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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Erwin Kawata
City & County of Honolulu
630 South Beretania Street
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Honolulu, Hawaii 96843

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JOB DESCRIPTION

RED-HILL
Weekly
RUSH Weekly Red Hill

JOB NUMBER

380-125009-1

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: 380-125009-1
SDG: Weekly

Qualifiers

GC/MS Semi VOA

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

GC/MS Semi VOA TICs

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

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.
S1+	Surrogate recovery exceeds control limits, high biased.

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: 380-125009-1

Job ID: 380-125009-1

Eurofins Eaton Analytical Pomona

Job Narrative 380-125009-1

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

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

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

Receipt

The samples were received on 12/5/2024 10:01 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 1.8°C.

GC/MS Semi VOA

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

Gasoline Range Organics

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

Diesel Range Organics

Method 8015B_DRO_LL_CS: The surrogate recovery for the MSD associated with preparation batch 570-511782 and analytical batch 570-514184 was outside the upper control limits. All associated sample surrogates fell within acceptance criteria; therefore, the data have been reported.

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

Detection Summary

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

Job ID: 380-125009-1
SDG: Weekly

Client Sample ID: HALAWA SHAFT (331-241-TP401)
PWSID Number: HI0000331

Lab Sample ID: 380-125009-1

No Detections.

Client Sample ID: TB:HALAWA SHAFT-331-241-TP401

Lab Sample ID: 380-125009-2

No Detections.

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This Detection Summary does not include radiochemical test results.

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-125009-1
SDG: Weekly

Client Sample ID: HALAWA SHAFT (331-241-TP401)

Lab Sample ID: 380-125009-1

Date Collected: 12/03/24 09:30

Matrix: Drinking Water

Date Received: 12/05/24 10:01

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.10		0.10	ug/L		12/10/24 10:47	12/11/24 20:20	1
2,4'-DDD	<0.10		0.10	ug/L		12/10/24 10:47	12/11/24 20:20	1
2,4'-DDE	<0.10		0.10	ug/L		12/10/24 10:47	12/11/24 20:20	1
2,4'-DDT	<0.10		0.10	ug/L		12/10/24 10:47	12/11/24 20:20	1
2,4-Dinitrotoluene	<0.10		0.10	ug/L		12/10/24 10:47	12/11/24 20:20	1
2,6-Dinitrotoluene	<0.10		0.10	ug/L		12/10/24 10:47	12/11/24 20:20	1
2-Methylnaphthalene	<0.10		0.10	ug/L		12/10/24 10:47	12/11/24 20:20	1
4,4'-DDD	<0.10		0.10	ug/L		12/10/24 10:47	12/11/24 20:20	1
4,4'-DDE	<0.10		0.10	ug/L		12/10/24 10:47	12/11/24 20:20	1
4,4'-DDT	<0.10		0.10	ug/L		12/10/24 10:47	12/11/24 20:20	1
Acenaphthene	<0.10		0.10	ug/L		12/10/24 10:47	12/11/24 20:20	1
Acenaphthylene	<0.10		0.10	ug/L		12/10/24 10:47	12/11/24 20:20	1
Acetochlor	<0.10		0.10	ug/L		12/10/24 10:47	12/11/24 20:20	1
Alachlor	<0.050		0.050	ug/L		12/10/24 10:47	12/11/24 20:20	1
alpha-BHC	<0.10		0.10	ug/L		12/10/24 10:47	12/11/24 20:20	1
alpha-Chlordane	<0.050		0.050	ug/L		12/10/24 10:47	12/11/24 20:20	1
Anthracene	<0.020		0.020	ug/L		12/10/24 10:47	12/11/24 20:20	1
Atrazine	<0.050		0.050	ug/L		12/10/24 10:47	12/11/24 20:20	1
Benz(a)anthracene	<0.050		0.050	ug/L		12/10/24 10:47	12/11/24 20:20	1
Benzo[a]pyrene	<0.020		0.020	ug/L		12/10/24 10:47	12/11/24 20:20	1
Benzo[b]fluoranthene	<0.020		0.020	ug/L		12/10/24 10:47	12/11/24 20:20	1
Benzo[g,h,i]perylene	<0.050		0.050	ug/L		12/10/24 10:47	12/11/24 20:20	1
Benzo[k]fluoranthene	<0.020		0.020	ug/L		12/10/24 10:47	12/11/24 20:20	1
beta-BHC	<0.10		0.10	ug/L		12/10/24 10:47	12/11/24 20:20	1
Bis(2-ethylhexyl) phthalate	<0.60		0.60	ug/L		12/10/24 10:47	12/11/24 20:20	1
Bromacil	<0.10		0.10	ug/L		12/10/24 10:47	12/11/24 20:20	1
Butachlor	<0.050		0.050	ug/L		12/10/24 10:47	12/11/24 20:20	1
Butylbenzylphthalate	<0.50		0.50	ug/L		12/10/24 10:47	12/11/24 20:20	1
Chlorobenzilate	<0.10		0.10	ug/L		12/10/24 10:47	12/11/24 20:20	1
Chloroneb	<0.10		0.10	ug/L		12/10/24 10:47	12/11/24 20:20	1
Chlorothalonil (Draconil, Bravo)	<0.10		0.10	ug/L		12/10/24 10:47	12/11/24 20:20	1
Chlorpyrifos	<0.050		0.050	ug/L		12/10/24 10:47	12/11/24 20:20	1
Chrysene	<0.020		0.020	ug/L		12/10/24 10:47	12/11/24 20:20	1
delta-BHC	<0.10		0.10	ug/L		12/10/24 10:47	12/11/24 20:20	1
Di(2-ethylhexyl)adipate	<0.60		0.60	ug/L		12/10/24 10:47	12/11/24 20:20	1
Dibenz(a,h)anthracene	<0.050		0.050	ug/L		12/10/24 10:47	12/11/24 20:20	1
Diclorvos (DDVP)	<0.050		0.050	ug/L		12/10/24 10:47	12/11/24 20:20	1
Dieldrin	<0.010		0.010	ug/L		12/10/24 10:47	12/11/24 20:20	1
Diethylphthalate	<0.50		0.50	ug/L		12/10/24 10:47	12/11/24 20:20	1
Dimethylphthalate	<0.50		0.50	ug/L		12/10/24 10:47	12/11/24 20:20	1
Di-n-butyl phthalate	<1.0		1.0	ug/L		12/10/24 10:47	12/11/24 20:20	1
Di-n-octyl phthalate	<0.10		0.10	ug/L		12/10/24 10:47	12/11/24 20:20	1
Endosulfan I (Alpha)	<0.10		0.10	ug/L		12/10/24 10:47	12/11/24 20:20	1
Endosulfan II (Beta)	<0.10		0.10	ug/L		12/10/24 10:47	12/11/24 20:20	1
Endosulfan sulfate	<0.10		0.10	ug/L		12/10/24 10:47	12/11/24 20:20	1
Endrin	<0.010		0.010	ug/L		12/10/24 10:47	12/11/24 20:20	1
Endrin aldehyde	<0.10		0.10	ug/L		12/10/24 10:47	12/11/24 20:20	1
EPTC	<0.10		0.10	ug/L		12/10/24 10:47	12/11/24 20:20	1
Fluoranthene	<0.10		0.10	ug/L		12/10/24 10:47	12/11/24 20:20	1

Client Sample Results

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

Job ID: 380-125009-1
SDG: Weekly

Client Sample ID: HALAWA SHAFT (331-241-TP401)

Lab Sample ID: 380-125009-1

Date Collected: 12/03/24 09:30

Matrix: Drinking Water

Date Received: 12/05/24 10:01

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	<0.050		0.050	ug/L		12/10/24 10:47	12/11/24 20:20	1
gamma-Chlordane	<0.050		0.050	ug/L		12/10/24 10:47	12/11/24 20:20	1
Heptachlor	<0.010		0.010	ug/L		12/10/24 10:47	12/11/24 20:20	1
Heptachlor epoxide (isomer B)	<0.010		0.010	ug/L		12/10/24 10:47	12/11/24 20:20	1
Hexachlorobenzene	<0.050		0.050	ug/L		12/10/24 10:47	12/11/24 20:20	1
Hexachlorocyclopentadiene	<0.050		0.050	ug/L		12/10/24 10:47	12/11/24 20:20	1
Indeno[1,2,3-cd]pyrene	<0.050		0.050	ug/L		12/10/24 10:47	12/11/24 20:20	1
Isophorone	<0.10		0.10	ug/L		12/10/24 10:47	12/11/24 20:20	1
Lindane	<0.010		0.010	ug/L		12/10/24 10:47	12/11/24 20:20	1
Malathion	<0.10		0.10	ug/L		12/10/24 10:47	12/11/24 20:20	1
Methoxychlor	<0.050		0.050	ug/L		12/10/24 10:47	12/11/24 20:20	1
Metolachlor	<0.050		0.050	ug/L		12/10/24 10:47	12/11/24 20:20	1
Molinate	<0.10		0.10	ug/L		12/10/24 10:47	12/11/24 20:20	1
Naphthalene	<0.10		0.10	ug/L		12/10/24 10:47	12/11/24 20:20	1
Parathion	<0.10		0.10	ug/L		12/10/24 10:47	12/11/24 20:20	1
Pendimethalin (Penoxaline)	<0.10		0.10	ug/L		12/10/24 10:47	12/11/24 20:20	1
Phenanthrene	<0.040		0.040	ug/L		12/10/24 10:47	12/11/24 20:20	1
Propachlor	<0.050		0.050	ug/L		12/10/24 10:47	12/11/24 20:20	1
Pyrene	<0.050		0.050	ug/L		12/10/24 10:47	12/11/24 20:20	1
Simazine	<0.050		0.050	ug/L		12/10/24 10:47	12/11/24 20:20	1
Terbacil	<0.10		0.10	ug/L		12/10/24 10:47	12/11/24 20:20	1
Terbutylazine	<0.10		0.10	ug/L		12/10/24 10:47	12/11/24 20:20	1
Thiobencarb	<0.10		0.10	ug/L		12/10/24 10:47	12/11/24 20:20	1
Total Permethrin (mixed isomers)	<0.20		0.20	ug/L		12/10/24 10:47	12/11/24 20:20	1
trans-Nonachlor	<0.050		0.050	ug/L		12/10/24 10:47	12/11/24 20:20	1
Trifluralin	<0.10		0.10	ug/L		12/10/24 10:47	12/11/24 20:20	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	12/10/24 10:47	12/11/24 20:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	97		70 - 130	12/10/24 10:47	12/11/24 20:20	1
Perylene-d12	95		70 - 130	12/10/24 10:47	12/11/24 20:20	1
Triphenylphosphate	101		70 - 130	12/10/24 10:47	12/11/24 20:20	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.19		0.19	ug/L		12/09/24 05:43	12/12/24 13:13	1
2-Methylnaphthalene	<0.19		0.19	ug/L		12/09/24 05:43	12/12/24 13:13	1
Acenaphthene	<0.19		0.19	ug/L		12/09/24 05:43	12/12/24 13:13	1
Acenaphthylene	<0.19		0.19	ug/L		12/09/24 05:43	12/12/24 13:13	1
Anthracene	<0.19		0.19	ug/L		12/09/24 05:43	12/12/24 13:13	1
Benzo[a]anthracene	<0.19		0.19	ug/L		12/09/24 05:43	12/12/24 13:13	1
Benzo[a]pyrene	<0.19		0.19	ug/L		12/09/24 05:43	12/12/24 13:13	1
Benzo[b]fluoranthene	<0.19		0.19	ug/L		12/09/24 05:43	12/12/24 13:13	1
Benzo[g,h,i]perylene	<0.19		0.19	ug/L		12/09/24 05:43	12/12/24 13:13	1
Benzo[k]fluoranthene	<0.19		0.19	ug/L		12/09/24 05:43	12/12/24 13:13	1
Chrysene	<0.19		0.19	ug/L		12/09/24 05:43	12/12/24 13:13	1
Dibenz(a,h)anthracene	<0.19		0.19	ug/L		12/09/24 05:43	12/12/24 13:13	1
Fluoranthene	<0.19		0.19	ug/L		12/09/24 05:43	12/12/24 13:13	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-125009-1
SDG: Weekly

Client Sample ID: HALAWA SHAFT (331-241-TP401)

Lab Sample ID: 380-125009-1

Date Collected: 12/03/24 09:30

Matrix: Drinking Water

Date Received: 12/05/24 10:01

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	<0.19		0.19	ug/L		12/09/24 05:43	12/12/24 13:13	1
Indeno[1,2,3-cd]pyrene	<0.19		0.19	ug/L		12/09/24 05:43	12/12/24 13:13	1
Naphthalene	<0.19		0.19	ug/L		12/09/24 05:43	12/12/24 13:13	1
Phenanthrene	<0.19		0.19	ug/L		12/09/24 05:43	12/12/24 13:13	1
Pyrene	<0.19		0.19	ug/L		12/09/24 05:43	12/12/24 13:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	78		28 - 127	12/09/24 05:43	12/12/24 13:13	1
2-Fluorobiphenyl (Surr)	75		31 - 120	12/09/24 05:43	12/12/24 13:13	1
2-Fluorophenol (Surr)	42		17 - 120	12/09/24 05:43	12/12/24 13:13	1
Nitrobenzene-d5 (Surr)	74		27 - 120	12/09/24 05:43	12/12/24 13:13	1
Phenol-d6 (Surr)	25		10 - 120	12/09/24 05:43	12/12/24 13:13	1
p-Terphenyl-d14 (Surr)	92		45 - 120	12/09/24 05:43	12/12/24 13:13	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
Unknown	8.8	T J	ug/L		6.59	N/A	12/09/24 05:43	12/17/24 11:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	72		33 - 139	12/09/24 05:43	12/17/24 11:35	1
2-Fluorobiphenyl (Surr)	72		33 - 126	12/09/24 05:43	12/17/24 11:35	1
2-Fluorophenol (Surr)	38		12 - 120	12/09/24 05:43	12/17/24 11:35	1
Nitrobenzene-d5 (Surr)	81		36 - 120	12/09/24 05:43	12/17/24 11:35	1
Phenol-d6 (Surr)	24		10 - 120	12/09/24 05:43	12/17/24 11:35	1
p-Terphenyl-d14 (Surr)	72		47 - 131	12/09/24 05:43	12/17/24 11:35	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			12/13/24 00:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		38 - 134		12/13/24 00:08	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C24)	<25		25	ug/L		12/09/24 16:00	12/16/24 07:57	1
Motor Oil Range Organics [C24-C36]	<25		25	ug/L		12/09/24 16:00	12/16/24 07:57	1
C8-C18	<25		25	ug/L		12/09/24 16:00	12/16/24 07:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	118		60 - 130	12/09/24 16:00	12/16/24 07:57	1

Client Sample ID: TB:HALAWA SHAFT-331-241-TP401

Lab Sample ID: 380-125009-2

Date Collected: 12/03/24 09:30

Matrix: Water

Date Received: 12/05/24 10:01

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	<10		10	ug/L			12/12/24 23:42	1

Client Sample Results

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

Job ID: 380-125009-1
SDG: Weekly

Client Sample ID: TB:HALAWA SHAFT-331-241-TP401

Lab Sample ID: 380-125009-2

Date Collected: 12/03/24 09:30

Matrix: Water

Date Received: 12/05/24 10:01

<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)	81		38 - 134		12/12/24 23:42	1

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Action Limit Summary

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

Job ID: 380-125009-1
 SDG: Weekly

Client Sample ID: HALAWA SHAFT (331-241-TP401)
PWSID Number: HI0000331

Lab Sample ID: 380-125009-1

Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits have been highlighted for your convenience.

Analyte	Result	Qualifier	Unit	EPAMCL	RL	Method	Prep Type
				Limit			
Alachlor	<0.050		ug/L	2	0.050	525.2	Total/NA
Atrazine	<0.050		ug/L	3	0.050	525.2	Total/NA
Benzo[a]pyrene	<0.020		ug/L	0.2	0.020	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	<0.60		ug/L	6	0.60	525.2	Total/NA
Di(2-ethylhexyl)adipate	<0.60		ug/L	400	0.60	525.2	Total/NA
Endrin	<0.010		ug/L	2	0.010	525.2	Total/NA
Heptachlor	<0.010		ug/L	0.4	0.010	525.2	Total/NA
Heptachlor epoxide (isomer B)	<0.010		ug/L	0.2	0.010	525.2	Total/NA
Hexachlorobenzene	<0.050		ug/L	1	0.050	525.2	Total/NA
Hexachlorocyclopentadiene	<0.050		ug/L	50	0.050	525.2	Total/NA
Lindane	<0.010		ug/L	0.2	0.010	525.2	Total/NA
Methoxychlor	<0.050		ug/L	40	0.050	525.2	Total/NA
Simazine	<0.050		ug/L	4	0.050	525.2	Total/NA

Surrogate Summary

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

Job ID: 380-125009-1
SDG: Weekly

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

Matrix: Drinking 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)
380-125009-1	HALAWA SHAFT (331-241-TP4)	97	95	101

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 (70-130)	PRY (70-130)	TPP (70-130)
380-125373-H-2-B MS	Matrix Spike	98	97	106
380-125507-B-1-B DU	Duplicate	96	91	102
LCS 380-122958/23-A	Lab Control Sample	96	96	105
MB 380-122958/21-A	Method Blank	97	91	101
MRL 380-122958/22-A	Lab Control Sample	98	91	100

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

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

Matrix: Drinking 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)
380-125009-1	HALAWA SHAFT (331-241-TP4)	72	72	38	81	24	72

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 - 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)
MB 570-511467/1-A	Method Blank	74	75	46	91	29	76

Surrogate Legend
 TBP = 2,4,6-Tribromophenol (Surr)
 FBP = 2-Fluorobiphenyl (Surr)
 2FP = 2-Fluorophenol (Surr)
 NBZ = Nitrobenzene-d5 (Surr)

Surrogate Summary

Client: City & County of Honolulu

Job ID: 380-125009-1

Project/Site: RED-HILL

SDG: Weekly

PHL6 = Phenol-d6 (Surr)

TPHd14 = p-Terphenyl-d14 (Surr)

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

Matrix: Drinking Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TBP (28-127)	FBP (31-120)	2FP (17-120)	NBZ (27-120)	PHL6 (10-120)	TPHd14 (45-120)
380-125009-1	HALAWA SHAFT (331-241-TP4)	78	75	42	74	25	92

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

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TBP (28-127)	FBP (31-120)	2FP (17-120)	NBZ (27-120)	PHL6 (10-120)	TPHd14 (45-120)
380-125019-A-1-A MS	Matrix Spike	82	80	51	69	31	80
380-125019-A-1-B MSD	Matrix Spike Duplicate	83	80	50	69	32	87
LCS 570-511467/2-A	Lab Control Sample	83	71	50	63	36	80
LCS 570-511467/3-A	Lab Control Sample Dup	81	77	54	69	36	89
MB 570-511467/1-A	Method Blank	79	66	44	70	30	71

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: Drinking Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1 (38-134)
380-125009-1	HALAWA SHAFT (331-241-TP4)	83

Surrogate Legend

BFB = 4-Bromofluorobenzene (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)
380-125009-2	TB:HALAWA SHAFT-331-241-T	81
380-125019-B-1 MS	Matrix Spike	89
380-125019-B-1 MSD	Matrix Spike Duplicate	88

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Surrogate Summary

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

Job ID: 380-125009-1
SDG: Weekly

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1 (38-134)
LCS 570-513139/4	Lab Control Sample	91
LCSD 570-513139/5	Lab Control Sample Dup	93
MB 570-513139/6	Method Blank	85
MRL 570-513139/3	Lab Control Sample	83

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

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

Matrix: Drinking Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OTCSN1 (60-130)
380-125009-1	HALAWA SHAFT (331-241-TP4)	118

Surrogate Legend

OTCSN = n-Octacosane (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)
380-125019-C-1-A MS	Matrix Spike	118
380-125019-C-1-B MSD	Matrix Spike Duplicate	202 S1+
LCS 570-511782/2-A	Lab Control Sample	114
LCSD 570-511782/3-A	Lab Control Sample Dup	112
MB 570-511782/1-A	Method Blank	111
MRL 570-511782/4-A	Lab Control Sample	110

Surrogate Legend

OTCSN = n-Octacosane (Surr)

QC Sample Results

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

Job ID: 380-125009-1
 SDG: Weekly

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

Lab Sample ID: MB 380-122958/21-A
Matrix: Water
Analysis Batch: 123183

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 122958

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.096		0.096	ug/L		12/10/24 10:47	12/11/24 13:38	1
2,4'-DDD	<0.096		0.096	ug/L		12/10/24 10:47	12/11/24 13:38	1
2,4'-DDE	<0.096		0.096	ug/L		12/10/24 10:47	12/11/24 13:38	1
2,4'-DDT	<0.096		0.096	ug/L		12/10/24 10:47	12/11/24 13:38	1
2,4-Dinitrotoluene	<0.096		0.096	ug/L		12/10/24 10:47	12/11/24 13:38	1
2,6-Dinitrotoluene	<0.096		0.096	ug/L		12/10/24 10:47	12/11/24 13:38	1
2-Methylnaphthalene	<0.096		0.096	ug/L		12/10/24 10:47	12/11/24 13:38	1
4,4'-DDD	<0.096		0.096	ug/L		12/10/24 10:47	12/11/24 13:38	1
4,4'-DDE	<0.096		0.096	ug/L		12/10/24 10:47	12/11/24 13:38	1
4,4'-DDT	<0.096		0.096	ug/L		12/10/24 10:47	12/11/24 13:38	1
Acenaphthene	<0.096		0.096	ug/L		12/10/24 10:47	12/11/24 13:38	1
Acenaphthylene	<0.096		0.096	ug/L		12/10/24 10:47	12/11/24 13:38	1
Acetochlor	<0.096		0.096	ug/L		12/10/24 10:47	12/11/24 13:38	1
Alachlor	<0.048		0.048	ug/L		12/10/24 10:47	12/11/24 13:38	1
alpha-BHC	<0.096		0.096	ug/L		12/10/24 10:47	12/11/24 13:38	1
alpha-Chlordane	<0.048		0.048	ug/L		12/10/24 10:47	12/11/24 13:38	1
Anthracene	<0.019		0.019	ug/L		12/10/24 10:47	12/11/24 13:38	1
Atrazine	<0.048		0.048	ug/L		12/10/24 10:47	12/11/24 13:38	1
Benz(a)anthracene	<0.048		0.048	ug/L		12/10/24 10:47	12/11/24 13:38	1
Benzo[a]pyrene	<0.019		0.019	ug/L		12/10/24 10:47	12/11/24 13:38	1
Benzo[b]fluoranthene	<0.019		0.019	ug/L		12/10/24 10:47	12/11/24 13:38	1
Benzo[g,h,i]perylene	<0.048		0.048	ug/L		12/10/24 10:47	12/11/24 13:38	1
Benzo[k]fluoranthene	<0.019		0.019	ug/L		12/10/24 10:47	12/11/24 13:38	1
beta-BHC	<0.096		0.096	ug/L		12/10/24 10:47	12/11/24 13:38	1
Bis(2-ethylhexyl) phthalate	<0.58		0.58	ug/L		12/10/24 10:47	12/11/24 13:38	1
Bromacil	<0.096		0.096	ug/L		12/10/24 10:47	12/11/24 13:38	1
Butachlor	<0.048		0.048	ug/L		12/10/24 10:47	12/11/24 13:38	1
Butylbenzylphthalate	<0.48		0.48	ug/L		12/10/24 10:47	12/11/24 13:38	1
Chlorobenzilate	<0.096		0.096	ug/L		12/10/24 10:47	12/11/24 13:38	1
Chloroneb	<0.096		0.096	ug/L		12/10/24 10:47	12/11/24 13:38	1
Chlorothalonil (Draconil, Bravo)	<0.096		0.096	ug/L		12/10/24 10:47	12/11/24 13:38	1
Chlorpyrifos	<0.048		0.048	ug/L		12/10/24 10:47	12/11/24 13:38	1
Chrysene	<0.019		0.019	ug/L		12/10/24 10:47	12/11/24 13:38	1
delta-BHC	<0.096		0.096	ug/L		12/10/24 10:47	12/11/24 13:38	1
Di(2-ethylhexyl)adipate	<0.58		0.58	ug/L		12/10/24 10:47	12/11/24 13:38	1
Dibenz(a,h)anthracene	<0.048		0.048	ug/L		12/10/24 10:47	12/11/24 13:38	1
Diclorvos (DDVP)	<0.048		0.048	ug/L		12/10/24 10:47	12/11/24 13:38	1
Dieldrin	<0.0096		0.0096	ug/L		12/10/24 10:47	12/11/24 13:38	1
Diethylphthalate	<0.48		0.48	ug/L		12/10/24 10:47	12/11/24 13:38	1
Dimethylphthalate	<0.48		0.48	ug/L		12/10/24 10:47	12/11/24 13:38	1
Di-n-butyl phthalate	<0.96		0.96	ug/L		12/10/24 10:47	12/11/24 13:38	1
Di-n-octyl phthalate	<0.096		0.096	ug/L		12/10/24 10:47	12/11/24 13:38	1
Endosulfan I (Alpha)	<0.096		0.096	ug/L		12/10/24 10:47	12/11/24 13:38	1
Endosulfan II (Beta)	<0.096		0.096	ug/L		12/10/24 10:47	12/11/24 13:38	1
Endosulfan sulfate	<0.096		0.096	ug/L		12/10/24 10:47	12/11/24 13:38	1
Endrin	<0.0096		0.0096	ug/L		12/10/24 10:47	12/11/24 13:38	1
Endrin aldehyde	<0.096		0.096	ug/L		12/10/24 10:47	12/11/24 13:38	1
EPTC	<0.096		0.096	ug/L		12/10/24 10:47	12/11/24 13:38	1

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QC Sample Results

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

Job ID: 380-125009-1
SDG: Weekly

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

Lab Sample ID: MB 380-122958/21-A
Matrix: Water
Analysis Batch: 123183

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 122958

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	<0.096		0.096	ug/L		12/10/24 10:47	12/11/24 13:38	1
Fluorene	<0.048		0.048	ug/L		12/10/24 10:47	12/11/24 13:38	1
gamma-Chlordane	<0.048		0.048	ug/L		12/10/24 10:47	12/11/24 13:38	1
Heptachlor	<0.0096		0.0096	ug/L		12/10/24 10:47	12/11/24 13:38	1
Heptachlor epoxide (isomer B)	<0.0096		0.0096	ug/L		12/10/24 10:47	12/11/24 13:38	1
Hexachlorobenzene	<0.048		0.048	ug/L		12/10/24 10:47	12/11/24 13:38	1
Hexachlorocyclopentadiene	<0.048		0.048	ug/L		12/10/24 10:47	12/11/24 13:38	1
Indeno[1,2,3-cd]pyrene	<0.048		0.048	ug/L		12/10/24 10:47	12/11/24 13:38	1
Isophorone	<0.096		0.096	ug/L		12/10/24 10:47	12/11/24 13:38	1
Lindane	<0.0096		0.0096	ug/L		12/10/24 10:47	12/11/24 13:38	1
Malathion	<0.096		0.096	ug/L		12/10/24 10:47	12/11/24 13:38	1
Methoxychlor	<0.048		0.048	ug/L		12/10/24 10:47	12/11/24 13:38	1
Metolachlor	<0.048		0.048	ug/L		12/10/24 10:47	12/11/24 13:38	1
Molinate	<0.096		0.096	ug/L		12/10/24 10:47	12/11/24 13:38	1
Naphthalene	<0.096		0.096	ug/L		12/10/24 10:47	12/11/24 13:38	1
Parathion	<0.096		0.096	ug/L		12/10/24 10:47	12/11/24 13:38	1
Pendimethalin (Penoxaline)	<0.096		0.096	ug/L		12/10/24 10:47	12/11/24 13:38	1
Phenanthrene	<0.039		0.039	ug/L		12/10/24 10:47	12/11/24 13:38	1
Propachlor	<0.048		0.048	ug/L		12/10/24 10:47	12/11/24 13:38	1
Pyrene	<0.048		0.048	ug/L		12/10/24 10:47	12/11/24 13:38	1
Simazine	<0.048		0.048	ug/L		12/10/24 10:47	12/11/24 13:38	1
Terbacil	<0.096		0.096	ug/L		12/10/24 10:47	12/11/24 13:38	1
Terbutylazine	<0.096		0.096	ug/L		12/10/24 10:47	12/11/24 13:38	1
Thiobencarb	<0.096		0.096	ug/L		12/10/24 10:47	12/11/24 13:38	1
Total Permethrin (mixed isomers)	<0.19		0.19	ug/L		12/10/24 10:47	12/11/24 13:38	1
trans-Nonachlor	<0.048		0.048	ug/L		12/10/24 10:47	12/11/24 13:38	1
Trifluralin	<0.096		0.096	ug/L		12/10/24 10:47	12/11/24 13:38	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
9-Octadecenamide, (Z)-	0.550	T J N	ug/L		7.95	301-02-0	12/10/24 10:47	12/11/24 13:38	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	97		70 - 130	12/10/24 10:47	12/11/24 13:38	1
Perylene-d12	91		70 - 130	12/10/24 10:47	12/11/24 13:38	1
Triphenylphosphate	101		70 - 130	12/10/24 10:47	12/11/24 13:38	1

Lab Sample ID: LCS 380-122958/23-A
Matrix: Water
Analysis Batch: 123183

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 122958

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1-Methylnaphthalene	1.93	1.91		ug/L		99	70 - 130
2,4'-DDD	1.93	2.01		ug/L		104	70 - 130
2,4'-DDE	1.93	2.00		ug/L		104	70 - 130
2,4'-DDT	1.93	2.04		ug/L		106	70 - 130
2,4-Dinitrotoluene	1.93	1.72		ug/L		89	70 - 130
2,6-Dinitrotoluene	1.93	1.73		ug/L		90	70 - 130
2-Methylnaphthalene	1.93	1.92		ug/L		99	70 - 130

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QC Sample Results

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

Job ID: 380-125009-1
SDG: Weekly

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

Lab Sample ID: LCS 380-122958/23-A
Matrix: Water
Analysis Batch: 123183

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 122958

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
4,4'-DDD	1.93	2.07		ug/L		107	70 - 130
4,4'-DDE	1.93	1.99		ug/L		103	70 - 130
4,4'-DDT	1.93	2.07		ug/L		107	70 - 130
Acenaphthene	1.93	1.89		ug/L		98	70 - 130
Acenaphthylene	1.93	1.89		ug/L		98	70 - 130
Acetochlor	1.93	2.03		ug/L		105	70 - 130
Alachlor	1.93	2.10		ug/L		109	70 - 130
alpha-BHC	1.93	1.94		ug/L		101	70 - 130
alpha-Chlordane	1.93	2.02		ug/L		105	70 - 130
Anthracene	1.93	1.71		ug/L		89	70 - 130
Atrazine	1.93	2.17		ug/L		112	70 - 130
Benz(a)anthracene	1.93	1.87		ug/L		97	70 - 130
Benzo[a]pyrene	1.93	1.74		ug/L		90	70 - 130
Benzo[b]fluoranthene	1.93	1.97		ug/L		102	70 - 130
Benzo[g,h,i]perylene	1.93	2.01		ug/L		104	70 - 130
Benzo[k]fluoranthene	1.93	2.07		ug/L		107	70 - 130
beta-BHC	1.93	1.96		ug/L		102	70 - 130
Bis(2-ethylhexyl) phthalate	1.93	2.03		ug/L		105	70 - 130
Bromacil	1.93	2.02		ug/L		105	70 - 130
Butachlor	1.93	2.19		ug/L		113	70 - 130
Butylbenzylphthalate	1.93	2.21		ug/L		115	70 - 130
Chlorobenzilate	1.93	1.84		ug/L		96	70 - 130
Chloroneb	1.93	2.12		ug/L		110	70 - 130
Chlorothalonil (Draconil, Bravo)	1.93	2.18		ug/L		113	70 - 130
Chlorpyrifos	1.93	2.10		ug/L		109	70 - 130
Chrysene	1.93	1.93		ug/L		100	70 - 130
delta-BHC	1.93	1.98		ug/L		102	70 - 130
Di(2-ethylhexyl)adipate	1.93	1.98		ug/L		102	70 - 130
Dibenz(a,h)anthracene	1.93	1.76		ug/L		91	70 - 130
Diclorvos (DDVP)	1.93	2.03		ug/L		105	70 - 130
Dieldrin	1.93	1.96		ug/L		102	70 - 130
Diethylphthalate	1.93	2.08		ug/L		107	70 - 130
Dimethylphthalate	1.93	2.06		ug/L		107	70 - 130
Di-n-butyl phthalate	3.86	4.20		ug/L		109	70 - 130
Di-n-octyl phthalate	1.93	1.74		ug/L		90	70 - 130
Endosulfan I (Alpha)	1.93	1.92		ug/L		100	70 - 130
Endosulfan II (Beta)	1.93	1.95		ug/L		101	70 - 130
Endosulfan sulfate	1.93	2.02		ug/L		105	70 - 130
Endrin	1.93	1.86		ug/L		96	70 - 130
Endrin aldehyde	1.93	1.98		ug/L		102	60 - 130
EPTC	1.93	1.99		ug/L		103	70 - 130
Fluoranthene	1.93	2.06		ug/L		107	70 - 130
Fluorene	1.93	2.02		ug/L		105	70 - 130
gamma-Chlordane	1.93	2.05		ug/L		106	70 - 130
Heptachlor	1.93	1.90		ug/L		99	70 - 130
Heptachlor epoxide (isomer B)	1.93	1.99		ug/L		103	70 - 130
Hexachlorobenzene	1.93	1.85		ug/L		96	70 - 130
Hexachlorocyclopentadiene	1.93	1.86		ug/L		96	70 - 130
Indeno[1,2,3-cd]pyrene	1.93	2.01		ug/L		104	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-125009-1
SDG: Weekly

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

Lab Sample ID: LCS 380-122958/23-A
Matrix: Water
Analysis Batch: 123183

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 122958

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Isophorone	1.93	1.92		ug/L		99	70 - 130
Lindane	1.93	1.85		ug/L		96	70 - 130
Malathion	1.93	2.10		ug/L		109	70 - 130
Methoxychlor	1.93	1.87		ug/L		97	70 - 130
Metolachlor	1.93	2.08		ug/L		108	70 - 130
Molinate	1.93	2.04		ug/L		106	70 - 130
Naphthalene	1.93	1.94		ug/L		101	70 - 130
Parathion	1.93	1.99		ug/L		103	70 - 130
Pendimethalin (Penoxaline)	1.93	1.86		ug/L		96	70 - 130
Phenanthrene	1.93	1.85		ug/L		96	70 - 130
Propachlor	1.93	2.04		ug/L		106	70 - 130
Pyrene	1.93	2.03		ug/L		105	70 - 130
Simazine	1.93	2.14		ug/L		111	70 - 130
Terbacil	1.93	2.09		ug/L		108	70 - 130
Terbutylazine	1.93	2.14		ug/L		111	70 - 130
Thiobencarb	1.93	2.09		ug/L		108	70 - 130
trans-Nonachlor	1.93	2.00		ug/L		103	70 - 130
Trifluralin	1.93	1.79		ug/L		93	70 - 130

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	96		70 - 130
Perylene-d12	96		70 - 130
Triphenylphosphate	105		70 - 130

Lab Sample ID: MRL 380-122958/22-A
Matrix: Water
Analysis Batch: 123183

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 122958

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	0.0966	0.117		ug/L		121	50 - 150
2,4'-DDD	0.0966	0.0951	J	ug/L		98	50 - 150
2,4'-DDE	0.0966	0.106		ug/L		109	50 - 150
2,4'-DDT	0.0966	0.0978		ug/L		101	50 - 150
2,4-Dinitrotoluene	0.0966	0.102		ug/L		106	50 - 150
2,6-Dinitrotoluene	0.0966	0.101		ug/L		104	50 - 150
2-Methylnaphthalene	0.0966	0.110		ug/L		114	50 - 150
4,4'-DDD	0.0966	0.109		ug/L		113	50 - 150
4,4'-DDE	0.0966	0.103		ug/L		107	50 - 150
4,4'-DDT	0.0966	0.0954	J	ug/L		99	50 - 150
Acenaphthene	0.0966	0.0995		ug/L		103	50 - 150
Acenaphthylene	0.0966	0.0925	J	ug/L		96	50 - 150
Acetochlor	0.0966	0.115		ug/L		119	50 - 150
Alachlor	0.0483	0.0537		ug/L		111	50 - 150
alpha-BHC	0.0966	0.108		ug/L		112	50 - 150
alpha-Chlordane	0.0242	<0.028		ug/L		108	50 - 150
Anthracene	0.0193	0.0207		ug/L		107	50 - 150
Atrazine	0.0483	0.0560		ug/L		116	50 - 150
Benz(a)anthracene	0.0483	0.0520		ug/L		108	50 - 150

QC Sample Results

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

Job ID: 380-125009-1
SDG: Weekly

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

Lab Sample ID: MRL 380-122958/22-A
Matrix: Water
Analysis Batch: 123183

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 122958

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Benzo[a]pyrene	0.0193	0.0219		ug/L		113	50 - 150
Benzo[b]fluoranthene	0.0193	0.0186	J	ug/L		96	50 - 150
Benzo[g,h,i]perylene	0.0483	0.0427	J	ug/L		88	50 - 150
Benzo[k]fluoranthene	0.0193	0.0184	J	ug/L		95	50 - 150
beta-BHC	0.0966	0.117		ug/L		121	50 - 150
Bis(2-ethylhexyl) phthalate	0.580	0.551	J	ug/L		95	50 - 150
Bromacil	0.0966	0.104		ug/L		108	50 - 150
Butachlor	0.0483	0.0540		ug/L		112	50 - 150
Butylbenzylphthalate	0.483	0.553		ug/L		115	50 - 150
Chlorobenzilate	0.0966	0.0986		ug/L		102	50 - 150
Chloroneb	0.0966	0.0931	J	ug/L		96	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0966	0.0882	J	ug/L		91	50 - 150
Chlorpyrifos	0.0483	0.0524		ug/L		109	50 - 150
Chrysene	0.0193	0.0226		ug/L		117	50 - 150
delta-BHC	0.0966	0.104		ug/L		107	50 - 150
Di(2-ethylhexyl)adipate	0.580	0.590		ug/L		102	50 - 150
Dibenz(a,h)anthracene	0.0483	0.0425	J	ug/L		88	50 - 150
Diclorvos (DDVP)	0.0483	0.0611		ug/L		127	50 - 150
Dieldrin	0.00966	0.0108		ug/L		112	50 - 150
Diethylphthalate	0.483	0.546		ug/L		113	50 - 150
Dimethylphthalate	0.483	0.540		ug/L		112	50 - 150
Di-n-butyl phthalate	0.483	0.556	J	ug/L		115	49 - 243
Di-n-octyl phthalate	0.0966	0.0922	J	ug/L		95	50 - 150
Endosulfan I (Alpha)	0.0966	0.101		ug/L		105	50 - 150
Endosulfan II (Beta)	0.0966	0.110		ug/L		114	50 - 150
Endosulfan sulfate	0.0966	0.109		ug/L		113	50 - 150
Endrin	0.00966	0.00994		ug/L		103	50 - 150
Endrin aldehyde	0.0966	0.105		ug/L		108	50 - 150
EPTC	0.0966	0.0989		ug/L		102	50 - 150
Fluoranthene	0.0966	0.101		ug/L		104	50 - 150
Fluorene	0.0483	0.0517		ug/L		107	50 - 150
gamma-Chlordane	0.0242	0.0263	J	ug/L		109	50 - 150
Heptachlor	0.00966	0.0113		ug/L		117	50 - 150
Heptachlor epoxide (isomer B)	0.00966	0.0118		ug/L		122	50 - 150
Hexachlorobenzene	0.0483	0.0482		ug/L		100	50 - 150
Hexachlorocyclopentadiene	0.0483	0.0483		ug/L		100	50 - 150
Indeno[1,2,3-cd]pyrene	0.0483	0.0397	J	ug/L		82	50 - 150
Isophorone	0.0966	0.120		ug/L		124	50 - 150
Lindane	0.00966	0.0144		ug/L		149	50 - 150
Malathion	0.0966	0.0897	J	ug/L		93	50 - 150
Methoxychlor	0.0483	0.0536		ug/L		111	50 - 150
Metolachlor	0.0483	0.0565		ug/L		117	50 - 150
Molinate	0.0966	0.103		ug/L		106	50 - 150
Naphthalene	0.0966	0.105		ug/L		109	50 - 150
Parathion	0.0966	0.0810	J	ug/L		84	50 - 150
Pendimethalin (Penoxaline)	0.0966	0.0863	J	ug/L		89	50 - 150
Phenanthrene	0.0386	0.0436		ug/L		113	50 - 150
Propachlor	0.0483	0.0539		ug/L		112	50 - 150
Pyrene	0.0483	0.0506		ug/L		105	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-125009-1
SDG: Weekly

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

Lab Sample ID: MRL 380-122958/22-A
Matrix: Water
Analysis Batch: 123183

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 122958

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Simazine	0.0483	0.0504		ug/L		104	50 - 150
Terbacil	0.0966	0.0969	J	ug/L		100	50 - 150
Terbuthylazine	0.0966	0.111		ug/L		114	50 - 150
Thiobencarb	0.0966	0.0995		ug/L		103	50 - 150
trans-Nonachlor	0.0242	0.0266	J	ug/L		110	50 - 150
Trifluralin	0.0966	0.0900	J	ug/L		93	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	MRL Limits
2-Nitro-m-xylene	98		70 - 130
Perylene-d12	91		70 - 130
Triphenylphosphate	100		70 - 130

Lab Sample ID: 380-125373-H-2-B MS
Matrix: Water
Analysis Batch: 123183

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 122958

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	<0.10		1.98	1.98		ug/L		99	70 - 130
2,4'-DDD	<0.10		1.98	2.14		ug/L		108	70 - 130
2,4'-DDE	<0.10		1.98	2.11		ug/L		106	70 - 130
2,4'-DDT	<0.10		1.98	2.15		ug/L		108	70 - 130
2,4-Dinitrotoluene	<0.10		1.98	1.94		ug/L		98	70 - 130
2,6-Dinitrotoluene	<0.10		1.98	1.93		ug/L		97	70 - 130
2-Methylnaphthalene	<0.10		1.98	1.98		ug/L		99	70 - 130
4,4'-DDD	<0.10		1.98	2.16		ug/L		109	70 - 130
4,4'-DDE	<0.10		1.98	2.11		ug/L		106	70 - 130
4,4'-DDT	<0.10		1.98	2.19		ug/L		110	70 - 130
Acenaphthene	<0.10		1.98	1.97		ug/L		99	70 - 130
Acenaphthylene	<0.10		1.98	2.04		ug/L		103	70 - 130
Acetochlor	<0.10		1.98	2.18		ug/L		110	70 - 130
Alachlor	<0.050		1.98	2.20		ug/L		111	70 - 130
alpha-BHC	<0.10		1.98	2.05		ug/L		103	70 - 130
alpha-Chlordane	<0.050		1.98	2.14		ug/L		108	70 - 130
Anthracene	<0.020	F1	1.98	1.15	F1	ug/L		58	70 - 130
Atrazine	<0.050		1.98	2.27		ug/L		115	70 - 130
Benz(a)anthracene	<0.050		1.98	1.83		ug/L		92	70 - 130
Benzo[a]pyrene	<0.020		1.98	1.65		ug/L		83	70 - 130
Benzo[b]fluoranthene	<0.020		1.98	2.04		ug/L		103	70 - 130
Benzo[g,h,i]perylene	<0.050		1.98	2.11		ug/L		106	70 - 130
Benzo[k]fluoranthene	<0.020		1.98	2.18		ug/L		110	70 - 130
beta-BHC	<0.10		1.98	2.05		ug/L		103	70 - 130
Bis(2-ethylhexyl) phthalate	<0.60		1.98	2.21		ug/L		112	70 - 130
Bromacil	<0.10		1.98	2.18		ug/L		110	70 - 130
Butachlor	<0.050		1.98	2.33		ug/L		117	70 - 130
Butylbenzylphthalate	<0.50		1.98	2.38		ug/L		120	70 - 130
Chlorobenzilate	<0.10		1.98	1.91		ug/L		96	70 - 130
Chloroneb	<0.10		1.98	2.11		ug/L		106	70 - 130
Chlorothalonil (Draconil, Bravo)	<0.10		1.98	2.23		ug/L		113	70 - 130

QC Sample Results

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

Job ID: 380-125009-1
SDG: Weekly

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

Lab Sample ID: 380-125373-H-2-B MS
Matrix: Water
Analysis Batch: 123183

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 122958

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier	Added	Result	Qualifier				
Chlorpyrifos	<0.050		1.98	2.21		ug/L		111	70 - 130
Chrysene	<0.020		1.98	2.00		ug/L		101	70 - 130
delta-BHC	<0.10		1.98	2.09		ug/L		105	70 - 130
Di(2-ethylhexyl)adipate	<0.60		1.98	2.13		ug/L		108	70 - 130
Dibenz(a,h)anthracene	<0.050		1.98	1.92		ug/L		97	70 - 130
Diclorvos (DDVP)	<0.050		1.98	2.19		ug/L		111	70 - 130
Dieldrin	<0.010		1.98	2.07		ug/L		105	70 - 130
Diethylphthalate	<0.50		1.98	2.17		ug/L		109	70 - 130
Dimethylphthalate	<0.50		1.98	2.16		ug/L		109	70 - 130
Di-n-butyl phthalate	<1.0		3.97	4.36		ug/L		110	70 - 130
Di-n-octyl phthalate	<0.10		1.98	1.90		ug/L		96	70 - 130
Endosulfan I (Alpha)	<0.10		1.98	2.03		ug/L		103	70 - 130
Endosulfan II (Beta)	<0.10		1.98	2.04		ug/L		103	70 - 130
Endosulfan sulfate	<0.10		1.98	2.15		ug/L		109	70 - 130
Endrin	<0.010		1.98	2.04		ug/L		103	70 - 130
Endrin aldehyde	<0.10		1.98	1.54		ug/L		77	60 - 130
EPTC	<0.10		1.98	2.13		ug/L		107	70 - 130
Fluoranthene	<0.10		1.98	2.17		ug/L		109	70 - 130
Fluorene	<0.050		1.98	2.10		ug/L		106	70 - 130
gamma-Chlordane	<0.050		1.98	2.12		ug/L		107	70 - 130
Heptachlor	<0.010		1.98	2.03		ug/L		102	70 - 130
Heptachlor epoxide (isomer B)	<0.010		1.98	2.08		ug/L		105	70 - 130
Hexachlorobenzene	<0.050		1.98	1.92		ug/L		97	70 - 130
Hexachlorocyclopentadiene	<0.050		1.98	1.97		ug/L		99	70 - 130
Indeno[1,2,3-cd]pyrene	<0.050		1.98	2.11		ug/L		107	70 - 130
Isophorone	<0.10		1.98	2.05		ug/L		103	70 - 130
Lindane	<0.010		1.98	1.88		ug/L		95	70 - 130
Malathion	<0.10		1.98	2.22		ug/L		112	70 - 130
Methoxychlor	<0.050		1.98	1.98		ug/L		100	70 - 130
Metolachlor	<0.050		1.98	2.19		ug/L		110	70 - 130
Molinate	<0.10		1.98	2.16		ug/L		109	70 - 130
Naphthalene	<0.10		1.98	2.00		ug/L		101	70 - 130
Parathion	<0.10		1.98	2.12		ug/L		107	70 - 130
Pendimethalin (Penoxaline)	<0.10		1.98	2.05		ug/L		103	70 - 130
Phenanthrene	<0.040		1.98	1.94		ug/L		98	70 - 130
Propachlor	<0.050		1.98	2.16		ug/L		109	70 - 130
Pyrene	<0.050		1.98	2.10		ug/L		106	70 - 130
Simazine	<0.050		1.98	2.28		ug/L		115	70 - 130
Terbacil	<0.10		1.98	2.32		ug/L		117	70 - 130
Terbutylazine	<0.10		1.98	2.24		ug/L		113	70 - 130
Thiobencarb	<0.10		1.98	2.22		ug/L		112	70 - 130
trans-Nonachlor	<0.050		1.98	2.07		ug/L		104	70 - 130
Trifluralin	<0.10		1.98	1.90		ug/L		96	70 - 130

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	98		70 - 130
Perylene-d12	97		70 - 130
Triphenylphosphate	106		70 - 130

QC Sample Results

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

Job ID: 380-125009-1
SDG: Weekly

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

Lab Sample ID: 380-125507-B-1-B DU
Matrix: Water
Analysis Batch: 123183

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 122958

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
1-Methylnaphthalene	<0.099		<0.097		ug/L		NC	20
2,4'-DDD	<0.099		<0.097		ug/L		NC	20
2,4'-DDE	<0.099		<0.097		ug/L		NC	20
2,4'-DDT	<0.099		<0.097		ug/L		NC	20
2,4-Dinitrotoluene	<0.099		<0.097		ug/L		NC	20
2,6-Dinitrotoluene	<0.099		<0.097		ug/L		NC	20
2-Methylnaphthalene	<0.099		<0.097		ug/L		NC	20
4,4'-DDD	<0.099		<0.097		ug/L		NC	20
4,4'-DDE	<0.099		<0.097		ug/L		NC	20
4,4'-DDT	<0.099		<0.097		ug/L		NC	20
Acenaphthene	<0.099		<0.097		ug/L		NC	20
Acenaphthylene	<0.099		<0.097		ug/L		NC	20
Acetochlor	<0.099		<0.097		ug/L		NC	20
Alachlor	<0.049		<0.049		ug/L		NC	20
alpha-BHC	<0.099		<0.097		ug/L		NC	20
alpha-Chlordane	<0.049		<0.049		ug/L		NC	20
Anthracene	<0.020		<0.019		ug/L		NC	20
Atrazine	<0.049		<0.049		ug/L		NC	20
Benz(a)anthracene	<0.049		<0.049		ug/L		NC	20
Benzo[a]pyrene	<0.020		<0.019		ug/L		NC	20
Benzo[b]fluoranthene	<0.020		<0.019		ug/L		NC	20
Benzo[g,h,i]perylene	<0.049		<0.049		ug/L		NC	20
Benzo[k]fluoranthene	<0.020		<0.019		ug/L		NC	20
beta-BHC	<0.099		<0.097		ug/L		NC	20
Bis(2-ethylhexyl) phthalate	<0.59		<0.58		ug/L		NC	20
Bromacil	<0.099		<0.097		ug/L		NC	20
Butachlor	<0.049		<0.049		ug/L		NC	20
Butylbenzylphthalate	<0.49		<0.49		ug/L		NC	20
Chlorobenzilate	<0.099		<0.097		ug/L		NC	20
Chloroneb	<0.099		<0.097		ug/L		NC	20
Chlorothalonil (Draconil, Bravo)	<0.099		<0.097		ug/L		NC	20
Chlorpyrifos	<0.049		<0.049		ug/L		NC	20
Chrysene	<0.020		<0.019		ug/L		NC	20
delta-BHC	<0.099		<0.097		ug/L		NC	20
Di(2-ethylhexyl)adipate	<0.59		<0.58		ug/L		NC	20
Dibenz(a,h)anthracene	<0.049		<0.049		ug/L		NC	20
Diclorvos (DDVP)	<0.049		<0.049		ug/L		NC	20
Dieldrin	<0.0099		<0.0097		ug/L		NC	20
Diethylphthalate	<0.49		<0.49		ug/L		NC	20
Dimethylphthalate	<0.49		<0.49		ug/L		NC	20
Di-n-butyl phthalate	<0.99		<0.97		ug/L		NC	20
Di-n-octyl phthalate	<0.099		<0.097		ug/L		NC	20
Endosulfan I (Alpha)	<0.099		<0.097		ug/L		NC	20
Endosulfan II (Beta)	<0.099		<0.097		ug/L		NC	20
Endosulfan sulfate	<0.099		<0.097		ug/L		NC	20
Endrin	<0.0099		<0.0097		ug/L		NC	20
Endrin aldehyde	<0.099		<0.097		ug/L		NC	20
EPTC	<0.099		<0.097		ug/L		NC	20

QC Sample Results

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

Job ID: 380-125009-1
SDG: Weekly

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

Lab Sample ID: 380-125507-B-1-B DU
Matrix: Water
Analysis Batch: 123183

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 122958

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Fluoranthene	<0.099		<0.097		ug/L		NC	20
Fluorene	<0.049		<0.049		ug/L		NC	20
gamma-Chlordane	<0.049		<0.049		ug/L		NC	20
Heptachlor	<0.0099		<0.0097		ug/L		NC	20
Heptachlor epoxide (isomer B)	<0.0099		<0.0097		ug/L		NC	20
Hexachlorobenzene	<0.049		<0.049		ug/L		NC	20
Hexachlorocyclopentadiene	<0.049		<0.049		ug/L		NC	20
Indeno[1,2,3-cd]pyrene	<0.049		<0.049		ug/L		NC	20
Isophorone	<0.099		<0.097		ug/L		NC	20
Lindane	<0.0099		<0.0097		ug/L		NC	20
Malathion	<0.099		<0.097		ug/L		NC	20
Methoxychlor	<0.049		<0.049		ug/L		NC	20
Metolachlor	<0.049		<0.049		ug/L		NC	20
Molinate	<0.099		<0.097		ug/L		NC	20
Naphthalene	<0.099		<0.097		ug/L		NC	20
Parathion	<0.099		<0.097		ug/L		NC	20
Pendimethalin (Penoxaline)	<0.099		<0.097		ug/L		NC	20
Phenanthrene	<0.040		<0.039		ug/L		NC	20
Propachlor	<0.049		<0.049		ug/L		NC	20
Pyrene	<0.049		<0.049		ug/L		NC	20
Simazine	<0.049		<0.049		ug/L		NC	20
Terbacil	<0.099		<0.097		ug/L		NC	20
Terbutylazine	<0.099		<0.097		ug/L		NC	20
Thiobencarb	<0.099		<0.097		ug/L		NC	20
Total Permethrin (mixed isomers)	<0.20		<0.19		ug/L		NC	20
trans-Nonachlor	<0.049		<0.049		ug/L		NC	20
Trifluralin	<0.099		<0.097		ug/L		NC	20

Surrogate	DU %Recovery	DU Qualifier	Limits
2-Nitro-m-xylene	96		70 - 130
Perylene-d12	91		70 - 130
Triphenylphosphate	102		70 - 130

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

Lab Sample ID: MB 570-511467/1-A
Matrix: Water
Analysis Batch: 514802

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 511467

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	12/09/24 05:43	12/17/24 11:11	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	74		33 - 139	12/09/24 05:43	12/17/24 11:11	1
2-Fluorobiphenyl (Surr)	75		33 - 126	12/09/24 05:43	12/17/24 11:11	1
2-Fluorophenol (Surr)	46		12 - 120	12/09/24 05:43	12/17/24 11:11	1
Nitrobenzene-d5 (Surr)	91		36 - 120	12/09/24 05:43	12/17/24 11:11	1
Phenol-d6 (Surr)	29		10 - 120	12/09/24 05:43	12/17/24 11:11	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-125009-1
SDG: Weekly

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

Lab Sample ID: MB 570-511467/1-A
Matrix: Water
Analysis Batch: 514802

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 511467

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>p</i> -Terphenyl-d14 (Surr)	76		47 - 131	12/09/24 05:43	12/17/24 11:11	1

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

Lab Sample ID: MB 570-511467/1-A
Matrix: Water
Analysis Batch: 514115

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 511467

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.20		0.20	ug/L		12/09/24 05:43	12/15/24 18:17	1
2-Methylnaphthalene	<0.20		0.20	ug/L		12/09/24 05:43	12/15/24 18:17	1
Acenaphthene	<0.20		0.20	ug/L		12/09/24 05:43	12/15/24 18:17	1
Acenaphthylene	<0.20		0.20	ug/L		12/09/24 05:43	12/15/24 18:17	1
Anthracene	<0.20		0.20	ug/L		12/09/24 05:43	12/15/24 18:17	1
Benzo[a]anthracene	<0.20		0.20	ug/L		12/09/24 05:43	12/15/24 18:17	1
Benzo[a]pyrene	<0.20		0.20	ug/L		12/09/24 05:43	12/15/24 18:17	1
Benzo[b]fluoranthene	<0.20		0.20	ug/L		12/09/24 05:43	12/15/24 18:17	1
Benzo[g,h,i]perylene	<0.20		0.20	ug/L		12/09/24 05:43	12/15/24 18:17	1
Benzo[k]fluoranthene	<0.20		0.20	ug/L		12/09/24 05:43	12/15/24 18:17	1
Chrysene	<0.20		0.20	ug/L		12/09/24 05:43	12/15/24 18:17	1
Dibenz(a,h)anthracene	<0.20		0.20	ug/L		12/09/24 05:43	12/15/24 18:17	1
Fluoranthene	<0.20		0.20	ug/L		12/09/24 05:43	12/15/24 18:17	1
Fluorene	<0.20		0.20	ug/L		12/09/24 05:43	12/15/24 18:17	1
Indeno[1,2,3-cd]pyrene	<0.20		0.20	ug/L		12/09/24 05:43	12/15/24 18:17	1
Naphthalene	<0.20		0.20	ug/L		12/09/24 05:43	12/15/24 18:17	1
Phenanthrene	<0.20		0.20	ug/L		12/09/24 05:43	12/15/24 18:17	1
Pyrene	<0.20		0.20	ug/L		12/09/24 05:43	12/15/24 18:17	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	79		28 - 127	12/09/24 05:43	12/15/24 18:17	1
2-Fluorobiphenyl (Surr)	66		31 - 120	12/09/24 05:43	12/15/24 18:17	1
2-Fluorophenol (Surr)	44		17 - 120	12/09/24 05:43	12/15/24 18:17	1
Nitrobenzene-d5 (Surr)	70		27 - 120	12/09/24 05:43	12/15/24 18:17	1
Phenol-d6 (Surr)	30		10 - 120	12/09/24 05:43	12/15/24 18:17	1
<i>p</i> -Terphenyl-d14 (Surr)	71		45 - 120	12/09/24 05:43	12/15/24 18:17	1

Lab Sample ID: LCS 570-511467/2-A
Matrix: Water
Analysis Batch: 514115

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 511467

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	20.0	14.0		ug/L		70	47 - 120
2-Methylnaphthalene	20.0	16.0		ug/L		80	43 - 120
Acenaphthene	20.0	15.8		ug/L		79	60 - 132
Acenaphthylene	20.0	15.3		ug/L		77	54 - 126
Anthracene	20.0	16.2		ug/L		81	43 - 120
Benzo[a]anthracene	20.0	17.1		ug/L		86	42 - 133
Benzo[a]pyrene	20.0	18.0		ug/L		90	32 - 148

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-125009-1
SDG: Weekly

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

Lab Sample ID: LCS 570-511467/2-A
Matrix: Water
Analysis Batch: 514115

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 511467

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzo[b]fluoranthene	20.0	17.7		ug/L		88	42 - 140
Benzo[g,h,i]perylene	20.0	15.1		ug/L		76	1 - 195
Benzo[k]fluoranthene	20.0	17.5		ug/L		87	25 - 146
Chrysene	20.0	16.4		ug/L		82	44 - 140
Dibenz(a,h)anthracene	20.0	16.3		ug/L		81	1 - 200
Fluoranthene	20.0	16.4		ug/L		82	43 - 121
Fluorene	20.0	16.2		ug/L		81	70 - 120
Indeno[1,2,3-cd]pyrene	20.0	16.0		ug/L		80	1 - 151
Naphthalene	20.0	13.4		ug/L		67	36 - 120
Phenanthrene	20.0	16.0		ug/L		80	65 - 120
Pyrene	20.0	17.1		ug/L		86	70 - 120

Surrogate	LCS %Recovery	LCS Qualifier	LCS Limits
2,4,6-Tribromophenol (Surr)	83		28 - 127
2-Fluorobiphenyl (Surr)	71		31 - 120
2-Fluorophenol (Surr)	50		17 - 120
Nitrobenzene-d5 (Surr)	63		27 - 120
Phenol-d6 (Surr)	36		10 - 120
p-Terphenyl-d14 (Surr)	80		45 - 120

Lab Sample ID: LCSD 570-511467/3-A
Matrix: Water
Analysis Batch: 513031

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 511467

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	20.0	15.0		ug/L		75	47 - 120	7	20
2-Methylnaphthalene	20.0	17.1		ug/L		86	43 - 120	7	20
Acenaphthene	20.0	18.0		ug/L		90	60 - 132	13	29
Acenaphthylene	20.0	17.5		ug/L		88	54 - 126	14	45
Anthracene	20.0	19.9		ug/L		100	43 - 120	21	40
Benzo[a]anthracene	20.0	19.4		ug/L		97	42 - 133	13	32
Benzo[a]pyrene	20.0	18.7		ug/L		93	32 - 148	4	43
Benzo[b]fluoranthene	20.0	19.0		ug/L		95	42 - 140	7	43
Benzo[g,h,i]perylene	20.0	19.1		ug/L		95	1 - 195	23	61
Benzo[k]fluoranthene	20.0	19.3		ug/L		96	25 - 146	10	38
Chrysene	20.0	19.4		ug/L		97	44 - 140	17	53
Dibenz(a,h)anthracene	20.0	18.4		ug/L		92	1 - 200	13	75
Fluoranthene	20.0	20.2		ug/L		101	43 - 121	21	40
Fluorene	20.0	18.9		ug/L		94	70 - 120	15	23
Indeno[1,2,3-cd]pyrene	20.0	19.7		ug/L		99	1 - 151	21	60
Naphthalene	20.0	15.2		ug/L		76	36 - 120	13	39
Phenanthrene	20.0	19.7		ug/L		98	65 - 120	21	24
Pyrene	20.0	20.5		ug/L		102	70 - 120	18	30

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
2,4,6-Tribromophenol (Surr)	81		28 - 127
2-Fluorobiphenyl (Surr)	77		31 - 120
2-Fluorophenol (Surr)	54		17 - 120

QC Sample Results

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

Job ID: 380-125009-1
SDG: Weekly

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

Lab Sample ID: LCSD 570-511467/3-A
Matrix: Water
Analysis Batch: 513031

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 511467

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
Nitrobenzene-d5 (Surr)	69		27 - 120
Phenol-d6 (Surr)	36		10 - 120
p-Terphenyl-d14 (Surr)	89		45 - 120

Lab Sample ID: 380-125019-A-1-A MS
Matrix: Water
Analysis Batch: 513031

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 511467

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	%Rec	Limits
				Result	Qualifier				
1-Methylnaphthalene	<0.19		19.3	14.1		ug/L		73	36 - 120
2-Methylnaphthalene	<0.19		19.3	15.8		ug/L		82	32 - 124
Acenaphthene	<0.19		19.3	17.1		ug/L		89	47 - 145
Acenaphthylene	<0.19		19.3	16.3		ug/L		85	33 - 145
Anthracene	<0.19		19.3	18.7		ug/L		97	27 - 133
Benzo[a]anthracene	<0.19		19.3	17.7		ug/L		92	33 - 143
Benzo[a]pyrene	<0.19		19.3	17.9		ug/L		93	17 - 163
Benzo[b]fluoranthene	<0.19		19.3	17.8		ug/L		92	24 - 159
Benzo[g,h,i]perylene	<0.19		19.3	17.7		ug/L		92	1 - 219
Benzo[k]fluoranthene	<0.19		19.3	18.3		ug/L		95	11 - 162
Chrysene	<0.19		19.3	18.2		ug/L		94	17 - 168
Dibenz(a,h)anthracene	<0.19		19.3	17.6		ug/L		91	1 - 227
Fluoranthene	<0.19		19.3	18.2		ug/L		94	26 - 137
Fluorene	<0.19		19.3	17.3		ug/L		90	59 - 121
Indeno[1,2,3-cd]pyrene	<0.19		19.3	18.6		ug/L		96	1 - 171
Naphthalene	<0.19		19.3	14.3		ug/L		74	21 - 133
Phenanthrene	<0.19		19.3	18.0		ug/L		94	54 - 120
Pyrene	<0.19		19.3	18.3		ug/L		95	52 - 120

Surrogate	MS		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	82		28 - 127
2-Fluorobiphenyl (Surr)	80		31 - 120
2-Fluorophenol (Surr)	51		17 - 120
Nitrobenzene-d5 (Surr)	69		27 - 120
Phenol-d6 (Surr)	31		10 - 120
p-Terphenyl-d14 (Surr)	80		45 - 120

Lab Sample ID: 380-125019-A-1-B MSD
Matrix: Water
Analysis Batch: 513031

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 511467

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	Limits	RPD	
				Result	Qualifier					RPD	Limit
1-Methylnaphthalene	<0.19		19.4	13.9		ug/L		72	36 - 120	1	30
2-Methylnaphthalene	<0.19		19.4	15.7		ug/L		81	32 - 124	1	30
Acenaphthene	<0.19		19.4	17.0		ug/L		88	47 - 145	0	48
Acenaphthylene	<0.19		19.4	16.5		ug/L		85	33 - 145	1	74
Anthracene	<0.19		19.4	18.5		ug/L		96	27 - 133	1	66
Benzo[a]anthracene	<0.19		19.4	18.3		ug/L		95	33 - 143	3	53
Benzo[a]pyrene	<0.19		19.4	18.5		ug/L		96	17 - 163	3	72

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-125009-1
SDG: Weekly

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

Lab Sample ID: 380-125019-A-1-B MSD

Client Sample ID: Matrix Spike Duplicate

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 513031

Prep Batch: 511467

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec		RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD		
Benzo[b]fluoranthene	<0.19		19.4	18.3		ug/L		94	24 - 159	3	71	
Benzo[g,h,i]perylene	<0.19		19.4	18.1		ug/L		94	1 - 219	2	97	
Benzo[k]fluoranthene	<0.19		19.4	19.3		ug/L		100	11 - 162	5	63	
Chrysene	<0.19		19.4	18.0		ug/L		93	17 - 168	1	87	
Dibenz(a,h)anthracene	<0.19		19.4	17.3		ug/L		89	1 - 227	2	126	
Fluoranthene	<0.19		19.4	18.4		ug/L		95	26 - 137	1	66	
Fluorene	<0.19		19.4	17.5		ug/L		90	59 - 121	1	38	
Indeno[1,2,3-cd]pyrene	<0.19		19.4	18.5		ug/L		95	1 - 171	1	99	
Naphthalene	<0.19		19.4	14.2		ug/L		73	21 - 133	1	65	
Phenanthrene	<0.19		19.4	18.1		ug/L		94	54 - 120	0	39	
Pyrene	<0.19		19.4	19.3		ug/L		100	52 - 120	5	49	

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	83		28 - 127
2-Fluorobiphenyl (Surr)	80		31 - 120
2-Fluorophenol (Surr)	50		17 - 120
Nitrobenzene-d5 (Surr)	69		27 - 120
Phenol-d6 (Surr)	32		10 - 120
p-Terphenyl-d14 (Surr)	87		45 - 120

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

Lab Sample ID: MB 570-513139/6

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 513139

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	<10		10	ug/L			12/12/24 16:20	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		38 - 134		12/12/24 16:20	1

Lab Sample ID: LCS 570-513139/4

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 513139

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (C4-C13)	400	344		ug/L		86	78 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	91		38 - 134

QC Sample Results

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

Job ID: 380-125009-1
SDG: Weekly

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

Surrogate	MB MB %Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>n</i> -Octacosane (Surr)	111		60 - 130	12/09/24 16:00	12/16/24 04:44	1

Lab Sample ID: LCS 570-511782/2-A
Matrix: Water
Analysis Batch: 514184

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 511782

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
C10-C28	1600	1430		ug/L		89	56 - 127

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

Lab Sample ID: LCSD 570-511782/3-A
Matrix: Water
Analysis Batch: 514184

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 511782

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
C10-C28	1600	1380		ug/L		86	56 - 127	4	23

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

Lab Sample ID: MRL 570-511782/4-A
Matrix: Water
Analysis Batch: 514184

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 511782

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
C10-C28	0.0200	0.0217	J	mg/L		108	50 - 150

Surrogate	MRL MRL %Recovery	Qualifier	Limits
<i>n</i> -Octacosane (Surr)	110		60 - 130

Lab Sample ID: 380-125019-C-1-A MS
Matrix: Water
Analysis Batch: 514184

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 511782

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
C10-C28	<27		1710	1610		ug/L		94	70 - 130

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

Lab Sample ID: 380-125019-C-1-B MSD
Matrix: Water
Analysis Batch: 514184

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 511782

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
C10-C28	<27		1700	1560		ug/L		92	70 - 130	4	20

QC Sample Results

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

Job ID: 380-125009-1
SDG: Weekly

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

Lab Sample ID: 380-125019-C-1-B MSD
Matrix: Water
Analysis Batch: 514184

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 511782

<i>Surrogate</i>	<i>%Recovery</i>	<i>MSD MSD Qualifier</i>	<i>Limits</i>
<i>n-Octacosane (Surr)</i>	202	S1+	60 - 130

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QC Association Summary

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

Job ID: 380-125009-1
SDG: Weekly

GC/MS Semi VOA

Prep Batch: 122958

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-125009-1	HALAWA SHAFT (331-241-TP401)	Total/NA	Drinking Water	525.2	
MB 380-122958/21-A	Method Blank	Total/NA	Water	525.2	
LCS 380-122958/23-A	Lab Control Sample	Total/NA	Water	525.2	
MRL 380-122958/22-A	Lab Control Sample	Total/NA	Water	525.2	
380-125373-H-2-B MS	Matrix Spike	Total/NA	Water	525.2	
380-125507-B-1-B DU	Duplicate	Total/NA	Water	525.2	

Analysis Batch: 123183

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-125009-1	HALAWA SHAFT (331-241-TP401)	Total/NA	Drinking Water	525.2	122958
MB 380-122958/21-A	Method Blank	Total/NA	Water	525.2	122958
LCS 380-122958/23-A	Lab Control Sample	Total/NA	Water	525.2	122958
MRL 380-122958/22-A	Lab Control Sample	Total/NA	Water	525.2	122958
380-125373-H-2-B MS	Matrix Spike	Total/NA	Water	525.2	122958
380-125507-B-1-B DU	Duplicate	Total/NA	Water	525.2	122958

Prep Batch: 511467

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-125009-1	HALAWA SHAFT (331-241-TP401)	Total/NA	Drinking Water	625.1	
MB 570-511467/1-A	Method Blank	Total/NA	Water	625.1	
LCS 570-511467/2-A	Lab Control Sample	Total/NA	Water	625.1	
LCSD 570-511467/3-A	Lab Control Sample Dup	Total/NA	Water	625.1	
380-125019-A-1-A MS	Matrix Spike	Total/NA	Water	625.1	
380-125019-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	625.1	

Analysis Batch: 513031

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-125009-1	HALAWA SHAFT (331-241-TP401)	Total/NA	Drinking Water	625.1 SIM	511467
LCSD 570-511467/3-A	Lab Control Sample Dup	Total/NA	Water	625.1 SIM	511467
380-125019-A-1-A MS	Matrix Spike	Total/NA	Water	625.1 SIM	511467
380-125019-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	625.1 SIM	511467

Analysis Batch: 514115

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 570-511467/1-A	Method Blank	Total/NA	Water	625.1 SIM	511467
LCS 570-511467/2-A	Lab Control Sample	Total/NA	Water	625.1 SIM	511467

Analysis Batch: 514802

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-125009-1	HALAWA SHAFT (331-241-TP401)	Total/NA	Drinking Water	625.1	511467
MB 570-511467/1-A	Method Blank	Total/NA	Water	625.1	511467

GC VOA

Analysis Batch: 513139

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-125009-1	HALAWA SHAFT (331-241-TP401)	Total/NA	Drinking Water	8015B GRO LL	
380-125009-2	TB:HALAWA SHAFT-331-241-TP401	Total/NA	Water	8015B GRO LL	
MB 570-513139/6	Method Blank	Total/NA	Water	8015B GRO LL	
LCS 570-513139/4	Lab Control Sample	Total/NA	Water	8015B GRO LL	
LCSD 570-513139/5	Lab Control Sample Dup	Total/NA	Water	8015B GRO LL	

QC Association Summary

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

Job ID: 380-125009-1
 SDG: Weekly

GC VOA (Continued)

Analysis Batch: 513139 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MRL 570-513139/3	Lab Control Sample	Total/NA	Water	8015B GRO LL	
380-125019-B-1 MS	Matrix Spike	Total/NA	Water	8015B GRO LL	
380-125019-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8015B GRO LL	

GC Semi VOA

Prep Batch: 511782

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-125009-1	HALAWA SHAFT (331-241-TP401)	Total/NA	Drinking Water	3510C	
MB 570-511782/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-511782/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-511782/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MRL 570-511782/4-A	Lab Control Sample	Total/NA	Water	3510C	
380-125019-C-1-A MS	Matrix Spike	Total/NA	Water	3510C	
380-125019-C-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	3510C	

Analysis Batch: 514184

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-125009-1	HALAWA SHAFT (331-241-TP401)	Total/NA	Drinking Water	8015B	511782
MB 570-511782/1-A	Method Blank	Total/NA	Water	8015B	511782
LCS 570-511782/2-A	Lab Control Sample	Total/NA	Water	8015B	511782
LCSD 570-511782/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	511782
MRL 570-511782/4-A	Lab Control Sample	Total/NA	Water	8015B	511782
380-125019-C-1-A MS	Matrix Spike	Total/NA	Water	8015B	511782
380-125019-C-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	8015B	511782

Lab Chronicle

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

Job ID: 380-125009-1
SDG: Weekly

Client Sample ID: HALAWA SHAFT (331-241-TP401)

Lab Sample ID: 380-125009-1

Date Collected: 12/03/24 09:30

Matrix: Drinking Water

Date Received: 12/05/24 10:01

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			122958	KRD3	EA POM	12/10/24 10:47
Total/NA	Analysis	525.2		1	123183	Q8LA	EA POM	12/11/24 20:20
Total/NA	Prep	625.1			511467	H1SH	EET CAL 4	12/09/24 05:43
Total/NA	Analysis	625.1		1	514802	CG	EET CAL 4	12/17/24 11:35
Total/NA	Prep	625.1			511467	H1SH	EET CAL 4	12/09/24 05:43
Total/NA	Analysis	625.1 SIM		1	513031	CG	EET CAL 4	12/12/24 13:13
Total/NA	Analysis	8015B GRO LL		1	513139	A9VE	EET CAL 4	12/13/24 00:08
Total/NA	Prep	3510C			511782	H6FE	EET CAL 4	12/09/24 16:00
Total/NA	Analysis	8015B		1	514184	H6FE	EET CAL 4	12/16/24 07:57

Client Sample ID: TB:HALAWA SHAFT-331-241-TP401

Lab Sample ID: 380-125009-2

Date Collected: 12/03/24 09:30

Matrix: Water

Date Received: 12/05/24 10:01

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015B GRO LL		1	513139	A9VE	EET CAL 4	12/12/24 23:42

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: 380-125009-1
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	Drinking Water	1-Methylnaphthalene
525.2	525.2	Drinking Water	2,4'-DDD
525.2	525.2	Drinking Water	2,4'-DDE
525.2	525.2	Drinking Water	2,4'-DDT
525.2	525.2	Drinking Water	2,4-Dinitrotoluene
525.2	525.2	Drinking Water	2,6-Dinitrotoluene
525.2	525.2	Drinking Water	2-Methylnaphthalene
525.2	525.2	Drinking Water	4,4'-DDD
525.2	525.2	Drinking Water	4,4'-DDE
525.2	525.2	Drinking Water	4,4' DDT
525.2	525.2	Drinking Water	Acetochlor
525.2	525.2	Drinking Water	alpha-BHC
525.2	525.2	Drinking Water	alpha-Chlordane
525.2	525.2	Drinking Water	beta-BHC
525.2	525.2	Drinking Water	Chlorobenzilate
525.2	525.2	Drinking Water	Chloroneb
525.2	525.2	Drinking Water	Chlorothalonil (Draconil, Bravo)
525.2	525.2	Drinking Water	Chlorpyrifos
525.2	525.2	Drinking Water	delta-BHC
525.2	525.2	Drinking Water	Diclorvos (DDVP)
525.2	525.2	Drinking Water	Endosulfan I (Alpha)
525.2	525.2	Drinking Water	Endosulfan II (Beta)
525.2	525.2	Drinking Water	Endosulfan sulfate
525.2	525.2	Drinking Water	Endrin aldehyde
525.2	525.2	Drinking Water	EPTC
525.2	525.2	Drinking Water	gamma-Chlordane
525.2	525.2	Drinking Water	Isophorone
525.2	525.2	Drinking Water	Malathion
525.2	525.2	Drinking Water	Parathion
525.2	525.2	Drinking Water	Pendimethalin (Penoxaline)
525.2	525.2	Drinking Water	Terbacil
525.2	525.2	Drinking Water	Terbutylazine
525.2	525.2	Drinking Water	Total Permethrin (mixed isomers)
525.2	525.2	Drinking Water	trans-Nonachlor

Laboratory: Eurofins Calscience

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

Authority	Program	Identification Number	Expiration Date
Arizona	State	AZ0830	11-16-25
Arkansas DEQ	State	88-01672	07-02-25
California	Los Angeles County Sanitation Districts	9257304	07-31-26
California	State	3082	07-31-25
Kansas	NELAP	E-10420	07-31-25
Nevada	State	CA00111	07-31-25

Eurofins Eaton Analytical Pomona

Accreditation/Certification Summary

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

Job ID: 380-125009-1
SDG: Weekly

Laboratory: Eurofins Calscience (Continued)

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

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4175	02-02-25
USDA	US Federal Programs	525-23-159-97150	06-08-26
Washington	State	C916	10-11-25

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Method Summary

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

Job ID: 380-125009-1
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: 380-125009-1
SDG: Weekly

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
380-125009-1	HALAWA SHAFT (331-241-TP401)	Drinking Water	12/03/24 09:30	12/05/24 10:01	HI0000331
380-125009-2	TB:HALAWA SHAFT-331-241-TP401	Water	12/03/24 09:30	12/05/24 10:01	

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Eurofins Eaton Analytical Pomona

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

Chain of Custody Record



Environment Testing

Client Information (Sub Contract Lab)		Sampler: N/A	Lab PM: Arada, Rachelle	Carrier Tracking No(s): N/A	COC No: 380-174869.1	Loc: 380 125009				
Client Contact: Shipping/Receiving		Phone: N/A	E-Mail: Rachelle.Arada@et.eurofins.com	State of Origin: Hawaii	Page: Page 1 of 1					
Company: Eurofins Environment Testing Southwest,		Accreditations Required (See note): State - Hawaii			Job #: 380-125009-1					
Address: 2841 Dow Avenue, Suite 100,		Due Date Requested: 12/18/2024	Analysis Requested				Preservation Codes: -			
City: Tustin		TAT Requested (days): N/A								
State, Zip: CA, 92780		PO #: N/A	Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) 8015B_DRO_LL_CS3510C_LL_HNL Ranges: C10-C24/C24-C36/C8-C18 625.1/625_Prep (MOD) Tentatively Identified Compounds (Hold) 625.1_SIM/625_Prep (MOD) Extended PAH List 8015B_GRO_LLJ5030C (MOD) GRO	Total Number of containers	Other: N/A					
Phone: 714-895-5494(Tel)		WO #: N/A								
Email: N/A		Project #: 38001111	Special Instructions/Note:							
Project Name: RED-HILL		SSOW#: N/A								
Site: Honolulu BWS Sites		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=wastel/oi, BT=Tissue, A=Air)	Preservation Code:					
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time							
HALAWA SHAFT (331-241-TP401) (380-125009-1)		12/3/24	09:30 Hawaiian	G Water	X	X	X	X	7	MRLs are needed. Confirm any hits >RL.
TB:HALAWA SHAFT-331-241-TP401 (380-125009-2)		12/3/24	09:30 Hawaiian	G Water				X	2	MRLs are needed.



380-125009 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.

Possible Hazard Identification				Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)			
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: 12/6/24 12:20	Company: <i>[Signature]</i>	Received by: <i>[Signature]</i>	Date/Time: 12/6/24 12:20	Company: <i>[Signature]</i>		
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:		
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:		
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0-9/10/9 5000					

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-125009-1

SDG Number: Weekly

Login Number: 125009

List Number: 1

Creator: Segura, Ryan

List Source: Eurofins Eaton Analytical Pomona

Question	Answer	Comment
The coolers custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
Samples were received on ice.	True	
Cooler(s) Temperature is acceptable.	True	
Cooler(s) Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and is legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
CIO4 headspace requirement met (>50% for CA, >30% for other states).	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: 380-125009-1

SDG Number: Weekly

Login Number: 125009

List Number: 2

Creator: Arellano, Cyndy

List Source: Eurofins Calscience

List Creation: 12/06/24 04:58 PM

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	Not present
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.9
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	

