

ANALYTICAL REPORT

PREPARED FOR

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JOB DESCRIPTION

RED-HILL
Weekly

JOB NUMBER

380-111916-1

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: 380-111916-1
SDG: Weekly

Qualifiers

GC/MS Semi VOA

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

GC/MS Semi VOA TICs

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

GC Semi VOA

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

Glossary

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

Case Narrative

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

Job ID: 380-111916-1

Job ID: 380-111916-1

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Job Narrative 380-111916-1

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

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

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

Receipt

The samples were received on 9/6/2024 10:33 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.5°C.

GC/MS Semi VOA

Method 625.1_SIM: The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 570-478816 and analytical batch 570-482140 recovered outside control limits for the following analytes: Acenaphthene, Fluorene, Phenanthrene and Pyrene. The LCS/LCSD was re-prep/re-ran on different instruments with new ICAL. The LCS/LCSD still failed low. The HT has expired therefore, no re-extraction. Data excluded due to this QC failure.

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

Gasoline Range Organics

Method 8015B_GRO_LL: One or more containers for the following sample was received broken or leaking: HALAWA WELLS UNITS 1 & 2 (331-206-TP065) (380-111916-3[MSD]). VOA vial for HALAWA WELL MSD for 8015 GRO accidentally broken in lab.

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

Diesel Range Organics

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

Detection Summary

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

Job ID: 380-111916-1
SDG: Weekly

**Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2
(331-203-TP400)**

Lab Sample ID: 380-111916-1

No Detections.

**Client Sample ID: TB: AIEA WELLS PUMPS 1&2 (260)
(331-203-TP400)**

Lab Sample ID: 380-111916-2

No Detections.

**Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1
(331-206-TP065)**

Lab Sample ID: 380-111916-3

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Dieldrin	0.040		0.0098	ug/L	1		525.2	Total/NA
Heptachlor epoxide (isomer B)	0.013		0.0098	ug/L	1		525.2	Total/NA

**Client Sample ID: TB: HALAWA WELLS UNITS 1&2
(331-206-TP065)**

Lab Sample ID: 380-111916-4

No Detections.

This Detection Summary does not include radiochemical test results.

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Client Sample Results

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

Job ID: 380-111916-1
SDG: Weekly

**Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2
(331-203-TP400)**

Lab Sample ID: 380-111916-1

Date Collected: 09/04/24 10:25

Matrix: Drinking Water

Date Received: 09/06/24 10:33

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.097		0.097	ug/L		09/09/24 11:09	09/10/24 15:29	1
2,4'-DDD	<0.097		0.097	ug/L		09/09/24 11:09	09/10/24 15:29	1
2,4'-DDE	<0.097		0.097	ug/L		09/09/24 11:09	09/10/24 15:29	1
2,4'-DDT	<0.097		0.097	ug/L		09/09/24 11:09	09/10/24 15:29	1
2,4-Dinitrotoluene	<0.097		0.097	ug/L		09/09/24 11:09	09/10/24 15:29	1
2,6-Dinitrotoluene	<0.097		0.097	ug/L		09/09/24 11:09	09/10/24 15:29	1
2-Methylnaphthalene	<0.097		0.097	ug/L		09/09/24 11:09	09/10/24 15:29	1
4,4'-DDD	<0.097		0.097	ug/L		09/09/24 11:09	09/10/24 15:29	1
4,4'-DDE	<0.097		0.097	ug/L		09/09/24 11:09	09/10/24 15:29	1
4,4'-DDT	<0.097		0.097	ug/L		09/09/24 11:09	09/10/24 15:29	1
Acenaphthene	<0.097		0.097	ug/L		09/09/24 11:09	09/10/24 15:29	1
Acenaphthylene	<0.097		0.097	ug/L		09/09/24 11:09	09/10/24 15:29	1
Acetochlor	<0.097		0.097	ug/L		09/09/24 11:09	09/10/24 15:29	1
Alachlor	<0.048		0.048	ug/L		09/09/24 11:09	09/10/24 15:29	1
alpha-BHC	<0.097		0.097	ug/L		09/09/24 11:09	09/10/24 15:29	1
alpha-Chlordane	<0.048		0.048	ug/L		09/09/24 11:09	09/10/24 15:29	1
Anthracene	<0.019		0.019	ug/L		09/09/24 11:09	09/10/24 15:29	1
Atrazine	<0.048		0.048	ug/L		09/09/24 11:09	09/10/24 15:29	1
Benz(a)anthracene	<0.048		0.048	ug/L		09/09/24 11:09	09/10/24 15:29	1
Benzo[a]pyrene	<0.019		0.019	ug/L		09/09/24 11:09	09/10/24 15:29	1
Benzo[b]fluoranthene	<0.019		0.019	ug/L		09/09/24 11:09	09/10/24 15:29	1
Benzo[g,h,i]perylene	<0.048		0.048	ug/L		09/09/24 11:09	09/10/24 15:29	1
Benzo[k]fluoranthene	<0.019		0.019	ug/L		09/09/24 11:09	09/10/24 15:29	1
beta-BHC	<0.097		0.097	ug/L		09/09/24 11:09	09/10/24 15:29	1
Bis(2-ethylhexyl) phthalate	<0.58		0.58	ug/L		09/09/24 11:09	09/10/24 15:29	1
Bromacil	<0.097		0.097	ug/L		09/09/24 11:09	09/10/24 15:29	1
Butachlor	<0.048		0.048	ug/L		09/09/24 11:09	09/10/24 15:29	1
Butylbenzylphthalate	<0.48		0.48	ug/L		09/09/24 11:09	09/10/24 15:29	1
Chlorobenzilate	<0.097		0.097	ug/L		09/09/24 11:09	09/10/24 15:29	1
Chloroneb	<0.097		0.097	ug/L		09/09/24 11:09	09/10/24 15:29	1
Chlorothalonil (Draconil, Bravo)	<0.097		0.097	ug/L		09/09/24 11:09	09/10/24 15:29	1
Chlorpyrifos	<0.048		0.048	ug/L		09/09/24 11:09	09/10/24 15:29	1
Chrysene	<0.019		0.019	ug/L		09/09/24 11:09	09/10/24 15:29	1
delta-BHC	<0.097		0.097	ug/L		09/09/24 11:09	09/10/24 15:29	1
Di(2-ethylhexyl)adipate	<0.58		0.58	ug/L		09/09/24 11:09	09/10/24 15:29	1
Dibenz(a,h)anthracene	<0.048		0.048	ug/L		09/09/24 11:09	09/10/24 15:29	1
Diclorvos (DDVP)	<0.048		0.048	ug/L		09/09/24 11:09	09/10/24 15:29	1
Dieldrin	<0.0097		0.0097	ug/L		09/09/24 11:09	09/10/24 15:29	1
Diethylphthalate	<0.48		0.48	ug/L		09/09/24 11:09	09/10/24 15:29	1
Dimethylphthalate	<0.48		0.48	ug/L		09/09/24 11:09	09/10/24 15:29	1
Di-n-butyl phthalate	<0.97		0.97	ug/L		09/09/24 11:09	09/10/24 15:29	1
Di-n-octyl phthalate	<0.097		0.097	ug/L		09/09/24 11:09	09/10/24 15:29	1
Endosulfan I (Alpha)	<0.097		0.097	ug/L		09/09/24 11:09	09/10/24 15:29	1
Endosulfan II (Beta)	<0.097		0.097	ug/L		09/09/24 11:09	09/10/24 15:29	1
Endosulfan sulfate	<0.097		0.097	ug/L		09/09/24 11:09	09/10/24 15:29	1
Endrin	<0.0097		0.0097	ug/L		09/09/24 11:09	09/10/24 15:29	1
Endrin aldehyde	<0.097		0.097	ug/L		09/09/24 11:09	09/10/24 15:29	1
EPTC	<0.097		0.097	ug/L		09/09/24 11:09	09/10/24 15:29	1

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Client Sample Results

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

Job ID: 380-111916-1
SDG: Weekly

**Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2
(331-203-TP400)**

Lab Sample ID: 380-111916-1

Date Collected: 09/04/24 10:25

Matrix: Drinking Water

Date Received: 09/06/24 10:33

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	<0.097		0.097	ug/L		09/09/24 11:09	09/10/24 15:29	1
Fluorene	<0.048		0.048	ug/L		09/09/24 11:09	09/10/24 15:29	1
gamma-Chlordane	<0.048		0.048	ug/L		09/09/24 11:09	09/10/24 15:29	1
Heptachlor	<0.0097	^3+	0.0097	ug/L		09/09/24 11:09	09/10/24 15:29	1
Heptachlor epoxide (isomer B)	<0.0097		0.0097	ug/L		09/09/24 11:09	09/10/24 15:29	1
Hexachlorobenzene	<0.048		0.048	ug/L		09/09/24 11:09	09/10/24 15:29	1
Hexachlorocyclopentadiene	<0.048		0.048	ug/L		09/09/24 11:09	09/10/24 15:29	1
Indeno[1,2,3-cd]pyrene	<0.048		0.048	ug/L		09/09/24 11:09	09/10/24 15:29	1
Isophorone	<0.097		0.097	ug/L		09/09/24 11:09	09/10/24 15:29	1
Lindane	<0.0097		0.0097	ug/L		09/09/24 11:09	09/10/24 15:29	1
Malathion	<0.097		0.097	ug/L		09/09/24 11:09	09/10/24 15:29	1
Methoxychlor	<0.048		0.048	ug/L		09/09/24 11:09	09/10/24 15:29	1
Metolachlor	<0.048		0.048	ug/L		09/09/24 11:09	09/10/24 15:29	1
Molinate	<0.097		0.097	ug/L		09/09/24 11:09	09/10/24 15:29	1
Naphthalene	<0.097		0.097	ug/L		09/09/24 11:09	09/10/24 15:29	1
Parathion	<0.097		0.097	ug/L		09/09/24 11:09	09/10/24 15:29	1
Pendimethalin (Penoxaline)	<0.097		0.097	ug/L		09/09/24 11:09	09/10/24 15:29	1
Phenanthrene	<0.039		0.039	ug/L		09/09/24 11:09	09/10/24 15:29	1
Propachlor	<0.048		0.048	ug/L		09/09/24 11:09	09/10/24 15:29	1
Pyrene	<0.048		0.048	ug/L		09/09/24 11:09	09/10/24 15:29	1
Simazine	<0.048		0.048	ug/L		09/09/24 11:09	09/10/24 15:29	1
Terbacil	<0.097		0.097	ug/L		09/09/24 11:09	09/10/24 15:29	1
Terbutylazine	<0.097		0.097	ug/L		09/09/24 11:09	09/10/24 15:29	1
Thiobencarb	<0.097		0.097	ug/L		09/09/24 11:09	09/10/24 15:29	1
Total Permethrin (mixed isomers)	<0.19		0.19	ug/L		09/09/24 11:09	09/10/24 15:29	1
trans-Nonachlor	<0.048		0.048	ug/L		09/09/24 11:09	09/10/24 15:29	1
Trifluralin	<0.097		0.097	ug/L		09/09/24 11:09	09/10/24 15:29	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	09/09/24 11:09	09/10/24 15:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	95		70 - 130	09/09/24 11:09	09/10/24 15:29	1
Perylene-d12	85		70 - 130	09/09/24 11:09	09/10/24 15:29	1
Triphenylphosphate	93		70 - 130	09/09/24 11:09	09/10/24 15:29	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			09/17/24 21:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		38 - 134		09/17/24 21:40	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		09/10/24 15:50	09/14/24 15:45	1
Motor Oil Range Organics [C24-C36]	<26		26	ug/L		09/10/24 15:50	09/14/24 15:45	1
C8-C18	<26		26	ug/L		09/10/24 15:50	09/14/24 15:45	1

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Client Sample Results

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

Job ID: 380-111916-1
SDG: Weekly

**Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2
(331-203-TP400)**

Lab Sample ID: 380-111916-1

Date Collected: 09/04/24 10:25

Matrix: Drinking Water

Date Received: 09/06/24 10:33

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>n</i> -Octacosane (Surr)	90		60 - 130	09/10/24 15:50	09/14/24 15:45	1

**Client Sample ID: TB: AIEA WELLS PUMPS 1&2 (260)
(331-203-TP400)**

Lab Sample ID: 380-111916-2

Date Collected: 09/04/24 10:25

Matrix: Water

Date Received: 09/06/24 10:33

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	<10		10	ug/L	-		09/17/24 18:18	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac		
4-Bromofluorobenzene (Surr)	90		38 - 134		09/17/24 18:18	1		

**Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1
(331-206-TP065)**

Lab Sample ID: 380-111916-3

Date Collected: 09/04/24 10:02

Matrix: Drinking Water

Date Received: 09/06/24 10:33

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		09/09/24 07:34	09/10/24 15:50	1
2,4'-DDD	<0.098		0.098	ug/L		09/09/24 07:34	09/10/24 15:50	1
2,4'-DDE	<0.098		0.098	ug/L		09/09/24 07:34	09/10/24 15:50	1
2,4'-DDT	<0.098		0.098	ug/L		09/09/24 07:34	09/10/24 15:50	1
2,4-Dinitrotoluene	<0.098		0.098	ug/L		09/09/24 07:34	09/10/24 15:50	1
2,6-Dinitrotoluene	<0.098		0.098	ug/L		09/09/24 07:34	09/10/24 15:50	1
2-Methylnaphthalene	<0.098		0.098	ug/L		09/09/24 07:34	09/10/24 15:50	1
4,4'-DDD	<0.098		0.098	ug/L		09/09/24 07:34	09/10/24 15:50	1
4,4'-DDE	<0.098		0.098	ug/L		09/09/24 07:34	09/10/24 15:50	1
4,4'-DDT	<0.098		0.098	ug/L		09/09/24 07:34	09/10/24 15:50	1
Acenaphthene	<0.098		0.098	ug/L		09/09/24 07:34	09/10/24 15:50	1
Acenaphthylene	<0.098		0.098	ug/L		09/09/24 07:34	09/10/24 15:50	1
Acetochlor	<0.098		0.098	ug/L		09/09/24 07:34	09/10/24 15:50	1
Alachlor	<0.049		0.049	ug/L		09/09/24 07:34	09/10/24 15:50	1
alpha-BHC	<0.098		0.098	ug/L		09/09/24 07:34	09/10/24 15:50	1
alpha-Chlordane	<0.049		0.049	ug/L		09/09/24 07:34	09/10/24 15:50	1
Anthracene	<0.020		0.020	ug/L		09/09/24 07:34	09/10/24 15:50	1
Atrazine	<0.049		0.049	ug/L		09/09/24 07:34	09/10/24 15:50	1
Benz(a)anthracene	<0.049		0.049	ug/L		09/09/24 07:34	09/10/24 15:50	1
Benzo[a]pyrene	<0.020		0.020	ug/L		09/09/24 07:34	09/10/24 15:50	1
Benzo[b]fluoranthene	<0.020		0.020	ug/L		09/09/24 07:34	09/10/24 15:50	1
Benzo[g,h,i]perylene	<0.049		0.049	ug/L		09/09/24 07:34	09/10/24 15:50	1
Benzo[k]fluoranthene	<0.020		0.020	ug/L		09/09/24 07:34	09/10/24 15:50	1
beta-BHC	<0.098		0.098	ug/L		09/09/24 07:34	09/10/24 15:50	1
Bis(2-ethylhexyl) phthalate	<0.59		0.59	ug/L		09/09/24 07:34	09/10/24 15:50	1
Bromacil	<0.098		0.098	ug/L		09/09/24 07:34	09/10/24 15:50	1
Butachlor	<0.049		0.049	ug/L		09/09/24 07:34	09/10/24 15:50	1
Butylbenzylphthalate	<0.49		0.49	ug/L		09/09/24 07:34	09/10/24 15:50	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-111916-1
SDG: Weekly

**Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1
(331-206-TP065)**

Lab Sample ID: 380-111916-3

Date Collected: 09/04/24 10:02

Matrix: Drinking Water

Date Received: 09/06/24 10:33

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzilate	<0.098		0.098	ug/L		09/09/24 07:34	09/10/24 15:50	1
Chloroneb	<0.098		0.098	ug/L		09/09/24 07:34	09/10/24 15:50	1
Chlorothalonil (Draconil, Bravo)	<0.098		0.098	ug/L		09/09/24 07:34	09/10/24 15:50	1
Chlorpyrifos	<0.049		0.049	ug/L		09/09/24 07:34	09/10/24 15:50	1
Chrysene	<0.020		0.020	ug/L		09/09/24 07:34	09/10/24 15:50	1
delta-BHC	<0.098		0.098	ug/L		09/09/24 07:34	09/10/24 15:50	1
Di(2-ethylhexyl)adipate	<0.59		0.59	ug/L		09/09/24 07:34	09/10/24 15:50	1
Dibenz(a,h)anthracene	<0.049		0.049	ug/L		09/09/24 07:34	09/10/24 15:50	1
Diclorvos (DDVP)	<0.049		0.049	ug/L		09/09/24 07:34	09/10/24 15:50	1
Dieldrin	0.040		0.0098	ug/L		09/09/24 07:34	09/10/24 15:50	1
Diethylphthalate	<0.49		0.49	ug/L		09/09/24 07:34	09/10/24 15:50	1
Dimethylphthalate	<0.49		0.49	ug/L		09/09/24 07:34	09/10/24 15:50	1
Di-n-butyl phthalate	<0.98		0.98	ug/L		09/09/24 07:34	09/10/24 15:50	1
Di-n-octyl phthalate	<0.098		0.098	ug/L		09/09/24 07:34	09/10/24 15:50	1
Endosulfan I (Alpha)	<0.098		0.098	ug/L		09/09/24 07:34	09/10/24 15:50	1
Endosulfan II (Beta)	<0.098		0.098	ug/L		09/09/24 07:34	09/10/24 15:50	1
Endosulfan sulfate	<0.098		0.098	ug/L		09/09/24 07:34	09/10/24 15:50	1
Endrin	<0.0098		0.0098	ug/L		09/09/24 07:34	09/10/24 15:50	1
Endrin aldehyde	<0.098		0.098	ug/L		09/09/24 07:34	09/10/24 15:50	1
EPTC	<0.098		0.098	ug/L		09/09/24 07:34	09/10/24 15:50	1
Fluoranthene	<0.098		0.098	ug/L		09/09/24 07:34	09/10/24 15:50	1
Fluorene	<0.049		0.049	ug/L		09/09/24 07:34	09/10/24 15:50	1
gamma-Chlordane	<0.049		0.049	ug/L		09/09/24 07:34	09/10/24 15:50	1
Heptachlor	<0.0098	^3+	0.0098	ug/L		09/09/24 07:34	09/10/24 15:50	1
Heptachlor epoxide (isomer B)	0.013		0.0098	ug/L		09/09/24 07:34	09/10/24 15:50	1
Hexachlorobenzene	<0.049		0.049	ug/L		09/09/24 07:34	09/10/24 15:50	1
Hexachlorocyclopentadiene	<0.049		0.049	ug/L		09/09/24 07:34	09/10/24 15:50	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049	ug/L		09/09/24 07:34	09/10/24 15:50	1
Isophorone	<0.098		0.098	ug/L		09/09/24 07:34	09/10/24 15:50	1
Lindane	<0.0098		0.0098	ug/L		09/09/24 07:34	09/10/24 15:50	1
Malathion	<0.098		0.098	ug/L		09/09/24 07:34	09/10/24 15:50	1
Methoxychlor	<0.049		0.049	ug/L		09/09/24 07:34	09/10/24 15:50	1
Metolachlor	<0.049		0.049	ug/L		09/09/24 07:34	09/10/24 15:50	1
Molinate	<0.098		0.098	ug/L		09/09/24 07:34	09/10/24 15:50	1
Naphthalene	<0.098		0.098	ug/L		09/09/24 07:34	09/10/24 15:50	1
Parathion	<0.098		0.098	ug/L		09/09/24 07:34	09/10/24 15:50	1
Pendimethalin (Penoxaline)	<0.098		0.098	ug/L		09/09/24 07:34	09/10/24 15:50	1
Phenanthrene	<0.039		0.039	ug/L		09/09/24 07:34	09/10/24 15:50	1
Propachlor	<0.049		0.049	ug/L		09/09/24 07:34	09/10/24 15:50	1
Pyrene	<0.049		0.049	ug/L		09/09/24 07:34	09/10/24 15:50	1
Simazine	<0.049		0.049	ug/L		09/09/24 07:34	09/10/24 15:50	1
Terbacil	<0.098		0.098	ug/L		09/09/24 07:34	09/10/24 15:50	1
Terbutylazine	<0.098		0.098	ug/L		09/09/24 07:34	09/10/24 15:50	1
Thiobencarb	<0.098		0.098	ug/L		09/09/24 07:34	09/10/24 15:50	1
Total Permethrin (mixed isomers)	<0.20		0.20	ug/L		09/09/24 07:34	09/10/24 15:50	1
trans-Nonachlor	<0.049		0.049	ug/L		09/09/24 07:34	09/10/24 15:50	1
Trifluralin	<0.098		0.098	ug/L		09/09/24 07:34	09/10/24 15:50	1

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Client Sample Results

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

Job ID: 380-111916-1
SDG: Weekly

**Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1
(331-206-TP065)**

Lab Sample ID: 380-111916-3

Date Collected: 09/04/24 10:02

Matrix: Drinking Water

Date Received: 09/06/24 10:33

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	09/09/24 07:34	09/10/24 15:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	94		70 - 130				09/09/24 07:34	09/10/24 15:50	1
Perylene-d12	85		70 - 130				09/09/24 07:34	09/10/24 15:50	1
Triphenylphosphate	93		70 - 130				09/09/24 07:34	09/10/24 15:50	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
GRO (C6-C10)	<10		10	ug/L			09/17/24 18:44	1	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	81		38 - 134				09/17/24 18:44	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		09/10/24 15:50	09/14/24 16:06	1	
Motor Oil Range Organics [C24-C36]	<26		26	ug/L		09/10/24 15:50	09/14/24 16:06	1	
C8-C18	<26		26	ug/L		09/10/24 15:50	09/14/24 16:06	1	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	87		60 - 130			09/10/24 15:50	09/14/24 16:06	1	

**Client Sample ID: TB: HALAWA WELLS UNITS 1&2
(331-206-TP065)**

Lab Sample ID: 380-111916-4

Date Collected: 09/04/24 10:02

Matrix: Water

Date Received: 09/06/24 10:33

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
GRO (C6-C10)	<10		10	ug/L			09/17/24 21:17	1	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		38 - 134				09/17/24 21:17	1	

Action Limit Summary

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

Job ID: 380-111916-1
SDG: Weekly

**Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2
(331-203-TP400)**

Lab Sample ID: 380-111916-1

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL	RL	Method	Prep Type
				Limit			
Alachlor	<0.048		ug/L	2	0.048	525.2	Total/NA
Atrazine	<0.048		ug/L	3	0.048	525.2	Total/NA
Benzo[a]pyrene	<0.019		ug/L	0.2	0.019	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	<0.58		ug/L	6	0.58	525.2	Total/NA
Di(2-ethylhexyl)adipate	<0.58		ug/L	400	0.58	525.2	Total/NA
Endrin	<0.0097		ug/L	2	0.0097	525.2	Total/NA
Heptachlor	<0.0097	^3+	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

**Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1
(331-206-TP065)**

Lab Sample ID: 380-111916-3

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	<0.049		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	^3+	ug/L	0.4	0.0098	525.2	Total/NA
Heptachlor epoxide (isomer B)	0.013		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

Surrogate Summary

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

Job ID: 380-111916-1
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)
380-111916-1	AIEA WELLS PUMPS 1&2 (260)	95	85	93
380-111916-3	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065)	94	85	93

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)
380-111671-I-1-A MS	Matrix Spike	94	89	95
380-111671-I-3-A DU	Duplicate	95	83	89
LCS 380-107404/23-A	Lab Control Sample	94	84	93
MB 380-107404/21-A	Method Blank	93	79	90
MRL 380-107404/22-A	Lab Control Sample	94	83	88

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

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)
380-111916-1	AIEA WELLS PUMPS 1&2 (260)	86
380-111916-3	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065)	81
380-111916-3 MS	HALAWA WELLS UNITS 1 & 2 (331-206-TP065)	95
380-111916-3 MSD	HALAWA WELLS UNITS 1 & 2 (331-206-TP065)	95

Surrogate Legend
 BFB = 4-Bromofluorobenzene (Surr)

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		BFB1 (38-134)
380-111916-2	TB: AIEA WELLS PUMPS 1&2 (90
380-111916-4	TB: HALAWA WELLS UNITS 1&2 (331-206-TP065)	90
LCS 570-481747/1009	Lab Control Sample	96
LCSD 570-481747/10	Lab Control Sample Dup	94

Surrogate Summary

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

Job ID: 380-111916-1
SDG: Weekly

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1 (38-134)
MB 570-481747/11	Method Blank	92
MRL 570-481747/1004	Lab Control Sample	89

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)
380-111916-1	AIEA WELLS PUMPS 1&2 (260)	90
380 111916 3	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065)	87
380-111916-3 MS	HALAWA WELLS UNITS 1 & 2 (331-206-TP065)	93
380-111916-3 MSD	HALAWA WELLS UNITS 1 & 2 (331-206-TP065)	90

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)
LCS 570-479343/2-A	Lab Control Sample	93
LCSD 570-479343/3-A	Lab Control Sample Dup	95
MB 570-479343/1-A	Method Blank	90
MRL 570-479343/4-A	Lab Control Sample	92

Surrogate Legend

OTCSN = n-Octacosane (Surr)

QC Sample Results

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

Job ID: 380-111916-1
 SDG: Weekly

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

Lab Sample ID: MB 380-107404/21-A
Matrix: Water
Analysis Batch: 107540

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 107404

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.099		0.099	ug/L		09/09/24 07:34	09/10/24 09:15	1
2,4'-DDD	<0.099		0.099	ug/L		09/09/24 07:34	09/10/24 09:15	1
2,4'-DDE	<0.099		0.099	ug/L		09/09/24 07:34	09/10/24 09:15	1
2,4'-DDT	<0.099		0.099	ug/L		09/09/24 07:34	09/10/24 09:15	1
2,4-Dinitrotoluene	<0.099		0.099	ug/L		09/09/24 07:34	09/10/24 09:15	1
2,6-Dinitrotoluene	<0.099		0.099	ug/L		09/09/24 07:34	09/10/24 09:15	1
2-Methylnaphthalene	<0.099		0.099	ug/L		09/09/24 07:34	09/10/24 09:15	1
4,4'-DDD	<0.099		0.099	ug/L		09/09/24 07:34	09/10/24 09:15	1
4,4'-DDE	<0.099		0.099	ug/L		09/09/24 07:34	09/10/24 09:15	1
4,4'-DDT	<0.099		0.099	ug/L		09/09/24 07:34	09/10/24 09:15	1
Acenaphthene	<0.099		0.099	ug/L		09/09/24 07:34	09/10/24 09:15	1
Acenaphthylene	<0.099		0.099	ug/L		09/09/24 07:34	09/10/24 09:15	1
Acetochlor	<0.099		0.099	ug/L		09/09/24 07:34	09/10/24 09:15	1
Alachlor	<0.050		0.050	ug/L		09/09/24 07:34	09/10/24 09:15	1
alpha-BHC	<0.099		0.099	ug/L		09/09/24 07:34	09/10/24 09:15	1
alpha-Chlordane	<0.050		0.050	ug/L		09/09/24 07:34	09/10/24 09:15	1
Anthracene	<0.020		0.020	ug/L		09/09/24 07:34	09/10/24 09:15	1
Atrazine	<0.050		0.050	ug/L		09/09/24 07:34	09/10/24 09:15	1
Benz(a)anthracene	<0.050		0.050	ug/L		09/09/24 07:34	09/10/24 09:15	1
Benzo[a]pyrene	<0.020		0.020	ug/L		09/09/24 07:34	09/10/24 09:15	1
Benzo[b]fluoranthene	<0.020		0.020	ug/L		09/09/24 07:34	09/10/24 09:15	1
Benzo[g,h,i]perylene	<0.050		0.050	ug/L		09/09/24 07:34	09/10/24 09:15	1
Benzo[k]fluoranthene	<0.020		0.020	ug/L		09/09/24 07:34	09/10/24 09:15	1
beta-BHC	<0.099		0.099	ug/L		09/09/24 07:34	09/10/24 09:15	1
Bis(2-ethylhexyl) phthalate	<0.60		0.60	ug/L		09/09/24 07:34	09/10/24 09:15	1
Bromacil	<0.099		0.099	ug/L		09/09/24 07:34	09/10/24 09:15	1
Butachlor	<0.050		0.050	ug/L		09/09/24 07:34	09/10/24 09:15	1
Butylbenzylphthalate	<0.50		0.50	ug/L		09/09/24 07:34	09/10/24 09:15	1
Chlorobenzilate	<0.099		0.099	ug/L		09/09/24 07:34	09/10/24 09:15	1
Chloroneb	<0.099		0.099	ug/L		09/09/24 07:34	09/10/24 09:15	1
Chlorothalonil (Draconil, Bravo)	<0.099		0.099	ug/L		09/09/24 07:34	09/10/24 09:15	1
Chlorpyrifos	<0.050		0.050	ug/L		09/09/24 07:34	09/10/24 09:15	1
Chrysene	<0.020		0.020	ug/L		09/09/24 07:34	09/10/24 09:15	1
delta-BHC	<0.099		0.099	ug/L		09/09/24 07:34	09/10/24 09:15	1
Di(2-ethylhexyl)adipate	<0.60		0.60	ug/L		09/09/24 07:34	09/10/24 09:15	1
Dibenz(a,h)anthracene	<0.050		0.050	ug/L		09/09/24 07:34	09/10/24 09:15	1
Diclorvos (DDVP)	<0.050		0.050	ug/L		09/09/24 07:34	09/10/24 09:15	1
Dieldrin	<0.0099		0.0099	ug/L		09/09/24 07:34	09/10/24 09:15	1
Diethylphthalate	<0.50		0.50	ug/L		09/09/24 07:34	09/10/24 09:15	1
Dimethylphthalate	<0.50		0.50	ug/L		09/09/24 07:34	09/10/24 09:15	1
Di-n-butyl phthalate	<0.99		0.99	ug/L		09/09/24 07:34	09/10/24 09:15	1
Di-n-octyl phthalate	<0.099		0.099	ug/L		09/09/24 07:34	09/10/24 09:15	1
Endosulfan I (Alpha)	<0.099		0.099	ug/L		09/09/24 07:34	09/10/24 09:15	1
Endosulfan II (Beta)	<0.099		0.099	ug/L		09/09/24 07:34	09/10/24 09:15	1
Endosulfan sulfate	<0.099		0.099	ug/L		09/09/24 07:34	09/10/24 09:15	1
Endrin	<0.0099		0.0099	ug/L		09/09/24 07:34	09/10/24 09:15	1
Endrin aldehyde	<0.099		0.099	ug/L		09/09/24 07:34	09/10/24 09:15	1
EPTC	<0.099		0.099	ug/L		09/09/24 07:34	09/10/24 09:15	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-111916-1
SDG: Weekly

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

Lab Sample ID: MB 380-107404/21-A
Matrix: Water
Analysis Batch: 107540

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 107404

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	<0.099		0.099	ug/L		09/09/24 07:34	09/10/24 09:15	1
Fluorene	<0.050		0.050	ug/L		09/09/24 07:34	09/10/24 09:15	1
gamma-Chlordane	<0.050		0.050	ug/L		09/09/24 07:34	09/10/24 09:15	1
Heptachlor	<0.0099		0.0099	ug/L		09/09/24 07:34	09/10/24 09:15	1
Heptachlor epoxide (isomer B)	<0.0099		0.0099	ug/L		09/09/24 07:34	09/10/24 09:15	1
Hexachlorobenzene	<0.050		0.050	ug/L		09/09/24 07:34	09/10/24 09:15	1
Hexachlorocyclopentadiene	<0.050		0.050	ug/L		09/09/24 07:34	09/10/24 09:15	1
Indeno[1,2,3-cd]pyrene	<0.050		0.050	ug/L		09/09/24 07:34	09/10/24 09:15	1
Isophorone	<0.099		0.099	ug/L		09/09/24 07:34	09/10/24 09:15	1
Lindane	<0.0099		0.0099	ug/L		09/09/24 07:34	09/10/24 09:15	1
Malathion	<0.099		0.099	ug/L		09/09/24 07:34	09/10/24 09:15	1
Methoxychlor	<0.050		0.050	ug/L		09/09/24 07:34	09/10/24 09:15	1
Metolachlor	<0.050		0.050	ug/L		09/09/24 07:34	09/10/24 09:15	1
Molinate	<0.099		0.099	ug/L		09/09/24 07:34	09/10/24 09:15	1
Naphthalene	<0.099		0.099	ug/L		09/09/24 07:34	09/10/24 09:15	1
Parathion	<0.099		0.099	ug/L		09/09/24 07:34	09/10/24 09:15	1
Pendimethalin (Penoxaline)	<0.099		0.099	ug/L		09/09/24 07:34	09/10/24 09:15	1
Phenanthrene	<0.040		0.040	ug/L		09/09/24 07:34	09/10/24 09:15	1
Propachlor	<0.050		0.050	ug/L		09/09/24 07:34	09/10/24 09:15	1
Pyrene	<0.050		0.050	ug/L		09/09/24 07:34	09/10/24 09:15	1
Simazine	<0.050		0.050	ug/L		09/09/24 07:34	09/10/24 09:15	1
Terbacil	<0.099		0.099	ug/L		09/09/24 07:34	09/10/24 09:15	1
Terbutylazine	<0.099		0.099	ug/L		09/09/24 07:34	09/10/24 09:15	1
Thiobencarb	<0.099		0.099	ug/L		09/09/24 07:34	09/10/24 09:15	1
Total Permethrin (mixed isomers)	<0.20		0.20	ug/L		09/09/24 07:34	09/10/24 09:15	1
trans-Nonachlor	<0.050		0.050	ug/L		09/09/24 07:34	09/10/24 09:15	1
Trifluralin	<0.099		0.099	ug/L		09/09/24 07:34	09/10/24 09:15	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	1.23	T J	ug/L		2.86	N/A	09/09/24 07:34	09/10/24 09:15	1
Unknown	0.611	T J	ug/L		3.24	N/A	09/09/24 07:34	09/10/24 09:15	1
Unknown	1.11	T J	ug/L		3.97	N/A	09/09/24 07:34	09/10/24 09:15	1
Unknown	0.499	T J	ug/L		4.61	N/A	09/09/24 07:34	09/10/24 09:15	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	93		70 - 130	09/09/24 07:34	09/10/24 09:15	1
Perylene-d12	79		70 - 130	09/09/24 07:34	09/10/24 09:15	1
Triphenylphosphate	90		70 - 130	09/09/24 07:34	09/10/24 09:15	1

Lab Sample ID: LCS 380-107404/23-A
Matrix: Water
Analysis Batch: 107540

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 107404

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1-Methylnaphthalene	1.99	1.92		ug/L		96	70 - 130
2,4'-DDD	1.99	2.00		ug/L		101	70 - 130
2,4'-DDE	1.99	2.01		ug/L		101	70 - 130
2,4'-DDT	1.99	2.05		ug/L		103	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-111916-1
SDG: Weekly

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

Lab Sample ID: LCS 380-107404/23-A
Matrix: Water
Analysis Batch: 107540

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 107404

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4-Dinitrotoluene	1.99	1.65		ug/L		83	70 - 130
2,6-Dinitrotoluene	1.99	1.67		ug/L		84	70 - 130
2-Methylnaphthalene	1.99	1.89		ug/L		95	70 - 130
4,4'-DDD	1.99	2.00		ug/L		101	70 - 130
4,4'-DDE	1.99	1.92		ug/L		96	70 - 130
4,4'-DDT	1.99	2.10		ug/L		106	70 - 130
Acenaphthene	1.99	1.98		ug/L		100	70 - 130
Acenaphthylene	1.99	1.85		ug/L		93	70 - 130
Acetochlor	1.99	2.03		ug/L		102	70 - 130
Alachlor	1.99	2.01		ug/L		101	70 - 130
alpha-BHC	1.99	1.96		ug/L		99	70 - 130
alpha-Chlordane	1.99	1.97		ug/L		99	70 - 130
Anthracene	1.99	1.77		ug/L		89	70 - 130
Atrazine	1.99	2.05		ug/L		103	70 - 130
Benz(a)anthracene	1.99	1.74		ug/L		87	70 - 130
Benzo[a]pyrene	1.99	1.64		ug/L		83	70 - 130
Benzo[b]fluoranthene	1.99	1.90		ug/L		95	70 - 130
Benzo[g,h,i]perylene	1.99	1.87		ug/L		94	70 - 130
Benzo[k]fluoranthene	1.99	2.06		ug/L		104	70 - 130
beta-BHC	1.99	2.09		ug/L		105	70 - 130
Bis(2-ethylhexyl) phthalate	1.99	1.82		ug/L		92	70 - 130
Bromacil	1.99	2.13		ug/L		107	70 - 130
Butachlor	1.99	2.04		ug/L		102	70 - 130
Butylbenzylphthalate	1.99	2.00		ug/L		101	70 - 130
Chlorobenzilate	1.99	2.29		ug/L		115	70 - 130
Chloroneb	1.99	2.06		ug/L		104	70 - 130
Chlorothalonil (Draconil, Bravo)	1.99	1.97		ug/L		99	70 - 130
Chlorpyrifos	1.99	2.24		ug/L		113	70 - 130
Chrysene	1.99	2.17		ug/L		109	70 - 130
delta-BHC	1.99	2.00		ug/L		101	70 - 130
Di(2-ethylhexyl)adipate	1.99	1.86		ug/L		93	70 - 130
Dibenz(a,h)anthracene	1.99	1.74		ug/L		88	70 - 130
Diclorvos (DDVP)	1.99	1.94		ug/L		98	70 - 130
Dieldrin	1.99	1.94		ug/L		97	70 - 130
Diethylphthalate	1.99	1.94		ug/L		98	70 - 130
Dimethylphthalate	1.99	1.99		ug/L		100	70 - 130
Di-n-butyl phthalate	3.98	4.06		ug/L		102	70 - 130
Di-n-octyl phthalate	1.99	1.72		ug/L		87	70 - 130
Endosulfan I (Alpha)	1.99	1.88		ug/L		95	70 - 130
Endosulfan II (Beta)	1.99	1.93		ug/L		97	70 - 130
Endosulfan sulfate	1.99	1.98		ug/L		100	70 - 130
Endrin	1.99	1.97		ug/L		99	70 - 130
Endrin aldehyde	1.99	1.67		ug/L		84	60 - 130
EPTC	1.99	1.95		ug/L		98	70 - 130
Fluoranthene	1.99	2.04		ug/L		103	70 - 130
Fluorene	1.99	2.00		ug/L		101	70 - 130
gamma-Chlordane	1.99	2.00		ug/L		100	70 - 130
Heptachlor	1.99	2.23		ug/L		112	70 - 130
Heptachlor epoxide (isomer B)	1.99	1.88		ug/L		95	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-111916-1
SDG: Weekly

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

Lab Sample ID: LCS 380-107404/23-A
Matrix: Water
Analysis Batch: 107540

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 107404

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexachlorobenzene	1.99	1.89		ug/L		95	70 - 130
Hexachlorocyclopentadiene	1.99	1.99		ug/L		100	70 - 130
Indeno[1,2,3-cd]pyrene	1.99	1.61		ug/L		81	70 - 130
Isophorone	1.99	1.86		ug/L		94	70 - 130
Lindane	1.99	1.96		ug/L		99	70 - 130
Malathion	1.99	2.16		ug/L		109	70 - 130
Methoxychlor	1.99	2.14		ug/L		108	70 - 130
Metolachlor	1.99	1.98		ug/L		100	70 - 130
Molinate	1.99	1.95		ug/L		98	70 - 130
Naphthalene	1.99	1.98		ug/L		100	70 - 130
Parathion	1.99	2.17		ug/L		109	70 - 130
Pendimethalin (Penoxaline)	1.99	1.52		ug/L		76	70 - 130
Phenanthrene	1.99	1.96		ug/L		99	70 - 130
Propachlor	1.99	1.98		ug/L		99	70 - 130
Pyrene	1.99	2.00		ug/L		100	70 - 130
Simazine	1.99	1.95		ug/L		98	70 - 130
Terbacil	1.99	2.22		ug/L		112	70 - 130
Terbutylazine	1.99	2.05		ug/L		103	70 - 130
Thiobencarb	1.99	2.00		ug/L		101	70 - 130
trans-Nonachlor	1.99	1.89		ug/L		95	70 - 130
Trifluralin	1.99	1.68		ug/L		85	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Nitro-m-xylene	94		70 - 130
Perylene-d12	84		70 - 130
Triphenylphosphate	93		70 - 130

Lab Sample ID: MRL 380-107404/22-A
Matrix: Water
Analysis Batch: 107540

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 107404

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	0.0995	0.103		ug/L		103	50 - 150
2,4'-DDD	0.0995	0.0803	J	ug/L		81	50 - 150
2,4'-DDE	0.0995	0.0901	J	ug/L		91	50 - 150
2,4'-DDT	0.0995	0.0841	J	ug/L		84	50 - 150
2,4-Dinitrotoluene	0.0995	0.0556	J	ug/L		56	50 - 150
2,6-Dinitrotoluene	0.0995	0.0615	J	ug/L		62	50 - 150
2-Methylnaphthalene	0.0995	0.0969	J	ug/L		97	50 - 150
4,4'-DDD	0.0995	0.0853	J	ug/L		86	50 - 150
4,4'-DDE	0.0995	0.0914	J	ug/L		92	50 - 150
4,4'-DDT	0.0995	0.0811	J	ug/L		81	50 - 150
Acenaphthene	0.0995	0.0950	J	ug/L		96	50 - 150
Acenaphthylene	0.0995	0.0832	J	ug/L		84	50 - 150
Acetochlor	0.0995	0.108		ug/L		108	50 - 150
Alachlor	0.0498	0.0432	J	ug/L		87	50 - 150
alpha-BHC	0.0995	0.103		ug/L		104	50 - 150
alpha-Chlordane	0.0249	<0.029		ug/L		82	50 - 150

QC Sample Results

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

Job ID: 380-111916-1
SDG: Weekly

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

Lab Sample ID: MRL 380-107404/22-A
Matrix: Water
Analysis Batch: 107540

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 107404

Analyte	Spike Added	MRL	MRL	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Anthracene	0.0199	<0.019		ug/L		89	50 - 150
Atrazine	0.0498	<0.048		ug/L		71	50 - 150
Benz(a)anthracene	0.0498	0.0434	J	ug/L		87	50 - 150
Benzo[a]pyrene	0.0199	0.0140	J	ug/L		70	50 - 150
Benzo[b]fluoranthene	0.0199	0.0144	J	ug/L		72	50 - 150
Benzo[g,h,i]perylene	0.0498	0.0323	J	ug/L		65	50 - 150
Benzo[k]fluoranthene	0.0199	<0.017		ug/L		81	50 - 150
beta-BHC	0.0995	0.113		ug/L		114	50 - 150
Bis(2-ethylhexyl) phthalate	0.597	0.454	J	ug/L		76	50 - 150
Bromacil	0.0995	0.101		ug/L		102	50 - 150
Butachlor	0.0498	0.0455	J	ug/L		91	50 - 150
Butylbenzylphthalate	0.498	0.432	J	ug/L		87	50 - 150
Chlorobenzilate	0.0995	0.0837	J	ug/L		84	50 - 150
Chloroneb	0.0995	0.108		ug/L		109	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0995	0.106		ug/L		106	50 - 150
Chlorpyrifos	0.0498	0.0474	J	ug/L		95	50 - 150
Chrysene	0.0199	0.0194	J	ug/L		97	50 - 150
delta-BHC	0.0995	0.100		ug/L		101	50 - 150
Di(2-ethylhexyl)adipate	0.597	0.462	J	ug/L		77	50 - 150
Dibenz(a,h)anthracene	0.0498	<0.033		ug/L		58	50 - 150
Diclorvos (DDVP)	0.0498	0.0493	J	ug/L		99	50 - 150
Dieldrin	0.00995	<0.0070		ug/L		68	50 - 150
Diethylphthalate	0.498	0.460	J	ug/L		93	50 - 150
Dimethylphthalate	0.498	0.485	J	ug/L		97	50 - 150
Di-n-butyl phthalate	0.498	0.439	J	ug/L		88	49 - 243
Di-n-octyl phthalate	0.0995	0.0640	J	ug/L		64	50 - 150
Endosulfan I (Alpha)	0.0995	0.0763	J	ug/L		77	50 - 150
Endosulfan II (Beta)	0.0995	0.0913	J	ug/L		92	50 - 150
Endosulfan sulfate	0.0995	0.0879	J	ug/L		88	50 - 150
Endrin	0.00995	0.0121		ug/L		122	50 - 150
Endrin aldehyde	0.0995	<0.084		ug/L		77	50 - 150
EPTC	0.0995	0.0897	J	ug/L		90	50 - 150
Fluoranthene	0.0995	0.0915	J	ug/L		92	50 - 150
Fluorene	0.0498	<0.050		ug/L		95	50 - 150
gamma-Chlordane	0.0249	<0.021		ug/L		83	50 - 150
Heptachlor	0.00995	0.0157	^3+	ug/L		157	50 - 150
Heptachlor epoxide (isomer B)	0.00995	0.0101		ug/L		101	50 - 150
Hexachlorobenzene	0.0498	0.0455	J	ug/L		92	50 - 150
Hexachlorocyclopentadiene	0.0498	0.0428	J	ug/L		86	50 - 150
Indeno[1,2,3-cd]pyrene	0.0498	<0.027		ug/L		51	50 - 150
Isophorone	0.0995	0.109		ug/L		109	50 - 150
Lindane	0.00995	0.0146		ug/L		147	50 - 150
Malathion	0.0995	0.0781	J	ug/L		79	50 - 150
Methoxychlor	0.0498	0.0387	J	ug/L		78	50 - 150
Metolachlor	0.0498	0.0516		ug/L		104	50 - 150
Molinate	0.0995	0.0943	J	ug/L		95	50 - 150
Naphthalene	0.0995	0.111		ug/L		112	50 - 150
Parathion	0.0995	0.0675	J	ug/L		68	50 - 150
Pendimethalin (Penoxaline)	0.0995	0.0776	J	ug/L		78	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-111916-1
SDG: Weekly

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

Lab Sample ID: MRL 380-107404/22-A
Matrix: Water
Analysis Batch: 107540

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 107404

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Phenanthrene	0.0398	0.0416		ug/L		105	50 - 150
Propachlor	0.0498	0.0445	J	ug/L		89	50 - 150
Pyrene	0.0498	0.0439	J	ug/L		88	50 - 150
Simazine	0.0498	0.0415	J	ug/L		83	50 - 150
Terbacil	0.0995	0.0991	J	ug/L		100	50 - 150
Terbutylazine	0.0995	0.0786	J	ug/L		79	50 - 150
Thiobencarb	0.0995	0.0930	J	ug/L		93	50 - 150
trans-Nonachlor	0.0249	<0.026		ug/L		80	50 - 150
Trifluralin	0.0995	0.0549	J	ug/L		55	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
2-Nitro-m-xylene	94		70 - 130
Perylene-d12	83		70 - 130
Triphenylphosphate	88		70 - 130

Lab Sample ID: 380-111671-I-1-A MS
Matrix: Water
Analysis Batch: 107540

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 107404

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	<0.097		1.96	1.87		ug/L		95	70 - 130
2,4'-DDD	<0.097		1.96	1.98		ug/L		101	70 - 130
2,4'-DDE	<0.097		1.96	1.96		ug/L		100	70 - 130
2,4'-DDT	<0.097		1.96	2.07		ug/L		106	70 - 130
2,4-Dinitrotoluene	<0.097		1.96	2.01		ug/L		103	70 - 130
2,6-Dinitrotoluene	<0.097		1.96	1.94		ug/L		99	70 - 130
2-Methylnaphthalene	<0.097		1.96	1.85		ug/L		94	70 - 130
4,4'-DDD	<0.097		1.96	1.98		ug/L		101	70 - 130
4,4'-DDE	<0.097		1.96	1.86		ug/L		95	70 - 130
4,4'-DDT	<0.097		1.96	2.16		ug/L		110	70 - 130
Acenaphthene	<0.097		1.96	1.92		ug/L		98	70 - 130
Acenaphthylene	<0.097		1.96	1.89		ug/L		96	70 - 130
Acetochlor	<0.097		1.96	2.01		ug/L		103	70 - 130
Alachlor	<0.049		1.96	1.96		ug/L		100	70 - 130
alpha-BHC	<0.097		1.96	1.97		ug/L		101	70 - 130
alpha-Chlordane	<0.049		1.96	2.00		ug/L		102	70 - 130
Anthracene	<0.019	F1	1.96	1.21	F1	ug/L		62	70 - 130
Atrazine	<0.049		1.96	2.08		ug/L		106	70 - 130
Benz(a)anthracene	<0.049		1.96	1.65		ug/L		84	70 - 130
Benzo[a]pyrene	<0.019		1.96	1.57		ug/L		80	70 - 130
Benzo[b]fluoranthene	<0.019		1.96	1.99		ug/L		102	70 - 130
Benzo[g,h,i]perylene	<0.049		1.96	1.95		ug/L		99	70 - 130
Benzo[k]fluoranthene	<0.019		1.96	2.14		ug/L		109	70 - 130
beta-BHC	<0.097		1.96	2.07		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	2.23		ug/L		114	70 - 130
Butachlor	<0.049		1.96	2.07		ug/L		105	70 - 130
Butylbenzylphthalate	<0.49		1.96	2.03		ug/L		104	70 - 130

QC Sample Results

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

Job ID: 380-111916-1
SDG: Weekly

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

Lab Sample ID: 380-111671-I-1-A MS
Matrix: Water
Analysis Batch: 107540

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 107404

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chlorobenzilate	<0.097		1.96	2.30		ug/L		117	70 - 130
Chloroneb	<0.097		1.96	2.02		ug/L		103	70 - 130
Chlorothalonil (Draconil, Bravo)	<0.097		1.96	2.03		ug/L		103	70 - 130
Chlorpyrifos	<0.049		1.96	2.23		ug/L		114	70 - 130
Chrysene	<0.019		1.96	2.24		ug/L		114	70 - 130
delta-BHC	<0.097		1.96	2.00		ug/L		102	70 - 130
Di(2-ethylhexyl)adipate	<0.58		1.96	1.76		ug/L		90	70 - 130
Dibenz(a,h)anthracene	<0.049		1.96	1.85		ug/L		94	70 - 130
Diclorvos (DDVP)	<0.049		1.96	1.89		ug/L		96	70 - 130
Dieldrin	<0.0097		1.96	1.96		ug/L		100	70 - 130
Diethylphthalate	<0.49		1.96	1.93		ug/L		98	70 - 130
Dimethylphthalate	<0.49		1.96	1.94		ug/L		99	70 - 130
Di-n-butyl phthalate	<0.97		3.92	4.06		ug/L		104	70 - 130
Di-n-octyl phthalate	<0.097		1.96	1.73		ug/L		88	70 - 130
Endosulfan I (Alpha)	<0.097		1.96	1.90		ug/L		97	70 - 130
Endosulfan II (Beta)	<0.097		1.96	1.89		ug/L		97	70 - 130
Endosulfan sulfate	<0.097		1.96	2.03		ug/L		104	70 - 130
Endrin	<0.0097		1.96	2.02		ug/L		103	70 - 130
Endrin aldehyde	<0.097		1.96	1.71		ug/L		87	60 - 130
EPTC	<0.097		1.96	1.98		ug/L		101	70 - 130
Fluoranthene	<0.097		1.96	2.05		ug/L		105	70 - 130
Fluorene	<0.049		1.96	1.94		ug/L		99	70 - 130
gamma-Chlordane	<0.049		1.96	2.02		ug/L		103	70 - 130
Heptachlor	<0.0097	^3+	1.96	2.25		ug/L		115	70 - 130
Heptachlor epoxide (isomer B)	<0.0097		1.96	1.89		ug/L		96	70 - 130
Hexachlorobenzene	<0.049		1.96	1.85		ug/L		94	70 - 130
Hexachlorocyclopentadiene	<0.049		1.96	1.97		ug/L		101	70 - 130
Indeno[1,2,3-cd]pyrene	<0.049		1.96	1.69		ug/L		86	70 - 130
Isophorone	<0.097		1.96	1.85		ug/L		94	70 - 130
Lindane	<0.0097		1.96	1.94		ug/L		99	70 - 130
Malathion	<0.097		1.96	2.17		ug/L		111	70 - 130
Methoxychlor	<0.049		1.96	2.46		ug/L		125	70 - 130
Metolachlor	<0.049		1.96	1.96		ug/L		100	70 - 130
Molinate	<0.097		1.96	1.98		ug/L		101	70 - 130
Naphthalene	<0.097		1.96	1.94		ug/L		99	70 - 130
Parathion	<0.097		1.96	2.34		ug/L		119	70 - 130
Pendimethalin (Penoxaline)	<0.097		1.96	1.81		ug/L		92	70 - 130
Phenanthrene	<0.039		1.96	1.90		ug/L		97	70 - 130
Propachlor	<0.049		1.96	1.96		ug/L		100	70 - 130
Pyrene	<0.049		1.96	2.00		ug/L		102	70 - 130
Simazine	<0.049		1.96	1.92		ug/L		98	70 - 130
Terbacil	<0.097		1.96	2.23		ug/L		114	70 - 130
Terbutylazine	<0.097		1.96	2.09		ug/L		107	70 - 130
Thiobencarb	<0.097		1.96	2.01		ug/L		102	70 - 130
trans-Nonachlor	<0.049		1.96	1.91		ug/L		97	70 - 130
Trifluralin	<0.097		1.96	1.86		ug/L		95	70 - 130

QC Sample Results

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

Job ID: 380-111916-1
SDG: Weekly

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

Lab Sample ID: 380-111671-I-1-A MS
Matrix: Water
Analysis Batch: 107540

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 107404

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	94		70 - 130
Perylene-d12	89		70 - 130
Triphenylphosphate	95		70 - 130

Lab Sample ID: 380-111671-I-3-A DU
Matrix: Water
Analysis Batch: 107540

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 107404

Analyte	Sample Result	Sample Qualifier	DU DU		Unit	D	RPD	Limit
			Result	Qualifier				
1-Methylnaphthalene	<0.097		<0.096		ug/L		NC	20
2,4'-DDD	<0.097		<0.096		ug/L		NC	20
2,4'-DDE	<0.097		<0.096		ug/L		NC	20
2,4'-DDT	<0.097		<0.096		ug/L		NC	20
2,4-Dinitrotoluene	<0.097		<0.096		ug/L		NC	20
2,6-Dinitrotoluene	<0.097		<0.096		ug/L		NC	20
2-Methylnaphthalene	<0.097		<0.096		ug/L		NC	20
4,4'-DDD	<0.097		<0.096		ug/L		NC	20
4,4'-DDE	<0.097		<0.096		ug/L		NC	20
4,4'-DDT	<0.097		<0.096		ug/L		NC	20
Acenaphthene	<0.097		<0.096		ug/L		NC	20
Acenaphthylene	<0.097		<0.096		ug/L		NC	20
Acetochlor	<0.097		<0.096		ug/L		NC	20
Alachlor	<0.048		<0.048		ug/L		NC	20
alpha-BHC	<0.097		<0.096		ug/L		NC	20
alpha-Chlordane	<0.048		<0.048		ug/L		NC	20
Anthracene	<0.019		<0.019		ug/L		NC	20
Atrazine	<0.048		<0.048		ug/L		NC	20
Benz(a)anthracene	<0.048		<0.048		ug/L		NC	20
Benzo[a]pyrene	<0.019		<0.019		ug/L		NC	20
Benzo[b]fluoranthene	<0.019		<0.019		ug/L		NC	20
Benzo[g,h,i]perylene	<0.048		<0.048		ug/L		NC	20
Benzo[k]fluoranthene	<0.019		<0.019		ug/L		NC	20
beta-BHC	<0.097		<0.096		ug/L		NC	20
Bis(2-ethylhexyl) phthalate	<0.58		<0.58		ug/L		NC	20
Bromacil	<0.097		<0.096		ug/L		NC	20
Butachlor	<0.048		<0.048		ug/L		NC	20
Butylbenzylphthalate	<0.48		<0.48		ug/L		NC	20
Chlorobenzilate	<0.097		<0.096		ug/L		NC	20
Chloroneb	<0.097		<0.096		ug/L		NC	20
Chlorothalonil (Draconil, Bravo)	<0.097		<0.096		ug/L		NC	20
Chlorpyrifos	<0.048		<0.048		ug/L		NC	20
Chrysene	<0.019		<0.019		ug/L		NC	20
delta-BHC	<0.097		<0.096		ug/L		NC	20
Di(2-ethylhexyl)adipate	<0.58		<0.58		ug/L		NC	20
Dibenz(a,h)anthracene	<0.048		<0.048		ug/L		NC	20
Diclorvos (DDVP)	<0.048		<0.048		ug/L		NC	20
Dieldrin	0.039		0.0421		ug/L		8	20
Diethylphthalate	<0.48		<0.48		ug/L		NC	20

QC Sample Results

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

Job ID: 380-111916-1
 SDG: Weekly

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

Lab Sample ID: 380-111671-I-3-A DU
Matrix: Water
Analysis Batch: 107540

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 107404

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Dimethylphthalate	<0.48		<0.48		ug/L		NC	20
Di-n-butyl phthalate	<0.97		<0.96		ug/L		NC	20
Di-n-octyl phthalate	<0.097		<0.096		ug/L		NC	20
Endosulfan I (Alpha)	<0.097		<0.096		ug/L		NC	20
Endosulfan II (Beta)	<0.097		<0.096		ug/L		NC	20
Endosulfan sulfate	<0.097		<0.096		ug/L		NC	20
Endrin	<0.0097		<0.0096		ug/L		NC	20
Endrin aldehyde	<0.097		<0.096		ug/L		NC	20
EPTC	<0.097		<0.096		ug/L		NC	20
Fluoranthene	<0.097		<0.096		ug/L		NC	20
Fluorene	<0.048		<0.048		ug/L		NC	20
gamma-Chlordane	<0.048		<0.048		ug/L		NC	20
Heptachlor	<0.0097	^3+	<0.0096		ug/L		NC	20
Heptachlor epoxide (isomer B)	<0.0097		<0.0096		ug/L		NC	20
Hexachlorobenzene	<0.048		<0.048		ug/L		NC	20
Hexachlorocyclopentadiene	<0.048		<0.048		ug/L		NC	20
Indeno[1,2,3-cd]pyrene	<0.048		<0.048		ug/L		NC	20
Isophorone	<0.097		<0.096		ug/L		NC	20
Lindane	<0.0097		<0.0096		ug/L		NC	20
Malathion	<0.097		<0.096		ug/L		NC	20
Methoxychlor	<0.048		<0.048		ug/L		NC	20
Metolachlor	<0.048		<0.048		ug/L		NC	20
Molinate	<0.097		<0.096		ug/L		NC	20
Naphthalene	<0.097		<0.096		ug/L		NC	20
Parathion	<0.097		<0.096		ug/L		NC	20
Pendimethalin (Penoxaline)	<0.097		<0.096		ug/L		NC	20
Phenanthrene	<0.039		<0.039		ug/L		NC	20
Propachlor	<0.048		<0.048		ug/L		NC	20
Pyrene	<0.048		<0.048		ug/L		NC	20
Simazine	<0.048		<0.048		ug/L		NC	20
Terbacil	<0.097		<0.096		ug/L		NC	20
Terbutylazine	<0.097		<0.096		ug/L		NC	20
Thiobencarb	<0.097		<0.096		ug/L		NC	20
Total Permethrin (mixed isomers)	<0.19		<0.19		ug/L		NC	20
trans-Nonachlor	<0.048		<0.048		ug/L		NC	20
Trifluralin	<0.097		<0.096		ug/L		NC	20

Surrogate	DU DU		Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	95		70 - 130
Perylene-d12	83		70 - 130
Triphenylphosphate	89		70 - 130

QC Sample Results

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

Job ID: 380-111916-1
SDG: Weekly

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

Lab Sample ID: MB 570-481747/11
Matrix: Water
Analysis Batch: 481747

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	<10		10	ug/L			09/17/24 17:23	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		38 - 134				09/17/24 17:23	1

Lab Sample ID: LCS 570-481747/1009
Matrix: Water
Analysis Batch: 481747

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (C4-C13)	400	357		ug/L		89	78 - 120
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	96		38 - 134				

Lab Sample ID: LCSD 570-481747/10
Matrix: Water
Analysis Batch: 481747

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (C4-C13)	400	368		ug/L		92	78 - 120	3	10
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
4-Bromofluorobenzene (Surr)	94		38 - 134						

Lab Sample ID: MRL 570-481747/1004
Matrix: Water
Analysis Batch: 481747

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (C4-C13)	10.0	12.5		ug/L		125	50 - 150
Surrogate	MRL %Recovery	MRL Qualifier	Limits				
4-Bromofluorobenzene (Surr)	89		38 - 134				

Lab Sample ID: 380-111916-3 MS
Matrix: Drinking Water
Analysis Batch: 481747

Client Sample ID: HALAWA WELLS UNITS 1 & 2 (331-206-TP065)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (C4-C13)	<10		400	365		ug/L		91	68 - 122
Surrogate	MS %Recovery	MS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	95		38 - 134						

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QC Sample Results

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

Job ID: 380-111916-1
SDG: Weekly

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

Lab Sample ID: 380-111916-3 MSD
Matrix: Drinking Water
Analysis Batch: 481747

Client Sample ID: HALAWA WELLS UNITS 1 & 2 (331-206-TP065)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (C4-C13)	<10		400	364		ug/L		91	68 - 122	0	18
Surrogate	%Recovery	MSD Qualifier	MSD Limits								
4-Bromofluorobenzene (Surr)	95		38 - 134								

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

Lab Sample ID: MB 570-479343/1-A
Matrix: Water
Analysis Batch: 480810

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 479343

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C24)	<25		25	ug/L		09/10/24 15:50	09/14/24 12:52	1
Motor Oil Range Organics [C24-C36]	<25		25	ug/L		09/10/24 15:50	09/14/24 12:52	1
C8-C18	<25		25	ug/L		09/10/24 15:50	09/14/24 12:52	1
Surrogate	%Recovery	MB Qualifier	MB Limits	Prepared	Analyzed	Dil Fac		
n-Octacosane (Surr)	90		60 - 130	09/10/24 15:50	09/14/24 12:52	1		

Lab Sample ID: LCS 570-479343/2-A
Matrix: Water
Analysis Batch: 480810

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 479343

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C10-C28	1600	1310		ug/L		82	56 - 127		
Surrogate	%Recovery	LCS Qualifier	LCS Limits						
n-Octacosane (Surr)	93		60 - 130						

Lab Sample ID: LCSD 570-479343/3-A
Matrix: Water
Analysis Batch: 480810

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 479343

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C10-C28	1600	1360		ug/L		85	56 - 127	4	23
Surrogate	%Recovery	LCSD Qualifier	LCSD Limits						
n-Octacosane (Surr)	95		60 - 130						

Lab Sample ID: MRL 570-479343/4-A
Matrix: Water
Analysis Batch: 480810

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 479343

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C10-C28	0.0200	0.0220	J	mg/L		110	50 - 150		

QC Sample Results

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

Job ID: 380-111916-1
 SDG: Weekly

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

Lab Sample ID: MRL 570-479343/4-A
Matrix: Water
Analysis Batch: 480810

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 479343

<u>Surrogate</u>	<u>MRL</u> <u>%Recovery</u>	<u>MRL</u> <u>Qualifier</u>	<u>Limits</u>
<i>n-Octacosane (Surr)</i>	92		60 - 130

Lab Sample ID: 380-111916-3 MS
Matrix: Drinking Water
Analysis Batch: 480810

Client Sample ID: HALAWA WELLS UNITS 1 & 2 (331-206-TP065)
Prep Type: Total/NA
Prep Batch: 479343

<u>Analyte</u>	<u>Sample</u> <u>Result</u>	<u>Sample</u> <u>Qualifier</u>	<u>Spike</u> <u>Added</u>	<u>MS</u> <u>Result</u>	<u>MS</u> <u>Qualifier</u>	<u>Unit</u>	<u>D</u>	<u>%Rec</u>	<u>Limits</u>
C10-C28	<26		1640	1380		ug/L		84	70 - 130

<u>Surrogate</u>	<u>MS</u> <u>%Recovery</u>	<u>MS</u> <u>Qualifier</u>	<u>Limits</u>
<i>n-Octacosane (Surr)</i>	93		60 - 130

Lab Sample ID: 380-111916-3 MSD
Matrix: Drinking Water
Analysis Batch: 480810

Client Sample ID: HALAWA WELLS UNITS 1 & 2 (331-206-TP065)
Prep Type: Total/NA
Prep Batch: 479343

<u>Analyte</u>	<u>Sample</u> <u>Result</u>	<u>Sample</u> <u>Qualifier</u>	<u>Spike</u> <u>Added</u>	<u>MSD</u> <u>Result</u>	<u>MSD</u> <u>Qualifier</u>	<u>Unit</u>	<u>D</u>	<u>%Rec</u>	<u>Limits</u>	<u>RPD</u>	<u>RPD</u> <u>Limit</u>
C10-C28	<26		1650	1330		ug/L		81	70 - 130	4	20

<u>Surrogate</u>	<u>MSD</u> <u>%Recovery</u>	<u>MSD</u> <u>Qualifier</u>	<u>Limits</u>
<i>n-Octacosane (Surr)</i>	90		60 - 130

QC Association Summary

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

Job ID: 380-111916-1
SDG: Weekly

GC/MS Semi VOA

Prep Batch: 107404

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-111916-1	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP	Total/NA	Drinking Water	525.2	
380-111916-3	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP0	Total/NA	Drinking Water	525.2	
MB 380-107404/21-A	Method Blank	Total/NA	Water	525.2	
LCS 380-107404/23-A	Lab Control Sample	Total/NA	Water	525.2	
MRL 380-107404/22-A	Lab Control Sample	Total/NA	Water	525.2	
380-111671-I-1-A MS	Matrix Spike	Total/NA	Water	525.2	
380-111671-I-3-A DU	Duplicate	Total/NA	Water	525.2	

Analysis Batch: 107540

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-111916-1	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP	Total/NA	Drinking Water	525.2	107404
380-111916-3	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP0	Total/NA	Drinking Water	525.2	107404
MB 380-107404/21-A	Method Blank	Total/NA	Water	525.2	107404
LCS 380-107404/23-A	Lab Control Sample	Total/NA	Water	525.2	107404
MRL 380-107404/22-A	Lab Control Sample	Total/NA	Water	525.2	107404
380-111671-I-1-A MS	Matrix Spike	Total/NA	Water	525.2	107404
380-111671-I-3-A DU	Duplicate	Total/NA	Water	525.2	107404

GC VOA

Analysis Batch: 481747

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-111916-1	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP	Total/NA	Drinking Water	8015B GRO LL	
380-111916-2	TB: AIEA WELLS PUMPS 1&2 (260) (331-203-TF	Total/NA	Water	8015B GRO LL	
380-111916-3	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP0	Total/NA	Drinking Water	8015B GRO LL	
380-111916-4	TB: HALAWA WELLS UNITS 1&2 (331-206-TP0	Total/NA	Water	8015B GRO LL	
MB 570-481747/11	Method Blank	Total/NA	Water	8015B GRO LL	
LCS 570-481747/1009	Lab Control Sample	Total/NA	Water	8015B GRO LL	
LCSD 570-481747/10	Lab Control Sample Dup	Total/NA	Water	8015B GRO LL	
MRL 570-481747/1004	Lab Control Sample	Total/NA	Water	8015B GRO LL	
380-111916-3 MS	HALAWA WELLS UNITS 1 & 2 (331-206-TP065)	Total/NA	Drinking Water	8015B GRO LL	
380-111916-3 MSD	HALAWA WELLS UNITS 1 & 2 (331-206-TP065)	Total/NA	Drinking Water	8015B GRO LL	

GC Semi VOA

Prep Batch: 479343

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-111916-1	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP	Total/NA	Drinking Water	3510C	
380-111916-3	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP0	Total/NA	Drinking Water	3510C	
MB 570-479343/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-479343/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-479343/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MRL 570-479343/4-A	Lab Control Sample	Total/NA	Water	3510C	
380-111916-3 MS	HALAWA WELLS UNITS 1 & 2 (331-206-TP065)	Total/NA	Drinking Water	3510C	
380-111916-3 MSD	HALAWA WELLS UNITS 1 & 2 (331-206-TP065)	Total/NA	Drinking Water	3510C	

Analysis Batch: 480810

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-111916-1	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP	Total/NA	Drinking Water	8015B	479343
380-111916-3	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP0	Total/NA	Drinking Water	8015B	479343
MB 570-479343/1-A	Method Blank	Total/NA	Water	8015B	479343
LCS 570-479343/2-A	Lab Control Sample	Total/NA	Water	8015B	479343

Eurofins Eaton Analytical Pomona

QC Association Summary

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

Job ID: 380-111916-1
SDG: Weekly

GC Semi VOA (Continued)

Analysis Batch: 480810 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 570-479343/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	479343
MRL 570-479343/4-A	Lab Control Sample	Total/NA	Water	8015B	479343
380-111916-3 MS	HALAWA WELLS UNITS 1 & 2 (331-206-TP065)	Total/NA	Drinking Water	8015B	479343
380-111916-3 MSD	HALAWA WELLS UNITS 1 & 2 (331-206-TP065)	Total/NA	Drinking Water	8015B	479343

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Lab Chronicle

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

Job ID: 380-111916-1
SDG: Weekly

**Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2
(331-203-TP400)**

Lab Sample ID: 380-111916-1

Date Collected: 09/04/24 10:25

Matrix: Drinking Water

Date Received: 09/06/24 10:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			107404	OTM3	EA POM	09/09/24 11:09
Total/NA	Analysis	525.2		1	107540	Q8LA	EA POM	09/10/24 15:29
Total/NA	Analysis	8015B GRO LL		1	481747	A9VE	EET CAL 4	09/17/24 21:40
Total/NA	Prep	3510C			479343	H6FE	EET CAL 4	09/10/24 15:50
Total/NA	Analysis	8015B		1	480810	SP9M	EET CAL 4	09/14/24 15:45

**Client Sample ID: TB: AIEA WELLS PUMPS 1&2 (260)
(331-203-TP400)**

Lab Sample ID: 380-111916-2

Date Collected: 09/04/24 10:25

Matrix: Water

Date Received: 09/06/24 10:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015B GRO LL		1	481747	A9VE	EET CAL 4	09/17/24 18:18

**Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1
(331-206-TP065)**

Lab Sample ID: 380-111916-3

Date Collected: 09/04/24 10:02

Matrix: Drinking Water

Date Received: 09/06/24 10:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			107404	OTM3	EA POM	09/09/24 07:34
Total/NA	Analysis	525.2		1	107540	Q8LA	EA POM	09/10/24 15:50
Total/NA	Analysis	8015B GRO LL		1	481747	A9VE	EET CAL 4	09/17/24 18:44
Total/NA	Prep	3510C			479343	H6FE	EET CAL 4	09/10/24 15:50
Total/NA	Analysis	8015B		1	480810	SP9M	EET CAL 4	09/14/24 16:06

**Client Sample ID: TB: HALAWA WELLS UNITS 1&2
(331-206-TP065)**

Lab Sample ID: 380-111916-4

Date Collected: 09/04/24 10:02

Matrix: Water

Date Received: 09/06/24 10:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015B GRO LL		1	481747	A9VE	EET CAL 4	09/17/24 21:17

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: 380-111916-1
 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	11-16-24
Arkansas DEQ	State	88-0161	07-02-25
California	Los Angeles County Sanitation Districts	9257304	08-01-24 *
California	State	3082	07-31-26
Kansas	NELAP	E-10420	07-31-25
Nevada	State	CA00111	07-31-25

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

Eurofins Eaton Analytical Pomona

Accreditation/Certification Summary

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

Job ID: 380-111916-1
SDG: Weekly

Laboratory: Eurofins Calscience (Continued)

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

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

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Method Summary

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

Job ID: 380-111916-1
SDG: Weekly

Method	Method Description	Protocol	Laboratory
525.2	Semivolatile Organic Compounds (GC/MS)	EPA	EA POM
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

Protocol References:

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: 380-111916-1
SDG: Weekly

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-111916-1	AIEA WELLS PUMPS 1&2 (260) P2 (331-203-TP400)	Drinking Water	09/04/24 10:25	09/06/24 10:33
380-111916-2	TB: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)	Water	09/04/24 10:25	09/06/24 10:33
380-111916-3	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065)	Drinking Water	09/04/24 10:02	09/06/24 10:33
380-111916-4	TB: HALAWA WELLS UNITS 1&2 (331-206-TP065)	Water	09/04/24 10:02	09/06/24 10:33

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Client Information		Lab PM	Carrier Tracking No(s)		COC No.
Sampler bailey		Arada, Rachelle			380-28005-2757 1
Phone: +1 808 748 5840		E-Mail Rachelle.Arada@et.eurofins.com	State of Origin:		Page: Page 1 of 1
Company: City & County of Honolulu		PWSID:	Analysis Requested		Job #:
Address: 630 South Beretania Street Chemistry Lab Honolulu		Due Date Requested	380-111916 COC		Preservation Codes: R - NaThioSC4 RA - NaThioHCl Q - Na2SO3 QA - Na2SO3/HCl Y - Trizma I - NH4 Acetate
City: Honolulu		TAT Requested (days)	QR Code		Other
State Zip: HI 96843		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No	625.1, 625.1 SIM		
Phone: 808-748-5091(Tel)		PO #: C20525101 exp 05312023	6015B_GRO_LL - (MOD) GRO		
Email: RFENSTEMACHER@hbws.org		WC #:	6015B_DRO_LL_CS HNL Ranges C10-C24/C24-C36/C8-C18		
Project Name: RED-HILL/HBWS Sites Event Desc. RUSH Weekly Red Hill		Project #: 38001111	525.2_PREC (MOD) 525plus Plus Tics		
Site: Hawaii		SSOW#:	533 - All Analytes		
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=water/oil)
Aiea Wells Pumps 1&2 (260) P2	4-Sep-2024	1025	G	Water	Water
Aiea Wells Pumps 1&2 (260) (Matrix Spike)				Water	Water
Aiea Wells Pumps 1&2 (Matrix Spike Duplicate)				Water	Water
TB Aiea Wells Pumps 1&2 (260)	4-Sep-2024	1025		Water	Water
Halawa Wells Units 1 & 2 P1				Water	Water
Halawa Wells Units 1 & 2 (Matrix Spike)				Water	Water
Halawa Wells Units 1 & 2 (Matrix Spike Duplicate)				Water	Water
TB Halawa Wells Units 1 & 2	4-Sep-2024	1002		Water	Water
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)					
Empty Kit Relinquished by					
Date/Time: 05SEP2024 1400		Date		Time	
Relinquished by: [Signature]		Date/Time: 09/06/2024 10:33		Method of Shipment: FED EX 7784 0132 6491	
Relinquished by: [Signature]		Date/Time: [Signature]		Company: GEAR	
Relinquished by: [Signature]		Date/Time: [Signature]		Company: GEAR	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No		Cooler Temperature(s) °C and Other Remarks: (751A) 2.6 °C ± 0.1 °C ± 2.5 °C	



Eurofins Eaton Analytical Pomona

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

Chain of Custody Record



Loc: 380
111916
 Environment Testing

Client Information (Sub Contract Lab)		Sampler:	Lab PM:	Carrier Tracking No(s):	COC No:																																																																			
Client Contact: Shipping/Receiving		Phone:	Arada, Rachele		380-150938.1																																																																			
Company: Eurofins Environment Testing Southwest,			E-Mail: Rachele.Arada@et.eurofinsus.com	State of Origin: Hawaii	Page: Page 1 of 1																																																																			
Address: 2841 Dow Avenue, Suite 100, City: Tustin State, Zip: CA, 92780 Phone: 714-895-5494(Tel) Email:		Due Date Requested: 9/19/2024	Accreditations Required (See note): State - Hawaii		Job #: 380-111916-1																																																																			
Project Name: RED-HILL Site: Honolulu BWS Sites		TAT Requested (days):	Analysis Requested		Preservation Codes:																																																																			
Project #: 38001111 SSOW#:		PO #:	<p>380-111916 Chain of Custody</p>		Total Number of containers: Other: Special Instructions/Note:																																																																			
<table border="1"> <thead> <tr> <th>Sample Identification - Client ID (Lab ID)</th> <th>Sample Date</th> <th>Sample Time</th> <th>Sample Type (C=Comp, G=grab)</th> <th>Matrix (W=water, S=soil, O=waste/oil, B=Tissue, A=Air)</th> <th>Field Filtered Sample (Yes or No)</th> <th>Perform MS/MSD (Yes or No)</th> <th>8015B_DRO_LL_CS3510C_LL_HNL Ranges: C10-C24/C24-C36/C8-C18</th> <th>8015B_GRO_LLJ5030C (MOD) GRO</th> <th>Other:</th> </tr> </thead> <tbody> <tr> <td>AIEA WELLS PUMPS 1&2 (260) (331-203-TP400) (380-111916-1)</td> <td>9/4/24</td> <td>10:25 Hawaiian</td> <td>G</td> <td>Water</td> <td>X</td> <td>X</td> <td></td> <td></td> <td>7 initial volume (500ml) and final volume (2ml). MRLs are needed.</td> </tr> <tr> <td>TB: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400) (380-111916-2)</td> <td>9/4/24</td> <td>10:25 Hawaiian</td> <td>G</td> <td>Water</td> <td></td> <td></td> <td>X</td> <td></td> <td>2 MRLs are needed.</td> </tr> <tr> <td>HALAWA WELLS UNITS 1 & 2 (331-206-TP065) (380-111916-3)</td> <td>9/4/24</td> <td>10:02 Hawaiian</td> <td>G</td> <td>Water</td> <td></td> <td>X</td> <td>X</td> <td></td> <td>7 initial volume (500ml) and final volume (2ml). MRLs are needed.</td> </tr> <tr> <td>HALAWA WELLS UNITS 1 & 2 (331-206-TP065) (380-111916-3M)</td> <td>9/4/24</td> <td>10:02 Hawaiian</td> <td>G</td> <td>Water</td> <td></td> <td>X</td> <td>X</td> <td></td> <td>3 initial volume (500ml) and final volume (2ml). MRLs are needed.</td> </tr> <tr> <td>HALAWA WELLS UNITS 1 & 2 (331-206-TP065) (380-111916-3M)</td> <td>9/4/24</td> <td>10:02 Hawaiian</td> <td>G</td> <td>Water</td> <td></td> <td>X</td> <td>X</td> <td></td> <td>2 initial volume (500ml) and final volume (2ml). MRLs are needed.</td> </tr> <tr> <td>TB: HALAWA WELLS UNITS 1&2 (331-206-TP065) (380-111916-4)</td> <td>9/4/24</td> <td>10:02 Hawaiian</td> <td>G</td> <td>Water</td> <td></td> <td></td> <td>X</td> <td></td> <td>2 MRLs are needed.</td> </tr> </tbody> </table>		Sample Identification - Client ID (Lab ID)				Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=soil, O=waste/oil, B=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015B_DRO_LL_CS3510C_LL_HNL Ranges: C10-C24/C24-C36/C8-C18	8015B_GRO_LLJ5030C (MOD) GRO	Other:	AIEA WELLS PUMPS 1&2 (260) (331-203-TP400) (380-111916-1)	9/4/24	10:25 Hawaiian	G	Water	X	X			7 initial volume (500ml) and final volume (2ml). MRLs are needed.	TB: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400) (380-111916-2)	9/4/24	10:25 Hawaiian	G	Water			X		2 MRLs are needed.	HALAWA WELLS UNITS 1 & 2 (331-206-TP065) (380-111916-3)	9/4/24	10:02 Hawaiian	G	Water		X	X		7 initial volume (500ml) and final volume (2ml). MRLs are needed.	HALAWA WELLS UNITS 1 & 2 (331-206-TP065) (380-111916-3M)	9/4/24	10:02 Hawaiian	G	Water		X	X		3 initial volume (500ml) and final volume (2ml). MRLs are needed.	HALAWA WELLS UNITS 1 & 2 (331-206-TP065) (380-111916-3M)	9/4/24	10:02 Hawaiian	G	Water		X	X		2 initial volume (500ml) and final volume (2ml). MRLs are needed.	TB: HALAWA WELLS UNITS 1&2 (331-206-TP065) (380-111916-4)	9/4/24	10:02 Hawaiian	G	Water			X
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=soil, O=waste/oil, B=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015B_DRO_LL_CS3510C_LL_HNL Ranges: C10-C24/C24-C36/C8-C18	8015B_GRO_LLJ5030C (MOD) GRO	Other:																																																															
AIEA WELLS PUMPS 1&2 (260) (331-203-TP400) (380-111916-1)	9/4/24	10:25 Hawaiian	G	Water	X	X			7 initial volume (500ml) and final volume (2ml). MRLs are needed.																																																															
TB: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400) (380-111916-2)	9/4/24	10:25 Hawaiian	G	Water			X		2 MRLs are needed.																																																															
HALAWA WELLS UNITS 1 & 2 (331-206-TP065) (380-111916-3)	9/4/24	10:02 Hawaiian	G	Water		X	X		7 initial volume (500ml) and final volume (2ml). MRLs are needed.																																																															
HALAWA WELLS UNITS 1 & 2 (331-206-TP065) (380-111916-3M)	9/4/24	10:02 Hawaiian	G	Water		X	X		3 initial volume (500ml) and final volume (2ml). MRLs are needed.																																																															
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TB: HALAWA WELLS UNITS 1&2 (331-206-TP065) (380-111916-4)	9/4/24	10:02 Hawaiian	G	Water			X		2 MRLs are needed.																																																															

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)	Special Instructions/QC Requirements:
Primary Deliverable Rank: 2	

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: <i>[Signature]</i>	Date/Time: 9/17/24 1055	Company: FEAP	Received by: <i>[Signature]</i>
Relinquished by: <i>[Signature]</i>	Date/Time: 9-17-24 1149	Company:	Received by: <i>[Signature]</i>
Relinquished by:	Date/Time:	Company:	Received by:

Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 10/10 5017 6/100
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Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-111916-1

SDG Number: Weekly

Login Number: 111916

List Number: 1

Creator: Gerfen, Chris

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").	N/A	
CIO4 headspace requirement met (>50% for CA, >30% for other states).	N/A	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	



Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-111916-1

SDG Number: Weekly

Login Number: 111916

List Number: 2

Creator: Skinner, Alma D

List Source: Eurofins Calscience

List Creation: 09/09/24 10:47 AM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	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	1.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

