

 **ANALYTICAL REPORT****PREPARED FOR**

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

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JOB DESCRIPTION

RED-HILL

JOB NUMBER

380-105576-1

Eurofins Eaton Analytical Pomona

Job Notes

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

Compliance Statement

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

Authorization



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



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Definitions/Glossary

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

Job ID: 380-105576-1

Qualifiers

GC/MS Semi VOA

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

GC/MS Semi VOA TICs

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

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: 380-105576-1

Job ID: 380-105576-1

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Job Narrative 380-105576-1

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 7/24/2024 9:37 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 4.1°C and 5.5°C.

Receipt Exceptions

One or more containers for the following samples were received broken or leaking: 2 of 2 (all) 8015B_GRO_LL TB vials received broken for TB: Aiea Wells Pumps 1&2 (260)

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: 380-105576-1

Client Sample ID: Aiea Gulch Wells Pump 2

Lab Sample ID: 380-105576-1

No Detections.

Client Sample ID: TB: Aiea Gulch Wells Pump 2

Lab Sample ID: 380-105576-2

No Detections.

Client Sample ID: Aiea Wells Pumps 1&2 (260) P2

Lab Sample ID: 380-105576-3

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Dieldrin	0.0099		0.0096	ug/L	1		525.2	Total/NA

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: 380-105576-1

Client Sample ID: Aiea Gulch Wells Pump 2

Lab Sample ID: 380-105576-1

Date Collected: 07/22/24 10:56

Matrix: Water

Date Received: 07/24/24 09:37

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		07/25/24 13:15	07/27/24 12:45	1
2,4'-DDD	<0.098		0.098	ug/L		07/25/24 13:15	07/27/24 12:45	1
2,4'-DDE	<0.098		0.098	ug/L		07/25/24 13:15	07/27/24 12:45	1
2,4'-DDT	<0.098		0.098	ug/L		07/25/24 13:15	07/27/24 12:45	1
2,4-Dinitrotoluene	<0.098		0.098	ug/L		07/25/24 13:15	07/27/24 12:45	1
2,6-Dinitrotoluene	<0.098		0.098	ug/L		07/25/24 13:15	07/27/24 12:45	1
2-Methylnaphthalene	<0.098		0.098	ug/L		07/25/24 13:15	07/27/24 12:45	1
4,4'-DDD	<0.098		0.098	ug/L		07/25/24 13:15	07/27/24 12:45	1
4,4'-DDE	<0.098		0.098	ug/L		07/25/24 13:15	07/27/24 12:45	1
4,4'-DDT	<0.098		0.098	ug/L		07/25/24 13:15	07/27/24 12:45	1
Acenaphthene	<0.098		0.098	ug/L		07/25/24 13:15	07/27/24 12:45	1
Acenaphthylene	<0.098		0.098	ug/L		07/25/24 13:15	07/27/24 12:45	1
Acetochlor	<0.098		0.098	ug/L		07/25/24 13:15	07/27/24 12:45	1
Alachlor	<0.049		0.049	ug/L		07/25/24 13:15	07/27/24 12:45	1
alpha-BHC	<0.098		0.098	ug/L		07/25/24 13:15	07/27/24 12:45	1
alpha-Chlordane	<0.049		0.049	ug/L		07/25/24 13:15	07/27/24 12:45	1
Anthracene	<0.020		0.020	ug/L		07/25/24 13:15	07/27/24 12:45	1
Atrazine	<0.049		0.049	ug/L		07/25/24 13:15	07/27/24 12:45	1
Benz(a)anthracene	<0.049		0.049	ug/L		07/25/24 13:15	07/27/24 12:45	1
Benzo[a]pyrene	<0.020		0.020	ug/L		07/25/24 13:15	07/27/24 12:45	1
Benzo[b]fluoranthene	<0.020		0.020	ug/L		07/25/24 13:15	07/27/24 12:45	1
Benzo[g,h,i]perylene	<0.049		0.049	ug/L		07/25/24 13:15	07/27/24 12:45	1
Benzo[k]fluoranthene	<0.020		0.020	ug/L		07/25/24 13:15	07/27/24 12:45	1
beta-BHC	<0.098		0.098	ug/L		07/25/24 13:15	07/27/24 12:45	1
Bis(2-ethylhexyl) phthalate	<0.59		0.59	ug/L		07/25/24 13:15	07/27/24 12:45	1
Bromacil	<0.098		0.098	ug/L		07/25/24 13:15	07/27/24 12:45	1
Butachlor	<0.049		0.049	ug/L		07/25/24 13:15	07/27/24 12:45	1
Butylbenzylphthalate	<0.49		0.49	ug/L		07/25/24 13:15	07/27/24 12:45	1
Chlorobenzilate	<0.098		0.098	ug/L		07/25/24 13:15	07/27/24 12:45	1
Chloroneb	<0.098		0.098	ug/L		07/25/24 13:15	07/27/24 12:45	1
Chlorothalonil (Draconil, Bravo)	<0.098		0.098	ug/L		07/25/24 13:15	07/27/24 12:45	1
Chlorpyrifos	<0.049		0.049	ug/L		07/25/24 13:15	07/27/24 12:45	1
Chrysene	<0.020		0.020	ug/L		07/25/24 13:15	07/27/24 12:45	1
delta-BHC	<0.098		0.098	ug/L		07/25/24 13:15	07/27/24 12:45	1
Di(2-ethylhexyl)adipate	<0.59		0.59	ug/L		07/25/24 13:15	07/27/24 12:45	1
Dibenz(a,h)anthracene	<0.049		0.049	ug/L		07/25/24 13:15	07/27/24 12:45	1
Diclorvos (DDVP)	<0.049		0.049	ug/L		07/25/24 13:15	07/27/24 12:45	1
Dieldrin	<0.0098		0.0098	ug/L		07/25/24 13:15	07/27/24 12:45	1
Diethylphthalate	<0.49		0.49	ug/L		07/25/24 13:15	07/27/24 12:45	1
Dimethylphthalate	<0.49		0.49	ug/L		07/25/24 13:15	07/27/24 12:45	1
Di-n-butyl phthalate	<0.98		0.98	ug/L		07/25/24 13:15	07/27/24 12:45	1
Di-n-octyl phthalate	<0.098		0.098	ug/L		07/25/24 13:15	07/27/24 12:45	1
Endosulfan I (Alpha)	<0.098		0.098	ug/L		07/25/24 13:15	07/27/24 12:45	1
Endosulfan II (Beta)	<0.098		0.098	ug/L		07/25/24 13:15	07/27/24 12:45	1
Endosulfan sulfate	<0.098		0.098	ug/L		07/25/24 13:15	07/27/24 12:45	1
Endrin	<0.0098		0.0098	ug/L		07/25/24 13:15	07/27/24 12:45	1
Endrin aldehyde	<0.098		0.098	ug/L		07/25/24 13:15	07/27/24 12:45	1
EPTC	<0.098		0.098	ug/L		07/25/24 13:15	07/27/24 12:45	1
Fluoranthene	<0.098		0.098	ug/L		07/25/24 13:15	07/27/24 12:45	1

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Client Sample Results

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

Job ID: 380-105576-1

Client Sample ID: Aiea Gulch Wells Pump 2

Lab Sample ID: 380-105576-1

Date Collected: 07/22/24 10:56

Matrix: Water

Date Received: 07/24/24 09:37

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		07/25/24 13:15	07/27/24 12:45	1
gamma-Chlordane	<0.049		0.049	ug/L		07/25/24 13:15	07/27/24 12:45	1
Heptachlor	<0.0098		0.0098	ug/L		07/25/24 13:15	07/27/24 12:45	1
Heptachlor epoxide (isomer B)	<0.0098		0.0098	ug/L		07/25/24 13:15	07/27/24 12:45	1
Hexachlorobenzene	<0.049		0.049	ug/L		07/25/24 13:15	07/27/24 12:45	1
Hexachlorocyclopentadiene	<0.049		0.049	ug/L		07/25/24 13:15	07/27/24 12:45	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049	ug/L		07/25/24 13:15	07/27/24 12:45	1
Isophorone	<0.098		0.098	ug/L		07/25/24 13:15	07/27/24 12:45	1
Lindane	<0.0098		0.0098	ug/L		07/25/24 13:15	07/27/24 12:45	1
Malathion	<0.098		0.098	ug/L		07/25/24 13:15	07/27/24 12:45	1
Methoxychlor	<0.049		0.049	ug/L		07/25/24 13:15	07/27/24 12:45	1
Metolachlor	<0.049		0.049	ug/L		07/25/24 13:15	07/27/24 12:45	1
Molinate	<0.098		0.098	ug/L		07/25/24 13:15	07/27/24 12:45	1
Naphthalene	<0.098		0.098	ug/L		07/25/24 13:15	07/27/24 12:45	1
Parathion	<0.098		0.098	ug/L		07/25/24 13:15	07/27/24 12:45	1
Pendimethalin (Penoxaline)	<0.098		0.098	ug/L		07/25/24 13:15	07/27/24 12:45	1
Phenanthrene	<0.039		0.039	ug/L		07/25/24 13:15	07/27/24 12:45	1
Propachlor	<0.049		0.049	ug/L		07/25/24 13:15	07/27/24 12:45	1
Pyrene	<0.049		0.049	ug/L		07/25/24 13:15	07/27/24 12:45	1
Simazine	<0.049		0.049	ug/L		07/25/24 13:15	07/27/24 12:45	1
Terbacil	<0.098		0.098	ug/L		07/25/24 13:15	07/27/24 12:45	1
Terbutylazine	<0.098		0.098	ug/L		07/25/24 13:15	07/27/24 12:45	1
Thiobencarb	<0.098		0.098	ug/L		07/25/24 13:15	07/27/24 12:45	1
Total Permethrin (mixed isomers)	<0.20		0.20	ug/L		07/25/24 13:15	07/27/24 12:45	1
trans-Nonachlor	<0.049		0.049	ug/L		07/25/24 13:15	07/27/24 12:45	1
Trifluralin	<0.098		0.098	ug/L		07/25/24 13:15	07/27/24 12:45	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	07/25/24 13:15	07/27/24 12:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	96		70 - 130	07/25/24 13:15	07/27/24 12:45	1
Perylene-d12	91		70 - 130	07/25/24 13:15	07/27/24 12:45	1
Triphenylphosphate	87		70 - 130	07/25/24 13:15	07/27/24 12:45	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		07/26/24 08:01	08/08/24 20:41	1
2-Methylnaphthalene	<0.19		0.19	ug/L		07/26/24 08:01	08/08/24 20:41	1
Acenaphthene	<0.19		0.19	ug/L		07/26/24 08:01	08/08/24 20:41	1
Acenaphthylene	<0.19		0.19	ug/L		07/26/24 08:01	08/08/24 20:41	1
Anthracene	<0.19		0.19	ug/L		07/26/24 08:01	08/08/24 20:41	1
Benzo[a]anthracene	<0.19		0.19	ug/L		07/26/24 08:01	08/08/24 20:41	1
Benzo[a]pyrene	<0.19		0.19	ug/L		07/26/24 08:01	08/08/24 20:41	1
Benzo[b]fluoranthene	<0.19		0.19	ug/L		07/26/24 08:01	08/08/24 20:41	1
Benzo[g,h,i]perylene	<0.19		0.19	ug/L		07/26/24 08:01	08/08/24 20:41	1
Benzo[k]fluoranthene	<0.19		0.19	ug/L		07/26/24 08:01	08/08/24 20:41	1
Chrysene	<0.19		0.19	ug/L		07/26/24 08:01	08/08/24 20:41	1
Dibenz(a,h)anthracene	<0.19		0.19	ug/L		07/26/24 08:01	08/08/24 20:41	1
Fluoranthene	<0.19		0.19	ug/L		07/26/24 08:01	08/08/24 20:41	1

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Client Sample Results

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

Job ID: 380-105576-1

Client Sample ID: Aiea Gulch Wells Pump 2

Lab Sample ID: 380-105576-1

Date Collected: 07/22/24 10:56

Matrix: Water

Date Received: 07/24/24 09:37

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		07/26/24 08:01	08/08/24 20:41	1
Indeno[1,2,3-cd]pyrene	<0.19		0.19	ug/L		07/26/24 08:01	08/08/24 20:41	1
Naphthalene	<0.19		0.19	ug/L		07/26/24 08:01	08/08/24 20:41	1
Phenanthrene	<0.19		0.19	ug/L		07/26/24 08:01	08/08/24 20:41	1
Pyrene	<0.19		0.19	ug/L		07/26/24 08:01	08/08/24 20:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	70		28 - 127	07/26/24 08:01	08/08/24 20:41	1
2-Fluorobiphenyl (Surr)	54		31 - 120	07/26/24 08:01	08/08/24 20:41	1
2-Fluorophenol (Surr)	34		17 - 120	07/26/24 08:01	08/08/24 20:41	1
Nitrobenzene-d5 (Surr)	53		27 - 120	07/26/24 08:01	08/08/24 20:41	1
Phenol-d6 (Surr)	22		10 - 120	07/26/24 08:01	08/08/24 20:41	1
p-Terphenyl-d14 (Surr)	68		45 - 120	07/26/24 08:01	08/08/24 20:41	1

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

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
2-Butenal, 3-methyl-	29	T J N	ug/L		2.75	107-86-8	07/26/24 08:01	08/12/24 14:33	1
Cyclohexane, 1-methyl-2-propyl-	19	T J N	ug/L		2.95	4291-79-6	07/26/24 08:01	08/12/24 14:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	75		33 - 139	07/26/24 08:01	08/12/24 14:33	1
2-Fluorobiphenyl (Surr)	58		33 - 126	07/26/24 08:01	08/12/24 14:33	1
2-Fluorophenol (Surr)	39		12 - 120	07/26/24 08:01	08/12/24 14:33	1
Nitrobenzene-d5 (Surr)	61		36 - 120	07/26/24 08:01	08/12/24 14:33	1
Phenol-d6 (Surr)	26		10 - 120	07/26/24 08:01	08/12/24 14:33	1
p-Terphenyl-d14 (Surr)	75		47 - 131	07/26/24 08:01	08/12/24 14:33	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			08/01/24 20:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		38 - 134		08/01/24 20:25	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		07/29/24 16:16	08/01/24 12:54	1
Motor Oil Range Organics [C24-C36]	<26		26	ug/L		07/29/24 16:16	08/01/24 12:54	1
C8-C18	<26		26	ug/L		07/29/24 16:16	08/01/24 12:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	114		60 - 130	07/29/24 16:16	08/01/24 12:54	1

Client Sample ID: TB: Aiea Gulch Wells Pump 2

Lab Sample ID: 380-105576-2

Date Collected: 07/22/24 10:56

Matrix: Water

Date Received: 07/24/24 09:37

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			08/01/24 22:22	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-105576-1

Client Sample ID: TB: Aiea Gulch Wells Pump 2

Lab Sample ID: 380-105576-2

Date Collected: 07/22/24 10:56

Matrix: Water

Date Received: 07/24/24 09:37

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		38 - 134		08/01/24 22:22	1

Client Sample ID: Aiea Wells Pumps 1&2 (260) P2

Lab Sample ID: 380-105576-3

Date Collected: 07/22/24 11:22

Matrix: Water

Date Received: 07/24/24 09:37

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.096		0.096	ug/L		07/25/24 13:15	07/26/24 13:14	1
2,4'-DDD	<0.096		0.096	ug/L		07/25/24 13:15	07/26/24 13:14	1
2,4'-DDE	<0.096		0.096	ug/L		07/25/24 13:15	07/26/24 13:14	1
2,4'-DDT	<0.096		0.096	ug/L		07/25/24 13:15	07/26/24 13:14	1
2,4-Dinitrotoluene	<0.096		0.096	ug/L		07/25/24 13:15	07/26/24 13:14	1
2,6-Dinitrotoluene	<0.096		0.096	ug/L		07/25/24 13:15	07/26/24 13:14	1
2-Methylnaphthalene	<0.096		0.096	ug/L		07/25/24 13:15	07/26/24 13:14	1
4,4'-DDD	<0.096		0.096	ug/L		07/25/24 13:15	07/26/24 13:14	1
4,4'-DDE	<0.096		0.096	ug/L		07/25/24 13:15	07/26/24 13:14	1
4,4'-DDT	<0.096		0.096	ug/L		07/25/24 13:15	07/26/24 13:14	1
Acenaphthene	<0.096		0.096	ug/L		07/25/24 13:15	07/26/24 13:14	1
Acenaphthylene	<0.096		0.096	ug/L		07/25/24 13:15	07/26/24 13:14	1
Acetochlor	<0.096		0.096	ug/L		07/25/24 13:15	07/26/24 13:14	1
Alachlor	<0.048		0.048	ug/L		07/25/24 13:15	07/26/24 13:14	1
alpha-BHC	<0.096		0.096	ug/L		07/25/24 13:15	07/26/24 13:14	1
alpha-Chlordane	<0.048		0.048	ug/L		07/25/24 13:15	07/26/24 13:14	1
Anthracene	<0.019		0.019	ug/L		07/25/24 13:15	07/26/24 13:14	1
Atrazine	<0.048		0.048	ug/L		07/25/24 13:15	07/26/24 13:14	1
Benz(a)anthracene	<0.048		0.048	ug/L		07/25/24 13:15	07/26/24 13:14	1
Benzo[a]pyrene	<0.019		0.019	ug/L		07/25/24 13:15	07/26/24 13:14	1
Benzo[b]fluoranthene	<0.019		0.019	ug/L		07/25/24 13:15	07/26/24 13:14	1
Benzo[g,h,i]perylene	<0.048		0.048	ug/L		07/25/24 13:15	07/26/24 13:14	1
Benzo[k]fluoranthene	<0.019		0.019	ug/L		07/25/24 13:15	07/26/24 13:14	1
beta-BHC	<0.096		0.096	ug/L		07/25/24 13:15	07/26/24 13:14	1
Bis(2-ethylhexyl) phthalate	<0.58		0.58	ug/L		07/25/24 13:15	07/26/24 13:14	1
Bromacil	<0.096		0.096	ug/L		07/25/24 13:15	07/26/24 13:14	1
Butachlor	<0.048		0.048	ug/L		07/25/24 13:15	07/26/24 13:14	1
Butylbenzylphthalate	<0.48		0.48	ug/L		07/25/24 13:15	07/26/24 13:14	1
Chlorobenzilate	<0.096		0.096	ug/L		07/25/24 13:15	07/26/24 13:14	1
Chloroneb	<0.096		0.096	ug/L		07/25/24 13:15	07/26/24 13:14	1
Chlorothalonil (Draconil, Bravo)	<0.096		0.096	ug/L		07/25/24 13:15	07/26/24 13:14	1
Chlorpyrifos	<0.048		0.048	ug/L		07/25/24 13:15	07/26/24 13:14	1
Chrysene	<0.019		0.019	ug/L		07/25/24 13:15	07/26/24 13:14	1
delta-BHC	<0.096		0.096	ug/L		07/25/24 13:15	07/26/24 13:14	1
Di(2-ethylhexyl)adipate	<0.58		0.58	ug/L		07/25/24 13:15	07/26/24 13:14	1
Dibenz(a,h)anthracene	<0.048		0.048	ug/L		07/25/24 13:15	07/26/24 13:14	1
Diclorvos (DDVP)	<0.048		0.048	ug/L		07/25/24 13:15	07/26/24 13:14	1
Dieldrin	0.0099		0.0096	ug/L		07/25/24 13:15	07/26/24 13:14	1
Diethylphthalate	<0.48		0.48	ug/L		07/25/24 13:15	07/26/24 13:14	1
Dimethylphthalate	<0.48		0.48	ug/L		07/25/24 13:15	07/26/24 13:14	1
Di-n-butyl phthalate	<0.96		0.96	ug/L		07/25/24 13:15	07/26/24 13:14	1
Di-n-octyl phthalate	<0.096		0.096	ug/L		07/25/24 13:15	07/26/24 13:14	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-105576-1

Client Sample ID: Aiea Wells Pumps 1&2 (260) P2

Lab Sample ID: 380-105576-3

Date Collected: 07/22/24 11:22

Matrix: Water

Date Received: 07/24/24 09:37

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Endosulfan I (Alpha)	<0.096		0.096	ug/L		07/25/24 13:15	07/26/24 13:14	1
Endosulfan II (Beta)	<0.096		0.096	ug/L		07/25/24 13:15	07/26/24 13:14	1
Endosulfan sulfate	<0.096		0.096	ug/L		07/25/24 13:15	07/26/24 13:14	1
Endrin	<0.0096		0.0096	ug/L		07/25/24 13:15	07/26/24 13:14	1
Endrin aldehyde	<0.096		0.096	ug/L		07/25/24 13:15	07/26/24 13:14	1
EPTC	<0.096		0.096	ug/L		07/25/24 13:15	07/26/24 13:14	1
Fluoranthene	<0.096		0.096	ug/L		07/25/24 13:15	07/26/24 13:14	1
Fluorene	<0.048		0.048	ug/L		07/25/24 13:15	07/26/24 13:14	1
gamma-Chlordane	<0.048		0.048	ug/L		07/25/24 13:15	07/26/24 13:14	1
Heptachlor	<0.0096		0.0096	ug/L		07/25/24 13:15	07/26/24 13:14	1
Heptachlor epoxide (isomer B)	<0.0096		0.0096	ug/L		07/25/24 13:15	07/26/24 13:14	1
Hexachlorobenzene	<0.048		0.048	ug/L		07/25/24 13:15	07/26/24 13:14	1
Hexachlorocyclopentadiene	<0.048		0.048	ug/L		07/25/24 13:15	07/26/24 13:14	1
Indeno[1,2,3-cd]pyrene	<0.048		0.048	ug/L		07/25/24 13:15	07/26/24 13:14	1
Isophorone	<0.096		0.096	ug/L		07/25/24 13:15	07/26/24 13:14	1
Lindane	<0.0096		0.0096	ug/L		07/25/24 13:15	07/26/24 13:14	1
Malathion	<0.096		0.096	ug/L		07/25/24 13:15	07/26/24 13:14	1
Methoxychlor	<0.048		0.048	ug/L		07/25/24 13:15	07/26/24 13:14	1
Metolachlor	<0.048		0.048	ug/L		07/25/24 13:15	07/26/24 13:14	1
Molinate	<0.096		0.096	ug/L		07/25/24 13:15	07/26/24 13:14	1
Naphthalene	<0.096		0.096	ug/L		07/25/24 13:15	07/26/24 13:14	1
Parathion	<0.096		0.096	ug/L		07/25/24 13:15	07/26/24 13:14	1
Pendimethalin (Penoxaline)	<0.096		0.096	ug/L		07/25/24 13:15	07/26/24 13:14	1
Phenanthrene	<0.039		0.039	ug/L		07/25/24 13:15	07/26/24 13:14	1
Propachlor	<0.048		0.048	ug/L		07/25/24 13:15	07/26/24 13:14	1
Pyrene	<0.048		0.048	ug/L		07/25/24 13:15	07/26/24 13:14	1
Simazine	<0.048		0.048	ug/L		07/25/24 13:15	07/26/24 13:14	1
Terbacil	<0.096		0.096	ug/L		07/25/24 13:15	07/26/24 13:14	1
Terbutylazine	<0.096		0.096	ug/L		07/25/24 13:15	07/26/24 13:14	1
Thiobencarb	<0.096		0.096	ug/L		07/25/24 13:15	07/26/24 13:14	1
Total Permethrin (mixed isomers)	<0.19		0.19	ug/L		07/25/24 13:15	07/26/24 13:14	1
trans-Nonachlor	<0.048		0.048	ug/L		07/25/24 13:15	07/26/24 13:14	1
Trifluralin	<0.096		0.096	ug/L		07/25/24 13:15	07/26/24 13:14	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	07/25/24 13:15	07/26/24 13:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	98		70 - 130	07/25/24 13:15	07/26/24 13:14	1
Perylene-d12	95		70 - 130	07/25/24 13:15	07/26/24 13:14	1
Triphenylphosphate	83		70 - 130	07/25/24 13:15	07/26/24 13:14	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		07/26/24 08:01	08/02/24 01:40	1
2-Methylnaphthalene	<0.19		0.19	ug/L		07/26/24 08:01	08/02/24 01:40	1
Acenaphthene	<0.19		0.19	ug/L		07/26/24 08:01	08/02/24 01:40	1
Acenaphthylene	<0.19		0.19	ug/L		07/26/24 08:01	08/02/24 01:40	1
Anthracene	<0.19		0.19	ug/L		07/26/24 08:01	08/02/24 01:40	1
Benzo[a]anthracene	<0.19		0.19	ug/L		07/26/24 08:01	08/02/24 01:40	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-105576-1

Client Sample ID: Aiea Wells Pumps 1&2 (260) P2

Lab Sample ID: 380-105576-3

Date Collected: 07/22/24 11:22

Matrix: Water

Date Received: 07/24/24 09:37

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		07/26/24 08:01	08/02/24 01:40	1
Benzo[b]fluoranthene	<0.19		0.19	ug/L		07/26/24 08:01	08/02/24 01:40	1
Benzo[g,h,i]perylene	<0.19		0.19	ug/L		07/26/24 08:01	08/02/24 01:40	1
Benzo[k]fluoranthene	<0.19		0.19	ug/L		07/26/24 08:01	08/02/24 01:40	1
Chrysene	<0.19		0.19	ug/L		07/26/24 08:01	08/02/24 01:40	1
Dibenz(a,h)anthracene	<0.19		0.19	ug/L		07/26/24 08:01	08/02/24 01:40	1
Fluoranthene	<0.19		0.19	ug/L		07/26/24 08:01	08/02/24 01:40	1
Fluorene	<0.19		0.19	ug/L		07/26/24 08:01	08/02/24 01:40	1
Indeno[1,2,3-cd]pyrene	<0.19		0.19	ug/L		07/26/24 08:01	08/02/24 01:40	1
Naphthalene	<0.19		0.19	ug/L		07/26/24 08:01	08/02/24 01:40	1
Phenanthrene	<0.19		0.19	ug/L		07/26/24 08:01	08/02/24 01:40	1
Pyrene	<0.19		0.19	ug/L		07/26/24 08:01	08/02/24 01:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	88		28 - 127	07/26/24 08:01	08/02/24 01:40	1
2-Fluorobiphenyl (Surr)	69		31 - 120	07/26/24 08:01	08/02/24 01:40	1
2-Fluorophenol (Surr)	47		17 - 120	07/26/24 08:01	08/02/24 01:40	1
Nitrobenzene-d5 (Surr)	72		27 - 120	07/26/24 08:01	08/02/24 01:40	1
Phenol-d6 (Surr)	30		10 - 120	07/26/24 08:01	08/02/24 01:40	1
p-Terphenyl-d14 (Surr)	76		45 - 120	07/26/24 08:01	08/02/24 01:40	1

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

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
2-Pentenal, (E)-	46	T J N	ug/L		2.75	1576-87-0	07/26/24 08:01	08/12/24 14:55	1
1-Hexene, 4-ethyl-	19	T J N	ug/L		2.84	16746-85-3	07/26/24 08:01	08/12/24 14:55	1
Cyclohexane, 1-methyl-2-propyl-	25	T J N	ug/L		2.95	4291-79-6	07/26/24 08:01	08/12/24 14:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	78		33 - 139	07/26/24 08:01	08/12/24 14:55	1
2-Fluorobiphenyl (Surr)	72		33 - 126	07/26/24 08:01	08/12/24 14:55	1
2-Fluorophenol (Surr)	54		12 - 120	07/26/24 08:01	08/12/24 14:55	1
Nitrobenzene-d5 (Surr)	77		36 - 120	07/26/24 08:01	08/12/24 14:55	1
Phenol-d6 (Surr)	31		10 - 120	07/26/24 08:01	08/12/24 14:55	1
p-Terphenyl-d14 (Surr)	76		47 - 131	07/26/24 08:01	08/12/24 14:55	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			08/01/24 20:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		38 - 134		08/01/24 20:48	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)	<25		25	ug/L		07/29/24 16:16	08/01/24 13:14	1
Motor Oil Range Organics [C24-C36]	<25		25	ug/L		07/29/24 16:16	08/01/24 13:14	1
C8-C18	<25		25	ug/L		07/29/24 16:16	08/01/24 13:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	107		60 - 130	07/29/24 16:16	08/01/24 13:14	1

Eurofins Eaton Analytical Pomona

Action Limit Summary

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

Job ID: 380-105576-1

Client Sample ID: Aiea Gulch Wells Pump 2

Lab Sample ID: 380-105576-1

Compliance Check

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

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

Client Sample ID: Aiea Wells Pumps 1&2 (260) P2

Lab Sample ID: 380-105576-3

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL		RL	Method	Prep Type
				Limit				
Alachlor	<0.048		ug/L	2		0.048	525.2	Total/NA
Atrazine	<0.048		ug/L	3		0.048	525.2	Total/NA
Benzo[a]pyrene	<0.019		ug/L	0.2		0.019	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	<0.58		ug/L	6		0.58	525.2	Total/NA
Di(2-ethylhexyl)adipate	<0.58		ug/L	400		0.58	525.2	Total/NA
Endrin	<0.0096		ug/L	2		0.0096	525.2	Total/NA
Heptachlor	<0.0096		ug/L	0.4		0.0096	525.2	Total/NA
Heptachlor epoxide (isomer B)	<0.0096		ug/L	0.2		0.0096	525.2	Total/NA
Hexachlorobenzene	<0.048		ug/L	1		0.048	525.2	Total/NA
Hexachlorocyclopentadiene	<0.048		ug/L	50		0.048	525.2	Total/NA
Lindane	<0.0096		ug/L	0.2		0.0096	525.2	Total/NA
Methoxychlor	<0.048		ug/L	40		0.048	525.2	Total/NA
Simazine	<0.048		ug/L	4		0.048	525.2	Total/NA
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: 380-105576-1

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	Percent Surrogate Recovery (Acceptance Limits)		
		2NMX (70-130)	PRY (70-130)	TPP (70-130)
380-105515-L-1-A MS	Matrix Spike	99	101	100
380-105515-M-1-A DU	Duplicate	101	99	101
380-105576-1	Aiea Gulch Wells Pump 2	96	91	87
380-105576-3	Aiea Wells Pumps 1&2 (260) P2	98	95	83
LCS 380-100689/23-A	Lab Control Sample	99	95	90
MB 380-100689/21-A	Method Blank	101	90	85
MRL 380-100689/22-A	Lab Control Sample	101	90	88

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

Percent Surrogate Recovery (Acceptance Limits)

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)
380-105576-1	Aiea Gulch Wells Pump 2	75	58	39	61	26	75
380-105576-3	Aiea Wells Pumps 1&2 (260) P2	78	72	54	77	31	76
MB 570-463841/1-A	Method Blank	68	51	38	61	25	65

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

Percent Surrogate Recovery (Acceptance Limits)

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)
380-105576-1	Aiea Gulch Wells Pump 2	70	54	34	53	22	68
380-105576-3	Aiea Wells Pumps 1&2 (260) P2	88	69	47	72	30	76
380-105582-A-1-A MS	Matrix Spike	73	63	48	55	34	72
380-105582-A-1-B MSD	Matrix Spike Duplicate	73	64	47	55	33	73
570-192681-A-1-A MS	Matrix Spike	64	48	26	42	18	45
570-192681-A-1-B MSD	Matrix Spike Duplicate	77	61	35	51	25	55
LCS 570-463841/2-A	Lab Control Sample	73	61	36	49	27	71
LCSD 570-463841/3-A	Lab Control Sample Dup	72	56	35	47	25	72
MB 570-463841/1-A	Method Blank	75	56	36	58	23	70

Surrogate Legend

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

FBP = 2-Fluorobiphenyl (Surr)

2FP = 2-Fluorophenol (Surr)

NBZ = Nitrobenzene-d5 (Surr)

Eurofins Eaton Analytical Pomona

Surrogate Summary

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

Job ID: 380-105576-1

PHL6 = Phenol-d6 (Surr)
TPHd14 = p-Terphenyl-d14 (Surr)

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)
380-105576-1	Aiea Gulch Wells Pump 2	90
380-105576-2	TB: Aiea Gulch Wells Pump 2	87
380-105576-3	Aiea Wells Pumps 1&2 (260) P2	84
380-105582-C-1 MS	Matrix Spike	92
380-105582-C-1 MSD	Matrix Spike Duplicate	93
LCS 570-466384/1008	Lab Control Sample	87
LCSD 570-466384/9	Lab Control Sample Dup	95
MB 570-466384/10	Method Blank	88
MRL 570-466384/1003	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)
380-105576-1	Aiea Gulch Wells Pump 2	114
380-105576-3	Aiea Wells Pumps 1&2 (260) P2	107
380-105582-B-1-A MS	Matrix Spike	109
380-105582-B-1-B MSD	Matrix Spike Duplicate	115
LCS 570-465129/2-A	Lab Control Sample	114
LCSD 570-465129/3-A	Lab Control Sample Dup	114
MB 570-465129/1-A	Method Blank	111
MRL 570-465129/4-A	Lab Control Sample	107

Surrogate Legend

OTCSN = n-Octacosane (Surr)

QC Sample Results

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

Job ID: 380-105576-1

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

Lab Sample ID: MB 380-100689/21-A
Matrix: Water
Analysis Batch: 100873

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 100689

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
1-Methylnaphthalene	<0.098		0.098	ug/L		07/25/24 12:30	07/26/24 12:14	1
2,4'-DDD	<0.098		0.098	ug/L		07/25/24 12:30	07/26/24 12:14	1
2,4'-DDE	<0.098		0.098	ug/L		07/25/24 12:30	07/26/24 12:14	1
2,4'-DDT	<0.098		0.098	ug/L		07/25/24 12:30	07/26/24 12:14	1
2,4-Dinitrotoluene	<0.098		0.098	ug/L		07/25/24 12:30	07/26/24 12:14	1
2,6-Dinitrotoluene	<0.098		0.098	ug/L		07/25/24 12:30	07/26/24 12:14	1
2-Methylnaphthalene	<0.098		0.098	ug/L		07/25/24 12:30	07/26/24 12:14	1
4,4'-DDD	<0.098		0.098	ug/L		07/25/24 12:30	07/26/24 12:14	1
4,4'-DDE	<0.098		0.098	ug/L		07/25/24 12:30	07/26/24 12:14	1
4,4'-DDT	<0.098		0.098	ug/L		07/25/24 12:30	07/26/24 12:14	1
Acenaphthene	<0.098		0.098	ug/L		07/25/24 12:30	07/26/24 12:14	1
Acenaphthylene	<0.098		0.098	ug/L		07/25/24 12:30	07/26/24 12:14	1
Acetochlor	<0.098		0.098	ug/L		07/25/24 12:30	07/26/24 12:14	1
Alachlor	<0.049		0.049	ug/L		07/25/24 12:30	07/26/24 12:14	1
alpha-BHC	<0.098		0.098	ug/L		07/25/24 12:30	07/26/24 12:14	1
alpha-Chlordane	<0.049		0.049	ug/L		07/25/24 12:30	07/26/24 12:14	1
Anthracene	<0.020		0.020	ug/L		07/25/24 12:30	07/26/24 12:14	1
Atrazine	<0.049		0.049	ug/L		07/25/24 12:30	07/26/24 12:14	1
Benz(a)anthracene	<0.049		0.049	ug/L		07/25/24 12:30	07/26/24 12:14	1
Benzo[a]pyrene	<0.020		0.020	ug/L		07/25/24 12:30	07/26/24 12:14	1
Benzo[b]fluoranthene	<0.020		0.020	ug/L		07/25/24 12:30	07/26/24 12:14	1
Benzo[g,h,i]perylene	<0.049		0.049	ug/L		07/25/24 12:30	07/26/24 12:14	1
Benzo[k]fluoranthene	<0.020		0.020	ug/L		07/25/24 12:30	07/26/24 12:14	1
beta-BHC	<0.098		0.098	ug/L		07/25/24 12:30	07/26/24 12:14	1
Bis(2-ethylhexyl) phthalate	<0.59		0.59	ug/L		07/25/24 12:30	07/26/24 12:14	1
Bromacil	<0.098		0.098	ug/L		07/25/24 12:30	07/26/24 12:14	1
Butachlor	<0.049		0.049	ug/L		07/25/24 12:30	07/26/24 12:14	1
Butylbenzylphthalate	<0.49		0.49	ug/L		07/25/24 12:30	07/26/24 12:14	1
Chlorobenzilate	<0.098		0.098	ug/L		07/25/24 12:30	07/26/24 12:14	1
Chloroneb	<0.098		0.098	ug/L		07/25/24 12:30	07/26/24 12:14	1
Chlorothalonil (Draconil, Bravo)	<0.098		0.098	ug/L		07/25/24 12:30	07/26/24 12:14	1
Chlorpyrifos	<0.049		0.049	ug/L		07/25/24 12:30	07/26/24 12:14	1
Chrysene	<0.020		0.020	ug/L		07/25/24 12:30	07/26/24 12:14	1
delta-BHC	<0.098		0.098	ug/L		07/25/24 12:30	07/26/24 12:14	1
Di(2-ethylhexyl)adipate	<0.59		0.59	ug/L		07/25/24 12:30	07/26/24 12:14	1
Dibenz(a,h)anthracene	<0.049		0.049	ug/L		07/25/24 12:30	07/26/24 12:14	1
Diclorvos (DDVP)	<0.049		0.049	ug/L		07/25/24 12:30	07/26/24 12:14	1
Dieldrin	<0.0098		0.0098	ug/L		07/25/24 12:30	07/26/24 12:14	1
Diethylphthalate	<0.49		0.49	ug/L		07/25/24 12:30	07/26/24 12:14	1
Dimethylphthalate	<0.49		0.49	ug/L		07/25/24 12:30	07/26/24 12:14	1
Di-n-butyl phthalate	<0.98		0.98	ug/L		07/25/24 12:30	07/26/24 12:14	1
Di-n-octyl phthalate	<0.098		0.098	ug/L		07/25/24 12:30	07/26/24 12:14	1
Endosulfan I (Alpha)	<0.098		0.098	ug/L		07/25/24 12:30	07/26/24 12:14	1
Endosulfan II (Beta)	<0.098		0.098	ug/L		07/25/24 12:30	07/26/24 12:14	1
Endosulfan sulfate	<0.098		0.098	ug/L		07/25/24 12:30	07/26/24 12:14	1
Endrin	<0.0098		0.0098	ug/L		07/25/24 12:30	07/26/24 12:14	1
Endrin aldehyde	<0.098		0.098	ug/L		07/25/24 12:30	07/26/24 12:14	1
EPTC	<0.098		0.098	ug/L		07/25/24 12:30	07/26/24 12:14	1

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QC Sample Results

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

Job ID: 380-105576-1

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

Lab Sample ID: MB 380-100689/21-A
Matrix: Water
Analysis Batch: 100873

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 100689

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	<0.098		0.098	ug/L		07/25/24 12:30	07/26/24 12:14	1
Fluorene	<0.049		0.049	ug/L		07/25/24 12:30	07/26/24 12:14	1
gamma-Chlordane	<0.049		0.049	ug/L		07/25/24 12:30	07/26/24 12:14	1
Heptachlor	<0.0098		0.0098	ug/L		07/25/24 12:30	07/26/24 12:14	1
Heptachlor epoxide (isomer B)	<0.0098		0.0098	ug/L		07/25/24 12:30	07/26/24 12:14	1
Hexachlorobenzene	<0.049		0.049	ug/L		07/25/24 12:30	07/26/24 12:14	1
Hexachlorocyclopentadiene	<0.049		0.049	ug/L		07/25/24 12:30	07/26/24 12:14	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049	ug/L		07/25/24 12:30	07/26/24 12:14	1
Isophorone	<0.098		0.098	ug/L		07/25/24 12:30	07/26/24 12:14	1
Lindane	<0.0098		0.0098	ug/L		07/25/24 12:30	07/26/24 12:14	1
Malathion	<0.098		0.098	ug/L		07/25/24 12:30	07/26/24 12:14	1
Methoxychlor	<0.049		0.049	ug/L		07/25/24 12:30	07/26/24 12:14	1
Metolachlor	<0.049		0.049	ug/L		07/25/24 12:30	07/26/24 12:14	1
Molinate	<0.098		0.098	ug/L		07/25/24 12:30	07/26/24 12:14	1
Naphthalene	<0.098		0.098	ug/L		07/25/24 12:30	07/26/24 12:14	1
Parathion	<0.098		0.098	ug/L		07/25/24 12:30	07/26/24 12:14	1
Pendimethalin (Penoxaline)	<0.098		0.098	ug/L		07/25/24 12:30	07/26/24 12:14	1
Phenanthrene	<0.039		0.039	ug/L		07/25/24 12:30	07/26/24 12:14	1
Propachlor	<0.049		0.049	ug/L		07/25/24 12:30	07/26/24 12:14	1
Pyrene	<0.049		0.049	ug/L		07/25/24 12:30	07/26/24 12:14	1
Simazine	<0.049		0.049	ug/L		07/25/24 12:30	07/26/24 12:14	1
Terbacil	<0.098		0.098	ug/L		07/25/24 12:30	07/26/24 12:14	1
Terbutylazine	<0.098		0.098	ug/L		07/25/24 12:30	07/26/24 12:14	1
Thiobencarb	<0.098		0.098	ug/L		07/25/24 12:30	07/26/24 12:14	1
Total Permethrin (mixed isomers)	<0.20		0.20	ug/L		07/25/24 12:30	07/26/24 12:14	1
trans-Nonachlor	<0.049		0.049	ug/L		07/25/24 12:30	07/26/24 12:14	1
Trifluralin	<0.098		0.098	ug/L		07/25/24 12:30	07/26/24 12:14	1

<i>Tentatively Identified Compound</i>	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
<i>Decane</i>	1.65	T J N	ug/L		2.28	124-18-5	07/25/24 12:30	07/26/24 12:14	1

<i>Surrogate</i>	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>2-Nitro-m-xylene</i>	101		70 - 130	07/25/24 12:30	07/26/24 12:14	1
<i>Perylene-d12</i>	90		70 - 130	07/25/24 12:30	07/26/24 12:14	1
<i>Triphenylphosphate</i>	85		70 - 130	07/25/24 12:30	07/26/24 12:14	1

Lab Sample ID: LCS 380-100689/23-A
Matrix: Water
Analysis Batch: 100873

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 100689

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1-Methylnaphthalene	1.96	1.79		ug/L		91	70 - 130
2,4'-DDD	1.96	1.85		ug/L		94	70 - 130
2,4'-DDE	1.96	1.67		ug/L		85	70 - 130
2,4'-DDT	1.96	1.85		ug/L		95	70 - 130
2,4-Dinitrotoluene	1.96	1.68		ug/L		86	70 - 130
2,6-Dinitrotoluene	1.96	1.74		ug/L		89	70 - 130
2-Methylnaphthalene	1.96	1.77		ug/L		90	70 - 130

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QC Sample Results

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

Job ID: 380-105576-1

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

Lab Sample ID: LCS 380-100689/23-A
Matrix: Water
Analysis Batch: 100873

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 100689

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
4,4'-DDD	1.96	1.93		ug/L		98	70 - 130
4,4'-DDE	1.96	1.74		ug/L		89	70 - 130
4,4'-DDT	1.96	1.73		ug/L		88	70 - 130
Acenaphthene	1.96	1.87		ug/L		95	70 - 130
Acenaphthylene	1.96	1.72		ug/L		88	70 - 130
Acetochlor	1.96	1.99		ug/L		101	70 - 130
Alachlor	1.96	1.93		ug/L		98	70 - 130
alpha-BHC	1.96	1.83		ug/L		93	70 - 130
alpha-Chlordane	1.96	1.88		ug/L		96	70 - 130
Anthracene	1.96	1.57		ug/L		80	70 - 130
Atrazine	1.96	1.86		ug/L		95	70 - 130
Benz(a)anthracene	1.96	1.71		ug/L		87	70 - 130
Benzo[a]pyrene	1.96	1.87		ug/L		95	70 - 130
Benzo[b]fluoranthene	1.96	2.00		ug/L		102	70 - 130
Benzo[g,h,i]perylene	1.96	2.06		ug/L		105	70 - 130
Benzo[k]fluoranthene	1.96	2.00		ug/L		102	70 - 130
beta-BHC	1.96	1.81		ug/L		92	70 - 130
Bis(2-ethylhexyl) phthalate	1.96	1.86		ug/L		95	70 - 130
Bromacil	1.96	1.81		ug/L		93	70 - 130
Butachlor	1.96	1.90		ug/L		97	70 - 130
Butylbenzylphthalate	1.96	1.94		ug/L		99	70 - 130
Chlorobenzilate	1.96	1.79		ug/L		91	70 - 130
Chloroneb	1.96	1.87		ug/L		96	70 - 130
Chlorothalonil (Draconil, Bravo)	1.96	1.94		ug/L		99	70 - 130
Chlorpyrifos	1.96	1.92		ug/L		98	70 - 130
Chrysene	1.96	2.02		ug/L		103	70 - 130
delta-BHC	1.96	1.93		ug/L		98	70 - 130
Di(2-ethylhexyl)adipate	1.96	1.64		ug/L		84	70 - 130
Dibenz(a,h)anthracene	1.96	1.98		ug/L		101	70 - 130
Diclorvos (DDVP)	1.96	1.90		ug/L		97	70 - 130
Dieldrin	1.96	1.88		ug/L		96	70 - 130
Diethylphthalate	1.96	1.88		ug/L		96	70 - 130
Dimethylphthalate	1.96	2.03		ug/L		103	70 - 130
Di-n-butyl phthalate	3.92	3.80		ug/L		97	70 - 130
Di-n-octyl phthalate	1.96	1.52		ug/L		78	70 - 130
Endosulfan I (Alpha)	1.96	1.88		ug/L		96	70 - 130
Endosulfan II (Beta)	1.96	1.89		ug/L		96	70 - 130
Endosulfan sulfate	1.96	1.78		ug/L		91	70 - 130
Endrin	1.96	1.68		ug/L		86	70 - 130
Endrin aldehyde	1.96	1.24		ug/L		63	60 - 130
EPTC	1.96	1.94		ug/L		99	70 - 130
Fluoranthene	1.96	1.92		ug/L		98	70 - 130
Fluorene	1.96	1.86		ug/L		95	70 - 130
gamma-Chlordane	1.96	1.87		ug/L		95	70 - 130
Heptachlor	1.96	1.76		ug/L		90	70 - 130
Heptachlor epoxide (isomer B)	1.96	1.98		ug/L		101	70 - 130
Hexachlorobenzene	1.96	1.62		ug/L		83	70 - 130
Hexachlorocyclopentadiene	1.96	1.79		ug/L		91	70 - 130
Indeno[1,2,3-cd]pyrene	1.96	1.92		ug/L		98	70 - 130

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QC Sample Results

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

Job ID: 380-105576-1

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

Lab Sample ID: LCS 380-100689/23-A
Matrix: Water
Analysis Batch: 100873

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 100689

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Isophorone	1.96	1.94		ug/L		99	70 - 130
Lindane	1.96	1.83		ug/L		93	70 - 130
Malathion	1.96	1.91		ug/L		98	70 - 130
Methoxychlor	1.96	2.04		ug/L		104	70 - 130
Metolachlor	1.96	1.93		ug/L		98	70 - 130
Molinate	1.96	2.02		ug/L		103	70 - 130
Naphthalene	1.96	1.74		ug/L		89	70 - 130
Parathion	1.96	1.89		ug/L		96	70 - 130
Pendimethalin (Penoxaline)	1.96	1.78		ug/L		91	70 - 130
Phenanthrene	1.96	1.75		ug/L		89	70 - 130
Propachlor	1.96	1.92		ug/L		98	70 - 130
Pyrene	1.96	1.90		ug/L		97	70 - 130
Simazine	1.96	1.96		ug/L		100	70 - 130
Terbacil	1.96	1.89		ug/L		97	70 - 130
Terbutylazine	1.96	1.92		ug/L		98	70 - 130
Thiobencarb	1.96	1.87		ug/L		95	70 - 130
trans-Nonachlor	1.96	1.95		ug/L		100	70 - 130
Trifluralin	1.96	1.62		ug/L		83	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Nitro-m-xylene	99		70 - 130
Perylene-d12	95		70 - 130
Triphenylphosphate	90		70 - 130

Lab Sample ID: MRL 380-100689/22-A
Matrix: Water
Analysis Batch: 100873

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 100689

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	0.0979	0.103		ug/L		105	50 - 150
2,4'-DDD	0.0979	0.0975	J	ug/L		100	50 - 150
2,4'-DDE	0.0979	0.102		ug/L		104	50 - 150
2,4'-DDT	0.0979	0.0956	J	ug/L		98	50 - 150
2,4-Dinitrotoluene	0.0979	0.0904	J	ug/L		92	50 - 150
2,6-Dinitrotoluene	0.0979	0.0962	J	ug/L		98	50 - 150
2-Methylnaphthalene	0.0979	0.0984		ug/L		100	50 - 150
4,4'-DDD	0.0979	0.107		ug/L		109	50 - 150
4,4'-DDE	0.0979	0.0915	J	ug/L		93	50 - 150
4,4'-DDT	0.0979	0.0909	J	ug/L		93	50 - 150
Acenaphthene	0.0979	0.0874	J	ug/L		89	50 - 150
Acenaphthylene	0.0979	0.0770	J	ug/L		79	50 - 150
Acetochlor	0.0979	0.113		ug/L		116	50 - 150
Alachlor	0.0490	0.0487	J	ug/L		99	50 - 150
alpha-BHC	0.0979	0.105		ug/L		107	50 - 150
alpha-Chlordane	0.0245	<0.028		ug/L		105	50 - 150
Anthracene	0.0196	<0.019		ug/L		88	50 - 150
Atrazine	0.0490	0.0470	J	ug/L		96	50 - 150
Benz(a)anthracene	0.0490	0.0514		ug/L		105	50 - 150

QC Sample Results

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

Job ID: 380-105576-1

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

Lab Sample ID: MRL 380-100689/22-A
Matrix: Water
Analysis Batch: 100873

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 100689

Analyte	Spike Added	MRL	MRL	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Benzo[a]pyrene	0.0196	0.0163	J	ug/L		83	50 - 150
Benzo[b]fluoranthene	0.0196	0.0185	J	ug/L		94	50 - 150
Benzo[g,h,i]perylene	0.0490	0.0411	J	ug/L		84	50 - 150
Benzo[k]fluoranthene	0.0196	0.0189	J	ug/L		96	50 - 150
beta-BHC	0.0979	0.102		ug/L		104	50 - 150
Bis(2-ethylhexyl) phthalate	0.588	0.554	J	ug/L		94	50 - 150
Bromacil	0.0979	0.104		ug/L		107	50 - 150
Butachlor	0.0490	0.0570		ug/L		116	50 - 150
Butylbenzylphthalate	0.490	0.490		ug/L		100	50 - 150
Chlorobenzilate	0.0979	0.0807	J	ug/L		82	50 - 150
Chloroneb	0.0979	0.0929	J	ug/L		95	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0979	0.0995		ug/L		102	50 - 150
Chlorpyrifos	0.0490	0.0496		ug/L		101	50 - 150
Chrysene	0.0196	0.0235		ug/L		120	50 - 150
delta-BHC	0.0979	0.110		ug/L		113	50 - 150
Di(2-ethylhexyl)adipate	0.588	0.540	J	ug/L		92	50 - 150
Dibenz(a,h)anthracene	0.0490	0.0462	J	ug/L		94	50 - 150
Diclorvos (DDVP)	0.0490	0.0585		ug/L		119	50 - 150
Dieldrin	0.00979	0.00812	J	ug/L		83	50 - 150
Diethylphthalate	0.490	0.495		ug/L		101	50 - 150
Dimethylphthalate	0.490	0.518		ug/L		106	50 - 150
Di-n-butyl phthalate	0.490	0.503	J	ug/L		103	49 - 243
Di-n-octyl phthalate	0.0979	0.0880	J	ug/L		90	50 - 150
Endosulfan I (Alpha)	0.0979	0.0886	J	ug/L		90	50 - 150
Endosulfan II (Beta)	0.0979	0.121		ug/L		123	50 - 150
Endosulfan sulfate	0.0979	0.0955	J	ug/L		97	50 - 150
Endrin	0.00979	0.0108		ug/L		110	50 - 150
Endrin aldehyde	0.0979	<0.082		ug/L		73	50 - 150
EPTC	0.0979	0.0886	J	ug/L		90	50 - 150
Fluoranthene	0.0979	0.0940	J	ug/L		96	50 - 150
Fluorene	0.0490	0.0491		ug/L		100	50 - 150
gamma-Chlordane	0.0245	0.0246	J	ug/L		100	50 - 150
Heptachlor	0.00979	0.0125		ug/L		128	50 - 150
Heptachlor epoxide (isomer B)	0.00979	0.0128		ug/L		131	50 - 150
Hexachlorobenzene	0.0490	0.0477	J	ug/L		97	50 - 150
Hexachlorocyclopentadiene	0.0490	0.0477	J	ug/L		97	50 - 150
Indeno[1,2,3-cd]pyrene	0.0490	0.0481	J	ug/L		98	50 - 150
Isophorone	0.0979	0.117		ug/L		119	50 - 150
Lindane	0.00979	0.0124		ug/L		126	50 - 150
Malathion	0.0979	0.0975	J	ug/L		100	50 - 150
Methoxychlor	0.0490	0.0594		ug/L		121	50 - 150
Metolachlor	0.0490	0.0555		ug/L		113	50 - 150
Molinate	0.0979	0.106		ug/L		108	50 - 150
Naphthalene	0.0979	0.0979	J	ug/L		100	50 - 150
Parathion	0.0979	0.0948	J	ug/L		97	50 - 150
Pendimethalin (Penoxaline)	0.0979	0.0902	J	ug/L		92	50 - 150
Phenanthrene	0.0392	0.0407		ug/L		104	50 - 150
Propachlor	0.0490	0.0498		ug/L		102	50 - 150
Pyrene	0.0490	0.0479	J	ug/L		98	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-105576-1

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

Lab Sample ID: MRL 380-100689/22-A
Matrix: Water
Analysis Batch: 100873

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 100689

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Simazine	0.0490	0.0465	J	ug/L		95	50 - 150
Terbacil	0.0979	0.0907	J	ug/L		93	50 - 150
Terbutylazine	0.0979	0.0916	J	ug/L		94	50 - 150
Thiobencarb	0.0979	0.109		ug/L		111	50 - 150
trans-Nonachlor	0.0245	<0.025		ug/L		95	50 - 150
Trifluralin	0.0979	0.0817	J	ug/L		83	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	MRL Limits
2-Nitro-m-xylene	101		70 - 130
Perylene-d12	90		70 - 130
Triphenylphosphate	88		70 - 130

Lab Sample ID: 380-105515-L-1-A MS
Matrix: Water
Analysis Batch: 100873

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 100689

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	<0.097		1.94	1.78		ug/L		92	70 - 130
2,4'-DDD	<0.097		1.94	1.99		ug/L		103	70 - 130
2,4'-DDE	<0.097		1.94	1.82		ug/L		94	70 - 130
2,4'-DDT	<0.097		1.94	2.00		ug/L		103	70 - 130
2,4-Dinitrotoluene	<0.097		1.94	1.69		ug/L		87	70 - 130
2,6-Dinitrotoluene	<0.097		1.94	1.80		ug/L		93	70 - 130
2-Methylnaphthalene	<0.097		1.94	1.81		ug/L		93	70 - 130
4,4'-DDD	<0.097		1.94	2.03		ug/L		105	70 - 130
4,4'-DDE	<0.097		1.94	1.86		ug/L		96	70 - 130
4,4'-DDT	<0.097		1.94	1.91		ug/L		98	70 - 130
Acenaphthene	<0.097		1.94	1.88		ug/L		97	70 - 130
Acenaphthylene	<0.097		1.94	1.77		ug/L		91	70 - 130
Acetochlor	<0.097		1.94	2.17		ug/L		112	70 - 130
Alachlor	<0.048		1.94	2.09		ug/L		108	70 - 130
alpha-BHC	<0.097		1.94	1.84		ug/L		95	70 - 130
alpha-Chlordane	<0.048		1.94	2.06		ug/L		106	70 - 130
Anthracene	<0.019	F1	1.94	1.29	F1	ug/L		66	70 - 130
Atrazine	<0.048		1.94	1.94		ug/L		100	70 - 130
Benz(a)anthracene	<0.048		1.94	1.79		ug/L		92	70 - 130
Benzo[a]pyrene	<0.019		1.94	1.81		ug/L		93	70 - 130
Benzo[b]fluoranthene	<0.019		1.94	2.03		ug/L		104	70 - 130
Benzo[g,h,i]perylene	<0.048		1.94	2.22		ug/L		115	70 - 130
Benzo[k]fluoranthene	<0.019		1.94	2.06		ug/L		106	70 - 130
beta-BHC	<0.097		1.94	1.86		ug/L		96	70 - 130
Bis(2-ethylhexyl) phthalate	<0.58		1.94	1.85		ug/L		95	70 - 130
Bromacil	<0.097		1.94	1.88		ug/L		97	70 - 130
Butachlor	<0.048		1.94	2.08		ug/L		107	70 - 130
Butylbenzylphthalate	<0.48		1.94	2.13		ug/L		110	70 - 130
Chlorobenzilate	<0.097		1.94	1.95		ug/L		101	70 - 130
Chloroneb	<0.097		1.94	1.85		ug/L		96	70 - 130
Chlorothalonil (Draconil, Bravo)	<0.097		1.94	1.96		ug/L		101	70 - 130

QC Sample Results

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

Job ID: 380-105576-1

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

Lab Sample ID: 380-105515-L-1-A MS
Matrix: Water
Analysis Batch: 100873

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 100689

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec
	Result	Qualifier	Added	Result	Qualifier				
Chlorpyrifos	<0.048		1.94	2.01		ug/L		103	70 - 130
Chrysene	<0.019		1.94	1.98		ug/L		102	70 - 130
delta-BHC	<0.097		1.94	1.99		ug/L		102	70 - 130
Di(2-ethylhexyl)adipate	<0.58		1.94	1.88		ug/L		97	70 - 130
Dibenz(a,h)anthracene	<0.048		1.94	2.09		ug/L		108	70 - 130
Diclorvos (DDVP)	<0.048		1.94	1.93		ug/L		99	70 - 130
Dieldrin	<0.0097		1.94	2.05		ug/L		105	70 - 130
Diethylphthalate	<0.48		1.94	1.85		ug/L		95	70 - 130
Dimethylphthalate	<0.48		1.94	1.99		ug/L		103	70 - 130
Di-n-butyl phthalate	<0.97		3.88	4.06		ug/L		105	70 - 130
Di-n-octyl phthalate	<0.097		1.94	1.56		ug/L		80	70 - 130
Endosulfan I (Alpha)	<0.097		1.94	2.06		ug/L		106	70 - 130
Endosulfan II (Beta)	<0.097		1.94	2.11		ug/L		109	70 - 130
Endosulfan sulfate	<0.097		1.94	1.95		ug/L		100	70 - 130
Endrin	<0.0097		1.94	1.94		ug/L		100	70 - 130
Endrin aldehyde	<0.097		1.94	1.44		ug/L		74	60 - 130
EPTC	<0.097		1.94	1.94		ug/L		100	70 - 130
Fluoranthene	<0.097		1.94	1.93		ug/L		99	70 - 130
Fluorene	<0.048		1.94	1.84		ug/L		95	70 - 130
gamma-Chlordane	<0.048		1.94	2.02		ug/L		104	70 - 130
Heptachlor	<0.0097		1.94	1.85		ug/L		95	70 - 130
Heptachlor epoxide (isomer B)	<0.0097		1.94	2.09		ug/L		108	70 - 130
Hexachlorobenzene	<0.048		1.94	1.68		ug/L		86	70 - 130
Hexachlorocyclopentadiene	<0.048		1.94	1.86		ug/L		96	70 - 130
Indeno[1,2,3-cd]pyrene	<0.048		1.94	2.05		ug/L		106	70 - 130
Isophorone	<0.097		1.94	1.92		ug/L		99	70 - 130
Lindane	<0.0097		1.94	1.81		ug/L		93	70 - 130
Malathion	<0.097		1.94	2.04		ug/L		105	70 - 130
Methoxychlor	<0.048		1.94	2.07		ug/L		107	70 - 130
Metolachlor	<0.048		1.94	2.02		ug/L		104	70 - 130
Molinate	<0.097		1.94	1.98		ug/L		102	70 - 130
Naphthalene	<0.097		1.94	1.75		ug/L		90	70 - 130
Parathion	<0.097		1.94	2.02		ug/L		104	70 - 130
Pendimethalin (Penoxaline)	<0.097		1.94	1.93		ug/L		99	70 - 130
Phenanthrene	<0.039		1.94	1.79		ug/L		92	70 - 130
Propachlor	<0.048		1.94	1.95		ug/L		100	70 - 130
Pyrene	<0.048		1.94	1.93		ug/L		99	70 - 130
Simazine	<0.048		1.94	2.00		ug/L		103	70 - 130
Terbacil	<0.097		1.94	2.05		ug/L		106	70 - 130
Terbutylazine	<0.097		1.94	2.05		ug/L		105	70 - 130
Thiobencarb	<0.097		1.94	1.90		ug/L		98	70 - 130
trans-Nonachlor	<0.048		1.94	2.10		ug/L		108	70 - 130
Trifluralin	<0.097		1.94	1.68		ug/L		87	70 - 130

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	99		70 - 130
Perylene-d12	101		70 - 130
Triphenylphosphate	100		70 - 130

QC Sample Results

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

Job ID: 380-105576-1

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

Lab Sample ID: 380-105515-M-1-A DU
Matrix: Water
Analysis Batch: 100873

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 100689

Analyte	Sample	Sample Qualifier	DU	DU	Unit	D	RPD	Limit
	Result		Result	Qualifier				
1-Methylnaphthalene	<0.097		<0.097		ug/L		NC	20
2,4'-DDD	<0.097		<0.097		ug/L		NC	20
2,4'-DDE	<0.097		<0.097		ug/L		NC	20
2,4'-DDT	<0.097		<0.097		ug/L		NC	20
2,4-Dinitrotoluene	<0.097		<0.097		ug/L		NC	20
2,6-Dinitrotoluene	<0.097		<0.097		ug/L		NC	20
2-Methylnaphthalene	<0.097		<0.097		ug/L		NC	20
4,4'-DDD	<0.097		<0.097		ug/L		NC	20
4,4'-DDE	<0.097		<0.097		ug/L		NC	20
4,4'-DDT	<0.097		<0.097		ug/L		NC	20
Acenaphthene	<0.097		<0.097		ug/L		NC	20
Acenaphthylene	<0.097		<0.097		ug/L		NC	20
Acetochlor	<0.097		<0.097		ug/L		NC	20
Alachlor	<0.048		<0.048		ug/L		NC	20
alpha-BHC	<0.097		<0.097		ug/L		NC	20
alpha-Chlordane	<0.048		<0.048		ug/L		NC	20
Anthracene	<0.019	F1	<0.019		ug/L		NC	20
Atrazine	<0.048		<0.048		ug/L		NC	20
Benz(a)anthracene	<0.048		<0.048		ug/L		NC	20
Benzo[a]pyrene	<0.019		<0.019		ug/L		NC	20
Benzo[b]fluoranthene	<0.019		<0.019		ug/L		NC	20
Benzo[g,h,i]perylene	<0.048		<0.048		ug/L		NC	20
Benzo[k]fluoranthene	<0.019		<0.019		ug/L		NC	20
beta-BHC	<0.097		<0.097		ug/L		NC	20
Bis(2-ethylhexyl) phthalate	<0.58		<0.58		ug/L		NC	20
Bromacil	<0.097		<0.097		ug/L		NC	20
Butachlor	<0.048		<0.048		ug/L		NC	20
Butylbenzylphthalate	<0.48		<0.48		ug/L		NC	20
Chlorobenzilate	<0.097		<0.097		ug/L		NC	20
Chloroneb	<0.097		<0.097		ug/L		NC	20
Chlorothalonil (Draconil, Bravo)	<0.097		<0.097		ug/L		NC	20
Chlorpyrifos	<0.048		<0.048		ug/L		NC	20
Chrysene	<0.019		<0.019		ug/L		NC	20
delta-BHC	<0.097		<0.097		ug/L		NC	20
Di(2-ethylhexyl)adipate	<0.58		<0.58		ug/L		NC	20
Dibenz(a,h)anthracene	<0.048		<0.048		ug/L		NC	20
Diclorvos (DDVP)	<0.048		<0.048		ug/L		NC	20
Dieldrin	<0.0097		<0.0097		ug/L		NC	20
Diethylphthalate	<0.48		<0.48		ug/L		NC	20
Dimethylphthalate	<0.48		<0.48		ug/L		NC	20
Di-n-butyl phthalate	<0.97		<0.97		ug/L		NC	20
Di-n-octyl phthalate	<0.097		<0.097		ug/L		NC	20
Endosulfan I (Alpha)	<0.097		<0.097		ug/L		NC	20
Endosulfan II (Beta)	<0.097		<0.097		ug/L		NC	20
Endosulfan sulfate	<0.097		<0.097		ug/L		NC	20
Endrin	<0.0097		<0.0097		ug/L		NC	20
Endrin aldehyde	<0.097		<0.097		ug/L		NC	20
EPTC	<0.097		<0.097		ug/L		NC	20

QC Sample Results

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

Job ID: 380-105576-1

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

Lab Sample ID: 380-105515-M-1-A DU
Matrix: Water
Analysis Batch: 100873

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 100689

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Fluoranthene	<0.097		<0.097		ug/L		NC	20
Fluorene	<0.048		<0.048		ug/L		NC	20
gamma-Chlordane	<0.048		<0.048		ug/L		NC	20
Heptachlor	<0.0097		<0.0097		ug/L		NC	20
Heptachlor epoxide (isomer B)	<0.0097		<0.0097		ug/L		NC	20
Hexachlorobenzene	<0.048		<0.048		ug/L		NC	20
Hexachlorocyclopentadiene	<0.048		<0.048		ug/L		NC	20
Indeno[1,2,3-cd]pyrene	<0.048		<0.048		ug/L		NC	20
Isophorone	<0.097		<0.097		ug/L		NC	20
Lindane	<0.0097		<0.0097		ug/L		NC	20
Malathion	<0.097		<0.097		ug/L		NC	20
Methoxychlor	<0.048		<0.048		ug/L		NC	20
Metolachlor	<0.048		<0.048		ug/L		NC	20
Molinate	<0.097		<0.097		ug/L		NC	20
Naphthalene	<0.097		<0.097		ug/L		NC	20
Parathion	<0.097		<0.097		ug/L		NC	20
Pendimethalin (Penoxaline)	<0.097		<0.097		ug/L		NC	20
Phenanthrene	<0.039		<0.039		ug/L		NC	20
Propachlor	<0.048		<0.048		ug/L		NC	20
Pyrene	<0.048		<0.048		ug/L		NC	20
Simazine	<0.048		<0.048		ug/L		NC	20
Terbacil	<0.097		<0.097		ug/L		NC	20
Terbutylazine	<0.097		<0.097		ug/L		NC	20
Thiobencarb	<0.097		<0.097		ug/L		NC	20
Total Permethrin (mixed isomers)	<0.19		<0.19		ug/L		NC	20
trans-Nonachlor	<0.048		<0.048		ug/L		NC	20
Trifluralin	<0.097		<0.097		ug/L		NC	20

Surrogate	DU	DU	Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	101		70 - 130
Perylene-d12	99		70 - 130
Triphenylphosphate	101		70 - 130

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

Lab Sample ID: MB 570-463841/1-A
Matrix: Water
Analysis Batch: 469809

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 463841

Tentatively Identified Compound	Est. Result	MB MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	07/25/24 08:01	08/12/24 14:10	1

Surrogate	MB MB	Qualifier	Limits	Prepared	Analyzed	Dil Fac
	%Recovery					
2,4,6-Tribromophenol (Surr)	68		33 - 139	07/25/24 08:01	08/12/24 14:10	1
2-Fluorobiphenyl (Surr)	51		33 - 126	07/25/24 08:01	08/12/24 14:10	1
2-Fluorophenol (Surr)	38		12 - 120	07/25/24 08:01	08/12/24 14:10	1
Nitrobenzene-d5 (Surr)	61		36 - 120	07/25/24 08:01	08/12/24 14:10	1
Phenol-d6 (Surr)	25		10 - 120	07/25/24 08:01	08/12/24 14:10	1

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QC Sample Results

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

Job ID: 380-105576-1

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

Lab Sample ID: MB 570-463841/1-A
Matrix: Water
Analysis Batch: 469809

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 463841

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>p</i> -Terphenyl-d14 (Surr)	65		47 - 131	07/25/24 08:01	08/12/24 14:10	1

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

Lab Sample ID: MB 570-463841/1-A
Matrix: Water
Analysis Batch: 464754

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 463841

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.20		0.20	ug/L		07/25/24 08:01	07/27/24 21:17	1
2-Methylnaphthalene	<0.20		0.20	ug/L		07/25/24 08:01	07/27/24 21:17	1
Acenaphthene	<0.20		0.20	ug/L		07/25/24 08:01	07/27/24 21:17	1
Acenaphthylene	<0.20		0.20	ug/L		07/25/24 08:01	07/27/24 21:17	1
Anthracene	<0.20		0.20	ug/L		07/25/24 08:01	07/27/24 21:17	1
Benzo[a]anthracene	<0.20		0.20	ug/L		07/25/24 08:01	07/27/24 21:17	1
Benzo[a]pyrene	<0.20		0.20	ug/L		07/25/24 08:01	07/27/24 21:17	1
Benzo[b]fluoranthene	<0.20		0.20	ug/L		07/25/24 08:01	07/27/24 21:17	1
Benzo[g,h,i]perylene	<0.20		0.20	ug/L		07/25/24 08:01	07/27/24 21:17	1
Benzo[k]fluoranthene	<0.20		0.20	ug/L		07/25/24 08:01	07/27/24 21:17	1
Chrysene	<0.20		0.20	ug/L		07/25/24 08:01	07/27/24 21:17	1
Dibenz(a,h)anthracene	<0.20		0.20	ug/L		07/25/24 08:01	07/27/24 21:17	1
Fluoranthene	<0.20		0.20	ug/L		07/25/24 08:01	07/27/24 21:17	1
Fluorene	<0.20		0.20	ug/L		07/25/24 08:01	07/27/24 21:17	1
Indeno[1,2,3-cd]pyrene	<0.20		0.20	ug/L		07/25/24 08:01	07/27/24 21:17	1
Naphthalene	<0.20		0.20	ug/L		07/25/24 08:01	07/27/24 21:17	1
Phenanthrene	<0.20		0.20	ug/L		07/25/24 08:01	07/27/24 21:17	1
Pyrene	<0.20		0.20	ug/L		07/25/24 08:01	07/27/24 21:17	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	75		28 - 127	07/25/24 08:01	07/27/24 21:17	1
2-Fluorobiphenyl (Surr)	56		31 - 120	07/25/24 08:01	07/27/24 21:17	1
2-Fluorophenol (Surr)	36		17 - 120	07/25/24 08:01	07/27/24 21:17	1
Nitrobenzene-d5 (Surr)	58		27 - 120	07/25/24 08:01	07/27/24 21:17	1
Phenol-d6 (Surr)	23		10 - 120	07/25/24 08:01	07/27/24 21:17	1
<i>p</i> -Terphenyl-d14 (Surr)	70		45 - 120	07/25/24 08:01	07/27/24 21:17	1

Lab Sample ID: LCS 570-463841/2-A
Matrix: Water
Analysis Batch: 464754

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 463841

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	20.0	10.8		ug/L		54	47 - 120
2-Methylnaphthalene	20.0	10.8		ug/L		54	43 - 120
Acenaphthene	20.0	13.6		ug/L		68	60 - 132
Acenaphthylene	20.0	14.3		ug/L		71	54 - 126
Anthracene	20.0	15.0		ug/L		75	43 - 120
Benzo[a]anthracene	20.0	15.7		ug/L		78	42 - 133
Benzo[a]pyrene	20.0	17.3		ug/L		87	32 - 148

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-105576-1

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

Lab Sample ID: LCS 570-463841/2-A
Matrix: Water
Analysis Batch: 464754

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 463841

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzo[b]fluoranthene	20.0	17.1		ug/L		85	42 - 140
Benzo[g,h,i]perylene	20.0	16.9		ug/L		85	1 - 195
Benzo[k]fluoranthene	20.0	16.8		ug/L		84	25 - 146
Chrysene	20.0	15.3		ug/L		76	44 - 140
Dibenz(a,h)anthracene	20.0	17.2		ug/L		86	1 - 200
Fluoranthene	20.0	16.2		ug/L		81	43 - 121
Fluorene	20.0	14.4		ug/L		72	70 - 120
Indeno[1,2,3-cd]pyrene	20.0	17.1		ug/L		86	1 - 151
Naphthalene	20.0	9.96		ug/L		50	36 - 120
Phenanthrene	20.0	15.1		ug/L		75	65 - 120
Pyrene	20.0	14.6		ug/L		73	70 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	73		28 - 127
2-Fluorobiphenyl (Surr)	61		31 - 120
2-Fluorophenol (Surr)	36		17 - 120
Nitrobenzene-d5 (Surr)	49		27 - 120
Phenol-d6 (Surr)	27		10 - 120
p-Terphenyl-d14 (Surr)	71		45 - 120

Lab Sample ID: LCSD 570-463841/3-A
Matrix: Water
Analysis Batch: 464754

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 463841

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	20.0	10.4		ug/L		52	47 - 120	4	20
2-Methylnaphthalene	20.0	10.2		ug/L		51	43 - 120	5	20
Acenaphthene	20.0	12.9		ug/L		65	60 - 132	5	29
Acenaphthylene	20.0	13.9		ug/L		69	54 - 126	3	45
Anthracene	20.0	15.4		ug/L		77	43 - 120	3	40
Benzo[a]anthracene	20.0	15.9		ug/L		80	42 - 133	1	32
Benzo[a]pyrene	20.0	16.6		ug/L		83	32 - 148	4	43
Benzo[b]fluoranthene	20.0	16.8		ug/L		84	42 - 140	2	43
Benzo[g,h,i]perylene	20.0	16.2		ug/L		81	1 - 195	4	61
Benzo[k]fluoranthene	20.0	16.3		ug/L		82	25 - 146	3	38
Chrysene	20.0	15.5		ug/L		78	44 - 140	2	53
Dibenz(a,h)anthracene	20.0	16.5		ug/L		83	1 - 200	4	75
Fluoranthene	20.0	16.5		ug/L		83	43 - 121	2	40
Fluorene	20.0	14.2		ug/L		71	70 - 120	2	23
Indeno[1,2,3-cd]pyrene	20.0	16.3		ug/L		82	1 - 151	5	60
Naphthalene	20.0	9.66		ug/L		48	36 - 120	3	39
Phenanthrene	20.0	15.2		ug/L		76	65 - 120	1	24
Pyrene	20.0	15.3		ug/L		76	70 - 120	4	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	72		28 - 127
2-Fluorobiphenyl (Surr)	56		31 - 120
2-Fluorophenol (Surr)	35		17 - 120

QC Sample Results

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

Job ID: 380-105576-1

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

Lab Sample ID: LCSD 570-463841/3-A
Matrix: Water
Analysis Batch: 464754

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 463841

<i>Surrogate</i>	<i>LCS D</i>	<i>LCS D</i>	<i>Limits</i>
	<i>%Recovery</i>	<i>Qualifier</i>	
<i>Nitrobenzene-d5 (Surr)</i>	47		27 - 120
<i>Phenol-d6 (Surr)</i>	25		10 - 120
<i>p-Terphenyl-d14 (Surr)</i>	72		45 - 120

Lab Sample ID: 380-105582-A-1-A MS
Matrix: Water
Analysis Batch: 468837

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 463841

<i>Analyte</i>	<i>Sample</i>	<i>Sample</i>	<i>Spike</i>	<i>MS</i>	<i>MS</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec</i>	<i>Limits</i>
	<i>Result</i>	<i>Qualifier</i>	<i>Added</i>	<i>Result</i>	<i>Qualifier</i>					
1-Methylnaphthalene	<0.19		19.5	12.2		ug/L		62		36 - 120
2-Methylnaphthalene	<0.19		19.5	12.2		ug/L		62		32 - 124
Acenaphthene	<0.19		19.5	14.2		ug/L		73		47 - 145
Acenaphthylene	<0.19		19.5	15.6		ug/L		80		33 - 145
Anthracene	<0.19		19.5	15.4		ug/L		79		27 - 133
Benzo[a]anthracene	<0.19		19.5	16.4		ug/L		84		33 - 143
Benzo[a]pyrene	<0.19		19.5	16.9		ug/L		86		17 - 163
Benzo[b]fluoranthene	<0.19		19.5	16.3		ug/L		84		24 - 159
Benzo[g,h,i]perylene	<0.19		19.5	15.9		ug/L		81		1 - 219
Benzo[k]fluoranthene	<0.19		19.5	16.4		ug/L		84		11 - 162
Chrysene	<0.19		19.5	15.0		ug/L		77		17 - 168
Dibenz(a,h)anthracene	<0.19		19.5	16.1		ug/L		83		1 - 227
Fluoranthene	<0.19		19.5	15.6		ug/L		80		26 - 137
Fluorene	<0.19		19.5	15.0		ug/L		77		59 - 121
Indeno[1,2,3-cd]pyrene	<0.19		19.5	16.2		ug/L		83		1 - 171
Naphthalene	<0.19		19.5	11.8		ug/L		60		21 - 133
Phenanthrene	<0.19		19.5	14.9		ug/L		76		54 - 120
Pyrene	<0.19		19.5	15.8		ug/L		81		52 - 120

<i>Surrogate</i>	<i>MS</i>	<i>MS</i>	<i>Limits</i>
	<i>%Recovery</i>	<i>Qualifier</i>	
<i>2,4,6-Tribromophenol (Surr)</i>	73		28 - 127
<i>2-Fluorobiphenyl (Surr)</i>	63		31 - 120
<i>2-Fluorophenol (Surr)</i>	48		17 - 120
<i>Nitrobenzene-d5 (Surr)</i>	55		27 - 120
<i>Phenol-d6 (Surr)</i>	34		10 - 120
<i>p-Terphenyl-d14 (Surr)</i>	72		45 - 120

Lab Sample ID: 380-105582-A-1-B MSD
Matrix: Water
Analysis Batch: 468837

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 463841

<i>Analyte</i>	<i>Sample</i>	<i>Sample</i>	<i>Spike</i>	<i>MSD</i>	<i>MSD</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec</i>	<i>Limits</i>	<i>RPD</i>	<i>RPD</i>
	<i>Result</i>	<i>Qualifier</i>	<i>Added</i>	<i>Result</i>	<i>Qualifier</i>							
1-Methylnaphthalene	<0.19		19.5	11.9		ug/L		61		36 - 120	2	30
2-Methylnaphthalene	<0.19		19.5	11.8		ug/L		61		32 - 124	3	30
Acenaphthene	<0.19		19.5	14.3		ug/L		73		47 - 145	0	48
Acenaphthylene	<0.19		19.5	15.5		ug/L		80		33 - 145	1	74
Anthracene	<0.19		19.5	15.2		ug/L		78		27 - 133	1	66
Benzo[a]anthracene	<0.19		19.5	16.0		ug/L		82		33 - 143	2	53
Benzo[a]pyrene	<0.19		19.5	16.6		ug/L		85		17 - 163	2	72

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-105576-1

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

Lab Sample ID: 380-105582-A-1-B MSD

Matrix: Water

Analysis Batch: 468837

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 463841

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzo[b]fluoranthene	<0.19		19.5	16.2		ug/L		83	24 - 159	1	71
Benzo[g,h,i]perylene	<0.19		19.5	15.6		ug/L		80	1 - 219	2	97
Benzo[k]fluoranthene	<0.19		19.5	16.0		ug/L		82	11 - 162	3	63
Chrysene	<0.19		19.5	14.8		ug/L		76	17 - 168	2	87
Dibenz(a,h)anthracene	<0.19		19.5	15.3		ug/L		79	1 - 227	5	126
Fluoranthene	<0.19		19.5	15.3		ug/L		78	26 - 137	2	66
Fluorene	<0.19		19.5	14.8		ug/L		76	59 - 121	2	38
Indeno[1,2,3-cd]pyrene	<0.19		19.5	15.7		ug/L		81	1 - 171	3	99
Naphthalene	<0.19		19.5	11.6		ug/L		60	21 - 133	1	65
Phenanthrene	<0.19		19.5	14.7		ug/L		75	54 - 120	1	39
Pyrene	<0.19		19.5	15.7		ug/L		81	52 - 120	0	49

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
2,4,6-Tribromophenol (Surr)	73		28 - 127
2-Fluorobiphenyl (Surr)	64		31 - 120
2-Fluorophenol (Surr)	47		17 - 120
Nitrobenzene-d5 (Surr)	55		27 - 120
Phenol-d6 (Surr)	33		10 - 120
p-Terphenyl-d14 (Surr)	73		45 - 120

Lab Sample ID: 570-192681-A-1-A MS

Matrix: Water

Analysis Batch: 464754

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 463841

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	<0.20		20.1	9.21		ug/L		46	36 - 120
2-Methylnaphthalene	<0.20		20.1	9.17		ug/L		46	32 - 124
Acenaphthene	<0.20		20.1	11.0		ug/L		55	47 - 145
Acenaphthylene	<0.20		20.1	10.7		ug/L		53	33 - 145
Anthracene	<0.20		20.1	11.5		ug/L		57	27 - 133
Benzo[a]anthracene	<0.20		20.1	11.6		ug/L		58	33 - 143
Benzo[a]pyrene	<0.20		20.1	10.2		ug/L		51	17 - 163
Benzo[b]fluoranthene	<0.20		20.1	11.5		ug/L		57	24 - 159
Benzo[g,h,i]perylene	<0.20		20.1	11.8		ug/L		59	1 - 219
Benzo[k]fluoranthene	<0.20		20.1	11.5		ug/L		57	11 - 162
Chrysene	<0.20		20.1	11.6		ug/L		58	17 - 168
Dibenz(a,h)anthracene	<0.20		20.1	12.2		ug/L		61	1 - 227
Fluoranthene	<0.20		20.1	14.0		ug/L		70	26 - 137
Fluorene	<0.20		20.1	11.9		ug/L		59	59 - 121
Indeno[1,2,3-cd]pyrene	<0.20		20.1	11.9		ug/L		59	1 - 171
Naphthalene	<0.20		20.1	8.72		ug/L		43	21 - 133
Phenanthrene	<0.20		20.1	13.1		ug/L		65	54 - 120
Pyrene	<0.20		20.1	12.5		ug/L		62	52 - 120

Surrogate	MS %Recovery	MS Qualifier	MS Limits
2,4,6-Tribromophenol (Surr)	64		28 - 127
2-Fluorobiphenyl (Surr)	48		31 - 120
2-Fluorophenol (Surr)	26		17 - 120

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-105576-1

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

Lab Sample ID: 570-192681-A-1-A MS
Matrix: Water
Analysis Batch: 464754

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 463841

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
Nitrobenzene-d5 (Surr)	42		27 - 120
Phenol-d6 (Surr)	18		10 - 120
p-Terphenyl-d14 (Surr)	45		45 - 120

Lab Sample ID: 570-192681-A-1-B MSD
Matrix: Water
Analysis Batch: 464754

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 463841

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD MSD		Unit	D	%Rec	%Rec		RPD	Limit
				Result	Qualifier				Limits	RPD		
1-Methylnaphthalene	<0.20		20.0	11.4		ug/L		57	36 - 120	21	30	
2-Methylnaphthalene	<0.20		20.0	11.3		ug/L		56	32 - 124	21	30	
Acenaphthene	<0.20		20.0	14.0		ug/L		70	47 - 145	23	48	
Acenaphthylene	<0.20		20.0	13.4		ug/L		67	33 - 145	23	74	
Anthracene	<0.20		20.0	14.0		ug/L		70	27 - 133	19	66	
Benzo[a]anthracene	<0.20		20.0	14.1		ug/L		70	33 - 143	19	53	
Benzo[a]pyrene	<0.20		20.0	12.5		ug/L		63	17 - 163	21	72	
Benzo[b]fluoranthene	<0.20		20.0	14.1		ug/L		70	24 - 159	20	71	
Benzo[g,h,i]perylene	<0.20		20.0	14.5		ug/L		72	1 - 219	20	97	
Benzo[k]fluoranthene	<0.20		20.0	14.0		ug/L		70	11 - 162	20	63	
Chrysene	<0.20		20.0	14.2		ug/L		71	17 - 168	20	87	
Dibenz(a,h)anthracene	<0.20		20.0	14.9		ug/L		75	1 - 227	20	126	
Fluoranthene	<0.20		20.0	16.9		ug/L		84	26 - 137	19	66	
Fluorene	<0.20		20.0	14.5		ug/L		72	59 - 121	19	38	
Indeno[1,2,3-cd]pyrene	<0.20		20.0	14.6		ug/L		73	1 - 171	20	99	
Naphthalene	<0.20		20.0	10.8		ug/L		54	21 - 133	21	65	
Phenanthrene	<0.20		20.0	15.7		ug/L		78	54 - 120	18	39	
Pyrene	<0.20		20.0	15.0		ug/L		75	52 - 120	19	49	

Surrogate	MSD MSD		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	77		28 - 127
2-Fluorobiphenyl (Surr)	61		31 - 120
2-Fluorophenol (Surr)	35		17 - 120
Nitrobenzene-d5 (Surr)	51		27 - 120
Phenol-d6 (Surr)	25		10 - 120
p-Terphenyl-d14 (Surr)	55		45 - 120

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

Lab Sample ID: MB 570-466384/10
Matrix: Water
Analysis Batch: 466384

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	<10		10	ug/L			08/01/24 17:44	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	88		38 - 134		08/01/24 17:44	1

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QC Sample Results

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

Job ID: 380-105576-1

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

Lab Sample ID: LCS 570-466384/1008
Matrix: Water
Analysis Batch: 466384

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (C4-C13)	400	391		ug/L		98	78 - 120
Surrogate		LCS %Recovery	LCS Qualifier				Limits
4-Bromofluorobenzene (Surr)		87					38 - 134

Lab Sample ID: LCSD 570-466384/9
Matrix: Water
Analysis Batch: 466384

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	391		ug/L		98	78 - 120	0	10
Surrogate		LCSD %Recovery	LCSD Qualifier				Limits		
4-Bromofluorobenzene (Surr)		95					38 - 134		

Lab Sample ID: MRL 570-466384/1003
Matrix: Water
Analysis Batch: 466384

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (C4-C13)	10.0	11.2		ug/L		112	50 - 150
Surrogate		MRL %Recovery	MRL Qualifier				Limits
4-Bromofluorobenzene (Surr)		89					38 - 134

Lab Sample ID: 380-105582-C-1 MS
Matrix: Water
Analysis Batch: 466384

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	385		ug/L		96	68 - 122
Surrogate		MS %Recovery		MS Qualifier					Limits
4-Bromofluorobenzene (Surr)		92							38 - 134

Lab Sample ID: 380-105582-C-1 MSD
Matrix: Water
Analysis Batch: 466384

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	410		ug/L		102	68 - 122	6	18

QC Sample Results

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

Job ID: 380-105576-1

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

Lab Sample ID: 380-105582-C-1 MSD
Matrix: Water
Analysis Batch: 466384

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

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

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

Lab Sample ID: MB 570-465129/1-A
Matrix: Water
Analysis Batch: 466159

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 465129

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C24)	<25		25	ug/L		07/29/24 16:16	08/01/24 11:31	1
Motor Oil Range Organics [C24-C36]	<25		25	ug/L		07/29/24 16:16	08/01/24 11:31	1
C8-C18	<25		25	ug/L		07/29/24 16:16	08/01/24 11:31	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	111		60 - 130	07/29/24 16:16	08/01/24 11:31	1

Lab Sample ID: LCS 570-465129/2-A
Matrix: Water
Analysis Batch: 466159

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 465129

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
C10-C28	1600	1340		ug/L		84	56 - 127

Surrogate	LCS %Recovery	LCS Qualifier	Limits
n-Octacosane (Surr)	114		60 - 130

Lab Sample ID: LCSD 570-465129/3-A
Matrix: Water
Analysis Batch: 466159

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 465129

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
C10-C28	1600	1340		ug/L		84	56 - 127	0	23

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
n-Octacosane (Surr)	114		60 - 130

Lab Sample ID: MRL 570-465129/4-A
Matrix: Water
Analysis Batch: 466159

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 465129

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
C10-C28	0.0200	<0.020		mg/L		59	50 - 150

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

QC Sample Results

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

Job ID: 380-105576-1

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

Lab Sample ID: 380-105582-B-1-A MS
Matrix: Water
Analysis Batch: 466159

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 465129

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
C10-C28	<26		1650	1460		ug/L		88	70 - 130
MS MS									
Surrogate	%Recovery	Qualifier	Limits						
<i>n</i> -Octacosane (Surr)	109		60 - 130						

Lab Sample ID: 380-105582-B-1-B MSD
Matrix: Water
Analysis Batch: 466159

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 465129

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C10-C28	<26		1620	1570		ug/L		97	70 - 130	7	20
MSD MSD											
Surrogate	%Recovery	Qualifier	Limits								
<i>n</i> -Octacosane (Surr)	115		60 - 130								



QC Association Summary

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

Job ID: 380-105576-1

GC/MS Semi VOA

Prep Batch: 100689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-105576-1	Aiea Gulch Wells Pump 2	Total/NA	Water	525.2	
380-105576-3	Aiea Wells Pumps 1&2 (260) P2	Total/NA	Water	525.2	
MB 380-100689/21-A	Method Blank	Total/NA	Water	525.2	
LCS 380-100689/23-A	Lab Control Sample	Total/NA	Water	525.2	
MRL 380-100689/22-A	Lab Control Sample	Total/NA	Water	525.2	
380-105515-L-1-A MS	Matrix Spike	Total/NA	Water	525.2	
380-105515-M-1-A DU	Duplicate	Total/NA	Water	525.2	

Analysis Batch: 100873

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-105576-3	Aiea Wells Pumps 1&2 (260) P2	Total/NA	Water	525.2	100689
MB 380-100689/21-A	Method Blank	Total/NA	Water	525.2	100689
LCS 380-100689/23-A	Lab Control Sample	Total/NA	Water	525.2	100689
MRL 380-100689/22-A	Lab Control Sample	Total/NA	Water	525.2	100689
380-105515-L-1-A MS	Matrix Spike	Total/NA	Water	525.2	100689
380-105515-M-1-A DU	Duplicate	Total/NA	Water	525.2	100689

Analysis Batch: 100951

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-105576-1	Aiea Gulch Wells Pump 2	Total/NA	Water	525.2	100689

Prep Batch: 463841

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-105576-1	Aiea Gulch Wells Pump 2	Total/NA	Water	625.1	
380-105576-3	Aiea Wells Pumps 1&2 (260) P2	Total/NA	Water	625.1	
MB 570-463841/1-A	Method Blank	Total/NA	Water	625.1	
LCS 570-463841/2-A	Lab Control Sample	Total/NA	Water	625.1	
LCSD 570-463841/3-A	Lab Control Sample Dup	Total/NA	Water	625.1	
380-105582-A-1-A MS	Matrix Spike	Total/NA	Water	625.1	
380-105582-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	625.1	
570-192681-A-1-A MS	Matrix Spike	Total/NA	Water	625.1	
570-192681-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	625.1	

Analysis Batch: 464754

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 570-463841/1-A	Method Blank	Total/NA	Water	625.1 SIM	463841
LCS 570-463841/2-A	Lab Control Sample	Total/NA	Water	625.1 SIM	463841
LCSD 570-463841/3-A	Lab Control Sample Dup	Total/NA	Water	625.1 SIM	463841
570-192681-A-1-A MS	Matrix Spike	Total/NA	Water	625.1 SIM	463841
570-192681-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	625.1 SIM	463841

Analysis Batch: 466489

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-105576-3	Aiea Wells Pumps 1&2 (260) P2	Total/NA	Water	625.1 SIM	463841

Analysis Batch: 468837

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-105576-1	Aiea Gulch Wells Pump 2	Total/NA	Water	625.1 SIM	463841
380-105582-A-1-A MS	Matrix Spike	Total/NA	Water	625.1 SIM	463841
380-105582-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	625.1 SIM	463841

QC Association Summary

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

Job ID: 380-105576-1

GC/MS Semi VOA

Analysis Batch: 469809

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-105576-1	Aiea Gulch Wells Pump 2	Total/NA	Water	625.1	463841
380-105576-3	Aiea Wells Pumps 1&2 (260) P2	Total/NA	Water	625.1	463841
MB 570-463841/1-A	Method Blank	Total/NA	Water	625.1	463841

GC VOA

Analysis Batch: 466384

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-105576-1	Aiea Gulch Wells Pump 2	Total/NA	Water	8015B GRO LL	
380-105576-2	TB: Aiea Gulch Wells Pump 2	Total/NA	Water	8015B GRO LL	
380-105576-3	Aiea Wells Pumps 1&2 (260) P2	Total/NA	Water	8015B GRO LL	
MB 570-466384/10	Method Blank	Total/NA	Water	8015B GRO LL	
LCS 570-466384/1008	Lab Control Sample	Total/NA	Water	8015B GRO LL	
LCSD 570-466384/9	Lab Control Sample Dup	Total/NA	Water	8015B GRO LL	
MRL 570-466384/1003	Lab Control Sample	Total/NA	Water	8015B GRO LL	
380-105582-C-1 MS	Matrix Spike	Total/NA	Water	8015B GRO LL	
380-105582-C-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8015B GRO LL	

GC Semi VOA

Prep Batch: 465129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-105576-1	Aiea Gulch Wells Pump 2	Total/NA	Water	3510C	
380-105576-3	Aiea Wells Pumps 1&2 (260) P2	Total/NA	Water	3510C	
MB 570-465129/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-465129/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-465129/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MRL 570-465129/4-A	Lab Control Sample	Total/NA	Water	3510C	
380-105582-B-1-A MS	Matrix Spike	Total/NA	Water	3510C	
380-105582-B-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	3510C	

Analysis Batch: 466159

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-105576-1	Aiea Gulch Wells Pump 2	Total/NA	Water	8015B	465129
380-105576-3	Aiea Wells Pumps 1&2 (260) P2	Total/NA	Water	8015B	465129
MB 570-465129/1-A	Method Blank	Total/NA	Water	8015B	465129
LCS 570-465129/2-A	Lab Control Sample	Total/NA	Water	8015B	465129
LCSD 570-465129/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	465129
MRL 570-465129/4-A	Lab Control Sample	Total/NA	Water	8015B	465129
380-105582-B-1-A MS	Matrix Spike	Total/NA	Water	8015B	465129
380-105582-B-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	8015B	465129

Lab Chronicle

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

Job ID: 380-105576-1

Client Sample ID: Aiea Gulch Wells Pump 2

Lab Sample ID: 380-105576-1

Date Collected: 07/22/24 10:56

Matrix: Water

Date Received: 07/24/24 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			100689	KRD3	EA POM	07/25/24 13:15
Total/NA	Analysis	525.2		1	100951	Q8LA	EA POM	07/27/24 12:45
Total/NA	Prep	625.1			463841	H1SH	EET CAL 4	07/26/24 08:01
Total/NA	Analysis	625.1		1	469809	CG	EET CAL 4	08/12/24 14:33
Total/NA	Prep	625.1			463841	H1SH	EET CAL 4	07/26/24 08:01
Total/NA	Analysis	625.1 SIM		1	468837	PQS1	EET CAL 4	08/08/24 20:41
Total/NA	Analysis	8015B GRO LL		1	466384	A9VE	EET CAL 4	08/01/24 20:25
Total/NA	Prep	3510C			465129	H6FE	EET CAL 4	07/29/24 16:16
Total/NA	Analysis	8015B		1	466159	SP9M	EET CAL 4	08/01/24 12:54

Client Sample ID: TB: Aiea Gulch Wells Pump 2

Lab Sample ID: 380-105576-2

Date Collected: 07/22/24 10:56

Matrix: Water

Date Received: 07/24/24 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015B GRO LL		1	466384	A9VE	EET CAL 4	08/01/24 22:22

Client Sample ID: Aiea Wells Pumps 1&2 (260) P2

Lab Sample ID: 380-105576-3

Date Collected: 07/22/24 11:22

Matrix: Water

Date Received: 07/24/24 09:37

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			100689	KRD3	EA POM	07/25/24 13:15
Total/NA	Analysis	525.2		1	100873	UPAC	EA POM	07/26/24 13:14
Total/NA	Prep	625.1			463841	H1SH	EET CAL 4	07/26/24 08:01
Total/NA	Analysis	625.1		1	469809	CG	EET CAL 4	08/12/24 14:55
Total/NA	Prep	625.1			463841	H1SH	EET CAL 4	07/26/24 08:01
Total/NA	Analysis	625.1 SIM		1	466489	PQS1	EET CAL 4	08/02/24 01:40
Total/NA	Analysis	8015B GRO LL		1	466384	A9VE	EET CAL 4	08/01/24 20:48
Total/NA	Prep	3510C			465129	H6FE	EET CAL 4	07/29/24 16:16
Total/NA	Analysis	8015B		1	466159	SP9M	EET CAL 4	08/01/24 13:14

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: 380-105576-1

Laboratory: Eurofins Eaton Analytical Pomona

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

Authority	Program	Identification Number	Expiration Date
Hawaii	State	CA00006	01-31-25

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

Analysis Method	Prep Method	Matrix	Analyte
525.2	525.2	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	11-16-24
Arkansas DEQ	State	88-0161	07-02-25
California	Los Angeles County Sanitation Districts	9257304	08-01-24 *
California	State	3082	07-31-26
Kansas	NELAP	E-10420	07-31-25
Nevada	State	CA00111	10-31-24

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

Eurofins Eaton Analytical Pomona

Accreditation/Certification Summary

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

Job ID: 380-105576-1

Laboratory: Eurofins Calscience (Continued)

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

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

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Method Summary

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

Job ID: 380-105576-1

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: 380-105576-1

<u>Lab Sample ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Collected</u>	<u>Received</u>
380-105576-1	Aiea Gulch Wells Pump 2	Water	07/22/24 10:56	07/24/24 09:37
380-105576-2	TB: Aiea Gulch Wells Pump 2	Water	07/22/24 10:56	07/24/24 09:37
380-105576-3	Aiea Wells Pumps 1&2 (260) P2	Water	07/22/24 11:22	07/24/24 09:37

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Chain of Custody Record



Client Information (Sub Contract Lab)		Lab Pk#: Arada, Rachelle	Carrier Tracking No(s): 380-140541-1
Company: Eurofins Environment Testing Southwest		E-Mail: Rachelle.Arada@eurofins.com	Page: Page 1 of 1
Address: 2841 Dow Avenue, Suite 100, Tustin, CA, 92780		State: Hawaii	Job #: 380-105576-1
Phone: 714-895-5494(Tel)		Accreditations Required (See note): State Hawaii	Preservation Codes:
Due Date Requested: 8/13/2024		Analysis Requested	
TAT Requested (days):		Total Number of Containers	
PO #:	WO #:	Perform MS/MSD (Yes or No)	7
Project #: 38001111	Project Name: RED-HILL	0015B_DRG_LL_CS/310C_LL_HNL Ranges: C10-C24/C25-C36/C8-C18	2
Site: Honolulu BWS Sites	Site:	0015B_GRO_LL/5030C (MOD) GRO	7
Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Swill, Composite, Other)
7/22/24	10:56 Hawaiian	Water	Water
7/22/24	10:56 Hawaiian	Water	Water
7/22/24	11:22 Hawaiian	Water	Water
Sample Identification Client ID (Lab ID)		Field Filtered Sample (Yes or No)	Special Instructions/Note:
Aiea Gulch Wells Pump 2 (380-105576-1)		X	initial volume (500ml) and final volume (2ml). MRLs are needed.
TB: Aiea Gulch Wells Pump 2 (380-105576-2)		X	MRLs are needed.
Aiea Wells Pumps 1&2 (260) P2 (380-105576-3)		X	initial volume (500ml) and final volume (2ml). MRLs are needed.

380-105576 Chain of Custody

Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Eaton Analytical, LLC.

Possible Hazard Identification
 Unconfirmed
 Deliverable Requested: I, II, III, IV Other (specify) Primary Deliverable Rank: 2
 Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Relinquished by: <i>[Signature]</i>	Date/Time: 7/25/24 12:30	Company: EAT
Relinquished by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No	Custody Seal No. 1-2/12-SC12	Cooler Temperature(s) °C and Other Remarks:



Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-105576-1

Login Number: 105576

List Number: 1

Creator: Gerfen, Chris

List Source: Eurofins Eaton Analytical Pomona

Question	Answer	Comment
The coolers custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
Samples were received on ice.	True	
Cooler(s) Temperature is acceptable.	True	
Cooler(s) Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and is legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	Refer to Job Narrative for details.
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: 380-105576-1

Login Number: 105576

List Number: 2

Creator: Khana, Piyush

List Source: Eurofins Calscience

List Creation: 07/25/24 03:16 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.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

