

## ANALYTICAL REPORT

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

Laboratory Job ID: 380-21547-1  
Client Project/Site: RED-HILL  
Sampling Event: RUSH Weekly 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:  
10/18/2022 7:40:35 PM

Rachelle Arada, Manager of Project Management  
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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  
10/18/2022 7:40:35 PM



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# Definitions/Glossary

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

Job ID: 380-21547-1

## Qualifiers

### GC/MS Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
^3+	Reporting Limit Check Standard is outside acceptance limits, high biased
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.

### GC/MS Semi VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
N	Presumptive evidence of material.
T	Result is a tentatively identified compound (TIC) and an estimated value.

### Subcontract

Qualifier	Qualifier Description
U	This analyte was not detected.

## Glossary

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

# Case Narrative

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

Job ID: 380-21547-1

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## Job ID: 380-21547-1

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### Laboratory: Eurofins Eaton Monrovia

#### Narrative

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#### Job Narrative 380-21547-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 9/21/2022 9:50 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 4.8° C.

#### GC/MS Semi VOA

Method 525.2: The continuing calibration verification (CCV) associated with batch 380-18328 recovered above the upper control limit for Malathion, Methoxychlor and Total Permethrin (mixed isomers). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: MOANALUA WELLS (331-223-TP202) (380-21547-1) and (380-21554-E-1-A).

No additional analytical or quality issues were noted, other than those described above or 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: 380-21547-1

**Client Sample ID: MOANALUA WELLS (331-223-TP202)**  
**PWSID Number: HI0000331**

**Lab Sample ID: 380-21547-1**

No Detections.

**Client Sample ID: TB MOANALUA WELLS (331-223-TP202)**

**Lab Sample ID: 380-21547-2**

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: 380-21547-1

**Client Sample ID: MOANALUA WELLS (331-223-TP202)**

**Lab Sample ID: 380-21547-1**

Date Collected: 09/19/22 10:19

Matrix: Drinking Water

Date Received: 09/21/22 09:50

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	ND	^3+	0.10	ug/L		09/22/22 09:50	09/23/22 13:08	1
2,4'-DDE	ND		0.10	ug/L		09/22/22 09:50	09/23/22 13:08	1
2,4'-DDT	ND		0.10	ug/L		09/22/22 09:50	09/23/22 13:08	1
2,4-Dinitrotoluene	ND		0.10	ug/L		09/22/22 09:50	09/23/22 13:08	1
2,6-Dinitrotoluene	ND		0.10	ug/L		09/22/22 09:50	09/23/22 13:08	1
4,4'-DDD	ND		0.10	ug/L		09/22/22 09:50	09/23/22 13:08	1
4,4'-DDE	ND		0.10	ug/L		09/22/22 09:50	09/23/22 13:08	1
4,4'-DDT	ND		0.10	ug/L		09/22/22 09:50	09/23/22 13:08	1
Acenaphthene	ND		0.10	ug/L		09/22/22 09:50	09/23/22 13:08	1
Acenaphthylene	ND		0.10	ug/L		09/22/22 09:50	09/23/22 13:08	1
Acetochlor	ND		0.10	ug/L		09/22/22 09:50	09/23/22 13:08	1
Alachlor	ND		0.052	ug/L		09/22/22 09:50	09/23/22 13:08	1
alpha-BHC	ND		0.10	ug/L		09/22/22 09:50	09/23/22 13:08	1
alpha-Chlordane	ND		0.052	ug/L		09/22/22 09:50	09/23/22 13:08	1
Anthracene	ND		0.021	ug/L		09/22/22 09:50	09/23/22 13:08	1
Atrazine	ND		0.052	ug/L		09/22/22 09:50	09/23/22 13:08	1
Benz(a)anthracene	ND		0.052	ug/L		09/22/22 09:50	09/23/22 13:08	1
Benzo[a]pyrene	ND		0.021	ug/L		09/22/22 09:50	09/23/22 13:08	1
Benzo[b]fluoranthene	ND		0.021	ug/L		09/22/22 09:50	09/23/22 13:08	1
Benzo[g,h,i]perylene	ND		0.052	ug/L		09/22/22 09:50	09/23/22 13:08	1
Benzo[k]fluoranthene	ND		0.021	ug/L		09/22/22 09:50	09/23/22 13:08	1
beta-BHC	ND		0.10	ug/L		09/22/22 09:50	09/23/22 13:08	1
Bromacil	ND	*+	0.10	ug/L		09/22/22 09:50	09/23/22 13:08	1
Butachlor	ND		0.052	ug/L		09/22/22 09:50	09/23/22 13:08	1
Butylbenzylphthalate	ND		0.52	ug/L		09/22/22 09:50	09/23/22 13:08	1
Caffeine	ND		0.052	ug/L		09/22/22 09:50	09/23/22 13:08	1
Chlorobenzilate	ND		0.10	ug/L		09/22/22 09:50	09/23/22 13:08	1
Chloroneb	ND		0.10	ug/L		09/22/22 09:50	09/23/22 13:08	1
Chlorothalonil (Draconil, Bravo)	ND		0.10	ug/L		09/22/22 09:50	09/23/22 13:08	1
Chlorpyrifos	ND		0.052	ug/L		09/22/22 09:50	09/23/22 13:08	1
Chrysene	ND		0.021	ug/L		09/22/22 09:50	09/23/22 13:08	1
delta-BHC	ND		0.10	ug/L		09/22/22 09:50	09/23/22 13:08	1
Di(2-ethylhexyl)adipate	ND	^3+	0.62	ug/L		09/22/22 09:50	09/23/22 13:08	1
Bis(2-ethylhexyl) phthalate	ND		0.62	ug/L		09/22/22 09:50	09/23/22 13:08	1
Diazinon (Qualitative)	ND		0.10	ug/L		09/22/22 09:50	09/23/22 13:08	1
Dibenz(a,h)anthracene	ND		0.052	ug/L		09/22/22 09:50	09/23/22 13:08	1
Diclorvos (DDVP)	ND	^3+	0.052	ug/L		09/22/22 09:50	09/23/22 13:08	1
Dieldrin	ND		0.21	ug/L		09/22/22 09:50	09/23/22 13:08	1
Diethylphthalate	ND		0.52	ug/L		09/22/22 09:50	09/23/22 13:08	1
Dimethoate	ND		0.10	ug/L		09/22/22 09:50	09/23/22 13:08	1
Dimethylphthalate	ND		0.52	ug/L		09/22/22 09:50	09/23/22 13:08	1
Di-n-butyl phthalate	ND		1.0	ug/L		09/22/22 09:50	09/23/22 13:08	1
Di-n-octyl phthalate	ND		0.10	ug/L		09/22/22 09:50	09/23/22 13:08	1
Endosulfan I (Alpha)	ND		0.10	ug/L		09/22/22 09:50	09/23/22 13:08	1
Endosulfan II (Beta)	ND		0.10	ug/L		09/22/22 09:50	09/23/22 13:08	1
Endosulfan sulfate	ND		0.10	ug/L		09/22/22 09:50	09/23/22 13:08	1
Endrin	ND		0.10	ug/L		09/22/22 09:50	09/23/22 13:08	1
Endrin aldehyde	ND		0.10	ug/L		09/22/22 09:50	09/23/22 13:08	1
EPTC	ND		0.10	ug/L		09/22/22 09:50	09/23/22 13:08	1

# Client Sample Results

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

Job ID: 380-21547-1

**Client Sample ID: MOANALUA WELLS (331-223-TP202)**

**Lab Sample ID: 380-21547-1**

Date Collected: 09/19/22 10:19

Matrix: Drinking Water

Date Received: 09/21/22 09:50

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	ND		0.10	ug/L		09/22/22 09:50	09/23/22 13:08	1
Fluorene	ND		0.052	ug/L		09/22/22 09:50	09/23/22 13:08	1
gamma-Chlordane	ND		0.052	ug/L		09/22/22 09:50	09/23/22 13:08	1
Heptachlor	ND		0.042	ug/L		09/22/22 09:50	09/23/22 13:08	1
Heptachlor epoxide (isomer B)	ND		0.052	ug/L		09/22/22 09:50	09/23/22 13:08	1
Hexachlorobenzene	ND		0.052	ug/L		09/22/22 09:50	09/23/22 13:08	1
Hexachlorocyclopentadiene	ND		0.052	ug/L		09/22/22 09:50	09/23/22 13:08	1
Indeno[1,2,3-cd]pyrene	ND		0.052	ug/L		09/22/22 09:50	09/23/22 13:08	1
Isophorone	ND		0.52	ug/L		09/22/22 09:50	09/23/22 13:08	1
Lindane	ND		0.042	ug/L		09/22/22 09:50	09/23/22 13:08	1
Malathion	ND		0.10	ug/L		09/22/22 09:50	09/23/22 13:08	1
Methoxychlor	ND	*+	0.10	ug/L		09/22/22 09:50	09/23/22 13:08	1
Metolachlor	ND		0.052	ug/L		09/22/22 09:50	09/23/22 13:08	1
Metribuzin	ND		0.052	ug/L		09/22/22 09:50	09/23/22 13:08	1
Molinate	ND		0.10	ug/L		09/22/22 09:50	09/23/22 13:08	1
Naphthalene	ND		0.31	ug/L		09/22/22 09:50	09/23/22 13:08	1
Parathion	ND		0.10	ug/L		09/22/22 09:50	09/23/22 13:08	1
Pendimethalin (Penoxaline)	ND		0.10	ug/L		09/22/22 09:50	09/23/22 13:08	1
Total Permethrin (mixed isomers)	ND		0.21	ug/L		09/22/22 09:50	09/23/22 13:08	1
Phenanthrene	ND		0.042	ug/L		09/22/22 09:50	09/23/22 13:08	1
Propachlor	ND		0.052	ug/L		09/22/22 09:50	09/23/22 13:08	1
Pyrene	ND		0.052	ug/L		09/22/22 09:50	09/23/22 13:08	1
Simazine	ND		0.052	ug/L		09/22/22 09:50	09/23/22 13:08	1
Terbacil	ND		0.10	ug/L		09/22/22 09:50	09/23/22 13:08	1
Terbutylazine	ND		0.10	ug/L		09/22/22 09:50	09/23/22 13:08	1
Thiobencarb	ND		0.21	ug/L		09/22/22 09:50	09/23/22 13:08	1
trans-Nonachlor	ND		0.052	ug/L		09/22/22 09:50	09/23/22 13:08	1
Trifluralin	ND		0.10	ug/L		09/22/22 09:50	09/23/22 13:08	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
2-Pentene, 2,4,4-trimethyl-	1.1	T J N	ug/L		2.33	107-40-4	09/22/22 09:50	09/23/22 13:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	104		70 - 130	09/22/22 09:50	09/23/22 13:08	1
Triphenylphosphate	110		70 - 130	09/22/22 09:50	09/23/22 13:08	1
Perylene-d12	96		70 - 130	09/22/22 09:50	09/23/22 13:08	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 09:55	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 09:55	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 09:55	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 09:55	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 09:55	1
Acenaphthene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 09:55	1
Acenaphthylene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 09:55	1
Anthracene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 09:55	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 09:55	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 09:55	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 09:55	1

Eurofins Eaton Monrovia



# Client Sample Results

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

Job ID: 380-21547-1

**Client Sample ID: MOANALUA WELLS (331-223-TP202)**

**Lab Sample ID: 380-21547-1**

Date Collected: 09/19/22 10:19

Matrix: Drinking Water

Date Received: 09/21/22 09:50

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[e]pyrene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 09:55	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 09:55	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 09:55	1
Biphenyl	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 09:55	1
Chrysene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 09:55	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 09:55	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 09:55	1
Dibenzothiophene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 09:55	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		09/26/22 00:00	10/05/22 09:55	1
Fluoranthene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 09:55	1
Fluorene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 09:55	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 09:55	1
Naphthalene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 09:55	1
Perylene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 09:55	1
Phenanthrene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 09:55	1
Pyrene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 09:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
(d10-Acenaphthene)	71		45 - 118	09/26/22 00:00	10/05/22 09:55	1
(d10-Phenanthrene)	82		56 - 123	09/26/22 00:00	10/05/22 09:55	1
(d12-Chrysene)	83		36 - 142	09/26/22 00:00	10/05/22 09:55	1
(d12-Perylene)	74		36 - 161	09/26/22 00:00	10/05/22 09:55	1
(d8-Naphthalene)	59		20 - 112	09/26/22 00:00	10/05/22 09:55	1

**Method: 8015 Diesel LL (EAL) and Motor Oil - 8015 - TPH DRO/ORO**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DIESEL	ND	U	0.027		mg/L			10/03/22 14:58	1
GASOLINE	ND	U	0.02		mg/L			09/23/22 03:59	1
MOTOR OIL	ND	U	0.055		mg/L			10/03/22 14:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOBENZENE	64		60 - 130		10/03/22 14:58	1
BROMOFLUOROBENZENE	86		60 - 140		09/23/22 03:59	1
HEXACOSANE	77		60 - 130		10/03/22 14:58	1

**Client Sample ID: TB MOANALUA WELLS (331-223-TP202)**

**Lab Sample ID: 380-21547-2**

Date Collected: 09/19/22 10:19

Matrix: Water

Date Received: 09/21/22 09:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			09/23/22 04:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE	86		60 - 140		09/23/22 04:37	1

# Action Limit Summary

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

Job ID: 380-21547-1

**Client Sample ID: MOANALUA WELLS (331-223-TP202)**  
**PWSID Number: HI0000331**

**Lab Sample ID: 380-21547-1**

## 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	0.052	525.2	Total/NA
Atrazine	ND		ug/L	3	0.052	525.2	Total/NA
Benzo[a]pyrene	ND		ug/L	0.2	0.021	525.2	Total/NA
Di(2-ethylhexyl)adipate	ND	^3+	ug/L	400	0.62	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	ND		ug/L	6	0.62	525.2	Total/NA
Endrin	ND		ug/L	2	0.10	525.2	Total/NA
Heptachlor	ND		ug/L	0.4	0.042	525.2	Total/NA
Heptachlor epoxide (isomer B)	ND		ug/L	0.2	0.052	525.2	Total/NA
Hexachlorobenzene	ND		ug/L	1	0.052	525.2	Total/NA
Hexachlorocyclopentadiene	ND		ug/L	50	0.052	525.2	Total/NA
Lindane	ND		ug/L	0.2	0.042	525.2	Total/NA
Methoxychlor	ND	*+	ug/L	40	0.10	525.2	Total/NA
Simazine	ND		ug/L	4	0.052	525.2	Total/NA

# Surrogate Summary

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

Job ID: 380-21547-1

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

Matrix: Drinking 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)
380-21547-1	MOANALUA WELLS (331-223-T	104	110	96

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

## 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)
380-21531-J-1-A MS	Matrix Spike	101	114	100
380-21554-F-1-B DU	Duplicate	101	112	93
LCS 380-18191/3-A	Lab Control Sample	100	111	99
LCS 380-18191/4-A	Lab Control Sample Dup	101	112	100
MB 380-18191/1-A	Method Blank	101	107	94
MRL 380-18191/2-A	Lab Control Sample	99	110	98

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

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

Matrix: BlankMatrix

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)				
		ANT (65-113)	CRY (60-139)	NPT (44-119)	PHN (80-111)	PRY (36-161)
100248-B1	Method Blank	92	103	76	96	86
100248-BS1	Lab Control Sample	88	96	84	96	88
100248-BS2	Lab Control Sample Dup	85	90	110	92	98

**Surrogate Legend**  
 ANT = (d10-Acenaphthene)  
 CRY = (d12-Chrysene)  
 NPT = (d8-Naphthalene)  
 PHN = (d10-Phenanthrene)  
 PRY = (d12-Perylene)

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

Matrix: Drinking Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)				
		ANT (45-118)	CRY (36-142)	NPT (20-112)	PHN (56-123)	PRY (36-161)
380-21547-1	MOANALUA WELLS (331-223-T	71	83	59	82	74

**Surrogate Legend**  
 ANT = (d10-Acenaphthene)  
 CRY = (d12-Chrysene)

# Surrogate Summary

Client: City & County of Honolulu

Job ID: 380-21547-1

Project/Site: RED-HILL

NPT = (d8-Naphthalene)

PHN = (d10-Phenanthrene)

PRY = (d12-Perylene)

## Method: 8015 Diesel LL (EAL) and Motor Oil - 8015 - TPH DRO/ORO

Matrix: Drinking Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BB (60-130)	XACOSAI (60-130)
380-21547-1	MOANALUA WELLS (331-223-T	64	77

#### Surrogate Legend

BB = BROMOBENZENE

HEXACOSANE = HEXACOSANE

## Method: 8015 Diesel LL (EAL) and Motor Oil - 8015 - TPH DRO/ORO

Matrix: Drinking Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (60-140)
380-21547-1	MOANALUA WELLS (331-223-T	86

#### Surrogate Legend

BFB = BROMOFLUOROBENZENE

## Method: 8015 Diesel LL (EAL) and Motor Oil - 8015 - TPH DRO/ORO

Matrix: WATER

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB
22VG39I16B	Method Blank	

#### Surrogate Legend

BFB = BROMOFLUOROBENZENE

## Method: 8015 Diesel LL (EAL) and Motor Oil - 8015 - TPH DRO/ORO

Matrix: WATER

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (70-130)
22VG39I16C	LCD	105
22VG39I16L	Lab Control Sample	107

#### Surrogate Legend

BFB = BROMOFLUOROBENZENE

## Method: 8015 Diesel LL (EAL) and Motor Oil - 8015 - TPH DRO/ORO

Matrix: WATER

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BB	XACOSAI
22DSJ003WB	Method Blank		

#### Surrogate Legend

BB = BROMOBENZENE

HEXACOSANE = HEXACOSANE

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# Surrogate Summary

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

Job ID: 380-21547-1

## Method: 8015 Diesel LL (EAL) and Motor Oil - 8015 - TPH DRO/ORO

Matrix: WATER

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BB (60-130)	HEXACOSANE (60-130)
22DSJ003WC	LCD	79	75
22DSJ003WL	Lab Control Sample	86	86

#### Surrogate Legend

BB = BROMOBENZENE  
HEXACOSANE = HEXACOSANE

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

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (60-140)
380-21547-2	TB MOANALUA WELLS (331-22	86

#### Surrogate Legend

BFB = BROMOFLUOROBENZENE

# QC Sample Results

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

Job ID: 380-21547-1

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

**Lab Sample ID: MB 380-18191/1-A**  
**Matrix: Water**  
**Analysis Batch: 18328**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 18191**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	ND		0.099	ug/L		09/22/22 09:50	09/23/22 12:27	1
2,4'-DDE	ND		0.099	ug/L		09/22/22 09:50	09/23/22 12:27	1
2,4'-DDT	ND		0.099	ug/L		09/22/22 09:50	09/23/22 12:27	1
2,4-Dinitrotoluene	ND		0.099	ug/L		09/22/22 09:50	09/23/22 12:27	1
2,6-Dinitrotoluene	ND		0.099	ug/L		09/22/22 09:50	09/23/22 12:27	1
4,4'-DDD	ND		0.099	ug/L		09/22/22 09:50	09/23/22 12:27	1
4,4'-DDE	ND		0.099	ug/L		09/22/22 09:50	09/23/22 12:27	1
4,4'-DDT	ND		0.099	ug/L		09/22/22 09:50	09/23/22 12:27	1
Acenaphthene	ND		0.099	ug/L		09/22/22 09:50	09/23/22 12:27	1
Acenaphthylene	ND		0.099	ug/L		09/22/22 09:50	09/23/22 12:27	1
Acetochlor	ND		0.099	ug/L		09/22/22 09:50	09/23/22 12:27	1
Alachlor	ND		0.050	ug/L		09/22/22 09:50	09/23/22 12:27	1
alpha-BHC	ND		0.099	ug/L		09/22/22 09:50	09/23/22 12:27	1
alpha-Chlordane	ND		0.050	ug/L		09/22/22 09:50	09/23/22 12:27	1
Anthracene	ND		0.020	ug/L		09/22/22 09:50	09/23/22 12:27	1
Atrazine	ND		0.050	ug/L		09/22/22 09:50	09/23/22 12:27	1
Benz(a)anthracene	ND		0.050	ug/L		09/22/22 09:50	09/23/22 12:27	1
Benzo[a]pyrene	ND		0.020	ug/L		09/22/22 09:50	09/23/22 12:27	1
Benzo[b]fluoranthene	ND		0.020	ug/L		09/22/22 09:50	09/23/22 12:27	1
Benzo[g,h,i]perylene	ND		0.050	ug/L		09/22/22 09:50	09/23/22 12:27	1
Benzo[k]fluoranthene	ND		0.020	ug/L		09/22/22 09:50	09/23/22 12:27	1
beta-BHC	ND		0.099	ug/L		09/22/22 09:50	09/23/22 12:27	1
Bromacil	ND		0.099	ug/L		09/22/22 09:50	09/23/22 12:27	1
Butachlor	ND		0.050	ug/L		09/22/22 09:50	09/23/22 12:27	1
Butylbenzylphthalate	ND		0.50	ug/L		09/22/22 09:50	09/23/22 12:27	1
Caffeine	ND		0.050	ug/L		09/22/22 09:50	09/23/22 12:27	1
Chlorobenzilate	ND		0.099	ug/L		09/22/22 09:50	09/23/22 12:27	1
Chloroneb	ND		0.099	ug/L		09/22/22 09:50	09/23/22 12:27	1
Chlorothalonil (Draconil, Bravo)	ND		0.099	ug/L		09/22/22 09:50	09/23/22 12:27	1
Chlorpyrifos	ND		0.050	ug/L		09/22/22 09:50	09/23/22 12:27	1
Chrysene	ND		0.020	ug/L		09/22/22 09:50	09/23/22 12:27	1
delta-BHC	ND		0.099	ug/L		09/22/22 09:50	09/23/22 12:27	1
Di(2-ethylhexyl)adipate	ND		0.60	ug/L		09/22/22 09:50	09/23/22 12:27	1
Bis(2-ethylhexyl) phthalate	ND		0.60	ug/L		09/22/22 09:50	09/23/22 12:27	1
Diazinon (Qualitative)	ND		0.099	ug/L		09/22/22 09:50	09/23/22 12:27	1
Dibenz(a,h)anthracene	ND		0.050	ug/L		09/22/22 09:50	09/23/22 12:27	1
Diclorvos (DDVP)	ND		0.050	ug/L		09/22/22 09:50	09/23/22 12:27	1
Dieldrin	ND		0.20	ug/L		09/22/22 09:50	09/23/22 12:27	1
Diethylphthalate	ND		0.50	ug/L		09/22/22 09:50	09/23/22 12:27	1
Dimethoate	ND		0.099	ug/L		09/22/22 09:50	09/23/22 12:27	1
Dimethylphthalate	ND		0.50	ug/L		09/22/22 09:50	09/23/22 12:27	1
Di-n-butyl phthalate	ND		0.99	ug/L		09/22/22 09:50	09/23/22 12:27	1
Di-n-octyl phthalate	ND		0.099	ug/L		09/22/22 09:50	09/23/22 12:27	1
Endosulfan I (Alpha)	ND		0.099	ug/L		09/22/22 09:50	09/23/22 12:27	1
Endosulfan II (Beta)	ND		0.099	ug/L		09/22/22 09:50	09/23/22 12:27	1
Endosulfan sulfate	ND		0.099	ug/L		09/22/22 09:50	09/23/22 12:27	1
Endrin	ND		0.099	ug/L		09/22/22 09:50	09/23/22 12:27	1
Endrin aldehyde	ND		0.099	ug/L		09/22/22 09:50	09/23/22 12:27	1

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# QC Sample Results

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

Job ID: 380-21547-1

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

**Lab Sample ID: MB 380-18191/1-A**  
**Matrix: Water**  
**Analysis Batch: 18328**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 18191**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
EPTC	ND		0.099	ug/L		09/22/22 09:50	09/23/22 12:27	1
Fluoranthene	ND		0.099	ug/L		09/22/22 09:50	09/23/22 12:27	1
Fluorene	ND		0.050	ug/L		09/22/22 09:50	09/23/22 12:27	1
gamma-Chlordane	ND		0.050	ug/L		09/22/22 09:50	09/23/22 12:27	1
Heptachlor	ND		0.040	ug/L		09/22/22 09:50	09/23/22 12:27	1
Heptachlor epoxide (isomer B)	ND		0.050	ug/L		09/22/22 09:50	09/23/22 12:27	1
Hexachlorobenzene	ND		0.050	ug/L		09/22/22 09:50	09/23/22 12:27	1
Hexachlorocyclopentadiene	ND		0.050	ug/L		09/22/22 09:50	09/23/22 12:27	1
Indeno[1,2,3-cd]pyrene	ND		0.050	ug/L		09/22/22 09:50	09/23/22 12:27	1
Isophorone	ND		0.50	ug/L		09/22/22 09:50	09/23/22 12:27	1
Lindane	ND		0.040	ug/L		09/22/22 09:50	09/23/22 12:27	1
Malathion	ND		0.099	ug/L		09/22/22 09:50	09/23/22 12:27	1
Methoxychlor	ND		0.099	ug/L		09/22/22 09:50	09/23/22 12:27	1
Metolachlor	ND		0.050	ug/L		09/22/22 09:50	09/23/22 12:27	1
Metribuzin	ND		0.050	ug/L		09/22/22 09:50	09/23/22 12:27	1
Molinate	ND		0.099	ug/L		09/22/22 09:50	09/23/22 12:27	1
Naphthalene	ND		0.30	ug/L		09/22/22 09:50	09/23/22 12:27	1
Parathion	ND		0.099	ug/L		09/22/22 09:50	09/23/22 12:27	1
Pendimethalin (Penoxaline)	ND		0.099	ug/L		09/22/22 09:50	09/23/22 12:27	1
Total Permethrin (mixed isomers)	ND		0.20	ug/L		09/22/22 09:50	09/23/22 12:27	1
Phenanthrene	ND		0.040	ug/L		09/22/22 09:50	09/23/22 12:27	1
Propachlor	ND		0.050	ug/L		09/22/22 09:50	09/23/22 12:27	1
Pyrene	ND		0.050	ug/L		09/22/22 09:50	09/23/22 12:27	1
Simazine	ND		0.050	ug/L		09/22/22 09:50	09/23/22 12:27	1
Terbacil	ND		0.099	ug/L		09/22/22 09:50	09/23/22 12:27	1
Terbutylazine	ND		0.099	ug/L		09/22/22 09:50	09/23/22 12:27	1
Thiobencarb	ND		0.20	ug/L		09/22/22 09:50	09/23/22 12:27	1
trans-Nonachlor	ND		0.050	ug/L		09/22/22 09:50	09/23/22 12:27	1
Trifluralin	ND		0.099	ug/L		09/22/22 09:50	09/23/22 12:27	1

<i>Tentatively Identified Compound</i>	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
<i>Cyclohexane, 1-methyl-2-propyl-</i>	0.975	T J N	ug/L		2.33	4291-79-6	09/22/22 09:50	09/23/22 12:27	1
<i>Decane</i>	1.66	T J N	ug/L		2.44	124-18-5	09/22/22 09:50	09/23/22 12:27	1
<i>Unknown</i>	0.627	T J	ug/L		2.69		09/22/22 09:50	09/23/22 12:27	1
<i>1-Heneicosanol</i>	0.536	T J N	ug/L		5.21	15594-90-8	09/22/22 09:50	09/23/22 12:27	1
<i>n-Hexadecanoic acid</i>	0.689	T J N	ug/L		5.87	57-10-3	09/22/22 09:50	09/23/22 12:27	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	101		70 - 130	09/22/22 09:50	09/23/22 12:27	1
Triphenylphosphate	107		70 - 130	09/22/22 09:50	09/23/22 12:27	1
Perylene-d12	94		70 - 130	09/22/22 09:50	09/23/22 12:27	1

**Lab Sample ID: LCS 380-18191/3-A**  
**Matrix: Water**  
**Analysis Batch: 18328**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 18191**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	1.98	2.02		ug/L		102	70 - 130

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# QC Sample Results

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

Job ID: 380-21547-1

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

**Lab Sample ID: LCS 380-18191/3-A**  
**Matrix: Water**  
**Analysis Batch: 18328**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 18191**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDE	1.98	2.07		ug/L		104	70 - 130
2,4'-DDT	1.98	2.39		ug/L		120	70 - 130
2,4-Dinitrotoluene	1.98	2.03		ug/L		102	70 - 130
2,6-Dinitrotoluene	1.98	2.07		ug/L		104	70 - 130
4,4'-DDD	1.98	2.37		ug/L		119	70 - 130
4,4'-DDE	1.98	2.12		ug/L		107	70 - 130
4,4'-DDT	1.98	2.36		ug/L		119	70 - 130
Acenaphthene	1.98	1.94		ug/L		98	70 - 130
Acenaphthylene	1.98	1.97		ug/L		99	70 - 130
Acetochlor	1.98	2.31		ug/L		116	70 - 130
Alachlor	1.98	2.25		ug/L		113	70 - 130
alpha-BHC	1.98	2.20		ug/L		111	70 - 130
alpha-Chlordane	1.98	2.13		ug/L		107	70 - 130
Anthracene	1.98	2.06		ug/L		104	70 - 130
Atrazine	1.98	2.15		ug/L		108	70 - 130
Benz(a)anthracene	1.98	2.29		ug/L		115	70 - 130
Benzo[a]pyrene	1.98	2.16		ug/L		109	70 - 130
Benzo[b]fluoranthene	1.98	2.26		ug/L		114	70 - 130
Benzo[g,h,i]perylene	1.98	2.20		ug/L		111	70 - 130
Benzo[k]fluoranthene	1.98	2.24		ug/L		113	70 - 130
beta-BHC	1.98	2.25		ug/L		114	70 - 130
Bromacil	1.98	2.55		ug/L		129	70 - 130
Butachlor	1.98	2.37		ug/L		119	70 - 130
Butylbenzylphthalate	1.98	2.33		ug/L		118	70 - 130
Caffeine	1.98	1.59		ug/L		80	45 - 137
Chlorobenzilate	1.98	2.33		ug/L		118	70 - 130
Chloroneb	1.98	2.10		ug/L		106	70 - 130
Chlorothalonil (Draconil, Bravo)	1.98	2.30		ug/L		116	70 - 130
Chlorpyrifos	1.98	2.29		ug/L		116	70 - 130
Chrysene	1.98	2.21		ug/L		111	70 - 130
delta-BHC	1.98	2.23		ug/L		113	70 - 130
Di(2-ethylhexyl)adipate	1.98	2.23		ug/L		113	70 - 130
Bis(2-ethylhexyl) phthalate	1.98	1.99		ug/L		100	70 - 130
Diazinon (Qualitative)	1.98	1.59		ug/L		80	15 - 132
Dibenz(a,h)anthracene	1.98	2.17		ug/L		109	70 - 130
Diclorvos (DDVP)	1.98	2.04		ug/L		103	70 - 130
Dieldrin	1.98	2.13		ug/L		108	70 - 130
Diethylphthalate	1.98	2.02		ug/L		102	70 - 130
Dimethoate	1.98	1.54		ug/L		77	35 - 100
Dimethylphthalate	1.98	2.08		ug/L		105	70 - 130
Di-n-butyl phthalate	3.97	4.21		ug/L		106	70 - 130
Di-n-octyl phthalate	1.98	2.06		ug/L		104	70 - 130
Endosulfan I (Alpha)	1.98	2.13		ug/L		108	70 - 130
Endosulfan II (Beta)	1.98	2.19		ug/L		110	70 - 130
Endosulfan sulfate	1.98	2.31		ug/L		116	70 - 130
Endrin	1.98	2.27		ug/L		114	70 - 130
Endrin aldehyde	1.98	2.26		ug/L		114	70 - 130
EPTC	1.98	2.02		ug/L		102	70 - 130
Fluoranthene	1.98	2.32		ug/L		117	70 - 130

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# QC Sample Results

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

Job ID: 380-21547-1

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

**Lab Sample ID: LCS 380-18191/3-A**  
**Matrix: Water**  
**Analysis Batch: 18328**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 18191**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluorene	1.98	2.06		ug/L		104	70 - 130
gamma-Chlordane	1.98	2.12		ug/L		107	70 - 130
Heptachlor	1.98	2.02		ug/L		102	70 - 130
Heptachlor epoxide (isomer B)	1.98	2.16		ug/L		109	70 - 130
Hexachlorobenzene	1.98	1.90		ug/L		96	70 - 130
Hexachlorocyclopentadiene	1.98	2.13		ug/L		107	70 - 130
Indeno[1,2,3-cd]pyrene	1.98	2.24		ug/L		113	70 - 130
Isophorone	1.98	2.04		ug/L		103	70 - 130
Lindane	1.98	2.23		ug/L		112	70 - 130
Malathion	1.98	2.59		ug/L		130	70 - 130
Methoxychlor	1.98	2.70	*+	ug/L		136	70 - 130
Metolachlor	1.98	2.33		ug/L		117	70 - 130
Metribuzin	1.98	2.28		ug/L		115	70 - 130
Molinate	1.98	2.02		ug/L		102	70 - 130
Naphthalene	1.98	1.95		ug/L		98	70 - 130
Parathion	1.98	2.50		ug/L		126	70 - 130
Pendimethalin (Penoxaline)	1.98	2.31		ug/L		116	70 - 130
Phenanthrene	1.98	1.97		ug/L		99	70 - 130
Propachlor	1.98	2.20		ug/L		111	70 - 130
Pyrene	1.98	2.34		ug/L		118	70 - 130
Simazine	1.98	2.37		ug/L		120	70 - 130
Terbacil	1.98	2.31		ug/L		116	70 - 130
Terbutylazine	1.98	2.36		ug/L		119	70 - 130
Thiobencarb	1.98	2.15		ug/L		108	70 - 130
trans-Nonachlor	1.98	2.12		ug/L		107	70 - 130
Trifluralin	1.98	2.13		ug/L		107	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Nitro-m-xylene	100		70 - 130
Triphenylphosphate	111		70 - 130
Perylene-d12	99		70 - 130

**Lab Sample ID: LCSD 380-18191/4-A**  
**Matrix: Water**  
**Analysis Batch: 18328**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 18191**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,4'-DDD	1.99	2.00		ug/L		101	70 - 130	1	20
2,4'-DDE	1.99	2.13		ug/L		107	70 - 130	3	20
2,4'-DDT	1.99	2.49		ug/L		125	70 - 130	4	20
2,4-Dinitrotoluene	1.99	2.13		ug/L		107	70 - 130	4	20
2,6-Dinitrotoluene	1.99	2.20		ug/L		111	70 - 130	7	20
4,4'-DDD	1.99	2.46		ug/L		123	70 - 130	4	20
4,4'-DDE	1.99	2.19		ug/L		110	70 - 130	3	20
4,4'-DDT	1.99	2.42		ug/L		122	70 - 130	3	20
Acenaphthene	1.99	1.93		ug/L		97	70 - 130	0	20
Acenaphthylene	1.99	1.91		ug/L		96	70 - 130	3	20
Acetochlor	1.99	2.26		ug/L		114	70 - 130	2	20

Eurofins Eaton Monrovia

# QC Sample Results

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

Job ID: 380-21547-1

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

**Lab Sample ID: LCSD 380-18191/4-A**  
**Matrix: Water**  
**Analysis Batch: 18328**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 18191**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD
									Limit
Alachlor	1.99	2.29		ug/L		115	70 - 130	2	20
alpha-BHC	1.99	2.24		ug/L		113	70 - 130	2	20
alpha-Chlordane	1.99	2.19		ug/L		110	70 - 130	3	20
Anthracene	1.99	2.02		ug/L		102	70 - 130	2	20
Atrazine	1.99	2.39		ug/L		120	70 - 130	11	20
Benz(a)anthracene	1.99	2.32		ug/L		117	70 - 130	1	20
Benzo[a]pyrene	1.99	2.12		ug/L		106	70 - 130	2	20
Benzo[b]fluoranthene	1.99	2.19		ug/L		110	70 - 130	3	20
Benzo[g,h,i]perylene	1.99	2.32		ug/L		117	70 - 130	5	20
Benzo[k]fluoranthene	1.99	2.30		ug/L		115	70 - 130	2	20
beta-BHC	1.99	2.25		ug/L		113	70 - 130	0	20
Bromacil	1.99	2.64	*+	ug/L		133	70 - 130	3	20
Butachlor	1.99	2.36		ug/L		119	70 - 130	0	20
Butylbenzylphthalate	1.99	2.35		ug/L		118	70 - 130	1	20
Caffeine	1.99	1.78		ug/L		90	45 - 137	11	20
Chlorobenzilate	1.99	2.35		ug/L		118	70 - 130	1	20
Chloroneb	1.99	2.11		ug/L		106	70 - 130	1	20
Chlorothalonil (Draconil, Bravo)	1.99	2.34		ug/L		118	70 - 130	2	20
Chlorpyrifos	1.99	2.29		ug/L		115	70 - 130	0	20
Chrysene	1.99	2.18		ug/L		109	70 - 130	1	20
delta-BHC	1.99	2.23		ug/L		112	70 - 130	0	20
Di(2-ethylhexyl)adipate	1.99	2.34		ug/L		118	70 - 130	5	20
Bis(2-ethylhexyl) phthalate	1.99	2.11		ug/L		106	70 - 130	6	20
Diazinon (Qualitative)	1.99	1.60		ug/L		80	15 - 132	1	20
Dibenz(a,h)anthracene	1.99	2.25		ug/L		113	70 - 130	4	20
Diclorvos (DDVP)	1.99	2.11		ug/L		106	70 - 130	3	20
Dieldrin	1.99	2.18		ug/L		110	70 - 130	2	20
Diethylphthalate	1.99	1.98		ug/L		100	70 - 130	2	20
Dimethoate	1.99	1.73		ug/L		87	35 - 100	12	20
Dimethylphthalate	1.99	2.18		ug/L		110	70 - 130	5	20
Di-n-butyl phthalate	3.98	4.14		ug/L		104	70 - 130	2	20
Di-n-octyl phthalate	1.99	2.07		ug/L		104	70 - 130	1	20
Endosulfan I (Alpha)	1.99	2.15		ug/L		108	70 - 130	1	20
Endosulfan II (Beta)	1.99	2.23		ug/L		112	70 - 130	2	20
Endosulfan sulfate	1.99	2.36		ug/L		118	70 - 130	2	20
Endrin	1.99	2.55		ug/L		128	70 - 130	12	20
Endrin aldehyde	1.99	2.08		ug/L		105	70 - 130	8	20
EPTC	1.99	2.05		ug/L		103	70 - 130	1	20
Fluoranthene	1.99	2.31		ug/L		116	70 - 130	0	20
Fluorene	1.99	2.04		ug/L		102	70 - 130	1	20
gamma-Chlordane	1.99	2.17		ug/L		109	70 - 130	3	20
Heptachlor	1.99	2.04		ug/L		103	70 - 130	1	20
Heptachlor epoxide (isomer B)	1.99	2.22		ug/L		111	70 - 130	2	20
Hexachlorobenzene	1.99	1.89		ug/L		95	70 - 130	1	20
Hexachlorocyclopentadiene	1.99	2.13		ug/L		107	70 - 130	0	20
Indeno[1,2,3-cd]pyrene	1.99	2.30		ug/L		116	70 - 130	3	20
Isophorone	1.99	2.10		ug/L		106	70 - 130	3	20
Lindane	1.99	2.21		ug/L		111	70 - 130	1	20
Malathion	1.99	2.58		ug/L		130	70 - 130	0	20

Eurofins Eaton Monrovia

# QC Sample Results

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

Job ID: 380-21547-1

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

**Lab Sample ID: LCSD 380-18191/4-A**  
**Matrix: Water**  
**Analysis Batch: 18328**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 18191**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methoxychlor	1.99	2.75	*+	ug/L		138	70 - 130	2	20
Metolachlor	1.99	2.33		ug/L		117	70 - 130	0	20
Metribuzin	1.99	2.30		ug/L		116	70 - 130	1	20
Molinate	1.99	2.11		ug/L		106	70 - 130	4	20
Naphthalene	1.99	1.98		ug/L		100	70 - 130	2	20
Parathion	1.99	2.44		ug/L		122	70 - 130	2	20
Pendimethalin (Penoxaline)	1.99	2.28		ug/L		115	70 - 130	1	20
Phenanthrene	1.99	1.98		ug/L		100	70 - 130	1	20
Propachlor	1.99	2.30		ug/L		116	70 - 130	5	20
Pyrene	1.99	2.33		ug/L		117	70 - 130	0	20
Simazine	1.99	2.41		ug/L		121	70 - 130	2	20
Terbacil	1.99	2.47		ug/L		124	70 - 130	7	20
Terbutylazine	1.99	2.38		ug/L		119	70 - 130	1	20
Thiobencarb	1.99	2.14		ug/L		108	70 - 130	0	20
trans-Nonachlor	1.99	2.20		ug/L		111	70 - 130	3	20
Trifluralin	1.99	2.13		ug/L		107	70 - 130	0	20

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
2-Nitro-m-xylene	101		70 - 130
Triphenylphosphate	112		70 - 130
Perylene-d12	100		70 - 130

**Lab Sample ID: MRL 380-18191/2-A**  
**Matrix: Water**  
**Analysis Batch: 18328**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 18191**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	0.0995	0.162	^3+	ug/L		163	50 - 150
2,4'-DDE	0.0995	0.109		ug/L		110	50 - 150
2,4'-DDT	0.0995	0.115		ug/L		116	50 - 150
2,4-Dinitrotoluene	0.0995	0.0902	J	ug/L		91	50 - 150
2,6-Dinitrotoluene	0.0995	0.0796	J	ug/L		80	50 - 150
4,4'-DDD	0.0995	0.119		ug/L		119	50 - 150
4,4'-DDE	0.0995	0.109		ug/L		109	50 - 150
4,4'-DDT	0.0995	0.122		ug/L		123	50 - 150
Acenaphthene	0.0995	0.0949	J	ug/L		95	50 - 150
Acenaphthylene	0.0995	0.0856	J	ug/L		86	50 - 150
Acetochlor	0.0497	0.0528	J	ug/L		106	50 - 150
Alachlor	0.0497	0.0562		ug/L		113	50 - 150
alpha-BHC	0.0995	0.106		ug/L		107	50 - 150
alpha-Chlordane	0.0497	0.0578		ug/L		116	50 - 150
Anthracene	0.0199	0.0213		ug/L		107	50 - 150
Atrazine	0.0497	0.0512		ug/L		103	50 - 150
Benz(a)anthracene	0.0497	0.0610		ug/L		123	50 - 150
Benzo[a]pyrene	0.0199	0.0218		ug/L		110	50 - 150
Benzo[b]fluoranthene	0.0199	0.0242		ug/L		122	50 - 150
Benzo[g,h,i]perylene	0.0497	0.0491	J	ug/L		99	50 - 150
Benzo[k]fluoranthene	0.0199	0.0226		ug/L		114	50 - 150

Eurofins Eaton Monrovia

# QC Sample Results

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

Job ID: 380-21547-1

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

**Lab Sample ID: MRL 380-18191/2-A**  
**Matrix: Water**  
**Analysis Batch: 18328**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 18191**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
beta-BHC	0.0995	0.102		ug/L		103	50 - 150
Bromacil	0.0995	0.115		ug/L		115	50 - 150
Butachlor	0.0497	0.0546		ug/L		110	50 - 150
Butylbenzylphthalate	0.149	0.189	J	ug/L		127	50 - 150
Caffeine	0.0497	0.0326	J	ug/L		66	50 - 150
Chlorobenzilate	0.0995	0.117		ug/L		117	50 - 150
Chloroneb	0.0995	0.0996		ug/L		100	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0995	0.103		ug/L		104	50 - 150
Chlorpyrifos	0.0497	0.0594		ug/L		119	50 - 150
Chrysene	0.0199	0.0244		ug/L		123	50 - 150
delta-BHC	0.0995	0.112		ug/L		112	50 - 150
Di(2-ethylhexyl)adipate	0.298	0.455	J ^3+	ug/L		153	50 - 150
Bis(2-ethylhexyl) phthalate	0.597	0.661		ug/L		111	50 - 150
Diazinon (Qualitative)	0.0995	0.0784	J	ug/L		79	15 - 132
Dibenz(a,h)anthracene	0.0497	0.0506		ug/L		102	50 - 150
Diclorvos (DDVP)	0.0497	0.0856	^3+	ug/L		172	50 - 150
Dieldrin	0.0995	0.122	J	ug/L		122	50 - 150
Diethylphthalate	0.149	0.162	J	ug/L		108	50 - 150
Dimethoate	0.0995	0.0787	J	ug/L		79	35 - 100
Dimethylphthalate	0.298	0.292	J	ug/L		98	50 - 150
Di-n-butyl phthalate	0.298	0.358	J	ug/L		120	49 - 243
Di-n-octyl phthalate	0.0995	0.100		ug/L		101	50 - 150
Endosulfan I (Alpha)	0.0995	0.110		ug/L		111	50 - 150
Endosulfan II (Beta)	0.0995	0.147		ug/L		148	50 - 150
Endosulfan sulfate	0.0995	0.109		ug/L		109	50 - 150
Endrin	0.0995	0.141		ug/L		142	50 - 150
Endrin aldehyde	0.0995	0.100		ug/L		101	50 - 150
EPTC	0.0995	0.0996		ug/L		100	50 - 150
Fluoranthene	0.0497	0.0596	J	ug/L		120	50 - 150
Fluorene	0.0497	0.0505		ug/L		102	50 - 150
gamma-Chlordane	0.0497	0.0498	J	ug/L		100	50 - 150
Heptachlor	0.0398	0.0541		ug/L		136	50 - 150
Heptachlor epoxide (isomer B)	0.0497	0.0490	J	ug/L		99	50 - 150
Hexachlorobenzene	0.0497	0.0541		ug/L		109	50 - 150
Hexachlorocyclopentadiene	0.0497	0.0513		ug/L		103	50 - 150
Indeno[1,2,3-cd]pyrene	0.0497	0.0502		ug/L		101	50 - 150
Isophorone	0.0995	0.102	J	ug/L		103	50 - 150
Lindane	0.0497	0.0545		ug/L		110	50 - 150
Malathion	0.0995	0.110		ug/L		111	50 - 150
Methoxychlor	0.0995	0.125		ug/L		126	50 - 150
Metolachlor	0.0497	0.0561		ug/L		113	50 - 150
Metribuzin	0.0497	0.0576		ug/L		116	50 - 150
Molinate	0.0995	0.101		ug/L		101	50 - 150
Naphthalene	0.0995	0.102	J	ug/L		103	50 - 150
Parathion	0.0995	0.138		ug/L		139	50 - 150
Pendimethalin (Penoxaline)	0.0995	0.137		ug/L		137	50 - 150
Phenanthrene	0.0199	0.0231	J	ug/L		116	50 - 150
Propachlor	0.0497	0.0522		ug/L		105	50 - 150
Pyrene	0.0497	0.0590		ug/L		119	50 - 150

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# QC Sample Results

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

Job ID: 380-21547-1

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

**Lab Sample ID: MRL 380-18191/2-A**  
**Matrix: Water**  
**Analysis Batch: 18328**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 18191**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Simazine	0.0497	0.0497	J	ug/L		100	50 - 150
Terbacil	0.0995	0.119		ug/L		120	50 - 150
Terbutylazine	0.0995	0.107		ug/L		107	50 - 150
Thiobencarb	0.0995	0.114	J	ug/L		115	50 - 150
trans-Nonachlor	0.0497	0.0449	J	ug/L		90	50 - 150
Trifluralin	0.0995	0.0821	J	ug/L		83	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
2-Nitro-m-xylene	99		70 - 130
Triphenylphosphate	110		70 - 130
Perylene-d12	98		70 - 130

**Lab Sample ID: 380-21531-J-1-A MS**  
**Matrix: Water**  
**Analysis Batch: 18328**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 18191**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	ND	^3+	2.01	2.02		ug/L		101	70 - 130
2,4'-DDE	ND		2.01	2.12		ug/L		105	70 - 130
2,4'-DDT	ND		2.01	2.49		ug/L		124	70 - 130
2,4-Dinitrotoluene	ND		2.01	2.11		ug/L		105	70 - 130
2,6-Dinitrotoluene	ND		2.01	2.16		ug/L		108	70 - 130
4,4'-DDD	ND		2.01	2.45		ug/L		122	70 - 130
4,4'-DDE	ND		2.01	2.15		ug/L		107	70 - 130
4,4'-DDT	ND		2.01	2.43		ug/L		121	70 - 130
Acenaphthene	ND		2.01	1.95		ug/L		97	70 - 130
Acenaphthylene	ND		2.01	2.00		ug/L		99	70 - 130
Acetochlor	ND		2.01	2.25		ug/L		112	70 - 130
Alachlor	ND		2.01	2.32		ug/L		116	70 - 130
alpha-BHC	ND		2.01	2.23		ug/L		111	70 - 130
alpha-Chlordane	ND		2.01	2.15		ug/L		107	70 - 130
Anthracene	ND		2.01	1.63		ug/L		81	70 - 130
Atrazine	ND		2.01	2.18		ug/L		109	70 - 130
Benz(a)anthracene	ND		2.01	2.27		ug/L		113	70 - 130
Benzo[a]pyrene	ND		2.01	1.95		ug/L		97	70 - 130
Benzo[b]fluoranthene	ND		2.01	2.26		ug/L		112	70 - 130
Benzo[g,h,i]perylene	ND		2.01	2.32		ug/L		116	70 - 130
Benzo[k]fluoranthene	ND		2.01	2.29		ug/L		114	70 - 130
beta-BHC	ND		2.01	2.27		ug/L		113	70 - 130
Bromacil	ND	*+ F1	2.01	2.78	F1	ug/L		138	70 - 130
Butachlor	ND		2.01	2.45		ug/L		122	70 - 130
Butylbenzylphthalate	ND		2.01	2.40		ug/L		119	70 - 130
Caffeine	ND		2.01	1.82		ug/L		91	46 - 144
Chlorobenzilate	ND		2.01	2.43		ug/L		121	70 - 130
Chloroneb	ND		2.01	2.14		ug/L		106	70 - 130
Chlorothalonil (Draconil, Bravo)	ND		2.01	2.30		ug/L		115	70 - 130
Chlorpyrifos	ND		2.01	2.35		ug/L		117	70 - 130
Chrysene	ND		2.01	2.21		ug/L		110	70 - 130

# QC Sample Results

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

Job ID: 380-21547-1

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

**Lab Sample ID: 380-21531-J-1-A MS**  
**Matrix: Water**  
**Analysis Batch: 18328**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 18191**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier	Added	Result	Qualifier				
delta-BHC	ND		2.01	2.28		ug/L		114	70 - 130
Di(2-ethylhexyl)adipate	ND	^3+	2.01	2.40		ug/L		115	70 - 130
Bis(2-ethylhexyl) phthalate	ND		2.01	2.14		ug/L		106	70 - 130
Diazinon (Qualitative)	ND		2.01	1.71		ug/L		85	15 - 132
Dibenz(a,h)anthracene	ND		2.01	2.33		ug/L		116	70 - 130
Diclorvos (DDVP)	ND	^3+	2.01	2.08		ug/L		104	70 - 130
Dieldrin	ND		2.01	2.17		ug/L		108	70 - 130
Diethylphthalate	ND		2.01	2.03		ug/L		101	70 - 130
Dimethoate	ND		2.01	1.64		ug/L		82	34 - 111
Dimethylphthalate	ND		2.01	2.19		ug/L		109	70 - 130
Di-n-butyl phthalate	ND		4.02	4.20		ug/L		104	70 - 130
Di-n-octyl phthalate	ND		2.01	2.13		ug/L		106	70 - 130
Endosulfan I (Alpha)	ND		2.01	2.18		ug/L		108	70 - 130
Endosulfan II (Beta)	ND		2.01	2.21		ug/L		110	70 - 130
Endosulfan sulfate	ND		2.01	2.38		ug/L		119	70 - 130
Endrin	ND		2.01	2.36		ug/L		118	70 - 130
Endrin aldehyde	ND		2.01	2.02		ug/L		101	70 - 130
EPTC	ND		2.01	2.07		ug/L		103	70 - 130
Fluoranthene	ND		2.01	2.34		ug/L		116	70 - 130
Fluorene	ND		2.01	2.08		ug/L		103	70 - 130
gamma-Chlordane	ND		2.01	2.20		ug/L		109	70 - 130
Heptachlor	ND		2.01	2.02		ug/L		101	70 - 130
Heptachlor epoxide (isomer B)	ND		2.01	2.26		ug/L		112	70 - 130
Hexachlorobenzene	ND		2.01	1.91		ug/L		95	70 - 130
Hexachlorocyclopentadiene	ND		2.01	2.16		ug/L		108	70 - 130
Indeno[1,2,3-cd]pyrene	ND		2.01	2.38		ug/L		118	70 - 130
Isophorone	ND		2.01	2.09		ug/L		104	70 - 130
Lindane	ND		2.01	2.23		ug/L		111	70 - 130
Malathion	ND	F1	2.01	2.63	F1	ug/L		131	70 - 130
Methoxychlor	ND	*+ F1	2.01	2.80	F1	ug/L		140	70 - 130
Metolachlor	ND		2.01	2.39		ug/L		119	70 - 130
Metribuzin	ND		2.01	2.38		ug/L		118	70 - 130
Molinate	ND		2.01	2.08		ug/L		103	70 - 130
Naphthalene	ND		2.01	1.99		ug/L		99	70 - 130
Parathion	ND		2.01	2.52		ug/L		126	70 - 130
Pendimethalin (Penoxaline)	ND		2.01	2.31		ug/L		115	70 - 130
Phenanthrene	ND		2.01	1.98		ug/L		99	70 - 130
Propachlor	ND		2.01	2.26		ug/L		113	70 - 130
Pyrene	ND		2.01	2.35		ug/L		117	70 - 130
Simazine	ND		2.01	2.49		ug/L		124	70 - 130
Terbacil	ND		2.01	2.42		ug/L		120	70 - 130
Terbutylazine	ND		2.01	2.39		ug/L		119	70 - 130
Thiobencarb	ND		2.01	2.13		ug/L		106	70 - 130
trans-Nonachlor	ND		2.01	2.22		ug/L		110	70 - 130
Trifluralin	ND		2.01	2.16		ug/L		108	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
2-Nitro-m-xylene	101		70 - 130

# QC Sample Results

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

Job ID: 380-21547-1

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

**Lab Sample ID: 380-21531-J-1-A MS**  
**Matrix: Water**  
**Analysis Batch: 18328**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 18191**

Surrogate	%Recovery	MS MS Qualifier	Limits
Triphenylphosphate	114		70 - 130
Perylene-d12	100		70 - 130

**Lab Sample ID: 380-21554-F-1-B DU**  
**Matrix: Water**  
**Analysis Batch: 18328**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 18191**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
2,4'-DDD	ND	^3+	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	^3+	ND		ug/L		NC	20
Bis(2-ethylhexyl) phthalate	ND		ND		ug/L		NC	20
Diazinon (Qualitative)	ND		ND		ug/L		NC	20
Dibenz(a,h)anthracene	ND		ND		ug/L		NC	20
Diclorvos (DDVP)	ND	^3+	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

# QC Sample Results

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

Job ID: 380-21547-1

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

**Lab Sample ID: 380-21554-F-1-B DU**  
**Matrix: Water**  
**Analysis Batch: 18328**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 18191**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Dimethylphthalate	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

Surrogate	DU %Recovery	DU Qualifier	Limits
2-Nitro-m-xylene	101		70 - 130
Triphenylphosphate	112		70 - 130
Perylene-d12	93		70 - 130



# QC Sample Results

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

Job ID: 380-21547-1

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

**Lab Sample ID: 100248-B1**  
**Matrix: BlankMatrix**  
**Analysis Batch: O-38136**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: O-38136\_P**

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 03:00	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 03:00	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 03:00	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 03:00	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 03:00	1
Acenaphthene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 03:00	1
Acenaphthylene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 03:00	1
Anthracene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 03:00	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 03:00	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 03:00	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 03:00	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 03:00	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 03:00	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 03:00	1
Biphenyl	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 03:00	1
Chrysene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 03:00	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 03:00	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 03:00	1
Dibenzothiophene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 03:00	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		09/26/22 00:00	10/05/22 03:00	1
Fluoranthene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 03:00	1
Fluorene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 03:00	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 03:00	1
Naphthalene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 03:00	1
Perylene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 03:00	1
Phenanthrene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 03:00	1
Pyrene	ND		0.005	0.001	µg/L		09/26/22 00:00	10/05/22 03:00	1

Surrogate	Blank %Recovery	Blank Qualifier	Limits	Prepared	Analyzed	Dil Fac
(d10-Acenaphthene)	92		65 - 113	09/26/22 00:00	10/05/22 03:00	1
(d10-Phenanthrene)	96		80 - 111	09/26/22 00:00	10/05/22 03:00	1
(d12-Chrysene)	103		60 - 139	09/26/22 00:00	10/05/22 03:00	1
(d12-Perylene)	86		36 - 161	09/26/22 00:00	10/05/22 03:00	1
(d8-Naphthalene)	76		44 - 119	09/26/22 00:00	10/05/22 03:00	1

**Lab Sample ID: 100248-BS1**  
**Matrix: BlankMatrix**  
**Analysis Batch: O-38136**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: O-38136\_P**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	0.5	0.474		µg/L		95	49 - 117
1-Methylphenanthrene	0.5	0.451		µg/L		90	66 - 127
2,3,5-Trimethylnaphthalene	0.5	0.588		µg/L		118	57 - 120
2,6-Dimethylnaphthalene	0.5	0.503		µg/L		101	54 - 117
2-Methylnaphthalene	0.5	0.439		µg/L		88	47 - 130
Acenaphthene	0.5	0.579		µg/L		116	53 - 131
Acenaphthylene	0.5	0.565		µg/L		113	43 - 140
Anthracene	0.5	0.44		µg/L		88	58 - 135

Eurofins Eaton Monrovia

# QC Sample Results

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

Job ID: 380-21547-1

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

**Lab Sample ID: 100248-BS1**  
**Matrix: BlankMatrix**  
**Analysis Batch: O-38136**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: O-38136\_P**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benz[a]anthracene	0.5	0.513		µg/L		103	55 - 145
Benzo[a]pyrene	0.5	0.398		µg/L		80	51 - 143
Benzo[b]fluoranthene	0.5	0.54		µg/L		108	46 - 165
Benzo[e]pyrene	0.5	0.501		µg/L		100	42 - 152
Benzo[g,h,i]perylene	0.5	0.419		µg/L		84	63 - 133
Benzo[k]fluoranthene	0.5	0.483		µg/L		97	56 - 145
Biphenyl	0.5	0.5		µg/L		100	56 - 119
Chrysene	0.5	0.452		µg/L		90	56 - 141
Dibenz[a,h]anthracene	0.5	0.519		µg/L		104	55 - 150
Dibenzo[a,l]pyrene	0.5	0.288		µg/L		58	50 - 150
Dibenzothiophene	0.5	0.446		µg/L		89	75 - 113
Disalicylidenepropanediamine	50	37		µg/L		74	50 - 150
Fluoranthene	0.5	0.439		µg/L		88	60 - 146
Fluorene	0.5	0.548		µg/L		110	58 - 131
Indeno[1,2,3-cd]pyrene	0.5	0.498		µg/L		100	50 - 151
Naphthalene	0.5	0.461		µg/L		92	41 - 126
Perylene	0.5	0.4		µg/L		80	48 - 141
Phenanthrene	0.5	0.449		µg/L		90	67 - 127
Pyrene	0.5	0.497		µg/L		99	54 - 156

Surrogate	LCS %Recovery	LCS Qualifier	Limits
(d10-Acenaphthene)	88		65 - 113
(d10-Phenanthrene)	96		80 - 111
(d12-Chrysene)	96		60 - 139
(d12-Perylene)	88		36 - 161
(d8-Naphthalene)	84		44 - 119

**Lab Sample ID: 100248-BS2**  
**Matrix: BlankMatrix**  
**Analysis Batch: O-38136**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: O-38136\_P**

Analyte	Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	0.5	0.557		µg/L		111	49 - 117	16	30
1-Methylphenanthrene	0.5	0.466		µg/L		93	66 - 127	3	30
2,3,5-Trimethylnaphthalene	0.5	0.584		µg/L		117	57 - 120	1	30
2,6-Dimethylnaphthalene	0.5	0.481		µg/L		96	54 - 117	5	30
2-Methylnaphthalene	0.5	0.585		µg/L		117	47 - 130	28	30
Acenaphthene	0.5	0.565		µg/L		113	53 - 131	3	30
Acenaphthylene	0.5	0.561		µg/L		112	43 - 140	1	30
Anthracene	0.5	0.434		µg/L		87	58 - 135	1	30
Benz[a]anthracene	0.5	0.535		µg/L		107	55 - 145	4	30
Benzo[a]pyrene	0.5	0.497		µg/L		99	51 - 143	21	30
Benzo[b]fluoranthene	0.5	0.583		µg/L		117	46 - 165	8	30
Benzo[e]pyrene	0.5	0.539		µg/L		108	42 - 152	8	30
Benzo[g,h,i]perylene	0.5	0.456		µg/L		91	63 - 133	8	30
Benzo[k]fluoranthene	0.5	0.511		µg/L		102	56 - 145	5	30
Biphenyl	0.5	0.47		µg/L		94	56 - 119	6	30
Chrysene	0.5	0.432		µg/L		86	56 - 141	5	30

Eurofins Eaton Monrovia

# QC Sample Results

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

Job ID: 380-21547-1

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

**Lab Sample ID: 100248-BS2**  
**Matrix: BlankMatrix**  
**Analysis Batch: O-38136**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: O-38136\_P**

Analyte	Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
Dibenz[a,h]anthracene	0.5	0.595		µg/L		119	55 - 150	13	30	
Dibenzo[a,i]pyrene	0.5	0.377		µg/L		75	50 - 150	26	30	
Dibenzothiophene	0.5	0.434		µg/L		87	75 - 113	2	30	
Disalicylidenepropanediamine	50	39.8		µg/L		80	50 - 150	8	30	
Fluoranthene	0.5	0.541		µg/L		108	60 - 146	20	30	
Fluorene	0.5	0.589		µg/L		118	58 - 131	7	30	
Indeno[1,2,3-cd]pyrene	0.5	0.619		µg/L		124	50 - 151	21	30	
Naphthalene	0.5	0.524		µg/L		105	41 - 126	13	30	
Perylene	0.5	0.446		µg/L		89	48 - 141	11	30	
Phenanthrene	0.5	0.439		µg/L		88	67 - 127	2	30	
Pyrene	0.5	0.546		µg/L		109	54 - 156	10	30	

Surrogate	LCS DUP		Limits
	%Recovery	Qualifier	
(d10-Acenaphthene)	85		65 - 113
(d10-Phenanthrene)	92		80 - 111
(d12-Chrysene)	90		60 - 139
(d12-Perylene)	98		36 - 161
(d8-Naphthalene)	110		44 - 119

## Method: 8015 Diesel LL (EAL) and Motor Oil - 8015 - TPH DRO/ORO

**Lab Sample ID: 22DSJ003WB**  
**Matrix: WATER**  
**Analysis Batch: 22DSJ003W**

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
DIESEL	ND	U	0.025		mg/L			10/03/22 12:30	1
MOTOR OIL	ND	U	0.05		mg/L			10/03/22 12:30	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
BROMOBENZENE					10/03/22 12:30	1
HEXACOSANE					10/03/22 12:30	1

**Lab Sample ID: 22DSJ003WL**  
**Matrix: WATER**  
**Analysis Batch: 22DSJ003W**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	
							Limits	RPD
DIESEL	2.5	2.47		mg/L		99	50 - 130	

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
BROMOBENZENE	86		60 - 130
HEXACOSANE	86		60 - 130

# QC Sample Results

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

Job ID: 380-21547-1

## Method: 8015 Diesel LL (EAL) and Motor Oil - 8015 - TPH DRO/ORO (Continued)

**Lab Sample ID: 22VG39I16B**  
**Matrix: WATER**  
**Analysis Batch: 22VG39I16**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			09/22/22 17:49	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE								09/22/22 17:49	1

**Lab Sample ID: 22VG39I16L**  
**Matrix: WATER**  
**Analysis Batch: 22VG39I16**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
GASOLINE	0.5	0.42		mg/L		84	60 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
BROMOFLUOROBENZENE	107		70 - 130				

# QC Association Summary

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

Job ID: 380-21547-1

## GC/MS Semi VOA

### Prep Batch: 18191

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-21547-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	525.2	
MB 380-18191/1-A	Method Blank	Total/NA	Water	525.2	
LCS 380-18191/3-A	Lab Control Sample	Total/NA	Water	525.2	
LCSD 380-18191/4-A	Lab Control Sample Dup	Total/NA	Water	525.2	
MRL 380-18191/2-A	Lab Control Sample	Total/NA	Water	525.2	
380-21531-J-1-A MS	Matrix Spike	Total/NA	Water	525.2	
380-21554-F-1-B DU	Duplicate	Total/NA	Water	525.2	

### Analysis Batch: 18328

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-21547-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	525.2	18191
MB 380-18191/1-A	Method Blank	Total/NA	Water	525.2	18191
LCS 380-18191/3-A	Lab Control Sample	Total/NA	Water	525.2	18191
LCSD 380-18191/4-A	Lab Control Sample Dup	Total/NA	Water	525.2	18191
MRL 380-18191/2-A	Lab Control Sample	Total/NA	Water	525.2	18191
380-21531-J-1-A MS	Matrix Spike	Total/NA	Water	525.2	18191
380-21554-F-1-B DU	Duplicate	Total/NA	Water	525.2	18191

## Subcontract

### Analysis Batch: O-38136

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-21547-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	625 PAH Physis LL (EAL) + TICs	O-38136_P
100248-B1	Method Blank	Total/NA	BlankMatrix	625 PAH Physis LL (EAL) + TICs	O-38136_P
100248-BS1	Lab Control Sample	Total/NA	BlankMatrix	625 PAH Physis LL (EAL) + TICs	O-38136_P
100248-BS2	Lab Control Sample Dup	Total/NA	BlankMatrix	625 PAH Physis LL (EAL) + TICs	O-38136_P

### Analysis Batch: 22DSJ003W

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-21547-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	8015 Diesel LL (EAL) and Motor Oil	
22DSJ003WB	Method Blank	Total/NA	WATER	8015 Diesel LL (EAL) and Motor Oil	
22DSJ003WL	Lab Control Sample	Total/NA	WATER	8015 Diesel LL (EAL) and Motor Oil	

### Analysis Batch: 22VG39116

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-21547-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	8015 Diesel LL (EAL) and Motor Oil	
380-21547-2	TB MOANALUA WELLS (331-223-TP202)	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
22VG39116B	Method Blank	Total/NA	WATER	8015 Diesel LL (EAL) and Motor Oil	

Eurofins Eaton Monrovia

# QC Association Summary

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

Job ID: 380-21547-1

## Subcontract (Continued)

### Analysis Batch: 22VG39116 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
22VG39116L	Lab Control Sample	Total/NA	WATER	8015 Diesel LL (EAL) and Motor Oil	

### Prep Batch: O-38136\_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-21547-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	EPA_625	
100248-B1	Method Blank	Total/NA	BlankMatrix	EPA_625	
100248-BS1	Lab Control Sample	Total/NA	BlankMatrix	EPA_625	
100248-BS2	Lab Control Sample Dup	Total/NA	BlankMatrix	EPA_625	

# Lab Chronicle

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

Job ID: 380-21547-1

**Client Sample ID: MOANALUA WELLS (331-223-TP202)**

**Lab Sample ID: 380-21547-1**

**Date Collected: 09/19/22 10:19**

**Matrix: Drinking Water**

**Date Received: 09/21/22 09:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			18191	N8NE	EA MON	09/22/22 09:50
Total/NA	Analysis	525.2		1	18328	UJC9	EA MON	09/23/22 13:08
Total/NA	Prep	EPA_625		1	O-38136_P			09/26/22 00:00
Total/NA	Analysis	625 PAH Physis LL (EAL) + TICs		1	O-38136	YC		10/05/22 09:55
Total/NA	Analysis	8015 Diesel LL (EAL) and Motor Oil		1	22VG39I16	SCerva		09/23/22 03:59
Total/NA	Analysis	8015 Diesel LL (EAL) and Motor Oil		1	22DSJ003W			10/03/22 14:58

**Client Sample ID: TB MOANALUA WELLS (331-223-TP202)**

**Lab Sample ID: 380-21547-2**

**Date Collected: 09/19/22 10:19**

**Matrix: Water**

**Date Received: 09/21/22 09:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	22VG39I16	SCerva		09/23/22 04:37

**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: 380-21547-1

## 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	Drinking Water	2,4'-DDD
525.2	525.2	Drinking Water	2,4'-DDE
525.2	525.2	Drinking Water	2,4'-DDT
525.2	525.2	Drinking Water	2,4-Dinitrotoluene
525.2	525.2	Drinking Water	2,6-Dinitrotoluene
525.2	525.2	Drinking Water	4,4'-DDD
525.2	525.2	Drinking Water	4,4'-DDE
525.2	525.2	Drinking Water	4,4'-DDT
525.2	525.2	Drinking Water	Acenaphthene
525.2	525.2	Drinking Water	Acenaphthylene
525.2	525.2	Drinking Water	Acetochlor
525.2	525.2	Drinking Water	alpha-BHC
525.2	525.2	Drinking Water	alpha-Chlordane
525.2	525.2	Drinking Water	Anthracene
525.2	525.2	Drinking Water	Benz(a)anthracene
525.2	525.2	Drinking Water	Benzo[b]fluoranthene
525.2	525.2	Drinking Water	Benzo[g,h,i]perylene
525.2	525.2	Drinking Water	Benzo[k]fluoranthene
525.2	525.2	Drinking Water	beta-BHC
525.2	525.2	Drinking Water	Bromacil
525.2	525.2	Drinking Water	Butylbenzylphthalate
525.2	525.2	Drinking Water	Caffeine
525.2	525.2	Drinking Water	Chlorobenzilate
525.2	525.2	Drinking Water	Chloroneb
525.2	525.2	Drinking Water	Chlorothalonil (Draconil, Bravo)
525.2	525.2	Drinking Water	Chlorpyrifos
525.2	525.2	Drinking Water	Chrysene
525.2	525.2	Drinking Water	delta-BHC
525.2	525.2	Drinking Water	Diazinon (Qualitative)
525.2	525.2	Drinking Water	Dibenz(a,h)anthracene
525.2	525.2	Drinking Water	Diclorvos (DDVP)
525.2	525.2	Drinking Water	Diethylphthalate
525.2	525.2	Drinking Water	Dimethoate
525.2	525.2	Drinking Water	Dimethylphthalate
525.2	525.2	Drinking Water	Di-n-butyl phthalate
525.2	525.2	Drinking Water	Di-n-octyl phthalate
525.2	525.2	Drinking Water	Endosulfan I (Alpha)
525.2	525.2	Drinking Water	Endosulfan II (Beta)
525.2	525.2	Drinking Water	Endosulfan sulfate
525.2	525.2	Drinking Water	Endrin aldehyde
525.2	525.2	Drinking Water	EPTC
525.2	525.2	Drinking Water	Fluoranthene
525.2	525.2	Drinking Water	Fluorene
525.2	525.2	Drinking Water	gamma-Chlordane
525.2	525.2	Drinking Water	Indeno[1,2,3-cd]pyrene





# Method Summary

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

Job ID: 380-21547-1

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: 380-21547-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
380-21547-1	MOANALUA WELLS (331-223-TP202)	Drinking Water	09/19/22 10:19	09/21/22 09:50	HI0000331
380-21547-2	TB MOANALUA WELLS (331-223-TP202)	Water	09/19/22 10:19	09/21/22 09:50	

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

Date: 10-07-2022  
EMAX Batch No.: 221271

Attn: Jackie Contreras

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

Subject: Laboratory Report  
Project: 380-21547

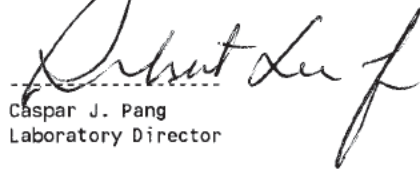
Enclosed is the Laboratory report for samples received on 09/22/22.  
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
380-21547-1	1271-01	09/19/22	WATER	TPH GASOLINE
380-21547-2	1271-02	09/19/22	WATER	TPH DIESEL & MOTOR OIL 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

# Chain of Custody Record

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

221271



Environment Testing  
America

**Client Information (Sub Contract Lab)**

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

Sampler: Arada, Rachelle  
Phone:  
Lab PM: Rachelle Arada@eurofins.com  
E-Mail: Rachelle Arada@eurofins.com  
Accreditations Required (See note): State - Hawaii

Carrier/Tracking No(s):  
State of Origin: Hawaii

COC No: 380-22088-1  
Page: Page 1 of 1  
Job #: 380-21547-1

Due Date Requested: 10/5/2022  
TAT Requested (days):

Analysis Requested

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

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

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

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	MATRIX (W=water, S=solid, O=volatile, BT=BTSS, AA=)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total Number of Containers	Special Instructions/Note:
MOANALUA WELLS (331-223-T-P202) (380-21547-1)	9/19/22	10:19	Water	Water	X	X	0	See Attached Instructions
TB MOANALUA WELLS (331-223-T-P202) (380-21547-2)	9/19/22	10:19	Water	Water	X	X	2	See Attached Instructions

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

**Possible Hazard Identification**  
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

Empty Kit Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Method of Shipment: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date/Time: 09/22/2022 Company: EAT Company: \_\_\_\_\_ Received by: \_\_\_\_\_ Date/Time: 9-22-22 11:22 Company: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date/Time: 9-22-22 13:40 Company: EMAX Company: \_\_\_\_\_ Received by: \_\_\_\_\_ Date/Time: 9/22/22 13:40 Company: EMAX

Custody Seals Intact: \_\_\_\_\_ Custody Seal No.: \_\_\_\_\_

REPORTRND: 221271

Core Temperature(s) °C and Other Remarks: 11.3



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 221271
		Recipient <u>HOWIN TAMORA</u>
		Date <u>9/22/22</u> Time <u>1340</u>

**COC INSPECTION**

<input checked="" type="checkbox"/> Client Name	<input checked="" type="checkbox"/> Client PM/FC	<input type="checkbox"/> Sampler Name	<input checked="" type="checkbox"/> Sampling Date/Time	<input checked="" type="checkbox"/> Sample ID	<input checked="" type="checkbox"/> Matrix
<input checked="" type="checkbox"/> Address	<input checked="" 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)	<input type="checkbox"/> High concentrations expected	<input type="checkbox"/> From Superfund Site	<input type="checkbox"/> Rad screening required		

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

**PACKAGING INSPECTION**

Container	<input checked="" type="checkbox"/> Cooler	<input type="checkbox"/> Box	<input type="checkbox"/> Other
Condition	<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>1.3</u> °C	<input type="checkbox"/> Cooler 2 _____ °C	<input type="checkbox"/> Cooler 3 _____ °C
	<input type="checkbox"/> Cooler 6 _____ °C	<input type="checkbox"/> Cooler 7 _____ °C	<input type="checkbox"/> Cooler 8 _____ °C
Thermometer:	A - S/N _____	B - S/N <u>210760237</u>	C - S/N _____
			<input checked="" type="checkbox"/> D - S/N <u>210760272</u>

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

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

**DISCREPANCIES**

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
<u>2</u>	<u>78</u>	<u>D22</u>	<u>1<sup>st</sup> date 9/14/22</u> <u>2<sup>nd</sup> date 9/19/22</u>	<u>R1</u> <u>↓</u>
<i>[Large handwritten scribble]</i>				

pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time. MS 9/26/22

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

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

**REVIEWS:**

Sample Labeling <u>HOWIN TAMORA</u>	SRF <u>[Signature]</u>	PM <u>[Signature]</u>
Date <u>9/22/22</u>	Date <u>9/22/22</u>	Date <u>9/26/22</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

380-21547

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

SDG#: 22I271





CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-21547

SDG : 22I271

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

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

Holding Time

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. VG39I16B - 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. VG39I16L/VG39I16C 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 I268-01M/I268-01S. 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.



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# SAMPLE RESULTS

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

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 09/19/22 10:19
Project     : 380-21547                   Date Received: 09/22/22
Batch No.   : 221271                       Date Extracted: 09/23/22 03:59
Sample ID   : 380-21547-1                 Date Analyzed: 09/23/22 03:59
Lab Samp ID: I271-01                       Dilution Factor: 1
Lab File ID: EI22021A                       Matrix: WATER
Ext Btch ID: 22VG39116                     % Moisture: NA
Calib. Ref.: EI22014A                       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	0.0344	0.0400	86	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: 09/19/22 10:19
Project     : 380-21547                   Date Received: 09/22/22
Batch No.   : 221271                       Date Extracted: 09/23/22 04:37
Sample ID   : 380-21547-2                 Date Analyzed: 09/23/22 04:37
Lab Samp ID : 1271-02                     Dilution Factor: 1
Lab File ID : E122022A                    Matrix: WATER
Ext Btch ID : 22VG39116                   % Moisture: NA
Calib. Ref.: E122014A                     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	0.0343	0.0400	86	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



EMAX QUALITY CONTROL DATA  
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL  
PROJECT : 380-21547  
BATCH NO. : 221271  
METHOD : 5030B/8015B

MATRIX : WATER		% MOISTURE:NA
DILUTION FACTOR: 1	1	1
SAMPLE ID : MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID : VG39116B	VG39116L	VG39116C
LAB FILE ID : EI22005A	EI22006A	EI22007A
DATE PREPARED : 09/22/22 17:49	09/22/22 18:27	09/22/22 19:05
DATE ANALYZED : 09/22/22 17:49	09/22/22 18:27	09/22/22 19:05
PREP BATCH : 22VG39116	22VG39116	22VG39116
CALIBRATION REF: EI22003A	EI22003A	EI22003A

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	0.420	84	0.500	0.424	85	1	60-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0429	107	0.0400	0.0418	105	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 : 380-21464  
BATCH NO. : 221268  
METHOD : 5030B/8015B

```

=====
MATRIX      : WATER                               % MOISTURE:NA
DILUTION FACTOR: 1                               1
SAMPLE ID   : 380-21464-1                         380-21464-1MS
LAB SAMPLE ID : 1268-01                           1268-01M
LAB FILE ID  : E122008A                           E122009A
DATE PREPARED : 09/22/22 19:43                     09/22/22 20:59
DATE ANALYZED : 09/22/22 19:43                     09/22/22 20:59
PREP BATCH   : 22VG39I16                           22VG39I16
CALIBRATION REF: E122003A                           E122003A
    
```

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	0.480	96	0.500	0.460	92	4	50-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0464	116	0.0400	0.0460	115	60-140

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

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-21547

METHOD 3520C/8015B  
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 22I271



CASE NARRATIVE

Client : EUROFINs EATON ANALYTICAL

Project: 380-21547

SDG : 22I271

METHOD 3520C/8015B  
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 09/22/22 to be analyzed for Total Petroleum Hydrocarbons by Extraction in accordance with Method 3520C/8015B and project specific requirements.

Holding Time

The sample was analyzed within the prescribed holding time.

Calibration

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

Method Blank

Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. DSJ003WB - 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. DSJ003WL/DSJ003WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample

Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Diesel was within MS QC limits in 22I333-01M/22I333-01S. Refer to Matrix QC summary form for details.

Surrogate

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

Sample Analysis

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

LAB CHRONICLE  
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL
Project    : 380-21547
SDG NO.   : 221271
Instrument ID : D5
=====
  
```

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
									WATER
MBLK1W	DSJ003WB	1	NA	10/03/2212:30	10/01/2215:45	LJ03007A	LJ03003A	22DSJ003W	Method Blank
LCS1W	DSJ003WL	1	NA	10/03/2212:49	10/01/2215:45	LJ03008A	LJ03003A	22DSJ003W	Lab Control Sample (LCS)
LCD1W	DSJ003WC	1	NA	10/03/2213:07	10/01/2215:45	LJ03009A	LJ03003A	22DSJ003W	LCS Duplicate
380-21547-1	1271-01	1	NA	10/03/2214:58	10/01/2215:45	LJ03015A	LJ03003A	22DSJ003W	Field Sample

FN - Filename  
% Moist - Percent Moisture



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# SAMPLE RESULTS



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# QC SUMMARIES

METHOD 3520C/8015B  
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/01/22 15:45
Project    : 380-21547                   Date Received: 10/01/22
Batch No.  : 221271                       Date Extracted: 10/01/22 15:45
Sample ID  : MBLK1W                       Date Analyzed: 10/03/22 12:30
Lab Samp ID: DSJ003WB                     Dilution Factor: 1
Lab File ID: LJ03007A                     Matrix: WATER
Ext Btch ID: 22DSJ003W                    % Moisture: NA
Calib. Ref.: LJ03003A                     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	0.362	0.500	72	60-130
Hexacosane	0.101	0.125	80	60-130

Notes:

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

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

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



EMAX QUALITY CONTROL DATA  
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL  
PROJECT : 380-21547  
BATCH NO. : 221271  
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	: DSJ003WB	DSJ003WL	DSJ003WC
LAB FILE ID	: LJ03007A	LJ03008A	LJ03009A
DATE PREPARED	: 10/01/22 15:45	10/01/22 15:45	10/01/22 15:45
DATE ANALYZED	: 10/03/22 12:30	10/03/22 12:49	10/03/22 13:07
PREP BATCH	: 22DSJ003W	22DSJ003W	22DSJ003W
CALIBRATION REF:	LJ03003A	LJ03003A	LJ03003A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Diesel	ND	2.50	2.47	99	2.50	2.10	84	16	50-130	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromobenzene	0.500	0.428	86	0.500	0.397	79	60-130
Hexacosane	0.125	0.108	86	0.125	0.0941	75	60-130

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

EMAX QUALITY CONTROL DATA  
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL  
PROJECT : 380-22076  
BATCH NO. : 221333  
METHOD : 3520C/8015B

```

=====
MATRIX : WATER % MOISTURE:NA
DILUTION FACTOR: 1 1
SAMPLE ID : 380-22076-1 380-22076-1MS 380-22076-1MSD
LAB SAMPLE ID : 221333-01 221333-01M 221333-01S
LAB FILE ID : LJ03097A LJ03020A LJ03021A
DATE PREPARED : 10/01/22 15:45 10/01/22 15:45 10/01/22 15:45
DATE ANALYZED : 10/04/22 16:12 10/03/22 16:31 10/03/22 16:49
PREP BATCH : 22DSJ003W 22DSJ003W 22DSJ003W
CALIBRATION REF: LJ03089A LJ03003A LJ03003A
  
```

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Diesel	ND	2.60	2.47	95	2.78	2.37	85	4	50-130	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.520	0.383	74	0.555	0.449	81	60-130
Hexacosane	0.130	0.110	85	0.139	0.109	79	60-130

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

October 07, 2022

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

Project Name: RED-HILL Project # 38001111 Job # 380-21547-1  
 Physis Project ID: 1407003-302


Dear Debbie,

Enclosed are the analytical results for the sample submitted to PHYSIS Environmental Laboratories, Inc. (PHYSIS) on 9/22/2022. A total of 1 sample was received for analysis in accordance with the attached chain of custody (COC). Per the COC, the sample was analyzed for:

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

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: 1407003-302

RED-HILL Project # 38001111 Job # 380-21547-1

Total Samples: 1

PHYSIS ID	Sample ID	Description	Date	Time	Matrix	Sample Type
100249	MOANALUA WELLS	331-223-TP202 (380-21547-1)	9/19/2022	10:19	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.

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## PHYSIS QUALIFIER CODES

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



---

## CASE NARRATIVE

### QUALIFIER NOTES

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

#### **ND**

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

# BIANALYTICALS

## REPORT

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## Base/Neutral Extractable Compounds

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
<b>Sample ID: 100249-R1</b>	<b>MOANALUA WELLS</b>	<b>331-223-TP202</b>	<b>Matrix: Samplewater</b>				<b>Sampled:</b>	<b>19-Sep-22 10:19</b>		<b>Received:</b>	<b>22-Sep-22</b>
Disalicylidenepropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38136	26-Sep-22	05-Oct-22



## Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed				
<b>Sample ID: 100249-R1</b>							<b>MOANALUA WELLS 331-223-TP202</b>		<b>Matrix: Samplewater</b>			<b>Sampled: 19-Sep-22 10:19</b>		<b>Received: 22-Sep-22</b>	
(d10-Acenaphthene)	EPA 625.1	% Recovery	71	1			Total		0-38136	26-Sep-22	05-Oct-22				
(d10-Phenanthrene)	EPA 625.1	% Recovery	82	1			Total		0-38136	26-Sep-22	05-Oct-22				
(d12-Chrysene)	EPA 625.1	% Recovery	83	1			Total		0-38136	26-Sep-22	05-Oct-22				
(d12-Perylene)	EPA 625.1	% Recovery	74	1			Total		0-38136	26-Sep-22	05-Oct-22				
(d8-Naphthalene)	EPA 625.1	% Recovery	59	1			Total		0-38136	26-Sep-22	05-Oct-22				
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		0-38136	26-Sep-22	05-Oct-22				
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		0-38136	26-Sep-22	05-Oct-22				
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		0-38136	26-Sep-22	05-Oct-22				
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		0-38136	26-Sep-22	05-Oct-22				
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		0-38136	26-Sep-22	05-Oct-22				
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		0-38136	26-Sep-22	05-Oct-22				
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		0-38136	26-Sep-22	05-Oct-22				
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		0-38136	26-Sep-22	05-Oct-22				
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		0-38136	26-Sep-22	05-Oct-22				
Benzo[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		0-38136	26-Sep-22	05-Oct-22				
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		0-38136	26-Sep-22	05-Oct-22				
Benzo[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		0-38136	26-Sep-22	05-Oct-22				
Benzo[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		0-38136	26-Sep-22	05-Oct-22				
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		0-38136	26-Sep-22	05-Oct-22				
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		0-38136	26-Sep-22	05-Oct-22				
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		0-38136	26-Sep-22	05-Oct-22				
D benz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		0-38136	26-Sep-22	05-Oct-22				
D benzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		0-38136	26-Sep-22	05-Oct-22				
D benzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		0-38136	26-Sep-22	05-Oct-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-38136	26-Sep-22	05-Oct-22
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38136	26-Sep-22	05-Oct-22
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38136	26-Sep-22	05-Oct-22
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38136	26-Sep-22	05-Oct-22
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38136	26-Sep-22	05-Oct-22
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38136	26-Sep-22	05-Oct-22
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38136	26-Sep-22	05-Oct-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: 100248-B1</b>		<b>QAQC Procedural Blank</b>				<b>Matrix: BlankMatrix</b>		<b>Sampled:</b>		<b>Received:</b>					
		Method: EPA 625.1				Batch ID: O-38136		Prepared: 26-Sep-22		Analyzed: 05-Oct-22					
Disalicylideneprapanediamin	Total	ND	1	0.05	0.1	µg/L									
<b>Sample ID: 100248-BS1</b>		<b>QAQC Procedural Blank</b>				<b>Matrix: BlankMatrix</b>		<b>Sampled:</b>		<b>Received:</b>					
		Method: EPA 625.1				Batch ID: O-38136		Prepared: 26-Sep-22		Analyzed: 05-Oct-22					
Disalicylideneprapanediamin	Total	37	1	0.05	0.1	µg/L	50	0	74	50 - 150%	PASS				
<b>Sample ID: 100248-BS2</b>		<b>QAQC Procedural Blank</b>				<b>Matrix: BlankMatrix</b>		<b>Sampled:</b>		<b>Received:</b>					
		Method: EPA 625.1				Batch ID: O-38136		Prepared: 26-Sep-22		Analyzed: 05-Oct-22					
Disalicylideneprapanediamin	Total	39.8	1	0.05	0.1	µg/L	50	0	80	50 - 150%	PASS	8	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: 100248-B1</b>		<b>QAQC Procedural Blank</b>			<b>Matrix: BlankMatrix</b>			<b>Sampled:</b>		<b>Received:</b>		
		Method: EPA 625.1			Batch ID: O-38136			Prepared: 26-Sep-22		Analyzed: 05-Oct-22		
(d10-Acenaphthene)	Total	92	1				% Recovery	100	92	65 - 113%	PASS	
(d10-Phenanthrene)	Total	96	1				% Recovery	100	96	80 - 111%	PASS	
(d12-Chrysene)	Total	103	1				% Recovery	100	103	60 - 139%	PASS	
(d12-Perylene)	Total	86	1				% Recovery	100	86	36 - 161%	PASS	
(d8-Naphthalene)	Total	76	1				% Recovery	100	76	44 - 119%	PASS	
1-Methylnaphthalene	Total	ND	1	0.001	0.005	µg/L						
1-Methylphenanthrene	Total	ND	1	0.001	0.005	µg/L						
2,3,5-Trimethylnaphthalene	Total	ND	1	0.001	0.005	µg/L						
2,6-Dimethylnaphthalene	Total	ND	1	0.001	0.005	µg/L						
2-Methylnaphthalene	Total	ND	1	0.001	0.005	µg/L						
Acenaphthene	Total	ND	1	0.001	0.005	µg/L						
Acenaphthylene	Total	ND	1	0.001	0.005	µg/L						
Anthracene	Total	ND	1	0.001	0.005	µg/L						
Benz[a]anthracene	Total	ND	1	0.001	0.005	µg/L						
Benzo[a]pyrene	Total	ND	1	0.001	0.005	µg/L						
Benzo[b]fluoranthene	Total	ND	1	0.001	0.005	µg/L						
Benzo[e]pyrene	Total	ND	1	0.001	0.005	µg/L						
Benzo[g,h,i]perylene	Total	ND	1	0.001	0.005	µg/L						
Benzo[k]fluoranthene	Total	ND	1	0.001	0.005	µg/L						
Biphenyl	Total	ND	1	0.001	0.005	µg/L						
Chrysene	Total	ND	1	0.001	0.005	µg/L						
Dibenz[a,h]anthracene	Total	ND	1	0.001	0.005	µg/L						
Dibenzo[a,l]pyrene	Total	ND	1	0.001	0.005	µg/L						



## Polynuclear Aromatic Hydrocarbons

## QUALITY CONTROL REPORT

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



## Polynuclear Aromatic Hydrocarbons

## QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY		PRECISION	QA CODE
							LEVEL	RESULT	%	LIMITS	%	LIMITS
<b>Sample ID: 100248-BS1</b>		<b>QAQC Procedural Blank</b>			<b>Matrix: BlankMatrix</b>			<b>Sampled:</b>		<b>Received:</b>		
Method: EPA 625.1		Batch ID: O-38136			Prepared: 26-Sep-22		Analyzed: 05-Oct-22					
(d10-Acenaphthene)	Total	88	1			% Recovery	100	0	88	65 - 113%	PASS	
(d10-Phenanthrene)	Total	96	1			% Recovery	100	0	96	80 - 111%	PASS	
(d12-Chrysene)	Total	96	1			% Recovery	100	0	96	60 - 139%	PASS	
(d12-Perylene)	Total	88	1			% Recovery	100	0	88	36 - 161%	PASS	
(d8-Naphthalene)	Total	84	1			% Recovery	100	0	84	44 - 119%	PASS	
1-Methylnaphthalene	Total	0.474	1	0.001	0.005	µg/L	0.5	0	95	49 - 117%	PASS	
1-Methylphenanthrene	Total	0.451	1	0.001	0.005	µg/L	0.5	0	90	66 - 127%	PASS	
2,3,5-Trimethylnaphthalene	Total	0.588	1	0.001	0.005	µg/L	0.5	0	118	57 - 120%	PASS	
2,6-Dimethylnaphthalene	Total	0.503	1	0.001	0.005	µg/L	0.5	0	101	54 - 117%	PASS	
2-Methylnaphthalene	Total	0.439	1	0.001	0.005	µg/L	0.5	0	88	47 - 130%	PASS	
Acenaphthene	Total	0.579	1	0.001	0.005	µg/L	0.5	0	116	53 - 131%	PASS	
Acenaphthylene	Total	0.565	1	0.001	0.005	µg/L	0.5	0	113	43 - 140%	PASS	
Anthracene	Total	0.44	1	0.001	0.005	µg/L	0.5	0	88	58 - 135%	PASS	
Benz[a]anthracene	Total	0.513	1	0.001	0.005	µg/L	0.5	0	103	55 - 145%	PASS	
Benzo[a]pyrene	Total	0.398	1	0.001	0.005	µg/L	0.5	0	80	51 - 143%	PASS	
Benzo[b]fluoranthene	Total	0.54	1	0.001	0.005	µg/L	0.5	0	108	46 - 165%	PASS	
Benzo[e]pyrene	Total	0.501	1	0.001	0.005	µg/L	0.5	0	100	42 - 152%	PASS	
Benzo[g,h,i]perylene	Total	0.419	1	0.001	0.005	µg/L	0.5	0	84	63 - 133%	PASS	
Benzo[k]fluoranthene	Total	0.483	1	0.001	0.005	µg/L	0.5	0	97	56 - 145%	PASS	
Biphenyl	Total	0.5	1	0.001	0.005	µg/L	0.5	0	100	56 - 119%	PASS	
Chrysene	Total	0.452	1	0.001	0.005	µg/L	0.5	0	90	56 - 141%	PASS	
Dibenz[a,h]anthracene	Total	0.519	1	0.001	0.005	µg/L	0.5	0	104	55 - 150%	PASS	
Dibenzo[a,l]pyrene	Total	0.288	1	0.001	0.005	µg/L	0.5	0	58	50 - 150%	PASS	

## Polynuclear Aromatic Hydrocarbons

## QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY		PRECISION		QA CODE <sub>c</sub>
							LEVEL	RESULT	%	LIMITS	%	LIMITS	
Dibenzothiophene	Total	0.446	1	0.001	0.005	µg/L	0.5	0	89	75 - 113%	PASS		
Fluoranthene	Total	0.439	1	0.001	0.005	µg/L	0.5	0	88	60 - 146%	PASS		
Fluorene	Total	0.548	1	0.001	0.005	µg/L	0.5	0	110	58 - 131%	PASS		
Indeno[1,2,3-cd]pyrene	Total	0.498	1	0.001	0.005	µg/L	0.5	0	100	50 - 151%	PASS		
Naphthalene	Total	0.461	1	0.001	0.005	µg/L	0.5	0	92	41 - 126%	PASS		
Perylene	Total	0.4	1	0.001	0.005	µg/L	0.5	0	80	48 - 141%	PASS		
Phenanthrene	Total	0.449	1	0.001	0.005	µg/L	0.5	0	90	67 - 127%	PASS		
Pyrene	Total	0.497	1	0.001	0.005	µg/L	0.5	0	99	54 - 156%	PASS		

**Polynuclear Aromatic Hydrocarbons**

**QUALITY CONTROL REPORT**

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY		PRECISION		QA CODE		
							LEVEL	RESULT	%	LIMITS	%	LIMITS			
<b>Sample ID: 100248-BS2</b>		<b>QAQC Procedural Blank</b>			<b>Matrix: BlankMatrix</b>			<b>Sampled:</b>			<b>Received:</b>				
Method: EPA 625.1		Batch ID: O-38136			Prepared: 26-Sep-22			Analyzed: 05-Oct-22							
(d10-Acenaphthene)	Total	85	1				% Recovery	100	0	85	65 - 113%	PASS	3	30	PASS
(d10-Phenanthrene)	Total	92	1				% Recovery	100	0	92	80 - 111%	PASS	4	30	PASS
(d12-Chrysene)	Total	90	1				% Recovery	100	0	90	60 - 139%	PASS	6	30	PASS
(d12-Perylene)	Total	98	1				% Recovery	100	0	98	36 - 161%	PASS	11	30	PASS
(d8-Naphthalene)	Total	110	1				% Recovery	100	0	110	44 - 119%	PASS	27	30	PASS
1-Methylnaphthalene	Total	0.557	1	0.001	0.005	µg/L		0.5	0	111	49 - 117%	PASS	16	30	PASS
1-Methylphenanthrene	Total	0.466	1	0.001	0.005	µg/L		0.5	0	93	66 - 127%	PASS	3	30	PASS
2,3,5-Trimethylnaphthalene	Total	0.584	1	0.001	0.005	µg/L		0.5	0	117	57 - 120%	PASS	1	30	PASS
2,6-Dimethylnaphthalene	Total	0.481	1	0.001	0.005	µg/L		0.5	0	96	54 - 117%	PASS	5	30	PASS
2-Methylnaphthalene	Total	0.585	1	0.001	0.005	µg/L		0.5	0	117	47 - 130%	PASS	28	30	PASS
Acenaphthene	Total	0.565	1	0.001	0.005	µg/L		0.5	0	113	53 - 131%	PASS	3	30	PASS
Acenaphthylene	Total	0.561	1	0.001	0.005	µg/L		0.5	0	112	43 - 140%	PASS	1	30	PASS
Anthracene	Total	0.434	1	0.001	0.005	µg/L		0.5	0	87	58 - 135%	PASS	1	30	PASS
Benz[a]anthracene	Total	0.535	1	0.001	0.005	µg/L		0.5	0	107	55 - 145%	PASS	4	30	PASS
Benzo[a]pyrene	Total	0.497	1	0.001	0.005	µg/L		0.5	0	99	51 - 143%	PASS	21	30	PASS
Benzo[b]fluoranthene	Total	0.583	1	0.001	0.005	µg/L		0.5	0	117	46 - 165%	PASS	8	30	PASS
Benzo[e]pyrene	Total	0.539	1	0.001	0.005	µg/L		0.5	0	108	42 - 152%	PASS	8	30	PASS
Benzo[g,h,i]perylene	Total	0.456	1	0.001	0.005	µg/L		0.5	0	91	63 - 133%	PASS	8	30	PASS
Benzo[k]fluoranthene	Total	0.511	1	0.001	0.005	µg/L		0.5	0	102	56 - 145%	PASS	5	30	PASS
Biphenyl	Total	0.47	1	0.001	0.005	µg/L		0.5	0	94	56 - 119%	PASS	6	30	PASS
Chrysene	Total	0.432	1	0.001	0.005	µg/L		0.5	0	86	56 - 141%	PASS	5	30	PASS
Dibenz[a,h]anthracene	Total	0.595	1	0.001	0.005	µg/L		0.5	0	119	55 - 150%	PASS	13	30	PASS
Dibenzo[a,l]pyrene	Total	0.377	1	0.001	0.005	µg/L		0.5	0	75	50 - 150%	PASS	26	30	PASS

## Polynuclear Aromatic Hydrocarbons

## QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY		PRECISION		QA CODE <sub>c</sub>	
							LEVEL	RESULT	%	LIMITS	%	LIMITS		
Dibenzothiophene	Total	0.434	1	0.001	0.005	µg/L	0.5	0	87	75 - 113%	PASS	2	30	PASS
Fluoranthene	Total	0.541	1	0.001	0.005	µg/L	0.5	0	108	60 - 146%	PASS	20	30	PASS
Fluorene	Total	0.589	1	0.001	0.005	µg/L	0.5	0	118	58 - 131%	PASS	7	30	PASS
Indeno[1,2,3-cd]pyrene	Total	0.619	1	0.001	0.005	µg/L	0.5	0	124	50 - 151%	PASS	21	30	PASS
Naphthalene	Total	0.524	1	0.001	0.005	µg/L	0.5	0	105	41 - 126%	PASS	13	30	PASS
Perylene	Total	0.446	1	0.001	0.005	µg/L	0.5	0	89	48 - 141%	PASS	11	30	PASS
Phenanthrene	Total	0.439	1	0.001	0.005	µg/L	0.5	0	88	67 - 127%	PASS	2	30	PASS
Pyrene	Total	0.546	1	0.001	0.005	µg/L	0.5	0	109	54 - 156%	PASS	10	30	PASS

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**PHYSIS**

**TENTATIVELY**

**IDENTIFIED COMPOUNDS**

ENVIRONMENTAL LABORATORIES, INC.

*Innovative Solutions for Nature*

Sample ID: 100249

RT	Area Pct	Concentration (ng/L)	Library/ID	Cas Number	Match Qual
32.4326	5.1888	1111	Anthracene-D10-	1517-22-2	96
No TICs were detected in this sample per the criteria.					

Concentration estimated using the response for Anthracene-d10

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Sample ID: Lab Blank Batch O-38136

RT	Area Pct	Concentration (ng/L)	Library/ID	Cas Number	Match Qual
32.4297	9.1660	1111	Anthracene-D10-	1517-22-2	97
No TICs were detected in this sample per the criteria.					

Concentration estimated using the response for Anthracene-d10

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# PERFORMANCE CHAIN OF CUSTODY

TERRA ENVIRONMENTAL LABORATORIES, INC. AURA

*Innovative Solutions for Nature*

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Project Iteration ID: 1407003-302  
 Client Name: Eurofins Eaton Analytical  
 Project Name: RED-HILL Project # 38001111 Job # 380-21547-1  
 COC Page Number: 2 of 2  
 Bottle Label Color: NA

## Sample Receipt Summary

### Receiving Info

- Initials Received By: AI
- Date Received: 9/22/22
- Time Received: 1200
- 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)
  - 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): 0.9  
 Used I/R Thermometer # 1-2

### Inspection Info

- Initials Inspected By: R6H

### 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:

**Monrovia, CA (Suite 100)**

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

**Chain of Custody Record**



<b>Client Information</b>		Sampler: <b>EJUAGDAN</b>	Lab PM: Frank, Debbie L	Carrier Tracking No(s):	COC No: 380-9754-2757.3
Client Contact: Dr. Ron Fenstermacher		Phone:	E-Mail: Debbie.Frank@et.eurofinsus.com	State of Origin:	Page: Page 3 of 3
Company: City & County of Honolulu		PWSID:	<b>Analysis Requested</b>		
Address: 630 South Beretania Street Chemistry Lab		Due Date Requested:	 380-21547 COC	Total Number of containers	
City: Honolulu		TAT Requested (days):			
State, Zip: HI, 96843		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No			
Phone: 808-748-5091(Tel)		PO #: C20525101 exp 05312023			
Email: RFENSTEMACHER@hbws.org		WO #:			
Project Name: RED-HILL/HBWS Sites Event Desc: RUSH Weekly Red Hill		Project #: 38001111	Preservation Codes: A - HCL                      M - Hexane B - NaOH                    N - None C - Zn Acetate              O - AsNaO2 D - Nitric Acid              P - Na2O4S E - NaHSO4                 Q - Na2SO3 F - MeOH                    R - Na2S2O3 G - Amchlor                S - H2SO4 H - Ascorbic Acid         T - TSP Dodecahydrate I - Ice                         U - Acetone J - DI Water                V - MCAA K - EDTA                    W - pH 4-5 L - EDA                      Y - Trizma Z - other (specify)		
Site: Hawaii		SSOW#:			
<b>Sample Identification</b>		<b>Sample Date</b>			
<b>Sample Time</b>	<b>Sample Type (C=Comp, G=grab)</b>	<b>Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)</b>			
<b>Preservation Code:</b>					
HALAWA WELLS UNITS1&2(331-206-TP065)		Water			
MOANALUA WELLS (331-223-TP202)	9/19/22	1019	G	Water	X X X X X
TB AIEA GULCH WELLS PUMP1 331-201-TP071				Water	
TB AIEA GULCH WELLS PUMP2 331-202-TP07				Water	
TB AIEA WELLS PUMPS1&2(260)331-203-TP400				Water	
TB HALAWA SHAFT (331-241-TP401)				Water	
TB HALAWA WELLS UNITS1&2(331-206-TP065)				Water	
TB MOANALUA WELLS (331-223-TP202)				Water	X
<b>Possible Hazard Identification</b>			<b>Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)</b>		
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological			<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		
Deliverable Requested: I, II, III, IV, Other (specify)			Special Instructions/QC Requirements:		
Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:	
Relinquished by: [Redacted]		Date/Time: 9/20/22 1200	Company:	Received by: [Signature] Date/Time: 9/21-22 0950 Company: [Signature]	
Relinquished by:		Date/Time:	Company:	Received by:	
Relinquished by:		Date/Time:	Company:	Received by:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:	



**Bottle Order Information**

Bottle Order: RUSH RED-HILL WEEKLY  
 Bottle Order #: 2757  
 Request From Client: 7/20/2022  
 Date Order Posted: 7/20/2022 11:12:54AM  
 Order Status: Ready To Process  
 Prepared By: Davis Haley  
**Deliver By Date: 9/12/2022 11:59:00PM**  
 Lab Project Number: 38001111  
 PWSID: HI0000331

**Order Completion Information**

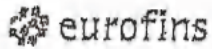
Creator: Davis Haley  
 Filled by:  
 Sent Date:  
 Sent Via:  
 Tracking #:

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #
6	2	16	Amber Glass 1 liter - Sodium Thiosulfate	Sodium Thiosulfate	SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs	Water	Normal	625 PAH + MS/MSD Volume	
6	4	24	Voa Vial 40ml - SodiumThio w/HCl-dropper	Sodium Thiosulfate	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	Water	Normal		
6	2	16	Amber Glass 1 L - NaThiosulfate 8mL HCL	Sodium Thiosulfate/Hydrochloric Acid	SUBCONTRACT - 8015 Diesel LL (EAL) and Motor Oil	Water	Normal		
6	2	12	Amber Glass 1 Liter- Sodium Sulfite/HCl	Sodium Sulfite w/HCl	525.2_PREC - (MOD) 525plus Plus TICs	Water	Normal		
6	2	12	VOA Vial 40mL - NaThiosulfate/HCL	Sodium Thiosulfate/Hydrochloric Acid	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	Water	Trip Blank		

**Total Bottle Summary**

Bottle Type Description	Preservative	Bottle Count
Amber Glass 1 L - NaThiosulfate 8mL HCL	Sodium Thiosulfate/Hydrochloric Acic	16
Amber Glass 1 liter - Sodium Thiosulfate	Sodium Thiosulfate	16
Amber Glass 1 Liter- Sodium Sulfite/HCl	Sodium Sulfite w/HCl	12
VOA Vial 40mL - NaThiosulfate/HCL	Sodium Thiosulfate/Hydrochloric Acic	12
Voa Vial 40ml - SodiumThio w/HCl-dropper	Sodium Thiosulfate	24
Total Bottles:		<b>80</b>

Please notify your PM immediately if an error is found in shipment. When returning samples, please return all provided QC samples.



Eaton Analytical

# INTERNAL CHAIN OF CUSTODY RECORD

EEA Folder Number: \_\_\_\_\_

### SAMPLE TEMP RECEIVED:

Notes: 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 = 4.9 °C) (Corr. Factor = -0.1 °C) (Final = 4.8 °C)

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

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

Compliance Acceptance Criteria:

777987984677

- 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)

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

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

7) VOA and Radon Headspace:

No Samples with Headspace:

Samples with Headspace (see below):

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

Exempt from headspace concerns: Methods 815.4, HAA(8251, 852), 805, 8PME, @CH, 832LCMS, 886, 838, Anatoxin, LCMS methods using 40 ml vials, International clients:

Samp ID	Bottle #	None/<8 mm	>8mm	Test	Samp ID	Bottle #	None/<8 mm	>8mm	Test	Samp ID	Bottle #	None/<8 mm	>8mm	Test	Samp ID	Bottle #	None/<8 mm	>8mm	Test	

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

SIGNATURE <u>Ann Bruell</u>	PRINT NAME <u>Ann Bruell</u>	COMPANY/TITLE Eurofins Eaton Analytical	DATE <u>9.21.22</u>	TIME <u>0950</u>
SIGNATURE	PRINT NAME	COMPANY/TITLE Eurofins Eaton Analytical	DATE	TIME
SAMPLES CHECKED AGAINST COC BY:				



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

SHIP DATE: 20SEP22  
ACTWGT: 52.00 LB  
CAD: 100205419/INET4530

BILL RECIPIENT

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

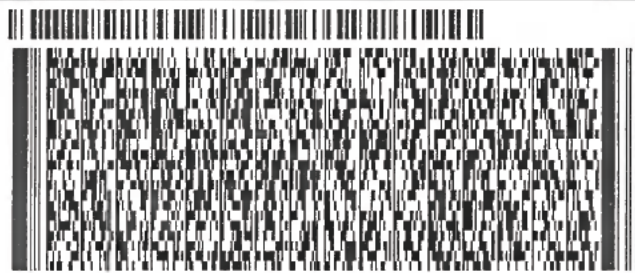
(626) 386-1178

REF:

INV.  
PO.

DEPT:

581J1EC80FE2D



WED - 21 SEP 10:30A  
PRIORITY OVERNIGHT

2 of 2

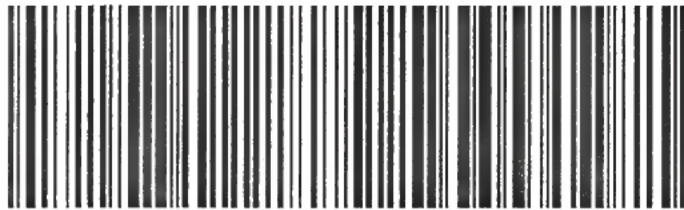
MPS# 7779 8798 4677  
0263

Mstr# 7779 8798 4390

0201

**WZ WHPA**

91016  
CA-US BUR



**After printing this label:**

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

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

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. 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 ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.



# Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-21547-1

**Login Number: 21547**  
**List Number: 1**  
**Creator: Segura, Ryan**

**List Source: Eurofins Eaton Monrovia**

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	

- 1
- 2
- 3
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- 17