

# ANALYTICAL REPORT

## PREPARED FOR

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City & County of Honolulu  
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Public Service Bldg. Room 310  
Honolulu, Hawaii 96843

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## JOB DESCRIPTION

RED-HILL  
Weekly

## JOB NUMBER

380-127249-1

# 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: 380-127249-1  
SDG: Weekly

## Qualifiers

### GC/MS Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### GC/MS Semi VOA TICs

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

## Glossary

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

# Case Narrative

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

Job ID: 380-127249-1

**Job ID: 380-127249-1**

**Eurofins Eaton Analytical Pomona**

## Job Narrative 380-127249-1

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 12/19/2024 10:17 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 1.3°C and 3.3°C.

### GC/MS Semi VOA

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

### Gasoline Range Organics

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

### Diesel Range Organics

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

# Detection Summary

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

Job ID: 380-127249-1  
SDG: Weekly

**Client Sample ID: HALAWA SHAFT VIEWING POOL**

**Lab Sample ID: 380-127249-1**

No Detections.

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 380-127249-2**

No Detections.

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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: 380-127249-1  
SDG: Weekly

**Client Sample ID: HALAWA SHAFT VIEWING POOL**

**Lab Sample ID: 380-127249-1**

Date Collected: 12/17/24 10:00

Matrix: Water

Date Received: 12/19/24 10:17

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.096		0.096	ug/L		12/23/24 10:15	12/26/24 18:42	1
2,4'-DDD	<0.096		0.096	ug/L		12/23/24 10:15	12/26/24 18:42	1
2,4'-DDE	<0.096		0.096	ug/L		12/23/24 10:15	12/26/24 18:42	1
2,4'-DDT	<0.096		0.096	ug/L		12/23/24 10:15	12/26/24 18:42	1
2,4-Dinitrotoluene	<0.096		0.096	ug/L		12/23/24 10:15	12/26/24 18:42	1
2,6-Dinitrotoluene	<0.096		0.096	ug/L		12/23/24 10:15	12/26/24 18:42	1
2-Methylnaphthalene	<0.096		0.096	ug/L		12/23/24 10:15	12/26/24 18:42	1
4,4'-DDD	<0.096		0.096	ug/L		12/23/24 10:15	12/26/24 18:42	1
4,4'-DDE	<0.096		0.096	ug/L		12/23/24 10:15	12/26/24 18:42	1
4,4'-DDT	<0.096		0.096	ug/L		12/23/24 10:15	12/26/24 18:42	1
Acenaphthene	<0.096		0.096	ug/L		12/23/24 10:15	12/26/24 18:42	1
Acenaphthylene	<0.096		0.096	ug/L		12/23/24 10:15	12/26/24 18:42	1
Acetochlor	<0.096		0.096	ug/L		12/23/24 10:15	12/26/24 18:42	1
Alachlor	<0.048		0.048	ug/L		12/23/24 10:15	12/26/24 18:42	1
alpha-BHC	<0.096		0.096	ug/L		12/23/24 10:15	12/26/24 18:42	1
alpha-Chlordane	<0.048		0.048	ug/L		12/23/24 10:15	12/26/24 18:42	1
Anthracene	<0.019		0.019	ug/L		12/23/24 10:15	12/26/24 18:42	1
Atrazine	<0.048		0.048	ug/L		12/23/24 10:15	12/26/24 18:42	1
Benz(a)anthracene	<0.048		0.048	ug/L		12/23/24 10:15	12/26/24 18:42	1
Benzo[a]pyrene	<0.019		0.019	ug/L		12/23/24 10:15	12/26/24 18:42	1
Benzo[b]fluoranthene	<0.019		0.019	ug/L		12/23/24 10:15	12/26/24 18:42	1
Benzo[g,h,i]perylene	<0.048		0.048	ug/L		12/23/24 10:15	12/26/24 18:42	1
Benzo[k]fluoranthene	<0.019		0.019	ug/L		12/23/24 10:15	12/26/24 18:42	1
beta-BHC	<0.096		0.096	ug/L		12/23/24 10:15	12/26/24 18:42	1
Bis(2-ethylhexyl) phthalate	<0.58		0.58	ug/L		12/23/24 10:15	12/26/24 18:42	1
Bromacil	<0.096		0.096	ug/L		12/23/24 10:15	12/26/24 18:42	1
Butachlor	<0.048		0.048	ug/L		12/23/24 10:15	12/26/24 18:42	1
Butylbenzylphthalate	<0.48		0.48	ug/L		12/23/24 10:15	12/26/24 18:42	1
Chlorobenzilate	<0.096		0.096	ug/L		12/23/24 10:15	12/26/24 18:42	1
Chloroneb	<0.096		0.096	ug/L		12/23/24 10:15	12/26/24 18:42	1
Chlorothalonil (Draconil, Bravo)	<0.096		0.096	ug/L		12/23/24 10:15	12/26/24 18:42	1
Chlorpyrifos	<0.048		0.048	ug/L		12/23/24 10:15	12/26/24 18:42	1
Chrysene	<0.019		0.019	ug/L		12/23/24 10:15	12/26/24 18:42	1
delta-BHC	<0.096		0.096	ug/L		12/23/24 10:15	12/26/24 18:42	1
Di(2-ethylhexyl)adipate	<0.58		0.58	ug/L		12/23/24 10:15	12/26/24 18:42	1
Dibenz(a,h)anthracene	<0.048		0.048	ug/L		12/23/24 10:15	12/26/24 18:42	1
Diclorvos (DDVP)	<0.048		0.048	ug/L		12/23/24 10:15	12/26/24 18:42	1
Dieldrin	<0.0096		0.0096	ug/L		12/23/24 10:15	12/26/24 18:42	1
Diethylphthalate	<0.48		0.48	ug/L		12/23/24 10:15	12/26/24 18:42	1
Dimethylphthalate	<0.48		0.48	ug/L		12/23/24 10:15	12/26/24 18:42	1
Di-n-butyl phthalate	<0.96		0.96	ug/L		12/23/24 10:15	12/26/24 18:42	1
Di-n-octyl phthalate	<0.096		0.096	ug/L		12/23/24 10:15	12/26/24 18:42	1
Endosulfan I (Alpha)	<0.096		0.096	ug/L		12/23/24 10:15	12/26/24 18:42	1
Endosulfan II (Beta)	<0.096		0.096	ug/L		12/23/24 10:15	12/26/24 18:42	1
Endosulfan sulfate	<0.096		0.096	ug/L		12/23/24 10:15	12/26/24 18:42	1
Endrin	<0.0096		0.0096	ug/L		12/23/24 10:15	12/26/24 18:42	1
Endrin aldehyde	<0.096		0.096	ug/L		12/23/24 10:15	12/26/24 18:42	1
EPTC	<0.096		0.096	ug/L		12/23/24 10:15	12/26/24 18:42	1
Fluoranthene	<0.096		0.096	ug/L		12/23/24 10:15	12/26/24 18:42	1

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# Client Sample Results

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

Job ID: 380-127249-1  
SDG: Weekly

**Client Sample ID: HALAWA SHAFT VIEWING POOL**

**Lab Sample ID: 380-127249-1**

Date Collected: 12/17/24 10:00

Matrix: Water

Date Received: 12/19/24 10:17

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	<0.048		0.048	ug/L		12/23/24 10:15	12/26/24 18:42	1
gamma-Chlordane	<0.048		0.048	ug/L		12/23/24 10:15	12/26/24 18:42	1
Heptachlor	<0.0096		0.0096	ug/L		12/23/24 10:15	12/26/24 18:42	1
Heptachlor epoxide (isomer B)	<0.0096		0.0096	ug/L		12/23/24 10:15	12/26/24 18:42	1
Hexachlorobenzene	<0.048		0.048	ug/L		12/23/24 10:15	12/26/24 18:42	1
Hexachlorocyclopentadiene	<0.048		0.048	ug/L		12/23/24 10:15	12/26/24 18:42	1
Indeno[1,2,3-cd]pyrene	<0.048		0.048	ug/L		12/23/24 10:15	12/26/24 18:42	1
Isophorone	<0.096		0.096	ug/L		12/23/24 10:15	12/26/24 18:42	1
Lindane	<0.0096		0.0096	ug/L		12/23/24 10:15	12/26/24 18:42	1
Malathion	<0.096		0.096	ug/L		12/23/24 10:15	12/26/24 18:42	1
Methoxychlor	<0.048		0.048	ug/L		12/23/24 10:15	12/26/24 18:42	1
Metolachlor	<0.048		0.048	ug/L		12/23/24 10:15	12/26/24 18:42	1
Molinate	<0.096		0.096	ug/L		12/23/24 10:15	12/26/24 18:42	1
Naphthalene	<0.096		0.096	ug/L		12/23/24 10:15	12/26/24 18:42	1
Parathion	<0.096		0.096	ug/L		12/23/24 10:15	12/26/24 18:42	1
Pendimethalin (Penoxaline)	<0.096		0.096	ug/L		12/23/24 10:15	12/26/24 18:42	1
Phenanthrene	<0.039		0.039	ug/L		12/23/24 10:15	12/26/24 18:42	1
Propachlor	<0.048		0.048	ug/L		12/23/24 10:15	12/26/24 18:42	1
Pyrene	<0.048		0.048	ug/L		12/23/24 10:15	12/26/24 18:42	1
Simazine	<0.048		0.048	ug/L		12/23/24 10:15	12/26/24 18:42	1
Terbacil	<0.096		0.096	ug/L		12/23/24 10:15	12/26/24 18:42	1
Terbutylazine	<0.096		0.096	ug/L		12/23/24 10:15	12/26/24 18:42	1
Thiobencarb	<0.096		0.096	ug/L		12/23/24 10:15	12/26/24 18:42	1
Total Permethrin (mixed isomers)	<0.19		0.19	ug/L		12/23/24 10:15	12/26/24 18:42	1
trans-Nonachlor	<0.048		0.048	ug/L		12/23/24 10:15	12/26/24 18:42	1
Trifluralin	<0.096		0.096	ug/L		12/23/24 10:15	12/26/24 18:42	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	12/23/24 10:15	12/26/24 18:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	97		70 - 130	12/23/24 10:15	12/26/24 18:42	1
Perylene-d12	84		70 - 130	12/23/24 10:15	12/26/24 18:42	1
Triphenylphosphate	109		70 - 130	12/23/24 10:15	12/26/24 18:42	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		12/20/24 13:43	12/30/24 20:16	1
2-Methylnaphthalene	<0.19		0.19	ug/L		12/20/24 13:43	12/30/24 20:16	1
Acenaphthene	<0.19		0.19	ug/L		12/20/24 13:43	12/30/24 20:16	1
Acenaphthylene	<0.19		0.19	ug/L		12/20/24 13:43	12/30/24 20:16	1
Anthracene	<0.19		0.19	ug/L		12/20/24 13:43	12/30/24 20:16	1
Benzo[a]anthracene	<0.19		0.19	ug/L		12/20/24 13:43	12/30/24 20:16	1
Benzo[a]pyrene	<0.19		0.19	ug/L		12/20/24 13:43	12/30/24 20:16	1
Benzo[b]fluoranthene	<0.19		0.19	ug/L		12/20/24 13:43	12/30/24 20:16	1
Benzo[g,h,i]perylene	<0.19		0.19	ug/L		12/20/24 13:43	12/30/24 20:16	1
Benzo[k]fluoranthene	<0.19		0.19	ug/L		12/20/24 13:43	12/30/24 20:16	1
Chrysene	<0.19		0.19	ug/L		12/20/24 13:43	12/30/24 20:16	1
Dibenz(a,h)anthracene	<0.19		0.19	ug/L		12/20/24 13:43	12/30/24 20:16	1
Fluoranthene	<0.19		0.19	ug/L		12/20/24 13:43	12/30/24 20:16	1

Eurofins Eaton Analytical Pomona



# Client Sample Results

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

Job ID: 380-127249-1  
SDG: Weekly

**Client Sample ID: HALAWA SHAFT VIEWING POOL**

**Lab Sample ID: 380-127249-1**

Date Collected: 12/17/24 10:00

Matrix: Water

Date Received: 12/19/24 10:17

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	<0.19		0.19	ug/L		12/20/24 13:43	12/30/24 20:16	1
Indeno[1,2,3-cd]pyrene	<0.19		0.19	ug/L		12/20/24 13:43	12/30/24 20:16	1
Naphthalene	<0.19		0.19	ug/L		12/20/24 13:43	12/30/24 20:16	1
Phenanthrene	<0.19		0.19	ug/L		12/20/24 13:43	12/30/24 20:16	1
Pyrene	<0.19		0.19	ug/L		12/20/24 13:43	12/30/24 20:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	83		28 - 127	12/20/24 13:43	12/30/24 20:16	1
2-Fluorobiphenyl (Surr)	82		31 - 120	12/20/24 13:43	12/30/24 20:16	1
2-Fluorophenol (Surr)	53		17 - 120	12/20/24 13:43	12/30/24 20:16	1
Nitrobenzene-d5 (Surr)	80		27 - 120	12/20/24 13:43	12/30/24 20:16	1
Phenol-d6 (Surr)	28		10 - 120	12/20/24 13:43	12/30/24 20:16	1
p-Terphenyl-d14 (Surr)	93		45 - 120	12/20/24 13:43	12/30/24 20:16	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	12/20/24 13:43	01/03/25 21:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	76		33 - 139	12/20/24 13:43	01/03/25 21:29	1
2-Fluorobiphenyl (Surr)	80		33 - 126	12/20/24 13:43	01/03/25 21:29	1
2-Fluorophenol (Surr)	36		12 - 120	12/20/24 13:43	01/03/25 21:29	1
Nitrobenzene-d5 (Surr)	71		36 - 120	12/20/24 13:43	01/03/25 21:29	1
Phenol-d6 (Surr)	21		10 - 120	12/20/24 13:43	01/03/25 21:29	1
p-Terphenyl-d14 (Surr)	69		47 - 131	12/20/24 13:43	01/03/25 21:29	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			12/30/24 21:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		38 - 134		12/30/24 21:15	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C24)	<25		25	ug/L		12/20/24 15:05	12/23/24 14:11	1
Motor Oil Range Organics [C24-C36]	<25		25	ug/L		12/20/24 15:05	12/23/24 14:11	1
C8-C18	<25		25	ug/L		12/20/24 15:05	12/23/24 14:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	104		60 - 130	12/20/24 15:05	12/23/24 14:11	1

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 380-127249-2**

Date Collected: 12/17/24 10:00

Matrix: Water

Date Received: 12/19/24 10:17

**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			12/30/24 19:57	1

# Client Sample Results

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

Job ID: 380-127249-1  
SDG: Weekly

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 380-127249-2**

**Date Collected: 12/17/24 10:00**

**Matrix: Water**

**Date Received: 12/19/24 10:17**

<u>Surrogate</u>	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
4-Bromofluorobenzene (Surr)	95		38 - 134		12/30/24 19:57	1

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- 16

# Action Limit Summary

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

Job ID: 380-127249-1  
SDG: Weekly

**Client Sample ID: HALAWA SHAFT VIEWING POOL**

**Lab Sample ID: 380-127249-1**

## 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	<0.048		ug/L	2	0.048	525.2	Total/NA
Atrazine	<0.048		ug/L	3	0.048	525.2	Total/NA
Benzo[a]pyrene	<0.019		ug/L	0.2	0.019	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	<0.58		ug/L	6	0.58	525.2	Total/NA
Di(2-ethylhexyl)adipate	<0.58		ug/L	400	0.58	525.2	Total/NA
Endrin	<0.0096		ug/L	2	0.0096	525.2	Total/NA
Heptachlor	<0.0096		ug/L	0.4	0.0096	525.2	Total/NA
Heptachlor epoxide (isomer B)	<0.0096		ug/L	0.2	0.0096	525.2	Total/NA
Hexachlorobenzene	<0.048		ug/L	1	0.048	525.2	Total/NA
Hexachlorocyclopentadiene	<0.048		ug/L	50	0.048	525.2	Total/NA
Lindane	<0.0096		ug/L	0.2	0.0096	525.2	Total/NA
Methoxychlor	<0.048		ug/L	40	0.048	525.2	Total/NA
Simazine	<0.048		ug/L	4	0.048	525.2	Total/NA
Benzo[a]pyrene	<0.19		ug/L	0.2	0.19	625.1 SIM	Total/NA

# Surrogate Summary

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

Job ID: 380-127249-1  
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)
380-126888-O-1-A DU	Duplicate	98	88	105
380-127249-1	HALAWA SHAFT VIEWING POOL	97	84	109
885-17344-R-3-A MS	Matrix Spike	99	92	104
LCS 380-125081/25-A	Lab Control Sample	95	90	105
MB 380-125081/23-A	Method Blank	97	92	106
MRL 380-125081/24-A	Lab Control Sample	96	85	102

**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)
380-127249-1	HALAWA SHAFT VIEWING POC	76	80	36	71	21	69
MB 570-516463/1-A	Method Blank	69	73	30	61	17	77

**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)
380-127249-1	HALAWA SHAFT VIEWING POC	83	82	53	80	28	93
570-212025-B-1-A MS	Matrix Spike	72	69	41	70	26	64
570-212025-B-1-B MSD	Matrix Spike Duplicate	69	56	31	50	21	62
LCS 570-516463/2-A	Lab Control Sample	86	77	49	70	29	84
LCSD 570-516463/3-A	Lab Control Sample Dup	79	73	45	65	27	81
MB 570-516463/1-A	Method Blank	69	66	38	67	18	85

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

# Surrogate Summary

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

Job ID: 380-127249-1  
 SDG: Weekly

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

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1 (38-134)
380-127091-AC-1 MS	Matrix Spike	103
380-127091-AE-1 MSD	Matrix Spike Duplicate	103
380-127249-1	HALAWA SHAFT VIEWING POOL	94
380-127249-2	TRIP BLANK	95
LCS 570-518803/1009	Lab Control Sample	98
LCSD 570 518803/10	Lab Control Sample Dup	97
MB 570-518803/11	Method Blank	93
MRL 570-518803/1004	Lab Control Sample	94

**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)
380-126982-B-1-A MS	Matrix Spike	108
380-126982-B-1-B MSD	Matrix Spike Duplicate	109
380-127249-1 - RA	HALAWA SHAFT VIEWING POOL	104
LCS 570-516519/2-A	Lab Control Sample	108
LCSD 570-516519/3-A	Lab Control Sample Dup	114
MB 570-516519/1-A	Method Blank	109
MRL 570-516519/4-A	Lab Control Sample	102

**Surrogate Legend**

OTCSN = n-Octacosane (Surr)

# QC Sample Results

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

Job ID: 380-127249-1  
 SDG: Weekly

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

**Lab Sample ID: MB 380-125081/23-A**  
**Matrix: Water**  
**Analysis Batch: 125336**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 125081**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.097		0.097	ug/L		12/23/24 10:15	12/26/24 12:59	1
2,4'-DDD	<0.097		0.097	ug/L		12/23/24 10:15	12/26/24 12:59	1
2,4'-DDE	<0.097		0.097	ug/L		12/23/24 10:15	12/26/24 12:59	1
2,4'-DDT	<0.097		0.097	ug/L		12/23/24 10:15	12/26/24 12:59	1
2,4-Dinitrotoluene	<0.097		0.097	ug/L		12/23/24 10:15	12/26/24 12:59	1
2,6-Dinitrotoluene	<0.097		0.097	ug/L		12/23/24 10:15	12/26/24 12:59	1
2-Methylnaphthalene	<0.097		0.097	ug/L		12/23/24 10:15	12/26/24 12:59	1
4,4'-DDD	<0.097		0.097	ug/L		12/23/24 10:15	12/26/24 12:59	1
4,4'-DDE	<0.097		0.097	ug/L		12/23/24 10:15	12/26/24 12:59	1
4,4'-DDT	<0.097		0.097	ug/L		12/23/24 10:15	12/26/24 12:59	1
Acenaphthene	<0.097		0.097	ug/L		12/23/24 10:15	12/26/24 12:59	1
Acenaphthylene	<0.097		0.097	ug/L		12/23/24 10:15	12/26/24 12:59	1
Acetochlor	<0.097		0.097	ug/L		12/23/24 10:15	12/26/24 12:59	1
Alachlor	<0.048		0.048	ug/L		12/23/24 10:15	12/26/24 12:59	1
alpha-BHC	<0.097		0.097	ug/L		12/23/24 10:15	12/26/24 12:59	1
alpha-Chlordane	<0.048		0.048	ug/L		12/23/24 10:15	12/26/24 12:59	1
Anthracene	<0.019		0.019	ug/L		12/23/24 10:15	12/26/24 12:59	1
Atrazine	<0.048		0.048	ug/L		12/23/24 10:15	12/26/24 12:59	1
Benz(a)anthracene	<0.048		0.048	ug/L		12/23/24 10:15	12/26/24 12:59	1
Benzo[a]pyrene	<0.019		0.019	ug/L		12/23/24 10:15	12/26/24 12:59	1
Benzo[b]fluoranthene	<0.019		0.019	ug/L		12/23/24 10:15	12/26/24 12:59	1
Benzo[g,h,i]perylene	<0.048		0.048	ug/L		12/23/24 10:15	12/26/24 12:59	1
Benzo[k]fluoranthene	<0.019		0.019	ug/L		12/23/24 10:15	12/26/24 12:59	1
beta-BHC	<0.097		0.097	ug/L		12/23/24 10:15	12/26/24 12:59	1
Bis(2-ethylhexyl) phthalate	<0.58		0.58	ug/L		12/23/24 10:15	12/26/24 12:59	1
Bromacil	<0.097		0.097	ug/L		12/23/24 10:15	12/26/24 12:59	1
Butachlor	<0.048		0.048	ug/L		12/23/24 10:15	12/26/24 12:59	1
Butylbenzylphthalate	<0.48		0.48	ug/L		12/23/24 10:15	12/26/24 12:59	1
Chlorobenzilate	<0.097		0.097	ug/L		12/23/24 10:15	12/26/24 12:59	1
Chloroneb	<0.097		0.097	ug/L		12/23/24 10:15	12/26/24 12:59	1
Chlorothalonil (Draconil, Bravo)	<0.097		0.097	ug/L		12/23/24 10:15	12/26/24 12:59	1
Chlorpyrifos	<0.048		0.048	ug/L		12/23/24 10:15	12/26/24 12:59	1
Chrysene	<0.019		0.019	ug/L		12/23/24 10:15	12/26/24 12:59	1
delta-BHC	<0.097		0.097	ug/L		12/23/24 10:15	12/26/24 12:59	1
Di(2-ethylhexyl)adipate	<0.58		0.58	ug/L		12/23/24 10:15	12/26/24 12:59	1
Dibenz(a,h)anthracene	<0.048		0.048	ug/L		12/23/24 10:15	12/26/24 12:59	1
Diclorvos (DDVP)	<0.048		0.048	ug/L		12/23/24 10:15	12/26/24 12:59	1
Dieldrin	<0.0097		0.0097	ug/L		12/23/24 10:15	12/26/24 12:59	1
Diethylphthalate	<0.48		0.48	ug/L		12/23/24 10:15	12/26/24 12:59	1
Dimethylphthalate	<0.48		0.48	ug/L		12/23/24 10:15	12/26/24 12:59	1
Di-n-butyl phthalate	<0.97		0.97	ug/L		12/23/24 10:15	12/26/24 12:59	1
Di-n-octyl phthalate	<0.097		0.097	ug/L		12/23/24 10:15	12/26/24 12:59	1
Endosulfan I (Alpha)	<0.097		0.097	ug/L		12/23/24 10:15	12/26/24 12:59	1
Endosulfan II (Beta)	<0.097		0.097	ug/L		12/23/24 10:15	12/26/24 12:59	1
Endosulfan sulfate	<0.097		0.097	ug/L		12/23/24 10:15	12/26/24 12:59	1
Endrin	<0.0097		0.0097	ug/L		12/23/24 10:15	12/26/24 12:59	1
Endrin aldehyde	<0.097		0.097	ug/L		12/23/24 10:15	12/26/24 12:59	1
EPTC	<0.097		0.097	ug/L		12/23/24 10:15	12/26/24 12:59	1

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# QC Sample Results

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

Job ID: 380-127249-1  
SDG: Weekly

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

**Lab Sample ID: MB 380-125081/23-A**  
**Matrix: Water**  
**Analysis Batch: 125336**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 125081**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	<0.097		0.097	ug/L		12/23/24 10:15	12/26/24 12:59	1
Fluorene	<0.048		0.048	ug/L		12/23/24 10:15	12/26/24 12:59	1
gamma-Chlordane	<0.048		0.048	ug/L		12/23/24 10:15	12/26/24 12:59	1
Heptachlor	<0.0097		0.0097	ug/L		12/23/24 10:15	12/26/24 12:59	1
Heptachlor epoxide (isomer B)	<0.0097		0.0097	ug/L		12/23/24 10:15	12/26/24 12:59	1
Hexachlorobenzene	<0.048		0.048	ug/L		12/23/24 10:15	12/26/24 12:59	1
Hexachlorocyclopentadiene	<0.048		0.048	ug/L		12/23/24 10:15	12/26/24 12:59	1
Indeno[1,2,3-cd]pyrene	<0.048		0.048	ug/L		12/23/24 10:15	12/26/24 12:59	1
Isophorone	<0.097		0.097	ug/L		12/23/24 10:15	12/26/24 12:59	1
Lindane	<0.0097		0.0097	ug/L		12/23/24 10:15	12/26/24 12:59	1
Malathion	<0.097		0.097	ug/L		12/23/24 10:15	12/26/24 12:59	1
Methoxychlor	<0.048		0.048	ug/L		12/23/24 10:15	12/26/24 12:59	1
Metolachlor	<0.048		0.048	ug/L		12/23/24 10:15	12/26/24 12:59	1
Molinate	<0.097		0.097	ug/L		12/23/24 10:15	12/26/24 12:59	1
Naphthalene	<0.097		0.097	ug/L		12/23/24 10:15	12/26/24 12:59	1
Parathion	<0.097		0.097	ug/L		12/23/24 10:15	12/26/24 12:59	1
Pendimethalin (Penoxaline)	<0.097		0.097	ug/L		12/23/24 10:15	12/26/24 12:59	1
Phenanthrene	<0.039		0.039	ug/L		12/23/24 10:15	12/26/24 12:59	1
Propachlor	<0.048		0.048	ug/L		12/23/24 10:15	12/26/24 12:59	1
Pyrene	<0.048		0.048	ug/L		12/23/24 10:15	12/26/24 12:59	1
Simazine	<0.048		0.048	ug/L		12/23/24 10:15	12/26/24 12:59	1
Terbacil	<0.097		0.097	ug/L		12/23/24 10:15	12/26/24 12:59	1
Terbutylazine	<0.097		0.097	ug/L		12/23/24 10:15	12/26/24 12:59	1
Thiobencarb	<0.097		0.097	ug/L		12/23/24 10:15	12/26/24 12:59	1
Total Permethrin (mixed isomers)	<0.19		0.19	ug/L		12/23/24 10:15	12/26/24 12:59	1
trans-Nonachlor	<0.048		0.048	ug/L		12/23/24 10:15	12/26/24 12:59	1
Trifluralin	<0.097		0.097	ug/L		12/23/24 10:15	12/26/24 12:59	1

<i>Tentatively Identified Compound</i>	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
9-Octadecenamide, (Z)-	1.85	T J N	ug/L		7.89	301-02-0	12/23/24 10:15	12/26/24 12:59	1
13-Docosenamide, (Z)-	0.512	T J N	ug/L		10.43	112-84-5	12/23/24 10:15	12/26/24 12:59	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	97		70 - 130	12/23/24 10:15	12/26/24 12:59	1
Perylene-d12	92		70 - 130	12/23/24 10:15	12/26/24 12:59	1
Triphenylphosphate	106		70 - 130	12/23/24 10:15	12/26/24 12:59	1

**Lab Sample ID: LCS 380-125081/25-A**  
**Matrix: Water**  
**Analysis Batch: 125336**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 125081**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	1.93	1.96		ug/L		101	70 - 130
2,4'-DDD	1.93	2.13		ug/L		110	70 - 130
2,4'-DDE	1.93	2.09		ug/L		108	70 - 130
2,4'-DDT	1.93	2.00		ug/L		104	70 - 130
2,4-Dinitrotoluene	1.93	1.47		ug/L		76	70 - 130
2,6-Dinitrotoluene	1.93	1.59		ug/L		82	70 - 130

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# QC Sample Results

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

Job ID: 380-127249-1  
SDG: Weekly

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

**Lab Sample ID: LCS 380-125081/25-A**  
**Matrix: Water**  
**Analysis Batch: 125336**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 125081**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2-Methylnaphthalene	1.93	1.97		ug/L		102	70 - 130
4,4'-DDD	1.93	2.13		ug/L		110	70 - 130
4,4'-DDE	1.93	2.09		ug/L		108	70 - 130
4,4'-DDT	1.93	2.01		ug/L		104	70 - 130
Acenaphthene	1.93	1.94		ug/L		101	70 - 130
Acenaphthylene	1.93	1.93		ug/L		100	70 - 130
Acetochlor	1.93	2.17		ug/L		112	70 - 130
Alachlor	1.93	2.20		ug/L		114	70 - 130
alpha-BHC	1.93	1.99		ug/L		103	70 - 130
alpha-Chlordane	1.93	2.17		ug/L		112	70 - 130
Anthracene	1.93	1.68		ug/L		87	70 - 130
Atrazine	1.93	2.18		ug/L		113	70 - 130
Benz(a)anthracene	1.93	1.86		ug/L		96	70 - 130
Benzo[a]pyrene	1.93	1.71		ug/L		89	70 - 130
Benzo[b]fluoranthene	1.93	2.11		ug/L		109	70 - 130
Benzo[g,h,i]perylene	1.93	2.13		ug/L		110	70 - 130
Benzo[k]fluoranthene	1.93	2.10		ug/L		109	70 - 130
beta-BHC	1.93	2.03		ug/L		105	70 - 130
Bis(2-ethylhexyl) phthalate	1.93	2.32		ug/L		120	70 - 130
Bromacil	1.93	1.84		ug/L		95	70 - 130
Butachlor	1.93	2.32		ug/L		120	70 - 130
Butylbenzylphthalate	1.93	2.38		ug/L		123	70 - 130
Chlorobenzilate	1.93	1.77		ug/L		92	70 - 130
Chloroneb	1.93	2.19		ug/L		113	70 - 130
Chlorothalonil (Draconil, Bravo)	1.93	2.26		ug/L		117	70 - 130
Chlorpyrifos	1.93	2.20		ug/L		114	70 - 130
Chrysene	1.93	1.99		ug/L		103	70 - 130
delta-BHC	1.93	2.10		ug/L		109	70 - 130
Di(2-ethylhexyl)adipate	1.93	2.13		ug/L		110	70 - 130
Dibenz(a,h)anthracene	1.93	1.90		ug/L		98	70 - 130
Diclorvos (DDVP)	1.93	2.06		ug/L		107	70 - 130
Dieldrin	1.93	2.10		ug/L		108	70 - 130
Diethylphthalate	1.93	2.13		ug/L		110	70 - 130
Dimethylphthalate	1.93	2.08		ug/L		108	70 - 130
Di-n-butyl phthalate	3.87	4.31		ug/L		111	70 - 130
Di-n-octyl phthalate	1.93	1.93		ug/L		100	70 - 130
Endosulfan I (Alpha)	1.93	2.06		ug/L		107	70 - 130
Endosulfan II (Beta)	1.93	2.06		ug/L		107	70 - 130
Endosulfan sulfate	1.93	2.11		ug/L		109	70 - 130
Endrin	1.93	2.02		ug/L		104	70 - 130
Endrin aldehyde	1.93	2.09		ug/L		108	60 - 130
EPTC	1.93	2.05		ug/L		106	70 - 130
Fluoranthene	1.93	2.10		ug/L		109	70 - 130
Fluorene	1.93	2.04		ug/L		105	70 - 130
gamma-Chlordane	1.93	2.14		ug/L		111	70 - 130
Heptachlor	1.93	1.96		ug/L		101	70 - 130
Heptachlor epoxide (isomer B)	1.93	2.12		ug/L		110	70 - 130
Hexachlorobenzene	1.93	1.90		ug/L		98	70 - 130
Hexachlorocyclopentadiene	1.93	1.67		ug/L		86	70 - 130

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# QC Sample Results

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

Job ID: 380-127249-1  
SDG: Weekly

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

**Lab Sample ID: LCS 380-125081/25-A**  
**Matrix: Water**  
**Analysis Batch: 125336**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 125081**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Indeno[1,2,3-cd]pyrene	1.93	2.01		ug/L		104	70 - 130
Isophorone	1.93	1.99		ug/L		103	70 - 130
Lindane	1.93	1.86		ug/L		96	70 - 130
Malathion	1.93	2.21		ug/L		114	70 - 130
Methoxychlor	1.93	1.90		ug/L		98	70 - 130
Metolachlor	1.93	2.21		ug/L		114	70 - 130
Molinate	1.93	2.08		ug/L		107	70 - 130
Naphthalene	1.93	1.97		ug/L		102	70 - 130
Parathion	1.93	1.95		ug/L		101	70 - 130
Pendimethalin (Penoxaline)	1.93	1.76		ug/L		91	70 - 130
Phenanthrene	1.93	1.91		ug/L		99	70 - 130
Propachlor	1.93	2.10		ug/L		109	70 - 130
Pyrene	1.93	2.07		ug/L		107	70 - 130
Simazine	1.93	2.16		ug/L		112	70 - 130
Terbacil	1.93	2.12		ug/L		110	70 - 130
Terbutylazine	1.93	2.18		ug/L		113	70 - 130
Thiobencarb	1.93	2.19		ug/L		113	70 - 130
trans-Nonachlor	1.93	2.12		ug/L		110	70 - 130
Trifluralin	1.93	1.77		ug/L		92	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Nitro-m-xylene	95		70 - 130
Perylene-d12	90		70 - 130
Triphenylphosphate	105		70 - 130

**Lab Sample ID: MRL 380-125081/24-A**  
**Matrix: Water**  
**Analysis Batch: 125336**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 125081**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	0.0966	0.111		ug/L		115	50 - 150
2,4'-DDD	0.0966	0.0895	J	ug/L		93	50 - 150
2,4'-DDE	0.0966	0.101		ug/L		105	50 - 150
2,4'-DDT	0.0966	0.0922	J	ug/L		95	50 - 150
2,4-Dinitrotoluene	0.0966	0.0888	J	ug/L		92	50 - 150
2,6-Dinitrotoluene	0.0966	0.0987		ug/L		102	50 - 150
2-Methylnaphthalene	0.0966	0.104		ug/L		108	50 - 150
4,4'-DDD	0.0966	0.105		ug/L		109	50 - 150
4,4'-DDE	0.0966	0.0984		ug/L		102	50 - 150
4,4'-DDT	0.0966	0.0888	J	ug/L		92	50 - 150
Acenaphthene	0.0966	0.0935	J	ug/L		97	50 - 150
Acenaphthylene	0.0966	0.0942	J	ug/L		97	50 - 150
Acetochlor	0.0966	0.105		ug/L		109	50 - 150
Alachlor	0.0483	0.0548		ug/L		114	50 - 150
alpha-BHC	0.0966	0.103		ug/L		106	50 - 150
alpha-Chlordane	0.0242	<0.028		ug/L		109	50 - 150
Anthracene	0.0193	0.0202		ug/L		105	50 - 150
Atrazine	0.0483	0.0473	J	ug/L		98	50 - 150

# QC Sample Results

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

Job ID: 380-127249-1  
SDG: Weekly

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

**Lab Sample ID: MRL 380-125081/24-A**  
**Matrix: Water**  
**Analysis Batch: 125336**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 125081**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Benz(a)anthracene	0.0483	0.0493		ug/L		102	50 - 150
Benzo[a]pyrene	0.0193	0.0216		ug/L		112	50 - 150
Benzo[b]fluoranthene	0.0193	0.0189	J	ug/L		98	50 - 150
Benzo[g,h,i]perylene	0.0483	0.0403	J	ug/L		83	50 - 150
Benzo[k]fluoranthene	0.0193	0.0195		ug/L		101	50 - 150
beta-BHC	0.0966	0.118		ug/L		122	50 - 150
Bis(2-ethylhexyl) phthalate	0.580	0.600		ug/L		103	50 - 150
Bromacil	0.0966	0.0932	J	ug/L		96	50 - 150
Butachlor	0.0483	0.0504		ug/L		104	50 - 150
Butylbenzylphthalate	0.483	0.546		ug/L		113	50 - 150
Chlorobenzilate	0.0966	0.0973		ug/L		101	50 - 150
Chloroneb	0.0966	0.0908	J	ug/L		94	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0966	0.0792	J	ug/L		82	50 - 150
Chlorpyrifos	0.0483	0.0464	J	ug/L		96	50 - 150
Chrysene	0.0193	0.0202		ug/L		105	50 - 150
delta-BHC	0.0966	0.107		ug/L		111	50 - 150
Di(2-ethylhexyl)adipate	0.580	0.595		ug/L		103	50 - 150
Dibenz(a,h)anthracene	0.0483	0.0472	J	ug/L		98	50 - 150
Diclorvos (DDVP)	0.0483	0.0557		ug/L		115	50 - 150
Dieldrin	0.00966	0.0124		ug/L		128	50 - 150
Diethylphthalate	0.483	0.499		ug/L		103	50 - 150
Dimethylphthalate	0.483	0.509		ug/L		105	50 - 150
Di-n-butyl phthalate	0.483	0.520	J	ug/L		108	49 - 243
Di-n-octyl phthalate	0.0966	0.0917	J	ug/L		95	50 - 150
Endosulfan I (Alpha)	0.0966	0.0761	J	ug/L		79	50 - 150
Endosulfan II (Beta)	0.0966	0.109		ug/L		113	50 - 150
Endosulfan sulfate	0.0966	0.0943	J	ug/L		98	50 - 150
Endrin	0.00966	0.0127		ug/L		132	50 - 150
Endrin aldehyde	0.0966	0.0903	J	ug/L		93	50 - 150
EPTC	0.0966	0.0890	J	ug/L		92	50 - 150
Fluoranthene	0.0966	0.0991		ug/L		103	50 - 150
Fluorene	0.0483	0.0495		ug/L		102	50 - 150
gamma-Chlordane	0.0242	0.0227	J	ug/L		94	50 - 150
Heptachlor	0.00966	0.0108		ug/L		111	50 - 150
Heptachlor epoxide (isomer B)	0.00966	0.0129		ug/L		133	50 - 150
Hexachlorobenzene	0.0483	0.0474	J	ug/L		98	50 - 150
Hexachlorocyclopentadiene	0.0483	<0.037		ug/L		69	50 - 150
Indeno[1,2,3-cd]pyrene	0.0483	0.0392	J	ug/L		81	50 - 150
Isophorone	0.0966	0.112		ug/L		116	50 - 150
Lindane	0.00966	0.0135		ug/L		139	50 - 150
Malathion	0.0966	0.0916	J	ug/L		95	50 - 150
Methoxychlor	0.0483	0.0504		ug/L		104	50 - 150
Metolachlor	0.0483	0.0533		ug/L		110	50 - 150
Molinate	0.0966	0.0996		ug/L		103	50 - 150
Naphthalene	0.0966	0.105		ug/L		109	50 - 150
Parathion	0.0966	0.0737	J	ug/L		76	50 - 150
Pendimethalin (Penoxaline)	0.0966	0.0798	J	ug/L		83	50 - 150
Phenanthrene	0.0386	0.0421		ug/L		109	50 - 150
Propachlor	0.0483	0.0534		ug/L		111	50 - 150

Eurofins Eaton Analytical Pomona

# QC Sample Results

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

Job ID: 380-127249-1  
SDG: Weekly

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

**Lab Sample ID: MRL 380-125081/24-A**  
**Matrix: Water**  
**Analysis Batch: 125336**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 125081**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Pyrene	0.0483	0.0487		ug/L		101	50 - 150
Simazine	0.0483	0.0460	J	ug/L		95	50 - 150
Terbacil	0.0966	0.0988		ug/L		102	50 - 150
Terbutylazine	0.0966	0.102		ug/L		105	50 - 150
Thiobencarb	0.0966	0.0989		ug/L		102	50 - 150
trans-Nonachlor	0.0242	<0.025		ug/L		96	50 - 150
Trifluralin	0.0966	0.0823	J	ug/L		85	50 - 150

  

Surrogate	MRL %Recovery	MRL Qualifier	Limits
2-Nitro-m-xylene	96		70 - 130
Perylene-d12	85		70 - 130
Triphenylphosphate	102		70 - 130

**Lab Sample ID: 885-17344-R-3-A MS**  
**Matrix: Water**  
**Analysis Batch: 125336**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 125081**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	<0.097		1.95	1.98		ug/L		101	70 - 130
2,4'-DDD	<0.097		1.95	2.06		ug/L		105	70 - 130
2,4'-DDE	<0.097		1.95	2.02		ug/L		104	70 - 130
2,4'-DDT	<0.097		1.95	2.00		ug/L		102	70 - 130
2,4-Dinitrotoluene	<0.097		1.95	1.81		ug/L		92	70 - 130
2,6-Dinitrotoluene	<0.097		1.95	1.87		ug/L		96	70 - 130
2-Methylnaphthalene	<0.097		1.95	1.98		ug/L		101	70 - 130
4,4'-DDD	<0.097		1.95	2.09		ug/L		107	70 - 130
4,4'-DDE	<0.097		1.95	2.01		ug/L		103	70 - 130
4,4'-DDT	<0.097		1.95	1.96		ug/L		100	70 - 130
Acenaphthene	<0.097		1.95	1.93		ug/L		99	70 - 130
Acenaphthylene	<0.097		1.95	1.85		ug/L		95	70 - 130
Acetochlor	<0.097		1.95	2.12		ug/L		108	70 - 130
Alachlor	<0.048		1.95	2.15		ug/L		110	70 - 130
alpha-BHC	<0.097		1.95	1.99		ug/L		102	70 - 130
alpha-Chlordane	<0.048		1.95	2.17		ug/L		111	70 - 130
Anthracene	<0.019	F1	1.95	0.0439	F1	ug/L		2	70 - 130
Atrazine	<0.048		1.95	2.15		ug/L		110	70 - 130
Benz(a)anthracene	<0.048	F1	1.95	1.12	F1	ug/L		57	70 - 130
Benzo[a]pyrene	<0.019	F1	1.95	0.708	F1	ug/L		36	70 - 130
Benzo[b]fluoranthene	<0.019		1.95	2.05		ug/L		105	70 - 130
Benzo[g,h,i]perylene	<0.048		1.95	2.00		ug/L		102	70 - 130
Benzo[k]fluoranthene	<0.019		1.95	2.09		ug/L		107	70 - 130
beta-BHC	<0.097		1.95	2.00		ug/L		102	70 - 130
Bis(2-ethylhexyl) phthalate	<0.58		1.95	1.95		ug/L		100	70 - 130
Bromacil	<0.097		1.95	1.97		ug/L		101	70 - 130
Butachlor	<0.048		1.95	2.24		ug/L		115	70 - 130
Butylbenzylphthalate	<0.48		1.95	2.28		ug/L		117	70 - 130
Chlorobenzilate	<0.097		1.95	1.75		ug/L		90	70 - 130
Chloroneb	<0.097		1.95	2.08		ug/L		106	70 - 130

# QC Sample Results

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

Job ID: 380-127249-1  
SDG: Weekly

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

**Lab Sample ID: 885-17344-R-3-A MS**  
**Matrix: Water**  
**Analysis Batch: 125336**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 125081**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier	Added	Result	Qualifier				
Chlorothalonil (Draconil, Bravo)	<0.097		1.95	2.22		ug/L		114	70 - 130
Chlorpyrifos	<0.048		1.95	2.19		ug/L		112	70 - 130
Chrysene	<0.019		1.95	1.95		ug/L		100	70 - 130
delta-BHC	<0.097		1.95	2.14		ug/L		109	70 - 130
Di(2-ethylhexyl)adipate	<0.58		1.95	1.89		ug/L		83	70 - 130
Dibenz(a,h)anthracene	<0.048		1.95	1.79		ug/L		92	70 - 130
Diclorvos (DDVP)	<0.048		1.95	2.11		ug/L		108	70 - 130
Dieldrin	<0.0097		1.95	2.00		ug/L		103	70 - 130
Diethylphthalate	<0.48		1.95	2.13		ug/L		109	70 - 130
Dimethylphthalate	<0.48		1.95	2.12		ug/L		109	70 - 130
Di-n-butyl phthalate	<0.97		3.91	4.25		ug/L		109	70 - 130
Di-n-octyl phthalate	<0.097		1.95	1.63		ug/L		83	70 - 130
Endosulfan I (Alpha)	<0.097		1.95	2.00		ug/L		102	70 - 130
Endosulfan II (Beta)	<0.097		1.95	1.99		ug/L		102	70 - 130
Endosulfan sulfate	<0.097		1.95	2.01		ug/L		103	70 - 130
Endrin	<0.0097		1.95	1.93		ug/L		99	70 - 130
Endrin aldehyde	<0.097		1.95	1.69		ug/L		86	60 - 130
EPTC	<0.097		1.95	2.10		ug/L		107	70 - 130
Fluoranthene	<0.097		1.95	2.09		ug/L		107	70 - 130
Fluorene	<0.048		1.95	2.08		ug/L		106	70 - 130
gamma-Chlordane	<0.048		1.95	2.11		ug/L		108	70 - 130
Heptachlor	<0.0097		1.95	2.01		ug/L		103	70 - 130
Heptachlor epoxide (isomer B)	<0.0097		1.95	2.05		ug/L		105	70 - 130
Hexachlorobenzene	<0.048		1.95	1.93		ug/L		99	70 - 130
Hexachlorocyclopentadiene	<0.048		1.95	1.83		ug/L		94	70 - 130
Indeno[1,2,3-cd]pyrene	<0.048		1.95	2.02		ug/L		104	70 - 130
Isophorone	<0.097		1.95	2.01		ug/L		103	70 - 130
Lindane	<0.0097		1.95	1.87		ug/L		95	70 - 130
Malathion	<0.097		1.95	2.16		ug/L		110	70 - 130
Methoxychlor	<0.048		1.95	1.94		ug/L		99	70 - 130
Metolachlor	<0.048		1.95	2.15		ug/L		110	70 - 130
Molinate	<0.097		1.95	2.11		ug/L		108	70 - 130
Naphthalene	<0.097		1.95	2.01		ug/L		103	70 - 130
Parathion	<0.097		1.95	2.03		ug/L		104	70 - 130
Pendimethalin (Penoxaline)	<0.097		1.95	1.97		ug/L		101	70 - 130
Phenanthrene	<0.039		1.95	1.92		ug/L		98	70 - 130
Propachlor	<0.048		1.95	2.10		ug/L		108	70 - 130
Pyrene	<0.048		1.95	1.92		ug/L		98	70 - 130
Simazine	<0.048		1.95	2.14		ug/L		109	70 - 130
Terbacil	<0.097		1.95	2.17		ug/L		111	70 - 130
Terbutylazine	<0.097		1.95	2.15		ug/L		110	70 - 130
Thiobencarb	<0.097		1.95	2.18		ug/L		111	70 - 130
trans-Nonachlor	<0.048		1.95	2.07		ug/L		106	70 - 130
Trifluralin	<0.097		1.95	1.86		ug/L		95	70 - 130

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	99		70 - 130
Perylene-d12	92		70 - 130

# QC Sample Results

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

Job ID: 380-127249-1  
 SDG: Weekly

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

**Lab Sample ID: 885-17344-R-3-A MS**  
**Matrix: Water**  
**Analysis Batch: 125336**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 125081**

Surrogate	%Recovery	MS MS Qualifier	Limits
Triphenylphosphate	104		70 - 130

**Lab Sample ID: 380-126888-O-1-A DU**  
**Matrix: Water**  
**Analysis Batch: 125336**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 125081**

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

# QC Sample Results

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

Job ID: 380-127249-1  
SDG: Weekly

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

**Lab Sample ID: 380-126888-O-1-A DU**  
**Matrix: Water**  
**Analysis Batch: 125336**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 125081**

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Di-n-octyl phthalate	<0.097		<0.096		ug/L		NC	20
Endosulfan I (Alpha)	<0.097		<0.096		ug/L		NC	20
Endosulfan II (Beta)	<0.097		<0.096		ug/L		NC	20
Endosulfan sulfate	<0.097		<0.096		ug/L		NC	20
Endrin	<0.0097		<0.0096		ug/L		NC	20
Endrin aldehyde	<0.097		<0.096		ug/L		NC	20
EPTC	<0.097		<0.096		ug/L		NC	20
Fluoranthene	<0.097		<0.096		ug/L		NC	20
Fluorene	<0.048		<0.048		ug/L		NC	20
gamma-Chlordane	<0.048		<0.048		ug/L		NC	20
Heptachlor	<0.0097		<0.0096		ug/L		NC	20
Heptachlor epoxide (isomer B)	<0.0097		<0.0096		ug/L		NC	20
Hexachlorobenzene	<0.048		<0.048		ug/L		NC	20
Hexachlorocyclopentadiene	<0.048		<0.048		ug/L		NC	20
Indeno[1,2,3-cd]pyrene	<0.048		<0.048		ug/L		NC	20
Isophorone	<0.097		<0.096		ug/L		NC	20
Lindane	<0.0097		<0.0096		ug/L		NC	20
Malathion	<0.097		<0.096		ug/L		NC	20
Methoxychlor	<0.048		<0.048		ug/L		NC	20
Metolachlor	<0.048		<0.048		ug/L		NC	20
Molinate	<0.097		<0.096		ug/L		NC	20
Naphthalene	<0.097		<0.096		ug/L		NC	20
Parathion	<0.097		<0.096		ug/L		NC	20
Pendimethalin (Penoxaline)	<0.097		<0.096		ug/L		NC	20
Phenanthrene	<0.039		<0.038		ug/L		NC	20
Propachlor	<0.048		<0.048		ug/L		NC	20
Pyrene	<0.048		<0.048		ug/L		NC	20
Simazine	<0.048		<0.048		ug/L		NC	20
Terbacil	<0.097		<0.096		ug/L		NC	20
Terbutylazine	<0.097		<0.096		ug/L		NC	20
Thiobencarb	<0.097		<0.096		ug/L		NC	20
Total Permethrin (mixed isomers)	<0.19		<0.19		ug/L		NC	20
trans-Nonachlor	<0.048		<0.048		ug/L		NC	20
Trifluralin	<0.097		<0.096		ug/L		NC	20

  

Surrogate	DU	DU	Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	98		70 - 130
Perylene-d12	88		70 - 130
Triphenylphosphate	105		70 - 130

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

**Lab Sample ID: MB 570-516463/1-A**  
**Matrix: Water**  
**Analysis Batch: 520104**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 516463**

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	12/20/24 13:21	01/03/25 20:42	1

Eurofins Eaton Analytical Pomona

# QC Sample Results

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

Job ID: 380-127249-1  
SDG: Weekly

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

Lab Sample ID: MB 570-516463/1-A  
Matrix: Water  
Analysis Batch: 520104

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 516463

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2,4,6-Tribromophenol (Surr)	69		33 - 139	12/20/24 13:21	01/03/25 20:42	1
2-Fluorobiphenyl (Surr)	73		33 - 126	12/20/24 13:21	01/03/25 20:42	1
2-Fluorophenol (Surr)	30		12 - 120	12/20/24 13:21	01/03/25 20:42	1
Nitrobenzene-d5 (Surr)	61		36 - 120	12/20/24 13:21	01/03/25 20:42	1
Phenol-d6 (Surr)	17		10 - 120	12/20/24 13:21	01/03/25 20:42	1
p-Terphenyl-d14 (Surr)	77		47 - 131	12/20/24 13:21	01/03/25 20:42	1

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

Lab Sample ID: MB 570-516463/1-A  
Matrix: Water  
Analysis Batch: 518800

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 516463

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
1-Methylnaphthalene	<0.20		0.20	ug/L		12/20/24 13:21	12/30/24 13:34	1
2-Methylnaphthalene	<0.20		0.20	ug/L		12/20/24 13:21	12/30/24 13:34	1
Acenaphthene	<0.20		0.20	ug/L		12/20/24 13:21	12/30/24 13:34	1
Acenaphthylene	<0.20		0.20	ug/L		12/20/24 13:21	12/30/24 13:34	1
Anthracene	<0.20		0.20	ug/L		12/20/24 13:21	12/30/24 13:34	1
Benzo[a]anthracene	<0.20		0.20	ug/L		12/20/24 13:21	12/30/24 13:34	1
Benzo[a]pyrene	<0.20		0.20	ug/L		12/20/24 13:21	12/30/24 13:34	1
Benzo[b]fluoranthene	<0.20		0.20	ug/L		12/20/24 13:21	12/30/24 13:34	1
Benzo[g,h,i]perylene	<0.20		0.20	ug/L		12/20/24 13:21	12/30/24 13:34	1
Benzo[k]fluoranthene	<0.20		0.20	ug/L		12/20/24 13:21	12/30/24 13:34	1
Chrysene	<0.20		0.20	ug/L		12/20/24 13:21	12/30/24 13:34	1
Dibenz(a,h)anthracene	<0.20		0.20	ug/L		12/20/24 13:21	12/30/24 13:34	1
Fluoranthene	<0.20		0.20	ug/L		12/20/24 13:21	12/30/24 13:34	1
Fluorene	<0.20		0.20	ug/L		12/20/24 13:21	12/30/24 13:34	1
Indeno[1,2,3-cd]pyrene	<0.20		0.20	ug/L		12/20/24 13:21	12/30/24 13:34	1
Naphthalene	<0.20		0.20	ug/L		12/20/24 13:21	12/30/24 13:34	1
Phenanthrene	<0.20		0.20	ug/L		12/20/24 13:21	12/30/24 13:34	1
Pyrene	<0.20		0.20	ug/L		12/20/24 13:21	12/30/24 13:34	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2,4,6-Tribromophenol (Surr)	69		28 - 127	12/20/24 13:21	12/30/24 13:34	1
2-Fluorobiphenyl (Surr)	66		31 - 120	12/20/24 13:21	12/30/24 13:34	1
2-Fluorophenol (Surr)	38		17 - 120	12/20/24 13:21	12/30/24 13:34	1
Nitrobenzene-d5 (Surr)	67		27 - 120	12/20/24 13:21	12/30/24 13:34	1
Phenol-d6 (Surr)	18		10 - 120	12/20/24 13:21	12/30/24 13:34	1
p-Terphenyl-d14 (Surr)	85		45 - 120	12/20/24 13:21	12/30/24 13:34	1

Lab Sample ID: LCS 570-516463/2-A  
Matrix: Water  
Analysis Batch: 518800

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 516463

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2-Methylnaphthalene	20.0	16.8		ug/L		84	43 - 120

Eurofins Eaton Analytical Pomona



# QC Sample Results

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

Job ID: 380-127249-1  
SDG: Weekly

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

**Lab Sample ID: LCS 570-516463/2-A**  
**Matrix: Water**  
**Analysis Batch: 518800**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 516463**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	20.0	16.6		ug/L		83	60 - 132
Acenaphthylene	20.0	15.8		ug/L		79	54 - 126
Anthracene	20.0	16.7		ug/L		83	43 - 120
Benzo[a]anthracene	20.0	16.1		ug/L		81	42 - 133
Benzo[a]pyrene	20.0	15.4		ug/L		77	32 - 148
Benzo[b]fluoranthene	20.0	16.5		ug/L		82	42 - 140
Benzo[g,h,i]perylene	20.0	16.9		ug/L		85	1 - 195
Benzo[k]fluoranthene	20.0	17.6		ug/L		88	25 - 146
Chrysene	20.0	16.8		ug/L		84	44 - 140
Dibenz(a,h)anthracene	20.0	17.4		ug/L		87	1 - 200
Fluoranthene	20.0	16.8		ug/L		84	43 - 121
Fluorene	20.0	17.1		ug/L		86	70 - 120
Indeno[1,2,3-cd]pyrene	20.0	23.9		ug/L		119	1 - 151
Naphthalene	20.0	14.0		ug/L		70	36 - 120
Phenanthrene	20.0	17.0		ug/L		85	65 - 120
Pyrene	20.0	17.2		ug/L		86	70 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	86		28 - 127
2-Fluorobiphenyl (Surr)	77		31 - 120
2-Fluorophenol (Surr)	49		17 - 120
Nitrobenzene-d5 (Surr)	70		27 - 120
Phenol-d6 (Surr)	29		10 - 120
p-Terphenyl-d14 (Surr)	84		45 - 120

**Lab Sample ID: LCSD 570-516463/3-A**  
**Matrix: Water**  
**Analysis Batch: 518800**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 516463**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	20.0	13.9		ug/L		69	47 - 120	5	20
2-Methylnaphthalene	20.0	16.1		ug/L		80	43 - 120	5	20
Acenaphthene	20.0	15.4		ug/L		77	60 - 132	8	29
Acenaphthylene	20.0	14.3		ug/L		72	54 - 126	10	45
Anthracene	20.0	15.6		ug/L		78	43 - 120	6	40
Benzo[a]anthracene	20.0	15.3		ug/L		77	42 - 133	5	32
Benzo[a]pyrene	20.0	14.1		ug/L		71	32 - 148	8	43
Benzo[b]fluoranthene	20.0	15.6		ug/L		78	42 - 140	6	43
Benzo[g,h,i]perylene	20.0	15.4		ug/L		77	1 - 195	10	61
Benzo[k]fluoranthene	20.0	16.7		ug/L		83	25 - 146	5	38
Chrysene	20.0	15.3		ug/L		77	44 - 140	9	53
Dibenz(a,h)anthracene	20.0	16.1		ug/L		81	1 - 200	8	75
Fluoranthene	20.0	16.0		ug/L		80	43 - 121	5	40
Fluorene	20.0	16.1		ug/L		81	70 - 120	6	23
Indeno[1,2,3-cd]pyrene	20.0	22.3		ug/L		112	1 - 151	7	60
Naphthalene	20.0	13.1		ug/L		65	36 - 120	7	39
Phenanthrene	20.0	16.0		ug/L		80	65 - 120	6	24
Pyrene	20.0	16.2		ug/L		81	70 - 120	6	30

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# QC Sample Results

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

Job ID: 380-127249-1  
SDG: Weekly

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

**Lab Sample ID: LCSD 570-516463/3-A**  
**Matrix: Water**  
**Analysis Batch: 518800**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 516463**

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	79		28 - 127
2-Fluorobiphenyl (Surr)	73		31 - 120
2-Fluorophenol (Surr)	45		17 - 120
Nitrobenzene-d5 (Surr)	65		27 - 120
Phenol-d6 (Surr)	27		10 - 120
p-Terphenyl-d14 (Surr)	81		45 - 120

**Lab Sample ID: 570-212025-B-1-A MS**  
**Matrix: Water**  
**Analysis Batch: 518800**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 516463**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	%Rec	%Rec Limits
				Result	Qualifier				
1-Methylnaphthalene	<0.20		19.7	14.5		ug/L		74	36 - 120
2-Methylnaphthalene	<0.20		19.7	16.6		ug/L		84	32 - 124
Acenaphthene	<0.20		19.7	13.6		ug/L		69	47 - 145
Acenaphthylene	<0.20		19.7	12.3		ug/L		62	33 - 145
Anthracene	<0.20		19.7	13.0		ug/L		66	27 - 133
Benzo[a]anthracene	<0.20		19.7	13.3		ug/L		68	33 - 143
Benzo[a]pyrene	<0.20		19.7	11.3		ug/L		57	17 - 163
Benzo[b]fluoranthene	<0.20		19.7	13.4		ug/L		68	24 - 159
Benzo[g,h,i]perylene	<0.20		19.7	12.6		ug/L		64	1 - 219
Benzo[k]fluoranthene	<0.20		19.7	13.5		ug/L		68	11 - 162
Chrysene	<0.20		19.7	13.4		ug/L		68	17 - 168
Dibenz(a,h)anthracene	<0.20		19.7	12.9		ug/L		65	1 - 227
Fluoranthene	<0.20		19.7	14.7		ug/L		74	26 - 137
Fluorene	<0.20		19.7	14.3		ug/L		73	59 - 121
Indeno[1,2,3-cd]pyrene	<0.20		19.7	18.6		ug/L		94	1 - 171
Naphthalene	<0.20		19.7	13.9		ug/L		70	21 - 133
Phenanthrene	<0.20		19.7	14.2		ug/L		72	54 - 120
Pyrene	<0.20		19.7	14.5		ug/L		73	52 - 120

Surrogate	MS		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	72		28 - 127
2-Fluorobiphenyl (Surr)	69		31 - 120
2-Fluorophenol (Surr)	41		17 - 120
Nitrobenzene-d5 (Surr)	70		27 - 120
Phenol-d6 (Surr)	26		10 - 120
p-Terphenyl-d14 (Surr)	64		45 - 120

**Lab Sample ID: 570-212025-B-1-B MSD**  
**Matrix: Water**  
**Analysis Batch: 518800**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 516463**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
				Result	Qualifier						
1-Methylnaphthalene	<0.20		19.6	11.2		ug/L		57	36 - 120	26	30
2-Methylnaphthalene	<0.20		19.6	12.6		ug/L		64	32 - 124	27	30
Acenaphthene	<0.20		19.6	12.3		ug/L		63	47 - 145	10	48
Acenaphthylene	<0.20		19.6	11.4		ug/L		58	33 - 145	7	74

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# QC Sample Results

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

Job ID: 380-127249-1  
SDG: Weekly

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

**Lab Sample ID: 570-212025-B-1-B MSD**  
**Matrix: Water**  
**Analysis Batch: 518800**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 516463**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec		RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD		
Anthracene	<0.20		19.6	12.7		ug/L		65	27 - 133	2	66	
Benzo[a]anthracene	<0.20		19.6	13.2		ug/L		68	33 - 143	1	53	
Benzo[a]pyrene	<0.20		19.6	11.5		ug/L		59	17 - 163	1	72	
Benzo[b]fluoranthene	<0.20		19.6	13.0		ug/L		67	24 - 159	3	71	
Benzo[g,h,i]perylene	<0.20		19.6	12.4		ug/L		63	1 - 219	2	97	
Benzo[k]fluoranthene	<0.20		19.6	13.5		ug/L		69	11 - 162	0	63	
Chrysene	<0.20		19.6	13.4		ug/L		68	17 - 168	0	87	
Dibenz(a,h)anthracene	<0.20		19.6	12.6		ug/L		65	1 - 227	2	126	
Fluoranthene	<0.20		19.6	14.4		ug/L		74	26 - 137	2	66	
Fluorene	<0.20		19.6	13.3		ug/L		68	59 - 121	7	38	
Indeno[1,2,3-cd]pyrene	<0.20		19.6	17.8		ug/L		91	1 - 171	5	99	
Naphthalene	<0.20		19.6	10.0		ug/L		51	21 - 133	32	65	
Phenanthrene	<0.20		19.6	13.5		ug/L		69	54 - 120	6	39	
Pyrene	<0.20		19.6	14.4		ug/L		73	52 - 120	1	49	

  

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	69		28 - 127
2-Fluorobiphenyl (Surr)	56		31 - 120
2-Fluorophenol (Surr)	31		17 - 120
Nitrobenzene-d5 (Surr)	50		27 - 120
Phenol-d6 (Surr)	21		10 - 120
p-Terphenyl-d14 (Surr)	62		45 - 120

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

**Lab Sample ID: MB 570-518803/11**  
**Matrix: Water**  
**Analysis Batch: 518803**

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

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
GRO (C6-C10)	<10		10	ug/L			12/30/24 16:09	1

  

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		38 - 134		12/30/24 16:09	1

**Lab Sample ID: LCS 570-518803/1009**  
**Matrix: Water**  
**Analysis Batch: 518803**

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

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec	
		Result	Qualifier				Limits	RPD
Gasoline Range Organics (C4-C13)	400	352		ug/L		88	78 - 120	

  

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		38 - 134

# QC Sample Results

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

Job ID: 380-127249-1  
SDG: Weekly

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

**Lab Sample ID: LCSD 570-518803/10**  
**Matrix: Water**  
**Analysis Batch: 518803**

**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	347		ug/L		87	78 - 120	1	10
<b>Surrogate</b>		<b>%Recovery</b>	<b>LCSD Qualifier</b>				<b>Limits</b>		
4-Bromofluorobenzene (Surr)		97					38 - 134		

**Lab Sample ID: MRL 570-518803/1004**  
**Matrix: Water**  
**Analysis Batch: 518803**

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (C4-C13)	10.0	13.1		ug/L		131	50 - 150		
<b>Surrogate</b>		<b>%Recovery</b>	<b>MRL Qualifier</b>				<b>Limits</b>		
4-Bromofluorobenzene (Surr)		94					38 - 134		

**Lab Sample ID: 380-127091-AC-1 MS**  
**Matrix: Water**  
**Analysis Batch: 518803**

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (C4-C13)	<10		400	313		ug/L		78	68 - 122		
<b>Surrogate</b>		<b>%Recovery</b>		<b>MS Qualifier</b>					<b>Limits</b>		
4-Bromofluorobenzene (Surr)		103							38 - 134		

**Lab Sample ID: 380-127091-AE-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 518803**

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (C4-C13)	<10		400	303		ug/L		76	68 - 122	3	18
<b>Surrogate</b>		<b>%Recovery</b>		<b>MSD Qualifier</b>					<b>Limits</b>		
4-Bromofluorobenzene (Surr)		103							38 - 134		

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

**Lab Sample ID: MB 570-516519/1-A**  
**Matrix: Water**  
**Analysis Batch: 516961**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 516519**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C24)	<25		25	ug/L		12/20/24 15:05	12/22/24 19:08	1
Motor Oil Range Organics [C24-C36]	<25		25	ug/L		12/20/24 15:05	12/22/24 19:08	1
C8-C18	<25		25	ug/L		12/20/24 15:05	12/22/24 19:08	1

Eurofins Eaton Analytical Pomona

# QC Sample Results

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

Job ID: 380-127249-1  
SDG: Weekly

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

Surrogate	MB MB %Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>n</i> -Octacosane (Surr)	109		60 - 130	12/20/24 15:05	12/22/24 19:08	1

**Lab Sample ID: LCS 570-516519/2-A**  
**Matrix: Water**  
**Analysis Batch: 516961**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 516519**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
C10-C28	1600	1270		ug/L		80	56 - 127

Surrogate	LCS LCS %Recovery	Qualifier	Limits
<i>n</i> -Octacosane (Surr)	108		60 - 130

**Lab Sample ID: LCSD 570-516519/3-A**  
**Matrix: Water**  
**Analysis Batch: 516961**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 516519**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD Limit
C10-C28	1600	1280		ug/L		80	56 - 127	1 23

Surrogate	LCSD LCSD %Recovery	Qualifier	Limits
<i>n</i> -Octacosane (Surr)	114		60 - 130

**Lab Sample ID: MRL 570-516519/4-A**  
**Matrix: Water**  
**Analysis Batch: 517214**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 516519**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
C10-C28	0.0200	<0.020		mg/L		98	50 - 150

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

**Lab Sample ID: 380-126982-B-1-A MS**  
**Matrix: Water**  
**Analysis Batch: 516961**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 516519**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
C10-C28	<25		1640	1320		ug/L		81	70 - 130

Surrogate	MS MS %Recovery	Qualifier	Limits
<i>n</i> -Octacosane (Surr)	108		60 - 130

**Lab Sample ID: 380-126982-B-1-B MSD**  
**Matrix: Water**  
**Analysis Batch: 516961**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 516519**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD Limit
C10-C28	<25		1640	1340		ug/L		81	70 - 130	1 20

# QC Sample Results

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

Job ID: 380-127249-1  
SDG: Weekly

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

Lab Sample ID: 380-126982-B-1-B MSD  
Matrix: Water  
Analysis Batch: 516961

Client Sample ID: Matrix Spike Duplicate  
Prep Type: Total/NA  
Prep Batch: 516519

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

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# QC Association Summary

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

Job ID: 380-127249-1  
SDG: Weekly

## GC/MS Semi VOA

### Prep Batch: 125081

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-127249-1	HALAWA SHAFT VIEWING POOL	Total/NA	Water	525.2	
MB 380-125081/23-A	Method Blank	Total/NA	Water	525.2	
LCS 380-125081/25-A	Lab Control Sample	Total/NA	Water	525.2	
MRL 380-125081/24-A	Lab Control Sample	Total/NA	Water	525.2	
885-17344-R-3-A MS	Matrix Spike	Total/NA	Water	525.2	
380-126888-O-1-A DU	Duplicate	Total/NA	Water	525.2	

### Analysis Batch: 125336

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-127249-1	HALAWA SHAFT VIEWING POOL	Total/NA	Water	525.2	125081
MB 380-125081/23-A	Method Blank	Total/NA	Water	525.2	125081
LCS 380-125081/25-A	Lab Control Sample	Total/NA	Water	525.2	125081
MRL 380-125081/24-A	Lab Control Sample	Total/NA	Water	525.2	125081
885-17344-R-3-A MS	Matrix Spike	Total/NA	Water	525.2	125081
380-126888-O-1-A DU	Duplicate	Total/NA	Water	525.2	125081

### Prep Batch: 516463

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-127249-1	HALAWA SHAFT VIEWING POOL	Total/NA	Water	625.1	
MB 570-516463/1-A	Method Blank	Total/NA	Water	625.1	
LCS 570-516463/2-A	Lab Control Sample	Total/NA	Water	625.1	
LCSD 570-516463/3-A	Lab Control Sample Dup	Total/NA	Water	625.1	
570-212025-B-1-A MS	Matrix Spike	Total/NA	Water	625.1	
570-212025-B-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	625.1	

### Analysis Batch: 518800

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-127249-1	HALAWA SHAFT VIEWING POOL	Total/NA	Water	625.1 SIM	516463
MB 570-516463/1-A	Method Blank	Total/NA	Water	625.1 SIM	516463
LCS 570-516463/2-A	Lab Control Sample	Total/NA	Water	625.1 SIM	516463
LCSD 570-516463/3-A	Lab Control Sample Dup	Total/NA	Water	625.1 SIM	516463
570-212025-B-1-A MS	Matrix Spike	Total/NA	Water	625.1 SIM	516463
570-212025-B-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	625.1 SIM	516463

### Analysis Batch: 520104

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-127249-1	HALAWA SHAFT VIEWING POOL	Total/NA	Water	625.1	516463
MB 570-516463/1-A	Method Blank	Total/NA	Water	625.1	516463

## GC VOA

### Analysis Batch: 518803

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-127249-1	HALAWA SHAFT VIEWING POOL	Total/NA	Water	8015B GRO LL	
380-127249-2	TRIP BLANK	Total/NA	Water	8015B GRO LL	
MB 570-518803/11	Method Blank	Total/NA	Water	8015B GRO LL	
LCS 570-518803/1009	Lab Control Sample	Total/NA	Water	8015B GRO LL	
LCSD 570-518803/10	Lab Control Sample Dup	Total/NA	Water	8015B GRO LL	
MRL 570-518803/1004	Lab Control Sample	Total/NA	Water	8015B GRO LL	
380-127091-AC-1 MS	Matrix Spike	Total/NA	Water	8015B GRO LL	
380-127091-AE-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8015B GRO LL	

# QC Association Summary

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

Job ID: 380-127249-1  
SDG: Weekly

## GC Semi VOA

### Prep Batch: 516519

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-127249-1 - RA	HALAWA SHAFT VIEWING POOL	Total/NA	Water	3510C	
MB 570-516519/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-516519/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-516519/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MRL 570-516519/4-A	Lab Control Sample	Total/NA	Water	3510C	
380-126982-B-1-A MS	Matrix Spike	Total/NA	Water	3510C	
380-126982-B-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	3510C	

### Analysis Batch: 516961

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 570-516519/1-A	Method Blank	Total/NA	Water	8015B	516519
LCS 570-516519/2-A	Lab Control Sample	Total/NA	Water	8015B	516519
LCSD 570-516519/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	516519
380-126982-B-1-A MS	Matrix Spike	Total/NA	Water	8015B	516519
380-126982-B-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	8015B	516519

### Analysis Batch: 517214

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-127249-1 - RA	HALAWA SHAFT VIEWING POOL	Total/NA	Water	8015B	516519
MRL 570-516519/4-A	Lab Control Sample	Total/NA	Water	8015B	516519

# Lab Chronicle

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

Job ID: 380-127249-1  
 SDG: Weekly

**Client Sample ID: HALAWA SHAFT VIEWING POOL**

**Lab Sample ID: 380-127249-1**

Date Collected: 12/17/24 10:00

Matrix: Water

Date Received: 12/19/24 10:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			125081	KRD3	EA POM	12/23/24 10:15
Total/NA	Analysis	525.2		1	125336	Q8LA	EA POM	12/26/24 18:42
Total/NA	Prep	625.1			516463	UD4J	EET CAL 4	12/20/24 13:43
Total/NA	Analysis	625.1		1	520104	AX7Z	EET CAL 4	01/03/25 21:29
Total/NA	Prep	625.1			516463	UD4J	EET CAL 4	12/20/24 13:43
Total/NA	Analysis	625.1 SIM		1	518800	CG	EET CAL 4	12/30/24 20:16
Total/NA	Analysis	8015B GRO LL		1	518803	A9VE	EET CAL 4	12/30/24 21:15
Total/NA	Prep	3510C	RA		516519	TVD6	EET CAL 4	12/20/24 15:05
Total/NA	Analysis	8015B	RA	1	517214	H6FE	EET CAL 4	12/23/24 14:11

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 380-127249-2**

Date Collected: 12/17/24 10:00

Matrix: Water

Date Received: 12/19/24 10:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015B GRO LL		1	518803	A9VE	EET CAL 4	12/30/24 19:57

**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: 380-127249-1  
 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	11-16-25
Arkansas DEQ	State	88-01672	07-02-25
California	Los Angeles County Sanitation Districts	9257304	07-31-26
California	State	3082	07-31-25
Kansas	NELAP	E-10420	07-31-25
Nevada	State	CA00111	07-31-25

# Accreditation/Certification Summary

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

Job ID: 380-127249-1  
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	525-23-159-97150	06-08-26
Washington	State	C916	10-11-25

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# Method Summary

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

Job ID: 380-127249-1  
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: 380-127249-1  
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>
380-127249-1	HALAWA SHAFT VIEWING POOL	Water	12/17/24 10:00	12/19/24 10:17
380-127249-2	TRIP BLANK	Water	12/17/24 10:00	12/19/24 10:17

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<b>Client Information</b>		Sampler: Ryan Greer		Lab PM: Arada, Rachelle		Carrier Tracking No(s):		COC No: 380-28005-2757 1	
Client Contact: Dr. Ron Fenstermacher		Phone: 808-748-5640		E-Mail: Rachelle.Arada@et.eurofins.com		State of Origin: HI		Page: Page 1 of 1	
Company: City & County of Honolulu		PWSID:		Due Date Requested:		Analysis Requested		Job #: Preservation Codes: R - NaThioSO4 RA - NaThio/HCl Q - Na2SO3 QA - Na2SO3/HCl Y - Trizma I - NH4 Acetate	
Address: 630 South Beretania Street Chemistry Lab Honolulu		TAT Requested (days):		Compliance Project: Δ Yes Δ No		Field Filtered Sample (Yes or No)		Other:	
State, Zip: HI, 96843		PO #: C20525101 exp 05312023		WO #:		Perform MS/MSD (Yes or No)		Total Number of Containers	
Phone: 808-748-5091(Tel)		Email: RFENSTEMACHER@hbws.org		Project #: 38001111		626.1, 626.1, SIM		Special Instructions/Note:	
Site: Hawaii		Project Name: RED-HILL/HBWS Sites Event Desc: RUSH Weekly Red Hill		SSOW#:		626.1, 626.1, SIM		380-127249 COC	
<b>Sample Identification</b>		Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=on-site, BT=Trace, PA=Air)	
Halawa Shaft Viewing Pool		12/17/24		1000		G		Water	
TRIP BLANK		12/17/24		1000		G		Water	
<b>Possible Hazard Identification</b>		<input type="checkbox"/> Non-Hazard		<input type="checkbox"/> Flammable		<input type="checkbox"/> Skin Irritant		<input type="checkbox"/> Radiological	
Deliverable Requested I, II, III, IV, Other (specify)		<input type="checkbox"/> Poison B		<input type="checkbox"/> Unknown		<input type="checkbox"/> Unknown		<input type="checkbox"/> Radiological	
Empty Kit Relinquished by		Date/Time: 12/18/24 1300		Company: HBWS		Received by: [Signature]		Method of Shipment: FEDEX 2	
Relinquished by		Date/Time: [Redacted]		Company: [Redacted]		Received by: [Redacted]		Date/Time: 12/19/24 10:17	
Relinquished by		Date/Time: [Redacted]		Company: [Redacted]		Received by: [Redacted]		Date/Time: [Redacted]	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.		Custody Seal No.		Custody Seal No.		Custody Seal No.	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.		Custody Seal No.		Custody Seal No.		Custody Seal No.	



**Chain of Custody Record**



<b>Client Information (Sub Contract Lab)</b>		Lab P/N:	Arada, Rachelle	Carrier Tracking No(s):	N/A	IOC No:	380-178496-1
<b>Shipping/Receiving</b>		Phone:	N/A	State of Origin:	Hawaii	Page:	Page 1 of 1
<b>Eurofins Environment Testing Southwest</b>		E-Mail:	Rachelle.Arada@et.eurofins.com	Accreditations Required (See note):	State Hawaii	Job #:	380-127249-1
Address:		2841 Dow Avenue, Suite 100,		Preservation Codes:			
City:		Tustin		Analysis Requested			
State, Zip:		CA, 92780		625.1625 Prep (MOD) Tentatively Identified			
Phone:		714-895-5494(Tel)		625.1 SIM/25 Prep (MOD) Extended PAH List			
Email:		N/A		8016B_GRO_LL/6503C (MOD) GRO			
Project Name:		RED-HILL		8016B_DRO_LL_CS/519C_LL HNL Ranges: C10-C24/C26/C28-C18			
Site:		Honolulu BWS Sites		Perform MS/MSD (Yes or No)			
Project #:		38001111		Field Filtered Sample (Yes or No)			
SSOW#:		N/A		Total Number of Containers			
Due Date Requested:		1/6/2025		TAT Requested (days):		N/A	
Sample Date		12/17/24		Sample Time		10:00 Hawaiian	
Sample Type (C=Comp, G=grab)		G		Matrix (V=volatile, S=solid, O=onwater, A=air)		Water	
Sample Date		12/17/24		Sample Time		10:00 Hawaiian	
Sample Type (C=Comp, G=grab)		G		Matrix (V=volatile, S=solid, O=onwater, A=air)		Water	
Sample Identification Client ID (Lab ID)		HALAWA SHAFT VIEWING POOL (380-127249-1)		Special Instructions/Note:		MRLs are needed. Confirm any nls >RL	
Sample Identification Client ID (Lab ID)		TRIP BLANK (380-127249-2)		Special Instructions/Note:		MRLs are needed.	

380-127249 Chain of Custody

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

**Possible Hazard Identification**  
 Unconfirmed

Deliverable Requested: I, II, III, IV Other (specify)  Return To Client  Disposal By Lab  Archive For  Months

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

Relinquished by: *Ken* Date: *12/20/24* Company: *ETA* Received by: *AK* Date/Time: *11:10* Company: *ETA*

Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_ Received by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_ Received by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_

Custody Seals Intact: \_\_\_\_\_ Custody Seal No. *04/14 SC14*

Ver: 10/10/2024



## Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-127249-1

SDG Number: Weekly

**Login Number: 127249**

**List Number: 1**

**Creator: Ngo, Theodore**

**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: 380-127249-1

SDG Number: Weekly

**Login Number: 127249**

**List Number: 2**

**Creator: Khana, Piyush**

**List Source: Eurofins Calscience**

**List Creation: 12/20/24 01:09 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.	True	Seal present with no number.
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.4
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.	N/A	

