

ANALYTICAL REPORT

PREPARED FOR

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City & County of Honolulu
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JOB DESCRIPTION

RED-HILL
Weekly
RUSH Weekly Red Hill

JOB NUMBER

380-124043-1

Eurofins Eaton Analytical Pomona

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Eaton Analytical, LLC Project Manager.

Compliance Statement

1. Laboratory is accredited in accordance with TNI 2016 Standards and ISO/IEC 17025:2017.
2. Laboratory certifies that the test results meet all TNI 2016 and ISO/IEC 17025:2017 requirements unless noted under the individual analysis
3. Test results relate only to the sample(s) tested.
4. This report shall not be reproduced except in full, without the written approval of the laboratory.
5. Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below. (DW, Water matrices)

Authorization



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Definitions/Glossary

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

Job ID: 380-124043-1
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
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: 380-124043-1

Job ID: 380-124043-1

Eurofins Eaton Analytical Pomona

Job Narrative 380-124043-1

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 11/27/2024 9:14 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 0.2°C, 1.3°C and 2.8°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: Surrogate recovery was outside acceptance limits for the following matrix spike/matrix spike duplicate (MS/MSD) sample: (380-124031-B-3-A MS). The parent sample's surrogate recovery was within limits. The MS/MSD sample has been qualified and 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: 380-124043-1
SDG: Weekly

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-124043-1

No Detections.

Client Sample ID: TB:AIEA GULCH WELLS P2

Lab Sample ID: 380-124043-2

No Detections.

Client Sample ID: AIEA WELLS PUMPS 1&2 (260)

Lab Sample ID: 380-124043-3

No Detections.

Client Sample ID: TB: AIEA WELLS PUMPS 1&2 (260)

Lab Sample ID: 380-124043-4

No Detections.

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

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: 380-124043-1
SDG: Weekly

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-124043-1

Date Collected: 11/25/24 10:14

Matrix: Drinking Water

Date Received: 11/27/24 09:14

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.098		0.098	ug/L		12/02/24 14:55	12/03/24 16:03	1
2,4'-DDD	<0.098		0.098	ug/L		12/02/24 14:55	12/03/24 16:03	1
2,4'-DDE	<0.098		0.098	ug/L		12/02/24 14:55	12/03/24 16:03	1
2,4'-DDT	<0.098		0.098	ug/L		12/02/24 14:55	12/03/24 16:03	1
2,4-Dinitrotoluene	<0.098		0.098	ug/L		12/02/24 14:55	12/03/24 16:03	1
2,6-Dinitrotoluene	<0.098		0.098	ug/L		12/02/24 14:55	12/03/24 16:03	1
2-Methylnaphthalene	<0.098		0.098	ug/L		12/02/24 14:55	12/03/24 16:03	1
4,4'-DDD	<0.098		0.098	ug/L		12/02/24 14:55	12/03/24 16:03	1
4,4'-DDE	<0.098		0.098	ug/L		12/02/24 14:55	12/03/24 16:03	1
4,4'-DDT	<0.098		0.098	ug/L		12/02/24 14:55	12/03/24 16:03	1
Acenaphthene	<0.098		0.098	ug/L		12/02/24 14:55	12/03/24 16:03	1
Acenaphthylene	<0.098		0.098	ug/L		12/02/24 14:55	12/03/24 16:03	1
Acetochlor	<0.098		0.098	ug/L		12/02/24 14:55	12/03/24 16:03	1
Alachlor	<0.049		0.049	ug/L		12/02/24 14:55	12/03/24 16:03	1
alpha-BHC	<0.098		0.098	ug/L		12/02/24 14:55	12/03/24 16:03	1
alpha-Chlordane	<0.049		0.049	ug/L		12/02/24 14:55	12/03/24 16:03	1
Anthracene	<0.020		0.020	ug/L		12/02/24 14:55	12/03/24 16:03	1
Atrazine	<0.049		0.049	ug/L		12/02/24 14:55	12/03/24 16:03	1
Benz(a)anthracene	<0.049		0.049	ug/L		12/02/24 14:55	12/03/24 16:03	1
Benzo[a]pyrene	<0.020		0.020	ug/L		12/02/24 14:55	12/03/24 16:03	1
Benzo[b]fluoranthene	<0.020		0.020	ug/L		12/02/24 14:55	12/03/24 16:03	1
Benzo[g,h,i]perylene	<0.049		0.049	ug/L		12/02/24 14:55	12/03/24 16:03	1
Benzo[k]fluoranthene	<0.020		0.020	ug/L		12/02/24 14:55	12/03/24 16:03	1
beta-BHC	<0.098		0.098	ug/L		12/02/24 14:55	12/03/24 16:03	1
Bis(2-ethylhexyl) phthalate	<0.59		0.59	ug/L		12/02/24 14:55	12/03/24 16:03	1
Bromacil	<0.098		0.098	ug/L		12/02/24 14:55	12/03/24 16:03	1
Butachlor	<0.049		0.049	ug/L		12/02/24 14:55	12/03/24 16:03	1
Butylbenzylphthalate	<0.49		0.49	ug/L		12/02/24 14:55	12/03/24 16:03	1
Chlorobenzilate	<0.098		0.098	ug/L		12/02/24 14:55	12/03/24 16:03	1
Chloroneb	<0.098		0.098	ug/L		12/02/24 14:55	12/03/24 16:03	1
Chlorothalonil (Draconil, Bravo)	<0.098		0.098	ug/L		12/02/24 14:55	12/03/24 16:03	1
Chlorpyrifos	<0.049		0.049	ug/L		12/02/24 14:55	12/03/24 16:03	1
Chrysene	<0.020		0.020	ug/L		12/02/24 14:55	12/03/24 16:03	1
delta-BHC	<0.098		0.098	ug/L		12/02/24 14:55	12/03/24 16:03	1
Di(2-ethylhexyl)adipate	<0.59		0.59	ug/L		12/02/24 14:55	12/03/24 16:03	1
Dibenz(a,h)anthracene	<0.049		0.049	ug/L		12/02/24 14:55	12/03/24 16:03	1
Diclorvos (DDVP)	<0.049		0.049	ug/L		12/02/24 14:55	12/03/24 16:03	1
Dieldrin	<0.0098		0.0098	ug/L		12/02/24 14:55	12/03/24 16:03	1
Diethylphthalate	<0.49		0.49	ug/L		12/02/24 14:55	12/03/24 16:03	1
Dimethylphthalate	<0.49		0.49	ug/L		12/02/24 14:55	12/03/24 16:03	1
Di-n-butyl phthalate	<0.98		0.98	ug/L		12/02/24 14:55	12/03/24 16:03	1
Di-n-octyl phthalate	<0.098		0.098	ug/L		12/02/24 14:55	12/03/24 16:03	1
Endosulfan I (Alpha)	<0.098		0.098	ug/L		12/02/24 14:55	12/03/24 16:03	1
Endosulfan II (Beta)	<0.098		0.098	ug/L		12/02/24 14:55	12/03/24 16:03	1
Endosulfan sulfate	<0.098		0.098	ug/L		12/02/24 14:55	12/03/24 16:03	1
Endrin	<0.0098		0.0098	ug/L		12/02/24 14:55	12/03/24 16:03	1
Endrin aldehyde	<0.098		0.098	ug/L		12/02/24 14:55	12/03/24 16:03	1
EPTC	<0.098		0.098	ug/L		12/02/24 14:55	12/03/24 16:03	1
Fluoranthene	<0.098		0.098	ug/L		12/02/24 14:55	12/03/24 16:03	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-124043-1
SDG: Weekly

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-124043-1

Date Collected: 11/25/24 10:14

Matrix: Drinking Water

Date Received: 11/27/24 09:14

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		12/02/24 14:55	12/03/24 16:03	1
gamma-Chlordane	<0.049		0.049	ug/L		12/02/24 14:55	12/03/24 16:03	1
Heptachlor	<0.0098		0.0098	ug/L		12/02/24 14:55	12/03/24 16:03	1
Heptachlor epoxide (isomer B)	<0.0098		0.0098	ug/L		12/02/24 14:55	12/03/24 16:03	1
Hexachlorobenzene	<0.049		0.049	ug/L		12/02/24 14:55	12/03/24 16:03	1
Hexachlorocyclopentadiene	<0.049		0.049	ug/L		12/02/24 14:55	12/03/24 16:03	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049	ug/L		12/02/24 14:55	12/03/24 16:03	1
Isophorone	<0.098		0.098	ug/L		12/02/24 14:55	12/03/24 16:03	1
Lindane	<0.0098		0.0098	ug/L		12/02/24 14:55	12/03/24 16:03	1
Malathion	<0.098		0.098	ug/L		12/02/24 14:55	12/03/24 16:03	1
Methoxychlor	<0.049		0.049	ug/L		12/02/24 14:55	12/03/24 16:03	1
Metolachlor	<0.049		0.049	ug/L		12/02/24 14:55	12/03/24 16:03	1
Molinate	<0.098		0.098	ug/L		12/02/24 14:55	12/03/24 16:03	1
Naphthalene	<0.098		0.098	ug/L		12/02/24 14:55	12/03/24 16:03	1
Parathion	<0.098		0.098	ug/L		12/02/24 14:55	12/03/24 16:03	1
Pendimethalin (Penoxaline)	<0.098		0.098	ug/L		12/02/24 14:55	12/03/24 16:03	1
Phenanthrene	<0.039		0.039	ug/L		12/02/24 14:55	12/03/24 16:03	1
Propachlor	<0.049		0.049	ug/L		12/02/24 14:55	12/03/24 16:03	1
Pyrene	<0.049		0.049	ug/L		12/02/24 14:55	12/03/24 16:03	1
Simazine	<0.049		0.049	ug/L		12/02/24 14:55	12/03/24 16:03	1
Terbacil	<0.098		0.098	ug/L		12/02/24 14:55	12/03/24 16:03	1
Terbutylazine	<0.098		0.098	ug/L		12/02/24 14:55	12/03/24 16:03	1
Thiobencarb	<0.098		0.098	ug/L		12/02/24 14:55	12/03/24 16:03	1
Total Permethrin (mixed isomers)	<0.20		0.20	ug/L		12/02/24 14:55	12/03/24 16:03	1
trans-Nonachlor	<0.049		0.049	ug/L		12/02/24 14:55	12/03/24 16:03	1
Trifluralin	<0.098		0.098	ug/L		12/02/24 14:55	12/03/24 16:03	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	12/02/24 14:55	12/03/24 16:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	99		70 - 130	12/02/24 14:55	12/03/24 16:03	1
Perylene-d12	94		70 - 130	12/02/24 14:55	12/03/24 16:03	1
Triphenylphosphate	99		70 - 130	12/02/24 14:55	12/03/24 16:03	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		12/02/24 05:05	12/08/24 00:51	1
2-Methylnaphthalene	<0.19		0.19	ug/L		12/02/24 05:05	12/08/24 00:51	1
Acenaphthene	<0.19		0.19	ug/L		12/02/24 05:05	12/08/24 00:51	1
Acenaphthylene	<0.19		0.19	ug/L		12/02/24 05:05	12/08/24 00:51	1
Anthracene	<0.19		0.19	ug/L		12/02/24 05:05	12/08/24 00:51	1
Benzo[a]anthracene	<0.19		0.19	ug/L		12/02/24 05:05	12/08/24 00:51	1
Benzo[a]pyrene	<0.19		0.19	ug/L		12/02/24 05:05	12/08/24 00:51	1
Benzo[b]fluoranthene	<0.19		0.19	ug/L		12/02/24 05:05	12/08/24 00:51	1
Benzo[g,h,i]perylene	<0.19		0.19	ug/L		12/02/24 05:05	12/08/24 00:51	1
Benzo[k]fluoranthene	<0.19		0.19	ug/L		12/02/24 05:05	12/08/24 00:51	1
Chrysene	<0.19		0.19	ug/L		12/02/24 05:05	12/08/24 00:51	1
Dibenz(a,h)anthracene	<0.19		0.19	ug/L		12/02/24 05:05	12/08/24 00:51	1
Fluoranthene	<0.19		0.19	ug/L		12/02/24 05:05	12/08/24 00:51	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-124043-1
SDG: Weekly

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-124043-1

Date Collected: 11/25/24 10:14

Matrix: Drinking Water

Date Received: 11/27/24 09:14

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		12/02/24 05:05	12/08/24 00:51	1
Indeno[1,2,3-cd]pyrene	<0.19		0.19	ug/L		12/02/24 05:05	12/08/24 00:51	1
Naphthalene	<0.19		0.19	ug/L		12/02/24 05:05	12/08/24 00:51	1
Phenanthrene	<0.19		0.19	ug/L		12/02/24 05:05	12/08/24 00:51	1
Pyrene	<0.19		0.19	ug/L		12/02/24 05:05	12/08/24 00:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	98		28 - 127	12/02/24 05:05	12/08/24 00:51	1
2-Fluorobiphenyl (Surr)	75		31 - 120	12/02/24 05:05	12/08/24 00:51	1
2-Fluorophenol (Surr)	44		17 - 120	12/02/24 05:05	12/08/24 00:51	1
Nitrobenzene-d5 (Surr)	77		27 - 120	12/02/24 05:05	12/08/24 00:51	1
Phenol-d6 (Surr)	27		10 - 120	12/02/24 05:05	12/08/24 00:51	1
p-Terphenyl-d14 (Surr)	77		45 - 120	12/02/24 05:05	12/08/24 00:51	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
1-Butanol, 3-methyl-, carbonate (2:1)	4.5	T J N	ug/L		3.32	2050-95-5	12/02/24 05:05	12/12/24 14:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	86		33 - 139	12/02/24 05:05	12/12/24 14:06	1
2-Fluorobiphenyl (Surr)	82		33 - 126	12/02/24 05:05	12/12/24 14:06	1
2-Fluorophenol (Surr)	53		12 - 120	12/02/24 05:05	12/12/24 14:06	1
Nitrobenzene-d5 (Surr)	84		36 - 120	12/02/24 05:05	12/12/24 14:06	1
Phenol-d6 (Surr)	30		10 - 120	12/02/24 05:05	12/12/24 14:06	1
p-Terphenyl-d14 (Surr)	88		47 - 131	12/02/24 05:05	12/12/24 14:06	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			12/02/24 19:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		38 - 134		12/02/24 19:06	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)	<27		27	ug/L		12/02/24 17:28	12/05/24 02:44	1
Motor Oil Range Organics [C24-C36]	<27		27	ug/L		12/02/24 17:28	12/05/24 02:44	1
C8-C18	<27		27	ug/L		12/02/24 17:28	12/05/24 02:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	107		60 - 130	12/02/24 17:28	12/05/24 02:44	1

Client Sample ID: TB:AIEA GULCH WELLS P2

Lab Sample ID: 380-124043-2

Date Collected: 11/25/24 10:14

Matrix: Water

Date Received: 11/27/24 09:14

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			12/02/24 22:21	1

Client Sample Results

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

Job ID: 380-124043-1
SDG: Weekly

Client Sample ID: TB:AIEA GULCH WELLS P2

Lab Sample ID: 380-124043-2

Date Collected: 11/25/24 10:14

Matrix: Water

Date Received: 11/27/24 09:14

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		38 - 134		12/02/24 22:21	1

Client Sample ID: AIEA WELLS PUMPS 1&2 (260)

Lab Sample ID: 380-124043-3

Date Collected: 11/25/24 10:38

Matrix: Drinking Water

Date Received: 11/27/24 09:14

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		12/02/24 16:15	12/03/24 16:23	1
2,4'-DDD	<0.097		0.097	ug/L		12/02/24 16:15	12/03/24 16:23	1
2,4'-DDE	<0.097		0.097	ug/L		12/02/24 16:15	12/03/24 16:23	1
2,4'-DDT	<0.097		0.097	ug/L		12/02/24 16:15	12/03/24 16:23	1
2,4-Dinitrotoluene	<0.097		0.097	ug/L		12/02/24 16:15	12/03/24 16:23	1
2,6-Dinitrotoluene	<0.097		0.097	ug/L		12/02/24 16:15	12/03/24 16:23	1
2-Methylnaphthalene	<0.097		0.097	ug/L		12/02/24 16:15	12/03/24 16:23	1
4,4'-DDD	<0.097		0.097	ug/L		12/02/24 16:15	12/03/24 16:23	1
4,4'-DDE	<0.097		0.097	ug/L		12/02/24 16:15	12/03/24 16:23	1
4,4'-DDT	<0.097		0.097	ug/L		12/02/24 16:15	12/03/24 16:23	1
Acenaphthene	<0.097		0.097	ug/L		12/02/24 16:15	12/03/24 16:23	1
Acenaphthylene	<0.097		0.097	ug/L		12/02/24 16:15	12/03/24 16:23	1
Acetochlor	<0.097		0.097	ug/L		12/02/24 16:15	12/03/24 16:23	1
Alachlor	<0.048		0.048	ug/L		12/02/24 16:15	12/03/24 16:23	1
alpha-BHC	<0.097		0.097	ug/L		12/02/24 16:15	12/03/24 16:23	1
alpha-Chlordane	<0.048		0.048	ug/L		12/02/24 16:15	12/03/24 16:23	1
Anthracene	<0.019		0.019	ug/L		12/02/24 16:15	12/03/24 16:23	1
Atrazine	<0.048		0.048	ug/L		12/02/24 16:15	12/03/24 16:23	1
Benz(a)anthracene	<0.048		0.048	ug/L		12/02/24 16:15	12/03/24 16:23	1
Benzo[a]pyrene	<0.019		0.019	ug/L		12/02/24 16:15	12/03/24 16:23	1
Benzo[b]fluoranthene	<0.019		0.019	ug/L		12/02/24 16:15	12/03/24 16:23	1
Benzo[g,h,i]perylene	<0.048		0.048	ug/L		12/02/24 16:15	12/03/24 16:23	1
Benzo[k]fluoranthene	<0.019		0.019	ug/L		12/02/24 16:15	12/03/24 16:23	1
beta-BHC	<0.097		0.097	ug/L		12/02/24 16:15	12/03/24 16:23	1
Bis(2-ethylhexyl) phthalate	<0.58		0.58	ug/L		12/02/24 16:15	12/03/24 16:23	1
Bromacil	<0.097		0.097	ug/L		12/02/24 16:15	12/03/24 16:23	1
Butachlor	<0.048		0.048	ug/L		12/02/24 16:15	12/03/24 16:23	1
Butylbenzylphthalate	<0.48		0.48	ug/L		12/02/24 16:15	12/03/24 16:23	1
Chlorobenzilate	<0.097		0.097	ug/L		12/02/24 16:15	12/03/24 16:23	1
Chloroneb	<0.097		0.097	ug/L		12/02/24 16:15	12/03/24 16:23	1
Chlorothalonil (Draconil, Bravo)	<0.097		0.097	ug/L		12/02/24 16:15	12/03/24 16:23	1
Chlorpyrifos	<0.048		0.048	ug/L		12/02/24 16:15	12/03/24 16:23	1
Chrysene	<0.019		0.019	ug/L		12/02/24 16:15	12/03/24 16:23	1
delta-BHC	<0.097		0.097	ug/L		12/02/24 16:15	12/03/24 16:23	1
Di(2-ethylhexyl)adipate	<0.58		0.58	ug/L		12/02/24 16:15	12/03/24 16:23	1
Dibenz(a,h)anthracene	<0.048		0.048	ug/L		12/02/24 16:15	12/03/24 16:23	1
Diclorvos (DDVP)	<0.048		0.048	ug/L		12/02/24 16:15	12/03/24 16:23	1
Dieldrin	<0.0097		0.0097	ug/L		12/02/24 16:15	12/03/24 16:23	1
Diethylphthalate	<0.48		0.48	ug/L		12/02/24 16:15	12/03/24 16:23	1
Dimethylphthalate	<0.48		0.48	ug/L		12/02/24 16:15	12/03/24 16:23	1
Di-n-butyl phthalate	<0.97		0.97	ug/L		12/02/24 16:15	12/03/24 16:23	1
Di-n-octyl phthalate	<0.097		0.097	ug/L		12/02/24 16:15	12/03/24 16:23	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-124043-1
SDG: Weekly

Client Sample ID: AIEA WELLS PUMPS 1&2 (260)

Lab Sample ID: 380-124043-3

Date Collected: 11/25/24 10:38

Matrix: Drinking Water

Date Received: 11/27/24 09:14

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Endosulfan I (Alpha)	<0.097		0.097	ug/L		12/02/24 16:15	12/03/24 16:23	1
Endosulfan II (Beta)	<0.097		0.097	ug/L		12/02/24 16:15	12/03/24 16:23	1
Endosulfan sulfate	<0.097		0.097	ug/L		12/02/24 16:15	12/03/24 16:23	1
Endrin	<0.0097		0.0097	ug/L		12/02/24 16:15	12/03/24 16:23	1
Endrin aldehyde	<0.097		0.097	ug/L		12/02/24 16:15	12/03/24 16:23	1
EPTC	<0.097		0.097	ug/L		12/02/24 16:15	12/03/24 16:23	1
Fluoranthene	<0.097		0.097	ug/L		12/02/24 16:15	12/03/24 16:23	1
Fluorene	<0.048		0.048	ug/L		12/02/24 16:15	12/03/24 16:23	1
gamma-Chlordane	<0.048		0.048	ug/L		12/02/24 16:15	12/03/24 16:23	1
Heptachlor	<0.0097		0.0097	ug/L		12/02/24 16:15	12/03/24 16:23	1
Heptachlor epoxide (isomer B)	<0.0097		0.0097	ug/L		12/02/24 16:15	12/03/24 16:23	1
Hexachlorobenzene	<0.048		0.048	ug/L		12/02/24 16:15	12/03/24 16:23	1
Hexachlorocyclopentadiene	<0.048		0.048	ug/L		12/02/24 16:15	12/03/24 16:23	1
Indeno[1,2,3-cd]pyrene	<0.048		0.048	ug/L		12/02/24 16:15	12/03/24 16:23	1
Isophorone	<0.097		0.097	ug/L		12/02/24 16:15	12/03/24 16:23	1
Lindane	<0.0097		0.0097	ug/L		12/02/24 16:15	12/03/24 16:23	1
Malathion	<0.097		0.097	ug/L		12/02/24 16:15	12/03/24 16:23	1
Methoxychlor	<0.048		0.048	ug/L		12/02/24 16:15	12/03/24 16:23	1
Metolachlor	<0.048		0.048	ug/L		12/02/24 16:15	12/03/24 16:23	1
Molinate	<0.097		0.097	ug/L		12/02/24 16:15	12/03/24 16:23	1
Naphthalene	<0.097		0.097	ug/L		12/02/24 16:15	12/03/24 16:23	1
Parathion	<0.097		0.097	ug/L		12/02/24 16:15	12/03/24 16:23	1
Pendimethalin (Penoxaline)	<0.097		0.097	ug/L		12/02/24 16:15	12/03/24 16:23	1
Phenanthrene	<0.039		0.039	ug/L		12/02/24 16:15	12/03/24 16:23	1
Propachlor	<0.048		0.048	ug/L		12/02/24 16:15	12/03/24 16:23	1
Pyrene	<0.048		0.048	ug/L		12/02/24 16:15	12/03/24 16:23	1
Simazine	<0.048		0.048	ug/L		12/02/24 16:15	12/03/24 16:23	1
Terbacil	<0.097		0.097	ug/L		12/02/24 16:15	12/03/24 16:23	1
Terbutylazine	<0.097		0.097	ug/L		12/02/24 16:15	12/03/24 16:23	1
Thiobencarb	<0.097		0.097	ug/L		12/02/24 16:15	12/03/24 16:23	1
Total Permethrin (mixed isomers)	<0.19		0.19	ug/L		12/02/24 16:15	12/03/24 16:23	1
trans-Nonachlor	<0.048		0.048	ug/L		12/02/24 16:15	12/03/24 16:23	1
Trifluralin	<0.097		0.097	ug/L		12/02/24 16:15	12/03/24 16:23	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	12/02/24 16:15	12/03/24 16:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	99		70 - 130	12/02/24 16:15	12/03/24 16:23	1
Perylene-d12	92		70 - 130	12/02/24 16:15	12/03/24 16:23	1
Triphenylphosphate	100		70 - 130	12/02/24 16:15	12/03/24 16:23	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		12/02/24 05:43	12/08/24 01:13	1
2-Methylnaphthalene	<0.19		0.19	ug/L		12/02/24 05:43	12/08/24 01:13	1
Acenaphthene	<0.19		0.19	ug/L		12/02/24 05:43	12/08/24 01:13	1
Acenaphthylene	<0.19		0.19	ug/L		12/02/24 05:43	12/08/24 01:13	1
Anthracene	<0.19		0.19	ug/L		12/02/24 05:43	12/08/24 01:13	1
Benzo[a]anthracene	<0.19		0.19	ug/L		12/02/24 05:43	12/08/24 01:13	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-124043-1
SDG: Weekly

Client Sample ID: AIEA WELLS PUMPS 1&2 (260)

Lab Sample ID: 380-124043-3

Date Collected: 11/25/24 10:38

Matrix: Drinking Water

Date Received: 11/27/24 09:14

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	<0.19		0.19	ug/L		12/02/24 05:43	12/08/24 01:13	1
Benzo[b]fluoranthene	<0.19		0.19	ug/L		12/02/24 05:43	12/08/24 01:13	1
Benzo[g,h,i]perylene	<0.19		0.19	ug/L		12/02/24 05:43	12/08/24 01:13	1
Benzo[k]fluoranthene	<0.19		0.19	ug/L		12/02/24 05:43	12/08/24 01:13	1
Chrysene	<0.19		0.19	ug/L		12/02/24 05:43	12/08/24 01:13	1
Dibenz[a,h]anthracene	<0.19		0.19	ug/L		12/02/24 05:43	12/08/24 01:13	1
Fluoranthene	<0.19		0.19	ug/L		12/02/24 05:43	12/08/24 01:13	1
Fluorene	<0.19		0.19	ug/L		12/02/24 05:43	12/08/24 01:13	1
Indeno[1,2,3-cd]pyrene	<0.19		0.19	ug/L		12/02/24 05:43	12/08/24 01:13	1
Naphthalene	<0.19		0.19	ug/L		12/02/24 05:43	12/08/24 01:13	1
Phenanthrene	<0.19		0.19	ug/L		12/02/24 05:43	12/08/24 01:13	1
Pyrene	<0.19		0.19	ug/L		12/02/24 05:43	12/08/24 01:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	82		28 - 127	12/02/24 05:43	12/08/24 01:13	1
2-Fluorobiphenyl (Surr)	84		31 - 120	12/02/24 05:43	12/08/24 01:13	1
2-Fluorophenol (Surr)	44		17 - 120	12/02/24 05:43	12/08/24 01:13	1
Nitrobenzene-d5 (Surr)	81		27 - 120	12/02/24 05:43	12/08/24 01:13	1
Phenol-d6 (Surr)	28		10 - 120	12/02/24 05:43	12/08/24 01:13	1
p-Terphenyl-d14 (Surr)	91		45 - 120	12/02/24 05:43	12/08/24 01:13	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
2,6-Dimethyl-5-methylphenylaminopyridin-3,4-dicarboxyimide	4.7	T J N	ug/L		3.63	1000222-06-1	12/02/24 05:43	12/12/24 14:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	75		33 - 139	12/02/24 05:43	12/12/24 14:29	1
2-Fluorobiphenyl (Surr)	90		33 - 126	12/02/24 05:43	12/12/24 14:29	1
2-Fluorophenol (Surr)	53		12 - 120	12/02/24 05:43	12/12/24 14:29	1
Nitrobenzene-d5 (Surr)	91		36 - 120	12/02/24 05:43	12/12/24 14:29	1
Phenol-d6 (Surr)	31		10 - 120	12/02/24 05:43	12/12/24 14:29	1
p-Terphenyl-d14 (Surr)	87		47 - 131	12/02/24 05:43	12/12/24 14:29	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	<10		10	ug/L			12/02/24 19:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		38 - 134		12/02/24 19:32	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C24)	<26		26	ug/L		12/02/24 17:28	12/05/24 03:06	1
Motor Oil Range Organics [C24-C36]	<26		26	ug/L		12/02/24 17:28	12/05/24 03:06	1
C8-C18	<26		26	ug/L		12/02/24 17:28	12/05/24 03:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	109		60 - 130	12/02/24 17:28	12/05/24 03:06	1

Client Sample Results

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

Job ID: 380-124043-1
 SDG: Weekly

Client Sample ID: TB: AIEA WELLS PUMPS 1&2 (260)

Lab Sample ID: 380-124043-4

Date Collected: 11/25/24 10:38

Matrix: Water

Date Received: 11/27/24 09:14

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			12/02/24 22:47	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		38 - 134				12/02/24 22:47	1

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

Action Limit Summary

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

Job ID: 380-124043-1
SDG: Weekly

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-124043-1

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	<0.049		ug/L	2	0.049	525.2	Total/NA
Atrazine	<0.049		ug/L	3	0.049	525.2	Total/NA
Benzo[a]pyrene	<0.020		ug/L	0.2	0.020	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	<0.59		ug/L	6	0.59	525.2	Total/NA
Di(2-ethylhexyl)adipate	<0.59		ug/L	400	0.59	525.2	Total/NA
Endrin	<0.0098		ug/L	2	0.0098	525.2	Total/NA
Heptachlor	<0.0098		ug/L	0.4	0.0098	525.2	Total/NA
Heptachlor epoxide (isomer B)	<0.0098		ug/L	0.2	0.0098	525.2	Total/NA
Hexachlorobenzene	<0.049		ug/L	1	0.049	525.2	Total/NA
Hexachlorocyclopentadiene	<0.049		ug/L	50	0.049	525.2	Total/NA
Lindane	<0.0098		ug/L	0.2	0.0098	525.2	Total/NA
Methoxychlor	<0.049		ug/L	40	0.049	525.2	Total/NA
Simazine	<0.049		ug/L	4	0.049	525.2	Total/NA
Benzo[a]pyrene	<0.19		ug/L	0.2	0.19	625.1 SIM	Total/NA

Client Sample ID: AIEA WELLS PUMPS 1&2 (260)

Lab Sample ID: 380-124043-3

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL	RL	Method	Prep Type
				Limit			
Alachlor	<0.048		ug/L	2	0.048	525.2	Total/NA
Atrazine	<0.048		ug/L	3	0.048	525.2	Total/NA
Benzo[a]pyrene	<0.019		ug/L	0.2	0.019	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	<0.58		ug/L	6	0.58	525.2	Total/NA
Di(2-ethylhexyl)adipate	<0.58		ug/L	400	0.58	525.2	Total/NA
Endrin	<0.0097		ug/L	2	0.0097	525.2	Total/NA
Heptachlor	<0.0097		ug/L	0.4	0.0097	525.2	Total/NA
Heptachlor epoxide (isomer B)	<0.0097		ug/L	0.2	0.0097	525.2	Total/NA
Hexachlorobenzene	<0.048		ug/L	1	0.048	525.2	Total/NA
Hexachlorocyclopentadiene	<0.048		ug/L	50	0.048	525.2	Total/NA
Lindane	<0.0097		ug/L	0.2	0.0097	525.2	Total/NA
Methoxychlor	<0.048		ug/L	40	0.048	525.2	Total/NA
Simazine	<0.048		ug/L	4	0.048	525.2	Total/NA
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: 380-124043-1
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)
380-124043-1	AIEA GULCH WELLS PUMP 2	99	94	99
380-124043-3	AIEA WELLS PUMPS 1&2 (260)	99	92	100

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)
380-124027-F-1-A MS	Matrix Spike	98	92	99
380-124029-H-1-A DU	Duplicate	99	99	103
LCS 380-121455/22-A	Lab Control Sample	101	87	103
MB 380-121455/20-A	Method Blank	99	78	100
MRL 380-121455/21-A	Lab Control Sample	101	80	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)
380-124043-1	AIEA GULCH WELLS PUMP 2	86	82	53	84	30	88
380-124043-3	AIEA WELLS PUMPS 1&2 (260)	75	90	53	91	31	87

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 570-508896/1-A	Method Blank	79	85	51	87	32	87

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl (Surr)

Surrogate Summary

Client: City & County of Honolulu

Job ID: 380-124043-1

Project/Site: RED-HILL

SDG: Weekly

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: Drinking 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)
380-124043-1	AIEA GULCH WELLS PUMP 2	98	75	44	77	27	77
380-124043-3	AIEA WELLS PUMPS 1&2 (260)	82	84	44	81	28	91

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)
380-124031-A-3-A MS	Matrix Spike	79	78	51	77	38	83
380-124031-A-3-B MSD	Matrix Spike Duplicate	82	83	60	74	42	84
LCS 570-508896/2-A	Lab Control Sample	68	66	49	64	33	70
LCS 570-508896/3-A	Lab Control Sample Dup	69	70	55	65	37	73
MB 570-508896/1-A	Method Blank	76	70	48	77	32	77

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)

FBP = 2-Fluorobiphenyl (Surr)

2FP = 2-Fluorophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

PHL6 = Phenol-d6 (Surr)

TPHd14 = p-Terphenyl-d14 (Surr)

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

Matrix: Drinking Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		BFB1 (38-134)
380-124043-1	AIEA GULCH WELLS PUMP 2	87
380-124043-3	AIEA WELLS PUMPS 1&2 (260)	86

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Surrogate Summary

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

Job ID: 380-124043-1
 SDG: Weekly

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1 (38-134)
380-124031-C-3 MS	Matrix Spike	92
380-124031-C-3 MSD	Matrix Spike Duplicate	93
380-124043-2	TB:AIEA GULCH WELLS P2	87
380-124043-4	TB: AIEA WELLS PUMPS 1&2 (260)	84
LCS 570-509042/4	Lab Control Sample	90
LCSD 570 509042/5	Lab Control Sample Dup	94
MB 570-509042/6	Method Blank	89
MRL 570-509042/3	Lab Control Sample	92

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)
380-124043-1	AIEA GULCH WELLS PUMP 2	107
380-124043-3	AIEA WELLS PUMPS 1&2 (260)	109

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)
380-124031-B-3-A MS	Matrix Spike	132 S1+
380-124031-B-3-B MSD	Matrix Spike Duplicate	109
LCS 570-509237/2-A	Lab Control Sample	107
LCSD 570-509237/3-A	Lab Control Sample Dup	99
MB 570-509237/1-A	Method Blank	109
MRL 570-509237/4-A	Lab Control Sample	105

Surrogate Legend

OTCSN = n-Octacosane (Surr)

QC Sample Results

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

Job ID: 380-124043-1
SDG: Weekly

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

Lab Sample ID: MB 380-121455/20-A
Matrix: Water
Analysis Batch: 121614

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 121455

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
1-Methylnaphthalene	<0.099		0.099	ug/L		12/02/24 16:15	12/03/24 14:20	1
2,4'-DDD	<0.099		0.099	ug/L		12/02/24 16:15	12/03/24 14:20	1
2,4'-DDE	<0.099		0.099	ug/L		12/02/24 16:15	12/03/24 14:20	1
2,4'-DDT	<0.099		0.099	ug/L		12/02/24 16:15	12/03/24 14:20	1
2,4-Dinitrotoluene	<0.099		0.099	ug/L		12/02/24 16:15	12/03/24 14:20	1
2,6-Dinitrotoluene	<0.099		0.099	ug/L		12/02/24 16:15	12/03/24 14:20	1
2-Methylnaphthalene	<0.099		0.099	ug/L		12/02/24 16:15	12/03/24 14:20	1
4,4'-DDD	<0.099		0.099	ug/L		12/02/24 16:15	12/03/24 14:20	1
4,4'-DDE	<0.099		0.099	ug/L		12/02/24 16:15	12/03/24 14:20	1
4,4'-DDT	<0.099		0.099	ug/L		12/02/24 16:15	12/03/24 14:20	1
Acenaphthene	<0.099		0.099	ug/L		12/02/24 16:15	12/03/24 14:20	1
Acenaphthylene	<0.099		0.099	ug/L		12/02/24 16:15	12/03/24 14:20	1
Acetochlor	<0.099		0.099	ug/L		12/02/24 16:15	12/03/24 14:20	1
Alachlor	<0.049		0.049	ug/L		12/02/24 16:15	12/03/24 14:20	1
alpha-BHC	<0.099		0.099	ug/L		12/02/24 16:15	12/03/24 14:20	1
alpha-Chlordane	<0.049		0.049	ug/L		12/02/24 16:15	12/03/24 14:20	1
Anthracene	<0.020		0.020	ug/L		12/02/24 16:15	12/03/24 14:20	1
Atrazine	<0.049		0.049	ug/L		12/02/24 16:15	12/03/24 14:20	1
Benz(a)anthracene	<0.049		0.049	ug/L		12/02/24 16:15	12/03/24 14:20	1
Benzo[a]pyrene	<0.020		0.020	ug/L		12/02/24 16:15	12/03/24 14:20	1
Benzo[b]fluoranthene	<0.020		0.020	ug/L		12/02/24 16:15	12/03/24 14:20	1
Benzo[g,h,i]perylene	<0.049		0.049	ug/L		12/02/24 16:15	12/03/24 14:20	1
Benzo[k]fluoranthene	<0.020		0.020	ug/L		12/02/24 16:15	12/03/24 14:20	1
beta-BHC	<0.099		0.099	ug/L		12/02/24 16:15	12/03/24 14:20	1
Bis(2-ethylhexyl) phthalate	<0.59		0.59	ug/L		12/02/24 16:15	12/03/24 14:20	1
Bromacil	<0.099		0.099	ug/L		12/02/24 16:15	12/03/24 14:20	1
Butachlor	<0.049		0.049	ug/L		12/02/24 16:15	12/03/24 14:20	1
Butylbenzylphthalate	<0.49		0.49	ug/L		12/02/24 16:15	12/03/24 14:20	1
Chlorobenzilate	<0.099		0.099	ug/L		12/02/24 16:15	12/03/24 14:20	1
Chloroneb	<0.099		0.099	ug/L		12/02/24 16:15	12/03/24 14:20	1
Chlorothalonil (Draconil, Bravo)	<0.099		0.099	ug/L		12/02/24 16:15	12/03/24 14:20	1
Chlorpyrifos	<0.049		0.049	ug/L		12/02/24 16:15	12/03/24 14:20	1
Chrysene	<0.020		0.020	ug/L		12/02/24 16:15	12/03/24 14:20	1
delta-BHC	<0.099		0.099	ug/L		12/02/24 16:15	12/03/24 14:20	1
Di(2-ethylhexyl)adipate	<0.59		0.59	ug/L		12/02/24 16:15	12/03/24 14:20	1
Dibenz(a,h)anthracene	<0.049		0.049	ug/L		12/02/24 16:15	12/03/24 14:20	1
Diclorvos (DDVP)	<0.049		0.049	ug/L		12/02/24 16:15	12/03/24 14:20	1
Dieldrin	<0.0099		0.0099	ug/L		12/02/24 16:15	12/03/24 14:20	1
Diethylphthalate	<0.49		0.49	ug/L		12/02/24 16:15	12/03/24 14:20	1
Dimethylphthalate	<0.49		0.49	ug/L		12/02/24 16:15	12/03/24 14:20	1
Di-n-butyl phthalate	<0.99		0.99	ug/L		12/02/24 16:15	12/03/24 14:20	1
Di-n-octyl phthalate	<0.099		0.099	ug/L		12/02/24 16:15	12/03/24 14:20	1
Endosulfan I (Alpha)	<0.099		0.099	ug/L		12/02/24 16:15	12/03/24 14:20	1
Endosulfan II (Beta)	<0.099		0.099	ug/L		12/02/24 16:15	12/03/24 14:20	1
Endosulfan sulfate	<0.099		0.099	ug/L		12/02/24 16:15	12/03/24 14:20	1
Endrin	<0.0099		0.0099	ug/L		12/02/24 16:15	12/03/24 14:20	1
Endrin aldehyde	<0.099		0.099	ug/L		12/02/24 16:15	12/03/24 14:20	1
EPTC	<0.099		0.099	ug/L		12/02/24 16:15	12/03/24 14:20	1

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QC Sample Results

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

Job ID: 380-124043-1
SDG: Weekly

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

Lab Sample ID: MB 380-121455/20-A
Matrix: Water
Analysis Batch: 121614

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 121455

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Fluoranthene	<0.099		0.099	ug/L		12/02/24 16:15	12/03/24 14:20	1
Fluorene	<0.049		0.049	ug/L		12/02/24 16:15	12/03/24 14:20	1
gamma-Chlordane	<0.049		0.049	ug/L		12/02/24 16:15	12/03/24 14:20	1
Heptachlor	<0.0099		0.0099	ug/L		12/02/24 16:15	12/03/24 14:20	1
Heptachlor epoxide (isomer B)	<0.0099		0.0099	ug/L		12/02/24 16:15	12/03/24 14:20	1
Hexachlorobenzene	<0.049		0.049	ug/L		12/02/24 16:15	12/03/24 14:20	1
Hexachlorocyclopentadiene	<0.049		0.049	ug/L		12/02/24 16:15	12/03/24 14:20	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049	ug/L		12/02/24 16:15	12/03/24 14:20	1
Isophorone	<0.099		0.099	ug/L		12/02/24 16:15	12/03/24 14:20	1
Lindane	<0.0099		0.0099	ug/L		12/02/24 16:15	12/03/24 14:20	1
Malathion	<0.099		0.099	ug/L		12/02/24 16:15	12/03/24 14:20	1
Methoxychlor	<0.049		0.049	ug/L		12/02/24 16:15	12/03/24 14:20	1
Metolachlor	<0.049		0.049	ug/L		12/02/24 16:15	12/03/24 14:20	1
Molinate	<0.099		0.099	ug/L		12/02/24 16:15	12/03/24 14:20	1
Naphthalene	<0.099		0.099	ug/L		12/02/24 16:15	12/03/24 14:20	1
Parathion	<0.099		0.099	ug/L		12/02/24 16:15	12/03/24 14:20	1
Pendimethalin (Penoxaline)	<0.099		0.099	ug/L		12/02/24 16:15	12/03/24 14:20	1
Phenanthrene	<0.039		0.039	ug/L		12/02/24 16:15	12/03/24 14:20	1
Propachlor	<0.049		0.049	ug/L		12/02/24 16:15	12/03/24 14:20	1
Pyrene	<0.049		0.049	ug/L		12/02/24 16:15	12/03/24 14:20	1
Simazine	<0.049		0.049	ug/L		12/02/24 16:15	12/03/24 14:20	1
Terbacil	<0.099		0.099	ug/L		12/02/24 16:15	12/03/24 14:20	1
Terbutylazine	<0.099		0.099	ug/L		12/02/24 16:15	12/03/24 14:20	1
Thiobencarb	<0.099		0.099	ug/L		12/02/24 16:15	12/03/24 14:20	1
Total Permethrin (mixed isomers)	<0.20		0.20	ug/L		12/02/24 16:15	12/03/24 14:20	1
trans-Nonachlor	<0.049		0.049	ug/L		12/02/24 16:15	12/03/24 14:20	1
Trifluralin	<0.099		0.099	ug/L		12/02/24 16:15	12/03/24 14:20	1

Tentatively Identified Compound	MB	MB	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
	Est. Result	Qualifier							
9-Octadecenamamide, (Z)-	0.918	T J N	ug/L		7.68	301-02-0	12/02/24 16:15	12/03/24 14:20	1
Unknown	0.691	T J	ug/L		8.77	N/A	12/02/24 16:15	12/03/24 14:20	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Nitro-m-xylene	99		70 - 130	12/02/24 16:15	12/03/24 14:20	1
Perylene-d12	78		70 - 130	12/02/24 16:15	12/03/24 14:20	1
Triphenylphosphate	100		70 - 130	12/02/24 16:15	12/03/24 14:20	1

Lab Sample ID: LCS 380-121455/22-A
Matrix: Water
Analysis Batch: 121614

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 121455

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
1-Methylnaphthalene	1.97	1.92		ug/L		98	70 - 130
2,4'-DDD	1.97	2.13		ug/L		108	70 - 130
2,4'-DDE	1.97	2.10		ug/L		107	70 - 130
2,4'-DDT	1.97	1.88		ug/L		96	70 - 130
2,4-Dinitrotoluene	1.97	1.64		ug/L		84	70 - 130
2,6-Dinitrotoluene	1.97	1.82		ug/L		93	70 - 130

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QC Sample Results

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

Job ID: 380-124043-1
SDG: Weekly

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

Lab Sample ID: LCS 380-121455/22-A

Matrix: Water

Analysis Batch: 121614

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 121455

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec Limits
	Added	Result	Qualifier				
2-Methylnaphthalene	1.97	1.94		ug/L		98	70 - 130
4,4'-DDD	1.97	2.20		ug/L		112	70 - 130
4,4'-DDE	1.97	2.06		ug/L		105	70 - 130
4,4'-DDT	1.97	1.85		ug/L		94	70 - 130
Acenaphthene	1.97	1.92		ug/L		97	70 - 130
Acenaphthylene	1.97	1.94		ug/L		98	70 - 130
Acetochlor	1.97	2.22		ug/L		113	70 - 130
Alachlor	1.97	2.27		ug/L		115	70 - 130
alpha-BHC	1.97	2.04		ug/L		103	70 - 130
alpha-Chlordane	1.97	2.00		ug/L		101	70 - 130
Anthracene	1.97	1.78		ug/L		91	70 - 130
Atrazine	1.97	2.07		ug/L		105	70 - 130
Benz(a)anthracene	1.97	1.95		ug/L		99	70 - 130
Benzo[a]pyrene	1.97	1.77		ug/L		90	70 - 130
Benzo[b]fluoranthene	1.97	2.01		ug/L		102	70 - 130
Benzo[g,h,i]perylene	1.97	1.99		ug/L		101	70 - 130
Benzo[k]fluoranthene	1.97	2.01		ug/L		102	70 - 130
beta-BHC	1.97	2.12		ug/L		108	70 - 130
Bis(2-ethylhexyl) phthalate	1.97	2.10		ug/L		107	70 - 130
Bromacil	1.97	1.97		ug/L		100	70 - 130
Butachlor	1.97	2.14		ug/L		109	70 - 130
Butylbenzylphthalate	1.97	2.19		ug/L		111	70 - 130
Chlorobenzilate	1.97	2.13		ug/L		108	70 - 130
Chloroneb	1.97	2.24		ug/L		114	70 - 130
Chlorothalonil (Draconil, Bravo)	1.97	2.11		ug/L		107	70 - 130
Chlorpyrifos	1.97	2.19		ug/L		111	70 - 130
Chrysene	1.97	2.05		ug/L		104	70 - 130
delta-BHC	1.97	2.03		ug/L		103	70 - 130
Di(2-ethylhexyl)adipate	1.97	2.05		ug/L		104	70 - 130
Dibenz(a,h)anthracene	1.97	2.00		ug/L		101	70 - 130
Diclorvos (DDVP)	1.97	1.98		ug/L		101	70 - 130
Dieldrin	1.97	2.00		ug/L		102	70 - 130
Diethylphthalate	1.97	2.09		ug/L		106	70 - 130
Dimethylphthalate	1.97	2.06		ug/L		104	70 - 130
Di-n-butyl phthalate	3.94	4.26		ug/L		108	70 - 130
Di-n-octyl phthalate	1.97	2.07		ug/L		105	70 - 130
Endosulfan I (Alpha)	1.97	1.99		ug/L		101	70 - 130
Endosulfan II (Beta)	1.97	2.08		ug/L		106	70 - 130
Endosulfan sulfate	1.97	1.98		ug/L		101	70 - 130
Endrin	1.97	2.31		ug/L		117	70 - 130
Endrin aldehyde	1.97	1.90		ug/L		97	60 - 130
EPTC	1.97	2.11		ug/L		107	70 - 130
Fluoranthene	1.97	2.15		ug/L		109	70 - 130
Fluorene	1.97	2.00		ug/L		102	70 - 130
gamma-Chlordane	1.97	2.06		ug/L		104	70 - 130
Heptachlor	1.97	2.12		ug/L		108	70 - 130
Heptachlor epoxide (isomer B)	1.97	2.03		ug/L		103	70 - 130
Hexachlorobenzene	1.97	1.89		ug/L		96	70 - 130
Hexachlorocyclopentadiene	1.97	1.86		ug/L		95	70 - 130

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QC Sample Results

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

Job ID: 380-124043-1
SDG: Weekly

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

Lab Sample ID: LCS 380-121455/22-A

Matrix: Water

Analysis Batch: 121614

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 121455

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec Limits
	Added	Result	Qualifier				
Indeno[1,2,3-cd]pyrene	1.97	1.81		ug/L		92	70 - 130
Isophorone	1.97	1.95		ug/L		99	70 - 130
Lindane	1.97	2.02		ug/L		102	70 - 130
Malathion	1.97	2.12		ug/L		108	70 - 130
Methoxychlor	1.97	1.82		ug/L		92	70 - 130
Metolachlor	1.97	2.14		ug/L		108	70 - 130
Molinate	1.97	2.14		ug/L		109	70 - 130
Naphthalene	1.97	2.03		ug/L		103	70 - 130
Parathion	1.97	1.97		ug/L		100	70 - 130
Pendimethalin (Penoxaline)	1.97	1.72		ug/L		87	70 - 130
Phenanthrene	1.97	1.95		ug/L		99	70 - 130
Propachlor	1.97	2.22		ug/L		113	70 - 130
Pyrene	1.97	2.13		ug/L		108	70 - 130
Simazine	1.97	2.24		ug/L		114	70 - 130
Terbacil	1.97	2.05		ug/L		104	70 - 130
Terbuthylazine	1.97	2.27		ug/L		116	70 - 130
Thiobencarb	1.97	2.19		ug/L		111	70 - 130
trans-Nonachlor	1.97	1.97		ug/L		100	70 - 130
Trifluralin	1.97	1.79		ug/L		91	70 - 130

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	101		70 - 130
Perylene-d12	87		70 - 130
Triphenylphosphate	103		70 - 130

Lab Sample ID: MRL 380-121455/21-A

Matrix: Water

Analysis Batch: 121614

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 121455

Analyte	Spike	MRL	MRL	Unit	D	%Rec	%Rec Limits
	Added	Result	Qualifier				
1-Methylnaphthalene	0.0981	0.107		ug/L		109	50 - 150
2,4'-DDD	0.0981	0.0966	J	ug/L		98	50 - 150
2,4'-DDE	0.0981	0.101		ug/L		103	50 - 150
2,4'-DDT	0.0981	0.0998		ug/L		102	50 - 150
2,4-Dinitrotoluene	0.0981	0.0820	J	ug/L		84	50 - 150
2,6-Dinitrotoluene	0.0981	0.0819	J	ug/L		83	50 - 150
2-Methylnaphthalene	0.0981	0.103		ug/L		105	50 - 150
4,4'-DDD	0.0981	0.104		ug/L		106	50 - 150
4,4'-DDE	0.0981	0.102		ug/L		104	50 - 150
4,4'-DDT	0.0981	0.101		ug/L		103	50 - 150
Acenaphthene	0.0981	0.0935	J	ug/L		95	50 - 150
Acenaphthylene	0.0981	0.0902	J	ug/L		92	50 - 150
Acetochlor	0.0981	0.117		ug/L		119	50 - 150
Alachlor	0.0491	0.0529		ug/L		108	50 - 150
alpha-BHC	0.0981	0.111		ug/L		113	50 - 150
alpha-Chlordane	0.0245	<0.028		ug/L		100	50 - 150
Anthracene	0.0196	0.0197	J	ug/L		101	50 - 150
Atrazine	0.0491	0.0577		ug/L		117	50 - 150

QC Sample Results

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

Job ID: 380-124043-1
SDG: Weekly

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

Lab Sample ID: MRL 380-121455/21-A

Matrix: Water

Analysis Batch: 121614

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 121455

Analyte	Spike	MRL	MRL	Unit	D	%Rec	%Rec Limits
	Added	Result	Qualifier				
Benz(a)anthracene	0.0491	0.0522		ug/L		106	50 - 150
Benzo[a]pyrene	0.0196	0.0173	J	ug/L		88	50 - 150
Benzo[b]fluoranthene	0.0196	0.0169	J	ug/L		86	50 - 150
Benzo[g,h,i]perylene	0.0491	0.0352	J	ug/L		72	50 - 150
Benzo[k]fluoranthene	0.0196	0.0176	J	ug/L		90	50 - 150
beta-BHC	0.0981	0.119		ug/L		121	50 - 150
Bis(2-ethylhexyl) phthalate	0.589	0.554	J	ug/L		94	50 - 150
Bromacil	0.0981	0.107		ug/L		109	50 - 150
Butachlor	0.0491	0.0676		ug/L		138	50 - 150
Butylbenzylphthalate	0.491	0.555		ug/L		113	50 - 150
Chlorobenzilate	0.0981	0.0920	J	ug/L		94	50 - 150
Chloroneb	0.0981	0.0709	J	ug/L		72	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0981	0.0964	J	ug/L		98	50 - 150
Chlorpyrifos	0.0491	0.0527		ug/L		107	50 - 150
Chrysene	0.0196	0.0228		ug/L		116	50 - 150
delta-BHC	0.0981	0.107		ug/L		109	50 - 150
Di(2-ethylhexyl)adipate	0.589	0.596		ug/L		101	50 - 150
Dibenz(a,h)anthracene	0.0491	0.0338	J	ug/L		69	50 - 150
Diclorvos (DDVP)	0.0491	0.0539		ug/L		110	50 - 150
Dieldrin	0.00981	0.0105		ug/L		107	50 - 150
Diethylphthalate	0.491	0.504		ug/L		103	50 - 150
Dimethylphthalate	0.491	0.506		ug/L		103	50 - 150
Di-n-butyl phthalate	0.491	0.497	J	ug/L		101	49 - 243
Di-n-octyl phthalate	0.0981	0.0687	J	ug/L		70	50 - 150
Endosulfan I (Alpha)	0.0981	0.0868	J	ug/L		88	50 - 150
Endosulfan II (Beta)	0.0981	0.112		ug/L		114	50 - 150
Endosulfan sulfate	0.0981	0.106		ug/L		108	50 - 150
Endrin	0.00981	0.0118		ug/L		120	50 - 150
Endrin aldehyde	0.0981	0.0887	J	ug/L		90	50 - 150
EPTC	0.0981	0.0954	J	ug/L		97	50 - 150
Fluoranthene	0.0981	0.0996		ug/L		102	50 - 150
Fluorene	0.0491	<0.049		ug/L		99	50 - 150
gamma-Chlordane	0.0245	0.0221	J	ug/L		90	50 - 150
Heptachlor	0.00981	0.0128		ug/L		131	50 - 150
Heptachlor epoxide (isomer B)	0.00981	0.0117		ug/L		119	50 - 150
Hexachlorobenzene	0.0491	0.0478	J	ug/L		97	50 - 150
Hexachlorocyclopentadiene	0.0491	0.0573		ug/L		117	50 - 150
Indeno[1,2,3-cd]pyrene	0.0491	0.0332	J	ug/L		68	50 - 150
Isophorone	0.0981	0.122		ug/L		124	50 - 150
Lindane	0.00981	0.0116		ug/L		119	50 - 150
Malathion	0.0981	0.103		ug/L		105	50 - 150
Methoxychlor	0.0491	0.0575		ug/L		117	50 - 150
Metolachlor	0.0491	0.0648		ug/L		132	50 - 150
Molinate	0.0981	0.100		ug/L		102	50 - 150
Naphthalene	0.0981	0.100		ug/L		102	50 - 150
Parathion	0.0981	0.0862	J	ug/L		88	50 - 150
Pendimethalin (Penoxaline)	0.0981	0.0925	J	ug/L		94	50 - 150
Phenanthrene	0.0393	0.0422		ug/L		108	50 - 150
Propachlor	0.0491	0.0587		ug/L		120	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-124043-1
SDG: Weekly

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

Lab Sample ID: MRL 380-121455/21-A
Matrix: Water
Analysis Batch: 121614

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 121455

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Pyrene	0.0491	0.0491		ug/L		100	50 - 150
Simazine	0.0491	0.0497		ug/L		101	50 - 150
Terbacil	0.0981	0.0996		ug/L		102	50 - 150
Terbutylazine	0.0981	0.106		ug/L		108	50 - 150
Thiobencarb	0.0981	0.102		ug/L		104	50 - 150
trans-Nonachlor	0.0245	<0.026		ug/L		94	50 - 150
Trifluralin	0.0981	0.0990		ug/L		101	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
2-Nitro-m-xylene	101		70 - 130
Perylene-d12	80		70 - 130
Triphenylphosphate	100		70 - 130

Lab Sample ID: 380-124027-F-1-A MS
Matrix: Water
Analysis Batch: 121614

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 121455

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	<0.097		1.96	1.92		ug/L		98	70 - 130
2,4'-DDD	<0.097		1.96	2.02		ug/L		103	70 - 130
2,4'-DDE	<0.097		1.96	1.96		ug/L		100	70 - 130
2,4'-DDT	<0.097		1.96	1.78		ug/L		91	70 - 130
2,4-Dinitrotoluene	<0.097		1.96	1.79		ug/L		91	70 - 130
2,6-Dinitrotoluene	<0.097		1.96	1.89		ug/L		96	70 - 130
2-Methylnaphthalene	<0.097		1.96	1.95		ug/L		100	70 - 130
4,4'-DDD	<0.097		1.96	2.05		ug/L		105	70 - 130
4,4'-DDE	<0.097		1.96	1.86		ug/L		95	70 - 130
4,4'-DDT	<0.097		1.96	1.76		ug/L		90	70 - 130
Acenaphthene	<0.097		1.96	1.91		ug/L		97	70 - 130
Acenaphthylene	<0.097		1.96	1.99		ug/L		102	70 - 130
Acetochlor	<0.097		1.96	2.17		ug/L		111	70 - 130
Alachlor	<0.049		1.96	2.15		ug/L		110	70 - 130
alpha-BHC	<0.097		1.96	2.02		ug/L		103	70 - 130
alpha-Chlordane	<0.049		1.96	1.91		ug/L		98	70 - 130
Anthracene	<0.019	F1	1.96	1.25	F1	ug/L		64	70 - 130
Atrazine	<0.049		1.96	2.01		ug/L		103	70 - 130
Benz(a)anthracene	<0.049		1.96	1.85		ug/L		94	70 - 130
Benzo[a]pyrene	<0.019		1.96	1.68		ug/L		86	70 - 130
Benzo[b]fluoranthene	<0.019		1.96	1.91		ug/L		98	70 - 130
Benzo[g,h,i]perylene	<0.049		1.96	1.82		ug/L		93	70 - 130
Benzo[k]fluoranthene	<0.019		1.96	2.08		ug/L		106	70 - 130
beta-BHC	<0.097		1.96	2.08		ug/L		106	70 - 130
Bis(2-ethylhexyl) phthalate	<0.58		1.96	1.82		ug/L		93	70 - 130
Bromacil	<0.097		1.96	1.96		ug/L		100	70 - 130
Butachlor	<0.049		1.96	2.05		ug/L		105	70 - 130
Butylbenzylphthalate	<0.49		1.96	2.11		ug/L		108	70 - 130
Chlorobenzilate	<0.097		1.96	2.00		ug/L		102	70 - 130
Chloroneb	<0.097		1.96	2.12		ug/L		108	70 - 130

QC Sample Results

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

Job ID: 380-124043-1
SDG: Weekly

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

Lab Sample ID: 380-124027-F-1-A MS

Client Sample ID: Matrix Spike

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 121614

Prep Batch: 121455

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier	Added	Result	Qualifier				
Chlorothalonil (Draconil, Bravo)	<0.097		1.96	2.09		ug/L		107	70 - 130
Chlorpyrifos	<0.049		1.96	2.10		ug/L		108	70 - 130
Chrysene	<0.019		1.96	2.06		ug/L		105	70 - 130
delta-BHC	<0.097		1.96	1.94		ug/L		99	70 - 130
Di(2-ethylhexyl)adipate	<0.58		1.96	1.75		ug/L		90	70 - 130
Dibenz(a,h)anthracene	<0.049		1.96	1.78		ug/L		91	70 - 130
Diclorvos (DDVP)	<0.049		1.96	1.95		ug/L		99	70 - 130
Dieldrin	<0.0097		1.96	1.88		ug/L		96	70 - 130
Diethylphthalate	<0.49		1.96	2.04		ug/L		100	70 - 130
Dimethylphthalate	<0.49		1.96	2.01		ug/L		103	70 - 130
Di-n-butyl phthalate	<0.97		3.91	4.08		ug/L		104	70 - 130
Di-n-octyl phthalate	<0.097		1.96	1.73		ug/L		89	70 - 130
Endosulfan I (Alpha)	<0.097		1.96	1.93		ug/L		99	70 - 130
Endosulfan II (Beta)	<0.097		1.96	2.05		ug/L		105	70 - 130
Endosulfan sulfate	<0.097		1.96	1.93		ug/L		99	70 - 130
Endrin	<0.0097		1.96	2.21		ug/L		113	70 - 130
Endrin aldehyde	<0.097		1.96	1.62		ug/L		83	60 - 130
EPTC	<0.097		1.96	2.03		ug/L		104	70 - 130
Fluoranthene	<0.097		1.96	2.11		ug/L		108	70 - 130
Fluorene	<0.049		1.96	1.99		ug/L		102	70 - 130
gamma-Chlordane	<0.049		1.96	1.95		ug/L		100	70 - 130
Heptachlor	<0.0097		1.96	2.03		ug/L		104	70 - 130
Heptachlor epoxide (isomer B)	<0.0097		1.96	1.95		ug/L		100	70 - 130
Hexachlorobenzene	<0.049		1.96	1.90		ug/L		97	70 - 130
Hexachlorocyclopentadiene	<0.049		1.96	1.90		ug/L		97	70 - 130
Indeno[1,2,3-cd]pyrene	<0.049		1.96	1.76		ug/L		90	70 - 130
Isophorone	<0.097		1.96	1.89		ug/L		96	70 - 130
Lindane	<0.0097		1.96	1.99		ug/L		102	70 - 130
Malathion	<0.097		1.96	2.01		ug/L		103	70 - 130
Methoxychlor	<0.049		1.96	1.97		ug/L		101	70 - 130
Metolachlor	<0.049		1.96	2.04		ug/L		104	70 - 130
Molinate	<0.097		1.96	2.08		ug/L		107	70 - 130
Naphthalene	<0.097		1.96	2.03		ug/L		104	70 - 130
Parathion	<0.097		1.96	2.01		ug/L		103	70 - 130
Pendimethalin (Penoxaline)	<0.097		1.96	1.82		ug/L		93	70 - 130
Phenanthrene	<0.039		1.96	1.93		ug/L		98	70 - 130
Propachlor	<0.049		1.96	2.18		ug/L		111	70 - 130
Pyrene	<0.049		1.96	2.07		ug/L		106	70 - 130
Simazine	<0.049		1.96	2.15		ug/L		110	70 - 130
Terbacil	<0.097		1.96	2.03		ug/L		104	70 - 130
Terbutylazine	<0.097		1.96	2.22		ug/L		114	70 - 130
Thiobencarb	<0.097		1.96	2.12		ug/L		109	70 - 130
trans-Nonachlor	<0.049		1.96	1.87		ug/L		95	70 - 130
Trifluralin	<0.097		1.96	1.86		ug/L		95	70 - 130

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	98		70 - 130
Perylene-d12	92		70 - 130

QC Sample Results

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

Job ID: 380-124043-1
SDG: Weekly

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

Lab Sample ID: 380-124027-F-1-A MS
Matrix: Water
Analysis Batch: 121614

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 121455

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
Triphenylphosphate	99		70 - 130

Lab Sample ID: 380-124029-H-1-A DU
Matrix: Water
Analysis Batch: 121614

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 121455

Analyte	Sample	Sample	DU DU		Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
1-Methylnaphthalene	<0.098		<0.098		ug/L		NC	20
2,4'-DDD	<0.098		<0.098		ug/L		NC	20
2,4'-DDE	<0.098		<0.098		ug/L		NC	20
2,4'-DDT	<0.098		<0.098		ug/L		NC	20
2,4-Dinitrotoluene	<0.098		<0.098		ug/L		NC	20
2,6-Dinitrotoluene	<0.098		<0.098		ug/L		NC	20
2-Methylnaphthalene	<0.098		<0.098		ug/L		NC	20
4,4'-DDD	<0.098		<0.098		ug/L		NC	20
4,4'-DDE	<0.098		<0.098		ug/L		NC	20
4,4'-DDT	<0.098		<0.098		ug/L		NC	20
Acenaphthene	<0.098		<0.098		ug/L		NC	20
Acenaphthylene	<0.098		<0.098		ug/L		NC	20
Acetochlor	<0.098		<0.098		ug/L		NC	20
Alachlor	<0.049		<0.049		ug/L		NC	20
alpha-BHC	<0.098		<0.098		ug/L		NC	20
alpha-Chlordane	<0.049		<0.049		ug/L		NC	20
Anthracene	<0.020		<0.020		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		<0.020		ug/L		NC	20
Benzo[b]fluoranthene	<0.020		<0.020		ug/L		NC	20
Benzo[g,h,i]perylene	<0.049		<0.049		ug/L		NC	20
Benzo[k]fluoranthene	<0.020		<0.020		ug/L		NC	20
beta-BHC	<0.098		<0.098		ug/L		NC	20
Bis(2-ethylhexyl) phthalate	<0.59		<0.59		ug/L		NC	20
Bromacil	<0.098		<0.098		ug/L		NC	20
Butachlor	<0.049		<0.049		ug/L		NC	20
Butylbenzylphthalate	<0.49		<0.49		ug/L		NC	20
Chlorobenzilate	<0.098		<0.098		ug/L		NC	20
Chloroneb	<0.098		<0.098		ug/L		NC	20
Chlorothalonil (Draconil, Bravo)	<0.098		<0.098		ug/L		NC	20
Chlorpyrifos	<0.049		<0.049		ug/L		NC	20
Chrysene	<0.020		<0.020		ug/L		NC	20
delta-BHC	<0.098		<0.098		ug/L		NC	20
Di(2-ethylhexyl)adipate	<0.59		<0.59		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	<0.0098		<0.0098		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	<0.98		<0.98		ug/L		NC	20

QC Sample Results

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

Job ID: 380-124043-1
SDG: Weekly

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

Lab Sample ID: 380-124029-H-1-A DU
Matrix: Water
Analysis Batch: 121614

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 121455

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Di-n-octyl phthalate	<0.098		<0.098		ug/L		NC	20
Endosulfan I (Alpha)	<0.098		<0.098		ug/L		NC	20
Endosulfan II (Beta)	<0.098		<0.098		ug/L		NC	20
Endosulfan sulfate	<0.098		<0.098		ug/L		NC	20
Endrin	<0.0098		<0.0098		ug/L		NC	20
Endrin aldehyde	<0.098		<0.098		ug/L		NC	20
EPTC	<0.098		<0.098		ug/L		NC	20
Fluoranthene	<0.098		<0.098		ug/L		NC	20
Fluorene	<0.049		<0.049		ug/L		NC	20
gamma-Chlordane	<0.049		<0.049		ug/L		NC	20
Heptachlor	<0.0098		<0.0098		ug/L		NC	20
Heptachlor epoxide (isomer B)	<0.0098		<0.0098		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	<0.098		<0.098		ug/L		NC	20
Lindane	<0.0098		<0.0098		ug/L		NC	20
Malathion	<0.098		<0.098		ug/L		NC	20
Methoxychlor	<0.049		<0.049		ug/L		NC	20
Metolachlor	<0.049		<0.049		ug/L		NC	20
Molinate	<0.098		<0.098		ug/L		NC	20
Naphthalene	<0.098		<0.098		ug/L		NC	20
Parathion	<0.098		<0.098		ug/L		NC	20
Pendimethalin (Penoxaline)	<0.098		<0.098		ug/L		NC	20
Phenanthrene	<0.039		<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	<0.098		<0.098		ug/L		NC	20
Terbutylazine	<0.098		<0.098		ug/L		NC	20
Thiobencarb	<0.098		<0.098		ug/L		NC	20
Total Permethrin (mixed isomers)	<0.20		<0.20		ug/L		NC	20
trans-Nonachlor	<0.049		<0.049		ug/L		NC	20
Trifluralin	<0.098		<0.098		ug/L		NC	20

Surrogate	DU	DU	Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	99		70 - 130
Perylene-d12	99		70 - 130
Triphenylphosphate	103		70 - 130

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

Lab Sample ID: MB 570-508896/1-A
Matrix: Water
Analysis Batch: 513022

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 508896

Tentatively Identified Compound	MB	MB	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
	Est. Result	Qualifier							
Tentatively Identified Compound	None		ug/L			N/A	12/02/24 05:05	12/12/24 12:09	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-124043-1
SDG: Weekly

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

Lab Sample ID: MB 570-508896/1-A
Matrix: Water
Analysis Batch: 513022

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 508896

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2,4,6-Tribromophenol (Surr)	79		33 - 139	12/02/24 05:05	12/12/24 12:09	1
2-Fluorobiphenyl (Surr)	85		33 - 126	12/02/24 05:05	12/12/24 12:09	1
2-Fluorophenol (Surr)	51		12 - 120	12/02/24 05:05	12/12/24 12:09	1
Nitrobenzene-d5 (Surr)	87		36 - 120	12/02/24 05:05	12/12/24 12:09	1
Phenol-d6 (Surr)	32		10 - 120	12/02/24 05:05	12/12/24 12:09	1
p-Terphenyl-d14 (Surr)	87		47 - 131	12/02/24 05:05	12/12/24 12:09	1

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

Lab Sample ID: MB 570-508896/1-A
Matrix: Water
Analysis Batch: 509860

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 508896

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
1-Methylnaphthalene	<0.20		0.20	ug/L		12/02/24 05:05	12/04/24 16:03	1
2-Methylnaphthalene	<0.20		0.20	ug/L		12/02/24 05:05	12/04/24 16:03	1
Acenaphthene	<0.20		0.20	ug/L		12/02/24 05:05	12/04/24 16:03	1
Acenaphthylene	<0.20		0.20	ug/L		12/02/24 05:05	12/04/24 16:03	1
Anthracene	<0.20		0.20	ug/L		12/02/24 05:05	12/04/24 16:03	1
Benzo[a]anthracene	<0.20		0.20	ug/L		12/02/24 05:05	12/04/24 16:03	1
Benzo[a]pyrene	<0.20		0.20	ug/L		12/02/24 05:05	12/04/24 16:03	1
Benzo[b]fluoranthene	<0.20		0.20	ug/L		12/02/24 05:05	12/04/24 16:03	1
Benzo[g,h,i]perylene	<0.20		0.20	ug/L		12/02/24 05:05	12/04/24 16:03	1
Benzo[k]fluoranthene	<0.20		0.20	ug/L		12/02/24 05:05	12/04/24 16:03	1
Chrysene	<0.20		0.20	ug/L		12/02/24 05:05	12/04/24 16:03	1
Dibenz(a,h)anthracene	<0.20		0.20	ug/L		12/02/24 05:05	12/04/24 16:03	1
Fluoranthene	<0.20		0.20	ug/L		12/02/24 05:05	12/04/24 16:03	1
Fluorene	<0.20		0.20	ug/L		12/02/24 05:05	12/04/24 16:03	1
Indeno[1,2,3-cd]pyrene	<0.20		0.20	ug/L		12/02/24 05:05	12/04/24 16:03	1
Naphthalene	<0.20		0.20	ug/L		12/02/24 05:05	12/04/24 16:03	1
Phenanthrene	<0.20		0.20	ug/L		12/02/24 05:05	12/04/24 16:03	1
Pyrene	<0.20		0.20	ug/L		12/02/24 05:05	12/04/24 16:03	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2,4,6-Tribromophenol (Surr)	76		28 - 127	12/02/24 05:05	12/04/24 16:03	1
2-Fluorobiphenyl (Surr)	70		31 - 120	12/02/24 05:05	12/04/24 16:03	1
2-Fluorophenol (Surr)	48		17 - 120	12/02/24 05:05	12/04/24 16:03	1
Nitrobenzene-d5 (Surr)	77		27 - 120	12/02/24 05:05	12/04/24 16:03	1
Phenol-d6 (Surr)	32		10 - 120	12/02/24 05:05	12/04/24 16:03	1
p-Terphenyl-d14 (Surr)	77		45 - 120	12/02/24 05:05	12/04/24 16:03	1

Lab Sample ID: LCS 570-508896/2-A
Matrix: Water
Analysis Batch: 509860

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 508896

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2-Methylnaphthalene	20.0	14.5		ug/L		73	43 - 120

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-124043-1
SDG: Weekly

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

Lab Sample ID: LCS 570-508896/2-A

Matrix: Water

Analysis Batch: 509860

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 508896

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Acenaphthene	20.0	14.1		ug/L		70	60 - 132	
Acenaphthylene	20.0	13.9		ug/L		69	54 - 126	
Anthracene	20.0	15.2		ug/L		76	43 - 120	
Benzo[a]anthracene	20.0	15.0		ug/L		75	42 - 133	
Benzo[a]pyrene	20.0	15.7		ug/L		78	32 - 148	
Benzo[b]fluoranthene	20.0	15.8		ug/L		79	42 - 140	
Benzo[g,h,i]perylene	20.0	13.9		ug/L		70	1 - 195	
Benzo[k]fluoranthene	20.0	15.7		ug/L		79	25 - 146	
Chrysene	20.0	14.4		ug/L		72	44 - 140	
Dibenz(a,h)anthracene	20.0	14.7		ug/L		73	1 - 200	
Fluoranthene	20.0	15.4		ug/L		77	43 - 121	
Fluorene	20.0	14.6		ug/L		73	70 - 120	
Indeno[1,2,3-cd]pyrene	20.0	15.0		ug/L		75	1 - 151	
Naphthalene	20.0	12.2		ug/L		61	36 - 120	
Phenanthrene	20.0	14.6		ug/L		73	65 - 120	
Pyrene	20.0	14.7		ug/L		74	70 - 120	

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	68		28 - 127
2-Fluorobiphenyl (Surr)	66		31 - 120
2-Fluorophenol (Surr)	49		17 - 120
Nitrobenzene-d5 (Surr)	64		27 - 120
Phenol-d6 (Surr)	33		10 - 120
p-Terphenyl-d14 (Surr)	70		45 - 120

Lab Sample ID: LCSD 570-508896/3-A

Matrix: Water

Analysis Batch: 509860

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 508896

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits		RPD	
									RPD	Limit
1-Methylnaphthalene	20.0	13.5		ug/L		67	47 - 120	7	20	
2-Methylnaphthalene	20.0	15.2		ug/L		76	43 - 120	5	20	
Acenaphthene	20.0	14.8		ug/L		74	60 - 132	5	29	
Acenaphthylene	20.0	14.7		ug/L		73	54 - 126	6	45	
Anthracene	20.0	16.2		ug/L		81	43 - 120	7	40	
Benzo[a]anthracene	20.0	16.1		ug/L		80	42 - 133	7	32	
Benzo[a]pyrene	20.0	17.2		ug/L		86	32 - 148	9	43	
Benzo[b]fluoranthene	20.0	17.2		ug/L		86	42 - 140	9	43	
Benzo[g,h,i]perylene	20.0	15.0		ug/L		75	1 - 195	7	61	
Benzo[k]fluoranthene	20.0	17.0		ug/L		85	25 - 146	8	38	
Chrysene	20.0	15.2		ug/L		76	44 - 140	5	53	
Dibenz(a,h)anthracene	20.0	15.8		ug/L		79	1 - 200	8	75	
Fluoranthene	20.0	16.8		ug/L		84	43 - 121	8	40	
Fluorene	20.0	15.7		ug/L		78	70 - 120	7	23	
Indeno[1,2,3-cd]pyrene	20.0	16.0		ug/L		80	1 - 151	6	60	
Naphthalene	20.0	13.0		ug/L		65	36 - 120	7	39	
Phenanthrene	20.0	15.4		ug/L		77	65 - 120	5	24	
Pyrene	20.0	15.2		ug/L		76	70 - 120	3	30	

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-124043-1
SDG: Weekly

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

Lab Sample ID: LCSD 570-508896/3-A
Matrix: Water
Analysis Batch: 509860

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 508896

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	69		28 - 127
2-Fluorobiphenyl (Surr)	70		31 - 120
2-Fluorophenol (Surr)	55		17 - 120
Nitrobenzene-d5 (Surr)	65		27 - 120
Phenol-d6 (Surr)	37		10 - 120
p-Terphenyl-d14 (Surr)	73		45 - 120

Lab Sample ID: 380-124031-A-3-A MS
Matrix: Water
Analysis Batch: 510911

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 508896

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	<0.19		19.1	15.3		ug/L		80	36 - 120
2-Methylnaphthalene	<0.19		19.1	17.7		ug/L		93	32 - 124
Acenaphthene	<0.19		19.1	15.4		ug/L		81	47 - 145
Acenaphthylene	<0.19		19.1	14.8		ug/L		77	33 - 145
Anthracene	<0.19		19.1	15.8		ug/L		83	27 - 133
Benzo[a]anthracene	<0.19		19.1	16.5		ug/L		86	33 - 143
Benzo[a]pyrene	<0.19		19.1	17.1		ug/L		90	17 - 163
Benzo[b]fluoranthene	<0.19		19.1	17.4		ug/L		91	24 - 159
Benzo[g,h,i]perylene	<0.19		19.1	15.8		ug/L		82	1 - 219
Benzo[k]fluoranthene	<0.19		19.1	17.4		ug/L		91	11 - 162
Chrysene	<0.19		19.1	15.4		ug/L		81	17 - 168
Dibenz(a,h)anthracene	<0.19		19.1	16.9		ug/L		88	1 - 227
Fluoranthene	<0.19		19.1	15.3		ug/L		80	26 - 137
Fluorene	<0.19		19.1	15.4		ug/L		81	59 - 121
Indeno[1,2,3-cd]pyrene	<0.19		19.1	17.2		ug/L		90	1 - 171
Naphthalene	<0.19		19.1	14.5		ug/L		76	21 - 133
Phenanthrene	<0.19		19.1	15.4		ug/L		81	54 - 120
Pyrene	<0.19		19.1	16.7		ug/L		87	52 - 120

Surrogate	MS %Recovery	MS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	79		28 - 127
2-Fluorobiphenyl (Surr)	78		31 - 120
2-Fluorophenol (Surr)	51		17 - 120
Nitrobenzene-d5 (Surr)	77		27 - 120
Phenol-d6 (Surr)	38		10 - 120
p-Terphenyl-d14 (Surr)	83		45 - 120

Lab Sample ID: 380-124031-A-3-B MSD
Matrix: Water
Analysis Batch: 510911

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 508896

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	<0.19		19.2	14.7		ug/L		76	36 - 120	4	30
2-Methylnaphthalene	<0.19		19.2	16.7		ug/L		87	32 - 124	6	30
Acenaphthene	<0.19		19.2	16.4		ug/L		85	47 - 145	6	48
Acenaphthylene	<0.19		19.2	16.2		ug/L		84	33 - 145	9	74

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-124043-1
SDG: Weekly

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

Lab Sample ID: 380-124031-A-3-B MSD

Client Sample ID: Matrix Spike Duplicate

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 510911

Prep Batch: 508896

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		
Anthracene	<0.19		19.2	17.1		ug/L		89	27 - 133	8	66
Benzo[a]anthracene	<0.19		19.2	17.2		ug/L		90	33 - 143	4	53
Benzo[a]pyrene	<0.19		19.2	18.6		ug/L		97	17 - 163	8	72
Benzo[b]fluoranthene	<0.19		19.2	18.5		ug/L		96	24 - 159	6	71
Benzo[g,h,i]perylene	<0.19		19.2	15.9		ug/L		83	1 - 219	1	97
Benzo[k]fluoranthene	<0.19		19.2	17.6		ug/L		92	11 - 162	1	63
Chrysene	<0.19		19.2	16.0		ug/L		84	17 - 168	4	87
Dibenz(a,h)anthracene	<0.19		19.2	16.5		ug/L		86	1 - 227	2	126
Fluoranthene	<0.19		19.2	15.9		ug/L		83	26 - 137	4	66
Fluorene	<0.19		19.2	16.3		ug/L		85	59 - 121	5	38
Indeno[1,2,3-cd]pyrene	<0.19		19.2	17.3		ug/L		90	1 - 171	0	99
Naphthalene	<0.19		19.2	13.9		ug/L		72	21 - 133	4	65
Phenanthrene	<0.19		19.2	16.4		ug/L		85	54 - 120	6	39
Pyrene	<0.19		19.2	17.1		ug/L		89	52 - 120	2	49

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	82		28 - 127
2-Fluorobiphenyl (Surr)	83		31 - 120
2-Fluorophenol (Surr)	60		17 - 120
Nitrobenzene-d5 (Surr)	74		27 - 120
Phenol-d6 (Surr)	42		10 - 120
p-Terphenyl-d14 (Surr)	84		45 - 120

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

Lab Sample ID: MB 570-509042/6

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 509042

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
GRO (C6-C10)	<10		10	ug/L			12/02/24 13:40	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	89		38 - 134		12/02/24 13:40	1

Lab Sample ID: LCS 570-509042/4

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 509042

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec
		Result	Qualifier				Limits
Gasoline Range Organics (C4-C13)	400	360		ug/L		90	78 - 120

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	90		38 - 134

QC Sample Results

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

Job ID: 380-124043-1
SDG: Weekly

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

Lab Sample ID: LCSD 570-509042/5
Matrix: Water
Analysis Batch: 509042

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Gasoline Range Organics (C4-C13)	400	338		ug/L		85	78 - 120	6	10
Surrogate		%Recovery	Qualifier						Limits
4-Bromofluorobenzene (Surr)		94							38 - 134

Lab Sample ID: MRL 570-509042/3
Matrix: Water
Analysis Batch: 509042

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Gasoline Range Organics (C4-C13)	10.0	11.0		ug/L		110	50 - 150		
Surrogate		%Recovery	Qualifier						Limits
4-Bromofluorobenzene (Surr)		92							38 - 134

Lab Sample ID: 380-124031-C-3 MS
Matrix: Water
Analysis Batch: 509042

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Gasoline Range Organics (C4-C13)	<10		400	357		ug/L		89	68 - 122		
Surrogate		%Recovery			Qualifier						Limits
4-Bromofluorobenzene (Surr)		92									38 - 134

Lab Sample ID: 380-124031-C-3 MSD
Matrix: Water
Analysis Batch: 509042

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	Limit
Gasoline Range Organics (C4-C13)	<10		400	356		ug/L		89	68 - 122	0	18
Surrogate		%Recovery			Qualifier						Limits
4-Bromofluorobenzene (Surr)		93									38 - 134

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

Lab Sample ID: MB 570-509237/1-A
Matrix: Water
Analysis Batch: 509983

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 509237

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C24)	<25		25	ug/L		12/02/24 17:28	12/04/24 23:32	1
Motor Oil Range Organics [C24-C36]	<25		25	ug/L		12/02/24 17:28	12/04/24 23:32	1
C8-C18	<25		25	ug/L		12/02/24 17:28	12/04/24 23:32	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-124043-1
SDG: Weekly

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

	MB	MB					
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac	
n-Octacosane (Surr)	109		60 - 130	12/02/24 17:28	12/04/24 23:32	1	

Lab Sample ID: LCS 570-509237/2-A
Matrix: Water
Analysis Batch: 509983

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 509237

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
C10-C28	1600	1390		ug/L		87	56 - 127

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
n-Octacosane (Surr)	107		60 - 130

Lab Sample ID: LCSD 570-509237/3-A
Matrix: Water
Analysis Batch: 509983

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 509237

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C10-C28	1600	1280		ug/L		80	56 - 127	9	23

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
n-Octacosane (Surr)	99		60 - 130

Lab Sample ID: MRL 570-509237/4-A
Matrix: Water
Analysis Batch: 509983

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 509237

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
C10-C28	0.0200	0.0273		mg/L		136	50 - 150

	MRL	MRL	
Surrogate	%Recovery	Qualifier	Limits
n-Octacosane (Surr)	105		60 - 130

Lab Sample ID: 380-124031-B-3-A MS
Matrix: Water
Analysis Batch: 509983

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 509237

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
C10-C28	<26		1650	1480		ug/L		90	70 - 130

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
n-Octacosane (Surr)	132	S1+	60 - 130

Lab Sample ID: 380-124031-B-3-B MSD
Matrix: Water
Analysis Batch: 509983

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 509237

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C10-C28	<26		1630	1440		ug/L		88	70 - 130	3	20

QC Sample Results

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

Job ID: 380-124043-1
SDG: Weekly

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

Lab Sample ID: 380-124031-B-3-B MSD

Matrix: Water

Analysis Batch: 509983

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 509237

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

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QC Association Summary

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

Job ID: 380-124043-1
 SDG: Weekly

GC/MS Semi VOA

Prep Batch: 121455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-124043-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	525.2	
380-124043-3	AIEA WELLS PUMPS 1&2 (260)	Total/NA	Drinking Water	525.2	
MB 380-121455/20-A	Method Blank	Total/NA	Water	525.2	
LCS 380-121455/22-A	Lab Control Sample	Total/NA	Water	525.2	
MRL 380-121455/21-A	Lab Control Sample	Total/NA	Water	525.2	
380-124027-F-1-A MS	Matrix Spike	Total/NA	Water	525.2	
380-124029-H-1-A DU	Duplicate	Total/NA	Water	525.2	

Analysis Batch: 121614

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-124043-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	525.2	121455
380-124043-3	AIEA WELLS PUMPS 1&2 (260)	Total/NA	Drinking Water	525.2	121455
MB 380-121455/20-A	Method Blank	Total/NA	Water	525.2	121455
LCS 380-121455/22-A	Lab Control Sample	Total/NA	Water	525.2	121455
MRL 380-121455/21-A	Lab Control Sample	Total/NA	Water	525.2	121455
380-124027-F-1-A MS	Matrix Spike	Total/NA	Water	525.2	121455
380-124029-H-1-A DU	Duplicate	Total/NA	Water	525.2	121455

Prep Batch: 508896

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-124043-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	625.1	
380-124043-3	AIEA WELLS PUMPS 1&2 (260)	Total/NA	Drinking Water	625.1	
MB 570-508896/1-A	Method Blank	Total/NA	Water	625.1	
LCS 570-508896/2-A	Lab Control Sample	Total/NA	Water	625.1	
LCSD 570-508896/3-A	Lab Control Sample Dup	Total/NA	Water	625.1	
380-124031-A-3-A MS	Matrix Spike	Total/NA	Water	625.1	
380-124031-A-3-B MSD	Matrix Spike Duplicate	Total/NA	Water	625.1	

Analysis Batch: 509860

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 570-508896/1-A	Method Blank	Total/NA	Water	625.1 SIM	508896
LCS 570-508896/2-A	Lab Control Sample	Total/NA	Water	625.1 SIM	508896
LCSD 570-508896/3-A	Lab Control Sample Dup	Total/NA	Water	625.1 SIM	508896

Analysis Batch: 510911

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-124031-A-3-A MS	Matrix Spike	Total/NA	Water	625.1 SIM	508896
380-124031-A-3-B MSD	Matrix Spike Duplicate	Total/NA	Water	625.1 SIM	508896

Analysis Batch: 511338

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-124043-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	625.1 SIM	508896
380-124043-3	AIEA WELLS PUMPS 1&2 (260)	Total/NA	Drinking Water	625.1 SIM	508896

Analysis Batch: 513022

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-124043-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	625.1	508896
380-124043-3	AIEA WELLS PUMPS 1&2 (260)	Total/NA	Drinking Water	625.1	508896
MB 570-508896/1-A	Method Blank	Total/NA	Water	625.1	508896

QC Association Summary

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

Job ID: 380-124043-1
 SDG: Weekly

GC VOA

Analysis Batch: 509042

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-124043-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	8015B GRO LL	
380-124043-2	TB:AIEA GULCH WELLS P2	Total/NA	Water	8015B GRO LL	
380-124043-3	AIEA WELLS PUMPS 1&2 (260)	Total/NA	Drinking Water	8015B GRO LL	
380-124043-4	TB: AIEA WELLS PUMPS 1&2 (260)	Total/NA	Water	8015B GRO LL	
MB 570-509042/6	Method Blank	Total/NA	Water	8015B GRO LL	
LCS 570-509042/4	Lab Control Sample	Total/NA	Water	8015B GRO LL	
LCSD 570-509042/5	Lab Control Sample Dup	Total/NA	Water	8015B GRO LL	
MRL 570-509042/3	Lab Control Sample	Total/NA	Water	8015B GRO LL	
380-124031-C-3 MS	Matrix Spike	Total/NA	Water	8015B GRO LL	
380-124031-C-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8015B GRO LL	

GC Semi VOA

Prep Batch: 509237

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-124043-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	3510C	
380-124043-3	AIEA WELLS PUMPS 1&2 (260)	Total/NA	Drinking Water	3510C	
MB 570-509237/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-509237/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-509237/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MRL 570-509237/4-A	Lab Control Sample	Total/NA	Water	3510C	
380-124031-B-3-A MS	Matrix Spike	Total/NA	Water	3510C	
380-124031-B-3-B MSD	Matrix Spike Duplicate	Total/NA	Water	3510C	

Analysis Batch: 509983

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-124043-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	8015B	509237
380-124043-3	AIEA WELLS PUMPS 1&2 (260)	Total/NA	Drinking Water	8015B	509237
MB 570-509237/1-A	Method Blank	Total/NA	Water	8015B	509237
LCS 570-509237/2-A	Lab Control Sample	Total/NA	Water	8015B	509237
LCSD 570-509237/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	509237
MRL 570-509237/4-A	Lab Control Sample	Total/NA	Water	8015B	509237
380-124031-B-3-A MS	Matrix Spike	Total/NA	Water	8015B	509237
380-124031-B-3-B MSD	Matrix Spike Duplicate	Total/NA	Water	8015B	509237

Lab Chronicle

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

Job ID: 380-124043-1
SDG: Weekly

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-124043-1

Date Collected: 11/25/24 10:14

Matrix: Drinking Water

Date Received: 11/27/24 09:14

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			121455	IQ42	EA POM	12/02/24 14:55
Total/NA	Analysis	525.2		1	121614	UPAC	EA POM	12/03/24 16:03
Total/NA	Prep	625.1			508896	H1SH	EET CAL 4	12/02/24 05:05
Total/NA	Analysis	625.1		1	513022	CG	EET CAL 4	12/12/24 14:06
Total/NA	Prep	625.1			508896	H1SH	EET CAL 4	12/02/24 05:05
Total/NA	Analysis	625.1 SIM		1	511338	J7WE	EET CAL 4	12/08/24 00:51
Total/NA	Analysis	8015B GRO LL		1	509042	A9VE	EET CAL 4	12/02/24 19:06
Total/NA	Prep	3510C			509237	H6FE	EET CAL 4	12/02/24 17:28
Total/NA	Analysis	8015B		1	509983	NR	EET CAL 4	12/05/24 02:44

Client Sample ID: TB:AIEA GULCH WELLS P2

Lab Sample ID: 380-124043-2

Date Collected: 11/25/24 10:14

Matrix: Water

Date Received: 11/27/24 09:14

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015B GRO LL		1	509042	A9VE	EET CAL 4	12/02/24 22:21

Client Sample ID: AIEA WELLS PUMPS 1&2 (260)

Lab Sample ID: 380-124043-3

Date Collected: 11/25/24 10:38

Matrix: Drinking Water

Date Received: 11/27/24 09:14

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			121455	IQ42	EA POM	12/02/24 16:15
Total/NA	Analysis	525.2		1	121614	UPAC	EA POM	12/03/24 16:23
Total/NA	Prep	625.1			508896	H1SH	EET CAL 4	12/02/24 05:43
Total/NA	Analysis	625.1		1	513022	CG	EET CAL 4	12/12/24 14:29
Total/NA	Prep	625.1			508896	H1SH	EET CAL 4	12/02/24 05:43
Total/NA	Analysis	625.1 SIM		1	511338	J7WE	EET CAL 4	12/08/24 01:13
Total/NA	Analysis	8015B GRO LL		1	509042	A9VE	EET CAL 4	12/02/24 19:32
Total/NA	Prep	3510C			509237	H6FE	EET CAL 4	12/02/24 17:28
Total/NA	Analysis	8015B		1	509983	NR	EET CAL 4	12/05/24 03:06

Client Sample ID: TB: AIEA WELLS PUMPS 1&2 (260)

Lab Sample ID: 380-124043-4

Date Collected: 11/25/24 10:38

Matrix: Water

Date Received: 11/27/24 09:14

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015B GRO LL		1	509042	A9VE	EET CAL 4	12/02/24 22:47

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: 380-124043-1
 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	88-0161	07-02-25
California	Los Angeles County Sanitation Districts	9257304	07-31-26
California	State	3082	07-31-26
Kansas	NELAP	E-10420	07-31-25
Nevada	State	CA00111	07-31-25

Accreditation/Certification Summary

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

Job ID: 380-124043-1
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	10-11-25

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Method Summary

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

Job ID: 380-124043-1
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: 380-124043-1
SDG: Weekly

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-124043-1	AIEA GULCH WELLS PUMP 2	Drinking Water	11/25/24 10:14	11/27/24 09:14
380-124043-2	TB:AIEA GULCH WELLS P2	Water	11/25/24 10:14	11/27/24 09:14
380-124043-3	AIEA WELLS PUMPS 1&2 (260)	Drinking Water	11/25/24 10:38	11/27/24 09:14
380-124043-4	TB: AIEA WELLS PUMPS 1&2 (260)	Water	11/25/24 10:38	11/27/24 09:14

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Chain of Custody Record

Client Information Client Contact: Dr. Ron Fenstermacher City & County of Honolulu Address: 630 South Beretania Street Chemistry Lab City: Honolulu State Zip: HI, 96843 Phone: 808-748-5091(Tel) Email: RFENSTERMACHER@hbws.org Project Name: RED-HILL/HBWS Sites Event Desc: RUSH Weekly Red Hill Site: Hawaii		Lab PM: Arada, Rachelle E-Mail: Rachelle.Arada@et.eurofins.com PWSID:		Carrier Tracking No(s): 380-28005-2757 1 Page: Page 1 of 1 Job #:						
Due Date Requested TAT Requested (days) Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No PO #: C20525101 exp 05312023 WO #:		Analysis Requested Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> 625.1, 625.1, SIM 8015B_GRO_LL (MOD) GRO 8015B_DRO_LL_CS - HNL Ranges C10-C24/C24-C36/C8-C18 625.2_PRC - (MOD) 525plus Plus TICs 627.1_DW_PRC - 627.1 Full List 533 - All Analytes								
Sample Identification Aiea Gulch Wells Pump 2 Aiea Gulch Wells Pump 2 (Matrix Spike) Aiea Gulch Wells Pump 2 (Matrix Spike Duplicate) TB: Aiea Gulch Wells Pump 2 Aiea Wells Pumps 1&2 (260) Aiea Wells Pumps 1&2 (260) (Matrix Spike) Aiea Wells Pumps 1&2 (Matrix Spike Duplicate) TB: Aiea Wells Pumps 1&2 (260)		Sample Date 25-Nov-2024 25-Nov-2024 25-Nov-2024 25-Nov-2024 25-Nov-2024 25-Nov-2024	Sample Time 1014 1014 1038 1038	Sample Type (C=Comp, G=grab) G G G G	Matrix (Water, G=solid, O=volatile, L=ET, Tissue, A=Air) Water Water Water Water Water Water Water	R 2 2 2 2 2 2	RA 3 3 3 3 3 3	QA 2 2 2 2 2 2	Y 2 2 2 2 2 2	Total Number of Containers Special Instructions/Note: Other: 380-124043 COC
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested I, II, III, IV, Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Special Instructions/QC Requirements: 67702 6096 5042 27702 6096 5053 Method of Shipment: FEDEX 37702 6096 5064								
Empty Kit Relinquished by:		Date: 26 Nov 2024 Date: 26 Nov 2024 Date: 26 Nov 2024		Time: 11:27:24 Time: 09:14 Time: 09:14						
Relinquished by:		Company: HBWS Company: HBWS Company: HBWS		Received by: [Signature] Received by: [Signature] Received by: [Signature]						
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Cooler Temperature(s) °C and Other Remarks: (FIA) 12.8°-0.0°-2.8° 20.2°-0.0°-0.2° 21.3°-0.0°-1.3° Custody Seal No								



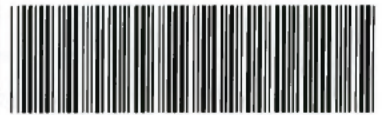
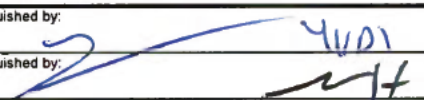
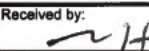

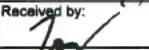
Eurofins Eaton Analytical Pomona

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

Chain of Custody Record



Loc: 380
 Enviro **124043**

Client Information (Sub Contract Lab)		Sampler: N/A		Lab PM: Arada, Rachelle		Carrier Tracking No(s): N/A		COC No: 380-173238.1			
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 #: 380-124043-1			
Address: 2841 Dow Avenue, Suite 100,		Due Date Requested: 12/12/2024		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)		Total Number of Containers		Other: N/A	
Phone: 714-895-5494(Tel)		WO #: N/A									
Email: N/A		Project #: 38001111		8015B_DRO_LL_CS/3510C_LL_HNL Ranges: C10-C24/C24-C36/C8-C18		625_1_SIM/625_Prep (MOD) Extended PAH List		8015B_GRO_LL/5030C (MOD) GRO		Special Instructions/Note:	
Project Name: RED-HILL		SSOW#: N/A									
Site: Honolulu BWS Sites		Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)		Preservation Code:	
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)		Preservation Code:	
AIEA GULCH WELLS PUMP 2 (331-202-TP072) (380-124043-1)		11/25/24		10:14 Hawaiian		G Water		X X X		7 MRLs are needed. Confirm any hits >RL.	
TB:AIEA GULCH WELLS P2 (331-202-TP072) (380-124043-2)		11/25/24		10:14 Hawaiian		G Water		X		2 MRLs are needed.	
AIEA WELLS PUMPS 1&2 (260) (331-203-TP400) (380-124043-3)		11/25/24		10:38 Hawaiian		G Water		X X X		7 MRLs are needed. Confirm any hits >RL.	
TB: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400) (380-124043-4)		11/25/24		10:38 Hawaiian		G Water		X		2 MRLs are needed.	
 380-124043 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: 		Date/Time: 11/27/24 1500		Company: WPP		Received by: 		Date/Time: 11-27-24 1500		Company: WP	
Relinquished by: 		Date/Time: 11-27-24 1602		Company: WPP		Received by: 		Date/Time: 11-27-24 1602		Company: EC	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:		Company:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:				Cooler Temperature(s) °C and Other Remarks: 1.1/1.8 sc12					

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Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-124043-1

SDG Number: Weekly

Login Number: 124043

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: 380-124043-1

SDG Number: Weekly

Login Number: 124043

List Number: 2

Creator: Nguyen, Jenny

List Source: Eurofins Calscience

List Creation: 11/27/24 06:01 PM

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

