

ANALYTICAL REPORT

PREPARED FOR

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Honolulu, Hawaii 96843

Generated 9/30/2024 11:33:12 AM

JOB DESCRIPTION

RED-HILL
Weekly

JOB NUMBER

380-113095-1

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
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Definitions/Glossary

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

Job ID: 380-113095-1
SDG: Weekly

Qualifiers

GC/MS Semi VOA

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

GC/MS Semi VOA TICs

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

GC Semi VOA

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

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: 380-113095-1

Job ID: 380-113095-1

Eurofins Eaton Analytical Pomona

Job Narrative 380-113095-1

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

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

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

Receipt

The samples were received on 9/13/2024 12:00 PM. 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 1.8°C and 3.7°C.

GC/MS Semi VOA

Method 625.1: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 570-481610. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

Method 625.1_SIM: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 570-481610. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

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: 380-113095-1
SDG: Weekly

Client Sample ID: HALAWA SHAFT VIEWING POOL

Lab Sample ID: 380-113095-1

No Detections.

Client Sample ID: TRIP BLANK

Lab Sample ID: 380-113095-2

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: 380-113095-1
SDG: Weekly

Client Sample ID: HALAWA SHAFT VIEWING POOL

Lab Sample ID: 380-113095-1

Date Collected: 09/10/24 10:00

Matrix: Water

Date Received: 09/13/24 12:00

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.097		0.097	ug/L		09/16/24 09:45	09/17/24 16:59	1
2,4'-DDD	<0.097		0.097	ug/L		09/16/24 09:45	09/17/24 16:59	1
2,4'-DDE	<0.097		0.097	ug/L		09/16/24 09:45	09/17/24 16:59	1
2,4'-DDT	<0.097		0.097	ug/L		09/16/24 09:45	09/17/24 16:59	1
2,4-Dinitrotoluene	<0.097		0.097	ug/L		09/16/24 09:45	09/17/24 16:59	1
2,6-Dinitrotoluene	<0.097		0.097	ug/L		09/16/24 09:45	09/17/24 16:59	1
2-Methylnaphthalene	<0.097		0.097	ug/L		09/16/24 09:45	09/17/24 16:59	1
4,4'-DDD	<0.097		0.097	ug/L		09/16/24 09:45	09/17/24 16:59	1
4,4'-DDE	<0.097		0.097	ug/L		09/16/24 09:45	09/17/24 16:59	1
4,4'-DDT	<0.097		0.097	ug/L		09/16/24 09:45	09/17/24 16:59	1
Acenaphthene	<0.097		0.097	ug/L		09/16/24 09:45	09/17/24 16:59	1
Acenaphthylene	<0.097		0.097	ug/L		09/16/24 09:45	09/17/24 16:59	1
Acetochlor	<0.097		0.097	ug/L		09/16/24 09:45	09/17/24 16:59	1
Alachlor	<0.049		0.049	ug/L		09/16/24 09:45	09/17/24 16:59	1
alpha-BHC	<0.097		0.097	ug/L		09/16/24 09:45	09/17/24 16:59	1
alpha-Chlordane	<0.049		0.049	ug/L		09/16/24 09:45	09/17/24 16:59	1
Anthracene	<0.019		0.019	ug/L		09/16/24 09:45	09/17/24 16:59	1
Atrazine	<0.049		0.049	ug/L		09/16/24 09:45	09/17/24 16:59	1
Benz(a)anthracene	<0.049		0.049	ug/L		09/16/24 09:45	09/17/24 16:59	1
Benzo[a]pyrene	<0.019		0.019	ug/L		09/16/24 09:45	09/17/24 16:59	1
Benzo[b]fluoranthene	<0.019		0.019	ug/L		09/16/24 09:45	09/17/24 16:59	1
Benzo[g,h,i]perylene	<0.049		0.049	ug/L		09/16/24 09:45	09/17/24 16:59	1
Benzo[k]fluoranthene	<0.019		0.019	ug/L		09/16/24 09:45	09/17/24 16:59	1
beta-BHC	<0.097		0.097	ug/L		09/16/24 09:45	09/17/24 16:59	1
Bis(2-ethylhexyl) phthalate	<0.58		0.58	ug/L		09/16/24 09:45	09/17/24 16:59	1
Bromacil	<0.097		0.097	ug/L		09/16/24 09:45	09/17/24 16:59	1
Butachlor	<0.049		0.049	ug/L		09/16/24 09:45	09/17/24 16:59	1
Butylbenzylphthalate	<0.49		0.49	ug/L		09/16/24 09:45	09/17/24 16:59	1
Chlorobenzilate	<0.097		0.097	ug/L		09/16/24 09:45	09/17/24 16:59	1
Chloroneb	<0.097		0.097	ug/L		09/16/24 09:45	09/17/24 16:59	1
Chlorothalonil (Draconil, Bravo)	<0.097		0.097	ug/L		09/16/24 09:45	09/17/24 16:59	1
Chlorpyrifos	<0.049		0.049	ug/L		09/16/24 09:45	09/17/24 16:59	1
Chrysene	<0.019		0.019	ug/L		09/16/24 09:45	09/17/24 16:59	1
delta-BHC	<0.097		0.097	ug/L		09/16/24 09:45	09/17/24 16:59	1
Di(2-ethylhexyl)adipate	<0.58		0.58	ug/L		09/16/24 09:45	09/17/24 16:59	1
Dibenz(a,h)anthracene	<0.049		0.049	ug/L		09/16/24 09:45	09/17/24 16:59	1
Diclorvos (DDVP)	<0.049		0.049	ug/L		09/16/24 09:45	09/17/24 16:59	1
Dieldrin	<0.0097	^3+	0.0097	ug/L		09/16/24 09:45	09/17/24 16:59	1
Diethylphthalate	<0.49		0.49	ug/L		09/16/24 09:45	09/17/24 16:59	1
Dimethylphthalate	<0.49		0.49	ug/L		09/16/24 09:45	09/17/24 16:59	1
Di-n-butyl phthalate	<0.97		0.97	ug/L		09/16/24 09:45	09/17/24 16:59	1
Di-n-octyl phthalate	<0.097		0.097	ug/L		09/16/24 09:45	09/17/24 16:59	1
Endosulfan I (Alpha)	<0.097		0.097	ug/L		09/16/24 09:45	09/17/24 16:59	1
Endosulfan II (Beta)	<0.097		0.097	ug/L		09/16/24 09:45	09/17/24 16:59	1
Endosulfan sulfate	<0.097		0.097	ug/L		09/16/24 09:45	09/17/24 16:59	1
Endrin	<0.0097		0.0097	ug/L		09/16/24 09:45	09/17/24 16:59	1
Endrin aldehyde	<0.097		0.097	ug/L		09/16/24 09:45	09/17/24 16:59	1
EPTC	<0.097		0.097	ug/L		09/16/24 09:45	09/17/24 16:59	1
Fluoranthene	<0.097		0.097	ug/L		09/16/24 09:45	09/17/24 16:59	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-113095-1
SDG: Weekly

Client Sample ID: HALAWA SHAFT VIEWING POOL

Lab Sample ID: 380-113095-1

Date Collected: 09/10/24 10:00

Matrix: Water

Date Received: 09/13/24 12:00

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	<0.049		0.049	ug/L		09/16/24 09:45	09/17/24 16:59	1
gamma-Chlordane	<0.049		0.049	ug/L		09/16/24 09:45	09/17/24 16:59	1
Heptachlor	<0.0097		0.0097	ug/L		09/16/24 09:45	09/17/24 16:59	1
Heptachlor epoxide (isomer B)	<0.0097		0.0097	ug/L		09/16/24 09:45	09/17/24 16:59	1
Hexachlorobenzene	<0.049		0.049	ug/L		09/16/24 09:45	09/17/24 16:59	1
Hexachlorocyclopentadiene	<0.049		0.049	ug/L		09/16/24 09:45	09/17/24 16:59	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049	ug/L		09/16/24 09:45	09/17/24 16:59	1
Isophorone	<0.097		0.097	ug/L		09/16/24 09:45	09/17/24 16:59	1
Lindane	<0.0097		0.0097	ug/L		09/16/24 09:45	09/17/24 16:59	1
Malathion	<0.097		0.097	ug/L		09/16/24 09:45	09/17/24 16:59	1
Methoxychlor	<0.049		0.049	ug/L		09/16/24 09:45	09/17/24 16:59	1
Metolachlor	<0.049		0.049	ug/L		09/16/24 09:45	09/17/24 16:59	1
Molinate	<0.097		0.097	ug/L		09/16/24 09:45	09/17/24 16:59	1
Naphthalene	<0.097		0.097	ug/L		09/16/24 09:45	09/17/24 16:59	1
Parathion	<0.097		0.097	ug/L		09/16/24 09:45	09/17/24 16:59	1
Pendimethalin (Penoxaline)	<0.097		0.097	ug/L		09/16/24 09:45	09/17/24 16:59	1
Phenanthrene	<0.039		0.039	ug/L		09/16/24 09:45	09/17/24 16:59	1
Propachlor	<0.049		0.049	ug/L		09/16/24 09:45	09/17/24 16:59	1
Pyrene	<0.049		0.049	ug/L		09/16/24 09:45	09/17/24 16:59	1
Simazine	<0.049		0.049	ug/L		09/16/24 09:45	09/17/24 16:59	1
Terbacil	<0.097		0.097	ug/L		09/16/24 09:45	09/17/24 16:59	1
Terbutylazine	<0.097		0.097	ug/L		09/16/24 09:45	09/17/24 16:59	1
Thiobencarb	<0.097		0.097	ug/L		09/16/24 09:45	09/17/24 16:59	1
Total Permethrin (mixed isomers)	<0.19		0.19	ug/L		09/16/24 09:45	09/17/24 16:59	1
trans-Nonachlor	<0.049		0.049	ug/L		09/16/24 09:45	09/17/24 16:59	1
Trifluralin	<0.097		0.097	ug/L		09/16/24 09:45	09/17/24 16:59	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown Carboxylic Acid	0.63	T J	ug/L		6.28	N/A	09/16/24 09:45	09/17/24 16:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	97		70 - 130	09/16/24 09:45	09/17/24 16:59	1
Perylene-d12	90		70 - 130	09/16/24 09:45	09/17/24 16:59	1
Triphenylphosphate	101		70 - 130	09/16/24 09:45	09/17/24 16:59	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.19		0.19	ug/L		09/17/24 07:43	09/24/24 20:29	1
2-Methylnaphthalene	<0.19		0.19	ug/L		09/17/24 07:43	09/24/24 20:29	1
Acenaphthene	<0.19		0.19	ug/L		09/17/24 07:43	09/24/24 20:29	1
Acenaphthylene	<0.19		0.19	ug/L		09/17/24 07:43	09/24/24 20:29	1
Anthracene	<0.19		0.19	ug/L		09/17/24 07:43	09/24/24 20:29	1
Benzo[a]anthracene	<0.19		0.19	ug/L		09/17/24 07:43	09/24/24 20:29	1
Benzo[a]pyrene	<0.19		0.19	ug/L		09/17/24 07:43	09/24/24 20:29	1
Benzo[b]fluoranthene	<0.19		0.19	ug/L		09/17/24 07:43	09/24/24 20:29	1
Benzo[g,h,i]perylene	<0.19		0.19	ug/L		09/17/24 07:43	09/24/24 20:29	1
Benzo[k]fluoranthene	<0.19		0.19	ug/L		09/17/24 07:43	09/24/24 20:29	1
Chrysene	<0.19		0.19	ug/L		09/17/24 07:43	09/24/24 20:29	1
Dibenz(a,h)anthracene	<0.19		0.19	ug/L		09/17/24 07:43	09/24/24 20:29	1
Fluoranthene	<0.19		0.19	ug/L		09/17/24 07:43	09/24/24 20:29	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-113095-1
SDG: Weekly

Client Sample ID: HALAWA SHAFT VIEWING POOL

Lab Sample ID: 380-113095-1

Date Collected: 09/10/24 10:00

Matrix: Water

Date Received: 09/13/24 12:00

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	<0.19		0.19	ug/L		09/17/24 07:43	09/24/24 20:29	1
Indeno[1,2,3-cd]pyrene	<0.19		0.19	ug/L		09/17/24 07:43	09/24/24 20:29	1
Naphthalene	<0.19		0.19	ug/L		09/17/24 07:43	09/24/24 20:29	1
Phenanthrene	<0.19		0.19	ug/L		09/17/24 07:43	09/24/24 20:29	1
Pyrene	<0.19		0.19	ug/L		09/17/24 07:43	09/24/24 20:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	82		28 - 127	09/17/24 07:43	09/24/24 20:29	1
2-Fluorobiphenyl (Surr)	43		31 - 120	09/17/24 07:43	09/24/24 20:29	1
2-Fluorophenol (Surr)	41		17 - 120	09/17/24 07:43	09/24/24 20:29	1
Nitrobenzene-d5 (Surr)	44		27 - 120	09/17/24 07:43	09/24/24 20:29	1
Phenol-d6 (Surr)	26		10 - 120	09/17/24 07:43	09/24/24 20:29	1
p-Terphenyl-d14 (Surr)	57		45 - 120	09/17/24 07:43	09/24/24 20:29	1

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

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	09/17/24 07:43	09/27/24 13:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	77		33 - 139	09/17/24 07:43	09/27/24 13:35	1
2-Fluorobiphenyl (Surr)	64		33 - 126	09/17/24 07:43	09/27/24 13:35	1
2-Fluorophenol (Surr)	54		12 - 120	09/17/24 07:43	09/27/24 13:35	1
Nitrobenzene-d5 (Surr)	56		36 - 120	09/17/24 07:43	09/27/24 13:35	1
Phenol-d6 (Surr)	23		10 - 120	09/17/24 07:43	09/27/24 13:35	1
p-Terphenyl-d14 (Surr)	79		47 - 131	09/17/24 07:43	09/27/24 13:35	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	<10		10	ug/L			09/20/24 17:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		38 - 134		09/20/24 17:09	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C24)	<25		25	ug/L		09/17/24 16:04	09/23/24 06:08	1
Motor Oil Range Organics [C24-C36]	<25		25	ug/L		09/17/24 16:04	09/23/24 06:08	1
C8-C18	<25		25	ug/L		09/17/24 16:04	09/23/24 06:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	104		60 - 130	09/17/24 16:04	09/23/24 06:08	1

Client Sample ID: TRIP BLANK

Lab Sample ID: 380-113095-2

Date Collected: 09/10/24 10:00

Matrix: Water

Date Received: 09/13/24 12:00

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			09/20/24 20:09	1

Client Sample Results

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

Job ID: 380-113095-1
SDG: Weekly

Client Sample ID: TRIP BLANK

Lab Sample ID: 380-113095-2

Date Collected: 09/10/24 10:00

Matrix: Water

Date Received: 09/13/24 12:00

<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)	83		38 - 134		09/20/24 20:09	1

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Action Limit Summary

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

Job ID: 380-113095-1
SDG: Weekly

Client Sample ID: HALAWA SHAFT VIEWING POOL

Lab Sample ID: 380-113095-1

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

Surrogate Summary

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

Job ID: 380-113095-1
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)
380-112933-L-1-A MS	Matrix Spike	94	87	93
380-113095-1	HALAWA SHAFT VIEWING POOL	97	90	101
LCS 380-108572/23-A	Lab Control Sample	94	88	93
LCSD 380-108572/24-A	Lab Control Sample Dup	95	90	93
MB 380-108572/21-A	Method Blank	93	82	88
MRL 380-108572/22-A	Lab Control Sample	98	87	102

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

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		2NMX	PRY	TPP
380-112933-L-2-A DU	Duplicate			

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)
380-113095-1	HALAWA SHAFT VIEWING POC	77	64	54	56	23	79
MB 570-481610/1-A	Method Blank	82	70	63	73	34	80

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)
380-113095-1	HALAWA SHAFT VIEWING POC	82	43	41	44	26	57
LCS 570-481610/2-A	Lab Control Sample	82	48	56	36	38	58
LCSD 570-481610/3-A	Lab Control Sample Dup	88	53	61	38	42	62
MB 570-481610/1-A	Method Blank	86	50	46	49	31	57

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Surrogate Summary

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

Job ID: 380-113095-1
SDG: Weekly

Surrogate Legend

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

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1 (38-134)
380-113095-1	HALAWA SHAFT VIEWING POC	85
380-113095-2	TRIP BLANK	83
380-113707-C-3 MS	Matrix Spike	91
380-113707-C-3 MSD	Matrix Spike Duplicate	91
LCS 570-483045/4	Lab Control Sample	89
LCSD 570-483045/5	Lab Control Sample Dup	92
MB 570-483045/6	Method Blank	85
MRL 570-483045/3	Lab Control Sample	86

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)
380-112520-B-3-A MS	Matrix Spike	125
380-112520-B-3-B MSD	Matrix Spike Duplicate	122
380-113095-1	HALAWA SHAFT VIEWING POOL	104
LCS 570-481430/2-A	Lab Control Sample	125
LCSD 570-481430/3-A	Lab Control Sample Dup	130
MB 570-481430/1-A	Method Blank	119
MRL 570-481430/4-A	Lab Control Sample	124

Surrogate Legend

OTCSN = n-Octacosane (Surr)

QC Sample Results

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

Job ID: 380-113095-1
 SDG: Weekly

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

Lab Sample ID: MB 380-108572/21-A
Matrix: Water
Analysis Batch: 108701

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 108572

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
1-Methylnaphthalene	<0.10		0.10	ug/L		09/16/24 08:35	09/17/24 09:55	1
2,4'-DDD	<0.10		0.10	ug/L		09/16/24 08:35	09/17/24 09:55	1
2,4'-DDE	<0.10		0.10	ug/L		09/16/24 08:35	09/17/24 09:55	1
2,4'-DDT	<0.10		0.10	ug/L		09/16/24 08:35	09/17/24 09:55	1
2,4-Dinitrotoluene	<0.10		0.10	ug/L		09/16/24 08:35	09/17/24 09:55	1
2,6-Dinitrotoluene	<0.10		0.10	ug/L		09/16/24 08:35	09/17/24 09:55	1
2-Methylnaphthalene	<0.10		0.10	ug/L		09/16/24 08:35	09/17/24 09:55	1
4,4'-DDD	<0.10		0.10	ug/L		09/16/24 08:35	09/17/24 09:55	1
4,4'-DDE	<0.10		0.10	ug/L		09/16/24 08:35	09/17/24 09:55	1
4,4'-DDT	<0.10		0.10	ug/L		09/16/24 08:35	09/17/24 09:55	1
Acenaphthene	<0.10		0.10	ug/L		09/16/24 08:35	09/17/24 09:55	1
Acenaphthylene	<0.10		0.10	ug/L		09/16/24 08:35	09/17/24 09:55	1
Acetochlor	<0.10		0.10	ug/L		09/16/24 08:35	09/17/24 09:55	1
Alachlor	<0.050		0.050	ug/L		09/16/24 08:35	09/17/24 09:55	1
alpha-BHC	<0.10		0.10	ug/L		09/16/24 08:35	09/17/24 09:55	1
alpha-Chlordane	<0.050		0.050	ug/L		09/16/24 08:35	09/17/24 09:55	1
Anthracene	<0.020		0.020	ug/L		09/16/24 08:35	09/17/24 09:55	1
Atrazine	<0.050		0.050	ug/L		09/16/24 08:35	09/17/24 09:55	1
Benz(a)anthracene	<0.050		0.050	ug/L		09/16/24 08:35	09/17/24 09:55	1
Benzo[a]pyrene	<0.020		0.020	ug/L		09/16/24 08:35	09/17/24 09:55	1
Benzo[b]fluoranthene	<0.020		0.020	ug/L		09/16/24 08:35	09/17/24 09:55	1
Benzo[g,h,i]perylene	<0.050		0.050	ug/L		09/16/24 08:35	09/17/24 09:55	1
Benzo[k]fluoranthene	<0.020		0.020	ug/L		09/16/24 08:35	09/17/24 09:55	1
beta-BHC	<0.10		0.10	ug/L		09/16/24 08:35	09/17/24 09:55	1
Bis(2-ethylhexyl) phthalate	<0.60		0.60	ug/L		09/16/24 08:35	09/17/24 09:55	1
Bromacil	<0.10		0.10	ug/L		09/16/24 08:35	09/17/24 09:55	1
Butachlor	<0.050		0.050	ug/L		09/16/24 08:35	09/17/24 09:55	1
Butylbenzylphthalate	<0.50		0.50	ug/L		09/16/24 08:35	09/17/24 09:55	1
Chlorobenzilate	<0.10		0.10	ug/L		09/16/24 08:35	09/17/24 09:55	1
Chloroneb	<0.10		0.10	ug/L		09/16/24 08:35	09/17/24 09:55	1
Chlorothalonil (Draconil, Bravo)	<0.10		0.10	ug/L		09/16/24 08:35	09/17/24 09:55	1
Chlorpyrifos	<0.050		0.050	ug/L		09/16/24 08:35	09/17/24 09:55	1
Chrysene	<0.020		0.020	ug/L		09/16/24 08:35	09/17/24 09:55	1
delta-BHC	<0.10		0.10	ug/L		09/16/24 08:35	09/17/24 09:55	1
Di(2-ethylhexyl)adipate	<0.60		0.60	ug/L		09/16/24 08:35	09/17/24 09:55	1
Dibenz(a,h)anthracene	<0.050		0.050	ug/L		09/16/24 08:35	09/17/24 09:55	1
Diclorvos (DDVP)	<0.050		0.050	ug/L		09/16/24 08:35	09/17/24 09:55	1
Dieldrin	<0.010		0.010	ug/L		09/16/24 08:35	09/17/24 09:55	1
Diethylphthalate	<0.50		0.50	ug/L		09/16/24 08:35	09/17/24 09:55	1
Dimethylphthalate	<0.50		0.50	ug/L		09/16/24 08:35	09/17/24 09:55	1
Di-n-butyl phthalate	<1.0		1.0	ug/L		09/16/24 08:35	09/17/24 09:55	1
Di-n-octyl phthalate	<0.10		0.10	ug/L		09/16/24 08:35	09/17/24 09:55	1
Endosulfan I (Alpha)	<0.10		0.10	ug/L		09/16/24 08:35	09/17/24 09:55	1
Endosulfan II (Beta)	<0.10		0.10	ug/L		09/16/24 08:35	09/17/24 09:55	1
Endosulfan sulfate	<0.10		0.10	ug/L		09/16/24 08:35	09/17/24 09:55	1
Endrin	<0.010		0.010	ug/L		09/16/24 08:35	09/17/24 09:55	1
Endrin aldehyde	<0.10		0.10	ug/L		09/16/24 08:35	09/17/24 09:55	1
EPTC	<0.10		0.10	ug/L		09/16/24 08:35	09/17/24 09:55	1

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QC Sample Results

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

Job ID: 380-113095-1
SDG: Weekly

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

Lab Sample ID: MB 380-108572/21-A
Matrix: Water
Analysis Batch: 108701

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 108572

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	<0.10		0.10	ug/L		09/16/24 08:35	09/17/24 09:55	1
Fluorene	<0.050		0.050	ug/L		09/16/24 08:35	09/17/24 09:55	1
gamma-Chlordane	<0.050		0.050	ug/L		09/16/24 08:35	09/17/24 09:55	1
Heptachlor	<0.010		0.010	ug/L		09/16/24 08:35	09/17/24 09:55	1
Heptachlor epoxide (isomer B)	<0.010		0.010	ug/L		09/16/24 08:35	09/17/24 09:55	1
Hexachlorobenzene	<0.050		0.050	ug/L		09/16/24 08:35	09/17/24 09:55	1
Hexachlorocyclopentadiene	<0.050		0.050	ug/L		09/16/24 08:35	09/17/24 09:55	1
Indeno[1,2,3-cd]pyrene	<0.050		0.050	ug/L		09/16/24 08:35	09/17/24 09:55	1
Isophorone	<0.10		0.10	ug/L		09/16/24 08:35	09/17/24 09:55	1
Lindane	<0.010		0.010	ug/L		09/16/24 08:35	09/17/24 09:55	1
Malathion	<0.10		0.10	ug/L		09/16/24 08:35	09/17/24 09:55	1
Methoxychlor	<0.050		0.050	ug/L		09/16/24 08:35	09/17/24 09:55	1
Metolachlor	<0.050		0.050	ug/L		09/16/24 08:35	09/17/24 09:55	1
Molinate	<0.10		0.10	ug/L		09/16/24 08:35	09/17/24 09:55	1
Naphthalene	<0.10		0.10	ug/L		09/16/24 08:35	09/17/24 09:55	1
Parathion	<0.10		0.10	ug/L		09/16/24 08:35	09/17/24 09:55	1
Pendimethalin (Penoxaline)	<0.10		0.10	ug/L		09/16/24 08:35	09/17/24 09:55	1
Phenanthrene	<0.040		0.040	ug/L		09/16/24 08:35	09/17/24 09:55	1
Propachlor	<0.050		0.050	ug/L		09/16/24 08:35	09/17/24 09:55	1
Pyrene	<0.050		0.050	ug/L		09/16/24 08:35	09/17/24 09:55	1
Simazine	<0.050		0.050	ug/L		09/16/24 08:35	09/17/24 09:55	1
Terbacil	<0.10		0.10	ug/L		09/16/24 08:35	09/17/24 09:55	1
Terbutylazine	<0.10		0.10	ug/L		09/16/24 08:35	09/17/24 09:55	1
Thiobencarb	<0.10		0.10	ug/L		09/16/24 08:35	09/17/24 09:55	1
Total Permethrin (mixed isomers)	<0.20		0.20	ug/L		09/16/24 08:35	09/17/24 09:55	1
trans-Nonachlor	<0.050		0.050	ug/L		09/16/24 08:35	09/17/24 09:55	1
Trifluralin	<0.10		0.10	ug/L		09/16/24 08:35	09/17/24 09:55	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Decane	1.20	T J N	ug/L		2.85	124-18-5	09/16/24 08:35	09/17/24 09:55	1
Cyclohexasiloxane, dodecamethyl-	0.615	T J N	ug/L		3.95	540-97-6	09/16/24 08:35	09/17/24 09:55	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	93		70 - 130	09/16/24 08:35	09/17/24 09:55	1
Perylene-d12	82		70 - 130	09/16/24 08:35	09/17/24 09:55	1
Triphenylphosphate	88		70 - 130	09/16/24 08:35	09/17/24 09:55	1

Lab Sample ID: LCS 380-108572/23-A
Matrix: Water
Analysis Batch: 108701

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 108572

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	1.99	1.89		ug/L		95	70 - 130
2,4'-DDD	1.99	2.00		ug/L		101	70 - 130
2,4'-DDE	1.99	1.99		ug/L		100	70 - 130
2,4'-DDT	1.99	2.07		ug/L		104	70 - 130
2,4-Dinitrotoluene	1.99	1.82		ug/L		92	70 - 130
2,6-Dinitrotoluene	1.99	1.81		ug/L		91	70 - 130

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QC Sample Results

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

Job ID: 380-113095-1
SDG: Weekly

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

Lab Sample ID: LCS 380-108572/23-A
Matrix: Water
Analysis Batch: 108701

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 108572

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2-Methylnaphthalene	1.99	1.86		ug/L		94	70 - 130
4,4'-DDD	1.99	1.99		ug/L		100	70 - 130
4,4'-DDE	1.99	1.92		ug/L		97	70 - 130
4,4'-DDT	1.99	2.10		ug/L		105	70 - 130
Acenaphthene	1.99	1.92		ug/L		97	70 - 130
Acenaphthylene	1.99	1.80		ug/L		91	70 - 130
Acetochlor	1.99	1.96		ug/L		98	70 - 130
Alachlor	1.99	1.91		ug/L		96	70 - 130
alpha-BHC	1.99	1.96		ug/L		99	70 - 130
alpha-Chlordane	1.99	2.06		ug/L		104	70 - 130
Anthracene	1.99	1.70		ug/L		86	70 - 130
Atrazine	1.99	2.12		ug/L		107	70 - 130
Benz(a)anthracene	1.99	1.72		ug/L		86	70 - 130
Benzo[a]pyrene	1.99	1.66		ug/L		83	70 - 130
Benzo[b]fluoranthene	1.99	1.77		ug/L		89	70 - 130
Benzo[g,h,i]perylene	1.99	1.83		ug/L		92	70 - 130
Benzo[k]fluoranthene	1.99	2.06		ug/L		103	70 - 130
beta-BHC	1.99	2.07		ug/L		104	70 - 130
Bis(2-ethylhexyl) phthalate	1.99	1.70		ug/L		86	70 - 130
Bromacil	1.99	1.91		ug/L		96	70 - 130
Butachlor	1.99	1.93		ug/L		97	70 - 130
Butylbenzylphthalate	1.99	1.91		ug/L		96	70 - 130
Chlorobenzilate	1.99	1.89		ug/L		95	70 - 130
Chloroneb	1.99	2.15		ug/L		108	70 - 130
Chlorothalonil (Draconil, Bravo)	1.99	2.00		ug/L		101	70 - 130
Chlorpyrifos	1.99	2.16		ug/L		109	70 - 130
Chrysene	1.99	2.12		ug/L		107	70 - 130
delta-BHC	1.99	1.96		ug/L		98	70 - 130
Di(2-ethylhexyl)adipate	1.99	1.76		ug/L		88	70 - 130
Dibenz(a,h)anthracene	1.99	1.65		ug/L		83	70 - 130
Diclorvos (DDVP)	1.99	1.81		ug/L		91	70 - 130
Dieldrin	1.99	1.93		ug/L		97	70 - 130
Diethylphthalate	1.99	1.90		ug/L		95	70 - 130
Dimethylphthalate	1.99	1.90		ug/L		96	70 - 130
Di-n-butyl phthalate	3.98	3.93		ug/L		99	70 - 130
Di-n-octyl phthalate	1.99	1.61		ug/L		81	70 - 130
Endosulfan I (Alpha)	1.99	1.84		ug/L		92	70 - 130
Endosulfan II (Beta)	1.99	1.84		ug/L		93	70 - 130
Endosulfan sulfate	1.99	1.98		ug/L		100	70 - 130
Endrin	1.99	1.93		ug/L		97	70 - 130
Endrin aldehyde	1.99	1.54		ug/L		77	60 - 130
EPTC	1.99	1.92		ug/L		96	70 - 130
Fluoranthene	1.99	2.02		ug/L		101	70 - 130
Fluorene	1.99	1.94		ug/L		98	70 - 130
gamma-Chlordane	1.99	2.07		ug/L		104	70 - 130
Heptachlor	1.99	2.10		ug/L		106	70 - 130
Heptachlor epoxide (isomer B)	1.99	1.87		ug/L		94	70 - 130
Hexachlorobenzene	1.99	1.90		ug/L		96	70 - 130
Hexachlorocyclopentadiene	1.99	1.76		ug/L		88	70 - 130

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QC Sample Results

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

Job ID: 380-113095-1
SDG: Weekly

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

Lab Sample ID: LCS 380-108572/23-A
Matrix: Water
Analysis Batch: 108701

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 108572

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Indeno[1,2,3-cd]pyrene	1.99	1.55		ug/L		78	70 - 130
Isophorone	1.99	1.82		ug/L		92	70 - 130
Lindane	1.99	1.89		ug/L		95	70 - 130
Malathion	1.99	2.05		ug/L		103	70 - 130
Methoxychlor	1.99	2.04		ug/L		102	70 - 130
Metolachlor	1.99	1.88		ug/L		95	70 - 130
Molinate	1.99	1.93		ug/L		97	70 - 130
Naphthalene	1.99	1.94		ug/L		98	70 - 130
Parathion	1.99	2.19		ug/L		110	70 - 130
Pendimethalin (Penoxaline)	1.99	1.63		ug/L		82	70 - 130
Phenanthrene	1.99	1.88		ug/L		94	70 - 130
Propachlor	1.99	1.89		ug/L		95	70 - 130
Pyrene	1.99	2.00		ug/L		100	70 - 130
Simazine	1.99	1.96		ug/L		99	70 - 130
Terbacil	1.99	2.00		ug/L		101	70 - 130
Terbutylazine	1.99	2.09		ug/L		105	70 - 130
Thiobencarb	1.99	1.94		ug/L		98	70 - 130
trans-Nonachlor	1.99	1.92		ug/L		97	70 - 130
Trifluralin	1.99	1.75		ug/L		88	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Nitro-m-xylene	94		70 - 130
Perylene-d12	88		70 - 130
Triphenylphosphate	93		70 - 130

Lab Sample ID: LCSD 380-108572/24-A
Matrix: Water
Analysis Batch: 108701

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 108572

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	1.99	1.89		ug/L		95	70 - 130	0	20
2,4'-DDD	1.99	1.99		ug/L		100	70 - 130	1	20
2,4'-DDE	1.99	1.97		ug/L		99	70 - 130	1	20
2,4'-DDT	1.99	2.09		ug/L		105	70 - 130	1	20
2,4-Dinitrotoluene	1.99	1.88		ug/L		94	70 - 130	3	20
2,6-Dinitrotoluene	1.99	1.88		ug/L		94	70 - 130	3	20
2-Methylnaphthalene	1.99	1.87		ug/L		94	70 - 130	0	20
4,4'-DDD	1.99	1.99		ug/L		100	70 - 130	0	20
4,4'-DDE	1.99	1.90		ug/L		95	70 - 130	1	20
4,4'-DDT	1.99	2.12		ug/L		107	70 - 130	1	20
Acenaphthene	1.99	1.92		ug/L		97	70 - 130	0	20
Acenaphthylene	1.99	1.82		ug/L		92	70 - 130	1	20
Acetochlor	1.99	1.95		ug/L		98	70 - 130	0	20
Alachlor	1.99	1.92		ug/L		97	70 - 130	1	20
alpha-BHC	1.99	1.96		ug/L		99	70 - 130	0	20
alpha-Chlordane	1.99	2.07		ug/L		104	70 - 130	1	20
Anthracene	1.99	1.72		ug/L		86	70 - 130	1	20
Atrazine	1.99	2.14		ug/L		108	70 - 130	1	20

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-113095-1
SDG: Weekly

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

Lab Sample ID: LCSD 380-108572/24-A
Matrix: Water
Analysis Batch: 108701

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 108572

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
Benz(a)anthracene	1.99	1.71		ug/L		86	70 - 130	1	20	
Benzo[a]pyrene	1.99	1.69		ug/L		85	70 - 130	2	20	
Benzo[b]fluoranthene	1.99	1.74		ug/L		88	70 - 130	2	20	
Benzo[g,h,i]perylene	1.99	1.87		ug/L		94	70 - 130	2	20	
Benzo[k]fluoranthene	1.99	2.12		ug/L		107	70 - 130	3	20	
beta-BHC	1.99	2.09		ug/L		105	70 - 130	1	20	
Bis(2-ethylhexyl) phthalate	1.99	1.69		ug/L		85	70 - 130	0	20	
Bromacil	1.99	1.99		ug/L		100	70 - 130	4	20	
Butachlor	1.99	1.96		ug/L		99	70 - 130	2	20	
Butylbenzylphthalate	1.99	1.95		ug/L		98	70 - 130	2	20	
Chlorobenzilate	1.99	1.94		ug/L		98	70 - 130	3	20	
Chloroneb	1.99	2.34		ug/L		118	70 - 130	8	20	
Chlorothalonil (Draconil, Bravo)	1.99	2.10		ug/L		106	70 - 130	5	20	
Chlorpyrifos	1.99	2.19		ug/L		110	70 - 130	1	20	
Chrysene	1.99	2.13		ug/L		107	70 - 130	0	20	
delta-BHC	1.99	1.97		ug/L		99	70 - 130	1	20	
Di(2-ethylhexyl)adipate	1.99	1.78		ug/L		89	70 - 130	1	20	
Dibenz(a,h)anthracene	1.99	1.76		ug/L		89	70 - 130	7	20	
Diclorvos (DDVP)	1.99	1.85		ug/L		93	70 - 130	2	20	
Dieldrin	1.99	1.93		ug/L		97	70 - 130	0	20	
Diethylphthalate	1.99	1.91		ug/L		96	70 - 130	1	20	
Dimethylphthalate	1.99	1.93		ug/L		97	70 - 130	1	20	
Di-n-butyl phthalate	3.97	3.90		ug/L		98	70 - 130	1	20	
Di-n-octyl phthalate	1.99	1.65		ug/L		83	70 - 130	2	20	
Endosulfan I (Alpha)	1.99	1.87		ug/L		94	70 - 130	2	20	
Endosulfan II (Beta)	1.99	1.91		ug/L		96	70 - 130	4	20	
Endosulfan sulfate	1.99	2.01		ug/L		101	70 - 130	1	20	
Endrin	1.99	1.94		ug/L		98	70 - 130	1	20	
Endrin aldehyde	1.99	1.59		ug/L		80	60 - 130	3	20	
EPTC	1.99	1.98		ug/L		100	70 - 130	3	20	
Fluoranthene	1.99	2.00		ug/L		100	70 - 130	1	20	
Fluorene	1.99	1.94		ug/L		98	70 - 130	0	20	
gamma-Chlordane	1.99	2.06		ug/L		104	70 - 130	0	20	
Heptachlor	1.99	2.12		ug/L		107	70 - 130	1	20	
Heptachlor epoxide (isomer B)	1.99	1.90		ug/L		95	70 - 130	1	20	
Hexachlorobenzene	1.99	1.93		ug/L		97	70 - 130	1	20	
Hexachlorocyclopentadiene	1.99	1.81		ug/L		91	70 - 130	3	20	
Indeno[1,2,3-cd]pyrene	1.99	1.57		ug/L		79	70 - 130	1	20	
Isophorone	1.99	1.84		ug/L		93	70 - 130	1	20	
Lindane	1.99	1.93		ug/L		97	70 - 130	2	20	
Malathion	1.99	2.04		ug/L		103	70 - 130	0	20	
Methoxychlor	1.99	2.09		ug/L		105	70 - 130	3	20	
Metolachlor	1.99	1.91		ug/L		96	70 - 130	1	20	
Molinate	1.99	1.95		ug/L		98	70 - 130	1	20	
Naphthalene	1.99	1.96		ug/L		99	70 - 130	1	20	
Parathion	1.99	2.27		ug/L		114	70 - 130	4	20	
Pendimethalin (Penoxaline)	1.99	1.67		ug/L		84	70 - 130	2	20	
Phenanthrene	1.99	1.89		ug/L		95	70 - 130	1	20	
Propachlor	1.99	1.94		ug/L		98	70 - 130	2	20	

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-113095-1
SDG: Weekly

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

Lab Sample ID: LCSD 380-108572/24-A
Matrix: Water
Analysis Batch: 108701

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 108572

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Pyrene	1.99	1.96		ug/L		99	70 - 130	2	20
Simazine	1.99	1.95		ug/L		98	70 - 130	1	20
Terbacil	1.99	2.07		ug/L		104	70 - 130	4	20
Terbuthylazine	1.99	2.09		ug/L		105	70 - 130	0	20
Thiobencarb	1.99	1.95		ug/L		98	70 - 130	1	20
trans-Nonachlor	1.99	2.00		ug/L		100	70 - 130	4	20
Trifluralin	1.99	1.80		ug/L		90	70 - 130	3	20

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
2-Nitro-m-xylene	95		70 - 130
Perylene-d12	90		70 - 130
Triphenylphosphate	93		70 - 130

Lab Sample ID: MRL 380-108572/22-A
Matrix: Water
Analysis Batch: 108799

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 108572

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	0.0994	0.104		ug/L		105	50 - 150
2,4'-DDD	0.0994	0.0907	J	ug/L		91	50 - 150
2,4'-DDE	0.0994	0.0999		ug/L		100	50 - 150
2,4'-DDT	0.0994	0.110		ug/L		111	50 - 150
2,4-Dinitrotoluene	0.0994	0.0995		ug/L		100	50 - 150
2,6-Dinitrotoluene	0.0994	0.112		ug/L		112	50 - 150
2-Methylnaphthalene	0.0994	0.0978	J	ug/L		98	50 - 150
4,4'-DDD	0.0994	0.109		ug/L		109	50 - 150
4,4'-DDE	0.0994	0.0973	J	ug/L		98	50 - 150
4,4'-DDT	0.0994	0.106		ug/L		107	50 - 150
Acenaphthene	0.0994	0.0955	J	ug/L		96	50 - 150
Acenaphthylene	0.0994	0.0892	J	ug/L		90	50 - 150
Acetochlor	0.0994	0.104		ug/L		105	50 - 150
Alachlor	0.0497	0.0485	J	ug/L		98	50 - 150
alpha-BHC	0.0994	0.104		ug/L		105	50 - 150
alpha-Chlordane	0.0249	<0.029		ug/L		99	50 - 150
Anthracene	0.0199	<0.019		ug/L		95	50 - 150
Atrazine	0.0497	0.0497	J	ug/L		100	50 - 150
Benz(a)anthracene	0.0497	0.0526		ug/L		106	50 - 150
Benzo[a]pyrene	0.0199	0.0169	J	ug/L		85	50 - 150
Benzo[b]fluoranthene	0.0199	0.0180	J	ug/L		90	50 - 150
Benzo[g,h,i]perylene	0.0497	0.0410	J	ug/L		82	50 - 150
Benzo[k]fluoranthene	0.0199	0.0181	J	ug/L		91	50 - 150
beta-BHC	0.0994	0.115		ug/L		116	50 - 150
Bis(2-ethylhexyl) phthalate	0.596	0.519	J	ug/L		87	50 - 150
Bromacil	0.0994	0.0990		ug/L		100	50 - 150
Butachlor	0.0497	0.0645		ug/L		130	50 - 150
Butylbenzylphthalate	0.497	0.493	J	ug/L		99	50 - 150
Chlorobenzilate	0.0994	0.0960	J	ug/L		97	50 - 150
Chloroneb	0.0994	0.0784	J	ug/L		79	50 - 150

QC Sample Results

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

Job ID: 380-113095-1
SDG: Weekly

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

Lab Sample ID: MRL 380-108572/22-A
Matrix: Water
Analysis Batch: 108799

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 108572

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Chlorothalonil (Draconil, Bravo)	0.0994	0.114		ug/L		114	50 - 150
Chlorpyrifos	0.0497	0.0457	J	ug/L		92	50 - 150
Chrysene	0.0199	0.0194	J	ug/L		98	50 - 150
delta-BHC	0.0994	0.108		ug/L		108	50 - 150
Di(2-ethylhexyl)adipate	0.596	0.537	J	ug/L		90	50 - 150
Dibenz(a,h)anthracene	0.0497	0.0403	J	ug/L		81	50 - 150
Diclorvos (DDVP)	0.0497	0.0526		ug/L		106	50 - 150
Dieldrin	0.00994	0.0158	^3+	ug/L		159	50 - 150
Diethylphthalate	0.497	0.503		ug/L		101	50 - 150
Dimethylphthalate	0.497	0.508		ug/L		102	50 - 150
Di-n-butyl phthalate	0.497	0.518	J	ug/L		104	49 - 243
Di-n-octyl phthalate	0.0994	0.0726	J	ug/L		73	50 - 150
Endosulfan I (Alpha)	0.0994	0.0870	J	ug/L		88	50 - 150
Endosulfan II (Beta)	0.0994	0.116		ug/L		116	50 - 150
Endosulfan sulfate	0.0994	0.111		ug/L		111	50 - 150
Endrin	0.00994	0.00972	J	ug/L		98	50 - 150
Endrin aldehyde	0.0994	0.0948	J	ug/L		95	50 - 150
EPTC	0.0994	0.0951	J	ug/L		96	50 - 150
Fluoranthene	0.0994	0.0998		ug/L		100	50 - 150
Fluorene	0.0497	0.0503		ug/L		101	50 - 150
gamma-Chlordane	0.0249	0.0223	J	ug/L		90	50 - 150
Heptachlor	0.00994	0.00970	J	ug/L		98	50 - 150
Heptachlor epoxide (isomer B)	0.00994	0.0143		ug/L		144	50 - 150
Hexachlorobenzene	0.0497	0.0455	J	ug/L		92	50 - 150
Hexachlorocyclopentadiene	0.0497	0.0453	J	ug/L		91	50 - 150
Indeno[1,2,3-cd]pyrene	0.0497	0.0379	J	ug/L		76	50 - 150
Isophorone	0.0994	0.113		ug/L		114	50 - 150
Lindane	0.00994	0.0114		ug/L		115	50 - 150
Malathion	0.0994	0.0927	J	ug/L		93	50 - 150
Methoxychlor	0.0497	0.0639		ug/L		128	50 - 150
Metolachlor	0.0497	0.0549		ug/L		110	50 - 150
Molinate	0.0994	0.100		ug/L		101	50 - 150
Naphthalene	0.0994	0.0981	J	ug/L		99	50 - 150
Parathion	0.0994	0.0866	J	ug/L		87	50 - 150
Pendimethalin (Penoxaline)	0.0994	0.0943	J	ug/L		95	50 - 150
Phenanthrene	0.0398	0.0411		ug/L		103	50 - 150
Propachlor	0.0497	0.0491	J	ug/L		99	50 - 150
Pyrene	0.0497	0.0482	J	ug/L		97	50 - 150
Simazine	0.0497	0.0412	J	ug/L		83	50 - 150
Terbacil	0.0994	0.0963	J	ug/L		97	50 - 150
Terbutylazine	0.0994	0.0996		ug/L		100	50 - 150
Thiobencarb	0.0994	0.101		ug/L		102	50 - 150
trans-Nonachlor	0.0249	<0.026		ug/L		94	50 - 150
Trifluralin	0.0994	0.0984	J	ug/L		99	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
2-Nitro-m-xylene	98		70 - 130
Perylene-d12	87		70 - 130

QC Sample Results

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

Job ID: 380-113095-1
SDG: Weekly

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

Lab Sample ID: MRL 380-108572/22-A
Matrix: Water
Analysis Batch: 108799

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 108572

Surrogate	%Recovery	MRL MRL Qualifier	Limits
Triphenylphosphate	102		70 - 130

Lab Sample ID: 380-112933-L-1-A MS
Matrix: Water
Analysis Batch: 108701

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 108572

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
1-Methylnaphthalene	<0.096		1.92	1.84		ug/L		96	70 - 130
2,4'-DDD	<0.096		1.92	2.00		ug/L		104	70 - 130
2,4'-DDE	<0.096		1.92	2.02		ug/L		105	70 - 130
2,4'-DDT	<0.096		1.92	2.13		ug/L		111	70 - 130
2,4-Dinitrotoluene	<0.096		1.92	2.10		ug/L		109	70 - 130
2,6-Dinitrotoluene	<0.096		1.92	1.95		ug/L		101	70 - 130
2-Methylnaphthalene	<0.096		1.92	1.81		ug/L		94	70 - 130
4,4'-DDD	<0.096		1.92	2.00		ug/L		104	70 - 130
4,4'-DDE	<0.096		1.92	1.94		ug/L		101	70 - 130
4,4'-DDT	<0.096		1.92	2.15		ug/L		112	70 - 130
Acenaphthene	<0.096		1.92	1.88		ug/L		98	70 - 130
Acenaphthylene	<0.096		1.92	1.77		ug/L		92	70 - 130
Acetochlor	<0.096		1.92	1.88		ug/L		98	70 - 130
Alachlor	<0.048		1.92	1.84		ug/L		96	70 - 130
alpha-BHC	<0.096		1.92	1.96		ug/L		102	70 - 130
alpha-Chlordane	<0.048		1.92	2.05		ug/L		107	70 - 130
Anthracene	<0.019	F1	1.92	0.941	F1	ug/L		49	70 - 130
Atrazine	<0.048		1.92	1.89		ug/L		98	70 - 130
Benz(a)anthracene	<0.048		1.92	1.58		ug/L		82	70 - 130
Benzo[a]pyrene	<0.019	F1	1.92	1.30	F1	ug/L		67	70 - 130
Benzo[b]fluoranthene	<0.019		1.92	1.72		ug/L		89	70 - 130
Benzo[g,h,i]perylene	<0.048		1.92	1.53		ug/L		80	70 - 130
Benzo[k]fluoranthene	<0.019		1.92	2.08		ug/L		108	70 - 130
beta-BHC	<0.096		1.92	2.03		ug/L		105	70 - 130
Bis(2-ethylhexyl) phthalate	<0.58		1.92	1.74		ug/L		91	70 - 130
Bromacil	<0.096		1.92	1.85		ug/L		96	70 - 130
Butachlor	<0.048		1.92	1.90		ug/L		99	70 - 130
Butylbenzylphthalate	<0.48		1.92	1.96		ug/L		102	70 - 130
Chlorobenzilate	<0.096		1.92	1.86		ug/L		97	70 - 130
Chloroneb	<0.096		1.92	2.01		ug/L		104	70 - 130
Chlorothalonil (Draconil, Bravo)	<0.096		1.92	2.09		ug/L		109	70 - 130
Chlorpyrifos	<0.048		1.92	2.17		ug/L		113	70 - 130
Chrysene	<0.019		1.92	2.11		ug/L		110	70 - 130
delta-BHC	<0.096		1.92	1.89		ug/L		99	70 - 130
Di(2-ethylhexyl)adipate	<0.58		1.92	1.80		ug/L		93	70 - 130
Dibenz(a,h)anthracene	<0.048		1.92	1.59		ug/L		83	70 - 130
Diclorvos (DDVP)	<0.048		1.92	1.79		ug/L		93	70 - 130
Dieldrin	<0.0096		1.92	1.91		ug/L		99	70 - 130
Diethylphthalate	<0.48		1.92	2.09		ug/L		109	70 - 130
Dimethylphthalate	<0.48		1.92	1.91		ug/L		99	70 - 130
Di-n-butyl phthalate	<0.96		3.85	3.90		ug/L		101	70 - 130

QC Sample Results

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

Job ID: 380-113095-1
SDG: Weekly

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

Lab Sample ID: 380-112933-L-1-A MS
Matrix: Water
Analysis Batch: 108701

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 108572

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec
	Result	Qualifier	Added	Result	Qualifier				
Di-n-octyl phthalate	<0.096		1.92	1.60		ug/L		83	70 - 130
Endosulfan I (Alpha)	<0.096		1.92	1.84		ug/L		96	70 - 130
Endosulfan II (Beta)	<0.096		1.92	1.72		ug/L		89	70 - 130
Endosulfan sulfate	<0.096		1.92	1.77		ug/L		92	70 - 130
Endrin	<0.0096		1.92	1.72		ug/L		89	70 - 130
Endrin aldehyde	<0.096		1.92	1.27		ug/L		66	60 - 130
EPTC	<0.096		1.92	1.93		ug/L		100	70 - 130
Fluoranthene	<0.096		1.92	2.03		ug/L		105	70 - 130
Fluorene	<0.048		1.92	1.91		ug/L		99	70 - 130
gamma-Chlordane	<0.048		1.92	2.07		ug/L		108	70 - 130
Heptachlor	<0.0096		1.92	2.06		ug/L		107	70 - 130
Heptachlor epoxide (isomer B)	<0.0096		1.92	1.88		ug/L		98	70 - 130
Hexachlorobenzene	<0.048		1.92	1.93		ug/L		100	70 - 130
Hexachlorocyclopentadiene	<0.048		1.92	1.88		ug/L		98	70 - 130
Indeno[1,2,3-cd]pyrene	<0.048		1.92	1.41		ug/L		73	70 - 130
Isophorone	<0.096		1.92	1.77		ug/L		92	70 - 130
Lindane	<0.0096		1.92	1.90		ug/L		99	70 - 130
Malathion	<0.096		1.92	2.04		ug/L		106	70 - 130
Methoxychlor	<0.048		1.92	2.15		ug/L		112	70 - 130
Metolachlor	<0.048		1.92	1.86		ug/L		97	70 - 130
Molinate	<0.096		1.92	1.96		ug/L		102	70 - 130
Naphthalene	<0.096		1.92	1.88		ug/L		98	70 - 130
Parathion	<0.096		1.92	2.36		ug/L		123	70 - 130
Pendimethalin (Penoxaline)	<0.096		1.92	1.87		ug/L		97	70 - 130
Phenanthrene	<0.039		1.92	1.87		ug/L		97	70 - 130
Propachlor	<0.048		1.92	1.93		ug/L		101	70 - 130
Pyrene	<0.048		1.92	1.98		ug/L		103	70 - 130
Simazine	<0.048		1.92	1.67		ug/L		87	70 - 130
Terbacil	<0.096		1.92	1.80		ug/L		93	70 - 130
Terbutylazine	<0.096		1.92	1.84		ug/L		95	70 - 130
Thiobencarb	<0.096		1.92	1.94		ug/L		101	70 - 130
trans-Nonachlor	<0.048		1.92	1.99		ug/L		103	70 - 130
Trifluralin	<0.096		1.92	1.91		ug/L		99	70 - 130

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	94		70 - 130
Perylene-d12	87		70 - 130
Triphenylphosphate	93		70 - 130

Lab Sample ID: 380-112933-L-2-A DU
Matrix: Water
Analysis Batch: 108701

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 108572

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	RPD	Limit
	Result	Qualifier	Result	Qualifier					
1-Methylnaphthalene	<0.096				ug/L				
2,4'-DDD	<0.096				ug/L				
2,4'-DDE	<0.096				ug/L				
2,4'-DDT	<0.096				ug/L				

QC Sample Results

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

Job ID: 380-113095-1
 SDG: Weekly

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

Lab Sample ID: 380-112933-L-2-A DU
Matrix: Water
Analysis Batch: 108701

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 108572

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

QC Sample Results

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

Job ID: 380-113095-1
SDG: Weekly

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

Lab Sample ID: 380-112933-L-2-A DU
Matrix: Water
Analysis Batch: 108701

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 108572

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Hexachlorobenzene			<0.048		ug/L			
Hexachlorocyclopentadiene			<0.048		ug/L			
Indeno[1,2,3-cd]pyrene			<0.048		ug/L			
Isophorone			<0.096		ug/L			
Lindane			<0.0096		ug/L			
Malathion			<0.096		ug/L			
Methoxychlor			<0.048		ug/L			
Metolachlor			<0.048		ug/L			
Molinate			<0.096		ug/L			
Naphthalene			<0.096		ug/L			
Parathion			<0.096		ug/L			
Pendimethalin (Penoxaline)			<0.096		ug/L			
Phenanthrene			<0.039		ug/L			
Propachlor			<0.048		ug/L			
Pyrene			<0.048		ug/L			
Simazine			<0.048		ug/L			
Terbacil			<0.096		ug/L			
Terbutylazine			<0.096		ug/L			
Thiobencarb			<0.096		ug/L			
Total Permethrin (mixed isomers)			<0.19		ug/L			
trans-Nonachlor			<0.048		ug/L			
Trifluralin			<0.096		ug/L			

Surrogate	DU %Recovery	DU Qualifier	Limits
2-Nitro-m-xylene			
Perylene-d12			
Triphenylphosphate			

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

Lab Sample ID: MB 570-481610/1-A
Matrix: Water
Analysis Batch: 485431

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 481610

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	09/17/24 07:42	09/27/24 13:13	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	82		33 - 139	09/17/24 07:42	09/27/24 13:13	1
2-Fluorobiphenyl (Surr)	70		33 - 126	09/17/24 07:42	09/27/24 13:13	1
2-Fluorophenol (Surr)	63		12 - 120	09/17/24 07:42	09/27/24 13:13	1
Nitrobenzene-d5 (Surr)	73		36 - 120	09/17/24 07:42	09/27/24 13:13	1
Phenol-d6 (Surr)	34		10 - 120	09/17/24 07:42	09/27/24 13:13	1
p-Terphenyl-d14 (Surr)	80		47 - 131	09/17/24 07:42	09/27/24 13:13	1

QC Sample Results

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

Job ID: 380-113095-1
SDG: Weekly

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

Lab Sample ID: MB 570-481610/1-A
Matrix: Water
Analysis Batch: 484381

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 481610

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.20		0.20	ug/L		09/17/24 07:42	09/24/24 19:24	1
2-Methylnaphthalene	<0.20		0.20	ug/L		09/17/24 07:42	09/24/24 19:24	1
Acenaphthene	<0.20		0.20	ug/L		09/17/24 07:42	09/24/24 19:24	1
Acenaphthylene	<0.20		0.20	ug/L		09/17/24 07:42	09/24/24 19:24	1
Anthracene	<0.20		0.20	ug/L		09/17/24 07:42	09/24/24 19:24	1
Benzo[a]anthracene	<0.20		0.20	ug/L		09/17/24 07:42	09/24/24 19:24	1
Benzo[a]pyrene	<0.20		0.20	ug/L		09/17/24 07:42	09/24/24 19:24	1
Benzo[b]fluoranthene	<0.20		0.20	ug/L		09/17/24 07:42	09/24/24 19:24	1
Benzo[g,h,i]perylene	<0.20		0.20	ug/L		09/17/24 07:42	09/24/24 19:24	1
Benzo[k]fluoranthene	<0.20		0.20	ug/L		09/17/24 07:42	09/24/24 19:24	1
Chrysene	<0.20		0.20	ug/L		09/17/24 07:42	09/24/24 19:24	1
Dibenz(a,h)anthracene	<0.20		0.20	ug/L		09/17/24 07:42	09/24/24 19:24	1
Fluoranthene	<0.20		0.20	ug/L		09/17/24 07:42	09/24/24 19:24	1
Fluorene	<0.20		0.20	ug/L		09/17/24 07:42	09/24/24 19:24	1
Indeno[1,2,3-cd]pyrene	<0.20		0.20	ug/L		09/17/24 07:42	09/24/24 19:24	1
Naphthalene	<0.20		0.20	ug/L		09/17/24 07:42	09/24/24 19:24	1
Phenanthrene	<0.20		0.20	ug/L		09/17/24 07:42	09/24/24 19:24	1
Pyrene	<0.20		0.20	ug/L		09/17/24 07:42	09/24/24 19:24	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	86		28 - 127	09/17/24 07:42	09/24/24 19:24	1
2-Fluorobiphenyl (Surr)	50		31 - 120	09/17/24 07:42	09/24/24 19:24	1
2-Fluorophenol (Surr)	46		17 - 120	09/17/24 07:42	09/24/24 19:24	1
Nitrobenzene-d5 (Surr)	49		27 - 120	09/17/24 07:42	09/24/24 19:24	1
Phenol-d6 (Surr)	31		10 - 120	09/17/24 07:42	09/24/24 19:24	1
p-Terphenyl-d14 (Surr)	57		45 - 120	09/17/24 07:42	09/24/24 19:24	1

Lab Sample ID: LCS 570-481610/2-A
Matrix: Water
Analysis Batch: 484381

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 481610

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	40.0	27.0		ug/L		67	47 - 120
2-Methylnaphthalene	40.0	26.5		ug/L		66	43 - 120
Acenaphthene	40.0	36.5		ug/L		91	60 - 132
Acenaphthylene	40.0	38.0		ug/L		95	54 - 126
Anthracene	40.0	40.0		ug/L		100	43 - 120
Benzo[a]anthracene	40.0	41.4		ug/L		104	42 - 133
Benzo[a]pyrene	40.0	44.0		ug/L		110	32 - 148
Benzo[b]fluoranthene	40.0	41.5		ug/L		104	42 - 140
Benzo[g,h,i]perylene	40.0	42.3		ug/L		106	1 - 195
Benzo[k]fluoranthene	40.0	42.0		ug/L		105	25 - 146
Chrysene	40.0	39.7		ug/L		99	44 - 140
Dibenz(a,h)anthracene	40.0	42.5		ug/L		106	1 - 200
Fluoranthene	40.0	41.2		ug/L		103	43 - 121
Fluorene	40.0	38.3		ug/L		96	70 - 120
Indeno[1,2,3-cd]pyrene	40.0	42.7		ug/L		107	1 - 151
Naphthalene	40.0	25.0		ug/L		63	36 - 120

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QC Sample Results

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

Job ID: 380-113095-1
SDG: Weekly

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

Lab Sample ID: LCS 570-481610/2-A
Matrix: Water
Analysis Batch: 484381

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 481610

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Phenanthrene	40.0	40.0		ug/L		100	65 - 120
Pyrene	40.0	39.5		ug/L		99	70 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	82		28 - 127
2-Fluorobiphenyl (Surr)	48		31 - 120
2-Fluorophenol (Surr)	56		17 - 120
Nitrobenzene-d5 (Surr)	36		27 - 120
Phenol-d6 (Surr)	38		10 - 120
p-Terphenyl-d14 (Surr)	58		45 - 120

Lab Sample ID: LCSD 570-481610/3-A
Matrix: Water
Analysis Batch: 484381

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 481610

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	40.0	28.6		ug/L		72	47 - 120	6	20
2-Methylnaphthalene	40.0	28.6		ug/L		71	43 - 120	8	20
Acenaphthene	40.0	40.0		ug/L		100	60 - 132	9	29
Acenaphthylene	40.0	42.2		ug/L		105	54 - 126	11	45
Anthracene	40.0	43.4		ug/L		108	43 - 120	8	40
Benzo[a]anthracene	40.0	45.8		ug/L		114	42 - 133	10	32
Benzo[a]pyrene	40.0	47.4		ug/L		118	32 - 148	7	43
Benzo[b]fluoranthene	40.0	45.8		ug/L		114	42 - 140	10	43
Benzo[g,h,i]perylene	40.0	45.6		ug/L		114	1 - 195	7	61
Benzo[k]fluoranthene	40.0	44.6		ug/L		111	25 - 146	6	38
Chrysene	40.0	43.8		ug/L		109	44 - 140	10	53
Dibenz(a,h)anthracene	40.0	46.2		ug/L		115	1 - 200	8	75
Fluoranthene	40.0	45.2		ug/L		113	43 - 121	9	40
Fluorene	40.0	41.8		ug/L		105	70 - 120	9	23
Indeno[1,2,3-cd]pyrene	40.0	46.0		ug/L		115	1 - 151	8	60
Naphthalene	40.0	26.7		ug/L		67	36 - 120	7	39
Phenanthrene	40.0	43.5		ug/L		109	65 - 120	8	24
Pyrene	40.0	44.8		ug/L		112	70 - 120	13	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	88		28 - 127
2-Fluorobiphenyl (Surr)	53		31 - 120
2-Fluorophenol (Surr)	61		17 - 120
Nitrobenzene-d5 (Surr)	38		27 - 120
Phenol-d6 (Surr)	42		10 - 120
p-Terphenyl-d14 (Surr)	62		45 - 120

QC Sample Results

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

Job ID: 380-113095-1
SDG: Weekly

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

Lab Sample ID: MB 570-483045/6
Matrix: Water
Analysis Batch: 483045

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	<10		10	ug/L			09/20/24 12:55	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		38 - 134				09/20/24 12:55	1

Lab Sample ID: LCS 570-483045/4
Matrix: Water
Analysis Batch: 483045

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	362		ug/L		91	78 - 120
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	89		38 - 134				

Lab Sample ID: LCSD 570-483045/5
Matrix: Water
Analysis Batch: 483045

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	360		ug/L		90	78 - 120	1	10
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
4-Bromofluorobenzene (Surr)	92		38 - 134						

Lab Sample ID: MRL 570-483045/3
Matrix: Water
Analysis Batch: 483045

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	11.1		ug/L		111	50 - 150
Surrogate	MRL %Recovery	MRL Qualifier	Limits				
4-Bromofluorobenzene (Surr)	86		38 - 134				

Lab Sample ID: 380-113707-C-3 MS
Matrix: Water
Analysis Batch: 483045

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	354		ug/L		88	68 - 122
Surrogate	MS %Recovery	MS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	91		38 - 134						

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QC Sample Results

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

Job ID: 380-113095-1
SDG: Weekly

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

Lab Sample ID: 380-113707-C-3 MSD
Matrix: Water
Analysis Batch: 483045

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	351		ug/L		88	68 - 122	1	18
Surrogate	%Recovery	MSD Qualifier	MSD Limits								
4-Bromofluorobenzene (Surr)	91		38 - 134								

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

Lab Sample ID: MB 570-481430/1-A
Matrix: Water
Analysis Batch: 483474

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 481430

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C24)	<25		25	ug/L		09/16/24 17:02	09/23/24 02:16	1
Motor Oil Range Organics [C24-C36]	<25		25	ug/L		09/16/24 17:02	09/23/24 02:16	1
C8-C18	<25		25	ug/L		09/16/24 17:02	09/23/24 02:16	1
Surrogate	%Recovery	MB Qualifier	MB Limits	Prepared	Analyzed	Dil Fac		
n-Octacosane (Surr)	119		60 - 130	09/16/24 17:02	09/23/24 02:16	1		

Lab Sample ID: LCS 570-481430/2-A
Matrix: Water
Analysis Batch: 483474

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 481430

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C10-C28	1600	1440		ug/L		90	56 - 127		
Surrogate	%Recovery	LCS Qualifier	LCS Limits						
n-Octacosane (Surr)	125		60 - 130						

Lab Sample ID: LCSD 570-481430/3-A
Matrix: Water
Analysis Batch: 483474

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 481430

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C10-C28	1600	1440		ug/L		90	56 - 127	0	23
Surrogate	%Recovery	LCSD Qualifier	LCSD Limits						
n-Octacosane (Surr)	130		60 - 130						

Lab Sample ID: MRL 570-481430/4-A
Matrix: Water
Analysis Batch: 483474

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 481430

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C10-C28	0.0200	0.0241	J	mg/L		121	50 - 150		

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QC Sample Results

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

Job ID: 380-113095-1
 SDG: Weekly

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

Lab Sample ID: MRL 570-481430/4-A
Matrix: Water
Analysis Batch: 483474

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 481430

<u>Surrogate</u>	<u>MRL</u> <u>%Recovery</u>	<u>MRL</u> <u>Qualifier</u>	<u>Limits</u>
<i>n-Octacosane (Surr)</i>	124		60 - 130

Lab Sample ID: 380-112520-B-3-A MS
Matrix: Water
Analysis Batch: 483474

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 481430

<u>Analyte</u>	<u>Sample</u> <u>Result</u>	<u>Sample</u> <u>Qualifier</u>	<u>Spike</u> <u>Added</u>	<u>MS</u> <u>Result</u>	<u>MS</u> <u>Qualifier</u>	<u>Unit</u>	<u>D</u>	<u>%Rec</u>	<u>Limits</u>
C10-C28	<26		1630	1550		ug/L		95	70 - 130

<u>Surrogate</u>	<u>MS</u> <u>%Recovery</u>	<u>MS</u> <u>Qualifier</u>	<u>Limits</u>
<i>n-Octacosane (Surr)</i>	125		60 - 130

Lab Sample ID: 380-112520-B-3-B MSD
Matrix: Water
Analysis Batch: 483474

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 481430

<u>Analyte</u>	<u>Sample</u> <u>Result</u>	<u>Sample</u> <u>Qualifier</u>	<u>Spike</u> <u>Added</u>	<u>MSD</u> <u>Result</u>	<u>MSD</u> <u>Qualifier</u>	<u>Unit</u>	<u>D</u>	<u>%Rec</u>	<u>Limits</u>	<u>RPD</u>	<u>RPD</u> <u>Limit</u>
C10-C28	<26		1640	1540		ug/L		94	70 - 130	1	20

<u>Surrogate</u>	<u>MSD</u> <u>%Recovery</u>	<u>MSD</u> <u>Qualifier</u>	<u>Limits</u>
<i>n-Octacosane (Surr)</i>	122		60 - 130

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QC Association Summary

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

Job ID: 380-113095-1
SDG: Weekly

GC/MS Semi VOA

Prep Batch: 108572

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-113095-1	HALAWA SHAFT VIEWING POOL	Total/NA	Water	525.2	
MB 380-108572/21-A	Method Blank	Total/NA	Water	525.2	
LCS 380-108572/23-A	Lab Control Sample	Total/NA	Water	525.2	
LCSD 380-108572/24-A	Lab Control Sample Dup	Total/NA	Water	525.2	
MRL 380-108572/22-A	Lab Control Sample	Total/NA	Water	525.2	
380-112933-L-1-A MS	Matrix Spike	Total/NA	Water	525.2	
380-112933-L-2-A DU	Duplicate	Total/NA	Water	525.2	

Analysis Batch: 108701

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 380-108572/21-A	Method Blank	Total/NA	Water	525.2	108572
LCS 380-108572/23-A	Lab Control Sample	Total/NA	Water	525.2	108572
LCSD 380-108572/24-A	Lab Control Sample Dup	Total/NA	Water	525.2	108572
380-112933-L-1-A MS	Matrix Spike	Total/NA	Water	525.2	108572
380-112933-L-2-A DU	Duplicate	Total/NA	Water	525.2	108572

Analysis Batch: 108799

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-113095-1	HALAWA SHAFT VIEWING POOL	Total/NA	Water	525.2	108572
MRL 380-108572/22-A	Lab Control Sample	Total/NA	Water	525.2	108572

Prep Batch: 481610

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-113095-1	HALAWA SHAFT VIEWING POOL	Total/NA	Water	625.1	
MB 570-481610/1-A	Method Blank	Total/NA	Water	625.1	
LCS 570-481610/2-A	Lab Control Sample	Total/NA	Water	625.1	
LCSD 570-481610/3-A	Lab Control Sample Dup	Total/NA	Water	625.1	

Analysis Batch: 484381

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-113095-1	HALAWA SHAFT VIEWING POOL	Total/NA	Water	625.1 SIM	481610
MB 570-481610/1-A	Method Blank	Total/NA	Water	625.1 SIM	481610
LCS 570-481610/2-A	Lab Control Sample	Total/NA	Water	625.1 SIM	481610
LCSD 570-481610/3-A	Lab Control Sample Dup	Total/NA	Water	625.1 SIM	481610

Analysis Batch: 485431

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-113095-1	HALAWA SHAFT VIEWING POOL	Total/NA	Water	625.1	481610
MB 570-481610/1-A	Method Blank	Total/NA	Water	625.1	481610

GC VOA

Analysis Batch: 483045

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-113095-1	HALAWA SHAFT VIEWING POOL	Total/NA	Water	8015B GRO LL	
380-113095-2	TRIP BLANK	Total/NA	Water	8015B GRO LL	
MB 570-483045/6	Method Blank	Total/NA	Water	8015B GRO LL	
LCS 570-483045/4	Lab Control Sample	Total/NA	Water	8015B GRO LL	
LCSD 570-483045/5	Lab Control Sample Dup	Total/NA	Water	8015B GRO LL	
MRL 570-483045/3	Lab Control Sample	Total/NA	Water	8015B GRO LL	
380-113707-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: 380-113095-1
 SDG: Weekly

GC VOA (Continued)

Analysis Batch: 483045 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-113707-C-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8015B GRO LL	

GC Semi VOA

Prep Batch: 481430

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-113095-1	HALAWA SHAFT VIEWING POOL	Total/NA	Water	3510C	
MB 570-481430/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-481430/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-481430/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MRL 570-481430/4-A	Lab Control Sample	Total/NA	Water	3510C	
380-112520-B-3-A MS	Matrix Spike	Total/NA	Water	3510C	
380-112520-B-3-B MSD	Matrix Spike Duplicate	Total/NA	Water	3510C	

Analysis Batch: 483474

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-113095-1	HALAWA SHAFT VIEWING POOL	Total/NA	Water	8015B	481430
MB 570-481430/1-A	Method Blank	Total/NA	Water	8015B	481430
LCS 570-481430/2-A	Lab Control Sample	Total/NA	Water	8015B	481430
LCSD 570-481430/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	481430
MRL 570-481430/4-A	Lab Control Sample	Total/NA	Water	8015B	481430
380-112520-B-3-A MS	Matrix Spike	Total/NA	Water	8015B	481430
380-112520-B-3-B MSD	Matrix Spike Duplicate	Total/NA	Water	8015B	481430

Lab Chronicle

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

Job ID: 380-113095-1
 SDG: Weekly

Client Sample ID: HALAWA SHAFT VIEWING POOL

Lab Sample ID: 380-113095-1

Date Collected: 09/10/24 10:00

Matrix: Water

Date Received: 09/13/24 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			108572	OTM3	EA POM	09/16/24 09:45
Total/NA	Analysis	525.2		1	108799	UPAC	EA POM	09/17/24 16:59
Total/NA	Prep	625.1			481610	OAJ3	EET CAL 4	09/17/24 07:43
Total/NA	Analysis	625.1		1	485431	CG	EET CAL 4	09/27/24 13:35
Total/NA	Prep	625.1			481610	OAJ3	EET CAL 4	09/17/24 07:43
Total/NA	Analysis	625.1 SIM		1	484381	PQS1	EET CAL 4	09/24/24 20:29
Total/NA	Analysis	8015B GRO LL		1	483045	A9VE	EET CAL 4	09/20/24 17:09
Total/NA	Prep	3510C			481430	H6FE	EET CAL 4	09/17/24 16:04
Total/NA	Analysis	8015B		1	483474	SP9M	EET CAL 4	09/23/24 06:08

Client Sample ID: TRIP BLANK

Lab Sample ID: 380-113095-2

Date Collected: 09/10/24 10:00

Matrix: Water

Date Received: 09/13/24 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015B GRO LL		1	483045	A9VE	EET CAL 4	09/20/24 20:09

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: 380-113095-1
SDG: Weekly

Laboratory: Eurofins Eaton Analytical Pomona

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

Authority	Program	Identification Number	Expiration Date
Hawaii	State	CA00006	01-31-25
<p>The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.</p>			
Analysis Method	Prep Method	Matrix	Analyte
525.2	525.2	Water	1-Methylnaphthalene
525.2	525.2	Water	2,4'-DDD
525.2	525.2	Water	2,4'-DDE
525.2	525.2	Water	2,4'-DDT
525.2	525.2	Water	2,4-Dinitrotoluene
525.2	525.2	Water	2,6-Dinitrotoluene
525.2	525.2	Water	2-Methylnaphthalene
525.2	525.2	Water	4,4'-DDD
525.2	525.2	Water	4,4'-DDE
525.2	525.2	Water	4,4' DDT
525.2	525.2	Water	Acetochlor
525.2	525.2	Water	alpha-BHC
525.2	525.2	Water	alpha-Chlordane
525.2	525.2	Water	beta-BHC
525.2	525.2	Water	Chlorobenzilate
525.2	525.2	Water	Chloroneb
525.2	525.2	Water	Chlorothalonil (Draconil, Bravo)
525.2	525.2	Water	Chlorpyrifos
525.2	525.2	Water	delta-BHC
525.2	525.2	Water	Diclorvos (DDVP)
525.2	525.2	Water	Endosulfan I (Alpha)
525.2	525.2	Water	Endosulfan II (Beta)
525.2	525.2	Water	Endosulfan sulfate
525.2	525.2	Water	Endrin aldehyde
525.2	525.2	Water	EPTC
525.2	525.2	Water	gamma-Chlordane
525.2	525.2	Water	Isophorone
525.2	525.2	Water	Malathion
525.2	525.2	Water	Parathion
525.2	525.2	Water	Pendimethalin (Penoxaline)
525.2	525.2	Water	Terbacil
525.2	525.2	Water	Terbutylazine
525.2	525.2	Water	Total Permethrin (mixed isomers)
525.2	525.2	Water	trans-Nonachlor

Laboratory: Eurofins Calscience

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

Authority	Program	Identification Number	Expiration Date
Arizona	State	AZ0830	11-16-24
Arkansas DEQ	State	88-0161	07-02-25
California	Los Angeles County Sanitation Districts	9257304	08-01-24 *
California	State	3082	07-31-26
Kansas	NELAP	E-10420	07-31-25
Nevada	State	CA00111	07-31-25

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

Accreditation/Certification Summary

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

Job ID: 380-113095-1
SDG: Weekly

Laboratory: Eurofins Calscience (Continued)

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

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

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Method Summary

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

Job ID: 380-113095-1
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: 380-113095-1
SDG: Weekly

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-113095-1	HALAWA SHAFT VIEWING POOL	Water	09/10/24 10:00	09/13/24 12:00
380-113095-2	TRIP BLANK	Water	09/10/24 10:00	09/13/24 12:00

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Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-113095-1

SDG Number: Weekly

Login Number: 113095

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: 380-113095-1

SDG Number: Weekly

Login Number: 113095

List Number: 2

Creator: Khana, Piyush

List Source: Eurofins Calscience

List Creation: 09/16/24 11:48 AM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

