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ANALYTICAL REPORT

PREPARED FOR

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

Generated 8/20/2024 4:53:49 PM

JOB DESCRIPTION

RED-HILL

JOB NUMBER

380-106529-1

Eurofins Eaton Analytical Pomona
941 Corporate Center Drive
Pomona CA 91768-2642

See page two for job notes and contact information.

Eurofins Eaton Analytical Pomona

Job Notes

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

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

Compliance Statement

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

Authorization

Rachelle Arada

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Authorized for release by
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Table of Contents

Definitions/Glossary

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

Job ID: 380-106529-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
^+	Continuing Calibration Verification (CCV) is outside acceptance limits, high biased.
^3+	Reporting Limit Check Standard is outside acceptance limits, high biased
B	Analyte was found in the associated method blank.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA TICs

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

GC Semi VOA

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

Glossary

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

Job Narrative
380-106529-1

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 7/31/2024 9:52 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.4°C.

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

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

Diesel Range Organics
Method 8015B_DRO_LL_CS: One or more containers for the following sample was received broken or leaking: MOANALUA WELLS (380-106529-1). 1 of 5 vials for method 8015B received broken.

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: 380-106529-1

Client Sample ID: MOANALUA WELLS — Lab Sample ID: 380-106529-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Dieldrin	0.024		0.0098		ug/L	1		525.2	Total/NA

Client Sample ID: TB: MOANALUA WELLS — Lab Sample ID: 380-106529-2

No Detections.

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1 — Lab Sample ID: 380-106529-3

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Dieldrin	0.042		0.0098		ug/L	1		525.2	Total/NA
Heptachlor epoxide (isomer B)	0.011		0.0098		ug/L	1		525.2	Total/NA

Client Sample ID: TB: HALAWA WELLS UNITS 1 & 2 P1 — Lab Sample ID: 380-106529-4

No Detections.

This Detection Summary does not include radiochemical test results.

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

Job ID: 380-106529-1

Client Sample ID: MOANALUA WELLS
Date Collected: 07/29/24 09:55
Date Received: 07/31/24 09:52

Lab Sample ID: 380-106529-1
Matrix: Water

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		08/01/24 16:25	08/04/24 15:37	1
2,4'-DDD	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:37	1
2,4'-DDE	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:37	1
2,4'-DDT	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:37	1
2,4-Dinitrotoluene	<0.098	^+	0.098		ug/L		08/01/24 16:25	08/04/24 15:37	1
2,6-Dinitrotoluene	<0.098	^+	0.098		ug/L		08/01/24 16:25	08/04/24 15:37	1
2-Methylnaphthalene	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:37	1
4,4'-DDD	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:37	1
4,4'-DDE	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:37	1
4,4'-DDT	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:37	1
Acenaphthene	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:37	1
Acenaphthylene	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:37	1
Acetochlor	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:37	1
Alachlor	<0.049		0.049		ug/L		08/01/24 16:25	08/04/24 15:37	1
alpha-BHC	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:37	1
alpha-Chlordane	<0.049		0.049		ug/L		08/01/24 16:25	08/04/24 15:37	1
Anthracene	<0.020		0.020		ug/L		08/01/24 16:25	08/04/24 15:37	1
Atrazine	<0.049		0.049		ug/L		08/01/24 16:25	08/04/24 15:37	1
Benz(a)anthracene	<0.049		0.049		ug/L		08/01/24 16:25	08/04/24 15:37	1
Benzo[a]pyrene	<0.020		0.020		ug/L		08/01/24 16:25	08/04/24 15:37	1
Benzo[b]fluoranthene	<0.020		0.020		ug/L		08/01/24 16:25	08/04/24 15:37	1
Benzo[g,h,i]perylene	<0.049		0.049		ug/L		08/01/24 16:25	08/04/24 15:37	1
Benzo[k]fluoranthene	<0.020		0.020		ug/L		08/01/24 16:25	08/04/24 15:37	1
beta-BHC	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:37	1
Bis(2-ethylhexyl) phthalate	<0.59		0.59		ug/L		08/01/24 16:25	08/04/24 15:37	1
Bromacil	<0.098	^3+	0.098		ug/L		08/01/24 16:25	08/04/24 15:37	1
Butachlor	<0.049		0.049		ug/L		08/01/24 16:25	08/04/24 15:37	1
Butylbenzylphthalate	<0.49	*+	0.49		ug/L		08/01/24 16:25	08/04/24 15:37	1
Chlorobenzilate	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:37	1
Chloroneb	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:37	1
Chlorothalonil (Draconil, Bravo)	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:37	1
Chlorpyrifos	<0.049		0.049		ug/L		08/01/24 16:25	08/04/24 15:37	1
Chrysene	<0.020		0.020		ug/L		08/01/24 16:25	08/04/24 15:37	1
delta-BHC	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:37	1
Di(2-ethylhexyl)adipate	<0.59	B ^3+ *+	0.59		ug/L		08/01/24 16:25	08/04/24 15:37	1
Dibenz(a,h)anthracene	<0.049		0.049		ug/L		08/01/24 16:25	08/04/24 15:37	1
Diclorvos (DDVP)	<0.049		0.049		ug/L		08/01/24 16:25	08/04/24 15:37	1
Dieldrin	**0.024**		0.0098		ug/L		08/01/24 16:25	08/04/24 15:37	1
Diethylphthalate	<0.49		0.49		ug/L		08/01/24 16:25	08/04/24 15:37	1
Dimethylphthalate	<0.49		0.49		ug/L		08/01/24 16:25	08/04/24 15:37	1
Di-n-butyl phthalate	<0.98		0.98		ug/L		08/01/24 16:25	08/04/24 15:37	1
Di-n-octyl phthalate	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:37	1
Endosulfan I (Alpha)	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:37	1
Endosulfan II (Beta)	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:37	1
Endosulfan sulfate	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:37	1
Endrin	<0.0098	*+	0.0098		ug/L		08/01/24 16:25	08/04/24 15:37	1
Endrin aldehyde	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:37	1
EPTC	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:37	1
Fluoranthene	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:37	1

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

Job ID: 380-106529-1

Client Sample ID: MOANALUA WELLS
Date Collected: 07/29/24 09:55
Date Received: 07/31/24 09:52

Lab Sample ID: 380-106529-1
Matrix: Water

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		08/01/24 16:25	08/04/24 15:37	1
gamma-Chlordane	<0.049		0.049		ug/L		08/01/24 16:25	08/04/24 15:37	1
Heptachlor	<0.0098		0.0098		ug/L		08/01/24 16:25	08/04/24 15:37	1
Heptachlor epoxide (isomer B)	<0.0098		0.0098		ug/L		08/01/24 16:25	08/04/24 15:37	1
Hexachlorobenzene	<0.049		0.049		ug/L		08/01/24 16:25	08/04/24 15:37	1
Hexachlorocyclopentadiene	<0.049		0.049		ug/L		08/01/24 16:25	08/04/24 15:37	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049		ug/L		08/01/24 16:25	08/04/24 15:37	1
Isophorone	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:37	1
Lindane	<0.0098		0.0098		ug/L		08/01/24 16:25	08/04/24 15:37	1
Malathion	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:37	1
Methoxychlor	<0.049		0.049		ug/L		08/01/24 16:25	08/04/24 15:37	1
Metolachlor	<0.049		0.049		ug/L		08/01/24 16:25	08/04/24 15:37	1
Molinate	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:37	1
Naphthalene	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:37	1
Parathion	<0.098	*+	0.098		ug/L		08/01/24 16:25	08/04/24 15:37	1
Pendimethalin (Penoxaline)	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:37	1
Phenanthrene	<0.039		0.039		ug/L		08/01/24 16:25	08/04/24 15:37	1
Propachlor	<0.049		0.049		ug/L		08/01/24 16:25	08/04/24 15:37	1
Pyrene	<0.049		0.049		ug/L		08/01/24 16:25	08/04/24 15:37	1
Simazine	<0.049		0.049		ug/L		08/01/24 16:25	08/04/24 15:37	1
Terbacil	<0.098	*+ ^+	0.098		ug/L		08/01/24 16:25	08/04/24 15:37	1
Terbuthylazine	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:37	1
Thiobencarb	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:37	1
Total Permethrin (mixed isomers)	<0.20		0.20		ug/L		08/01/24 16:25	08/04/24 15:37	1
trans-Nonachlor	<0.049		0.049		ug/L		08/01/24 16:25	08/04/24 15:37	1
Trifluralin	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:37	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*			*N/A*	*08/01/24 16:25*	*08/04/24 15:37*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*107*		*70 - 130*	*08/01/24 16:25*	*08/04/24 15:37*	*1*
Perylene-d12	*105*		*70 - 130*	*08/01/24 16:25*	*08/04/24 15:37*	*1*
Triphenylphosphate	*106*		*70 - 130*	*08/01/24 16:25*	*08/04/24 15:37*	*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		08/02/24 09:43	08/08/24 17:24	1
2-Methylnaphthalene	<0.19		0.19		ug/L		08/02/24 09:43	08/08/24 17:24	1
Acenaphthene	<0.19		0.19		ug/L		08/02/24 09:43	08/08/24 17:24	1
Acenaphthylene	<0.19		0.19		ug/L		08/02/24 09:43	08/08/24 17:24	1
Anthracene	<0.19		0.19		ug/L		08/02/24 09:43	08/08/24 17:24	1
Benzo[a]anthracene	<0.19		0.19		ug/L		08/02/24 09:43	08/08/24 17:24	1
Benzo[a]pyrene	<0.19		0.19		ug/L		08/02/24 09:43	08/08/24 17:24	1
Benzo[b]fluoranthene	<0.19		0.19		ug/L		08/02/24 09:43	08/08/24 17:24	1
Benzo[g,h,i]perylene	<0.19		0.19		ug/L		08/02/24 09:43	08/08/24 17:24	1
Benzo[k]fluoranthene	<0.19		0.19		ug/L		08/02/24 09:43	08/08/24 17:24	1
Chrysene	<0.19		0.19		ug/L		08/02/24 09:43	08/08/24 17:24	1
Dibenz(a,h)anthracene	<0.19		0.19		ug/L		08/02/24 09:43	08/08/24 17:24	1
Fluoranthene	<0.19		0.19		ug/L		08/02/24 09:43	08/08/24 17:24	1

Client Sample ID: MOANALUA WELLS

Lab Sample ID: 380-106529-1

Date Collected: 07/29/24 09:55

Matrix: Water

Date Received: 07/31/24 09:52

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		08/02/24 09:43	08/08/24 17:24	1
Indeno[1,2,3-cd]pyrene	<0.19		0.19		ug/L		08/02/24 09:43	08/08/24 17:24	1
Naphthalene	<0.19		0.19		ug/L		08/02/24 09:43	08/08/24 17:24	1
Phenanthrene	<0.19		0.19		ug/L		08/02/24 09:43	08/08/24 17:24	1
Pyrene	<0.19		0.19		ug/L		08/02/24 09:43	08/08/24 17:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*81*		*28 - 127*	*08/02/24 09:43*	*08/08/24 17:24*	*1*
2-Fluorobiphenyl (Surr)	*60*		*31 - 120*	*08/02/24 09:43*	*08/08/24 17:24*	*1*
2-Fluorophenol (Surr)	*44*		*17 - 120*	*08/02/24 09:43*	*08/08/24 17:24*	*1*
Nitrobenzene-d5 (Surr)	*65*		*27 - 120*	*08/02/24 09:43*	*08/08/24 17:24*	*1*
Phenol-d6 (Surr)	*28*		*10 - 120*	*08/02/24 09:43*	*08/08/24 17:24*	*1*
p-Terphenyl-d14 (Surr)	*71*		*45 - 120*	*08/02/24 09:43*	*08/08/24 17:24*	*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*
Unknown	*18*	*T J*	*ug/L*		*3.92*	*N/A*	*08/02/24 09:43*	*08/19/24 18:11*	*1*
Unknown	*11*	*T J*	*ug/L*		*6.66*	*N/A*	*08/02/24 09:43*	*08/19/24 18:11*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*69*		*33 - 139*	*08/02/24 09:43*	*08/19/24 18:11*	*1*
2-Fluorobiphenyl (Surr)	*77*		*33 - 126*	*08/02/24 09:43*	*08/19/24 18:11*	*1*
2-Fluorophenol (Surr)	*45*		*12 - 120*	*08/02/24 09:43*	*08/19/24 18:11*	*1*
Nitrobenzene-d5 (Surr)	*69*		*36 - 120*	*08/02/24 09:43*	*08/19/24 18:11*	*1*
Phenol-d6 (Surr)	*25*		*10 - 120*	*08/02/24 09:43*	*08/19/24 18:11*	*1*
p-Terphenyl-d14 (Surr)	*90*		*47 - 131*	*08/02/24 09:43*	*08/19/24 18:11*	*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			08/07/24 15:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*52*		*38 - 134*		*08/07/24 15:11*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C24)	<27		27		ug/L		08/02/24 18:40	08/11/24 12:10	1
Motor Oil Range Organics [C24-C36]	<27		27		ug/L		08/02/24 18:40	08/11/24 12:10	1
C8-C18	<27		27		ug/L		08/02/24 18:40	08/11/24 12:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*96*		*60 - 130*	*08/02/24 18:40*	*08/11/24 12:10*	*1*

Client Sample ID: TB: MOANALUA WELLS

Lab Sample ID: 380-106529-2

Date Collected: 07/29/24 09:55

Matrix: Water

Date Received: 07/31/24 09:52

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			08/07/24 19:06	1

Client Sample ID: TB: MOANALUA WELLS

Lab Sample ID: 380-106529-2

Date Collected: 07/29/24 09:55

Matrix: Water

Date Received: 07/31/24 09:52

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	66		38 - 134		08/07/24 19:06	1

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1

Lab Sample ID: 380-106529-3

Date Collected: 07/29/24 10:27

Matrix: Water

Date Received: 07/31/24 09:52

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		08/01/24 16:25	08/04/24 15:57	1
2,4'-DDD	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:57	1
2,4'-DDE	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:57	1
2,4'-DDT	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:57	1
2,4-Dinitrotoluene	<0.098	^+	0.098		ug/L		08/01/24 16:25	08/04/24 15:57	1
2,6-Dinitrotoluene	<0.098	^+	0.098		ug/L		08/01/24 16:25	08/04/24 15:57	1
2-Methylnaphthalene	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:57	1
4,4'-DDD	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:57	1
4,4'-DDE	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:57	1
4,4'-DDT	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:57	1
Acenaphthene	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:57	1
Acenaphthylene	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:57	1
Acetochlor	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:57	1
Alachlor	<0.049		0.049		ug/L		08/01/24 16:25	08/04/24 15:57	1
alpha-BHC	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:57	1
alpha-Chlordane	<0.049		0.049		ug/L		08/01/24 16:25	08/04/24 15:57	1
Anthracene	<0.020		0.020		ug/L		08/01/24 16:25	08/04/24 15:57	1
Atrazine	<0.049		0.049		ug/L		08/01/24 16:25	08/04/24 15:57	1
Benz(a)anthracene	<0.049		0.049		ug/L		08/01/24 16:25	08/04/24 15:57	1
Benzo[a]pyrene	<0.020		0.020		ug/L		08/01/24 16:25	08/04/24 15:57	1
Benzo[b]fluoranthene	<0.020		0.020		ug/L		08/01/24 16:25	08/04/24 15:57	1
Benzo[g,h,i]perylene	<0.049		0.049		ug/L		08/01/24 16:25	08/04/24 15:57	1
Benzo[k]fluoranthene	<0.020		0.020		ug/L		08/01/24 16:25	08/04/24 15:57	1
beta-BHC	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:57	1
Bis(2-ethylhexyl) phthalate	<0.59		0.59		ug/L		08/01/24 16:25	08/04/24 15:57	1
Bromacil	<0.098	^3+	0.098		ug/L		08/01/24 16:25	08/04/24 15:57	1
Butachlor	<0.049		0.049		ug/L		08/01/24 16:25	08/04/24 15:57	1
Butylbenzylphthalate	<0.49	*+	0.49		ug/L		08/01/24 16:25	08/04/24 15:57	1
Chlorobenzilate	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:57	1
Chloroneb	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:57	1
Chlorothalonil (Draconil, Bravo)	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:57	1
Chlorpyrifos	<0.049		0.049		ug/L		08/01/24 16:25	08/04/24 15:57	1
Chrysene	<0.020		0.020		ug/L		08/01/24 16:25	08/04/24 15:57	1
delta-BHC	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:57	1
Di(2-ethylhexyl)adipate	<0.59	B ^3+ *+	0.59		ug/L		08/01/24 16:25	08/04/24 15:57	1
Dibenz(a,h)anthracene	<0.049		0.049		ug/L		08/01/24 16:25	08/04/24 15:57	1
Diclorvos (DDVP)	<0.049		0.049		ug/L		08/01/24 16:25	08/04/24 15:57	1
Dieldrin	**0.042**		0.0098		ug/L		08/01/24 16:25	08/04/24 15:57	1
Diethylphthalate	<0.49		0.49		ug/L		08/01/24 16:25	08/04/24 15:57	1
Dimethylphthalate	<0.49		0.49		ug/L		08/01/24 16:25	08/04/24 15:57	1
Di-n-butyl phthalate	<0.98		0.98		ug/L		08/01/24 16:25	08/04/24 15:57	1
Di-n-octyl phthalate	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:57	1

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1
Date Collected: 07/29/24 10:27
Date Received: 07/31/24 09:52

Lab Sample ID: 380-106529-3
Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Endosulfan I (Alpha)	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:57	1
Endosulfan II (Beta)	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:57	1
Endosulfan sulfate	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:57	1
Endrin	<0.0098	*+	0.0098		ug/L		08/01/24 16:25	08/04/24 15:57	1
Endrin aldehyde	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:57	1
EPTC	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:57	1
Fluoranthene	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:57	1
Fluorene	<0.049		0.049		ug/L		08/01/24 16:25	08/04/24 15:57	1
gamma-Chlordane	<0.049		0.049		ug/L		08/01/24 16:25	08/04/24 15:57	1
Heptachlor	<0.0098		0.0098		ug/L		08/01/24 16:25	08/04/24 15:57	1
Heptachlor epoxide (isomer B)	**0.011**		0.0098		ug/L		08/01/24 16:25	08/04/24 15:57	1
Hexachlorobenzene	<0.049		0.049		ug/L		08/01/24 16:25	08/04/24 15:57	1
Hexachlorocyclopentadiene	<0.049		0.049		ug/L		08/01/24 16:25	08/04/24 15:57	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049		ug/L		08/01/24 16:25	08/04/24 15:57	1
Isophorone	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:57	1
Lindane	<0.0098		0.0098		ug/L		08/01/24 16:25	08/04/24 15:57	1
Malathion	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:57	1
Methoxychlor	<0.049		0.049		ug/L		08/01/24 16:25	08/04/24 15:57	1
Metolachlor	<0.049		0.049		ug/L		08/01/24 16:25	08/04/24 15:57	1
Molinate	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:57	1
Naphthalene	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:57	1
Parathion	<0.098	*+	0.098		ug/L		08/01/24 16:25	08/04/24 15:57	1
Pendimethalin (Penoxaline)	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:57	1
Phenanthrene	<0.039		0.039		ug/L		08/01/24 16:25	08/04/24 15:57	1
Propachlor	<0.049		0.049		ug/L		08/01/24 16:25	08/04/24 15:57	1
Pyrene	<0.049		0.049		ug/L		08/01/24 16:25	08/04/24 15:57	1
Simazine	<0.049		0.049		ug/L		08/01/24 16:25	08/04/24 15:57	1
Terbacil	<0.098	*+ ^+	0.098		ug/L		08/01/24 16:25	08/04/24 15:57	1
Terbuthylazine	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:57	1
Thiobencarb	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:57	1
Total Permethrin (mixed isomers)	<0.20		0.20		ug/L		08/01/24 16:25	08/04/24 15:57	1
trans-Nonachlor	<0.049		0.049		ug/L		08/01/24 16:25	08/04/24 15:57	1
Trifluralin	<0.098		0.098		ug/L		08/01/24 16:25	08/04/24 15:57	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*			*N/A*	*08/01/24 16:25*	*08/04/24 15:57*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*109*		*70 - 130*	*08/01/24 16:25*	*08/04/24 15:57*	*1*
Perylene-d12	*103*		*70 - 130*	*08/01/24 16:25*	*08/04/24 15:57*	*1*
Triphenylphosphate	*100*		*70 - 130*	*08/01/24 16:25*	*08/04/24 15:57*	*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		08/02/24 09:43	08/08/24 17:46	1
2-Methylnaphthalene	<0.19		0.19		ug/L		08/02/24 09:43	08/08/24 17:46	1
Acenaphthene	<0.19		0.19		ug/L		08/02/24 09:43	08/08/24 17:46	1
Acenaphthylene	<0.19		0.19		ug/L		08/02/24 09:43	08/08/24 17:46	1
Anthracene	<0.19		0.19		ug/L		08/02/24 09:43	08/08/24 17:46	1
Benzo[a]anthracene	<0.19		0.19		ug/L		08/02/24 09:43	08/08/24 17:46	1

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1
Date Collected: 07/29/24 10:27
Date Received: 07/31/24 09:52

Lab Sample ID: 380-106529-3
Matrix: Water

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		08/02/24 09:43	08/08/24 17:46	1
Benzo[b]fluoranthene	<0.19		0.19		ug/L		08/02/24 09:43	08/08/24 17:46	1
Benzo[g,h,i]perylene	<0.19		0.19		ug/L		08/02/24 09:43	08/08/24 17:46	1
Benzo[k]fluoranthene	<0.19		0.19		ug/L		08/02/24 09:43	08/08/24 17:46	1
Chrysene	<0.19		0.19		ug/L		08/02/24 09:43	08/08/24 17:46	1
Dibenz(a,h)anthracene	<0.19		0.19		ug/L		08/02/24 09:43	08/08/24 17:46	1
Fluoranthene	<0.19		0.19		ug/L		08/02/24 09:43	08/08/24 17:46	1
Fluorene	<0.19		0.19		ug/L		08/02/24 09:43	08/08/24 17:46	1
Indeno[1,2,3-cd]pyrene	<0.19		0.19		ug/L		08/02/24 09:43	08/08/24 17:46	1
Naphthalene	<0.19		0.19		ug/L		08/02/24 09:43	08/08/24 17:46	1
Phenanthrene	<0.19		0.19		ug/L		08/02/24 09:43	08/08/24 17:46	1
Pyrene	<0.19		0.19		ug/L		08/02/24 09:43	08/08/24 17:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*78*		*28 - 127*	*08/02/24 09:43*	*08/08/24 17:46*	*1*
2-Fluorobiphenyl (Surr)	*65*		*31 - 120*	*08/02/24 09:43*	*08/08/24 17:46*	*1*
2-Fluorophenol (Surr)	*47*		*17 - 120*	*08/02/24 09:43*	*08/08/24 17:46*	*1*
Nitrobenzene-d5 (Surr)	*71*		*27 - 120*	*08/02/24 09:43*	*08/08/24 17:46*	*1*
Phenol-d6 (Surr)	*31*		*10 - 120*	*08/02/24 09:43*	*08/08/24 17:46*	*1*
p-Terphenyl-d14 (Surr)	*71*		*45 - 120*	*08/02/24 09:43*	*08/08/24 17:46*	*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*
Tentatively Identified Compound	*None*		*ug/L*			*N/A*	*08/02/24 09:43*	*08/19/24 17:42*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*68*		*33 - 139*	*08/02/24 09:43*	*08/19/24 17:42*	*1*
2-Fluorobiphenyl (Surr)	*85*		*33 - 126*	*08/02/24 09:43*	*08/19/24 17:42*	*1*
2-Fluorophenol (Surr)	*49*		*12 - 120*	*08/02/24 09:43*	*08/19/24 17:42*	*1*
Nitrobenzene-d5 (Surr)	*80*		*36 - 120*	*08/02/24 09:43*	*08/19/24 17:42*	*1*
Phenol-d6 (Surr)	*28*		*10 - 120*	*08/02/24 09:43*	*08/19/24 17:42*	*1*
p-Terphenyl-d14 (Surr)	*86*		*47 - 131*	*08/02/24 09:43*	*08/19/24 17:42*	*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			08/07/24 22:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*66*		*38 - 134*		*08/07/24 22:08*	*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		08/02/24 18:40	08/11/24 13:12	1
Motor Oil Range Organics [C24-C36]	<26		26		ug/L		08/02/24 18:40	08/11/24 13:12	1
C8-C18	<26		26		ug/L		08/02/24 18:40	08/11/24 13:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*97*		*60 - 130*	*08/02/24 18:40*	*08/11/24 13:12*	*1*

Client Sample Results

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

Job ID: 380-106529-1

Client Sample ID: TB: HALAWA WELLS UNITS 1 & 2 P1

Date Collected: 07/29/24 10:27
Date Received: 07/31/24 09:52

Lab Sample ID: 380-106529-4

Matrix: Water

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			08/07/24 19:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*68*		*38 - 134*		*08/07/24 19:32*	*1*

Action Limit Summary

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

Job ID: 380-106529-1

Client Sample ID: MOANALUA WELLS — Lab Sample ID: 380-106529-1

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 Limit	RL	Method	Prep Type
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	B ^3+ *+	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: HALAWA WELLS UNITS 1 & 2 P1 — Lab Sample ID: 380-106529-3

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 Limit	RL	Method	Prep Type
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	B ^3+ *+	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)	0.011		ug/L	0.2	0.0098	525.2	Total/NA
Hexachlorobenzene	<0.049		ug/L	1	0.049	525.2	Total/NA
Hexachlorocyclopentadiene	<0.049		ug/L	50	0.049	525.2	Total/NA
Lindane	<0.0098		ug/L	0.2	0.0098	525.2	Total/NA
Methoxychlor	<0.049		ug/L	40	0.049	525.2	Total/NA
Simazine	<0.049		ug/L	4	0.049	525.2	Total/NA
Benzo[a]pyrene	<0.19		ug/L	0.2	0.19	625.1 SIM	Total/NA

Surrogate Summary

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

Job ID: 380-106529-1

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

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)								
		2NMX	PRY	TPP						
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)						
380-106347-K-1-A MS	Matrix Spike	107	100	115						
380-106433-AH-1-A DU	Duplicate	107	96	104						
380-106529-1	MOANALUA WELLS	107	105	106						
380-106529-3	HALAWA WELLS UNITS 1 & 2 P1	109	103	100						
LCS 380-101803/23-A	Lab Control Sample	102	101	118						
MB 380-101803/21-A	Method Blank	108	107	120						
MRL 380-101803/22-A	Lab Control Sample	104	97	99						

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)							
		TBP	FBP	2FP	NBZ	PHL6	TPHd14		
Lab Sample ID	Client Sample ID	(33-139)	(33-126)	(12-120)	(36-120)	(10-120)	(47-131)		
380-106529-1	MOANALUA WELLS	69	77	45	69	25	90		
380-106529-3	HALAWA WELLS UNITS 1 & 2 P1	68	85	49	80	28	86		
MB 570-466739/1-A	Method Blank	75	71	44	68	26	87		

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)							
		TBP	FBP	2FP	NBZ	PHL6	TPHd14		
Lab Sample ID	Client Sample ID	(28-127)	(31-120)	(17-120)	(27-120)	(10-120)	(45-120)		
380-106529-1	MOANALUA WELLS	81	60	44	65	28	71		
380-106529-1 MS	MOANALUA WELLS	67	55	45	50	33	63		
380-106529-1 MSD	MOANALUA WELLS	76	65	49	56	37	75		
380-106529-3	HALAWA WELLS UNITS 1 & 2 P1	78	65	47	71	31	71		
LCS 570-466739/2-A	Lab Control Sample	78	62	47	52	34	77		
LCSD 570-466739/3-A	Lab Control Sample Dup	77	62	47	51	33	75		
MB 570-466739/1-A	Method Blank	87	66	47	66	32	90		

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)

Surrogate Summary

Client: City & County of Honolulu
Job ID: 380-106529-1
Project/Site: RED-HILL

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)
		BFB1
Lab Sample ID	Client Sample ID	(38-134)
380-106529-1	MOANALUA WELLS	52
380-106529-1 MS	MOANALUA WELLS	81
380-106529-1 MSD	MOANALUA WELLS	85
380-106529-2	TB: MOANALUA WELLS	66
380-106529-3	HALAWA WELLS UNITS 1 & 2 P1	66
380-106529-4	TB: HALAWA WELLS UNITS 1 & 2 P1	68
LCS 570-468381/4	Lab Control Sample	89
LCSD 570-468381/5	Lab Control Sample Dup	85
MB 570-468381/6	Method Blank	75
MRL 570-468381/3	Lab Control Sample	70

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)
		OTCSN1
Lab Sample ID	Client Sample ID	(60-130)
380-106529-1	MOANALUA WELLS	96
380-106529-1 MS	MOANALUA WELLS	106
380-106529-1 MSD	MOANALUA WELLS	105
380-106529-3	HALAWA WELLS UNITS 1 & 2 P1	97
LCS 570-467007/2-A	Lab Control Sample	111
LCSD 570-467007/3-A	Lab Control Sample Dup	107
MB 570-467007/1-A	Method Blank	102
MRL 570-467007/4-A	Lab Control Sample	107

Surrogate Legend

OTCSN = n-Octacosane (Surr)

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

Lab Sample ID: MB 380-101803/21-A
Matrix: Water
Analysis Batch: 102136

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 101803

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.099		0.099		ug/L		08/01/24 15:15	08/04/24 09:51	1
2,4'-DDD	<0.099		0.099		ug/L		08/01/24 15:15	08/04/24 09:51	1
2,4'-DDE	<0.099		0.099		ug/L		08/01/24 15:15	08/04/24 09:51	1
2,4'-DDT	<0.099		0.099		ug/L		08/01/24 15:15	08/04/24 09:51	1
2,4-Dinitrotoluene	<0.099		0.099		ug/L		08/01/24 15:15	08/04/24 09:51	1
2,6-Dinitrotoluene	<0.099		0.099		ug/L		08/01/24 15:15	08/04/24 09:51	1
2-Methylnaphthalene	<0.099		0.099		ug/L		08/01/24 15:15	08/04/24 09:51	1
4,4'-DDD	<0.099		0.099		ug/L		08/01/24 15:15	08/04/24 09:51	1
4,4'-DDE	<0.099		0.099		ug/L		08/01/24 15:15	08/04/24 09:51	1
4,4'-DDT	<0.099		0.099		ug/L		08/01/24 15:15	08/04/24 09:51	1
Acenaphthene	<0.099		0.099		ug/L		08/01/24 15:15	08/04/24 09:51	1
Acenaphthylene	<0.099		0.099		ug/L		08/01/24 15:15	08/04/24 09:51	1
Acetochlor	<0.099		0.099		ug/L		08/01/24 15:15	08/04/24 09:51	1
Alachlor	<0.049		0.049		ug/L		08/01/24 15:15	08/04/24 09:51	1
alpha-BHC	<0.099		0.099		ug/L		08/01/24 15:15	08/04/24 09:51	1
alpha-Chlordane	<0.049		0.049		ug/L		08/01/24 15:15	08/04/24 09:51	1
Anthracene	<0.020		0.020		ug/L		08/01/24 15:15	08/04/24 09:51	1
Atrazine	<0.049		0.049		ug/L		08/01/24 15:15	08/04/24 09:51	1
Benz(a)anthracene	<0.049		0.049		ug/L		08/01/24 15:15	08/04/24 09:51	1
Benzo[a]pyrene	<0.020		0.020		ug/L		08/01/24 15:15	08/04/24 09:51	1
Benzo[b]fluoranthene	<0.020		0.020		ug/L		08/01/24 15:15	08/04/24 09:51	1
Benzo[g,h,i]perylene	<0.049		0.049		ug/L		08/01/24 15:15	08/04/24 09:51	1
Benzo[k]fluoranthene	<0.020		0.020		ug/L		08/01/24 15:15	08/04/24 09:51	1
beta-BHC	<0.099		0.099		ug/L		08/01/24 15:15	08/04/24 09:51	1
Bis(2-ethylhexyl) phthalate	<0.59		0.59		ug/L		08/01/24 15:15	08/04/24 09:51	1
Bromacil	<0.099		0.099		ug/L		08/01/24 15:15	08/04/24 09:51	1
Butachlor	<0.049		0.049		ug/L		08/01/24 15:15	08/04/24 09:51	1
Butylbenzylphthalate	<0.49		0.49		ug/L		08/01/24 15:15	08/04/24 09:51	1
Chlorobenzilate	<0.099		0.099		ug/L		08/01/24 15:15	08/04/24 09:51	1
Chloroneb	<0.099		0.099		ug/L		08/01/24 15:15	08/04/24 09:51	1
Chlorothalonil (Draconil, Bravo)	<0.099		0.099		ug/L		08/01/24 15:15	08/04/24 09:51	1
Chlorpyrifos	<0.049		0.049		ug/L		08/01/24 15:15	08/04/24 09:51	1
Chrysene	<0.020		0.020		ug/L		08/01/24 15:15	08/04/24 09:51	1
delta-BHC	<0.099		0.099		ug/L		08/01/24 15:15	08/04/24 09:51	1
Di(2-ethylhexyl)adipate	1.98	B	0.59		ug/L		08/01/24 15:15	08/04/24 09:51	1
Dibenz(a,h)anthracene	<0.049		0.049		ug/L		08/01/24 15:15	08/04/24 09:51	1
Diclorvos (DDVP)	<0.049		0.049		ug/L		08/01/24 15:15	08/04/24 09:51	1
Dieldrin	<0.0099		0.0099		ug/L		08/01/24 15:15	08/04/24 09:51	1
Diethylphthalate	<0.49		0.49		ug/L		08/01/24 15:15	08/04/24 09:51	1
Dimethylphthalate	<0.49		0.49		ug/L		08/01/24 15:15	08/04/24 09:51	1
Di-n-butyl phthalate	<0.99		0.99		ug/L		08/01/24 15:15	08/04/24 09:51	1
Di-n-octyl phthalate	<0.099		0.099		ug/L		08/01/24 15:15	08/04/24 09:51	1
Endosulfan I (Alpha)	<0.099		0.099		ug/L		08/01/24 15:15	08/04/24 09:51	1
Endosulfan II (Beta)	<0.099		0.099		ug/L		08/01/24 15:15	08/04/24 09:51	1
Endosulfan sulfate	<0.099		0.099		ug/L		08/01/24 15:15	08/04/24 09:51	1
Endrin	<0.0099		0.0099		ug/L		08/01/24 15:15	08/04/24 09:51	1
Endrin aldehyde	<0.099		0.099		ug/L		08/01/24 15:15	08/04/24 09:51	1
EPTC	<0.099		0.099		ug/L		08/01/24 15:15	08/04/24 09:51	1

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

Lab Sample ID: MB 380-101803/21-A
Matrix: Water
Analysis Batch: 102136

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 101803

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	<0.099		0.099		ug/L		08/01/24 15:15	08/04/24 09:51	1
Fluorene	<0.049		0.049		ug/L		08/01/24 15:15	08/04/24 09:51	1
gamma-Chlordane	<0.049		0.049		ug/L		08/01/24 15:15	08/04/24 09:51	1
Heptachlor	<0.0099		0.0099		ug/L		08/01/24 15:15	08/04/24 09:51	1
Heptachlor epoxide (isomer B)	<0.0099		0.0099		ug/L		08/01/24 15:15	08/04/24 09:51	1
Hexachlorobenzene	<0.049		0.049		ug/L		08/01/24 15:15	08/04/24 09:51	1
Hexachlorocyclopentadiene	<0.049		0.049		ug/L		08/01/24 15:15	08/04/24 09:51	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049		ug/L		08/01/24 15:15	08/04/24 09:51	1
Isophorone	<0.099		0.099		ug/L		08/01/24 15:15	08/04/24 09:51	1
Lindane	<0.0099		0.0099		ug/L		08/01/24 15:15	08/04/24 09:51	1
Malathion	<0.099		0.099		ug/L		08/01/24 15:15	08/04/24 09:51	1
Methoxychlor	<0.049		0.049		ug/L		08/01/24 15:15	08/04/24 09:51	1
Metolachlor	<0.049		0.049		ug/L		08/01/24 15:15	08/04/24 09:51	1
Molinate	<0.099		0.099		ug/L		08/01/24 15:15	08/04/24 09:51	1
Naphthalene	<0.099		0.099		ug/L		08/01/24 15:15	08/04/24 09:51	1
Parathion	<0.099		0.099		ug/L		08/01/24 15:15	08/04/24 09:51	1
Pendimethalin (Penoxaline)	<0.099		0.099		ug/L		08/01/24 15:15	08/04/24 09:51	1
Phenanthrene	<0.039		0.039		ug/L		08/01/24 15:15	08/04/24 09:51	1
Propachlor	<0.049		0.049		ug/L		08/01/24 15:15	08/04/24 09:51	1
Pyrene	<0.049		0.049		ug/L		08/01/24 15:15	08/04/24 09:51	1
Simazine	<0.049		0.049		ug/L		08/01/24 15:15	08/04/24 09:51	1
Terbacil	<0.099		0.099		ug/L		08/01/24 15:15	08/04/24 09:51	1
Terbuthylazine	<0.099		0.099		ug/L		08/01/24 15:15	08/04/24 09:51	1
Thiobencarb	<0.099		0.099		ug/L		08/01/24 15:15	08/04/24 09:51	1
Total Permethrin (mixed isomers)	<0.20		0.20		ug/L		08/01/24 15:15	08/04/24 09:51	1
trans-Nonachlor	<0.049		0.049		ug/L		08/01/24 15:15	08/04/24 09:51	1
Trifluralin	<0.099		0.099		ug/L		08/01/24 15:15	08/04/24 09:51	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*0.576*	*T J*	*ug/L*		*2.78*	*N/A*	*08/01/24 15:15*	*08/04/24 09:51*	*1*
Unknown	*0.681*	*T J*	*ug/L*		*3.35*	*N/A*	*08/01/24 15:15*	*08/04/24 09:51*	*1*
Tetradecanoic acid	*0.648*	*T J N*	*ug/L*		*5.96*	*544-63-8*	*08/01/24 15:15*	*08/04/24 09:51*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*108*		*70 - 130*	*08/01/24 15:15*	*08/04/24 09:51*	*1*
Perylene-d12	*107*		*70 - 130*	*08/01/24 15:15*	*08/04/24 09:51*	*1*
Triphenylphosphate	*120*		*70 - 130*	*08/01/24 15:15*	*08/04/24 09:51*	*1*

Lab Sample ID: LCS 380-101803/23-A
Matrix: Water
Analysis Batch: 102136

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 101803

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	1.97	1.91		ug/L		97	70 - 130
2,4'-DDD	1.97	2.22		ug/L		113	70 - 130
2,4'-DDE	1.97	2.11		ug/L		107	70 - 130
2,4'-DDT	1.97	2.29		ug/L		116	70 - 130
2,4-Dinitrotoluene	1.97	2.56		ug/L		130	70 - 130

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

Job ID: 380-106529-1

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

Lab Sample ID: LCS 380-101803/23-A
Matrix: Water
Analysis Batch: 102136

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 101803

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,6-Dinitrotoluene	1.97	2.41		ug/L		123	70 - 130
2-Methylnaphthalene	1.97	1.91		ug/L		97	70 - 130
4,4'-DDD	1.97	2.38		ug/L		121	70 - 130
4,4'-DDE	1.97	2.13		ug/L		108	70 - 130
4,4'-DDT	1.97	2.42		ug/L		123	70 - 130
Acenaphthene	1.97	1.99		ug/L		101	70 - 130
Acenaphthylene	1.97	1.84		ug/L		94	70 - 130
Acetochlor	1.97	2.26		ug/L		115	70 - 130
Alachlor	1.97	2.30		ug/L		117	70 - 130
alpha-BHC	1.97	2.04		ug/L		104	70 - 130
alpha-Chlordane	1.97	2.15		ug/L		109	70 - 130
Anthracene	1.97	1.68		ug/L		86	70 - 130
Atrazine	1.97	2.28		ug/L		116	70 - 130
Benz(a)anthracene	1.97	2.15		ug/L		109	70 - 130
Benzo[a]pyrene	1.97	2.11		ug/L		107	70 - 130
Benzo[b]fluoranthene	1.97	2.30		ug/L		117	70 - 130
Benzo[g,h,i]perylene	1.97	2.38		ug/L		121	70 - 130
Benzo[k]fluoranthene	1.97	2.30		ug/L		117	70 - 130
beta-BHC	1.97	2.12		ug/L		108	70 - 130
Bis(2-ethylhexyl) phthalate	1.97	1.90		ug/L		97	70 - 130
Bromacil	1.97	2.53		ug/L		129	70 - 130
Butachlor	1.97	2.32		ug/L		118	70 - 130
Butylbenzylphthalate	1.97	2.59	*+	ug/L		132	70 - 130
Chlorobenzilate	1.97	2.41		ug/L		122	70 - 130
Chloroneb	1.97	1.95		ug/L		99	70 - 130
Chlorothalonil (Draconil, Bravo)	1.97	2.12		ug/L		108	70 - 130
Chlorpyrifos	1.97	2.36		ug/L		120	70 - 130
Chrysene	1.97	2.14		ug/L		109	70 - 130
delta-BHC	1.97	2.07		ug/L		105	70 - 130
Di(2-ethylhexyl)adipate	1.97	2.99	*+	ug/L		152	70 - 130
Dibenz(a,h)anthracene	1.97	2.47		ug/L		125	70 - 130
Diclorvos (DDVP)	1.97	2.25		ug/L		114	70 - 130
Dieldrin	1.97	2.18		ug/L		111	70 - 130
Diethylphthalate	1.97	2.08		ug/L		106	70 - 130
Dimethylphthalate	1.97	2.14		ug/L		109	70 - 130
Di-n-butyl phthalate	3.94	4.36		ug/L		111	70 - 130
Di-n-octyl phthalate	1.97	1.64		ug/L		84	70 - 130
Endosulfan I (Alpha)	1.97	2.10		ug/L		107	70 - 130
Endosulfan II (Beta)	1.97	2.34		ug/L		119	70 - 130
Endosulfan sulfate	1.97	2.18		ug/L		111	70 - 130
Endrin	1.97	2.63	*+	ug/L		133	70 - 130
Endrin aldehyde	1.97	1.42		ug/L		72	60 - 130
EPTC	1.97	2.04		ug/L		104	70 - 130
Fluoranthene	1.97	2.14		ug/L		109	70 - 130
Fluorene	1.97	2.06		ug/L		105	70 - 130
gamma-Chlordane	1.97	2.22		ug/L		113	70 - 130
Heptachlor	1.97	2.37		ug/L		121	70 - 130
Heptachlor epoxide (isomer B)	1.97	2.22		ug/L		113	70 - 130
Hexachlorobenzene	1.97	1.90		ug/L		97	70 - 130

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

Lab Sample ID: LCS 380-101803/23-A
Matrix: Water
Analysis Batch: 102136

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 101803

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexachlorocyclopentadiene	1.97	2.26		ug/L		115	70 - 130
Indeno[1,2,3-cd]pyrene	1.97	2.16		ug/L		110	70 - 130
Isophorone	1.97	2.06		ug/L		105	70 - 130
Lindane	1.97	2.07		ug/L		105	70 - 130
Malathion	1.97	2.31		ug/L		117	70 - 130
Methoxychlor	1.97	2.48		ug/L		126	70 - 130
Metolachlor	1.97	2.50		ug/L		127	70 - 130
Molinate	1.97	2.00		ug/L		101	70 - 130
Naphthalene	1.97	1.76		ug/L		90	70 - 130
Parathion	1.97	2.63	*+	ug/L		134	70 - 130
Pendimethalin (Penoxaline)	1.97	2.49		ug/L		127	70 - 130
Phenanthrene	1.97	1.97		ug/L		100	70 - 130
Propachlor	1.97	2.13		ug/L		108	70 - 130
Pyrene	1.97	2.13		ug/L		108	70 - 130
Simazine	1.97	2.30		ug/L		117	70 - 130
Terbacil	1.97	2.69	*+	ug/L		137	70 - 130
Terbuthylazine	1.97	2.20		ug/L		112	70 - 130
Thiobencarb	1.97	2.10		ug/L		107	70 - 130
trans-Nonachlor	1.97	2.13		ug/L		108	70 - 130
Trifluralin	1.97	1.99		ug/L		101	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Nitro-m-xylene	*102*		*70 - 130*
Perylene-d12	*101*		*70 - 130*
Triphenylphosphate	*118*		*70 - 130*

Lab Sample ID: MRL 380-101803/22-A
Matrix: Water
Analysis Batch: 102136

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 101803

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	0.0981	0.107		ug/L		109	50 - 150
2,4'-DDD	0.0981	0.0919	J	ug/L		94	50 - 150
2,4'-DDE	0.0981	0.0889	J	ug/L		91	50 - 150
2,4'-DDT	0.0981	0.0995		ug/L		101	50 - 150
2,4-Dinitrotoluene	0.0981	0.135		ug/L		137	50 - 150
2,6-Dinitrotoluene	0.0981	0.134		ug/L		137	50 - 150
2-Methylnaphthalene	0.0981	0.103		ug/L		105	50 - 150
4,4'-DDD	0.0981	0.101		ug/L		103	50 - 150
4,4'-DDE	0.0981	0.0899	J	ug/L		92	50 - 150
4,4'-DDT	0.0981	0.114		ug/L		116	50 - 150
Acenaphthene	0.0981	0.0932	J	ug/L		95	50 - 150
Acenaphthylene	0.0981	0.0790	J	ug/L		80	50 - 150
Acetochlor	0.0981	0.114		ug/L		116	50 - 150
Alachlor	0.0491	0.0502		ug/L		102	50 - 150
alpha-BHC	0.0981	0.106		ug/L		108	50 - 150
alpha-Chlordane	0.0245	<0.028		ug/L		97	50 - 150
Anthracene	0.0196	<0.019		ug/L		87	50 - 150

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

Lab Sample ID: MRL 380-101803/22-A
Matrix: Water
Analysis Batch: 102136

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 101803

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Atrazine	0.0491	0.0503		ug/L		103	50 - 150
Benz(a)anthracene	0.0491	0.0445	J	ug/L		91	50 - 150
Benzo[a]pyrene	0.0196	0.0196	J	ug/L		100	50 - 150
Benzo[b]fluoranthene	0.0196	0.0207		ug/L		106	50 - 150
Benzo[g,h,i]perylene	0.0491	0.0507		ug/L		103	50 - 150
Benzo[k]fluoranthene	0.0196	0.0183	J	ug/L		93	50 - 150
beta-BHC	0.0981	0.111		ug/L		113	50 - 150
Bis(2-ethylhexyl) phthalate	0.589	0.569	J	ug/L		97	50 - 150
Bromacil	0.0981	0.156	^3+	ug/L		158	50 - 150
Butachlor	0.0491	0.0594		ug/L		121	50 - 150
Butylbenzylphthalate	0.491	0.579		ug/L		118	50 - 150
Chlorobenzilate	0.0981	0.105		ug/L		107	50 - 150
Chloroneb	0.0981	0.0980		ug/L		100	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0981	0.0948	J	ug/L		97	50 - 150
Chlorpyrifos	0.0491	0.0513		ug/L		105	50 - 150
Chrysene	0.0196	0.0220		ug/L		112	50 - 150
delta-BHC	0.0981	0.113		ug/L		116	50 - 150
Di(2-ethylhexyl)adipate	0.589	2.85	^3+	ug/L		484	50 - 150
Dibenz(a,h)anthracene	0.0491	0.0526		ug/L		107	50 - 150
Diclorvos (DDVP)	0.0491	0.0679		ug/L		138	50 - 150
Dieldrin	0.00981	0.00989		ug/L		101	50 - 150
Diethylphthalate	0.491	0.503		ug/L		103	50 - 150
Dimethylphthalate	0.491	0.522		ug/L		106	50 - 150
Di-n-butyl phthalate	0.491	0.501	J	ug/L		102	49 - 243
Di-n-octyl phthalate	0.0981	0.0945	J	ug/L		96	50 - 150
Endosulfan I (Alpha)	0.0981	0.102		ug/L		104	50 - 150
Endosulfan II (Beta)	0.0981	0.120		ug/L		122	50 - 150
Endosulfan sulfate	0.0981	0.117		ug/L		119	50 - 150
Endrin	0.00981	0.0102		ug/L		104	50 - 150
Endrin aldehyde	0.0981	0.0872	J	ug/L		89	50 - 150
EPTC	0.0981	0.107		ug/L		109	50 - 150
Fluoranthene	0.0981	0.100		ug/L		102	50 - 150
Fluorene	0.0491	<0.049		ug/L		100	50 - 150
gamma-Chlordane	0.0245	0.0218	J	ug/L		89	50 - 150
Heptachlor	0.00981	0.0146		ug/L		149	50 - 150
Heptachlor epoxide (isomer B)	0.00981	0.0108		ug/L		110	50 - 150
Hexachlorobenzene	0.0491	0.0505		ug/L		103	50 - 150
Hexachlorocyclopentadiene	0.0491	0.0545		ug/L		111	50 - 150
Indeno[1,2,3-cd]pyrene	0.0491	0.0546		ug/L		111	50 - 150
Isophorone	0.0981	0.135		ug/L		138	50 - 150
Lindane	0.00981	0.0123		ug/L		126	50 - 150
Malathion	0.0981	0.122		ug/L		125	50 - 150
Methoxychlor	0.0491	0.0700		ug/L		143	50 - 150
Metolachlor	0.0491	0.0582		ug/L		119	50 - 150
Molinate	0.0981	0.114		ug/L		117	50 - 150
Naphthalene	0.0981	0.110		ug/L		112	50 - 150
Parathion	0.0981	0.124		ug/L		126	50 - 150
Pendimethalin (Penoxaline)	0.0981	0.111		ug/L		113	50 - 150
Phenanthrene	0.0393	0.0421		ug/L		107	50 - 150

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

Lab Sample ID: MRL 380-101803/22-A
Matrix: Water
Analysis Batch: 102136

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 101803

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Propachlor	0.0491	0.0589		ug/L		120	50 - 150
Pyrene	0.0491	0.0488	J	ug/L		100	50 - 150
Simazine	0.0491	0.0509		ug/L		104	50 - 150
Terbacil	0.0981	0.138		ug/L		141	50 - 150
Terbuthylazine	0.0981	0.0919	J	ug/L		94	50 - 150
Thiobencarb	0.0981	0.108		ug/L		110	50 - 150
trans-Nonachlor	0.0245	0.0280	J	ug/L		114	50 - 150
Trifluralin	0.0981	0.104		ug/L		106	50 - 150

Surrogate	*MRL %Recovery*	*MRL Qualifier*	*Limits*
2-Nitro-m-xylene	*104*		*70 - 130*
Perylene-d12	*97*		*70 - 130*
Triphenylphosphate	*99*		*70 - 130*

Lab Sample ID: 380-106347-K-1-A MS
Matrix: Water
Analysis Batch: 102136

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 101803

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	<0.099		1.94	1.94		ug/L		100	70 - 130
2,4'-DDD	<0.099		1.94	2.13		ug/L		110	70 - 130
2,4'-DDE	<0.099		1.94	2.04		ug/L		105	70 - 130
2,4'-DDT	<0.099		1.94	2.15		ug/L		111	70 - 130
2,4-Dinitrotoluene	<0.099	^+	1.94	2.51		ug/L		130	70 - 130
2,6-Dinitrotoluene	<0.099	^+	1.94	2.42		ug/L		125	70 - 130
2-Methylnaphthalene	<0.099		1.94	1.95		ug/L		100	70 - 130
4,4'-DDD	<0.099		1.94	2.27		ug/L		117	70 - 130
4,4'-DDE	<0.099		1.94	1.96		ug/L		101	70 - 130
4,4'-DDT	<0.099		1.94	2.23		ug/L		115	70 - 130
Acenaphthene	<0.099		1.94	2.01		ug/L		104	70 - 130
Acenaphthylene	<0.099		1.94	1.73		ug/L		89	70 - 130
Acetochlor	<0.099		1.94	2.22		ug/L		114	70 - 130
Alachlor	<0.049		1.94	2.28		ug/L		118	70 - 130
alpha-BHC	<0.099		1.94	2.04		ug/L		105	70 - 130
alpha-Chlordane	<0.049		1.94	2.13		ug/L		110	70 - 130
Anthracene	<0.020	F1	1.94	0.201	F1	ug/L		10	70 - 130
Atrazine	<0.049		1.94	2.18		ug/L		112	70 - 130
Benz(a)anthracene	<0.049	F1	1.94	1.29	F1	ug/L		66	70 - 130
Benzo[a]pyrene	<0.020	F1	1.94	0.703	F1	ug/L		36	70 - 130
Benzo[b]fluoranthene	<0.020		1.94	2.38		ug/L		123	70 - 130
Benzo[g,h,i]perylene	<0.049		1.94	2.39		ug/L		123	70 - 130
Benzo[k]fluoranthene	<0.020		1.94	2.39		ug/L		123	70 - 130
beta-BHC	<0.099		1.94	2.06		ug/L		106	70 - 130
Bis(2-ethylhexyl) phthalate	<0.59		1.94	2.36		ug/L		101	70 - 130
Bromacil	<0.099	^3+ F1	1.94	2.55	F1	ug/L		132	70 - 130
Butachlor	<0.049		1.94	2.24		ug/L		115	70 - 130
Butylbenzylphthalate	<0.49	*+	1.94	2.41		ug/L		124	70 - 130
Chlorobenzilate	<0.099		1.94	2.15		ug/L		111	70 - 130

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

Lab Sample ID: 380-106347-K-1-A MS
Matrix: Water
Analysis Batch: 102136

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 101803

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloroneb	<0.099		1.94	2.05		ug/L		106	70 - 130
Chlorothalonil (Draconil, Bravo)	<0.099		1.94	2.08		ug/L		107	70 - 130
Chlorpyrifos	<0.049		1.94	2.31		ug/L		119	70 - 130
Chrysene	<0.020		1.94	2.18		ug/L		112	70 - 130
delta-BHC	<0.099		1.94	2.06		ug/L		106	70 - 130
Di(2-ethylhexyl)adipate	<0.59	B ^3+ *+	1.94	2.21		ug/L		110	70 - 130
Dibenz(a,h)anthracene	<0.049		1.94	2.51		ug/L		129	70 - 130
Diclorvos (DDVP)	<0.049		1.94	2.31		ug/L		119	70 - 130
Dieldrin	<0.0099		1.94	2.22		ug/L		115	70 - 130
Diethylphthalate	<0.49		1.94	2.34		ug/L		107	70 - 130
Dimethylphthalate	<0.49		1.94	2.14		ug/L		110	70 - 130
Di-n-butyl phthalate	<0.99		3.88	4.24		ug/L		109	70 - 130
Di-n-octyl phthalate	<0.099		1.94	1.94		ug/L		100	70 - 130
Endosulfan I (Alpha)	<0.099		1.94	2.10		ug/L		108	70 - 130
Endosulfan II (Beta)	<0.099		1.94	2.32		ug/L		120	70 - 130
Endosulfan sulfate	<0.099		1.94	2.12		ug/L		109	70 - 130
Endrin	<0.0099	F1 *+	1.94	2.57	F1	ug/L		132	70 - 130
Endrin aldehyde	<0.099		1.94	1.60		ug/L		82	60 - 130
EPTC	<0.099		1.94	2.08		ug/L		107	70 - 130
Fluoranthene	<0.099		1.94	2.02		ug/L		104	70 - 130
Fluorene	<0.049		1.94	2.03		ug/L		105	70 - 130
gamma-Chlordane	<0.049		1.94	2.14		ug/L		111	70 - 130
Heptachlor	<0.0099		1.94	2.36		ug/L		122	70 - 130
Heptachlor epoxide (isomer B)	<0.0099		1.94	2.25		ug/L		116	70 - 130
Hexachlorobenzene	<0.049		1.94	1.90		ug/L		98	70 - 130
Hexachlorocyclopentadiene	<0.049		1.94	2.34		ug/L		121	70 - 130
Indeno[1,2,3-cd]pyrene	<0.049		1.94	2.22		ug/L		114	70 - 130
Isophorone	<0.099		1.94	2.08		ug/L		107	70 - 130
Lindane	<0.0099		1.94	2.12		ug/L		109	70 - 130
Malathion	<0.099		1.94	2.26		ug/L		116	70 - 130
Methoxychlor	<0.049	F1	1.94	2.74	F1	ug/L		141	70 - 130
Metolachlor	<0.049		1.94	2.49		ug/L		128	70 - 130
Molinate	<0.099		1.94	2.01		ug/L		104	70 - 130
Naphthalene	<0.099		1.94	1.82		ug/L		94	70 - 130
Parathion	<0.099	F1 *+	1.94	2.54	F1	ug/L		131	70 - 130
Pendimethalin (Penoxaline)	<0.099		1.94	2.46		ug/L		127	70 - 130
Phenanthrene	<0.040		1.94	1.94		ug/L		100	70 - 130
Propachlor	<0.049		1.94	2.14		ug/L		110	70 - 130
Pyrene	<0.049		1.94	1.95		ug/L		100	70 - 130
Simazine	<0.049		1.94	2.25		ug/L		116	70 - 130
Terbacil	<0.099	F1 *+ ^+	1.94	2.55	F1	ug/L		131	70 - 130
Terbuthylazine	<0.099		1.94	2.14		ug/L		110	70 - 130
Thiobencarb	<0.099		1.94	2.01		ug/L		104	70 - 130
trans-Nonachlor	<0.049		1.94	2.09		ug/L		108	70 - 130
Trifluralin	<0.099		1.94	2.01		ug/L		103	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Nitro-m-xylene	*107*		*70 - 130*

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

Lab Sample ID: 380-106347-K-1-A MS
Matrix: Water
Analysis Batch: 102136

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 101803

Surrogate	MS %Recovery	MS Qualifier	Limits
Perylene-d12	*100*		*70 - 130*
Triphenylphosphate	*115*		*70 - 130*

Lab Sample ID: 380-106433-AH-1-A DU
Matrix: Water
Analysis Batch: 102136

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 101803

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
1-Methylnaphthalene	<0.10		<0.099		ug/L		NC	20
2,4'-DDD	<0.10		<0.099		ug/L		NC	20
2,4'-DDE	<0.10		<0.099		ug/L		NC	20
2,4'-DDT	<0.10		<0.099		ug/L		NC	20
2,4-Dinitrotoluene	<0.10	^+	<0.099		ug/L		NC	20
2,6-Dinitrotoluene	<0.10	^+	<0.099		ug/L		NC	20
2-Methylnaphthalene	<0.10		<0.099		ug/L		NC	20
4,4'-DDD	<0.10		<0.099		ug/L		NC	20
4,4'-DDE	<0.10		<0.099		ug/L		NC	20
4,4'-DDT	<0.10		<0.099		ug/L		NC	20
Acenaphthene	<0.10		<0.099		ug/L		NC	20
Acenaphthylene	<0.10		<0.099		ug/L		NC	20
Acetochlor	<0.10		<0.099		ug/L		NC	20
Alachlor	<0.050		<0.050		ug/L		NC	20
alpha-BHC	<0.10		<0.099		ug/L		NC	20
alpha-Chlordane	<0.050		<0.050		ug/L		NC	20
Anthracene	<0.020		<0.020		ug/L		NC	20
Atrazine	<0.050		<0.050		ug/L		NC	20
Benz(a)anthracene	<0.050		<0.050		ug/L		NC	20
Benzo[a]pyrene	<0.020		<0.020		ug/L		NC	20
Benzo[b]fluoranthene	<0.020		<0.020		ug/L		NC	20
Benzo[g,h,i]perylene	<0.050		<0.050		ug/L		NC	20
Benzo[k]fluoranthene	<0.020		<0.020		ug/L		NC	20
beta-BHC	<0.10		<0.099		ug/L		NC	20
Bis(2-ethylhexyl) phthalate	<0.60		<0.60		ug/L		NC	20
Bromacil	<0.10	^3+	<0.099		ug/L		NC	20
Butachlor	<0.050		<0.050		ug/L		NC	20
Butylbenzylphthalate	<0.50	*+	<0.50	*+	ug/L		NC	20
Chlorobenzilate	<0.10		<0.099		ug/L		NC	20
Chloroneb	<0.10		<0.099		ug/L		NC	20
Chlorothalonil (Draconil, Bravo)	<0.10		<0.099		ug/L		NC	20
Chlorpyrifos	<0.050		<0.050		ug/L		NC	20
Chrysene	<0.020		<0.020		ug/L		NC	20
delta-BHC	<0.10		<0.099		ug/L		NC	20
Di(2-ethylhexyl)adipate	<0.60	B ^3+ *+	<0.60	B *+	ug/L		NC	20
Dibenz(a,h)anthracene	<0.050		<0.050		ug/L		NC	20
Diclorvos (DDVP)	<0.050		<0.050		ug/L		NC	20
Dieldrin	<0.010		<0.0099		ug/L		NC	20
Diethylphthalate	<0.50		<0.50		ug/L		NC	20
Dimethylphthalate	<0.50		<0.50		ug/L		NC	20

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

Lab Sample ID: 380-106433-AH-1-A DU
Matrix: Water
Analysis Batch: 102136

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 101803

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Di-n-butyl phthalate	<1.0			<0.99		ug/L				NC	20
Di-n-octyl phthalate	<0.10			<0.099		ug/L				NC	20
Endosulfan I (Alpha)	<0.10			<0.099		ug/L				NC	20
Endosulfan II (Beta)	<0.10			<0.099		ug/L				NC	20
Endosulfan sulfate	<0.10			<0.099		ug/L				NC	20
Endrin	<0.010	*+		<0.0099	*+	ug/L				NC	20
Endrin aldehyde	<0.10			<0.099		ug/L				NC	20
EPTC	<0.10			<0.099		ug/L				NC	20
Fluoranthene	<0.10			<0.099		ug/L				NC	20
Fluorene	<0.050			<0.050		ug/L				NC	20
gamma-Chlordane	<0.050			<0.050		ug/L				NC	20
Heptachlor	<0.010			<0.0099		ug/L				NC	20
Heptachlor epoxide (isomer B)	<0.010			<0.0099		ug/L				NC	20
Hexachlorobenzene	<0.050			<0.050		ug/L				NC	20
Hexachlorocyclopentadiene	<0.050			<0.050		ug/L				NC	20
Indeno[1,2,3-cd]pyrene	<0.050			<0.050		ug/L				NC	20
Isophorone	<0.10			<0.099		ug/L				NC	20
Lindane	<0.010			<0.0099		ug/L				NC	20
Malathion	<0.10			<0.099		ug/L				NC	20
Methoxychlor	<0.050			<0.050		ug/L				NC	20
Metolachlor	<0.050			<0.050		ug/L				NC	20
Molinate	<0.10			<0.099		ug/L				NC	20
Naphthalene	<0.10			<0.099		ug/L				NC	20
Parathion	<0.10	*+		<0.099	*+	ug/L				NC	20
Pendimethalin (Penoxaline)	<0.10			<0.099		ug/L				NC	20
Phenanthrene	<0.040			<0.040		ug/L				NC	20
Propachlor	<0.050			<0.050		ug/L				NC	20
Pyrene	<0.050			<0.050		ug/L				NC	20
Simazine	<0.050			<0.050		ug/L				NC	20
Terbacil	<0.10	*+ ^+		<0.099	*+	ug/L				NC	20
Terbuthylazine	<0.10			<0.099		ug/L				NC	20
Thiobencarb	<0.10			<0.099		ug/L				NC	20
Total Permethrin (mixed isomers)	<0.20			<0.20		ug/L				NC	20
trans-Nonachlor	<0.050			<0.050		ug/L				NC	20
Trifluralin	<0.10			<0.099		ug/L				NC	20

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
2-Nitro-m-xylene	*107*		*70 - 130*
Perylene-d12	*96*		*70 - 130*
Triphenylphosphate	*104*		*70 - 130*

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

Lab Sample ID: MB 570-466739/1-A
Matrix: Water
Analysis Batch: 472045

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 466739

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	08/02/24 09:43	08/19/24 14:28	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	75		33 - 139	08/02/24 09:43	08/19/24 14:28	1
2-Fluorobiphenyl (Surr)	71		33 - 126	08/02/24 09:43	08/19/24 14:28	1
2-Fluorophenol (Surr)	44		12 - 120	08/02/24 09:43	08/19/24 14:28	1
Nitrobenzene-d5 (Surr)	68		36 - 120	08/02/24 09:43	08/19/24 14:28	1
Phenol-d6 (Surr)	26		10 - 120	08/02/24 09:43	08/19/24 14:28	1
p-Terphenyl-d14 (Surr)	87		47 - 131	08/02/24 09:43	08/19/24 14:28	1

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

Lab Sample ID: MB 570-466739/1-A
Matrix: Water
Analysis Batch: 468707

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 466739

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.20		0.20		ug/L		08/02/24 09:43	08/08/24 14:21	1
2-Methylnaphthalene	<0.20		0.20		ug/L		08/02/24 09:43	08/08/24 14:21	1
Acenaphthene	<0.20		0.20		ug/L		08/02/24 09:43	08/08/24 14:21	1
Acenaphthylene	<0.20		0.20		ug/L		08/02/24 09:43	08/08/24 14:21	1
Anthracene	<0.20		0.20		ug/L		08/02/24 09:43	08/08/24 14:21	1
Benzo[a]anthracene	<0.20		0.20		ug/L		08/02/24 09:43	08/08/24 14:21	1
Benzo[a]pyrene	<0.20		0.20		ug/L		08/02/24 09:43	08/08/24 14:21	1
Benzo[b]fluoranthene	<0.20		0.20		ug/L		08/02/24 09:43	08/08/24 14:21	1
Benzo[g,h,i]perylene	<0.20		0.20		ug/L		08/02/24 09:43	08/08/24 14:21	1
Benzo[k]fluoranthene	<0.20		0.20		ug/L		08/02/24 09:43	08/08/24 14:21	1
Chrysene	<0.20		0.20		ug/L		08/02/24 09:43	08/08/24 14:21	1
Dibenz(a,h)anthracene	<0.20		0.20		ug/L		08/02/24 09:43	08/08/24 14:21	1
Fluoranthene	<0.20		0.20		ug/L		08/02/24 09:43	08/08/24 14:21	1
Fluorene	<0.20		0.20		ug/L		08/02/24 09:43	08/08/24 14:21	1
Indeno[1,2,3-cd]pyrene	<0.20		0.20		ug/L		08/02/24 09:43	08/08/24 14:21	1
Naphthalene	<0.20		0.20		ug/L		08/02/24 09:43	08/08/24 14:21	1
Phenanthrene	<0.20		0.20		ug/L		08/02/24 09:43	08/08/24 14:21	1
Pyrene	<0.20		0.20		ug/L		08/02/24 09:43	08/08/24 14:21	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	87		28 - 127	08/02/24 09:43	08/08/24 14:21	1
2-Fluorobiphenyl (Surr)	66		31 - 120	08/02/24 09:43	08/08/24 14:21	1
2-Fluorophenol (Surr)	47		17 - 120	08/02/24 09:43	08/08/24 14:21	1
Nitrobenzene-d5 (Surr)	66		27 - 120	08/02/24 09:43	08/08/24 14:21	1
Phenol-d6 (Surr)	32		10 - 120	08/02/24 09:43	08/08/24 14:21	1
p-Terphenyl-d14 (Surr)	90		45 - 120	08/02/24 09:43	08/08/24 14:21	1

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

Lab Sample ID: LCS 570-466739/2-A
Matrix: Water
Analysis Batch: 468707

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 466739

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	13.1		ug/L		66	60 - 132
Acenaphthylene	20.0	13.7		ug/L		68	54 - 126
Anthracene	20.0	14.7		ug/L		74	43 - 120
Benzo[a]anthracene	20.0	14.6		ug/L		73	42 - 133
Benzo[a]pyrene	20.0	14.5		ug/L		73	32 - 148
Benzo[b]fluoranthene	20.0	14.5		ug/L		72	42 - 140
Benzo[g,h,i]perylene	20.0	14.7		ug/L		74	1 - 195
Benzo[k]fluoranthene	20.0	14.6		ug/L		73	25 - 146
Chrysene	20.0	14.2		ug/L		71	44 - 140
Dibenz(a,h)anthracene	20.0	14.8		ug/L		74	1 - 200
Fluoranthene	20.0	14.6		ug/L		73	43 - 121
Fluorene	20.0	14.0		ug/L		70	70 - 120
Indeno[1,2,3-cd]pyrene	20.0	14.6		ug/L		73	1 - 151
Naphthalene	20.0	10.4		ug/L		52	36 - 120
Phenanthrene	20.0	14.2		ug/L		71	65 - 120
Pyrene	20.0	15.7		ug/L		79	70 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*78*		*28 - 127*
2-Fluorobiphenyl (Surr)	*62*		*31 - 120*
2-Fluorophenol (Surr)	*47*		*17 - 120*
Nitrobenzene-d5 (Surr)	*52*		*27 - 120*
Phenol-d6 (Surr)	*34*		*10 - 120*
p-Terphenyl-d14 (Surr)	*77*		*45 - 120*

Lab Sample ID: LCSD 570-466739/3-A
Matrix: Water
Analysis Batch: 468707

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 466739

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	20.0	10.7		ug/L		54	47 - 120	0	20
2-Methylnaphthalene	20.0	11.0		ug/L		55	43 - 120	2	20
Acenaphthene	20.0	13.3		ug/L		66	60 - 132	1	29
Acenaphthylene	20.0	14.0		ug/L		70	54 - 126	2	45
Anthracene	20.0	15.0		ug/L		75	43 - 120	2	40
Benzo[a]anthracene	20.0	14.6		ug/L		73	42 - 133	0	32
Benzo[a]pyrene	20.0	14.6		ug/L		73	32 - 148	0	43
Benzo[b]fluoranthene	20.0	14.4		ug/L		72	42 - 140	0	43
Benzo[g,h,i]perylene	20.0	14.8		ug/L		74	1 - 195	1	61
Benzo[k]fluoranthene	20.0	14.9		ug/L		74	25 - 146	1	38
Chrysene	20.0	14.3		ug/L		72	44 - 140	1	53
Dibenz(a,h)anthracene	20.0	14.9		ug/L		74	1 - 200	1	75
Fluoranthene	20.0	14.9		ug/L		75	43 - 121	2	40
Fluorene	20.0	14.2		ug/L		71	70 - 120	1	23
Indeno[1,2,3-cd]pyrene	20.0	14.5		ug/L		73	1 - 151	0	60
Naphthalene	20.0	10.5		ug/L		52	36 - 120	1	39

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

Lab Sample ID: LCSD 570-466739/3-A
Matrix: Water
Analysis Batch: 468707

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 466739

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Phenanthrene			20.0	14.5		ug/L		72	65 - 120	2	24
Pyrene			20.0	15.8		ug/L		79	70 - 120	0	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*77*		*28 - 127*
2-Fluorobiphenyl (Surr)	*62*		*31 - 120*
2-Fluorophenol (Surr)	*47*		*17 120*
Nitrobenzene-d5 (Surr)	*51*		*27 - 120*
Phenol-d6 (Surr)	*33*		*10 - 120*
p-Terphenyl-d14 (Surr)	*75*		*45 - 120*

Lab Sample ID: 380-106529-1 MS
Matrix: Water
Analysis Batch: 468837

Client Sample ID: MOANALUA WELLS
Prep Type: Total/NA
Prep Batch: 466739

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	<0.19		19.4	9.78		ug/L		51	36 - 120
2-Methylnaphthalene	<0.19		19.4	9.90		ug/L		51	32 - 124
Acenaphthene	<0.19		19.4	11.7		ug/L		60	47 - 145
Acenaphthylene	<0.19		19.4	12.7		ug/L		66	33 - 145
Anthracene	<0.19		19.4	12.6		ug/L		65	27 - 133
Benzo[a]anthracene	<0.19		19.4	13.3		ug/L		69	33 - 143
Benzo[a]pyrene	<0.19		19.4	13.7		ug/L		71	17 - 163
Benzo[b]fluoranthene	<0.19		19.4	13.2		ug/L		68	24 - 159
Benzo[g,h,i]perylene	<0.19		19.4	12.8		ug/L		66	1 - 219
Benzo[k]fluoranthene	<0.19		19.4	13.2		ug/L		68	11 - 162
Chrysene	<0.19		19.4	12.1		ug/L		63	17 - 168
Dibenz(a,h)anthracene	<0.19		19.4	13.0		ug/L		67	1 - 227
Fluoranthene	<0.19		19.4	12.8		ug/L		66	26 - 137
Fluorene	<0.19		19.4	12.4		ug/L		64	59 - 121
Indeno[1,2,3-cd]pyrene	<0.19		19.4	13.0		ug/L		67	1 - 171
Naphthalene	<0.19		19.4	9.69		ug/L		50	21 - 133
Phenanthrene	<0.19		19.4	12.2		ug/L		63	54 - 120
Pyrene	<0.19		19.4	12.8		ug/L		66	52 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*67*		*28 - 127*
2-Fluorobiphenyl (Surr)	*55*		*31 - 120*
2-Fluorophenol (Surr)	*45*		*17 - 120*
Nitrobenzene-d5 (Surr)	*50*		*27 - 120*
Phenol-d6 (Surr)	*33*		*10 - 120*
p-Terphenyl-d14 (Surr)	*63*		*45 - 120*

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

Lab Sample ID: 380-106529-1 MSD
Matrix: Water
Analysis Batch: 468837

Client Sample ID: MOANALUA WELLS
Prep Type: Total/NA
Prep Batch: 466739

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	<0.19		19.5	11.7		ug/L		60	36 - 120	18	30
2-Methylnaphthalene	<0.19		19.5	11.8		ug/L		60	32 - 124	17	30
Acenaphthene	<0.19		19.5	13.6		ug/L		70	47 - 145	15	48
Acenaphthylene	<0.19		19.5	14.8		ug/L		76	33 - 145	15	74
Anthracene	<0.19		19.5	14.5		ug/L		74	27 - 133	14	66
Benzo[a]anthracene	<0.19		19.5	15.6		ug/L		80	33 - 143	16	53
Benzo[a]pyrene	<0.19		19.5	16.2		ug/L		83	17 - 163	17	72
Benzo[b]fluoranthene	<0.19		19.5	15.8		ug/L		81	24 - 159	18	71
Benzo[g,h,i]perylene	<0.19		19.5	15.4		ug/L		79	1 - 219	19	97
Benzo[k]fluoranthene	<0.19		19.5	15.6		ug/L		80	11 - 162	17	63
Chrysene	<0.19		19.5	14.5		ug/L		74	17 - 168	18	87
Dibenz(a,h)anthracene	<0.19		19.5	15.8		ug/L		81	1 - 227	20	126
Fluoranthene	<0.19		19.5	14.6		ug/L		75	26 - 137	13	66
Fluorene	<0.19		19.5	14.3		ug/L		73	59 - 121	14	38
Indeno[1,2,3-cd]pyrene	<0.19		19.5	15.6		ug/L		80	1 - 171	18	99
Naphthalene	<0.19		19.5	11.3		ug/L		58	21 - 133	15	65
Phenanthrene	<0.19		19.5	14.0		ug/L		72	54 - 120	13	39
Pyrene	<0.19		19.5	15.2		ug/L		78	52 - 120	17	49

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*76*		*28 - 127*
2-Fluorobiphenyl (Surr)	*65*		*31 - 120*
2-Fluorophenol (Surr)	*49*		*17 - 120*
Nitrobenzene-d5 (Surr)	*56*		*27 - 120*
Phenol-d6 (Surr)	*37*		*10 - 120*
p-Terphenyl-d14 (Surr)	*75*		*45 - 120*

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

Lab Sample ID: MB 570-468381/6
Matrix: Water
Analysis Batch: 468381

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			08/07/24 13:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*75*		*38 - 134*		*08/07/24 13:51*	*1*

Lab Sample ID: LCS 570-468381/4
Matrix: Water
Analysis Batch: 468381

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	380		ug/L		95	78 - 120		

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

Lab Sample ID: LCS 570-468381/4
Matrix: Water
Analysis Batch: 468381

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

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

Lab Sample ID: LCSD 570-468381/5
Matrix: Water
Analysis Batch: 468381

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (C4-C13)			400	368		ug/L		92	78 - 120	3	10

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*85*		*38 - 134*

Lab Sample ID: MRL 570-468381/3
Matrix: Water
Analysis Batch: 468381

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

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (C4-C13)			10.0	12.5		ug/L		125	50 - 150		

Surrogate	*MRL %Recovery*	*MRL Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*70*		*38 - 134*

Lab Sample ID: 380-106529-1 MS
Matrix: Water
Analysis Batch: 468381

Client Sample ID: MOANALUA WELLS
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	360		ug/L		90	68 - 122		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*81*		*38 - 134*

Lab Sample ID: 380-106529-1 MSD
Matrix: Water
Analysis Batch: 468381

Client Sample ID: MOANALUA WELLS
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	369		ug/L		92	68 - 122	2	18

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*85*		*38 - 134*

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

Lab Sample ID: MB 570-467007/1-A
Matrix: Water
Analysis Batch: 469622

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 467007

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C24)	<25		25		ug/L		08/02/24 18:40	08/11/24 09:46	1
Motor Oil Range Organics [C24-C36]	<25		25		ug/L		08/02/24 18:40	08/11/24 09:46	1
C8-C18	<25		25		ug/L		08/02/24 18:40	08/11/24 09:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*102*		*60 - 130*	*08/02/24 18:40*	*08/11/24 09:46*	*1*

Lab Sample ID: LCS 570-467007/2-A
Matrix: Water
Analysis Batch: 469622

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 467007

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
C10-C28			2000	1840		ug/L		92	56 - 127		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Octacosane (Surr)	*111*		*60 - 130*

Lab Sample ID: LCSD 570-467007/3-A
Matrix: Water
Analysis Batch: 469622

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 467007

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C10-C28			2000	1790		ug/L		89	56 - 127	3	23

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

Lab Sample ID: MRL 570-467007/4-A
Matrix: Water
Analysis Batch: 469622

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 467007

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
C10-C28			0.0200	0.0202	J	mg/L		101	50 - 150		

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

Lab Sample ID: 380-106529-1 MS
Matrix: Water
Analysis Batch: 469622

Client Sample ID: MOANALUA WELLS
Prep Type: Total/NA
Prep Batch: 467007

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
C10-C28	<27		2170	2110		ug/L		97	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
n-Octacosane (Surr)	*106*		*60 - 130*

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

Job ID: 380-106529-1

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

Lab Sample ID: 380-106529-1 MSD
Matrix: Water
Analysis Batch: 469622

Client Sample ID: MOANALUA WELLS
Prep Type: Total/NA
Prep Batch: 467007

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C10-C28	<27		2170	2120		ug/L		98	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
n-Octacosane (Surr)	*105*		*60 - 130*

GC/MS Semi VOA

Prep Batch: 101803

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-106529-1	MOANALUA WELLS	Total/NA	Water	525.2	
380-106529-3	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Water	525.2	
MB 380-101803/21-A	Method Blank	Total/NA	Water	525.2	
LCS 380-101803/23-A	Lab Control Sample	Total/NA	Water	525.2	
MRL 380-101803/22-A	Lab Control Sample	Total/NA	Water	525.2	
380-106347-K-1-A MS	Matrix Spike	Total/NA	Water	525.2	
380-106433-AH-1-A DU	Duplicate	Total/NA	Water	525.2	

Analysis Batch: 102136

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-106529-1	MOANALUA WELLS	Total/NA	Water	525.2	101803
380-106529-3	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Water	525.2	101803
MB 380-101803/21-A	Method Blank	Total/NA	Water	525.2	101803
LCS 380-101803/23-A	Lab Control Sample	Total/NA	Water	525.2	101803
MRL 380-101803/22-A	Lab Control Sample	Total/NA	Water	525.2	101803
380-106347-K-1-A MS	Matrix Spike	Total/NA	Water	525.2	101803
380-106433-AH-1-A DU	Duplicate	Total/NA	Water	525.2	101803

Prep Batch: 466739

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-106529-1	MOANALUA WELLS	Total/NA	Water	625.1	
380-106529-3	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Water	625.1	
MB 570-466739/1-A	Method Blank	Total/NA	Water	625.1	
LCS 570-466739/2-A	Lab Control Sample	Total/NA	Water	625.1	
LCSD 570-466739/3-A	Lab Control Sample Dup	Total/NA	Water	625.1	
380-106529-1 MS	MOANALUA WELLS	Total/NA	Water	625.1	
380-106529-1 MSD	MOANALUA WELLS	Total/NA	Water	625.1	

Analysis Batch: 468707

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 570-466739/1-A	Method Blank	Total/NA	Water	625.1 SIM	466739
LCS 570-466739/2-A	Lab Control Sample	Total/NA	Water	625.1 SIM	466739
LCSD 570-466739/3-A	Lab Control Sample Dup	Total/NA	Water	625.1 SIM	466739

Analysis Batch: 468837

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-106529-1	MOANALUA WELLS	Total/NA	Water	625.1 SIM	466739
380-106529-3	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Water	625.1 SIM	466739
380-106529-1 MS	MOANALUA WELLS	Total/NA	Water	625.1 SIM	466739
380-106529-1 MSD	MOANALUA WELLS	Total/NA	Water	625.1 SIM	466739

Analysis Batch: 472045

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-106529-1	MOANALUA WELLS	Total/NA	Water	625.1	466739
380-106529-3	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Water	625.1	466739
MB 570-466739/1-A	Method Blank	Total/NA	Water	625.1	466739

QC Association Summary

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

Job ID: 380-106529-1

GC VOA

Analysis Batch: 468381

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-106529-1	MOANALUA WELLS	Total/NA	Water	8015B GRO LL	
380-106529-2	TB: MOANALUA WELLS	Total/NA	Water	8015B GRO LL	
380-106529-3	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Water	8015B GRO LL	
380-106529-4	TB: HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Water	8015B GRO LL	
MB 570-468381/6	Method Blank	Total/NA	Water	8015B GRO LL	
LCS 570-468381/4	Lab Control Sample	Total/NA	Water	8015B GRO LL	
LCSD 570-468381/5	Lab Control Sample Dup	Total/NA	Water	8015B GRO LL	
MRL 570-468381/3	Lab Control Sample	Total/NA	Water	8015B GRO LL	
380-106529-1 MS	MOANALUA WELLS	Total/NA	Water	8015B GRO LL	
380-106529-1 MSD	MOANALUA WELLS	Total/NA	Water	8015B GRO LL	

GC Semi VOA

Prep Batch: 467007

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-106529-1	MOANALUA WELLS	Total/NA	Water	3510C	
380-106529-3	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Water	3510C	
MB 570-467007/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-467007/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-467007/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MRL 570-467007/4-A	Lab Control Sample	Total/NA	Water	3510C	
380-106529-1 MS	MOANALUA WELLS	Total/NA	Water	3510C	
380-106529-1 MSD	MOANALUA WELLS	Total/NA	Water	3510C	

Analysis Batch: 469622

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-106529-1	MOANALUA WELLS	Total/NA	Water	8015B	467007
380-106529-3	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Water	8015B	467007
MB 570-467007/1-A	Method Blank	Total/NA	Water	8015B	467007
LCS 570-467007/2-A	Lab Control Sample	Total/NA	Water	8015B	467007
LCSD 570-467007/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	467007
MRL 570-467007/4-A	Lab Control Sample	Total/NA	Water	8015B	467007
380-106529-1 MS	MOANALUA WELLS	Total/NA	Water	8015B	467007
380-106529-1 MSD	MOANALUA WELLS	Total/NA	Water	8015B	467007

Lab Chronicle

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

Job ID: 380-106529-1

Client Sample ID: MOANALUA WELLS
Lab Sample ID: 380-106529-1
Date Collected: 07/29/24 09:55
Matrix: Water
Date Received: 07/31/24 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			101803	IQ42	EA POM	08/01/24 16:25
Total/NA	Analysis	525.2		1	102136	Q8LA	EA POM	08/04/24 15:37
Total/NA	Prep	625.1			466739	OAJ3	EET CAL 4	08/02/24 09:43
Total/NA	Analysis	625.1		1	472045	CG	EET CAL 4	08/19/24 18:11
Total/NA	Prep	625.1			466739	OAJ3	EET CAL 4	08/02/24 09:43
Total/NA	Analysis	625.1 SIM		1	468837	PQS1	EET CAL 4	08/08/24 17:24
Total/NA	Analysis	8015B GRO LL		1	468381	GC3Z	EET CAL 4	08/07/24 15:11
Total/NA	Prep	3510C			467007	H6FE	EET CAL 4	08/02/24 18:40
Total/NA	Analysis	8015B		1	469622	SP9M	EET CAL 4	08/11/24 12:10

Client Sample ID: TB: MOANALUA WELLS
Lab Sample ID: 380-106529-2
Date Collected: 07/29/24 09:55
Matrix: Water
Date Received: 07/31/24 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015B GRO LL		1	468381	GC3Z	EET CAL 4	08/07/24 19:06

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1
Lab Sample ID: 380-106529-3
Date Collected: 07/29/24 10:27
Matrix: Water
Date Received: 07/31/24 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			101803	IQ42	EA POM	08/01/24 16:25
Total/NA	Analysis	525.2		1	102136	Q8LA	EA POM	08/04/24 15:57
Total/NA	Prep	625.1			466739	OAJ3	EET CAL 4	08/02/24 09:43
Total/NA	Analysis	625.1		1	472045	CG	EET CAL 4	08/19/24 17:42
Total/NA	Prep	625.1			466739	OAJ3	EET CAL 4	08/02/24 09:43
Total/NA	Analysis	625.1 SIM		1	468837	PQS1	EET CAL 4	08/08/24 17:46
Total/NA	Analysis	8015B GRO LL		1	468381	GC3Z	EET CAL 4	08/07/24 22:08
Total/NA	Prep	3510C			467007	H6FE	EET CAL 4	08/02/24 18:40
Total/NA	Analysis	8015B		1	469622	SP9M	EET CAL 4	08/11/24 13:12

Client Sample ID: TB: HALAWA WELLS UNITS 1 & 2 P1
Lab Sample ID: 380-106529-4
Date Collected: 07/29/24 10:27
Matrix: Water
Date Received: 07/31/24 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015B GRO LL		1	468381	GC3Z	EET CAL 4	08/07/24 19:32

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: 380-106529-1

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	Terbuthylazine
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.

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

Job ID: 380-106529-1

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

Method Summary

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

Job ID: 380-106529-1

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: 380-106529-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-106529-1	MOANALUA WELLS	Water	07/29/24 09:55	07/31/24 09:52
380-106529-2	TB: MOANALUA WELLS	Water	07/29/24 09:55	07/31/24 09:52
380-106529-3	HALAWA WELLS UNITS 1 & 2 P1	Water	07/29/24 10:27	07/31/24 09:52
380-106529-4	TB: HALAWA WELLS UNITS 1 & 2 P1	Water	07/29/24 10:27	07/31/24 09:52

Eurofins Eaton Analytical Pomona
941 Corporate Center Drive
Pomona CA 91768-2642
Phone (626) 386-1100

Chain of Custody Record

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Client Information	Sampler: bailey	Lab PM: Arada, Rachelle	Carrier Tracking No(s):	COC No: 380-28005-2757 1
Client Contact: Dr Ron Fenstemacher	Phone: +1 808 748 5840	E-Mail: Rachelle.Arada@et.eurofinsus.com	State of Origin:	Page: Page 1 of 1
Company: City & County of Honolulu	PWSID:			Job #:
Address: 630 South Beretania Street Chemistry Lab	Due Date Requested			
City: Honolulu	TAT Requested (days):			
State Zip: HI 96843	Compliance Project: Δ Yes Δ No			
Phone: 808-748-5091(Tel)	PO #: C20525101 exp 05312023			
Email: RFENSTEMACHER@hbws.org	WO #:			
Project Name: RED-HILL/HBWS Sites Event Desc: RUSH Weekly Red Hill	Project #: 38001111			
Site: Hawaii	SSOW#:			

Analysis Requested

Preservation Codes.
R - NaThioSO4
RA - NaThio/HCl
Q - Na2SO3
QA - Na2SO3/HCl
Y Trizma
I - NH4 Acetate
Other:

380-106529 COC

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	625.1, 625.1_SIM	8015B_GRO_LL (MOD) GRO	8015B_DRO_LL_CS HNL Ranges C10-C24/C24-C36/C8-C18	525.2_PREC (MOD) 525plus Plus TICs	537 1_DW_PREC 537 1 Full List	533 - All Analytes	Total Number of containers	Special Instructions/Note:
			Preservation Code:				R	RA	Q	QA	Y	I		
Moanalua Wells	29-Jul-2024	0955	G	Water	x		4	(5)	4	2				← 1 of 5 vials for 8015 Received broken TV
Moanalua Wells (Matrix Spike)				Water			X	X	X					
Moanalua Wells (Matrix Spike Duplicate)				Water			X	X	X					
TB- Moanalua Wells	29-Jul-2024	0955		Water				2						
Halawa Wells Units 1 & 2 P1	29-Jul-2024	1027	G	Water			2	3	2	2				
Halawa Wells Units 1 & 2 (Matrix Spike)				Water										
Halawa Wells Units 1 & 2 (Matrix Spike Duplicate)				Water										
TB Halawa Wells Units 1 & 2	29-Jul-2024	1027		Water				2						

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

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

Deliverable Requested I II III IV, Other (specify)

Special Instructions/QC Requirements.

Empty Kit Relinquished by:	Date	Time:	Method of Shipment: FEDEX 7776 9704 6799
Relinquished by: [redacted]	Date/Time: 30JUL2024 1400	Company: HBWS	Received by: G.REITNER Date/Time: 07/31/2024 09:52 Company: EEAP
Relinquished by:	Date/Time:	Company	Received by: Date/Time: Company
Relinquished by:	Date/Time:	Company	Received by: Date/Time: Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks: 751A 3.5°-0.1°=3.4° GEL-FROZEN

Ver: 04/02/2024

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

Chain of Custody Record

eurofins | Envir

Loc. 380
106529

Client Information (Sub Contract Lab)	Sampler	Lab PM: Arada, Rachelle	Carrier Tracking No(s):	COC No: 380-142423.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Rachelle.Arada@et.eurofinsus.com	State of Origin: Hawaii	Page: Page 1 of 1
Company: Eurofins Environment Testing Southwest,		Accreditations Required (See note): State Hawaii		Job #: 380-106529-1
Address: 2841 Dow Avenue, Suite 100,	Due Date Requested: 8/20/2024	Analysis Requested		Preservation Codes:
City: Tustin	TAT Requested (days):			
State, Zip: CA, 92780				
Phone: 714-895-5494(Tel)	PO #:			
Email:	WO #:			
Project Name: RED-HILL	Project #: 38001111			
Site: Honolulu BWS Sites	SSOW#:			

380-106529 Chain of Custody

Sample Identification Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015B_DRO_LL_CS/3510C_LL HNL Ranges: C10-C24/C24-C36/C9-C18	8015B_GRO_LL/5030C (MOD) GRO	625.1_SIM/625_Prep (MOD) Extended PAH List	625.1/625_Prep (MOD) Tentatively Identified Compounds (Hold)	8015B_GRO_LL/5030C GRO	Total Number of containe	Special Instructions/Note:
		Preservation Code:											
MOANALUA WELLS (380-106529-1)	7/29/24	09:55 Hawaiian		Water			X	X	X	X		6	initial volume (500ml) and final volume (2ml). MRLs are needed.
MOANALUA WELLS (380-106529-1MS)	7/29/24	09:55 Hawaiian	MS	Water			X	X	X	X		6	initial volume (500ml) and final volume (2ml). MRLs are needed.
MOANALUA WELLS (380-106529-1MSD)	7/29/24	09:55 Hawaiian	MSD	Water			X	X	X	X		6	initial volume (500ml) and final volume (2ml). MRLs are needed.
TB: MOANALUA WELLS (380-106529-2)	7/29/24	09:55 Hawaiian		Water							X	2	MRLs are needed.
HALAWA WELLS UNITS 1 & 2 P1 (380-106529-3)	7/29/24	10:27 Hawaiian		Water			X	X	X	X		7	initial volume (500ml) and final volume (2ml). MRLs are needed.
TB: HALAWA WELLS UNITS 1 & 2 P1 (380-106529-4)	7/29/24	10:27 Hawaiian		Water							X	2	MRLs are needed.

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

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

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	8/1/24 1100	[illegible]	[signature]	8/1/24 11.00	FE
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks: 5c12 1 5/1 5 1 0/1 0

Ver: 04/02/2024

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-106529-1

Login Number: 106529
List Number: 1
Creator: Do, Michelle

List Source: Eurofins Eaton Analytical Pomona

Question	Answer	Comment
The coolers custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
Samples were received on ice.	True	
Cooler(s) Temperature is acceptable.	True	
Cooler(s) Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and is legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	MOANALUA: 1 of 5 vials for method 8015 rec'd broken
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
ClO4 headspace requirement met (>50% for CA, >30% for other states).	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-106529-1

Login Number: 106529
List Number: 2
Creator: Khana, Piyush

List Source: Eurofins Calscience
List Creation: 08/01/24 03:43 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	1.5
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	