

ANALYTICAL REPORT

PREPARED FOR

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JOB DESCRIPTION

RED-HILL
Weekly

JOB NUMBER

380-123575-1

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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Table of Contents

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Detection Summary	6
Client Sample Results	7
Action Limit Summary	14
Surrogate Summary	15
QC Sample Results	17
QC Association Summary	33
Lab Chronicle	35
Certification Summary	36
Method Summary	38
Sample Summary	39
Chain of Custody	40
Receipt Checklists	42

Definitions/Glossary

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

Job ID: 380-123575-1
SDG: Weekly

Qualifiers

GC/MS 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.

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.

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: 380-123575-1

Job ID: 380-123575-1

Eurofins Eaton Analytical Pomona

Job Narrative 380-123575-1

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

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

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

Receipt

The samples were received on 11/22/2024 9:43 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 2.0°C, 2.3°C and 2.4°C.

GC/MS Semi VOA

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

Gasoline Range Organics

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

Diesel Range Organics

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: 380-123575-1
SDG: Weekly

Client Sample ID: AIEA GULCH WELLS PUMP 1

Lab Sample ID: 380-123575-1

No Detections.

Client Sample ID: TB: AIEA GULCH WELLS PUMP 1

Lab Sample ID: 380-123575-2

No Detections.

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-123575-3

No Detections.

Client Sample ID: TB: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-123575-4

No Detections.

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

This Detection Summary does not include radiochemical test results.

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-123575-1
SDG: Weekly

Client Sample ID: AIEA GULCH WELLS PUMP 1

Lab Sample ID: 380-123575-1

Date Collected: 11/20/24 10:05

Matrix: Water

Date Received: 11/22/24 09:43

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		11/25/24 10:43	11/26/24 19:00	1
2,4'-DDD	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:00	1
2,4'-DDE	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:00	1
2,4'-DDT	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:00	1
2,4-Dinitrotoluene	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:00	1
2,6-Dinitrotoluene	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:00	1
2-Methylnaphthalene	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:00	1
4,4'-DDD	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:00	1
4,4'-DDE	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:00	1
4,4'-DDT	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:00	1
Acenaphthene	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:00	1
Acenaphthylene	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:00	1
Acetochlor	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:00	1
Alachlor	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 19:00	1
alpha-BHC	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:00	1
alpha-Chlordane	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 19:00	1
Anthracene	<0.020		0.020	ug/L		11/25/24 10:43	11/26/24 19:00	1
Atrazine	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 19:00	1
Benz(a)anthracene	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 19:00	1
Benzo[a]pyrene	<0.020		0.020	ug/L		11/25/24 10:43	11/26/24 19:00	1
Benzo[b]fluoranthene	<0.020		0.020	ug/L		11/25/24 10:43	11/26/24 19:00	1
Benzo[g,h,i]perylene	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 19:00	1
Benzo[k]fluoranthene	<0.020		0.020	ug/L		11/25/24 10:43	11/26/24 19:00	1
beta-BHC	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:00	1
Bis(2-ethylhexyl) phthalate	<0.59		0.59	ug/L		11/25/24 10:43	11/26/24 19:00	1
Bromacil	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:00	1
Butachlor	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 19:00	1
Butylbenzylphthalate	<0.49		0.49	ug/L		11/25/24 10:43	11/26/24 19:00	1
Chlorobenzilate	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:00	1
Chloroneb	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:00	1
Chlorothalonil (Draconil, Bravo)	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:00	1
Chlorpyrifos	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 19:00	1
Chrysene	<0.020		0.020	ug/L		11/25/24 10:43	11/26/24 19:00	1
delta-BHC	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:00	1
Di(2-ethylhexyl)adipate	<0.59		0.59	ug/L		11/25/24 10:43	11/26/24 19:00	1
Dibenz(a,h)anthracene	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 19:00	1
Diclorvos (DDVP)	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 19:00	1
Dieldrin	<0.0098		0.0098	ug/L		11/25/24 10:43	11/26/24 19:00	1
Diethylphthalate	<0.49		0.49	ug/L		11/25/24 10:43	11/26/24 19:00	1
Dimethylphthalate	<0.49		0.49	ug/L		11/25/24 10:43	11/26/24 19:00	1
Di-n-butyl phthalate	<0.98		0.98	ug/L		11/25/24 10:43	11/26/24 19:00	1
Di-n-octyl phthalate	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:00	1
Endosulfan I (Alpha)	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:00	1
Endosulfan II (Beta)	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:00	1
Endosulfan sulfate	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:00	1
Endrin	<0.0098		0.0098	ug/L		11/25/24 10:43	11/26/24 19:00	1
Endrin aldehyde	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:00	1
EPTC	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:00	1
Fluoranthene	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:00	1

Client Sample Results

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

Job ID: 380-123575-1
SDG: Weekly

Client Sample ID: AIEA GULCH WELLS PUMP 1

Lab Sample ID: 380-123575-1

Date Collected: 11/20/24 10:05

Matrix: Water

Date Received: 11/22/24 09:43

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		11/25/24 10:43	11/26/24 19:00	1
gamma-Chlordane	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 19:00	1
Heptachlor	<0.0098		0.0098	ug/L		11/25/24 10:43	11/26/24 19:00	1
Heptachlor epoxide (isomer B)	<0.0098		0.0098	ug/L		11/25/24 10:43	11/26/24 19:00	1
Hexachlorobenzene	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 19:00	1
Hexachlorocyclopentadiene	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 19:00	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 19:00	1
Isophorone	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:00	1
Lindane	<0.0098		0.0098	ug/L		11/25/24 10:43	11/26/24 19:00	1
Malathion	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:00	1
Methoxychlor	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 19:00	1
Metolachlor	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 19:00	1
Molinate	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:00	1
Naphthalene	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:00	1
Parathion	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:00	1
Pendimethalin (Penoxaline)	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:00	1
Phenanthrene	<0.039		0.039	ug/L		11/25/24 10:43	11/26/24 19:00	1
Propachlor	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 19:00	1
Pyrene	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 19:00	1
Simazine	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 19:00	1
Terbacil	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:00	1
Terbutylazine	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:00	1
Thiobencarb	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:00	1
Total Permethrin (mixed isomers)	<0.20		0.20	ug/L		11/25/24 10:43	11/26/24 19:00	1
trans-Nonachlor	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 19:00	1
Trifluralin	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:00	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	11/25/24 10:43	11/26/24 19:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	99		70 - 130	11/25/24 10:43	11/26/24 19:00	1
Perylene-d12	94		70 - 130	11/25/24 10:43	11/26/24 19:00	1
Triphenylphosphate	97		70 - 130	11/25/24 10:43	11/26/24 19:00	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.19		0.19	ug/L		11/25/24 19:13	12/06/24 16:12	1
2-Methylnaphthalene	<0.19		0.19	ug/L		11/25/24 19:13	12/06/24 16:12	1
Acenaphthene	<0.19		0.19	ug/L		11/25/24 19:13	12/06/24 16:12	1
Acenaphthylene	<0.19		0.19	ug/L		11/25/24 19:13	12/06/24 16:12	1
Anthracene	<0.19		0.19	ug/L		11/25/24 19:13	12/06/24 16:12	1
Benzo[a]anthracene	<0.19		0.19	ug/L		11/25/24 19:13	12/06/24 16:12	1
Benzo[a]pyrene	<0.19		0.19	ug/L		11/25/24 19:13	12/06/24 16:12	1
Benzo[b]fluoranthene	<0.19		0.19	ug/L		11/25/24 19:13	12/06/24 16:12	1
Benzo[g,h,i]perylene	<0.19		0.19	ug/L		11/25/24 19:13	12/06/24 16:12	1
Benzo[k]fluoranthene	<0.19		0.19	ug/L		11/25/24 19:13	12/06/24 16:12	1
Chrysene	<0.19		0.19	ug/L		11/25/24 19:13	12/06/24 16:12	1
Dibenz(a,h)anthracene	<0.19		0.19	ug/L		11/25/24 19:13	12/06/24 16:12	1
Fluoranthene	<0.19		0.19	ug/L		11/25/24 19:13	12/06/24 16:12	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-123575-1
SDG: Weekly

Client Sample ID: AIEA GULCH WELLS PUMP 1

Lab Sample ID: 380-123575-1

Date Collected: 11/20/24 10:05

Matrix: Water

Date Received: 11/22/24 09:43

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	<0.19		0.19	ug/L		11/25/24 19:13	12/06/24 16:12	1
Indeno[1,2,3-cd]pyrene	<0.19		0.19	ug/L		11/25/24 19:13	12/06/24 16:12	1
Naphthalene	<0.19		0.19	ug/L		11/25/24 19:13	12/06/24 16:12	1
Phenanthrene	<0.19		0.19	ug/L		11/25/24 19:13	12/06/24 16:12	1
Pyrene	<0.19		0.19	ug/L		11/25/24 19:13	12/06/24 16:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	83		28 - 127	11/25/24 19:13	12/06/24 16:12	1
2-Fluorobiphenyl (Surr)	77		31 - 120	11/25/24 19:13	12/06/24 16:12	1
2-Fluorophenol (Surr)	49		17 - 120	11/25/24 19:13	12/06/24 16:12	1
Nitrobenzene-d5 (Surr)	84		27 - 120	11/25/24 19:13	12/06/24 16:12	1
Phenol-d6 (Surr)	29		10 - 120	11/25/24 19:13	12/06/24 16:12	1
p-Terphenyl-d14 (Surr)	87		45 - 120	11/25/24 19:13	12/06/24 16:12	1

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

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Methylene Chloride	15	T J N	ug/L		1.51	75-09-2	11/25/24 19:13	12/11/24 12:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	68		33 - 139	11/25/24 19:13	12/11/24 12:57	1
2-Fluorobiphenyl (Surr)	84		33 - 126	11/25/24 19:13	12/11/24 12:57	1
2-Fluorophenol (Surr)	45		12 - 120	11/25/24 19:13	12/11/24 12:57	1
Nitrobenzene-d5 (Surr)	83		36 - 120	11/25/24 19:13	12/11/24 12:57	1
Phenol-d6 (Surr)	23		10 - 120	11/25/24 19:13	12/11/24 12:57	1
p-Terphenyl-d14 (Surr)	81		47 - 131	11/25/24 19:13	12/11/24 12:57	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			11/29/24 18:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		38 - 134		11/29/24 18:45	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)	<26		26	ug/L		11/26/24 17:51	11/29/24 15:55	1
Motor Oil Range Organics [C24-C36]	<26		26	ug/L		11/26/24 17:51	11/29/24 15:55	1
C8-C18	<26		26	ug/L		11/26/24 17:51	11/29/24 15:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	76		60 - 130	11/26/24 17:51	11/29/24 15:55	1

Client Sample ID: TB: AIEA GULCH WELLS PUMP 1

Lab Sample ID: 380-123575-2

Date Collected: 11/20/24 10:05

Matrix: Water

Date Received: 11/22/24 09:43

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			11/29/24 16:35	1

Client Sample Results

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

Job ID: 380-123575-1
SDG: Weekly

Client Sample ID: TB: AIEA GULCH WELLS PUMP 1

Lab Sample ID: 380-123575-2

Date Collected: 11/20/24 10:05

Matrix: Water

Date Received: 11/22/24 09:43

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		38 - 134		11/29/24 16:35	1

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-123575-3

Date Collected: 11/20/24 10:32

Matrix: Water

Date Received: 11/22/24 09:43

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		11/25/24 10:43	11/26/24 19:20	1
2,4'-DDD	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:20	1
2,4'-DDE	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:20	1
2,4'-DDT	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:20	1
2,4-Dinitrotoluene	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:20	1
2,6-Dinitrotoluene	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:20	1
2-Methylnaphthalene	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:20	1
4,4'-DDD	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:20	1
4,4'-DDE	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:20	1
4,4'-DDT	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:20	1
Acenaphthene	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:20	1
Acenaphthylene	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:20	1
Acetochlor	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:20	1
Alachlor	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 19:20	1
alpha-BHC	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:20	1
alpha-Chlordane	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 19:20	1
Anthracene	<0.020		0.020	ug/L		11/25/24 10:43	11/26/24 19:20	1
Atrazine	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 19:20	1
Benz(a)anthracene	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 19:20	1
Benzo[a]pyrene	<0.020		0.020	ug/L		11/25/24 10:43	11/26/24 19:20	1
Benzo[b]fluoranthene	<0.020		0.020	ug/L		11/25/24 10:43	11/26/24 19:20	1
Benzo[g,h,i]perylene	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 19:20	1
Benzo[k]fluoranthene	<0.020		0.020	ug/L		11/25/24 10:43	11/26/24 19:20	1
beta-BHC	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:20	1
Bis(2-ethylhexyl) phthalate	<0.59		0.59	ug/L		11/25/24 10:43	11/26/24 19:20	1
Bromacil	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:20	1
Butachlor	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 19:20	1
Butylbenzylphthalate	<0.49		0.49	ug/L		11/25/24 10:43	11/26/24 19:20	1
Chlorobenzilate	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:20	1
Chloroneb	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:20	1
Chlorothalonil (Draconil, Bravo)	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:20	1
Chlorpyrifos	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 19:20	1
Chrysene	<0.020		0.020	ug/L		11/25/24 10:43	11/26/24 19:20	1
delta-BHC	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:20	1
Di(2-ethylhexyl)adipate	<0.59		0.59	ug/L		11/25/24 10:43	11/26/24 19:20	1
Dibenz(a,h)anthracene	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 19:20	1
Diclorvos (DDVP)	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 19:20	1
Dieldrin	<0.0098		0.0098	ug/L		11/25/24 10:43	11/26/24 19:20	1
Diethylphthalate	<0.49		0.49	ug/L		11/25/24 10:43	11/26/24 19:20	1
Dimethylphthalate	<0.49		0.49	ug/L		11/25/24 10:43	11/26/24 19:20	1
Di-n-butyl phthalate	<0.98		0.98	ug/L		11/25/24 10:43	11/26/24 19:20	1
Di-n-octyl phthalate	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:20	1

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Client Sample Results

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

Job ID: 380-123575-1
SDG: Weekly

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-123575-3

Date Collected: 11/20/24 10:32

Matrix: Water

Date Received: 11/22/24 09:43

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Endosulfan I (Alpha)	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:20	1
Endosulfan II (Beta)	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:20	1
Endosulfan sulfate	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:20	1
Endrin	<0.0098		0.0098	ug/L		11/25/24 10:43	11/26/24 19:20	1
Endrin aldehyde	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:20	1
EPTC	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:20	1
Fluoranthene	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:20	1
Fluorene	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 19:20	1
gamma-Chlordane	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 19:20	1
Heptachlor	<0.0098		0.0098	ug/L		11/25/24 10:43	11/26/24 19:20	1
Heptachlor epoxide (isomer B)	<0.0098		0.0098	ug/L		11/25/24 10:43	11/26/24 19:20	1
Hexachlorobenzene	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 19:20	1
Hexachlorocyclopentadiene	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 19:20	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 19:20	1
Isophorone	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:20	1
Lindane	<0.0098		0.0098	ug/L		11/25/24 10:43	11/26/24 19:20	1
Malathion	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:20	1
Methoxychlor	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 19:20	1
Metolachlor	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 19:20	1
Molinate	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:20	1
Naphthalene	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:20	1
Parathion	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:20	1
Pendimethalin (Penoxaline)	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:20	1
Phenanthrene	<0.039		0.039	ug/L		11/25/24 10:43	11/26/24 19:20	1
Propachlor	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 19:20	1
Pyrene	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 19:20	1
Simazine	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 19:20	1
Terbacil	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:20	1
Terbutylazine	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:20	1
Thiobencarb	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:20	1
Total Permethrin (mixed isomers)	<0.20		0.20	ug/L		11/25/24 10:43	11/26/24 19:20	1
trans-Nonachlor	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 19:20	1
Trifluralin	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 19:20	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	0.62	T J	ug/L		4.48	N/A	11/25/24 10:43	11/26/24 19:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	99		70 - 130	11/25/24 10:43	11/26/24 19:20	1
Perylene-d12	95		70 - 130	11/25/24 10:43	11/26/24 19:20	1
Triphenylphosphate	98		70 - 130	11/25/24 10:43	11/26/24 19:20	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.19		0.19	ug/L		11/25/24 19:13	12/06/24 16:57	1
2-Methylnaphthalene	<0.19		0.19	ug/L		11/25/24 19:13	12/06/24 16:57	1
Acenaphthene	<0.19		0.19	ug/L		11/25/24 19:13	12/06/24 16:57	1
Acenaphthylene	<0.19		0.19	ug/L		11/25/24 19:13	12/06/24 16:57	1
Anthracene	<0.19		0.19	ug/L		11/25/24 19:13	12/06/24 16:57	1
Benzo[a]anthracene	<0.19		0.19	ug/L		11/25/24 19:13	12/06/24 16:57	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-123575-1
SDG: Weekly

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-123575-3

Date Collected: 11/20/24 10:32

Matrix: Water

Date Received: 11/22/24 09:43

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	<0.19		0.19	ug/L		11/25/24 19:13	12/06/24 16:57	1
Benzo[b]fluoranthene	<0.19		0.19	ug/L		11/25/24 19:13	12/06/24 16:57	1
Benzo[g,h,i]perylene	<0.19		0.19	ug/L		11/25/24 19:13	12/06/24 16:57	1
Benzo[k]fluoranthene	<0.19		0.19	ug/L		11/25/24 19:13	12/06/24 16:57	1
Chrysene	<0.19		0.19	ug/L		11/25/24 19:13	12/06/24 16:57	1
Dibenz[a,h]anthracene	<0.19		0.19	ug/L		11/25/24 19:13	12/06/24 16:57	1
Fluoranthene	<0.19		0.19	ug/L		11/25/24 19:13	12/06/24 16:57	1
Fluorene	<0.19		0.19	ug/L		11/25/24 19:13	12/06/24 16:57	1
Indeno[1,2,3-cd]pyrene	<0.19		0.19	ug/L		11/25/24 19:13	12/06/24 16:57	1
Naphthalene	<0.19		0.19	ug/L		11/25/24 19:13	12/06/24 16:57	1
Phenanthrene	<0.19		0.19	ug/L		11/25/24 19:13	12/06/24 16:57	1
Pyrene	<0.19		0.19	ug/L		11/25/24 19:13	12/06/24 16:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	79		28 - 127	11/25/24 19:13	12/06/24 16:57	1
2-Fluorobiphenyl (Surr)	77		31 - 120	11/25/24 19:13	12/06/24 16:57	1
2-Fluorophenol (Surr)	58		17 - 120	11/25/24 19:13	12/06/24 16:57	1
Nitrobenzene-d5 (Surr)	87		27 - 120	11/25/24 19:13	12/06/24 16:57	1
Phenol-d6 (Surr)	36		10 - 120	11/25/24 19:13	12/06/24 16:57	1
p-Terphenyl-d14 (Surr)	89		45 - 120	11/25/24 19:13	12/06/24 16:57	1

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

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Cyclic octaatomic sulfur	58	T J N	ug/L		9.94	10544-50-0	11/25/24 19:13	12/11/24 13:21	1
Eicosane	16	T J N	ug/L		12.17	112-95-8	11/25/24 19:13	12/11/24 13:21	1
Octadecane	24	T J N	ug/L		12.72	593-45-3	11/25/24 19:13	12/11/24 13:21	1
Eicosane	29	T J N	ug/L		13.32	112-95-8	11/25/24 19:13	12/11/24 13:21	1
Octadecane	26	T J N	ug/L		13.98	593-45-3	11/25/24 19:13	12/11/24 13:21	1
Eicosane	19	T J N	ug/L		14.69	112-95-8	11/25/24 19:13	12/11/24 13:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	69		33 - 139	11/25/24 19:13	12/11/24 13:21	1
2-Fluorobiphenyl (Surr)	84		33 - 126	11/25/24 19:13	12/11/24 13:21	1
2-Fluorophenol (Surr)	51		12 - 120	11/25/24 19:13	12/11/24 13:21	1
Nitrobenzene-d5 (Surr)	85		36 - 120	11/25/24 19:13	12/11/24 13:21	1
Phenol-d6 (Surr)	29		10 - 120	11/25/24 19:13	12/11/24 13:21	1
p-Terphenyl-d14 (Surr)	88		47 - 131	11/25/24 19:13	12/11/24 13:21	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			11/29/24 19:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		38 - 134		11/29/24 19:11	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		11/26/24 17:51	11/29/24 16:17	1
Motor Oil Range Organics [C24-C36]	<26		26	ug/L		11/26/24 17:51	11/29/24 16:17	1
C8-C18	<26		26	ug/L		11/26/24 17:51	11/29/24 16:17	1

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Client Sample Results

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

Job ID: 380-123575-1
 SDG: Weekly

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-123575-3

Date Collected: 11/20/24 10:32

Matrix: Water

Date Received: 11/22/24 09:43

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>n</i> -Octacosane (Surr)	70		60 - 130	11/26/24 17:51	11/29/24 16:17	1

Client Sample ID: TB: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-123575-4

Date Collected: 11/20/24 10:32

Matrix: Water

Date Received: 11/22/24 09:43

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			11/29/24 17:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		38 - 134		11/29/24 17:01	1

Action Limit Summary

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

Job ID: 380-123575-1
SDG: Weekly

Client Sample ID: AIEA GULCH WELLS PUMP 1

Lab Sample ID: 380-123575-1

Compliance Check

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

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

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-123575-3

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		ug/L	0.4		0.0098	525.2	Total/NA
Heptachlor epoxide (isomer B)	<0.0098		ug/L	0.2		0.0098	525.2	Total/NA
Hexachlorobenzene	<0.049		ug/L	1		0.049	525.2	Total/NA
Hexachlorocyclopentadiene	<0.049		ug/L	50		0.049	525.2	Total/NA
Lindane	<0.0098		ug/L	0.2		0.0098	525.2	Total/NA
Methoxychlor	<0.049		ug/L	40		0.049	525.2	Total/NA
Simazine	<0.049		ug/L	4		0.049	525.2	Total/NA
Benzo[a]pyrene	<0.19		ug/L	0.2		0.19	625.1 SIM	Total/NA

Surrogate Summary

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

Job ID: 380-123575-1
SDG: Weekly

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		2NMX (70-130)	PRY (70-130)	TPP (70-130)
380-123575-1	AIEA GULCH WELLS PUMP 1	99	94	97
380-123575-3	AIEA GULCH WELLS PUMP 2	99	95	98
380-123576-G-1-B MSD	Matrix Spike Duplicate	100	98	106
380-123576-H-1-A MS	Matrix Spike	98	98	105
LCS 380-120635/23-A	Lab Control Sample	99	96	104
MB 380-120635/21-A	Method Blank	99	99	103
MRL 380-120635/22-A	Lab Control Sample	98	85	104

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

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (33-139)	FBP (33-126)	2FP (12-120)	NBZ (36-120)	PHL6 (10-120)	TPHd14 (47-131)
380-123575-1	AIEA GULCH WELLS PUMP 1	68	84	45	83	23	81
380-123575-3	AIEA GULCH WELLS PUMP 2	69	84	51	85	29	88
MB 570-507118/1-A	Method Blank	60	79	45	77	25	77

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

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (28-127)	FBP (31-120)	2FP (17-120)	NBZ (27-120)	PHL6 (10-120)	TPHd14 (45-120)
380-123575-1	AIEA GULCH WELLS PUMP 1	83	77	49	84	29	87
380-123575-3	AIEA GULCH WELLS PUMP 2	79	77	58	87	36	89
380-123576-A-1-B MS	Matrix Spike	87	80	57	73	37	87
380-123576-A-1-C MSD	Matrix Spike Duplicate	81	74	53	68	37	86
LCS 570-507118/2-A	Lab Control Sample	84	77	61	70	43	81
LCSD 570-507118/3-A	Lab Control Sample Dup	75	68	54	64	38	74
MB 570-507118/1-A	Method Blank	69	72	54	82	34	80

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

Surrogate Summary

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

Job ID: 380-123575-1
 SDG: Weekly

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (38-134)	
380-123126-C-3 MS	Matrix Spike	94	
380-123126-C-3 MSD	Matrix Spike Duplicate	93	
380-123575-1	AIEA GULCH WELLS PUMP 1	84	
380-123575-2	TB: AIEA GULCH WELLS PUMP 1	85	
380-123575-3	AIEA GULCH WELLS PUMP 2	85	
380-123575-4	TB: AIEA GULCH WELLS PUMP 2	90	
LCS 570-508548/4	Lab Control Sample	93	
LCSD 570-508548/5	Lab Control Sample Dup	93	
MB 570-508548/6	Method Blank	85	
MRL 570-508548/3	Lab Control Sample	89	
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	OTCSN1 (60-130)	
380-123575-1	AIEA GULCH WELLS PUMP 1	76	
380-123575-3	AIEA GULCH WELLS PUMP 2	70	
380-123576-C-1-B MS	Matrix Spike	76	
380-123576-C-1-C MSD	Matrix Spike Duplicate	76	
LCS 570-507978/2-A	Lab Control Sample	77	
LCSD 570-507978/3-A	Lab Control Sample Dup	73	
MB 570-507978/1-A	Method Blank	74	
MRL 570-507978/4-A	Lab Control Sample	72	
Surrogate Legend			
OTCSN = n-Octacosane (Surr)			

QC Sample Results

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

Job ID: 380-123575-1
SDG: Weekly

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

Lab Sample ID: MB 380-120635/21-A
Matrix: Water
Analysis Batch: 120827

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 120635

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
1-Methylnaphthalene	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 12:34	1
2,4'-DDD	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 12:34	1
2,4'-DDE	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 12:34	1
2,4'-DDT	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 12:34	1
2,4-Dinitrotoluene	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 12:34	1
2,6-Dinitrotoluene	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 12:34	1
2-Methylnaphthalene	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 12:34	1
4,4'-DDD	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 12:34	1
4,4'-DDE	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 12:34	1
4,4'-DDT	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 12:34	1
Acenaphthene	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 12:34	1
Acenaphthylene	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 12:34	1
Acetochlor	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 12:34	1
Alachlor	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 12:34	1
alpha-BHC	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 12:34	1
alpha-Chlordane	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 12:34	1
Anthracene	<0.020		0.020	ug/L		11/25/24 10:43	11/26/24 12:34	1
Atrazine	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 12:34	1
Benz(a)anthracene	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 12:34	1
Benzo[a]pyrene	<0.020		0.020	ug/L		11/25/24 10:43	11/26/24 12:34	1
Benzo[b]fluoranthene	<0.020		0.020	ug/L		11/25/24 10:43	11/26/24 12:34	1
Benzo[g,h,i]perylene	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 12:34	1
Benzo[k]fluoranthene	<0.020		0.020	ug/L		11/25/24 10:43	11/26/24 12:34	1
beta-BHC	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 12:34	1
Bis(2-ethylhexyl) phthalate	<0.59		0.59	ug/L		11/25/24 10:43	11/26/24 12:34	1
Bromacil	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 12:34	1
Butachlor	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 12:34	1
Butylbenzylphthalate	<0.49		0.49	ug/L		11/25/24 10:43	11/26/24 12:34	1
Chlorobenzilate	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 12:34	1
Chloroneb	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 12:34	1
Chlorothalonil (Draconil, Bravo)	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 12:34	1
Chlorpyrifos	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 12:34	1
Chrysene	<0.020		0.020	ug/L		11/25/24 10:43	11/26/24 12:34	1
delta-BHC	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 12:34	1
Di(2-ethylhexyl)adipate	<0.59		0.59	ug/L		11/25/24 10:43	11/26/24 12:34	1
Dibenz(a,h)anthracene	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 12:34	1
Diclorvos (DDVP)	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 12:34	1
Dieldrin	<0.0098		0.0098	ug/L		11/25/24 10:43	11/26/24 12:34	1
Diethylphthalate	<0.49		0.49	ug/L		11/25/24 10:43	11/26/24 12:34	1
Dimethylphthalate	<0.49		0.49	ug/L		11/25/24 10:43	11/26/24 12:34	1
Di-n-butyl phthalate	<0.98		0.98	ug/L		11/25/24 10:43	11/26/24 12:34	1
Di-n-octyl phthalate	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 12:34	1
Endosulfan I (Alpha)	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 12:34	1
Endosulfan II (Beta)	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 12:34	1
Endosulfan sulfate	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 12:34	1
Endrin	<0.0098		0.0098	ug/L		11/25/24 10:43	11/26/24 12:34	1
Endrin aldehyde	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 12:34	1
EPTC	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 12:34	1

QC Sample Results

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

Job ID: 380-123575-1
SDG: Weekly

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

Lab Sample ID: MB 380-120635/21-A
Matrix: Water
Analysis Batch: 120827

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 120635

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Fluoranthene	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 12:34	1
Fluorene	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 12:34	1
gamma-Chlordane	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 12:34	1
Heptachlor	<0.0098		0.0098	ug/L		11/25/24 10:43	11/26/24 12:34	1
Heptachlor epoxide (isomer B)	<0.0098		0.0098	ug/L		11/25/24 10:43	11/26/24 12:34	1
Hexachlorobenzene	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 12:34	1
Hexachlorocyclopentadiene	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 12:34	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 12:34	1
Isophorone	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 12:34	1
Lindane	<0.0098		0.0098	ug/L		11/25/24 10:43	11/26/24 12:34	1
Malathion	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 12:34	1
Methoxychlor	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 12:34	1
Metolachlor	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 12:34	1
Molinate	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 12:34	1
Naphthalene	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 12:34	1
Parathion	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 12:34	1
Pendimethalin (Penoxaline)	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 12:34	1
Phenanthrene	<0.039		0.039	ug/L		11/25/24 10:43	11/26/24 12:34	1
Propachlor	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 12:34	1
Pyrene	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 12:34	1
Simazine	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 12:34	1
Terbacil	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 12:34	1
Terbutylazine	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 12:34	1
Thiobencarb	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 12:34	1
Total Permethrin (mixed isomers)	<0.20		0.20	ug/L		11/25/24 10:43	11/26/24 12:34	1
trans-Nonachlor	<0.049		0.049	ug/L		11/25/24 10:43	11/26/24 12:34	1
Trifluralin	<0.098		0.098	ug/L		11/25/24 10:43	11/26/24 12:34	1

Tentatively Identified Compound	MB	MB	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
	Est. Result	Qualifier							
Cyclopentasiloxane, decamethyl-	0.664	T J N	ug/L		3.24	541-02-6	11/25/24 10:43	11/26/24 12:34	1
Cyclohexasiloxane, dodecamethyl-	0.729	T J N	ug/L		3.85	540-97-6	11/25/24 10:43	11/26/24 12:34	1
9-Octadecenamamide, (Z)-	2.01	T J N	ug/L		7.85	301-02-0	11/25/24 10:43	11/26/24 12:34	1
Unknown	1.62	T J	ug/L		10.45	N/A	11/25/24 10:43	11/26/24 12:34	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Nitro-m-xylene	99		70 - 130	11/25/24 10:43	11/26/24 12:34	1
Perylene-d12	99		70 - 130	11/25/24 10:43	11/26/24 12:34	1
Triphenylphosphate	103		70 - 130	11/25/24 10:43	11/26/24 12:34	1

Lab Sample ID: LCS 380-120635/23-A
Matrix: Water
Analysis Batch: 120827

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 120635

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
1-Methylnaphthalene	1.94	1.87		ug/L		96	70 - 130
2,4'-DDD	1.94	2.08		ug/L		107	70 - 130
2,4'-DDE	1.94	2.04		ug/L		105	70 - 130
2,4'-DDT	1.94	2.10		ug/L		108	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-123575-1
SDG: Weekly

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

Lab Sample ID: LCS 380-120635/23-A

Matrix: Water

Analysis Batch: 120827

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 120635

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec Limits
	Added	Result	Qualifier				
2,4-Dinitrotoluene	1.94	1.62		ug/L		83	70 - 130
2,6-Dinitrotoluene	1.94	1.65		ug/L		85	70 - 130
2-Methylnaphthalene	1.94	1.92		ug/L		99	70 - 130
4,4'-DDD	1.94	2.16		ug/L		111	70 - 130
4,4'-DDE	1.94	1.98		ug/L		102	70 - 130
4,4'-DDT	1.94	2.17		ug/L		112	70 - 130
Acenaphthene	1.94	1.86		ug/L		96	70 - 130
Acenaphthylene	1.94	1.95		ug/L		100	70 - 130
Acetochlor	1.94	2.07		ug/L		106	70 - 130
Alachlor	1.94	2.12		ug/L		109	70 - 130
alpha-BHC	1.94	2.03		ug/L		104	70 - 130
alpha-Chlordane	1.94	2.11		ug/L		109	70 - 130
Anthracene	1.94	1.85		ug/L		95	70 - 130
Atrazine	1.94	2.11		ug/L		109	70 - 130
Benz(a)anthracene	1.94	1.95		ug/L		100	70 - 130
Benzo[a]pyrene	1.94	2.04		ug/L		105	70 - 130
Benzo[b]fluoranthene	1.94	2.16		ug/L		111	70 - 130
Benzo[g,h,i]perylene	1.94	2.14		ug/L		110	70 - 130
Benzo[k]fluoranthene	1.94	2.15		ug/L		111	70 - 130
beta-BHC	1.94	2.04		ug/L		105	70 - 130
Bis(2-ethylhexyl) phthalate	1.94	2.15		ug/L		110	70 - 130
Bromacil	1.94	1.92		ug/L		99	70 - 130
Butachlor	1.94	2.26		ug/L		116	70 - 130
Butylbenzylphthalate	1.94	2.36		ug/L		121	70 - 130
Chlorobenzilate	1.94	1.83		ug/L		94	70 - 130
Chloroneb	1.94	2.35		ug/L		121	70 - 130
Chlorothalonil (Draconil, Bravo)	1.94	2.34		ug/L		120	70 - 130
Chlorpyrifos	1.94	2.11		ug/L		108	70 - 130
Chrysene	1.94	1.91		ug/L		98	70 - 130
delta-BHC	1.94	1.99		ug/L		103	70 - 130
Di(2-ethylhexyl)adipate	1.94	2.34		ug/L		121	70 - 130
Dibenz(a,h)anthracene	1.94	1.92		ug/L		99	70 - 130
Diclorvos (DDVP)	1.94	2.07		ug/L		107	70 - 130
Dieldrin	1.94	2.05		ug/L		105	70 - 130
Diethylphthalate	1.94	2.07		ug/L		107	70 - 130
Dimethylphthalate	1.94	2.04		ug/L		105	70 - 130
Di-n-butyl phthalate	3.89	4.21		ug/L		108	70 - 130
Di-n-octyl phthalate	1.94	1.93		ug/L		99	70 - 130
Endosulfan I (Alpha)	1.94	1.99		ug/L		102	70 - 130
Endosulfan II (Beta)	1.94	2.12		ug/L		109	70 - 130
Endosulfan sulfate	1.94	2.16		ug/L		111	70 - 130
Endrin	1.94	2.06		ug/L		106	70 - 130
Endrin aldehyde	1.94	1.79		ug/L		92	60 - 130
EPTC	1.94	2.02		ug/L		104	70 - 130
Fluoranthene	1.94	2.11		ug/L		109	70 - 130
Fluorene	1.94	2.00		ug/L		103	70 - 130
gamma-Chlordane	1.94	2.09		ug/L		108	70 - 130
Heptachlor	1.94	1.96		ug/L		101	70 - 130
Heptachlor epoxide (isomer B)	1.94	2.00		ug/L		103	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-123575-1
SDG: Weekly

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

Lab Sample ID: LCS 380-120635/23-A

Matrix: Water

Analysis Batch: 120827

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 120635

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Hexachlorobenzene	1.94	1.84		ug/L		95	70 - 130
Hexachlorocyclopentadiene	1.94	2.07		ug/L		107	70 - 130
Indeno[1,2,3-cd]pyrene	1.94	1.96		ug/L		101	70 - 130
Isophorone	1.94	2.01		ug/L		103	70 - 130
Lindane	1.94	2.02		ug/L		104	70 - 130
Malathion	1.94	2.20		ug/L		113	70 - 130
Methoxychlor	1.94	1.98		ug/L		102	70 - 130
Metolachlor	1.94	2.16		ug/L		111	70 - 130
Molinate	1.94	2.06		ug/L		106	70 - 130
Naphthalene	1.94	1.99		ug/L		102	70 - 130
Parathion	1.94	2.08		ug/L		107	70 - 130
Pendimethalin (Penoxaline)	1.94	1.87		ug/L		96	70 - 130
Phenanthrene	1.94	1.89		ug/L		97	70 - 130
Propachlor	1.94	2.08		ug/L		107	70 - 130
Pyrene	1.94	2.09		ug/L		108	70 - 130
Simazine	1.94	2.19		ug/L		112	70 - 130
Terbacil	1.94	2.12		ug/L		109	70 - 130
Terbutylazine	1.94	2.15		ug/L		111	70 - 130
Thiobencarb	1.94	2.10		ug/L		108	70 - 130
trans-Nonachlor	1.94	2.07		ug/L		107	70 - 130
Trifluralin	1.94	1.73		ug/L		89	70 - 130

Surrogate	LCS		Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	99		70 - 130
Perylene-d12	96		70 - 130
Triphenylphosphate	104		70 - 130

Lab Sample ID: MRL 380-120635/22-A

Matrix: Water

Analysis Batch: 120827

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 120635

Analyte	Spike Added	MRL	MRL	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
1-Methylnaphthalene	0.0973	0.106		ug/L		109	50 - 150
2,4'-DDD	0.0973	0.0908	J	ug/L		93	50 - 150
2,4'-DDE	0.0973	0.102		ug/L		105	50 - 150
2,4'-DDT	0.0973	0.0946	J	ug/L		97	50 - 150
2,4-Dinitrotoluene	0.0973	0.0949	J	ug/L		98	50 - 150
2,6-Dinitrotoluene	0.0973	0.0958	J	ug/L		99	50 - 150
2-Methylnaphthalene	0.0973	0.101		ug/L		103	50 - 150
4,4'-DDD	0.0973	0.107		ug/L		110	50 - 150
4,4'-DDE	0.0973	0.103		ug/L		106	50 - 150
4,4'-DDT	0.0973	0.0981		ug/L		101	50 - 150
Acenaphthene	0.0973	0.0961	J	ug/L		99	50 - 150
Acenaphthylene	0.0973	0.0914	J	ug/L		94	50 - 150
Acetochlor	0.0973	0.117		ug/L		120	50 - 150
Alachlor	0.0486	0.0524		ug/L		108	50 - 150
alpha-BHC	0.0973	0.107		ug/L		110	50 - 150
alpha-Chlordane	0.0243	<0.028		ug/L		102	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-123575-1
SDG: Weekly

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

Lab Sample ID: MRL 380-120635/22-A

Matrix: Water

Analysis Batch: 120827

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 120635

Analyte	Spike	MRL	MRL	Unit	D	%Rec	%Rec Limits
	Added	Result	Qualifier				
Anthracene	0.0195	0.0196		ug/L		101	50 - 150
Atrazine	0.0486	0.0501		ug/L		103	50 - 150
Benz(a)anthracene	0.0486	0.0553		ug/L		114	50 - 150
Benzo[a]pyrene	0.0195	0.0187	J	ug/L		96	50 - 150
Benzo[b]fluoranthene	0.0195	0.0196		ug/L		101	50 - 150
Benzo[g,h,i]perylene	0.0486	0.0392	J	ug/L		81	50 - 150
Benzo[k]fluoranthene	0.0195	0.0193		ug/L		99	50 - 150
beta-BHC	0.0973	0.106		ug/L		109	50 - 150
Bis(2-ethylhexyl) phthalate	0.584	0.591		ug/L		101	50 - 150
Bromacil	0.0973	0.109		ug/L		112	50 - 150
Butachlor	0.0486	0.0567		ug/L		117	50 - 150
Butylbenzylphthalate	0.486	0.616		ug/L		127	50 - 150
Chlorobenzilate	0.0973	0.0843	J	ug/L		87	50 - 150
Chloroneb	0.0973	0.0965	J	ug/L		99	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0973	0.0897	J	ug/L		92	50 - 150
Chlorpyrifos	0.0486	0.0501		ug/L		103	50 - 150
Chrysene	0.0195	0.0195		ug/L		100	50 - 150
delta-BHC	0.0973	0.114		ug/L		117	50 - 150
Di(2-ethylhexyl)adipate	0.584	0.727		ug/L		125	50 - 150
Dibenz(a,h)anthracene	0.0486	0.0503		ug/L		104	50 - 150
Diclorvos (DDVP)	0.0486	0.0566		ug/L		116	50 - 150
Dieldrin	0.00973	0.0131		ug/L		134	50 - 150
Diethylphthalate	0.486	0.523		ug/L		108	50 - 150
Dimethylphthalate	0.486	0.519		ug/L		107	50 - 150
Di-n-butyl phthalate	0.486	0.536	J	ug/L		110	49 - 243
Di-n-octyl phthalate	0.0973	0.0987		ug/L		102	50 - 150
Endosulfan I (Alpha)	0.0973	0.0973		ug/L		100	50 - 150
Endosulfan II (Beta)	0.0973	0.114		ug/L		117	50 - 150
Endosulfan sulfate	0.0973	0.104		ug/L		107	50 - 150
Endrin	0.00973	0.0102		ug/L		105	50 - 150
Endrin aldehyde	0.0973	0.117		ug/L		120	50 - 150
EPTC	0.0973	0.0928	J	ug/L		95	50 - 150
Fluoranthene	0.0973	0.0960	J	ug/L		99	50 - 150
Fluorene	0.0486	0.0503		ug/L		103	50 - 150
gamma-Chlordane	0.0243	0.0221	J	ug/L		91	50 - 150
Heptachlor	0.00973	0.0104		ug/L		107	50 - 150
Heptachlor epoxide (isomer B)	0.00973	0.00941	J	ug/L		97	50 - 150
Hexachlorobenzene	0.0486	0.0425	J	ug/L		87	50 - 150
Hexachlorocyclopentadiene	0.0486	0.0427	J	ug/L		88	50 - 150
Indeno[1,2,3-cd]pyrene	0.0486	0.0482	J	ug/L		99	50 - 150
Isophorone	0.0973	0.120		ug/L		124	50 - 150
Lindane	0.00973	0.0140		ug/L		144	50 - 150
Malathion	0.0973	0.0925	J	ug/L		95	50 - 150
Methoxychlor	0.0486	0.0454	J	ug/L		93	50 - 150
Metolachlor	0.0486	0.0568		ug/L		117	50 - 150
Molinate	0.0973	0.100		ug/L		103	50 - 150
Naphthalene	0.0973	0.124		ug/L		127	50 - 150
Parathion	0.0973	0.0775	J	ug/L		80	50 - 150
Pendimethalin (Penoxaline)	0.0973	0.0825	J	ug/L		85	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-123575-1
SDG: Weekly

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

Lab Sample ID: MRL 380-120635/22-A
Matrix: Water
Analysis Batch: 120827

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 120635

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Phenanthrene	0.0389	0.0428		ug/L		110	50 - 150
Propachlor	0.0486	0.0558		ug/L		115	50 - 150
Pyrene	0.0486	0.0480	J	ug/L		99	50 - 150
Simazine	0.0486	0.0532		ug/L		109	50 - 150
Terbacil	0.0973	0.0924	J	ug/L		95	50 - 150
Terbutylazine	0.0973	0.101		ug/L		103	50 - 150
Thiobencarb	0.0973	0.103		ug/L		106	50 - 150
trans-Nonachlor	0.0243	<0.025		ug/L		96	50 - 150
Trifluralin	0.0973	0.0870	J	ug/L		89	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
2-Nitro-m-xylene	98		70 - 130
Perylene-d12	85		70 - 130
Triphenylphosphate	104		70 - 130

Lab Sample ID: 380-123576-G-1-B MSD
Matrix: Water
Analysis Batch: 120827

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 120635

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	<0.098		1.95	1.87		ug/L		95	70 - 130	0	20
2,4'-DDD	<0.098		1.95	2.09		ug/L		107	70 - 130	0	20
2,4'-DDE	<0.098		1.95	2.03		ug/L		104	70 - 130	1	20
2,4'-DDT	<0.098		1.95	2.07		ug/L		106	70 - 130	0	20
2,4-Dinitrotoluene	<0.098		1.95	1.81		ug/L		93	70 - 130	2	20
2,6-Dinitrotoluene	<0.098		1.95	1.82		ug/L		93	70 - 130	1	20
2-Methylnaphthalene	<0.098		1.95	1.90		ug/L		97	70 - 130	0	20
4,4'-DDD	<0.098		1.95	2.17		ug/L		111	70 - 130	1	20
4,4'-DDE	<0.098		1.95	1.95		ug/L		100	70 - 130	1	20
4,4'-DDT	<0.098		1.95	2.12		ug/L		109	70 - 130	1	20
Acenaphthene	<0.098		1.95	1.85		ug/L		95	70 - 130	1	20
Acenaphthylene	<0.098		1.95	1.98		ug/L		102	70 - 130	1	20
Acetochlor	<0.098		1.95	2.12		ug/L		109	70 - 130	3	20
Alachlor	<0.049		1.95	2.15		ug/L		110	70 - 130	2	20
alpha-BHC	<0.098		1.95	2.04		ug/L		104	70 - 130	0	20
alpha-Chlordane	<0.049		1.95	2.13		ug/L		109	70 - 130	3	20
Anthracene	<0.020		1.95	1.45		ug/L		74	70 - 130	6	20
Atrazine	<0.049		1.95	2.16		ug/L		111	70 - 130	1	20
Benz(a)anthracene	<0.049		1.95	1.92		ug/L		99	70 - 130	1	20
Benzo[a]pyrene	<0.020		1.95	2.00		ug/L		103	70 - 130	3	20
Benzo[b]fluoranthene	<0.020		1.95	2.22		ug/L		114	70 - 130	1	20
Benzo[g,h,i]perylene	<0.049		1.95	2.17		ug/L		111	70 - 130	2	20
Benzo[k]fluoranthene	<0.020		1.95	2.13		ug/L		109	70 - 130	2	20
beta-BHC	<0.098		1.95	2.08		ug/L		107	70 - 130	2	20
Bis(2-ethylhexyl) phthalate	<0.59		1.95	2.06		ug/L		105	70 - 130	3	20
Bromacil	<0.098		1.95	2.06		ug/L		106	70 - 130	1	20
Butachlor	<0.049		1.95	2.30		ug/L		118	70 - 130	1	20
Butylbenzylphthalate	<0.49		1.95	2.41		ug/L		123	70 - 130	2	20

QC Sample Results

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

Job ID: 380-123575-1
SDG: Weekly

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

Lab Sample ID: 380-123576-G-1-B MSD

Client Sample ID: Matrix Spike Duplicate

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 120827

Prep Batch: 120635

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		Limit
Chlorobenzilate	<0.098		1.95	1.92		ug/L		98	70 - 130	3	20
Chloroneb	<0.098		1.95	2.35		ug/L		120	70 - 130	3	20
Chlorothalonil (Draconil, Bravo)	<0.098		1.95	2.35		ug/L		121	70 - 130	7	20
Chlorpyrifos	<0.049		1.95	2.14		ug/L		110	70 - 130	0	20
Chrysene	<0.020		1.95	1.90		ug/L		97	70 - 130	2	20
delta-BHC	<0.098		1.95	2.02		ug/L		103	70 - 130	1	20
Di(2-ethylhexyl)adipate	<0.59		1.95	2.25		ug/L		115	70 - 130	4	20
Dibenz(a,h)anthracene	<0.049		1.95	1.98		ug/L		101	70 - 130	2	20
Diclorvos (DDVP)	<0.049		1.95	2.15		ug/L		110	70 - 130	1	20
Dieldrin	<0.0098		1.95	2.09		ug/L		107	70 - 130	5	20
Diethylphthalate	<0.49		1.95	2.12		ug/L		109	70 - 130	0	20
Dimethylphthalate	<0.49		1.95	2.07		ug/L		106	70 - 130	1	20
Di-n-butyl phthalate	<0.98		3.90	4.32		ug/L		111	70 - 130	1	20
Di-n-octyl phthalate	<0.098		1.95	1.82		ug/L		93	70 - 130	5	20
Endosulfan I (Alpha)	<0.098		1.95	2.04		ug/L		105	70 - 130	2	20
Endosulfan II (Beta)	<0.098		1.95	2.16		ug/L		111	70 - 130	2	20
Endosulfan sulfate	<0.098		1.95	2.21		ug/L		113	70 - 130	3	20
Endrin	<0.0098		1.95	2.10		ug/L		108	70 - 130	2	20
Endrin aldehyde	<0.098		1.95	1.67		ug/L		86	60 - 130	14	20
EPTC	<0.098		1.95	2.03		ug/L		104	70 - 130	2	20
Fluoranthene	<0.098		1.95	2.14		ug/L		110	70 - 130	0	20
Fluorene	<0.049		1.95	1.99		ug/L		102	70 - 130	1	20
gamma-Chlordane	<0.049		1.95	2.13		ug/L		109	70 - 130	3	20
Heptachlor	<0.0098		1.95	1.97		ug/L		101	70 - 130	2	20
Heptachlor epoxide (isomer B)	<0.0098		1.95	2.07		ug/L		106	70 - 130	4	20
Hexachlorobenzene	<0.049		1.95	1.85		ug/L		95	70 - 130	1	20
Hexachlorocyclopentadiene	<0.049		1.95	2.05		ug/L		105	70 - 130	5	20
Indeno[1,2,3-cd]pyrene	<0.049		1.95	2.02		ug/L		103	70 - 130	1	20
Isophorone	<0.098		1.95	2.03		ug/L		104	70 - 130	2	20
Lindane	<0.0098		1.95	2.06		ug/L		106	70 - 130	0	20
Malathion	<0.098		1.95	2.28		ug/L		117	70 - 130	1	20
Methoxychlor	<0.049		1.95	2.11		ug/L		108	70 - 130	1	20
Metolachlor	<0.049		1.95	2.18		ug/L		112	70 - 130	2	20
Molinate	<0.098		1.95	2.08		ug/L		106	70 - 130	1	20
Naphthalene	<0.098		1.95	1.96		ug/L		101	70 - 130	1	20
Parathion	<0.098		1.95	2.21		ug/L		113	70 - 130	3	20
Pendimethalin (Penoxaline)	<0.098		1.95	2.00		ug/L		102	70 - 130	0	20
Phenanthrene	<0.039		1.95	1.89		ug/L		97	70 - 130	1	20
Propachlor	<0.049		1.95	2.12		ug/L		109	70 - 130	0	20
Pyrene	<0.049		1.95	2.11		ug/L		108	70 - 130	1	20
Simazine	<0.049		1.95	2.26		ug/L		116	70 - 130	3	20
Terbacil	<0.098		1.95	2.21		ug/L		113	70 - 130	2	20
Terbutylazine	<0.098		1.95	2.21		ug/L		113	70 - 130	1	20
Thiobencarb	<0.098		1.95	2.15		ug/L		110	70 - 130	0	20
trans-Nonachlor	<0.049		1.95	2.08		ug/L		107	70 - 130	4	20
Trifluralin	<0.098		1.95	1.89		ug/L		97	70 - 130	4	20

QC Sample Results

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

Job ID: 380-123575-1
SDG: Weekly

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

Lab Sample ID: 380-123576-G-1-B MSD

Matrix: Water

Analysis Batch: 120827

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 120635

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2-Nitro-m-xylene	100		70 - 130
Perylene-d12	98		70 - 130
Triphenylphosphate	106		70 - 130

Lab Sample ID: 380-123576-H-1-A MS

Matrix: Water

Analysis Batch: 120827

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 120635

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	<0.098		1.94	1.86		ug/L		95	70 - 130
2,4'-DDD	<0.098		1.94	2.08		ug/L		107	70 - 130
2,4'-DDE	<0.098		1.94	2.01		ug/L		103	70 - 130
2,4'-DDT	<0.098		1.94	2.08		ug/L		107	70 - 130
2,4-Dinitrotoluene	<0.098		1.94	1.86		ug/L		95	70 - 130
2,6-Dinitrotoluene	<0.098		1.94	1.83		ug/L		94	70 - 130
2-Methylnaphthalene	<0.098		1.94	1.90		ug/L		97	70 - 130
4,4'-DDD	<0.098		1.94	2.14		ug/L		110	70 - 130
4,4'-DDE	<0.098		1.94	1.97		ug/L		101	70 - 130
4,4'-DDT	<0.098		1.94	2.14		ug/L		110	70 - 130
Acenaphthene	<0.098		1.94	1.87		ug/L		96	70 - 130
Acenaphthylene	<0.098		1.94	2.00		ug/L		103	70 - 130
Acetochlor	<0.098		1.94	2.07		ug/L		106	70 - 130
Alachlor	<0.049		1.94	2.11		ug/L		108	70 - 130
alpha-BHC	<0.098		1.94	2.04		ug/L		105	70 - 130
alpha-Chlordane	<0.049		1.94	2.07		ug/L		106	70 - 130
Anthracene	<0.020		1.94	1.54		ug/L		79	70 - 130
Atrazine	<0.049		1.94	2.18		ug/L		112	70 - 130
Benz(a)anthracene	<0.049		1.94	1.94		ug/L		100	70 - 130
Benzo[a]pyrene	<0.020		1.94	2.05		ug/L		106	70 - 130
Benzo[b]fluoranthene	<0.020		1.94	2.25		ug/L		116	70 - 130
Benzo[g,h,i]perylene	<0.049		1.94	2.12		ug/L		109	70 - 130
Benzo[k]fluoranthene	<0.020		1.94	2.17		ug/L		112	70 - 130
beta-BHC	<0.098		1.94	2.05		ug/L		105	70 - 130
Bis(2-ethylhexyl) phthalate	<0.59		1.94	1.99		ug/L		102	70 - 130
Bromacil	<0.098		1.94	2.09		ug/L		107	70 - 130
Butachlor	<0.049		1.94	2.27		ug/L		117	70 - 130
Butylbenzylphthalate	<0.49		1.94	2.36		ug/L		121	70 - 130
Chlorobenzilate	<0.098		1.94	1.87		ug/L		96	70 - 130
Chloroneb	<0.098		1.94	2.28		ug/L		117	70 - 130
Chlorothalonil (Draconil, Bravo)	<0.098		1.94	2.52		ug/L		130	70 - 130
Chlorpyrifos	<0.049		1.94	2.15		ug/L		110	70 - 130
Chrysene	<0.020		1.94	1.94		ug/L		100	70 - 130
delta-BHC	<0.098		1.94	2.00		ug/L		103	70 - 130
Di(2-ethylhexyl)adipate	<0.59		1.94	2.17		ug/L		112	70 - 130
Dibenz(a,h)anthracene	<0.049		1.94	1.94		ug/L		100	70 - 130
Diclorvos (DDVP)	<0.049		1.94	2.13		ug/L		109	70 - 130
Dieldrin	<0.0098		1.94	1.99		ug/L		103	70 - 130
Diethylphthalate	<0.49		1.94	2.11		ug/L		108	70 - 130

QC Sample Results

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

Job ID: 380-123575-1
SDG: Weekly

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

Lab Sample ID: 380-123576-H-1-A MS

Client Sample ID: Matrix Spike

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 120827

Prep Batch: 120635

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier	Added	Result	Qualifier				
Dimethylphthalate	<0.49		1.94	2.09		ug/L		108	70 - 130
Di-n-butyl phthalate	<0.98		3.89	4.28		ug/L		110	70 - 130
Di-n-octyl phthalate	<0.098		1.94	1.74		ug/L		89	70 - 130
Endosulfan I (Alpha)	<0.098		1.94	2.00		ug/L		103	70 - 130
Endosulfan II (Beta)	<0.098		1.94	2.12		ug/L		109	70 - 130
Endosulfan sulfate	<0.098		1.94	2.14		ug/L		110	70 - 130
Endrin	<0.0098		1.94	2.05		ug/L		105	70 - 130
Endrin aldehyde	<0.098		1.94	1.46		ug/L		75	60 - 130
EPTC	<0.098		1.94	2.00		ug/L		103	70 - 130
Fluoranthene	<0.098		1.94	2.15		ug/L		110	70 - 130
Fluorene	<0.049		1.94	2.02		ug/L		104	70 - 130
gamma-Chlordane	<0.049		1.94	2.08		ug/L		107	70 - 130
Heptachlor	<0.0098		1.94	1.93		ug/L		99	70 - 130
Heptachlor epoxide (isomer B)	<0.0098		1.94	1.99		ug/L		102	70 - 130
Hexachlorobenzene	<0.049		1.94	1.87		ug/L		96	70 - 130
Hexachlorocyclopentadiene	<0.049		1.94	2.15		ug/L		111	70 - 130
Indeno[1,2,3-cd]pyrene	<0.049		1.94	2.00		ug/L		103	70 - 130
Isophorone	<0.098		1.94	1.99		ug/L		103	70 - 130
Lindane	<0.0098		1.94	2.07		ug/L		106	70 - 130
Malathion	<0.098		1.94	2.25		ug/L		116	70 - 130
Methoxychlor	<0.049		1.94	2.14		ug/L		110	70 - 130
Metolachlor	<0.049		1.94	2.15		ug/L		110	70 - 130
Molinate	<0.098		1.94	2.10		ug/L		108	70 - 130
Naphthalene	<0.098		1.94	1.95		ug/L		100	70 - 130
Parathion	<0.098		1.94	2.15		ug/L		110	70 - 130
Pendimethalin (Penoxaline)	<0.098		1.94	2.00		ug/L		103	70 - 130
Phenanthrene	<0.039		1.94	1.91		ug/L		98	70 - 130
Propachlor	<0.049		1.94	2.12		ug/L		109	70 - 130
Pyrene	<0.049		1.94	2.09		ug/L		107	70 - 130
Simazine	<0.049		1.94	2.32		ug/L		119	70 - 130
Terbacil	<0.098		1.94	2.25		ug/L		116	70 - 130
Terbutylazine	<0.098		1.94	2.24		ug/L		115	70 - 130
Thiobencarb	<0.098		1.94	2.16		ug/L		111	70 - 130
trans-Nonachlor	<0.049		1.94	2.00		ug/L		103	70 - 130
Trifluralin	<0.098		1.94	1.82		ug/L		94	70 - 130

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	98		70 - 130
Perylene-d12	98		70 - 130
Triphenylphosphate	105		70 - 130

QC Sample Results

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

Job ID: 380-123575-1
SDG: Weekly

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

Lab Sample ID: MB 570-507118/1-A
Matrix: Water
Analysis Batch: 512557

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 507118

<i>Tentatively Identified Compound</i>	<i>Est. Result</i>	<i>Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>RT</i>	<i>CAS No.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Tentatively Identified Compound</i>	<i>None</i>		<i>ug/L</i>			<i>N/A</i>	<i>11/25/24 06:08</i>	<i>12/11/24 11:44</i>	<i>1</i>

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>2,4,6-Tribromophenol (Surr)</i>	<i>60</i>		<i>33 - 139</i>	<i>11/25/24 06:08</i>	<i>12/11/24 11:44</i>	<i>1</i>
<i>2-Fluorobiphenyl (Surr)</i>	<i>79</i>		<i>33 - 126</i>	<i>11/25/24 06:08</i>	<i>12/11/24 11:44</i>	<i>1</i>
<i>2-Fluorophenol (Surr)</i>	<i>45</i>		<i>12 - 120</i>	<i>11/25/24 06:08</i>	<i>12/11/24 11:44</i>	<i>1</i>
<i>Nitrobenzene-d5 (Surr)</i>	<i>77</i>		<i>36 - 120</i>	<i>11/25/24 06:08</i>	<i>12/11/24 11:44</i>	<i>1</i>
<i>Phenol-d6 (Surr)</i>	<i>25</i>		<i>10 - 120</i>	<i>11/25/24 06:08</i>	<i>12/11/24 11:44</i>	<i>1</i>
<i>p-Terphenyl-d14 (Surr)</i>	<i>77</i>		<i>47 - 131</i>	<i>11/25/24 06:08</i>	<i>12/11/24 11:44</i>	<i>1</i>

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

Lab Sample ID: MB 570-507118/1-A
Matrix: Water
Analysis Batch: 510911

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 507118

<i>Analyte</i>	<i>Result</i>	<i>Qualifier</i>	<i>RL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>1-Methylnaphthalene</i>	<i><0.20</i>		<i>0.20</i>	<i>ug/L</i>		<i>11/25/24 06:08</i>	<i>12/06/24 13:36</i>	<i>1</i>
<i>2-Methylnaphthalene</i>	<i><0.20</i>		<i>0.20</i>	<i>ug/L</i>		<i>11/25/24 06:08</i>	<i>12/06/24 13:36</i>	<i>1</i>
<i>Acenaphthene</i>	<i><0.20</i>		<i>0.20</i>	<i>ug/L</i>		<i>11/25/24 06:08</i>	<i>12/06/24 13:36</i>	<i>1</i>
<i>Acenaphthylene</i>	<i><0.20</i>		<i>0.20</i>	<i>ug/L</i>		<i>11/25/24 06:08</i>	<i>12/06/24 13:36</i>	<i>1</i>
<i>Anthracene</i>	<i><0.20</i>		<i>0.20</i>	<i>ug/L</i>		<i>11/25/24 06:08</i>	<i>12/06/24 13:36</i>	<i>1</i>
<i>Benzo[a]anthracene</i>	<i><0.20</i>		<i>0.20</i>	<i>ug/L</i>		<i>11/25/24 06:08</i>	<i>12/06/24 13:36</i>	<i>1</i>
<i>Benzo[a]pyrene</i>	<i><0.20</i>		<i>0.20</i>	<i>ug/L</i>		<i>11/25/24 06:08</i>	<i>12/06/24 13:36</i>	<i>1</i>
<i>Benzo[b]fluoranthene</i>	<i><0.20</i>		<i>0.20</i>	<i>ug/L</i>		<i>11/25/24 06:08</i>	<i>12/06/24 13:36</i>	<i>1</i>
<i>Benzo[g,h,i]perylene</i>	<i><0.20</i>		<i>0.20</i>	<i>ug/L</i>		<i>11/25/24 06:08</i>	<i>12/06/24 13:36</i>	<i>1</i>
<i>Benzo[k]fluoranthene</i>	<i><0.20</i>		<i>0.20</i>	<i>ug/L</i>		<i>11/25/24 06:08</i>	<i>12/06/24 13:36</i>	<i>1</i>
<i>Chrysene</i>	<i><0.20</i>		<i>0.20</i>	<i>ug/L</i>		<i>11/25/24 06:08</i>	<i>12/06/24 13:36</i>	<i>1</i>
<i>Dibenz(a,h)anthracene</i>	<i><0.20</i>		<i>0.20</i>	<i>ug/L</i>		<i>11/25/24 06:08</i>	<i>12/06/24 13:36</i>	<i>1</i>
<i>Fluoranthene</i>	<i><0.20</i>		<i>0.20</i>	<i>ug/L</i>		<i>11/25/24 06:08</i>	<i>12/06/24 13:36</i>	<i>1</i>
<i>Fluorene</i>	<i><0.20</i>		<i>0.20</i>	<i>ug/L</i>		<i>11/25/24 06:08</i>	<i>12/06/24 13:36</i>	<i>1</i>
<i>Indeno[1,2,3-cd]pyrene</i>	<i><0.20</i>		<i>0.20</i>	<i>ug/L</i>		<i>11/25/24 06:08</i>	<i>12/06/24 13:36</i>	<i>1</i>
<i>Naphthalene</i>	<i><0.20</i>		<i>0.20</i>	<i>ug/L</i>		<i>11/25/24 06:08</i>	<i>12/06/24 13:36</i>	<i>1</i>
<i>Phenanthrene</i>	<i><0.20</i>		<i>0.20</i>	<i>ug/L</i>		<i>11/25/24 06:08</i>	<i>12/06/24 13:36</i>	<i>1</i>
<i>Pyrene</i>	<i><0.20</i>		<i>0.20</i>	<i>ug/L</i>		<i>11/25/24 06:08</i>	<i>12/06/24 13:36</i>	<i>1</i>

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>2,4,6-Tribromophenol (Surr)</i>	<i>69</i>		<i>28 - 127</i>	<i>11/25/24 06:08</i>	<i>12/06/24 13:36</i>	<i>1</i>
<i>2-Fluorobiphenyl (Surr)</i>	<i>72</i>		<i>31 - 120</i>	<i>11/25/24 06:08</i>	<i>12/06/24 13:36</i>	<i>1</i>
<i>2-Fluorophenol (Surr)</i>	<i>54</i>		<i>17 - 120</i>	<i>11/25/24 06:08</i>	<i>12/06/24 13:36</i>	<i>1</i>
<i>Nitrobenzene-d5 (Surr)</i>	<i>82</i>		<i>27 - 120</i>	<i>11/25/24 06:08</i>	<i>12/06/24 13:36</i>	<i>1</i>
<i>Phenol-d6 (Surr)</i>	<i>34</i>		<i>10 - 120</i>	<i>11/25/24 06:08</i>	<i>12/06/24 13:36</i>	<i>1</i>
<i>p-Terphenyl-d14 (Surr)</i>	<i>80</i>		<i>45 - 120</i>	<i>11/25/24 06:08</i>	<i>12/06/24 13:36</i>	<i>1</i>

QC Sample Results

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

Job ID: 380-123575-1
SDG: Weekly

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

Lab Sample ID: LCS 570-507118/2-A

Matrix: Water

Analysis Batch: 510911

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 507118

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
1-Methylnaphthalene	20.0	14.6		ug/L		73	47 - 120	
2-Methylnaphthalene	20.0	16.6		ug/L		83	43 - 120	
Acenaphthene	20.0	17.2		ug/L		86	60 - 132	
Acenaphthylene	20.0	17.1		ug/L		85	54 - 126	
Anthracene	20.0	17.6		ug/L		88	43 - 120	
Benzo[a]anthracene	20.0	17.4		ug/L		87	42 - 133	
Benzo[a]pyrene	20.0	17.5		ug/L		88	32 - 148	
Benzo[b]fluoranthene	20.0	17.6		ug/L		88	42 - 140	
Benzo[g,h,i]perylene	20.0	16.3		ug/L		81	1 - 195	
Benzo[k]fluoranthene	20.0	17.8		ug/L		89	25 - 146	
Chrysene	20.0	16.5		ug/L		82	44 - 140	
Dibenz(a,h)anthracene	20.0	17.4		ug/L		87	1 - 200	
Fluoranthene	20.0	17.7		ug/L		89	43 - 121	
Fluorene	20.0	18.0		ug/L		90	70 - 120	
Indeno[1,2,3-cd]pyrene	20.0	17.8		ug/L		89	1 - 151	
Naphthalene	20.0	14.2		ug/L		71	36 - 120	
Phenanthrene	20.0	17.1		ug/L		85	65 - 120	
Pyrene	20.0	17.6		ug/L		88	70 - 120	

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	84		28 - 127
2-Fluorobiphenyl (Surr)	77		31 - 120
2-Fluorophenol (Surr)	61		17 - 120
Nitrobenzene-d5 (Surr)	70		27 - 120
Phenol-d6 (Surr)	43		10 - 120
p-Terphenyl-d14 (Surr)	81		45 - 120

Lab Sample ID: LCSD 570-507118/3-A

Matrix: Water

Analysis Batch: 510911

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 507118

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits		RPD Limit	
1-Methylnaphthalene	20.0	13.4		ug/L		67	47 - 120	8	20	
2-Methylnaphthalene	20.0	15.2		ug/L		76	43 - 120	9	20	
Acenaphthene	20.0	15.1		ug/L		75	60 - 132	13	29	
Acenaphthylene	20.0	14.7		ug/L		73	54 - 126	15	45	
Anthracene	20.0	16.0		ug/L		80	43 - 120	10	40	
Benzo[a]anthracene	20.0	15.9		ug/L		79	42 - 133	9	32	
Benzo[a]pyrene	20.0	16.2		ug/L		81	32 - 148	8	43	
Benzo[b]fluoranthene	20.0	16.5		ug/L		83	42 - 140	6	43	
Benzo[g,h,i]perylene	20.0	14.8		ug/L		74	1 - 195	9	61	
Benzo[k]fluoranthene	20.0	16.0		ug/L		80	25 - 146	10	38	
Chrysene	20.0	15.0		ug/L		75	44 - 140	9	53	
Dibenz(a,h)anthracene	20.0	15.8		ug/L		79	1 - 200	10	75	
Fluoranthene	20.0	15.8		ug/L		79	43 - 121	11	40	
Fluorene	20.0	15.7		ug/L		79	70 - 120	13	23	
Indeno[1,2,3-cd]pyrene	20.0	16.0		ug/L		80	1 - 151	10	60	
Naphthalene	20.0	12.9		ug/L		64	36 - 120	10	39	

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-123575-1
SDG: Weekly

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

Lab Sample ID: LCSD 570-507118/3-A

Matrix: Water

Analysis Batch: 510911

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 507118

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Phenanthrene	20.0	15.3		ug/L		76	65 - 120	11	24
Pyrene	20.0	16.0		ug/L		80	70 - 120	9	30

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	75		28 - 127
2-Fluorobiphenyl (Surr)	68		31 - 120
2-Fluorophenol (Surr)	54		17 - 120
Nitrobenzene-d5 (Surr)	64		27 - 120
Phenol-d6 (Surr)	38		10 - 120
p-Terphenyl-d14 (Surr)	74		45 - 120

Lab Sample ID: 380-123576-A-1-B MS

Matrix: Water

Analysis Batch: 510911

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 507118

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	<0.19		19.3	14.8		ug/L		77	36 - 120
2-Methylnaphthalene	<0.19		19.3	16.8		ug/L		87	32 - 124
Acenaphthene	<0.19		19.3	16.7		ug/L		87	47 - 145
Acenaphthylene	<0.19		19.3	16.2		ug/L		84	33 - 145
Anthracene	<0.19		19.3	17.3		ug/L		90	27 - 133
Benzo[a]anthracene	<0.19		19.3	17.4		ug/L		90	33 - 143
Benzo[a]pyrene	<0.19		19.3	17.6		ug/L		91	17 - 163
Benzo[b]fluoranthene	<0.19		19.3	18.0		ug/L		93	24 - 159
Benzo[g,h,i]perylene	<0.19		19.3	16.4		ug/L		85	1 - 219
Benzo[k]fluoranthene	<0.19		19.3	17.6		ug/L		92	11 - 162
Chrysene	<0.19		19.3	16.4		ug/L		85	17 - 168
Dibenz(a,h)anthracene	<0.19		19.3	17.6		ug/L		91	1 - 227
Fluoranthene	<0.19		19.3	17.6		ug/L		91	26 - 137
Fluorene	<0.19		19.3	16.9		ug/L		88	59 - 121
Indeno[1,2,3-cd]pyrene	<0.19		19.3	17.4		ug/L		90	1 - 171
Naphthalene	<0.19		19.3	14.1		ug/L		73	21 - 133
Phenanthrene	<0.19		19.3	16.6		ug/L		86	54 - 120
Pyrene	<0.19		19.3	18.1		ug/L		94	52 - 120

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	87		28 - 127
2-Fluorobiphenyl (Surr)	80		31 - 120
2-Fluorophenol (Surr)	57		17 - 120
Nitrobenzene-d5 (Surr)	73		27 - 120
Phenol-d6 (Surr)	37		10 - 120
p-Terphenyl-d14 (Surr)	87		45 - 120

QC Sample Results

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

Job ID: 380-123575-1
SDG: Weekly

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

Lab Sample ID: 380-123576-A-1-C MSD

Matrix: Water

Analysis Batch: 510911

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 507118

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
1-Methylnaphthalene	<0.19		19.4	13.9		ug/L		72	36 - 120	6	30
2-Methylnaphthalene	<0.19		19.4	15.9		ug/L		82	32 - 124	5	30
Acenaphthene	<0.19		19.4	15.5		ug/L		80	47 - 145	8	48
Acenaphthylene	<0.19		19.4	15.2		ug/L		78	33 - 145	6	74
Anthracene	<0.19		19.4	16.3		ug/L		84	27 - 133	6	66
Benzo[a]anthracene	<0.19		19.4	16.6		ug/L		86	33 - 143	5	53
Benzo[a]pyrene	<0.19		19.4	14.9		ug/L		77	17 - 163	17	72
Benzo[b]fluoranthene	<0.19		19.4	15.5		ug/L		80	24 - 159	15	71
Benzo[g,h,i]perylene	<0.19		19.4	14.4		ug/L		74	1 - 219	13	97
Benzo[k]fluoranthene	<0.19		19.4	15.9		ug/L		82	11 - 162	10	63
Chrysene	<0.19		19.4	15.7		ug/L		81	17 - 168	4	87
Dibenz(a,h)anthracene	<0.19		19.4	15.6		ug/L		80	1 - 227	12	126
Fluoranthene	<0.19		19.4	16.4		ug/L		84	26 - 137	7	66
Fluorene	<0.19		19.4	15.9		ug/L		82	59 - 121	6	38
Indeno[1,2,3-cd]pyrene	<0.19		19.4	15.5		ug/L		80	1 - 171	11	99
Naphthalene	<0.19		19.4	13.2		ug/L		68	21 - 133	6	65
Phenanthrene	<0.19		19.4	15.7		ug/L		81	54 - 120	6	39
Pyrene	<0.19		19.4	17.4		ug/L		89	52 - 120	4	49

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	81		28 - 127
2-Fluorobiphenyl (Surr)	74		31 - 120
2-Fluorophenol (Surr)	53		17 - 120
Nitrobenzene-d5 (Surr)	68		27 - 120
Phenol-d6 (Surr)	37		10 - 120
p-Terphenyl-d14 (Surr)	86		45 - 120

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

Lab Sample ID: MB 570-508548/6

Matrix: Water

Analysis Batch: 508548

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			11/29/24 11:53	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	85		38 - 134		11/29/24 11:53	1

Lab Sample ID: LCS 570-508548/4

Matrix: Water

Analysis Batch: 508548

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec
		Result	Qualifier				Limits
Gasoline Range Organics (C4-C13)	400	332		ug/L		83	78 - 120

QC Sample Results

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

Job ID: 380-123575-1
SDG: Weekly

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

Lab Sample ID: LCS 570-508548/4
Matrix: Water
Analysis Batch: 508548

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

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	93		38 - 134

Lab Sample ID: LCSD 570-508548/5
Matrix: Water
Analysis Batch: 508548

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	330		ug/L		82	78 - 120	1	10

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	93		38 - 134

Lab Sample ID: MRL 570-508548/3
Matrix: Water
Analysis Batch: 508548

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	12.2		ug/L		122	50 - 150

	MRL	MRL	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	89		38 - 134

Lab Sample ID: 380-123126-C-3 MS
Matrix: Water
Analysis Batch: 508548

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	374		ug/L		93	68 - 122

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	94		38 - 134

Lab Sample ID: 380-123126-C-3 MSD
Matrix: Water
Analysis Batch: 508548

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	355		ug/L		89	68 - 122	5	18

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	93		38 - 134

QC Sample Results

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

Job ID: 380-123575-1
SDG: Weekly

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

Lab Sample ID: MB 570-507978/1-A
Matrix: Water
Analysis Batch: 508534

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 507978

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Diesel Range Organics (C10-C24)	<25		25	ug/L		11/26/24 17:51	11/29/24 13:46	1
Motor Oil Range Organics [C24-C36]	<25		25	ug/L		11/26/24 17:51	11/29/24 13:46	1
C8-C18	<25		25	ug/L		11/26/24 17:51	11/29/24 13:46	1
Surrogate	MB MB		Limits			Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier						
n-Octacosane (Surr)	74		60 - 130			11/26/24 17:51	11/29/24 13:46	1

Lab Sample ID: LCS 570-507978/2-A
Matrix: Water
Analysis Batch: 508534

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 507978

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
C10-C28	1600	1270		ug/L		79	56 - 127
Surrogate	LCS LCS		Limits			%Rec	
	%Recovery	Qualifier					
n-Octacosane (Surr)	77		60 - 130				

Lab Sample ID: LCSD 570-507978/3-A
Matrix: Water
Analysis Batch: 508534

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 507978

Analyte	Spike Added	LCSD LCSD		Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
		Result	Qualifier						
C10-C28	1600	1250		ug/L		78	56 - 127	1	23
Surrogate	LCSD LCSD		Limits			%Rec			
	%Recovery	Qualifier							
n-Octacosane (Surr)	73		60 - 130						

Lab Sample ID: MRL 570-507978/4-A
Matrix: Water
Analysis Batch: 508534

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 507978

Analyte	Spike Added	MRL MRL		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
C10-C28	0.0200	<0.020		mg/L		76	50 - 150
Surrogate	MRL MRL		Limits			%Rec	
	%Recovery	Qualifier					
n-Octacosane (Surr)	72		60 - 130				

Lab Sample ID: 380-123576-C-1-B MS
Matrix: Water
Analysis Batch: 508534

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 507978

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	%Rec	%Rec Limits
				Result	Qualifier				
C10-C28	<26		1660	1340		ug/L		81	70 - 130
Surrogate	MS MS		Limits					%Rec	
	%Recovery	Qualifier							
n-Octacosane (Surr)	76		60 - 130						

QC Sample Results

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

Job ID: 380-123575-1
 SDG: Weekly

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

Lab Sample ID: 380-123576-C-1-C MSD

Matrix: Water

Analysis Batch: 508534

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 507978

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C10-C28	<26		1640	1330		ug/L		81	70 - 130	1	20
Surrogate	<i>MSD</i>	<i>MSD</i>									
<i>n-Octacosane (Surr)</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>								
	76		60 - 130								

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QC Association Summary

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

Job ID: 380-123575-1
 SDG: Weekly

GC/MS Semi VOA

Prep Batch: 120635

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-123575-1	AIEA GULCH WELLS PUMP 1	Total/NA	Water	525.2	
380-123575-3	AIEA GULCH WELLS PUMP 2	Total/NA	Water	525.2	
MB 380-120635/21-A	Method Blank	Total/NA	Water	525.2	
LCS 380-120635/23-A	Lab Control Sample	Total/NA	Water	525.2	
MRL 380-120635/22-A	Lab Control Sample	Total/NA	Water	525.2	
380-123576-G-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	525.2	
380-123576-H-1-A MS	Matrix Spike	Total/NA	Water	525.2	

Analysis Batch: 120827

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-123575-1	AIEA GULCH WELLS PUMP 1	Total/NA	Water	525.2	120635
380-123575-3	AIEA GULCH WELLS PUMP 2	Total/NA	Water	525.2	120635
MB 380-120635/21-A	Method Blank	Total/NA	Water	525.2	120635
LCS 380-120635/23-A	Lab Control Sample	Total/NA	Water	525.2	120635
MRL 380-120635/22-A	Lab Control Sample	Total/NA	Water	525.2	120635
380-123576-G-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	525.2	120635
380-123576-H-1-A MS	Matrix Spike	Total/NA	Water	525.2	120635

Prep Batch: 507118

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-123575-1	AIEA GULCH WELLS PUMP 1	Total/NA	Water	625.1	
380-123575-3	AIEA GULCH WELLS PUMP 2	Total/NA	Water	625.1	
MB 570-507118/1-A	Method Blank	Total/NA	Water	625.1	
LCS 570-507118/2-A	Lab Control Sample	Total/NA	Water	625.1	
LCSD 570-507118/3-A	Lab Control Sample Dup	Total/NA	Water	625.1	
380-123576-A-1-B MS	Matrix Spike	Total/NA	Water	625.1	
380-123576-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	625.1	

Analysis Batch: 510911

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-123575-1	AIEA GULCH WELLS PUMP 1	Total/NA	Water	625.1 SIM	507118
380-123575-3	AIEA GULCH WELLS PUMP 2	Total/NA	Water	625.1 SIM	507118
MB 570-507118/1-A	Method Blank	Total/NA	Water	625.1 SIM	507118
LCS 570-507118/2-A	Lab Control Sample	Total/NA	Water	625.1 SIM	507118
LCSD 570-507118/3-A	Lab Control Sample Dup	Total/NA	Water	625.1 SIM	507118
380-123576-A-1-B MS	Matrix Spike	Total/NA	Water	625.1 SIM	507118
380-123576-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	625.1 SIM	507118

Analysis Batch: 512557

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-123575-1	AIEA GULCH WELLS PUMP 1	Total/NA	Water	625.1	507118
380-123575-3	AIEA GULCH WELLS PUMP 2	Total/NA	Water	625.1	507118
MB 570-507118/1-A	Method Blank	Total/NA	Water	625.1	507118

GC VOA

Analysis Batch: 508548

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-123575-1	AIEA GULCH WELLS PUMP 1	Total/NA	Water	8015B GRO LL	
380-123575-2	TB: AIEA GULCH WELLS PUMP 1	Total/NA	Water	8015B GRO LL	
380-123575-3	AIEA GULCH WELLS PUMP 2	Total/NA	Water	8015B GRO LL	

QC Association Summary

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

Job ID: 380-123575-1
 SDG: Weekly

GC VOA (Continued)

Analysis Batch: 508548 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-123575-4	TB: AIEA GULCH WELLS PUMP 2	Total/NA	Water	8015B GRO LL	
MB 570-508548/6	Method Blank	Total/NA	Water	8015B GRO LL	
LCS 570-508548/4	Lab Control Sample	Total/NA	Water	8015B GRO LL	
LCSD 570-508548/5	Lab Control Sample Dup	Total/NA	Water	8015B GRO LL	
MRL 570-508548/3	Lab Control Sample	Total/NA	Water	8015B GRO LL	
380-123126-C-3 MS	Matrix Spike	Total/NA	Water	8015B GRO LL	
380-123126-C-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8015B GRO LL	

GC Semi VOA

Prep Batch: 507978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-123575-1	AIEA GULCH WELLS PUMP 1	Total/NA	Water	3510C	
380-123575-3	AIEA GULCH WELLS PUMP 2	Total/NA	Water	3510C	
MB 570-507978/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-507978/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-507978/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MRL 570-507978/4-A	Lab Control Sample	Total/NA	Water	3510C	
380-123576-C-1-B MS	Matrix Spike	Total/NA	Water	3510C	
380-123576-C-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	3510C	

Analysis Batch: 508534

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-123575-1	AIEA GULCH WELLS PUMP 1	Total/NA	Water	8015B	507978
380-123575-3	AIEA GULCH WELLS PUMP 2	Total/NA	Water	8015B	507978
MB 570-507978/1-A	Method Blank	Total/NA	Water	8015B	507978
LCS 570-507978/2-A	Lab Control Sample	Total/NA	Water	8015B	507978
LCSD 570-507978/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	507978
MRL 570-507978/4-A	Lab Control Sample	Total/NA	Water	8015B	507978
380-123576-C-1-B MS	Matrix Spike	Total/NA	Water	8015B	507978
380-123576-C-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	8015B	507978

Lab Chronicle

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

Job ID: 380-123575-1
SDG: Weekly

Client Sample ID: AIEA GULCH WELLS PUMP 1

Lab Sample ID: 380-123575-1

Date Collected: 11/20/24 10:05

Matrix: Water

Date Received: 11/22/24 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			120635	KRD3	EA POM	11/25/24 10:43
Total/NA	Analysis	525.2		1	120827	UPAC	EA POM	11/26/24 19:00
Total/NA	Prep	625.1			507118	H1SH	EET CAL 4	11/25/24 19:13
Total/NA	Analysis	625.1		1	512557	CG	EET CAL 4	12/11/24 12:57
Total/NA	Prep	625.1			507118	H1SH	EET CAL 4	11/25/24 19:13
Total/NA	Analysis	625.1 SIM		1	510911	AX7Z	EET CAL 4	12/06/24 16:12
Total/NA	Analysis	8015B GRO LL		1	508548	A9VE	EET CAL 4	11/29/24 18:45
Total/NA	Prep	3510C			507978	H6FE	EET CAL 4	11/26/24 17:51
Total/NA	Analysis	8015B		1	508534	E5RH	EET CAL 4	11/29/24 15:55

Client Sample ID: TB: AIEA GULCH WELLS PUMP 1

Lab Sample ID: 380-123575-2

Date Collected: 11/20/24 10:05

Matrix: Water

Date Received: 11/22/24 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015B GRO LL		1	508548	A9VE	EET CAL 4	11/29/24 16:35

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-123575-3

Date Collected: 11/20/24 10:32

Matrix: Water

Date Received: 11/22/24 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			120635	KRD3	EA POM	11/25/24 10:43
Total/NA	Analysis	525.2		1	120827	UPAC	EA POM	11/26/24 19:20
Total/NA	Prep	625.1			507118	H1SH	EET CAL 4	11/25/24 19:13
Total/NA	Analysis	625.1		1	512557	CG	EET CAL 4	12/11/24 13:21
Total/NA	Prep	625.1			507118	H1SH	EET CAL 4	11/25/24 19:13
Total/NA	Analysis	625.1 SIM		1	510911	AX7Z	EET CAL 4	12/06/24 16:57
Total/NA	Analysis	8015B GRO LL		1	508548	A9VE	EET CAL 4	11/29/24 19:11
Total/NA	Prep	3510C			507978	H6FE	EET CAL 4	11/26/24 17:51
Total/NA	Analysis	8015B		1	508534	E5RH	EET CAL 4	11/29/24 16:17

Client Sample ID: TB: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-123575-4

Date Collected: 11/20/24 10:32

Matrix: Water

Date Received: 11/22/24 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015B GRO LL		1	508548	A9VE	EET CAL 4	11/29/24 17:01

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: 380-123575-1
 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	Water	1-Methylnaphthalene
525.2	525.2	Water	2,4'-DDD
525.2	525.2	Water	2,4'-DDE
525.2	525.2	Water	2,4'-DDT
525.2	525.2	Water	2,4-Dinitrotoluene
525.2	525.2	Water	2,6-Dinitrotoluene
525.2	525.2	Water	2-Methylnaphthalene
525.2	525.2	Water	4,4'-DDD
525.2	525.2	Water	4,4'-DDE
525.2	525.2	Water	4,4' DDT
525.2	525.2	Water	Acetochlor
525.2	525.2	Water	alpha-BHC
525.2	525.2	Water	alpha-Chlordane
525.2	525.2	Water	beta-BHC
525.2	525.2	Water	Chlorobenzilate
525.2	525.2	Water	Chloroneb
525.2	525.2	Water	Chlorothalonil (Draconil, Bravo)
525.2	525.2	Water	Chlorpyrifos
525.2	525.2	Water	delta-BHC
525.2	525.2	Water	Diclorvos (DDVP)
525.2	525.2	Water	Endosulfan I (Alpha)
525.2	525.2	Water	Endosulfan II (Beta)
525.2	525.2	Water	Endosulfan sulfate
525.2	525.2	Water	Endrin aldehyde
525.2	525.2	Water	EPTC
525.2	525.2	Water	gamma-Chlordane
525.2	525.2	Water	Isophorone
525.2	525.2	Water	Malathion
525.2	525.2	Water	Parathion
525.2	525.2	Water	Pendimethalin (Penoxaline)
525.2	525.2	Water	Terbacil
525.2	525.2	Water	Terbutylazine
525.2	525.2	Water	Total Permethrin (mixed isomers)
525.2	525.2	Water	trans-Nonachlor

Laboratory: Eurofins Calscience

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

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

Accreditation/Certification Summary

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

Job ID: 380-123575-1
SDG: Weekly

Laboratory: Eurofins Calscience (Continued)

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

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

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Method Summary

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

Job ID: 380-123575-1
SDG: Weekly

Method	Method Description	Protocol	Laboratory
525.2	Semivolatile Organic Compounds (GC/MS)	EPA	EA POM
625.1	Semivolatile Organic Compounds (GC/MS)	EPA	EET CAL 4
625.1 SIM	Semivolatile Organic Compounds GC/MS (SIM)	EPA	EET CAL 4
8015B GRO LL	Gasoline Range Organics - (GC)	SW846	EET CAL 4
8015B	Diesel Range Organics (DRO) (GC) Low Level	SW846	EET CAL 4
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET CAL 4
5030C	Purge and Trap	SW846	EET CAL 4
525.2	Extraction of Semivolatile Compounds	EPA	EA POM
625.1	Liquid-Liquid Extraction	40CFR136A	EET CAL 4

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.
EPA = US Environmental Protection Agency
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EA POM = Eurofins Eaton Analytical Pomona, 941 Corporate Center Drive, Pomona, CA 91768-2642, TEL (626)386-1100
EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

Sample Summary

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

Job ID: 380-123575-1
SDG: Weekly

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-123575-1	AIEA GULCH WELLS PUMP 1	Water	11/20/24 10:05	11/22/24 09:43
380-123575-2	TB: AIEA GULCH WELLS PUMP 1	Water	11/20/24 10:05	11/22/24 09:43
380-123575-3	AIEA GULCH WELLS PUMP 2	Water	11/20/24 10:32	11/22/24 09:43
380-123575-4	TB: AIEA GULCH WELLS PUMP 2	Water	11/20/24 10:32	11/22/24 09:43

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Chain of Custody Record

Client Information		SAMPLER bailey		Lao PM Arada, Rachelle		Carrier Tracking No(s)		COC No: 380-28005-2757 1	
Client Contact: Dr Ron Fenstemacher		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		Total Number of Containers		Job #:	
Address: 630 South Beretania Street Chemistry Lab		Due Date Requested		537 1, DW, PREC - 537 1 Full List		533 All Analytes		Preservation Codes: R - NaThioS04 RA - NaThioHCl G - Na2SO QA - Na2S Y - Trizma I - NH4 Ac	
City: Honolulu		TAT Requested (days):		525 2, PREC - (MOD) 525plus Plus TICs		8015B_DRO_LL_CS - HNL Ranges C10-C24/C24-C36/C8-C18		Other: 380-123575 COC	
State Zip: HI 96843		Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		8015B_GRO_LL - (MOD) GRO		625 1, 625 1, SIM		QR Code	
Phone: 808-748-5091 (Tel)		PO #: C20525101 exp 05312023		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Special Instructions/Note:	
Email: RFENSTEMACHER@hbws.org		WO #:		R		RA		QA	
Project Name: RED-HILL/HBWS Sites Event Desc: RUSH Weekly Red Hill		Project #: 38001111		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)	
Site: Hawaii		SSOW#:		20-Nov-2024		1006		G	
Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Preservation Code:	
Aiea Gulch Wells Pump 1		20-Nov-2024		1006		G		Water	
Aiea Gulch Wells Pump 1 (Matrix Spike)								Water	
Aiea Gulch Wells Pump 1 (Matrix Spike Duplicate)								Water	
TB Aiea Gulch Wells Pump 1		20-Nov-2024		1006				Water	
Aiea Gulch Wells Pump 2		20-Nov-2024		1032		G		Water	
Aiea Gulch Wells Pump 2 (Matrix Spike)								Water	
Aiea Gulch Wells Pump 2 (Matrix Spike Duplicate)								Water	
TB Aiea Gulch Wells Pump 2		20-Nov-2024		1032				Water	
Possible Hazard Identification		Date/Time: 21 Nov 2024		Date/Time: 1400		Company HBWS		Date/Time: 11/22/24	
<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		Relinquished by		Relinquished by	
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Special Instructions/QC Requirements: ① 3462 3010 ② 3462 3462 3021		Method of Shipment: FedEx ③ 3462 3462 3032		Date/Time: 11/22/24	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No		Cooler Temperature(s) °C and Other Remarks: ① 2.2-0.0-2.3 ② 2.0-0.0-2.0 ③ 2.4-0.0-2.4		Company HBWS		Company	



Eurofins Eaton Analytical Pomona

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

Chain of Custody Record



eurofins

Enviro

Loc: 380

123575

Client Information (Sub Contract Lab)		Sampler: N/A		Lab PM: Arada, Rachele		Carrier Tracking No(s): N/A		COC No: 380-172193.1									
Client Contact: Shipping/Receiving		Phone: N/A		E-Mail: Rachele.Arada@et.eurofins.com		State of Origin: Hawaii		Page: Page 1 of 1									
Company: Eurofins Environment Testing Southwest				Accreditations Required (See note): State - Hawaii				Job #: 380-123575-1									
Address: 2841 Dow Avenue, Suite 100, Tustin, CA, 92780		Due Date Requested: 12/9/2024		Analysis Requested				Preservation Codes:									
City: Tustin		TAT Requested (days): N/A															
State, Zip: CA, 92780		PO #: N/A		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) 8015B_DRO_LL_CS0510C_LL_HNL_Ranges:C10-C24/C24-C36/C6-C18 8015B_GRO_LU030C (MOD) GRO 625_1_SHM/625_Prep (MOD) Extended PAH List 625_1/625_Prep (MOD) Tentatively Identified Compounds (Hold)		Total Number of Containers		Other: N/A									
Phone: 714-895-5494(Tel)		WVO #: N/A															
Email: N/A		Project #: 38001111															
Project Name: RED-HILL		SSOW#: N/A															
Site: Honolulu BWS Sites																	
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Organic/Inorg, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015B_DRO_LL_CS0510C_LL_HNL_Ranges:C10-C24/C24-C36/C6-C18	8015B_GRO_LU030C (MOD) GRO	625_1_SHM/625_Prep (MOD) Extended PAH List	625_1/625_Prep (MOD) Tentatively Identified Compounds (Hold)	Total Number of Containers	Special Instructions/Note:				
				Preservation Code:													
AIEA GULCH WELLS PUMP 1 (380-123575-1)		11/20/24	10:05 Hawaiian	G	Water		X	X	X	X		7	MRLs are needed. Confirm any hits >RL.				
TB: AIEA GULCH WELLS PUMP 1 (380-123575-2)		11/20/24	10:05 Hawaiian	G	Water			X				2	MRLs are needed.				
AIEA GULCH WELLS PUMP 2 (380-123575-3)		11/20/24	10:32 Hawaiian	G	Water		X	X	X	X		7	MRLs are needed. Confirm any hits >RL.				
TB: AIEA GULCH WELLS PUMP 2 (380-123575-4)		11/20/24	10:32 Hawaiian	G	Water			X				2	MRLs are needed.				
<p>380-123575 Chain of Custody</p>																	
Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Eaton Analytical, LLC.																	
Possible Hazard Identification						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)											
Unconfirmed						<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months											
Deliverable Requested: I, II, III, IV, Other (specify)				Primary Deliverable Rank: 2		Special Instructions/QC Requirements:											
Empty Kit Relinquished by:			Date:			Time:			Method of Shipment:								
Relinquished by: <i>[Signature]</i>			Date/Time: 11/25/24 12:45			Company: BBA			Received by: <i>[Signature]</i>			Date/Time: 11/25/24 12:45			Company: ec		
Relinquished by:			Date/Time:			Company:			Received by:			Date/Time:			Company:		
Relinquished by:			Date/Time:			Company:			Received by:			Date/Time:			Company:		
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:				Cooler Temperature(s) °C and Other Remarks: 0.6/1.6 SC 14											

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-123575-1

SDG Number: Weekly

Login Number: 123575

List Number: 1

Creator: Edrosa, Rey

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: 380-123575-1

SDG Number: Weekly

Login Number: 123575

List Number: 2

Creator: Yu, Tiffany

List Source: Eurofins Calscience

List Creation: 11/25/24 02:07 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.6
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	Containers received broken. No volume could be salvaged for analysis.
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

