

ANALYTICAL REPORT

PREPARED FOR

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

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JOB DESCRIPTION

RED-HILL
RUSH Weekly Red Hill

JOB NUMBER

380-112518-1

Eurofins Eaton Analytical Pomona

Job Notes

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

Compliance Statement

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

Authorization



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



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Definitions/Glossary

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

Job ID: 380-112518-1

Qualifiers

GC/MS Semi VOA

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

GC/MS Semi VOA TICs

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

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.

Glossary

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

Case Narrative

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

Job ID: 380-112518-1

Job ID: 380-112518-1

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Job Narrative 380-112518-1

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 9/11/2024 10:09 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 4.2°C, 5.4°C and 5.8°C.

GC/MS Semi VOA

Method 625.1_SIM: The laboratory control sample (LCS) and laboratory control sample (LCSD) for preparation batch 570-480477 and analytical batch 570-482655 recovered outside control limits for the following analytes: 1-Methylnaphthalene, Acenaphthene, Fluorene, Phenanthrene and Pyrene. The LCS/LCSD was re-prep/re-ran on a different instrument. The LCS/LCSD still failed low. HT has expired therefore, no re-extraction. Data excluded due to this QC failure.

Method 525.2_PREC: The matrix spike (MS) recoveries for preparation batch 380-108010 and analytical batch 380-108249 were outside control limits for Anthracene. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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 for the following sample was outside the upper control limit: AIEA GULCH WELLS PUMP 2 (380-112518-1). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

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: 380-112518-1

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-112518-1

No Detections.

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2

Lab Sample ID: 380-112518-2

No Detections.

Client Sample ID: TB:AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-112518-3

No Detections.

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

Lab Sample ID: 380-112518-4

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.

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Client Sample Results

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

Job ID: 380-112518-1

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-112518-1

Date Collected: 09/09/24 10:37

Matrix: Drinking Water

Date Received: 09/11/24 10:09

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		09/12/24 10:45	09/13/24 12:53	1
2,4'-DDD	<0.098		0.098	ug/L		09/12/24 10:45	09/13/24 12:53	1
2,4'-DDE	<0.098		0.098	ug/L		09/12/24 10:45	09/13/24 12:53	1
2,4'-DDT	<0.098		0.098	ug/L		09/12/24 10:45	09/13/24 12:53	1
2,4-Dinitrotoluene	<0.098		0.098	ug/L		09/12/24 10:45	09/13/24 12:53	1
2,6-Dinitrotoluene	<0.098		0.098	ug/L		09/12/24 10:45	09/13/24 12:53	1
2-Methylnaphthalene	<0.098		0.098	ug/L		09/12/24 10:45	09/13/24 12:53	1
4,4'-DDD	<0.098		0.098	ug/L		09/12/24 10:45	09/13/24 12:53	1
4,4'-DDE	<0.098		0.098	ug/L		09/12/24 10:45	09/13/24 12:53	1
4,4'-DDT	<0.098		0.098	ug/L		09/12/24 10:45	09/13/24 12:53	1
Acenaphthene	<0.098		0.098	ug/L		09/12/24 10:45	09/13/24 12:53	1
Acenaphthylene	<0.098		0.098	ug/L		09/12/24 10:45	09/13/24 12:53	1
Acetochlor	<0.098		0.098	ug/L		09/12/24 10:45	09/13/24 12:53	1
Alachlor	<0.049		0.049	ug/L		09/12/24 10:45	09/13/24 12:53	1
alpha-BHC	<0.098		0.098	ug/L		09/12/24 10:45	09/13/24 12:53	1
alpha-Chlordane	<0.049		0.049	ug/L		09/12/24 10:45	09/13/24 12:53	1
Anthracene	<0.020	F1	0.020	ug/L		09/12/24 10:45	09/13/24 12:53	1
Atrazine	<0.049		0.049	ug/L		09/12/24 10:45	09/13/24 12:53	1
Benz(a)anthracene	<0.049		0.049	ug/L		09/12/24 10:45	09/13/24 12:53	1
Benzo[a]pyrene	<0.020		0.020	ug/L		09/12/24 10:45	09/13/24 12:53	1
Benzo[b]fluoranthene	<0.020		0.020	ug/L		09/12/24 10:45	09/13/24 12:53	1
Benzo[g,h,i]perylene	<0.049		0.049	ug/L		09/12/24 10:45	09/13/24 12:53	1
Benzo[k]fluoranthene	<0.020		0.020	ug/L		09/12/24 10:45	09/13/24 12:53	1
beta-BHC	<0.098		0.098	ug/L		09/12/24 10:45	09/13/24 12:53	1
Bis(2-ethylhexyl) phthalate	<0.59		0.59	ug/L		09/12/24 10:45	09/13/24 12:53	1
Bromacil	<0.098		0.098	ug/L		09/12/24 10:45	09/13/24 12:53	1
Butachlor	<0.049		0.049	ug/L		09/12/24 10:45	09/13/24 12:53	1
Butylbenzylphthalate	<0.49		0.49	ug/L		09/12/24 10:45	09/13/24 12:53	1
Chlorobenzilate	<0.098		0.098	ug/L		09/12/24 10:45	09/13/24 12:53	1
Chloroneb	<0.098		0.098	ug/L		09/12/24 10:45	09/13/24 12:53	1
Chlorothalonil (Draconil, Bravo)	<0.098		0.098	ug/L		09/12/24 10:45	09/13/24 12:53	1
Chlorpyrifos	<0.049		0.049	ug/L		09/12/24 10:45	09/13/24 12:53	1
Chrysene	<0.020		0.020	ug/L		09/12/24 10:45	09/13/24 12:53	1
delta-BHC	<0.098		0.098	ug/L		09/12/24 10:45	09/13/24 12:53	1
Di(2-ethylhexyl)adipate	<0.59		0.59	ug/L		09/12/24 10:45	09/13/24 12:53	1
Dibenz(a,h)anthracene	<0.049		0.049	ug/L		09/12/24 10:45	09/13/24 12:53	1
Diclorvos (DDVP)	<0.049		0.049	ug/L		09/12/24 10:45	09/13/24 12:53	1
Dieldrin	<0.0098		0.0098	ug/L		09/12/24 10:45	09/13/24 12:53	1
Diethylphthalate	<0.49		0.49	ug/L		09/12/24 10:45	09/13/24 12:53	1
Dimethylphthalate	<0.49		0.49	ug/L		09/12/24 10:45	09/13/24 12:53	1
Di-n-butyl phthalate	<0.98		0.98	ug/L		09/12/24 10:45	09/13/24 12:53	1
Di-n-octyl phthalate	<0.098		0.098	ug/L		09/12/24 10:45	09/13/24 12:53	1
Endosulfan I (Alpha)	<0.098		0.098	ug/L		09/12/24 10:45	09/13/24 12:53	1
Endosulfan II (Beta)	<0.098		0.098	ug/L		09/12/24 10:45	09/13/24 12:53	1
Endosulfan sulfate	<0.098		0.098	ug/L		09/12/24 10:45	09/13/24 12:53	1
Endrin	<0.0098		0.0098	ug/L		09/12/24 10:45	09/13/24 12:53	1
Endrin aldehyde	<0.098		0.098	ug/L		09/12/24 10:45	09/13/24 12:53	1
EPTC	<0.098		0.098	ug/L		09/12/24 10:45	09/13/24 12:53	1
Fluoranthene	<0.098		0.098	ug/L		09/12/24 10:45	09/13/24 12:53	1

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Client Sample Results

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

Job ID: 380-112518-1

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-112518-1

Date Collected: 09/09/24 10:37

Matrix: Drinking Water

Date Received: 09/11/24 10:09

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	<0.049		0.049	ug/L		09/12/24 10:45	09/13/24 12:53	1
gamma-Chlordane	<0.049		0.049	ug/L		09/12/24 10:45	09/13/24 12:53	1
Heptachlor	<0.0098		0.0098	ug/L		09/12/24 10:45	09/13/24 12:53	1
Heptachlor epoxide (isomer B)	<0.0098		0.0098	ug/L		09/12/24 10:45	09/13/24 12:53	1
Hexachlorobenzene	<0.049		0.049	ug/L		09/12/24 10:45	09/13/24 12:53	1
Hexachlorocyclopentadiene	<0.049		0.049	ug/L		09/12/24 10:45	09/13/24 12:53	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049	ug/L		09/12/24 10:45	09/13/24 12:53	1
Isophorone	<0.098		0.098	ug/L		09/12/24 10:45	09/13/24 12:53	1
Lindane	<0.0098		0.0098	ug/L		09/12/24 10:45	09/13/24 12:53	1
Malathion	<0.098		0.098	ug/L		09/12/24 10:45	09/13/24 12:53	1
Methoxychlor	<0.049		0.049	ug/L		09/12/24 10:45	09/13/24 12:53	1
Metolachlor	<0.049		0.049	ug/L		09/12/24 10:45	09/13/24 12:53	1
Molinate	<0.098		0.098	ug/L		09/12/24 10:45	09/13/24 12:53	1
Naphthalene	<0.098		0.098	ug/L		09/12/24 10:45	09/13/24 12:53	1
Parathion	<0.098		0.098	ug/L		09/12/24 10:45	09/13/24 12:53	1
Pendimethalin (Penoxaline)	<0.098		0.098	ug/L		09/12/24 10:45	09/13/24 12:53	1
Phenanthrene	<0.039		0.039	ug/L		09/12/24 10:45	09/13/24 12:53	1
Propachlor	<0.049		0.049	ug/L		09/12/24 10:45	09/13/24 12:53	1
Pyrene	<0.049		0.049	ug/L		09/12/24 10:45	09/13/24 12:53	1
Simazine	<0.049		0.049	ug/L		09/12/24 10:45	09/13/24 12:53	1
Terbacil	<0.098		0.098	ug/L		09/12/24 10:45	09/13/24 12:53	1
Terbutylazine	<0.098		0.098	ug/L		09/12/24 10:45	09/13/24 12:53	1
Thiobencarb	<0.098		0.098	ug/L		09/12/24 10:45	09/13/24 12:53	1
Total Permethrin (mixed isomers)	<0.20		0.20	ug/L		09/12/24 10:45	09/13/24 12:53	1
trans-Nonachlor	<0.049		0.049	ug/L		09/12/24 10:45	09/13/24 12:53	1
Trifluralin	<0.098		0.098	ug/L		09/12/24 10:45	09/13/24 12:53	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	09/12/24 10:45	09/13/24 12:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	95		70 - 130	09/12/24 10:45	09/13/24 12:53	1
Perylene-d12	87		70 - 130	09/12/24 10:45	09/13/24 12:53	1
Triphenylphosphate	87		70 - 130	09/12/24 10:45	09/13/24 12:53	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	<10		10	ug/L			09/20/24 13:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	79		38 - 134		09/20/24 13:45	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		09/16/24 17:02	09/23/24 03:19	1
Motor Oil Range Organics [C24-C36]	<27		27	ug/L		09/16/24 17:02	09/23/24 03:19	1
C8-C18	<27		27	ug/L		09/16/24 17:02	09/23/24 03:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	135	S1+	60 - 130	09/16/24 17:02	09/23/24 03:19	1

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Client Sample Results

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

Job ID: 380-112518-1

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2

Lab Sample ID: 380-112518-2

Date Collected: 09/09/24 11:01

Matrix: Drinking Water

Date Received: 09/11/24 10:09

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.096		0.096	ug/L		09/12/24 10:45	09/13/24 13:13	1
2,4'-DDD	<0.096		0.096	ug/L		09/12/24 10:45	09/13/24 13:13	1
2,4'-DDE	<0.096		0.096	ug/L		09/12/24 10:45	09/13/24 13:13	1
2,4'-DDT	<0.096		0.096	ug/L		09/12/24 10:45	09/13/24 13:13	1
2,4-Dinitrotoluene	<0.096		0.096	ug/L		09/12/24 10:45	09/13/24 13:13	1
2,6-Dinitrotoluene	<0.096		0.096	ug/L		09/12/24 10:45	09/13/24 13:13	1
2-Methylnaphthalene	<0.096		0.096	ug/L		09/12/24 10:45	09/13/24 13:13	1
4,4'-DDD	<0.096		0.096	ug/L		09/12/24 10:45	09/13/24 13:13	1
4,4'-DDE	<0.096		0.096	ug/L		09/12/24 10:45	09/13/24 13:13	1
4,4'-DDT	<0.096		0.096	ug/L		09/12/24 10:45	09/13/24 13:13	1
Acenaphthene	<0.096		0.096	ug/L		09/12/24 10:45	09/13/24 13:13	1
Acenaphthylene	<0.096		0.096	ug/L		09/12/24 10:45	09/13/24 13:13	1
Acetochlor	<0.096		0.096	ug/L		09/12/24 10:45	09/13/24 13:13	1
Alachlor	<0.048		0.048	ug/L		09/12/24 10:45	09/13/24 13:13	1
alpha-BHC	<0.096		0.096	ug/L		09/12/24 10:45	09/13/24 13:13	1
alpha-Chlordane	<0.048		0.048	ug/L		09/12/24 10:45	09/13/24 13:13	1
Anthracene	<0.019		0.019	ug/L		09/12/24 10:45	09/13/24 13:13	1
Atrazine	<0.048		0.048	ug/L		09/12/24 10:45	09/13/24 13:13	1
Benz(a)anthracene	<0.048		0.048	ug/L		09/12/24 10:45	09/13/24 13:13	1
Benzo[a]pyrene	<0.019		0.019	ug/L		09/12/24 10:45	09/13/24 13:13	1
Benzo[b]fluoranthene	<0.019		0.019	ug/L		09/12/24 10:45	09/13/24 13:13	1
Benzo[g,h,i]perylene	<0.048		0.048	ug/L		09/12/24 10:45	09/13/24 13:13	1
Benzo[k]fluoranthene	<0.019		0.019	ug/L		09/12/24 10:45	09/13/24 13:13	1
beta-BHC	<0.096		0.096	ug/L		09/12/24 10:45	09/13/24 13:13	1
Bis(2-ethylhexyl) phthalate	<0.58		0.58	ug/L		09/12/24 10:45	09/13/24 13:13	1
Bromacil	<0.096		0.096	ug/L		09/12/24 10:45	09/13/24 13:13	1
Butachlor	<0.048		0.048	ug/L		09/12/24 10:45	09/13/24 13:13	1
Butylbenzylphthalate	<0.48		0.48	ug/L		09/12/24 10:45	09/13/24 13:13	1
Chlorobenzilate	<0.096		0.096	ug/L		09/12/24 10:45	09/13/24 13:13	1
Chloroneb	<0.096		0.096	ug/L		09/12/24 10:45	09/13/24 13:13	1
Chlorothalonil (Draconil, Bravo)	<0.096		0.096	ug/L		09/12/24 10:45	09/13/24 13:13	1
Chlorpyrifos	<0.048		0.048	ug/L		09/12/24 10:45	09/13/24 13:13	1
Chrysene	<0.019		0.019	ug/L		09/12/24 10:45	09/13/24 13:13	1
delta-BHC	<0.096		0.096	ug/L		09/12/24 10:45	09/13/24 13:13	1
Di(2-ethylhexyl)adipate	<0.58		0.58	ug/L		09/12/24 10:45	09/13/24 13:13	1
Dibenz(a,h)anthracene	<0.048		0.048	ug/L		09/12/24 10:45	09/13/24 13:13	1
Diclorvos (DDVP)	<0.048		0.048	ug/L		09/12/24 10:45	09/13/24 13:13	1
Dieldrin	<0.0096		0.0096	ug/L		09/12/24 10:45	09/13/24 13:13	1
Diethylphthalate	<0.48		0.48	ug/L		09/12/24 10:45	09/13/24 13:13	1
Dimethylphthalate	<0.48		0.48	ug/L		09/12/24 10:45	09/13/24 13:13	1
Di-n-butyl phthalate	<0.96		0.96	ug/L		09/12/24 10:45	09/13/24 13:13	1
Di-n-octyl phthalate	<0.096		0.096	ug/L		09/12/24 10:45	09/13/24 13:13	1
Endosulfan I (Alpha)	<0.096		0.096	ug/L		09/12/24 10:45	09/13/24 13:13	1
Endosulfan II (Beta)	<0.096		0.096	ug/L		09/12/24 10:45	09/13/24 13:13	1
Endosulfan sulfate	<0.096		0.096	ug/L		09/12/24 10:45	09/13/24 13:13	1
Endrin	<0.0096		0.0096	ug/L		09/12/24 10:45	09/13/24 13:13	1
Endrin aldehyde	<0.096		0.096	ug/L		09/12/24 10:45	09/13/24 13:13	1
EPTC	<0.096		0.096	ug/L		09/12/24 10:45	09/13/24 13:13	1
Fluoranthene	<0.096		0.096	ug/L		09/12/24 10:45	09/13/24 13:13	1

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Client Sample Results

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

Job ID: 380-112518-1

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2

Lab Sample ID: 380-112518-2

Date Collected: 09/09/24 11:01

Matrix: Drinking Water

Date Received: 09/11/24 10:09

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	<0.048		0.048	ug/L		09/12/24 10:45	09/13/24 13:13	1
gamma-Chlordane	<0.048		0.048	ug/L		09/12/24 10:45	09/13/24 13:13	1
Heptachlor	<0.0096		0.0096	ug/L		09/12/24 10:45	09/13/24 13:13	1
Heptachlor epoxide (isomer B)	<0.0096		0.0096	ug/L		09/12/24 10:45	09/13/24 13:13	1
Hexachlorobenzene	<0.048		0.048	ug/L		09/12/24 10:45	09/13/24 13:13	1
Hexachlorocyclopentadiene	<0.048		0.048	ug/L		09/12/24 10:45	09/13/24 13:13	1
Indeno[1,2,3-cd]pyrene	<0.048		0.048	ug/L		09/12/24 10:45	09/13/24 13:13	1
Isophorone	<0.096		0.096	ug/L		09/12/24 10:45	09/13/24 13:13	1
Lindane	<0.0096		0.0096	ug/L		09/12/24 10:45	09/13/24 13:13	1
Malathion	<0.096		0.096	ug/L		09/12/24 10:45	09/13/24 13:13	1
Methoxychlor	<0.048		0.048	ug/L		09/12/24 10:45	09/13/24 13:13	1
Metolachlor	<0.048		0.048	ug/L		09/12/24 10:45	09/13/24 13:13	1
Molinate	<0.096		0.096	ug/L		09/12/24 10:45	09/13/24 13:13	1
Naphthalene	<0.096		0.096	ug/L		09/12/24 10:45	09/13/24 13:13	1
Parathion	<0.096		0.096	ug/L		09/12/24 10:45	09/13/24 13:13	1
Pendimethalin (Penoxaline)	<0.096		0.096	ug/L		09/12/24 10:45	09/13/24 13:13	1
Phenanthrene	<0.038		0.038	ug/L		09/12/24 10:45	09/13/24 13:13	1
Propachlor	<0.048		0.048	ug/L		09/12/24 10:45	09/13/24 13:13	1
Pyrene	<0.048		0.048	ug/L		09/12/24 10:45	09/13/24 13:13	1
Simazine	<0.048		0.048	ug/L		09/12/24 10:45	09/13/24 13:13	1
Terbacil	<0.096		0.096	ug/L		09/12/24 10:45	09/13/24 13:13	1
Terbutylazine	<0.096		0.096	ug/L		09/12/24 10:45	09/13/24 13:13	1
Thiobencarb	<0.096		0.096	ug/L		09/12/24 10:45	09/13/24 13:13	1
Total Permethrin (mixed isomers)	<0.19		0.19	ug/L		09/12/24 10:45	09/13/24 13:13	1
trans-Nonachlor	<0.048		0.048	ug/L		09/12/24 10:45	09/13/24 13:13	1
Trifluralin	<0.096		0.096	ug/L		09/12/24 10:45	09/13/24 13:13	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	09/12/24 10:45	09/13/24 13:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	96		70 - 130	09/12/24 10:45	09/13/24 13:13	1
Perylene-d12	88		70 - 130	09/12/24 10:45	09/13/24 13:13	1
Triphenylphosphate	92		70 - 130	09/12/24 10:45	09/13/24 13:13	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	<10		10	ug/L			09/20/24 14:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		38 - 134		09/20/24 14:09	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C24)	<26		26	ug/L		09/16/24 17:02	09/23/24 03:40	1
Motor Oil Range Organics [C24-C36]	<26		26	ug/L		09/16/24 17:02	09/23/24 03:40	1
C8-C18	<26		26	ug/L		09/16/24 17:02	09/23/24 03:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	121		60 - 130	09/16/24 17:02	09/23/24 03:40	1

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Client Sample Results

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

Job ID: 380-112518-1

Client Sample ID: TB:AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-112518-3

Date Collected: 09/09/24 10:37

Matrix: Water

Date Received: 09/11/24 10:09

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			09/18/24 00:23	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		38 - 134				09/18/24 00:23	1

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

Lab Sample ID: 380-112518-4

Date Collected: 09/09/24 11:01

Matrix: Water

Date Received: 09/11/24 10:09

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			09/18/24 00:46	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		38 - 134				09/18/24 00:46	1

Action Limit Summary

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

Job ID: 380-112518-1

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-112518-1

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

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2

Lab Sample ID: 380-112518-2

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	<0.0096		ug/L	2		0.0096	525.2	Total/NA
Heptachlor	<0.0096		ug/L	0.4		0.0096	525.2	Total/NA
Heptachlor epoxide (isomer B)	<0.0096		ug/L	0.2		0.0096	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	<0.0096		ug/L	0.2		0.0096	525.2	Total/NA
Methoxychlor	<0.048		ug/L	40		0.048	525.2	Total/NA
Simazine	<0.048		ug/L	4		0.048	525.2	Total/NA

Surrogate Summary

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

Job ID: 380-112518-1

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)
380-112518-1	AIEA GULCH WELLS PUMP 2	95	87	87
380-112518-1 MS	AIEA GULCH WELLS PUMP 2	95	92	93
380-112518-2	AIEA WELLS PUMPS 1&2 (260) P2	96	88	92
380-112518-2 DU	AIEA WELLS PUMPS 1&2 (260) P2	95	88	89

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)
LCS 380-108010/23-A	Lab Control Sample	94	88	93
MB 380-108010/21-A	Method Blank	94	82	88
MRL 380-108010/22-A	Lab Control Sample	96	81	90

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)
380-112518-1	AIEA GULCH WELLS PUMP 2	79
380-112518-2	AIEA WELLS PUMPS 1&2 (260) P2	83

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-C-3 MS	Matrix Spike	95
380-111916-F-3 MSD	Matrix Spike Duplicate	95
380-112518-3	TB:AIEA GULCH WELLS PUMP 2	84
380-112518-4	TB: AIEA WELLS PUMPS 1&2 (260)	88
380-112520-C-3 MS	Matrix Spike	88
380-112520-C-3 MSD	Matrix Spike Duplicate	92

Surrogate Summary

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

Job ID: 380-112518-1

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1 (38-134)
LCS 570-481747/1009	Lab Control Sample	96
LCS 570-483045/4	Lab Control Sample	89
LCSD 570-481747/10	Lab Control Sample Dup	94
LCSD 570-483045/5	Lab Control Sample Dup	92
MB 570-481747/11	Method Blank	92
MB 570-483045/6	Method Blank	85
MRL 570-481747/1004	Lab Control Sample	89
MRL 570-483045/3	Lab Control Sample	86

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)
380-112518-1	AIEA GULCH WELLS PUMP 2	135 S1+
380-112518-2	AIEA WELLS PUMPS 1&2 (260) P2	121

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

Surrogate Legend

OTCSN = n-Octacosane (Surr)

QC Sample Results

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

Job ID: 380-112518-1

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

Lab Sample ID: MB 380-108010/21-A
Matrix: Water
Analysis Batch: 108249

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 108010

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.10		0.10	ug/L		09/12/24 10:45	09/13/24 12:32	1
2,4'-DDD	<0.10		0.10	ug/L		09/12/24 10:45	09/13/24 12:32	1
2,4'-DDE	<0.10		0.10	ug/L		09/12/24 10:45	09/13/24 12:32	1
2,4'-DDT	<0.10		0.10	ug/L		09/12/24 10:45	09/13/24 12:32	1
2,4-Dinitrotoluene	<0.10		0.10	ug/L		09/12/24 10:45	09/13/24 12:32	1
2,6-Dinitrotoluene	<0.10		0.10	ug/L		09/12/24 10:45	09/13/24 12:32	1
2-Methylnaphthalene	<0.10		0.10	ug/L		09/12/24 10:45	09/13/24 12:32	1
4,4'-DDD	<0.10		0.10	ug/L		09/12/24 10:45	09/13/24 12:32	1
4,4'-DDE	<0.10		0.10	ug/L		09/12/24 10:45	09/13/24 12:32	1
4,4'-DDT	<0.10		0.10	ug/L		09/12/24 10:45	09/13/24 12:32	1
Acenaphthene	<0.10		0.10	ug/L		09/12/24 10:45	09/13/24 12:32	1
Acenaphthylene	<0.10		0.10	ug/L		09/12/24 10:45	09/13/24 12:32	1
Acetochlor	<0.10		0.10	ug/L		09/12/24 10:45	09/13/24 12:32	1
Alachlor	<0.050		0.050	ug/L		09/12/24 10:45	09/13/24 12:32	1
alpha-BHC	<0.10		0.10	ug/L		09/12/24 10:45	09/13/24 12:32	1
alpha-Chlordane	<0.050		0.050	ug/L		09/12/24 10:45	09/13/24 12:32	1
Anthracene	<0.020		0.020	ug/L		09/12/24 10:45	09/13/24 12:32	1
Atrazine	<0.050		0.050	ug/L		09/12/24 10:45	09/13/24 12:32	1
Benz(a)anthracene	<0.050		0.050	ug/L		09/12/24 10:45	09/13/24 12:32	1
Benzo[a]pyrene	<0.020		0.020	ug/L		09/12/24 10:45	09/13/24 12:32	1
Benzo[b]fluoranthene	<0.020		0.020	ug/L		09/12/24 10:45	09/13/24 12:32	1
Benzo[g,h,i]perylene	<0.050		0.050	ug/L		09/12/24 10:45	09/13/24 12:32	1
Benzo[k]fluoranthene	<0.020		0.020	ug/L		09/12/24 10:45	09/13/24 12:32	1
beta-BHC	<0.10		0.10	ug/L		09/12/24 10:45	09/13/24 12:32	1
Bis(2-ethylhexyl) phthalate	<0.60		0.60	ug/L		09/12/24 10:45	09/13/24 12:32	1
Bromacil	<0.10		0.10	ug/L		09/12/24 10:45	09/13/24 12:32	1
Butachlor	<0.050		0.050	ug/L		09/12/24 10:45	09/13/24 12:32	1
Butylbenzylphthalate	<0.50		0.50	ug/L		09/12/24 10:45	09/13/24 12:32	1
Chlorobenzilate	<0.10		0.10	ug/L		09/12/24 10:45	09/13/24 12:32	1
Chloroneb	<0.10		0.10	ug/L		09/12/24 10:45	09/13/24 12:32	1
Chlorothalonil (Draconil, Bravo)	<0.10		0.10	ug/L		09/12/24 10:45	09/13/24 12:32	1
Chlorpyrifos	<0.050		0.050	ug/L		09/12/24 10:45	09/13/24 12:32	1
Chrysene	<0.020		0.020	ug/L		09/12/24 10:45	09/13/24 12:32	1
delta-BHC	<0.10		0.10	ug/L		09/12/24 10:45	09/13/24 12:32	1
Di(2-ethylhexyl)adipate	<0.60		0.60	ug/L		09/12/24 10:45	09/13/24 12:32	1
Dibenz(a,h)anthracene	<0.050		0.050	ug/L		09/12/24 10:45	09/13/24 12:32	1
Diclorvos (DDVP)	<0.050		0.050	ug/L		09/12/24 10:45	09/13/24 12:32	1
Dieldrin	<0.010		0.010	ug/L		09/12/24 10:45	09/13/24 12:32	1
Diethylphthalate	<0.50		0.50	ug/L		09/12/24 10:45	09/13/24 12:32	1
Dimethylphthalate	<0.50		0.50	ug/L		09/12/24 10:45	09/13/24 12:32	1
Di-n-butyl phthalate	<1.0		1.0	ug/L		09/12/24 10:45	09/13/24 12:32	1
Di-n-octyl phthalate	<0.10		0.10	ug/L		09/12/24 10:45	09/13/24 12:32	1
Endosulfan I (Alpha)	<0.10		0.10	ug/L		09/12/24 10:45	09/13/24 12:32	1
Endosulfan II (Beta)	<0.10		0.10	ug/L		09/12/24 10:45	09/13/24 12:32	1
Endosulfan sulfate	<0.10		0.10	ug/L		09/12/24 10:45	09/13/24 12:32	1
Endrin	<0.010		0.010	ug/L		09/12/24 10:45	09/13/24 12:32	1
Endrin aldehyde	<0.10		0.10	ug/L		09/12/24 10:45	09/13/24 12:32	1
EPTC	<0.10		0.10	ug/L		09/12/24 10:45	09/13/24 12:32	1

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QC Sample Results

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

Job ID: 380-112518-1

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

Lab Sample ID: MB 380-108010/21-A

Matrix: Water

Analysis Batch: 108249

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 108010

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	<0.10		0.10	ug/L		09/12/24 10:45	09/13/24 12:32	1
Fluorene	<0.050		0.050	ug/L		09/12/24 10:45	09/13/24 12:32	1
gamma-Chlordane	<0.050		0.050	ug/L		09/12/24 10:45	09/13/24 12:32	1
Heptachlor	<0.010		0.010	ug/L		09/12/24 10:45	09/13/24 12:32	1
Heptachlor epoxide (isomer B)	<0.010		0.010	ug/L		09/12/24 10:45	09/13/24 12:32	1
Hexachlorobenzene	<0.050		0.050	ug/L		09/12/24 10:45	09/13/24 12:32	1
Hexachlorocyclopentadiene	<0.050		0.050	ug/L		09/12/24 10:45	09/13/24 12:32	1
Indeno[1,2,3-cd]pyrene	<0.050		0.050	ug/L		09/12/24 10:45	09/13/24 12:32	1
Isophorone	<0.10		0.10	ug/L		09/12/24 10:45	09/13/24 12:32	1
Lindane	<0.010		0.010	ug/L		09/12/24 10:45	09/13/24 12:32	1
Malathion	<0.10		0.10	ug/L		09/12/24 10:45	09/13/24 12:32	1
Methoxychlor	<0.050		0.050	ug/L		09/12/24 10:45	09/13/24 12:32	1
Metolachlor	<0.050		0.050	ug/L		09/12/24 10:45	09/13/24 12:32	1
Molinate	<0.10		0.10	ug/L		09/12/24 10:45	09/13/24 12:32	1
Naphthalene	<0.10		0.10	ug/L		09/12/24 10:45	09/13/24 12:32	1
Parathion	<0.10		0.10	ug/L		09/12/24 10:45	09/13/24 12:32	1
Pendimethalin (Penoxaline)	<0.10		0.10	ug/L		09/12/24 10:45	09/13/24 12:32	1
Phenanthrene	<0.040		0.040	ug/L		09/12/24 10:45	09/13/24 12:32	1
Propachlor	<0.050		0.050	ug/L		09/12/24 10:45	09/13/24 12:32	1
Pyrene	<0.050		0.050	ug/L		09/12/24 10:45	09/13/24 12:32	1
Simazine	<0.050		0.050	ug/L		09/12/24 10:45	09/13/24 12:32	1
Terbacil	<0.10		0.10	ug/L		09/12/24 10:45	09/13/24 12:32	1
Terbutylazine	<0.10		0.10	ug/L		09/12/24 10:45	09/13/24 12:32	1
Thiobencarb	<0.10		0.10	ug/L		09/12/24 10:45	09/13/24 12:32	1
Total Permethrin (mixed isomers)	<0.20		0.20	ug/L		09/12/24 10:45	09/13/24 12:32	1
trans-Nonachlor	<0.050		0.050	ug/L		09/12/24 10:45	09/13/24 12:32	1
Trifluralin	<0.10		0.10	ug/L		09/12/24 10:45	09/13/24 12:32	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	0.532	T J	ug/L		2.80	N/A	09/12/24 10:45	09/13/24 12:32	1
Decane	1.27	T J N	ug/L		2.85	124-18-5	09/12/24 10:45	09/13/24 12:32	1
Cyclohexasiloxane, dodecamethyl-	0.799	T J N	ug/L		3.96	540-97-6	09/12/24 10:45	09/13/24 12:32	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	94		70 - 130	09/12/24 10:45	09/13/24 12:32	1
Perylene-d12	82		70 - 130	09/12/24 10:45	09/13/24 12:32	1
Triphenylphosphate	88		70 - 130	09/12/24 10:45	09/13/24 12:32	1

Lab Sample ID: LCS 380-108010/23-A

Matrix: Water

Analysis Batch: 108249

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 108010

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	1.99	1.91		ug/L		96	70 - 130
2,4'-DDD	1.99	2.03		ug/L		102	70 - 130
2,4'-DDE	1.99	2.06		ug/L		104	70 - 130
2,4'-DDT	1.99	2.13		ug/L		107	70 - 130
2,4-Dinitrotoluene	1.99	1.84		ug/L		93	70 - 130

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QC Sample Results

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

Job ID: 380-112518-1

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

Lab Sample ID: LCS 380-108010/23-A
Matrix: Water
Analysis Batch: 108249

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 108010

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,6-Dinitrotoluene	1.99	1.82		ug/L		92	70 - 130
2-Methylnaphthalene	1.99	1.89		ug/L		95	70 - 130
4,4'-DDD	1.99	2.02		ug/L		102	70 - 130
4,4'-DDE	1.99	1.95		ug/L		98	70 - 130
4,4'-DDT	1.99	2.16		ug/L		109	70 - 130
Acenaphthene	1.99	1.96		ug/L		99	70 - 130
Acenaphthylene	1.99	1.85		ug/L		93	70 - 130
Acetochlor	1.99	2.13		ug/L		107	70 - 130
Alachlor	1.99	2.06		ug/L		104	70 - 130
alpha-BHC	1.99	2.04		ug/L		102	70 - 130
alpha-Chlordane	1.99	2.08		ug/L		105	70 - 130
Anthracene	1.99	1.81		ug/L		91	70 - 130
Atrazine	1.99	2.18		ug/L		110	70 - 130
Benz(a)anthracene	1.99	1.72		ug/L		87	70 - 130
Benzo[a]pyrene	1.99	1.80		ug/L		91	70 - 130
Benzo[b]fluoranthene	1.99	1.90		ug/L		95	70 - 130
Benzo[g,h,i]perylene	1.99	1.92		ug/L		96	70 - 130
Benzo[k]fluoranthene	1.99	2.11		ug/L		106	70 - 130
beta-BHC	1.99	2.14		ug/L		107	70 - 130
Bis(2-ethylhexyl) phthalate	1.99	1.91		ug/L		96	70 - 130
Bromacil	1.99	1.87		ug/L		94	70 - 130
Butachlor	1.99	2.09		ug/L		105	70 - 130
Butylbenzylphthalate	1.99	2.04		ug/L		103	70 - 130
Chlorobenzilate	1.99	2.26		ug/L		114	70 - 130
Chloroneb	1.99	2.26		ug/L		114	70 - 130
Chlorothalonil (Draconil, Bravo)	1.99	2.03		ug/L		102	70 - 130
Chlorpyrifos	1.99	2.28		ug/L		115	70 - 130
Chrysene	1.99	2.19		ug/L		110	70 - 130
delta-BHC	1.99	2.05		ug/L		103	70 - 130
Di(2-ethylhexyl)adipate	1.99	1.89		ug/L		95	70 - 130
Dibenz(a,h)anthracene	1.99	1.82		ug/L		91	70 - 130
Diclorvos (DDVP)	1.99	1.85		ug/L		93	70 - 130
Dieldrin	1.99	2.04		ug/L		103	70 - 130
Diethylphthalate	1.99	2.00		ug/L		101	70 - 130
Dimethylphthalate	1.99	1.96		ug/L		99	70 - 130
Di-n-butyl phthalate	3.97	4.11		ug/L		103	70 - 130
Di-n-octyl phthalate	1.99	1.82		ug/L		92	70 - 130
Endosulfan I (Alpha)	1.99	1.92		ug/L		97	70 - 130
Endosulfan II (Beta)	1.99	1.92		ug/L		97	70 - 130
Endosulfan sulfate	1.99	2.03		ug/L		102	70 - 130
Endrin	1.99	2.08		ug/L		105	70 - 130
Endrin aldehyde	1.99	1.76		ug/L		88	60 - 130
EPTC	1.99	1.99		ug/L		100	70 - 130
Fluoranthene	1.99	2.07		ug/L		104	70 - 130
Fluorene	1.99	1.99		ug/L		100	70 - 130
gamma-Chlordane	1.99	2.13		ug/L		107	70 - 130
Heptachlor	1.99	2.31		ug/L		116	70 - 130
Heptachlor epoxide (isomer B)	1.99	1.96		ug/L		99	70 - 130
Hexachlorobenzene	1.99	1.94		ug/L		98	70 - 130

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QC Sample Results

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

Job ID: 380-112518-1

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

Lab Sample ID: LCS 380-108010/23-A
Matrix: Water
Analysis Batch: 108249

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 108010

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Hexachlorocyclopentadiene	1.99	1.95		ug/L		98	70 - 130
Indeno[1,2,3-cd]pyrene	1.99	1.65		ug/L		83	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	2.22		ug/L		112	70 - 130
Methoxychlor	1.99	2.23		ug/L		112	70 - 130
Metolachlor	1.99	2.03		ug/L		102	70 - 130
Molinate	1.99	1.98		ug/L		100	70 - 130
Naphthalene	1.99	1.99		ug/L		100	70 - 130
Parathion	1.99	2.36		ug/L		119	70 - 130
Pendimethalin (Penoxaline)	1.99	1.71		ug/L		86	70 - 130
Phenanthrene	1.99	1.96		ug/L		99	70 - 130
Propachlor	1.99	2.03		ug/L		102	70 - 130
Pyrene	1.99	2.04		ug/L		103	70 - 130
Simazine	1.99	1.93		ug/L		97	70 - 130
Terbacil	1.99	2.17		ug/L		109	70 - 130
Terbutylazine	1.99	2.13		ug/L		107	70 - 130
Thiobencarb	1.99	2.04		ug/L		103	70 - 130
trans-Nonachlor	1.99	2.00		ug/L		100	70 - 130
Trifluralin	1.99	1.92		ug/L		96	70 - 130
		LCS	LCS				
Surrogate		%Recovery	Qualifier				Limits
2-Nitro-m-xylene		94					70 - 130
Perylene-d12		88					70 - 130
Triphenylphosphate		93					70 - 130

Lab Sample ID: MRL 380-108010/22-A
Matrix: Water
Analysis Batch: 108249

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 108010

Analyte	Spike Added	MRL	MRL	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
1-Methylnaphthalene	0.0992	0.106		ug/L		107	50 - 150
2,4'-DDD	0.0992	0.0831	J	ug/L		84	50 - 150
2,4'-DDE	0.0992	0.0956	J	ug/L		96	50 - 150
2,4'-DDT	0.0992	0.0924	J	ug/L		93	50 - 150
2,4-Dinitrotoluene	0.0992	0.0697	J	ug/L		70	50 - 150
2,6-Dinitrotoluene	0.0992	0.0818	J	ug/L		82	50 - 150
2-Methylnaphthalene	0.0992	0.0993		ug/L		100	50 - 150
4,4'-DDD	0.0992	0.0911	J	ug/L		92	50 - 150
4,4'-DDE	0.0992	0.0959	J	ug/L		97	50 - 150
4,4'-DDT	0.0992	0.0843	J	ug/L		85	50 - 150
Acenaphthene	0.0992	0.103		ug/L		103	50 - 150
Acenaphthylene	0.0992	0.0851	J	ug/L		86	50 - 150
Acetochlor	0.0992	0.110		ug/L		111	50 - 150
Alachlor	0.0496	0.0492	J	ug/L		99	50 - 150
alpha-BHC	0.0992	0.114		ug/L		115	50 - 150
alpha-Chlordane	0.0248	<0.029		ug/L		100	50 - 150
Anthracene	0.0198	0.0190	J	ug/L		96	50 - 150

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QC Sample Results

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

Job ID: 380-112518-1

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

Lab Sample ID: MRL 380-108010/22-A
Matrix: Water
Analysis Batch: 108249

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 108010

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Atrazine	0.0496	<0.048		ug/L		85	50 - 150
Benz(a)anthracene	0.0496	0.0449	J	ug/L		90	50 - 150
Benzo[a]pyrene	0.0198	0.0138	J	ug/L		70	50 - 150
Benzo[b]fluoranthene	0.0198	0.0150	J	ug/L		76	50 - 150
Benzo[g,h,i]perylene	0.0496	0.0343	J	ug/L		69	50 - 150
Benzo[k]fluoranthene	0.0198	<0.017		ug/L		85	50 - 150
beta-BHC	0.0992	0.116		ug/L		117	50 - 150
Bis(2-ethylhexyl) phthalate	0.595	0.457	J	ug/L		77	50 - 150
Bromacil	0.0992	0.104		ug/L		105	50 - 150
Butachlor	0.0496	0.0524		ug/L		106	50 - 150
Butylbenzylphthalate	0.496	0.484	J	ug/L		98	50 - 150
Chlorobenzilate	0.0992	0.0896	J	ug/L		90	50 - 150
Chloroneb	0.0992	0.0722	J	ug/L		73	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0992	0.116		ug/L		117	50 - 150
Chlorpyrifos	0.0496	0.0481	J	ug/L		97	50 - 150
Chrysene	0.0198	0.0213		ug/L		107	50 - 150
delta-BHC	0.0992	0.111		ug/L		112	50 - 150
Di(2-ethylhexyl)adipate	0.595	0.511	J	ug/L		86	50 - 150
Dibenz(a,h)anthracene	0.0496	<0.033		ug/L		62	50 - 150
Diclorvos (DDVP)	0.0496	0.0473	J	ug/L		95	50 - 150
Dieldrin	0.00992	0.0102		ug/L		102	50 - 150
Diethylphthalate	0.496	0.494	J	ug/L		100	50 - 150
Dimethylphthalate	0.496	0.499	J	ug/L		101	50 - 150
Di-n-butyl phthalate	0.496	0.476	J	ug/L		96	49 - 243
Di-n-octyl phthalate	0.0992	0.0670	J	ug/L		68	50 - 150
Endosulfan I (Alpha)	0.0992	0.0931	J	ug/L		94	50 - 150
Endosulfan II (Beta)	0.0992	0.104		ug/L		105	50 - 150
Endosulfan sulfate	0.0992	0.0923	J	ug/L		93	50 - 150
Endrin	0.00992	0.0121		ug/L		122	50 - 150
Endrin aldehyde	0.0992	0.0958	J	ug/L		97	50 - 150
EPTC	0.0992	0.0937	J	ug/L		94	50 - 150
Fluoranthene	0.0992	0.0953	J	ug/L		96	50 - 150
Fluorene	0.0496	<0.050		ug/L		98	50 - 150
gamma-Chlordane	0.0248	0.0210	J	ug/L		85	50 - 150
Heptachlor	0.00992	0.0133		ug/L		134	50 - 150
Heptachlor epoxide (isomer B)	0.00992	0.0127		ug/L		128	50 - 150
Hexachlorobenzene	0.0496	0.0491	J	ug/L		99	50 - 150
Hexachlorocyclopentadiene	0.0496	0.0454	J	ug/L		92	50 - 150
Indeno[1,2,3-cd]pyrene	0.0496	<0.027		ug/L		50	50 - 150
Isophorone	0.0992	0.116		ug/L		117	50 - 150
Lindane	0.00992	0.0148		ug/L		149	50 - 150
Malathion	0.0992	0.0939	J	ug/L		95	50 - 150
Methoxychlor	0.0496	0.0419	J	ug/L		84	50 - 150
Metolachlor	0.0496	0.0543		ug/L		110	50 - 150
Molinate	0.0992	0.103		ug/L		103	50 - 150
Naphthalene	0.0992	0.108		ug/L		109	50 - 150
Parathion	0.0992	0.0743	J	ug/L		75	50 - 150
Pendimethalin (Penoxaline)	0.0992	0.0891	J	ug/L		90	50 - 150
Phenanthrene	0.0397	0.0438		ug/L		110	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-112518-1

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

Lab Sample ID: MRL 380-108010/22-A
Matrix: Water
Analysis Batch: 108249

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 108010

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Propachlor	0.0496	0.0508		ug/L		102	50 - 150
Pyrene	0.0496	0.0461	J	ug/L		93	50 - 150
Simazine	0.0496	0.0438	J	ug/L		88	50 - 150
Terbacil	0.0992	0.117		ug/L		118	50 - 150
Terbutylazine	0.0992	0.0856	J	ug/L		86	50 - 150
Thiobencarb	0.0992	0.0992		ug/L		100	50 - 150
trans-Nonachlor	0.0248	<0.026		ug/L		90	50 - 150
Trifluralin	0.0992	0.0675	J	ug/L		68	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
2-Nitro-m-xylene	96		70 - 130
Perylene-d12	81		70 - 130
Triphenylphosphate	90		70 - 130

Lab Sample ID: 380-112518-1 MS
Matrix: Drinking Water
Analysis Batch: 108249

Client Sample ID: AIEA GULCH WELLS PUMP 2
Prep Type: Total/NA
Prep Batch: 108010

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	<0.098		1.95	1.87		ug/L		96	70 - 130
2,4'-DDD	<0.098		1.95	1.95		ug/L		100	70 - 130
2,4'-DDE	<0.098		1.95	1.92		ug/L		99	70 - 130
2,4'-DDT	<0.098		1.95	2.02		ug/L		104	70 - 130
2,4-Dinitrotoluene	<0.098		1.95	1.98		ug/L		102	70 - 130
2,6-Dinitrotoluene	<0.098		1.95	1.90		ug/L		98	70 - 130
2-Methylnaphthalene	<0.098		1.95	1.86		ug/L		95	70 - 130
4,4'-DDD	<0.098		1.95	1.90		ug/L		98	70 - 130
4,4'-DDE	<0.098		1.95	1.80		ug/L		93	70 - 130
4,4'-DDT	<0.098		1.95	2.02		ug/L		104	70 - 130
Acenaphthene	<0.098		1.95	1.92		ug/L		99	70 - 130
Acenaphthylene	<0.098		1.95	1.85		ug/L		95	70 - 130
Acetochlor	<0.098		1.95	2.00		ug/L		103	70 - 130
Alachlor	<0.049		1.95	1.98		ug/L		102	70 - 130
alpha-BHC	<0.098		1.95	1.95		ug/L		100	70 - 130
alpha-Chlordane	<0.049		1.95	1.99		ug/L		102	70 - 130
Anthracene	<0.020	F1	1.95	1.26	F1	ug/L		65	70 - 130
Atrazine	<0.049		1.95	2.08		ug/L		107	70 - 130
Benz(a)anthracene	<0.049		1.95	1.61		ug/L		83	70 - 130
Benzo[a]pyrene	<0.020		1.95	1.60		ug/L		82	70 - 130
Benzo[b]fluoranthene	<0.020		1.95	1.81		ug/L		93	70 - 130
Benzo[g,h,i]perylene	<0.049		1.95	1.86		ug/L		96	70 - 130
Benzo[k]fluoranthene	<0.020		1.95	2.02		ug/L		104	70 - 130
beta-BHC	<0.098		1.95	2.03		ug/L		105	70 - 130
Bis(2-ethylhexyl) phthalate	<0.59		1.95	1.63		ug/L		84	70 - 130
Bromacil	<0.098		1.95	2.00		ug/L		103	70 - 130
Butachlor	<0.049		1.95	2.01		ug/L		103	70 - 130
Butylbenzylphthalate	<0.49		1.95	1.95		ug/L		100	70 - 130
Chlorobenzilate	<0.098		1.95	2.20		ug/L		113	70 - 130

QC Sample Results

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

Job ID: 380-112518-1

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

Lab Sample ID: 380-112518-1 MS

Matrix: Drinking Water

Analysis Batch: 108249

Client Sample ID: AIEA GULCH WELLS PUMP 2

Prep Type: Total/NA

Prep Batch: 108010

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier	Added	Result	Qualifier				
Chloroneb	<0.098		1.95	2.08		ug/L		107	70 - 130
Chlorothalonil (Draconil, Bravo)	<0.098		1.95	1.96		ug/L		101	70 - 130
Chlorpyrifos	<0.049		1.95	2.22		ug/L		114	70 - 130
Chrysene	<0.020		1.95	2.09		ug/L		107	70 - 130
delta-BHC	<0.098		1.95	1.94		ug/L		100	70 - 130
Di(2-ethylhexyl)adipate	<0.59		1.95	1.70		ug/L		88	70 - 130
Dibenz(a,h)anthracene	<0.049		1.95	1.76		ug/L		90	70 - 130
Diclorvos (DDVP)	<0.049		1.95	1.84		ug/L		94	70 - 130
Dieldrin	<0.0098		1.95	1.93		ug/L		99	70 - 130
Diethylphthalate	<0.49		1.95	1.91		ug/L		98	70 - 130
Dimethylphthalate	<0.49		1.95	1.90		ug/L		97	70 - 130
Di-n-butyl phthalate	<0.98		3.89	3.99		ug/L		103	70 - 130
Di-n-octyl phthalate	<0.098		1.95	1.53		ug/L		79	70 - 130
Endosulfan I (Alpha)	<0.098		1.95	1.88		ug/L		97	70 - 130
Endosulfan II (Beta)	<0.098		1.95	1.84		ug/L		95	70 - 130
Endosulfan sulfate	<0.098		1.95	1.96		ug/L		101	70 - 130
Endrin	<0.0098		1.95	2.00		ug/L		103	70 - 130
Endrin aldehyde	<0.098		1.95	1.42		ug/L		73	60 - 130
EPTC	<0.098		1.95	1.95		ug/L		100	70 - 130
Fluoranthene	<0.098		1.95	2.00		ug/L		103	70 - 130
Fluorene	<0.049		1.95	1.93		ug/L		99	70 - 130
gamma-Chlordane	<0.049		1.95	2.03		ug/L		104	70 - 130
Heptachlor	<0.0098		1.95	2.22		ug/L		114	70 - 130
Heptachlor epoxide (isomer B)	<0.0098		1.95	1.91		ug/L		98	70 - 130
Hexachlorobenzene	<0.049		1.95	1.92		ug/L		99	70 - 130
Hexachlorocyclopentadiene	<0.049		1.95	2.09		ug/L		108	70 - 130
Indeno[1,2,3-cd]pyrene	<0.049		1.95	1.59		ug/L		82	70 - 130
Isophorone	<0.098		1.95	1.81		ug/L		93	70 - 130
Lindane	<0.0098		1.95	1.88		ug/L		97	70 - 130
Malathion	<0.098		1.95	2.13		ug/L		109	70 - 130
Methoxychlor	<0.049		1.95	2.19		ug/L		113	70 - 130
Metolachlor	<0.049		1.95	1.97		ug/L		101	70 - 130
Molinate	<0.098		1.95	1.94		ug/L		100	70 - 130
Naphthalene	<0.098		1.95	1.93		ug/L		99	70 - 130
Parathion	<0.098		1.95	2.35		ug/L		121	70 - 130
Pendimethalin (Penoxaline)	<0.098		1.95	1.81		ug/L		93	70 - 130
Phenanthrene	<0.039		1.95	1.88		ug/L		97	70 - 130
Propachlor	<0.049		1.95	1.94		ug/L		100	70 - 130
Pyrene	<0.049		1.95	1.95		ug/L		100	70 - 130
Simazine	<0.049		1.95	1.92		ug/L		99	70 - 130
Terbacil	<0.098		1.95	2.15		ug/L		110	70 - 130
Terbutylazine	<0.098		1.95	2.04		ug/L		105	70 - 130
Thiobencarb	<0.098		1.95	1.94		ug/L		100	70 - 130
trans-Nonachlor	<0.049		1.95	1.92		ug/L		99	70 - 130
Trifluralin	<0.098		1.95	1.97		ug/L		101	70 - 130

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	95		70 - 130

QC Sample Results

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

Job ID: 380-112518-1

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

Lab Sample ID: 380-112518-1 MS
Matrix: Drinking Water
Analysis Batch: 108249

Client Sample ID: AIEA GULCH WELLS PUMP 2
Prep Type: Total/NA
Prep Batch: 108010

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
Perylene-d12	92		70 - 130
Triphenylphosphate	93		70 - 130

Lab Sample ID: 380-112518-2 DU
Matrix: Drinking Water
Analysis Batch: 108249

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2
Prep Type: Total/NA
Prep Batch: 108010

Analyte	Sample Result	Sample Qualifier	DU DU		Unit	D	RPD	Limit
			Result	Qualifier				
1-Methylnaphthalene	<0.096		<0.096		ug/L		NC	20
2,4'-DDD	<0.096		<0.096		ug/L		NC	20
2,4'-DDE	<0.096		<0.096		ug/L		NC	20
2,4'-DDT	<0.096		<0.096		ug/L		NC	20
2,4-Dinitrotoluene	<0.096		<0.096		ug/L		NC	20
2,6-Dinitrotoluene	<0.096		<0.096		ug/L		NC	20
2-Methylnaphthalene	<0.096		<0.096		ug/L		NC	20
4,4'-DDD	<0.096		<0.096		ug/L		NC	20
4,4'-DDE	<0.096		<0.096		ug/L		NC	20
4,4'-DDT	<0.096		<0.096		ug/L		NC	20
Acenaphthene	<0.096		<0.096		ug/L		NC	20
Acenaphthylene	<0.096		<0.096		ug/L		NC	20
Acetochlor	<0.096		<0.096		ug/L		NC	20
Alachlor	<0.048		<0.048		ug/L		NC	20
alpha-BHC	<0.096		<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	<0.096		<0.096		ug/L		NC	20
Bis(2-ethylhexyl) phthalate	<0.58		<0.58		ug/L		NC	20
Bromacil	<0.096		<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	<0.096		<0.096		ug/L		NC	20
Chloroneb	<0.096		<0.096		ug/L		NC	20
Chlorothalonil (Draconil, Bravo)	<0.096		<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	<0.096		<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	<0.0096		0.0110		ug/L		NC	20
Diethylphthalate	<0.48		<0.48		ug/L		NC	20
Dimethylphthalate	<0.48		<0.48		ug/L		NC	20

QC Sample Results

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

Job ID: 380-112518-1

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

Lab Sample ID: 380-112518-2 DU
Matrix: Drinking Water
Analysis Batch: 108249

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2
Prep Type: Total/NA
Prep Batch: 108010

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Di-n-butyl phthalate	<0.96		<0.96		ug/L		NC	20
Di-n-octyl phthalate	<0.096		<0.096		ug/L		NC	20
Endosulfan I (Alpha)	<0.096		<0.096		ug/L		NC	20
Endosulfan II (Beta)	<0.096		<0.096		ug/L		NC	20
Endosulfan sulfate	<0.096		<0.096		ug/L		NC	20
Endrin	<0.0096		<0.0096		ug/L		NC	20
Endrin aldehyde	<0.096		<0.096		ug/L		NC	20
EPTC	<0.096		<0.096		ug/L		NC	20
Fluoranthene	<0.096		<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	<0.0096		<0.0096		ug/L		NC	20
Heptachlor epoxide (isomer B)	<0.0096		<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	<0.096		<0.096		ug/L		NC	20
Lindane	<0.0096		<0.0096		ug/L		NC	20
Malathion	<0.096		<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	<0.096		<0.096		ug/L		NC	20
Naphthalene	<0.096		<0.096		ug/L		NC	20
Parathion	<0.096		<0.096		ug/L		NC	20
Pendimethalin (Penoxaline)	<0.096		<0.096		ug/L		NC	20
Phenanthrene	<0.038		<0.038		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	<0.096		<0.096		ug/L		NC	20
Terbutylazine	<0.096		<0.096		ug/L		NC	20
Thiobencarb	<0.096		<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	<0.096		<0.096		ug/L		NC	20
		DU	DU					
Surrogate	%Recovery	Qualifier	Limits					
2-Nitro-m-xylene	95		70 - 130					
Perylene-d12	88		70 - 130					
Triphenylphosphate	89		70 - 130					

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	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
GRO (C6-C10)	<10		10	ug/L			09/17/24 17:23	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-112518-1

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

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	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-C-3 MS
Matrix: Water
Analysis Batch: 481747

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (C4-C13)	<10		400	365		ug/L		91	68 - 122

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	95		38 - 134

QC Sample Results

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

Job ID: 380-112518-1

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

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

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

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

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

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

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

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

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (C4-C13)	400	362		ug/L		91	78 - 120
Surrogate	%Recovery	LCS Qualifier	LCS Limits				
4-Bromofluorobenzene (Surr)	89		38 - 134				

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

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (C4-C13)	400	360		ug/L		90	78 - 120	1	10
Surrogate	%Recovery	LCSD Qualifier	LCSD Limits						
4-Bromofluorobenzene (Surr)	92		38 - 134						

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

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (C4-C13)	10.0	11.1		ug/L		111	50 - 150
Surrogate	%Recovery	MRL Qualifier	MRL Limits				
4-Bromofluorobenzene (Surr)	86		38 - 134				

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QC Sample Results

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

Job ID: 380-112518-1

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

Lab Sample ID: 380-112520-C-3 MS
Matrix: Water
Analysis Batch: 483045

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits	
Gasoline Range Organics (C4-C13)	<10		400	343		ug/L		86	68 - 122	
Surrogate	%Recovery	MS Qualifier	MS Limits							
4-Bromofluorobenzene (Surr)	88		38 - 134							

Lab Sample ID: 380-112520-C-3 MSD
Matrix: Water
Analysis Batch: 483045

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (C4-C13)	<10		400	363		ug/L		91	68 - 122	6	18
Surrogate	%Recovery	MSD Qualifier	MSD Limits								
4-Bromofluorobenzene (Surr)	92		38 - 134								

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

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

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

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

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

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

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

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

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C10-C28	1600	1440		ug/L		90	56 - 127	0	23

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QC Sample Results

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

Job ID: 380-112518-1

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

QC Association Summary

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

Job ID: 380-112518-1

GC/MS Semi VOA

Prep Batch: 108010

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-112518-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	525.2	
380-112518-2	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	525.2	
MB 380-108010/21-A	Method Blank	Total/NA	Water	525.2	
LCS 380-108010/23-A	Lab Control Sample	Total/NA	Water	525.2	
MRL 380-108010/22-A	Lab Control Sample	Total/NA	Water	525.2	
380-112518-1 MS	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	525.2	
380-112518-2 DU	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	525.2	

Analysis Batch: 108249

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-112518-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	525.2	108010
380-112518-2	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	525.2	108010
MB 380-108010/21-A	Method Blank	Total/NA	Water	525.2	108010
LCS 380-108010/23-A	Lab Control Sample	Total/NA	Water	525.2	108010
MRL 380-108010/22-A	Lab Control Sample	Total/NA	Water	525.2	108010
380-112518-1 MS	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	525.2	108010
380-112518-2 DU	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	525.2	108010

GC VOA

Analysis Batch: 481747

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-112518-3	TB:AIEA GULCH WELLS PUMP 2	Total/NA	Water	8015B GRO LL	
380-112518-4	TB: AIEA WELLS PUMPS 1&2 (260)	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-C-3 MS	Matrix Spike	Total/NA	Water	8015B GRO LL	
380-111916-F-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8015B GRO LL	

Analysis Batch: 483045

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-112518-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	8015B GRO LL	
380-112518-2	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	8015B GRO LL	
MB 570-483045/6	Method Blank	Total/NA	Water	8015B GRO LL	
LCS 570-483045/4	Lab Control Sample	Total/NA	Water	8015B GRO LL	
LCSD 570-483045/5	Lab Control Sample Dup	Total/NA	Water	8015B GRO LL	
MRL 570-483045/3	Lab Control Sample	Total/NA	Water	8015B GRO LL	
380-112520-C-3 MS	Matrix Spike	Total/NA	Water	8015B GRO LL	
380-112520-C-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8015B GRO LL	

GC Semi VOA

Prep Batch: 481430

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-112518-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	3510C	
380-112518-2	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	3510C	
MB 570-481430/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-481430/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-481430/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MRL 570-481430/4-A	Lab Control Sample	Total/NA	Water	3510C	

Eurofins Eaton Analytical Pomona

QC Association Summary

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

Job ID: 380-112518-1

GC Semi VOA (Continued)

Prep Batch: 481430 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-112520-B-3-A MS	Matrix Spike	Total/NA	Water	3510C	
380-112520-B-3-B MSD	Matrix Spike Duplicate	Total/NA	Water	3510C	

Analysis Batch: 483474

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-112518-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	8015B	481430
380-112518-2	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	8015B	481430
MB 570-481430/1-A	Method Blank	Total/NA	Water	8015B	481430
LCS 570-481430/2-A	Lab Control Sample	Total/NA	Water	8015B	481430
LCSD 570-481430/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	481430
MRL 570-481430/4-A	Lab Control Sample	Total/NA	Water	8015B	481430
380-112520-B-3-A MS	Matrix Spike	Total/NA	Water	8015B	481430
380-112520-B-3-B MSD	Matrix Spike Duplicate	Total/NA	Water	8015B	481430

Lab Chronicle

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

Job ID: 380-112518-1

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-112518-1

Date Collected: 09/09/24 10:37

Matrix: Drinking Water

Date Received: 09/11/24 10:09

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			108010	OTM3	EA POM	09/12/24 10:45
Total/NA	Analysis	525.2		1	108249	Q8LA	EA POM	09/13/24 12:53
Total/NA	Analysis	8015B GRO LL		1	483045	A9VE	EET CAL 4	09/20/24 13:45
Total/NA	Prep	3510C			481430	H6FE	EET CAL 4	09/16/24 17:02
Total/NA	Analysis	8015B		1	483474	SP9M	EET CAL 4	09/23/24 03:19

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2

Lab Sample ID: 380-112518-2

Date Collected: 09/09/24 11:01

Matrix: Drinking Water

Date Received: 09/11/24 10:09

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			108010	OTM3	EA POM	09/12/24 10:45
Total/NA	Analysis	525.2		1	108249	Q8LA	EA POM	09/13/24 13:13
Total/NA	Analysis	8015B GRO LL		1	483045	A9VE	EET CAL 4	09/20/24 14:09
Total/NA	Prep	3510C			481430	H6FE	EET CAL 4	09/16/24 17:02
Total/NA	Analysis	8015B		1	483474	SP9M	EET CAL 4	09/23/24 03:40

Client Sample ID: TB:AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-112518-3

Date Collected: 09/09/24 10:37

Matrix: Water

Date Received: 09/11/24 10:09

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015B GRO LL		1	481747	A9VE	EET CAL 4	09/18/24 00:23

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

Lab Sample ID: 380-112518-4

Date Collected: 09/09/24 11:01

Matrix: Water

Date Received: 09/11/24 10:09

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015B GRO LL		1	481747	A9VE	EET CAL 4	09/18/24 00:46

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: 380-112518-1

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: 380-112518-1

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: 380-112518-1

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: 380-112518-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-112518-1	AIEA GULCH WELLS PUMP 2	Drinking Water	09/09/24 10:37	09/11/24 10:09
380-112518-2	AIEA WELLS PUMPS 1&2 (260) P2	Drinking Water	09/09/24 11:01	09/11/24 10:09
380-112518-3	TB:AIEA GULCH WELLS PUMP 2	Water	09/09/24 10:37	09/11/24 10:09
380-112518-4	TB: AIEA WELLS PUMPS 1&2 (260)	Water	09/09/24 11:01	09/11/24 10:09

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Client Information		Lab PM: Arada, Rachelle		Carrier Tracking No(s): 380-28005-2757 1	
Client Contact: Dr. Ron Fenstermacher		E-Mail: Rachelle.Arada@et.eurofins.com		Page: 1 of 1	
Company: City & County of Honolulu		PWSID:		Job #:	
Address: 630 South Beretania Street Chemistry Lab		Due Date Requested:		Preservation Codes: R - NaThioSO4 RA - NaThio/HCl Q - Na2SO3 QA - Na2SO3/HCl Y - Trizma I - NH4 Acetate	
City: Honolulu		TAT Requested (days):		Other:	
State Zip: HI, 96843		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No			
Phone: 808-748-5091(Tel)		PO #: C20525101 exp 05312023			
Email: RFENSTERMACHER@hbws.org		WO #:			
Project Name: RED-HILL/HBWS Sites Event Desc. RUSH Weekly Red Hill		Project #: 38001111			
Site: Hawaii		SSON#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Soil, Tissue, etc.)	Preservation Code	Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Analysis Requested		Special Instructions/Note:
						R	RA	Q	QA	Y	I	
Aiea Gulch Wells Pump 2	9-Sep-2024	1057	G	Water		X	X	2	3	2	2	
Aiea Gulch Wells Pump 2 (Matrix Spike)				Water								
Aiea Gulch Wells Pump 2 (Matrix Spike Duplicate)	9-Sep-2024	1037		Water				2				
TB- Aiea Gulch Wells Pump 2				Water								
Aiea Wells Pumps 1&2 (260) PZ	9-Sep-2024	1101	G	Water				2	3	2	2	
Aiea Wells Pumps 1&2 (260) (Matrix Spike)				Water								
Aiea Wells Pumps 1&2 (Matrix Spike Duplicate)				Water								
TB Aiea Wells Pumps 1&2 (260)	9-Sep-2024	1101		Water				2				380-112518 COC

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological
 Deliverable Requested I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Special Instructions/QC Requirements:

Empty Kit Relinquished by _____ Date _____ Time _____ Method of Shipment: **BY**

Relinquished by _____ Date/Time: **10 SEP 2024 1400** Company: **HBWS**

Received by _____ Date/Time: **9/11/24 10:09** Company: **CEMP**

Relinquished by _____ Date/Time: _____ Company: _____

Received by _____ Date/Time: _____ Company: _____

Cooler Temperature(s) °C and Other Remarks: **602/4.4-0.2 = 4.2 GET**



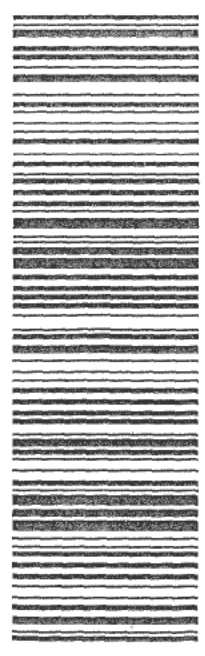
ORIGIN ID HIKA (808) 748-5840 SHIP DATE: 10SEP24
BWS CHEM LAB ACTWGT 62.00 LB
HONOLULU BOARD OF WATER SUPPLY CAD 258050552/INET4535
630 S. BERETANIA ST
CHEMICAL LABORATORY
HONOLULU HI 96843
UNITED STATES US BILL RECIPIENT

TO EUROFINS RECEIVING DEPARTMENT
EUROFINS DRINKING WATER TESTING
941 CORPORATE CENTER DR

POMONA CA 91768 REF
(626) 386-1100 INV. PC



3 of 4 WED - 11 SEP 10:30A
MPS# 7785 0206 0969 PRIORITY OVERNIGHT
Mstr# 7785 0206 0947 0201 91768
WM ONTA CA-US ONT



6887/5-6-2-25-4
No cc
9/11/24 10:09
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After printing this label
CONSIGNEE COPY PLEASE PLACE IN FRONT OF POUCH
1 Fold the printed page along the horizontal line
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ORIGIN ID HKA (808) 748-5840
BWS CHEMLAB
HONOLULU BOARD OF WATER SUPPLY
630 S. BERETANIA ST
CHEMICAL LABORATORY
HONOLULU HI 96843
UNITED STATES US

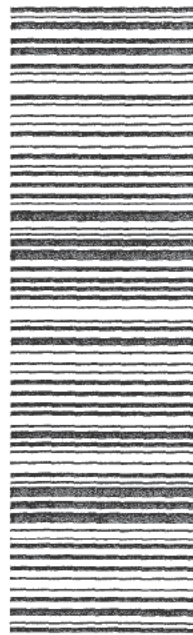
SHIP DATE 10SEP24
ACTWGT 62.00 LB
CAD 258050552INET4535
BILL RECIPIENT

TO EUROFINS RECEIVING DEPARTMENT
EUROFINS DRINKING WATER TESTING
941 CORPORATE CENTER DR
POMONA CA 91768

REF



4 of 4
MPS# 7785 0206 0970
Mst# 7785 0206 0947
WED - 11 SEP 10:30A
PRIORITY OVERNIGHT
WM ONTA
CA-US ONT
91768



61877 / 6.0 2.2 = 5.8 GEL
Nu Col

4401 9/11/24 10.06

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Chain of Custody Record



Client Information (Sub Contract Lab)		Sampier: Lao PHL: Arada, Rachelle		COC No: 380-152199.1											
Client Contact: Rachelle.Arada@eurofins.com		E-Mail: Rachelle.Arada@eurofins.com		Page: Page 1 of 1											
Shipping/Receiving		State: Hawaii		Job #: 380-112518-1											
Company: Eurofins Environment Testing Southwest		Accreditations Required (See note):		Preservation Codes:											
Address: 2841 Dow Avenue, Suite 100		Due Date Requested: 9/24/2024		Analysis Requested:											
City: Tustin		TAT Requested (days):													
State, Zip: CA, 92780		PO #:													
Phone: 714-896-5494(Tel)		WG #:													
Email:		Project #:													
Project Name: RED-HILL		38001111													
Site: Honolulu BWS Sites		SSOW#:													
Sample Identification	Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Sewage, Stormwater, etc.)	Preservation Codes	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	60158_DRO_LL_CS/3510C_LL_HML Ranges: C10	624/C24-C35/C8-C18	626.1_SiM/25_Prep (MOD) Extended PAH List	60158_GRO_LL/5030C (MOD) GRO	60158_GRO_LL/5030C GRO	Total Number of Containers	Special Instructions/Notes:
AIEA GULCH WELLS PUMP 2 (331-202-TP072)	(380-112518-1)	9/9/24	10:37 Hawaiian	G	Water		X	X	X	X	X	X	X	7	Initial volume (500ml) and final volume (2ml). MRLs are needed.
AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)	(380-112518-2)	9/9/24	11:01 Hawaiian	G	Water		X	X	X	X	X	X	X	7	Initial volume (500ml) and final volume (2ml). MRLs are needed.
TB/AIEA GULCH WELLS P2 (331-202-TP072)	(380-112518-3)	9/9/24	10:37 Hawaiian	G	Water							X		2	MRLs are needed.
TB: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)	(380-1125)	9/9/24	11:01 Hawaiian	G	Water							X		2	MRLs are needed.



380-112518 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/test/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
 Unconfirmed
 Deliverable Requested: I II III IV Other (specify) Primary Deliverable Rank: 2
 Empty Kit Relinquished by: Date: _____ Method of Shipment: _____
 Relinquished by: *[Signature]* Date: 9/24/24 Company: *[Signature]* Received by: *[Signature]* Date/Time: 9/24/24 Company: *[Signature]*
 Relinquished by: Date/Time: _____ Company: _____
 Relinquished by: Date/Time: _____ Company: _____
 Custody Seals Intact: Custody Seal No. 12/12 Seal
 A Yes Δ No Ver: 05/06/2024



Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-112518-1

Login Number: 112518
List Number: 1
Creator: Ngo, Theodore

List Source: Eurofins Eaton Analytical Pomona

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



Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-112518-1

Login Number: 112518

List Number: 2

Creator: Khana, Piyush

List Source: Eurofins Calscience

List Creation: 09/12/24 03:09 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.2
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.	False	

