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 11/7/2024 9:32:10 AM

JOB DESCRIPTION

RED-HILL
Weekly
RUSH Weekly Red Hill

JOB NUMBER

380-119309-1

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

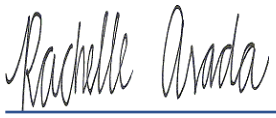
This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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



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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: 380-119309-1
SDG: Weekly

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
^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.

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
^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
380-119309-1

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 10/24/2024 10:24 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 1.8°C and 2.3°C.

GC/MS Semi VOA
Method 625.1: The continuing calibration verification (CCV) associated with batch 570-499944 recovered above the upper control limit. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCVIS 570-499944/2).

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 570-497002 and analytical batch 570-499795 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.

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: 380-119309-1
SDG: Weekly

Client Sample ID: HALAWA SHAFT Viewing Pool (331-241-TP401)

Lab Sample ID: 380-119309-1

PWSID Number: HI0000331

No Detections.

Client Sample ID: TB:HALAWA SHAFT Vieweing Pool (331-241-TP401

Lab Sample ID: 380-119309-2

No Detections.

This Detection Summary does not include radiochemical test results.

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

Job ID: 380-119309-1
SDG: Weekly

Client Sample ID: HALAWA SHAFT Viewing Pool (331-241-TP401)
Date Collected: 10/22/24 10:30
Date Received: 10/24/24 10:24

Lab Sample ID: 380-119309-1
Matrix: Drinking Water
PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.096		0.096		ug/L		10/27/24 14:00	10/28/24 18:35	1
2,4'-DDD	<0.096		0.096		ug/L		10/27/24 14:00	10/28/24 18:35	1
2,4'-DDE	<0.096		0.096		ug/L		10/27/24 14:00	10/28/24 18:35	1
2,4'-DDT	<0.096		0.096		ug/L		10/27/24 14:00	10/28/24 18:35	1
2,4-Dinitrotoluene	<0.096		0.096		ug/L		10/27/24 14:00	10/28/24 18:35	1
2,6-Dinitrotoluene	<0.096		0.096		ug/L		10/27/24 14:00	10/28/24 18:35	1
2-Methylnaphthalene	<0.096		0.096		ug/L		10/27/24 14:00	10/28/24 18:35	1
4,4'-DDD	<0.096		0.096		ug/L		10/27/24 14:00	10/28/24 18:35	1
4,4'-DDE	<0.096		0.096		ug/L		10/27/24 14:00	10/28/24 18:35	1
4,4'-DDT	<0.096		0.096		ug/L		10/27/24 14:00	10/28/24 18:35	1
Acenaphthene	<0.096		0.096		ug/L		10/27/24 14:00	10/28/24 18:35	1
Acenaphthylene	<0.096		0.096		ug/L		10/27/24 14:00	10/28/24 18:35	1
Acetochlor	<0.096		0.096		ug/L		10/27/24 14:00	10/28/24 18:35	1
Alachlor	<0.048		0.048		ug/L		10/27/24 14:00	10/28/24 18:35	1
alpha-BHC	<0.096		0.096		ug/L		10/27/24 14:00	10/28/24 18:35	1
alpha-Chlordane	<0.048		0.048		ug/L		10/27/24 14:00	10/28/24 18:35	1
Anthracene	<0.019		0.019		ug/L		10/27/24 14:00	10/28/24 18:35	1
Atrazine	<0.048		0.048		ug/L		10/27/24 14:00	10/28/24 18:35	1
Benz(a)anthracene	<0.048		0.048		ug/L		10/27/24 14:00	10/28/24 18:35	1
Benzo[a]pyrene	<0.019		0.019		ug/L		10/27/24 14:00	10/28/24 18:35	1
Benzo[b]fluoranthene	<0.019		0.019		ug/L		10/27/24 14:00	10/28/24 18:35	1
Benzo[g,h,i]perylene	<0.048		0.048		ug/L		10/27/24 14:00	10/28/24 18:35	1
Benzo[k]fluoranthene	<0.019		0.019		ug/L		10/27/24 14:00	10/28/24 18:35	1
beta-BHC	<0.096		0.096		ug/L		10/27/24 14:00	10/28/24 18:35	1
Bis(2-ethylhexyl) phthalate	<0.58		0.58		ug/L		10/27/24 14:00	10/28/24 18:35	1
Bromacil	<0.096		0.096		ug/L		10/27/24 14:00	10/28/24 18:35	1
Butachlor	<0.048		0.048		ug/L		10/27/24 14:00	10/28/24 18:35	1
Butylbenzylphthalate	<0.48		0.48		ug/L		10/27/24 14:00	10/28/24 18:35	1
Chlorobenzilate	<0.096		0.096		ug/L		10/27/24 14:00	10/28/24 18:35	1
Chloroneb	<0.096		0.096		ug/L		10/27/24 14:00	10/28/24 18:35	1
Chlorothalonil (Draconil, Bravo)	<0.096		0.096		ug/L		10/27/24 14:00	10/28/24 18:35	1
Chlorpyrifos	<0.048		0.048		ug/L		10/27/24 14:00	10/28/24 18:35	1
Chrysene	<0.019		0.019		ug/L		10/27/24 14:00	10/28/24 18:35	1
delta-BHC	<0.096		0.096		ug/L		10/27/24 14:00	10/28/24 18:35	1
Di(2-ethylhexyl)adipate	<0.58		0.58		ug/L		10/27/24 14:00	10/28/24 18:35	1
Dibenz(a,h)anthracene	<0.048		0.048		ug/L		10/27/24 14:00	10/28/24 18:35	1
Diclorvos (DDVP)	<0.048		0.048		ug/L		10/27/24 14:00	10/28/24 18:35	1
Dieldrin	<0.0096		0.0096		ug/L		10/27/24 14:00	10/28/24 18:35	1
Diethylphthalate	<0.48		0.48		ug/L		10/27/24 14:00	10/28/24 18:35	1
Dimethylphthalate	<0.48		0.48		ug/L		10/27/24 14:00	10/28/24 18:35	1
Di-n-butyl phthalate	<0.96		0.96		ug/L		10/27/24 14:00	10/28/24 18:35	1
Di-n-octyl phthalate	<0.096		0.096		ug/L		10/27/24 14:00	10/28/24 18:35	1
Endosulfan I (Alpha)	<0.096		0.096		ug/L		10/27/24 14:00	10/28/24 18:35	1
Endosulfan II (Beta)	<0.096		0.096		ug/L		10/27/24 14:00	10/28/24 18:35	1
Endosulfan sulfate	<0.096		0.096		ug/L		10/27/24 14:00	10/28/24 18:35	1
Endrin	<0.0096		0.0096		ug/L		10/27/24 14:00	10/28/24 18:35	1
Endrin aldehyde	<0.096		0.096		ug/L		10/27/24 14:00	10/28/24 18:35	1
EPTC	<0.096		0.096		ug/L		10/27/24 14:00	10/28/24 18:35	1

Client Sample ID: HALAWA SHAFT Viewing Pool (331-241-TP401)

Lab Sample ID: 380-119309-1

Date Collected: 10/22/24 10:30
Date Received: 10/24/24 10:24

Matrix: Drinking Water
PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	<0.096		0.096		ug/L		10/27/24 14:00	10/28/24 18:35	1
Fluorene	<0.048		0.048		ug/L		10/27/24 14:00	10/28/24 18:35	1
gamma-Chlordane	<0.048		0.048		ug/L		10/27/24 14:00	10/28/24 18:35	1
Heptachlor	<0.0096	^3+	0.0096		ug/L		10/27/24 14:00	10/28/24 18:35	1
Heptachlor epoxide (isomer B)	<0.0096		0.0096		ug/L		10/27/24 14:00	10/28/24 18:35	1
Hexachlorobenzene	<0.048		0.048		ug/L		10/27/24 14:00	10/28/24 18:35	1
Hexachlorocyclopentadiene	<0.048		0.048		ug/L		10/27/24 14:00	10/28/24 18:35	1
Indeno[1,2,3-cd]pyrene	<0.048		0.048		ug/L		10/27/24 14:00	10/28/24 18:35	1
Isophorone	<0.096		0.096		ug/L		10/27/24 14:00	10/28/24 18:35	1
Lindane	<0.0096	^3+	0.0096		ug/L		10/27/24 14:00	10/28/24 18:35	1
Malathion	<0.096		0.096		ug/L		10/27/24 14:00	10/28/24 18:35	1
Methoxychlor	<0.048		0.048		ug/L		10/27/24 14:00	10/28/24 18:35	1
Metolachlor	<0.048		0.048		ug/L		10/27/24 14:00	10/28/24 18:35	1
Molinate	<0.096		0.096		ug/L		10/27/24 14:00	10/28/24 18:35	1
Naphthalene	<0.096		0.096		ug/L		10/27/24 14:00	10/28/24 18:35	1
Parathion	<0.096		0.096		ug/L		10/27/24 14:00	10/28/24 18:35	1
Pendimethalin (Penoxaline)	<0.096		0.096		ug/L		10/27/24 14:00	10/28/24 18:35	1
Phenanthrene	<0.038		0.038		ug/L		10/27/24 14:00	10/28/24 18:35	1
Propachlor	<0.048		0.048		ug/L		10/27/24 14:00	10/28/24 18:35	1
Pyrene	<0.048		0.048		ug/L		10/27/24 14:00	10/28/24 18:35	1
Simazine	<0.048		0.048		ug/L		10/27/24 14:00	10/28/24 18:35	1
Terbacil	<0.096		0.096		ug/L		10/27/24 14:00	10/28/24 18:35	1
Terbuthylazine	<0.096		0.096		ug/L		10/27/24 14:00	10/28/24 18:35	1
Thiobencarb	<0.096		0.096		ug/L		10/27/24 14:00	10/28/24 18:35	1
Total Permethrin (mixed isomers)	<0.19		0.19		ug/L		10/27/24 14:00	10/28/24 18:35	1
trans-Nonachlor	<0.048		0.048		ug/L		10/27/24 14:00	10/28/24 18:35	1
Trifluralin	<0.096		0.096		ug/L		10/27/24 14:00	10/28/24 18:35	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1,3-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	*1.1*	*T J N*	*ug/L*		*10.32*	*137-89-3*	*10/27/24 14:00*	*10/28/24 18:35*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*96*		*70 - 130*	*10/27/24 14:00*	*10/28/24 18:35*	*1*
Perylene-d12	*85*		*70 - 130*	*10/27/24 14:00*	*10/28/24 18:35*	*1*
Triphenylphosphate	*105*		*70 - 130*	*10/27/24 14:00*	*10/28/24 18:35*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.20		0.20		ug/L		10/28/24 12:16	11/04/24 19:44	1
2-Methylnaphthalene	<0.20		0.20		ug/L		10/28/24 12:16	11/04/24 19:44	1
Acenaphthene	<0.20		0.20		ug/L		10/28/24 12:16	11/04/24 19:44	1
Acenaphthylene	<0.20		0.20		ug/L		10/28/24 12:16	11/04/24 19:44	1
Anthracene	<0.20		0.20		ug/L		10/28/24 12:16	11/04/24 19:44	1
Benzo[a]anthracene	<0.20		0.20		ug/L		10/28/24 12:16	11/04/24 19:44	1
Benzo[a]pyrene	<0.20		0.20		ug/L		10/28/24 12:16	11/04/24 19:44	1
Benzo[b]fluoranthene	<0.20		0.20		ug/L		10/28/24 12:16	11/04/24 19:44	1
Benzo[g,h,i]perylene	<0.20		0.20		ug/L		10/28/24 12:16	11/04/24 19:44	1
Benzo[k]fluoranthene	<0.20		0.20		ug/L		10/28/24 12:16	11/04/24 19:44	1

Client Sample ID: HALAWA SHAFT Viewing Pool (331-241-TP401)

Date Collected: 10/22/24 10:30
Date Received: 10/24/24 10:24

Lab Sample ID: 380-119309-1

Matrix: Drinking Water
PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	<0.20		0.20		ug/L		10/28/24 12:16	11/04/24 19:44	1
Dibenz(a,h)anthracene	<0.20		0.20		ug/L		10/28/24 12:16	11/04/24 19:44	1
Fluoranthene	<0.20		0.20		ug/L		10/28/24 12:16	11/04/24 19:44	1
Fluorene	<0.20		0.20		ug/L		10/28/24 12:16	11/04/24 19:44	1
Indeno[1,2,3-cd]pyrene	<0.20		0.20		ug/L		10/28/24 12:16	11/04/24 19:44	1
Naphthalene	<0.20		0.20		ug/L		10/28/24 12:16	11/04/24 19:44	1
Phenanthrene	<0.20		0.20		ug/L		10/28/24 12:16	11/04/24 19:44	1
Pyrene	<0.20		0.20		ug/L		10/28/24 12:16	11/04/24 19:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*98*		*28 - 127*	*10/28/24 12:16*	*11/04/24 19:44*	*1*
2-Fluorobiphenyl (Surr)	*101*		*31 - 120*	*10/28/24 12:16*	*11/04/24 19:44*	*1*
2-Fluorophenol (Surr)	*55*		*17 - 120*	*10/28/24 12:16*	*11/04/24 19:44*	*1*
Nitrobenzene-d5 (Surr)	*96*		*27 - 120*	*10/28/24 12:16*	*11/04/24 19:44*	*1*
Phenol-d6 (Surr)	*32*		*10 - 120*	*10/28/24 12:16*	*11/04/24 19:44*	*1*
p-Terphenyl-d14 (Surr)	*109*		*45 - 120*	*10/28/24 12:16*	*11/04/24 19:44*	*1*

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

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Methylene Chloride	*32*	*T J N*	*ug/L*		*2.00*	*75-09-2*	*10/28/24 12:16*	*11/06/24 16:33*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*91*		*33 - 139*	*10/28/24 12:16*	*11/06/24 16:33*	*1*
2-Fluorobiphenyl (Surr)	*104*		*33 - 126*	*10/28/24 12:16*	*11/06/24 16:33*	*1*
2-Fluorophenol (Surr)	*62*		*12 - 120*	*10/28/24 12:16*	*11/06/24 16:33*	*1*
Nitrobenzene-d5 (Surr)	*113*		*36 - 120*	*10/28/24 12:16*	*11/06/24 16:33*	*1*
Phenol-d6 (Surr)	*37*		*10 - 120*	*10/28/24 12:16*	*11/06/24 16:33*	*1*
p-Terphenyl-d14 (Surr)	*93*		*47 - 131*	*10/28/24 12:16*	*11/06/24 16:33*	*1*

Method: SW846 8015B GRO LL - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	<10		10		ug/L			11/04/24 15:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*70*		*38 - 134*		*11/04/24 15:50*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C24)	<25		25		ug/L		10/29/24 15:19	11/06/24 15:05	1
Motor Oil Range Organics [C24-C36]	<25		25		ug/L		10/29/24 15:19	11/06/24 15:05	1
C8-C18	<25		25		ug/L		10/29/24 15:19	11/06/24 15:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*106*		*60 - 130*	*10/29/24 15:19*	*11/06/24 15:05*	*1*

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

Job ID: 380-119309-1
SDG: Weekly

Client Sample ID: TB:HALAWA SHAFT Vieweing Pool (331-241-TP401
Date Collected: 10/22/24 10:30
Date Received: 10/24/24 10:24

Lab Sample ID: 380-119309-2
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			11/04/24 16:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*69*		*38 - 134*		*11/04/24 16:14*	*1*

Action Limit Summary

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

Job ID: 380-119309-1
SDG: Weekly

Client Sample ID: HALAWA SHAFT Viewing Pool (331-241-TP401)

Lab Sample ID: 380-119309-1

PWSID Number: HI0000331

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	<0.0096		ug/L	2	0.0096	525.2	Total/NA
Heptachlor	<0.0096	^3+	ug/L	0.4	0.0096	525.2	Total/NA
Heptachlor epoxide (isomer B)	<0.0096		ug/L	0.2	0.0096	525.2	Total/NA
Hexachlorobenzene	<0.048		ug/L	1	0.048	525.2	Total/NA
Hexachlorocyclopentadiene	<0.048		ug/L	50	0.048	525.2	Total/NA
Lindane	<0.0096	^3+	ug/L	0.2	0.0096	525.2	Total/NA
Methoxychlor	<0.048		ug/L	40	0.048	525.2	Total/NA
Simazine	<0.048		ug/L	4	0.048	525.2	Total/NA
Benzo[a]pyrene	<0.20		ug/L	0.2	0.20	625.1 SIM	Total/NA

Surrogate Summary

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

Job ID: 380-119309-1
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)
380-119309-1	HALAWA SHAFT Viewing Pool (	96	85	105

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)		
		2NMX	PRY	TPP
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
380-119304-I-1-A MSD	Matrix Spike Duplicate	99	98	107
380-119304-J-1-A MS	Matrix Spike	97	99	106
LCS 380-115692/23-A	Lab Control Sample	98	90	109
MB 380-115692/21-A	Method Blank	97	83	104
MRL 380-115692/22-A	Lab Control Sample	97	78	107

Surrogate Legend

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

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

Matrix: Drinking 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)
380-119309-1	HALAWA SHAFT Viewing Pool (	91	104	62	113	37	93

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 - 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)
MB 570-496453/1-A	Method Blank	92	100	62	113	40	105

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: Drinking 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)
380-119309-1	HALAWA SHAFT Viewing Pool (	98	101	55	96	32	109

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)
380-119304-A-1-A MS	Matrix Spike	102	93	55	91	36	107
380-119304-A-1-B MSD	Matrix Spike Duplicate	101	92	55	76	36	104
LCS 570-496453/2-A	Lab Control Sample	104	98	64	78	42	112
LCSD 570-496453/3-A	Lab Control Sample Dup	99	96	63	77	41	110
MB 570-496453/1-A	Method Blank	109	96	63	95	39	117

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: 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)
380-119309-1	HALAWA SHAFT Viewing Pool (	70

Surrogate Legend

BFB = 4-Bromofluorobenzene (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)
380-119304-B-1 MS	Matrix Spike	80
380-119304-B-1 MSD	Matrix Spike Duplicate	79
380-119309-2	TB:HALAWA SHAFT Vieweing Pool (331-241-TP401	69

Surrogate Summary

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

Job ID: 380-119309-1
SDG: Weekly

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

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

		Percent Surrogate Recovery (Acceptance Limits)								
Lab Sample ID	Client Sample ID	BFB1 (38-134)								
LCS 570-498920/4	Lab Control Sample	78								
LCSD 570-498920/5	Lab Control Sample Dup	78								
MB 570-498920/6	Method Blank	72								
MRL 570-498920/3	Lab Control Sample	70								

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)								
380-119309-1	HALAWA SHAFT Viewing Pool (	106								

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)								
380-119304-C-1-A MS	Matrix Spike	108								
380-119304-C-1-B MSD	Matrix Spike Duplicate	109								
LCS 570-497002/2-A	Lab Control Sample	112								
LCSD 570-497002/3-A	Lab Control Sample Dup	109								
MB 570-497002/1-A	Method Blank	109								
MRL 570-497002/4-A	Lab Control Sample	109								

Surrogate Legend

OTCSN = n-Octacosane (Surr)

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

Lab Sample ID: MB 380-115692/21-A
Matrix: Water
Analysis Batch: 115702

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 115692

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.098		0.098		ug/L		10/27/24 11:06	10/28/24 14:53	1
2,4'-DDD	<0.098		0.098		ug/L		10/27/24 11:06	10/28/24 14:53	1
2,4'-DDE	<0.098		0.098		ug/L		10/27/24 11:06	10/28/24 14:53	1
2,4'-DDT	<0.098		0.098		ug/L		10/27/24 11:06	10/28/24 14:53	1
2,4-Dinitrotoluene	<0.098		0.098		ug/L		10/27/24 11:06	10/28/24 14:53	1
2,6-Dinitrotoluene	<0.098		0.098		ug/L		10/27/24 11:06	10/28/24 14:53	1
2-Methylnaphthalene	<0.098		0.098		ug/L		10/27/24 11:06	10/28/24 14:53	1
4,4'-DDD	<0.098		0.098		ug/L		10/27/24 11:06	10/28/24 14:53	1
4,4'-DDE	<0.098		0.098		ug/L		10/27/24 11:06	10/28/24 14:53	1
4,4'-DDT	<0.098		0.098		ug/L		10/27/24 11:06	10/28/24 14:53	1
Acenaphthene	<0.098		0.098		ug/L		10/27/24 11:06	10/28/24 14:53	1
Acenaphthylene	<0.098		0.098		ug/L		10/27/24 11:06	10/28/24 14:53	1
Acetochlor	<0.098		0.098		ug/L		10/27/24 11:06	10/28/24 14:53	1
Alachlor	<0.049		0.049		ug/L		10/27/24 11:06	10/28/24 14:53	1
alpha-BHC	<0.098		0.098		ug/L		10/27/24 11:06	10/28/24 14:53	1
alpha-Chlordane	<0.049		0.049		ug/L		10/27/24 11:06	10/28/24 14:53	1
Anthracene	<0.020		0.020		ug/L		10/27/24 11:06	10/28/24 14:53	1
Atrazine	<0.049		0.049		ug/L		10/27/24 11:06	10/28/24 14:53	1
Benz(a)anthracene	<0.049		0.049		ug/L		10/27/24 11:06	10/28/24 14:53	1
Benzo[a]pyrene	<0.020		0.020		ug/L		10/27/24 11:06	10/28/24 14:53	1
Benzo[b]fluoranthene	<0.020		0.020		ug/L		10/27/24 11:06	10/28/24 14:53	1
Benzo[g,h,i]perylene	<0.049		0.049		ug/L		10/27/24 11:06	10/28/24 14:53	1
Benzo[k]fluoranthene	<0.020		0.020		ug/L		10/27/24 11:06	10/28/24 14:53	1
beta-BHC	<0.098		0.098		ug/L		10/27/24 11:06	10/28/24 14:53	1
Bis(2-ethylhexyl) phthalate	<0.59		0.59		ug/L		10/27/24 11:06	10/28/24 14:53	1
Bromacil	<0.098		0.098		ug/L		10/27/24 11:06	10/28/24 14:53	1
Butachlor	<0.049		0.049		ug/L		10/27/24 11:06	10/28/24 14:53	1
Butylbenzylphthalate	<0.49		0.49		ug/L		10/27/24 11:06	10/28/24 14:53	1
Chlorobenzilate	<0.098		0.098		ug/L		10/27/24 11:06	10/28/24 14:53	1
Chloroneb	<0.098		0.098		ug/L		10/27/24 11:06	10/28/24 14:53	1
Chlorothalonil (Draconil, Bravo)	<0.098		0.098		ug/L		10/27/24 11:06	10/28/24 14:53	1
Chlorpyrifos	<0.049		0.049		ug/L		10/27/24 11:06	10/28/24 14:53	1
Chrysene	<0.020		0.020		ug/L		10/27/24 11:06	10/28/24 14:53	1
delta-BHC	<0.098		0.098		ug/L		10/27/24 11:06	10/28/24 14:53	1
Di(2-ethylhexyl)adipate	<0.59		0.59		ug/L		10/27/24 11:06	10/28/24 14:53	1
Dibenz(a,h)anthracene	<0.049		0.049		ug/L		10/27/24 11:06	10/28/24 14:53	1
Diclorvos (DDVP)	<0.049		0.049		ug/L		10/27/24 11:06	10/28/24 14:53	1
Dieldrin	<0.0098		0.0098		ug/L		10/27/24 11:06	10/28/24 14:53	1
Diethylphthalate	<0.49		0.49		ug/L		10/27/24 11:06	10/28/24 14:53	1
Dimethylphthalate	<0.49		0.49		ug/L		10/27/24 11:06	10/28/24 14:53	1
Di-n-butyl phthalate	<0.98		0.98		ug/L		10/27/24 11:06	10/28/24 14:53	1
Di-n-octyl phthalate	<0.098		0.098		ug/L		10/27/24 11:06	10/28/24 14:53	1
Endosulfan I (Alpha)	<0.098		0.098		ug/L		10/27/24 11:06	10/28/24 14:53	1
Endosulfan II (Beta)	<0.098		0.098		ug/L		10/27/24 11:06	10/28/24 14:53	1
Endosulfan sulfate	<0.098		0.098		ug/L		10/27/24 11:06	10/28/24 14:53	1
Endrin	<0.0098		0.0098		ug/L		10/27/24 11:06	10/28/24 14:53	1
Endrin aldehyde	<0.098		0.098		ug/L		10/27/24 11:06	10/28/24 14:53	1
EPTC	<0.098		0.098		ug/L		10/27/24 11:06	10/28/24 14:53	1

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

Lab Sample ID: MB 380-115692/21-A
Matrix: Water
Analysis Batch: 115702

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 115692

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	<0.098		0.098		ug/L		10/27/24 11:06	10/28/24 14:53	1
Fluorene	<0.049		0.049		ug/L		10/27/24 11:06	10/28/24 14:53	1
gamma-Chlordane	<0.049		0.049		ug/L		10/27/24 11:06	10/28/24 14:53	1
Heptachlor	<0.0098	^3+	0.0098		ug/L		10/27/24 11:06	10/28/24 14:53	1
Heptachlor epoxide (isomer B)	<0.0098		0.0098		ug/L		10/27/24 11:06	10/28/24 14:53	1
Hexachlorobenzene	<0.049		0.049		ug/L		10/27/24 11:06	10/28/24 14:53	1
Hexachlorocyclopentadiene	<0.049		0.049		ug/L		10/27/24 11:06	10/28/24 14:53	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049		ug/L		10/27/24 11:06	10/28/24 14:53	1
Isophorone	<0.098		0.098		ug/L		10/27/24 11:06	10/28/24 14:53	1
Lindane	<0.0098	^3+	0.0098		ug/L		10/27/24 11:06	10/28/24 14:53	1
Malathion	<0.098		0.098		ug/L		10/27/24 11:06	10/28/24 14:53	1
Methoxychlor	<0.049		0.049		ug/L		10/27/24 11:06	10/28/24 14:53	1
Metolachlor	<0.049		0.049		ug/L		10/27/24 11:06	10/28/24 14:53	1
Molinate	<0.098		0.098		ug/L		10/27/24 11:06	10/28/24 14:53	1
Naphthalene	<0.098		0.098		ug/L		10/27/24 11:06	10/28/24 14:53	1
Parathion	<0.098		0.098		ug/L		10/27/24 11:06	10/28/24 14:53	1
Pendimethalin (Penoxaline)	<0.098		0.098		ug/L		10/27/24 11:06	10/28/24 14:53	1
Phenanthrene	<0.039		0.039		ug/L		10/27/24 11:06	10/28/24 14:53	1
Propachlor	<0.049		0.049		ug/L		10/27/24 11:06	10/28/24 14:53	1
Pyrene	<0.049		0.049		ug/L		10/27/24 11:06	10/28/24 14:53	1
Simazine	<0.049		0.049		ug/L		10/27/24 11:06	10/28/24 14:53	1
Terbacil	<0.098		0.098		ug/L		10/27/24 11:06	10/28/24 14:53	1
Terbuthylazine	<0.098		0.098		ug/L		10/27/24 11:06	10/28/24 14:53	1
Thiobencarb	<0.098		0.098		ug/L		10/27/24 11:06	10/28/24 14:53	1
Total Permethrin (mixed isomers)	<0.20		0.20		ug/L		10/27/24 11:06	10/28/24 14:53	1
trans-Nonachlor	<0.049		0.049		ug/L		10/27/24 11:06	10/28/24 14:53	1
Trifluralin	<0.098		0.098		ug/L		10/27/24 11:06	10/28/24 14:53	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*0.719*	*T J*	*ug/L*		*3.21*	*N/A*	*10/27/24 11:06*	*10/28/24 14:53*	*1*
9-Octadecenamide, (Z)-	*1.13*	*T J N*	*ug/L*		*7.99*	*301-02-0*	*10/27/24 11:06*	*10/28/24 14:53*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*97*		*70 - 130*	*10/27/24 11:06*	*10/28/24 14:53*	*1*
Perylene-d12	*83*		*70 - 130*	*10/27/24 11:06*	*10/28/24 14:53*	*1*
Triphenylphosphate	*104*		*70 - 130*	*10/27/24 11:06*	*10/28/24 14:53*	*1*

Lab Sample ID: LCS 380-115692/23-A
Matrix: Water
Analysis Batch: 115702

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 115692

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	1.95	1.86		ug/L		96	70 - 130
2,4'-DDD	1.95	2.16		ug/L		111	70 - 130
2,4'-DDE	1.95	2.05		ug/L		105	70 - 130
2,4'-DDT	1.95	1.93		ug/L		99	70 - 130
2,4-Dinitrotoluene	1.95	1.77		ug/L		91	70 - 130
2,6-Dinitrotoluene	1.95	1.81		ug/L		93	70 - 130

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

Lab Sample ID: LCS 380-115692/23-A
Matrix: Water
Analysis Batch: 115702

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 115692

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2-Methylnaphthalene	1.95	1.85		ug/L		95	70 - 130
4,4'-DDD	1.95	2.04		ug/L		104	70 - 130
4,4'-DDE	1.95	2.00		ug/L		102	70 - 130
4,4'-DDT	1.95	1.90		ug/L		97	70 - 130
Acenaphthene	1.95	1.90		ug/L		98	70 - 130
Acenaphthylene	1.95	1.74		ug/L		89	70 - 130
Acetochlor	1.95	2.19		ug/L		112	70 - 130
Alachlor	1.95	2.10		ug/L		108	70 - 130
alpha-BHC	1.95	2.01		ug/L		103	70 - 130
alpha-Chlordane	1.95	2.25		ug/L		115	70 - 130
Anthracene	1.95	1.75		ug/L		90	70 - 130
Atrazine	1.95	2.29		ug/L		117	70 - 130
Benz(a)anthracene	1.95	1.89		ug/L		97	70 - 130
Benzo[a]pyrene	1.95	1.91		ug/L		98	70 - 130
Benzo[b]fluoranthene	1.95	1.91		ug/L		98	70 - 130
Benzo[g,h,i]perylene	1.95	1.79		ug/L		92	70 - 130
Benzo[k]fluoranthene	1.95	1.97		ug/L		101	70 - 130
beta-BHC	1.95	2.03		ug/L		104	70 - 130
Bis(2-ethylhexyl) phthalate	1.95	1.87		ug/L		96	70 - 130
Bromacil	1.95	2.15		ug/L		110	70 - 130
Butachlor	1.95	2.08		ug/L		107	70 - 130
Butylbenzylphthalate	1.95	2.12		ug/L		109	70 - 130
Chlorobenzilate	1.95	1.87		ug/L		96	70 - 130
Chloroneb	1.95	2.16		ug/L		111	70 - 130
Chlorothalonil (Draconil, Bravo)	1.95	2.20		ug/L		113	70 - 130
Chlorpyrifos	1.95	2.19		ug/L		112	70 - 130
Chrysene	1.95	2.01		ug/L		103	70 - 130
delta-BHC	1.95	2.07		ug/L		106	70 - 130
Di(2-ethylhexyl)adipate	1.95	2.04		ug/L		104	70 - 130
Dibenz(a,h)anthracene	1.95	1.79		ug/L		92	70 - 130
Diclorvos (DDVP)	1.95	1.80		ug/L		92	70 - 130
Dieldrin	1.95	2.15		ug/L		110	70 - 130
Diethylphthalate	1.95	2.10		ug/L		108	70 - 130
Dimethylphthalate	1.95	2.02		ug/L		104	70 - 130
Di-n-butyl phthalate	3.90	4.20		ug/L		108	70 - 130
Di-n-octyl phthalate	1.95	1.77		ug/L		91	70 - 130
Endosulfan I (Alpha)	1.95	2.05		ug/L		105	70 - 130
Endosulfan II (Beta)	1.95	2.09		ug/L		107	70 - 130
Endosulfan sulfate	1.95	2.05		ug/L		105	70 - 130
Endrin	1.95	2.34		ug/L		120	70 - 130
Endrin aldehyde	1.95	1.91		ug/L		98	60 - 130
EPTC	1.95	2.04		ug/L		104	70 - 130
Fluoranthene	1.95	2.11		ug/L		108	70 - 130
Fluorene	1.95	1.98		ug/L		101	70 - 130
gamma-Chlordane	1.95	2.19		ug/L		112	70 - 130
Heptachlor	1.95	2.16		ug/L		111	70 - 130
Heptachlor epoxide (isomer B)	1.95	2.10		ug/L		108	70 - 130
Hexachlorobenzene	1.95	1.83		ug/L		94	70 - 130
Hexachlorocyclopentadiene	1.95	1.83		ug/L		94	70 - 130

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

Lab Sample ID: LCS 380-115692/23-A
Matrix: Water
Analysis Batch: 115702

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 115692

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Indeno[1,2,3-cd]pyrene	1.95	1.88		ug/L		97	70 - 130
Isophorone	1.95	2.04		ug/L		105	70 - 130
Lindane	1.95	1.96		ug/L		100	70 - 130
Malathion	1.95	2.33		ug/L		119	70 - 130
Methoxychlor	1.95	2.07		ug/L		106	70 - 130
Metolachlor	1.95	2.30		ug/L		118	70 - 130
Molinate	1.95	2.04		ug/L		105	70 - 130
Naphthalene	1.95	1.88		ug/L		96	70 - 130
Parathion	1.95	2.15		ug/L		110	70 - 130
Pendimethalin (Penoxaline)	1.95	1.96		ug/L		101	70 - 130
Phenanthrene	1.95	1.90		ug/L		97	70 - 130
Propachlor	1.95	2.11		ug/L		108	70 - 130
Pyrene	1.95	2.18		ug/L		112	70 - 130
Simazine	1.95	2.20		ug/L		113	70 - 130
Terbacil	1.95	2.35		ug/L		120	70 - 130
Terbuthylazine	1.95	2.25		ug/L		115	70 - 130
Thiobencarb	1.95	2.17		ug/L		111	70 - 130
trans-Nonachlor	1.95	2.25		ug/L		115	70 - 130
Trifluralin	1.95	1.91		ug/L		98	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Nitro-m-xylene	*98*		*70 - 130*
Perylene-d12	*90*		*70 - 130*
Triphenylphosphate	*109*		*70 - 130*

Lab Sample ID: MRL 380-115692/22-A
Matrix: Water
Analysis Batch: 115702

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 115692

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	0.0975	0.114		ug/L		117	50 - 150
2,4'-DDD	0.0975	0.0983		ug/L		101	50 - 150
2,4'-DDE	0.0975	0.109		ug/L		112	50 - 150
2,4'-DDT	0.0975	0.109		ug/L		111	50 - 150
2,4-Dinitrotoluene	0.0975	0.0966	J	ug/L		99	50 - 150
2,6-Dinitrotoluene	0.0975	0.0990		ug/L		101	50 - 150
2-Methylnaphthalene	0.0975	0.103		ug/L		106	50 - 150
4,4'-DDD	0.0975	0.124		ug/L		127	50 - 150
4,4'-DDE	0.0975	0.109		ug/L		112	50 - 150
4,4'-DDT	0.0975	0.111		ug/L		114	50 - 150
Acenaphthene	0.0975	0.0992		ug/L		102	50 - 150
Acenaphthylene	0.0975	0.0856	J	ug/L		88	50 - 150
Acetochlor	0.0975	0.120		ug/L		123	50 - 150
Alachlor	0.0488	0.0584		ug/L		120	50 - 150
alpha-BHC	0.0975	0.113		ug/L		116	50 - 150
alpha-Chlordane	0.0244	<0.028		ug/L		114	50 - 150
Anthracene	0.0195	0.0201		ug/L		103	50 - 150
Atrazine	0.0488	0.0547		ug/L		112	50 - 150

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

Lab Sample ID: MRL 380-115692/22-A
Matrix: Water
Analysis Batch: 115702

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 115692

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Benz(a)anthracene	0.0488	0.0527		ug/L		108	50 - 150
Benzo[a]pyrene	0.0195	0.0215		ug/L		110	50 - 150
Benzo[b]fluoranthene	0.0195	0.0230		ug/L		118	50 - 150
Benzo[g,h,i]perylene	0.0488	0.0514		ug/L		105	50 - 150
Benzo[k]fluoranthene	0.0195	0.0214		ug/L		110	50 - 150
beta-BHC	0.0975	0.123		ug/L		127	50 - 150
Bis(2-ethylhexyl) phthalate	0.585	0.553	J	ug/L		94	50 - 150
Bromacil	0.0975	0.124		ug/L		127	50 - 150
Butachlor	0.0488	0.0637		ug/L		131	50 - 150
Butylbenzylphthalate	0.488	0.577		ug/L		118	50 - 150
Chlorobenzilate	0.0975	0.105		ug/L		107	50 - 150
Chloroneb	0.0975	0.0965	J	ug/L		99	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0975	0.116		ug/L		119	50 - 150
Chlorpyrifos	0.0488	0.0494		ug/L		101	50 - 150
Chrysene	0.0195	0.0224		ug/L		115	50 - 150
delta-BHC	0.0975	0.116		ug/L		119	50 - 150
Di(2-ethylhexyl)adipate	0.585	0.668		ug/L		114	50 - 150
Dibenz(a,h)anthracene	0.0488	0.0472	J	ug/L		97	50 - 150
Diclorvos (DDVP)	0.0488	0.0545		ug/L		112	50 - 150
Dieldrin	0.00975	0.0111		ug/L		114	50 - 150
Diethylphthalate	0.488	0.542		ug/L		111	50 - 150
Dimethylphthalate	0.488	0.523		ug/L		107	50 - 150
Di-n-butyl phthalate	0.488	0.547	J	ug/L		112	49 - 243
Di-n-octyl phthalate	0.0975	0.109		ug/L		112	50 - 150
Endosulfan I (Alpha)	0.0975	0.117		ug/L		120	50 - 150
Endosulfan II (Beta)	0.0975	0.122		ug/L		125	50 - 150
Endosulfan sulfate	0.0975	0.125		ug/L		129	50 - 150
Endrin	0.00975	0.0127		ug/L		130	50 - 150
Endrin aldehyde	0.0975	0.124		ug/L		127	50 - 150
EPTC	0.0975	0.0996		ug/L		102	50 - 150
Fluoranthene	0.0975	0.107		ug/L		109	50 - 150
Fluorene	0.0488	0.0545		ug/L		112	50 - 150
gamma-Chlordane	0.0244	0.0231	J	ug/L		95	50 - 150
Heptachlor	0.00975	0.0158	^3+	ug/L		162	50 - 150
Heptachlor epoxide (isomer B)	0.00975	0.0124		ug/L		127	50 - 150
Hexachlorobenzene	0.0488	0.0508		ug/L		104	50 - 150
Hexachlorocyclopentadiene	0.0488	0.0451	J	ug/L		92	50 - 150
Indeno[1,2,3-cd]pyrene	0.0488	0.0493		ug/L		101	50 - 150
Isophorone	0.0975	0.126		ug/L		129	50 - 150
Lindane	0.00975	0.0167	^3+	ug/L		172	50 - 150
Malathion	0.0975	0.0978	J	ug/L		100	50 - 150
Methoxychlor	0.0488	0.0584		ug/L		120	50 - 150
Metolachlor	0.0488	0.0625		ug/L		128	50 - 150
Molinate	0.0975	0.105		ug/L		107	50 - 150
Naphthalene	0.0975	0.0989		ug/L		101	50 - 150
Parathion	0.0975	0.0907	J	ug/L		93	50 - 150
Pendimethalin (Penoxaline)	0.0975	0.0939	J	ug/L		96	50 - 150
Phenanthrene	0.0390	0.0449		ug/L		115	50 - 150
Propachlor	0.0488	0.0585		ug/L		120	50 - 150

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

Lab Sample ID: MRL 380-115692/22-A
Matrix: Water
Analysis Batch: 115702

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 115692

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
Pyrene			0.0488	0.0551		ug/L		113	50 - 150		
Simazine			0.0488	0.0546		ug/L		112	50 - 150		
Terbacil			0.0975	0.0862	J	ug/L		88	50 - 150		
Terbuthylazine			0.0975	0.119		ug/L		122	50 - 150		
Thiobencarb			0.0975	0.109		ug/L		111	50 - 150		
trans-Nonachlor			0.0244	0.0287	J	ug/L		118	50 - 150		
Trifluralin			0.0975	0.0930	J	ug/L		95	50 - 150		

Surrogate	*MRL %Recovery*	*MRL Qualifier*	*Limits*
2-Nitro-m-xylene	*97*		*70 - 130*
Perylene-d12	*78*		*70 - 130*
Triphenylphosphate	*107*		*70 - 130*

Lab Sample ID: 380-119304-I-1-A MSD
Matrix: Water
Analysis Batch: 115702

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 115692

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	<0.097		1.93	1.92		ug/L		99	70 - 130	0	20
2,4'-DDD	<0.097		1.93	2.11		ug/L		110	70 - 130	1	20
2,4'-DDE	<0.097		1.93	2.03		ug/L		105	70 - 130	1	20
2,4'-DDT	<0.097		1.93	1.89		ug/L		98	70 - 130	3	20
2,4-Dinitrotoluene	<0.097		1.93	2.16		ug/L		112	70 - 130	2	20
2,6-Dinitrotoluene	<0.097		1.93	2.10		ug/L		109	70 - 130	1	20
2-Methylnaphthalene	<0.097		1.93	1.91		ug/L		99	70 - 130	1	20
4,4'-DDD	<0.097		1.93	2.04		ug/L		106	70 - 130	2	20
4,4'-DDE	<0.097		1.93	1.98		ug/L		103	70 - 130	2	20
4,4'-DDT	<0.097		1.93	1.81		ug/L		94	70 - 130	7	20
Acenaphthene	<0.097		1.93	1.92		ug/L		100	70 - 130	2	20
Acenaphthylene	<0.097		1.93	1.97		ug/L		102	70 - 130	3	20
Acetochlor	<0.097		1.93	2.18		ug/L		113	70 - 130	1	20
Alachlor	<0.049		1.93	2.11		ug/L		109	70 - 130	2	20
alpha-BHC	<0.097		1.93	2.03		ug/L		105	70 - 130	1	20
alpha-Chlordane	<0.049		1.93	2.21		ug/L		115	70 - 130	2	20
Anthracene	<0.019		1.93	1.56		ug/L		81	70 - 130	5	20
Atrazine	<0.049		1.93	2.27		ug/L		118	70 - 130	2	20
Benz(a)anthracene	<0.049		1.93	1.86		ug/L		97	70 - 130	3	20
Benzo[a]pyrene	<0.019		1.93	2.02		ug/L		105	70 - 130	4	20
Benzo[b]fluoranthene	<0.019		1.93	2.01		ug/L		104	70 - 130	2	20
Benzo[g,h,i]perylene	<0.049		1.93	1.85		ug/L		96	70 - 130	1	20
Benzo[k]fluoranthene	<0.019		1.93	1.96		ug/L		102	70 - 130	4	20
beta-BHC	<0.097		1.93	2.00		ug/L		104	70 - 130	3	20
Bis(2-ethylhexyl) phthalate	<0.58		1.93	1.95		ug/L		101	70 - 130	2	20
Bromacil	<0.097		1.93	2.21		ug/L		115	70 - 130	1	20
Butachlor	<0.049		1.93	2.11		ug/L		110	70 - 130	2	20
Butylbenzylphthalate	<0.49		1.93	2.04		ug/L		106	70 - 130	2	20
Chlorobenzilate	<0.097		1.93	1.87		ug/L		97	70 - 130	3	20
Chloroneb	<0.097		1.93	2.26		ug/L		117	70 - 130	2	20

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

Lab Sample ID: 380-119304-I-1-A MSD
Matrix: Water
Analysis Batch: 115702

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 115692

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chlorothalonil (Draconil, Bravo)	<0.097		1.93	2.19		ug/L		114	70 - 130	4	20
Chlorpyrifos	<0.049		1.93	2.25		ug/L		117	70 - 130	0	20
Chrysene	<0.019		1.93	2.01		ug/L		104	70 - 130	3	20
delta-BHC	<0.097		1.93	2.02		ug/L		105	70 - 130	4	20
Di(2-ethylhexyl)adipate	<0.58		1.93	2.01		ug/L		100	70 - 130	0	20
Dibenz(a,h)anthracene	<0.049		1.93	1.95		ug/L		101	70 - 130	1	20
Diclorvos (DDVP)	<0.049		1.93	1.90		ug/L		99	70 - 130	2	20
Dieldrin	<0.0097		1.93	2.07		ug/L		107	70 - 130	3	20
Diethylphthalate	<0.49		1.93	2.10		ug/L		109	70 - 130	2	20
Dimethylphthalate	<0.49		1.93	2.10		ug/L		109	70 - 130	2	20
Di-n-butyl phthalate	<0.97		3.85	4.18		ug/L		108	70 - 130	1	20
Di-n-octyl phthalate	<0.097		1.93	1.81		ug/L		94	70 - 130	0	20
Endosulfan I (Alpha)	<0.097		1.93	2.10		ug/L		109	70 - 130	6	20
Endosulfan II (Beta)	<0.097		1.93	2.14		ug/L		111	70 - 130	8	20
Endosulfan sulfate	<0.097		1.93	2.07		ug/L		108	70 - 130	4	20
Endrin	<0.0097		1.93	2.32		ug/L		121	70 - 130	3	20
Endrin aldehyde	<0.097		1.93	1.84		ug/L		95	60 - 130	1	20
EPTC	<0.097		1.93	2.09		ug/L		109	70 - 130	1	20
Fluoranthene	<0.097		1.93	2.13		ug/L		111	70 - 130	2	20
Fluorene	<0.049		1.93	2.04		ug/L		106	70 - 130	1	20
gamma-Chlordane	<0.049		1.93	2.20		ug/L		114	70 - 130	3	20
Heptachlor	<0.0097	^3+	1.93	2.15		ug/L		111	70 - 130	4	20
Heptachlor epoxide (isomer B)	<0.0097		1.93	2.13		ug/L		111	70 - 130	4	20
Hexachlorobenzene	<0.049		1.93	1.87		ug/L		97	70 - 130	3	20
Hexachlorocyclopentadiene	<0.049		1.93	1.75		ug/L		91	70 - 130	13	20
Indeno[1,2,3-cd]pyrene	<0.049		1.93	2.03		ug/L		106	70 - 130	1	20
Isophorone	<0.097		1.93	2.05		ug/L		107	70 - 130	2	20
Lindane	<0.0097	^3+	1.93	1.94		ug/L		101	70 - 130	2	20
Malathion	<0.097		1.93	2.37		ug/L		123	70 - 130	1	20
Methoxychlor	<0.049		1.93	2.11		ug/L		110	70 - 130	4	20
Metolachlor	<0.049		1.93	2.29		ug/L		119	70 - 130	3	20
Molinate	<0.097		1.93	2.08		ug/L		108	70 - 130	0	20
Naphthalene	<0.097		1.93	1.89		ug/L		98	70 - 130	0	20
Parathion	<0.097		1.93	2.30		ug/L		120	70 - 130	0	20
Pendimethalin (Penoxaline)	<0.097		1.93	2.21		ug/L		115	70 - 130	0	20
Phenanthrene	<0.039		1.93	1.90		ug/L		98	70 - 130	3	20
Propachlor	<0.049		1.93	2.17		ug/L		112	70 - 130	1	20
Pyrene	<0.049		1.93	2.15		ug/L		111	70 - 130	3	20
Simazine	<0.049		1.93	2.21		ug/L		115	70 - 130	2	20
Terbacil	<0.097		1.93	2.38		ug/L		124	70 - 130	1	20
Terbuthylazine	<0.097		1.93	2.24		ug/L		117	70 - 130	2	20
Thiobencarb	<0.097		1.93	2.15		ug/L		112	70 - 130	1	20
trans-Nonachlor	<0.049		1.93	2.24		ug/L		116	70 - 130	3	20
Trifluralin	<0.097		1.93	2.13		ug/L		110	70 - 130	0	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Nitro-m-xylene	*99*		*70 - 130*
Perylene-d12	*98*		*70 - 130*

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

Lab Sample ID: 380-119304-I-1-A MSD
Matrix: Water
Analysis Batch: 115702

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 115692

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Triphenylphosphate	*107*		*70 - 130*

Lab Sample ID: 380-119304-J-1-A MS
Matrix: Water
Analysis Batch: 115702

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 115692

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	<0.097		1.95	1.92		ug/L		98	70 - 130
2,4'-DDD	<0.097		1.95	2.10		ug/L		108	70 - 130
2,4'-DDE	<0.097		1.95	2.04		ug/L		105	70 - 130
2,4'-DDT	<0.097		1.95	1.94		ug/L		100	70 - 130
2,4-Dinitrotoluene	<0.097		1.95	2.20		ug/L		113	70 - 130
2,6-Dinitrotoluene	<0.097		1.95	2.09		ug/L		107	70 - 130
2-Methylnaphthalene	<0.097		1.95	1.92		ug/L		99	70 - 130
4,4'-DDD	<0.097		1.95	2.00		ug/L		103	70 - 130
4,4'-DDE	<0.097		1.95	2.01		ug/L		103	70 - 130
4,4'-DDT	<0.097		1.95	1.95		ug/L		100	70 - 130
Acenaphthene	<0.097		1.95	1.95		ug/L		100	70 - 130
Acenaphthylene	<0.097		1.95	2.03		ug/L		104	70 - 130
Acetochlor	<0.097		1.95	2.16		ug/L		111	70 - 130
Alachlor	<0.049		1.95	2.05		ug/L		105	70 - 130
alpha-BHC	<0.097		1.95	2.05		ug/L		105	70 - 130
alpha-Chlordane	<0.049		1.95	2.16		ug/L		111	70 - 130
Anthracene	<0.019		1.95	1.64		ug/L		84	70 - 130
Atrazine	<0.049		1.95	2.32		ug/L		119	70 - 130
Benz(a)anthracene	<0.049		1.95	1.92		ug/L		99	70 - 130
Benzo[a]pyrene	<0.019		1.95	2.11		ug/L		108	70 - 130
Benzo[b]fluoranthene	<0.019		1.95	2.05		ug/L		105	70 - 130
Benzo[g,h,i]perylene	<0.049		1.95	1.87		ug/L		96	70 - 130
Benzo[k]fluoranthene	<0.019		1.95	2.03		ug/L		104	70 - 130
beta-BHC	<0.097		1.95	2.06		ug/L		106	70 - 130
Bis(2-ethylhexyl) phthalate	<0.58		1.95	1.91		ug/L		98	70 - 130
Bromacil	<0.097		1.95	2.19		ug/L		112	70 - 130
Butachlor	<0.049		1.95	2.07		ug/L		106	70 - 130
Butylbenzylphthalate	<0.49		1.95	2.07		ug/L		106	70 - 130
Chlorobenzilate	<0.097		1.95	1.81		ug/L		93	70 - 130
Chloroneb	<0.097		1.95	2.23		ug/L		114	70 - 130
Chlorothalonil (Draconil, Bravo)	<0.097		1.95	2.28		ug/L		117	70 - 130
Chlorpyrifos	<0.049		1.95	2.26		ug/L		116	70 - 130
Chrysene	<0.019		1.95	2.08		ug/L		107	70 - 130
delta-BHC	<0.097		1.95	2.11		ug/L		108	70 - 130
Di(2-ethylhexyl)adipate	<0.58		1.95	2.01		ug/L		99	70 - 130
Dibenz(a,h)anthracene	<0.049		1.95	1.93		ug/L		99	70 - 130
Diclorvos (DDVP)	<0.049		1.95	1.94		ug/L		99	70 - 130
Dieldrin	<0.0097		1.95	2.00		ug/L		102	70 - 130
Diethylphthalate	<0.49		1.95	2.14		ug/L		110	70 - 130
Dimethylphthalate	<0.49		1.95	2.06		ug/L		106	70 - 130
Di-n-butyl phthalate	<0.97		3.90	4.14		ug/L		106	70 - 130

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

Lab Sample ID: 380-119304-J-1-A MS
Matrix: Water
Analysis Batch: 115702

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 115692

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Di-n-octyl phthalate	<0.097		1.95	1.82		ug/L		93	70 - 130
Endosulfan I (Alpha)	<0.097		1.95	1.98		ug/L		101	70 - 130
Endosulfan II (Beta)	<0.097		1.95	1.97		ug/L		101	70 - 130
Endosulfan sulfate	<0.097		1.95	1.99		ug/L		102	70 - 130
Endrin	<0.0097		1.95	2.26		ug/L		116	70 - 130
Endrin aldehyde	<0.097		1.95	1.81		ug/L		93	60 - 130
EPTC	<0.097		1.95	2.07		ug/L		106	70 - 130
Fluoranthene	<0.097		1.95	2.18		ug/L		112	70 - 130
Fluorene	<0.049		1.95	2.06		ug/L		106	70 - 130
gamma-Chlordane	<0.049		1.95	2.14		ug/L		110	70 - 130
Heptachlor	<0.0097	^3+	1.95	2.24		ug/L		115	70 - 130
Heptachlor epoxide (isomer B)	<0.0097		1.95	2.06		ug/L		106	70 - 130
Hexachlorobenzene	<0.049		1.95	1.93		ug/L		99	70 - 130
Hexachlorocyclopentadiene	<0.049		1.95	2.00		ug/L		103	70 - 130
Indeno[1,2,3-cd]pyrene	<0.049		1.95	2.05		ug/L		105	70 - 130
Isophorone	<0.097		1.95	2.01		ug/L		103	70 - 130
Lindane	<0.0097	^3+	1.95	1.97		ug/L		101	70 - 130
Malathion	<0.097		1.95	2.35		ug/L		120	70 - 130
Methoxychlor	<0.049		1.95	2.20		ug/L		113	70 - 130
Metolachlor	<0.049		1.95	2.21		ug/L		114	70 - 130
Molinate	<0.097		1.95	2.08		ug/L		107	70 - 130
Naphthalene	<0.097		1.95	1.89		ug/L		97	70 - 130
Parathion	<0.097		1.95	2.29		ug/L		118	70 - 130
Pendimethalin (Penoxaline)	<0.097		1.95	2.21		ug/L		113	70 - 130
Phenanthrene	<0.039		1.95	1.95		ug/L		100	70 - 130
Propachlor	<0.049		1.95	2.15		ug/L		110	70 - 130
Pyrene	<0.049		1.95	2.20		ug/L		113	70 - 130
Simazine	<0.049		1.95	2.25		ug/L		115	70 - 130
Terbacil	<0.097		1.95	2.37		ug/L		122	70 - 130
Terbuthylazine	<0.097		1.95	2.29		ug/L		117	70 - 130
Thiobencarb	<0.097		1.95	2.17		ug/L		111	70 - 130
trans-Nonachlor	<0.049		1.95	2.18		ug/L		112	70 - 130
Trifluralin	<0.097		1.95	2.12		ug/L		109	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Nitro-m-xylene	*97*		*70 - 130*
Perylene-d12	*99*		*70 - 130*
Triphenylphosphate	*106*		*70 - 130*

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

Lab Sample ID: MB 570-496453/1-A
Matrix: Water
Analysis Batch: 499944

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 496453

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*	*10/28/24 12:16*	*11/06/24 15:32*	*1*

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

Lab Sample ID: MB 570-496453/1-A
Matrix: Water
Analysis Batch: 499944

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 496453

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	92		33 - 139	10/28/24 12:16	11/06/24 15:32	1
2-Fluorobiphenyl (Surr)	100		33 - 126	10/28/24 12:16	11/06/24 15:32	1
2-Fluorophenol (Surr)	62		12 - 120	10/28/24 12:16	11/06/24 15:32	1
Nitrobenzene-d5 (Surr)	113		36 - 120	10/28/24 12:16	11/06/24 15:32	1
Phenol-d6 (Surr)	40		10 - 120	10/28/24 12:16	11/06/24 15:32	1
p-Terphenyl-d14 (Surr)	105		47 - 131	10/28/24 12:16	11/06/24 15:32	1

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

Lab Sample ID: MB 570-496453/1-A
Matrix: Water
Analysis Batch: 498190

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 496453

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.20		0.20		ug/L		10/28/24 12:16	11/01/24 10:13	1
2-Methylnaphthalene	<0.20		0.20		ug/L		10/28/24 12:16	11/01/24 10:13	1
Acenaphthene	<0.20		0.20		ug/L		10/28/24 12:16	11/01/24 10:13	1
Acenaphthylene	<0.20		0.20		ug/L		10/28/24 12:16	11/01/24 10:13	1
Anthracene	<0.20		0.20		ug/L		10/28/24 12:16	11/01/24 10:13	1
Benzo[a]anthracene	<0.20		0.20		ug/L		10/28/24 12:16	11/01/24 10:13	1
Benzo[a]pyrene	<0.20		0.20		ug/L		10/28/24 12:16	11/01/24 10:13	1
Benzo[b]fluoranthene	<0.20		0.20		ug/L		10/28/24 12:16	11/01/24 10:13	1
Benzo[g,h,i]perylene	<0.20		0.20		ug/L		10/28/24 12:16	11/01/24 10:13	1
Benzo[k]fluoranthene	<0.20		0.20		ug/L		10/28/24 12:16	11/01/24 10:13	1
Chrysene	<0.20		0.20		ug/L		10/28/24 12:16	11/01/24 10:13	1
Dibenz(a,h)anthracene	<0.20		0.20		ug/L		10/28/24 12:16	11/01/24 10:13	1
Fluoranthene	<0.20		0.20		ug/L		10/28/24 12:16	11/01/24 10:13	1
Fluorene	<0.20		0.20		ug/L		10/28/24 12:16	11/01/24 10:13	1
Indeno[1,2,3-cd]pyrene	<0.20		0.20		ug/L		10/28/24 12:16	11/01/24 10:13	1
Naphthalene	<0.20		0.20		ug/L		10/28/24 12:16	11/01/24 10:13	1
Phenanthrene	<0.20		0.20		ug/L		10/28/24 12:16	11/01/24 10:13	1
Pyrene	<0.20		0.20		ug/L		10/28/24 12:16	11/01/24 10:13	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	109		28 - 127	10/28/24 12:16	11/01/24 10:13	1
2-Fluorobiphenyl (Surr)	96		31 - 120	10/28/24 12:16	11/01/24 10:13	1
2-Fluorophenol (Surr)	63		17 - 120	10/28/24 12:16	11/01/24 10:13	1
Nitrobenzene-d5 (Surr)	95		27 - 120	10/28/24 12:16	11/01/24 10:13	1
Phenol-d6 (Surr)	39		10 - 120	10/28/24 12:16	11/01/24 10:13	1
p-Terphenyl-d14 (Surr)	117		45 - 120	10/28/24 12:16	11/01/24 10:13	1

Lab Sample ID: LCS 570-496453/2-A
Matrix: Water
Analysis Batch: 498190

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 496453

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1-Methylnaphthalene			20.0	16.0		ug/L		80	47 - 120		
2-Methylnaphthalene			20.0	18.3		ug/L		91	43 - 120		

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

Lab Sample ID: LCS 570-496453/2-A
Matrix: Water
Analysis Batch: 498190

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 496453

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	20.0	19.7		ug/L		99	60 - 132
Acenaphthylene	20.0	19.5		ug/L		97	54 - 126
Anthracene	20.0	23.2		ug/L		116	43 - 120
Benzo[a]anthracene	20.0	22.4		ug/L		112	42 - 133
Benzo[a]pyrene	20.0	22.8		ug/L		114	32 - 148
Benzo[b]fluoranthene	20.0	23.0		ug/L		115	42 - 140
Benzo[g,h,i]perylene	20.0	21.4		ug/L		107	1 - 195
Benzo[k]fluoranthene	20.0	23.3		ug/L		117	25 - 146
Chrysene	20.0	21.8		ug/L		109	44 - 140
Dibenz(a,h)anthracene	20.0	23.5		ug/L		117	1 - 200
Fluoranthene	20.0	23.7		ug/L		118	43 - 121
Fluorene	20.0	20.5		ug/L		102	70 - 120
Indeno[1,2,3-cd]pyrene	20.0	22.9		ug/L		115	1 - 151
Naphthalene	20.0	15.8		ug/L		79	36 - 120
Phenanthrene	20.0	22.8		ug/L		114	65 - 120
Pyrene	20.0	23.3		ug/L		116	70 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*104*		*28 - 127*
2-Fluorobiphenyl (Surr)	*98*		*31 - 120*
2-Fluorophenol (Surr)	*64*		*17 - 120*
Nitrobenzene-d5 (Surr)	*78*		*27 - 120*
Phenol-d6 (Surr)	*42*		*10 - 120*
p-Terphenyl-d14 (Surr)	*112*		*45 - 120*

Lab Sample ID: LCSD 570-496453/3-A
Matrix: Water
Analysis Batch: 498190

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 496453

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	20.0	15.5		ug/L		78	47 - 120	3	20
2-Methylnaphthalene	20.0	17.7		ug/L		89	43 - 120	3	20
Acenaphthene	20.0	19.6		ug/L		98	60 - 132	0	29
Acenaphthylene	20.0	19.5		ug/L		97	54 - 126	0	45
Anthracene	20.0	22.5		ug/L		113	43 - 120	3	40
Benzo[a]anthracene	20.0	21.9		ug/L		109	42 - 133	2	32
Benzo[a]pyrene	20.0	22.1		ug/L		111	32 - 148	3	43
Benzo[b]fluoranthene	20.0	22.9		ug/L		114	42 - 140	1	43
Benzo[g,h,i]perylene	20.0	21.1		ug/L		105	1 - 195	2	61
Benzo[k]fluoranthene	20.0	22.7		ug/L		114	25 - 146	3	38
Chrysene	20.0	21.1		ug/L		106	44 - 140	3	53
Dibenz(a,h)anthracene	20.0	22.8		ug/L		114	1 - 200	3	75
Fluoranthene	20.0	22.6		ug/L		113	43 - 121	5	40
Fluorene	20.0	20.3		ug/L		102	70 - 120	1	23
Indeno[1,2,3-cd]pyrene	20.0	22.2		ug/L		111	1 - 151	3	60
Naphthalene	20.0	15.4		ug/L		77	36 - 120	3	39
Phenanthrene	20.0	21.9		ug/L		109	65 - 120	4	24
Pyrene	20.0	23.2		ug/L		116	70 - 120	0	30

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

Lab Sample ID: LCSD 570-496453/3-A
Matrix: Water
Analysis Batch: 498190

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 496453

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*99*		*28 - 127*
2-Fluorobiphenyl (Surr)	*96*		*31 - 120*
2-Fluorophenol (Surr)	*63*		*17 - 120*
Nitrobenzene-d5 (Surr)	*77*		*27 - 120*
Phenol-d6 (Surr)	*41*		*10 - 120*
p-Terphenyl-d14 (Surr)	*110*		*45 - 120*

Lab Sample ID: 380-119304-A-1-A MS
Matrix: Water
Analysis Batch: 499085

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 496453

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	<0.19		19.4	17.6		ug/L		91	36 - 120
2-Methylnaphthalene	<0.19		19.4	19.7		ug/L		101	32 - 124
Acenaphthene	<0.19		19.4	18.4		ug/L		95	47 - 145
Acenaphthylene	<0.19		19.4	17.5		ug/L		90	33 - 145
Anthracene	<0.19		19.4	20.5		ug/L		105	27 - 133
Benzo[a]anthracene	<0.19		19.4	20.4		ug/L		105	33 - 143
Benzo[a]pyrene	<0.19		19.4	17.6		ug/L		90	17 - 163
Benzo[b]fluoranthene	<0.19		19.4	20.4		ug/L		105	24 - 159
Benzo[g,h,i]perylene	<0.19		19.4	25.4		ug/L		130	1 - 219
Benzo[k]fluoranthene	<0.19		19.4	20.7		ug/L		106	11 - 162
Chrysene	<0.19		19.4	20.5		ug/L		105	17 - 168
Dibenz(a,h)anthracene	<0.19		19.4	28.8		ug/L		148	1 - 227
Fluoranthene	<0.19		19.4	21.5		ug/L		110	26 - 137
Fluorene	<0.19		19.4	19.4		ug/L		100	59 - 121
Indeno[1,2,3-cd]pyrene	<0.19		19.4	27.0		ug/L		139	1 - 171
Naphthalene	<0.19		19.4	17.1		ug/L		88	21 - 133
Phenanthrene	<0.19		19.4	20.7		ug/L		106	54 - 120
Pyrene	<0.19		19.4	21.4		ug/L		110	52 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*102*		*28 - 127*
2-Fluorobiphenyl (Surr)	*93*		*31 - 120*
2-Fluorophenol (Surr)	*55*		*17 - 120*
Nitrobenzene-d5 (Surr)	*91*		*27 - 120*
Phenol-d6 (Surr)	*36*		*10 - 120*
p-Terphenyl-d14 (Surr)	*107*		*45 - 120*

Lab Sample ID: 380-119304-A-1-B MSD
Matrix: Water
Analysis Batch: 499085

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 496453

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	<0.19		19.2	14.8		ug/L		77	36 - 120	17	30
2-Methylnaphthalene	<0.19		19.2	17.2		ug/L		90	32 - 124	14	30
Acenaphthene	<0.19		19.2	18.2		ug/L		95	47 - 145	1	48
Acenaphthylene	<0.19		19.2	18.1		ug/L		95	33 - 145	4	74

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

Lab Sample ID: 380-119304-A-1-B MSD
Matrix: Water
Analysis Batch: 499085

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 496453

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Anthracene	<0.19		19.2	21.3		ug/L		111	27 - 133	3	66
Benzo[a]anthracene	<0.19		19.2	20.0		ug/L		104	33 - 143	2	53
Benzo[a]pyrene	<0.19		19.2	19.7		ug/L		102	17 - 163	11	72
Benzo[b]fluoranthene	<0.19		19.2	20.0		ug/L		104	24 - 159	2	71
Benzo[g,h,i]perylene	<0.19		19.2	20.4		ug/L		106	1 - 219	22	97
Benzo[k]fluoranthene	<0.19		19.2	20.9		ug/L		109	11 - 162	1	63
Chrysene	<0.19		19.2	19.9		ug/L		103	17 - 168	3	87
Dibenz(a,h)anthracene	<0.19		19.2	21.9		ug/L		114	1 - 227	27	126
Fluoranthene	<0.19		19.2	21.0		ug/L		109	26 - 137	2	66
Fluorene	<0.19		19.2	18.8		ug/L		98	59 - 121	3	38
Indeno[1,2,3-cd]pyrene	<0.19		19.2	20.7		ug/L		108	1 - 171	26	99
Naphthalene	<0.19		19.2	14.6		ug/L		76	21 - 133	16	65
Phenanthrene	<0.19		19.2	20.5		ug/L		107	54 - 120	1	39
Pyrene	<0.19		19.2	21.4		ug/L		111	52 - 120	0	49

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*101*		*28 - 127*
2-Fluorobiphenyl (Surr)	*92*		*31 - 120*
2-Fluorophenol (Surr)	*55*		*17 - 120*
Nitrobenzene-d5 (Surr)	*76*		*27 - 120*
Phenol-d6 (Surr)	*36*		*10 - 120*
p-Terphenyl-d14 (Surr)	*104*		*45 - 120*

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

Lab Sample ID: MB 570-498920/6
Matrix: Water
Analysis Batch: 498920

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			11/04/24 11:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*72*		*38 - 134*		*11/04/24 11:41*	*1*

Lab Sample ID: LCS 570-498920/4
Matrix: Water
Analysis Batch: 498920

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	347		ug/L		87	78 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*78*		*38 - 134*

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

Lab Sample ID: LCSD 570-498920/5
Matrix: Water
Analysis Batch: 498920

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	340		ug/L		85	78 - 120	2	10

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*78*		*38 - 134*

Lab Sample ID: MRL 570-498920/3
Matrix: Water
Analysis Batch: 498920

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	12.6		ug/L		126	50 - 150		

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

Lab Sample ID: 380-119304-B-1 MS
Matrix: Water
Analysis Batch: 498920

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (C4-C13)	<10		400	336		ug/L		84	68 - 122		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*80*		*38 - 134*

Lab Sample ID: 380-119304-B-1 MSD
Matrix: Water
Analysis Batch: 498920

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (C4-C13)	<10		400	348		ug/L		87	68 - 122	4	18

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*79*		*38 - 134*

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

Lab Sample ID: MB 570-497002/1-A
Matrix: Water
Analysis Batch: 499795

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 497002

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C24)	<25		25		ug/L		10/29/24 15:18	11/06/24 12:34	1
Motor Oil Range Organics [C24-C36]	<25		25		ug/L		10/29/24 15:18	11/06/24 12:34	1
C8-C18	<25		25		ug/L		10/29/24 15:18	11/06/24 12:34	1

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

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	109		60 - 130	10/29/24 15:18	11/06/24 12:34	1

Lab Sample ID: LCS 570-497002/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 499795 — **Prep Batch: 497002**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
C10-C28			1600	1550		ug/L		97	56 - 127		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
n-Octacosane (Surr)	112		60 - 130

Lab Sample ID: LCSD 570-497002/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 499795 — **Prep Batch: 497002**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C10-C28			1600	1510		ug/L		95	56 - 127	2	23

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
n-Octacosane (Surr)	109		60 - 130

Lab Sample ID: MRL 570-497002/4-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 499795 — **Prep Batch: 497002**

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
C10-C28			0.0200	0.0347	^3+	mg/L		173	50 - 150		

Surrogate	MRL %Recovery	MRL Qualifier	Limits
n-Octacosane (Surr)	109		60 - 130

Lab Sample ID: 380-119304-C-1-A MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 499795 — **Prep Batch: 497002**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
C10-C28	<26	^3+	1650	1590		ug/L		96	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
n-Octacosane (Surr)	108		60 - 130

Lab Sample ID: 380-119304-C-1-B MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 499795 — **Prep Batch: 497002**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C10-C28	<26	^3+	1660	1580		ug/L		96	70 - 130	1	20

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

Lab Sample ID: 380-119304-C-1-B MSD
Matrix: Water
Analysis Batch: 499795

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 497002

Surrogate	MSD %Recovery	MSD Qualifier	Limits
n-Octacosane (Surr)	109		60 - 130

QC Association Summary

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

Job ID: 380-119309-1
SDG: Weekly

GC/MS Semi VOA

Prep Batch: 115692

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-119309-1	HALAWA SHAFT Viewing Pool (331-241-TP401)	Total/NA	Drinking Water	525.2	
MB 380-115692/21-A	Method Blank	Total/NA	Water	525.2	
LCS 380-115692/23-A	Lab Control Sample	Total/NA	Water	525.2	
MRL 380-115692/22-A	Lab Control Sample	Total/NA	Water	525.2	
380-119304-I-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	525.2	
380-119304-J-1-A MS	Matrix Spike	Total/NA	Water	525.2	

Analysis Batch: 115702

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-119309-1	HALAWA SHAFT Viewing Pool (331-241-TP401)	Total/NA	Drinking Water	525.2	115692
MB 380-115692/21-A	Method Blank	Total/NA	Water	525.2	115692
LCS 380-115692/23-A	Lab Control Sample	Total/NA	Water	525.2	115692
MRL 380-115692/22-A	Lab Control Sample	Total/NA	Water	525.2	115692
380-119304-I-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	525.2	115692
380-119304-J-1-A MS	Matrix Spike	Total/NA	Water	525.2	115692

Prep Batch: 496453

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-119309-1	HALAWA SHAFT Viewing Pool (331-241-TP401)	Total/NA	Drinking Water	625.1	
MB 570-496453/1-A	Method Blank	Total/NA	Water	625.1	
LCS 570-496453/2-A	Lab Control Sample	Total/NA	Water	625.1	
LCSD 570-496453/3-A	Lab Control Sample Dup	Total/NA	Water	625.1	
380-119304-A-1-A MS	Matrix Spike	Total/NA	Water	625.1	
380-119304-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	625.1	

Analysis Batch: 498190

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 570-496453/1-A	Method Blank	Total/NA	Water	625.1 SIM	496453
LCS 570-496453/2-A	Lab Control Sample	Total/NA	Water	625.1 SIM	496453
LCSD 570-496453/3-A	Lab Control Sample Dup	Total/NA	Water	625.1 SIM	496453

Analysis Batch: 499085

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-119309-1	HALAWA SHAFT Viewing Pool (331-241-TP401)	Total/NA	Drinking Water	625.1 SIM	496453
380-119304-A-1-A MS	Matrix Spike	Total/NA	Water	625.1 SIM	496453
380-119304-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	625.1 SIM	496453

Analysis Batch: 499944

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-119309-1	HALAWA SHAFT Viewing Pool (331-241-TP401)	Total/NA	Drinking Water	625.1	496453
MB 570-496453/1-A	Method Blank	Total/NA	Water	625.1	496453

GC VOA

Analysis Batch: 498920

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-119309-1	HALAWA SHAFT Viewing Pool (331-241-TP401)	Total/NA	Drinking Water	8015B GRO LL	
380-119309-2	TB:HALAWA SHAFT Vieweing Pool (331-241-TP	Total/NA	Water	8015B GRO LL	
MB 570-498920/6	Method Blank	Total/NA	Water	8015B GRO LL	
LCS 570-498920/4	Lab Control Sample	Total/NA	Water	8015B GRO LL	
LCSD 570-498920/5	Lab Control Sample Dup	Total/NA	Water	8015B GRO LL	

GC VOA (Continued)

Analysis Batch: 498920 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MRL 570-498920/3	Lab Control Sample	Total/NA	Water	8015B GRO LL	
380-119304-B-1 MS	Matrix Spike	Total/NA	Water	8015B GRO LL	
380-119304-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8015B GRO LL	

GC Semi VOA

Prep Batch: 497002

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-119309-1	HALAWA SHAFT Viewing Pool (331-241-TP401)	Total/NA	Drinking Water	3510C	
MB 570-497002/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-497002/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-497002/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MRL 570-497002/4-A	Lab Control Sample	Total/NA	Water	3510C	
380-119304-C-1-A MS	Matrix Spike	Total/NA	Water	3510C	
380-119304-C-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	3510C	

Analysis Batch: 499795

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-119309-1	HALAWA SHAFT Viewing Pool (331-241-TP401)	Total/NA	Drinking Water	8015B	497002
MB 570-497002/1-A	Method Blank	Total/NA	Water	8015B	497002
LCS 570-497002/2-A	Lab Control Sample	Total/NA	Water	8015B	497002
LCSD 570-497002/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	497002
MRL 570-497002/4-A	Lab Control Sample	Total/NA	Water	8015B	497002
380-119304-C-1-A MS	Matrix Spike	Total/NA	Water	8015B	497002
380-119304-C-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	8015B	497002

Lab Chronicle

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

Job ID: 380-119309-1
SDG: Weekly

Client Sample ID: HALAWA SHAFT Viewing Pool (331-241-TP401)

Lab Sample ID: 380-119309-1

Date Collected: 10/22/24 10:30
Date Received: 10/24/24 10:24

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			115692	KRD3	EA POM	10/27/24 14:00
Total/NA	Analysis	525.2		1	115702	Q8LA	EA POM	10/28/24 18:35
Total/NA	Prep	625.1			496453	H1SH	EET CAL 4	10/28/24 12:16
Total/NA	Analysis	625.1		1	499944	CG	EET CAL 4	11/06/24 16:33
Total/NA	Prep	625.1			496453	H1SH	EET CAL 4	10/28/24 12:16
Total/NA	Analysis	625.1 SIM		1	499085	PQS1	EET CAL 4	11/04/24 19:44
Total/NA	Analysis	8015B GRO LL		1	498920	A9VE	EET CAL 4	11/04/24 15:50
Total/NA	Prep	3510C			497002	H6FE	EET CAL 4	10/29/24 15:19
Total/NA	Analysis	8015B		1	499795	E5RH	EET CAL 4	11/06/24 15:05

Client Sample ID: TB:HALAWA SHAFT Vieweing Pool (331-241-TP401

Lab Sample ID: 380-119309-2

Date Collected: 10/22/24 10:30
Date Received: 10/24/24 10:24

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015B GRO LL		1	498920	A9VE	EET CAL 4	11/04/24 16:14

Laboratory References:

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

Accreditation/Certification Summary

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

Job ID: 380-119309-1
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	11-15-24
Arkansas DEQ	State	88-0161	07-02-25
California	Los Angeles County Sanitation Districts	9257304	07-31-26
California	SCAQMD LAP	17LA0919	11-30-24
California	State	3082	07-31-26
Kansas	NELAP	E-10420	07-31-25

Accreditation/Certification Summary

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

Job ID: 380-119309-1
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
Nevada	State	CA00111	07-31-25
Oregon	NELAP	4175	02-02-25
USDA	US Federal Programs	P330-22-00059	06-08-26
Washington	State	C916-18	12-31-24

Method Summary

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

Job ID: 380-119309-1
SDG: Weekly

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

Protocol References:

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

Laboratory References:

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

Sample Summary

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

Job ID: 380-119309-1
SDG: Weekly

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
380-119309-1	HALAWA SHAFT Viewing Pool (331-241-TP401)	Drinking Water	10/22/24 10:30	10/24/24 10:24	HI0000331
380-119309-2	TB:HALAWA SHAFT Vieweing Pool (331-241-TP401	Water	10/22/24 10:30	10/24/24 10:24	

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: EJ	Lab PM: Arada Rachelle	Carrier Tracking No(s):	COC No.: 380-28005-2757 1
Client Contact: Dr Ron Fenstemacher	Phone: 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:				R	RA	Q	QA	Y	I		
Halawa Shaft Viewing Pool	10/22/24	1030	G	Water			2	3	2	2				
TRIP BLANK	10/22/24	1030	G	Water				2						

380-119309 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 7794 7406 3190 Method of Shipment: FEDEX ② 7794 7406 3180

Empty Kit Relinquished by:	Date:	Time:			
Relinquished by: [redacted]	Date/Time: 10/23/24 1200	Company	Received by: G.PETTNER	Date/Time: 10/24/2024 10:24	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) ① 1.8°-0.0°=1.8° ② 2.3°-0.0°=2.3° 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 | Environment Testing

Loc: 380
119309

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Arada, Rachelle	Carrier Tracking No(s): N/A	COC No: 380-164594.1
Client Contact: Shipping/Receiving	Phone: N/A	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 #: 380-119309-1
Address: 2841 Dow Avenue, Suite 100, ,	Due Date Requested: 11/6/2024			
City: Tustin	TAT Requested (days): N/A			
State, Zip: CA, 92780				
Phone: 714-895-5494(Tel)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: RED-HILL	Project #: 38001111			
Site: Honolulu BWS Sites	SSOW#: N/A			

Analysis Requested

Preservation Codes:
-

Other: N/A

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/C8-C18	625.1/625_Prep (MOD) Tentatively Identified Compounds (Hold)	625.1_SIM/625_Prep (MOD) Extended PAH List	8015B_GRO_LL/5030C (MOD) GRO	Total Number of containers	Special Instructions/Note:
			Preservation Code:									
HALAWA SHAFT Viewing Pool (331-241-TP401) (380-119309-1)	10/22/24	10:30 Hawaiian	G	Water			X	X	X	X	7	MRLs are needed. Confirm any hits >RL.
TB:HALAWA SHAFT Viweing Pool-331-241-TP401 (380-119309-1	10/22/24	10:30 Hawaiian	G	Water						X	2	MRLs are needed.

380-119309 Chain of Custody

Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/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
[signature]	10/25/24 1750	[illegible]	[signature]	10-25-24 1760	
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: 1.5/2.3 SOIL

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-119309-1
SDG Number: Weekly

Login Number: 119309
List Number: 1
Creator: Segura, Ryan

List Source: Eurofins Eaton Analytical Pomona

Question	Answer	Comment
The coolers custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
Samples were received on ice.	True	
Cooler(s) Temperature is acceptable.	True	
Cooler(s) Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and is legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	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: 380-119309-1
SDG Number: Weekly

Login Number: 119309
List Number: 2
Creator: Skinner, Alma D

List Source: Eurofins Calscience
List Creation: 10/25/24 05:43 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.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.8
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	