eurofins | Environment Testing

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 9/6/2024 6:26:41 PM

JOB DESCRIPTION

RED-HILL
Weekly
RUSH Weekly Red Hill

JOB NUMBER

380-108696-1

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

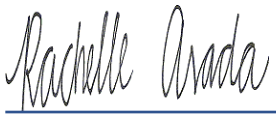
This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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



Generated
9/6/2024 6:26:41 PM

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

Table of Contents

Definitions/Glossary

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

Job ID: 380-108696-1
SDG: Weekly

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*3	ISTD response or retention time outside acceptable limits.
^3+	Reporting Limit Check Standard is outside acceptance limits, high biased
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.

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 VOA

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

GC Semi VOA

Qualifier	Qualifier Description
^3+	Reporting Limit Check Standard is outside acceptance limits, high biased

Glossary

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

Job Narrative
380-108696-1

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 8/14/2024 9:38 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 1.3°C, 2.2°C, 3.2°C and 3.6°C.

GC/MS Semi VOA
Method 625.1 SIM: The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 570-471988 and analytical batch 570-472524 recovered outside control limits for multiple compounds. The LCS/LCSD was re-prep/re-run. The LCS/LCSD failed low on 2nd attempt. The HT had expired therefore, no re-extraction. The data excluded due to this QC failure.

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: The method reporting limit check (MRL) for preparation batch 570-471628 and analytical batch 570-473675 recovered outside control limits for the following analytes: C10-C28. These analytes were biased high in the MRL and were not detected in the associated samples; therefore, the data have been reported.

Method 8015B_DRO_LL_CS: The following sample(s) was re-prepared outside of preparation holding time due to reworked to confirm the result. Data excluded due to this. MOANALUA WELLS (331-223-TP202).

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: 380-108696-1
SDG: Weekly

Client Sample ID: MOANALUA WELLS (331-223-TP202) — Lab Sample ID: 380-108696-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Dieldrin	0.027		0.0097		ug/L	1		525.2	Total/NA

Client Sample ID: TB: MOANALUA WELLS (331-223-TP202) — Lab Sample ID: 380-108696-2

No Detections.

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065) — Lab Sample ID: 380-108696-3

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Dieldrin	0.038		0.0097		ug/L	1		525.2	Total/NA
Heptachlor epoxide (isomer B)	0.013		0.0097		ug/L	1		525.2	Total/NA

Client Sample ID: TB: HALAWA WELLS UNITS 1&2 (331-206-TP065) — Lab Sample ID: 380-108696-4

No Detections.

This Detection Summary does not include radiochemical test results.

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

Job ID: 380-108696-1
SDG: Weekly

Client Sample ID: MOANALUA WELLS (331-223-TP202)
Date Collected: 08/12/24 09:32
Date Received: 08/14/24 09:38

Lab Sample ID: 380-108696-1
Matrix: Drinking Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:06	1
2,4'-DDD	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:06	1
2,4'-DDE	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:06	1
2,4'-DDT	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:06	1
2,4-Dinitrotoluene	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:06	1
2,6-Dinitrotoluene	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:06	1
2-Methylnaphthalene	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:06	1
4,4'-DDD	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:06	1
4,4'-DDE	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:06	1
4,4'-DDT	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:06	1
Acenaphthene	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:06	1
Acenaphthylene	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:06	1
Acetochlor	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:06	1
Alachlor	<0.048		0.048		ug/L		08/16/24 14:30	08/18/24 16:06	1
alpha-BHC	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:06	1
alpha-Chlordane	<0.048		0.048		ug/L		08/16/24 14:30	08/18/24 16:06	1
Anthracene	<0.020		0.020		ug/L		08/19/24 11:50	08/21/24 13:04	1
Atrazine	<0.048		0.048		ug/L		08/16/24 14:30	08/18/24 16:06	1
Benz(a)anthracene	<0.048		0.048		ug/L		08/16/24 14:30	08/18/24 16:06	1
Benzo[a]pyrene	<0.019		0.019		ug/L		08/16/24 14:30	08/18/24 16:06	1
Benzo[b]fluoranthene	<0.019		0.019		ug/L		08/16/24 14:30	08/18/24 16:06	1
Benzo[g,h,i]perylene	<0.048		0.048		ug/L		08/16/24 14:30	08/18/24 16:06	1
Benzo[k]fluoranthene	<0.019		0.019		ug/L		08/16/24 14:30	08/18/24 16:06	1
beta-BHC	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:06	1
Bis(2-ethylhexyl) phthalate	<0.58		0.58		ug/L		08/16/24 14:30	08/18/24 16:06	1
Bromacil	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:06	1
Butachlor	<0.048	^3+	0.048		ug/L		08/16/24 14:30	08/18/24 16:06	1
Butylbenzylphthalate	<0.48		0.48		ug/L		08/16/24 14:30	08/18/24 16:06	1
Chlorobenzilate	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:06	1
Chloroneb	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:06	1
Chlorothalonil (Draconil, Bravo)	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:06	1
Chlorpyrifos	<0.048		0.048		ug/L		08/16/24 14:30	08/18/24 16:06	1
Chrysene	<0.019		0.019		ug/L		08/16/24 14:30	08/18/24 16:06	1
delta-BHC	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:06	1
Di(2-ethylhexyl)adipate	<0.58		0.58		ug/L		08/16/24 14:30	08/18/24 16:06	1
Dibenz(a,h)anthracene	<0.048		0.048		ug/L		08/16/24 14:30	08/18/24 16:06	1
Diclorvos (DDVP)	<0.048		0.048		ug/L		08/16/24 14:30	08/18/24 16:06	1
Dieldrin	**0.027**		0.0097		ug/L		08/16/24 14:30	08/18/24 16:06	1
Diethylphthalate	<0.48		0.48		ug/L		08/16/24 14:30	08/18/24 16:06	1
Dimethylphthalate	<0.48		0.48		ug/L		08/16/24 14:30	08/18/24 16:06	1
Di-n-butyl phthalate	<0.97		0.97		ug/L		08/16/24 14:30	08/18/24 16:06	1
Di-n-octyl phthalate	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:06	1
Endosulfan I (Alpha)	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:06	1
Endosulfan II (Beta)	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:06	1
Endosulfan sulfate	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:06	1
Endrin	<0.0097		0.0097		ug/L		08/16/24 14:30	08/18/24 16:06	1
Endrin aldehyde	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:06	1
EPTC	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:06	1
Fluoranthene	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:06	1

Client Sample ID: MOANALUA WELLS (331-223-TP202)
Date Collected: 08/12/24 09:32
Date Received: 08/14/24 09:38

Lab Sample ID: 380-108696-1
Matrix: Drinking Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	<0.048		0.048		ug/L		08/16/24 14:30	08/18/24 16:06	1
gamma-Chlordane	<0.048		0.048		ug/L		08/16/24 14:30	08/18/24 16:06	1
Heptachlor	<0.0097		0.0097		ug/L		08/16/24 14:30	08/18/24 16:06	1
Heptachlor epoxide (isomer B)	<0.0097		0.0097		ug/L		08/16/24 14:30	08/18/24 16:06	1
Hexachlorobenzene	<0.048		0.048		ug/L		08/16/24 14:30	08/18/24 16:06	1
Hexachlorocyclopentadiene	<0.048		0.048		ug/L		08/16/24 14:30	08/18/24 16:06	1
Indeno[1,2,3-cd]pyrene	<0.048		0.048		ug/L		08/16/24 14:30	08/18/24 16:06	1
Isophorone	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:06	1
Lindane	<0.0097	^3+	0.0097		ug/L		08/16/24 14:30	08/18/24 16:06	1
Malathion	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:06	1
Methoxychlor	<0.048	^3+	0.048		ug/L		08/16/24 14:30	08/18/24 16:06	1
Metolachlor	<0.048		0.048		ug/L		08/16/24 14:30	08/18/24 16:06	1
Molinate	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:06	1
Naphthalene	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:06	1
Parathion	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:06	1
Pendimethalin (Penoxaline)	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:06	1
Phenanthrene	<0.039		0.039		ug/L		08/16/24 14:30	08/18/24 16:06	1
Propachlor	<0.048		0.048		ug/L		08/16/24 14:30	08/18/24 16:06	1
Pyrene	<0.048		0.048		ug/L		08/16/24 14:30	08/18/24 16:06	1
Simazine	<0.048		0.048		ug/L		08/16/24 14:30	08/18/24 16:06	1
Terbacil	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:06	1
Terbuthylazine	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:06	1
Thiobencarb	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:06	1
Total Permethrin (mixed isomers)	<0.19		0.19		ug/L		08/16/24 14:30	08/18/24 16:06	1
trans-Nonachlor	<0.048		0.048		ug/L		08/16/24 14:30	08/18/24 16:06	1
Trifluralin	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:06	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Hexazinone	*0.13*		*ug/L*		*8.15*	*51235-04-2*	*08/16/24 14:30*	*08/18/24 16:06*	*1*
Tentatively Identified Compound	*None*		*ug/L*			*N/A*	*08/16/24 14:30*	*08/18/24 16:06*	*1*
Tentatively Identified Compound	*None*		*ug/L*			*N/A*	*08/19/24 11:50*	*08/21/24 13:04*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*93*		*70 - 130*	*08/16/24 14:30*	*08/18/24 16:06*	*1*
2-Nitro-m-xylene	*99*		*70 - 130*	*08/19/24 11:50*	*08/21/24 13:04*	*1*
Perylene-d12	*96*		*70 - 130*	*08/16/24 14:30*	*08/18/24 16:06*	*1*
Perylene-d12	*100*		*70 - 130*	*08/19/24 11:50*	*08/21/24 13:04*	*1*
Triphenylphosphate	*108*		*70 - 130*	*08/16/24 14:30*	*08/18/24 16:06*	*1*
Triphenylphosphate	*108*		*70 - 130*	*08/19/24 11:50*	*08/21/24 13:04*	*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			08/19/24 20:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*79*		*38 - 134*		*08/19/24 20:24*	*1*

Client Sample ID: TB: MOANALUA WELLS (331-223-TP202)

Lab Sample ID: 380-108696-2
Date Collected: 08/12/24 09:32
Matrix: Water
Date Received: 08/14/24 09:38

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			08/19/24 22:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*74*		*38 - 134*		*08/19/24 22:20*	*1*

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065)

Lab Sample ID: 380-108696-3
Date Collected: 08/12/24 10:05
Matrix: Drinking Water
Date Received: 08/14/24 09:38

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:26	1
2,4'-DDD	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:26	1
2,4'-DDE	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:26	1
2,4'-DDT	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:26	1
2,4-Dinitrotoluene	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:26	1
2,6-Dinitrotoluene	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:26	1
2-Methylnaphthalene	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:26	1
4,4'-DDD	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:26	1
4,4'-DDE	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:26	1
4,4'-DDT	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:26	1
Acenaphthene	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:26	1
Acenaphthylene	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:26	1
Acetochlor	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:26	1
Alachlor	<0.048		0.048		ug/L		08/16/24 14:30	08/18/24 16:26	1
alpha-BHC	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:26	1
alpha-Chlordane	<0.048		0.048		ug/L		08/16/24 14:30	08/18/24 16:26	1
Anthracene	<0.019		0.019		ug/L		08/19/24 11:50	08/21/24 13:24	1
Atrazine	<0.048		0.048		ug/L		08/16/24 14:30	08/18/24 16:26	1
Benz(a)anthracene	<0.048		0.048		ug/L		08/16/24 14:30	08/18/24 16:26	1
Benzo[a]pyrene	<0.019		0.019		ug/L		08/16/24 14:30	08/18/24 16:26	1
Benzo[b]fluoranthene	<0.019		0.019		ug/L		08/16/24 14:30	08/18/24 16:26	1
Benzo[g,h,i]perylene	<0.048		0.048		ug/L		08/16/24 14:30	08/18/24 16:26	1
Benzo[k]fluoranthene	<0.019		0.019		ug/L		08/16/24 14:30	08/18/24 16:26	1
beta-BHC	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:26	1
Bis(2-ethylhexyl) phthalate	<0.58		0.58		ug/L		08/16/24 14:30	08/18/24 16:26	1
Bromacil	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:26	1
Butachlor	<0.048	^3+	0.048		ug/L		08/16/24 14:30	08/18/24 16:26	1
Butylbenzylphthalate	<0.48		0.48		ug/L		08/16/24 14:30	08/18/24 16:26	1
Chlorobenzilate	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:26	1
Chloroneb	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:26	1
Chlorothalonil (Draconil, Bravo)	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:26	1
Chlorpyrifos	<0.048		0.048		ug/L		08/16/24 14:30	08/18/24 16:26	1
Chrysene	<0.019		0.019		ug/L		08/16/24 14:30	08/18/24 16:26	1
delta-BHC	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:26	1
Di(2-ethylhexyl)adipate	<0.58		0.58		ug/L		08/16/24 14:30	08/18/24 16:26	1
Dibenz(a,h)anthracene	<0.048		0.048		ug/L		08/16/24 14:30	08/18/24 16:26	1
Diclorvos (DDVP)	<0.048		0.048		ug/L		08/16/24 14:30	08/18/24 16:26	1
Dieldrin	**0.038**		0.0097		ug/L		08/16/24 14:30	08/18/24 16:26	1

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065)
Date Collected: 08/12/24 10:05
Date Received: 08/14/24 09:38

Lab Sample ID: 380-108696-3
Matrix: Drinking Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diethylphthalate	<0.48		0.48		ug/L		08/16/24 14:30	08/18/24 16:26	1
Dimethylphthalate	<0.48		0.48		ug/L		08/16/24 14:30	08/18/24 16:26	1
Di-n-butyl phthalate	<0.97		0.97		ug/L		08/16/24 14:30	08/18/24 16:26	1
Di-n-octyl phthalate	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:26	1
Endosulfan I (Alpha)	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:26	1
Endosulfan II (Beta)	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:26	1
Endosulfan sulfate	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:26	1
Endrin	<0.0097		0.0097		ug/L		08/16/24 14:30	08/18/24 16:26	1
Endrin aldehyde	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:26	1
EPTC	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:26	1
Fluoranthene	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:26	1
Fluorene	<0.048		0.048		ug/L		08/16/24 14:30	08/18/24 16:26	1
gamma-Chlordane	<0.048		0.048		ug/L		08/16/24 14:30	08/18/24 16:26	1
Heptachlor	<0.0097		0.0097		ug/L		08/16/24 14:30	08/18/24 16:26	1
Heptachlor epoxide (isomer B)	**0.013**		0.0097		ug/L		08/16/24 14:30	08/18/24 16:26	1
Hexachlorobenzene	<0.048		0.048		ug/L		08/16/24 14:30	08/18/24 16:26	1
Hexachlorocyclopentadiene	<0.048		0.048		ug/L		08/16/24 14:30	08/18/24 16:26	1
Indeno[1,2,3-cd]pyrene	<0.048		0.048		ug/L		08/16/24 14:30	08/18/24 16:26	1
Isophorone	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:26	1
Lindane	<0.0097	^3+	0.0097		ug/L		08/16/24 14:30	08/18/24 16:26	1
Malathion	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:26	1
Methoxychlor	<0.048	^3+	0.048		ug/L		08/16/24 14:30	08/18/24 16:26	1
Metolachlor	<0.048		0.048		ug/L		08/16/24 14:30	08/18/24 16:26	1
Molinate	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:26	1
Naphthalene	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:26	1
Parathion	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:26	1
Pendimethalin (Penoxaline)	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:26	1
Phenanthrene	<0.039		0.039		ug/L		08/16/24 14:30	08/18/24 16:26	1
Propachlor	<0.048		0.048		ug/L		08/16/24 14:30	08/18/24 16:26	1
Pyrene	<0.048		0.048		ug/L		08/16/24 14:30	08/18/24 16:26	1
Simazine	<0.048		0.048		ug/L		08/16/24 14:30	08/18/24 16:26	1
Terbacil	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:26	1
Terbuthylazine	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:26	1
Thiobencarb	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:26	1
Total Permethrin (mixed isomers)	<0.19		0.19		ug/L		08/16/24 14:30	08/18/24 16:26	1
trans-Nonachlor	<0.048		0.048		ug/L		08/16/24 14:30	08/18/24 16:26	1
Trifluralin	<0.097		0.097		ug/L		08/16/24 14:30	08/18/24 16:26	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Hexazinone	*0.13*		*ug/L*		*8.15*	*51235-04-2*	*08/16/24 14:30*	*08/18/24 16:26*	*1*
Tentatively Identified Compound	*None*		*ug/L*			*N/A*	*08/16/24 14:30*	*08/18/24 16:26*	*1*
Tentatively Identified Compound	*None*		*ug/L*			*N/A*	*08/19/24 11:50*	*08/21/24 13:24*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*92*		*70 - 130*	*08/16/24 14:30*	*08/18/24 16:26*	*1*
2-Nitro-m-xylene	*101*		*70 - 130*	*08/19/24 11:50*	*08/21/24 13:24*	*1*
Perylene-d12	*98*		*70 - 130*	*08/16/24 14:30*	*08/18/24 16:26*	*1*
Perylene-d12	*98*		*70 - 130*	*08/19/24 11:50*	*08/21/24 13:24*	*1*
Triphenylphosphate	*109*		*70 - 130*	*08/16/24 14:30*	*08/18/24 16:26*	*1*

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065)

Lab Sample ID: 380-108696-3

Date Collected: 08/12/24 10:05
Date Received: 08/14/24 09:38

Matrix: Drinking Water

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Triphenylphosphate	*104*		*70 - 130*	*08/19/24 11:50*	*08/21/24 13:24*	*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			08/19/24 20:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*77*		*38 - 134*		*08/19/24 20:47*	*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		08/16/24 14:30	08/23/24 14:43	1
Motor Oil Range Organics [C24-C36]	<26		26	ug/L		08/16/24 14:30	08/23/24 14:43	1
C8-C18	<26		26	ug/L		08/16/24 14:30	08/23/24 14:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*98*		*60 - 130*	*08/16/24 14:30*	*08/23/24 14:43*	*1*

Client Sample ID: TB: HALAWA WELLS UNITS 1&2 (331-206-TP065)

Lab Sample ID: 380-108696-4

Date Collected: 08/12/24 10:05
Date Received: 08/14/24 09:38

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			08/19/24 22:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*38 - 134*		*08/19/24 22:44*	*1*

Action Limit Summary

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

Job ID: 380-108696-1
SDG: Weekly

Client Sample ID: MOANALUA WELLS (331-223-TP202) — Lab Sample ID: 380-108696-1

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	<0.048		ug/L	2	0.048	525.2	Total/NA
Atrazine	<0.048		ug/L	3	0.048	525.2	Total/NA
Benzo[a]pyrene	<0.019		ug/L	0.2	0.019	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	<0.58		ug/L	6	0.58	525.2	Total/NA
Di(2-ethylhexyl)adipate	<0.58		ug/L	400	0.58	525.2	Total/NA
Endrin	<0.0097		ug/L	2	0.0097	525.2	Total/NA
Heptachlor	<0.0097		ug/L	0.4	0.0097	525.2	Total/NA
Heptachlor epoxide (isomer B)	<0.0097		ug/L	0.2	0.0097	525.2	Total/NA
Hexachlorobenzene	<0.048		ug/L	1	0.048	525.2	Total/NA
Hexachlorocyclopentadiene	<0.048		ug/L	50	0.048	525.2	Total/NA
Lindane	<0.0097	^3+	ug/L	0.2	0.0097	525.2	Total/NA
Methoxychlor	<0.048	^3+	ug/L	40	0.048	525.2	Total/NA
Simazine	<0.048		ug/L	4	0.048	525.2	Total/NA

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065) — Lab Sample ID: 380-108696-3

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	<0.048		ug/L	2	0.048	525.2	Total/NA
Atrazine	<0.048		ug/L	3	0.048	525.2	Total/NA
Benzo[a]pyrene	<0.019		ug/L	0.2	0.019	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	<0.58		ug/L	6	0.58	525.2	Total/NA
Di(2-ethylhexyl)adipate	<0.58		ug/L	400	0.58	525.2	Total/NA
Endrin	<0.0097		ug/L	2	0.0097	525.2	Total/NA
Heptachlor	<0.0097		ug/L	0.4	0.0097	525.2	Total/NA
Heptachlor epoxide (isomer B)	0.013		ug/L	0.2	0.0097	525.2	Total/NA
Hexachlorobenzene	<0.048		ug/L	1	0.048	525.2	Total/NA
Hexachlorocyclopentadiene	<0.048		ug/L	50	0.048	525.2	Total/NA
Lindane	<0.0097	^3+	ug/L	0.2	0.0097	525.2	Total/NA
Methoxychlor	<0.048	^3+	ug/L	40	0.048	525.2	Total/NA
Simazine	<0.048		ug/L	4	0.048	525.2	Total/NA

Surrogate Summary

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

Job ID: 380-108696-1
SDG: Weekly

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

Matrix: Drinking 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)
380-108696-1	MOANALUA WELLS (331-223-T	93	96	108
380-108696-1	MOANALUA WELLS (331-223-TP202)	99	100	108
380-108696-3	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065)	92	98	109
380-108696-3	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065)	101	98	104

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)		
		2NMX	PRY	TPP
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
380-108450-BG-1-A MS	Matrix Spike	100	106	110
380-108450-BH-1-A MSD	Matrix Spike Duplicate	97	101	107
380-108577-R-1-A DU	Duplicate	101	16 S1- *3	112
380-108692-B-1-A MS	Matrix Spike	96	100	114
LCS 380-104031/23-A	Lab Control Sample	96	99	117
LCS 380-104353/23-A	Lab Control Sample	100	105	113
MB 380-104031/21-A	Method Blank	96	98	108
MB 380-104353/21-A	Method Blank	100	98	104
MRL 380-104031/22-A	Lab Control Sample	96	97	112
MRL 380-104353/22-A	Lab Control Sample	98	97	104

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)
		BFB1
Lab Sample ID	Client Sample ID	(38-134)
380-108696-1	MOANALUA WELLS (331-223-T	79
380-108696-3	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065)	77
380-108696-3 MS	HALAWA WELLS UNITS 1 & 2 (331-206-TP065)	85
380-108696-3 MSD	HALAWA WELLS UNITS 1 & 2 (331-206-TP065)	88

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Surrogate Summary

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

Job ID: 380-108696-1
SDG: Weekly

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

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

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	BFB1 (38-134)
380-108696-2	TB: MOANALUA WELLS (331-2	74
380-108696-4	TB: HALAWA WELLS UNITS 1&2 (331-206-TP065)	80
LCS 570-472071/3	Lab Control Sample	83
LCSD 570-472071/4	Lab Control Sample Dup	83
MB 570-472071/6	Method Blank	80
MRL 570 472071/5	Lab Control Sample	74

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

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

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

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	OTCSN1 (60-130)
380-108696-3	HALAWA WELLS UNITS 1 & 2 F	98
380-108696-3 MS	HALAWA WELLS UNITS 1 & 2 (331-206-TP065)	97
380-108696-3 MSD	HALAWA WELLS UNITS 1 & 2 (331-206-TP065)	99

Surrogate Legend

OTCSN = n-Octacosane (Surr)

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

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

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	OTCSN1 (60-130)
LCS 570-471628/2-A	Lab Control Sample	95
LCSD 570-471628/3-A	Lab Control Sample Dup	99
MB 570-471628/1-A	Method Blank	94
MRL 570-471628/4-A	Lab Control Sample	92

Surrogate Legend

OTCSN = n-Octacosane (Surr)

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

Lab Sample ID: MB 380-104031/21-A
Matrix: Water
Analysis Batch: 104204

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 104031

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.097		0.097		ug/L		08/16/24 12:40	08/18/24 09:53	1
2,4'-DDD	<0.097		0.097		ug/L		08/16/24 12:40	08/18/24 09:53	1
2,4'-DDE	<0.097		0.097		ug/L		08/16/24 12:40	08/18/24 09:53	1
2,4'-DDT	<0.097		0.097		ug/L		08/16/24 12:40	08/18/24 09:53	1
2,4-Dinitrotoluene	<0.097		0.097		ug/L		08/16/24 12:40	08/18/24 09:53	1
2,6-Dinitrotoluene	<0.097		0.097		ug/L		08/16/24 12:40	08/18/24 09:53	1
2-Methylnaphthalene	<0.097		0.097		ug/L		08/16/24 12:40	08/18/24 09:53	1
4,4'-DDD	<0.097		0.097		ug/L		08/16/24 12:40	08/18/24 09:53	1
4,4'-DDE	<0.097		0.097		ug/L		08/16/24 12:40	08/18/24 09:53	1
4,4'-DDT	<0.097		0.097		ug/L		08/16/24 12:40	08/18/24 09:53	1
Acenaphthene	<0.097		0.097		ug/L		08/16/24 12:40	08/18/24 09:53	1
Acenaphthylene	<0.097		0.097		ug/L		08/16/24 12:40	08/18/24 09:53	1
Acetochlor	<0.097		0.097		ug/L		08/16/24 12:40	08/18/24 09:53	1
Alachlor	<0.049		0.049		ug/L		08/16/24 12:40	08/18/24 09:53	1
alpha-BHC	<0.097		0.097		ug/L		08/16/24 12:40	08/18/24 09:53	1
alpha-Chlordane	<0.049		0.049		ug/L		08/16/24 12:40	08/18/24 09:53	1
Atrazine	<0.049		0.049		ug/L		08/16/24 12:40	08/18/24 09:53	1
Benz(a)anthracene	<0.049		0.049		ug/L		08/16/24 12:40	08/18/24 09:53	1
Benzo[a]pyrene	<0.019		0.019		ug/L		08/16/24 12:40	08/18/24 09:53	1
Benzo[b]fluoranthene	<0.019		0.019		ug/L		08/16/24 12:40	08/18/24 09:53	1
Benzo[g,h,i]perylene	<0.049		0.049		ug/L		08/16/24 12:40	08/18/24 09:53	1
Benzo[k]fluoranthene	<0.019		0.019		ug/L		08/16/24 12:40	08/18/24 09:53	1
beta-BHC	<0.097		0.097		ug/L		08/16/24 12:40	08/18/24 09:53	1
Bis(2-ethylhexyl) phthalate	<0.58		0.58		ug/L		08/16/24 12:40	08/18/24 09:53	1
Bromacil	<0.097		0.097		ug/L		08/16/24 12:40	08/18/24 09:53	1
Butachlor	<0.049		0.049		ug/L		08/16/24 12:40	08/18/24 09:53	1
Butylbenzylphthalate	<0.49		0.49		ug/L		08/16/24 12:40	08/18/24 09:53	1
Chlorobenzilate	<0.097		0.097		ug/L		08/16/24 12:40	08/18/24 09:53	1
Chloroneb	<0.097		0.097		ug/L		08/16/24 12:40	08/18/24 09:53	1
Chlorothalonil (Draconil, Bravo)	<0.097		0.097		ug/L		08/16/24 12:40	08/18/24 09:53	1
Chlorpyrifos	<0.049		0.049		ug/L		08/16/24 12:40	08/18/24 09:53	1
Chrysene	<0.019		0.019		ug/L		08/16/24 12:40	08/18/24 09:53	1
delta-BHC	<0.097		0.097		ug/L		08/16/24 12:40	08/18/24 09:53	1
Di(2-ethylhexyl)adipate	<0.58		0.58		ug/L		08/16/24 12:40	08/18/24 09:53	1
Dibenz(a,h)anthracene	<0.049		0.049		ug/L		08/16/24 12:40	08/18/24 09:53	1
Diclorvos (DDVP)	<0.049		0.049		ug/L		08/16/24 12:40	08/18/24 09:53	1
Dieldrin	<0.0097		0.0097		ug/L		08/16/24 12:40	08/18/24 09:53	1
Diethylphthalate	<0.49		0.49		ug/L		08/16/24 12:40	08/18/24 09:53	1
Dimethylphthalate	<0.49		0.49		ug/L		08/16/24 12:40	08/18/24 09:53	1
Di-n-butyl phthalate	<0.97		0.97		ug/L		08/16/24 12:40	08/18/24 09:53	1
Di-n-octyl phthalate	<0.097		0.097		ug/L		08/16/24 12:40	08/18/24 09:53	1
Endosulfan I (Alpha)	<0.097		0.097		ug/L		08/16/24 12:40	08/18/24 09:53	1
Endosulfan II (Beta)	<0.097		0.097		ug/L		08/16/24 12:40	08/18/24 09:53	1
Endosulfan sulfate	<0.097		0.097		ug/L		08/16/24 12:40	08/18/24 09:53	1
Endrin	<0.0097		0.0097		ug/L		08/16/24 12:40	08/18/24 09:53	1
Endrin aldehyde	<0.097		0.097		ug/L		08/16/24 12:40	08/18/24 09:53	1
EPTC	<0.097		0.097		ug/L		08/16/24 12:40	08/18/24 09:53	1
Fluoranthene	<0.097		0.097		ug/L		08/16/24 12:40	08/18/24 09:53	1

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

Lab Sample ID: MB 380-104031/21-A
Matrix: Water
Analysis Batch: 104204

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 104031

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	<0.049		0.049		ug/L		08/16/24 12:40	08/18/24 09:53	1
gamma-Chlordane	<0.049		0.049		ug/L		08/16/24 12:40	08/18/24 09:53	1
Heptachlor	<0.0097		0.0097		ug/L		08/16/24 12:40	08/18/24 09:53	1
Heptachlor epoxide (isomer B)	<0.0097		0.0097		ug/L		08/16/24 12:40	08/18/24 09:53	1
Hexachlorobenzene	<0.049		0.049		ug/L		08/16/24 12:40	08/18/24 09:53	1
Hexachlorocyclopentadiene	<0.049		0.049		ug/L		08/16/24 12:40	08/18/24 09:53	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049		ug/L		08/16/24 12:40	08/18/24 09:53	1
Isophorone	<0.097		0.097		ug/L		08/16/24 12:40	08/18/24 09:53	1
Lindane	<0.0097		0.0097		ug/L		08/16/24 12:40	08/18/24 09:53	1
Malathion	<0.097		0.097		ug/L		08/16/24 12:40	08/18/24 09:53	1
Methoxychlor	<0.049		0.049		ug/L		08/16/24 12:40	08/18/24 09:53	1
Metolachlor	<0.049		0.049		ug/L		08/16/24 12:40	08/18/24 09:53	1
Molinate	<0.097		0.097		ug/L		08/16/24 12:40	08/18/24 09:53	1
Naphthalene	<0.097		0.097		ug/L		08/16/24 12:40	08/18/24 09:53	1
Parathion	<0.097		0.097		ug/L		08/16/24 12:40	08/18/24 09:53	1
Pendimethalin (Penoxaline)	<0.097		0.097		ug/L		08/16/24 12:40	08/18/24 09:53	1
Phenanthrene	<0.039		0.039		ug/L		08/16/24 12:40	08/18/24 09:53	1
Propachlor	<0.049		0.049		ug/L		08/16/24 12:40	08/18/24 09:53	1
Pyrene	<0.049		0.049		ug/L		08/16/24 12:40	08/18/24 09:53	1
Simazine	<0.049		0.049		ug/L		08/16/24 12:40	08/18/24 09:53	1
Terbacil	<0.097		0.097		ug/L		08/16/24 12:40	08/18/24 09:53	1
Terbuthylazine	<0.097		0.097		ug/L		08/16/24 12:40	08/18/24 09:53	1
Thiobencarb	<0.097		0.097		ug/L		08/16/24 12:40	08/18/24 09:53	1
Total Permethrin (mixed isomers)	<0.19		0.19		ug/L		08/16/24 12:40	08/18/24 09:53	1
trans-Nonachlor	<0.049		0.049		ug/L		08/16/24 12:40	08/18/24 09:53	1
Trifluralin	<0.097		0.097		ug/L		08/16/24 12:40	08/18/24 09:53	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*0.543*	*T J*	*ug/L*		*9.81*	*N/A*	*08/16/24 12:40*	*08/18/24 09:53*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*96*		*70 - 130*	*08/16/24 12:40*	*08/18/24 09:53*	*1*
Perylene-d12	*98*		*70 - 130*	*08/16/24 12:40*	*08/18/24 09:53*	*1*
Triphenylphosphate	*108*		*70 - 130*	*08/16/24 12:40*	*08/18/24 09:53*	*1*

Lab Sample ID: LCS 380-104031/23-A
Matrix: Water
Analysis Batch: 104204

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 104031

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1-Methylnaphthalene			1.95	1.94		ug/L		99	70 - 130		
2,4'-DDD			1.95	2.20		ug/L		113	70 - 130		
2,4'-DDE			1.95	2.07		ug/L		106	70 - 130		
2,4'-DDT			1.95	1.92		ug/L		98	70 - 130		
2,4-Dinitrotoluene			1.95	1.97		ug/L		101	70 - 130		
2,6-Dinitrotoluene			1.95	1.92		ug/L		98	70 - 130		
2-Methylnaphthalene			1.95	1.95		ug/L		100	70 - 130		
4,4'-DDD			1.95	2.01		ug/L		103	70 - 130		

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

Lab Sample ID: LCS 380-104031/23-A
Matrix: Water
Analysis Batch: 104204

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 104031

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
4,4'-DDE	1.95	2.19		ug/L		112	70 - 130
4,4'-DDT	1.95	1.89		ug/L		97	70 - 130
Acenaphthene	1.95	1.97		ug/L		101	70 - 130
Acenaphthylene	1.95	1.99		ug/L		102	70 - 130
Acetochlor	1.95	2.26		ug/L		116	70 - 130
Alachlor	1.95	2.30		ug/L		118	70 - 130
alpha-BHC	1.95	2.11		ug/L		108	70 - 130
alpha-Chlordane	1.95	2.19		ug/L		112	70 - 130
Atrazine	1.95	2.12		ug/L		109	70 - 130
Benz(a)anthracene	1.95	1.94		ug/L		99	70 - 130
Benzo[a]pyrene	1.95	1.55		ug/L		80	70 - 130
Benzo[b]fluoranthene	1.95	2.16		ug/L		111	70 - 130
Benzo[g,h,i]perylene	1.95	1.91		ug/L		98	70 - 130
Benzo[k]fluoranthene	1.95	2.13		ug/L		109	70 - 130
beta-BHC	1.95	2.15		ug/L		110	70 - 130
Bis(2-ethylhexyl) phthalate	1.95	1.74		ug/L		89	70 - 130
Bromacil	1.95	2.05		ug/L		105	70 - 130
Butachlor	1.95	2.19		ug/L		112	70 - 130
Butylbenzylphthalate	1.95	2.22		ug/L		114	70 - 130
Chlorobenzilate	1.95	2.14		ug/L		110	70 - 130
Chloroneb	1.95	2.04		ug/L		104	70 - 130
Chlorothalonil (Draconil, Bravo)	1.95	2.10		ug/L		108	70 - 130
Chlorpyrifos	1.95	2.09		ug/L		107	70 - 130
Chrysene	1.95	2.13		ug/L		109	70 - 130
delta-BHC	1.95	2.16		ug/L		111	70 - 130
Di(2-ethylhexyl)adipate	1.95	1.85		ug/L		95	70 - 130
Dibenz(a,h)anthracene	1.95	1.90		ug/L		97	70 - 130
Diclorvos (DDVP)	1.95	1.91		ug/L		98	70 - 130
Dieldrin	1.95	2.09		ug/L		107	70 - 130
Diethylphthalate	1.95	2.15		ug/L		110	70 - 130
Dimethylphthalate	1.95	2.04		ug/L		105	70 - 130
Di-n-butyl phthalate	3.90	4.22		ug/L		108	70 - 130
Di-n-octyl phthalate	1.95	1.75		ug/L		89	70 - 130
Endosulfan I (Alpha)	1.95	2.07		ug/L		106	70 - 130
Endosulfan II (Beta)	1.95	2.23		ug/L		114	70 - 130
Endosulfan sulfate	1.95	2.08		ug/L		106	70 - 130
Endrin	1.95	2.09		ug/L		107	70 - 130
Endrin aldehyde	1.95	2.18		ug/L		112	60 - 130
EPTC	1.95	2.06		ug/L		105	70 - 130
Fluoranthene	1.95	2.33		ug/L		119	70 - 130
Fluorene	1.95	2.11		ug/L		108	70 - 130
gamma-Chlordane	1.95	2.19		ug/L		112	70 - 130
Heptachlor	1.95	2.02		ug/L		103	70 - 130
Heptachlor epoxide (isomer B)	1.95	2.41		ug/L		123	70 - 130
Hexachlorobenzene	1.95	2.02		ug/L		104	70 - 130
Hexachlorocyclopentadiene	1.95	1.70		ug/L		87	70 - 130
Indeno[1,2,3-cd]pyrene	1.95	1.91		ug/L		98	70 - 130
Isophorone	1.95	1.93		ug/L		99	70 - 130
Lindane	1.95	2.00		ug/L		103	70 - 130

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

Lab Sample ID: LCS 380-104031/23-A
Matrix: Water
Analysis Batch: 104204

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 104031

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Malathion	1.95	2.17		ug/L		111	70 - 130
Methoxychlor	1.95	2.15		ug/L		110	70 - 130
Metolachlor	1.95	2.33		ug/L		119	70 - 130
Molinate	1.95	2.12		ug/L		109	70 - 130
Naphthalene	1.95	1.86		ug/L		95	70 - 130
Parathion	1.95	2.19		ug/L		112	70 - 130
Pendimethalin (Penoxaline)	1.95	2.14		ug/L		110	70 - 130
Phenanthrene	1.95	1.99		ug/L		102	70 - 130
Propachlor	1.95	2.15		ug/L		110	70 - 130
Pyrene	1.95	2.06		ug/L		106	70 - 130
Simazine	1.95	2.10		ug/L		108	70 - 130
Terbacil	1.95	2.12		ug/L		109	70 - 130
Terbuthylazine	1.95	2.12		ug/L		109	70 - 130
Thiobencarb	1.95	2.31		ug/L		118	70 - 130
trans-Nonachlor	1.95	2.17		ug/L		111	70 - 130
Trifluralin	1.95	2.12		ug/L		108	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Nitro-m-xylene	*96*		*70 - 130*
Perylene-d12	*99*		*70 - 130*
Triphenylphosphate	*117*		*70 - 130*

Lab Sample ID: MRL 380-104031/22-A
Matrix: Water
Analysis Batch: 104204

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 104031

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	0.0972	0.101		ug/L		103	50 - 150
2,4'-DDD	0.0972	0.0994		ug/L		102	50 - 150
2,4'-DDE	0.0972	0.105		ug/L		108	50 - 150
2,4'-DDT	0.0972	0.118		ug/L		122	50 - 150
2,4-Dinitrotoluene	0.0972	0.108		ug/L		111	50 - 150
2,6-Dinitrotoluene	0.0972	0.109		ug/L		112	50 - 150
2-Methylnaphthalene	0.0972	0.0903	J	ug/L		93	50 - 150
4,4'-DDD	0.0972	0.125		ug/L		128	50 - 150
4,4'-DDE	0.0972	0.109		ug/L		112	50 - 150
4,4'-DDT	0.0972	0.117		ug/L		120	50 - 150
Acenaphthene	0.0972	0.0971		ug/L		100	50 - 150
Acenaphthylene	0.0972	0.0946	J	ug/L		97	50 - 150
Acetochlor	0.0972	0.117		ug/L		121	50 - 150
Alachlor	0.0486	0.0548		ug/L		113	50 - 150
alpha-BHC	0.0972	0.108		ug/L		111	50 - 150
alpha-Chlordane	0.0243	0.0322	J	ug/L		133	50 - 150
Atrazine	0.0486	0.0655		ug/L		135	50 - 150
Benz(a)anthracene	0.0486	0.0585		ug/L		120	50 - 150
Benzo[a]pyrene	0.0194	0.0198		ug/L		102	50 - 150
Benzo[b]fluoranthene	0.0194	0.0184	J	ug/L		94	50 - 150
Benzo[g,h,i]perylene	0.0486	0.0456	J	ug/L		94	50 - 150

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

Lab Sample ID: MRL 380-104031/22-A
Matrix: Water
Analysis Batch: 104204

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 104031

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Benzo[k]fluoranthene	0.0194	0.0173	J	ug/L		89	50 - 150
beta-BHC	0.0972	0.113		ug/L		116	50 - 150
Bis(2-ethylhexyl) phthalate	0.583	0.570	J	ug/L		98	50 - 150
Bromacil	0.0972	0.125		ug/L		129	50 - 150
Butachlor	0.0486	0.0761	^3+	ug/L		156	50 - 150
Butylbenzylphthalate	0.486	0.537		ug/L		110	50 - 150
Chlorobenzilate	0.0972	0.111		ug/L		114	50 - 150
Chloroneb	0.0972	0.115		ug/L		118	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0972	0.112		ug/L		115	50 - 150
Chlorpyrifos	0.0486	0.0726		ug/L		149	50 - 150
Chrysene	0.0194	0.0217		ug/L		111	50 - 150
delta-BHC	0.0972	0.112		ug/L		115	50 - 150
Di(2-ethylhexyl)adipate	0.583	0.633		ug/L		108	50 - 150
Dibenz(a,h)anthracene	0.0486	0.0464	J	ug/L		95	50 - 150
Diclorvos (DDVP)	0.0486	0.0432	J	ug/L		89	50 - 150
Dieldrin	0.00972	0.0142		ug/L		146	50 - 150
Diethylphthalate	0.486	0.535		ug/L		110	50 - 150
Dimethylphthalate	0.486	0.492		ug/L		101	50 - 150
Di-n-butyl phthalate	0.486	0.573	J	ug/L		118	49 - 243
Di-n-octyl phthalate	0.0972	0.111		ug/L		114	50 - 150
Endosulfan I (Alpha)	0.0972	0.104		ug/L		107	50 - 150
Endosulfan II (Beta)	0.0972	0.119		ug/L		122	50 - 150
Endosulfan sulfate	0.0972	0.113		ug/L		116	50 - 150
Endrin	0.00972	0.0140		ug/L		144	50 - 150
Endrin aldehyde	0.0972	0.133		ug/L		137	50 - 150
EPTC	0.0972	0.0908	J	ug/L		93	50 - 150
Fluoranthene	0.0972	0.112		ug/L		116	50 - 150
Fluorene	0.0486	0.0492		ug/L		101	50 - 150
gamma-Chlordane	0.0243	0.0312	J	ug/L		128	50 - 150
Heptachlor	0.00972	0.0113		ug/L		116	50 - 150
Heptachlor epoxide (isomer B)	0.00972	0.0114		ug/L		117	50 - 150
Hexachlorobenzene	0.0486	0.0466	J	ug/L		96	50 - 150
Hexachlorocyclopentadiene	0.0486	<0.037		ug/L		71	50 - 150
Indeno[1,2,3-cd]pyrene	0.0486	0.0434	J	ug/L		89	50 - 150
Isophorone	0.0972	0.121		ug/L		125	50 - 150
Lindane	0.00972	0.0162	^3+	ug/L		166	50 - 150
Malathion	0.0972	0.120		ug/L		123	50 - 150
Methoxychlor	0.0486	0.0738	^3+	ug/L		152	50 - 150
Metolachlor	0.0486	0.0621		ug/L		128	50 - 150
Molinate	0.0972	0.105		ug/L		108	50 - 150
Naphthalene	0.0972	0.0969	J	ug/L		100	50 - 150
Parathion	0.0972	0.0998		ug/L		103	50 - 150
Pendimethalin (Penoxaline)	0.0972	0.118		ug/L		121	50 - 150
Phenanthrene	0.0389	0.0452		ug/L		116	50 - 150
Propachlor	0.0486	0.0528		ug/L		109	50 - 150
Pyrene	0.0486	0.0668		ug/L		137	50 - 150
Simazine	0.0486	0.0699		ug/L		144	50 - 150
Terbacil	0.0972	0.122		ug/L		125	50 - 150
Terbuthylazine	0.0972	0.116		ug/L		120	50 - 150

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

Lab Sample ID: MRL 380-104031/22-A
Matrix: Water
Analysis Batch: 104204

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 104031

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
Thiobencarb			0.0972	0.115		ug/L		118	50 - 150		
trans-Nonachlor			0.0243	0.0311	J	ug/L		128	50 - 150		
Trifluralin			0.0972	0.116		ug/L		119	50 - 150		

Surrogate	*MRL %Recovery*	*MRL Qualifier*	*Limits*
2-Nitro-m-xylene	*96*		*70 - 130*
Perylene-d12	*97*		*70 - 130*
Triphenylphosphate	*112*		*70 - 130*

Lab Sample ID: 380-108692-B-1-A MS
Matrix: Water
Analysis Batch: 104204

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 104031

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
1-Methylnaphthalene	<0.097		1.97	1.95		ug/L		99	70 - 130		
2,4'-DDD	<0.097		1.97	2.21		ug/L		112	70 - 130		
2,4'-DDE	<0.097		1.97	2.13		ug/L		108	70 - 130		
2,4'-DDT	<0.097		1.97	2.03		ug/L		103	70 - 130		
2,4-Dinitrotoluene	<0.097		1.97	1.97		ug/L		100	70 - 130		
2,6-Dinitrotoluene	<0.097		1.97	1.91		ug/L		97	70 - 130		
2-Methylnaphthalene	<0.097		1.97	1.95		ug/L		99	70 - 130		
4,4'-DDD	<0.097		1.97	2.02		ug/L		103	70 - 130		
4,4'-DDE	<0.097		1.97	2.29		ug/L		117	70 - 130		
4,4'-DDT	<0.097		1.97	2.01		ug/L		102	70 - 130		
Acenaphthene	<0.097		1.97	1.98		ug/L		101	70 - 130		
Acenaphthylene	<0.097		1.97	2.08		ug/L		106	70 - 130		
Acetochlor	<0.097		1.97	2.27		ug/L		115	70 - 130		
Alachlor	<0.048		1.97	2.31		ug/L		117	70 - 130		
alpha-BHC	<0.097		1.97	2.10		ug/L		107	70 - 130		
alpha-Chlordane	<0.048		1.97	2.21		ug/L		112	70 - 130		
Atrazine	<0.048		1.97	2.09		ug/L		106	70 - 130		
Benz(a)anthracene	<0.048		1.97	2.17		ug/L		110	70 - 130		
Benzo[a]pyrene	<0.019		1.97	1.97		ug/L		100	70 - 130		
Benzo[b]fluoranthene	<0.019		1.97	2.14		ug/L		109	70 - 130		
Benzo[g,h,i]perylene	<0.048		1.97	2.06		ug/L		104	70 - 130		
Benzo[k]fluoranthene	<0.019		1.97	2.30		ug/L		117	70 - 130		
beta-BHC	<0.097		1.97	2.12		ug/L		108	70 - 130		
Bis(2-ethylhexyl) phthalate	<0.58		1.97	1.88		ug/L		95	70 - 130		
Bromacil	<0.097		1.97	2.03		ug/L		101	70 - 130		
Butachlor	<0.048	^3+	1.97	2.21		ug/L		112	70 - 130		
Butylbenzylphthalate	<0.48		1.97	2.19		ug/L		111	70 - 130		
Chlorobenzilate	<0.097		1.97	2.11		ug/L		107	70 - 130		
Chloroneb	<0.097		1.97	2.07		ug/L		105	70 - 130		
Chlorothalonil (Draconil, Bravo)	<0.097		1.97	2.12		ug/L		107	70 - 130		
Chlorpyrifos	<0.048		1.97	2.08		ug/L		106	70 - 130		
Chrysene	<0.019		1.97	2.17		ug/L		110	70 - 130		
delta-BHC	<0.097		1.97	2.07		ug/L		105	70 - 130		
Di(2-ethylhexyl)adipate	<0.58		1.97	2.08		ug/L		106	70 - 130		

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

Lab Sample ID: 380-108692-B-1-A MS
Matrix: Water
Analysis Batch: 104204

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 104031

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Dibenz(a,h)anthracene	<0.048		1.97	1.98		ug/L		100	70 - 130
Diclorvos (DDVP)	<0.048		1.97	1.81		ug/L		92	70 - 130
Dieldrin	<0.0097		1.97	2.12		ug/L		108	70 - 130
Diethylphthalate	<0.48		1.97	2.17		ug/L		110	70 - 130
Dimethylphthalate	<0.48		1.97	2.07		ug/L		105	70 - 130
Di-n-butyl phthalate	<0.97		3.94	4.28		ug/L		109	70 - 130
Di-n-octyl phthalate	<0.097		1.97	1.80		ug/L		92	70 - 130
Endosulfan I (Alpha)	<0.097		1.97	2.08		ug/L		106	70 - 130
Endosulfan II (Beta)	<0.097		1.97	2.24		ug/L		114	70 - 130
Endosulfan sulfate	<0.097		1.97	2.06		ug/L		105	70 - 130
Endrin	<0.0097		1.97	2.02		ug/L		103	70 - 130
Endrin aldehyde	<0.097		1.97	2.11		ug/L		107	60 - 130
EPTC	<0.097		1.97	2.12		ug/L		107	70 - 130
Fluoranthene	<0.097		1.97	2.34		ug/L		119	70 - 130
Fluorene	<0.048		1.97	2.10		ug/L		107	70 - 130
gamma-Chlordane	<0.048		1.97	2.22		ug/L		113	70 - 130
Heptachlor	<0.0097		1.97	2.08		ug/L		106	70 - 130
Heptachlor epoxide (isomer B)	<0.0097		1.97	2.42		ug/L		123	70 - 130
Hexachlorobenzene	<0.048		1.97	2.06		ug/L		105	70 - 130
Hexachlorocyclopentadiene	<0.048		1.97	1.73		ug/L		88	70 - 130
Indeno[1,2,3-cd]pyrene	<0.048		1.97	2.12		ug/L		107	70 - 130
Isophorone	<0.097		1.97	1.95		ug/L		99	70 - 130
Lindane	<0.0097	^3+	1.97	2.02		ug/L		103	70 - 130
Malathion	<0.097		1.97	2.19		ug/L		111	70 - 130
Methoxychlor	<0.048	^3+	1.97	2.07		ug/L		105	70 - 130
Metolachlor	<0.048		1.97	2.34		ug/L		119	70 - 130
Molinate	<0.097		1.97	2.16		ug/L		109	70 - 130
Naphthalene	<0.097		1.97	1.88		ug/L		95	70 - 130
Parathion	<0.097		1.97	2.17		ug/L		110	70 - 130
Pendimethalin (Penoxaline)	<0.097		1.97	2.14		ug/L		109	70 - 130
Phenanthrene	<0.039		1.97	2.02		ug/L		102	70 - 130
Propachlor	<0.048		1.97	2.18		ug/L		110	70 - 130
Pyrene	<0.048		1.97	2.11		ug/L		107	70 - 130
Simazine	<0.048		1.97	2.14		ug/L		109	70 - 130
Terbacil	<0.097		1.97	2.12		ug/L		107	70 - 130
Terbuthylazine	<0.097		1.97	2.09		ug/L		106	70 - 130
Thiobencarb	<0.097		1.97	2.31		ug/L		117	70 - 130
trans-Nonachlor	<0.048		1.97	2.21		ug/L		112	70 - 130
Trifluralin	<0.097		1.97	2.12		ug/L		107	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Nitro-m-xylene	*96*		*70 - 130*
Perylene-d12	*100*		*70 - 130*
Triphenylphosphate	*114*		*70 - 130*

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

Lab Sample ID: 380-108577-R-1-A DU
Matrix: Water
Analysis Batch: 104204

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 104031

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
1-Methylnaphthalene				<0.10		ug/L					20
2,4'-DDD				<0.10		ug/L					20
2,4'-DDE				<0.10		ug/L					20
2,4'-DDT				<0.10		ug/L					20
2,4-Dinitrotoluene				<0.10		ug/L					20
2,6-Dinitrotoluene				<0.10		ug/L					20
2-Methylnaphthalene				<0.10		ug/L					20
4,4'-DDD	<0.098			<0.10		ug/L				NC	20
4,4'-DDE	<0.098			<0.10		ug/L				NC	20
4,4'-DDT	<0.098			<0.10		ug/L				NC	20
Acenaphthene	<0.098			<0.10		ug/L				NC	20
Acenaphthylene	<0.098			<0.10		ug/L				NC	20
Acetochlor				<0.10		ug/L					20
Alachlor				<0.051		ug/L					20
alpha-BHC	<0.098			<0.10		ug/L				NC	20
alpha-Chlordane				<0.051		ug/L					20
Atrazine				<0.051		ug/L					20
Benz(a)anthracene	<0.049			<0.051		ug/L				NC	20
Benzo[a]pyrene	<0.020			<0.020	*3	ug/L				NC	20
Benzo[b]fluoranthene	<0.020			<0.020	*3	ug/L				NC	20
Benzo[g,h,i]perylene	<0.049			<0.051	*3	ug/L				NC	20
Benzo[k]fluoranthene	<0.020			<0.020	*3	ug/L				NC	20
beta-BHC	<0.098			<0.10		ug/L				NC	20
Bis(2-ethylhexyl) phthalate	<0.59			<0.61	*3	ug/L				NC	20
Bromacil				<0.10		ug/L					20
Butachlor				<0.051		ug/L					20
Butylbenzylphthalate	<0.49			<0.51		ug/L				NC	20
Chlorobenzilate				<0.10		ug/L					20
Chloroneb				<0.10		ug/L					20
Chlorothalonil (Draconil, Bravo)				<0.10		ug/L					20
Chlorpyrifos				<0.051		ug/L					20
Chrysene	<0.020			<0.020	*3	ug/L				NC	20
delta-BHC	<0.098			0.133		ug/L				NC	20
Di(2-ethylhexyl)adipate				<0.61		ug/L					20
Dibenz(a,h)anthracene	<0.049			<0.051	*3	ug/L				NC	20
Diclorvos (DDVP)				<0.051		ug/L					20
Dieldrin				0.0117		ug/L					20
Diethylphthalate	<0.49			<0.51		ug/L				NC	20
Dimethylphthalate	<0.49			<0.51		ug/L				NC	20
Di-n-butyl phthalate	<0.98			<1.0		ug/L				NC	20
Di-n-octyl phthalate	<0.098			<0.10	*3	ug/L				NC	20
Endosulfan I (Alpha)	<0.098			<0.10		ug/L				NC	20
Endosulfan II (Beta)	<0.098			<0.10		ug/L				NC	20
Endosulfan sulfate	<0.098			<0.10		ug/L				NC	20
Endrin	<0.0098			<0.010		ug/L				NC	20
Endrin aldehyde	<0.098			<0.10		ug/L				NC	20
EPTC				<0.10		ug/L					20
Fluoranthene	<0.098			<0.10		ug/L				NC	20

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

Lab Sample ID: 380-108577-R-1-A DU
Matrix: Water
Analysis Batch: 104204

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 104031

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Fluorene	<0.049			<0.051		ug/L				NC	20
gamma-Chlordane				<0.051		ug/L					20
Heptachlor				<0.010		ug/L					20
Heptachlor epoxide (isomer B)				<0.010		ug/L					20
Hexachlorobenzene	<0.049			<0.051		ug/L				NC	20
Hexachlorocyclopentadiene	<0.049			<0.051		ug/L				NC	20
Indeno[1,2,3-cd]pyrene	<0.049			<0.051	*3	ug/L				NC	20
Isophorone	<0.098			<0.10		ug/L				NC	20
Lindane	<0.0098	^3+		<0.010		ug/L				NC	20
Malathion				<0.10		ug/L					20
Methoxychlor				<0.051	*3	ug/L					20
Metolachlor				<0.051		ug/L					20
Molinate				<0.10		ug/L					20
Naphthalene	<0.098			<0.10		ug/L				NC	20
Parathion				<0.10		ug/L					20
Pendimethalin (Penoxaline)				<0.10		ug/L					20
Phenanthrene	<0.039			<0.041		ug/L				NC	20
Propachlor				<0.051		ug/L					20
Pyrene	<0.049			<0.051		ug/L				NC	20
Simazine				<0.051		ug/L					20
Terbacil				<0.10		ug/L					20
Terbuthylazine				<0.10		ug/L					20
Thiobencarb	<0.098			<0.10		ug/L				NC	20
Total Permethrin (mixed isomers)	Missing Input			<0.20		ug/L				NC	20
trans-Nonachlor				<0.051		ug/L					20
Trifluralin				<0.10		ug/L					20

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
2-Nitro-m-xylene	*101*		*70 - 130*
Perylene-d12	*16*	*S1- *3*	*70 - 130*
Triphenylphosphate	*112*		*70 - 130*

Lab Sample ID: MB 380-104353/21-A
Matrix: Water
Analysis Batch: 104625

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 104353

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Anthracene	<0.019		0.019		ug/L		08/19/24 11:50	08/21/24 10:15	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Camphene	*1.06*	*T J N*	*ug/L*		*2.39*	*79-92-5*	*08/19/24 11:50*	*08/21/24 10:15*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*100*		*70 - 130*	*08/19/24 11:50*	*08/21/24 10:15*	*1*
Perylene-d12	*98*		*70 - 130*	*08/19/24 11:50*	*08/21/24 10:15*	*1*
Triphenylphosphate	*104*		*70 - 130*	*08/19/24 11:50*	*08/21/24 10:15*	*1*

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

Lab Sample ID: LCS 380-104353/23-A
Matrix: Water
Analysis Batch: 104625

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 104353

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Anthracene			1.96	1.64		ug/L		84	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Nitro-m-xylene	*100*		*70 - 130*
Perylene-d12	*105*		*70 - 130*
Triphenylphosphate	*113*		*70 - 130*

Lab Sample ID: MRL 380-104353/22-A
Matrix: Water
Analysis Batch: 104625

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 104353

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
Anthracene			0.0194	<0.018		ug/L		91	50 - 150		

Surrogate	*MRL %Recovery*	*MRL Qualifier*	*Limits*
2-Nitro-m-xylene	*98*		*70 - 130*
Perylene-d12	*97*		*70 - 130*
Triphenylphosphate	*104*		*70 - 130*

Lab Sample ID: 380-108450-BG-1-A MS
Matrix: Water
Analysis Batch: 104625

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 104353

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Anthracene	<0.020		1.97	1.76		ug/L		89	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Nitro-m-xylene	*100*		*70 - 130*
Perylene-d12	*106*		*70 - 130*
Triphenylphosphate	*110*		*70 - 130*

Lab Sample ID: 380-108450-BH-1-A MSD
Matrix: Water
Analysis Batch: 104625

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 104353

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Anthracene	<0.020		1.98	1.70		ug/L		86	70 - 130	3	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Nitro-m-xylene	*97*		*70 - 130*
Perylene-d12	*101*		*70 - 130*
Triphenylphosphate	*107*		*70 - 130*

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

Lab Sample ID: MB 570-472071/6
Matrix: Water
Analysis Batch: 472071

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			08/19/24 12:15	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*38 - 134*		*08/19/24 12:15*	*1*

Lab Sample ID: LCS 570-472071/3
Matrix: Water
Analysis Batch: 472071

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	323		ug/L		81	78 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*83*		*38 - 134*

Lab Sample ID: LCSD 570-472071/4
Matrix: Water
Analysis Batch: 472071

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	328		ug/L		82	78 - 120	2	10

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*83*		*38 - 134*

Lab Sample ID: MRL 570-472071/5
Matrix: Water
Analysis Batch: 472071

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	8.08	J	ug/L		81	50 - 150		

Surrogate	*MRL %Recovery*	*MRL Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*74*		*38 - 134*

Lab Sample ID: 380-108696-3 MS
Matrix: Drinking Water
Analysis Batch: 472071

Client Sample ID: HALAWA WELLS UNITS 1 & 2 (331-206-TP065)
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	313		ug/L		78	68 - 122		

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

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

Lab Sample ID: 380-108696-3 MSD
Matrix: Drinking Water
Analysis Batch: 472071

Client Sample ID: HALAWA WELLS UNITS 1 & 2 (331-206-TP065)
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	328		ug/L		82	68 - 122	5	18

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*88*		*38 - 134*

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

Lab Sample ID: MB 570-471628/1-A
Matrix: Water
Analysis Batch: 473675

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 471628

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C24)	<25		25		ug/L		08/16/24 14:29	08/23/24 12:15	1
Motor Oil Range Organics [C24-C36]	<25		25		ug/L		08/16/24 14:29	08/23/24 12:15	1
C8-C18	<25		25		ug/L		08/16/24 14:29	08/23/24 12:15	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*94*		*60 - 130*	*08/16/24 14:29*	*08/23/24 12:15*	*1*

Lab Sample ID: LCS 570-471628/2-A
Matrix: Water
Analysis Batch: 473675

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 471628

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
C10-C28			1600	1370		ug/L		86	56 - 127		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Octacosane (Surr)	*95*		*60 - 130*

Lab Sample ID: LCSD 570-471628/3-A
Matrix: Water
Analysis Batch: 473675

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 471628

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C10-C28			1600	1430		ug/L		90	56 - 127	4	23

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
n-Octacosane (Surr)	*99*		*60 - 130*

Lab Sample ID: MRL 570-471628/4-A
Matrix: Water
Analysis Batch: 473675

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 471628

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
C10-C28			0.0200	0.0863	^3+	mg/L		431	50 - 150		

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

Lab Sample ID: MRL 570-471628/4-A
Matrix: Water
Analysis Batch: 473675

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 471628

Surrogate	MRL %Recovery	MRL Qualifier	Limits
n-Octacosane (Surr)	*92*		*60 - 130*

Lab Sample ID: 380-108696-3 MS
Matrix: Drinking Water
Analysis Batch: 473675

Client Sample ID: HALAWA WELLS UNITS 1 & 2 (331-206-TP065)
Prep Type: Total/NA
Prep Batch: 471628

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
C10-C28	<26	^3+	1720	1610		ug/L		94	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
n-Octacosane (Surr)	*97*		*60 - 130*

Lab Sample ID: 380-108696-3 MSD
Matrix: Drinking Water
Analysis Batch: 473675

Client Sample ID: HALAWA WELLS UNITS 1 & 2 (331-206-TP065)
Prep Type: Total/NA
Prep Batch: 471628

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C10-C28	<26	^3+	1690	1620		ug/L		96	70 - 130	1	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
n-Octacosane (Surr)	*99*		*60 - 130*

GC/MS Semi VOA

Prep Batch: 104031

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-108696-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	525.2	
380-108696-3	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP0(	Total/NA	Drinking Water	525.2	
MB 380-104031/21-A	Method Blank	Total/NA	Water	525.2	
LCS 380-104031/23-A	Lab Control Sample	Total/NA	Water	525.2	
MRL 380-104031/22-A	Lab Control Sample	Total/NA	Water	525.2	
380-108692-B-1-A MS	Matrix Spike	Total/NA	Water	525.2	
380-108577-R-1-A DU	Duplicate	Total/NA	Water	525.2	

Analysis Batch: 104204

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-108696-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	525.2	104031
380-108696-3	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP0(	Total/NA	Drinking Water	525.2	104031
MB 380-104031/21-A	Method Blank	Total/NA	Water	525.2	104031
LCS 380-104031/23-A	Lab Control Sample	Total/NA	Water	525.2	104031
MRL 380-104031/22-A	Lab Control Sample	Total/NA	Water	525.2	104031
380-108692-B-1-A MS	Matrix Spike	Total/NA	Water	525.2	104031
380-108577-R-1-A DU	Duplicate	Total/NA	Water	525.2	104031

Prep Batch: 104353

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-108696-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	525.2	
380-108696-3	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP0(	Total/NA	Drinking Water	525.2	
MB 380-104353/21-A	Method Blank	Total/NA	Water	525.2	
LCS 380-104353/23-A	Lab Control Sample	Total/NA	Water	525.2	
MRL 380-104353/22-A	Lab Control Sample	Total/NA	Water	525.2	
380-108450-BG-1-A MS	Matrix Spike	Total/NA	Water	525.2	
380-108450-BH-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	525.2	

Analysis Batch: 104625

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-108696-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	525.2	104353
380-108696-3	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP0(	Total/NA	Drinking Water	525.2	104353
MB 380-104353/21-A	Method Blank	Total/NA	Water	525.2	104353
LCS 380-104353/23-A	Lab Control Sample	Total/NA	Water	525.2	104353
MRL 380-104353/22-A	Lab Control Sample	Total/NA	Water	525.2	104353
380-108450-BG-1-A MS	Matrix Spike	Total/NA	Water	525.2	104353
380-108450-BH-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	525.2	104353

GC VOA

Analysis Batch: 472071

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-108696-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	8015B GRO LL	
380-108696-2	TB: MOANALUA WELLS (331-223-TP202)	Total/NA	Water	8015B GRO LL	
380-108696-3	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP0(	Total/NA	Drinking Water	8015B GRO LL	
380-108696-4	TB: HALAWA WELLS UNITS 1&2 (331-206-TP06	Total/NA	Water	8015B GRO LL	
MB 570-472071/6	Method Blank	Total/NA	Water	8015B GRO LL	
LCS 570-472071/3	Lab Control Sample	Total/NA	Water	8015B GRO LL	
LCSD 570-472071/4	Lab Control Sample Dup	Total/NA	Water	8015B GRO LL	
MRL 570-472071/5	Lab Control Sample	Total/NA	Water	8015B GRO LL	
380-108696-3 MS	HALAWA WELLS UNITS 1 & 2 (331-206-TP065)	Total/NA	Drinking Water	8015B GRO LL	

GC VOA (Continued)

Analysis Batch: 472071 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-108696-3 MSD	HALAWA WELLS UNITS 1 & 2 (331-206-TP065)	Total/NA	Drinking Water	8015B GRO LL	

GC Semi VOA

Prep Batch: 471628

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-108696-3	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP0	Total/NA	Drinking Water	3510C	
MB 570-471628/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-471628/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-471628/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MRL 570-471628/4-A	Lab Control Sample	Total/NA	Water	3510C	
380-108696-3 MS	HALAWA WELLS UNITS 1 & 2 (331-206-TP065)	Total/NA	Drinking Water	3510C	
380-108696-3 MSD	HALAWA WELLS UNITS 1 & 2 (331-206-TP065)	Total/NA	Drinking Water	3510C	

Analysis Batch: 473675

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-108696-3	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP0	Total/NA	Drinking Water	8015B	471628
MB 570-471628/1-A	Method Blank	Total/NA	Water	8015B	471628
LCS 570-471628/2-A	Lab Control Sample	Total/NA	Water	8015B	471628
LCSD 570-471628/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	471628
MRL 570-471628/4-A	Lab Control Sample	Total/NA	Water	8015B	471628
380-108696-3 MS	HALAWA WELLS UNITS 1 & 2 (331-206-TP065)	Total/NA	Drinking Water	8015B	471628
380-108696-3 MSD	HALAWA WELLS UNITS 1 & 2 (331-206-TP065)	Total/NA	Drinking Water	8015B	471628

Lab Chronicle

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

Job ID: 380-108696-1
SDG: Weekly

Client Sample ID: MOANALUA WELLS (331-223-TP202)

Lab Sample ID: 380-108696-1
Date Collected: 08/12/24 09:32
Matrix: Drinking Water
Date Received: 08/14/24 09:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			104031	IQ42	EA POM	08/16/24 14:30
Total/NA	Analysis	525.2		1	104204	UPAC	EA POM	08/18/24 16:06
Total/NA	Prep	525.2			104353	KRD3	EA POM	08/19/24 11:50
Total/NA	Analysis	525.2		1	104625	Q8LA	EA POM	08/21/24 13:04
Total/NA	Analysis	8015B GRO LL		1	472071	GC3Z	EET CAL 4	08/19/24 20:24

Client Sample ID: TB: MOANALUA WELLS (331-223-TP202)

Lab Sample ID: 380-108696-2
Date Collected: 08/12/24 09:32
Matrix: Water
Date Received: 08/14/24 09:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015B GRO LL		1	472071	GC3Z	EET CAL 4	08/19/24 22:20

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065)

Lab Sample ID: 380-108696-3
Date Collected: 08/12/24 10:05
Matrix: Drinking Water
Date Received: 08/14/24 09:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			104031	IQ42	EA POM	08/16/24 14:30
Total/NA	Analysis	525.2		1	104204	UPAC	EA POM	08/18/24 16:26
Total/NA	Prep	525.2			104353	KRD3	EA POM	08/19/24 11:50
Total/NA	Analysis	525.2		1	104625	Q8LA	EA POM	08/21/24 13:24
Total/NA	Analysis	8015B GRO LL		1	472071	GC3Z	EET CAL 4	08/19/24 20:47
Total/NA	Prep	3510C			471628	H6FE	EET CAL 4	08/16/24 14:30
Total/NA	Analysis	8015B		1	473675	SP9M	EET CAL 4	08/23/24 14:43

Client Sample ID: TB: HALAWA WELLS UNITS 1&2 (331-206-TP065)

Lab Sample ID: 380-108696-4
Date Collected: 08/12/24 10:05
Matrix: Water
Date Received: 08/14/24 09:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015B GRO LL		1	472071	GC3Z	EET CAL 4	08/19/24 22:44

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: 380-108696-1
SDG: Weekly

Laboratory: Eurofins Eaton Analytical Pomona

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

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

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

Analysis Method	Prep Method	Matrix	Analyte
525.2	525.2	Drinking Water	1-Methylnaphthalene
525.2	525.2	Drinking Water	2,4'-DDD
525.2	525.2	Drinking Water	2,4'-DDE
525.2	525.2	Drinking Water	2,4'-DDT
525.2	525.2	Drinking Water	2,4-Dinitrotoluene
525.2	525.2	Drinking Water	2,6-Dinitrotoluene
525.2	525.2	Drinking Water	2-Methylnaphthalene
525.2	525.2	Drinking Water	4,4'-DDD
525.2	525.2	Drinking Water	4,4'-DDE
525 2	525 2	Drinking Water	4,4' DDT
525.2	525.2	Drinking Water	Acetochlor
525.2	525.2	Drinking Water	alpha-BHC
525.2	525.2	Drinking Water	alpha-Chlordane
525.2	525.2	Drinking Water	beta-BHC
525.2	525.2	Drinking Water	Chlorobenzilate
525.2	525.2	Drinking Water	Chloroneb
525.2	525.2	Drinking Water	Chlorothalonil (Draconil, Bravo)
525.2	525.2	Drinking Water	Chlorpyrifos
525.2	525.2	Drinking Water	delta-BHC
525.2	525.2	Drinking Water	Diclorvos (DDVP)
525.2	525.2	Drinking Water	Endosulfan I (Alpha)
525.2	525.2	Drinking Water	Endosulfan II (Beta)
525.2	525.2	Drinking Water	Endosulfan sulfate
525.2	525.2	Drinking Water	Endrin aldehyde
525.2	525.2	Drinking Water	EPTC
525.2	525.2	Drinking Water	gamma-Chlordane
525.2	525.2	Drinking Water	Isophorone
525.2	525.2	Drinking Water	Malathion
525.2	525.2	Drinking Water	Parathion
525.2	525.2	Drinking Water	Pendimethalin (Penoxaline)
525.2	525.2	Drinking Water	Terbacil
525.2	525.2	Drinking Water	Terbuthylazine
525.2	525.2	Drinking Water	Total Permethrin (mixed isomers)
525.2	525.2	Drinking Water	trans-Nonachlor

Laboratory: Eurofins Calscience

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

Authority	Program	Identification Number	Expiration Date
Arizona	State	AZ0830	11-16-24
Arkansas DEQ	State	88-0161	07-02-25
California	Los Angeles County Sanitation Districts	9257304	08-01-24 *
California	State	3082	07-31-26
Kansas	NELAP	E-10420	07-31-25
Nevada	State	CA00111	10-31-24

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

Accreditation/Certification Summary

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

Job ID: 380-108696-1
SDG: Weekly

Laboratory: Eurofins Calscience (Continued)

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

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

Method Summary

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

Job ID: 380-108696-1
SDG: Weekly

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

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

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

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

Sample Summary

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

Job ID: 380-108696-1
SDG: Weekly

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-108696-1	MOANALUA WELLS (331-223-TP202)	Drinking Water	08/12/24 09:32	08/14/24 09:38
380-108696-2	TB: MOANALUA WELLS (331-223-TP202)	Water	08/12/24 09:32	08/14/24 09:38
380-108696-3	HALAWA WELLS UNITS 1 & 2 P1 (331-206-TP065)	Drinking Water	08/12/24 10:05	08/14/24 09:38
380-108696-4	TB: HALAWA WELLS UNITS 1&2 (331-206-TP065)	Water	08/12/24 10:05	08/14/24 09:38

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

Chain of Custody Record

eurofins | Environment Testing

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:

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:		X	X	R	RA	Q	QA	Y	I	X	
Moanalua Wells	12-Aug-2024	0932	G	Water			2	3	2	2				
Moanalua Wells (Matrix Spike)				Water										
Moanalua Wells (Matrix Spike Duplicate)				Water										
TB Moanalua Wells	12-Aug-2024	0932		Water				2						
Halawa Wells Units 1 & 2 D1	12-Aug-2024	1005	G	Water	X		4	5	4	2				
Halawa Wells Units 1 & 2 (Matrix Spike)				Water			X	X	X					
Halawa Wells Units 1 & 2 (Matrix Spike Duplicate)				Water			X	X	X					
TB Halawa Wells Units 1 & 2	12-Aug-2024	1005		Water				2						
														(4) 7779 5239 8271

380-108696 COC

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: (1) 7779 5239 8249 (2) 7779 5239 8250

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: FED EX (3) 7779 5239 8260

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
[redacted]	13/08/2024 1400	HBWS	B. RETTNER	08/14/2024 09:38	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 (1) 2.3°-0.1°=2.2° (2) 3.3°-0.1°=3.2° (3) 1.4°-0.1°=1.3° (4) 3.7°-0.1°=3.6° BEL-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 | Loc. 380 **108696**

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arada, Rachelle	Carrier Tracking No(s):	COC No: 380-145684.1
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 #: 380-108696-1
Address: 2841 Dow Avenue, Suite 100,	Due Date Requested: 9/4/2024	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#:			

380-108696 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_DAU (MOD) Methanol & Ethanol	8015B_DRO_LL_CS/3510C_LL HNL Ranges: C10-C24/C24-C36/C8-C18	8015B_GRO_LL/5030C (MOD) GRO	625.1_SIM/625_Prep (MOD) Extended PAH List	8015B_GRO_LL/5030C GRO	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
MOANALUA WELLS (331-223-TP202) (380-108696-1)	8/12/24	09:32 Hawaiian	G	Water			X	X	X	X		7	initial volume (500ml) and final volume (2ml). MRLs are needed.
TB:MOANALUA WELLS (331-223-TP202) (380-108696-2)	8/12/24	09:32 Hawaiian	G	Water							X	2	MRLs are needed.
HALAWA WELLS UNITS 1 & 2 (331-206-TP065) (380-108696-3)	8/12/24	10:05 Hawaiian	G	Water			X	X	X	X		7	initial volume (500ml) and final volume (2ml). MRLs are needed.
HALAWA WELLS UNITS 1 & 2 (331-206-TP065) (380-108696-3M	8/12/24	10:05 Hawaiian	G	Water			X	X	X	X		3	initial volume (500ml) and final volume (2ml). MRLs are needed.
HALAWA WELLS UNITS 1 & 2 (331-206-TP065) (380-108696-3M	8/12/24	10:05 Hawaiian	G	Water			X	X	X	X		3	initial volume (500ml) and final volume (2ml). MRLs are needed.
TB: HALAWA WELLS UNITS 1&2 (331-206-TP065) (380-108696-	8/12/24	10:05 Hawaiian	G	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		8/15/24 1250			8/15/24 12:50	
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: 13/13 342

Ver: 05/06/2024

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-108696-1
SDG Number: Weekly

Login Number: 108696
List Number: 1
Creator: Ngo, Theodore

List Source: Eurofins Eaton Analytical Pomona

Question	Answer	Comment
The coolers custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
Samples were received on ice.	True	
Cooler(s) Temperature is acceptable.	True	
Cooler(s) Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and is legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
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: 380-108696-1
SDG Number: Weekly

Login Number: 108696
List Number: 2
Creator: Khana, Piyush

List Source: Eurofins Calscience
List Creation: 08/15/24 02:33 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	1.3
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.	False	