

# ANALYTICAL REPORT

## PREPARED FOR

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## JOB DESCRIPTION

RED-HILL  
Weekly

## JOB NUMBER

380-107533-1

# 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: 380-107533-1  
SDG: Weekly

## Qualifiers

### GC/MS Semi VOA

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

### GC/MS Semi VOA TICs

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

### GC VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### GC Semi VOA

Qualifier	Qualifier Description
^3+	Reporting Limit Check Standard is outside acceptance limits, high biased

## Glossary

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

# Case Narrative

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

Job ID: 380-107533-1

**Job ID: 380-107533-1**

**Eurofins Eaton Analytical Pomona**

## Job Narrative 380-107533-1

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 8/7/2024 10:32 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 5 coolers at receipt time were 1.7°C, 1.7°C, 1.8°C, 1.9°C and 2.2°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

Method 8015B\_GRO\_LL: The following sample(s) were collected in properly preserved vials for analysis of volatile organic compounds (VOCs). However, the pH was outside the required criteria when verified by the laboratory, and corrective action was not possible: TB:MOANALUA WELLS (380-107533-2) and TB: HALAWA WELLS UNITS 1&2 P1 (380-107533-4). Data excluded due to this.

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

### Diesel Range Organics

Method 8015B\_DRO\_LL\_CS: The method reporting limit check (MRL) for preparation batch 570-469700 and analytical batch 570-471795 recovered outside control limits for the following analytes: C10-C28. These analytes were biased high in the MRL and were not detected in the associated samples; therefore, the data have been reported.

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: 380-107533-1  
 SDG: Weekly

## Client Sample ID: MOANALUA WELLS

Lab Sample ID: 380-107533-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Dieldrin	0.019		0.0099	ug/L	1		525.2	Total/NA

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

Lab Sample ID: 380-107533-3

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Dieldrin	0.037		0.0098	ug/L	1		525.2	Total/NA
Heptachlor epoxide (isomer B)	0.012		0.0098	ug/L	1		525.2	Total/NA

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: 380-107533-1  
 SDG: Weekly

**Client Sample ID: MOANALUA WELLS**

**Lab Sample ID: 380-107533-1**

Date Collected: 08/05/24 09:48

Matrix: Water

Date Received: 08/07/24 10:32

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.099		0.099	ug/L		08/08/24 17:15	08/12/24 10:38	1
2,4'-DDD	<0.099		0.099	ug/L		08/08/24 17:15	08/12/24 10:38	1
2,4'-DDE	<0.099		0.099	ug/L		08/08/24 17:15	08/12/24 10:38	1
2,4'-DDT	<0.099		0.099	ug/L		08/08/24 17:15	08/12/24 10:38	1
2,4-Dinitrotoluene	<0.099		0.099	ug/L		08/08/24 17:15	08/12/24 10:38	1
2,6-Dinitrotoluene	<0.099		0.099	ug/L		08/08/24 17:15	08/12/24 10:38	1
2-Methylnaphthalene	<0.099		0.099	ug/L		08/08/24 17:15	08/12/24 10:38	1
4,4'-DDD	<0.099		0.099	ug/L		08/08/24 17:15	08/12/24 10:38	1
4,4'-DDE	<0.099		0.099	ug/L		08/08/24 17:15	08/12/24 10:38	1
4,4'-DDT	<0.099		0.099	ug/L		08/08/24 17:15	08/12/24 10:38	1
Acenaphthene	<0.099		0.099	ug/L		08/08/24 17:15	08/12/24 10:38	1
Acenaphthylene	<0.099		0.099	ug/L		08/08/24 17:15	08/12/24 10:38	1
Acetochlor	<0.099		0.099	ug/L		08/08/24 17:15	08/12/24 10:38	1
Alachlor	<0.050		0.050	ug/L		08/08/24 17:15	08/12/24 10:38	1
alpha-BHC	<0.099		0.099	ug/L		08/08/24 17:15	08/12/24 10:38	1
alpha-Chlordane	<0.050		0.050	ug/L		08/08/24 17:15	08/12/24 10:38	1
Anthracene	<0.020		0.020	ug/L		08/08/24 17:15	08/12/24 10:38	1
Atrazine	<0.050		0.050	ug/L		08/08/24 17:15	08/12/24 10:38	1
Benz(a)anthracene	<0.050		0.050	ug/L		08/08/24 17:15	08/12/24 10:38	1
Benzo[a]pyrene	<0.020		0.020	ug/L		08/08/24 17:15	08/12/24 10:38	1
Benzo[b]fluoranthene	<0.020		0.020	ug/L		08/08/24 17:15	08/12/24 10:38	1
Benzo[g,h,i]perylene	<0.050		0.050	ug/L		08/08/24 17:15	08/12/24 10:38	1
Benzo[k]fluoranthene	<0.020		0.020	ug/L		08/08/24 17:15	08/12/24 10:38	1
beta-BHC	<0.099		0.099	ug/L		08/08/24 17:15	08/12/24 10:38	1
Bis(2-ethylhexyl) phthalate	<0.60		0.60	ug/L		08/08/24 17:15	08/12/24 10:38	1
Bromacil	<0.099		0.099	ug/L		08/08/24 17:15	08/12/24 10:38	1
Butachlor	<0.050		0.050	ug/L		08/08/24 17:15	08/12/24 10:38	1
Butylbenzylphthalate	<0.50		0.50	ug/L		08/08/24 17:15	08/12/24 10:38	1
Chlorobenzilate	<0.099		0.099	ug/L		08/08/24 17:15	08/12/24 10:38	1
Chloroneb	<0.099		0.099	ug/L		08/08/24 17:15	08/12/24 10:38	1
Chlorothalonil (Draconil, Bravo)	<0.099		0.099	ug/L		08/08/24 17:15	08/12/24 10:38	1
Chlorpyrifos	<0.050		0.050	ug/L		08/08/24 17:15	08/12/24 10:38	1
Chrysene	<0.020		0.020	ug/L		08/08/24 17:15	08/12/24 10:38	1
delta-BHC	<0.099		0.099	ug/L		08/08/24 17:15	08/12/24 10:38	1
Di(2-ethylhexyl)adipate	<0.60		0.60	ug/L		08/08/24 17:15	08/12/24 10:38	1
Dibenz(a,h)anthracene	<0.050		0.050	ug/L		08/08/24 17:15	08/12/24 10:38	1
Diclorvos (DDVP)	<0.050		0.050	ug/L		08/08/24 17:15	08/12/24 10:38	1
<b>Dieldrin</b>	<b>0.019</b>		0.0099	ug/L		08/08/24 17:15	08/12/24 10:38	1
Diethylphthalate	<0.50		0.50	ug/L		08/08/24 17:15	08/12/24 10:38	1
Dimethylphthalate	<0.50		0.50	ug/L		08/08/24 17:15	08/12/24 10:38	1
Di-n-butyl phthalate	<0.99		0.99	ug/L		08/08/24 17:15	08/12/24 10:38	1
Di-n-octyl phthalate	<0.099		0.099	ug/L		08/08/24 17:15	08/12/24 10:38	1
Endosulfan I (Alpha)	<0.099		0.099	ug/L		08/08/24 17:15	08/12/24 10:38	1
Endosulfan II (Beta)	<0.099		0.099	ug/L		08/08/24 17:15	08/12/24 10:38	1
Endosulfan sulfate	<0.099		0.099	ug/L		08/08/24 17:15	08/12/24 10:38	1
Endrin	<0.0099		0.0099	ug/L		08/08/24 17:15	08/12/24 10:38	1
Endrin aldehyde	<0.099		0.099	ug/L		08/08/24 17:15	08/12/24 10:38	1
EPTC	<0.099		0.099	ug/L		08/08/24 17:15	08/12/24 10:38	1
Fluoranthene	<0.099		0.099	ug/L		08/08/24 17:15	08/12/24 10:38	1

# Client Sample Results

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

Job ID: 380-107533-1  
SDG: Weekly

**Client Sample ID: MOANALUA WELLS**

**Lab Sample ID: 380-107533-1**

Date Collected: 08/05/24 09:48

Matrix: Water

Date Received: 08/07/24 10:32

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	<0.050		0.050	ug/L		08/08/24 17:15	08/12/24 10:38	1
gamma-Chlordane	<0.050		0.050	ug/L		08/08/24 17:15	08/12/24 10:38	1
Heptachlor	<0.0099	^3+	0.0099	ug/L		08/08/24 17:15	08/12/24 10:38	1
Heptachlor epoxide (isomer B)	<0.0099		0.0099	ug/L		08/08/24 17:15	08/10/24 14:55	1
Hexachlorobenzene	<0.050		0.050	ug/L		08/08/24 17:15	08/12/24 10:38	1
Hexachlorocyclopentadiene	<0.050		0.050	ug/L		08/08/24 17:15	08/12/24 10:38	1
Indeno[1,2,3-cd]pyrene	<0.050		0.050	ug/L		08/08/24 17:15	08/12/24 10:38	1
Isophorone	<0.099		0.099	ug/L		08/08/24 17:15	08/12/24 10:38	1
Lindane	<0.0099		0.0099	ug/L		08/08/24 17:15	08/12/24 10:38	1
Malathion	<0.099		0.099	ug/L		08/08/24 17:15	08/12/24 10:38	1
Methoxychlor	<0.050		0.050	ug/L		08/08/24 17:15	08/12/24 10:38	1
Metolachlor	<0.050		0.050	ug/L		08/08/24 17:15	08/12/24 10:38	1
Molinate	<0.099		0.099	ug/L		08/08/24 17:15	08/12/24 10:38	1
Naphthalene	<0.099		0.099	ug/L		08/08/24 17:15	08/12/24 10:38	1
Parathion	<0.099		0.099	ug/L		08/08/24 17:15	08/12/24 10:38	1
Pendimethalin (Penoxaline)	<0.099		0.099	ug/L		08/08/24 17:15	08/12/24 10:38	1
Phenanthrene	<0.040		0.040	ug/L		08/08/24 17:15	08/12/24 10:38	1
Propachlor	<0.050		0.050	ug/L		08/08/24 17:15	08/12/24 10:38	1
Pyrene	<0.050		0.050	ug/L		08/08/24 17:15	08/12/24 10:38	1
Simazine	<0.050		0.050	ug/L		08/08/24 17:15	08/12/24 10:38	1
Terbacil	<0.099		0.099	ug/L		08/08/24 17:15	08/12/24 10:38	1
Terbutylazine	<0.099		0.099	ug/L		08/08/24 17:15	08/12/24 10:38	1
Thiobencarb	<0.099		0.099	ug/L		08/08/24 17:15	08/12/24 10:38	1
Total Permethrin (mixed isomers)	<0.20		0.20	ug/L		08/08/24 17:15	08/12/24 10:38	1
trans-Nonachlor	<0.050		0.050	ug/L		08/08/24 17:15	08/12/24 10:38	1
Trifluralin	<0.099		0.099	ug/L		08/08/24 17:15	08/12/24 10:38	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	08/08/24 17:15	08/12/24 10:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	95		70 - 130	08/08/24 17:15	08/10/24 14:55	1
2-Nitro-m-xylene	98		70 - 130	08/08/24 17:15	08/12/24 10:38	1
Perylene-d12	92		70 - 130	08/08/24 17:15	08/10/24 14:55	1
Perylene-d12	95		70 - 130	08/08/24 17:15	08/12/24 10:38	1
Triphenylphosphate	102		70 - 130	08/08/24 17:15	08/10/24 14:55	1
Triphenylphosphate	105		70 - 130	08/08/24 17:15	08/12/24 10:38	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		08/12/24 08:05	08/15/24 18:03	1
2-Methylnaphthalene	<0.19		0.19	ug/L		08/12/24 08:05	08/15/24 18:03	1
Acenaphthene	<0.19		0.19	ug/L		08/12/24 08:05	08/15/24 18:03	1
Acenaphthylene	<0.19		0.19	ug/L		08/12/24 08:05	08/15/24 18:03	1
Anthracene	<0.19		0.19	ug/L		08/12/24 08:05	08/15/24 18:03	1
Benzo[a]anthracene	<0.19		0.19	ug/L		08/12/24 08:05	08/15/24 18:03	1
Benzo[a]pyrene	<0.19		0.19	ug/L		08/12/24 08:05	08/15/24 18:03	1
Benzo[b]fluoranthene	<0.19		0.19	ug/L		08/12/24 08:05	08/15/24 18:03	1
Benzo[g,h,i]perylene	<0.19		0.19	ug/L		08/12/24 08:05	08/15/24 18:03	1
Benzo[k]fluoranthene	<0.19		0.19	ug/L		08/12/24 08:05	08/15/24 18:03	1

Eurofins Eaton Analytical Pomona



# Client Sample Results

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

Job ID: 380-107533-1  
SDG: Weekly

**Client Sample ID: MOANALUA WELLS**

**Lab Sample ID: 380-107533-1**

Date Collected: 08/05/24 09:48

Matrix: Water

Date Received: 08/07/24 10:32

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	<0.19		0.19	ug/L		08/12/24 08:05	08/15/24 18:03	1
Dibenz(a,h)anthracene	<0.19		0.19	ug/L		08/12/24 08:05	08/15/24 18:03	1
Fluoranthene	<0.19		0.19	ug/L		08/12/24 08:05	08/15/24 18:03	1
Fluorene	<0.19		0.19	ug/L		08/12/24 08:05	08/15/24 18:03	1
Indeno[1,2,3-cd]pyrene	<0.19		0.19	ug/L		08/12/24 08:05	08/15/24 18:03	1
Naphthalene	<0.19		0.19	ug/L		08/12/24 08:05	08/15/24 18:03	1
Phenanthrene	<0.19		0.19	ug/L		08/12/24 08:05	08/15/24 18:03	1
Pyrene	<0.19		0.19	ug/L		08/12/24 08:05	08/15/24 18:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	87		28 - 127	08/12/24 08:05	08/15/24 18:03	1
2-Fluorobiphenyl (Surr)	65		31 - 120	08/12/24 08:05	08/15/24 18:03	1
2-Fluorophenol (Surr)	37		17 - 120	08/12/24 08:05	08/15/24 18:03	1
Nitrobenzene-d5 (Surr)	61		27 - 120	08/12/24 08:05	08/15/24 18:03	1
Phenol-d6 (Surr)	23		10 - 120	08/12/24 08:05	08/15/24 18:03	1
p-Terphenyl-d14 (Surr)	76		45 - 120	08/12/24 08:05	08/15/24 18:03	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	08/12/24 08:05	08/20/24 13:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	71		33 - 139	08/12/24 08:05	08/20/24 13:08	1
2-Fluorobiphenyl (Surr)	67		33 - 126	08/12/24 08:05	08/20/24 13:08	1
2-Fluorophenol (Surr)	39		12 - 120	08/12/24 08:05	08/20/24 13:08	1
Nitrobenzene-d5 (Surr)	67		36 - 120	08/12/24 08:05	08/20/24 13:08	1
Phenol-d6 (Surr)	19		10 - 120	08/12/24 08:05	08/20/24 13:08	1
p-Terphenyl-d14 (Surr)	81		47 - 131	08/12/24 08:05	08/20/24 13:08	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			08/19/24 17:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		38 - 134		08/19/24 17:17	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C24)	<26		26	ug/L		08/11/24 22:13	08/17/24 14:49	1
Motor Oil Range Organics [C24-C36]	<26		26	ug/L		08/11/24 22:13	08/17/24 14:49	1
C8-C18	<26		26	ug/L		08/11/24 22:13	08/17/24 14:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	119		60 - 130	08/11/24 22:13	08/17/24 14:49	1

# Client Sample Results

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

Job ID: 380-107533-1  
SDG: Weekly

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

**Lab Sample ID: 380-107533-3**

Date Collected: 08/05/24 10:22

Matrix: Water

Date Received: 08/07/24 10:32

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.098		0.098	ug/L		08/08/24 17:15	08/12/24 10:58	1
2,4'-DDD	<0.098		0.098	ug/L		08/08/24 17:15	08/12/24 10:58	1
2,4'-DDE	<0.098		0.098	ug/L		08/08/24 17:15	08/12/24 10:58	1
2,4'-DDT	<0.098		0.098	ug/L		08/08/24 17:15	08/12/24 10:58	1
2,4-Dinitrotoluene	<0.098		0.098	ug/L		08/08/24 17:15	08/12/24 10:58	1
2,6-Dinitrotoluene	<0.098		0.098	ug/L		08/08/24 17:15	08/12/24 10:58	1
2-Methylnaphthalene	<0.098		0.098	ug/L		08/08/24 17:15	08/12/24 10:58	1
4,4'-DDD	<0.098		0.098	ug/L		08/08/24 17:15	08/12/24 10:58	1
4,4'-DDE	<0.098		0.098	ug/L		08/08/24 17:15	08/12/24 10:58	1
4,4'-DDT	<0.098		0.098	ug/L		08/08/24 17:15	08/12/24 10:58	1
Acenaphthene	<0.098		0.098	ug/L		08/08/24 17:15	08/12/24 10:58	1
Acenaphthylene	<0.098		0.098	ug/L		08/08/24 17:15	08/12/24 10:58	1
Acetochlor	<0.098		0.098	ug/L		08/08/24 17:15	08/12/24 10:58	1
Alachlor	<0.049		0.049	ug/L		08/08/24 17:15	08/12/24 10:58	1
alpha-BHC	<0.098		0.098	ug/L		08/08/24 17:15	08/12/24 10:58	1
alpha-Chlordane	<0.049		0.049	ug/L		08/08/24 17:15	08/12/24 10:58	1
Anthracene	<0.020		0.020	ug/L		08/08/24 17:15	08/12/24 10:58	1
Atrazine	<0.049		0.049	ug/L		08/08/24 17:15	08/12/24 10:58	1
Benz(a)anthracene	<0.049		0.049	ug/L		08/08/24 17:15	08/12/24 10:58	1
Benzo[a]pyrene	<0.020		0.020	ug/L		08/08/24 17:15	08/12/24 10:58	1
Benzo[b]fluoranthene	<0.020		0.020	ug/L		08/08/24 17:15	08/12/24 10:58	1
Benzo[g,h,i]perylene	<0.049		0.049	ug/L		08/08/24 17:15	08/12/24 10:58	1
Benzo[k]fluoranthene	<0.020		0.020	ug/L		08/08/24 17:15	08/12/24 10:58	1
beta-BHC	<0.098		0.098	ug/L		08/08/24 17:15	08/12/24 10:58	1
Bis(2-ethylhexyl) phthalate	<0.59		0.59	ug/L		08/08/24 17:15	08/12/24 10:58	1
Bromacil	<0.098		0.098	ug/L		08/08/24 17:15	08/12/24 10:58	1
Butachlor	<0.049		0.049	ug/L		08/08/24 17:15	08/12/24 10:58	1
Butylbenzylphthalate	<0.49		0.49	ug/L		08/08/24 17:15	08/12/24 10:58	1
Chlorobenzilate	<0.098		0.098	ug/L		08/08/24 17:15	08/12/24 10:58	1
Chloroneb	<0.098		0.098	ug/L		08/08/24 17:15	08/12/24 10:58	1
Chlorothalonil (Draconil, Bravo)	<0.098		0.098	ug/L		08/08/24 17:15	08/12/24 10:58	1
Chlorpyrifos	<0.049		0.049	ug/L		08/08/24 17:15	08/12/24 10:58	1
Chrysene	<0.020		0.020	ug/L		08/08/24 17:15	08/12/24 10:58	1
delta-BHC	<0.098		0.098	ug/L		08/08/24 17:15	08/12/24 10:58	1
Di(2-ethylhexyl)adipate	<0.59		0.59	ug/L		08/08/24 17:15	08/12/24 10:58	1
Dibenz(a,h)anthracene	<0.049		0.049	ug/L		08/08/24 17:15	08/12/24 10:58	1
Diclorvos (DDVP)	<0.049		0.049	ug/L		08/08/24 17:15	08/12/24 10:58	1
<b>Dieldrin</b>	<b>0.037</b>		0.0098	ug/L		08/08/24 17:15	08/12/24 10:58	1
Diethylphthalate	<0.49		0.49	ug/L		08/08/24 17:15	08/12/24 10:58	1
Dimethylphthalate	<0.49		0.49	ug/L		08/08/24 17:15	08/12/24 10:58	1
Di-n-butyl phthalate	<0.98		0.98	ug/L		08/08/24 17:15	08/12/24 10:58	1
Di-n-octyl phthalate	<0.098		0.098	ug/L		08/08/24 17:15	08/12/24 10:58	1
Endosulfan I (Alpha)	<0.098		0.098	ug/L		08/08/24 17:15	08/12/24 10:58	1
Endosulfan II (Beta)	<0.098		0.098	ug/L		08/08/24 17:15	08/12/24 10:58	1
Endosulfan sulfate	<0.098		0.098	ug/L		08/08/24 17:15	08/12/24 10:58	1
Endrin	<0.0098		0.0098	ug/L		08/08/24 17:15	08/12/24 10:58	1
Endrin aldehyde	<0.098		0.098	ug/L		08/08/24 17:15	08/12/24 10:58	1
EPTC	<0.098		0.098	ug/L		08/08/24 17:15	08/12/24 10:58	1
Fluoranthene	<0.098		0.098	ug/L		08/08/24 17:15	08/12/24 10:58	1

Eurofins Eaton Analytical Pomona

# Client Sample Results

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

Job ID: 380-107533-1  
SDG: Weekly

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

**Lab Sample ID: 380-107533-3**

Date Collected: 08/05/24 10:22

Matrix: Water

Date Received: 08/07/24 10:32

**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		08/08/24 17:15	08/12/24 10:58	1
gamma-Chlordane	<0.049		0.049	ug/L		08/08/24 17:15	08/12/24 10:58	1
Heptachlor	<0.0098	^3+	0.0098	ug/L		08/08/24 17:15	08/12/24 10:58	1
<b>Heptachlor epoxide (isomer B)</b>	<b>0.012</b>		0.0098	ug/L		08/08/24 17:15	08/10/24 15:16	1
Hexachlorobenzene	<0.049		0.049	ug/L		08/08/24 17:15	08/12/24 10:58	1
Hexachlorocyclopentadiene	<0.049		0.049	ug/L		08/08/24 17:15	08/12/24 10:58	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049	ug/L		08/08/24 17:15	08/12/24 10:58	1
Isophorone	<0.098		0.098	ug/L		08/08/24 17:15	08/12/24 10:58	1
Lindane	<0.0098		0.0098	ug/L		08/08/24 17:15	08/12/24 10:58	1
Malathion	<0.098		0.098	ug/L		08/08/24 17:15	08/12/24 10:58	1
Methoxychlor	<0.049		0.049	ug/L		08/08/24 17:15	08/12/24 10:58	1
Metolachlor	<0.049		0.049	ug/L		08/08/24 17:15	08/12/24 10:58	1
Molinate	<0.098		0.098	ug/L		08/08/24 17:15	08/12/24 10:58	1
Naphthalene	<0.098		0.098	ug/L		08/08/24 17:15	08/12/24 10:58	1
Parathion	<0.098		0.098	ug/L		08/08/24 17:15	08/12/24 10:58	1
Pendimethalin (Penoxaline)	<0.098		0.098	ug/L		08/08/24 17:15	08/12/24 10:58	1
Phenanthrene	<0.039		0.039	ug/L		08/08/24 17:15	08/12/24 10:58	1
Propachlor	<0.049		0.049	ug/L		08/08/24 17:15	08/12/24 10:58	1
Pyrene	<0.049		0.049	ug/L		08/08/24 17:15	08/12/24 10:58	1
Simazine	<0.049		0.049	ug/L		08/08/24 17:15	08/12/24 10:58	1
Terbacil	<0.098		0.098	ug/L		08/08/24 17:15	08/12/24 10:58	1
Terbutylazine	<0.098		0.098	ug/L		08/08/24 17:15	08/12/24 10:58	1
Thiobencarb	<0.098		0.098	ug/L		08/08/24 17:15	08/12/24 10:58	1
Total Permethrin (mixed isomers)	<0.20		0.20	ug/L		08/08/24 17:15	08/12/24 10:58	1
trans-Nonachlor	<0.049		0.049	ug/L		08/08/24 17:15	08/12/24 10:58	1
Trifluralin	<0.098		0.098	ug/L		08/08/24 17:15	08/12/24 10:58	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	08/08/24 17:15	08/12/24 10:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	98		70 - 130	08/08/24 17:15	08/10/24 15:16	1
2-Nitro-m-xylene	100		70 - 130	08/08/24 17:15	08/12/24 10:58	1
Perylene-d12	92		70 - 130	08/08/24 17:15	08/10/24 15:16	1
Perylene-d12	96		70 - 130	08/08/24 17:15	08/12/24 10:58	1
Triphenylphosphate	99		70 - 130	08/08/24 17:15	08/10/24 15:16	1
Triphenylphosphate	105		70 - 130	08/08/24 17:15	08/12/24 10:58	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		08/12/24 08:05	08/15/24 18:25	1
2-Methylnaphthalene	<0.19		0.19	ug/L		08/12/24 08:05	08/15/24 18:25	1
Acenaphthene	<0.19		0.19	ug/L		08/12/24 08:05	08/15/24 18:25	1
Acenaphthylene	<0.19		0.19	ug/L		08/12/24 08:05	08/15/24 18:25	1
Anthracene	<0.19		0.19	ug/L		08/12/24 08:05	08/15/24 18:25	1
Benzo[a]anthracene	<0.19		0.19	ug/L		08/12/24 08:05	08/15/24 18:25	1
Benzo[a]pyrene	<0.19		0.19	ug/L		08/12/24 08:05	08/15/24 18:25	1
Benzo[b]fluoranthene	<0.19		0.19	ug/L		08/12/24 08:05	08/15/24 18:25	1
Benzo[g,h,i]perylene	<0.19		0.19	ug/L		08/12/24 08:05	08/15/24 18:25	1
Benzo[k]fluoranthene	<0.19		0.19	ug/L		08/12/24 08:05	08/15/24 18:25	1

Eurofins Eaton Analytical Pomona

# Client Sample Results

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

Job ID: 380-107533-1  
SDG: Weekly

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

**Lab Sample ID: 380-107533-3**

Date Collected: 08/05/24 10:22

Matrix: Water

Date Received: 08/07/24 10:32

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	<0.19		0.19	ug/L		08/12/24 08:05	08/15/24 18:25	1
Dibenz(a,h)anthracene	<0.19		0.19	ug/L		08/12/24 08:05	08/15/24 18:25	1
Fluoranthene	<0.19		0.19	ug/L		08/12/24 08:05	08/15/24 18:25	1
Fluorene	<0.19		0.19	ug/L		08/12/24 08:05	08/15/24 18:25	1
Indeno[1,2,3-cd]pyrene	<0.19		0.19	ug/L		08/12/24 08:05	08/15/24 18:25	1
Naphthalene	<0.19		0.19	ug/L		08/12/24 08:05	08/15/24 18:25	1
Phenanthrene	<0.19		0.19	ug/L		08/12/24 08:05	08/15/24 18:25	1
Pyrene	<0.19		0.19	ug/L		08/12/24 08:05	08/15/24 18:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	77		28 - 127	08/12/24 08:05	08/15/24 18:25	1
2-Fluorobiphenyl (Surr)	67		31 - 120	08/12/24 08:05	08/15/24 18:25	1
2-Fluorophenol (Surr)	40		17 - 120	08/12/24 08:05	08/15/24 18:25	1
Nitrobenzene-d5 (Surr)	65		27 - 120	08/12/24 08:05	08/15/24 18:25	1
Phenol-d6 (Surr)	26		10 - 120	08/12/24 08:05	08/15/24 18:25	1
p-Terphenyl-d14 (Surr)	80		45 - 120	08/12/24 08:05	08/15/24 18:25	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	08/12/24 08:05	08/20/24 12:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	69		33 - 139	08/12/24 08:05	08/20/24 12:45	1
2-Fluorobiphenyl (Surr)	71		33 - 126	08/12/24 08:05	08/20/24 12:45	1
2-Fluorophenol (Surr)	46		12 - 120	08/12/24 08:05	08/20/24 12:45	1
Nitrobenzene-d5 (Surr)	72		36 - 120	08/12/24 08:05	08/20/24 12:45	1
Phenol-d6 (Surr)	25		10 - 120	08/12/24 08:05	08/20/24 12:45	1
p-Terphenyl-d14 (Surr)	79		47 - 131	08/12/24 08:05	08/20/24 12:45	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			08/19/24 18:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	76		38 - 134		08/19/24 18:27	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C24)	<26		26	ug/L		08/11/24 22:13	08/17/24 15:52	1
Motor Oil Range Organics [C24-C36]	<26		26	ug/L		08/11/24 22:13	08/17/24 15:52	1
C8-C18	<26		26	ug/L		08/11/24 22:13	08/17/24 15:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac	
n-Octacosane (Surr)	112		60 - 130		08/11/24 22:13	08/17/24 15:52	1

# Action Limit Summary

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

Job ID: 380-107533-1  
SDG: Weekly

**Client Sample ID: MOANALUA WELLS**

**Lab Sample ID: 380-107533-1**

## 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	<0.050		ug/L	2	0.050	525.2	Total/NA
Atrazine	<0.050		ug/L	3	0.050	525.2	Total/NA
Benzo[a]pyrene	<0.020		ug/L	0.2	0.020	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	<0.60		ug/L	6	0.60	525.2	Total/NA
Di(2-ethylhexyl)adipate	<0.60		ug/L	400	0.60	525.2	Total/NA
Endrin	<0.0099		ug/L	2	0.0099	525.2	Total/NA
Heptachlor	<0.0099	^3+	ug/L	0.4	0.0099	525.2	Total/NA
Heptachlor epoxide (isomer B)	<0.0099		ug/L	0.2	0.0099	525.2	Total/NA
Hexachlorobenzene	<0.050		ug/L	1	0.050	525.2	Total/NA
Hexachlorocyclopentadiene	<0.050		ug/L	50	0.050	525.2	Total/NA
Lindane	<0.0099		ug/L	0.2	0.0099	525.2	Total/NA
Methoxychlor	<0.050		ug/L	40	0.050	525.2	Total/NA
Simazine	<0.050		ug/L	4	0.050	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: 380-107533-3**

## 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	<0.020		ug/L	0.2	0.020	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	<0.59		ug/L	6	0.59	525.2	Total/NA
Di(2-ethylhexyl)adipate	<0.59		ug/L	400	0.59	525.2	Total/NA
Endrin	<0.0098		ug/L	2	0.0098	525.2	Total/NA
Heptachlor	<0.0098	^3+	ug/L	0.4	0.0098	525.2	Total/NA
Heptachlor epoxide (isomer B)	0.012		ug/L	0.2	0.0098	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	<0.0098		ug/L	0.2	0.0098	525.2	Total/NA
Methoxychlor	<0.049		ug/L	40	0.049	525.2	Total/NA
Simazine	<0.049		ug/L	4	0.049	525.2	Total/NA
Benzo[a]pyrene	<0.19		ug/L	0.2	0.19	625.1 SIM	Total/NA

# Surrogate Summary

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

Job ID: 380-107533-1  
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)
380-107351-O-2-A MS	Matrix Spike	95	100	108
380-107533-1	MOANALUA WELLS	95	92	102
380-107533-1	MOANALUA WELLS	98	95	105
380-107533-3	HALAWA WELLS UNITS 1&2 P1	98	92	99
380-107533-3	HALAWA WELLS UNITS 1&2 P1	100	96	105
380-107568-D-1-A DU	Duplicate	96	97	103
LCS 380-102933/23-A	Lab Control Sample	97	101	110
MB 380-102933/21-A	Method Blank	95	98	104
MRL 380-102933/22-A	Lab Control Sample	96	98	106
MRL 380-102933/22-A	Lab Control Sample	102	101	112

**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)
380-107533-1	MOANALUA WELLS	71	67	39	67	19	81
380-107533-3	HALAWA WELLS UNITS 1&2 P1	69	71	46	72	25	79
MB 570-469775/1-A	Method Blank	80	66	43	63	24	74

**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)
380-107533-1	MOANALUA WELLS	87	65	37	61	23	76
380-107533-1 MS	MOANALUA WELLS	80	64	38	51	27	78
380-107533-1 MSD	MOANALUA WELLS	80	64	37	49	26	82
380-107533-3	HALAWA WELLS UNITS 1&2 P1	77	67	40	65	26	80
LCS 570-469775/2-A	Lab Control Sample	84	70	49	58	36	82
LCSD 570-469775/3-A	Lab Control Sample Dup	83	65	43	52	32	83
MB 570-469775/1-A	Method Blank	87	64	44	66	30	83

**Surrogate Legend**

Eurofins Eaton Analytical Pomona

# Surrogate Summary

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

Job ID: 380-107533-1  
 SDG: Weekly

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

## Method: 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)
380-107533-1	MOANALUA WELLS	83
380-107533-1 MS	MOANALUA WELLS	85
380-107533-1 MSD	MOANALUA WELLS	85
380-107533-3	HALAWA WELLS UNITS 1&2 P1	76
LCS 570-472071/3	Lab Control Sample	83
LCSD 570-472071/4	Lab Control Sample Dup	83
MB 570-472071/6	Method Blank	80
MRL 570-472071/5	Lab Control Sample	74

#### 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)
380-107533-1	MOANALUA WELLS	119
380-107533-1 MS	MOANALUA WELLS	117
380-107533-1 MSD	MOANALUA WELLS	102
380-107533-3	HALAWA WELLS UNITS 1&2 P1	112
LCS 570-469700/2-A	Lab Control Sample	118
LCSD 570-469700/3-A	Lab Control Sample Dup	114
MB 570-469700/1-A	Method Blank	113
MRL 570-469700/4-A	Lab Control Sample	99

#### Surrogate Legend

OTCSN = n-Octacosane (Surr)

# QC Sample Results

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

Job ID: 380-107533-1  
 SDG: Weekly

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

**Lab Sample ID: MB 380-102933/21-A**  
**Matrix: Water**  
**Analysis Batch: 103193**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 102933**

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
1-Methylnaphthalene	<0.098		0.098	ug/L		08/08/24 15:45	08/10/24 13:53	1
2,4'-DDD	<0.098		0.098	ug/L		08/08/24 15:45	08/10/24 13:53	1
2,4'-DDE	<0.098		0.098	ug/L		08/08/24 15:45	08/10/24 13:53	1
2,4'-DDT	<0.098		0.098	ug/L		08/08/24 15:45	08/10/24 13:53	1
2,4-Dinitrotoluene	<0.098		0.098	ug/L		08/08/24 15:45	08/10/24 13:53	1
2,6-Dinitrotoluene	<0.098		0.098	ug/L		08/08/24 15:45	08/10/24 13:53	1
2-Methylnaphthalene	<0.098		0.098	ug/L		08/08/24 15:45	08/10/24 13:53	1
4,4'-DDD	<0.098		0.098	ug/L		08/08/24 15:45	08/10/24 13:53	1
4,4'-DDE	<0.098		0.098	ug/L		08/08/24 15:45	08/10/24 13:53	1
4,4'-DDT	<0.098		0.098	ug/L		08/08/24 15:45	08/10/24 13:53	1
Acenaphthene	<0.098		0.098	ug/L		08/08/24 15:45	08/10/24 13:53	1
Acenaphthylene	<0.098		0.098	ug/L		08/08/24 15:45	08/10/24 13:53	1
Acetochlor	<0.098		0.098	ug/L		08/08/24 15:45	08/10/24 13:53	1
Alachlor	<0.049		0.049	ug/L		08/08/24 15:45	08/10/24 13:53	1
alpha-BHC	<0.098		0.098	ug/L		08/08/24 15:45	08/10/24 13:53	1
alpha-Chlordane	<0.049		0.049	ug/L		08/08/24 15:45	08/10/24 13:53	1
Anthracene	<0.020		0.020	ug/L		08/08/24 15:45	08/10/24 13:53	1
Atrazine	<0.049		0.049	ug/L		08/08/24 15:45	08/10/24 13:53	1
Benz(a)anthracene	<0.049		0.049	ug/L		08/08/24 15:45	08/10/24 13:53	1
Benzo[a]pyrene	<0.020		0.020	ug/L		08/08/24 15:45	08/10/24 13:53	1
Benzo[b]fluoranthene	<0.020		0.020	ug/L		08/08/24 15:45	08/10/24 13:53	1
Benzo[g,h,i]perylene	<0.049		0.049	ug/L		08/08/24 15:45	08/10/24 13:53	1
Benzo[k]fluoranthene	<0.020		0.020	ug/L		08/08/24 15:45	08/10/24 13:53	1
beta-BHC	<0.098		0.098	ug/L		08/08/24 15:45	08/10/24 13:53	1
Bis(2-ethylhexyl) phthalate	<0.59		0.59	ug/L		08/08/24 15:45	08/10/24 13:53	1
Bromacil	<0.098		0.098	ug/L		08/08/24 15:45	08/10/24 13:53	1
Butachlor	<0.049		0.049	ug/L		08/08/24 15:45	08/10/24 13:53	1
Butylbenzylphthalate	<0.49		0.49	ug/L		08/08/24 15:45	08/10/24 13:53	1
Chlorobenzilate	<0.098		0.098	ug/L		08/08/24 15:45	08/10/24 13:53	1
Chloroneb	<0.098		0.098	ug/L		08/08/24 15:45	08/10/24 13:53	1
Chlorothalonil (Draconil, Bravo)	<0.098		0.098	ug/L		08/08/24 15:45	08/10/24 13:53	1
Chlorpyrifos	<0.049		0.049	ug/L		08/08/24 15:45	08/10/24 13:53	1
Chrysene	<0.020		0.020	ug/L		08/08/24 15:45	08/10/24 13:53	1
delta-BHC	<0.098		0.098	ug/L		08/08/24 15:45	08/10/24 13:53	1
Di(2-ethylhexyl)adipate	<0.59		0.59	ug/L		08/08/24 15:45	08/10/24 13:53	1
Dibenz(a,h)anthracene	<0.049		0.049	ug/L		08/08/24 15:45	08/10/24 13:53	1
Diclorvos (DDVP)	<0.049		0.049	ug/L		08/08/24 15:45	08/10/24 13:53	1
Dieldrin	<0.0098		0.0098	ug/L		08/08/24 15:45	08/10/24 13:53	1
Diethylphthalate	<0.49		0.49	ug/L		08/08/24 15:45	08/10/24 13:53	1
Dimethylphthalate	<0.49		0.49	ug/L		08/08/24 15:45	08/10/24 13:53	1
Di-n-butyl phthalate	<0.98		0.98	ug/L		08/08/24 15:45	08/10/24 13:53	1
Di-n-octyl phthalate	<0.098		0.098	ug/L		08/08/24 15:45	08/10/24 13:53	1
Endosulfan I (Alpha)	<0.098		0.098	ug/L		08/08/24 15:45	08/10/24 13:53	1
Endosulfan II (Beta)	<0.098		0.098	ug/L		08/08/24 15:45	08/10/24 13:53	1
Endosulfan sulfate	<0.098		0.098	ug/L		08/08/24 15:45	08/10/24 13:53	1
Endrin	<0.0098		0.0098	ug/L		08/08/24 15:45	08/10/24 13:53	1
Endrin aldehyde	<0.098		0.098	ug/L		08/08/24 15:45	08/10/24 13:53	1
EPTC	<0.098		0.098	ug/L		08/08/24 15:45	08/10/24 13:53	1

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# QC Sample Results

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

Job ID: 380-107533-1  
SDG: Weekly

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

**Lab Sample ID: MB 380-102933/21-A**  
**Matrix: Water**  
**Analysis Batch: 103193**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 102933**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	<0.098		0.098	ug/L		08/08/24 15:45	08/10/24 13:53	1
Fluorene	<0.049		0.049	ug/L		08/08/24 15:45	08/10/24 13:53	1
gamma-Chlordane	<0.049		0.049	ug/L		08/08/24 15:45	08/10/24 13:53	1
Heptachlor	<0.0098		0.0098	ug/L		08/08/24 15:45	08/10/24 13:53	1
Heptachlor epoxide (isomer B)	<0.0098		0.0098	ug/L		08/08/24 15:45	08/10/24 13:53	1
Hexachlorobenzene	<0.049		0.049	ug/L		08/08/24 15:45	08/10/24 13:53	1
Hexachlorocyclopentadiene	<0.049		0.049	ug/L		08/08/24 15:45	08/10/24 13:53	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049	ug/L		08/08/24 15:45	08/10/24 13:53	1
Isophorone	<0.098		0.098	ug/L		08/08/24 15:45	08/10/24 13:53	1
Lindane	<0.0098		0.0098	ug/L		08/08/24 15:45	08/10/24 13:53	1
Malathion	<0.098		0.098	ug/L		08/08/24 15:45	08/10/24 13:53	1
Methoxychlor	<0.049		0.049	ug/L		08/08/24 15:45	08/10/24 13:53	1
Metolachlor	<0.049		0.049	ug/L		08/08/24 15:45	08/10/24 13:53	1
Molinate	<0.098		0.098	ug/L		08/08/24 15:45	08/10/24 13:53	1
Naphthalene	<0.098		0.098	ug/L		08/08/24 15:45	08/10/24 13:53	1
Parathion	<0.098		0.098	ug/L		08/08/24 15:45	08/10/24 13:53	1
Pendimethalin (Penoxaline)	<0.098		0.098	ug/L		08/08/24 15:45	08/10/24 13:53	1
Phenanthrene	<0.039		0.039	ug/L		08/08/24 15:45	08/10/24 13:53	1
Propachlor	<0.049		0.049	ug/L		08/08/24 15:45	08/10/24 13:53	1
Pyrene	<0.049		0.049	ug/L		08/08/24 15:45	08/10/24 13:53	1
Simazine	<0.049		0.049	ug/L		08/08/24 15:45	08/10/24 13:53	1
Terbacil	<0.098		0.098	ug/L		08/08/24 15:45	08/10/24 13:53	1
Terbutylazine	<0.098		0.098	ug/L		08/08/24 15:45	08/10/24 13:53	1
Thiobencarb	<0.098		0.098	ug/L		08/08/24 15:45	08/10/24 13:53	1
Total Permethrin (mixed isomers)	<0.20		0.20	ug/L		08/08/24 15:45	08/10/24 13:53	1
trans-Nonachlor	<0.049		0.049	ug/L		08/08/24 15:45	08/10/24 13:53	1
Trifluralin	<0.098		0.098	ug/L		08/08/24 15:45	08/10/24 13:53	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	0.493	T J	ug/L		3.27	N/A	08/08/24 15:45	08/10/24 13:53	1
9-Octadecenamide, (Z)-	0.611	T J N	ug/L		7.87	301-02-0	08/08/24 15:45	08/10/24 13:53	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	95		70 - 130	08/08/24 15:45	08/10/24 13:53	1
Perylene-d12	98		70 - 130	08/08/24 15:45	08/10/24 13:53	1
Triphenylphosphate	104		70 - 130	08/08/24 15:45	08/10/24 13:53	1

**Lab Sample ID: LCS 380-102933/23-A**  
**Matrix: Water**  
**Analysis Batch: 103193**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 102933**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	1.97	1.85		ug/L		94	70 - 130
2,4'-DDD	1.97	2.15		ug/L		109	70 - 130
2,4'-DDE	1.97	2.04		ug/L		104	70 - 130
2,4'-DDT	1.97	1.95		ug/L		99	70 - 130
2,4-Dinitrotoluene	1.97	1.89		ug/L		96	70 - 130
2,6-Dinitrotoluene	1.97	1.83		ug/L		93	70 - 130

Eurofins Eaton Analytical Pomona

# QC Sample Results

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

Job ID: 380-107533-1  
SDG: Weekly

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

**Lab Sample ID: LCS 380-102933/23-A**  
**Matrix: Water**  
**Analysis Batch: 103193**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 102933**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2-Methylnaphthalene	1.97	1.84		ug/L		94	70 - 130
4,4'-DDD	1.97	1.98		ug/L		101	70 - 130
4,4'-DDE	1.97	2.08		ug/L		105	70 - 130
4,4'-DDT	1.97	2.00		ug/L		101	70 - 130
Acenaphthene	1.97	1.86		ug/L		94	70 - 130
Acenaphthylene	1.97	1.98		ug/L		100	70 - 130
Acetochlor	1.97	2.17		ug/L		110	70 - 130
Alachlor	1.97	2.24		ug/L		114	70 - 130
alpha-BHC	1.97	2.06		ug/L		104	70 - 130
alpha-Chlordane	1.97	2.02		ug/L		102	70 - 130
Anthracene	1.97	1.80		ug/L		92	70 - 130
Atrazine	1.97	2.07		ug/L		105	70 - 130
Benz(a)anthracene	1.97	2.11		ug/L		107	70 - 130
Benzo[a]pyrene	1.97	2.05		ug/L		104	70 - 130
Benzo[b]fluoranthene	1.97	2.18		ug/L		111	70 - 130
Benzo[g,h,i]perylene	1.97	1.97		ug/L		100	70 - 130
Benzo[k]fluoranthene	1.97	2.17		ug/L		110	70 - 130
beta-BHC	1.97	2.16		ug/L		110	70 - 130
Bis(2-ethylhexyl) phthalate	1.97	1.87		ug/L		95	70 - 130
Bromacil	1.97	2.07		ug/L		105	70 - 130
Butachlor	1.97	2.11		ug/L		107	70 - 130
Butylbenzylphthalate	1.97	2.14		ug/L		108	70 - 130
Chlorobenzilate	1.97	2.02		ug/L		103	70 - 130
Chloroneb	1.97	2.12		ug/L		108	70 - 130
Chlorothalonil (Draconil, Bravo)	1.97	2.14		ug/L		109	70 - 130
Chlorpyrifos	1.97	2.03		ug/L		103	70 - 130
Chrysene	1.97	2.06		ug/L		104	70 - 130
delta-BHC	1.97	2.03		ug/L		103	70 - 130
Di(2-ethylhexyl)adipate	1.97	2.01		ug/L		102	70 - 130
Dibenz(a,h)anthracene	1.97	1.99		ug/L		101	70 - 130
Diclorvos (DDVP)	1.97	1.91		ug/L		97	70 - 130
Dieldrin	1.97	2.03		ug/L		103	70 - 130
Diethylphthalate	1.97	2.09		ug/L		106	70 - 130
Dimethylphthalate	1.97	1.94		ug/L		98	70 - 130
Di-n-butyl phthalate	3.94	4.13		ug/L		105	70 - 130
Di-n-octyl phthalate	1.97	1.82		ug/L		92	70 - 130
Endosulfan I (Alpha)	1.97	2.06		ug/L		105	70 - 130
Endosulfan II (Beta)	1.97	2.16		ug/L		110	70 - 130
Endosulfan sulfate	1.97	2.01		ug/L		102	70 - 130
Endrin	1.97	2.05		ug/L		104	70 - 130
Endrin aldehyde	1.97	2.04		ug/L		104	60 - 130
EPTC	1.97	2.03		ug/L		103	70 - 130
Fluoranthene	1.97	2.22		ug/L		112	70 - 130
Fluorene	1.97	1.99		ug/L		101	70 - 130
gamma-Chlordane	1.97	2.03		ug/L		103	70 - 130
Heptachlor	1.97	2.08		ug/L		106	70 - 130
Heptachlor epoxide (isomer B)	1.97	2.19		ug/L		111	70 - 130
Hexachlorobenzene	1.97	1.85		ug/L		94	70 - 130
Hexachlorocyclopentadiene	1.97	1.90		ug/L		96	70 - 130

Eurofins Eaton Analytical Pomona

# QC Sample Results

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

Job ID: 380-107533-1  
SDG: Weekly

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

**Lab Sample ID: LCS 380-102933/23-A**  
**Matrix: Water**  
**Analysis Batch: 103193**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 102933**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Indeno[1,2,3-cd]pyrene	1.97	2.06		ug/L		104	70 - 130
Isophorone	1.97	1.96		ug/L		99	70 - 130
Lindane	1.97	2.01		ug/L		102	70 - 130
Malathion	1.97	2.06		ug/L		105	70 - 130
Methoxychlor	1.97	2.06		ug/L		104	70 - 130
Metolachlor	1.97	2.25		ug/L		114	70 - 130
Molinate	1.97	2.08		ug/L		106	70 - 130
Naphthalene	1.97	1.81		ug/L		92	70 - 130
Parathion	1.97	2.13		ug/L		108	70 - 130
Pendimethalin (Penoxaline)	1.97	1.94		ug/L		99	70 - 130
Phenanthrene	1.97	1.92		ug/L		97	70 - 130
Propachlor	1.97	2.15		ug/L		109	70 - 130
Pyrene	1.97	2.01		ug/L		102	70 - 130
Simazine	1.97	2.15		ug/L		109	70 - 130
Terbacil	1.97	2.15		ug/L		109	70 - 130
Terbutylazine	1.97	2.08		ug/L		106	70 - 130
Thiobencarb	1.97	2.27		ug/L		115	70 - 130
trans-Nonachlor	1.97	2.02		ug/L		102	70 - 130
Trifluralin	1.97	1.95		ug/L		99	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Nitro-m-xylene	97		70 - 130
Perylene-d12	101		70 - 130
Triphenylphosphate	110		70 - 130

**Lab Sample ID: MRL 380-102933/22-A**  
**Matrix: Water**  
**Analysis Batch: 103193**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 102933**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	0.0983	0.109		ug/L		111	50 - 150
2,4'-DDD	0.0983	0.104		ug/L		106	50 - 150
2,4'-DDE	0.0983	0.113		ug/L		115	50 - 150
2,4'-DDT	0.0983	0.128		ug/L		131	50 - 150
2,4-Dinitrotoluene	0.0983	0.123		ug/L		125	50 - 150
2,6-Dinitrotoluene	0.0983	0.121		ug/L		123	50 - 150
2-Methylnaphthalene	0.0983	0.0983		ug/L		100	50 - 150
4,4'-DDD	0.0983	0.133		ug/L		135	50 - 150
4,4'-DDE	0.0983	0.109		ug/L		110	50 - 150
4,4'-DDT	0.0983	0.132		ug/L		135	50 - 150
Acenaphthene	0.0983	0.0983		ug/L		100	50 - 150
Acenaphthylene	0.0983	0.0906	J	ug/L		92	50 - 150
Acetochlor	0.0983	0.135		ug/L		137	50 - 150
Alachlor	0.0491	0.0579		ug/L		118	50 - 150
alpha-BHC	0.0983	0.114		ug/L		116	50 - 150
alpha-Chlordane	0.0246	0.0300	J	ug/L		122	50 - 150
Anthracene	0.0197	0.0205		ug/L		104	50 - 150
Atrazine	0.0491	0.0695		ug/L		142	50 - 150

# QC Sample Results

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

Job ID: 380-107533-1  
SDG: Weekly

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

**Lab Sample ID: MRL 380-102933/22-A**  
**Matrix: Water**  
**Analysis Batch: 103193**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 102933**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Benz(a)anthracene	0.0491	0.0627		ug/L		128	50 - 150
Benzo[a]pyrene	0.0197	0.0269		ug/L		137	50 - 150
Benzo[b]fluoranthene	0.0197	0.0212		ug/L		108	50 - 150
Benzo[g,h,i]perylene	0.0491	0.0531		ug/L		108	50 - 150
Benzo[k]fluoranthene	0.0197	0.0242		ug/L		123	50 - 150
beta-BHC	0.0983	0.124		ug/L		126	50 - 150
Bis(2-ethylhexyl) phthalate	0.590	0.647		ug/L		110	50 - 150
Bromacil	0.0983	0.134		ug/L		136	50 - 150
Butachlor	0.0491	0.0811	^3+	ug/L		165	50 - 150
Butylbenzylphthalate	0.491	0.599		ug/L		122	50 - 150
Chlorobenzilate	0.0983	0.123		ug/L		125	50 - 150
Chloroneb	0.0983	0.0856	J	ug/L		87	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0983	0.120		ug/L		122	50 - 150
Chlorpyrifos	0.0491	0.0712		ug/L		145	50 - 150
Chrysene	0.0197	0.0242		ug/L		123	50 - 150
delta-BHC	0.0983	0.117		ug/L		119	50 - 150
Di(2-ethylhexyl)adipate	0.590	0.714		ug/L		121	50 - 150
Dibenz(a,h)anthracene	0.0491	0.0542		ug/L		110	50 - 150
Diclorvos (DDVP)	0.0491	0.0415	J	ug/L		84	50 - 150
Dieldrin	0.00983	0.0156	^3+	ug/L		158	50 - 150
Diethylphthalate	0.491	0.570		ug/L		116	50 - 150
Dimethylphthalate	0.491	0.494		ug/L		100	50 - 150
Di-n-butyl phthalate	0.491	0.636	J	ug/L		129	49 - 243
Di-n-octyl phthalate	0.0983	0.124		ug/L		126	50 - 150
Endosulfan I (Alpha)	0.0983	0.113		ug/L		115	50 - 150
Endosulfan II (Beta)	0.0983	0.118		ug/L		120	50 - 150
Endosulfan sulfate	0.0983	0.129		ug/L		131	50 - 150
Endrin	0.00983	0.0120		ug/L		122	50 - 150
Endrin aldehyde	0.0983	0.130		ug/L		132	50 - 150
EPTC	0.0983	0.0968	J	ug/L		99	50 - 150
Fluoranthene	0.0983	0.114		ug/L		116	50 - 150
Fluorene	0.0491	0.0506		ug/L		103	50 - 150
gamma-Chlordane	0.0246	0.0293	J	ug/L		119	50 - 150
Heptachlor	0.00983	0.0133		ug/L		136	50 - 150
Heptachlor epoxide (isomer B)	0.00983	0.0135		ug/L		138	50 - 150
Hexachlorobenzene	0.0491	0.0488	J	ug/L		99	50 - 150
Hexachlorocyclopentadiene	0.0491	0.0502		ug/L		102	50 - 150
Indeno[1,2,3-cd]pyrene	0.0491	0.0483	J	ug/L		98	50 - 150
Isophorone	0.0983	0.121		ug/L		123	50 - 150
Lindane	0.00983	0.0205	^3+	ug/L		209	50 - 150
Malathion	0.0983	0.122		ug/L		124	50 - 150
Methoxychlor	0.0491	0.0803	^3+	ug/L		163	50 - 150
Metolachlor	0.0491	0.0638		ug/L		130	50 - 150
Molinate	0.0983	0.109		ug/L		111	50 - 150
Naphthalene	0.0983	0.101		ug/L		102	50 - 150
Parathion	0.0983	0.107		ug/L		109	50 - 150
Pendimethalin (Penoxaline)	0.0983	0.116		ug/L		118	50 - 150
Phenanthrene	0.0393	0.0453		ug/L		115	50 - 150
Propachlor	0.0491	0.0558		ug/L		113	50 - 150

Eurofins Eaton Analytical Pomona

# QC Sample Results

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

Job ID: 380-107533-1  
SDG: Weekly

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

**Lab Sample ID: MRL 380-102933/22-A**  
**Matrix: Water**  
**Analysis Batch: 103193**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 102933**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Pyrene	0.0491	0.0689		ug/L		140	50 - 150
Simazine	0.0491	0.0713		ug/L		145	50 - 150
Terbacil	0.0983	0.131		ug/L		134	50 - 150
Terbutylazine	0.0983	0.124		ug/L		127	50 - 150
Thiobencarb	0.0983	0.127		ug/L		129	50 - 150
trans-Nonachlor	0.0246	0.0315	J	ug/L		128	50 - 150
Trifluralin	0.0983	0.118		ug/L		120	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
2-Nitro-m-xylene	96		70 - 130
Perylene-d12	98		70 - 130
Triphenylphosphate	106		70 - 130

**Lab Sample ID: MRL 380-102933/22-A**  
**Matrix: Water**  
**Analysis Batch: 103278**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 102933**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	0.0983	0.125		ug/L		127	50 - 150
2,4'-DDD	0.0983	0.108		ug/L		110	50 - 150
2,4'-DDE	0.0983	0.117		ug/L		119	50 - 150
2,4'-DDT	0.0983	0.119		ug/L		121	50 - 150
2,4-Dinitrotoluene	0.0983	0.0970	J	ug/L		99	50 - 150
2,6-Dinitrotoluene	0.0983	0.100		ug/L		102	50 - 150
2-Methylnaphthalene	0.0983	0.125		ug/L		128	50 - 150
4,4'-DDD	0.0983	0.129		ug/L		131	50 - 150
4,4'-DDE	0.0983	0.0945	J	ug/L		96	50 - 150
4,4'-DDT	0.0983	0.126		ug/L		128	50 - 150
Acenaphthene	0.0983	0.104		ug/L		106	50 - 150
Acenaphthylene	0.0983	0.0977	J	ug/L		99	50 - 150
Acetochlor	0.0983	0.137		ug/L		139	50 - 150
Alachlor	0.0491	0.0627		ug/L		128	50 - 150
alpha-BHC	0.0983	0.116		ug/L		118	50 - 150
alpha-Chlordane	0.0246	0.0335	J	ug/L		136	50 - 150
Anthracene	0.0197	<0.019		ug/L		93	50 - 150
Atrazine	0.0491	0.0573		ug/L		117	50 - 150
Benz(a)anthracene	0.0491	0.0664		ug/L		135	50 - 150
Benzo[a]pyrene	0.0197	0.0197	J	ug/L		100	50 - 150
Benzo[b]fluoranthene	0.0197	0.0244		ug/L		124	50 - 150
Benzo[g,h,i]perylene	0.0491	0.0512		ug/L		104	50 - 150
Benzo[k]fluoranthene	0.0197	0.0210		ug/L		107	50 - 150
beta-BHC	0.0983	0.118		ug/L		120	50 - 150
Bis(2-ethylhexyl) phthalate	0.590	0.745		ug/L		126	50 - 150
Bromacil	0.0983	0.132		ug/L		134	50 - 150
Butachlor	0.0491	0.0687		ug/L		140	50 - 150
Butylbenzylphthalate	0.491	0.643		ug/L		131	50 - 150
Chlorobenzilate	0.0983	0.103		ug/L		104	50 - 150
Chloroneb	0.0983	0.107		ug/L		109	50 - 150

Eurofins Eaton Analytical Pomona

# QC Sample Results

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

Job ID: 380-107533-1  
SDG: Weekly

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

**Lab Sample ID: MRL 380-102933/22-A**  
**Matrix: Water**  
**Analysis Batch: 103278**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 102933**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Chlorothalonil (Draconil, Bravo)	0.0983	0.0972	J	ug/L		99	50 - 150
Chlorpyrifos	0.0491	0.0571		ug/L		116	50 - 150
Chrysene	0.0197	0.0250		ug/L		127	50 - 150
delta-BHC	0.0983	0.119		ug/L		121	50 - 150
Di(2-ethylhexyl)adipate	0.590	0.814		ug/L		138	50 - 150
Dibenz(a,h)anthracene	0.0491	0.0503		ug/L		102	50 - 150
Diclorvos (DDVP)	0.0491	0.0662		ug/L		135	50 - 150
Dieldrin	0.00983	0.0112		ug/L		114	50 - 150
Diethylphthalate	0.491	0.612		ug/L		125	50 - 150
Dimethylphthalate	0.491	0.549		ug/L		112	50 - 150
Di-n-butyl phthalate	0.491	0.638	J	ug/L		130	49 - 243
Di-n-octyl phthalate	0.0983	0.126		ug/L		128	50 - 150
Endosulfan I (Alpha)	0.0983	0.110		ug/L		112	50 - 150
Endosulfan II (Beta)	0.0983	0.138		ug/L		141	50 - 150
Endosulfan sulfate	0.0983	0.118		ug/L		120	50 - 150
Endrin	0.00983	0.0126		ug/L		128	50 - 150
Endrin aldehyde	0.0983	0.130		ug/L		133	50 - 150
EPTC	0.0983	0.0979	J	ug/L		100	50 - 150
Fluoranthene	0.0983	0.115		ug/L		117	50 - 150
Fluorene	0.0491	0.0526		ug/L		107	50 - 150
gamma-Chlordane	0.0246	0.0310	J	ug/L		126	50 - 150
Heptachlor	0.00983	0.0188	^3+	ug/L		191	50 - 150
Hexachlorobenzene	0.0491	0.0418	J	ug/L		85	50 - 150
Hexachlorocyclopentadiene	0.0491	0.0516		ug/L		105	50 - 150
Indeno[1,2,3-cd]pyrene	0.0491	0.0523		ug/L		106	50 - 150
Isophorone	0.0983	0.132		ug/L		135	50 - 150
Lindane	0.00983	0.0122		ug/L		124	50 - 150
Malathion	0.0983	0.107		ug/L		109	50 - 150
Methoxychlor	0.0491	0.0663		ug/L		135	50 - 150
Metolachlor	0.0491	0.0693		ug/L		141	50 - 150
Molinate	0.0983	0.109		ug/L		111	50 - 150
Naphthalene	0.0983	0.112		ug/L		114	50 - 150
Parathion	0.0983	0.119		ug/L		122	50 - 150
Pendimethalin (Penoxaline)	0.0983	0.114		ug/L		116	50 - 150
Phenanthrene	0.0393	0.0430		ug/L		109	50 - 150
Propachlor	0.0491	0.0569		ug/L		116	50 - 150
Pyrene	0.0491	0.0578		ug/L		118	50 - 150
Simazine	0.0491	0.0565		ug/L		115	50 - 150
Terbacil	0.0983	0.129		ug/L		131	50 - 150
Terbutylazine	0.0983	0.114		ug/L		116	50 - 150
Thiobencarb	0.0983	0.134		ug/L		136	50 - 150
trans-Nonachlor	0.0246	0.0321	J	ug/L		131	50 - 150
Trifluralin	0.0983	0.107		ug/L		108	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	MRL Limits
2-Nitro-m-xylene	102		70 - 130
Perylene-d12	101		70 - 130
Triphenylphosphate	112		70 - 130

# QC Sample Results

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

Job ID: 380-107533-1  
SDG: Weekly

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

**Lab Sample ID: 380-107351-O-2-A MS**  
**Matrix: Water**  
**Analysis Batch: 103193**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 102933**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
1-Methylnaphthalene	<0.098		1.95	1.89		ug/L		97	70 - 130
2,4'-DDD	<0.098		1.95	2.22		ug/L		114	70 - 130
2,4'-DDE	<0.098		1.95	2.11		ug/L		108	70 - 130
2,4'-DDT	<0.098		1.95	2.08		ug/L		106	70 - 130
2,4-Dinitrotoluene	<0.098		1.95	1.82		ug/L		93	70 - 130
2,6-Dinitrotoluene	<0.098		1.95	1.79		ug/L		92	70 - 130
2-Methylnaphthalene	<0.098		1.95	1.88		ug/L		96	70 - 130
4,4'-DDD	<0.098		1.95	2.05		ug/L		105	70 - 130
4,4'-DDE	<0.098		1.95	2.17		ug/L		111	70 - 130
4,4'-DDT	<0.098		1.95	2.09		ug/L		107	70 - 130
Acenaphthene	<0.098		1.95	1.90		ug/L		97	70 - 130
Acenaphthylene	<0.098		1.95	1.95		ug/L		100	70 - 130
Acetochlor	<0.098		1.95	2.21		ug/L		113	70 - 130
Alachlor	<0.049		1.95	2.29		ug/L		117	70 - 130
alpha-BHC	<0.098		1.95	2.09		ug/L		107	70 - 130
alpha-Chlordane	<0.049		1.95	2.09		ug/L		107	70 - 130
Anthracene	<0.020		1.95	1.44		ug/L		74	70 - 130
Atrazine	<0.049		1.95	2.12		ug/L		108	70 - 130
Benz(a)anthracene	<0.049		1.95	2.10		ug/L		107	70 - 130
Benzo[a]pyrene	<0.020		1.95	1.93		ug/L		99	70 - 130
Benzo[b]fluoranthene	<0.020		1.95	2.20		ug/L		113	70 - 130
Benzo[g,h,i]perylene	<0.049		1.95	2.07		ug/L		106	70 - 130
Benzo[k]fluoranthene	<0.020		1.95	2.17		ug/L		111	70 - 130
beta-BHC	<0.098		1.95	2.19		ug/L		112	70 - 130
Bis(2-ethylhexyl) phthalate	<0.59		1.95	2.16		ug/L		111	70 - 130
Bromacil	<0.098		1.95	2.01		ug/L		103	70 - 130
Butachlor	<0.049	^3+	1.95	2.17		ug/L		111	70 - 130
Butylbenzylphthalate	<0.49		1.95	2.18		ug/L		112	70 - 130
Chlorobenzilate	<0.098		1.95	2.09		ug/L		107	70 - 130
Chloroneb	<0.098		1.95	2.07		ug/L		106	70 - 130
Chlorothalonil (Draconil, Bravo)	<0.098		1.95	2.12		ug/L		108	70 - 130
Chlorpyrifos	<0.049		1.95	2.09		ug/L		107	70 - 130
Chrysene	<0.020		1.95	2.14		ug/L		110	70 - 130
delta-BHC	<0.098		1.95	2.05		ug/L		105	70 - 130
Di(2-ethylhexyl)adipate	<0.59		1.95	2.27		ug/L		116	70 - 130
Dibenz(a,h)anthracene	<0.049		1.95	1.99		ug/L		102	70 - 130
Diclorvos (DDVP)	<0.049		1.95	1.81		ug/L		92	70 - 130
Dieldrin	<0.0098	^3+	1.95	2.09		ug/L		107	70 - 130
Diethylphthalate	<0.49		1.95	2.24		ug/L		110	70 - 130
Dimethylphthalate	<0.49		1.95	1.94		ug/L		99	70 - 130
Di-n-butyl phthalate	<0.98		3.91	4.23		ug/L		108	70 - 130
Di-n-octyl phthalate	<0.098		1.95	2.14		ug/L		110	70 - 130
Endosulfan I (Alpha)	<0.098		1.95	2.13		ug/L		109	70 - 130
Endosulfan II (Beta)	<0.098		1.95	2.16		ug/L		111	70 - 130
Endosulfan sulfate	<0.098		1.95	2.08		ug/L		106	70 - 130
Endrin	<0.0098		1.95	2.03		ug/L		104	70 - 130
Endrin aldehyde	<0.098		1.95	2.07		ug/L		106	60 - 130
EPTC	<0.098		1.95	2.02		ug/L		103	70 - 130

# QC Sample Results

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

Job ID: 380-107533-1  
SDG: Weekly

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

**Lab Sample ID: 380-107351-O-2-A MS**  
**Matrix: Water**  
**Analysis Batch: 103193**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 102933**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec
	Result	Qualifier	Added	Result	Qualifier				
Fluoranthene	<0.098		1.95	2.25		ug/L		115	70 - 130
Fluorene	<0.049		1.95	2.01		ug/L		103	70 - 130
gamma-Chlordane	<0.049		1.95	2.09		ug/L		107	70 - 130
Heptachlor	<0.0098		1.95	2.15		ug/L		110	70 - 130
Heptachlor epoxide (isomer B)	<0.0098		1.95	2.22		ug/L		114	70 - 130
Hexachlorobenzene	<0.049		1.95	1.92		ug/L		98	70 - 130
Hexachlorocyclopentadiene	<0.049		1.95	1.98		ug/L		101	70 - 130
Indeno[1,2,3-cd]pyrene	<0.049		1.95	2.08		ug/L		107	70 - 130
Isophorone	<0.098		1.95	1.96		ug/L		100	70 - 130
Lindane	<0.0098	^3+	1.95	2.03		ug/L		104	70 - 130
Malathion	<0.098		1.95	2.12		ug/L		108	70 - 130
Methoxychlor	<0.049	^3+	1.95	2.14		ug/L		110	70 - 130
Metolachlor	<0.049		1.95	2.28		ug/L		117	70 - 130
Molinate	<0.098		1.95	2.05		ug/L		105	70 - 130
Naphthalene	<0.098		1.95	1.84		ug/L		94	70 - 130
Parathion	<0.098		1.95	2.16		ug/L		111	70 - 130
Pendimethalin (Penoxaline)	<0.098		1.95	2.03		ug/L		104	70 - 130
Phenanthrene	<0.039		1.95	1.92		ug/L		98	70 - 130
Propachlor	<0.049		1.95	2.13		ug/L		109	70 - 130
Pyrene	<0.049		1.95	2.04		ug/L		105	70 - 130
Simazine	<0.049		1.95	2.08		ug/L		107	70 - 130
Terbacil	<0.098		1.95	2.11		ug/L		108	70 - 130
Terbutylazine	<0.098		1.95	2.17		ug/L		111	70 - 130
Thiobencarb	<0.098		1.95	2.32		ug/L		119	70 - 130
trans-Nonachlor	<0.049		1.95	2.05		ug/L		105	70 - 130
Trifluralin	<0.098		1.95	2.04		ug/L		104	70 - 130

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	95		70 - 130
Perylene-d12	100		70 - 130
Triphenylphosphate	108		70 - 130

**Lab Sample ID: 380-107568-D-1-A DU**  
**Matrix: Water**  
**Analysis Batch: 103193**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 102933**

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
1-Methylnaphthalene	<0.099		<0.10		ug/L		NC	20
2,4'-DDD	<0.099		<0.10		ug/L		NC	20
2,4'-DDE	<0.099		<0.10		ug/L		NC	20
2,4'-DDT	<0.099		<0.10		ug/L		NC	20
2,4-Dinitrotoluene	<0.099		<0.10		ug/L		NC	20
2,6-Dinitrotoluene	<0.099		<0.10		ug/L		NC	20
2-Methylnaphthalene	<0.099		<0.10		ug/L		NC	20
4,4'-DDD	<0.099		<0.10		ug/L		NC	20
4,4'-DDE	<0.099		<0.10		ug/L		NC	20
4,4'-DDT	<0.099		<0.10		ug/L		NC	20
Acenaphthene	<0.099		<0.10		ug/L		NC	20

Eurofins Eaton Analytical Pomona



# QC Sample Results

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

Job ID: 380-107533-1  
SDG: Weekly

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

**Lab Sample ID: 380-107568-D-1-A DU**  
**Matrix: Water**  
**Analysis Batch: 103193**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 102933**

Analyte	Sample	Sample Qualifier	DU	DU	Unit	D	RPD	Limit
	Result		Result	Qualifier				
Acenaphthylene	<0.099		<0.10		ug/L		NC	20
Acetochlor	<0.099		<0.10		ug/L		NC	20
Alachlor	<0.049		<0.050		ug/L		NC	20
alpha-BHC	<0.099		<0.10		ug/L		NC	20
alpha-Chlordane	<0.049		<0.050		ug/L		NC	20
Anthracene	<0.020		<0.020		ug/L		NC	20
Atrazine	<0.049		<0.050		ug/L		NC	20
Benz(a)anthracene	<0.049		<0.050		ug/L		NC	20
Benzo[a]pyrene	<0.020		<0.020		ug/L		NC	20
Benzo[b]fluoranthene	<0.020		<0.020		ug/L		NC	20
Benzo[g,h,i]perylene	<0.049		<0.050		ug/L		NC	20
Benzo[k]fluoranthene	<0.020		<0.020		ug/L		NC	20
beta-BHC	<0.099		<0.10		ug/L		NC	20
Bis(2-ethylhexyl) phthalate	<0.59		<0.60		ug/L		NC	20
Bromacil	<0.099		<0.10		ug/L		NC	20
Butachlor	<0.049	^3+	<0.050		ug/L		NC	20
Butylbenzylphthalate	<0.49		<0.50		ug/L		NC	20
Chlorobenzilate	<0.099		<0.10		ug/L		NC	20
Chloroneb	<0.099		<0.10		ug/L		NC	20
Chlorothalonil (Draconil, Bravo)	<0.099		<0.10		ug/L		NC	20
Chlorpyrifos	<0.049		<0.050		ug/L		NC	20
Chrysene	<0.020		<0.020		ug/L		NC	20
delta-BHC	<0.099		<0.10		ug/L		NC	20
Di(2-ethylhexyl)adipate	<0.59		<0.60		ug/L		NC	20
Dibenz(a,h)anthracene	<0.049		<0.050		ug/L		NC	20
Diclorvos (DDVP)	<0.049		<0.050		ug/L		NC	20
Dieldrin	<0.0099	^3+	<0.010		ug/L		NC	20
Diethylphthalate	<0.49		<0.50		ug/L		NC	20
Dimethylphthalate	<0.49		<0.50		ug/L		NC	20
Di-n-butyl phthalate	<0.99		<1.0		ug/L		NC	20
Di-n-octyl phthalate	<0.099		<0.10		ug/L		NC	20
Endosulfan I (Alpha)	<0.099		<0.10		ug/L		NC	20
Endosulfan II (Beta)	<0.099		<0.10		ug/L		NC	20
Endosulfan sulfate	<0.099		<0.10		ug/L		NC	20
Endrin	<0.0099		<0.010		ug/L		NC	20
Endrin aldehyde	<0.099		<0.10		ug/L		NC	20
EPTC	<0.099		<0.10		ug/L		NC	20
Fluoranthene	<0.099		<0.10		ug/L		NC	20
Fluorene	<0.049		<0.050		ug/L		NC	20
gamma-Chlordane	<0.049		<0.050		ug/L		NC	20
Heptachlor	<0.0099		<0.010		ug/L		NC	20
Heptachlor epoxide (isomer B)	<0.0099		<0.010		ug/L		NC	20
Hexachlorobenzene	<0.049		<0.050		ug/L		NC	20
Hexachlorocyclopentadiene	<0.049		<0.050		ug/L		NC	20
Indeno[1,2,3-cd]pyrene	<0.049		<0.050		ug/L		NC	20
Isophorone	<0.099		<0.10		ug/L		NC	20
Lindane	<0.0099	^3+	<0.010		ug/L		NC	20
Malathion	<0.099		<0.10		ug/L		NC	20
Methoxychlor	<0.049	^3+	<0.050		ug/L		NC	20

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# QC Sample Results

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

Job ID: 380-107533-1  
SDG: Weekly

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

**Lab Sample ID: 380-107568-D-1-A DU**  
**Matrix: Water**  
**Analysis Batch: 103193**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 102933**

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Metolachlor	<0.049		<0.050		ug/L		NC	20
Molinate	<0.099		<0.10		ug/L		NC	20
Naphthalene	<0.099		<0.10		ug/L		NC	20
Parathion	<0.099		<0.10		ug/L		NC	20
Pendimethalin (Penoxaline)	<0.099		<0.10		ug/L		NC	20
Phenanthrene	<0.040		<0.040		ug/L		NC	20
Propachlor	<0.049		<0.050		ug/L		NC	20
Pyrene	<0.049		<0.050		ug/L		NC	20
Simazine	<0.049		<0.050		ug/L		NC	20
Terbacil	<0.099		<0.10		ug/L		NC	20
Terbutylazine	<0.099		<0.10		ug/L		NC	20
Thiobencarb	<0.099		<0.10		ug/L		NC	20
Total Permethrin (mixed isomers)	<0.20		<0.20		ug/L		NC	20
trans-Nonachlor	<0.049		<0.050		ug/L		NC	20
Trifluralin	<0.099		<0.10		ug/L		NC	20

Surrogate	DU	DU	Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	96		70 - 130
Perylene-d12	97		70 - 130
Triphenylphosphate	103		70 - 130

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

**Lab Sample ID: MB 570-469775/1-A**  
**Matrix: Water**  
**Analysis Batch: 472479**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 469775**

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	08/12/24 08:05	08/20/24 12:21	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2,4,6-Tribromophenol (Surr)	80		33 - 139	08/12/24 08:05	08/20/24 12:21	1
2-Fluorobiphenyl (Surr)	66		33 - 126	08/12/24 08:05	08/20/24 12:21	1
2-Fluorophenol (Surr)	43		12 - 120	08/12/24 08:05	08/20/24 12:21	1
Nitrobenzene-d5 (Surr)	63		36 - 120	08/12/24 08:05	08/20/24 12:21	1
Phenol-d6 (Surr)	24		10 - 120	08/12/24 08:05	08/20/24 12:21	1
p-Terphenyl-d14 (Surr)	74		47 - 131	08/12/24 08:05	08/20/24 12:21	1

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

**Lab Sample ID: MB 570-469775/1-A**  
**Matrix: Water**  
**Analysis Batch: 471031**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 469775**

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
1-Methylnaphthalene	<0.20		0.20	ug/L		08/12/24 08:05	08/15/24 15:04	1
2-Methylnaphthalene	<0.20		0.20	ug/L		08/12/24 08:05	08/15/24 15:04	1
Acenaphthene	<0.20		0.20	ug/L		08/12/24 08:05	08/15/24 15:04	1

Eurofins Eaton Analytical Pomona

# QC Sample Results

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

Job ID: 380-107533-1  
SDG: Weekly

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

**Lab Sample ID: MB 570-469775/1-A**  
**Matrix: Water**  
**Analysis Batch: 471031**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 469775**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	<0.20		0.20	ug/L		08/12/24 08:05	08/15/24 15:04	1
Anthracene	<0.20		0.20	ug/L		08/12/24 08:05	08/15/24 15:04	1
Benzo[a]anthracene	<0.20		0.20	ug/L		08/12/24 08:05	08/15/24 15:04	1
Benzo[a]pyrene	<0.20		0.20	ug/L		08/12/24 08:05	08/15/24 15:04	1
Benzo[b]fluoranthene	<0.20		0.20	ug/L		08/12/24 08:05	08/15/24 15:04	1
Benzo[g,h,i]perylene	<0.20		0.20	ug/L		08/12/24 08:05	08/15/24 15:04	1
Benzo[k]fluoranthene	<0.20		0.20	ug/L		08/12/24 08:05	08/15/24 15:04	1
Chrysene	<0.20		0.20	ug/L		08/12/24 08:05	08/15/24 15:04	1
Dibenz(a,h)anthracene	<0.20		0.20	ug/L		08/12/24 08:05	08/15/24 15:04	1
Fluoranthene	<0.20		0.20	ug/L		08/12/24 08:05	08/15/24 15:04	1
Fluorene	<0.20		0.20	ug/L		08/12/24 08:05	08/15/24 15:04	1
Indeno[1,2,3-cd]pyrene	<0.20		0.20	ug/L		08/12/24 08:05	08/15/24 15:04	1
Naphthalene	<0.20		0.20	ug/L		08/12/24 08:05	08/15/24 15:04	1
Phenanthrene	<0.20		0.20	ug/L		08/12/24 08:05	08/15/24 15:04	1
Pyrene	<0.20		0.20	ug/L		08/12/24 08:05	08/15/24 15:04	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	87		28 - 127	08/12/24 08:05	08/15/24 15:04	1
2-Fluorobiphenyl (Surr)	64		31 - 120	08/12/24 08:05	08/15/24 15:04	1
2-Fluorophenol (Surr)	44		17 - 120	08/12/24 08:05	08/15/24 15:04	1
Nitrobenzene-d5 (Surr)	66		27 - 120	08/12/24 08:05	08/15/24 15:04	1
Phenol-d6 (Surr)	30		10 - 120	08/12/24 08:05	08/15/24 15:04	1
p-Terphenyl-d14 (Surr)	83		45 - 120	08/12/24 08:05	08/15/24 15:04	1

**Lab Sample ID: LCS 570-469775/2-A**  
**Matrix: Water**  
**Analysis Batch: 471031**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 469775**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	20.0	13.5		ug/L		68	47 - 120
2-Methylnaphthalene	20.0	13.3		ug/L		67	43 - 120
Acenaphthene	20.0	16.1		ug/L		80	60 - 132
Acenaphthylene	20.0	16.8		ug/L		84	54 - 126
Anthracene	20.0	17.6		ug/L		88	43 - 120
Benzo[a]anthracene	20.0	16.8		ug/L		84	42 - 133
Benzo[a]pyrene	20.0	16.1		ug/L		80	32 - 148
Benzo[b]fluoranthene	20.0	16.4		ug/L		82	42 - 140
Benzo[g,h,i]perylene	20.0	17.3		ug/L		86	1 - 195
Benzo[k]fluoranthene	20.0	17.5		ug/L		88	25 - 146
Chrysene	20.0	17.0		ug/L		85	44 - 140
Dibenz(a,h)anthracene	20.0	17.4		ug/L		87	1 - 200
Fluoranthene	20.0	17.4		ug/L		87	43 - 121
Fluorene	20.0	17.2		ug/L		86	70 - 120
Indeno[1,2,3-cd]pyrene	20.0	16.8		ug/L		84	1 - 151
Naphthalene	20.0	12.9		ug/L		64	36 - 120
Phenanthrene	20.0	16.8		ug/L		84	65 - 120
Pyrene	20.0	18.3		ug/L		92	70 - 120

# QC Sample Results

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

Job ID: 380-107533-1  
SDG: Weekly

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

**Lab Sample ID: LCS 570-469775/2-A**  
**Matrix: Water**  
**Analysis Batch: 471031**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 469775**

Surrogate	LCS		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	84		28 - 127
2-Fluorobiphenyl (Surr)	70		31 - 120
2-Fluorophenol (Surr)	49		17 - 120
Nitrobenzene-d5 (Surr)	58		27 - 120
Phenol-d6 (Surr)	36		10 - 120
p-Terphenyl-d14 (Surr)	82		45 - 120

**Lab Sample ID: LCSD 570-469775/3-A**  
**Matrix: Water**  
**Analysis Batch: 471031**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 469775**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
1-Methylnaphthalene	20.0	12.8		ug/L		64	47 - 120	6	20	
2-Methylnaphthalene	20.0	12.4		ug/L		62	43 - 120	7	20	
Acenaphthene	20.0	15.3		ug/L		77	60 - 132	5	29	
Acenaphthylene	20.0	16.1		ug/L		81	54 - 126	4	45	
Anthracene	20.0	17.6		ug/L		88	43 - 120	0	40	
Benzo[a]anthracene	20.0	16.9		ug/L		84	42 - 133	0	32	
Benzo[a]pyrene	20.0	15.9		ug/L		80	32 - 148	1	43	
Benzo[b]fluoranthene	20.0	16.4		ug/L		82	42 - 140	0	43	
Benzo[g,h,i]perylene	20.0	17.1		ug/L		86	1 - 195	1	61	
Benzo[k]fluoranthene	20.0	17.5		ug/L		88	25 - 146	0	38	
Chrysene	20.0	17.0		ug/L		85	44 - 140	0	53	
Dibenz(a,h)anthracene	20.0	17.1		ug/L		86	1 - 200	2	75	
Fluoranthene	20.0	17.4		ug/L		87	43 - 121	0	40	
Fluorene	20.0	16.6		ug/L		83	70 - 120	4	23	
Indeno[1,2,3-cd]pyrene	20.0	16.6		ug/L		83	1 - 151	1	60	
Naphthalene	20.0	11.6		ug/L		58	36 - 120	10	39	
Phenanthrene	20.0	16.8		ug/L		84	65 - 120	0	24	
Pyrene	20.0	18.6		ug/L		93	70 - 120	1	30	

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	83		28 - 127
2-Fluorobiphenyl (Surr)	65		31 - 120
2-Fluorophenol (Surr)	43		17 - 120
Nitrobenzene-d5 (Surr)	52		27 - 120
Phenol-d6 (Surr)	32		10 - 120
p-Terphenyl-d14 (Surr)	83		45 - 120

**Lab Sample ID: 380-107533-1 MS**  
**Matrix: Water**  
**Analysis Batch: 471031**

**Client Sample ID: MOANALUA WELLS**  
**Prep Type: Total/NA**  
**Prep Batch: 469775**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	%Rec	%Rec	
				Result	Qualifier				Limits	RPD
1-Methylnaphthalene	<0.19		19.5	11.3		ug/L		58	36 - 120	
2-Methylnaphthalene	<0.19		19.5	11.1		ug/L		57	32 - 124	
Acenaphthene	<0.19		19.5	14.2		ug/L		73	47 - 145	
Acenaphthylene	<0.19		19.5	15.0		ug/L		77	33 - 145	

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# QC Sample Results

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

Job ID: 380-107533-1  
SDG: Weekly

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

**Lab Sample ID: 380-107533-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 471031**

**Client Sample ID: MOANALUA WELLS**  
**Prep Type: Total/NA**  
**Prep Batch: 469775**

Surrogate	MSD MSD		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	80		28 - 127
2-Fluorobiphenyl (Surr)	64		31 - 120
2-Fluorophenol (Surr)	37		17 - 120
Nitrobenzene-d5 (Surr)	49		27 - 120
Phenol-d6 (Surr)	26		10 - 120
p-Terphenyl-d14 (Surr)	82		45 - 120

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

**Lab Sample ID: MB 570-472071/6**  
**Matrix: Water**  
**Analysis Batch: 472071**

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	<10		10	ug/L			08/19/24 12:15	1

  

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	80		38 - 134		08/19/24 12:15	1

**Lab Sample ID: LCS 570-472071/3**  
**Matrix: Water**  
**Analysis Batch: 472071**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (C4-C13)	400	323		ug/L		81	78 - 120

  

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	83		38 - 134

**Lab Sample ID: LCSD 570-472071/4**  
**Matrix: Water**  
**Analysis Batch: 472071**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (C4-C13)	400	328		ug/L		82	78 - 120	2	10

  

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	83		38 - 134

**Lab Sample ID: MRL 570-472071/5**  
**Matrix: Water**  
**Analysis Batch: 472071**

**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	8.08	J	ug/L		81	50 - 150

# QC Sample Results

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

Job ID: 380-107533-1  
SDG: Weekly

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

**Lab Sample ID: MRL 570-472071/5**  
**Matrix: Water**  
**Analysis Batch: 472071**

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

<i>Surrogate</i>	<i>%Recovery</i>	<i>MRL MRL Qualifier</i>	<i>Limits</i>
4-Bromofluorobenzene (Surr)	74		38 - 134

**Lab Sample ID: 380-107533-1 MS**  
**Matrix: Water**  
**Analysis Batch: 472071**

**Client Sample ID: MOANALUA WELLS**  
**Prep Type: Total/NA**

<i>Analyte</i>	<i>Sample Result</i>	<i>Sample Qualifier</i>	<i>Spike Added</i>	<i>MS Result</i>	<i>MS Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec Limits</i>
Gasoline Range Organics (C4-C13)	<10		400	327		ug/L		82	68 - 122

  

<i>Surrogate</i>	<i>%Recovery</i>	<i>MS MS Qualifier</i>	<i>Limits</i>
4-Bromofluorobenzene (Surr)	85		38 - 134

**Lab Sample ID: 380-107533-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 472071**

**Client Sample ID: MOANALUA WELLS**  
**Prep Type: Total/NA**

<i>Analyte</i>	<i>Sample Result</i>	<i>Sample Qualifier</i>	<i>Spike Added</i>	<i>MSD Result</i>	<i>MSD Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec Limits</i>	<i>RPD</i>	<i>RPD Limit</i>
Gasoline Range Organics (C4-C13)	<10		400	331		ug/L		83	68 - 122	1	18

  

<i>Surrogate</i>	<i>%Recovery</i>	<i>MSD MSD Qualifier</i>	<i>Limits</i>
4-Bromofluorobenzene (Surr)	85		38 - 134

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

**Lab Sample ID: MB 570-469700/1-A**  
**Matrix: Water**  
**Analysis Batch: 471795**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 469700**

<i>Analyte</i>	<i>MB Result</i>	<i>MB Qualifier</i>	<i>RL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Diesel Range Organics (C10-C24)	<25		25	ug/L		08/11/24 22:13	08/17/24 13:03	1
Motor Oil Range Organics [C24-C36]	<25		25	ug/L		08/11/24 22:13	08/17/24 13:03	1
C8-C18	<25		25	ug/L		08/11/24 22:13	08/17/24 13:03	1

  

<i>Surrogate</i>	<i>%Recovery</i>	<i>MB MB Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
n-Octacosane (Surr)	113		60 - 130	08/11/24 22:13	08/17/24 13:03	1

**Lab Sample ID: LCS 570-469700/2-A**  
**Matrix: Water**  
**Analysis Batch: 471795**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 469700**

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

  

<i>Surrogate</i>	<i>%Recovery</i>	<i>LCS LCS Qualifier</i>	<i>Limits</i>
n-Octacosane (Surr)	118		60 - 130

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# QC Sample Results

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

Job ID: 380-107533-1  
SDG: Weekly

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

**Lab Sample ID: LCSD 570-469700/3-A**  
**Matrix: Water**  
**Analysis Batch: 471795**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 469700**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
C10-C28	1600	1390		ug/L		87	56 - 127	5	23
<b>Surrogate</b>									
	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
<i>n-Octacosane (Surr)</i>	114		60 - 130						

**Lab Sample ID: MRL 570-469700/4-A**  
**Matrix: Water**  
**Analysis Batch: 471795**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 469700**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
C10-C28	0.0200	0.0397	^3+	mg/L		198	50 - 150		
<b>Surrogate</b>									
	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
<i>n-Octacosane (Surr)</i>	99		60 - 130						

**Lab Sample ID: 380-107533-1 MS**  
**Matrix: Water**  
**Analysis Batch: 471795**

**Client Sample ID: MOANALUA WELLS**  
**Prep Type: Total/NA**  
**Prep Batch: 469700**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
C10-C28	<26	^3+	1690	1430		ug/L		85	70 - 130		
<b>Surrogate</b>											
	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>								
<i>n-Octacosane (Surr)</i>	117		60 - 130								

**Lab Sample ID: 380-107533-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 471795**

**Client Sample ID: MOANALUA WELLS**  
**Prep Type: Total/NA**  
**Prep Batch: 469700**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
C10-C28	<26	^3+	1690	1400		ug/L		83	70 - 130	2	20
<b>Surrogate</b>											
	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>								
<i>n-Octacosane (Surr)</i>	102		60 - 130								



# QC Association Summary

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

Job ID: 380-107533-1  
SDG: Weekly

## GC/MS Semi VOA

### Prep Batch: 102933

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-107533-1	MOANALUA WELLS	Total/NA	Water	525.2	
380-107533-3	HALAWA WELLS UNITS 1&2 P1	Total/NA	Water	525.2	
MB 380-102933/21-A	Method Blank	Total/NA	Water	525.2	
LCS 380-102933/23-A	Lab Control Sample	Total/NA	Water	525.2	
MRL 380-102933/22-A	Lab Control Sample	Total/NA	Water	525.2	
380-107351-O-2-A MS	Matrix Spike	Total/NA	Water	525.2	
380-107568-D-1-A DU	Duplicate	Total/NA	Water	525.2	

### Analysis Batch: 103193

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-107533-1	MOANALUA WELLS	Total/NA	Water	525.2	102933
380-107533-3	HALAWA WELLS UNITS 1&2 P1	Total/NA	Water	525.2	102933
MB 380-102933/21-A	Method Blank	Total/NA	Water	525.2	102933
LCS 380-102933/23-A	Lab Control Sample	Total/NA	Water	525.2	102933
MRL 380-102933/22-A	Lab Control Sample	Total/NA	Water	525.2	102933
380-107351-O-2-A MS	Matrix Spike	Total/NA	Water	525.2	102933
380-107568-D-1-A DU	Duplicate	Total/NA	Water	525.2	102933

### Analysis Batch: 103278

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-107533-1	MOANALUA WELLS	Total/NA	Water	525.2	102933
380-107533-3	HALAWA WELLS UNITS 1&2 P1	Total/NA	Water	525.2	102933
MRL 380-102933/22-A	Lab Control Sample	Total/NA	Water	525.2	102933

### Prep Batch: 469775

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-107533-1	MOANALUA WELLS	Total/NA	Water	625.1	
380-107533-3	HALAWA WELLS UNITS 1&2 P1	Total/NA	Water	625.1	
MB 570-469775/1-A	Method Blank	Total/NA	Water	625.1	
LCS 570-469775/2-A	Lab Control Sample	Total/NA	Water	625.1	
LCSD 570-469775/3-A	Lab Control Sample Dup	Total/NA	Water	625.1	
380-107533-1 MS	MOANALUA WELLS	Total/NA	Water	625.1	
380-107533-1 MSD	MOANALUA WELLS	Total/NA	Water	625.1	

### Analysis Batch: 471031

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-107533-1	MOANALUA WELLS	Total/NA	Water	625.1 SIM	469775
380-107533-3	HALAWA WELLS UNITS 1&2 P1	Total/NA	Water	625.1 SIM	469775
MB 570-469775/1-A	Method Blank	Total/NA	Water	625.1 SIM	469775
LCS 570-469775/2-A	Lab Control Sample	Total/NA	Water	625.1 SIM	469775
LCSD 570-469775/3-A	Lab Control Sample Dup	Total/NA	Water	625.1 SIM	469775
380-107533-1 MS	MOANALUA WELLS	Total/NA	Water	625.1 SIM	469775
380-107533-1 MSD	MOANALUA WELLS	Total/NA	Water	625.1 SIM	469775

### Analysis Batch: 472479

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-107533-1	MOANALUA WELLS	Total/NA	Water	625.1	469775
380-107533-3	HALAWA WELLS UNITS 1&2 P1	Total/NA	Water	625.1	469775
MB 570-469775/1-A	Method Blank	Total/NA	Water	625.1	469775

# QC Association Summary

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

Job ID: 380-107533-1  
SDG: Weekly

## GC VOA

### Analysis Batch: 472071

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-107533-1	MOANALUA WELLS	Total/NA	Water	8015B GRO LL	
380-107533-3	HALAWA WELLS UNITS 1&2 P1	Total/NA	Water	8015B GRO LL	
MB 570-472071/6	Method Blank	Total/NA	Water	8015B GRO LL	
LCS 570-472071/3	Lab Control Sample	Total/NA	Water	8015B GRO LL	
LCSD 570-472071/4	Lab Control Sample Dup	Total/NA	Water	8015B GRO LL	
MRL 570-472071/5	Lab Control Sample	Total/NA	Water	8015B GRO LL	
380-107533-1 MS	MOANALUA WELLS	Total/NA	Water	8015B GRO LL	
380-107533-1 MSD	MOANALUA WELLS	Total/NA	Water	8015B GRO LL	

## GC Semi VOA

### Prep Batch: 469700

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-107533-1	MOANALUA WELLS	Total/NA	Water	3510C	
380-107533-3	HALAWA WELLS UNITS 1&2 P1	Total/NA	Water	3510C	
MB 570-469700/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-469700/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-469700/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MRL 570-469700/4-A	Lab Control Sample	Total/NA	Water	3510C	
380-107533-1 MS	MOANALUA WELLS	Total/NA	Water	3510C	
380-107533-1 MSD	MOANALUA WELLS	Total/NA	Water	3510C	

### Analysis Batch: 471795

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-107533-1	MOANALUA WELLS	Total/NA	Water	8015B	469700
380-107533-3	HALAWA WELLS UNITS 1&2 P1	Total/NA	Water	8015B	469700
MB 570-469700/1-A	Method Blank	Total/NA	Water	8015B	469700
LCS 570-469700/2-A	Lab Control Sample	Total/NA	Water	8015B	469700
LCSD 570-469700/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	469700
MRL 570-469700/4-A	Lab Control Sample	Total/NA	Water	8015B	469700
380-107533-1 MS	MOANALUA WELLS	Total/NA	Water	8015B	469700
380-107533-1 MSD	MOANALUA WELLS	Total/NA	Water	8015B	469700

# Lab Chronicle

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

Job ID: 380-107533-1  
SDG: Weekly

## Client Sample ID: MOANALUA WELLS

## Lab Sample ID: 380-107533-1

Date Collected: 08/05/24 09:48

Matrix: Water

Date Received: 08/07/24 10:32

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			102933	IQ42	EA POM	08/08/24 17:15
Total/NA	Analysis	525.2		1	103193	Q8LA	EA POM	08/10/24 14:55
Total/NA	Prep	525.2			102933	IQ42	EA POM	08/08/24 17:15
Total/NA	Analysis	525.2		1	103278	Q8LA	EA POM	08/12/24 10:38
Total/NA	Prep	625.1			469775	OAJ3	EET CAL 4	08/12/24 08:05
Total/NA	Analysis	625.1		1	472479	CG	EET CAL 4	08/20/24 13:08
Total/NA	Prep	625.1			469775	OAJ3	EET CAL 4	08/12/24 08:05
Total/NA	Analysis	625.1 SIM		1	471031	PQS1	EET CAL 4	08/15/24 18:03
Total/NA	Analysis	8015B GRO LL		1	472071	GC3Z	EET CAL 4	08/19/24 17:17
Total/NA	Prep	3510C			469700	H6FE	EET CAL 4	08/11/24 22:13
Total/NA	Analysis	8015B		1	471795	SP9M	EET CAL 4	08/17/24 14:49

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

## Lab Sample ID: 380-107533-3

Date Collected: 08/05/24 10:22

Matrix: Water

Date Received: 08/07/24 10:32

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			102933	IQ42	EA POM	08/08/24 17:15
Total/NA	Analysis	525.2		1	103193	Q8LA	EA POM	08/10/24 15:16
Total/NA	Prep	525.2			102933	IQ42	EA POM	08/08/24 17:15
Total/NA	Analysis	525.2		1	103278	Q8LA	EA POM	08/12/24 10:58
Total/NA	Prep	625.1			469775	OAJ3	EET CAL 4	08/12/24 08:05
Total/NA	Analysis	625.1		1	472479	CG	EET CAL 4	08/20/24 12:45
Total/NA	Prep	625.1			469775	OAJ3	EET CAL 4	08/12/24 08:05
Total/NA	Analysis	625.1 SIM		1	471031	PQS1	EET CAL 4	08/15/24 18:25
Total/NA	Analysis	8015B GRO LL		1	472071	GC3Z	EET CAL 4	08/19/24 18:27
Total/NA	Prep	3510C			469700	H6FE	EET CAL 4	08/11/24 22:13
Total/NA	Analysis	8015B		1	471795	SP9M	EET CAL 4	08/17/24 15:52

**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: 380-107533-1  
 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

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

Analysis Method	Prep Method	Matrix	Analyte
525.2	525.2	Water	1-Methylnaphthalene
525.2	525.2	Water	2,4'-DDD
525.2	525.2	Water	2,4'-DDE
525.2	525.2	Water	2,4'-DDT
525.2	525.2	Water	2,4-Dinitrotoluene
525.2	525.2	Water	2,6-Dinitrotoluene
525.2	525.2	Water	2-Methylnaphthalene
525.2	525.2	Water	4,4'-DDD
525.2	525.2	Water	4,4'-DDE
525.2	525.2	Water	4,4' DDT
525.2	525.2	Water	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	State	3082	08-20-24
Kansas	NELAP	E-10420	07-31-25
Nevada	State	CA00111	10-31-24

\* 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: 380-107533-1  
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
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: 380-107533-1  
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: 380-107533-1  
SDG: Weekly

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<u>Lab Sample ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Collected</u>	<u>Received</u>
380-107533-1	MOANALUA WELLS	Water	08/05/24 09:48	08/07/24 10:32
380-107533-3	HALAWA WELLS UNITS 1&2 P1	Water	08/05/24 10:22	08/07/24 10:32

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<b>Client Information</b>		Lab PM	Carrier Tracking No(s)	COC No:
Client Contact: Dr. Ron Fenstemacher		Arada Rachelle		380-28005-2757 1
Company: City & County of Honolulu		E-Mail: Rachelle.Arada@et.euofins.com	State of Origin:	Page: Page 1 of 1
Address: 630 South Beretania Street Chemistry Lab Honolulu State, Zip: HI 96843		PWSID:		Job #:
Phone: 808-748-5091(Tel)		Due Date Requested	Analysis Requested	
PO #: C20525101 exp 05312023		TAT Requested (days):	R - NaThioSO4 RA - NaThioHCl Q - Na2SO3 OA Na2SO3/HCl Y - Trizma I - NH4 Acetate	
MO #:		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No	Other: 380-107533 COC	
Project #: 38001111			Special Instructions/Note:	
SSOW#:			Total Number of containers	
Address: RED-HILL/HBWS Sites Event Desc: RUSH Weekly Red Hill Site: Hawaii			Preservation Codes: R - NaThioSO4 RA - NaThioHCl Q - Na2SO3 OA Na2SO3/HCl Y - Trizma I - NH4 Acetate	
Sample Identification		Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	625.1, 625.1, SIM
Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Preservation Code	Matrix (W=water, S=solid, O=wasteboll, BT=tissue, ASH)
5-Aug-2024	0948	G		Water
5-Aug-2024	0948	G		Water
5-Aug-2024	1022	G		Water
5-Aug-2024	1022	G		Water
Possible Hazard Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		
Deliverable Requested I, II, III, IV, Other (specify)		Special Instructions/QC Requirements		
Empty Kit Relinquished by		Method of Shipment: <b>FED EX 5 COOLERS</b>		
Relinquished	Date:	Relinquished by	Date/Time:	Company
Relinquished	06/03/2024	W. G. PETERSON	08/07/2024 10:32	EEAP Company
Relinquished by	Date/Time:	Relinquished by	Date/Time:	Company
Relinquished by		Relinquished by		Company
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks: <b>(757A) -0.1° correction frozen</b>		





**Chain of Custody Record**



<b>Client Information (Sub Contract Lab)</b>		Sampler	Lab PM:	Carrier Tracking No(s):	COC No:							
Shipping/Receiving		Phone:	Arada, Rachelle	380-143826-1	380-143826-1							
Company:		Address:	State:	State of Origin:	Page:							
Eurofins Environment Testing Southwest,		2841 Dow Avenue, Suite 100,	Hawaii	Hawaii	Page 1 of 1							
City:		State:	Accreditations Required (See note):	Job #:	Preservation Codes:							
Tustin		Hawaii	380-107533-1	380-107533-1								
State, Zip:		Due Date Requested:	<b>Analysis Requested</b>									
CA, 92780		8/27/2024										
Phone:		TAT Requested (days):										
714-995-5494(Tel)												
Email:		PO #:										
		WO #:										
Project Name:		Project #:										
RED-HILL		38001111										
Site:		SSOVR#:										
Honolulu BWS Sites												
Sample Identification	Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=other)	Field Filtered Sample (Yes or No)	Field MS/MSD (Yes or No)	624/C24-C36/C8-C18	625.1 SIM/626 Prep (MOD) Extended PAH List	625.1/626 Prep (MOD) Tentatively Identified Compounds (Hold)	Total Number of Containers	Special Instructions/Note:
MOANALUA WELLS (380-107533-1)		8/5/24	09:48 Hawaiian	Water	Water	X	X	X	X	X	7	Initial volume (500ml) and final volume (2ml). MRLs are needed.
MOANALUA WELLS (380-107533-1MS)		8/5/24	09:48 Hawaiian	MS	Water	X	X	X	X	X	3	Initial volume (500ml) and final volume (2ml). MRLs are needed.
MOANALUA WELLS (380-107533-1MSD)		8/5/24	09:48 Hawaiian	MSD	Water	X	X	X	X	X	3	Initial volume (500ml) and final volume (2ml). MRLs are needed.
TB: MOANALUA WELLS (380-107533-2)		8/5/24	09:48 Hawaiian	Water	Water	X	X	X	X	X	2	MRLs are needed.
HALAWA WELLS UNITS 1&2 P1 (380-107533-3)		8/5/24	10:22 Hawaiian	Water	Water	X	X	X	X	X	7	Initial volume (500ml) and final volume (2ml). MRLs are needed.
TB: HALAWA WELLS UNITS 1&2 P1 (380-107533-4)		8/5/24	10:22 Hawaiian	Water	Water	X	X	X	X	X	2	MRLs are needed.
<p><b>Possible Hazard Identification</b>                  Unconfirmed                  Deliverable Requested: I II III IV Other (specify) Primary Deliverable Rank: 2                  Empty Kit Relinquished by: _____ Date: _____ Time: _____ Method of Shipment: _____                  Relinquished by: <i>AR</i> Date: <i>8/28/24</i> Time: <i>1200</i> Company: <i>EEA</i>                  Relinquished by: _____ Date: _____ Time: _____ Company: _____                  Relinquished by: _____ Date: _____ Time: _____ Company: _____                  Custody Seals Intact: _____ Custody Seal No. _____                  Δ Yes Δ No</p>												



## Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-107533-1

SDG Number: Weekly

**Login Number: 107533**

**List Number: 1**

**Creator: Do, Michelle**

**List Source: Eurofins Eaton Analytical Pomona**

Question	Answer	Comment
The coolers custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
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).	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	



## Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-107533-1

SDG Number: Weekly

**Login Number: 107533**

**List Number: 2**

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**List Source: Eurofins Calscience**

**List Creation: 08/08/24 02:42 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	2.0
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	