

## ANALYTICAL REPORT

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

Laboratory Job ID: 380-12725-1  
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:  
10/14/2022 7:21:45 PM  
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Results relate only to the items tested and the sample(s) as received by the laboratory.

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



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Kathleen Robb  
Client Program Manager  
10/14/2022 7:21:45 PM



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# Definitions/Glossary

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

Job ID: 380-12725-1

## 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
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.
⌘	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: 380-12725-1

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## Job ID: 380-12725-1

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### Laboratory: Eurofins Eaton Monrovia

#### Narrative

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#### Job Narrative 380-12725-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 7/28/2022 10:15 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 8 coolers at receipt time were 2.1° C, 3.3° C, 3.3° C, 3.8° C, 3.8° C, 3.9° C, 4.4° C and 4.9° C.

#### GC/MS Semi VOA

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

#### Subcontract non-Sister

See attached subcontract report.

#### Organic Prep

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

#### Subcontract Work

Methods 8015 Diesel LL (EAL) and Motor Oil, 8015 Gas (Purgeable) LL (EAL): These methods were subcontracted to EMAX Laboratories Inc. The subcontract laboratory certifications are different from that of the facility issuing the final report.

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



# Detection Summary

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

Job ID: 380-12725-1

**Client Sample ID: AIEA GULCH WELLS PUMP 1  
(331-201-TP071)**  
PWSID Number: HI0000331

**Lab Sample ID: 380-12725-1**

No Detections.

**Client Sample ID: AIEA WELLS PUMPS 1&2 (260)  
(331-203-TP400)**  
PWSID Number: HI0000331

**Lab Sample ID: 380-12725-2**

No Detections.

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

**Lab Sample ID: 380-12725-3**

No Detections.

This Detection Summary does not include radiochemical test results.

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# Client Sample Results

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

Job ID: 380-12725-1

**Client Sample ID: AIEA GULCH WELLS PUMP 1  
(331-201-TP071)**

**Lab Sample ID: 380-12725-1**

**Date Collected: 07/26/22 11:00**

**Matrix: Drinking Water**

**Date Received: 07/28/22 10:15**

**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		0.099	ug/L		08/01/22 08:52	08/19/22 12:01	1
2,4'-DDE	ND		0.099	ug/L		08/01/22 08:52	08/19/22 12:01	1
2,4'-DDT	ND		0.099	ug/L		08/01/22 08:52	08/19/22 12:01	1
2,4-Dinitrotoluene	ND		0.099	ug/L		08/01/22 08:52	08/19/22 12:01	1
2,6-Dinitrotoluene	ND		0.099	ug/L		08/01/22 08:52	08/19/22 12:01	1
4,4'-DDD	ND		0.099	ug/L		08/01/22 08:52	08/19/22 12:01	1
4,4'-DDE	ND	^3+	0.099	ug/L		08/01/22 08:52	08/19/22 12:01	1
4,4'-DDT	ND		0.099	ug/L		08/01/22 08:52	08/19/22 12:01	1
Acenaphthene	ND		0.099	ug/L		08/01/22 08:52	08/19/22 12:01	1
Acenaphthylene	ND		0.099	ug/L		08/01/22 08:52	08/19/22 12:01	1
Acetochlor	ND		0.099	ug/L		08/01/22 08:52	08/19/22 12:01	1
Alachlor	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:01	1
alpha-BHC	ND		0.099	ug/L		08/01/22 08:52	08/19/22 12:01	1
alpha-Chlordane	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:01	1
Anthracene	ND		0.020	ug/L		08/01/22 08:52	08/19/22 12:01	1
Atrazine	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:01	1
Benz(a)anthracene	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:01	1
Benzo[a]pyrene	ND		0.020	ug/L		08/01/22 08:52	08/19/22 12:01	1
Benzo[b]fluoranthene	ND		0.020	ug/L		08/01/22 08:52	08/19/22 12:01	1
Benzo[g,h,i]perylene	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:01	1
Benzo[k]fluoranthene	ND		0.020	ug/L		08/01/22 08:52	08/19/22 12:01	1
beta-BHC	ND		0.099	ug/L		08/01/22 08:52	08/19/22 12:01	1
Bromacil	ND		0.099	ug/L		08/01/22 08:52	08/19/22 12:01	1
Butachlor	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:01	1
Butylbenzylphthalate	ND	^3+	0.49	ug/L		08/01/22 08:52	08/19/22 12:01	1
Caffeine	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:01	1
Chlorobenzilate	ND		0.099	ug/L		08/01/22 08:52	08/19/22 12:01	1
Chloroneb	ND		0.099	ug/L		08/01/22 08:52	08/19/22 12:01	1
Chlorothalonil (Draconil, Bravo)	ND		0.099	ug/L		08/01/22 08:52	08/19/22 12:01	1
Chlorpyrifos	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:01	1
Chrysene	ND		0.020	ug/L		08/01/22 08:52	08/19/22 12:01	1
delta-BHC	ND		0.099	ug/L		08/01/22 08:52	08/19/22 12:01	1
Di(2-ethylhexyl)adipate	ND	^3+ *+	0.59	ug/L		08/01/22 08:52	08/19/22 12:01	1
Bis(2-ethylhexyl) phthalate	ND		0.59	ug/L		08/01/22 08:52	08/19/22 12:01	1
Diazinon (Qualitative)	ND		0.099	ug/L		08/01/22 08:52	08/19/22 12:01	1
Dibenz(a,h)anthracene	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:01	1
Diclorvos (DDVP)	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:01	1
Dieldrin	ND		0.20	ug/L		08/01/22 08:52	08/19/22 12:01	1
Diethylphthalate	ND		0.49	ug/L		08/01/22 08:52	08/19/22 12:01	1
Dimethoate	ND		0.099	ug/L		08/01/22 08:52	08/19/22 12:01	1
Dimethylphthalate	ND		0.49	ug/L		08/01/22 08:52	08/19/22 12:01	1
Di-n-butyl phthalate	ND		0.99	ug/L		08/01/22 08:52	08/19/22 12:01	1
Di-n-octyl phthalate	ND		0.099	ug/L		08/01/22 08:52	08/19/22 12:01	1
Endosulfan I (Alpha)	ND		0.099	ug/L		08/01/22 08:52	08/19/22 12:01	1
Endosulfan II (Beta)	ND	^3+	0.099	ug/L		08/01/22 08:52	08/19/22 12:01	1
Endosulfan sulfate	ND		0.099	ug/L		08/01/22 08:52	08/19/22 12:01	1
Endrin	ND		0.099	ug/L		08/01/22 08:52	08/19/22 12:01	1
Endrin aldehyde	ND		0.099	ug/L		08/01/22 08:52	08/19/22 12:01	1

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# Client Sample Results

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

Job ID: 380-12725-1

**Client Sample ID: AIEA GULCH WELLS PUMP 1  
(331-201-TP071)**

**Lab Sample ID: 380-12725-1**

**Date Collected: 07/26/22 11:00**

**Matrix: Drinking Water**

**Date Received: 07/28/22 10:15**

**PWSID Number: HI0000331**

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
EPTC	ND		0.099	ug/L		08/01/22 08:52	08/19/22 12:01	1
Fluoranthene	ND		0.099	ug/L		08/01/22 08:52	08/19/22 12:01	1
Fluorene	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:01	1
gamma-Chlordane	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:01	1
Heptachlor	ND		0.039	ug/L		08/01/22 08:52	08/19/22 12:01	1
Heptachlor epoxide (isomer B)	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:01	1
Hexachlorobenzene	ND	^3+	0.049	ug/L		08/01/22 08:52	08/19/22 12:01	1
Hexachlorocyclopentadiene	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:01	1
Indeno[1,2,3-cd]pyrene	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:01	1
Isophorone	ND		0.49	ug/L		08/01/22 08:52	08/19/22 12:01	1
Lindane	ND		0.039	ug/L		08/01/22 08:52	08/19/22 12:01	1
Malathion	ND		0.099	ug/L		08/01/22 08:52	08/19/22 12:01	1
Methoxychlor	ND		0.099	ug/L		08/01/22 08:52	08/19/22 12:01	1
Metolachlor	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:01	1
Metribuzin	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:01	1
Molinate	ND		0.099	ug/L		08/01/22 08:52	08/19/22 12:01	1
Naphthalene	ND		0.30	ug/L		08/01/22 08:52	08/19/22 12:01	1
Parathion	ND		0.099	ug/L		08/01/22 08:52	08/19/22 12:01	1
Pendimethalin (Penoxaline)	ND		0.099	ug/L		08/01/22 08:52	08/19/22 12:01	1
Total Permethrin (mixed isomers)	ND		0.20	ug/L		08/01/22 08:52	08/19/22 12:01	1
Phenanthrene	ND		0.039	ug/L		08/01/22 08:52	08/19/22 12:01	1
Propachlor	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:01	1
Pyrene	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:01	1
Simazine	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:01	1
Terbacil	ND		0.099	ug/L		08/01/22 08:52	08/19/22 12:01	1
Terbutylazine	ND		0.099	ug/L		08/01/22 08:52	08/19/22 12:01	1
Thiobencarb	ND		0.20	ug/L		08/01/22 08:52	08/19/22 12:01	1
trans-Nonachlor	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:01	1
Trifluralin	ND		0.099	ug/L		08/01/22 08:52	08/19/22 12:01	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	0.63	T J	ug/L		2.59		08/01/22 08:52	08/19/22 12:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	96		70 - 130	08/01/22 08:52	08/19/22 12:01	1
Triphenylphosphate	99		70 - 130	08/01/22 08:52	08/19/22 12:01	1
Perylene-d12	100		70 - 130	08/01/22 08:52	08/19/22 12:01	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		08/02/22 00:00	08/06/22 22:09	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 22:09	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 22:09	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 22:09	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 22:09	1
Acenaphthene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 22:09	1
Acenaphthylene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 22:09	1
Anthracene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 22:09	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 22:09	1

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# Client Sample Results

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

Job ID: 380-12725-1

**Client Sample ID: AIEA GULCH WELLS PUMP 1  
(331-201-TP071)**

**Lab Sample ID: 380-12725-1**

Date Collected: 07/26/22 11:00

Matrix: Drinking Water

Date Received: 07/28/22 10:15

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[a]pyrene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 22:09	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 22:09	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 22:09	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 22:09	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 22:09	1
Biphenyl	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 22:09	1
Chrysene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 22:09	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 22:09	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 22:09	1
Dibenzothiophene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 22:09	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		08/02/22 00:00	08/06/22 22:09	1
Fluoranthene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 22:09	1
Fluorene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 22:09	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 22:09	1
Naphthalene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 22:09	1
Perylene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 22:09	1
Phenanthrene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 22:09	1
Pyrene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 22:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
(d10-Acenaphthene)	89		45 - 118	08/02/22 00:00	08/06/22 22:09	1
(d10-Phenanthrene)	91		56 - 123	08/02/22 00:00	08/06/22 22:09	1
(d12-Chrysene)	88		36 - 142	08/02/22 00:00	08/06/22 22:09	1
(d12-Perylene)	87		36 - 161	08/02/22 00:00	08/06/22 22:09	1
(d8-Naphthalene)	85		20 - 112	08/02/22 00:00	08/06/22 22:09	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			08/02/22 18:28	1
MOTOR OIL	ND	U	0.053		mg/L			08/02/22 18:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOBENZENE	80		60 - 130		08/02/22 18:28	1
HEXACOSANE	89		60 - 130		08/02/22 18:28	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			07/29/22 15:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE	90		60 - 140		07/29/22 15:47	1

**Client Sample ID: AIEA WELLS PUMPS 1&2 (260)  
(331-203-TP400)**

**Lab Sample ID: 380-12725-2**

Date Collected: 07/26/22 10:09

Matrix: Drinking Water

Date Received: 07/28/22 10:15

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	ND		0.098		ug/L		08/01/22 08:52	08/19/22 12:41	1

Eurofins Eaton Monrovia

# Client Sample Results

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

Job ID: 380-12725-1

**Client Sample ID: AIEA WELLS PUMPS 1&2 (260)  
(331-203-TP400)**

**Lab Sample ID: 380-12725-2**

**Date Collected: 07/26/22 10:09**

**Matrix: Drinking Water**

**Date Received: 07/28/22 10:15**

**PWSID Number: HI0000331**

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDE	ND		0.098	ug/L		08/01/22 08:52	08/19/22 12:41	1
2,4'-DDT	ND		0.098	ug/L		08/01/22 08:52	08/19/22 12:41	1
2,4-Dinitrotoluene	ND		0.098	ug/L		08/01/22 08:52	08/19/22 12:41	1
2,6-Dinitrotoluene	ND		0.098	ug/L		08/01/22 08:52	08/19/22 12:41	1
4,4'-DDD	ND		0.098	ug/L		08/01/22 08:52	08/19/22 12:41	1
4,4'-DDE	ND	^3+	0.098	ug/L		08/01/22 08:52	08/19/22 12:41	1
4,4'-DDT	ND		0.098	ug/L		08/01/22 08:52	08/19/22 12:41	1
Acenaphthene	ND		0.098	ug/L		08/01/22 08:52	08/19/22 12:41	1
Acenaphthylene	ND		0.098	ug/L		08/01/22 08:52	08/19/22 12:41	1
Acetochlor	ND		0.098	ug/L		08/01/22 08:52	08/19/22 12:41	1
Alachlor	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:41	1
alpha-BHC	ND		0.098	ug/L		08/01/22 08:52	08/19/22 12:41	1
alpha-Chlordane	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:41	1
Anthracene	ND		0.020	ug/L		08/01/22 08:52	08/19/22 12:41	1
Atrazine	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:41	1
Benz(a)anthracene	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:41	1
Benzo[a]pyrene	ND		0.020	ug/L		08/01/22 08:52	08/19/22 12:41	1
Benzo[b]fluoranthene	ND		0.020	ug/L		08/01/22 08:52	08/19/22 12:41	1
Benzo[g,h,i]perylene	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:41	1
Benzo[k]fluoranthene	ND		0.020	ug/L		08/01/22 08:52	08/19/22 12:41	1
beta-BHC	ND		0.098	ug/L		08/01/22 08:52	08/19/22 12:41	1
Bromacil	ND		0.098	ug/L		08/01/22 08:52	08/19/22 12:41	1
Butachlor	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:41	1
Butylbenzylphthalate	ND	^3+	0.49	ug/L		08/01/22 08:52	08/19/22 12:41	1
Caffeine	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:41	1
Chlorobenzilate	ND		0.098	ug/L		08/01/22 08:52	08/19/22 12:41	1
Chloroneb	ND		0.098	ug/L		08/01/22 08:52	08/19/22 12:41	1
Chlorothalonil (Draconil, Bravo)	ND		0.098	ug/L		08/01/22 08:52	08/19/22 12:41	1
Chlorpyrifos	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:41	1
Chrysene	ND		0.020	ug/L		08/01/22 08:52	08/19/22 12:41	1
delta-BHC	ND		0.098	ug/L		08/01/22 08:52	08/19/22 12:41	1
Di(2-ethylhexyl)adipate	ND	^3+ *+	0.59	ug/L		08/01/22 08:52	08/19/22 12:41	1
Bis(2-ethylhexyl) phthalate	ND		0.59	ug/L		08/01/22 08:52	08/19/22 12:41	1
Diazinon (Qualitative)	ND		0.098	ug/L		08/01/22 08:52	08/19/22 12:41	1
Dibenz(a,h)anthracene	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:41	1
Diclorvos (DDVP)	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:41	1
Dieldrin	ND		0.20	ug/L		08/01/22 08:52	08/19/22 12:41	1
Diethylphthalate	ND		0.49	ug/L		08/01/22 08:52	08/19/22 12:41	1
Dimethoate	ND		0.098	ug/L		08/01/22 08:52	08/19/22 12:41	1
Dimethylphthalate	ND		0.49	ug/L		08/01/22 08:52	08/19/22 12:41	1
Di-n-butyl phthalate	ND		0.98	ug/L		08/01/22 08:52	08/19/22 12:41	1
Di-n-octyl phthalate	ND		0.098	ug/L		08/01/22 08:52	08/19/22 12:41	1
Endosulfan I (Alpha)	ND		0.098	ug/L		08/01/22 08:52	08/19/22 12:41	1
Endosulfan II (Beta)	ND	^3+	0.098	ug/L		08/01/22 08:52	08/19/22 12:41	1
Endosulfan sulfate	ND		0.098	ug/L		08/01/22 08:52	08/19/22 12:41	1
Endrin	ND		0.098	ug/L		08/01/22 08:52	08/19/22 12:41	1
Endrin aldehyde	ND		0.098	ug/L		08/01/22 08:52	08/19/22 12:41	1
EPTC	ND		0.098	ug/L		08/01/22 08:52	08/19/22 12:41	1

Eurofins Eaton Monrovia

# Client Sample Results

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

Job ID: 380-12725-1

**Client Sample ID: AIEA WELLS PUMPS 1&2 (260)  
(331-203-TP400)**

**Lab Sample ID: 380-12725-2**

**Date Collected: 07/26/22 10:09**

**Matrix: Drinking Water**

**Date Received: 07/28/22 10:15**

**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		0.098	ug/L		08/01/22 08:52	08/19/22 12:41	1
Fluorene	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:41	1
gamma-Chlordane	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:41	1
Heptachlor	ND		0.039	ug/L		08/01/22 08:52	08/19/22 12:41	1
Heptachlor epoxide (isomer B)	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:41	1
Hexachlorobenzene	ND	^3+	0.049	ug/L		08/01/22 08:52	08/19/22 12:41	1
Hexachlorocyclopentadiene	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:41	1
Indeno[1,2,3-cd]pyrene	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:41	1
Isophorone	ND		0.49	ug/L		08/01/22 08:52	08/19/22 12:41	1
Lindane	ND		0.039	ug/L		08/01/22 08:52	08/19/22 12:41	1
Malathion	ND		0.098	ug/L		08/01/22 08:52	08/19/22 12:41	1
Methoxychlor	ND		0.098	ug/L		08/01/22 08:52	08/19/22 12:41	1
Metolachlor	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:41	1
Metribuzin	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:41	1
Molinate	ND		0.098	ug/L		08/01/22 08:52	08/19/22 12:41	1
Naphthalene	ND		0.29	ug/L		08/01/22 08:52	08/19/22 12:41	1
Parathion	ND		0.098	ug/L		08/01/22 08:52	08/19/22 12:41	1
Pendimethalin (Penoxaline)	ND		0.098	ug/L		08/01/22 08:52	08/19/22 12:41	1
Total Permethrin (mixed isomers)	ND		0.20	ug/L		08/01/22 08:52	08/19/22 12:41	1
Phenanthrene	ND		0.039	ug/L		08/01/22 08:52	08/19/22 12:41	1
Propachlor	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:41	1
Pyrene	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:41	1
Simazine	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:41	1
Terbacil	ND		0.098	ug/L		08/01/22 08:52	08/19/22 12:41	1
Terbutylazine	ND		0.098	ug/L		08/01/22 08:52	08/19/22 12:41	1
Thiobencarb	ND		0.20	ug/L		08/01/22 08:52	08/19/22 12:41	1
trans-Nonachlor	ND		0.049	ug/L		08/01/22 08:52	08/19/22 12:41	1
Trifluralin	ND		0.098	ug/L		08/01/22 08:52	08/19/22 12:41	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
D-Limonene	0.63	T J N	ug/L		2.57	5989-27-5	08/01/22 08:52	08/19/22 12:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	95		70 - 130	08/01/22 08:52	08/19/22 12:41	1
Triphenylphosphate	100		70 - 130	08/01/22 08:52	08/19/22 12:41	1
Perylene-d12	103		70 - 130	08/01/22 08:52	08/19/22 12:41	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		08/02/22 00:00	08/06/22 23:53	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 23:53	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 23:53	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 23:53	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 23:53	1
Acenaphthene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 23:53	1
Acenaphthylene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 23:53	1
Anthracene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 23:53	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 23:53	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 23:53	1

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# Client Sample Results

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

Job ID: 380-12725-1

**Client Sample ID: AIEA WELLS PUMPS 1&2 (260)**  
**(331-203-TP400)**

**Lab Sample ID: 380-12725-2**

Date Collected: 07/26/22 10:09

Matrix: Drinking Water

Date Received: 07/28/22 10:15

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[b]fluoranthene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 23:53	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 23:53	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 23:53	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 23:53	1
Biphenyl	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 23:53	1
Chrysene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 23:53	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 23:53	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 23:53	1
Dibenzothiophene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 23:53	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		08/02/22 00:00	08/06/22 23:53	1
Fluoranthene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 23:53	1
Fluorene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 23:53	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 23:53	1
Naphthalene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 23:53	1
Perylene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 23:53	1
Phenanthrene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 23:53	1
Pyrene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 23:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
(d10-Acenaphthene)	89		45 - 118	08/02/22 00:00	08/06/22 23:53	1
(d10-Phenanthrene)	93		56 - 123	08/02/22 00:00	08/06/22 23:53	1
(d12-Chrysene)	90		36 - 142	08/02/22 00:00	08/06/22 23:53	1
(d12-Perylene)	91		36 - 161	08/02/22 00:00	08/06/22 23:53	1
(d8-Naphthalene)	84		20 - 112	08/02/22 00:00	08/06/22 23:53	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	0.026		mg/L			08/02/22 18:46	1
MOTOR OIL	ND	U	0.052		mg/L			08/02/22 18:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOBENZENE	50		60 - 130		08/02/22 18:46	1
HEXACOSANE	76		60 - 130		08/02/22 18:46	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			07/29/22 17:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE	84		60 - 140		07/29/22 17:37	1

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

**Lab Sample ID: 380-12725-3**

Date Collected: 07/26/22 10:50

Matrix: Drinking Water

Date Received: 07/28/22 10:15

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		0.099	ug/L		08/01/22 08:52	08/19/22 11:20	1
2,4'-DDE	ND		0.099	ug/L		08/01/22 08:52	08/19/22 11:20	1
2,4'-DDT	ND		0.099	ug/L		08/01/22 08:52	08/19/22 11:20	1

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# Client Sample Results

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

Job ID: 380-12725-1

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

**Lab Sample ID: 380-12725-3**

Date Collected: 07/26/22 10:50

Matrix: Drinking Water

Date Received: 07/28/22 10:15

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrotoluene	ND		0.099	ug/L		08/01/22 08:52	08/19/22 11:20	1
2,6-Dinitrotoluene	ND		0.099	ug/L		08/01/22 08:52	08/19/22 11:20	1
4,4'-DDD	ND		0.099	ug/L		08/01/22 08:52	08/19/22 11:20	1
4,4'-DDE	ND	^3+	0.099	ug/L		08/01/22 08:52	08/19/22 11:20	1
4,4'-DDT	ND		0.099	ug/L		08/01/22 08:52	08/19/22 11:20	1
Acenaphthene	ND		0.099	ug/L		08/01/22 08:52	08/19/22 11:20	1
Acenaphthylene	ND		0.099	ug/L		08/01/22 08:52	08/19/22 11:20	1
Acetochlor	ND		0.099	ug/L		08/01/22 08:52	08/19/22 11:20	1
Alachlor	ND		0.049	ug/L		08/01/22 08:52	08/19/22 11:20	1
alpha-BHC	ND		0.099	ug/L		08/01/22 08:52	08/19/22 11:20	1
alpha-Chlordane	ND		0.049	ug/L		08/01/22 08:52	08/19/22 11:20	1
Anthracene	ND		0.020	ug/L		08/01/22 08:52	08/19/22 11:20	1
Atrazine	ND		0.049	ug/L		08/01/22 08:52	08/19/22 11:20	1
Benz(a)anthracene	ND		0.049	ug/L		08/01/22 08:52	08/19/22 11:20	1
Benzo[a]pyrene	ND		0.020	ug/L		08/01/22 08:52	08/19/22 11:20	1
Benzo[b]fluoranthene	ND		0.020	ug/L		08/01/22 08:52	08/19/22 11:20	1
Benzo[g,h,i]perylene	ND		0.049	ug/L		08/01/22 08:52	08/19/22 11:20	1
Benzo[k]fluoranthene	ND		0.020	ug/L		08/01/22 08:52	08/19/22 11:20	1
beta-BHC	ND		0.099	ug/L		08/01/22 08:52	08/19/22 11:20	1
Bromacil	ND		0.099	ug/L		08/01/22 08:52	08/19/22 11:20	1
Butachlor	ND		0.049	ug/L		08/01/22 08:52	08/19/22 11:20	1
Butylbenzylphthalate	ND	^3+	0.49	ug/L		08/01/22 08:52	08/19/22 11:20	1
Caffeine	ND		0.049	ug/L		08/01/22 08:52	08/19/22 11:20	1
Chlorobenzilate	ND		0.099	ug/L		08/01/22 08:52	08/19/22 11:20	1
Chloroneb	ND		0.099	ug/L		08/01/22 08:52	08/19/22 11:20	1
Chlorothalonil (Draconil, Bravo)	ND		0.099	ug/L		08/01/22 08:52	08/19/22 11:20	1
Chlorpyrifos	ND		0.049	ug/L		08/01/22 08:52	08/19/22 11:20	1
Chrysene	ND		0.020	ug/L		08/01/22 08:52	08/19/22 11:20	1
delta-BHC	ND		0.099	ug/L		08/01/22 08:52	08/19/22 11:20	1
Di(2-ethylhexyl)adipate	ND	^3+ **	0.59	ug/L		08/01/22 08:52	08/19/22 11:20	1
Bis(2-ethylhexyl) phthalate	ND		0.59	ug/L		08/01/22 08:52	08/19/22 11:20	1
Diazinon (Qualitative)	ND		0.099	ug/L		08/01/22 08:52	08/19/22 11:20	1
Dibenz(a,h)anthracene	ND		0.049	ug/L		08/01/22 08:52	08/19/22 11:20	1
Diclorvos (DDVP)	ND		0.049	ug/L		08/01/22 08:52	08/19/22 11:20	1
Dieldrin	ND		0.20	ug/L		08/01/22 08:52	08/19/22 11:20	1
Diethylphthalate	ND		0.49	ug/L		08/01/22 08:52	08/19/22 11:20	1
Dimethoate	ND		0.099	ug/L		08/01/22 08:52	08/19/22 11:20	1
Dimethylphthalate	ND		0.49	ug/L		08/01/22 08:52	08/19/22 11:20	1
Di-n-butyl phthalate	ND		0.99	ug/L		08/01/22 08:52	08/19/22 11:20	1
Di-n-octyl phthalate	ND		0.099	ug/L		08/01/22 08:52	08/19/22 11:20	1
Endosulfan I (Alpha)	ND		0.099	ug/L		08/01/22 08:52	08/19/22 11:20	1
Endosulfan II (Beta)	ND	^3+	0.099	ug/L		08/01/22 08:52	08/19/22 11:20	1
Endosulfan sulfate	ND		0.099	ug/L		08/01/22 08:52	08/19/22 11:20	1
Endrin	ND		0.099	ug/L		08/01/22 08:52	08/19/22 11:20	1
Endrin aldehyde	ND		0.099	ug/L		08/01/22 08:52	08/19/22 11:20	1
EPTC	ND		0.099	ug/L		08/01/22 08:52	08/19/22 11:20	1
Fluoranthene	ND		0.099	ug/L		08/01/22 08:52	08/19/22 11:20	1
Fluorene	ND		0.049	ug/L		08/01/22 08:52	08/19/22 11:20	1
gamma-Chlordane	ND		0.049	ug/L		08/01/22 08:52	08/19/22 11:20	1

Eurofins Eaton Monrovia

# Client Sample Results

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

Job ID: 380-12725-1

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

**Lab Sample ID: 380-12725-3**

Date Collected: 07/26/22 10:50

Matrix: Drinking Water

Date Received: 07/28/22 10:15

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor	ND		0.040	ug/L		08/01/22 08:52	08/19/22 11:20	1
Heptachlor epoxide (isomer B)	ND		0.049	ug/L		08/01/22 08:52	08/19/22 11:20	1
Hexachlorobenzene	ND	^3+	0.049	ug/L		08/01/22 08:52	08/19/22 11:20	1
Hexachlorocyclopentadiene	ND		0.049	ug/L		08/01/22 08:52	08/19/22 11:20	1
Indeno[1,2,3-cd]pyrene	ND		0.049	ug/L		08/01/22 08:52	08/19/22 11:20	1
Isophorone	ND		0.49	ug/L		08/01/22 08:52	08/19/22 11:20	1
Lindane	ND		0.040	ug/L		08/01/22 08:52	08/19/22 11:20	1
Malathion	ND		0.099	ug/L		08/01/22 08:52	08/19/22 11:20	1
Methoxychlor	ND		0.099	ug/L		08/01/22 08:52	08/19/22 11:20	1
Metolachlor	ND		0.049	ug/L		08/01/22 08:52	08/19/22 11:20	1
Metribuzin	ND		0.049	ug/L		08/01/22 08:52	08/19/22 11:20	1
Molinate	ND		0.099	ug/L		08/01/22 08:52	08/19/22 11:20	1
Naphthalene	ND		0.30	ug/L		08/01/22 08:52	08/19/22 11:20	1
Parathion	ND		0.099	ug/L		08/01/22 08:52	08/19/22 11:20	1
Pendimethalin (Penoxaline)	ND		0.099	ug/L		08/01/22 08:52	08/19/22 11:20	1
Total Permethrin (mixed isomers)	ND		0.20	ug/L		08/01/22 08:52	08/19/22 11:20	1
Phenanthrene	ND		0.040	ug/L		08/01/22 08:52	08/19/22 11:20	1
Propachlor	ND		0.049	ug/L		08/01/22 08:52	08/19/22 11:20	1
Pyrene	ND		0.049	ug/L		08/01/22 08:52	08/19/22 11:20	1
Simazine	ND		0.049	ug/L		08/01/22 08:52	08/19/22 11:20	1
Terbacil	ND		0.099	ug/L		08/01/22 08:52	08/19/22 11:20	1
Terbutylazine	ND		0.099	ug/L		08/01/22 08:52	08/19/22 11:20	1
Thiobencarb	ND		0.20	ug/L		08/01/22 08:52	08/19/22 11:20	1
trans-Nonachlor	ND		0.049	ug/L		08/01/22 08:52	08/19/22 11:20	1
Trifluralin	ND		0.099	ug/L		08/01/22 08:52	08/19/22 11:20	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L				08/01/22 08:52	08/19/22 11:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	95		70 - 130	08/01/22 08:52	08/19/22 11:20	1
Triphenylphosphate	104		70 - 130	08/01/22 08:52	08/19/22 11:20	1
Perylene-d12	98		70 - 130	08/01/22 08:52	08/19/22 11:20	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		08/02/22 00:00	08/07/22 01:36	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/07/22 01:36	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/07/22 01:36	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/07/22 01:36	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/07/22 01:36	1
Acenaphthene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/07/22 01:36	1
Acenaphthylene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/07/22 01:36	1
Anthracene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/07/22 01:36	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/07/22 01:36	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/07/22 01:36	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/07/22 01:36	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/07/22 01:36	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/07/22 01:36	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/07/22 01:36	1

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# Client Sample Results

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

Job ID: 380-12725-1

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

**Lab Sample ID: 380-12725-3**

Date Collected: 07/26/22 10:50

Matrix: Drinking Water

Date Received: 07/28/22 10:15

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
Biphenyl	ND		0.005	0.001	µg/L		08/02/22 00:00	08/07/22 01:36	1
Chrysene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/07/22 01:36	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/07/22 01:36	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/07/22 01:36	1
Dibenzothiophene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/07/22 01:36	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		08/02/22 00:00	08/07/22 01:36	1
Fluoranthene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/07/22 01:36	1
Fluorene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/07/22 01:36	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/07/22 01:36	1
Naphthalene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/07/22 01:36	1
Perylene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/07/22 01:36	1
Phenanthrene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/07/22 01:36	1
Pyrene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/07/22 01:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
(d10-Acenaphthene)	82		45 - 118	08/02/22 00:00	08/07/22 01:36	1
(d10-Phenanthrene)	84		56 - 123	08/02/22 00:00	08/07/22 01:36	1
(d12-Chrysene)	82		36 - 142	08/02/22 00:00	08/07/22 01:36	1
(d12-Perylene)	79		36 - 161	08/02/22 00:00	08/07/22 01:36	1
(d8-Naphthalene)	79		20 - 112	08/02/22 00:00	08/07/22 01:36	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	0.025		mg/L			08/02/22 19:05	1
MOTOR OIL	ND	U	0.049		mg/L			08/02/22 19:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOBENZENE	63		60 - 130		08/02/22 19:05	1
HEXACOSANE	93		60 - 130		08/02/22 19:05	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			07/29/22 18:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE	88		60 - 140		07/29/22 18:14	1

# Action Limit Summary

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

Job ID: 380-12725-1

**Client Sample ID: AIEA GULCH WELLS PUMP 1**  
**(331-201-TP071)**  
**PWSID Number: HI0000331**

**Lab Sample ID: 380-12725-1**

## Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL	RL	Method	Prep Type
				Limit			
Alachlor	ND		ug/L	2	0.049	525.2	Total/NA
Atrazine	ND		ug/L	3	0.049	525.2	Total/NA
Benzo[a]pyrene	ND		ug/L	0.2	0.020	525.2	Total/NA
Di(2-ethylhexyl)adipate	ND	^3+ **	ug/L	400	0.59	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	ND		ug/L	6	0.59	525.2	Total/NA
Endrin	ND		ug/L	2	0.099	525.2	Total/NA
Heptachlor	ND		ug/L	0.4	0.039	525.2	Total/NA
Heptachlor epoxide (isomer B)	ND		ug/L	0.2	0.049	525.2	Total/NA
Hexachlorobenzene	ND	^3+	ug/L	1	0.049	525.2	Total/NA
Hexachlorocyclopentadiene	ND		ug/L	50	0.049	525.2	Total/NA
Lindane	ND		ug/L	0.2	0.039	525.2	Total/NA
Methoxychlor	ND		ug/L	40	0.099	525.2	Total/NA
Simazine	ND		ug/L	4	0.049	525.2	Total/NA

**Client Sample ID: AIEA WELLS PUMPS 1&2 (260)**  
**(331-203-TP400)**  
**PWSID Number: HI0000331**

**Lab Sample ID: 380-12725-2**

## Compliance Check

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

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

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

**Lab Sample ID: 380-12725-3**

## Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL	RL	Method	Prep Type
				Limit			
Alachlor	ND		ug/L	2	0.049	525.2	Total/NA
Atrazine	ND		ug/L	3	0.049	525.2	Total/NA
Benzo[a]pyrene	ND		ug/L	0.2	0.020	525.2	Total/NA

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# Action Limit Summary

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

Job ID: 380-12725-1

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

**Lab Sample ID: 380-12725-3**

**(Continued)**

**PWSID Number: HI0000331**

## 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			
Di(2-ethylhexyl)adipate	ND	<sup>3+</sup> **	ug/L	400	0.59	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	ND		ug/L	6	0.59	525.2	Total/NA
Endrin	ND		ug/L	2	0.099	525.2	Total/NA
Heptachlor	ND		ug/L	0.4	0.040	525.2	Total/NA
Heptachlor epoxide (isomer B)	ND		ug/L	0.2	0.049	525.2	Total/NA
Hexachlorobenzene	ND	<sup>3+</sup>	ug/L	1	0.049	525.2	Total/NA
Hexachlorocyclopentadiene	ND		ug/L	50	0.049	525.2	Total/NA
Lindane	ND		ug/L	0.2	0.040	525.2	Total/NA
Methoxychlor	ND		ug/L	40	0.099	525.2	Total/NA
Simazine	ND		ug/L	4	0.049	525.2	Total/NA

# Surrogate Summary

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

Job ID: 380-12725-1

## 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)
380-12725-1	AIEA GULCH WELLS PUMP 1 (	96	99	100
380-12725-2	AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)	95	100	103
380-12725-3	MOANALUA WELLS (331-223-TP202)	95	104	98

**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)
380-12317-I-1-A DU	Duplicate	94	100	97
380-12602-S-6-A MS	Matrix Spike	96	103	102
LCS 380-10968/3-A	Lab Control Sample	96	100	100
LCSD 380-10968/4-A	Lab Control Sample Dup	94	100	101
MB 380-10968/1-A	Method Blank	93	106	94
MRL 380-10968/2-A	Lab Control Sample	96	101	93

**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: 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)
380-12725-1	AIEA GULCH WELLS PUMP 1 (	89	88	85	91	87
380-12725-2	AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)	89	90	84	93	91
380-12725-3	MOANALUA WELLS (331-223-TP202)	82	82	79	84	79

**Surrogate Legend**

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

# Surrogate Summary

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

Job ID: 380-12725-1

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

Matrix: water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)				
		ANT (65-113)	CRY (60-139)	NPT (44-119)	PHN (80-111)	PRY (36-161)
98853-B1	Method Blank	95	95	91	98	93
98853-BS1	Lab Control Sample	92	95	86	95	97
98853-BS2	Lab Control Sample Dup	93	98	87	96	99

**Surrogate Legend**

ANT = (d10-Acenaphthene)  
 CRY = (d12-Chrysene)  
 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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BB (60-130)	HEXACOSANE (60-130)
380-12725-1	AIEA GULCH WELLS PUMP 1 (	80	89
380-12725-2	AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)	50	76
380-12725-3	MOANALUA WELLS (331-223-TP202)	63	93

**Surrogate Legend**

BB = BROMOBENZENE  
 HEXACOSANE = HEXACOSANE

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

Matrix: WATER

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BB (60-130)	HEXACOSANE (60-130)
22DSH001WB	Method Blank		

**Surrogate Legend**

BB = BROMOBENZENE  
 HEXACOSANE = HEXACOSANE

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

Matrix: WATER

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BB (60-130)	HEXACOSANE (60-130)
22DSH001WC	LCD	85	94
22DSH001WL	Lab Control Sample	80	90

**Surrogate Legend**

BB = BROMOBENZENE  
 HEXACOSANE = HEXACOSANE

# Surrogate Summary

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

Job ID: 380-12725-1

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

Matrix: Drinking Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (60-140)
380-12725-1	AIEA GULCH WELLS PUMP 1 (	90
380-12725-2	AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)	84
380-12725-3	MOANALUA WELLS (331-223-TP202)	88

#### Surrogate Legend

BFB = BROMOFLUOROBENZENE

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

Matrix: WATER

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB
22VG39G19B	Method Blank	

#### Surrogate Legend

BFB = BROMOFLUOROBENZENE

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

Matrix: WATER

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (70-130)
22VG39G19C	LCD	114
22VG39G19L	Lab Control Sample	116

#### Surrogate Legend

BFB = BROMOFLUOROBENZENE

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

Matrix: WATER

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (60-140)
22G304-01M	Matrix Spike	110
22G304-01S	Matrix Spike Duplicate	106

#### Surrogate Legend

BFB = BROMOFLUOROBENZENE

# QC Sample Results

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

Job ID: 380-12725-1

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

**Lab Sample ID: MB 380-10968/1-A**  
**Matrix: Water**  
**Analysis Batch: 14003**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 10968**

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
2,4'-DDD	ND		0.099	ug/L		08/01/22 08:52	08/19/22 10:40	1
2,4'-DDE	ND		0.099	ug/L		08/01/22 08:52	08/19/22 10:40	1
2,4'-DDT	ND		0.099	ug/L		08/01/22 08:52	08/19/22 10:40	1
2,4-Dinitrotoluene	ND		0.099	ug/L		08/01/22 08:52	08/19/22 10:40	1
2,6-Dinitrotoluene	ND		0.099	ug/L		08/01/22 08:52	08/19/22 10:40	1
4,4'-DDD	ND		0.099	ug/L		08/01/22 08:52	08/19/22 10:40	1
4,4'-DDE	ND		0.099	ug/L		08/01/22 08:52	08/19/22 10:40	1
4,4'-DDT	ND		0.099	ug/L		08/01/22 08:52	08/19/22 10:40	1
Acenaphthene	ND		0.099	ug/L		08/01/22 08:52	08/19/22 10:40	1
Acenaphthylene	ND		0.099	ug/L		08/01/22 08:52	08/19/22 10:40	1
Acetochlor	ND		0.099	ug/L		08/01/22 08:52	08/19/22 10:40	1
Alachlor	ND		0.049	ug/L		08/01/22 08:52	08/19/22 10:40	1
alpha-BHC	ND		0.099	ug/L		08/01/22 08:52	08/19/22 10:40	1
alpha-Chlordane	ND		0.049	ug/L		08/01/22 08:52	08/19/22 10:40	1
Anthracene	ND		0.020	ug/L		08/01/22 08:52	08/19/22 10:40	1
Atrazine	ND		0.049	ug/L		08/01/22 08:52	08/19/22 10:40	1
Benz(a)anthracene	ND		0.049	ug/L		08/01/22 08:52	08/19/22 10:40	1
Benzo[a]pyrene	ND		0.020	ug/L		08/01/22 08:52	08/19/22 10:40	1
Benzo[b]fluoranthene	ND		0.020	ug/L		08/01/22 08:52	08/19/22 10:40	1
Benzo[g,h,i]perylene	ND		0.049	ug/L		08/01/22 08:52	08/19/22 10:40	1
Benzo[k]fluoranthene	ND		0.020	ug/L		08/01/22 08:52	08/19/22 10:40	1
beta-BHC	ND		0.099	ug/L		08/01/22 08:52	08/19/22 10:40	1
Bromacil	ND		0.099	ug/L		08/01/22 08:52	08/19/22 10:40	1
Butachlor	ND		0.049	ug/L		08/01/22 08:52	08/19/22 10:40	1
Butylbenzylphthalate	ND		0.49	ug/L		08/01/22 08:52	08/19/22 10:40	1
Caffeine	ND		0.049	ug/L		08/01/22 08:52	08/19/22 10:40	1
Chlorobenzilate	ND		0.099	ug/L		08/01/22 08:52	08/19/22 10:40	1
Chloroneb	ND		0.099	ug/L		08/01/22 08:52	08/19/22 10:40	1
Chlorothalonil (Draconil, Bravo)	ND		0.099	ug/L		08/01/22 08:52	08/19/22 10:40	1
Chlorpyrifos	ND		0.049	ug/L		08/01/22 08:52	08/19/22 10:40	1
Chrysene	ND		0.020	ug/L		08/01/22 08:52	08/19/22 10:40	1
delta-BHC	ND		0.099	ug/L		08/01/22 08:52	08/19/22 10:40	1
Di(2-ethylhexyl)adipate	ND		0.59	ug/L		08/01/22 08:52	08/19/22 10:40	1
Bis(2-ethylhexyl) phthalate	ND		0.59	ug/L		08/01/22 08:52	08/19/22 10:40	1
Diazinon (Qualitative)	ND		0.099	ug/L		08/01/22 08:52	08/19/22 10:40	1
Dibenz(a,h)anthracene	ND		0.049	ug/L		08/01/22 08:52	08/19/22 10:40	1
Diclorvos (DDVP)	ND		0.049	ug/L		08/01/22 08:52	08/19/22 10:40	1
Dieldrin	ND		0.20	ug/L		08/01/22 08:52	08/19/22 10:40	1
Diethylphthalate	ND		0.49	ug/L		08/01/22 08:52	08/19/22 10:40	1
Dimethoate	ND		0.099	ug/L		08/01/22 08:52	08/19/22 10:40	1
Dimethylphthalate	ND		0.49	ug/L		08/01/22 08:52	08/19/22 10:40	1
Di-n-butyl phthalate	ND		0.99	ug/L		08/01/22 08:52	08/19/22 10:40	1
Di-n-octyl phthalate	ND		0.099	ug/L		08/01/22 08:52	08/19/22 10:40	1
Endosulfan I (Alpha)	ND		0.099	ug/L		08/01/22 08:52	08/19/22 10:40	1
Endosulfan II (Beta)	ND		0.099	ug/L		08/01/22 08:52	08/19/22 10:40	1
Endosulfan sulfate	ND		0.099	ug/L		08/01/22 08:52	08/19/22 10:40	1
Endrin	ND		0.099	ug/L		08/01/22 08:52	08/19/22 10:40	1
Endrin aldehyde	ND		0.099	ug/L		08/01/22 08:52	08/19/22 10:40	1

Eurofins Eaton Monrovia

# QC Sample Results

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

Job ID: 380-12725-1

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

**Lab Sample ID: MB 380-10968/1-A**  
**Matrix: Water**  
**Analysis Batch: 14003**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 10968**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
EPTC	ND		0.099	ug/L		08/01/22 08:52	08/19/22 10:40	1
Fluoranthene	ND		0.099	ug/L		08/01/22 08:52	08/19/22 10:40	1
Fluorene	ND		0.049	ug/L		08/01/22 08:52	08/19/22 10:40	1
gamma-Chlordane	ND		0.049	ug/L		08/01/22 08:52	08/19/22 10:40	1
Heptachlor	ND		0.039	ug/L		08/01/22 08:52	08/19/22 10:40	1
Heptachlor epoxide (isomer B)	ND		0.049	ug/L		08/01/22 08:52	08/19/22 10:40	1
Hexachlorobenzene	ND		0.049	ug/L		08/01/22 08:52	08/19/22 10:40	1
Hexachlorocyclopentadiene	ND		0.049	ug/L		08/01/22 08:52	08/19/22 10:40	1
Indeno[1,2,3-cd]pyrene	ND		0.049	ug/L		08/01/22 08:52	08/19/22 10:40	1
Isophorone	ND		0.49	ug/L		08/01/22 08:52	08/19/22 10:40	1
Lindane	ND		0.039	ug/L		08/01/22 08:52	08/19/22 10:40	1
Malathion	ND		0.099	ug/L		08/01/22 08:52	08/19/22 10:40	1
Methoxychlor	ND		0.099	ug/L		08/01/22 08:52	08/19/22 10:40	1
Metolachlor	ND		0.049	ug/L		08/01/22 08:52	08/19/22 10:40	1
Metribuzin	ND		0.049	ug/L		08/01/22 08:52	08/19/22 10:40	1
Molinate	ND		0.099	ug/L		08/01/22 08:52	08/19/22 10:40	1
Naphthalene	ND		0.30	ug/L		08/01/22 08:52	08/19/22 10:40	1
Parathion	ND		0.099	ug/L		08/01/22 08:52	08/19/22 10:40	1
Pendimethalin (Penoxaline)	ND		0.099	ug/L		08/01/22 08:52	08/19/22 10:40	1
Total Permethrin (mixed isomers)	ND		0.20	ug/L		08/01/22 08:52	08/19/22 10:40	1
Phenanthrene	ND		0.039	ug/L		08/01/22 08:52	08/19/22 10:40	1
Propachlor	ND		0.049	ug/L		08/01/22 08:52	08/19/22 10:40	1
Pyrene	ND		0.049	ug/L		08/01/22 08:52	08/19/22 10:40	1
Simazine	ND		0.049	ug/L		08/01/22 08:52	08/19/22 10:40	1
Terbacil	ND		0.099	ug/L		08/01/22 08:52	08/19/22 10:40	1
Terbutylazine	ND		0.099	ug/L		08/01/22 08:52	08/19/22 10:40	1
Thiobencarb	ND		0.20	ug/L		08/01/22 08:52	08/19/22 10:40	1
trans-Nonachlor	ND		0.049	ug/L		08/01/22 08:52	08/19/22 10:40	1
Trifluralin	ND		0.099	ug/L		08/01/22 08:52	08/19/22 10:40	1

<i>Tentatively Identified Compound</i>	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Decane	2.03	T J N	ug/L		2.41	124-18-5	08/01/22 08:52	08/19/22 10:40	1
Tetradecanoic acid	1.09	T J N	ug/L		5.83	544-63-8	08/01/22 08:52	08/19/22 10:40	1
Octadecanoic acid	0.684	T J N	ug/L		6.51	57-11-4	08/01/22 08:52	08/19/22 10:40	1
Hexadecanamide	1.55	T J N	ug/L		6.66	629-54-9	08/01/22 08:52	08/19/22 10:40	1
Octadecanamide	1.06	T J N	ug/L		7.60	124-26-5	08/01/22 08:52	08/19/22 10:40	1
13-Docosenamide, (Z)-	1.02	T J N	ug/L		10.10	112-84-5	08/01/22 08:52	08/19/22 10:40	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	93		70 - 130	08/01/22 08:52	08/19/22 10:40	1
Triphenylphosphate	106		70 - 130	08/01/22 08:52	08/19/22 10:40	1
Perylene-d12	94		70 - 130	08/01/22 08:52	08/19/22 10:40	1

# QC Sample Results

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

Job ID: 380-12725-1

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

**Lab Sample ID: LCS 380-10968/3-A**  
**Matrix: Water**  
**Analysis Batch: 14003**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 10968**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	1.97	2.14		ug/L		109	70 - 130
2,4'-DDE	1.97	1.92		ug/L		98	70 - 130
2,4'-DDT	1.97	1.86		ug/L		94	70 - 130
2,4-Dinitrotoluene	1.97	2.05		ug/L		104	70 - 130
2,6-Dinitrotoluene	1.97	2.01		ug/L		102	70 - 130
4,4'-DDD	1.97	1.86		ug/L		94	70 - 130
4,4'-DDE	1.97	1.94		ug/L		99	70 - 130
4,4'-DDT	1.97	2.04		ug/L		103	70 - 130
Acenaphthene	1.97	1.85		ug/L		94	70 - 130
Acenaphthylene	1.97	1.91		ug/L		97	70 - 130
Acetochlor	1.97	2.01		ug/L		102	70 - 130
Alachlor	1.97	1.88		ug/L		96	70 - 130
alpha-BHC	1.97	1.83		ug/L		93	70 - 130
alpha-Chlordane	1.97	1.86		ug/L		94	70 - 130
Anthracene	1.97	1.90		ug/L		97	70 - 130
Atrazine	1.97	2.09		ug/L		106	70 - 130
Benz(a)anthracene	1.97	1.88		ug/L		96	70 - 130
Benzo[a]pyrene	1.97	1.69		ug/L		86	70 - 130
Benzo[b]fluoranthene	1.97	1.84		ug/L		93	70 - 130
Benzo[g,h,i]perylene	1.97	1.81		ug/L		92	70 - 130
Benzo[k]fluoranthene	1.97	1.84		ug/L		93	70 - 130
beta-BHC	1.97	1.79		ug/L		91	70 - 130
Bromacil	1.97	1.96		ug/L		99	70 - 130
Butachlor	1.97	2.06		ug/L		104	70 - 130
Butylbenzylphthalate	1.97	2.31		ug/L		118	70 - 130
Caffeine	1.97	1.62		ug/L		82	45 - 137
Chlorobenzilate	1.97	2.07		ug/L		105	70 - 130
Chloroneb	1.97	1.84		ug/L		93	70 - 130
Chlorothalonil (Draconil, Bravo)	1.97	2.26		ug/L		115	70 - 130
Chlorpyrifos	1.97	1.95		ug/L		99	70 - 130
Chrysene	1.97	1.65		ug/L		84	70 - 130
delta-BHC	1.97	1.75		ug/L		89	70 - 130
Di(2-ethylhexyl)adipate	1.97	2.68	*+	ug/L		136	70 - 130
Bis(2-ethylhexyl) phthalate	1.97	2.16		ug/L		110	70 - 130
Diazinon (Qualitative)	1.97	1.91		ug/L		97	15 - 132
Dibenz(a,h)anthracene	1.97	1.90		ug/L		97	70 - 130
Diclorvos (DDVP)	1.97	2.34		ug/L		119	70 - 130
Dieldrin	1.97	2.04		ug/L		104	70 - 130
Diethylphthalate	1.97	2.03		ug/L		103	70 - 130
Dimethoate	1.97	1.70		ug/L		87	35 - 100
Dimethylphthalate	1.97	2.09		ug/L		106	70 - 130
Di-n-butyl phthalate	3.94	4.06		ug/L		103	70 - 130
Di-n-octyl phthalate	1.97	1.83		ug/L		93	70 - 130
Endosulfan I (Alpha)	1.97	1.67		ug/L		85	70 - 130
Endosulfan II (Beta)	1.97	1.97		ug/L		100	70 - 130
Endosulfan sulfate	1.97	2.22		ug/L		113	70 - 130
Endrin	1.97	1.95		ug/L		99	70 - 130
Endrin aldehyde	1.97	1.77		ug/L		90	70 - 130

Eurofins Eaton Monrovia

# QC Sample Results

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

Job ID: 380-12725-1

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

**Lab Sample ID: LCS 380-10968/3-A**  
**Matrix: Water**  
**Analysis Batch: 14003**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 10968**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
EPTC	1.97	2.21		ug/L		112	70 - 130
Fluoranthene	1.97	1.86		ug/L		94	70 - 130
Fluorene	1.97	2.07		ug/L		105	70 - 130
gamma-Chlordane	1.97	1.92		ug/L		97	70 - 130
Heptachlor	1.97	1.97		ug/L		100	70 - 130
Heptachlor epoxide (isomer B)	1.97	2.02		ug/L		102	70 - 130
Hexachlorobenzene	1.97	1.91		ug/L		97	70 - 130
Hexachlorocyclopentadiene	1.97	1.86		ug/L		94	70 - 130
Indeno[1,2,3-cd]pyrene	1.97	1.84		ug/L		94	70 - 130
Isophorone	1.97	1.97		ug/L		100	70 - 130
Lindane	1.97	1.80		ug/L		91	70 - 130
Malathion	1.97	2.10		ug/L		107	70 - 130
Methoxychlor	1.97	2.07		ug/L		105	70 - 130
Metolachlor	1.97	1.93		ug/L		98	70 - 130
Metribuzin	1.97	1.97		ug/L		100	70 - 130
Molinate	1.97	2.24		ug/L		114	70 - 130
Naphthalene	1.97	2.05		ug/L		104	70 - 130
Parathion	1.97	2.25		ug/L		114	70 - 130
Pendimethalin (Penoxaline)	1.97	2.34		ug/L		119	70 - 130
Phenanthrene	1.97	1.93		ug/L		98	70 - 130
Propachlor	1.97	2.27		ug/L		115	70 - 130
Pyrene	1.97	1.96		ug/L		99	70 - 130
Simazine	1.97	2.13		ug/L		108	70 - 130
Terbacil	1.97	2.25		ug/L		114	70 - 130
Terbutylazine	1.97	1.94		ug/L		98	70 - 130
Thiobencarb	1.97	2.06		ug/L		105	70 - 130
trans-Nonachlor	1.97	1.87		ug/L		95	70 - 130
Trifluralin	1.97	2.47		ug/L		125	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Nitro-m-xylene	96		70 - 130
Triphenylphosphate	100		70 - 130
Perylene-d12	100		70 - 130

**Lab Sample ID: LCSD 380-10968/4-A**  
**Matrix: Water**  
**Analysis Batch: 14003**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 10968**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,4'-DDD	1.97	2.14		ug/L		108	70 - 130	0	20
2,4'-DDE	1.97	1.90		ug/L		97	70 - 130	1	20
2,4'-DDT	1.97	1.83		ug/L		93	70 - 130	1	20
2,4-Dinitrotoluene	1.97	1.97		ug/L		100	70 - 130	4	20
2,6-Dinitrotoluene	1.97	1.93		ug/L		98	70 - 130	4	20
4,4'-DDD	1.97	1.82		ug/L		93	70 - 130	2	20
4,4'-DDE	1.97	1.94		ug/L		99	70 - 130	0	20
4,4'-DDT	1.97	2.00		ug/L		101	70 - 130	2	20
Acenaphthene	1.97	1.82		ug/L		93	70 - 130	1	20

Eurofins Eaton Monrovia



# QC Sample Results

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

Job ID: 380-12725-1

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

**Lab Sample ID: LCSD 380-10968/4-A**  
**Matrix: Water**  
**Analysis Batch: 14003**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 10968**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	RPD Limit
							Limits	RPD		
Acenaphthylene	1.97	1.91		ug/L		97	70 - 130	0	20	
Acetochlor	1.97	2.03		ug/L		103	70 - 130	1	20	
Alachlor	1.97	1.85		ug/L		94	70 - 130	2	20	
alpha-BHC	1.97	1.81		ug/L		92	70 - 130	1	20	
alpha-Chlordane	1.97	1.88		ug/L		95	70 - 130	1	20	
Anthracene	1.97	1.88		ug/L		95	70 - 130	1	20	
Atrazine	1.97	2.10		ug/L		107	70 - 130	1	20	
Benz(a)anthracene	1.97	1.89		ug/L		96	70 - 130	0	20	
Benzo[a]pyrene	1.97	1.65		ug/L		84	70 - 130	2	20	
Benzo[b]fluoranthene	1.97	1.75		ug/L		89	70 - 130	5	20	
Benzo[g,h,i]perylene	1.97	1.70		ug/L		86	70 - 130	6	20	
Benzo[k]fluoranthene	1.97	1.79		ug/L		91	70 - 130	3	20	
beta-BHC	1.97	1.73		ug/L		88	70 - 130	3	20	
Bromacil	1.97	1.90		ug/L		96	70 - 130	3	20	
Butachlor	1.97	2.06		ug/L		104	70 - 130	0	20	
Butylbenzylphthalate	1.97	2.27		ug/L		115	70 - 130	2	20	
Caffeine	1.97	1.60		ug/L		81	45 - 137	1	20	
Chlorobenzilate	1.97	2.10		ug/L		106	70 - 130	1	20	
Chloroneb	1.97	1.78		ug/L		90	70 - 130	3	20	
Chlorothalonil (Draconil, Bravo)	1.97	2.27		ug/L		115	70 - 130	0	20	
Chlorpyrifos	1.97	1.98		ug/L		100	70 - 130	2	20	
Chrysene	1.97	1.65		ug/L		84	70 - 130	0	20	
delta-BHC	1.97	1.74		ug/L		88	70 - 130	1	20	
Di(2-ethylhexyl)adipate	1.97	2.67	+	ug/L		135	70 - 130	0	20	
Bis(2-ethylhexyl) phthalate	1.97	2.05		ug/L		104	70 - 130	6	20	
Diazinon (Qualitative)	1.97	1.90		ug/L		96	15 - 132	1	20	
Dibenz(a,h)anthracene	1.97	1.73		ug/L		88	70 - 130	9	20	
Diclorvos (DDVP)	1.97	2.25		ug/L		114	70 - 130	4	20	
Dieldrin	1.97	2.08		ug/L		105	70 - 130	2	20	
Diethylphthalate	1.97	1.97		ug/L		100	70 - 130	3	20	
Dimethoate	1.97	1.75		ug/L		89	35 - 100	3	20	
Dimethylphthalate	1.97	1.99		ug/L		101	70 - 130	5	20	
Di-n-butyl phthalate	3.94	3.95		ug/L		100	70 - 130	3	20	
Di-n-octyl phthalate	1.97	1.69		ug/L		86	70 - 130	8	20	
Endosulfan I (Alpha)	1.97	1.67		ug/L		84	70 - 130	0	20	
Endosulfan II (Beta)	1.97	1.98		ug/L		101	70 - 130	1	20	
Endosulfan sulfate	1.97	2.24		ug/L		114	70 - 130	1	20	
Endrin	1.97	1.97		ug/L		100	70 - 130	1	20	
Endrin aldehyde	1.97	1.86		ug/L		94	70 - 130	5	20	
EPTC	1.97	2.21		ug/L		112	70 - 130	0	20	
Fluoranthene	1.97	1.87		ug/L		95	70 - 130	1	20	
Fluorene	1.97	2.01		ug/L		102	70 - 130	3	20	
gamma-Chlordane	1.97	1.95		ug/L		99	70 - 130	2	20	
Heptachlor	1.97	1.98		ug/L		100	70 - 130	1	20	
Heptachlor epoxide (isomer B)	1.97	2.02		ug/L		102	70 - 130	0	20	
Hexachlorobenzene	1.97	1.90		ug/L		96	70 - 130	1	20	
Hexachlorocyclopentadiene	1.97	1.85		ug/L		94	70 - 130	0	20	
Indeno[1,2,3-cd]pyrene	1.97	1.76		ug/L		89	70 - 130	5	20	
Isophorone	1.97	1.88		ug/L		96	70 - 130	4	20	

Eurofins Eaton Monrovia

# QC Sample Results

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

Job ID: 380-12725-1

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

**Lab Sample ID: LCSD 380-10968/4-A**  
**Matrix: Water**  
**Analysis Batch: 14003**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 10968**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Lindane	1.97	1.77		ug/L		90	70 - 130	1	20
Malathion	1.97	2.06		ug/L		105	70 - 130	2	20
Methoxychlor	1.97	2.01		ug/L		102	70 - 130	3	20
Metolachlor	1.97	1.90		ug/L		96	70 - 130	2	20
Metribuzin	1.97	1.97		ug/L		100	70 - 130	0	20
Molinate	1.97	2.15		ug/L		109	70 - 130	4	20
Naphthalene	1.97	1.99		ug/L		101	70 - 130	3	20
Parathion	1.97	2.20		ug/L		111	70 - 130	2	20
Pendimethalin (Penoxaline)	1.97	2.30		ug/L		117	70 - 130	2	20
Phenanthrene	1.97	1.84		ug/L		93	70 - 130	5	20
Propachlor	1.97	2.24		ug/L		113	70 - 130	1	20
Pyrene	1.97	1.92		ug/L		97	70 - 130	2	20
Simazine	1.97	2.13		ug/L		108	70 - 130	0	20
Terbacil	1.97	2.11		ug/L		107	70 - 130	6	20
Terbutylazine	1.97	1.93		ug/L		98	70 - 130	0	20
Thiobencarb	1.97	2.09		ug/L		106	70 - 130	1	20
trans-Nonachlor	1.97	1.91		ug/L		97	70 - 130	2	20
Trifluralin	1.97	2.48		ug/L		126	70 - 130	1	20

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	94		70 - 130
Triphenylphosphate	100		70 - 130
Perylene-d12	101		70 - 130

**Lab Sample ID: MRL 380-10968/2-A**  
**Matrix: Water**  
**Analysis Batch: 14003**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 10968**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	0.0987	0.130		ug/L		132	50 - 150
2,4'-DDE	0.0987	0.0869	J	ug/L		88	50 - 150
2,4'-DDT	0.0987	0.0805	J	ug/L		82	50 - 150
2,4-Dinitrotoluene	0.0987	0.123		ug/L		125	50 - 150
2,6-Dinitrotoluene	0.0987	0.109		ug/L		110	50 - 150
4,4'-DDD	0.0987	0.0833	J	ug/L		84	50 - 150
4,4'-DDE	0.0987	0.151	^3+	ug/L		153	50 - 150
4,4'-DDT	0.0987	0.0855	J	ug/L		87	50 - 150
Acenaphthene	0.0987	0.0942	J	ug/L		95	50 - 150
Acenaphthylene	0.0987	0.0762	J	ug/L		77	50 - 150
Acetochlor	0.0494	0.0448	J	ug/L		91	50 - 150
Alachlor	0.0494	0.0590		ug/L		120	50 - 150
alpha-BHC	0.0987	0.101		ug/L		102	50 - 150
alpha-Chlordane	0.0494	0.0453	J	ug/L		92	50 - 150
Anthracene	0.0197	0.0201		ug/L		102	50 - 150
Atrazine	0.0494	0.0489	J	ug/L		99	50 - 150
Benz(a)anthracene	0.0494	0.0398	J	ug/L		81	50 - 150
Benzo[a]pyrene	0.0197	0.0133	J	ug/L		67	50 - 150
Benzo[b]fluoranthene	0.0197	0.0166	J	ug/L		84	50 - 150

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# QC Sample Results

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

Job ID: 380-12725-1

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

**Lab Sample ID: MRL 380-10968/2-A**  
**Matrix: Water**  
**Analysis Batch: 14003**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 10968**

Analyte	Spike Added	MRL	MRL	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Benzo[g,h,i]perylene	0.0494	0.0320	J	ug/L		65	50 - 150
Benzo[k]fluoranthene	0.0197	ND		ug/L		75	50 - 150
beta-BHC	0.0987	0.102		ug/L		103	50 - 150
Bromacil	0.0987	0.109		ug/L		110	50 - 150
Butachlor	0.0494	0.0648		ug/L		131	50 - 150
Butylbenzylphthalate	0.148	0.577	^3+	ug/L		389	50 - 150
Caffeine	0.0494	0.0451	J	ug/L		91	50 - 150
Chlorobenzilate	0.0987	0.0831	J	ug/L		84	50 - 150
Chloroneb	0.0987	0.0917	J	ug/L		93	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0987	0.0912	J	ug/L		92	50 - 150
Chlorpyrifos	0.0494	0.0486	J	ug/L		98	50 - 150
Chrysene	0.0197	0.0156	J	ug/L		79	50 - 150
delta-BHC	0.0987	0.113		ug/L		114	50 - 150
Di(2-ethylhexyl)adipate	0.296	0.646	^3+	ug/L		218	50 - 150
Bis(2-ethylhexyl) phthalate	0.592	0.725		ug/L		122	50 - 150
Diazinon (Qualitative)	0.0987	0.0997		ug/L		101	15 - 132
Dibenz(a,h)anthracene	0.0494	ND		ug/L		60	50 - 150
Diclorvos (DDVP)	0.0494	0.0570		ug/L		116	50 - 150
Dieldrin	0.0987	0.124	J	ug/L		126	50 - 150
Diethylphthalate	0.148	0.171	J	ug/L		116	50 - 150
Dimethoate	0.0987	0.0808	J	ug/L		82	35 - 100
Dimethylphthalate	0.296	0.299	J	ug/L		101	50 - 150
Di-n-butyl phthalate	0.296	0.361	J	ug/L		122	49 - 243
Di-n-octyl phthalate	0.0987	0.0986	J	ug/L		100	50 - 150
Endosulfan I (Alpha)	0.0987	0.0896	J	ug/L		91	50 - 150
Endosulfan II (Beta)	0.0987	0.445	^3+	ug/L		451	50 - 150
Endosulfan sulfate	0.0987	0.113		ug/L		114	50 - 150
Endrin	0.0987	0.138		ug/L		139	50 - 150
Endrin aldehyde	0.0987	ND		ug/L		81	50 - 150
EPTC	0.0987	0.0971	J	ug/L		98	50 - 150
Fluoranthene	0.0494	0.0481	J	ug/L		97	50 - 150
Fluorene	0.0494	0.0537		ug/L		109	50 - 150
gamma-Chlordane	0.0494	0.0492		ug/L		100	50 - 150
Heptachlor	0.0395	0.0418		ug/L		106	50 - 150
Heptachlor epoxide (isomer B)	0.0494	0.0554		ug/L		112	50 - 150
Hexachlorobenzene	0.0494	0.0846	^3+	ug/L		171	50 - 150
Hexachlorocyclopentadiene	0.0494	0.0393	J	ug/L		80	50 - 150
Indeno[1,2,3-cd]pyrene	0.0494	0.0344	J	ug/L		70	50 - 150
Isophorone	0.0987	0.0942	J	ug/L		95	50 - 150
Lindane	0.0494	0.0434		ug/L		88	50 - 150
Malathion	0.0987	0.104		ug/L		105	50 - 150
Methoxychlor	0.0987	0.0860	J	ug/L		87	50 - 150
Metolachlor	0.0494	0.0533		ug/L		108	50 - 150
Metribuzin	0.0494	0.0455	J	ug/L		92	50 - 150
Molinate	0.0987	0.104		ug/L		106	50 - 150
Naphthalene	0.0987	0.101	J	ug/L		102	50 - 150
Parathion	0.0987	0.143		ug/L		145	50 - 150
Pendimethalin (Penoxaline)	0.0987	0.0890	J	ug/L		90	50 - 150
Phenanthrene	0.0197	0.0246	J	ug/L		124	50 - 150

Eurofins Eaton Monrovia

# QC Sample Results

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

Job ID: 380-12725-1

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

**Lab Sample ID: MRL 380-10968/2-A**  
**Matrix: Water**  
**Analysis Batch: 14003**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 10968**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Propachlor	0.0494	0.0536		ug/L		109	50 - 150
Pyrene	0.0494	0.0502		ug/L		102	50 - 150
Simazine	0.0494	0.0567		ug/L		115	50 - 150
Terbacil	0.0987	0.111		ug/L		112	50 - 150
Terbutylazine	0.0987	0.0883	J	ug/L		89	50 - 150
Thiobencarb	0.0987	0.108	J	ug/L		109	50 - 150
trans-Nonachlor	0.0494	0.0452	J	ug/L		92	50 - 150
Trifluralin	0.0987	0.0918	J	ug/L		93	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
2-Nitro-m-xylene	96		70 - 130
Triphenylphosphate	101		70 - 130
Perylene-d12	93		70 - 130

**Lab Sample ID: 380-12602-S-6-A MS**  
**Matrix: Water**  
**Analysis Batch: 14003**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 10968**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	ND		1.97	2.17		ug/L		110	70 - 130
2,4'-DDE	ND		1.97	1.88		ug/L		95	70 - 130
2,4'-DDT	ND		1.97	1.90		ug/L		96	70 - 130
2,4-Dinitrotoluene	ND		1.97	1.97		ug/L		100	70 - 130
2,6-Dinitrotoluene	ND		1.97	1.93		ug/L		98	70 - 130
4,4'-DDD	ND		1.97	1.94		ug/L		98	70 - 130
4,4'-DDE	ND	^3+	1.97	1.94		ug/L		99	70 - 130
4,4'-DDT	ND		1.97	2.01		ug/L		102	70 - 130
Acenaphthene	ND		1.97	1.86		ug/L		94	70 - 130
Acenaphthylene	ND		1.97	1.95		ug/L		99	70 - 130
Acetochlor	ND		1.97	2.05		ug/L		104	70 - 130
Alachlor	ND		1.97	1.90		ug/L		96	70 - 130
alpha-BHC	ND		1.97	1.83		ug/L		93	70 - 130
alpha-Chlordane	ND		1.97	1.90		ug/L		96	70 - 130
Anthracene	ND		1.97	1.45		ug/L		73	70 - 130
Atrazine	ND		1.97	2.16		ug/L		110	70 - 130
Benz(a)anthracene	ND		1.97	1.96		ug/L		99	70 - 130
Benzo[a]pyrene	ND		1.97	1.62		ug/L		82	70 - 130
Benzo[b]fluoranthene	ND		1.97	1.85		ug/L		93	70 - 130
Benzo[g,h,i]perylene	ND		1.97	1.72		ug/L		87	70 - 130
Benzo[k]fluoranthene	ND		1.97	1.94		ug/L		98	70 - 130
beta-BHC	ND		1.97	1.80		ug/L		91	70 - 130
Bromacil	ND		1.97	1.96		ug/L		99	70 - 130
Butachlor	ND		1.97	2.07		ug/L		105	70 - 130
Butylbenzylphthalate	ND	^3+	1.97	2.10		ug/L		106	70 - 130
Caffeine	ND		1.97	1.66		ug/L		84	46 - 144
Chlorobenzilate	ND		1.97	2.11		ug/L		107	70 - 130
Chloroneb	ND		1.97	1.90		ug/L		96	70 - 130
Chlorothalonil (Draconil, Bravo)	ND		1.97	2.29		ug/L		116	70 - 130

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# QC Sample Results

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

Job ID: 380-12725-1

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

**Lab Sample ID: 380-12602-S-6-A MS**  
**Matrix: Water**  
**Analysis Batch: 14003**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 10968**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chlorpyrifos	ND		1.97	2.01		ug/L		102	70 - 130
Chrysene	ND		1.97	1.73		ug/L		88	70 - 130
delta-BHC	ND		1.97	1.77		ug/L		90	70 - 130
Di(2-ethylhexyl)adipate	ND	^3+ *+	1.97	2.18		ug/L		89	70 - 130
Bis(2-ethylhexyl) phthalate	ND		1.97	1.83		ug/L		93	70 - 130
Diazinon (Qualitative)	ND		1.97	1.97		ug/L		100	15 - 132
Dibenz(a,h)anthracene	ND		1.97	1.74		ug/L		88	70 - 130
Diclorvos (DDVP)	ND		1.97	2.38		ug/L		121	70 - 130
Dieldrin	ND		1.97	2.05		ug/L		104	70 - 130
Diethylphthalate	ND		1.97	2.02		ug/L		102	70 - 130
Dimethoate	ND		1.97	1.62		ug/L		82	34 - 111
Dimethylphthalate	ND		1.97	2.01		ug/L		102	70 - 130
Di-n-butyl phthalate	ND		3.95	4.02		ug/L		102	70 - 130
Di-n-octyl phthalate	ND		1.97	1.59		ug/L		81	70 - 130
Endosulfan I (Alpha)	ND		1.97	1.72		ug/L		87	70 - 130
Endosulfan II (Beta)	ND	^3+	1.97	2.22		ug/L		112	70 - 130
Endosulfan sulfate	ND		1.97	2.16		ug/L		110	70 - 130
Endrin	ND		1.97	1.97		ug/L		100	70 - 130
Endrin aldehyde	ND		1.97	1.50		ug/L		76	70 - 130
EPTC	ND		1.97	2.28		ug/L		116	70 - 130
Fluoranthene	ND		1.97	1.94		ug/L		98	70 - 130
Fluorene	ND		1.97	2.05		ug/L		104	70 - 130
gamma-Chlordane	ND		1.97	1.96		ug/L		99	70 - 130
Heptachlor	ND		1.97	1.96		ug/L		99	70 - 130
Heptachlor epoxide (isomer B)	ND		1.97	2.08		ug/L		105	70 - 130
Hexachlorobenzene	ND	^3+	1.97	1.95		ug/L		99	70 - 130
Hexachlorocyclopentadiene	ND		1.97	1.99		ug/L		101	70 - 130
Indeno[1,2,3-cd]pyrene	ND		1.97	1.80		ug/L		91	70 - 130
Isophorone	ND		1.97	1.97		ug/L		100	70 - 130
Lindane	ND		1.97	1.83		ug/L		93	70 - 130
Malathion	ND		1.97	2.15		ug/L		109	70 - 130
Methoxychlor	ND		1.97	2.17		ug/L		110	70 - 130
Metolachlor	ND		1.97	1.96		ug/L		99	70 - 130
Metribuzin	ND		1.97	2.03		ug/L		103	70 - 130
Molinate	ND		1.97	2.30		ug/L		116	70 - 130
Naphthalene	ND		1.97	2.03		ug/L		103	70 - 130
Parathion	ND		1.97	2.29		ug/L		116	70 - 130
Pendimethalin (Penoxaline)	ND		1.97	2.40		ug/L		122	70 - 130
Phenanthrene	ND		1.97	1.92		ug/L		97	70 - 130
Propachlor	ND		1.97	2.32		ug/L		117	70 - 130
Pyrene	ND		1.97	2.01		ug/L		102	70 - 130
Simazine	ND		1.97	2.25		ug/L		114	70 - 130
Terbacil	ND		1.97	2.16		ug/L		110	70 - 130
Terbutylazine	ND		1.97	2.09		ug/L		106	70 - 130
Thiobencarb	ND		1.97	2.04		ug/L		103	70 - 130
trans-Nonachlor	ND		1.97	1.88		ug/L		95	70 - 130
Trifluralin	ND		1.97	2.58		ug/L		130	70 - 130

# QC Sample Results

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

Job ID: 380-12725-1

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

**Lab Sample ID: 380-12602-S-6-A MS**  
**Matrix: Water**  
**Analysis Batch: 14003**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 10968**

Surrogate	%Recovery	MS MS Qualifier	Limits
2-Nitro-m-xylene	96		70 - 130
Triphenylphosphate	103		70 - 130
Perylene-d12	102		70 - 130

**Lab Sample ID: 380-12317-I-1-A DU**  
**Matrix: Water**  
**Analysis Batch: 14003**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 10968**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
2,4'-DDD	ND		ND		ug/L		NC	20
2,4'-DDE	ND		ND		ug/L		NC	20
2,4'-DDT	ND		ND		ug/L		NC	20
2,4-Dinitrotoluene	ND		ND		ug/L		NC	20
2,6-Dinitrotoluene	ND		ND		ug/L		NC	20
4,4'-DDD	ND		ND		ug/L		NC	20
4,4'-DDE	ND	^3+	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	^3+	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		ND		ug/L		NC	20
Dieldrin	ND		ND		ug/L		NC	20
Diethylphthalate	ND		ND		ug/L		NC	20

Eurofins Eaton Monrovia

# QC Sample Results

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

Job ID: 380-12725-1

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

**Lab Sample ID: 380-12317-I-1-A DU**  
**Matrix: Water**  
**Analysis Batch: 14003**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 10968**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Dimethoate	ND		ND		ug/L		NC	20
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	^3+	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	^3+	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	%Recovery	DU Qualifier	DU Limits
2-Nitro-m-xylene	94		70 - 130
Triphenylphosphate	100		70 - 130
Perylene-d12	97		70 - 130

# QC Sample Results

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

Job ID: 380-12725-1

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

**Lab Sample ID: 98853-B1**  
**Matrix: water**  
**Analysis Batch: O-38076**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: O-38076\_P**

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 16:58	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 16:58	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 16:58	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 16:58	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 16:58	1
Acenaphthene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 16:58	1
Acenaphthylene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 16:58	1
Anthracene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 16:58	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 16:58	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 16:58	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 16:58	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 16:58	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 16:58	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 16:58	1
Biphenyl	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 16:58	1
Chrysene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 16:58	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 16:58	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 16:58	1
Dibenzothiophene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 16:58	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		08/02/22 00:00	08/06/22 16:58	1
Fluoranthene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 16:58	1
Fluorene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 16:58	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 16:58	1
Naphthalene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 16:58	1
Perylene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 16:58	1
Phenanthrene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 16:58	1
Pyrene	ND		0.005	0.001	µg/L		08/02/22 00:00	08/06/22 16:58	1

Surrogate	Blank %Recovery	Blank Qualifier	Limits	Prepared	Analyzed	Dil Fac
(d10-Acenaphthene)	95		65 - 113	08/02/22 00:00	08/06/22 16:58	1
(d10-Phenanthrene)	98		80 - 111	08/02/22 00:00	08/06/22 16:58	1
(d12-Chrysene)	95		60 - 139	08/02/22 00:00	08/06/22 16:58	1
(d12-Perylene)	93		36 - 161	08/02/22 00:00	08/06/22 16:58	1
(d8-Naphthalene)	91		44 - 119	08/02/22 00:00	08/06/22 16:58	1

**Lab Sample ID: 98853-BS1**  
**Matrix: water**  
**Analysis Batch: O-38076**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: O-38076\_P**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	0.5	0.438		µg/L		88	49 - 117
1-Methylphenanthrene	0.5	0.437		µg/L		87	66 - 127
2,3,5-Trimethylnaphthalene	0.5	0.426		µg/L		85	57 - 120
2,6-Dimethylnaphthalene	0.5	0.44		µg/L		88	54 - 117
2-Methylnaphthalene	0.5	0.452		µg/L		90	47 - 130
Acenaphthene	0.5	0.433		µg/L		87	53 - 131
Acenaphthylene	0.5	0.432		µg/L		86	43 - 140
Anthracene	0.5	0.442		µg/L		88	58 - 135

Eurofins Eaton Monrovia



# QC Sample Results

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

Job ID: 380-12725-1

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

**Lab Sample ID: 98853-BS1**  
**Matrix: water**  
**Analysis Batch: O-38076**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: O-38076\_P**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benz[a]anthracene	0.5	0.491		µg/L		98	55 - 145
Benzo[a]pyrene	0.5	0.397		µg/L		79	51 - 143
Benzo[b]fluoranthene	0.5	0.579		µg/L		116	46 - 165
Benzo[e]pyrene	0.5	0.516		µg/L		103	42 - 152
Benzo[g,h,i]perylene	0.5	0.445		µg/L		89	63 - 133
Benzo[k]fluoranthene	0.5	0.503		µg/L		101	56 - 145
Biphenyl	0.5	0.438		µg/L		88	56 - 119
Chrysene	0.5	0.418		µg/L		84	56 - 141
Dibenz[a,h]anthracene	0.5	0.552		µg/L		110	55 - 150
Dibenzo[a,l]pyrene	0.5	0.502		µg/L		100	50 - 150
Dibenzothiophene	0.5	0.446		µg/L		89	75 - 113
Disalicylidenepropanediamine	50	34.7		µg/L		69	50 - 150
Fluoranthene	0.5	0.449		µg/L		90	60 - 146
Fluorene	0.5	0.427		µg/L		85	58 - 131
Indeno[1,2,3-cd]pyrene	0.5	0.581		µg/L		116	50 - 151
Naphthalene	0.5	0.417		µg/L		83	41 - 126
Perylene	0.5	0.476		µg/L		95	48 - 141
Phenanthrene	0.5	0.446		µg/L		89	67 - 127
Pyrene	0.5	0.451		µg/L		90	54 - 156

Surrogate	LCS %Recovery	LCS Qualifier	Limits
(d10-Acenaphthene)	92		65 - 113
(d10-Phenanthrene)	95		80 - 111
(d12-Chrysene)	95		60 - 139
(d12-Perylene)	97		36 - 161
(d8-Naphthalene)	86		44 - 119

**Lab Sample ID: 98853-BS2**  
**Matrix: water**  
**Analysis Batch: O-38076**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: O-38076\_P**

Analyte	Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	0.5	0.437		µg/L		87	49 - 117	1	30
1-Methylphenanthrene	0.5	0.455		µg/L		91	66 - 127	4	30
2,3,5-Trimethylnaphthalene	0.5	0.435		µg/L		87	57 - 120	2	30
2,6-Dimethylnaphthalene	0.5	0.444		µg/L		89	54 - 117	1	30
2-Methylnaphthalene	0.5	0.45		µg/L		90	47 - 130	0	30
Acenaphthene	0.5	0.436		µg/L		87	53 - 131	0	30
Acenaphthylene	0.5	0.437		µg/L		87	43 - 140	1	30
Anthracene	0.5	0.45		µg/L		90	58 - 135	2	30
Benz[a]anthracene	0.5	0.523		µg/L		105	55 - 145	7	30
Benzo[a]pyrene	0.5	0.405		µg/L		81	51 - 143	2	30
Benzo[b]fluoranthene	0.5	0.601		µg/L		120	46 - 165	3	30
Benzo[e]pyrene	0.5	0.525		µg/L		105	42 - 152	2	30
Benzo[g,h,i]perylene	0.5	0.452		µg/L		90	63 - 133	1	30
Benzo[k]fluoranthene	0.5	0.527		µg/L		105	56 - 145	4	30
Biphenyl	0.5	0.446		µg/L		89	56 - 119	1	30
Chrysene	0.5	0.434		µg/L		87	56 - 141	4	30

Eurofins Eaton Monrovia

# QC Sample Results

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

Job ID: 380-12725-1

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

**Lab Sample ID: 98853-BS2**  
**Matrix: water**  
**Analysis Batch: O-38076**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: O-38076\_P**

Analyte	Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
Dibenz[a,h]anthracene	0.5	0.57		µg/L		114	55 - 150	4	30	
Dibenzo[a,i]pyrene	0.5	0.536		µg/L		107	50 - 150	7	30	
Dibenzothiophene	0.5	0.446		µg/L		89	75 - 113	0	30	
Disalicylidenepropanediamine	50	39.1		µg/L		78	50 - 150	12	30	
Fluoranthene	0.5	0.472		µg/L		94	60 - 146	4	30	
Fluorene	0.5	0.435		µg/L		87	58 - 131	2	30	
Indeno[1,2,3-cd]pyrene	0.5	0.601		µg/L		120	50 - 151	3	30	
Naphthalene	0.5	0.425		µg/L		85	41 - 126	2	30	
Perylene	0.5	0.491		µg/L		98	48 - 141	3	30	
Phenanthrene	0.5	0.456		µg/L		91	67 - 127	2	30	
Pyrene	0.5	0.47		µg/L		94	54 - 156	4	30	

Surrogate	LCS DUP		Limits
	%Recovery	Qualifier	
(d10-Acenaphthene)	93		65 - 113
(d10-Phenanthrene)	96		80 - 111
(d12-Chrysene)	98		60 - 139
(d12-Perylene)	99		36 - 161
(d8-Naphthalene)	87		44 - 119

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

**Lab Sample ID: 22DSH001WB**  
**Matrix: WATER**  
**Analysis Batch: 22DSH001W**

**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			08/02/22 14:45	1
MOTOR OIL	ND	U	0.05		mg/L			08/02/22 14:45	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
BROMOBENZENE					08/02/22 14:45	1
HEXACOSANE					08/02/22 14:45	1

**Lab Sample ID: 22DSH001WL**  
**Matrix: WATER**  
**Analysis Batch: 22DSH001W**

**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	2.21		mg/L		88	50 - 130	

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
BROMOBENZENE	80		60 - 130
HEXACOSANE	90		60 - 130

# QC Sample Results

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

Job ID: 380-12725-1

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

**Lab Sample ID: 22VG39G19B**  
**Matrix: WATER**  
**Analysis Batch: 22VG39G19**

**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			07/29/22 13:58	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE								07/29/22 13:58	1

**Lab Sample ID: 22VG39G19L**  
**Matrix: WATER**  
**Analysis Batch: 22VG39G19**

**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	0.524		mg/L		105	60 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
BROMOFLUOROBENZENE	116		70 - 130				

**Lab Sample ID: 22G304-01M**  
**Matrix: WATER**  
**Analysis Batch: 22VG39G19**

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
GASOLINE	ND		0.5	0.474		mg/L		95	50 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
BROMOFLUOROBENZENE	110		60 - 140						

**Lab Sample ID: 22G304-01S**  
**Matrix: WATER**  
**Analysis Batch: 22VG39G19**

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
GASOLINE	ND		0.5	0.452		mg/L		90	50 - 130	5	30
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
BROMOFLUOROBENZENE	106		60 - 140								

# QC Association Summary

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

Job ID: 380-12725-1

## GC/MS Semi VOA

### Prep Batch: 10968

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-12725-1	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	525.2	
380-12725-2	AIEA WELLS PUMPS 1&2 (260) (331-203-TP40C	Total/NA	Drinking Water	525.2	
380-12725-3	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	525.2	
MB 380-10968/1-A	Method Blank	Total/NA	Water	525.2	
LCS 380-10968/3-A	Lab Control Sample	Total/NA	Water	525.2	
LCSD 380-10968/4-A	Lab Control Sample Dup	Total/NA	Water	525.2	
MRL 380-10968/2-A	Lab Control Sample	Total/NA	Water	525.2	
380-12602-S-6-A MS	Matrix Spike	Total/NA	Water	525.2	
380-12317-I-1-A DU	Duplicate	Total/NA	Water	525.2	

### Analysis Batch: 14003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-12725-1	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	525.2	10968
380-12725-2	AIEA WELLS PUMPS 1&2 (260) (331-203-TP40C	Total/NA	Drinking Water	525.2	10968
380-12725-3	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	525.2	10968
MB 380-10968/1-A	Method Blank	Total/NA	Water	525.2	10968
LCS 380-10968/3-A	Lab Control Sample	Total/NA	Water	525.2	10968
LCSD 380-10968/4-A	Lab Control Sample Dup	Total/NA	Water	525.2	10968
MRL 380-10968/2-A	Lab Control Sample	Total/NA	Water	525.2	10968
380-12602-S-6-A MS	Matrix Spike	Total/NA	Water	525.2	10968
380-12317-I-1-A DU	Duplicate	Total/NA	Water	525.2	10968

## Subcontract

### Analysis Batch: O-38076

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-12725-1	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	625 PAH Physis LL (EAL) + TICs	O-38076_P
380-12725-2	AIEA WELLS PUMPS 1&2 (260) (331-203-TP40C	Total/NA	Drinking Water	625 PAH Physis LL (EAL) + TICs	O-38076_P
380-12725-3	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	625 PAH Physis LL (EAL) + TICs	O-38076_P
98853-B1	Method Blank	Total/NA	water	625 PAH Physis LL (EAL) + TICs	O-38076_P
98853-BS1	Lab Control Sample	Total/NA	water	625 PAH Physis LL (EAL) + TICs	O-38076_P
98853-BS2	Lab Control Sample Dup	Total/NA	water	625 PAH Physis LL (EAL) + TICs	O-38076_P

### Analysis Batch: 22DSH001W

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-12725-1	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	8015 Diesel LL (EAL) and Motor Oil	
380-12725-2	AIEA WELLS PUMPS 1&2 (260) (331-203-TP40C	Total/NA	Drinking Water	8015 Diesel LL (EAL) and Motor Oil	
380-12725-3	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	8015 Diesel LL (EAL) and Motor Oil	
22DSH001WB	Method Blank	Total/NA	WATER	8015 Diesel LL (EAL) and Motor Oil	

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# QC Association Summary

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

Job ID: 380-12725-1

## Subcontract (Continued)

### Analysis Batch: 22DSH001W (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
22DSH001WL	Lab Control Sample	Total/NA	WATER	8015 Diesel LL (EAL) and Motor Oil	

### Analysis Batch: 22VG39G19

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-12725-1	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	8015 Gas (Purgeable) LL (EAL)	
380-12725-2	AIEA WELLS PUMPS 1&2 (260) (331-203-TP40C	Total/NA	Drinking Water	8015 Gas (Purgeable) LL (EAL)	
380-12725-3	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	8015 Gas (Purgeable) LL (EAL)	
22VG39G19B	Method Blank	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	
22VG39G19L	Lab Control Sample	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	
22G304-01M	Matrix Spike	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	
22G304-01S	Matrix Spike Duplicate	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	

### Prep Batch: O-38076\_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-12725-1	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	EPA_625	
380-12725-2	AIEA WELLS PUMPS 1&2 (260) (331-203-TP40C	Total/NA	Drinking Water	EPA_625	
380-12725-3	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	EPA_625	
98853-B1	Method Blank	Total/NA	water	EPA_625	
98853-BS1	Lab Control Sample	Total/NA	water	EPA_625	
98853-BS2	Lab Control Sample Dup	Total/NA	water	EPA_625	

# Lab Chronicle

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

Job ID: 380-12725-1

**Client Sample ID: AIEA GULCH WELLS PUMP 1  
(331-201-TP071)**

**Lab Sample ID: 380-12725-1**

**Date Collected: 07/26/22 11:00**

**Matrix: Drinking Water**

**Date Received: 07/28/22 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			10968	G9MN	EA MON	08/01/22 08:52
Total/NA	Analysis	525.2		1	14003	UPAC	EA MON	08/19/22 12:01
Total/NA	Prep	EPA_625		1	O-38076_P			08/02/22 00:00
Total/NA	Analysis	625 PAH Physis LL (EAL) + TICs		1	O-38076	YC		08/06/22 22:09
Total/NA	Analysis	8015 Diesel LL (EAL) and Motor Oil		1	22DSH001W	SDees		08/02/22 18:28
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	22VG39G19	SCerva		07/29/22 15:47

**Client Sample ID: AIEA WELLS PUMPS 1&2 (260)  
(331-203-TP400)**

**Lab Sample ID: 380-12725-2**

**Date Collected: 07/26/22 10:09**

**Matrix: Drinking Water**

**Date Received: 07/28/22 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			10968	G9MN	EA MON	08/01/22 08:52
Total/NA	Analysis	525.2		1	14003	UPAC	EA MON	08/19/22 12:41
Total/NA	Prep	EPA_625		1	O-38076_P			08/02/22 00:00
Total/NA	Analysis	625 PAH Physis LL (EAL) + TICs		1	O-38076	YC		08/06/22 23:53
Total/NA	Analysis	8015 Diesel LL (EAL) and Motor Oil		1	22DSH001W	SDees		08/02/22 18:46
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	22VG39G19	SCerva		07/29/22 17:37

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

**Lab Sample ID: 380-12725-3**

**Date Collected: 07/26/22 10:50**

**Matrix: Drinking Water**

**Date Received: 07/28/22 10:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			10968	G9MN	EA MON	08/01/22 08:52
Total/NA	Analysis	525.2		1	14003	UPAC	EA MON	08/19/22 11:20
Total/NA	Prep	EPA_625		1	O-38076_P			08/02/22 00:00
Total/NA	Analysis	625 PAH Physis LL (EAL) + TICs		1	O-38076	YC		08/07/22 01:36
Total/NA	Analysis	8015 Diesel LL (EAL) and Motor Oil		1	22DSH001W	SDees		08/02/22 19:05
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	22VG39G19	SCerva		07/29/22 18:14

**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

Eurofins Eaton Monrovia

# Accreditation/Certification Summary

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

Job ID: 380-12725-1

## 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

# Accreditation/Certification Summary

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

Job ID: 380-12725-1

## Laboratory: Eurofins Eaton Monrovia (Continued)

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

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





# Method Summary

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

Job ID: 380-12725-1

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: 380-12725-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
380-12725-1	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Drinking Water	07/26/22 11:00	07/28/22 10:15	HI0000331
380-12725-2	AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)	Drinking Water	07/26/22 10:09	07/28/22 10:15	HI0000331
380-12725-3	MOANALUA WELLS (331-223-TP202)	Drinking Water	07/26/22 10:50	07/28/22 10:15	HI0000331

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August 09, 2022

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

Project Name: RED-HILL Project # 38001111 Job # 380-12725-1  
Physis Project ID: 1407003-259

Dear Debbie,


Enclosed are the analytical results for samples submitted to PHYSIS Environmental Laboratories, Inc. (PHYSIS) on 7/29/2022. A total of 3 samples were received for analysis in accordance with the attached chain of custody (COC). Per the COC, the samples were analyzed for:

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

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

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

Regards,

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

## PROJECT SAMPLE LIST

Eurofins Eaton Analytical

PHYSIS Project ID: 1407003-259

RED-HILL Project # 38001111 Job # 380-12725-1

Total Samples: 3

PHYSIS ID	Sample ID	Description	Date	Time	Matrix	Sample Type
98854	AIEA GULCH WELLS PUMP 331-201-TP071	(380-12725-1)	7/26/2022	11:00	Samplewater	Not Specified
98855	AIEA WELLS PUMPS 1&2 (260) 331-203-TP400	(380-12725-2)	7/26/2022	10:09	Samplewater	Not Specified
98856	MOANALUA WELLS 331-223-TP202	(380-12725-3)	7/26/2022	10:50	Samplewater	Not Specified



## ABBREVIATIONS and ACRONYMS

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

## QUALITY ASSURANCE SUMMARY

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

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

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

**PRECISION:** Precision is the agreement among a set of replicate measurements without assumption of knowledge of the true value and is based on RPD calculations between repeated values. Precision of the project data was determined by analysis of replicate MS<sub>1</sub>/MS<sub>2</sub>, BS<sub>1</sub>/BS<sub>2</sub>, LCS<sub>1</sub>/LCS<sub>2</sub>, LCM<sub>1</sub>/LCM<sub>2</sub>, CRM<sub>1</sub>/CRM<sub>2</sub>, surrogate spikes and/or replicate project sample analysis (R<sub>1</sub>/R<sub>2</sub>) on a minimum frequency of one per batch. Physis' QM requires that for 95% of the compounds greater than 10 times the MDL, the percent RPD should be within the specified acceptance range.

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

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

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

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

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

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

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

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

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

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

## PHYSIS QUALIFIER CODES

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



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## CASE NARRATIVE

### QUALIFIER NOTES

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

#### **ND**

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

# ANALYTICALS

# REPORT

TERRA AURA  
ENVIRONMENTAL LABORATORIES, INC.

*Innovative Solutions for Nature*

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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: 98854-R1 AIEA GULCH WELLS PUMP 1 331-20 Matrix: Samplewater</b>											
Disalicylidenepropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38076	02-Aug-22	06-Aug-22
<b>Sample ID: 98855-R1 AIEA WELLS PUMPS 1&amp;2 (260) 331- Matrix: Samplewater</b>											
Disalicylidenepropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38076	02-Aug-22	06-Aug-22
<b>Sample ID: 98856-R1 MOANALUA WELLS 331-223-TP202 Matrix: Samplewater</b>											
Disalicylidenepropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38076	02-Aug-22	07-Aug-22



## Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
<b>Sample ID: 98854-R1</b>							<b>AIEA GULCH WELLS PUMP 1331-20 Matrix: Samplewater</b>		<b>Sampled: 26-Jul-22 11:00</b>		<b>Received: 29-Jul-22</b>
(d10-Acenaphthene)	EPA 625.1	% Recovery	89	1			Total		O-38076	02-Aug-22	06-Aug-22
(d10-Phenanthrene)	EPA 625.1	% Recovery	91	1			Total		O-38076	02-Aug-22	06-Aug-22
(d12-Chrysene)	EPA 625.1	% Recovery	88	1			Total		O-38076	02-Aug-22	06-Aug-22
(d12-Perylene)	EPA 625.1	% Recovery	87	1			Total		O-38076	02-Aug-22	06-Aug-22
(d8-Naphthalene)	EPA 625.1	% Recovery	85	1			Total		O-38076	02-Aug-22	06-Aug-22
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
Benzo[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
Benzo[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
Benzo[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
D benz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
D benzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
D benzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22

### Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22



## Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
<b>Sample ID: 98855-R1</b>	<b>AIEA WELLS PUMPS 1&amp;2 (260) 331- Matrix: Samplewater</b>						<b>Sampled:</b>	<b>26-Jul-22 10:09</b>	<b>Received:</b>	<b>29-Jul-22</b>	
(d10-Acenaphthene)	EPA 625.1	% Recovery	89	1			Total		O-38076	02-Aug-22	06-Aug-22
(d10-Phenanthrene)	EPA 625.1	% Recovery	93	1			Total		O-38076	02-Aug-22	06-Aug-22
(d12-Chrysene)	EPA 625.1	% Recovery	90	1			Total		O-38076	02-Aug-22	06-Aug-22
(d12-Perylene)	EPA 625.1	% Recovery	91	1			Total		O-38076	02-Aug-22	06-Aug-22
(d8-Naphthalene)	EPA 625.1	% Recovery	84	1			Total		O-38076	02-Aug-22	06-Aug-22
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
Benzo[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
Benzo[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
Benzo[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
D benz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
D benzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
D benzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22

## Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	06-Aug-22



## Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
<b>Sample ID: 98856-R1</b>	<b>MOANALUA WELLS 331-223-TP202 Matrix: Samplewater</b>						<b>Sampled:</b>	<b>26-Jul-22 10:50</b>	<b>Received:</b>	<b>29-Jul-22</b>	
(d10-Acenaphthene)	EPA 625.1	% Recovery	82	1			Total		O-38076	02-Aug-22	07-Aug-22
(d10-Phenanthrene)	EPA 625.1	% Recovery	84	1			Total		O-38076	02-Aug-22	07-Aug-22
(d12-Chrysene)	EPA 625.1	% Recovery	82	1			Total		O-38076	02-Aug-22	07-Aug-22
(d12-Perylene)	EPA 625.1	% Recovery	79	1			Total		O-38076	02-Aug-22	07-Aug-22
(d8-Naphthalene)	EPA 625.1	% Recovery	79	1			Total		O-38076	02-Aug-22	07-Aug-22
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	07-Aug-22
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	07-Aug-22
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	07-Aug-22
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	07-Aug-22
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	07-Aug-22
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	07-Aug-22
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	07-Aug-22
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	07-Aug-22
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	07-Aug-22
Benzo[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	07-Aug-22
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	07-Aug-22
Benzo[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	07-Aug-22
Benzo[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	07-Aug-22
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	07-Aug-22
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	07-Aug-22
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	07-Aug-22
D benz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	07-Aug-22
D benzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	07-Aug-22
D benzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	07-Aug-22



## Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	07-Aug-22
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	07-Aug-22
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	07-Aug-22
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	07-Aug-22
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	07-Aug-22
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	07-Aug-22
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38076	02-Aug-22	07-Aug-22



# QUALITY CONTROL REPORT

TERRA ENVIRONMENTAL LABORATORIES, INC. AURA

*Innovative Solutions for Nature*

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## Base/Neutral Extractable Compounds

## QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	PRECISION %	QA CODEc
						LIMITS			LIMITS		
<b>Sample ID: 98853-B1</b>		<b>QAQC Procedural Blank</b>			<b>Matrix: BlankMatrix</b>		<b>Sampled:</b>		<b>Received:</b>		
		Method: EPA 625.1			Batch ID: O-38076		Prepared: 02-Aug-22		Analyzed: 06-Aug-22		
Disalicylideneprapanediamin	Total	ND	1	0.05	0.1	µg/L					
<b>Sample ID: 98853-BS1</b>		<b>QAQC Procedural Blank</b>			<b>Matrix: BlankMatrix</b>		<b>Sampled:</b>		<b>Received:</b>		
		Method: EPA 625.1			Batch ID: O-38076		Prepared: 02-Aug-22		Analyzed: 06-Aug-22		
Disalicylideneprapanediamin	Total	34.7	1	0.05	0.1	µg/L	50	0	69	50 - 150% PASS	
<b>Sample ID: 98853-BS2</b>		<b>QAQC Procedural Blank</b>			<b>Matrix: BlankMatrix</b>		<b>Sampled:</b>		<b>Received:</b>		
		Method: EPA 625.1			Batch ID: O-38076		Prepared: 02-Aug-22		Analyzed: 06-Aug-22		
Disalicylideneprapanediamin	Total	39.1	1	0.05	0.1	µg/L	50	0	78	50 - 150% PASS	12 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: 98853-B1</b>		<b>QAQC Procedural Blank</b>			<b>Matrix: BlankMatrix</b>		<b>Sampled:</b>		<b>Received:</b>		
	Method: EPA 625.1					Batch ID: O-38076	Prepared: 02-Aug-22	Analyzed: 06-Aug-22			
(d10-Acenaphthene)	Total	95	1			% Recovery	100	95	65 - 113%	PASS	
(d10-Phenanthrene)	Total	98	1			% Recovery	100	98	80 - 111%	PASS	
(d12-Chrysene)	Total	95	1			% Recovery	100	95	60 - 139%	PASS	
(d12-Perylene)	Total	93	1			% Recovery	100	93	36 - 161%	PASS	
(d8-Naphthalene)	Total	91	1			% Recovery	100	91	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: 98853-BS1</b>		<b>QAQC Procedural Blank</b>			<b>Matrix: BlankMatrix</b>			<b>Sampled:</b>		<b>Received:</b>		
Method: EPA 625.1		Batch ID: O-38076			Prepared: 02-Aug-22		Analyzed: 06-Aug-22					
(d10-Acenaphthene)	Total	92	1			% Recovery	100	0	92	65 - 113%	PASS	
(d10-Phenanthrene)	Total	95	1			% Recovery	100	0	95	80 - 111%	PASS	
(d12-Chrysene)	Total	95	1			% Recovery	100	0	95	60 - 139%	PASS	
(d12-Perylene)	Total	97	1			% Recovery	100	0	97	36 - 161%	PASS	
(d8-Naphthalene)	Total	86	1			% Recovery	100	0	86	44 - 119%	PASS	
1-Methylnaphthalene	Total	0.438	1	0.001	0.005	µg/L	0.5	0	88	49 - 117%	PASS	
1-Methylphenanthrene	Total	0.437	1	0.001	0.005	µg/L	0.5	0	87	66 - 127%	PASS	
2,3,5-Trimethylnaphthalene	Total	0.426	1	0.001	0.005	µg/L	0.5	0	85	57 - 120%	PASS	
2,6-Dimethylnaphthalene	Total	0.44	1	0.001	0.005	µg/L	0.5	0	88	54 - 117%	PASS	
2-Methylnaphthalene	Total	0.452	1	0.001	0.005	µg/L	0.5	0	90	47 - 130%	PASS	
Acenaphthene	Total	0.433	1	0.001	0.005	µg/L	0.5	0	87	53 - 131%	PASS	
Acenaphthylene	Total	0.432	1	0.001	0.005	µg/L	0.5	0	86	43 - 140%	PASS	
Anthracene	Total	0.442	1	0.001	0.005	µg/L	0.5	0	88	58 - 135%	PASS	
Benz[a]anthracene	Total	0.491	1	0.001	0.005	µg/L	0.5	0	98	55 - 145%	PASS	
Benzo[a]pyrene	Total	0.397	1	0.001	0.005	µg/L	0.5	0	79	51 - 143%	PASS	
Benzo[b]fluoranthene	Total	0.579	1	0.001	0.005	µg/L	0.5	0	116	46 - 165%	PASS	
Benzo[e]pyrene	Total	0.516	1	0.001	0.005	µg/L	0.5	0	103	42 - 152%	PASS	
Benzo[g,h,i]perylene	Total	0.445	1	0.001	0.005	µg/L	0.5	0	89	63 - 133%	PASS	
Benzo[k]fluoranthene	Total	0.503	1	0.001	0.005	µg/L	0.5	0	101	56 - 145%	PASS	
Biphenyl	Total	0.438	1	0.001	0.005	µg/L	0.5	0	88	56 - 119%	PASS	
Chrysene	Total	0.418	1	0.001	0.005	µg/L	0.5	0	84	56 - 141%	PASS	
Dibenz[a,h]anthracene	Total	0.552	1	0.001	0.005	µg/L	0.5	0	110	55 - 150%	PASS	
Dibenzo[a,l]pyrene	Total	0.502	1	0.001	0.005	µg/L	0.5	0	100	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	0.449	1	0.001	0.005	µg/L	0.5	0	90	60 - 146%	PASS		
Fluorene	Total	0.427	1	0.001	0.005	µg/L	0.5	0	85	58 - 131%	PASS		
Indeno[1,2,3-cd]pyrene	Total	0.581	1	0.001	0.005	µg/L	0.5	0	116	50 - 151%	PASS		
Naphthalene	Total	0.417	1	0.001	0.005	µg/L	0.5	0	83	41 - 126%	PASS		
Perylene	Total	0.476	1	0.001	0.005	µg/L	0.5	0	95	48 - 141%	PASS		
Phenanthrene	Total	0.446	1	0.001	0.005	µg/L	0.5	0	89	67 - 127%	PASS		
Pyrene	Total	0.451	1	0.001	0.005	µg/L	0.5	0	90	54 - 156%	PASS		

## Polynuclear Aromatic Hydrocarbons

## QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY		PRECISION		QA CODEc		
							LEVEL	RESULT	%	LIMITS	%	LIMITS			
<b>Sample ID: 98853-BS2</b>		<b>QAQC Procedural Blank</b>			<b>Matrix: BlankMatrix</b>			<b>Sampled:</b>			<b>Received:</b>				
		Method: EPA 625.1			Batch ID: O-38076			Prepared: 02-Aug-22			Analyzed: 06-Aug-22				
(d10-Acenaphthene)	Total	93	1				% Recovery	100	0	93	65 - 113%	PASS	1	30	PASS
(d10-Phenanthrene)	Total	96	1				% Recovery	100	0	96	80 - 111%	PASS	1	30	PASS
(d12-Chrysene)	Total	98	1				% Recovery	100	0	98	60 - 139%	PASS	3	30	PASS
(d12-Perylene)	Total	99	1				% Recovery	100	0	99	36 - 161%	PASS	2	30	PASS
(d8-Naphthalene)	Total	87	1				% Recovery	100	0	87	44 - 119%	PASS	1	30	PASS
1-Methylnaphthalene	Total	0.437	1	0.001	0.005	µg/L		0.5	0	87	49 - 117%	PASS	1	30	PASS
1-Methylphenanthrene	Total	0.455	1	0.001	0.005	µg/L		0.5	0	91	66 - 127%	PASS	4	30	PASS
2,3,5-Trimethylnaphthalene	Total	0.435	1	0.001	0.005	µg/L		0.5	0	87	57 - 120%	PASS	2	30	PASS
2,6-Dimethylnaphthalene	Total	0.444	1	0.001	0.005	µg/L		0.5	0	89	54 - 117%	PASS	1	30	PASS
2-Methylnaphthalene	Total	0.45	1	0.001	0.005	µg/L		0.5	0	90	47 - 130%	PASS	0	30	PASS
Acenaphthene	Total	0.436	1	0.001	0.005	µg/L		0.5	0	87	53 - 131%	PASS	0	30	PASS
Acenaphthylene	Total	0.437	1	0.001	0.005	µg/L		0.5	0	87	43 - 140%	PASS	1	30	PASS
Anthracene	Total	0.45	1	0.001	0.005	µg/L		0.5	0	90	58 - 135%	PASS	2	30	PASS
Benz[a]anthracene	Total	0.523	1	0.001	0.005	µg/L		0.5	0	105	55 - 145%	PASS	7	30	PASS
Benzo[a]pyrene	Total	0.405	1	0.001	0.005	µg/L		0.5	0	81	51 - 143%	PASS	2	30	PASS
Benzo[b]fluoranthene	Total	0.601	1	0.001	0.005	µg/L		0.5	0	120	46 - 165%	PASS	3	30	PASS
Benzo[e]pyrene	Total	0.525	1	0.001	0.005	µg/L		0.5	0	105	42 - 152%	PASS	2	30	PASS
Benzo[g,h,i]perylene	Total	0.452	1	0.001	0.005	µg/L		0.5	0	90	63 - 133%	PASS	1	30	PASS
Benzo[k]fluoranthene	Total	0.527	1	0.001	0.005	µg/L		0.5	0	105	56 - 145%	PASS	4	30	PASS
Biphenyl	Total	0.446	1	0.001	0.005	µg/L		0.5	0	89	56 - 119%	PASS	1	30	PASS
Chrysene	Total	0.434	1	0.001	0.005	µg/L		0.5	0	87	56 - 141%	PASS	4	30	PASS
Dibenz[a,h]anthracene	Total	0.57	1	0.001	0.005	µg/L		0.5	0	114	55 - 150%	PASS	4	30	PASS
Dibenzo[a,l]pyrene	Total	0.536	1	0.001	0.005	µg/L		0.5	0	107	50 - 150%	PASS	7	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	0.446	1	0.001	0.005	µg/L	0.5	0	89	75 - 113%	PASS	0	30	PASS
Fluoranthene	Total	0.472	1	0.001	0.005	µg/L	0.5	0	94	60 - 146%	PASS	4	30	PASS
Fluorene	Total	0.435	1	0.001	0.005	µg/L	0.5	0	87	58 - 131%	PASS	2	30	PASS
Indeno[1,2,3-cd]pyrene	Total	0.601	1	0.001	0.005	µg/L	0.5	0	120	50 - 151%	PASS	3	30	PASS
Naphthalene	Total	0.425	1	0.001	0.005	µg/L	0.5	0	85	41 - 126%	PASS	2	30	PASS
Perylene	Total	0.491	1	0.001	0.005	µg/L	0.5	0	98	48 - 141%	PASS	3	30	PASS
Phenanthrene	Total	0.456	1	0.001	0.005	µg/L	0.5	0	91	67 - 127%	PASS	2	30	PASS
Pyrene	Total	0.47	1	0.001	0.005	µg/L	0.5	0	94	54 - 156%	PASS	4	30	PASS

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**PHYSIS**

**TENTATIVELY**

**IDENTIFIED COMPOUNDS**

ENVIRONMENTAL LABORATORIES, INC.

*Innovative Solutions for Nature*

Sample ID: 98854

RT	Area Pct	Concentration (ng/L)	Library/ID	Cas Number	Match Qual
32.6345	5.6711	1111	Anthracene-D10-	1719-06-8	97
43.1625	2.9566	579	Terephthalic acid, isobutyl butyl ester	1000323-56-2	95
64.5691	1.7059	334	1,4-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	6422-86-2	96
14.9664	1.3767	270	Cyclohexane, 1,2,4,5-tetraethyl-, (1.alpha.,2.alpha.,4.alpha.,5.alpha.)-	61142-24-3	85
14.8055	0.6878	135	Cyclohexane, 1,2,4,5-tetraethyl-, (1.alpha.,2.alpha.,4.alpha.,5.alpha.)-	61142-24-3	85
25.3077	0.5547	109	2,2,4-Trimethyl-1,3-pentanediol diisobutyrate	6846-50-0	96
15.6879	0.5432	106	3-Octene, 2,2-dimethyl-	86869-76-3	84

Concentration estimated using the response for Anthracene-d10



Sample ID: 98855

RT	Area Pct	Concentration (ng/L)	Library/ID	Cas Number	Match Qual
32.6331	6.3547	1111	Anthracene-D10	1517-22-2	96
43.1615	2.9169	510	Terephthalic acid, isobutyl butyl ester	1000323-56-2	95
64.5648	1.6351	286	1,4-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	6422-86-2	95
14.9669	1.3625	238	Cyclohexane, 1,2,4,5-tetraethyl-, (1.alpha.,2.alpha.,4.alpha.,5.alpha.)-	61142-24-3	84

Concentration estimated using the response for Anthracene-d10

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Sample ID: 98856

RT	Area Pct	Concentration (ng/L)	Library/ID	Cas Number	Match Qual
32.6335	6.4215	1111	Anthracene-D10-	1719-06-8	96
43.1615	3.1009	537	Terephthalic acid, isobutyl butyl ester	1000323-56-2	95
64.5578	1.6830	291	1,4-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	6422-86-2	97
14.9668	1.5138	262	Cyclohexane, 1,2,4,5-tetraethyl-, (1.alpha.,2.alpha.,4.alpha.,5.alpha.)-	61142-24-3	84
14.9672	1.0103	175	Ethanone, 1-(3,4-dihydro-6-methyl-2H-pyran-2-yl)-	28450-02-4	83
15.6881	0.6305	109	3-Octene, 2,2-dimethyl-	86869-76-3	83

Concentration estimated using the response for Anthracene-d10



Sample ID: Lab Blank Batch O-38076

RT	Area Pct	Concentration (ng/L)	Library/ID	Cas Number	Match Qual
32.6362	6.4994	1111	Anthracene-D10-	1719-06-8	97
43.1684	2.4327	416	Terephthalic acid, isobutyl butyl ester	1000323-56-2	95
64.5707	1.3441	230	1,4-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	6422-86-2	97
14.9678	1.3108	224	3-Hexene, 3-ethyl-2,5-dimethyl-	62338-08-3	84
14.8062	0.6922	118	Cyclohexane, 1,2,4,5-tetraethyl-, (1.alpha.,2.alpha.,4.alpha.,5.alpha.)-	61142-24-3	85

Concentration estimated using the response for Anthracene-d10

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# PERFORMANCE CHAIN OF CUSTODY

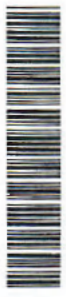
TERRA ENVIRONMENTAL LABORATORIES, INC. AURA

*Innovative Solutions for Nature*

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

# Chain of Custody Record



<b>Client Information (Sub Contract Lab)</b>	Sampler: Frank, Debbie L
Client Contact: Shipping/Receiving	Phone: Debbie.Frank@atl.eurofins.com
Company: Physis Environmental Laboratories	Accreditations Required (See note): State - Hawaii
Address: 1904 Wright Circle	Due Date Requested: 8/4/2022
City: Anaheim	TAT Requested (days):
State, Zip: CA, 92806	PO #:
Phone:	W/O #:
Email:	Project #:
Project Name: RED-HILL	Project #/SSOW#: 38001111
Site: Honolulu BWS Sites	

<b>Analysis Requested</b>	Field Filtered Sample (Yes or No)
	Return MS/WSD (Yes or No)
	SUB (625 PAH Physis LL (EAL) + TICs) 625 PAH Physis LL (EAL) + TICs
<b>Analysis Requested</b>	
COC No.: 380-14850-1	Page: Page 1 of 1
Job #: 380-12725-1	Method of Shipment: <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Swill, Dewatered, BT/Tissue, Ash)	Field Filtered Sample (Yes or No)		Total Number of Containers	Special Instructions/Note:
					Return MS/WSD (Yes or No)	SUB (625 PAH Physis LL (EAL) + TICs) 625 PAH Physis LL (EAL) + TICs		
AIEA GULCH WELLS PUMP 1 (331-201-T-P071) (380-12725-1)	7/26/22	11:00	Water	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	4	See Attached Instructions
AIEA WELLS PUMPS 1&2 (260) (331-203-T-P400) (380-12725-2)	7/26/22	10:09	Water	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	4	See Attached Instructions
MOANALUA WELLS (331-223-T-P202) (380-12725-3)	7/26/22	10:50	Water	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	4	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/substrate 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  
 Empty Kit Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_

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

Custody Seal Intact: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Custody Seal No.:
Relinquished by: _____	Date/Time: _____
Relinquished by: _____	Date/Time: _____
Relinquished by: _____	Date/Time: _____
Relinquished by: _____	Date/Time: _____
Relinquished by: _____	Date/Time: _____
Relinquished by: _____	Date/Time: _____



Project Iteration ID: 1407003-259  
 Client Name: Eurofins Eaton Analytical  
 Project Name: RED-HILL Project # 38001111  
 Job # 380-12725-1  
 COC Page Number: 2 of 2  
 Bottle Label Color: NA

**Sample Receipt Summary**

**Receiving Info**

1. Initials Received By: DA
2. Date Received: 7/29/22
3. Time Received: \_\_\_\_\_
4. Client Name: Eurofins
5. Courier Information: (Please circle)
  - Client
  - UPS
  - Area Fast
  - DRS
  - FedEx
  - GSO/GLS
  - Ontrac
  - PAMS
  - PHYSIS Driver:
    - i. Start Time: \_\_\_\_\_
    - ii. End Time: \_\_\_\_\_
    - iii. Total Mileage: \_\_\_\_\_
    - iv. Number of Pickups: \_\_\_\_\_
6. Container Information: (Please put the # of containers or circle none)
  - Cooler
  - Styrofoam Cooler
  - Boxes
  - None
  - Carboy(s)
  - Carboy Trash Can(s)
  - Carboy Cap(s)
  - Other \_\_\_\_\_
7. What type of ice was used: (Please circle any that apply)
  - Wet Ice
  - Blue Ice
  - Dry Ice
  - Water
  - None
8. Randomly Selected Samples Temperature (°C): -1.6  
 Used I/R Thermometer # 122

**Inspection Info**

1. Initials Inspected By: DA

**Sample Integrity Upon Receipt:**

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

Notes:



3051 Fujita Street  
Torrance, CA 90506  
Tel: (310)-618-8889

Date: 08-08-2022  
EMAX Batch No.: 22G304

Attn: Jackie Contreras

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

Subject: Laboratory Report  
Project: 380-12725

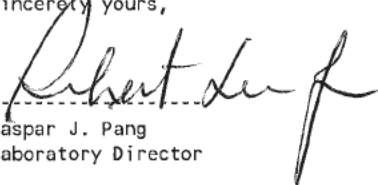
Enclosed is the Laboratory report for samples received on 07/29/22.  
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
380-12725-1	G304-01	07/26/22	WATER	TPH GASOLINE TPH DIESEL & MOTOR OIL
380-12725-2	G304-02	07/26/22	WATER	TPH GASOLINE TPH DIESEL & MOTOR OIL
380-12725-3	G304-03	07/26/22	WATER	TPH GASOLINE TPH DIESEL & MOTOR OIL
380-12725-1MS	G304-01M	07/26/22	WATER	TPH GASOLINE
380-12725-1MSD	G304-01S	07/26/22	WATER	TPH GASOLINE

The results are summarized on the following pages.

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

Sincerely yours,

  
-----  
Caspar J. Pang  
Laboratory Director

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

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

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

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

# Chain of Custody Record



Environment Testing  
 America



226304

**Client Information (Sub Contract Lab)**

Lab PM: Frank, Debbie L  
 Carrier Tracking No(s): 380-14849-1  
 State of Origin: Hawaii  
 Page: Page 1 of 1  
 Job #: 380-12725-1  
 Preservation Codes:  
 M - Hexane  
 N - None  
 O - AsNaO2  
 P - Na2O4S  
 C - Zn Acetate  
 D - Nitric Acid  
 E - NAHSO4  
 F - MeOH  
 G - Amchlor  
 H - Ascorbic Acid  
 I - Ice  
 J - DI Water  
 K - EDTA  
 L - EDA  
 Z - other (specify)  
 Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (w=water, s=solid, o=waste oil, BT=Tissue, A=Air)	Field Filtered Samples (or NO)		Perform MS/MSD (Yes or NO)		Sub (8015 Gas (Purgeable) LL (EAL) 8015 Gas (Purgeable) LL (EAL) and Motor Oil) 8015		Diesel LL (EAL) and Motor Oil		Total Number of Containers	Special Instructions/Note:
					Sample Date	Sample Time	Sample Type	Matrix	Field Filtered Samples	Perform MS/MSD	Sub (8015 Gas)	Sub (8015 Diesel)		
AIEA GULCH WELLS PUMP 1 (331-201-T P071) (380-12725-1)	7/26/22	11:00	Hawaiian	Water				X	X				5	See Attached Instructions
AIEA WELLS PUMPS 1&2 (260) (331-203-TP400) (380-12725-2)	7/26/22	10:09	Hawaiian	Water				X	X				6	See Attached Instructions
MOANALUA WELLS (331-223-T P202) (380-12725-3)	7/26/22	10:50	Hawaiian	Water				X	X				6	See Attached Instructions

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

**Possible Hazard Identification**  
 Unconfirmed  
 Deliverable Requested: I, II, III, IV, Other (specify)  
 Primary Deliverable Rank: 2

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

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

Received by: \_\_\_\_\_ Date: 7/29/22  
 Received by: \_\_\_\_\_ Date: 7/29/22  
 Received by: \_\_\_\_\_ Date: 7/29/22

Company: EMAX  
 Company: EMAX  
 Company: EMAX

Method of Shipment:  
 Cooler Temperature(s) °C and Other Remarks:  
 226304 No. 200304  
 Δ Yes Δ No



REFERENCE: EMAX-SM02 Rev. 12  
**SAMPLE RECEIPT FORM 1**

Type of Delivery <input type="checkbox"/> Fedex <input type="checkbox"/> UPS <input type="checkbox"/> GSO <input type="checkbox"/> Others <input type="checkbox"/> EMAX Courier <input checked="" type="checkbox"/> Client Delivery	Airbill / Tracking Number	ECN <u>226304</u> Recipient <u>Jowhin Zamora</u> Date <u>07/29/22</u> Time <u>11:52</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 type="checkbox"/> Tel # / Fax #	<input type="checkbox"/> Courier Signature	<input checked="" type="checkbox"/> Analysis Required	<input type="checkbox"/> Preservative (if any)	<input checked="" type="checkbox"/> TAT
Safety Issues (if any) Note: _____	<input type="checkbox"/> High concentrations expected	<input type="checkbox"/> From Superfund Site	<input type="checkbox"/> Rad screening required		

**PACKAGING INSPECTION**

Container	<input checked="" type="checkbox"/> Cooler	<input type="checkbox"/> Box	<input type="checkbox"/> Other
Condition	<input type="checkbox"/> Custody Seal	<input type="checkbox"/> Intact	<input type="checkbox"/> Damaged
Packaging	<input checked="" type="checkbox"/> Bubble Pack	<input type="checkbox"/> Styrofoam	<input type="checkbox"/> Popcorn
Temperatures (Cool, ≤6 °C but not frozen)	<input checked="" type="checkbox"/> Cooler 1 <u>5.5</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"/> Sufficient <input type="checkbox"/> _____
			<input type="checkbox"/> Cooler 4 _____ °C <input type="checkbox"/> Cooler 5 _____ °C
			<input type="checkbox"/> Cooler 9 _____ °C <input type="checkbox"/> Cooler 10 _____ °C

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

**DISCREPANCIES**

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action

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

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

**LEGEND:**

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

REVIEWS:

Sample Labeling <u>Maria Rivera</u> Date <u>07/29/22</u>	SRF <u>[Signature]</u> Date <u>7/29/22</u>	PM <u>[Signature]</u> Date <u>8/1/22</u>
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REPORT ID: 22G304

## 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

380-12725

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

SDG#: 22G304



CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-12725

SDG : 22G304

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

A total of three(3) water samples were received on 07/29/22 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. VG39G19B - 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. VG39G19L/VG39G19C 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 G304-01M/G304-01S. Refer to Matrix QC summary form for details.

Surrogate

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

Sample Analysis

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

LAB CHRONICLE  
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client : EUROFINS EATON ANALYTICAL  
Project : 380-12725  
SDG NO. : 22G304  
Instrument ID : GCT039

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes	
				WATER						
MBLK1W	VG39G19B	1	NA	07/29/2213:58	07/29/2213:58	EG29005A	EG29003A	22VG39G19	Method Blank	
LCS1W	VG39G19L	1	NA	07/29/2214:35	07/29/2214:35	EG29006A	EG29003A	22VG39G19	Lab Control Sample (LCS)	
LC01W	VG39G19C	1	NA	07/29/2215:11	07/29/2215:11	EG29007A	EG29003A	22VG39G19	LCS Duplicate	
380-12725-1	G304-01	1	NA	07/29/2215:47	07/29/2215:47	EG29008A	EG29003A	22VG39G19	Field Sample	
380-12725-1MS	G304-01M	1	NA	07/29/2216:24	07/29/2216:24	EG29009A	EG29003A	22VG39G19	Matrix Spike Sample (MS)	
380-12725-1MSD	G304-01S	1	NA	07/29/2217:01	07/29/2217:01	EG29010A	EG29003A	22VG39G19	MS Duplicate (MSD)	
380-12725-2	G304-02	1	NA	07/29/2217:37	07/29/2217:37	EG29011A	EG29003A	22VG39G19	Field Sample	
380-12725-3	G304-03	1	NA	07/29/2218:14	07/29/2218:14	EG29012A	EG29003A	22VG39G19	Field Sample	

FN - Filename  
% Moist - Percent Moisture





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# SAMPLE RESULTS

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

=====  
Client : EUROFINS EATON ANALYTICAL Date Collected: 07/26/22 11:00  
Project : 380-12725 Date Received: 07/29/22  
Batch No. : 22G304 Date Extracted: 07/29/22 15:47  
Sample ID : 380-12725-1 Date Analyzed: 07/29/22 15:47  
Lab Samp ID: G304-01 Dilution Factor: 1  
Lab File ID: EG29008A Matrix: WATER  
Ext Btch ID: 22VG39G19 % Moisture: NA  
Calib. Ref.: EG29003A 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	0.0359	0.0400	90	60-140
=====				

Notes:

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

Detection limits are reported relative to sample result significant figures.

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



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

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 07/26/22 10:50
Project     : 380-12725                   Date Received: 07/29/22
Batch No.   : 22G304                       Date Extracted: 07/29/22 18:14
Sample ID   : 380-12725-3                 Date Analyzed: 07/29/22 18:14
Lab Samp ID: G304-03                       Dilution Factor: 1
Lab File ID: EG29012A                       Matrix: WATER
Ext Btch ID: 22VG39G19                     % Moisture: NA
Calib. Ref.: EG29003A                       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	0.0350	0.0400	88	60-140

Notes:

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

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

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# QC SUMMARIES

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

=====  
Client : EUROFINS EATON ANALYTICAL Date Collected: 07/29/22 13:58  
Project : 380-12725 Date Received: 07/29/22  
Batch No. : 22G304 Date Extracted: 07/29/22 13:58  
Sample ID : MBLK1W Date Analyzed: 07/29/22 13:58  
Lab Samp ID: VG39G19B Dilution Factor: 1  
Lab File ID: EG29005A Matrix: WATER  
Ext Btch ID: 22VG39G19 % Moisture: NA  
Calib. Ref.: EG29003A 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	0.0355	0.0400	89	60-140

=====

Notes:

Parameter H-C Range  
Gasoline C6-C10

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

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

EMAX QUALITY CONTROL DATA  
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL  
PROJECT : 380-12725  
BATCH NO. : 22G304  
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	: VG39G19B	VG39G19L	VG39G19C
LAB FILE ID	: EG29005A	EG29006A	EG29007A
DATE PREPARED	: 07/29/22 13:58	07/29/22 14:35	07/29/22 15:11
DATE ANALYZED	: 07/29/22 13:58	07/29/22 14:35	07/29/22 15:11
PREP BATCH	: 22VG39G19	22VG39G19	22VG39G19
CALIBRATION REF:	EG29003A	EG29003A	EG29003A

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	0.524	105	0.500	0.494	99	6	60-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0465	116	0.0400	0.0457	114	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 : 380-12725  
BATCH NO. : 22G304  
METHOD : 5030B/8015B

MATRIX : WATER		% MOISTURE:NA
DILUTION FACTOR: 1	1	1
SAMPLE ID : 380-12725-1	380-12725-1MS	380-12725-1MSD
LAB SAMPLE ID : G304-01	G304-01M	G304-01S
LAB FILE ID : EG29008A	EG29009A	EG29010A
DATE PREPARED : 07/29/22 15:47	07/29/22 16:24	07/29/22 17:01
DATE ANALYZED : 07/29/22 15:47	07/29/22 16:24	07/29/22 17:01
PREP BATCH : 22VG39G19	22VG39G19	22VG39G19
CALIBRATION REF: EG29003A	EG29003A	EG29003A

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	0.474	95	0.500	0.452	90	5	50-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0438	110	0.0400	0.0423	106	60-140

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



LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-12725

METHOD 3520C/8015B  
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 22G304



CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-12725

SDG : 22G304

METHOD 3520C/8015B  
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

A total of three(3) water samples were received on 07/29/22 to be analyzed for Total Petroleum Hydrocarbons by Extraction in accordance with Method 3520C/8015B and project specific requirements.

Holding Time

Samples were analyzed within the prescribed holding time.

Calibration

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

Method Blank

Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. DSH001WB - 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. DSH001WL/DSH001WC 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 22G287-01M/22G287-01S. Refer to Matrix QC summary form for details.

Surrogate

Surrogates were added on QC and field samples. For this SDG, all surrogate recoveries were within QC limits except for Bromobenzene in G304-02. However, an alternate surrogate, Hexacosane, was 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 with the exception of those that were discussed within the associated QC parameter.



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# SAMPLE RESULTS

METHOD 3520C/8015B  
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 07/26/22 11:00
Project     : 380-12725                   Date Received: 07/29/22
Batch No.   : 22G304                       Date Extracted: 08/01/22 10:30
Sample ID   : 380-12725-1                 Date Analyzed: 08/02/22 18:28
Lab Samp ID: 22G304-01                     Dilution Factor: 1
Lab File ID: LH02022A                       Matrix: WATER
Ext Btch ID: 22DSH001W                       % Moisture: NA
Calib. Ref.: LH02004A                       Instrument ID: D5
=====

```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
Diesel	ND	0.027	0.013	
Motor Oil	ND	0.053	0.027	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.423	0.530	80	60-130
Hexacosane	0.118	0.132	89	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 : 940ml                      Final Volume : 5ml  
Prepared by : P0reto                        Analyzed by : SDeeso

METHOD 3520C/8015B  
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 07/26/22 10:09
Project     : 380-12725                 Date Received: 07/29/22
Batch No.   : 22G304                   Date Extracted: 08/01/22 10:30
Sample ID   : 380-12725-2              Date Analyzed: 08/02/22 18:46
Lab Samp ID: 22G304-02                 Dilution Factor: 1
Lab File ID: LH02023A                 Matrix: WATER
Ext Btch ID: 22DSH001W                % Moisture: NA
Calib. Ref.: LH02004A                 Instrument ID: D5
=====

```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
Diesel	ND	0.026	0.013	
Motor Oil	ND	0.052	0.026	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.261	0.520	50*	60-130
Hexacosane	0.0992	0.130	76	60-130

Notes:

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

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount : 960ml                      Final Volume : 5ml  
Prepared by : P0reto                        Analyzed by : SDeeso

METHOD 3520C/8015B  
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

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=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 07/26/22 10:50
Project     : 380-12725                   Date Received: 07/29/22
Batch No.   : 22G304                       Date Extracted: 08/01/22 10:30
Sample ID   : 380-12725-3                 Date Analyzed: 08/02/22 19:05
Lab Samp ID: 22G304-03                   Dilution Factor: 1
Lab File ID: LHO2024A                     Matrix: WATER
Ext Btch ID: 22DSH001W                   % Moisture: NA
Calib. Ref.: LHO2004A                     Instrument ID: D5
=====

```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
Diesel	ND	0.025	0.012	
Motor Oil	ND	0.049	0.025	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.311	0.490	63	60-130
Hexacosane	0.114	0.123	93	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 : 1020ml                      Final Volume : 5ml  
Prepared by    : P0reto                            Analyzed by : SDeeso

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# QC SUMMARIES



METHOD 3520C/8015B  
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 08/01/22 10:30
Project     : 380-12725                   Date Received: 08/01/22
Batch No.   : 22G304                       Date Extracted: 08/01/22 10:30
Sample ID   : MBLK1W                       Date Analyzed: 08/02/22 14:45
Lab Samp ID: DSH001WB                      Dilution Factor: 1
Lab File ID: LH02010A                      Matrix: WATER
Ext Btch ID: 22DSH001W                     % Moisture: NA
Calib. Ref.: LH02004A                     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	0.346	0.500	69	60-130
Hexacosane	0.104	0.125	83	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    : P0reto                            Analyzed by : SDeeso

EMAX QUALITY CONTROL DATA  
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL  
PROJECT : 380-12725  
BATCH NO. : 22G304  
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	: DSH001WB	DSH001WL	DSH001WC
LAB FILE ID	: LH02010A	LH02011A	LH02012A
DATE PREPARED	: 08/01/22 10:30	08/01/22 10:30	08/01/22 10:30
DATE ANALYZED	: 08/02/22 14:45	08/02/22 15:04	08/02/22 15:22
PREP BATCH	: 22DSH001W	22DSH001W	22DSH001W
CALIBRATION REF:	LH02004A	LH02004A	LH02004A

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	2.21	88	2.50	2.32	93	5	50-130	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromobenzene	0.500	0.398	80	0.500	0.426	85	60-130
Hexacosane	0.125	0.112	90	0.125	0.118	94	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 : 380-12377  
BATCH NO. : 22G287  
METHOD : 3520C/8015B

```

=====
MATRIX      : WATER                                     % MOISTURE:NA
DILUTION FACTOR: 1                                     1
SAMPLE ID   : 380-12377-1                             380-12377-1MS
LAB SAMPLE ID : 22G287-01                             22G287-01M
LAB FILE ID  : LH02017A                               LH02018A
DATE PREPARED : 08/01/22 10:30                       08/01/22 10:30
DATE ANALYZED : 08/02/22 16:55                       08/02/22 17:13
PREP BATCH   : 22DSH001W                             22DSH001W
CALIBRATION REF: LH02004A                             LH02004A
    
```

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Diesel	ND	2.55	2.18	85	2.65	2.26	85	4	50-130	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.510	0.374	73	0.530	0.370	70	60-130
Hexacosane	0.127	0.120	94	0.132	0.126	95	60-130

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

**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>E. JUAGDAN</b>		Lab PM: Frank, Debbie L		Carrier Tracking No(s):		COC No: 380-9619-2757.1	
Client Contact: Dr. Ron Fenstermacher		Phone: <b>808.748.5840</b>		E-Mail: Debbie.Frank@eurofinsus.com		State of Origin:		Page: Page 1 of 3	
Company: City & County of Honolulu		Address: 630 South Beretania Street Chemistry Lab		City: Honolulu		State: HI, 96843		Job #:	
Phone: 808-748-5091(Tel)		Due Date Requested:		TAT Requested (days):		Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Preservation Codes:	
Email: RFENSTEMACHER@hbws.org		PO #: C20525101 exp 05312023		WO #:		Project #: 38001111		A - HCL	
Project Name: RED-HILL/HBWS Sites Event Desc: RUSH Weekly Red Hill		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		M - Hexane	
Site: Hawaii		7/26/22		1100		G		N - None	
<b>Sample Identification</b>		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		O - AsNaO2	
AIEA GULCH WELLS PUMP 1 (331-201-TP071)		7/26/22		1009		G		P - Na2O4S	
AIEA GULCH WELLS PUMP 2 (331-202-TP072)								Q - Na2SO3	
AIEA WELLS PUMPS1&2(260)331-203-TP400								R - Na2SO3	
HALAWA SHAFT (331-241-TP401)								S - H2SO4	
HALAWA WELLS UNITS1&2(331-206-TP065)								T - TSP Dodecahydrate	
MOANALUA WELLS (331-223-TP202)								U - Acetone	
AIEA GULCH WELLS PUMP 1 (331-201-TP071)								V - MCAA	
AIEA GULCH WELLS PUMP 2 (331-202-TP072)								W - pH 4-5	
AIEA WELLS PUMPS1&2(260)331-203-TP400								X - Trizma	
HALAWA SHAFT (331-241-TP401)								Y - EDTA	
HALAWA WELLS UNITS1&2(331-206-TP065)								Z - other (specify)	
<b>Possible Hazard Identification</b>		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air)	
<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		7/26/22		1100		G		Water	
Deliverable Requested: I, II, III, IV, Other (specify)		7/26/22		1009		G		Water	
Empty Kit Relinquished by:								Water	
Relinquished by:		Date: 7/27/22		Time: 1200		Company: HBWS		Water	
Relinquished by:		Date/Time:		Date/Time:		Company:		Water	
Relinquished by:		Date/Time:		Date/Time:		Company:		Water	
Custody Seals Intact: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Custody Seal No.:		Custody Seal No.:		Custody Seal No.:		Water	
Cooler Temperature(s) °C and Other Remarks:		Cooler Temperature(s) °C and Other Remarks:		Cooler Temperature(s) °C and Other Remarks:		Cooler Temperature(s) °C and Other Remarks:		Water	



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

**Chain of Custody Record**



Environmental Testing  
 Laboratory

<b>Client Information</b> Client Contact: Dr. Ron Fenstermacher Company: City & County of Honolulu Address: 630 South Beretania Street Chemistry Lab City: Honolulu State, Zip: HI, 96843 Phone: 808-748-5091 (Tel) Email: RFENSTEMACHER@hbws.org Project Name: RED-HILL/HBWS Sites Event Desc: RUSH Weekly Red Hill Site: Hawaii		Lab PM: Frank, Debbie L E-Mail: Debbie.Frank@et.eurofinsus.com PWSID:		Carrier Tracking No(s): 380-9619-2757.2 State of Origin: Page 2 of 3 Job #:	
Due Date Requested: TAT Requested (days): Compliance Project: <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No PO #: C20525101 exp 05312023 WO #: Project #: 38001111 SOW#:	Analysis Requested SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL) SUBCONTRACT - 8015 Diesel LL (EAL) and Motor Oil 525.2.PREC. (MOD) 52plus Plus TICs SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL) RA RA RA	Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)	
Sample Date: <del>XXXXXX</del> Sample Time: <del>XXXXXX</del> Sample Type (C=comp, G=grab): Matrix (W=water, G=soil, O=organic, On=astabil, BT=TISSUE, A=AIR):	Sample Date: 07/26/22 Sample Time: 1050 Sample Type: G Matrix: Water	Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL) + TICs SUBCONTRACT - 8015 Diesel LL (EAL) and Motor Oil 525.2.PREC. (MOD) 52plus Plus TICs SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL) RA RA RA		Total Number of Containers: <del>XXXXXX</del> Special Instructions/Note:	
<b>Possible Hazard Identification</b> <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological					
<b>Deliverable Requested: I, II, III, IV, Other (specify)</b> <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Special Instructions/QC Requirements:					
<b>Empty Kit Relinquished by:</b>					
Relinquished by: R. NISHIKAWA Date/Time: 07/26/22 1200 Company: Bus		Relinquished by: G. REINER Date/Time: 07/25/2022 00:15 Company: BOA		Relinquished by: Date/Time: Company:	
Relinquished by: Date/Time: Company:		Relinquished by: Date/Time: Company:		Relinquished by: Date/Time: Company:	
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:	

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VPR 06/08/2021



**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: 7/22/2022 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	4	24	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	12	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	0	0	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 Acid	12
Amber Glass 1 liter - Sodium Thiosulfate	Sodium Thiosulfate	24
Amber Glass 1 Liter- Sodium Sulfite/HCl	Sodium Sulfite w/HCl	12
VOA Vial 40mL - NaThiosulfate/HCL	Sodium Thiosulfate/Hydrochloric Acid	0
Voa Vial 40ml - SodiumThio w/HCl-dropper	Sodium Thiosulfate	24
Total Bottles:		<u>72</u>

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

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# INTERNAL CHAIN OF CUSTODY RECORD

EEA Folder Number:

**SAMPLE TEMP RECEIVED:**  
Note: If sampler are out of temperature range, let the ASM's know. ASM's will determine whether to proceed with analysis or not.  
**SAMPLES REC'D DAY OF COLLECTION?** Yes / No

IR Gun ID = 649A (Observation = 3.6 °C) (Corr. Factor -0.3 °C) (Final = 3.3 °C)

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

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

**Compliance Acceptance Criteria:**

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

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

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

4 Dioxin (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(8261,882), 806, SPME, @CH, 832LCMS, 888, 838, Anstoxin, 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): \_\_\_\_\_

RECEIVED BY:	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
		G. REITNER	Eurofins Eaton Analytical	07/28/2022	10:15
SAMPLES CHECKED AGAINST COC BY:	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
			Eurofins Eaton Analytical		





Euron Analytical

# INTERNAL CHAIN OF CUSTODY RECORD

EEA Folder Number: Euron Analytical  
SAMPLE TEMP RECEIVED: \_\_\_\_\_  
Note: If samples are out of temperature range, let the ASM know. ASMs will determine whether to proceed with analysis or not.  
SAMPLES REC'D DAY OF COLLECTION? Yes / No

IR Gun ID = 649A (Observation = 4.2 °C) (Corr. Factor = -0.3 °C) (Final = 3.9 °C)

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

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

### Compliance Acceptance Criteria:

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

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

1 = (Observation = '0') (Corr. Factor = '0') (Final = '0')	2 = (Observation = '0') (Corr. Factor = '0') (Final = '0')
3 = (Observation = '0') (Corr. Factor = '0') (Final = '0')	4 = (Observation = '0') (Corr. Factor = '0') (Final = '0')

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) Expiration Date: \_\_\_\_\_ Results: \_\_\_\_\_

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

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

7) VOA and Radon Headspace: \_\_\_\_\_ No Samples with Headspace: \_\_\_\_\_ Samples with Headspace (see below): \_\_\_\_\_

Exempt from headspace concerns Methods 816.4, HAA(825, 852), 808, 8PME, @CH, 822LCMS, 886, 838, Anatoxin, LCMS methods using 40 ml vials, International clients:	Samp ID	Bottle #	None/<8	>8mm	Test

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

RECEIVED BY: <u>[Signature]</u>	COMPANY/TITLE: Eurofins Euron Analytical	DATE: 07/28/2022	TIME: 10:15
SAMPLES CHECKED AGAINST ODD BY: <u>[Signature]</u>	COMPANY/TITLE: Eurofins Euron Analytical	DATE: _____	TIME: _____



# INTERNAL CHAIN OF CUSTODY RECORD

EEA Folder Number:

**SAMPLE TEMP RECEIVED:**  
 Note: If samples are out of temperature range, let the ASMs know. ASMs will determine whether to proceed with analysis or not.  
**SAMPLES REC'D DAY OF COLLECTION?** Yes / No

IR Gun ID = 649A (Observation = 4.1 °C) (Corr. Factor -0.3 °C) (Final = 3.8 °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:**

- 1) Chemistry: >0, ≤8°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):

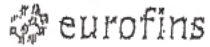
**Headspace Documentation (use additional VOC and Radon Internal COFC for additional bottles)**

Exempt from headspace concerns: Methods 815.4, HAA(8281,882), 806, SPME, @CH, 832LCMS, 888, 836, Anatoxin, LCMS methods using 40 ml vials, International clients:

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

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

RECEIVED BY:	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
		G. REITNER	Eurofins Eaton Analytical	07/28/2022	10:15
SAMPLES CHECKED AGAINST DOO BY:	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
			Eurofins Eaton Analytical		



Eaton Analytical

# INTERNAL CHAIN OF CUSTODY RECORD

EEA Folder Number:

### SAMPLE TEMP RECEIVED:

Notes: If sampler 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 = 649A (Observation = 2.4 °C) (Corr. Factor -0.3 °C) (Final = 2.1 °C)

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

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

### Compliance Acceptance Criteria:

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

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

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

4 Dioxin (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):

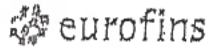
**Headspace Documentation (use additional VOC and Radon Internal COFC for additional bottles)**

Exempt from headspace concerns: Methods 815.4, HAA(8281,882), 808, 8PME, @CH, 832LCMS, 888, 838, Anstoxin, LCMS methods using 40 ml vials, International clients:

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

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

<small>RECEIVED BY:</small>	<small>SIGNATURE</small> 	<small>PRINT NAME</small> G. REITNER	<small>COMPANY/TITLE</small> Eurofins Eaton Analytical	<small>DATE</small> 07/28/2022	<small>TIME</small> 10:15
<small>SAMPLES CHECKED AGAINST COC BY:</small>	<small>SIGNATURE</small>	<small>PRINT NAME</small>	<small>COMPANY/TITLE</small> Eurofins Eaton Analytical	<small>DATE</small>	<small>TIME</small>



Eaton Analytical

# INTERNAL CHAIN OF CUSTODY RECORD

EEA Folder Number:

### SAMPLE TEMP RECEIVED:

Notes: If samples are out of temperature range, let the ASM's know. ASM's will determine whether to proceed with analysis or not.

SAMPLES REC'D DAY OF COLLECTION? Yes / No

IR Gun ID = 649A (Observation = 4.1 °C) (Corr. Factor -0.3 °C) (Final = 3.8 °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:

- 1) Chemistry: >0, ≤ 8°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 816.4, HAA(8251, 852), 806, BPME, @CH, 832LCMS, 868, 836, 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 	PRINT NAME <b>G. REITNER</b>	COMPANY/TITLE Eurofins Eaton Analytical	DATE <b>07/28/2022</b>	TIME <b>10:15</b>
SIGNATURE	PRINT NAME	COMPANY/TITLE Eurofins Eaton Analytical	DATE	TIME
SAMPLES CHECKED AGAINST COC BY: _____				

# INTERNAL CHAIN OF CUSTODY RECORD

EEA Folder Number:

**SAMPLE TEMP RECEIVED:**  
 Note: If samples are out of temperature range, let the ASM know. ASM will determine whether to proceed with analysis or not.  
**SAMPLES REC'D DAY OF COLLECTION?** Yes / No

IR Gun ID = 649A (Observation = 3.6 °C) (Corr. Factor -0.3 °C) (Final = 3.3 °C)

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

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

**Compliance Acceptance Criteria:**

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

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

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

4 Dioxin (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, 862), 805, SPME, @CH, 832LCMS, 856, 836, Anatoxin, LCMS methods using 40 ml vials, International clients:

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

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

<b>SIGNATURE</b> RECEIVED BY:	<b>PRINT NAME</b> G. REITNER	<b>COMPANY/TITLE</b> Eurofins Eaton Analytical	<b>DATE</b> 07/28/2022	<b>TIME</b> 10:15
<b>SIGNATURE</b> SAMPLES CHECKED AGAINST COC BY:	<b>PRINT NAME</b>	<b>COMPANY/TITLE</b> Eurofins Eaton Analytical	<b>DATE</b>	<b>TIME</b>



# 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 = 649A (Observation = 4.7 °C) (Corr. Factor -0.3 °C) (Final = 4.4 °C)

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

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

**Compliance Acceptance Criteria:**

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

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

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

4 Dioxin (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(8261,862), 806, 8PME, @CH, 832LCMS, 888, 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): \_\_\_\_\_

RECEIVED BY: <u>[Signature]</u>	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
		<u>G. REITNER</u>	Eurofins Eaton Analytical	<u>07/28/2022</u>	<u>10:15</u>
SAMPLES CHECKED AGAINST DOO BY: _____	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
			Eurofins Eaton Analytical		

# INTERNAL CHAIN OF CUSTODY RECORD

EBA Folder Number:

SAMPLE TEMP RECEIVED:  
 Note: If sampler 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 = 649A (Observation = 5.2 °C) (Corr. Factor -0.3 °C) (Final = 4.9 °C)

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

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

**Compliance Acceptance Criteria:**

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

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

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

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

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

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

7) VOA and Radon Headspace:  No Samples with Headspace:  Samples with Headspace (see below):

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

Exempt from headspace concerns: Methods 815.4, HAA(8281,832), 808, 8PME, 804H, 832LCMS, 858, 838, Anatoxin, LCMS methods using 40 ml vials, International clients:

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

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

RECEIVED BY:	SIGNATURE: <u>[Signature]</u>	PRINT NAME: <u>G. REITNER</u>	COMPANY/TITLE: <u>Eurofins Eaton Analytical</u>
			DATE: <u>07/28/2022</u> TIME: <u>10:15</u>
SAMPLES CHECKED AGAINST COC BY:	SIGNATURE:	PRINT NAME:	COMPANY/TITLE: <u>Eurofins Eaton Analytical</u>
			DATE: _____ TIME: _____

48-5840  
PER SUPPLY

SHIP DATE: 27 JUL 22  
ACTWGT: 70.00 LB  
CAD: 100205419/INET4490

UNITED STATES US  
LULU HI 96843

BILL RECIPIENT

TO C CHUCK

EUROFINS EATON ANALYTICAL, INC

750 ROYAL OAKS DR

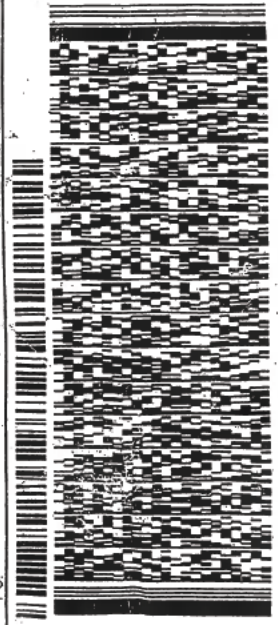
SUITE 100

MONROVIA CA 91016

(626) 363-1178  
INV. NO. REF:

581J20A92FE4A

DEPT:



THU - 28 JUL 10:30A

PRIORITY OVERNIGHT

2 of 8

MPS# 7775 0467 0892

0263

Mstr# 7775-0467 1042

91016

MI7 WILDA

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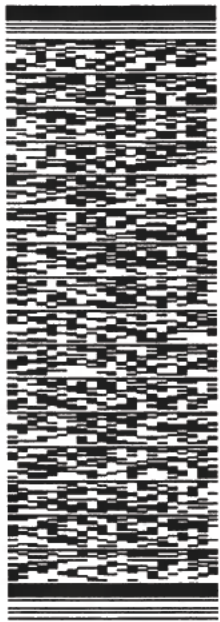
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ORIGIN ID: HIKA (808) 748-5840  
 BWS CHEM LAB  
 HONOLULU BOARD OF WATER SUPPLY  
 630 S. BERETANIA ST.  
 CHEMICAL LABORATORY  
 HONOLULU, HI 96843  
 UNITED STATES US

SHIP DATE: 27 JUL 22  
 ACTWGT: 70.00 LB  
 CAD: 100205419/NET/4490  
 BILL RECEIPT

TO **C CHUCK**  
**EUROFINS EATON ANALYTICAL, INC**  
**750 ROYAL OAKS DR**  
**SUITE 100**  
**MONROVIA CA 91016**  
 (926) 386-1178 REF:  
 NV: DEPT:  
 PO:

581.020A92/FE4A



JZZ2822841281uv

TRK# 1 of 8  
 0201 7775 0467 1042  
 ## MASTER ##

THU - 28 JUL 10:30A  
 PRIORITY OVERNIGHT

**WZ WHPA**  
 CA-US BUR 91016



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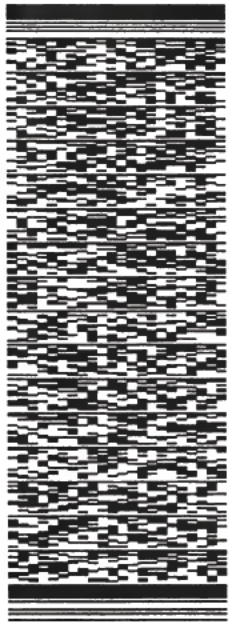
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ORIGIN ID: HIKA (808) 748-5840  
 BMS-CHEM-LAB  
 HONOLULU BOARD OF WATER SUPPLY  
 630 S. BERETANIA ST.  
 CHEMICAL LABORATORY  
 HONOLULU, HI 96843  
 UNITED STATES US

SHIP DATE: 27 JUL 22  
 ACTWGT: 70.00 LB  
 CAD: 100205419/INET/4490  
 BILL RECEIPT

TO **C CHUCK**  
**EUROFINS EATON ANALYTICAL, INC**  
**750 ROYAL OAKS DR**  
**SUITE 100**  
**MONROVIA CA 91016**  
 (626) 386-1178 REF:  
 NV/ DEPT:  
 PO/

581J20A92/FE4A



THU - 28 JUL 10:30A  
 PRIORITY OVERNIGHT

MPS# 7775 0467 1638  
 3 of 8  
 Mstr# 7775 0467 1042

0201

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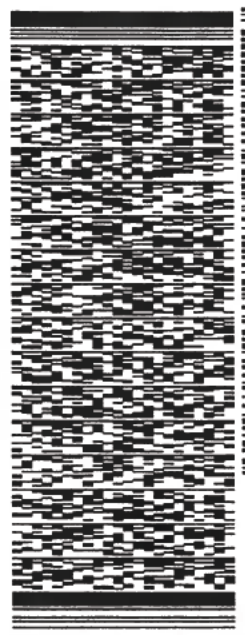
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ORIGIN ID:HIKA (808) 748-5940  
BWS-CHEMILAB  
HONOLULU BOARD OF WATER SUPPLY  
630 S. BERETANIA ST.  
CHEMICAL LABORATORY  
HONOLULU, HI 96843  
UNITED STATES US

SHIP DATE: 27 JUL 22  
ACTWGT: 70.00 LB  
CAD: 100205419/NET/4490  
BILL RECEIPT

TO C CHUCK  
EUROFINS EATON ANALYTICAL, INC  
750 ROYAL OAKS DR  
SUITE 100  
MONROVIA CA 91016  
REF: (626) 386-1178  
PO: NV  
DEPT:

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4 of 8

MPS# 7775 0467 1833  
Mstr# 7775 0467 1042

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

SHIP DATE: 27 JUL 22  
 ACTWGT: 7.00 LB  
 CAD: 100205419/NET 4490  
 BILL RECEIPT

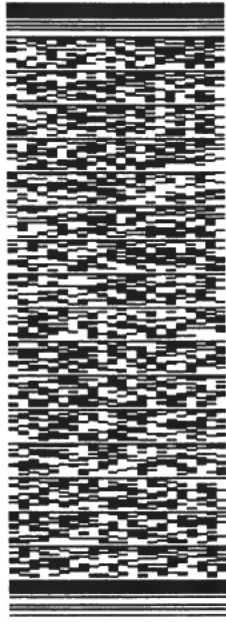
TO C CHUCK

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

(626) 386-1178 REF:  
 INV:  
 PO:

DEPT:

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5 of 8

MPS# 7775 0467 2233  
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 Mstr# 7775 0467 1042

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

SHIP DATE: 27 JUL 22  
 ACTWGT: 70.00 LB  
 CAD: 100205419/INNET4490

BILL RECIPIENT

TO C CHUCK

EUROFINS EATON ANALYTICAL, INC  
 750 ROYAL OAKS DR  
 SUITE 100

MONROVIA CA 91016  
 (626) 386-1178  
 INV. REF.

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DEPT:



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Mstr# 7775 0467 1042

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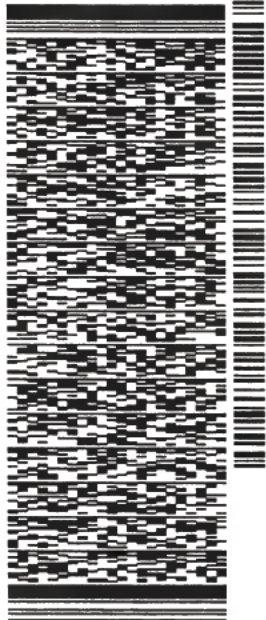
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ORIGIN ID:HIKA (808) 748-5840  
 BWS CHEM LAB  
 HONOLULU BOARD OF WATER SUPPLY  
 630 S. BERETANIA ST.  
 CHEMICAL LABORATORY  
 HONOLULU HI 96943  
 UNITED STATES US

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 EUROFINS EATON ANALYTICAL, INC  
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 SUITE 100  
 MONROVIA CA 91016  
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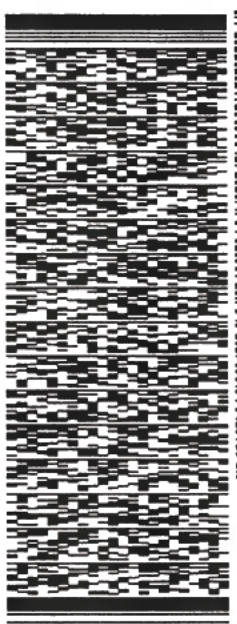


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BWS CHEM LAB  
HONOLULU BOARD OF WATER SUPPLY  
630 S. BERETANIA ST.  
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HONOLULU HI 96843  
UNITED STATES US

SHIP DATE: 27 JUL 22  
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CAD: 100205419/NET14490  
BILL RECIPIENT

TO C CHUCK  
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SUITE 100  
MONROVIA CA 91016  
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8 of 8  
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# Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-12725-1

**Login Number: 12725**  
**List Number: 1**  
**Creator: Ngo, Theodore**

**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.	False	Containers recd broken. Sufficient sample in remaining containers for analysis.
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	

