

# ANALYTICAL REPORT

## PREPARED FOR

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## JOB DESCRIPTION

RED-HILL  
Weekly

## JOB NUMBER

380-114717-1

# 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: 380-114717-1  
SDG: Weekly

## Qualifiers

### GC/MS Semi VOA

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

### GC/MS Semi VOA TICs

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

## 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: 380-114717-1

**Job ID: 380-114717-1**

**Eurofins Eaton Analytical Pomona**

## **Job Narrative 380-114717-1**

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 9/25/2024 9:48 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.7°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: 380-114717-1  
SDG: Weekly

## Client Sample ID: Ka'amilo Wells

Lab Sample ID: 380-114717-1

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: Ka'amilo Wells

Lab Sample ID: 380-114717-2

No Detections.

## Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1

Lab Sample ID: 380-114717-3

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Dieldrin	0.046		0.0097	ug/L	1		525.2	Total/NA
Heptachlor epoxide (isomer B)	0.020	^3+	0.0097	ug/L	1		525.2	Total/NA

## Client Sample ID: TB: HALAWA WELLS UNITS 1 & 2

Lab Sample ID: 380-114717-4

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: 380-114717-1  
SDG: Weekly

**Client Sample ID: Ka'amilo Wells**

**Lab Sample ID: 380-114717-1**

Date Collected: 09/23/24 11:28

Matrix: Water

Date Received: 09/25/24 09:48

**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		09/26/24 10:20	09/27/24 16:13	1
2,4'-DDD	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:13	1
2,4'-DDE	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:13	1
2,4'-DDT	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:13	1
2,4-Dinitrotoluene	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:13	1
2,6-Dinitrotoluene	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:13	1
2-Methylnaphthalene	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:13	1
4,4'-DDD	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:13	1
4,4'-DDE	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:13	1
4,4'-DDT	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:13	1
Acenaphthene	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:13	1
Acenaphthylene	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:13	1
Acetochlor	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:13	1
Alachlor	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 16:13	1
alpha-BHC	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:13	1
alpha-Chlordane	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 16:13	1
Anthracene	<0.019		0.019	ug/L		09/26/24 10:20	09/27/24 16:13	1
Atrazine	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 16:13	1
Benz(a)anthracene	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 16:13	1
Benzo[a]pyrene	<0.019		0.019	ug/L		09/26/24 10:20	09/27/24 16:13	1
Benzo[b]fluoranthene	<0.019		0.019	ug/L		09/26/24 10:20	09/27/24 16:13	1
Benzo[g,h,i]perylene	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 16:13	1
Benzo[k]fluoranthene	<0.019		0.019	ug/L		09/26/24 10:20	09/27/24 16:13	1
beta-BHC	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:13	1
Bis(2-ethylhexyl) phthalate	<0.58		0.58	ug/L		09/26/24 10:20	09/27/24 16:13	1
Bromacil	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:13	1
Butachlor	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 16:13	1
Butylbenzylphthalate	<0.49	F1 *+	0.49	ug/L		09/26/24 10:20	09/27/24 16:13	1
Chlorobenzilate	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:13	1
Chloroneb	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:13	1
Chlorothalonil (Draconil, Bravo)	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:13	1
Chlorpyrifos	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 16:13	1
Chrysene	<0.019		0.019	ug/L		09/26/24 10:20	09/27/24 16:13	1
delta-BHC	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:13	1
Di(2-ethylhexyl)adipate	<0.58	F1 *+	0.58	ug/L		09/26/24 10:20	09/27/24 16:13	1
Dibenz(a,h)anthracene	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 16:13	1
Diclorvos (DDVP)	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 16:13	1
<b>Dieldrin</b>	<b>0.015</b>		0.0097	ug/L		09/26/24 10:20	09/27/24 16:13	1
Diethylphthalate	<0.49		0.49	ug/L		09/26/24 10:20	09/27/24 16:13	1
Dimethylphthalate	<0.49		0.49	ug/L		09/26/24 10:20	09/27/24 16:13	1
Di-n-butyl phthalate	<0.97		0.97	ug/L		09/26/24 10:20	09/27/24 16:13	1
Di-n-octyl phthalate	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:13	1
Endosulfan I (Alpha)	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:13	1
Endosulfan II (Beta)	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:13	1
Endosulfan sulfate	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:13	1
Endrin	<0.0097		0.0097	ug/L		09/26/24 10:20	09/27/24 16:13	1
Endrin aldehyde	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:13	1
EPTC	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:13	1
Fluoranthene	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:13	1

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# Client Sample Results

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

Job ID: 380-114717-1  
SDG: Weekly

**Client Sample ID: Ka'amilo Wells**

**Lab Sample ID: 380-114717-1**

Date Collected: 09/23/24 11:28

Matrix: Water

Date Received: 09/25/24 09:48

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 16:13	1
gamma-Chlordane	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 16:13	1
Heptachlor	<0.0097	^3+	0.0097	ug/L		09/26/24 10:20	09/27/24 16:13	1
Heptachlor epoxide (isomer B)	<0.0097	^3+	0.0097	ug/L		09/26/24 10:20	09/27/24 16:13	1
Hexachlorobenzene	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 16:13	1
Hexachlorocyclopentadiene	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 16:13	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 16:13	1
Isophorone	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:13	1
Lindane	<0.0097	^3+	0.0097	ug/L		09/26/24 10:20	09/27/24 16:13	1
Malathion	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:13	1
Methoxychlor	<0.049	^3+	0.049	ug/L		09/26/24 10:20	09/27/24 16:13	1
Metolachlor	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 16:13	1
Molinate	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:13	1
Naphthalene	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:13	1
Parathion	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:13	1
Pendimethalin (Penoxaline)	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:13	1
Phenanthrene	<0.039		0.039	ug/L		09/26/24 10:20	09/27/24 16:13	1
Propachlor	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 16:13	1
Pyrene	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 16:13	1
Simazine	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 16:13	1
Terbacil	<0.097	F1 *+	0.097	ug/L		09/26/24 10:20	09/27/24 16:13	1
Terbutylazine	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:13	1
Thiobencarb	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:13	1
Total Permethrin (mixed isomers)	<0.19		0.19	ug/L		09/26/24 10:20	09/27/24 16:13	1
trans-Nonachlor	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 16:13	1
Trifluralin	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:13	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	09/26/24 10:20	09/27/24 16:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	98		70 - 130	09/26/24 10:20	09/27/24 16:13	1
Perylene-d12	90		70 - 130	09/26/24 10:20	09/27/24 16:13	1
Triphenylphosphate	109		70 - 130	09/26/24 10:20	09/27/24 16:13	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		09/27/24 06:25	10/03/24 10:30	1
2-Methylnaphthalene	<0.19		0.19	ug/L		09/27/24 06:25	10/03/24 10:30	1
Acenaphthene	<0.19		0.19	ug/L		09/27/24 06:25	10/03/24 10:30	1
Acenaphthylene	<0.19		0.19	ug/L		09/27/24 06:25	10/03/24 10:30	1
Anthracene	<0.19		0.19	ug/L		09/27/24 06:25	10/03/24 10:30	1
Benzo[a]anthracene	<0.19		0.19	ug/L		09/27/24 06:25	10/03/24 10:30	1
Benzo[a]pyrene	<0.19		0.19	ug/L		09/27/24 06:25	10/03/24 10:30	1
Benzo[b]fluoranthene	<0.19		0.19	ug/L		09/27/24 06:25	10/03/24 10:30	1
Benzo[g,h,i]perylene	<0.19		0.19	ug/L		09/27/24 06:25	10/03/24 10:30	1
Benzo[k]fluoranthene	<0.19		0.19	ug/L		09/27/24 06:25	10/03/24 10:30	1
Chrysene	<0.19		0.19	ug/L		09/27/24 06:25	10/03/24 10:30	1
Dibenz(a,h)anthracene	<0.19		0.19	ug/L		09/27/24 06:25	10/03/24 10:30	1
Fluoranthene	<0.19		0.19	ug/L		09/27/24 06:25	10/03/24 10:30	1

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# Client Sample Results

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

Job ID: 380-114717-1  
SDG: Weekly

**Client Sample ID: Ka'amilo Wells**

**Lab Sample ID: 380-114717-1**

Date Collected: 09/23/24 11:28

Matrix: Water

Date Received: 09/25/24 09:48

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	<0.19		0.19	ug/L		09/27/24 06:25	10/03/24 10:30	1
Indeno[1,2,3-cd]pyrene	<0.19		0.19	ug/L		09/27/24 06:25	10/03/24 10:30	1
Naphthalene	<0.19		0.19	ug/L		09/27/24 06:25	10/03/24 10:30	1
Phenanthrene	<0.19		0.19	ug/L		09/27/24 06:25	10/03/24 10:30	1
Pyrene	<0.19		0.19	ug/L		09/27/24 06:25	10/03/24 10:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	87		28 - 127	09/27/24 06:25	10/03/24 10:30	1
2-Fluorobiphenyl (Surr)	54		31 - 120	09/27/24 06:25	10/03/24 10:30	1
2-Fluorophenol (Surr)	52		17 - 120	09/27/24 06:25	10/03/24 10:30	1
Nitrobenzene-d5 (Surr)	56		27 - 120	09/27/24 06:25	10/03/24 10:30	1
Phenol-d6 (Surr)	34		10 - 120	09/27/24 06:25	10/03/24 10:30	1
p-Terphenyl-d14 (Surr)	59		45 - 120	09/27/24 06:25	10/03/24 10:30	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	09/27/24 06:25	10/07/24 16:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	100		33 - 139	09/27/24 06:25	10/07/24 16:45	1
2-Fluorobiphenyl (Surr)	81		33 - 126	09/27/24 06:25	10/07/24 16:45	1
2-Fluorophenol (Surr)	57		12 - 120	09/27/24 06:25	10/07/24 16:45	1
Nitrobenzene-d5 (Surr)	84		36 - 120	09/27/24 06:25	10/07/24 16:45	1
Phenol-d6 (Surr)	34		10 - 120	09/27/24 06:25	10/07/24 16:45	1
p-Terphenyl-d14 (Surr)	73		47 - 131	09/27/24 06:25	10/07/24 16:45	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			10/01/24 19:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	81		38 - 134		10/01/24 19:08	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)	<27		27	ug/L		09/27/24 12:38	10/01/24 19:55	1
Motor Oil Range Organics [C24-C36]	<27		27	ug/L		09/27/24 12:38	10/01/24 19:55	1
C8-C18	<27		27	ug/L		09/27/24 12:38	10/01/24 19:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	102		60 - 130	09/27/24 12:38	10/01/24 19:55	1

**Client Sample ID: TB: Ka'amilo Wells**

**Lab Sample ID: 380-114717-2**

Date Collected: 09/23/24 11:28

Matrix: Water

Date Received: 09/25/24 09:48

**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			10/01/24 17:35	1

# Client Sample Results

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

Job ID: 380-114717-1  
SDG: Weekly

**Client Sample ID: TB: Ka'amilo Wells**

**Lab Sample ID: 380-114717-2**

Date Collected: 09/23/24 11:28

Matrix: Water

Date Received: 09/25/24 09:48

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		38 - 134		10/01/24 17:35	1

**Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1**

**Lab Sample ID: 380-114717-3**

Date Collected: 09/23/24 10:07

Matrix: Water

Date Received: 09/25/24 09:48

**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		09/26/24 10:20	09/27/24 16:34	1
2,4'-DDD	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:34	1
2,4'-DDE	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:34	1
2,4'-DDT	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:34	1
2,4-Dinitrotoluene	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:34	1
2,6-Dinitrotoluene	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:34	1
2-Methylnaphthalene	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:34	1
4,4'-DDD	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:34	1
4,4'-DDE	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:34	1
4,4'-DDT	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:34	1
Acenaphthene	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:34	1
Acenaphthylene	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:34	1
Acetochlor	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:34	1
Alachlor	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 16:34	1
alpha-BHC	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:34	1
alpha-Chlordane	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 16:34	1
Anthracene	<0.019		0.019	ug/L		09/26/24 10:20	09/27/24 16:34	1
Atrazine	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 16:34	1
Benz(a)anthracene	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 16:34	1
Benzo[a]pyrene	<0.019		0.019	ug/L		09/26/24 10:20	09/27/24 16:34	1
Benzo[b]fluoranthene	<0.019		0.019	ug/L		09/26/24 10:20	09/27/24 16:34	1
Benzo[g,h,i]perylene	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 16:34	1
Benzo[k]fluoranthene	<0.019		0.019	ug/L		09/26/24 10:20	09/27/24 16:34	1
beta-BHC	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:34	1
Bis(2-ethylhexyl) phthalate	<0.58		0.58	ug/L		09/26/24 10:20	09/27/24 16:34	1
Bromacil	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:34	1
Butachlor	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 16:34	1
Butylbenzylphthalate	<0.49	*+	0.49	ug/L		09/26/24 10:20	09/27/24 16:34	1
Chlorobenzilate	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:34	1
Chloroneb	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:34	1
Chlorothalonil (Draconil, Bravo)	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:34	1
Chlorpyrifos	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 16:34	1
Chrysene	<0.019		0.019	ug/L		09/26/24 10:20	09/27/24 16:34	1
delta-BHC	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:34	1
Di(2-ethylhexyl)adipate	<0.58	*+	0.58	ug/L		09/26/24 10:20	09/27/24 16:34	1
Dibenz(a,h)anthracene	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 16:34	1
Diclorvos (DDVP)	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 16:34	1
<b>Dieldrin</b>	<b>0.046</b>		0.0097	ug/L		09/26/24 10:20	09/27/24 16:34	1
Diethylphthalate	<0.49		0.49	ug/L		09/26/24 10:20	09/27/24 16:34	1
Dimethylphthalate	<0.49		0.49	ug/L		09/26/24 10:20	09/27/24 16:34	1
Di-n-butyl phthalate	<0.97		0.97	ug/L		09/26/24 10:20	09/27/24 16:34	1
Di-n-octyl phthalate	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:34	1

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# Client Sample Results

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

Job ID: 380-114717-1  
SDG: Weekly

**Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1**

**Lab Sample ID: 380-114717-3**

Date Collected: 09/23/24 10:07

Matrix: Water

Date Received: 09/25/24 09:48

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Endosulfan I (Alpha)	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:34	1
Endosulfan II (Beta)	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:34	1
Endosulfan sulfate	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:34	1
Endrin	<0.0097		0.0097	ug/L		09/26/24 10:20	09/27/24 16:34	1
Endrin aldehyde	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:34	1
EPTC	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:34	1
Fluoranthene	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:34	1
Fluorene	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 16:34	1
gamma-Chlordane	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 16:34	1
Heptachlor	<0.0097	^3+	0.0097	ug/L		09/26/24 10:20	09/27/24 16:34	1
<b>Heptachlor epoxide (isomer B)</b>	<b>0.020</b>	<b>^3+</b>	0.0097	ug/L		09/26/24 10:20	09/27/24 16:34	1
Hexachlorobenzene	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 16:34	1
Hexachlorocyclopentadiene	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 16:34	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 16:34	1
Isophorone	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:34	1
Lindane	<0.0097	^3+	0.0097	ug/L		09/26/24 10:20	09/27/24 16:34	1
Malathion	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:34	1
Methoxychlor	<0.049	^3+	0.049	ug/L		09/26/24 10:20	09/27/24 16:34	1
Metolachlor	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 16:34	1
Molinate	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:34	1
Naphthalene	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:34	1
Parathion	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:34	1
Pendimethalin (Penoxaline)	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:34	1
Phenanthrene	<0.039		0.039	ug/L		09/26/24 10:20	09/27/24 16:34	1
Propachlor	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 16:34	1
Pyrene	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 16:34	1
Simazine	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 16:34	1
Terbacil	<0.097	*+	0.097	ug/L		09/26/24 10:20	09/27/24 16:34	1
Terbutylazine	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:34	1
Thiobencarb	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:34	1
Total Permethrin (mixed isomers)	<0.19		0.19	ug/L		09/26/24 10:20	09/27/24 16:34	1
trans-Nonachlor	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 16:34	1
Trifluralin	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 16:34	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	09/26/24 10:20	09/27/24 16:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	98		70 - 130	09/26/24 10:20	09/27/24 16:34	1
Perylene-d12	91		70 - 130	09/26/24 10:20	09/27/24 16:34	1
Triphenylphosphate	108		70 - 130	09/26/24 10:20	09/27/24 16:34	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		09/27/24 06:25	10/03/24 10:09	1
2-Methylnaphthalene	<0.19		0.19	ug/L		09/27/24 06:25	10/03/24 10:09	1
Acenaphthene	<0.19		0.19	ug/L		09/27/24 06:25	10/03/24 10:09	1
Acenaphthylene	<0.19		0.19	ug/L		09/27/24 06:25	10/03/24 10:09	1
Anthracene	<0.19		0.19	ug/L		09/27/24 06:25	10/03/24 10:09	1
Benzo[a]anthracene	<0.19		0.19	ug/L		09/27/24 06:25	10/03/24 10:09	1

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# Client Sample Results

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

Job ID: 380-114717-1  
SDG: Weekly

**Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1**

**Lab Sample ID: 380-114717-3**

Date Collected: 09/23/24 10:07

Matrix: Water

Date Received: 09/25/24 09:48

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	<0.19		0.19	ug/L		09/27/24 06:25	10/03/24 10:09	1
Benzo[b]fluoranthene	<0.19		0.19	ug/L		09/27/24 06:25	10/03/24 10:09	1
Benzo[g,h,i]perylene	<0.19		0.19	ug/L		09/27/24 06:25	10/03/24 10:09	1
Benzo[k]fluoranthene	<0.19		0.19	ug/L		09/27/24 06:25	10/03/24 10:09	1
Chrysene	<0.19		0.19	ug/L		09/27/24 06:25	10/03/24 10:09	1
Dibenz(a,h)anthracene	<0.19		0.19	ug/L		09/27/24 06:25	10/03/24 10:09	1
Fluoranthene	<0.19		0.19	ug/L		09/27/24 06:25	10/03/24 10:09	1
Fluorene	<0.19		0.19	ug/L		09/27/24 06:25	10/03/24 10:09	1
Indeno[1,2,3-cd]pyrene	<0.19		0.19	ug/L		09/27/24 06:25	10/03/24 10:09	1
Naphthalene	<0.19		0.19	ug/L		09/27/24 06:25	10/03/24 10:09	1
Phenanthrene	<0.19		0.19	ug/L		09/27/24 06:25	10/03/24 10:09	1
Pyrene	<0.19		0.19	ug/L		09/27/24 06:25	10/03/24 10:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	85		28 - 127	09/27/24 06:25	10/03/24 10:09	1
2-Fluorobiphenyl (Surr)	52		31 - 120	09/27/24 06:25	10/03/24 10:09	1
2-Fluorophenol (Surr)	51		17 - 120	09/27/24 06:25	10/03/24 10:09	1
Nitrobenzene-d5 (Surr)	54		27 - 120	09/27/24 06:25	10/03/24 10:09	1
Phenol-d6 (Surr)	33		10 - 120	09/27/24 06:25	10/03/24 10:09	1
p-Terphenyl-d14 (Surr)	56		45 - 120	09/27/24 06:25	10/03/24 10:09	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	09/27/24 06:25	10/07/24 17:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	96		33 - 139	09/27/24 06:25	10/07/24 17:08	1
2-Fluorobiphenyl (Surr)	76		33 - 126	09/27/24 06:25	10/07/24 17:08	1
2-Fluorophenol (Surr)	58		12 - 120	09/27/24 06:25	10/07/24 17:08	1
Nitrobenzene-d5 (Surr)	82		36 - 120	09/27/24 06:25	10/07/24 17:08	1
Phenol-d6 (Surr)	35		10 - 120	09/27/24 06:25	10/07/24 17:08	1
p-Terphenyl-d14 (Surr)	79		47 - 131	09/27/24 06:25	10/07/24 17:08	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			10/01/24 14:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	81		38 - 134		10/01/24 14:12	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)	<25		25	ug/L		09/27/24 12:38	10/01/24 20:15	1
Motor Oil Range Organics [C24-C36]	<25		25	ug/L		09/27/24 12:38	10/01/24 20:15	1
C8-C18	<25		25	ug/L		09/27/24 12:38	10/01/24 20:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	110		60 - 130	09/27/24 12:38	10/01/24 20:15	1

# Client Sample Results

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

Job ID: 380-114717-1  
 SDG: Weekly

**Client Sample ID: TB: HALAWA WELLS UNITS 1 & 2**

**Lab Sample ID: 380-114717-4**

Date Collected: 09/23/24 10:07

Matrix: Water

Date Received: 09/25/24 09:48

**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			10/01/24 17:58	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		38 - 134				10/01/24 17:58	1

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

# Action Limit Summary

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

Job ID: 380-114717-1  
SDG: Weekly

**Client Sample ID: Ka'amilo Wells**

**Lab Sample ID: 380-114717-1**

## 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	F1 *+	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	^3+	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	^3+	ug/L	0.2	0.0097	525.2	Total/NA
Methoxychlor	<0.049	^3+	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: HALAWA WELLS UNITS 1 & 2 P1**

**Lab Sample ID: 380-114717-3**

## 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	<0.049		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)	0.020	^3+	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	^3+	ug/L	0.2	0.0097	525.2	Total/NA
Methoxychlor	<0.049	^3+	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

# Surrogate Summary

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

Job ID: 380-114717-1  
SDG: Weekly

## 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)
380-114717-1	Ka'amilo Wells	98	90	109
380-114717-1 MS	Ka'amilo Wells	98	94	111
380-114717-3	HALAWA WELLS UNITS 1 & 2	98	91	108
	P1			
380-114717-3 DU	HALAWA WELLS UNITS 1 & 2	100	89	106
	P1			
LCS 380-110387/23-A	Lab Control Sample	97	92	114
LCSD 380-110387/24-A	Lab Control Sample Dup	97	90	107
MB 380-110387/21-A	Method Blank	97	82	107
MRL 380-110387/22-A	Lab Control Sample	98	79	109

**Surrogate Legend**

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

## 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)
380-114717-1	Ka'amilo Wells	100	81	57	84	34	73
380-114717-3	HALAWA WELLS UNITS 1 & 2	96	76	58	82	35	79
	P1						
MB 570-485362/1-A	Method Blank	103	81	60	84	38	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)
380-114717-1	Ka'amilo Wells	87	54	52	56	34	59
380-114717-3	HALAWA WELLS UNITS 1 & 2	85	52	51	54	33	56
	P1						
380-114717-3 MS	HALAWA WELLS UNITS 1 & 2	82	51	59	39	39	62
380-114717-3 MSD	HALAWA WELLS UNITS 1 & 2	82	49	58	37	39	57
LCS 570-485362/2-A	Lab Control Sample	86	48	52	40	36	62
LCSD 570-485362/3-A	Lab Control Sample Dup	86	55	63	46	43	61
MB 570-485362/1-A	Method Blank	84	52	54	54	35	57

**Surrogate Legend**

TBP = 2,4,6-Tribromophenol (Surr)  
FBP = 2-Fluorobiphenyl (Surr)

# Surrogate Summary

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

Job ID: 380-114717-1  
 SDG: Weekly

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: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1 (38-134)
380-114717-1	Ka'amilo Wells	81
380-114717-2	TB: Ka'amilo Wells	83
380-114717-3	HALAWA WELLS UNITS 1 & 2 P1	81
380-114717-3 MS	HALAWA WELLS UNITS 1 & 2	87
380-114717-3 MSD	HALAWA WELLS UNITS 1 & 2	87
380-114717-4	TB: HALAWA WELLS UNITS 1 & 2	86
LCS 570-486453/5	Lab Control Sample	87
LCSD 570-486453/6	Lab Control Sample Dup	86
MB 570-486453/4	Method Blank	85
MRL 570-486453/3	Lab Control Sample	78

#### Surrogate Legend

BFB = 4-Bromofluorobenzene (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)
380-114394-B-1-A MS	Matrix Spike	109
380-114394-B-1-B MSD	Matrix Spike Duplicate	105
380-114717-1	Ka'amilo Wells	102
380-114717-3	HALAWA WELLS UNITS 1 & 2 P1	110
380-114717-3 MS	HALAWA WELLS UNITS 1 & 2	118
380-114717-3 MSD	HALAWA WELLS UNITS 1 & 2	115
LCS 570-485540/2-A	Lab Control Sample	117
LCSD 570-485540/3-A	Lab Control Sample Dup	112
MB 570-485540/1-A	Method Blank	108
MRL 570-485540/4-A	Lab Control Sample	113

#### Surrogate Legend

OTCSN = n-Octacosane (Surr)



# QC Sample Results

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

Job ID: 380-114717-1  
 SDG: Weekly

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

**Lab Sample ID: MB 380-110387/21-A**  
**Matrix: Water**  
**Analysis Batch: 110681**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 110387**

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
1-Methylnaphthalene	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 15:53	1
2,4'-DDD	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 15:53	1
2,4'-DDE	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 15:53	1
2,4'-DDT	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 15:53	1
2,4-Dinitrotoluene	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 15:53	1
2,6-Dinitrotoluene	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 15:53	1
2-Methylnaphthalene	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 15:53	1
4,4'-DDD	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 15:53	1
4,4'-DDE	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 15:53	1
4,4'-DDT	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 15:53	1
Acenaphthene	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 15:53	1
Acenaphthylene	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 15:53	1
Acetochlor	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 15:53	1
Alachlor	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 15:53	1
alpha-BHC	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 15:53	1
alpha-Chlordane	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 15:53	1
Anthracene	<0.019		0.019	ug/L		09/26/24 10:20	09/27/24 15:53	1
Atrazine	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 15:53	1
Benz(a)anthracene	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 15:53	1
Benzo[a]pyrene	<0.019		0.019	ug/L		09/26/24 10:20	09/27/24 15:53	1
Benzo[b]fluoranthene	<0.019		0.019	ug/L		09/26/24 10:20	09/27/24 15:53	1
Benzo[g,h,i]perylene	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 15:53	1
Benzo[k]fluoranthene	<0.019		0.019	ug/L		09/26/24 10:20	09/27/24 15:53	1
beta-BHC	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 15:53	1
Bis(2-ethylhexyl) phthalate	<0.58		0.58	ug/L		09/26/24 10:20	09/27/24 15:53	1
Bromacil	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 15:53	1
Butachlor	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 15:53	1
Butylbenzylphthalate	<0.49		0.49	ug/L		09/26/24 10:20	09/27/24 15:53	1
Chlorobenzilate	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 15:53	1
Chloroneb	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 15:53	1
Chlorothalonil (Draconil, Bravo)	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 15:53	1
Chlorpyrifos	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 15:53	1
Chrysene	<0.019		0.019	ug/L		09/26/24 10:20	09/27/24 15:53	1
delta-BHC	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 15:53	1
Di(2-ethylhexyl)adipate	<0.58		0.58	ug/L		09/26/24 10:20	09/27/24 15:53	1
Dibenz(a,h)anthracene	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 15:53	1
Diclorvos (DDVP)	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 15:53	1
Dieldrin	<0.0097		0.0097	ug/L		09/26/24 10:20	09/27/24 15:53	1
Diethylphthalate	<0.49		0.49	ug/L		09/26/24 10:20	09/27/24 15:53	1
Dimethylphthalate	<0.49		0.49	ug/L		09/26/24 10:20	09/27/24 15:53	1
Di-n-butyl phthalate	<0.97		0.97	ug/L		09/26/24 10:20	09/27/24 15:53	1
Di-n-octyl phthalate	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 15:53	1
Endosulfan I (Alpha)	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 15:53	1
Endosulfan II (Beta)	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 15:53	1
Endosulfan sulfate	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 15:53	1
Endrin	<0.0097		0.0097	ug/L		09/26/24 10:20	09/27/24 15:53	1
Endrin aldehyde	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 15:53	1
EPTC	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 15:53	1

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# QC Sample Results

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

Job ID: 380-114717-1  
SDG: Weekly

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

**Lab Sample ID: MB 380-110387/21-A**  
**Matrix: Water**  
**Analysis Batch: 110681**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 110387**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 15:53	1
Fluorene	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 15:53	1
gamma-Chlordane	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 15:53	1
Heptachlor	<0.0097		0.0097	ug/L		09/26/24 10:20	09/27/24 15:53	1
Heptachlor epoxide (isomer B)	<0.0097		0.0097	ug/L		09/26/24 10:20	09/27/24 15:53	1
Hexachlorobenzene	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 15:53	1
Hexachlorocyclopentadiene	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 15:53	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 15:53	1
Isophorone	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 15:53	1
Lindane	<0.0097		0.0097	ug/L		09/26/24 10:20	09/27/24 15:53	1
Malathion	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 15:53	1
Methoxychlor	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 15:53	1
Metolachlor	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 15:53	1
Molinate	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 15:53	1
Naphthalene	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 15:53	1
Parathion	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 15:53	1
Pendimethalin (Penoxaline)	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 15:53	1
Phenanthrene	<0.039		0.039	ug/L		09/26/24 10:20	09/27/24 15:53	1
Propachlor	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 15:53	1
Pyrene	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 15:53	1
Simazine	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 15:53	1
Terbacil	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 15:53	1
Terbutylazine	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 15:53	1
Thiobencarb	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 15:53	1
Total Permethrin (mixed isomers)	<0.19		0.19	ug/L		09/26/24 10:20	09/27/24 15:53	1
trans-Nonachlor	<0.049		0.049	ug/L		09/26/24 10:20	09/27/24 15:53	1
Trifluralin	<0.097		0.097	ug/L		09/26/24 10:20	09/27/24 15:53	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Decane	1.68	T J N	ug/L		2.80	124-18-5	09/26/24 10:20	09/27/24 15:53	1
Cyclopentasiloxane, decamethyl-	0.588	T J N	ug/L		3.28	541-02-6	09/26/24 10:20	09/27/24 15:53	1
Cyclohexasiloxane, dodecamethyl-	0.598	T J N	ug/L		3.90	540-97-6	09/26/24 10:20	09/27/24 15:53	1
9-Octadecenamamide, (Z)-	0.752	T J N	ug/L		7.93	301-02-0	09/26/24 10:20	09/27/24 15:53	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	97		70 - 130	09/26/24 10:20	09/27/24 15:53	1
Perylene-d12	82		70 - 130	09/26/24 10:20	09/27/24 15:53	1
Triphenylphosphate	107		70 - 130	09/26/24 10:20	09/27/24 15:53	1

**Lab Sample ID: LCS 380-110387/23-A**  
**Matrix: Water**  
**Analysis Batch: 110681**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 110387**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1-Methylnaphthalene	1.95	1.95		ug/L		100	70 - 130
2,4'-DDD	1.95	2.33		ug/L		120	70 - 130
2,4'-DDE	1.95	2.26		ug/L		116	70 - 130
2,4'-DDT	1.95	2.02		ug/L		104	70 - 130

Eurofins Eaton Analytical Pomona

# QC Sample Results

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

Job ID: 380-114717-1  
SDG: Weekly

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

**Lab Sample ID: LCS 380-110387/23-A**  
**Matrix: Water**  
**Analysis Batch: 110681**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 110387**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4-Dinitrotoluene	1.95	1.51		ug/L		78	70 - 130
2,6-Dinitrotoluene	1.95	1.60		ug/L		82	70 - 130
2-Methylnaphthalene	1.95	1.93		ug/L		99	70 - 130
4,4'-DDD	1.95	2.21		ug/L		113	70 - 130
4,4'-DDE	1.95	2.12		ug/L		109	70 - 130
4,4'-DDT	1.95	1.97		ug/L		101	70 - 130
Acenaphthene	1.95	1.91		ug/L		98	70 - 130
Acenaphthylene	1.95	1.91		ug/L		98	70 - 130
Acetochlor	1.95	2.38		ug/L		122	70 - 130
Alachlor	1.95	2.37		ug/L		122	70 - 130
alpha-BHC	1.95	2.03		ug/L		104	70 - 130
alpha-Chlordane	1.95	2.21		ug/L		114	70 - 130
Anthracene	1.95	1.81		ug/L		93	70 - 130
Atrazine	1.95	2.25		ug/L		116	70 - 130
Benz(a)anthracene	1.95	2.13		ug/L		110	70 - 130
Benzo[a]pyrene	1.95	1.99		ug/L		102	70 - 130
Benzo[b]fluoranthene	1.95	2.09		ug/L		107	70 - 130
Benzo[g,h,i]perylene	1.95	1.95		ug/L		100	70 - 130
Benzo[k]fluoranthene	1.95	1.99		ug/L		102	70 - 130
beta-BHC	1.95	2.21		ug/L		113	70 - 130
Bis(2-ethylhexyl) phthalate	1.95	2.25		ug/L		115	70 - 130
Bromacil	1.95	2.30		ug/L		118	70 - 130
Butachlor	1.95	2.49		ug/L		128	70 - 130
Butylbenzylphthalate	1.95	2.60	*+	ug/L		133	70 - 130
Chlorobenzilate	1.95	2.46		ug/L		126	70 - 130
Chloroneb	1.95	2.12		ug/L		109	70 - 130
Chlorothalonil (Draconil, Bravo)	1.95	2.22		ug/L		114	70 - 130
Chlorpyrifos	1.95	2.48		ug/L		127	70 - 130
Chrysene	1.95	2.12		ug/L		109	70 - 130
delta-BHC	1.95	2.10		ug/L		108	70 - 130
Di(2-ethylhexyl)adipate	1.95	2.61	*+	ug/L		134	70 - 130
Dibenz(a,h)anthracene	1.95	1.91		ug/L		98	70 - 130
Diclorvos (DDVP)	1.95	2.24		ug/L		115	70 - 130
Dieldrin	1.95	2.19		ug/L		113	70 - 130
Diethylphthalate	1.95	2.12		ug/L		109	70 - 130
Dimethylphthalate	1.95	2.09		ug/L		107	70 - 130
Di-n-butyl phthalate	3.89	4.68		ug/L		120	70 - 130
Di-n-octyl phthalate	1.95	2.00		ug/L		103	70 - 130
Endosulfan I (Alpha)	1.95	2.15		ug/L		110	70 - 130
Endosulfan II (Beta)	1.95	2.17		ug/L		112	70 - 130
Endosulfan sulfate	1.95	2.26		ug/L		116	70 - 130
Endrin	1.95	2.45		ug/L		126	70 - 130
Endrin aldehyde	1.95	2.16		ug/L		111	60 - 130
EPTC	1.95	2.15		ug/L		111	70 - 130
Fluoranthene	1.95	2.35		ug/L		121	70 - 130
Fluorene	1.95	2.00		ug/L		103	70 - 130
gamma-Chlordane	1.95	2.13		ug/L		109	70 - 130
Heptachlor	1.95	2.32		ug/L		119	70 - 130
Heptachlor epoxide (isomer B)	1.95	2.10		ug/L		108	70 - 130

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# QC Sample Results

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

Job ID: 380-114717-1  
SDG: Weekly

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

**Lab Sample ID: LCS 380-110387/23-A**  
**Matrix: Water**  
**Analysis Batch: 110681**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 110387**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexachlorobenzene	1.95	1.88		ug/L		96	70 - 130
Hexachlorocyclopentadiene	1.95	1.89		ug/L		97	70 - 130
Indeno[1,2,3-cd]pyrene	1.95	2.00		ug/L		103	70 - 130
Isophorone	1.95	2.13		ug/L		110	70 - 130
Lindane	1.95	2.05		ug/L		105	70 - 130
Malathion	1.95	2.27		ug/L		116	70 - 130
Methoxychlor	1.95	1.93		ug/L		99	70 - 130
Metolachlor	1.95	2.37		ug/L		122	70 - 130
Molinate	1.95	2.15		ug/L		110	70 - 130
Naphthalene	1.95	1.91		ug/L		98	70 - 130
Parathion	1.95	2.22		ug/L		114	70 - 130
Pendimethalin (Penoxaline)	1.95	1.89		ug/L		97	70 - 130
Phenanthrene	1.95	2.02		ug/L		104	70 - 130
Propachlor	1.95	2.25		ug/L		116	70 - 130
Pyrene	1.95	2.35		ug/L		121	70 - 130
Simazine	1.95	2.29		ug/L		118	70 - 130
Terbacil	1.95	2.70	*+	ug/L		139	70 - 130
Terbutylazine	1.95	2.32		ug/L		119	70 - 130
Thiobencarb	1.95	2.47		ug/L		127	70 - 130
trans-Nonachlor	1.95	2.22		ug/L		114	70 - 130
Trifluralin	1.95	1.81		ug/L		93	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Nitro-m-xylene	97		70 - 130
Perylene-d12	92		70 - 130
Triphenylphosphate	114		70 - 130

**Lab Sample ID: LCSD 380-110387/24-A**  
**Matrix: Water**  
**Analysis Batch: 110681**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 110387**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	1.95	1.98		ug/L		102	70 - 130	2	20
2,4'-DDD	1.95	2.28		ug/L		117	70 - 130	2	20
2,4'-DDE	1.95	2.22		ug/L		114	70 - 130	2	20
2,4'-DDT	1.95	1.94		ug/L		100	70 - 130	4	20
2,4-Dinitrotoluene	1.95	1.51		ug/L		77	70 - 130	0	20
2,6-Dinitrotoluene	1.95	1.58		ug/L		81	70 - 130	1	20
2-Methylnaphthalene	1.95	1.98		ug/L		102	70 - 130	3	20
4,4'-DDD	1.95	2.16		ug/L		111	70 - 130	2	20
4,4'-DDE	1.95	2.07		ug/L		106	70 - 130	3	20
4,4'-DDT	1.95	1.91		ug/L		98	70 - 130	3	20
Acenaphthene	1.95	1.95		ug/L		100	70 - 130	2	20
Acenaphthylene	1.95	1.92		ug/L		99	70 - 130	1	20
Acetochlor	1.95	2.29		ug/L		118	70 - 130	4	20
Alachlor	1.95	2.34		ug/L		120	70 - 130	1	20
alpha-BHC	1.95	2.07		ug/L		106	70 - 130	2	20
alpha-Chlordane	1.95	2.15		ug/L		111	70 - 130	3	20

# QC Sample Results

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

Job ID: 380-114717-1  
SDG: Weekly

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

**Lab Sample ID: LCSD 380-110387/24-A**  
**Matrix: Water**  
**Analysis Batch: 110681**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 110387**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
Anthracene	1.95	1.78		ug/L		92	70 - 130	2	20	
Atrazine	1.95	2.25		ug/L		116	70 - 130	0	20	
Benz(a)anthracene	1.95	2.08		ug/L		107	70 - 130	3	20	
Benzo[a]pyrene	1.95	1.99		ug/L		102	70 - 130	0	20	
Benzo[b]fluoranthene	1.95	2.02		ug/L		104	70 - 130	3	20	
Benzo[g,h,i]perylene	1.95	1.97		ug/L		101	70 - 130	1	20	
Benzo[k]fluoranthene	1.95	2.07		ug/L		106	70 - 130	4	20	
beta-BHC	1.95	2.17		ug/L		112	70 - 130	2	20	
Bis(2-ethylhexyl) phthalate	1.95	2.25		ug/L		115	70 - 130	0	20	
Bromacil	1.95	2.26		ug/L		116	70 - 130	2	20	
Butachlor	1.95	2.39		ug/L		123	70 - 130	4	20	
Butylbenzylphthalate	1.95	2.51		ug/L		129	70 - 130	3	20	
Chlorobenzilate	1.95	2.38		ug/L		123	70 - 130	3	20	
Chloroneb	1.95	2.12		ug/L		109	70 - 130	0	20	
Chlorothalonil (Draconil, Bravo)	1.95	2.13		ug/L		110	70 - 130	4	20	
Chlorpyrifos	1.95	2.44		ug/L		126	70 - 130	1	20	
Chrysene	1.95	2.13		ug/L		110	70 - 130	1	20	
delta-BHC	1.95	2.03		ug/L		104	70 - 130	4	20	
Di(2-ethylhexyl)adipate	1.95	2.55	*+	ug/L		131	70 - 130	3	20	
Dibenz(a,h)anthracene	1.95	1.90		ug/L		98	70 - 130	0	20	
Diclorvos (DDVP)	1.95	2.29		ug/L		118	70 - 130	2	20	
Dieldrin	1.95	2.08		ug/L		107	70 - 130	5	20	
Diethylphthalate	1.95	2.16		ug/L		111	70 - 130	2	20	
Dimethylphthalate	1.95	2.10		ug/L		108	70 - 130	0	20	
Di-n-butyl phthalate	3.89	4.63		ug/L		119	70 - 130	1	20	
Di-n-octyl phthalate	1.95	2.00		ug/L		103	70 - 130	0	20	
Endosulfan I (Alpha)	1.95	2.09		ug/L		107	70 - 130	3	20	
Endosulfan II (Beta)	1.95	2.06		ug/L		106	70 - 130	5	20	
Endosulfan sulfate	1.95	2.22		ug/L		114	70 - 130	2	20	
Endrin	1.95	2.36		ug/L		121	70 - 130	4	20	
Endrin aldehyde	1.95	2.15		ug/L		111	60 - 130	0	20	
EPTC	1.95	2.20		ug/L		113	70 - 130	2	20	
Fluoranthene	1.95	2.32		ug/L		119	70 - 130	1	20	
Fluorene	1.95	2.05		ug/L		105	70 - 130	2	20	
gamma-Chlordane	1.95	2.07		ug/L		106	70 - 130	3	20	
Heptachlor	1.95	2.28		ug/L		117	70 - 130	1	20	
Heptachlor epoxide (isomer B)	1.95	2.07		ug/L		107	70 - 130	1	20	
Hexachlorobenzene	1.95	1.92		ug/L		99	70 - 130	2	20	
Hexachlorocyclopentadiene	1.95	1.91		ug/L		98	70 - 130	1	20	
Indeno[1,2,3-cd]pyrene	1.95	2.01		ug/L		104	70 - 130	1	20	
Isophorone	1.95	2.18		ug/L		112	70 - 130	2	20	
Lindane	1.95	2.04		ug/L		105	70 - 130	1	20	
Malathion	1.95	2.22		ug/L		114	70 - 130	2	20	
Methoxychlor	1.95	1.92		ug/L		99	70 - 130	1	20	
Metolachlor	1.95	2.30		ug/L		118	70 - 130	3	20	
Molinate	1.95	2.18		ug/L		112	70 - 130	2	20	
Naphthalene	1.95	1.95		ug/L		100	70 - 130	2	20	
Parathion	1.95	2.17		ug/L		111	70 - 130	3	20	
Pendimethalin (Penoxaline)	1.95	1.81		ug/L		93	70 - 130	5	20	

Eurofins Eaton Analytical Pomona

# QC Sample Results

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

Job ID: 380-114717-1  
SDG: Weekly

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

**Lab Sample ID: LCSD 380-110387/24-A**  
**Matrix: Water**  
**Analysis Batch: 110681**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 110387**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Phenanthrene	1.95	2.02		ug/L		104	70 - 130	0	20
Propachlor	1.95	2.28		ug/L		117	70 - 130	1	20
Pyrene	1.95	2.29		ug/L		118	70 - 130	3	20
Simazine	1.95	2.27		ug/L		117	70 - 130	1	20
Terbacil	1.95	2.59	*+	ug/L		133	70 - 130	4	20
Terbutylazine	1.95	2.30		ug/L		118	70 - 130	1	20
Thiobencarb	1.95	2.39		ug/L		123	70 - 130	3	20
trans-Nonachlor	1.95	2.16		ug/L		111	70 - 130	2	20
Trifluralin	1.95	1.79		ug/L		92	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
2-Nitro-m-xylene	97		70 - 130
Perylene-d12	90		70 - 130
Triphenylphosphate	107		70 - 130

**Lab Sample ID: MRL 380-110387/22-A**  
**Matrix: Water**  
**Analysis Batch: 110681**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 110387**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	0.0972	0.106		ug/L		109	50 - 150
2,4'-DDD	0.0972	0.0984		ug/L		101	50 - 150
2,4'-DDE	0.0972	0.109		ug/L		112	50 - 150
2,4'-DDT	0.0972	0.0968	J	ug/L		100	50 - 150
2,4-Dinitrotoluene	0.0972	0.0879	J	ug/L		90	50 - 150
2,6-Dinitrotoluene	0.0972	0.0963	J	ug/L		99	50 - 150
2-Methylnaphthalene	0.0972	0.101		ug/L		103	50 - 150
4,4'-DDD	0.0972	0.125		ug/L		129	50 - 150
4,4'-DDE	0.0972	0.102		ug/L		105	50 - 150
4,4'-DDT	0.0972	0.111		ug/L		115	50 - 150
Acenaphthene	0.0972	0.0984		ug/L		101	50 - 150
Acenaphthylene	0.0972	0.0913	J	ug/L		94	50 - 150
Acetochlor	0.0972	0.123		ug/L		127	50 - 150
Alachlor	0.0486	0.0578		ug/L		119	50 - 150
alpha-BHC	0.0972	0.112		ug/L		115	50 - 150
alpha-Chlordane	0.0243	0.0309	J	ug/L		127	50 - 150
Anthracene	0.0194	0.0188	J	ug/L		96	50 - 150
Atrazine	0.0486	0.0622		ug/L		128	50 - 150
Benz(a)anthracene	0.0486	0.0532		ug/L		109	50 - 150
Benzo[a]pyrene	0.0194	0.0221		ug/L		114	50 - 150
Benzo[b]fluoranthene	0.0194	0.0263		ug/L		135	50 - 150
Benzo[g,h,i]perylene	0.0486	0.0494		ug/L		102	50 - 150
Benzo[k]fluoranthene	0.0194	0.0242		ug/L		125	50 - 150
beta-BHC	0.0972	0.122		ug/L		125	50 - 150
Bis(2-ethylhexyl) phthalate	0.583	0.615		ug/L		105	50 - 150
Bromacil	0.0972	0.111		ug/L		114	50 - 150
Butachlor	0.0486	0.0591		ug/L		122	50 - 150
Butylbenzylphthalate	0.486	0.630		ug/L		130	50 - 150

# QC Sample Results

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

Job ID: 380-114717-1  
SDG: Weekly

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

**Lab Sample ID: MRL 380-110387/22-A**  
**Matrix: Water**  
**Analysis Batch: 110681**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 110387**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Chlorobenzilate	0.0972	0.108		ug/L		111	50 - 150
Chloroneb	0.0972	0.0921	J	ug/L		95	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0972	0.118		ug/L		121	50 - 150
Chlorpyrifos	0.0486	0.0579		ug/L		119	50 - 150
Chrysene	0.0194	0.0219		ug/L		113	50 - 150
delta-BHC	0.0972	0.118		ug/L		121	50 - 150
Di(2-ethylhexyl)adipate	0.583	0.732		ug/L		125	50 - 150
Dibenz(a,h)anthracene	0.0486	0.0505		ug/L		104	50 - 150
Diclorvos (DDVP)	0.0486	0.0662		ug/L		136	50 - 150
Dieldrin	0.00972	0.0129		ug/L		133	50 - 150
Diethylphthalate	0.486	0.544		ug/L		112	50 - 150
Dimethylphthalate	0.486	0.533		ug/L		110	50 - 150
Di-n-butyl phthalate	0.486	0.541	J	ug/L		111	49 - 243
Di-n-octyl phthalate	0.0972	0.114		ug/L		117	50 - 150
Endosulfan I (Alpha)	0.0972	0.0964	J	ug/L		99	50 - 150
Endosulfan II (Beta)	0.0972	0.106		ug/L		109	50 - 150
Endosulfan sulfate	0.0972	0.108		ug/L		111	50 - 150
Endrin	0.00972	0.0104		ug/L		107	50 - 150
Endrin aldehyde	0.0972	0.110		ug/L		113	50 - 150
EPTC	0.0972	0.101		ug/L		104	50 - 150
Fluoranthene	0.0972	0.102		ug/L		104	50 - 150
Fluorene	0.0486	0.0497		ug/L		102	50 - 150
gamma-Chlordane	0.0243	0.0268	J	ug/L		110	50 - 150
Heptachlor	0.00972	0.0209	^3+	ug/L		215	50 - 150
Heptachlor epoxide (isomer B)	0.00972	0.0149	^3+	ug/L		153	50 - 150
Hexachlorobenzene	0.0486	0.0479	J	ug/L		99	50 - 150
Hexachlorocyclopentadiene	0.0486	0.0522		ug/L		107	50 - 150
Indeno[1,2,3-cd]pyrene	0.0486	0.0535		ug/L		110	50 - 150
Isophorone	0.0972	0.129		ug/L		132	50 - 150
Lindane	0.00972	0.0149	^3+	ug/L		154	50 - 150
Malathion	0.0972	0.113		ug/L		117	50 - 150
Methoxychlor	0.0486	0.0771	^3+	ug/L		159	50 - 150
Metolachlor	0.0486	0.0669		ug/L		138	50 - 150
Molinate	0.0972	0.107		ug/L		110	50 - 150
Naphthalene	0.0972	0.107		ug/L		110	50 - 150
Parathion	0.0972	0.0925	J	ug/L		95	50 - 150
Pendimethalin (Penoxaline)	0.0972	0.0900	J	ug/L		93	50 - 150
Phenanthrene	0.0389	0.0427		ug/L		110	50 - 150
Propachlor	0.0486	0.0572		ug/L		118	50 - 150
Pyrene	0.0486	0.0505		ug/L		104	50 - 150
Simazine	0.0486	0.0550		ug/L		113	50 - 150
Terbacil	0.0972	0.118		ug/L		122	50 - 150
Terbutylazine	0.0972	0.117		ug/L		121	50 - 150
Thiobencarb	0.0972	0.117		ug/L		120	50 - 150
trans-Nonachlor	0.0243	0.0315	J	ug/L		130	50 - 150
Trifluralin	0.0972	0.0942	J	ug/L		97	50 - 150

# QC Sample Results

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

Job ID: 380-114717-1  
SDG: Weekly

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

**Lab Sample ID: MRL 380-110387/22-A**  
**Matrix: Water**  
**Analysis Batch: 110681**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 110387**

Surrogate	MRL %Recovery	MRL Qualifier	Limits
2-Nitro-m-xylene	98		70 - 130
Perylene-d12	79		70 - 130
Triphenylphosphate	109		70 - 130

**Lab Sample ID: 380-114717-1 MS**  
**Matrix: Water**  
**Analysis Batch: 110681**

**Client Sample ID: Ka'amilo Wells**  
**Prep Type: Total/NA**  
**Prep Batch: 110387**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
1-Methylnaphthalene	<0.097		1.94	1.97		ug/L		101	70 - 130
2,4'-DDD	<0.097		1.94	2.31		ug/L		119	70 - 130
2,4'-DDE	<0.097		1.94	2.25		ug/L		116	70 - 130
2,4'-DDT	<0.097		1.94	2.10		ug/L		108	70 - 130
2,4-Dinitrotoluene	<0.097		1.94	1.64		ug/L		85	70 - 130
2,6-Dinitrotoluene	<0.097		1.94	1.68		ug/L		86	70 - 130
2-Methylnaphthalene	<0.097		1.94	1.95		ug/L		100	70 - 130
4,4'-DDD	<0.097		1.94	2.16		ug/L		111	70 - 130
4,4'-DDE	<0.097		1.94	2.10		ug/L		108	70 - 130
4,4'-DDT	<0.097		1.94	2.07		ug/L		107	70 - 130
Acenaphthene	<0.097		1.94	1.93		ug/L		99	70 - 130
Acenaphthylene	<0.097		1.94	2.01		ug/L		103	70 - 130
Acetochlor	<0.097		1.94	2.35		ug/L		121	70 - 130
Alachlor	<0.049		1.94	2.39		ug/L		123	70 - 130
alpha-BHC	<0.097		1.94	2.06		ug/L		106	70 - 130
alpha-Chlordane	<0.049		1.94	2.24		ug/L		115	70 - 130
Anthracene	<0.019		1.94	1.44		ug/L		74	70 - 130
Atrazine	<0.049		1.94	2.31		ug/L		119	70 - 130
Benz(a)anthracene	<0.049		1.94	1.95		ug/L		100	70 - 130
Benzo[a]pyrene	<0.019		1.94	1.89		ug/L		97	70 - 130
Benzo[b]fluoranthene	<0.019		1.94	2.01		ug/L		103	70 - 130
Benzo[g,h,i]perylene	<0.049		1.94	1.85		ug/L		95	70 - 130
Benzo[k]fluoranthene	<0.019		1.94	2.04		ug/L		105	70 - 130
beta-BHC	<0.097		1.94	2.26		ug/L		116	70 - 130
Bis(2-ethylhexyl) phthalate	<0.58		1.94	2.49		ug/L		128	70 - 130
Bromacil	<0.097		1.94	2.28		ug/L		117	70 - 130
Butachlor	<0.049		1.94	2.53		ug/L		130	70 - 130
Butylbenzylphthalate	<0.49	F1 *+	1.94	2.58	F1	ug/L		133	70 - 130
Chlorobenzilate	<0.097		1.94	2.44		ug/L		125	70 - 130
Chloroneb	<0.097		1.94	2.22		ug/L		114	70 - 130
Chlorothalonil (Draconil, Bravo)	<0.097		1.94	2.19		ug/L		112	70 - 130
Chlorpyrifos	<0.049		1.94	2.51		ug/L		129	70 - 130
Chrysene	<0.019		1.94	2.12		ug/L		109	70 - 130
delta-BHC	<0.097		1.94	2.11		ug/L		108	70 - 130
Di(2-ethylhexyl)adipate	<0.58	F1 *+	1.94	2.68	F1	ug/L		138	70 - 130
Dibenz(a,h)anthracene	<0.049		1.94	1.86		ug/L		96	70 - 130
Diclorvos (DDVP)	<0.049		1.94	2.36		ug/L		121	70 - 130
Dieldrin	0.015		1.94	2.15		ug/L		110	70 - 130
Diethylphthalate	<0.49		1.94	2.21		ug/L		114	70 - 130





# QC Sample Results

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

Job ID: 380-114717-1  
SDG: Weekly

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

**Lab Sample ID: 380-114717-3 DU**

**Matrix: Water**

**Analysis Batch: 110681**

**Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1**

**Prep Type: Total/NA**

**Prep Batch: 110387**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
2,4'-DDE	<0.097		<0.096		ug/L		NC	20
2,4'-DDT	<0.097		<0.096		ug/L		NC	20
2,4-Dinitrotoluene	<0.097		<0.096		ug/L		NC	20
2,6-Dinitrotoluene	<0.097		<0.096		ug/L		NC	20
2-Methylnaphthalene	<0.097		<0.096		ug/L		NC	20
4,4'-DDD	<0.097		<0.096		ug/L		NC	20
4,4'-DDE	<0.097		<0.096		ug/L		NC	20
4,4'-DDT	<0.097		<0.096		ug/L		NC	20
Acenaphthene	<0.097		<0.096		ug/L		NC	20
Acenaphthylene	<0.097		<0.096		ug/L		NC	20
Acetochlor	<0.097		<0.096		ug/L		NC	20
Alachlor	<0.049		<0.048		ug/L		NC	20
alpha-BHC	<0.097		<0.096		ug/L		NC	20
alpha-Chlordane	<0.049		<0.048		ug/L		NC	20
Anthracene	<0.019		<0.019		ug/L		NC	20
Atrazine	<0.049		<0.048		ug/L		NC	20
Benz(a)anthracene	<0.049		<0.048		ug/L		NC	20
Benzo[a]pyrene	<0.019		<0.019		ug/L		NC	20
Benzo[b]fluoranthene	<0.019		<0.019		ug/L		NC	20
Benzo[g,h,i]perylene	<0.049		<0.048		ug/L		NC	20
Benzo[k]fluoranthene	<0.019		<0.019		ug/L		NC	20
beta-BHC	<0.097		<0.096		ug/L		NC	20
Bis(2-ethylhexyl) phthalate	<0.58		<0.58		ug/L		NC	20
Bromacil	<0.097		<0.096		ug/L		NC	20
Butachlor	<0.049		<0.048		ug/L		NC	20
Butylbenzylphthalate	<0.49	*+	<0.48	*+	ug/L		NC	20
Chlorobenzilate	<0.097		<0.096		ug/L		NC	20
Chloroneb	<0.097		<0.096		ug/L		NC	20
Chlorothalonil (Draconil, Bravo)	<0.097		<0.096		ug/L		NC	20
Chlorpyrifos	<0.049		<0.048		ug/L		NC	20
Chrysene	<0.019		<0.019		ug/L		NC	20
delta-BHC	<0.097		<0.096		ug/L		NC	20
Di(2-ethylhexyl)adipate	<0.58	*+	<0.58	*+	ug/L		NC	20
Dibenz(a,h)anthracene	<0.049		<0.048		ug/L		NC	20
Diclorvos (DDVP)	<0.049		<0.048		ug/L		NC	20
Dieldrin	0.046		0.0459		ug/L		0.6	20
Diethylphthalate	<0.49		<0.48		ug/L		NC	20
Dimethylphthalate	<0.49		<0.48		ug/L		NC	20
Di-n-butyl phthalate	<0.97		<0.96		ug/L		NC	20
Di-n-octyl phthalate	<0.097		<0.096		ug/L		NC	20
Endosulfan I (Alpha)	<0.097		<0.096		ug/L		NC	20
Endosulfan II (Beta)	<0.097		<0.096		ug/L		NC	20
Endosulfan sulfate	<0.097		<0.096		ug/L		NC	20
Endrin	<0.0097		<0.0096		ug/L		NC	20
Endrin aldehyde	<0.097		<0.096		ug/L		NC	20
EPTC	<0.097		<0.096		ug/L		NC	20
Fluoranthene	<0.097		<0.096		ug/L		NC	20
Fluorene	<0.049		<0.048		ug/L		NC	20
gamma-Chlordane	<0.049		<0.048		ug/L		NC	20

Eurofins Eaton Analytical Pomona

# QC Sample Results

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

Job ID: 380-114717-1  
SDG: Weekly

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

**Lab Sample ID: 380-114717-3 DU**  
**Matrix: Water**  
**Analysis Batch: 110681**

**Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1**  
**Prep Type: Total/NA**  
**Prep Batch: 110387**

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Heptachlor	<0.0097	^3+	<0.0096		ug/L		NC	20
Heptachlor epoxide (isomer B)	0.020	^3+	0.0190		ug/L		4	20
Hexachlorobenzene	<0.049		<0.048		ug/L		NC	20
Hexachlorocyclopentadiene	<0.049		<0.048		ug/L		NC	20
Indeno[1,2,3-cd]pyrene	<0.049		<0.048		ug/L		NC	20
Isophorone	<0.097		<0.096		ug/L		NC	20
Lindane	<0.0097	^3+	<0.0096		ug/L		NC	20
Malathion	<0.097		<0.096		ug/L		NC	20
Methoxychlor	<0.049	^3+	<0.048		ug/L		NC	20
Metolachlor	<0.049		<0.048		ug/L		NC	20
Molinate	<0.097		<0.096		ug/L		NC	20
Naphthalene	<0.097		<0.096		ug/L		NC	20
Parathion	<0.097		<0.096		ug/L		NC	20
Pendimethalin (Penoxaline)	<0.097		<0.096		ug/L		NC	20
Phenanthrene	<0.039		<0.038		ug/L		NC	20
Propachlor	<0.049		<0.048		ug/L		NC	20
Pyrene	<0.049		<0.048		ug/L		NC	20
Simazine	<0.049		<0.048		ug/L		NC	20
Terbacil	<0.097	*+	<0.096	*+	ug/L		NC	20
Terbutylazine	<0.097		<0.096		ug/L		NC	20
Thiobencarb	<0.097		<0.096		ug/L		NC	20
Total Permethrin (mixed isomers)	<0.19		<0.19		ug/L		NC	20
trans-Nonachlor	<0.049		<0.048		ug/L		NC	20
Trifluralin	<0.097		<0.096		ug/L		NC	20

Surrogate	DU	DU	Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	100		70 - 130
Perylene-d12	89		70 - 130
Triphenylphosphate	106		70 - 130

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

**Lab Sample ID: MB 570-485362/1-A**  
**Matrix: Water**  
**Analysis Batch: 488518**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 485362**

Tentatively Identified Compound	MB	MB	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
	Est. Result	Qualifier							
Tentatively Identified Compound	None		ug/L			N/A	09/27/24 06:25	10/07/24 16:21	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2,4,6-Tribromophenol (Surr)	103		33 - 139	09/27/24 06:25	10/07/24 16:21	1
2-Fluorobiphenyl (Surr)	81		33 - 126	09/27/24 06:25	10/07/24 16:21	1
2-Fluorophenol (Surr)	60		12 - 120	09/27/24 06:25	10/07/24 16:21	1
Nitrobenzene-d5 (Surr)	84		36 - 120	09/27/24 06:25	10/07/24 16:21	1
Phenol-d6 (Surr)	38		10 - 120	09/27/24 06:25	10/07/24 16:21	1
p-Terphenyl-d14 (Surr)	81		47 - 131	09/27/24 06:25	10/07/24 16:21	1

Eurofins Eaton Analytical Pomona

# QC Sample Results

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

Job ID: 380-114717-1  
SDG: Weekly

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

**Lab Sample ID: MB 570-485362/1-A**  
**Matrix: Water**  
**Analysis Batch: 487353**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 485362**

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
1-Methylnaphthalene	<0.20		0.20	ug/L		09/27/24 06:25	10/03/24 08:19	1
2-Methylnaphthalene	<0.20		0.20	ug/L		09/27/24 06:25	10/03/24 08:19	1
Acenaphthene	<0.20		0.20	ug/L		09/27/24 06:25	10/03/24 08:19	1
Acenaphthylene	<0.20		0.20	ug/L		09/27/24 06:25	10/03/24 08:19	1
Anthracene	<0.20		0.20	ug/L		09/27/24 06:25	10/03/24 08:19	1
Benzo[a]anthracene	<0.20		0.20	ug/L		09/27/24 06:25	10/03/24 08:19	1
Benzo[a]pyrene	<0.20		0.20	ug/L		09/27/24 06:25	10/03/24 08:19	1
Benzo[b]fluoranthene	<0.20		0.20	ug/L		09/27/24 06:25	10/03/24 08:19	1
Benzo[g,h,i]perylene	<0.20		0.20	ug/L		09/27/24 06:25	10/03/24 08:19	1
Benzo[k]fluoranthene	<0.20		0.20	ug/L		09/27/24 06:25	10/03/24 08:19	1
Chrysene	<0.20		0.20	ug/L		09/27/24 06:25	10/03/24 08:19	1
Dibenz(a,h)anthracene	<0.20		0.20	ug/L		09/27/24 06:25	10/03/24 08:19	1
Fluoranthene	<0.20		0.20	ug/L		09/27/24 06:25	10/03/24 08:19	1
Fluorene	<0.20		0.20	ug/L		09/27/24 06:25	10/03/24 08:19	1
Indeno[1,2,3-cd]pyrene	<0.20		0.20	ug/L		09/27/24 06:25	10/03/24 08:19	1
Naphthalene	<0.20		0.20	ug/L		09/27/24 06:25	10/03/24 08:19	1
Phenanthrene	<0.20		0.20	ug/L		09/27/24 06:25	10/03/24 08:19	1
Pyrene	<0.20		0.20	ug/L		09/27/24 06:25	10/03/24 08:19	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2,4,6-Tribromophenol (Surr)	84		28 - 127	09/27/24 06:25	10/03/24 08:19	1
2-Fluorobiphenyl (Surr)	52		31 - 120	09/27/24 06:25	10/03/24 08:19	1
2-Fluorophenol (Surr)	54		17 - 120	09/27/24 06:25	10/03/24 08:19	1
Nitrobenzene-d5 (Surr)	54		27 - 120	09/27/24 06:25	10/03/24 08:19	1
Phenol-d6 (Surr)	35		10 - 120	09/27/24 06:25	10/03/24 08:19	1
p-Terphenyl-d14 (Surr)	57		45 - 120	09/27/24 06:25	10/03/24 08:19	1

**Lab Sample ID: LCS 570-485362/2-A**  
**Matrix: Water**  
**Analysis Batch: 487353**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 485362**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
1-Methylnaphthalene	40.0	31.3		ug/L		78	47 - 120
2-Methylnaphthalene	40.0	30.5		ug/L		76	43 - 120
Acenaphthene	40.0	37.3		ug/L		93	60 - 132
Acenaphthylene	40.0	38.1		ug/L		95	54 - 126
Anthracene	40.0	42.7		ug/L		107	43 - 120
Benzo[a]anthracene	40.0	43.5		ug/L		109	42 - 133
Benzo[a]pyrene	40.0	43.2		ug/L		108	32 - 148
Benzo[b]fluoranthene	40.0	42.0		ug/L		105	42 - 140
Benzo[g,h,i]perylene	40.0	43.0		ug/L		108	1 - 195
Benzo[k]fluoranthene	40.0	42.2		ug/L		106	25 - 146
Chrysene	40.0	41.9		ug/L		105	44 - 140
Dibenz(a,h)anthracene	40.0	44.1		ug/L		110	1 - 200
Fluoranthene	40.0	43.1		ug/L		108	43 - 121
Fluorene	40.0	39.9		ug/L		100	70 - 120
Indeno[1,2,3-cd]pyrene	40.0	42.6		ug/L		107	1 - 151
Naphthalene	40.0	28.5		ug/L		71	36 - 120

Eurofins Eaton Analytical Pomona

# QC Sample Results

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

Job ID: 380-114717-1  
SDG: Weekly

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

**Lab Sample ID: LCS 570-485362/2-A**  
**Matrix: Water**  
**Analysis Batch: 487353**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 485362**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Phenanthrene	40.0	42.8		ug/L		107	65 - 120
Pyrene	40.0	44.8		ug/L		112	70 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	86		28 - 127
2-Fluorobiphenyl (Surr)	48		31 - 120
2-Fluorophenol (Surr)	52		17 - 120
Nitrobenzene-d5 (Surr)	40		27 - 120
Phenol-d6 (Surr)	36		10 - 120
p-Terphenyl-d14 (Surr)	62		45 - 120

**Lab Sample ID: LCSD 570-485362/3-A**  
**Matrix: Water**  
**Analysis Batch: 487353**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 485362**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	40.0	35.0		ug/L		88	47 - 120	11	20
2-Methylnaphthalene	40.0	34.6		ug/L		86	43 - 120	13	20
Acenaphthene	40.0	40.2		ug/L		101	60 - 132	8	29
Acenaphthylene	40.0	42.6		ug/L		106	54 - 126	11	45
Anthracene	40.0	43.4		ug/L		108	43 - 120	2	40
Benzo[a]anthracene	40.0	43.3		ug/L		108	42 - 133	0	32
Benzo[a]pyrene	40.0	42.8		ug/L		107	32 - 148	1	43
Benzo[b]fluoranthene	40.0	42.1		ug/L		105	42 - 140	0	43
Benzo[g,h,i]perylene	40.0	43.2		ug/L		108	1 - 195	0	61
Benzo[k]fluoranthene	40.0	41.6		ug/L		104	25 - 146	2	38
Chrysene	40.0	41.8		ug/L		104	44 - 140	0	53
Dibenz(a,h)anthracene	40.0	43.6		ug/L		109	1 - 200	1	75
Fluoranthene	40.0	43.5		ug/L		109	43 - 121	1	40
Fluorene	40.0	42.4		ug/L		106	70 - 120	6	23
Indeno[1,2,3-cd]pyrene	40.0	42.8		ug/L		107	1 - 151	0	60
Naphthalene	40.0	32.9		ug/L		82	36 - 120	14	39
Phenanthrene	40.0	43.0		ug/L		107	65 - 120	0	24
Pyrene	40.0	43.7		ug/L		109	70 - 120	2	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	86		28 - 127
2-Fluorobiphenyl (Surr)	55		31 - 120
2-Fluorophenol (Surr)	63		17 - 120
Nitrobenzene-d5 (Surr)	46		27 - 120
Phenol-d6 (Surr)	43		10 - 120
p-Terphenyl-d14 (Surr)	61		45 - 120

# QC Sample Results

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

Job ID: 380-114717-1  
SDG: Weekly

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

**Lab Sample ID: 380-114717-3 MS**

**Matrix: Water**

**Analysis Batch: 487353**

**Client Sample ID: HALAWA WELLS UNITS 1 & 2**

**Prep Type: Total/NA**

**Prep Batch: 485362**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier					
1-Methylnaphthalene	<0.19		38.3	27.5		ug/L		72		36 - 120
2-Methylnaphthalene	<0.19		38.3	27.4		ug/L		72		32 - 124
Acenaphthene	<0.19		38.3	36.4		ug/L		95		47 - 145
Acenaphthylene	<0.19		38.3	37.2		ug/L		97		33 - 145
Anthracene	<0.19		38.3	38.6		ug/L		101		27 - 133
Benzo[a]anthracene	<0.19		38.3	41.3		ug/L		108		33 - 143
Benzo[a]pyrene	<0.19		38.3	41.1		ug/L		107		17 - 163
Benzo[b]fluoranthene	<0.19		38.3	39.7		ug/L		104		24 - 159
Benzo[g,h,i]perylene	<0.19		38.3	40.8		ug/L		106		1 - 219
Benzo[k]fluoranthene	<0.19		38.3	40.1		ug/L		105		11 - 162
Chrysene	<0.19		38.3	39.7		ug/L		104		17 - 168
Dibenz(a,h)anthracene	<0.19		38.3	41.0		ug/L		107		1 - 227
Fluoranthene	<0.19		38.3	38.4		ug/L		100		26 - 137
Fluorene	<0.19		38.3	37.5		ug/L		98		59 - 121
Indeno[1,2,3-cd]pyrene	<0.19		38.3	40.1		ug/L		105		1 - 171
Naphthalene	<0.19		38.3	25.4		ug/L		66		21 - 133
Phenanthrene	<0.19		38.3	38.6		ug/L		101		54 - 120
Pyrene	<0.19		38.3	41.4		ug/L		108		52 - 120

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	82		28 - 127
2-Fluorobiphenyl (Surr)	51		31 - 120
2-Fluorophenol (Surr)	59		17 - 120
Nitrobenzene-d5 (Surr)	39		27 - 120
Phenol-d6 (Surr)	39		10 - 120
p-Terphenyl-d14 (Surr)	62		45 - 120

**Lab Sample ID: 380-114717-3 MSD**

**Matrix: Water**

**Analysis Batch: 487353**

**Client Sample ID: HALAWA WELLS UNITS 1 & 2**

**Prep Type: Total/NA**

**Prep Batch: 485362**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier							
1-Methylnaphthalene	<0.19		38.8	26.9		ug/L		69		36 - 120	2	30
2-Methylnaphthalene	<0.19		38.8	26.4		ug/L		68		32 - 124	4	30
Acenaphthene	<0.19		38.8	35.9		ug/L		92		47 - 145	2	48
Acenaphthylene	<0.19		38.8	36.4		ug/L		94		33 - 145	2	74
Anthracene	<0.19		38.8	37.9		ug/L		98		27 - 133	2	66
Benzo[a]anthracene	<0.19		38.8	39.4		ug/L		101		33 - 143	5	53
Benzo[a]pyrene	<0.19		38.8	40.3		ug/L		104		17 - 163	2	72
Benzo[b]fluoranthene	<0.19		38.8	38.1		ug/L		98		24 - 159	4	71
Benzo[g,h,i]perylene	<0.19		38.8	38.9		ug/L		100		1 - 219	5	97
Benzo[k]fluoranthene	<0.19		38.8	39.3		ug/L		101		11 - 162	2	63
Chrysene	<0.19		38.8	37.6		ug/L		97		17 - 168	5	87
Dibenz(a,h)anthracene	<0.19		38.8	39.1		ug/L		101		1 - 227	5	126
Fluoranthene	<0.19		38.8	37.9		ug/L		98		26 - 137	1	66
Fluorene	<0.19		38.8	36.5		ug/L		94		59 - 121	3	38
Indeno[1,2,3-cd]pyrene	<0.19		38.8	38.5		ug/L		99		1 - 171	4	99
Naphthalene	<0.19		38.8	24.8		ug/L		64		21 - 133	3	65

Eurofins Eaton Analytical Pomona

# QC Sample Results

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

Job ID: 380-114717-1  
SDG: Weekly

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

Lab Sample ID: 380-114717-3 MSD

Client Sample ID: HALAWA WELLS UNITS 1 & 2

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 487353

Prep Batch: 485362

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Phenanthrene	<0.19		38.8	37.6		ug/L		97	54 - 120	3	39
Pyrene	<0.19		38.8	39.3		ug/L		101	52 - 120	5	49

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
2,4,6-Tribromophenol (Surr)	82		28 - 127
2-Fluorobiphenyl (Surr)	49		31 - 120
2-Fluorophenol (Surr)	58		17 - 120
Nitrobenzene-d5 (Surr)	37		27 - 120
Phenol-d6 (Surr)	39		10 - 120
p-Terphenyl-d14 (Surr)	57		45 - 120

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

Lab Sample ID: MB 570-486453/4

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 486453

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	<10		10	ug/L			10/01/24 10:52	1

Surrogate	MB %Recovery	MB Qualifier	MB Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		38 - 134		10/01/24 10:52	1

Lab Sample ID: LCS 570-486453/5

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 486453

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (C4-C13)	400	332		ug/L		83	78 - 120

Surrogate	LCS %Recovery	LCS Qualifier	LCS Limits
4-Bromofluorobenzene (Surr)	87		38 - 134

Lab Sample ID: LCSD 570-486453/6

Client Sample ID: Lab Control Sample Dup

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 486453

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (C4-C13)	400	326		ug/L		82	78 - 120	2	10

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
4-Bromofluorobenzene (Surr)	86		38 - 134

# QC Sample Results

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

Job ID: 380-114717-1  
SDG: Weekly

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

**Lab Sample ID: MRL 570-486453/3**  
**Matrix: Water**  
**Analysis Batch: 486453**

**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	10.2		ug/L		102	50 - 150
<b>Surrogate</b>		<b>MRL %Recovery</b>	<b>MRL Qualifier</b>				<b>Limits</b>
4-Bromofluorobenzene (Surr)		78					38 - 134

**Lab Sample ID: 380-114717-3 MS**  
**Matrix: Water**  
**Analysis Batch: 486453**

**Client Sample ID: HALAWA WELLS UNITS 1 & 2**  
**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	333		ug/L		83	68 - 122
<b>Surrogate</b>		<b>MS %Recovery</b>		<b>MS Qualifier</b>					<b>Limits</b>
4-Bromofluorobenzene (Surr)		87							38 - 134

**Lab Sample ID: 380-114717-3 MSD**  
**Matrix: Water**  
**Analysis Batch: 486453**

**Client Sample ID: HALAWA WELLS UNITS 1 & 2**  
**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	330		ug/L		83	68 - 122	1	18
<b>Surrogate</b>		<b>MSD %Recovery</b>		<b>MSD Qualifier</b>					<b>Limits</b>		
4-Bromofluorobenzene (Surr)		87							38 - 134		

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

**Lab Sample ID: MB 570-485540/1-A**  
**Matrix: Water**  
**Analysis Batch: 486540**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 485540**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C24)	<25		25	ug/L		09/27/24 12:37	10/01/24 15:21	1
Motor Oil Range Organics [C24-C36]	<25		25	ug/L		09/27/24 12:37	10/01/24 15:21	1
C8-C18	<25		25	ug/L		09/27/24 12:37	10/01/24 15:21	1
<b>Surrogate</b>		<b>MB %Recovery</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
n-Octacosane (Surr)		108				09/27/24 12:37	10/01/24 15:21	1

**Lab Sample ID: LCS 570-485540/2-A**  
**Matrix: Water**  
**Analysis Batch: 486540**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 485540**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
C10-C28	1600	1410		ug/L		88	56 - 127

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# QC Sample Results

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

Job ID: 380-114717-1  
SDG: Weekly

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

**Lab Sample ID: LCS 570-485540/2-A**  
**Matrix: Water**  
**Analysis Batch: 486540**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 485540**

	LCS %Recovery	LCS Qualifier	Limits
<i>Surrogate</i> <i>n-Octacosane (Surr)</i>	117		60 - 130

**Lab Sample ID: LCSD 570-485540/3-A**  
**Matrix: Water**  
**Analysis Batch: 486540**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 485540**

	Spike Added	LCSD Result	LCSD Qualifier		D	%Rec	%Rec Limits	RPD	Limit
<b>Analyte</b> C10-C28	1600	1370				86	56 - 127	3	23

	LCSD %Recovery	LCSD Qualifier	Limits
<i>Surrogate</i> <i>n-Octacosane (Surr)</i>	112		60 - 130

**Lab Sample ID: MRL 570-485540/4-A**  
**Matrix: Water**  
**Analysis Batch: 486540**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 485540**

	Spike Added	MRL Result	MRL Qualifier		D	%Rec	%Rec Limits		
<b>Analyte</b> C10-C28	0.0200	<0.020				99	50 - 150		

	MRL %Recovery	MRL Qualifier	Limits
<i>Surrogate</i> <i>n-Octacosane (Surr)</i>	113		60 - 130

**Lab Sample ID: 380-114394-B-1-A MS**  
**Matrix: Water**  
**Analysis Batch: 486540**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 485540**

	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier		D	%Rec	%Rec Limits		
<b>Analyte</b> C10-C28	<25		1660	1440				87	70 - 130		

	MS %Recovery	MS Qualifier	Limits
<i>Surrogate</i> <i>n-Octacosane (Surr)</i>	109		60 - 130

**Lab Sample ID: 380-114394-B-1-B MSD**  
**Matrix: Water**  
**Analysis Batch: 486540**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 485540**

	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier		D	%Rec	%Rec Limits	RPD	Limit
<b>Analyte</b> C10-C28	<25		1680	1500				89	70 - 130	4	20

	MSD %Recovery	MSD Qualifier	Limits
<i>Surrogate</i> <i>n-Octacosane (Surr)</i>	105		60 - 130

# QC Sample Results

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

Job ID: 380-114717-1  
SDG: Weekly

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

**Lab Sample ID: 380-114717-3 MS**

**Matrix: Water**

**Analysis Batch: 486540**

**Client Sample ID: HALAWA WELLS UNITS 1 & 2**

**Prep Type: Total/NA**

**Prep Batch: 485540**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits	
C10-C28	<25		1630	1580		ug/L		97	70 - 130	
<b>Surrogate</b>	<b>%Recovery</b>	<b>MS Qualifier</b>	<b>MS Limits</b>							
<i>n-Octacosane (Surr)</i>	118		60 - 130							

**Lab Sample ID: 380-114717-3 MSD**

**Matrix: Water**

**Analysis Batch: 486540**

**Client Sample ID: HALAWA WELLS UNITS 1 & 2**

**Prep Type: Total/NA**

**Prep Batch: 485540**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C10-C28	<25		1630	1570		ug/L		96	70 - 130	1	20
<b>Surrogate</b>	<b>%Recovery</b>	<b>MSD Qualifier</b>	<b>MSD Limits</b>								
<i>n-Octacosane (Surr)</i>	115		60 - 130								

# QC Association Summary

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

Job ID: 380-114717-1  
SDG: Weekly

## GC/MS Semi VOA

### Prep Batch: 110387

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-114717-1	Ka'amilo Wells	Total/NA	Water	525.2	
380-114717-3	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Water	525.2	
MB 380-110387/21-A	Method Blank	Total/NA	Water	525.2	
LCS 380-110387/23-A	Lab Control Sample	Total/NA	Water	525.2	
LCSD 380-110387/24-A	Lab Control Sample Dup	Total/NA	Water	525.2	
MRL 380-110387/22-A	Lab Control Sample	Total/NA	Water	525.2	
380-114717-1 MS	Ka'amilo Wells	Total/NA	Water	525.2	
380-114717-3 DU	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Water	525.2	

### Analysis Batch: 110681

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-114717-1	Ka'amilo Wells	Total/NA	Water	525.2	110387
380-114717-3	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Water	525.2	110387
MB 380-110387/21-A	Method Blank	Total/NA	Water	525.2	110387
LCS 380-110387/23-A	Lab Control Sample	Total/NA	Water	525.2	110387
LCSD 380-110387/24-A	Lab Control Sample Dup	Total/NA	Water	525.2	110387
MRL 380-110387/22-A	Lab Control Sample	Total/NA	Water	525.2	110387
380-114717-1 MS	Ka'amilo Wells	Total/NA	Water	525.2	110387
380-114717-3 DU	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Water	525.2	110387

### Prep Batch: 485362

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-114717-1	Ka'amilo Wells	Total/NA	Water	625.1	
380-114717-3	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Water	625.1	
MB 570-485362/1-A	Method Blank	Total/NA	Water	625.1	
LCS 570-485362/2-A	Lab Control Sample	Total/NA	Water	625.1	
LCSD 570-485362/3-A	Lab Control Sample Dup	Total/NA	Water	625.1	
380-114717-3 MS	HALAWA WELLS UNITS 1 & 2	Total/NA	Water	625.1	
380-114717-3 MSD	HALAWA WELLS UNITS 1 & 2	Total/NA	Water	625.1	

### Analysis Batch: 487353

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-114717-1	Ka'amilo Wells	Total/NA	Water	625.1 SIM	485362
380-114717-3	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Water	625.1 SIM	485362
MB 570-485362/1-A	Method Blank	Total/NA	Water	625.1 SIM	485362
LCS 570-485362/2-A	Lab Control Sample	Total/NA	Water	625.1 SIM	485362
LCSD 570-485362/3-A	Lab Control Sample Dup	Total/NA	Water	625.1 SIM	485362
380-114717-3 MS	HALAWA WELLS UNITS 1 & 2	Total/NA	Water	625.1 SIM	485362
380-114717-3 MSD	HALAWA WELLS UNITS 1 & 2	Total/NA	Water	625.1 SIM	485362

### Analysis Batch: 488518

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-114717-1	Ka'amilo Wells	Total/NA	Water	625.1	485362
380-114717-3	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Water	625.1	485362
MB 570-485362/1-A	Method Blank	Total/NA	Water	625.1	485362

## GC VOA

### Analysis Batch: 486453

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-114717-1	Ka'amilo Wells	Total/NA	Water	8015B GRO LL	

# QC Association Summary

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

Job ID: 380-114717-1  
 SDG: Weekly

## GC VOA (Continued)

### Analysis Batch: 486453 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-114717-2	TB: Ka'amilo Wells	Total/NA	Water	8015B GRO LL	
380-114717-3	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Water	8015B GRO LL	
380-114717-4	TB: HALAWA WELLS UNITS 1 & 2	Total/NA	Water	8015B GRO LL	
MB 570-486453/4	Method Blank	Total/NA	Water	8015B GRO LL	
LCS 570-486453/5	Lab Control Sample	Total/NA	Water	8015B GRO LL	
LCSD 570-486453/6	Lab Control Sample Dup	Total/NA	Water	8015B GRO LL	
MRL 570-486453/3	Lab Control Sample	Total/NA	Water	8015B GRO LL	
380-114717-3 MS	HALAWA WELLS UNITS 1 & 2	Total/NA	Water	8015B GRO LL	
380-114717-3 MSD	HALAWA WELLS UNITS 1 & 2	Total/NA	Water	8015B GRO LL	

## GC Semi VOA

### Prep Batch: 485540

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-114717-1	Ka'amilo Wells	Total/NA	Water	3510C	
380-114717-3	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Water	3510C	
MB 570-485540/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-485540/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-485540/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MRL 570-485540/4-A	Lab Control Sample	Total/NA	Water	3510C	
380-114394-B-1-A MS	Matrix Spike	Total/NA	Water	3510C	
380-114394-B-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	3510C	
380-114717-3 MS	HALAWA WELLS UNITS 1 & 2	Total/NA	Water	3510C	
380-114717-3 MSD	HALAWA WELLS UNITS 1 & 2	Total/NA	Water	3510C	

### Analysis Batch: 486540

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-114717-1	Ka'amilo Wells	Total/NA	Water	8015B	485540
380-114717-3	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Water	8015B	485540
MB 570-485540/1-A	Method Blank	Total/NA	Water	8015B	485540
LCS 570-485540/2-A	Lab Control Sample	Total/NA	Water	8015B	485540
LCSD 570-485540/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	485540
MRL 570-485540/4-A	Lab Control Sample	Total/NA	Water	8015B	485540
380-114394-B-1-A MS	Matrix Spike	Total/NA	Water	8015B	485540
380-114394-B-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	8015B	485540
380-114717-3 MS	HALAWA WELLS UNITS 1 & 2	Total/NA	Water	8015B	485540
380-114717-3 MSD	HALAWA WELLS UNITS 1 & 2	Total/NA	Water	8015B	485540

# Lab Chronicle

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

Job ID: 380-114717-1  
SDG: Weekly

## Client Sample ID: Ka'amilo Wells

## Lab Sample ID: 380-114717-1

Date Collected: 09/23/24 11:28

Matrix: Water

Date Received: 09/25/24 09:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			110387	KRD3	EA POM	09/26/24 10:20
Total/NA	Analysis	525.2		1	110681	Q8LA	EA POM	09/27/24 16:13
Total/NA	Prep	625.1			485362	H1SH	EET CAL 4	09/27/24 06:25
Total/NA	Analysis	625.1		1	488518	CG	EET CAL 4	10/07/24 16:45
Total/NA	Prep	625.1			485362	H1SH	EET CAL 4	09/27/24 06:25
Total/NA	Analysis	625.1 SIM		1	487353	PQS1	EET CAL 4	10/03/24 10:30
Total/NA	Analysis	8015B GRO LL		1	486453	A9VE	EET CAL 4	10/01/24 19:08
Total/NA	Prep	3510C			485540	H6FE	EET CAL 4	09/27/24 12:38
Total/NA	Analysis	8015B		1	486540	SP9M	EET CAL 4	10/01/24 19:55

## Client Sample ID: TB: Ka'amilo Wells

## Lab Sample ID: 380-114717-2

Date Collected: 09/23/24 11:28

Matrix: Water

Date Received: 09/25/24 09:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015B GRO LL		1	486453	A9VE	EET CAL 4	10/01/24 17:35

## Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1

## Lab Sample ID: 380-114717-3

Date Collected: 09/23/24 10:07

Matrix: Water

Date Received: 09/25/24 09:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			110387	KRD3	EA POM	09/26/24 10:20
Total/NA	Analysis	525.2		1	110681	Q8LA	EA POM	09/27/24 16:34
Total/NA	Prep	625.1			485362	H1SH	EET CAL 4	09/27/24 06:25
Total/NA	Analysis	625.1		1	488518	CG	EET CAL 4	10/07/24 17:08
Total/NA	Prep	625.1			485362	H1SH	EET CAL 4	09/27/24 06:25
Total/NA	Analysis	625.1 SIM		1	487353	PQS1	EET CAL 4	10/03/24 10:09
Total/NA	Analysis	8015B GRO LL		1	486453	A9VE	EET CAL 4	10/01/24 14:12
Total/NA	Prep	3510C			485540	H6FE	EET CAL 4	09/27/24 12:38
Total/NA	Analysis	8015B		1	486540	SP9M	EET CAL 4	10/01/24 20:15

## Client Sample ID: TB: HALAWA WELLS UNITS 1 & 2

## Lab Sample ID: 380-114717-4

Date Collected: 09/23/24 10:07

Matrix: Water

Date Received: 09/25/24 09:48

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015B GRO LL		1	486453	A9VE	EET CAL 4	10/01/24 17:58

**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

# Accreditation/Certification Summary

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

Job ID: 380-114717-1  
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	Water	1-Methylnaphthalene
525.2	525.2	Water	2,4'-DDD
525.2	525.2	Water	2,4'-DDE
525.2	525.2	Water	2,4'-DDT
525.2	525.2	Water	2,4-Dinitrotoluene
525.2	525.2	Water	2,6-Dinitrotoluene
525.2	525.2	Water	2-Methylnaphthalene
525.2	525.2	Water	4,4'-DDD
525.2	525.2	Water	4,4'-DDE
525.2	525.2	Water	4,4' DDT
525.2	525.2	Water	Acetochlor
525.2	525.2	Water	alpha-BHC
525.2	525.2	Water	alpha-Chlordane
525.2	525.2	Water	beta-BHC
525.2	525.2	Water	Chlorobenzilate
525.2	525.2	Water	Chloroneb
525.2	525.2	Water	Chlorothalonil (Draconil, Bravo)
525.2	525.2	Water	Chlorpyrifos
525.2	525.2	Water	delta-BHC
525.2	525.2	Water	Diclorvos (DDVP)
525.2	525.2	Water	Endosulfan I (Alpha)
525.2	525.2	Water	Endosulfan II (Beta)
525.2	525.2	Water	Endosulfan sulfate
525.2	525.2	Water	Endrin aldehyde
525.2	525.2	Water	EPTC
525.2	525.2	Water	gamma-Chlordane
525.2	525.2	Water	Isophorone
525.2	525.2	Water	Malathion
525.2	525.2	Water	Parathion
525.2	525.2	Water	Pendimethalin (Penoxaline)
525.2	525.2	Water	Terbacil
525.2	525.2	Water	Terbutylazine
525.2	525.2	Water	Total Permethrin (mixed isomers)
525.2	525.2	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	11-16-24
Arkansas DEQ	State	88-0161	07-02-25
California	Los Angeles County Sanitation Districts	9257304	08-01-24 *
California	SCAQMD LAP	17LA0919	11-30-24
California	State	3082	07-31-26
Kansas	NELAP	E-10420	07-31-25

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Eaton Analytical Pomona

# Accreditation/Certification Summary

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

Job ID: 380-114717-1  
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	10-11-24

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# Method Summary

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

Job ID: 380-114717-1  
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: 380-114717-1  
SDG: Weekly

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-114717-1	Ka'amilo Wells	Water	09/23/24 11:28	09/25/24 09:48
380-114717-2	TB: Ka'amilo Wells	Water	09/23/24 11:28	09/25/24 09:48
380-114717-3	HALAWA WELLS UNITS 1 & 2 P1	Water	09/23/24 10:07	09/25/24 09:48
380-114717-4	TB: HALAWA WELLS UNITS 1 & 2	Water	09/23/24 10:07	09/25/24 09:48

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**Chain of Custody Record**



<b>Client Information (Sub Contract Lab)</b>		Lab File: Arada, Rachelle	Carrier Tracking No(S): 380-114717-1
Client Contact: Shipping/Receiving		E-Mail: Rachelle.Arada@eurofins.com	Pages: Page 1 of 1
Company: Eurofins Environment Testing Southwest		State of Origin: Hawaii	Job #: 380-114717-1
Address: 2841 Dow Avenue, Suite 100,		Accreditations Required (See note): State Hawaii	Preservation Codes:
City: Tustin	Due Date Requested: 10/8/2024	<b>Analysis Requested</b>	
State, Zip: CA, 92780	TAT Requested (days):	380-114717 Chain of Custody	
Phone: 714-896-5484(Tel)	PO #:		
Email:	WO #:	625.1_S1M/625_Prep (MOD) Extended PAH List 625.1_625_Prep (MOD) Tentatively Identified Compounds (Field) 8015B_GRO_LL/5030C GRO 8015B_GRO_LL/5030C GRO 824/C24-C36/C8-C18 C24/C24-C36/C8-C18 8015B_GRO_LL CS/510C LL HNL Ranges: C10	
Project Name: RED-HILL	Project #: 38001111	Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> Total Number of Containers: 7	
Site: Honolulu BWS Sites	SSOW#:	Other:	
<b>Sample Identification Client ID (Lab ID)</b>		<b>Special Instructions/Note:</b>	
Ka'amilo Wells (380-114717-1)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)
9/23/24	11:28 Hawaiian	G	Water
9/23/24	11:28 Hawaiian	G	Water
9/23/24	10:07 Hawaiian	G	Water
9/23/24	10:07 Hawaiian	G	Water
9/23/24	10:07 Hawaiian	G	Water
9/23/24	10:07 Hawaiian	G	Water
9/23/24	10:07 Hawaiian	G	Water
TB: HALAWA WELLS UNITS 1 & 2 (380-114717-4)		MRLs are needed. Confirm any hits >RL	
TB: Ka'amilo Wells (380-114717-2)		MRLs are needed.	
HALAWA WELLS UNITS 1 & 2 P1 (380-114717-3)		MRLs are needed. Confirm any hits >RL	
HALAWA WELLS UNITS 1 & 2 (380-114717-3MS)		MRLs are needed. Confirm any hits >RL	
HALAWA WELLS UNITS 1 & 2 (380-114717-3MSD)		MRLs are needed. Confirm any hits >RL	
TB: HALAWA WELLS UNITS 1 & 2 (380-114717-4)		MRLs are needed.	
<p><b>Possible Hazard Identification</b></p> <p><input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months</p> <p><b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b></p> <p>Special Instructions/QC Requirements:</p>			
Deliverable Requested: I II III IV Other (specify)		Method of Shipment:	
Empty Kit Relinquished by		Date:	
Relinquished by: <i>[Signature]</i>		Date/Time: 9/26/24 11:00	
Relinquished by: <i>[Signature]</i>		Date/Time: 9/26/24 11:00	
Relinquished by:		Date/Time:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Cooler Temperature(s) °C and Other Remarks: 17/17 S02	



## Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-114717-1

SDG Number: Weekly

**Login Number: 114717**

**List Number: 1**

**Creator: Edrosa, Rey**

**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").	True	
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: 380-114717-1

SDG Number: Weekly

**Login Number: 114717**

**List Number: 2**

**Creator: Khana, Piyush**

**List Source: Eurofins Calscience**

**List Creation: 09/26/24 01:32 PM**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> 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	1.7
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 <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	False	