

ANALYTICAL REPORT

PREPARED FOR

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JOB DESCRIPTION

RED-HILL
525.2
RUSH Weekly Red Hill

JOB NUMBER

380-79337-1

Eurofins Eaton Analytical Pomona

Job Notes

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

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

Compliance Statement

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

Authorization



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Definitions/Glossary

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

Job ID: 380-79337-1
SDG: 525.2

Qualifiers

GC/MS Semi VOA

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

GC/MS Semi VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
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.
α	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: 380-79337-1

Job ID: 380-79337-1

Eurofins Eaton Analytical Pomona

Job Narrative 380-79337-1

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 are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample 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 1/19/2024 11:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.3°C

GC/MS Semi VOA

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: 380-79337-1
SDG: 525.2

Client Sample ID: HALAWA WELLS UNIT 1
PWSID Number: HI0000331

Lab Sample ID: 380-79337-1

No Detections.

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

This Detection Summary does not include radiochemical test results.

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Client Sample Results

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

Job ID: 380-79337-1
SDG: 525.2

Client Sample ID: HALAWA WELLS UNIT 1

Lab Sample ID: 380-79337-1

Date Collected: 01/17/24 10:45

Matrix: Drinking Water

Date Received: 01/19/24 11:00

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.098		0.098	ug/L		01/21/24 14:30	01/22/24 14:16	1
2,4'-DDD	<0.098		0.098	ug/L		01/21/24 14:30	01/22/24 14:16	1
2,4'-DDE	<0.098		0.098	ug/L		01/21/24 14:30	01/22/24 14:16	1
2,4'-DDT	<0.098		0.098	ug/L		01/21/24 14:30	01/22/24 14:16	1
2,4-Dinitrotoluene	<0.098		0.098	ug/L		01/21/24 14:30	01/22/24 14:16	1
2,6-Dinitrotoluene	<0.098		0.098	ug/L		01/21/24 14:30	01/22/24 14:16	1
2-Methylnaphthalene	<0.098		0.098	ug/L		01/21/24 14:30	01/22/24 14:16	1
4,4'-DDD	<0.098		0.098	ug/L		01/21/24 14:30	01/22/24 14:16	1
4,4'-DDE	<0.098		0.098	ug/L		01/21/24 14:30	01/22/24 14:16	1
4,4'-DDT	<0.098		0.098	ug/L		01/21/24 14:30	01/22/24 14:16	1
Acenaphthene	<0.098		0.098	ug/L		01/21/24 14:30	01/22/24 14:16	1
Acenaphthylene	<0.098		0.098	ug/L		01/21/24 14:30	01/22/24 14:16	1
Acetochlor	<0.098		0.098	ug/L		01/21/24 14:30	01/22/24 14:16	1
Alachlor	<0.049		0.049	ug/L		01/21/24 14:30	01/22/24 14:16	1
alpha-BHC	<0.098		0.098	ug/L		01/21/24 14:30	01/22/24 14:16	1
alpha-Chlordane	<0.049		0.049	ug/L		01/21/24 14:30	01/22/24 14:16	1
Anthracene	<0.020		0.020	ug/L		01/21/24 14:30	01/22/24 14:16	1
Atrazine	<0.049		0.049	ug/L		01/21/24 14:30	01/22/24 14:16	1
Benz(a)anthracene	<0.049		0.049	ug/L		01/21/24 14:30	01/22/24 14:16	1
Benzo[a]pyrene	<0.020		0.020	ug/L		01/21/24 14:30	01/22/24 14:16	1
Benzo[b]fluoranthene	<0.020		0.020	ug/L		01/21/24 14:30	01/22/24 14:16	1
Benzo[g,h,i]perylene	<0.049		0.049	ug/L		01/21/24 14:30	01/22/24 14:16	1
Benzo[k]fluoranthene	<0.020		0.020	ug/L		01/21/24 14:30	01/22/24 14:16	1
beta-BHC	<0.098		0.098	ug/L		01/21/24 14:30	01/22/24 14:16	1
Bis(2-ethylhexyl) phthalate	<0.59		0.59	ug/L		01/21/24 14:30	01/22/24 14:16	1
Bromacil	<0.098		0.098	ug/L		01/21/24 14:30	01/22/24 14:16	1
Butachlor	<0.049		0.049	ug/L		01/21/24 14:30	01/22/24 14:16	1
Butylbenzylphthalate	<0.49		0.49	ug/L		01/21/24 14:30	01/22/24 14:16	1
Chlorobenzilate	<0.098		0.098	ug/L		01/21/24 14:30	01/22/24 14:16	1
Chloroneb	<0.098		0.098	ug/L		01/21/24 14:30	01/22/24 14:16	1
Chlorothalonil (Draconil, Bravo)	<0.098	^3+	0.098	ug/L		01/21/24 14:30	01/22/24 14:16	1
Chlorpyrifos	<0.049		0.049	ug/L		01/21/24 14:30	01/22/24 14:16	1
Chrysene	<0.020		0.020	ug/L		01/21/24 14:30	01/22/24 14:16	1
delta-BHC	<0.098		0.098	ug/L		01/21/24 14:30	01/22/24 14:16	1
Di(2-ethylhexyl)adipate	<0.59		0.59	ug/L		01/21/24 14:30	01/22/24 14:16	1
Dibenz(a,h)anthracene	<0.049		0.049	ug/L		01/21/24 14:30	01/22/24 14:16	1
Diclorvos (DDVP)	<0.049		0.049	ug/L		01/21/24 14:30	01/22/24 14:16	1
Dieldrin	<0.20		0.20	ug/L		01/21/24 14:30	01/22/24 14:16	1
Diethylphthalate	<0.49		0.49	ug/L		01/21/24 14:30	01/22/24 14:16	1
Dimethylphthalate	<0.49		0.49	ug/L		01/21/24 14:30	01/22/24 14:16	1
Di-n-butyl phthalate	<0.98		0.98	ug/L		01/21/24 14:30	01/22/24 14:16	1
Di-n-octyl phthalate	<0.098		0.098	ug/L		01/21/24 14:30	01/22/24 14:16	1
Endosulfan I (Alpha)	<0.098		0.098	ug/L		01/21/24 14:30	01/22/24 14:16	1
Endosulfan II (Beta)	<0.098		0.098	ug/L		01/21/24 14:30	01/22/24 14:16	1
Endosulfan sulfate	<0.098		0.098	ug/L		01/21/24 14:30	01/22/24 14:16	1
Endrin	<0.098		0.098	ug/L		01/21/24 14:30	01/22/24 14:16	1
Endrin aldehyde	<0.098		0.098	ug/L		01/21/24 14:30	01/22/24 14:16	1
EPTC	<0.098		0.098	ug/L		01/21/24 14:30	01/22/24 14:16	1
Fluoranthene	<0.098		0.098	ug/L		01/21/24 14:30	01/22/24 14:16	1

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Client Sample Results

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

Job ID: 380-79337-1
SDG: 525.2

Client Sample ID: HALAWA WELLS UNIT 1

Lab Sample ID: 380-79337-1

Date Collected: 01/17/24 10:45

Matrix: Drinking Water

Date Received: 01/19/24 11:00

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	<0.049		0.049	ug/L		01/21/24 14:30	01/22/24 14:16	1
gamma-Chlordane	<0.049		0.049	ug/L		01/21/24 14:30	01/22/24 14:16	1
Heptachlor	<0.039		0.039	ug/L		01/21/24 14:30	01/22/24 14:16	1
Heptachlor epoxide (isomer B)	<0.049		0.049	ug/L		01/21/24 14:30	01/22/24 14:16	1
Hexachlorobenzene	<0.049		0.049	ug/L		01/21/24 14:30	01/22/24 14:16	1
Hexachlorocyclopentadiene	<0.049		0.049	ug/L		01/21/24 14:30	01/22/24 14:16	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049	ug/L		01/21/24 14:30	01/22/24 14:16	1
Isophorone	<0.49		0.49	ug/L		01/21/24 14:30	01/22/24 14:16	1
Lindane	<0.039		0.039	ug/L		01/21/24 14:30	01/22/24 14:16	1
Malathion	<0.098		0.098	ug/L		01/21/24 14:30	01/22/24 14:16	1
Methoxychlor	<0.098		0.098	ug/L		01/21/24 14:30	01/22/24 14:16	1
Metolachlor	<0.049		0.049	ug/L		01/21/24 14:30	01/22/24 14:16	1
Molinate	<0.098		0.098	ug/L		01/21/24 14:30	01/22/24 14:16	1
Naphthalene	<0.29		0.29	ug/L		01/21/24 14:30	01/22/24 14:16	1
Parathion	<0.098		0.098	ug/L		01/21/24 14:30	01/22/24 14:16	1
Pendimethalin (Penoxaline)	<0.098		0.098	ug/L		01/21/24 14:30	01/22/24 14:16	1
Phenanthrene	<0.039		0.039	ug/L		01/21/24 14:30	01/22/24 14:16	1
Propachlor	<0.049		0.049	ug/L		01/21/24 14:30	01/22/24 14:16	1
Pyrene	<0.049		0.049	ug/L		01/21/24 14:30	01/22/24 14:16	1
Simazine	<0.049		0.049	ug/L		01/21/24 14:30	01/22/24 14:16	1
Terbacil	<0.098		0.098	ug/L		01/21/24 14:30	01/22/24 14:16	1
Terbutylazine	<0.098		0.098	ug/L		01/21/24 14:30	01/22/24 14:16	1
Thiobencarb	<0.20		0.20	ug/L		01/21/24 14:30	01/22/24 14:16	1
Total Permethrin (mixed isomers)	<0.20		0.20	ug/L		01/21/24 14:30	01/22/24 14:16	1
trans-Nonachlor	<0.049		0.049	ug/L		01/21/24 14:30	01/22/24 14:16	1
Trifluralin	<0.098		0.098	ug/L		01/21/24 14:30	01/22/24 14:16	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Decane	2.6	T J N	ug/L		2.35	124-18-5	01/21/24 14:30	01/22/24 14:16	1
Tridecane, 5-propyl-	0.59	T J N	ug/L		2.50	55045-11-9	01/21/24 14:30	01/22/24 14:16	1
Cyclopentasiloxane, decamethyl-	0.78	T J N	ug/L		2.64	541-02-6	01/21/24 14:30	01/22/24 14:16	1
Tetradecanoic acid	0.72	T J N	ug/L		5.78	544-63-8	01/21/24 14:30	01/22/24 14:16	1
Octadecanoic acid	0.55	T J N	ug/L		6.47	57-11-4	01/21/24 14:30	01/22/24 14:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	94		70 - 130	01/21/24 14:30	01/22/24 14:16	1
Perylene-d12	102		70 - 130	01/21/24 14:30	01/22/24 14:16	1
Triphenylphosphate	107		70 - 130	01/21/24 14:30	01/22/24 14:16	1

Action Limit Summary

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

Job ID: 380-79337-1
SDG: 525.2

Client Sample ID: HALAWA WELLS UNIT 1
PWSID Number: HI0000331

Lab Sample ID: 380-79337-1

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	<0.098		ug/L	2	0.098	525.2	Total/NA
Heptachlor	<0.039		ug/L	0.4	0.039	525.2	Total/NA
Heptachlor epoxide (isomer B)	<0.049		ug/L	0.2	0.049	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	<0.039		ug/L	0.2	0.039	525.2	Total/NA
Methoxychlor	<0.098		ug/L	40	0.098	525.2	Total/NA
Simazine	<0.049		ug/L	4	0.049	525.2	Total/NA

Surrogate Summary

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

Job ID: 380-79337-1
SDG: 525.2

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

Matrix: Drinking Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	2NMX (70-130)	PRY (70-130)	TPP (70-130)
380-79337-1	HALAWA WELLS UNIT 1	94	102	107
380-79337-1 DU	HALAWA WELLS UNIT 1	97	100	105

Surrogate Legend

2NMX = 2-Nitro-m-xylene

PRY = Perylene-d12

TPP = Triphenylphosphate

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	2NMX (70-130)	PRY (70-130)	TPP (70-130)
380-79297-W-1-A MS	Matrix Spike	93	102	116
LCS 380-72487/23-A	Lab Control Sample	94	104	109
MB 380-72487/21-A	Method Blank	100	95	104
MRL 380-72487/22-A	Lab Control Sample	96	102	105

Surrogate Legend

2NMX = 2-Nitro-m-xylene

PRY = Perylene-d12

TPP = Triphenylphosphate

QC Sample Results

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

Job ID: 380-79337-1
 SDG: 525.2

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

Lab Sample ID: MB 380-72487/21-A
Matrix: Water
Analysis Batch: 72549

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 72487

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.099		0.099	ug/L		01/21/24 14:30	01/22/24 13:36	1
2,4'-DDD	<0.099		0.099	ug/L		01/21/24 14:30	01/22/24 13:36	1
2,4'-DDE	<0.099		0.099	ug/L		01/21/24 14:30	01/22/24 13:36	1
2,4'-DDT	<0.099		0.099	ug/L		01/21/24 14:30	01/22/24 13:36	1
2,4-Dinitrotoluene	<0.099		0.099	ug/L		01/21/24 14:30	01/22/24 13:36	1
2,6-Dinitrotoluene	<0.099		0.099	ug/L		01/21/24 14:30	01/22/24 13:36	1
2-Methylnaphthalene	<0.099		0.099	ug/L		01/21/24 14:30	01/22/24 13:36	1
4,4'-DDD	<0.099		0.099	ug/L		01/21/24 14:30	01/22/24 13:36	1
4,4'-DDE	<0.099		0.099	ug/L		01/21/24 14:30	01/22/24 13:36	1
4,4'-DDT	<0.099		0.099	ug/L		01/21/24 14:30	01/22/24 13:36	1
Acenaphthene	<0.099		0.099	ug/L		01/21/24 14:30	01/22/24 13:36	1
Acenaphthylene	<0.099		0.099	ug/L		01/21/24 14:30	01/22/24 13:36	1
Acetochlor	<0.099		0.099	ug/L		01/21/24 14:30	01/22/24 13:36	1
Alachlor	<0.049		0.049	ug/L		01/21/24 14:30	01/22/24 13:36	1
alpha-BHC	<0.099		0.099	ug/L		01/21/24 14:30	01/22/24 13:36	1
alpha-Chlordane	<0.049		0.049	ug/L		01/21/24 14:30	01/22/24 13:36	1
Anthracene	<0.020		0.020	ug/L		01/21/24 14:30	01/22/24 13:36	1
Atrazine	<0.049		0.049	ug/L		01/21/24 14:30	01/22/24 13:36	1
Benz(a)anthracene	<0.049		0.049	ug/L		01/21/24 14:30	01/22/24 13:36	1
Benzo[a]pyrene	<0.020		0.020	ug/L		01/21/24 14:30	01/22/24 13:36	1
Benzo[b]fluoranthene	<0.020		0.020	ug/L		01/21/24 14:30	01/22/24 13:36	1
Benzo[g,h,i]perylene	<0.049		0.049	ug/L		01/21/24 14:30	01/22/24 13:36	1
Benzo[k]fluoranthene	<0.020		0.020	ug/L		01/21/24 14:30	01/22/24 13:36	1
beta-BHC	<0.099		0.099	ug/L		01/21/24 14:30	01/22/24 13:36	1
Bis(2-ethylhexyl) phthalate	<0.59		0.59	ug/L		01/21/24 14:30	01/22/24 13:36	1
Bromacil	<0.099		0.099	ug/L		01/21/24 14:30	01/22/24 13:36	1
Butachlor	<0.049		0.049	ug/L		01/21/24 14:30	01/22/24 13:36	1
Butylbenzylphthalate	<0.49		0.49	ug/L		01/21/24 14:30	01/22/24 13:36	1
Chlorobenzilate	<0.099		0.099	ug/L		01/21/24 14:30	01/22/24 13:36	1
Chloroneb	<0.099		0.099	ug/L		01/21/24 14:30	01/22/24 13:36	1
Chlorothalonil (Draconil, Bravo)	<0.099		0.099	ug/L		01/21/24 14:30	01/22/24 13:36	1
Chlorpyrifos	<0.049		0.049	ug/L		01/21/24 14:30	01/22/24 13:36	1
Chrysene	<0.020		0.020	ug/L		01/21/24 14:30	01/22/24 13:36	1
delta-BHC	<0.099		0.099	ug/L		01/21/24 14:30	01/22/24 13:36	1
Di(2-ethylhexyl)adipate	<0.59		0.59	ug/L		01/21/24 14:30	01/22/24 13:36	1
Dibenz(a,h)anthracene	<0.049		0.049	ug/L		01/21/24 14:30	01/22/24 13:36	1
Diclorvos (DDVP)	<0.049		0.049	ug/L		01/21/24 14:30	01/22/24 13:36	1
Dieldrin	<0.20		0.20	ug/L		01/21/24 14:30	01/22/24 13:36	1
Diethylphthalate	<0.49		0.49	ug/L		01/21/24 14:30	01/22/24 13:36	1
Dimethylphthalate	<0.49		0.49	ug/L		01/21/24 14:30	01/22/24 13:36	1
Di-n-butyl phthalate	<0.99		0.99	ug/L		01/21/24 14:30	01/22/24 13:36	1
Di-n-octyl phthalate	<0.099		0.099	ug/L		01/21/24 14:30	01/22/24 13:36	1
Endosulfan I (Alpha)	<0.099		0.099	ug/L		01/21/24 14:30	01/22/24 13:36	1
Endosulfan II (Beta)	<0.099		0.099	ug/L		01/21/24 14:30	01/22/24 13:36	1
Endosulfan sulfate	<0.099		0.099	ug/L		01/21/24 14:30	01/22/24 13:36	1
Endrin	<0.099		0.099	ug/L		01/21/24 14:30	01/22/24 13:36	1
Endrin aldehyde	<0.099		0.099	ug/L		01/21/24 14:30	01/22/24 13:36	1
EPTC	<0.099		0.099	ug/L		01/21/24 14:30	01/22/24 13:36	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-79337-1
SDG: 525.2

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

Lab Sample ID: MB 380-72487/21-A
Matrix: Water
Analysis Batch: 72549

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 72487

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	<0.099		0.099	ug/L		01/21/24 14:30	01/22/24 13:36	1
Fluorene	<0.049		0.049	ug/L		01/21/24 14:30	01/22/24 13:36	1
gamma-Chlordane	<0.049		0.049	ug/L		01/21/24 14:30	01/22/24 13:36	1
Heptachlor	<0.039		0.039	ug/L		01/21/24 14:30	01/22/24 13:36	1
Heptachlor epoxide (isomer B)	<0.049		0.049	ug/L		01/21/24 14:30	01/22/24 13:36	1
Hexachlorobenzene	<0.049		0.049	ug/L		01/21/24 14:30	01/22/24 13:36	1
Hexachlorocyclopentadiene	<0.049		0.049	ug/L		01/21/24 14:30	01/22/24 13:36	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049	ug/L		01/21/24 14:30	01/22/24 13:36	1
Isophorone	<0.49		0.49	ug/L		01/21/24 14:30	01/22/24 13:36	1
Lindane	<0.039		0.039	ug/L		01/21/24 14:30	01/22/24 13:36	1
Malathion	<0.099		0.099	ug/L		01/21/24 14:30	01/22/24 13:36	1
Methoxychlor	<0.099		0.099	ug/L		01/21/24 14:30	01/22/24 13:36	1
Metolachlor	<0.049		0.049	ug/L		01/21/24 14:30	01/22/24 13:36	1
Molinate	<0.099		0.099	ug/L		01/21/24 14:30	01/22/24 13:36	1
Naphthalene	<0.30		0.30	ug/L		01/21/24 14:30	01/22/24 13:36	1
Parathion	<0.099		0.099	ug/L		01/21/24 14:30	01/22/24 13:36	1
Pendimethalin (Penoxaline)	<0.099		0.099	ug/L		01/21/24 14:30	01/22/24 13:36	1
Phenanthrene	<0.039		0.039	ug/L		01/21/24 14:30	01/22/24 13:36	1
Propachlor	<0.049		0.049	ug/L		01/21/24 14:30	01/22/24 13:36	1
Pyrene	<0.049		0.049	ug/L		01/21/24 14:30	01/22/24 13:36	1
Simazine	<0.049		0.049	ug/L		01/21/24 14:30	01/22/24 13:36	1
Terbacil	<0.099		0.099	ug/L		01/21/24 14:30	01/22/24 13:36	1
Terbutylazine	<0.099		0.099	ug/L		01/21/24 14:30	01/22/24 13:36	1
Thiobencarb	<0.20		0.20	ug/L		01/21/24 14:30	01/22/24 13:36	1
Total Permethrin (mixed isomers)	<0.20		0.20	ug/L		01/21/24 14:30	01/22/24 13:36	1
trans-Nonachlor	<0.049		0.049	ug/L		01/21/24 14:30	01/22/24 13:36	1
Trifluralin	<0.099		0.099	ug/L		01/21/24 14:30	01/22/24 13:36	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Decane	2.56	T J N	ug/L		2.35	124-18-5	01/21/24 14:30	01/22/24 13:36	1
Cyclopentasiloxane, decamethyl-	0.795	T J N	ug/L		2.64	541-02-6	01/21/24 14:30	01/22/24 13:36	1
n-Hexadecanoic acid	0.611	T J N	ug/L		5.78	57-10-3	01/21/24 14:30	01/22/24 13:36	1
9-Octadecenamamide, (Z)-	0.738	T J N	ug/L		7.45	301-02-0	01/21/24 14:30	01/22/24 13:36	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	100		70 - 130	01/21/24 14:30	01/22/24 13:36	1
Perylene-d12	95		70 - 130	01/21/24 14:30	01/22/24 13:36	1
Triphenylphosphate	104		70 - 130	01/21/24 14:30	01/22/24 13:36	1

Lab Sample ID: LCS 380-72487/23-A
Matrix: Water
Analysis Batch: 72549

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 72487

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	1.97	1.95		ug/L		99	70 - 130
2,4'-DDD	1.97	2.02		ug/L		102	70 - 130
2,4'-DDE	1.97	2.07		ug/L		105	70 - 130
2,4'-DDT	1.97	2.07		ug/L		105	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-79337-1
SDG: 525.2

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

Lab Sample ID: LCS 380-72487/23-A
Matrix: Water
Analysis Batch: 72549

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 72487

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4-Dinitrotoluene	1.97	2.06		ug/L		105	70 - 130
2,6-Dinitrotoluene	1.97	1.96		ug/L		100	70 - 130
2-Methylnaphthalene	1.97	2.03		ug/L		103	70 - 130
4,4'-DDD	1.97	2.03		ug/L		103	70 - 130
4,4'-DDE	1.97	1.92		ug/L		97	70 - 130
4,4'-DDT	1.97	1.95		ug/L		99	70 - 130
Acenaphthene	1.97	1.80		ug/L		91	70 - 130
Acenaphthylene	1.97	1.77		ug/L		90	70 - 130
Acetochlor	1.97	1.74		ug/L		88	70 - 130
Alachlor	1.97	2.11		ug/L		107	70 - 130
alpha-BHC	1.97	1.87		ug/L		95	70 - 130
alpha-Chlordane	1.97	2.23		ug/L		113	70 - 130
Anthracene	1.97	2.00		ug/L		102	70 - 130
Atrazine	1.97	2.24		ug/L		114	70 - 130
Benz(a)anthracene	1.97	2.02		ug/L		103	70 - 130
Benzo[a]pyrene	1.97	2.05		ug/L		104	70 - 130
Benzo[b]fluoranthene	1.97	2.05		ug/L		104	70 - 130
Benzo[g,h,i]perylene	1.97	1.99		ug/L		101	70 - 130
Benzo[k]fluoranthene	1.97	2.16		ug/L		110	70 - 130
beta-BHC	1.97	1.93		ug/L		98	70 - 130
Bis(2-ethylhexyl) phthalate	1.97	1.63		ug/L		83	70 - 130
Bromacil	1.97	2.23		ug/L		113	70 - 130
Butachlor	1.97	2.19		ug/L		111	70 - 130
Butylbenzylphthalate	1.97	2.14		ug/L		109	70 - 130
Chlorobenzilate	1.97	2.15		ug/L		109	70 - 130
Chloroneb	1.97	2.00		ug/L		102	70 - 130
Chlorothalonil (Draconil, Bravo)	1.97	2.13		ug/L		108	70 - 130
Chlorpyrifos	1.97	2.13		ug/L		108	70 - 130
Chrysene	1.97	1.92		ug/L		97	70 - 130
delta-BHC	1.97	1.79		ug/L		91	70 - 130
Di(2-ethylhexyl)adipate	1.97	2.00		ug/L		101	70 - 130
Dibenz(a,h)anthracene	1.97	2.03		ug/L		103	70 - 130
Diclorvos (DDVP)	1.97	1.72		ug/L		87	70 - 130
Dieldrin	1.97	2.03		ug/L		103	70 - 130
Diethylphthalate	1.97	1.98		ug/L		101	70 - 130
Dimethylphthalate	1.97	1.95		ug/L		99	70 - 130
Di-n-butyl phthalate	3.94	4.37		ug/L		111	70 - 130
Di-n-octyl phthalate	1.97	1.40		ug/L		71	70 - 130
Endosulfan I (Alpha)	1.97	1.93		ug/L		98	70 - 130
Endosulfan II (Beta)	1.97	2.02		ug/L		103	70 - 130
Endosulfan sulfate	1.97	2.32		ug/L		118	70 - 130
Endrin	1.97	2.13		ug/L		108	70 - 130
Endrin aldehyde	1.97	1.98		ug/L		101	70 - 130
EPTC	1.97	2.15		ug/L		109	70 - 130
Fluoranthene	1.97	2.09		ug/L		106	70 - 130
Fluorene	1.97	2.02		ug/L		103	70 - 130
gamma-Chlordane	1.97	2.27		ug/L		115	70 - 130
Heptachlor	1.97	1.79		ug/L		91	70 - 130
Heptachlor epoxide (isomer B)	1.97	2.18		ug/L		111	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-79337-1
SDG: 525.2

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

Lab Sample ID: LCS 380-72487/23-A
Matrix: Water
Analysis Batch: 72549

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 72487

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexachlorobenzene	1.97	2.14		ug/L		109	70 - 130
Hexachlorocyclopentadiene	1.97	2.17		ug/L		110	70 - 130
Indeno[1,2,3-cd]pyrene	1.97	2.04		ug/L		104	70 - 130
Isophorone	1.97	1.67		ug/L		85	70 - 130
Lindane	1.97	1.98		ug/L		100	70 - 130
Malathion	1.97	2.26		ug/L		115	70 - 130
Methoxychlor	1.97	1.84		ug/L		93	70 - 130
Metolachlor	1.97	2.14		ug/L		109	70 - 130
Molinate	1.97	2.02		ug/L		102	70 - 130
Naphthalene	1.97	1.85		ug/L		94	70 - 130
Parathion	1.97	1.94		ug/L		99	70 - 130
Pendimethalin (Penoxaline)	1.97	2.10		ug/L		107	70 - 130
Phenanthrene	1.97	1.92		ug/L		98	70 - 130
Propachlor	1.97	2.01		ug/L		102	70 - 130
Pyrene	1.97	2.09		ug/L		106	70 - 130
Simazine	1.97	2.33		ug/L		119	70 - 130
Terbacil	1.97	2.05		ug/L		104	70 - 130
Terbutylazine	1.97	2.18		ug/L		111	70 - 130
Thiobencarb	1.97	1.91		ug/L		97	70 - 130
trans-Nonachlor	1.97	2.08		ug/L		105	70 - 130
Trifluralin	1.97	2.43		ug/L		124	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Nitro-m-xylene	94		70 - 130
Perylene-d12	104		70 - 130
Triphenylphosphate	109		70 - 130

Lab Sample ID: MRL 380-72487/22-A
Matrix: Water
Analysis Batch: 72549

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 72487

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	0.0985	0.111		ug/L		113	50 - 150
2,4'-DDD	0.0985	0.112		ug/L		114	50 - 150
2,4'-DDE	0.0985	0.0960	J	ug/L		97	50 - 150
2,4'-DDT	0.0985	0.0811	J	ug/L		82	50 - 150
2,4-Dinitrotoluene	0.0985	0.0803	J	ug/L		81	50 - 150
2,6-Dinitrotoluene	0.0985	0.0921	J	ug/L		94	50 - 150
2-Methylnaphthalene	0.0985	0.109		ug/L		110	50 - 150
4,4'-DDD	0.0985	0.0897	J	ug/L		91	50 - 150
4,4'-DDE	0.0985	0.130		ug/L		132	50 - 150
4,4'-DDT	0.0985	0.112		ug/L		113	50 - 150
Acenaphthene	0.0985	0.0896	J	ug/L		91	50 - 150
Acenaphthylene	0.0985	0.0796	J	ug/L		81	50 - 150
Acetochlor	0.0492	0.0374	J	ug/L		76	50 - 150
Alachlor	0.0492	0.0569		ug/L		116	50 - 150
alpha-BHC	0.0985	0.0945	J	ug/L		96	50 - 150
alpha-Chlordane	0.0246	<0.029		ug/L		108	50 - 150

QC Sample Results

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

Job ID: 380-79337-1
SDG: 525.2

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

Lab Sample ID: MRL 380-72487/22-A
Matrix: Water
Analysis Batch: 72549

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 72487

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Anthracene	0.0197	<0.019		ug/L		94	50 - 150
Atrazine	0.0492	0.0485	J	ug/L		98	50 - 150
Benz(a)anthracene	0.0492	0.0453	J	ug/L		92	50 - 150
Benzo[a]pyrene	0.0197	0.0159	J	ug/L		81	50 - 150
Benzo[b]fluoranthene	0.0197	0.0182	J	ug/L		92	50 - 150
Benzo[g,h,i]perylene	0.0492	0.0451	J	ug/L		92	50 - 150
Benzo[k]fluoranthene	0.0197	0.0170	J	ug/L		86	50 - 150
beta-BHC	0.0985	0.101		ug/L		102	50 - 150
Bis(2-ethylhexyl) phthalate	0.591	0.541	J	ug/L		92	50 - 150
Bromacil	0.0985	0.0977	J	ug/L		99	50 - 150
Butachlor	0.0492	0.0583		ug/L		118	50 - 150
Butylbenzylphthalate	0.148	0.156	J	ug/L		105	50 - 150
Chlorobenzilate	0.0985	0.134		ug/L		136	50 - 150
Chloroneb	0.0985	0.0953	J	ug/L		97	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0985	0.158	^3+	ug/L		161	50 - 150
Chlorpyrifos	0.0492	0.0492		ug/L		100	50 - 150
Chrysene	0.0197	0.0193	J	ug/L		98	50 - 150
delta-BHC	0.0985	0.104		ug/L		105	50 - 150
Di(2-ethylhexyl)adipate	0.295	0.330	J	ug/L		112	50 - 150
Dibenz(a,h)anthracene	0.0492	0.0389	J	ug/L		79	50 - 150
Diclorvos (DDVP)	0.0492	0.0488	J	ug/L		99	50 - 150
Dieldrin	0.0985	0.0972	J	ug/L		99	50 - 150
Diethylphthalate	0.148	0.166	J	ug/L		112	50 - 150
Dimethylphthalate	0.295	0.288	J	ug/L		97	50 - 150
Di-n-butyl phthalate	0.295	0.354	J	ug/L		120	49 - 243
Di-n-octyl phthalate	0.0985	0.108		ug/L		109	50 - 150
Endosulfan I (Alpha)	0.0985	0.0952	J	ug/L		97	50 - 150
Endosulfan II (Beta)	0.0985	0.122		ug/L		123	50 - 150
Endosulfan sulfate	0.0985	0.108		ug/L		110	50 - 150
Endrin	0.0985	0.0941	J	ug/L		96	50 - 150
Endrin aldehyde	0.0985	0.147		ug/L		150	50 - 150
EPTC	0.0985	0.105		ug/L		107	50 - 150
Fluoranthene	0.0492	0.0491	J	ug/L		100	50 - 150
Fluorene	0.0492	<0.049		ug/L		99	50 - 150
gamma-Chlordane	0.0246	0.0277	J	ug/L		112	50 - 150
Heptachlor	0.0394	0.0425		ug/L		108	50 - 150
Heptachlor epoxide (isomer B)	0.0492	0.0581		ug/L		118	50 - 150
Hexachlorobenzene	0.0492	0.0509		ug/L		103	50 - 150
Hexachlorocyclopentadiene	0.0492	0.0457	J	ug/L		93	50 - 150
Indeno[1,2,3-cd]pyrene	0.0492	0.0411	J	ug/L		84	50 - 150
Isophorone	0.0985	0.0934	J	ug/L		95	50 - 150
Lindane	0.0394	0.0367	J	ug/L		93	50 - 150
Malathion	0.0985	0.0998		ug/L		101	50 - 150
Methoxychlor	0.0985	0.0981		ug/L		100	50 - 150
Metolachlor	0.0492	0.0521		ug/L		106	50 - 150
Molinate	0.0985	0.100		ug/L		102	50 - 150
Naphthalene	0.0985	0.109	J	ug/L		111	50 - 150
Parathion	0.0985	0.117		ug/L		119	50 - 150
Pendimethalin (Penoxaline)	0.0985	0.0929	J	ug/L		94	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-79337-1
SDG: 525.2

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

Lab Sample ID: MRL 380-72487/22-A
Matrix: Water
Analysis Batch: 72549

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 72487

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Phenanthrene	0.0197	0.0214	J	ug/L		109	50 - 150
Propachlor	0.0492	0.0508		ug/L		103	50 - 150
Pyrene	0.0492	0.0486	J	ug/L		99	50 - 150
Simazine	0.0492	0.0533		ug/L		108	50 - 150
Terbacil	0.0985	0.103		ug/L		104	50 - 150
Terbutylazine	0.0985	0.0987		ug/L		100	50 - 150
Thiobencarb	0.0985	0.0994	J	ug/L		101	50 - 150
trans-Nonachlor	0.0246	<0.026		ug/L		96	50 - 150
Trifluralin	0.0985	0.0887	J	ug/L		90	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
2-Nitro-m-xylene	96		70 - 130
Perylene-d12	102		70 - 130
Triphenylphosphate	105		70 - 130

Lab Sample ID: 380-79297-W-1-A MS
Matrix: Water
Analysis Batch: 72549

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 72487

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	<0.098		1.96	1.90		ug/L		97	70 - 130
2,4'-DDD	<0.098		1.96	2.07		ug/L		106	70 - 130
2,4'-DDE	<0.098		1.96	2.12		ug/L		108	70 - 130
2,4'-DDT	<0.098		1.96	2.26		ug/L		115	70 - 130
2,4-Dinitrotoluene	<0.098		1.96	2.24		ug/L		115	70 - 130
2,6-Dinitrotoluene	<0.098		1.96	2.11		ug/L		108	70 - 130
2-Methylnaphthalene	<0.098		1.96	2.00		ug/L		102	70 - 130
4,4'-DDD	<0.098		1.96	2.16		ug/L		111	70 - 130
4,4'-DDE	<0.098		1.96	1.99		ug/L		101	70 - 130
4,4'-DDT	<0.098		1.96	2.16		ug/L		110	70 - 130
Acenaphthene	<0.098		1.96	1.76		ug/L		90	70 - 130
Acenaphthylene	<0.098		1.96	1.85		ug/L		95	70 - 130
Acetochlor	<0.098		1.96	1.71		ug/L		87	70 - 130
Alachlor	<0.049		1.96	2.09		ug/L		107	70 - 130
alpha-BHC	<0.098		1.96	1.89		ug/L		97	70 - 130
alpha-Chlordane	<0.049		1.96	2.28		ug/L		117	70 - 130
Anthracene	<0.020		1.96	1.78		ug/L		91	70 - 130
Atrazine	<0.049		1.96	2.11		ug/L		108	70 - 130
Benz(a)anthracene	<0.049		1.96	2.14		ug/L		109	70 - 130
Benzo[a]pyrene	<0.020		1.96	2.05		ug/L		105	70 - 130
Benzo[b]fluoranthene	<0.020		1.96	2.07		ug/L		106	70 - 130
Benzo[g,h,i]perylene	<0.049		1.96	1.90		ug/L		97	70 - 130
Benzo[k]fluoranthene	<0.020		1.96	2.26		ug/L		115	70 - 130
beta-BHC	<0.098		1.96	1.95		ug/L		100	70 - 130
Bis(2-ethylhexyl) phthalate	<0.59		1.96	1.85		ug/L		94	70 - 130
Bromacil	<0.098		1.96	2.43		ug/L		124	70 - 130
Butachlor	<0.049		1.96	2.17		ug/L		111	70 - 130
Butylbenzylphthalate	<0.49		1.96	2.21		ug/L		113	70 - 130

QC Sample Results

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

Job ID: 380-79337-1
 SDG: 525.2

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

Lab Sample ID: 380-79297-W-1-A MS
Matrix: Water
Analysis Batch: 72549

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 72487

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier	Added	Result	Qualifier				
Chlorobenzilate	<0.098		1.96	2.35		ug/L		120	70 - 130
Chloroneb	<0.098		1.96	1.95		ug/L		100	70 - 130
Chlorothalonil (Draconil, Bravo)	<0.098	^3+	1.96	2.09		ug/L		107	70 - 130
Chlorpyrifos	<0.049		1.96	2.18		ug/L		111	70 - 130
Chrysene	<0.020		1.96	1.96		ug/L		100	70 - 130
delta-BHC	<0.098		1.96	1.75		ug/L		89	70 - 130
Di(2-ethylhexyl)adipate	<0.59		1.96	2.18		ug/L		111	70 - 130
Dibenz(a,h)anthracene	<0.049		1.96	2.01		ug/L		103	70 - 130
Diclorvos (DDVP)	<0.049		1.96	1.70		ug/L		87	70 - 130
Dieldrin	<0.20		1.96	1.94		ug/L		99	70 - 130
Diethylphthalate	<0.49		1.96	2.02		ug/L		103	70 - 130
Dimethylphthalate	<0.49		1.96	2.03		ug/L		104	70 - 130
Di-n-butyl phthalate	<0.98		3.91	4.72		ug/L		118	70 - 130
Di-n-octyl phthalate	<0.098		1.96	1.64		ug/L		84	70 - 130
Endosulfan I (Alpha)	<0.098		1.96	1.87		ug/L		96	70 - 130
Endosulfan II (Beta)	<0.098		1.96	2.10		ug/L		107	70 - 130
Endosulfan sulfate	<0.098		1.96	2.38		ug/L		122	70 - 130
Endrin	<0.098		1.96	1.95		ug/L		100	70 - 130
Endrin aldehyde	<0.098		1.96	1.49		ug/L		76	70 - 130
EPTC	<0.098		1.96	2.19		ug/L		112	70 - 130
Fluoranthene	<0.098		1.96	2.12		ug/L		108	70 - 130
Fluorene	<0.049		1.96	2.00		ug/L		102	70 - 130
gamma-Chlordane	<0.049		1.96	2.36		ug/L		121	70 - 130
Heptachlor	<0.039		1.96	1.73		ug/L		89	70 - 130
Heptachlor epoxide (isomer B)	<0.049		1.96	2.20		ug/L		112	70 - 130
Hexachlorobenzene	<0.049		1.96	2.11		ug/L		108	70 - 130
Hexachlorocyclopentadiene	<0.049		1.96	2.18		ug/L		111	70 - 130
Indeno[1,2,3-cd]pyrene	<0.049		1.96	2.03		ug/L		104	70 - 130
Isophorone	<0.49		1.96	1.68		ug/L		86	70 - 130
Lindane	<0.039		1.96	1.94		ug/L		99	70 - 130
Malathion	<0.098		1.96	2.33		ug/L		119	70 - 130
Methoxychlor	<0.098		1.96	1.97		ug/L		101	70 - 130
Metolachlor	<0.049		1.96	2.21		ug/L		113	70 - 130
Molinate	<0.098		1.96	2.09		ug/L		107	70 - 130
Naphthalene	<0.29		1.96	1.79		ug/L		91	70 - 130
Parathion	<0.098		1.96	2.04		ug/L		104	70 - 130
Pendimethalin (Penoxaline)	<0.098		1.96	2.31		ug/L		118	70 - 130
Phenanthrene	<0.039		1.96	1.89		ug/L		97	70 - 130
Propachlor	<0.049		1.96	2.10		ug/L		107	70 - 130
Pyrene	<0.049		1.96	2.14		ug/L		109	70 - 130
Simazine	<0.049		1.96	2.23		ug/L		114	70 - 130
Terbacil	<0.098		1.96	2.06		ug/L		105	70 - 130
Terbutylazine	<0.098		1.96	2.07		ug/L		106	70 - 130
Thiobencarb	<0.20		1.96	1.99		ug/L		101	70 - 130
trans-Nonachlor	<0.049		1.96	2.14		ug/L		109	70 - 130
Trifluralin	<0.098	F1	1.96	2.57	F1	ug/L		131	70 - 130

QC Sample Results

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

Job ID: 380-79337-1
SDG: 525.2

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

Lab Sample ID: 380-79297-W-1-A MS
Matrix: Water
Analysis Batch: 72549

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 72487

<i>Surrogate</i>	<i>%Recovery</i>	<i>MS MS Qualifier</i>	<i>Limits</i>
2-Nitro-m-xylene	93		70 - 130
Perylene-d12	102		70 - 130
Triphenylphosphate	116		70 - 130

Lab Sample ID: 380-79337-1 DU
Matrix: Drinking Water
Analysis Batch: 72549

Client Sample ID: HALAWA WELLS UNIT 1
Prep Type: Total/NA
Prep Batch: 72487

Analyte	Sample Result	Sample Qualifier	DU		Unit	D	RPD	Limit
			Result	Qualifier				
1-Methylnaphthalene	<0.098		<0.098		ug/L		NC	20
2,4'-DDD	<0.098		<0.098		ug/L		NC	20
2,4'-DDE	<0.098		<0.098		ug/L		NC	20
2,4'-DDT	<0.098		<0.098		ug/L		NC	20
2,4-Dinitrotoluene	<0.098		<0.098		ug/L		NC	20
2,6-Dinitrotoluene	<0.098		<0.098		ug/L		NC	20
2-Methylnaphthalene	<0.098		<0.098		ug/L		NC	20
4,4'-DDD	<0.098		<0.098		ug/L		NC	20
4,4'-DDE	<0.098		<0.098		ug/L		NC	20
4,4'-DDT	<0.098		<0.098		ug/L		NC	20
Acenaphthene	<0.098		<0.098		ug/L		NC	20
Acenaphthylene	<0.098		<0.098		ug/L		NC	20
Acetochlor	<0.098		<0.098		ug/L		NC	20
Alachlor	<0.049		<0.049		ug/L		NC	20
alpha-BHC	<0.098		<0.098		ug/L		NC	20
alpha-Chlordane	<0.049		<0.049		ug/L		NC	20
Anthracene	<0.020		<0.020		ug/L		NC	20
Atrazine	<0.049		<0.049		ug/L		NC	20
Benz(a)anthracene	<0.049		<0.049		ug/L		NC	20
Benzo[a]pyrene	<0.020		<0.020		ug/L		NC	20
Benzo[b]fluoranthene	<0.020		<0.020		ug/L		NC	20
Benzo[g,h,i]perylene	<0.049		<0.049		ug/L		NC	20
Benzo[k]fluoranthene	<0.020		<0.020		ug/L		NC	20
beta-BHC	<0.098		<0.098		ug/L		NC	20
Bis(2-ethylhexyl) phthalate	<0.59		<0.59		ug/L		NC	20
Bromacil	<0.098		<0.098		ug/L		NC	20
Butachlor	<0.049		<0.049		ug/L		NC	20
Butylbenzylphthalate	<0.49		<0.49		ug/L		NC	20
Chlorobenzilate	<0.098		<0.098		ug/L		NC	20
Chloroneb	<0.098		<0.098		ug/L		NC	20
Chlorothalonil (Draconil, Bravo)	<0.098	^3+	<0.098		ug/L		NC	20
Chlorpyrifos	<0.049		<0.049		ug/L		NC	20
Chrysene	<0.020		<0.020		ug/L		NC	20
delta-BHC	<0.098		<0.098		ug/L		NC	20
Di(2-ethylhexyl)adipate	<0.59		<0.59		ug/L		NC	20
Dibenz(a,h)anthracene	<0.049		<0.049		ug/L		NC	20
Diclorvos (DDVP)	<0.049		<0.049		ug/L		NC	20
Dieldrin	<0.20		<0.20		ug/L		NC	20
Diethylphthalate	<0.49		<0.49		ug/L		NC	20

QC Sample Results

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

Job ID: 380-79337-1
SDG: 525.2

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

Lab Sample ID: 380-79337-1 DU
Matrix: Drinking Water
Analysis Batch: 72549

Client Sample ID: HALAWA WELLS UNIT 1
Prep Type: Total/NA
Prep Batch: 72487

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Dimethylphthalate	<0.49		<0.49		ug/L		NC	20
Di-n-butyl phthalate	<0.98		<0.98		ug/L		NC	20
Di-n-octyl phthalate	<0.098		<0.098		ug/L		NC	20
Endosulfan I (Alpha)	<0.098		<0.098		ug/L		NC	20
Endosulfan II (Beta)	<0.098		<0.098		ug/L		NC	20
Endosulfan sulfate	<0.098		<0.098		ug/L		NC	20
Endrin	<0.098		<0.098		ug/L		NC	20
Endrin aldehyde	<0.098		<0.098		ug/L		NC	20
EPTC	<0.098		<0.098		ug/L		NC	20
Fluoranthene	<0.098		<0.098		ug/L		NC	20
Fluorene	<0.049		<0.049		ug/L		NC	20
gamma-Chlordane	<0.049		<0.049		ug/L		NC	20
Heptachlor	<0.039		<0.039		ug/L		NC	20
Heptachlor epoxide (isomer B)	<0.049		<0.049		ug/L		NC	20
Hexachlorobenzene	<0.049		<0.049		ug/L		NC	20
Hexachlorocyclopentadiene	<0.049		<0.049		ug/L		NC	20
Indeno[1,2,3-cd]pyrene	<0.049		<0.049		ug/L		NC	20
Isophorone	<0.49		<0.49		ug/L		NC	20
Lindane	<0.039		<0.039		ug/L		NC	20
Malathion	<0.098		<0.098		ug/L		NC	20
Methoxychlor	<0.098		<0.098		ug/L		NC	20
Metolachlor	<0.049		<0.049		ug/L		NC	20
Molinate	<0.098		<0.098		ug/L		NC	20
Naphthalene	<0.29		<0.29		ug/L		NC	20
Parathion	<0.098		<0.098		ug/L		NC	20
Pendimethalin (Penoxaline)	<0.098		<0.098		ug/L		NC	20
Phenanthrene	<0.039		<0.039		ug/L		NC	20
Propachlor	<0.049		<0.049		ug/L		NC	20
Pyrene	<0.049		<0.049		ug/L		NC	20
Simazine	<0.049		<0.049		ug/L		NC	20
Terbacil	<0.098		<0.098		ug/L		NC	20
Terbutylazine	<0.098		<0.098		ug/L		NC	20
Thiobencarb	<0.20		<0.20		ug/L		NC	20
Total Permethrin (mixed isomers)	<0.20		<0.20		ug/L		NC	20
trans-Nonachlor	<0.049		<0.049		ug/L		NC	20
Trifluralin	<0.098		<0.098		ug/L		NC	20

Surrogate	DU %Recovery	DU Qualifier	Limits
2-Nitro-m-xylene	97		70 - 130
Perylene-d12	100		70 - 130
Triphenylphosphate	105		70 - 130

QC Association Summary

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

Job ID: 380-79337-1
 SDG: 525.2

GC/MS Semi VOA

Prep Batch: 72487

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-79337-1	HALAWA WELLS UNIT 1	Total/NA	Drinking Water	525.2	
MB 380-72487/21-A	Method Blank	Total/NA	Water	525.2	
LCS 380-72487/23-A	Lab Control Sample	Total/NA	Water	525.2	
MRL 380-72487/22-A	Lab Control Sample	Total/NA	Water	525.2	
380-79297-W-1-A MS	Matrix Spike	Total/NA	Water	525.2	
380-79337-1 DU	HALAWA WELLS UNIT 1	Total/NA	Drinking Water	525.2	

Analysis Batch: 72549

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-79337-1	HALAWA WELLS UNIT 1	Total/NA	Drinking Water	525.2	72487
MB 380-72487/21-A	Method Blank	Total/NA	Water	525.2	72487
LCS 380-72487/23-A	Lab Control Sample	Total/NA	Water	525.2	72487
MRL 380-72487/22-A	Lab Control Sample	Total/NA	Water	525.2	72487
380-79297-W-1-A MS	Matrix Spike	Total/NA	Water	525.2	72487
380-79337-1 DU	HALAWA WELLS UNIT 1	Total/NA	Drinking Water	525.2	72487



Lab Chronicle

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

Job ID: 380-79337-1
SDG: 525.2

Client Sample ID: HALAWA WELLS UNIT 1

Lab Sample ID: 380-79337-1

Date Collected: 01/17/24 10:45

Matrix: Drinking Water

Date Received: 01/19/24 11:00

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Analyst</u>	<u>Lab</u>	<u>Prepared or Analyzed</u>
Total/NA	Prep	525.2			72487	N8NE	EA POM	01/21/24 14:30
Total/NA	Analysis	525.2		1	72549	Q8LA	EA POM	01/22/24 14:16

Laboratory References:

EA POM = Eurofins Eaton Analytical Pomona, 941 Corporate Center Drive, Pomona, CA 91768-2642, TEL (626)386-1100

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Accreditation/Certification Summary

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

Job ID: 380-79337-1
 SDG: 525.2

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	01-31-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
525.2	525.2	Drinking Water	1-Methylnaphthalene
525.2	525.2	Drinking Water	2,4'-DDD
525.2	525.2	Drinking Water	2,4'-DDE
525.2	525.2	Drinking Water	2,4'-DDT
525.2	525.2	Drinking Water	2,4-Dinitrotoluene
525.2	525.2	Drinking Water	2,6-Dinitrotoluene
525.2	525.2	Drinking Water	2-Methylnaphthalene
525.2	525.2	Drinking Water	4,4'-DDD
525.2	525.2	Drinking Water	4,4'-DDE
525.2	525.2	Drinking Water	4,4' DDT
525.2	525.2	Drinking Water	Acenaphthene
525.2	525.2	Drinking Water	Acenaphthylene
525.2	525.2	Drinking Water	Acetochlor
525.2	525.2	Drinking Water	alpha-BHC
525.2	525.2	Drinking Water	alpha-Chlordane
525.2	525.2	Drinking Water	Anthracene
525.2	525.2	Drinking Water	Benz(a)anthracene
525.2	525.2	Drinking Water	Benzo[b]fluoranthene
525.2	525.2	Drinking Water	Benzo[g,h,i]perylene
525.2	525.2	Drinking Water	Benzo[k]fluoranthene
525.2	525.2	Drinking Water	beta-BHC
525.2	525.2	Drinking Water	Bromacil
525.2	525.2	Drinking Water	Butylbenzylphthalate
525.2	525.2	Drinking Water	Chlorobenzilate
525.2	525.2	Drinking Water	Chloroneb
525.2	525.2	Drinking Water	Chlorothalonil (Draconil, Bravo)
525.2	525.2	Drinking Water	Chlorpyrifos
525.2	525.2	Drinking Water	Chrysene
525.2	525.2	Drinking Water	delta-BHC
525.2	525.2	Drinking Water	Dibenz(a,h)anthracene
525.2	525.2	Drinking Water	Diclorvos (DDVP)
525.2	525.2	Drinking Water	Diethylphthalate
525.2	525.2	Drinking Water	Dimethylphthalate
525.2	525.2	Drinking Water	Di-n-butyl phthalate
525.2	525.2	Drinking Water	Di n octyl phthalate
525.2	525.2	Drinking Water	Endosulfan I (Alpha)
525.2	525.2	Drinking Water	Endosulfan II (Beta)
525.2	525.2	Drinking Water	Endosulfan sulfate
525.2	525.2	Drinking Water	Endrin aldehyde
525.2	525.2	Drinking Water	EPTC
525.2	525.2	Drinking Water	Fluoranthene
525.2	525.2	Drinking Water	Fluorene
525.2	525.2	Drinking Water	gamma-Chlordane
525.2	525.2	Drinking Water	Indeno[1,2,3-cd]pyrene
525.2	525.2	Drinking Water	Isophorone

Accreditation/Certification Summary

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

Job ID: 380-79337-1
SDG: 525.2

Laboratory: Eurofins Eaton Analytical Pomona (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
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The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
525.2	525.2	Drinking Water	Malathion
525.2	525.2	Drinking Water	Molinate
525.2	525.2	Drinking Water	Naphthalene
525.2	525.2	Drinking Water	Parathion
525.2	525.2	Drinking Water	Pendimethalin (Penoxaline)
525.2	525.2	Drinking Water	Phenanthrene
525.2	525.2	Drinking Water	Pyrene
525.2	525.2	Drinking Water	Terbacil
525.2	525.2	Drinking Water	Terbutylazine
525.2	525.2	Drinking Water	Thiobencarb
525.2	525.2	Drinking Water	Total Permethrin (mixed isomers)
525.2	525.2	Drinking Water	trans-Nonachlor
525.2	525.2	Drinking Water	Trifluralin

Method Summary

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

Job ID: 380-79337-1
SDG: 525.2

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

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EA POM = Eurofins Eaton Analytical Pomona, 941 Corporate Center Drive, Pomona, CA 91768-2642, TEL (626)386-1100

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Sample Summary

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

Job ID: 380-79337-1
SDG: 525.2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
380-79337-1	HALAWA WELLS UNIT 1	Drinking Water	01/17/24 10:45	01/19/24 11:00	HI0000331

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Monrovia, CA (Suite 100)
 750 Royal Oaks Drive Suite 100
 Monrovia, CA 91016
 Phone (626) 386-1100

Chain of Custody Record



Environment Testing
 America

Client Information		Lab PM Arada, Rachelle		Carrier Tracking No(s)		COC No			
Client Contact: Dr. Ron Fenstermacher		Phone 808-748-5840		State of Origin		Page Page 1 of 1			
Company City and County of Honolulu		E-Mail Rachelle.Arada@et.eurofins.com		PWSID		Job #			
Address 630 South Beretania St. Chemistry Lab		Due Date Requested:		Analysis Requested					
City Honolulu		TAT Requested (days):							
State, Zip Hawaii 96843		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No							
Phone 808-748-5841		PO # C20525101 exp 05312023							
Email RFENSTEMACHER@hbws.org		WO #							
Project Name RED HILL/HBWS Sites Event Desc: RUSH Weekly Red Hill		Project # 38001111		533 - All Analytes					
Site Hawaii		SSOW#		537.1, DW, PREC - 537.1 Full List					
Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air)	
HALAWA WELLS UNIT 1		1/17/2024		10:45		G		Water	
TB HALAWA WELLS UNIT 1		1/17/2024		10:45				Water	
								Temp blank / °C	
Possible Hazard Identification		<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
Deliverable Requested 1, II, III, IV, Other (specify)								Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For: _____ Months	
Empty Kit Relinquished by		Date		Special Instructions/QC Requirements					
Relinquished by: Lesli Laanui		Date/Time: 1-18-2024 1200		Method of Shipment: FED Ex 7748 5900 1766					
Relinquished by:		Date/Time		Received by: G RETNIER Date/Time: 01/19/2024 11:00 Company: ESEAP					
Relinquished by:		Date/Time		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: 751A 34.0-0.1 = 33 °C FROZEN					



Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-79337-1

SDG Number: 525.2

Login Number: 79337

List Number: 1

Creator: Elyas, Matthew

List Source: Eurofins Eaton Analytical Pomona

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

