

## ANALYTICAL REPORT

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Tel: (626)386-1100

Laboratory Job ID: 380-20345-1  
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:  
10/1/2022 7:12:28 PM

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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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Rachelle Arada  
Manager of Project Management  
10/1/2022 7:12:28 PM



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# Definitions/Glossary

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

Job ID: 380-20345-1

## Qualifiers

### GC/MS Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## 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: 380-20345-1

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## Job ID: 380-20345-1

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### Laboratory: Eurofins Eaton Monrovia

#### Narrative

#### Job Narrative 380-20345-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 9/8/2022 10:45 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 0.4° C.

#### Receipt Exceptions

Following samples received partially frozen:

625 - both bottles

525 - 1 of 2 bottles

HALAWA SHAFT STATIC (Viewing Pool) (380-20345-1) and TB:HALAWA SHAFT STATIC (Viewing Pool) (380-20345-2)

#### GC/MS Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Subcontract non-Sister

See attached subcontract report.

#### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Subcontract Work

Methods 8015 Diesel LL (EAL) and Motor Oil, 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.

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

# Detection Summary

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

Job ID: 380-20345-1

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**Client Sample ID: HALAWA SHAFT STATIC (Viewing Pool)**

**Lab Sample ID: 380-20345-1**

No Detections.

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**Client Sample ID: TB:HALAWA SHAFT STATIC (Viewing Pool)**

**Lab Sample ID: 380-20345-2**

No Detections.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17

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: 380-20345-1

**Client Sample ID: HALAWA SHAFT STATIC (Viewing Pool)**

**Lab Sample ID: 380-20345-1**

Date Collected: 09/06/22 09:30

Matrix: Water

Date Received: 09/08/22 10:45

**Method: 525.2 - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	ND		0.098	ug/L		09/14/22 10:07	09/15/22 15:04	1
2,4'-DDE	ND		0.098	ug/L		09/14/22 10:07	09/15/22 15:04	1
2,4'-DDT	ND		0.098	ug/L		09/14/22 10:07	09/15/22 15:04	1
2,4-Dinitrotoluene	ND		0.098	ug/L		09/14/22 10:07	09/15/22 15:04	1
2,6-Dinitrotoluene	ND		0.098	ug/L		09/14/22 10:07	09/15/22 15:04	1
4,4'-DDD	ND		0.098	ug/L		09/14/22 10:07	09/15/22 15:04	1
4,4'-DDE	ND		0.098	ug/L		09/14/22 10:07	09/15/22 15:04	1
4,4'-DDT	ND		0.098	ug/L		09/14/22 10:07	09/15/22 15:04	1
Acenaphthene	ND		0.098	ug/L		09/14/22 10:07	09/15/22 15:04	1
Acenaphthylene	ND		0.098	ug/L		09/14/22 10:07	09/15/22 15:04	1
Acetochlor	ND		0.098	ug/L		09/14/22 10:07	09/15/22 15:04	1
Alachlor	ND		0.049	ug/L		09/14/22 10:07	09/15/22 15:04	1
alpha-BHC	ND		0.098	ug/L		09/14/22 10:07	09/15/22 15:04	1
alpha-Chlordane	ND		0.049	ug/L		09/14/22 10:07	09/15/22 15:04	1
Anthracene	ND		0.020	ug/L		09/14/22 10:07	09/15/22 15:04	1
Atrazine	ND		0.049	ug/L		09/14/22 10:07	09/15/22 15:04	1
Benz(a)anthracene	ND		0.049	ug/L		09/14/22 10:07	09/15/22 15:04	1
Benzo[a]pyrene	ND		0.020	ug/L		09/14/22 10:07	09/15/22 15:04	1
Benzo[b]fluoranthene	ND		0.020	ug/L		09/14/22 10:07	09/15/22 15:04	1
Benzo[g,h,i]perylene	ND		0.049	ug/L		09/14/22 10:07	09/15/22 15:04	1
Benzo[k]fluoranthene	ND		0.020	ug/L		09/14/22 10:07	09/15/22 15:04	1
beta-BHC	ND		0.098	ug/L		09/14/22 10:07	09/15/22 15:04	1
Bromacil	ND		0.098	ug/L		09/14/22 10:07	09/15/22 15:04	1
Butachlor	ND		0.049	ug/L		09/14/22 10:07	09/15/22 15:04	1
Butylbenzylphthalate	ND		0.49	ug/L		09/14/22 10:07	09/15/22 15:04	1
Caffeine	ND		0.049	ug/L		09/14/22 10:07	09/15/22 15:04	1
Chlorobenzilate	ND		0.098	ug/L		09/14/22 10:07	09/15/22 15:04	1
Chloroneb	ND		0.098	ug/L		09/14/22 10:07	09/15/22 15:04	1
Chlorothalonil (Draconil, Bravo)	ND		0.098	ug/L		09/14/22 10:07	09/15/22 15:04	1
Chlorpyrifos	ND		0.049	ug/L		09/14/22 10:07	09/15/22 15:04	1
Chrysene	ND		0.020	ug/L		09/14/22 10:07	09/15/22 15:04	1
delta-BHC	ND		0.098	ug/L		09/14/22 10:07	09/15/22 15:04	1
Di(2-ethylhexyl)adipate	ND		0.59	ug/L		09/14/22 10:07	09/15/22 15:04	1
Bis(2-ethylhexyl) ph halate	ND		0.59	ug/L		09/14/22 10:07	09/15/22 15:04	1
Diazinon (Qualitative)	ND		0.098	ug/L		09/14/22 10:07	09/15/22 15:04	1
Dibenz(a,h)anthracene	ND		0.049	ug/L		09/14/22 10:07	09/15/22 15:04	1
Diclorvos (DDVP)	ND		0.049	ug/L		09/14/22 10:07	09/15/22 15:04	1
Dieldrin	ND		0.20	ug/L		09/14/22 10:07	09/15/22 15:04	1
Die hylphthalate	ND		0.49	ug/L		09/14/22 10:07	09/15/22 15:04	1
Dimethoate	ND		0.098	ug/L		09/14/22 10:07	09/15/22 15:04	1
Dimethylphthalate	ND		0.49	ug/L		09/14/22 10:07	09/15/22 15:04	1
Di-n-butyl phthalate	ND		0.98	ug/L		09/14/22 10:07	09/15/22 15:04	1
Di-n-octyl phthalate	ND		0.098	ug/L		09/14/22 10:07	09/15/22 15:04	1
Endosulfan I (Alpha)	ND		0.098	ug/L		09/14/22 10:07	09/15/22 15:04	1
Endosulfan II (Beta)	ND		0.098	ug/L		09/14/22 10:07	09/15/22 15:04	1
Endosulfan sulfate	ND		0.098	ug/L		09/14/22 10:07	09/15/22 15:04	1
Endrin	ND		0.098	ug/L		09/14/22 10:07	09/15/22 15:04	1
Endrin aldehyde	ND		0.098	ug/L		09/14/22 10:07	09/15/22 15:04	1
EPTC	ND		0.098	ug/L		09/14/22 10:07	09/15/22 15:04	1

Eurofins Eaton Monrovia

# Client Sample Results

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

Job ID: 380-20345-1

**Client Sample ID: HALAWA SHAFT STATIC (Viewing Pool)**

**Lab Sample ID: 380-20345-1**

Date Collected: 09/06/22 09:30

Matrix: Water

Date Received: 09/08/22 10:45

**Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	ND		0.098	ug/L		09/14/22 10:07	09/15/22 15:04	1
Fluorene	ND		0.049	ug/L		09/14/22 10:07	09/15/22 15:04	1
gamma-Chlordane	ND		0.049	ug/L		09/14/22 10:07	09/15/22 15:04	1
Heptachlor	ND		0.039	ug/L		09/14/22 10:07	09/15/22 15:04	1
Heptachlor epoxide (isomer B)	ND		0.049	ug/L		09/14/22 10:07	09/15/22 15:04	1
Hexachlorobenzene	ND		0.049	ug/L		09/14/22 10:07	09/15/22 15:04	1
Hexachlorocyclopentadiene	ND		0.049	ug/L		09/14/22 10:07	09/15/22 15:04	1
Indeno[1,2,3-cd]pyrene	ND		0.049	ug/L		09/14/22 10:07	09/15/22 15:04	1
Isophorone	ND		0.49	ug/L		09/14/22 10:07	09/15/22 15:04	1
Lindane	ND		0.039	ug/L		09/14/22 10:07	09/15/22 15:04	1
Malathion	ND		0.098	ug/L		09/14/22 10:07	09/15/22 15:04	1
Methoxychlor	ND		0.098	ug/L		09/14/22 10:07	09/15/22 15:04	1
Metolachlor	ND		0.049	ug/L		09/14/22 10:07	09/15/22 15:04	1
Metribuzin	ND		0.049	ug/L		09/14/22 10:07	09/15/22 15:04	1
Molinate	ND		0.098	ug/L		09/14/22 10:07	09/15/22 15:04	1
Naphthalene	ND		0.29	ug/L		09/14/22 10:07	09/15/22 15:04	1
Parathion	ND		0.098	ug/L		09/14/22 10:07	09/15/22 15:04	1
Pendimethalin (Penoxaline)	ND		0.098	ug/L		09/14/22 10:07	09/15/22 15:04	1
Total Permethrin (mixed isomers)	ND		0.20	ug/L		09/14/22 10:07	09/15/22 15:04	1
Phenanthrene	ND		0.039	ug/L		09/14/22 10:07	09/15/22 15:04	1
Propachlor	ND		0.049	ug/L		09/14/22 10:07	09/15/22 15:04	1
Pyrene	ND		0.049	ug/L		09/14/22 10:07	09/15/22 15:04	1
Simazine	ND		0.049	ug/L		09/14/22 10:07	09/15/22 15:04	1
Terbacil	ND		0.098	ug/L		09/14/22 10:07	09/15/22 15:04	1
Terbutylazine	ND		0.098	ug/L		09/14/22 10:07	09/15/22 15:04	1
Thiobencarb	ND		0.20	ug/L		09/14/22 10:07	09/15/22 15:04	1
trans-Nonachlor	ND		0.049	ug/L		09/14/22 10:07	09/15/22 15:04	1
Trifluralin	ND		0.098	ug/L		09/14/22 10:07	09/15/22 15:04	1
1-Methylnaphthalene	ND		0.098	ug/L		09/14/22 10:07	09/15/22 15:04	1
2-Methylnaphthalene	ND		0.098	ug/L		09/14/22 10:07	09/15/22 15:04	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L				09/14/22 10:07	09/15/22 15:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	91		70 - 130	09/14/22 10:07	09/15/22 15:04	1
Triphenylphosphate	90		70 - 130	09/14/22 10:07	09/15/22 15:04	1
Perylene-d12	89		70 - 130	09/14/22 10:07	09/15/22 15:04	1



# Action Limit Summary

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

Job ID: 380-20345-1

**Client Sample ID: HALAWA SHAFT STATIC (Viewing Pool)**

**Lab Sample ID: 380-20345-1**

## Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits have been highlighted for your convenience.

Analyte	Result	Qualifier	Unit	EPAMCL	RL	Method	Prep Type
				Limit			
Alachlor	ND		ug/L	2	0.049	525.2	Total/NA
Atrazine	ND		ug/L	3	0.049	525.2	Total/NA
Benzo[a]pyrene	ND		ug/L	0.2	0.020	525.2	Total/NA
Di(2-ethylhexyl)adipate	ND		ug/L	400	0.59	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	ND		ug/L	6	0.59	525.2	Total/NA
Endrin	ND		ug/L	2	0.098	525.2	Total/NA
Heptachlor	ND		ug/L	0.4	0.039	525.2	Total/NA
Heptachlor epoxide (isomer B)	ND		ug/L	0.2	0.049	525.2	Total/NA
Hexachlorobenzene	ND		ug/L	1	0.049	525.2	Total/NA
Hexachlorocyclopentadiene	ND		ug/L	50	0.049	525.2	Total/NA
Lindane	ND		ug/L	0.2	0.039	525.2	Total/NA
Methoxychlor	ND		ug/L	40	0.098	525.2	Total/NA
Simazine	ND		ug/L	4	0.049	525.2	Total/NA

# Surrogate Summary

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

Job ID: 380-20345-1

## Method: 525.2 - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		2NMX (70-130)	TPP (70-130)	PRY (70-130)
380-20345-1	HALAWA SHAFT STATIC (Viewing f	91	90	89
380-20830-J-2-A DU	Duplicate	91	93	93
380-20830-J-3-A MS	Matrix Spike	95	105	93
LCS 380-17302/3-A	Lab Control Sample	94	104	95
LCSD 380-17302/4-A	Lab Control Sample Dup	95	98	94
MB 380-17302/1-A	Method Blank	91	98	92
MRL 380-17302/2-A	Lab Control Sample	94	97	89

### Surrogate Legend

2NMX = 2-Nitro-m-xylene  
TPP = Triphenylphosphate  
PRY = Perylene-d12

# QC Sample Results

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

Job ID: 380-20345-1

## Method: 525.2 - Semivolatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 380-17302/1-A**  
**Matrix: Water**  
**Analysis Batch: 17480**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 17302**

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
2,4'-DDD	ND		0.098	ug/L		09/14/22 10:07	09/15/22 13:12	1
2,4'-DDE	ND		0.098	ug/L		09/14/22 10:07	09/15/22 13:12	1
2,4'-DDT	ND		0.098	ug/L		09/14/22 10:07	09/15/22 13:12	1
2,4-Dinitrotoluene	ND		0.098	ug/L		09/14/22 10:07	09/15/22 13:12	1
2,6-Dinitrotoluene	ND		0.098	ug/L		09/14/22 10:07	09/15/22 13:12	1
4,4'-DDD	ND		0.098	ug/L		09/14/22 10:07	09/15/22 13:12	1
4,4'-DDE	ND		0.098	ug/L		09/14/22 10:07	09/15/22 13:12	1
4,4'-DDT	ND		0.098	ug/L		09/14/22 10:07	09/15/22 13:12	1
Acenaphthene	ND		0.098	ug/L		09/14/22 10:07	09/15/22 13:12	1
Acenaphthylene	ND		0.098	ug/L		09/14/22 10:07	09/15/22 13:12	1
Acetochlor	ND		0.098	ug/L		09/14/22 10:07	09/15/22 13:12	1
Alachlor	ND		0.049	ug/L		09/14/22 10:07	09/15/22 13:12	1
alpha-BHC	ND		0.098	ug/L		09/14/22 10:07	09/15/22 13:12	1
alpha-Chlordane	ND		0.049	ug/L		09/14/22 10:07	09/15/22 13:12	1
Anthracene	ND		0.020	ug/L		09/14/22 10:07	09/15/22 13:12	1
Atrazine	ND		0.049	ug/L		09/14/22 10:07	09/15/22 13:12	1
Benz(a)anthracene	ND		0.049	ug/L		09/14/22 10:07	09/15/22 13:12	1
Benzo[a]pyrene	ND		0.020	ug/L		09/14/22 10:07	09/15/22 13:12	1
Benzo[b]fluoranthene	ND		0.020	ug/L		09/14/22 10:07	09/15/22 13:12	1
Benzo[g,h,i]perylene	ND		0.049	ug/L		09/14/22 10:07	09/15/22 13:12	1
Benzo[k]fluoranthene	ND		0.020	ug/L		09/14/22 10:07	09/15/22 13:12	1
beta-BHC	ND		0.098	ug/L		09/14/22 10:07	09/15/22 13:12	1
Bromacil	ND		0.098	ug/L		09/14/22 10:07	09/15/22 13:12	1
Butachlor	ND		0.049	ug/L		09/14/22 10:07	09/15/22 13:12	1
Butylbenzylphthalate	ND		0.49	ug/L		09/14/22 10:07	09/15/22 13:12	1
Caffeine	ND		0.049	ug/L		09/14/22 10:07	09/15/22 13:12	1
Chlorobenzilate	ND		0.098	ug/L		09/14/22 10:07	09/15/22 13:12	1
Chloroneb	ND		0.098	ug/L		09/14/22 10:07	09/15/22 13:12	1
Chloroethalonil (Draconil, Bravo)	ND		0.098	ug/L		09/14/22 10:07	09/15/22 13:12	1
Chlorpyrifos	ND		0.049	ug/L		09/14/22 10:07	09/15/22 13:12	1
Chrysene	ND		0.020	ug/L		09/14/22 10:07	09/15/22 13:12	1
delta-BHC	ND		0.098	ug/L		09/14/22 10:07	09/15/22 13:12	1
Di(2-ethylhexyl)adipate	ND		0.59	ug/L		09/14/22 10:07	09/15/22 13:12	1
Bis(2-ethylhexyl) phthalate	ND		0.59	ug/L		09/14/22 10:07	09/15/22 13:12	1
Diazinon (Qualitative)	ND		0.098	ug/L		09/14/22 10:07	09/15/22 13:12	1
Dibenz(a,h)an hracene	ND		0.049	ug/L		09/14/22 10:07	09/15/22 13:12	1
Diclorvos (DDVP)	ND		0.049	ug/L		09/14/22 10:07	09/15/22 13:12	1
Dieldrin	ND		0.20	ug/L		09/14/22 10:07	09/15/22 13:12	1
Diethylphthalate	ND		0.49	ug/L		09/14/22 10:07	09/15/22 13:12	1
Dimethoate	ND		0.098	ug/L		09/14/22 10:07	09/15/22 13:12	1
Dimethylphalate	ND		0.49	ug/L		09/14/22 10:07	09/15/22 13:12	1
Di-n-butyl phthalate	ND		0.98	ug/L		09/14/22 10:07	09/15/22 13:12	1
Di-n-octyl phthalate	ND		0.098	ug/L		09/14/22 10:07	09/15/22 13:12	1
Endosulfan I (Alpha)	ND		0.098	ug/L		09/14/22 10:07	09/15/22 13:12	1
Endosulfan II (Beta)	ND		0.098	ug/L		09/14/22 10:07	09/15/22 13:12	1
Endosulfan sulfate	ND		0.098	ug/L		09/14/22 10:07	09/15/22 13:12	1
Endrin	ND		0.098	ug/L		09/14/22 10:07	09/15/22 13:12	1
Endrin aldehyde	ND		0.098	ug/L		09/14/22 10:07	09/15/22 13:12	1

Euofins Eaton Monrovia

# QC Sample Results

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

Job ID: 380-20345-1

## Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 380-17302/1-A

Matrix: Water

Analysis Batch: 17480

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 17302

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
EPTC	ND		0.098	ug/L		09/14/22 10:07	09/15/22 13:12	1
Fluoranthene	ND		0.098	ug/L		09/14/22 10:07	09/15/22 13:12	1
Fluorene	ND		0.049	ug/L		09/14/22 10:07	09/15/22 13:12	1
gamma-Chlordane	ND		0.049	ug/L		09/14/22 10:07	09/15/22 13:12	1
Heptachlor	ND		0.039	ug/L		09/14/22 10:07	09/15/22 13:12	1
Heptachlor epoxide (isomer B)	ND		0.049	ug/L		09/14/22 10:07	09/15/22 13:12	1
Hexachlorobenzene	ND		0.049	ug/L		09/14/22 10:07	09/15/22 13:12	1
Hexachlorocyclopentadiene	ND		0.049	ug/L		09/14/22 10:07	09/15/22 13:12	1
Indeno[1,2,3-cd]pyrene	ND		0.049	ug/L		09/14/22 10:07	09/15/22 13:12	1
Isophorone	ND		0.49	ug/L		09/14/22 10:07	09/15/22 13:12	1
Lindane	ND		0.039	ug/L		09/14/22 10:07	09/15/22 13:12	1
Malathion	ND		0.098	ug/L		09/14/22 10:07	09/15/22 13:12	1
Methoxychlor	ND		0.098	ug/L		09/14/22 10:07	09/15/22 13:12	1
Metolachlor	ND		0.049	ug/L		09/14/22 10:07	09/15/22 13:12	1
Metribuzin	ND		0.049	ug/L		09/14/22 10:07	09/15/22 13:12	1
Molinate	ND		0.098	ug/L		09/14/22 10:07	09/15/22 13:12	1
Naphthalene	ND		0.29	ug/L		09/14/22 10:07	09/15/22 13:12	1
Parathion	ND		0.098	ug/L		09/14/22 10:07	09/15/22 13:12	1
Pendimethalin (Penoxaline)	ND		0.098	ug/L		09/14/22 10:07	09/15/22 13:12	1
Total Permethrin (mixed isomers)	ND		0.20	ug/L		09/14/22 10:07	09/15/22 13:12	1
Phenanthrene	ND		0.039	ug/L		09/14/22 10:07	09/15/22 13:12	1
Propachlor	ND		0.049	ug/L		09/14/22 10:07	09/15/22 13:12	1
Pyrene	ND		0.049	ug/L		09/14/22 10:07	09/15/22 13:12	1
Simazine	ND		0.049	ug/L		09/14/22 10:07	09/15/22 13:12	1
Terbacil	ND		0.098	ug/L		09/14/22 10:07	09/15/22 13:12	1
Terbutylazine	ND		0.098	ug/L		09/14/22 10:07	09/15/22 13:12	1
Thiobencarb	ND		0.20	ug/L		09/14/22 10:07	09/15/22 13:12	1
trans-Nonachlor	ND		0.049	ug/L		09/14/22 10:07	09/15/22 13:12	1
Trifluralin	ND		0.098	ug/L		09/14/22 10:07	09/15/22 13:12	1
1-Methylnaphthalene	ND		0.098	ug/L		09/14/22 10:07	09/15/22 13:12	1
2-Methylnaphthalene	ND		0.098	ug/L		09/14/22 10:07	09/15/22 13:12	1

Tentatively Identified Compound	MB	MB	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
	Est. Result	Qualifier							
Tentatively Identified Compound	None		ug/L				09/14/22 10:07	09/15/22 13:12	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Nitro-m-xylene	91		70 - 130	09/14/22 10:07	09/15/22 13:12	1
Triphenylphosphate	98		70 - 130	09/14/22 10:07	09/15/22 13:12	1
Perylene-d12	92		70 - 130	09/14/22 10:07	09/15/22 13:12	1

Lab Sample ID: LCS 380-17302/3-A

Matrix: Water

Analysis Batch: 17480

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 17302

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
2,4'-DDD	1.96	2.02		ug/L		103	70 - 130
2,4'-DDE	1.96	2.01		ug/L		103	70 - 130
2,4'-DDT	1.96	2.36		ug/L		120	70 - 130

Euofins Eaton Monrovia

# QC Sample Results

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

Job ID: 380-20345-1

## Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 380-17302/3-A

Matrix: Water

Analysis Batch: 17480

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 17302

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec Limits
	Added	Result	Qualifier				
2,4-Dinitrotoluene	1.96	1.63		ug/L		83	70 - 130
2,6-Dinitrotoluene	1.96	1.56		ug/L		79	70 - 130
4,4'-DDD	1.96	2.22		ug/L		113	70 - 130
4,4'-DDE	1.96	2.13		ug/L		109	70 - 130
4,4'-DDT	1.96	2.13		ug/L		109	70 - 130
Acenaphthene	1.96	1.75		ug/L		89	70 - 130
Acenaphthylene	1.96	1.88		ug/L		96	70 - 130
Acetochlor	1.96	1.86		ug/L		95	70 - 130
Alachlor	1.96	1.99		ug/L		101	70 - 130
alpha-BHC	1.96	1.95		ug/L		99	70 - 130
alpha-Chlordane	1.96	1.65		ug/L		84	70 - 130
Anthracene	1.96	1.94		ug/L		99	70 - 130
Atrazine	1.96	2.08		ug/L		106	70 - 130
Benz(a)anthracene	1.96	2.21		ug/L		113	70 - 130
Benzo[a]pyrene	1.96	2.14		ug/L		109	70 - 130
Benzo[b]fluoranthene	1.96	2.04		ug/L		104	70 - 130
Benzo[g,h,i]perylene	1.96	1.98		ug/L		101	70 - 130
Benzo[k]fluoranthene	1.96	2.26		ug/L		115	70 - 130
beta-BHC	1.96	1.99		ug/L		102	70 - 130
Bromacil	1.96	2.54		ug/L		129	70 - 130
Butachlor	1.96	2.07		ug/L		106	70 - 130
Butylbenzylphthalate	1.96	2.11		ug/L		107	70 - 130
Caffeine	1.96	1.34		ug/L		68	45 - 137
Chlorobenzilate	1.96	2.19		ug/L		111	70 - 130
Chloroneb	1.96	2.18		ug/L		111	70 - 130
Chlorothalonil (Draconil, Bravo)	1.96	2.16		ug/L		110	70 - 130
Chlorpyrifos	1.96	2.25		ug/L		115	70 - 130
Chrysene	1.96	2.28		ug/L		116	70 - 130
delta-BHC	1.96	1.96		ug/L		100	70 - 130
Di(2-ethylhexyl)adipate	1.96	2.04		ug/L		104	70 - 130
Bis(2-ethylhexyl) phthalate	1.96	1.93		ug/L		98	70 - 130
Diazinon (Qualitative)	1.96	1.84		ug/L		94	15 - 132
Dibenz(a,h)anthracene	1.96	2.06		ug/L		105	70 - 130
Diclorvos (DDVP)	1.96	2.15		ug/L		110	70 - 130
Dieldrin	1.96	2.13		ug/L		108	70 - 130
Diethylphthalate	1.96	1.89		ug/L		96	70 - 130
Dimethoate	1.96	0.904		ug/L		46	35 - 100
Dimethylphthalate	1.96	1.88		ug/L		96	70 - 130
Di-n-butyl phthalate	3.92	4.38		ug/L		112	70 - 130
Di-n-octyl phthalate	1.96	1.83		ug/L		93	70 - 130
Endosulfan I (Alpha)	1.96	2.12		ug/L		108	70 - 130
Endosulfan II (Beta)	1.96	2.25		ug/L		115	70 - 130
Endosulfan sulfate	1.96	2.19		ug/L		112	70 - 130
Endrin	1.96	2.01		ug/L		103	70 - 130
Endrin aldehyde	1.96	2.09		ug/L		106	70 - 130
EPTC	1.96	1.96		ug/L		100	70 - 130
Fluoranthene	1.96	2.18		ug/L		111	70 - 130
Fluorene	1.96	1.91		ug/L		97	70 - 130
gamma-Chlordane	1.96	1.73		ug/L		88	70 - 130

Eurofins Eaton Monrovia

# QC Sample Results

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

Job ID: 380-20345-1

## Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 380-17302/3-A

Matrix: Water

Analysis Batch: 17480

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 17302

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	
							Limits	
Heptachlor	1.96	2.06		ug/L		105	70 - 130	
Heptachlor epoxide (isomer B)	1.96	1.71		ug/L		87	70 - 130	
Hexachlorobenzene	1.96	1.99		ug/L		101	70 - 130	
Hexachlorocyclopentadiene	1.96	2.17		ug/L		111	70 - 130	
Indeno[1,2,3-cd]pyrene	1.96	2.05		ug/L		105	70 - 130	
Isophorone	1.96	1.85		ug/L		94	70 - 130	
Lindane	1.96	2.00		ug/L		102	70 - 130	
Malathion	1.96	2.17		ug/L		111	70 - 130	
Methoxychlor	1.96	2.33		ug/L		119	70 - 130	
Metolachlor	1.96	2.14		ug/L		109	70 - 130	
Metribuzin	1.96	2.07		ug/L		105	70 - 130	
Molinate	1.96	2.05		ug/L		105	70 - 130	
Naphthalene	1.96	1.90		ug/L		97	70 - 130	
Parathion	1.96	2.17		ug/L		111	70 - 130	
Pendimethalin (Penoxaline)	1.96	2.16		ug/L		110	70 - 130	
Phenanthrene	1.96	1.91		ug/L		97	70 - 130	
Propachlor	1.96	2.15		ug/L		109	70 - 130	
Pyrene	1.96	2.23		ug/L		113	70 - 130	
Simazine	1.96	2.30		ug/L		117	70 - 130	
Terbacil	1.96	2.09		ug/L		107	70 - 130	
Terbuthylazine	1.96	2.06		ug/L		105	70 - 130	
Thiobencarb	1.96	1.89		ug/L		97	70 - 130	
trans-Nonachlor	1.96	2.07		ug/L		106	70 - 130	
Trifluralin	1.96	1.96		ug/L		100	70 - 130	
1-Methylnaphthalene	1.96	1.93		ug/L		98	70 - 130	
2-Methylnaphthalene	1.96	1.92		ug/L		98	70 - 130	

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	94		70 - 130
Triphenylphosphate	104		70 - 130
Perylene-d12	95		70 - 130

Lab Sample ID: LCSD 380-17302/4-A

Matrix: Water

Analysis Batch: 17480

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 17302

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	
							Limits		RPD	Limit
2,4'-DDD	1.96	2.09		ug/L		107	70 - 130	3	20	
2,4'-DDE	1.96	2.04		ug/L		104	70 - 130	1	20	
2,4'-DDT	1.96	2.36		ug/L		120	70 - 130	0	20	
2,4-Dinitrotoluene	1.96	1.57		ug/L		80	70 - 130	3	20	
2,6-Dinitrotoluene	1.96	1.51		ug/L		77	70 - 130	3	20	
4,4'-DDD	1.96	2.30		ug/L		117	70 - 130	3	20	
4,4'-DDE	1.96	2.15		ug/L		109	70 - 130	1	20	
4,4'-DDT	1.96	2.06		ug/L		105	70 - 130	3	20	
Acenaphthene	1.96	1.74		ug/L		89	70 - 130	1	20	
Acenaphthylene	1.96	1.83		ug/L		93	70 - 130	2	20	
Acetochlor	1.96	1.78		ug/L		91	70 - 130	4	20	

Euofins Eaton Monrovia

# QC Sample Results

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

Job ID: 380-20345-1

## Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 380-17302/4-A

Matrix: Water

Analysis Batch: 17480

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 17302

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec	RPD	RPD
	Added	Result	Qualifier				Limits		Limit
Alachlor	1.96	1.89		ug/L		96	70 - 130	5	20
alpha-BHC	1.96	1.91		ug/L		97	70 - 130	2	20
alpha-Chlordane	1.96	1.52		ug/L		77	70 - 130	8	20
Anthracene	1.96	1.90		ug/L		97	70 - 130	2	20
Atrazine	1.96	1.97		ug/L		100	70 - 130	6	20
Benz(a)anthracene	1.96	2.15		ug/L		110	70 - 130	3	20
Benzo[a]pyrene	1.96	2.08		ug/L		106	70 - 130	3	20
Benzo[b]fluoranthene	1.96	2.04		ug/L		104	70 - 130	0	20
Benzo[g,h,i]perylene	1.96	1.97		ug/L		100	70 - 130	0	20
Benzo[k]fluoranthene	1.96	2.15		ug/L		110	70 - 130	5	20
beta-BHC	1.96	1.90		ug/L		97	70 - 130	5	20
Bromacil	1.96	2.46		ug/L		126	70 - 130	3	20
Butachlor	1.96	2.04		ug/L		104	70 - 130	1	20
Butylbenzylphthalate	1.96	2.06		ug/L		105	70 - 130	2	20
Caffeine	1.96	1.37		ug/L		70	45 - 137	3	20
Chlorobenzilate	1.96	2.18		ug/L		111	70 - 130	0	20
Chloroneb	1.96	2.15		ug/L		110	70 - 130	1	20
Chlorothalonil (Draconil, Bravo)	1.96	2.22		ug/L		113	70 - 130	3	20
Chlorpyrifos	1.96	2.22		ug/L		113	70 - 130	1	20
Chrysene	1.96	2.32		ug/L		118	70 - 130	2	20
delta-BHC	1.96	1.90		ug/L		97	70 - 130	3	20
Di(2-ethylhexyl)adipate	1.96	2.03		ug/L		104	70 - 130	0	20
Bis(2-ethylhexyl) phthalate	1.96	1.96		ug/L		100	70 - 130	2	20
Diazinon (Qualitative)	1.96	1.80		ug/L		92	15 - 132	2	20
Dibenz(a,h)an hracene	1.96	2.07		ug/L		105	70 - 130	0	20
Diclorvos (DDVP)	1.96	2.10		ug/L		107	70 - 130	2	20
Dieldrin	1.96	2.16		ug/L		110	70 - 130	2	20
Diethylphthalate	1.96	1.84		ug/L		94	70 - 130	3	20
Dimethoate	1.96	0.899		ug/L		46	35 - 100	1	20
Dimethylphalate	1.96	1.83		ug/L		93	70 - 130	2	20
Di-n-butyl phthalate	3.93	4.33		ug/L		110	70 - 130	1	20
Di-n-octyl phthalate	1.96	1.83		ug/L		93	70 - 130	0	20
Endosulfan I (Alpha)	1.96	2.08		ug/L		106	70 - 130	2	20
Endosulfan II (Beta)	1.96	2.26		ug/L		115	70 - 130	1	20
Endosulfan sulfate	1.96	2.24		ug/L		114	70 - 130	2	20
Endrin	1.96	1.92		ug/L		98	70 - 130	5	20
Endrin aldehyde	1.96	2.01		ug/L		102	70 - 130	4	20
EPTC	1.96	1.95		ug/L		99	70 - 130	1	20
Fluoranthene	1.96	2.16		ug/L		110	70 - 130	1	20
Fluorene	1.96	1.86		ug/L		95	70 - 130	3	20
gamma-Chlordane	1.96	1.67		ug/L		85	70 - 130	3	20
Heptachlor	1.96	2.08		ug/L		106	70 - 130	1	20
Heptachlor epoxide (isomer B)	1.96	1.68		ug/L		86	70 - 130	2	20
Hexachlorobenzene	1.96	1.97		ug/L		100	70 - 130	1	20
Hexachlorocyclopentadiene	1.96	2.16		ug/L		110	70 - 130	0	20
Indeno[1,2,3-cd]pyrene	1.96	2.01		ug/L		103	70 - 130	2	20
Isophorone	1.96	1.86		ug/L		95	70 - 130	1	20
Lindane	1.96	2.00		ug/L		102	70 - 130	0	20
Malathion	1.96	2.12		ug/L		108	70 - 130	2	20

Eurofins Eaton Monrovia

# QC Sample Results

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

Job ID: 380-20345-1

## Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 380-17302/4-A

Matrix: Water

Analysis Batch: 17480

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 17302

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	RPD Limit
							Limits	RPD		
Methoxychlor	1.96	2.34		ug/L		119	70 - 130	0	20	
Metolachlor	1.96	2.15		ug/L		109	70 - 130	0	20	
Metribuzin	1.96	1.96		ug/L		100	70 - 130	5	20	
Molinate	1.96	2.02		ug/L		103	70 - 130	2	20	
Naphthalene	1.96	1.90		ug/L		97	70 - 130	0	20	
Parathion	1.96	2.18		ug/L		111	70 - 130	0	20	
Pendimethalin (Penoxaline)	1.96	2.12		ug/L		108	70 - 130	2	20	
Phenanthrene	1.96	1.89		ug/L		96	70 - 130	1	20	
Propachlor	1.96	2.14		ug/L		109	70 - 130	0	20	
Pyrene	1.96	2.25		ug/L		114	70 - 130	1	20	
Simazine	1.96	2.16		ug/L		110	70 - 130	6	20	
Terbacil	1.96	2.08		ug/L		106	70 - 130	1	20	
Terbutylazine	1.96	1.99		ug/L		102	70 - 130	3	20	
Thiobencarb	1.96	1.95		ug/L		99	70 - 130	3	20	
trans-Nonachlor	1.96	2.01		ug/L		103	70 - 130	3	20	
Trifluralin	1.96	2.00		ug/L		102	70 - 130	2	20	
1-Methylnaphthalene	1.96	1.89		ug/L		96	70 - 130	2	20	
2-Methylnaphthalene	1.96	1.90		ug/L		97	70 - 130	1	20	

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	95		70 - 130
Triphenylphosphate	98		70 - 130
Perylene-d12	94		70 - 130

Lab Sample ID: MRL 380-17302/2-A

Matrix: Water

Analysis Batch: 17480

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 17302

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec	
							Limits	RPD
2,4'-DDD	0.0980	0.124		ug/L		126	50 - 150	
2,4'-DDE	0.0980	0.101		ug/L		103	50 - 150	
2,4'-DDT	0.0980	0.0997		ug/L		102	50 - 150	
2,4-Dinitrotoluene	0.0980	0.0754	J	ug/L		77	50 - 150	
2,6-Dinitrotoluene	0.0980	0.0732	J	ug/L		75	50 - 150	
4,4'-DDD	0.0980	0.110		ug/L		112	50 - 150	
4,4'-DDE	0.0980	0.109		ug/L		111	50 - 150	
4,4'-DDT	0.0980	0.126		ug/L		129	50 - 150	
Acenaphthene	0.0980	0.0953	J	ug/L		97	50 - 150	
Acenaphthylene	0.0980	0.0827	J	ug/L		84	50 - 150	
Acetochlor	0.0490	0.0495	J	ug/L		101	50 - 150	
Alachlor	0.0490	0.0559		ug/L		114	50 - 150	
alpha-BHC	0.0980	0.0959	J	ug/L		98	50 - 150	
alpha-Chlordane	0.0490	0.0532		ug/L		109	50 - 150	
Anthracene	0.0196	ND		ug/L		85	50 - 150	
Atrazine	0.0490	0.0580		ug/L		118	50 - 150	
Benz(a)anthracene	0.0490	0.0515		ug/L		105	50 - 150	
Benzo[a]pyrene	0.0196	0.0218		ug/L		111	50 - 150	
Benzo[b]fluoranthene	0.0196	0.0223		ug/L		114	50 - 150	

Euofins Eaton Monrovia



# QC Sample Results

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

Job ID: 380-20345-1

## Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MRL 380-17302/2-A

Matrix: Water

Analysis Batch: 17480

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 17302

Analyte	Spike	MRL	MRL	Unit	D	%Rec	%Rec Limits
	Added	Result	Qualifier				
Benzo[g,h,i]perylene	0.0490	0.0438	J	ug/L		89	50 - 150
Benzo[k]fluoranthene	0.0196	0.0214		ug/L		109	50 - 150
beta-BHC	0.0980	0.0932	J	ug/L		95	50 - 150
Bromacil	0.0980	0.102		ug/L		104	50 - 150
Butachlor	0.0490	0.0542		ug/L		111	50 - 150
Butylbenzylphthalate	0.147	0.186	J	ug/L		126	50 - 150
Caffeine	0.0490	0.0251	J	ug/L		51	50 - 150
Chlorobenzilate	0.0980	0.103		ug/L		105	50 - 150
Chloroneb	0.0980	0.113		ug/L		115	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0980	0.0844	J	ug/L		86	50 - 150
Chlorpyrifos	0.0490	0.0502		ug/L		102	50 - 150
Chrysene	0.0196	0.0238		ug/L		121	50 - 150
delta-BHC	0.0980	0.115		ug/L		117	50 - 150
Di(2-ethylhexyl)adipate	0.294	0.340	J	ug/L		115	50 - 150
Bis(2-ethylhexyl) phthalate	0.588	0.704		ug/L		120	50 - 150
Diazinon (Qualitative)	0.0980	0.0906	J	ug/L		92	15 - 132
Dibenz(a,h)an hracene	0.0490	0.0438	J	ug/L		89	50 - 150
Diclorvos (DDVP)	0.0490	0.0546		ug/L		111	50 - 150
Dieldrin	0.0980	0.102	J	ug/L		104	50 - 150
Diethylphthalate	0.147	0.157	J	ug/L		106	50 - 150
Dimethoate	0.0980	0.0379	J	ug/L		39	35 - 100
Dimethylphthalate	0.294	0.281	J	ug/L		95	50 - 150
Di-n-butyl phthalate	0.294	0.379	J	ug/L		129	49 - 243
Di-n-octyl phthalate	0.0980	0.119		ug/L		121	50 - 150
Endosulfan I (Alpha)	0.0980	0.0980		ug/L		100	50 - 150
Endosulfan II (Beta)	0.0980	0.102		ug/L		104	50 - 150
Endosulfan sulfate	0.0980	0.0861	J	ug/L		88	50 - 150
Endrin	0.0980	0.122		ug/L		124	50 - 150
Endrin aldehyde	0.0980	0.108		ug/L		110	50 - 150
EPTC	0.0980	0.0991		ug/L		101	50 - 150
Fluoranthene	0.0490	0.0462	J	ug/L		94	50 - 150
Fluorene	0.0490	0.0509		ug/L		104	50 - 150
gamma-Chlordane	0.0490	0.0523		ug/L		107	50 - 150
Heptachlor	0.0392	0.0545		ug/L		139	50 - 150
Heptachlor epoxide (isomer B)	0.0490	0.0468	J	ug/L		96	50 - 150
Hexachlorobenzene	0.0490	0.0413	J	ug/L		84	50 - 150
Hexachlorocyclopentadiene	0.0490	0.0492		ug/L		100	50 - 150
Indeno[1,2,3-cd]pyrene	0.0490	0.0424	J	ug/L		87	50 - 150
Isophorone	0.0980	0.0999	J	ug/L		102	50 - 150
Lindane	0.0490	0.0393		ug/L		80	50 - 150
Malathion	0.0980	0.0897	J	ug/L		92	50 - 150
Methoxychlor	0.0980	0.137		ug/L		139	50 - 150
Metolachlor	0.0490	0.0524		ug/L		107	50 - 150
Metribuzin	0.0490	0.0638		ug/L		130	50 - 150
Molinate	0.0980	0.0984		ug/L		100	50 - 150
Naphthalene	0.0980	0.103	J	ug/L		105	50 - 150
Parathion	0.0980	0.119		ug/L		122	50 - 150
Pendimethalin (Penoxaline)	0.0980	0.126		ug/L		128	50 - 150
Phenanthrene	0.0196	0.0186	J	ug/L		95	50 - 150

Eurofins Eaton Monrovia

# QC Sample Results

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

Job ID: 380-20345-1

## Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MRL 380-17302/2-A

Matrix: Water

Analysis Batch: 17480

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 17302

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Propachlor	0.0490	0.0478	J	ug/L		97	50 - 150
Pyrene	0.0490	0.0464	J	ug/L		95	50 - 150
Simazine	0.0490	0.0392	J	ug/L		80	50 - 150
Terbacil	0.0980	0.108		ug/L		110	50 - 150
Terbutylazine	0.0980	0.104		ug/L		106	50 - 150
Thiobencarb	0.0980	0.113	J	ug/L		115	50 - 150
trans-Nonachlor	0.0490	0.0364	J	ug/L		74	50 - 150
Trifluralin	0.0980	0.108		ug/L		110	50 - 150
1-Methylnaphthalene	0.0980	0.111		ug/L		113	50 - 150
2-Methylnaphthalene	0.0980	0.106		ug/L		108	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
2-Nitro-m-xylene	94		70 - 130
Triphenylphosphate	97		70 - 130
Perylene-d12	89		70 - 130

Lab Sample ID: 380-20830-J-3-A MS

Matrix: Water

Analysis Batch: 17480

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 17302

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	ND		1.96	2.07		ug/L		106	70 - 130
2,4'-DDE	ND		1.96	2.13		ug/L		109	70 - 130
2,4'-DDT	ND		1.96	2.49		ug/L		127	70 - 130
2,4-Dinitrotoluene	ND		1.96	1.78		ug/L		91	70 - 130
2,6-Dinitrotoluene	ND		1.96	1.72		ug/L		88	70 - 130
4,4'-DDD	ND		1.96	2.32		ug/L		118	70 - 130
4,4'-DDE	ND		1.96	2.21		ug/L		113	70 - 130
4,4'-DDT	ND		1.96	2.32		ug/L		118	70 - 130
Acenaphthene	ND		1.96	1.79		ug/L		91	70 - 130
Acenaphthylene	ND		1.96	1.88		ug/L		96	70 - 130
Acetochlor	ND		1.96	1.91		ug/L		98	70 - 130
Alachlor	ND		1.96	2.04		ug/L		104	70 - 130
alpha-BHC	ND		1.96	2.00		ug/L		102	70 - 130
alpha-Chlordane	ND		1.96	1.77		ug/L		91	70 - 130
Anthracene	ND		1.96	1.83		ug/L		93	70 - 130
Atrazine	ND		1.96	2.08		ug/L		106	70 - 130
Benz(a)anthracene	ND		1.96	2.33		ug/L		119	70 - 130
Benzo[a]pyrene	ND		1.96	2.13		ug/L		109	70 - 130
Benzo[b]fluoranthene	ND		1.96	2.13		ug/L		109	70 - 130
Benzo[g,h,i]perylene	ND		1.96	2.02		ug/L		103	70 - 130
Benzo[k]fluoranthene	ND		1.96	2.31		ug/L		118	70 - 130
beta-BHC	ND		1.96	2.05		ug/L		105	70 - 130
Bromacil	ND	F1	1.96	2.69	F1	ug/L		137	70 - 130
Butachlor	ND		1.96	2.14		ug/L		109	70 - 130
Butylbenzylphthalate	ND		1.96	2.18		ug/L		111	70 - 130
Caffeine	ND		1.96	1.69		ug/L		86	46 - 144
Chlorobenzilate	ND		1.96	2.26		ug/L		115	70 - 130

Eurofins Eaton Monrovia

# QC Sample Results

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

Job ID: 380-20345-1

## Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 380-20830-J-3-A MS

Client Sample ID: Matrix Spike

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 17480

Prep Batch: 17302

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier	Added	Result	Qualifier				
Chloroneb	ND		1.96	2.19		ug/L		112	70 - 130
Chlorothalonil (Draconil, Bravo)	ND		1.96	2.22		ug/L		113	70 - 130
Chlorpyrifos	ND		1.96	2.36		ug/L		120	70 - 130
Chrysene	ND		1.96	2.31		ug/L		118	70 - 130
delta-BHC	ND		1.96	2.03		ug/L		104	70 - 130
Di(2-ethylhexyl)adipate	ND		1.96	2.15		ug/L		110	70 - 130
Bis(2-ethylhexyl) phthalate	ND		1.96	2.06		ug/L		105	70 - 130
Diazinon (Qualitative)	ND		1.96	1.91		ug/L		98	15 - 132
Dibenz(a,h)an hracene	ND		1.96	2.16		ug/L		110	70 - 130
Diclorvos (DDVP)	ND		1.96	2.14		ug/L		109	70 - 130
Dieldrin	ND		1.96	2.22		ug/L		114	70 - 130
Diethylphthalate	ND		1.96	1.88		ug/L		96	70 - 130
Dimethoate	ND		1.96	1.05		ug/L		54	34 - 111
Dimethylphalate	ND		1.96	1.92		ug/L		98	70 - 130
Di-n-butyl phthalate	ND		3.92	4.48		ug/L		114	70 - 130
Di-n-octyl phthalate	ND		1.96	1.92		ug/L		98	70 - 130
Endosulfan I (Alpha)	ND		1.96	2.22		ug/L		113	70 - 130
Endosulfan II (Beta)	ND		1.96	2.33		ug/L		119	70 - 130
Endosulfan sulfate	ND		1.96	2.35		ug/L		120	70 - 130
Endrin	ND		1.96	2.03		ug/L		104	70 - 130
Endrin aldehyde	ND		1.96	1.97		ug/L		101	70 - 130
EPTC	ND		1.96	1.96		ug/L		100	70 - 130
Fluoranthene	ND		1.96	2.29		ug/L		117	70 - 130
Fluorene	ND		1.96	1.97		ug/L		100	70 - 130
gamma-Chlordane	ND		1.96	1.86		ug/L		95	70 - 130
Heptachlor	ND		1.96	2.07		ug/L		106	70 - 130
Heptachlor epoxide (isomer B)	ND		1.96	1.85		ug/L		94	70 - 130
Hexachlorobenzene	ND		1.96	2.03		ug/L		104	70 - 130
Hexachlorocyclopentadiene	ND		1.96	2.35		ug/L		120	70 - 130
Indeno[1,2,3-cd]pyrene	ND		1.96	2.13		ug/L		109	70 - 130
Isophorone	ND		1.96	1.87		ug/L		96	70 - 130
Lindane	ND		1.96	2.09		ug/L		107	70 - 130
Malathion	ND		1.96	2.26		ug/L		115	70 - 130
Methoxychlor	ND		1.96	2.31		ug/L		118	70 - 130
Metolachlor	ND		1.96	2.21		ug/L		113	70 - 130
Metribuzin	ND		1.96	1.97		ug/L		101	70 - 130
Molinate	ND		1.96	2.05		ug/L		105	70 - 130
Naphthalene	ND		1.96	1.92		ug/L		98	70 - 130
Parathion	ND		1.96	2.24		ug/L		114	70 - 130
Pendimethalin (Penoxaline)	ND		1.96	2.27		ug/L		116	70 - 130
Phenanthrene	ND		1.96	1.95		ug/L		100	70 - 130
Propachlor	ND		1.96	2.16		ug/L		111	70 - 130
Pyrene	ND		1.96	2.33		ug/L		119	70 - 130
Simazine	ND		1.96	2.28		ug/L		116	70 - 130
Terbacil	ND		1.96	2.19		ug/L		112	70 - 130
Terbuthylazine	ND		1.96	2.07		ug/L		106	70 - 130
Thiobencarb	ND		1.96	1.93		ug/L		98	70 - 130
trans-Nonachlor	ND		1.96	2.23		ug/L		114	70 - 130
Trifluralin	ND		1.96	2.10		ug/L		107	70 - 130

Eurofins Eaton Monrovia

# QC Sample Results

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

Job ID: 380-20345-1

## Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 380-20830-J-3-A MS

Client Sample ID: Matrix Spike

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 17480

Prep Batch: 17302

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier	Added	Result	Qualifier				
1-Methylnaphthalene	ND		1.96	1.92		ug/L		98	70 - 130
2-Methylnaphthalene	ND		1.96	1.93		ug/L		99	70 - 130

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	95		70 - 130
Triphenylphosphate	105		70 - 130
Perylene-d12	93		70 - 130

Lab Sample ID: 380-20830-J-2-A DU

Client Sample ID: Duplicate

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 17480

Prep Batch: 17302

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
2,4'-DDD	ND		ND		ug/L		NC	20
2,4'-DDE	ND		ND		ug/L		NC	20
2,4'-DDT	ND		ND		ug/L		NC	20
2,4-Dinitrotoluene	ND		ND		ug/L		NC	20
2,6-Dinitrotoluene	ND		ND		ug/L		NC	20
4,4'-DDD	ND		ND		ug/L		NC	20
4,4'-DDE	ND		ND		ug/L		NC	20
4,4'-DDT	ND		ND		ug/L		NC	20
Acenaphthene	ND		ND		ug/L		NC	20
Acenaphthylene	ND		ND		ug/L		NC	20
Acetochlor	ND		ND		ug/L		NC	20
Alachlor	ND		ND		ug/L		NC	20
alpha-BHC	ND		ND		ug/L		NC	20
alpha-Chlordane	ND		ND		ug/L		NC	20
Anthracene	ND		ND		ug/L		NC	20
Atrazine	ND		ND		ug/L		NC	20
Benz(a)anthracene	ND		ND		ug/L		NC	20
Benzo[a]pyrene	ND		ND		ug/L		NC	20
Benzo[b]fluoranthene	ND		ND		ug/L		NC	20
Benzo[g,h,i]perylene	ND		ND		ug/L		NC	20
Benzo[k]fluoranthene	ND		ND		ug/L		NC	20
beta-BHC	ND		ND		ug/L		NC	20
Bromacil	ND		ND		ug/L		NC	20
Butachlor	ND		ND		ug/L		NC	20
Butylbenzylphthalate	ND		ND		ug/L		NC	20
Caffeine	ND		ND		ug/L		NC	20
Chlorobenzilate	ND		ND		ug/L		NC	20
Chloroneb	ND		ND		ug/L		NC	20
Chlorothalonil (Draconil, Bravo)	ND		ND		ug/L		NC	20
Chlorpyrifos	ND		ND		ug/L		NC	20
Chrysene	ND		ND		ug/L		NC	20
delta-BHC	ND		ND		ug/L		NC	20
Di(2-ethylhexyl)adipate	ND		ND		ug/L		NC	20
Bis(2-ethylhexyl) phthalate	ND		ND		ug/L		NC	20
Diazinon (Qualitative)	ND		ND		ug/L		NC	20

Eurofins Eaton Monrovia

# QC Sample Results

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

Job ID: 380-20345-1

## Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 380-20830-J-2-A DU

Matrix: Water

Analysis Batch: 17480

Client Sample ID: Duplicate

Prep Type: Total/NA

Prep Batch: 17302

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Dibenz(a,h)an hracene	ND		ND		ug/L		NC	20
Diclorvos (DDVP)	ND		ND		ug/L		NC	20
Dieldrin	ND		ND		ug/L		NC	20
Diethylphthalate	ND		ND		ug/L		NC	20
Dimethoate	ND		ND		ug/L		NC	20
Dimethylph halate	ND		ND		ug/L		NC	20
Di-n-butyl phthalate	ND		ND		ug/L		NC	20
Di-n-octyl phthalate	ND		ND		ug/L		NC	20
Endosulfan I (Alpha)	ND		ND		ug/L		NC	20
Endosulfan II (Beta)	ND		ND		ug/L		NC	20
Endosulfan sulfate	ND		ND		ug/L		NC	20
Endrin	ND		ND		ug/L		NC	20
Endrin aldehyde	ND		ND		ug/L		NC	20
EPTC	ND		ND		ug/L		NC	20
Fluoranthene	ND		ND		ug/L		NC	20
Fluorene	ND		ND		ug/L		NC	20
gamma-Chlordane	ND		ND		ug/L		NC	20
Heptachlor	ND		ND		ug/L		NC	20
Heptachlor epoxide (isomer B)	ND		ND		ug/L		NC	20
Hexachlorobenzene	ND		ND		ug/L		NC	20
Hexachlorocyclopentadiene	ND		ND		ug/L		NC	20
Indeno[1,2,3-cd]pyrene	ND		ND		ug/L		NC	20
Isophorone	ND		ND		ug/L		NC	20
Lindane	ND		ND		ug/L		NC	20
Malathion	ND		ND		ug/L		NC	20
Methoxychlor	ND		ND		ug/L		NC	20
Metolachlor	ND		ND		ug/L		NC	20
Metribuzin	ND		ND		ug/L		NC	20
Molinate	ND		ND		ug/L		NC	20
Naphthalene	ND		ND		ug/L		NC	20
Parathion	ND		ND		ug/L		NC	20
Pendimethalin (Penoxaline)	ND		ND		ug/L		NC	20
Total Permethrin (mixed isomers)	ND		ND		ug/L		NC	20
Phenanthrene	ND		ND		ug/L		NC	20
Propachlor	ND		ND		ug/L		NC	20
Pyrene	ND		ND		ug/L		NC	20
Simazine	ND		ND		ug/L		NC	20
Terbacil	ND		ND		ug/L		NC	20
Terbutylazine	ND		ND		ug/L		NC	20
Thiobencarb	ND		ND		ug/L		NC	20
trans-Nonachlor	ND		ND		ug/L		NC	20
Trifluralin	ND		ND		ug/L		NC	20
1-Methylnaphthalene	ND		ND		ug/L		NC	20
2-Methylnaphthalene	ND		ND		ug/L		NC	20

Surrogate	DU DU		Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	91		70 - 130
Triphenylphosphate	93		70 - 130

Eurofins Eaton Monrovia

# QC Sample Results

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

Job ID: 380-20345-1

## Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 380-20830-J-2-A DU

Matrix: Water

Analysis Batch: 17480

Client Sample ID: Duplicate

Prep Type: Total/NA

Prep Batch: 17302

<i>Surrogate</i>	<i>%Recovery</i>	<i>DU DU</i> <i>Qualifier</i>	<i>Limits</i>
<i>Perylene-d12</i>	93		70 - 130

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# QC Association Summary

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

Job ID: 380-20345-1

## GC/MS Semi VOA

### Prep Batch: 17302

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-20345-1	HALAWA SHAFT STATIC (Viewing Pool)	Total/NA	Water	525.2	
MB 380-17302/1-A	Method Blank	Total/NA	Water	525.2	
LCS 380-17302/3-A	Lab Control Sample	Total/NA	Water	525.2	
LCSD 380-17302/4-A	Lab Control Sample Dup	Total/NA	Water	525.2	
MRL 380-17302/2-A	Lab Control Sample	Total/NA	Water	525.2	
380-20830-J-3-A MS	Matrix Spike	Total/NA	Water	525.2	
380-20830-J-2-A DU	Duplicate	Total/NA	Water	525.2	

### Analysis Batch: 17480

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-20345-1	HALAWA SHAFT STATIC (Viewing Pool)	Total/NA	Water	525.2	17302
MB 380-17302/1-A	Method Blank	Total/NA	Water	525.2	17302
LCS 380-17302/3-A	Lab Control Sample	Total/NA	Water	525.2	17302
LCSD 380-17302/4-A	Lab Control Sample Dup	Total/NA	Water	525.2	17302
MRL 380-17302/2-A	Lab Control Sample	Total/NA	Water	525.2	17302
380-20830-J-3-A MS	Matrix Spike	Total/NA	Water	525.2	17302
380-20830-J-2-A DU	Duplicate	Total/NA	Water	525.2	17302



# Lab Chronicle

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

Job ID: 380-20345-1

**Client Sample ID: HALAWA SHAFT STATIC (Viewing Pool)**

**Lab Sample ID: 380-20345-1**

**Date Collected: 09/06/22 09:30**

**Matrix: Water**

**Date Received: 09/08/22 10:45**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			17302	UMV1	EA MON	09/14/22 10:07
Total/NA	Analysis	525.2		1	17480	Q8LA	EA MON	09/15/22 15:04

**Laboratory References:**

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

EA MON = Eurofins Eaton Monrovia, 750 Royal Oaks Drive, Suite 100, Monrovia, CA 91016, TEL (626)386-1100





# Accreditation/Certification Summary

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

Job ID: 380-20345-1

## Laboratory: Eurofins Eaton Monrovia

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Hawaii	State	CA00006	01-31-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
525.2	525.2	Water	1-Methylnaphthalene
525.2	525.2	Water	2,4'-DDD
525.2	525.2	Water	2,4'-DDE
525.2	525.2	Water	2,4'-DDT
525.2	525.2	Water	2,4-Dinitrotoluene
525.2	525.2	Water	2,6-Dinitrotoluene
525.2	525.2	Water	2-Methylnaphthalene
525.2	525.2	Water	4,4'-DDD
525.2	525.2	Water	4,4'-DDE
525.2	525.2	Water	4,4'-DDT
525.2	525.2	Water	Acenaphthene
525.2	525.2	Water	Acenaphthylene
525.2	525.2	Water	Acetochlor
525.2	525.2	Water	alpha-BHC
525.2	525.2	Water	alpha-Chlordane
525.2	525.2	Water	Anthracene
525.2	525.2	Water	Benz(a)anthracene
525.2	525.2	Water	Benzo[b]fluoranthene
525.2	525.2	Water	Benzo[g,h,i]perylene
525.2	525.2	Water	Benzo[k]fluoranthene
525.2	525.2	Water	beta-BHC
525.2	525.2	Water	Bromacil
525.2	525.2	Water	Butylbenzylphthalate
525.2	525.2	Water	Caffeine
525.2	525.2	Water	Chlorobenzilate
525.2	525.2	Water	Chloroneb
525.2	525.2	Water	Chlorothalonil (Draconil, Bravo)
525.2	525.2	Water	Chlorpyrifos
525.2	525.2	Water	Chrysene
525.2	525.2	Water	delta-BHC
525.2	525.2	Water	Diazinon (Qualitative)
525.2	525.2	Water	Dibenz(a,h)anthracene
525.2	525.2	Water	Diclorvos (DDVP)
525.2	525.2	Water	Diethylphthalate
525.2	525.2	Water	Dimethoate
525.2	525.2	Water	Dimethylphthalate
525.2	525.2	Water	Di-n-butyl phthalate
525.2	525.2	Water	Di-n-octyl phthalate
525.2	525.2	Water	Endosulfan I (Alpha)
525.2	525.2	Water	Endosulfan II (Beta)
525.2	525.2	Water	Endosulfan sulfate
525.2	525.2	Water	Endrin aldehyde
525.2	525.2	Water	EPTC
525.2	525.2	Water	Fluoranthene
525.2	525.2	Water	Fluorene

# Accreditation/Certification Summary

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

Job ID: 380-20345-1

## Laboratory: Eurofins Eaton Monrovia (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
525.2	525.2	Water	gamma-Chlordane
525.2	525.2	Water	Indeno[1,2,3-cd]pyrene
525.2	525.2	Water	Isophorone
525.2	525.2	Water	Malathion
525.2	525.2	Water	Molinate
525.2	525.2	Water	Naphthalene
525.2	525.2	Water	Parathion
525.2	525.2	Water	Pendimethalin (Penoxaline)
525.2	525.2	Water	Phenanthrene
525.2	525.2	Water	Pyrene
525.2	525.2	Water	Terbacil
525.2	525.2	Water	Terbutylazine
525.2	525.2	Water	Thiobencarb
525.2	525.2	Water	Total Permethrin (mixed isomers)
525.2	525.2	Water	trans-Nonachlor
525.2	525.2	Water	Trifluralin



# Method Summary

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

Job ID: 380-20345-1

Method	Method Description	Protocol	Laboratory
525.2	Semivolatile Organic Compounds (GC/MS)	EPA	EA MON
625	EPA 625 Base/Neutral and Acid Organics i	EPA	
8015	8015 - TPH DRO/ORO	EPA	
8015B	SW846 8015B Gasoline Range Organics	SW846	
525.2	Extraction of Semivolatile Compounds	EPA	EA MON

**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

EA MON = Eurofins Eaton Monrovia, 750 Royal Oaks Drive, Suite 100, Monrovia, CA 91016, TEL (626)386-1100



# Sample Summary

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

Job ID: 380-20345-1

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-20345-1	HALAWA SHAFT STATIC (Viewing Pool)	Water	09/06/22 09:30	09/08/22 10:45
380-20345-2	TB:HALAWA SHAFT STATIC (Viewing Pool)	Water	09/06/22 09:30	09/08/22 10:45

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**EMAX**  
**LABORATORIES, INC.**  
 1835 W. 205th Street  
 Torrance, CA 90501  
 Tel: (310) 618-8889

Date: 09-23-2022  
 EMAX Batch No.: 221107

Attn: Jackie Contreras

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

Subject: Laboratory Report  
 Project: 380-20345

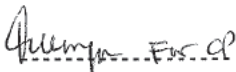
-----  
 Enclosed is the Laboratory report for samples received on 09/09/22.  
 The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
380-20345-1	1107-01	09/06/22	WATER	TPH GASOLINE TPH DIESEL & MOTOR OIL
380-20345-2	1107-02	09/06/22	WATER	TPH GASOLINE
380-20345-1MS	1107-01M	09/06/22	WATER	TPH GASOLINE
380-20345-1MSD	1107-01S	09/06/22	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



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

221107

**Client Information (Sub Contract Lab)**

Client Contact: Shipping/Receiving  
 Company: EMAX Laboratories Inc  
 Address: 3051 Fujita Street, Torrance  
 State, Zip: CA, 90505  
 Phone: [Blank]  
 Email: [Blank]  
 Project Name: RED-HILL  
 Site: Honolulu BWS Sites

Due Date Requested: 9/15/2022  
 TAT Requested (day/s): [Blank]  
 Lab P/N: Frank, Debbie L  
 E-Mail: Debbie.Frank@et.eurofins.com  
 State of Origin: Hawaii  
 Accreditations Required (See note): State - Hawaii

COG No: 380-21290-1  
 Page: Page 1 of 1  
 Job #: 380-20345-1

**Analysis Requested**

Field Filtered Sample (Yes or No)  **Perform MS/MSD (Yes or No)**

SUB (8015 Gas (Purgeable) LL (EAL)) 8015 Gas (Purgeable) LL (EAL)  
 SUB (8015 Diesel LL (EAL) and Motor Oil)/ 8015 Diesel LL (EAL) and Motor Oil

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

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (O=comp, G=grab)	MATRIX (W=water, S=solid, O=waste oil, BT=tissue, A=air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Special Instructions/Note:
1 HALAWA SHAFT STATIC (Viewing Pool) (380-20345-1)	9/6/22	09:30		Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	See Attached Instructions
2 TBHALAWA SHAFT STATIC (Viewing Pool) (380-20345-2)	9/6/22	09:30		Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	See Attached Instructions

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

**Possible Hazard Identification**  
 Unconfirmed

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:  Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
[Signature]	09/09/2022	EMAX	[Signature]	09/09/22	EMAX
[Signature]	9-9-22	ANALYT	[Signature]	9/9/22	EMAX

Custody Seals Intact: Custody Seal No.: [Blank]

REPORIND: 221107

Cooler Temperature(s) °C and Other Remarks: Temp 4.4/4.2 C/F 0.2



Type of Delivery <input type="checkbox"/> Fedex <input type="checkbox"/> UPS <input type="checkbox"/> GSO <input type="checkbox"/> Others <input type="checkbox"/> EMAX Courier <input checked="" type="checkbox"/> Client Delivery	Airbill / Tracking Number	ECN <u>22I107</u> Recipient <u>JHOWIN ZAMORA</u> Date <u>9/9/22</u> Time <u>1400</u>
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**COC INSPECTION**

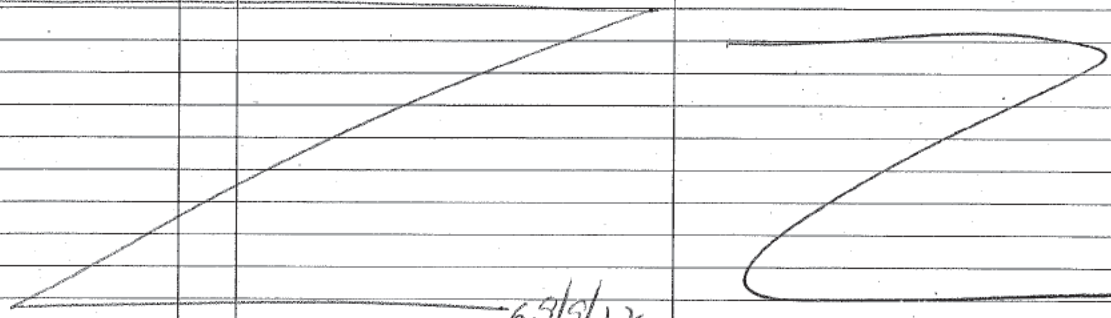
<input checked="" type="checkbox"/> Client Name	<input checked="" type="checkbox"/> Client PM/FC	<input type="checkbox"/> Sampler Name	<input checked="" type="checkbox"/> Sampling Date/Time	<input checked="" type="checkbox"/> Sample ID	<input checked="" type="checkbox"/> Matrix
<input type="checkbox"/>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

**PACKAGING INSPECTION**

Container	<input checked="" type="checkbox"/> Cooler	<input type="checkbox"/> Box	<input type="checkbox"/> Other
Condition	<input type="checkbox"/> Custody Seal	<input type="checkbox"/> Intact	<input type="checkbox"/> Damaged
Packaging	<input checked="" type="checkbox"/> Bubble Pack	<input type="checkbox"/> Styrofoam	<input type="checkbox"/> Popcorn
Temperatures (Cool, ≤6 °C but not frozen)	<input checked="" type="checkbox"/> Cooler 1 <u>4.4/42</u> °C	<input type="checkbox"/> Cooler 2 _____ °C	<input type="checkbox"/> Cooler 3 _____ °C
Thermometer: A - S/N _____	<input type="checkbox"/> Cooler 6 _____ °C	<input type="checkbox"/> Cooler 7 _____ °C	<input type="checkbox"/> Cooler 8 _____ °C
	<input checked="" type="checkbox"/> B - S/N <u>210740237</u>	<input type="checkbox"/> Cooler 9 _____ °C	<input type="checkbox"/> Cooler 10 _____ °C
		<input type="checkbox"/> C - S/N _____	<input type="checkbox"/> D - S/N <u>210740272</u>

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

**DISCREPANCIES**

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
<u>L</u>	<u>7.8</u>	<u>D22</u>	<u>Dates read 9/16/22 &amp; 8/16/22</u>	<u>R1</u>
				

pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time. RB 9/13/22

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

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

**REVIEWS:**

Sample Labeling <u>JHOWIN ZAMORA</u>	SRF <u>[Signature]</u>	PM <u>RB</u>
Date <u>9/9/22</u>	Date <u>9/9/22</u>	Date <u>9/13/22</u>

## 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

380-20345

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

SDG#: 22I107



CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-20345

SDG : 22I107

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

A total of two(2) water samples were received on 09/09/22 to be analyzed for Total Petroleum Hydrocarbons by Purge and Trap in accordance with Method 5030B/8015B and project specific requirements.

Holding Time

Samples were analyzed within the prescribed holding time.

Calibration

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

Method Blank

Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. VG39I09B - 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. VG39I09L/VG39I09C 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 I107-01M/I107-01S. Refer to Matrix QC summary form for details.

Surrogate

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

Sample Analysis

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

LAB CHRONICLE  
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client : EUROFINS EATON ANALYTICAL  
 Project : 380-20345  
 SDG NO. : 221107  
 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	VG39109B	1	NA	09/12/2213:24	09/12/2213:24	EI12005A	EI12004A	22VG39109	Method Blank
LCS1W	VG39109L	1	NA	09/12/2214:02	09/12/2214:02	EI12006A	EI12004A	22VG39109	Lab Control Sample (LCS)
LCD1W	VG39109C	1	NA	09/12/2214:40	09/12/2214:40	EI12007A	EI12004A	22VG39109	LCS Duplicate
380-20345-1	I107-01	1	NA	09/12/2215:19	09/12/2215:19	EI12008A	EI12004A	22VG39109	Field Sample
380-20345-1MS	I107-01M	1	NA	09/12/2215:57	09/12/2215:57	EI12009A	EI12004A	22VG39109	Matrix Spike Sample (MS)
380-20345-1MSD	I107-01S	1	NA	09/12/2216:35	09/12/2216:35	EI12010A	EI12004A	22VG39109	MS Duplicate (MSD)
380-20345-2	I107-02	1	NA	09/12/2217:13	09/12/2217:13	EI12011A	EI12004A	22VG39109	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: 09/06/22 09:30
Project     : 380-20345                    Date Received: 09/09/22
Batch No.   : 221107                      Date Extracted: 09/12/22 15:19
Sample ID   : 380-20345-1                 Date Analyzed: 09/12/22 15:19
Lab Samp ID: I107-01                      Dilution Factor: 1
Lab File ID: E112008A                    Matrix: WATER
Ext Btch ID: 22VG39109                   % Moisture: NA
Calib. Ref.: E112004A                    Instrument ID: 39
=====
  
```

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

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0341	0.0400	85	60-140

Notes:

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

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

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

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 09/06/22 09:30
Project     : 380-20345                   Date Received: 09/09/22
Batch No.   : 221107                       Date Extracted: 09/12/22 17:13
Sample ID   : 380-20345-2                 Date Analyzed: 09/12/22 17:13
Lab Samp ID : I107-02                      Dilution Factor: 1
Lab File ID : E112011A                    Matrix: WATER
Ext Btch ID : 22VG39109                   % Moisture: NA
Calib. Ref.: E112004A                     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	0.0351	0.0400	88	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: 09/12/22 13:24
Project    : 380-20345                   Date Received: 09/12/22
Batch No.  : 221107                       Date Extracted: 09/12/22 13:24
Sample ID  : MBLK1W                       Date Analyzed: 09/12/22 13:24
Lab Samp ID: VG39I09B                     Dilution Factor: 1
Lab File ID: E112005A                     Matrix: WATER
Ext Btch ID: 22VG39I09                    % Moisture: NA
Calib. Ref.: E112004A                    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	0.0347	0.0400	87	60-140

Notes:

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

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



EMAX QUALITY CONTROL DATA  
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL  
PROJECT : 380-20345  
BATCH NO. : 221107  
METHOD : 5030B/8015B

MATRIX : WATER		% MOISTURE:NA
DILUTION FACTOR: 1	1	1
SAMPLE ID : MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID : VG39109B	VG39109L	VG39109C
LAB FILE ID : EI12005A	EI12006A	EI12007A
DATE PREPARED : 09/12/22 13:24	09/12/22 14:02	09/12/22 14:40
DATE ANALYZED : 09/12/22 13:24	09/12/22 14:02	09/12/22 14:40
PREP BATCH : 22VG39109	22VG39109	22VG39109
CALIBRATION REF: EI12004A	EI12004A	EI12004A

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	0.446	89	0.500	0.440	88	1	60-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0431	108	0.0400	0.0437	109	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 : 380-20345  
BATCH NO. : 221107  
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: 380-20345-1	380-20345-1MS	380-20345-1MSD
LAB SAMPLE ID	: 1107-01	1107-01M	1107-01S
LAB FILE ID	: EI12008A	EI12009A	EI12010A
DATE PREPARED	: 09/12/22 15:19	09/12/22 15:57	09/12/22 16:35
DATE ANALYZED	: 09/12/22 15:19	09/12/22 15:57	09/12/22 16:35
PREP BATCH	: 22VG39109	22VG39109	22VG39109
CALIBRATION REF:	EI12004A	EI12004A	EI12004A

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	0.450	90	0.500	0.453	91	1	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	0.0449	112	60-140

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

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-20345

METHOD 3520C/8015B  
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 221107



CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-20345

SDG : 22I107

METHOD 3520C/8015B  
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 09/09/22 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. DSI016WB - 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 DSI016WL. 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 22I073-01M/22I073-01S. Refer to Matrix QC summary form for details.

Surrogate

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

Sample Analysis

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

LAB CHROMICLE  
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL
Project     : 380-20345
=====
SDG NO.    : 221107
Instrument ID : D5
=====

```

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	WATER		Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
				Analysis DateTime	% Moist					
MBLK1W	DS1016WB	1	NA	09/15/2219:40	09/14/2215:15	LI15011A	LI15004A	22DS1016W	Method Blank	
LCS1W	DS1016WL	1	NA	09/15/2219:58	09/14/2215:15	LI15012A	LI15004A	22DS1016W	Lab Control sample (LCS)	
380-20345-1	1107-01	1	NA	09/15/2222:26	09/14/2215:15	LI15020A	LI15004A	22DS1016W	Field Sample	

```

FN      - Filename
% Moist - Percent Moisture

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# SAMPLE RESULTS

METHOD 3520C/8015B  
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 09/06/22 09:30
Project     : 380-20345                   Date Received: 09/09/22
Batch No.   : 221107                       Date Extracted: 09/14/22 15:15
Sample ID   : 380-20345-1                 Date Analyzed: 09/15/22 22:26
Lab Samp ID: 221107-01                   Dilution Factor: 1
Lab File ID: LI15020A                     Matrix: WATER
Ext Btch ID: 22DSI016W                   % Moisture: NA
Calib. Ref.: LI15004A                     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	0.373	0.520	72	60-130	
Hexacosane	0.123	0.130	95	60-130	

Notes:

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

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount : 960ml                      Final Volume : 5ml  
Prepared by : DLi                              Analyzed by : SDeeso

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# QC SUMMARIES



METHOD 3520C/8015B  
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 09/14/22 15:15
Project     : 380-20345                   Date Received: 09/14/22
Batch No.   : 221107                       Date Extracted: 09/14/22 15:15
Sample ID   : MBLK1W                       Date Analyzed: 09/15/22 19:40
Lab Samp ID: DSI016WB                     Dilution Factor: 1
Lab File ID: L115011A                     Matrix: WATER
Ext Btch ID: 22DSI016W                    % Moisture: NA
Calib. Ref.: L115004A                    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	0.347	0.500	69	60-130
Hexacosane	0.124	0.125	99	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    : DLi                                Analyzed by : SDeeso

EMAX QUALITY CONTROL DATA  
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL  
PROJECT : 380-20345  
BATCH NO. : 221107  
METHOD : 3520C/8015B

=====

MATRIX : WATER % MOISTURE:NA  
DILUTION FACTOR: 1 1  
SAMPLE ID : MBLK1W LCS1W  
LAB SAMPLE ID : DSI016WB DSI016WL  
LAB FILE ID : LI15011A LI15012A  
DATE PREPARED : 09/14/22 15:15 09/14/22 15:15  
DATE ANALYZED : 09/15/22 19:40 09/15/22 19:58  
PREP BATCH : 22DSI016W 22DSI016W  
CALIBRATION REF: LI15004A LI15004A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Diesel	ND	2.50	2.31	92	50-130

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Bromobenzene	0.500	0.424	85	60-130
Hexacosane	0.125	0.126	101	60-130

=====

MB: Method Blank sample LCS: Lab Control Sample

EMAX QUALITY CONTROL DATA  
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL  
PROJECT : 380-20077  
BATCH NO. : 221073  
METHOD : 3520C/8015B

```

=====
MATRIX      : WATER                                     % MOISTURE:NA
DILUTION FACTOR: 1                                     1
SAMPLE ID   : 380-20077-1                             380-20077-1MSD
LAB SAMPLE ID : 221073-01                             221073-01S
LAB FILE ID  : LI15015A                               LI15017A
DATE PREPARED : 09/14/22 15:15                       09/14/22 15:15
DATE ANALYZED : 09/15/22 20:54                       09/15/22 21:31
PREP BATCH   : 22DSI016W                             22DSI016W
CALIBRATION REF: LI15004A                             LI15004A
    
```

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Diesel	ND	2.62	2.71	103	2.60	2.74	105	1	50-130	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.525	0.436	83	0.520	0.465	89	60-130
Hexacosane	0.131	0.143	109	0.130	0.139	107	60-130

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

September 24, 2022

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

Project Name: Eurofins Eaton RED-HILL Project # 38001111 Job # 380-20345-1  
Physis Project ID: 1407003-290

Dear Debbie,


Enclosed are the analytical results for the sample submitted to PHYSIS Environmental Laboratories, Inc. (PHYSIS) on 9/9/2022. 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

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: 1407003-290

Eurofins Eaton RED-HILL Project # 38001111 Job # 380-20345-1

Total Samples: 1

PHYSIS ID	Sample ID	Description	Date	Time	Matrix	Sample Type
99955	HALAWA SHAFT STATIC	Viewing Pool (380-20345-1)	9/6/2022	9:30	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

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

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

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

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



## PHYSIS QUALIFIER CODES

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

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## CASE NARRATIVE

### QUALIFIER NOTES

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

#### **ND**

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

# BIANALYTICALS

## REPORT

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## Base/Neutral Extractable Compounds

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
<b>Sample ID: 99955-R1    HALAWA SHAFT STATIC Viewing P Matrix: Samplewater    Sampled: 06-Sep-22 9:30    Received: 09-Sep-22</b>											
Disalicylidenepropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38114	13-Sep-22	17-Sep-22



## Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed	
<b>Sample ID: 99955-R1</b>	<b>HALAWA SHAFT STATIC Viewing P Matrix: Samplewater</b>						<b>Sampled: 06-Sep-22 9:30</b>		<b>Received: 09-Sep-22</b>			
(d10-Acenaphthene)	EPA 625.1	% Recovery	85	1			Total		0-38114	13-Sep-22	17-Sep-22	
(d10-Phenanthrene)	EPA 625.1	% Recovery	86	1			Total		0-38114	13-Sep-22	17-Sep-22	
(d12-Chrysene)	EPA 625.1	% Recovery	74	1			Total		0-38114	13-Sep-22	17-Sep-22	
(d12-Perylene)	EPA 625.1	% Recovery	75	1			Total		0-38114	13-Sep-22	17-Sep-22	
(d8-Naphthalene)	EPA 625.1	% Recovery	91	1			Total		0-38114	13-Sep-22	17-Sep-22	
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		0-38114	13-Sep-22	17-Sep-22	
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		0-38114	13-Sep-22	17-Sep-22	
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		0-38114	13-Sep-22	17-Sep-22	
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		0-38114	13-Sep-22	17-Sep-22	
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		0-38114	13-Sep-22	17-Sep-22	
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		0-38114	13-Sep-22	17-Sep-22	
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		0-38114	13-Sep-22	17-Sep-22	
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		0-38114	13-Sep-22	17-Sep-22	
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		0-38114	13-Sep-22	17-Sep-22	
Benzo[a]pyrene	EPA 625.1	µg/L	0.00572	1	0.001	0.005	Total		0-38114	13-Sep-22	17-Sep-22	
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		0-38114	13-Sep-22	17-Sep-22	
Benzo[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		0-38114	13-Sep-22	17-Sep-22	
Benzo[g,h,i]perylene	EPA 625.1	µg/L	0.0181	1	0.001	0.005	Total		0-38114	13-Sep-22	17-Sep-22	
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		0-38114	13-Sep-22	17-Sep-22	
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		0-38114	13-Sep-22	17-Sep-22	
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		0-38114	13-Sep-22	17-Sep-22	
D benz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		0-38114	13-Sep-22	17-Sep-22	
D benzo[a,l]pyrene	EPA 625.1	µg/L	0.00777	1	0.001	0.005	Total		0-38114	13-Sep-22	17-Sep-22	
D benzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		0-38114	13-Sep-22	17-Sep-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-38114	13-Sep-22	17-Sep-22
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38114	13-Sep-22	17-Sep-22
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38114	13-Sep-22	17-Sep-22
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38114	13-Sep-22	17-Sep-22
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38114	13-Sep-22	17-Sep-22
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38114	13-Sep-22	17-Sep-22
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38114	13-Sep-22	17-Sep-22



# QUALITY CONTROL REPORT

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## Base/Neutral Extractable Compounds

## QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE SOURCE		ACCURACY		PRECISION		QA CODEc
							LEVEL	RESULT	%	LIMITS	%	LIMITS	
<b>Sample ID: 99954-B1</b>		<b>QAQC Procedural Blank</b>			<b>Matrix: BlankMatrix</b>			<b>Sampled:</b>		<b>Received:</b>			
		Method: EPA 625.1			Batch ID: O-38114			Prepared: 13-Sep-22		Analyzed: 17-Sep-22			
Disalicylideneprapanediamin	Total	ND	1	0.05	0.1	µg/L							
<b>Sample ID: 99954-BS1</b>		<b>QAQC Procedural Blank</b>			<b>Matrix: BlankMatrix</b>			<b>Sampled:</b>		<b>Received:</b>			
		Method: EPA 625.1			Batch ID: O-38114			Prepared: 13-Sep-22		Analyzed: 17-Sep-22			
Disalicylideneprapanediamin	Total	37.7	1	0.05	0.1	µg/L	50	0	75	50 - 150%	PASS		
<b>Sample ID: 99954-BS2</b>		<b>QAQC Procedural Blank</b>			<b>Matrix: BlankMatrix</b>			<b>Sampled:</b>		<b>Received:</b>			
		Method: EPA 625.1			Batch ID: O-38114			Prepared: 13-Sep-22		Analyzed: 17-Sep-22			
Disalicylideneprapanediamin	Total	41.4	1	0.05	0.1	µg/L	50	0	83	50 - 150%	PASS	10	30 PASS



## Polynuclear Aromatic Hydrocarbons

## QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY	PRECISION	QA CODEc
							LEVEL	RESULT	% LIMITS	% LIMITS	
<b>Sample ID: 99954-B1</b>		<b>QAQC Procedural Blank</b>			<b>Matrix: BlankMatrix</b>		<b>Sampled:</b>		<b>Received:</b>		
	Method: EPA 625.1					Batch ID: O-38114	Prepared: 13-Sep-22	Analyzed: 17-Sep-22			
(d10-Acenaphthene)	Total	93	1			% Recovery	100	93	65 - 113%	PASS	
(d10-Phenanthrene)	Total	87	1			% Recovery	100	87	80 - 111%	PASS	
(d12-Chrysene)	Total	83	1			% Recovery	100	83	60 - 139%	PASS	
(d12-Perylene)	Total	95	1			% Recovery	100	95	36 - 161%	PASS	
(d8-Naphthalene)	Total	95	1			% Recovery	100	95	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					
Dibenzothiophene	Total	ND	1	0.001	0.005	µg/L					

## Polynuclear Aromatic Hydrocarbons

## QUALITY CONTROL REPORT

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



## Polynuclear Aromatic Hydrocarbons

## QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY	PRECISION	QA CODEc	
							LEVEL	RESULT	% LIMITS	% LIMITS		
<b>Sample ID: 99954-BS1</b>		<b>QAQC Procedural Blank</b>			<b>Matrix: BlankMatrix</b>			<b>Sampled:</b>		<b>Received:</b>		
Method: EPA 625.1		Batch ID: O-38114			Prepared: 13-Sep-22		Analyzed: 17-Sep-22					
(d10-Acenaphthene)	Total	92	1			% Recovery	100	0	92	65 - 113%	PASS	
(d10-Phenanthrene)	Total	94	1			% Recovery	100	0	94	80 - 111%	PASS	
(d12-Chrysene)	Total	77	1			% Recovery	100	0	77	60 - 139%	PASS	
(d12-Perylene)	Total	105	1			% Recovery	100	0	105	36 - 161%	PASS	
(d8-Naphthalene)	Total	92	1			% Recovery	100	0	92	44 - 119%	PASS	
1-Methylnaphthalene	Total	0.464	1	0.001	0.005	µg/L	0.5	0	93	49 - 117%	PASS	
1-Methylphenanthrene	Total	0.46	1	0.001	0.005	µg/L	0.5	0	92	66 - 127%	PASS	
2,3,5-Trimethylnaphthalene	Total	0.483	1	0.001	0.005	µg/L	0.5	0	97	57 - 120%	PASS	
2,6-Dimethylnaphthalene	Total	0.466	1	0.001	0.005	µg/L	0.5	0	93	54 - 117%	PASS	
2-Methylnaphthalene	Total	0.459	1	0.001	0.005	µg/L	0.5	0	92	47 - 130%	PASS	
Acenaphthene	Total	0.469	1	0.001	0.005	µg/L	0.5	0	94	53 - 131%	PASS	
Acenaphthylene	Total	0.46	1	0.001	0.005	µg/L	0.5	0	92	43 - 140%	PASS	
Anthracene	Total	0.472	1	0.001	0.005	µg/L	0.5	0	94	58 - 135%	PASS	
Benz[a]anthracene	Total	0.399	1	0.001	0.005	µg/L	0.5	0	80	55 - 145%	PASS	
Benzo[a]pyrene	Total	0.533	1	0.001	0.005	µg/L	0.5	0	107	51 - 143%	PASS	
Benzo[b]fluoranthene	Total	0.553	1	0.001	0.005	µg/L	0.5	0	111	46 - 165%	PASS	
Benzo[e]pyrene	Total	0.553	1	0.001	0.005	µg/L	0.5	0	111	42 - 152%	PASS	
Benzo[g,h,i]perylene	Total	0.501	1	0.001	0.005	µg/L	0.5	0	100	63 - 133%	PASS	
Benzo[k]fluoranthene	Total	0.447	1	0.001	0.005	µg/L	0.5	0	89	56 - 145%	PASS	
Biphenyl	Total	0.473	1	0.001	0.005	µg/L	0.5	0	95	56 - 119%	PASS	
Chrysene	Total	0.414	1	0.001	0.005	µg/L	0.5	0	83	56 - 141%	PASS	
Dibenz[a,h]anthracene	Total	0.643	1	0.001	0.005	µg/L	0.5	0	129	55 - 150%	PASS	
Dibenzo[a,l]pyrene	Total	0.248	1	0.001	0.005	µg/L	0.5	0	50	50 - 150%	PASS	
Dibenzothiophene	Total	0.475	1	0.001	0.005	µg/L	0.5	0	95	75 - 113%	PASS	

## Polynuclear Aromatic Hydrocarbons

## QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY		PRECISION		QA CODE <sub>c</sub>
							LEVEL	RESULT	%	LIMITS	%	LIMITS	
Fluoranthene	Total	0.48	1	0.001	0.005	µg/L	0.5	0	96	60 - 146%	PASS		
Fluorene	Total	0.461	1	0.001	0.005	µg/L	0.5	0	92	58 - 131%	PASS		
Indeno[1,2,3-cd]pyrene	Total	0.597	1	0.001	0.005	µg/L	0.5	0	119	50 - 151%	PASS		
Naphthalene	Total	0.453	1	0.001	0.005	µg/L	0.5	0	91	41 - 126%	PASS		
Perylene	Total	0.458	1	0.001	0.005	µg/L	0.5	0	92	48 - 141%	PASS		
Phenanthrene	Total	0.48	1	0.001	0.005	µg/L	0.5	0	96	67 - 127%	PASS		
Pyrene	Total	0.482	1	0.001	0.005	µg/L	0.5	0	96	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: 99954-BS2</b>		<b>QAQC Procedural Blank</b>			<b>Matrix: BlankMatrix</b>			<b>Sampled:</b>			<b>Received:</b>				
		Method: EPA 625.1			Batch ID: O-38114			Prepared: 13-Sep-22			Analyzed: 17-Sep-22				
(d10-Acenaphthene)	Total	86	1				% Recovery	100	0	86	65 - 113%	PASS	7	30	PASS
(d10-Phenanthrene)	Total	83	1				% Recovery	100	0	83	80 - 111%	PASS	12	30	PASS
(d12-Chrysene)	Total	66	1				% Recovery	100	0	66	60 - 139%	PASS	15	30	PASS
(d12-Perylene)	Total	98	1				% Recovery	100	0	98	36 - 161%	PASS	7	30	PASS
(d8-Naphthalene)	Total	89	1				% Recovery	100	0	89	44 - 119%	PASS	3	30	PASS
1-Methylnaphthalene	Total	0.424	1	0.001	0.005	µg/L		0.5	0	85	49 - 117%	PASS	9	30	PASS
1-Methylphenanthrene	Total	0.411	1	0.001	0.005	µg/L		0.5	0	82	66 - 127%	PASS	11	30	PASS
2,3,5-Trimethylnaphthalene	Total	0.443	1	0.001	0.005	µg/L		0.5	0	89	57 - 120%	PASS	9	30	PASS
2,6-Dimethylnaphthalene	Total	0.442	1	0.001	0.005	µg/L		0.5	0	88	54 - 117%	PASS	6	30	PASS
2-Methylnaphthalene	Total	0.429	1	0.001	0.005	µg/L		0.5	0	86	47 - 130%	PASS	7	30	PASS
Acenaphthene	Total	0.447	1	0.001	0.005	µg/L		0.5	0	89	53 - 131%	PASS	5	30	PASS
Acenaphthylene	Total	0.433	1	0.001	0.005	µg/L		0.5	0	87	43 - 140%	PASS	6	30	PASS
Anthracene	Total	0.438	1	0.001	0.005	µg/L		0.5	0	88	58 - 135%	PASS	7	30	PASS
Benz[a]anthracene	Total	0.348	1	0.001	0.005	µg/L		0.5	0	70	55 - 145%	PASS	13	30	PASS
Benzo[a]pyrene	Total	0.551	1	0.001	0.005	µg/L		0.5	0	110	51 - 143%	PASS	3	30	PASS
Benzo[b]fluoranthene	Total	0.522	1	0.001	0.005	µg/L		0.5	0	104	46 - 165%	PASS	7	30	PASS
Benzo[e]pyrene	Total	0.52	1	0.001	0.005	µg/L		0.5	0	104	42 - 152%	PASS	7	30	PASS
Benzo[g,h,i]perylene	Total	0.474	1	0.001	0.005	µg/L		0.5	0	95	63 - 133%	PASS	5	30	PASS
Benzo[k]fluoranthene	Total	0.43	1	0.001	0.005	µg/L		0.5	0	86	56 - 145%	PASS	3	30	PASS
Biphenyl	Total	0.45	1	0.001	0.005	µg/L		0.5	0	90	56 - 119%	PASS	5	30	PASS
Chrysene	Total	0.356	1	0.001	0.005	µg/L		0.5	0	71	56 - 141%	PASS	16	30	PASS
Dibenz[a,h]anthracene	Total	0.649	1	0.001	0.005	µg/L		0.5	0	130	55 - 150%	PASS	1	30	PASS
Dibenzo[a,l]pyrene	Total	0.286	1	0.001	0.005	µg/L		0.5	0	57	50 - 150%	PASS	13	30	PASS
Dibenzothiophene	Total	0.43	1	0.001	0.005	µg/L		0.5	0	86	75 - 113%	PASS	10	30	PASS

## Polynuclear Aromatic Hydrocarbons

## QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY		PRECISION		QA CODE <sub>c</sub>	
							LEVEL	RESULT	%	LIMITS	%	LIMITS		
Fluoranthene	Total	0.436	1	0.001	0.005	µg/L	0.5	0	87	60 - 146%	PASS	10	30	PASS
Fluorene	Total	0.429	1	0.001	0.005	µg/L	0.5	0	86	58 - 131%	PASS	7	30	PASS
Indeno[1,2,3-cd]pyrene	Total	0.599	1	0.001	0.005	µg/L	0.5	0	120	50 - 151%	PASS	1	30	PASS
Naphthalene	Total	0.444	1	0.001	0.005	µg/L	0.5	0	89	41 - 126%	PASS	2	30	PASS
Perylene	Total	0.452	1	0.001	0.005	µg/L	0.5	0	90	48 - 141%	PASS	2	30	PASS
Phenanthrene	Total	0.442	1	0.001	0.005	µg/L	0.5	0	88	67 - 127%	PASS	9	30	PASS
Pyrene	Total	0.446	1	0.001	0.005	µg/L	0.5	0	89	54 - 156%	PASS	8	30	PASS

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# PHYSIS

**TENTATIVELY IDENTIFIED COMPOUNDS**

ENVIRONMENTAL LABORATORIES, INC.  
*Innovative Solutions for Nature*

Sample ID: 99955

RT	Area Pct	Concentration (ng/L)	Library/ID	Cas Number	Match Qual
32.5102	10.7552	1111	Anthracene-D10	1517-22-2	96
No identifiable TICs were detected in this sample.					

Concentration estimated using the response for Anthracene-d10

- 1
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- 12
- 13
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- 16
- 17



Sample ID: Lab Blank Batch O-38114

RT	Area Pct	Concentration (ng/L)	Library/ID	Cas Number	Match Qual
32.5116	7.6559	1111	Anthracene-D10-	1719-06-8	97
No identifiable TICs were detected in this sample.					

Concentration estimated using the response for Anthracene-d10

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- 17

# PERFORMANCE CHAIN OF CUSTODY

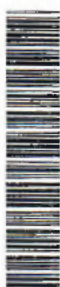
TERRA ENVIRONMENTAL LABORATORIES, INC. AURA

*Innovative Solutions for Nature*

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Monrovia, CA (Suite 100)  
750 Royal Oaks Drive Suite 100  
Monrovia, CA 91016  
Phone: 626-366-1100

# Chain of Custody Record



Environment Testing  
America

Client Information (Sub Contract Lab)					Sampler:	Lab Pk:	Carrier/Tracking No(s):	COC No:		
Client Contact:					Frank, Debbie L	380-21292.1		Page:		
Shipping/Receiving:					Debbie.Frank@eurofins.com	State of Origin:		Page 1 of 1		
Company:					Physis Environmental Laboratories	Accreditations Required (See note):		Job #:		
Address:					1904 Wright Circle,	State - Hawaii		380-20345-1		
City:					Armaheim	<b>Analysis Requested</b>				
State Zip:					CA, 92806					
Phone:					PO #:	A - HCL N - None O - Ash/NO2 P - NaCO3S Q - Na2SO3 R - Na2S2O3 S - H2SO4 G - Anichlor H - Ascorbic Acid T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 Y - Trama Z - other (specify)				
Email:					WO #:					
Project Name:					Project #:	<b>Special Instructions/Note:</b> See Attached Instructions				
RED-HILL					SSOW#:					
Site:					Honolulu BWS Sites					
Sample Identification - Client ID (Lab ID)				Sample Date	Sample Time	Sample Type (G=comp, G=grab)	Preservation Codes	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total Number of containers

Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyze & 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/matrix being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Eaton Analytical, LLC.

**Possible Hazard Identification**  
 Unconfirmed  
 Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2  
 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/Time:	Date:	Time:	Method of Shipment:
Relinquished by: <i>B. Bertner</i>	09/09/2022	10:35		
Relinquished by: <i>Albert G</i>	9-9-22	16:10		
Relinquished by:	Date/Time:	Received by:		Date/Time:
		<i>CENSAR NUADWIE</i>		9/9/22
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No	Custody Seal No.:	Received by:		Date/Time:
		<i>CENSAR NUADWIE</i>		9/9/22
Cooler Temperature(s) °C and Other Remarks:				

Project Iteration ID: 1407003-290  
 Client Name: Eurofins Eaton Analytical  
 Project Name: Eurofins Eaton RED-HILL Project  
 # 38001111 Job # 380-20345-1  
 COC Page Number: 2 of 2  
 Bottle Label Color: NA

**Sample Receipt Summary**

**Receiving Info**

- Initials Received By: CN
- Date Received: 9/9/2022
- Time Received: 1615
- Client Name: EUROFINS
- Courier Information: (Please circle)
  - Client
    - UPS
    - Area Fast
    - DRS
  - FedEx
  - GSO/GLS
  - Ontrac
  - PAMS
  - PHYSIS Driver:
    - Start Time: \_\_\_\_\_
    - End Time: \_\_\_\_\_
    - Total Mileage: \_\_\_\_\_
    - Number of Pickups: \_\_\_\_\_
- Container Information: (Please put the # of containers or circle none)
  - 1 Cooler
  - \_\_\_ Styrofoam Cooler
  - \_\_\_ Boxes
  - None
  - \_\_\_ Carboy(s)
  - \_\_\_ Carboy Trash Can(s)
  - \_\_\_ Carboy Cap(s)
  - Other \_\_\_\_\_
- What type of ice was used: (Please circle any that apply)
  - Wet Ice
  - Blue Ice
  - Dry Ice
  - Water
  - None
- Randomly Selected Samples Temperature (°C): 1-4  
 Used I/R Thermometer # /

**Inspection Info**

- Initials Inspected By: RGH

**Sample Integrity Upon Receipt:**

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

Notes:

Duplicate COC

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

**Chain of Custody Record**



Client Contact: **Physis Environmental Laboratories** | Sampler: \_\_\_\_\_  
 Shipping/Receiving: \_\_\_\_\_ | Phone: \_\_\_\_\_ | Lab POC: **Frank, Debbie L.**  
 E-Mail: **Debbie.Frank@eurofins.com** | State of Origin: **Hawaii**  
 Company: **Physis Environmental Laboratories** | Address: **1904 Wright Circle, Honolulu BWS Sites** | Accreditation Required (See note): **State - Hawaii**  
 Due Date Requested: **9/15/2022** | Analysis Requested: \_\_\_\_\_  
 City: **Anaheim** | TAT Requested (days): \_\_\_\_\_  
 State Zip: **CA, 92806** | PO #: \_\_\_\_\_  
 WOC #: \_\_\_\_\_  
 Project #: **38001111** | SSSOW#: \_\_\_\_\_

COG No.: **380-21282-1** | Job #: **380-20345-1**  
 Page: **1 of 1**  
 Preservation Codes: **A - HCL, B - NaOH, C - 2n Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Another, H - Ascobic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA**  
**Other:** \_\_\_\_\_  
 M - Hexane, N - None, O - Acetic, P - Na2OAS, R - Na2S2O3, S - H2SO4, T - TSP Dodecylhydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (O-comp, G-trab)	Matrix (Weaves, Solid, Over-sat, Brackets, Asst)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested	Total Number of Containers	Special Instructions/Note
<b>HALAWA SHAFT STATIC (Viewing Pool) (380-20345-1)</b>	<b>9/8/22</b>	<b>09:30</b>	<b>Hawaiian</b>	<b>Water</b>	<b>X</b>	<b>X</b>	<b>SUB (625 PAH Physis LL (EAL) + TICs)/ 625 PAH Physis LL (EAL) + TICs</b>	<b>2</b>	<b>See Attached Instructions</b>

**Possible Hazard Identification**  
 Deliverable Requested: **I, II, III, IV, Other (specify)** | Primary Deliverable Rank: **2**  
 Empty Kit Relinquished by: \_\_\_\_\_ | Date: \_\_\_\_\_  
 Relinquished by: **GAETNER** | Date/Time: **09/09/2022 10:38** | Company: **EGA**  
 Relinquished by: **ALL - 1** | Date/Time: **9-2-22 16:10** | Company: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ | Date/Time: \_\_\_\_\_ | Company: \_\_\_\_\_

**Note:** Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis, 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.  
**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: \_\_\_\_\_  
 Method of Shipment: \_\_\_\_\_  
 Cooler Temperature(s) °C and Other Remarks: \_\_\_\_\_



Eaton Analytical

750 Royal Oaks Drive, Suite 100  
 Monrovia, CA 91016-3629  
 Phone: 626 386 1100  
 Fax: 626 386 1101  
 800 566 LABS (800 566 5227)

# CHAIN OF CUSTODY RECORD

EUROFINS EATON ANALYTICAL USE ONLY:

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

SAMPLES CHECKED AGAINST COC BY: GR

SAMPLES LOGGED IN BY: \_\_\_\_\_

SAMPLES REC'D DAY OF COLLECTION?  (check for yes)

SAMPLE TEMP RECEIVED AT: \_\_\_\_\_ °C (Compliance: 4 ± 2 °C)

Colton / No. California / Arizona  
 Monrovia

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

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

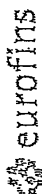
TO BE COMPLETED BY SAMPLER:

COMPANY/AGENCY NAME: BWS HONOLULU		PROJECT CODE: Red Hill Special	COMPLIANCE SAMPLES <input type="checkbox"/> NON-COMPLIANCE SAMPLES <input checked="" type="checkbox"/>															
COG ID:		SAMPLE GROUP: Weekly_RED_HILL (2022)	REGULATION INVOLVED:															
TAT requested: rush by adv notice only		STD ___ 1 wk ___ X ___ 3 day ___ 2 day ___ 1 day ___	Type of samples (circle one): ROUTINE <input checked="" type="checkbox"/> SPECIAL CONFIRMATION (eg. SDWA, Phase V, NPDES, FDA,...)															
SAMPLE DATE	SAMPLE TIME	SAMPLE ID	CLIENT LAB ID	MATRIX														
09/08/22	930	Halawa Shaft Static (Viewing Pool)	RGW	RGW														
list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)																		
<table border="1"> <tr> <td>625 PAH + MSMSD</td> <td>Gas(Purge) (2x40ml)</td> <td>Subcontract: 2015</td> <td>and Mtd (2x11)</td> <td>8015 Diesel LL (EAL)</td> <td>SUBCONTRACT-</td> <td>Volume (2x1L)</td> </tr> <tr> <td>2</td> <td>2</td> <td>4</td> <td>2</td> <td>2</td> <td></td> <td></td> </tr> </table>					625 PAH + MSMSD	Gas(Purge) (2x40ml)	Subcontract: 2015	and Mtd (2x11)	8015 Diesel LL (EAL)	SUBCONTRACT-	Volume (2x1L)	2	2	4	2	2		
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\* MATRIX TYPES: RSW = Raw Surface Water, RGW = Raw Ground Water, CFW = Chlor(am)inated Finished Water, FW = Other Finished Water  
 SEAW = Sea Water, WW = Waste Water, BW = Bottled Water, SW = Storm Water, SO = Soil, SL = Sludge

SAMPLED BY:	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:		Olaf Happe	Honolulu Board of Water Supply	9/6/2022	930
RECEIVED BY:		Olaf Happe	Honolulu Board of Water Supply	9/8/2022	1130
RELINQUISHED BY:		Chuck Brooks		9-8-22	1045
RECEIVED BY:					





Eaton Analytical

EEA Folder Number

# INTERNAL CHAIN OF CUSTODY RECORD

**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 = 401 (Observation = 0.5 °C) (Corr. Factor = 0.1 °C) (Final = 0.4 °C)

TYPE OF ICE: Real  Synthetic  No Ice  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 (1813 or 2,3,7,8 TCDD): must be between 0-4 °C, not frozen (if received after 24 hrs of sample collection) Results: \_\_\_\_\_

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: \_\_\_\_\_

VOA and Radon

7) Headspace:

Exempt from headspace concerns: Methods 815-4, HAA(8251, 822), 805, SPME, @CH, 652LCMS, 666, 669, Anatoxin, LCMS methods using 40 ml vials, International clients: \_\_\_\_\_

Sample ID	Bottle #	None/≤8	>8mm	Test

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

RECEIVED BY: Chuck Beck SIGNATURE: Chuck Beck PRINT NAME: Chuck Beck

COMPANY/TITLE: Eurofins Eaton Analytical DATE: 9.8.22 TIME: 10:15

COMPANY/TITLE: Eurofins Eaton Analytical DATE: 09/08/2022 TIME: 15:23

SAMPLES CHECKED AGAINST LOG IN: \_\_\_\_\_ SIGNATURE: \_\_\_\_\_ PRINT NAME: \_\_\_\_\_



ORIGIN ID: HKA (808) 748-5840  
 BWS CHEMLAB  
 HONOLULU BOARD OF WATER SUPPLY  
 630 S. BERETANIA ST  
 CHEMICAL LABORATORY  
 HONOLULU, HI 96843  
 UNITED STATES US

SHIP DATE 07SEP22  
 ACTWGT. 54.00 LB  
 CAD 100205419/INET4830

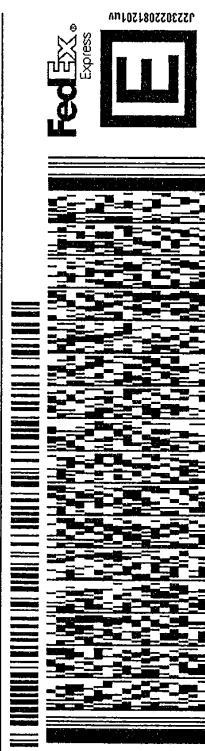
**TO BROOKS**  
**EUROFINS EATON ANALYTICAL, INC**  
**750 ROYAL OAKS DR**  
**SUITE 100**  
**MONROVIA CA 91016**

581J1/E080/FE20

BILL RECIPIENT

REF (626) 386-1178

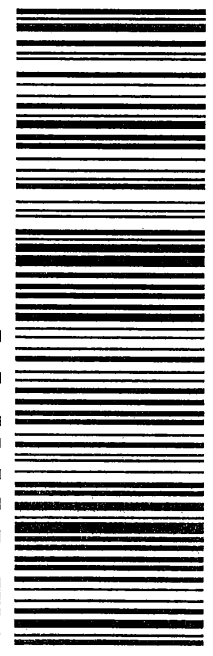
PO INV DEPT



THU - 08 SEP 10:30A  
PRIORITY OVERNIGHT

1 of 2  
TRK# 7778 7335 2210  
## MASTER ##

**WZ WHPA**  
91016  
CA-US BUR



**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. 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.

- 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.

FedEx Ship Manager - Print Your Label(s)

9/7/22, 12 27 PM



## Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-20345-1

Login Number: 20345

List Source: Eurofins Eaton Monrovia

List Number: 1

Creator: Ngo, Theodore

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