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# ANALYTICAL REPORT

## PREPARED FOR

Attn: Mr. Erwin Kawata  
City & County of Honolulu  
630 South Beretania Street  
Public Service Bldg. Room 310  
Honolulu, Hawaii 96843

Generated 10/21/2024 10:59:22 AM

## JOB DESCRIPTION

RED-HILL  
Weekly

## JOB NUMBER

380-116207-1

# 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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Authorized for release by  
Rachelle Arada, Project Manager  
[Rachelle.Arada@et.eurofinsus.com](mailto:Rachelle.Arada@et.eurofinsus.com)  
(626)386-1106



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# Definitions/Glossary

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

Job ID: 380-116207-1  
SDG: Weekly

## Qualifiers

### GC/MS Semi VOA

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

### GC/MS Semi VOA TICs

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

## Glossary

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

# Case Narrative

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

Job ID: 380-116207-1

**Job ID: 380-116207-1**

**Eurofins Eaton Analytical Pomona**

## Job Narrative 380-116207-1

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

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

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

### Receipt

The samples were received on 10/4/2024 10:06 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.9°C.

### GC/MS Semi VOA

Method 625.1: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with BATCH 489158, EPA METHOD 625 SIM

Method 625.1\_SIM: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with BATCH 489158, EPA METHOD 625 SIM

Method 625.1\_SIM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 570-489158 and analytical batch 570-490947 recovered outside control limits for the following analytes: 1-Methylnaphthalene, 2-Methylnaphthalene, Acenaphthene, Fluorene and Phenanthrene.

Method 625.1\_SIM: The following analyte(s) recovered outside control limits for the LCS associated with preparation batch 570-489158 and analytical batch 570-491289: Fluorene. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

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

Method 8015B\_DRO\_LL\_CS: The following sample was re-prepared outside of preparation holding time due to confirm the previous result: Halawa Shaft Viewing Pool (380-116207-1). Data excluded due to this.

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

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# Detection Summary

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

Job ID: 380-116207-1  
SDG: Weekly

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**Client Sample ID: Halawa Shaft Viewing Pool**

**Lab Sample ID: 380-116207-1**

No Detections.

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**Client Sample ID: TB: Halawa Shaft Viewing Pool**

**Lab Sample ID: 380-116207-2**

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: 380-116207-1  
SDG: Weekly

**Client Sample ID: Halawa Shaft Viewing Pool**

**Lab Sample ID: 380-116207-1**

Date Collected: 10/02/24 10:00

Matrix: Water

Date Received: 10/04/24 10:06

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.097		0.097	ug/L		10/07/24 13:15	10/08/24 15:38	1
2,4'-DDD	<0.097		0.097	ug/L		10/07/24 13:15	10/08/24 15:38	1
2,4'-DDE	<0.097		0.097	ug/L		10/07/24 13:15	10/08/24 15:38	1
2,4'-DDT	<0.097		0.097	ug/L		10/07/24 13:15	10/08/24 15:38	1
2,4-Dinitrotoluene	<0.097		0.097	ug/L		10/07/24 13:15	10/08/24 15:38	1
2,6-Dinitrotoluene	<0.097		0.097	ug/L		10/07/24 13:15	10/08/24 15:38	1
2-Methylnaphthalene	<0.097		0.097	ug/L		10/07/24 13:15	10/08/24 15:38	1
4,4'-DDD	<0.097		0.097	ug/L		10/07/24 13:15	10/08/24 15:38	1
4,4'-DDE	<0.097		0.097	ug/L		10/07/24 13:15	10/08/24 15:38	1
4,4'-DDT	<0.097		0.097	ug/L		10/07/24 13:15	10/08/24 15:38	1
Acenaphthene	<0.097		0.097	ug/L		10/07/24 13:15	10/08/24 15:38	1
Acenaphthylene	<0.097		0.097	ug/L		10/07/24 13:15	10/08/24 15:38	1
Acetochlor	<0.097		0.097	ug/L		10/07/24 13:15	10/08/24 15:38	1
Alachlor	<0.048		0.048	ug/L		10/07/24 13:15	10/08/24 15:38	1
alpha-BHC	<0.097		0.097	ug/L		10/07/24 13:15	10/08/24 15:38	1
alpha-Chlordane	<0.048		0.048	ug/L		10/07/24 13:15	10/08/24 15:38	1
Anthracene	<0.019		0.019	ug/L		10/07/24 13:15	10/08/24 15:38	1
Atrazine	<0.048		0.048	ug/L		10/07/24 13:15	10/08/24 15:38	1
Benz(a)anthracene	<0.048		0.048	ug/L		10/07/24 13:15	10/08/24 15:38	1
Benzo[a]pyrene	<0.019		0.019	ug/L		10/07/24 13:15	10/08/24 15:38	1
Benzo[b]fluoranthene	<0.019		0.019	ug/L		10/07/24 13:15	10/08/24 15:38	1
Benzo[g,h,i]perylene	<0.048		0.048	ug/L		10/07/24 13:15	10/08/24 15:38	1
Benzo[k]fluoranthene	<0.019		0.019	ug/L		10/07/24 13:15	10/08/24 15:38	1
beta-BHC	<0.097		0.097	ug/L		10/07/24 13:15	10/08/24 15:38	1
Bis(2-ethylhexyl) phthalate	<0.58		0.58	ug/L		10/07/24 13:15	10/08/24 15:38	1
Bromacil	<0.097		0.097	ug/L		10/07/24 13:15	10/08/24 15:38	1
Butachlor	<0.048		0.048	ug/L		10/07/24 13:15	10/08/24 15:38	1
Butylbenzylphthalate	<0.48		0.48	ug/L		10/07/24 13:15	10/08/24 15:38	1
Chlorobenzilate	<0.097		0.097	ug/L		10/07/24 13:15	10/08/24 15:38	1
Chloroneb	<0.097		0.097	ug/L		10/07/24 13:15	10/08/24 15:38	1
Chlorothalonil (Draconil, Bravo)	<0.097		0.097	ug/L		10/07/24 13:15	10/08/24 15:38	1
Chlorpyrifos	<0.048		0.048	ug/L		10/07/24 13:15	10/08/24 15:38	1
Chrysene	<0.019		0.019	ug/L		10/07/24 13:15	10/08/24 15:38	1
delta-BHC	<0.097		0.097	ug/L		10/07/24 13:15	10/08/24 15:38	1
Di(2-ethylhexyl)adipate	<0.58		0.58	ug/L		10/07/24 13:15	10/08/24 15:38	1
Dibenz(a,h)anthracene	<0.048		0.048	ug/L		10/07/24 13:15	10/08/24 15:38	1
Diclorvos (DDVP)	<0.048		0.048	ug/L		10/07/24 13:15	10/08/24 15:38	1
Dieldrin	<0.0097		0.0097	ug/L		10/07/24 13:15	10/08/24 15:38	1
Diethylphthalate	<0.48		0.48	ug/L		10/07/24 13:15	10/08/24 15:38	1
Dimethylphthalate	<0.48		0.48	ug/L		10/07/24 13:15	10/08/24 15:38	1
Di-n-butyl phthalate	<0.97		0.97	ug/L		10/07/24 13:15	10/08/24 15:38	1
Di-n-octyl phthalate	<0.097	*1	0.097	ug/L		10/07/24 13:15	10/08/24 15:38	1
Endosulfan I (Alpha)	<0.097		0.097	ug/L		10/07/24 13:15	10/08/24 15:38	1
Endosulfan II (Beta)	<0.097		0.097	ug/L		10/07/24 13:15	10/08/24 15:38	1
Endosulfan sulfate	<0.097		0.097	ug/L		10/07/24 13:15	10/08/24 15:38	1
Endrin	<0.0097		0.0097	ug/L		10/07/24 13:15	10/08/24 15:38	1
Endrin aldehyde	<0.097		0.097	ug/L		10/07/24 13:15	10/08/24 15:38	1
EPTC	<0.097		0.097	ug/L		10/07/24 13:15	10/08/24 15:38	1
Fluoranthene	<0.097		0.097	ug/L		10/07/24 13:15	10/08/24 15:38	1

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# Client Sample Results

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

Job ID: 380-116207-1  
SDG: Weekly

**Client Sample ID: Halawa Shaft Viewing Pool**

**Lab Sample ID: 380-116207-1**

Date Collected: 10/02/24 10:00

Matrix: Water

Date Received: 10/04/24 10:06

**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		10/07/24 13:15	10/08/24 15:38	1
gamma-Chlordane	<0.048		0.048	ug/L		10/07/24 13:15	10/08/24 15:38	1
Heptachlor	<0.0097		0.0097	ug/L		10/07/24 13:15	10/08/24 15:38	1
Heptachlor epoxide (isomer B)	<0.0097	^3+	0.0097	ug/L		10/07/24 13:15	10/08/24 15:38	1
Hexachlorobenzene	<0.048		0.048	ug/L		10/07/24 13:15	10/08/24 15:38	1
Hexachlorocyclopentadiene	<0.048		0.048	ug/L		10/07/24 13:15	10/08/24 15:38	1
Indeno[1,2,3-cd]pyrene	<0.048		0.048	ug/L		10/07/24 13:15	10/08/24 15:38	1
Isophorone	<0.097		0.097	ug/L		10/07/24 13:15	10/08/24 15:38	1
Lindane	<0.0097		0.0097	ug/L		10/07/24 13:15	10/08/24 15:38	1
Malathion	<0.097		0.097	ug/L		10/07/24 13:15	10/08/24 15:38	1
Methoxychlor	<0.048		0.048	ug/L		10/07/24 13:15	10/08/24 15:38	1
Metolachlor	<0.048		0.048	ug/L		10/07/24 13:15	10/08/24 15:38	1
Molinate	<0.097		0.097	ug/L		10/07/24 13:15	10/08/24 15:38	1
Naphthalene	<0.097		0.097	ug/L		10/07/24 13:15	10/08/24 15:38	1
Parathion	<0.097		0.097	ug/L		10/07/24 13:15	10/08/24 15:38	1
Pendimethalin (Penoxaline)	<0.097		0.097	ug/L		10/07/24 13:15	10/08/24 15:38	1
Phenanthrene	<0.039		0.039	ug/L		10/07/24 13:15	10/08/24 15:38	1
Propachlor	<0.048		0.048	ug/L		10/07/24 13:15	10/08/24 15:38	1
Pyrene	<0.048		0.048	ug/L		10/07/24 13:15	10/08/24 15:38	1
Simazine	<0.048		0.048	ug/L		10/07/24 13:15	10/08/24 15:38	1
Terbacil	<0.097		0.097	ug/L		10/07/24 13:15	10/08/24 15:38	1
Terbutylazine	<0.097		0.097	ug/L		10/07/24 13:15	10/08/24 15:38	1
Thiobencarb	<0.097		0.097	ug/L		10/07/24 13:15	10/08/24 15:38	1
Total Permethrin (mixed isomers)	<0.19		0.19	ug/L		10/07/24 13:15	10/08/24 15:38	1
trans-Nonachlor	<0.048		0.048	ug/L		10/07/24 13:15	10/08/24 15:38	1
Trifluralin	<0.097		0.097	ug/L		10/07/24 13:15	10/08/24 15:38	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
9-Octadecenamide, (Z)-	0.68	T J N	ug/L		7.95	301-02-0	10/07/24 13:15	10/08/24 15:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	99		70 - 130	10/07/24 13:15	10/08/24 15:38	1
Perylene-d12	91		70 - 130	10/07/24 13:15	10/08/24 15:38	1
Triphenylphosphate	100		70 - 130	10/07/24 13:15	10/08/24 15:38	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.20	*1	0.20	ug/L		10/08/24 15:24	10/13/24 12:49	1
2-Methylnaphthalene	<0.20	*1	0.20	ug/L		10/08/24 15:24	10/13/24 12:49	1
Acenaphthene	<0.20	*1	0.20	ug/L		10/08/24 15:24	10/13/24 12:49	1
Acenaphthylene	<0.20		0.20	ug/L		10/08/24 15:24	10/13/24 12:49	1
Anthracene	<0.20		0.20	ug/L		10/08/24 15:24	10/13/24 12:49	1
Benzo[a]anthracene	<0.20		0.20	ug/L		10/08/24 15:24	10/13/24 12:49	1
Benzo[a]pyrene	<0.20		0.20	ug/L		10/08/24 15:24	10/13/24 12:49	1
Benzo[b]fluoranthene	<0.20		0.20	ug/L		10/08/24 15:24	10/13/24 12:49	1
Benzo[g,h,i]perylene	<0.20		0.20	ug/L		10/08/24 15:24	10/13/24 12:49	1
Benzo[k]fluoranthene	<0.20		0.20	ug/L		10/08/24 15:24	10/13/24 12:49	1
Chrysene	<0.20		0.20	ug/L		10/08/24 15:24	10/13/24 12:49	1
Dibenz(a,h)anthracene	<0.20		0.20	ug/L		10/08/24 15:24	10/13/24 12:49	1
Fluoranthene	<0.20		0.20	ug/L		10/08/24 15:24	10/13/24 12:49	1

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# Client Sample Results

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

Job ID: 380-116207-1  
SDG: Weekly

**Client Sample ID: Halawa Shaft Viewing Pool**

**Lab Sample ID: 380-116207-1**

Date Collected: 10/02/24 10:00

Matrix: Water

Date Received: 10/04/24 10:06

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	<0.20	*- *1	0.20	ug/L		10/08/24 15:24	10/13/24 12:49	1
Indeno[1,2,3-cd]pyrene	<0.20		0.20	ug/L		10/08/24 15:24	10/13/24 12:49	1
Naphthalene	<0.20		0.20	ug/L		10/08/24 15:24	10/13/24 12:49	1
Phenanthrene	<0.20	*1	0.20	ug/L		10/08/24 15:24	10/13/24 12:49	1
Pyrene	<0.20		0.20	ug/L		10/08/24 15:24	10/13/24 12:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	90		28 - 127	10/08/24 15:24	10/13/24 12:49	1
2-Fluorobiphenyl (Surr)	54		31 - 120	10/08/24 15:24	10/13/24 12:49	1
2-Fluorophenol (Surr)	46		17 - 120	10/08/24 15:24	10/13/24 12:49	1
Nitrobenzene-d5 (Surr)	54		27 - 120	10/08/24 15:24	10/13/24 12:49	1
Phenol-d6 (Surr)	30		10 - 120	10/08/24 15:24	10/13/24 12:49	1
p-Terphenyl-d14 (Surr)	62		45 - 120	10/08/24 15:24	10/13/24 12:49	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	10/08/24 15:24	10/17/24 20:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	81		33 - 139	10/08/24 15:24	10/17/24 20:35	1
2-Fluorobiphenyl (Surr)	71		33 - 126	10/08/24 15:24	10/17/24 20:35	1
2-Fluorophenol (Surr)	49		12 - 120	10/08/24 15:24	10/17/24 20:35	1
Nitrobenzene-d5 (Surr)	75		36 - 120	10/08/24 15:24	10/17/24 20:35	1
Phenol-d6 (Surr)	30		10 - 120	10/08/24 15:24	10/17/24 20:35	1
p-Terphenyl-d14 (Surr)	89		47 - 131	10/08/24 15:24	10/17/24 20:35	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	<10		10	ug/L			10/15/24 12:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	65		38 - 134		10/15/24 12:45	1

**Client Sample ID: TB: Halawa Shaft Viewing Pool**

**Lab Sample ID: 380-116207-2**

Date Collected: 10/02/24 10:00

Matrix: Water

Date Received: 10/04/24 10:06

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	<10		10	ug/L			10/15/24 12:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	61		38 - 134		10/15/24 12:22	1

# Action Limit Summary

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

Job ID: 380-116207-1  
SDG: Weekly

**Client Sample ID: Halawa Shaft Viewing Pool**

**Lab Sample ID: 380-116207-1**

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

# Surrogate Summary

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

Job ID: 380-116207-1  
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)
380-115918-A-1-B MS	Matrix Spike	98	88	106
380-115918-A-1-C MSD	Matrix Spike Duplicate	99	88	105
380-116207-1	Halawa Shaft Viewing Pool	99	91	100
LCS 380-112062/23-A	Lab Control Sample	97	84	107
LCSD 380-112062/24-A	Lab Control Sample Dup	99	87	107
MB 380-112062/21-A	Method Blank	98	80	101
MRL 380-112062/22-A	Lab Control Sample	98	75	101

**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)
380-116207-1	Halawa Shaft Viewing Pool	81	71	49	75	30	89
MB 570-489158/1-A	Method Blank	71	65	49	65	29	78

**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)
380-116207-1	Halawa Shaft Viewing Pool	90	54	46	54	30	62
LCS 570-489158/2-A - RA	Lab Control Sample	65	41	52	35	37	61
LCSD 570-489158/3-A	Lab Control Sample Dup	86	54	60	47	42	63
MB 570-489158/1-A	Method Blank	74	44	42	45	29	53

**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: 380-116207-1  
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)
380-116207-1	Halawa Shaft Viewing Pool	65
380-116207-2	TB: Halawa Shaft Viewing Pool	61
380-117186-C-3 MS	Matrix Spike	74
380-117186-C-3 MSD	Matrix Spike Duplicate	77
LCS 570-491567/4	Lab Control Sample	78
LCSD 570-491567/5	Lab Control Sample Dup	78
MB 570-491567/6	Method Blank	64
MRL 570-491567/3	Lab Control Sample	71

### Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

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

# QC Sample Results

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

Job ID: 380-116207-1  
 SDG: Weekly

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

**Lab Sample ID: MB 380-112062/21-A**  
**Matrix: Water**  
**Analysis Batch: 112290**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 112062**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.099		0.099	ug/L		10/07/24 12:10	10/08/24 14:57	1
2,4'-DDD	<0.099		0.099	ug/L		10/07/24 12:10	10/08/24 14:57	1
2,4'-DDE	<0.099		0.099	ug/L		10/07/24 12:10	10/08/24 14:57	1
2,4'-DDT	<0.099		0.099	ug/L		10/07/24 12:10	10/08/24 14:57	1
2,4-Dinitrotoluene	<0.099		0.099	ug/L		10/07/24 12:10	10/08/24 14:57	1
2,6-Dinitrotoluene	<0.099		0.099	ug/L		10/07/24 12:10	10/08/24 14:57	1
2-Methylnaphthalene	<0.099		0.099	ug/L		10/07/24 12:10	10/08/24 14:57	1
4,4'-DDD	<0.099		0.099	ug/L		10/07/24 12:10	10/08/24 14:57	1
4,4'-DDE	<0.099		0.099	ug/L		10/07/24 12:10	10/08/24 14:57	1
4,4'-DDT	<0.099		0.099	ug/L		10/07/24 12:10	10/08/24 14:57	1
Acenaphthene	<0.099		0.099	ug/L		10/07/24 12:10	10/08/24 14:57	1
Acenaphthylene	<0.099		0.099	ug/L		10/07/24 12:10	10/08/24 14:57	1
Acetochlor	<0.099		0.099	ug/L		10/07/24 12:10	10/08/24 14:57	1
Alachlor	<0.050		0.050	ug/L		10/07/24 12:10	10/08/24 14:57	1
alpha-BHC	<0.099		0.099	ug/L		10/07/24 12:10	10/08/24 14:57	1
alpha-Chlordane	<0.050		0.050	ug/L		10/07/24 12:10	10/08/24 14:57	1
Anthracene	<0.020		0.020	ug/L		10/07/24 12:10	10/08/24 14:57	1
Atrazine	<0.050		0.050	ug/L		10/07/24 12:10	10/08/24 14:57	1
Benz(a)anthracene	<0.050		0.050	ug/L		10/07/24 12:10	10/08/24 14:57	1
Benzo[a]pyrene	<0.020		0.020	ug/L		10/07/24 12:10	10/08/24 14:57	1
Benzo[b]fluoranthene	<0.020		0.020	ug/L		10/07/24 12:10	10/08/24 14:57	1
Benzo[g,h,i]perylene	<0.050		0.050	ug/L		10/07/24 12:10	10/08/24 14:57	1
Benzo[k]fluoranthene	<0.020		0.020	ug/L		10/07/24 12:10	10/08/24 14:57	1
beta-BHC	<0.099		0.099	ug/L		10/07/24 12:10	10/08/24 14:57	1
Bis(2-ethylhexyl) phthalate	<0.60		0.60	ug/L		10/07/24 12:10	10/08/24 14:57	1
Bromacil	<0.099		0.099	ug/L		10/07/24 12:10	10/08/24 14:57	1
Butachlor	<0.050		0.050	ug/L		10/07/24 12:10	10/08/24 14:57	1
Butylbenzylphthalate	<0.50		0.50	ug/L		10/07/24 12:10	10/08/24 14:57	1
Chlorobenzilate	<0.099		0.099	ug/L		10/07/24 12:10	10/08/24 14:57	1
Chloroneb	<0.099		0.099	ug/L		10/07/24 12:10	10/08/24 14:57	1
Chlorothalonil (Draconil, Bravo)	<0.099		0.099	ug/L		10/07/24 12:10	10/08/24 14:57	1
Chlorpyrifos	<0.050		0.050	ug/L		10/07/24 12:10	10/08/24 14:57	1
Chrysene	<0.020		0.020	ug/L		10/07/24 12:10	10/08/24 14:57	1
delta-BHC	<0.099		0.099	ug/L		10/07/24 12:10	10/08/24 14:57	1
Di(2-ethylhexyl)adipate	<0.60		0.60	ug/L		10/07/24 12:10	10/08/24 14:57	1
Dibenz(a,h)anthracene	<0.050		0.050	ug/L		10/07/24 12:10	10/08/24 14:57	1
Diclorvos (DDVP)	<0.050		0.050	ug/L		10/07/24 12:10	10/08/24 14:57	1
Dieldrin	<0.0099		0.0099	ug/L		10/07/24 12:10	10/08/24 14:57	1
Diethylphthalate	<0.50		0.50	ug/L		10/07/24 12:10	10/08/24 14:57	1
Dimethylphthalate	<0.50		0.50	ug/L		10/07/24 12:10	10/08/24 14:57	1
Di-n-butyl phthalate	<0.99		0.99	ug/L		10/07/24 12:10	10/08/24 14:57	1
Di-n-octyl phthalate	<0.099		0.099	ug/L		10/07/24 12:10	10/08/24 14:57	1
Endosulfan I (Alpha)	<0.099		0.099	ug/L		10/07/24 12:10	10/08/24 14:57	1
Endosulfan II (Beta)	<0.099		0.099	ug/L		10/07/24 12:10	10/08/24 14:57	1
Endosulfan sulfate	<0.099		0.099	ug/L		10/07/24 12:10	10/08/24 14:57	1
Endrin	<0.0099		0.0099	ug/L		10/07/24 12:10	10/08/24 14:57	1
Endrin aldehyde	<0.099		0.099	ug/L		10/07/24 12:10	10/08/24 14:57	1
EPTC	<0.099		0.099	ug/L		10/07/24 12:10	10/08/24 14:57	1

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# QC Sample Results

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

Job ID: 380-116207-1  
SDG: Weekly

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

**Lab Sample ID: MB 380-112062/21-A**  
**Matrix: Water**  
**Analysis Batch: 112290**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 112062**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	<0.099		0.099	ug/L		10/07/24 12:10	10/08/24 14:57	1
Fluorene	<0.050		0.050	ug/L		10/07/24 12:10	10/08/24 14:57	1
gamma-Chlordane	<0.050		0.050	ug/L		10/07/24 12:10	10/08/24 14:57	1
Heptachlor	<0.0099		0.0099	ug/L		10/07/24 12:10	10/08/24 14:57	1
Heptachlor epoxide (isomer B)	<0.0099		0.0099	ug/L		10/07/24 12:10	10/08/24 14:57	1
Hexachlorobenzene	<0.050		0.050	ug/L		10/07/24 12:10	10/08/24 14:57	1
Hexachlorocyclopentadiene	<0.050		0.050	ug/L		10/07/24 12:10	10/08/24 14:57	1
Indeno[1,2,3-cd]pyrene	<0.050		0.050	ug/L		10/07/24 12:10	10/08/24 14:57	1
Isophorone	<0.099		0.099	ug/L		10/07/24 12:10	10/08/24 14:57	1
Lindane	<0.0099		0.0099	ug/L		10/07/24 12:10	10/08/24 14:57	1
Malathion	<0.099		0.099	ug/L		10/07/24 12:10	10/08/24 14:57	1
Methoxychlor	<0.050		0.050	ug/L		10/07/24 12:10	10/08/24 14:57	1
Metolachlor	<0.050		0.050	ug/L		10/07/24 12:10	10/08/24 14:57	1
Molinate	<0.099		0.099	ug/L		10/07/24 12:10	10/08/24 14:57	1
Naphthalene	<0.099		0.099	ug/L		10/07/24 12:10	10/08/24 14:57	1
Parathion	<0.099		0.099	ug/L		10/07/24 12:10	10/08/24 14:57	1
Pendimethalin (Penoxaline)	<0.099		0.099	ug/L		10/07/24 12:10	10/08/24 14:57	1
Phenanthrene	<0.040		0.040	ug/L		10/07/24 12:10	10/08/24 14:57	1
Propachlor	<0.050		0.050	ug/L		10/07/24 12:10	10/08/24 14:57	1
Pyrene	<0.050		0.050	ug/L		10/07/24 12:10	10/08/24 14:57	1
Simazine	<0.050		0.050	ug/L		10/07/24 12:10	10/08/24 14:57	1
Terbacil	<0.099		0.099	ug/L		10/07/24 12:10	10/08/24 14:57	1
Terbutylazine	<0.099		0.099	ug/L		10/07/24 12:10	10/08/24 14:57	1
Thiobencarb	<0.099		0.099	ug/L		10/07/24 12:10	10/08/24 14:57	1
Total Permethrin (mixed isomers)	<0.20		0.20	ug/L		10/07/24 12:10	10/08/24 14:57	1
trans-Nonachlor	<0.050		0.050	ug/L		10/07/24 12:10	10/08/24 14:57	1
Trifluralin	<0.099		0.099	ug/L		10/07/24 12:10	10/08/24 14:57	1

<i>Tentatively Identified Compound</i>	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
9-Octadecenamide, (Z)-	0.545	T J N	ug/L		7.95	301-02-0	10/07/24 12:10	10/08/24 14:57	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	98		70 - 130	10/07/24 12:10	10/08/24 14:57	1
Perylene-d12	80		70 - 130	10/07/24 12:10	10/08/24 14:57	1
Triphenylphosphate	101		70 - 130	10/07/24 12:10	10/08/24 14:57	1

**Lab Sample ID: LCS 380-112062/23-A**  
**Matrix: Water**  
**Analysis Batch: 112290**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 112062**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1-Methylnaphthalene	1.99	1.98		ug/L		100	70 - 130
2,4'-DDD	1.99	2.15		ug/L		108	70 - 130
2,4'-DDE	1.99	2.22		ug/L		112	70 - 130
2,4'-DDT	1.99	1.92		ug/L		97	70 - 130
2,4-Dinitrotoluene	1.99	2.01		ug/L		101	70 - 130
2,6-Dinitrotoluene	1.99	1.99		ug/L		100	70 - 130
2-Methylnaphthalene	1.99	1.92		ug/L		97	70 - 130

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# QC Sample Results

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

Job ID: 380-116207-1  
SDG: Weekly

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

**Lab Sample ID: LCS 380-112062/23-A**  
**Matrix: Water**  
**Analysis Batch: 112290**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 112062**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
4,4'-DDD	1.99	2.13		ug/L		107	70 - 130
4,4'-DDE	1.99	2.21		ug/L		111	70 - 130
4,4'-DDT	1.99	1.94		ug/L		98	70 - 130
Acenaphthene	1.99	2.02		ug/L		102	70 - 130
Acenaphthylene	1.99	1.80		ug/L		91	70 - 130
Acetochlor	1.99	2.22		ug/L		112	70 - 130
Alachlor	1.99	2.20		ug/L		111	70 - 130
alpha-BHC	1.99	2.07		ug/L		104	70 - 130
alpha-Chlordane	1.99	2.29		ug/L		116	70 - 130
Anthracene	1.99	1.64		ug/L		82	70 - 130
Atrazine	1.99	2.05		ug/L		103	70 - 130
Benz(a)anthracene	1.99	1.93		ug/L		97	70 - 130
Benzo[a]pyrene	1.99	1.67		ug/L		84	70 - 130
Benzo[b]fluoranthene	1.99	1.88		ug/L		95	70 - 130
Benzo[g,h,i]perylene	1.99	1.90		ug/L		96	70 - 130
Benzo[k]fluoranthene	1.99	2.02		ug/L		102	70 - 130
beta-BHC	1.99	2.15		ug/L		108	70 - 130
Bis(2-ethylhexyl) phthalate	1.99	1.80		ug/L		91	70 - 130
Bromacil	1.99	1.99		ug/L		100	70 - 130
Butachlor	1.99	2.00		ug/L		101	70 - 130
Butylbenzylphthalate	1.99	2.02		ug/L		102	70 - 130
Chlorobenzilate	1.99	1.95		ug/L		98	70 - 130
Chloroneb	1.99	1.93		ug/L		97	70 - 130
Chlorothalonil (Draconil, Bravo)	1.99	2.15		ug/L		108	70 - 130
Chlorpyrifos	1.99	2.21		ug/L		111	70 - 130
Chrysene	1.99	2.07		ug/L		104	70 - 130
delta-BHC	1.99	2.14		ug/L		108	70 - 130
Di(2-ethylhexyl)adipate	1.99	1.87		ug/L		94	70 - 130
Dibenz(a,h)anthracene	1.99	1.87		ug/L		94	70 - 130
Diclorvos (DDVP)	1.99	1.88		ug/L		95	70 - 130
Dieldrin	1.99	2.01		ug/L		101	70 - 130
Diethylphthalate	1.99	2.10		ug/L		106	70 - 130
Dimethylphthalate	1.99	2.00		ug/L		101	70 - 130
Di-n-butyl phthalate	3.97	4.17		ug/L		105	70 - 130
Di-n-octyl phthalate	1.99	1.80		ug/L		91	70 - 130
Endosulfan I (Alpha)	1.99	2.11		ug/L		106	70 - 130
Endosulfan II (Beta)	1.99	2.00		ug/L		101	70 - 130
Endosulfan sulfate	1.99	2.00		ug/L		101	70 - 130
Endrin	1.99	2.18		ug/L		110	70 - 130
Endrin aldehyde	1.99	1.81		ug/L		91	60 - 130
EPTC	1.99	2.01		ug/L		101	70 - 130
Fluoranthene	1.99	2.11		ug/L		106	70 - 130
Fluorene	1.99	2.02		ug/L		102	70 - 130
gamma-Chlordane	1.99	2.25		ug/L		113	70 - 130
Heptachlor	1.99	1.95		ug/L		98	70 - 130
Heptachlor epoxide (isomer B)	1.99	2.12		ug/L		107	70 - 130
Hexachlorobenzene	1.99	2.07		ug/L		104	70 - 130
Hexachlorocyclopentadiene	1.99	1.90		ug/L		96	70 - 130
Indeno[1,2,3-cd]pyrene	1.99	1.62		ug/L		81	70 - 130

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# QC Sample Results

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

Job ID: 380-116207-1  
SDG: Weekly

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

**Lab Sample ID: LCS 380-112062/23-A**  
**Matrix: Water**  
**Analysis Batch: 112290**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 112062**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Isophorone	1.99	1.93		ug/L		97	70 - 130
Lindane	1.99	2.01		ug/L		101	70 - 130
Malathion	1.99	2.10		ug/L		106	70 - 130
Methoxychlor	1.99	1.73		ug/L		87	70 - 130
Metolachlor	1.99	2.27		ug/L		114	70 - 130
Molinate	1.99	2.00		ug/L		101	70 - 130
Naphthalene	1.99	1.91		ug/L		96	70 - 130
Parathion	1.99	2.41		ug/L		121	70 - 130
Pendimethalin (Penoxaline)	1.99	1.88		ug/L		95	70 - 130
Phenanthrene	1.99	1.92		ug/L		97	70 - 130
Propachlor	1.99	2.07		ug/L		104	70 - 130
Pyrene	1.99	2.09		ug/L		105	70 - 130
Simazine	1.99	2.10		ug/L		106	70 - 130
Terbacil	1.99	2.26		ug/L		114	70 - 130
Terbutylazine	1.99	2.25		ug/L		113	70 - 130
Thiobencarb	1.99	2.09		ug/L		105	70 - 130
trans-Nonachlor	1.99	2.24		ug/L		113	70 - 130
Trifluralin	1.99	1.72		ug/L		86	70 - 130

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	97		70 - 130
Perylene-d12	84		70 - 130
Triphenylphosphate	107		70 - 130

**Lab Sample ID: LCSD 380-112062/24-A**  
**Matrix: Water**  
**Analysis Batch: 112290**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 112062**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	1.99	1.98		ug/L		99	70 - 130	0	20
2,4'-DDD	1.99	2.11		ug/L		106	70 - 130	2	20
2,4'-DDE	1.99	2.11		ug/L		106	70 - 130	5	20
2,4'-DDT	1.99	1.88		ug/L		94	70 - 130	2	20
2,4-Dinitrotoluene	1.99	2.09		ug/L		105	70 - 130	3	20
2,6-Dinitrotoluene	1.99	2.05		ug/L		103	70 - 130	3	20
2-Methylnaphthalene	1.99	1.91		ug/L		96	70 - 130	0	20
4,4'-DDD	1.99	2.10		ug/L		106	70 - 130	1	20
4,4'-DDE	1.99	2.04		ug/L		102	70 - 130	8	20
4,4'-DDT	1.99	1.86		ug/L		94	70 - 130	4	20
Acenaphthene	1.99	2.01		ug/L		101	70 - 130	0	20
Acenaphthylene	1.99	1.81		ug/L		91	70 - 130	0	20
Acetochlor	1.99	2.20		ug/L		111	70 - 130	1	20
Alachlor	1.99	2.18		ug/L		109	70 - 130	1	20
alpha-BHC	1.99	2.08		ug/L		105	70 - 130	1	20
alpha-Chlordane	1.99	2.21		ug/L		111	70 - 130	4	20
Anthracene	1.99	1.61		ug/L		81	70 - 130	1	20
Atrazine	1.99	2.06		ug/L		104	70 - 130	0	20
Benz(a)anthracene	1.99	1.91		ug/L		96	70 - 130	1	20



# QC Sample Results

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

Job ID: 380-116207-1  
SDG: Weekly

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

**Lab Sample ID: LCSD 380-112062/24-A**  
**Matrix: Water**  
**Analysis Batch: 112290**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 112062**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	RPD Limit
							Limits	RPD		
Benzo[a]pyrene	1.99	1.68		ug/L		84	70 - 130	1	20	
Benzo[b]fluoranthene	1.99	1.87		ug/L		94	70 - 130	1	20	
Benzo[g,h,i]perylene	1.99	1.85		ug/L		93	70 - 130	3	20	
Benzo[k]fluoranthene	1.99	1.98		ug/L		100	70 - 130	2	20	
beta-BHC	1.99	2.16		ug/L		109	70 - 130	1	20	
Bis(2-ethylhexyl) phthalate	1.99	1.52		ug/L		76	70 - 130	17	20	
Bromacil	1.99	2.02		ug/L		102	70 - 130	1	20	
Butachlor	1.99	1.98		ug/L		99	70 - 130	1	20	
Butylbenzylphthalate	1.99	2.03		ug/L		102	70 - 130	0	20	
Chlorobenzilate	1.99	1.87		ug/L		94	70 - 130	4	20	
Chloroneb	1.99	2.24		ug/L		113	70 - 130	15	20	
Chlorothalonil (Draconil, Bravo)	1.99	2.06		ug/L		104	70 - 130	4	20	
Chlorpyrifos	1.99	2.19		ug/L		110	70 - 130	1	20	
Chrysene	1.99	2.06		ug/L		104	70 - 130	0	20	
delta-BHC	1.99	2.15		ug/L		108	70 - 130	1	20	
Di(2-ethylhexyl)adipate	1.99	1.61		ug/L		81	70 - 130	15	20	
Dibenz(a,h)anthracene	1.99	1.75		ug/L		88	70 - 130	6	20	
Diclorvos (DDVP)	1.99	1.89		ug/L		95	70 - 130	0	20	
Dieldrin	1.99	2.04		ug/L		103	70 - 130	1	20	
Diethylphthalate	1.99	2.09		ug/L		105	70 - 130	1	20	
Dimethylphthalate	1.99	2.01		ug/L		101	70 - 130	1	20	
Di-n-butyl phthalate	3.98	4.12		ug/L		104	70 - 130	1	20	
Di-n-octyl phthalate	1.99	1.42	*1	ug/L		72	70 - 130	23	20	
Endosulfan I (Alpha)	1.99	2.07		ug/L		104	70 - 130	2	20	
Endosulfan II (Beta)	1.99	1.99		ug/L		100	70 - 130	1	20	
Endosulfan sulfate	1.99	2.05		ug/L		103	70 - 130	2	20	
Endrin	1.99	2.16		ug/L		109	70 - 130	1	20	
Endrin aldehyde	1.99	1.89		ug/L		95	60 - 130	4	20	
EPTC	1.99	2.06		ug/L		104	70 - 130	3	20	
Fluoranthene	1.99	2.08		ug/L		105	70 - 130	1	20	
Fluorene	1.99	2.03		ug/L		102	70 - 130	1	20	
gamma-Chlordane	1.99	2.22		ug/L		112	70 - 130	1	20	
Heptachlor	1.99	1.94		ug/L		97	70 - 130	1	20	
Heptachlor epoxide (isomer B)	1.99	2.11		ug/L		106	70 - 130	1	20	
Hexachlorobenzene	1.99	2.03		ug/L		102	70 - 130	2	20	
Hexachlorocyclopentadiene	1.99	1.93		ug/L		97	70 - 130	1	20	
Indeno[1,2,3-cd]pyrene	1.99	1.60		ug/L		80	70 - 130	1	20	
Isophorone	1.99	1.92		ug/L		97	70 - 130	0	20	
Lindane	1.99	2.01		ug/L		101	70 - 130	0	20	
Malathion	1.99	2.12		ug/L		107	70 - 130	1	20	
Methoxychlor	1.99	1.82		ug/L		92	70 - 130	5	20	
Metolachlor	1.99	2.26		ug/L		114	70 - 130	0	20	
Molinate	1.99	2.04		ug/L		103	70 - 130	2	20	
Naphthalene	1.99	1.91		ug/L		96	70 - 130	0	20	
Parathion	1.99	2.44		ug/L		123	70 - 130	1	20	
Pendimethalin (Penoxaline)	1.99	1.93		ug/L		97	70 - 130	3	20	
Phenanthrene	1.99	1.89		ug/L		95	70 - 130	2	20	
Propachlor	1.99	2.08		ug/L		105	70 - 130	1	20	
Pyrene	1.99	2.05		ug/L		103	70 - 130	2	20	

Eurofins Eaton Analytical Pomona

# QC Sample Results

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

Job ID: 380-116207-1  
SDG: Weekly

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

**Lab Sample ID: LCSD 380-112062/24-A**  
**Matrix: Water**  
**Analysis Batch: 112290**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 112062**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Simazine	1.99	2.15		ug/L		108	70 - 130	2	20
Terbacil	1.99	2.29		ug/L		115	70 - 130	1	20
Terbuthylazine	1.99	2.26		ug/L		114	70 - 130	0	20
Thiobencarb	1.99	2.06		ug/L		104	70 - 130	1	20
trans-Nonachlor	1.99	2.19		ug/L		110	70 - 130	2	20
Trifluralin	1.99	1.79		ug/L		90	70 - 130	4	20

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
2-Nitro-m-xylene	99		70 - 130
Perylene-d12	87		70 - 130
Triphenylphosphate	107		70 - 130

**Lab Sample ID: MRL 380-112062/22-A**  
**Matrix: Water**  
**Analysis Batch: 112290**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 112062**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	0.0986	0.109		ug/L		110	50 - 150
2,4'-DDD	0.0986	0.0925	J	ug/L		94	50 - 150
2,4'-DDE	0.0986	0.105		ug/L		106	50 - 150
2,4'-DDT	0.0986	0.101		ug/L		102	50 - 150
2,4-Dinitrotoluene	0.0986	0.108		ug/L		110	50 - 150
2,6-Dinitrotoluene	0.0986	0.118		ug/L		120	50 - 150
2-Methylnaphthalene	0.0986	0.0995		ug/L		101	50 - 150
4,4'-DDD	0.0986	0.105		ug/L		107	50 - 150
4,4'-DDE	0.0986	0.105		ug/L		107	50 - 150
4,4'-DDT	0.0986	0.0964	J	ug/L		98	50 - 150
Acenaphthene	0.0986	0.101		ug/L		103	50 - 150
Acenaphthylene	0.0986	0.0824	J	ug/L		84	50 - 150
Acetochlor	0.0986	0.120		ug/L		122	50 - 150
Alachlor	0.0493	0.0511		ug/L		104	50 - 150
alpha-BHC	0.0986	0.119		ug/L		120	50 - 150
alpha-Chlordane	0.0246	<0.029		ug/L		104	50 - 150
Anthracene	0.0197	0.0190	J	ug/L		96	50 - 150
Atrazine	0.0493	0.0479	J	ug/L		97	50 - 150
Benz(a)anthracene	0.0493	0.0495		ug/L		100	50 - 150
Benzo[a]pyrene	0.0197	0.0141	J	ug/L		71	50 - 150
Benzo[b]fluoranthene	0.0197	0.0151	J	ug/L		77	50 - 150
Benzo[g,h,i]perylene	0.0493	0.0349	J	ug/L		71	50 - 150
Benzo[k]fluoranthene	0.0197	0.0175	J	ug/L		89	50 - 150
beta-BHC	0.0986	0.114		ug/L		116	50 - 150
Bis(2-ethylhexyl) phthalate	0.591	0.441	J	ug/L		75	50 - 150
Bromacil	0.0986	0.0974	J	ug/L		99	50 - 150
Butachlor	0.0493	0.0598		ug/L		121	50 - 150
Butylbenzylphthalate	0.493	0.500		ug/L		101	50 - 150
Chlorobenzilate	0.0986	0.102		ug/L		104	50 - 150
Chloroneb	0.0986	0.0919	J	ug/L		93	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0986	0.107		ug/L		108	50 - 150

# QC Sample Results

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

Job ID: 380-116207-1  
SDG: Weekly

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

**Lab Sample ID: MRL 380-112062/22-A**  
**Matrix: Water**  
**Analysis Batch: 112290**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 112062**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Chlorpyrifos	0.0493	0.0490		ug/L		99	50 - 150
Chrysene	0.0197	0.0214		ug/L		109	50 - 150
delta-BHC	0.0986	0.116		ug/L		118	50 - 150
Di(2-ethylhexyl)adipate	0.591	0.509	J	ug/L		86	50 - 150
Dibenz(a,h)anthracene	0.0493	<0.033		ug/L		64	50 - 150
Diclorvos (DDVP)	0.0493	0.0533		ug/L		108	50 - 150
Dieldrin	0.00986	0.0129		ug/L		131	50 - 150
Diethylphthalate	0.493	0.534		ug/L		108	50 - 150
Dimethylphthalate	0.493	0.511		ug/L		104	50 - 150
Di-n-butyl phthalate	0.493	0.510	J	ug/L		103	49 - 243
Di-n-octyl phthalate	0.0986	0.0506	J	ug/L		51	50 - 150
Endosulfan I (Alpha)	0.0986	0.0971	J	ug/L		99	50 - 150
Endosulfan II (Beta)	0.0986	0.112		ug/L		114	50 - 150
Endosulfan sulfate	0.0986	0.107		ug/L		109	50 - 150
Endrin	0.00986	0.0142		ug/L		144	50 - 150
Endrin aldehyde	0.0986	0.0920	J	ug/L		93	50 - 150
EPTC	0.0986	0.0942	J	ug/L		96	50 - 150
Fluoranthene	0.0986	0.0990		ug/L		100	50 - 150
Fluorene	0.0493	0.0513		ug/L		104	50 - 150
gamma-Chlordane	0.0246	0.0234	J	ug/L		95	50 - 150
Heptachlor	0.00986	0.00947	J	ug/L		96	50 - 150
Heptachlor epoxide (isomer B)	0.00986	0.0163	^3+	ug/L		165	50 - 150
Hexachlorobenzene	0.0493	0.0492		ug/L		100	50 - 150
Hexachlorocyclopentadiene	0.0493	<0.037		ug/L		67	50 - 150
Indeno[1,2,3-cd]pyrene	0.0493	0.0270	J	ug/L		55	50 - 150
Isophorone	0.0986	0.116		ug/L		118	50 - 150
Lindane	0.00986	0.0148		ug/L		150	50 - 150
Malathion	0.0986	0.105		ug/L		106	50 - 150
Methoxychlor	0.0493	0.0586		ug/L		119	50 - 150
Metolachlor	0.0493	0.0557		ug/L		113	50 - 150
Molinate	0.0986	0.0988	J	ug/L		100	50 - 150
Naphthalene	0.0986	0.110		ug/L		111	50 - 150
Parathion	0.0986	0.100		ug/L		102	50 - 150
Pendimethalin (Penoxaline)	0.0986	0.0837	J	ug/L		85	50 - 150
Phenanthrene	0.0394	0.0425		ug/L		108	50 - 150
Propachlor	0.0493	0.0529		ug/L		107	50 - 150
Pyrene	0.0493	0.0480	J	ug/L		97	50 - 150
Simazine	0.0493	0.0504		ug/L		102	50 - 150
Terbacil	0.0986	0.101		ug/L		102	50 - 150
Terbutylazine	0.0986	0.104		ug/L		106	50 - 150
Thiobencarb	0.0986	0.0974	J	ug/L		99	50 - 150
trans-Nonachlor	0.0246	<0.026		ug/L		102	50 - 150
Trifluralin	0.0986	0.0933	J	ug/L		95	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	MRL Limits
2-Nitro-m-xylene	98		70 - 130
Perylene-d12	75		70 - 130
Triphenylphosphate	101		70 - 130

# QC Sample Results

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

Job ID: 380-116207-1  
 SDG: Weekly

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

**Lab Sample ID: 380-115918-A-1-B MS**  
**Matrix: Water**  
**Analysis Batch: 112290**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 112062**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
1-Methylnaphthalene	<0.097		1.93	1.91		ug/L		99	70 - 130
2,4'-DDD	<0.097		1.93	2.05		ug/L		106	70 - 130
2,4'-DDE	<0.097		1.93	2.04		ug/L		106	70 - 130
2,4'-DDT	<0.097		1.93	1.92		ug/L		99	70 - 130
2,4-Dinitrotoluene	<0.097		1.93	2.16		ug/L		112	70 - 130
2,6-Dinitrotoluene	<0.097		1.93	2.08		ug/L		107	70 - 130
2-Methylnaphthalene	<0.097		1.93	1.87		ug/L		97	70 - 130
4,4'-DDD	<0.097		1.93	2.04		ug/L		105	70 - 130
4,4'-DDE	<0.097		1.93	2.04		ug/L		106	70 - 130
4,4'-DDT	<0.097		1.93	1.92		ug/L		99	70 - 130
Acenaphthene	<0.097		1.93	1.94		ug/L		100	70 - 130
Acenaphthylene	<0.097		1.93	1.74		ug/L		90	70 - 130
Acetochlor	<0.097		1.93	2.06		ug/L		107	70 - 130
Alachlor	<0.048		1.93	2.06		ug/L		106	70 - 130
alpha-BHC	<0.097		1.93	2.01		ug/L		104	70 - 130
alpha-Chlordane	<0.048		1.93	2.16		ug/L		112	70 - 130
Anthracene	<0.019	F1	1.93	0.201	F1	ug/L		10	70 - 130
Atrazine	<0.048		1.93	1.99		ug/L		103	70 - 130
Benz(a)anthracene	<0.048		1.93	1.47		ug/L		76	70 - 130
Benzo[a]pyrene	<0.019	F1	1.93	0.994	F1	ug/L		51	70 - 130
Benzo[b]fluoranthene	<0.019		1.93	1.83		ug/L		95	70 - 130
Benzo[g,h,i]perylene	<0.048		1.93	1.88		ug/L		97	70 - 130
Benzo[k]fluoranthene	<0.019		1.93	1.96		ug/L		101	70 - 130
beta-BHC	<0.097		1.93	2.07		ug/L		107	70 - 130
Bis(2-ethylhexyl) phthalate	<0.58		1.93	1.55		ug/L		80	70 - 130
Bromacil	<0.097		1.93	2.02		ug/L		104	70 - 130
Butachlor	<0.048		1.93	1.89		ug/L		98	70 - 130
Butylbenzylphthalate	<0.48		1.93	1.97		ug/L		102	70 - 130
Chlorobenzilate	<0.097		1.93	1.84		ug/L		95	70 - 130
Chloroneb	<0.097		1.93	2.00		ug/L		103	70 - 130
Chlorothalonil (Draconil, Bravo)	<0.097		1.93	2.00		ug/L		103	70 - 130
Chlorpyrifos	<0.048		1.93	2.21		ug/L		115	70 - 130
Chrysene	<0.019		1.93	1.98		ug/L		102	70 - 130
delta-BHC	<0.097		1.93	2.01		ug/L		104	70 - 130
Di(2-ethylhexyl)adipate	<0.58		1.93	1.67		ug/L		86	70 - 130
Dibenz(a,h)anthracene	<0.048		1.93	1.76		ug/L		91	70 - 130
Diclorvos (DDVP)	<0.048		1.93	1.87		ug/L		97	70 - 130
Dieldrin	<0.0097		1.93	1.95		ug/L		101	70 - 130
Diethylphthalate	0.90	F1	1.93	2.02	F1	ug/L		58	70 - 130
Dimethylphthalate	<0.48		1.93	1.96		ug/L		101	70 - 130
Di-n-butyl phthalate	<0.97		3.87	3.96		ug/L		102	70 - 130
Di-n-octyl phthalate	<0.097	*1	1.93	1.48		ug/L		76	70 - 130
Endosulfan I (Alpha)	<0.097		1.93	1.98		ug/L		102	70 - 130
Endosulfan II (Beta)	<0.097		1.93	1.95		ug/L		101	70 - 130
Endosulfan sulfate	<0.097		1.93	1.97		ug/L		102	70 - 130
Endrin	<0.0097		1.93	2.10		ug/L		109	70 - 130
Endrin aldehyde	<0.097		1.93	1.56		ug/L		81	60 - 130
EPTC	<0.097		1.93	1.97		ug/L		102	70 - 130

# QC Sample Results

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

Job ID: 380-116207-1  
SDG: Weekly

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

**Lab Sample ID: 380-115918-A-1-B MS**  
**Matrix: Water**  
**Analysis Batch: 112290**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 112062**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier					
Fluoranthene	<0.097		1.93	2.02		ug/L		104	70 - 130	
Fluorene	<0.048		1.93	1.98		ug/L		103	70 - 130	
gamma-Chlordane	<0.048		1.93	2.14		ug/L		110	70 - 130	
Heptachlor	<0.0097		1.93	1.88		ug/L		97	70 - 130	
Heptachlor epoxide (isomer B)	<0.0097	^3+	1.93	2.00		ug/L		103	70 - 130	
Hexachlorobenzene	<0.048		1.93	2.02		ug/L		104	70 - 130	
Hexachlorocyclopentadiene	<0.048		1.93	1.91		ug/L		99	70 - 130	
Indeno[1,2,3-cd]pyrene	<0.048		1.93	1.66		ug/L		86	70 - 130	
Isophorone	<0.097		1.93	1.88		ug/L		97	70 - 130	
Lindane	<0.0097		1.93	1.94		ug/L		100	70 - 130	
Malathion	<0.097		1.93	2.02		ug/L		104	70 - 130	
Methoxychlor	<0.048		1.93	1.78		ug/L		92	70 - 130	
Metolachlor	<0.048		1.93	2.17		ug/L		112	70 - 130	
Molinate	<0.097		1.93	1.97		ug/L		102	70 - 130	
Naphthalene	<0.097		1.93	1.85		ug/L		96	70 - 130	
Parathion	<0.097		1.93	2.38		ug/L		123	70 - 130	
Pendimethalin (Penoxaline)	<0.097		1.93	1.95		ug/L		101	70 - 130	
Phenanthrene	<0.039		1.93	1.84		ug/L		95	70 - 130	
Propachlor	<0.048		1.93	2.01		ug/L		104	70 - 130	
Pyrene	<0.048		1.93	1.91		ug/L		99	70 - 130	
Simazine	<0.048		1.93	2.09		ug/L		108	70 - 130	
Terbacil	<0.097		1.93	2.19		ug/L		113	70 - 130	
Terbutylazine	<0.097		1.93	2.16		ug/L		112	70 - 130	
Thiobencarb	<0.097		1.93	1.97		ug/L		102	70 - 130	
trans-Nonachlor	<0.048		1.93	2.13		ug/L		110	70 - 130	
Trifluralin	<0.097		1.93	1.75		ug/L		90	70 - 130	

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	98		70 - 130
Perylene-d12	88		70 - 130
Triphenylphosphate	106		70 - 130

**Lab Sample ID: 380-115918-A-1-C MSD**  
**Matrix: Water**  
**Analysis Batch: 112290**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 112062**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier							
1-Methylnaphthalene	<0.097		1.93	1.92		ug/L		99	70 - 130	0	20	
2,4'-DDD	<0.097		1.93	1.99		ug/L		103	70 - 130	3	20	
2,4'-DDE	<0.097		1.93	2.02		ug/L		105	70 - 130	1	20	
2,4'-DDT	<0.097		1.93	1.84		ug/L		95	70 - 130	4	20	
2,4-Dinitrotoluene	<0.097		1.93	2.20		ug/L		114	70 - 130	2	20	
2,6-Dinitrotoluene	<0.097		1.93	2.11		ug/L		109	70 - 130	2	20	
2-Methylnaphthalene	<0.097		1.93	1.87		ug/L		97	70 - 130	0	20	
4,4'-DDD	<0.097		1.93	1.99		ug/L		103	70 - 130	2	20	
4,4'-DDE	<0.097		1.93	1.96		ug/L		101	70 - 130	4	20	
4,4'-DDT	<0.097		1.93	1.85		ug/L		96	70 - 130	3	20	
Acenaphthene	<0.097		1.93	1.95		ug/L		101	70 - 130	0	20	

Eurofins Eaton Analytical Pomona

# QC Sample Results

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

Job ID: 380-116207-1  
SDG: Weekly

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

**Lab Sample ID: 380-115918-A-1-C MSD**

**Client Sample ID: Matrix Spike Duplicate**

**Matrix: Water**

**Prep Type: Total/NA**

**Analysis Batch: 112290**

**Prep Batch: 112062**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		
Acenaphthylene	<0.097		1.93	1.72		ug/L		89	70 - 130	2	20
Acetochlor	<0.097		1.93	2.05		ug/L		106	70 - 130	1	20
Alachlor	<0.048		1.93	2.03		ug/L		105	70 - 130	1	20
alpha-BHC	<0.097		1.93	1.97		ug/L		102	70 - 130	2	20
alpha-Chlordane	<0.048		1.93	2.15		ug/L		111	70 - 130	0	20
Anthracene	<0.019	F1	1.93	0.180	F1	ug/L		9	70 - 130	11	20
Atrazine	<0.048		1.93	1.95		ug/L		101	70 - 130	2	20
Benz(a)anthracene	<0.048		1.93	1.41		ug/L		73	70 - 130	4	20
Benzo[a]pyrene	<0.019	F1	1.93	0.982	F1	ug/L		51	70 - 130	1	20
Benzo[b]fluoranthene	<0.019		1.93	1.86		ug/L		96	70 - 130	1	20
Benzo[g,h,i]perylene	<0.048		1.93	1.83		ug/L		95	70 - 130	3	20
Benzo[k]fluoranthene	<0.019		1.93	1.94		ug/L		100	70 - 130	1	20
beta-BHC	<0.097		1.93	2.07		ug/L		107	70 - 130	0	20
Bis(2-ethylhexyl) phthalate	<0.58		1.93	1.45		ug/L		75	70 - 130	7	20
Bromacil	<0.097		1.93	1.99		ug/L		103	70 - 130	2	20
Butachlor	<0.048		1.93	1.87		ug/L		97	70 - 130	1	20
Butylbenzylphthalate	<0.48		1.93	1.91		ug/L		99	70 - 130	3	20
Chlorobenzilate	<0.097		1.93	1.76		ug/L		91	70 - 130	5	20
Chloroneb	<0.097		1.93	1.98		ug/L		102	70 - 130	1	20
Chlorothalonil (Draconil, Bravo)	<0.097		1.93	2.03		ug/L		105	70 - 130	2	20
Chlorpyrifos	<0.048		1.93	2.17		ug/L		112	70 - 130	2	20
Chrysene	<0.019		1.93	1.98		ug/L		103	70 - 130	0	20
delta-BHC	<0.097		1.93	1.99		ug/L		103	70 - 130	1	20
Di(2-ethylhexyl)adipate	<0.58		1.93	1.57		ug/L		81	70 - 130	6	20
Dibenz(a,h)anthracene	<0.048		1.93	1.67		ug/L		87	70 - 130	5	20
Diclorvos (DDVP)	<0.048		1.93	1.87		ug/L		97	70 - 130	0	20
Dieldrin	<0.0097		1.93	1.90		ug/L		98	70 - 130	3	20
Diethylphthalate	0.90	F1	1.93	2.03	F1	ug/L		59	70 - 130	1	20
Dimethylphthalate	<0.48		1.93	1.96		ug/L		101	70 - 130	0	20
Di-n-butyl phthalate	<0.97		3.86	3.91		ug/L		101	70 - 130	1	20
Di-n-octyl phthalate	<0.097	*1	1.93	1.38		ug/L		71	70 - 130	7	20
Endosulfan I (Alpha)	<0.097		1.93	1.97		ug/L		102	70 - 130	0	20
Endosulfan II (Beta)	<0.097		1.93	1.92		ug/L		99	70 - 130	2	20
Endosulfan sulfate	<0.097		1.93	1.95		ug/L		101	70 - 130	1	20
Endrin	<0.0097		1.93	2.03		ug/L		105	70 - 130	4	20
Endrin aldehyde	<0.097		1.93	1.66		ug/L		86	60 - 130	6	20
EPTC	<0.097		1.93	1.98		ug/L		102	70 - 130	0	20
Fluoranthene	<0.097		1.93	1.99		ug/L		103	70 - 130	1	20
Fluorene	<0.048		1.93	1.98		ug/L		103	70 - 130	0	20
gamma-Chlordane	<0.048		1.93	2.12		ug/L		110	70 - 130	1	20
Heptachlor	<0.0097		1.93	1.88		ug/L		97	70 - 130	0	20
Heptachlor epoxide (isomer B)	<0.0097	^3+	1.93	1.99		ug/L		103	70 - 130	0	20
Hexachlorobenzene	<0.048		1.93	2.01		ug/L		104	70 - 130	0	20
Hexachlorocyclopentadiene	<0.048		1.93	1.94		ug/L		100	70 - 130	2	20
Indeno[1,2,3-cd]pyrene	<0.048		1.93	1.63		ug/L		84	70 - 130	2	20
Isophorone	<0.097		1.93	1.89		ug/L		98	70 - 130	0	20
Lindane	<0.0097		1.93	1.95		ug/L		101	70 - 130	0	20
Malathion	<0.097		1.93	1.99		ug/L		103	70 - 130	1	20
Methoxychlor	<0.048		1.93	1.80		ug/L		93	70 - 130	1	20

Eurofins Eaton Analytical Pomona

# QC Sample Results

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

Job ID: 380-116207-1  
SDG: Weekly

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

Lab Sample ID: 380-115918-A-1-C MSD

Client Sample ID: Matrix Spike Duplicate

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 112290

Prep Batch: 112062

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits	Limit	
Metolachlor	<0.048		1.93	2.13		ug/L		110	70 - 130	1	20
Molinate	<0.097		1.93	1.97		ug/L		102	70 - 130	0	20
Naphthalene	<0.097		1.93	1.84		ug/L		95	70 - 130	1	20
Parathion	<0.097		1.93	2.37		ug/L		123	70 - 130	0	20
Pendimethalin (Penoxaline)	<0.097		1.93	1.96		ug/L		101	70 - 130	1	20
Phenanthrene	<0.039		1.93	1.82		ug/L		94	70 - 130	1	20
Propachlor	<0.048		1.93	2.00		ug/L		104	70 - 130	0	20
Pyrene	<0.048		1.93	1.87		ug/L		97	70 - 130	2	20
Simazine	<0.048		1.93	2.04		ug/L		106	70 - 130	2	20
Terbacil	<0.097		1.93	2.11		ug/L		109	70 - 130	4	20
Terbutylazine	<0.097		1.93	2.13		ug/L		110	70 - 130	1	20
Thiobencarb	<0.097		1.93	1.96		ug/L		102	70 - 130	0	20
trans-Nonachlor	<0.048		1.93	2.09		ug/L		108	70 - 130	2	20
Trifluralin	<0.097		1.93	1.77		ug/L		92	70 - 130	1	20

  

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	99		70 - 130
Perylene-d12	88		70 - 130
Triphenylphosphate	105		70 - 130

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

Lab Sample ID: MB 570-489158/1-A

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 492527

Prep Batch: 489158

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	10/08/24 15:24	10/17/24 20:12	1

  

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2,4,6-Tribromophenol (Surr)	71		33 - 139	10/08/24 15:24	10/17/24 20:12	1
2-Fluorobiphenyl (Surr)	65		33 - 126	10/08/24 15:24	10/17/24 20:12	1
2-Fluorophenol (Surr)	49		12 - 120	10/08/24 15:24	10/17/24 20:12	1
Nitrobenzene-d5 (Surr)	65		36 - 120	10/08/24 15:24	10/17/24 20:12	1
Phenol-d6 (Surr)	29		10 - 120	10/08/24 15:24	10/17/24 20:12	1
p-Terphenyl-d14 (Surr)	78		47 - 131	10/08/24 15:24	10/17/24 20:12	1

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

Lab Sample ID: MB 570-489158/1-A

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 490947

Prep Batch: 489158

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
1-Methylnaphthalene	<0.20		0.20	ug/L		10/08/24 15:24	10/13/24 11:43	1
2-Methylnaphthalene	<0.20		0.20	ug/L		10/08/24 15:24	10/13/24 11:43	1
Acenaphthene	<0.20		0.20	ug/L		10/08/24 15:24	10/13/24 11:43	1
Acenaphthylene	<0.20		0.20	ug/L		10/08/24 15:24	10/13/24 11:43	1

Eurofins Eaton Analytical Pomona

# QC Sample Results

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

Job ID: 380-116207-1  
SDG: Weekly

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

**Lab Sample ID: MB 570-489158/1-A**  
**Matrix: Water**  
**Analysis Batch: 490947**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 489158**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Anthracene	<0.20		0.20	ug/L		10/08/24 15:24	10/13/24 11:43	1
Benzo[a]anthracene	<0.20		0.20	ug/L		10/08/24 15:24	10/13/24 11:43	1
Benzo[a]pyrene	<0.20		0.20	ug/L		10/08/24 15:24	10/13/24 11:43	1
Benzo[b]fluoranthene	<0.20		0.20	ug/L		10/08/24 15:24	10/13/24 11:43	1
Benzo[g,h,i]perylene	<0.20		0.20	ug/L		10/08/24 15:24	10/13/24 11:43	1
Benzo[k]fluoranthene	<0.20		0.20	ug/L		10/08/24 15:24	10/13/24 11:43	1
Chrysene	<0.20		0.20	ug/L		10/08/24 15:24	10/13/24 11:43	1
Dibenz(a,h)anthracene	<0.20		0.20	ug/L		10/08/24 15:24	10/13/24 11:43	1
Fluoranthene	<0.20		0.20	ug/L		10/08/24 15:24	10/13/24 11:43	1
Fluorene	<0.20		0.20	ug/L		10/08/24 15:24	10/13/24 11:43	1
Indeno[1,2,3-cd]pyrene	<0.20		0.20	ug/L		10/08/24 15:24	10/13/24 11:43	1
Naphthalene	<0.20		0.20	ug/L		10/08/24 15:24	10/13/24 11:43	1
Phenanthrene	<0.20		0.20	ug/L		10/08/24 15:24	10/13/24 11:43	1
Pyrene	<0.20		0.20	ug/L		10/08/24 15:24	10/13/24 11:43	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	74		28 - 127	10/08/24 15:24	10/13/24 11:43	1
2-Fluorobiphenyl (Surr)	44		31 - 120	10/08/24 15:24	10/13/24 11:43	1
2-Fluorophenol (Surr)	42		17 - 120	10/08/24 15:24	10/13/24 11:43	1
Nitrobenzene-d5 (Surr)	45		27 - 120	10/08/24 15:24	10/13/24 11:43	1
Phenol-d6 (Surr)	29		10 - 120	10/08/24 15:24	10/13/24 11:43	1
p-Terphenyl-d14 (Surr)	53		45 - 120	10/08/24 15:24	10/13/24 11:43	1

**Lab Sample ID: LCSD 570-489158/3-A**  
**Matrix: Water**  
**Analysis Batch: 490947**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 489158**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	20.0	14.4	*1	ug/L		72	47 - 120	33	20
2-Methylnaphthalene	20.0	14.5	*1	ug/L		72	43 - 120	33	20
Acenaphthene	20.0	16.4	*1	ug/L		82	60 - 132	31	29
Acenaphthylene	20.0	17.4		ug/L		87	54 - 126	31	45
Anthracene	20.0	17.6		ug/L		88	43 - 120	30	40
Benzo[a]anthracene	20.0	18.1		ug/L		91	42 - 133	26	32
Benzo[a]pyrene	20.0	18.4		ug/L		92	32 - 148	25	43
Benzo[b]fluoranthene	20.0	17.9		ug/L		89	42 - 140	26	43
Benzo[g,h,i]perylene	20.0	17.7		ug/L		89	1 - 195	25	61
Benzo[k]fluoranthene	20.0	18.1		ug/L		91	25 - 146	27	38
Chrysene	20.0	17.1		ug/L		86	44 - 140	26	53
Dibenz(a,h)anthracene	20.0	18.1		ug/L		90	1 - 200	26	75
Fluoranthene	20.0	17.7		ug/L		88	43 - 121	29	40
Fluorene	20.0	17.2	*1	ug/L		86	70 - 120	30	23
Indeno[1,2,3-cd]pyrene	20.0	17.7		ug/L		89	1 - 151	25	60
Naphthalene	20.0	13.9		ug/L		69	36 - 120	33	39
Phenanthrene	20.0	17.2	*1	ug/L		86	65 - 120	31	24
Pyrene	20.0	18.1		ug/L		91	70 - 120	29	30



# QC Sample Results

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

Job ID: 380-116207-1  
SDG: Weekly

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

**Lab Sample ID: LCSD 570-489158/3-A**  
**Matrix: Water**  
**Analysis Batch: 490947**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 489158**

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	86		28 - 127
2-Fluorobiphenyl (Surr)	54		31 - 120
2-Fluorophenol (Surr)	60		17 - 120
Nitrobenzene-d5 (Surr)	47		27 - 120
Phenol-d6 (Surr)	42		10 - 120
p-Terphenyl-d14 (Surr)	63		45 - 120

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

**Lab Sample ID: LCS 570-489158/2-A**  
**Matrix: Water**  
**Analysis Batch: 491289**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 489158**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2-Methylnaphthalene - RA	20.0	11.4		ug/L		57	43 - 120
Acenaphthene - RA	20.0	12.5		ug/L		63	60 - 132
Acenaphthylene - RA	20.0	13.5		ug/L		67	54 - 126
Anthracene - RA	20.0	13.8		ug/L		69	43 - 120
Benzo[a]anthracene - RA	20.0	14.5		ug/L		72	42 - 133
Benzo[a]pyrene - RA	20.0	11.1		ug/L		56	32 - 148
Benzo[b]fluoranthene - RA	20.0	11.4		ug/L		57	42 - 140
Benzo[g,h,i]perylene - RA	20.0	13.5		ug/L		67	1 - 195
Benzo[k]fluoranthene - RA	20.0	11.9		ug/L		60	25 - 146
Chrysene - RA	20.0	13.7		ug/L		68	44 - 140
Dibenz(a,h)anthracene - RA	20.0	14.2		ug/L		71	1 - 200
Fluoranthene - RA	20.0	13.4		ug/L		67	43 - 121
Fluorene - RA	20.0	13.0	*	ug/L		65	70 - 120
Indeno[1,2,3-cd]pyrene - RA	20.0	13.5		ug/L		68	1 - 151
Naphthalene - RA	20.0	10.5		ug/L		53	36 - 120
Phenanthrene - RA	20.0	13.3		ug/L		66	65 - 120
Pyrene - RA	20.0	16.7		ug/L		83	70 - 120

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr) - RA	65		28 - 127
2-Fluorobiphenyl (Surr) - RA	41		31 - 120
2-Fluorophenol (Surr) - RA	52		17 - 120
Nitrobenzene-d5 (Surr) - RA	35		27 - 120
Phenol-d6 (Surr) - RA	37		10 - 120
p-Terphenyl-d14 (Surr) - RA	61		45 - 120

# QC Sample Results

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

Job ID: 380-116207-1  
SDG: Weekly

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

**Lab Sample ID: MB 570-491567/6**  
**Matrix: Water**  
**Analysis Batch: 491567**

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C6-C10)	<10		10	ug/L			10/15/24 11:30	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	64		38 - 134				10/15/24 11:30	1

**Lab Sample ID: LCS 570-491567/4**  
**Matrix: Water**  
**Analysis Batch: 491567**

**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	424		ug/L		106	78 - 120
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	78		38 - 134				

**Lab Sample ID: LCSD 570-491567/5**  
**Matrix: Water**  
**Analysis Batch: 491567**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Gasoline Range Organics (C4-C13)	400	414		ug/L		103	78 - 120	2	10
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
4-Bromofluorobenzene (Surr)	78		38 - 134						

**Lab Sample ID: MRL 570-491567/3**  
**Matrix: Water**  
**Analysis Batch: 491567**

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (C4-C13)	10.0	11.5		ug/L		115	50 - 150
Surrogate	MRL %Recovery	MRL Qualifier	Limits				
4-Bromofluorobenzene (Surr)	71		38 - 134				

**Lab Sample ID: 380-117186-C-3 MS**  
**Matrix: Water**  
**Analysis Batch: 491567**

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (C4-C13)	<10		400	403		ug/L		101	68 - 122
Surrogate	MS %Recovery	MS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	74		38 - 134						

Eurofins Eaton Analytical Pomona

# QC Sample Results

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

Job ID: 380-116207-1  
 SDG: Weekly

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

**Lab Sample ID: 380-117186-C-3 MSD**

**Client Sample ID: Matrix Spike Duplicate**

**Matrix: Water**

**Prep Type: Total/NA**

**Analysis Batch: 491567**

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	396		ug/L		99	68 - 122	2	18
<b>Surrogate</b>		<i>MSD</i> <b>%Recovery</b>	<i>MSD</i> <b>Qualifier</b>								<b>Limits</b>
4-Bromofluorobenzene (Surr)		77									38 - 134

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# QC Association Summary

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

Job ID: 380-116207-1  
SDG: Weekly

## GC/MS Semi VOA

### Prep Batch: 112062

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-116207-1	Halawa Shaft Viewing Pool	Total/NA	Water	525.2	
MB 380-112062/21-A	Method Blank	Total/NA	Water	525.2	
LCS 380-112062/23-A	Lab Control Sample	Total/NA	Water	525.2	
LCSD 380-112062/24-A	Lab Control Sample Dup	Total/NA	Water	525.2	
MRL 380-112062/22-A	Lab Control Sample	Total/NA	Water	525.2	
380-115918-A-1-B MS	Matrix Spike	Total/NA	Water	525.2	
380-115918-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	525.2	

### Analysis Batch: 112290

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-116207-1	Halawa Shaft Viewing Pool	Total/NA	Water	525.2	112062
MB 380-112062/21-A	Method Blank	Total/NA	Water	525.2	112062
LCS 380-112062/23-A	Lab Control Sample	Total/NA	Water	525.2	112062
LCSD 380-112062/24-A	Lab Control Sample Dup	Total/NA	Water	525.2	112062
MRL 380-112062/22-A	Lab Control Sample	Total/NA	Water	525.2	112062
380-115918-A-1-B MS	Matrix Spike	Total/NA	Water	525.2	112062
380-115918-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	525.2	112062

### Prep Batch: 489158

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-116207-1	Halawa Shaft Viewing Pool	Total/NA	Water	625.1	
MB 570-489158/1-A	Method Blank	Total/NA	Water	625.1	
LCS 570-489158/2-A - RA	Lab Control Sample	Total/NA	Water	625.1	
LCSD 570-489158/3-A	Lab Control Sample Dup	Total/NA	Water	625.1	

### Analysis Batch: 490947

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-116207-1	Halawa Shaft Viewing Pool	Total/NA	Water	625.1 SIM	489158
MB 570-489158/1-A	Method Blank	Total/NA	Water	625.1 SIM	489158
LCSD 570-489158/3-A	Lab Control Sample Dup	Total/NA	Water	625.1 SIM	489158

### Analysis Batch: 491289

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 570-489158/2-A - RA	Lab Control Sample	Total/NA	Water	625.1 SIM	489158

### Analysis Batch: 492527

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-116207-1	Halawa Shaft Viewing Pool	Total/NA	Water	625.1	489158
MB 570-489158/1-A	Method Blank	Total/NA	Water	625.1	489158

## GC VOA

### Analysis Batch: 491567

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-116207-1	Halawa Shaft Viewing Pool	Total/NA	Water	8015B GRO LL	
380-116207-2	TB: Halawa Shaft Viewing Pool	Total/NA	Water	8015B GRO LL	
MB 570-491567/6	Method Blank	Total/NA	Water	8015B GRO LL	
LCS 570-491567/4	Lab Control Sample	Total/NA	Water	8015B GRO LL	
LCSD 570-491567/5	Lab Control Sample Dup	Total/NA	Water	8015B GRO LL	
MRL 570-491567/3	Lab Control Sample	Total/NA	Water	8015B GRO LL	
380-117186-C-3 MS	Matrix Spike	Total/NA	Water	8015B GRO LL	

# QC Association Summary

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

Job ID: 380-116207-1  
SDG: Weekly

## GC VOA (Continued)

### Analysis Batch: 491567 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-117186-C-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8015B GRO LL	

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# Lab Chronicle

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

Job ID: 380-116207-1  
 SDG: Weekly

## Client Sample ID: Halawa Shaft Viewing Pool

## Lab Sample ID: 380-116207-1

Date Collected: 10/02/24 10:00

Matrix: Water

Date Received: 10/04/24 10:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			112062	OTM3	EA POM	10/07/24 13:15
Total/NA	Analysis	525.2		1	112290	UPAC	EA POM	10/08/24 15:38
Total/NA	Prep	625.1			489158	TVD6	EET CAL 4	10/08/24 15:24
Total/NA	Analysis	625.1		1	492527	J7WE	EET CAL 4	10/17/24 20:35
Total/NA	Prep	625.1			489158	TVD6	EET CAL 4	10/08/24 15:24
Total/NA	Analysis	625.1 SIM		1	490947	PQS1	EET CAL 4	10/13/24 12:49
Total/NA	Analysis	8015B GRO LL		1	491567	A9VE	EET CAL 4	10/15/24 12:45

## Client Sample ID: TB: Halawa Shaft Viewing Pool

## Lab Sample ID: 380-116207-2

Date Collected: 10/02/24 10:00

Matrix: Water

Date Received: 10/04/24 10:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015B GRO LL		1	491567	A9VE	EET CAL 4	10/15/24 12:22

**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: 380-116207-1  
 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	11-15-24
Arkansas DEQ	State	88-0161	07-02-25
California	Los Angeles County Sanitation Districts	9257304	07-31-26
California	SCAQMD LAP	17LA0919	11-30-24
California	State	3082	07-31-26
Kansas	NELAP	E-10420	07-31-25

# Accreditation/Certification Summary

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

Job ID: 380-116207-1  
SDG: Weekly

## Laboratory: Eurofins Calscience (Continued)

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

Authority	Program	Identification Number	Expiration Date
Nevada	State	CA00111	07-31-25
Oregon	NELAP	4175	02-02-25
USDA	US Federal Programs	P330-22-00059	06-08-26
Washington	State	C916-18	10-11-24 *

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





# Method Summary

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

Job ID: 380-116207-1  
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
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: 380-116207-1  
SDG: Weekly

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-116207-1	Halawa Shaft Viewing Pool	Water	10/02/24 10:00	10/04/24 10:06
380-116207-2	TB: Halawa Shaft Viewing Pool	Water	10/02/24 10:00	10/04/24 10:06

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**Eurofins Eaton Analytical Pomona**

941 Corporate Center Drive  
 Pomona, CA 91768-2642  
 Phone: 626-386-1100

**Chain of Custody Record**



eurofins | Envirc

Loc: 380  
**116207**

<b>Client Information (Sub Contract Lab)</b>		Sampler:		Lab PM: Arada, Rachelle		Carrier Tracking No(s):		COC No: 380-159105.1		
Client Contact: Shipping/Receiving		Phone:		E-Mail: Rachelle.Arada@et.eurofinsus.com		State of Origin: Hawaii		Page: Page 1 of 1		
Company: Eurofins Environment Testing Southwest,				Accreditations Required (See note): State - Hawaii				Job #: 380-116207-1		
Address: 2841 Dow Avenue, Suite 100,		Due Date Requested: 10/17/2024		<b>Analysis Requested</b>					Preservation Codes:  Other:	
City: Tustin		TAT Requested (days):								
State, Zip: CA, 92780		PO #:								
Phone: 714-895-5494(Tel)		WO #:								
Email:		Project #: 38001111								
Project Name: RED-HILL		SSOW#:		Site: Honolulu BWS Sites		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (Water, Seawater, Oil, BT=Tissue, A=Air)		
								Field Filtered Sample (Yes or No)		
								Perform MS/MSD (Yes or No)		
								8015B_DRO_LL_CS/510C_LL_HNL Ranges: C10-C24/C24-C36/C38-C18		
								8015B_GRO_LL/5030C (MOD) GRO		
								625.1_SIM/625_Prep (MOD) Extended PAH List		
								Total Number of containers		
								Special Instructions/Note:		
Halawa Shaft Viewing Pool (380-116207-1)		10/2/24		10:00 Hawaiian		G Water		X X X		
TB: Halawa Shaft Viewing Pool (380-116207-2)		10/2/24		10:00 Hawaiian		G Water		X		
								7 MRLs are needed. Confirm any hits >RL		
								2 MRLs are needed.		



380-116207 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/tests/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.

<b>Possible Hazard Identification</b>				<b>Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)</b>			
Unconfirmed				<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)		Primary Deliverable Rank: 2		Special Instructions/QC Requirements:			
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by: <i>[Signature]</i>		Date/Time: 10/5/24 1012		Company: <i>[Signature]</i>		Received by: <i>[Signature]</i>	
Relinquished by: <i>[Signature]</i>		Date/Time: 10/5/24 1111		Company: <i>[Signature]</i>		Received by: <i>[Signature]</i>	
Relinquished by: <i>[Signature]</i>		Date/Time:		Company:		Received by: <i>[Signature]</i>	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 1.0/2.0 > 14			

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# Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-116207-1

SDG Number: Weekly

**Login Number: 116207**

**List Number: 1**

**Creator: Gerfen, Chris**

**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: 380-116207-1

SDG Number: Weekly

**Login Number: 116207**

**List Number: 2**

**Creator: Yu, Tiffany**

**List Source: Eurofins Calscience**

**List Creation: 10/07/24 09:31 AM**

Question	Answer	Comment
Radioactivity wasn't checked or is < /= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
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?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

