

# ANALYTICAL REPORT

## PREPARED FOR

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Honolulu, Hawaii 96843

Generated 11/13/2024 9:53:58 AM

## JOB DESCRIPTION

RED-HILL  
Weekly

## JOB NUMBER

380-119982-1

# Eurofins Eaton Analytical Pomona

## Job Notes

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

## Compliance Statement

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

## Authorization



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# Definitions/Glossary

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

Job ID: 380-119982-1  
SDG: Weekly

## Qualifiers

### GC/MS Semi VOA

Qualifier	Qualifier Description
^3+	Reporting Limit Check Standard is outside acceptance limits, high biased
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### GC/MS Semi VOA TICs

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

## 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: RED-HILL

Job ID: 380-119982-1

**Job ID: 380-119982-1**

**Eurofins Eaton Analytical Pomona**

## **Job Narrative 380-119982-1**

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

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

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

### **Receipt**

The samples were received on 10/30/2024 9:35 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 1.1°C, 1.3°C, 2.4°C and 2.7°C.

### **GC/MS Semi VOA**

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

### **Gasoline Range Organics**

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

### **Diesel Range Organics**

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

# Detection Summary

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

Job ID: 380-119982-1  
SDG: Weekly

**Client Sample ID: AIEA GULCH WELLS PUMP 2  
(331-202-TP072)**

**Lab Sample ID: 380-119982-1**

No Detections.

**Client Sample ID: TB:AIEA GULCH WELLS P2 (331-202-TP072)**

**Lab Sample ID: 380-119982-2**

No Detections.

**Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2  
(331-203-TP400)**

**Lab Sample ID: 380-119982-3**

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Dieldrin	0.015		0.0097	ug/L	1		525.2	Total/NA

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

**Lab Sample ID: 380-119982-4**

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: 380-119982-1  
SDG: Weekly

**Client Sample ID: AIEA GULCH WELLS PUMP 2  
(331-202-TP072)**

**Lab Sample ID: 380-119982-1**

**Date Collected: 10/28/24 10:31**

**Matrix: Drinking Water**

**Date Received: 10/30/24 09:35**

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:14	1
2,4'-DDD	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:14	1
2,4'-DDE	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:14	1
2,4'-DDT	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:14	1
2,4-Dinitrotoluene	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:14	1
2,6-Dinitrotoluene	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:14	1
2-Methylnaphthalene	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:14	1
4,4'-DDD	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:14	1
4,4'-DDE	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:14	1
4,4'-DDT	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:14	1
Acenaphthene	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:14	1
Acenaphthylene	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:14	1
Acetochlor	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:14	1
Alachlor	<0.049		0.049	ug/L		10/31/24 09:04	11/01/24 15:14	1
alpha-BHC	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:14	1
alpha-Chlordane	<0.049		0.049	ug/L		10/31/24 09:04	11/01/24 15:14	1
Anthracene	<0.019		0.019	ug/L		10/31/24 09:04	11/01/24 15:14	1
Atrazine	<0.049		0.049	ug/L		10/31/24 09:04	11/01/24 15:14	1
Benz(a)anthracene	<0.049		0.049	ug/L		10/31/24 09:04	11/01/24 15:14	1
Benzo[a]pyrene	<0.019		0.019	ug/L		10/31/24 09:04	11/01/24 15:14	1
Benzo[b]fluoranthene	<0.019		0.019	ug/L		10/31/24 09:04	11/01/24 15:14	1
Benzo[g,h,i]perylene	<0.049		0.049	ug/L		10/31/24 09:04	11/01/24 15:14	1
Benzo[k]fluoranthene	<0.019		0.019	ug/L		10/31/24 09:04	11/01/24 15:14	1
beta-BHC	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:14	1
Bis(2-ethylhexyl) phthalate	<0.58		0.58	ug/L		10/31/24 09:04	11/01/24 15:14	1
Bromacil	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:14	1
Butachlor	<0.049		0.049	ug/L		10/31/24 09:04	11/01/24 15:14	1
Butylbenzylphthalate	<0.49		0.49	ug/L		10/31/24 09:04	11/01/24 15:14	1
Chlorobenzilate	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:14	1
Chloroneb	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:14	1
Chlorothalonil (Draconil, Bravo)	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:14	1
Chlorpyrifos	<0.049		0.049	ug/L		10/31/24 09:04	11/01/24 15:14	1
Chrysene	<0.019		0.019	ug/L		10/31/24 09:04	11/01/24 15:14	1
delta-BHC	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:14	1
Di(2-ethylhexyl)adipate	<0.58		0.58	ug/L		10/31/24 09:04	11/01/24 15:14	1
Dibenz(a,h)anthracene	<0.049		0.049	ug/L		10/31/24 09:04	11/01/24 15:14	1
Diclorvos (DDVP)	<0.049		0.049	ug/L		10/31/24 09:04	11/01/24 15:14	1
Dieldrin	<0.0097		0.0097	ug/L		10/31/24 09:04	11/01/24 15:14	1
Diethylphthalate	<0.49		0.49	ug/L		10/31/24 09:04	11/01/24 15:14	1
Dimethylphthalate	<0.49		0.49	ug/L		10/31/24 09:04	11/01/24 15:14	1
Di-n-butyl phthalate	<0.97		0.97	ug/L		10/31/24 09:04	11/01/24 15:14	1
Di-n-octyl phthalate	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:14	1
Endosulfan I (Alpha)	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:14	1
Endosulfan II (Beta)	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:14	1
Endosulfan sulfate	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:14	1
Endrin	<0.0097		0.0097	ug/L		10/31/24 09:04	11/01/24 15:14	1
Endrin aldehyde	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:14	1
EPTC	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:14	1

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# Client Sample Results

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

Job ID: 380-119982-1  
SDG: Weekly

**Client Sample ID: AIEA GULCH WELLS PUMP 2  
(331-202-TP072)**

**Lab Sample ID: 380-119982-1**

**Date Collected: 10/28/24 10:31**

**Matrix: Drinking Water**

**Date Received: 10/30/24 09:35**

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:14	1
Fluorene	<0.049		0.049	ug/L		10/31/24 09:04	11/01/24 15:14	1
gamma-Chlordane	<0.049		0.049	ug/L		10/31/24 09:04	11/01/24 15:14	1
Heptachlor	<0.0097	^3+	0.0097	ug/L		10/31/24 09:04	11/01/24 15:14	1
Heptachlor epoxide (isomer B)	<0.0097		0.0097	ug/L		10/31/24 09:04	11/01/24 15:14	1
Hexachlorobenzene	<0.049		0.049	ug/L		10/31/24 09:04	11/01/24 15:14	1
Hexachlorocyclopentadiene	<0.049		0.049	ug/L		10/31/24 09:04	11/01/24 15:14	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049	ug/L		10/31/24 09:04	11/01/24 15:14	1
Isophorone	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:14	1
Lindane	<0.0097		0.0097	ug/L		10/31/24 09:04	11/01/24 15:14	1
Malathion	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:14	1
Methoxychlor	<0.049		0.049	ug/L		10/31/24 09:04	11/01/24 15:14	1
Metolachlor	<0.049		0.049	ug/L		10/31/24 09:04	11/01/24 15:14	1
Molinate	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:14	1
Naphthalene	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:14	1
Parathion	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:14	1
Pendimethalin (Penoxaline)	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:14	1
Phenanthrene	<0.039		0.039	ug/L		10/31/24 09:04	11/01/24 15:14	1
Propachlor	<0.049		0.049	ug/L		10/31/24 09:04	11/01/24 15:14	1
Pyrene	<0.049		0.049	ug/L		10/31/24 09:04	11/01/24 15:14	1
Simazine	<0.049		0.049	ug/L		10/31/24 09:04	11/01/24 15:14	1
Terbacil	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:14	1
Terbutylazine	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:14	1
Thiobencarb	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:14	1
Total Permethrin (mixed isomers)	<0.19		0.19	ug/L		10/31/24 09:04	11/01/24 15:14	1
trans-Nonachlor	<0.049		0.049	ug/L		10/31/24 09:04	11/01/24 15:14	1
Trifluralin	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:14	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	10/31/24 09:04	11/01/24 15:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	96		70 - 130	10/31/24 09:04	11/01/24 15:14	1
Perylene-d12	84		70 - 130	10/31/24 09:04	11/01/24 15:14	1
Triphenylphosphate	112		70 - 130	10/31/24 09:04	11/01/24 15:14	1

**Method: EPA 625.1 SIM - Semivolatile Organic Compounds GC/MS (SIM)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.19		0.19	ug/L		11/03/24 05:14	11/10/24 20:19	1
2-Methylnaphthalene	<0.19		0.19	ug/L		11/03/24 05:14	11/10/24 20:19	1
Acenaphthene	<0.19		0.19	ug/L		11/03/24 05:14	11/10/24 20:19	1
Acenaphthylene	<0.19		0.19	ug/L		11/03/24 05:14	11/10/24 20:19	1
Anthracene	<0.19		0.19	ug/L		11/03/24 05:14	11/10/24 20:19	1
Benzo[a]anthracene	<0.19		0.19	ug/L		11/03/24 05:14	11/10/24 20:19	1
Benzo[a]pyrene	<0.19		0.19	ug/L		11/03/24 05:14	11/10/24 20:19	1
Benzo[b]fluoranthene	<0.19		0.19	ug/L		11/03/24 05:14	11/10/24 20:19	1
Benzo[g,h,i]perylene	<0.19		0.19	ug/L		11/03/24 05:14	11/10/24 20:19	1
Benzo[k]fluoranthene	<0.19		0.19	ug/L		11/03/24 05:14	11/10/24 20:19	1
Chrysene	<0.19		0.19	ug/L		11/03/24 05:14	11/10/24 20:19	1

Eurofins Eaton Analytical Pomona



# Client Sample Results

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

Job ID: 380-119982-1  
SDG: Weekly

**Client Sample ID: AIEA GULCH WELLS PUMP 2  
(331-202-TP072)**

**Lab Sample ID: 380-119982-1**

**Date Collected: 10/28/24 10:31**

**Matrix: Drinking Water**

**Date Received: 10/30/24 09:35**

**Method: EPA 625.1 SIM - Semivolatile Organic Compounds GC/MS (SIM) (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenz(a,h)anthracene	<0.19		0.19	ug/L		11/03/24 05:14	11/10/24 20:19	1
Fluoranthene	<0.19		0.19	ug/L		11/03/24 05:14	11/10/24 20:19	1
Fluorene	<0.19		0.19	ug/L		11/03/24 05:14	11/10/24 20:19	1
Indeno[1,2,3-cd]pyrene	<0.19		0.19	ug/L		11/03/24 05:14	11/10/24 20:19	1
Naphthalene	<0.19		0.19	ug/L		11/03/24 05:14	11/10/24 20:19	1
Phenanthrene	<0.19		0.19	ug/L		11/03/24 05:14	11/10/24 20:19	1
Pyrene	<0.19		0.19	ug/L		11/03/24 05:14	11/10/24 20:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	84		28 - 127	11/03/24 05:14	11/10/24 20:19	1
2-Fluorobiphenyl (Surr)	77		31 - 120	11/03/24 05:14	11/10/24 20:19	1
2-Fluorophenol (Surr)	47		17 - 120	11/03/24 05:14	11/10/24 20:19	1
Nitrobenzene-d5 (Surr)	86		27 - 120	11/03/24 05:14	11/10/24 20:19	1
Phenol-d6 (Surr)	28		10 - 120	11/03/24 05:14	11/10/24 20:19	1
p-Terphenyl-d14 (Surr)	87		45 - 120	11/03/24 05:14	11/10/24 20:19	1

**Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS)**

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	11/03/24 05:14	11/12/24 13:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	84		33 - 139	11/03/24 05:14	11/12/24 13:11	1
2-Fluorobiphenyl (Surr)	85		33 - 126	11/03/24 05:14	11/12/24 13:11	1
2-Fluorophenol (Surr)	51		12 - 120	11/03/24 05:14	11/12/24 13:11	1
Nitrobenzene-d5 (Surr)	96		36 - 120	11/03/24 05:14	11/12/24 13:11	1
Phenol-d6 (Surr)	28		10 - 120	11/03/24 05:14	11/12/24 13:11	1
p-Terphenyl-d14 (Surr)	87		47 - 131	11/03/24 05:14	11/12/24 13:11	1

**Method: SW846 8015B GRO LL - Gasoline Range Organics - (GC)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	<10		10	ug/L			11/09/24 17:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		38 - 134		11/09/24 17:46	1

**Method: SW846 8015B - Diesel Range Organics (DRO) (GC) Low Level**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C24)	<26		26	ug/L		11/01/24 11:05	11/12/24 04:06	1
Motor Oil Range Organics [C24-C36]	<26		26	ug/L		11/01/24 11:05	11/12/24 04:06	1
C8-C18	<26		26	ug/L		11/01/24 11:05	11/12/24 04:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	92		60 - 130	11/01/24 11:05	11/12/24 04:06	1

# Client Sample Results

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

Job ID: 380-119982-1  
SDG: Weekly

**Client Sample ID: TB:AIEA GULCH WELLS P2 (331-202-TP072)**

**Lab Sample ID: 380-119982-2**

Date Collected: 10/28/24 10:31

Matrix: Water

Date Received: 10/30/24 09:35

**Method: SW846 8015B GRO LL - Gasoline Range Organics - (GC)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	<10		10	ug/L			11/09/24 20:22	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		38 - 134				11/09/24 20:22	1

**Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP400)**

**Lab Sample ID: 380-119982-3**

Date Collected: 10/28/24 10:55

Matrix: Drinking Water

Date Received: 10/30/24 09:35

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:55	1
2,4'-DDD	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:55	1
2,4'-DDE	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:55	1
2,4'-DDT	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:55	1
2,4-Dinitrotoluene	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:55	1
2,6-Dinitrotoluene	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:55	1
2-Methylnaphthalene	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:55	1
4,4'-DDD	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:55	1
4,4'-DDE	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:55	1
4,4'-DDT	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:55	1
Acenaphthene	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:55	1
Acenaphthylene	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:55	1
Acetochlor	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:55	1
Alachlor	<0.048		0.048	ug/L		10/31/24 09:04	11/01/24 15:55	1
alpha-BHC	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:55	1
alpha-Chlordane	<0.048		0.048	ug/L		10/31/24 09:04	11/01/24 15:55	1
Anthracene	<0.019		0.019	ug/L		10/31/24 09:04	11/01/24 15:55	1
Atrazine	<0.048		0.048	ug/L		10/31/24 09:04	11/01/24 15:55	1
Benz(a)anthracene	<0.048		0.048	ug/L		10/31/24 09:04	11/01/24 15:55	1
Benzo[a]pyrene	<0.019		0.019	ug/L		10/31/24 09:04	11/01/24 15:55	1
Benzo[b]fluoranthene	<0.019		0.019	ug/L		10/31/24 09:04	11/01/24 15:55	1
Benzo[g,h,i]perylene	<0.048		0.048	ug/L		10/31/24 09:04	11/01/24 15:55	1
Benzo[k]fluoranthene	<0.019		0.019	ug/L		10/31/24 09:04	11/01/24 15:55	1
beta-BHC	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:55	1
Bis(2-ethylhexyl) phthalate	<0.58		0.58	ug/L		10/31/24 09:04	11/01/24 15:55	1
Bromacil	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:55	1
Butachlor	<0.048		0.048	ug/L		10/31/24 09:04	11/01/24 15:55	1
Butylbenzylphthalate	<0.48		0.48	ug/L		10/31/24 09:04	11/01/24 15:55	1
Chlorobenzilate	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:55	1
Chloroneb	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:55	1
Chlorothalonil (Draconil, Bravo)	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:55	1
Chlorpyrifos	<0.048		0.048	ug/L		10/31/24 09:04	11/01/24 15:55	1
Chrysene	<0.019		0.019	ug/L		10/31/24 09:04	11/01/24 15:55	1
delta-BHC	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:55	1
Di(2-ethylhexyl)adipate	<0.58		0.58	ug/L		10/31/24 09:04	11/01/24 15:55	1
Dibenz(a,h)anthracene	<0.048		0.048	ug/L		10/31/24 09:04	11/01/24 15:55	1
Diclorvos (DDVP)	<0.048		0.048	ug/L		10/31/24 09:04	11/01/24 15:55	1
<b>Dieldrin</b>	<b>0.015</b>		0.0097	ug/L		10/31/24 09:04	11/01/24 15:55	1

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# Client Sample Results

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

Job ID: 380-119982-1  
SDG: Weekly

**Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2  
(331-203-TP400)**

**Lab Sample ID: 380-119982-3**

Date Collected: 10/28/24 10:55

Matrix: Drinking Water

Date Received: 10/30/24 09:35

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diethylphthalate	<0.48		0.48	ug/L		10/31/24 09:04	11/01/24 15:55	1
Dimethylphthalate	<0.48		0.48	ug/L		10/31/24 09:04	11/01/24 15:55	1
Di-n-butyl phthalate	<0.97		0.97	ug/L		10/31/24 09:04	11/01/24 15:55	1
Di-n-octyl phthalate	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:55	1
Endosulfan I (Alpha)	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:55	1
Endosulfan II (Beta)	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:55	1
Endosulfan sulfate	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:55	1
Endrin	<0.0097		0.0097	ug/L		10/31/24 09:04	11/01/24 15:55	1
Endrin aldehyde	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:55	1
EPTC	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:55	1
Fluoranthene	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:55	1
Fluorene	<0.048		0.048	ug/L		10/31/24 09:04	11/01/24 15:55	1
gamma-Chlordane	<0.048		0.048	ug/L		10/31/24 09:04	11/01/24 15:55	1
Heptachlor	<0.0097	^3+	0.0097	ug/L		10/31/24 09:04	11/01/24 15:55	1
Heptachlor epoxide (isomer B)	<0.0097		0.0097	ug/L		10/31/24 09:04	11/01/24 15:55	1
Hexachlorobenzene	<0.048		0.048	ug/L		10/31/24 09:04	11/01/24 15:55	1
Hexachlorocyclopentadiene	<0.048		0.048	ug/L		10/31/24 09:04	11/01/24 15:55	1
Indeno[1,2,3-cd]pyrene	<0.048		0.048	ug/L		10/31/24 09:04	11/01/24 15:55	1
Isophorone	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:55	1
Lindane	<0.0097		0.0097	ug/L		10/31/24 09:04	11/01/24 15:55	1
Malathion	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:55	1
Methoxychlor	<0.048		0.048	ug/L		10/31/24 09:04	11/01/24 15:55	1
Metolachlor	<0.048		0.048	ug/L		10/31/24 09:04	11/01/24 15:55	1
Molinate	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:55	1
Naphthalene	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:55	1
Parathion	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:55	1
Pendimethalin (Penoxaline)	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:55	1
Phenanthrene	<0.039		0.039	ug/L		10/31/24 09:04	11/01/24 15:55	1
Propachlor	<0.048		0.048	ug/L		10/31/24 09:04	11/01/24 15:55	1
Pyrene	<0.048		0.048	ug/L		10/31/24 09:04	11/01/24 15:55	1
Simazine	<0.048		0.048	ug/L		10/31/24 09:04	11/01/24 15:55	1
Terbacil	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:55	1
Terbutylazine	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:55	1
Thiobencarb	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:55	1
Total Permethrin (mixed isomers)	<0.19		0.19	ug/L		10/31/24 09:04	11/01/24 15:55	1
trans-Nonachlor	<0.048		0.048	ug/L		10/31/24 09:04	11/01/24 15:55	1
Trifluralin	<0.097		0.097	ug/L		10/31/24 09:04	11/01/24 15:55	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	10/31/24 09:04	11/01/24 15:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	98		70 - 130	10/31/24 09:04	11/01/24 15:55	1
Perylene-d12	91		70 - 130	10/31/24 09:04	11/01/24 15:55	1
Triphenylphosphate	105		70 - 130	10/31/24 09:04	11/01/24 15:55	1

**Method: EPA 625.1 SIM - Semivolatile Organic Compounds GC/MS (SIM)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.19		0.19	ug/L		11/03/24 05:14	11/10/24 20:41	1

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# Client Sample Results

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

Job ID: 380-119982-1  
SDG: Weekly

**Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2  
(331-203-TP400)**

**Lab Sample ID: 380-119982-3**

**Date Collected: 10/28/24 10:55**

**Matrix: Drinking Water**

**Date Received: 10/30/24 09:35**

**Method: EPA 625.1 SIM - Semivolatile Organic Compounds GC/MS (SIM) (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	<0.19		0.19	ug/L		11/03/24 05:14	11/10/24 20:41	1
Acenaphthene	<0.19		0.19	ug/L		11/03/24 05:14	11/10/24 20:41	1
Acenaphthylene	<0.19		0.19	ug/L		11/03/24 05:14	11/10/24 20:41	1
Anthracene	<0.19		0.19	ug/L		11/03/24 05:14	11/10/24 20:41	1
Benzo[a]anthracene	<0.19		0.19	ug/L		11/03/24 05:14	11/10/24 20:41	1
Benzo[a]pyrene	<0.19		0.19	ug/L		11/03/24 05:14	11/10/24 20:41	1
Benzo[b]fluoranthene	<0.19		0.19	ug/L		11/03/24 05:14	11/10/24 20:41	1
Benzo[g,h,i]perylene	<0.19		0.19	ug/L		11/03/24 05:14	11/10/24 20:41	1
Benzo[k]fluoranthene	<0.19		0.19	ug/L		11/03/24 05:14	11/10/24 20:41	1
Chrysene	<0.19		0.19	ug/L		11/03/24 05:14	11/10/24 20:41	1
Dibenz(a,h)anthracene	<0.19		0.19	ug/L		11/03/24 05:14	11/10/24 20:41	1
Fluoranthene	<0.19		0.19	ug/L		11/03/24 05:14	11/10/24 20:41	1
Fluorene	<0.19		0.19	ug/L		11/03/24 05:14	11/10/24 20:41	1
Indeno[1,2,3-cd]pyrene	<0.19		0.19	ug/L		11/03/24 05:14	11/10/24 20:41	1
Naphthalene	<0.19		0.19	ug/L		11/03/24 05:14	11/10/24 20:41	1
Phenanthrene	<0.19		0.19	ug/L		11/03/24 05:14	11/10/24 20:41	1
Pyrene	<0.19		0.19	ug/L		11/03/24 05:14	11/10/24 20:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	83		28 - 127	11/03/24 05:14	11/10/24 20:41	1
2-Fluorobiphenyl (Surr)	75		31 - 120	11/03/24 05:14	11/10/24 20:41	1
2-Fluorophenol (Surr)	43		17 - 120	11/03/24 05:14	11/10/24 20:41	1
Nitrobenzene-d5 (Surr)	75		27 - 120	11/03/24 05:14	11/10/24 20:41	1
Phenol-d6 (Surr)	26		10 - 120	11/03/24 05:14	11/10/24 20:41	1
p-Terphenyl-d14 (Surr)	81		45 - 120	11/03/24 05:14	11/10/24 20:41	1

**Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS)**

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	11/03/24 05:14	11/12/24 13:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	79		33 - 139	11/03/24 05:14	11/12/24 13:35	1
2-Fluorobiphenyl (Surr)	81		33 - 126	11/03/24 05:14	11/12/24 13:35	1
2-Fluorophenol (Surr)	48		12 - 120	11/03/24 05:14	11/12/24 13:35	1
Nitrobenzene-d5 (Surr)	92		36 - 120	11/03/24 05:14	11/12/24 13:35	1
Phenol-d6 (Surr)	30		10 - 120	11/03/24 05:14	11/12/24 13:35	1
p-Terphenyl-d14 (Surr)	85		47 - 131	11/03/24 05:14	11/12/24 13:35	1

**Method: SW846 8015B GRO LL - Gasoline Range Organics - (GC)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	<10		10	ug/L			11/09/24 18:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		38 - 134		11/09/24 18:11	1

**Method: SW846 8015B - Diesel Range Organics (DRO) (GC) Low Level**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C24)	<26		26	ug/L		11/01/24 11:05	11/12/24 04:27	1
Motor Oil Range Organics [C24-C36]	<26		26	ug/L		11/01/24 11:05	11/12/24 04:27	1

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# Client Sample Results

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

Job ID: 380-119982-1  
 SDG: Weekly

**Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2  
 (331-203-TP400)**

**Lab Sample ID: 380-119982-3**

Date Collected: 10/28/24 10:55

Matrix: Drinking Water

Date Received: 10/30/24 09:35

**Method: SW846 8015B - Diesel Range Organics (DRO) (GC) Low Level (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
C8-C18	<26		26	ug/L		11/01/24 11:05	11/12/24 04:27	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
<i>n</i> -Octacosane (Surr)	97		60 - 130			11/01/24 11:05	11/12/24 04:27	1

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

**Lab Sample ID: 380-119982-4**

Date Collected: 10/28/24 10:55

Matrix: Water

Date Received: 10/30/24 09:35

**Method: SW846 8015B GRO LL - Gasoline Range Organics - (GC)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	<10		10	ug/L			11/09/24 20:48	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		38 - 134				11/09/24 20:48	1

# Action Limit Summary

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

Job ID: 380-119982-1  
SDG: Weekly

**Client Sample ID: AIEA GULCH WELLS PUMP 2  
(331-202-TP072)**

**Lab Sample ID: 380-119982-1**

## 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	<0.049		ug/L	2	0.049	525.2	Total/NA
Atrazine	<0.049		ug/L	3	0.049	525.2	Total/NA
Benzo[a]pyrene	<0.019		ug/L	0.2	0.019	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	<0.58		ug/L	6	0.58	525.2	Total/NA
Di(2-ethylhexyl)adipate	<0.58		ug/L	400	0.58	525.2	Total/NA
Endrin	<0.0097		ug/L	2	0.0097	525.2	Total/NA
Heptachlor	<0.0097	^3+	ug/L	0.4	0.0097	525.2	Total/NA
Heptachlor epoxide (isomer B)	<0.0097		ug/L	0.2	0.0097	525.2	Total/NA
Hexachlorobenzene	<0.049		ug/L	1	0.049	525.2	Total/NA
Hexachlorocyclopentadiene	<0.049		ug/L	50	0.049	525.2	Total/NA
Lindane	<0.0097		ug/L	0.2	0.0097	525.2	Total/NA
Methoxychlor	<0.049		ug/L	40	0.049	525.2	Total/NA
Simazine	<0.049		ug/L	4	0.049	525.2	Total/NA
Benzo[a]pyrene	<0.19		ug/L	0.2	0.19	625.1 SIM	Total/NA

**Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2  
(331-203-TP400)**

**Lab Sample ID: 380-119982-3**

## 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	<0.048		ug/L	2	0.048	525.2	Total/NA
Atrazine	<0.048		ug/L	3	0.048	525.2	Total/NA
Benzo[a]pyrene	<0.019		ug/L	0.2	0.019	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	<0.58		ug/L	6	0.58	525.2	Total/NA
Di(2-ethylhexyl)adipate	<0.58		ug/L	400	0.58	525.2	Total/NA
Endrin	<0.0097		ug/L	2	0.0097	525.2	Total/NA
Heptachlor	<0.0097	^3+	ug/L	0.4	0.0097	525.2	Total/NA
Heptachlor epoxide (isomer B)	<0.0097		ug/L	0.2	0.0097	525.2	Total/NA
Hexachlorobenzene	<0.048		ug/L	1	0.048	525.2	Total/NA
Hexachlorocyclopentadiene	<0.048		ug/L	50	0.048	525.2	Total/NA
Lindane	<0.0097		ug/L	0.2	0.0097	525.2	Total/NA
Methoxychlor	<0.048		ug/L	40	0.048	525.2	Total/NA
Simazine	<0.048		ug/L	4	0.048	525.2	Total/NA
Benzo[a]pyrene	<0.19		ug/L	0.2	0.19	625.1 SIM	Total/NA

# Surrogate Summary

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

Job ID: 380-119982-1  
SDG: Weekly

## 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)	PRY (70-130)	TPP (70-130)
380-119982-1	AIEA GULCH WELLS PUMP 2 (	96	84	112
380-119982-1 DU	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	98	86	107
380-119982-3	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP400)	98	91	105

**Surrogate Legend**

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

## 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)	PRY (70-130)	TPP (70-130)
380-119975-I-1-A MS	Matrix Spike	98	96	113
LCS 380-116558/23-A	Lab Control Sample	98	94	111
MB 380-116558/21-A	Method Blank	97	86	107
MRL 380-116558/22-A	Lab Control Sample	99	86	109

**Surrogate Legend**

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

## Method: 625.1 - Semivolatile Organic Compounds (GC/MS)

Matrix: Drinking Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (33-139)	FBP (33-126)	2FP (12-120)	NBZ (36-120)	PHL6 (10-120)	TPHd14 (47-131)
380-119982-1	AIEA GULCH WELLS PUMP 2 (	84	85	51	96	28	87
380-119982-3	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP400)	79	81	48	92	30	85

**Surrogate Legend**

TBP = 2,4,6-Tribromophenol (Surr)  
FBP = 2-Fluorobiphenyl (Surr)  
2FP = 2-Fluorophenol (Surr)  
NBZ = Nitrobenzene-d5 (Surr)  
PHL6 = Phenol-d6 (Surr)  
TPHd14 = p-Terphenyl-d14 (Surr)

## Method: 625.1 - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (33-139)	FBP (33-126)	2FP (12-120)	NBZ (36-120)	PHL6 (10-120)	TPHd14 (47-131)
MB 570-498744/1-A	Method Blank	104	95	64	111	40	98

**Surrogate Legend**

Eurofins Eaton Analytical Pomona

# Surrogate Summary

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

Job ID: 380-119982-1  
 SDG: Weekly

TBP = 2,4,6-Tribromophenol (Surr)  
 FBP = 2-Fluorobiphenyl (Surr)  
 2FP = 2-Fluorophenol (Surr)  
 NBZ = Nitrobenzene-d5 (Surr)  
 PHL6 = Phenol-d6 (Surr)  
 TPHd14 = p-Terphenyl-d14 (Surr)

## Method: 625.1 SIM - Semivolatile Organic Compounds GC/MS (SIM)

Matrix: Drinking Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (28-127)	FBP (31-120)	2FP (17-120)	NBZ (27-120)	PHL6 (10-120)	TPHd14 (45-120)
380-119982-1	AIEA GULCH WELLS PUMP 2 (	84	77	47	86	28	87
380-119982-3	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP400)	83	75	43	75	26	81

### Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)  
 FBP = 2-Fluorobiphenyl (Surr)  
 2FP = 2-Fluorophenol (Surr)  
 NBZ = Nitrobenzene-d5 (Surr)  
 PHL6 = Phenol-d6 (Surr)  
 TPHd14 = p-Terphenyl-d14 (Surr)

## Method: 625.1 SIM - Semivolatile Organic Compounds GC/MS (SIM)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (28-127)	FBP (31-120)	2FP (17-120)	NBZ (27-120)	PHL6 (10-120)	TPHd14 (45-120)
380-119975-A-3-A MS	Matrix Spike	93	82	58	69	38	91
380-119975-A-3-B MSD	Matrix Spike Duplicate	91	81	56	68	38	93
LCS 570-498744/2-A	Lab Control Sample	87	78	64	71	43	81
LCSD 570-498744/3-A	Lab Control Sample Dup	83	76	60	66	39	82
MB 570-498744/1-A	Method Blank	88	80	55	83	35	83

### Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)  
 FBP = 2-Fluorobiphenyl (Surr)  
 2FP = 2-Fluorophenol (Surr)  
 NBZ = Nitrobenzene-d5 (Surr)  
 PHL6 = Phenol-d6 (Surr)  
 TPHd14 = p-Terphenyl-d14 (Surr)

## Method: 8015B GRO LL - Gasoline Range Organics - (GC)

Matrix: Drinking Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		BFB1 (38-134)
380-119982-1	AIEA GULCH WELLS PUMP 2 (	93
380-119982-3	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP400)	91

### Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)



# Surrogate Summary

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

Job ID: 380-119982-1  
 SDG: Weekly

## Method: 8015B GRO LL - Gasoline Range Organics - (GC)

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1 (38-134)
380-119975-B-3 MS	Matrix Spike	101
380-119975-B-3 MSD	Matrix Spike Duplicate	102
380-119982-2	TB:AIEA GULCH WELLS P2 (331-202-TP072)	85
380-119982-4	TB: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)	85
LCS 570-501335/43	Lab Control Sample	99
LCSD 570-501335/44	Lab Control Sample Dup	96
MB 570-501335/45	Method Blank	88
MRL 570-501335/42	Lab Control Sample	91

#### Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

## Method: 8015B - Diesel Range Organics (DRO) (GC) Low Level

Matrix: Drinking Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OTCSN1 (60-130)
380-119982-1	AIEA GULCH WELLS PUMP 2 (	92
380-119982-3	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP400)	97

#### Surrogate Legend

OTCSN = n-Octacosane (Surr)

## Method: 8015B - Diesel Range Organics (DRO) (GC) Low Level

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OTCSN1 (60-130)
380-119975-C-3-A MS	Matrix Spike	97
380-119975-C-3-B MSD	Matrix Spike Duplicate	97
LCS 570-498284/2-A	Lab Control Sample	102
LCSD 570-498284/3-A	Lab Control Sample Dup	95
MB 570-498284/1-A	Method Blank	105
MRL 570-498284/4-A	Lab Control Sample	98

#### Surrogate Legend

OTCSN = n-Octacosane (Surr)

# QC Sample Results

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

Job ID: 380-119982-1  
 SDG: Weekly

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

**Lab Sample ID: MB 380-116558/21-A**  
**Matrix: Water**  
**Analysis Batch: 116854**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 116558**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.099		0.099	ug/L		10/31/24 09:04	11/01/24 14:34	1
2,4'-DDD	<0.099		0.099	ug/L		10/31/24 09:04	11/01/24 14:34	1
2,4'-DDE	<0.099		0.099	ug/L		10/31/24 09:04	11/01/24 14:34	1
2,4'-DDT	<0.099		0.099	ug/L		10/31/24 09:04	11/01/24 14:34	1
2,4-Dinitrotoluene	<0.099		0.099	ug/L		10/31/24 09:04	11/01/24 14:34	1
2,6-Dinitrotoluene	<0.099		0.099	ug/L		10/31/24 09:04	11/01/24 14:34	1
2-Methylnaphthalene	<0.099		0.099	ug/L		10/31/24 09:04	11/01/24 14:34	1
4,4'-DDD	<0.099		0.099	ug/L		10/31/24 09:04	11/01/24 14:34	1
4,4'-DDE	<0.099		0.099	ug/L		10/31/24 09:04	11/01/24 14:34	1
4,4'-DDT	<0.099		0.099	ug/L		10/31/24 09:04	11/01/24 14:34	1
Acenaphthene	<0.099		0.099	ug/L		10/31/24 09:04	11/01/24 14:34	1
Acenaphthylene	<0.099		0.099	ug/L		10/31/24 09:04	11/01/24 14:34	1
Acetochlor	<0.099		0.099	ug/L		10/31/24 09:04	11/01/24 14:34	1
Alachlor	<0.050		0.050	ug/L		10/31/24 09:04	11/01/24 14:34	1
alpha-BHC	<0.099		0.099	ug/L		10/31/24 09:04	11/01/24 14:34	1
alpha-Chlordane	<0.050		0.050	ug/L		10/31/24 09:04	11/01/24 14:34	1
Anthracene	<0.020		0.020	ug/L		10/31/24 09:04	11/01/24 14:34	1
Atrazine	<0.050		0.050	ug/L		10/31/24 09:04	11/01/24 14:34	1
Benz(a)anthracene	<0.050		0.050	ug/L		10/31/24 09:04	11/01/24 14:34	1
Benzo[a]pyrene	<0.020		0.020	ug/L		10/31/24 09:04	11/01/24 14:34	1
Benzo[b]fluoranthene	<0.020		0.020	ug/L		10/31/24 09:04	11/01/24 14:34	1
Benzo[g,h,i]perylene	<0.050		0.050	ug/L		10/31/24 09:04	11/01/24 14:34	1
Benzo[k]fluoranthene	<0.020		0.020	ug/L		10/31/24 09:04	11/01/24 14:34	1
beta-BHC	<0.099		0.099	ug/L		10/31/24 09:04	11/01/24 14:34	1
Bis(2-ethylhexyl) phthalate	<0.60		0.60	ug/L		10/31/24 09:04	11/01/24 14:34	1
Bromacil	<0.099		0.099	ug/L		10/31/24 09:04	11/01/24 14:34	1
Butachlor	<0.050		0.050	ug/L		10/31/24 09:04	11/01/24 14:34	1
Butylbenzylphthalate	<0.50		0.50	ug/L		10/31/24 09:04	11/01/24 14:34	1
Chlorobenzilate	<0.099		0.099	ug/L		10/31/24 09:04	11/01/24 14:34	1
Chloroneb	<0.099		0.099	ug/L		10/31/24 09:04	11/01/24 14:34	1
Chlorothalonil (Draconil, Bravo)	<0.099		0.099	ug/L		10/31/24 09:04	11/01/24 14:34	1
Chlorpyrifos	<0.050		0.050	ug/L		10/31/24 09:04	11/01/24 14:34	1
Chrysene	<0.020		0.020	ug/L		10/31/24 09:04	11/01/24 14:34	1
delta-BHC	<0.099		0.099	ug/L		10/31/24 09:04	11/01/24 14:34	1
Di(2-ethylhexyl)adipate	<0.60		0.60	ug/L		10/31/24 09:04	11/01/24 14:34	1
Dibenz(a,h)anthracene	<0.050		0.050	ug/L		10/31/24 09:04	11/01/24 14:34	1
Diclorvos (DDVP)	<0.050		0.050	ug/L		10/31/24 09:04	11/01/24 14:34	1
Dieldrin	<0.0099		0.0099	ug/L		10/31/24 09:04	11/01/24 14:34	1
Diethylphthalate	<0.50		0.50	ug/L		10/31/24 09:04	11/01/24 14:34	1
Dimethylphthalate	<0.50		0.50	ug/L		10/31/24 09:04	11/01/24 14:34	1
Di-n-butyl phthalate	<0.99		0.99	ug/L		10/31/24 09:04	11/01/24 14:34	1
Di-n-octyl phthalate	<0.099		0.099	ug/L		10/31/24 09:04	11/01/24 14:34	1
Endosulfan I (Alpha)	<0.099		0.099	ug/L		10/31/24 09:04	11/01/24 14:34	1
Endosulfan II (Beta)	<0.099		0.099	ug/L		10/31/24 09:04	11/01/24 14:34	1
Endosulfan sulfate	<0.099		0.099	ug/L		10/31/24 09:04	11/01/24 14:34	1
Endrin	<0.0099		0.0099	ug/L		10/31/24 09:04	11/01/24 14:34	1
Endrin aldehyde	<0.099		0.099	ug/L		10/31/24 09:04	11/01/24 14:34	1
EPTC	<0.099		0.099	ug/L		10/31/24 09:04	11/01/24 14:34	1

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# QC Sample Results

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

Job ID: 380-119982-1  
SDG: Weekly

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

**Lab Sample ID: MB 380-116558/21-A**  
**Matrix: Water**  
**Analysis Batch: 116854**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 116558**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	<0.099		0.099	ug/L		10/31/24 09:04	11/01/24 14:34	1
Fluorene	<0.050		0.050	ug/L		10/31/24 09:04	11/01/24 14:34	1
gamma-Chlordane	<0.050		0.050	ug/L		10/31/24 09:04	11/01/24 14:34	1
Heptachlor	<0.0099	^3+	0.0099	ug/L		10/31/24 09:04	11/01/24 14:34	1
Heptachlor epoxide (isomer B)	<0.0099		0.0099	ug/L		10/31/24 09:04	11/01/24 14:34	1
Hexachlorobenzene	<0.050		0.050	ug/L		10/31/24 09:04	11/01/24 14:34	1
Hexachlorocyclopentadiene	<0.050		0.050	ug/L		10/31/24 09:04	11/01/24 14:34	1
Indeno[1,2,3-cd]pyrene	<0.050		0.050	ug/L		10/31/24 09:04	11/01/24 14:34	1
Isophorone	<0.099		0.099	ug/L		10/31/24 09:04	11/01/24 14:34	1
Lindane	<0.0099		0.0099	ug/L		10/31/24 09:04	11/01/24 14:34	1
Malathion	<0.099		0.099	ug/L		10/31/24 09:04	11/01/24 14:34	1
Methoxychlor	<0.050		0.050	ug/L		10/31/24 09:04	11/01/24 14:34	1
Metolachlor	<0.050		0.050	ug/L		10/31/24 09:04	11/01/24 14:34	1
Molinate	<0.099		0.099	ug/L		10/31/24 09:04	11/01/24 14:34	1
Naphthalene	<0.099		0.099	ug/L		10/31/24 09:04	11/01/24 14:34	1
Parathion	<0.099		0.099	ug/L		10/31/24 09:04	11/01/24 14:34	1
Pendimethalin (Penoxaline)	<0.099		0.099	ug/L		10/31/24 09:04	11/01/24 14:34	1
Phenanthrene	<0.040		0.040	ug/L		10/31/24 09:04	11/01/24 14:34	1
Propachlor	<0.050		0.050	ug/L		10/31/24 09:04	11/01/24 14:34	1
Pyrene	<0.050		0.050	ug/L		10/31/24 09:04	11/01/24 14:34	1
Simazine	<0.050		0.050	ug/L		10/31/24 09:04	11/01/24 14:34	1
Terbacil	<0.099		0.099	ug/L		10/31/24 09:04	11/01/24 14:34	1
Terbutylazine	<0.099		0.099	ug/L		10/31/24 09:04	11/01/24 14:34	1
Thiobencarb	<0.099		0.099	ug/L		10/31/24 09:04	11/01/24 14:34	1
Total Permethrin (mixed isomers)	<0.20		0.20	ug/L		10/31/24 09:04	11/01/24 14:34	1
trans-Nonachlor	<0.050		0.050	ug/L		10/31/24 09:04	11/01/24 14:34	1
Trifluralin	<0.099		0.099	ug/L		10/31/24 09:04	11/01/24 14:34	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
9-Octadecenamide, (Z)-	0.599	T J N	ug/L		7.99	301-02-0	10/31/24 09:04	11/01/24 14:34	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	97		70 - 130	10/31/24 09:04	11/01/24 14:34	1
Perylene-d12	86		70 - 130	10/31/24 09:04	11/01/24 14:34	1
Triphenylphosphate	107		70 - 130	10/31/24 09:04	11/01/24 14:34	1

**Lab Sample ID: LCS 380-116558/23-A**  
**Matrix: Water**  
**Analysis Batch: 116854**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 116558**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1-Methylnaphthalene	1.98	2.01		ug/L		101	70 - 130
2,4'-DDD	1.98	2.26		ug/L		114	70 - 130
2,4'-DDE	1.98	2.16		ug/L		109	70 - 130
2,4'-DDT	1.98	2.06		ug/L		104	70 - 130
2,4-Dinitrotoluene	1.98	2.14		ug/L		108	70 - 130
2,6-Dinitrotoluene	1.98	2.11		ug/L		106	70 - 130
2-Methylnaphthalene	1.98	1.98		ug/L		100	70 - 130

Eurofins Eaton Analytical Pomona

# QC Sample Results

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

Job ID: 380-119982-1  
SDG: Weekly

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

**Lab Sample ID: LCS 380-116558/23-A**  
**Matrix: Water**  
**Analysis Batch: 116854**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 116558**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
4,4'-DDD	1.98	2.16		ug/L		109	70 - 130
4,4'-DDE	1.98	2.16		ug/L		109	70 - 130
4,4'-DDT	1.98	2.06		ug/L		104	70 - 130
Acenaphthene	1.98	2.03		ug/L		102	70 - 130
Acenaphthylene	1.98	1.95		ug/L		98	70 - 130
Acetochlor	1.98	2.29		ug/L		116	70 - 130
Alachlor	1.98	2.17		ug/L		109	70 - 130
alpha-BHC	1.98	2.12		ug/L		107	70 - 130
alpha-Chlordane	1.98	2.33		ug/L		117	70 - 130
Anthracene	1.98	1.88		ug/L		95	70 - 130
Atrazine	1.98	2.46		ug/L		124	70 - 130
Benz(a)anthracene	1.98	2.10		ug/L		106	70 - 130
Benzo[a]pyrene	1.98	2.13		ug/L		107	70 - 130
Benzo[b]fluoranthene	1.98	2.02		ug/L		102	70 - 130
Benzo[g,h,i]perylene	1.98	1.89		ug/L		95	70 - 130
Benzo[k]fluoranthene	1.98	2.12		ug/L		107	70 - 130
beta-BHC	1.98	2.22		ug/L		112	70 - 130
Bis(2-ethylhexyl) phthalate	1.98	1.95		ug/L		98	70 - 130
Bromacil	1.98	2.27		ug/L		115	70 - 130
Butachlor	1.98	2.19		ug/L		111	70 - 130
Butylbenzylphthalate	1.98	2.22		ug/L		112	70 - 130
Chlorobenzilate	1.98	2.14		ug/L		108	70 - 130
Chloroneb	1.98	2.25		ug/L		113	70 - 130
Chlorothalonil (Draconil, Bravo)	1.98	2.31		ug/L		117	70 - 130
Chlorpyrifos	1.98	2.31		ug/L		117	70 - 130
Chrysene	1.98	2.11		ug/L		106	70 - 130
delta-BHC	1.98	2.12		ug/L		107	70 - 130
Di(2-ethylhexyl)adipate	1.98	2.17		ug/L		109	70 - 130
Dibenz(a,h)anthracene	1.98	1.99		ug/L		100	70 - 130
Diclorvos (DDVP)	1.98	1.96		ug/L		99	70 - 130
Dieldrin	1.98	2.12		ug/L		107	70 - 130
Diethylphthalate	1.98	2.24		ug/L		113	70 - 130
Dimethylphthalate	1.98	2.16		ug/L		109	70 - 130
Di-n-butyl phthalate	3.97	4.43		ug/L		112	70 - 130
Di-n-octyl phthalate	1.98	1.90		ug/L		96	70 - 130
Endosulfan I (Alpha)	1.98	2.09		ug/L		105	70 - 130
Endosulfan II (Beta)	1.98	2.18		ug/L		110	70 - 130
Endosulfan sulfate	1.98	2.14		ug/L		108	70 - 130
Endrin	1.98	2.39		ug/L		121	70 - 130
Endrin aldehyde	1.98	2.00		ug/L		101	60 - 130
EPTC	1.98	2.16		ug/L		109	70 - 130
Fluoranthene	1.98	2.27		ug/L		115	70 - 130
Fluorene	1.98	2.16		ug/L		109	70 - 130
gamma-Chlordane	1.98	2.27		ug/L		115	70 - 130
Heptachlor	1.98	2.29		ug/L		116	70 - 130
Heptachlor epoxide (isomer B)	1.98	2.16		ug/L		109	70 - 130
Hexachlorobenzene	1.98	2.01		ug/L		101	70 - 130
Hexachlorocyclopentadiene	1.98	2.12		ug/L		107	70 - 130
Indeno[1,2,3-cd]pyrene	1.98	2.05		ug/L		103	70 - 130

Eurofins Eaton Analytical Pomona

# QC Sample Results

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

Job ID: 380-119982-1  
SDG: Weekly

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

**Lab Sample ID:** LCS 380-116558/23-A  
**Matrix:** Water  
**Analysis Batch:** 116854

**Client Sample ID:** Lab Control Sample  
**Prep Type:** Total/NA  
**Prep Batch:** 116558

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Isophorone	1.98	2.15		ug/L		108	70 - 130
Lindane	1.98	2.09		ug/L		105	70 - 130
Malathion	1.98	2.49		ug/L		125	70 - 130
Methoxychlor	1.98	2.17		ug/L		109	70 - 130
Metolachlor	1.98	2.35		ug/L		119	70 - 130
Molinate	1.98	2.18		ug/L		110	70 - 130
Naphthalene	1.98	2.00		ug/L		101	70 - 130
Parathion	1.98	2.37		ug/L		119	70 - 130
Pendimethalin (Penoxaline)	1.98	2.17		ug/L		109	70 - 130
Phenanthrene	1.98	2.00		ug/L		101	70 - 130
Propachlor	1.98	2.27		ug/L		115	70 - 130
Pyrene	1.98	2.30		ug/L		116	70 - 130
Simazine	1.98	2.40		ug/L		121	70 - 130
Terbacil	1.98	2.51		ug/L		126	70 - 130
Terbutylazine	1.98	2.45		ug/L		124	70 - 130
Thiobencarb	1.98	2.30		ug/L		116	70 - 130
trans-Nonachlor	1.98	2.35		ug/L		118	70 - 130
Trifluralin	1.98	2.12		ug/L		107	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Nitro-m-xylene	98		70 - 130
Perylene-d12	94		70 - 130
Triphenylphosphate	111		70 - 130

**Lab Sample ID:** MRL 380-116558/22-A  
**Matrix:** Water  
**Analysis Batch:** 116854

**Client Sample ID:** Lab Control Sample  
**Prep Type:** Total/NA  
**Prep Batch:** 116558

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	0.0994	0.121		ug/L		122	50 - 150
2,4'-DDD	0.0994	0.107		ug/L		107	50 - 150
2,4'-DDE	0.0994	0.114		ug/L		115	50 - 150
2,4'-DDT	0.0994	0.120		ug/L		121	50 - 150
2,4-Dinitrotoluene	0.0994	0.116		ug/L		116	50 - 150
2,6-Dinitrotoluene	0.0994	0.116		ug/L		117	50 - 150
2-Methylnaphthalene	0.0994	0.110		ug/L		111	50 - 150
4,4'-DDD	0.0994	0.134		ug/L		135	50 - 150
4,4'-DDE	0.0994	0.116		ug/L		117	50 - 150
4,4'-DDT	0.0994	0.117		ug/L		118	50 - 150
Acenaphthene	0.0994	0.103		ug/L		104	50 - 150
Acenaphthylene	0.0994	0.0854	J	ug/L		86	50 - 150
Acetochlor	0.0994	0.123		ug/L		123	50 - 150
Alachlor	0.0497	0.0620		ug/L		125	50 - 150
alpha-BHC	0.0994	0.118		ug/L		119	50 - 150
alpha-Chlordane	0.0249	0.0295	J	ug/L		119	50 - 150
Anthracene	0.0199	0.0220		ug/L		110	50 - 150
Atrazine	0.0497	0.0584		ug/L		118	50 - 150
Benz(a)anthracene	0.0497	0.0575		ug/L		116	50 - 150

# QC Sample Results

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

Job ID: 380-119982-1  
SDG: Weekly

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

**Lab Sample ID: MRL 380-116558/22-A**  
**Matrix: Water**  
**Analysis Batch: 116854**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 116558**

Analyte	Spike	MRL	MRL	Unit	D	%Rec	%Rec Limits
	Added	Result	Qualifier				
Benzo[a]pyrene	0.0199	0.0236		ug/L		119	50 - 150
Benzo[b]fluoranthene	0.0199	0.0271		ug/L		136	50 - 150
Benzo[g,h,i]perylene	0.0497	0.0566		ug/L		114	50 - 150
Benzo[k]fluoranthene	0.0199	0.0257		ug/L		129	50 - 150
beta-BHC	0.0994	0.125		ug/L		126	50 - 150
Bis(2-ethylhexyl) phthalate	0.596	0.603		ug/L		101	50 - 150
Bromacil	0.0994	0.132		ug/L		133	50 - 150
Butachlor	0.0497	0.0657		ug/L		132	50 - 150
Butylbenzylphthalate	0.497	0.595		ug/L		120	50 - 150
Chlorobenzilate	0.0994	0.115		ug/L		116	50 - 150
Chloroneb	0.0994	0.102		ug/L		103	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0994	0.120		ug/L		120	50 - 150
Chlorpyrifos	0.0497	0.0588		ug/L		118	50 - 150
Chrysene	0.0199	0.0238		ug/L		120	50 - 150
delta-BHC	0.0994	0.115		ug/L		115	50 - 150
Di(2-ethylhexyl)adipate	0.596	0.678		ug/L		114	50 - 150
Dibenz(a,h)anthracene	0.0497	0.0529		ug/L		106	50 - 150
Diclorvos (DDVP)	0.0497	0.0588		ug/L		118	50 - 150
Dieldrin	0.00994	0.0124		ug/L		125	50 - 150
Diethylphthalate	0.497	0.557		ug/L		112	50 - 150
Dimethylphthalate	0.497	0.563		ug/L		113	50 - 150
Di-n-butyl phthalate	0.497	0.579	J	ug/L		117	49 - 243
Di-n-octyl phthalate	0.0994	0.120		ug/L		121	50 - 150
Endosulfan I (Alpha)	0.0994	0.108		ug/L		109	50 - 150
Endosulfan II (Beta)	0.0994	0.141		ug/L		142	50 - 150
Endosulfan sulfate	0.0994	0.129		ug/L		130	50 - 150
Endrin	0.00994	0.0133		ug/L		133	50 - 150
Endrin aldehyde	0.0994	0.144		ug/L		145	50 - 150
EPTC	0.0994	0.105		ug/L		106	50 - 150
Fluoranthene	0.0994	0.114		ug/L		114	50 - 150
Fluorene	0.0497	0.0564		ug/L		113	50 - 150
gamma-Chlordane	0.0249	0.0256	J	ug/L		103	50 - 150
Heptachlor	0.00994	0.0183	^3+	ug/L		184	50 - 150
Heptachlor epoxide (isomer B)	0.00994	0.0133		ug/L		134	50 - 150
Hexachlorobenzene	0.0497	0.0495	J	ug/L		100	50 - 150
Hexachlorocyclopentadiene	0.0497	0.0469	J	ug/L		94	50 - 150
Indeno[1,2,3-cd]pyrene	0.0497	0.0600		ug/L		121	50 - 150
Isophorone	0.0994	0.136		ug/L		137	50 - 150
Lindane	0.00994	0.0141		ug/L		142	50 - 150
Malathion	0.0994	0.104		ug/L		105	50 - 150
Methoxychlor	0.0497	0.0653		ug/L		131	50 - 150
Metolachlor	0.0497	0.0647		ug/L		130	50 - 150
Molinate	0.0994	0.112		ug/L		112	50 - 150
Naphthalene	0.0994	0.110		ug/L		110	50 - 150
Parathion	0.0994	0.110		ug/L		111	50 - 150
Pendimethalin (Penoxaline)	0.0994	0.109		ug/L		110	50 - 150
Phenanthrene	0.0398	0.0475		ug/L		120	50 - 150
Propachlor	0.0497	0.0578		ug/L		116	50 - 150
Pyrene	0.0497	0.0585		ug/L		118	50 - 150

Eurofins Eaton Analytical Pomona

# QC Sample Results

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

Job ID: 380-119982-1  
SDG: Weekly

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

**Lab Sample ID: MRL 380-116558/22-A**  
**Matrix: Water**  
**Analysis Batch: 116854**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 116558**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Simazine	0.0497	0.0576		ug/L		116	50 - 150
Terbacil	0.0994	0.109		ug/L		110	50 - 150
Terbutylazine	0.0994	0.121		ug/L		122	50 - 150
Thiobencarb	0.0994	0.113		ug/L		113	50 - 150
trans-Nonachlor	0.0249	0.0294	J	ug/L		118	50 - 150
Trifluralin	0.0994	0.108		ug/L		109	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	MRL Limits
2-Nitro-m-xylene	99		70 - 130
Perylene-d12	86		70 - 130
Triphenylphosphate	109		70 - 130

**Lab Sample ID: 380-119975-I-1-A MS**  
**Matrix: Water**  
**Analysis Batch: 116854**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 116558**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	<0.096		1.93	1.97		ug/L		102	70 - 130
2,4'-DDD	<0.096		1.93	2.26		ug/L		117	70 - 130
2,4'-DDE	<0.096		1.93	2.17		ug/L		113	70 - 130
2,4'-DDT	<0.096		1.93	2.09		ug/L		109	70 - 130
2,4-Dinitrotoluene	<0.096		1.93	2.14		ug/L		111	70 - 130
2,6-Dinitrotoluene	<0.096		1.93	2.12		ug/L		110	70 - 130
2-Methylnaphthalene	<0.096		1.93	1.97		ug/L		102	70 - 130
4,4'-DDD	<0.096		1.93	2.17		ug/L		113	70 - 130
4,4'-DDE	<0.096		1.93	2.16		ug/L		112	70 - 130
4,4'-DDT	<0.096		1.93	2.07		ug/L		108	70 - 130
Acenaphthene	<0.096		1.93	1.99		ug/L		103	70 - 130
Acenaphthylene	<0.096		1.93	1.98		ug/L		103	70 - 130
Acetochlor	<0.096		1.93	2.27		ug/L		118	70 - 130
Alachlor	<0.048		1.93	2.17		ug/L		113	70 - 130
alpha-BHC	<0.096		1.93	2.07		ug/L		108	70 - 130
alpha-Chlordane	<0.048		1.93	2.34		ug/L		121	70 - 130
Anthracene	<0.019	F1	1.93	1.29	F1	ug/L		67	70 - 130
Atrazine	<0.048		1.93	2.44		ug/L		127	70 - 130
Benz(a)anthracene	<0.048		1.93	1.98		ug/L		103	70 - 130
Benzo[a]pyrene	<0.019		1.93	1.97		ug/L		102	70 - 130
Benzo[b]fluoranthene	<0.019		1.93	2.14		ug/L		111	70 - 130
Benzo[g,h,i]perylene	<0.048		1.93	1.92		ug/L		100	70 - 130
Benzo[k]fluoranthene	<0.019		1.93	2.01		ug/L		104	70 - 130
beta-BHC	<0.096		1.93	2.12		ug/L		110	70 - 130
Bis(2-ethylhexyl) phthalate	<0.57		1.93	2.05		ug/L		106	70 - 130
Bromacil	<0.096		1.93	2.32		ug/L		119	70 - 130
Butachlor	<0.048		1.93	2.19		ug/L		113	70 - 130
Butylbenzylphthalate	<0.48		1.93	2.21		ug/L		115	70 - 130
Chlorobenzilate	<0.096		1.93	2.11		ug/L		110	70 - 130
Chloroneb	<0.096		1.93	2.19		ug/L		114	70 - 130
Chlorothalonil (Draconil, Bravo)	<0.096		1.93	2.24		ug/L		116	70 - 130

# QC Sample Results

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

Job ID: 380-119982-1  
SDG: Weekly

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

**Lab Sample ID: 380-119975-I-1-A MS**  
**Matrix: Water**  
**Analysis Batch: 116854**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 116558**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec
	Result	Qualifier	Added	Result	Qualifier				
Chlorpyrifos	<0.048		1.93	2.38		ug/L		124	70 - 130
Chrysene	<0.019		1.93	2.11		ug/L		110	70 - 130
delta-BHC	<0.096		1.93	2.14		ug/L		111	70 - 130
Di(2-ethylhexyl)adipate	<0.57		1.93	2.16		ug/L		112	70 - 130
Dibenz(a,h)anthracene	<0.048		1.93	2.05		ug/L		107	70 - 130
Diclorvos (DDVP)	<0.048		1.93	1.93		ug/L		100	70 - 130
Dieldrin	0.024		1.93	2.19		ug/L		112	70 - 130
Diethylphthalate	<0.48		1.93	2.17		ug/L		113	70 - 130
Dimethylphthalate	<0.48		1.93	2.12		ug/L		110	70 - 130
Di-n-butyl phthalate	<0.96		3.85	4.38		ug/L		114	70 - 130
Di-n-octyl phthalate	<0.096		1.93	2.01		ug/L		104	70 - 130
Endosulfan I (Alpha)	<0.096		1.93	2.13		ug/L		110	70 - 130
Endosulfan II (Beta)	<0.096		1.93	2.17		ug/L		112	70 - 130
Endosulfan sulfate	<0.096		1.93	2.14		ug/L		111	70 - 130
Endrin	<0.0096		1.93	2.41		ug/L		125	70 - 130
Endrin aldehyde	<0.096		1.93	1.93		ug/L		100	60 - 130
EPTC	<0.096		1.93	2.12		ug/L		110	70 - 130
Fluoranthene	<0.096		1.93	2.29		ug/L		119	70 - 130
Fluorene	<0.048		1.93	2.11		ug/L		110	70 - 130
gamma-Chlordane	<0.048		1.93	2.31		ug/L		119	70 - 130
Heptachlor	<0.0096	^3+	1.93	2.28		ug/L		118	70 - 130
Heptachlor epoxide (isomer B)	<0.0096		1.93	2.20		ug/L		114	70 - 130
Hexachlorobenzene	<0.048		1.93	1.97		ug/L		102	70 - 130
Hexachlorocyclopentadiene	<0.048		1.93	2.03		ug/L		106	70 - 130
Indeno[1,2,3-cd]pyrene	<0.048		1.93	2.10		ug/L		109	70 - 130
Isophorone	<0.096		1.93	2.10		ug/L		109	70 - 130
Lindane	<0.0096		1.93	2.02		ug/L		105	70 - 130
Malathion	<0.096		1.93	2.50		ug/L		130	70 - 130
Methoxychlor	<0.048		1.93	2.25		ug/L		117	70 - 130
Metolachlor	<0.048		1.93	2.35		ug/L		122	70 - 130
Molinate	<0.096		1.93	2.13		ug/L		111	70 - 130
Naphthalene	<0.096		1.93	1.97		ug/L		100	70 - 130
Parathion	<0.096		1.93	2.38		ug/L		124	70 - 130
Pendimethalin (Penoxaline)	<0.096		1.93	2.26		ug/L		117	70 - 130
Phenanthrene	<0.038		1.93	2.00		ug/L		104	70 - 130
Propachlor	<0.048		1.93	2.21		ug/L		115	70 - 130
Pyrene	<0.048		1.93	2.31		ug/L		120	70 - 130
Simazine	<0.048		1.93	2.33		ug/L		121	70 - 130
Terbacil	<0.096		1.93	2.49		ug/L		129	70 - 130
Terbutylazine	<0.096		1.93	2.36		ug/L		123	70 - 130
Thiobencarb	<0.096		1.93	2.28		ug/L		119	70 - 130
trans-Nonachlor	<0.048		1.93	2.40		ug/L		125	70 - 130
Trifluralin	<0.096		1.93	2.10		ug/L		109	70 - 130

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	98		70 - 130
Perylene-d12	96		70 - 130
Triphenylphosphate	113		70 - 130



# QC Sample Results

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

Job ID: 380-119982-1  
SDG: Weekly

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

**Lab Sample ID: 380-119982-1 DU**  
**Matrix: Drinking Water**  
**Analysis Batch: 116854**

**Client Sample ID: AIEA GULCH WELLS PUMP 2 (331-202-TP072)**  
**Prep Type: Total/NA**  
**Prep Batch: 116558**

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
1-Methylnaphthalene	<0.097		<0.098		ug/L		NC	20
2,4'-DDD	<0.097		<0.098		ug/L		NC	20
2,4'-DDE	<0.097		<0.098		ug/L		NC	20
2,4'-DDT	<0.097		<0.098		ug/L		NC	20
2,4-Dinitrotoluene	<0.097		<0.098		ug/L		NC	20
2,6-Dinitrotoluene	<0.097		<0.098		ug/L		NC	20
2-Methylnaphthalene	<0.097		<0.098		ug/L		NC	20
4,4'-DDD	<0.097		<0.098		ug/L		NC	20
4,4'-DDE	<0.097		<0.098		ug/L		NC	20
4,4'-DDT	<0.097		<0.098		ug/L		NC	20
Acenaphthene	<0.097		<0.098		ug/L		NC	20
Acenaphthylene	<0.097		<0.098		ug/L		NC	20
Acetochlor	<0.097		<0.098		ug/L		NC	20
Alachlor	<0.049		<0.049		ug/L		NC	20
alpha-BHC	<0.097		<0.098		ug/L		NC	20
alpha-Chlordane	<0.049		<0.049		ug/L		NC	20
Anthracene	<0.019		<0.020		ug/L		NC	20
Atrazine	<0.049		<0.049		ug/L		NC	20
Benz(a)anthracene	<0.049		<0.049		ug/L		NC	20
Benzo[a]pyrene	<0.019		<0.020		ug/L		NC	20
Benzo[b]fluoranthene	<0.019		<0.020		ug/L		NC	20
Benzo[g,h,i]perylene	<0.049		<0.049		ug/L		NC	20
Benzo[k]fluoranthene	<0.019		<0.020		ug/L		NC	20
beta-BHC	<0.097		<0.098		ug/L		NC	20
Bis(2-ethylhexyl) phthalate	<0.58		<0.59		ug/L		NC	20
Bromacil	<0.097		<0.098		ug/L		NC	20
Butachlor	<0.049		<0.049		ug/L		NC	20
Butylbenzylphthalate	<0.49		<0.49		ug/L		NC	20
Chlorobenzilate	<0.097		<0.098		ug/L		NC	20
Chloroneb	<0.097		<0.098		ug/L		NC	20
Chlorothalonil (Draconil, Bravo)	<0.097		<0.098		ug/L		NC	20
Chlorpyrifos	<0.049		<0.049		ug/L		NC	20
Chrysene	<0.019		<0.020		ug/L		NC	20
delta-BHC	<0.097		<0.098		ug/L		NC	20
Di(2-ethylhexyl)adipate	<0.58		<0.59		ug/L		NC	20
Dibenz(a,h)anthracene	<0.049		<0.049		ug/L		NC	20
Diclorvos (DDVP)	<0.049		<0.049		ug/L		NC	20
Dieldrin	<0.0097		<0.0098		ug/L		NC	20
Diethylphthalate	<0.49		<0.49		ug/L		NC	20
Dimethylphthalate	<0.49		<0.49		ug/L		NC	20
Di-n-butyl phthalate	<0.97		<0.98		ug/L		NC	20
Di-n-octyl phthalate	<0.097		<0.098		ug/L		NC	20
Endosulfan I (Alpha)	<0.097		<0.098		ug/L		NC	20
Endosulfan II (Beta)	<0.097		<0.098		ug/L		NC	20
Endosulfan sulfate	<0.097		<0.098		ug/L		NC	20
Endrin	<0.0097		<0.0098		ug/L		NC	20
Endrin aldehyde	<0.097		<0.098		ug/L		NC	20
EPTC	<0.097		<0.098		ug/L		NC	20

# QC Sample Results

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

Job ID: 380-119982-1  
SDG: Weekly

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

**Lab Sample ID: 380-119982-1 DU**  
**Matrix: Drinking Water**  
**Analysis Batch: 116854**

**Client Sample ID: AIEA GULCH WELLS PUMP 2 (331-202-TP072)**  
**Prep Type: Total/NA**  
**Prep Batch: 116558**

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Fluoranthene	<0.097		<0.098		ug/L		NC	20
Fluorene	<0.049		<0.049		ug/L		NC	20
gamma-Chlordane	<0.049		<0.049		ug/L		NC	20
Heptachlor	<0.0097	^3+	<0.0098		ug/L		NC	20
Heptachlor epoxide (isomer B)	<0.0097		<0.0098		ug/L		NC	20
Hexachlorobenzene	<0.049		<0.049		ug/L		NC	20
Hexachlorocyclopentadiene	<0.049		<0.049		ug/L		NC	20
Indeno[1,2,3-cd]pyrene	<0.049		<0.049		ug/L		NC	20
Isophorone	<0.097		<0.098		ug/L		NC	20
Lindane	<0.0097		<0.0098		ug/L		NC	20
Malathion	<0.097		<0.098		ug/L		NC	20
Methoxychlor	<0.049		<0.049		ug/L		NC	20
Metolachlor	<0.049		<0.049		ug/L		NC	20
Molinate	<0.097		<0.098		ug/L		NC	20
Naphthalene	<0.097		<0.098		ug/L		NC	20
Parathion	<0.097		<0.098		ug/L		NC	20
Pendimethalin (Penoxaline)	<0.097		<0.098		ug/L		NC	20
Phenanthrene	<0.039		<0.039		ug/L		NC	20
Propachlor	<0.049		<0.049		ug/L		NC	20
Pyrene	<0.049		<0.049		ug/L		NC	20
Simazine	<0.049		<0.049		ug/L		NC	20
Terbacil	<0.097		<0.098		ug/L		NC	20
Terbutylazine	<0.097		<0.098		ug/L		NC	20
Thiobencarb	<0.097		<0.098		ug/L		NC	20
Total Permethrin (mixed isomers)	<0.19		<0.20		ug/L		NC	20
trans-Nonachlor	<0.049		<0.049		ug/L		NC	20
Trifluralin	<0.097		<0.098		ug/L		NC	20

Surrogate	DU	DU	Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	98		70 - 130
Perylene-d12	86		70 - 130
Triphenylphosphate	107		70 - 130

## Method: 625.1 - Semivolatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 570-498744/1-A**  
**Matrix: Water**  
**Analysis Batch: 502131**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 498744**

Tentatively Identified Compound	Est. Result	MB MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound		None	ug/L			N/A	11/03/24 05:14	11/12/24 11:58	1

Surrogate	MB MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery Qualifier				
2,4,6-Tribromophenol (Surr)	104	33 - 139	11/03/24 05:14	11/12/24 11:58	1
2-Fluorobiphenyl (Surr)	95	33 - 126	11/03/24 05:14	11/12/24 11:58	1
2-Fluorophenol (Surr)	64	12 - 120	11/03/24 05:14	11/12/24 11:58	1
Nitrobenzene-d5 (Surr)	111	36 - 120	11/03/24 05:14	11/12/24 11:58	1
Phenol-d6 (Surr)	40	10 - 120	11/03/24 05:14	11/12/24 11:58	1

Eurofins Eaton Analytical Pomona

# QC Sample Results

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

Job ID: 380-119982-1  
SDG: Weekly

## Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 570-498744/1-A  
Matrix: Water  
Analysis Batch: 502131

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 498744

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>p</i> -Terphenyl-d14 (Surr)	98		47 - 131	11/03/24 05:14	11/12/24 11:58	1

## Method: 625.1 SIM - Semivolatile Organic Compounds GC/MS (SIM)

Lab Sample ID: MB 570-498744/1-A  
Matrix: Water  
Analysis Batch: 501449

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 498744

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.20		0.20	ug/L		11/03/24 05:14	11/10/24 21:52	1
2-Methylnaphthalene	<0.20		0.20	ug/L		11/03/24 05:14	11/10/24 21:52	1
Acenaphthene	<0.20		0.20	ug/L		11/03/24 05:14	11/10/24 21:52	1
Acenaphthylene	<0.20		0.20	ug/L		11/03/24 05:14	11/10/24 21:52	1
Anthracene	<0.20		0.20	ug/L		11/03/24 05:14	11/10/24 21:52	1
Benzo[a]anthracene	<0.20		0.20	ug/L		11/03/24 05:14	11/10/24 21:52	1
Benzo[a]pyrene	<0.20		0.20	ug/L		11/03/24 05:14	11/10/24 21:52	1
Benzo[b]fluoranthene	<0.20		0.20	ug/L		11/03/24 05:14	11/10/24 21:52	1
Benzo[g,h,i]perylene	<0.20		0.20	ug/L		11/03/24 05:14	11/10/24 21:52	1
Benzo[k]fluoranthene	<0.20		0.20	ug/L		11/03/24 05:14	11/10/24 21:52	1
Chrysene	<0.20		0.20	ug/L		11/03/24 05:14	11/10/24 21:52	1
Dibenz(a,h)anthracene	<0.20		0.20	ug/L		11/03/24 05:14	11/10/24 21:52	1
Fluoranthene	<0.20		0.20	ug/L		11/03/24 05:14	11/10/24 21:52	1
Fluorene	<0.20		0.20	ug/L		11/03/24 05:14	11/10/24 21:52	1
Indeno[1,2,3-cd]pyrene	<0.20		0.20	ug/L		11/03/24 05:14	11/10/24 21:52	1
Naphthalene	<0.20		0.20	ug/L		11/03/24 05:14	11/10/24 21:52	1
Phenanthrene	<0.20		0.20	ug/L		11/03/24 05:14	11/10/24 21:52	1
Pyrene	<0.20		0.20	ug/L		11/03/24 05:14	11/10/24 21:52	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	88		28 - 127	11/03/24 05:14	11/10/24 21:52	1
2-Fluorobiphenyl (Surr)	80		31 - 120	11/03/24 05:14	11/10/24 21:52	1
2-Fluorophenol (Surr)	55		17 - 120	11/03/24 05:14	11/10/24 21:52	1
Nitrobenzene-d5 (Surr)	83		27 - 120	11/03/24 05:14	11/10/24 21:52	1
Phenol-d6 (Surr)	35		10 - 120	11/03/24 05:14	11/10/24 21:52	1
<i>p</i> -Terphenyl-d14 (Surr)	83		45 - 120	11/03/24 05:14	11/10/24 21:52	1

Lab Sample ID: LCS 570-498744/2-A  
Matrix: Water  
Analysis Batch: 501449

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 498744

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	20.0	14.5		ug/L		73	47 - 120
2-Methylnaphthalene	20.0	16.6		ug/L		83	43 - 120
Acenaphthene	20.0	16.7		ug/L		84	60 - 132
Acenaphthylene	20.0	16.6		ug/L		83	54 - 126
Anthracene	20.0	17.8		ug/L		89	43 - 120
Benzo[a]anthracene	20.0	17.5		ug/L		87	42 - 133
Benzo[a]pyrene	20.0	18.8		ug/L		94	32 - 148

Eurofins Eaton Analytical Pomona

# QC Sample Results

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

Job ID: 380-119982-1  
SDG: Weekly

## Method: 625.1 SIM - Semivolatile Organic Compounds GC/MS (SIM) (Continued)

**Lab Sample ID: LCS 570-498744/2-A**  
**Matrix: Water**  
**Analysis Batch: 501449**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 498744**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzo[b]fluoranthene	20.0	18.7		ug/L		94	42 - 140
Benzo[g,h,i]perylene	20.0	16.1		ug/L		81	1 - 195
Benzo[k]fluoranthene	20.0	18.4		ug/L		92	25 - 146
Chrysene	20.0	16.4		ug/L		82	44 - 140
Dibenz(a,h)anthracene	20.0	17.3		ug/L		87	1 - 200
Fluoranthene	20.0	18.8		ug/L		94	43 - 121
Fluorene	20.0	17.3		ug/L		86	70 - 120
Indeno[1,2,3-cd]pyrene	20.0	17.3		ug/L		86	1 - 151
Naphthalene	20.0	13.9		ug/L		70	36 - 120
Phenanthrene	20.0	17.1		ug/L		85	65 - 120
Pyrene	20.0	16.3		ug/L		82	70 - 120

Surrogate	LCS %Recovery	LCS Qualifier	LCS Limits
2,4,6-Tribromophenol (Surr)	87		28 - 127
2-Fluorobiphenyl (Surr)	78		31 - 120
2-Fluorophenol (Surr)	64		17 - 120
Nitrobenzene-d5 (Surr)	71		27 - 120
Phenol-d6 (Surr)	43		10 - 120
p-Terphenyl-d14 (Surr)	81		45 - 120

**Lab Sample ID: LCSD 570-498744/3-A**  
**Matrix: Water**  
**Analysis Batch: 501449**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 498744**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	20.0	13.3		ug/L		67	47 - 120	9	20
2-Methylnaphthalene	20.0	15.1		ug/L		75	43 - 120	10	20
Acenaphthene	20.0	15.7		ug/L		79	60 - 132	6	29
Acenaphthylene	20.0	15.5		ug/L		77	54 - 126	7	45
Anthracene	20.0	16.9		ug/L		84	43 - 120	5	40
Benzo[a]anthracene	20.0	17.1		ug/L		85	42 - 133	2	32
Benzo[a]pyrene	20.0	17.8		ug/L		89	32 - 148	6	43
Benzo[b]fluoranthene	20.0	18.0		ug/L		90	42 - 140	4	43
Benzo[g,h,i]perylene	20.0	15.8		ug/L		79	1 - 195	2	61
Benzo[k]fluoranthene	20.0	17.9		ug/L		90	25 - 146	3	38
Chrysene	20.0	16.1		ug/L		80	44 - 140	2	53
Dibenz(a,h)anthracene	20.0	17.1		ug/L		86	1 - 200	1	75
Fluoranthene	20.0	17.3		ug/L		87	43 - 121	8	40
Fluorene	20.0	16.3		ug/L		81	70 - 120	6	23
Indeno[1,2,3-cd]pyrene	20.0	17.0		ug/L		85	1 - 151	1	60
Naphthalene	20.0	13.2		ug/L		66	36 - 120	5	39
Phenanthrene	20.0	16.6		ug/L		83	65 - 120	3	24
Pyrene	20.0	16.6		ug/L		83	70 - 120	2	30

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
2,4,6-Tribromophenol (Surr)	83		28 - 127
2-Fluorobiphenyl (Surr)	76		31 - 120
2-Fluorophenol (Surr)	60		17 - 120

# QC Sample Results

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

Job ID: 380-119982-1  
SDG: Weekly

## Method: 625.1 SIM - Semivolatile Organic Compounds GC/MS (SIM) (Continued)

**Lab Sample ID: LCSD 570-498744/3-A**  
**Matrix: Water**  
**Analysis Batch: 501449**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 498744**

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
Nitrobenzene-d5 (Surr)	66		27 - 120
Phenol-d6 (Surr)	39		10 - 120
p-Terphenyl-d14 (Surr)	82		45 - 120

**Lab Sample ID: 380-119975-A-3-A MS**  
**Matrix: Water**  
**Analysis Batch: 501453**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 498744**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier					
1-Methylnaphthalene	<0.19		19.2	13.6		ug/L		71		36 - 120
2-Methylnaphthalene	<0.19		19.2	15.2		ug/L		79		32 - 124
Acenaphthene	<0.19		19.2	16.8		ug/L		87		47 - 145
Acenaphthylene	<0.19		19.2	16.2		ug/L		85		33 - 145
Anthracene	<0.19		19.2	17.4		ug/L		91		27 - 133
Benzo[a]anthracene	<0.19		19.2	17.4		ug/L		90		33 - 143
Benzo[a]pyrene	<0.19		19.2	17.5		ug/L		91		17 - 163
Benzo[b]fluoranthene	<0.19		19.2	17.1		ug/L		89		24 - 159
Benzo[g,h,i]perylene	<0.19		19.2	16.9		ug/L		88		1 - 219
Benzo[k]fluoranthene	<0.19		19.2	16.5		ug/L		86		11 - 162
Chrysene	<0.19		19.2	16.6		ug/L		86		17 - 168
Dibenz(a,h)anthracene	<0.19		19.2	18.0		ug/L		94		1 - 227
Fluoranthene	<0.19		19.2	17.2		ug/L		90		26 - 137
Fluorene	<0.19		19.2	17.2		ug/L		90		59 - 121
Indeno[1,2,3-cd]pyrene	<0.19		19.2	18.6		ug/L		97		1 - 171
Naphthalene	<0.19		19.2	13.9		ug/L		72		21 - 133
Phenanthrene	<0.19		19.2	17.1		ug/L		89		54 - 120
Pyrene	<0.19		19.2	18.8		ug/L		98		52 - 120

Surrogate	MS		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	93		28 - 127
2-Fluorobiphenyl (Surr)	82		31 - 120
2-Fluorophenol (Surr)	58		17 - 120
Nitrobenzene-d5 (Surr)	69		27 - 120
Phenol-d6 (Surr)	38		10 - 120
p-Terphenyl-d14 (Surr)	91		45 - 120

**Lab Sample ID: 380-119975-A-3-B MSD**  
**Matrix: Water**  
**Analysis Batch: 501453**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 498744**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	Limits	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier							
1-Methylnaphthalene	<0.19		19.4	13.7		ug/L		71		36 - 120	1	30
2-Methylnaphthalene	<0.19		19.4	15.5		ug/L		80		32 - 124	2	30
Acenaphthene	<0.19		19.4	16.6		ug/L		85		47 - 145	1	48
Acenaphthylene	<0.19		19.4	16.2		ug/L		84		33 - 145	0	74
Anthracene	<0.19		19.4	17.1		ug/L		88		27 - 133	2	66
Benzo[a]anthracene	<0.19		19.4	17.6		ug/L		91		33 - 143	1	53
Benzo[a]pyrene	<0.19		19.4	17.1		ug/L		88		17 - 163	2	72

Eurofins Eaton Analytical Pomona

# QC Sample Results

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

Job ID: 380-119982-1  
SDG: Weekly

## Method: 625.1 SIM - Semivolatile Organic Compounds GC/MS (SIM) (Continued)

**Lab Sample ID: 380-119975-A-3-B MSD**

**Client Sample ID: Matrix Spike Duplicate**

**Matrix: Water**

**Prep Type: Total/NA**

**Analysis Batch: 501453**

**Prep Batch: 498744**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits	Limit	
Benzo[b]fluoranthene	<0.19		19.4	16.6		ug/L		86	24 - 159	3	71
Benzo[g,h,i]perylene	<0.19		19.4	16.0		ug/L		83	1 - 219	5	97
Benzo[k]fluoranthene	<0.19		19.4	16.8		ug/L		86	11 - 162	2	63
Chrysene	<0.19		19.4	16.6		ug/L		85	17 - 168	0	87
Dibenz(a,h)anthracene	<0.19		19.4	17.1		ug/L		88	1 - 227	5	126
Fluoranthene	<0.19		19.4	17.2		ug/L		89	26 - 137	0	66
Fluorene	<0.19		19.4	17.7		ug/L		91	59 - 121	3	38
Indeno[1,2,3-cd]pyrene	<0.19		19.4	17.6		ug/L		91	1 - 171	5	99
Naphthalene	<0.19		19.4	13.6		ug/L		70	21 - 133	2	65
Phenanthrene	<0.19		19.4	16.8		ug/L		87	54 - 120	2	39
Pyrene	<0.19		19.4	19.2		ug/L		99	52 - 120	2	49

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	91		28 - 127
2-Fluorobiphenyl (Surr)	81		31 - 120
2-Fluorophenol (Surr)	56		17 - 120
Nitrobenzene-d5 (Surr)	68		27 - 120
Phenol-d6 (Surr)	38		10 - 120
p-Terphenyl-d14 (Surr)	93		45 - 120

## Method: 8015B GRO LL - Gasoline Range Organics - (GC)

**Lab Sample ID: MB 570-501335/45**

**Client Sample ID: Method Blank**

**Matrix: Water**

**Prep Type: Total/NA**

**Analysis Batch: 501335**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	<10		10	ug/L			11/09/24 16:02	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		38 - 134		11/09/24 16:02	1

**Lab Sample ID: LCS 570-501335/43**

**Client Sample ID: Lab Control Sample**

**Matrix: Water**

**Prep Type: Total/NA**

**Analysis Batch: 501335**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (C4-C13)	400	342		ug/L		86	78 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		38 - 134

# QC Sample Results

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

Job ID: 380-119982-1  
SDG: Weekly

## Method: 8015B GRO LL - Gasoline Range Organics - (GC) (Continued)

**Lab Sample ID: LCSD 570-501335/44**  
**Matrix: Water**  
**Analysis Batch: 501335**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (C4-C13)	400	354		ug/L		89	78 - 120	3	10
<b>Surrogate</b>	<b>%Recovery</b>	<b>LCSD Qualifier</b>	<b>Limits</b>						
4-Bromofluorobenzene (Surr)	96		38 - 134						

**Lab Sample ID: MRL 570-501335/42**  
**Matrix: Water**  
**Analysis Batch: 501335**

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (C4-C13)	10.0	11.7		ug/L		117	50 - 150		
<b>Surrogate</b>	<b>%Recovery</b>	<b>MRL Qualifier</b>	<b>Limits</b>						
4-Bromofluorobenzene (Surr)	91		38 - 134						

**Lab Sample ID: 380-119975-B-3 MS**  
**Matrix: Water**  
**Analysis Batch: 501335**

**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 Range Organics (C4-C13)	<10		400	370		ug/L		93	68 - 122		
<b>Surrogate</b>	<b>%Recovery</b>	<b>MS Qualifier</b>	<b>Limits</b>								
4-Bromofluorobenzene (Surr)	101		38 - 134								

**Lab Sample ID: 380-119975-B-3 MSD**  
**Matrix: Water**  
**Analysis Batch: 501335**

**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	RPD Limit
Gasoline Range Organics (C4-C13)	<10		400	376		ug/L		94	68 - 122	1	18
<b>Surrogate</b>	<b>%Recovery</b>	<b>MSD Qualifier</b>	<b>Limits</b>								
4-Bromofluorobenzene (Surr)	102		38 - 134								

## Method: 8015B - Diesel Range Organics (DRO) (GC) Low Level

**Lab Sample ID: MB 570-498284/1-A**  
**Matrix: Water**  
**Analysis Batch: 501964**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 498284**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C24)	<25		25	ug/L		11/01/24 11:05	11/12/24 01:35	1
Motor Oil Range Organics [C24-C36]	<25		25	ug/L		11/01/24 11:05	11/12/24 01:35	1
C8-C18	<25		25	ug/L		11/01/24 11:05	11/12/24 01:35	1

Eurofins Eaton Analytical Pomona

# QC Sample Results

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

Job ID: 380-119982-1  
SDG: Weekly

## Method: 8015B - Diesel Range Organics (DRO) (GC) Low Level (Continued)

Surrogate	MB MB %Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>n</i> -Octacosane (Surr)	105		60 - 130	11/01/24 11:05	11/12/24 01:35	1

**Lab Sample ID: LCS 570-498284/2-A**  
Matrix: Water  
Analysis Batch: 501964

**Client Sample ID: Lab Control Sample**  
Prep Type: Total/NA  
Prep Batch: 498284

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
C10-C28	1600	1460		ug/L		91	56 - 127

Surrogate	LCS LCS %Recovery	Qualifier	Limits
<i>n</i> -Octacosane (Surr)	102		60 - 130

**Lab Sample ID: LCSD 570-498284/3-A**  
Matrix: Water  
Analysis Batch: 501964

**Client Sample ID: Lab Control Sample Dup**  
Prep Type: Total/NA  
Prep Batch: 498284

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD Limit
C10-C28	1600	1320		ug/L		82	56 - 127	10 23

Surrogate	LCSD LCSD %Recovery	Qualifier	Limits
<i>n</i> -Octacosane (Surr)	95		60 - 130

**Lab Sample ID: MRL 570-498284/4-A**  
Matrix: Water  
Analysis Batch: 501964

**Client Sample ID: Lab Control Sample**  
Prep Type: Total/NA  
Prep Batch: 498284

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
C10-C28	0.0200	0.0253		mg/L		127	50 - 150

Surrogate	MRL MRL %Recovery	Qualifier	Limits
<i>n</i> -Octacosane (Surr)	98		60 - 130

**Lab Sample ID: 380-119975-C-3-A MS**  
Matrix: Water  
Analysis Batch: 501964

**Client Sample ID: Matrix Spike**  
Prep Type: Total/NA  
Prep Batch: 498284

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
C10-C28	<26		1660	1450		ug/L		87	70 - 130

Surrogate	MS MS %Recovery	Qualifier	Limits
<i>n</i> -Octacosane (Surr)	97		60 - 130

**Lab Sample ID: 380-119975-C-3-B MSD**  
Matrix: Water  
Analysis Batch: 501964

**Client Sample ID: Matrix Spike Duplicate**  
Prep Type: Total/NA  
Prep Batch: 498284

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD Limit
C10-C28	<26		1620	1300		ug/L		80	70 - 130	11 20



# QC Sample Results

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

Job ID: 380-119982-1  
SDG: Weekly

## Method: 8015B - Diesel Range Organics (DRO) (GC) Low Level (Continued)

Lab Sample ID: 380-119975-C-3-B MSD  
Matrix: Water  
Analysis Batch: 501964

Client Sample ID: Matrix Spike Duplicate  
Prep Type: Total/NA  
Prep Batch: 498284

<i>Surrogate</i>	<i>MSD</i>	<i>MSD</i>	<i>Limits</i>
	<i>%Recovery</i>	<i>Qualifier</i>	
<i>n-Octacosane (Surr)</i>	97		60 - 130

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# QC Association Summary

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

Job ID: 380-119982-1  
SDG: Weekly

## GC/MS Semi VOA

### Prep Batch: 116558

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-119982-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	525.2	
380-119982-3	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP	Total/NA	Drinking Water	525.2	
MB 380-116558/21-A	Method Blank	Total/NA	Water	525.2	
LCS 380-116558/23-A	Lab Control Sample	Total/NA	Water	525.2	
MRL 380-116558/22-A	Lab Control Sample	Total/NA	Water	525.2	
380-119975-I-1-A MS	Matrix Spike	Total/NA	Water	525.2	
380-119982-1 DU	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	525.2	

### Analysis Batch: 116854

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-119982-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	525.2	116558
380-119982-3	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP	Total/NA	Drinking Water	525.2	116558
MB 380-116558/21-A	Method Blank	Total/NA	Water	525.2	116558
LCS 380-116558/23-A	Lab Control Sample	Total/NA	Water	525.2	116558
MRL 380-116558/22-A	Lab Control Sample	Total/NA	Water	525.2	116558
380-119975-I-1-A MS	Matrix Spike	Total/NA	Water	525.2	116558
380-119982-1 DU	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	525.2	116558

### Prep Batch: 498744

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-119982-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	625.1	
380-119982-3	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP	Total/NA	Drinking Water	625.1	
MB 570-498744/1-A	Method Blank	Total/NA	Water	625.1	
LCS 570-498744/2-A	Lab Control Sample	Total/NA	Water	625.1	
LCSD 570-498744/3-A	Lab Control Sample Dup	Total/NA	Water	625.1	
380-119975-A-3-A MS	Matrix Spike	Total/NA	Water	625.1	
380-119975-A-3-B MSD	Matrix Spike Duplicate	Total/NA	Water	625.1	

### Analysis Batch: 501449

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 570-498744/1-A	Method Blank	Total/NA	Water	625.1 SIM	498744
LCS 570-498744/2-A	Lab Control Sample	Total/NA	Water	625.1 SIM	498744
LCSD 570-498744/3-A	Lab Control Sample Dup	Total/NA	Water	625.1 SIM	498744

### Analysis Batch: 501453

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-119982-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	625.1 SIM	498744
380-119982-3	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP	Total/NA	Drinking Water	625.1 SIM	498744
380-119975-A-3-A MS	Matrix Spike	Total/NA	Water	625.1 SIM	498744
380-119975-A-3-B MSD	Matrix Spike Duplicate	Total/NA	Water	625.1 SIM	498744

### Analysis Batch: 502131

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-119982-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	625.1	498744
380-119982-3	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP	Total/NA	Drinking Water	625.1	498744
MB 570-498744/1-A	Method Blank	Total/NA	Water	625.1	498744

# QC Association Summary

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

Job ID: 380-119982-1  
 SDG: Weekly

## GC VOA

### Analysis Batch: 501335

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-119982-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	8015B GRO LL	
380-119982-2	TB:AIEA GULCH WELLS P2 (331-202-TP072)	Total/NA	Water	8015B GRO LL	
380-119982-3	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP	Total/NA	Drinking Water	8015B GRO LL	
380-119982-4	TB: AIEA WELLS PUMPS 1&2 (260) (331-203-TF	Total/NA	Water	8015B GRO LL	
MB 570-501335/45	Method Blank	Total/NA	Water	8015B GRO LL	
LCS 570-501335/43	Lab Control Sample	Total/NA	Water	8015B GRO LL	
LCSD 570-501335/44	Lab Control Sample Dup	Total/NA	Water	8015B GRO LL	
MRL 570-501335/42	Lab Control Sample	Total/NA	Water	8015B GRO LL	
380-119975-B-3 MS	Matrix Spike	Total/NA	Water	8015B GRO LL	
380-119975-B-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8015B GRO LL	

## GC Semi VOA

### Prep Batch: 498284

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-119982-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	3510C	
380-119982-3	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP	Total/NA	Drinking Water	3510C	
MB 570-498284/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-498284/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-498284/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MRL 570-498284/4-A	Lab Control Sample	Total/NA	Water	3510C	
380-119975-C-3-A MS	Matrix Spike	Total/NA	Water	3510C	
380-119975-C-3-B MSD	Matrix Spike Duplicate	Total/NA	Water	3510C	

### Analysis Batch: 501964

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-119982-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	8015B	498284
380-119982-3	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP	Total/NA	Drinking Water	8015B	498284
MB 570-498284/1-A	Method Blank	Total/NA	Water	8015B	498284
LCS 570-498284/2-A	Lab Control Sample	Total/NA	Water	8015B	498284
LCSD 570-498284/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	498284
MRL 570-498284/4-A	Lab Control Sample	Total/NA	Water	8015B	498284
380-119975-C-3-A MS	Matrix Spike	Total/NA	Water	8015B	498284
380-119975-C-3-B MSD	Matrix Spike Duplicate	Total/NA	Water	8015B	498284

# Lab Chronicle

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

Job ID: 380-119982-1  
SDG: Weekly

**Client Sample ID: AIEA GULCH WELLS PUMP 2  
(331-202-TP072)**

**Lab Sample ID: 380-119982-1**

**Date Collected: 10/28/24 10:31**

**Matrix: Drinking Water**

**Date Received: 10/30/24 09:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			116558	KRD3	EA POM	10/31/24 09:04
Total/NA	Analysis	525.2		1	116854	UPAC	EA POM	11/01/24 15:14
Total/NA	Prep	625.1			498744	TR8L	EET CAL 4	11/03/24 05:14
Total/NA	Analysis	625.1		1	502131	J7WE	EET CAL 4	11/12/24 13:11
Total/NA	Prep	625.1			498744	TR8L	EET CAL 4	11/03/24 05:14
Total/NA	Analysis	625.1 SIM		1	501453	PQS1	EET CAL 4	11/10/24 20:19
Total/NA	Analysis	8015B GRO LL		1	501335	A9VE	EET CAL 4	11/09/24 17:46
Total/NA	Prep	3510C			498284	H6FE	EET CAL 4	11/01/24 11:05
Total/NA	Analysis	8015B		1	501964	NR	EET CAL 4	11/12/24 04:06

**Client Sample ID: TB:AIEA GULCH WELLS P2 (331-202-TP072)**

**Lab Sample ID: 380-119982-2**

**Date Collected: 10/28/24 10:31**

**Matrix: Water**

**Date Received: 10/30/24 09:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015B GRO LL		1	501335	A9VE	EET CAL 4	11/09/24 20:22

**Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2  
(331-203-TP400)**

**Lab Sample ID: 380-119982-3**

**Date Collected: 10/28/24 10:55**

**Matrix: Drinking Water**

**Date Received: 10/30/24 09:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			116558	KRD3	EA POM	10/31/24 09:04
Total/NA	Analysis	525.2		1	116854	UPAC	EA POM	11/01/24 15:55
Total/NA	Prep	625.1			498744	TR8L	EET CAL 4	11/03/24 05:14
Total/NA	Analysis	625.1		1	502131	J7WE	EET CAL 4	11/12/24 13:35
Total/NA	Prep	625.1			498744	TR8L	EET CAL 4	11/03/24 05:14
Total/NA	Analysis	625.1 SIM		1	501453	PQS1	EET CAL 4	11/10/24 20:41
Total/NA	Analysis	8015B GRO LL		1	501335	A9VE	EET CAL 4	11/09/24 18:11
Total/NA	Prep	3510C			498284	H6FE	EET CAL 4	11/01/24 11:05
Total/NA	Analysis	8015B		1	501964	NR	EET CAL 4	11/12/24 04:27

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

**Lab Sample ID: 380-119982-4**

**Date Collected: 10/28/24 10:55**

**Matrix: Water**

**Date Received: 10/30/24 09:35**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015B GRO LL		1	501335	A9VE	EET CAL 4	11/09/24 20:48

**Laboratory References:**

EA POM = Eurofins Eaton Analytical Pomona, 941 Corporate Center Drive, Pomona, CA 91768-2642, TEL (626)386-1100  
EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

Eurofins Eaton Analytical Pomona

# Accreditation/Certification Summary

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

Job ID: 380-119982-1  
SDG: Weekly

## Laboratory: Eurofins Eaton Analytical Pomona

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

Authority	Program	Identification Number	Expiration Date
Hawaii	State	CA00006	01-31-25
<p>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.</p>			
Analysis Method	Prep Method	Matrix	Analyte
525.2	525.2	Drinking Water	1-Methylnaphthalene
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	2-Methylnaphthalene
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	Acetochlor
525.2	525.2	Drinking Water	alpha-BHC
525.2	525.2	Drinking Water	alpha-Chlordane
525.2	525.2	Drinking Water	beta-BHC
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	delta-BHC
525.2	525.2	Drinking Water	Diclorvos (DDVP)
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	gamma-Chlordane
525.2	525.2	Drinking Water	Isophorone
525.2	525.2	Drinking Water	Malathion
525.2	525.2	Drinking Water	Parathion
525.2	525.2	Drinking Water	Pendimethalin (Penoxaline)
525.2	525.2	Drinking Water	Terbacil
525.2	525.2	Drinking Water	Terbutylazine
525.2	525.2	Drinking Water	Total Permethrin (mixed isomers)
525.2	525.2	Drinking Water	trans-Nonachlor

## Laboratory: Eurofins Calscience

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arizona	State	AZ0830	11-15-24
Arkansas DEQ	State	88-0161	07-02-25
California	Los Angeles County Sanitation Districts	9257304	07-31-26
California	SCAQMD LAP	17LA0919	11-30-24
California	State	3082	07-31-26
Kansas	NELAP	E-10420	07-31-25

# Accreditation/Certification Summary

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

Job ID: 380-119982-1  
SDG: Weekly

## Laboratory: Eurofins Calscience (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Nevada	State	CA00111	07-31-25
Oregon	NELAP	4175	02-02-25
USDA	US Federal Programs	P330-22-00059	06-08-26
Washington	State	C916-18	12-31-24

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# Method Summary

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

Job ID: 380-119982-1  
SDG: Weekly

Method	Method Description	Protocol	Laboratory
525.2	Semivolatile Organic Compounds (GC/MS)	EPA	EA POM
625.1	Semivolatile Organic Compounds (GC/MS)	EPA	EET CAL 4
625.1 SIM	Semivolatile Organic Compounds GC/MS (SIM)	EPA	EET CAL 4
8015B GRO LL	Gasoline Range Organics - (GC)	SW846	EET CAL 4
8015B	Diesel Range Organics (DRO) (GC) Low Level	SW846	EET CAL 4
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET CAL 4
5030C	Purge and Trap	SW846	EET CAL 4
525.2	Extraction of Semivolatile Compounds	EPA	EA POM
625.1	Liquid-Liquid Extraction	40CFR136A	EET CAL 4

#### Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

EPA = US Environmental Protection Agency

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

#### Laboratory References:

EA POM = Eurofins Eaton Analytical Pomona, 941 Corporate Center Drive, Pomona, CA 91768-2642, TEL (626)386-1100

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

# Sample Summary

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


Job ID: 380-119982-1  
SDG: Weekly

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-119982-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Drinking Water	10/28/24 10:31	10/30/24 09:35
380-119982-2	TB:AIEA GULCH WELLS P2 (331-202-TP072)	Water	10/28/24 10:31	10/30/24 09:35
380-119982-3	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP400)	Drinking Water	10/28/24 10:55	10/30/24 09:35
380-119982-4	TB: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)	Water	10/28/24 10:55	10/30/24 09:35

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**Chain of Custody Record**

<b>Client Information</b>		Lab PIV: Arada Rachelle		Carrier Tracking No(s): 380-28005-2757 1		
Client Contact: Dr. Ron Fenstermacher		E-Mail: Rachelle.Arada@et.eurofins.com		Page: 1 of 1		
Company: City & County of Honolulu		PWSID:		Job #:		
Address: 630 South Beretania Street Chemistry Lab		Due Date Requested: TAT Requested (days):		Analysis Requested:		
City: Honolulu		Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		 380-119982 COC		
State Zip: HI, 96843		PO #: C20525101 exp 05312023		533 - All Analytes 537 1_DW_PREC - 537 1 Full List 525.2 PREC - (MOD) 525plus Plus TICs 8015B_DRD_LL_CS - HNL Ranges C10-C24/C24-C36/C38-C18 8015B_GRO_LL - (MOD) GRO 825.1, 825.1 SIM		
Phone: 808-748-5091(Tel)		WO #:		Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/>		
Email: RFENSTEMACHER@hbws.org		Project #: 38001111		Total Number of containers: <input checked="" type="checkbox"/>		
Project Name: RED-HILL/HBWS Sites Event Desc: RUSH Weekly Red Hill		SSOW#:		Special Instructions/Note:		
Site: Hawaii						
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wastebolt, BT=tissue, A=air)	Preservation Code:	Special Instructions/Note:
Aiea Gulch Wells Pump 2	28-Oct-2024	1031	G	Water		
Aiea Gulch Wells Pump 2 (Matrix Spike)				Water		
Aiea Gulch Wells Pump 2 (Matrix Spike Duplicate)				Water		
TB: Aiea Gulch Wells Pump 2	28-Oct-2024	1031		Water		① 7796 0467 5570 (751A) 2.4°-0.0° = 2.4°
Aiea Wells Pumps 1&2 (260) PZ	28-Oct-2024	1055	G	Water		② 7796 0467 5580 (751A) 1.1°-0.0° = 1.1°
Aiea Wells Pumps 1&2 (260) (Matrix Spike)				Water		③ 7796 0467 5591 (751A) 2.7°-0.0° = 2.7°
Aiea Wells Pumps 1&2 (Matrix Spike Duplicate)				Water		④ 7796 0467 5606 (751A) 1.3°-0.0° = 1.3°
TB: Aiea Wells Pumps 1&2 (260)	28-Oct-2024	1055		Water		
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological						
Deliverable Requested I, II, III, IV Other (specify)						
Empty Kit Relinquished by:						
Relinquished by: [Redacted]		Date: 29 Oct 2024		Time: 1400		Company: HBWS
Relinquished by: [Redacted]		Date: 10/30/2024		Time: 09:35		Company: EEAD
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months						
Special Instructions/QC Requirements:						
Method of Shipment: <b>FED EX</b>						
Relinquished by: [Redacted]		Date: 29 Oct 2024		Time: 1400		Company: HBWS
Relinquished by: [Redacted]		Date: 10/30/2024		Time: 09:35		Company: EEAD
Cooler Temperature(s) °C and Other Remarks: (751A) DEL-FROZEN ± 0.0°						



**Chain of Custody Record**



**Client Information (Sub Contract Lab)**  
 Client Contact: Rachelle Arada, Rachelle Arada@eurofins.com  
 Shipping/Receiving: Rachelle Arada@eurofins.com  
 Company: Eurofins Environment Testing Southwest, State Hawaii  
 Address: 2841 Dow Avenue, Suite 100, Honolulu BWS Sites  
 City: Tustin, State: CA, Zip: 92780  
 Phone: 714-895-5494(Tel), Project #: 38001111, SSO#: N/A  
 Email: N/A

**Lab PII:** Arada, Rachelle  
**Lab PII:** N/A  
**Carrier Tracing No(s):** 380-185922-1  
**Page:** Page 1 of 1  
**Job #:** 380-119982-1  
**Preservation Codes:**

Sample ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Seawater, Overstabil)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	024624-C38/C8-C18	80158_GRO_LL/60303(MO3) GRO	625_1_SIM/625_Prep (MOD) Extended PAH List	625_1/625_Prep (MOD) Tentatively Identified Compounds (Hold)	Analysis Requested	Total Number of Containers	Special Instructions/Note:
AIEA GULCH WELLS PUMP 2 (331-202-TP072) (380-119982-1)	10/28/24	10:31 Hawaiian	G	Water	X	X	X	X	X	X		7	MRLs are needed. Confirm any hits >RL
TB-AIEA GULCH WELLS P2 (331-202-TP072) (380-119982-2)	10/28/24	10:31 Hawaiian	G	Water			X					2	MRLs are needed.
AIEA WELLS PUMPS 1&2 (260) (331-203-TP400) (380-119982-3)	10/28/24	10:55 Hawaiian	G	Water			X	X	X	X		7	MRLs are needed. Confirm any hits >RL
TB: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400) (380-119982-4)	10/28/24	10:55 Hawaiian	G	Water			X	X	X	X		2	MRLs are needed.



380-119982 Chain of Custody

**Possible Hazard Identification**  
 Unconfirmed  
 Deliverable Requested: I, II, III, IV Other (specify) \_\_\_\_\_  
 Primary Deliverable Rank: 2  
 Empty Kit Reinquished by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Reinquished by: [Signature] Date/Time: 10/31/24 6:10  
 Reinquished by: [Signature] Date/Time: \_\_\_\_\_  
 Reinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Custody Seals Intact:  Yes  No  
 Custody Seal No. 15/25 SCA  
 Cooler Temperature(s) °C and Other Remarks: \_\_\_\_\_  
 Received by: [Signature] Date/Time: 10/31/24 11:10 Company: EC  
 Received by: [Signature] Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_  
 Received by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_  
 Special Instructions/QC Requirements: \_\_\_\_\_  
 Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

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



## Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-119982-1

SDG Number: Weekly

**Login Number: 119982**

**List Number: 1**

**Creator: Gerfen, Chris**

**List Source: Eurofins Eaton Analytical Pomona**

Question	Answer	Comment
The coolers custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
Samples were received on ice.	True	
Cooler(s) Temperature is acceptable.	True	
Cooler(s) Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and is legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
CIO4 headspace requirement met (>50% for CA, >30% for other states).	N/A	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	



# Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-119982-1

SDG Number: Weekly

**Login Number: 119982**

**List Number: 2**

**Creator: Khana, Piyush**

**List Source: Eurofins Calscience**

**List Creation: 10/31/24 01:44 PM**

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	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	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

