50-130	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.515	0.345	67	0.530	0.358	68	60-130
Hexacosane	0.129	0.111	86	0.132	0.118	89	60-130

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

EMAX QUALITY CONTROL DATA  
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL  
PROJECT : 380-11192  
BATCH NO. : 22G213  
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: 380-11192-1	380-11192-1MS	380-11192-1MSD
LAB SAMPLE ID	: 22G213-01	22G213-01M	22G213-01S
LAB FILE ID	: LG27084A	LG27087A	LG27088A
DATE PREPARED	: 07/27/22 11:45	07/27/22 11:45	07/27/22 11:45
DATE ANALYZED	: 07/28/22 17:36	07/28/22 18:31	07/28/22 18:50
PREP BATCH	: 22DSG026W	22DSG026W	22DSG026W
CALIBRATION REF:	LG27074A	LG27074A	LG27074A

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
JP5	ND	2.72	1.97	72	2.70	1.92	71	3	30-160	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.545	0.432	79	0.540	0.415	77	60-130
Hexacosane	0.136	0.109	80	0.135	0.125	93	60-130

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

EMAX QUALITY CONTROL DATA  
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL  
PROJECT : 380-11192  
BATCH NO. : 22G213  
METHOD : 3520C/8015B

MATRIX : WATER		% MOISTURE:NA
DILUTION FACTOR: 1	1	1
SAMPLE ID : 380-11192-1	380-11192-1MS	380-11192-1MSD
LAB SAMPLE ID : 22G213-01	22G213-01M	22G213-01S
LAB FILE ID : LG27084A	LG27089A	LG27090A
DATE PREPARED : 07/27/22 11:45	07/27/22 11:45	07/27/22 11:45
DATE ANALYZED : 07/28/22 17:36	07/28/22 19:09	07/28/22 19:27
PREP BATCH : 22DSG026W	22DSG026W	22DSG026W
CALIBRATION REF: LG27075A	LG27075A	LG27075A

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
JP8	ND	2.55	1.84	72	2.60	1.85	71	1	30-160	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.510	0.492	96	0.520	0.419	81	60-130
Hexacosane	0.127	0.127	100	0.130	0.113	87	60-130

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

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-11120

METHOD SW8015C  
ALCOHOLS BY GC

SDG#: 22G208

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CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-11120

SDG : 22G208

METHOD SW8015C  
ALCOHOLS BY GC

One(1) water sample was received on 07/22/22 to be analyzed for Alcohols by GC in accordance with Method SW8015C 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. MEG003WB - 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. MEG003WL/MEG003WC 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. Ethanol was within MS QC limits in G238-01M/G238-01S. Refer to Matrix QC summary form 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  
ALCOHOLS BY GC

```
=====
Client      : EUROFINS EATON ANALYTICAL
Project    : 380-11120
SDG NO.   : 22G208
Instrument ID : GCT050
=====
```

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	MEG003WB	1	NA	07/26/22 11:42	NA	TG26004A	TG26002A	MEG003W	Method Blank
LCS1W	MEG003WL	1	NA	07/26/22 11:57	NA	TG26005A	TG26002A	MEG003W	Lab Control Sample (LCS)
LCD1W	MEG003WC	1	NA	07/26/22 12:11	NA	TG26006A	TG26002A	MEG003W	LCS Duplicate
380-11120-1	G208-01	1	NA	07/26/22 16:23	NA	TG26011A	TG26010A	MEG003W	Field Sample

FN - Filename  
% Moist - Percent Moisture

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# SAMPLE RESULTS

METHOD SW8015C  
ALCOHOLS BY GC

```

=====
Client      : EUROFINS EATON ANALYTICAL      Date Collected: 07/19/22
Project    : 380-11120                      Date Received: 07/22/22
Batch No.  : 22G208                         Date Extracted: NA
Sample ID  : 380-11120-1                   Date Analyzed: 07/26/22 16:23
Lab Samp ID: G208-01                       Dilution Factor: 1
Lab File ID: TG26011A                     Matrix          : WATER
Ext Btch ID: MEG003W                      % Moisture     : NA
Calib. Ref.: TG26010A                     Instrument ID   : GCT050
=====
  
```

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANOL	ND	2000	500

RL : Reporting Limit



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# QC SUMMARIES

METHOD SW8015C  
ALCOHOLS BY GC

```
=====
Client   : EUROFINS EATON ANALYTICAL      Date Collected: NA
Project  : 380-11120                      Date Received: NA
Batch No. : 22G208                        Date Extracted: NA
Sample ID: MBLK1W                         Date Analyzed: 07/26/22 11:42
Lab Samp ID: MEG003WB                    Dilution Factor: 1
Lab File ID: TG26004A                    Matrix       : WATER
Ext Btch ID: MEG003W                     % Moisture   : NA
Calib. Ref.: TG26002A                    Instrument ID : GCT050
=====
```

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANOL	ND	2000	500

RL : Reporting Limit

EMAX QUALITY CONTROL DATA  
LCS/LCD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL  
PROJECT: 380-11120  
BATCH NO.: 22G208  
METHOD: METHOD SW8015C

=====

MATRIX: WATER % MOISTURE: NA  
DILUTION FACTOR: 1 1 1  
SAMPLE ID: MBLK1W  
LAB SAMP ID: MEG003WB MEG003WL MEG003WC  
LAB FILE ID: TG26004A TG26005A TG26006A  
DATE EXTRACTED: NA NA NA DATE COLLECTED: NA  
DATE ANALYZED: 07/26/2211:42 07/26/2211:57 07/26/2212:11 DATE RECEIVED: NA  
PREP. BATCH: MEG003W MEG003W MEG003W  
CALIB. REF: TG26002A TG26002A TG26002A

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Ethanol	ND	10000	9140	91	10000	8960	90	2	60-130	30

EMAX QUALITY CONTROL DATA  
MS/MSD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL  
PROJECT: 380-11532  
BATCH NO.: 22G238  
METHOD: METHOD SW8015C

=====

MATRIX: WATER % MOISTURE: NA  
DILUTION FACTOR: 1 1 1  
SAMPLE ID: 380-11532-1  
LAB SAMP ID: G238-01 G238-01M G238-01S  
LAB FILE ID: TG26007A TG26008A TG26009A  
DATE EXTRACTED: NA NA NA DATE COLLECTED: 07/20/22  
DATE ANALYZED: 07/26/2212:27 07/26/2212:40 07/26/2212:53 DATE RECEIVED: 07/25/22  
PREP. BATCH: MEG003W MEG003W MEG003W  
CALIB. REF: TG26002A TG26002A TG26002A

ACCESSION:

PARAMETER	SMPL RSLT (ug/L)	SPIKE AMT (ug/L)	MS RSLT (ug/L)	MS % REC	SPIKE AMT (ug/L)	MSD RSLT (ug/L)	MSD % REC	RPD ( % )	QC LIMIT ( % )	MAX RPD ( % )
Ethanol	ND	10000	9900	99	10000	9320	93	6	60-130	30



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

Date: 08-08-2022  
EMAX Batch No.: 22G239

Attn: Jackie Contreras

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

Subject: Laboratory Report  
Project: 380-11120

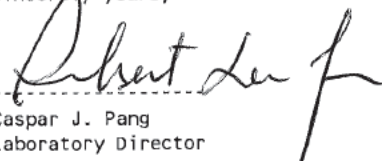
-----  
Enclosed is the Laboratory report for samples received on 07/25/22.  
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
380-11120-2	G239-01	07/19/22	WATER	TPH GASOLINE

The results are summarized on the following pages.

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

Sincerely yours,

  
-----  
Caspar J. Pang  
Laboratory Director

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

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

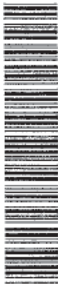
NELAP Accredited Certificate Number CA002912022-22  
ANAB Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing  
California ELAP Accredited Certificate Number 2672





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

**Chain of Custody Record**



Environment Testing  
 America

2217239

<b>Client Information (Sub Contract Lab)</b>		Lab P#:	Frank, Debbie L	Carrier Tracking No(s):	COC No: 380-18891.1
Client Contact: Shipping/Receiving		Phone:	Debbie.Frank@eurofins.com	State of Origin:	Hawaii
Company: EMAX Laboratories Inc		Address:	3051 Fujita Street,	City:	Torrance
State:		CA, 90505	PO #:	WO #:	Project #: 38001111
Site: Honolulu BWS Sites		SSOW#:	Sample Date	Sample Time	Sample Type (C=comp, G=grab)
Sample Identification - Client ID (Lab ID)		TRAVEL BLANK (380-11120-2)	7/19/22	09:50 Hawaiian	Water
Analysis Requested		Field/Retained Sample (Yes or No)	Form MS/MSD (Yes or No)	SUB (6015 Gas (Purgeable) LL (EAL)/ 8015 Gas (Purgeable) LL (EAL))	Matrix (w/water, S-solids, O-waste/oil, BT-Tissue, A-Air)
Preservation Codes:		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify) Other:			
Special Instructions/Note:		See Attached Instructions			
Total Number of Containers		2			

Due Date Requested: 8/3/2022  
 TAT Requested (days):  
 Date/Time: 7-25-22 12:17  
 Date/Time: 7-25-22 14:25  
 Date/Time:

Relinquished by: *Chris Brown*  
 Relinquished by: *Alvin*  
 Relinquished by:

Received by: *Maia Min*  
 Received by:  
 Received by:

Company: EFA  
 Company: EMAX  
 Company:

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

Special Instructions/QC Requirements:  
 Deliverable Requested: I, II, III, IV, Other (specify)  
 Primary Deliverable Rank: 2

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

Method of Shipment:  
 Cooler Temperature(s) °C and Other Remarks: Temp. 2.0/1.8 °C Page 2 of 13





Type of Delivery <input type="checkbox"/> Fedex <input type="checkbox"/> UPS <input type="checkbox"/> GSO <input type="checkbox"/> Others	Airbill / Tracking Number	ECN 22G239
<input type="checkbox"/> EMAX Courier <input checked="" type="checkbox"/> Client Delivery		Recipient Maria Rivera
		Date 07/25/22 Time 14:25

**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 checked="" type="checkbox"/> Address	<input 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 <i>*Correction</i>	<input type="checkbox"/> Custody Seal	<input type="checkbox"/> Intact	<input type="checkbox"/> Damaged
Packaging <i>Factor:</i>	<input checked="" type="checkbox"/> Bubble Pack	<input type="checkbox"/> Styrofoam	<input type="checkbox"/> Popcorn
Temperatures <i>-0.2</i>	<input checked="" type="checkbox"/> Cooler 1 <i>2.0/1.8</i> °C	<input type="checkbox"/> Cooler 2 _____ °C	<input type="checkbox"/> Cooler 3 _____ °C
(Cool, ≤6 °C but not frozen)	<input type="checkbox"/> Cooler 6 _____ °C	<input type="checkbox"/> Cooler 7 _____ °C	<input type="checkbox"/> Cooler 8 _____ °C
Thermometer: <i>A - S/N 210583479</i>	<i>B - S/N 210760237</i>	<i>C - S/N 210271399</i>	<i>D - S/N _____</i>

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

**DISCREPANCIES**

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
1	1.2	D1		<i>NI</i>
1	1.2	D22	<i>2nd Date on label reads 7/8/22</i>	<i>AS</i>
1	1.2	D16		
<i>AS 7/25/22</i>				

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

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

- LEGEND:**
- |   |   |  |
|---|---|--|
| <p><b>Code Description-Sample Management</b></p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> D1 Analysis is not indicated in <i>label</i></li> <li>D2 Analysis mismatch COC vs label</li> <li>D3 Sample ID mismatch COC vs label</li> <li>D4 Sample ID is not indicated in _____</li> <li>D5 Container -[improper] [leaking] [broken]</li> <li>D6 Date/Time is not indicated in _____</li> <li>D7 Date/Time mismatch COC vs label</li> <li>D8 Sample listed in COC is not received</li> <li>D9 Sample received is not listed in COC</li> <li>D10 No initial/date on corrections in COC/label</li> <li>D11 Container count mismatch COC vs received</li> <li>D12 Container size mismatch COC vs received</li> </ul> | <p><b>Code Description-Sample Management</b></p> <ul style="list-style-type: none"> <li>D13 Out of Holding Time</li> <li>D14 Bubble is &gt;6mm</li> <li>D15 No trip blank in cooler</li> <li><input checked="" type="checkbox"/> D16 Preservation not indicated in <i>COC</i></li> <li>D17 Preservation mismatch COC vs label</li> <li>D18 Insufficient chemical preservative</li> <li>D19 Insufficient Sample</li> <li>D20 No filtration info for dissolved analysis</li> <li>D21 No sample for moisture determination</li> <li><input checked="" type="checkbox"/> D22 <i>2nd date on label is incorrect</i></li> <li>D23 _____</li> <li>D24 _____</li> </ul> | <p><input type="checkbox"/> Continue to next page.</p> <p><b>Code Description-Sample Management</b></p> <ul style="list-style-type: none"> <li>R1 Proceed as indicated in <input checked="" type="checkbox"/> COC <input type="checkbox"/> Label</li> <li>R2 Refer to attached instruction</li> <li>R3 Cancel the analysis</li> <li>R4 Use vial with smallest bubble first</li> <li>R5 Log-in with latest sampling date and time+1 min</li> <li>R6 Adjust pH as necessary</li> <li>R7 Filter and preserved as necessary</li> <li>R8 <i>Informed Client</i></li> <li>R9 _____</li> <li>R10 _____</li> <li>R11 _____</li> <li>R12 _____</li> </ul> |
|---|---|--|

REVIEWS:

Sample Labeling <i>Maria Rivera</i>	SRF <i>Asif Khan</i>	PM <i>AS</i>
Date <i>07/25/22</i>	Date <i>7/25/22</i>	Date <i>7/25/22</i>

## REPORTING CONVENTIONS

### DATA QUALIFIERS:

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

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

### ACRONYMS AND ABBREVIATIONS:

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

### DATES

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

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-11120

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

SDG#: 22G239



CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-11120

SDG : 22G239

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

One(1) water sample was received on 07/25/22 to be analyzed for Total Petroleum Hydrocarbons by Purge and Trap in accordance with Method 5030B/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. VG39G18B - 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. VG39G18L/VG39G18C 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 G238-01M/G238-01S. 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

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  
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

```

=====
Client      : EUROFINS EATON ANALYTICAL
Project     : 380-11120
=====
SDG NO.    : 22G239
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
MBLK1W	VG39G18B	1	NA	07/26/2212:21	07/26/2212:21	EG26005A	EG26003A	22VG39G18	Method Blank
LCS1W	VG39G18L	1	NA	07/26/2212:57	07/26/2212:57	EG26006A	EG26003A	22VG39G18	Lab Control Sample (LCS)
LCD1W	VG39G18C	1	NA	07/26/2213:34	07/26/2213:34	EG26007A	EG26003A	22VG39G18	LCS Duplicate
380-11120-2	G239-01	1	NA	07/26/2216:35	07/26/2216:35	EG26012A	EG26003A	22VG39G18	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: 07/19/22 09:50
Project     : 380-11120                   Date Received: 07/25/22
Batch No.   : 22G239                       Date Extracted: 07/26/22 16:35
Sample ID   : 380-11120-2                 Date Analyzed: 07/26/22 16:35
Lab Samp ID: G239-01                       Dilution Factor: 1
Lab File ID: EG26012A                       Matrix: WATER
Ext Btch ID: 22VG39G18                       % Moisture: NA
Calib. Ref.: EG26003A                       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	0.0360	0.0400	90	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

```

=====
Client      : EUROFINS EATON ANALYTICAL    Date Collected: 07/26/22 12:21
Project     : 380-11120                    Date Received: 07/26/22
Batch No.   : 22G239                       Date Extracted: 07/26/22 12:21
Sample ID   : MBLK1W                       Date Analyzed: 07/26/22 12:21
Lab Samp ID: VG39G18B                      Dilution Factor: 1
Lab File ID: EG26005A                      Matrix: WATER
Ext Btch ID: 22VG39G18                    % Moisture: NA
Calib. Ref.: EG26003A                     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	0.0354	0.0400	89	60-140

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

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

EMAX QUALITY CONTROL DATA  
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL  
PROJECT : 380-11120  
BATCH NO. : 22G239  
METHOD : 5030B/8015B

```

=====
MATRIX      : WATER                               % MOISTURE:NA
DILUTION FACTOR: 1                               1
SAMPLE ID   : MBLK1W                             LCD1W
LAB SAMPLE ID : VG39G18B                         VG39G18C
LAB FILE ID  : EG26005A                         EG26007A
DATE PREPARED : 07/26/22 12:21                 07/26/22 13:34
DATE ANALYZED : 07/26/22 12:21                 07/26/22 13:34
PREP BATCH   : 22VG39G18                       22VG39G18
CALIBRATION REF: EG26003A                      EG26003A
  
```

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	0.484	97	0.500	0.462	92	5	60-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0427	107	0.0400	0.0414	104	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 : 380-11532  
BATCH NO. : 22G238  
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: 380-11532-1	380-11532-1MS	380-11532-1MSD
LAB SAMPLE ID	: G238-01	G238-01M	G238-01S
LAB FILE ID	: EG26008A	EG26009A	EG26010A
DATE PREPARED	: 07/26/22 14:10	07/26/22 14:46	07/26/22 15:22
DATE ANALYZED	: 07/26/22 14:10	07/26/22 14:46	07/26/22 15:22
PREP BATCH	: 22VG39G18	22VG39G18	22VG39G18
CALIBRATION REF:	EG26003A	EG26003A	EG26003A

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	0.479	96	0.500	0.490	98	2	50-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0429	107	0.0400	0.0449	112	60-140

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

August 29, 2022

Debbie Frank  
 Eurofins Eaton Analytical  
 750 Royal Oaks Drive  
 Suite 100  
 Monrovia, CA 91016-

Project Name: RED-HILL Project # 38001111 Job # 380-11120-1  
 Physis Project ID: 1407003-248

Dear Debbie,

Enclosed are the analytical results for the sample submitted to PHYSIS Environmental Laboratories, Inc. (PHYSIS) on 7/22/2022. 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
Base/Neutral Extractable Compounds by EPA 625.1
Acid Extractable Compounds w/ PAHs by EPA 625.1
6-tert-Butyl-2,4-dimethylphenol by EPA 625.1
2,6-Di-tert-butylphenol by EPA 625.1
2,6-Di-tert-butyl-4-methylphenol by EPA 625.1
p-tert-Butylphenol by EPA 625.1

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

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

Regards,



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



## PROJECT SAMPLE LIST

Eurofins Eaton Analytical

PHYSIS Project ID: 1407003-248

RED-HILL Project # 38001111 Job # 380-11120-1

Total Samples: 1

PHYSIS ID	Sample ID	Description	Date	Time	Matrix	Sample Type
98645	Halawa Wells Pump 2	(380-11120-1)	7/19/2022	9:50	Samplewater	Not Specified

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## ABBREVIATIONS and ACRONYMS

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

## 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



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## CASE NARRATIVE

### QUALIFIER NOTES

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

#### **ND**

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

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

# BIANALYTICALS REPORT

TERRA AURA  
ENVIRONMENTAL LABORATORIES, INC.

*Innovative Solutions for Nature*

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## Acid Extractable Compounds

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed	
<b>Sample ID: 98645-R1</b>	<b>Halawa Wells Pump 2 (380-11120-1) Matrix: Samplewater</b>						<b>Sampled:</b>	<b>19-Jul-22 9:50</b>		<b>Received:</b>	<b>22-Jul-22</b>	
(2,4,6-Tribromophenol)	EPA 625.1	% Recovery	35	1			Total		O-38066	25-Jul-22	01-Aug-22	
(d5-Phenol)	EPA 625.1	% Recovery	19	1			Total		O-38066	25-Jul-22	01-Aug-22	
2,4,5-Trichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22	
2,4,6-Trichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22	
2,4-Dichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22	
2,4-Dinitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-38066	25-Jul-22	01-Aug-22	
2,6-Dichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22	
2,6-Di-tert-butyl-4-methylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22	
2,6-Di-tert-butylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22	
2-Chlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22	
2-Methyl-4,6-dinitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-38066	25-Jul-22	01-Aug-22	
2-Methylphenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-38066	25-Jul-22	01-Aug-22	
2-Nitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-38066	25-Jul-22	01-Aug-22	
3+4-Methylphenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-38066	25-Jul-22	01-Aug-22	
4-Chloro-3-methylphenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-38066	25-Jul-22	01-Aug-22	
4-Nitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-38066	25-Jul-22	01-Aug-22	
6-tert-butyl-2,4-dimethylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22	
Benzoic Acid	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-38066	25-Jul-22	01-Aug-22	
Benzyl Alcohol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-38066	25-Jul-22	01-Aug-22	
Pentachlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22	
Phenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-38066	25-Jul-22	01-Aug-22	
p-tert-Butylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22	

## Base/Neutral Extractable Compounds

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
<b>Sample ID: 98645-R1</b>	<b>Halawa Wells Pump 2 (380-11120-1)</b>	<b>Matrix: Samplewater</b>					<b>Sampled:</b>	<b>19-Jul-22 9:50</b>		<b>Received:</b>	<b>22-Jul-22</b>
2-Chloronaphthalene	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
2-Nitroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
3-Nitroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
4-Bromophenylphenyl ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
4-Chloroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
4-Chlorophenylphenyl ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
4-Nitroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
Aniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
Benzidine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
Bis(2-Chloroethoxy) methane	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
Bis(2-Chloroethyl) ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
Bis(2-Chloroisopropyl) ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
D benzofuran	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
Disalicylidenepropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
Hexachloroethane	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
Nitrobenzene	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
N-Nitrosodi-n-propylamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
N-Nitrosodiphenylamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22

## Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
<b>Sample ID: 98645-R1</b>	<b>Halawa Wells Pump 2 (380-11120-1) Matrix: Samplewater</b>						<b>Sampled:</b>	<b>19-Jul-22 9:50</b>	<b>Received:</b>	<b>22-Jul-22</b>	
(d10-Acenaphthene)	EPA 625.1	% Recovery	88	1			Total		O-38066	25-Jul-22	01-Aug-22
(d10-Phenanthrene)	EPA 625.1	% Recovery	94	1			Total		O-38066	25-Jul-22	01-Aug-22
(d12-Chrysene)	EPA 625.1	% Recovery	108	1			Total		O-38066	25-Jul-22	01-Aug-22
(d12-Perylene)	EPA 625.1	% Recovery	85	1			Total		O-38066	25-Jul-22	01-Aug-22
(d8-Naphthalene)	EPA 625.1	% Recovery	86	1			Total		O-38066	25-Jul-22	01-Aug-22
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
Benzo[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
Benzo[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
Benzo[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
D benz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
D benzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
D benzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22

### 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-38066	25-Jul-22	01-Aug-22
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22





# QUALITY CONTROL REPORT

TERRA ENVIRONMENTAL LABORATORIES, INC. AURA

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## Acid 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: 98644-B1</b>		<b>QAQC Procedural Blank</b>			<b>Matrix: BlankMatrix</b>			<b>Sampled:</b>		<b>Received:</b>			
		Method: EPA 625.1			Batch ID: O-38066			Prepared: 25-Jul-22		Analyzed: 01-Aug-22			
(2,4,6-Tribromophenol)	Total	95	1			% Recovery	100	95	44 - 159%	PASS			
(d5-Phenol)	Total	119	1			% Recovery	100	119	20 - 121%	PASS			
2,4,5-Trichlorophenol	Total	ND	1	0.05	0.1	µg/L							
2,4,6-Trichlorophenol	Total	ND	1	0.05	0.1	µg/L							
2,4-Dichlorophenol	Total	ND	1	0.05	0.1	µg/L							
2,4-Dinitrophenol	Total	ND	1	0.1	0.2	µg/L							
2,6-Dichlorophenol	Total	ND	1	0.05	0.1	µg/L							
2,6-Di-tert-butyl-4-methylphenol	Total	ND	1	0.05	0.1	µg/L							
2,6-Di-tert-butylphenol	Total	ND	1	0.05	0.1	µg/L							
2-Chlorophenol	Total	ND	1	0.05	0.1	µg/L							
2-Methyl-4,6-dinitrophenol	Total	ND	1	0.1	0.2	µg/L							
2-Methylphenol	Total	ND	1	0.1	0.2	µg/L							
2-Nitrophenol	Total	ND	1	0.1	0.2	µg/L							
3+4-Methylphenol	Total	ND	1	0.1	0.2	µg/L							
4-Chloro-3-methylphenol	Total	ND	1	0.1	0.2	µg/L							
4-Nitrophenol	Total	ND	1	0.1	0.2	µg/L							
6-tert-butyl-2,4-dimethylphenol	Total	ND	1	0.05	0.1	µg/L							
Benzoic Acid	Total	ND	1	0.1	0.2	µg/L							
Benzyl Alcohol	Total	ND	1	0.1	0.2	µg/L							
Pentachlorophenol	Total	ND	1	0.05	0.1	µg/L							
Phenol	Total	ND	1	0.1	0.2	µg/L							
p-tert-Butylphenol	Total	ND	1	0.05	0.1	µg/L							

## Acid Extractable Compounds

## QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY		PRECISION	QA CODE
							LEVEL	RESULT	%	LIMITS	%	LIMITS
<b>Sample ID: 98644-BS1</b>		<b>QAQC Procedural Blank</b>			<b>Matrix: BlankMatrix</b>			<b>Sampled:</b>		<b>Received:</b>		
Method: EPA 625.1		Batch ID: O-38066			Prepared: 25-Jul-22		Analyzed: 01-Aug-22					
(2,4,6-Tribromophenol)	Total	144	1			% Recovery	100	0	144	44 - 159%	PASS	
(d5-Phenol)	Total	113	1			% Recovery	100	0	113	20 - 121%	PASS	
2,4,5-Trichlorophenol	Total	0.736	1	0.05	0.1	µg/L	1	0	74	57 - 116%	PASS	
2,4,6-Trichlorophenol	Total	0.667	1	0.05	0.1	µg/L	1	0	67	56 - 118%	PASS	
2,4-Dichlorophenol	Total	0.798	1	0.05	0.1	µg/L	1	0	80	51 - 117%	PASS	
2,4-Dinitrophenol	Total	0.522	1	0.1	0.2	µg/L	0.5	0	104	0 - 152%	PASS	
2,6-Dichlorophenol	Total	0.842	1	0.05	0.1	µg/L	1	0	84	30 - 130%	PASS	
2,6-Di-tert-butyl-4-methylphenol	Total	0.356	1	0.05	0.1	µg/L	0.5	0	71	50 - 150%	PASS	
2,6-Di-tert-butylphenol	Total	0.501	1	0.05	0.1	µg/L	1	0	50	50 - 150%	PASS	
2-Chlorophenol	Total	0.896	1	0.05	0.1	µg/L	1	0	90	41 - 110%	PASS	
2-Methyl-4,6-dinitrophenol	Total	0.517	1	0.1	0.2	µg/L	0.5	0	103	0 - 141%	PASS	
2-Methylphenol	Total	0.742	1	0.1	0.2	µg/L	1	0	74	40 - 117%	PASS	
2-Nitrophenol	Total	0.569	1	0.1	0.2	µg/L	1	0	57	40 - 117%	PASS	
3+4-Methylphenol	Total	0.922	1	0.1	0.2	µg/L	1	0	92	0 - 130%	PASS	
4-Chloro-3-methylphenol	Total	0.683	1	0.1	0.2	µg/L	1	0	68	51 - 128%	PASS	
4-Nitrophenol	Total	0.513	1	0.1	0.2	µg/L	1	0	51	10 - 164%	PASS	
6-tert-butyl-2,4-dimethylphenol	Total	0.501	1	0.05	0.1	µg/L	1	0	50	50 - 150%	PASS	
Benzoic Acid	Total	0.457	1	0.1	0.2	µg/L	0.5	0	91	2 - 145%	PASS	
Benzyl Alcohol	Total	1.02	1	0.1	0.2	µg/L	1	0	102	43 - 148%	PASS	
Pentachlorophenol	Total	0.482	1	0.05	0.1	µg/L	1	0	48	36 - 111%	PASS	
Phenol	Total	0.904	1	0.1	0.2	µg/L	1	0	90	29 - 114%	PASS	
p-tert-Butylphenol	Total	0.5	1	0.05	0.1	µg/L	1	0	50	50 - 150%	PASS	

## Acid Extractable Compounds

## QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY		PRECISION		QA CODEc	
									%	LIMITS	%	LIMITS		
<b>Sample ID: 98644-BS2</b>		<b>QAQC Procedural Blank</b>			<b>Matrix: BlankMatrix</b>			<b>Sampled:</b>		<b>Received:</b>				
Method: EPA 625.1		Batch ID: O-38066			Prepared: 25-Jul-22		Analyzed: 01-Aug-22							
(2,4,6-Tribromophenol)	Total	136	1			% Recovery	100	0	136	44 - 159%	PASS	6	30	PASS
(d5-Phenol)	Total	112	1			% Recovery	100	0	112	20 - 121%	PASS	1	30	PASS
2,4,5-Trichlorophenol	Total	0.837	1	0.05	0.1	µg/L	1	0	84	57 - 116%	PASS	13	30	PASS
2,4,6-Trichlorophenol	Total	0.868	1	0.05	0.1	µg/L	1	0	87	56 - 118%	PASS	26	30	PASS
2,4-Dichlorophenol	Total	0.899	1	0.05	0.1	µg/L	1	0	90	51 - 117%	PASS	12	30	PASS
2,4-Dinitrophenol	Total	0.655	1	0.1	0.2	µg/L	0.5	0	131	0 - 152%	PASS	23	30	PASS
2,6-Dichlorophenol	Total	0.962	1	0.05	0.1	µg/L	1	0	96	30 - 130%	PASS	13	30	PASS
2,6-Di-tert-butyl-4-methylphenol	Total	0.437	1	0.05	0.1	µg/L	0.5	0	87	50 - 150%	PASS	20	30	PASS
2,6-Di-tert-butylphenol	Total	0.5	1	0.05	0.1	µg/L	1	0	50	50 - 150%	PASS	0	30	PASS
2-Chlorophenol	Total	0.937	1	0.05	0.1	µg/L	1	0	94	41 - 110%	PASS	4	30	PASS
2-Methyl-4,6-dinitrophenol	Total	0.69	1	0.1	0.2	µg/L	0.5	0	138	0 - 141%	PASS	29	30	PASS
2-Methylphenol	Total	0.935	1	0.1	0.2	µg/L	1	0	94	40 - 117%	PASS	24	30	PASS
2-Nitrophenol	Total	0.741	1	0.1	0.2	µg/L	1	0	74	40 - 117%	PASS	26	30	PASS
3+4-Methylphenol	Total	0.975	1	0.1	0.2	µg/L	1	0	98	0 - 130%	PASS	6	30	PASS
4-Chloro-3-methylphenol	Total	0.832	1	0.1	0.2	µg/L	1	0	83	51 - 128%	PASS	20	30	PASS
4-Nitrophenol	Total	0.653	1	0.1	0.2	µg/L	1	0	65	10 - 164%	PASS	24	30	PASS
6-tert-butyl-2,4-dimethylphenol	Total	0.501	1	0.05	0.1	µg/L	1	0	50	50 - 150%	PASS	0	30	PASS
Benzoic Acid	Total	0.601	1	0.1	0.2	µg/L	0.5	0	120	2 - 145%	PASS	27	30	PASS
Benzyl Alcohol	Total	0.978	1	0.1	0.2	µg/L	1	0	98	43 - 148%	PASS	4	30	PASS
Pentachlorophenol	Total	0.638	1	0.05	0.1	µg/L	1	0	64	36 - 111%	PASS	29	30	PASS
Phenol	Total	0.91	1	0.1	0.2	µg/L	1	0	91	29 - 114%	PASS	1	30	PASS
p-tert-Butylphenol	Total	0.567	1	0.05	0.1	µg/L	1	0	57	50 - 150%	PASS	13	30	PASS

## Base/Neutral Extractable Compounds

## QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY	PRECISION	QA CODE
							LEVEL	RESULT	%	LIMITS	%
<b>Sample ID: 98644-B1</b>		<b>QAQC Procedural Blank</b>			<b>Matrix: BlankMatrix</b>		<b>Sampled:</b>		<b>Received:</b>		
Method: EPA 625.1		Batch ID: O-38066		Prepared: 25-Jul-22		Analyzed: 01-Aug-22					
2-Chloronaphthalene	Total	ND	1	0.05	0.1	µg/L					
2-Nitroaniline	Total	ND	1	0.05	0.1	µg/L					
3-Nitroaniline	Total	ND	1	0.05	0.1	µg/L					
4-Bromophenylphenyl ether	Total	ND	1	0.05	0.1	µg/L					
4-Chloroaniline	Total	ND	1	0.05	0.1	µg/L					
4-Chlorophenylphenyl ether	Total	ND	1	0.05	0.1	µg/L					
4-Nitroaniline	Total	ND	1	0.05	0.1	µg/L					
Aniline	Total	ND	1	0.05	0.1	µg/L					
Benzidine	Total	ND	1	0.05	0.1	µg/L					
Bis(2-Chloroethoxy) methane	Total	ND	1	0.05	0.1	µg/L					
Bis(2-Chloroethyl) ether	Total	ND	1	0.05	0.1	µg/L					
Bis(2-Chloroisopropyl) ether	Total	ND	1	0.05	0.1	µg/L					
Dibenzofuran	Total	ND	1	0.05	0.1	µg/L					
Disalicylidenepropanediamin	Total	ND	1	0.05	0.1	µg/L					
Hexachloroethane	Total	ND	1	0.05	0.1	µg/L					
Nitrobenzene	Total	ND	1	0.05	0.1	µg/L					
N-Nitrosodi-n-propylamine	Total	ND	1	0.05	0.1	µg/L					
N-Nitrosodiphenylamine	Total	ND	1	0.05	0.1	µg/L					

## 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: 98644-BS1</b>		<b>QAQC Procedural Blank</b>			<b>Matrix: BlankMatrix</b>			<b>Sampled:</b>		<b>Received:</b>		
Method: EPA 625.1		Batch ID: O-38066			Prepared: 25-Jul-22		Analyzed: 01-Aug-22					
2-Chloronaphthalene	Total	1.06	1	0.05	0.1	µg/L	1	0	106	53 - 130%	PASS	
2-Nitroaniline	Total	0.8	1	0.05	0.1	µg/L	1	0	80	69 - 114%	PASS	
3-Nitroaniline	Total	0.511	1	0.05	0.1	µg/L	0.5	0	102	23 - 137%	PASS	
4-Bromophenylphenyl ether	Total	0.82	1	0.05	0.1	µg/L	1	0	82	61 - 132%	PASS	
4-Chloroaniline	Total	0.573	1	0.05	0.1	µg/L	0.5	0	115	50 - 150%	PASS	
4-Chlorophenylphenyl ether	Total	0.99	1	0.05	0.1	µg/L	1	0	99	63 - 130%	PASS	
4-Nitroaniline	Total	0.707	1	0.05	0.1	µg/L	1	0	71	10 - 159%	PASS	
Aniline	Total	0.106	1	0.05	0.1	µg/L	0.1	0	106	50 - 150%	PASS	
Benzidine	Total	0.0243	1	0.05	0.1	µg/L	0.1	0	24	0 - 125%	PASS	
Bis(2-Chloroethoxy) methane	Total	0.91	1	0.05	0.1	µg/L	1	0	91	66 - 122%	PASS	
Bis(2-Chloroethyl) ether	Total	0.898	1	0.05	0.1	µg/L	1	0	90	43 - 127%	PASS	
Bis(2-Chloroisopropyl) ether	Total	1.58	1	0.05	0.1	µg/L	2	0	79	49 - 128%	PASS	
Dibenzofuran	Total	1.04	1	0.05	0.1	µg/L	1	0	104	50 - 150%	PASS	
Disalicylidenepropanediamin	Total	9.89	1	0.05	0.1	µg/L	10	0	99	50 - 150%	PASS	
Hexachloroethane	Total	1.03	1	0.05	0.1	µg/L	1	0	103	27 - 130%	PASS	
Nitrobenzene	Total	0.994	1	0.05	0.1	µg/L	1	0	99	54 - 111%	PASS	
N-Nitrosodi-n-propylamine	Total	0.728	1	0.05	0.1	µg/L	1	0	73	61 - 152%	PASS	
N-Nitrosodiphenylamine	Total	0.869	1	0.05	0.1	µg/L	1	0	87	49 - 142%	PASS	

## Base/Neutral Extractable Compounds

## QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY		PRECISION		QA CODEc	
									%	LIMITS	%	LIMITS		
<b>Sample ID: 98644-BS2</b>		<b>QAQC Procedural Blank</b>			<b>Matrix: BlankMatrix</b>			<b>Sampled:</b>		<b>Received:</b>				
Method: EPA 625.1		Batch ID: O-38066			Prepared: 25-Jul-22		Analyzed: 01-Aug-22							
2-Chloronaphthalene	Total	1.05	1	0.05	0.1	µg/L	1	0	105	53 - 130%	PASS	1	30	PASS
2-Nitroaniline	Total	0.809	1	0.05	0.1	µg/L	1	0	81	69 - 114%	PASS	1	30	PASS
3-Nitroaniline	Total	0.685	1	0.05	0.1	µg/L	0.5	0	137	23 - 137%	PASS	29	30	PASS
4-Bromophenylphenyl ether	Total	0.934	1	0.05	0.1	µg/L	1	0	93	61 - 132%	PASS	13	30	PASS
4-Chloroaniline	Total	0.689	1	0.05	0.1	µg/L	0.5	0	138	50 - 150%	PASS	18	30	PASS
4-Chlorophenylphenyl ether	Total	1.03	1	0.05	0.1	µg/L	1	0	103	63 - 130%	PASS	4	30	PASS
4-Nitroaniline	Total	0.872	1	0.05	0.1	µg/L	1	0	87	10 - 159%	PASS	20	30	PASS
Aniline	Total	0.0968	1	0.05	0.1	µg/L	0.1	0	97	50 - 150%	PASS	9	30	PASS
Benzidine	Total	0.0217	1	0.05	0.1	µg/L	0.1	0	22	0 - 125%	PASS	9	30	PASS
Bis(2-Chloroethoxy) methane	Total	0.97	1	0.05	0.1	µg/L	1	0	97	66 - 122%	PASS	6	30	PASS
Bis(2-Chloroethyl) ether	Total	0.894	1	0.05	0.1	µg/L	1	0	89	43 - 127%	PASS	1	30	PASS
Bis(2-Chloroisopropyl) ether	Total	1.5	1	0.05	0.1	µg/L	2	0	75	49 - 128%	PASS	5	30	PASS
Dibenzofuran	Total	1.06	1	0.05	0.1	µg/L	1	0	106	50 - 150%	PASS	2	30	PASS
Disalicylidenepropanediamin	Total	10.2	1	0.05	0.1	µg/L	10	0	102	50 - 150%	PASS	3	30	PASS
Hexachloroethane	Total	0.938	1	0.05	0.1	µg/L	1	0	94	27 - 130%	PASS	9	30	PASS
Nitrobenzene	Total	0.965	1	0.05	0.1	µg/L	1	0	96	54 - 111%	PASS	3	30	PASS
N-Nitrosodi-n-propylamine	Total	0.939	1	0.05	0.1	µg/L	1	0	94	61 - 152%	PASS	25	30	PASS
N-Nitrosodiphenylamine	Total	1.03	1	0.05	0.1	µg/L	1	0	103	49 - 142%	PASS	17	30	PASS

## 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: 98644-B1</b>		<b>QAQC Procedural Blank</b>			<b>Matrix: BlankMatrix</b>			<b>Sampled:</b>		<b>Received:</b>		
Method: EPA 625.1		Batch ID: O-38066			Prepared: 25-Jul-22		Analyzed: 01-Aug-22					
(d10-Acenaphthene)	Total	98	1			% Recovery	100	98	65 - 113%	PASS		
(d10-Phenanthrene)	Total	97	1			% Recovery	100	97	80 - 111%	PASS		
(d12-Chrysene)	Total	92	1			% Recovery	100	92	60 - 139%	PASS		
(d12-Perylene)	Total	87	1			% Recovery	100	87	36 - 161%	PASS		
(d8-Naphthalene)	Total	117	1			% Recovery	100	117	44 - 119%	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	



## Polynuclear Aromatic Hydrocarbons

## QUALITY CONTROL REPORT

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



## Polynuclear Aromatic Hydrocarbons

## QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY	PRECISION	QA CODE	
							LEVEL	RESULT	%	LIMITS	%	LIMITS
<b>Sample ID: 98644-BS1</b>		<b>QAQC Procedural Blank</b>			<b>Matrix: BlankMatrix</b>			<b>Sampled:</b>		<b>Received:</b>		
Method: EPA 625.1		Batch ID: O-38066			Prepared: 25-Jul-22		Analyzed: 01-Aug-22					
(d10-Acenaphthene)	Total	102	1				% Recovery	100	0	102	65 - 113%	PASS
(d10-Phenanthrene)	Total	98	1				% Recovery	100	0	98	80 - 111%	PASS
(d12-Chrysene)	Total	120	1				% Recovery	100	0	120	60 - 139%	PASS
(d12-Perylene)	Total	88	1				% Recovery	100	0	88	36 - 161%	PASS
(d8-Naphthalene)	Total	99	1				% Recovery	100	0	99	44 - 119%	PASS
1-Methylnaphthalene	Total	0.478	1	0.001	0.005	µg/L		0.5	0	96	49 - 117%	PASS
1-Methylphenanthrene	Total	0.414	1	0.001	0.005	µg/L		0.5	0	83	66 - 127%	PASS
2,3,5-Trimethylnaphthalene	Total	0.453	1	0.001	0.005	µg/L		0.5	0	91	57 - 120%	PASS
2,6-Dimethylnaphthalene	Total	0.463	1	0.001	0.005	µg/L		0.5	0	93	54 - 117%	PASS
2-Methylnaphthalene	Total	1.63	1	0.001	0.005	µg/L		1.5	0	109	47 - 130%	PASS
Acenaphthene	Total	1.56	1	0.001	0.005	µg/L		1.5	0	104	53 - 131%	PASS
Acenaphthylene	Total	1.58	1	0.001	0.005	µg/L		1.5	0	105	43 - 140%	PASS
Anthracene	Total	1.6	1	0.001	0.005	µg/L		1.5	0	107	58 - 135%	PASS
Benz[a]anthracene	Total	1.44	1	0.001	0.005	µg/L		1.5	0	96	55 - 145%	PASS
Benzo[a]pyrene	Total	1.85	1	0.001	0.005	µg/L		1.5	0	123	51 - 143%	PASS
Benzo[b]fluoranthene	Total	1.62	1	0.001	0.005	µg/L		1.5	0	108	46 - 165%	PASS
Benzo[e]pyrene	Total	0.454	1	0.001	0.005	µg/L		0.5	0	91	42 - 152%	PASS
Benzo[g,h,i]perylene	Total	1.77	1	0.001	0.005	µg/L		1.5	0	118	63 - 133%	PASS
Benzo[k]fluoranthene	Total	1.54	1	0.001	0.005	µg/L		1.5	0	103	56 - 145%	PASS
Biphenyl	Total	0.532	1	0.001	0.005	µg/L		0.5	0	106	56 - 119%	PASS
Chrysene	Total	1.96	1	0.001	0.005	µg/L		1.5	0	131	56 - 141%	PASS
Dibenz[a,h]anthracene	Total	1.33	1	0.001	0.005	µg/L		1.5	0	89	55 - 150%	PASS
Dibenzo[a,l]pyrene	Total	0.372	1	0.001	0.005	µg/L		0.5	0	74	50 - 150%	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	
Dibenzothiophene	Total	0.449	1	0.001	0.005	µg/L	0.5	0	90	75 - 113%	PASS		
Fluoranthene	Total	1.55	1	0.001	0.005	µg/L	1.5	0	103	60 - 146%	PASS		
Fluorene	Total	1.65	1	0.001	0.005	µg/L	1.5	0	110	58 - 131%	PASS		
Indeno[1,2,3-cd]pyrene	Total	1.3	1	0.001	0.005	µg/L	1.5	0	87	50 - 151%	PASS		
Naphthalene	Total	1.59	1	0.001	0.005	µg/L	1.5	0	106	41 - 126%	PASS		
Perylene	Total	0.417	1	0.001	0.005	µg/L	0.5	0	83	48 - 141%	PASS		
Phenanthrene	Total	1.62	1	0.001	0.005	µg/L	1.5	0	108	67 - 127%	PASS		
Pyrene	Total	1.52	1	0.001	0.005	µg/L	1.5	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: 98644-BS2</b>		<b>QAQC Procedural Blank</b>			<b>Matrix: BlankMatrix</b>			<b>Sampled:</b>			<b>Received:</b>			
Method: EPA 625.1		Batch ID: O-38066			Prepared: 25-Jul-22			Analyzed: 01-Aug-22						
(d10-Acenaphthene)	Total	105	1			% Recovery	100	0	105	65 - 113%	PASS	3	30	PASS
(d10-Phenanthrene)	Total	106	1			% Recovery	100	0	106	80 - 111%	PASS	8	30	PASS
(d12-Chrysene)	Total	136	1			% Recovery	100	0	136	60 - 139%	PASS	12	30	PASS
(d12-Perylene)	Total	104	1			% Recovery	100	0	104	36 - 161%	PASS	17	30	PASS
(d8-Naphthalene)	Total	100	1			% Recovery	100	0	100	44 - 119%	PASS	1	30	PASS
1-Methylnaphthalene	Total	0.48	1	0.001	0.005	µg/L	0.5	0	96	49 - 117%	PASS	0	30	PASS
1-Methylphenanthrene	Total	0.45	1	0.001	0.005	µg/L	0.5	0	90	66 - 127%	PASS	8	30	PASS
2,3,5-Trimethylnaphthalene	Total	0.473	1	0.001	0.005	µg/L	0.5	0	95	57 - 120%	PASS	4	30	PASS
2,6-Dimethylnaphthalene	Total	0.486	1	0.001	0.005	µg/L	0.5	0	97	54 - 117%	PASS	4	30	PASS
2-Methylnaphthalene	Total	1.68	1	0.001	0.005	µg/L	1.5	0	112	47 - 130%	PASS	3	30	PASS
Acenaphthene	Total	1.62	1	0.001	0.005	µg/L	1.5	0	108	53 - 131%	PASS	4	30	PASS
Acenaphthylene	Total	1.64	1	0.001	0.005	µg/L	1.5	0	109	43 - 140%	PASS	4	30	PASS
Anthracene	Total	1.7	1	0.001	0.005	µg/L	1.5	0	113	58 - 135%	PASS	5	30	PASS
Benz[a]anthracene	Total	1.68	1	0.001	0.005	µg/L	1.5	0	112	55 - 145%	PASS	15	30	PASS
Benzo[a]pyrene	Total	1.95	1	0.001	0.005	µg/L	1.5	0	130	51 - 143%	PASS	6	30	PASS
Benzo[b]fluoranthene	Total	1.75	1	0.001	0.005	µg/L	1.5	0	117	46 - 165%	PASS	8	30	PASS
Benzo[e]pyrene	Total	0.537	1	0.001	0.005	µg/L	0.5	0	107	42 - 152%	PASS	16	30	PASS
Benzo[g,h,i]perylene	Total	1.95	1	0.001	0.005	µg/L	1.5	0	130	63 - 133%	PASS	10	30	PASS
Benzo[k]fluoranthene	Total	1.61	1	0.001	0.005	µg/L	1.5	0	107	56 - 145%	PASS	4	30	PASS
Biphenyl	Total	0.521	1	0.001	0.005	µg/L	0.5	0	104	56 - 119%	PASS	2	30	PASS
Chrysene	Total	2.12	1	0.001	0.005	µg/L	1.5	0	141	56 - 141%	PASS	7	30	PASS
Dibenz[a,h]anthracene	Total	1.56	1	0.001	0.005	µg/L	1.5	0	104	55 - 150%	PASS	16	30	PASS
Dibenzo[a,l]pyrene	Total	0.324	1	0.001	0.005	µg/L	0.5	0	65	50 - 150%	PASS	13	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		
Dibenzothiophene	Total	0.5	1	0.001	0.005	µg/L	0.5	0	100	75 - 113%	PASS	11	30	PASS
Fluoranthene	Total	1.74	1	0.001	0.005	µg/L	1.5	0	116	60 - 146%	PASS	12	30	PASS
Fluorene	Total	1.76	1	0.001	0.005	µg/L	1.5	0	117	58 - 131%	PASS	6	30	PASS
Indeno[1,2,3-cd]pyrene	Total	1.55	1	0.001	0.005	µg/L	1.5	0	103	50 - 151%	PASS	17	30	PASS
Naphthalene	Total	1.58	1	0.001	0.005	µg/L	1.5	0	105	41 - 126%	PASS	1	30	PASS
Perylene	Total	0.482	1	0.001	0.005	µg/L	0.5	0	96	48 - 141%	PASS	15	30	PASS
Phenanthrene	Total	1.75	1	0.001	0.005	µg/L	1.5	0	117	67 - 127%	PASS	8	30	PASS
Pyrene	Total	1.76	1	0.001	0.005	µg/L	1.5	0	117	54 - 156%	PASS	15	30	PASS



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**PHYSIS**

**TENTATIVELY**

**IDENTIFIED COMPOUNDS**

ENVIRONMENTAL LABORATORIES, INC.

*Innovative Solutions for Nature*

Sample ID: 98645

RT	Area Pct	Concentration (ng/L)	Library/ID	Cas Number	Match Qual
32.6461	6.8740	1111	Anthracene-D10-	1719-06-8	96
41.8586	2.9601	478	Cyclic octaatomic sulfur	10544-50-0	96
43.1770	1.2480	202	Terephthalic acid, isobutyl butyl ester	1000323-56-2	94
14.9723	1.0675	173	Cyclohexane, 1,2,4,5-tetraethyl-, (1.alpha.,2.alpha.,4.alpha.,5.alpha.)-	61142-24-3	83

Concentration estimated using the response for Anthracene-d10

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Sample ID: Lab Blank Batch O-38066

RT	Area Pct	Concentration (ng/L)	Library/ID	Cas Number	Match Qual
32.6450	7.2436	1111	Anthracene-D10-	1719-06-8	96
14.9726	1.4015	215	Cyclohexane, 1,2,4,5-tetraethyl-, (1.alpha.,2.alpha.,4.alpha.,5.alpha.)-	61142-24-3	81
14.8120	0.7195	110	Cyclohexane, 1,2,4,5-tetraethyl-, (1.alpha.,2.alpha.,4.alpha.,5.alpha.)-	61142-24-3	80

Concentration estimated using the response for Anthracene-d10

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# PERFORMANCE CHAIN OF CUSTODY

TERRA ENVIRONMENTAL LABORATORIES, INC. AURA

*Innovative Solutions for Nature*

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**Monrovia, CA (Suite 100)**  
750 Royal Oaks Drive Suite 100  
Monrovia, CA 91018  
Phone: 626-386-1100

### Chain of Custody Record



**eurofins**  
Environmental Testing  
America

#### Client Information (Sub Contract Lab)

Client Contact: Frank, Debbie L  
Shipping/Receiving: Debbie.Frank@et.eurofins.com  
Company: Physis Environmental Laboratories  
Address: 1904 Wright Circle, State of Origin: Hawaii  
City: Anahelm  
State, Zip: CA, 92806  
Phone: PO #:  
Email: WO #:  
Project Name: RED-HILL  
Project #: 38001111  
Site: S5OW#:  
Honolulu BWS Sites

Lab P/N: Frank, Debbie L  
Carrier Tracking No(s):  
COC No.: 380-13748-1  
Page: Page 1 of 1  
Job #: 380-1120-1

Due Date Requested: 8/3/2022  
TAT Requested (days):  
Analysis Requested

Sample ID	Sample Date	Sample Time	Sample Type (G=comp, P=grab)	Matrix (Water, Seawater, Groundwater, etc.)	Field Filtered Sample (Yes or No)	Perform MSMSD (Yes or No)	Analysis Requested	Total Number of Containers	Special Instructions/Note:
Halawa Wells Pump 2 (380-1120-1)	7/9/22	09:50		Water	X	X	X	7	See Attached Instructions

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

**Possible Hazard Identification**  
 Return To Client  
 Disposal By Lab  
 Archive For \_\_\_\_\_ Months

Deliverable Requested: I, II, III, IV, Other (Specify) \_\_\_\_\_ Primary Deliverable Rank: 2  
 Special Instructions/QC Requirements: \_\_\_\_\_

Relinquished by:	Date/Time:	Company:	Time:	Method of Shipment:
Frank, Debbie L	7/9/22 11:53	Physis		
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:

Custody Seal Intact: A Yes A No  
Custody Seal No.:

Project Iteration ID: 1407003-248  
 Client Name: Eurofins Eaton Analytical  
 Project Name: RED-HILL Project # 38001111  
 Job # 380-11120-1  
 COC Page Number: 2 of 2  
 Bottle Label Color: NA

**Sample Receipt Summary**

**Receiving Info**

1. Initials Received By: [Signature]
2. Date Received: 7/22/20
3. Time Received: 1153
4. Client Name: Eurofins
5. Courier Information: (Please circle)
  - Client
  - UPS
  - Area Fast
  - DRS
  - FedEx
  - GSO/GLS
  - Ontrac
  - PAMS
  - PHYSIS Driver:
    - i. Start Time: \_\_\_\_\_
    - ii. End Time: \_\_\_\_\_
    - iii. Total Mileage: \_\_\_\_\_
    - iv. Number of Pickups: \_\_\_\_\_
6. Container Information: (Please put the # of containers or circle none)
  - 3 Cooler
  - Styrofoam Cooler
  - Boxes
  - None
  - Carboy(s)
  - Carboy Trash Can(s)
  - Carboy Cap(s)
  - Other \_\_\_\_\_
7. What type of ice was used: (Please circle any that apply)
  - Wet Ice
  - Blue Ice
  - Dry Ice
  - Water
  - None
8. Randomly Selected Samples Temperature (°C): 1.2 Used I/R Thermometer # 12

**Inspection Info**

1. Initials Inspected By: [Signature]

**Sample Integrity Upon Receipt:**

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

Notes:

# CHAIN OF CUSTODY RECORD

750 Royal Oaks Drive, St  
Monrovia, CA 91016-362

Phone: 626 386 1100  
Fax: 626 386 1101

800 566 LABS (800 566 5227)

380-11120 COC



EUROFINS EATON ANALYTICAL USE ONLY:

**LOGIN COMMENTS:** \_\_\_\_\_

**SAMPLES CHECKED AGAINST COC BY:** W

**SAMPLES LOGGED IN BY:** GS

**SAMPLE TEMP RECEIVED AT:**

Colton / No. California / Arizona \_\_\_\_\_ °C (Compliance: 4 ± 2 °C)

Monrovia 37 °C (Compliance: 4 ± 2 °C)

**CONDITION OF BLUE ICE:** Frozen  Partially Frozen \_\_\_\_\_ Thawed \_\_\_\_\_ Wet Ice \_\_\_\_\_ No Ice \_\_\_\_\_

**METHOD OF SHIPMENT:** Pick-Up / Walk-In / FedEx / UPS / DHL / Area Fast / Top Line / Other: \_\_\_\_\_

TO BE COMPLETED BY SAMPLER:

**COMPANY/AGENCY NAME:** BWS HONOLULU

**PROJECT CODE:** 3Q2022

**COMPLIANCE SAMPLES**  **NON-COMPLIANCE SAMPLES**  (check for yes)

- Requires state forms  **REGULATION INVOLVED:** \_\_\_\_\_

**EEA CLIENT CODE:** \_\_\_\_\_ **COC ID:** \_\_\_\_\_ **SAMPLE GROUP:** Red Hill Quarterly

Type of samples (circle one): ROUTINE SPECIAL CONFIRMATION (eg. SDWA, Phase V, NPDES, FDA,...)

**SEE ATTACHED BOTTLE ORDER FOR ANALYSES**  (check for yes), OR

**list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)**

TAT requested: rush by adv notice only

STD X 1 wk \_\_\_\_\_ 3 day \_\_\_\_\_ 2 day \_\_\_\_\_ 1 day \_\_\_\_\_

SAMPLE DATE	SAMPLE TIME	SAMPLE ID	CLIENT LAB ID	MATRIX *	FIELD DATA	FIELD DATA	Q3 RED HILL											SAMPLER COMMENTS			
07/19/22	0950	Halawa Wells Pump 2	331-024	FW			X														See comment on 1L amber glass bottle having sodium dichromate / hydrochloric a.c.d preservative. UIC 7-17-2022
																					Temp: <u>1°C</u>

\* **MATRIX TYPES:** RSW = Raw Surface Water    CFW = Chlor(am)inated Finished Water    SEAW = Sea Water    BW = Bottled Water    SO = Soil    O = Other - Please Identify  
 RGW = Raw Ground Water    FW = Other Finished Water    WW = Waste Water    SW = Storm Water    SL = Sludge

SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
SAMPLED BY: [Redacted]	Lesli Laanui	Honolulu Board of Water Supply	07/19/22	
RELINQUISHED BY: [Redacted]	Lesli Laanui	Honolulu Board of Water Supply	07/19/22	1200
RECEIVED BY: <u>[Signature]</u>	<u>[Signature]</u>	<u>[Signature]</u>	7-20-22	1010
RELINQUISHED BY:				
RECEIVED BY:				



Kit Order for BOARD OF WATER SUPPLY, CITY AND COUNTY OF

Debbie L Frank is your Eurofins Eaton Analytical, LLC Service Manager

750 Royal Oaks Drive, Suite 100  
Monrovia, California 91016-3629  
(626) 386-1100 FAX (866) 988-3757

**Note: Sampler Please return this paper with your samples**

Kit #: n/a

Created By: Debbie L Frank - [DEB]  
Deliver By: 02/03/2022  
STG: Bottle Orders  
Ice Type: W

Client ID: HONOLULU



Project Code: RED-HILL  
Group Name: 8015 gas Stock Containers and Labels  
PO#/JOB#: C20525101 exp 05312023  
Description: 8015 gas Stock FS+TB and 8015 L

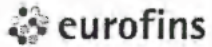
Ship Sample Kits to  
Honolulu Board of Water Supply  
630 South Beretania Street  
Chemistry Lab  
Honolulu, HI 96843  
  
Attn: Ron Fenstermacher  
Phone: 808-748-5841  
Fax: 808-550-5572

Send Report to  
Honolulu Board of Water Supply  
630 South Beretania Street  
Public Service Bldg. Room 308  
Honolulu, HI 96843  
  
Attn: Erwin Kawata  
Phone: 808-748-5091  
Fax: 808-550-5018

Billing Address  
Honolulu Board of Water Supply  
630 South Beretania Street  
Public Service Bldg. Room 308  
Honolulu, HI 96843  
  
Attn: Erwin Kawata  
Phone: 808-748-5091  
Fax: 808-550-5018

# of Sample Tests	Bottle Qty - Type [ preservative information ]	Total	UN DOT#
Sodium Thiosulfate/ Hydrochloric Acid	6 - 1 L amber glass [1 mL Thio 8% + HCl] 2 mL of 50% HCL on side (glass vial)	6	
Subcontract - 625 Acid LL (EAL) Physis	4 - 1 L amber glass [1 mL Thio 8%]	4	
Subcontract - 625 Base Neutral LL (EAL)	2 - 1 L amber glass [1 mL Thio 8%]	2	
Subcontract - 625 PAH Physis LL (EAL) + TICS	2 - 1 L amber glass [1 mL Thio 8%]	2	
Subcontract - 8015 - Ethanol	4 - 40ml amber glass vial [1 drop Thio (8%)]	4	
Subcontract - 8015 Gas (Purgeable) LL (EAL)	4 - 40ml amber glass [1 drop Thio + HCl dropper]	4	10 drops per vial
VOA TB	2 - 40ml amber glass vial [1 drop Thio + HCL]	2	

Notes: Quarter Red Hill set for Halawa Wells Pump 2



Eaton Analytical

# INTERNAL CHAIN OF CUSTODY RECORD

EEA Folder Number:

### SAMPLE TEMP RECEIVED:

Note: If samples are out of temperature range, let the ASMs know. ASMs will determine whether to proceed with analysis or not.

SAMPLES REC'D DAY OF COLLECTION? Yes  No

IR Gun ID = 630 (Observation = 3.9 °C) (Corr. Factor -0.2 °C) (Final = 3.7 °C)

TYPE OF ICE: Real  Synthetic  No Ice  CONDITION OF ICE: Frozen  Partially Frozen  Thawed  N/A

METHOD OF SHIPMENT: Pick-Up / Walk-In / FedEx / UPS / DHL / Area Fast / Top Line / Other: \_\_\_\_\_

### Compliance Acceptance Criteria:

- 1) **Chemistry:** >0, ≤6°C, not frozen (NELAP) (if received after 24 hrs of sample collection)
- 2) **Microbiology, Distribution:** < 10°C, not frozen (can be ≥10°C if received on ice the same day as sample collection, within 8 hours)
- 3) **Microbiology, Surface Water:** < 10°C (if received after 2 hours of sample collection)

If out of temperature range for both Chemistry and Microbiology samples and temperature does not confirm, then measure the temperature of each quadrant and record each temperature of the quadrants.

1 = (Observation = _____ °C) (Corr. Factor _____ °C) (Final = _____ °C)	2 = (Observation = _____ °C) (Corr. Factor _____ °C) (Final = _____ °C)
3 = (Observation = _____ °C) (Corr. Factor _____ °C) (Final = _____ °C)	4 = (Observation = _____ °C) (Corr. Factor _____ °C) (Final = _____ °C)

4 **Dioxin (1613 or 2,3,7,8 TCDD):** must be between 0-4 °C, not frozen (if received after 24 hrs of sample collection)

5) **pH Check.** Manufacturer: \_\_\_\_\_ Lot Number: \_\_\_\_\_ pH strip type: 0 - 14 or \_\_\_\_\_ Expiration Date \_\_\_\_\_ Results: \_\_\_\_\_

6) **Chlorine check.** Manufacturer: Sansafe. Lot No.: \_\_\_\_\_ Expiration Date: \_\_\_\_\_ Results \_\_\_\_\_

7) **VOA and Radon Headspace:**

No Samples with Headspace:


Samples with Headspace (see below):

### Headspace Documentation (use additional VOC and Radon Internal COFC for additional bottles)


Exempt from headspace concerns: Methods 515.4, HAA(6251,552), 505, SPME, @CH, 532LCMS, 556, 536, Anatoxin, LCMS methods using 40 ml vials, International clients:

Samp ID	Bottle #	None/<6 mm	>6mm	Test	Samp ID	Bottle #	None/<6 mm	>6mm	Test	Samp ID	Bottle #	None/<6 mm	>6mm	Test	Samp ID	Bottle #	None/<6 mm	>6mm	Test	

Note Sample IDs which have dissimilar headspace (i.e. potential sampling errors): \_\_\_\_\_

RECEIVED BY: 	SIGNATURE	PRINT NAME: <u>Vivian Vasquez</u>	PRINT NAME	COMPANY/TITLE: Eurofins Eaton Analytical	COMPANY/TITLE	DATE: <u>7-20-22</u>	DATE	TIME: <u>1010</u>	TIME
SAMPLES CHECKED AGAINST COC BY: _____	SIGNATURE	PRINT NAME: _____	PRINT NAME	COMPANY/TITLE: Eurofins Eaton Analytical	COMPANY/TITLE	DATE: _____	DATE	TIME: _____	TIME

1 of 3  
 TRK# 0201  
 # MASTER # 7774 3057 7123  
**WZ WHPA**  
 CA-US BUR  
 91016  
 WED - 20 JUL 10:30A  
 PRIORITY OVERNIGHT

  
 J22202041281ur

SHIP DATE: 19 JUL 22  
 ACTWGT: 83.00 LB  
 CAD: 100205419/NET4490  
 BILL RECIPIENT  
 ORIGIN ID:HIKA (808) 748-5840  
 BWS CHEMLAB  
 HONOLULU BOARD OF WATER SUPPLY  
 630 S. BERETANIA ST.  
 CHEMICAL LABORATORY  
 HONOLULU, HI 96843  
 UNITED STATES US  
 TO C CHUCK  
 EUROFINS EATON ANALYTICAL, INC  
 750 ROYAL OAKS DR  
 SUITE 100  
 MONROVIA CA 91016  
 (626) 386-1178  
 INV:  
 DEPT:

- After printing this label:**
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
  2. Fold the printed page along the horizontal line.
  3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

**Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.**

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on [fedex.com](http://fedex.com). FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g., jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

# Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-11120-1

**Login Number: 11120**

**List Source: Eurofins Eaton Monrovia**

**List Number: 1**

**Creator: Sanchez Velasquez, Gustavo**

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
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	